ENTUITIVE

PROXIMITY STUDY

GLADSTONE & LORETTA, OTTAWA

C019.1960

FOR: TIP GLADSTONE LP | **DATE:** DECEMBER 15, 2025

ENTUITIVE

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1. INTRODUCTION

TIP Gladstone LP will be proceeding with the design and construction of a new mixed-use development located at 951 Gladstone Ave. and 145 Loretta Ave. North in Ottawa, Ontario (the Project). The Project includes three residential towers sitting on top of a mixed-use podium with commercial office space and retail units. The ground floor of the development supports the mixed-use component and allows for pedestrian and vehicular access around the complex. The entire mixed-use component will be supported by and built above a below grade parking area. The development is located adjacent to the Trillium LRT line and Coroso Italia Station.

The proposed development at Gladstone and Loretta will support the City's investment in rapid transit by placing significant density adjacent to the Coroso Italia Station. The development has been carefully designed to complement the Coroso Italia Station.

Reference to the *O-Train Proximity Study Guidelines 2024* prepared by the City of Ottawa has been made in preparing this Proximity Study.

This Proximity Study will address the impact of the proposed development on the following adjacent public infrastructure:

1. Coroso Italia (former Gladstone) Station
2. Trillium LRT Line (O-Train) infrastructure

This Proximity Study is to be read in conjunction with the referenced drawings as included in the report and as attached in the Appendices.

2. PROJECT DESCRIPTION

The Project will include towers of 29, 33, and 35 levels. The total building heights at the towers will be 34, 38, and 40 storeys. The project will be phased with the construction of Tower A at 34 stories proceeding first.

The Project will be designed to the requirements of the Ontario Building Code; the Canadian Highway Bridge Code, with respect to the urban driveways; the Guidelines for New Development in Proximity to Railway Operations prepared for the Federation of Canadian Municipalities and the Railway Association of Canada - May 2013, and the appropriate material design standards prepared by the Canadian Standards Association.

The Project is to be constructed generally of reinforced concrete framing with reinforced concrete walls, reinforced concrete columns, and generally conventionally reinforced concrete slab construction. The Project will be founded on the existing rock stratum using conventional strip and spread footings, located generally between elevation 52.12 and 53.12 with the finished ground floor elevation at approximately 65.00. The ground floor structure will support areas of the public realm which includes driveways and privately-owned publicly accessible spaces (P.O.P.S.) constructed over suspended slab areas. The underground construction consists of three levels of below grade parking. The lowest level of parking (P3) is at approximately elevation 54.0. The construction of the lower levels of parking generally requires the removal of the existing fill, clay and sandy clay material, and interbedded limestone and shale bedrock. This is done to achieve the depths required and to accommodate the planned parking slab elevations and to construct the building foundation support condition. According to the geotechnical and hydro-geological investigation carried out by DST Consulting Engineers Inc., based on an investigation date of June and July 2017**,** groundwater monitoring wells indicated that groundwater was found at elevations varying from 60 to 63 elevations over the site. The proposed buildings are to be founded on conventional spread footings placed on clean sound rock. The report identifies a requirement for waterproofing below the floor slab and around the basement walls.

An aerial view of the site (shown in red) is shown in *Figure 1.* A Proximity Plan prepared by Entuitive, indicating the centerline Trillium LRT Lines; and the distance between the centerline of the nearest track and the proposed structure for the development is presented in *Figure 2*. Included in **Appendix B3**, are the available Coroso Italia (former Gladstone) Station drawings. The proposed development will be separated from the Trillium LRT line (O-Train) corridor by an area of landscaping – a horizontal distance in excess of 25 metres measured from the centerline of the nearest track.



Figure 1 | Aerial View of Site

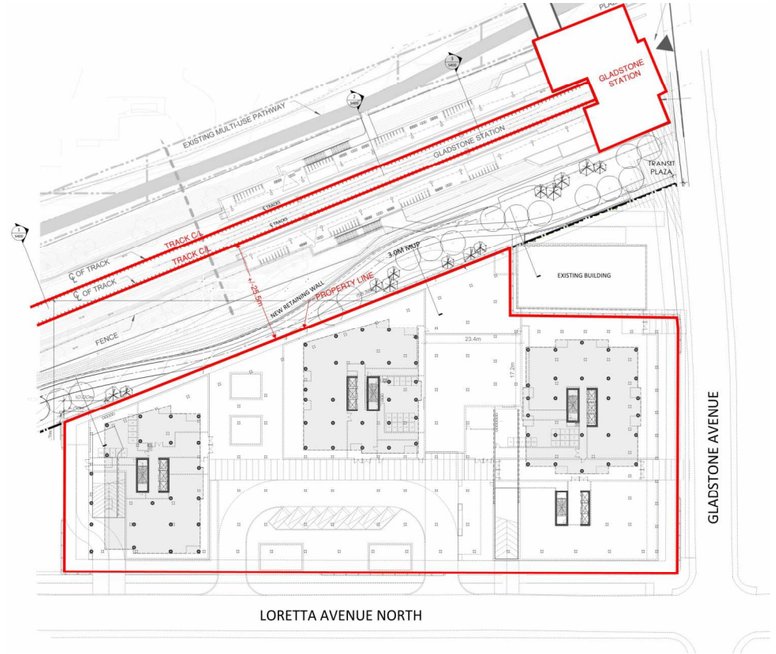


Figure 2 | Proximity Plan

3. SITE PLAN

A Site Plan prepared by Linebox Studio with the distance measured from the centerline of the nearest Trillium O-train track to the property line/proposed substructure extent, is presented in *Figure 3* below. The representative drawing prepared by Linebox Studio is included in **Appendix A1**.

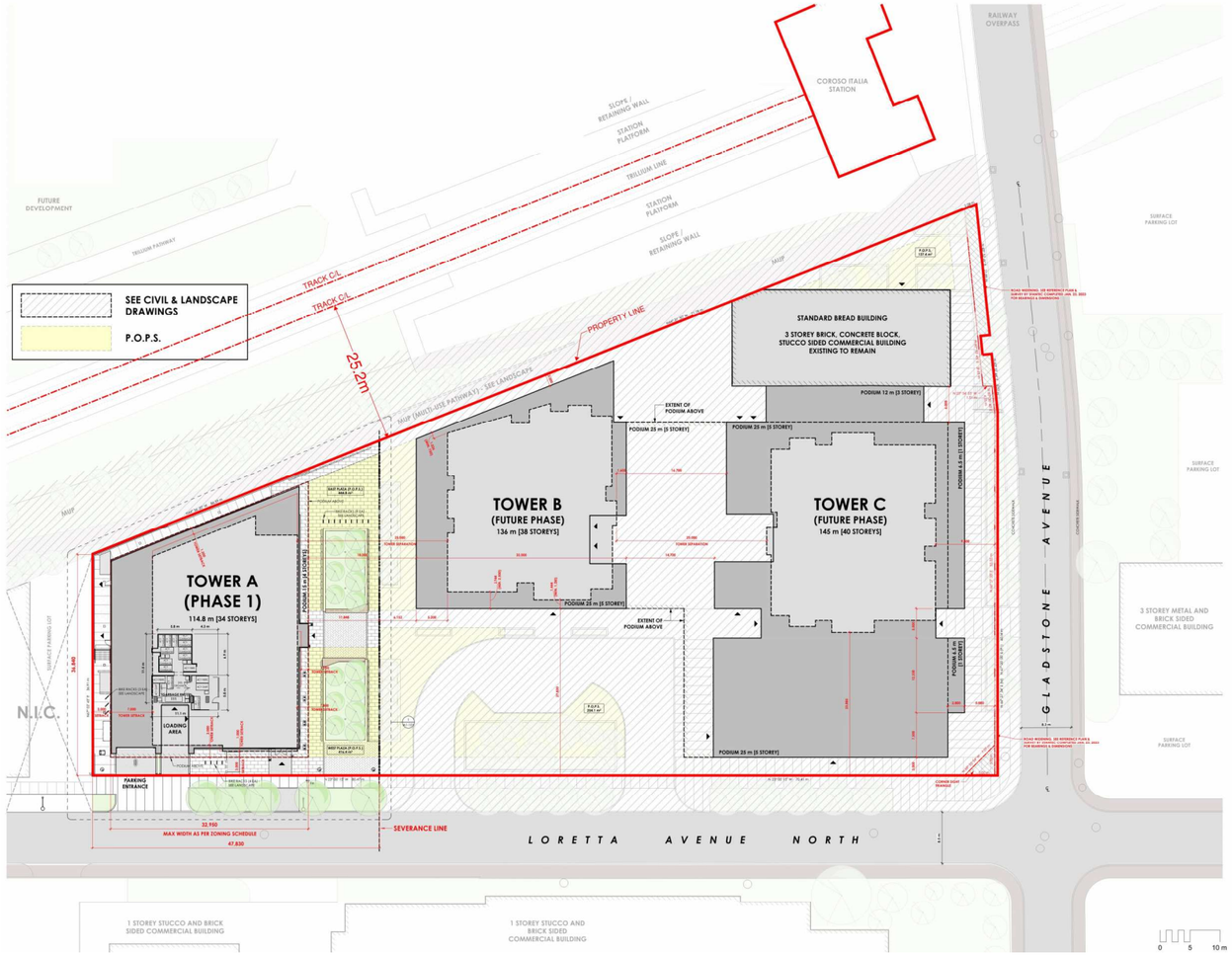
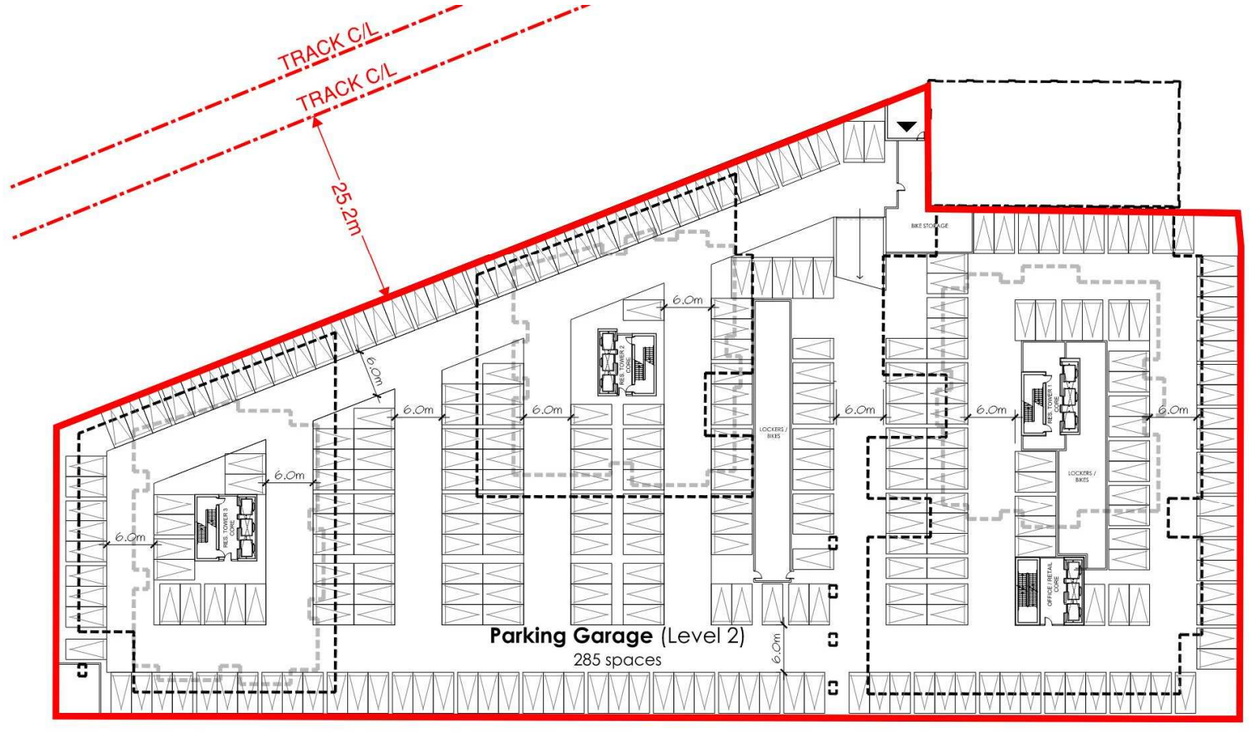


Figure 3 | Site Plan

Ventilation for the below grade program areas will be done primarily along the perimeter of the development through area wells with exhaust shafts located on the south and west sides of the development. Ventilation for the above grade program areas is still being developed but is anticipated to done through the roof and louvres in the podium and towers. No impact is anticipated on the Gladstone station and/or platforms based on the location of the intake and exhaust shafts and the distance from the proposed development to the Gladstone station. As well, there is no anticipated operational impacts to the use or maintenance of the Trillium LRT lines from the proposed development.

4. FLOOR PLANS

The Architectural plan (prepared by Hobin Architects) of the lowest levels of the planned development, indicate the centerline of the Trillium Line, the distances between the centerline to the proposed structure for the development. This is presented in *Figure 4* below. Architectural Drawings for Phase 1 prepared by Linebox Studio can be found in **Appendix B1**. The below grade Structural Drawings prepared by Cunliffe & Associates Consulting Structural Engineers are included in **Appendix B4**.


TRACK C/L
TRACK C/L
25.2m
6.0m
6.0m
6.0

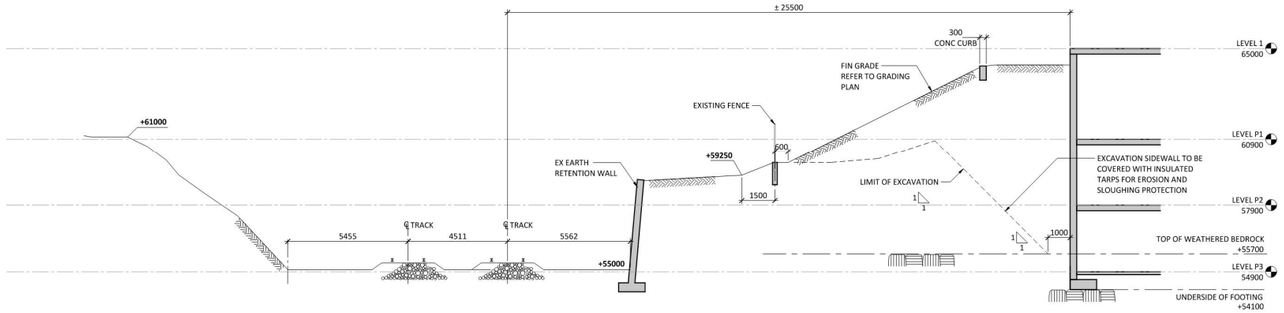


Figure 5 | East-West Section at Northern Boundary of Site

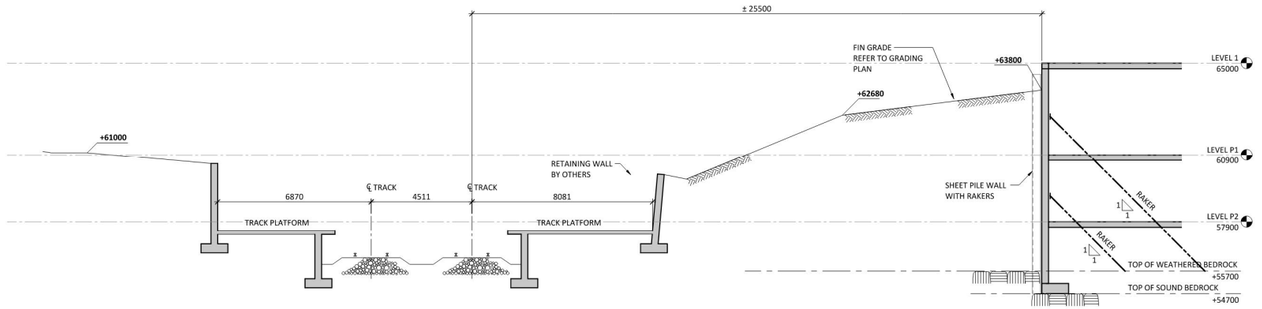


Figure 6 | East-West Section at Mid-Site
Note: Section is applicable to future Phase 2 work and not part of current Phase 1 (145 Loretta Avenue) submission.

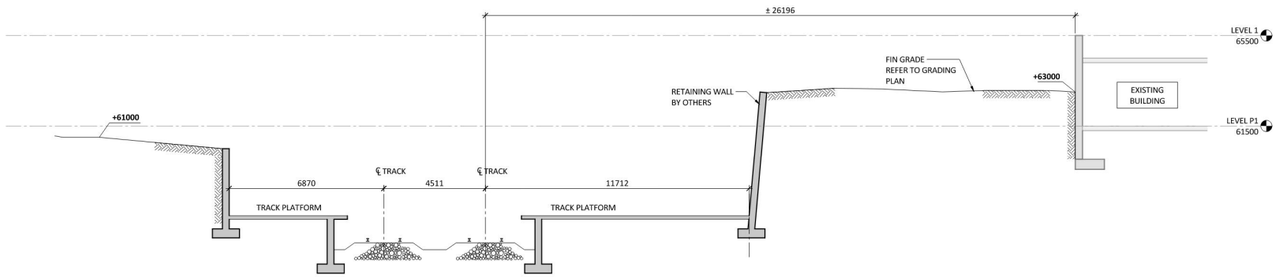


Figure 7 | East-West Section at Southern Boundary of Site
Note: Section is applicable to future Phase 2 work and not part of current Phase 1 (145 Loretta Avenue) submission.

6. GEOTECHNICAL REPORT

The geotechnical report (Geotechnical Investigation Report TS-SO-029563) for the proposed development was prepared by DST Consulting Engineers Inc., dated August 16, 2017, and is included in **Appendix C1**.

The site is currently occupied by existing buildings and surface parking lots. The subsurface profile consists of varying fill material overlying fine grained deposits of silt and clay. The clay/sandy clay overlies an interbedded limestone and shale bedrock. Fill depth is from 1 to 4 metres below the existing grade. A layer of clay was encountered, underlying the fill layer. The clay was soft to very stiff in consistency. Bedrock appears to be fair to good quality based on Rock Quality Designation (RQD) results. The groundwater levels measured in the ground water monitor wells are subject to seasonal fluctuations up to 1 or 2 m based on the report.

The building will be founded on conventional spread footings on clean, sound bedrock. Localized bedrock removal will be required to complete the underground parking levels and foundation construction. Line drilling and controlled blasting will be used for the bedrock removal. The blasting operations will be planned and completed under the guidance of a professional engineer with experience in blasting operation.

7. PROPERTY SURVEY

The survey information from the Topological Survey completed by Stantec Geomatics LTD on Part of Lot 38 Concession 1 (Ottawa Front) and Lots 1, 2 & 3 (West Champagne Avenue) Block C and Lots 1, 2, & 3 (East Loretta Avenue) Block C and Lots 4, 5, 6, 7, 8 Block C and Part of Block C and Part of Champagne Street (Closed by By-Law 4763) Registered Plan 73 City of Ottawa is shown on the Property Survey prepared by Stantec. These drawings indicate the property lines and existing topographic information including the existing surface elevations, location of buildings and rail tracks, as well as the existing contours of the surface elevations and are included in **Appendix A2**.

8. UTILITY SERVICING PLAN

The utility servicing plans prepared by WSP are included in **Appendix B2**. All utilities will be fed from the municipal right of way.

9. STROMWATER MANAGEMENT PLAN AND GRADING PLAN

The grading plans prepared by WSP are included in **Appendix B2**. The letter prepared by WSP indicates that the project will have no adverse impact on the adjacent LRT lands with respect to grading and stormwater runoff and is included in **Appendix F1**.

10. ARCHITECTURAL DRAWINGS

The architectural drawings prepared by Linebox studios are included in **Appendix B1**.

11. LANDSCAPE DRAWINGS

The landscape drawings prepared by CSW landscape architects are included in **Appendix B6**.

12. NOISE AND VIBRATION STUDY

The noise and vibration study prepared by J.E. Coulter Associates Limited is included in **Appendix E1**. Acknowledgement that the potential for noise and vibration from Trillium Line operations have been considered in the design of the project, and appropriate mitigation measures applied is provided in the letter by Linebox Studio and is included in **Appendix E2**.

13. EXCAVATION PLAN

During the proposed building excavation, the overburden soils along the LRT property will be sloped at a suitable incline of 1H:1V or flatter. Refer to Figure 2.5 above and the Proximity Assessment Report prepared by Paterson Group Consulting Engineers included in **Appendix C2**. Temporary shoring is not anticipated along the LRT property, although a temporary shoring system will be used for the other sides of the proposed building excavation. Shoring drawings prepared by Marathon Underground Constructors Corporation are included in **Appendix B5**.

The primary issue with the proposed building excavation will be vibrations associated with blasting for bedrock removal. Accordingly, a vibration monitoring program will be implemented to ensure vibration levels remain below recommended tolerances. The Proximity Assessment Report prepared by Paterson Group Consulting Engineers included in **Appendix C2** outlines the Vibration Monitoring and Control Plan.

14. CONSTRUCTION PLAN DRAWING

The construction management plan prepared by Contractor is included in **Appendix D**. The crane locations and swing radii are indicated on the drawings prepared by Bellai Alliance and are included in **Appendix D**. It is important to note that although the crane swing may pass over Trillium LRT lands it does not extend over the rail line and no lifting or swinging of loads will occur over the rail corridor.

In advance to the bulk excavation, auguring and installation of shoring piles will commence around the site to facilitate the start of the excavation work. Wood lagging work will proceed with the excavation along the perimeter to the top tie back level. A berm will remain along the perimeter to allow for more interior excavation and allow the drill rig to set up in a stabilized condition so that the tie-back holes may be drilled and grouted into the rock. Excavation will proceed to the next tie back level and again after tieback installation continues to the bottom of the hole. The soldier piles will be drilled to a depth of 1000mm below the depth of excavation at the perimeter to provide a toe-anchor to the pile.

With the completion of the bulk excavation, finer excavation work will continue for the building footings and the tower raft foundations. We anticipate the perimeter of the footing or raft will be pre-drilled rather than excavated with a hoe-ram excavator to limit the excavation and to avoid the need for formwork to the excavated hole. As the installation of the foundation proceeds, work will commence with the erection of formwork for the columns and walls, as well as the soffit formwork of the substructure floors. As the ground floor is completed, the need to monitor the perimeter of the excavation for shoring pile movements will be redundant. At this time the shoring tiebacks will be destressed.

The superstructure work will then commence. As the structure is completed, the area will be turned over to the follow-on trades such as cladding, building services (mechanical, electrical and plumbing (MEP) as well as other finishing trades.

15. SHORING PLANS

The shoring drawings prepared by Marathon Underground Constructors Corporation are included in **Appendix B5**. These drawings generally indicate that soldier piles with wood lagging will form the temporary vertical wall of the excavation. Drilled and installed rock anchors as the project excavation proceeds will provide lateral support for this shored (Earth Retention) wall. These tie backs are necessary to control the horizontal and vertical deflection and subsidence of the shored wall as the excavation proceeds.

16. FOUNDATION DRAWINGS

The foundation drawings prepared by Cunliffe & Associates Consulting Structural Engineers are included in **Appendix B4**. The building will be founded on conventional spread footings on clean, sound bedrock. Localized bedrock removal will be required to complete the underground parking levels and foundation construction.

17. PRE AND POST CONSTRUCTION SURVEYS

A pre-construction survey will be required for the portion of the Trillium Line located in the vicinity of the proposed development at 145 Loretta Avenue. Any existing structures in the immediate area of the proposed building will also undergo a pre-construction survey as per standard construction practices, where blasting is required.

18. GROUNDWATER CONTROL AND MONITORING PLAN

Control and management of the ground water will be required. During the excavation and subsequent construction of the substructure, there will be a drawdown of the water table. Based on available elevations, the Trillium Rail Line is located below the depth of the silty clay and is likely bearing on the glacial till deposit and/or bedrock, which are not susceptible to settlement from temporary dewatering during construction as indicated in the letter prepared by Paterson Group Consulting Engineers and including in **Appendix F2**. Further, due to the presence of the waterproofing which will be installed over the perimeter foundation walls, groundwater will not be drawn down during the permanent condition, and long-term groundwater lowering is anticipated to be negligible for the area. Therefore, no adverse effects to the Trillium Line are expected from potential dewatering as indicated in the letter prepared by Paterson Group Consulting Engineers and including in **Appendix F2**.

19. ELECTRO-MAGNETIC INTERFERENCE AND STRAY CURRENT

The Trillium Line currently operates with Diesel multiple unit trains. Therefore, there will be no electro-magnetic interference and stray voltage from Trillium Line operations and the proposed building will not require any additional measures to mitigate electromagnetic forces and stray voltage as indicated in the letter prepared by Goodkey, Weedmark & Associates Ltd. and included **Appendix G**.

If the Trillium Line becomes electrified, the details and quantum of the electro-magnetic interference at the property line and what mitigation measures have been included in the design of the system will be required as the full design characteristics of the electrification of the O-Train/Trillium Line system would be intrinsic to any proposed solution.

20. CONSTRUCTION AS-BUILT DRAWINGS

If requested by the City of Ottawa, construction record (as-built) drawings in PDF will be provided at project completion.

APPENDIX A

SITE DRAWINGS

APPENDIX A1

ARCHITECTURAL SITE PLAN

SURVEY INFORMATION TAKEN FROM:

SURVEYOR'S REAL PROPERTY REPORT
PART 1 - PLAN OF
PART OF LOT 1 & LOTS 2 & 3
(WEST CHAMPAGNE AVENUE)
BLOCK C AND
LOTS 1, 2 & 3 (EAST LORETTA AVENUE)
BLOCK C AND
LOTS 4, 5, 6, 7 & 8
BLOCK C AND
PART OF BLOCK C AND
PART OF CHAMPAGNE STREET
(CLOSED BY BY-LAW 4863)

REGISTERED PLAN 73
CITY OF OTTAWA

STANTEC GEOMATICS LTD. 2017

SITE STATISTICS

SITE AREA: 10,012m² / 2.47 ac
RESIDENTIAL UNIT COUNT:
TOWER A = 402
TOWER B = 304
TOWER C = 332
TOTAL = 1038

MC[XXXX] SYYY-h	Requirement	Proposed
Minimum Lot Width (m)	No minimum	Complies
Minimum Lot Area (m²)	No minimum	Complies
Minimum Front Yard Setback (m)	5 metres; aside from Standard Bread Building, (See S.YYY)	5m
Minimum Rear Yard Setback (m)	3 metres, (See S. YYY)	3m
Interior Side Yard Setback (m)	2 metres, aside from Standard Bread Building (See S.YYY)	2m
Corner Side Yard Setback (m)	3 metres, (See S.YYY)	3m
Minimum Building Height (m)	6.7metres, (See S.YYY)	Complies
Maximum Building Height (m)	0m to 132m (See S.YYY)	Complies
Maximum Floor Space Index	No Maximum	N/A
Minimum Width of Landscaped Area	No minimum, except that where a yard is provided and not used for required driveways, aisles, parking, loading spaces or outdoor commercial patio, the whole yard must be landscaped	Complies
Minimum Tower Separation	23 metres	Complies
Minimum Tower Podium Stepback Distance	2 metres	2m at Gladstone frontage only

Parking Requirements (Sec. 101, 102, 106, 111)		Requirement	Proposed
Area Z or Schedule 1A 0 spaces/unit (resident) 0.1 spaces/unit, less first 12 units (visitor), but no more than 30		Resident: 0 Visitor: 30	Surface: 4 P1: 218 P2: 251 P3: 53 Total: 526
Vehicle Space Dimensions		- Must be 2.6m-3.1m by 5.2m - Up to 40% of required parking aside from visitor's spaces may be 2.4m x 4.6m	Complies
Bicycle Parking Rates		(0.5 per Dwelling Unit) 0.5 x 1038 units = 519 (1 per 250m² Office, Retail, & Existing Building) 20,080 m² /250 = 80	Surface Bicycle Parking =68 Indoor Bicycle Parking = 694
		Total Required = 599	Total Bicycle Parking = 762
Bicycle Space Dimensions		Horizontal: 0.6m x 1.8m Vertical: 0.5m x 1.5m (max 50% of required spaces) Stacked: 0.37m x 1.5x	Complies
Drive Aisle Width (Double Traffic Lane)	Parking Lot	Minimum: 6.7m	Complies
	Parking Garage	Minimum: 6m Maximum: 6.7m	6m

Amenity Space Requirements (Sec. 137)	Requirement	Proposed
Total: 6 m² per unit (1038 x 6) **Communal: 50% of total required** POPS (Privately Owned Public Space)	Total: 6,228 m² Communal: 3,114 m²	Rooftop Terrace (Communal): 1441.9 m² Indoor Amenity (Communal): 2,437.1 m² Total Communal: 3,879.0 m² Balconies: 2,350.0 m² Total Amenities: 6,229 m² POPS: 1,017.7 m2

SEE CIVIL & LANDSCAPE DRAWINGS

P.O.P.S.

RAILWAY OVERPASS
COROSO ITALIA STATION
FUTURE DEVELOPMENT
TRILLIUM PATHWAY
SLOPE / RETAINING WALL
STATION PLATFORM
TRILLIUM LINE
MUP
TRACK C/L
PROPERTY LINE
25.21m
SURFACE PARKING LOT
P.O.P.S. 137.4 m²
ROAD WIDENING. SEE REFERENCE PLAN & SURVEY BY STANTEC COMPLETED JAN. 23, 2023 FOR BEARINGS & DIMENSIONS
STANDARD BREAD BUILDING
3 STOREY BRICK, CONCRETE BLOCK, STUCCO SIDED COMMERCIAL BUILDING EXISTING TO REMAIN
PODIUM 12 m [3 STOREY]
EXTENT OF PODIUM ABOVE
PODIUM 25 m [5 STOREY]
PODIUM 6.5 m [1 STOREY]
TOWER A (PHASE 1)
114.8 m [34 STOREYS]
TOWER B (FUTURE PHASE)
136 m [38 STOREYS]
TOWER C (FUTURE PHASE)
145 m [40 STOREYS]
PODIUM 1.5 m [4 STOREYS]
EAST PLAZA (P.O.P.S.) 444.8 m²
WEST PLAZA (P.O.P.S.) 416.4 m²
P.O.P.S. 254.1 m²
BIKE RACKS (9 EA.) SEE LANDSCAPE
BIKE RACKS (3 EA.) SEE LANDSCAPE
BIKE RACKS (4 EA.) SEE LANDSCAPE
GARAGE IN 111
LOADING AREA
PARKING ENTRANCE
N.I.C.
SURFACE PARKING LOT
3 STOREY METAL AND BRICK SIDED COMMERCIAL BUILDING
1 STOREY STUCCO AND BRICK SIDED COMMERCIAL BUILDING
1 STOREY STUCCO AND BRICK SIDED COMMERCIAL BUILDING
GLADSTONE AVENUE
CONCRETE SIDEWALK
CORNER SIGHT TRIANGLE
SEVERANCE LINE
MAX WIDTH AS PER ZONING SCHEDULE
32.950
47.830
LORETTA AVENUE NORTH
N 23° 00' 15" W 70.41 m
N 23° 00' 15" W 80.47m
N 66° 59' 45" E 5.00 m
N 23° 54' 55" W 1.51 m
N 66° 31' 25" W 71.78 m
N 66° 30' 36" W 84.09 m
N 67° 29' 34" E (M) N 67° 00' 00" E (P) 80.54 m
N 67° 02' 40" E 36.91 m
36.840
0 5 10 m

25 RE-ISSUED FOR OPA/ZBA	25-10-15
24 ISSUED FOR OPA/ZBA	25-07-23
17 RE-ISSUED FOR SPA	25-03-03
16 RE-ISSUED FOR SPA	25-02-28
15 RE-ISSUED FOR SPA	25-02-27
14 RE-ISSUED FOR SPA	25-01-31
9 ISSUED FOR SPA	24-11-20
no revisions	date

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

MASTER SITE PLAN

project number | numero du projet	2402
drawn | dessiné	JH / DL / PC / JP
checked | verifié	JP / AR
scale | échelle	1 : 200
date | date	11/19/24

drawing number \| numéro du dessin

A1-100a

client
CLVGROUP DEVELOPMENTS
structural engineers | ingénieurs structurels
CUNLIFFE & ASSOCIATES CONSULTING STRUCTURAL ENGINEERS
electrical engineers | ingénieur electrique
mechanical engineer | ingénieur méchanique
GWAL Goodkey, Weedmark & Associates Ltd.
civil engineers | ingénieur civil
wsp
landscape architect | architecte paysagiste
CSW
nord du projet project north
nord reel true north
NOT FOR CONSTRUCTION
architect | architecte
ONTARIO ASSOCIATION OF ARCHITECTS ANDREW REEVES LICENCE 6464
linebox STUDIO

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
2025-10-15 13:18:21 YM

APPENDIX A2

SURVEY DRAWINGS

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
2011886

THIS PLAN IS NOT VALID UNLESS IT IS AN EMBOSSED ORIGINAL COPY ISSUED BY THE SURVEYOR
In accordance with Regulation 1026, Section 29(3)

SURVEYOR'S REAL PROPERTY REPORT
PART 1 - PLAN OF

LOTS 1, 2 & 3 (WEST CHAMPAGNE AVENUE)
BLOCK C AND
LOTS 1, 2 & 3 (EAST LORETTA AVENUE)
BLOCK C AND
LOTS 4, 5, 6, 7 & 8
BLOCK C AND
PART OF BLOCK C AND
PART OF CHAMPAGNE STREET
(CLOSED BY BY-LAW 4863)
REGISTERED PLAN 73
CITY OF OTTAWA

Scale 1:200
0 5 10 15 METRES

METRIC CONVERSION

DISTANCES AND COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

BEARING NOTE

BEARINGS ARE ASTRONOMIC AND ARE REFERRED TO THE EASTERLY LIMIT OF LORETTA STREET NORTH AS SHOWN ON PLAN 4R-207, HAVING A BEARING OF N 23° 00' 15" W.

ELEVATION NOTE

POSITION OF SITE BENCHMARKS AS SHOWN HEREON.

ELEVATIONS SHOWN HEREON ARE GEODETIC (CGVD-1928:1978) AND ARE DERIVED FROM CITY OF OTTAWA VERTICAL CONTROL MONUMENTS No.'s 2011-0106 (ELEV=62.968m) AND 2011-0107 (ELEV=55.863m).

UTILITY NOTE

LOCATION OF UNDERGROUND SERVICES ARE APPROXIMATE AND ARE PER THE CITY OF OTTAWA SHEET No.'s__ AND__ AND MUST BE VERIFIED PRIOR TO CONSTRUCTION.

NOTE

- THIS PLAN OF SURVEY IS TO BE READ IN CONJUNCTION WITH THE REPORT SUMMARY NOTED AS PART 2 HEREON.
- THIS REPORT CAN ONLY BE UPDATED BY THIS OFFICE. NO ADDITIONAL PRINTS OF THIS ORIGINAL REPORT WILL BE ISSUED SUBSEQUENT TO THE DATE OF CERTIFICATION.
- ALL TIES ARE MINIMUM UNLESS OTHERWISE NOTED.
- ALL TIES TO CURVED BOUNDARY ARE RADIAL TO ARC.
- RISK OF UNDERGROUND SERVICES. MONUMENTATION PLANTED ACCORDINGLY.

PART 2

This Report was prepared for _____ and the undersigned accepts no responsibility for the use by other parties.

1. REGISTERED RIGHTS-OF-WAY/EASEMENTS
No rights-of-way or easements were found to be registered against the subject properties.
2. PROPERTY IMPROVEMENTS

3. COMPLIANCE WITH MUNICIPAL ZONING BYLAWS
Compliance is not certified by this report.
4. ADDITIONAL REMARKS

LEGEND (IF APPLICABLE)

■	DENOTES	FOUND MONUMENTS
□	-	SET MONUMENTS
IB	-	IRON BAR
IB#	-	ROUND IRON BAR
SIB	-	STANDARD IRON BAR
SSIB	-	SHORT STANDARD IRON BAR
CC	-	CUT CROSS
CP	-	CONCRETE PIN
WIT	-	WITNESS
PIN	-	PROPERTY IDENTIFICATION NUMBER
MEAS	-	MEASURED
PROP	-	PROPORTIONED
OU	-	ORIGIN UNKNOWN
SG	-	STANTEC GEOMATICS LTD.
P	-	REGISTERED PLAN 73
P1	-	PLAN BY 725 DATED AUGUST 23, 1967
P2	-	PLAN BY 857 DATED AUGUST 10, 1979
P3	-	PLAN BY GCM DATED AUGUST 10, 1951
P4	-	PLAN BY 857 DATED JUNE 21, 2001
P5	-	PLAN BY A&M DATED NOVEMBER 6, 1963
P6	-	PLAN 4R-207
P7	-	PLAN 4R-22151

ACU	-	AIR CONDITIONING UNIT
AN	-	ANCHOR
AP	-	AIR PUMP
ANT	-	ANTENNA
BH	-	BOREHOLE
BIB	-	HOSE BIB
BKP	-	BIKE RACK
BENCH	-	BENCH
BOL	-	BOLLARD
BOUL	-	BOULDER
CB	-	CATCH BASIN
DCB	-	DOUBLE CB
CBMH	-	CB MANHOLE
DCBMH	-	DOUBLE CB MANHOLE
CBSI	-	SIDE INLET CB
CHM	-	CHIMNEY
CSV	-	VALVE CURB STOP
DRN	-	DRAIN
EPOST	-	ELECTRICAL OUTLET
FP	-	FLAG POLE
FL	-	FLOOD LIGHT
FTF	-	FUEL TANK FILLER CAP
GC	-	GARBAGE CAN
GFL	-	PIPE FLANGE (GAS)
GFP	-	GAS FUEL PUMP
GP	-	POLE GUYWIRE
GSR	-	GAS SERVICE REGULATOR
GV	-	GAS VALVE
HIC	-	HICKENBOTTOM
HDS	-	HEADSTONE
HLS	-	LIGHT STANDARD HYDRO
HM	-	HYDRO METER
HTR	-	HYDRO TRANSFORMER
HW	-	HAND WELL
HYD	-	FIRE HYDRANT
JBX	-	JUNCTION BOX
MB	-	MAILBOX
MP	-	MONITORING PIN
MH	-	MAINTENANCE HOLE UNIDENTIFIED
MHB	-	MAINTENANCE HOLE BELL
MHF	-	MAINTENANCE HOLE FIBRE OPTIC
MHH	-	MAINTENANCE HOLE HYDRO
MHI	-	MAINTENANCE HOLE INVERT
MHSA	-	MAINTENANCE HOLE SANITARY
MHST	-	MAINTENANCE HOLE STORM
MHT	-	MAINTENANCE HOLE TRAFFIC
MW	-	MONITORING WELL
NPB	-	NEWS PAPER BOX
OLP	-	LIGHT STANDARD ORNAMENTAL
OHW	-	OVERHEAD UTILITY WIRES
PKM	-	PARKING METER
PLBX	-	PULL BOX
PLQ	-	PLAQUE
PLR	-	PILLAR
PZ	-	PIEZOMETER
RLC	-	RED LIGHT CAMERA
RWSL	-	RAILWAY SIGNAL LIGHT
RWSS	-	RAILWAY SWITCH STAND
SAT	-	SATELLITE DISH
SCLP	-	SCULPTURE
SCP	-	SUMP/CATCH PIT
SCV	-	SPRINKLER CONTROL VALVE
SH	-	SPRINKLER HEAD
SM	-	SIAMESE CONNECTION
SN	-	SIGN
SPAN	-	SOLAR PANEL
SPT	-	SEPTIC TANK LID
TBL	-	TABLE
TB BELL	-	TERMINAL BOX - BELL
TB CATV	-	TERMINAL BOX - CABLE
TCP	-	TRAFFIC CONTROL BOX
TPIT	-	TEST PIT
TSL	-	TRAFFIC SIGNAL LIGHT
UMB	-	MARKER BELL UNDERGROUND
UMC	-	MARKER CABLE UNDERGROUND
UMG	-	MARKER GAS UNDERGROUND
UMO	-	MARKER OIL UNDERGROUND
UP	-	UTILITY POLE
VB	-	VALVE BOX
VC	-	VALVE CHAMBER
WV	-	WATER VALVE

SURVEYOR'S CERTIFICATE

I CERTIFY THAT :
1. THE SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND THE REGULATIONS MADE UNDER THEM.
2. THE SURVEY WAS COMPLETED ON THE _ DAY OF _, 2017.

DATE

BRIAN J. WEBSTER
ONTARIO LAND SURVEYOR

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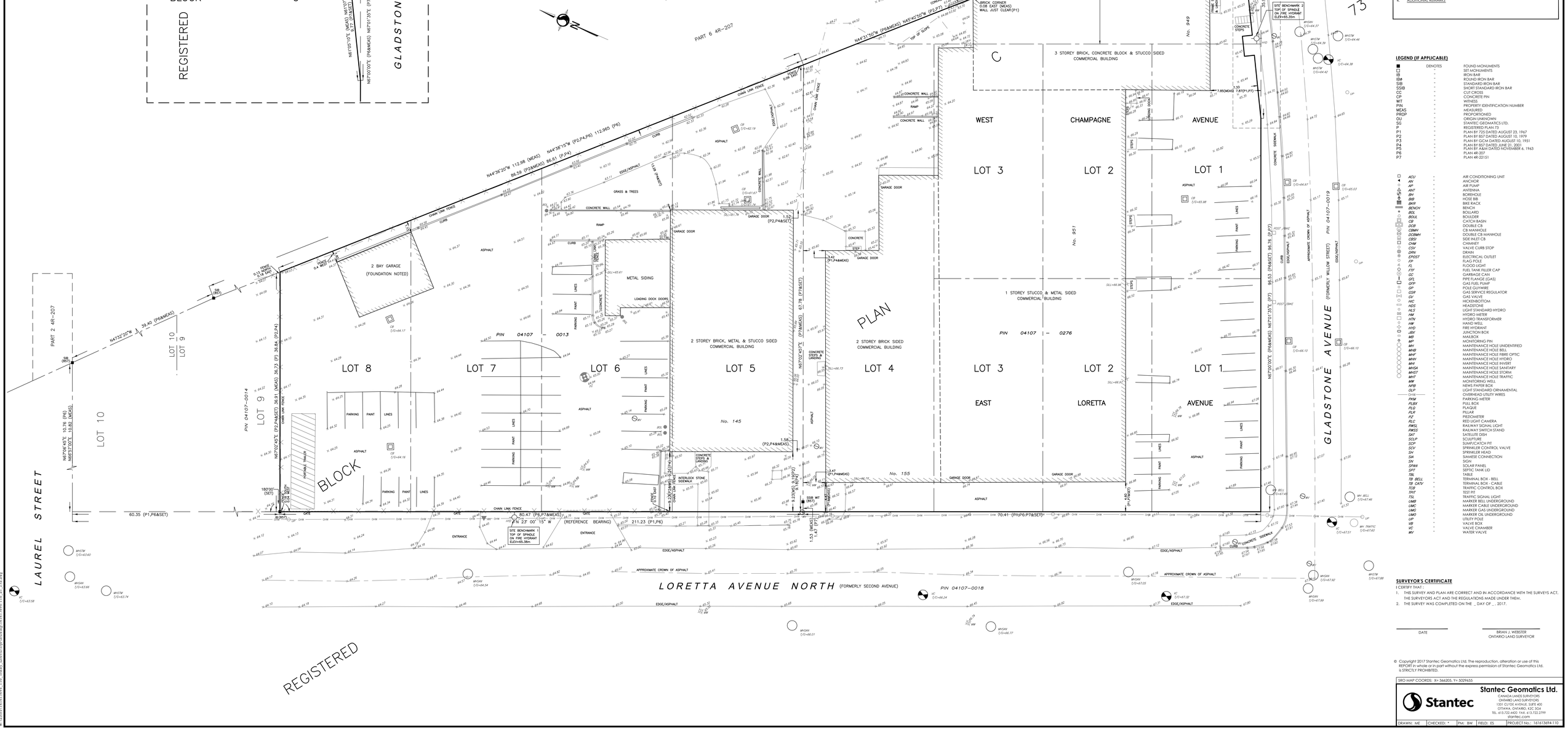
SRO MAP COORDS: X= 366205, Y= 5029655

Stantec Geomatics Ltd.
CANADA LAND SURVEYORS
ONTARIO LAND SURVEYORS
1331 CLYDE AVENUE, SUITE 400
OTTAWA, ONTARIO, K2C 3G4
TEL 613.722.4420 FAX 613.722.2799
stantec.com

DRAWN: ME | CHECKED: * | PM: BW | FIELD: ES | PROJECT No.: 161613694-110

DETAIL
SCALE = 1:100 m

PART 1 4R-207
PART OF LOT 38 CONCESSION 1 (NEPEAN)
(OTTAWA FRONT)
N44°31'50"W (P6&MEAS) N45°40'50"W (P2,P7) 75.63 (P6&MEAS) 75.78 (P7) 3.85 (P7&SET)
PIN 04107 - 0020
PART 35 4R-402
BLOCK C
73
PLAN
CHAMPAGNE AVENUE
(CLOSED BY BY-LAW 4863)
(FORMERLY FIRST AVENUE)
N61°05'10"E 21.89 (MEAS) N61°03'20"E 21.87 (P7)
PART 1 4R-22151
PIN 04107-0225
35.99 (P7&SET)
N28°54'50"W (SET)
N28°52'40"W (P7)
1.53 (P7&SET)
N61°05'10"E (MEAS) N61°03'20"E (P7) 96.53 (P7&SET)
PIN 04107 - 0276
WEST CHAMPAGNE AVENUE
LOT 1
BLOCK C
REGISTERED
N28°54'50"W (SET)
N28°52'40"W (P7)
1.53 (P7&SET)
N61°05'10"E (MEAS) N61°03'20"E (P7) 96.53 (P7&SET)
N07°00'00"E (P6&MEAS) N07°01'35"E (P7) 96.53 (P6&SET) 96.76 (P,P7)
GLADSTONE AVENUE (FORMERLY WILLOW STREET)
PIN 04107-0019



APPENDIX B

DEVELOPMENT DRAWINGS

APPENDIX B1

ARCHITECTURAL DRAWINGS

GLADSTONE AND LORETTA - RESIDENTIAL TOWER

ARCHITECTURAL DRAWING PACKAGE

ARCHITECT
Linebox Studio Inc.
Address: 116 Lisgar Street, Suite 110, Ottawa, ON, K2P 0C2
Tel. 613.216.2609
Architect: Andrew Reeves
Point of Contact: Josée Anne Provonost

STRUCTURAL ENGINEERS
Cunliffe & Associates Inc.
Address: 200, 1550 Carling Ave 2nd Floor, Ottawa, ON K1Z 8S8
Tel. 416.255.3337
Engineer: Brad Armstrong
Point of Contact: Paul Dolan

MEP ENGINEERS
GWAL | Goodkey, Weedmark & Associates Ltd.
Address: 1688 Woodward Dr, Ottawa, ON K2C 3R8
Tel. 613.727.5111
Mechanical: Mark Sarazin
Electrical: Divyankant (Raj) Vyas

CIVIL ENGINEERS
WSP
Address: 2611 Queensview Drive 200, 300, 400 Ottawa, ON K2B 6B7
Tel. 613.829.2800
Engineer: Michael Flowers
Point of Contact: Jared Delpellaro

LANDSCAPE ARCHITECT
CSW Landscape Architects Limited.
Address: 319 McRae Avenue, Ottawa, ON K1Z 0B9
Tel. 613.729.4536
Architect &
Point of Contact: Christian Matteau

CLIENT
CLV Group Development
Address: 485 Bank St. #200, Ottawa, ON K2P 1Z2
Tel. 905 691 5260
Point of Contact: Jenn Morrison

BUILDER
PBC Development & Construction Management Group Inc.
Address: 200-485 Bank St. Ottawa, ON K2P 1Z2
Tel. 613 739 1307 x226
Point of Contact: Maria Martinez

PROJECT MAILING ADDRESS
145 Loretta Ave N.
Ottawa, ON
K1Y 4W5

ARCHITECTURAL DRAWING LIST

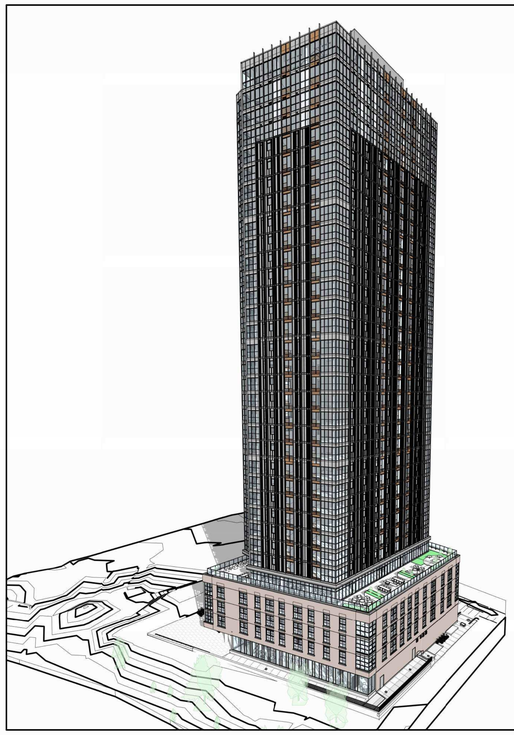
DWG NO.	DRAWING TITLE	REV. DATE
A0 GENERAL		
A0-000	COVER SHEET	25-06-12
A0-100	GENERAL NOTES	25-06-12
A0-200	BUILDING CODE MATRIX, ANALYSIS	25-06-12
A0-201	BUILDING CODE ANALYSIS DRAWINGS	25-06-12
A0-202	BUILDING CODE ANALYSIS DRAWINGS	25-06-12
A0-203	BUILDING CODE ANALYSIS DRAWINGS	25-06-12
A0-204	BUILDING CODE ANALYSIS DRAWINGS	25-06-12
A0-210	BUILDING CODE NOTES	25-06-12
A0-211	BUILDING CODE NOTES	25-06-12
A0-300	ASSEMBLY SCHEDULES	25-06-12
A0-400	WINDOW SCHEDULE	25-06-12
A0-401	WINDOW SCHEDULE	25-06-12
A0-402	WINDOW SCHEDULE	25-06-12
A0-403	WINDOW SCHEDULE	25-06-12
A0-404	WINDOW SCHEDULE	25-06-12
A0-405	WINDOW SCHEDULE	25-06-12
A0-406	WINDOW SCHEDULE	25-06-12
A0-408	WINDOW SCHEDULE COMPONENT DETAILS	25-06-12
A0-500	DOOR TYPES & HARDWARE SCHEDULES	25-06-12
A0-505	DOOR SCHEDULES	25-06-12
A1 SITE		
A1-100	MASTER PLAN (PHASE 1)	25-06-12
A1-101	SITE PLAN (PHASE 1)	25-06-12
A1-103	SITE SECTIONS	25-06-12
A2 FLOOR PLANS		
A2-098	FLOOR PLAN - P3 (FOUNDATION PLAN)	25-06-12
A2-098a	SLAB EDGE PLAN - LEVEL P3	25-06-12
A2-099	FLOOR PLAN - P2	25-06-12
A2-099a	SLAB EDGE PLAN - LEVEL P2	25-06-12
A2-100	FLOOR PLAN - P1	25-06-12
A2-100a	SLAB EDGE PLAN - LEVEL P1	25-06-12
A2-101	FLOOR PLAN - LEVEL 01	25-06-12
A2-101a	SLAB EDGE PLAN - LEVEL 01	25-06-12
A2-102	FLOOR PLAN - LEVEL 02 (PODIUM)	25-06-12
A2-102a	SLAB EDGE PLAN - LEVEL 02	25-06-12
A2-103	FLOOR PLAN - LEVEL 03 (PODIUM)	25-06-12
A2-103a	SLAB EDGE PLAN - LEVEL 03	25-06-12
A2-104	FLOOR PLAN - LEVEL 04 (PODIUM)	25-06-12
A2-104a	SLAB EDGE PLAN - LEVEL 04	25-06-12
A2-105	FLOOR PLAN - LEVEL 05 (PODIUM ROOF AMENITY)	25-06-12
A2-105a	SLAB EDGE PLAN - LEVEL 05	25-06-12
A2-106	FLOOR PLAN - LEVEL 06 - 30 (TYPICAL TOWER)	25-06-12
A2-106a	SLAB EDGE PLAN - LEVEL 06 - 30 (TYPICAL TOWER)	25-06-12
A2-131	FLOOR PLAN - LEVEL 31 - 33 (TYPICAL PENTHOUSE)	25-06-12
A2-131a	SLAB EDGE PLAN - LEVEL 31-33	25-06-12
A2-134	FLOOR PLAN - LEVEL 34 (RESIDENTIAL AND AMENITY SKY LEVEL)	25-06-12
A2-134a	SLAB EDGE PLAN - LEVEL 34	25-06-12
A2-135	FLOOR PLAN - LEVEL 35 (MECHANICAL PENTHOUSE)	25-06-12
A2-135a	SLAB EDGE PLAN - LEVEL 35	25-06-12
A2-136	ROOF PLAN	25-06-12
A2-136a	SLAB EDGE PLANS - ELEVATOR MACHINE ROOM & PENTHOUSE ROOF	25-06-12
A2-201-E	ENLARGED FLOOR PLAN - LEVEL 01	25-06-12
A2-201-W	ENLARGED FLOOR PLAN - LEVEL 01	25-06-12
A2-202-E	ENLARGED FLOOR PLAN - LEVEL 02	25-06-12
A2-202-W	ENLARGED FLOOR PLAN - LEVEL 02	25-06-12
A2-203-E	ENLARGED FLOOR PLAN - LEVEL 03	25-06-12
A2-203-W	ENLARGED FLOOR PLAN - LEVEL 03	25-06-12
A2-204-E	ENLARGED FLOOR PLAN - LEVEL 04	25-06-12
A2-204-W	ENLARGED FLOOR PLAN - LEVEL 04	25-06-12
A2-205-E	ENLARGED FLOOR PLAN - LEVEL 05	25-06-12
A2-205-W	ENLARGED FLOOR PLAN - LEVEL 05	25-06-12
A2-206-E	ENLARGED FLOOR PLAN - LEVEL 06 - 30 (TYPICAL TOWER)	25-06-12
A2-206-W	ENLARGED FLOOR PLAN - LEVEL 06 - 30 (TYPICAL TOWER)	25-06-12
A2-231-E	ENLARGED FLOOR PLAN - LEVEL 31 - 33 (TYPICAL PENTHOUSE)	25-06-12
A2-231-W	ENLARGED FLOOR PLAN - LEVEL 31 - 33 (TYPICAL PENTHOUSE)	25-06-12
A2-234-E	ENLARGED FLOOR PLAN - LEVEL 34 (RESIDENTIAL AND AMENITY SKY LEVEL)	25-06-12
A2-234-W	ENLARGED FLOOR PLAN - LEVEL 34 (RESIDENTIAL AND AMENITY SKY LEVEL)	25-06-12
A2-235-E	ENLARGED FLOOR PLAN - LEVEL 35 (MECHANICAL PENTHOUSE)	25-06-12
A2-235-W	ENLARGED FLOOR PLAN - LEVEL 35 (MECHANICAL PENTHOUSE)	25-06-12
A3 REFLECTED CEILING PLANS		
A3-098	REFLECTED CEILING PLAN - P3	25-06-12
A3-099	REFLECTED CEILING PLAN - P2	25-06-12
A3-100	REFLECTED CEILING PLAN - P1	25-06-12
A3-101	REFLECTED CEILING PLAN - LEVEL 01	25-06-12
A3-102	REFLECTED CEILING PLAN - LEVEL 02 (PODIUM)	25-06-12
A3-103	REFLECTED CEILING PLAN - LEVEL 03 (PODIUM)	25-06-12
A3-104	REFLECTED CEILING PLAN - LEVEL 04 (PODIUM)	25-06-12
A3-105	REFLECTED CEILING PLAN - LEVEL 05 (PODIUM ROOF AMENITY)	25-06-12
A3-106	REFLECTED CEILING PLAN - LEVEL 06 - 30 (TYPICAL TOWER)	25-06-12
A3-131	REFLECTED CEILING PLAN - LEVEL 31 - 33 (TYPICAL PENTHOUSE)	25-06-12
A3-134	REFLECTED CEILING PLAN - LEVEL 34 (RESIDENTIAL AND AMENITY SKY LEVEL)	25-06-12
A3-135	REFLECTED CEILING PLAN - LEVEL 35 (MECHANICAL PENTHOUSE)	25-06-12
A3-201-E	ENLARGED RCP - LEVEL 01 - EAST	25-06-12
A3-201-W	ENLARGED RCP - LEVEL 01 - WEST	25-06-12
A3-202-E	ENLARGED RCP - LEVEL 02 - EAST	25-06-12
A3-202-W	ENLARGED RCP - LEVEL 02 - WEST	25-06-12
A3-203-E	ENLARGED RCP - LEVEL 03 - EAST	25-06-12
A3-203-W	ENLARGED RCP - LEVEL 03 - WEST	25-06-12
A3-204-E	ENLARGED RCP - LEVEL 04 - EAST	25-06-12
A3-204-W	ENLARGED RCP - LEVEL 04 - WEST	25-06-12
A3-205-E	ENLARGED RCP - LEVEL 05 - EAST	25-06-12
A3-205-W	ENLARGED RCP - LEVEL 05 - WEST	25-06-12
A3-206-E	ENLARGED RCP - LEVEL 06 - 30 (TYPICAL TOWER) - EAST	25-06-12
A3-206-W	ENLARGED RCP - LEVEL 06 - 30 (TYPICAL TOWER) - WEST	25-06-12
A3-231-E	ENLARGED RCP - LEVEL 31-33 (TYPICAL PENTHOUSE) - EAST	25-06-12
A3-231-W	ENLARGED RCP - LEVEL 31-33 (TYPICAL PENTHOUSE) - WEST	25-06-12
A3-234-E	ENLARGED RCP - LEVEL 34 (RESIDENTIAL AND AMENITY SKY LEVEL) - EAST	25-06-12
A3-234-W	ENLARGED RCP - LEVEL 34 (RESIDENTIAL AND AMENITY SKY LEVEL) - WEST	25-06-12
A3-235-E	ENLARGED RCP - LEVEL 35 (MECHANICAL PENTHOUSE) - EAST	25-06-12
A3-235-W	ENLARGED RCP - LEVEL 35 (MECHANICAL PENTHOUSE) - WEST	25-06-12
A5 ELEVATIONS		
A5-100	BUILDING ELEVATIONS - WEST AND SOUTH	25-06-12
A5-101	BUILDING ELEVATIONS - EAST AND NORTH	25-06-12
A5-200	ENLARGED ELEVATIONS	25-06-12
A5-201	ENLARGED ELEVATIONS	25-06-12
A5-202	ENLARGED ELEVATIONS	25-06-12
A6 SECTIONS		
A6-100	BUILDING SECTIONS	25-06-12
A6-101	BUILDING SECTIONS	25-06-12
A6-102	ENLARGED SECTIONS - BASEMENT PARKING	25-06-12

ARCHITECTURAL DRAWING LIST

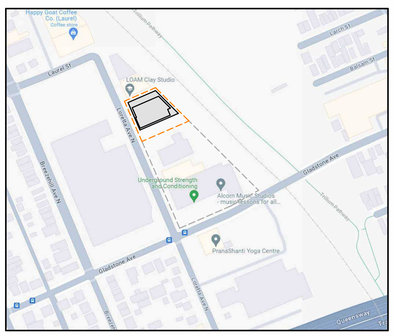
DWG NO.	DRAWING TITLE	REV. DATE
A6-103	ENLARGED SECTIONS - PODIUM	25-06-12
A6-104	ENLARGED SECTIONS - PENTHOUSE LEVELS	25-06-12
A6-200	WALL SECTIONS - BELOW GRADE	25-06-12
A6-201	WALL SECTIONS - BELOW GRADE	25-06-12
A6-202	WALL SECTIONS - BELOW GRADE	25-06-12
A6-205	WALL SECTIONS - PODIUM LEVELS	25-06-12
A6-206	WALL SECTIONS - PODIUM LEVELS	25-06-12
A6-210	WALL SECTIONS - PENTHOUSE LEVELS	25-06-12
A6-300	DETAILS - BELOW GRADE & TYPICAL WATERPROOFING CONDITIONS	25-06-12
A6-305	DETAILS - PODIUM	25-06-12
A6-306	DETAILS - PODIUM	25-06-12
A6-307	DETAILS - PODIUM	25-06-12
A6-308	DETAILS - ENTRANCE CANOPY	25-06-12
A6-310	DETAILS - PENTHOUSE LEVELS	25-06-12
A6-320	INTERIOR DETAILS	25-06-12
A7 VERTICAL CIRCULATION		
A7-100	EXIT STAIRS - ENLARGED PLANS & SECTIONS	25-06-12
A7-101	EXIT STAIRS - ENLARGED PLANS & DETAILS	25-06-12
A7-200	ENLARGED PLANS & SECTIONS AT ELEVATOR HOISTWAY	25-06-12
A7-300	ENLARGED PLANS - CORE	25-06-12
A9 INTERIORS		
A9-010	INTERIOR DETAILS	25-06-12











SITE MAP -PHASE 1

client
CLVGROUP DEVELOPMENTS
CUNLIFFE & ASSOCIATES CONSULTING STRUCTURAL ENGINEERS
structural engineers | ingénieurs structurels
GWAL Goodkey, Weedmark & Associates Ltd.
electrical engineers | ingénieur electrique
mechanical engineer | ingénieur méchanique
wsp
civil engineers | ingénieur civil
CSW
landscape architect | architecte paysagiste

NOT FOR CONSTRUCTION
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no	revisions	date
01	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
14	RE-ISSUED FOR SPA	25-01-31
12	RE-ISSUED FOR SHORING & EXCAV. IFT	24-12-19
11	ISSUED FOR ELEVATOR TENDER	24-12-02
10	ISSUED FOR SHORING & EXCAV. IFP/IFT	24-11-05
9	ISSUED FOR SPA	24-11-20
6	REVISED 33% WORKING DRAWINGS	24-08-19
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
2	RE-ISSUED FOR CLASS 'D' ESTIMATE	24-05-13
1	ISSUED FOR CLASS 'D' ESTIMATE	24-05-17

stamp | timbre

architect | architecte
linebox STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

COVER SHEET

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 1000**
date | date	**02/15/24**

drawing number | numéro du dessin

A0-000

Autodesk Docs://Gladstone & Loretta/2402- 145 Loretta CLV -LB Tower A.rvt
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GENERAL NOTES

1. CONSTRUCTION MANAGER & SUB-CONTRACTORS TO VERIFY ALL DIMENSIONS ON SITE, REPORT TO THE OWNER AND ARCHITECT ON ANY DISCREPANCIES BETWEEN THE EXISTING SITE CONDITIONS AND THE FINAL DRAWINGS PRIOR TO CONTINUING CONSTRUCTION.
2. CONSTRUCTION MANAGER & SUB-CONTRACTORS TO BE RESPONSIBLE FOR CONFORMANCE OF WORKMANSHIP, MATERIALS, AND METHODS.
3. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH THE 2024 ONTARIO BUILDING CODE AND LOCAL AUTHORITIES HAVING JURISDICTION.
4. CONSTRUCTION MANAGER & SUB-CONTRACTORS TO CHECK AVAILABILITY OF ALL MATERIALS AND REPORT ANY DISCONTINUATIONS OR DELAYS TO THE OWNER AND ARCHITECT.
5. CONSTRUCTION MANAGER TO CLEAN ALL WINDOWS, FLOORS, ETC. AT THE COMPLETION OF CONSTRUCTION.
6. CONSTRUCTION MANAGER TO OBTAIN AND BE FAMILIAR WITH ALL REQUIRED TESTING AND REPORTS DURING THE PROGRESS OF THE WORK.
7. FINISH MATERIALS TO MEET 2024 ONTARIO BUILDING CODE REQUIREMENTS FOR FLAME SPREAD RATINGS AND SMOKE DEVELOPED CLASSIFICATION.
8. ALL INTERIOR FURNISHINGS ARE BY THE TENANT UNLESS OTHERWISE NOTED.
9. SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION OF ALL ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL ITEMS.
10. SEE ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR BASE BUILDING RELEVANT NOTES AND DETAILS.
11. REFER TO MECHANICAL & ELECTRICAL DRAWINGS FOR HEATING, VENTILATION, AIR CONDITIONING, LIGHTS, AND SPRINKLERS.
12. ALL CONSTRUCTION TO CONFORM TO 2024 ONTARIO BUILDING CODE SECTION 3.8 BARRIER-FREE DESIGN.
13. CAULK AND SEAL ALL AROUND OPENINGS AT PENETRATIONS. SUBMIT SHOP DRAWINGS FOR ALL FIRE STOP SYSTEMS AT PENETRATIONS IN FIRE SEPARATIONS AND ASSEMBLIES WITH FIRE RESISTANCE RATINGS.
14. FOR ALL ELECTRICAL, AV & MECHANICAL EQUIPMENT MOUNTING HEIGHTS REFER TO ENGINEERING DRAWINGS.
15. ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS ARE COMPLEMENTARY. ANYTHING SHOWN ON ARCHITECTURAL DRAWINGS AND NOT SHOWN ON STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS OR VISE VERSA, SHALL BE INTERPRETED AS BEING SHOWN ON ALL FOUR. NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH WORK.
16. DO NOT SCALE DRAWINGS
17. ALL STEEL STUDS TO BE DESIGNED, WITH STAMPED DRAWINGS ISSUED BY PROFESSIONAL ENGINEER LICENSED IN ONTARIO - SUBMIT SHOP DRAWINGS
18. CONCRETE FLOORS TO BE SMOOTH & LEVEL WITH A MAXIMUM DEVIATION OF 1/2 INCH IN 20 FEET READY TO ACCEPT TENANT'S FLOOR FINISH MATERIAL UNLESS NOTED OTHERWISE ON FLOOR PLAN OR SPECIFICATIONS - TO COMPLY WITH TENANTS REQUIREMENTS.
19. SEE DOOR SCHEDULE FOR DOOR & FRAME TYPE, SIZE & HARDWARE.
20. METAL ROOF DECK CEILING TO BE SUITABLE FOR PAINT WITHOUT ADDITIONAL PREPARATION BY TENANT
21. CLIENT TO OBTAIN A SEPARATE PERMIT REGARDING EXTERIOR SIGNAGE, IF REQUIRED.
22. SHOP QUALITY SPRINKLER DRAWINGS COMPLETE WITH HYDRAULIC CALCULATIONS TO BE SUBMITTED TO THE CITY UNDER SEPARATE COVER BY THE SUCCESSFUL CONTRACTOR'S SPRINKLER SYSTEM DESIGN ENGINEER WHEREVER SPRINKLERS ARE REQUIRED.
23. USE HILTI FS601 OR FS-ONE FLEXIBLE FIRE STOP AT TOP OF ALL FIRE RATED WALLS AT ROOF DECKS AND WALL PENETRATIONS TO SUIT RATING OF WALL (TYP.)
24. 50mm METAL STRAPS @ 600 o.c AT ALL DOUBLE WALL CONSTRUCTION TO SECURE BATT INSULATION IN PLACE.
25. ALL STEEL STRUCTURAL MEMBERS TO BE WITHIN STUD CAVITIES
26. PIPING, TUBING, DUCTS, CHIMNEYS, OPTICAL FIBRE CABLES, ELECTRICAL WIRES AND CABLES, TOTALLY ENCLOSED NON-COMBUSTIBLE RACEWAYS, ELECTRICAL OUTLET BOXES AND OTHER SIMILAR BUILDING SERVICES THAT PENETRATE A MEMBRANE FORMING PART OF AN ASSEMBLY REQUIRED TO HAVE A FIRE-RESISTANCE RATING, OR A FIRE SEPARATION, SHALL BE SEALED BY A FIRE STOP SYSTEM.
27. AT ALL TRANSITIONS OF MATERIALS, JOINTS TO BE CAULKED c/w BACKER ROD
28. WRAP ENTIRE PERIMETER OF ROUGH OPENINGS WITH PEEL AND STICK MEMBRANE BEFORE INSTALLATION OF WINDOW AND DOOR FRAMES.
29. PROVIDE 12.7mm EXTERIOR GRADE PLYWOOD @ ALL SIGNAGE, AWNINGS, LIGHT FIXTURE LOCATIONS, AND GAS PIPES UNLESS OTHERWISE NOTED. PROVIDE WOOD BLOCKING FOR ALL WASHROOM FIXTURES, ELECTRICAL & MECHANICAL FIXTURES WHERE APPLICABLE (TYP.)
30. CONSTRUCTION MANAGER & SUB-CONTRACTORS TO ENSURE THAT FIRE RATING OF DEMISING WALLS IS NOT ALTERED FROM THE DESIGNATED WALL CONSTRUCTION LISTED
31. GAS PIPES TO BE PAINTED SAME COLOR AS WALL OR CEILING ON WHICH THEY ARE MOUNTED. w/ YELLOW STRIPES SPACED @ 4'-0" FROM EACH OTHER
32. WHERE FIRE RATED WALL RUNS PERPENDICULAR TO METAL DECK, DRYWALL TO FOLLOW DECK CONTOUR c/w 12mm TO 20mm GAP. FILL ALL VOIDS WITH FIRE STOP MINERAL WOOL AND FIRE STOP CAULKING/SPRAY TO MAINTAIN WALL FIRE RATING.
33. HORIZONTAL JOINT @ DEFLECTION TRACK CAULKING TO MAINTAIN FIRE RATING (TYP.)
34. VERTICAL DRYWALL CONTROL JOINT TO BE @ EVERY STEEL COLUMN TYP. (SEE SPECIFICATIONS)
35. PAINT EXTERIOR H.M. DOOR EDGES
36. GRADES SHOWN ON FLOOR PLANS, ELEVATIONS, AND SECTION DATUM TAGS ARE FOR REFERENCE ONLY. CONSTRUCTION MANAGER IS TO CONFIRM AND COORDINATE ALL GRADES WITH GRADING PLAN.
37. SUB-CONTRACTOR TO BOX IN ALL ELEC. & MECH. SERVICES NOT CONCEALED IN WALLS UNLESS OTHERWISE NOTED. PROVIDE ACCESS PANELS WHERE APPLICABLE.
38. SUB-CONTRACTOR TO CLEAN (SCRAPE AND VACUUM) BOTTOM OF STUD TRACK BEFORE BATT TYPE INSULATION INSTALLATION.
39. REFER TO WALL TYPES, ULC MANUAL, AND OBC DRAWINGS FOR ALL FIRE RATINGS REQUIRED FOR ALL INTERIOR AND EXTERIOR WALLS. NO SUBSTITUTIONS FOR GYPSUM BOARD LISTED IN THE ULC MANUAL FOR THE FIRE RATED WALLS.
40. FIRE STOP NOTE: FOR ALL DOUBLE STUD WALLS WITHIN AN AIR SPACE MORE THAN 25mm - PROVIDE 12.7 EXTERIOR GRADE GYPSUM WALL BOARD FIRE STOP @ 3m o.c. VERTICAL INTERVALS x 20m o.c. HORIZONTAL INTERVALS OR FILL CAVITY WITH BATT TYPE INSULATION.

NOTES: ONTARIO BUILDING CODE
INTERIOR FINISHES:

ALL SURFACES FOR EXIT STAIRS, LOBBIES (ELEVATOR), SERVICE ROOMS MEET:
- FLAME SPREAD RATING: 25
- SMOKE DEVELOPED RATING: 50

10% MAX. OF A SURFACE WITHIN AN EXIT OR LOBBY:
- FLAME SPREAD RATING: 150
- SMOKE DEVELOPED RATING: 300

ALL OTHER WALLS:
- FLAME SPREAD RATING: 150
- SMOKE DEVELOPED RATING: 0

COMBUSTIBLE CEILING FINISHES:
- FLAME SPREAD RATING: 25

GENERAL NOTES FOR RESIDENTIAL SUITES

BATHROOMS:
*PROVIDE WOOD BLOCKING BEHIND TOILETS & BATHTUBS TO PROVIDE FOR FUTURE GRAB BARS & ACCESSORIES. SEE TYPICAL SUITE ELEVATIONS & DETAILS.

*BATHROOM VANITY w/ RECESSED SINK & BASE CABINETS ARE TYPICAL. COORDINATE WIDTH.

*COORDINATE ANY RECESSED CABINETS TO BE RECEIVED IN WALL W/ MILLWORK DRAWINGS. COORDINATE SIZE (SPEC. TBD)

*COORDINATE TOWEL BAR(S), TOILET PAPER DISPENSER LOCATIONS.

*DIMENSIONS OF TUB/SHOWER SUIT TO FIT MANUFACTURER.

*PROVIDE WOOD BLOCKING SUPPORT FOR OPTIONAL FUTURE GRAB BARS TOWEL BAR & DISPENSERS.

*ALL WALLS & CEILINGS IN WET AREAS TO HAVE MOLD RESISTANT GYPSUM BOARD - INCLUDING BUT NOT LIMITED TO WASHROOMS, JANITOR'S CLOSETS, DOG WASH STATION, KITCHEN AREAS IN AMENITY SPACES.

*SUITE WASHROOM WALL STUD FRAMING TO BE FILLED TO ABOVE CEILING w/ SOUND BATT (TYPICAL)

KITCHEN:
KITCHENS SHOWN FOR GENERAL LAYOUT. CABINETRY & COUNTER-TOP STYLE, FINISHES, HARDWARE, ETC. TBD. PROVIDE SHOP DRAWINGS FOR ARCHITECT'S APPROVAL.

*PROVIDE REQ'D BACKING AS PER MANUF. SPEC

LAUNDRY/ WASHER/DRYER CLOSET
*COORDINATE DIMENSIONS & CLEARANCES REQUIRED FOR WASHER/ DRYER UNIT, PLUMBING CONNECTIONS, & DOOR FRAME CLEARANCE (TYPICAL)

*FLOOR DRAIN TO BE INSTALLED IN LAUNDRY ROOM (TYPICAL) REFER TO MECH/ ELECT. DWGS.

*COORDINATE 'FLOOD SAVER' OR APPROVED EQUAL (REFER TO MECHANICAL)

GENERAL NOTES FOR SLAB EDGE DRAWINGS

1. FOR STAIR OPENINGS AND SLAB EDGE DETAILS REFER TO THE PRECAST STAIR SHOP DRAWINGS.
2. FOR ELEVATOR SHAFT OPENING REFER TO ELEVATOR SHOP DRAWINGS.
3. FOR DUCT/SHAFT OPENING AND PENETRATIONS THROUGH WALLS & FLOORS, REFER TO MECHANICAL, PLUMBING & ELECTRICAL DRAWINGS. COORDINATE ALL PENETRATIONS FOR LIGHTING w/ ELECTRICAL ENGINEERS DRAWINGS PRIOR TO CONSTRUCTION OF FLOOR SLABS.
4. FOR DOOR AND WINDOW OPENINGS THROUGH WALLS, CHECKS IN FLOORS, ELEMENTS TO BE CAST INTO FLOORS - COORDINATE WITH OTHER ARCHITECTURAL DRAWINGS, SPECIFICATIONS AND DOOR AND WINDOW SHOP DRAWINGS.
5. PROVIDE POCKETS FOR PRECAST ANCHORS & OTHER EMBEDS FOR OTHER SYSTEMS. FOR LOCATIONS AND DETAILS COORDINATE WITH SHOP DRAWINGS.
6. ALL STRUCTURAL WALL THICKNESSES, COLUMN SIZES AND BEAM SIZES TO BE CONFIRMED BY STRUCTURAL DRAWINGS.
7. FOR ROOF ANCHORS AND DAVIT BASES ON ROOF SLAB REFER TO ROOF ANCHOR SYSTEM PLAN FOR LOCATIONS AND DETAILS.
8. REFER TO LANDSCAPE DRAWINGS FOR PLANTER WALL DETAILS AND DIMENSIONS.

10.ALL NOTCHES SHOWN FOR CURTAIN WALL & WINDOW WALL CONNECTION LOCATIONS ARE STRICTLY DIAGRAMMATIC. CONFIRM ALL LOCATIONS WITH CURTAIN WALL SHOP DRAWINGS PRIOR TO CONSTRUCTION OF SLAB

DENOTES SLOPE DIRECTION OF CONCRETE SLAB

DENOTES **TOP OF STRUCTURAL SLAB (T.S.S.)**

GENERAL NOTES FOR WALLS WITH S.T.C. RATINGS

1. WALLS MUST EXTEND SLAB TO SLAB.
2. THERE IS TO BE A MINIMUM AMOUNT OF STUDS PER WALL. (NO ADDITIONAL STUDS SHOULD BE INSTALLED)
3. MAXIMUM THICKNESS OF STUDS IN WALLS WITH A SINGLE ROW OF STUDS TO BE 25 Ga.
4. INNER AND OUTER LAYERS OF DRYWALL SHOULD HAVE NO GAPS OVER 6 MM.
5. INNER LAYERS SHOULD BE TAPED BUT NOT SANDED.
6. JOINTS IN GYPSUM LAYERS MUST BE STAGGERED.
7. FIRE RATED CAULKING SHOULD BE USED AS THE PRIMARY SEALANT.
8. FIRE RATED CAULKING SHOULD BE DONE ON ALL LAYERS OF DRYWALL AROUND ENTIRE PERIMETER EXCEPT AT DRYWALL JOINTS.
9. FIRE RATED CAULKING ON ANY GAP OVER 6 MM MUST BE OVER ROD BACKUP. BUT GAPS OVER 6 MM ARE TO BE AVOIDED.
10. ELECTRICAL BOXES ON OPPOSING FACES OF THE WALL SHOULD BE LOCATED IN SEPARATE STUD CAVITIES & A MINIMUM OF 600 mm APART.
11. FIT DRYWALL TIGHTLY WITHIN 6 MM OF ALL SERVICES INCLUDING ELECTRICAL BOXES FOR EACH DRYWALL LAYER.
12. ALL ELECTRICAL SERVICES IN PARTY WALLS SHOULD HAVE BACK BOXES.
13. FIBERGLASS OR MINERAL FIBER BATT SHOULD BE RUN BEHIND AND AROUND ALL ELECTRICAL BOXES.
14. ALL PENETRATIONS THROUGH RATED WALLS MUST BE SEALED AIR-TIGHT WITH A COMBINATION OF JOINT COMPOUND AND CAULKED
15. NO DRYWALL IS TO PASS BETWEEN ROOMS. FOR EXAMPLE DRYWALL IS TO BE BROKEN (SEPARATED) AT TEES, CROSS AND CORNER JUNCTIONS. THIS AVOIDS A DIRECT LINK BETWEEN THE TWO ROOMS WHICH WOULD DECREASES STC RATINGS CONSIDERABLY.
16. BLOCKING INSTALLED IN THE DEMISING WALLS SHOULD NOT BRIDGE THE TWO FACES OF THE WALLS, BUT BE INSTALLED ONLY ON THE FACE OF THE STUDS ACCEPTING THE CABINETRY
17. BLOCKING FOR CABINETS WILL BE REPLACING PART OF THE INNER LAYER OF A DOUBLE LAYER DRYWALL WALL WITH PLYWOOD. WHEREVER PLYWOOD IS USED INSTEAD OF DRYWALL, SEAL ALL AROUND THE PLYWOOD TO THE ADJACENT DRYWALL.
18. BATT TYPE INSULATION FOR INTERIOR WALLS MAY BE MINERAL WOOL OR FIBERGLASS - AT OWNER'S DISCRETION

GENERAL NOTES FOR ROOF PLANS

DRAINAGE:
- CO-ORD ROOF DRAIN LOCATIONS AS SHOWN W/ MECH. DWGS.
- SLOPE CONCRETE TOPPING TO DRAIN AS INDICATED ON ROOF PLANS. CO-ORD W/ STRUCT DWGS, NOTING MINIMUM & MAXIMUM SLAB THICKNESSES.
- FORM CRICKETS AS REQ'D TO ACHIEVE POSITIVE DRAINAGE AROUND ANY AND ALL CURBS & OBSTRUCTIONS TO DRAINAGE.
- ENSURE THAT RAIN WATER LEADERS ARE GROUPED (SEE MECH. DWGS).

ROOF ASSEMBLY:
PROVIDE MANUF SPECS & DETAILS FOR APPROVAL BY ARCHITECT, FOR ENTIRE NEW ROOF SYSTEM. SEE TYP SECT. DETAILS.
SEE MECH /ELECT DWGS FOR ROOF EQUIPMENT OPENINGS, CURBS, ETC & ROOF MEMBRANE MANUFACTURER'S INSTALLATION DETAILS /SPECS AT ALL LOCATIONS.

WARRANTY:
- PROVIDE WRITTEN WARRANTY FROM BOTH THE ROOFING CONTRACTOR & THE ROOFING MEMBRANE MANUFACTURER. CO-ORD WITH OWNER FOR REQUIREMENTS. THIS WARRANTY SHALL COVER BOTH MATERIALS & WORKMANSHIP FOR ALL COMPONENTS OF THE ROOFING SYSTEM INCLUDING, BUT NOT LIMITED TO ROOF MEMBRANE, FLASHING, MECHANICAL & ELECTRICAL EQUIPMENT PENETRATIONS AND TERMINATIONS W/ OTHER ELEMENTS OF THE BUILDING ENVELOPE SYSTEM.

- COORDINATE PRO BEL SAFETY ROOF ANCHORS W/ STRUCTURAL ENGINEERING DRAWINGS FOR REQUIRED STRUCTURAL CONNECTIONS

- REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS

GENERAL NOTES FOR FLOOR FINISH PLANS

1. ALL WALL TILE LOCATIONS TO BE SHOWN ON INTERIOR ELEVATIONS AND ALL RELATED DETAILING ON ARCHITECTURAL DRAWINGS.
2. ALL FLOORING MATERIALS AND RELATED WALL TILES TO BE INSTALLED IN FULL ACCORDANCE WITH SPECIFICATIONS AND RELATED ARCHITECTURAL DETAILS.
3. METAL TRANSITION STRIPS ARE TO BE SUPPLIED AND INSTALLED AT ALL TRANSITIONS BETWEEN DISSIMILAR FLOOR FINISHES AS PER SPECIFICATIONS.
4. TILE EDGING STRIPS ARE TO BE USED AT ALL TILE EDGES AS NOTED IN SPECIFICATIONS.
5. ALL FLOORING MATERIALS ARE TO BE INSTALLED ONLY ONCE ALL SUBFLOOR CONDITIONS ENSURING PROPER INSTALLATION ARE MET (INCLUDING ALL REQUIRED FLOOR LEVELING ON STRUCTURE).
6. ANY FLOORING MATERIALS EXHIBITING IMPROPER ADHESION, SIGNS OF TELEGRAPHING, CALENDERING, OR IRREGULARITIES THROUGH THE FINISHED SUBFLOOR, ETC, MAY BE DEEMED UNSUITABLE - REQUIRING RECTIFICATION TO THE ARCHITECT'S STANDARDS.
7. EXTEND ALL FLOORING UNDER MILLWORK IN COMMON BUILDING AREAS
8. FLOOR MATERIAL HATCHES ARE NOT INDICATIVE OF PATTERN. SEE FLOORING MATERIAL LEGEND FOR NOTES ON INSTALLATION
9. ALL FINISHING PRODUCING NOXIOUS OR IRRITATING FUMES OR ODORS (ELECTROSTATIC PAINTING, FLOOR FINISHES, ETC.) SHALL BE DONE ONLY AFTER BUILDING MANAGEMENT REVIEW AND ONLY AFTER BUSINESS HOURS.
10. ALL VCT, RUBBER, & OTHER HARD SURFACE FLOORING TO BE PREPPED AND SEALED TO MANUFACTURERS' RECOMMENDATIONS
11. REFER TO ARCHITECTURAL SPECIFICATIONS FOR MORE NOTES ON FLOOR FINISHES

FIRE STRATEGY LEGEND

- 00 min (0HR)
- 60 min (1.0HR)
- 90 min (1.5HR)
- 120 min (2.0HR)
- 180 min (3.0HR)
- TRAVEL DISTANCE
- SEPARATION DISTANCE BETWEEN EXITS
- DEAD END TRAVEL DISTANCE
- FIRE HOSE LENGTH

MATERIAL NOTES

ALUMINUM	PLASTER / MORTAR / GROUT
BATT / FIBRE INSULATION	PLYWOOD
BRICK	PRECAST (CONCRETE)
CONCRETE	RIGID INSULATION
CONCRETE BLOCK	SEMI-RIGID INSULATION
EARTH	STEEL
GLASS	STONE
GRAVEL	TILE
GYPSUM BOARD	WOOD
MDF	

SYMBOL LEGEND

DRAWING TITLE	1 / A101 View Name, View Scale, A202 — DRAWING NUMBER, SCALE, SOURCE DRAWING, DRAWING NUMBER
CALLOUT	1 / A101 — REFERENCE DRAWING, DRAWING NUMBER
SECTION MARKER	1 / A101 — SECTION / VIEW NUMBER, SECTION REFERENCING SHEET
EXTERIOR ELEVATION MARKER	1 / A101 — ELEVATION / VIEW NUMBER, ELEVATION REFERENCING SHEET
INTERIOR ELEVATION MARKER	1, 2, 3, 4, A101 — ELEVATION / VIEW NUMBER, INTERIOR ELEVATION REFERENCING SHEET
GRID BUBBLE	0
ELEVATION DATUM	DATUM NAME 146.070m
ROOM TAG	ROOM NAME 101
MATERIAL/FIXTURE TAG	XX-##
DOOR TAG	XXXX
GYPSUM WALL TAG	
FLOOR/ROOF TAG	XX
WINDOW TAG	1t
SHEET NOTE	X.#
SPOT ELEVATION MARKER	
FLOOR TRANSITION	TX
WALL FINISH INDICATOR	WALL FINISH / BASE FINISH (BASE TYPE)

ABBREVIATIONS

ACT	ACOUSTIC CEILING TILE	MAX	MAXIMUM
AL	ALUMINUM	MECH	MECHANICAL
AFL	ACCESS FLOOR	MEMB	MEMBRANE
AVB	AIR / VAPOUR BARRIER	MIN	MINIMUM
		MIRR	MIRROR
CIP	CAST IN PLACE	MTL	METAL
CLG	CEILING		
CLR	CLEAR	NIC	NOT IN CONTRACT
CONT	CONTINUOUS	NTS	NOT TO SCALE
COORD	COORDINATE		
CORR	CORRIDOR	OC	ON CENTER
CP	CARPET	OPG	OPENING
CPT	CARPET TILE		
CRK	CORK	PCC	PRECAST CONCRETE
CT	CERAMIC TILE	PE	PASSENGER ELEVATOR
		PERF	PERFORATED
DEMO	DEMOLITION	PLAM	PLASTIC LAMINATE
DET	DETAIL	PLAS	PLASTIC
DIFF	DIFFUSER	PLYWD	PLYWOOD
DIM	DIMENSION	POL	POLISHED
DR	DOOR	PREFAB	PREFABRICATED
DWG	DRAWING	PREFIN	PREFINISHE
		PT	PAINT
EA	EACH		
ELEC	ELECTRIC	RA	RETURN AIR
EL	ELEVATION	RB	RUBBER BASE
ELEV	ELEVATOR	RBF	RUBBER FLOORING
EOS	EDGE OF SLAB	RC	REINFORCED CONCRETE
EQ	EQUAL	RCP	REFLECTED CEILING PLAN
EXIST	EXISTING	REINF	REINFORCE
EXT	EXTERIOR	REQD	REQUIRED
		RF	RESINOUS FLOORING
FD	FLOOR DRAIN	RM	ROOM
FE	FIRE EXTINGUISHER	RO	ROUGH OPENING
FEC	FIRE EXTINGUISHER CABINET	RSO	ROUGH STEEL OPEINING
FF	FINISH FACE	RVL	REVEAL
FFL	FINISH FLOOR LEVEL		
FHC	FIRE HOSE CABINET	SA	SUPPLY AIR
FIN	FINISH	SE	SERVICE ELEVATOR
FIXT	FIXTURE	SF	SQUARE FOOT (FEET)
FLR	FLOOR	SIM	SIMILAR
FLR FIN	FLOOR FINISH	SPKR	SPEAKER
FOF	FACE OF FINISH	SPKLR	SPRINKLER
FOG	FACE OF GLASS	SQ	SQUARE
FOS	FACE OF STUD	SS	SOLID SURFACE
FOW	FACE OF WALL	SSL	STRUCTURAL SLAB LEVEL
FP	FIRE PROOFING	SST	STAINLESS STEEL
FRR	FIRE RESISTANCE RATER	ST	STONE
FR	FRAME	STC	SOUND TRANSMISSION CLASS
FT	FEET	STL	STEEL
FURN	FURNITURE	STRUCT	STRUCTURAL
		SUSP	SUSPENDED
GALV	GALVANIZED		
GE	GENERAL EXHAUST	TA	TOILET ACCESSORY
GL	GLASS	TER	TERRAZZO
GLZ	GLAZING	TG	TEMPERED GLASS
GRL	GRILLE	T&G	TONGUE AND GROOVE
GYP	GYPSUM BOARD	THRES	THRESHOLD
		TL	TILE
HDWD	HARDWOOD	TMPD	TEMPERED
HM	HOLLOW METAL	TOL	TOP OF LANDING
HMAI	HOLLOW METAL ACOUSTICALLY INSULATED	TOS	TOP OF SLAB
		TOW	TOP OF WALL
HMD	HOLLOW METAL DOOR	TP	TRANSITION POINT
HMF	HOLLOW METAL FRAME	TYP	TYPICAL
HORIZ	HORIZONTAL		
HP	HEIGH POINT	U/S	UNDERSIDE OF
HT	HEIGHT	UNO	UNLESS NOTED OTHERWISE
INSUL	INSULATION	VB	VINYL BASE
INTER	INTERMEDIATE	VCT	VINYL COMPOSITE TILE
		VERT	VERTICAL
JAN	JANITOR	VEST	VESTIBULE
JB	JAMBOARD	VIF	VERIFY IN FIELD
JT	MATERIAL JOINT	VR	VAPOR RETARDER
		VYL	VINYL
KIT	KITCHEN		
KTT	KTICHENETTE	WC	WALL COVERING
		WCST	WAINSCOT
LIN	LINEAR	WD	WOOD
LP	LOW POINT	WDF	HARDWOOD WOOD FLOORING
		WDV	WOOD VENEER
		WP	WORKING POINT
		WPM	WATERPROOF MEMBRANE

CLVGROUP DEVELOPMENTS
client

CUNLIFFE & ASSOCIATES CONSULTING STRUCTURAL ENGINEERS
structural engineers | ingénieurs structurels

GWAL Goodkey, Weedmark & Associates Ltd.
electrical engineers | ingénieur electrique
mechanical engineer | ingénieur méchanique

wsp
civil engineers | ingénieur civil

CSW
landscape architect | architecte paysagiste

nord du projet / project north — nord reel / true north

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	25-06-12
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
2	RE-ISSUED FOR CLASS 'D' ESTIMATE	24-05-13
1	ISSUED FOR CLASS 'D' ESTIMATE	24-05-17

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architect | architecte
linebox STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet
GLADSTONE AND LORETTA RESIDENTIAL TOWER
145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin
GENERAL NOTES

project number | numero du projet	2402
drawn | dessiné	JH / DL / PC / JP
checked | verifié	JP / AR
scale | échelle	As indicated
date | date	02/15/24
drawing number | numéro du dessin	A0-100

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
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GENERAL NOTES FOR RESIDENTIAL SUITES

ADDITIONAL CONSTRUCTION REQUIREMENTS:
(GENERAL FIRE SAFETY)

** NOTE: GENERAL NOTES TO BE READ IN CONJUNCTION WITH BUILDING CODE ANALYSIS DRAWINGS. NOTIFY ARCHITECT OF ANY DISCREPENCY*

-ALL CANOPY STRUCTURES ARE TO BE OF 'NON-COMBUSTIBLE' CONSTRUCTION, HOWEVER, O.B.C. 3.1.5.2. & 3.1.5.3 PERMITS MINOR COMBUSTIBLE COMPONENTS.

-ALL GROUP - 'C' RESIDENTIAL USE DWELLING UNITS/SUITES ARE TO BE SEPARATED FROM EACH OTHER, AND THE REMAINDER OF THE BUILDING BY 1 HOUR 'FIRE SEPARATIONS' (MIN.) AS PER O.B.C. - 3.3.4.2.(2)

-ALL CORRIDORS HAVE BEEN DESIGNED TO MEET REQUIREMENTS INCLUDING:
- I. MINIMUM REQUIRED WIDTH
- II. SMOKE DETECTORS
- III. EMERGENCY LIGHTING
- IV. MINIMUM LIGHTING LEVELS
- V. FLAME SPREAD RATINGS
- VI. VISUALLY AND PHYSICALLY OPEN
- VII. MAXIMUM TRAVEL DISTANCE
- VIII. NO FUEL-FIRED APPLIANCES
- IX. NO DEAD-END PORTION WITHOUT SECOND MEANS OF EGRESS

-'COMMON TENANT STORAGE AREAS' HAVE BEEN SEPARATED FROM REMAINING FLOOR AREAS BY ONE(1) HOUR FIRE SEPARATIONS (MIN.) AS PER O.B.C. - 3.3.4.3.(2)

-'ELEVATOR HOISTWAYS' HAVE BEEN SEPARATED FROM REMAINING FLOOR AREAS BY 1.5 HOUR FIRE SEPARATIONS (MIN.) AS PER O.B.C. - TABLE 3.5.3.1.

-'VERTICAL SERVICE SPACES' ARE TO BE SEPARATED FROM ALL OTHER PORTIONS OF EACH ADJACENT STOREY BY 1 HOUR FIRE SEPARATIONS AS PER O.B.C-TABLE 3.6.3.1.

-'MECHANICAL ROOMS' HAVE BEEN SEPARATED FROM REMAINING FLOOR AREAS BY ONE(1) HOUR FIRE SEPARATION (MIN.), AS PER O.B.C. - 3.6.2.1.(1)(3)

-'ELECTRICAL ROOM' HAS BEEN SEPARATED FROM REMAINING FLOOR AREAS BY ONE(1) HOUR FIRE SEPARATION (MIN.) AS PER O.B.C. - 3.6.2.1.(6)

-'REFUSE STORAGE ROOM' **c/w** CHUTE DISCHARGE TO BE SPRINKLERED AND SEPARATED FROM THE REMAINDER OF THE BUILDING BY TWO(2) HOUR FIRE SEPARATION (MIN.) AS PER O.B.C. - 3.6.3.3.(9)
--'REFUSE STORAGE ROOM' **WITHOUT** CHUTE DISCHARGE HAVE BEEN SEPARATED BY ONE(1) HOUR FIRE SEPARATION (MIN.) AS PER O.B.C. - 3.6.2.5.

-ALL DOORS, AND MECHANICAL DUCTS THAT PENETRATE A REQUIRED FIRE SEPARATION SHALL CONFORM TO O.B.C. TABLE 3.1.8.4. FOR THE REQUIRED CORRESPONDING FIRE RATING AS INDICATED (INCLUDES FIRE DAMPERS AS PER O.B.C. - 3.1.8.7)

-REFER TO O.B.C. - 3.1.8.8 TO CONFIRM EXEMPTIONS FOR SPECIFIC FIRE DAMPERS (AT UNRATED FIRE SEPARATIONS IF APPLICABLE).

-MAXIMUM OPENING SIZES WITHIN ALL REQUIRED FIRE SEPARATIONS ARE NOT TO EXCEED THE DIMENSIONS AS PER O.B.C. - 3.1.8.6.(2)

FIRE ALARM AND DETECTION SYSTEMS;
-'FIRE ALARM SYSTEM' IS REQUIRED AS PER O.B.C. - 3.2.4.1.(1)(4)(C), ETC

-HEAT DETECTORS WILL NOT BE REQUIRED WITH THE PROVISION OF ELECTRICALLY-SUPERVISED 'SPRINKLER SYSTEM' AS PER O.B.C. - 3.2.4.12 (3.2.4.9.)

-'FIRE DETECTORS' TO BE LOCATED IN ALL STORAGE ROOMS, SERVICE ROOMS, JANITOR'S ROOMS, ELEVATORS, AS PER O.B.C. - 3.2.4.10.(2), UNLESS THE FLOOR AREA IS SPRINKLERED, AS PER O.B.C. 3.2.4.10.(3)

-'SMOKE DETECTORS' ARE TO BE INSTALLED WITHIN EACH PUBLIC CORRIDOR, ELEVATOR MACHINE ROOM, AND EXIT STAIRS AS PER O.B.C. - 3.2.4.11.(1)(d)(e)(g)

-'MANUAL PULL STATIONS' ARE TO BE LOCATED AS PER O.B.C. - 3.2.4.16.

ADDITIONAL REQUIREMENTS FOR HIGH BUILDING
-BUILDING DESIGNED IN CONFORMANCE OF HIGH BUILDING REQUIREMENTS AS PER O.B.C. 3.2.6.1.(D)

-BUILDING TO SATISFY ALL 'REQUIREMENTS COMMON TO ALL MEASURES FOR FIRE SAFETY IN HIGH BUILDINGS' AS PER SECTION 2 OF OBC - MMAH SUPPLEMENTARY STANDARDS SB-4

-BUILDING TO SATISFY 'MEASURE A - FULLY SPRINKLERED BUILDING' AS PER SECTION 2 OF OBC - MMAH SUPPLEMENTARY STANDARDS SB-4

-'CONTROL OF SMOKE MOVEMENT' TO BE ACHIEVED BY ADHERANCE TO O.B.C. 3.2.6.2.(1)-(5)

-ELEVATORS TO BE DESIGNED AND OPERATIONAL TO SATISFY THE REQUIREMENTS OF O.B.C. 3.2.6.4. 'EMERGENCY OPERATION OF ELEVATORS'

-PROVIDE ALL REQUIREMENTS FOR 'ELEVATOR FOR USE BY FIREFIGHTERS' AS PER O.B.C. 3.2.6.5.

-'VENTING TO AID FIREFIGHTING' HAS BEEN DESIGNED AS PER O.B.C. 3.2.6.6.

-'CENTRAL ALARM AND CONTROL FACILITY' TO BE CONSTRUCTED AS PER O.B.C. 3.2.6.7.

-'VOICE COMMUNICATION SYSTEM' TO CONFORM TO O.B.C. 3.2.4.22. - SHALL BE PROVIDED AS PER O.B.C. 3.2.6.8.

-'TESTING OF SMOKE CONTROL AND MECHANICAL VENTING' SHALL BE CONDUCTED AFTER OCCUPANCY AS PER O.B.C. 3.2.6.9.

EMERGENCY LIGHTING;
-TO BE PROVIDED AND LOCATED AS PER O.B.C. - 3.2.7.3.

STANDPIPE SYSTEM;
-IS REQUIRED AS PER O.B.C. - 3.2.5.8

FLAME SPREAD RATINGS;
-REQUIREMENTS FOR FLAME SPREAD RATINGS ARE TO BE SATISFIED WITH RESPECT TO LOCATIONS AS SPECIFIED BY O.B.C. - 3.1.13.2 (INCL. TABLE 3.1.13.2).

REQUIREMENTS FOR EXITING;
-OVERALL BUILDING 'REQUIRED EXIT CAPACITIES' HAVE BEEN PROVIDED AS PER O.B.C. - 3.4

-AT LEAST 2 'EXIT STAIRS' HAVE BEEN PROVIDED AND LOCATED TO SATISFY THE REQUIREMENTS OF O.B.C. - 3.4.2.1.(1) (MIN. NUMBER OF EXITS), 3.4.4.4. (INTEGRITY OF EXITS), AND 3.4.2.5.(1)(C) (MAXIMUM 45M TRAVEL DISTANCE).

-ENSURE REQUIRED EXITING 'DOOR SWING' DIRECTIONS AT ALL (HORIZONTAL EXITS) LOCATIONS, AND PROVIDE 'EXIT SIGNS' AS PER O.B.C. - 3.4.5.1

-'MINIMUM WIDTHS' FOR ALL 'EXIT STAIRS' HAVE BEEN DESIGNED AS PER O.B.C. - 3.4.3.1., 3.4.3.2 & 3.4.3.3

-'MINIMUM WIDTHS' FOR 'ACCESS TO EXIT' CORRIDORS WHICH SERVE GROUP 'C' FLOOR AREAS HAVE BEEN PROVIDED AS PER THE REQUIREMENTS OF O.B.C.

-'MINIMUM DOOR WIDTHS' FOR ALL EXITS SERVING GROUP -'C' FLOOR AREAS HAVE BEEN PROVIDED AS PER O.B.C.

(NOTE:)
-REFER TO O.B.C. - 3.3.1.13.(1) TO CONFIRM MIN. REQUIRED DOOR WIDTHS AT OTHER LOCATIONS AS INDICATED.

-'HANDRAIL' & 'GUARD' DETAILS ARE TO SATISFY THE REQUIREMENTS OF O.B.C. - 3.4.6.5. & 3.4.6.6.

-IDENTIFICATION OF FLOOR LEVELS AND STAIR DESIGNATION IS TO BE PROVIDED FOR BOTH SIDES OF ALL DOORS INTO EXIT STAIRS AS PER O.B.C. - 3.4.6.19.(1) & (2).

ELEVATOR REQUIREMENTS;
-TO SATISFY THE REQUIREMENTS FOR 'ELEVATORS' AS PER O.B.C. - 3.5.2 INCLUDING;

-ELEVATOR TO BE DESIGNED TO SATISFY 'BARRIER-FREE' REQUIREMENTS OF O.B.C. - 3.8.3.5.

SOUND TRANSMISSION:
-SOUND TRANSMISSION CLASS (S.T.C.) MIN. RATINGS ARE TO BE PROVIDED FOR ALL 'DWELLING UNIT /SUITES' AS PER O.B.C. - 3.3.4.6.(1) - REFER TO SECTION #5 / 5.8

-MINIMUM 55 STC FROM ELEVATOR AREAS TO FLOOR AREAS AS PER O.B.C. 5.8.1.1.(2)

-MINIMUM 50 STC FROM ALL OTHER AREAS

-REFER TO GENERAL NOTES FOR WALLS WITH STC RATINGS FOR MORE INFORMATION

WINDOW REQUIREMENTS;
-PROTECTION IS TO BE PROVIDED AT 'WINDOWS' LOCATED WITHIN ALL DWELLING UNIT/SUITES AS PER O.B.C. - 3.7.2.1.

-PROPOSED INTERIOR 'WIRED GLASS ASSEMBLIES' ARE TO MEET THE REQUIREMENTS OF O.B.C. - 3.1.8.16. (APPLICABLE TO ONE-HOUR MAX. FIRE SEPARATIONS ONLY). (REFER ALSO TO 5.8.-2.3.15)

-PROTECTION OF 'OPENINGS' WITHIN 'FIRE SEPARATIONS' WITH REQUIRED FIRE RATINGS EXCEEDING ONE-HOUR ARE TO BE PROTECTED BY CLOSURES (FIRE SHUTTERS) WITH FIRE RATINGS AS REQUIRED BY O.B.C. - 3.1.8.4.(2).

BARRIER-FREE REQUIREMENTS;
-'BUILDING ENTRANCES' (INCLUDING 'VESTIBULE' DOORS) ARE TO PROVIDE FOR 'BARRIER-FREE' ACCESS AS PER, O.B.C. - 3.8.1.2. AND 3.8.3.3.(5) & (6) (POWER OPERATORS).

-'BARRIER-FREE PATH OF TRAVEL' MIN. WIDTHS HAVE BEEN PROVIDED AS PER O.B.C. 3.8.1.3. AT ALL LOCATIONS AS CONFIRMED BY O.B.C. - 3.8.2.1.(1) AND (2).

(NOTE:)
-A 'BARRIER FREE' PATH OF TRAVEL IS NOT REQUIRED WITHIN INDIVIDUAL DWELLING UNIT/SUITES OF RESIDENTIAL OCCUPANCY AS EXEMPTED BY O.B.C. - 3.8.2.1.(3) (J).

- 15% OF **CONDOMINIUM** SUITES REQUIRED TO BE PROVIDED WITH A BARRIER FREE PATH OF TRAVEL INTO AT LEAST THE FOLLOWING SPACES
  - AT LEAST ONE BEDROOM
  - AT LEAST ONE BATHROOM
  - THE KITCHEN
  - A LIVING ROOM OR SPACE

AS PER O.B.C. 3.8.2.1.(5)

- UNITS REQUIRED TO BE BARRIER FREE HAVE BEEN DISTRIBUTED BETWEEN STOREYS AS PER 3.8.2.1.(8).

WASHROOM REQUIREMENTS;
- EACH 'DWELLING UNIT /SUITE' HAS BEEN PROVIDED W/ PLUMBING FACILITIES AS PER O.B.C. - 3.7.4.5.

SPATIAL SEPARATION AND EXPOSURE PROTECTION;
(NOTES:)
-ALL DWELLING UNIT/SUITES HAVE BEEN SEPARATED BY 45 MINUTE FIRE COMPARTMENTS (MIN.) AS PER O.B.C. - 3.2.3.2.(2).

-AS PER O.B.C. - TABLE 3.2.3.1.D., 'UNPROTECTED OPENINGS' ARE PERMITTED AS DESIGNED & OUTLINED IN MATRIX CALCULATIONS & NO 'SPECIAL CONSTRUCTION ' IS REQUIRED AS PER O.B.C. 3.2.3.7.

DESIGN OF 'DWELLING UNITS'
- RESIDENTIAL FLOORS DESIGNED TO MEET THE REQUIREMENTS OF SECTION 3.3.4.

- DESIGN TO MEET THE REQUIREMENTS OF SECTION 9.5 AND THE WINDOW AREAS OF 3.7.2.1

- - - - - - - - - - - - - - - - - - END OF O.B.C. ANALYSIS. - - - - - - - - - - - - - - - - - -

BUILDING CODE: PART 3 DATA MATRIX

Name of Practice: **Stamp:**
LINEBOX STUDIO INC.
Certificate of Practice Number:
116 Ligar Street suite 110 - Ottwa, ON, K2P 0C2
613.216.2609

Name of Project:
Gladstone & Loretta - Residential Tower A

Location:
145 Loretta Avenue N, Ottawa Ontario, Canada, K1Y 4W5

Item	Ontario Building Code Data Matrix Part 3		Building Code Reference To Division B unless noted (A) for Division A or (C) for Division C
3.00	Building Code Version: O. Reg. 203/24 Last Amendment: O. Reg. 203/24		
3.01	Project Type:	☒ New Construction ☐ Addition ☐ Renovation ☐ Change of Use ☐ Addition & Renovation Description: New 35 Storey Multi-Unit Residential Building	(A) 1.1.2.2.
3.02	Major Occupancy Classification(s):	Occupancy: Use Group C Apartments Storage Garage	3.1.2.
3.03	Superimposed Major Occupancies:	☒ No ☐ Yes Description: New 35 Storey Multi-Unit Residential Building	3.2.2.7.
3.04	Building Area (m²)	Description: Existing New Total Group C 0 1284 1284 0 0 0 0 1284 1284 Total	(A) 1.4.1.2.
3.05	Gross Area (m²)	Description: Existing New Total Level 1 0 1,133 1,133 Levels 2-4 0 1,284 (x3) 3,852 Level 5 0 784 784 Levels 6-30 0 853 (x25) 21,325 Levels 31-34 0 841 (x4) 3,364 Level 35 (Penthouse) 0 215 215 Total 0 30,673 30,673	(A) 1.4.1.2.
3.06	Gross Area (m²)	Description: Existing New Total Level 0 0 0 0 0 0 Total	3.2.1.1.
3.07	Building Height	34 Storeys above grade 111 (m) Above grade 3 Storeys below grade	(A) 1.4.1.2. & 3.2.1.1.
3.08	High Building	☐ No ☒ Yes	3.2.6.
3.09	Number of Streets/ Firefighter Access	1 Street(s)	3.2.2.10. & 3.2.5.
3.10	Building Classification (Size & Construction Relative to Occupancy)	3.2.2.47. Group/Div. C, Any Height, Any Area, Sprinklered (not a retirement home)	3.2.2.20-83.
3.11	Sprinkler System	☒ Required ☐ Not Required Provided: ☒ Entire Building ☐ Selected Compartments ☐ Selected Floor Areas ☐ Basement ☐ In Lieu of Roof Rating ☐ None Description:	3.2.1.5. & 3.2.2.17., 3.2.2.18., 3.2.4.8. to 3.2.4.10., & 3.2.5.13.
3.12	Standpipe System	☒ Required ☐ Not Required	3.2.5.9.
3.13	Fire Alarm System	☒ Required ☐ Not Required Type Provided: ☐ Single Stage ☐ Two Stage ☐ None	3.2.4.
3.14	Water Service/Supply is Adequate	☐ No ☒ Yes	3.2.5.7.
3.15	Construction Type:	Restriction: ☐ Combustible permitted ☒ Non-combustible required ☐ Encapsulated mass timber Actual: ☐ Combustible ☒ Non-combustible ☐ Combination of combustible & non-combustible ☐ Encapsulated mass timber ☐ Combination of encapsulated mass timber & non-combustible Heavy Timber Construction: ☒ No ☐ Yes	3.2.2.20.-83. & 3.2.1.4.
3.16	Importance Category:	☐ Low ☐ Low human occupancy ☐ Post-disaster shelter ☒ Normal ☐ High ☐ Minor storage building ☐ Explosive or hazardous substances ☐ Post-disaster	4.1.2.1.(3) & 14.1.2.1.8
3.17	Seismic Hazard Index:	(Is Fa Sa (0.2))= ____ Seismic design required for Table 4.1.8.18. items 6 to 21: (Is Fa Sa (0.2)) ≥ 0.35 or Post-disaster) ☐ No ☒ Yes	4.1.2.1.(3) 4.1.8.18.(1)
3.18	Occupant Load	Floor Level/Area — Occupancy Type — Based On — Occupant Load (Persons) — Posted Limit Required P3 - Storage Garage — F3 — - — ppl — Yes/No P2 - Storage Garage — F3 — - — ppl — Yes/No P1 - Storage Garage — F3 — - — ppl — Yes/No L 1 — — — — ppl — Yes/No L 2 & 3 - Dwelling Units — C — 2/BR — ppl (eq. fir) — No L 4 - Amenity/Dwellings — A2/C — # m²/psn / 2/BR — ppl — Yes/No L 5 - Amenity Areas — A2 — # m²/psn — ppl — Yes/No L 6 to 30 - Dwelling Units — C — 2/BR — ppl (eq. fir) — No L 31 to 33 - Dwelling Units — C — 2/BR — ppl (eq. fir) — No L 34 - Amenity/Dwellings — A2/C — # m²/psn / 2/BR — ppl — Yes/No L 35 - Mechanical P.H. — — — — ppl — Yes/No	3.1.17.
3.19	Barrier-free Design: Barrier-free Entrances:	☒ Yes ☐ No — — Number: 3 — —	3.8. 3.8.1.2.
3.20	Hazardous Substances:	☐ Yes ☐ No — —	3.3.1.2. & 3.3.1.21.
3.21	Required Fire Resistance Ratings	Horizontal Assembly — Rating (Hr) — Supporting Assembly (Hr) — Noncombustible in lieu of ratings? Storeys below grade 2 2 ☒ No ☐ Yes ☐ N/A Floors over basement 2 2 ☒ No ☐ Yes ☐ N/A Floors 2 2 ☒ No ☐ Yes ☐ N/A Mezzanine 1 1 ☒ No ☐ Yes ☐ N/A Roof 0 0 ☐ No ☐ Yes ☒ N/A	3.2.2.20.-83., 3.2.1.2., 3.2.1.4., 3.2.2.15.
3.22a	Spatial Separation	Exposing Building Face — EBF Area (m²) — L.D. (m) — L/H or H/L — Required FRR (Hr) — % Unprotected Openings Permitted — % Unprotected Openings Provided North — — 3 — N/A — — — — East — — 2 — N/A — — — — South — — 11.9 — N/A — — — — West — — 13.5 — N/A — — — —	3.2.3.
3.22b	Spatial Separation Continued	EBF (repeated) — Construction Type (provided) — Cladding Type (provided) North — Noncombustible — ☐ Noncombustible East — Noncombustible — ☐ Noncombustible South — Noncombustible — ☐ Noncombustible West — Noncombustible — ☐ Noncombustible	
3.23a	Plumbing Fixture Requirements	Ratio: Male:Female = 50:50 Except as noted otherwise Floor Level/Area — Occ. Load — OBC Ref. — WCs Req. — WCs Provided L 1 Amenity — # — - — # — # L 2 & 3 - Dwelling Units — # — 3.7.4.5. — # — # L 4 - Amenity — # — — # — # L 4 - Dwelling Units — # — 3.7.4.5. — # — # L 5 - Amenity — # — — # — # L 6 to 30 - Dwelling Units — # — 3.7.4.5. — # — # L 27 to 33 - Dwelling Units — # — 3.7.4.5. — # — # L 34 - Amenity — # — — # — # L 34 - Dwellings Units — # — 3.7.4.5. — # — #	3.7.4., 3.8.2.3.
3.23a	Plumbing Fixture Requirements continued:	Floor Level/Area (repeated) — Barrier-free WCs Req. — Barrier-free WCs Provided — Universal WRs Req. — Universal WRs Provided L 1 Amenity — # — # — # — # L 4 - Amenity — # — # — # — # L 5 - Amenity — # — # — # — # L 30 - Amenity — # — # — # — #	3.8.2.3.A & 3.8.2.3.B
3.24	Energy Efficiency:	Compliance Path: 2015 NECB Div. B Part 8 "Building Energy Performance Compliance Path" & MMA SB-10 Ch. 3 Climate Zone: 6 Degree Days Below 18° C: 4,440	12.2.1.2. SB-1 Table 2
3.25	Sound Transmission Design:	More than 1 dwelling unit per building: ☒ Yes ☐ No Option Implemented: Typical unit demising SB-3 Assembly 55b Notes: See Assembly Schedules for other conditions, incl. elevator separation from units.	SB-3, 5.8.1.2.(2), 5.8.1.4., & 5.8.1.5.

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 2:26:52 PM

21 RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20 ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19 ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18 ISSUED FOR 65% WD & CLIENT BUDGETING	25-03-28
4 ISSUED FOR 33% WORKING DRAWINGS	24-08-12
no revisions	date

stamp | timbre

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

BUILDING CODE MATRIX, ANALYSIS

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 1**
date | date	**02/15/24**

drawing number | numéro du dessin

A0-200

Autodesk Docs://Gladstone & Loretta/2402-145 Loretta CLV JJR Tower A.rvt
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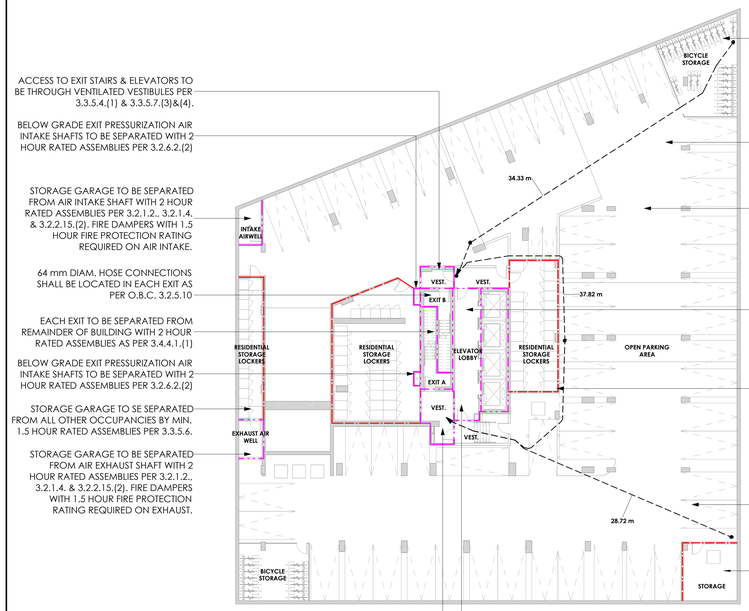


ACCESS TO EXIT STAIRS & ELEVATORS TO BE THROUGH VENTILATED VESTIBULES PER 3.3.5.4.(1) & 3.3.5.7.(3)&(4).

BELOW GRADE EXIT PRESSURIZATION AIR INTAKE SHAFTS TO BE SEPARATED WITH 2 HOUR RATED ASSEMBLIES PER 3.2.6.2.(2)

STORAGE GARAGE TO BE SEPARATED FROM AIR INTAKE SHAFT WITH 2 HOUR RATED ASSEMBLIES PER 3.2.1.2., 3.2.1.4. & 3.2.2.15.(2). FIRE DAMPERS WITH 1.5 HOUR FIRE PROTECTION RATING REQUIRED ON AIR INTAKE.

64 mm DIAM. HOSE CONNECTIONS SHALL BE LOCATED IN EACH EXIT AS PER O.B.C. 3.2.5.10

EACH EXIT TO BE SEPARATED FROM REMAINDER OF BUILDING WITH 2 HOUR RATED ASSEMBLIES AS PER 3.4.4.1.(1)

BELOW GRADE EXIT PRESSURIZATION AIR INTAKE SHAFTS TO BE SEPARATED WITH 2 HOUR RATED ASSEMBLIES PER 3.2.6.2.(2)

STORAGE GARAGE TO SE SEPARATED FROM ALL OTHER OCCUPANCIES BY MIN. 1.5 HOUR RATED ASSEMBLIES PER 3.3.5.6.

STORAGE GARAGE TO BE SEPARATED FROM AIR EXHAUST SHAFT WITH 2 HOUR RATED ASSEMBLIES PER 3.2.1.2., 3.2.1.4. & 3.2.2.15.(2). FIRE DAMPERS WITH 1.5 HOUR FIRE PROTECTION RATING REQUIRED ON EXHAUST.

ACCESS TO EXIT STAIRS & ELEVATORS TO BE THROUGH VENTILATED VESTIBULES PER 3.3.5.4.(1) & 3.3.5.7.(3)&(4).

TRAVEL DISTANCE TO AN EXIT FROM STORAGE ROOMS TO BE MAX 45m AS PER 3.4.2.5.(c)

STORAGE GARAGE PERMITTED TO HAVE RESTRICTED HEADROOM AS PER 3.3.1.8. AREAS WITH < 1980 mm HEADROOM TO BE SECTIONED OFF WITH GUARD RAIL PER 3.8.1.3.(5)&(6).

STORAGE GARAGE TO BE SEPARATED FROM FLOORS ABOVE GRADE AND OTHER FLOORS OF STORAGE GARAGE BY 2 HOUR RATED ASSEMBLIES PER 3.2.1.2., 3.2.1.4. & 3.2.2.15.(2).

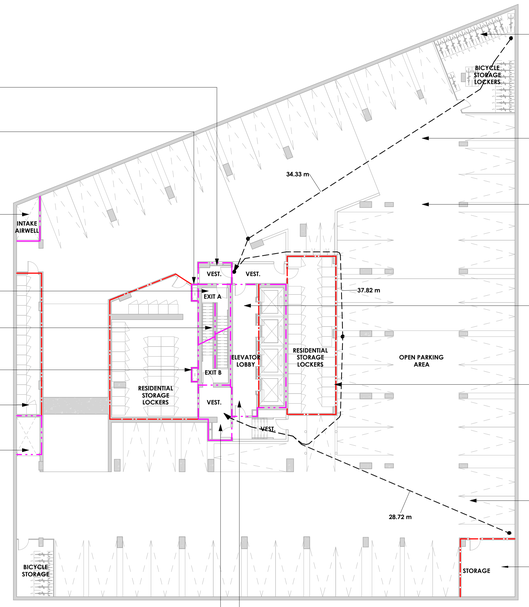
VESTIBULE ACCESSING ELEVATOR AT STOREYS BELOW GRADE TO BE SEPARATED FROM REMAINDER OF BUILDING WITH MIN. 2 HOUR RATED ASSEMBLY AS PER 3.2.6.2.(4), MMAH SUP. STD SB-4 [3.2.6.2.(4)] (1)(b), 3.4.4.1. & 3.2.2.47.

STORAGE GARAGE TO SE SEPARATED FROM ALL OTHER OCCUPANCIES BY MIN. 1.5 HOUR RATED ASSEMBLIES PER 3.3.5.6.

REFER TO ELEC. LIGHTING DRAWINGS FOR ALL EXIT SIGNS, INCL. DIRECTIONAL SIGNALS.

STORAGE GARAGE TO BE SEPARATED FROM ALL OTHER OCCUPANCIES BY MIN. 1.5 HOUR RATED ASSEMBLIES PER 3.3.5.6.

1 A0-201 BUILDING CODE PLAN - P3
1 : 200
A0-204



ACCESS TO EXIT STAIRS & ELEVATORS TO BE THROUGH VENTILATED VESTIBULES PER 3.3.5.4.(1) & 3.3.5.7.(3)&(4).

BELOW GRADE EXIT PRESSURIZATION AIR INTAKE SHAFTS TO BE SEPARATED WITH 2 HOUR RATED ASSEMBLIES PER 3.2.6.2.(2)

STORAGE GARAGE TO BE SEPARATED FROM AIR INTAKE SHAFT WITH 2 HOUR RATED ASSEMBLIES PER 3.2.1.2., 3.2.1.4. & 3.2.2.15.(2). FIRE DAMPERS WITH 1.5 HOUR FIRE PROTECTION RATING REQUIRED ON AIR INTAKE.

64 mm DIAM. HOSE CONNECTIONS SHALL BE LOCATED IN EACH EXIT AS PER O.B.C. 3.2.5.10

EACH EXIT TO BE SEPARATED FROM REMAINDER OF BUILDING WITH 2 HOUR RATED ASSEMBLIES AS PER 3.4.4.1.(1)

BELOW GRADE EXIT PRESSURIZATION AIR INTAKE SHAFTS TO BE SEPARATED WITH 2 HOUR RATED ASSEMBLIES PER 3.2.6.2.(2)

STORAGE GARAGE TO SE SEPARATED FROM ALL OTHER OCCUPANCIES BY MIN. 1.5 HOUR RATED ASSEMBLIES PER 3.3.5.6.

STORAGE GARAGE TO BE SEPARATED FROM AIR EXHAUST SHAFT WITH 2 HOUR RATED ASSEMBLIES PER 3.2.1.2., 3.2.1.4. & 3.2.2.15.(2). FIRE DAMPERS WITH 1.5 HOUR FIRE PROTECTION RATING REQUIRED ON EXHAUST.

ACCESS TO EXIT STAIRS & ELEVATORS TO BE THROUGH VENTILATED VESTIBULES PER 3.3.5.4.(1) & 3.3.5.7.(3)&(4).

TRAVEL DISTANCE TO AN EXIT FROM STORAGE ROOMS TO BE MAX 45m AS PER 3.4.2.5.(c)

STORAGE GARAGE PERMITTED TO HAVE RESTRICTED HEADROOM AS PER 3.3.1.8. AREAS WITH < 1980 mm HEADROOM TO BE SECTIONED OFF WITH GUARD RAIL PER 3.8.1.3.(5)&(6).

STORAGE GARAGE TO BE SEPARATED FROM FLOORS ABOVE GRADE AND OTHER FLOORS OF STORAGE GARAGE BY 2 HOUR RATED ASSEMBLIES PER 3.2.1.2., 3.2.1.4. & 3.2.2.15.(2).

VESTIBULE ACCESSING ELEVATOR AT STOREYS BELOW GRADE TO BE SEPARATED FROM REMAINDER OF BUILDING WITH MIN. 2 HOUR RATED ASSEMBLY AS PER 3.2.6.2.(4), MMAH SUP. STD SB-4 [3.2.6.2.(4)] (1)(b), 3.4.4.1. & 3.2.2.47.

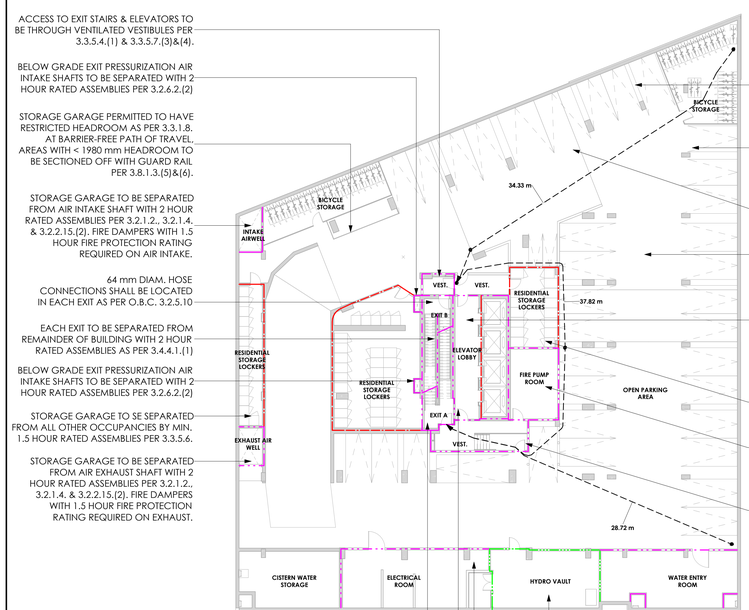
STORAGE GARAGE TO SE SEPARATED FROM ALL OTHER OCCUPANCIES BY MIN. 1.5 HOUR RATED ASSEMBLIES PER 3.3.5.6.

REFER TO ELEC. LIGHTING DRAWINGS FOR ALL EXIT SIGNS, INCL. DIRECTIONAL SIGNALS.

STORAGE GARAGE TO BE SEPARATED FROM ALL OTHER OCCUPANCIES BY MIN. 1.5 HOUR RATED ASSEMBLIES PER 3.3.5.6.

2 A0-201 BUILDING CODE PLAN - P2
1 : 200
A0-204

00 min (0HR)
60 min (1.0HR)
90 min (1.5HR)
120 min (2.0HR)
180 min (3.0HR)
TRAVEL DISTANCE
SEPARATION DISTANCE BETWEEN EXITS
DEAD END TRAVEL DISTANCE
FIRE HOSE LENGTH



ACCESS TO EXIT STAIRS & ELEVATORS TO BE THROUGH VENTILATED VESTIBULES PER 3.3.5.4.(1) & 3.3.5.7.(3)&(4).

BELOW GRADE EXIT PRESSURIZATION AIR INTAKE SHAFTS TO BE SEPARATED WITH 2 HOUR RATED ASSEMBLIES PER 3.2.6.2.(2)

STORAGE GARAGE PERMITTED TO HAVE RESTRICTED HEADROOM AS PER 3.3.1.8. AT BARRIER-FREE PATH OF TRAVEL, AREAS WITH < 1980 mm HEADROOM TO BE SECTIONED OFF WITH GUARD RAIL PER 3.8.1.3.(5)&(6).

STORAGE GARAGE TO BE SEPARATED FROM AIR INTAKE SHAFT WITH 2 HOUR RATED ASSEMBLIES PER 3.2.1.2., 3.2.1.4. & 3.2.2.15.(2). FIRE DAMPERS WITH 1.5 HOUR FIRE PROTECTION RATING REQUIRED ON AIR INTAKE.

64 mm DIAM. HOSE CONNECTIONS SHALL BE LOCATED IN EACH EXIT AS PER O.B.C. 3.2.5.10

EACH EXIT TO BE SEPARATED FROM REMAINDER OF BUILDING WITH 2 HOUR RATED ASSEMBLIES AS PER 3.4.4.1.(1)

BELOW GRADE EXIT PRESSURIZATION AIR INTAKE SHAFTS TO BE SEPARATED WITH 2 HOUR RATED ASSEMBLIES PER 3.2.6.2.(2)

STORAGE GARAGE TO SE SEPARATED FROM ALL OTHER OCCUPANCIES BY MIN. 1.5 HOUR RATED ASSEMBLIES PER 3.3.5.6.

STORAGE GARAGE TO BE SEPARATED FROM AIR EXHAUST SHAFT WITH 2 HOUR RATED ASSEMBLIES PER 3.2.1.2., 3.2.1.4. & 3.2.2.15.(2). FIRE DAMPERS WITH 1.5 HOUR FIRE PROTECTION RATING REQUIRED ON EXHAUST.

ACCESS TO EXIT STAIRS & ELEVATORS TO BE THROUGH VENTILATED VESTIBULES PER 3.3.5.4.(1) & 3.3.5.7.(3)&(4).

PARKING GARAGE TO BE DEEMED AS SERVICE ROOM FOR THE PURPOSES OF TRAVEL DISTANCE AS PER 3.4.2.4.(3)

REFER TO ELEC. LIGHTING DRAWINGS FOR ALL EXIT SIGNS, INCL. DIRECTIONAL SIGNALS.

HEADROOM FROM PARKING ENTRACE TO BARRIER-FREE PARKING SPACES TO BE MIN. 2100 mm PER 3.8.2.2.(2).

STORAGE GARAGE TO BE SEPARATED FROM FLOORS ABOVE GRADE AND OTHER FLOORS OF STORAGE GARAGE BY 2 HOUR RATED ASSEMBLIES PER 3.2.1.2., 3.2.1.4. & 3.2.2.15.(2).

VESTIBULE ACCESSING ELEVATOR AT STOREYS BELOW GRADE TO BE SEPARATED FROM REMAINDER OF BUILDING WITH MIN. 2 HOUR RATED ASSEMBLY AS PER 3.2.6.2.(4), MMAH SUP. STD SB-4 [3.2.6.2.(4)] (1)(b), 3.4.4.1. & 3.2.2.47.

STORAGE GARAGE TO SE SEPARATED FROM ALL OTHER OCCUPANCIES BY MIN. 1.5 HOUR RATED ASSEMBLIES PER 3.3.5.6.

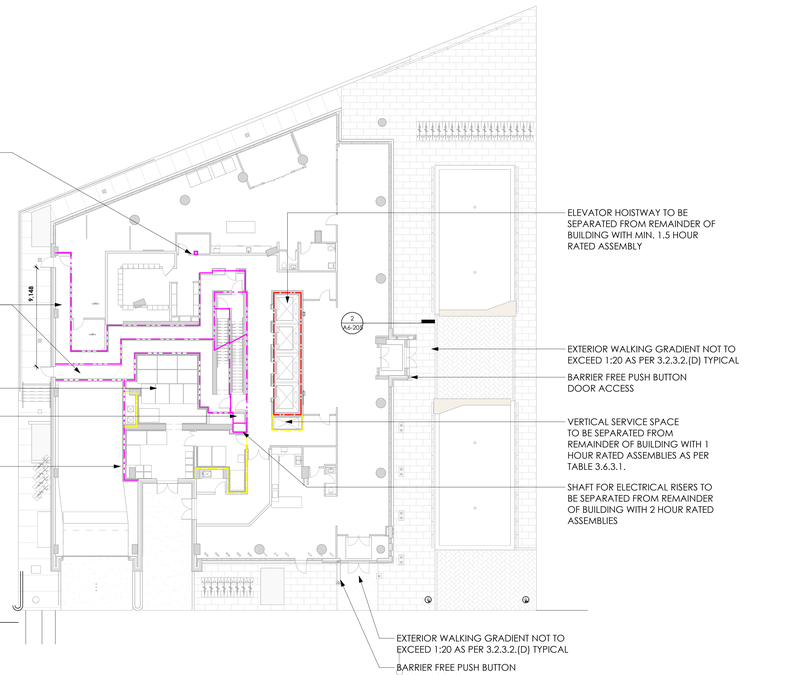
FIRE PUMP ROOM TO BE SEPARATED FROM REMAINDER OF FLOOR AREA BY 2 HOUR RATED ASSEMBLIES PER NFPA20 4.13.1.1.1. & O.B.C. 3.6.2.1.(4)

FIRE PUMP ROOM TO BE ACCESSIBLE THROUGH ENCLOSED PASSAGEWAY LEADING FROM EXIT, SEPARATED FROM REMAINDER OF FLOOR AREA BY 2 HOUR RATED ASSEMBLIES PER NFPA20 4.13.2.1.1. & 4.13.2.1.2.

ELECTRICAL VAULT TO BE SEPARATED BY REMAINDER OF BUILDING BY SOLID MASONRY/CONCRETE ASSEMBLIES WITH 3 HOUR RATING.

ELECTRICAL ROOM TO BE SEPARATED FROM REMAINING FLOOR AREAS BY A MIN. OF 2 HOUR FIRE RATING PER 3.2.7.

3 A0-201 BUILDING CODE PLAN - P1
1 : 200
A0-204



VENTILATED SHAFT FOR NATURAL GAS PIPE SERVING GENERATOR FOR EMERGENCY POWER TO BE SEPARATED FROM REMAINDER OF BUILDING WITH 2 HOUR FIRE RATED ASSEMBLIES

EXITS TO BE SEPARATED FROM REMAINDER OF BUILDING WITH 2 HOUR RATED ASSEMBLIES AS PER 3.4.4.1.

GARBAGE ROOM NOT CONTAINING REFUSE CHUTE TO BE SEPARATED FROM REMAINDER OF BUILDING WITH 1 HOUR RATED ASSEMBLIES AS PER OBC 3.6.2.5.

64 mm DIAM. HOSE CONNECTIONS SHALL BE LOCATED IN EACH EXIT AS PER O.B.C. 3.2.5.10

STORAGE GARAGE TO BE SEPARATED FROM FLOORS ABOVE GRADE AND OTHER FLOORS OF STORAGE GARAGE BY 2 HOUR RATED ASSEMBLIES PER 3.2.1.2., 3.2.1.4. & 3.2.2.15.(2).

ELEVATOR HOISTWAY TO BE SEPARATED FROM REMAINDER OF BUILDING WITH MIN. 1.5 HOUR RATED ASSEMBLY

EXTERIOR WALKING GRADIENT NOT TO EXCEED 1:20 AS PER 3.2.3.2.(D) TYPICAL

BARRIER FREE PUSH BUTTON DOOR ACCESS

VERTICAL SERVICE SPACE TO BE SEPARATED FROM REMAINDER OF BUILDING WITH 1 HOUR RATED ASSEMBLIES AS PER TABLE 3.6.3.1.

SHAFT FOR ELECTRICAL RISERS TO BE SEPARATED FROM REMAINDER OF BUILDING WITH 2 HOUR RATED ASSEMBLIES

EXTERIOR WALKING GRADIENT NOT TO EXCEED 1:20 AS PER 3.2.3.2.(D) TYPICAL

BARRIER FREE PUSH BUTTON DOOR ACCESS

4 A0-201 BUILDING CODE PLAN - LEVEL 01
1 : 200
A0-204

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nord du projet
project north

nord reel
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no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-19~~
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12

stamp | timbre

architect | architecte
linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

BUILDING CODE ANALYSIS DRAWINGS

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 200**
date | date	**07/16/24**

drawing number | numéro du dessin

A0-201

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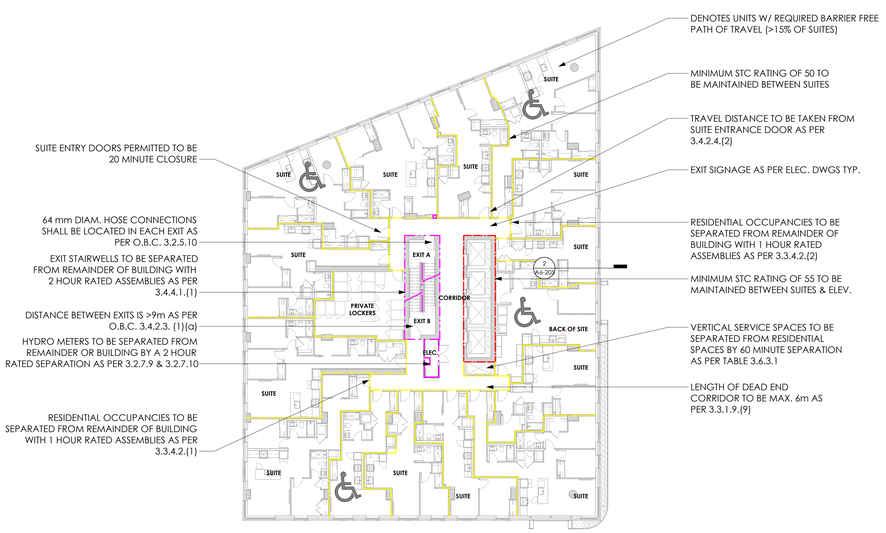

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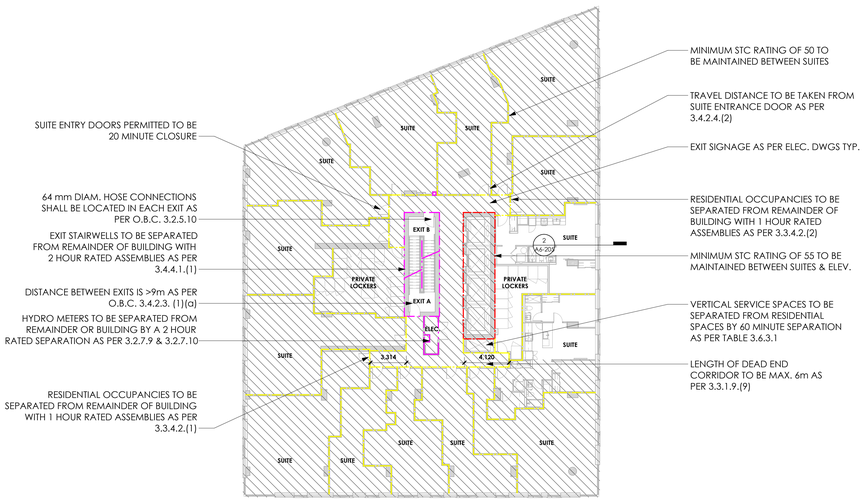
1 : 200
A0-204



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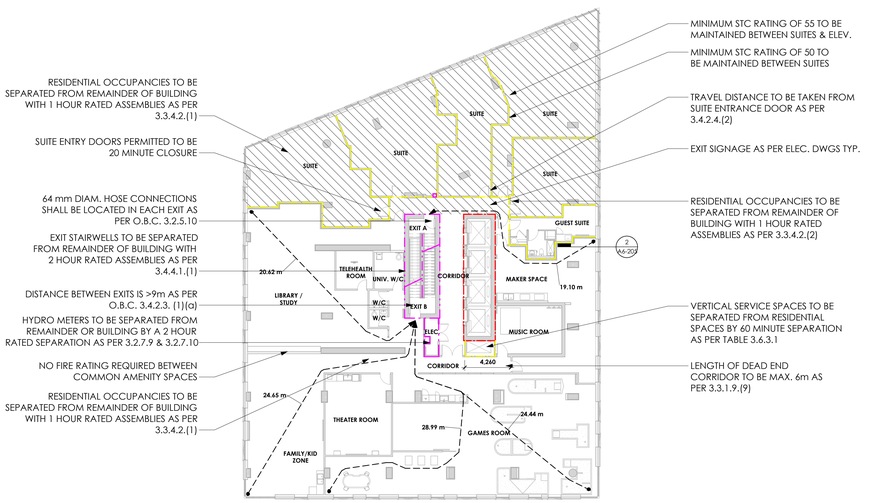
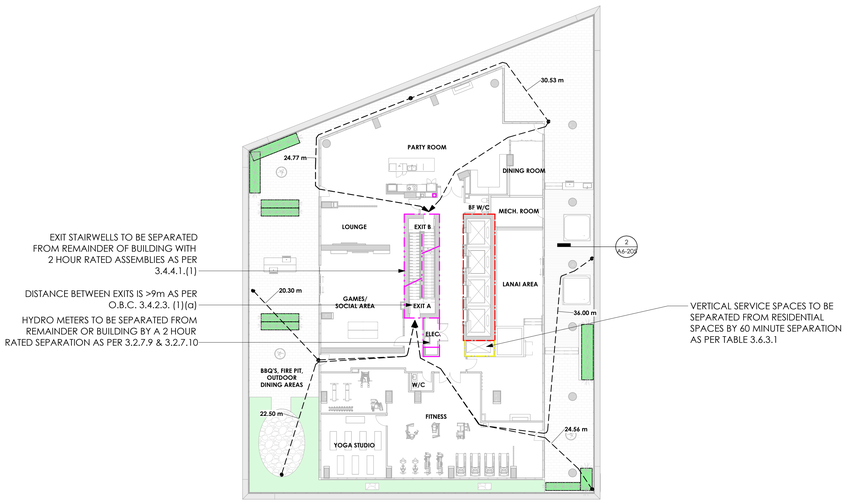
1 : 200
A0-204



3 A0-202 BUILDING CODE PLAN - LEVEL 04 (AMENITY)
1 : 200
A0-204



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A0-204

00 min (0HR)
60 min (1.0HR)
90 min (1.5HR)
120 min (2.0HR)
180 min (3.0HR)
TRAVEL DISTANCE
SEPARATION DISTANCE BETWEEN EXITS
DEAD END TRAVEL DISTANCE
FIRE HOSE LENGTH

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18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
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architect | architecte

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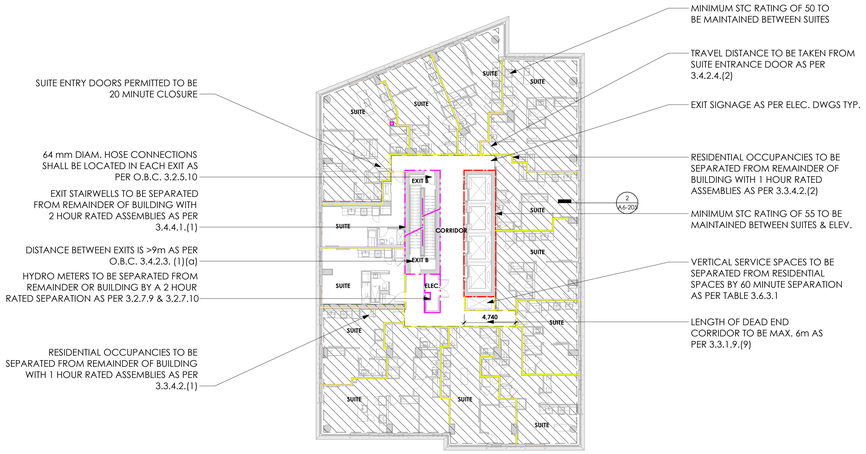
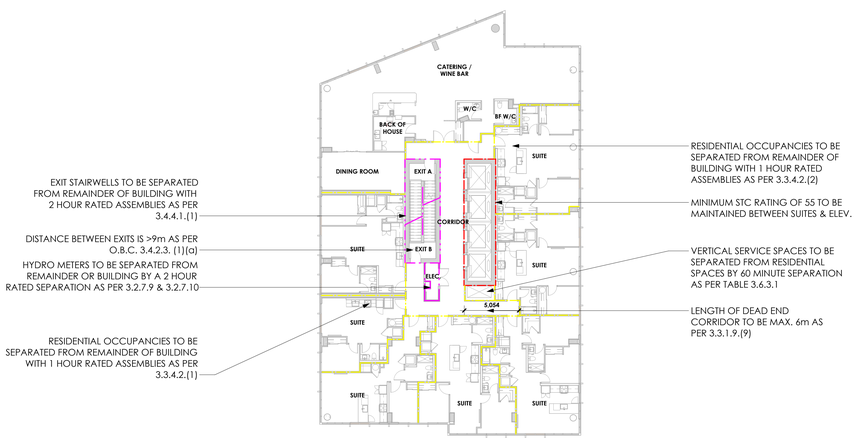


5 A0-203 BUILDING CODE PLAN - LEVEL 06-26 (TYP TOWER)
1 : 200
A0-204



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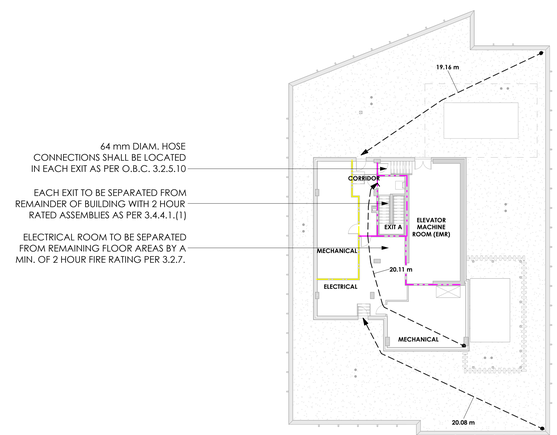
A0-204



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A0-204

00 min (0HR)
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90 min (1.5HR)
120 min (2.0HR)
180 min (3.0HR)
TRAVEL DISTANCE
SEPARATION DISTANCE BETWEEN EXITS
DEAD END TRAVEL DISTANCE
FIRE HOSE LENGTH

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19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
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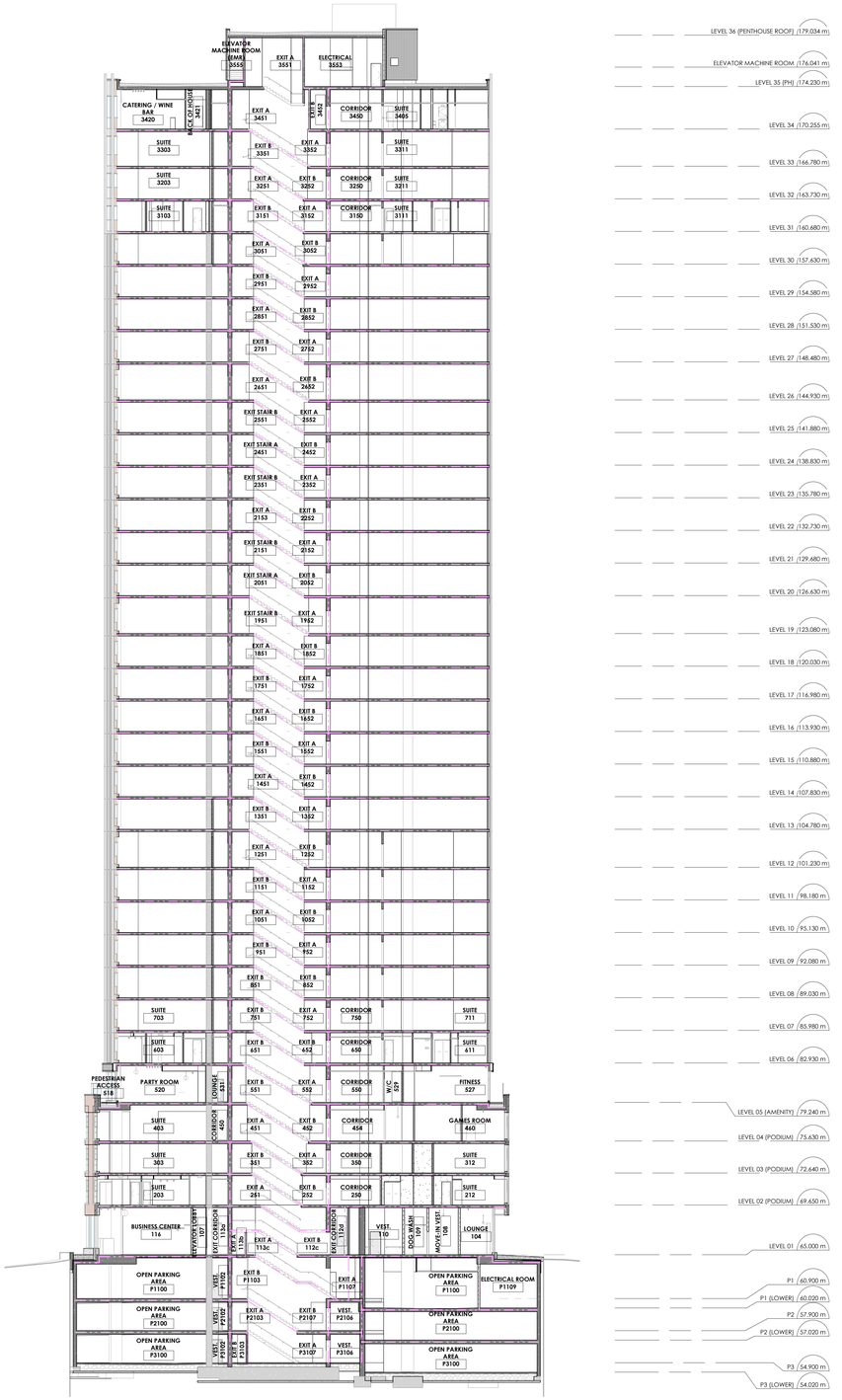

1 BUILDING CODE SECTION @ STAIRS
A0-204 1 : 200

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mechanical engineer | ingénieur méchanique

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no	revisions	date
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stamp | timbre

architect | architecte

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drawing number | numéro du dessin

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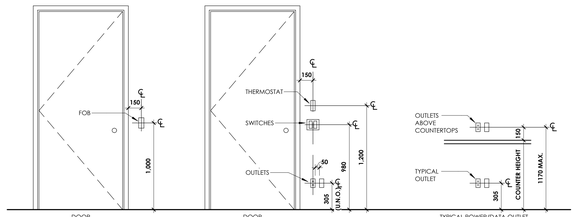
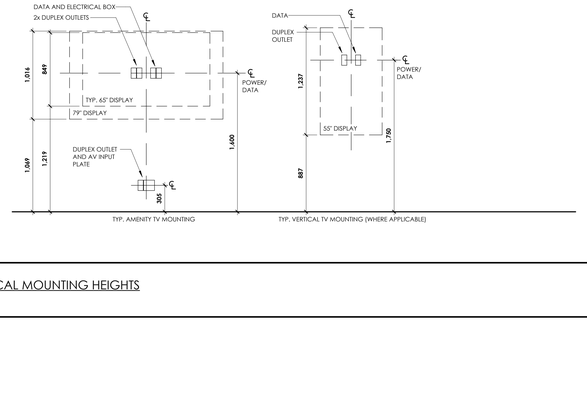
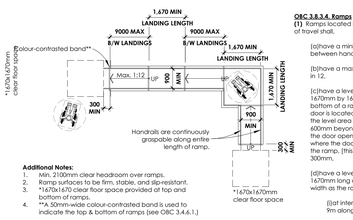
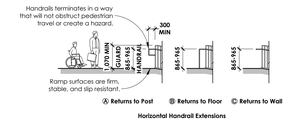




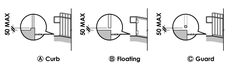
11 TYPICAL MOUNTING HEIGHTS
A0-210 | 1 : 25



Additional Notes:
1. Min. 2100mm clear headroom over ramps.
2. Ramp surfaces to be firm, stable, and slip-resistant.
3. *1,670x1,670 clear floor space provided at top and bottom of ramps.
4. **A 50mm-wide colour-contrasted band is used to indicate the top & bottom of ramps (see OBC 3.4.6.1.)



Horizontal Handrail Extensions



Edge Protection Configurations

OBC 3.8.3.4. Ramps

(1) Ramps located in a barrier-free path of travel shall,

(a)have a minimum width of 900 m between handrails,

(b)have a maximum gradient of 1 in 12,

(c)have a level area of at least 1670mm by 1670mm at the top and bottom of a ramp and where a door is located in a ramp, so that the level area extends at least 600mm beyond the latch side of the door opening, except that where the door opens away from the ramp, [this may be reduced to] 300mm,

(d)have a level area at least 1670mm long and at least the same width as the ramp,

(i)at intervals of not more than 9m along its length, and

(ii)where there is a change of 90° or more in the direction of the ramp,

(e)except as provided in Sentence (2), be equipped with handrails on both sides that shall,

(i)be not less than 865mm and not more than 965mm high, measured vertically from the surface of the ramp, except that handrails not meeting these requirements are permitted provided they are installed in addition to the required handrail,

(ii)be terminated in a manner that will not obstruct pedestrian travel or create a hazard,

(iv)extend horizontally not less than 300mm beyond the top and bottom of the ramp,

(f)except as provided in Sentence (2), have a wall or a guard on both sides and where a guard is provided the guard shall,

(i)be not less than 1070mm measured vertically to the top of the guard from the ramp surface, and

(ii)be designed so that no member, attachment or opening located between 140mm and 900mm above the ramp surface being protected by the guard will facilitate climbing,

(g)be provided,

(i)with a curb at least 50mm high on any side of the ramp where no solid enclosure or solid guard is provided, and

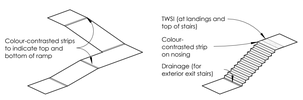
(ii)with railings or other barriers that extend to within 50mm of the finished ramp surface or have a curb not less than 50mm high, and

(h)except as provided in Sentence (2), where the ramp is wider than 2200mm, have an intermediate handrail with a clear width of 900mm between the intermediate handrail and one of the handrails described in Clause (e).

(2) Where a ramp serves as an aisleway for fixed seating, the requirements for handrails in Clauses (1)(e) and (h) and for walls or guards in Clause (1)(f) need not apply.

(3) Floors or walks in a barrier-free path of travel having a slope steeper than 1 in 20 shall be designed as ramps.

10 RAMPS
A0-210 | 1 : 100



Perspective View (N.T.S.) Ramp

Perspective View (N.T.S.) Stairs

OBC 3.4.6.1 Surface Finish of Ramps & Stairs

(1) The surfaces of ramps, landings and treads shall,

(a)have a finish that is slip-resistant, and

(b)if accessible to the public, have a colour contrast or a distinctive visual pattern to demarcate,

(i)the leading edge of the tread,

(ii)the leading edge of the landing, and

(iii)the beginning and end of a ramp.

(2) A tactile attention indicator conforming to Article 3.8.3.18. shall be installed,

(a)at the top of the stairs, starting one tread depth back from the edge of the top stair, and

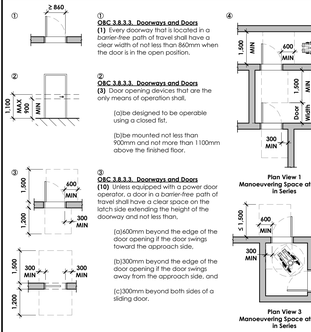
(b)at the leading edge of landings where a doorway opens onto stairs, starting one tread depth back from the edge of the landing.

(3) Treads and landings of exterior exit stairs shall be designed to be free of ice and snow accumulations if the stairs,

(a)are more than 10 m high, or

(b)serve a hotel.

9 SURFACE FINISH OF RAMPS AND STAIRS
A0-210 | 1 : 100



① **OBC 3.8.3.3. Doorways and Doors**
(1) Every doorway that is located in a barrier-free path of travel shall have a clear width of not less than 860mm when the door is in the open position.

② **OBC 3.8.3.3. Doorways and Doors**
(3) Door opening devices that are the only means of operation shall,

(a)be designed to be operable using a closed fist,

(b)be mounted not less than 900mm and not more than 1100mm above the finished floor.

③ **OBC 3.8.3.3. Doorways and Doors**
(10) Unless equipped with a power door operator, a door in a barrier-free path of travel shall have a clear space on the latch side extending the height of the doorway and not less than,

(a)600mm beyond the edge of the door opening if the door swings toward the approach side,

(b)300mm beyond the edge of the door opening if the door swings away from the approach side, and

(c)300mm beyond both sides of a sliding door.

Plan View 1 Manoeuvering Space at Doors in Series

Plan View 2 Manoeuvering Space at Doors in Series

Plan View 3 Manoeuvering Space at Doors in Series

Plan View 4 Manoeuvering Space at Doors in Series

④ **OBC 3.8.3.3. Doorways and Doors**
(11) Vestibules located in a barrier-free path of travel,

(a)shall be arranged to allow the movement of wheelchairs between doors, and

(b)shall provide,

(i)where the doors into the vestibule are in series, a distance between the doors of at least 1500mm plus the width of any door that swings into the space in the path of travel from one door to another, and

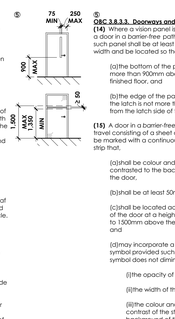
(ii)where the doors into the vestibule are not aligned, a turning diameter of 1500mm within the vestibule clear of any door swing.

(12) Only the active leaf in a multiple leaf door in a barrier-free path of travel need conform to the requirements of this Article.

(13) Except as provided in Clause 3.8.3.4.(1)(c), the floor surface on each side of a door in a barrier-free path of travel shall be level within a rectangular area,

(a)as wide as the door plus the clearance required on the latch side by Sentence (10), and

(b)whose dimension perpendicular to the closed door is not less than the width of the barrier-free path of travel but need not exceed 1500mm.



⑤ **OBC 3.8.3.3. Doorways and Doors**
(14) Where a vision panel is provided in a door in a barrier-free path of travel, such panel shall be at least 75 mm in width and be located so that,

(a)the bottom of the panel is not more than 900mm above the finished floor, and

(b)the edge of the panel closest to the latch is not more than 250mm from the latch side of the door.

(15) A door in a barrier-free path of travel consisting of a sheet of glass shall be marked with a continuous opaque strip that,

(a)shall be colour and brightness contrasted to the background of the door,

(b)shall be at least 50mm wide,

(c)shall be located across the width of the door at a height of 1350mm to 1500mm above the finished floor, and

(d)may incorporate a logo or symbol provided such logo or symbol does not diminish,

(i)the opacity of the strip,

(ii)the width of the strip,

(iii)the colour and brightness contrast of the strip to the background of the door, and

(iv)the continuity of the strip across the width of the door.

⑥ **OBC 3.8.3.3. Doorways and Doors**
(17) Except where a proximity scanning device is installed in conformance with Sentence (18), the control for a power door operator required by Sentence (4), (5) or (6) shall,

(b)be operable using a closed fist,

(c)be located so that,

(i) its centre is located not less than 900mm and not more than 1100mm from the finished floor or ground, or

(ii) it extends from not more than 200mm to not less than 900mm above the finished floor or ground,

(d)be located not less than 600mm and not more than 1500mm beyond the door swing where the door opens towards the control,

(e)be located to allow persons to activate the opening of the door from either direction of travel,

(f)be located so that the path of travel is not obstructed,

(g)be located in a clearly visible position, and

(h)contain a sign incorporating the International Symbol of Access.

⑦ **OBC 3.8.1.5. Controls**
(1) Except as required by Sentences 3.5.2.(1) and 3.8.3.5.(1) for elevators and Sentence 3.8.3.3.(17) for power door operator controls, controls for the operation of building services or safety devices, including electrical switches, thermostats and intercom switches, intended to be operated by the occupant and located in a barrier-free path of travel shall,

(a)be mounted,

(i)1200mm above the finished floor, in the case of a thermostat or a manual pull station, and

(ii)not less than 900 mm and not more than 1100mm above the finished floor, in the case of all other controls, and

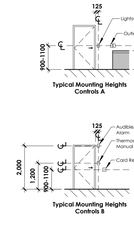
(b)be located so as to be adjacent to and centred on either the length or the width of a clear floor space of 810mm by 1370mm, and

(c)be operable,

(i)using one hand, without requiring tight grasping, pinching with fingers or twisting of the wrist, and with a force of not more than 22.2 N, in the case of a manual pull station, and

(ii)using a closed fist and with a force of not more than 22.2N, in the case of all other controls.

(2) A signal intended for the public to indicate the operation of a building security system that controls access to a building shall consist of an audible and visual signal.



8 HANDRAILS
A0-210 | 1 : 10

OBC 3.4.6.8. Treads and Risers

(1) Except as permitted for dwelling units and by Sentence 3.4.7.5.(1) for fire escapes, steps for stairs shall have a run of not less than 280 mm and not more than 355 mm between successive steps.

(2) Steps for stairs referred to in Sentence (1) shall have a rise between successive treads not less than 125mm and not more than 180mm.

(3) Except in fire escape stairs and where an exterior stair adjoins a walkway as permitted by Sentence 3.4.6.3.(3), risers, measured as the vertical nosing-to-nosing distance, shall be of uniform height in any one flight, with a maximum tolerance of,

(a)5mm between adjacent treads or landings, and

(b)10mm between the tallest and shortest risers in a flight.

(4) The height of handrails on stairs and ramps shall be measured vertically from the top of the handrail to,

(a)a straight line drawn tangent to the tread nosings of the stair served by the handrail, or

(b)the surface of the ramp, floor or landing served by the handrail.

(5) Except as provided by Sentences (6) and (7), The height of handrails on stairs and ramps shall be,

(a)not less than 865 mm, and

(b)not more than 965 mm.

(6) Handrails installed in addition to required handrails need not comply with Sentence (5).

(7) Where guards are required, handrails required on landings shall be not more than 1070mm in height.

(8) Except as required by Sentence (14) and except where interrupted by doorways or newels at changes in direction, at least one handrail shall be continuous throughout the length of a stairway or ramp, including landings.

(9) Handrails shall be terminated in a manner that will not obstruct pedestrian travel or create a hazard.

(10) At least one handrail shall,

(a)in the case of a stair,

(i)extend horizontally at the required height, not less than 300 mm beyond the top riser, and

(ii)continue to slope for a depth of one tread beyond the bottom riser followed by a 300mm horizontal extension, and

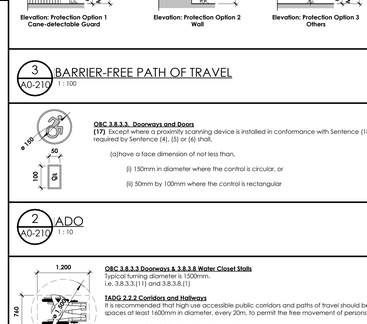
(b) in the case of a ramp, extend horizontally at the required height, not less than 30 mm beyond the top and bottom edges of the incline.

(13) A ramp shall have handrails on both sides.

(14) In a long-term care home, a Group B, Division 3 occupancy and a retirement home, a continuous handrail shall be provided on both sides of a stairway throughout the length of the stairway, including landings, except where a handrail is interrupted by doorways or newels at changes in direction.

***Note:** Handrail perimeter to be 100-125mm

7 STAIRS, GUARDS AND RAILINGS
A0-210 | 1 : 100



Unobstructed Space

180 Degrees Turning Space

OBC 3.8.1.3. Barrier-Free Path of Travel

(1) Except as required in Sentence (4) and except as permitted in Subsection 3.8.3., every barrier-free path of travel shall provide an unobstructed width of at least 1100mm for the passage of wheelchairs.

(4) Every barrier-free path of travel less than 1600mm in width shall be provided with an unobstructed space not less than 1800mm in width and 1800mm in length located not more than 30m apart.

(5) Where the headroom of an area in a barrier-free path of travel is reduced to less than 1980mm, a guardrail or other barrier with its leading edge at or below 680mm from the finished floor shall be provided.

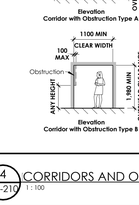
(6) A normally occupied floor area that is not required by Article 3.8.2.1. to have a barrier-free path of travel shall meet the following requirements:

(a)interior walking surfaces throughout the normally occupied floor area shall comply with Clauses (2)(a) to (e), and

(b)where the headroom of an area in a corridor or aisle in the normally occupied floor area is reduced to less than 1980mm, a guardrail or other barrier with its leading edge at or below 680mm from the finished floor shall be provided.

6 DOORS AND DOORWAYS
A0-210 | 1 : 100

5 CONTROL MOUNTING HEIGHTS
A0-210 | 1 : 100



OBC 3.3.1.9. Corridors

(1) The minimum width of a public corridor shall be 1100mm.

(2) Except as required by Sentences 3.3.3.3.(2) and (3), the minimum unobstructed width shall be 1100mm for every,

(a)corridor used by the public,

(b)corridor serving classrooms, and

(c)corridor in a Group B, Division 2 or 3 occupancy where the corridor,

(i)serves a service room,

(ii)serves an administrative area,

(iii)will not be used by non-ambulatory outpatients, or

(iv)will not be used by non-ambulatory residents.

(3) Except as permitted by Sentence (4), obstructions located within 1980mm of the floor shall not project more than 100mm horizontally in a manner that would create a hazard for a person with a visual disability traveling adjacent to the walls in,

(a)an exit passageway,

(b)a public corridor,

(c)a corridor used by the public,

(d)a corridor serving classrooms, or

(e)a corridor serving patients' or residents' sleeping rooms in a Group B, Division 2 or Division 3 occupancy.

(4) The horizontal projection of an obstruction referred to in Sentence (3) is permitted to be more than 100 mm provided the clearance between the obstruction and the floor is less than 680mm.

4 CORRIDORS AND OBSTRUCTIONS
A0-210 | 1 : 100

3 BARRIER-FREE PATH OF TRAVEL
A0-210 | 1 : 100

OBC 3.8.3.3. Doorways and Doors

(17) Except where a proximity scanning device is installed in conformance with Sentence (18), the control for a power door operator required by Sentence (4), (5) or (6) shall,

(a)have a face dimension of not less than,

(i) 150mm in diameter where the control is circular, or

(ii) 50mm by 100mm where the control is rectangular

2 ADO
A0-210 | 1 : 10

OBC 3.8.3.3 Doorways & 3.8.3.8 Water Closet Stalls
Typical turning diameter is 1500mm.
i.e. 3.8.3.3.(11) and 3.8.3.8.(1)

TADG 2.2.2 Corridors and Hallways
It is recommended that high use accessible public corridors and paths of travel should be a minimum of 1100mm wide, with turning spaces at least 1600mm in diameter, every 20m, to permit the free movement of persons using mobility aids.

MFADS 4.1.1 Space and Reach Requirements
The minimum clear floor space or ground space necessary to accommodate the largest dimensional requirement of a single, stationary wheelchair or scooter and its' occupant shall be 760x1370mm.

1 CLEAR FLOOR SPACE
A0-210 | 1 : 30

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

NOT FOR CONSTRUCTION
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21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER — 25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER — 25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING — 25-05-16
18	ISSUED FOR 66% MD & CLIENT BUDGETING — 25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS — 24-08-12
no	revisions — date

stamp | timbre

architect | architecte

linebox STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

BUILDING CODE NOTES

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**As indicated**
date | date	**02/15/24**

drawing number | numéro du dessin

A0-210

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OBC 3.8.3.5. Passenger Elevating Devices
(1) A passenger elevating device referred to in Article 3.8.2.1. shall conform to CSA B355, "Lifts for Persons with Physical Disabilities".

CSA B651-04: 7.3.1.4 Elevating devices.
An elevating device to surmount a change in level shall comply with one of the following:

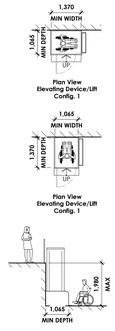
(a) CSA B44, including its Appendix E, for elevators and service lifts;

(b) CAN/CSA-B613 for platform lifts that are situated within a dwelling unit; or

(c) CAN/CSA-B355 for elevating devices that have a maximum change in level of

(i) 7000mm if the runway is enclosed; or

(ii) 2500mm if the runway is unenclosed.



TADG 2.2.4 Elevators and Platform Lifts
The provision of ramps is strongly preferred over platform lifts.

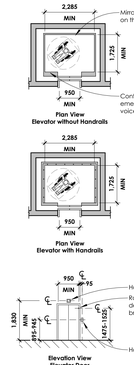
• Elevators and platform lifts should comply with the most recent CAN/CSA B355 Standards "Lifts for Persons with Physical Disabilities".

• Controls/buttons should include tactile information to ensure easy use by persons who have visual limitations. Controls/buttons should be easy to reach and push, be raised and require minimal
strength to activate. A delay button should be available both in the cab and
in each elevator lobby to allow boarding by persons who are slower than usual, as
a result of ageing or disability.

• Individual platform lifts required to travel between levels not exceeding 1980mm shall have a platform size of no less than 1065mm by 1370mm.

• Elevators and platform lifts used by persons with disabilities should include
an emergency call system linked to a monitored location within the building
with 2-way voice communication capability.

• Lighting in elevator cabs and at platform lifts is recommended to be no less than 100 lux (10 ft. candles) measured at the floor level. The same lighting level should be provided in adjacent lobby space to minimize tripping hazards at door openings



OBC 3.5.2.2. Barrier-Free Design
(1) Passenger elevators shall conform to Appendix E of ASME A17.1 / CSA B44, "Safety Code for Elevators and Escalators".

TADG 2.2.4 Elevators and Platform Lifts
• Passenger elevating devices should comply with the most recent CAN/CSA Standards B44, "Safety Code for Elevators."

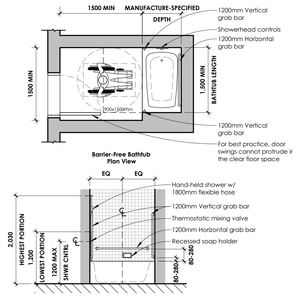
• Controls/buttons should include tactile information to ensure easy use by persons who have visual limitations. Controls/buttons should be easy to reach and push, be raised and require minimal strength to activate. A delay button should be available both in the cab and in each elevator lobby to allow boarding by persons who are slower than usual, as a result of ageing or disability.

• In both high-rise residential and institutional facilities serving seniors or people with disabilities, at least one elevator should be capable of accommodating a stretcher, with a minimum platform size of 1725mm by 2285mm.

• Elevators and platform lifts used by persons with disabilities should include an emergency call system linked to a monitored location within the building, with 2-way voice communication capability.

• Install a concave mirror at the back of the elevator cab.

• Lighting in elevator cabs and at platform lifts is recommended to be no less than 100 lux (10 ft. candles) measured at the floor level. The same lighting level should be provided in adjacent lobby space to minimize tripping hazards at door openings



OBC 3.8.3.13. Showers and Bathtubs
(1) Except within a suite of residential occupancy, if showers are provided in a building, the number of barrier-free showers shall conform to Table 3.8.3.13.

(2) A barrier-free shower required by Sentence (1) shall,

(a)be not less than 1500mm wide and 900mm deep,

(b)have a clear floor space at the entrance to the shower not less than 900 mm deep and the same width as the shower, except that fixtures are permitted to project into that space provided they do not restrict access to the shower,

(c)have no doors that obstruct the shower controls or the clear floor space described in Clause (b),

(d)have a slip-resistant floor surface,

(e)have a threshold that is level with the adjacent finished floor or a beveled threshold not more than 13mm higher than the adjacent finished floor,

(f)have a hinged seat, other than a spring-loaded hinged seat, or a fixed seat that shall,

(i)be not less than 450mm wide and 400mm deep,

(ii)be mounted on the same side wall as the vertical grab bar between 460mm and 480mm above the finished floor,

(iii)be designed to carry a minimum load of 1.3 kN,

(iv)be located so that the edge of the seat is within 500mm of the shower controls, and

(v)have a smooth and slip-resistant surface and no rough edges,

(g)have two grab bars,

(i)that conform to Sentence 3.8.3.8.(7) and do not obstruct the use of the shower controls,

(ii)one of which is 1000mm long vertically located on the side wall between 50mm and 80mm from the adjacent clear floor area, and with the lower end between 600mm and 650mm above the finished floor, and

(iii)one of which is L-shaped, located on the wall opposite the entrance to the shower, with a 1000mm long horizontal component mounted between 750mm and 870mm above the finished floor and a 750mm long vertical component **"mounted between 400mm and 500mm from the side wall on which the vertical grab bar described in Subclause (ii) is mounted.**

(h)have a pressure-equalizing or thermostatic mixing valve that.

(i)is operable using a closed fist and with a force of not more than 22.2 N,

(ii)is mounted on the wall opposite the entrance to the shower no more than 1200mm above the finished floor, and

(iii)is located within reach of the seat,

(i)have a hand-held shower head with not less than 1800mm of flexible hose located so that it,

(i)can be reached from a seated position,

(ii)can be used in a fixed position at a height of 1200mm and 2030mm from the finished floor, and

(iii)does not obstruct the use of the grab bars, and

(j)have fully recessed soap holders that can be reached from the seated position.

(2.1) All other controls installed in a shower described in Sentence (2) shall comply with Subclauses (2)(h)(i) to (iii).

(3) Individual showers that are provided for use by patients or residents in buildings of Group B, Division 2 or 3 occupancy shall conform to Sentence (2).

OBC 3.8.3.13. Showers and Bathtubs
(4) Individual bathtubs that are provided for the use of patients or residents in buildings of Group B, Division 2 or 3 occupancy shall,

(a)be located in a room with a clear floor space not less than 1500mm in diameter,

(b)be not less than 1500mm long,

(c)be capable of being accessed along the full length of the bathtub with no tracks mounted on the bathtub rim,

(d)have faucets that,

(i)are operable using a closed fist and with a force of not more than 22.2 N, and

(ii)are located on the centre line of the bathtub and the exterior edge of the bathtub rim, at a maximum height of 450mm above the rim,

(e)unless the bathtub is free-standing, have three grab bars,

(i)conforming to Sentence 3.8.3.8.(7),

(ii)that are not less than 1200mm long,

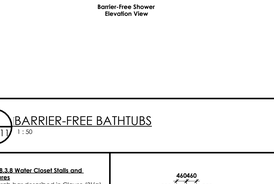
(iii)two of which are located vertically at each end of the bathtub, mounted between 80mm and 280mm above the bathtub rim, and

(iv)one of which is located horizontally along the full length of the bathtub, mounted between 80mm and 280mm above the bathtub rim,

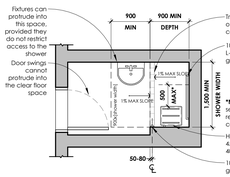
(f)have a slip-resistant bottom surface, and

(g)be equipped with a hand-held shower head with not less than 1800mm of flexible hose that can be used in a fixed position at a height of 1200mm and 2030mm and does not obstruct the use of the grab bars.

(5) Where a barrier-free bathtub is provided, a clear floor space at least 900mm wide and 1500mm long shall be provided along the full length of the bathtub.



10 A0-211 PASSENGER LIFTS
1 : 100



Item	Column 1 Number of Showers provided as a Group	Column 2 Minimum Number of Showers Required to Be Barrier-Free
1.	1	0
2.	2 to 7	1
3.	Over 7	1 plus 1 for each additional increment of 7 showers in a group

Table 3.8.3.1.13

OBC 3.8.3.16. Drinking Fountains
(1) Where more than one drinking fountain is provided, at least one shall be a barrier-free fountain that conforms to Sentences (2) and (3).

(2) A barrier-free drinking fountain shall,

(a)have a spout located near the front of the unit not more than 915mm above the finished floor,

(b)be equipped with controls that are easily operated by a wheelchair using one hand with a force of not more than 22 N or shall operate automatically,

(c)project the water at least 100mm high,

(d)provide the water stream at a vertical angle of up to,

(i)30°, where the spout is located less than 75mm from the front of the fountain, or

(ii)15°, where the spout is located not less than 75 mm and not more than 125mm from the front of the fountain,

(e)be detectable by a cane at a level at or below 680 mm from the finished floor, and

(f)where the drinking fountain is cantilevered, meet the following requirements:

(i)be mounted not more than 915mm above the finished floor,

(ii)provide a clearance height under the fountain of not less than 735mm above the finished floor,

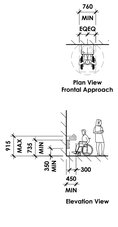
(iii)have a clear depth under the fountain of not less than 450mm,

(iv)have a clear width under the fountain of not less than 760mm,

(v)have a depth at the base of the fountain of at least 700mm.

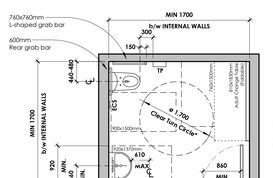
(3) A barrier-free drinking fountain required by Sentence (1) shall have a clear floor space in front of, or adjacent to, the fountain that is a minimum of 810mm deep and 1370mm wide.

(4) Where more than one drinking fountain is provided in a normally occupied floor area that is not required by Article 3.8.2.1. to have a barrier-free path of travel, at least one shall be a barrier-free fountain that conforms to Sentences (2) and (3).



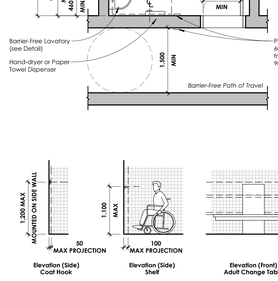
9 A0-211 BARRIER-FREE SHOWERS
1 : 50

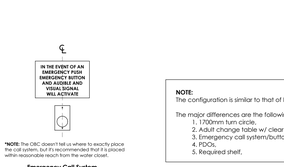
7 A0-211 ELEVATORS
1 : 100



*NOTE: Clear floor spaces CAN overlap each other

TP: Toilet Paper Dispenser
RCS: Emergency Call System





NOTE:
The configuration is similar to that of BF Washroom Stalls.

The major differences are the following:
1. 1700mm turn circle,
2. Adult change table w/ clear floor space,
3. Emergency call system/button,
4. PDOs,
5. Required shelf.

6 A0-211 UNIVERSAL WASHROOM
1 : 50
A2-201-E

OBC 3.8.3.12. Universal Washrooms
(1) A universal washroom shall,

(a)be served by a barrier-free path of travel,

(b)have a door that,

(i)complies with Article 3.8.3.3.,

(ii)has a graspable latch-operating mechanism that is,

(A)operable using a closed fist and with a force of not more than 22.2N, and

(B)located between 900mm and 1000mm AFF, and

(iii)is capable of being locked from the inside and released from the outside in case of emergency,

(c)have one lavatory conforming to Sentences 3.8.3.11.(1), (3) and (4),

(d)have one water closet conforming to Article 3.8.3.9. that is located in accordance with Clause 3.8.3.8.(2)(a) or (b),

(e)have grab bars conforming to,

(i)Sentence 3.8.3.8.(3), if the water closet is located in accordance with Clause 3.8.3.8.(2)(a), or

(ii)Sentence 3.8.3.8.(4), if the water closet is located in accordance with Clause 3.8.3.8.(2)(b),

(f)have no internal dimension between walls that is less than 1700mm,

(g)have a coat hook that conforms to Clause 3.8.3.8.(11)(e) and a shelf that is located not more than 1100mm above the finished floor and projects not more than 100mm from the wall,

(h)be designed to permit a wheelchair to turn in an open space not less than 1700mm in diameter,

(i)be provided with a door equipped with a power door operator,

(j)be provided with a mirror,

(i)installed above a lavatory described in Clause (1)(c), and

(ii)mounted with its bottom edge not more than 1000mm above the finished floor or inclined to the vertical to be usable by a person in a wheelchair, and

(k)have lighting controlled by a motion sensor conforming to Sentence 12.2.4.1.(2).

(2) A universal washroom shall have.

(a)an emergency call system* that consists of audible and visual signal devices inside and outside of the washroom that are activated by a control device inside the washroom, and

(b)an emergency sign that contains the words **IN THE EVENT OF AN EMERGENCY PUSH EMERGENCY BUTTON AND AUDIBLE AND VISUAL SIGNAL WILL ACTIVATE** in letters at least 25mm high with a 5mm stroke and that is posted above the emergency button.

(3) A clear space not less than 810 mm wide and 1 830 mm long shall be provided in each universal washroom for an adult-size change table.

(4) Where the clear space provided for an adult-size change table is adjacent to a wall, reinforcement shall be installed in the wall to permit the future installation of the change table.

(5) Where an adult-size change table is installed, it shall,

(a)when fully loaded, have a surface height above the finished floor that can be adjusted from between 450mm and 500mm at the low range to between 850mm and 900mm at the high range,

(b)be designed to carry a minimum load of 1.35 kN,

(c)have a clear floor space parallel to the long side of the table not less than 760 mm wide and 1500mm long, and

(d)in the case of a fold-down table,

(i)be installed so that it does not encroach into a clear transfer space described in Clause 3.8.3.8.(2)(a) or (b), and

(ii)have no operating mechanisms higher than 1200mm.

(6) A universal washroom need not conform to Sentences (3) and (4) if,

(a)it is located in an individual suite that,

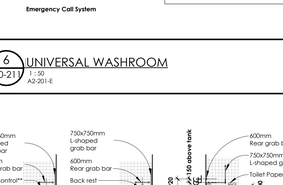
(i)is used for an assembly occupancy, a business and personal services occupancy, a mercantile occupancy or an industrial occupancy, and

(ii)meets one of the following requirements,

(A)it is located in a building that is less than 300 m^2 in building area, or

(B)it is less than 300 m^2 in area, if located in a building that is at least 300m^2 in building area, or

(b)another universal washroom conforming to this Article is provided on the same floor level within 45m.



OBC 3.8.3.8 Water Closet Stalls and Enclosures
(1) Every barrier-free water closet stall or enclosure in a washroom described in Sentence 3.8.2.3.(3) or (4) shall,

(a)have a clear turning space within the stall or enclosure of at least 1500mm in diameter,

(b)have a clear floor space in front of the stall or enclosure of at least 1500mm in diameter,

(c)be equipped with a door that,

(i)is capable of being latched from the inside with a mechanism conforming to Subclause 3.8.1.5.(1)(b)(i),

(ii)in an open position, has a clear opening of at least 860mm wide,

(iii)swings outward, unless 820mm by 1440mm clear floor area is provided within the stall to permit the door to be closed without interfering with the wheelchair,

(iv)is self-closing so that, when at rest, the door remains open not more than 50mm beyond the jamb,

(v)is provided with a horizontal, D-shaped, visually contrasting door pull on both sides of the door, mounted on the vertical centre line of the door, located at a height not less than 800mm and not more than 1000mm above the finished floor,

(vi)is aligned with a clear transfer space required by Subclause (2)(a)(i) or Clause(2)(b), and

(vii)is capable of having the latch required by Subclause (i) released from the outside in case of an emergency,

(d)be equipped with a water closet conforming to Article 3.8.3.9. that is located in accordance with Clause(2)(a) or (b),

(e)be equipped with a coat hook mounted not more than 1200mm above the finished floor on a side wall and projecting not more than 50mm from the wall,

(f)have a clearance of at least 1700mm between the outside of the stall face and the face of an in-swinging washroom door and 1400mm between the outside of the stall face and any wall-mounted fixture or other obstruction, and

(g)be equipped with a toilet paper dispenser mounted on the side wall closest to the water closet so that,

(i)the dispenser is located below the grab bar,

(ii)the closest edge of the dispenser is 300mm from the front of the water closet seat, and

(iii)the bottom of the dispenser is 600mm to 800mm above the finished floor.

(2) A water closet described in Clause (1)(d) shall be,

(a)located so that,

(i)the centre line of the water closet is not less than 460mm and not more than 480mm from one side wall, and

(ii)a clear transfer space at least 900mm wide and 1500mm deep is provided on the other side of the water closet, or

(b)located so that a clear transfer space at least 900mm wide and 1500mm deep is provided on each side of the water closet.

(3) Where a water closet is located in accordance with Clause (2)(a),

(a)a grab bar conforming to Sentences (3) and (7) shall be provided on the side wall referred to in Subclause (2)(a)(i),

(b)a fold-down grab bar may be provided and, if one is provided, it shall conform to Sentence (8) and be provided on the side of the water closet opposite the grab bar described in Clause (a), and

(4) Where a water closet is located in accordance with Clause (2)(b),

(a)a fold-down grab bar conforming to Sentence (8) shall be provided on each side of the water closet, and

(b)a grab bar conforming to Sentences (6) and (7) shall be provided on the wall behind the water closet.

(5) A grab bar described in Clause (3)(a) shall,

(a)be continuous L-shaped with 750mm long horizontal and vertical components, and

(b)be wall mounted with the horizontal component 750mm above the finished floor and the vertical component 150mm in front of the water closet.

(6) A grab bar described in Clause (3)(c) or (4)(b) shall,

(a)be at least 600mm in length, and

(b)be wall mounted horizontally from 840mm to 920mm above the finished floor and, where the water closet has a water tank, be wall mounted 150mm above the tank.

(8) A fold-down grab bar described in Clause (3)(b) or (4)(a) shall,

(a)be mounted on the wall behind the water closet,

(i)with the horizontal component 750 mm above the finished floor, and

(ii)not less 390mm and not more than 410mm from the centre line of the water closet,

(b)not require a force of more than 22.2 N to pull it down,

(c)be at least 750mm in length,

(d)be installed to resist a load of at least 1.3 kN applied vertically or horizontally,

(e)be not less than 30mm and not more than 40mm in diameter, and

(f)have a slip-resistant surface.

(9) A fold-down grab bar installed in accordance with Sentence (8) is permitted to encroach into,

(a)the clear turning space described in Clause (1)(b), or

(b)a clear transfer space described in Subclause (2)(a)(ii) or Clause(2)(b).

(10) Where an ambulatory water closet stall or enclosure is required by Sentence 3.8.2.3.(6), it shall,

(a)be at least 1500mm in depth and be not less than 890mm and not more than 940mm in width,

(b)be equipped with a door that shall,

(i)be capable of being latched from the inside with a mechanism that is operable using a closed fist,

(ii)when the door is in an open position, have a clear opening of at least 810mm,

(iii)swing outward, unless the minimum dimensions in Clause (a) are not located within the door swing,

(iv)be provided with spring-type or gravity hinges so that the door closes automatically,

(v)be provided with a door pull on both sides of the door, near the latch side of the door, located at a height not less than 900mm and not more than 1100mm above the finished floor, and

(vi)be capable of having the latch required by Subclause (i) released from the outside in the case of an emergency,

(c)be equipped with a water closet conforming to Article 3.8.3.9. and located so that its centre line is centred between the partition walls,

(d)be equipped on each side of the water closet with grab bars conforming to Clause (3)(a), and

(e)be equipped with a coat hook conforming to Clause (1)(e).

8 A0-211 DRINKING FOUNTAINS
1 : 100

1 A0-211 WATER CLOSET STALLS
1 : 100

OBC 3.8.3.10 Urinals
(1) Where more than one urinal is provided in a washroom described in Sentence 3.8.2.3.(3) or (4), at least one urinal shall,

(a)be mounted with the rim located not more than 430mm above the finished floor,

(b)have a clear floor space at least 800mm wide that is perpendicular t o, and centred on, the urinal and is unobstructed by privacy screens, and

(c)have no step in front of it.

(2) A urinal described in Sentence (1) shall,

(a)flush automatically or be equipped with a flushing control that is,

(i)located between 900mm and 1100mm above the finished floor, and

(ii)operable using a closed fist and with a force of not more than 22.2 N, and

(b)have installed on each side, a vertically mounted grab bar that,

(i)complies with Article 3.8.3.8.(7),

(ii)is not less than 600mm long, with its centre line 1000mm above the finished floor, and

(iii)is located not more than 380mm from the centre line of the urinal.

(3) Where privacy screens are installed for a urinal described in Sentence (1), they shall,

(a)be mounted a minimum of 460mm from thecentre line of the urinal, and

(b)have a clearance of at least 50mm from the grab bars required by Clause (2)(b).

5 A0-211 BARRIER-FREE BATHTUBS
1 : 50

OBC 3.8.3.8 Water Closet Stalls and Enclosures
(7) A grab bar described in Clause (3)(a) or (c) or (4)(b) shall,

(a)be installed to resist a load of at least 1.3 kN applied vertically or horizontally,

(b)be not less than 30mm and not more than 40mm in diameter,

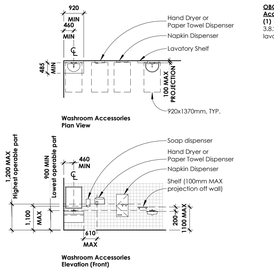
(c)have a clearance of not less than 38mm and not more than 50mm from the wall to the inside surface of the grab bar, and

(d)have a slip-resistant surface.



3 A0-211 GRAB BARS
1 : 10

4 A0-211 URINALS
1 : 100



OBC 3.8.3.11 Lavatories, Mirrors, and Washroom Accessories
(1) A washroom described in Sentence 3.8.2.3.(2), (3) or (4) shall be provided with a lavatory that shall,

(a)be located so that the distance between the centre line of the lavatory and the side wall is not less than 460mm,

(b)have a rim height not more than 865mm above the finished floor,

(c)have a clearance beneath the lavatory not less than,

(i)920mm wide,

(ii)735mm high at the front edge,

(iii)685mm high at a point 200mm back from the front edge, and

(iv)380mm high over the distance from point 280mm to a point 430mm back from the front edge,

(d)have insulated pipes where they would otherwise present a burn hazard or have water supply temperature limited to a maximum of 43°C,

(e)be equipped with faucets that,

(i)operate automatically or comply with 3.7.4.2.(11)(b)(i) and (ii), and

(ii)are located so that the distance from the centre line of the faucet to the edge of the basin or, where the basin is mounted in a vanity, to the front edge of the vanity, is not more than 485mm,

(f)have a minimum 1370mm deep floor space to allow for a forward approach, of which a maximum of 300mm can be located under the lavatory,

(g)have a soap dispenser that,

(i)operates automatically or is operable using a closed fist and with a force of not more than 22.2 N, and

(ii)is located not more than 1 100 mm above the finished floor, within 500mm from the front of the lavatory, and,

(h)have a towel dispenser or other hand drying equipment that is,

(i)located to be accessible to persons in wheelchairs,

(ii)located so that the dispensing height is not more than 1200mm above the finished floor,

(iii)operable with one hand, and

(iv)located not more than 610mm, measured horizontally, from the edge of the lavatory.

(2) If mirrors are installed in a washroom described in Sentence 3.8.2.3.(2), (3) or (4), at least one mirror shall be,

(a)installed above a lavatory required by Sentence (1), and

(b)mounted with its bottom edge not more than 100mm above the finished floor or inclined to the vertical to be usable by a person in a wheelchair.

(3) If dispensing or hand-operated washroom accessories, other than those located in water closet stalls or enclosures and those described in Clause (1)(g), are provided, they shall be mounted so that,

(a)the dispensing height is not less than 900mm and not more than 1200 mm above the finished floor,

(b)the controls or operating mechanisms are mounted not less than 900mm and not more than 1200mm above the finished floor, and

(c)a minimum 1370mm deep floor space is provided in front of the controls or operating mechanisms to allow for a front approach.

(4) Where a shelf is installed above a lavatory required by Sentence (1), it shall,

(a)be located not more than 200mm above the top of the lavatory and not more than 1100mm above the finished floor, and

(b)project not more than 100 mm from the wall.

(5) A washroom described in Sentence 3.8.2.3.(6) shall be provided with a lavatory conforming to Clauses (1)(e), (g) and (h).



2 A0-211 LAVATORIES AND ACCESSORIES
1 : 100

CLVGROUP DEVELOPMENTS
client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS
structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.
electrical engineers | ingénieur électrique

mechanical engineer | ingénieur mécanique

wsp
civil engineers | ingénieur civil

CSW
landscape architect | architecte paysagiste

architect | architecte
linebox STUDIO

NOT FOR CONSTRUCTION
2025-06-12 2:42:12 PM

21 RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20 ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19 ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18 ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
4 ISSUED FOR 33% WORKING DRAWINGS	24-08-12
no revisions	date

stamp | timbre

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

BUILDING CODE NOTES

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / FC / JP**
checked | verifié	**JP / AR**
scale | échelle	**As indicated**
date | date	**02/15/24**

drawing number | numéro du dessin

A0-211

Autodesk Docs://Gladstone & Loretta/2402 - 145 Loretta CLV LB_Tower A.rvt
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WALL SCHEDULE

WALL TYPE	DESCRIPTION	DETAIL
W1	**ALUMINUM COMPOSITE PANEL WALL ASSEMBLY** 38 mm VERTICAL CORRUGATED METAL SIDING 38 mm HORIZONTAL Z-GIRTS 102 mm CONTINUOUS MINERAL WOOL INSULATIUON (R-17.2) C/W 102 mm VERTICAL Z-GIRTS -- VAPOUR PERMEABLE SELF-ADHERED AIR & WEATHER BARRIER 13 mm EXTERIOR GLASS MAT SHEATHING 152 mm STEEL STUD (NON LOAD BEARING) AS PER STEEL STUD SPECIALIST c/w 152mm MINERAL WOOL BATT TYPE INSULATION (R-22.5) -- POLY VAPOUR BARRIER 13 mm GYPSUM WALL BOARD	
W2	**BRICK VENEER WALL ASSEMBLY** 90 mm BRICK VENEER 25 mm AIR SPACE CAVITY 102 mm CONTINUOUS MINERAL WOOL INSULATION (R-17.2) -- VAPOUR PERMEABLE SELF-ADHERED AIR & WEATHER BARRIER 13 mm EXTERIOR GLASS MAT SHEATHING - GP DENSGLASS OR APPROV. EQ. 152 mm STEEL STUD (NON LOAD BEARING) AS PER STEEL STUD SPECIALIST c/w 152mm MINERAL WOOL BATT TYPE INSULATION (R-22.5) -- POLY VAPOUR BARRIER 13 mm GYPSUM WALL BOARD	
W3	**ALUMINUM PANEL WINDOW WALL ASSEMBLY** *OPAQUE AREAS R-7.6 ACTUAL* 51 mm CUSTOM PROFILE PROJECTED ALUMINUM PANELS 135 mm WINDOW WALL c/w 76 mm INSULATED METAL BACK PAN ±13 mm ALIGNMENT TOLERANCE 41 mm STEEL STUD (NON LOAD BEARING) AS PER STEEL STUD SPECIALIST 13 mm GYPSUM WALL BOARD	
W4	**VERTICAL SIDING WALL ASSEMBLY** 19 mm SIDING (VERTICAL) 38 mm GALV. Z-GIRTS 90 mm CONCRETE MASONRY UNIT VENEER (CONCEALED SUPPORT FOR BRICK VENEER ABOVE) 25 mm AIR SPACE CAVITY 102 mm CONTINUOUS MINERAL WOOL INSULATION (R-17.2) -- VAPOUR PERMEABLE SELF-ADHERED AIR & WEATHER BARRIER 13 mm EXTERIOR GLASS MAT SHEATHING - GP DENSGLASS OR APPROV. EQ. 152 mm STEEL STUD (NON LOAD BEARING) AS PER STEEL STUD SPECIALIST c/w 152mm MINERAL WOOL BATT TYPE INSULATION (R-22.5) -- POLY VAPOUR BARRIER 13 mm GYPSUM WALL BOARD	
W5	**INSULATED CMU WALL ASSEMBLY** 13 mm GYPSUM WALL BOARD 51 mm RIGID INSULATION -- LIQUID AIR & VAPOUR BARRIER VARIES CONCRETE MASONRY UNITS - SEE SEPARATE TAG & FIRE RATING, MASONRY PARTITION SCHEDULE	
W6	**INSULATED WALL ASSEMBLY - NO FINISH** 102 mm CONTINUOUS MINERAL WOOL INSULATION (R-17.2) -- VAPOUR PERMEABLE SELF-ADHERED AIR & WEATHER BARRIER 13 mm EXTERIOR GLASS MAT SHEATHING - GP DENSGLASS OR APPROV. EQ. 152 mm STEEL STUD (NON LOAD BEARING) AS PER STEEL STUD SPECIALIST c/w 152mm MINERAL WOOL BATT TYPE INSULATION (R-22.5) -- POLY VAPOUR BARRIER 13 mm GYPSUM WALL BOARD	
W7	**EXTERIOR CMU WALL ASSEMBLY (HYDRO VAULT ACCESS & EXIT PRESSURIZATION WELLS)** PARGING ON METAL LATH OR PROTECTION BOARD RATED FOR PERMANENT EXPOSURE 10 mm TANGLED FILAMENT DRAINAGE & VENTILATION MAT 51 mm XPS RIGID INSULATION -- SEPARATION SHEET -- MONOLITHIC RUBBERIZED BITUMEN WATERPROOFING MEMBRANE VARIES CONCRETE MASONRY UNITS - SEE SEPARATE TAG & FIRE RATING, MASONRY PARTITION SCHEDULE	
FW1	**POURED CONCRETE FOUNDATION WALL ASSEMBLY AT SHORING OR BEDROCK** -- PREPARED BEDROCK OR SHORING SYSTEM 50 mm RIGID INSULATION TO 1200 mm BELOW FINISHED GRADE (R-10) 10 mm DRAINAGE BOARD -- BLINDSIDE WATERPROOFING MEMBRANE 300 mm STRUCTURAL CONCRETE WALL (MIN. THICKNESS)	
FW1a	**POURED CONCRETE FOUNDATION WALL ASSEMBLY AT SHORING OR BEDROCK & CISTERN** SAME AS 'FW1', ADD THE FOLLOWING: -- CONCRETE WALL TO BE C/W XYPEX ADMIXTURE - SEE STRUCTURAL. -- COLD JOINTS TO BE C/W BENTONITE STRIP WATERSTOPS -- WATERPROOFING MEMBRANE	
FW2	**POURED CONCRETE FOUNDATION WALL ASSEMBLY AT OPEN EXCAVATION** -- BACKFILL 50mm RIGID INSULATION TO 1200 mm BELOW FINISHED GRADE 12mm DRAINAGE BOARD -- WATERPROOFING MEMBRANE 300mm STRUCTURAL CONCRETE WALL	
CW1	**POURED CONCRETE INTERIOR WALL ASSEMBLY AT CISTERN** 300mm STRUCTURAL CONCRETE WALL C/W XYPEX ADMIXTURE - SEE STRUCTURAL, BENTONITE WATERSTOPS @ COLD JOINTS -- WATERPROOFING MEMBRANE (PMMA TYPE)	

FLOOR SCHEDULE

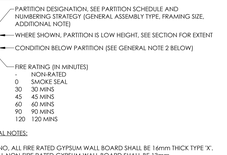
FLOOR TYPE	DESCRIPTION	DETAIL
F1	**TYPICAL INTERIOR FLOOR** VARIES FLOOR FINISH, SEE FLOOR FINISH PLAN VARIES CONCRETE STRUCTURAL SLAB	VARIES
F2	**TYPICAL SLAB ON GRADE** -- CONCRETE SEALER INCLUDE UPTURN 150mm AT ALL VERTICAL SURFACES 125mm CONCRETE SLAB-ON-GROUND (SEE STRUCTURAL) -- VAPOUR BARRIER -- COMPACTED GRANULAR FILL -- UNDER SLAB DRAINAGE PIPING AND PERIMETER DRAINAGE WITHIN CRUSHED STONE. REFER TO GEO-TECHNICAL REPORT	125
F3	**TYPICAL PARKING GARAGE FLOOR** -- TRAFFIC TOPPING VARIES CONCRETE STRUCTURAL SLAB	VARIES
F4	**PARKING ENTRANCE RAMP (INTERIOR)** -- CONCRETE SEALER 250 mm CONCRETE STRUCTURAL SLAB WITH HERRINGBONE DRAINAGE GROOVES (REFER TO STRUCTURAL. 250 mm IS MINIMUM SLAB THICKNESS. THICKNESS TO BE ADDED FOR GROOVES.)	250 MIN
F5	**MECHANICAL ROOM FLOATING SLAB** -- WATER REPELLENT SEALER 100mm FLOATING CONCRETE SLAB C/W WWM REINFORCEMENT -- 6mil POLY VAPOUR BARRIER 19mm P.T. PLYWOOD SHEATHING -- SOUND ISOLATION BEARING PADS W/ ACOUSTIC BATT INSULATION TO FILL VOID -- CONCRETE STRUCTURA SLAB -- ROOT BARRIER PROVIDE 25mm PERIMETER SEPARATION SEMI-RIGID INSULATION BOARD AND PERIMETER CAULKING TO TOP OF CONCRETE CURB	
F6	**TYPICAL AMENITY FLOOR** VARIES FLOOR FINISH, SEE FLOOR FINISH PLAN 10mm SOUND ISOLATION MAT VARIES CONCRETE STRUCTURAL SLAB	VARIES
F7	**INTERIOR GROUND FLOOR ABOVE PARKING GARAGE** VARIES FLOOR FINISH, SEE FLOOR FINISH PLAN VARIES CONCRETE STRUCTURAL SLAB 51 mm SEMI-RIGID MINERAL INSULATION C/W POLYETHELENE FACE	VARIES
F8	**CISTERN FLOOR @ P1** -- WATERPROOFING MEMBRANE (PMMA TYPE) VARIES CONCRETE STRUCTURAL SLAB C/W XYPEX ADMIXTURE - SEE STRUCTURAL	VARIES
F9	**FLOOR @ EXPOSED SOFFIT CONDITION** VARIES FLOOR FINISH, SEE FLOOR FINISH PLAN VARIES CONCRETE STRUCTURAL SLAB 127 CONTINUOUS CLOSED CELL SPRAY FOAM INSULATION (R-35) VARIES UNHEATED MECHANICAL SPACE VARIES SUSPENDED SOFFIT ASSEMBLY - SEE RCPs	VARIES

ROOF SCHEDULE

ROOF TYPE	DESCRIPTION	DETAIL
R1	**TYPICAL FINISHED TERRACE ROOF (LEVEL 5)** VARIES UNIT PAVERS (SEE LANDSCAPE DRAWINGS) VARIES SECOND LAYER(SEE LANDSCAPE DRAWINGS) -- GEOTEXTILE FABRIC 178 mm 2-LAYERS @ 89 mm EXTRUDED POLYSTYRENE (XPS) INSULATION BOARDS W/ OFFSET JOINTS (LOOSE LAID) (R-35) -- SEPARATION SHEET -- MONOLITHIC RUBBERIZED-BITUMEN WATERPROOFING MEMBRANE VARIES SLOPED CONCRETE TOPPING (1.5% MIN.) -- CONCRETE ROOF SLAB (SEE STRUCTURAL)	
R1a	**FINISHED TERRACE ROOF @ RAISED HOT TUB & COLD PLUNGE AREA (LEVEL 5)** SAME AS 'R1' BUT SUBSTITUTE THE FOLLOWING IN PLACE OF 'MONOLITHIC RUBBERIZED-BITUMEN WATERPROOFING MEMBRANE' -- MONOLITHIC PMMA WATERPROOFING MEMBRANE SYSTEM (NOTE: LANDSCAPE FINISH ALSO VARIES)	
R2	**TYPICAL UNFINISHED ROOF (LEVELS 35 & 36)** VARIES GRAVEL BALLAST - 50 kg/m² IN FIELD & STRIP 1200 mm WIDE OF 180 kg/m² @ PERIMETER, CORNERS & PENETRATIONS -- GEOTEXTILE FABRIC 178 mm 2-LAYERS @ 89 mm EXTRUDED POLYSTYRENE (XPS) INSULATION BOARDS W/ OFFSET JOINTS (LOOSE LAID) (R-35) -- SEPARATION SHEET -- MONOLITHIC RUBBERIZED-BITUMEN WATERPROOFING MEMBRANE VARIES SLOPED CONCRETE TOPPING (1.5% MIN.) -- CONCRETE ROOF SLAB (SEE STRUCTURAL)	
R3	**GROUND FLOOR ROOF OVER PARKING GARAGE** -- UNIT PAVERS ON COMPACTED GRANDULAR FILL OR SOFT LANDSCAPING, SEE LANDSCAPE & CIVIL DRAWINGS -- GEOTEXTILE FABRIC 51 mm XPS RIGID INSULATION -- SEPARATION SHEET -- MONOLITHIC RUBBERIZED-BITUMEN WATERPROOFING MEMBRANE VARIES SLOPED CONCRETE TOPPING -- CONCRETE ROOF SLAB (SEE STRUCTURAL)	
R4	**ROOFING BELOW GREEN ROOF PLANTING (LEVEL 5 & GROUND FLOOR PLANTERS)** -- SEE LANDSCAPE DRAWINGS FOR GREEN ROOF PLANTING & ACCESSORY PRODUCTS ABOVE GEOTEXTILE FABRIC -- GEOTEXTILE FABRIC 10 mm DRAINAGE BOARD 178 mm 2-LAYERS @ 89 mm EXTRUDED POLYSTYRENE (XPS) INSULATION BOARDS W/ OFFSET JOINTS (LOOSE LAID) (R-35) -- ROOT BARRIER -- SEPARATION SHEET -- MONOLITHIC RUBBERIZED-BITUMEN WATERPROOFING MEMBRANE VARIES SLOPED CONCRETE TOPPING (1.5% MIN.) -- CONCRETE ROOF SLAB (SEE STRUCTURAL)	
R5	**PARKING ENTRANCE RAMP (EXTERIOR)** -- CONCRETE SEALER 150 mm CONCRETE WEAR SLAB AND GLYCOL TUBING WITH HERRINGBONE DRAINAGE GROOVES (REFER TO STRUCTURAL) VARIES GRANULAR FILL TO SUIT GRADING (SEE CIVIL & LANDSCAPE) 10 mm DRAINAGE BOARD 50 mm HIGH LOAD RIGID INSULATION 2 mm WATERPROOFING PROTECTION BOARD OR SEPARATION SHEET -- MONOLITHIC RUBBERIZED BITUMEN WATERPROOFING MEMBRANE VARIES SLOPED CONCRETE TOPPING (1.5% MIN.) -- CONCRETE ROOF SLAB (SEE STRUCTURAL)	

PARTITION NOTES

PARTITION SYMBOL:

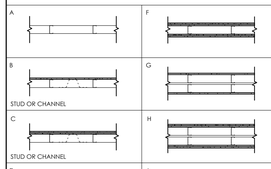


GENERAL NOTES:

1. UNO, ALL FIRE RATED GYPSUM WALL BOARD SHALL BE 16mm THICK TYPE 'X'. ALL NON-FIRE RATED GYPSUM WALL BOARD SHALL BE 13mm
2. UNO, ALL GYPSUM PARTITIONS SHALL SPAN FROM SLAB TO SLAB
3. CONDITION BELOW PARTITION:
   A. RESERVED
   B. RESERVED
   C. CURB
   D. RESERVED
4. NO RESIDENTIAL LOW-DENSITY GRADE GYPSUM SHALL BE PERMITTED
5. ALL GYPSUM BOARD SHALL BE MOLD RESISTANT
6. 20 GA STEEL STUD AT EACH OPENING GREATER THAN 450mm
7. DO NOT USE GAS OR POWDER ACTUATED TOOLS ON COLUMNS OR COLUMN DROP PANELS
8. TEAR-AWAY GYPSUM BEAD AGAINST COLUMNS
9. 20 GA STEEL STUD AT LOCATIONS OF BRICK WALL CLADDING WITH GREENBOARD BACKING IN LIEU OF GYPSUM, SEE PLAN
10. WALL FURRING TO EXTEND 150mm MINIMUM ABOVE CEILING FINISH, EXCEPT IN ROOMS WITHOUT CEILING, EXTEND TO SLAB, U.N.O.
11. CONTRACTOR TO VERIFY ADEQUACY OF STUD DEPTH FOR LIMITING HEIGHTS BASED ON THE SELECTED STUD MANUFACTURER
12. ALL PLAN DIMENSIONS ARE TO FACE OF OUTER MOST LAYER OF GYPSUM BOARD, U.N.O.
13. REPLACE FACE LAYER OF GYPSUM BOARD WITH MOISTURE RESISTANT GYPSUM IN KITCHENS, BATHROOMS, LAUNDRY ROOMS, LOCKERS, JANITOR CLOSETS, AND MECHANICAL ROOMS
14. REPLACE FACE LAYER OF GYPSUM BOARD WITH CEMENT BOARD AND USE 20GA STUDS AT ALL SHOWERS AND BATHTUB WALLS
15. PATCH AND REPAIR ALL EXISTING GYPSUM PARTITIONS THAT ARE TO REMAIN
16. FOR PARTITIONS WITH ACOUSTIC FIBERGLASS INSULATION, PROVIDE ACOUSTIC CAULKING AT BOTTOM OF FINAL LAYER OF GYPSUM AND ALL PENETRATIONS THROUGH WALLS AND CEILINGS

PARTITION NUMBERING STRATEGY

GENERAL ASSEMBLY TYPE



FRAMING SIZE

0	7/8" / 22mm	HAT CHANNEL 25 GA
1	1-5/8" / 41mm	METAL STUD 25 GA
2	2-1/2" / 64mm	METAL STUD / CH-STUD 25 GA @ 400mm OC
3	3-5/8" / 92mm	METAL STUD 25 GA@ 400mm OC
4	4" / 102mm	METAL STUD / CH-STUD 25 GA @ 400mm OC
5	5" / 127mm	METAL STUD / CH-STUD 25 GA @ 400mm OC
6	6" / 152mm	METAL STUD / CH-STUD 25 GA @ 400mmOC
7	-	NOT USED
8	8" / 203mm	METAL STUD 25 GA @ 400mmOC
X	LAMINATED	NO FRAMING

ADDITIONAL NOTES

a. NONE
b. INSULATION TO FILL STUD CAVITY, SEE PARTITION SCHEDULE FOR INSULATION TYPE
c. TYPE X GYPSUM BOARD
d. TYPE X GYPSUM BOARD WITH INSULATION TO FILL STUD CAVITY, SEE PARTITION SCHEDULE FOR INSULATION TYPE
e. 16mm TYPE X GYPSUM BOARD
f. 16mm TYPE C GYPSUM BOARD WITH INSULATION TO FILL STUD CAVITY W/ADDITIONAL MOISTURE RESISTANT GYPSUM ON SHOWER SIDE
g. 16mm TYPE C GYPSUM BOARD WITH INSULATION TO FILL STUD CAVITY W/ADDITIONAL MOISTURE RESISTANT GYPSUM ON BOTH SIDES
h. 13 mm (1/2") CGC SHEETROCK® BRAND FIRECODE® C PANELS, FACE LAYER JOINTS FINISHED

PARTITION SCHEDULE

PARTITION TYPE		DESCRIPTION	DETAIL	FIRE RATING (MINUTES)	STC (OBC REF.)	FIRE TEST NUMBER	REMARKS
B	B/0 B/30 B/45 B/60	- 1 LAYER 13mm GYPSUM BOARD OR CEMENT BOARD WHEN NOTED, SEE GENERAL NOTES - STEEL STUD @ 400mm OC		-	-	-	TYPICAL FURRING/CHASE
	B/0	- 1 LAYER 13mm GYPSUM BOARD OR CEMENT BOARD WHEN NOTED, SEE GENERAL NOTES - STEEL STUD @ 400mm OC C/W ECOTOUCH QUIETZONE PINK FIBREGLASS ACOUSTIC INSULATION TO FILL ENTIRE STUD CAVITY					ACOUTIC FURRING/CHASE
C	C/0	- 2 LAYERS 13mm GYPSUM BOARD - STEEL STUD @ 400mm OC C/W ECOTOUCH QUIETZONE PINK FIBREGLASS ACOUSTIC INSULATION TO FILL ENTIRE STUD CAVITY		-	-	-	TYPICAL ACOUTIC CHASE
D	D/0 D/30 D/45	- 1 LAYER 13mm GYPSUM BOARD - STEEL STUD @ 400mm OC C/W ECOTOUCH QUIETZONE PINK FIBREGLASS ACOUSTIC INSULATION TO FILL ENTIRE STUD CAVITY - 1 LAYER 13mm GYPSUM BOARD		-	-	-	TYPICAL INTERIOR PARTITION
	D/0	- 1 LAYER 13mm GYPSUM BOARD - STEEL STUD @ 400mm OC C/W ECOTOUCH QUIETZONE PINK FIBREGLASS ACOUSTIC INSULATION TO FILL ENTIRE STUD CAVITY - 1 LAYER 13mm GYPSUM BOARD		-	47 (54b)	-	TYPICAL ACOUSTIC PARTITION
	D/0	- 1 LAYER 16mm GYPSUM BOARD TYPE 'X' - STEEL STUD @ 400mm OC C/W ECOTOUCH QUIETZONE PINK FIBREGLASS ACOUSTIC INSULATION TO FILL ENTIRE STUD CAVITY - 1 LAYER 16mm GYPSUM BOARD TYPE 'X'		60	47 (54b)	W453	TYPICAL 60 MIN RATED PARTITION
	D/0	- 1 LAYER 16mm GYPSUM BOARD TYPE 'X' - STEEL STUD @ 400mm OC - 1 LAYER 16mm GYPSUM BOARD TYPE 'X'		60	38 (54d)	W453	TYPICAL 60 MIN RATED PARTITION
E	E/0 E/60	- 2 LAYERS 16mm GYPSUM BOARD TYPE 'X' - STEEL STUD @ 400mm OC C/W ECOTOUCH QUIETZONE PINK FIBREGLASS ACOUSTIC INSULATION TO FILL ENTIRE STUD CAVITY - 1 LAYER 16mm GYPSUM BOARD TYPE 'X'		60	52 (56b)	-	TYPICAL SUITE DEMISING WALL (SUITE TO CORRIDOR & SUITE TO SUITE)
	E/0 E/60	- 2 LAYERS 16mm GYPSUM BOARD TYPE 'X' - STEEL STUD @ 400mm OC C/W ECOTOUCH QUIETZONE PINK FIBREGLASS ACOUSTIC INSULATION TO FILL ENTIRE STUD CAVITY - 1 LAYER 16mm GYPSUM BOARD TYPE 'X' - 1 LAYER 13mm MOISTURE RESISTANT GYPSUM	SHOWER	60	51		
	E/0 E/60	- 1 LAYER 13mm MOISTURE RESISTANT GYPSUM - 2 LAYERS 16mm GYPSUM BOARD TYPE 'X' - STEEL STUD @ 400mm OC C/W ECOTOUCH QUIETZONE PINK FIBREGLASS ACOUSTIC INSULATION TO FILL ENTIRE STUD CAVITY - 1 LAYER 16mm GYPSUM BOARD TYPE 'X' - 1 LAYER 13mm MOISTURE RESISTANT GYPSUM	SHOWER SHOWER	60	51		
F	F/0	- 2 LAYERS 13mm GYPSUM BOARD - STEEL STUD @ 400mm OC C/W ECOTOUCH QUIETZONE PINK FIBREGLASS ACOUSTIC INSULATION TO FILL ENTIRE STUD CAVITY - 2 LAYERS 13mm GYPSUM BOARD		-	55 (56b)	-	TYPICAL ACOUSTIC PARTITION
	F/0 F/90	- 2 LAYERS 16mm GYPSUM BOARD TYPE 'X' - 92mm STEEL STUD @ 400mm OC C/W 92mm ECOTOUCH QUIETZONE PINK FIBREGLASS ACOUSTIC INSULATION - 2 LAYERS 16mm GYPSUM BOARD TYPE 'X'		90	55 (56b)	W453	TYPICAL GYPSUM 90 MIN. FIRE SEPARATION
	F/0 F/120	- 2 LAYERS 16mm GYPSUM BOARD TYPE 'X' - 92mm STEEL STUD @ 400mm OC C/W 92mm ECOTOUCH QUIETZONE PINK FIBREGLASS ACOUSTIC INSULATION - 2 LAYERS 16mm GYPSUM BOARD TYPE 'X'		120	55 (56b)	W453	TYPICAL GYPSUM 120 MIN. FIRE SEPARATION
G	G/0	- 1 LAYER 13mm GYPSUM BOARD - 64mm STEEL STUD @ 400mm OC - 70mm POCKET DOOR SPACE - 64mm STEEL STUD @ 400mm OC - 1 LAYER 13mm GYPSUM BOARD		-	-	-	TYPICAL POCKET DOOR PARTITION
H	H/0	- 2 LAYERS 16mm GYPSUM BOARD - 92mm STEEL STUD @ 400mm OC C/W 89mm MINERAL WOOL BATT TYPE INSULATION - 25mm AIR SPACE - 92mm STEEL STUD @ 400mm OC C/W 89mm MINERAL WOOL BATT TYPE INSULATION - 3 LAYERS 16mm GYPSUM BOARD		-	-	-	TYPICAL SOUND-PROOF PARTITION
	H/0	- 2 LAYERS 13mm GYPSUM BOARD - 152mm STEEL STUD @ 400mm OC C/W 150mm ECOTOUCH QUIETZONE PINK FIBREGLASS ACOUSTIC INSULATION - 25mm AIR SPACE - 152mm STEEL STUD @ 400mm OC C/W 150mm ECOTOUCH QUIETZONE PINK FIBREGLASS ACOUSTIC INSULATION - 2 LAYERS 13mm GYPSUM BOARD		-	-	-	TYPICAL SOUND-PROOF PARTITION
K	K/120	- 2 LAYERS 13mm GYPSUM BOARD TYPE 'C' - 102mm STEEL CH STUD @ 610mm OC C/W 76 mm MINERAL FIBER INSULATION - 25.4mm GYPSUM LINER PANEL		120	-	W452 SYSTEM B	RAL-DT-04-019 TYPICAL 120MIN SHAFT WALL (ACOUSTIC - STC 50)
	K/90	- 2 LAYERS 13mm GYPSUM BOARD TYPE 'C' - 64mm STEEL CH STUD @ 610mm OC - 25.4mm GYPSUM LINER PANEL		120	-	W452 SYSTEM B	TYPICAL 120MIN SHAFT WALL
J	J/60	- 1 LAYER 16mm GYPSUM BOARD TYPE 'X' - 64mm STEEL CH STUD @ 610mm OC - 25.4mm GYPSUM LINER PANEL		60	-	W452 SYSTEM A	TYPICAL 60MIN SHAFT WALL

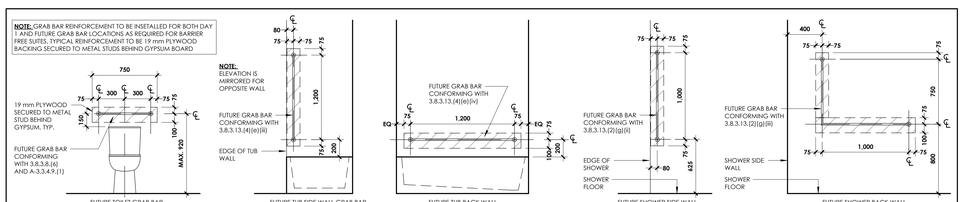
CEILING SCHEDULE

CEILING DESIGNATION	DESCRIPTION	DETAIL	FIRE RATING (MINUTES)	STC	FIRE TEST NUMBER	REMARKS
CS/0	TYPICAL SUSPENDED CEILING - HANGING WIRE - 41mm C CHANNEL - 22mm HAT CHANNEL - 1 LAYER 13mm GYPSUM BOARD *USE MOISTURE RESISTANT BOARD FOR WET ROOMS		-	-		
CS/0	TYPICAL ACOUSTIC SUSPENDED CEILING - THREADED HANGING ROD - COMPACT SPRING CEILING HANGER W/ PRECOMPRESSED SPRINGS OR GENIE CLIP - 100mm ACOUSTIC BATT INSULATION - 2 LAYERS 13mm GYPSUM BOARD	CH	-	-		CEILINGS BELOW MECHANICAL AND AMENITY FLOORS. PROVIDE 13mm GAP WHERE CEILING MEETS ACOUSTIC PARTITION, FILL ENTIRE DEPTH OF STUD WITH GLASS FIBER INSULATION, SEALED WITH BACKER ROD AND ACOUSTIC CAULK, SEE DETAIL
CB/0	TYPICAL BULKHEAD - (HORIZONTAL) 22 mm HAT CHANNEL @ 600 O.C. C/W 25 mm GALV. ANGLE @ CORNER - (VERTICAL) 41 mm STEEL STUD @ 600 O.C. - 13mm GYPSUM BOARD* *MOISTURE RESISTANT @ WET ROOMS		-	-		
CS/0	TYPICAL STUD FRAMED CEILING - 92mm STEEL STUD @ 400mm OC - 1 LAYER 13mm GYPSUM BOARD		-	-		
CS/120	TYPICAL 120min FIRE RATED HORIZONTAL MEMBRANE - 25mm GYPSUM LINER PANEL - 64mm STEEL CH STUD @ 610mm OC - 3 LAYERS 16mm GYPSUM BOARD TYPE 'C' - RESILIENT CHANNELS AT 406mm (16') O.C. BETWEEN 2ND AND 3RD LAYER OF GYPSUM PANEL		120	-	cUL I515	
CS/0	TYPICAL LOW PROFILE CEILING - 41 mm STEEL STUD @ 600 O.C. - 1 LAYER 13mm GYPSUM BOARD* *USE MOISTURE RESISTANT BOARD FOR WET ROOMS		-	-		

MASONRY PARTITION SCHEDULE (NON-LOADBEARING CMU)

WALL TYPE	THICKNESS (T)	FIRE RESISTANCE (MINUTES)	TYPE OF UNIT			STC RATING	REMARKS
			HOLLOW UNIT	75% SOLID	SOLID UNIT		
SINGLE WYTHE 140							
M/0	140	120		●		45	
SINGLE WYTHE 190							
M/0	190	-	●			52	
M/0	190	0	●			52	
M/0	190	60	●			52	
M/0	190	90	●			52	
M/0	190	120	●			52	
M/0	190	180		●			

NOTE: GRAB BAR REINFORCEMENT TO BE INSETALLED FOR BOTH DAY 1 AND FUTURE GRAB BAR LOCATIONS AS REQUIRED FOR BARRIER FREE SUITES. TYPICAL REINFORCEMENT TO BE 19 mm PLYWOOD BACKING SECURED TO METAL STUDS BEHIND GYPSUM BOARD



GRAB BAR DETAILS

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CLV GROUP DEVELOPMENTS
client
CUNLIFFE & ASSOCIATES CONSULTING STRUCTURAL ENGINEERS
structural engineers | ingénieurs structurels
GWAL Goodkey, Weedmark & Associates Ltd.
electrical engineers | ingénieur electrique
mechanical engineer | ingénieur mécharique
wsp
civil engineers | ingénieur civil
CSW
landscape architect | architecte paysagiste

nord du projet / project north

nord réel / true north

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no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
19	~~ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING~~	~~25-05-16~~
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
2	RE-ISSUED FOR CLASS 'D' ESTIMATE	24-05-13
1	ISSUED FOR CLASS 'D' ESTIMATE	24-05-17

stamp | timbre

architect | architecte
linebox STUDIO

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project title | titre du projet

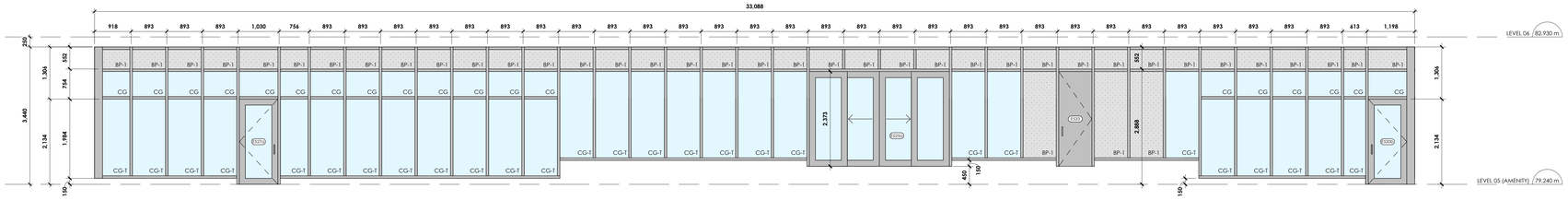
GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ASSEMBLY SCHEDULES

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 25**
date | date	**02/15/24**
drawing number | numéro du dessin	**A0-300**



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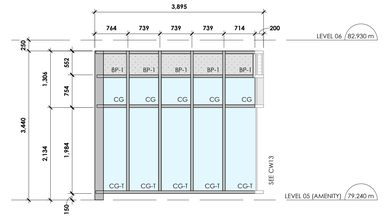

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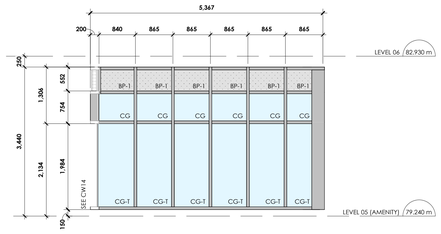

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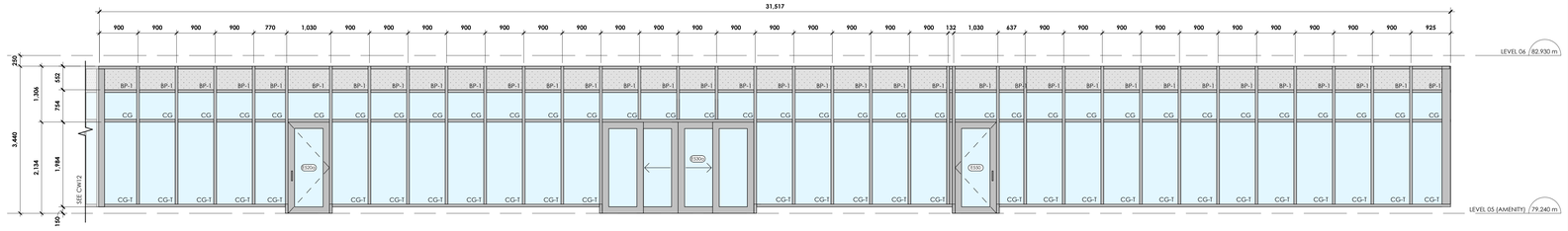

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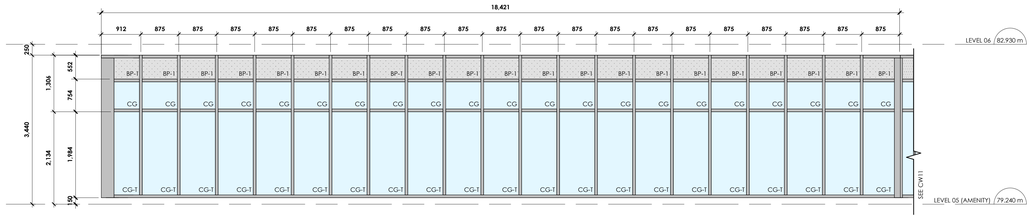

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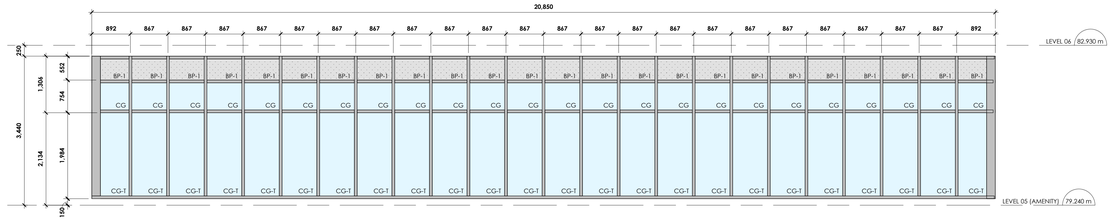

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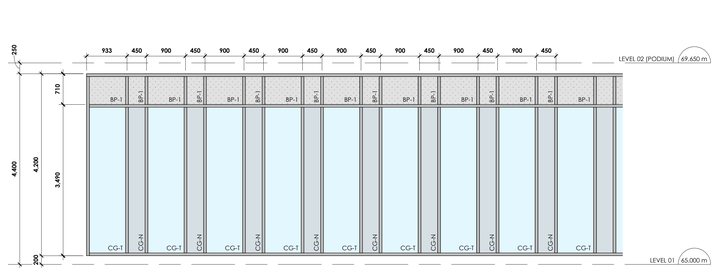

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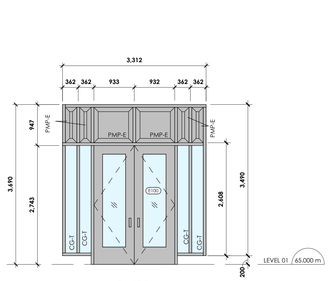

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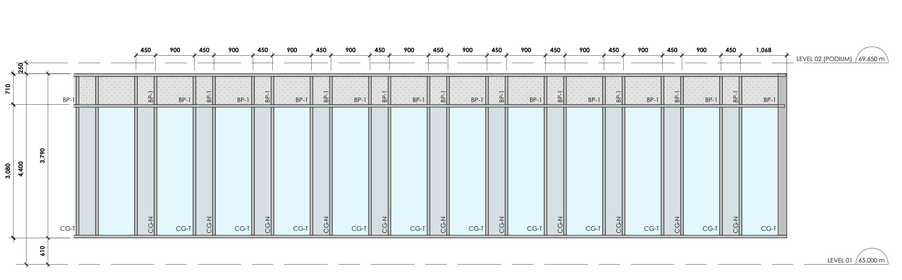

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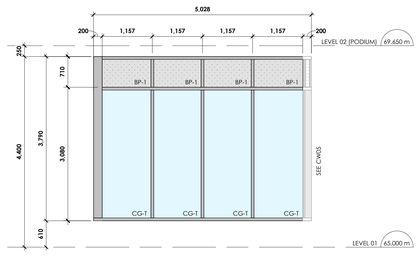

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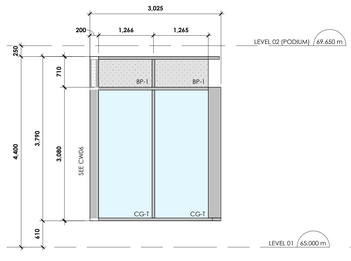

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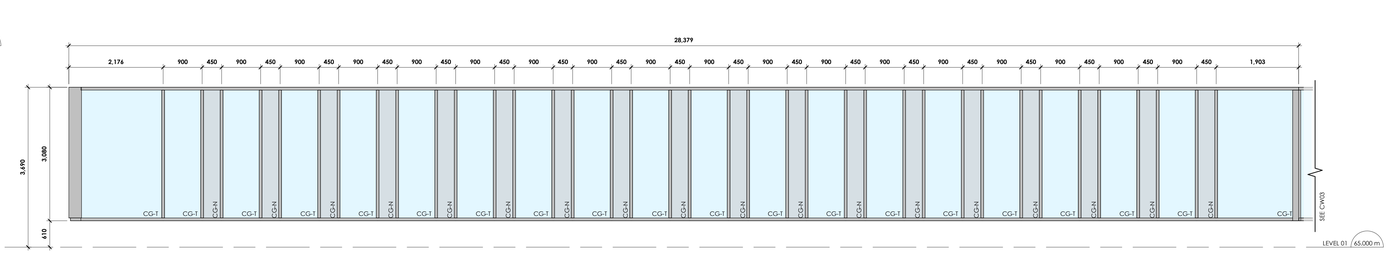

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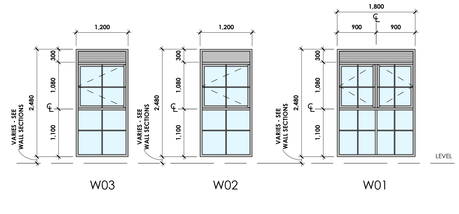
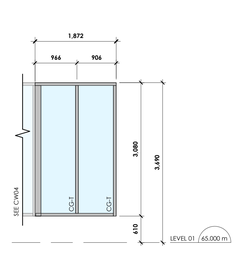


W03 W02 W01

PUNCHED WINDOW SCHEDULE (PODIUM)



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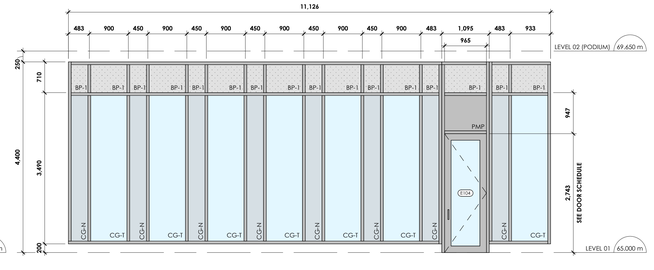

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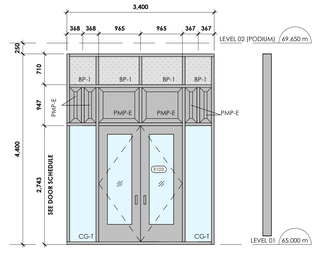

CW01

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client
CLV GROUP DEVELOPMENTS

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS
structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.
electrical engineers | ingénieur electrique
mechanical engineer | ingénieur méchanique

wsp
civil engineers | ingénieur civil

CSW
landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

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architect | architecte
linebox
STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

WINDOW SCHEDULE

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 50**
date | date	**07/16/24**

drawing number | numéro du dessin

A0-400

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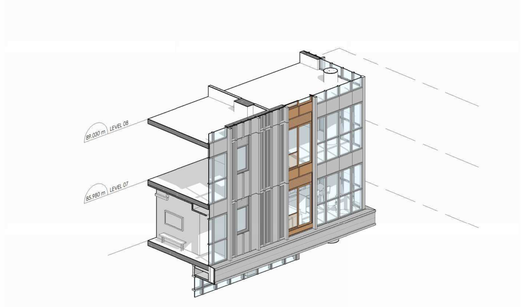
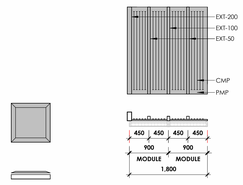
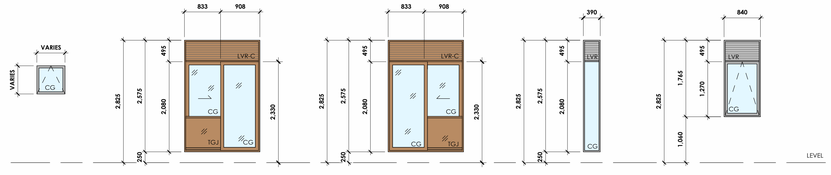


TOWER CLADDING CONTEXT AXO



PMP-E

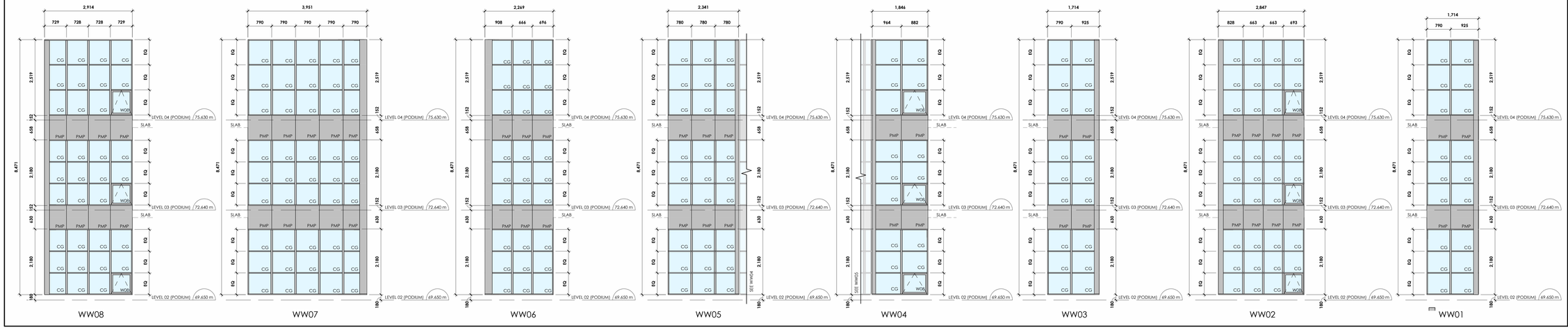
PMP-TYPICAL TOWER MODULES (2 SHOWN)



CURTAIN WALL & WINDOW WALL ABBREVIATIONS

BP-1	INSULATED BACK PAN CONCEALED BETWEEN SOFFIT & U/S OF SLAB ABOVE. EXTERIOR TO BE FINISHED W/ 22 GA. GALV. STEEL OR ALUM. SHEET METAL.
CG	CLEAR INSULATED GLAZING UNIT
CG-T	CLEAR INSULATED GLAZING UNIT - TEMPERED
CG-N	CLEAR INSULATED GLAZING UNIT - TINTED GREY
CG-F	CLEAR INSULATED GLAZING UNIT - TINTED COLOUR (TBD)
CMP	CORRUGATED METAL PANEL
EXT-200	100 x 200 mm EXTRUSION
EXT-100	61 x 102 mm EXTRUSION
EXT-50	61 x 53 mm EXTRUSION
LVR	LOUVER - TYPICAL COLOUR
LVR-C	LOUVER - ALTERNATE COLOUR
PMP	PROJECTED METAL PANEL - TYPICAL COLOUR
PMP-C	PROJECTED METAL PANEL - ALTERNATE COLOUR
PMP-E	PROJECTED METAL PANEL - MAIN ENTRANCES
SG-1	SPANDREL GLASS - BACK PAINTED, COLOUR #1, SINGLE PANE
SG-2	SPANDREL GLASS - BACK PAINTED, COLOUR #2, SINGLE PANE
TGJ	TEMPERED GLASS JULIET GUARD INTEGRATED WITH SLIDING PATIO DOOR - TINTED COLOUR (TBD - MATCHING 'CG-F)

CURTAIN WALL & WINDOW WALL LEGEND



CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
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electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

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no	revisions	date
21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
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stamp | timbre

architect | architecte

linebox STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

WINDOW SCHEDULE

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 50**
date | date	**07/16/24**

drawing number | numéro du dessin

A0-401

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
2025-06-12 4:27:28 PM

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
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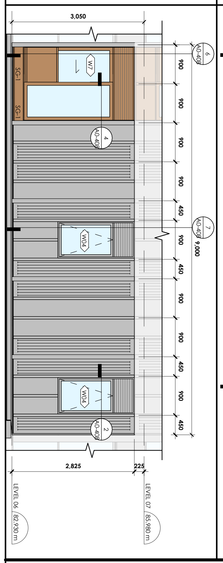
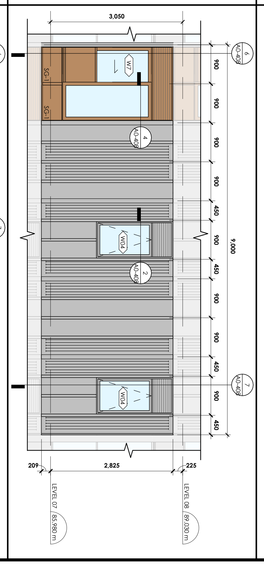
WW13

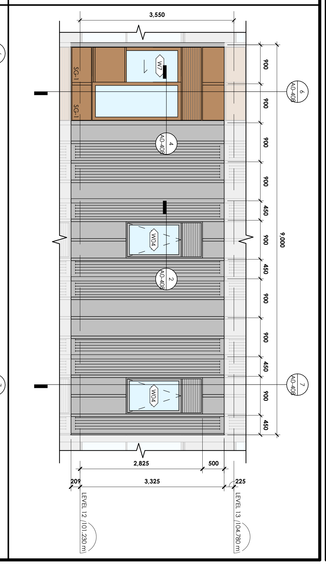
WW13b (BASE @ L.6)



WW13t (TYPICAL 3050 mm FLOORS)

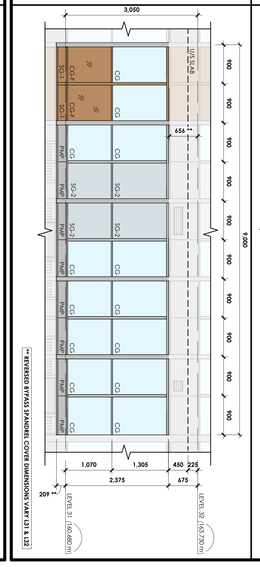


WW13c (CROSS-OVER 3550 mm FLOORS)

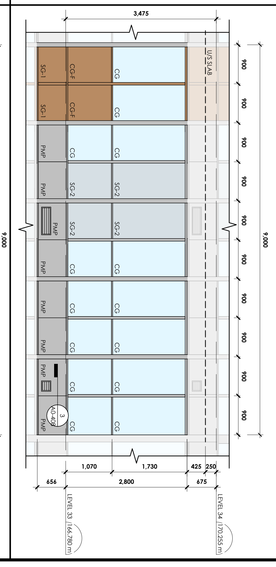


WW28

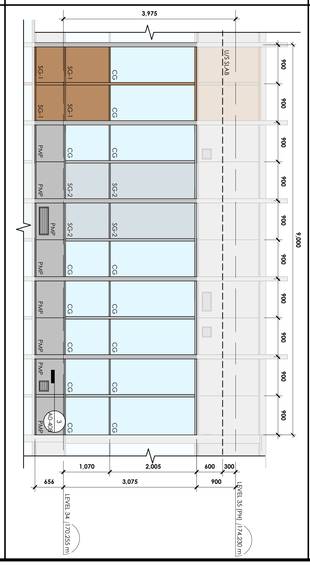
WW28g (L31 & L32)



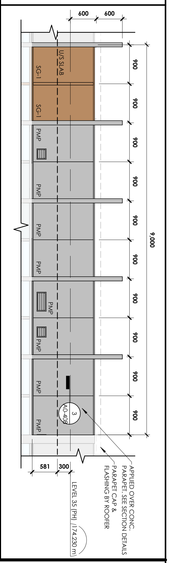
WW28p (L33)



WW28ph (L34 - PENTHOUSE)

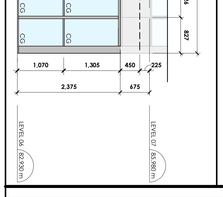


WW28ppt (PARAPET)

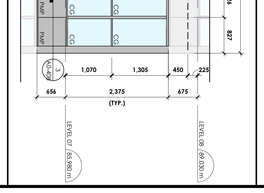


WW12

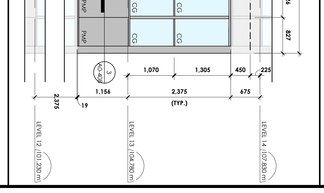
WW12b (BASE @ L.6)



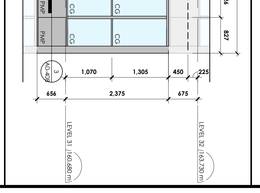
WW12t (TYPICAL 3050 mm FLOORS)



WW12c (ABOVE CROSS-OVER 3550 mm FLOORS)



WW12g (L31 & L32)



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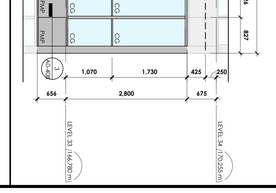
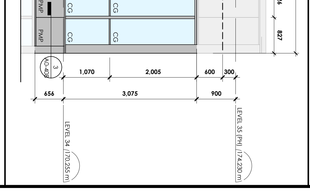
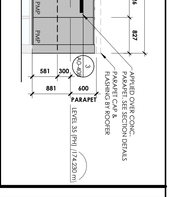


WW12ph (L34 - PENTHOUSE)

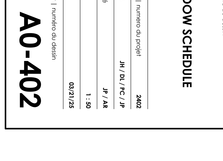


WW12ppt (PARAPET)



WW11

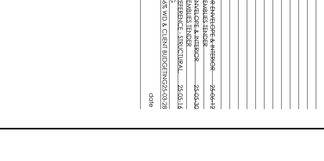
WW11b (BASE @ L.6)



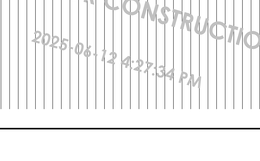
WW11t (TYPICAL 3050 mm FLOORS)



WW11c (ABOVE CROSS-OVER 3550 mm FLOORS)



WW11g (L31 & L32)



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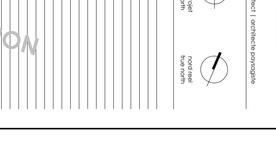

WW11ph (L34 - PENTHOUSE)



WW11ppt (PARAPET)



WW10

WW10b (BASE @ L.6)

WW10t (TYPICAL 3050 mm FLOORS)

WW10c (CROSS-OVER 3550 mm FLOORS)

WW27

WW27g (L31 & L32)

WW27p (L33)

WW27ph (L34 - PENTHOUSE)

WW27ppt (PARAPET)

WW09

WW09b (BASE @ L.6)

WW09t (TYPICAL 3050 mm FLOORS)

WW09c (ABOVE CROSS-OVER 3550 mm FLOORS)

WW09g (L31 & L32)

WW09p (L33)

WW09ph (L34 - PENTHOUSE)

WW09ppt (PARAPET)

NOT FOR CONSTRUCTION
2025-06-12 4:27:34 PM

client
CLV GROUP DEVELOPMENTS

structural engineers | ingénieurs structures
CUNLIFFE & ASSOCIATES CONSULTING STRUCTURAL ENGINEERS

electrical engineers | ingénieurs électrique
mechanical engineer | ingénieur mécanique
GWAL ADAM, MECKLER & ASSOCIATES

civil engineers | ingénieur civil
WSP

landscape architect | architecte paysagiste
CSW

project north / nord du projet
true north / nord réel

no.	revisions	date
1	145 LORETTA AVE N. / OTTAWA, ON	
2	145 LORETTA AVE N. / OTTAWA, ON	
3	PLANNING SUBMISSION #1	2024-12
4	PLANNING SUBMISSION #2	2025-04-17
5	REVISED FOR SUBMISSION #2	2025-05-30
6	ISSUED FOR ZONING & SITE PLAN	2025-06-12
7	ISSUED FOR REFERENCE - STRUCTURAL	2025-06-14
8	ISSUED FOR CMHC & CITY SUBMISSION	2025-06-20
9	ISSUED FOR ZONING & SITE PLAN	2025-06-20
10	ISSUED FOR CMHC & CITY SUBMISSION	2025-06-20
11	ISSUED FOR REFERENCE - STRUCTURAL	2025-06-20
12	ISSUED FOR CMHC & CITY SUBMISSION	2025-06-20
13	ISSUED FOR CMHC & CITY SUBMISSION	2025-06-20
14	ISSUED FOR CMHC & CITY SUBMISSION	2025-06-20
15	ISSUED FOR CMHC & CITY SUBMISSION	2025-06-20
16	ISSUED FOR CMHC & CITY SUBMISSION	2025-06-20
17	ISSUED FOR CMHC & CITY SUBMISSION	2025-06-20
18	ISSUED FOR 445 WD & CLIENT REVIEW	2025-06-20
19	ISSUED FOR CMHC & CITY SUBMISSION	2025-06-20
20	ISSUED FOR ZONING & SITE PLAN	2025-06-20
21	ISSUED FOR REFERENCE - STRUCTURAL	2025-06-20
22	ISSUED FOR CMHC & CITY SUBMISSION	2025-06-20
23	ISSUED FOR CMHC & CITY SUBMISSION	2025-06-20
24	ISSUED FOR CMHC & CITY SUBMISSION	2025-06-20

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CIV_LB_Tower A.rvt
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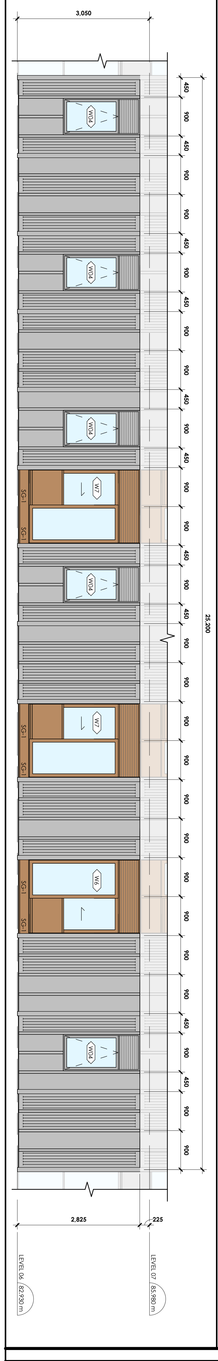
WW16

WW16b (BASE @ L.6)



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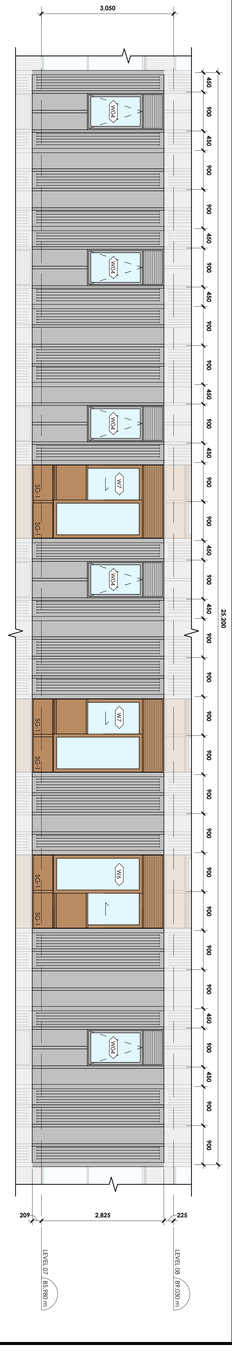

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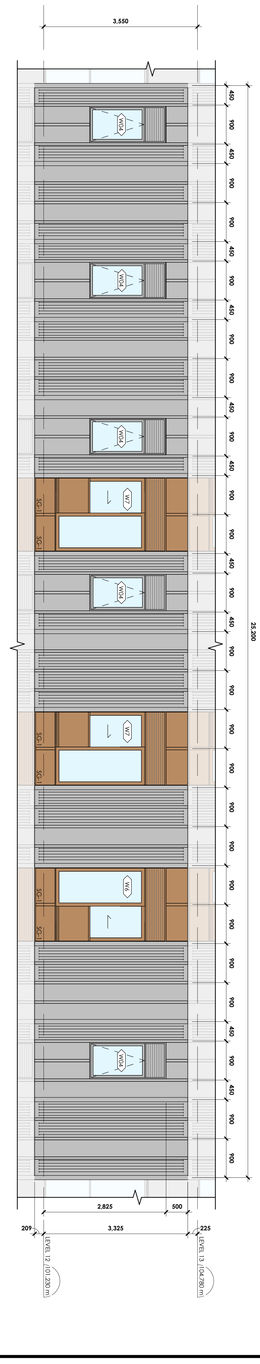
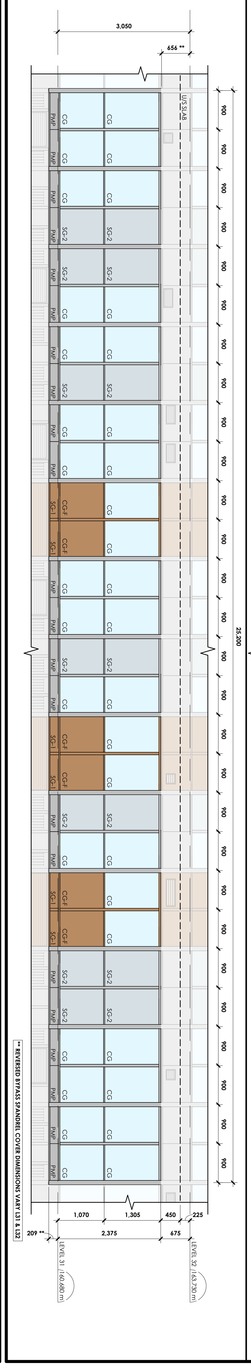


WW29

WW29g (L31 & L32)



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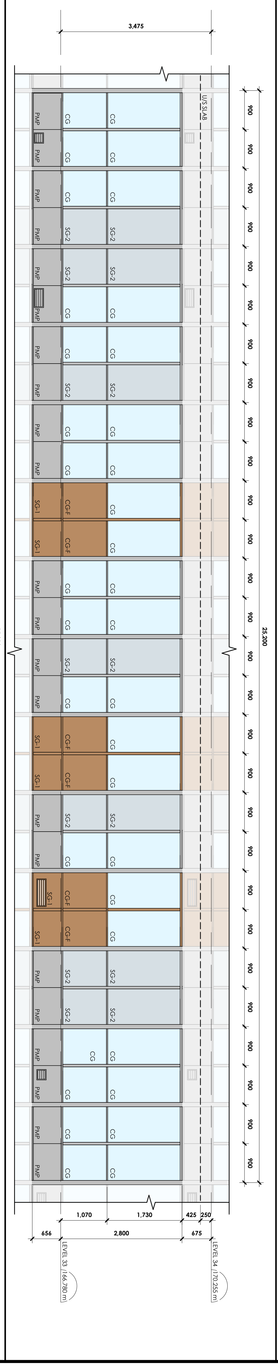

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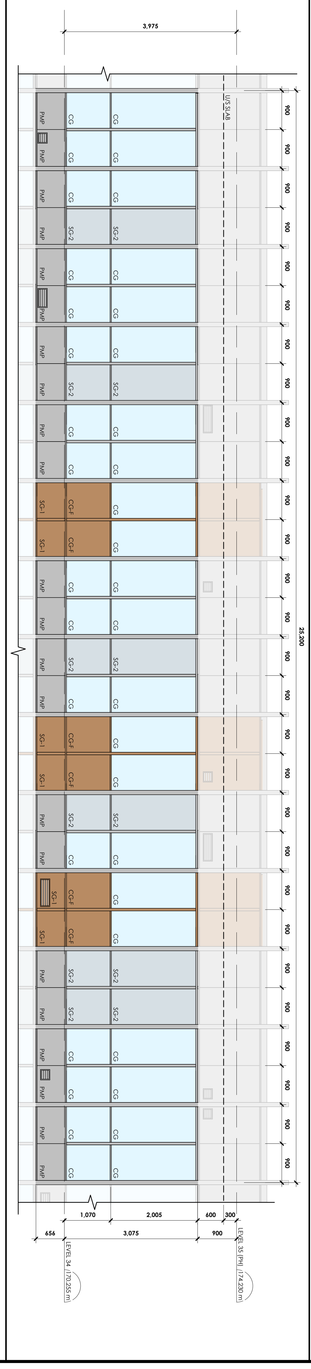
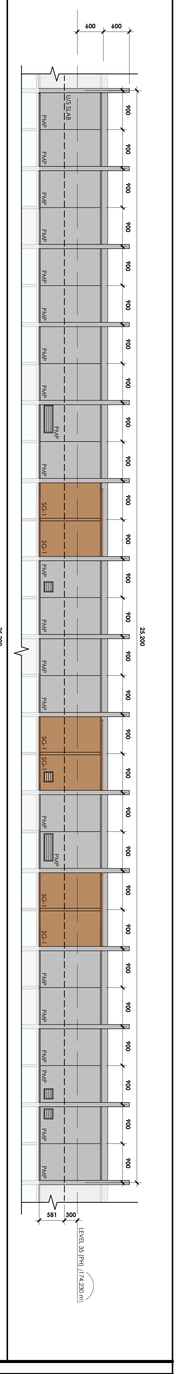


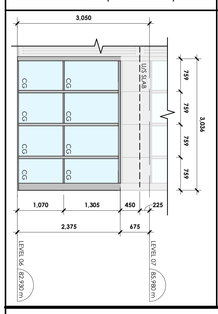
WW29ppt (PARAPET)



** REVERSED TYPICAL SPANDREL COVER DIMENSIONS V.ANT L31 & L32

WW15

WW15b (BASE @ L.6)



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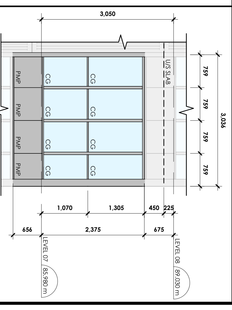
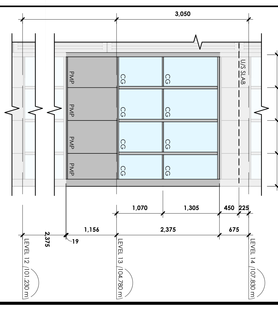
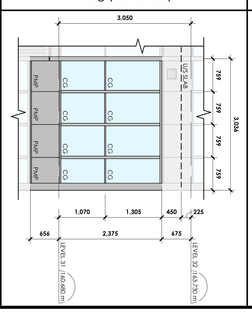


WW15c (ABOVE CROSS-OVER 3550 mm FLOORS)



WW15g (L31 & L32)



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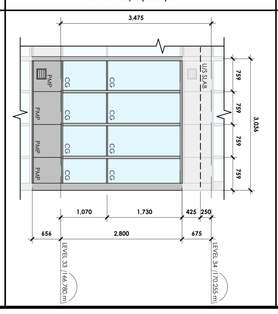

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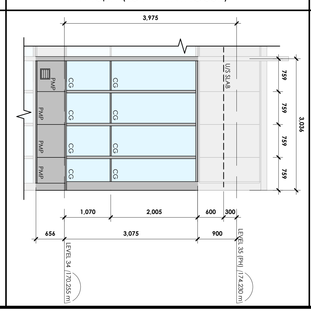
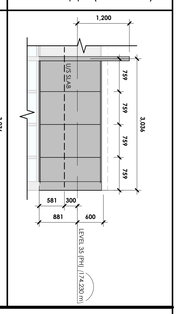
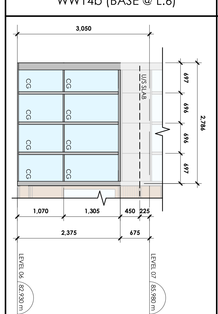


WW15ppt (PARAPET)



WW14

WW14b (BASE @ L.6)



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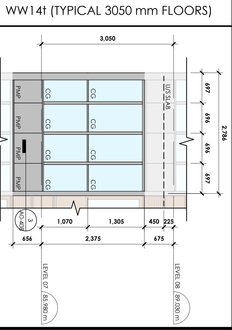
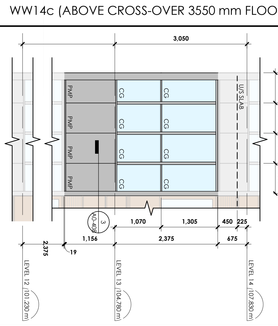
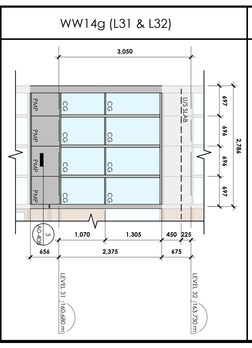


WW14c (ABOVE CROSS-OVER 3550 mm FLOORS)



WW14g (L31 & L32)



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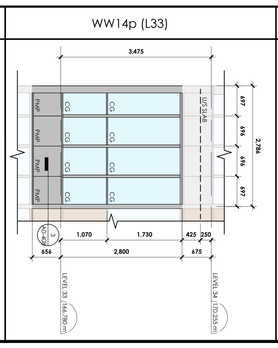
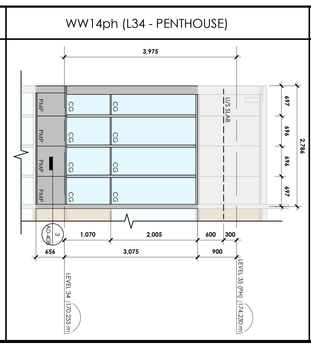
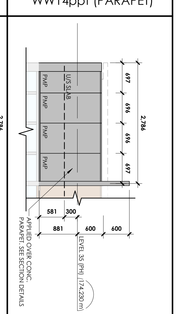


WW14ph (L34 - PENTHOUSE)



WW14ppt (PARAPET)



WINDOW SCHEDULE

project number | numéro du projet: 2402
drawn | dessiné: JH / DL / PC / JP
checked | vérifié: JP / AR
scale | échelle: 1 : 50
date | date: 02/13/25
drawing number | numéro du dessin: **A0-403**
drawing title | titre du dessin:

GLADSTONE AND LORETTA RESIDENTIAL TOWER
145 LORETTA AVE N. | OTTAWA | ON
project title | titre du projet

architect | architecte
linebox STUDIO
Architecture + Urban Design
Contractor shall check and verify all dimensions and report any discrepancies to the Architect. Do not scale the drawings. Not for construction until signed by the Architect.

NOT FOR CONSTRUCTION
2025-06-12 4:27:39 PM

no.	revisions	date
stamp | marque		

1st ISSUED FOR SPA REVIEW	25-04-17
2nd CITY/SAA ASSURANCE REVIEW	25-04-19
3rd ISSUED FOR BANGHART & INTERFACE	25-05-30
4th ISSUED FOR REFERENCE - STRUCTURAL	25-05-14
5th ISSUED FOR SPA REVIEW	25-06-12
1st ISSUED FOR SAES WG & CLIENT REVIEW	25-03-28

project north | true north

landscape architect | architecte paysagiste

civil engineer | ingénieur civil

mechanical engineer | ingénieur mécanique

electrical engineers | ingénieur électrique

structural engineers | ingénieurs structures

client

CLW GROUP DEVELOPMENTS

CUNLIFFE & ASSOCIATES CONSULTING STRUCTURAL ENGINEERS

GWAL CONSULTING ENGINEERS & SCIENTISTS

WSP

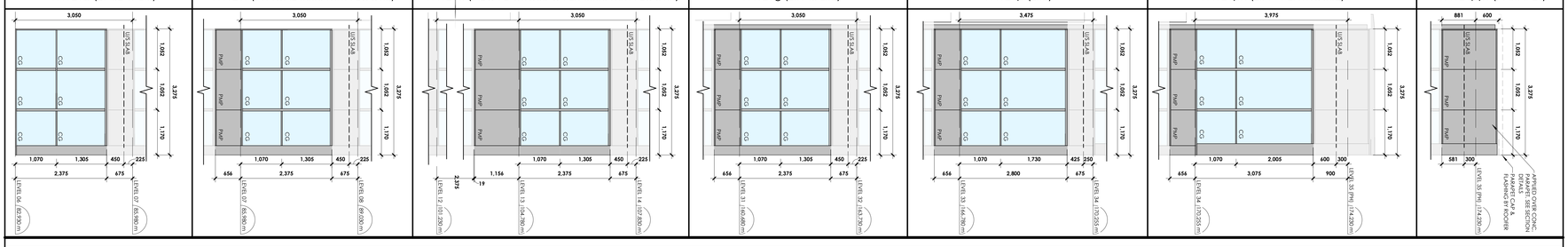
MCW

DSW

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
2025-06-12 4:27:46 PM

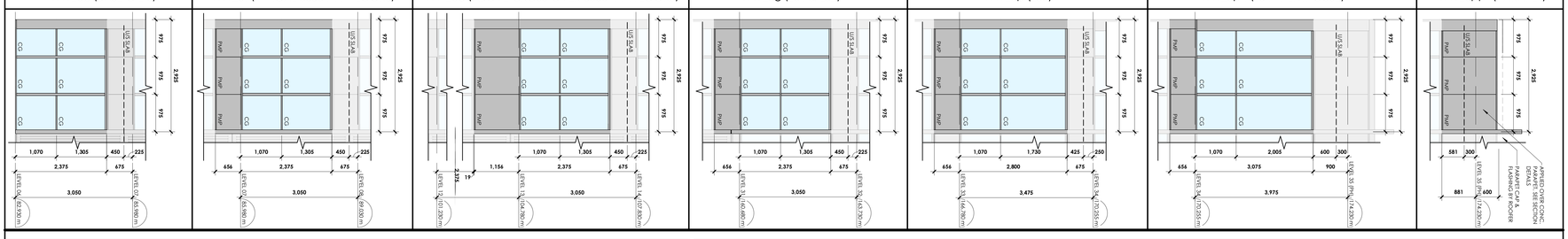
WW21

WW21b (BASE @ L.6) | WW21t (TYPICAL 3050 mm FLOORS) | WW21c (ABOVE CROSS-OVER 3550 mm FLOORS) | WW21g (L31 & L32) | WW21p (L33) | WW21ph (L34 - PENTHOUSE) | WW21ppt (PARAPET)



WW20

WW20b (BASE @ L.6) | WW20t (TYPICAL 3050 mm FLOORS) | WW20c (ABOVE CROSS-OVER 3550 mm FLOORS) | WW20g (L31 & L32) | WW20p (L33) | WW20ph (L34 - PENTHOUSE) | WW20ppt (PARAPET)



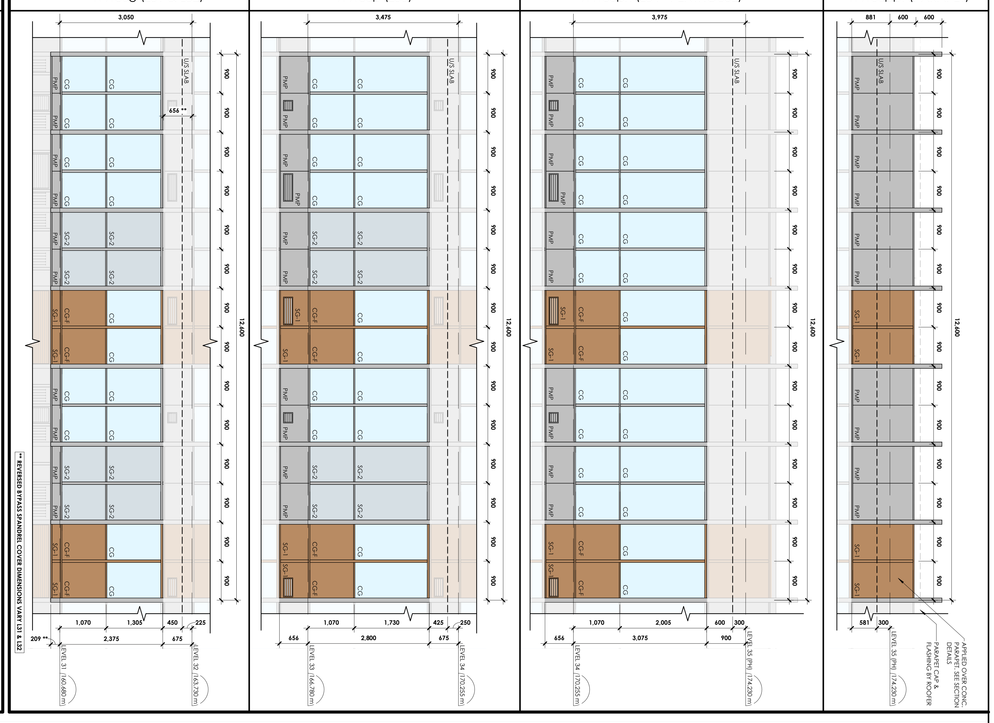
WW19

WW19b (BASE @ L.6) | WW19t (TYPICAL 3050 mm FLOORS) | WW19c (CROSS-OVER 3550 mm FLOORS)



WW30

WW30g (L31 & L32) | WW30p (L33) | WW30ph (L34 - PENTHOUSE) | WW30ppt (PARAPET)



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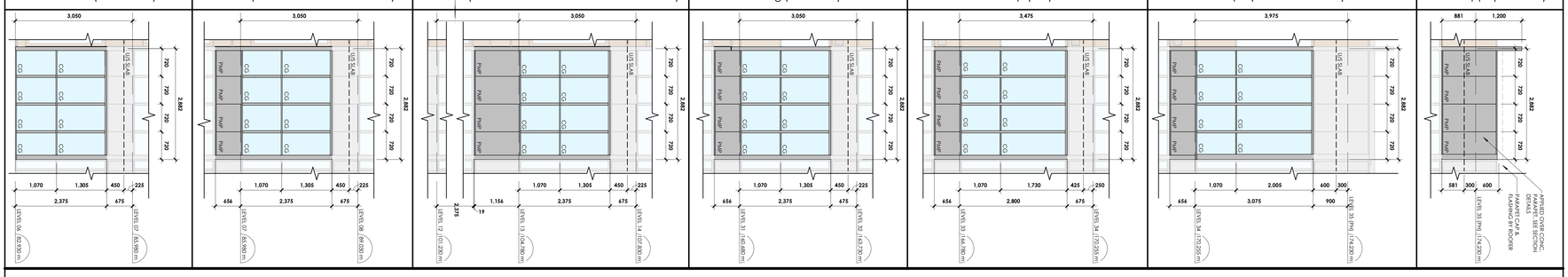
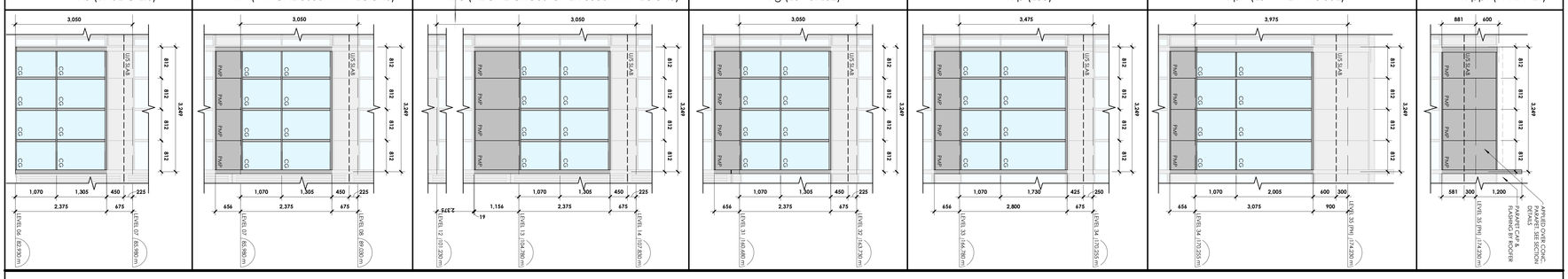
WW18b (BASE @ L.6) | WW18t (TYPICAL 3050 mm FLOORS) | WW18c (ABOVE CROSS-OVER 3550 mm FLOORS) | WW18g (L31 & L32) | WW18p (L33) | WW18ph (L34 - PENTHOUSE) | WW18ppt (PARAPET)



WW17

WW17b (BASE @ L.6) | WW17t (TYPICAL 3050 mm FLOORS) | WW17c (ABOVE CROSS-OVER 3550 mm FLOORS) | WW17g (L31 & L32) | WW17p (L33) | WW17ph (L34 - PENTHOUSE) | WW17ppt (PARAPET)



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no	revisions	date
01	ISSUED FOR REVIEW & COST	2024-05-17
02	ISSUED FOR REVIEW & COST	2024-06-07
03	ISSUED FOR REVIEW & COST	2024-06-21
04	ISSUED FOR REVIEW & COST	2024-07-05
05	ISSUED FOR REVIEW & COST	2024-07-19
06	ISSUED FOR REVIEW & COST	2024-08-02
07	ISSUED FOR REVIEW & COST	2024-08-16
08	ISSUED FOR REVIEW & COST	2024-08-30
09	ISSUED FOR REVIEW & COST	2024-09-13
10	ISSUED FOR REVIEW & COST	2024-09-27
11	ISSUED FOR REVIEW & COST	2024-10-11
12	ISSUED FOR REVIEW & COST	2024-10-25
13	ISSUED FOR REFERENCE - STRUCTURAL	2024-10-28
14	ISSUED FOR 65% REVIEW & CLIENT BUDGETING	2025-01-03
15	ISSUED FOR 65% REVIEW & CLIENT BUDGETING	2025-01-28

stamp | timbre

landscape architect | architecte paysagiste

CSW

civil engineers | ingénieur civil

WSP

mechanical engineer | ingénieur mécanique

electrical engineers | ingénieur électrique

GWAL
CONSULTING ENGINEERS & TECHNOLOGISTS

structural engineers | ingénieurs structurels

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

client

CLVGROUP
DEVELOPMENTS

architect | architecte

linebox
STUDIO

All dimensions are in mm and are to be verified on site.
Contractor must check and verify all dimensions and report any errors or omissions to the Architect.
Do not scale the drawings.
Do not proceed with any work relating to the Architect's drawings for construction until signed by the Architect.

project | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE N | OTTAWA | ON

drawing title | titre du dessin

WINDOW SCHEDULE

project number | numéro du projet	2402
drawn | dessiné	JH / DL / PC / JP
checked | vérifié	JP / AR
scale | échelle	1:50
date | date	02/14/25
drawing number | numéro du dessin	**A0-404**

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
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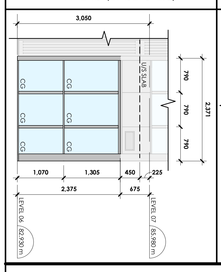
WW24

WW24b (BASE @ L.6)



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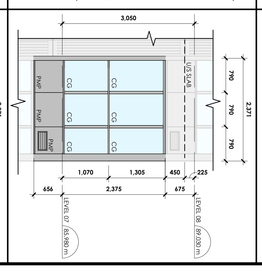
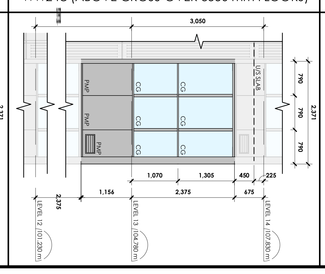
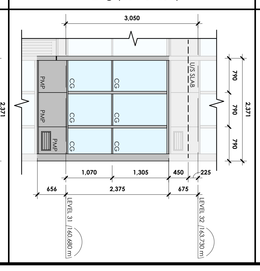


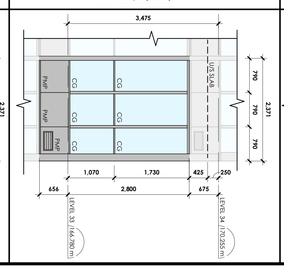
WW24c (ABOVE CROSS-OVER 3550 mm FLOORS)



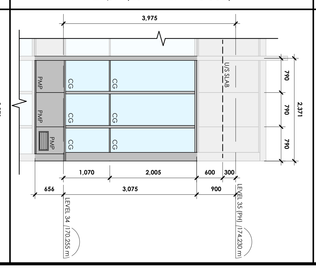
WW24g (L31 & L32)



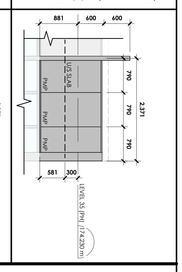
WW24p (L33)



WW24ph (L34 - PENTHOUSE)

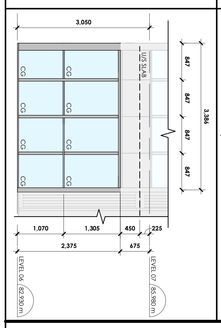


WW24ppt (PARAPET)

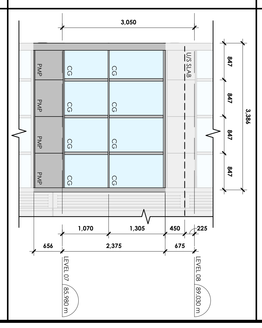


WW23

WW23b (BASE @ L.6)



WW23t (TYPICAL 3050 mm FLOORS)



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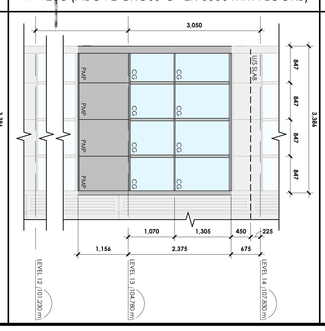
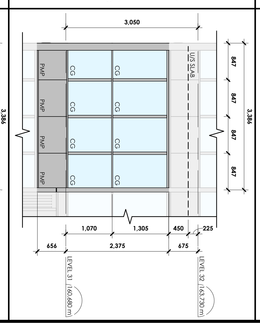


WW23g (L31 & L32)



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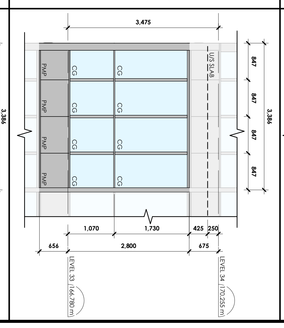

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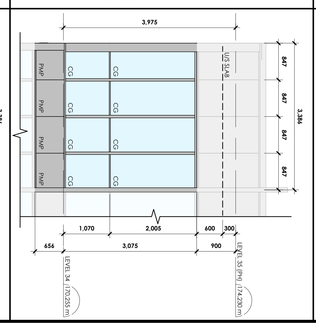

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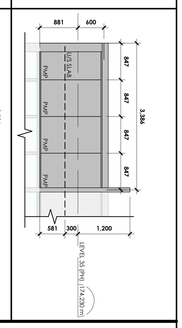
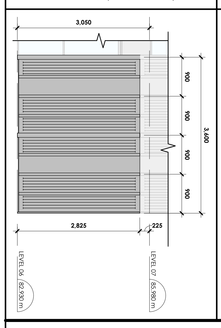
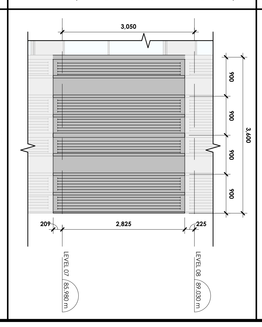


WW22

WW22b (BASE @ L.6)



WW22t (TYPICAL 3050 mm FLOORS)



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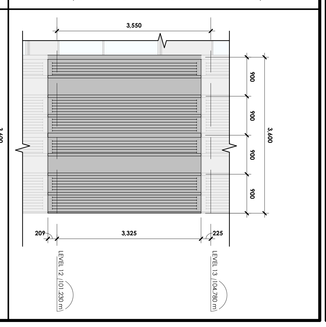
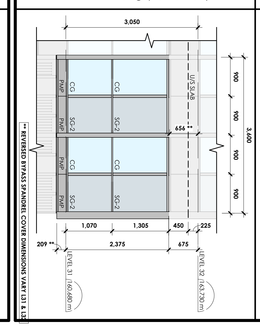


WW31

WW31g (L31 & L32)



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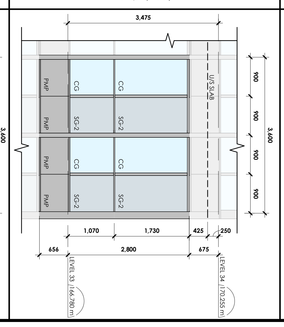
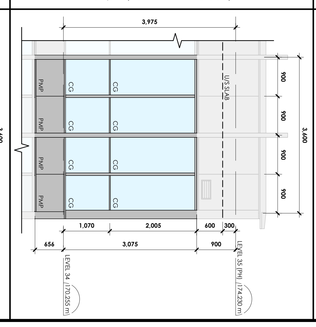


WW31ph (L34 - PENTHOUSE)



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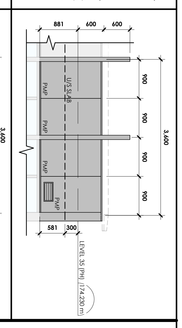

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodwin, Weedmark & Associates Ltd.

electrical engineers | ingénieur électrique
mechanical engineer | ingénieur mécanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord réel
true north

NOT FOR CONSTRUCTION
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01-REVISED FOR ENVELOPE & INTERIOR	25-04-12
GIPSUM ASSEMBLIES TENDER	
20-SSUED FOR ENVELOPE & INTERIOR	25-05-30
GIPSUM ASSEMBLIES TENDER	
19-SSUED FOR REFERENCE - STRUCTURAL	25-05-16
MAIL PRICING	
no revisions	date
stamp | timbre	

architect | architecte

linebox STUDIO

All dimensions are shown in metric. Contractor shall check and verify all dimensions and report all error and omissions to the Architect. Do not scale the drawings. Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER
145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

WINDOW SCHEDULE

project number | numero du projet	2402
drawn | dessiné	JH / DL / PC / JP
checked | verifié	JP / AR
scale | échelle	1 : 50
date | date	04/14/25

drawing number | numéro du dessin

A0-405

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
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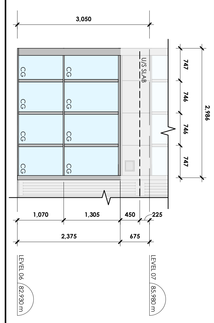
WW26

WW26b (BASE @ L.6)



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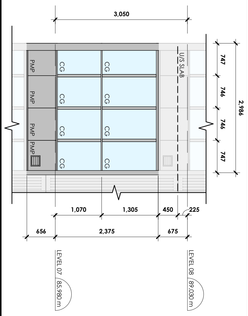

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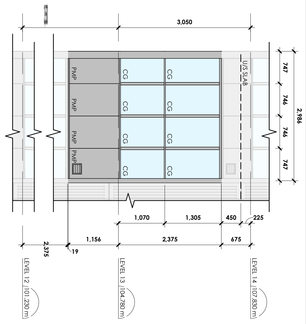

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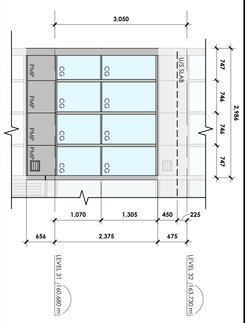

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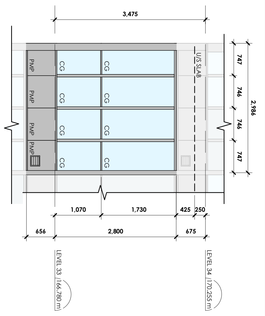

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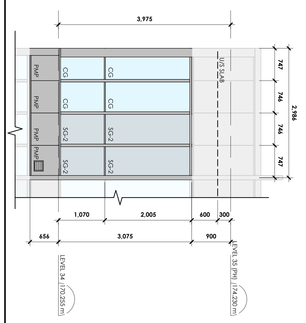

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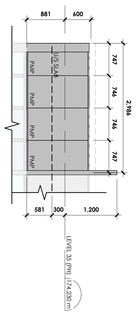
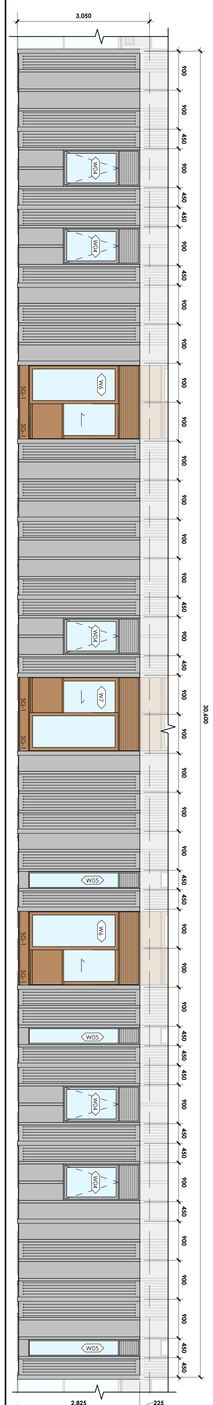


WW25

WW25b (BASE @ L.6)



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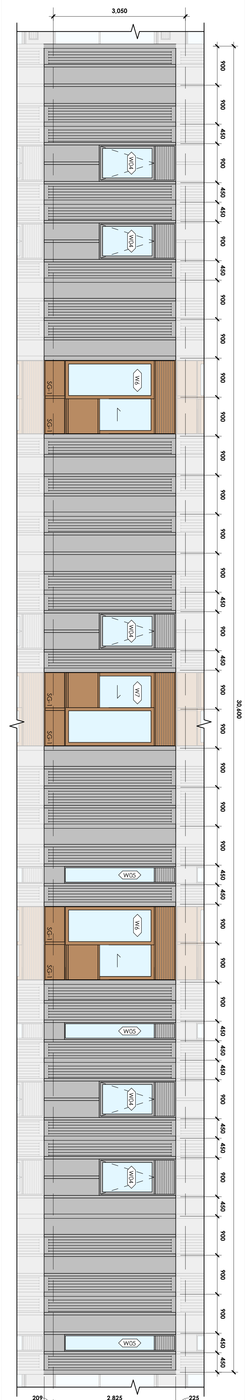

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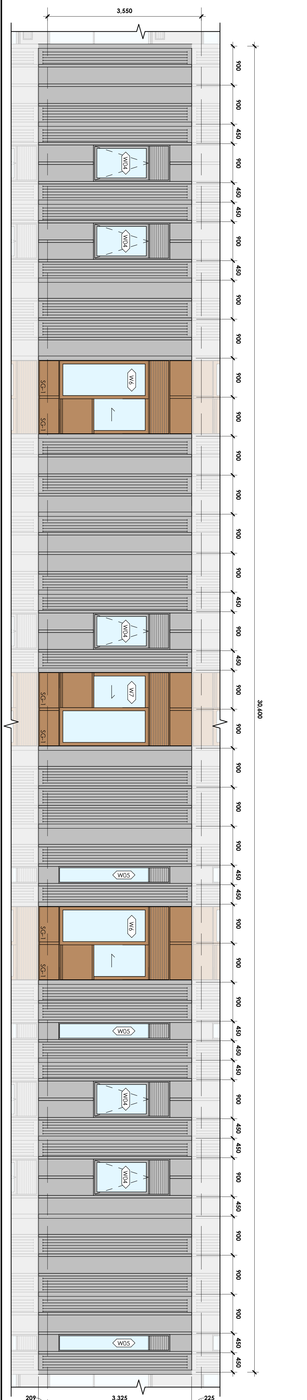
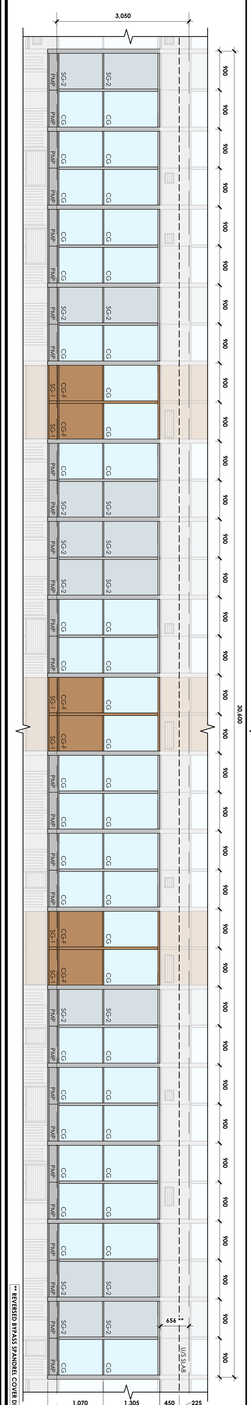


WW32

WW32g (L31 & L32)



** REVERSED BYPASS SPANDREL COVER DIMENSIONS VARY LEVEL 31 & L32

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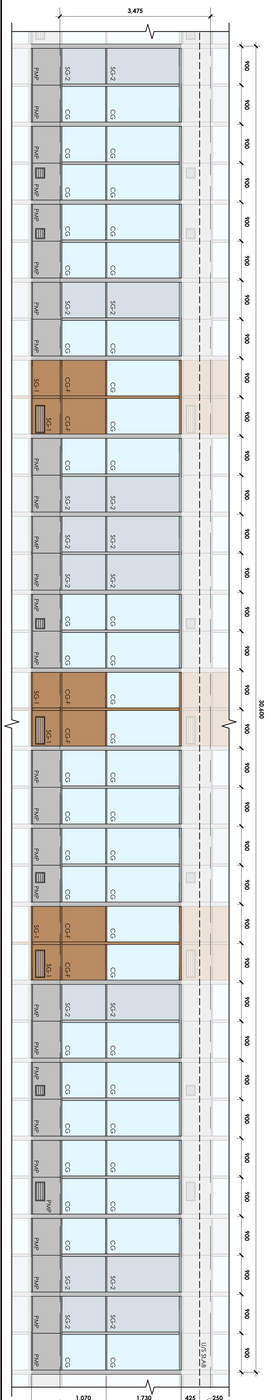

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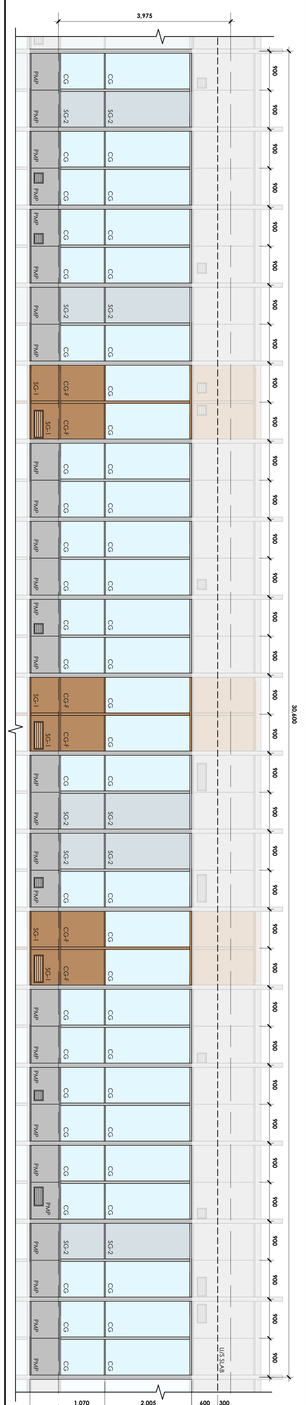

WW32ppt (PARAPET)



client

CLV GROUP DEVELOPMENTS

structural engineers | ingénieurs structures

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structures

GWAL
GOWLING WLG (CANADA) LLP

electrical engineers | ingénieur électrique

mechanical engineer | ingénieur mécanique

WSP

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

project north
projet nord

true north
vrai nord

NOT FOR CONSTRUCTION
2025-06-12 4:27:54 PM

no	revisions	date
stamp \ timbre		

architect | architecte

linebox
STUDIO

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project title \ titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N. | OTTAWA | ON

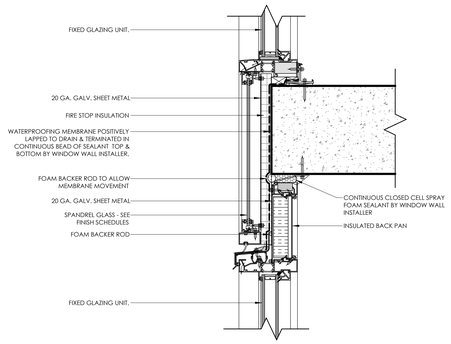
drawing title \ titre du dessin

WINDOW SCHEDULE

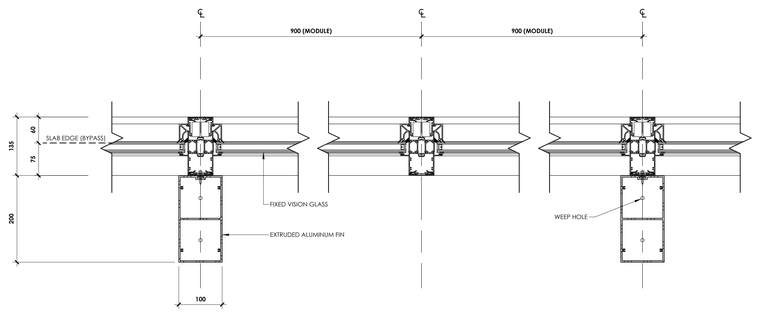
project number \ numéro du projet	**2402**
drawn \ dessiné	**JH / DL / FC / JP**
checked \ vérifié	**JP / AR**
scale \ échelle	**1 : 50**
date \ date	**06/12/25**

drawing number \ numéro du dessin

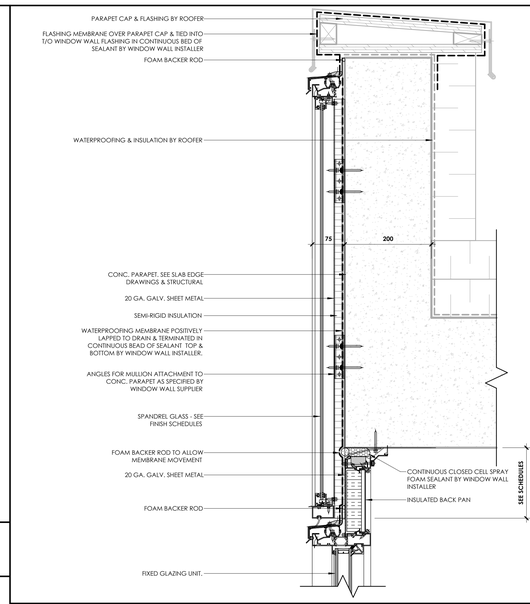
A0-406



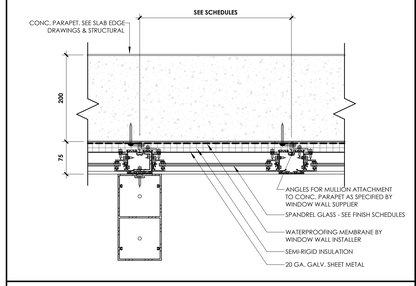
13 A0-408 — REVERSE BYPASS - SPANDREL GLASS
1 : 5
A6-210



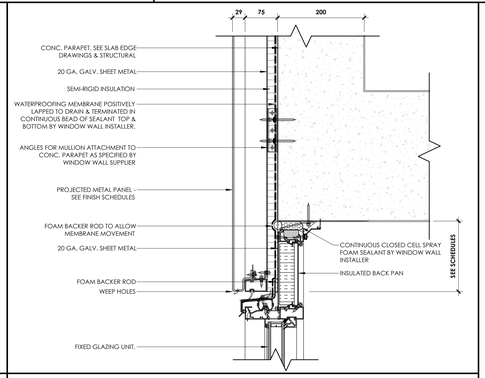
12 A0-408 — PLAN - PENTHOUSE GLAZING
1 : 5



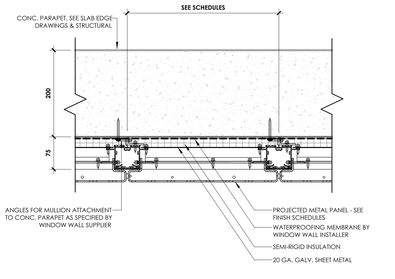
11 A0-408 — SECTION - SPANDREL GLASS @ PARAPET/HEAD OF GLAZING
1 : 5
A6-310



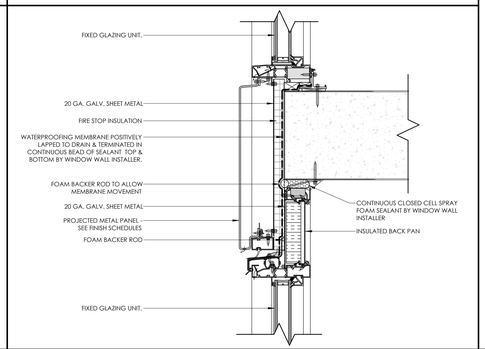
10 A0-408 — PLAN - SPANDREL GLASS @ PARAPET
1 : 5



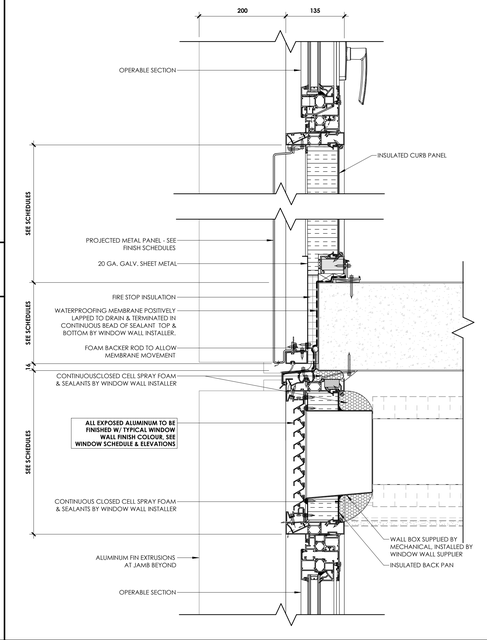
8 A0-408 — SECTION - PROJECTED METAL PANEL @ PARAPET/HEAD OF GLAZING
1 : 5
A6-210



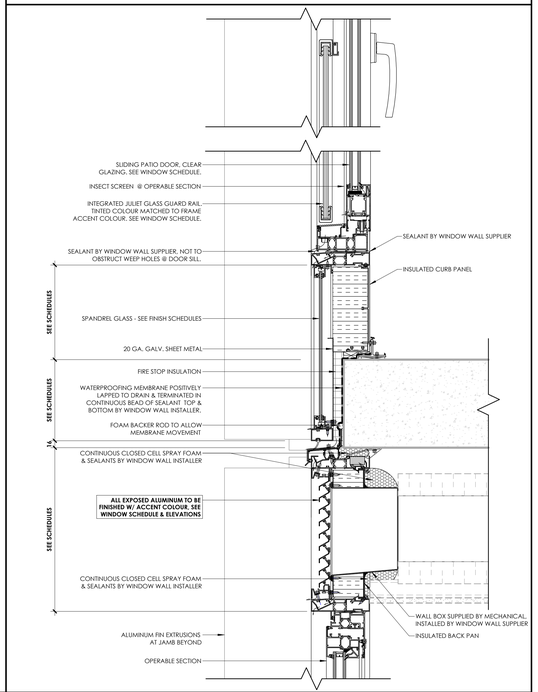
9 A0-408 — PLAN - PROJECTED METAL PANEL @ PARAPET
1 : 5



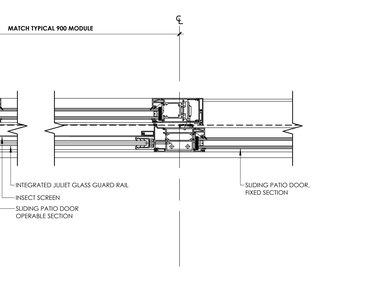
5 A0-408 — REVERSE BYPASS - PROJECTED METAL PANEL
1 : 5
A6-210



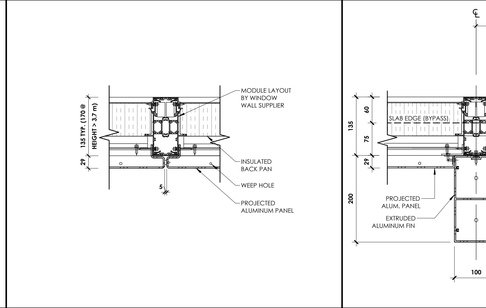
7 A0-408 — T.6 BYPASS @ AWNING
1 : 5
A0-402



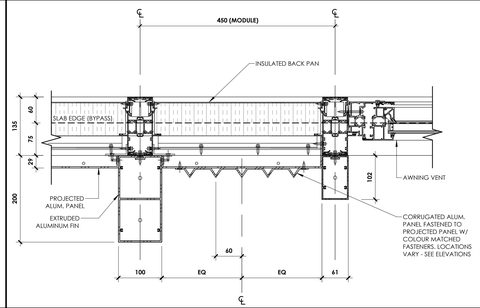
6 A0-408 — T.3 - BYPASS W/ SPANDREL GLASS (ACCENT COLOURS)
1 : 5
A0-402



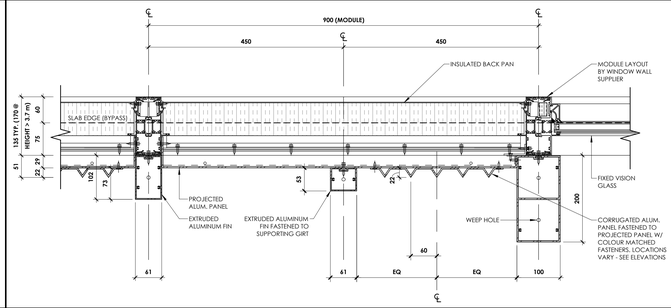
4 A0-408 — JAMB @ CASEMENT (ACCENT COLOURS)
1 : 5
A0-402



3 A0-408 — S.1 - PROJECTED METAL PANEL JAMB @ CURBS
1 : 5
A0-402



2 A0-408 — T.4 - JAMB @ AWNING
1 : 5
A0-402



1 A0-408 — T.1 - JAMB @ FIXED GLAZING
1 : 5

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CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

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21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
no	revisions	date

stamp | timbre

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

WINDOW SCHEDULE COMPONENT DETIALS

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 5**
date | date	**02/11/25**

drawing number | numéro du dessin

A0-408

EXTERIOR DOOR HARDWARE SCHEDULE

EXTERIOR DOOR HARDWARE SET	DESCRIPTION	FINISH DOOR HARDWARE: HANDLE / LOCKSET	FINISH DOOR HARDWARE: HINGE	SECURITY LOCK FUNCTION	CLOSER	POWER OPERATED	SECURITY READER (CARD/FOB)	SECURITY READER (CARD/FOB) OFFLINE	ELECTRIC STRIKE (FAIL-SECURE)	MAG LOCK (FAIL-SAFE)	PANIC DEVICE	WEATHER STRIP / GAS SEAL	DOOR SWEEP	ASTRAGAL	KICK PLATE	ALUMINUM THRESHOLD	NOTES
EHS-01	GROUND FLOOR MAIN ENTRANCE	PANIC DEVICE ON INTERIOR, ROCKWOOD PDUB500-3-US32D, STRAIGHT PULL ON EXTERIOR, ROCKWOOD PDUB500-3-US32D	(3) BUTT HINGE	PAS	●	●					●	●	●		●	●	HARDWARE TO BE STAINLESS STEEL WITH BLACK INFILL LETTERS
EHS-02	TYPICAL GROUND FLOOR EXTERIOR DOOR	PANIC DEVICE ON INTERIOR, ROCKWOOD PDUB500-BSP, STRAIGHT PULL ON EXTERIOR, ROCKWOOD PDUB500-3-US32D	(3) BUTT HINGE	STR	●		●		●		●	●	●		●	●	HARDWARE TO BE STAINLESS STEEL WITH BLACK INFILL LETTERS
EHS-03	EXTERIOR DOOR (TENANT ACCESS)	SCHLAGE JUPITER 626 (ALB0PD STOREROOM)	(3) BUTT HINGE	STR	●		●		●			●	●		●	●	HARDWARE TO BE STAINLESS STEEL ACCESS CONTROLLED TO OUTSIDE FROM INSIDE
EHS-04	EXTERIOR DOOR (BOH)	SCHLAGE JUPITER 626 (ALB0PD STOREROOM)	(3) BUTT HINGE	STR	●						●	●	●		●	●	HARDWARE TO BE STAINLESS STEEL
EHS-05	GROUND FLOOR MOVE-IN VESTIBULE EXTERIOR DOOR	SCHLAGE JUPITER 626 (ALB0PD STOREROOM)	(3) BUTT HINGE	STR	●		●		●		●	●	●		●	●	HARDWARE TO BE STAINLESS STEEL PROVIDE MANUAL HOLD-OPEN DEVICE
EHS-06																	
EHS-07	GROUND FLOOR EXIT STAIR DOOR	PULL TRIM W/ CYLINDER ON EXTERIOR, PANIC DEVICE ON INTERIOR	(3) BUTT HINGE	STR	●						●	●	●		●	●	HARDWARE TO BE STAINLESS STEEL PROVIDE DOOR CONTACT AND REQUEST TO EXIT

GENERAL NOTES:

1. PROVIDE POSITIVE LATCHING SYSTEM FOR ALL FIRE RATED DOORS, SEE DOOR SCHEDULE
2. SECURITY LOCK FUNCTIONS:
   - PAS PASSAGE
   - PRV PRIVACY
   - STR STOREROOM
   - ENT ENTRY
3. PROVIDE DOOR CONTACT AND REQUEST TO EXIT FOR ALL ELECTRONIC ACCESS CONTROLLED DOORS (ELECTRIC STRIKE, MAG-LOCK) OR AS INDICATED IN DOOR SCHEDULE
4. FOR DOUBLE DOORS, PROVIDE FLUSH BOLT FOR INACTIVE DOOR LEAF, EXCEPT FOR MAIN ENTRANCE

RESIDENTIAL SUITE INTERIOR DOOR HARDWARE SCHEDULE

RESIDENTIAL INTERIOR DOOR HARDWARE SET	DESCRIPTION	HANDLE	HINGE	DOOR STOP	MISC.	NOTES
RHS-01	SWING PASSAGE DOOR (BEDROOM)	PASSAGE SET HALIFAX SQUARE ROSE PASSAGE LEVER - MATTE BLACK 9GLA1010-065	3" BUTT HINGE RICHELIEU 820FBV	3" FLEXIBLE DOOR STOP RICHELIEU 2177BVB	COSMAROMA - 544 SINGLE SHAKER SOLID CORE DOORS	ALL HADRWARE TO BE MATTE BLACK
RHS-02	WASHROOM DOOR	PRIVACY SET HALIFAX SQUARE ROSE PRIVACY LEVER - MATTE BLACK 9GLA3310-064	3" BUTT HINGE RICHELIEU 820FBV	3" FLEXIBLE DOOR STOP RICHELIEU 2177BVB	COSMAROMA - 544 SINGLE SHAKER SOLID CORE DOORS	ALL HARDWARE TO BE MATTE BLACK
RHS-03	BEDROOM BARN DOOR	MODERN RECTANGULAR FLUSH PULL FOR DOOR PULL - 221710 - BY EMTEK, MATTE BLACK ON LIVING AREA SIDE BRISBANE PULL 861710 - BY EMTEK, MATT BLACK - ON BEDROOM SIDE			COSMAROMA - 544 SINGLE SHAKER SOLID CORE DOORS	2460590MATBC BY RICHELIEU OR OTHERS, PROVIDE SEPERATE PRICES FOR ALTERNATES. ALL HARDWARE TO BE MATTE BLACK
RHS-04	SHOWER GLASS DOOR				GLASS SLIDING DOOR KIT MAAX HALO PRO SLIDING DOOR W/ TOWEL BAR (56.5"-59" X 78 3/4") 138956-900-340-000	OR APPROVED SIMILAR ALL SHOWER GLASS HARDWARE TO BE MATTE BLACK
RHS-04a	SHOWER GLASS DOOR				GLASS SLIDING DOOR KIT MAAX HALO PRO SLIDING DOOR W/ TOWEL BAR (44.5-47" X 78 3/4") 138954-900-340-000	OR APPROVED SIMILAR. ALL SHOWER GLASS HARDWARE TO BE MATTE BLACK
RHS-05	SLIDING CLOSET DOOR	MODERN RECTANGULAR FLUSH PULL FOR DOOR PULL - 221710 - BY EMTEK, MATTE BLACK			COSMAROMA - 544 SINGLE SHAKER HOLLOW CORE DOORS	BYPASS DOOR HARDWARE KIT - WITH TRACK, MODEL NO. 14672BC BY ONWARD HARDWARE OR OTHERS, PROVIDE SEPERATE PRICES FOR ALTERNATES. ALL HADRWARE TO BE MATTE BLACK SEE RESIDENTIAL INTERIOR DOOR SCHEDULE FOR SIZES
RHS-06	SWING CLOSET DOOR (SINGLE, DOUBLE, W/D CLOSET)	DUMMY SET HALIFAX SQUARE ROSE HALF DUMMY LEVER - MATTE BLACK 9GLA120-054	3" BUTT HINGE RICHELIEU 820FBV		COSMAROMA - 544 SINGLE SHAKER SOLID CORE DOORS ADJUSTABLE BALL CATCH RICHELIEU 5035FBV	ALL HADRWARE TO BE MATTE BLACK AT VENTLESS DRYER LOCATIONS PROVIDE 19mm UNDERCUT
RHS-07	GLASS BEDROOM DOOR	PASSAGE SET HALIFAX SQUARE ROSE PASSAGE LEVER - MATTE BLACK 9GLA1010-065	3" BUTT HINGE		PC350 - OR APPROVED ALTERNATE.	ALL HADRWARE TO BE MATTE BLACK

DOOR HARDWARE SCHEDULE

DOOR HARDWARE SET	DESCRIPTION	FINISH DOOR HARDWARE: HANDLE / LOCKSET	FINISH DOOR HARDWARE: HINGE	FINISH DOOR HARDWARE: DOOR STOP	SECURITY LOCK FUNCTION	CLOSER	CLOSER - HOLD-OPEN	POWER OPERATED	SECURITY READER (CARD/FOB)	SECURITY READER (CARD/FOB) OFFLINE	ELECTRIC STRIKE (FAIL-SECURE)	ELECTRIC STRIKE (FAIL-SAFE)	PANIC DEVICE	WEATHER STRIP / GAS SEAL	DOOR SWEEP	ASTRAGAL	KICK PLATE	NOTES
HS-01	EXIT STAIR DOOR	SCHLAGE JUPITER 622 (AL2SD EXIT), PANIC DEVICE ON CORRIDOR	(3) BUTT HINGE	FLOOR DOOR STOP GSH 240 C19	EXIT	●								●	●	●	●	PROVIDE FIRE EXIT DEVICE TRIM ALL HARDWARE TO BE STAINLESS STEEL
HS-01a	EXIT STAIR DOOR (GROUND FLOOR)	SCHLAGE JUPITER 622 (AL80PD STOREROOM), PANIC DEVICE IN STAIRWELL	(3) BUTT HINGE	FLOOR DOOR STOP GSH 240 C19	STR	●			●		●		●	●	●	●	●	PROVIDE FIRE EXIT DEVICE TRIM ALL HARDWARE TO BE STAINLESS STEEL USE TYPICAL FLOOR STOP AT STAIR-A GROUND FLOOR ONLY
HS-01b	EXIT STAIR DOOR (POWER DOOR OPERATOR)	SCHLAGE JUPITER 622 (AL2SD EXIT), PANIC DEVICE ON CORRIDOR	(3) BUTT HINGE	FLOOR DOOR STOP GSH 240 C19	EXIT	●		●					●	●	●		●	PROVIDE FIRE EXIT DEVICE TRIM ALL HARDWARE TO BE STAINLESS STEEL
HS-02	SUITE ENTRANCE DOOR	HALIFAX SQUARE ROSE PASSAGE LEVER - MATTE BLACK 9GLA1010-065	3" BUTT HINGE RICHELIEU 820FBV	3" FLEXIBLE DOOR STOP RICHELIEU 2177BVB	PAS	●				●			●	●				PROVIDE PEEP HOLE, ELECTRONIC LOCK ALL HARDWARE TO BE STAINLESS STEEL
HS-03	GARBAGE INTAKE ROOM DOOR	SCHLAGE JUPITER 622 (AL10S PASSAGE)	(3) BUTT HINGE	FLOOR DOOR STOP GSH 240 C19	PAS	●							●	●			●	ALL HARDWARE TO BE STAINLESS STEEL
HS-04	TENANT ACCESS DOOR	SCHLAGE JUPITER 622 (AL80PD STOREROOM)	(3) BUTT HINGE	FLOOR DOOR STOP IVES SR64 GRY (AMENITIES) WALL DOOR STOP GSH 240 C19 (STORAGE)	STR	●			●		●						●	ALL HARDWARE TO BE STAINLESS STEEL
HS-04a	TENANT ACCESS DOOR	SCHLAGE JUPITER 622 (AL80PD STOREROOM)	(3) BUTT HINGE	FLOOR DOOR STOP IVES SR64 GRY (AMENITIES) WALL DOOR STOP GSH 240 C19 (STORAGE)	STR		●		●		●						●	ALL HARDWARE TO BE STAINLESS STEEL
HS-04b	TENANT ACCESS DOOR (ENTRANCE VESTIBULE)	PANIC DEVICE ON INTERIOR, ROCKWOOD PDUB500-BSP, STRAIGHT PULL ON EXTERIOR, ROCKWOOD PDUB500-3-BSP	(3) BUTT HINGE	FLOOR DOOR STOP IVES SR64 GRY	STR	●		●	●		●		●					ALL HARDWARE TO BE STAINLESS STEEL
HS-04c	TENANT ACCESS DOOR (AMENITY)	OFFSET LADDER DOOR PULL 30" (BY GLAZING MANUFACTURER) EXTERIOR, SCHLAGE JUPITER 622 (AL10S PASSAGE) INTERIOR	(3) BUTT HINGE	FLOOR DOOR STOP IVES SR64 GRY (AMENITIES)	STR	●			●		●						●	ALL HARDWARE TO BE STAINLESS STEEL
HS-05	BUILDING SERVICE / STORAGE ROOM DOOR	SCHLAGE JUPITER 622 (AL80PD STOREROOM)	(3) BUTT HINGE	FLOOR DOOR STOP GSH 240 C19	STR	●											●	ALL HARDWARE TO BE STAINLESS STEEL
HS-05a	BUILDING SERVICE / STORAGE ROOM DOOR	SCHLAGE JUPITER 622 (AL80PD STOREROOM)	(3) BUTT HINGE	FLOOR DOOR STOP GSH 240 C19	STR		●										●	ALL HARDWARE TO BE STAINLESS STEEL
HS-06	PUBLIC WASHROOM DOOR	SCHLAGE JUPITER 622 (AL40S PRIVACY)	(3) BUTT HINGE	FLOOR DOOR STOP IVES SR64 GRY	PRV													ALL HARDWARE TO BE STAINLESS STEEL
HS-06a	PUBLIC WASHROOM DOOR (UNIVERSAL BARRIER-FREE)	SCHLAGE JUPITER 622 (AL80PD STOREROOM)	(3) BUTT HINGE	FLOOR DOOR STOP IVES SR64 GRY	STR	●		●			●						●	PROVIDE HANDICAP OPERATOR, EMERGENCY RELEASE ALL HARDWARE TO BE STAINLESS STEEL
HS-07	HYDRO VAULT DOOR				STR	●							●	●			●	AS PER HYDRO OTTAWA REQUIREMENTS PROVIDE HYDRO OTTAWA APPROVED LOCKING HASP
HS-08	BASEMENT GARBAGE ROOM DOOR POWER DOOR OPERATOR)	SCHLAGE JUPITER 622 (AL80PD STOREROOM)	(3) BUTT HINGE	WALL DOOR STOP GSH 240 C19 (STORAGE)	STR	●		●					●	●	●		●	ALL HARDWARE TO BE STAINLESS STEEL
HS-08a	GARBAGE ROOM DOOR	SCHLAGE JUPITER 622 (AL80PD STOREROOM)	(3) BUTT HINGE	WALL DOOR STOP GSH 240 C19 (STORAGE)	STR		●						●	●	●		●	ALL HARDWARE TO BE STAINLESS STEEL
HS-09	JANITOR'S CLOSET DOOR	SCHLAGE JUPITER 622 (AL10S PASSAGE)	(3) BUTT HINGE	FLOOR DOOR STOP GSH 240 C19	PAS		●						●	●			●	ALL HARDWARE TO BE STAINLESS STEEL
HS-10	CORRIDOR DOOR	SCHLAGE JUPITER 622 (AL10S PASSAGE)	(3) BUTT HINGE	FLOOR DOOR STOP GSH 240 C19	PAS	●							●	●				ALL HARDWARE TO BE STAINLESS STEEL
HS-10a	CORRIDOR DOOR (POWER OPERATOR)	SCHLAGE JUPITER 622 (AL10S PASSAGE)	(3) BUTT HINGE	FLOOR DOOR STOP GSH 240 C19	PAS	●		●					●	●			●	ALL HARDWARE TO BE STAINLESS STEEL
HS-11	TYPICAL PASSAGE	SCHLAGE JUPITER 622 (AL10S PASSAGE)	(3) BUTT HINGE	FLOOR DOOR STOP GSH 240 C19	PAS	●											●	ALL HARDWARE TO BE STAINLESS STEEL
HS-12	GLASS SLIDING DOOR	TBD	TBD		SLID													HARDWARE AS PER DOOR MANUFACTURER ALL HARDWARE TO BE STAINLESS STEEL

GENERAL NOTES:

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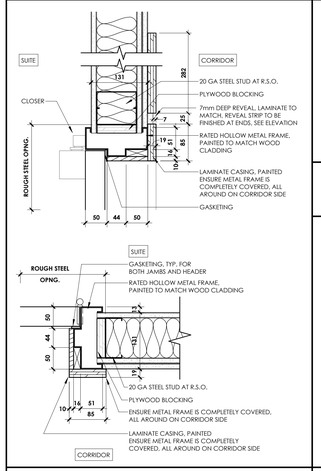
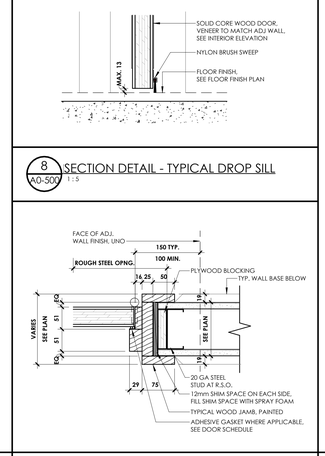
2. SECURITY LOCK FUNCTIONS:
   - PAS PASSAGE
   - PRV PRIVACY
   - STR STOREROOM
   - ENT ENTRY
3. PROVIDE DOOR STOPS WHERE DOOR OPENS ON TO ADJACENT WALL
4. PROVIDE DOOR CONTACT AND REQUEST TO EXIT FOR ALL ELECTRONIC ACCESS CONTROLLED DOORS (ELECTRIC STRIKE, MAG-LOCK) OR AS INDICATED IN DOOR SCHEDULE
5. FOR DOUBLE DOORS, PROVIDE FLUSH BOLT FOR INACTIVE DOOR LEAF

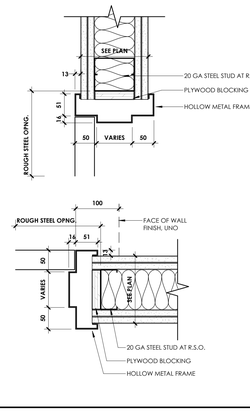


9 A0-500 DOOR FRAME - SUITE ENTRANCE
1 : 5
A0-500

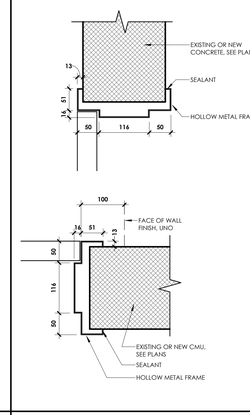


8 A0-500 SECTION DETAIL - TYPICAL DROP SILL
1 : 5

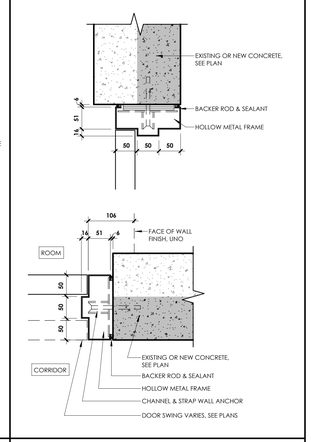
7 A0-500 DOOR FRAME - TYP. WOOD DOOR FRAME
1 : 5
A0-500



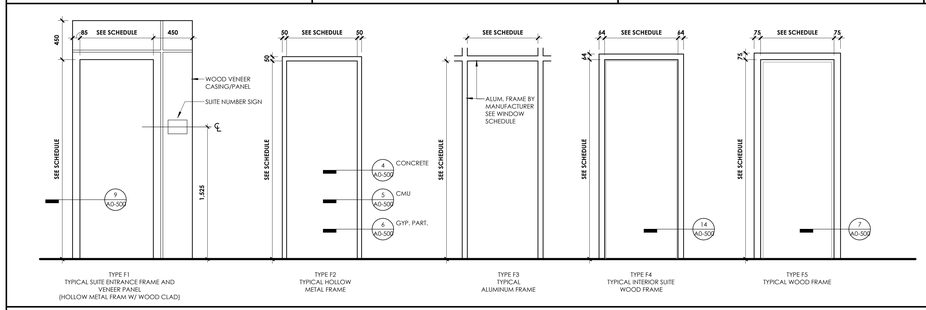
6 A0-500 DOOR FRAME - HM @ GYPSUM PARTITION
1 : 5
A0-500



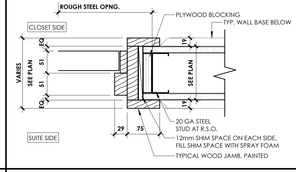
5 A0-500 DOOR FRAME - HM @ CMU WALL
1 : 5
A0-500



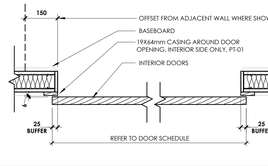
4 A0-500 DOOR FRAME - HM @ CONCRETE WALL
1 : 5
A0-500



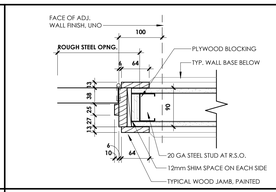
2 A0-500 DOOR FRAME TYPES
1 : 25



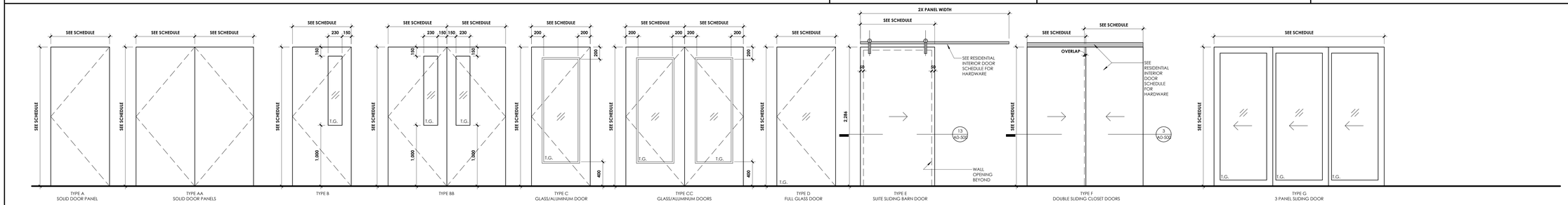
3 A0-500 DOOR FRAME - SLIDING CLOSET DOORS
1 : 5
A0-500



13 A0-500 PLAN DETAIL - TYPICAL INTERIOR TOP HUNG DOOR
1 : 10
A0-500



14 A0-500 PLAN DETAIL - TYPICAL SUITE INTERIOR DOOR FRAME
1 : 5
A0-500



1 A0-500 DOOR PANEL TYPES
1 : 25

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CLVGROUP DEVELOPMENTS
client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS
structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.
electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp
civil engineers | ingénieur civil

CSW
landscape architect | architecte paysagiste

nord du projet project north
nord réel true north

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21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-19~~
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
19	~~ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING~~	~~25-05-16~~
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
2	RE-ISSUED FOR CLASS 'D' ESTIMATE	24-05-13
1	ISSUED FOR CLASS 'D' ESTIMATE	24-05-17
no	revisions	date

stamp | timbre

architect | architecte
linebox STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

DOOR TYPES & HARDWARE SCHEDULES

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**As indicated**
date | date	**02/15/24**

drawing number | numéro du dessin

A0-500

INTERIOR DOOR SCHEDULE

DOOR NUMBER	FROM ROOM NUMBER	FROM ROOM NAME	TO ROOM NUMBER	TO ROOM NAME	DOOR PANEL DOOR TYPE	DOOR PANEL OVERALL WIDTH	DOOR PANEL HEIGHT	DOOR PANEL THICKNESS	DOOR PANEL PANEL 1 WIDTH	DOOR PANEL PANEL 2 WIDTH	DOOR PANEL MATERIAL	DOOR PANEL FINISH	DOOR FRAME FRAME TYPE	DOOR FRAME MATERIAL	DOOR FRAME FINISH	HARDWARE SET	U.L.C. RATING	NOTES
P3 (LOWER)																		
P3105	P3100	OPEN PARKING AREA	P3105	VEST.	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-01		
P3117	P3100	OPEN PARKING AREA	P3117	STORAGE	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-04a	60 MIN	
P3119	P3115	RESIDENTIAL STORAGE LOCKERS	P3119	EXHAUST AIR WELL	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-05	90 MIN	
P3																		
P3101	P3100	OPEN PARKING AREA	P3101	VEST.	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-01b		
P3102	P3101	VEST.	P3102	VEST.	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-01	90 MIN	
P3103	P3102	VEST.	P3103	EXIT B	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-01	90 MIN	
P3104	P3101	VEST.	P3104	ELEVATOR LOBBY	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-01b	90 MIN	
P3104b	P3105	VEST.	P3104	ELEVATOR LOBBY	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-01	90 MIN	
P3106	P3105	VEST.	P3106	VEST.	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-01	90 MIN	
P3107	P3106	VEST.	P3107	EXIT A	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-01	90 MIN	
P3113	P3100	OPEN PARKING AREA	P3113	RESIDENTIAL STORAGE LOCKERS	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-04a	60 MIN	
P3115a	P3100	OPEN PARKING AREA	P3115	RESIDENTIAL STORAGE LOCKERS	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-04a	60 MIN	
P3116	P3101	VEST.	P3116	RESIDENTIAL STORAGE LOCKERS	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-04a	60 MIN	
P3118	P3100	OPEN PARKING AREA	P3118	INTAKE AIRWELL	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-05	90 MIN	
P2 (LOWER)																		
P2105	P2100	OPEN PARKING AREA	P2105	VEST.	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-01		
P2117	P2100	OPEN PARKING AREA	P2117	STORAGE	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-04a	60 MIN	
P2																		
P2101	P2100	OPEN PARKING AREA	P2101	VEST.	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-01b	-	
P2102	P2101	VEST.	P2102	VEST.	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-01	90 MIN	
P2103	P2102	VEST.	P2103	EXIT A	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-01	90 MIN	
P2104	P2101	VEST.	P2104	ELEVATOR LOBBY	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-01b	90 MIN	
P2104b	P2105	VEST.	P2104	ELEVATOR LOBBY	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-01	90 MIN	
P2106	P2105	VEST.	P2106	VEST.	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-01	90 MIN	
P2107	P2106	VEST.	P2107	EXIT B	A	965	2,134	45	965		HM	PT	F3	HM	PT	HS-01	90 MIN	
P2113	P2100	OPEN PARKING AREA	P2113	RESIDENTIAL STORAGE LOCKERS	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-04a	60 MIN	
P2115a	P2100	OPEN PARKING AREA	P2115	RESIDENTIAL STORAGE LOCKERS	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-04a	60 MIN	
P2116	P2101	VEST.	P2116	RESIDENTIAL STORAGE LOCKERS	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-04a	60 MIN	
P1 (LOWER)																		
P1106	P1100	OPEN PARKING AREA	P1106	VEST.	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-01	90 MIN	
P1109	P1109	ELECTRICAL ROOM	P1100	OPEN PARKING AREA	A	1,525	2,134	45	1,525		HM	PT	F2	HM	PT	HS-05	90 MIN	
P1110	P1110	HYDRO VAULT	P1100	OPEN PARKING AREA	AA	965	2,134	45	965		HM	PT	F2	HM	PT	HS-07	120 MIN	
P1110a	P1110	HYDRO VAULT			AA	1,524	2,438	45	762	762	HM	PT	F2	HM	PT	HS-07	120 MIN	
P1111	P1100	OPEN PARKING AREA	P1111	WATER ENTRY ROOM	A	1,525	2,134	45	1,525		HM	PT	F2	HM	PT	HS-05	90 MIN	
P1																		
P1101	P1100	OPEN PARKING AREA	P1101	VEST.	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-01b		
P1102	P1101	VEST.	P1102	VEST.	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-01	90 MIN	
P1103	P1102	VEST.	P1103	EXIT B	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-01	90 MIN	
P1104b	P1101	VEST.	P1104	ELEVATOR LOBBY	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-01b	90 MIN	
P1104b	P1106	VEST.	P1104	ELEVATOR LOBBY	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-01	90 MIN	
P1105	P1106	VEST.	P1105	FIRE PUMP ROOM	A	965	2,134	45	965		HM	PT	F2	HM	PT		90 MIN	
P1107	P1106	VEST.	P1107	EXIT A	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-01	90 MIN	
P1113	P1100	OPEN PARKING AREA	P1113	RESIDENTIAL STORAGE LOCKERS	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-04a	60 MIN	
P1116	P1101	VEST.	P1116	RESIDENTIAL STORAGE LOCKERS	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-04a	60 MIN	
P1117	P1100	OPEN PARKING AREA	P1117	RESIDENTIAL STORAGE LOCKERS	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-04a	60 MIN	
LEVEL 01																		
100	101	AMENITY	100	VEST.	CC	1,865	2,743	45	933	932	AL/GL	-	F3 (SEE WINDOW TYPES)	AL	-	HS-04b	-	
103	101	AMENITY	103	VEST.	CC	1,957	4,387	45	979	978	AL/GL	-	F3 (SEE WINDOW TYPES)	AL	-	HS-04b	-	
105	104	LOUNGE	105	CACF	A	864	2,134	45	864		HM	PT	F2	HM	PT	HS-05	90 MIN	
106	104	LOUNGE	106	W/C	A	864	2,134	45	864		HM	PT	F2	HM	PT	HS-06	-	
107a	107	ELEVATOR LOBBY	102	CONCIERGE	C	927	4,387	45	927		AL/GL	-	F3 (SEE WINDOW TYPES)	AL	-	HS-04b	-	
107b	102	CONCIERGE	107	ELEVATOR LOBBY	C	927	4,387	45	927		AL/GL	-	F3 (SEE WINDOW TYPES)	AL	-	HS-04b	-	
108	108	MOVE-IN VEST.	107	ELEVATOR LOBBY	BB	1,930	2,134	45	965	965	HM/GL	PT	F2	HM	PT	HS-10	45 MIN	
109	108	MOVE-IN VEST.	109	DOG WASH	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-04		
110	107	ELEVATOR LOBBY	110	VEST.	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-08	45 MIN	
111	110	VEST.	111	GARBAGE RM.	AA	1,371	2,134	45	965	406	HM	PT	F2	HM	PT	HS-08a		
112a	107	ELEVATOR LOBBY	112a	EXIT B	B	965	2,032	45	965		HM/GL	PT	F2	HM	PT	HS-01	90 MIN	
112b	112d	EXIT CORRIDOR	112a	EXIT B	B	965	2,032	45	965		HM/GL	PT	F2	HM	PT	HS-01	90 MIN	
113	114	MAIL ROOM	115	COLD STORAGE	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-04a		
113a	107	ELEVATOR LOBBY	113a	EXIT CORRIDOR	B	965	2,032	45	965		HM/GL	PT	F2	HM	PT	HS-01	90 MIN	
113b	113c	EXIT A	113b	EXIT A	B	965	2,032	45	965		HM/GL	PT	F2	HM	PT	HS-01	90 MIN	
113c	113a	EXIT CORRIDOR	113b	EXIT A	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-01	90 MIN	
114	114	MAIL ROOM	114	MAIL ROOM	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-05		
116	116	BUSINESS CENTER	101	AMENITY	C	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-04c		
116a	116	BUSINESS CENTER	113a	EXIT CORRIDOR	B	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-01	90 MIN	
118b	116	BUSINESS CENTER	118b	OFFICE	C	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-11	-	
118c	116	BUSINESS CENTER	118c	W/C	A	864	2,134	45	864		HM	PT	F2	HM	PT	HS-06	-	
118d	116	BUSINESS CENTER	118d	UNIV. W/C	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-06a	-	
LEVEL 02 (PODIUM)																		
201	250	CORRIDOR	201	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
202	250	CORRIDOR	202	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
203	250	CORRIDOR	203	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
204	250	CORRIDOR	204	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
205	250	CORRIDOR	205	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
206	250	CORRIDOR	206	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
207	250	CORRIDOR	207	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
208	250	CORRIDOR	208	BACK OF SITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
208a	208a	MEETING ROOM	208	BACK OF SITE	C	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-11	-	
208b	208b	W/C	208	BACK OF SITE	A	965	2,134	45	965		HM	HM	F2	HM	PT	HS-06a	-	
208c	208	BACK OF SITE	208c	STORAGE	A	965	2,134	45	915		HM	HM	F2	HM	PT	HS-05		
209	250	CORRIDOR	209	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
210	250	CORRIDOR	210	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
211	250	CORRIDOR	211	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
212	250	CORRIDOR	212	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
213	250	CORRIDOR	213	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
214	250	CORRIDOR	214	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
215	250	CORRIDOR	215	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
251	251	EXIT A	250	CORRIDOR	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-01	90 MIN	
252	250	CORRIDOR	252	EXIT B	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-01	90 MIN	
253	253	ELEC.	250	CORRIDOR	AA	1,626	2,134	45	813	813	HM	PT	F2	HM	PT	HS-05	90 MIN	
254	250	CORRIDOR	254	PRIVATE LOCKERS	A	965	2,134	45	965		HM	PT	F1	HM	PT	HS-04a	45 MIN	
LEVEL 03 (PODIUM)																		
301	350	CORRIDOR	301	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
302	350	CORRIDOR	302	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
303	350	CORRIDOR	303	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
304	350	CORRIDOR	304	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
305	350	CORRIDOR	305	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
306	350	CORRIDOR	306	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
307	350	CORRIDOR	307	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
308	350	CORRIDOR	308	PRIVATE LOCKERS	A	915	2,134	45	915		HM	PT	F1	HM	PT	HS-04a	45 MIN	
309	350	CORRIDOR	309	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
310	350	CORRIDOR	310	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
311	350	CORRIDOR	311	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
312	350	CORRIDOR	312	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
313	350	CORRIDOR	313	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
314	350	CORRIDOR	314	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
315	350	CORRIDOR	315	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
317	350	CORRIDOR	317	PRIVATE LOCKERS	A	965	2,134	45	965		HM	PT	F1	HM	PT	HS-04a	45 MIN	
351	351	EXIT B	350	CORRIDOR	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-01	90 MIN	
352	350	CORRIDOR	352	EXIT A	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-01	90 MIN	
353	353	ELEC.	350	CORRIDOR	AA	1,626	2,134	45	813	813	HM	PT	F2	HM	PT	HS-05	90 MIN	
LEVEL 04 (PODIUM)																		
255	462	MAKER SPACE			C	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-04a	-	
258	454	CORRIDOR	459	THEATER ROOM	C	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-04c	-	
402	450	CORRIDOR	402	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
403	450	CORRIDOR	403	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
404	450	CORRIDOR	404	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
405	450	CORRIDOR	405	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
406	450	CORRIDOR	406	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
407			407	GUEST SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
451	450	CORRIDOR	451	EXIT A	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-01	90 MIN	
452	454	CORRIDOR	452	EXIT B	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-01	90 MIN	
453	453	ELEC.	450	CORRIDOR	AA	1,626	2,134	45	813	813	HM	PT	F2	HM	PT	HS-05	90 MIN	
454	454	CORRIDOR	450	CORRIDOR	CC	1,930	2,134	45	965	965	HM/GL	PT	F2	HM	PT	HS-04c	45 MIN	
456	454	CORRIDOR	456	W/C	A	864	2,134	45	864		HM	PT	F2	HM	PT	HS-06	-	
457	457	W/C	454	CORRIDOR	A	864	2,134	45	864		HM	PT	F2	HM	PT	HS-06	-	
461	454	CORRIDOR	461	MUSIC ROOM	C	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-04c	-	
462	454	CORRIDOR	462	MAKER SPACE	C	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-04c		
467	455	LIBRARY / STUDY	467	TELEHEALTH ROOM	A	864	2,134	45	864		HM	PT	F2	HM	PT	HS-04c	-	
468	454	CORRIDOR	468	UNIV. W/C	A	915	2,134	45	915		HM	PT	F2	HM	PT	HS-06a	-	
532	450	CORRIDOR	455	LIBRARY / STUDY	A	864	2,134	45	864		HM	PT	F2	HM	PT	HS-06		
P1112	450	CORRIDOR			A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
LEVEL 05 (AMENITY)																		
500	550	CORRIDOR	520	PARTY ROOM	CC	1,963	2,115	45	982	981	AL/GL	-	F3 (SEE WINDOW TYPES)	AL	-	HS-04c	45 MIN	
524	550	CORRIDOR	524	BF W/C	A	915	2,134	45	915		HM	PT	F2	HM	PT	HS-06	45 MIN	
525	550	CORRIDOR	525	LANAI AREA	C	965	2,115	45	965		AL/GL	-	F3 (SEE WINDOW TYPES)	AL	-	HS-04c		
527	527	FITNESS	550	CORRIDOR	CC	1,939	2,115	45	970	969	AL/GL	-	F3 (SEE WINDOW TYPES)	AL	-	HS-04c	45 MIN	
528	527	FITNESS	528	YOGA STUDIO	C	965	2,134	45	965		HM	PT	F2	HM	PT	HS-11		
529	550	CORRIDOR	529	W/C	A	864	2,134	45	864		HM	PT	F2	HM	PT	HS-06	45 MIN	
530	550	CORRIDOR	530	GAMES/ SOCIAL AREA	C	912	3,402	45	912		AL/GL	-	F3 (SEE WINDOW TYPES)	AL	-	HS-04c	45 MIN	
531	550	CORRIDOR	520	PARTY ROOM	C	965	2,134	45	965		HM/GL	PT	F2	HM	PT	HS-04c	45 MIN	
551	550	CORRIDOR	551	EXIT B	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-01	90 MIN	
552	550	CORRIDOR	552	EXIT A	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-01	90 MIN	
553	553	ELEC.	550	CORRIDOR	AA	1,626	2,134	45	813	813	HM	PT	F2	HM	PT	HS-05	90 MIN	
LEVEL 06																		
601	650	CORRIDOR	601	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
602	650	CORRIDOR	602	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
603	650	CORRIDOR	603	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
604	650	CORRIDOR	604	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
605 **30**	650	CORRIDOR	605	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
606	650	CORRIDOR	606	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
607	650	CORRIDOR	607	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
608	650	CORRIDOR	608	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
609	650	CORRIDOR	609	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
610	650	CORRIDOR	610	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
611	650	CORRIDOR	611	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
612	650	CORRIDOR	612	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
613	650	CORRIDOR	613	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
651	650	CORRIDOR	651	EXIT B	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-01	90 MIN	
652	650	CORRIDOR	652	EXIT B	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-01	90 MIN	
654	654	ELEC.	650	CORRIDOR	AA	1,626	2,134	45	813	813	HM	PT	F2	HM	PT	HS-05	90 MIN	

INTERIOR DOOR SCHEDULE CONT'D

DOOR NUMBER	FROM ROOM NUMBER	FROM ROOM NAME	TO ROOM NUMBER	TO ROOM NAME	DOOR PANEL DOOR TYPE	DOOR PANEL OVERALL WIDTH	DOOR PANEL HEIGHT	DOOR PANEL THICKNESS	DOOR PANEL PANEL 1 WIDTH	DOOR PANEL PANEL 2 WIDTH	DOOR PANEL MATERIAL	DOOR PANEL FINISH	DOOR FRAME FRAME TYPE	DOOR FRAME MATERIAL	DOOR FRAME FINISH	HARDWARE SET	U.L.C. RATING	NOTES
LEVEL 31																		
3101	3150	CORRIDOR	3101	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
3102	3150	CORRIDOR	3102	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
3103	3150	CORRIDOR	3103	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
3104	3150	CORRIDOR	3104	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
3105	3150	CORRIDOR	3105	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
3106	3150	CORRIDOR	3106	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
3107	3150	CORRIDOR	3107	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
3108	3150	CORRIDOR	3108	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
3109	3150	CORRIDOR	3109	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
3110	3150	CORRIDOR	3110	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
3111	3150	CORRIDOR	3111	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
3112	3150	CORRIDOR	3112	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
3151	3151	EXIT B	3150	CORRIDOR	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-01	90 MIN	
3152	3150	CORRIDOR	3152	EXIT A	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-01	90 MIN	
3153	3153	ELECTRICAL	3150	CORRIDOR	AA	1,626	2,134	45	813	813	HM	PT	F2	HM	PT	HS-05	90 MIN	
LEVEL 34																		
3401	3450	CORRIDOR	3401	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
3402	3450	CORRIDOR	3402	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
3403	3450	CORRIDOR	3403	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
3404	3450	CORRIDOR	3404	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
3405	3450	CORRIDOR	3405	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
3406	3450	CORRIDOR	3406	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
3407	3450	CORRIDOR	3407	SUITE	A	915	2,134	45	915		HM	PT	F1	HM/WD	PT	HS-02	45 MIN	
3420a	3420	CATERING / WINE BAR	3450	CORRIDOR	CC	1,930	2,134	45	965	965	HM/GL	PT	F2	HM	PT	HS-04c	45 MIN	
3420b	3450	CORRIDOR	3420	CATERING / WINE BAR	C	965	2,134	45	965		HM/GL	HM	F2	HM	PT	HS-04c	45 MIN	
3421a	3450	CORRIDOR	3451	EXIT A	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-01	90 MIN	
3452	3452	EXIT B	3450	CORRIDOR	A	965	2,134	45	965		HM	PT	F2	HM	PT	HS-01	90 MIN	
3453	3453	ELEC.	3450	CORRIDOR	AA	1,626	2,134	45

SURVEY INFORMATION TAKEN FROM:

SURVEYOR'S REAL PROPERTY REPORT
PART 1 - PLAN OF
PART OF LOT 1 & LOTS 2 & 3
(WEST CHAMPAGNE AVENUE)
BLOCK C AND
LOTS 1, 2 & 3 (EAST LORETTA AVENUE)
BLOCK C AND
LOTS 4, 5, 6, 7 & 8
BLOCK C AND
PART OF BLOCK C AND
PART OF CHAMPAGNE STREET
(CLOSED BY BY-LAW 4863)

REGISTERED PLAN 73
CITY OF OTTAWA

STANTEC GEOMATICS LTD. 2017

SITE STATISTICS

SITE AREA: 10,012m² / 2.47 ac
RESIDENTIAL UNIT COUNT:
TOWER A = 402
TOWER B = 304
TOWER C = 332
TOTAL = 1038

FUTURE DEVELOPMENT
FUTURE DEVELOPMENT
COROSO ITALIA STATION
RAILWAY OVERPASS
SLOPE / RETAINING WALL
STATION PLATFORM
TRILLIUM LINE
STATION PLATFORM
SLOPE / RETAINING WALL
TRILLIUM PATHWAY
MUP
MUP (MULTI-USE PATHWAY)
STANDARD BREAD BUILDING
3 STOREY BRICK, CONCRETE BLOCK, STUCCO SIDED COMMERCIAL BUILDING EXISTING TO REMAIN
SURFACE PARKING LOT EXISTING TO REMAIN
SURFACE PARKING LOT
SURFACE PARKING LOT
SURFACE PARKING LOT
SURFACE PARKING LOT EXISTING TO REMAIN
STANDARD (2600 x 5200)
STANDARD (2900 x 5200)
CONCRETE SIDEWALK
GLADSTONE AVENUE
EXISTING LOADING BAY STRUCTURE TO BE DEMOLISHED
2 STOREY BRICK, METAL AND STUCCO SIDED COMMERCIAL BUILDING EXISTING TO REMAIN
N.I.C.
2 STOREY BRICK SIDED COMMERCIAL BUILDING EXISTING TO REMAIN
1 STOREY STUCCO AND METAL SIDED COMMERCIAL BUILDING EXISTING TO REMAIN
3 STOREY METAL AND BRICK SIDED COMMERCIAL BUILDING
TOWER A (PHASE 1)
N.I.C.
SURFACE PARKING LOT
36.840
1.000 TOWER SETBACK
14.042
2.207
24.044
TOWER SETBACK
7.000 TOWER SETBACK
3.000 SETBACK
7.000 TOWER SETBACK
LOADING AREA
2.000 TOWER SETBACK
1.000 TOWER SETBACK
PODIUM ABOVE
GAS FEED
12.154
PARKING ENTRANCE
3.000 SETBACK
MAN HOLE FOR SANITATION MONITORING (REFER TO CIVIL)
FH
32.950
MAX WIDTH AS PER ZONING SCHEDULE
47.830
SEVERANCE LINE TBD
LORETTA AVENUE NORTH
1 STOREY STUCCO AND BRICK SIDED COMMERCIAL BUILDING
1 STOREY STUCCO AND BRICK SIDED COMMERCIAL BUILDING

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CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

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no	revisions	date
21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
5	ISSUED FOR REVIEW	24-08-12
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12

stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

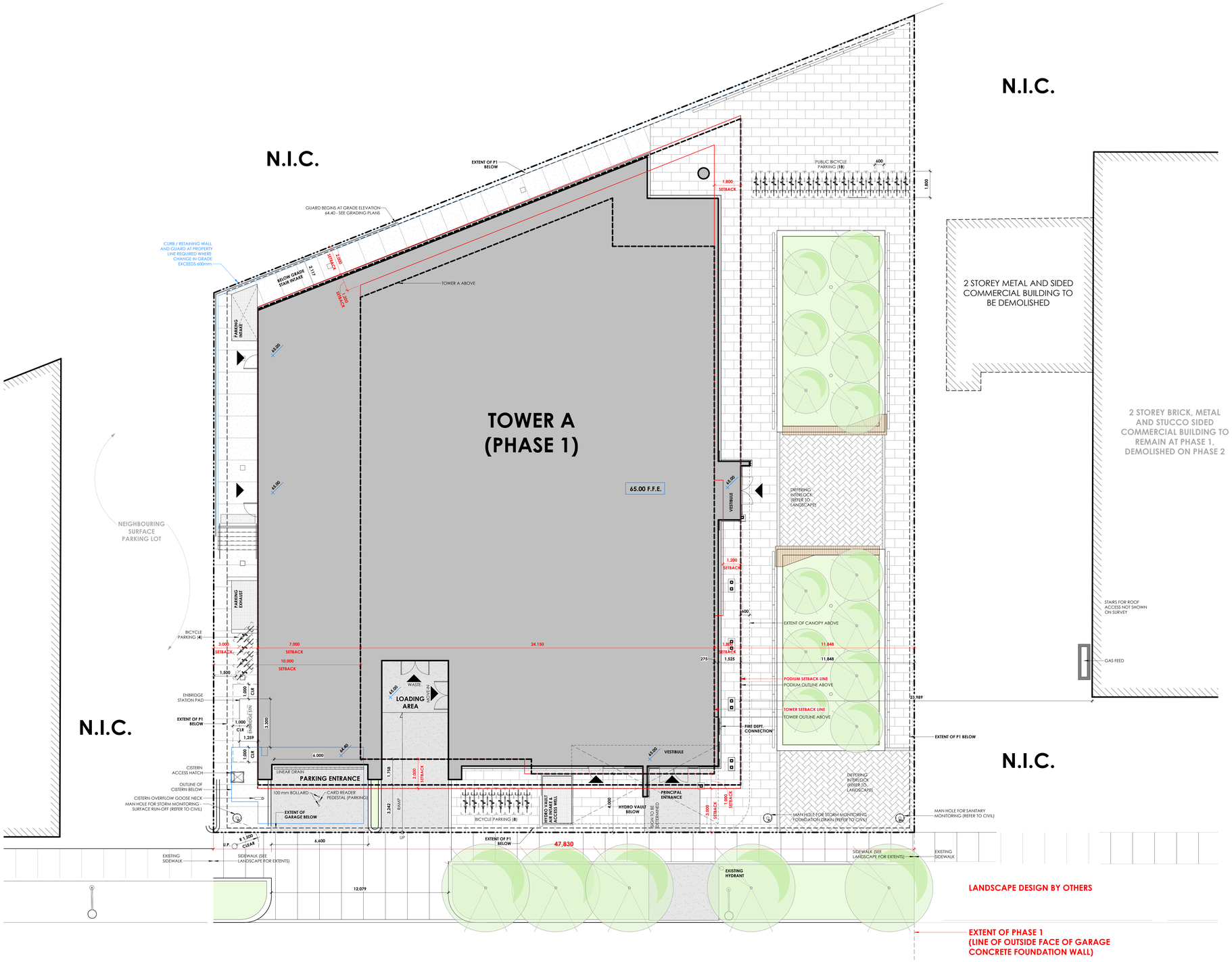
drawing title | titre du dessin

MASTER PLAN (PHASE 1)

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 200**
date | date	**07/16/24**

drawing number | numéro du dessin

A1-100



ZONING MATRIX

ITEM	FIELD	DATA		
1	LEGAL DESCRIPTION	SEE LEGAL DESCRIPTION ON SITE PLAN.		
2	CURRENT ZONING PERMITTED USES:	MIXED-USE CENTRE ZONE - MC[2830] S466-h1-h2		
3	LOT AREA	2,215 m²		
4	LOT FRONTAGE	47.817 m		
5	BUILDING AREA	1,284 m²		
6	BUILDING SETBACKS (SEE SCHEDULE 466)	FRONT YARD REQUIRED:	3 m (3 m PROVIDED)	
		REAR YARD (REQUIRED):	2 m (2 m PROVIDED)	
		INTERIOR SIDE YARD (REQUIRED):	3 m (3 m PROVIDED)	
		TOWER SETBACKS:	SEE PLAN & SCHEDULE 466	
7	SUITE COUNT	402 DWELLING UNITS		
8	AMENITY SPACE	REQUIRED:	PROVIDED:	
		SUITE COUNT x 6m² 402 x 6m² **2,412.00 m²**	SHARED INTERIOR AMENITY AREA 1,945.07 m² SHARED EXTERIOR AMENITY AREA 475.29 m² PRIVATE EXTERIOR AMENITY AREA 0.00 m² **TOTAL AMENITY AREA PROVIDED 2,420.37 m²**	
9	BUILDING HEIGHT	**14.73 m** PODIUM ROOF **114.52 m** TOP OF MECHANICAL PENTHOUSE		
10	LOADING ZONE			
11	VEHICLE PARKING	REQUIRED:	PROVIDED:	
		VISITOR: MINIMUM: 0.1 PER UNIT 402 x 0.1 SPACES = 40 SPACES - 12 x 0.1 SPACES = 39 SPACES MAXIMUM REQUIRED: **30 SPACES**	ACCESSIBLE (3660x5200) 1 STANDARD (2600x5200) 29 **TOTAL PROVIDED (VISITOR) 30**	
		RESIDENTIAL: MAXIMUM: 1.75 PER UNIT (LESS VISITOR SPACES) 402 x 1.75 SPACES = **704** SPACES - 30 SPACES = **674 SPACES MAX.**	ACCESSIBLE (3660x5200) 1 COMPACT (2400x4600) 33 MOTORCYCLE (1300x3000) 6 PARALLEL (2600x6700) 3 STANDARD (2600x5200) 75 **TOTAL PROVIDED (TENANT) 118**	
12	BICYCLE PARKING	REQUIRED:	PROVIDED:	
		RESIDENTIAL: MINIMUM: 0.5 PER UNIT 402 x 0.5 SPACES = **201 SPACES MIN.**	HORIZONTAL 24 HORIZONTAL STACKED 192 **TOTAL PROVIDED 216** ** NOT INCLUDED: 18 PUBLIC BIKE PARKING SPOTS*	
13	DRIVE AISLES	REQUIRED: 6m WIDE	PROVIDED: 6m WIDE	

client

CLVGROUP DEVELOPMENTS

structural engineers | ingénieurs structurels

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

electrical engineers | ingénieur electrique
mechanical engineer | ingénieur méchanique

GWAL
Goodkey, Weedmark & Associates Ltd.

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

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no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
14	RE-ISSUED FOR SPA	25-01-31
12	RE-ISSUED FOR SHORING & EXCAV. IFT	24-12-19
10	ISSUED FOR SHORING & EXCAV. IFP/IFT	24-11-05
9	ISSUED FOR SPA	24-11-20
7	ISSUED FOR REVIEW	24-10-07
5	ISSUED FOR REVIEW	24-08-12
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
2	RE-ISSUED FOR CLASS 'D' ESTIMATE	24-05-13
1	ISSUED FOR CLASS 'D' ESTIMATE	24-05-17

stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

SITE PLAN (PHASE 1)

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**As indicated**
date | date	**02/15/24**

drawing number | numéro du dessin

A1-101

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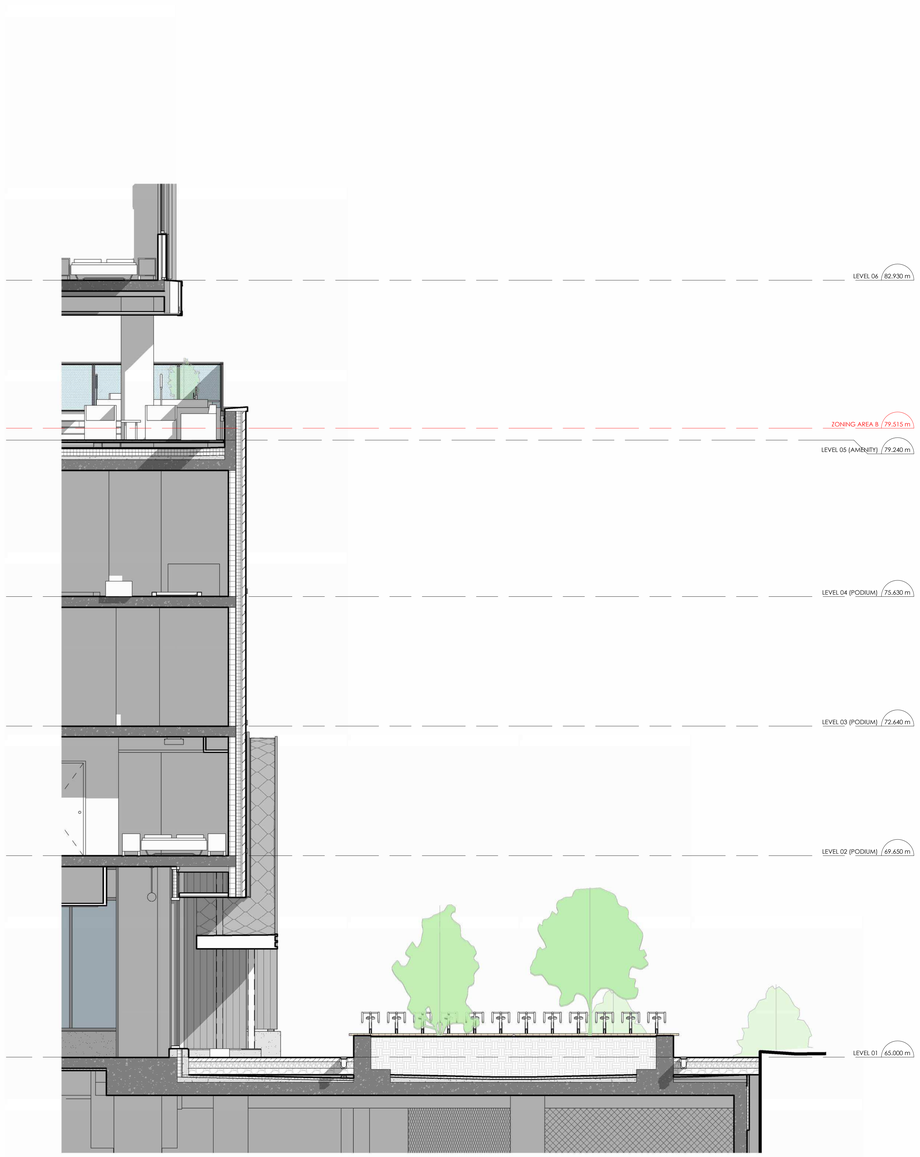

2 A1-103 PODIUM SECTION @ P.O.P.S. AREA
1 : 50



1 A1-103 PODIUM SECTION AT LORETTA AVE N
1 : 50
A2-201-W

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

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electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

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no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
14	RE-ISSUED FOR SPA	25-01-31

stamp | timbre

architect | architecte

linebox
STUDIO

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GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

SITE SECTIONS

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 50**
date | date	**12/18/24**

drawing number | numéro du dessin

A1-103

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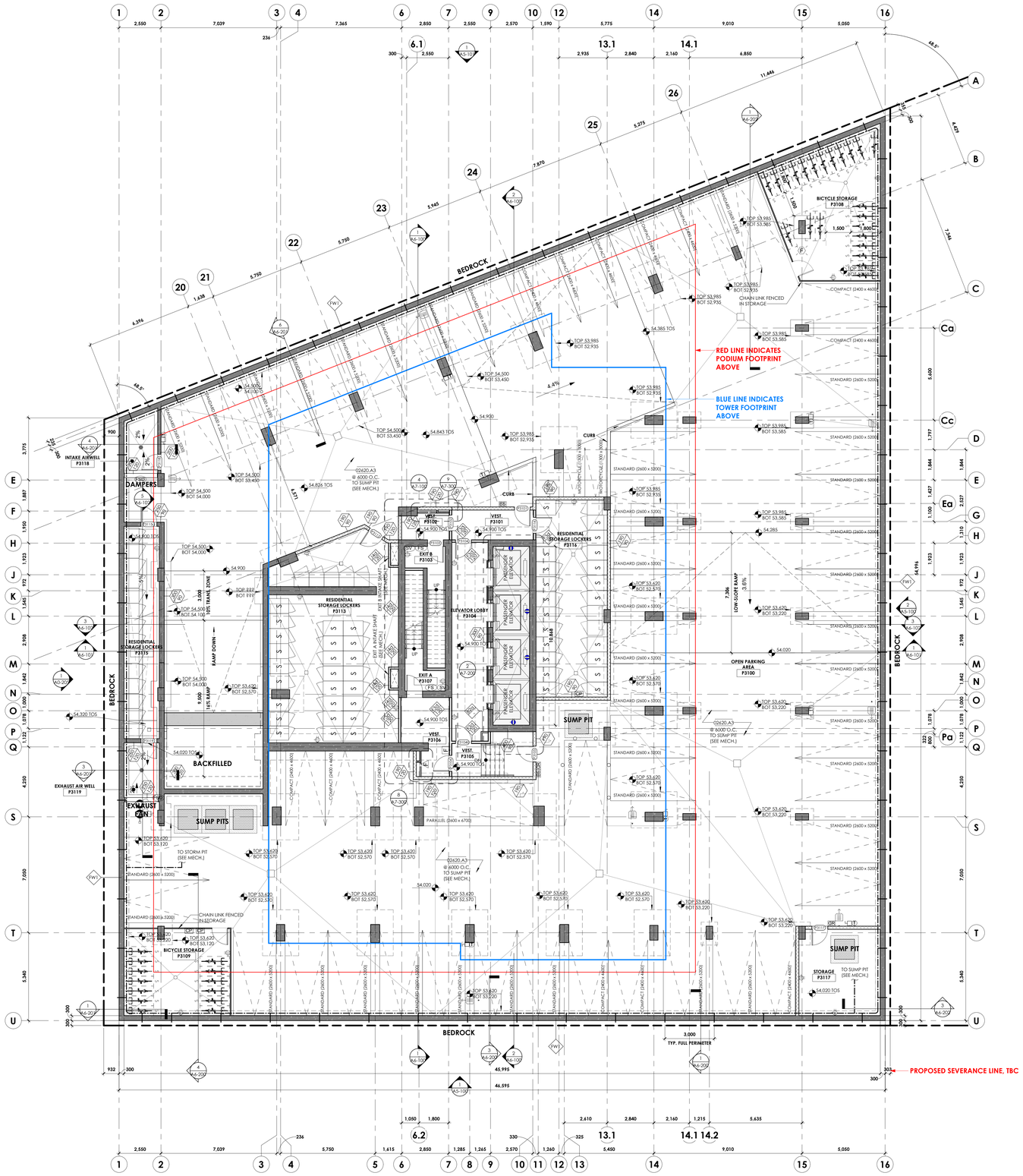
BICYCLE PARKING PROVIDED	
TYPE	**COUNT**
P3	
HORIZONTAL	4
HORIZONTAL STACKED	64
	68
P2 (LOWER)	
HORIZONTAL STACKED	14
	14
P2	
HORIZONTAL	4
HORIZONTAL STACKED	38
	42
P1	
HORIZONTAL	4
HORIZONTAL STACKED	76
	80
LEVEL 01	
HORIZONTAL	12
	12
GRAND TOTAL	**216**

RESIDENTIAL STORAGE LOCKERS	
LOCKER SIZE AND TYPE	**COUNT**
P3	
34"W x 48"D x 40"H STACKED	6
36"W x 36"D x 80"H SINGLE	22
36"W x 48"D x 40"H STACKED	86
	114
P2	
30"W x 48"D x 40"H STACKED	2
34"W x 48"D x 40"H STACKED	6
36"W x 36"D x 80"H SINGLE	22
36"W x 48"D x 40"H STACKED	94
	124
P1	
34"W x 48"D x 40"H STACKED	6
36"W x 36"D x 80"H SINGLE	21
36"W x 48"D x 40"H STACKED	68
	95
LEVEL 02 (PODIUM)	
36"W x 48"D x 40"H STACKED	32
	32
LEVEL 03 (PODIUM)	
36"W x 48"D x 40"H STACKED	52
	52
GRAND TOTAL	**417**

VEHICLE PARKING PROVIDED	
PARKING STALL TYPE	**COUNT**
P3	
COMPACT (2400x4600)	13
MOTORCYCLE (1300x3000)	2
PARALLEL (2600x6700)	1
STANDARD (2600x5200)	40
	56
P2	
COMPACT (2400x4600)	13
MOTORCYCLE (1300x3000)	2
PARALLEL (2600x6700)	1
STANDARD (2600x5200)	39
	55
P1	
ACCESSIBLE (3660x5200)	2
COMPACT (2400x4600)	7
MOTORCYCLE (1300x3000)	2
PARALLEL (2600x6700)	1
STANDARD (2600x5200)	25
	37
GRAND TOTAL	**148**



GENERAL NOTES:

1. REFER TO **A010** FOR TYPICAL ASSEMBLY TYPES
2. REFER TO **A020** FOR TYPICAL DOOR TYPES
3. RESIDENTIAL SUITES AND ELEVATOR LOBBIES ON LEVELS 27-30 TO RECEIVE HIGH-END FINISHES

LEGEND:

- CAST IN PLAN CONCRETE, EXPOSED WHERE SHOWN IN PLAN
- CMU PARTITIONS
- GYPSUM PARTITION, FIRE RATED
- GYPSUM PARTITION, NON-RATED

KEYNOTES	
Key Value	Keynote Text
02620.A3	150mm Perforated PVC Pipe
ST-03	

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
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electrical engineers | ingénieur electrique

mechanical engineer | ingénieur mécanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

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no	revisions	date
~~21~~	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
~~20~~	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
~~19~~	~~ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING~~	~~25-05-16~~
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
14	RE-ISSUED FOR SPA	25-01-31
12	RE-ISSUED FOR SHORING & EXCAV. IFT	24-12-19
11	ISSUED FOR ELEVATOR TENDER	24-12-02
10	ISSUED FOR SHORING & EXCAV. IFP/IFT	24-11-05
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
3	ISSUED FOR EXCAVATION PERMIT	24-06-13
2	RE-ISSUED FOR CLASS 'D' ESTIMATE	24-05-13
1	ISSUED FOR CLASS 'D' ESTIMATE	24-05-17

stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

FLOOR PLAN - P3 (FOUNDATION PLAN)

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**02/15/24**

drawing number | numéro du dessin

A2-098

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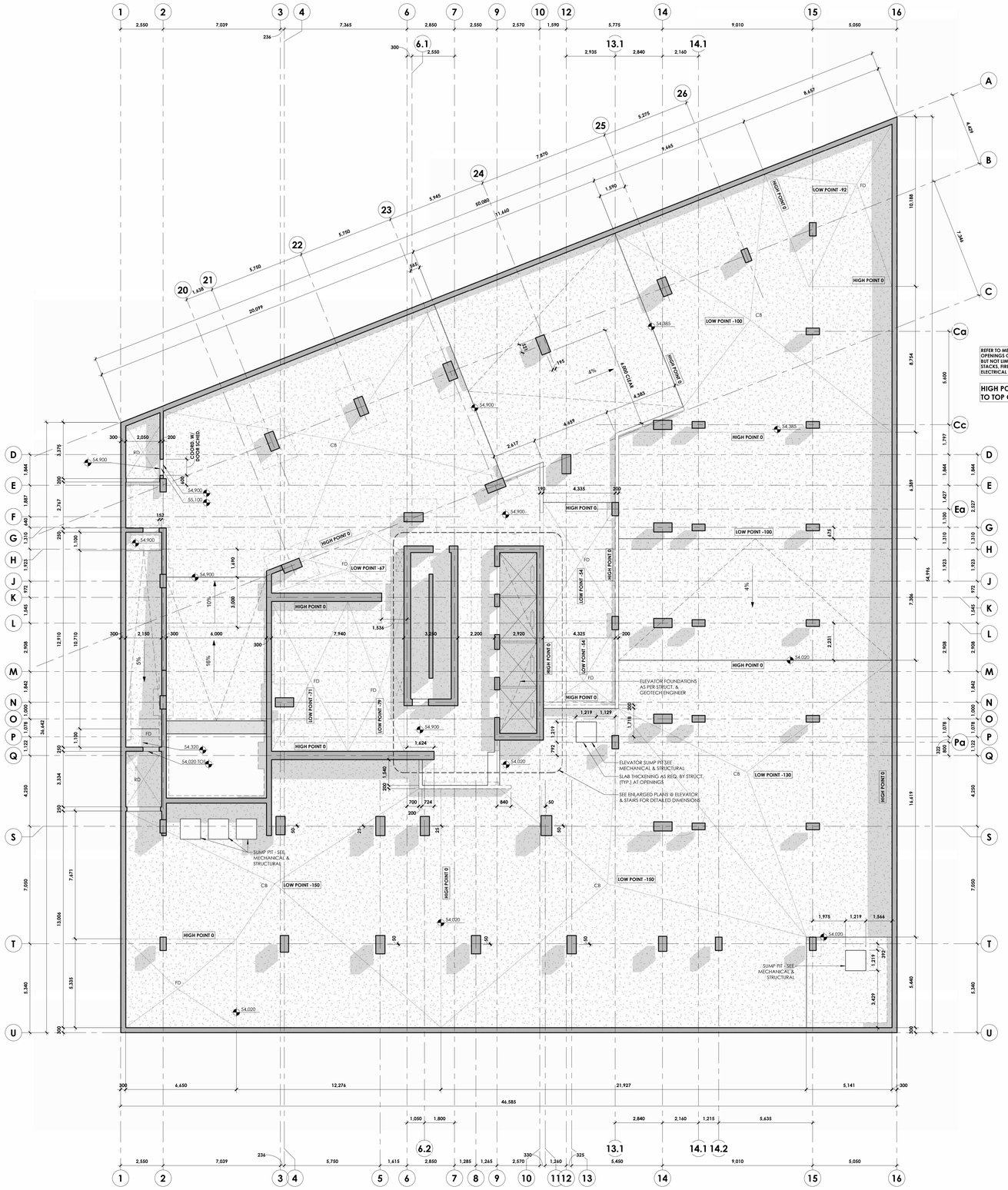

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CLVGROUP DEVELOPMENTS

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electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

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~~21~~	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-19~~
~~20~~	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
no	revisions	date

stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

SLAB EDGE PLAN - LEVEL P3

project number | numero du projet	2402
drawn | dessiné	JH / DL / PC / JP
checked | verifié	JP / AR
scale | échelle	1 : 100
date | date	08/01/24

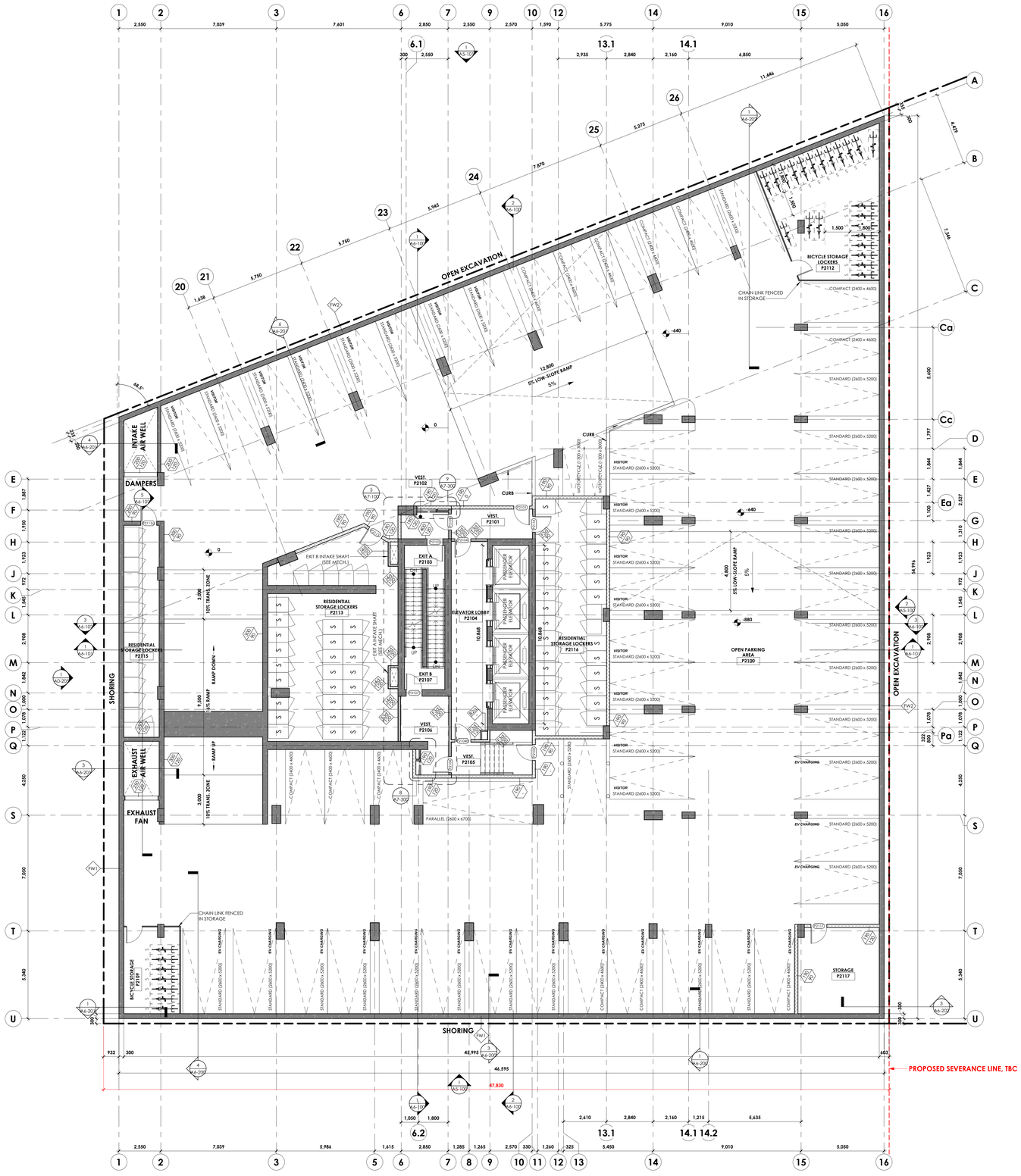
drawing number | numéro du dessin

A2-098a

BICYCLE PARKING PROVIDED	
TYPE	**COUNT**
P3	
HORIZONTAL	4
HORIZONTAL STACKED	64
	68
P2 (LOWER)	
HORIZONTAL STACKED	14
	14
P2	
HORIZONTAL	4
HORIZONTAL STACKED	38
	42
P1	
HORIZONTAL	4
HORIZONTAL STACKED	76
	80
LEVEL 01	
HORIZONTAL	12
	12
GRAND TOTAL	**216**

RESIDENTIAL STORAGE LOCKERS	
LOCKER SIZE AND TYPE	**COUNT**
P3	
34"W x 48"D x 40"H STACKED	6
36"W x 36"D x 80"H SINGLE	22
36"W x 48"D x 40"H STACKED	86
	114
P2	
30"W x 48"D x 40"H STACKED	2
34"W x 48"D x 40"H STACKED	6
36"W x 36"D x 80"H SINGLE	22
36"W x 48"D x 40"H STACKED	94
	124
P1	
34"W x 48"D x 40"H STACKED	6
36"W x 36"D x 80"H SINGLE	21
36"W x 48"D x 40"H STACKED	68
	95
LEVEL 02 (PODIUM)	
36"W x 48"D x 40"H STACKED	32
	32
LEVEL 03 (PODIUM)	
36"W x 48"D x 40"H STACKED	52
	52
GRAND TOTAL	**417**

VEHICLE PARKING PROVIDED	
PARKING STALL TYPE	**COUNT**
P3	
COMPACT (2400x4600)	13
MOTORCYCLE (1300x3000)	2
PARALLEL (2600x6700)	1
STANDARD (2600x5200)	40
	56
P2	
COMPACT (2400x4600)	13
MOTORCYCLE (1300x3000)	2
PARALLEL (2600x6700)	1
STANDARD (2600x5200)	39
	55
P1	
ACCESSIBLE (3660x5200)	2
COMPACT (2400x4600)	7
MOTORCYCLE (1300x3000)	2
PARALLEL (2600x6700)	1
STANDARD (2600x5200)	25
	37
GRAND TOTAL	**148**



GENERAL NOTES:

1. REFER TO **A010** FOR TYPICAL ASSEMBLY TYPES
2. REFER TO **A020** FOR TYPICAL DOOR TYPES
3. RESIDENTIAL SUITES AND ELEVATOR LOBBIES ON LEVELS 27-30 TO RECEIVE HIGH-END FINISHES

LEGEND:

- CAST IN PLAN CONCRETE, EXPOSED WHERE SHOWN IN PLAN
- CMU PARTITIONS
- GYPSUM PARTITION, FIRE RATED
- GYPSUM PARTITION, NON-RATED

client

CLVGROUP DEVELOPMENTS

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CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

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mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:28:44 PM

21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% MD & CLIENT BUDGETING	25-03-28
14	RE-ISSUED FOR SPA	25-01-31
12	RE-ISSUED FOR SHORING & EXCAV. IFT	24-12-19
11	ISSUED FOR ELEVATOR TENDER	24-12-02
10	ISSUED FOR SHORING & EXCAV. IFP/IFT	24-11-05
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
3	ISSUED FOR EXCAVATION PERMIT	24-06-13
2	RE-ISSUED FOR CLASS T2 ESTIMATE	24-05-13
1	ISSUED FOR CLASS T2 ESTIMATE	24-05-17

no revisions — date

stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

FLOOR PLAN - P2

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**02/15/24**

drawing number | numéro du dessin

A2-099

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV JB_Tower A.rvt
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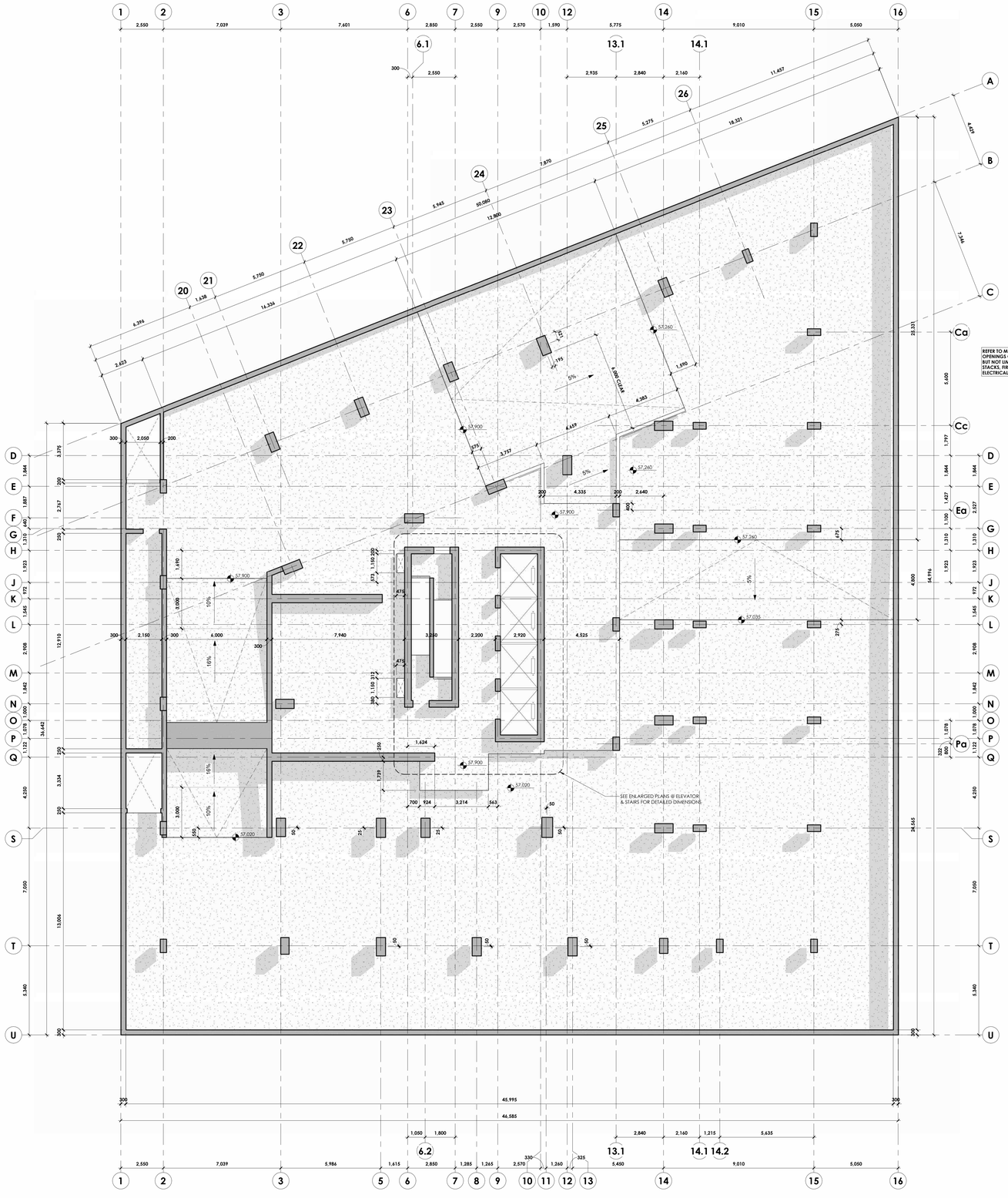

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CLVGROUP DEVELOPMENTS

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structural engineers | ingénieurs structurels

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mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:28:51 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12

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architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

SLAB EDGE PLAN - LEVEL P2

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**08/01/24**

drawing number | numéro du dessin

A2-099a

BICYCLE PARKING PROVIDED	
TYPE	**COUNT**
P3	
HORIZONTAL	4
HORIZONTAL STACKED	64
	68
P2 (LOWER)	
HORIZONTAL STACKED	14
	14
P2	
HORIZONTAL	4
HORIZONTAL STACKED	38
	42
P1	
HORIZONTAL	4
HORIZONTAL STACKED	76
	80
LEVEL 01	
HORIZONTAL	12
	12
GRAND TOTAL	**216**

RESIDENTIAL STORAGE LOCKERS	
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34"W x 48"D x 40"H STACKED	6
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	114
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36"W x 48"D x 40"H STACKED	94
	124
P1	
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36"W x 48"D x 40"H STACKED	68
	95
LEVEL 02 (PODIUM)	
36"W x 48"D x 40"H STACKED	32
	32
LEVEL 03 (PODIUM)	
36"W x 48"D x 40"H STACKED	52
	52
GRAND TOTAL	**417**

VEHICLE PARKING PROVIDED	
PARKING STALL TYPE	**COUNT**
P3	
COMPACT (2400x4600)	13
MOTORCYCLE (1300x3000)	2
PARALLEL (2600x6700)	1
STANDARD (2600x5200)	40
	56
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MOTORCYCLE (1300x3000)	2
PARALLEL (2600x6700)	1
STANDARD (2600x5200)	39
	55
P1	
ACCESSIBLE (3660x5200)	2
COMPACT (2400x4600)	7
MOTORCYCLE (1300x3000)	2
PARALLEL (2600x6700)	1
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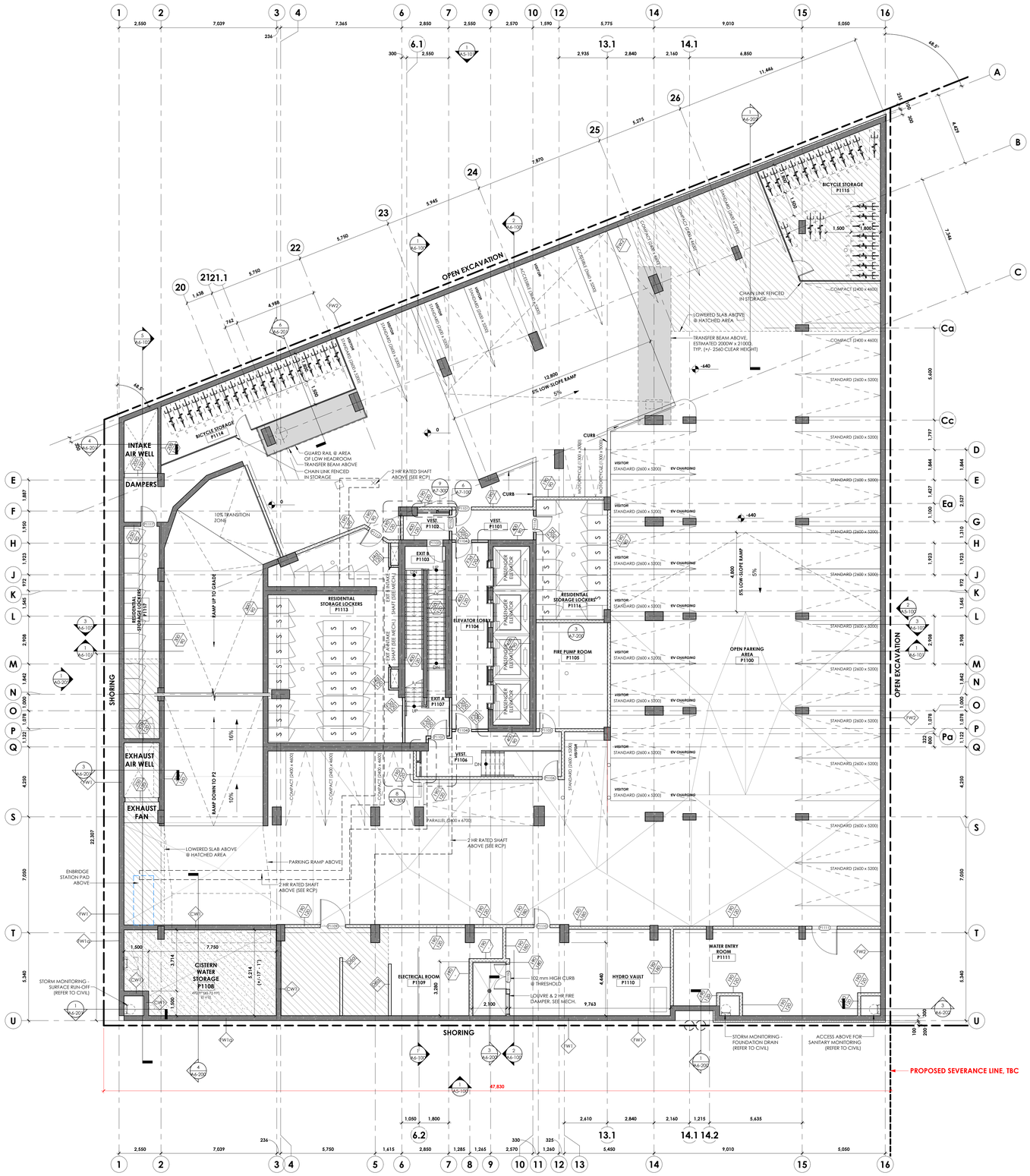

GENERAL NOTES:

1. REFER TO **A010** FOR TYPICAL ASSEMBLY TYPES
2. REFER TO **A020** FOR TYPICAL DOOR TYPES
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LEGEND:

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- CMU PARTITIONS
- GYPSUM PARTITION, FIRE RATED
- GYPSUM PARTITION, NON-RATED

NOTES FOR TRANSFORMER ROOM:

1. FIRE DOOR CLASS "A" WITH APPROVED LATCHING & HASP FOR HYDRO OTTAWA PADLOCK.
2. CONTRACTOR TO PROVIDE GUARD FENCE & GATE AS REQUIRED BY HYDRO OTTAWA - HEAVY SCREEN ON 31.75MM TUBE FRAME (PAINTED OR GALVANIZED). GATE TO BE SAME SIZE AS FIRE DOOR w/ HASP FOR HYDRO OTTAWA PADLOCK
3. OIL SUMP PIT TO BE MIN. 610mm x 610mm x 610mm OR CAPABLE OF HOLDING THE OIL FROM LARGEST TRANSFORMER. REFER TO MECH/ELEC DRAWINGS FOR LOCATION AND SIZE.
4. PROVIDE 9.53mm FLUSH MOUNTED STEEL PLATE COVER ON OIL SUMP PIT & ANY CABLE TRENCHES.
5. "DANGER HIGH VOLTAGE" SIGN(S) SUPPLIED AND INSTALLED AS PER HYDRO OTTAWA.
6. PROVIDE 100mm REMOVABLE CURB UNDER AREA WELL ACCESS DOOR AS PER HYDRO OTTAWA SPECIFICATIONS.
7. LIGHT FIXTURES TO BE WALL MOUNTED WHEREVER POSSIBLE AT 2285mm FROM FLOOR OR 2438mm FROM FLOOR IF SUSPENDED FROM CEILING (150W INC.)
8. CONCRETE FLOOR SLAB TO SLOPE MIN. 1:48 TO 100MM "P" TRAP OR FLAME TRAP.
9. ANY/ALL CABLE TRENCHES OR DUCT BANKS TO BE CONSTRUCTED AS PER HYDRO OTTAWA SPEC.'s. 8212p = FIRE DOOR CLASS "A" WITH APPROVED LATCHING & HASP FOR HYDRO OTTAWA PADLOCK.

client

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mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

CONSTRUCTION
2025-06-12 4:29:12 PM
NOT FOR CONSTRUCTION

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 44'S WD & CLIENT BUDGETING	25-03-28
14	RE-ISSUED FOR SPA	25-01-31
12	RE-ISSUED FOR SHORING & EXCAV. IFT	24-12-19
11	ISSUED FOR ELEVATOR TENDER	24-12-02
10	ISSUED FOR SHORING & EXCAV. IFP/IFT	24-11-05
7	ISSUED FOR REVIEW	24-10-07
4	ISSUED FOR 33'S WORKING DRAWINGS	24-08-12
3	ISSUED FOR EXCAVATION PERMIT	24-06-13
2	RE-ISSUED FOR CLASS 'D' ESTIMATE	24-05-13
1	ISSUED FOR CLASS 'D' ESTIMATE	24-05-17

stamp | timbre

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

FLOOR PLAN - P1

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / FC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**02/15/24**

drawing number | numéro du dessin

A2-100

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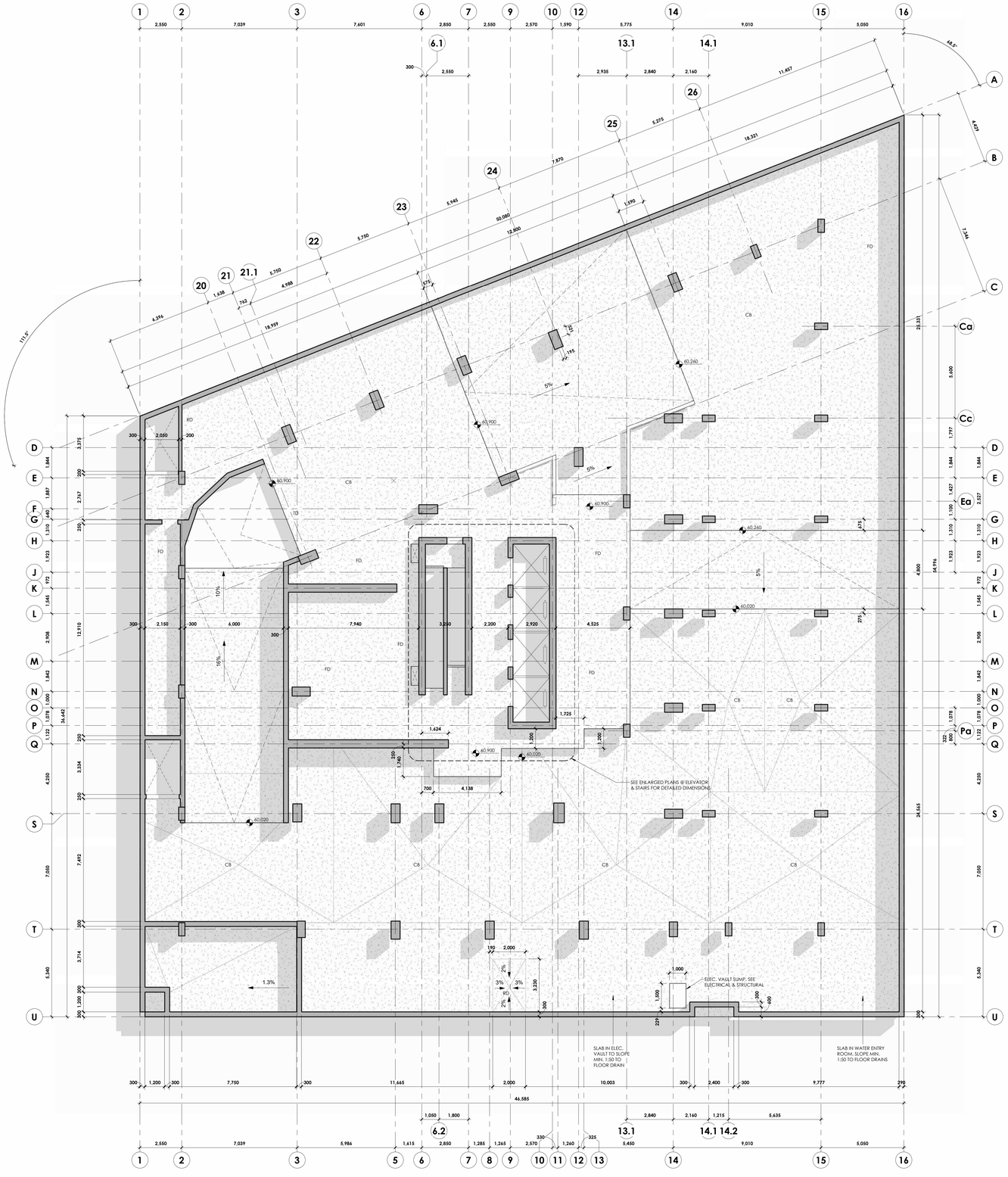

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
2025-06-12 4:29:19 PM

client

CLVGROUP DEVELOPMENTS

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mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:29:19 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12

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linebox STUDIO

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GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

SLAB EDGE PLAN - LEVEL P1

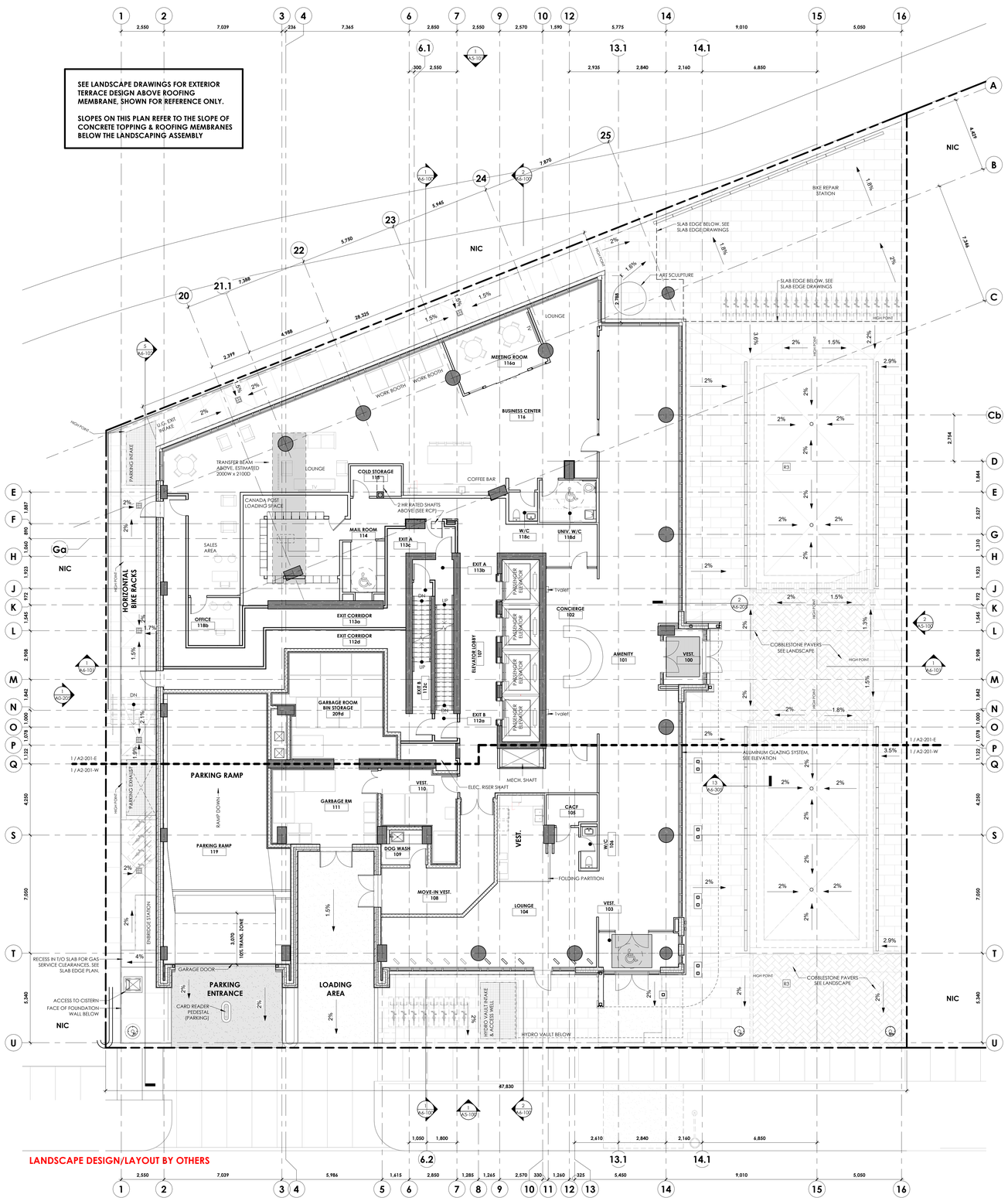
project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**08/01/24**

drawing number | numéro du dessin

A2-100a

BICYCLE PARKING PROVIDED	
TYPE	**COUNT**
P3	
HORIZONTAL	4
HORIZONTAL STACKED	64
	68
P2 (LOWER)	
HORIZONTAL STACKED	14
	14
P2	
HORIZONTAL	4
HORIZONTAL STACKED	38
	42
P1	
HORIZONTAL	4
HORIZONTAL STACKED	76
	80
LEVEL 01	
HORIZONTAL	12
	12
GRAND TOTAL	**216**

RESIDENTIAL STORAGE LOCKERS	
LOCKER SIZE AND TYPE	**COUNT**
P3	
34"W x 48"D x 40"H STACKED	6
36"W x 36"D x 80"H SINGLE	22
36"W x 48"D x 40"H STACKED	86
	114
P2	
30"W x 48"D x 40"H STACKED	2
34"W x 48"D x 40"H STACKED	6
36"W x 36"D x 80"H SINGLE	22
36"W x 48"D x 40"H STACKED	94
	124
P1	
34"W x 48"D x 40"H STACKED	6
36"W x 36"D x 80"H SINGLE	21
36"W x 48"D x 40"H STACKED	68
	95
LEVEL 02 (PODIUM)	
36"W x 48"D x 40"H STACKED	32
	32
LEVEL 03 (PODIUM)	
36"W x 48"D x 40"H STACKED	52
	52
GRAND TOTAL	**417**



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LEGEND:

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- GYPSUM PARTITION, FIRE RATED
- GYPSUM PARTITION, NON-RATED

STRUCTURAL NOTES (HIGH-LEVEL ESTIMATE):

INTERIOR SLAB = 250 THK
PODIUM SLAB (GROUND FLOOR EXTERIOR ABOVE PARKING = 300 THK + SLOPED TOPPING + COLUM CAPITALS
RAMP SLAB = 250 THK

TRANSFER BEAMS ABOVE = 2000 X 2100 DP

SHEAR WALLS = 400 THK

TYPICAL TOWER COLUMN = 550x900
TYPICAL PODIUM COLUMN = 400x800 OR 600 DIAM

CONCRETE STRENGTHS:
SLABS = 35 MPa (TYPE N)
RAMP = 35 MPa (TYPE C-1) + CORROSION INHIBITOR
TOWER COLUMNS & SHEAR WALLS = 45 MPa (TYPE N)
PODIUM COLUMNS = 35 MPa (TYPE N)

CLVGROUP DEVELOPMENTS

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nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:30:43 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	25-06-12
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
14	RE-ISSUED FOR SPA	25-01-31
11	ISSUED FOR ELEVATOR TENDER	24-12-02
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
2	RE-ISSUED FOR CLASS 'D' ESTIMATE	24-05-13
1	ISSUED FOR CLASS 'D' ESTIMATE	24-05-17

stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

FLOOR PLAN - LEVEL 01

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | vertifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**02/15/24**

drawing number | numéro du dessin

A2-101

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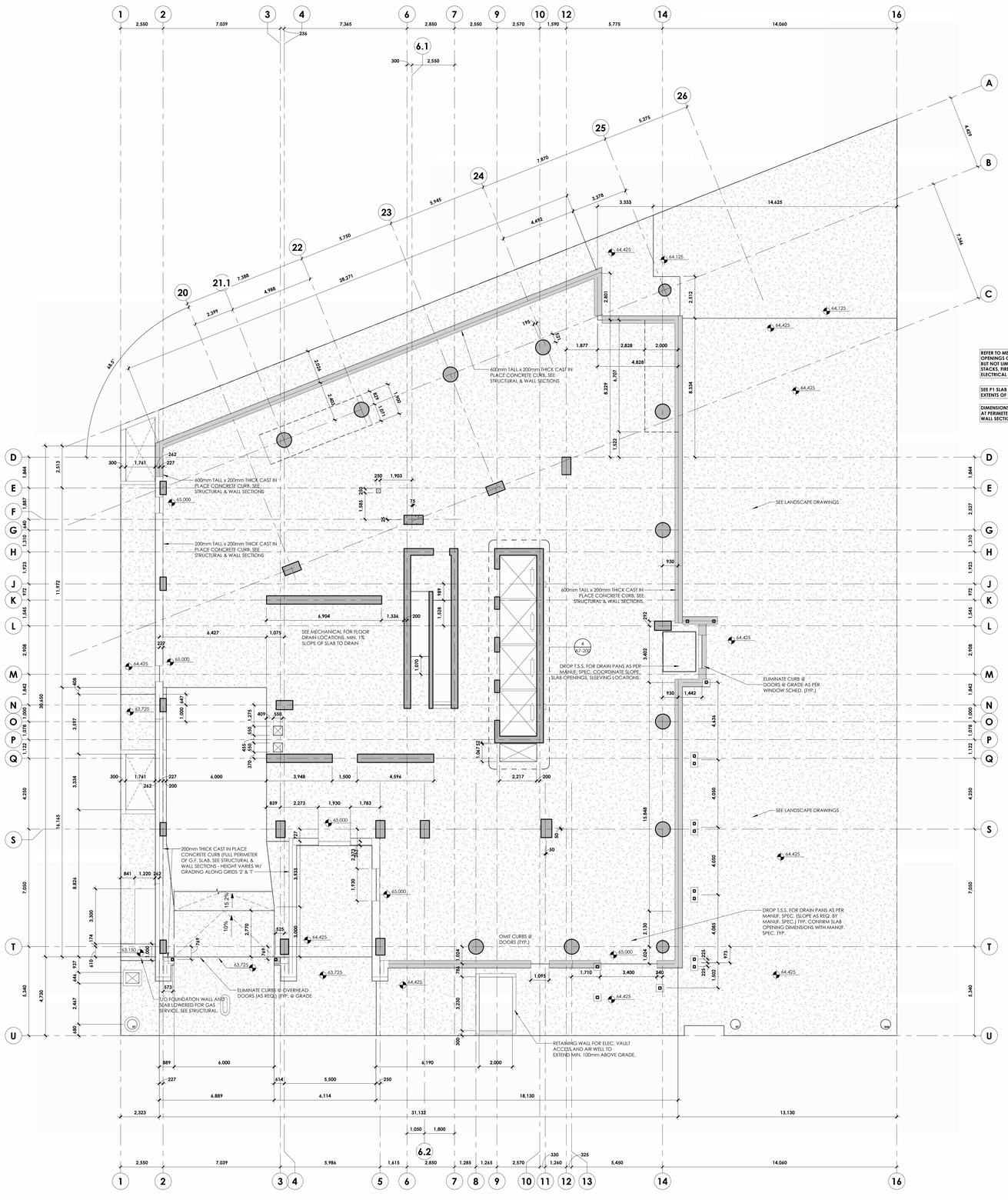

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2025-06-12 4:30:19 PM

client

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nord du projet
project north

nord reel
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NOT FOR CONSTRUCTION
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21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 64R WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33R WORKING DRAWINGS	24-08-12
no	revisions	date

stamp | timbre

architect | architecte

linebox STUDIO

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GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

SLAB EDGE PLAN - LEVEL 01

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
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A2-101a

BICYCLE PARKING PROVIDED	
TYPE	**COUNT**
P3	
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HORIZONTAL STACKED	64
	68
P2 (LOWER)	
HORIZONTAL STACKED	14
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HORIZONTAL	4
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GRAND TOTAL	**216**

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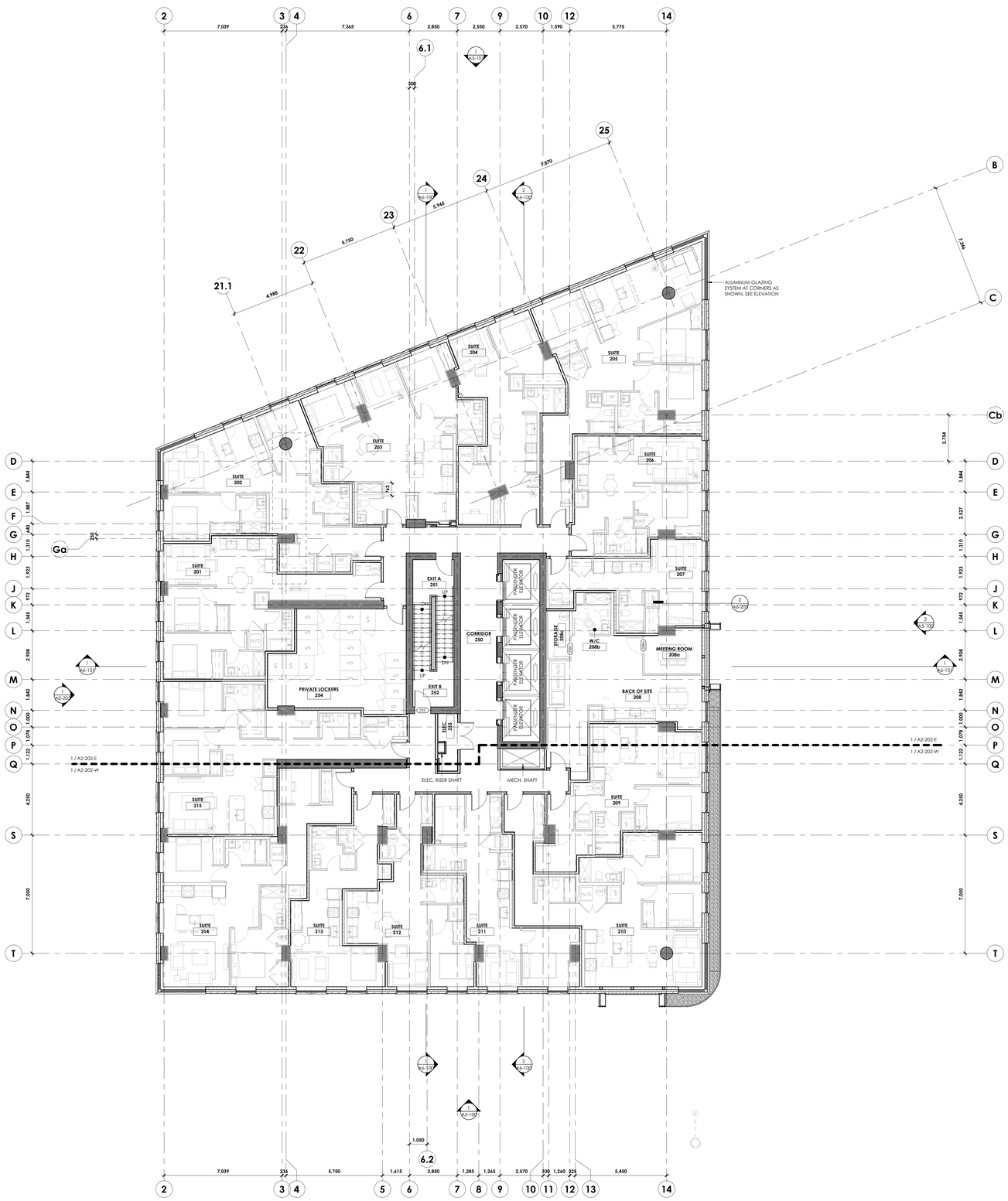
36"W x 48"D x 40"H STACKED	68
	95
LEVEL 02 (PODIUM)	
36"W x 48"D x 40"H STACKED	32
	32
LEVEL 03 (PODIUM)	
36"W x 48"D x 40"H STACKED	52
	52
GRAND TOTAL	**417**



GENERAL NOTES:

1. REFER TO **A010** FOR TYPICAL ASSEMBLY TYPES
2. REFER TO **A020** FOR TYPICAL DOOR TYPES
3. RESIDENTIAL SUITES AND ELEVATOR LOBBIES ON LEVELS 27-30 TO RECEIVE HIGH-END FINISHES

LEGEND:

- CAST IN PLAN CONCRETE, EXPOSED WHERE SHOWN IN PLAN
- CMU PARTITIONS
- GYPSUM PARTITION, FIRE RATED
- GYPSUM PARTITION, NON-RATED

STRUCTURAL NOTES (HIGH-LEVEL ESTIMATE):

SLAB = 250 THK

SHEAR WALLS = 400 THK

TYPICAL TOWER COLUMN = 500x900
TYPICAL PODIUM COLUMN = 400x800 OR 600 DIAM

CONCRETE STRENGTHS:
SLABS = 35 MPa (TYPE N)
COLUMNS & SHEAR WALLS = 45 MPa (TYPE N)
PODIUM COLUMNS = 35 MPa (TYPE N)

client

CLVGROUP DEVELOPMENTS

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:30:14 PM

no	revisions	date
~~21~~	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
~~20~~	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
19	ISSUED FOR REFERANCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
11	ISSUED FOR ELEVATOR TENDER	24-12-02
6	REVISED 33% WORKING DRAWINGS	24-08-19
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
2	RE-ISSUED FOR CLASS 'D' ESTIMATE	24-05-13
1	ISSUED FOR CLASS 'D' ESTIMATE	24-05-17

stamp | timbre

architect | architecte

linebox STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

FLOOR PLAN - LEVEL 02 (PODIUM)

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**02/15/24**

drawing number | numéro du dessin

A2-102

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_IB_Tower A.rvt
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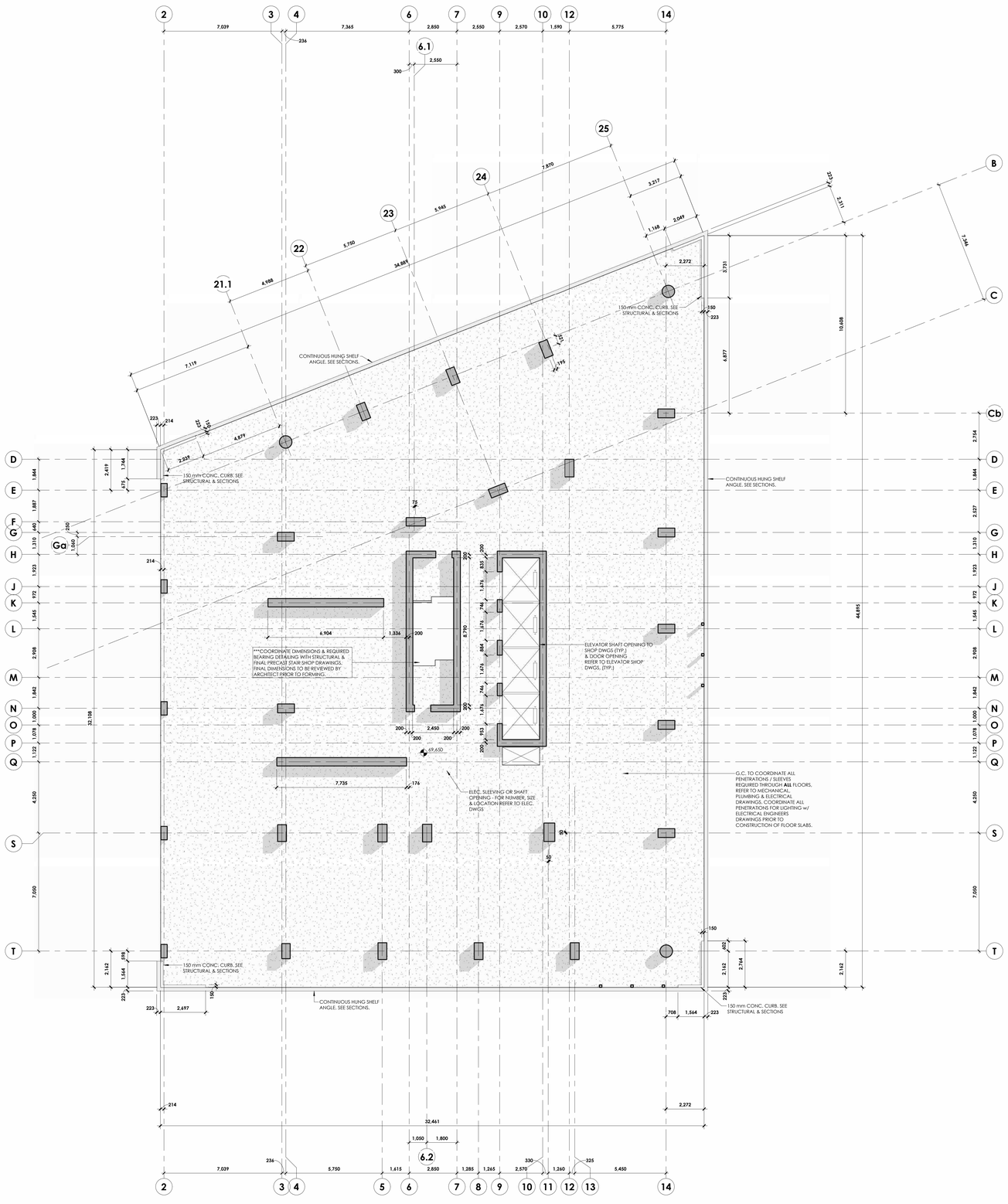

Autodesk Docs://Gladstone & Loretta/2402 - 145 Loretta CLV LR_Tower A.rvt
2025-06-12 4:30:29 PM

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:30:29 PM

21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 44% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
no	revisions	date

stamp | timbre

architect | architecte

linebox
STUDIO

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Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

SLAB EDGE PLAN - LEVEL 02

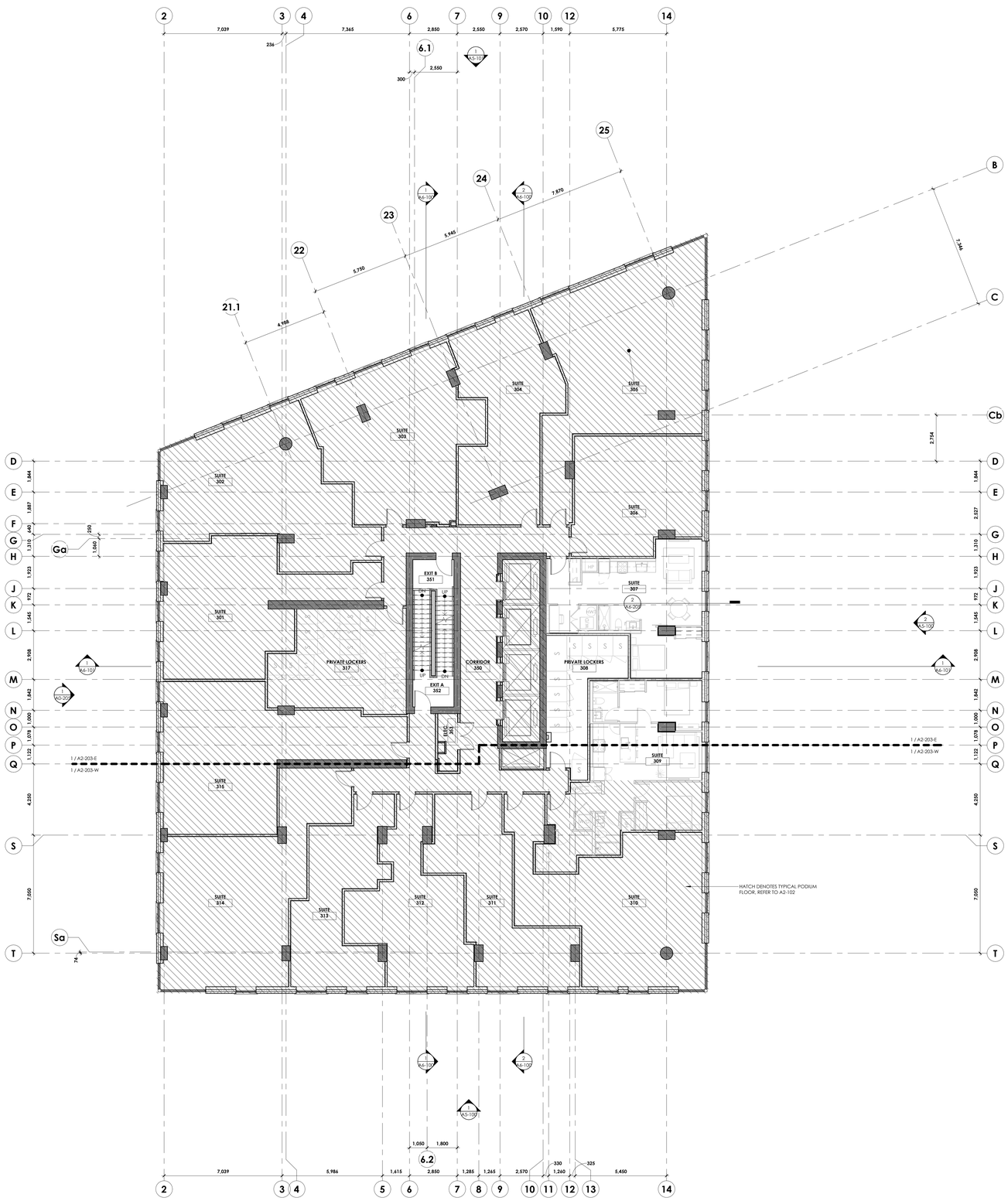
project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**08/01/24**

drawing number | numéro du dessin

A2-102a

BICYCLE PARKING PROVIDED	
TYPE	**COUNT**
P3	
HORIZONTAL	4
HORIZONTAL STACKED	64
	68
P2 (LOWER)	
HORIZONTAL STACKED	14
	14
P2	
HORIZONTAL	4
HORIZONTAL STACKED	38
	42
P1	
HORIZONTAL	4
HORIZONTAL STACKED	76
	80
LEVEL 01	
HORIZONTAL	12
	12
GRAND TOTAL	**216**

RESIDENTIAL STORAGE LOCKERS	
LOCKER SIZE AND TYPE	**COUNT**
P3	
34"W x 48"D x 40"H STACKED	6
36"W x 36"D x 80"H SINGLE	22
36"W x 48"D x 40"H STACKED	86
	114
P2	
30"W x 48"D x 40"H STACKED	2
34"W x 48"D x 40"H STACKED	6
36"W x 36"D x 80"H SINGLE	22
36"W x 48"D x 40"H STACKED	94
	124
P1	
34"W x 48"D x 40"H STACKED	6
36"W x 36"D x 80"H SINGLE	21
36"W x 48"D x 40"H STACKED	68
	95
LEVEL 02 (PODIUM)	
36"W x 48"D x 40"H STACKED	32
	32
LEVEL 03 (PODIUM)	
36"W x 48"D x 40"H STACKED	52
	52
GRAND TOTAL	**417**



GENERAL NOTES:

1. REFER TO **A010** FOR TYPICAL ASSEMBLY TYPES
2. REFER TO **A020** FOR TYPICAL DOOR TYPES
3. RESIDENTIAL SUITES AND ELEVATOR LOBBIES ON LEVELS 27-30 TO RECEIVE HIGH-END FINISHES

LEGEND:

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- CMU PARTITIONS
- GYPSUM PARTITION, FIRE RATED
- GYPSUM PARTITION, NON-RATED

STRUCTURAL NOTES (HIGH-LEVEL ESTIMATE):

SLAB = 250 THK

SHEAR WALLS = 400 THK

TYPICAL TOWER COLUMN = 500x900
TYPICAL PODIUM COLUMN = 400x800 OR 600 DIAM

CONCRETE STRENGTHS:
SLABS = 35 MPa (TYPE N)
COLUMNS & SHEAR WALLS = 45 MPa (TYPE N)
PODIUM COLUMNS = 35 MPa (TYPE N)

client

CLVGROUP DEVELOPMENTS

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:30:23 PM

21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
14	RE-ISSUED FOR SPA	25-01-31
11	ISSUED FOR ELEVATOR TENDER	24-12-09
6	REVISED 33% WORKING DRAWINGS	24-08-19
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
2	RE-ISSUED FOR CLASS 'D' ESTIMATE	24-05-13
1	ISSUED FOR CLASS 'D' ESTIMATE	24-05-17
no	revisions	date

stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

FLOOR PLAN - LEVEL 03 (PODIUM)

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**02/15/24**

drawing number | numéro du dessin

A2-103

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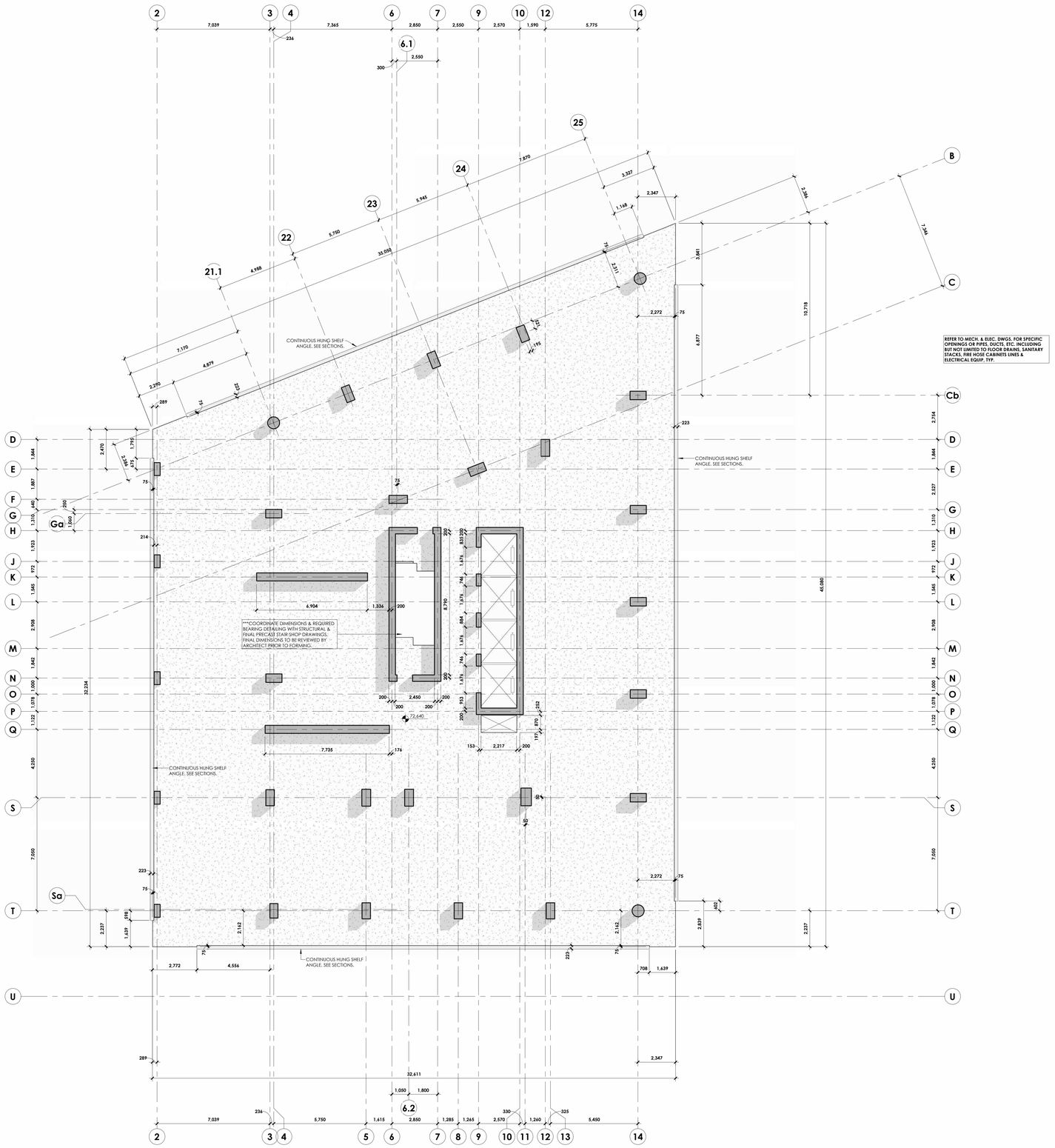

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CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:30:37 PM

no	revisions	date
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20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12

stamp | timbre

architect | architecte

linebox
STUDIO

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Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

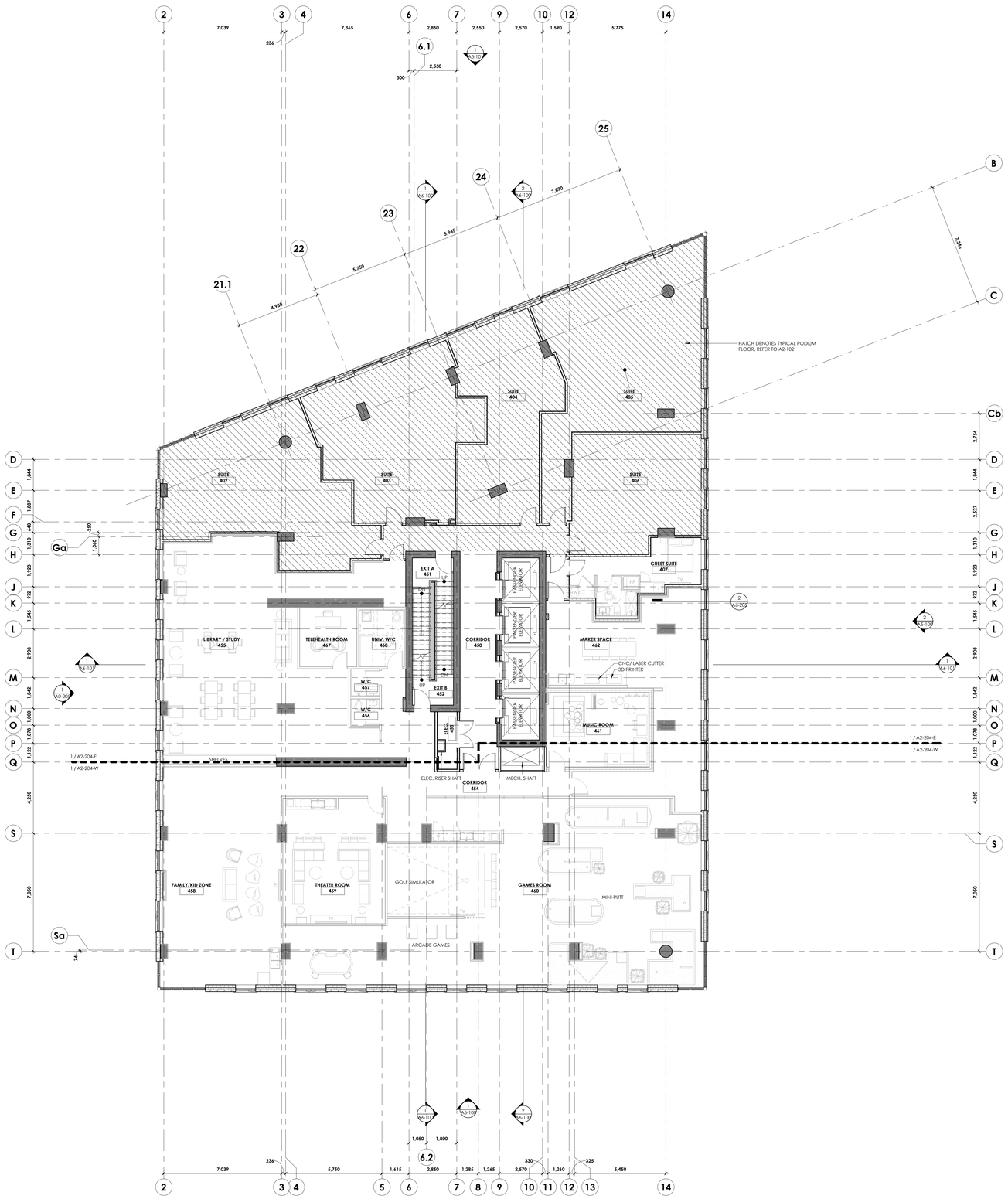
drawing title | titre du dessin

SLAB EDGE PLAN - LEVEL 03

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**08/01/24**

drawing number | numéro du dessin

A2-103a



GENERAL NOTES:

1. REFER TO **A010** FOR TYPICAL ASSEMBLY TYPES
2. REFER TO **A020** FOR TYPICAL DOOR TYPES
3. RESIDENTIAL SUITES AND ELEVATOR LOBBIES ON LEVELS 27-30 TO RECEIVE HIGH-END FINISHES

LEGEND:

- CAST IN PLAN CONCRETE, EXPOSED WHERE SHOWN IN PLAN
- CMU PARTITIONS
- GYPSUM PARTITION, FIRE RATED
- GYPSUM PARTITION, NON-RATED

STRUCTURAL NOTES (HIGH-LEVEL ESTIMATE):

SLAB = 250 THK

SHEAR WALLS = 400 THK

TYPICAL TOWER COLUMN = 500x900
TYPICAL PODIUM COLUMN = 400x800 OR 600 DIAM

CONCRETE STRENGTHS:
SLABS = 35 MPa (TYPE N)
COLUMNS & SHEAR WALLS = 45 MPa (TYPE N)
PODIUM COLUMNS = 35 MPa (TYPE N)

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:30:33 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% MID & CLIENT BUDGETING	25-03-28
11	ISSUED FOR ELEVATOR TENDER	24-12-02
6	REVISED 33% WORKING DRAWINGS	24-08-19
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
2	RE-ISSUED FOR CLASS 'D' ESTIMATE	24-05-13
1	ISSUED FOR CLASS 'D' ESTIMATE	24-05-17

stamp | timbre

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
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Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

FLOOR PLAN - LEVEL 04 (PODIUM)

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**02/15/24**

drawing number | numéro du dessin

A2-104

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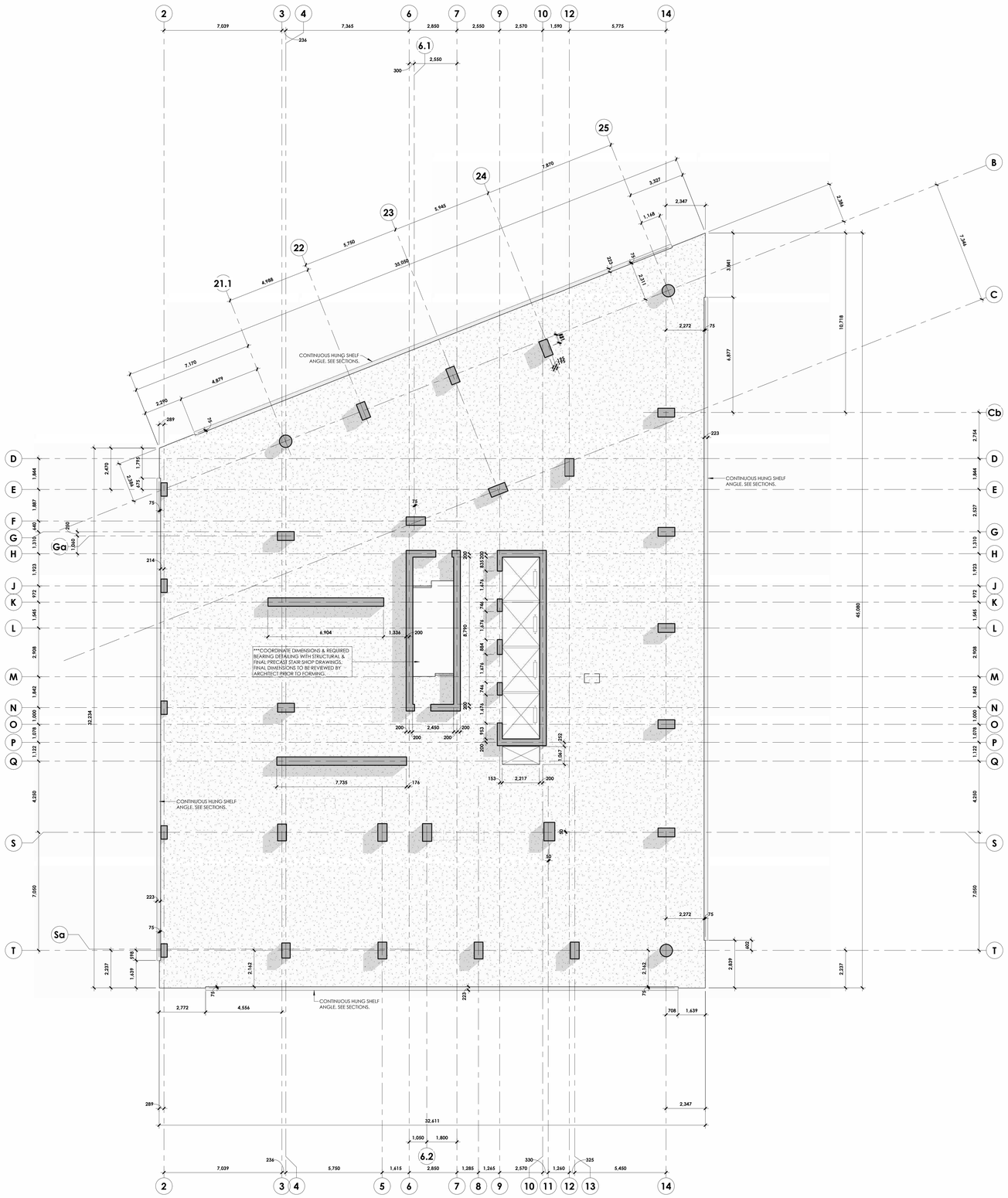

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CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:30:40 PM

no	revisions	date
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20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12

stamp | timbre

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

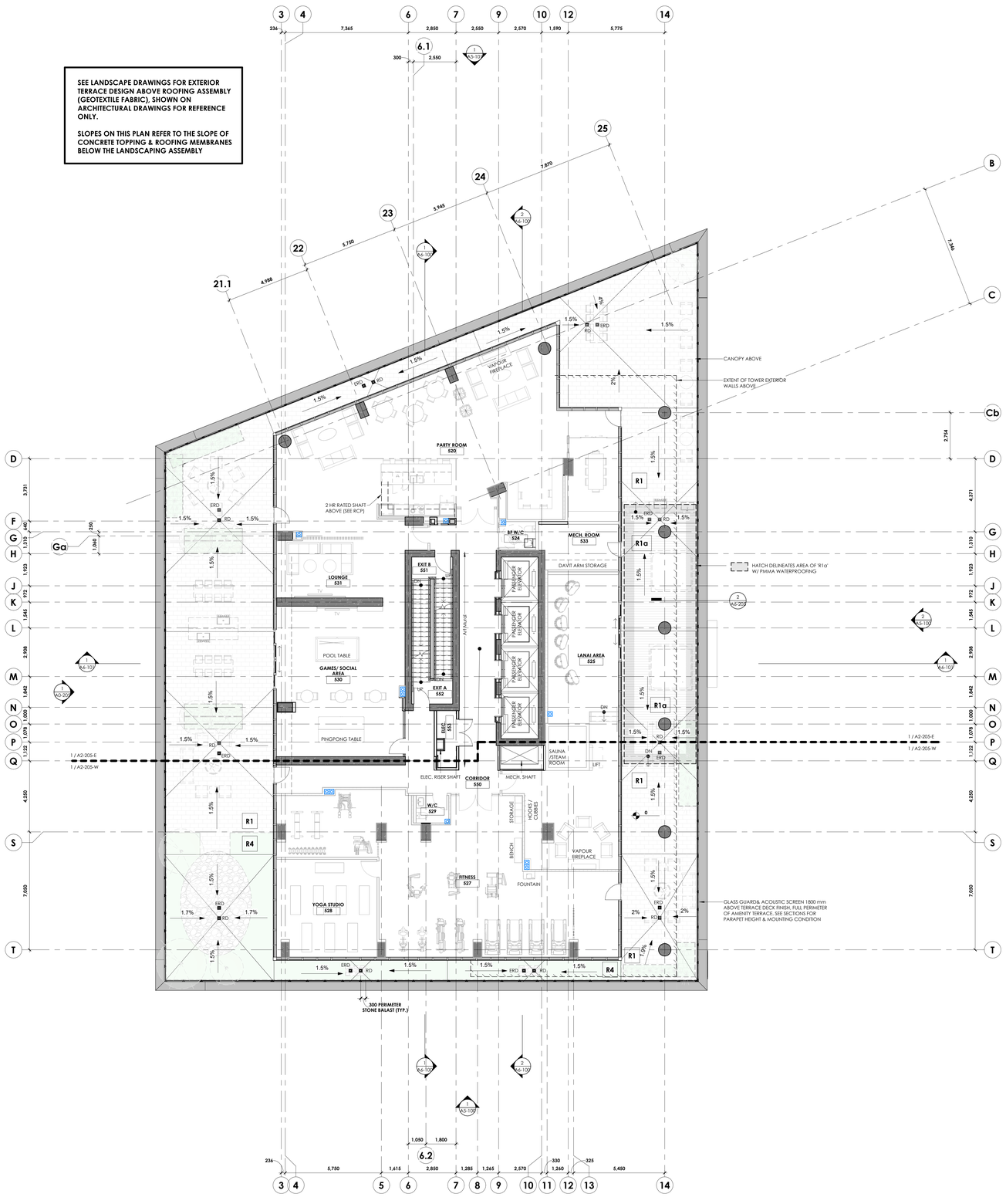
drawing title | titre du dessin

SLAB EDGE PLAN - LEVEL 04

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | vertifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**08/01/24**

drawing number | numéro du dessin

A2-104a



GENERAL NOTES:

1. REFER TO **A010** FOR TYPICAL ASSEMBLY TYPES
2. REFER TO **A020** FOR TYPICAL DOOR TYPES
3. RESIDENTIAL SUITES AND ELEVATOR LOBBIES ON LEVELS 27-30 TO RECEIVE HIGH-END FINISHES

LEGEND:

- CAST IN PLAN CONCRETE, EXPOSED WHERE SHOWN IN PLAN
- CMU PARTITIONS
- GYPSUM PARTITION, FIRE RATED
- GYPSUM PARTITION, NON-RATED

STRUCTURAL NOTES (HIGH-LEVEL ESTIMATE):

LS PODIUM SLAB = 300 THK + SLOPED TOPPING

SHEAR WALLS = 400 THK

TYPICAL TOWER COLUMN = 500x900 or 750 DIAM

CONCRETE STRENGTHS:
LS SLABS = 35 MPa (TYPE N)
INTERIOR SLABS = 30 MPa (TYPE N)
COLUMNS & SHEAR WALLS = 40 MPa (TYPE N) L5-10
COLUMNS & SHEAR WALLS = 35 MPa (TYPE N) L11-16
COLUMNS & SHEAR WALLS = 30 MPa (TYPE N) L17-27

client

CLVGROUP DEVELOPMENTS

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:30:45 PM

no	revisions	date
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20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
14	RE-ISSUED FOR SPA	25-01-31
11	ISSUED FOR ELEVATOR TENDER	24-12-02
9	ISSUED FOR SPA	24-11-20
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
2	RE-ISSUED FOR CLASS 'D' ESTIMATE	24-05-13
1	ISSUED FOR CLASS 'D' ESTIMATE	24-05-17

stamp | timbre

architect | architecte

linebox STUDIO

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Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

FLOOR PLAN - LEVEL 05 (PODIUM ROOF AMENITY)

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**02/15/24**

drawing number | numéro du dessin

A2-105

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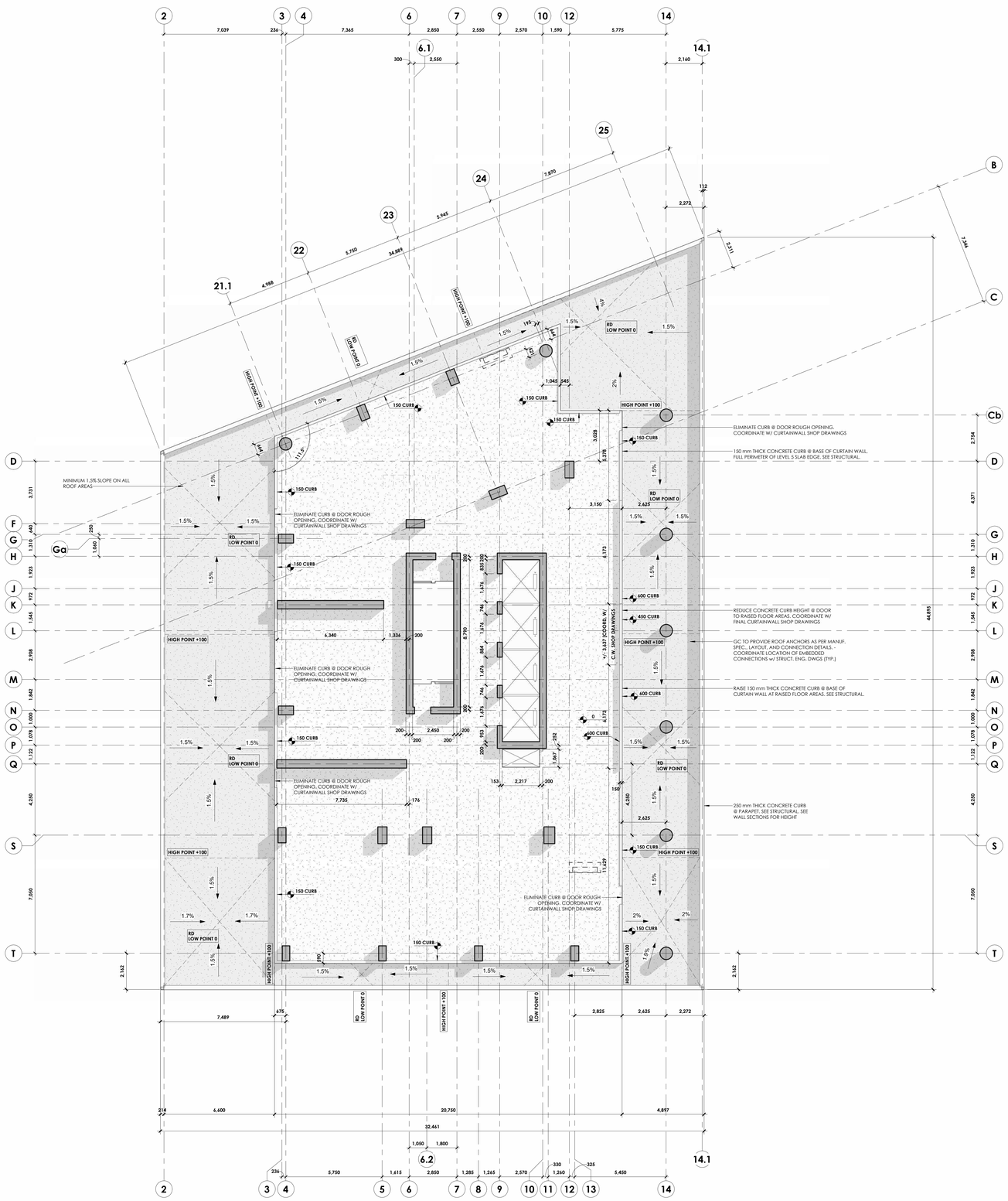

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_JB_Tower A.rvt
2025-06-12 4:30:53 PM

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:30:53 PM

no	revisions	date
~~21~~	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-19~~
~~20~~	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12

stamp | timbre

architect | architecte

linebox STUDIO

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GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

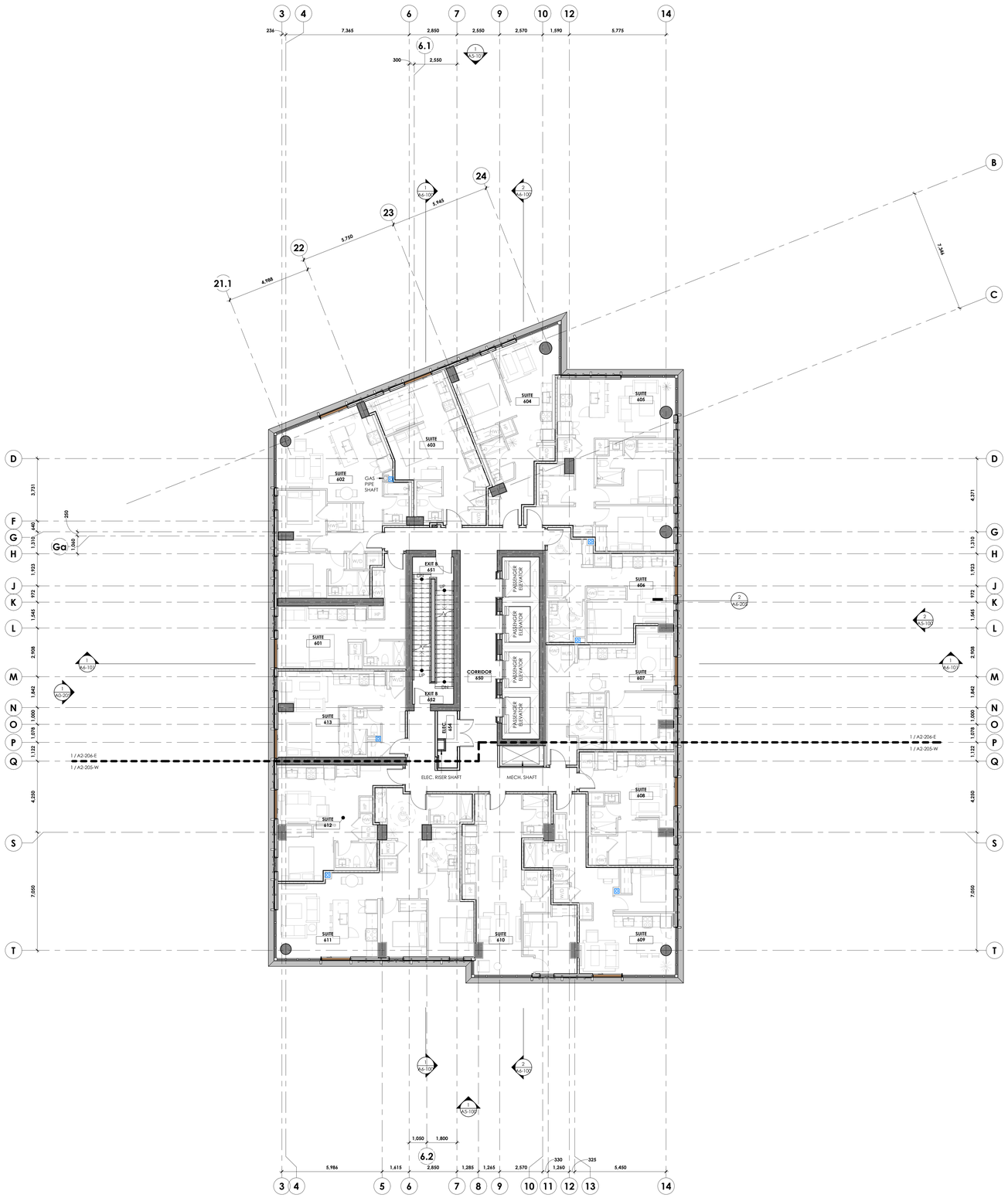
drawing title | titre du dessin

SLAB EDGE PLAN - LEVEL 05

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | vertifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**08/01/24**

drawing number | numéro du dessin

A2-105a



GENERAL NOTES:

1. REFER TO **A010** FOR TYPICAL ASSEMBLY TYPES
2. REFER TO **A020** FOR TYPICAL DOOR TYPES
3. RESIDENTIAL SUITES AND ELEVATOR LOBBIES ON LEVELS 27-30 TO RECEIVE HIGH-END FINISHES

LEGEND:

- CAST IN PLAN CONCRETE, EXPOSED WHERE SHOWN IN PLAN
- CMU PARTITIONS
- GYPSUM PARTITION, FIRE RATED
- GYPSUM PARTITION, NON-RATED

STRUCTURAL NOTES (HIGH-LEVEL ESTIMATE):

TYPICAL SLAB = 225 THK

SHEAR WALLS = 400 THK

TYPICAL TOWER COLUMN = 500x900 or 750 DIAM

CONCRETE STRENGTHS:
INTERIOR SLABS = 30 MPa (TYPE N)
BACLONY SLABS = 35 MPa (TYPE C-1)
COLUMNS & SHEAR WALLS = 40 MPa (TYPE N) L5-10
COLUMNS & SHEAR WALLS = 35 MPa (TYPE N) L11-16
COLUMNS & SHEAR WALLS = 30 MPa (TYPE N) L17-27

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:30:55 PM

no	revisions	date
~~21~~	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-19~~
~~20~~	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
11	ISSUED FOR ELEVATOR TENDER	24-12-02
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
2	RE-ISSUED FOR CLASS 'D' ESTIMATE	24-05-13
1	ISSUED FOR CLASS 'D' ESTIMATE	24-05-17

stamp | timbre

architect | architecte

linebox STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

FLOOR PLAN - LEVEL 06 - 30 (TYPICAL TOWER)

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | vertifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**02/15/24**

drawing number | numéro du dessin

A2-106

Autodesk Docs://Gladstone & Loretta/2402 145 Loretta CLV LB_Tower A.rvt
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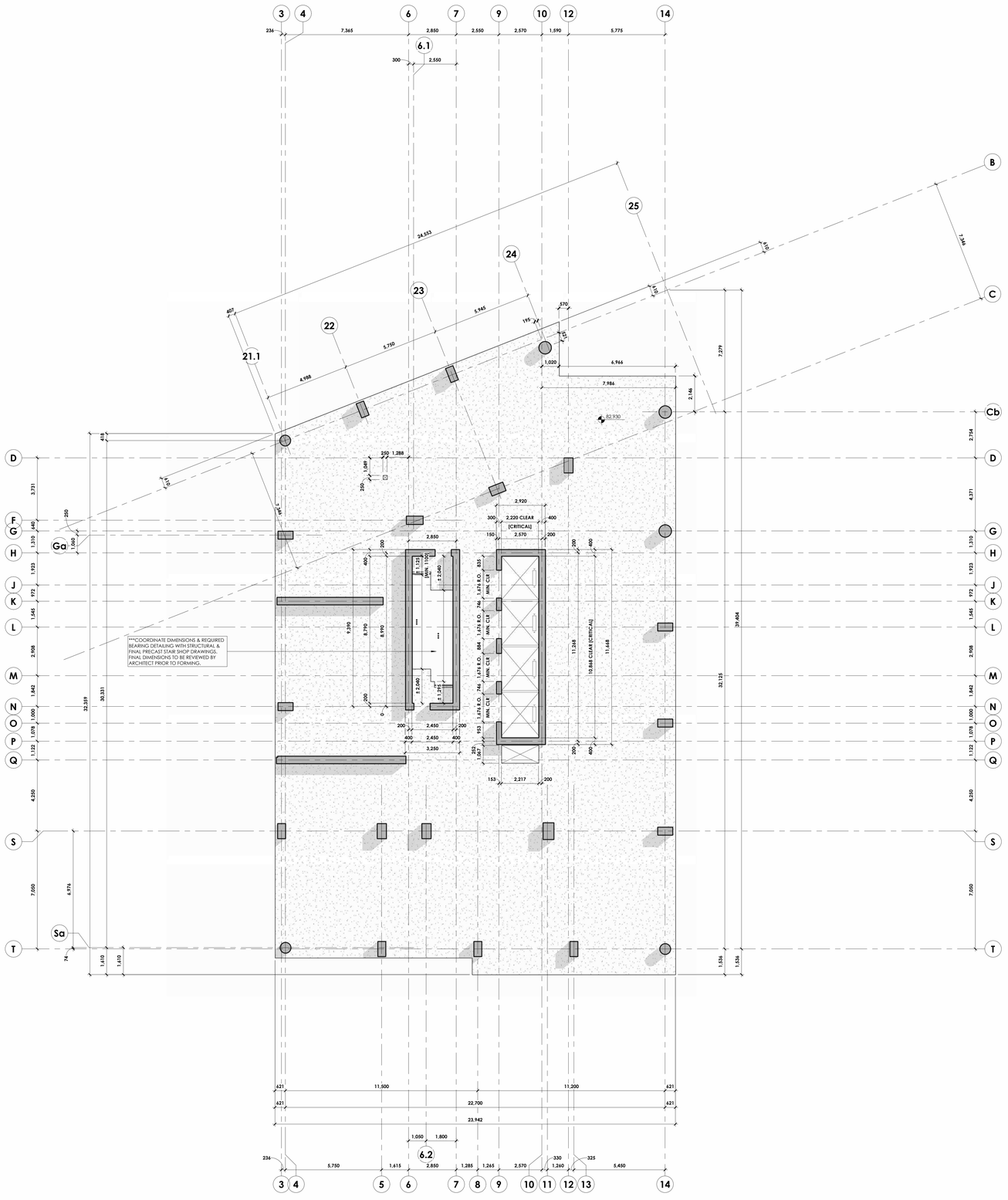

Autodesk Docs://Gladstone & Loretta/2402 - 145 Loretta CLV LB_Tower A.rvt
2025-06-12 4:31:03 PM

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:31:03 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	25-06-19
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	25-05-30
19	~~ISSUED FOR REFERENCE - STRUCTURAL MILE PRICING~~	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12

stamp | timbre

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
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Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

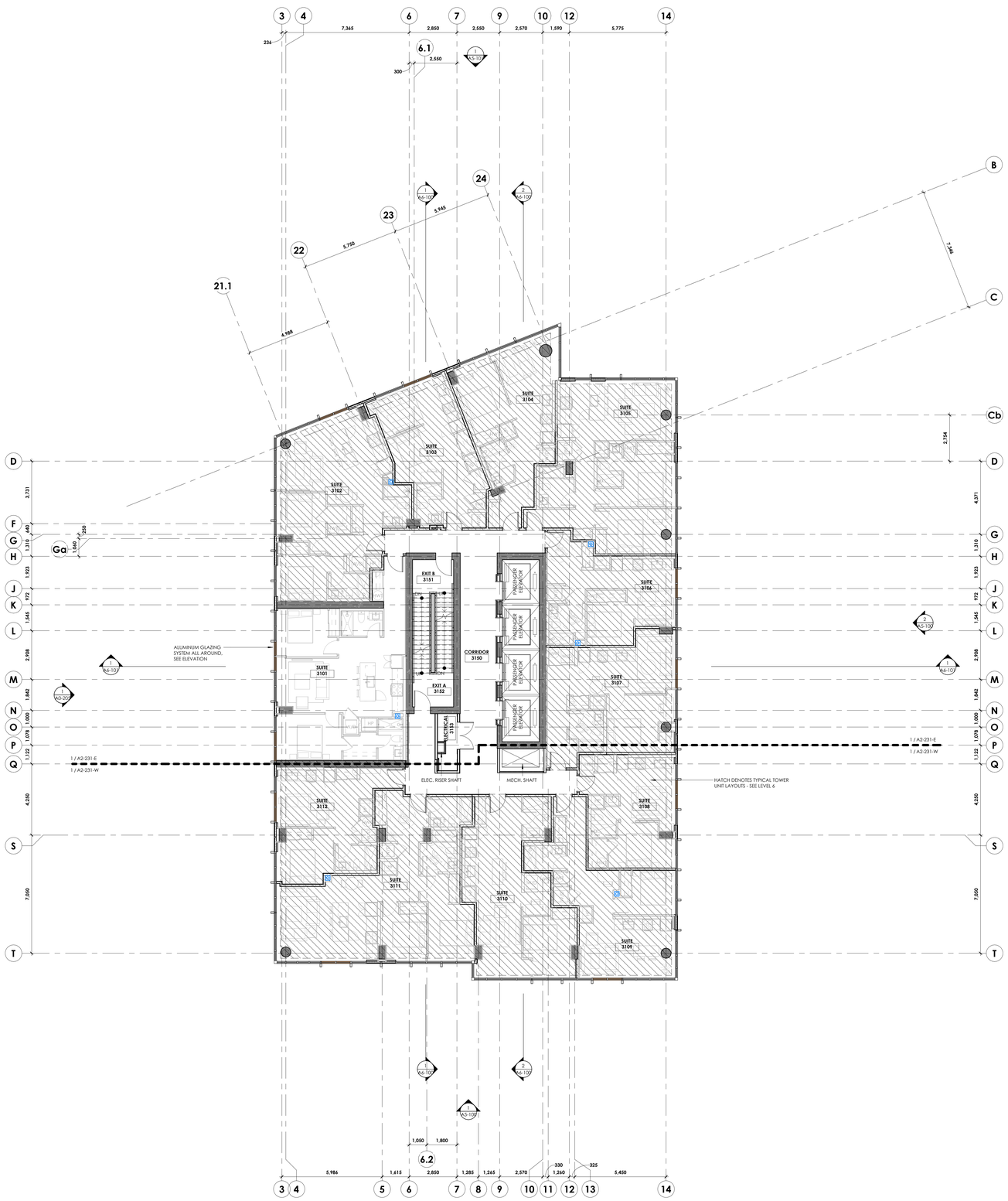
drawing title | titre du dessin

SLAB EDGE PLAN - LEVEL 06 - 30 (TYPICAL TOWER)

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | vertifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**08/01/24**

drawing number | numéro du dessin

A2-106a



GENERAL NOTES:

1. REFER TO **A010** FOR TYPICAL ASSEMBLY TYPES
2. REFER TO **A020** FOR TYPICAL DOOR TYPES
3. RESIDENTIAL SUITES AND ELEVATOR LOBBIES ON LEVELS 27-30 TO RECEIVE HIGH-END FINISHES

LEGEND:

- CAST IN PLAN CONCRETE, EXPOSED WHERE SHOWN IN PLAN
- CMU PARTITIONS
- GYPSUM PARTITION, FIRE RATED
- GYPSUM PARTITION, NON-RATED

STRUCTURAL NOTES (HIGH-LEVEL ESTIMATE):

SLAB = 225 THK

SHEAR WALLS = 400 THK

TYPICAL TOWER COLUMN = 400x800 OR 600 DIAM.

CONCRETE STRENGTHS:
INTERIOR SLABS = 30 MPa (TYPE N)
BACLONY SLABS = 35 MPa (TYPE C-1)
COLUMNS & SHEAR WALLS = 30 MPa (TYPE N)

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:31:05 PM

21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
14	RE-ISSUED FOR SPA	25-01-31
11	ISSUED FOR ELEVATOR TENDER	24-12-09
6	REVISED 33% WORKING DRAWINGS	24-08-19
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
2	RE-ISSUED FOR CLASS 'D' ESTIMATE	24-05-13
1	ISSUED FOR CLASS 'D' ESTIMATE	24-05-17

no revisions | date

stamp | timbre

architect | architecte

linebox STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

FLOOR PLAN - LEVEL 31 - 33 (TYPICAL PENTHOUSE)

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | vérifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**02/15/24**

drawing number | numéro du dessin

A2-131

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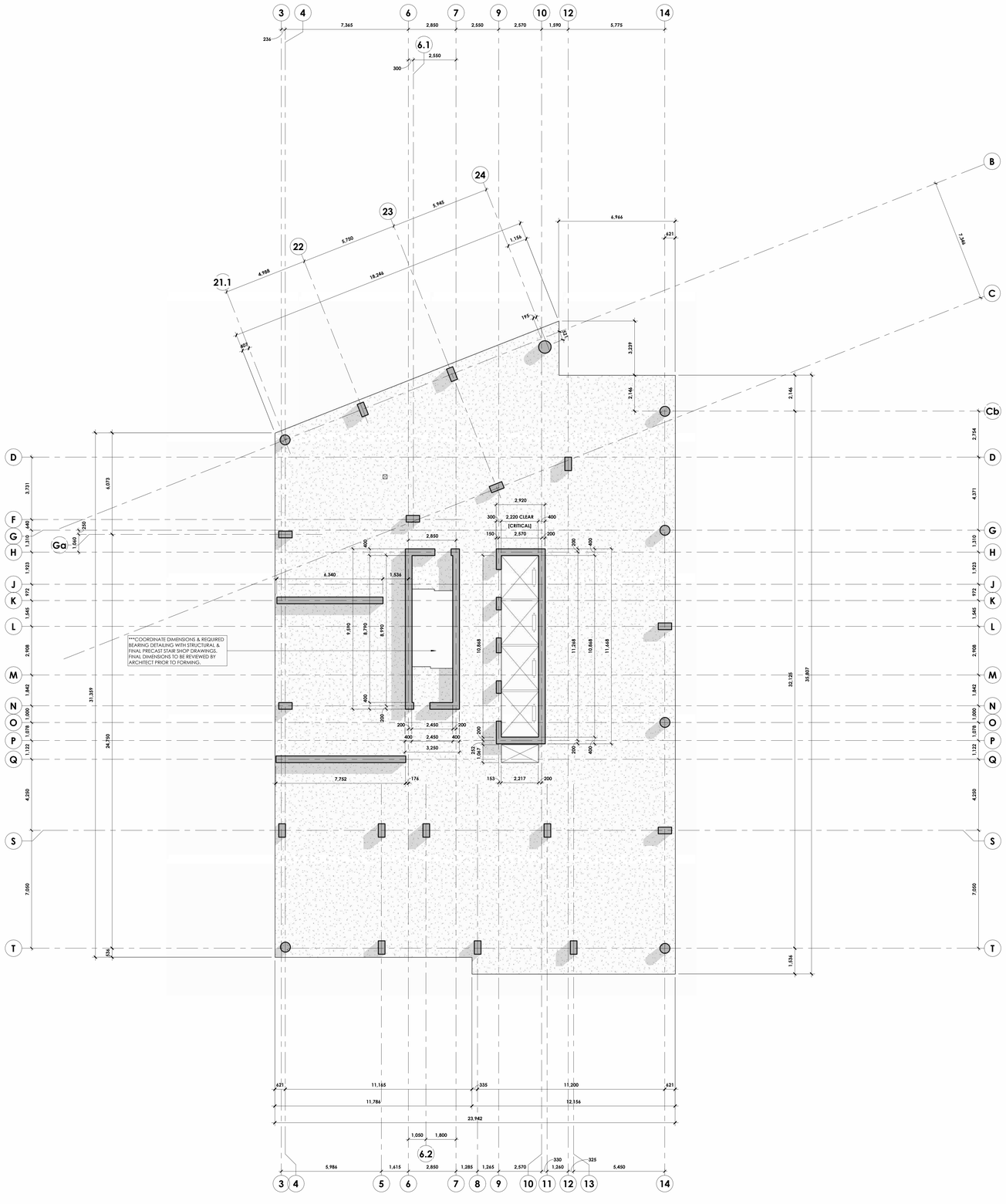

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CLVGROUP
DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:33:12 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12

stamp | timbre

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

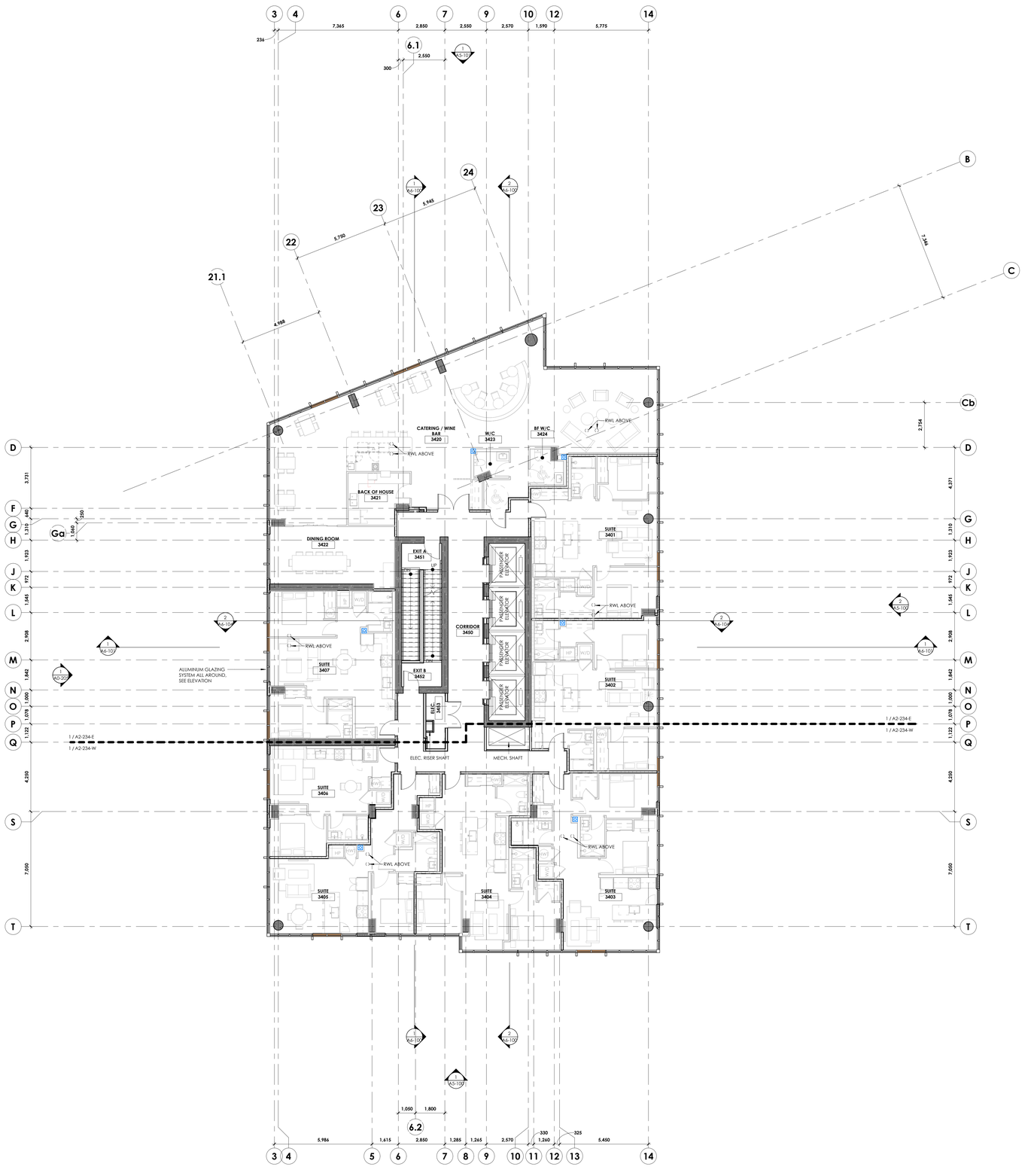
drawing title | titre du dessin

SLAB EDGE PLAN - LEVEL 31-33

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**08/01/24**

drawing number | numéro du dessin

A2-131a



GENERAL NOTES:

1. REFER TO **A010** FOR TYPICAL ASSEMBLY TYPES
2. REFER TO **A020** FOR TYPICAL DOOR TYPES
3. RESIDENTIAL SUITES AND ELEVATOR LOBBIES ON LEVELS 27-30 TO RECEIVE HIGH-END FINISHES

LEGEND:

- CAST IN PLAN CONCRETE, EXPOSED WHERE SHOWN IN PLAN
- CMU PARTITIONS
- GYPSUM PARTITION, FIRE RATED
- GYPSUM PARTITION, NON-RATED

STRUCTURAL NOTES (HIGH-LEVEL ESTIMATE):

SLAB = 225 THK

SHEAR WALLS = 400 THK

TYPICAL TOWER COLUMN = 400x800 OR 600 DIAM.

CONCRETE STRENGTHS:
INTERIOR SLABS = 30 MPa (TYPE N)
BACLONY SLABS = 35 MPa (TYPE C-1)
COLUMNS & SHEAR WALLS = 30 MPa (TYPE N)

client

CLV GROUP DEVELOPMENTS

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:23:15 PM

no	revisions	date
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20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 44/5 WD & CLIENT BUDGETING	25-03-28
14	RE-ISSUED FOR SPA	25-01-31
11	ISSUED FOR ELEVATOR TENDER	24-12-02
6	REVISED 33% WORKING DRAWINGS	24-08-19
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
2	RE-ISSUED FOR CLASS 'D' ESTIMATE	24-05-13
1	ISSUED FOR CLASS 'D' ESTIMATE	24-05-17

stamp | timbre

architect | architecte

linebox STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

FLOOR PLAN - LEVEL 34 (RESIDENTIAL AND AMENITY SKY LEVEL)

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**02/15/24**

drawing number | numéro du dessin

A2-134

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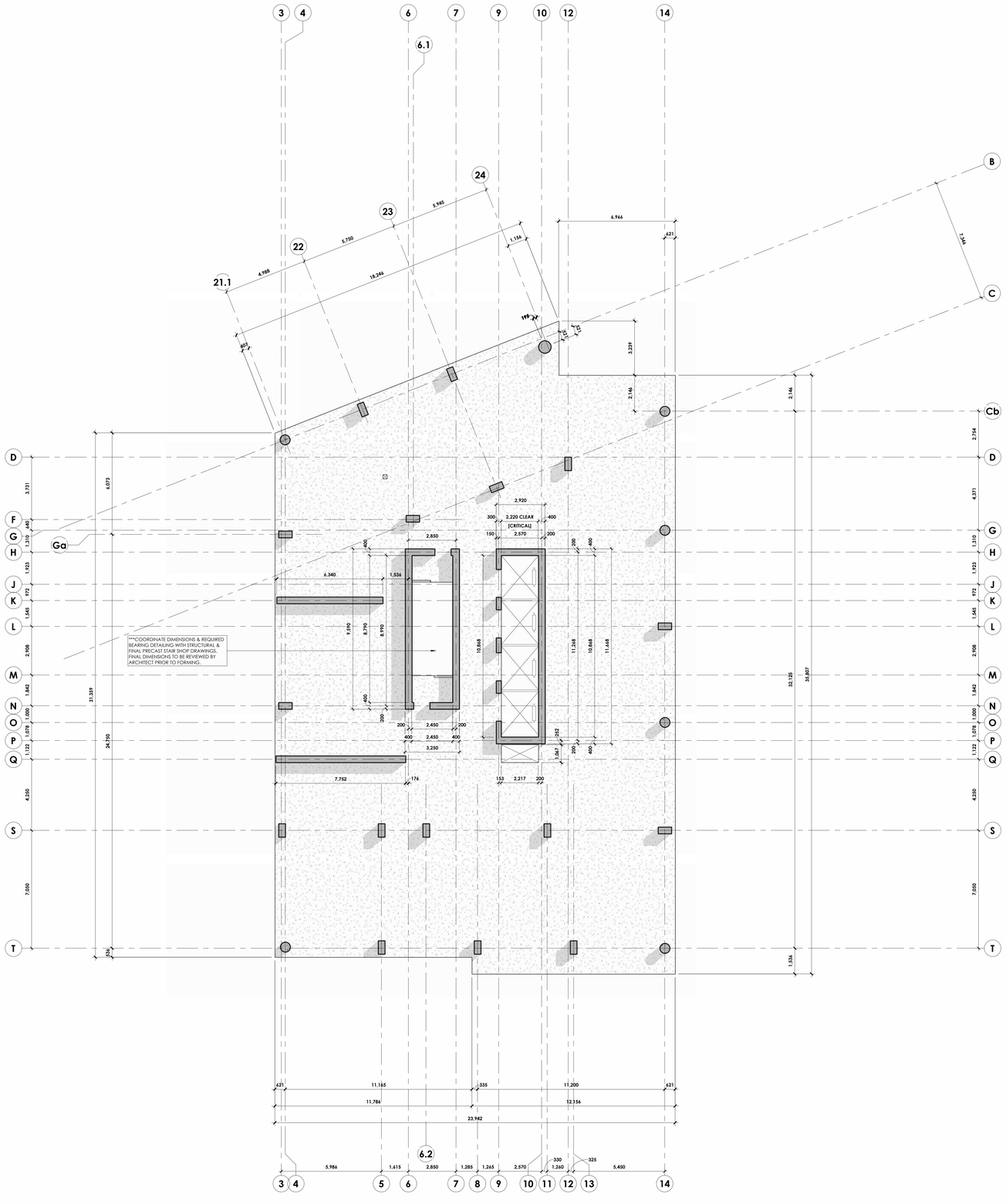

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CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:31:22 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	25-06-12
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	25-05-30
19	~~ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING~~	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12

stamp | timbre

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

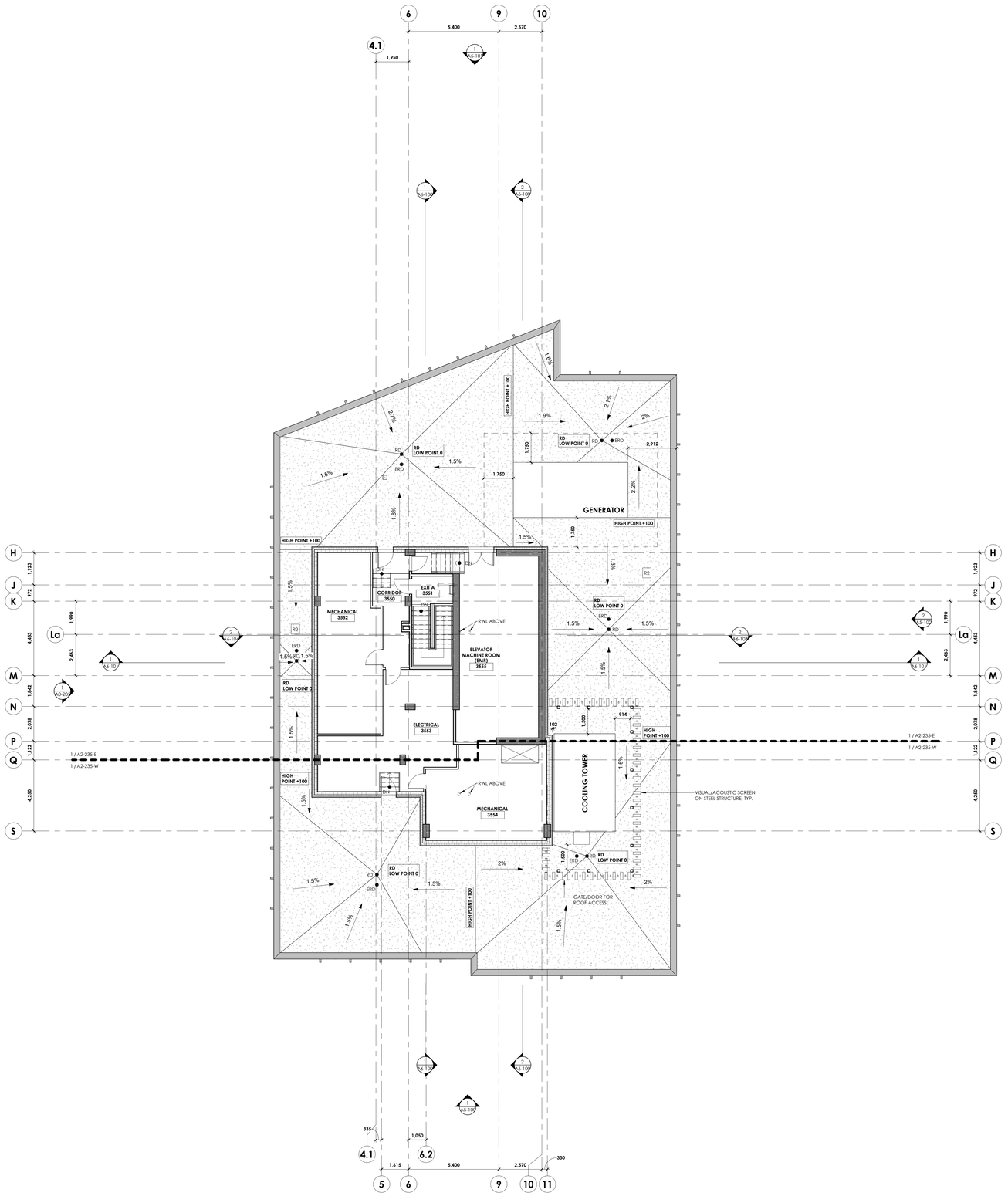
SLAB EDGE PLAN - LEVEL 34

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**08/01/24**

drawing number | numéro du dessin

A2-134a

M&E COORDINATION NOT COMPLETED AT THIS TIME:
PENTHOUSE SIZE AND DIMENSIONS,
EXTERIOR WALL LOCATIONS,
ROOFTOP ACCESS, LOCATION OF EQUIMENT, INTERIOR LAYOUT TO BE CONFIRMED



GENERAL NOTES:

1. REFER TO **A010** FOR TYPICAL ASSEMBLY TYPES
2. REFER TO **A020** FOR TYPICAL DOOR TYPES
3. RESIDENTIAL SUITES AND ELEVATOR LOBBIES ON LEVELS 27-30 TO RECEIVE HIGH-END FINISHES

LEGEND:

- CAST IN PLAN CONCRETE, EXPOSED WHERE SHOWN IN PLAN
- CMU PARTITIONS
- GYPSUM PARTITION, FIRE RATED
- GYPSUM PARTITION, NON-RATED

STRUCTURAL NOTES (HIGH-LEVEL ESTIMATE):

ROOF/TERRACE SLAB = 300 THK + SLOPED TOPPING
INT MECHANICAL/SERVICE AREAS = 300 THK
MECHANICAL FLOATING SLAB (FS) = 300 THK + 100 THK SLAB

SHEAR WALLS = 400 THK

COLUMNS = 400x800

CONCRETE STRENGTHS:
SLABS = 35 MPa (TYPE N)
COLUMNS & SHEAR WALLS = 30 MPa (TYPE N)

client

structural engineers | ingénieurs structurels

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

civil engineers | ingénieur civil

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
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no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-19~~
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
11	ISSUED FOR ELEVATOR TENDER	24-12-02
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
2	RE-ISSUED FOR CLASS 'D' ESTIMATE	24-05-13
1	ISSUED FOR CLASS 'D' ESTIMATE	24-05-17

stamp | timbre

architect | architecte

linebox STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

FLOOR PLAN - LEVEL 35 (MECHANICAL PENTHOUSE)

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**02/15/24**

drawing number | numéro du dessin

A2-135

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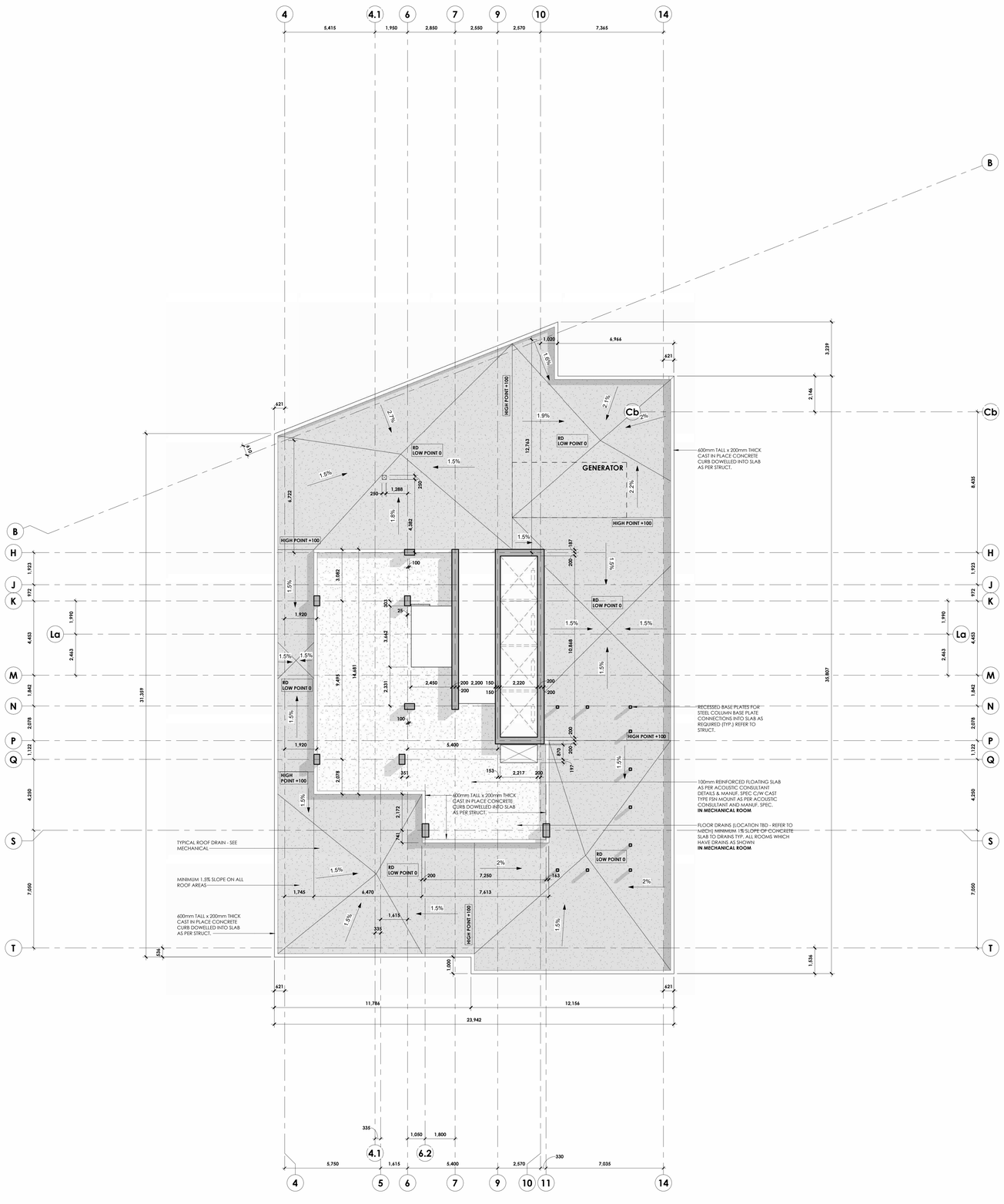

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2025-06-12 4:31:39 PM

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:31:39 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-19~~
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12

stamp | timbre

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

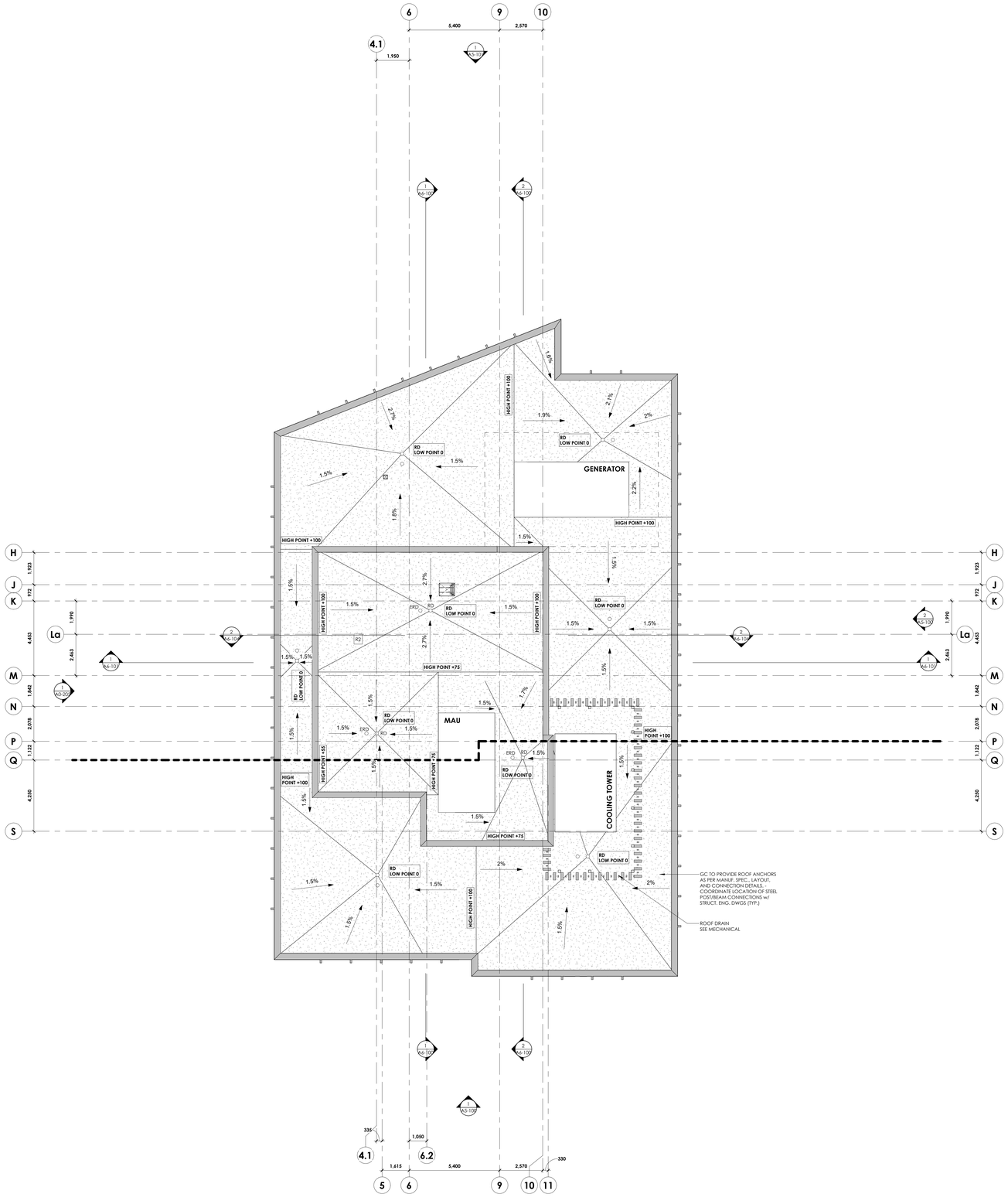
SLAB EDGE PLAN - LEVEL 35

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**08/01/24**

drawing number | numéro du dessin

A2-135a

M&E COORDINATION NOT COMPLETED AT THIS TIME:
PENTHOUSE SIZE AND DIMENSIONS,
EXTERIOR WALL LOCATIONS,
ROOFTOP ACCESS, LOCATION OF EQUIMENT, INTERIOR LAYOUT TO BE CONFIRMED



CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:31:32 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
11	ISSUED FOR ELEVATOR TENDER	24-12-02
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
2	RE-ISSUED FOR CLASS 'D' ESTIMATE	24-05-13
1	ISSUED FOR CLASS 'D' ESTIMATE	24-05-17

stamp | timbre

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
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Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ROOF PLAN

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**02/15/24**

drawing number | numéro du dessin

A2-136

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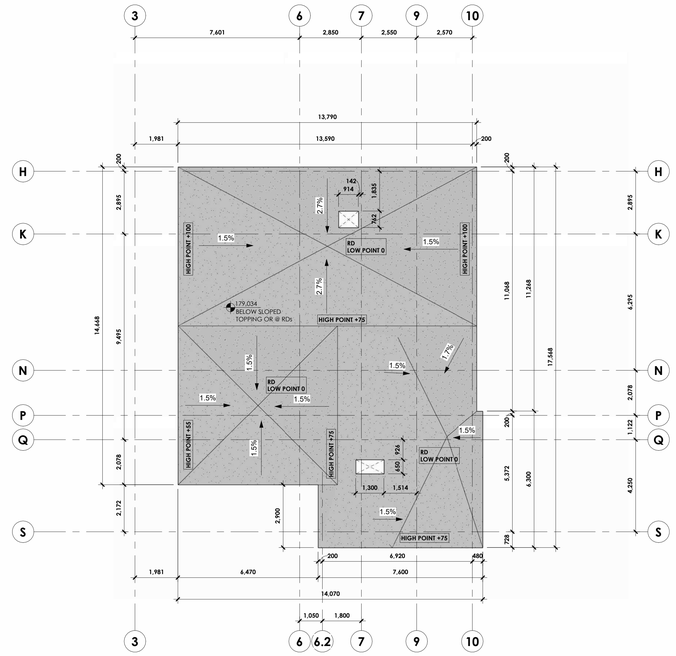
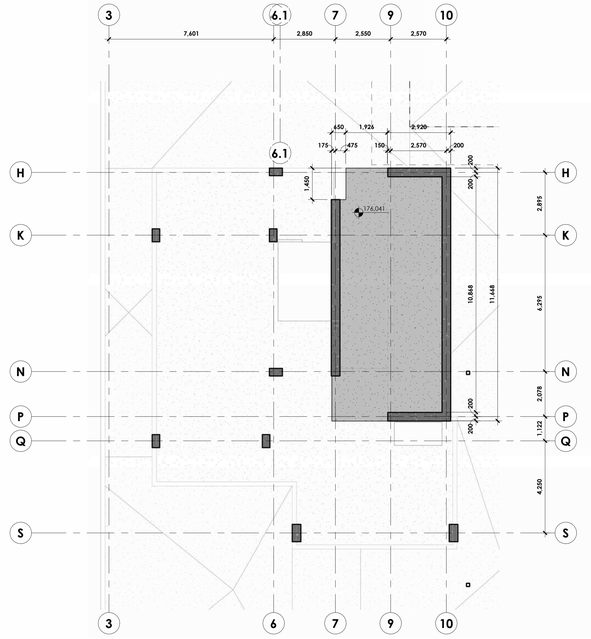


2 SLAB EDGE PLAN - LEVEL 36 (PENTHOUSE ROOF)
X2-136a 1 : 100
A0-204



1 SLAB EDGE PLAN - ELEVATOR MACHINE ROOM
X2-136a 1 : 100
A0-204

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
2025-06-12 4:31:49 PM

client

CLV GROUP DEVELOPMENTS

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:31:49 PM

no	revisions	date
21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16

stamp | timbre

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

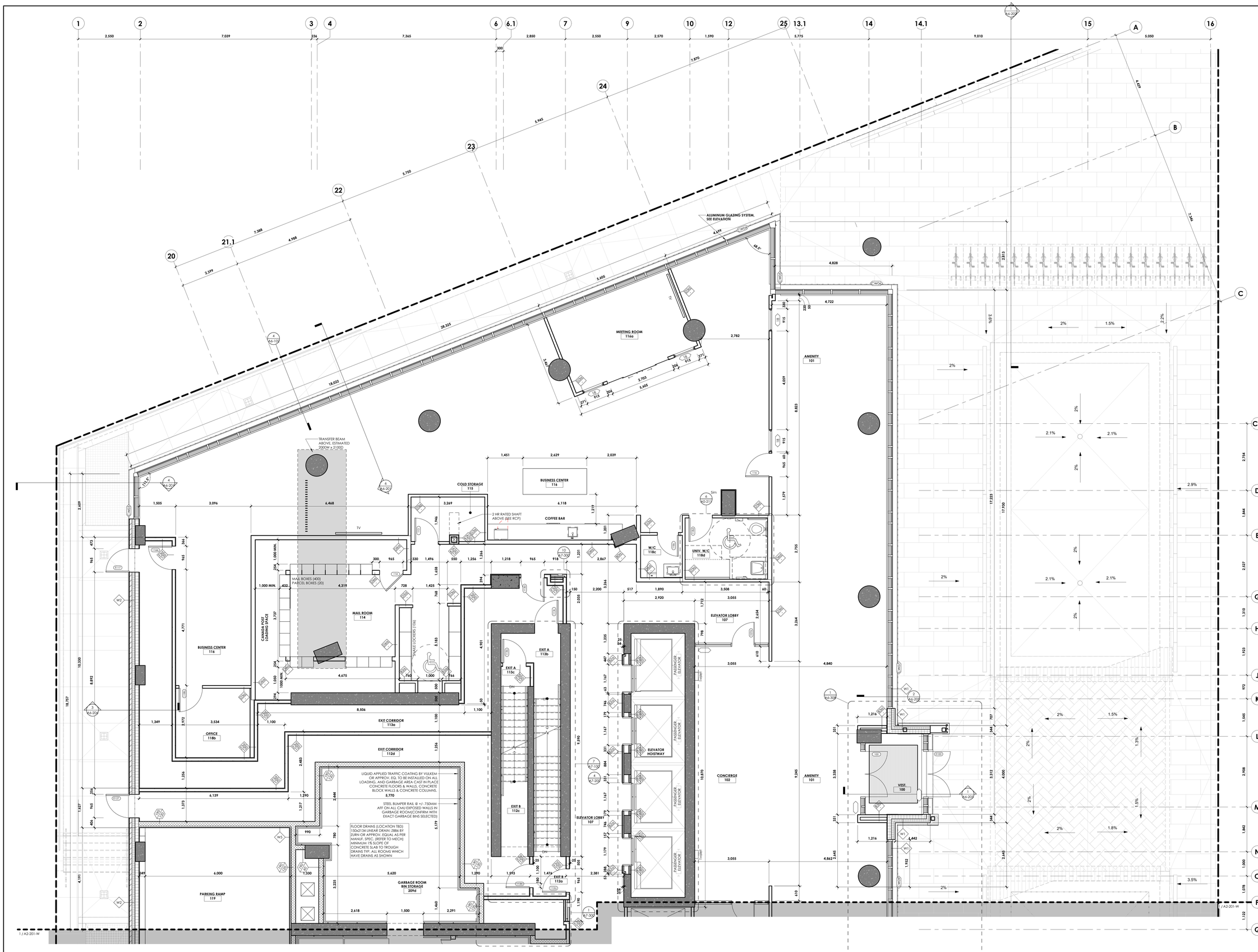
drawing title | titre du dessin

SLAB EDGE PLANS - ELEVATOR MACHINE ROOM & PENTHOUSE ROOF

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**05/02/25**

drawing number | numéro du dessin

A2-136a



1 / A2-201-E — ENLARGED FLOOR PLAN - LEVEL 01 (EAST)
1 : 50
A0-204

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB Tower A.rvt
2025-06-12 4:32:07 PM

client

CLVGROUP DEVELOPMENTS

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:32:07 PM

21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
no	revisions	date

stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

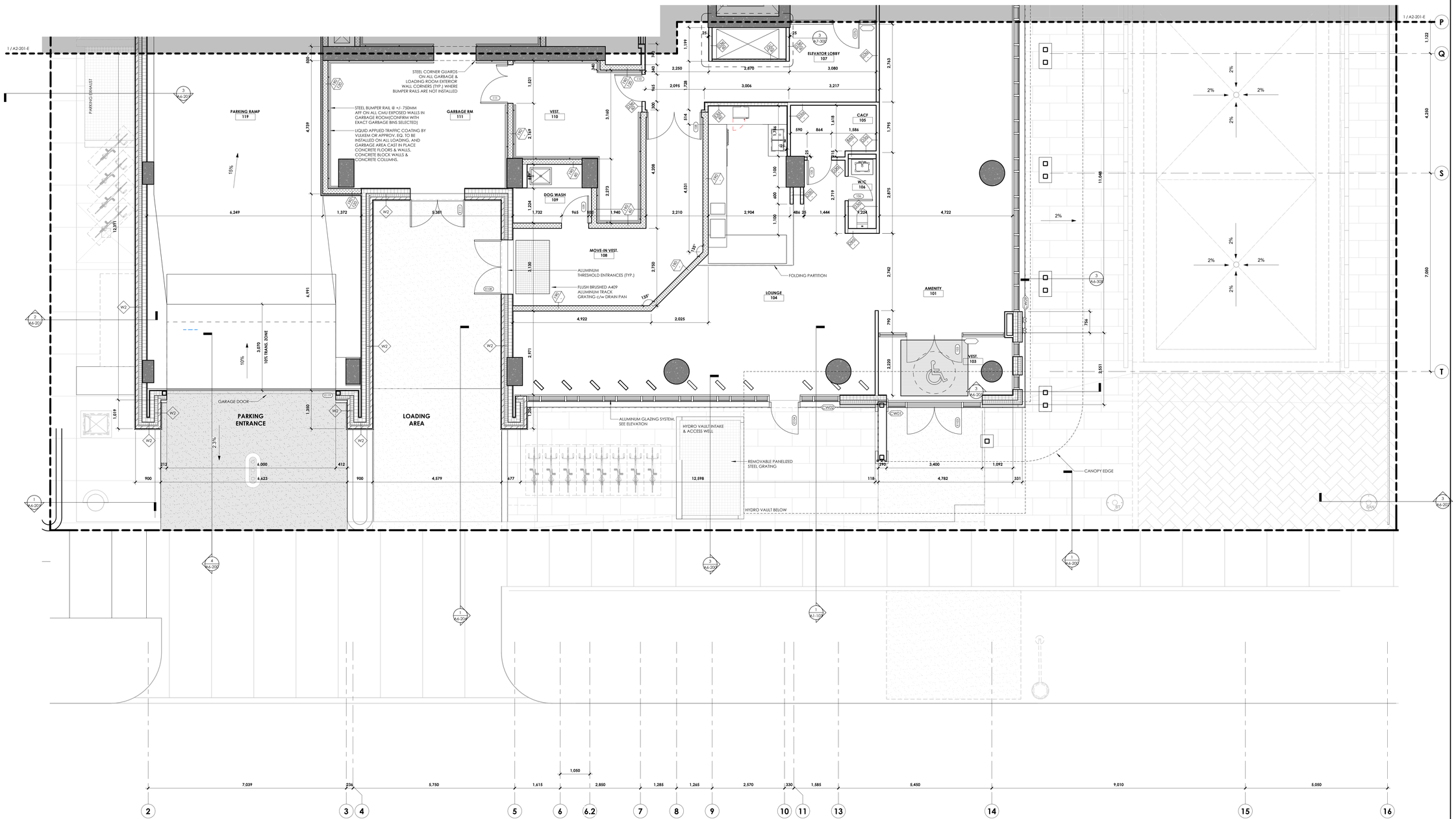
drawing title | titre du dessin

ENLARGED FLOOR PLAN - LEVEL 01

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 50**
date | date	**08/07/24**

drawing number | numéro du dessin

A2-201-E



1 ENLARGED FLOOR PLAN - LEVEL 01 (WEST)
A2-201-W 1 : 50
A0-204

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
2025-06-12 4:32:46 PM

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:32:46 PM

no	revisions	date
21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

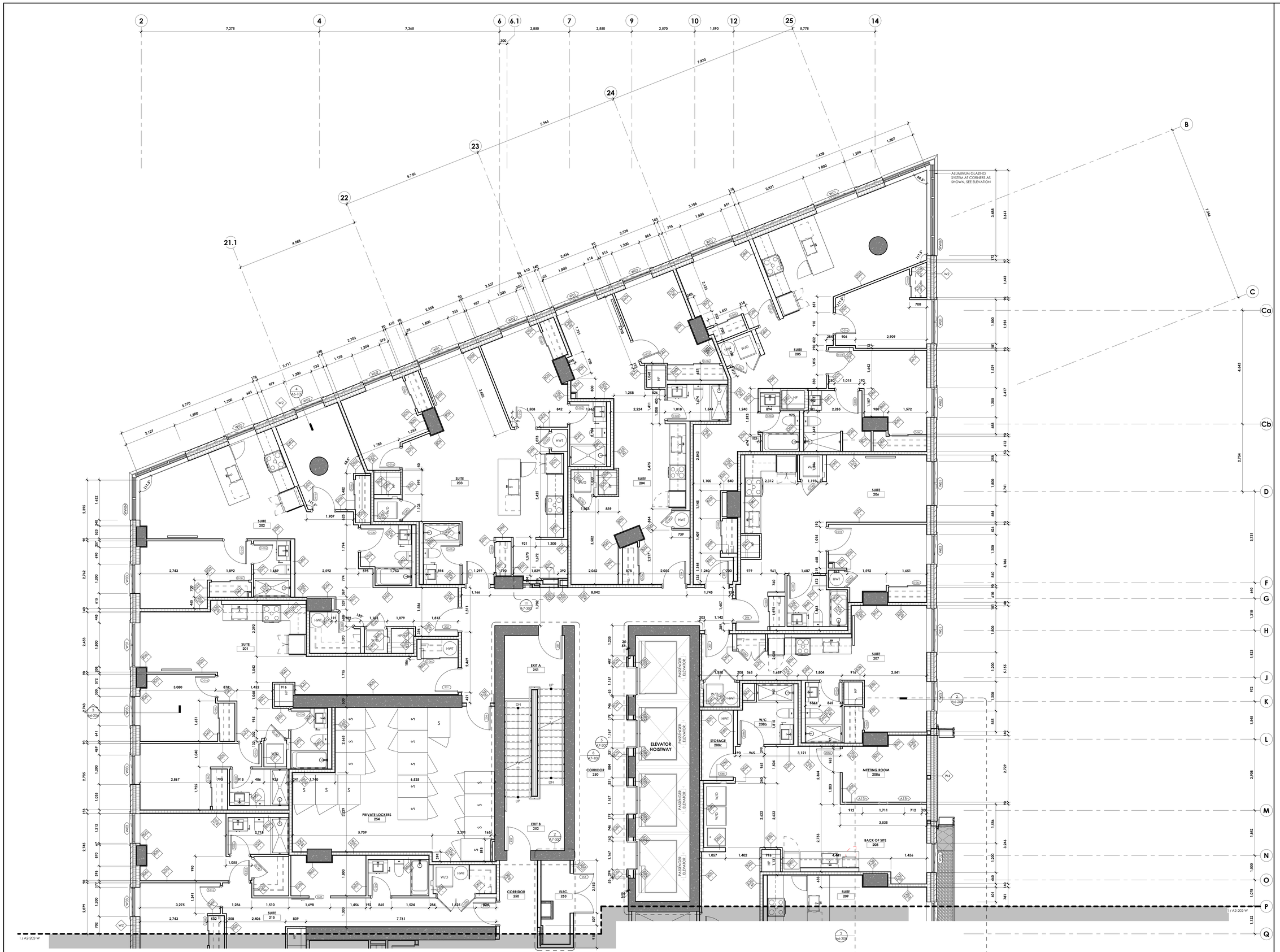
drawing title | titre du dessin

ENLARGED FLOOR PLAN - LEVEL 01

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 50**
date | date	**08/07/24**

drawing number | numéro du dessin

A2-201-W



1 A2-202-E ENLARGED FLOOR PLAN - LEVEL 02 (PODIUM) (EAST)
1 : 50
A0-204

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB Tower A.rvt
2025-06-12 4:32:59 PM

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet project north | nord reel true north

NOT FOR CONSTRUCTION
2025-06-12 4:32:59 PM

21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
no	revisions	date

stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

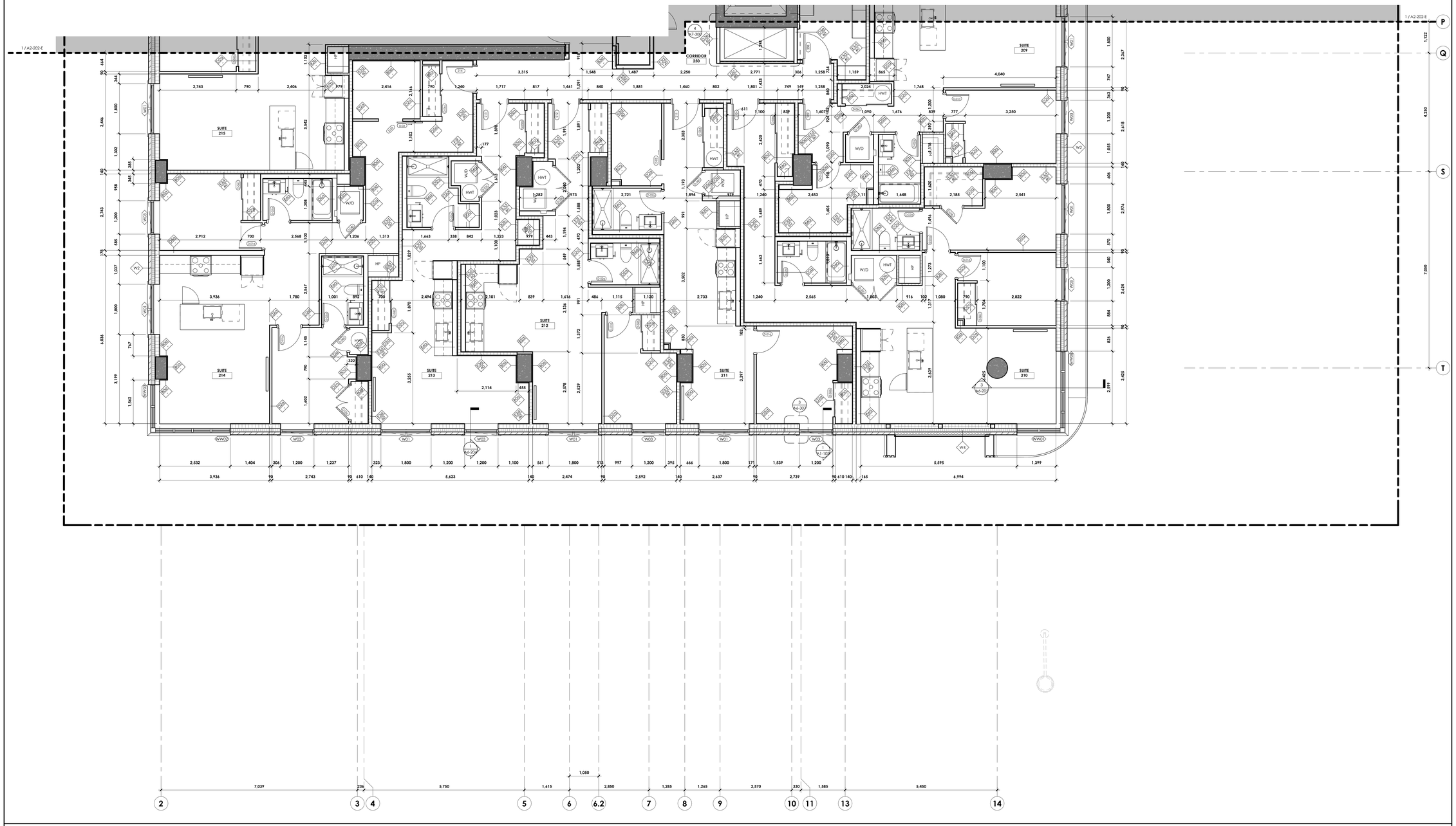
drawing title | titre du dessin

ENLARGED FLOOR PLAN - LEVEL 02

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 50**
date | date	**08/07/24**

drawing number | numéro du dessin

A2-202-E



1 A2-202-W ENLARGED FLOOR PLAN - LEVEL 02 (PODIUM) (WEST)
1 : 50
A0-204

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV JB_Tower A.rvt
2025-06-12 4:32:52 PM

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:32:52 PM

21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL MAE PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
no	revisions	date

stamp | timbre

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

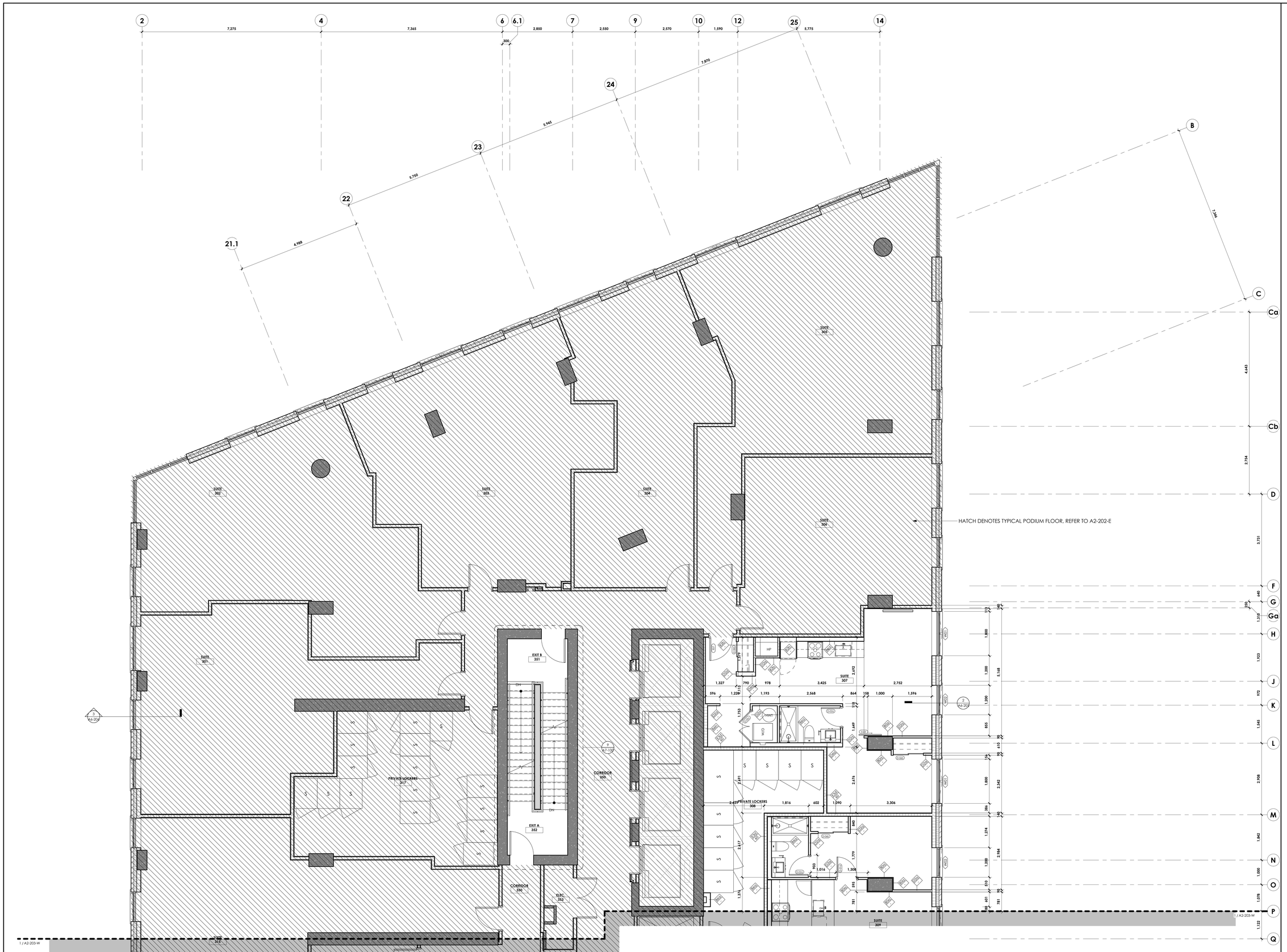
drawing title | titre du dessin

ENLARGED FLOOR PLAN - LEVEL 02

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 50**
date | date	**08/07/24**

drawing number | numéro du dessin

A2-202-W



1 / A2-203 ENLARGED FLOOR PLAN - LEVEL 03 (PODIUM) (EAST)
1 : 50
A0-204

Autodesk Docs://Gladstone & Loretta/2402-145 Loretta CLV_LB_Tower A.rvt
2025-06-12 4:32:54 PM

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:32:54 PM

no	revisions	date
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20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ENLARGED FLOOR PLAN - LEVEL 03

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 50**
date | date	**08/06/24**

drawing number | numéro du dessin

A2-203-E



1 A2-203-W ENLARGED FLOOR PLAN - LEVEL 03 (PODIUM) (WEST)
1 : 50
A0-204

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
2025-06-12 4:32:55 PM

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:32:55 PM

no	revisions	date
21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ENLARGED FLOOR PLAN - LEVEL 03

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
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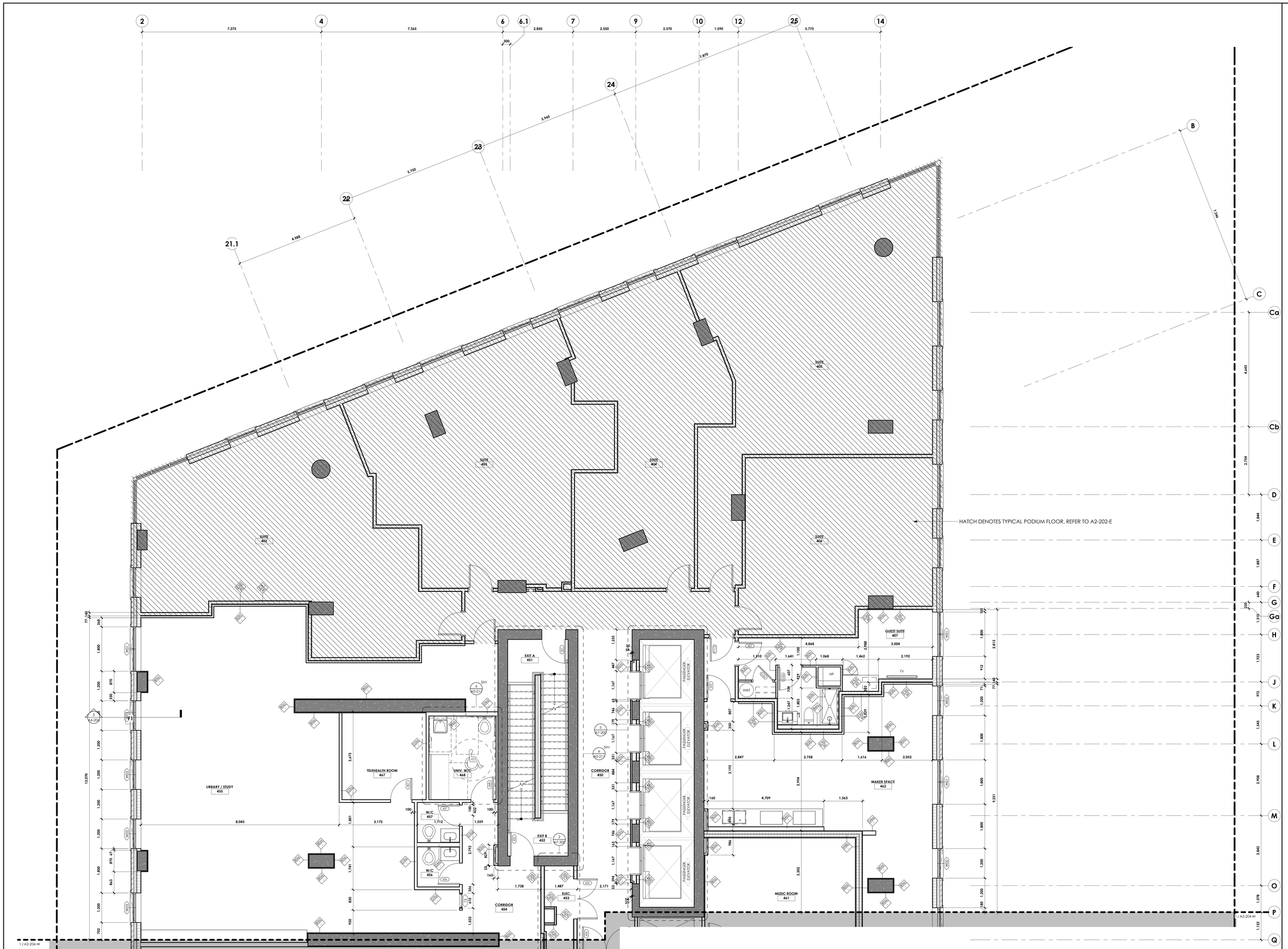
date | date	**08/06/24**

drawing number | numéro du dessin

A2-203-W



1 ENLARGED FLOOR PLAN - LEVEL 04 (PODIUM) (EAST)
A2-204-E 1 : 50
A0-204

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
2025-06-12 4:32:57 PM

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:32:57 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ENLARGED FLOOR PLAN - LEVEL 04

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 50**
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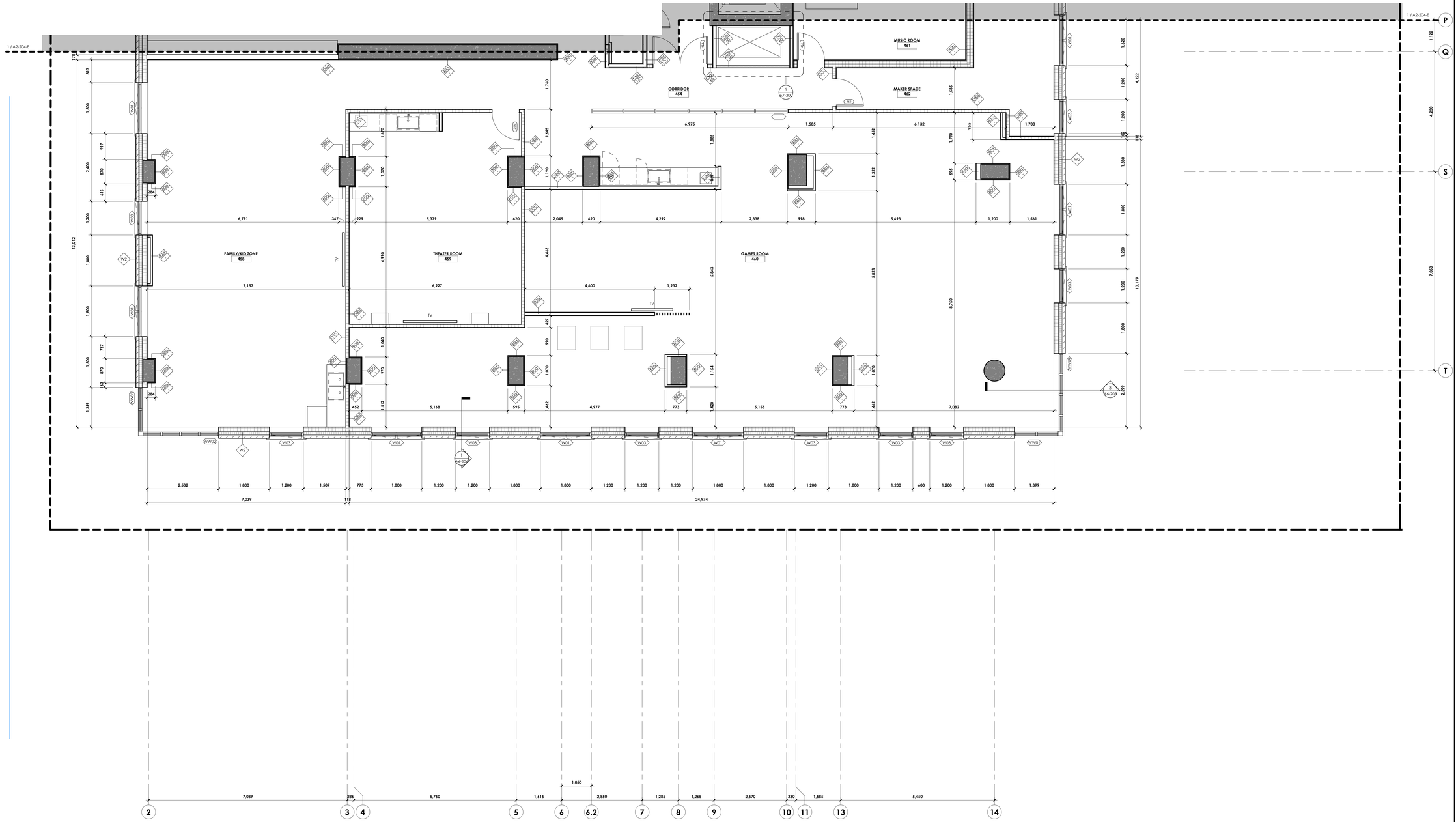
drawing number | numéro du dessin

A2-204-E



1 A2-204-W ENLARGED FLOOR PLAN - LEVEL 04 (PODIUM) (WEST)
1 : 50
A0-204

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB Tower A.rvt
2025-06-12 4:32:59 PM

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
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mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:32:59 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ENLARGED FLOOR PLAN - LEVEL 04

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
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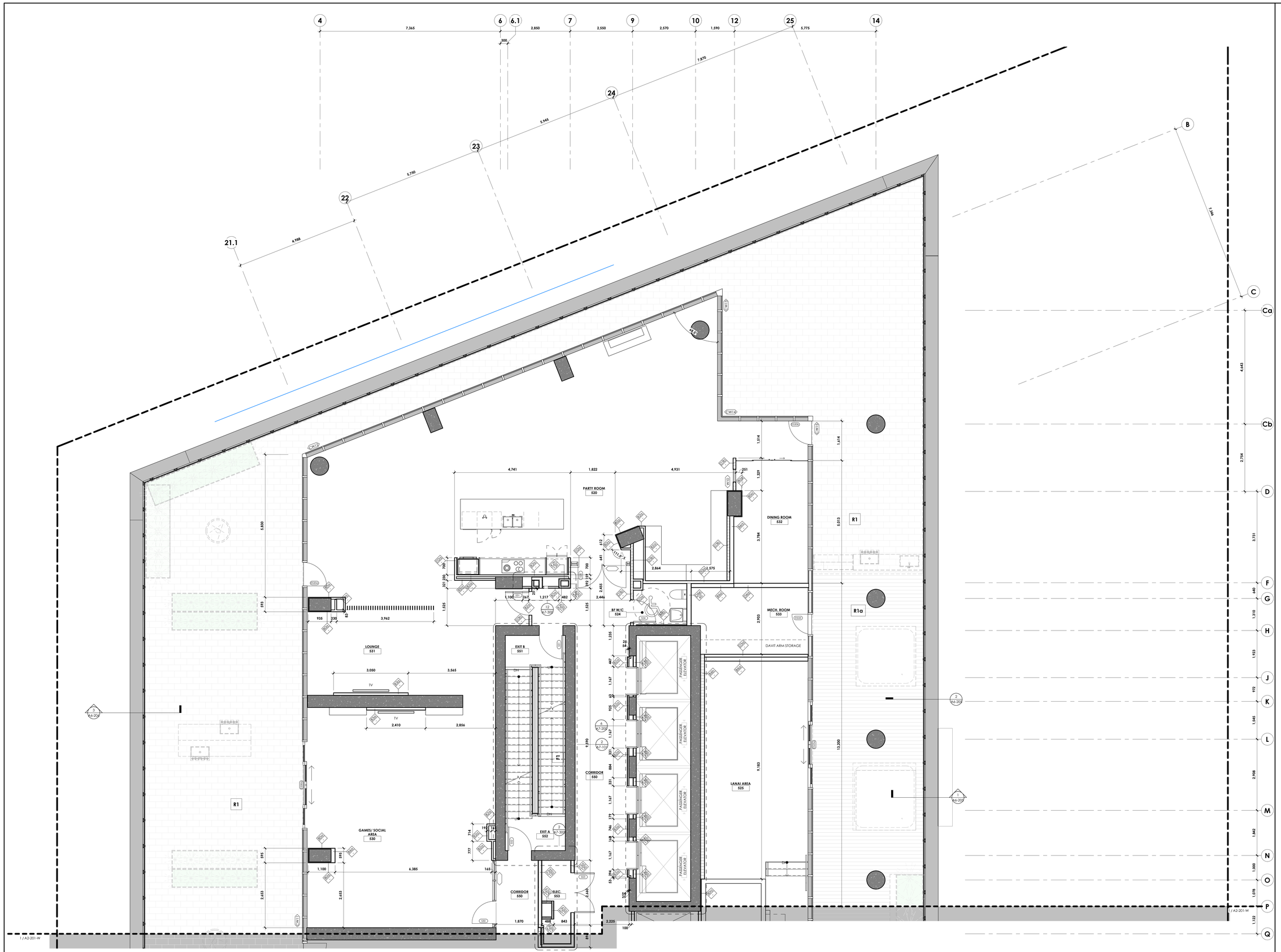
drawing number | numéro du dessin

A2-204-W



1 ENLARGED FLOOR PLAN - LEVEL 05 (PODIUM TERRACE) (EAST)
A2-205-E 1 : 50
A0-204

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
2025-06-12 4:33:02 PM

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:33:02 PM

no	revisions	date
21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ENLARGED FLOOR PLAN - LEVEL 05

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
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drawing number | numéro du dessin

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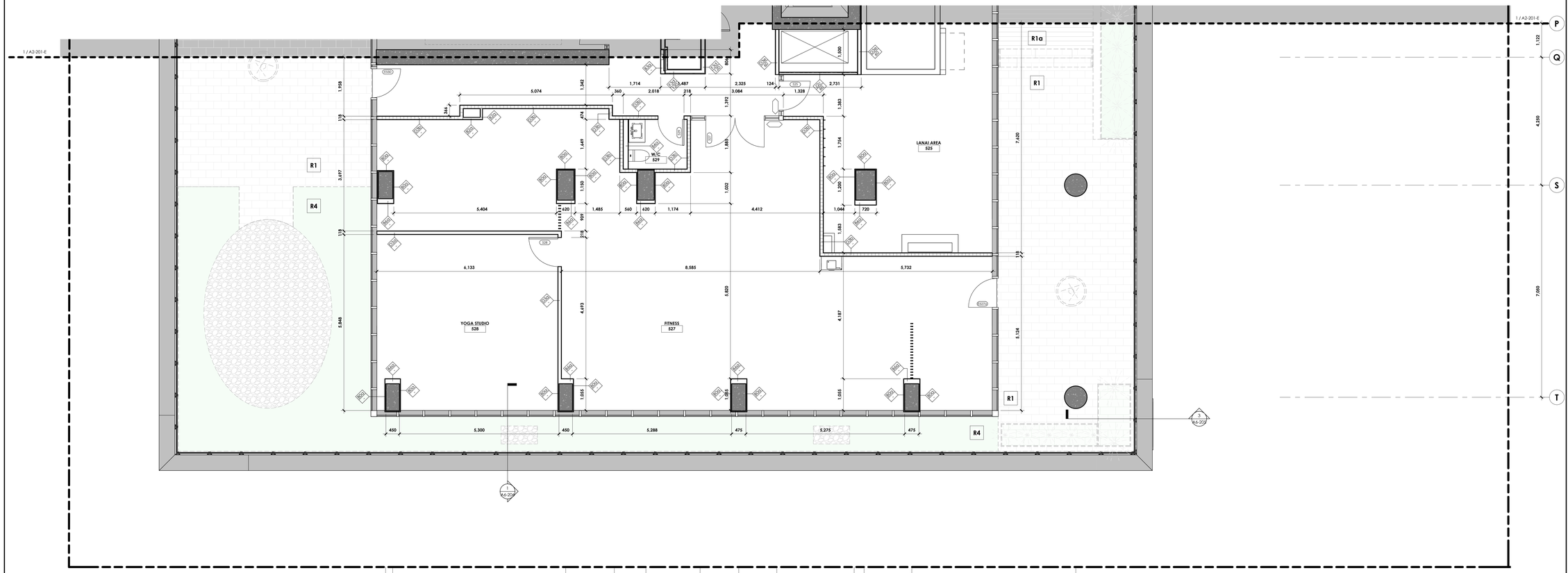

1 / A2-205-W ENLARGED FLOOR PLAN - LEVEL 05 (PODIUM TERRACE) (WEST)
1 : 50
A0-204

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
2025-06-12 4:33:03 PM

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:33:03 PM

21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
no	revisions	date

stamp | timbre

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ENLARGED FLOOR PLAN - LEVEL 05

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
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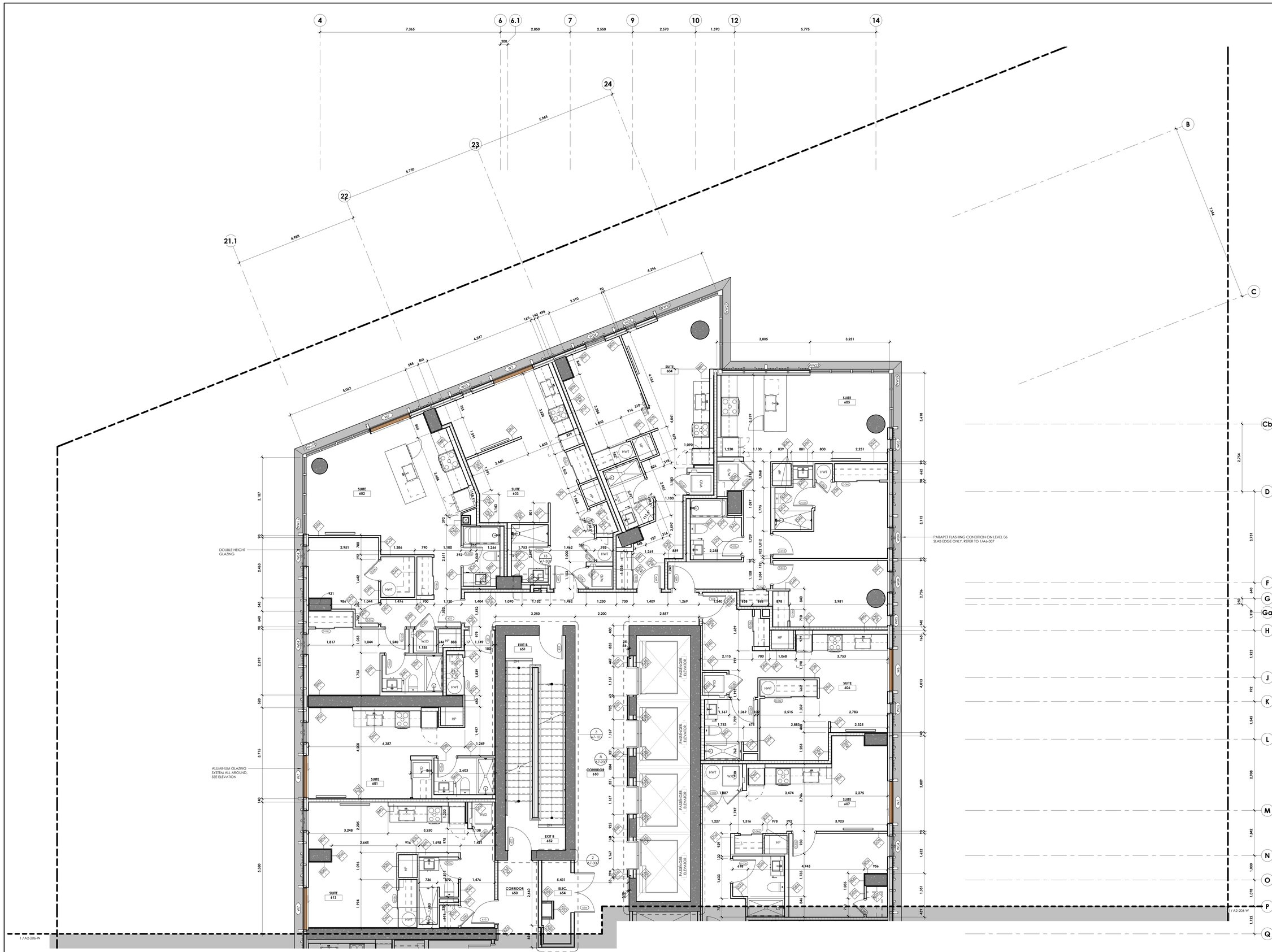
date | date	**08/06/24**

drawing number | numéro du dessin

A2-205-W



1 ENLARGED FLOOR PLAN - LEVEL 06 (AMENITY) (EAST)
A2-206-E 1 : 50
A0-204

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
2025-06-12 4:33:06 PM

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:33:06 PM

no	revisions	date
21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 60% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

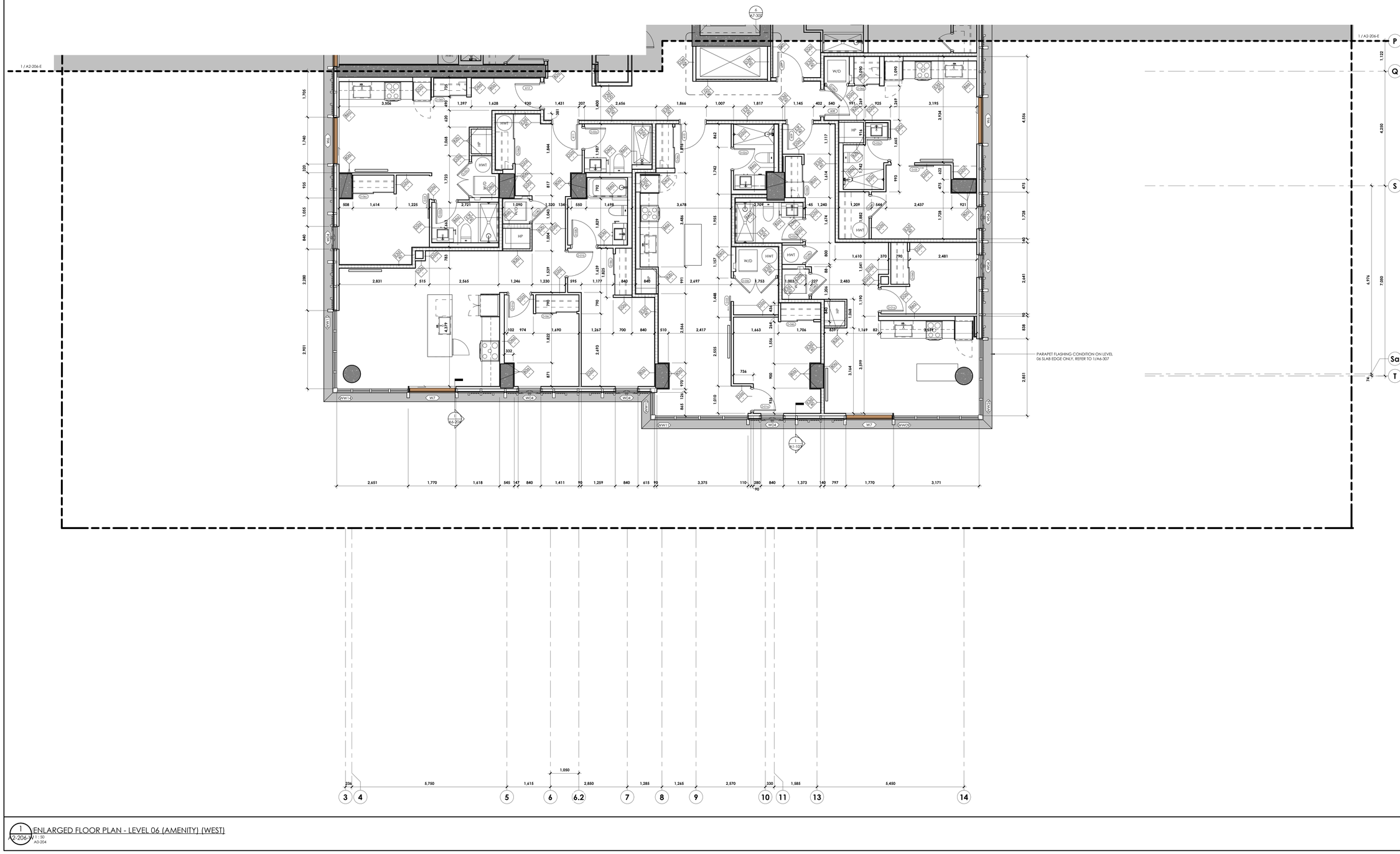
drawing title | titre du dessin

ENLARGED FLOOR PLAN - LEVEL 06 - 30 (TYPICAL TOWER)

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 50**
date | date	**08/07/24**

drawing number | numéro du dessin

A2-206-E



1 ENLARGED FLOOR PLAN - LEVEL 06 (AMENITY) (WEST)
A2-206-W 1 : 50
A0-204

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
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client

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nord du projet
project north

nord reel
true north

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no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
19	~~ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING~~	~~25-05-16~~
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte

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GLADSTONE AND LORETTA RESIDENTIAL TOWER

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drawing title | titre du dessin

ENLARGED FLOOR PLAN - LEVEL 06 - 30 (TYPICAL TOWER)

project number | numero du projet	2402
drawn | dessiné	JH / DL / PC / JP
checked | verifié	JP / AR
scale | échelle	1 : 50
date | date	08/06/24

drawing number | numéro du dessin

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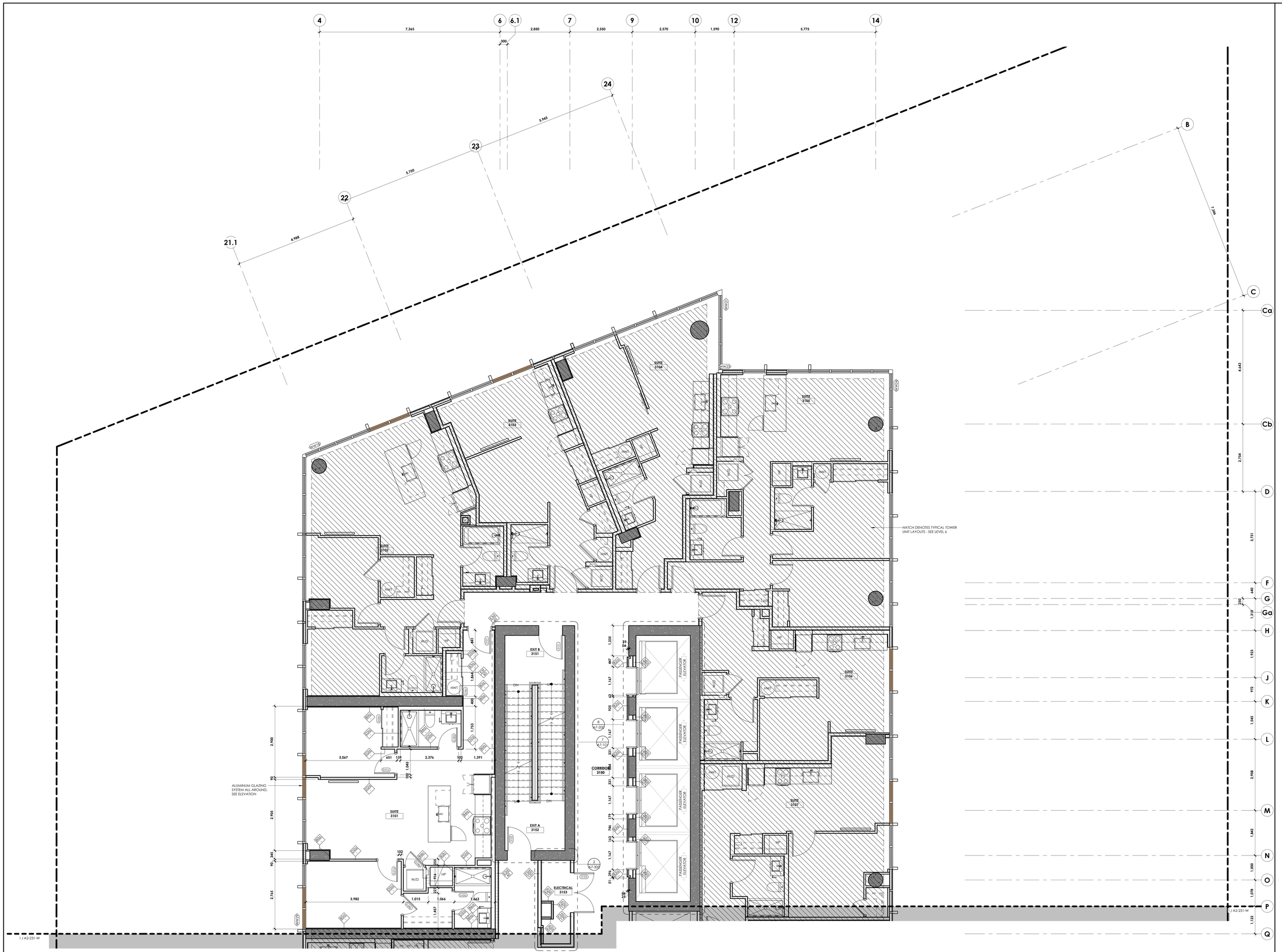

1 / A2-231-E ENLARGED FLOOR PLAN - LEVEL 31 - 33 (TYPICAL PENTHOUSE) (EAST)
SCALE: 1 : 50
A0-204

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19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

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architect | architecte

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drawing title | titre du dessin

ENLARGED FLOOR PLAN - LEVEL 31 - 33 (TYPICAL PENTHOUSE)

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 50**
date | date	**08/07/24**

drawing number | numéro du dessin

A2-231-E



1 ENLARGED FLOOR PLAN - LEVEL 31 - 33 (TYPICAL PENTHOUSE) (WEST)
A2-231-W 1 : 50
A0-204

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project north

nord reel
true north

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no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	25-06-12
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drawing title | titre du dessin

ENLARGED FLOOR PLAN - LEVEL 31 - 33 (TYPICAL PENTHOUSE)

project number | numero du projet	**2402**
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drawing number | numéro du dessin

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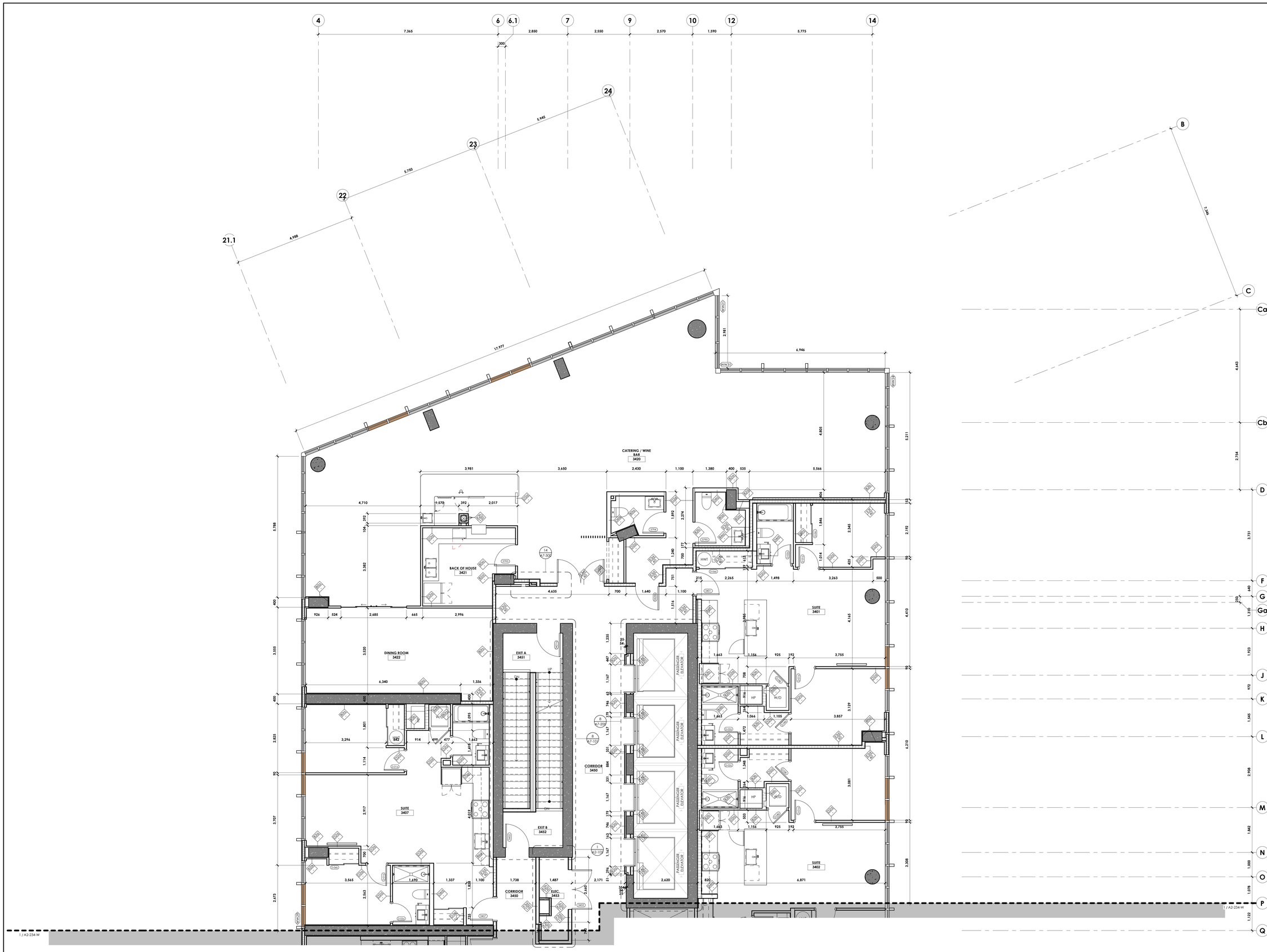

1 / A2-234 ENLARGED FLOOR PLAN - LEVEL 34 (RESIDENTIAL AND AMENITY SKY LEVEL) (EAST)
1 : 50
A0-204

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nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
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no	revisions	date
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20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte

linebox
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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

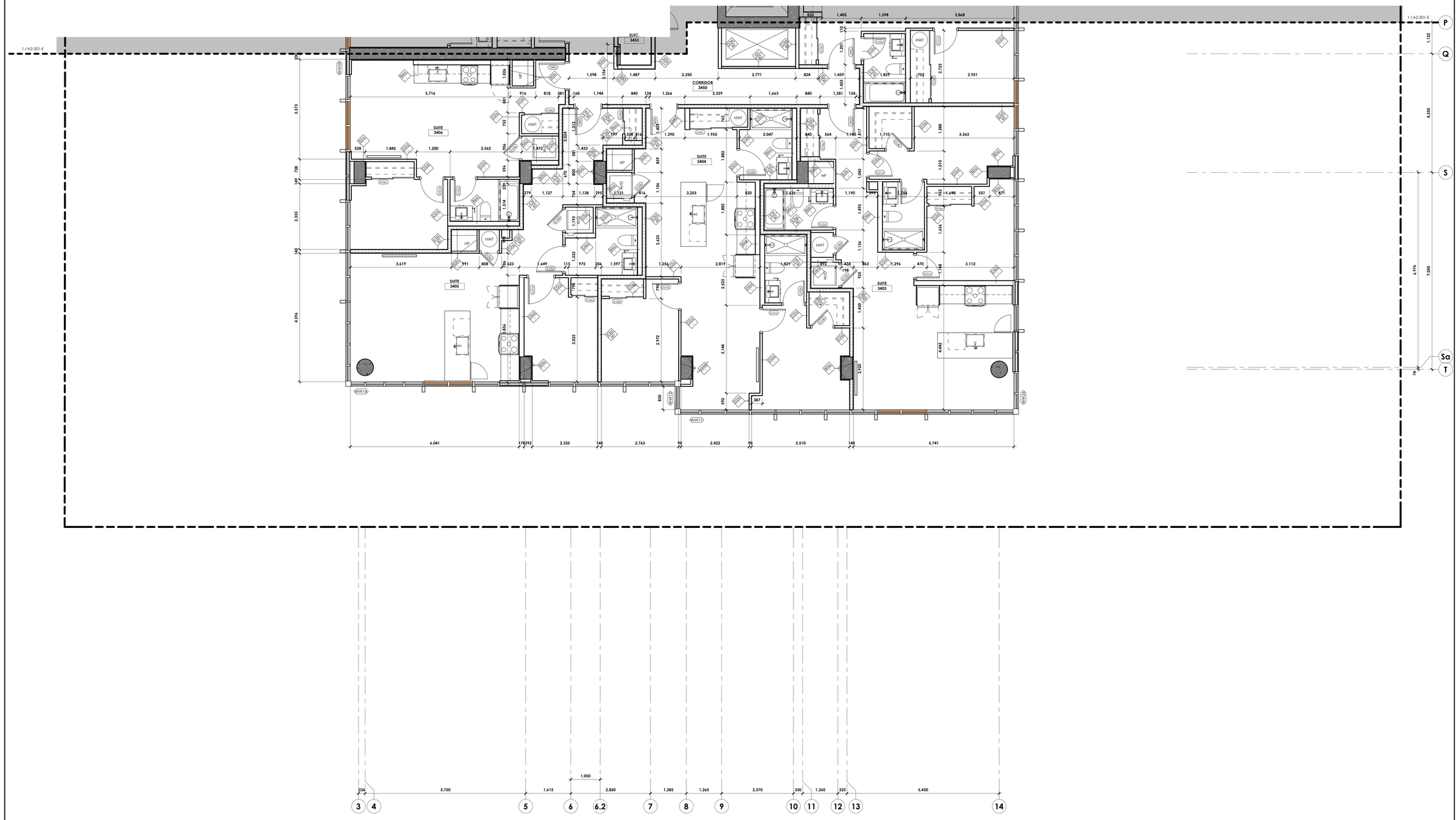
drawing title | titre du dessin

ENLARGED FLOOR PLAN - LEVEL 34 (RESIDENTIAL AND AMENITY SKY LEVEL)

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 50**
date | date	**08/07/24**

drawing number | numéro du dessin

A2-234-E



1 A2-234-W 1 : 50 A0-204

1 ENLARGED FLOOR PLAN - LEVEL 34 (RESIDENTIAL AND AMENITY SKY LEVEL) (WEST)

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mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:33:16 PM

no	revisions	date
21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte

linebox
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GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

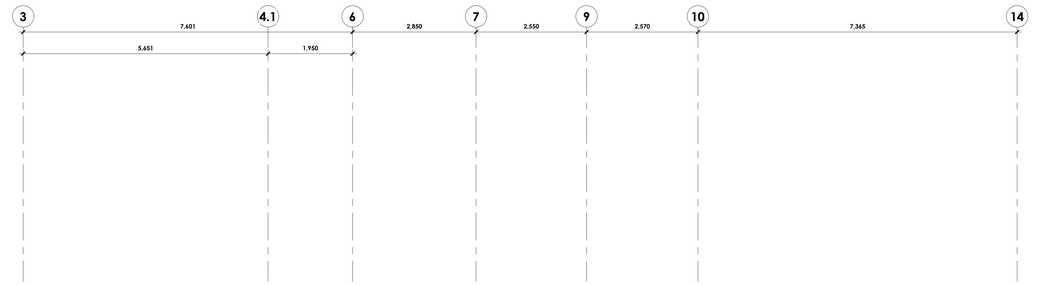
drawing title | titre du dessin

ENLARGED FLOOR PLAN - LEVEL 34 (RESIDENTIAL AND AMENITY SKY LEVEL)

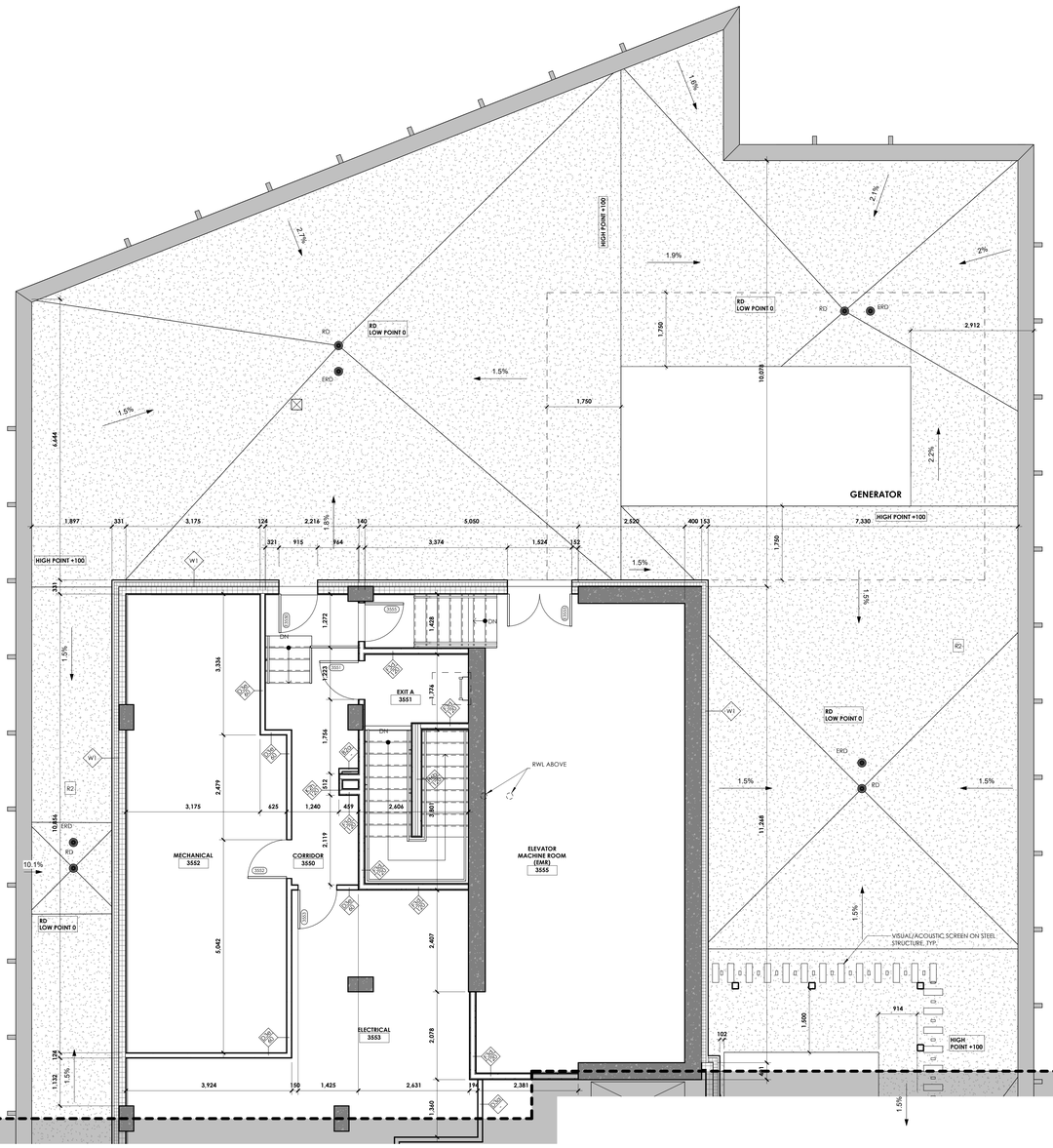
project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 50**
date | date	**08/06/24**

drawing number | numéro du dessin

A2-234-W



M&E COORDINATION NOT COMPLETED AT THIS TIME: PENTHOUSE SIZE AND DIMENSIONS, EXTERIOR WALL LOCATIONS, ROOFTOP ACCESS, LOCATION OF EQUIMENT, INTERIOR LAYOUT TO BE CONFIRMED



1 ENLARGED FLOOR PLAN - LEVEL 35 (MECH. PENTHOUSE) (EAST)
A2-235-E 1 : 50
A0-204

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
2025-06-12 4:33:17 PM

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:33:17 PM

no	revisions	date
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20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ENLARGED FLOOR PLAN - LEVEL 35 (MECHANICAL PENTHOUSE)

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 50**
date | date	**08/07/24**

drawing number | numéro du dessin

A2-235-E

1 / A2-235-W ENLARGED FLOOR PLAN - LEVEL 35 (MECH. PENTHOUSE) (WEST)
1 : 50
A0-204

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
2025-06-12 4:33:18 PM

CLVGROUP DEVELOPMENTS

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project north

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2025-06-12 4:33:16 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
19	~~ISSUED FOR REFERENCE : STRUCTURAL M&E PRICING~~	~~25-05-16~~
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte

linebox
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GLADSTONE AND LORETTA RESIDENTIAL TOWER

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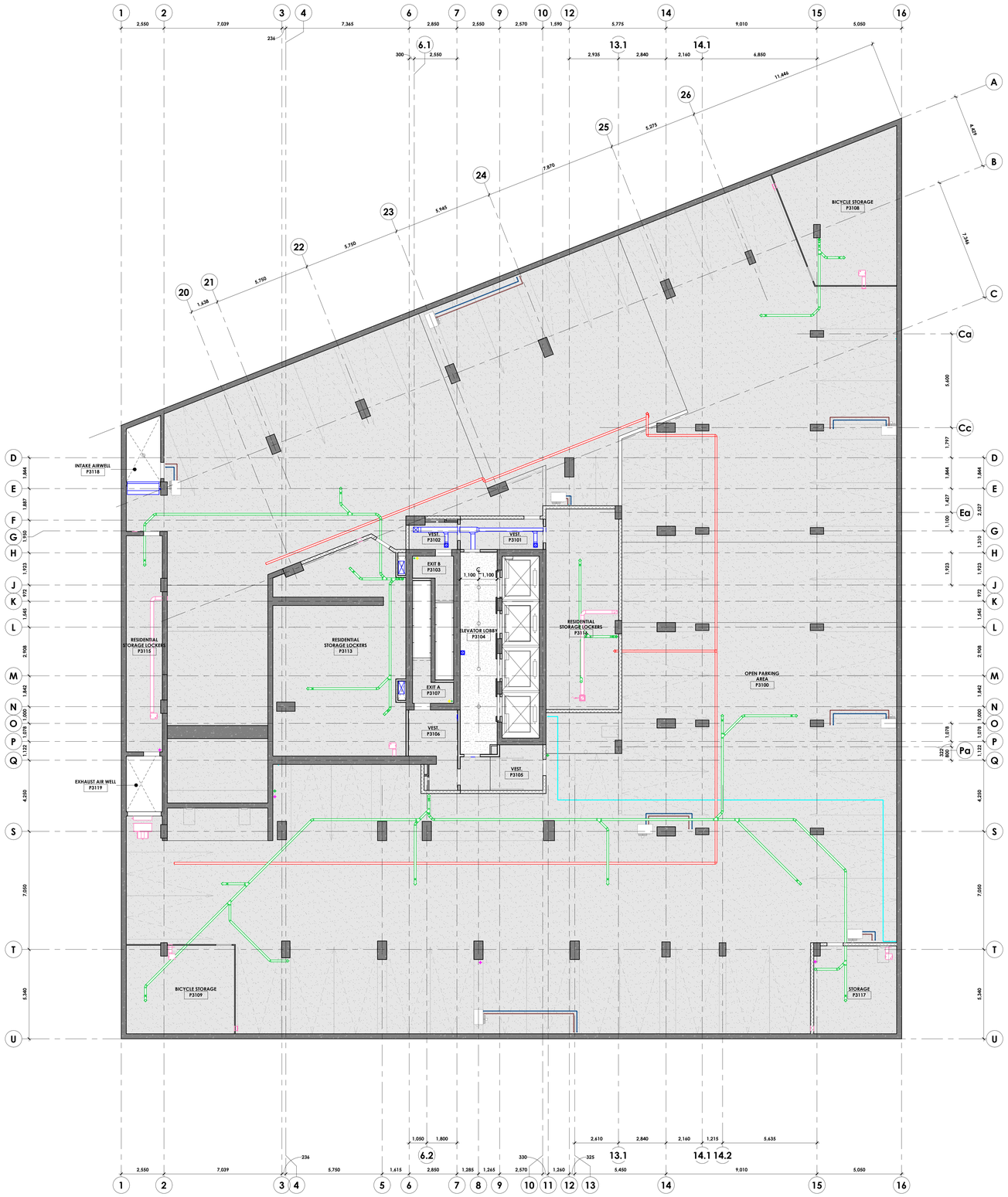
drawing title | titre du dessin

ENLARGED FLOOR PLAN - LEVEL 35 (MECHANICAL PENTHOUSE)

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 50**
date | date	**08/06/24**

drawing number | numéro du dessin

A2-235-W



GENERAL NOTES

1. REFLECTED CEILING PLANS ARE FOR GENERAL COORDINATION AND LAYOUT ONLY. FOR QUANTITIES AND TYPES OF FIXTURES AND EQUIPMENT REFER TO MECHANICAL AND ELECTRICAL DRAWINGS.
2. PRIOR TO COMMENCING INSTALLATION OF SERVICES AND WORK NOTED ABOVE, PREPARE A COMPLETE COORDINATED LAYOUT OF ALL ACCESS PANELS WHICH ARE REQUIRED. SUBMIT LAYOUT TO INDICATE EXACT SIZES AND LOCATIONS OF THE ACCESS POINTS FOR CONSULTANTS REVIEW. PLACE CONTROLS, DAMPERS, SHUTOFF VALVES, ETC. IN ACCESSIBLE CEILING SYSTEM AREAS WHEREVER POSSIBLE. ALL ACCESS PANELS ARE DIMENSIONED TO THE CENTERLINE OF THE PANEL.
3. MECHANICAL DUCTING, EQUIPMENT, LOUVERS AND DIFFUERS AS PER MECHANICAL DRAWINGS AND SPECS.
4. REFER TO ELECTRICAL DRAWINGS FOR EMERGENCY LIGHTING AND EXITING REQUIREMENT DETAILS
5. ALL CEILING W/O HATCH ARE TO BE EXPOSED TO STRUCTURE ABOVE, U.N.O.
6. ALL LIGHTING FIXTURES MOUNTED TO EXPOSED CONCRETE SLABS REQUIRE ASSOCIATED CABLES, CONDUITS, AND ELECTRICAL BOXES TO BE CAST INTO THE SLAB DURING CONSTRUCTION. REFER TO ELECTRICAL AND STRUCTURAL DRAWINGS.
7. REFER TO A9-211 FOR DIMENSIONS OF POTLIGHTS ABOVE UNIT TUBS AND SHOWERS.

CEILING LEGEND:

	GYPSUM CEILING ASSEMBLY. SEE A0-300 FOR ADDITIONAL INFO.
	EXPOSED CONCRETE CEILINGS
	EXTERIOR ARCHITECTURAL METAL SOFFIT

CEILING TAG LEGEND

CEILING TYPE TAG	TYPE FIRE RATING
SPOT ELEVATION & CLG TYPE	2200 — ELEVATION (ABOVE SSL) GB1 — CEILING TYPE

LIGHTING LEGEND (SEE ELECTRICAL DWGS FOR ADDT'L INFO)

FIXTURE TYPE	SYMBOL	TAG
BOLLARD LIGHT		B-X
LIGHT COVE		F-1
UNDERCABINET LIGHTS		U-X
LINEAR FIXTURE		L-X
LED-ILLUMINATED MIRROR		M-X
PENDANT FIXTURE		P-X
RECESSED FIXTURE		R-X
SURFACE MOUNTED FIXTURE		S-X
TRACK LIGHT		T-X
WALL SCONCE		W-X
WINDOW COVERINGS [MAN]		WC-01
WINDOW COVERINGS [AUTO]		WC-02

LIGHTING INSTALLATION NOTES

GENERAL NOTES

SUSPENDEND LIGHTS:
BOTTOM OF PENDANT (± 1980mm AFF)
TO BE CONFIRMED BY ARCH.

LIGHTS SUSPENDED OVER TABLE OR DESK:
BOTTOM OF PENDANT (813 mm TO 914 mm) FROM TOP OF WORKING SURFACE.
LEAVE 152mm OF WIRE FOR SITE ADJUSTMENT

SEE ELECTRICAL PLAN FOR ADDITIONAL INFO.

CEILING FIXTURE LEGEND

FIXTURE TYPE	SYMBOL
CEILING SPRINKLER HEAD	
EMERGENCY SPEAKER/STROBE	(ES)
SMOKE DETECTOR	(S)
OCCUPANCY SENSOR	(OS)
DAYLIGHT SENSOR	(DL)
WIRELESS ACCESS POINT	(WAP)
EXIT SIGN	
UPGRADE OPTION	(U)

ACCESS DOOR LEGEND

TAG	DESCRIPTION
AD-01	305x305mm GYPSUM ACCESS DOOR. AD-01 SHOWN IN THE PUBLIC CORRIDOR IN TYPICAL 03 TO 08 CEILING PLAN ONLY ON L3 CROSS OVER FLOOR
AD-02a	305x305mm GYPSUM ACCESS DOOR, RECESSED, TRIMLESS
AD-02	610x610mm GYPSUM ACCESS DOOR, RECESSED, TRIMLESS
AD-03	457x457mm GYPSUM ACCESS DOOR

1 A3-098 REFLECTED CEILING PLAN - P3
1 : 100
A0-204

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CLVGROUP DEVELOPMENTS
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nord du projet project north
nord reel true north

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2025-06-12 4:53:21 PM

no	revisions	date
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19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12

stamp | timbre

architect | architecte

linebox STUDIO

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GLADSTONE AND LORETTA RESIDENTIAL TOWER

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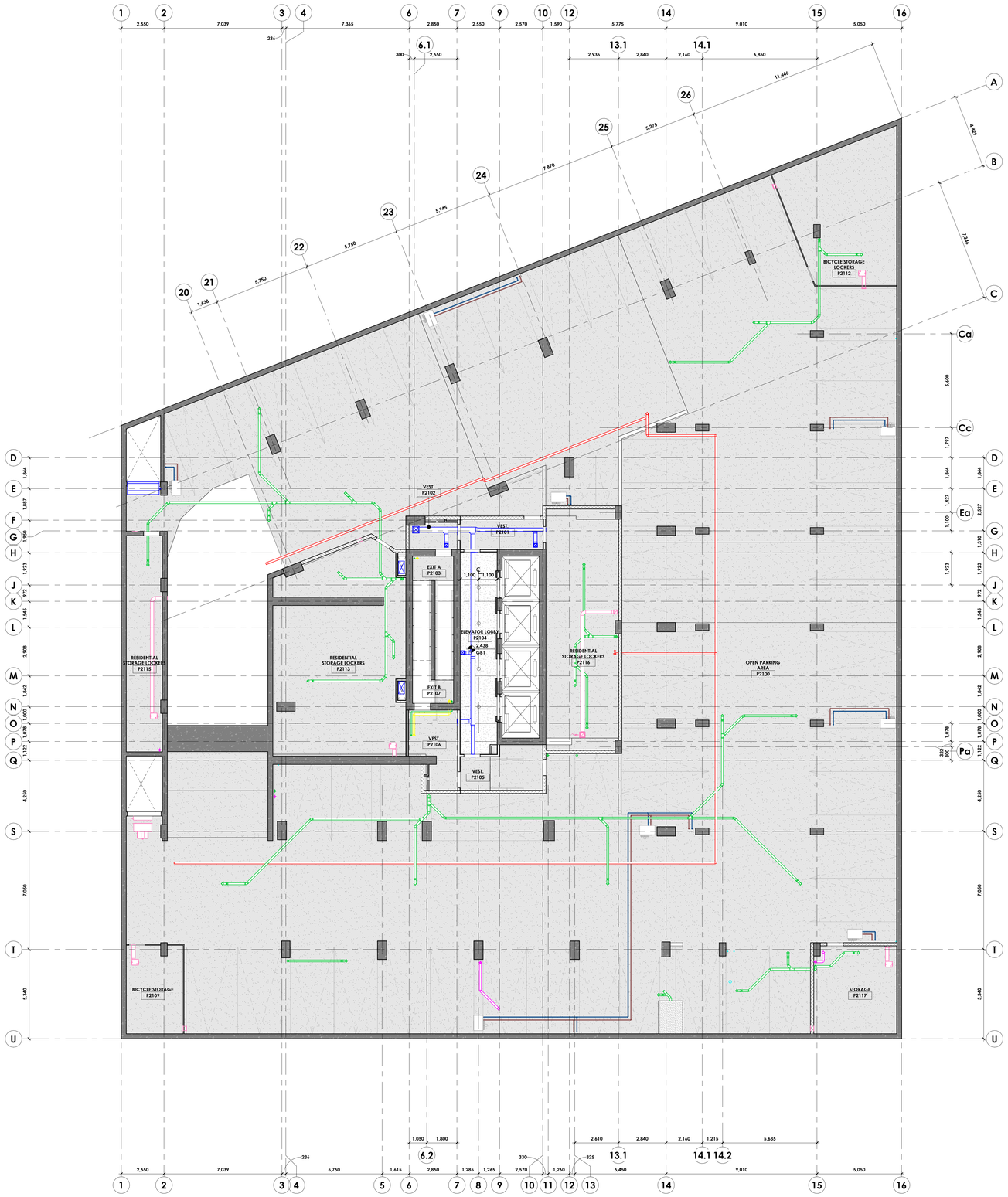
drawing title | titre du dessin

REFLECTED CEILING PLAN - P3

project number | numero du projet	2402
drawn | dessiné	JH / DL / PC / JP
checked | verifié	JP / AR
scale | échelle	1 : 100
date | date	07/17/24

drawing number | numéro du dessin

A3-098



GENERAL NOTES

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2. PRIOR TO COMMENCING INSTALLATION OF SERVICES AND WORK NOTED ABOVE, PREPARE A COMPLETE COORDINATED LAYOUT OF ALL ACCESS PANELS WHICH ARE REQUIRED. SUBMIT LAYOUT TO INDICATE EXACT SIZES AND LOCATIONS OF THE ACCESS POINTS FOR CONSULTANTS REVIEW. PLACE CONTROLS, DAMPERS, SHUTOFF VALVES, ETC. IN ACCESSIBLE CEILING SYSTEM AREAS WHEREVER POSSIBLE. ALL ACCESS PANELS ARE DIMENSIONED TO THE CENTERLINE OF THE PANEL.
3. MECHANICAL DUCTING, EQUIPMENT, LOUVERS AND DIFFUERS AS PER MECHANICAL DRAWINGS AND SPECS.
4. REFER TO ELECTRICAL DRAWINGS FOR EMERGENCY LIGHTING AND EXITING REQUIREMENT DETAILS
5. ALL CEILING W/O HATCH ARE TO BE EXPOSED TO STRUCTURE ABOVE, U.N.O.
6. ALL LIGHTING FIXTURES MOUNTED TO EXPOSED CONCRETE SLABS REQUIRE ASSOCIATED CABLES, CONDUITS, AND ELECTRICAL BOXES TO BE CAST INTO THE SLAB DURING CONSTRUCTION. REFER TO ELECTRICAL AND STRUCTURAL DRAWINGS.
7. REFER TO A9-211 FOR DIMENSIONS OF POTLIGHTS ABOVE UNIT TUBS AND SHOWERS.

CEILING LEGEND:

	GYPSUM CEILING ASSEMBLY, SEE A0-300 FOR ADDITIONAL INFO.
	EXPOSED CONCRETE CEILINGS
	EXTERIOR ARCHITECTURAL METAL SOFFIT

CEILING TAG LEGEND

CEILING TYPE TAG	TYPE FIRE RATING
SPOT ELEVATION & CLG TYPE	2200 — ELEVATION (ABOVE SSL) GB1 — CEILING TYPE

LIGHTING LEGEND (SEE ELECTRICAL DWGS FOR ADDT'L INFO)

FIXTURE TYPE	SYMBOL	TAG
BOLLARD LIGHT		B-X
LIGHT COVE		F-1
UNDERCABINET LIGHTS		U-X
LINEAR FIXTURE		L-X
LED-ILLUMINATED MIRROR		M-X
PENDANT FIXTURE		P-X
RECESSED FIXTURE		R-X
SURFACE MOUNTED FIXTURE		S-X
TRACK LIGHT		T-X
WALL SCONCE		W-X
WINDOW COVERINGS [MAN]		WC-01
WINDOW COVERINGS [AUTO]		WC-02

LIGHTING INSTALLATION NOTES

GENERAL NOTES

SUSPENDEND LIGHTS:
BOTTOM OF PENDANT (± 1980mm AFF)
TO BE CONFIRMED BY ARCH.

LIGHTS SUSPENDED OVER TABLE OR DESK:
BOTTOM OF PENDANT (813 mm TO 914 mm) FROM TOP OF WORKING SURFACE.
LEAVE 152mm OF WIRE FOR SITE ADJUSTMENT

SEE ELECTRICAL PLAN FOR ADDITIONAL INFO.

CEILING FIXTURE LEGEND

FIXTURE TYPE	SYMBOL
CEILING SPRINKLER HEAD	
EMERGENCY SPEAKER/STROBE	
SMOKE DETECTOR	
OCCUPANCY SENSOR	
DAYLIGHT SENSOR	
WIRELESS ACCESS POINT	
EXIT SIGN	
UPGRADE OPTION	

ACCESS DOOR LEGEND

TAG	DESCRIPTION
AD-01	305x305mm GYPSUM ACCESS DOOR, AD-01 SHOWN IN THE PUBLIC CORRIDOR IN TYPICAL 03 TO 08 CEILING PLAN ONLY ON L3 CROSS OVER FLOOR
AD-02a	305x305mm GYPSUM ACCESS DOOR, RECESSED, TRIMLESS
AD-02	610x610mm GYPSUM ACCESS DOOR, RECESSED, TRIMLESS
AD-03	457x457mm GYPSUM ACCESS DOOR

1 / A3-099 REFLECTED CEILING PLAN - P2
1 : 100
A0-204

client
CLVGROUP DEVELOPMENTS

structural engineers | ingénieurs structurels
CUNLIFFE & ASSOCIATES CONSULTING STRUCTURAL ENGINEERS

electrical engineers | ingénieur electrique
mechanical engineer | ingénieur méchanique
GWAL Goodkey, Weedmark & Associates Ltd.

civil engineers | ingénieur civil
wsp

landscape architect | architecte paysagiste
CSW

nord du projet project north
nord reel true north

NOT FOR CONSTRUCTION 2025-06-12 4:53:23 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12

stamp | timbre

architect | architecte
linebox STUDIO

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Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

REFLECTED CEILING PLAN - P2

project number | numero du projet	2402
drawn | dessiné	JH / DL / PC / JP
checked | verifié	JP / AR
scale | échelle	1 : 100
date | date	07/17/24

drawing number | numéro du dessin

A3-099

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
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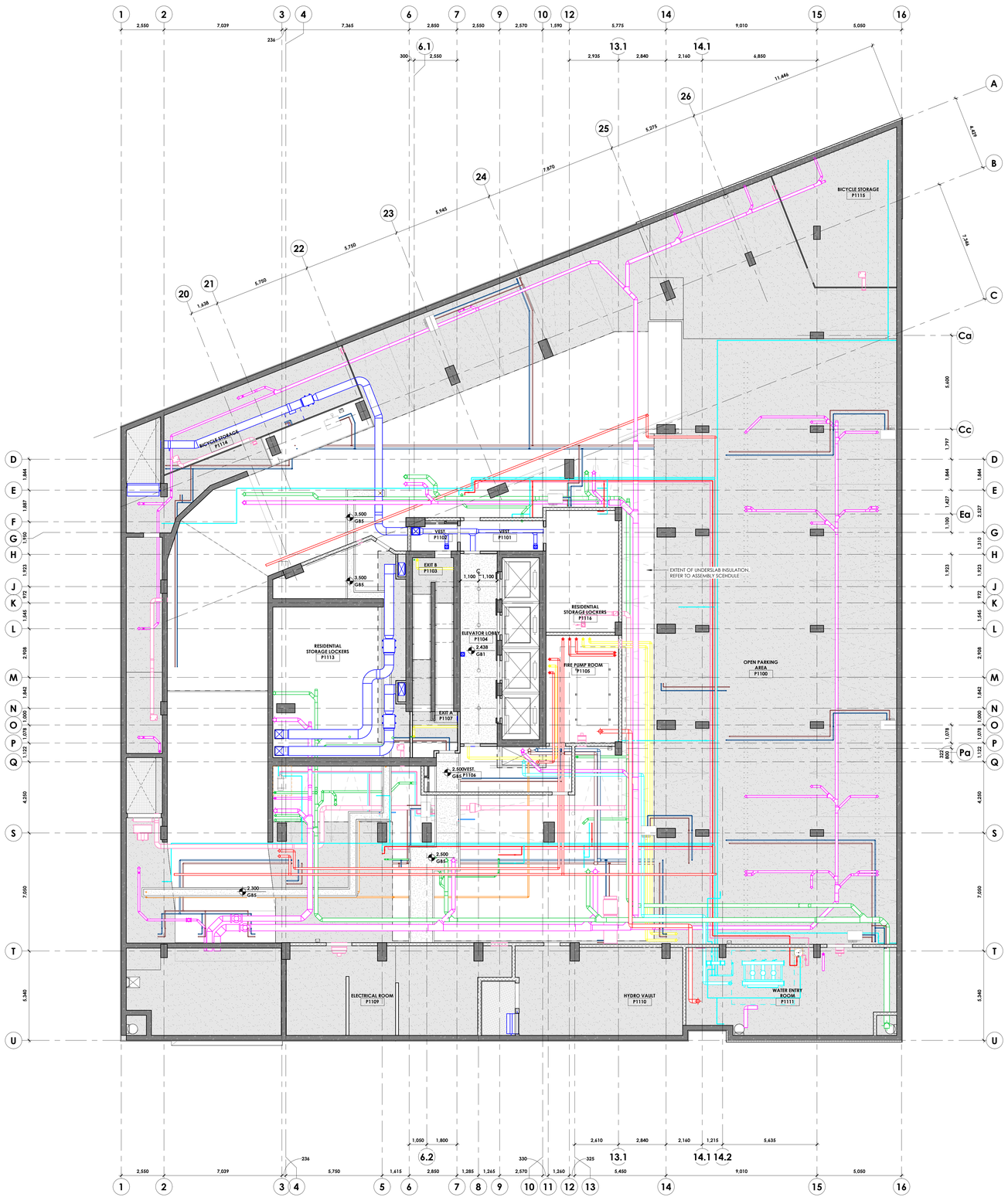

1 REFLECTED CEILING PLAN - P1
A3-100 1 : 100
A0-204

GENERAL NOTES

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7. REFER TO A9-211 FOR DIMENSIONS OF POTLIGHTS ABOVE UNIT TUBS AND SHOWERS.

CEILING LEGEND:

- GYPSUM CEILING ASSEMBLY, SEE A0-300 FOR ADDITIONAL INFO.
- EXPOSED CONCRETE CEILINGS
- EXTERIOR ARCHITECTURAL METAL SOFFIT

CEILING TAG LEGEND

CEILING TYPE TAG — TYPE / FIRE RATING

SPOT ELEVATION & CLG TYPE — 2200 ELEVATION (ABOVE SSL) / GB1 CEILING TYPE

LIGHTING LEGEND (SEE ELECTRICAL DWGS FOR ADDT'L INFO)

FIXTURE TYPE	SYMBOL	TAG
BOLLARD LIGHT		B-X
LIGHT COVE		F-1
UNDERCABINET LIGHTS		U-X
LINEAR FIXTURE		L-X
LED-ILLUMINATED MIRROR		M-X
PENDANT FIXTURE		P-X
RECESSED FIXTURE		R-X
SURFACE MOUNTED FIXTURE		S-X
TRACK LIGHT		T-X
WALL SCONCE		W-X
WINDOW COVERINGS [MAN]		WC-01
WINDOW COVERINGS [AUTO]		WC-02

LIGHTING INSTALLATION NOTES

GENERAL NOTES

SUSPENDEND LIGHTS:
BOTTOM OF PENDANT (± 1980mm AFF)
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LEAVE 152mm OF WIRE FOR SITE ADJUSTMENT

SEE ELECTRICAL PLAN FOR ADDITIONAL INFO.

CEILING FIXTURE LEGEND

FIXTURE TYPE	SYMBOL
CEILING SPRINKLER HEAD	
EMERGENCY SPEAKER/STROBE	
SMOKE DETECTOR	
OCCUPANCY SENSOR	
DAYLIGHT SENSOR	
WIRELESS ACCESS POINT	
EXIT SIGN	
UPGRADE OPTION	

ACCESS DOOR LEGEND

TAG	DESCRIPTION
AD-01	305x305mm GYPSUM ACCESS DOOR, AD-01 SHOWN IN THE PUBLIC CORRIDOR IN TYPICAL 03 TO 08 CEILING PLAN ONLY ON L3 CROSS OVER FLOOR
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AD-02	610x610mm GYPSUM ACCESS DOOR, RECESSED, TRIMLESS
AD-03	457x457mm GYPSUM ACCESS DOOR

client
CLVGROUP DEVELOPMENTS

structural engineers | ingénieurs structurels
CUNLIFFE & ASSOCIATES CONSULTING STRUCTURAL ENGINEERS

electrical engineers | ingénieur electrique
mechanical engineer | ingénieur méchanique
GWAL Goodkey, Weedmark & Associates Ltd.

civil engineers | ingénieur civil
wsp

landscape architect | architecte paysagiste
CSW

nord du projet project north
nord reel true north

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no	revisions	date
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20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12

stamp | timbre

architect | architecte
linebox STUDIO

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Not for construction until signed by the Architect.

project title | titre du projet
GLADSTONE AND LORETTA RESIDENTIAL TOWER
145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin
REFLECTED CEILING PLAN - P1

project number | numero du projet	2402
drawn | dessiné	JH / DL / PC / JP
checked | verifié	JP / AR
scale | échelle	1 : 100
date | date	07/17/24

drawing number | numéro du dessin
A3-100

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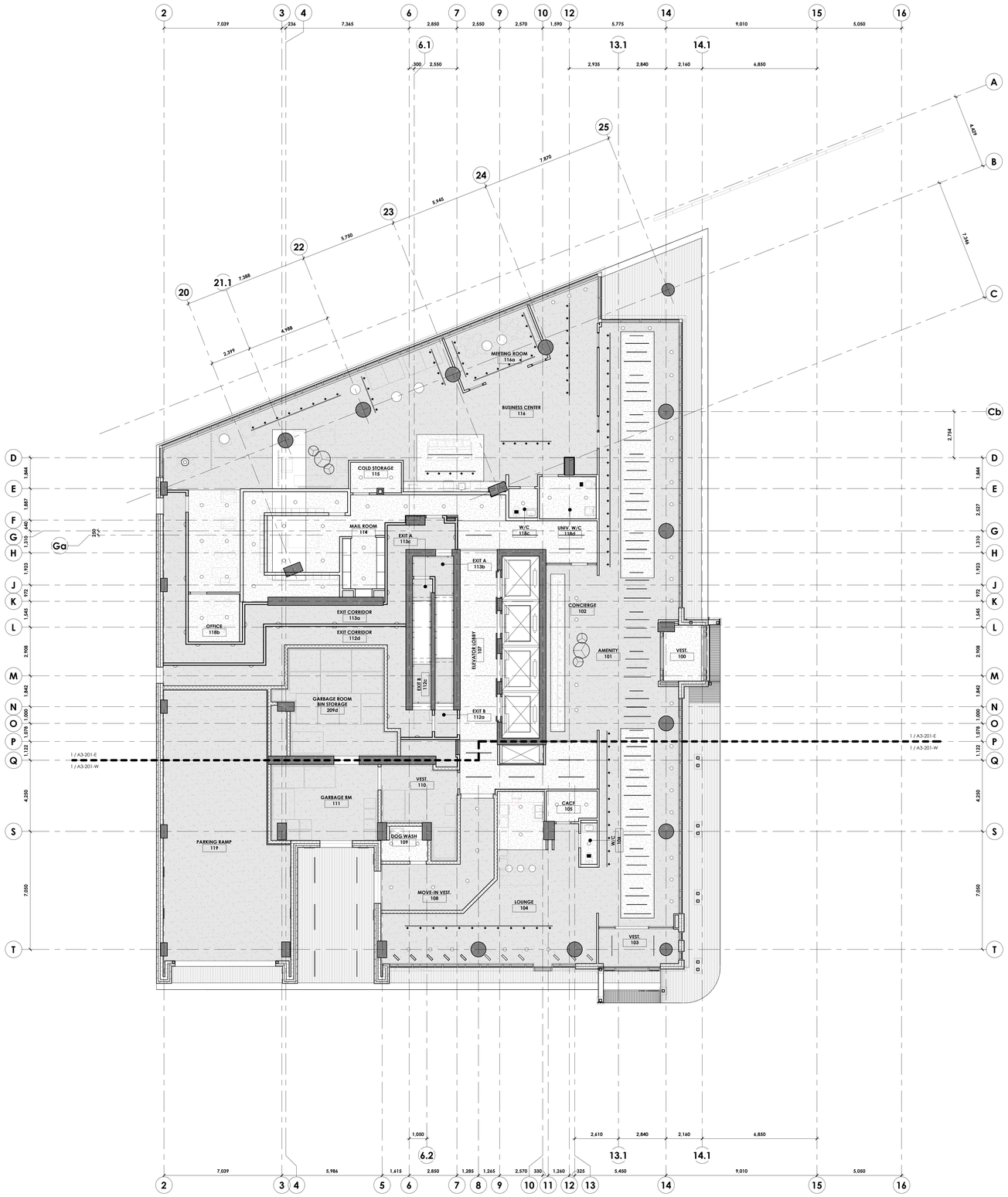
2025-06-12 4:33:26 PM

M&E COORDINATION NOT COMPLETED AT THIS TIME
CEILING HEIGHTS AND LIGHTING LAYOUTS TO BE CONFIRMED

CONCEPTUAL ARCHITECTURAL LIGHTING LAYOUT IS BEING PROPOSED FOR COSTING EXERCISE ONLY. LIGHTING DESIGN TO BE COORDINATED WITH CLIENT, LIGHTING DESIGNER AND ELECTRICAL CONSULTANT



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CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet project north

nord reel true north

NOT FOR CONSTRUCTION
2025-06-12 4:33:28 PM

no	revisions	date
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stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

REFLECTED CEILING PLAN - LEVEL 01

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**07/17/24**

drawing number | numéro du dessin

A3-101



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CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
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no	revisions	date
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19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12

stamp | timbre

architect | architecte

linebox
STUDIO

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Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

REFLECTED CEILING PLAN - LEVEL 02 (PODIUM)

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
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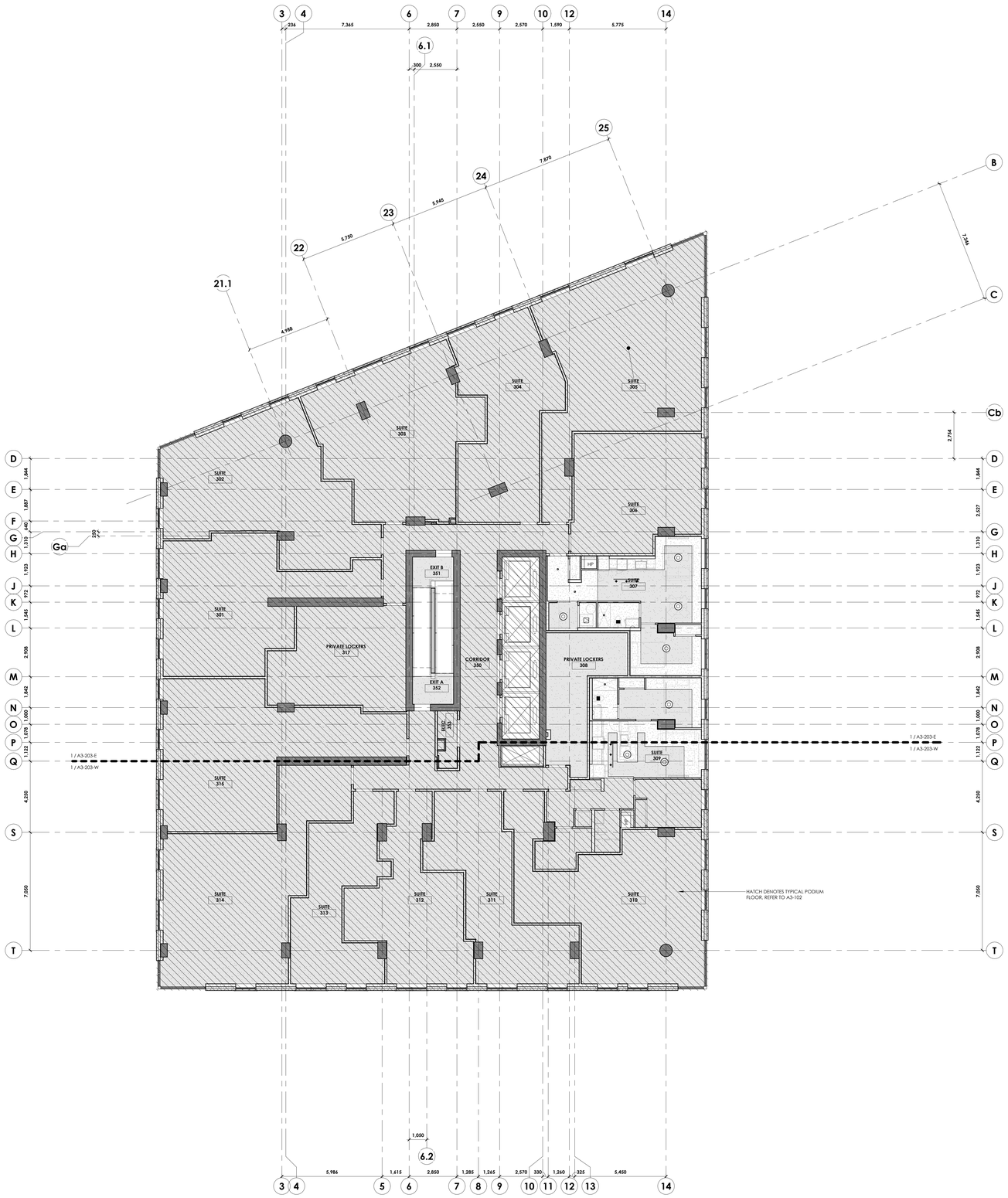
date | date	**07/17/24**

drawing number | numéro du dessin

A3-102



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CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:33:32 PM

no	revisions	date
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20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 65% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12

stamp | timbre

architect | architecte

linebox
STUDIO

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Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

REFLECTED CEILING PLAN - LEVEL 03 (PODIUM)

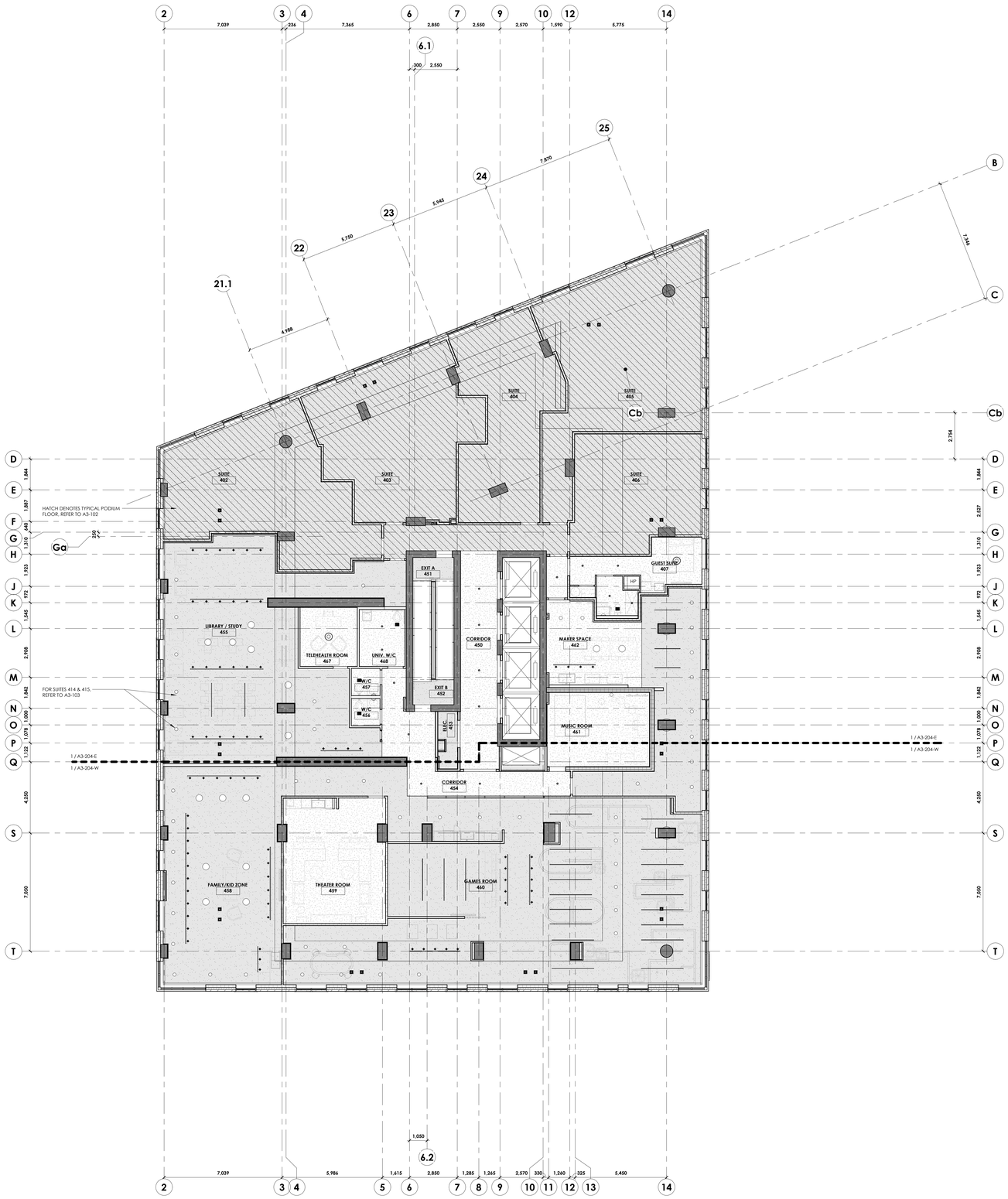
project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**07/17/24**

drawing number | numéro du dessin

A3-103

M&E COORDINATION NOT COMPLETED AT THIS TIME
CEILING HEIGHTS AND LIGHTING LAYOUTS TO BE CONFIRMED

CONCEPTUAL ARCHITECTURAL LIGHTING LAYOUT IS BEING PROPOSED FOR COSTING EXERCISE ONLY, LIGHTING DESIGN TO BE COORDINATED WITH CLIENT, LIGHTING DESIGNER AND ELECTRICAL CONSULTANT



CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
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no	revisions	date
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19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12

stamp | timbre

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

REFLECTED CEILING PLAN - LEVEL 04 (PODIUM)

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**07/17/24**

drawing number | numéro du dessin

A3-104

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M&E COORDINATION NOT COMPLETED AT THIS TIME
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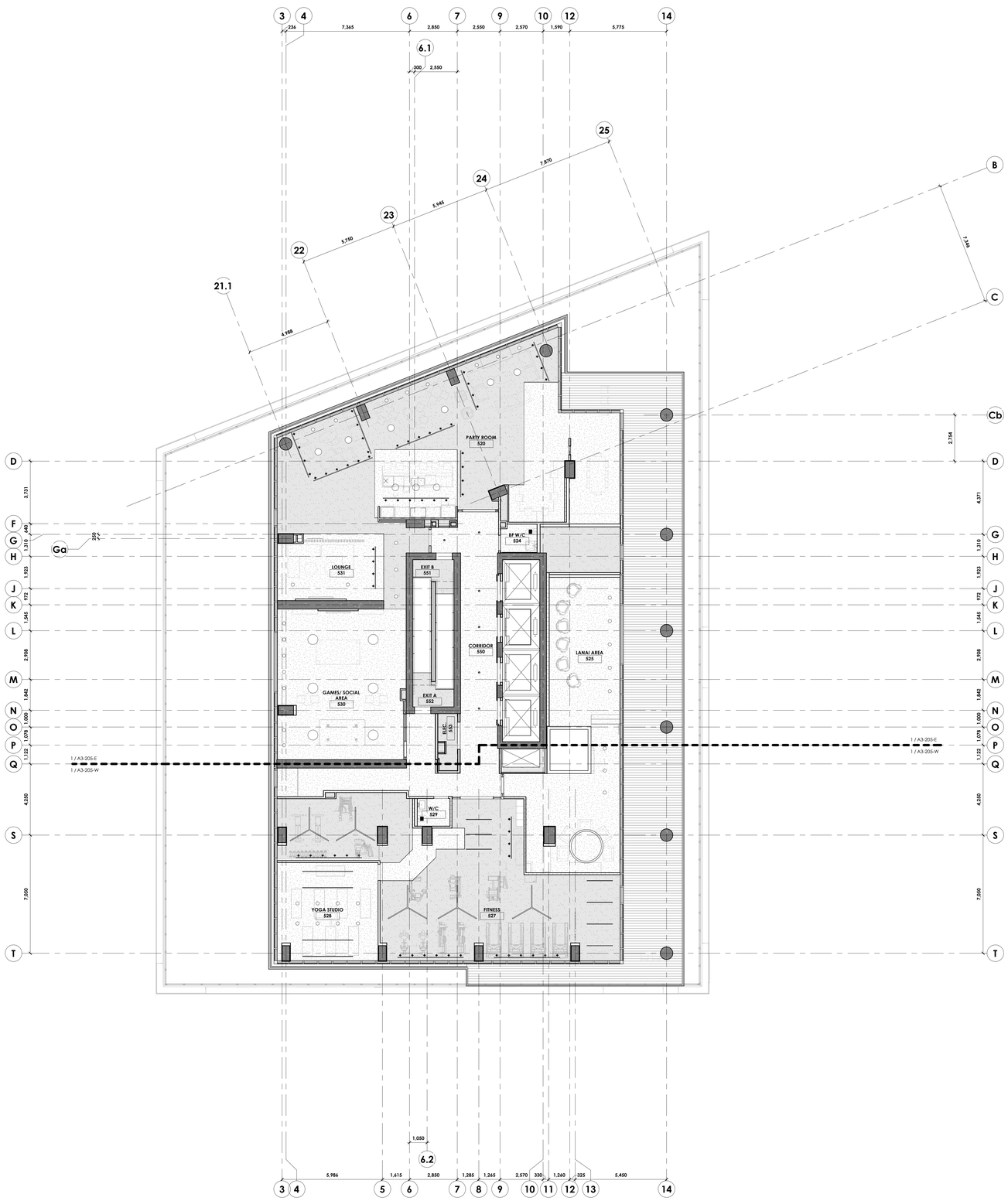

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CONSULTING STRUCTURAL ENGINEERS

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mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:33:37 PM

no	revisions	date
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20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
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stamp | timbre

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

REFLECTED CEILING PLAN - LEVEL 05 (PODIUM ROOF AMENITY)

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**07/17/24**

drawing number | numéro du dessin

A3-105

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_JB_Tower A.rvt
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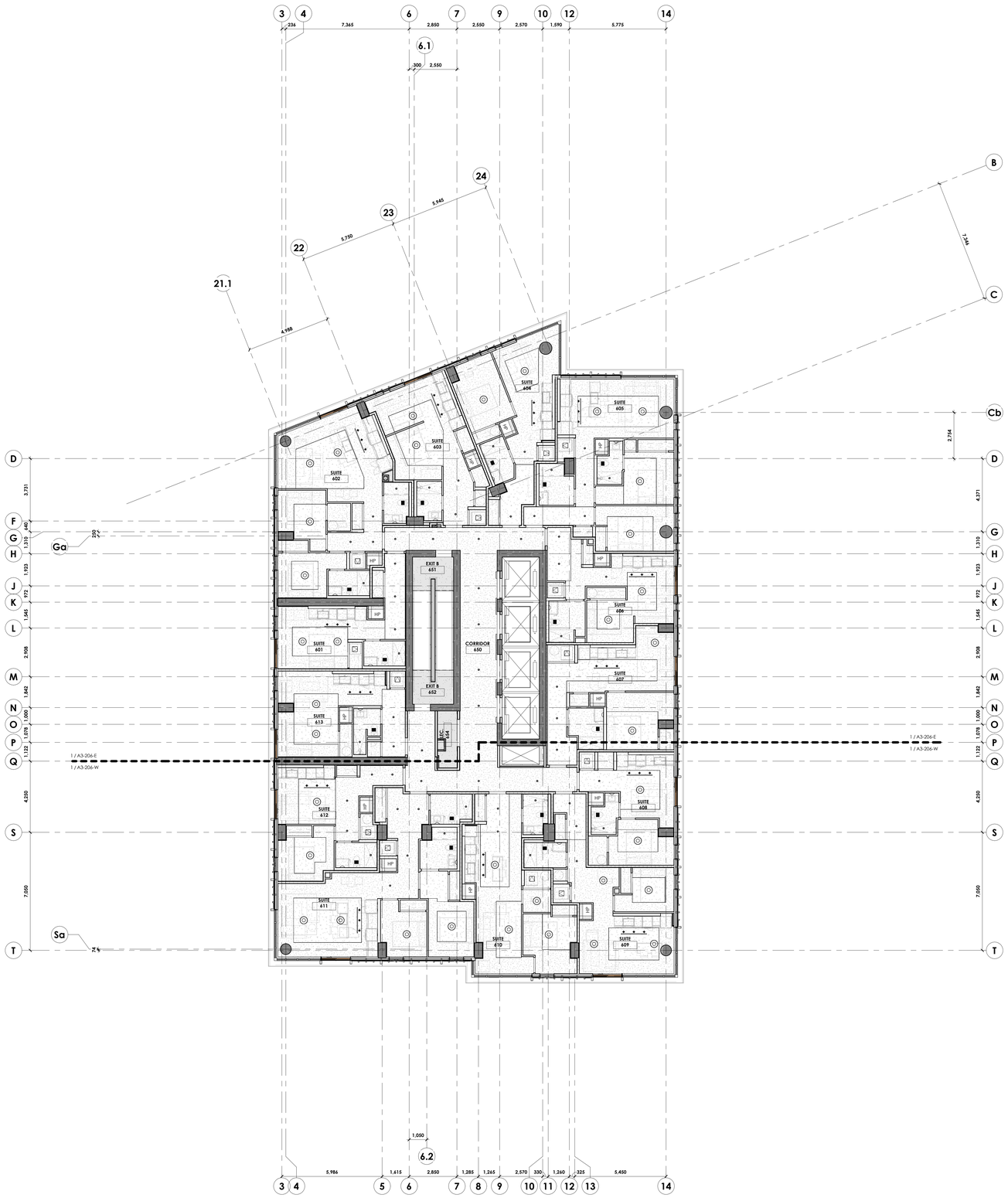

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CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:33:39 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-19~~
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18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
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stamp | timbre

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

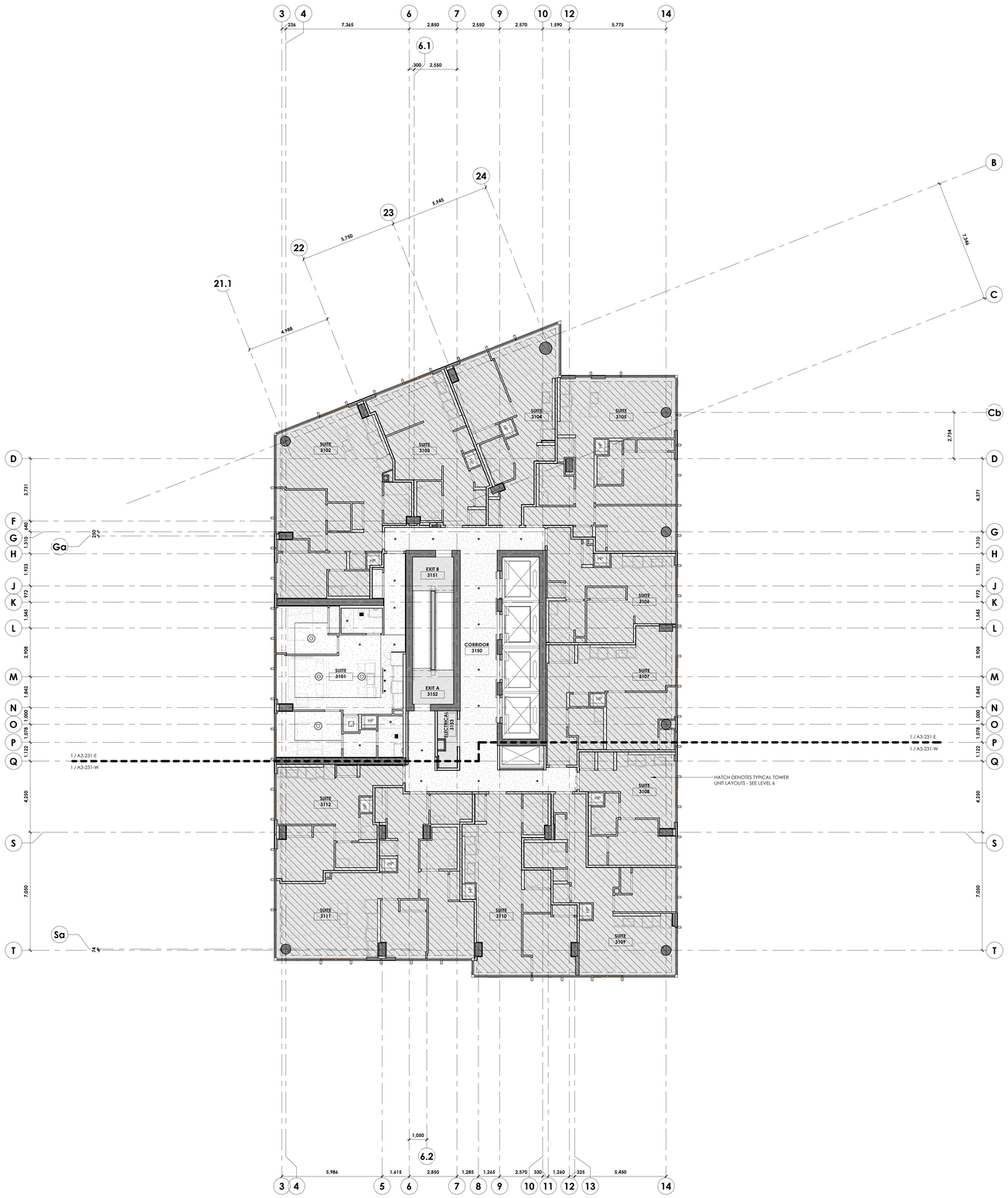
drawing title | titre du dessin

REFLECTED CEILING PLAN - LEVEL 06 - 30 (TYPICAL TOWER)

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**07/17/24**

drawing number | numéro du dessin

A3-106



Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_IB_Tower A.rvt
2025-06-13 4:33:41 PM

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-13 4:33:41 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-19~~
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12

stamp | timbre

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

REFLECTED CEILING PLAN - LEVEL 31 - 33 (TYPICAL PENTHOUSE)

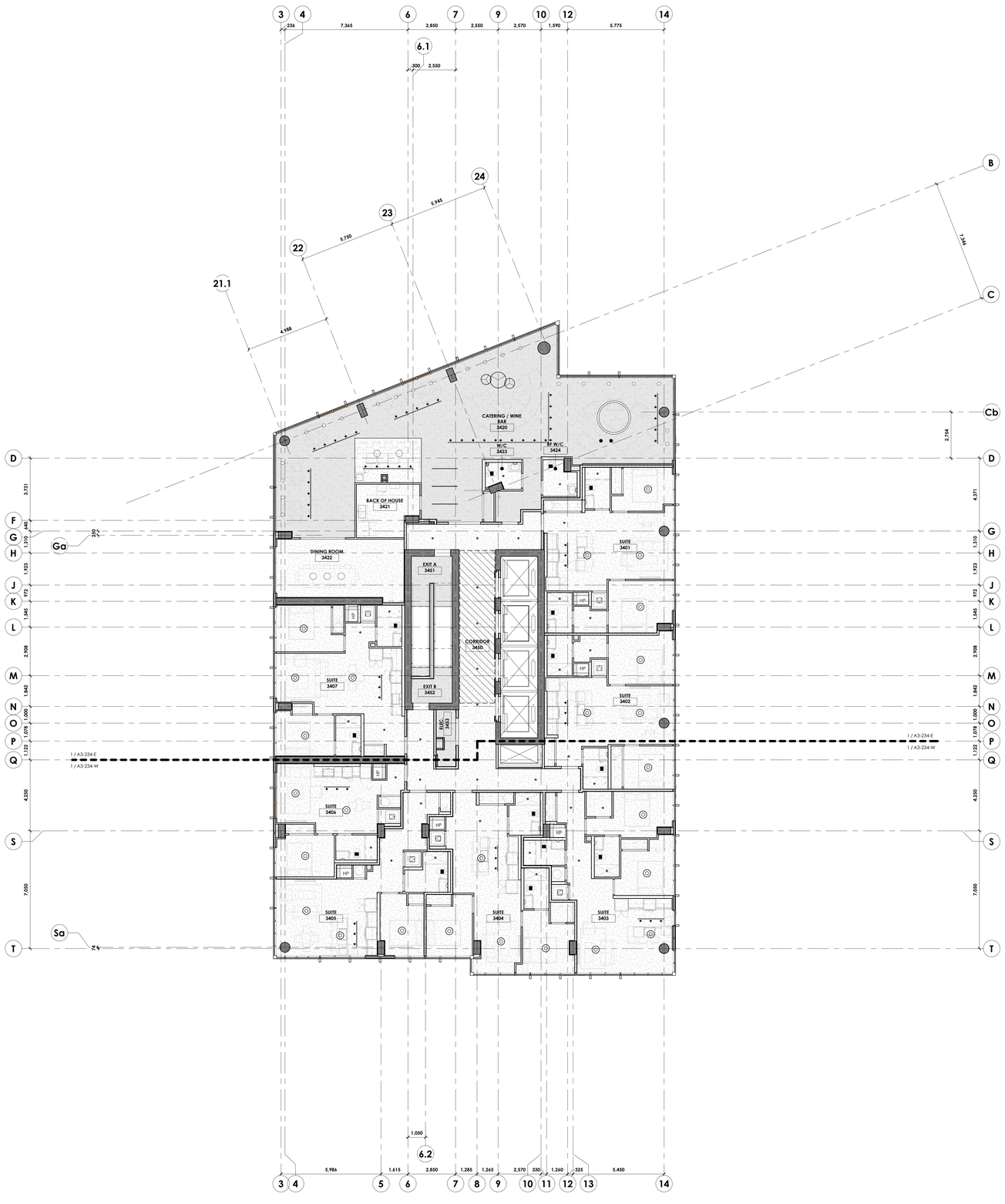
project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**07/17/24**

drawing number | numéro du dessin

A3-131

M&E COORDINATION NOT COMPLETED AT THIS TIME
CEILING HEIGHTS AND LIGHTING LAYOUTS TO BE CONFIRMED

CONCEPTUAL ARCHITECTURAL LIGHTING LAYOUT IS BEING PROPOSED FOR COSTING EXERCISE ONLY, LIGHTING DESIGN TO BE COORDINATED WITH CLIENT, LIGHTING DESIGNER AND ELECTRICAL CONSULTANT



Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
2025-06-12 4:33:43 PM

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
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structural engineers | ingénieurs structurels

GWAL
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wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

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no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12

stamp | timbre

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

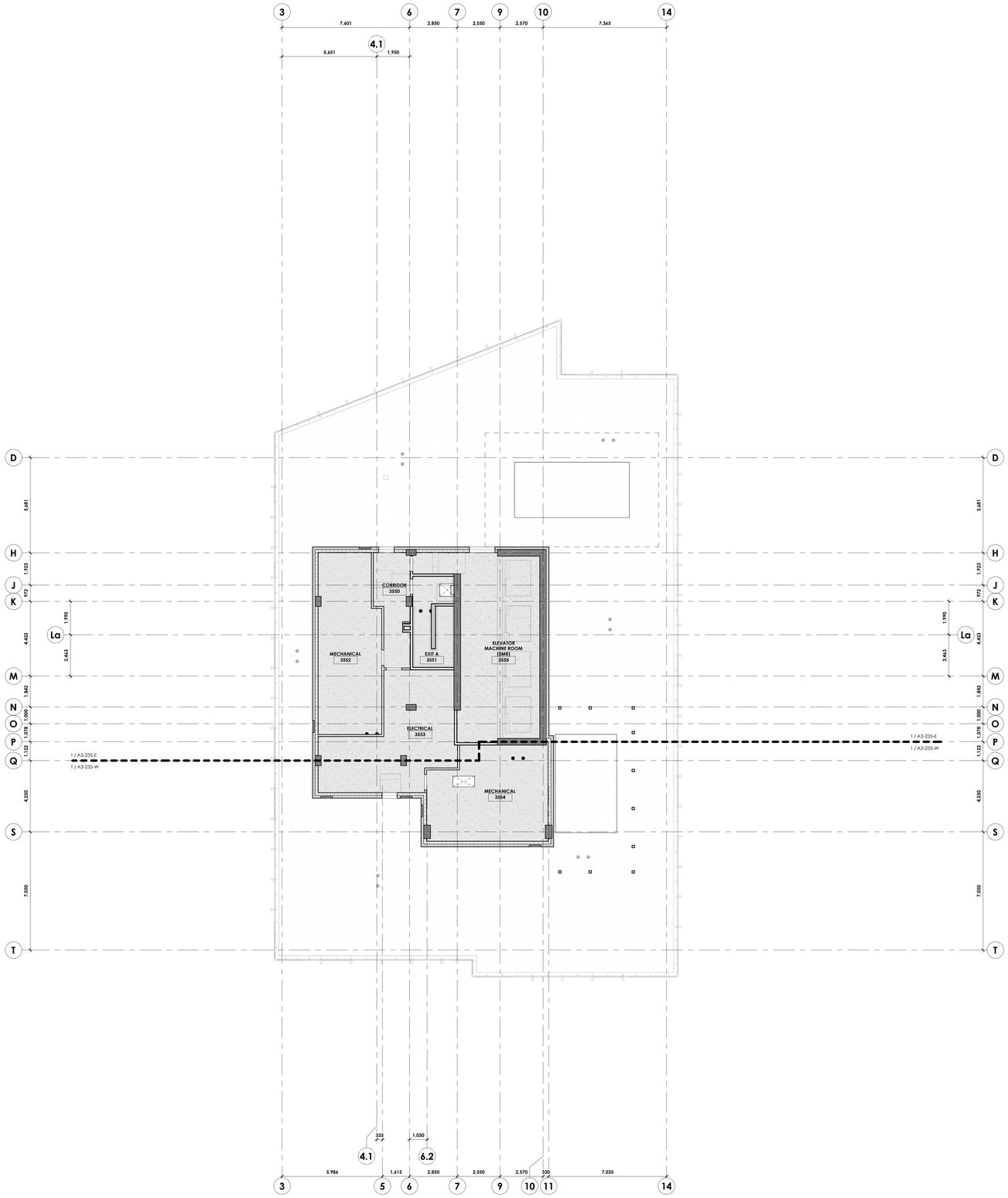
drawing title | titre du dessin

REFLECTED CEILING PLAN - LEVEL 34 (RESIDENTIAL AND AMENITY SKY LEVEL)

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**07/17/24**

drawing number | numéro du dessin

A3-134



CLVGROUP
DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:33:44 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12

stamp | timbre

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

REFLECTED CEILING PLAN - LEVEL 35 (MECHANICAL PENTHOUSE)

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**07/17/24**

drawing number | numéro du dessin

A3-135

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
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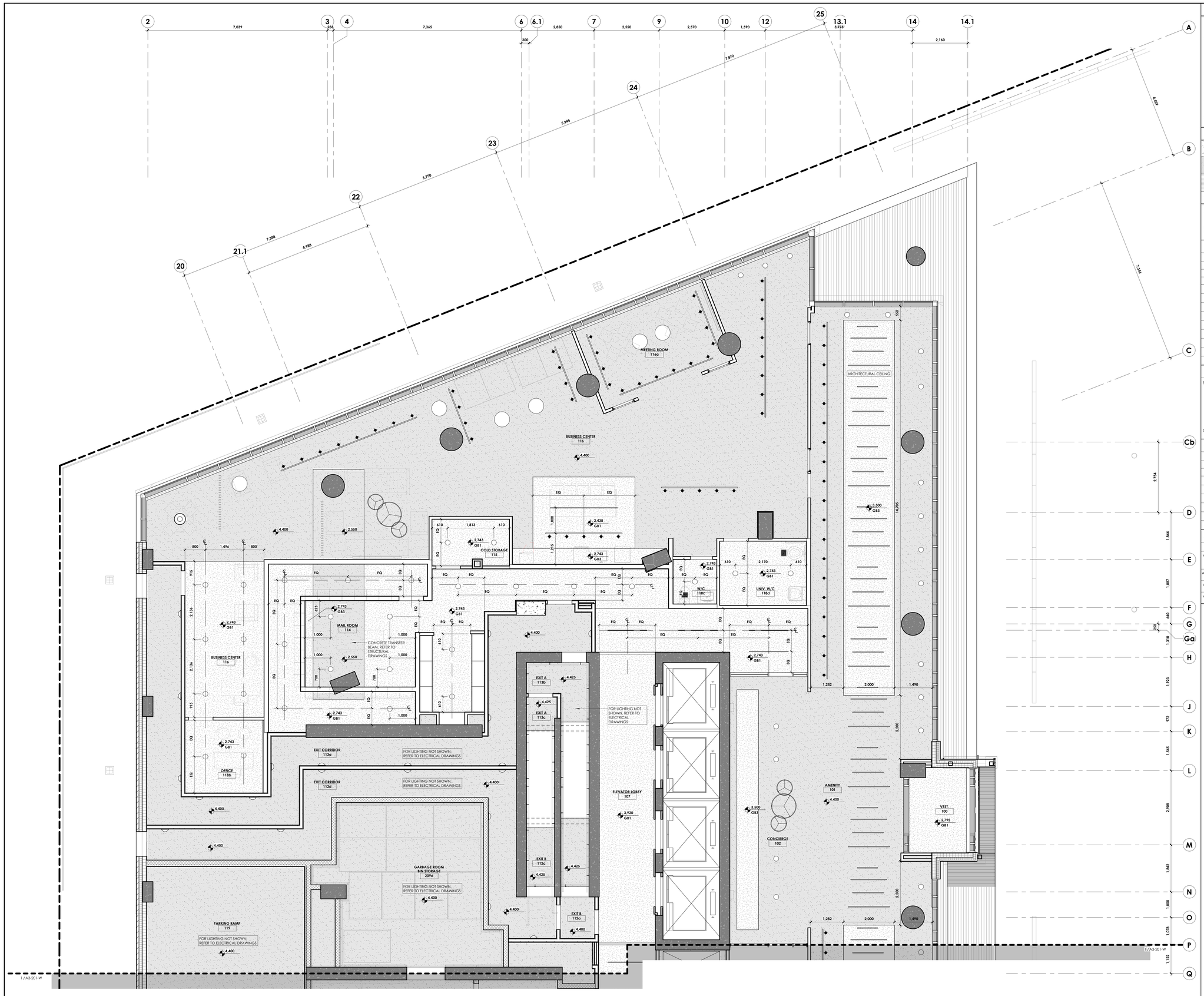

GENERAL NOTES

1. REFLECTED CEILING PLANS ARE FOR GENERAL COORDINATION AND LAYOUT ONLY. FOR QUANTITIES AND TYPES OF FIXTURES AND EQUIPMENT REFER TO MECHANICAL AND ELECTRICAL DRAWINGS.
2. PRIOR TO COMMENCING INSTALLATION OF SERVICES AND WORK NOTED ABOVE, PREPARE A COMPLETE COORDINATED LAYOUT OF ALL ACCESS PANELS WHICH ARE REQUIRED. SUBMIT LAYOUT TO INDICATE EXACT SIZES AND LOCATIONS OF THE ACCESS POINTS FOR CONSULTANTS REVIEW. PLACE CONTROLS, DAMPERS, SHUTOFF VALVES, ETC. IN ACCESSIBLE CEILING SYSTEM AREAS WHEREVER POSSIBLE. ALL ACCESS PANELS ARE DIMENSIONED TO THE CENTERLINE OF THE PANEL.
3. MECHANICAL DUCTING, EQUIPMENT, LOUVERS AND DIFFUERS AS PER MECHANICAL DRAWINGS AND SPECS.
4. REFER TO ELECTRICAL DRAWINGS FOR EMERGENCY LIGHTING AND EXITING REQUIREMENT DETAILS
5. ALL CEILING W/O HATCH ARE TO BE EXPOSED TO STRUCTURE ABOVE, U.N.O.
6. ALL LIGHTING FIXTURES MOUNTED TO EXPOSED CONCRETE SLABS REQUIRE ASSOCIATED CABLES, CONDUITS, AND ELECTRICAL BOXES TO BE CAST INTO THE SLAB DURING CONSTRUCTION. REFER TO ELECTRICAL AND STRUCTURAL DRAWINGS.
7. REFER TO A9-211 FOR DIMENSIONS OF POTLIGHTS ABOVE UNIT TUBS AND SHOWERS.

CEILING LEGEND:

	GYPSUM CEILING ASSEMBLY. SEE A0-300 FOR ADDITIONAL INFO.
	EXPOSED CONCRETE CEILINGS
	EXTERIOR ARCHITECTURAL METAL SOFFIT

CEILING TAG LEGEND

CEILING TYPE TAG — TYPE / FIRE RATING

SPOT ELEVATION & CLG TYPE — 2200 / GB1 — ELEVATION (ABOVE SSL) / CEILING TYPE

LIGHTING LEGEND (SEE ELECTRICAL DWGS FOR ADDT'L INFO)

FIXTURE TYPE	SYMBOL	TAG
BOLLARD LIGHT		B-X
LIGHT COVE		F-1
UNDERCABINET LIGHTS		U-X
LINEAR FIXTURE		L-X
LED-ILLUMINATED MIRROR		M-X
PENDANT FIXTURE		P-X
RECESSED FIXTURE		R-X
SURFACE MOUNTED FIXTURE		S-X
TRACK LIGHT		T-X
WALL SCONCE		W-X
WINDOW COVERINGS [MAN]		WC-01
WINDOW COVERINGS [AUTO]		WC-02

LIGHTING INSTALLATION NOTES

GENERAL NOTES

SUSPENDEND LIGHTS:
BOTTOM OF PENDANT (± 1980mm AFF)
TO BE CONFIRMED BY ARCH.

LIGHTS SUSPENDED OVER TABLE OR DESK:
BOTTOM OF PENDANT (813 mm TO 914 mm) FROM TOP OF WORKING SURFACE.
LEAVE 152mm OF WIRE FOR SITE ADJUSTMENT

SEE ELECTRICAL PLAN FOR ADDITIONAL INFO.

CEILING FIXTURE LEGEND

FIXTURE TYPE	SYMBOL
CEILING SPRINKLER HEAD	
EMERGENCY SPEAKER/STROBE	
SMOKE DETECTOR	
OCCUPANCY SENSOR	
DAYLIGHT SENSOR	
WIRELESS ACCESS POINT	
EXIT SIGN	
UPGRADE OPTION	

ACCESS DOOR LEGEND

TAG	DESCRIPTION
AD-01	305x305mm GYPSUM ACCESS DOOR. AD-01 SHOWN IN THE PUBLIC CORRIDOR IN TYPICAL 03 TO 08 CEILING PLAN ONLY ON L3 CROSS OVER FLOOR
AD-02a	305x305mm GYPSUM ACCESS DOOR, RECESSED, TRIMLESS
AD-02	610x610mm GYPSUM ACCESS DOOR, RECESSED, TRIMLESS
AD-03	457x457mm GYPSUM ACCESS DOOR

1 ENLARGED REFLECTED CEILING PLAN - LEVEL 01 (EAST)
A3-201-E 1 : 50
A0-204

client
CLVGROUP DEVELOPMENTS

structural engineers | ingénieurs structurels
CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

electrical engineers | ingénieur electrique
mechanical engineer | ingénieur méchanique
GWAL
Goodkey, Weedmark & Associates Ltd.

civil engineers | ingénieur civil
wsp

landscape architect | architecte paysagiste
CSW

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:33:46 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	25-06-12
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	25-05-30
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18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte
linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ENLARGED RCP - LEVEL 01 - EAST

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | vertifié	**JP / AR**
scale | échelle	**As indicated**
date | date	**02/20/25**

drawing number | numéro du dessin

A3-201-E

Autodesk Docs://Gladstone & Loretta/2402 - 145 Loretta CLV LB_Tower A.rvt
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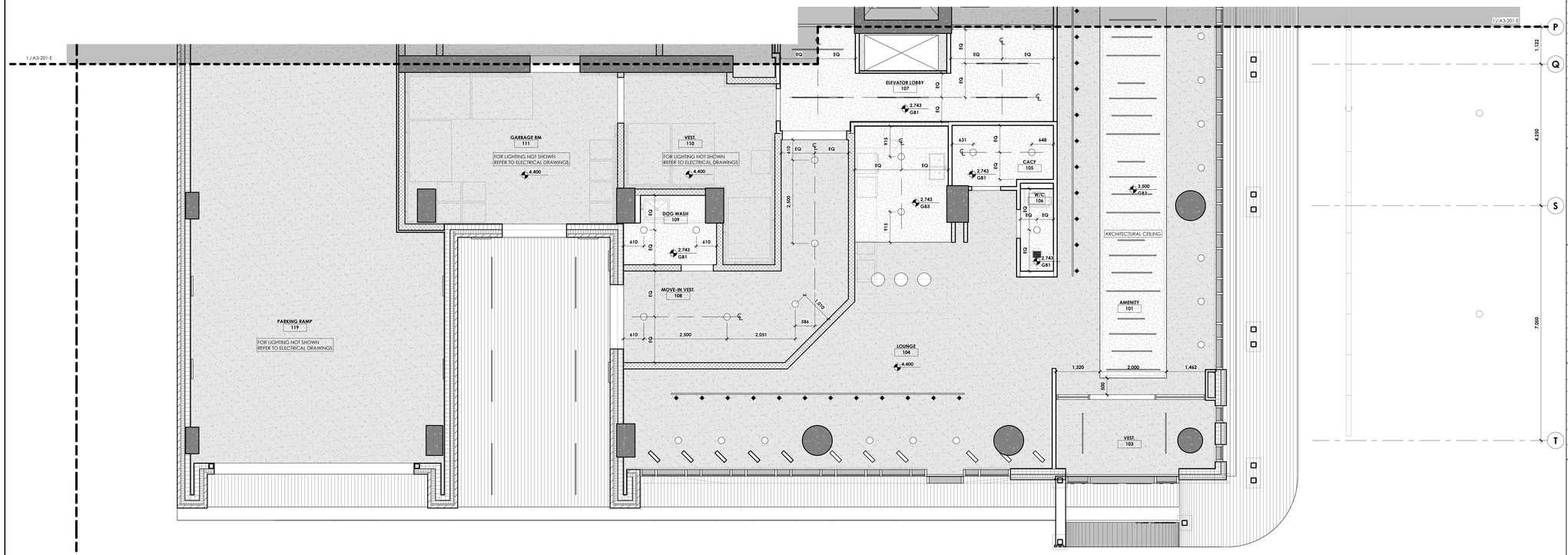

GENERAL NOTES

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6. ALL LIGHTING FIXTURES MOUNTED TO EXPOSED CONCRETE SLABS REQUIRE ASSOCIATED CABLES, CONDUITS, AND ELECTRICAL BOXES TO BE CAST INTO THE SLAB DURING CONSTRUCTION. REFER TO ELECTRICAL AND STRUCTURAL DRAWINGS.
7. REFER TO A9-211 FOR DIMENSIONS OF POTLIGHTS ABOVE UNIT TUBS AND SHOWERS.

CEILING LEGEND:

- GYPSUM CEILING ASSEMBLY. SEE A0-300 FOR ADDITIONAL INFO.
- EXPOSED CONCRETE CEILINGS
- EXTERIOR ARCHITECTURAL METAL SOFFIT

CEILING TAG LEGEND

CEILING TYPE TAG — TYPE / FIRE RATING

SPOT ELEVATION & CLG TYPE — 2200 / GB1 — ELEVATION (ABOVE SSL) / CEILING TYPE

LIGHTING LEGEND (SEE ELECTRICAL DWGS FOR ADDT'L INFO)

FIXTURE TYPE	SYMBOL	TAG
BOLLARD LIGHT		B-X
LIGHT COVE		F-1
UNDERCABINET LIGHTS		U-X
LINEAR FIXTURE		L-X
LED-ILLUMINATED MIRROR		M-X
PENDANT FIXTURE		P-X
RECESSED FIXTURE		R-X
SURFACE MOUNTED FIXTURE		S-X
TRACK LIGHT		T-X
WALL SCONCE		W-X
WINDOW COVERINGS (MAN)		WC-01
WINDOW COVERINGS (AUTO)		WC-02

LIGHTING INSTALLATION NOTES

GENERAL NOTES

SUSPENDEND LIGHTS:
BOTTOM OF PENDANT (± 1980mm AFF)
TO BE CONFIRMED BY ARCH.

LIGHTS SUSPENDED OVER TABLE OR DESK:
BOTTOM OF PENDANT (813 mm TO 914 mm) FROM TOP OF WORKING SURFACE.
LEAVE 152mm OF WIRE FOR SITE ADJUSTMENT

SEE ELECTRICAL PLAN FOR ADDITIONAL INFO.

CEILING FIXTURE LEGEND

FIXTURE TYPE	SYMBOL
CEILING SPRINKLER HEAD	
EMERGENCY SPEAKER/STROBE	
SMOKE DETECTOR	
OCCUPANCY SENSOR	
DAYLIGHT SENSOR	
WIRELESS ACCESS POINT	
EXIT SIGN	
UPGRADE OPTION	

ACCESS DOOR LEGEND

TAG	DESCRIPTION
AD-01	305x305mm GYPSUM ACCESS DOOR. AD-01 SHOWN IN THE PUBLIC CORRIDOR IN TYPICAL 03 TO 08 CEILING PLAN ONLY ON L3 CROSS OVER FLOOR
AD-02a	305x305mm GYPSUM ACCESS DOOR, RECESSED, TRIMLESS
AD-02	610x610mm GYPSUM ACCESS DOOR, RECESSED, TRIMLESS
AD-03	457x457mm GYPSUM ACCESS DOOR

1 A3-201-W ENLARGED REFLECTED CEILING PLAN - LEVEL 01 (WEST)
1 : 50
AD-204

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
2025-06-12 4:33:48 PM

client
CLVGROUP DEVELOPMENTS

structural engineers | ingénieurs structurels
CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

electrical engineers | ingénieur electrique
mechanical engineer | ingénieur méchanique
GWAL
Goodkey, Weedmark & Associates Ltd.

civil engineers | ingénieur civil
wsp

landscape architect | architecte paysagiste
CSW

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:33:48 PM

21 RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER 25-06-12
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19 ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING 25-05-16
18 ISSUED FOR 66% WD & CLIENT BUDGETING 25-03-28

no revisions | date

stamp | timbre

architect | architecte
linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

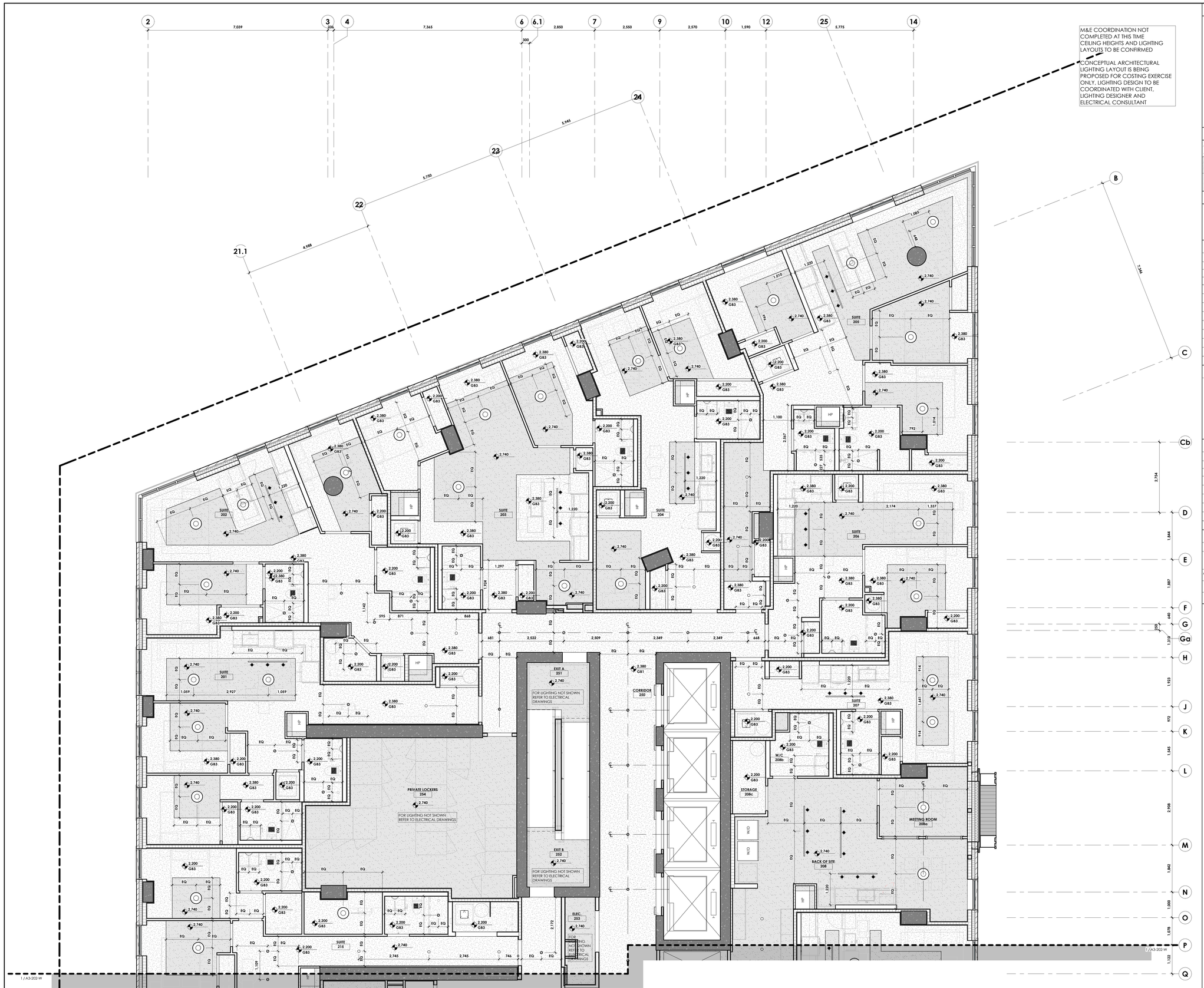
drawing title | titre du dessin

ENLARGED RCP - LEVEL 01 - WEST

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**As indicated**
date | date	**02/20/25**

drawing number | numéro du dessin

A3-201-W



1 ENLARGED REFLECTED CEILING PLAN - LEVEL 02 (EAST)
A3-202-E 1 : 50
AO-204

GENERAL NOTES

1. REFLECTED CEILING PLANS ARE FOR GENERAL COORDINATION AND LAYOUT ONLY. FOR QUANTITIES AND TYPES OF FIXTURES AND EQUIPMENT REFER TO MECHANICAL AND ELECTRICAL DRAWINGS
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7. REFER TO A9-211 FOR DIMENSIONS OF POTLIGHTS ABOVE UNIT TUBS AND SHOWERS.

CEILING LEGEND:

- GYPSUM CEILING ASSEMBLY. SEE A0-300 FOR ADDITIONAL INFO.
- EXPOSED CONCRETE CEILINGS
- EXTERIOR ARCHITECTURAL METAL SOFFIT

CEILING TAG LEGEND

- CEILING TYPE TAG: TYPE / FIRE RATING
- SPOT ELEVATION & CLG TYPE: 2200 / GB1 — ELEVATION (ABOVE SSL) / CEILING TYPE

LIGHTING LEGEND (SEE ELECTRICAL DWGS FOR ADDT'L INFO)

FIXTURE TYPE	SYMBOL	TAG
BOLLARD LIGHT		B-X
LIGHT COVE		F-1
UNDERCABINET LIGHTS		U-X
LINEAR FIXTURE		L-X
LED-ILLUMINATED MIRROR		M-X
PENDANT FIXTURE		P-X
RECESSED FIXTURE		R-X
SURFACE MOUNTED FIXTURE		S-X
TRACK LIGHT		T-X
WALL SCONCE		W-X
WINDOW COVERINGS (MAN)		WC-01
WINDOW COVERINGS (AUTO)		WC-02

LIGHTING INSTALLATION NOTES

GENERAL NOTES

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CEILING FIXTURE LEGEND

FIXTURE TYPE	SYMBOL
CEILING SPRINKLER HEAD	
EMERGENCY SPEAKER/STROBE	
SMOKE DETECTOR	
OCCUPANCY SENSOR	
DAYLIGHT SENSOR	
WIRELESS ACCESS POINT	
EXIT SIGN	
UPGRADE OPTION	

ACCESS DOOR LEGEND

TAG	DESCRIPTION
AD-01	305x305mm GYPSUM ACCESS DOOR. AD-01 SHOWN IN THE PUBLIC CORRIDOR IN TYPICAL 03 TO 08 CEILING PLAN ONLY ON L3 CROSS OVER FLOOR
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AD-03	457x457mm GYPSUM ACCESS DOOR

CLVGROUP DEVELOPMENTS
client

CUNLIFFE & ASSOCIATES CONSULTING STRUCTURAL ENGINEERS
structural engineers | ingénieurs structurels

GWAL Goodkey, Weedmark & Associates Ltd.
electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp
civil engineers | ingénieur civil

CSW
landscape architect | architecte paysagiste

nord du projet project north | nord reel true north

NOT FOR CONSTRUCTION 2025-06-12 4:33:51 PM

21 RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER 25-06-12
20 ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER 25-05-30
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no revisions | date

stamp | timbre

architect | architecte
linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ENLARGED RCP - LEVEL 02 - EAST

project number | numero du projet	2402
drawn | dessiné	JH / DL / PC / JP
checked | verifié	JP / AR
scale | échelle	As indicated
date | date	02/20/25

drawing number | numéro du dessin

A3-202-E

Autodesk Docs://Gladstone & Loretta/2402 145 Loretta CLV_LB_Tower A.rvt
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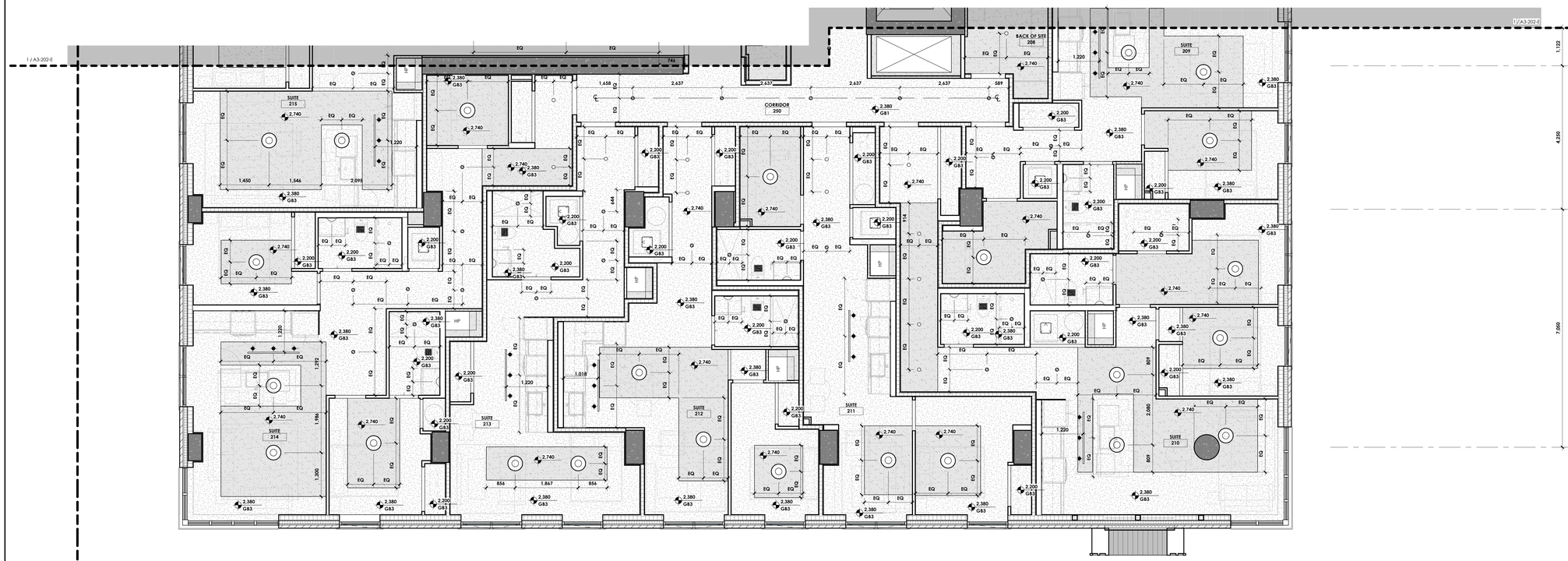

1 ENLARGED REFLECTED CEILING PLAN - LEVEL 02 (WEST)
A3-202-W 1 : 50
AD-204

GENERAL NOTES

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4. REFER TO ELECTRICAL DRAWINGS FOR EMERGENCY LIGHTING AND EXITING REQUIREMENT DETAILS
5. ALL CEILING W/O HATCH ARE TO BE EXPOSED TO STRUCTURE ABOVE, U.N.O.
6. ALL LIGHTING FIXTURES MOUNTED TO EXPOSED CONCRETE SLABS REQUIRE ASSOCIATED CABLES, CONDUITS, AND ELECTRICAL BOXES TO BE CAST INTO THE SLAB DURING CONSTRUCTION. REFER TO ELECTRICAL AND STRUCTURAL DRAWINGS.
7. REFER TO A9-211 FOR DIMENSIONS OF POTLIGHTS ABOVE UNIT TUBS AND SHOWERS.

CEILING LEGEND:

- GYPSUM CEILING ASSEMBLY. SEE A0-300 FOR ADDITIONAL INFO.
- EXPOSED CONCRETE CEILINGS
- EXTERIOR ARCHITECTURAL METAL SOFFIT

CEILING TAG LEGEND

CEILING TYPE TAG — TYPE / FIRE RATING

SPOT ELEVATION & CLG TYPE — 2200 / G81 — ELEVATION (ABOVE SSL) / CEILING TYPE

LIGHTING LEGEND (SEE ELECTRICAL DWGS FOR ADDT'L INFO)

FIXTURE TYPE	SYMBOL	TAG
BOLLARD LIGHT		B-X
LIGHT COVE		F-1
UNDERCABINET LIGHTS		U-X
LINEAR FIXTURE		L-X
LED-ILLUMINATED MIRROR		M-X
PENDANT FIXTURE		P-X
RECESSED FIXTURE		R-X
SURFACE MOUNTED FIXTURE		S-X
TRACK LIGHT		T-X
WALL SCONCE		W-X
WINDOW COVERINGS [MAN]		WC-01
WINDOW COVERINGS [AUTO]		WC-02

LIGHTING INSTALLATION NOTES

GENERAL NOTES

SUSPENDEND LIGHTS:
BOTTOM OF PENDANT (± 1980mm AFF)
TO BE CONFIRMED BY ARCH.

LIGHTS SUSPENDED OVER TABLE OR DESK:
BOTTOM OF PENDANT (813 mm TO 914 mm) FROM TOP OF WORKING SURFACE.
LEAVE 152mm OF WIRE FOR SITE ADJUSTMENT

SEE ELECTRICAL PLAN FOR ADDITIONAL INFO.

CEILING FIXTURE LEGEND

FIXTURE TYPE	SYMBOL
CEILING SPRINKLER HEAD	
EMERGENCY SPEAKER/STROBE	(ES)
SMOKE DETECTOR	(S)
OCCUPANCY SENSOR	(OS)
DAYLIGHT SENSOR	(DL)
WIRELESS ACCESS POINT	(WAP)
EXIT SIGN	
UPGRADE OPTION	(U)

ACCESS DOOR LEGEND

TAG	DESCRIPTION
AD-01	305x305mm GYPSUM ACCESS DOOR. AD-01 SHOWN IN THE PUBLIC CORRIDOR IN TYPICAL 03 TO 08 CEILING PLAN ONLY ON L3 CROSS OVER FLOOR
AD-02a	305x305mm GYPSUM ACCESS DOOR, RECESSED, TRIMLESS
AD-02	610x610mm GYPSUM ACCESS DOOR, RECESSED, TRIMLESS
AD-03	457x457mm GYPSUM ACCESS DOOR

client
CLVGROUP DEVELOPMENTS

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS
structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.
electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique
wsp
civil engineers | ingénieur civil

CSW
landscape architect | architecte paysagiste

nord du projet project north
nord reel true north

NOT FOR CONSTRUCTION
2025-06-12 4:33:54 PM

no	revisions	date
21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte
linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ENLARGED RCP - LEVEL 02 - WEST

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**As indicated**
date | date	**02/20/25**

drawing number | numéro du dessin

A3-202-W

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV JB_Tower A.rvt
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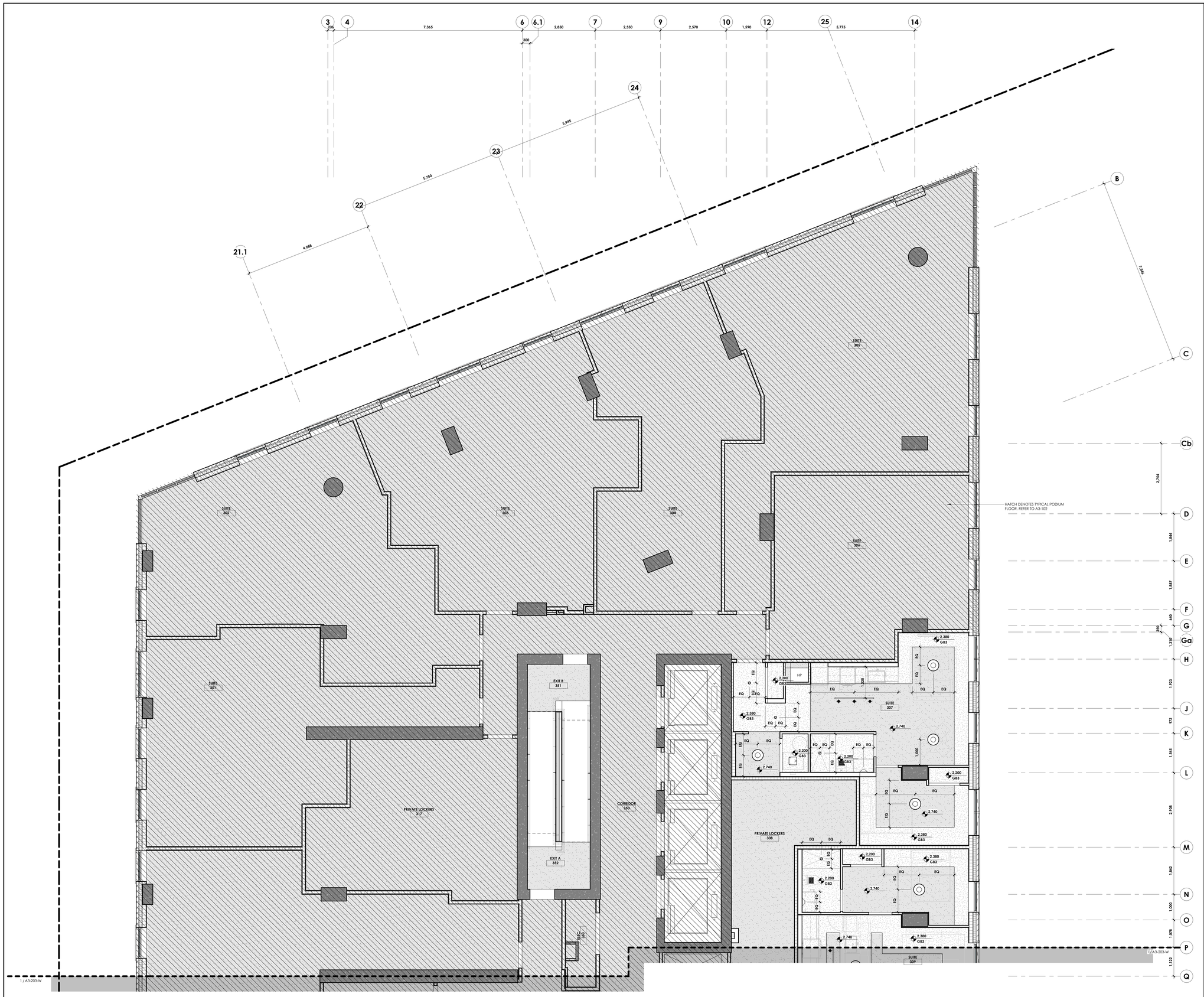

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- EXPOSED CONCRETE CEILINGS
- EXTERIOR ARCHITECTURAL METAL SOFFIT

CEILING TAG LEGEND

CEILING TYPE TAG — TYPE / FIRE RATING

SPOT ELEVATION & CLG TYPE — 2200 / GB1 — ELEVATION (ABOVE SSL) / CEILING TYPE

LIGHTING LEGEND (SEE ELECTRICAL DWGS FOR ADD'L INFO)

FIXTURE TYPE	SYMBOL	TAG
BOLLARD LIGHT		B-X
LIGHT COVE		F-1
UNDERCABINET LIGHTS		U-X
LINEAR FIXTURE		L-X
LED-ILLUMINATED MIRROR		M-X
PENDANT FIXTURE		P-X
RECESSED FIXTURE		R-X
SURFACE MOUNTED FIXTURE		S-X
TRACK LIGHT		T-X
WALL SCONCE		W-X
WINDOW COVERINGS [MAN]		WC-01
WINDOW COVERINGS [AUTO]		WC-02

LIGHTING INSTALLATION NOTES

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CEILING FIXTURE LEGEND

FIXTURE TYPE	SYMBOL
CEILING SPRINKLER HEAD	
EMERGENCY SPEAKER/STROBE	ES
SMOKE DETECTOR	S
OCCUPANCY SENSOR	OS
DAYLIGHT SENSOR	DL
WIRELESS ACCESS POINT	WAP
EXIT SIGN	
UPGRADE OPTION	(U)

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AD-03	457x457mm GYPSUM ACCESS DOOR

1 ENLARGED REFLECTED CEILING PLAN - LEVEL 03 (PODIUM) EAST
A3-203-E 1 : 50
A0-204

client
CLVGROUP DEVELOPMENTS

structural engineers | ingénieurs structurels
CUNLIFFE & ASSOCIATES — CONSULTING STRUCTURAL ENGINEERS

electrical engineers | ingénieur electrique
mechanical engineer | ingénieur méchanique
GWAL — Goodkey, Weedmark & Associates Ltd.

civil engineers | ingénieur civil
wsp

landscape architect | architecte paysagiste
CSW

nord du projet project north
nord reel true north

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no	revisions	date

stamp | timbre

architect | architecte
linebox STUDIO

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GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ENLARGED RCP - LEVEL 03 - EAST

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**As indicated**
date | date	**02/20/25**

drawing number | numéro du dessin

A3-203-E

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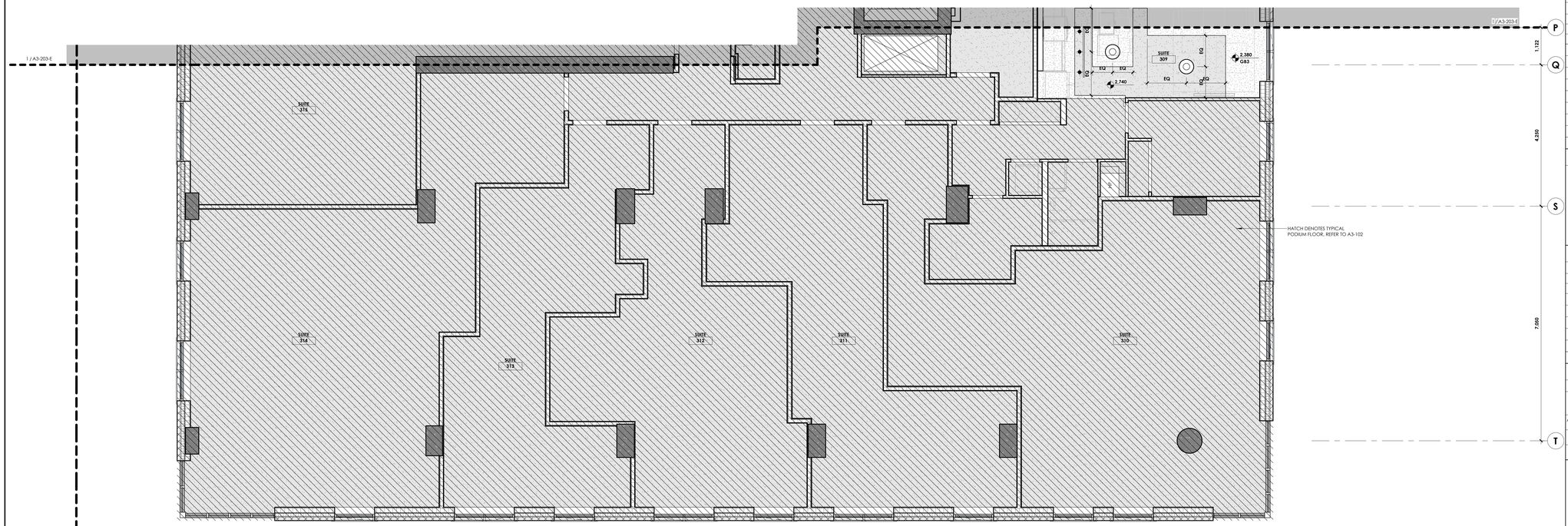

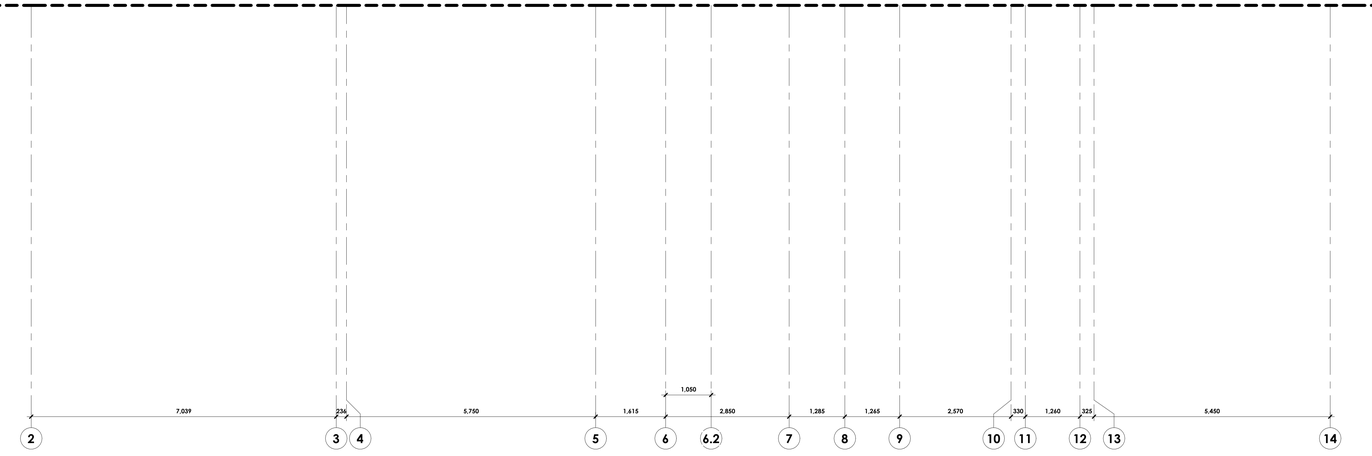

1 ENLARGED REFLECTED CEILING PLAN - LEVEL 03 (PODIUM) (WEST)
A3-203-W / 1 : 50
AO-204

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CEILING LEGEND:

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CEILING TAG LEGEND

CEILING TYPE TAG — TYPE / FIRE RATING

SPOT ELEVATION & CLG TYPE — 2200 / G81 — ELEVATION (ABOVE SSL) / CEILING TYPE

LIGHTING LEGEND (SEE ELECTRICAL DWGS FOR ADDT'L INFO)

FIXTURE TYPE	SYMBOL	TAG
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LIGHT COVE		F-1
UNDERCABINET LIGHTS		U-X
LINEAR FIXTURE		L-X
LED-ILLUMINATED MIRROR		M-X
PENDANT FIXTURE		P-X
RECESSED FIXTURE		R-X
SURFACE MOUNTED FIXTURE		S-X
TRACK LIGHT		T-X
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CEILING FIXTURE LEGEND

FIXTURE TYPE	SYMBOL
CEILING SPRINKLER HEAD	
EMERGENCY SPEAKER/STROBE	
SMOKE DETECTOR	
OCCUPANCY SENSOR	
DAYLIGHT SENSOR	
WIRELESS ACCESS POINT	WAP
EXIT SIGN	
UPGRADE OPTION	(U)

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client
CLVGROUP DEVELOPMENTS

structural engineers | ingénieurs structurels
CUNLIFFE & ASSOCIATES CONSULTING STRUCTURAL ENGINEERS

electrical engineers | ingénieur electrique
mechanical engineer | ingénieur méchanique
GWAL Goodkey, Weedmark & Associates Ltd.

civil engineers | ingénieur civil
wsp

landscape architect | architecte paysagiste
CSW

nord du projet project north
nord reel true north

NOT FOR CONSTRUCTION
2025-06-12 4:33:57 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	25-06-12
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	25-05-30
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stamp | timbre

architect | architecte
linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ENLARGED RCP - LEVEL 03 - WEST

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**As indicated**
date | date	**02/20/25**

drawing number | numéro du dessin

A3-203-W

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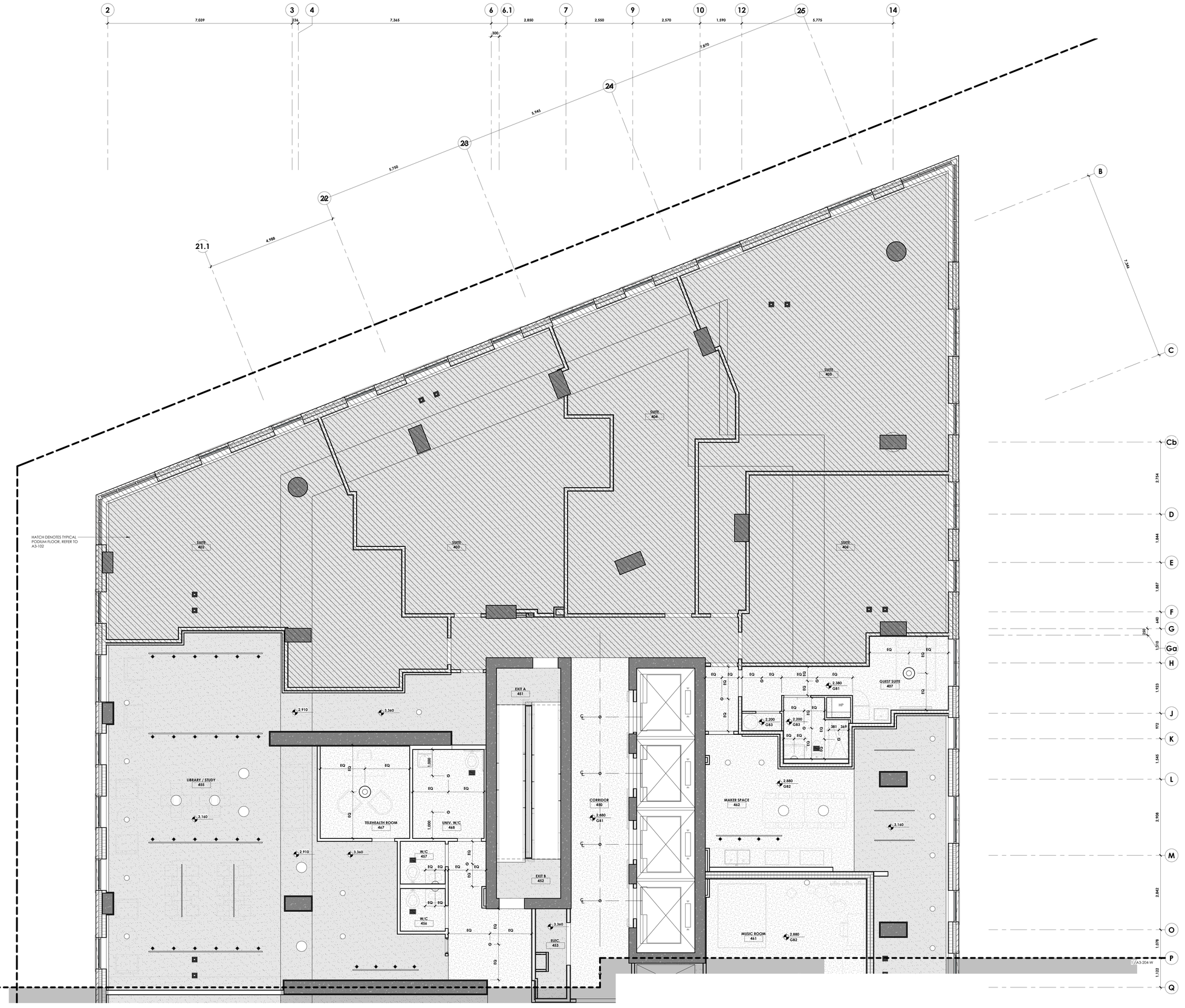

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CEILING LEGEND:

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	EXPOSED CONCRETE CEILINGS
	EXTERIOR ARCHITECTURAL METAL SOFFIT

CEILING TAG LEGEND

CEILING TYPE TAG	TYPE / FIRE RATING
SPOT ELEVATION & CLG TYPE	2200 / GB1 — ELEVATION (ABOVE SSL) / CEILING TYPE

LIGHTING LEGEND (SEE ELECTRICAL DWGS FOR ADDT'L INFO)

FIXTURE TYPE	SYMBOL	TAG
BOLLARD LIGHT		B-X
LIGHT COVE		F-1
UNDERCABINET LIGHTS		U-X
LINEAR FIXTURE		L-X
LED-ILLUMINATED MIRROR		M-X
PENDANT FIXTURE		P-X
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FIXTURE TYPE	SYMBOL
CEILING SPRINKLER HEAD	
EMERGENCY SPEAKER/STROBE	
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WIRELESS ACCESS POINT	
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TAG	DESCRIPTION
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1 ENLARGED REFLECTED CEILING PLAN - LEVEL 04 (EAST)
A3-204-E 1 : 50
A0-204

Autodesk Docs://Gladstone & Loretta/2402 - 145 Loretta CLV- LB Tower A.rvt
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CLVGROUP DEVELOPMENTS
client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS
structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.
electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp
civil engineers | ingénieur civil

CSW
landscape architect | architecte paysagiste

nord du projet
project north

nord reel
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stamp | timbre

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

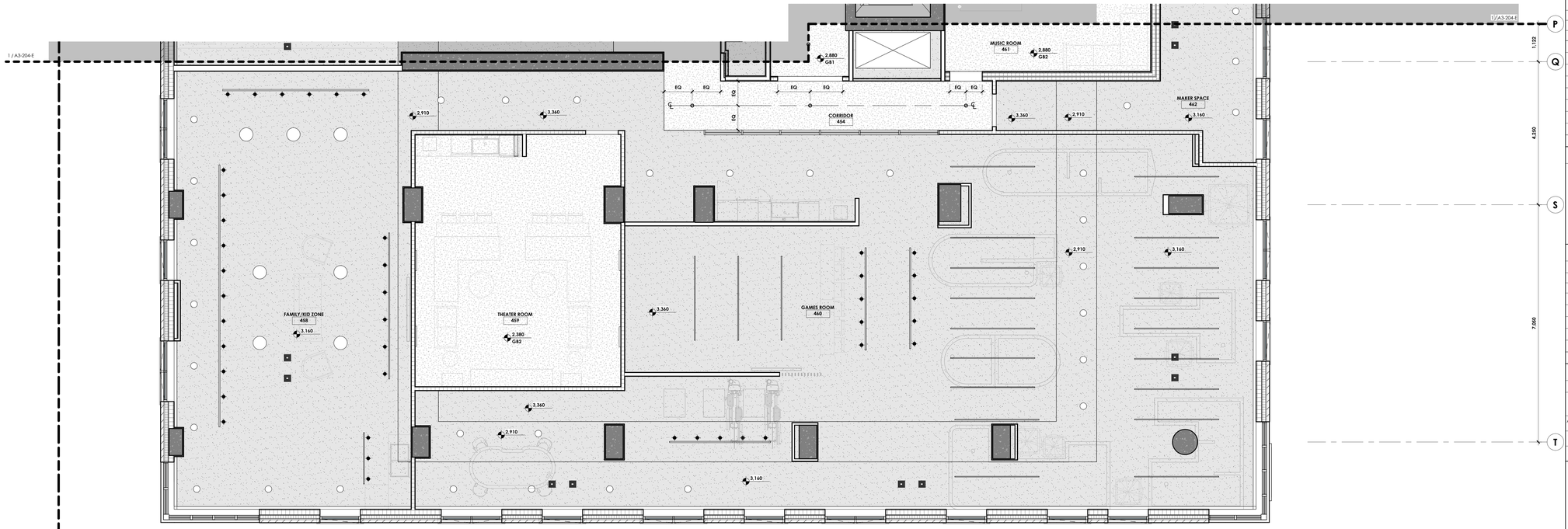
drawing title | titre du dessin

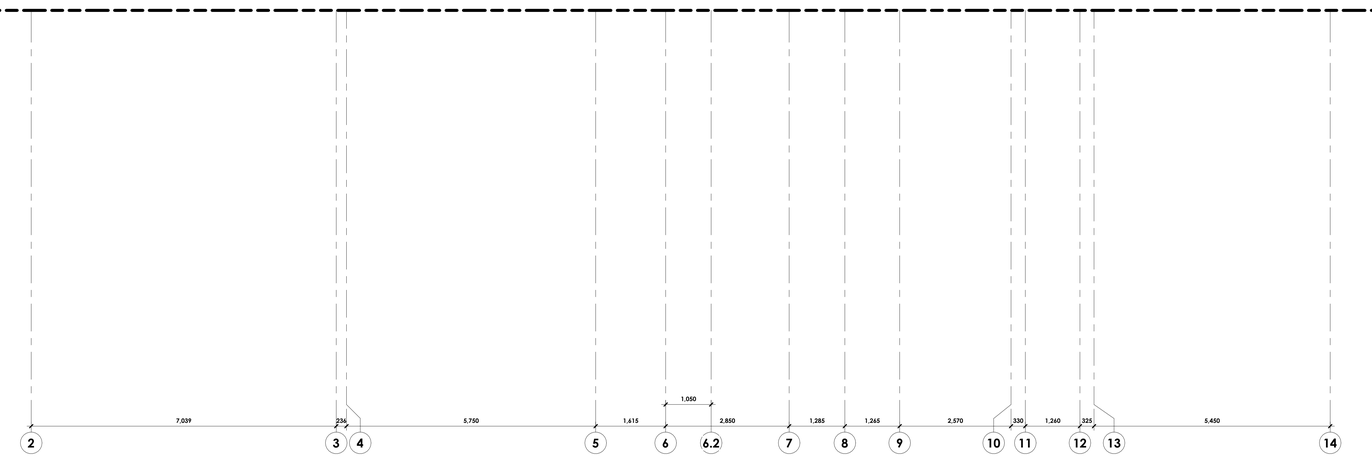
ENLARGED RCP - LEVEL 04 - EAST

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JF / AR**
scale | échelle	**As indicated**
date | date	**02/20/25**

drawing number | numéro du dessin

A3-204-E





1 A3-204-W 1 : 50 A0-204

ENLARGED REFLECTED CEILING PLAN - LEVEL 04 (WEST)

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- EXPOSED CONCRETE CEILINGS
- EXTERIOR ARCHITECTURAL METAL SOFFIT

CEILING TAG LEGEND

CEILING TYPE TAG — TYPE / FIRE RATING

SPOT ELEVATION & CLG TYPE — 2200 / GB1 — ELEVATION (ABOVE SSL) / CEILING TYPE

LIGHTING LEGEND (SEE ELECTRICAL DWGS FOR ADDT'L INFO)

FIXTURE TYPE	SYMBOL	TAG
BOLLARD LIGHT		B-X
LIGHT COVE		F-1
UNDERCABINET LIGHTS		U-X
LINEAR FIXTURE		L-X
LED-ILLUMINATED MIRROR		M-X
PENDANT FIXTURE		P-X
RECESSED FIXTURE		R-X
SURFACE MOUNTED FIXTURE		S-X
TRACK LIGHT		T-X
WALL SCONCE		W-X
WINDOW COVERINGS [MAN]		WC-01
WINDOW COVERINGS [AUTO]		WC-02

LIGHTING INSTALLATION NOTES

GENERAL NOTES

SUSPENDEND LIGHTS:
BOTTOM OF PENDANT (± 1980mm AFF)
TO BE CONFIRMED BY ARCH.

LIGHTS SUSPENDED OVER TABLE OR DESK:
BOTTOM OF PENDANT (813 mm TO 914 mm) FROM TOP OF WORKING SURFACE.
LEAVE 152mm OF WIRE FOR SITE ADJUSTMENT

SEE ELECTRICAL PLAN FOR ADDITIONAL INFO.

CEILING FIXTURE LEGEND

FIXTURE TYPE	SYMBOL
CEILING SPRINKLER HEAD	
EMERGENCY SPEAKER/STROBE	(ES)
SMOKE DETECTOR	(S)
OCCUPANCY SENSOR	(OS)
DAYLIGHT SENSOR	(DL)
WIRELESS ACCESS POINT	(WAP)
EXIT SIGN	
UPGRADE OPTION	(U)

ACCESS DOOR LEGEND

TAG	DESCRIPTION
AD-01	305x305mm GYPSUM ACCESS DOOR. AD-01 SHOWN IN THE PUBLIC CORRIDOR IN TYPICAL 03 TO 08 CEILING PLAN ONLY ON L3 CROSS OVER FLOOR
AD-02a	305x305mm GYPSUM ACCESS DOOR, RECESSED, TRIMLESS
AD-02	610x610mm GYPSUM ACCESS DOOR, RECESSED, TRIMLESS
AD-03	457x457mm GYPSUM ACCESS DOOR

CLVGROUP DEVELOPMENTS — client

CUNLIFFE & ASSOCIATES CONSULTING STRUCTURAL ENGINEERS — structural engineers | ingénieurs structurels

GWAL Goodkey, Weedmark & Associates Ltd. — electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp — civil engineers | ingénieur civil

CSW — landscape architect | architecte paysagiste

nord du projet project north

nord reel true north

NOT FOR CONSTRUCTION 2025-06-12 4:34:01 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
19	~~ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING~~	~~25-05-16~~
18	ISSUED FOR 65% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte

linebox STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ENLARGED RCP - LEVEL 04 - WEST

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**As indicated**
date | date	**02/20/25**

drawing number | numéro du dessin

A3-204-W

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV JB_Tower A.rvt
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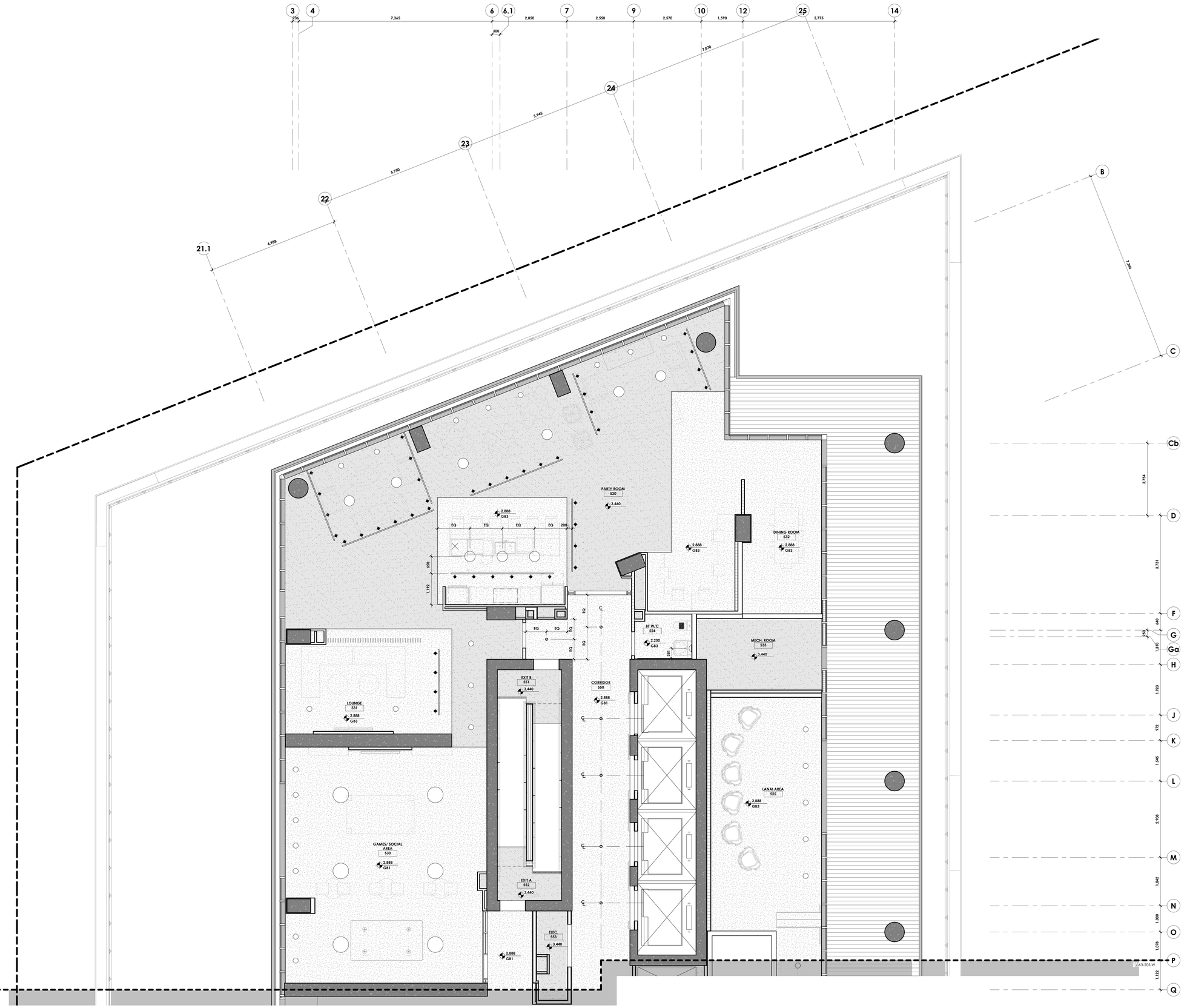

GENERAL NOTES

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7. REFER TO A9-211 FOR DIMENSIONS OF POTLIGHTS ABOVE UNIT TUBS AND SHOWERS.

CEILING LEGEND:

- GYPSUM CEILING ASSEMBLY. SEE A0-300 FOR ADDITIONAL INFO.
- EXPOSED CONCRETE CEILINGS
- EXTERIOR ARCHITECTURAL METAL SOFFIT

CEILING TAG LEGEND

CEILING TYPE TAG — TYPE / FIRE RATING

SPOT ELEVATION & CLG TYPE — 2200 / GB1 — ELEVATION (ABOVE SSL) / CEILING TYPE

LIGHTING LEGEND (SEE ELECTRICAL DWGS FOR ADDT'L INFO)

FIXTURE TYPE	SYMBOL	TAG
BOLLARD LIGHT		B-X
LIGHT COVE		F-1
UNDERCABINET LIGHTS		U-X
LINEAR FIXTURE		L-X
LED-ILLUMINATED MIRROR		M-X
PENDANT FIXTURE		P-X
RECESSED FIXTURE		R-X
SURFACE MOUNTED FIXTURE		S-X
TRACK LIGHT		T-X
WALL SCONCE		W-X
WINDOW COVERINGS (MAN)		WC-01
WINDOW COVERINGS (AUTO)		WC-02

LIGHTING INSTALLATION NOTES

GENERAL NOTES

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LEAVE 152mm OF WIRE FOR SITE ADJUSTMENT

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CEILING FIXTURE LEGEND

FIXTURE TYPE	SYMBOL
CEILING SPRINKLER HEAD	
EMERGENCY SPEAKER/STROBE	
SMOKE DETECTOR	
OCCUPANCY SENSOR	
DAYLIGHT SENSOR	
WIRELESS ACCESS POINT	
EXIT SIGN	
UPGRADE OPTION	

ACCESS DOOR LEGEND

TAG	DESCRIPTION
AD-01	305x305mm GYPSUM ACCESS DOOR. AD-01 SHOWN IN THE PUBLIC CORRIDOR IN TYPICAL 03 TO 08 CEILING PLAN ONLY ON L3 CROSS OVER FLOOR
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AD-03	457x457mm GYPSUM ACCESS DOOR

1 / A3-205 ENLARGED REFLECTED CEILING PLAN - LEVEL 05 (EAST)
1 : 50
A0-204

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
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CLVGROUP DEVELOPMENTS — client

CUNLIFFE & ASSOCIATES CONSULTING STRUCTURAL ENGINEERS — structural engineers | ingénieurs structurels

GWAL Goodkey, Weedmark & Associates Ltd. — electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp — civil engineers | ingénieur civil

CSW — landscape architect | architecte paysagiste

nord du projet / project north — nord reel / true north

NOT FOR CONSTRUCTION 2025-06-12 4:34:03 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	25-06-12
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

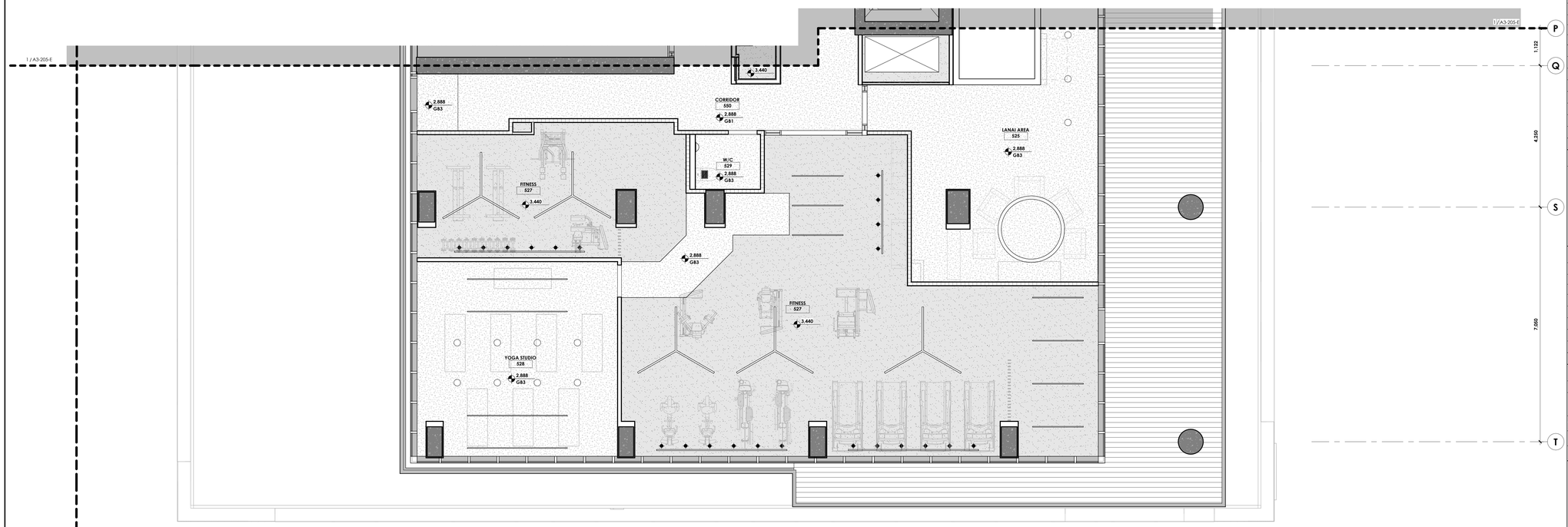
drawing title | titre du dessin

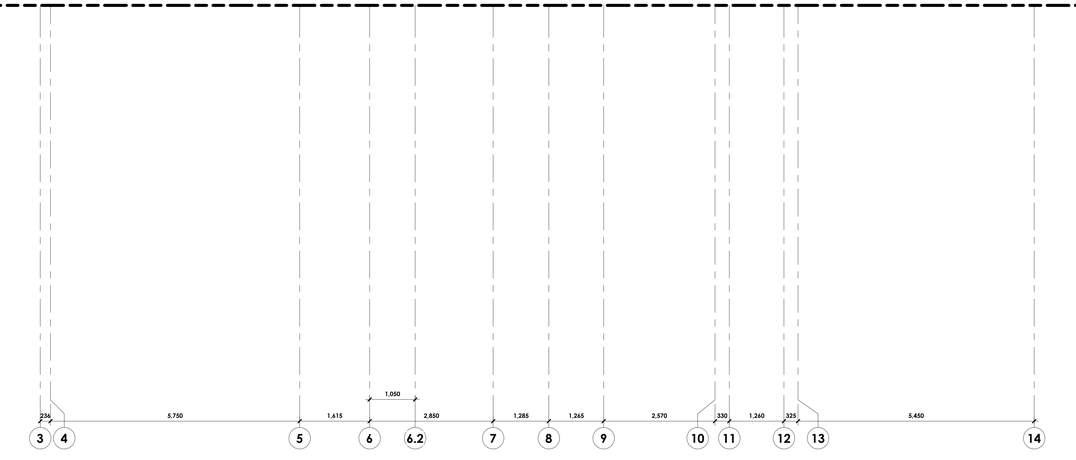
ENLARGED RCP - LEVEL 05 - EAST

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**As indicated**
date | date	**02/20/25**

drawing number | numéro du dessin

A3-205-E





1 ENLARGED REFLECTED CEILING PLAN - LEVEL 05 (WEST)
A3-205-W / 1 : 50
A0-204

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7. REFER TO A9-211 FOR DIMENSIONS OF FOTLIGHTS ABOVE UNIT TUBS AND SHOWERS.

CEILING LEGEND:

- GYPSUM CEILING ASSEMBLY, SEE A0-300 FOR ADDITIONAL INFO.
- EXPOSED CONCRETE CEILINGS
- EXTERIOR ARCHITECTURAL METAL SOFFIT

CEILING TAG LEGEND

CEILING TYPE TAG — TYPE / FIRE RATING

SPOT ELEVATION & CLG TYPE — 2200 / G81 — ELEVATION (ABOVE SSL) / CEILING TYPE

LIGHTING LEGEND (SEE ELECTRICAL DWGS FOR ADD'L INFO)

FIXTURE TYPE	SYMBOL	TAG
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LIGHT COVE		F-1
UNDERCABINET LIGHTS		U-X
LINEAR FIXTURE		L-X
LED-ILLUMINATED MIRROR		M-X
PENDANT FIXTURE		P-X
RECESSED FIXTURE		R-X
SURFACE MOUNTED FIXTURE		S-X
TRACK LIGHT		T-X
WALL SCONCE		W-X
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LIGHTING INSTALLATION NOTES

GENERAL NOTES

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CEILING FIXTURE LEGEND

FIXTURE TYPE	SYMBOL
CEILING SPRINKLER HEAD	
EMERGENCY SPEAKER/STROBE	(ES)
SMOKE DETECTOR	(S)
OCCUPANCY SENSOR	(OS)
DAYLIGHT SENSOR	(DL)
WIRELESS ACCESS POINT	(WAP)
EXIT SIGN	
UPGRADE OPTION	(U)

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mechanical engineer | ingénieur méchanique

wsp — civil engineers | ingénieur civil

CSW — landscape architect | architecte paysagiste

nord du projet project north

nord reel true north

NOT FOR CONSTRUCTION
2025-06-12 4:34:05 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
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18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ENLARGED RCP - LEVEL 05 - WEST

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**As indicated**
date | date	**02/20/25**

drawing number | numéro du dessin

A3-205-W

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
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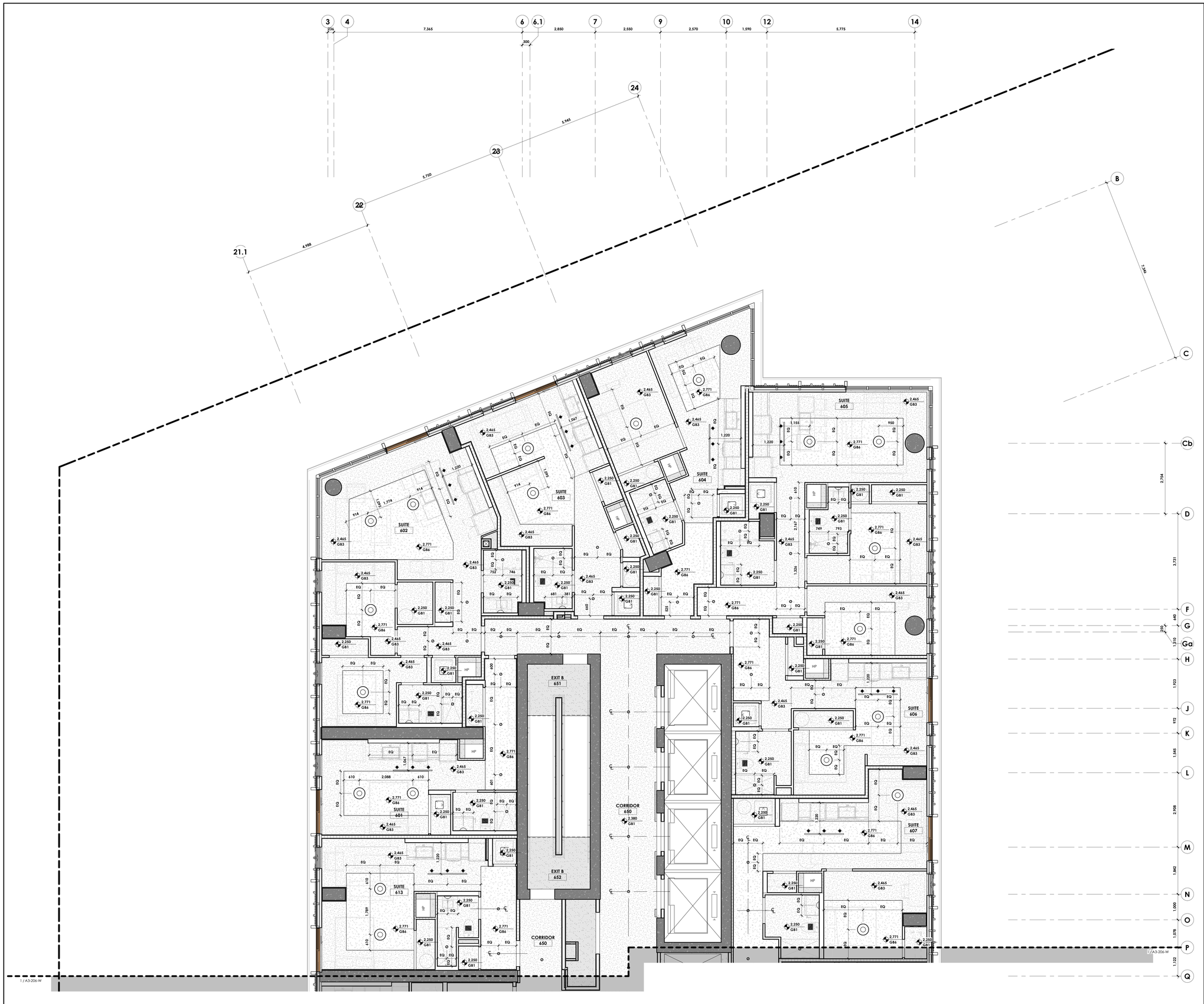

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CEILING LEGEND:

- GYPSUM CEILING ASSEMBLY. SEE A0-300 FOR ADDITIONAL INFO.
- EXPOSED CONCRETE CEILINGS
- EXTERIOR ARCHITECTURAL METAL SOFFIT

CEILING TAG LEGEND

CEILING TYPE TAG — TYPE / FIRE RATING

SPOT ELEVATION & CLG TYPE — 2200 / G81 — ELEVATION (ABOVE SSL) / CEILING TYPE

LIGHTING LEGEND (SEE ELECTRICAL DWGS FOR ADDT'L INFO)

FIXTURE TYPE	SYMBOL	TAG
BOLLARD LIGHT		B-X
LIGHT COVE		F-1
UNDERCABINET LIGHTS		U-X
LINEAR FIXTURE		L-X
LED-ILLUMINATED MIRROR		M-X
PENDANT FIXTURE		P-X
RECESSED FIXTURE		R-X
SURFACE MOUNTED FIXTURE		S-X
TRACK LIGHT		T-X
WALL SCONCE		W-X
WINDOW COVERINGS [MAN]		WC-01
WINDOW COVERINGS [AUTO]		WC-02

LIGHTING INSTALLATION NOTES

GENERAL NOTES

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CEILING FIXTURE LEGEND

FIXTURE TYPE	SYMBOL
CEILING SPRINKLER HEAD	
EMERGENCY SPEAKER/STROBE	
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OCCUPANCY SENSOR	
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WIRELESS ACCESS POINT	
EXIT SIGN	
UPGRADE OPTION	

ACCESS DOOR LEGEND

TAG	DESCRIPTION
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AD-02a	305x305mm GYPSUM ACCESS DOOR, RECESSED, TRIMLESS
AD-02	610x610mm GYPSUM ACCESS DOOR, RECESSED, TRIMLESS
AD-03	457x457mm GYPSUM ACCESS DOOR

1 ENLARGED REFLECTED CEILING PLAN - LEVEL 06 - 30 (EAST)
A3-206 1 : 50 A0-204

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV LR_Tower A.rvt
2025-06-12 4:34:07 PM

CLVGROUP DEVELOPMENTS — client

CUNLIFFE & ASSOCIATES CONSULTING STRUCTURAL ENGINEERS — structural engineers | ingénieurs structurels

GWAL Goodkey, Weedmark & Associates Ltd. — electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp — civil engineers | ingénieur civil

CSW — landscape architect | architecte paysagiste

nord du projet / project north — nord reel / true north

NOT FOR CONSTRUCTION 2025-06-12 4:34:07 PM

no	revisions	date
21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
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stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

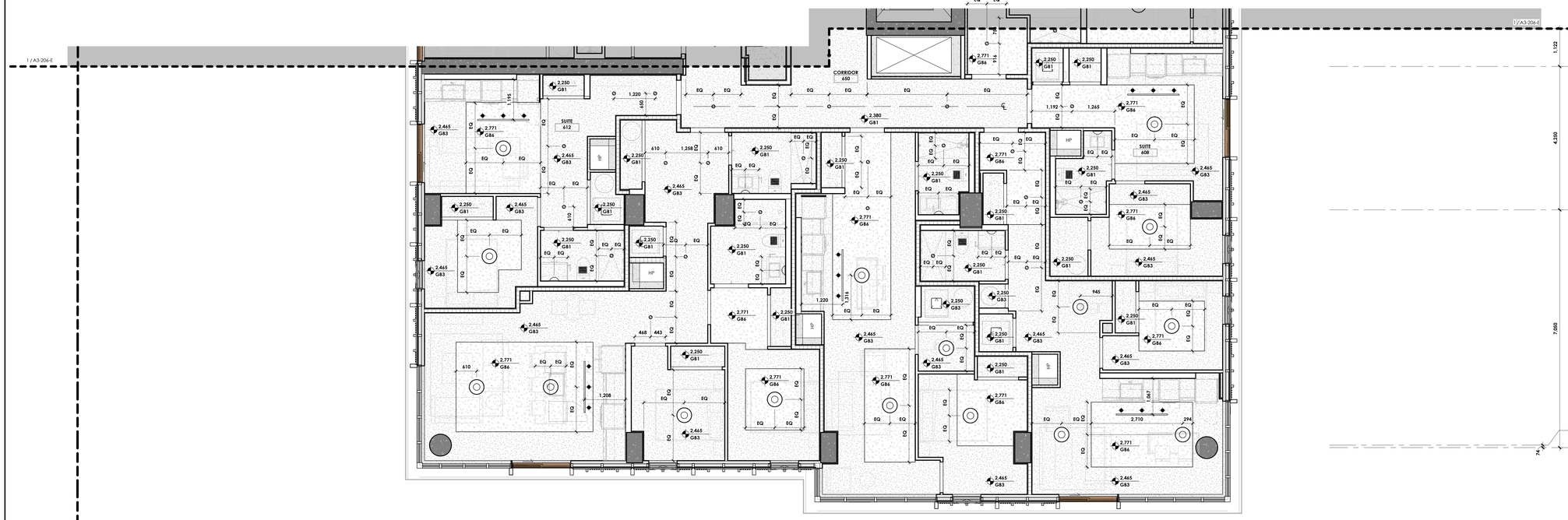
drawing title | titre du dessin

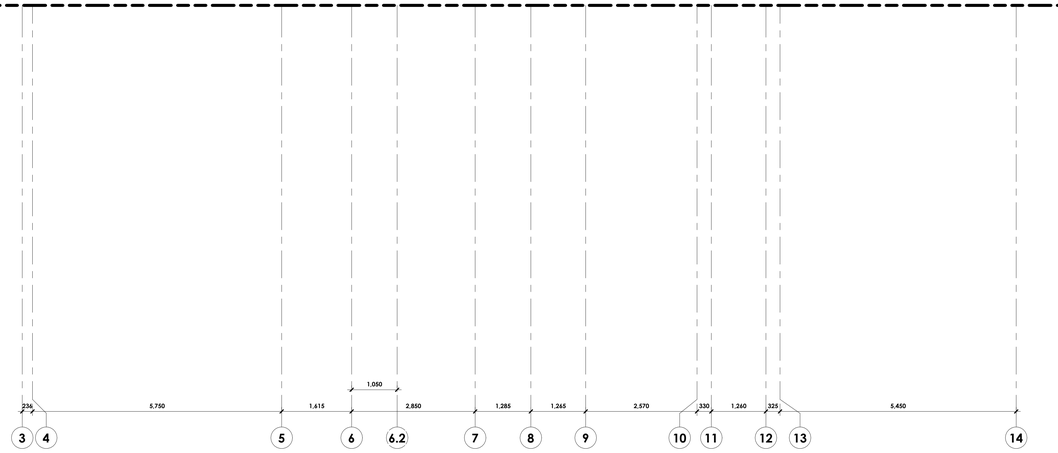
ENLARGED RCP - LEVEL 06 - 30 (TYPICAL TOWER) - EAST

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**As indicated**
date | date	**02/11/25**

drawing number | numéro du dessin

A3-206-E





1 A3-206-W ENLARGED REFLECTED CEILING PLAN - LEVEL 06 - 30 (WEST)
1 : 50
AD-204

GENERAL NOTES

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CEILING LEGEND:

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CEILING TAG LEGEND

CEILING TYPE TAG — TYPE / FIRE RATING

SPOT ELEVATION & CLG TYPE — 2200 ELEVATION (ABOVE SSL) / GB1 CEILING TYPE

LIGHTING LEGEND (SEE ELECTRICAL DWGS FOR ADDT'L INFO)

FIXTURE TYPE	SYMBOL	TAG
BOLLARD LIGHT		B-X
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WINDOW COVERINGS [MAN]		WC-01
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FIXTURE TYPE	SYMBOL
CEILING SPRINKLER HEAD	
EMERGENCY SPEAKER/STROBE	
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WIRELESS ACCESS POINT	
EXIT SIGN	
UPGRADE OPTION	

ACCESS DOOR LEGEND

TAG	DESCRIPTION
AD-01	305x305mm GYPSUM ACCESS DOOR, AD-01 SHOWN IN THE PUBLIC CORRIDOR IN TYPICAL 03 TO 08 CEILING PLAN ONLY ON L3 CROSS OVER FLOOR
AD-02a	305x305mm GYPSUM ACCESS DOOR, RECESSED, TRIMLESS
AD-02	610x610mm GYPSUM ACCESS DOOR, RECESSED, TRIMLESS
AD-03	457x457mm GYPSUM ACCESS DOOR

CLVGROUP DEVELOPMENTS — client

CUNLIFFE & ASSOCIATES CONSULTING STRUCTURAL ENGINEERS — structural engineers | ingénieurs structurels

GWAL Goodkey, Weedmark & Associates Ltd. — electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

civil engineers | ingénieur civil

CSW — landscape architect | architecte paysagiste

nord du projet project north

nord reel true north

NOT FOR CONSTRUCTION 2025-06-12 4:34:09 PM

no	revisions	date
~~21~~	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
~~20~~	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
~~19~~	~~ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING~~	~~25-05-16~~
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte

linebox STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ENLARGED RCP - LEVEL 06 - 30 (TYPICAL TOWER) - WEST

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**As indicated**
date | date	**02/11/25**

drawing number | numéro du dessin

A3-206-W

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
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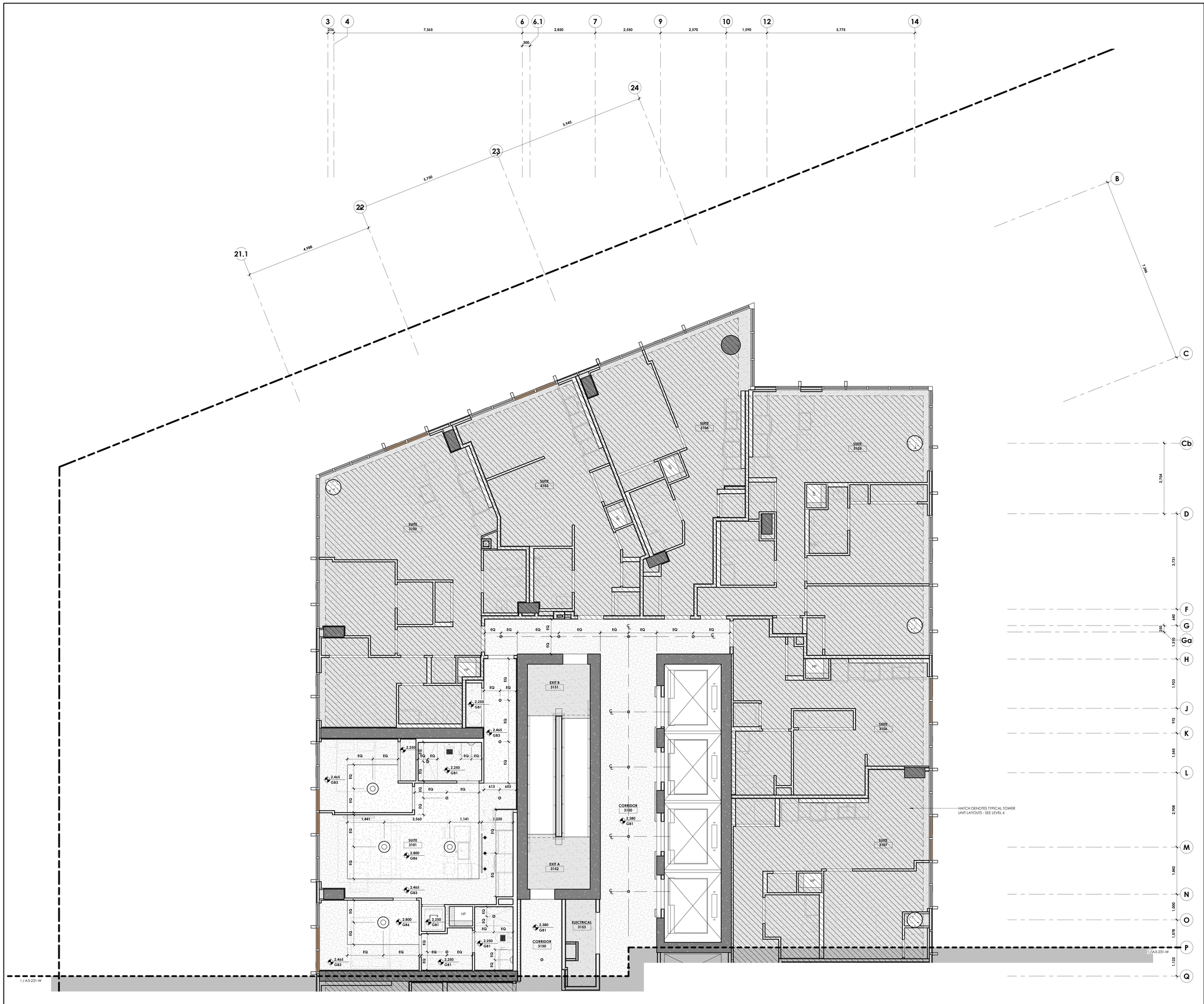

GENERAL NOTES

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2. PRIOR TO COMMENCING INSTALLATION OF SERVICES AND WORK NOTED ABOVE, PREPARE A COMPLETE COORDINATED LAYOUT OF ALL ACCESS PANELS WHICH ARE REQUIRED. SUBMIT LAYOUT TO INDICATE EXACT SIZES AND LOCATIONS OF THE ACCESS POINTS FOR CONSULTANTS REVIEW. PLACE CONTROLS, DAMPERS, SHUTOFF VALVES, ETC. IN ACCESSIBLE CEILING SYSTEM AREAS WHEREVER POSSIBLE. ALL ACCESS PANELS ARE DIMENSIONED TO THE CENTERLINE OF THE PANEL.
3. MECHANICAL DUCTING, EQUIPMENT, LOUVERS AND DIFFUERS AS PER MECHANICAL DRAWINGS AND SPECS.
4. REFER TO ELECTRICAL DRAWINGS FOR EMERGENCY LIGHTING AND EXITING REQUIREMENT DETAILS
5. ALL CEILING W/O HATCH ARE TO BE EXPOSED TO STRUCTURE ABOVE, U.N.O.
6. ALL LIGHTING FIXTURES MOUNTED TO EXPOSED CONCRETE SLABS REQUIRE ASSOCIATED CABLES, CONDUITS, AND ELECTRICAL BOXES TO BE CAST INTO THE SLAB DURING CONSTRUCTION. REFER TO ELECTRICAL AND STRUCTURAL DRAWINGS.
7. REFER TO A9-211 FOR DIMENSIONS OF POTLIGHTS ABOVE UNIT TUBS AND SHOWERS.

CEILING LEGEND:

- GYPSUM CEILING ASSEMBLY. SEE A0-300FOR ADDITIONAL INFO.
- EXPOSED CONCRETE CEILINGS
- EXTERIOR ARCHITECTURAL METAL SOFFIT

CEILING TAG LEGEND

CEILING TYPE TAG — TYPE / FIRE RATING

SPOT ELEVATION & CLG TYPE — 2200 ELEVATION (ABOVE SSL) / GB1 CEILING TYPE

LIGHTING LEGEND (SEE ELECTRICAL DWGS FOR ADDT'L INFO)

FIXTURE TYPE	SYMBOL	TAG
BOLLARD LIGHT		B-X
LIGHT COVE		F-1
UNDERCABINET LIGHTS		U-X
LINEAR FIXTURE		L-X
LED-ILLUMINATED MIRROR		M-X
PENDANT FIXTURE		P-X
RECESSED FIXTURE		R-X
SURFACE MOUNTED FIXTURE		S-X
TRACK LIGHT		T-X
WALL SCONCE		W-X
WINDOW COVERINGS (MAN)		WC-01
WINDOW COVERINGS (AUTO)		WC-02

LIGHTING INSTALLATION NOTES

GENERAL NOTES

SUSPENDEND LIGHTS:
BOTTOM OF PENDANT (± 1980mm AFF)
TO BE CONFIRMED BY ARCH.

LIGHTS SUSPENDED OVER TABLE OR DESK:
BOTTOM OF PENDANT (813 mm TO 914 mm) FROM TOP OF WORKING SURFACE.
LEAVE 152mm OF WIRE FOR SITE ADJUSTMENT

SEE ELECTRICAL PLAN FOR ADDITIONAL INFO.

CEILING FIXTURE LEGEND

FIXTURE TYPE	SYMBOL
CEILING SPRINKLER HEAD	
EMERGENCY SPEAKER/STROBE	
SMOKE DETECTOR	
OCCUPANCY SENSOR	
DAYLIGHT SENSOR	
WIRELESS ACCESS POINT	
EXIT SIGN	
UPGRADE OPTION	

ACCESS DOOR LEGEND

TAG	DESCRIPTION
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1 ENLARGED REFLECTED CEILING PLAN - LEVEL 31-33 (EAST)
A3-231-E 1 : 50
A0-204

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
2025-06-12 4:34:11 PM

client

CLVGROUP DEVELOPMENTS

structural engineers | ingénieurs structurels

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

electrical engineers | ingénieur electrique

GWAL
Goodkey, Weedmark & Associates Ltd.

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

landscape architect | architecte paysagiste

CSW

nord du projet
project north

nord reel
true north

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stamp | timbre

architect | architecte

linebox STUDIO

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GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

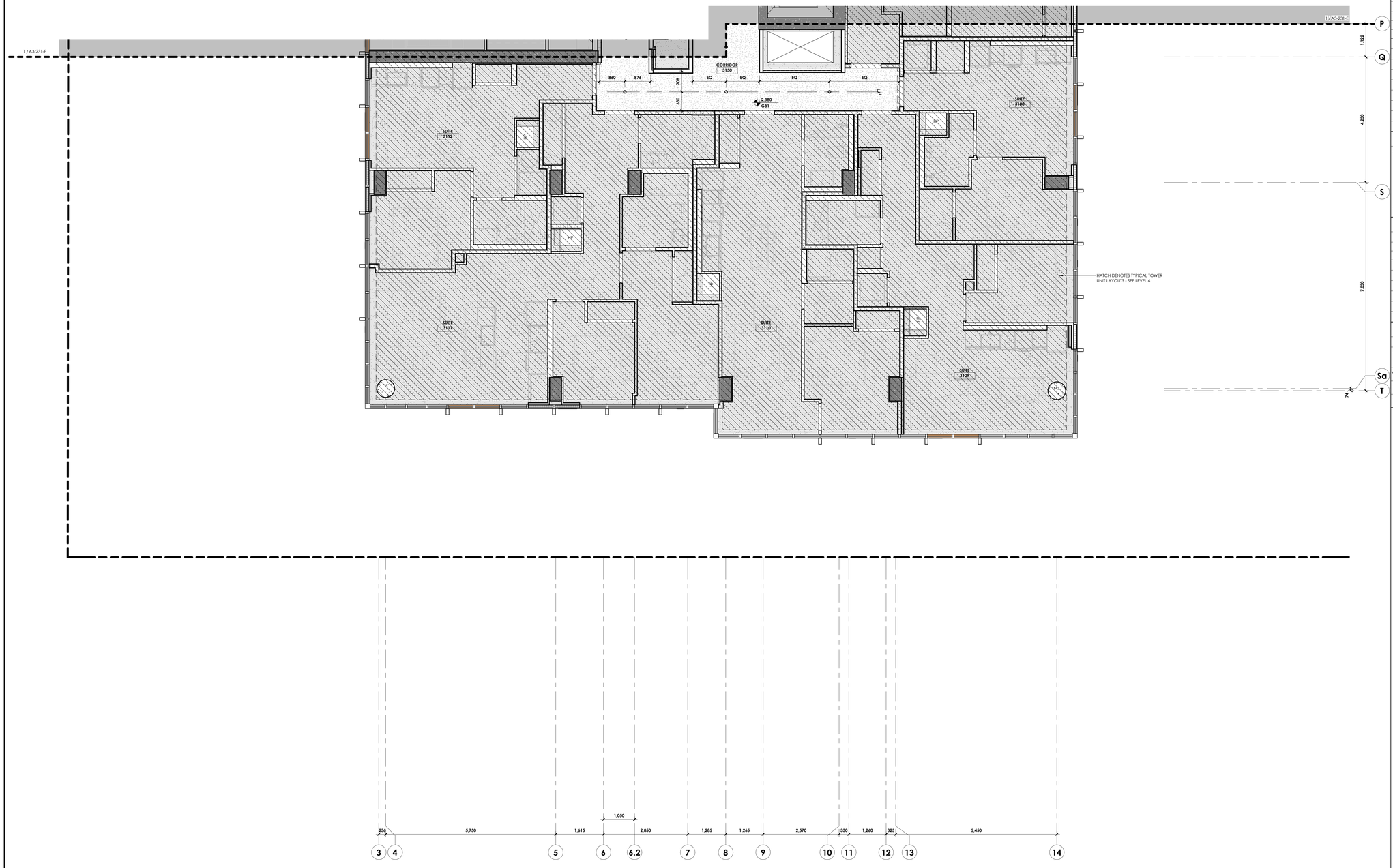
drawing title | titre du dessin

ENLARGED RCP - LEVEL 31-33 (TYPICAL PENTHOUSE) - EAST

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**As indicated**
date | date	**02/11/25**

drawing number | numéro du dessin

A3-231-E



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CEILING LEGEND:

- GYPSUM CEILING ASSEMBLY. SEE A0-300 FOR ADDITIONAL INFO.
- EXPOSED CONCRETE CEILINGS
- EXTERIOR ARCHITECTURAL METAL SOFFIT

CEILING TAG LEGEND

CEILING TYPE TAG — TYPE / FIRE RATING

SPOT ELEVATION & CLG TYPE — 2200 / GB1 — ELEVATION (ABOVE SSL) / CEILING TYPE

LIGHTING LEGEND (SEE ELECTRICAL DWGS FOR ADDT'L INFO)

FIXTURE TYPE	SYMBOL	TAG
BOLLARD LIGHT		B-X
LIGHT COVE		F-1
UNDERCABINET LIGHTS		U-X
LINEAR FIXTURE		L-X
LED-ILLUMINATED MIRROR		M-X
PENDANT FIXTURE		P-X
RECESSED FIXTURE		R-X
SURFACE MOUNTED FIXTURE		S-X
TRACK LIGHT		T-X
WALL SCONCE		W-X
WINDOW COVERINGS [MAN]		WC-01
WINDOW COVERINGS [AUTO]		WC-02

LIGHTING INSTALLATION NOTES

GENERAL NOTES

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CEILING FIXTURE LEGEND

FIXTURE TYPE	SYMBOL
CEILING SPRINKLER HEAD	
EMERGENCY SPEAKER/STROBE	
SMOKE DETECTOR	
OCCUPANCY SENSOR	
DAYLIGHT SENSOR	
WIRELESS ACCESS POINT	
EXIT SIGN	
UPGRADE OPTION	

ACCESS DOOR LEGEND

TAG	DESCRIPTION
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1 A3-231-W — ENLARGED REFLECTED CEILING PLAN - LEVEL 31-33 (WEST)
1/4" = 1'-0" | 1 : 50
A0-204

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
2025-06-12 4:34:13 PM

client
CLV GROUP DEVELOPMENTS

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS
structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.
electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique
wsp
civil engineers | ingénieur civil

CSW
landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:34:13 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
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18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte
linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

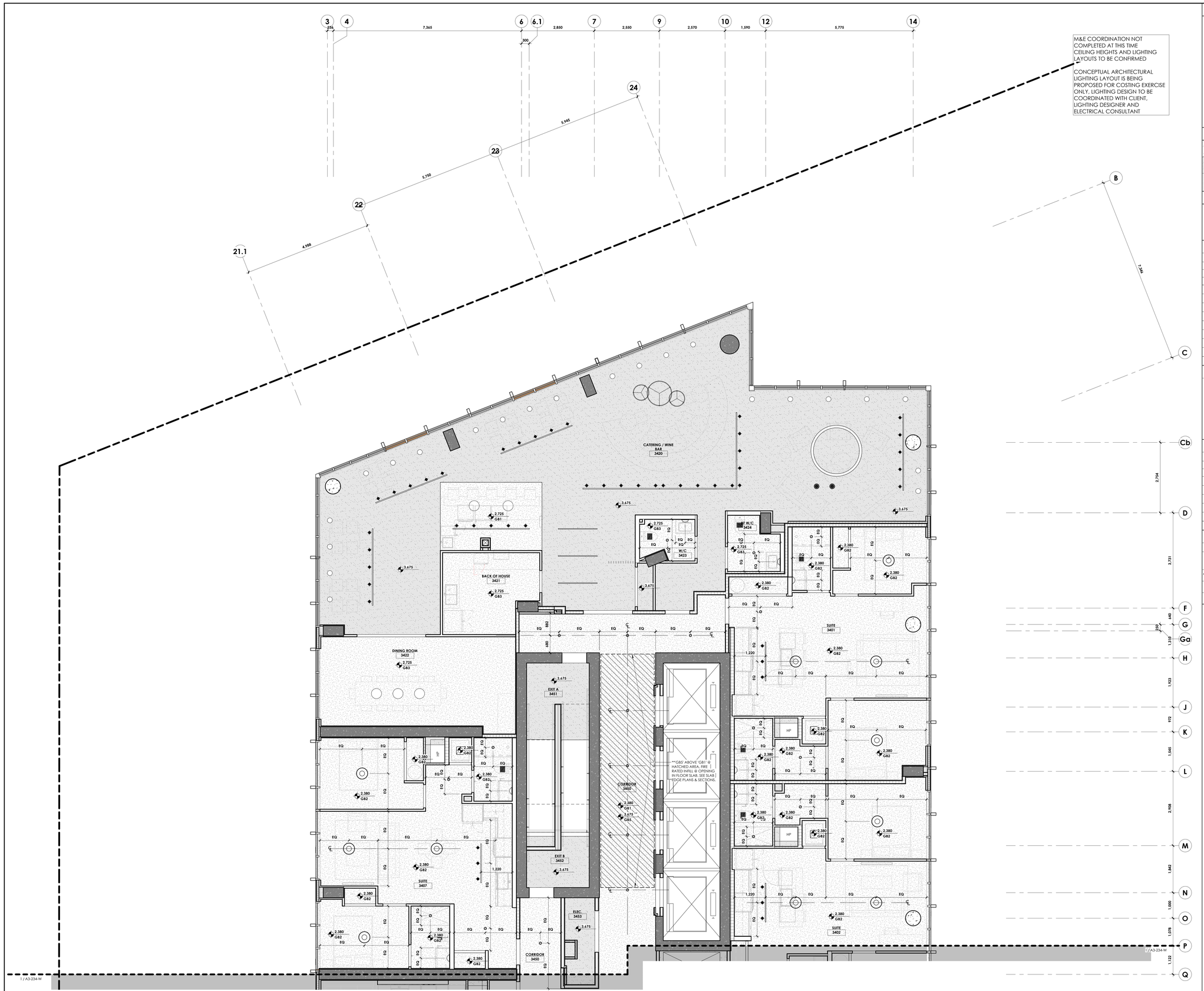
drawing title | titre du dessin

ENLARGED RCP - LEVEL 31-33 (TYPICAL PENTHOUSE) - WEST

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**As indicated**
date | date	**02/11/25**

drawing number | numéro du dessin

A3-231-W



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CEILING LEGEND:

	GYPSUM CEILING ASSEMBLY. SEE A0-300 FOR ADDITIONAL INFO.
	EXPOSED CONCRETE CEILINGS
	EXTERIOR ARCHITECTURAL METAL SOFFIT

CEILING TAG LEGEND

CEILING TYPE TAG	TYPE FIRE RATING
SPOT ELEVATION & CLG TYPE	2200 — ELEVATION (ABOVE SSL) GB1 — CEILING TYPE

LIGHTING LEGEND (SEE ELECTRICAL DWGS FOR ADDT'L INFO)

FIXTURE TYPE	SYMBOL	TAG
BOLLARD LIGHT		B-X
LIGHT COVE		F-1
UNDERCABINET LIGHTS		U-X
LINEAR FIXTURE		L-X
LED-ILLUMINATED MIRROR		M-X
PENDANT FIXTURE		P-X
RECESSED FIXTURE		R-X
SURFACE MOUNTED FIXTURE		S-X
TRACK LIGHT		T-X
WALL SCONCE		W-X
WINDOW COVERINGS (MAN)		WC-01
WINDOW COVERINGS (AUTO)		WC-02

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GENERAL NOTES

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CEILING FIXTURE LEGEND

FIXTURE TYPE	SYMBOL
CEILING SPRINKLER HEAD	
EMERGENCY SPEAKER/STROBE	
SMOKE DETECTOR	
OCCUPANCY SENSOR	
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WIRELESS ACCESS POINT	
EXIT SIGN	
UPGRADE OPTION	

ACCESS DOOR LEGEND

TAG	DESCRIPTION
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AD-03	457x457mm GYPSUM ACCESS DOOR

1 ENLARGED REFLECTED CEILING PLAN - LEVEL 34 (EAST)
A3-234-E 1 : 50
A0-204

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
2025-06-12 4:34:15 PM

CLVGROUP DEVELOPMENTS
client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS
structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.
electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp
civil engineers | ingénieur civil

CSW
landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
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no	revisions	date
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stamp | timbre

architect | architecte
linebox
STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

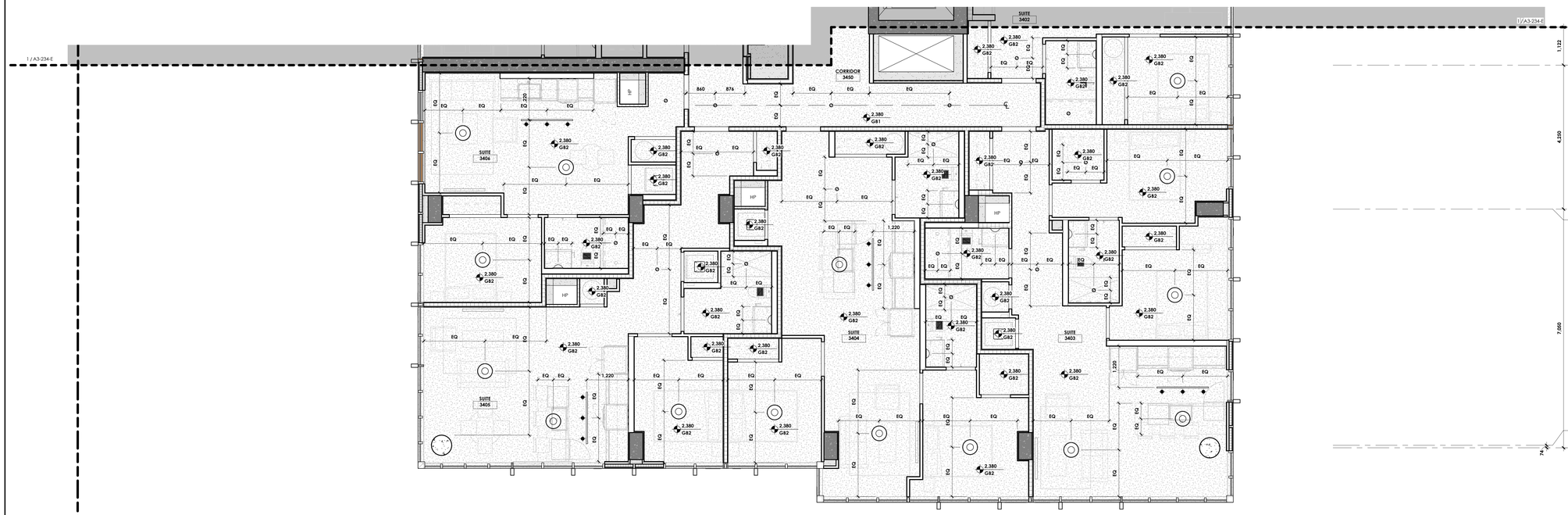
ENLARGED RCP - LEVEL 34 (RESIDENTIAL AND AMENITY SKY LEVEL) - EAST

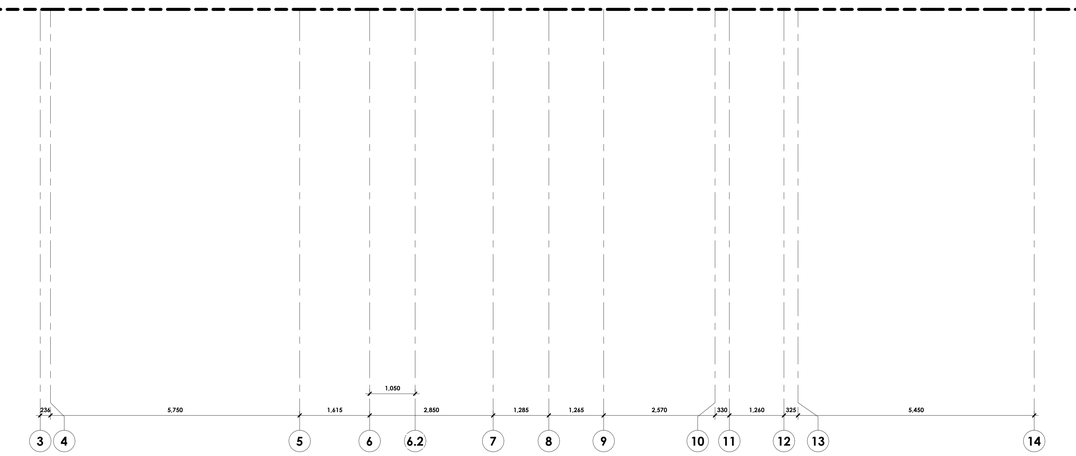
project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**As indicated**
date | date	**02/11/25**

drawing number | numéro du dessin

A3-234-E

M&E COORDINATION NOT COMPLETED AT THIS TIME
CEILING HEIGHTS AND LIGHTING LAYOUTS TO BE CONFIRMED





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CEILING TAG LEGEND

CEILING TYPE TAG	TYPE FIRE RATING
SPOT ELEVATION & CLG TYPE	2200 — ELEVATION (ABOVE SSL) GB1 — CEILING TYPE

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FIXTURE TYPE	SYMBOL	TAG
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CEILING FIXTURE LEGEND

FIXTURE TYPE	SYMBOL
CEILING SPRINKLER HEAD	
EMERGENCY SPEAKER/STROBE	
SMOKE DETECTOR	
OCCUPANCY SENSOR	
DAYLIGHT SENSOR	
WIRELESS ACCESS POINT	
EXIT SIGN	
UPGRADE OPTION	(U)

ACCESS DOOR LEGEND

TAG	DESCRIPTION
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1 : 50
A0-204

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client

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Goodkey, Weedmark & Associates Ltd.
electrical engineers | ingénieur electrique
mechanical engineer | ingénieur méchanique

wsp
civil engineers | ingénieur civil

CSW
landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

Not for Construction
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no	revisions	date
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stamp | timbre

architect | architecte
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STUDIO

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project title | titre du projet

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145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ENLARGED RCP - LEVEL 34 (RESIDENTIAL AND AMENITY SKY LEVEL) - WEST

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**As indicated**
date | date	**02/11/25**

drawing number | numéro du dessin

A3-234-W

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
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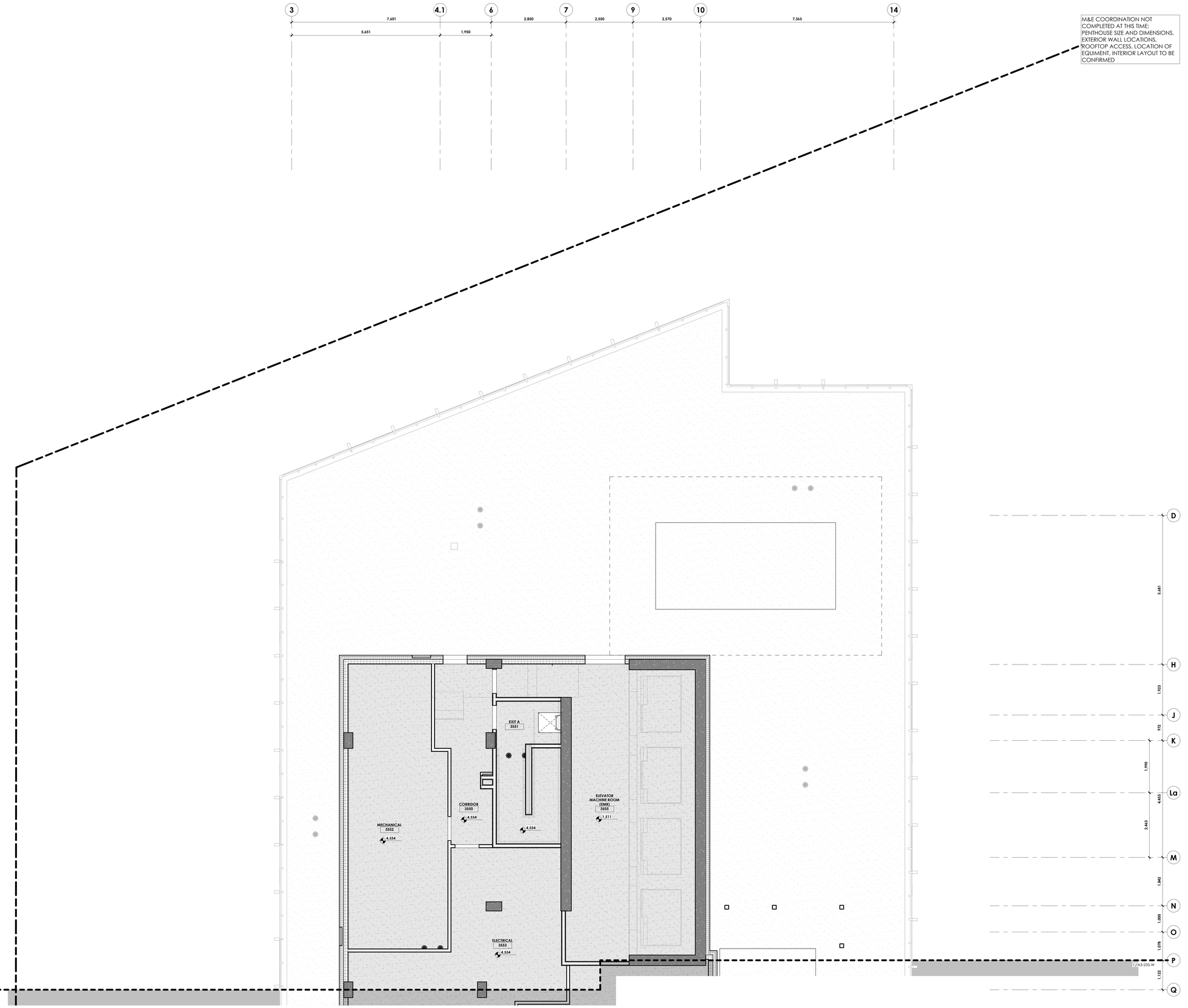

GENERAL NOTES

1. REFLECTED CEILING PLANS ARE FOR GENERAL COORDINATION AND LAYOUT ONLY. FOR QUANTITIES AND TYPES OF FIXTURES AND EQUIPMENT REFER TO MECHANICAL AND ELECTRICAL DRAWINGS.
2. PRIOR TO COMMENCING INSTALLATION OF SERVICES AND WORK NOTED ABOVE, PREPARE A COMPLETE COORDINATED LAYOUT OF ALL ACCESS PANELS WHICH ARE REQUIRED. SUBMIT LAYOUT TO INDICATE EXACT SIZES AND LOCATIONS OF THE ACCESS POINTS FOR CONSULTANTS REVIEW. PLACE CONTROLS, DAMPERS, SHUTOFF VALVES, ETC. IN ACCESSIBLE CEILING SYSTEM AREAS WHEREVER POSSIBLE. ALL ACCESS PANELS ARE DIMENSIONED TO THE CENTERLINE OF THE PANEL.
3. MECHANICAL DUCTING, EQUIPMENT, LOUVERS AND DIFFUERS AS PER MECHANICAL DRAWINGS AND SPECS.
4. REFER TO ELECTRICAL DRAWINGS FOR EMERGENCY LIGHTING AND EXITING REQUIREMENT DETAILS
5. ALL CEILING W/O HATCH ARE TO BE EXPOSED TO STRUCTURE ABOVE, U.N.O.
6. ALL LIGHTING FIXTURES MOUNTED TO EXPOSED CONCRETE SLABS REQUIRE ASSOCIATED CABLES, CONDUITS, AND ELECTRICAL BOXES TO BE CAST INTO THE SLAB DURING CONSTRUCTION. REFER TO ELECTRICAL AND STRUCTURAL DRAWINGS.
7. REFER TO A9-211 FOR DIMENSIONS OF FOTLIGHTS ABOVE UNIT TUBS AND SHOWERS.

CEILING LEGEND:

- GYPSUM CEILING ASSEMBLY. SEE A0-300 FOR ADDITIONAL INFO.
- EXPOSED CONCRETE CEILINGS
- EXTERIOR ARCHITECTURAL METAL SOFFIT

CEILING TAG LEGEND

CEILING TYPE TAG — TYPE / FIRE RATING

SPOT ELEVATION & CLG TYPE — 2200 / GB1 — ELEVATION (ABOVE SSL) / CEILING TYPE

LIGHTING LEGEND (SEE ELECTRICAL DWGS FOR ADDT'L INFO)

FIXTURE TYPE	SYMBOL	TAG
BOLLARD LIGHT		B-X
LIGHT COVE		F-1
UNDERCABINET LIGHTS		U-X
LINEAR FIXTURE		L-X
LED-ILLUMINATED MIRROR		M-X
PENDANT FIXTURE		P-X
RECESSED FIXTURE		R-X
SURFACE MOUNTED FIXTURE		S-X
TRACK LIGHT		T-X
WALL SCONCE		W-X
WINDOW COVERINGS (MAN)		WC-01
WINDOW COVERINGS (AUTO)		WC-02

LIGHTING INSTALLATION NOTES

GENERAL NOTES

SUSPENDEND LIGHTS:
BOTTOM OF PENDANT (± 1980mm AFF)
TO BE CONFIRMED BY ARCH.

LIGHTS SUSPENDED OVER TABLE OR DESK:
BOTTOM OF PENDANT (813 mm TO 914 mm) FROM TOP OF WORKING SURFACE.
LEAVE 152mm OF WIRE FOR SITE ADJUSTMENT

SEE ELECTRICAL PLAN FOR ADDITIONAL INFO.

CEILING FIXTURE LEGEND

FIXTURE TYPE	SYMBOL
CEILING SPRINKLER HEAD	
EMERGENCY SPEAKER/STROBE	(ES)
SMOKE DETECTOR	(S)
OCCUPANCY SENSOR	(OS)
DAYLIGHT SENSOR	(DL)
WIRELESS ACCESS POINT	(WAP)
EXIT SIGN	
UPGRADE OPTION	(U)

ACCESS DOOR LEGEND

TAG	DESCRIPTION
AD-01	305x305mm GYPSUM ACCESS DOOR. AD-01 SHOWN IN THE PUBLIC CORRIDOR IN TYPICAL 03 TO 08 CEILING PLAN ONLY ON L3 CROSS OVER FLOOR
AD-02a	305x305mm GYPSUM ACCESS DOOR, RECESSED, TRIMLESS
AD-02	610x610mm GYPSUM ACCESS DOOR, RECESSED, TRIMLESS
AD-03	457x457mm GYPSUM ACCESS DOOR

1 / A3-235-E ENLARGED REFLECTED CEILING PLAN - LEVEL 35 (EAST)
1 : 50

client
CLVGROUP DEVELOPMENTS

structural engineers | ingénieurs structurels
CUNLIFFE & ASSOCIATES CONSULTING STRUCTURAL ENGINEERS

electrical engineers | ingénieur electrique
mechanical engineer | ingénieur méchanique
GWAL Goodkey, Weedmark & Associates Ltd.

civil engineers | ingénieur civil
wsp

landscape architect | architecte paysagiste
CSW

nord du projet project north
nord reel true north

Not for Construction 2025-06-12 4:34:15 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte
linebox STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ENLARGED RCP - LEVEL 35 (MECHANICAL PENTHOUSE) - EAST

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**As indicated**
date | date	**02/11/25**

drawing number | numéro du dessin

A3-235-E

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
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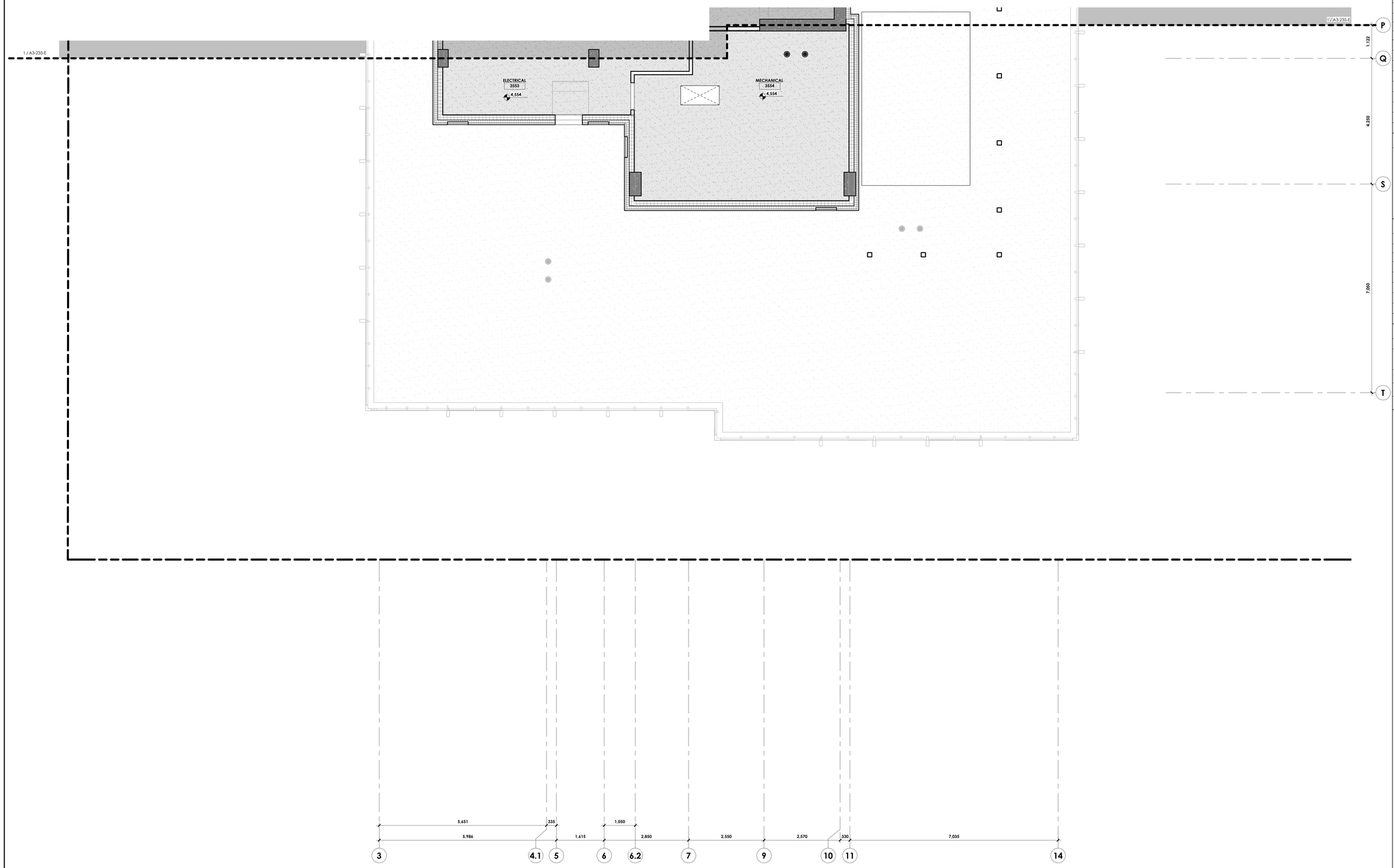

M&E COORDINATION NOT COMPLETED AT THIS TIME: PENTHOUSE SIZE AND DIMENSIONS, EXTERIOR WALL LOCATIONS, ROOFTOP ACCESS, LOCATION OF EQUIMENT, INTERIOR LAYOUT TO BE CONFIRMED

GENERAL NOTES

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7. REFER TO A9-211 FOR DIMENSIONS OF POTLIGHTS ABOVE UNIT TUBS AND SHOWERS.

CEILING LEGEND:

- GYPSUM CEILING ASSEMBLY. SEE A0-300 FOR ADDITIONAL INFO.
- EXPOSED CONCRETE CEILINGS
- EXTERIOR ARCHITECTURAL METAL SOFFIT

CEILING TAG LEGEND

CEILING TYPE TAG — TYPE / FIRE RATING

SPOT ELEVATION & CLG TYPE — 2200 / GB1 — ELEVATION (ABOVE SSL) / CEILING TYPE

LIGHTING LEGEND (SEE ELECTRICAL DWGS FOR ADDT'L INFO)

FIXTURE TYPE	SYMBOL	TAG
BOLLARD LIGHT		B-X
LIGHT COVE		F-1
UNDERCABINET LIGHTS		U-X
LINEAR FIXTURE		L-X
LED-ILLUMINATED MIRROR		M-X
PENDANT FIXTURE		P-X
RECESSED FIXTURE		R-X
SURFACE MOUNTED FIXTURE		S-X
TRACK LIGHT		T-X
WALL SCONCE		W-X
WINDOW COVERINGS (MAN)		WC-01
WINDOW COVERINGS (AUTO)		WC-02

LIGHTING INSTALLATION NOTES

GENERAL NOTES

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SEE ELECTRICAL PLAN FOR ADDITIONAL INFO.

CEILING FIXTURE LEGEND

FIXTURE TYPE	SYMBOL
CEILING SPRINKLER HEAD	
EMERGENCY SPEAKER/STROBE	
SMOKE DETECTOR	
OCCUPANCY SENSOR	
DAYLIGHT SENSOR	
WIRELESS ACCESS POINT	
EXIT SIGN	
UPGRADE OPTION	(U)

ACCESS DOOR LEGEND

TAG	DESCRIPTION
AD-01	305x305mm GYPSUM ACCESS DOOR. AD-01 SHOWN IN THE PUBLIC CORRIDOR IN TYPICAL 03 TO 08 CEILING PLAN ONLY ON L3 CROSS OVER FLOOR
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AD-03	457x457mm GYPSUM ACCESS DOOR

1 ENLARGED REFLECTED CEILING PLAN - LEVEL 35 (WEST)
A3-235-W / 1 : 50
A0-204

client

CLV GROUP DEVELOPMENTS

structural engineers | ingénieurs structurels

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

GWAL
Goodkey, Weedmark & Associates Ltd.

civil engineers | ingénieur civil

wsp

landscape architect | architecte paysagiste

CSW

nord du projet
project north

nord reel
true north

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no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ENLARGED RCP - LEVEL 35 (MECHANICAL PENTHOUSE) - WEST

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**As indicated**
date | date	**02/11/25**

drawing number | numéro du dessin

A3-235-W

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
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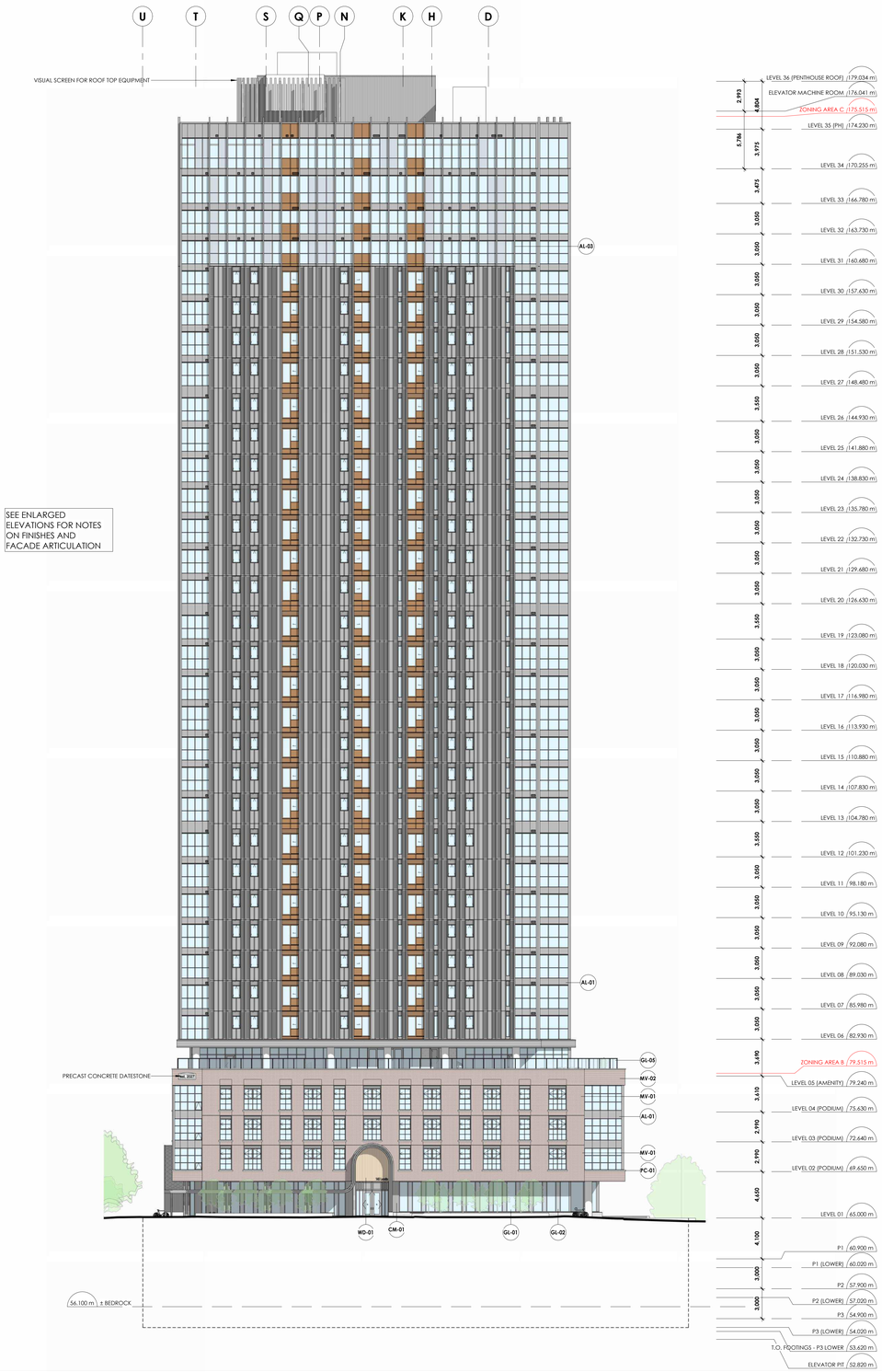
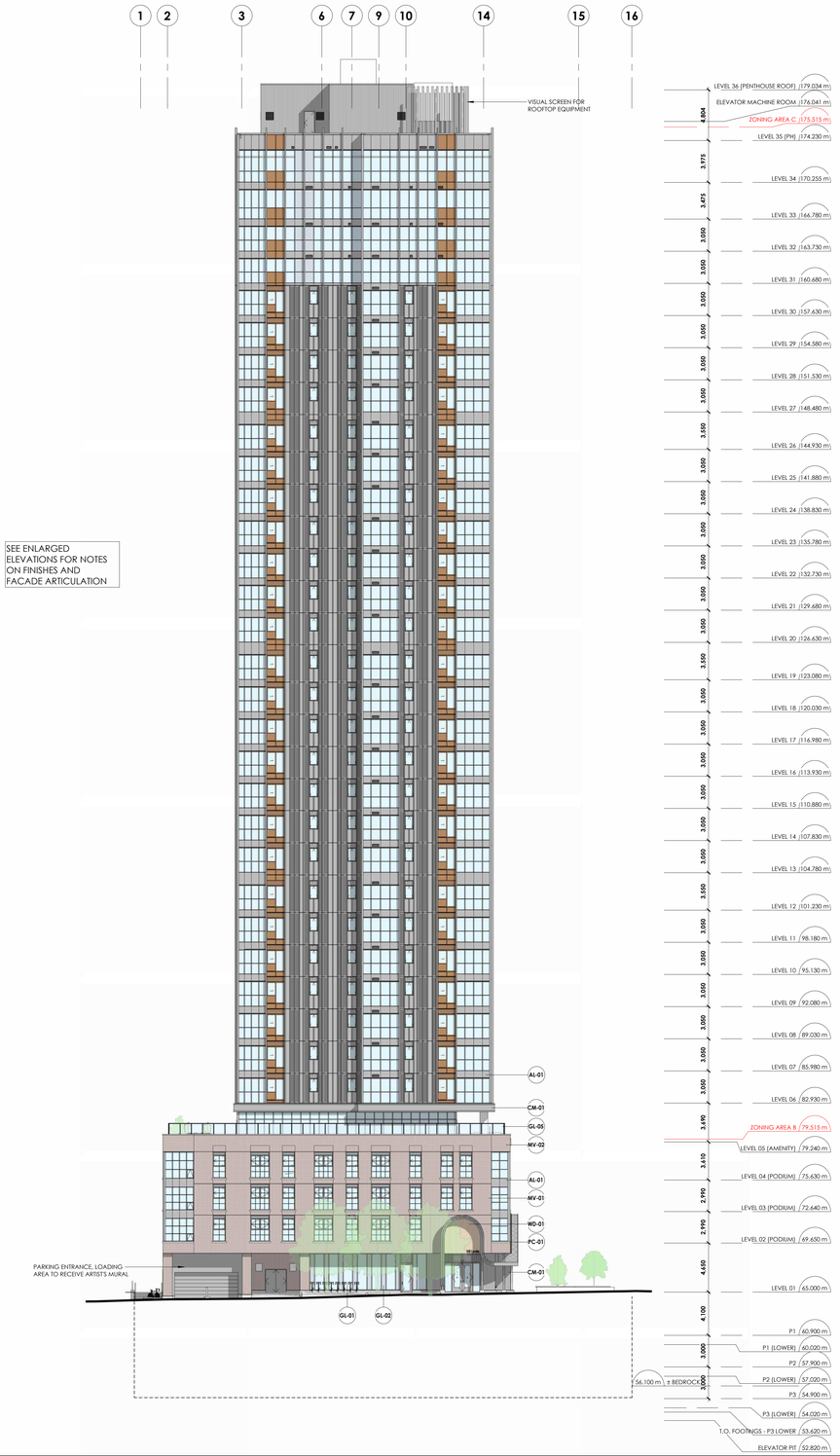


SEE ENLARGED ELEVATIONS FOR NOTES ON FINISHES AND FACADE ARTICULATION

2 A5-100 BUILDING ELEVATION - SOUTH
1 : 200
A2-098



SEE ENLARGED ELEVATIONS FOR NOTES ON FINISHES AND FACADE ARTICULATION

1 A5-100 BUILDING ELEVATION - WEST (LORETTA AVE N)
1 : 200
A2-098

EXTERIOR FINISH MATERIALS LEGEND

TAG	KEYNOTE	DESCRIPTION
		PROFILED PROJECTED ALUMINUM PANEL BY WINDOW WALL SUPPLIER
AL-01		PREFINISHED ALUMINUM SPANDREL PANEL BY WINDOW WALL SUPPLIER
AL-02		CUSTOM PROFILE PROJECTED ALUMINUM PANEL
AL-03		ALUMINUM EXTRUSION BY WINDOW WALL SUPPLIER
AL-04		CUSTOM PROFILE PROJECTED ALUMINUM PANEL - ALTERNATE COLOUR. SEE SPECIFICATION SCHEDULES.
CM-01		CORRUGATED METAL SIDING/ROOFING PANELS. SEE SPECIFICATION SCHEDULES.
GL-01	08810.F1	CLEAR GLASS INSULATED GLAZING UNIT. SEE WINDOW SCHEDULES.
GL-02	08810.F3	TINTED INSULATED GLAZING UNIT. SEE SPECIFICATION SCHEDULES.
GL-04		COLOURED TEMPERED GLASS GUARD. SEE SPECIFICATION SCHEDULES.
MV-01	04210.A1	METRIC MODULAR CLAY BRICK MASONRY VENEER - RED - RUNNING BOND (SEE SPEC. SCHEDULES)
MV-02	04210.A1	METRIC MODULAR CLAY BRICK MASONRY VENEER - RED - STACK BONDED SOLDIER COURSES (SEE SPEC. SCHEDULES)
PC-01	04200.B3	SLOPED TWO-COURSE PRECAST CONCRETE LUG SILL
WD-01		VERTICAL WOOD-LOOK SIDING (SEE SPEC. SCHEDULES)

Not for construction
2025-06-12 4:34:52 PM

client

CLVGROUP DEVELOPMENTS

structural engineers | ingénieurs structurels

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

electrical engineers | ingénieur électrique
mechanical engineer | ingénieur méchanique

GWAL
Goodkey, Weedmark & Associates Ltd.

civil engineers | ingénieur civil

wsp

landscape architect | architecte paysagiste

CSW

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
14	RE-ISSUED FOR SPA	25-01-31
11	ISSUED FOR ELEVATOR TENDER	24-12-02
9	ISSUED FOR SPA	24-11-20
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
2	RE-ISSUED FOR CLASS 'D' ESTIMATE	24-05-13
1	ISSUED FOR CLASS 'D' ESTIMATE	24-05-17

stamp | timbre

architect | architecte

linebox STUDIO

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Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

BUILDING ELEVATIONS - WEST AND SOUTH

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 200**
date | date	**02/15/24**
drawing number | numéro du dessin	**A5-100**

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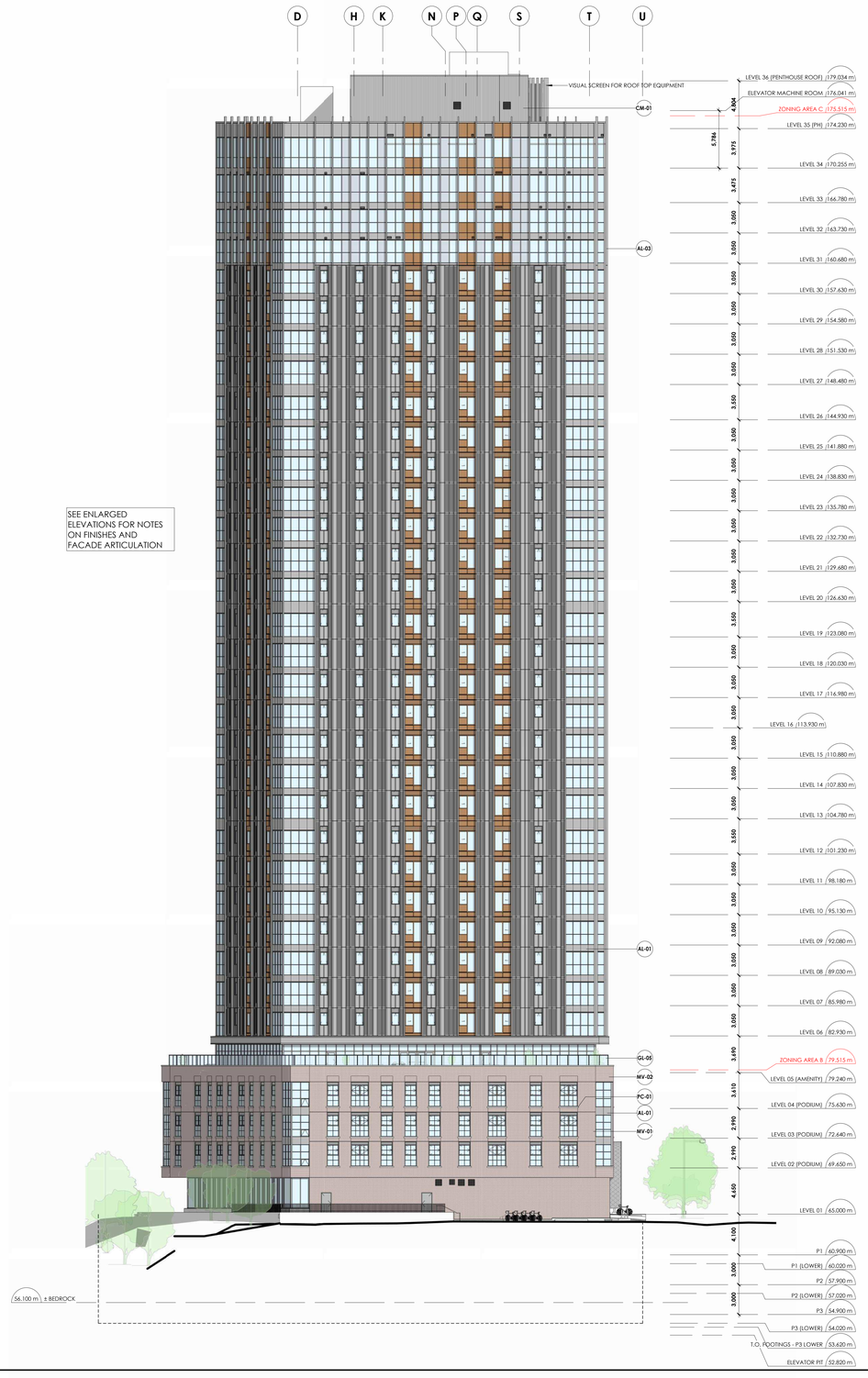

2 A5-101 BUILDING ELEVATION - NORTH
1 : 200
A2-098



1 A5-101 BUILDING ELEVATION - EAST
1 : 200
A2-098

EXTERIOR FINISH MATERIALS LEGEND

TAG	KEYNOTE	DESCRIPTION
		PROFILED PROJECTED ALUMINIUM PANEL BY WINDOW WALL SUPPLIER
AL-01		PREFINISHED ALUMINIUM SPANDREL PANEL BY WINDOW WALL SUPPLIER
AL-02		CUSTOM PROFILE PROJECTED ALUMINIUM PANEL
AL-03		ALUMINIUM EXTRUSION BY WINDOW WALL SUPPLIER
AL-04		CUSTOM PROFILE PROJECTED ALUMINIUM PANEL - ALTERNATE COLOUR. SEE SPECIFICATION SCHEDULES.
CM-01		CORRUGATED METAL SIDING/ROOFING PANELS. SEE SPECIFICATION SCHEDULES.
GL-01	08810.F1	CLEAR GLASS INSULATED GLAZING UNIT. SEE WINDOW SCHEDULES.
GL-02	08810.F3	TINTED INSULATED GLAZING UNIT. SEE SPECIFICATION SCHEDULES.
GL-04		COLOURED TEMPERED GLASS GUARD. SEE SPECIFICATION SCHEDULES.
MV-01	04210.A1	METRIC MODULAR CLAY BRICK MASONRY VENEER - RED - RUNNING BOND (SEE SPEC. SCHEDULES)
MV-02	04210.A1	METRIC MODULAR CLAY BRICK MASONRY VENEER - RED - STACK BONDED SOLDIER COURSES (SEE SPEC. SCHEDULES)
PC-01	04200.B3	SLOPED TWO-COURSE PRECAST CONCRETE LUG SILL
WD-01		VERTICAL WOOD-LOOK SIDING (SEE SPEC. SCHEDULES)

Not for Construction
2025-06-12 4:35:36 PM

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
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18	ISSUED FOR 44% WD & CLIENT BUDGETING	25-03-28
14	RE-ISSUED FOR SPA	25-01-31
11	ISSUED FOR ELEVATOR TENDER	24-12-02
9	ISSUED FOR SPA	24-11-20
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
2	RE-ISSUED FOR CLASS 'D' ESTIMATE	24-05-13
1	ISSUED FOR CLASS 'D' ESTIMATE	24-05-17

no revisions date

stamp | timbre

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

BUILDING ELEVATIONS - EAST AND NORTH

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 200**
date | date	**02/15/24**

drawing number | numéro du dessin

A5-101

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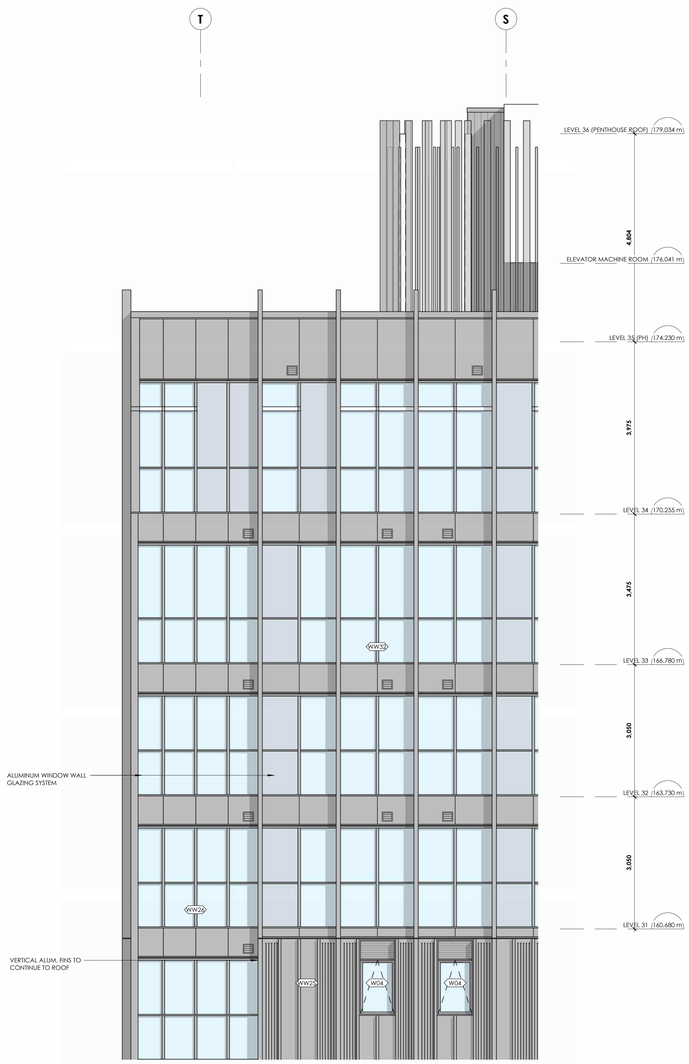
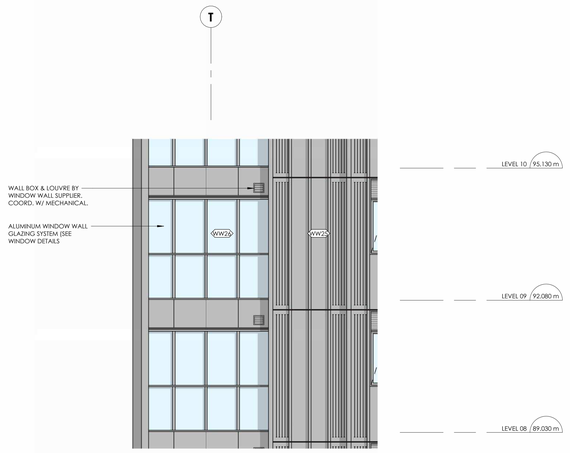
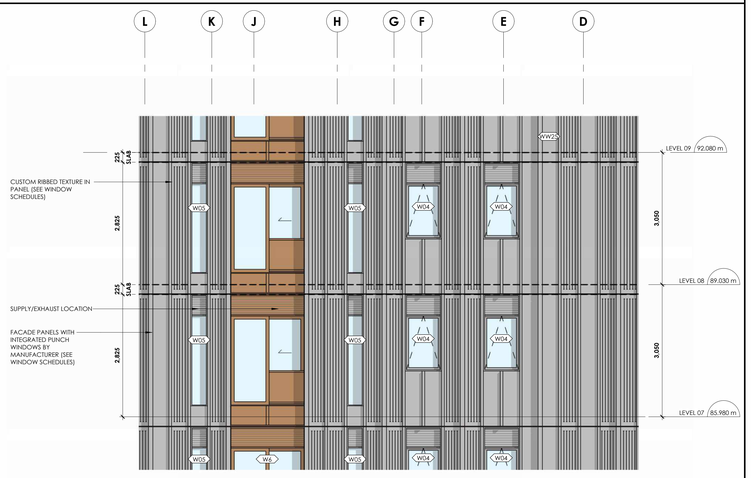


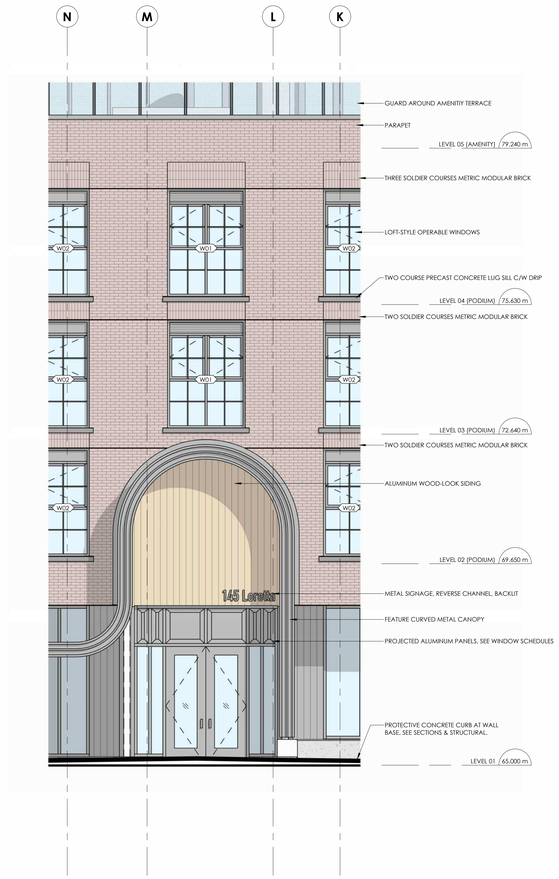
6 A5-200 ENLARGED ELEVATION - PENTHOUSE LEVELS GLAZED FACADE
1 : 50



4 A5-200 ENLARGED ELEVATION - TYPICAL TOWER CURTAIN WALL
1 : 50
A5-201



3 A5-200 ENLARGED ELEVATION - TYPICAL TOWER FACADE
1 : 50
A5-201



1 A5-200 ENLARGED ELEVATION - SOUTH ENTRANCE
1 : 50
A5-201

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

Not For Construction
2025-06-12 4:35:46 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
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stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ENLARGED ELEVATIONS

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 50**
date | date	**02/15/24**

drawing number | numéro du dessin

A5-200

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1 A5-201 BUILDING ELEVATION - SOUTH - Callout 1
1 : 50

Autodesk Docs://Gladstone & Loretta/2402. 145 Loretta CLV_LB_Tower A.rvt
2025-06-12 4:36:19 PM

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

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2025-06-12 4:36:19 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-19~~
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte

linebox STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ENLARGED ELEVATIONS

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 50**
date | date	**08/07/24**

drawing number | numéro du dessin

A5-201



1 / A5-202 ENLARGED ELEVATION - WEST ENTRANCE (LORETTA)
1 : 50

client

CLVGROUP DEVELOPMENTS

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:36:32 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ENLARGED ELEVATIONS

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | vertifié	**JP / AR**
scale | échelle	**1 : 50**
date | date	**08/07/24**

drawing number | numéro du dessin

A5-202

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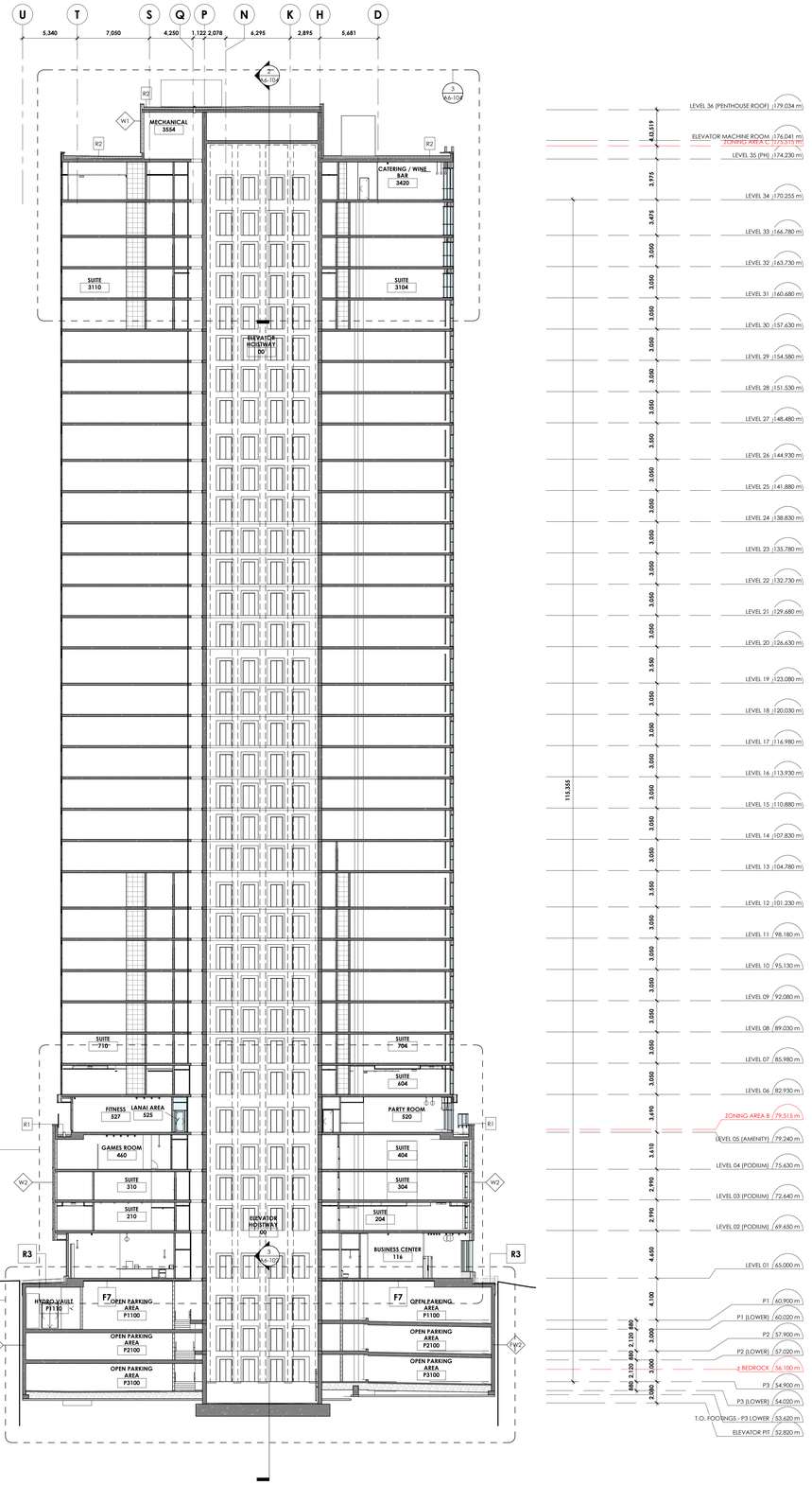
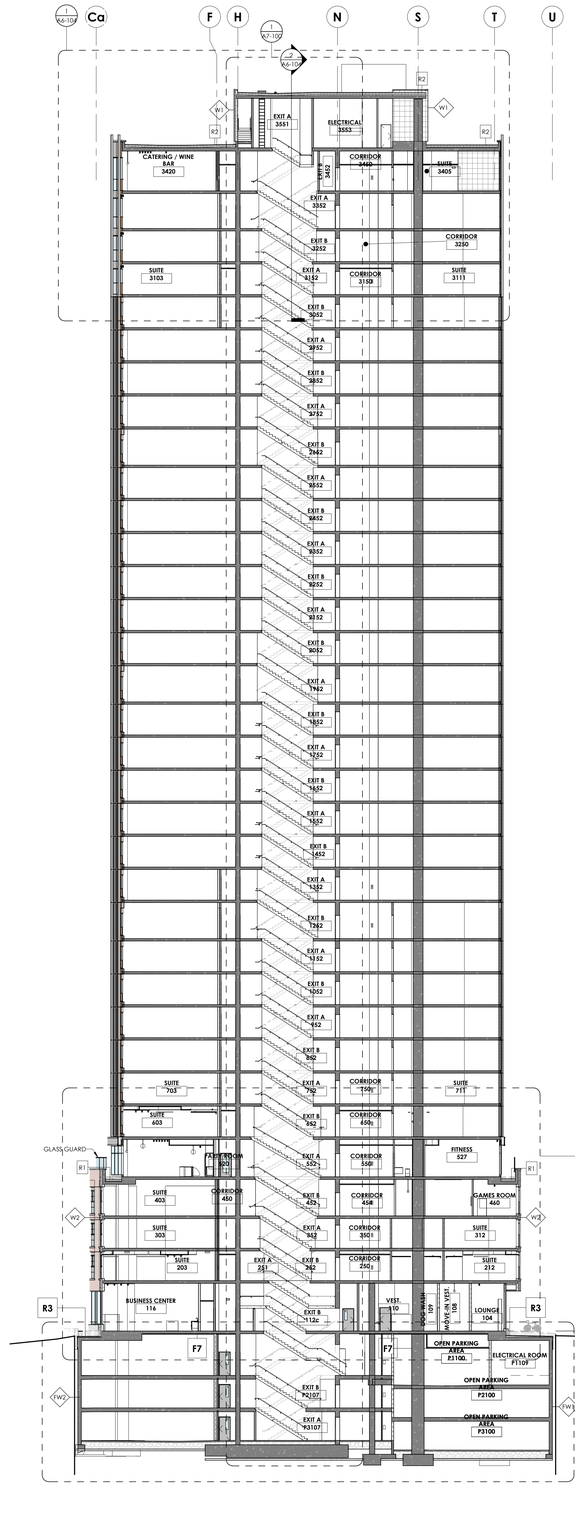
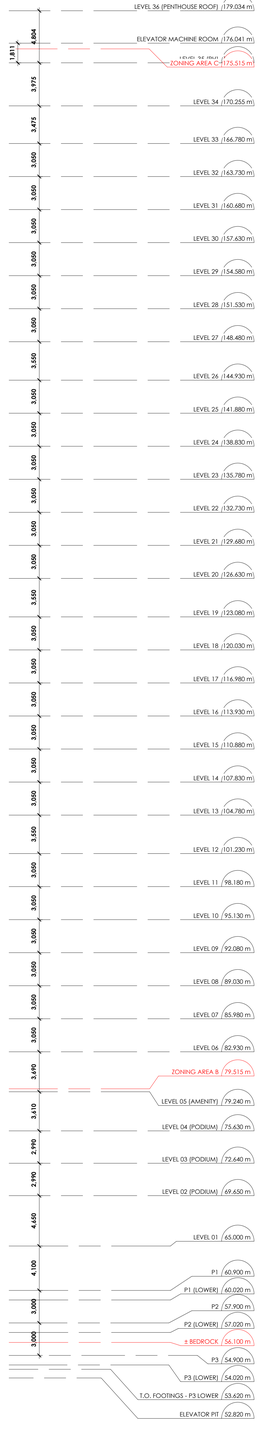


2 A6-100 BUILDING SECTION @ ELEVATORS
1 : 200
A2-098





1 A6-100 BUILDING SECTION @ STAIRS
1 : 200
A2-098

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

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2025-06-12 4:36:36 PM

21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-19~~
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% MD & CLIENT BUDGETING	25-03-28
11	ISSUED FOR ELEVATOR TENDER	24-12-02
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
2	RE-ISSUED FOR CLASS 'D' ESTIMATE	24-05-13
1	ISSUED FOR CLASS 'D' ESTIMATE	24-05-17
no	revisions	date

stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

BUILDING SECTIONS

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | vertifié	**JP / AR**
scale | échelle	**1 : 200**
date | date	**02/15/24**

drawing number | numéro du dessin

A6-100

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_IB_Tower A.rvt
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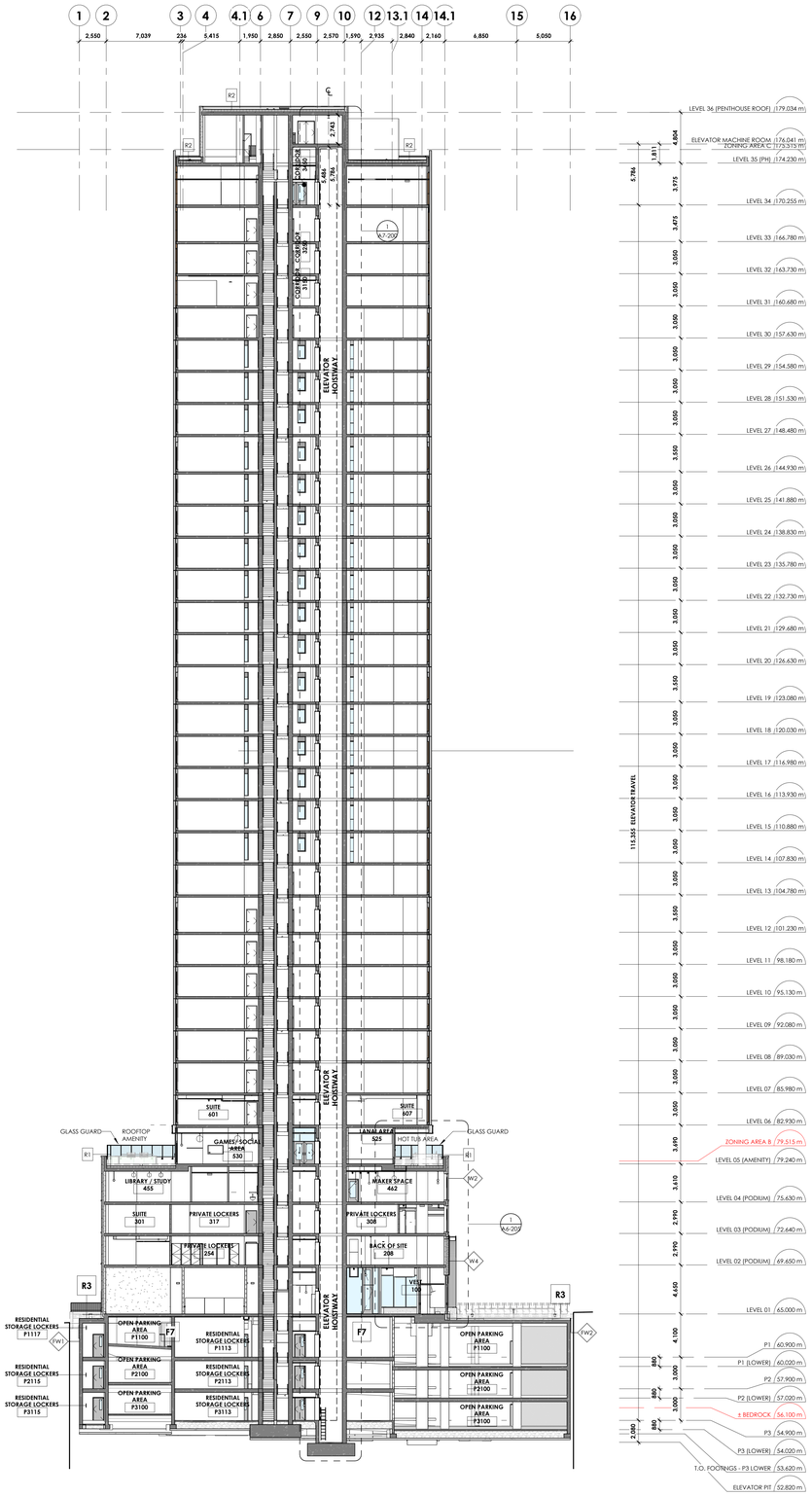

1 A6-101 BUILDING SECTION - STAIR CROSS SECTION
1 : 200
A2-098

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
2025-06-12 4:36:42 PM

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

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mechanical engineer | ingénieur méchanique

wsp

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landscape architect | architecte paysagiste

NOT FOR CONSTRUCTION
2025-06-12 4:36:42 PM

21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-19~~
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
19	ISSUED FOR REFERENCE - STRUCTURAL MAT PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
11	ISSUED FOR ELEVATOR TENDER	24-12-02
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
2	RE-ISSUED FOR CLASS 'D' ESTIMATE	24-05-13
1	ISSUED FOR CLASS 'D' ESTIMATE	24-05-17

no revisions date

stamp | timbre

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

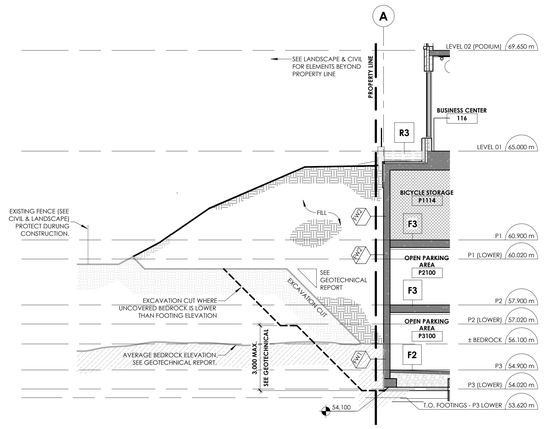
drawing title | titre du dessin

BUILDING SECTIONS

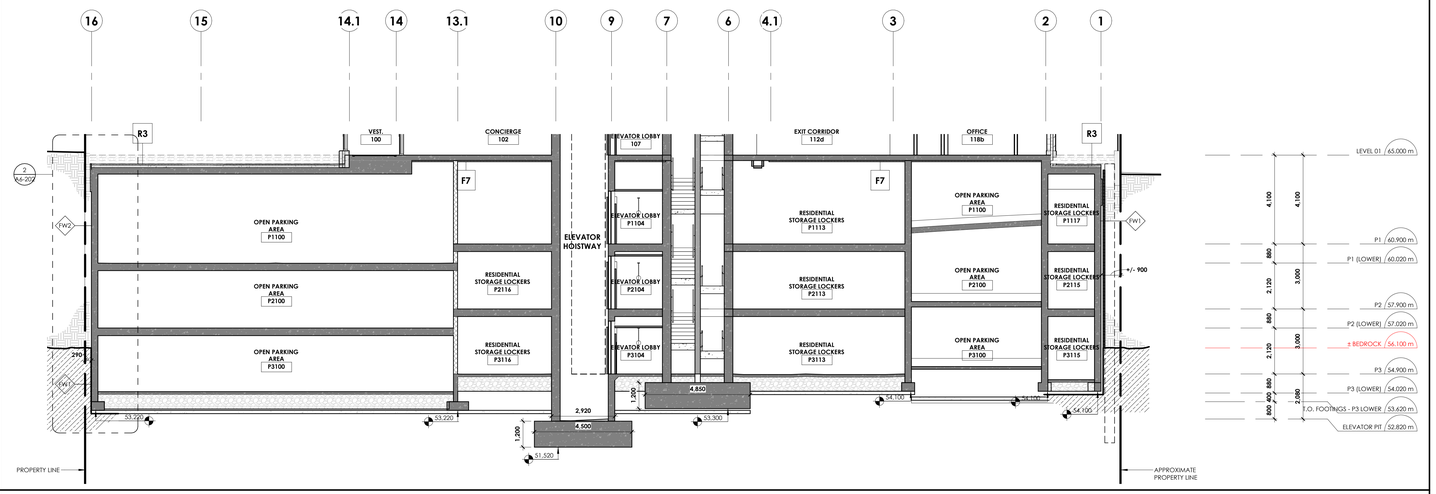
project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 200**
date | date	**02/15/24**

drawing number | numéro du dessin

A6-101



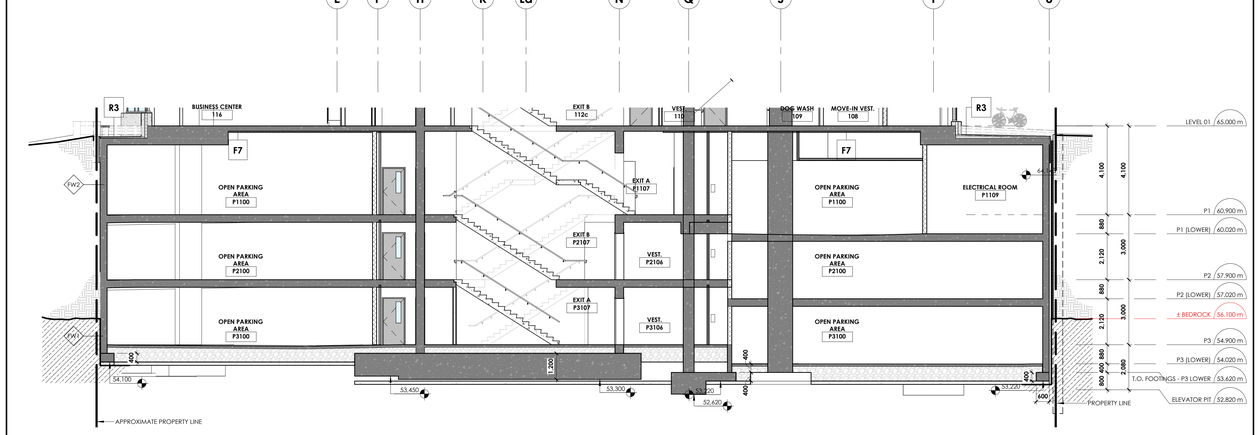
4 A6-102 PARTIAL SECTION @ GRID 'A' & MUP
1 : 100
A2-201-E



3 A6-102 BASEMENT PARTIAL SECTION - ELEVATORS 2
1 : 100
A2-098

2 A6-102 BASEMENT PARTIAL SECTION - ELEVATOR
1 : 100
A6-100

5 A6-102 BASEMENT PARTIAL SECTION - AIR WELLS & CISTERN
1 : 100
A2-098



1 A6-102 BASEMENT PARTIAL SECTION - EXIT STAIRS
1 : 100
A6-100

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CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

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2025-06-12 4:36:52 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-19~~
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
12	RE-ISSUED FOR SHORING & EXCAV. IFT	24-12-19
10	ISSUED FOR SHORING & EXCAV. IFP/IFT	24-11-05
8	DRAFT: SHORING & EXCAVATION PERMIT	24-10-10
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
3	ISSUED FOR EXCAVATION PERMIT	24-06-13
2	RE-ISSUED FOR CLASS 'D' ESTIMATE	24-05-13
1	ISSUED FOR CLASS 'D' ESTIMATE	24-05-17

stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

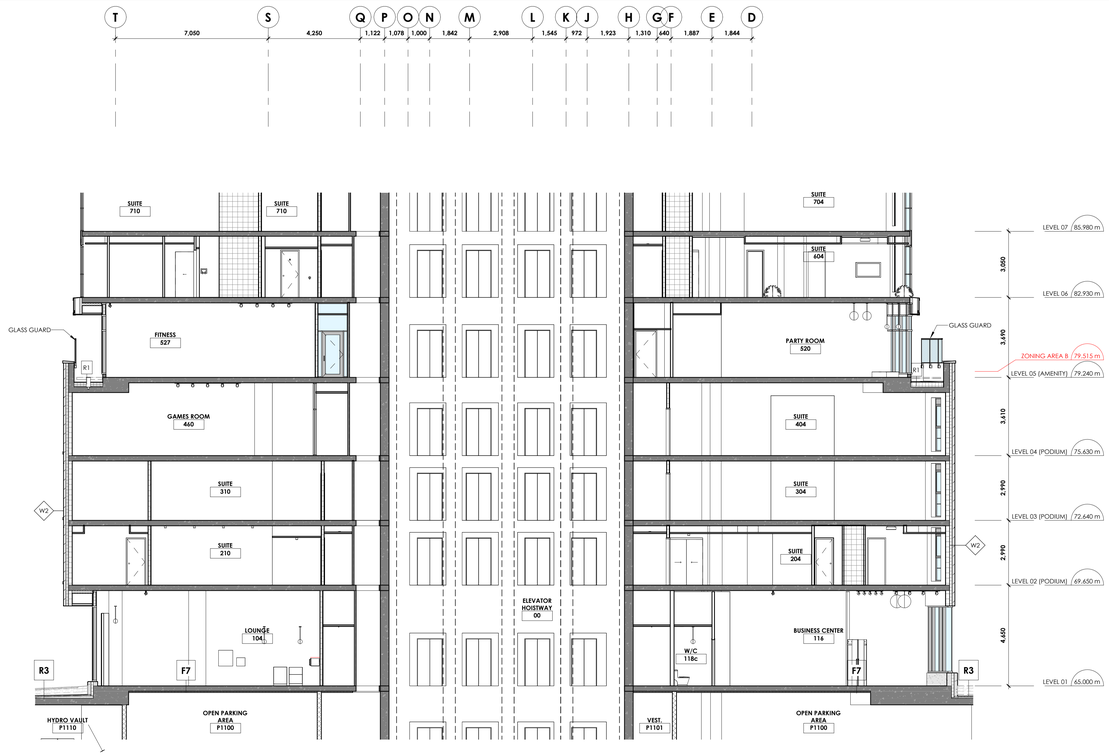
drawing title | titre du dessin

ENLARGED SECTIONS - BASEMENT PARKING

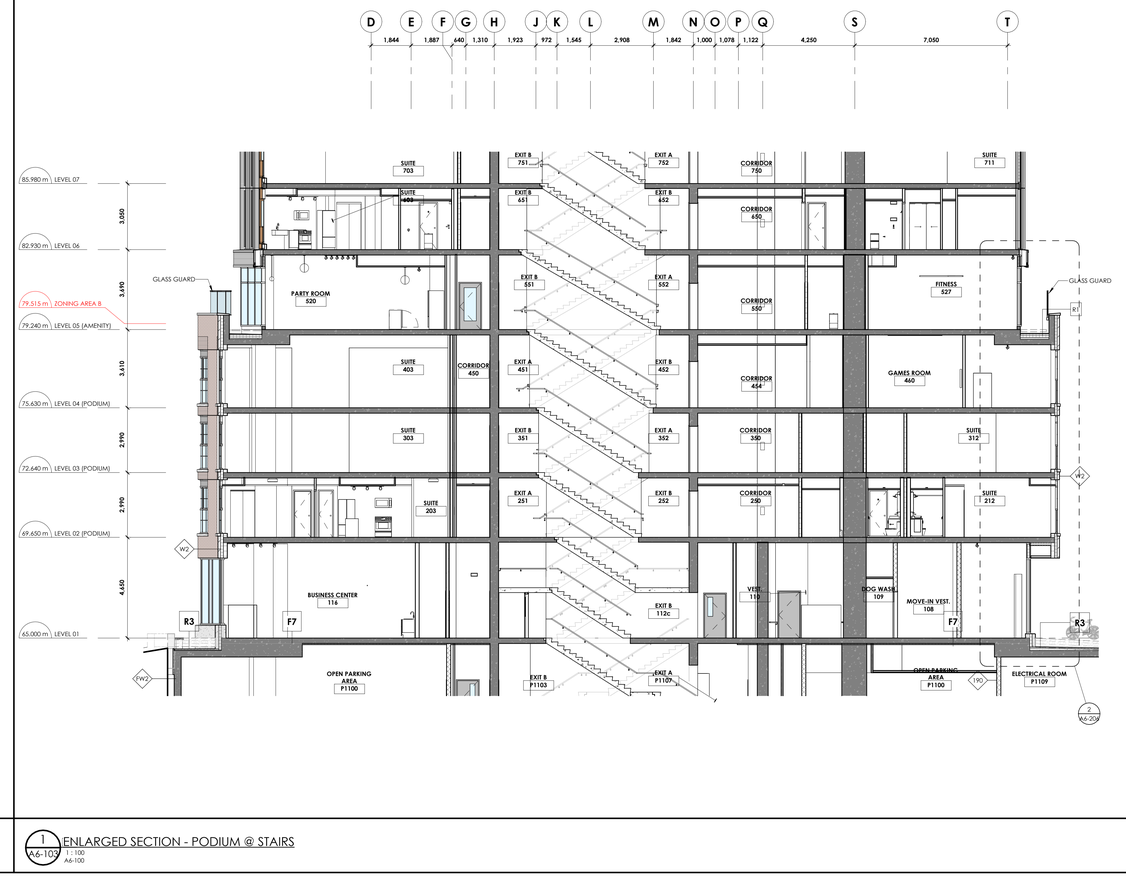
project number | numéro du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**02/15/24**

drawing number | numéro du dessin

A6-102



2 A6-105 ENLARGED SECTION - PODIUM @ ELEVATOR
1 : 100
A6-100



1 A6-105 ENLARGED SECTION - PODIUM @ STAIRS
1 : 100
A6-100

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client

CLVGROUP DEVELOPMENTS

structural engineers | ingénieurs structurels

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

electrical engineers | ingénieur electrique
mechanical engineer | ingénieur méchanique

GWAL
Goodkey, Weedmark & Associates Ltd.

civil engineers | ingénieur civil

wsp

landscape architect | architecte paysagiste

CSW

21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-19~~
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
2	RE-ISSUED FOR CLASS 'D' ESTIMATE	24-05-13
1	ISSUED FOR CLASS 'D' ESTIMATE	24-05-17
no	revisions	date

stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ENLARGED SECTIONS - PODIUM

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**02/15/24**

drawing number | numéro du dessin

A6-103

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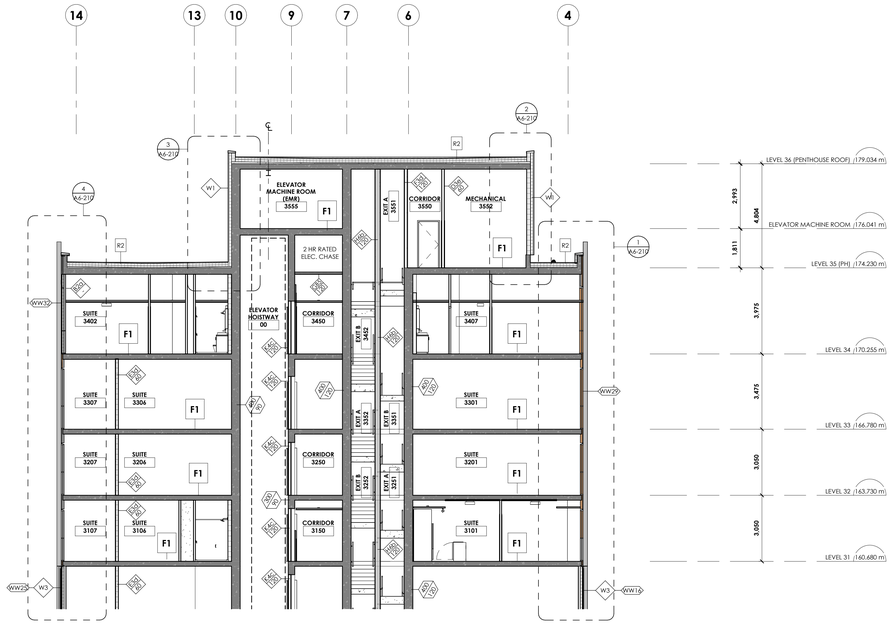
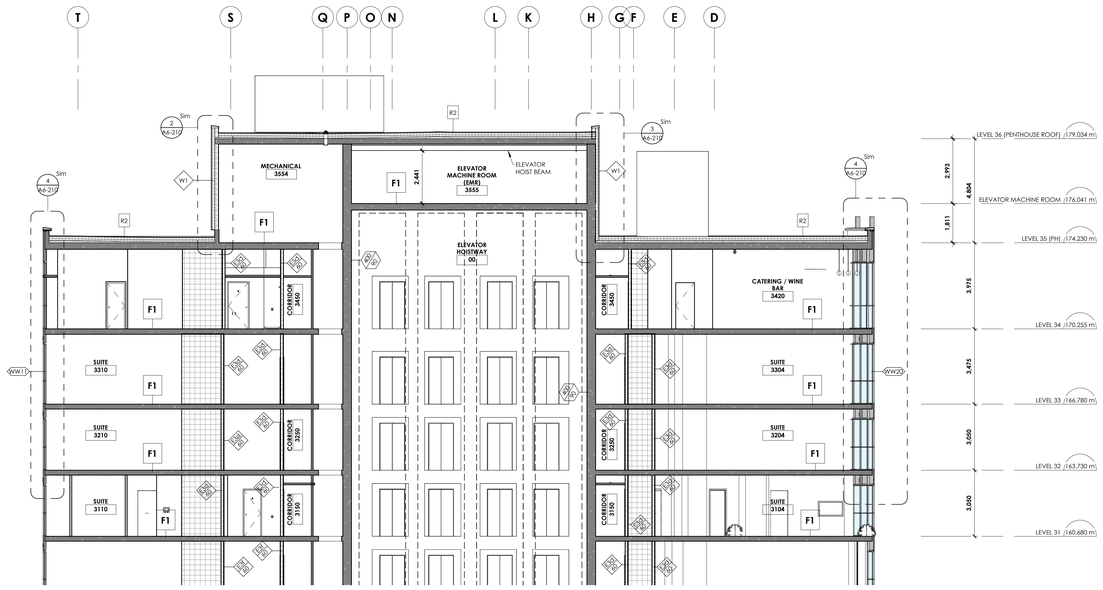


2 A6-104 PENTHOUSE PARTIAL SECTION - N/S
1 : 100
A2-134



3 A6-104 PENTHOUSE PARTIAL SECTION - ELEVATORS
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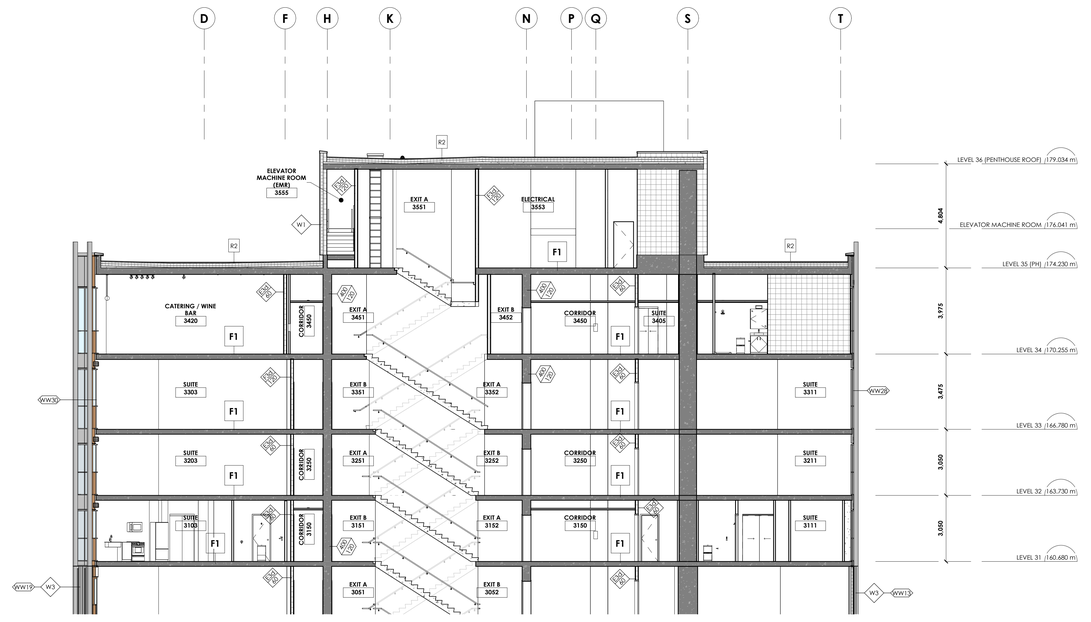
A6-100



1 A6-104 PENTHOUSE PARTIAL SECTION - STAIRS
1 : 100
A6-100

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

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2025-06-12 4:36:56 PM

21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-19~~
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
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18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
4	ISSUED FOR 33% WORKING DRAWINGS	24-08-12
2	RE-ISSUED FOR CLASS 'D' ESTIMATE	24-05-13
1	ISSUED FOR CLASS 'D' ESTIMATE	24-05-17
no	revisions	date

stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ENLARGED SECTIONS - PENTHOUSE LEVELS

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 100**
date | date	**02/15/24**

drawing number | numéro du dessin

A6-104

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
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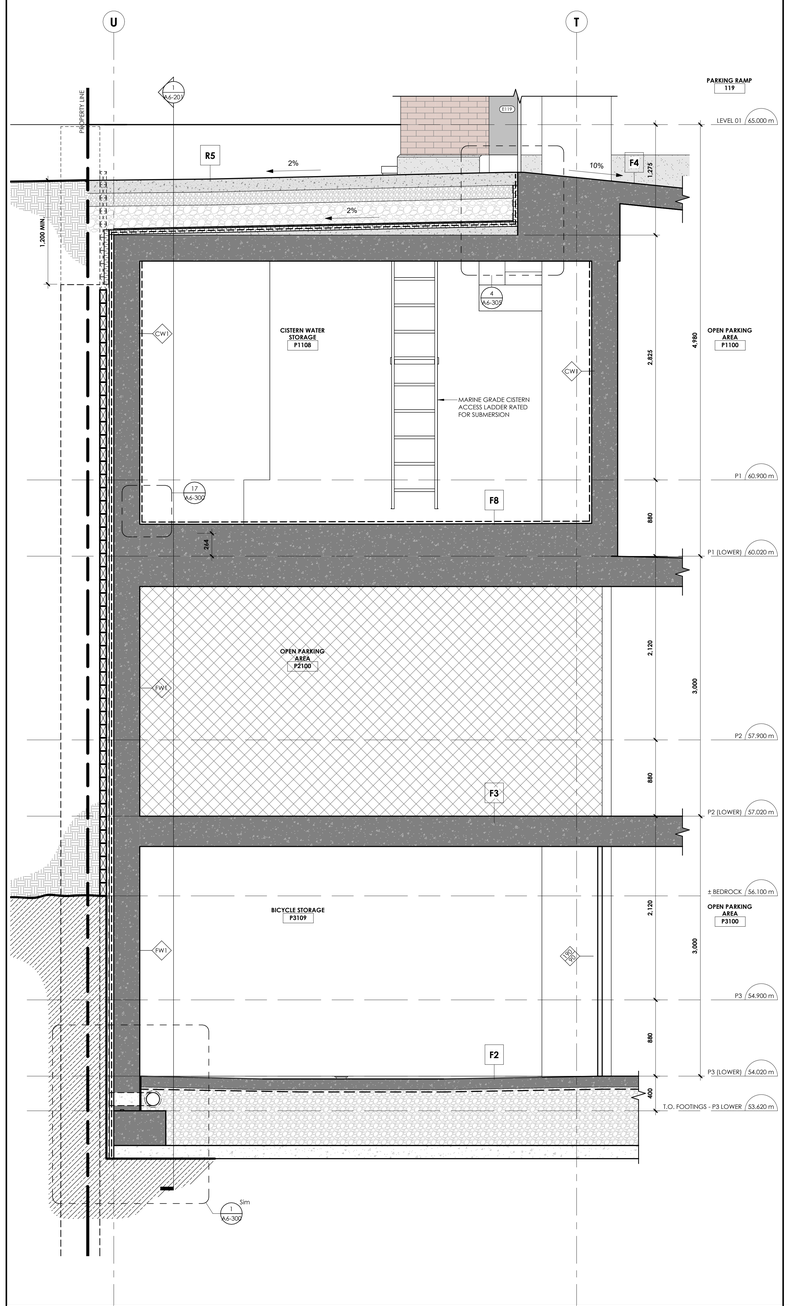
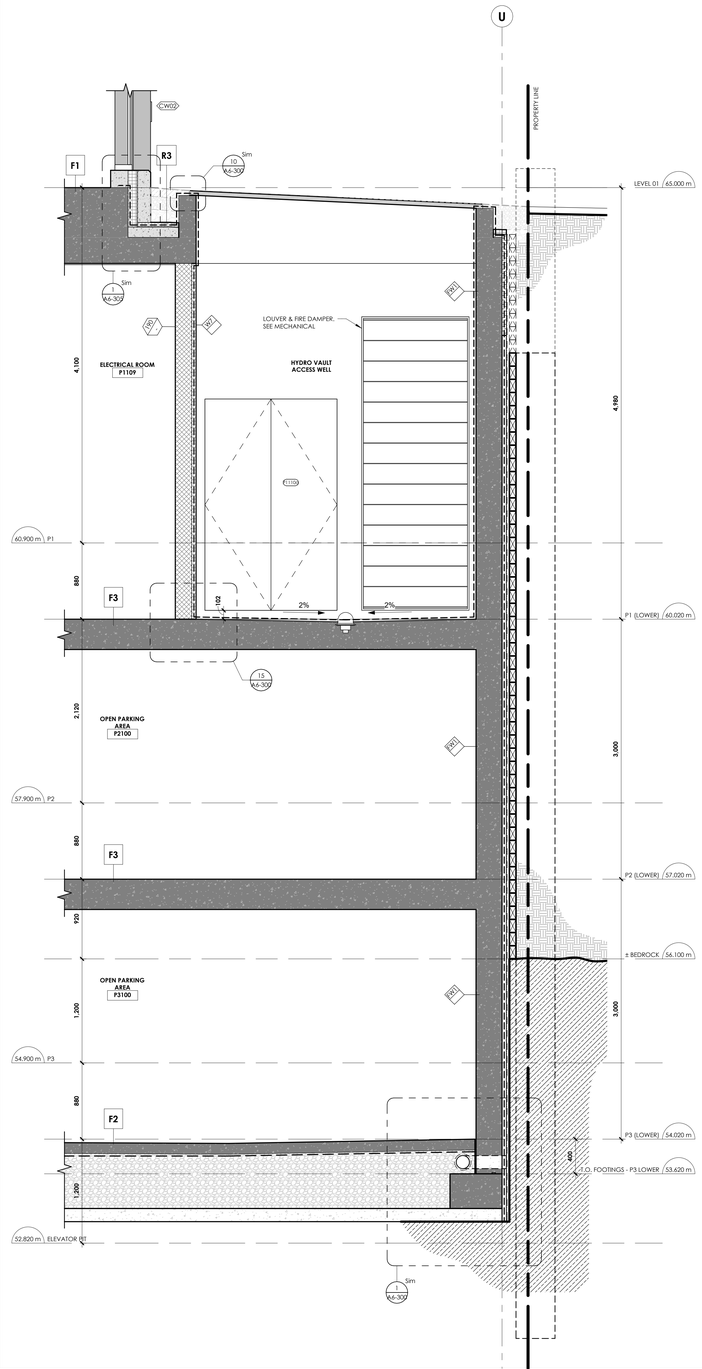
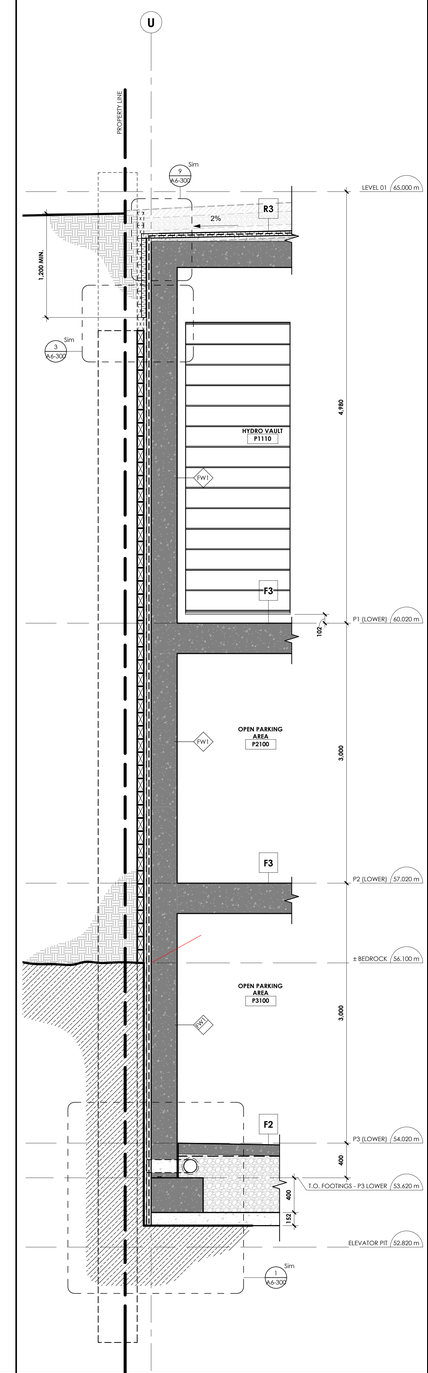


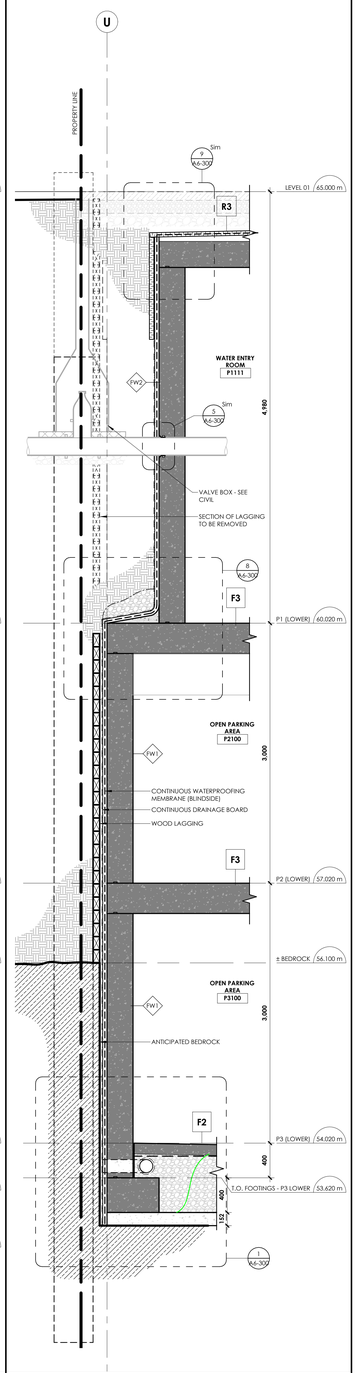
4 A6-200 1 : 25 A2-098 FOUNDATION WALL SECTION @ GRID 'U' - PARKING ENTRY & CISTERN



3 A6-200 1 : 25 A2-098 FOUNDATION WALL SECTION @ GRID 'U' - HYDRO VAULT ACCESS WELL



2 A6-200 1 : 25 A6-102 FOUNDATION WALL SECTION @ GRID 'U' - HYDRO VAULT



1 A6-200 1 : 25 A2-098 WALL SECTION @ GRID 'U' - VALVE BOXES

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB Tower A.rvt
2025-06-12 4:37:09 PM

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet project north

nord reel true north

NOT FOR CONSTRUCTION 2025-06-12 4:37:09 PM

no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	25-06-12
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	25-05-30
19	~~ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING~~	25-05-16

stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

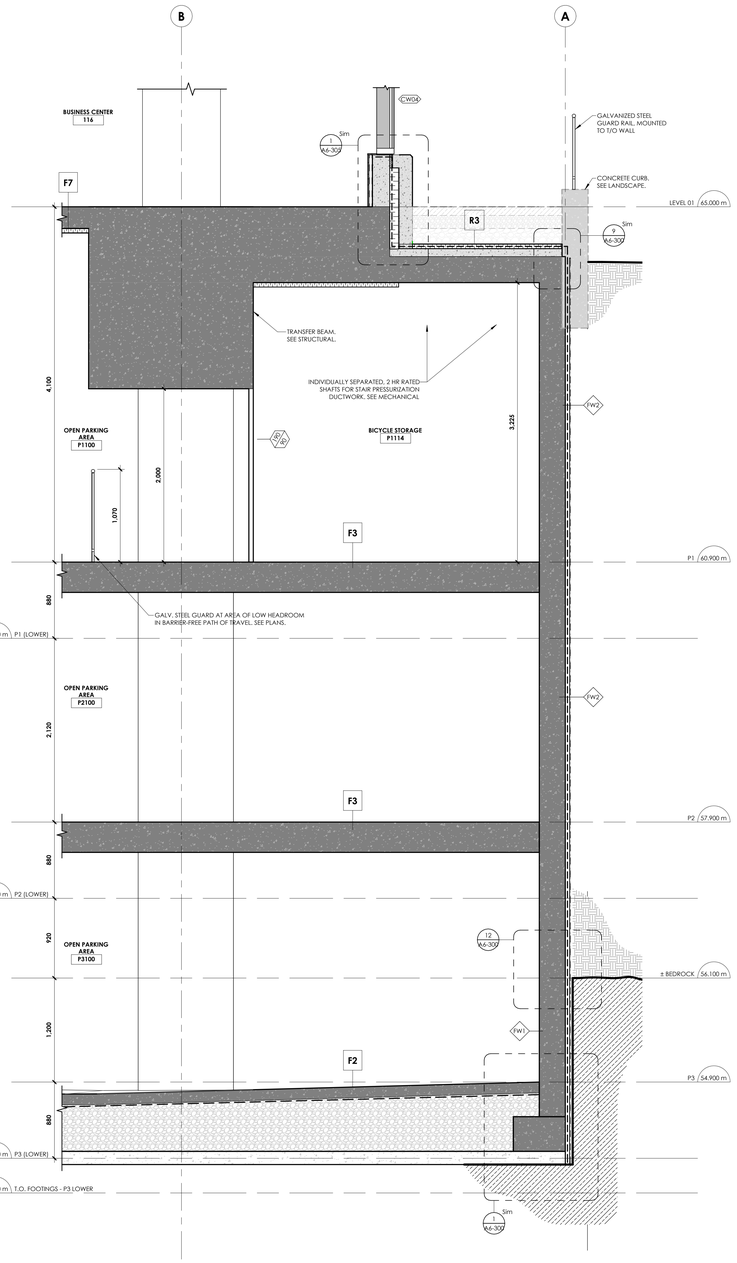
drawing title | titre du dessin

WALL SECTIONS - BELOW GRADE

project number | numero du projet	2402
drawn | dessiné	JH / DL / PC / JP
checked | verifié	JP / AR
scale | échelle	1 : 25
date | date	04/23/25

drawing number | numéro du dessin

A6-200



6 A6-201 FOUNDATION WALL SECTION @ GRID 'A' - BIKE STORAGE
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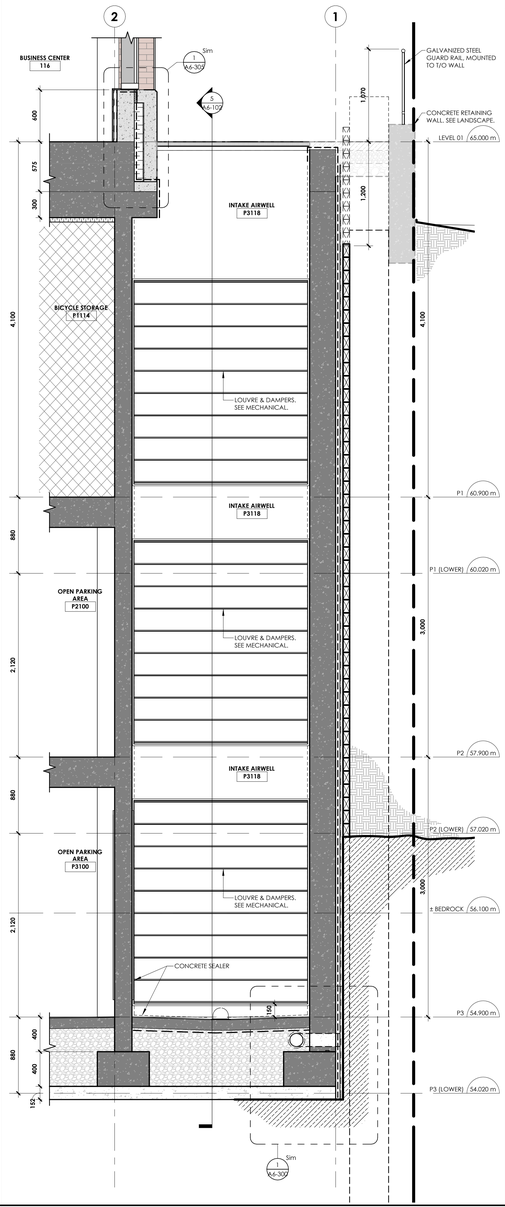
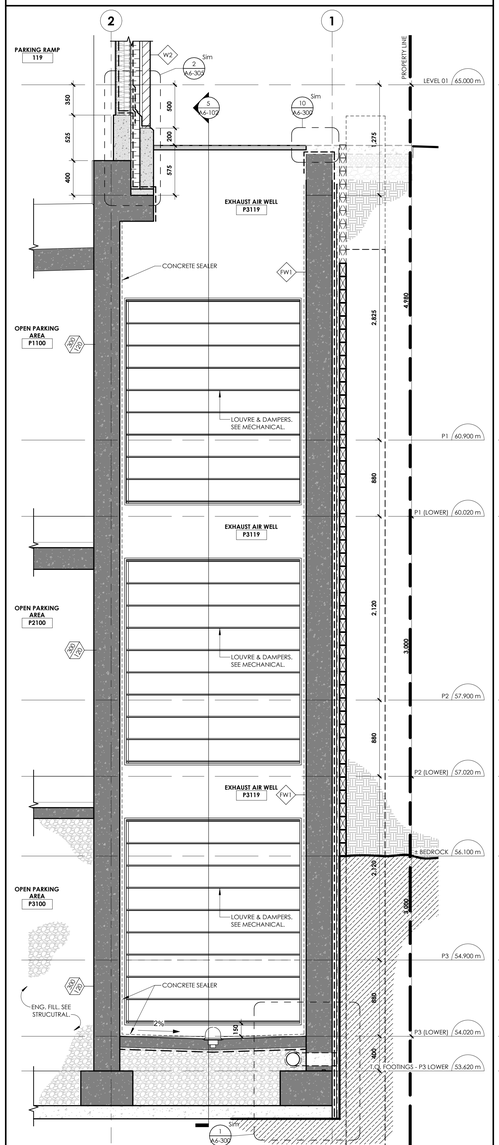
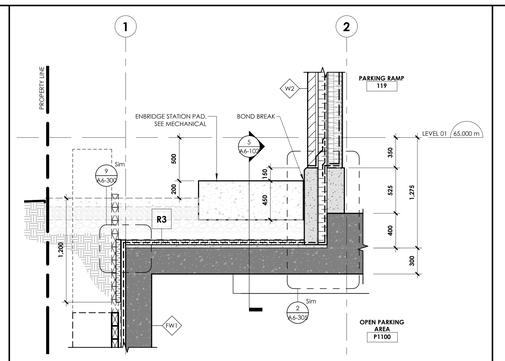
A2-098



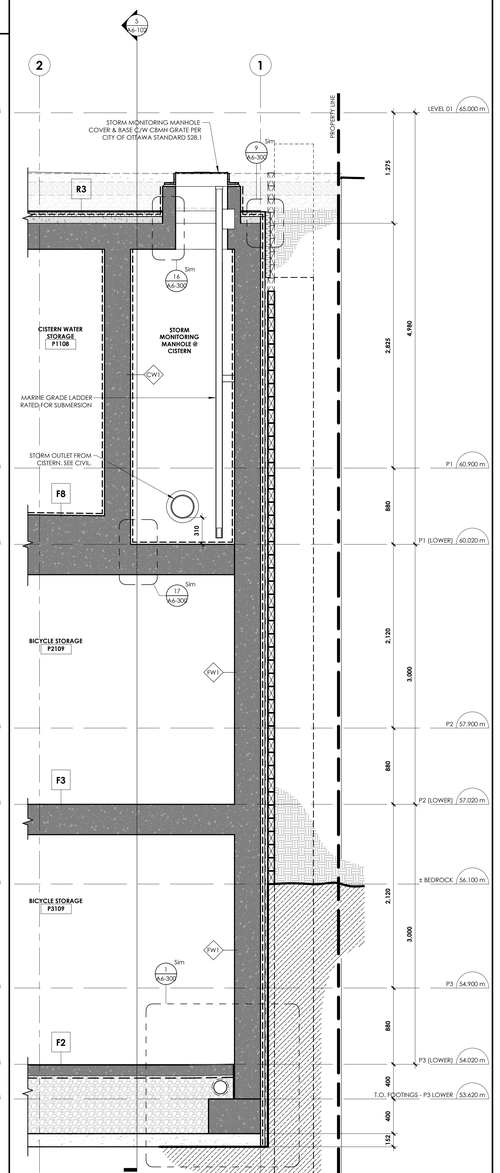
4 A6-201 FOUNDATION WALL SECTION @ GRID '1' - INTAKE AIR WELL
1 : 25
A2-098



3 A6-201 FOUNDATION WALL SECTION @ GRID '1' - EXHAUST AIR WELL
1 : 25
A2-098



2 A6-201 PARKING ROOF SECTION @ ENBRIDGE STATION
1 : 25
A2-201-W



1 A6-201 FOUNDATION WALL SECTION @ GRID '1' - MONITORING MH @ CISTERN
1 : 25
A2-098

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
2025-06-12 4:37:03 PM

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

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electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

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21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
no	revisions	date

stamp | timbre

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

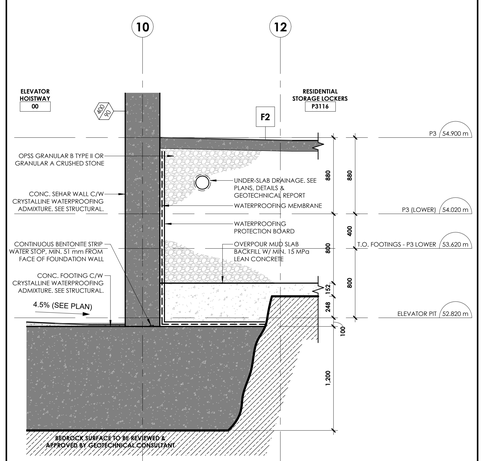
drawing title | titre du dessin

WALL SECTIONS - BELOW GRADE

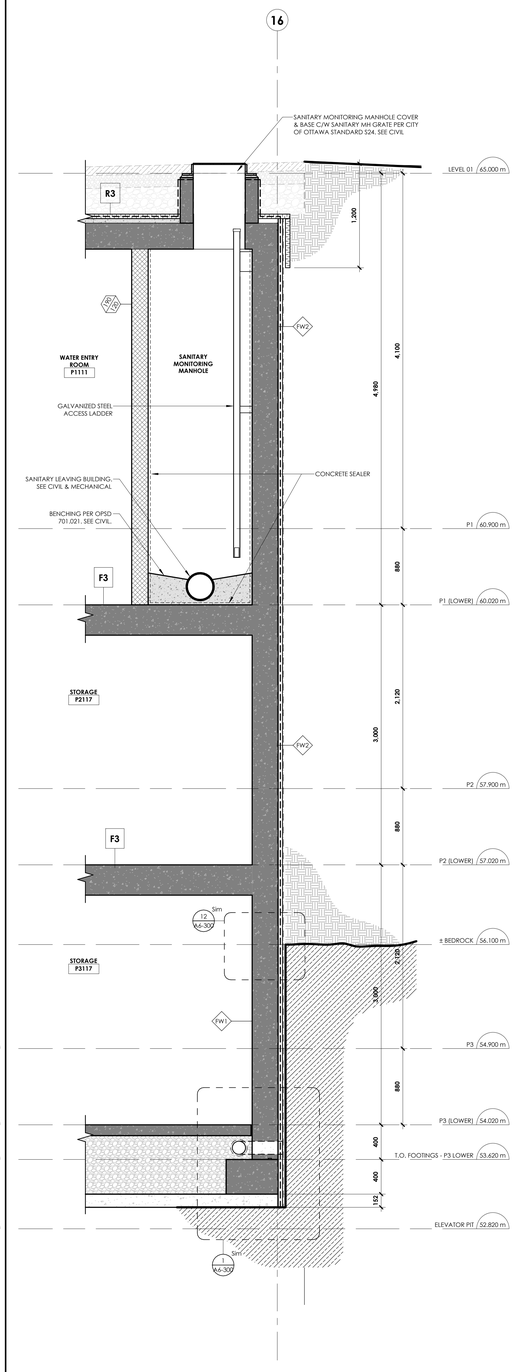
project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 25**
date | date	**04/24/25**

drawing number | numéro du dessin

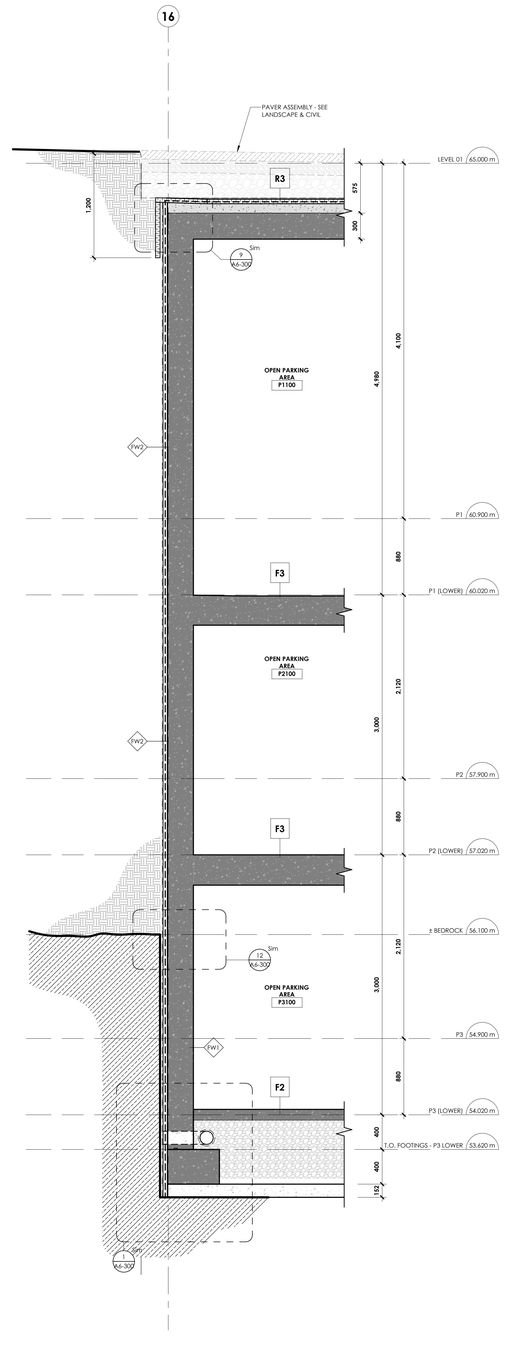
A6-201



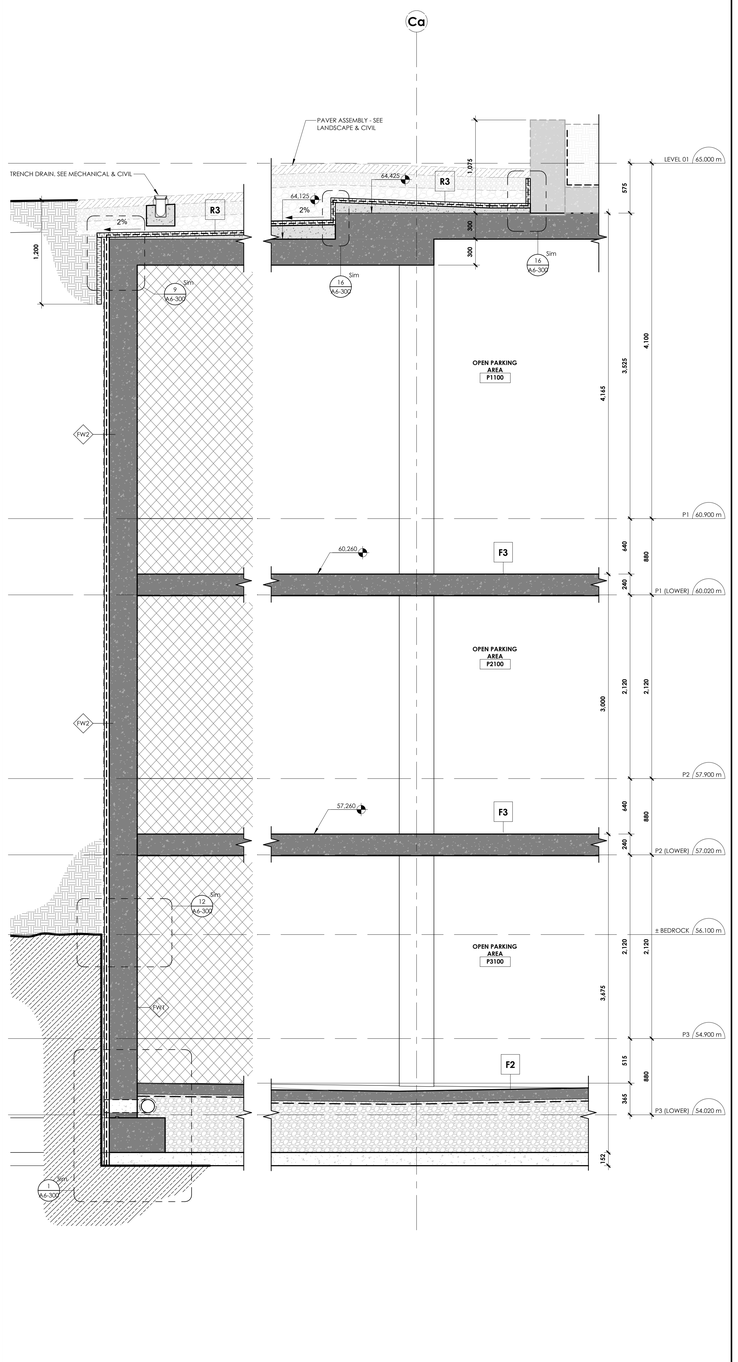
4 A6-202 WALL SECTION @ ELEVATOR HOISTWAY PIT
1 : 25
A7-200



3 A6-202 FOUNDATION WALL SECTION @ SANITARY MONITORING MANHOLE
1 : 25
A2-098



2 A6-202 FOUNDATION WALL SECTION @ GRID '16'
1 : 25
A6-102



1 A6-202 FOUNDATION WALL SECTION @ GRID 'Ca' SLAB CRANK
1 : 25
A2-098

CLVGROUP DEVELOPMENTS

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wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

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2025

21 RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20 ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19 ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
no revisions	date

stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

WALL SECTIONS - BELOW GRADE

project number | numéro du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 25**
date | date	**04/24/25**

drawing number | numéro du dessin

A6-202

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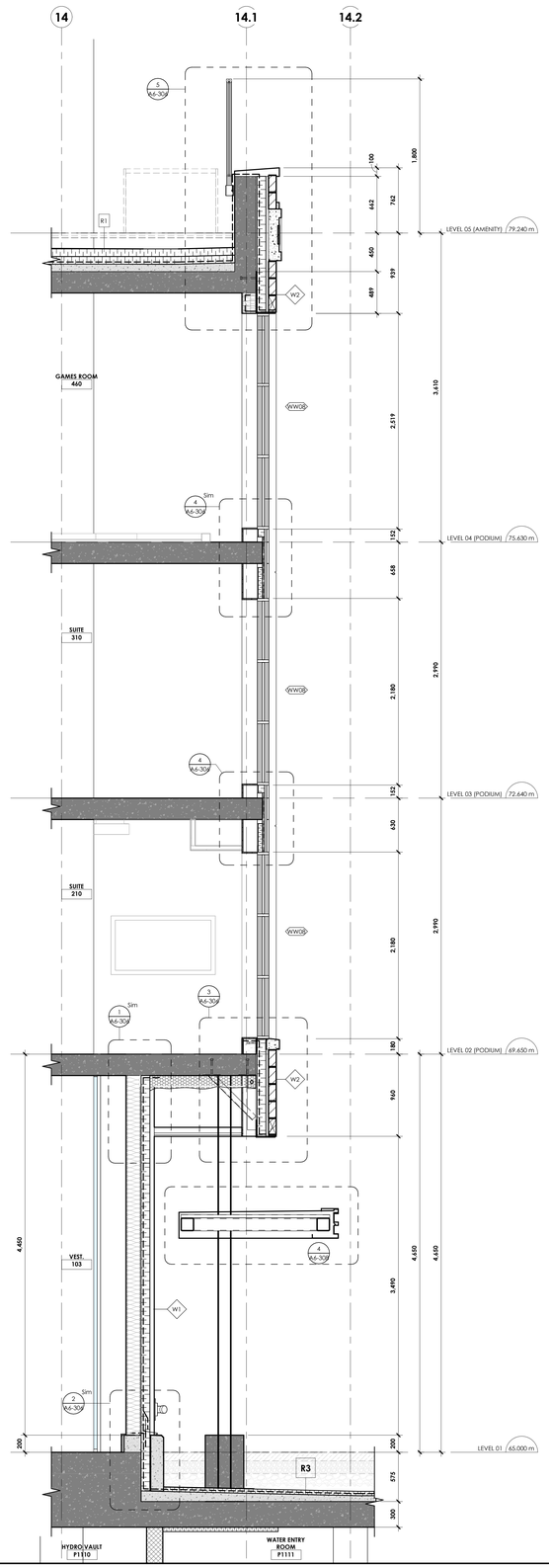
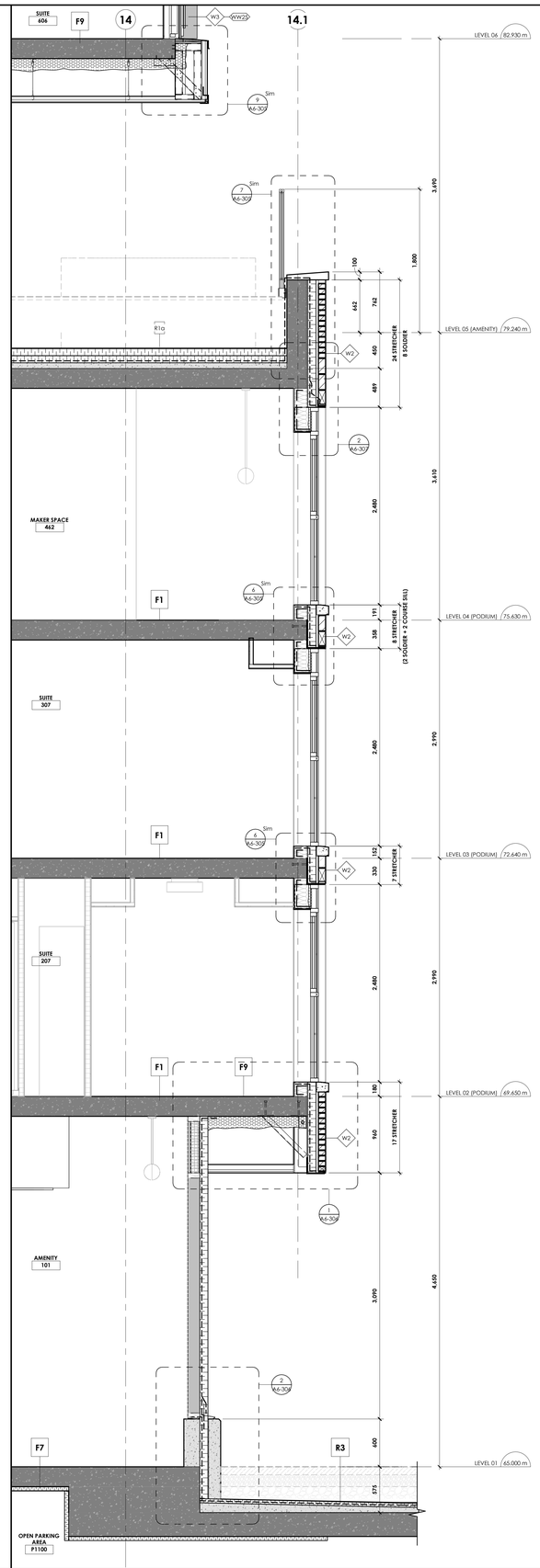
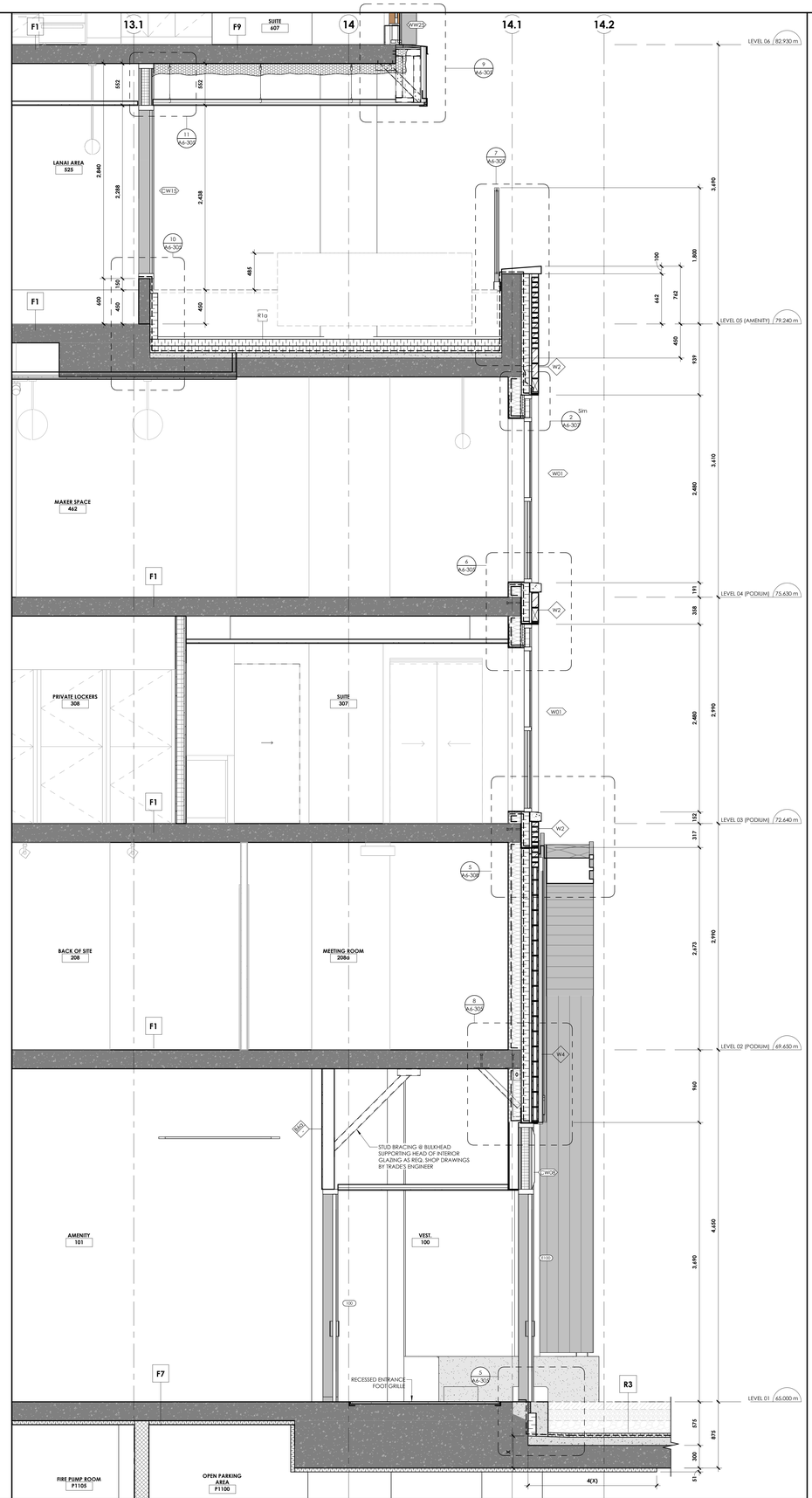


3 A6-205 PODIUM WALL SECTION @ GRIDLINE '14.1' - ENTRY VESTIBULE 103 & CORNER WINDOW WALL
1 : 25
A2-201-W



2 A6-205 PODIUM WALL SECTION @ GRIDLINE '14.1' -WALL TYPE 'W1' @ GROUND FLOOR
1 : 25
A2-201-E



1 A6-205 PODIUM WALL SECTION @ GRIDLINE '14.1' - ENTRY VESTIBULE 100
1 : 25
A2-201-E

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CLVGROUP DEVELOPMENTS

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CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

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mechanical engineer | ingénieur méchanique

wsp

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CSW

landscape architect | architecte paysagiste

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21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
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19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
no	revisions	date

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architect | architecte

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GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

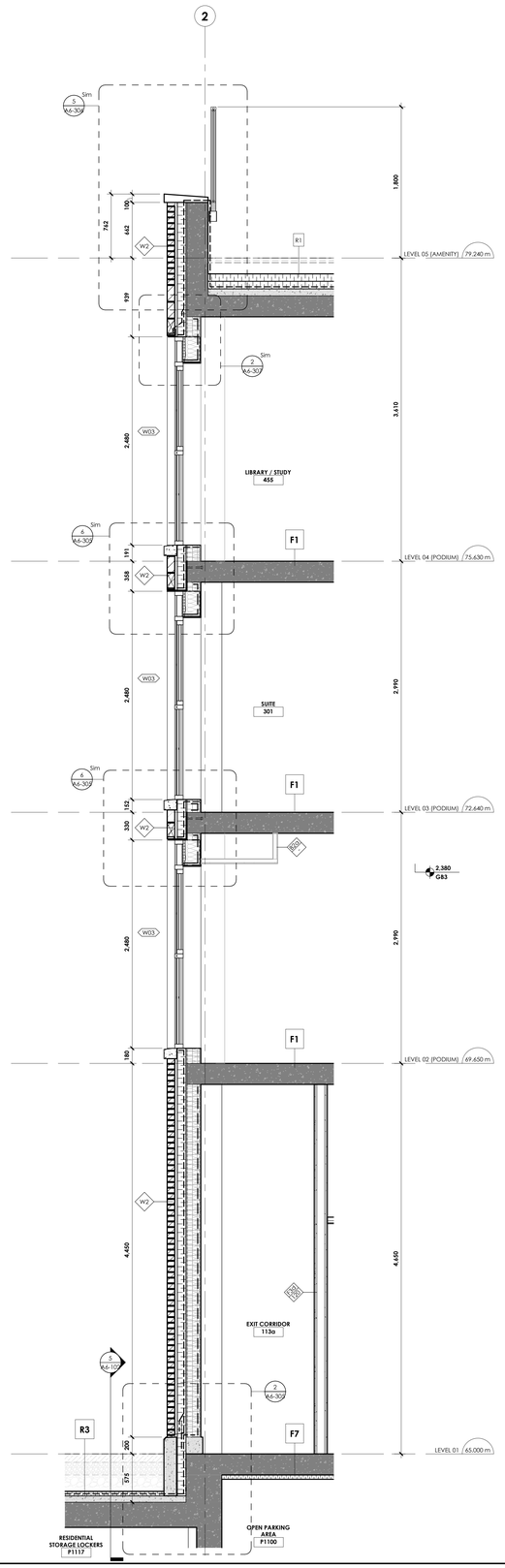
drawing title | titre du dessin

WALL SECTIONS - PODIUM LEVELS

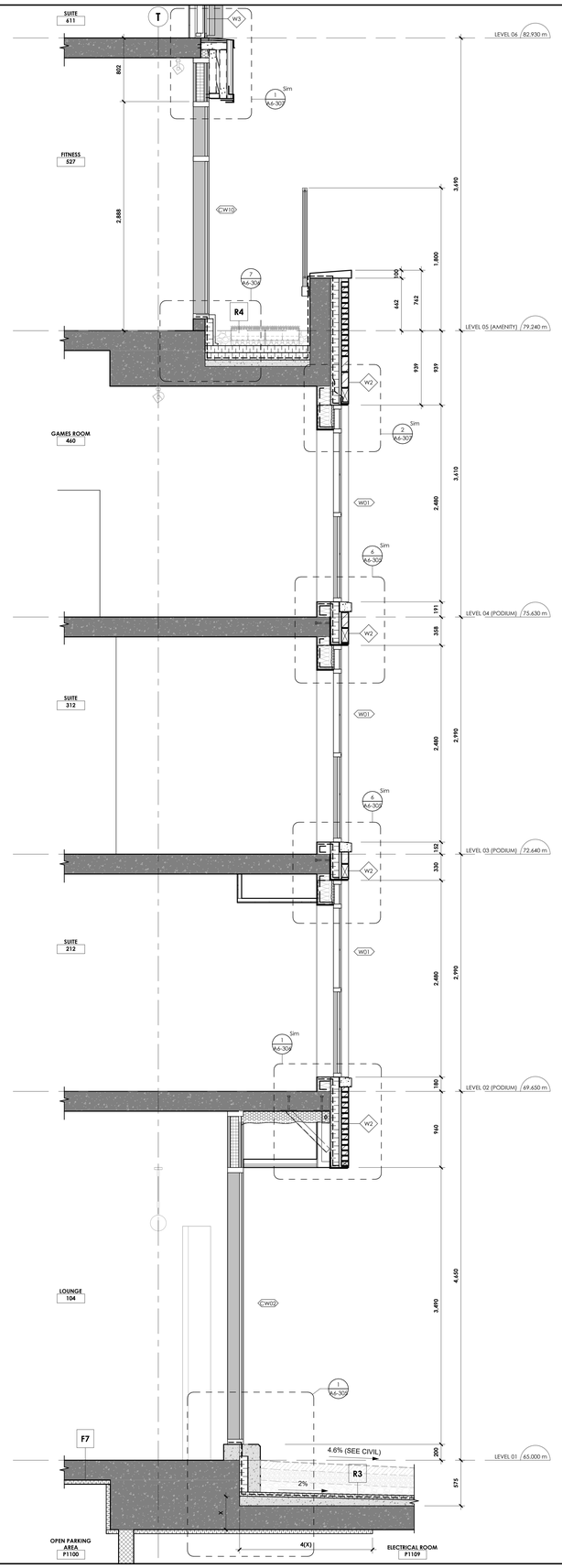
project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 25**
date | date	**08/07/24**

drawing number | numéro du dessin

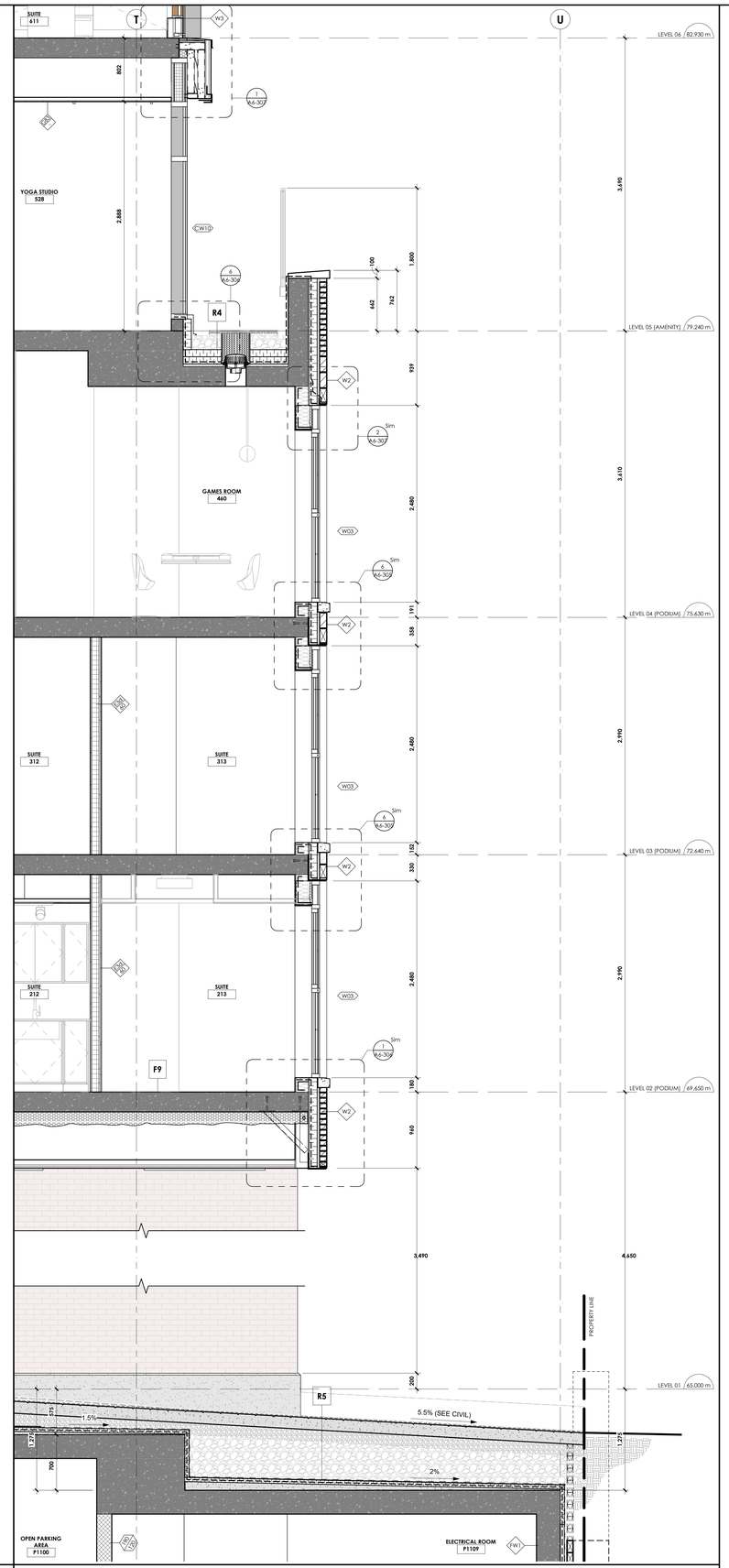
A6-205



3 / A6-206 PODIUM WALL SECTION @ GRIDLINE 'T' - GROUND FLOOR MASONRY VENEER WALL
1 : 25
A2-201-E



2 / A6-205 PODIUM WALL SECTION @ GRIDLINE 'T' - GROUND FLOOR GLAZING
1 : 25
A6-103



1 / A6-205 PODIUM WALL SECTION @ GRIDLINE 'T' - LOADING AREA RAMP & L.5 GREEN ROOFING
1 : 25
A2-201-W

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CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
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wsp

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no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

WALL SECTIONS - PODIUM LEVELS

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 25**
date | date	**08/07/24**

drawing number | numéro du dessin

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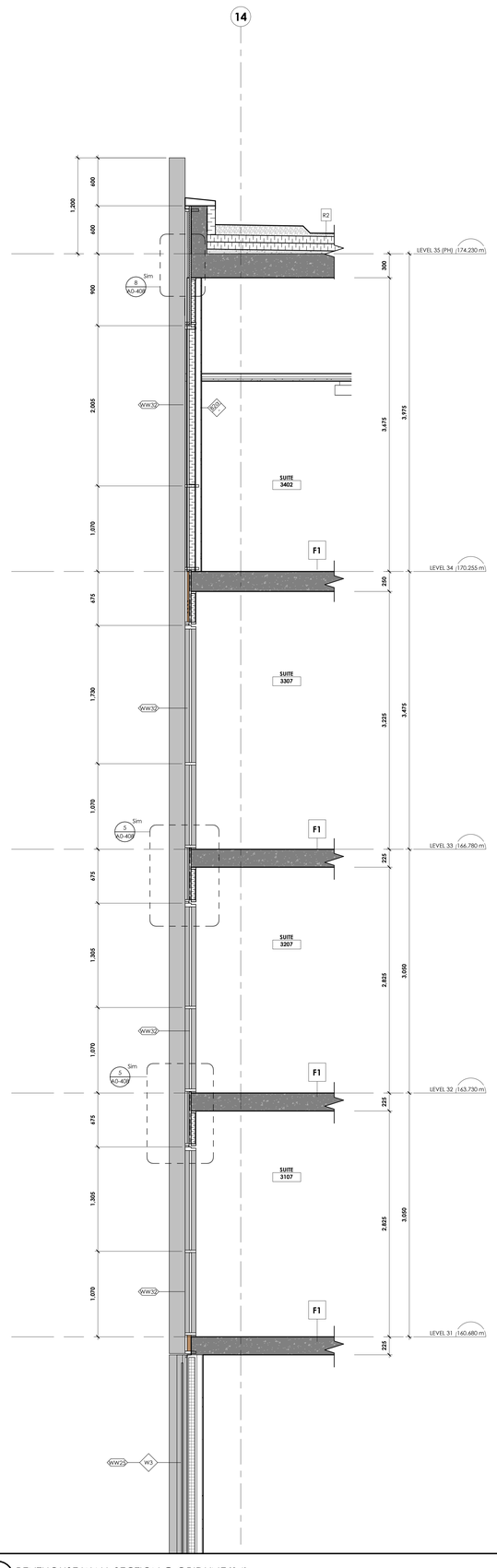
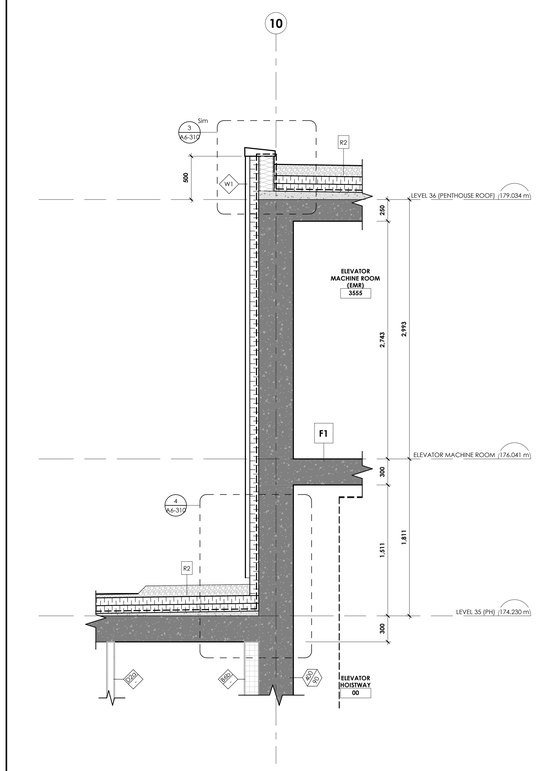
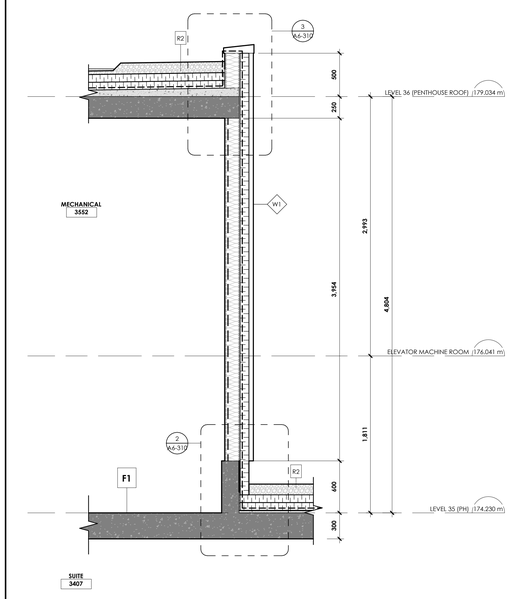


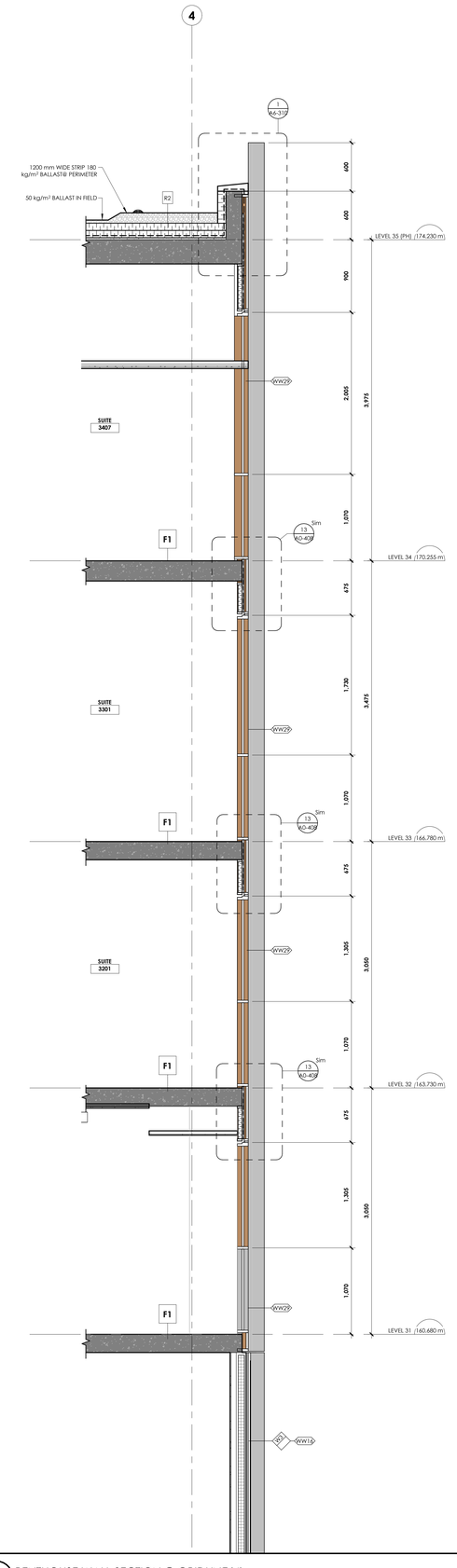
4 A6-210 PENTHOUSE WALL SECTION @ GRIDLINE '14'
1 : 25
A6-104



3 A6-210 MECHANICAL PENTHOUSE WALL SECTION @ ELEVATOR MACHINE ROOM
1 : 25
A6-104



2 A6-210 MECHANICAL PENTHOUSE WALL SECTION
1 : 25
A6-104



1 A6-210 PENTHOUSE WALL SECTION @ GRIDLINE '4'
1 : 25
A6-104

CLVGROUP DEVELOPMENTS

client

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structural engineers | ingénieurs structurels

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wsp

civil engineers | ingénieur civil

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nord du projet project north

nord reel true north

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21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30

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architect | architecte

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GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

WALL SECTIONS - PENTHOUSE LEVELS

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 25**
date | date	**05/29/25**

drawing number | numéro du dessin

A6-210

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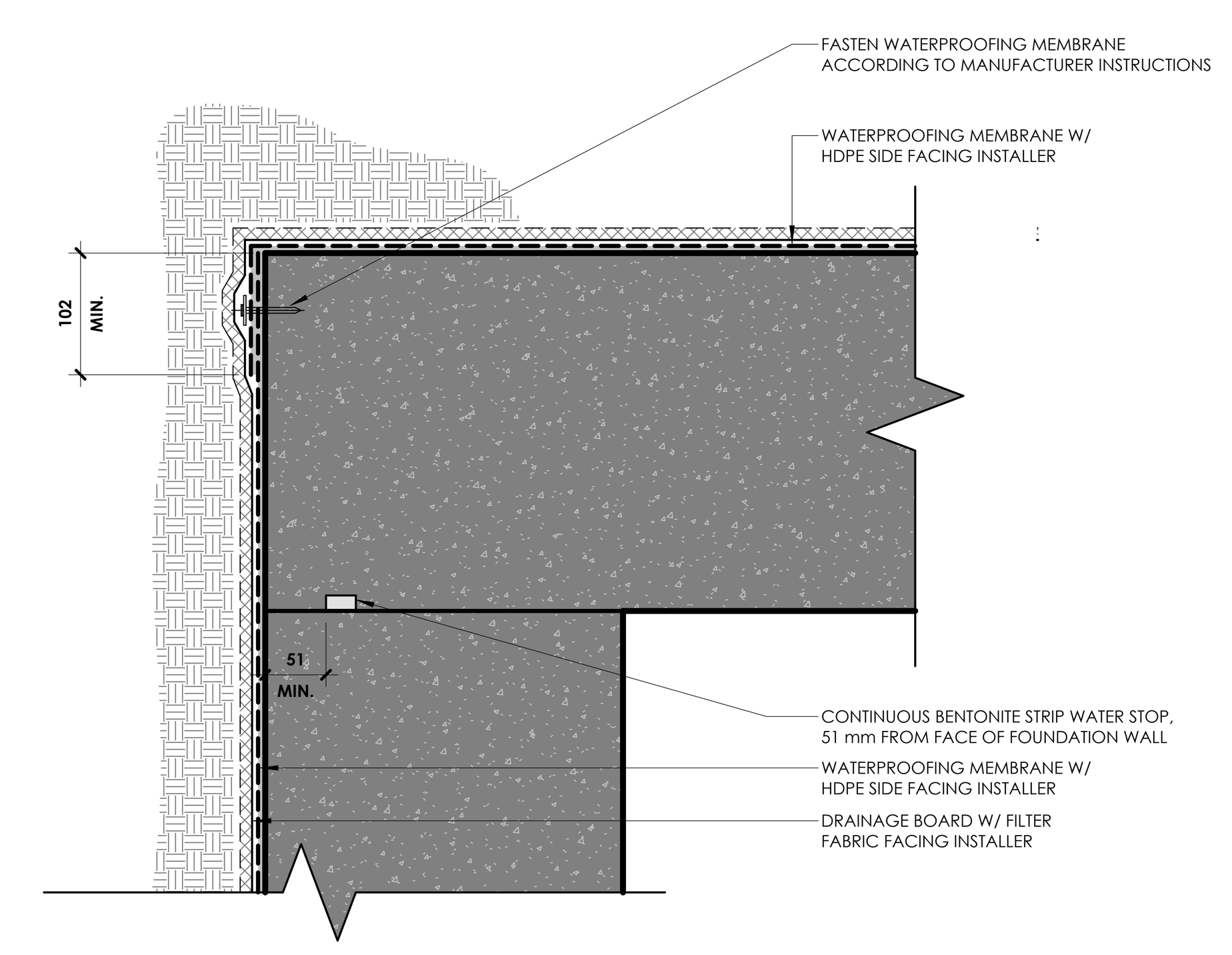
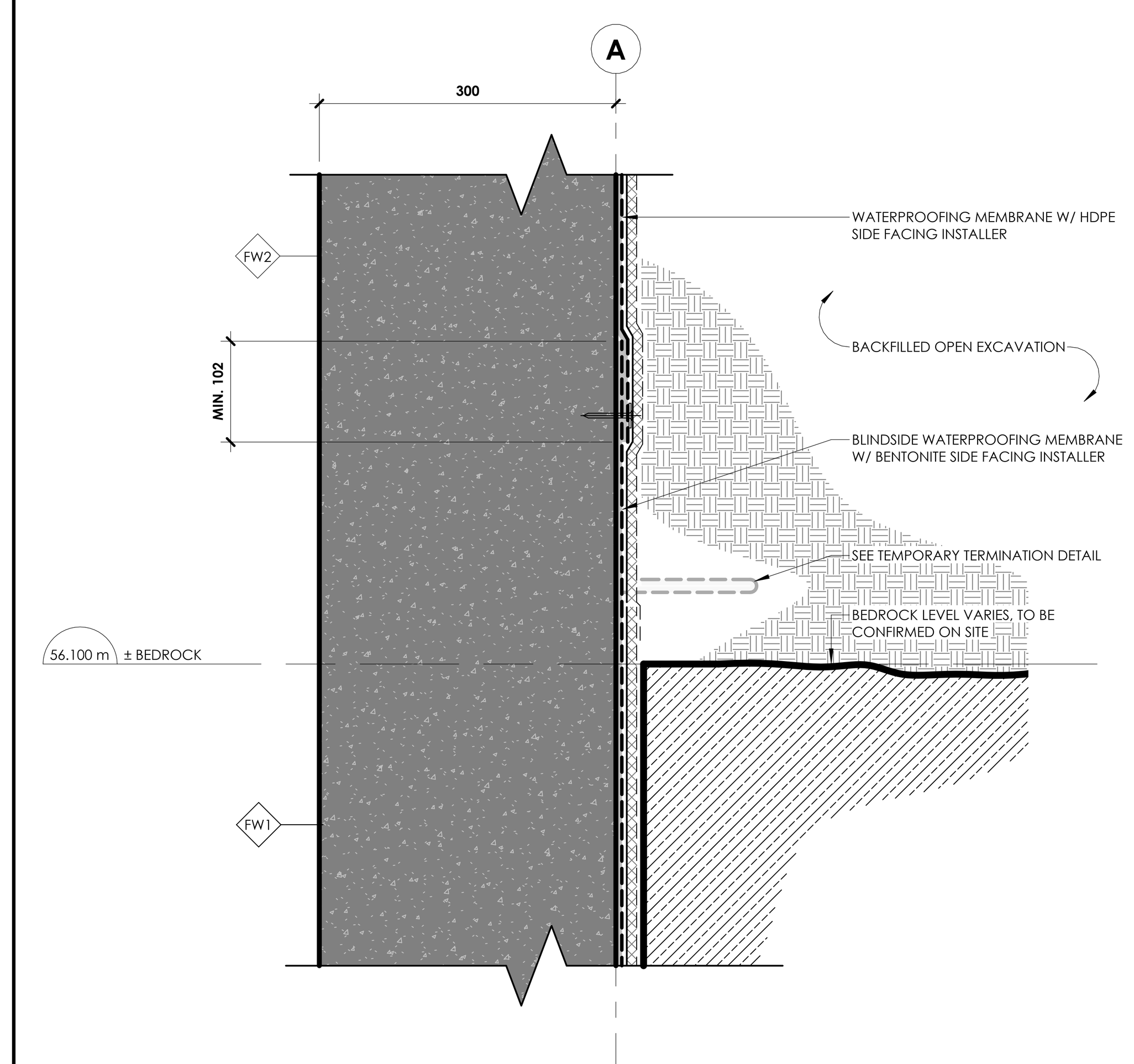
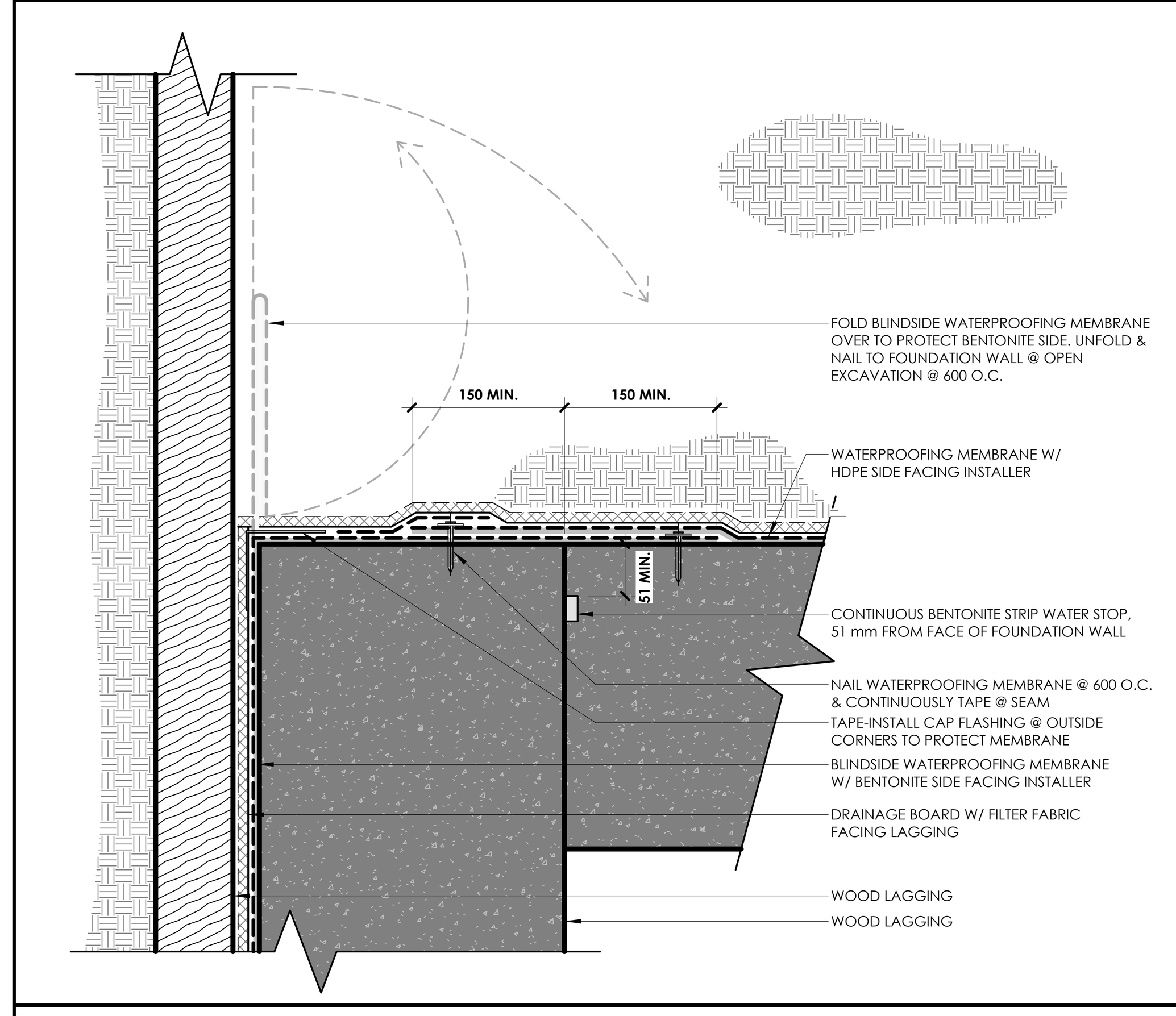


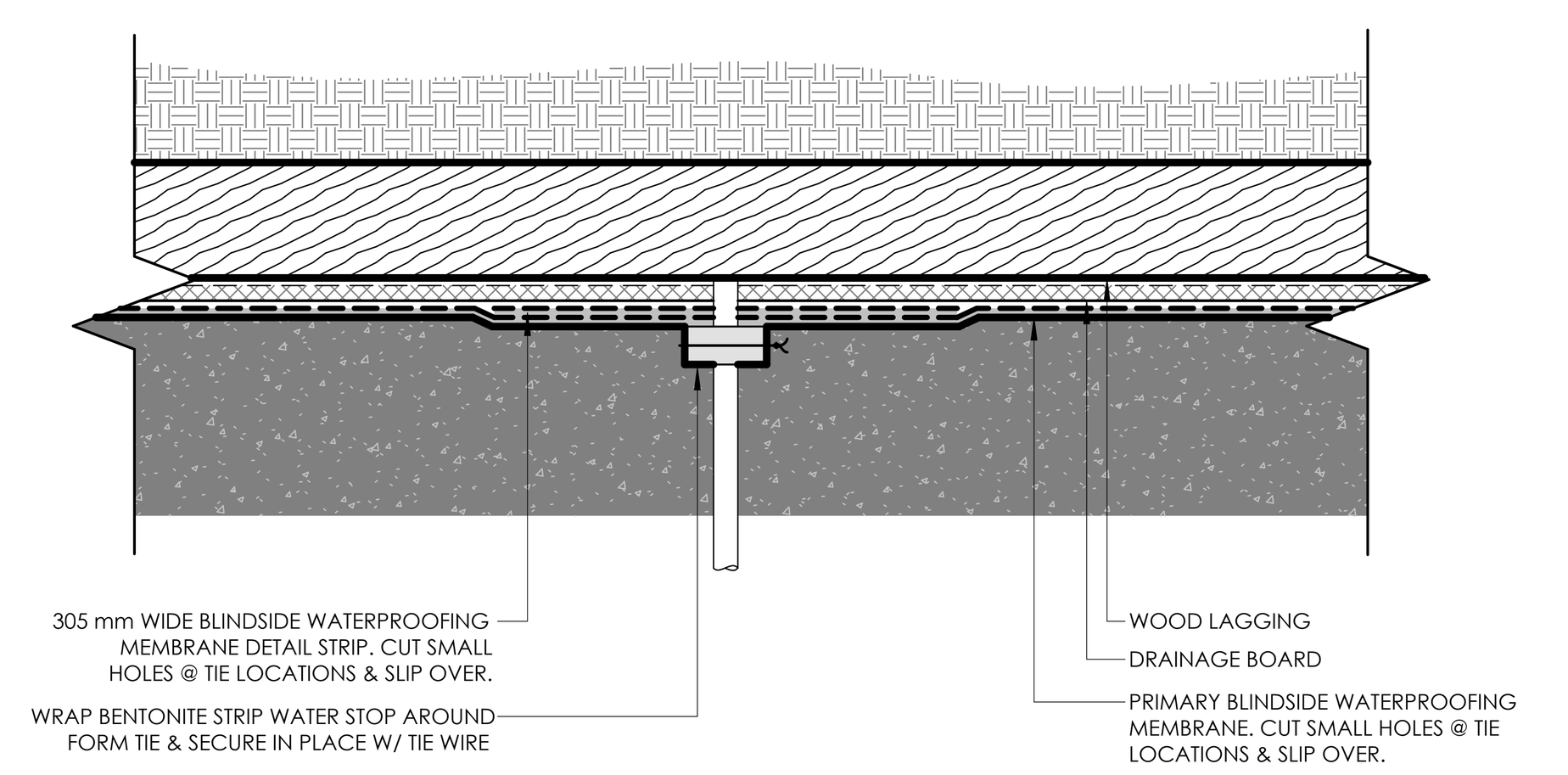
13 A6-300 SHEET WATERPROOFING DECK TO WALL TIE-IN (BELOW INSULATED LEVELS)
1 : 5



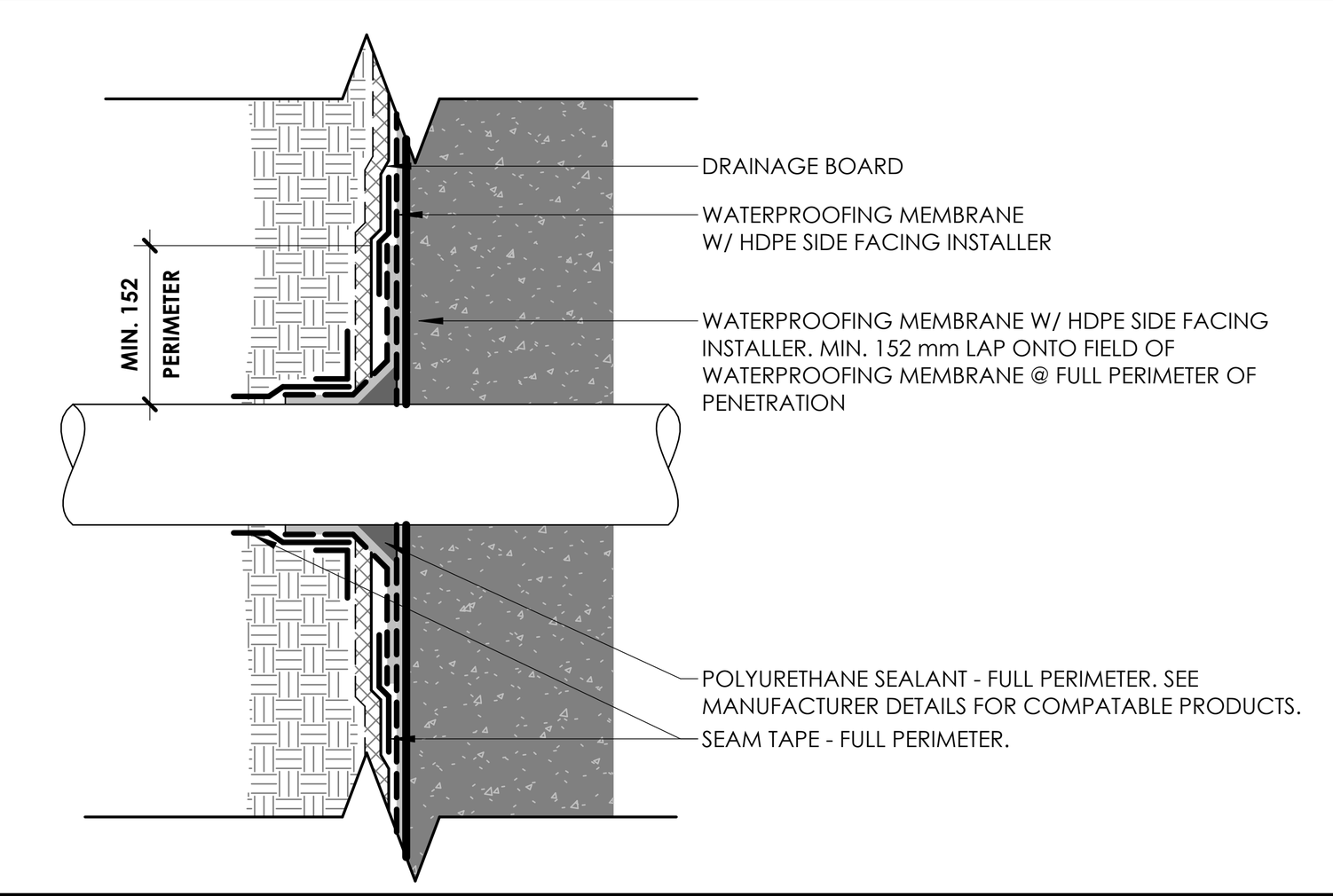
12 A6-300 SECTION DETAIL - BS WATERPROOFING TO BACKFILLED TRANSITION
1 : 5
A6-201



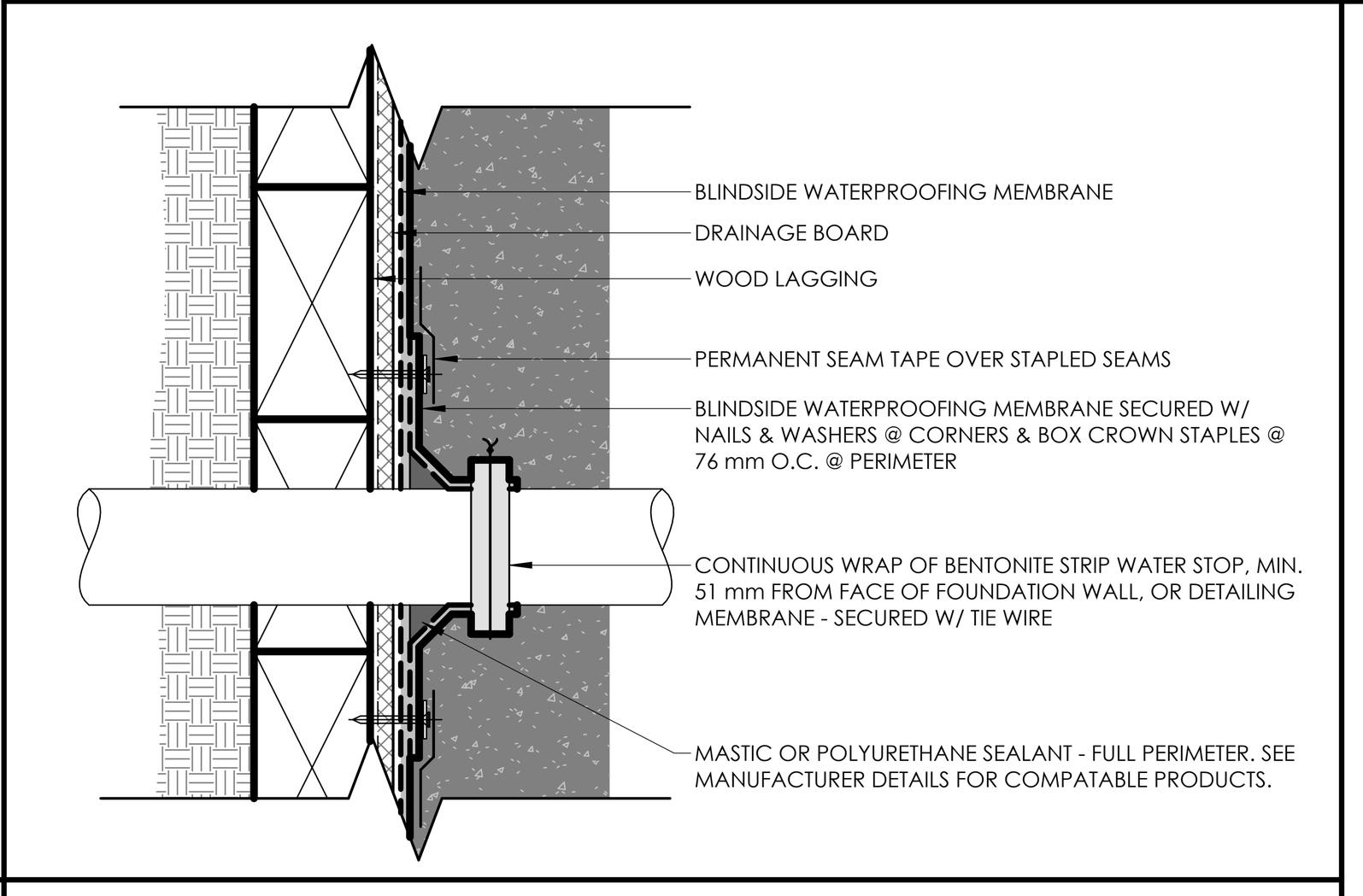
7 A6-300 PLAN DETAIL - BS WATERPROOFING TO BACKFILLED TRANSITION
1 : 5



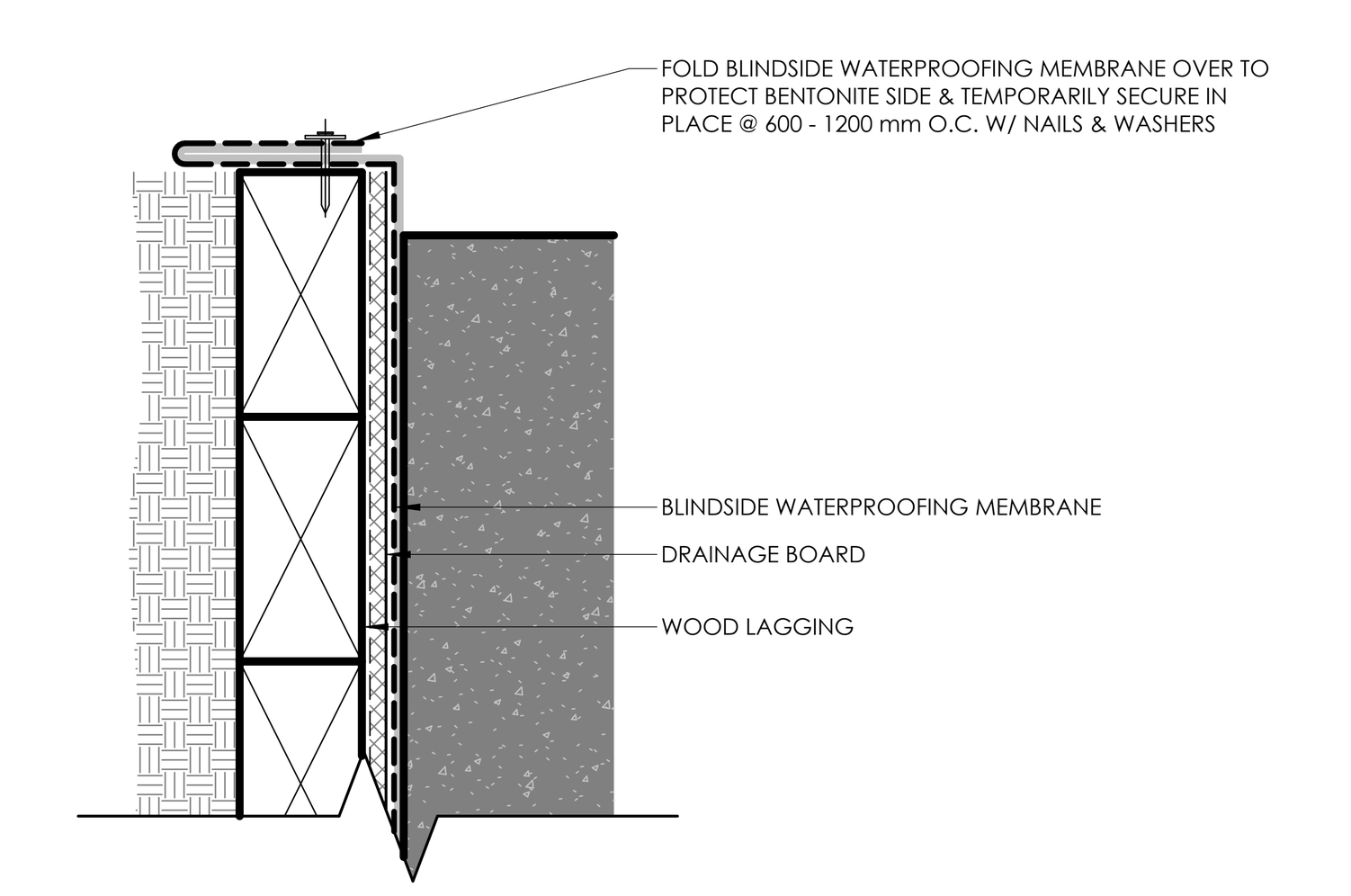
6 A6-300 PLAN DETAIL - BLINDSIDE WATERPROOFING @ FORM TIES
1 : 5



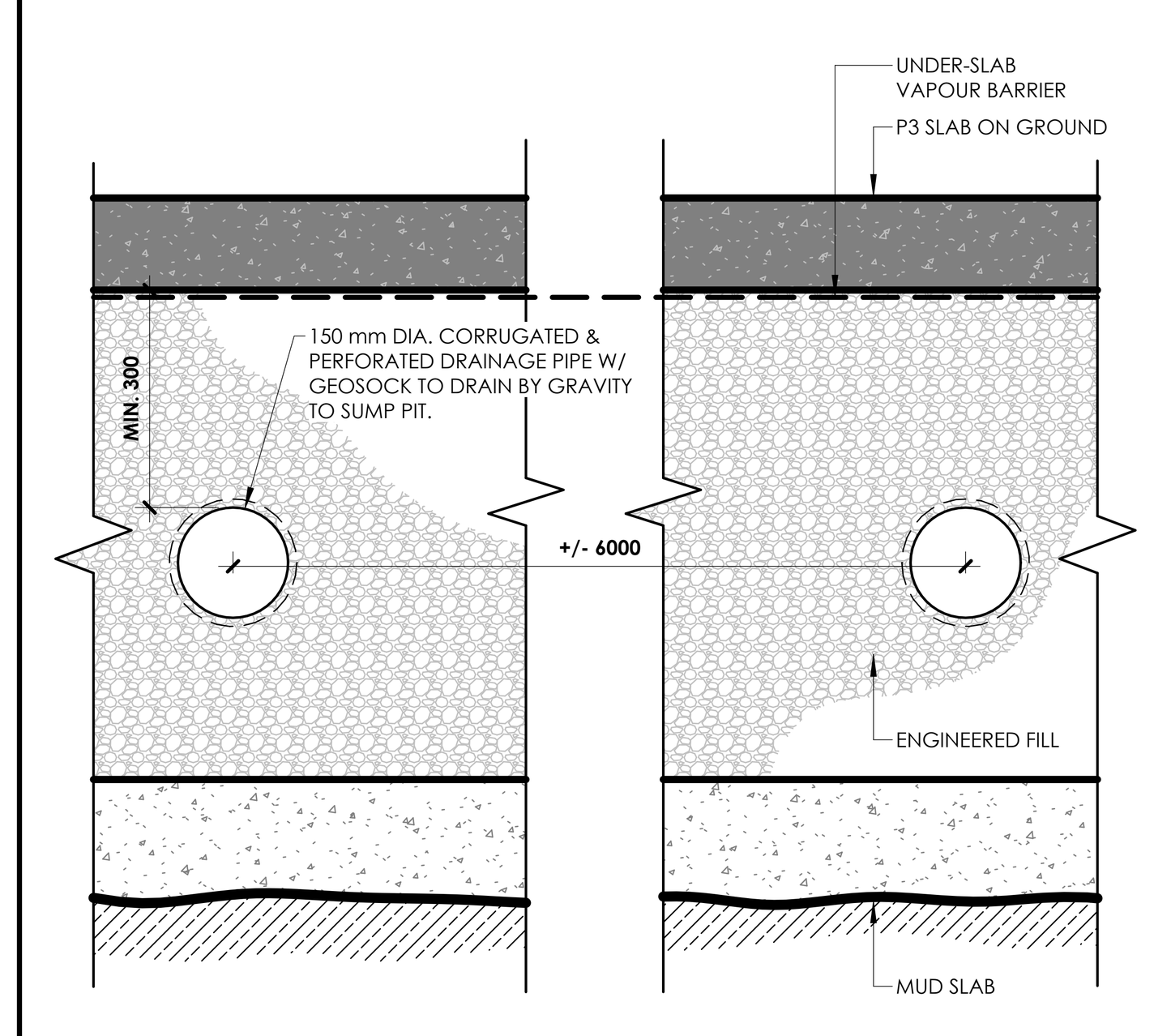
11 A6-300 BACKFILLED WATERPROOFING @ PIPE PENETRATION
1 : 5



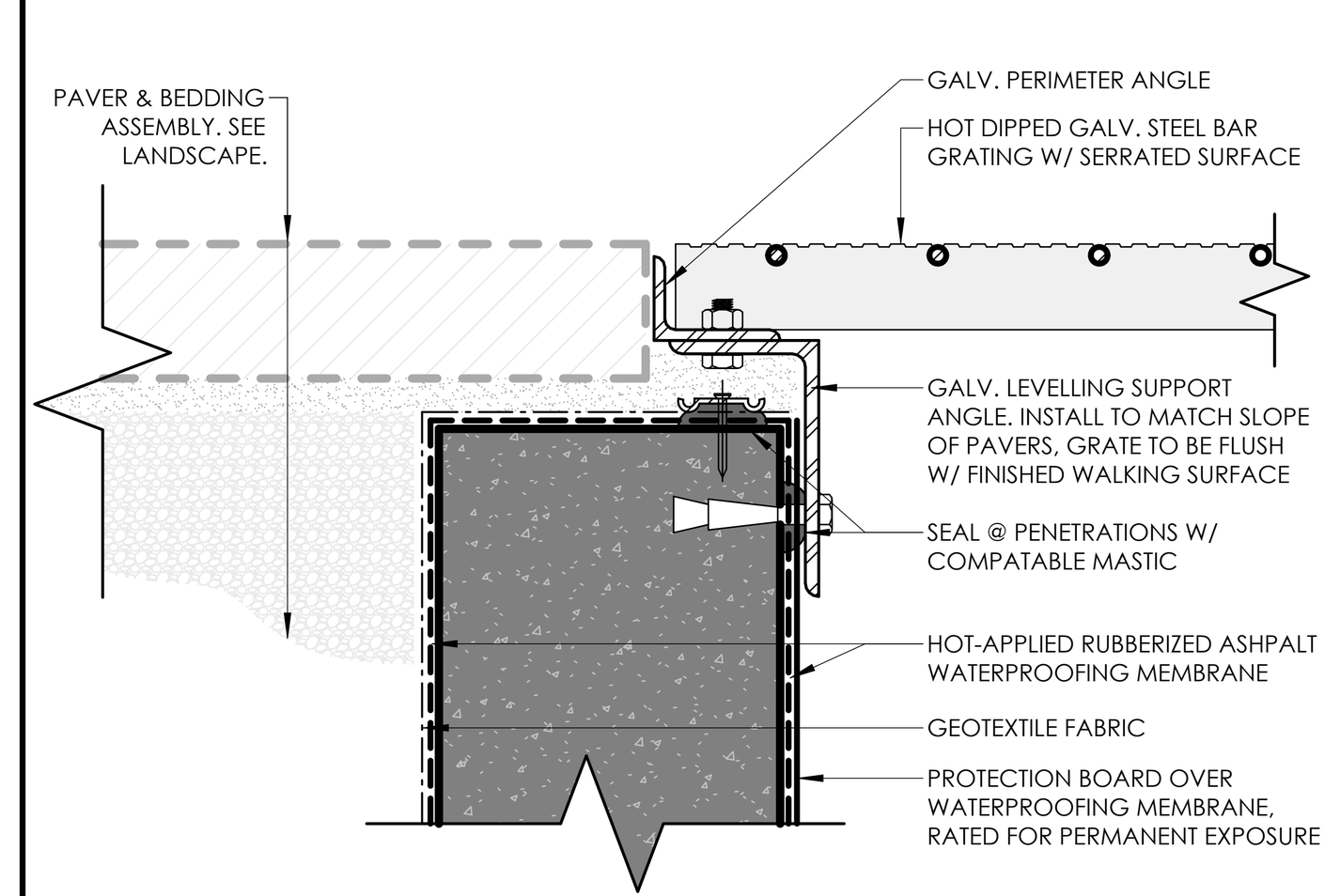
5 A6-300 BLINDSIDE WATERPROOFING @ PIPE PENETRATION
1 : 5
A6-200



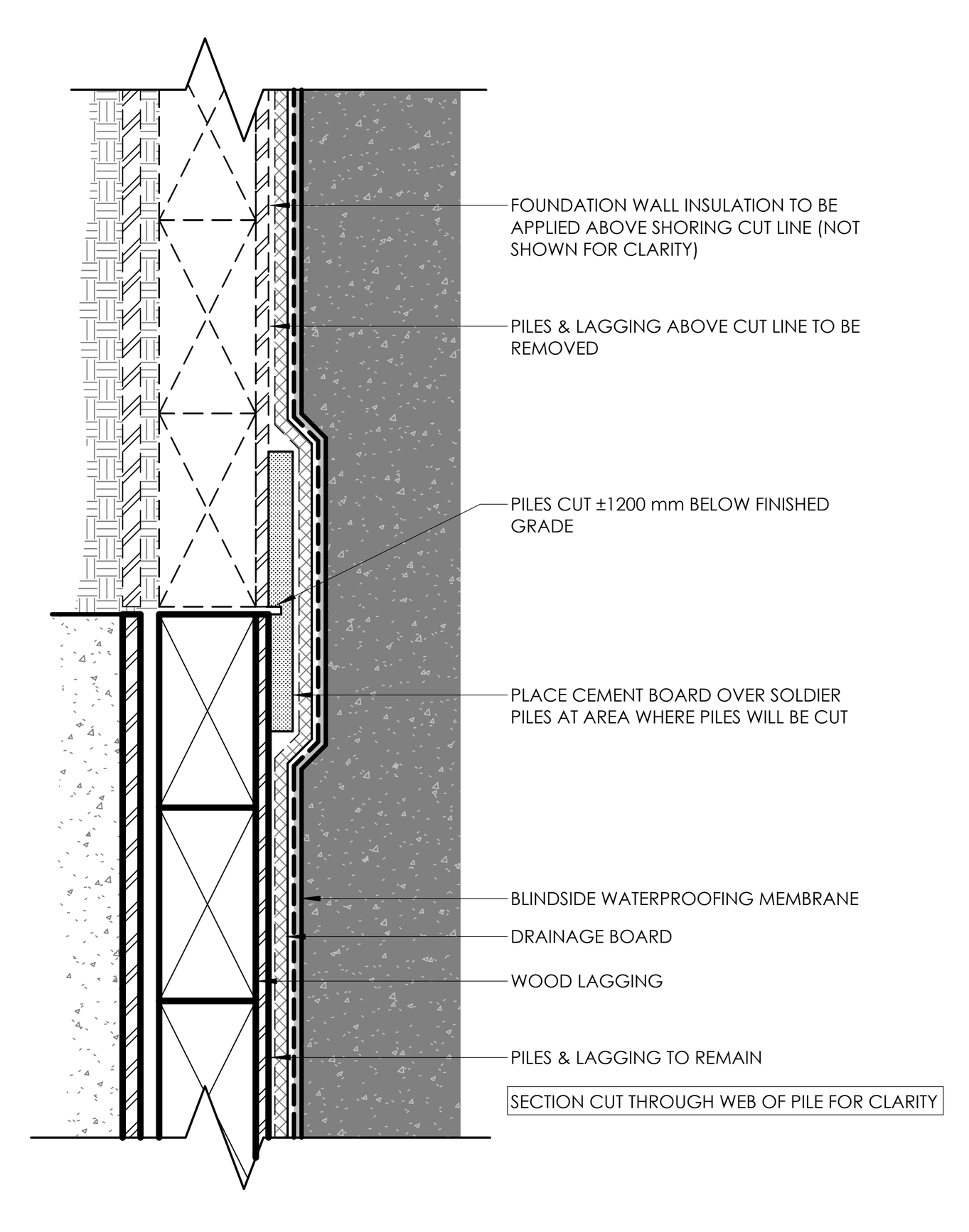
4 A6-300 TEMP. WATERPROOFING TERMINATION @ T.O. SHORING
1 : 5



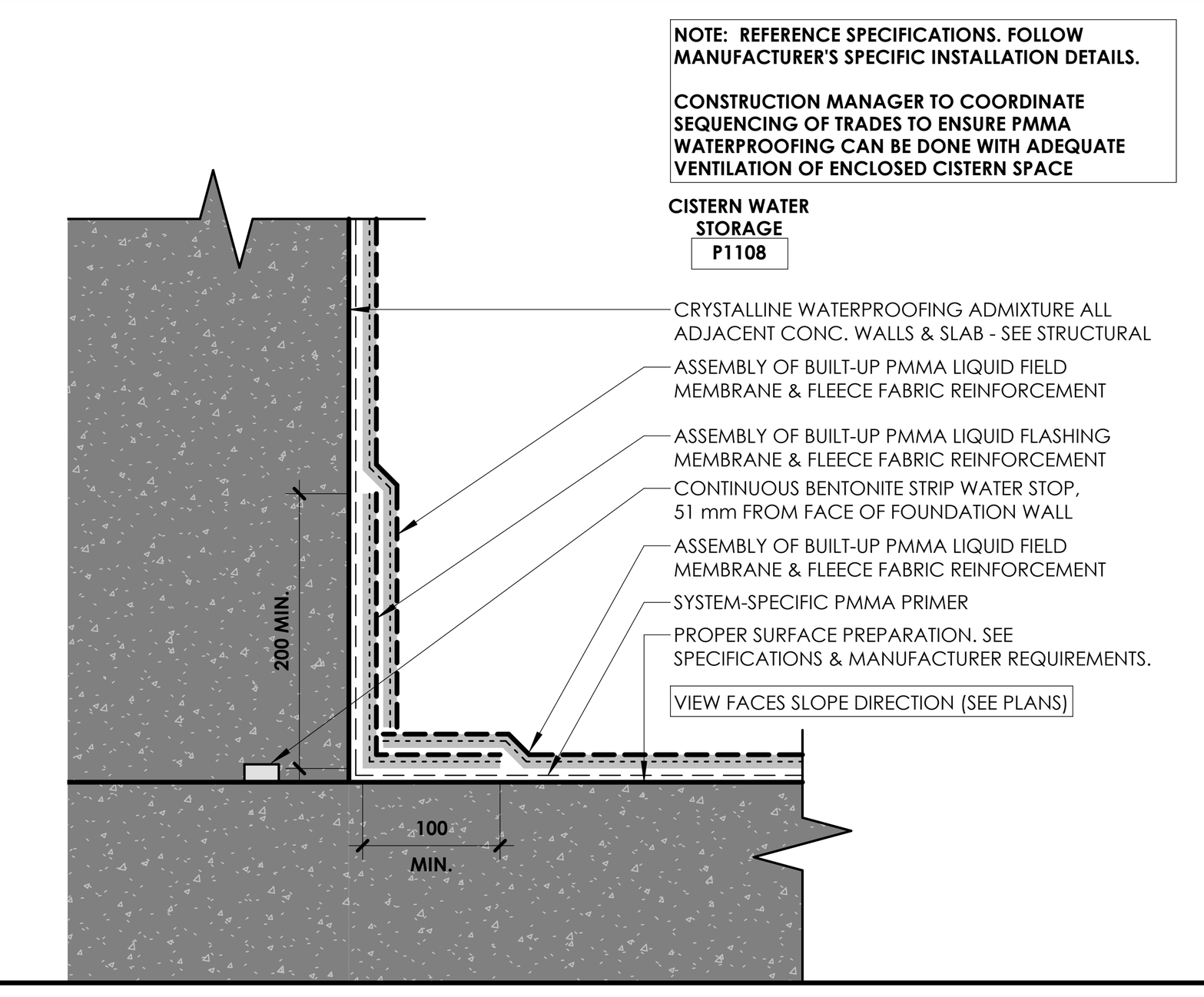
14 A6-300 TYPICAL UNDER-SLAB DRAINAGE SECTION
1 : 10



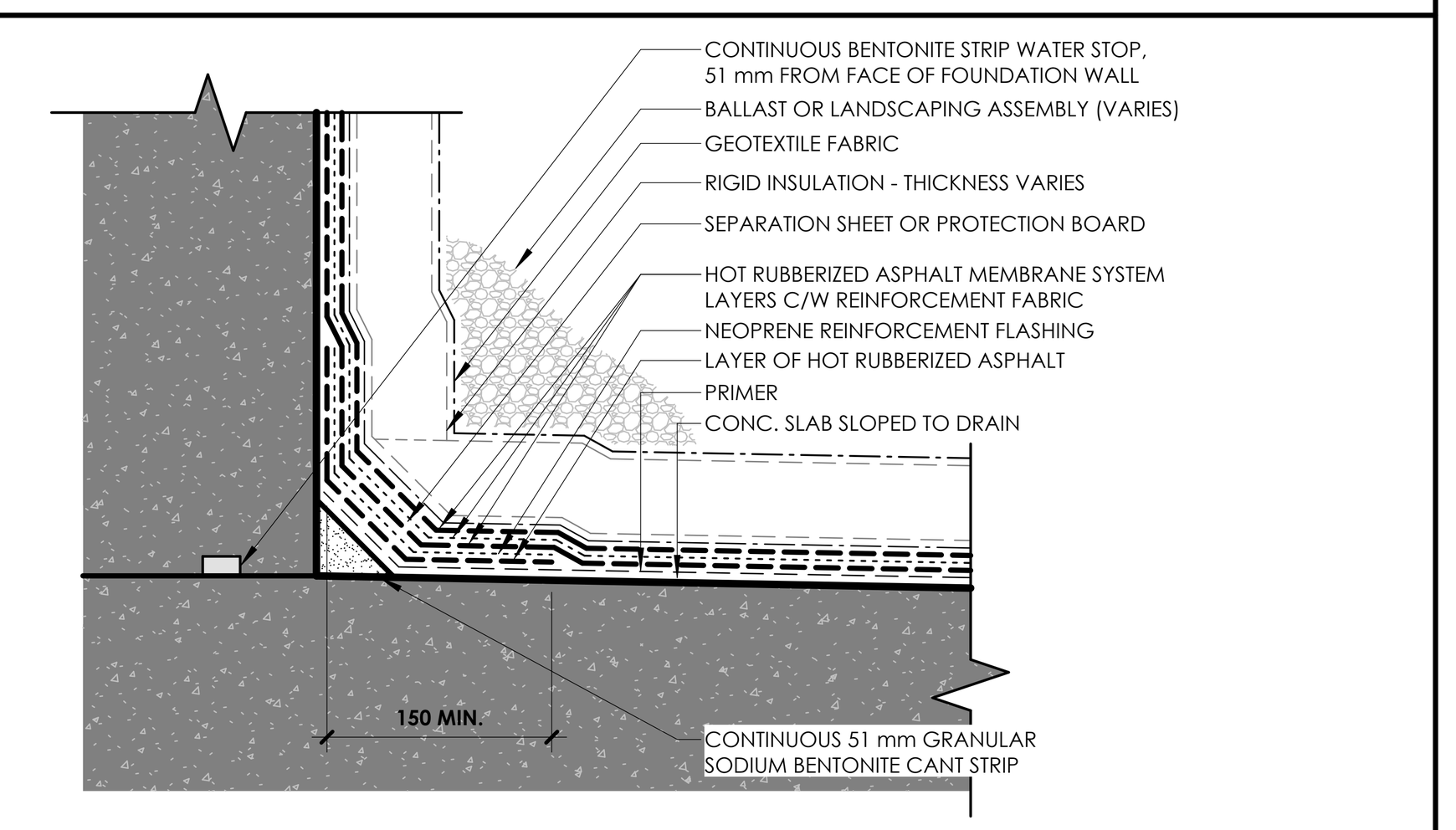
10 A6-300 SECTION @ ACCESS & AIR WELL GRATING CURB
1 : 5
A6-200



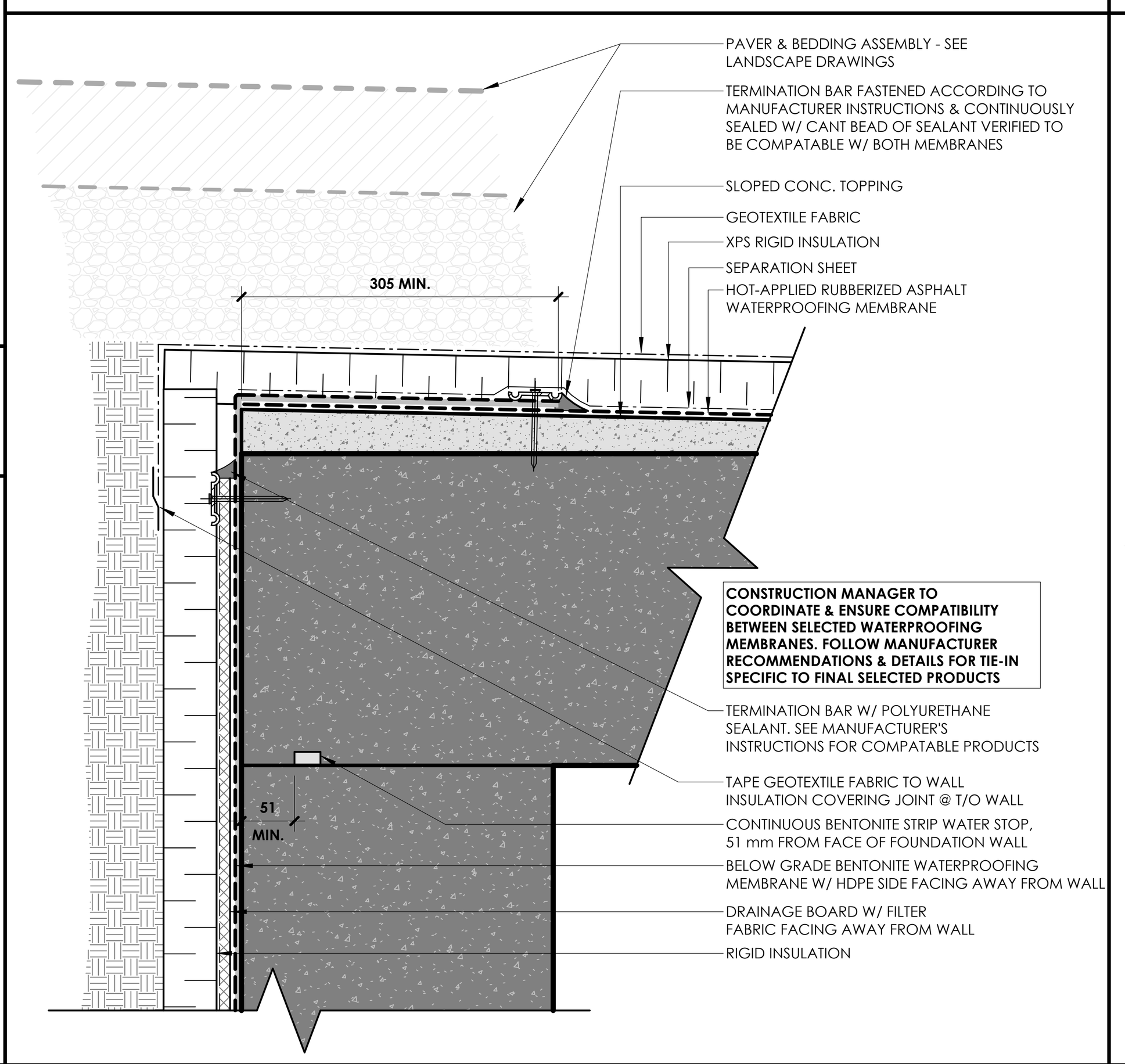
3 A6-300 BLINDSIDE WATERPROOFING @ PILES TO BE CUT
1 : 5
A6-200



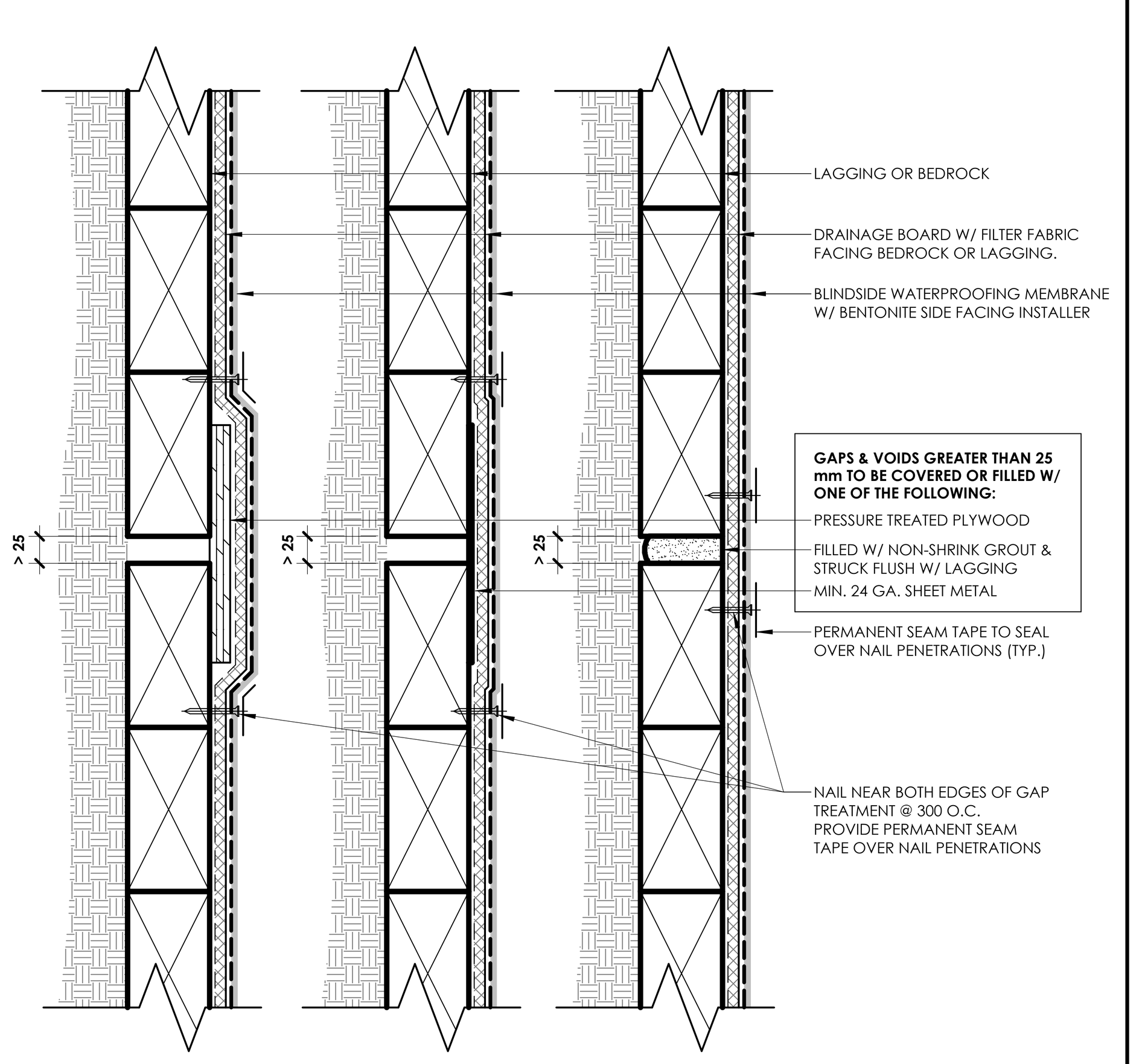
17 A6-300 TYP. PMMA WATERPROOFING @ WALL FLASHING & UPSTANDS
1 : 5
A6-200



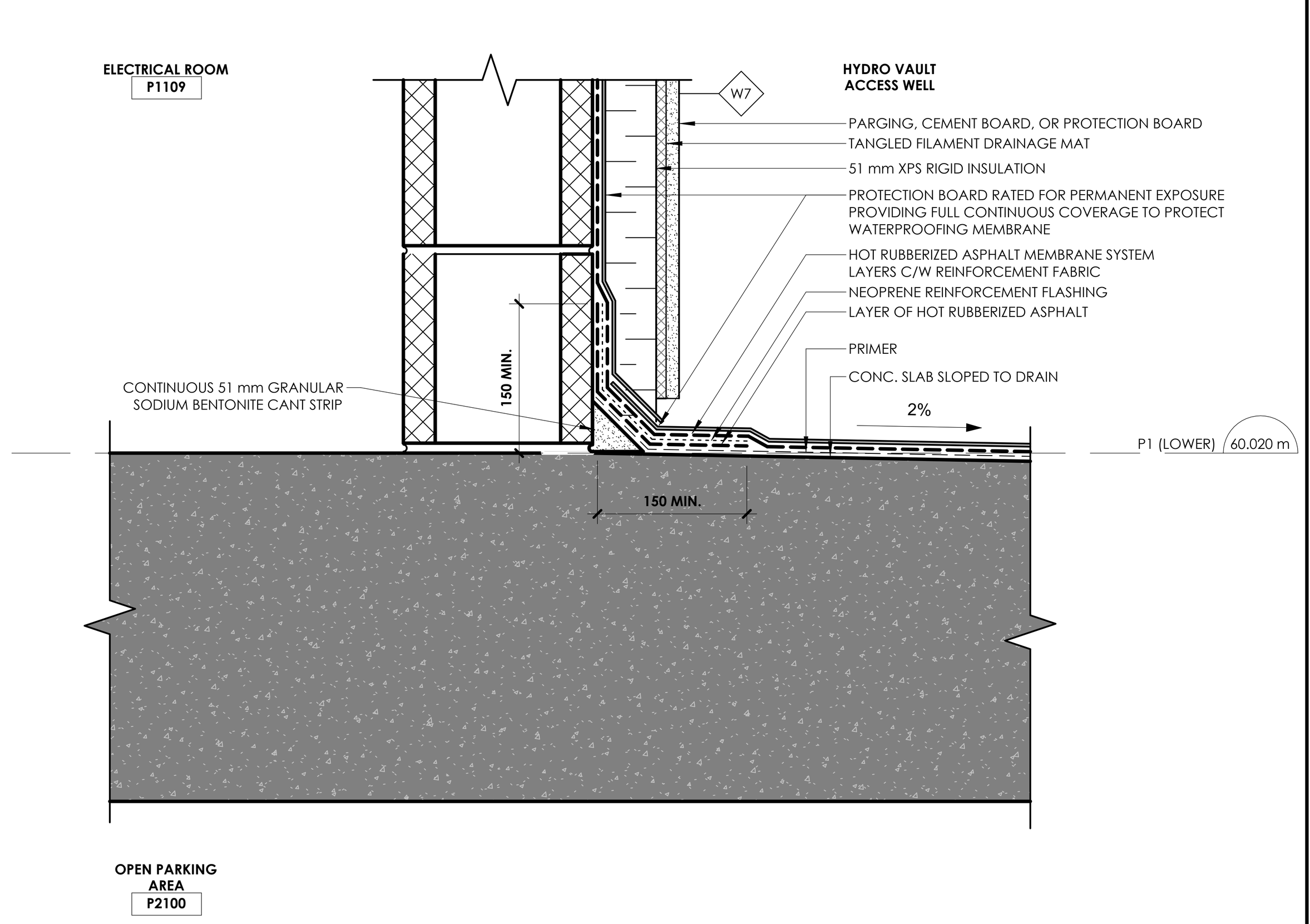
16 A6-300 TYP. RUBBERIZED ASPHALT WATERPROOFING @ BASE OF UPSTANDS
1 : 5
A6-201



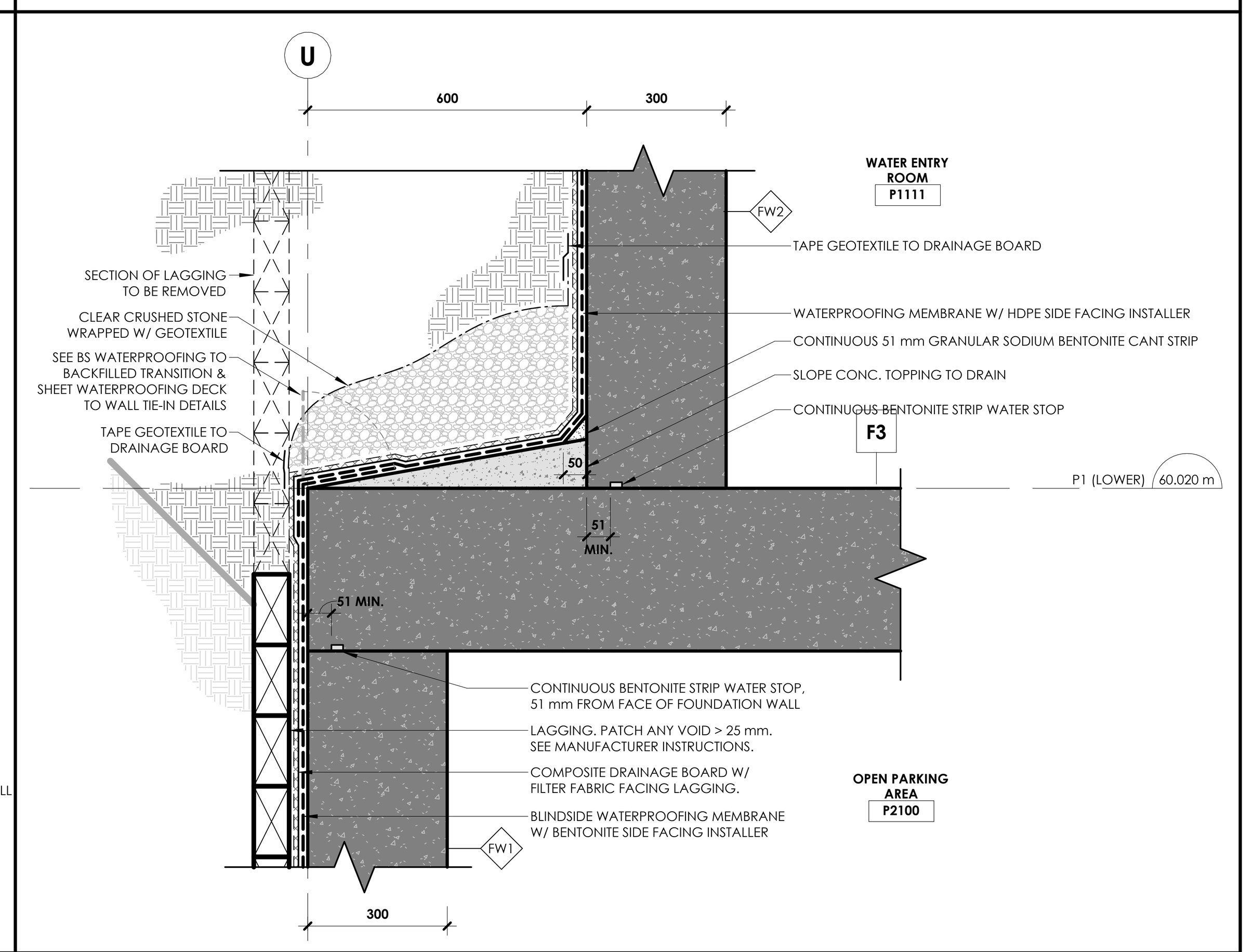
9 A6-300 RUBBERIZED ASPHALT DECK WATERPROOFING TO WALL TIE-IN
1 : 5
A6-200



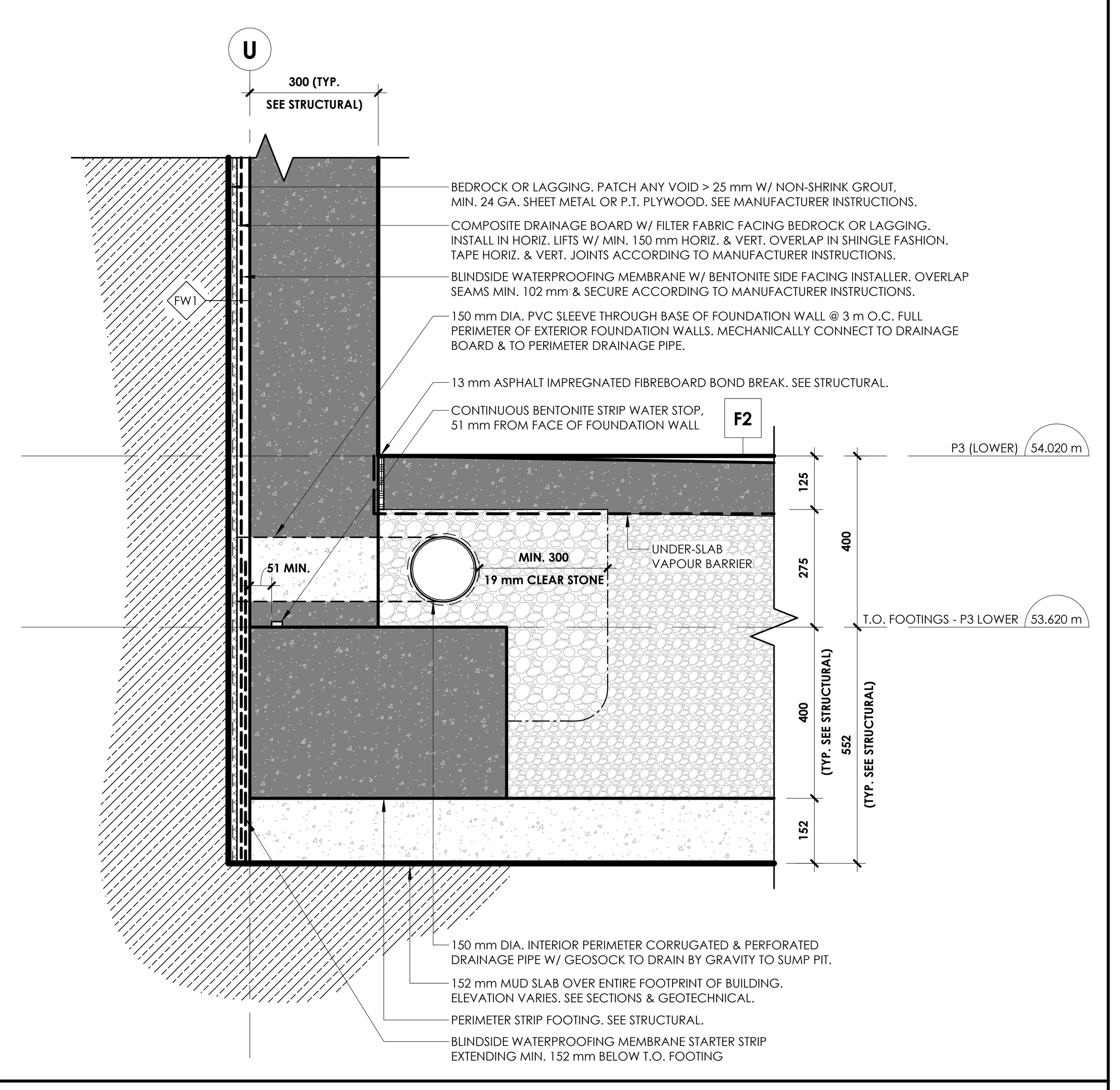
2 A6-300 BLINDSIDE WATERPROOFING & SURFACE PREP. @ VOIDS
1 : 5



15 A6-300 SECTION DETAIL - WATERPROOFING @ HYDRO VAULT ACCESS WELL
1 : 5
A6-200



8 A6-300 SECTION DETAIL - W.P. TRANSITION @ FOUNDATION JOG FOR VALVE BOX
1 : 10
A6-200



1 A6-300 SECTION DETAIL - TYPICAL PERIMETER FOOTING @ BEDROCK
1 : 10
A6-200

CLVGROUP DEVELOPMENTS
client

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mechanical engineer | ingénieur méchanique

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civil engineers | ingénieur civil

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nord reel / true north

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no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-06-12~~
20	~~ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	~~25-05-30~~
19	~~ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING~~	~~25-05-16~~

stamp | timbre

architect | architecte
linebox STUDIO

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project title | titre du projet
GLADSTONE AND LORETTA RESIDENTIAL TOWER
145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin
DETAILS - BELOW GRADE & TYPICAL WATERPROOFING CONDITIONS

project number | numero du projet	2402
drawn | dessiné	JH / DL / PC / JP
checked | verifié	JP / AR
scale | échelle	As indicated
date | date	04/29/25

drawing number | numéro du dessin
A6-300

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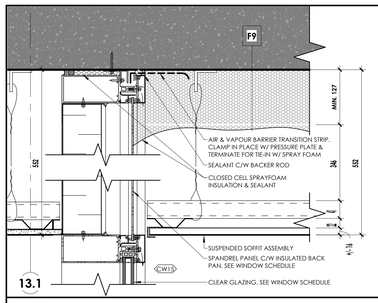
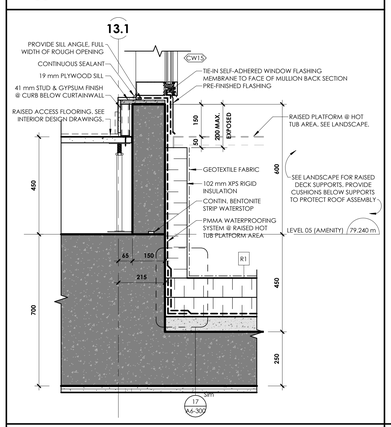
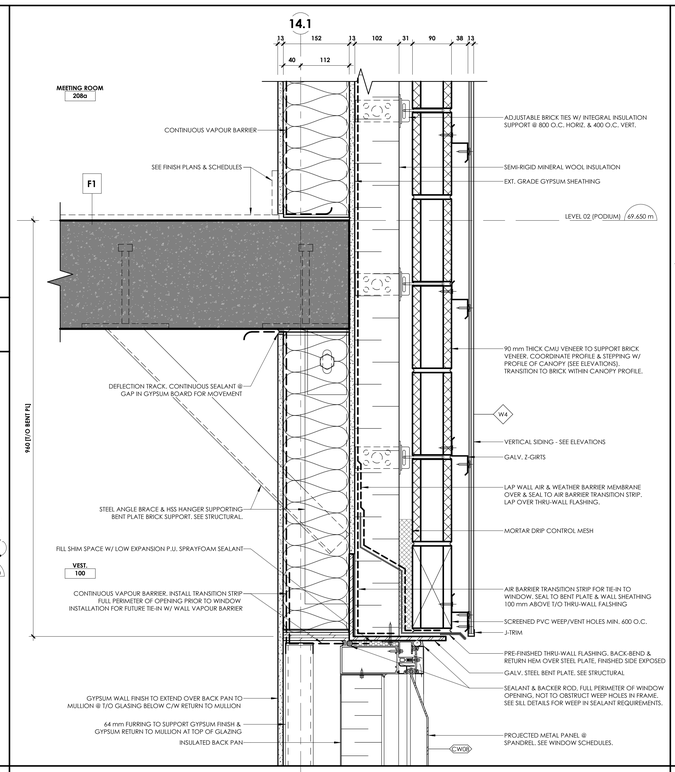


11 A6-305 SECTION DETAIL @ L.5 CURTAINWALL HEAD
1 : 5
A6-205



10 A6-305 SECTION DETAIL @ L.5 WALL BASE - HOT TUB AREA
1 : 10
A6-205



8 A6-305 SECTION DETAIL @ SECOND FLOOR ABOVE MAIN ENTRY DOOR
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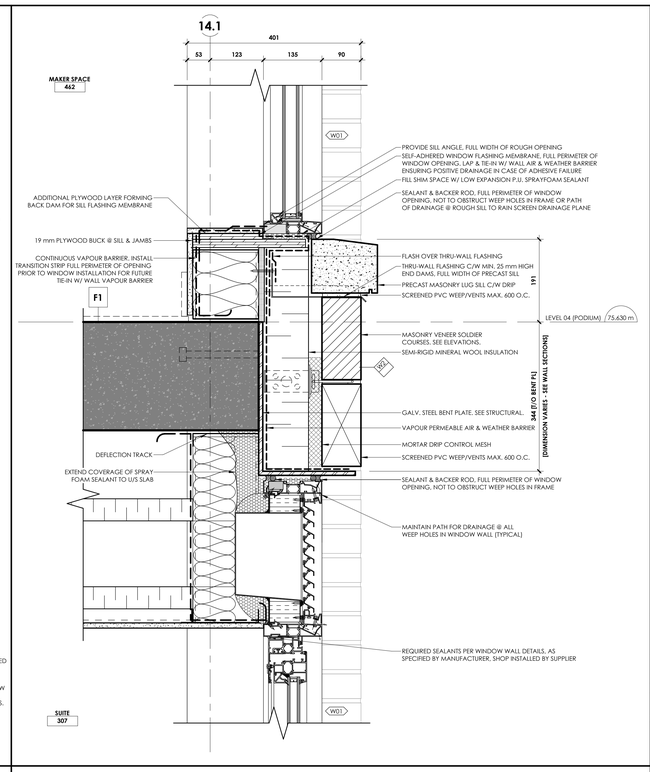
A6-205



6 A6-305 SECTION DETAIL - PODIUM FLOOR @ EXTERIOR WALL
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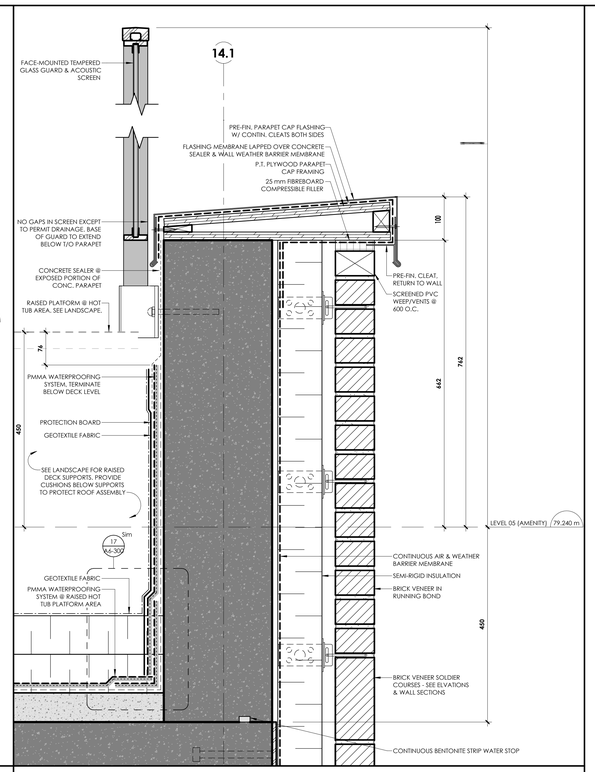
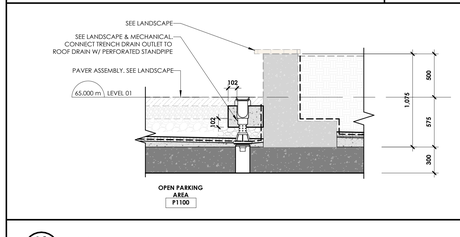
A6-205



7 A6-305 SECTION DETAIL @ LEVEL 5 PARAPET - HOT TUB AREA
1 : 5
A6-205



13 A6-305 Section 59
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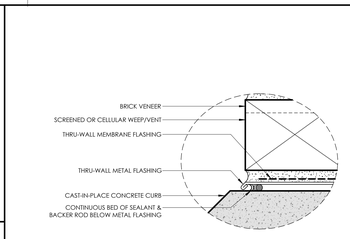
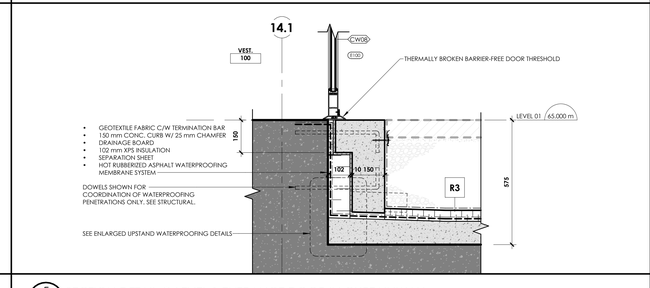
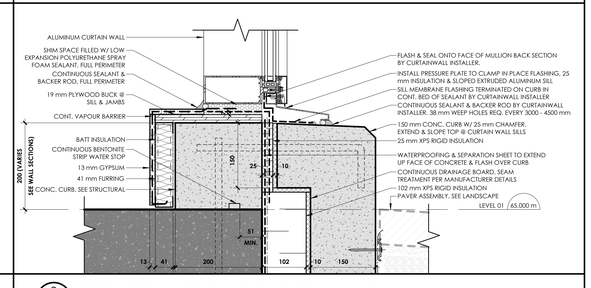


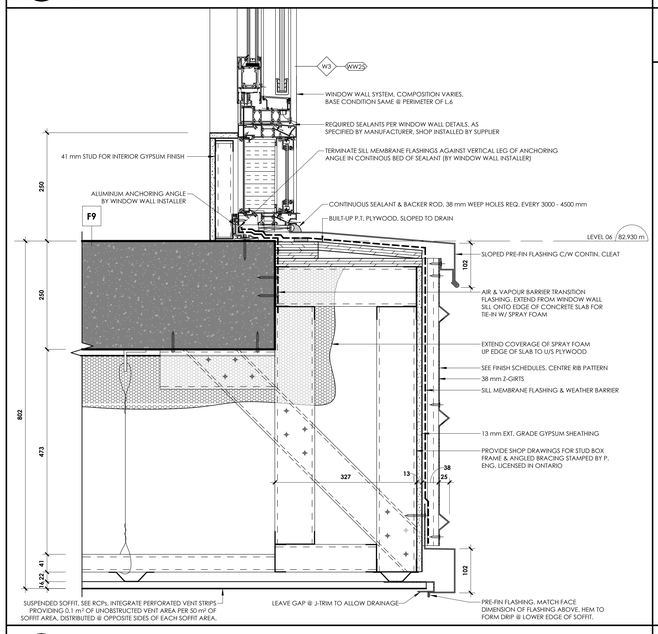
12 A6-305 ENLARGED SECTION DETAIL @ BASE OF BRICK VENEER
1 : 2
A6-305



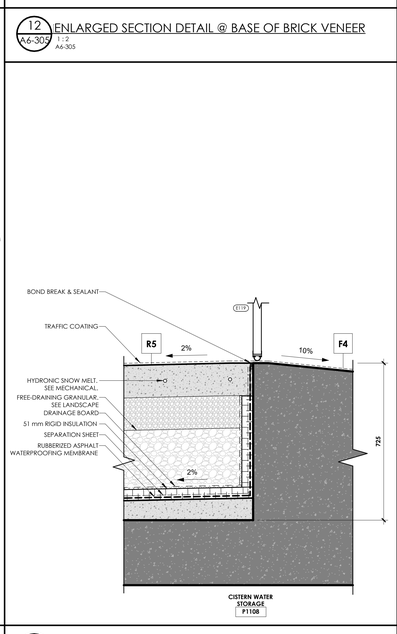
5 A6-305 SECTION DETAIL @ LEVEL 1 ENTRANCE DOOR IN CURTAINWALL
1 : 10
A6-205



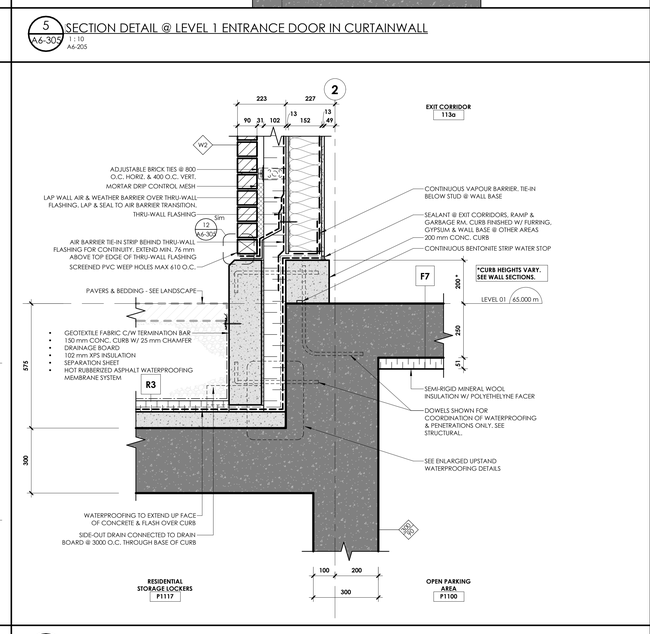
3 A6-305 SECTION DETAIL @ TYPICAL LEVEL 1 CURTAINWALL SILL
1 : 5
A6-305



9 A6-305 SECTION DETAIL @ BASE OF WINDOW WALL & SOFFIT BELOW LEVEL 6
1 : 5
A6-205



4 A6-305 SECTION DETAIL @ GARAGE OH DOOR THRESHOLD
1 : 10
A6-200



2 A6-305 SECTION DETAIL @ LEVEL 1 BRICK VENEER WALL BASE
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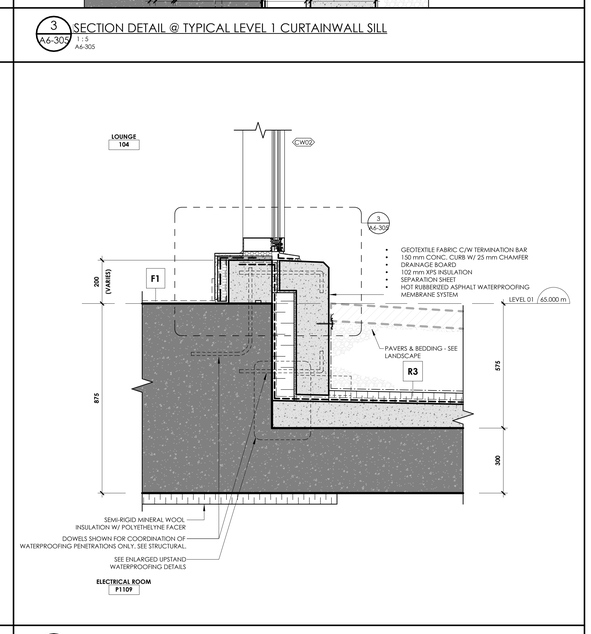
A6-201



1 A6-305 SECTION DETAIL @ TYPICAL CURB BELOW LEVEL 1 CURTAINWALL SILL
1 : 10
A6-200

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

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21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
no	revisions	date

stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

DETAILS - PODIUM

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**As indicated**
date | date	**05/09/25**

drawing number | numéro du dessin

A6-305

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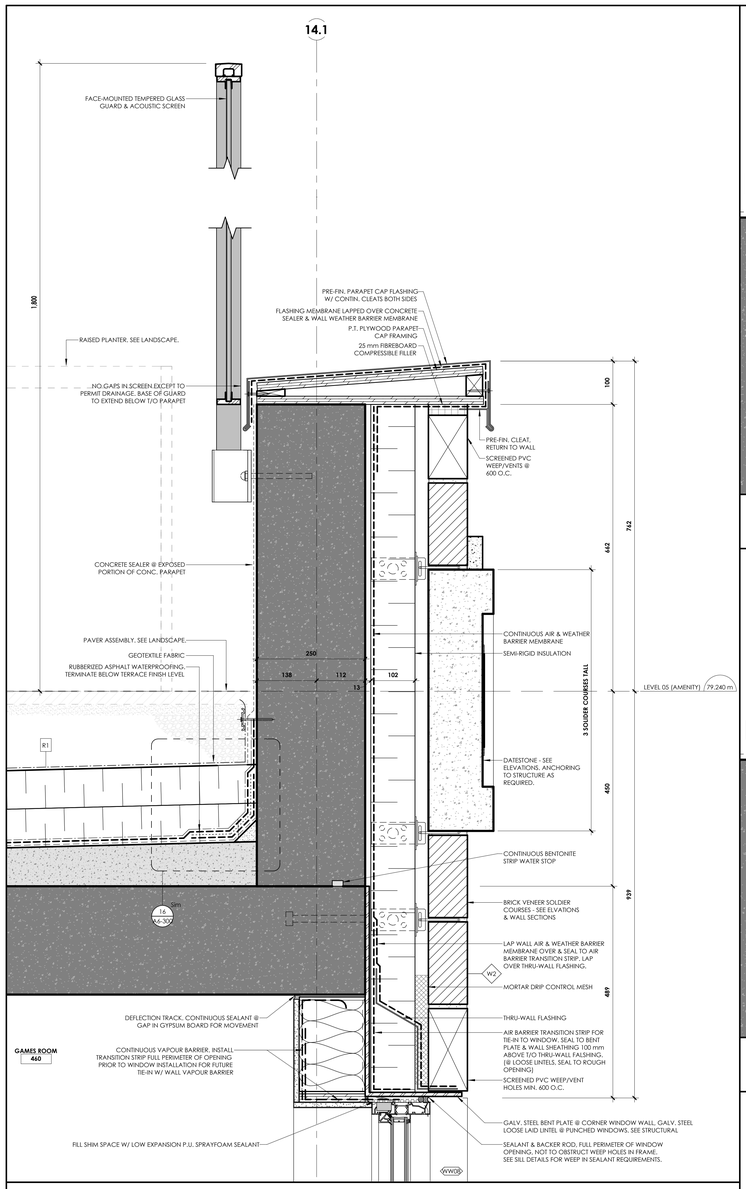

5 A6-306 SECTION DETAIL @ LEVEL 5 PARAPET - CORNER WINDOW WALL
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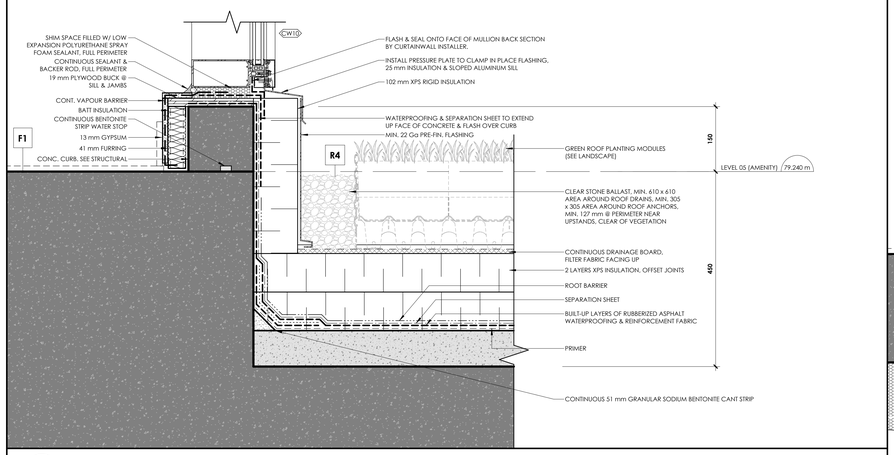
A6-205



7 A6-306 Detail 0 - Callout 1
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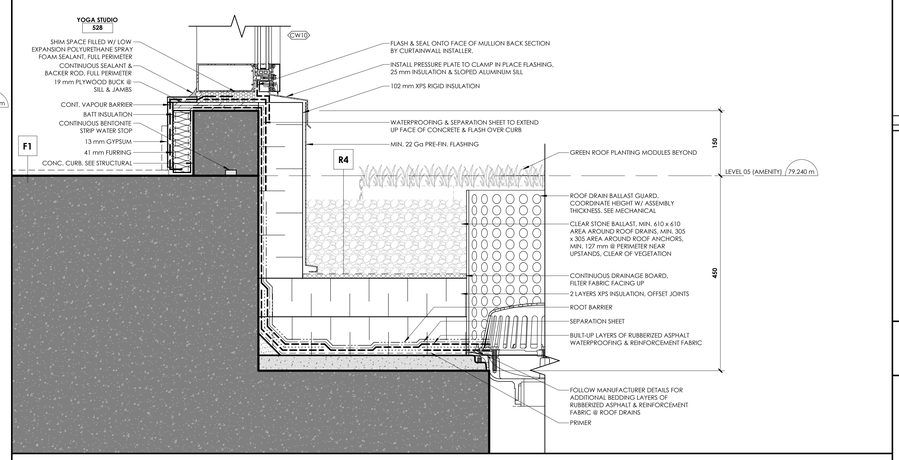
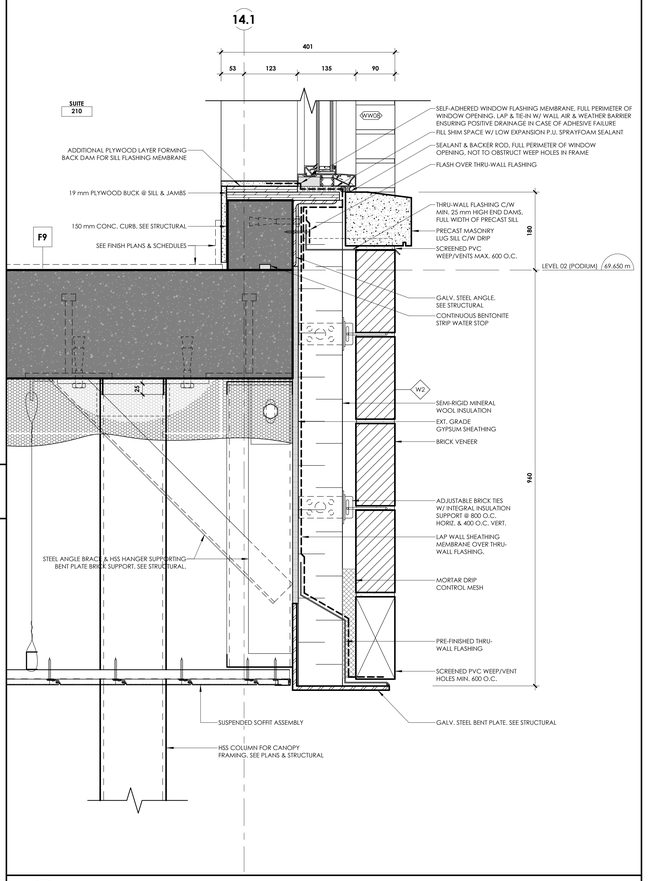
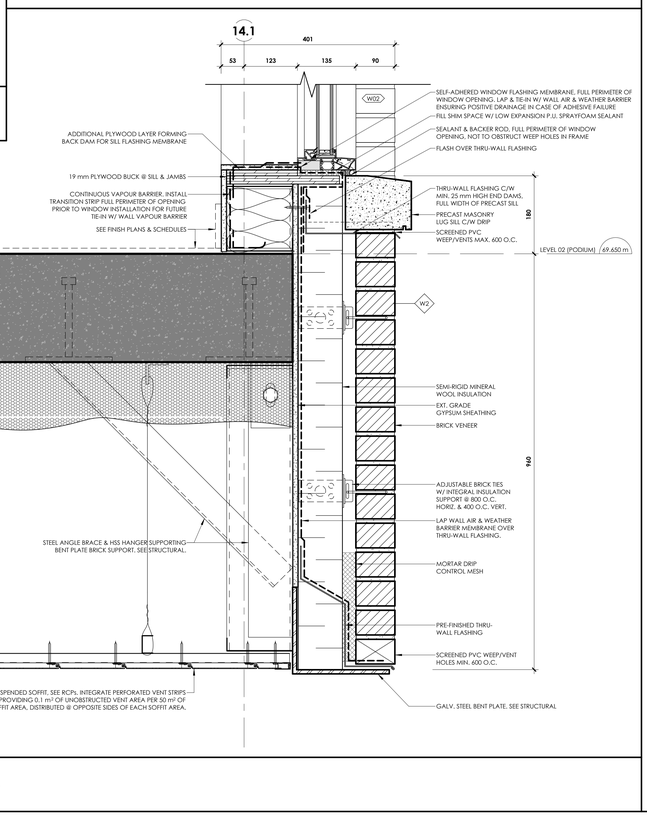


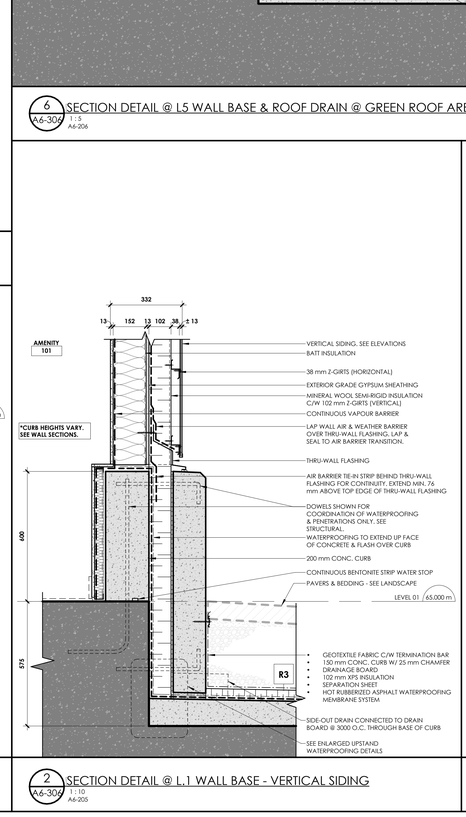
6 A6-306 SECTION DETAIL @ L5 WALL BASE & ROOF DRAIN @ GREEN ROOF AREA
1 : 5
A6-206



3 A6-306 SECTION DETAIL @ L.2 SOFFIT - PODIUM CORNER WINDOW WALL SILL
1 : 5
A6-205



1 A6-306 SECTION DETAIL @ GL '14.1' - LEVEL 2 SOFFIT TO LEVEL 1 SIDING
1 : 5
A6-205



2 A6-306 SECTION DETAIL @ L.1 WALL BASE - VERTICAL SIDING
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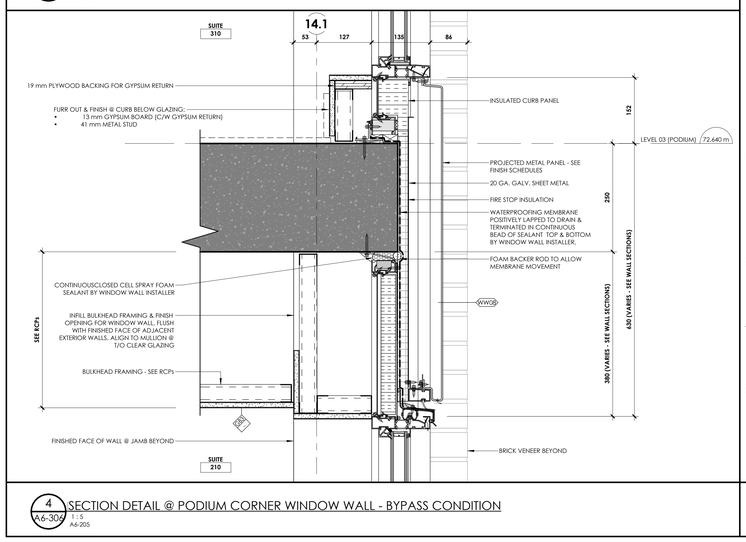
A6-205



4 A6-306 SECTION DETAIL @ PODIUM CORNER WINDOW WALL - BYPASS CONDITION
1 : 5
A6-205

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CLVGROUP DEVELOPMENTS
client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS
structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.
electrical engineers | ingénieur electrique
mechanical engineer | ingénieur méchanique

wsp
civil engineers | ingénieur civil

CSW
landscape architect | architecte paysagiste

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21 RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20 ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19 ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18 ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
no revisions	date

stamp | timbre

architect | architecte
linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

DETAILS - PODIUM

project number | numero du projet	2402
drawn | dessiné	JH / DL / PC / JP
checked | verifié	JP / AR
scale | échelle	As indicated
date | date	09/04/24

drawing number | numéro du dessin

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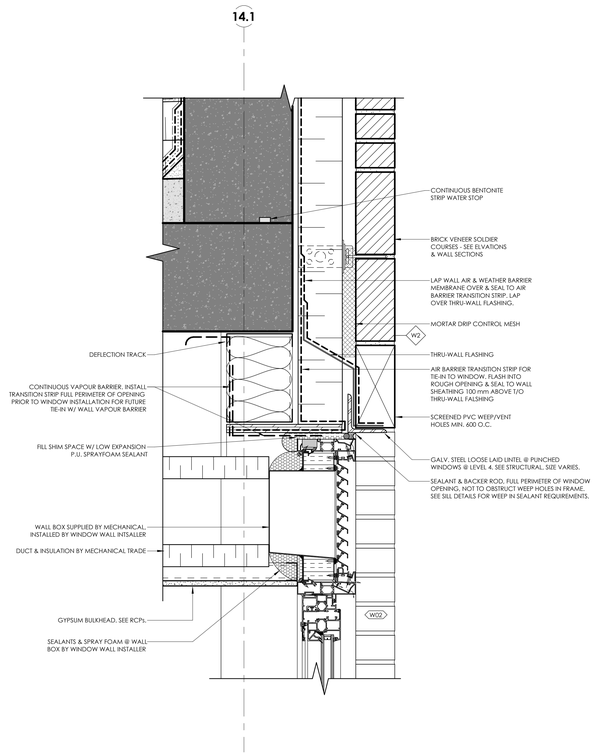
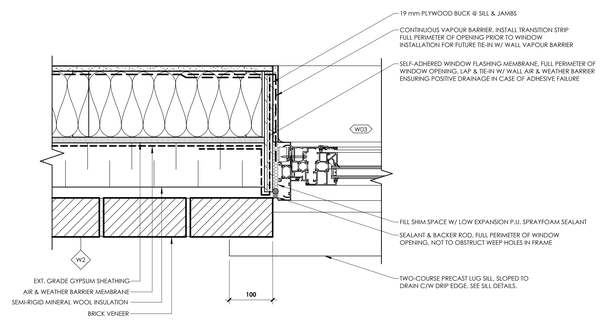


2 A6-307 SECTION DETAIL - LEVEL 4 PUNCHED WINDOW HEAD @ BRICK VENEER W. LOOSE LINTEL

1 : 5

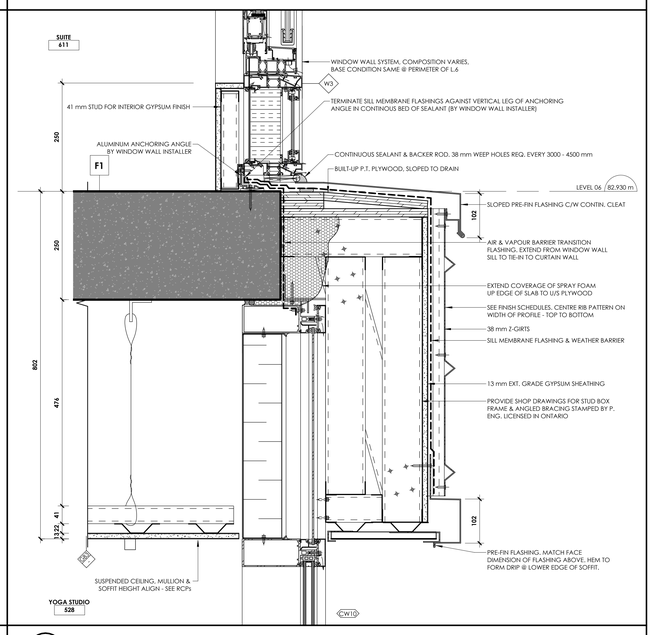
A6-205



3 A6-307 PLAN DETAIL - TYPICAL PUNCHED WINDOW JAMB @ BRICK VENEER

1 : 5

A2-202-W



1 A6-307 SECTION DETAIL @ LEVEL 6 SLAB EDGE, GRIDLINE 'T'

1 : 5

A6-206

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet project north

nord reel true north

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no	revisions	date
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20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30

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architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

DETAILS - PODIUM

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 5**
date | date	**05/28/25**

drawing number | numéro du dessin

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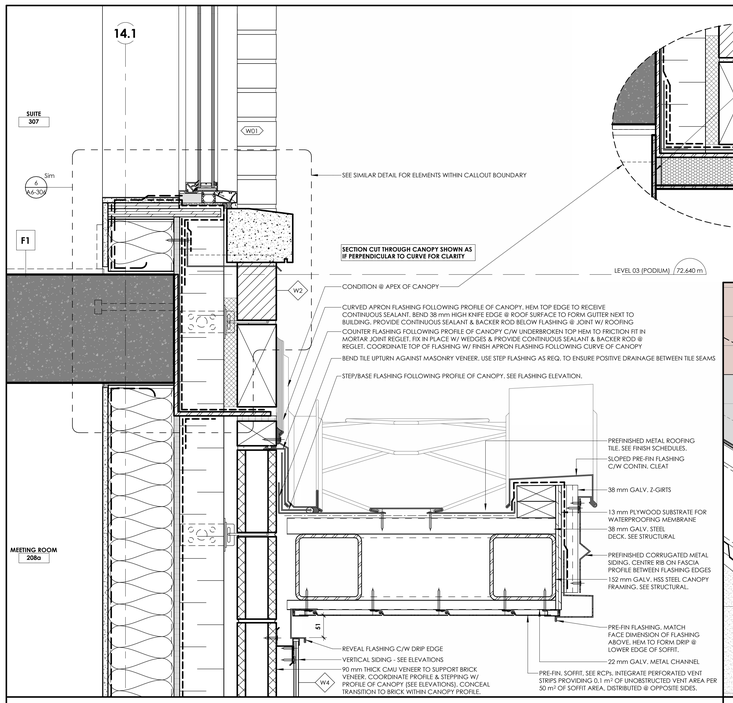
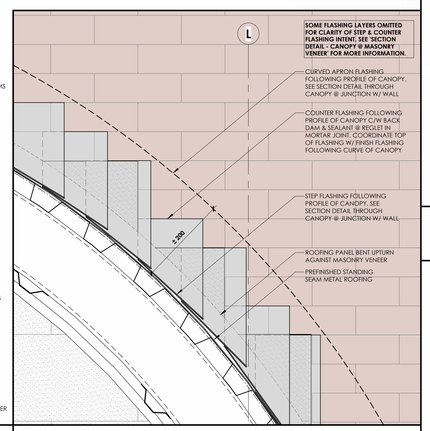
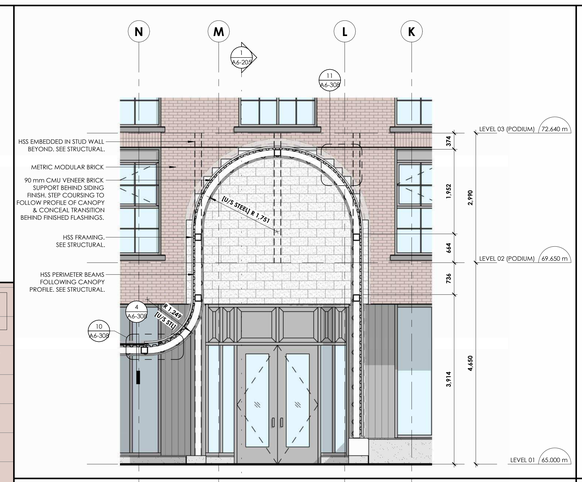


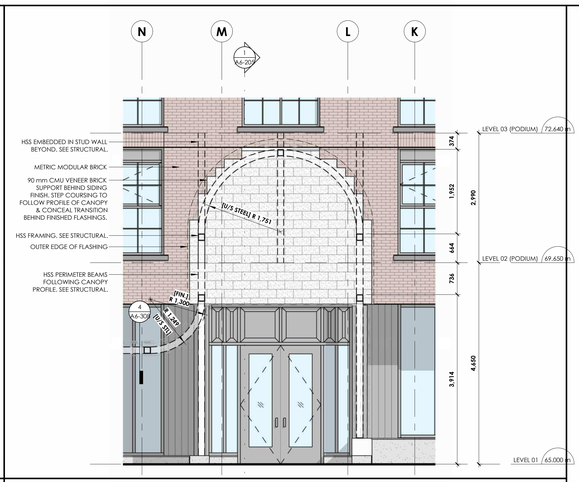
5 A6-308 SECTION DETAIL - CANOPY @ MASONRY VENEER
1 : 5



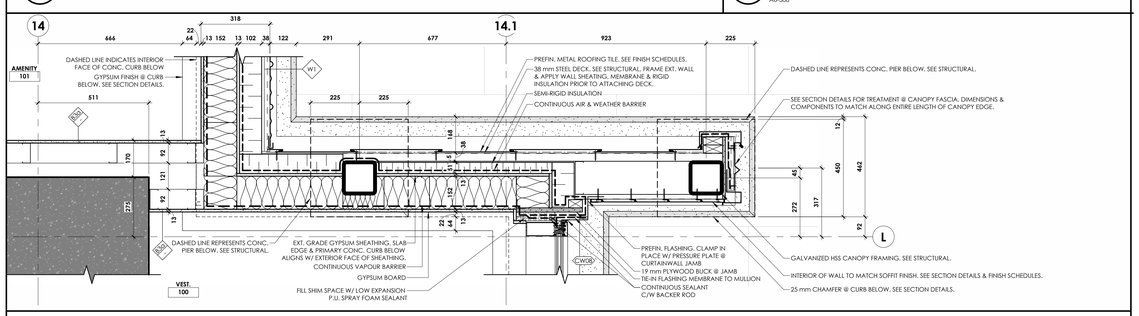
11 A6-308 FLASHING ELEVATION - CANOPY @ MASONRY VENEER
1 : 5
A6-308



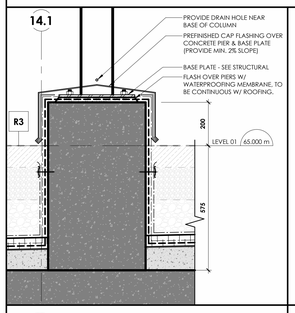
9 A6-308 CANOPY SECTION & BRICK VENEER SUPPORT ELEVATION @ SOUTH ENTRANCE
1 : 50



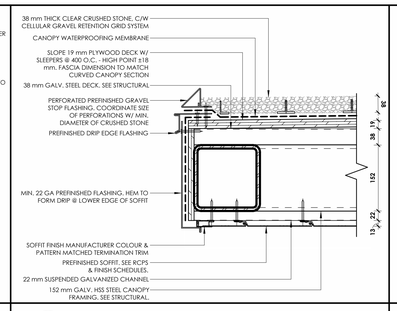
6 A6-308 CANOPY FRAMING & BRICK VENEER SUPPORT ELEVATION @ SOUTH ENTRANCE
1 : 50



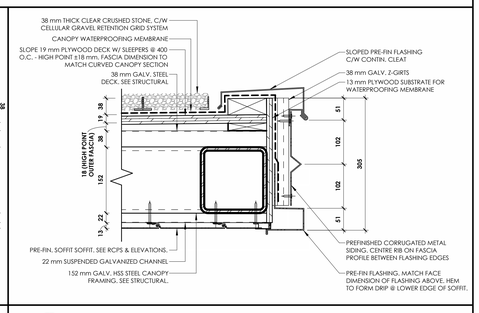
13 A6-308 PLAN DETAIL @ RM 100 CANOPY BASE - GRIDS 'L' & 14.1
1 : 10
A6-308



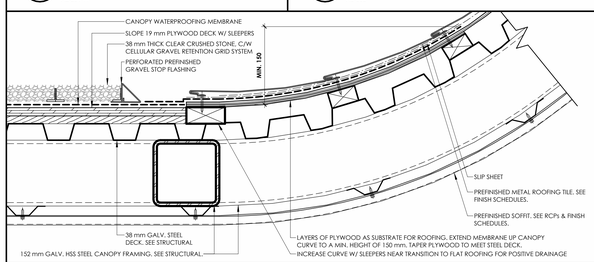
3 A6-308 SECTION DETAIL - CANOPY PIER
1 : 10
A2-201-W



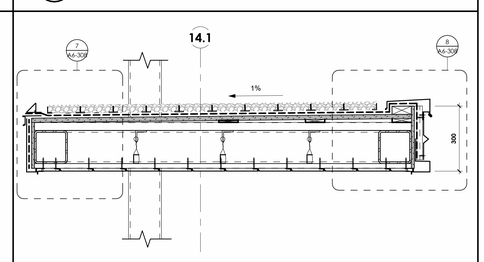
7 A6-308 SECTION DETAIL - INNER FASCIA @ FLAT CANOPY
1 : 5
A6-308



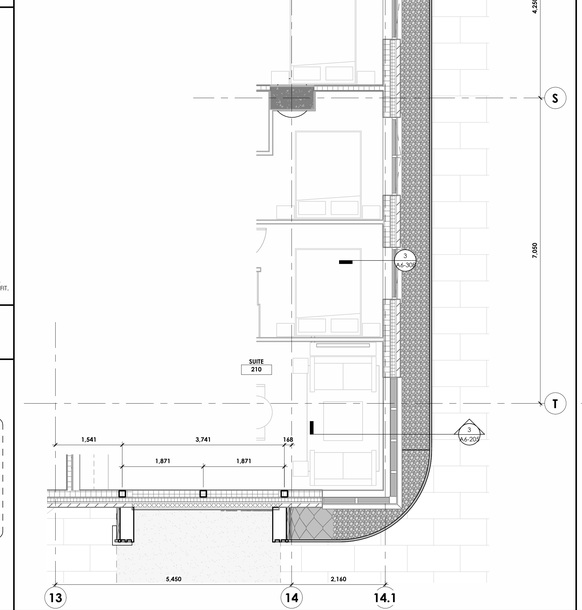
8 A6-308 SECTION DETAIL - OUTER FASCIA @ CANOPY FLAT SECTION
1 : 5
A6-308



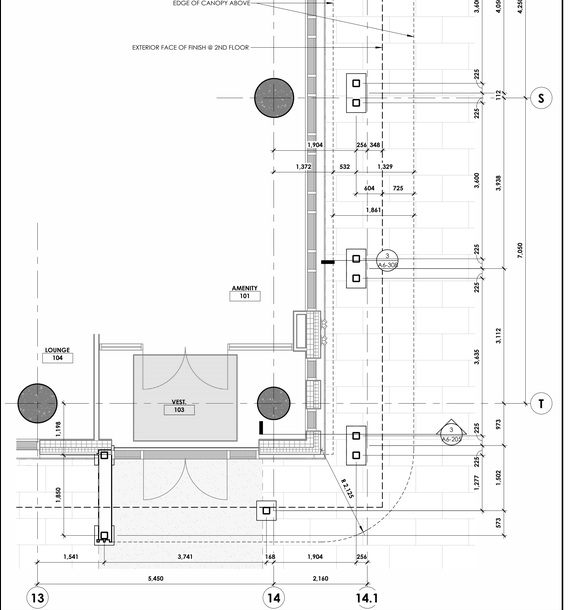
10 A6-308 SECTION DETAIL @ CANOPY - SLOPE TRANSITION TO FLAT SECTION
1 : 5
A6-308



4 A6-308 SECTION DETAIL @ CANOPY - FLAT SECTION
1 : 10
A6-205



2 A6-308 CANOPY PLAN @ ENTRIES - LEVEL 2
1 : 50
A2-202-E



1 A6-308 CANOPY PLAN @ ENTRIES - LEVEL 1
1 : 50
A2-201-E

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur mécanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

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no revisions date

stamp | timbre

architect | architecte

linebox STUDIO

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GLADSTONE AND LORETTA RESIDENTIAL TOWER

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drawing title | titre du dessin

DETAILS - ENTRANCE CANOPY

project number | numero du projet	2402
drawn | dessiné	JH / DL / PC / JP
checked | verifié	JP / AR
scale | échelle	As indicated
date | date	08/07/24

drawing number | numéro du dessin

A6-308

Autodesk Docs://Gladstone & Loretta/2402 - 145 Loretta CLV JB Tower A.rvt
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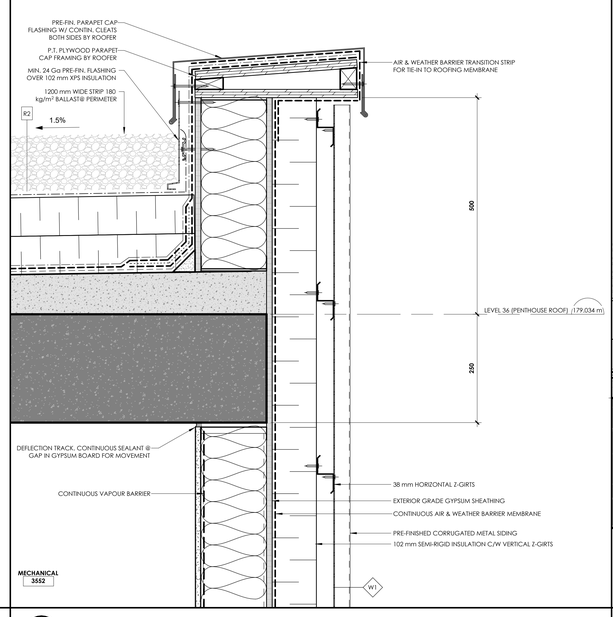
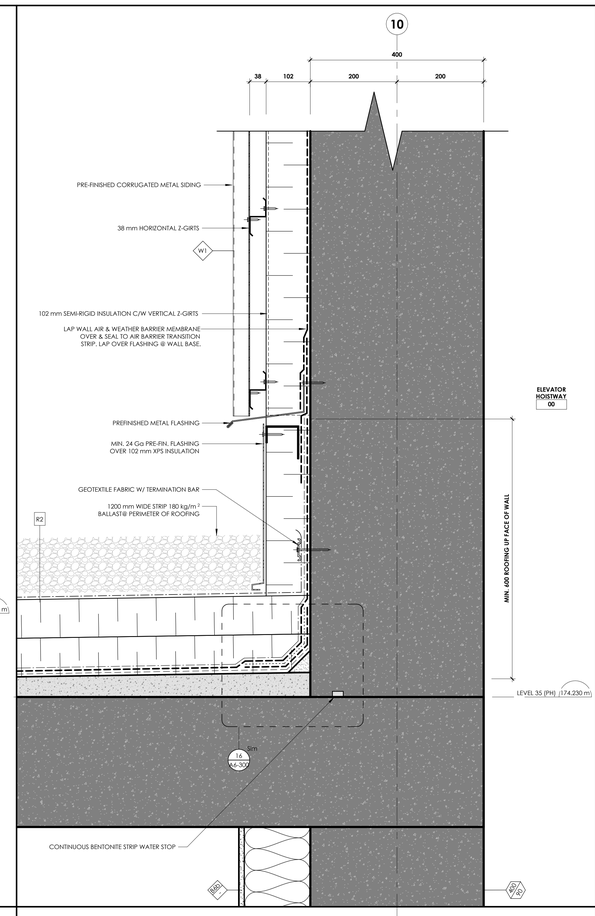
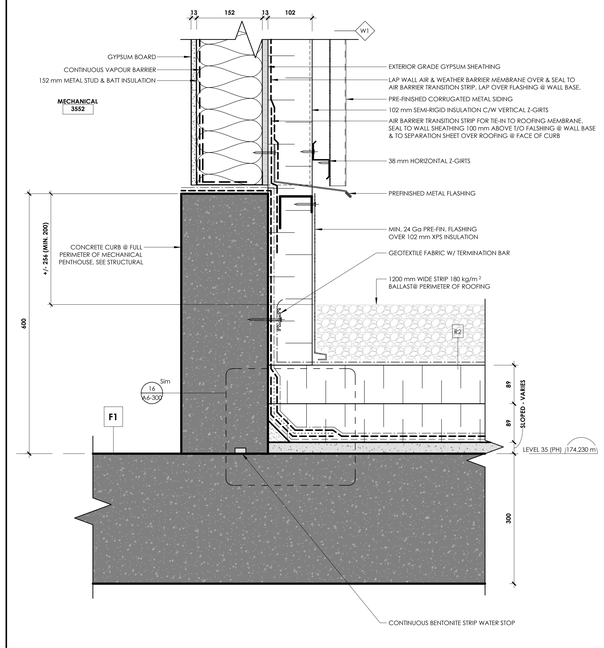


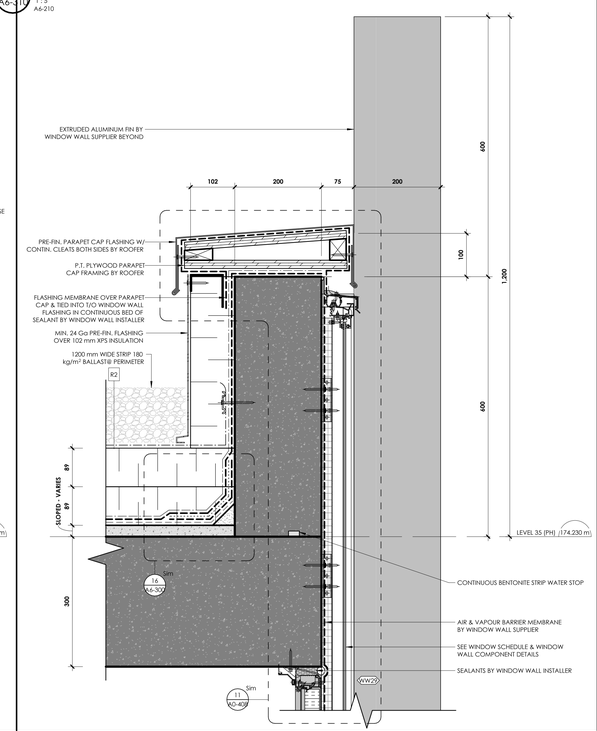
3 A6-310 SECTION DETAIL @ LEVEL 36 MECHANICAL PENTHOUSE ROOF PARAPET
1 : 5
A6-210



4 A6-310 MECHANICAL PENTHOUSE WALL SECTION @ ELEVATOR MACHINE ROOM - Callout 1
1 : 5
A6-210



2 A6-310 SECTION DETAIL @ MECHANICAL PENTHOUSE WALL BASE
1 : 5
A6-210



1 A6-310 SECTION DETAIL @ LEVEL 35 PARAPET
1 : 5
A6-210

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

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21. RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20. ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
no revisions	date

stamp | timbre

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

DETAILS - PENTHOUSE LEVELS

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 5**
date | date	**05/29/25**

drawing number | numéro du dessin

A6-310

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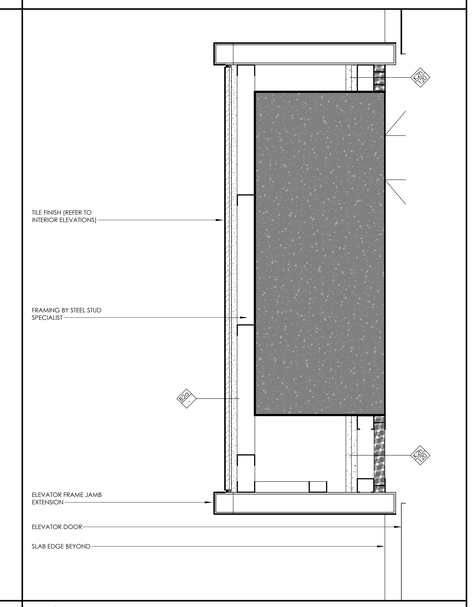

2 A6-320 PLAN DETAIL - ELEVATOR DOOR B
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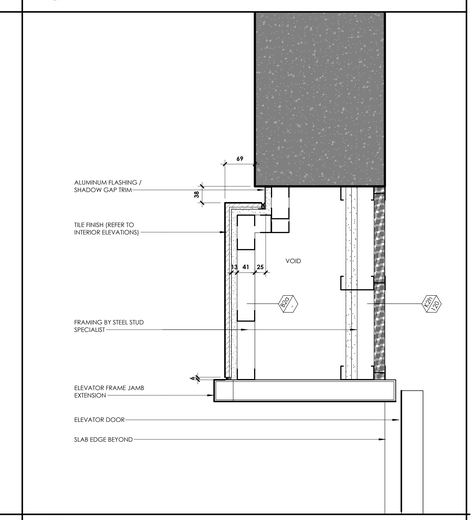

1 A6-320 PLAN DETAIL - ELEVATOR DOOR A
1 : 5

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

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no	revisions	date
21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30

stamp | timbre

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

INTERIOR DETAILS

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 5**
date | date	**09/18/24**

drawing number | numéro du dessin

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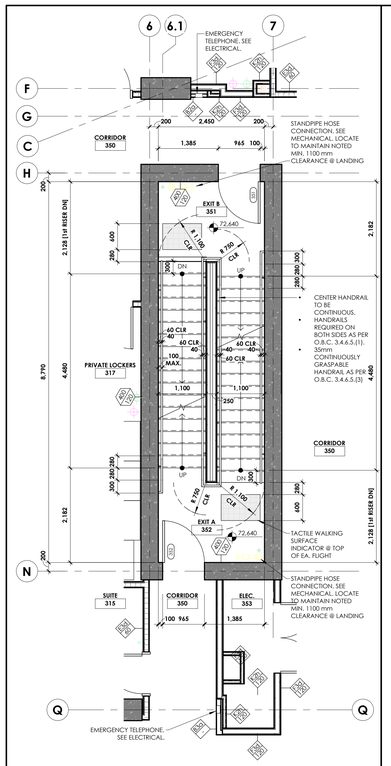
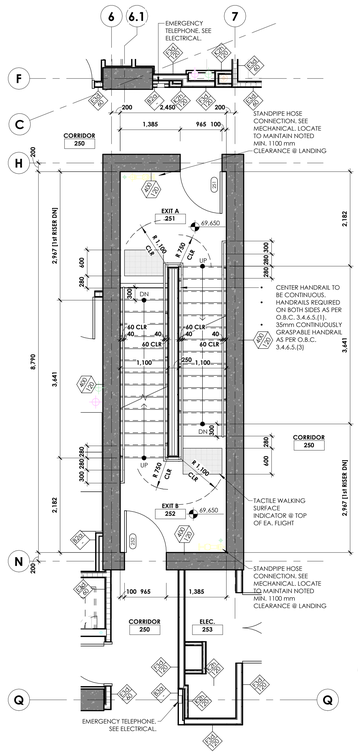


9 A7-100 ENLARGED EXIT STAIR PLAN - LEVEL 03 (PODIUM)
1 : 50
A2-203-E



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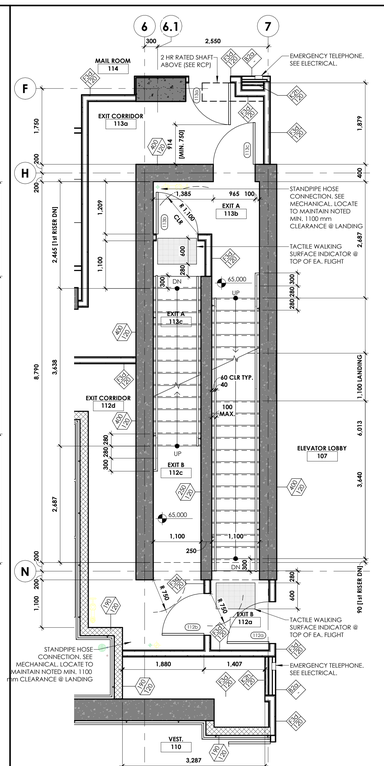
1 : 50
A2-202-E



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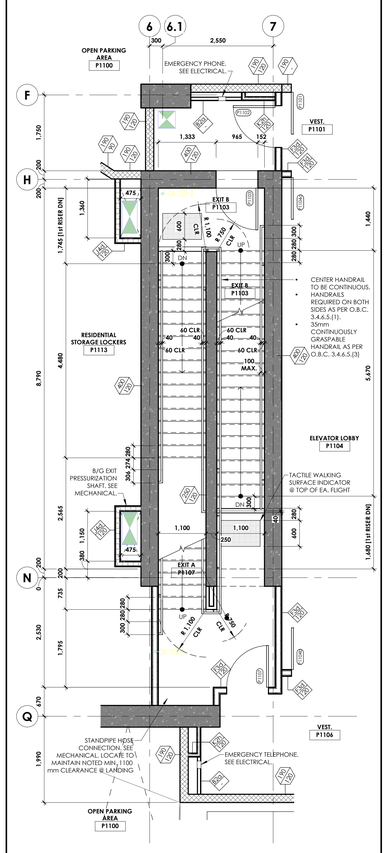
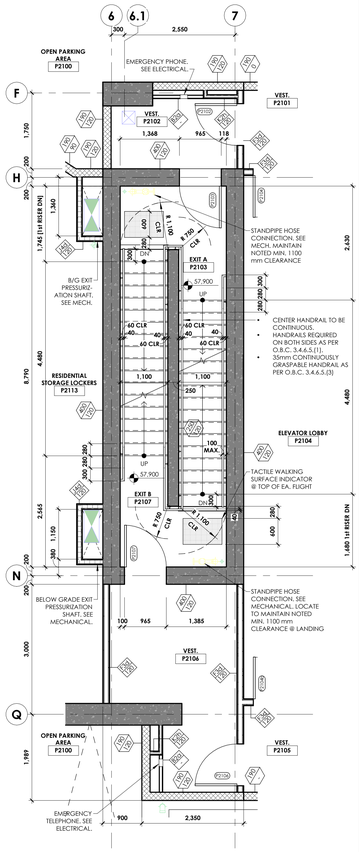
1 : 50
A2-201-E



6 A7-100 ENLARGED EXIT STAIR PLAN - P1
1 : 50
A2-100



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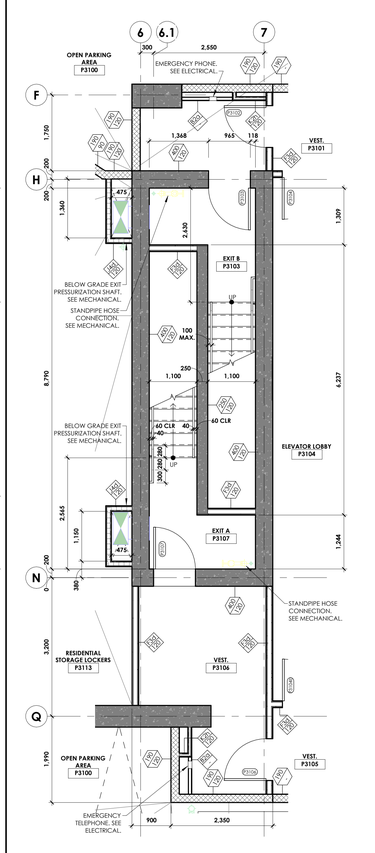
A2-099



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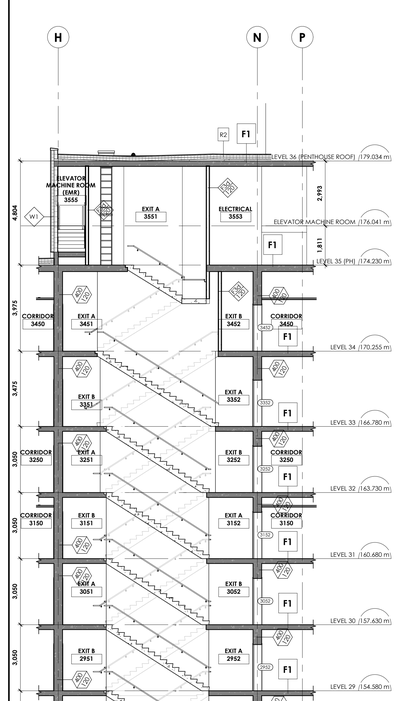
A2-098



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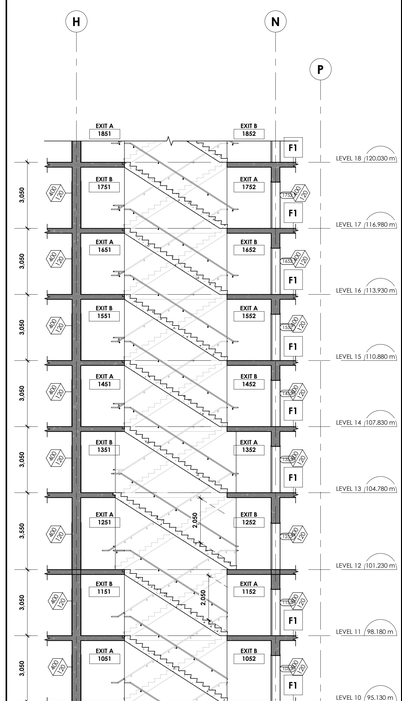
A7-100



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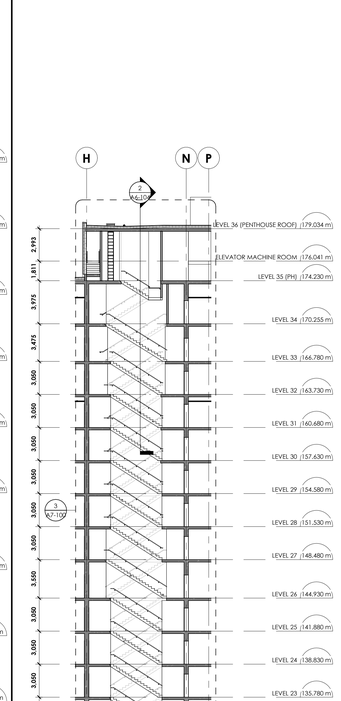
A7-100



1 A7-100 PARTIAL SECTION @ EXIT STAIRS
1 : 200
A6-100

CLVGROUP DEVELOPMENTS
client
CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS
structural engineers | ingénieurs structurels
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mechanical engineer | ingénieur méchanique
wsp
civil engineers | ingénieur civil
CSW
landscape architect | architecte paysagiste
nord du projet project north
nord reel true north

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no	revisions	date
21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte
linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

EXIT STAIRS - ENLARGED PLANS & SECTIONS

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**As indicated**
date | date	**07/17/24**

drawing number | numéro du dessin

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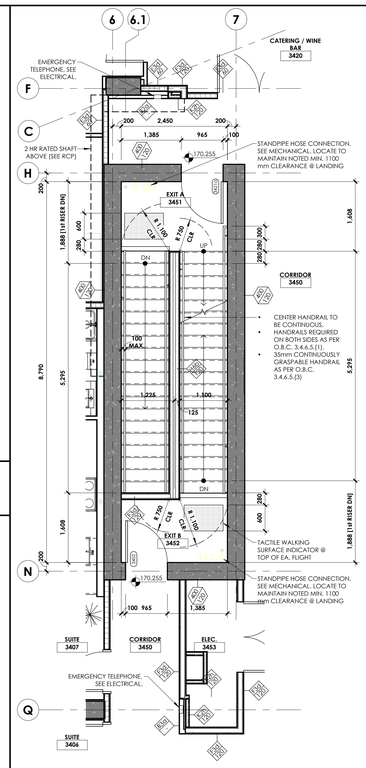
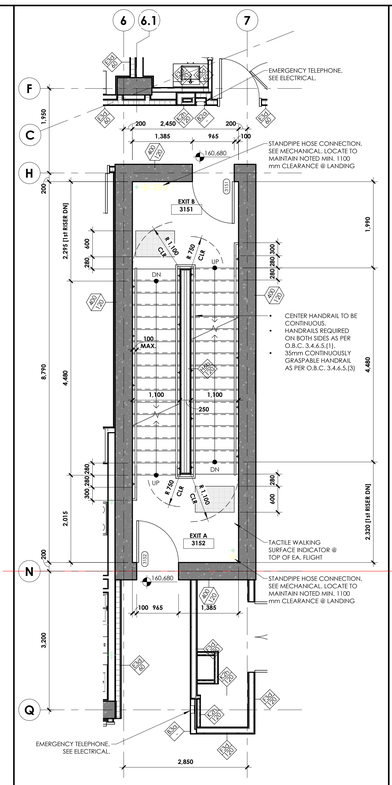


8 A7-101 ENLARGED EXIT STAIR PLAN - LEVEL 34
1 : 50
A2-234-E



7 A7-101 ENLARGED EXIT STAIR PLAN - LEVEL 31-33
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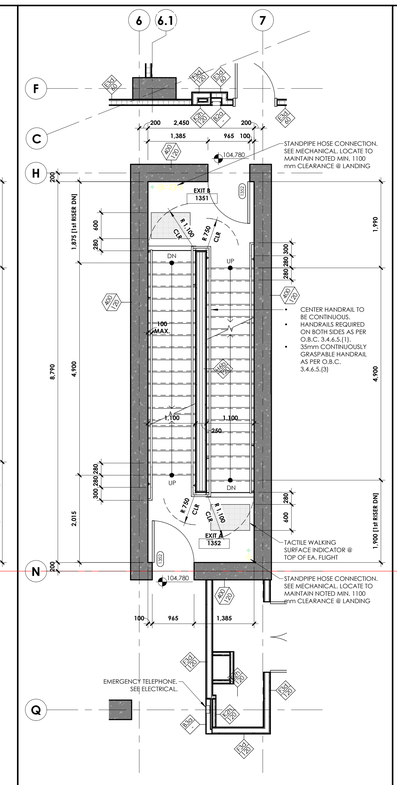
A2-231-E



6 A7-101 ENLARGED EXIT STAIR PLAN - L13, L20, L27
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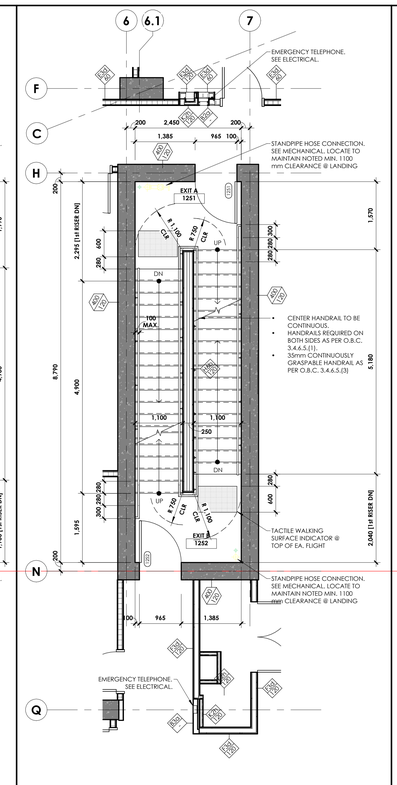

5 A7-101 ENLARGED EXIT STAIR PLAN - L12, L19, L26, L30
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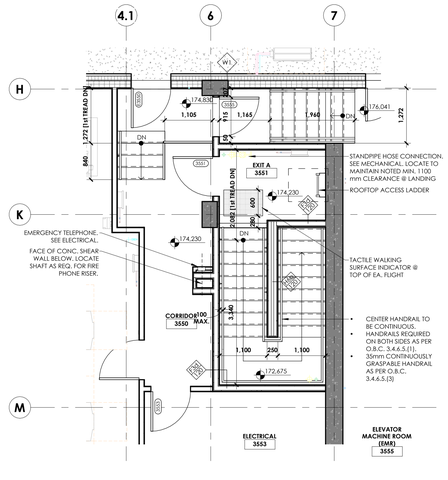

9 A7-101 ENLARGED PLAN @ EXIT - L35 (MECH. PENTHOUSE)
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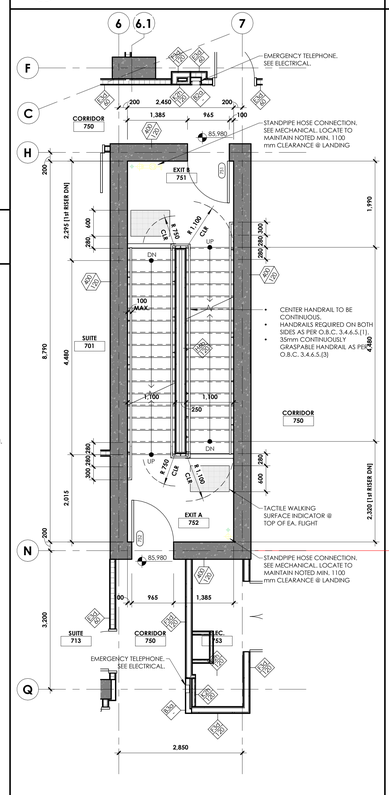

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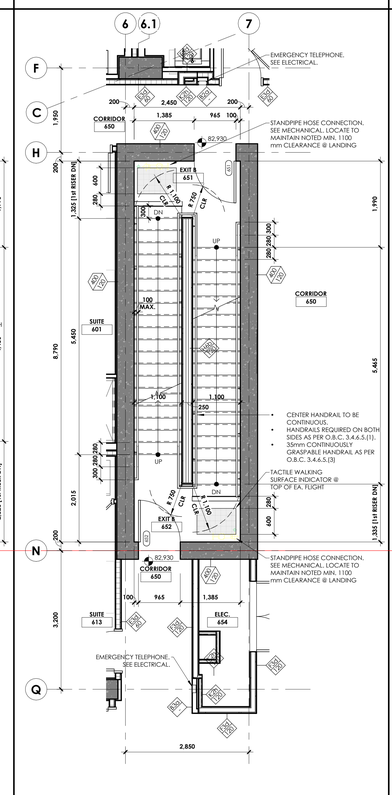

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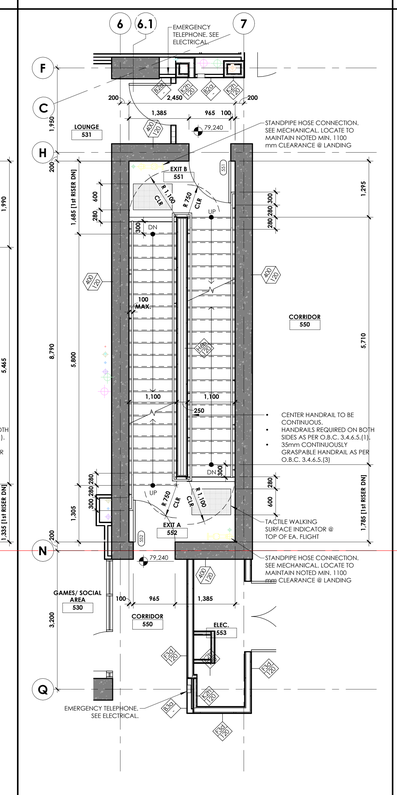
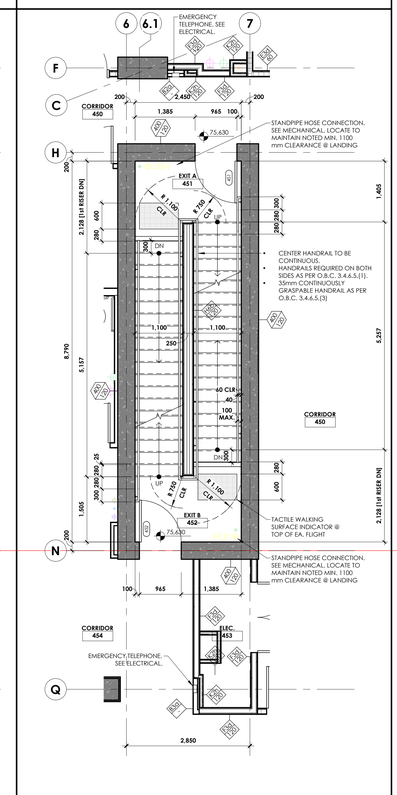
A2-206-E



2 A7-101 ENLARGED EXIT STAIR PLAN - LEVEL 05 (PODIUM TERRACE)
1 : 50
A2-205-E



1 A7-101 ENLARGED EXIT STAIR PLAN - L4
1 : 50

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client

CLV GROUP DEVELOPMENTS

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
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electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

no	revisions	date
21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL, M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

EXIT STAIRS - ENLARGED PLANS & DETAILS

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**1 : 50**
date | date	**07/17/24**

drawing number | numéro du dessin

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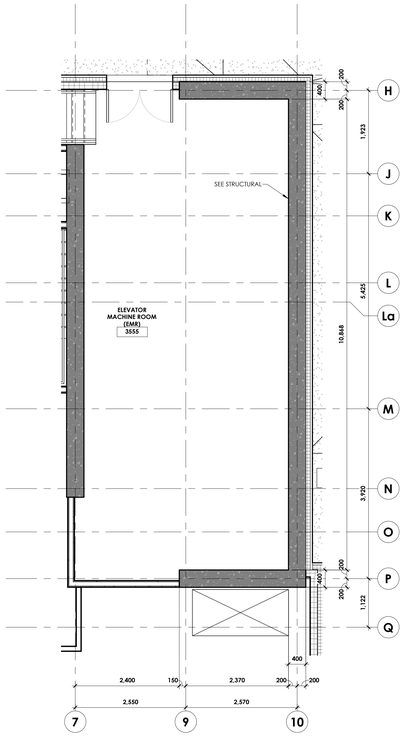
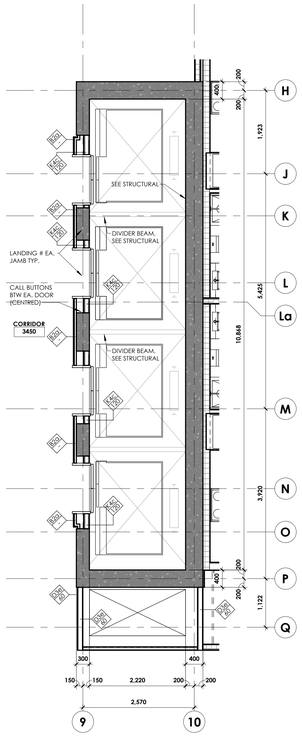
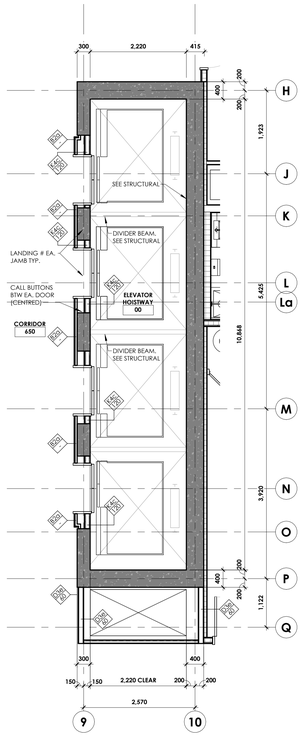


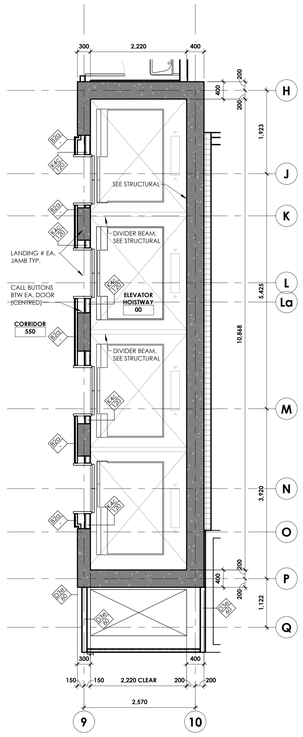
9 A7-200 HOISTWAY PLAN @ ELEVATOR MACHINE ROOM
1 : 50



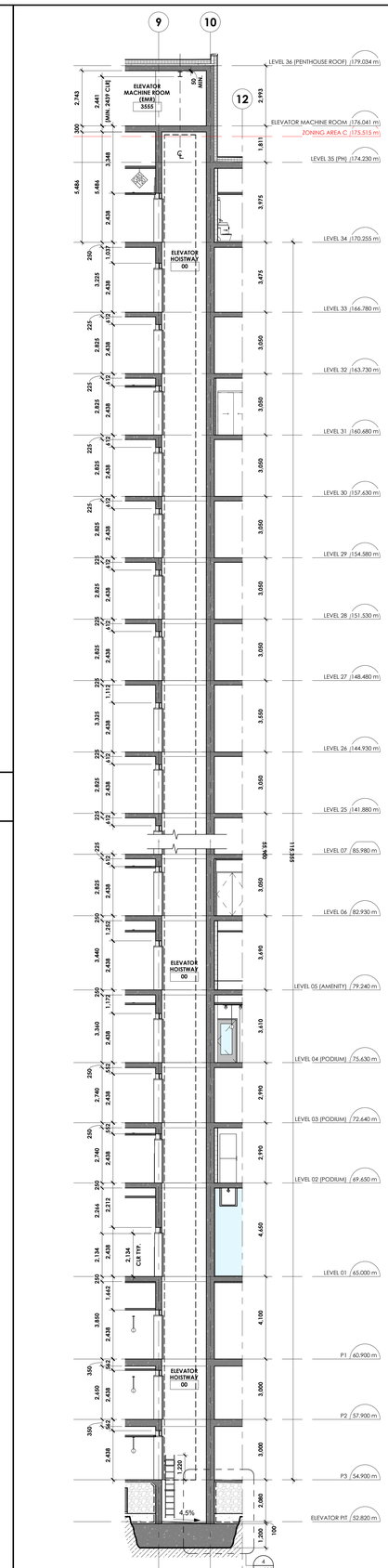
8 A7-200 HOISTWAY PLAN @ PODIUM (TYPICAL RESIDENTIAL)1
1 : 50
A2-206-E



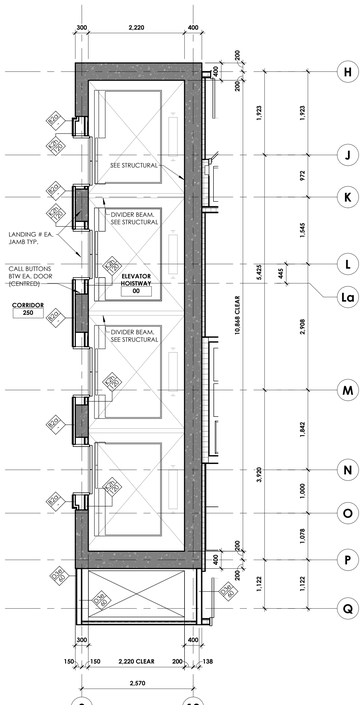
7 A7-200 HOISTWAY PLAN @ TOWER (TYPICAL RESIDENTIAL)
1 : 50



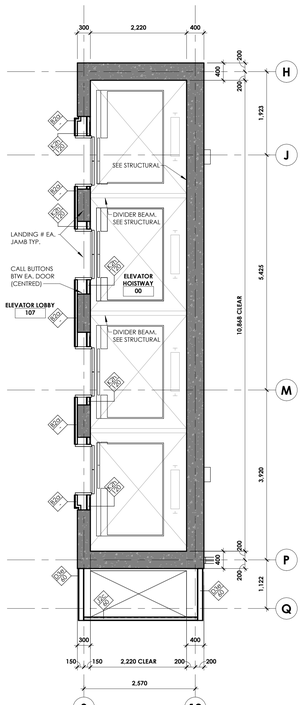
6 A7-200 HOISTWAY PLAN @ PODIUM (AMENITY ROOF)
1 : 50
A2-205-E



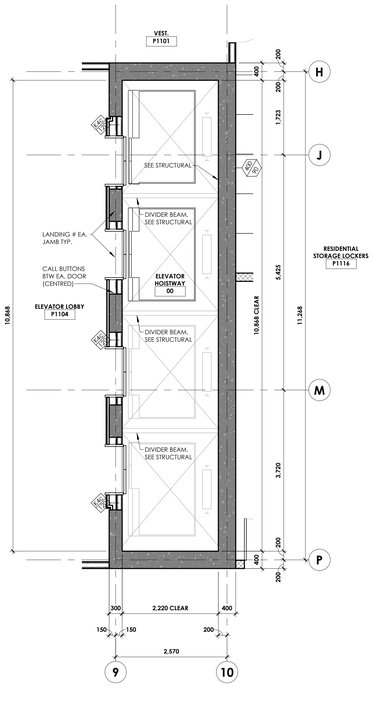
1 A7-200 SECTION - ELEVATOR HOISTWAY
1 : 100
A6-101



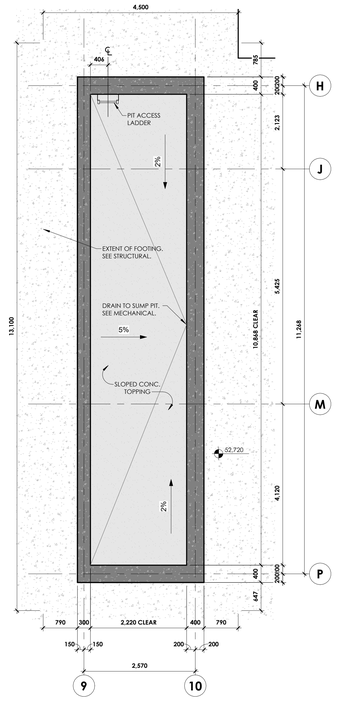
5 A7-200 HOISTWAY PLAN @ PODIUM (TYPICAL RESIDENTIAL)
1 : 50
A2-202-E



4 A7-200 HOISTWAY PLAN @ GROUND FLOOR (TYP. NON-RESIDENTIAL)
1 : 50
A2-101a



3 A7-200 ENLARGED PLAN - TYP. HOISTWAY @ PARKING LEVELS
1 : 100
A2-100



2 A7-200 ENLARGED PLAN - ELEVATOR PIT
1 : 50
A0-205

CLVGROUP DEVELOPMENTS
client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS
structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.
electrical engineers | ingénieur electrique
mechanical engineer | ingénieur méchanique

wsp
civil engineers | ingénieur civil

CSW
landscape architect | architecte paysagiste

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nord reel true north

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no	revisions	date
21	~~RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER~~	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30
19	ISSUED FOR REFERENCE - STRUCTURAL M&E PRICING	25-05-16
18	ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28

stamp | timbre

architect | architecte
linebox STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ENLARGED PLANS & SECTIONS AT ELEVATOR HOISTWAY

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**As indicated**
date | date	**07/17/24**

drawing number | numéro du dessin

A7-200

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_SB_Tower A.rvt
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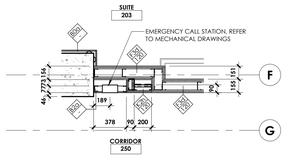
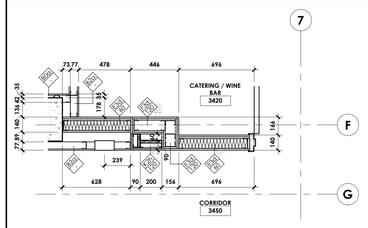


11 A7-300 ENLARGED PLAN - LEVEL 02 - 04 (EAST) CALL STATION
1 : 25
A2-202-E



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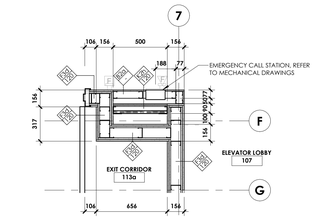
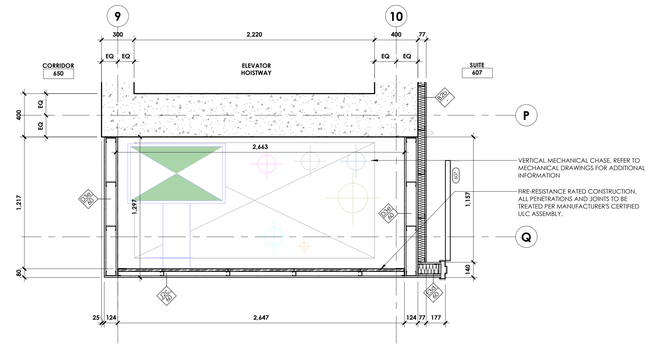
1 : 20
A2-234-E



10 A7-300 ENLARGED PLAN - LEVEL 01 (EAST) CALL STATION
1 : 20
A2-201-E



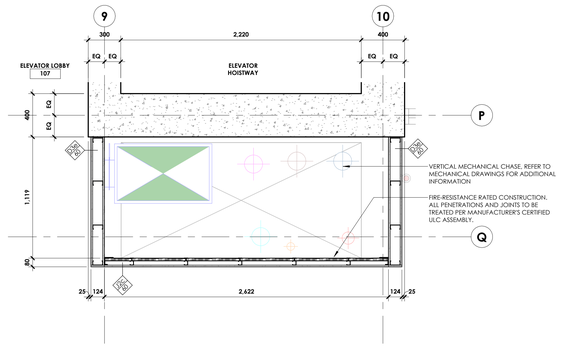
PROVIDE FIRE-RATED ACCESS PANELS (ULC LISTED) AS NEEDED FOR EQUIPMENT OR VALVE ACCESS. COORDINATE LOCATIONS WITH ELECTRICAL ENGINEER / TRADES

NO LOAD-BEARING INSTALLATIONS DIRECTLY ON SHAFT WALL UNLESS STRUCTURALLY REINFORCED.

USE INDEPENDENT UNISTRUT FRAMING OR LATERAL SUPPORT BRACKETS TIED INTO SLAB OR STRUCTURE FOR HEAVIER EQUIPMENT.

ALL PENETRATIONS (CONDUIT, PIPE, CABLE TRAY, DUCT) TO BE:
- BOXED OUT WITH STEEL FRAMING IF EXCEEDING 100mm DIAMETER.
- FIRESTOPPED WITH INTUMESCENT SEALANT OR PRE-MANUFACTURED FIRESTOP COLLARS RATED TO SAME HOURLY ASSEMBLY.

6 A7-300 ENLARGED PLAN - VERT. MECHANICAL CHASE @ TYPICAL TOWER (LEVEL 06 TO 30)
1 : 20
A2-206-W



PROVIDE FIRE-RATED ACCESS PANELS (ULC LISTED) AS NEEDED FOR EQUIPMENT OR VALVE ACCESS. COORDINATE LOCATIONS WITH ELECTRICAL ENGINEER / TRADES

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USE INDEPENDENT UNISTRUT FRAMING OR LATERAL SUPPORT BRACKETS TIED INTO SLAB OR STRUCTURE FOR HEAVIER EQUIPMENT.

ALL PENETRATIONS (CONDUIT, PIPE, CABLE TRAY, DUCT) TO BE:
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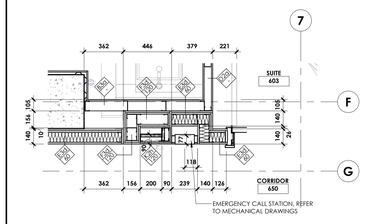
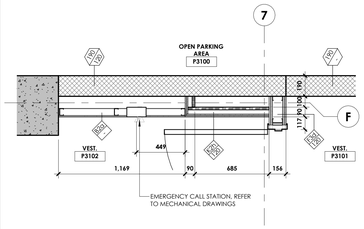
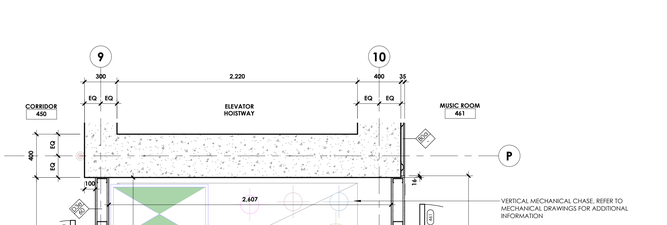
3 A7-300 ENLARGED PLAN - VERT. MECHANICAL CHASE @ LEVEL 01
1 : 20
A2-201-W



13 A7-300 ENLARGED PLAN - LEVEL 06 - 33 (EAST) CALL STATION
1 : 20
A2-206-E



9 A7-300 ENLARGED PLAN - P3 - P1 (EAST) CALL STATION
1 : 20
A2-098



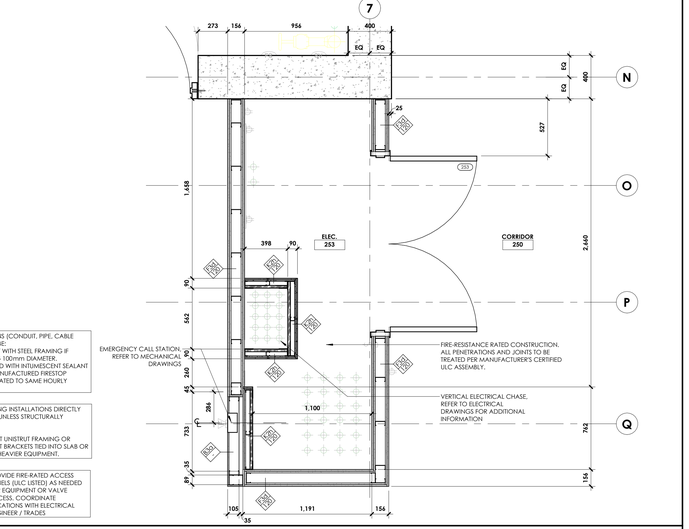
PROVIDE FIRE-RATED ACCESS PANELS (ULC LISTED) AS NEEDED FOR EQUIPMENT OR VALVE ACCESS. COORDINATE LOCATIONS WITH ELECTRICAL ENGINEER / TRADES

NO LOAD-BEARING INSTALLATIONS DIRECTLY ON SHAFT WALL UNLESS STRUCTURALLY REINFORCED.

USE INDEPENDENT UNISTRUT FRAMING OR LATERAL SUPPORT BRACKETS TIED INTO SLAB OR STRUCTURE FOR HEAVIER EQUIPMENT.

ALL PENETRATIONS (CONDUIT, PIPE, CABLE TRAY, DUCT) TO BE:
- BOXED OUT WITH STEEL FRAMING IF EXCEEDING 100mm DIAMETER.
- FIRESTOPPED WITH INTUMESCENT SEALANT OR PRE-MANUFACTURED FIRESTOP COLLARS RATED TO SAME HOURLY ASSEMBLY.

5 A7-300 ENLARGED PLAN - VERT. MECHANICAL CHASE @ PODIUM (LEVEL 04 & 05)
1 : 20
A2-204-W



ALL PENETRATIONS (CONDUIT, PIPE, CABLE TRAY, DUCT) TO BE:
- BOXED OUT WITH STEEL FRAMING IF EXCEEDING 100mm DIAMETER.
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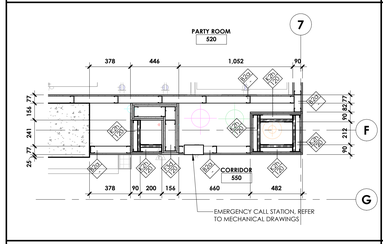
NO LOAD-BEARING INSTALLATIONS DIRECTLY ON SHAFT WALL UNLESS STRUCTURALLY REINFORCED.

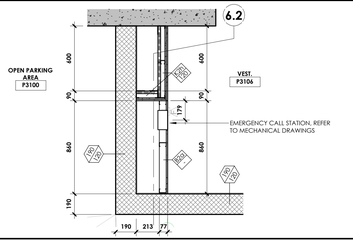
USE INDEPENDENT UNISTRUT FRAMING OR LATERAL SUPPORT BRACKETS TIED INTO SLAB OR STRUCTURE FOR HEAVIER EQUIPMENT.

PROVIDE FIRE-RATED ACCESS PANELS (ULC LISTED) AS NEEDED FOR EQUIPMENT OR VALVE ACCESS. COORDINATE LOCATIONS WITH ELECTRICAL ENGINEER / TRADES

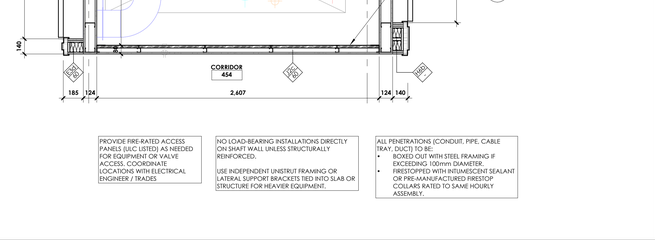
2 A7-300 ENLARGED PLAN - ELECTRICAL ROOM, VERTICAL CHASE & CALL STATION (LEVEL 02 TO 34)
1 : 20
A2-202-E



12 A7-300 ENLARGED PLAN - LEVEL 05 (EAST) CALL STATION
1 : 20
A2-205-E



8 A7-300 ENLARGED PLAN - P3 - P1 (WEST) CALL STATION
1 : 20
A2-098



PROVIDE FIRE-RATED ACCESS PANELS (ULC LISTED) AS NEEDED FOR EQUIPMENT OR VALVE ACCESS. COORDINATE LOCATIONS WITH ELECTRICAL ENGINEER / TRADES

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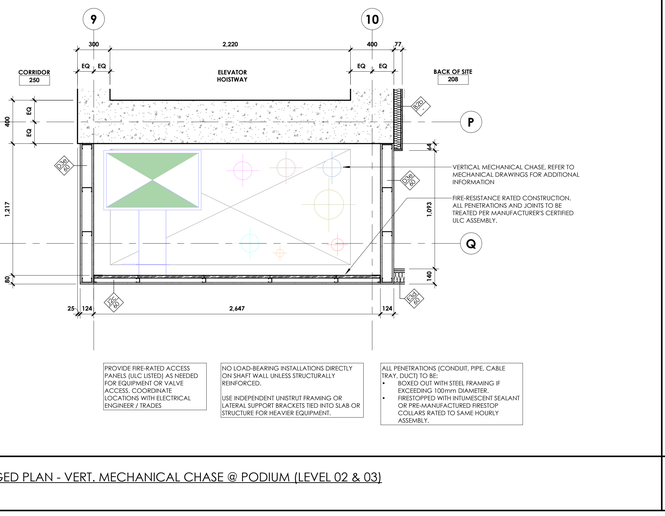
- FIRESTOPPED WITH INTUMESCENT SEALANT OR PRE-MANUFACTURED FIRESTOP COLLARS RATED TO SAME HOURLY ASSEMBLY.

7 A7-300 ENLARGED PLAN - VERT. MECHANICAL CHASE @ TYPICAL PENTHOUSE (LEVEL 31 TO 34)
1 : 20
A2-231-W



PROVIDE FIRE-RATED ACCESS PANELS (ULC LISTED) AS NEEDED FOR EQUIPMENT OR VALVE ACCESS. COORDINATE LOCATIONS WITH ELECTRICAL ENGINEER / TRADES

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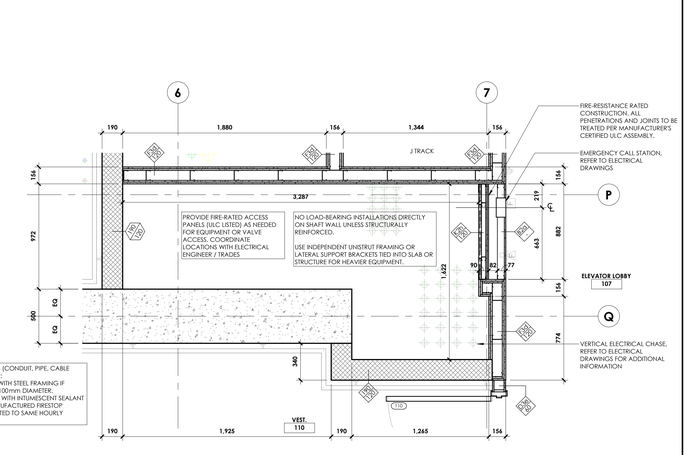
4 A7-300 ENLARGED PLAN - VERT. MECHANICAL CHASE @ PODIUM (LEVEL 02 & 03)
1 : 20
A2-202-W



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1 A7-300 ENLARGED PLAN - VERTICAL ELECTRICAL CHASE @ LEVEL 01
1 : 20
A2-201-E

client
CLV GROUP DEVELOPMENTS
CUNLIFFE & ASSOCIATES CONSULTING STRUCTURAL ENGINEERS
structural engineers | ingénieurs structurels
GWAL Goodkey, Weedmark & Associates Ltd.
electrical engineers | ingénieur electrique
mechanical engineer | ingénieur méchanique
wsp
civil engineers | ingénieur civil
CSW
landscape architect | architecte paysagiste

nord du projet project north

nord reel true north

NOT FOR CONSTRUCTION 2025-06-12 4:38:00 PM

no	revisions	date
21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30

stamp | timbre

architect | architecte
linebox STUDIO

All dimensions are shown in metric. Contractor shall check and verify all dimensions and report all error and omissions to the Architect. Do not scale the drawings. Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

ENLARGED PLANS - CORE

project number | numéro du projet	2402
drawn | dessiné	JH / DL / PC / JP
checked | verifié	JP / AR
scale | échelle	As indicated
date | date	07/17/24

drawing number | numéro du dessin

A7-300

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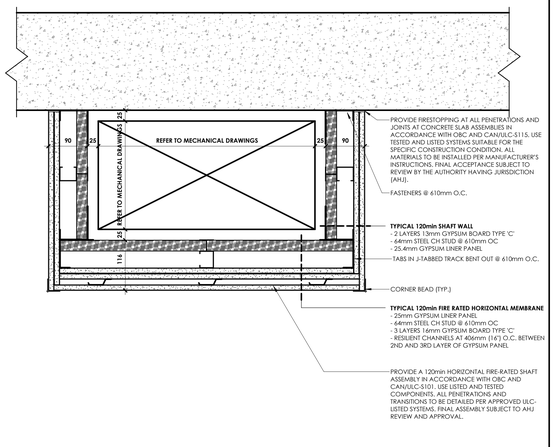
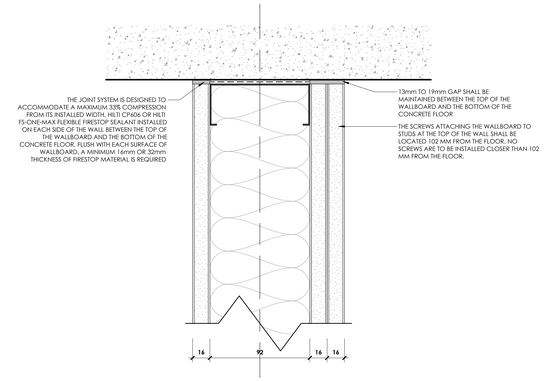
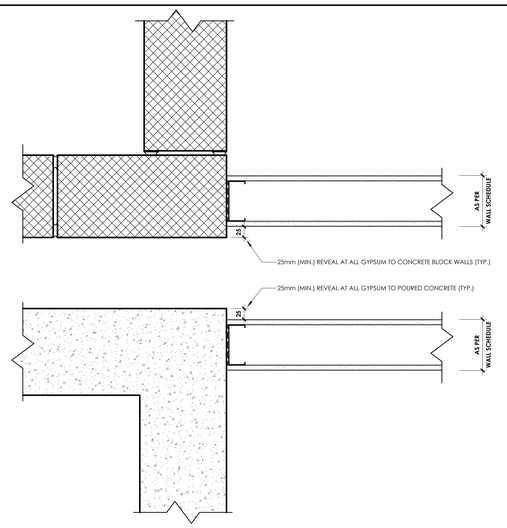


6 A9-010 SECTION DETAIL - TYPICAL 120min HORIZONTAL SHAFT
1 : 5

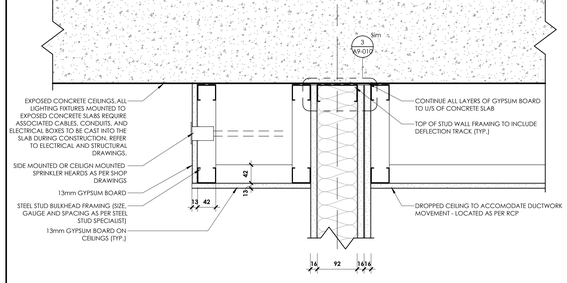
FIRE STOP SYSTEM No. HW18



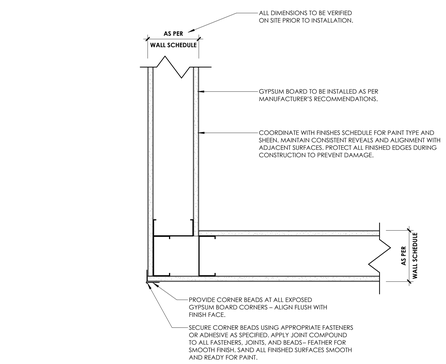
3 A9-010 SECTION DETAIL - TYPICAL FIRESTOPPING DETAIL
1 : 2
A9-010



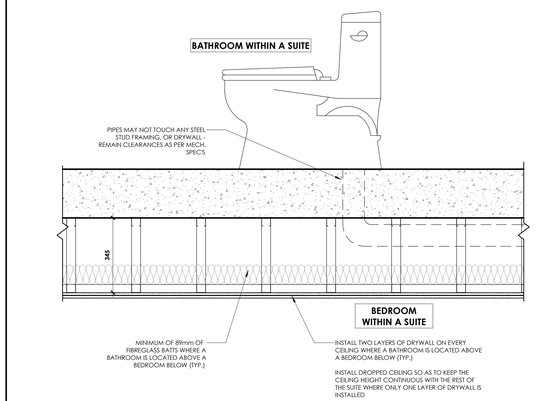
5 A9-010 PLAN DETAIL - TYPICAL GYPSUM TO CONCRETE BLOCK / CIP WALL
1 : 5



2 A9-010 SECTION DETAIL - FLOOR DETAIL @ SUITES
1 : 5



4 A9-010 PLAN DETAIL - TYPICAL GYPSUM CORNER BEAD
1 : 5



1 A9-010 SECTION DETAIL - BEDROOM / BATHROOM FLOOR DETAIL
1 : 10

Autodesk Docs://Gladstone & Loretta/2402_145 Loretta CLV_LB_Tower A.rvt
2025-06-12 4:58:01 PM

CLVGROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

NOT FOR CONSTRUCTION
2025-06-12 4:58:01 PM

no	revisions	date
21	RE-ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-06-12
20	ISSUED FOR ENVELOPE & INTERIOR GYPSUM ASSEMBLIES TENDER	25-05-30

stamp | timbre

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE AND LORETTA RESIDENTIAL TOWER

145 LORETTA AVE. N | OTTAWA | ON

drawing title | titre du dessin

INTERIOR DETAILS

project number | numero du projet	**2402**
drawn | dessiné	**JH / DL / PC / JP**
checked | verifié	**JP / AR**
scale | échelle	**As indicated**
date | date	**04/22/25**

drawing number | numéro du dessin

A9-010

APPENDIX B2

CIVIL DRAWINGS

951 GLADSTONE AVENUE AND 145 LORETTA AVENUE NORTH MIXED-USE

OTTAWA, ONTARIO



KEY PLAN
N.T.S

CIVIL DRAWING LIST

C0.1 NOTES AND DETAILS
C0.2 GENERAL ARRANGEMENT PLAN - PHASE 1
C0.3 GENERAL ARRANGEMENT PLAN - MASTER
R1.0 REMOVALS PLAN - PHASE 1
R1.1 REMOVALS PLAN - MASTER
C1.1 GRADING PLAN - PHASE 1
C1.2 GRADING PLAN - MASTER
C1.3 SERVICING PLAN - PHASE 1
C1.4 SERVICING PLAN - MASTER
C1.5 EROSION AND SEDIMENT CONTROL PLAN - PHASE 1
C1.6 SERVICING PROFILES - PHASE 1
C1.7 SERVICING PROFILES - MASTER

CLV GROUP DEVELOPMENTS INC.
485 BANK STREET, SUITE 200
OTTAWA, ON, K2P 1Z2

2611 QUEENSVIEW DRIVE, SUITE 300,
OTTAWA, ONTARIO, CANADA K2B 8K2
PHONE: 613-829-2800
WWW.WSP.COM

RE-ISSUED FOR SITE PLAN CONTROL

DATE: JANUARY 2025

M:\2020\20M-01441-00 - Gladstone-Trinity-Mixed-Use & Residential\14.0 - Tech & Prof Services\14.02 - Drawings\01. Civil\01. Production\Phase 1\20M-01441-00 Cover.dwg Jan 29, 2025 - 3:15pm BY (CAI7074512)

GENERAL

1. DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL AND LANDSCAPE DRAWINGS.
2. ALL SERVICES, MATERIALS, CONSTRUCTION METHODS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND REGULATIONS OF THE: CITY OF OTTAWA STANDARD SPECIFICATIONS AND DRAWINGS, ONTARIO PROVINCIAL SPECIFICATION STANDARD SPECIFICATION (OPSS) AND ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD), UNLESS OTHERWISE SPECIFIED, TO THE SATISFACTION OF THE CITY AND THE CONSULTANT.
3. THE POSITION OF EXISTING POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND ABOVEGROUND UTILITIES, STRUCTURES AND APPURTENANCES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWING, AND WHERE SHOWN THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SATISFY HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM DURING THE COURSE OF CONSTRUCTION. ANY RELOCATION OF EXISTING UTILITIES REQUIRED BY THE DEVELOPMENT OF SUBJECT LANDS IS TO BE UNDERTAKEN AT CONTRACTOR'S EXPENSE.
4. THE CONTRACTOR MUST NOTIFY ALL EXISTING UTILITY COMPANY OFFICIALS FIVE (5) BUSINESS DAYS PRIOR TO START OF CONSTRUCTION AND HAVE ALL EXISTING UTILITIES AND SERVICES LOCATED IN THE FIELD OR EXPOSED PRIOR TO THE START OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO HYDRO, BELL, CABLE TV, AND CONSUMERS GAS LINES.
5. ALL TRENCHING AND EXCAVATIONS TO BE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS. ALL INFORMATION SHALL BE CONFIRMED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
6. REFER TO ARCHITECTS PLANS FOR BUILDING DIMENSIONS, ELEVATIONS, LAYOUT AND REMOVALS. REFER TO LANDSCAPE PLAN FOR LANDSCAPED DETAILS AND OTHER RELEVANT INFORMATION. ALL INFORMATION SHALL BE CONFIRMED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
7. TOPOGRAPHIC SURVEY COMPLETED AND PROVIDED BY STANTEC GEOMATICS LTD., DATED JULY 6, 2017. CONTRACTOR TO VERIFY IN THE FIELD PRIOR TO CONSTRUCTION OF ANY WORK AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
8. ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS. VERIFY THAT JOB BENCHMARKS HAVE NOT BEEN ALTERED OR DISTURBED.
9. ALL GROUND SURFACES SHALL BE EVENLY GRADED WITHOUT PONDING AREAS AND WITHOUT LOW POINTS EXCEPT WHERE APPROVED SWALE OR DRAIN OUTLETS ARE PROVIDED.
10. ALL EDGES OF DISTURBED PAVEMENT SHALL BE SAW CUT TO FORM A NEAT AND STRAIGHT LINE PRIOR TO PLACING NEW PAVEMENT PAVEMENT REINSTATEMENT SHALL BE WITH STEP JOINTS OF 500mm WIDTH MINIMUM.
11. ALL DISTURBED AREAS OUTSIDE PROPOSED GRADING LIMITS TO BE RESTORED TO ORIGINAL ELEVATIONS AND CONDITIONS UNLESS OTHERWISE SPECIFIED. EXISTING PARKING LOT SHALL BE RE-ASPHALTED AT EXISTING GRADES EXCEPT AS NOTED TO EVEN OUT GRADES. ALL RESTORATION SHALL BE COMPLETED WITH THE GEOTECHNICAL REQUIREMENTS FOR BACKFILL AND COMPACTION.
12. ABUTTING PROPERTY GRADES TO BE MATCHED.
13. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE MUNICIPAL AUTHORITIES PRIOR TO COMMENCING CONSTRUCTION, INCLUDING WATER PERMIT AND ROAD CUT PERMIT.
14. MINIMIZE DISTURBANCE TO EXISTING VEGETATION DURING THE EXECUTION OF ALL WORKS.
15. REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL UNLESS OTHERWISE DIRECTED FROM THE ENGINEER. EXCAVATE AND REMOVE ALL ORGANIC MATERIAL AND DEBRIS LOCATED WITHIN THE PROPOSED BUILDING, PARKING AND ROADWAY LOCATIONS.
16. AT PROPOSED UTILITY CONNECTION POINTS AND CROSSINGS (I.E. STORM SEWER, SANITARY SEWER, WATER, ETC.) THE CONTRACTOR SHALL DETERMINE THE PRECISE LOCATION AND DEPTH OF EXISTING UTILITIES AND REPORT ANY DISCREPANCIES OR CONFLICTS TO THE ENGINEER BEFORE COMMENCING WORK.
17. PRIOR TO CONSTRUCTION, A GEOTECHNICAL ENGINEER REGISTERED IN THE PROVINCE OF ONTARIO IS TO INSPECT ALL SUB-SURFACES FOR FOOTINGS, SERVICES AND PAVEMENT STRUCTURES.
18. CONTRACTOR TO OBTAIN POST-CONSTRUCTION TOPOGRAPHIC SURVEY PERFORMED BY CERTIFIED OLS OR P.ENG. CONFIRMING COMPLIANCE WITH DESIGN GRADING AND SERVICING. SURVEY IS TO INCLUDE LOCATION AND INVERTS FOR BURIED UTILITIES.
19. PROVIDE CCTV INSPECTION REPORT FOR ALL SEWERS AND CATCHBASIN LEADS 200MM DIAMETER AND LARGER. REPEAT CCTV INSPECTION FOLLOWING RECTIFICATION OF ANY DEFICIENCIES.
20. REPORT REFERENCES

20.1. GEOTECHNICAL INVESTIGATION REPORT FOR PROPOSED MIXED-USE DEVELOPMENT, 951 GLADSTONE AVENE AND 145 LORETTA AVENUE NORTH, OTTAWA, ONTARIO, PREPARED BY PATERSONGROUP, PROJ NO. PG5517-1, NOVEMBER 12, 2021.

20.2. 951 GLADSTONE AVE & 145 LORETTA AVE N, OTTAWA, ONTARIO, SERVICING AND STORMWATER MANAGEMENT REPORT, PREPARED BY WSP CANADA INC., PROJ NO. 20M-01441, NOVEMBER 18, 2024.

PARKING LOT AND WORK IN PUBLIC RIGHTS OF WAY

1. CONTRACTOR TO REINSTATE ROAD CUTS AS PER CITY OF OTTAWA DETAIL R10.
2. GEOTECHNICAL INVESTIGATION REPORT FOR PROPOSED MIXED-USE DEVELOPMENT, 951 GLADSTONE AVENE AND 145 LORETTA AVENUE NORTH, OTTAWA, ONTARIO, PREPARED BY PATERSONGROUP, PROJ NO. PG5517-1, NOVEMBER 12, 2021.
3. CONTRACTOR TO PREPARE SUBGRADE, INCLUDING PROOFROLLING, TO THE SATISFACTION OF THE GEOTECHNICAL CONSULTANT PRIOR TO THE COMMENCEMENT OF PLACEMENT OF GRANULAR B MATERIAL.
4. FILL TO BE PLACED AND COMPACTED PER THE GEOTECHNICAL REPORT REQUIREMENTS.
5. CONTRACTOR TO SUPPLY, PLACE AND COMPACT GRANULAR B MATERIAL IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL CONSULTANT. CONTRACTOR TO PROVIDE CONSULTANT WITH SAMPLES OF GRANULAR B MATERIAL FOR TESTING AND CERTIFICATION FROM THE GEOTECHNICAL CONSULTANT THAT THE MATERIAL MEETS THE GRADATION REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL REPORT.
6. GRANULAR A MATERIAL TO BE PLACED ONLY UPON APPROVAL BY THE GEOTECHNICAL CONSULTANT OF GRANULAR B PLACEMENT.
7. CONTRACTOR TO SUPPLY, PLACE AND COMPACT GRANULAR A MATERIAL IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL CONSULTANT. CONTRACTOR TO PROVIDE CONSULTANT WITH SAMPLES OF GRANULAR A MATERIAL FOR TESTING AND CERTIFICATION FROM THE GEOTECHNICAL CONSULTANT THAT THE MATERIAL MEETS THE GRADATION REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL REPORT.
8. ASPHALT MATERIAL TO BE PLACED ONLY UPON APPROVAL BY THE GEOTECHNICAL CONSULTANT OF GRANULAR A PLACEMENT.
9. CONTRACTOR TO SUPPLY, PLACE AND COMPACT ASPHALT MATERIAL IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL CONSULTANT. CONTRACTOR TO PROVIDE CONSULTANT WITH SAMPLES OF ASPHALT MATERIAL FOR TESTING AND CERTIFICATION FROM THE GEOTECHNICAL CONSULTANT THAT THE MATERIAL MEETS THE REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL REPORT.
10. CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING LINE AND GRADE IN ACCORDANCE WITH THE PLANS, AND FOR PROVIDING THE CONSULTANT WITH VERIFICATION PRIOR TO PLACEMENT.
11. ALL EXCESS MATERIAL TO BE HAULED OFFSITE AND DISPOSED OF AT AN APPROVED DUMP SITE. SHOULD THE CONTRACTOR DISCOVER ANY HAZARDOUS MATERIAL, CONTRACTOR IS TO NOTIFY CONSULTANT. CONSULTANT TO DETERMINE APPROPRIATE DISPOSAL METHOD/LOCATION.
12. PAVEMENT STRUCTURE (MATERIAL TYPES AND THICKNESS) TO BE AS SPECIFIED IN THE GEOTECHNICAL REPORT.

STORM SEWERS AND STRUCTURES

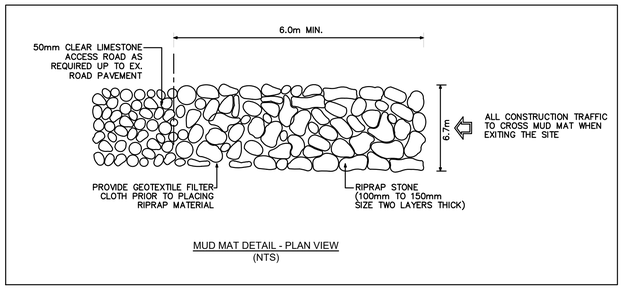
1. ALL STORM SEWER MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. PROVIDE CCTV INSPECTION REPORTS FOR ALL NEW STORMSEWERS, SERVICES AND CB LEADS.
2. STORM SEWERS 450mm DIAMETER AND SMALLER SHALL BE PVC SDR-35, WITH RUBBER GASKET PER CSA A-257.3.
3. STORM SEWER LARGER THAN 450mm SHALL BE REINFORCED CONCRETE CLASS 100D.
4. SEWER BEDDING AS PER CITY OF OTTAWA DETAIL S6.
5. ALL STORM MANHOLES TO BE AS PER STORM STRUCTURE TABLE.
6. ANY NEW OR EXISTING STORM SEWER WITH LESS THAN 2.0m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR APPROVED BY THE ENGINEER.
7. ALL CATCHBASIN LEADS TO BE MINIMUM 200mm DIAMETER AT MINIMUM 1.0% SLOPE UNLESS OTHERWISE SPECIFIED.
8. STORM CATCHBASINS AS PER OPSD 705.010 AND FRAME/COVER AS PER CITY STANDARD DRAWINGS S19. STORM CBMH'S AS INDICATED IN TABLE WITH SUMP, ADJUSTMENT SECTIONS SHALL BE AS PER OPSD 704.010.
9. INSTALLATION OF FLOW CONTROL ICD'S TO BE VERIFIED BY QUALITY VERIFICATION ENGINEER RETAINED BY CONTRACTOR.
10. PROVIDE BACKWATER VALVE ON FOUNDATION DRAIN, STORM DISCHARGE, AND OVERFLOW DISCHARGE PER S14
11. ALL CATCHBASINS EXCLUDING LANDSCAPE CATCHBASINS TO HAVE 150 MMØ PERFORATED PIPE FOR 3.0M ON ALL AVAILABLE SIDES AT AN ELEVATION OF 300mm BELOW SUBGRADE LEVEL AS PER CITY OF OTTAWA STANDARD DRAWING 'R1'.

SANITARY SEWER AND STRUCTURES

1. ALL SANITARY SEWER, SANITARY SEWER APPURTENANCES AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. PROVIDE CCTV INSPECTION REPORTS FOR ALL NEW SANITARY PIPING.
2. SANITARY SEWER PIPE SIZE 150mm DIAMETER AND GREATER TO BE PVC SDR-35 (UNLESS SPECIFIED OTHERWISE) WITH RUBBER GASKET TYPE JOINTS IN CONFORMANCE WITH CSA B-182.2,3,4.
3. SEWER BEDDING AS PER CITY OF OTTAWA DETAIL S6.
4. ALL SANITARY MANHOLES 1200mm IN DIAMETER TO BE AS PER OPSD 701.01. FRAME AND COVER TO BE AS PER CITY OF OTTAWA STANDARD S25 AND S24.
5. MAINTENANCE HOLE BENCHING AND PIPE OPENING ALTERNATIVES AS PER THE OPSD 701.021
6. ANY SANITARY SEWER WITH LESS THAN 2.0m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR APPROVED BY THE ENGINEER.
7. PROVIDE BACKWATER VALVE FOR BUILDING SANITARY SERVICES PER S14.1.

WATERMAIN

1. ALL WATERMAIN AND WATERMAIN APPURTANANCES, MATERIALS, CONSTRUCTION AND TESTING METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA AND MINISTRY OF ENVIRONMENT STANDARDS AND SPECIFICATIONS.
2. ALL WATERMAIN 300mm DIAMETER AND SMALLER TO BE POLY VINYL CHLORIDE (PVC) CLASS 150 DR 18 MEETING AWWA SPECIFICATION C900.
3. ALL WATERMAIN TO BE INSTALLED AT MINIMUM COVER OF 2.4m BELOW FINISHED GRADE. WHERE WATERMAINS CROSS OVER OTHER UTILITIES, A MINIMUM 0.30m CLEARANCE SHALL BE MAINTAINED; WHERE WATERMAINS CROSS UNDER OTHER UTILITIES, A MINIMUM 0.50m CLEARANCE SHALL BE MAINTAINED. WHERE THE MINIMUM SEPARATION CANNOT BE ACHIEVED, THE WATERMAIN SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARDS W25 AND W25.2. WHERE 2.4m MINIMUM DEPTH CANNOT BE ACHIEVED, THERMAL INSULATION SHALL BE PROVIDED AS PER CITY OF OTTAWA STANDARD W22. WHERE A WATERMAIN IS IN CLOSE PROXIMITY TO AN OPEN STRUCTURE, THERMAL INSULATION SHALL BE PROVIDED AS PER CITY OF OTTAWA STANDARD W23.
4. CONCRETE THRUST BLOCKS AND MECHANICAL RESTRAINTS ARE TO BE INSTALLED AT ALL TEES, BENDS,HYDRANTS, REDUCERS, ENDS OF MAINS AND CONNECTIONS 100mm AND LARGER, IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS W25.3 & W25.4.
5. CATHODIC PROTECTION REQUIRED FOR ALL IRON FITTINGS AS PER CITY OF OTTAWA STANDARD W40 & W42.
6. ALL VALVES AND VALVE BOXES AND CHAMBERS, HYDRANTS, AND HYDRANT VALVES AND ASSEMBLES SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARD.
7. FIRE HYDRANT LOCATION AND INSTALLATION AS PER CITY OF OTTAWA STANDARD W18 & W19. CONTRACTOR TO PROVIDE FLOW TEST AND PAINTING OF NEW HYDRANT IN ACCORDANCE WITH CITY STANDARDS.
8. IF WATER MAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS LESS THAN HALF THAT RECOMMENDED BY THE MANUFACTURER.



MUD MAT DETAIL - PLAN VIEW
(NTS)

EROSION AND SEDIMENT CONTROL

** CONTRACTOR IS RESPONSIBLE FOR ALL INSTALLATION, MONITORING, REPAIR AND REMOVAL OF ALL EROSION AND SEDIMENT CONTROL FEATURES. **

1. PRIOR TO START OF CONSTRUCTION:
1.1. INSTALL SILT FENCE IN LOCATION SHOWN.
1.2. INSTALL SILT SACK FILTERS IN ALL THE CATCHBASINS AND MANHOLES TO REMAIN DURING CONSTRUCTION WITHIN THE SITE.
1.3. INSPECT MEASURES IMMEDIATELY AFTER INSTALLATION.
1.4. INSTALL MUD MAT AT CONSTRUCTION ENTRANCES.

2. DURING CONSTRUCTION:
2.1. MINIMIZE THE EXTENT OF DISTURBED AREAS AND THE DURATION OF EXPOSURE AND IMPACTS TO EXISTING GRADING.
2.2. PERIMETER VEGETATION TO REMAIN IN PLACE UNTIL PERMANENT STORM WATER MANAGEMENT IS IN PLACE. OTHERWISE, IMMEDIATELY INSTALL SILT FENCE WHEN THE EXISTING SITE IS DISTURBED AT THE PERIMETER.
2.3. PROTECT DISTURBED AREAS FROM OVERLAND FLOW BY PROVIDING TEMPORARY SWALES TO THE SATISFACTION OF THE FIELD ENGINEER. TIE-IN TEMPORARY SWALE TO EXISTING CB'S AS REQUIRED.
2.4. PROVIDE TEMPORARY COVER SUCH AS SEEDING OR MULCHING IF DISTURBED AREA WILL NOT BE REHABILITATED WITHIN 30 DAYS.
2.5. INSPECT SILT FENCES, FILTER FABRIC FILTERS AND CATCH BASIN SUMPS WEEKLY AND WITHIN 24 HOURS AFTER A STORM EVENT. CLEAN AND REPAIR WHEN NECESSARY.
2.6. DOWNSTREAM STORM INFRASTRUCTURE SHALL BE PROTECTED FROM UNFILTERED RUNOFF DURING ON-SITE STORM INFRASTRUCTURE DEMOLITION.
2.7. DRAWING TO BE REVIEWED AND REVISED AS REQUIRED DURING CONSTRUCTION.
2.8. EROSION CONTROL FENCING TO BE ALSO INSTALLED AROUND THE BASE OF ALL STOCKPILES.
2.9. DO NOT LOCATE TOPSOIL PILES AND EXCAVATION MATERIAL CLOSER THAN 2.5m FROM ANY PAVED SURFACE, OR ONE WHICH IS TO BE PAVED BEFORE THE PILE IS REMOVED. ALL TOPSOIL PILES ARE TO BE SEEDED IF THEY ARE TO REMAIN ON SITE LONG ENOUGH FOR SEEDS TO GROW (LONGER THAN 30 DAYS).
2.10. CONTROL WIND-BLOWN DUST OFF SITE BY SEEDING TOPSOIL PILES AND OTHER AREAS TEMPORARILY (PROVIDE WATERING AS REQUIRED AND TO THE SATISFACTION OF THE ENGINEER).
2.11. NO ALTERNATE METHODS OF EROSION PROTECTION SHALL BE PERMITTED UNLESS APPROVED BY THE FIELD ENGINEER.
2.12. CITY ROADWAY AND SIDEWALK TO BE CLEANED OF ALL SEDIMENT FROM VEHICULAR TRACKING AS REQUIRED.
2.13. DURING WET CONDITIONS, TIRES OF ALL VEHICLES/EQUIPMENT LEAVING THE SITE ARE TO BE SCRAPED.
2.14. ANY MUD/MATERIAL TRACKED ONTO THE ROAD SHALL BE REMOVED IMMEDIATELY BY HAND OR RUBBER TIRE LOADER.
2.15. TAKE ALL NECESSARY STEPS TO PREVENT BUILDING MATERIAL, CONSTRUCTION DEBRIS OR WASTE BEING SPILLED OR TRACKED ONTO ABUTTING PROPERTIES OR PUBLIC STREETS DURING CONSTRUCTION AND PROCEED IMMEDIATELY TO CLEAN UP ANY AREAS SO AFFECTED.
2.16. ALL EROSION CONTROL STRUCTURE TO REMAIN IN PLACE UNTIL ALL DISTURBED GROUND SURFACES HAVE BEEN STABILIZED EITHER BY PAVING OR RESTORATION OF VEGETATIVE GROUND COVER.
2.17. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.

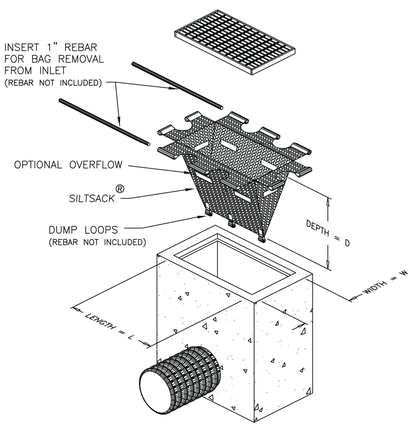
TEMPORARY BENCH MARKS

T.B.M. #	ELEVATION (m)	DESCRIPTION
1	65.38	TOP OF SPINDLE ON FIRE HYDRANT
2	65.35	TOP OF SPINDLE ON FIRE HYDRANT

Recommended Pavement Structure - Car Only Parking Areas	
Thickness (mm)	**Material Description**
50	**Wear Course** - HL 3 or Superpave 12.5 Asphaltic Concrete
150	**BASE** - OPSS Granular A Crushed Stone
300	**SUBBASE** - OPSS Granular B Type II
SUBGRADE - In situ soil, or OPSS Granular B Type I or II material placed over in situ soil	

Recommended Pavement Structure Access Lanes, Garage Ramp and Heavey Truck Parking Areas	
Thickness (mm)	**Material Description**
40	**Wear Course** - HL-3 or Superpave 12.5 Asphaltic Concrete
50	**Binder Course** - HL-8 or Superpave 19.0 Asphaltic Concrete
150	**BASE** - OPSS Granular A Crushed Stone
450	**SUBBASE** - OPSS Granular B Type II
SUBGRADE - In situ soil, or OPSS Granular B Type I or II material placed over in situ soil	

Typical Siltsack® Construction - Type B



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SEAL:

LICENSED PROFESSIONAL ENGINEER
D. B. YANG
100230568
2025-01-31
PROVINCE OF ONTARIO

CLIENT:
CLV GROUP
CLV GROUP DEVELOPMENTS INC.
485 BANK STREET, SUITE 200
OTTAWA, ON, K2P 1Z2

CLIENT REF. #: --

PROJECT:
951 GLADSTONE AVENUE AND
145 LORETTA AVENUE NORTH
MIXED-USE

KEY PLAN:



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ISSUED FOR - REVISION:

8		2025-01-31	RE-ISSUED FOR SITE PLAN CONTROL
7		2024-12-10	ISSUED FOR TENDER
6		2024-11-20	RE-ISSUED FOR SITE PLAN CONTROL
5		2024-04-19	RE-ISSUED FOR SITE PLAN CONTROL
4		2022-10-14	RE-ISSUED FOR SITE PLAN CONTROL
3		2022-03-04	RE-ISSUED FOR SITE PLAN CONTROL
2		2021-12-23	RE-ISSUED FOR SITE PLAN CONTROL
1		2021-04-14	ISSUED FOR SITE PLAN CONTROL
IS	RE	DATE:	DESCRIPTION

PROJECT NO.: 20M-01441-00
DATE: JANUARY 2025
ORIGINAL SCALE: AS SHOWN
IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.
25mm
DESIGNED BY: JD
DRAWN BY: JT
CHECKED BY: DY
DISCIPLINE: CIVIL
TITLE: NOTES AND DETAILS
SHEET NUMBER: C0.1
SHEET #: 1 OF 12
ISSUE: RE-ISSUED FOR SITE PLAN CONTROL
REV.#: 0
DATE OF: 2025-01-31

M:\2020\20M-01441-00 - Gladstone-Trinity-Mixed-Use & Residential\143 - Tech & Prof Services\14.02 - Drawings\01 Civil\01 Production\Phase 1\20M01441-00 Notes.dwg Jan 29, 2025 3:15pm BY (CAJ1076572)

18526

EXISTING LEGEND:

- EXISTING EDGE OF PAVEMENT
- EXISTING CURB
- 99.00 MAJOR CONTOURS
- MINOR CONTOURS
- OW EXISTING OVERHEAD WIRE
- W EXISTING WATERMAIN
- ST EXISTING STORM SEWER
- SA EXISTING SANITARY SEWER
- GAS EXISTING GAS
- X EXISTING FENCE
- PROPERTY BOUNDARY
- TBM# SITE TEMPORARY BENCH MARK
- EXISTING PIEZOMETER
- BH # BOREHOLE LOCATION
- UP EXISTING UTILITY POLE
- EXISTING ROAD SIGN
- EXISTING ASPHALT
- EXISTING SIDEWALK
- EXISTING BUILDING
- EXISTING LARGE Ø WATERMAIN
- + 00.00 EXISTING ELEVATION
- EXISTING CATCH BASIN
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING FIRE HYDRANT
- + 64.90 EXISTING ELEVATION

PROPOSED LEGEND:

- PROPERTY LINE
- NEW EDGE OF PAVEMENT
- NEW BARRIER CURB
- W NEW WATERMAIN
- ST NEW STORM SEWER
- SA NEW SANITARY SEWER
- UG NEW UNDERGROUND HYDRO
- NEW BUILDING DECK DRAIN
- NEW STORM MANHOLE
- NEW SANITARY MANHOLE
- NEW WATER VALVE
- FIRE DEPT SIAMESE CONNECTION
- NEW BUILDING
- INTERLOCK PAVEMENT
- PROPOSED SIDEWALK
- ROAD CUT REINSTATEMENT
- NEW BUILDING ENTRANCE
- NEW TREES
- PROPOSED STREET LIGHT

PHASE 1
TOWER A
FFE.=65.00
P1=60.02
P2=57.02
P3=54.02

LOT 10 LOT 9 LOT 8 LOT 7 LOT 6 LOT 5

LOADING AREA
PARKING ENTRANCE
HYDRO VAULT BELOW
SPEAR GRADE
RAMP
GARAGE DOOR
METAL SIDING
LOADING DOCK DOORS
CHAIN LINK FENCE
CONCRETE
CONCRETE WALL
CONCRETE STEPS & LANDING
INTERLOCK STONE SIDEWALK
GRASS & TREES
GRASS
ASPHALT
CURB
EDGE/ASPHALT
EDGE/ASPHALT (NO CURB)
APPROXIMATE CROWN OF ASPHALT
DRAINAGE DIVIDE
EX.PIPE
EX.200MMØ CONC.SAN
EX.1050MMØ CONC.SAN
EX.1050MMØ CONC.STM
SIB (BY OTHERS)
39.40 (P6&MEAS)
1 C1.6
LORETTA AVENUE NORTH

0 5m 10m
SCALE: 1:150

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LANDSCAPE ARCHITECT:
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SEAL:
LICENSED PROFESSIONAL ENGINEER
D. B. YANG
100230568
2025-01-31
PROVINCE OF ONTARIO

NORTH

CLIENT:
CLV GROUP
CLV GROUP DEVELOPMENTS INC.
485 BANK STREET, SUITE 200
OTTAWA, ON, K2P 1Z2

CLIENT REF. #: --

PROJECT:
951 GLADSTONE AVENUE AND
145 LORETTA AVENUE NORTH
MIXED-USE

KEY PLAN:

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ISSUED FOR - REVISION:

8		2025-01-31	RE-ISSUED FOR SITE PLAN CONTROL
7		2024-12-10	ISSUED FOR TENDER
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IS	RE	DATE	DESCRIPTION

PROJECT NO.: 20M-01441-00
DATE: JANUARY 2025
ORIGINAL SCALE: 1:150
DESIGNED BY: JD
DRAWN BY: JT
CHECKED BY: DY
IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.
25mm

DISCIPLINE: CIVIL

TITLE: GENERAL ARRANGEMENT - PHASE 1

SHEET NUMBER: C0.2
SHEET #: 2 OF 12

ISSUE: RE-ISSUED FOR SITE PLAN CONTROL
DATE OF: 2025-01-31
REV #: 0

M:\2020\20M-01441-00 - Gladstone Trinity Mixed-Use & Residential\14.0 - Tech & Prof Services\14.02 - Drawings\01 Civil\01 Production\Phase 1\20M-01441-00 GA - Phase 1.dwg Jan 29, 2025 3:16pm BY: rCAJITPAKTZ

18526

EXISTING LEGEND:

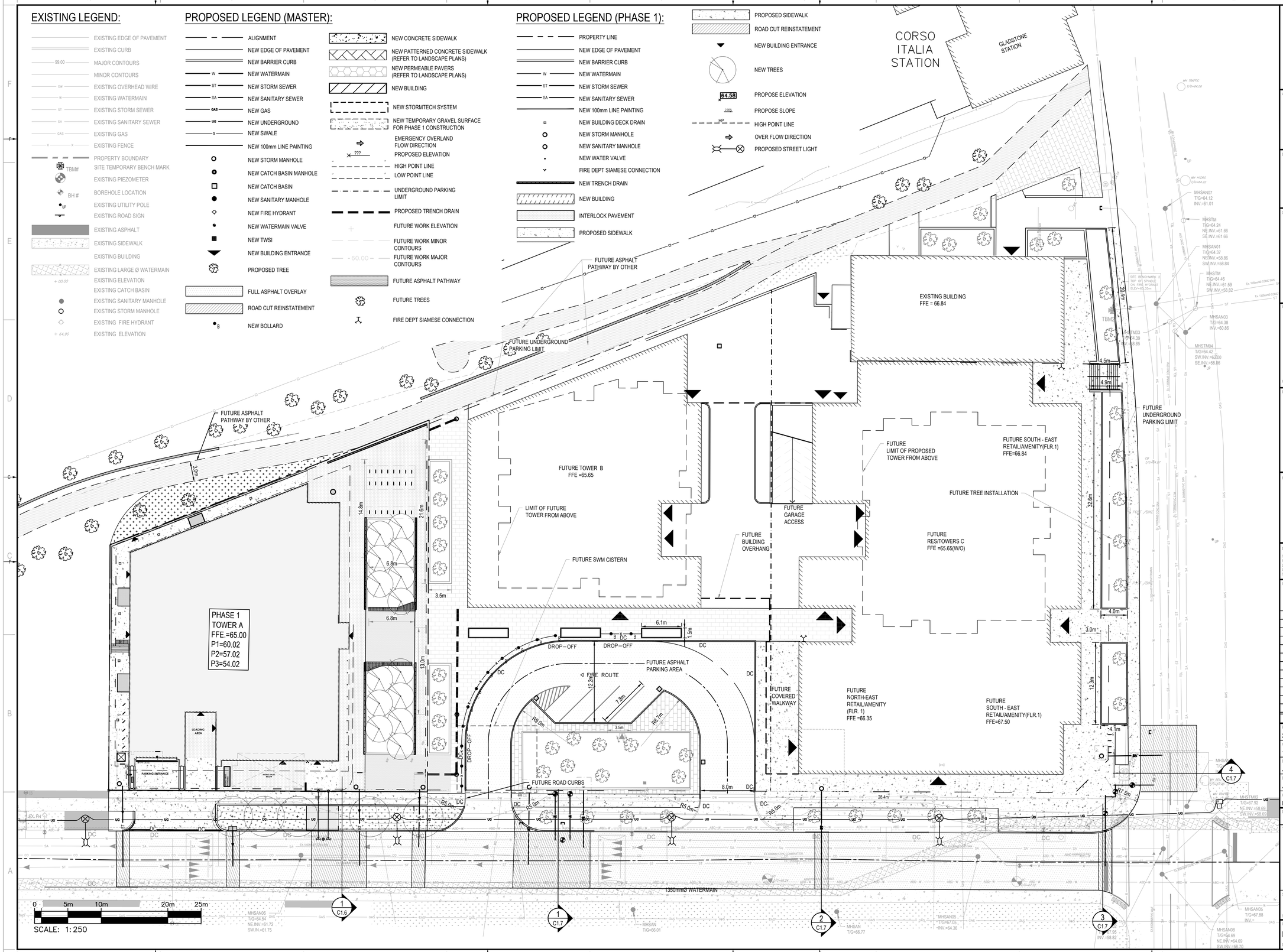
- EXISTING EDGE OF PAVEMENT
- EXISTING CURB
- 99.00 MAJOR CONTOURS
- MINOR CONTOURS
- OW EXISTING OVERHEAD WIRE
- W EXISTING WATERMAIN
- ST EXISTING STORM SEWER
- SA EXISTING SANITARY SEWER
- GAS EXISTING GAS
- X EXISTING FENCE
- PROPERTY BOUNDARY
- TBM# SITE TEMPORARY BENCH MARK
- EXISTING PIEZOMETER
- BH # BOREHOLE LOCATION
- UP EXISTING UTILITY POLE
- EXISTING ROAD SIGN
- EXISTING ASPHALT
- EXISTING SIDEWALK
- EXISTING BUILDING
- EXISTING LARGE Ø WATERMAIN
- + 00.00 EXISTING ELEVATION
- EXISTING CATCH BASIN
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING FIRE HYDRANT
- + 64.90 EXISTING ELEVATION

PROPOSED LEGEND (MASTER):

- ALIGNMENT
- NEW EDGE OF PAVEMENT
- NEW BARRIER CURB
- W NEW WATERMAIN
- ST NEW STORM SEWER
- SA NEW SANITARY SEWER
- GAS NEW GAS
- UG NEW UNDERGROUND
- S NEW SWALE
- NEW 100mm LINE PAINTING
- NEW STORM MANHOLE
- NEW CATCH BASIN MANHOLE
- NEW CATCH BASIN
- NEW SANITARY MANHOLE
- NEW FIRE HYDRANT
- NEW WATERMAIN VALVE
- NEW TWSI
- NEW BUILDING ENTRANCE
- PROPOSED TREE
- FULL ASPHALT OVERLAY
- ROAD CUT REINSTATEMENT
- B NEW BOLLARD
- NEW CONCRETE SIDEWALK
- NEW PATTERNED CONCRETE SIDEWALK (REFER TO LANDSCAPE PLANS)
- NEW PERMEABLE PAVERS (REFER TO LANDSCAPE PLANS)
- NEW BUILDING
- NEW STORMTECH SYSTEM
- NEW TEMPORARY GRAVEL SURFACE FOR PHASE 1 CONSTRUCTION
- EMERGENCY OVERLAND FLOW DIRECTION
- ??? PROPOSED ELEVATION
- HIGH POINT LINE
- LOW POINT LINE
- UNDERGROUND PARKING LIMIT
- PROPOSED TRENCH DRAIN
- FUTURE WORK ELEVATION
- FUTURE WORK MINOR CONTOURS
- - 60.00 - FUTURE WORK MAJOR CONTOURS
- FUTURE ASPHALT PATHWAY
- FUTURE TREES
- FIRE DEPT SIAMESE CONNECTION

PROPOSED LEGEND (PHASE 1):

- PROPERTY LINE
- NEW EDGE OF PAVEMENT
- NEW BARRIER CURB
- W NEW WATERMAIN
- ST NEW STORM SEWER
- SA NEW SANITARY SEWER
- NEW 100mm LINE PAINTING
- NEW BUILDING DECK DRAIN
- NEW STORM MANHOLE
- NEW SANITARY MANHOLE
- NEW WATER VALVE
- FIRE DEPT SIAMESE CONNECTION
- NEW TRENCH DRAIN
- NEW BUILDING
- INTERLOCK PAVEMENT
- PROPOSED SIDEWALK
- PROPOSED SIDEWALK
- ROAD CUT REINSTATEMENT
- NEW BUILDING ENTRANCE
- NEW TREES
- 64.58 PROPOSE ELEVATION
- 2.00% PROPOSE SLOPE
- HP HIGH POINT LINE
- OVER FLOW DIRECTION
- PROPOSED STREET LIGHT



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PHONE: 613-829-2800
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LANDSCAPE ARCHITECT:
CSW
319 MCRAE AVENUE, SUITE 502
OTTAWA, ON, K1Z 0B9

SEAL:
LICENSED PROFESSIONAL ENGINEER
D. B. YANG
100230568
2025-01-31
PROVINCE OF ONTARIO

NORTH

CLIENT:
CLV GROUP
CLV GROUP DEVELOPMENTS INC.
485 BANK STREET, SUITE 200
OTTAWA, ON, K2P 1Z2

CLIENT REF. #: --

PROJECT:
951 GLADSTONE AVENUE AND
145 LORETTA AVENUE NORTH
MIXED-USE

KEY PLAN:

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ISSUED FOR - REVISION:

IS	RE	DATE	DESCRIPTION
8		2025-01-31	RE-ISSUED FOR SITE PLAN CONTROL
7		2024-12-10	ISSUED FOR TENDER
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5		2024-04-19	RE-ISSUED FOR SITE PLAN CONTROL
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2		2021-12-23	RE-ISSUED FOR SITE PLAN CONTROL
1		2021-04-14	ISSUED FOR SITE PLAN CONTROL

PROJECT NO: 20M-01441-00
DATE: JANUARY 2025
ORIGINAL SCALE: 1:250
DESIGNED BY: JD
DRAWN BY: JT
CHECKED BY: DY
IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.
25mm

DISCIPLINE: CIVIL

TITLE: GENERAL ARRANGEMENT - MASTER PLAN

SHEET NUMBER: C0.3
SHEET #: 3 OF 12

ISSUE: RE-ISSUED FOR SITE PLAN CONTROL
REV #: 0
DATE OF: 2025-01-31

M:\2020\20M-01441-00 - Gladstone Trinity Mixed-Use & Residential\14.0 - Tech & Prof Services\14.02 - Drawings\01 Civil\01 Production\Phase 1\20M-01441-00 GA - Master.dwg Jan 29, 2025-3:16pm BY:(JATOTH512)

18526

EXISTING LEGEND:

- EXISTING EDGE OF PAVEMENT
- EXISTING CURB
- 99.00 MAJOR CONTOURS
- MINOR CONTOURS
- OW EXISTING OVERHEAD WIRE
- W EXISTING WATERMAIN
- ST EXISTING STORM SEWER
- SA EXISTING SANITARY SEWER
- GAS EXISTING GAS
- X EXISTING FENCE
- PROPERTY BOUNDARY
- BM# SITE TEMPORARY BENCH MARK
- EXISTING PIEZOMETER
- BH # BOREHOLE LOCATION
- UP EXISTING UTILITY POLE
- EXISTING ROAD SIGN
- EXISTING ASPHALT
- EXISTING SIDEWALK
- EXISTING BUILDING
- EXISTING LARGE Ø WATERMAIN
- + 00.00 EXISTING ELEVATION
- EXISTING CATCH BASIN
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING FIRE HYDRANT
- + 64.90 EXISTING ELEVATION

REMOVAL LEGEND:

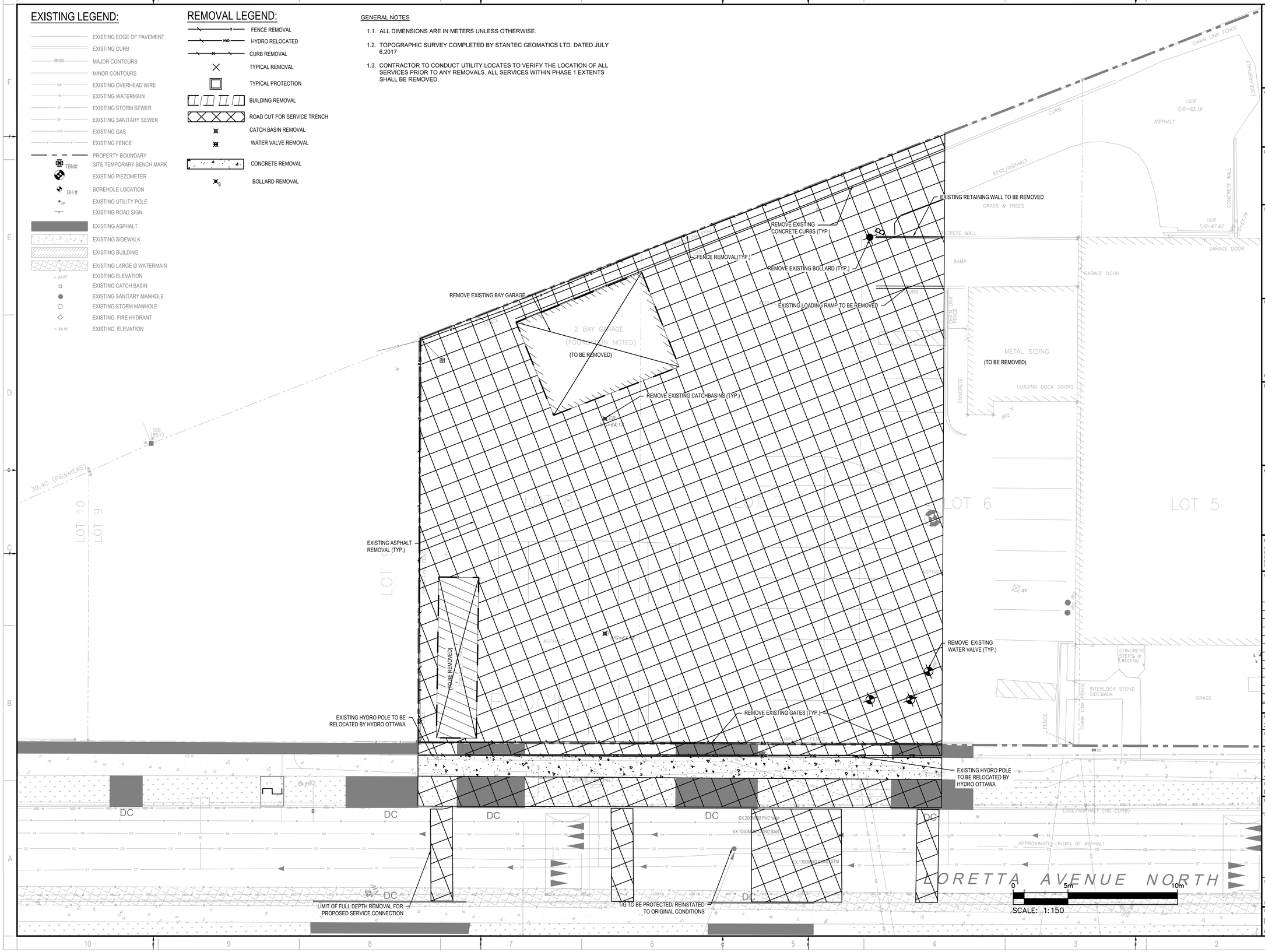
- FENCE REMOVAL
- HYD HYDRO RELOCATED
- CURB REMOVAL
- TYPICAL REMOVAL
- TYPICAL PROTECTION
- BUILDING REMOVAL
- ROAD CUT FOR SERVICE TRENCH
- CATCH BASIN REMOVAL
- WATER VALVE REMOVAL
- CONCRETE REMOVAL
- B BOLLARD REMOVAL

GENERAL NOTES

1.1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE.

1.2. TOPOGRAPHIC SURVEY COMPLETED BY STANTEC GEOMATICS LTD. DATED JULY 6,2017

1.3. CONTRACTOR TO CONDUCT UTILITY LOCATES TO VERIFY THE LOCATION OF ALL SERVICES PRIOR TO ANY REMOVALS. ALL SERVICES WITHIN PHASE 1 EXTENTS SHALL BE REMOVED.



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KEY PLAN:



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PROJECT NO.: 20M-01441-00
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DESIGNED BY: JD
DRAWN BY: JT
CHECKED BY: DY
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25mm

DISCIPLINE: CIVIL

TITLE: REMOVALS PLAN - PHASE 1

SHEET NUMBER: R1.1
SHEET #: 4 OF 12

ISSUE: RE-ISSUED FOR SITE PLAN CONTROL
DATE OF: 2025-01-31
REV #: 0

M:\2020\20M-01441-00 - Gladstone-Trinity-Mixed Use & Residential\143 - Tech & Prof Services\14.02 - Drawings\01 Civil\01 Production\Phase 1\20M-01441-00 Removals Plan - Phase 1.dwg, Jan 29, 2025-3:17pm BY (CA17016512)

18526

EXISTING LEGEND:

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- EXISTING CURB
- 99.00 MAJOR CONTOURS
- MINOR CONTOURS
- OW EXISTING OVERHEAD WIRE
- W EXISTING WATERMAIN
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- SA EXISTING SANITARY SEWER
- GAS EXISTING GAS
- X EXISTING FENCE
- PROPERTY BOUNDARY
- TBM# SITE TEMPORARY BENCH MARK
- EXISTING PIEZOMETER
- BH # BOREHOLE LOCATION
- UP EXISTING UTILITY POLE
- EXISTING ROAD SIGN
- EXISTING ASPHALT
- EXISTING SIDEWALK
- EXISTING BUILDING
- EXISTING LARGE Ø WATERMAIN
- + 00.00 EXISTING ELEVATION
- EXISTING CATCH BASIN
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING FIRE HYDRANT
- + 64.90 EXISTING ELEVATION

REMOVAL LEGEND:

- W WATER SERVICE REMOVAL
- ABD-W ABANDONED WATER SERVICE
- ST STORM SEWER REMOVAL
- SA SANITARY SEWER REMOVAL
- GAS GAS REMOVAL
- UG UNDERGROUND UTILITIES REMOVAL
- C CABLE REMOVAL
- CURB REMOVAL
- TYPICAL REMOVAL
- TYPICAL PROTECTION
- BUILDING REMOVAL
- ROAD CUT FOR SERVICE TRENCH
- PARTIAL DEPTH ASPHALT REMOVAL
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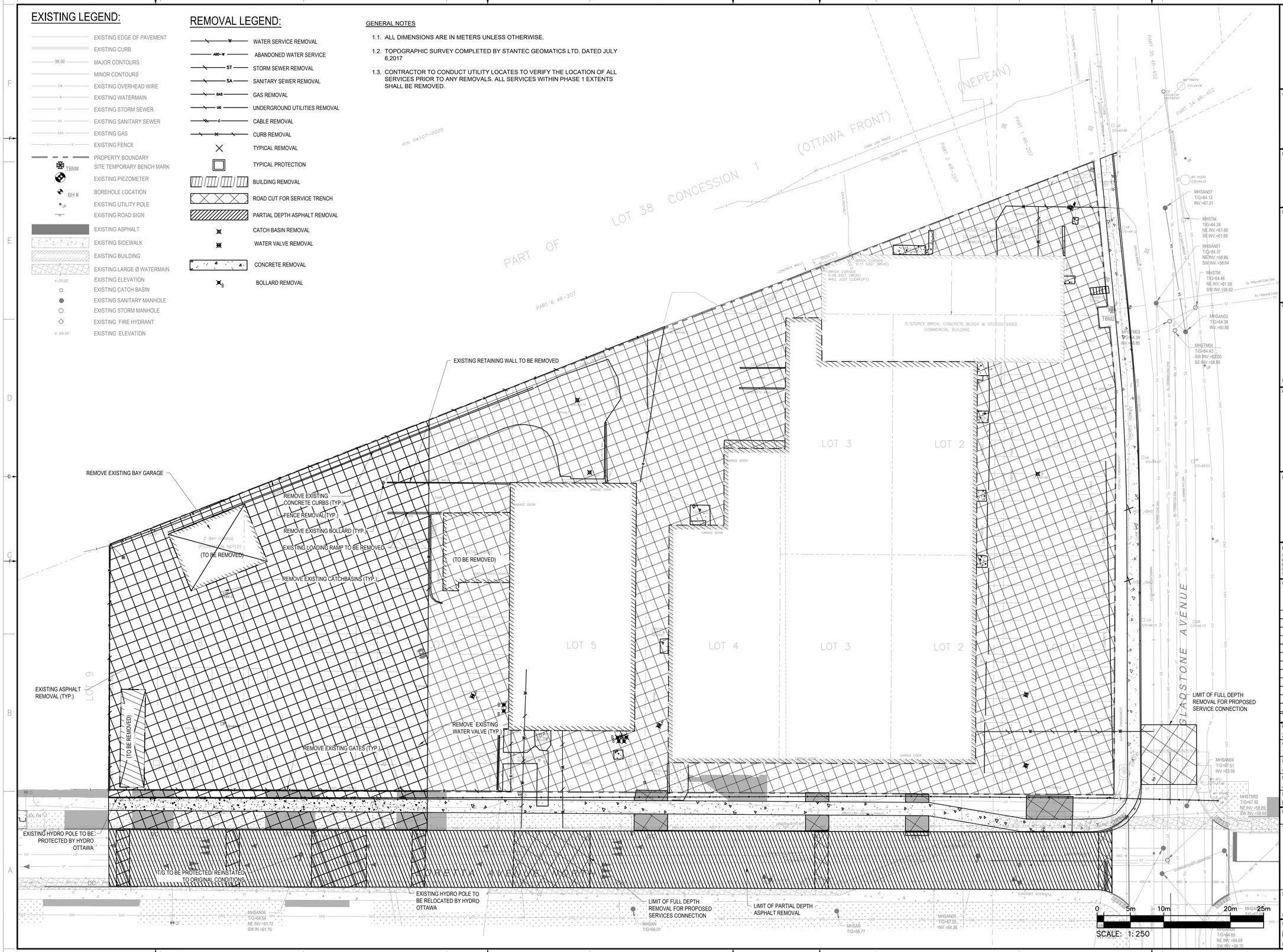

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SEAL:

LICENSED PROFESSIONAL ENGINEER
D. B. YANG
100230568
2025-01-31
PROVINCE OF ONTARIO

NORTH

CLIENT:

CLV GROUP
CLV GROUP DEVELOPMENTS INC.
485 BANK STREET, SUITE 200
OTTAWA, ON, K2P 1Z2

CLIENT REF. #: --

PROJECT:

951 GLADSTONE AVENUE AND
145 LORETTA AVENUE NORTH
MIXED-USE

KEY PLAN:



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PROJECT NO: 20M-01441-00
DATE: JANUARY 2025
ORGINAL SCALE: 1:250
DESIGNED BY: JD
DRAWN BY: JT
CHECKED BY: DY
IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.
25mm

DISCIPLINE: CIVIL

TITLE: REMOVALS PLAN - MASTER PLAN

SHEET NUMBER: R1.1
SHEET #: 5 OF 12

ISSUE: RE-ISSUED FOR SITE PLAN CONTROL
REV #: 0
DATE OF: 2025-01-31

M:\2020\20M-01441-00 - Gladstone Trinity Mixed Use & Residential\14.0 - Tech & Prof Services\14.02 - Drawings\01 Civil\01 Production\Phase 1\20M-01441-00 Removals Plan - Master.dwg, Jan 29, 2025 3:17pm BY (CALITOTE12)

18526

EXISTING LEGEND:

- EXISTING EDGE OF PAVEMENT
- EXISTING CURB
- 99.00 MAJOR CONTOURS
- MINOR CONTOURS
- OH EXISTING OVERHEAD WIRE
- W EXISTING WATERMAIN
- ST EXISTING STORM SEWER
- SA EXISTING SANITARY SEWER
- GAS EXISTING GAS
- X EXISTING FENCE
- PROPERTY BOUNDARY
- TBM# SITE TEMPORARY BENCH MARK
- EXISTING PIEZOMETER
- BH # BOREHOLE LOCATION
- EXISTING UTILITY POLE
- EXISTING ROAD SIGN
- EXISTING ASPHALT
- EXISTING SIDEWALK
- EXISTING BUILDING
- EXISTING LARGE Ø WATERMAIN
- + 00.00 EXISTING ELEVATION
- EXISTING CATCH BASIN
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING FIRE HYDRANT
- + 64.90 EXISTING ELEVATION

PROPOSED LEGEND:

- PROPERTY LINE
- NEW EDGE OF PAVEMENT
- NEW BARRIER CURB
- W NEW WATERMAIN
- ST NEW STORM SEWER
- SA NEW SANITARY SEWER
- NEW 100mm LINE PAINTING
- NEW BUILDING DECK DRAIN
- NEW STORM MANHOLE
- NEW SANITARY MANHOLE
- NEW WATER VALVE
- FIRE DEPT SIAMESE CONNECTION
- NEW TRENCH DRAIN
- NEW BUILDING
- INTERLOCK PAVEMENT
- PROPOSED SIDEWALK
- ROAD CUT REINSTATEMENT
- NEW BUILDING ENTRANCE
- NEW TREES
- 64.58 PROPOSE ELEVATION
- 2.00% PROPOSE SLOPE
- HP HIGH POINT LINE
- OVER FLOW DIRECTION
- PROPOSED STREET LIGHT

GENERAL NOTES

1.1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE.

1.2. TOPOGRAPHIC SURVEY COMPLETED BY STANTEC GEOMATICS LTD. DATED JULY 6,2017

1.3. ELEVATIONS SHOWN HEREON ARE GEODETIC(CGVD-1928:1978) AND ARE DERIVED FROM CITY OF OTTAWA VERTICAL CONTROL MONUMENTS No.'s 2011-0106(ELEV=62.968m) AND 2011-0107(ELEV=55.863m).

1.4. TRENCH DRAINS SHALL BE EQUIPPED WITH SUITABLE GRATES TO ACHIEVE MINIMUM 100% CAPTURE OF 10-YEAR RUNOFF FLOWS. TRENCH DRAIN GEOMETRY AND SLOPE SHALL SET TO CONVEY 100-YEAR RUNOFF FLOWS.

PROPOSED CURB/ RETAINING WALL C/W GUARD RAIL AT PROPERTY LINE . BOTTOM OF WALL WILL TIE INTO THE EXISTING GRADE FOR INTERIM CONDITION CONTRACTOR TO CONFIRM THE EXISTING ELEVATION AT PROPERTY LINE PRIOR TO CONSTRUCTION. TOP OF WALL SHALL BE 65.00m (REFER TO ARCHITECTURAL AND LANDSCAPING DWG FOR DETAILS)

FUTURE ASPHALT PATHWAY BY CSW

TERMINATION OF RETAINING WALL

TIE INTO FUTURE ASPHALT PATHWAY ELEVATION

PHASE 1
TOWER A
FFE.=65.00
P1=60.02
P2=57.02
P3=54.02

LOADING AREA

PARKING ENTRANCE

HYDRO VAULT BELOW

ROAD CUT TO BE REINSTATED AS PER CITY STD R10

CURB RETURN ENTRANCE AS PER CITY STD SC7.1

TIE INTO EXISTING GRADES AT THE EDGE OF ASPHALT

ROAD CUT TO BE REINSTATED AS PER CITY STD R10

LORETTA AVENUE NORTH

LOT 10 LOT 9 LOT 8 LOT 7 LOT 6 LOT 5

SCALE: 1:150

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SEAL:
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D. B. YANG
100230568
2025-01-31
PROVINCE OF ONTARIO

CLIENT:
CLV GROUP DEVELOPMENTS INC.
485 BANK STREET, SUITE 200
OTTAWA, ON, K2P 1Z2

CLIENT REF. #: --

PROJECT:
951 GLADSTONE AVENUE AND
145 LORETTA AVENUE NORTH
MIXED-USE

KEY PLAN:

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PROJECT NO: 20M-01441-00
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DESIGNED BY: JD
DRAWN BY: JT
CHECKED BY: DY
IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE. 25mm

DISCIPLINE: CIVIL

TITLE: GRADING PLAN - PHASE 1

SHEET NUMBER: C1.1
SHEET #: 6 OF 12

ISSUE: RE-ISSUED FOR SITE PLAN CONTROL
DATE OF: 2025-01-31
REV #: 0

EXISTING LEGEND:

- EXISTING EDGE OF PAVEMENT
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- OW EXISTING OVERHEAD WIRE
- W EXISTING WATERMAIN
- ST EXISTING STORM SEWER
- EXISTING SUB DRAIN
- SA EXISTING SANITARY SEWER
- GAS EXISTING GAS
- X EXISTING FENCE
- UG EXISTING UNDERGROUND HYDRO
- TEL EXISTING TELE LINE
- B EXISTING BELL CABLE
- PROPERTY BOUNDARY
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- BH # BOREHOLE LOCATION
- EXISTING UTILITY POLE
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- EXISTING SIDEWALK
- EXISTING BUILDING
- + 00.00 EXISTING ELEVATION
- EXISTING CATCH BASIN
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING FIRE HYDRANT
- + 64.90 EXISTING ELEVATION

PROPOSED LEGEND (MASTER):

- ALIGNMENT
- NEW EDGE OF PAVEMENT
- NEW BARRIER CURB
- W NEW WATERMAIN
- ST NEW STORM SEWER
- SA NEW SANITARY SEWER
- S NEW SWALE
- NEW 100mm LINE PAINTING
- NEW STORM MANHOLE
- NEW CATCH BASIN MANHOLE
- NEW CATCH BASIN
- NEW SANITARY MANHOLE
- NEW FIRE HYDRANT
- NEW WATERMAIN VALVE
- NEW TWSI
- NEW BUILDING ENTRANCE
- PROPOSED TREE
- FULL ASPHALT OVERLAY
- FULL DEPTH ROAD CUT REINSTATEMENT
- 8 NEW BOLLARD
- NEW CONCRETE SIDEWALK
- NEW PATTERNED CONCRETE SIDEWALK (REFER TO LANDSCAPE PLANS)
- NEW PERMEABLE PAVERS (REFER TO LANDSCAPE PLANS)
- NEW BUILDING
- NEW STORMTECH SYSTEM
- EMERGENCY OVERLAND FLOW DIRECTION
- 64.60 FUTURE ELEVATION
- HP HIGH POINT LINE
- LP LOW POINT LINE
- UNDERGROUND PARKING LIMIT
- PROPOSED TRENCH DRAIN
- FUTURE WORK MINOR CONTOURS
- 60.00 FUTURE WORK MAJOR CONTOURS
- FUTURE ASPHALT PATHWAY
- FUTURE TREES
- FIRE DEPT SIAMESE CONNECTION

PROPOSED LEGEND (PHASE 1):

- PROPERTY LINE
- NEW EDGE OF PAVEMENT
- NEW BARRIER CURB
- W NEW WATERMAIN
- ST NEW STORM SEWER
- SA NEW SANITARY SEWER
- NEW 100mm LINE PAINTING
- NEW BUILDING DECK DRAIN
- NEW STORM MANHOLE
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- NEW WATER VALVE
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- 64.58 PROPOSE ELEVATION
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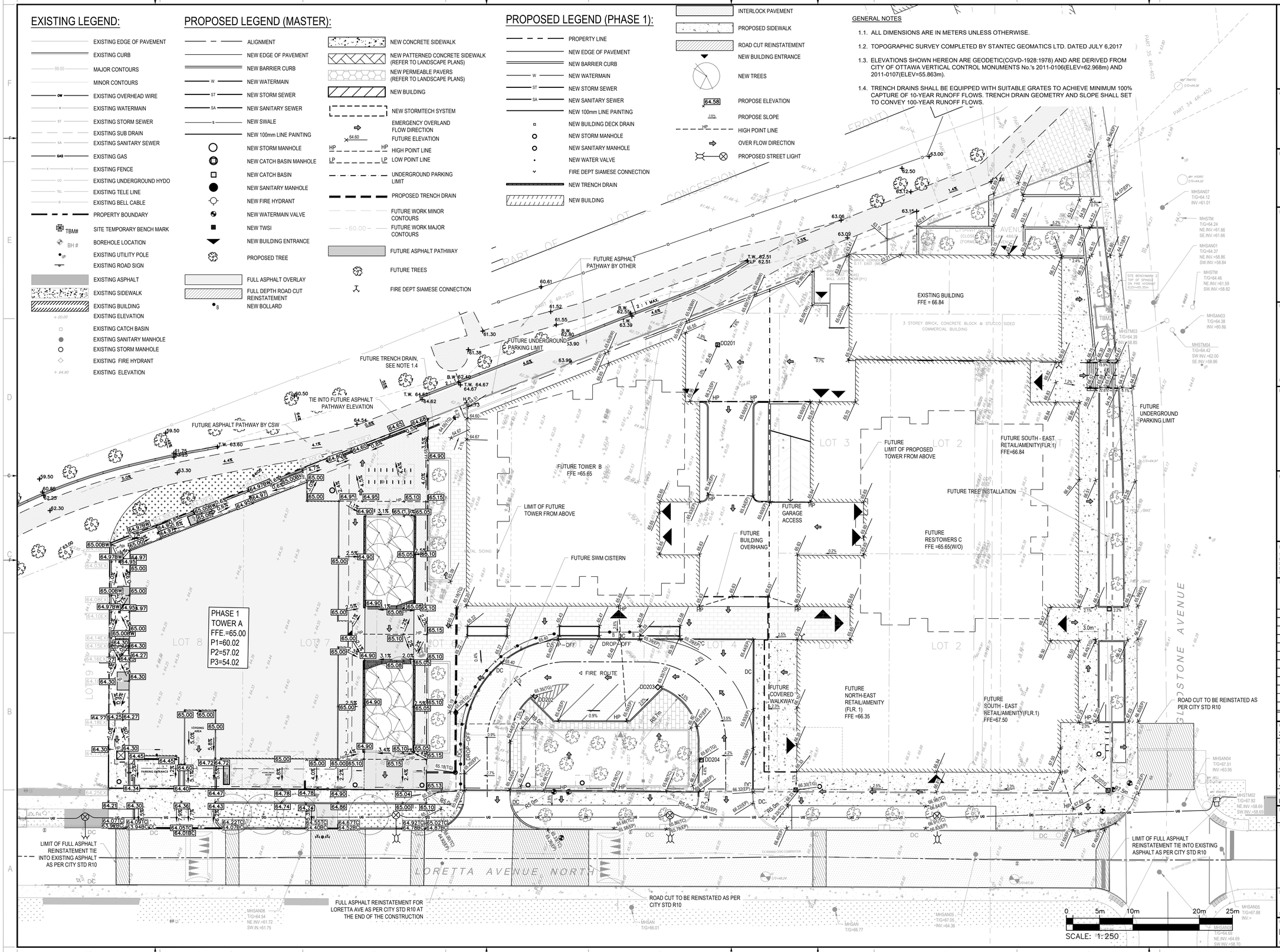

SCALE: 1:250

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TITLE: GRADING PLAN - MASTER

SHEET NUMBER: C1.2
SHEET #: 7 OF 12

ISSUE: RE-ISSUED FOR SITE PLAN CONTROL
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M:\2020\20M-01441-00 - Gladstone Trinity Mixed Use & Residential\14.0 - Track & Prof Services\14.02 - Drawings\01. Civil\01. Production\Phase 1\20M-01441-00 Grading Plan - Master.dwg, Jan 29, 2025 4:19pm BY (CA\TD1452)

DO 17-21-0053

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- ST — EXISTING STORM SEWER
- SA — EXISTING SANITARY SEWER
- GAS — EXISTING GAS
- X — X — EXISTING FENCE
- PROPERTY BOUNDARY
- TBM# — SITE TEMPORARY BENCH MARK
- EXISTING PIEZOMETER
- BH # — BOREHOLE LOCATION
- EXISTING UTILITY POLE
- EXISTING ROAD SIGN
- EXISTING ASPHALT
- EXISTING SIDEWALK
- EXISTING BUILDING
- EXISTING LARGE Ø WATERMAIN
- + 00.00 — EXISTING ELEVATION
- EXISTING CATCH BASIN
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING FIRE HYDRANT
- + 64.90 — EXISTING ELEVATION

PROPOSED LEGEND:

- PROPERTY LINE
- NEW EDGE OF PAVEMENT
- NEW BARRIER CURB
- W — NEW WATERMAIN
- ST — NEW STORM SEWER
- SA — NEW SANITARY SEWER
- NEW 100mm LINE PAINTING
- NEW BUILDING DECK DRAIN
- NEW STORM MANHOLE
- NEW SANITARY MANHOLE
- NEW WATER VALVE
- FIRE DEPT SIAMESE CONNECTION
- NEW BUILDING
- INTERLOCK PAVEMENT
- PROPOSED SIDEWALK
- NEW BUILDING ENTRANCE
- NEW TREES
- PROPOSED STREET LIGHT

PIPE		Obvert	Invert			Obvert	Invert	
1	200mmØ PVC CB LEAD	62.674	62.474	0.644	Clearance Over	61.830	61.627	EX. 203mmØ PVC W/M
2	200mmØ PVC CB LEAD	62.663	62.463	2.795	Clearance Over	59.668	58.485	EX. 1050mmØ CONC SAN
3	150mmØ PVC STM	60.405	60.255	1.622	Clearance Under	62.230	62.027	EX. 203mmØ PVC W/M
4	150mmØ PVC STM	60.394	60.244	0.334	Clearance Over	59.910	58.530	EX. 1050mmØ CONC SAN
5	150mmØ PVC STM	60.366	60.216	1.581	Clearance Under	62.317	61.947	EX.300mm CONC COMBINATION
6	300mmØ PVC SAN	60.245	59.945	2.032	Clearance Under	62.480	62.277	EX. 203mmØ PVC W/M
7	250mmØ PVC STM	60.521	60.271	0.956	Clearance Under	61.680	61.477	EX. 203mmØ PVC W/M
8	250mmØ PVC STM	60.510	60.260	0.632	Clearance Over	59.628	58.445	EX. 1050mmØ CONC SAN
9	250mmØ PVC STM	60.496	60.246	0.527	Clearance Under	61.393	61.023	EX.300mm CONC COMBINATION
10	200mmØ PVC CB LEAD	62.650	62.450	0.628	Clearance Over	61.822	61.452	EX.300mm CONC COMBINATION

*Note: Provide Concrete Encased for corssing clearance less than 0.3m

WATERMAIN SCHEDULE

STATION	DESCRIPTION	FINISHED GRADE	TOP OF WATERM	COVER
	200mm WATERMAIN SERVICE FROM BUILDING TO LORRETTA			
0+000	Connect to proposed building with VB	64.56	62.160	2.40
0+007.23	Connect to EX.203mm W/M with TEE connection	64.53	62.130	2.40

ORIOISED TRENCH DRAIN (REFER TO MECH DWG FOR DETAILS)

PROPOSED TRENCH DRAIN (REFER TO MECH DWG FOR DETAILS)

PROPOSED TRENCH DRAIN (REFER TO MECH DWG FOR DETAILS)

MONITORING STMH02 C/W STMH GRATE AS PER CITY STD S24.1 ATTACHED TO THE BUILDING FOUNDATION
T/G=65.02
INV.=60.33

CONNECT TO BUILDING FOUNDATION SERVICE AT INV.=60.35 C/W BACKWATER PREVENTOR (REFER TO MECH DWG FOR CONTINUATION)

PROPOSED ART/SCULPTURE

CONNECT TO BUILDING SANITARY SERVICE AT INV.=60.04 C/W BACKWATER PREVENTOR (REFER TO MECH DWG FOR CONTINUATION)

MONITORING SAMH03 C/W SAN MH GRATE AS PER CITY STD S24, ATTACHED TO THE BUILDING FOUNDATION
T/G=65.14
INV.=60.02

HYDRO POLE TO BE RELOCATED BY HYDRO OTTAWA

NEW 8.6m - 300mmØ PVC SAN @ 1.00

ROAD CUT REINSTATEMENT AS PER CITY STD R10

CONNECT TO EX.1050mm CONC SAN AT INV.=59.28 (CONTRACTOR TO CONFIRM THE EX.SAN INVERT PRIOR TO CONSTRUCTION)

NEW 11.4m - 150mmØ PVC STM @ 1.00%

CONNECT TO EX.1350mmØ CONC STM AT INV.=59.65 (CONTRACTOR TO CONFIRM THE EX.STM INVERT PRIOR TO CONSTRUCTION)

CONNECT TO BUILDING STORM SERVICE AT INV.= +/- 64.10 C/W BACKFLOW PREVENTOR (REFER TO MECH DWG FOR CONTINUATION)

SWM TANK 1
VOL. REQUIRED=78m³
VOL.PROVIDED=82m³
(SEE DETAIL DWG 5/C1.6)

SWM TANK ACCESS LID
T/G=64.30

250mm Dia. OPENING AT INV.=60.35

MONITORING STMH01 C/W CBMH GRATE AS PER CITY STD S28.1 ATTACHED TO THE SWM TANK
T/G=64.29
INV.=60.33 C/W 100mmØ ORFFICE PLATE TYPE ICD

NEW 12.1m - 250mmØ PVC STM @ 1.00%

CONNECT TO EX. 1350mm CONC STM AT INV.=59.47 (CONTRACTOR TO CONFIRM THE EX.STM INVERT PRIOR TO CONSTRUCTION)

CONNECT TO BUILDING WATER SERVICE (SEE MECHANICAL DWG FOR CONTINUATON) TOP OF W/M=62.16

NEW 200mm VB

RELOCATE EX. DOUBLE CICB

NEW 5.7m - 200mmØ CB LEAD @ 1.00

INSTALL NEW 200mm VB BY CITY FORCE

ROAD CUT REINSTATEMENT AS PER CITY STD R10

CONNECT TO EXISTING 200mmØ W/M WITH 200x200mm TEE CONNECTION AS PER CITY STD W25.1 BY CITY FORCE (EXCAVATION, BACKFILL, CHLORINATION, AND REINSTATEMENT BY CONTRACTOR)

ROAD CUT REINSTATEMENT AS PER CITY STD R10

1 / C1.6

PHASE 1
TOWER A
FFE.=65.00
P1=60.02
P2=57.02
P3=54.02

2 BAY GARAGE
(FOUNDATION NOTED)

LOADING AREA

PARKING ENTRANCE

ASPHALT

METAL SIDING

LOADING DOCK DOORS

RAMP

GARAGE DOOR

CONCRETE WALL

CHAIN LINK FENCE

LOT 10 LOT 9 LOT 8 LOT 7 LOT 6 LOT 5

LORETTA AVE

SCALE: 1:150

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PHONE: 613-829-2800
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ARCHITECT: linebox STUDIO
116 LISGAR ST, UNIT 110
OTTAWA, ON, K2P 0C2

LANDSCAPE ARCHITECT: CSW
319 MCRAE AVENUE, SUITE 502
OTTAWA, ON, K1Z 0B9

SEAL: LICENSED PROFESSIONAL ENGINEER — D. B. YANG — 100230568 — 2025-01-31 — PROVINCE OF ONTARIO

NORTH

CLIENT: CLV GROUP
CLV GROUP DEVELOPMENTS INC.
485 BANK STREET, SUITE 200
OTTAWA, ON, K2P 1Z2

CLIENT REF. #: --

PROJECT:
951 GLADSTONE AVENUE AND
145 LORETTA AVENUE NORTH
MIXED-USE

KEY PLAN:

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6		2024-11-20	RE-ISSUED FOR SITE PLAN CONTROL
5		2024-04-19	RE-ISSUED FOR SITE PLAN CONTROL
4		2022-10-14	RE-ISSUED FOR SITE PLAN CONTROL
3		2022-03-04	RE-ISSUED FOR SITE PLAN CONTROL
2		2021-12-23	RE-ISSUED FOR SITE PLAN CONTROL
1		2021-04-14	ISSUED FOR SITE PLAN CONTROL

PROJECT NO.: 20M-01441-00
DATE: JANUARY 2025
ORIGINAL SCALE: 1:150
IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.
25mm
DESIGNED BY: JD
DRAWN BY: JT
CHECKED BY: DY

DISCIPLINE: CIVIL

TITLE: SERVICING PLAN - PHASE 1

SHEET NUMBER: C1.3
SHEET #: 8 OF 12

ISSUE: RE-ISSUED FOR SITE PLAN CONTROL
DATE OF: 2025-01-31
REV.#: 0

M:\2020\20M-01441-00 - Gladstone-Trinity-Mixed Use & Residential\14.0 - Tech & Prof Services\14.02 - Drawings\01_Civil\01 Production\Phase 1\20M-01441-00 Servicing Plan - Phase 1.dwg Jan 29, 2025 2:29pm BY (CA1107452)

18526

PIPE DATA Proposed Storm								
FROM	TO	INLET ELEV. (m)	OUTLET ELEV. (m)	SIZE	LENGTH	SLOPE	CITY STANDARD	MIN. COVER (m)
Tank 2 @ PL	ST2 Elbow	61.735	61.648	250 mm	8.7 m	1.00%	DR 35 PVC Pipe SI	3.28
ST2 Elbow	ST2	61.648	59.597	250 mm	2.1 m	96.29%	DR 35 PVC Pipe SI	0.00
	Structure - (78)	60.330	60.221	150 mm	10.9 m	1.00%	DR 35 PVC Pipe SI	-4.44
Tank 1 @ PL	ST1 Elbow	60.329	60.231	250 mm	9.8 m	1.00%	DR 35 PVC Pipe SI	5.81
ST1 Elbow	ST1	60.231	59.685	250 mm	0.6 m	97.50%	DR 35 PVC Pipe SI	5.92
ST3 Elbow	ST3	60.055	59.549	250 mm	0.5 m	99.19%	DR 35 PVC Pipe SI	0.00

PIPE DATA Proposed Sanitary								
FROM	TO	INLET ELEV. (m)	OUTLET ELEV. (m)	SIZE	LENGTH	SLOPE	CITY STANDARD	MIN. COVER (m)
	SA3	60.040	59.957	300 mm	8.3 m	1.00%	DR 35 PVC Pipe SI	0.63
Tower 1	SA1	59.721	59.577	300 mm	7.2 m	2.00%	DR 35 PVC Pipe SI	7.13
Tower 2	SA2	59.524	59.360	300 mm	8.2 m	2.00%	DR 35 PVC Pipe SI	5.73

PIPE DATA Proposed WM								
FROM	TO	INLET ELEV. (m)	OUTLET ELEV. (m)	SIZE	LENGTH	SLOPE	CITY STANDARD	MIN. COVER (m)
Tower 1LOR	W1Lor	65.025	64.599	150 mm	10.6 m	4.00%	PVC Pipe SI	2.08
Tower 1GLAD	W1Glad	64.641	64.581	150 mm	6.0 m	1.00%	PVC Pipe SI	2.41
Tower 2S	W2S	63.101	63.030	150 mm	7.1 m	1.00%	PVC Pipe SI	2.12
Tower 2N	W2N	63.031	62.960	150 mm	7.1 m	1.00%	PVC Pipe SI	2.16
		62.220	61.900	200 mm	7.2 m	4.42%	PVC Pipe SI	1.22
		61.960	61.930	200 mm	7.2 m	0.41%	PVC Pipe SI	1.49

PIPE CROSSING TABLE								
CROSSING		Obvert	Invert			Obvert	Invert	
1	300mmØ PVC SAN	59.598	59.298	2.392	Clearance Under	62.190	61.990	EX. 200mmØ PVC W/M
2	250mmØ PVC STM	60.339	60.089	3.721	Clearance Under	64.260	64.060	EX. 200mmØ PVC W/M
3	250mmØ PVC STM	60.330	60.080	0.500	Clearance Over	59.580	58.530	EX. 1050mmØ CONC SAN
4	250mmØ PVC STM	60.315	60.065	1.680	Clearance Under	62.295	61.995	EX. 300mmØ PVC COMBINED
5	250mmØ PVC STM	61.914	61.664	0.796	Clearance Under	62.910	62.710	EX. 200mmØ PVC W/M
6	250mmØ PVC STM	61.903	61.653	2.013	Clearance Over	59.640	58.590	EX. 1050mmØ CONC SAN
7	250mmØ PVC STM	61.890	61.640	0.676	Clearance Under	62.866	62.566	EX. 300mmØ PVC COMBINED
8	300mmØ PVC SAN	59.682	59.382	3.248	Clearance Under	63.130	62.930	EX. 200mmØ PVC W/M
9	250mmØ PVC STM	60.509	60.259	3.271	Clearance Under	63.980	63.780	EX. 200mmØ PVC W/M
10	250mmØ PVC STM	60.500	60.250	0.500	Clearance Over	59.750	58.700	EX. 1050mmØ CONC SAN
11	250mmØ PVC STM	60.486	60.236	3.132	Clearance Under	63.918	63.618	EX. 300mmØ PVC COMBINED
12	150mmØ PVC W/M	64.770	64.620	4.770	Clearance Over	59.850	57.800	EX. 1050mmØ CONC SAN
13	150mmØ PVC W/M	64.760	64.610	4.590	Clearance Over	60.020	58.970	EX. 1350mmØ CONC STM
14	300mmØ PVC SAN	59.902	59.602	4.618	Clearance Under	64.720	64.520	EX. 200mmØ PVC W/M

*Note: Provide Concrete Encased for crossing clearance less than 0.3m

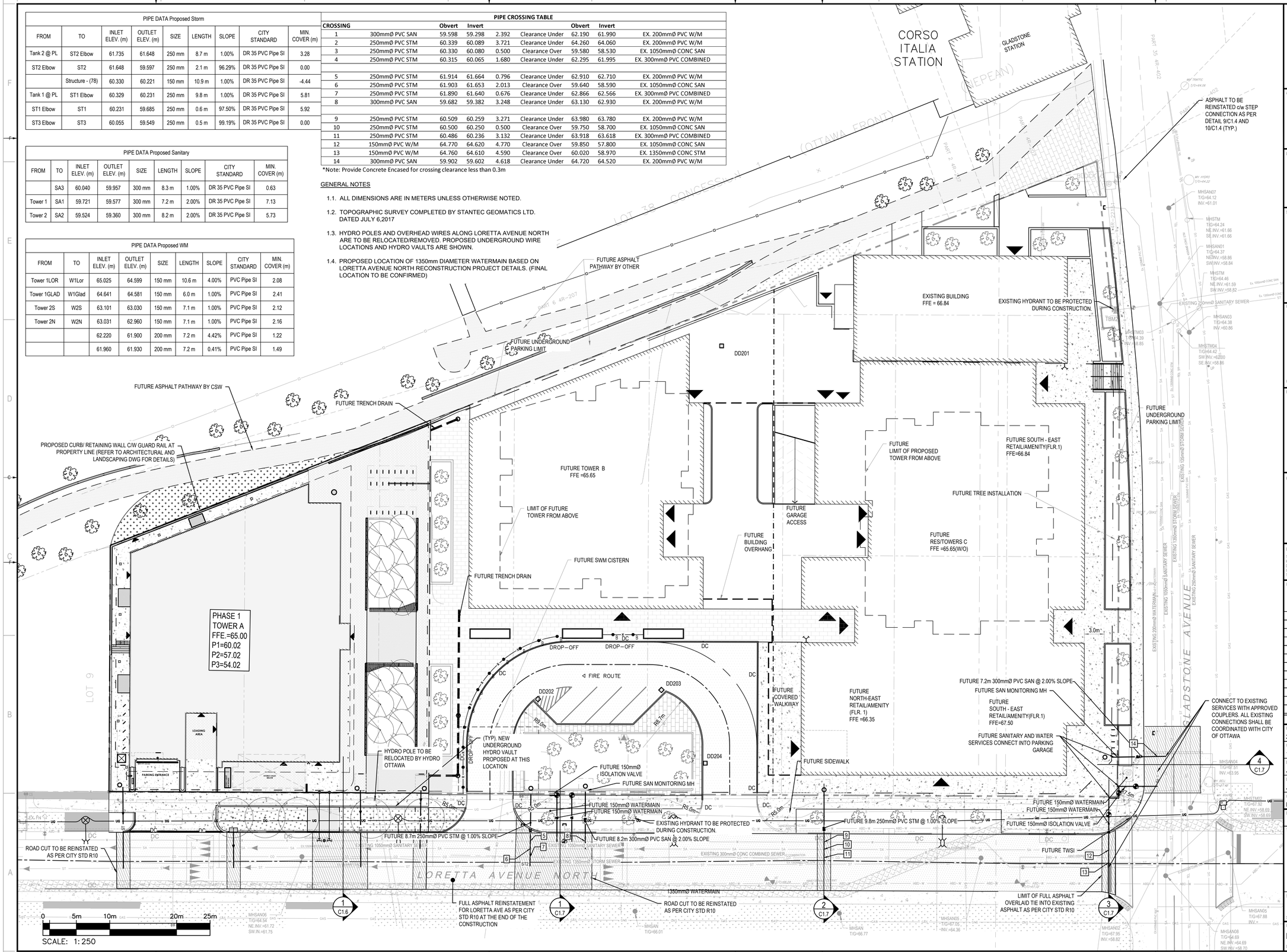
GENERAL NOTES

1.1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.

1.2. TOPOGRAPHIC SURVEY COMPLETED BY STANTEC GEOMATICS LTD. DATED JULY 6,2017

1.3. HYDRO POLES AND OVERHEAD WIRES ALONG LORETTA AVENUE NORTH ARE TO BE RELOCATED/REMOVED. PROPOSED UNDERGROUND WIRE LOCATIONS AND HYDRO VAULTS ARE SHOWN.

1.4. PROPOSED LOCATION OF 1350mm DIAMETER WATERMAIN BASED ON LORETTA AVENUE NORTH RECONSTRUCTION PROJECT DETAILS. (FINAL LOCATION TO BE CONFIRMED)



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PHONE: 613-829-2800
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LANDSCAPE ARCHITECT:
CSW
319 MCRAE AVENUE, SUITE 502
OTTAWA, ON, K1Z 0B9

SEAL:
LICENSED PROFESSIONAL ENGINEER
D. B. YANG
100230568
2025-01-31
PROVINCE OF ONTARIO

NORTH

CLIENT:
CLV GROUP
CLV GROUP DEVELOPMENTS INC.
485 BANK STREET, SUITE 200
OTTAWA, ON, K2P 1Z2

CLIENT REF. #: --

PROJECT:
951 GLADSTONE AVENUE AND
145 LORETTA AVENUE NORTH
MIXED-USE

KEY PLAN:

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1		2021-04-14	ISSUED FOR SITE PLAN CONTROL

PROJECT NO: 20M-01441-00
DATE: JANUARY 2025
ORIGINAL SCALE: 1:250
DESIGNED BY: JD
DRAWN BY: JT
CHECKED BY: DY
IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.
25mm

DISCIPLINE: CIVIL

TITLE: SERVICING PLAN - MASTER

SHEET NUMBER: C1.4
SHEET #: 9 OF 12

ISSUE: RE-ISSUED FOR SITE PLAN CONTROL
DATE OF: 2025-01-31
REV #: 0

M:\2020\20M-01441-00 - Gladstone-Trinity Mixed Use & Residential\14.0 - Tech & Prof Services\14.02 - Drawings\01 CivilSt - Production\Phase 1\20M-01441-00 Servicing Plan - Master.dwg Jan 29, 2025-3:21pm BY (CA1709157)
DOT-12-21-0053
18526

EXISTING LEGEND:

- EXISTING EDGE OF PAVEMENT
- EXISTING CURB
- 99.00 MAJOR CONTOURS
- MINOR CONTOURS
- OW EXISTING OVERHEAD WIRE
- W EXISTING WATERMAIN
- ST EXISTING STORM SEWER
- SA EXISTING SANITARY SEWER
- GAS EXISTING GAS
- X EXISTING FENCE
- PROPERTY BOUNDARY
- TBM# SITE TEMPORARY BENCH MARK
- EXISTING PIEZOMETER
- BH # BOREHOLE LOCATION
- EXISTING UTILITY POLE
- EXISTING ROAD SIGN
- EXISTING ASPHALT
- EXISTING SIDEWALK
- EXISTING BUILDING
- EXISTING LARGE Ø WATERMAIN
- + 00.00 EXISTING ELEVATION
- EXISTING CATCH BASIN
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING FIRE HYDRANT
- + 64.90 EXISTING ELEVATION

PROPOSED LEGEND:

- PROPERTY LINE
- NEW EDGE OF PAVEMENT
- NEW BARRIER CURB
- W NEW WATERMAIN
- ST NEW STORM SEWER
- SA NEW SANITARY SEWER
- NEW 100mm LINE PAINTING
- NEW BUILDING DECK DRAIN
- NEW STORM MANHOLE
- NEW SANITARY MANHOLE
- NEW WATER VALVE
- FIRE DEPT SIAMESE CONNECTION
- NEW BUILDING
- INTERLOCK PAVEMENT
- PROPOSED SIDEWALK
- NEW BUILDING ENTRANCE
- NEW TREES
- PROPOSED STREET LIGHT

ESC LEGEND:

- LIGHT DUTY SILT FENCE (OPSD 219.110)
- FILTER CLOTH PROTECTION (CITY OF OTTAWA STANDARDS)
- MUD MAT

GENERAL NOTES

1.1. CONTRACTOR IS RESPONSIBILE TO KEEP ROADS FREE AND CLEAN FROM MUD OR DEBRIS

1.2. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATOR AGENCY.

1.3. PROVIDE TEMPORARY CATCH BASING PROTECTION USING SEDIMENT CAPTURE DEVICE (SCD) PER CITY OF OTTAWA TEMPORARY SEDIMENT TRAP (TYPE 2) OR APPROVED EQUIVALENT.

1.4. REFER TO DRAWING C1.0 - NOTES SECTION 6. "SILT MITIGATION" FOR ADDITIONAL DETAILS

LIGHT DUTY SILT FENCE AS PER OPSD 219.110

PHASE 1
TOWER A
FFE.=65.00
P1=60.02
P2=57.02
P3=54.02

LOT 10 LOT 9 LOT 8 LOT 7 LOT 6 LOT 5

LOADING AREA

PARKING ENTRANCE

HYDRO VAULT BELOW

METAL SIDING

INSTALL SEDIMENT CAPTURE DEVICE (SCD) ON ALL CATCH BASINS PER CITY OF OTTAWA TEMPORARY SEDIMENT TRAP (TYPE 2) OR APPROVED EQUIVALENT (TYP).

UNDERGROUND PARKING LIMIT

INSTALL MUD MAT AT CONSTRUCTION ACCESS (REFER TO DETAIL ON DWG C1.6

LORETTA AVENUE NORTH

0 5m 10m

SCALE: 1:150

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LANDSCAPE ARCHITECT:
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SEAL:
LICENSED PROFESSIONAL ENGINEER
D. B. YANG
100230568
2025-01-31
PROVINCE OF ONTARIO

NORTH

CLIENT:
CLV GROUP
CLV GROUP DEVELOPMENTS INC.
485 BANK STREET, SUITE 200
OTTAWA, ON, K2P 1Z2

CLIENT REF. #: --

PROJECT:
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1		2021-04-14	ISSUED FOR SITE PLAN CONTROL

PROJECT NO: 20M-01441-00
DATE: JANUARY 2025
ORIGINAL SCALE: 1:150
DESIGNED BY: JD
DRAWN BY: JT
CHECKED BY: DY
IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.
25mm

DISCIPLINE: CIVIL

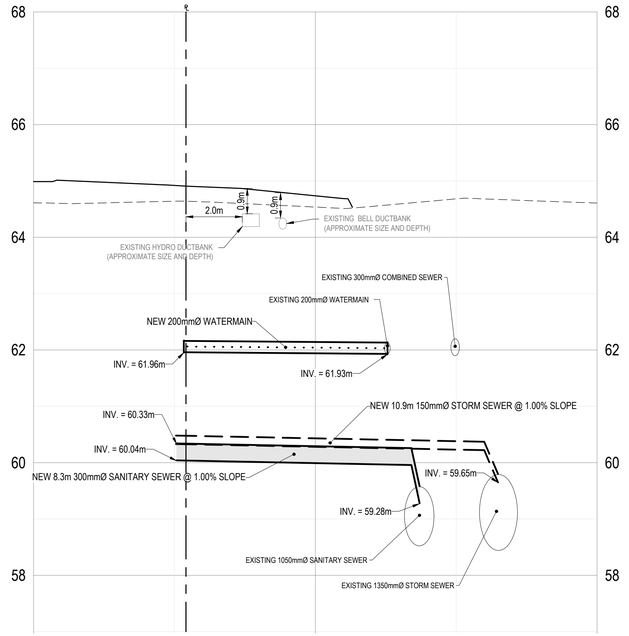
TITLE: EROSION AND SEDIMENT CONTROL PLAN - PHASE 1

SHEET NUMBER: C1.5
SHEET #: 10 OF 12

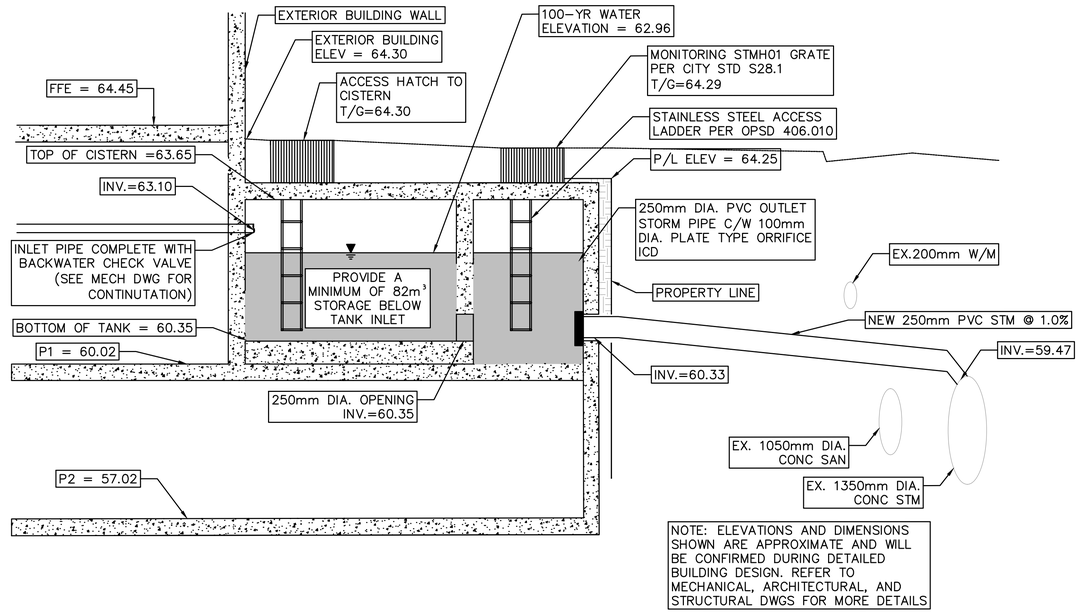
ISSUE: RE-ISSUED FOR SITE PLAN CONTROL
DATE OF: 2025-01-31
REV #: 0

M:\2020\20M-01441-00 - Gladstone Trinity Mixed Use & Residential\4.0 - Tech & Prof Services\4.02 - Drawings\01 Civil\01 Production\Phase 1\20M-01441-00 ESC - Phase 1.dwg, Jan 29, 2025 3:22pm BY: (JALITON4192)
DOT: (2.27.0053)

18526



1 C1.6 **TOWER 3 SERVICES**
SCALE: H: 1:100 V: 1:50



2 C1.6 **STORMWATER SYSTEM DETAILS**
SCALE: N.T.S.

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LANDSCAPE ARCHITECT:
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OTTAWA, ON, K1Z 0B9

SEAL:
LICENSED PROFESSIONAL ENGINEER
D. B. YANG
100230568
2025-01-31
PROVINCE OF ONTARIO

CLIENT:
CLV GROUP
CLV GROUP DEVELOPMENTS INC.
485 BANK STREET, SUITE 200
OTTAWA, ON, K2P 1Z2

CLIENT REF. #: --

PROJECT:
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145 LORETTA AVENUE NORTH
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7		2024-12-10	ISSUED FOR TENDER
6		2024-11-20	RE-ISSUED FOR SITE PLAN CONTROL
5		2024-04-19	RE-ISSUED FOR SITE PLAN CONTROL
4		2022-10-14	RE-ISSUED FOR SITE PLAN CONTROL
3		2022-03-04	RE-ISSUED FOR SITE PLAN CONTROL
2		2021-12-23	RE-ISSUED FOR SITE PLAN CONTROL
1		2021-04-14	ISSUED FOR SITE PLAN CONTROL

PROJECT NO: 20M-01441-00
DATE: JANUARY 2025
ORIGINAL SCALE: AS SHOWN
IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.
25mm
DESIGNED BY: JD
DRAWN BY: JT
CHECKED BY: DY

DISCIPLINE: CIVIL

TITLE: SERVICING PROFILE AND DETAILS - PHASE 1

SHEET NUMBER: C1.6
SHEET #: 11 OF 12

ISSUE: RE-ISSUED FOR SITE PLAN CONTROL
REV #: 0
DATE OF: 2025-01-31

M:\2020\20M-01441-00 - Gladstone-Trinity Mixed Use & Residential\14.0 - Tech & Prof Services\14.02 - Drawings\01. Civil\01. Production\Phase 1\20M-01441-00 Servicing Profiles.dwg Jan 29, 2025 - 4:21pm BY: LCA (137245.2)

DOT-1241-0053

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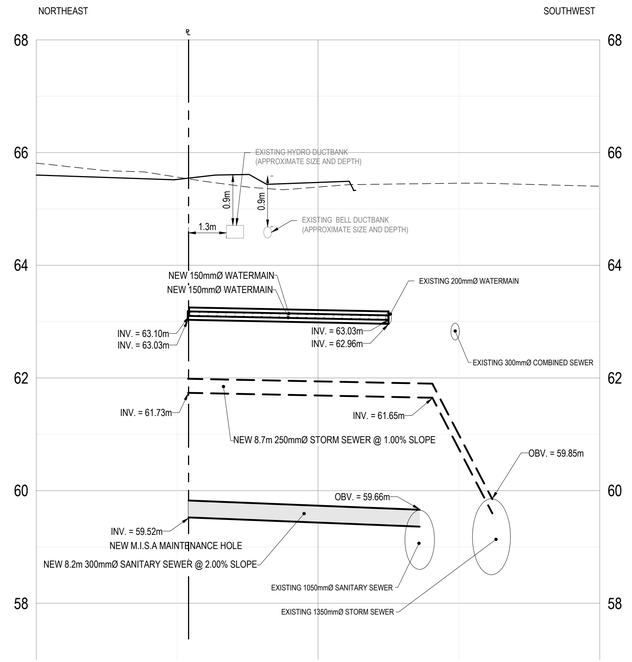
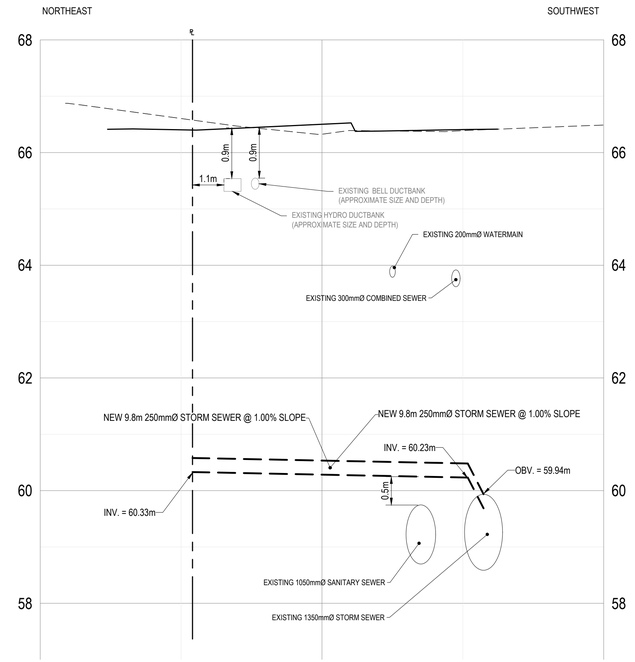


1 C1.7 **TOWER 2 SERVICES**
SCALE: H: 1:100 V: 1:50



2 C1.7 **TOWER 1 LORETTA STORM SERVICE**
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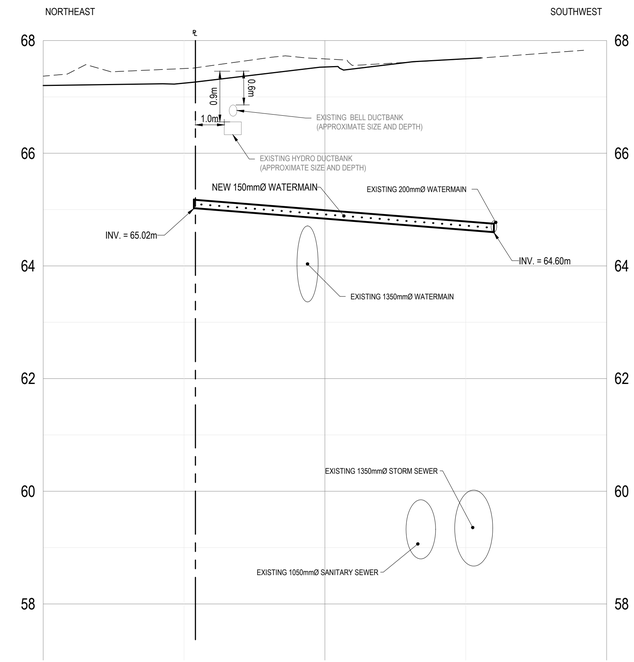
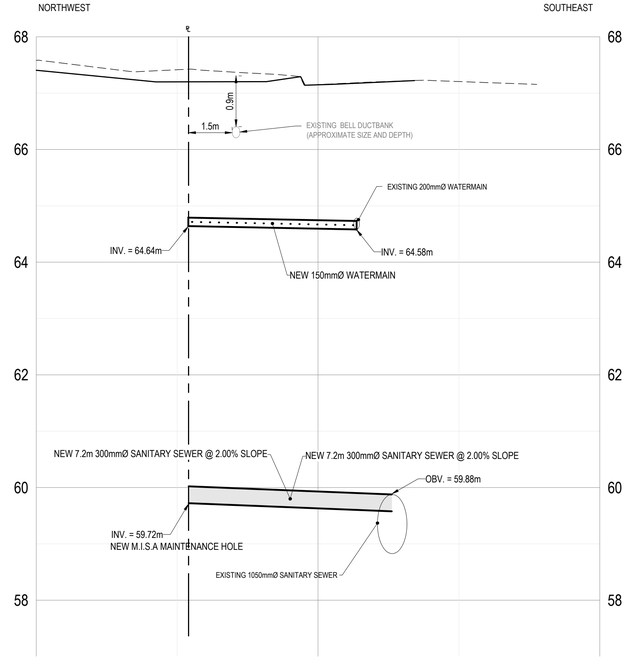


3 C1.7 **TOWER 1 LORETTA WATER SERVICE**
SCALE: H: 1:100 V: 1:50



4 C1.7 **TOWER 1 GLADSTONE SERVICES**
SCALE: H: 1:100 V: 1:50

wsp
2611 QUEENSVIEW DRIVE, SUITE 300
OTTAWA, ONTARIO
CANADA K2B 8K2
PHONE: 613-829-2800
WWW.WSP.COM

ARCHITECT:
linebox STUDIO
116 LISGAR ST, UNIT 110
OTTAWA, ON, K2P 0C2

LANDSCAPE ARCHITECT:
CSW
319 MCRAE AVENUE, SUITE 502
OTTAWA, ON, K1Z 0B9

SEAL:
LICENSED PROFESSIONAL ENGINEER
D. B. YANG
100230568
2025-01-31
PROVINCE OF ONTARIO

CLIENT:
CLV GROUP
CLV GROUP DEVELOPMENTS INC.
485 BANK STREET, SUITE 200
OTTAWA, ON, K2P 1Z2
CLIENT REF. #: --

PROJECT:
951 GLADSTONE AVENUE AND
145 LORETTA AVENUE NORTH
MIXED-USE

KEY PLAN:


DISCLAIMER: COPYRIGHT:
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THIS DRAWING IS NOT TO BE SCALED.

ISSUED FOR - REVISION:

IS	RE	DATE	DESCRIPTION
8		2025-01-31	RE-ISSUED FOR SITE PLAN CONTROL
7		2024-12-10	ISSUED FOR TENDER
6		2024-11-20	RE-ISSUED FOR SITE PLAN CONTROL
5		2024-04-19	RE-ISSUED FOR SITE PLAN CONTROL
4		2022-10-14	RE-ISSUED FOR SITE PLAN CONTROL
3		2022-03-04	RE-ISSUED FOR SITE PLAN CONTROL
2		2021-12-23	RE-ISSUED FOR SITE PLAN CONTROL
1		2021-04-14	ISSUED FOR SITE PLAN CONTROL

PROJECT NO: 20M-01441-00
DATE: JANUARY 2025
ORIGINAL SCALE: AS SHOWN
IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.
25mm
DESIGNED BY: JD
DRAWN BY: JT
CHECKED BY: DY

DISCIPLINE: CIVIL

TITLE: SERVICING PROFILES - MASTER

SHEET NUMBER: C1.7
SHEET #: 12 OF 12

ISSUE: RE-ISSUED FOR SITE PLAN CONTROL
REV #: 0
DATE OF: 2025-01-31

M:\2020\20M-01441-00 - Gladstone-Trinity-Mixed-Use & Residential\14.0 - Tech & Prof Services\14.02 - Drawings\01 Civil\01 Production\Phase 1\20M01441-00 Servicing Profiles.dwg Jan 29, 2025-3:23pm BY (CA1170451Z)
DOT-12-21-0053
18526

TRILLIUM LINE EXTENSION PROJECT

CIVIL

CORSO ITALIA STATION

SEGMENT 2

ISSUED FOR CONSTRUCTION

JULY 30, 2021

CONTRACT NO. - LRT19-1025

DRAWING No. 660373-1GSC-003-41DD-0001 | 01

SUPERCEDES PRINTS OF THIS NUMBER WITH LETTERS PREVIOUS TO

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DRAWING INDEX
SEGMENT 2 - CORSO ITALIA STATION

DRAWING No.	DESCRIPTION	REV.	
660373-1GSC-003-41DD-0001	COVER SHEET	01	01
660373-1GSC-003-41DD-0002	DRAWING INDEX	01	
660373-1GSC-003-41DD-0003	KEY PLAN	00	
660373-1GSC-003-41DD-0004	LEGEND AND SYMBOLS	00	
660373-1GSC-003-41DD-0005	GENERAL NOTES	00	
660373-1GSC-003-41DD-0006	STANDARD SPECIFICATIONS	00	
660373-1GSC-003-41DD-0007	STANDARD DRAWINGS	00	
660373-1GSC-003-41DD-0901	TOPOGRAPHY SURVEY PLAN	00	
660373-1GSC-003-41DD-1101	REMOVALS PLAN	01	01
660373-1GSC-003-41DD-4501	GEOMETRY PLAN	01	
660373-1GSC-003-41DD-7501	GRADING AND DRAINAGE PLAN	01	
660373-1GSC-003-41DD-7505	CULVERT PROFILES	00	
660373-1GSC-003-41DD-3101	CULVERT CONNECTION DETAILS	00	
660373-1GSC-003-41DD-3001	TYPICAL SECTIONS	01	01
660373-1GSC-003-41DD-3002	TYPICAL SECTIONS	01	
660373-1GSC-003-41DD-7503	MUP PLAN AND PROFILES	01	
660373-1GSC-003-41DD-7504	EGRESS PATH PLAN AND PROFILES	01	
660373-1GSC-003-41DD-6001	PAVEMENT MARKINGS PLAN	01	

OTrain STAGE 2 ETAPE 2

Ottawa

CIVIL
SEGMENT 2
CORSO ITALIA STATION
DRAWING INDEX

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
A. IYER	I. ROMANSKYY
DRAWN	SEALED
A. IYER	D. SUDANI

DRAWING NUMBER
660373-1GSC-003-41DD-0002

MODEL NUMBER

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER
D. N. SUDANI
100114754
2021-07-30
PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

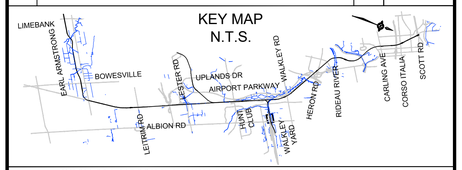
SCALE
N.T.S.

ASSET No.
-

ASSET GROUP
-

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	DS	2021-03-29
01	REVISED ISSUED FOR CONSTRUCTION	DS	2021-07-30

KEY MAP
N.T.S.



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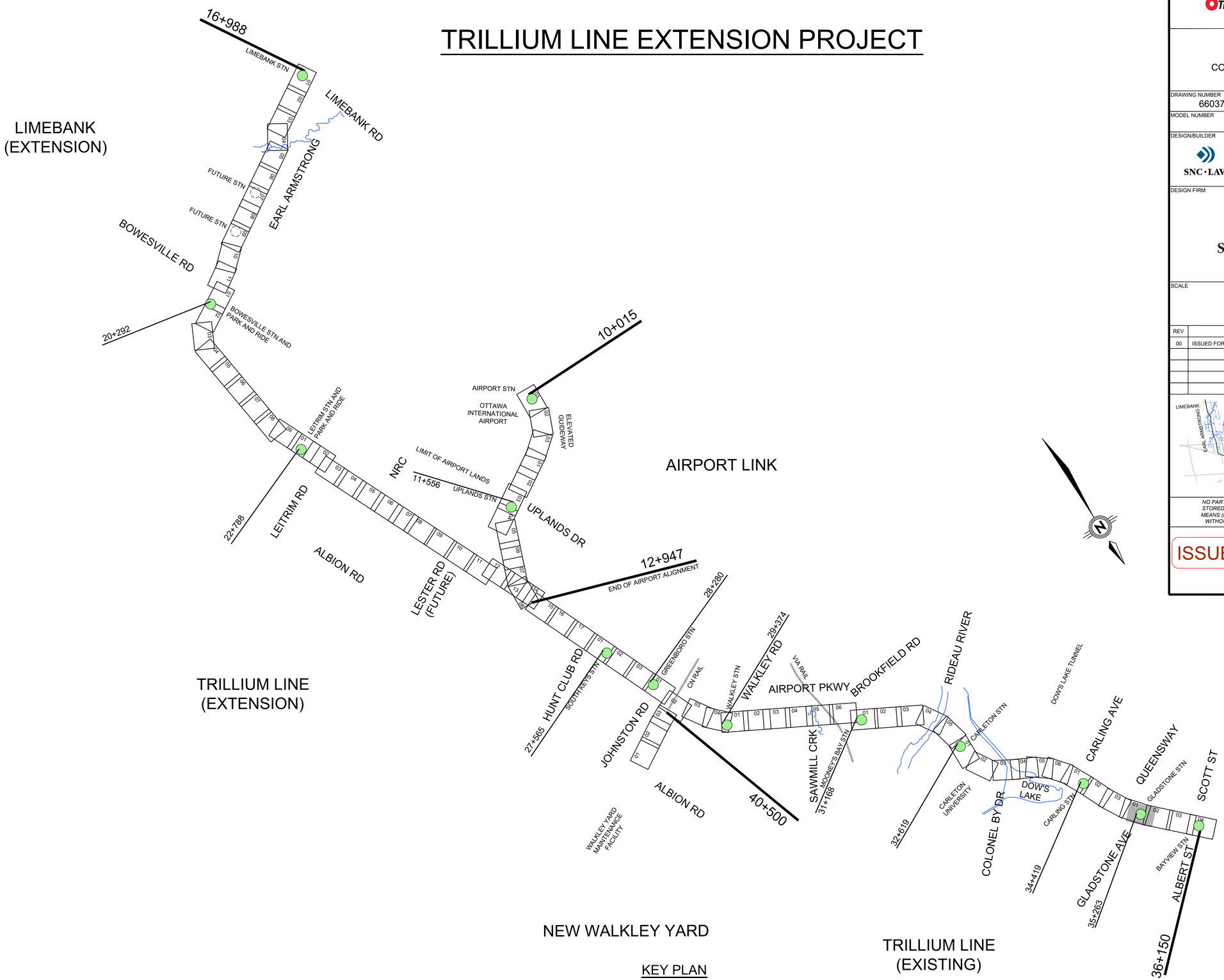
ISSUED FOR CONSTRUCTION

2021-07-30

01

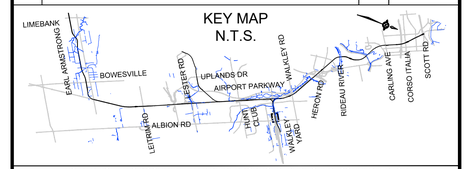
TRILLIUM LINE EXTENSION PROJECT



OTrain STAGE 2 ETAPE 2	Ottawa
CIVIL SEGMENT 2 CORSO ITALIA STATION KEY PLAN	CONTRACT No. LRT19-1025
	DESIGNED A. IYER / CHECKED I. ROMANSKYY
	DRAWN A. IYER / SEALED D. SUDANI
DRAWING NUMBER 660373-1GSC-003-41DD-0003	PRIMARY SEAL
MODEL NUMBER	LICENSED PROFESSIONAL ENGINEER D. N. SUDANI 100114754 2021-03-29 PROVINCE OF ONTARIO
DESIGN/BUILDER SNC·LAVALIN TransitNEXT	
DESIGN FIRM SNC·LAVALIN	SECONDARY SEAL (IF REQUIRED)
SCALE N.T.S.	ASSET No. -
	ASSET GROUP -

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	DS	2021-03-29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

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LEGEND AND SYMBOLS

UTILITIES

		EXISTING	PROPOSED
WATER -	WATERMAIN	200mm WATERMAIN	200mm WM
	PROFILE WATERMAIN		200mm WM (IN PROFILE)
	VALVE BOX		
	VALVE CHAMBER		
	STAND PIPE		
	WATERMAIN LEADS		
	REDUCER		
	HYDRANT		
BELL -	UNDERGOUND BELL CABLE OR DUCT	100mm U/G BELL DUCT	100mm U/G BELL DUCT
	OVERHEAD BELL LINE	O/H BELL	O/H BELL
	BELL POLE	B	B
	BELL MANHOLE	B	B
	BELL POLE WITH GUY WIRE	B	B
	TELEPHONE BOOTH	T	T
	BELL PEDESTAL	B	B
HYDRO -	UNDERGROUND HYDRO CABLE / DUCT	U/G HYDRO DUCT	U/G HYDRO CABLE
	OVERHEAD HYDRO	O/ H HYDRO	O/H HYDRO
	HYDRO POLE	H	H
	HYDRO POLE WITH GUY WIRE	H	H
	HYDRO TOWER		
	HYDRO MANHOLE	H	H
	HYDRO PEDESTAL	H	H
GAS -	GAS MAIN	100mm GAS	100mm GAS
	GAS VALVE		
	GAS METER		
CABLE -	UNDERGOUND TV CABLE (ROGERS)	CATV (ROGERS)	CATV (ROGERS)
	UNDERGOUND TELECOMMUNICATIONS	CATL (TELUS)	CATL (TELUS)

SEWERS

	EXISTING	PROPOSED
SEWER PIPE - COMBINED SEWER	450mm COMBINED SEWER	450mm COMBINED SEWER
STORM SEWER LESS THAN 450mm	350mm STORM SEWER	350mm STORM SEWER
STORM SEWER GREATER THAN 450mm	600mm STORM SEWER	600mm STORM SEWER
SUBDRAIN		
SANITARY SEWER LESS THAN 450mm	350mm SANITARY SEWER	350mm SANITARY SEWER
SANITARY SEWER GREATER THAN 450mm	500mm SANITARY SEWER	500mm SANITARY SEWER
ABANDONED STORM SEWER	ABANDONED 300mm STORM	
ABANDONED SANITARY SEWER	ABANDONED 300mm SANITARY	

SEWERS

	EXISTING	PROPOSED
MANHOLES - STORM MANHOLE		ST
SANITARY MANHOLE		SAN
CATCH BASIN MANHOLE		CBMH
DITCH INLET MANHOLE		DIMH
CATCH BASIN / DOUBLE CATCH BASIN	/	CBI / CB
DITCH INLET		DI
CLEAN OUT		*CO
CULVERT		
CULVERT WITH HEAD WALLS		
CONCRETE CURB		ROAD OR PARKING SIDE
SWALES/BIO-SWALES		
DITCH		
EDGE OF LAKE OR RIVER		
TREES		

MISCELLANEOUS

	EXISTING	PROPOSED
TOES		
FENCE		
HANDRAIL		
FENCE GATE		
ROW		PROP. ROW
TEMPORARY ROW		PROP. TEMP. ROW
PROPERTY		
RETAINING WALL		
RAIL TRACKS		
CONCRETE BARRIER		
STEEL BEAM GUIDE RAIL		
STRUCTURE NUMBER	SN000000	SN000000
STRUCTURAL DECK		
SAWCUT		
ROCK CUT LINE		

REFERENCE POINTS

BOREHOLE LOCATION	
CONCRETE MONUMENT	CM
IRON TUBE OR PIPE	IP
IRON BAR	IB
WOOD STAKE	WS
2ND ORDER INTEGRATED SURVEY CONTROL MONUMENT	ISCM 2-
3RD ORDER INTEGRATED SURVEY CONTROL MONUMENT	ISCM 3-
CUT CROSS	
CUT VEE	V
ROUND IRON BAR	RIB
REINFORCING BAR	
STANDARD IRON BAR	SIB
SHORT STANDARD IRON BAR	SSIB
WORK POINT	

PAVEMENT CONSTRUCTION (PROPOSED)

- MUP / SERVICE ROADS (PAVED)
- MUP (STONE DUST)
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- GRAVEL

REMOVALS AND ADJUSTMENTS

- REMOVAL OF ASPHALT PAVEMENT
- REMOVAL OF SIDEWALK / CONCRETE PAVEMENT
- REMOVALS OF GRAVEL ROAD
- MILL AND OVERLAY
- CLEARING AND GRUBBING
- PLUG
- REMOVAL OF UTILITY
- REMOVAL OF CURB
- REMOVAL OF RETAINING WALL
- REMOVAL OF FENCE
- ADJUST EXISTING SINGLE CATCH BASIN
- ADJUST EXISTING DOUBLE CATCH BASIN
- ADJUST EXISTING MANHOLE
- REMOVAL OF SINGLE CATCH BASIN
- REMOVAL OF DOUBLE CATCH BASIN
- REMOVAL OF MANHOLE
- REMOVAL OF VALVE CHAMBER

OTrain STAGE 2 ETAPE 2 — Ottawa

CIVIL
SEGMENT 2
CORSO ITALIA STATION
LEGEND AND SYMBOLS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
A. IYER	I. ROMANSKYY
DRAWN	SEALED
A. IYER	D. SUDANI

DRAWING NUMBER 660373-1GSC-003-41DD-0004

MODEL NUMBER

DESIGN/BUILDER: SNC·LAVALIN TransitNEXT

PRIMARY SEAL: LICENSED PROFESSIONAL ENGINEER — D. N. SUDANI — 100114754 — 2021-03-29 — PROVINCE OF ONTARIO

DESIGN FIRM: SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

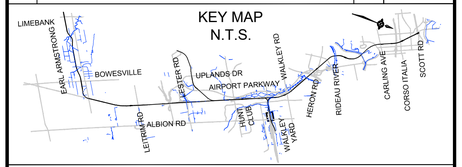
SCALE: N.T.S.

ASSET No. -

ASSET GROUP -

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	DS	2021-03-29

KEY MAP N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

TITLEBLOCK: 790mm x 534mm

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GENERAL NOTES

GENERAL NOTES:

1. THIS PACKAGE TO BE READ IN CONJUNCTION WITH TRACK, LANDSCAPE, UTILITY, ARCHITECTURE, ELECTRICAL DRAWINGS.
2. REFER TO TRACK ALIGNMENT PACKAGE FOR TRACK DETAILS.
3. REFER TO LANDSCAPE PACKAGE FOR LANDSCAPE DESIGN INCLUDING STREET FURNITURE, FENCE AND GATE DETAILS.
4. REFER TO ARCHITECTURE PACKAGE FOR STATION DESIGN.
5. REFER TO ELECTRICAL PACKAGE FOR ELECTRICAL ITEMS INSTALLATION, INCLUDING RELOCATION AND REMOVALS.
6. REFER TO UTILITY PACKAGE FOR DETAILS OF NEW AND EXISTING UTILITIES.
7. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AND APPROVALS FOR THE PROPOSED WORK PRIOR TO COMMENCEMENT OF CONSTRUCTION.
8. THE CONTRACTOR SHALL USE DUE CARE WHEN WORKING NEAR EXISTING SERVICES. NOTIFY THE UTILITY OWNER PRIOR TO WORK. ANY SERVICES DISTURBED ARE TO BE REPLACED TO THE SATISFACTION OF THE CITIES OR OTHER APPROVING AGENCIES.
9. THE CONTRACTOR SHALL KEEP PROPER AS-BUILT INFORMATION DURING CONSTRUCTION AND SHALL SUBMIT RED-LINE DRAWINGS AND SUPPORTING AS-BUILT INFORMATION TO THE ENGINEER AS CONSTRUCTION PROGRESSES AND WHEN CONSTRUCTION IS COMPLETED.
10. ROW BASED ON PROPERTY REQUEST PLANS (PRP) PROVIDED BY THE CITY.
11. WORK SHALL CONFORM TO THE LATEST CITY OF OTTAWA STANDARD DRAWINGS AND SPECIFICATIONS AS WELL AS THE LATEST ADOPTED ONTARIO PROVINCIAL STANDARD DRAWINGS AND SPECIFICATIONS.
12. WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE CURRENT "OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS." THE GENERAL CONTRACTOR SHALL BE DEEMED TO BE THE CONSTRUCTOR AS DEFINED IN THE ACT.
13. TEMPORARY TRAFFIC CONTROL AND SIGNAGE DURING CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT ONTARIO TRAFFIC MANUAL BOOK 7: TEMPORARY CONDITIONS FIELD EDITION.
14. TRENCHES WITHIN EXISTING RIGHT-OF-WAYS SHALL BE BACKFILLED WITH UNSHRINKABLE FILL. TEMPORARY REPAIRS TO UTILITY CUTS SHALL BE IN ACCORDANCE WITH MUNICIPAL CONSENT REQUIREMENTS: APPENDIX D, TEMPORARY REPAIRS TO UTILITY CUTS.
15. THE CONTRACTOR SHALL RECTIFY ALL DISTURBED AREAS TO THE ORIGINAL CONDITION OR BETTER AND TO THE SATISFACTION OF THE EXECUTIVE DIRECTOR TECHNICAL SERVICES.
16. PRIOR TO COMMENCING ANY WORK WITHIN THE MUNICIPAL RIGHT-OF-WAY, THE CONTRACTOR SHALL OBTAIN ALL NECESSARY ROAD OCCUPANCY PERMITS FROM THE CITY'S RIGHT OF WAY MANAGEMENT UNIT
17. FENCE LAYOUT REFLECTED INCORPORATES EXISTING LOCATIONS WHERE FEASIBLE, IS LOCATED WITHIN THE R.O.W. LIMITS AND ACCOMODATES THE PROPOSED GUIDEWAY DESIGN. WHERE EXISTING FENCING IS TO REMAIN, THE CONDITION OF THE FENCE WILL BE FIELD VERIFIED PRIOR TO CONSTRUCTION AND MAINTAINED IF DEEMED TO BE GOOD CONDITION OR WILL BE REPLACED WITH NEW, AS REQUIRED. MIN. 0.6m BUFFER SHALL BE PROVIDED BETWEEN EDGE OF TRILLIUM PAHTWAY, MUP AND PROPOSED FENCE.
18. ROW BASED ON PROPERTY PLANS (PP) PROVIDED BY THE CITY.
19. DESIGN IS BASED ON DETAILED SURVEY PROVIDED BY SNC SURVEYORS ON APRIL 2019.

ROADWORKS:

1. CONTRACTOR SHALL CONFORM TO ALL CITY OF OTTAWA STANDARDS AND SPECIFICATIONS AS REQUIRED.
2. CONTRACTOR SHALL COORDINATE ABANDONMENT/REMOVAL OF EXISTING UTILITIES, AND ALL PUMPING REQUIREMENTS.
3. UTILITY OWNERS AND/OR OPERATORS TO CONFIRM EXISTING UTILITIES DURING REVIEW PROCESS.
4. THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE PROTECTION FROM DAMAGE.
5. CONNECTION POINTS TO EXISTING UTILITIES TO BE VERIFIED BY VISUAL EXPOSURE AND SURVEY AS REQUIRED.
6. ALL CONCRETE AND ASPHALT REMOVALS SHALL BE SAWCUT WHERE THEY MATCH EXISTING TO ENSURE A SMOOTH CLEAN JOINT FOR CONSTRUCTION.
7. CONCRETE OUTLETS FOR CONCRETE CURB AND GUTTER TO BE 90° AS PER OPSD 604.010.

GRADE CONSTRUCTION:

1. ALL ORGANIC MATERIAL SHALL BE REMOVED AS REQUIRED IN THE GEOTECHNICAL REPORT AND REPLACED WITH SUITABLE MATERIAL AND COMPACTED, SUPPLY AND COMPACTION SHALL FOLLOW THE STANDARD SPECIFICATIONS.
2. SUBGRADE AND GRANULAR MATERIAL SHALL BE SUPPLIED, PLACED AND COMPACTED AS PER THE STANDARD SPECIFICATIONS.

STORM DRAINAGE:

1. PVC PIPE SHALL BE IN ACCORDANCE WITH DR 35 CSA B182.2-06 CERTIFIED ASTM D3034-04A, F679-03. SERVICE CONNECTION PVC PIPE SHALL BE IN ACCORDANCE WITH DR 28 CSA B182.2-06 CERTIFIED ASTM D3034-04A.
2. BEDDING FOR FLEXIBLE PIPE SHALL BE IN ACCORDANCE WITH OPSD 802.010, 802.013 OR 802.014
3. REINFORCED CONCRETE PIPE SHALL BE IN ACCORDANCE WITH CSA A257.2-03. CLASS AS SHOWN ON CONTRACT DRAWINGS.
4. NON-REINFORCED CONCRETE PIPE 150 mm TO 250 mm SHALL BE IN ACCORDANCE WITH CSA A257.1-03 CLASS 3. CLASS AS SHOWN ON CONTRACT DRAWINGS.
5. BEDDING FOR RIGID PIPE SHALL BE CLASS B IN ACCORDANCE WITH OPSD 802.030, 802.031, 802.032, OR 802.033, UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS.
6. SUBDRAIN SHALL BE PVC PIPE ACCORDING TO OPSS 1841, OR PE PIPE ACCORDING TO OPSS 1840.
7. MAINTENANCE HOLES SHALL BE IN ACCORDANCE WITH OPSD 701.010 (1200 mm). FRAME AND COVER SHALL BE IN ACCORDANCE WITH OPSD 401.010 TYPE A CLOSE (STORM).
8. BENCHING SHALL BE IN ACCORDANCE WITH OPSD 701.021.
9. DITCH INLET MAINTENANCE HOLES SHALL BE IN ACCORDANCE WITH OPSD 702.040 AND 050.
10. DROP STRUCTURES SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA S12 OR OPSD 1003.031 (INTERNAL).
11. CATCH BASINS SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA S1 OR OPSD 705.010, 020 AND 030. FRAME AND COVER IN ACCORDANCE WITH CITY OF OTTAWA STANDARD DETAILS.
12. CONCRETE DITCH INLET SHALL BE IN ACCORDANCE WITH OPSD 705.030.
13. STORM SEWER SHALL BE INSTALLED WITH 2.0 m MINIMUM COVER ON ROAD, AND 1.2 m MINIMUM COVER AT PARKS.
14. RIP-RAP END TREATMENTS AT SEWER AND CULVERTS OUTLETS TO BE 810.010 TYPE B OR AS SHOWN ON CONTRACT DRAWINGS.
15. RIP-RAP END TREATMENT AT DITCH INLET TO BE OPSD 810.020 OR AS SHOWN ON CONTRACT DRAWINGS.
16. CONCRETE ENDWALL TO BE AS PER OPSD 804.030 AND 040.

UTILITY TREATMENT NOTES:

1. ALL UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE AND DERIVED FROM MUNICIPAL AND ENGINEERING PLANS. THE CONTRACTOR SHALL OBTAIN AND KEEP LOCATES CURRENT AT ALL TIMES PRIOR TO ANY CONSTRUCTION WORK. ACTUAL SITE CONDITIONS MAY VARY.
2. EXISTING UTILITIES SHOWN ON THE DRAWINGS BASED ON INFORMATION SUPPLIED BY THE SPONSORS, UTILITY OWNERS AND CITY OF OTTAWA. THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE AND SHOULD BE VERIFIED BY THE CONTRACTOR IN THE FIELD. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONDUCT LOCATES AND CONFIRM ALL UTILITY LOCATIONS BEFORE COMMENCING ANY CONSTRUCTION WORK AND RESPONSIBLE FROM ADEQUATE PROTECTION FROM DAMAGE.
3. SEE TRAFFIC MANAGEMENT PLANS FOR SUGGESTED CONSTRUCTION STAGING. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING TRAFFIC MANAGEMENT PLANS TO COMPLETE WORKS THAT ARE OUTSIDE THE LIMITS OF THE TRAFFIC MANAGEMENT PLANS PROVIDED.
4. CONTRACTOR SHALL TEST PIT UTILITIES IN FIELD PRIOR TO CONSTRUCTION TO VERIFY LOCATION AND DEPTH.
5. CONTRACTOR SHALL CONFIRM UTILITIES NOTED AS ABANDONED WITH OWNER PRIOR TO CONSTRUCTION / REMOVAL, ALL ABANDONED UTILITIES TO BE GROUTED & CAPPED.
6. INVERT & GRATE ELEVATIONS FOR NEW MAINTENANCE HOLES ARE APPROXIMATE, ELEVATIONS SHALL BE VERIFIED BY CONTRACTOR ON SITE PRIOR TO EXCAVATION & INSTALLATION.
7. RELOCATION OF PRIVATE UTILITIES SHALL BE IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS OF EACH INDIVIDUAL UTILITY OWNER. CONTACT UTILITY OWNER TO COORDINATE WORK.
8. CONTRACTOR TO MAINTAIN STORM DRAINAGE AT ALL TIMES.
   - CONTRACTOR TO PERFORM DETAILED SURVEY FROM 50 m UPSTREAM TO 50 m DOWNSTREAM PRIOR TO CONSTRUCTION TO CAPTURE ROAD GRADES, HIGH POINTS AND LOW POINTS TO DETERMINE EXISTING OVERLAND FLOW CAPACITY OF THE ROAD BEING DISTURBED BY EXCAVATION AND TO DETERMINE UPSTREAM AND DOWNSTREAM LIMITS OF TEMPORARY SURFACE FLOW BYPASS WORKS. THE CAPACITY SHALL BE BASED ON NET SURFACE AREA BELOW THE RESPECTIVE PROPERTY LINE ELEVATIONS.
   - THE CONTRACTOR SHALL PROVIDE A WORKPLAN AND STAMPED DESIGN DRAWINGS FOR OVERLAND FLOW ACCOMMODATION TO CITY OF OTTAWA FOR REVIEW.
   - LOCALIZED ROAD RE-GRADING MAY BE REQUIRED.
   - CONTRACTOR SHALL ENSURE THAT THERE WILL BE NO POOLING UPSTREAM AS RESULT OF THE CONTRACTOR'S WORK.
   - THIS WORK SHALL BE IN ADDITION TO THE MAINTENANCE OF REGULAR STORM DRAINAGE.
9. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT "OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS".
10. A CCTV INSPECTION SHALL BE PERFORMED PRIOR TO THE START OF ANY CONSTRUCTION WORK FOR ALL EXISTING SEWERS THAT ARE WITHIN THE UTILITY RELOCATION ZONES OF THIS PROJECT, INCLUDING SECTIONS UPSTREAM / DOWNSTREAM TO THE NEXT MAINTENANCE HOLE. THE CCTV SHALL ESTABLISH THE CONDITION OF THE EXISTING SYSTEMS AND TO ENSURE THAT THEY WILL NOT BE NEGATIVELY IMPACTED BY CONSTRUCTION. THE CCTV SHALL ALSO DETERMINE ALL EXISTING LATERAL CONNECTIONS WHICH WILL REQUIRE SUPPORT AND REPLACEMENT DURING AND AFTER THE CONSTRUCTION ON THE INFRASTRUCTURE.
   - CCTV REPORTS SHALL BE STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER AND SUBMITTED TO THE CITY OF OTTAWA FOR REVIEW.
   - FOLLOWING CONNECTION OF ANY NEW PERMANENT SEWER SECTION, A CCTV INSPECTION SHALL BE PREFORMED FOR THE SEWER, INCLUDING SECTIONS UPSTREAM / DOWNSTREAM TO THE NEXT MAINTENANCE HOLE TO ENSURE THAT THE EXISTING SEWERS HAVE NOT BEEN NEGATIVELY IMPACTED AND THAT THE NEW SEWERS HAVE BEEN PROPERLY CONSTRUCTED.
   - A CCTV INSPECTION SHALL BE PERFORMED FOLLOWING THE WARRANTY PERIOD FOR ALL SEWERS AS DESCRIBED ABOVE TO ENSURE THAT THE SEWERS ARE FUNCTIONING TO THE SATISFACTION OF THE CITY OF OTTAWA.
11. THE CONTRACTOR SHALL ALLOW FOR THE PROTECTION AND/OR SUPPORT OF ANY AND ALL SERVICES TO ANY AND ALL AFFECTED PROPERTIES, UNLESS SHOWN ON DETAILED DRAWINGS THAT THIS IS NOT REQUIRED. THE CONTRACTOR SHALL ASSUME A FULL COMPLEMENT OF SERVICES.
12. FOR STREET LIGHTING AND TRAFFIC LIGHT STAGING, SEE STREET LIGHTING DETAILED DRAWINGS AND CITY OF OTTAWA TRAFFIC STANDARD DETAILED DRAWINGS.
13. ADDITIONAL EXCAVATION AND BREAK-OUT OF PROTECTIVE COVERING IN ADDITION TO EXTENT SHOWN MAY BE REQUIRED TO FACILITATE THE SUPPORT OF PRIVATE UTILITIES AS PRESCRIBED
14. CONTRACTORS SHALL NOTE THAT THERE IS SPECIAL PROVISION TO OPSS 1010 IN REGARD THE USAGE OF GRANULAR B MATERIAL INDICATED IN THE BELOW TABLE FOR "MSE WITHIN THE REINFORCED ZONE". THIS SPECIAL PROVISION RESTRICTS THE PERCENTAGE OF FINE CONTENTS AND DEGREE OF COMPACTION. CONTRACTOR SHALL REFER TO DOCUMENT 660373-0000-003-4GEN-0006: MEMORANDUM - GRANULAR B TYPE II PERMEABILITY TEST.

GEOTECHNICAL REPORTS:

CONSTRUCTION TO BE IN ACCORDANCE WITH THE FOLLOWING GEOTECHNICAL REPORTS FOR EMBANKMENT CONSTRUCTION, PROOF ROLLING, SUBGRADE PREPARATION, FILL MATERIALS, COMPACTION REQUIREMENTS, SLOPES, MSE WALL FOUNDATIONS AND ALL OTHER RELATED GEOTECHNICAL RECOMMENDATIONS:

REPORT SUBJECT	DOCUMENT NUMBER	REV	DOCUMENT TITLE
CONSTRUCTION IMPACT ASSESSMENT REPORT	660373-0000-003-4GER-1002	00	CONSTRUCTION IMPACT ASSESSMENT REPORT - SEGMENT 2
GIMP REPORT	660373-0000-003-4GER-2002	00	GEOTECHNICAL INSTRUMENTATION AND MONITORING PLAN (GIMP) - SEGMENT 2
STATION REPORTS			
BAYVIEW STATION	660373-1BVS-003-4GER-0001	00	GEOTECHNICAL DESIGN REPORT FOR BAYVIEW STATION
GLADSTONE STATION	660373-1GSS-003-4GER-0001	01	GEOTECHNICAL DESIGN REPORT FOR GLADSTONE STATION
CARLING STATION	660373-1CLS-003-4GER-0001	02	GEOTECHNICAL DESIGN REPORT FOR CARLING STATION
CARLETON STATION	660373-3MCU-003-4GER-0001	04	DETAILED GEOTECHNICAL DESIGN REPORT - MUP PEDESTRIAN UNDERPASS AT CARLETON STATION
MOONEY'S BAY STATION	660373-1MBS-003-4GER-0001	01	GEOTECHNICAL DESIGN REPORT FOR STATION PLATFORM AT MOONEY'S BAY STATION
WALKLEY STATION	660373-1WKS-003-4GER-0001	00	PRELIMINARY GEOTECHNICAL DESIGN REPORT - STATION PLATFORMS AT WALKLEY STATION
GREENBORO STATION	660373-1GBS-003-4GER-0001	01	GEOTECHNICAL DESIGN REPORT FOR STATION PLATFORMS AT GREENBORO STATION
STRUCTURE REPORTS	660373-3BEW-003-4GER-0001	02	GEOTECHNICAL DESIGN REPORT - VIA RAIL GRADE SEPARATION BRIDGE AT ELLWOOD DIAMOND REPORT
	660373-3BEW-003-4GER-0002	03	GEOTECHNICAL DESIGN REPORT - EMBANKMENT AT VIA RAIL GRADE SEPARATION AT ELLWOOD DIAMOND
	660373-3BUR-003-4GER-0001	02	GEOTECHNICAL DESIGN REPORT - MULTI-USE PEDESTRIAN BRIDGE OVER RIDEAU RIVER NEAR UNIVERSITY ROAD
	660373-3MCN-003-4GER-0001	03	DETAILED GEOTECHNICAL DESIGN REPORT - NORTH RAIL BRIDGE OVER MULTI-USE PEDESTRIAN BRIDGE AT CARLETON UNIVERSITY
	660373-3MCS-003-4GER-0001	02	DETAILED GEOTECHNICAL DESIGN REPORT - SOUTH MULTI-USE PEDESTRIAN UNDERPASS AT CARLETON UNIVERSITY
TRACK REPORT	660373-4TAA-003-4GER-0002	02	TRILLIUM PHASE 2 PROJECT – TRACKBED DESIGN REPORT – SEGMENT 2: BAYVIEW STATION TO GREENBORO STATION
ROCK CUT MEMO	660373-4CGC-003-4GER-0002	00	ROCK CUT ASSESSMENT - CARLING AND GLADSTONE STATIONS
CAMPUS AVENUE STABILITY STUDY	660373-4CGC-003-4GEN-0001	00	TECHNICAL MEMO - CAMPUS AVENUE STABILITY STUDY
STRESS ANALYSIS FOR STORM PIPES MEMO	660373-0000-003-4GEN-0013	00	TECHNICAL MEMO - STRESS ANALYSIS UNDER E80 FREIGHT TRAIN LOADS FOR STORM PIPES AT STA. 30+544, 31+156, AND 34+410 WITHIN SEGMENT 2

MATERIALS SPECIFICATIONS FOR SEGMENTS 1 AND 2:

USAGE	LOCATION OF BACKFILL	MATERIAL	COMPACTION, LIFT THICKNESS AND (MAX. SIZE OF PARTICULES)	QUALITY CONTROL	
				MATERIAL	COMPACTION
SLOPED EMBANKMENT WITH TYPICAL 2H:1V SLOPE	WITHIN THE EMBANKMENT	COMPACTIBLE EARTH OR GRANULAR	98 % SPMDD, 300 MM*, (300 MM)	AS PER OPSS 212, TABLE 1, FOR ALL TYPE OF MATERIAL	"AS PER OPSS 501, METHODS A OR B. FREQUENCY: TABLE 1, PART I"
	LAST 1.5 M OF FILL UNDER SUB-BASE LEVEL	COMPACTIBLE EARTH OR SELECTED SUBGRADE MATERIAL	100% SPMDD, 300 MM*, (200 MM)	AS PER OPSS 212, TABLE 1, FOR ALL EMBANKMENT USE	AS PER OPSS 501, METHODS A OR B. FREQUENCY: TABLE 1, PART I
	LAST 0.3 M OF FILL UNDER SUB-BASE LEVEL	SELECTED SUBGRADE MATERIAL OR GRANULAR	100% SPMDD, 300 MM*, (200 MM)	AS PER OPSS 212, TABLE 1, FOR ALL EMBANKMENT USE	AS PER OPSS 501, METHODS A OR B. FREQUENCY: TABLE 1, PART I
WITHIN STRUCTURE LIMIT (BRIDGE ABUTMENT, BOX CULVERT OR STATION)	INCLUDING A DISTANCE FROM THE STRUCTURE LIMITS ABUTMENT: 10 M STATION: 10 M BOX CULVERT: 5 M OR EQUIVALENT MAX HEIGHT OF BOX CULVERT WHICHEVER IS HIGHER	GRANULAR B TYPE II	FOR EMBANKMENT AND WALL BACKFILL**: • GENERAL: 98 % SPMDD, 300 MM* • 1.5 M BELOW THE TRACK SUB-BALLAST BASE LEVEL: 100% SPMDD, 300 MM*	AS PER OPSS 212, TABLE 1, FOR ALL EMBANKMENT USE	AS PER OPSS 501, METHODS A OR B. FREQUENCY: TABLE 1, PART II
			• FOR BOX CULVERT AND WITHIN THE STATION LIMITS: 100% OF ITS SPMDD, 300 MM*	AS PER OPSS 1010, TABLES B-1 AND B-2 (UNDER STATION LIMITS)	AS PER OPSS 501, FREQUENCY: TABLE 1, PART V
CSP AND SMALL CULVERT BELOW GRADE	WITHIN THE EXCAVATION, CONSIDERING PROPER TAPERS FROM CROSS-SECTION	GRANULAR B TYPE II	98 % SPMDD, 300 MM*	AS PER OPSS 212, TABLE 1	AS PER OPSS 501, FREQUENCY: TABLE 1, PART IV
MSE WITHIN THE REINFORCED ZONE	RETAINING WALLS	GRANULAR B TYPE II**	• GENERAL: 98 % SPMDD, 300 MM* • 1.5 M BELOW THE TRACK SUB-BALLAST BASE LEVEL: 100% SPMDD, 300 MM*	AS PER OPSS 1010 TABLES B-1 AND B-2	AS PER OPSS 501, FREQUENCY: TABLE 1, PART V
TRACK BED	BALLAST	AREMA NO. 4A	NO SPECIFIC COMPACTION IS REQUIRED (PACKED BY A BALLAST TAMPER)	AS PER OPSS 1010 TABLES B-1 AND B-2	---
	SUB-BALLAST	GRANULAR 'A' WITH LESS THAN 5% OF FINES (<75 MM) OR GRANULAR O	100 % SPMDD, 300 MM*	AS PER OPSS 1010 TABLES B-1 AND B-2	AS PER OPSS 501, FREQUENCY: TABLE 1, PART V
	SUB-BASE	GRANULAR B TYPE II	100 % SPMDD, 300 MM*	AS PER OPSS 1010 TABLES B-1 AND B-2"	AS PER OPSS 501, FREQUENCY: TABLE 1, PART V
SLOPED EMBANKMENT WITH TYPICAL 1.75H:1V	WITHIN THE EMBANKMENT	GRANULAR B TYPE II OR BETTER. MINIMUM PHI + 41 DEGREES	100 % SPMDD, 300 MM*	AS PER OPSS212, TABLE1, FOR SELECT EMBANKMENT USE	AS PER OPSS 501 METHODS A OR B. FREQUENCY : TABLE1, PART1

NOTES: * FILL LIFT BEFORE COMPACTION
** GRANULAR B TYPE II, CONTAINING <7.5% FINES
SOURCE : 20200331_660373_0000-003-4GEN-0003_02_GEOTECHNICAL_MATERIAL_SPECIFICATIONS.PDF

OTrain STAGE 2 ETAPE 2

Ottawa

CIVIL
SEGMENT 2
CORSO ITALIA STATION
GENERAL NOTES

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
A. IYER	I. ROMANSKYY
DRAWN	SEALED
A. IYER	D. SUDANI

DRAWING NUMBER 660373-1GSC-003-41DD-0005

MODEL NUMBER

DESIGN/BUILDER SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER
D. N. SUDANI
100114754
2021-03-29
PROVINCE OF ONTARIO

DESIGN FIRM SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

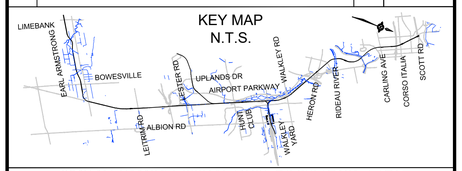
SCALE N.T.S.

ASSET No. -

ASSET GROUP -

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	DS	2021-03-29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

STANDARD SPECIFICATIONS

ONTARIO PROVINCIAL STANDARD SPECIFICATIONS (OPSS)

NO.	TITLE
MUNI 180	MANAGEMENT OF EXCESS MATERIALS
MUNI 182	ENVIRONMENTAL PROTECTION FOR CONSTRUCTION IN AND AROUND WATERBODIES AND ON WATERBODY BANKS
201	CLEARING, CLOSE CUT CLEARING, GRUBBING, AND REMOVAL OF SURFACE AND PILED BOULDERS
MUNI 206	GRADING
MUNI 209	EMBANKMENTS OVER SWAMPS AND COMPRESSIBLE SOILS
MUNI 212	EARTH BORROW
MUNI 305	GRANULAR SEALING
MUNI 310	HOT MIX ASPHALT
311	ASPHALT SIDEWALK AND SIDEWALK RESURFACING ASPHALT SIDEWALK, DRIVEWAY, BOULEVARD AND SIDEWALK RESURFACING
MUNI 312	ASPHALT CURB AND GUTTER SYSTEMS AND ASPHALT SURFACING OF GUTTERS
MUNI 314	UNTREATED SUBBASE, BASE, SURFACE, SHOULDER, SELECTED SUBGRADE, AND STOCKPILING
MUNI 316	EXTRUDED EXPANDED POLYSTYRENE FROST HEAVE TREATMENT
MUNI 330	IN-PLACE FULL DEPTH RECLAMATION OF BITUMINOUS PAVEMENT AND UNDERLYING GRANULAR
350	CONCRETE PAVEMENT AND CONCRETE BASE
351	CONCRETE SIDEWALK
353	CONCRETE CURB AND GUTTER SYSTEMS
MUNI 355	INSTALLATION OF INTERLOCKING CONCRETE PAVERS
MUNI 401	TRENCHING, BACKFILLING, AND COMPACTING
MUNI 402	EXCAVATING, BACKFILLING, AND COMPACTING FOR MAINTENANCE HOLES, CATCH BASINS, DITCH INLETS, AND VALVE CHAMBERS
MUNI 403	ROCK EXCAVATION FOR PIPELINES, UTILITIES, AND ASSOCIATED STRUCTURES IN OPEN CUT
MUNI 404	SUPPORT SYSTEMS
MUNI 405	PIPE SUBDRAINS
407	MANHOLES, CATCH BASINS AND DITCH INLETS (MTC)
408	ADJUSTING OR REBUILDING MAINTENANCE HOLES, CATCH BASINS, DITCH INLETS, AND VALVE CHAMBERS
MUNI 409	CLOSED-CIRCUIT TELEVISION (CCTV) INSPECTION OF PIPELINES
MUNI 410	PIPE SEWER INSTALLATION IN OPEN CUT
MUNI 421	PIPE CULVERT INSTALLATION IN OPEN CUT
422	PRECAST REINFORCED CONCRETE BOX CULVERTS AND BOX SEWERS IN OPEN CUT (REISSUED NOVEMBER 2010)
MUNI 490	SITE PREPARATION FOR PIPELINES, UTILITIES, AND ASSOCIATED STRUCTURES
MUNI 491	PRESERVATION, PROTECTION, AND RECONSTRUCTION OF EXISTING FACILITIES
MUNI 492	SITE RESTORATIONFOLLOWING INSTALLATION OF PIPELINES, UTILITIES, AND ASSOCIATED STRUCTURES
MUNI 501	COMPACTING
MUNI 506	DUST SUPPRESANTS
MUNI 510	REMOVAL
MUNI 511	RIP-RAP, ROCK PROTECTION, AND GRANULAR SHEETING
MUNI 512	INSTALLATION OF GABIONS
MUNI 517	DEWATERING FOR EXCAVATIONS
MUNI 518	CONTROL OF WATERING FROM DEWATERING OPERATIONS
MUNI 539	TEMPORARY PROTECTION SYSTEMS
703	PERMANENT SMALL SIGNS AND SUPPORT SYSTEMS
704	POST MOUNTED DELINEATORS
705	FLEXIBLE DELINEATORS
MUNI 706	TRAFFIC CONTROL DEVICES
710	PAVEMENT MARKING (FORMERLY OPSS 532)
MUNI 721	STEEL BEAM GUIDE RAIL AND CABLE GUIDE RAIL
MUNI 723	ENERGY ATTENUATORS
MUNI 732	GUIDE RAIL END TREATMENT - STEEL BEAM ENERGY ATTENUATING TERMINAL SYSTEMS
MUNI 733	STEEL BEAM TERMINAL SYSTEM
740	CONCRETE BARRIERS (FORMERLY OPSS 553)
741	TEMPORARY CONCRETE BARRIERS
MUNI 771	STANDARD HIGHWAY FENCE
MUNI 772	CHAIN-LINK FENCE
801	PROTECTION OF TREES (FORMERLY OPSS 565)
802	TOPSOIL (FORMERLY OPSS 570)

NO.	TITLE
MUNI 803	SODDING
MUNI 804	SEED AND COVER
MUNI 805	TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES
902	EXCAVATING AND BACKFILLING - STRUCTURES
MUNII 1001	AGRREGATES - GENERAL
MUNII 1002	AGRREGATES - CONCRETE
MUNII 1003	AGRREGATES - HOT MIX ASPHALT
MUNI 1004	AGGREGATES - MISCELLANEOUS
MUNII 1005	AGGREGATES - STREAMBED MATERIAL
MUNII 1006	AGGREGATES - SURFACE TREATMENT
MUNI 1010	AGGREGATES - BASE, SUBBASE, SELECT SUBGRADE, AND BACKFILL MATERIAL
MUNI 1101	PERFORMANCE GRADED ASPHALT CEMENT
MUNI 1102	LIQUID ASPHALT USED IN SPRAYING, SEALING, AND PRIMING APPLICATIONS
MUNI 1103	EMULSIFIED ASPHALT
MUNI 1150	HOT MIX ASPHALT
MUNI 1151	SUPERPAVE AND STONE MASTIC ASPHALT MIXTURES
1301	CEMENTING MATERIALS
1302	WATER
MUNI 1303	ADMIXTURES FOR CONCRETE
1305	MOISTURE VAPOUR BARRIERS
1306	BURLAP
1308	JOINT FILLER IN CONCRETE
1315	WHITE PIGMENTED CURING COMPOUND FOR CONCRETE
MUNI 1350	CONCRETE - MATERIALS AND PRODUCTION
1351	PRECAST REINFORCED CONCRETE COMPONENTS FOR MAINTENANCE HOLES, CATCH BASINS, DITCH INLETS AND VALVE CHAMBERS
1352	PRECAST CONCRETE BARRIERS
MUNI 1430	GABION BASKETS AND MATS
MUNI 1504	STEEL BEAM GUIDE RAIL
MUNI 1505	CHANNEL COMPONENTS FOR STEEL BEAM GUIDE RAIL
MUNI 1540	STANDARD HIGHWAY FENCE COMPONENTS
MUNI 1541	CHAIN-LINK FENCE COMPONENTS
1712	ORGANIC SOLVENT BASED TRAFFIC PAINT
1713	THERMOPLASTIC PAVEMENT MARKING MATERIALS
1714	FIELD REACTED POLIMERIC PAVEMENT MARKING MATERIALS
1715	PERFORMED PLASTIC PAVEMENT MARKING TAPE
1716	WATER-BORNE TRAFFIC PAINT
1750	TRAFFIC PAINT REFLECTORIZING GLASS BEADS
MUNI 1801	CORRUGATED STEEL PIPE (CSP) PRODUCTS
MUNI 1820	CIRCULAR AND ELLIPTICAL CONCRETE PIPE
MUNI 1841	NON-PRESSURE POLYVINYL CHLORIDE PIPE PRODUCTS
MUNI 1850	FRAMES, GRATES, COVERS, AND GRATINGS
MUNI 1860	GEOTEXTILES

CITY OF OTTAWA SPECIAL PROVISIONS

NO.	TITLE
F-1007	SEWER FLOW MANAGEMENT PLANS
F-1201	USE OF EXPLOSIVE
F-2060	EARTH EXCAVATION, GRADING (INCLUDING REMOVALS)
F-2065	EARTH DITCH CLEANOUT, ROCK DITCH CLEANOUT
F-2120	SELECT SUBGRADE MATERIAL FOR TRENCH BACKFILL
F-3051	GRANULAR SEALING
F-3101	PRICE ADJUSTMENT FOR PERFORMANCE GRADED ASPHALT CEMENT
F-3104	PERFORMANCE GRADED HOT MIX ASPHALT - MARSHALL DESIGN METHOD
F-3106	MATERIAL SPECIFICATION FOR SUPERPAVE HOT MIX ASPHALT MIXES

NO.	TITLE
F-3110	ASPHALT SIDEWALK, MEDIANS, BOULEVARDS, ISLANDS, PRIVATE WALKS AND DRIVEWAY
F-3130	CONSTRUCTION SPECIFICATION FOR HOT MIX ASPHALTEND RESULT
F-3145	CLEAR STONE
F-3147	GRANULAR MATERIAL
F-3500	ULTRA THIN WHITE TOPPING (UTW)
F-3510	CONCRETE SIDEWALK, MEDIANS, BOULEVARDS AND ISLANDS
F-3511	CONCRETE SIDEWALK "ALL INCLUSIVE"
F-3512	TACTILE WALKING SURFACE INDICATORS
F-3513	SLAB JACKING OF CONCRETE SIDEWALKS AND SLABS
F-3515	CONCRETE DRIVEWAYS
F-3531	CONCRETE CURB AND GUTTER
F-3532	PRECAST CONCRETE CURB
F-3550	INTERLOCKING CONCRETE PAVERS
F-4031	ROCK EXCAVATION FOR SEWERS AND WATERMAINS
F-4050	PIPE SUBDRAIN
F-4070	MAINTENANCE HOLES, CATCH BASINS, DITCH INLETS AND CHAMBERS
F-4080	ADJUSTING OR REBUILDING MAINTENANCE HOLES, CATCH BASINS, DITCH INLETS AND VALVE CHAMBERS
F-4090	CLEANING AND TELEVISING OF SEWERS
F-4100	PIPE SEWERS
F-4101	CONNECTING TO EXISTING MAINTENANCE HOLES, CATCH BASINS, DITCH INLETS CULVERTS AND SEWERS
F-4102	EXPANDED POLYSTYRENE INSULATION FOR SEWERS
F-4103	WEEPING TILE REROUTE WITH BACKWATER VALVE
F-4104	ABANDONMENT OF SEWER INFRASTRUCTURE
F-4210	PIPE CULVERTS, CONCRETE HEADWALLS AND CONCRETE APPURTANCES
F-4221	SUBSTITUTION OF PRECAST CONCRETE FOR CAST-IN-PLACE CONCRETE BOX CULVERTS
F-4411	WATERMAIN CONSTRUCTION BY OPEN CUT
F-4412	WATERMAIN PIPE
F-4413	VALVES, VALVES BOXES, VALVE CHAMBERS
F-4415	INSULATION FOR WATERMAINS
F-4491	COMMISSIONING OF WATERMAIN
F-4492	THRUST RESTRAINT OF WATERMAINS AND FITTINGS
F-4493	TRACING WIRE FOR WATERMAINS AND NON-METALLIC FORCEMAINS
F-4494	CATHODIC PROTECTION OF NEW WATERMAINS AND FITTINGS
F-5103	REMOVAL OF ASPHALT PAVEMENT, PARTIAL DEPTH
F-6011	STREETLIGHTING
F-6101	REMOVAL OF ELECTRICAL EQUIPMENT
F-6151	POLE ERECTION
F-6171	ROADWAY LUMINAIRES
F-7211	STEEL BEAM GUIDE RAIL, CABLE GUIDE RAIL, AND DELINEATOR POSTS
F-7216	REMOVAL AND SALVAGE OF GUIDERAIL
F-7217	SAFETY ITEMS CERTIFICATION
F-7301	ECCENTRIC LOADER
F-7302	SUPPLY AND INSTALL ECCENTRIC LOADER INCLUDING WIDENINGS
F-7401	CONCRETE BARRIER AND TALL WALL BARRIER
F-7721	WOOD FENCE
F-7722	CHAIN LINK FENCE COATING SYSTEM
F-8011	TREE PROTECTION
F-8021	TOPSOIL, IMPORTED
F-8031	SODDING, STAKED AND UNSTAKED
F-8041	SEEDING AND MULCHING
F-8045	MISCELLANEOUS REINSTATEMENT OF ADJACENT PROPERTIES
F-9040	CONCRETE STRUCTURES
F-9045	CONCRETE - MATERIALS AND PRODUCTION
F-9049	FLAGSTONE SLOPE PAVING

REPORTS

NO.	TITLE
	ENVIRONMENTAL MANAGEMENT PLAN (EMP)
	TRAFFIC MANAGEMENT PLAN (TMP)

CONTRACT DESIGN ESTIMATION AND DOCUMENTATION (CDED)

NO.	TITLE
SSP S99S22	RETAINED SOIL SYSTEM WALL/SLOPE LOW SYSTEM

NOTES:

1. ORDER OF PRECEDENCE IS CITY OF OTTAWA (COO) SPECIFICATIONS AND DRAWINGS HIGHER THAN OPSS AND OPSDS UNLESS, OTHERWISE AS NOTED IN GEOTECHNICAL REPORTS OR DRAWINGS.

OTrain STAGE 2 ETAPE 2 — Ottawa

CIVIL
SEGMENT 2
CORSO ITALIA STATION
STANDARD SPECIFICATIONS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
A. IYER	I. ROMANSKYY
DRAWN	SEALED
A. IYER	D. SUDANI

DRAWING NUMBER: 660373-1GSC-003-41DD-0006

MODEL NUMBER:

DESIGN/BUILDER: SNC·LAVALIN TransitNEXT

PRIMARY SEAL: LICENSED PROFESSIONAL ENGINEER — D. N. SUDANI — 100114754 — 2021-03-29 — PROVINCE OF ONTARIO

DESIGN FIRM: SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

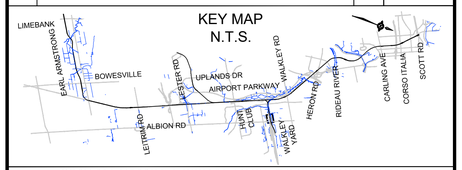
SCALE: N.T.S.

ASSET No.: -

ASSET GROUP: -

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	DS	2021-03-29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

TITLEBLOCK: 790mm x 534mm
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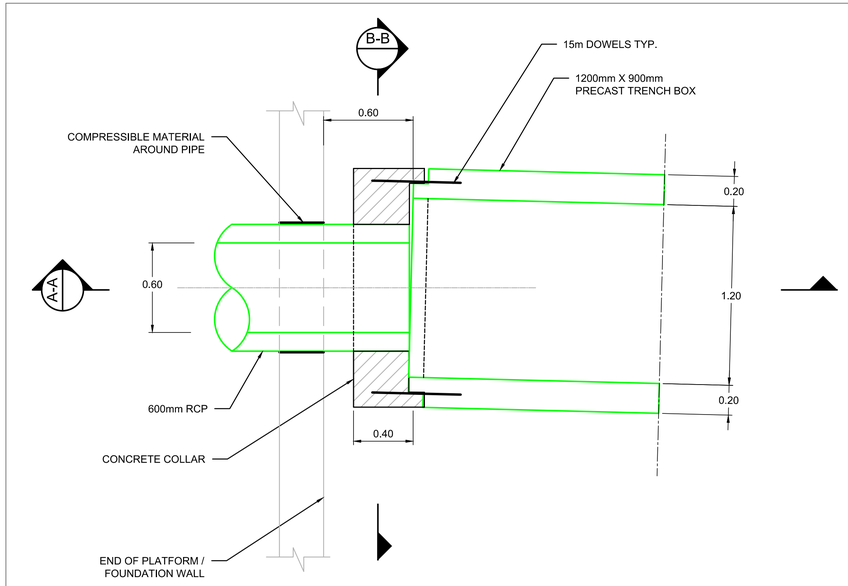
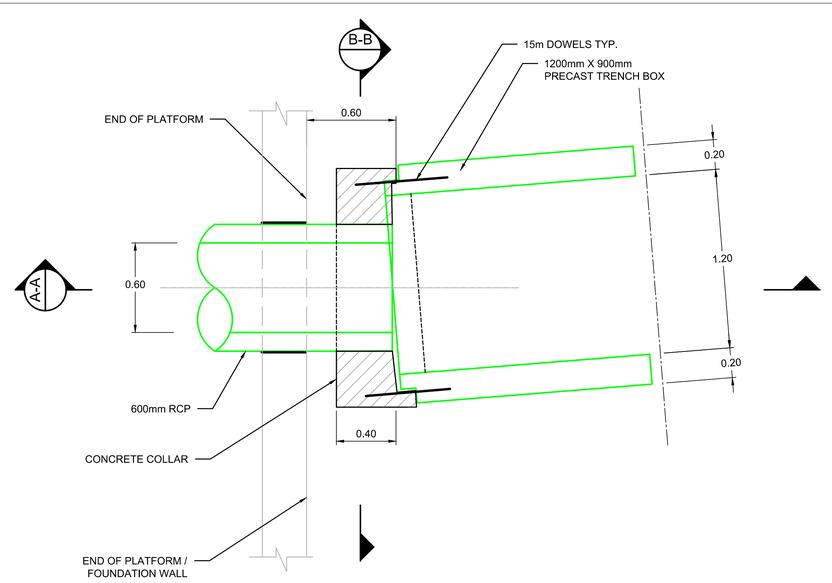
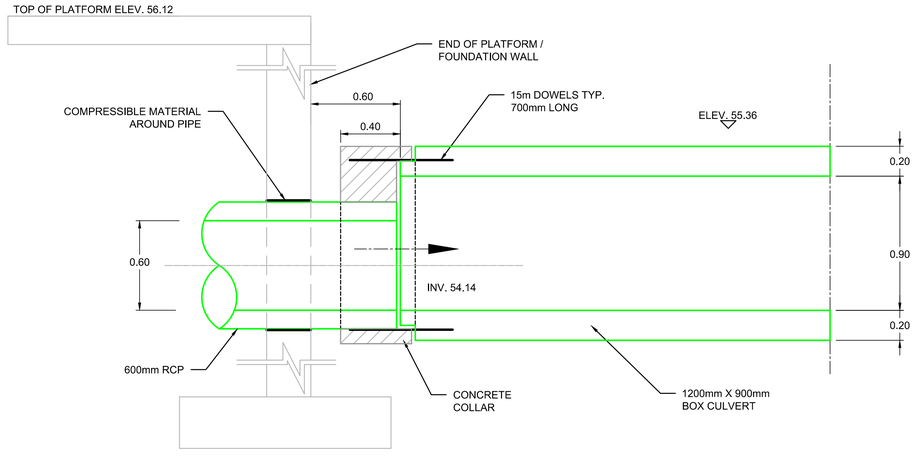


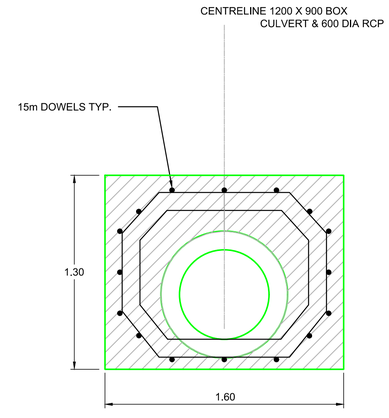
PLAN - PRECAST TRENCH BOX -210



PLAN - PRECAST TRENCH BOX -211



A-A SECTION
SCALE 1:20



B-B SECTION
SCALE 1:20

1 DETAILS - 600mm TO 1200X900 BOX CULVERT CONNECTION
7501,7505
SCALE 1:20

NOTE:

1. REFER TO DRAWING 660373-1GBC-003-41DD-0005 FOR GENERAL NOTES.

OTrain STAGE 2 ETAPE 2

Ottawa

CIVIL
SEGMENT 2
CORSO ITALIA STATION
CULVERT CONNECTION DETAILS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
V. MYKYTYAK	I. ROMANSKYY
DRAWN	SEALED
V. MYKYTYAK	D. SUDANI

DRAWING NUMBER
660373-1GSC-003-41DD-3101

MODEL NUMBER
C3D-PR-SLV-41-S200-COR-Guideway

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER
D. N. SUDANI
100114754
2021-03-29
PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

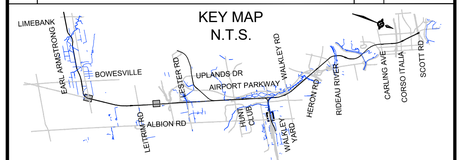
SCALE
AS SHOWN

ASSET No.
-

ASSET GROUP
-

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	DS	2021-03-29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

TITLEBLOCK: 790mm x 534mm
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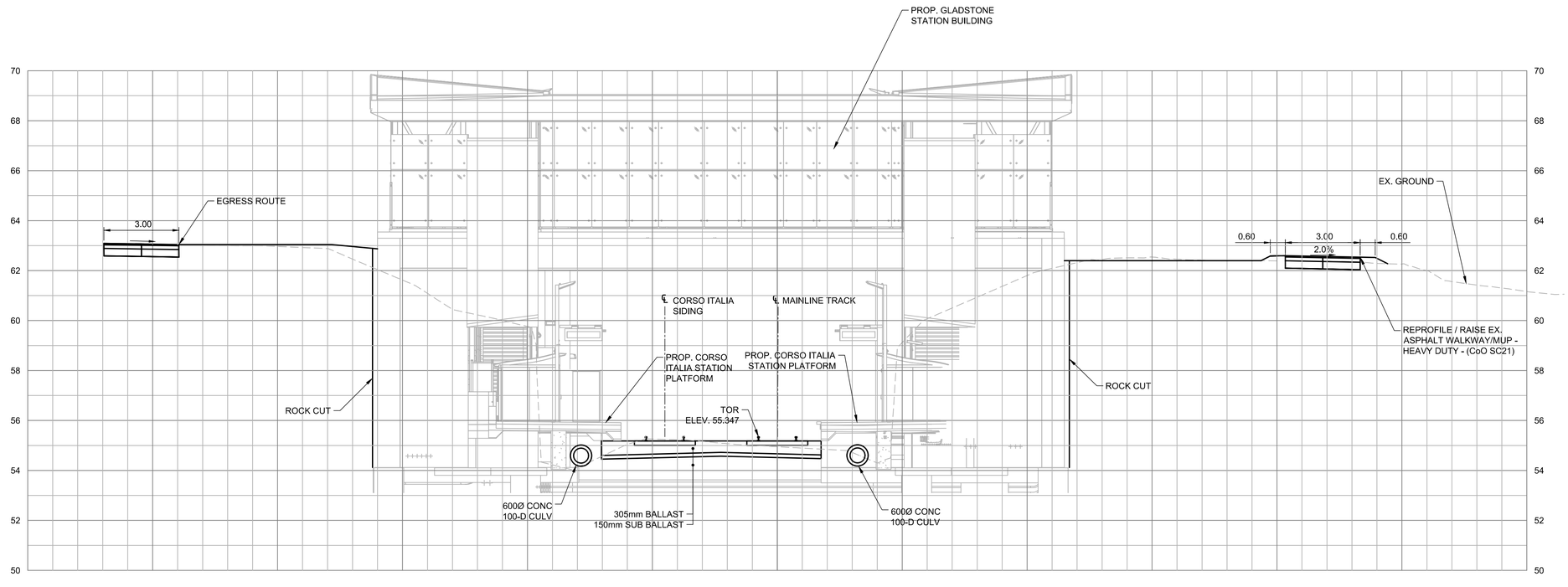
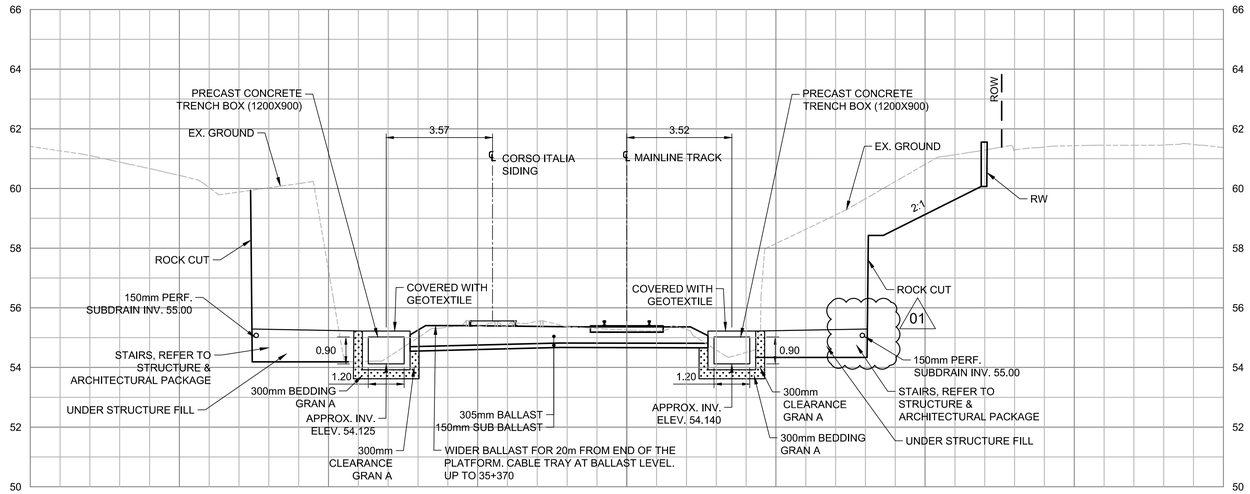
TITLEBLOCK: 790mm x 534mm



A 7501 SECTION
SCALE 1:100



B 7501 SECTION
SCALE 1:100

OTrain STAGE 2 ETAPE 2

Ottawa

CIVIL
SEGMENT 2
CORSO ITALIA STATION
TYPICAL SECTIONS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
V. MYKYTYAK	I. ROMANSKYY
DRAWN	SEALED
V. MYKYTYAK	D. SUDANI

DRAWING NUMBER
660373-1GSC-003-41DD-3001

MODEL NUMBER
C3D-PR-SLV-41-S200-COR-Guideway

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER
D. N. SUDANI
100114754
2021-07-30
PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

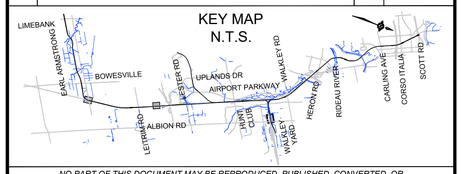
SCALE
AS SHOWN

ASSET No.
-

ASSET GROUP
-

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	DS	2021-03-29
01	REVISED ISSUED FOR CONSTRUCTION	DS	2021-07-30

KEY MAP
N.T.S.



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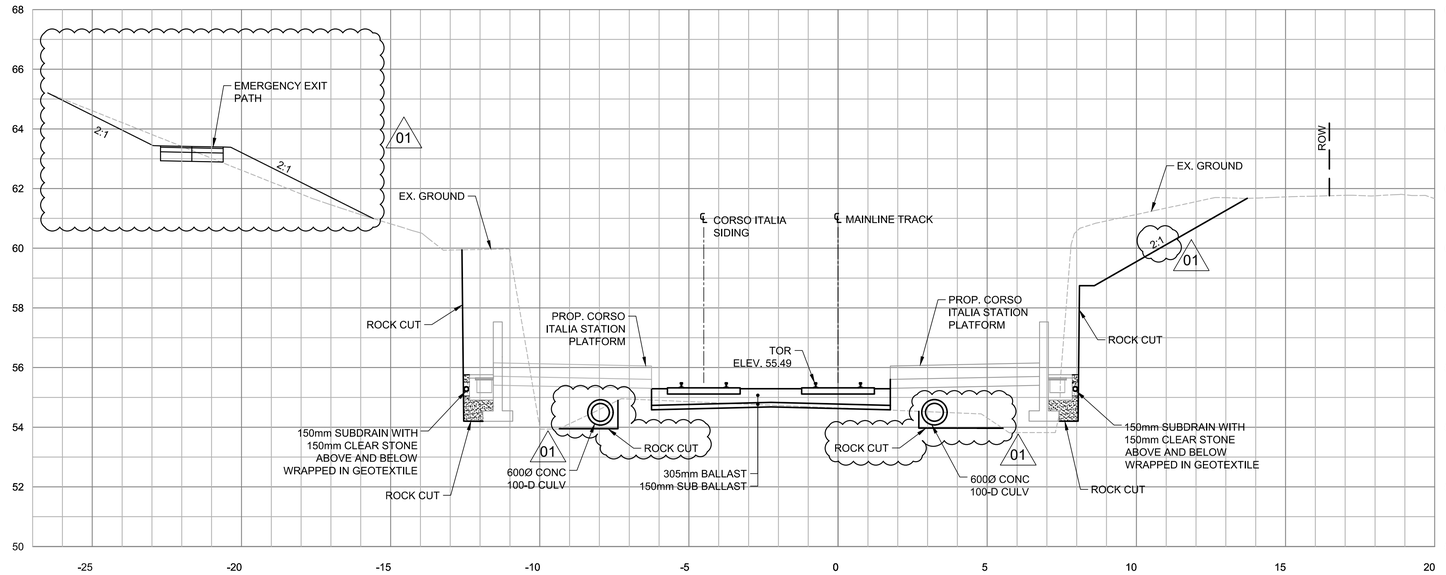
ISSUED FOR CONSTRUCTION
2021-07-30

2021-Jun-8 12:02:29 AM

01

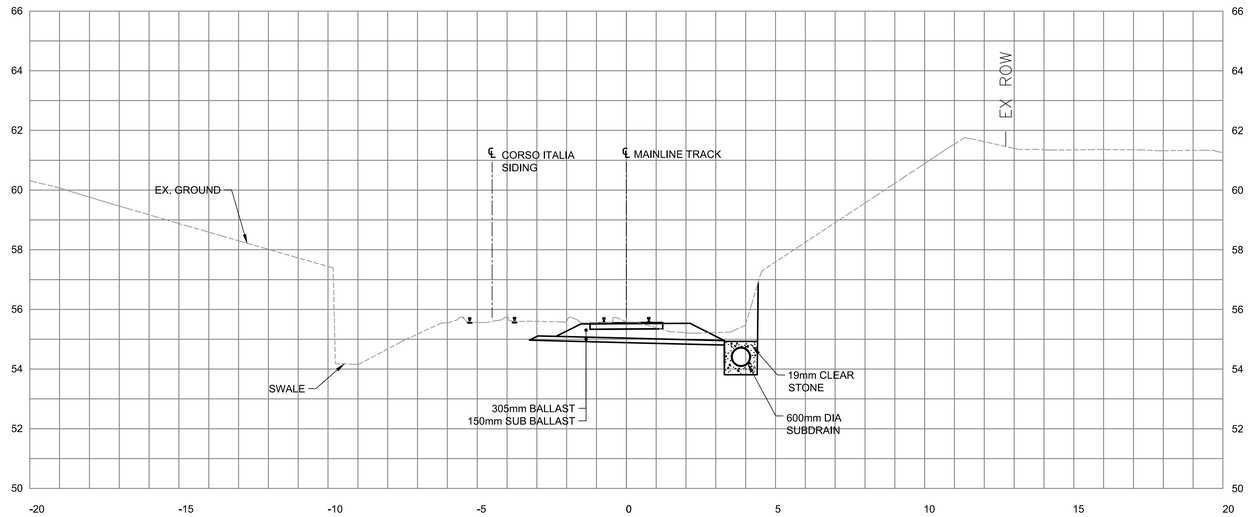
TITLEBLOCK: 790mm x 534mm

35+330



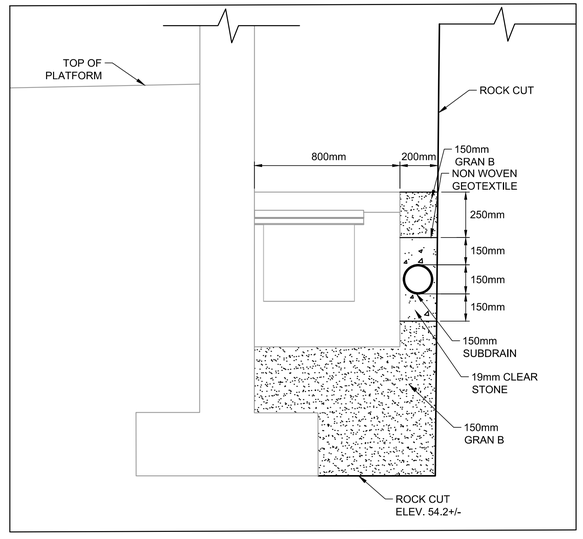
C 7501 SECTION
SCALE 1:100

35+400



D 7501 SECTION
SCALE 1:100

SUBDRAIN DETAIL



SCALE N.T.S.

OTrain STAGE 2 ETAPE 2

Ottawa

CIVIL
SEGMENT 2
CORSO ITALIA STATION
TYPICAL SECTIONS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
V. MYKYTYAK	I. ROMANSKYY
DRAWN	SEALED
V. MYKYTYAK	D. SUDANI

DRAWING NUMBER
660373-1GSC-003-41DD-3002

MODEL NUMBER
C3D-PR-SLV-41-S200-COR-Guideway

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER
D. N. SUDANI
100114754
2021-07-30
PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

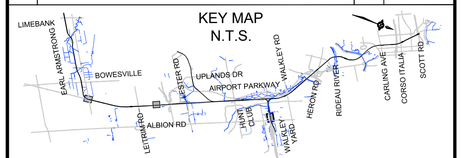
SCALE
AS SHOWN

ASSET No.
-

ASSET GROUP
-

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	DS	2021-03-29
01	REVISED ISSUED FOR COSTRUCTION	DS	2021-07-30

KEY MAP
N.T.S.



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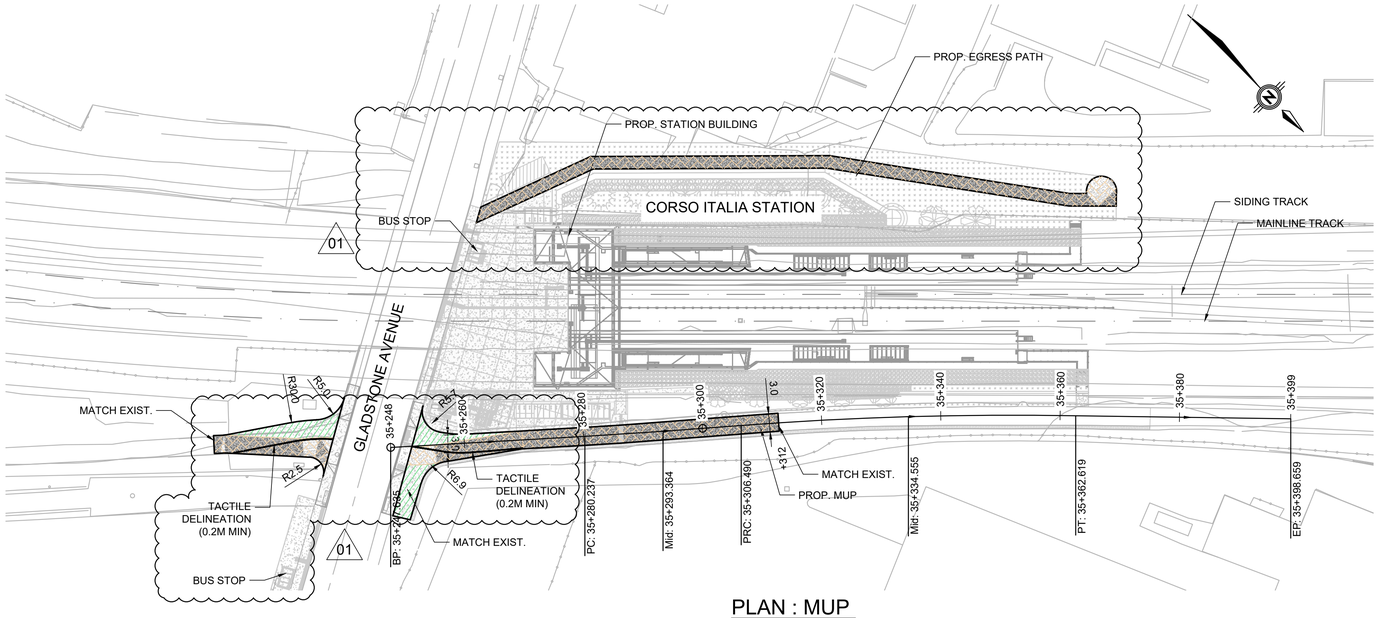
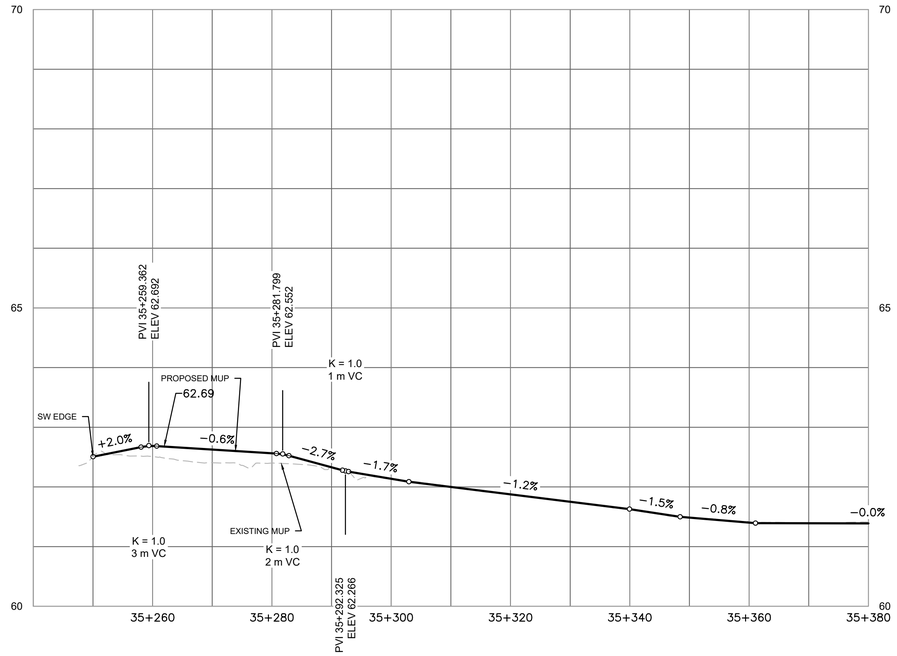
ISSUED FOR CONSTRUCTION
2021-07-30

2021-Jun-8 12:02:29 AM

TITLEBLOCK: 790mm x 534mm



PLAN : MUP



PROFILE : MUP

```
**********
ALIGNMENT NAME: S230-CORSO ITALIA STATION MUP EAST
STATION RANGE: START:  35+247.63, END: 35+376.21
**********

BEGIN S230-CORSO ITALIA STATION MUP EAST
N 5,029,642.0944  E 366,337.6283          35+247.63

LINE (1)
N48° 36' 32.34"W   32.602M
N 5,029,663.6509  E 366,313.1695          35+280.24
LINE (1)

CURVE (2)
BC  N 5,029,663.6509  E 366,313.1695       35+280.24
CTR  N 5,028,456.7952  E 365,258.3183
PI  N 5,029,672.2895  E 366,303.2861

DIRECTION BACK  N48° 50' 41.81"W
RADIUS   1,602.876M
DELTA   0°56'18"(LT)
LENGTH   26.253M
TANGENT   13.127M
CHORD DIRECTION   N49° 18' 50.95"W
DISTANCE  26.252M
DIRECTION AHEAD N49° 47' 00.10"W

EC  N 5,029,680.7651  E 366,293.2625       35+306.49
CURVE (2)

REVERSING CURVE

**NON-TANGENT** RADIAL BEARING S40° 17' 56.79"W
CURVE (3)
BC  N 5,029,680.7651  E 366,293.2625       35+306.49
CTR  N 5,030,138.0994  E 366,681.0980
PI  N 5,029,698.9300  E 366,271.8425

DIRECTION BACK  N49° 42' 03.21"W
RADIUS   599.642M
DELTA   5°21'47"(RT)
LENGTH   56.130M
TANGENT   28.085M
CHORD DIRECTION   N47° 01' 09.49"W
DISTANCE  56.109M
DIRECTION AHEAD N44° 20' 15.78"W

EC  N 5,029,719.0175  E 366,252.2140       35+362.62
CURVE (3)

LINE (4)
**NON-TANGENT** RADIAL BEARING S45° 39' 44.22"W
N44° 35' 41.59"W   13.590M
N 5,029,728.6947  E 366,242.6728          35+376.21
LINE (4)

N 5,029,728.6947  E 366,242.6728          35+376.21
END S230-CORSO ITALIA STATION MUP EAST

**********
ALIGNMENT LENGTH: 128.574M
**********
```

LEGEND:

- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- 01

OTrain STAGE 2 ETAPE 2 — Ottawa

CIVIL
SEGMENT 2
CORSO ITALIA STATION
MUP PLAN & PROFILE

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
V. MYKYTYAK	I. ROMANSKY
DRAWN	SEALED
A. IYER	D. SUDANI

DRAWING NUMBER: 660373-1CRC-003-41DD-7503

MODEL NUMBER: C3D-PR-SLV-41-S200-COR-MUP-GS

DESIGN/BUILDER: SNC·LAVALIN TransitNEXT

PRIMARY SEAL: LICENSED PROFESSIONAL ENGINEER — D. N. SUDANI — 100114754 — 2021-07-30 — PROVINCE OF ONTARIO

DESIGN FIRM: SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

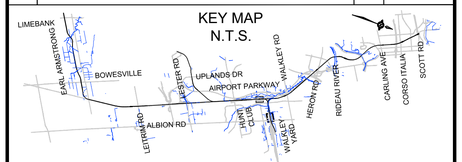
SCALE
HORIZONTAL 1:500 FULL SIZE / 1:1000 HALF SIZE
0m 5 10 20 40
0m 0.5 1 2 4
VERTICAL 1:5 FULL SIZE / 1:10 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	DS	2021-03-29
01	REVISED ISSUED FOR CONSTRUCTION	DS	2021-07-30

KEY MAP N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

pw:\\SLI3969.sli.bz:Trillium\Documents\00 - WIP Private\41 - Civil\41DD - Drawings\Stations\02_CR\660373-1CRC-003-41DD-7503.dwg
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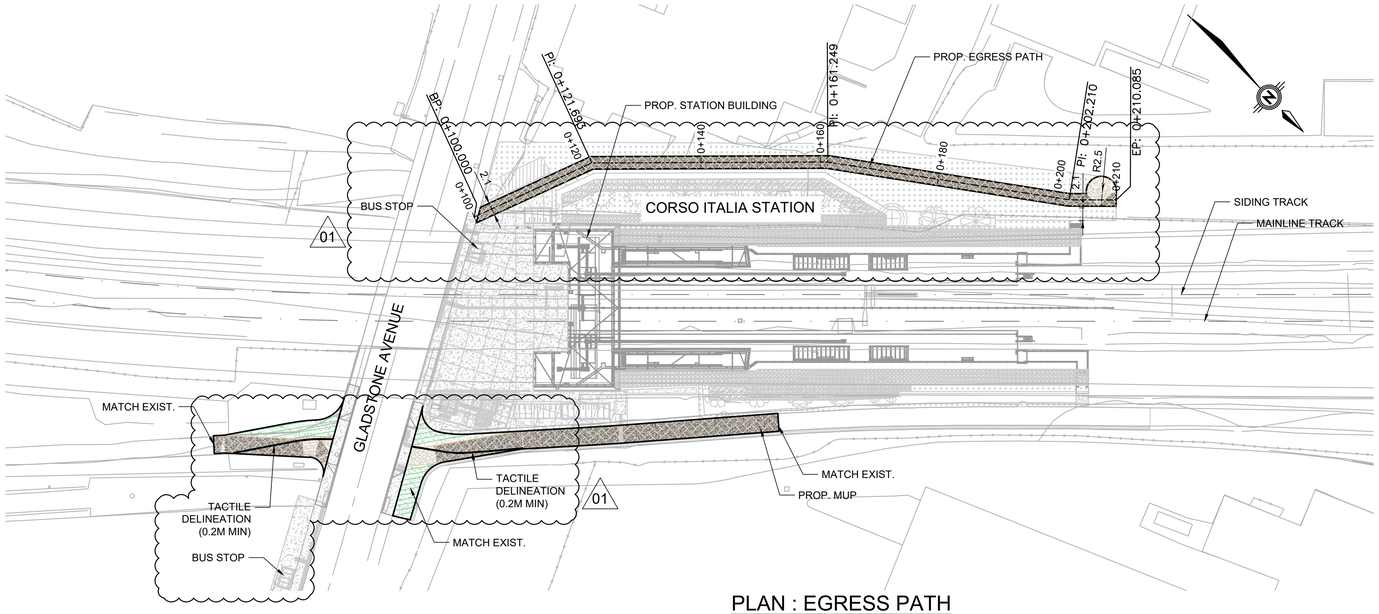
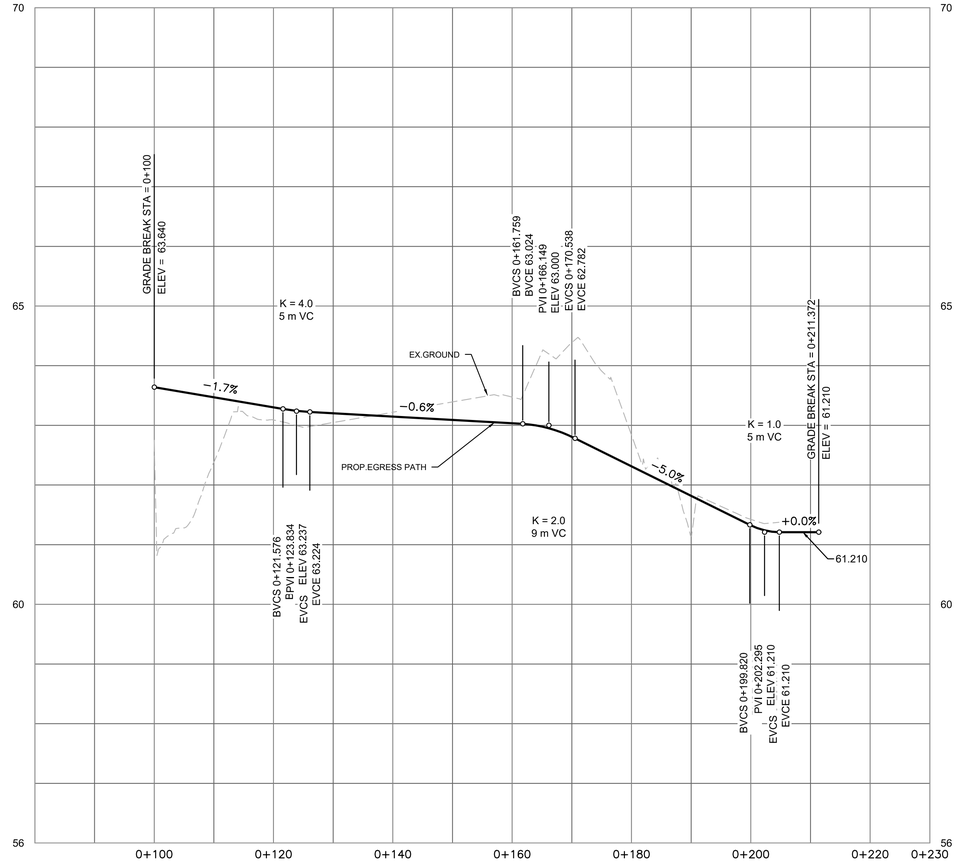


PLAN : EGRESS PATH



PROFILE : EGRESS PATH

ALIGNMENT NAME: S230-GLADSTONE STATION PATHWAY WEST
STATION RANGE: START: 0+100.000, END: 0+210.085

BEGIN S230-GLADSTONE STATION PATHWAY WEST
N 5,029,624.458 E 366,300.501 0+100.000

LINE (1)
N70° 01' 36.56"W 21.693M
N 5,029,631.868 E 366,280.112 0+121.693
LINE (1)

LINE (2)
N45° 33' 39.37"W 39.556M
N 5,029,659.563 E 366,251.869 0+161.249
LINE (2)

LINE (3)
N36° 26' 30.42"W 40.961M
N 5,029,692.514 E 366,227.538 0+202.210
LINE (3)

LINE (4)
N45° 09' 43.72"W 7.875M
N 5,029,698.067 E 366,221.954 0+210.085
LINE (4)

N 5,029,698.067 E 366,221.954 0+210.085
END S230-GLADSTONE STATION PATHWAY WEST

ALIGNMENT LENGTH: 110.085M

OTrain STAGE 2 ETAPE 2

Ottawa

CIVIL
SEGMENT 2
CORSO ITALIA STATION
EGRESS PATH PLAN & PROFILE

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
V. MYKYTYAK	I. ROMANSKY
DRAWN	SEALED
A. IYER	D. SUDANI

DRAWING NUMBER
660373-1GSC-003-41DD-7504

MODEL NUMBER
C3D-PR-SLV-41-S200-COR-MUP-GS

PRIMARY SEAL

LICENSED PROFESSIONAL ENGINEER
D. N. SUDANI
100114754
2021-07-30
PROVINCE OF ONTARIO

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

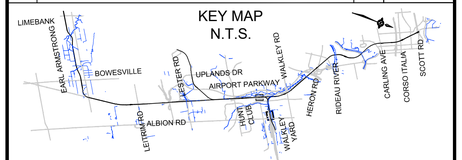
SCALE
HORIZONTAL 1:500 FULL SIZE / 1:1000 HALF SIZE
0m 5 10 20 40
0m 0.5 1 2 4
VERTICAL 1:5 FULL SIZE / 1:10 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	DS	2021-03-29
01	REVISED ISSUED FOR CONSTRUCTION	DS	2021-07-30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

LEGEND:
ASPHALT PAVEMENT
01 CONCRETE PAVEMENT

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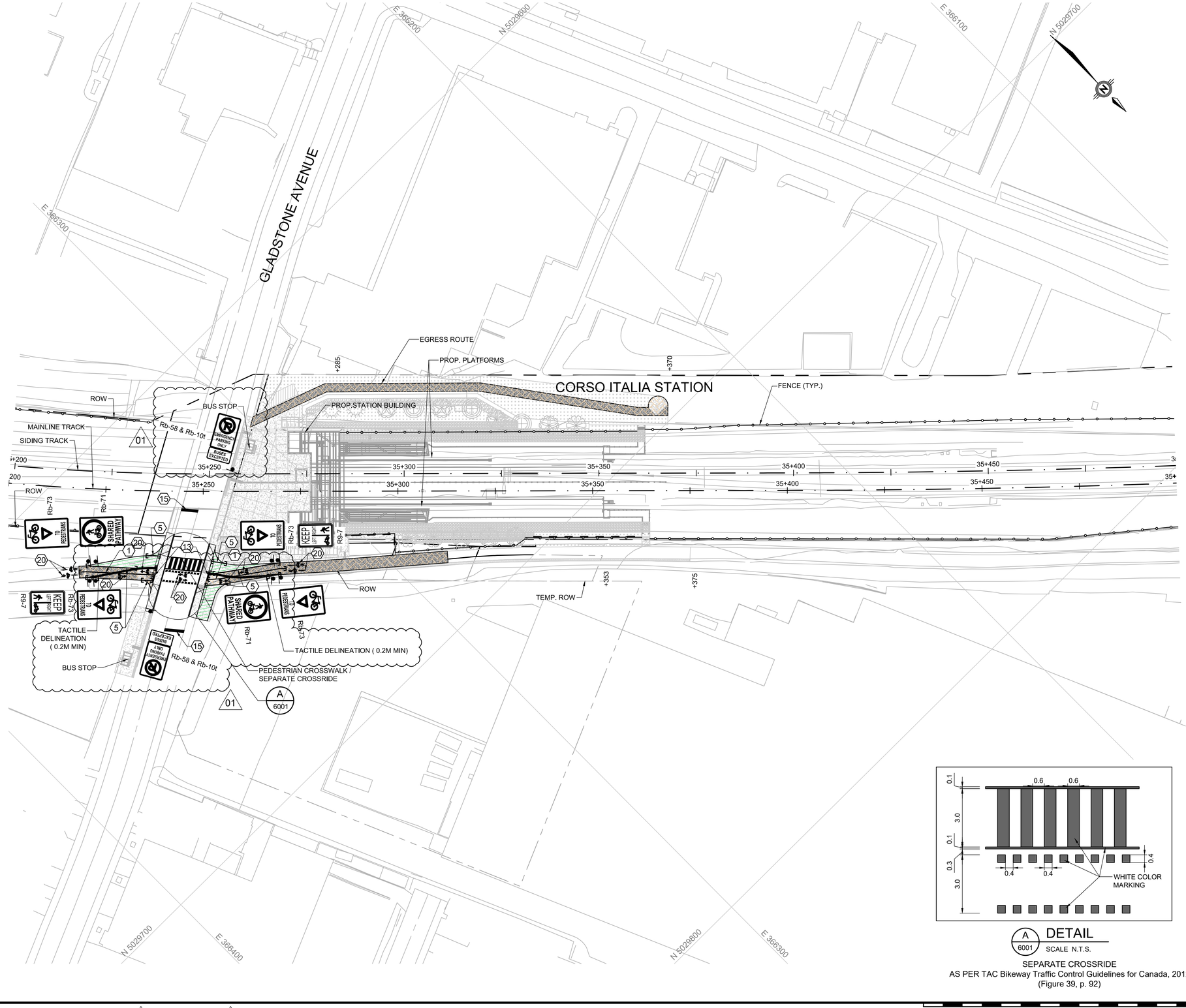
TITLEBLOCK: 790mm x 534mm



A/6001 DETAIL
SCALE N.T.S.

SEPARATE CROSSRIDE
AS PER TAC Bikeway Traffic Control Guidelines for Canada, 2012
(Figure 39, p. 92)

LEGEND

1	SOLID YELLOW, 10cm
2	SOLID DOUBLE YELLOW, 10cm
3	3-6-3 BROKEN YELLOW, 10cm
4	SOLID YELLOW, 20cm
5	SOLID WHITE, 10cm
6	3-3 3 BROKEN WHITE, 10cm
7	3-6-3 BROKEN WHITE, 10cm
8	3-9-3 BROKEN WHITE, 10cm
9	SOLID WHITE, 20cm
10	1-1-1 BROKEN WHITE, 20cm
11	3-3-3 BROKEN WHITE, 20cm
12	3-3-3 BROKEN WHITE, 30cm
13	SOLID WHITE, 30cm
14	SOLID WHITE, 45cm
15	SOLID WHITE, 60cm
20	SYMBOLS

1. 3-3-3, 3-6-3, 3-9-3 DENOTE PAVEMENT MARKING SPACING (e.g., 3m LINE, 6m GAP, 3m LINE).
2. USE (1) TO DENOTE PAVEMENT MARKING.

NOTE:

1. REFER TO DRAWING 660373-1GSC-003-41DD-0005 FOR GENERAL NOTES.

OTrain STAGE 2 ETAPE 2

Ottawa

CIVIL
SEGMENT 2
CORSO ITALIA STATION
PAVEMENT MARKING PLAN

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
V. MYKYTYAK	I. ROMANSKYY
DRAWN	SEALED
V. MYKYTYAK	D. SUDANI

DRAWING NUMBER
660373-1GSC-003-41DD-6001

MODEL NUMBER
C3D-PR-SLV-41-S200-COR-Guideway

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER
D. N. SUDANI
100114754
2021-07-30
PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

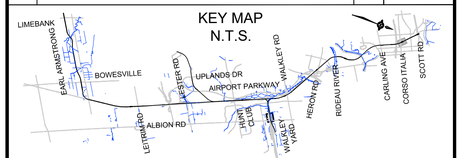
SCALE
HORIZONTAL 1:500 FULL SIZE
1:1000 HALF SIZE
0m 5 10 20 40

ASSET No.
-

ASSET GROUP
-

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	DS	2021-03-29
01	REVISED ISSUED FOR CONSTRUCTION	DS	2021-07-30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

2021-Jul-28 7:15:04 PM

TRILLIUM LINE EXTENSION PROJECT

LANDSCAPE
CORSO ITALIA STATION

SEGMENT 2

ISSUED FOR CONSTRUCTION

JULY 30, 2021

CONTRACT NO. - LRT19-1025

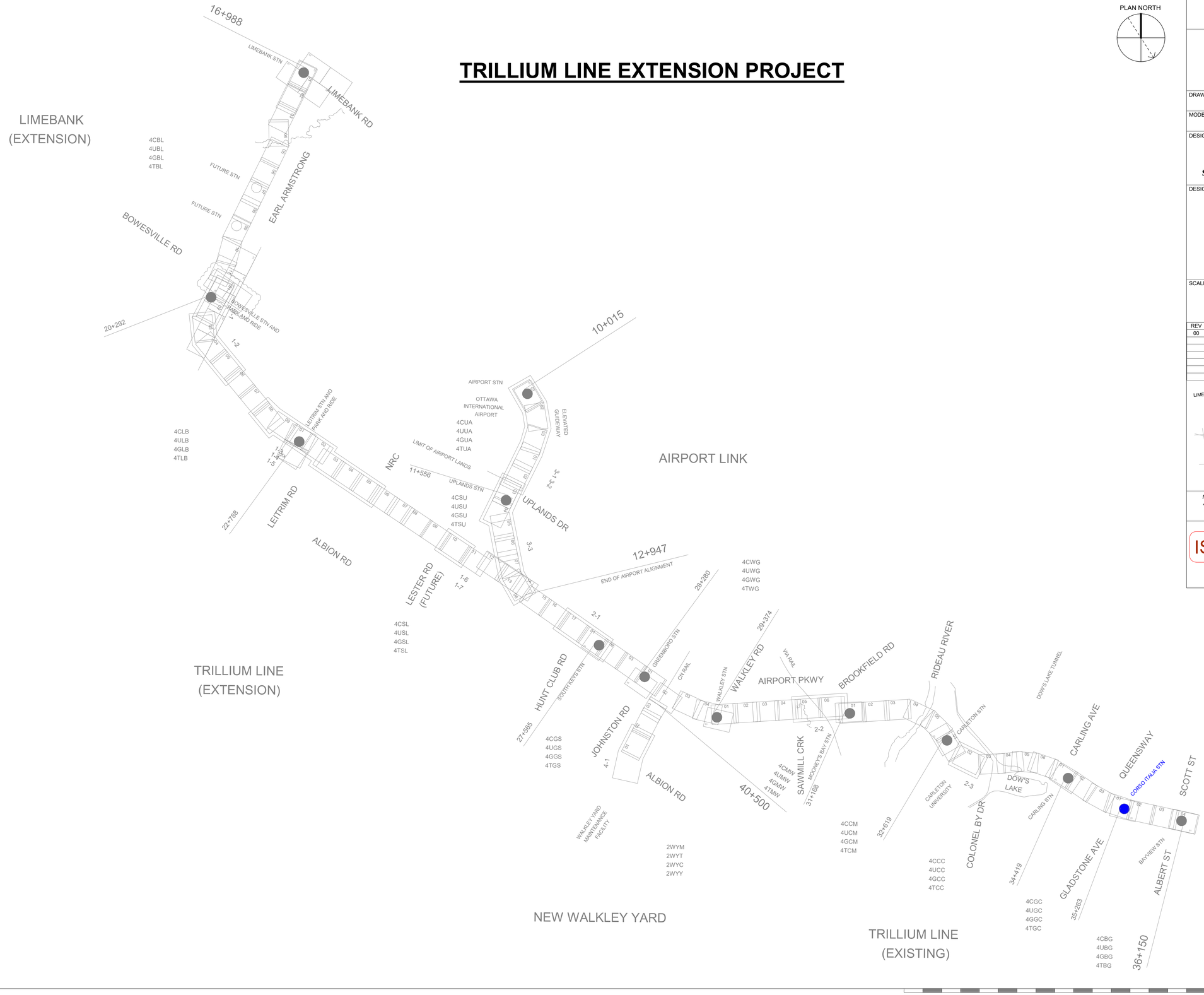
02/09/2021 16:17:24
BIM 360://5196059-Trillium Line South Ext-DD/660373-1GSC-005-4UDM-1000.rvt

DRAWING No. 660373-1GSC-005-4UDD-0001 | 01

SUPERCEDES PRINTS TO THIS NUMBER WITH LETTER PREVIOUS TO

TITLEBLOCK: 790mm x 534mm

TRILLIUM LINE EXTENSION PROJECT



PLAN NORTH

OTrain STAGE 2 ETAPE 2

Ottawa

LANDSCAPE
CORSO ITALIA STATION
GENERAL
KEY PLAN

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
P. DUDLEY	S. COVELL
DRAWN	SEALED
A. GATICA	R. JAMES

DRAWING NUMBER
660373-1GSC-005-4UDD-0002

MODEL NUMBER
660373-1GSC-005-4UDM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ASSOCIATION OF LANDSCAPE ARCHITECTS — RYAN G. JAMES — MEMBER — 2021-03-29

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

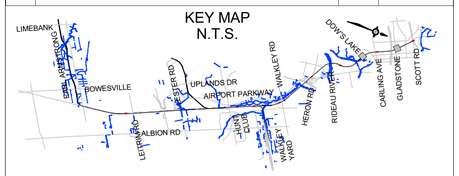
SCALE
N.T.S.

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	SC	2021-03-29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

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TITLEBLOCK: 790mm x 534mm

FURNITURE LEGEND		
SYMBOL	CODE	DESCRIPTION
	2-D1	RECEPTACLE
	2-D2	BENCH
	2-D3	BIKE RACK
	2-D4	BOLLARD
	2-D6	BIKE SHELTER
	2-D9	ALGONQUIN WAYFINDING WHEEL
	5-D1	CHAIN LINK FENCE - (OPSD 972.130)
	5-D7	STEEL GUARDRAIL - (CoO F12)
		STREETLIGHT POLES REFER TO 47A PACKAGE
		BUS SHELTER (REFER TO ARCHITECTURAL PACKAGE - 660373-0000-004-44DD-7200)

01

HARDSCAPE LEGEND		
SYMBOL	CODE	DESCRIPTION
	1-D5	GUIDANCE TWSI
	1-D6	ATTENTION TWSI
	1-D7	TRENCH DRAIN
	1-D8	TRENCH DRAIN GRATE
	1-D10	DELINEATOR STRIP
	3-D2	CIP CONCRETE RETAINING WALL
	1-D1	ASPHALT WALKWAY - HEAVY DUTY (CoO SC21)
	1-D2	CONCRETE PAVING - HEAVY DUTY (CoO SC23)
	1-D11	STEEL FACED CURB AND PLATFORM (CoO SC11.1)

01

TREE LEGEND			
SYMBOL	CODE	*BOTANICAL NAME*	COMMON NAME
CONIFEROUS TREES			
	PG	*Picea glauca*	White Spruce
DECIDOUS TREES			
	AF	*Acer x freemanii*	Autumn Blaze Maple
	CO	*Celtis occidentalis*	Hackberry
	GT	*Gleditsia tricanthos var. inermis*	Thornless Honeylocust
	QR	*Quercus rubra*	Red Oak

PLANTING LEGEND				
HATCH	SYMBOL	CODE	*BOTANICAL NAME*	COMMON NAME
CONIFEROUS SHRUBS				
		Jss	*Juniperus sabina skandia*	Prince of Wales Juniper
		Pms	*pinus mugo slowmound*	Slowmound Mugho Pine
DECIDUOUS SHRUBS				
		Csa	*cornus sericea 'farrow'*	Artic Fire Dogwood
		Rag	*Rhus typhina*	Gro-Low Fragant Sumac
		Vd	*Viburnum dentatum*	Arrowwood Viburnum
ORNAMENTAL SHRUBS				
		Sh	*Sporobolus heterolepsis*	Prairie Dropseed
SEED MIX				
		Smd	*Refer to the notes on drawing '0003'*	Dry Seed Mix
		Sod	*Refer to the notes on drawing '0003'*	Sod

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GENERAL:

1. All general site information and conditions are compiled from Consultant's field notes and plans provided by the owner and are supplied for information purposes only. It shall be the responsibility of the Contractor to verify the accuracy of all the information obtained from this plan.

2. Contractor to check and report any discrepancies before commencing work. No responsibility is borne by the Consultants for unknown utilities or subsurface conditions.

3. The Contractor shall determine the exact location, size, material, and elevation of all existing utilities prior to commencing construction. Protect and assume responsibility for all existing utilities regardless of being shown on the drawings.

4. Contractor to check and verify all dimensions and quantities on site and report any errors or omissions to the Consultant.

5. Drawings not to be scaled. Work to dimensions only.

6. This drawing set is to be read and interpreted in conjunction with all the contract details and specifications, including related civil, utility, structural, architectural, mechanical, electrical, environmental, geotechnical, industrial, railroad / trackwork, and survey information.

7. Contractor is responsible for all fees arising from the completion of works conveyed by these drawings, details and specifications. Fees include but are not limited to: securities, permit fees, deposits, application fees, letters of credit, or any other related funding requests.

8. All construction to be carried out in accordance with the most current provincial and municipal standards and specifications. Order of precedence is Trillium Line Extension Ottawa Stage 2 LRT Project Agreement-Execution Version, City of Ottawa, and then Ontario Provincial Standards for Roads and Public Works.

9. All existing vegetation to be retained shall be protected for the duration of construction according to the contract details and specifications.

10. Contractor to coordinate all access and protect the general public and users of the site with appropriate control fencing and supervision throughout the construction period, to the satisfaction of the Consultant.

11. Contractor shall coordinate and schedule all work with other trades and contractors.

12. Contractor responsible for the removal and off-site disposal of all materials as required to facilitate new construction. All items and materials identified by the Consultant to be salvaged shall be stored at a location on site as identified by the Consultant.

13. Site shall be maintained in a clean and orderly state for the duration of construction; all work shall be performed in accordance with the Occupational Health and Safety Act.

14. Reinstate all areas and items damaged or disturbed, beyond the limit of work, as a result of construction activities, including but not limited to construction staging areas, haul roads, stockpile areas, etc. to the satisfaction of the Consultant. Unless otherwise noted, Construction Team shall reinstate all disturbed turf areas with 150mm topsoil and seed. Unless otherwise noted, Construction Team shall reinstate all other areas to pre-construction condition.

15. Construction Team to provide Staging Plans to the Consultant prior to start of construction.

TREE PROTECTION:

The following protection measures must be implemented for retained trees, both on site and on adjacent sites, prior to any tree removal or site works and maintained for the duration of construction on site:

1. Tree Protection shall conform to City Special Provisions F-8011.

2. Under the guidance of a landscape architect/arborist, erect a fence at the critical root zone (CRZ) of trees where the CRZ is established as being 10 centimeters from the trunk of a tree for every centimeter of trunk diameter at breast height. The CRZ is calculated as DBH x 10cm. Refer to the tree protection fence detail.

3. When trees to be removed overlap with the CRZ of trees to be preserved: cut roots at the edge of the CRZ and grind down stumps after tree removals, do not pull out stumps. Ensure there is not root pulling or disturbance of the ground within the CRZ.

4. Seek guidance of City Tree Inspector should root pruning be required. Always follow best arboricultural procedures where root must be pruned. If roots must be cut, roots 20mm or larger should be cut at right angles with clean, sharp horticultural tools without tearing, crushing, or pulling.

5. Hand work only where required within the CRZ; absolutely no machinery permitted.

6. Do not place any material or equipment within the CRZ of any tree. Only tunnel or bore when digging within the CRZ of a tree.

7. Do not attach any signs, notices or posters to any tree.

8. Do not disturb, raise or lower the existing grade within the CRZ without approval.

9. Do not damage the root system, trunk, or branches or any tree.

10. Ensure that exhaust fumes from all equipment are directed away from any tree canopy.

GRADING AND SERVICING:

1. Contractor to refer to Civil Engineer drawings, specifications and details for all grading, drainage, and servicing information.

2. Contractor shall verify accuracy of existing topography and survey prior to proceeding with grading works. Any discrepancies shall be brought to the attention of the Consultant. Commencement of grading works shall constitute acceptance of site conditions.

3. All areas of the site designated for hard landscaping, or the construction of structures, shall be stripped of all topsoil and organic matter. Topsoil shall be stripped to its full depth, exercising caution not to mix topsoil with subsoil.

4. Provide drainage as indicated in grading plan. Round all tops and toes of slopes, smoothly. Compact all areas to 95% standard proctor density unless otherwise noted.

5. Contractor to excavate to accommodate hard surface and ensure proper depth of excavation as specified on related drawings, contract details and specifications.

6. Match existing grades at limit of work.

7. Ensure positive surface drainage of all areas within the limit of work, whether indicated or not and prevent ponding

8. Subgrades shall be compacted and inspected by the geotechnical engineer prior to the placement of granular.

9. Any soft areas evident from compaction shall be sub-excavated and replaced with suitable material that is frost compatible with the existing soils as recommended by the geotechnical engineer.

10. Remove from site all excess excavated material unless instructed otherwise by Consultant.

11. Refer to geotechnical recommendations (if available) prepared by geotechnical engineer for subsurface conditions and construction recommendations. No claims shall be entertained for conditions that could have been ascertained by reviewing geotechnical report.

12. Reinstate all areas damaged or disturbed beyond the limit of work to existing or better conditions.

13. Slopes, unless otherwise noted:
a. Walkways - maximum 12:1 slope (cross slopes shall not exceed 2%).
b. Asphalt and concrete surfaces - minimum 1.0% slope; maximum 5% slope.
c. Sodded/seeded and planted areas - minimum 2% slope; maximum 33.3% slope.
d. Swales - Shall be flat-bottomed as per Contract drawings and specification, with maximum side slopes of 3:1 and a minimum slope of 8:1.

13. Areas designated as future bike parking expansion area are to be graded as a continuation of the adjacent plaza/hard surface.

14. New surfaces shall have smooth, safe, and seamless transition of materials, where construction of sidewalks, MUPs, station plazas, and sod, adjoins existing materials. This is applicable for all surfaces soft and hard.

EROSION AND SEDIMENT CONTROL:

1. Refer to Erosion and Sediment Control Plan 660373-0000-003-4EAG-0015.

2. All swales and seeded slopes that exceed 2:1 slopes shall include erosion control mats; double net straw blanket S32 by Terrafix or approved equal. Install as per manufacturer specifications.

UNIT PAVING:

1. Unit paving shall conform to City Special Provisions F-3550.

2. Maintain paver joints uniformly and closely butted throughout. Where necessary, saw cut pavers to fit accurately. Produce a sharp, vertical cut without damaged edges.

3. Clean paving with fine water spray to remove excess sediment.

CONCRETE:

1. Concrete paving shall be to 35MPa, with a magnesium float finish. There shall be no tooled edges.

2. Expansion joints to be fiber board set 12mm below grade with caulking on top of joint. Colour of caulking to match concrete.

3. See landscape plan for expansion joint and dummy joint layout. Where the landscape plans do not specify the joint layouts, the document details are to be used.

FENCING:

1. All fencing shall conform to City Special Provisions F-7721 and F-7722.

2. The existing fence layout and condition will be verified in the field and any required modifications identified will be carried out, as required.

TOPSOIL REQUIREMENTS:

1. Topsoil shall conform to City Special Provisions F-8021 and F-8047.

2. Topsoil testing shall conform to City Special Provisions F-8047.

3. All topsoil areas shall be scarified to a depth of 150mm prior to the topsoil placement. This includes areas that are being reinstated and restored.

4. Topsoil depth requirements are as follows:

a. shrub planting beds: 450mm min. Continuous depth
b. compensation/naturalization areas: 300mm min. Continuous depth
c. sod areas: 150mm min. Continuous depth
d. seed areas: 150mm min. Continuous depth

5. All in-situ non-contaminated overburden, and topsoil not appropriate for reuse as topsoil, stripped for the construction requirements, may be utilized as earth borrow backfill within the Lands.

PLANTING:

1. Planting shall conform to City Special Provisions F-8047.

2. Plant material shall be No. 1 Grade and shall comply with Canadian Standards for Nursery Stock (latest edition) published by the Canadian Nursery Landscape Association.

3. The plant material must be grown for a minimum of two (2) years in zones 4(a) to 5(b) in accordance with agriculture Canada plant hardiness zones map. Each plant is to be labelled as to type, grade and size. For planting in clay soils, only use plant material that was grown in clay.

4. Make plants available for inspection prior to installation. Material not conforming to specifications shall be rejected and replaced at Contractor's expense. Acceptance of the plant material at its source does not prevent rejection for the material delivered on-site or during planting operations.

5. All trees shall be open-grown for wind-firmness. Trees shall not be leaning or have significant sweep, crook or bend. All trees shall have straight trunks, good crown shape, and colour characteristic of their species. Trees shall have a single dominant leader with no side branches taller/ longer than the main leader. Trees that are weak, thin, undersized, diseased or injured shall be rejected. Deciduous shade trees shall be free of branches less than 1.8m above the ground.

6. If required, trees shall be properly target pruned (never flush cut, trimmed, rounded-over, hedged, tipped or topped) and dead / damaged branches shall be removed. Branches that cross-over each other or rub against each other, co-dominant leaders, and branches growing upward inside the crown shall be properly pruned. Trees shall not be treated at any time with wound paint.

7. All plant material shall be container grown, potted, WB or BB, as indicated on plant list. All plants shall have root ball sizes that meet or exceed nursery standards. Root balls shall be firm and structurally integral with the trunk. Bare root planting will only be acceptable for certain species and as approved by the Consultant.

8. Plant material substitutions shall not be permitted without the written approval from the Consultant, with 48 hours' notice, prior to shipping plant material. Additional plant quantities will be required to compensate for approved reduction in size due to unavailability of materials, to the satisfaction of the Consultant. Should larger plant material be provided, the use of larger plant must be approved by the Consultant, and their use shall not increase the contract price.

9. Plant locations are schematic / approximate only. Contractor shall stake out locations on site for approval by the Consultant prior to installation.

10. The illustrated number of plants shown in the planting plan supersedes the quantity in the plant list. Contractor to report any discrepancies to the Consultant prior to installation. Contractor will assume full responsibility if the Consultant is not notified.

11. Poor drainage or percolation should be reported to the Consultant. Do not proceed with planting if water remains in planting pits. In heavy clay or poorly drained soils, set root ball with root collar 75-100mm higher than finished grade.

12. Trees shall be planted by approved methods and faced to give best appearance. Guy and stake trees upon planting as detailed. Tree guard type shall be hardware cloth.

13. Ensure trees are thoroughly watered following planting. Monitor material and ensure adequate moisture until acceptance and commencement of the maintenance period.

14. Shrubs and ground covers shall have full, well branched crowns typical of species or variety. Root systems shall be ample, well-balanced and fibrous, capable of sustaining vigorous growth. Plants that are weak or thin, undersized, diseased, or injured, or have been cut back from larger grades to meet specifications shall be rejected.

15. Shrubs, perennials, vines, and groundcovers shall be planted in a continuous planting bed with approved planting soil covered with 75mm depth shredded bark mulch.

16. Materials for compensation/naturalization shall conform to City Special Provisions F-8043.

TREE COMPENSATION:

1. Minimum Tree Compensation requirements are based on total removals for the Guideway as a whole. Likewise, Tree Compensation plantings provided are a culmination of the Guideway plantings as a whole rather than segment by segment. Refer to Landscape Plans for Segments 1, 2, 3, 4, and 5 for complete Tree Compensation.

2. Minimum Tree Compensation replacement rate is 0.25:1. Additional requirements, if necessary will be the responsibility of the City. See Tree Compensation Summary table below for total planting quantities for this segment.

"Any additional trees impacted during construction, outside of what is reflected as part of the CD/IFC submission will be addressed in coordination with the City separately. City Forester and Rail Office will be contacted in advance of such activities."

SOD:

1. Sod shall conform to City Special Provisions F-8031.

2. Sod quality and source shall be turfgrass nursery sod conforming to the latest specifications of the Canadian Standards for Nursery stock and the Nursery Sod Growers Association of Ontario.

3. Sod shall be rolled when dry and is to be laid in rows, perpendicular to slope, with joints staggered. Where the slope is in excess of 3:1 (run: rise), the sod sections shall be secured with stakes. Water thoroughly after installation.

4. Where required, stakes are to be wooden pegs 17 x 17 x 300mm. Place pegs 3 per square meter, 100mm below top edge to prevent sod shifting. Drive stakes to be flush with top of sod soil. Provide a minimum of 2 stakes per roll of sod.

5. Unless otherwise specified, turf is to be maintained by the Contractor until a second cutting is accepted by the Consultant.

6. 0.6m sod strip to be installed adjacent to all MUP surface edges. NOTE: sod not typically graphically shown on plans

SEEDING:

1. Seed shall conform to City Special Provisions F-8041, unless otherwise noted.

2. Contractor to Terraseed areas only as noted on the plans.

3. Contractor to exercise caution when seeding around plant material. All plants showing excessive over spray of seed material shall be replaced at Contractor's expense.

4. Seed areas are to make use of topsoil already in place. Scarify and prepare topsoil as per contract specifications. Topsoil is to be topped up if 150mm depth is not available.

5. For encroachments outside of the right-of-way, refer to Civil drawings.

6. Seed mixes are as noted.

SEED MIXES:

SEED - DRY MIX:
General seed mix for (dry) restoration areas along guideway and roadways.

PICKSEED: RIGHT OF WAY NATIVE MIX
Seeding Rate: 22 kg/ha

Rate	Botanical Name	Common Name
35%	*Elymus virginicus*	Virginia Wild Rye
20%	*Lolium multiflorum*	Annual Ryegrass
15%	*Panicum virgatum*	Switchgrass
10%	*Festuca rubra*	Creeping Red Fescue
5%	*Agrostis perennans*	Autumn Bentgrass
5%	*Carex vulpinoidea*	Fox Sedge
5%	*Desmodium canadense*	Showy Tick Trefoil
5%	*Panicum clandestinum*	Deertongue

SEED - WET MIX:
Seed mix for wet areas such as SWM ponds, bioswales, and ditches.

PICKSEED: SWM DETENTION BASIN MIX
Seeding Rate: 30 kg/ha

Rate	Botanical Name	Common Name
-	*Agrostis alba*	Red Top
-	*Agrostis hyemalis*	Ticklegrass
-	*Agrostis perennans*	Autumn Bentgrass
-	*Agrostis stolonifera*	Creeping Bentgrass
-	*Carex vulpinoidea*	Fox Sedge
-	*Elymus virginicus*	Virginia Wild Rye
-	*Poa palustris*	Fowl Bluegrass
-	*Puccinellia distans*	Alkali Grass

SEED - SLOPE MIX:
Seed mix for slopes steeper than 2:1. Hydroseed/hydromulch and use with erosion control blankets as required.

PICKSEED: STEEP SLOPE MIX
Seeding Rate: 34 kg/ha

FERTILIZER:

1. Fertilizer shall conform to City Special Provisions F-8031 and F-8047.

OTrain STAGE ETAPE 2 | Ottawa

LANDSCAPE
CORSO ITALIA STATION
GENERAL
LEGEND, SYMBOLS, AND NOTES

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
P. DUDLEY	S. COVELL
DRAWN	SEALED
T.ALSHAQSI	R. JAMES

DRAWING NUMBER 660373-1GSC-005-4UDD-0003

MODEL NUMBER 660373-1GSC-005-4UDM-1000

DESIGN/BUILDER: SNC·LAVALIN TransitNEXT

PRIMARY SEAL: ONTARIO ASSOCIATION OF LANDSCAPE ARCHITECTS — RYAN G. JAMES — OALA MEMBER — JUL.30/21

DESIGN FIRM: SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

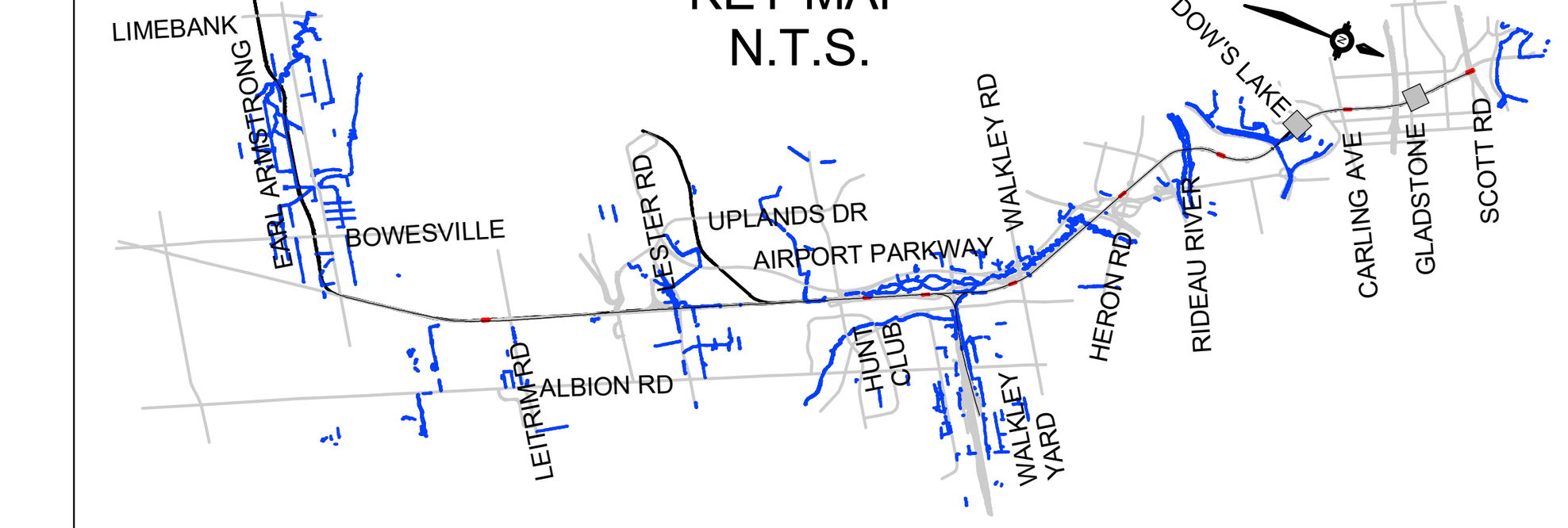
SCALE N.T.S.

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	SC	2021-03-29
01	REVISED ISSUED FOR CONSTRUCTION	SC	2021-07-30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

STANDARD SPECIFICATIONS:

NO.	TITLE
	CITY OF OTTAWA SPECIAL PROVISIONS
F-1015	GRANULAR A FOR TEMPORARY PEDESTRIAN WALKWAY
F-1016	TEMPORARY ASPHALT FOR TEMPORARY PEDESTRIAN FACILITY
F-1017	STONE DUST FOR TEMPORARY PEDESTRIAN FACILITY
F-3510	CONCRETE SIDEWALK, MEDIANS, BOULEVARDS AND ISLANDS
F-3511	CONCRETE SIDEWALK "ALL INCLUSIVE"
F-3512	TACTILE WALKING SURFACE INDICATORS
F-3532	PRECAST CONCRETE CURB
F-3550	INTERLOCKING CONCRETE PAVERS
F-7721	WOOD FENCE
F-7722	CHAIN LINK FENCE COATING SYSTEM
F-8011	TREE PROTECTION
F-8021	TOPSOIL, IMPORTED
F-8024	EXTENDED WARRANTY PERIOD MAINTENANCE FOR PLANTING
F-8031	SEEDING AND MULCHING
F-8043	BED COVER
F-8045	MISCELLANEOUS REINSTATEMENT OF ADJACENT PROPERTIES
F-8047	HEDGEROWS, NURSERY STOCK AND REFORESTATION

TITLEBLOCK: 790mm x 534mm

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DRAWING INDEX		
DRAWING No.	DESCRIPTION	REV.
01. GENERAL INFORMATION		
660373-1GSC-005-4UDD-0001	COVER SHEET	01
660373-1GSC-005-4UDD-0002	KEY PLAN	00
660373-1GSC-005-4UDD-0003	LEGEND, SYMBOLS, AND NOTES	01
660373-1GSC-005-4UDD-0004	DRAWING INDEX & COMPLIANCE LIST	01
02. GENERAL ARRANGEMENT		
660373-1GSC-005-4UDD-1001	OVERALL PLAN	01
660373-1GSC-005-4UDD-1002	ENLARGEMENT PLAN	01
660373-1GSC-005-4UDD-1003	PLANTING PLAN	01
660373-1GSC-005-4UDD-1004	LAYOUT AND GRADING PLAN	01
03. SECTIONS		
660373-1GSC-005-4UDD-2001	SECTIONS	01

660373-1GSC-005-4UDD - Related Reports	
Please refer to the following reports:	
REPORT NO.	**REPORT TITLE**
660373-1GSS-021-4QER-0001_PA	CPTED Report

Project Agreement – Schedule 15-2, Part 6 – Design and Construction Requirements		
REQUIREMENT		**PROVISION**
ARTICLE 4 - SITE SPECIFIC DESIRED OUTCOMES		
4.1 Station Specific Desired Outcomes		
i	Provide Station Plaza between Gladstone Avenue and Station entrance with a minimum size of 500m2, extending from the Fare Paid Zone to Gladstone Avenue to the south, and the MUP to the east.	Refer to COMPLIANCE SUMMARY TABLE
ii	The Station Plaza design shall be developed as a pedestrian space, and to deter cycle movements.	YES
iii	Project Co shall provide a bus shelter at the western limit of the Station Plaza.	YES
iv	Provide all bicycle parking to the east of the plaza, adjacent to the MUP.	YES
v	Realign the parking on the west side of the Station, within the city lands, to accommodate a 2m Emergency exit path from the Station Platform to Gladstone Avenue.	YES
vi	Provide sufficient space at the north end of the Emergency exit path to accommodate Maintenance Vehicle turning requirements.	YES
vii	Provide a minimum of 1m offset between Emergency exit and realigned parking, and install traffic barrier to restrict vehicles from accessing or blocking Emergency exit pathway.	YES
viii	Reinstate planting disturbed by construction to match existing between Gladstone Station and existing Trillium MUP.	YES
ix	Provide pedestrian and cyclist activated signalized crosswalk/crossride at MUP crossing of Gladstone Avenue.	YES

REQUIREMENT		PROVISION
4.2 Site Furnishings		
	PPUDO Parking Spaces: 0 | Bicycle Parking Spaces: 20 | Accessible Benches: 2 | Waste Receptacles: 2	Refer to COMPLIANCE SUMMARY TABLE
4.2 Site Plantings		
	Deciduous Trees: 15 | Coniferous Trees: 3 | Deciduous Shrubs: 140 | Coniferous Shrubs: 60	Refer to COMPLIANCE SUMMARY TABLE
4.4 Site Specific Requirements		
i	There are no specific requirements for this Station.	N/A
ARTICLE 5 - SITE SPECIFIC TEMPORARY REQUIREMENTS		
5.1 Station Specific Temporary Requirements		
	Project Co shall design and construct the following at Gladstone Station and Trillium MUP:	
i	Maintain the north-south MUP on the east side of the proposed alignment and Station, between Bayview and Gladstone Avenue.	YES
ii	This temporary paved pathway shall be a minimum of 3m, plus 1m clearance on either side and have sufficient configuration to ensure sight lines a minimum of 60m, and clear views from the adjacent lands to the pathway.	YES
iii	Provide MUP connections to Larch and Balsam Streets east of the realigned MUP.	YES
iv	Opaque screening/hoarding shall not be permitted.	YES
v	Provide direct connection to existing MUP on the south side of Gladstone Avenue.	YES
5.2 Corridor Specific Requirements		
i	There are no specific requirements for this Station.	N/A

COMPLIANCE SUMMARY TABLE:

PA REFERENCE	DESCRIPTION	REQUIRED	PROVIDED
Site Furnishings			
Sch.15-2, Part 6, Article 4.2 (a)	PPUDO Parking Spaces	0	0
Sch.15-2, Part 6, Article 4.2 (a)	Accessible Benches	2	2
Sch.15-2, Part 6, Article 4.2 (a)	Waste Receptacles	2	2
Bicycle Parking			
Sch.15-2, Part 6, Article 4.2 (a)	Total Bicycle Parking Spaces	20	24
Sch.15-2, Part 6, Article 2.7 (b) vi)	Sheltered Bicycle Parking Spaces - 80%	16	24
Site Plantings			
Sch.15-2, Part 6, Article 4.3 (a)	Deciduous Trees	15	15
Sch.15-2, Part 6, Article 4.3 (a)	Coniferous Trees	3	3
Sch.15-2, Part 6, Article 4.3 (a)	Deciduous Shrubs	140	605
Sch.15-2, Part 6, Article 4.3 (a)	Coniferous Shrubs	60	209
NA	Ornamental Grasses	-	12
Plaza Area			
CO	Total Plaza Area (m2)	500	707
Sch.15-2, Part 6, Article 4.1 (m) i)	Softscape Plaza (m2) - 10%	-	3% 21
Sch.15-2, Part 6, Article 4.1 (m) i)	Hardscape Plaza (m2) - 90%	-	97% 686
Park and Ride Facility - Parking Lot			
Sch.15-2, Part 6, Article 2.5a) i)	Total Parking Area (m2)	NA	-
Sch.15-2, Part 6, Article 2.5a) i)	Parking Lot Landscape Treatment (m2) - 15%	NA	-

OTrain STAGE 2 ETAPE 2

Ottawa

LANDSCAPE
CORSO ITALIA STATION
GENERAL
DRAWING INDEX & COMPLIANCE LIST

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
P. DUDLEY	S. COVELL
DRAWN	SEALED
T.ALSHAQSI	R. JAMES

DRAWING NUMBER
660373-1GSC-005-4UDD-0004

MODEL NUMBER
660373-1GSC-005-4UDM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF LANDSCAPE ARCHITECTS
RYAN G. JAMES
JUL 30
MEMBER

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

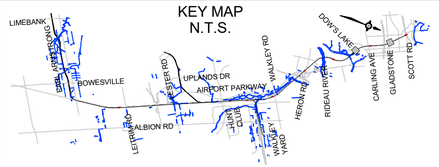
SCALE
N.T.S.

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	SC	2021-03-29
01	REVISED ISSUED FOR CONSTRUCTION	SC	2021-07-30

KEY MAP
N.T.S.



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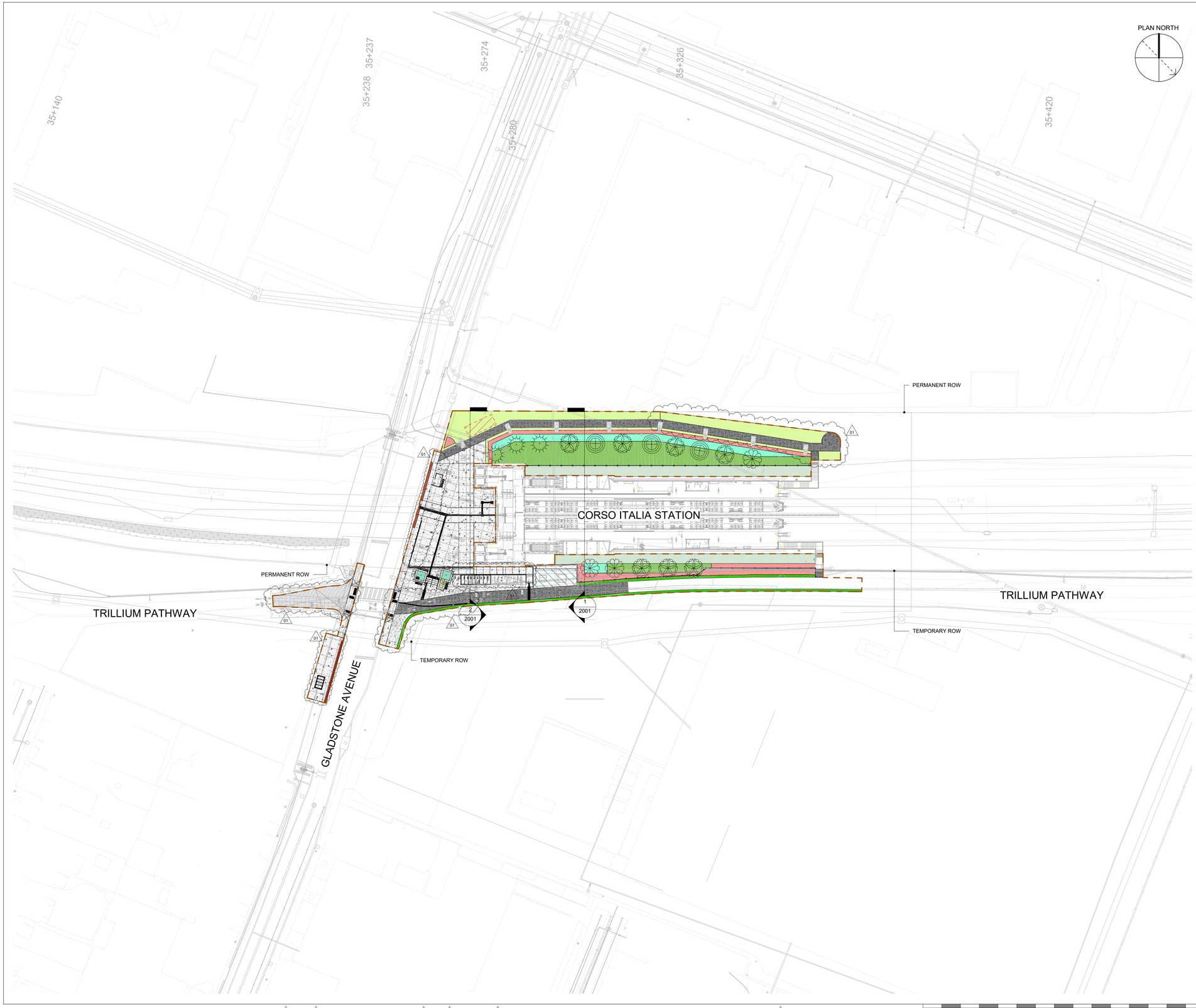
ISSUED FOR CONSTRUCTION
2021-07-30



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02/09/2021 16:17:43

OTrain STAGE ETAPE 2

Ottawa

LANDSCAPE
CORSO ITALIA STATION
SITE DRAWINGS
OVERALL PLAN

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
P. DUDLEY	S. COVELL
DRAWN	SEALED
T.ALSHAQSI	R. JAMES

DRAWING NUMBER
660373-1GSC-005-4UDD-1001

MODEL NUMBER
660373-1GSC-005-4UDM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF LANDSCAPE ARCHITECTS
RYAN G. JAMES
OALA
MEMBER
JUL 30/21

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

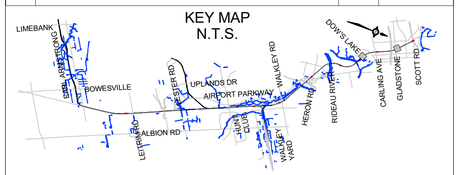
SCALE
HORIZONTAL 1 : 500 FULLSIZE
1 : 1000 HALF SIZE
0 5 10 20 40 m
VERTICAL 1 : 500 FULLSIZE
1 : 1000 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	SC	2021-03-29
01	REVISED ISSUED FOR CONSTRUCTION	SC	2021-07-30

KEY MAP
N.T.S.



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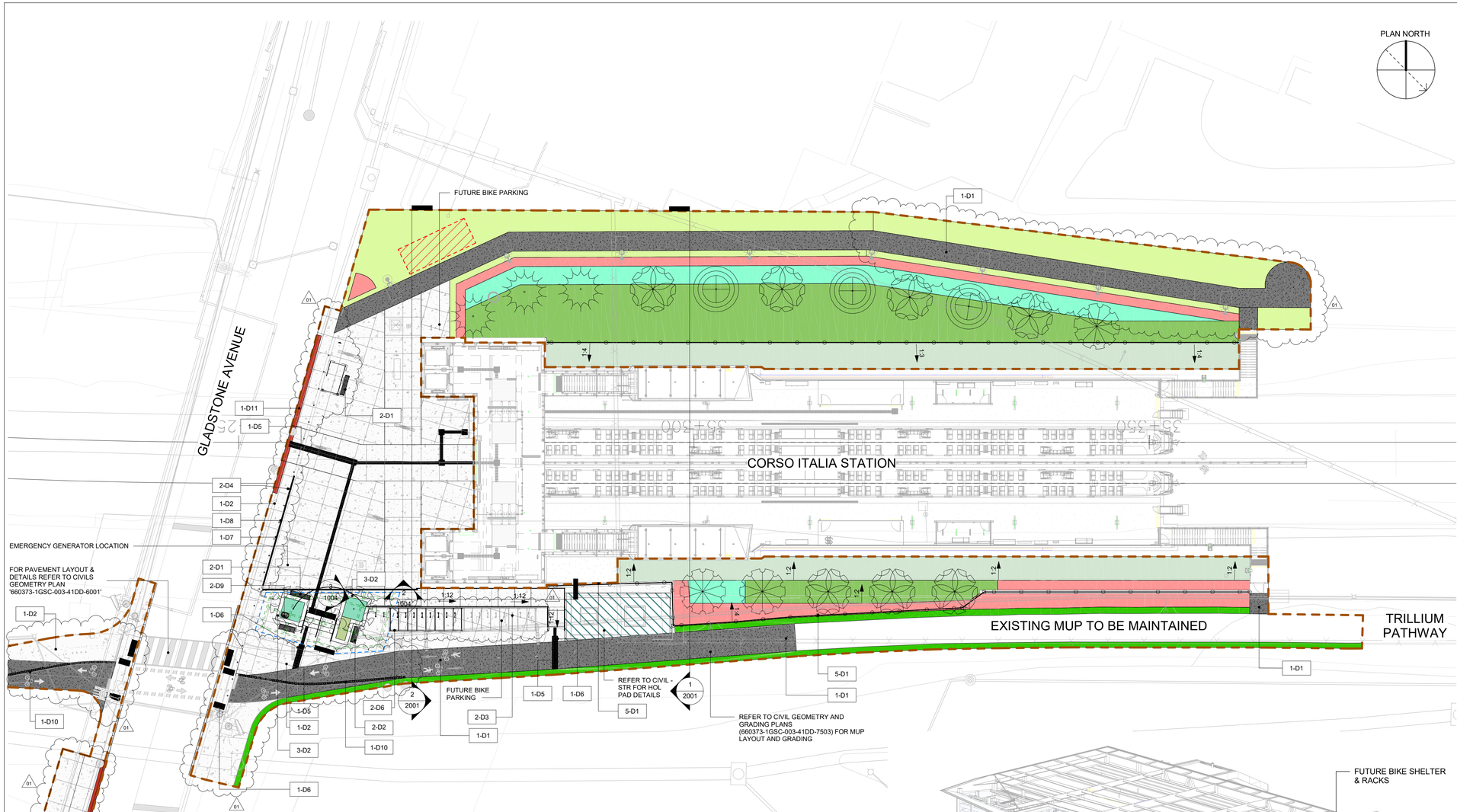
ISSUED FOR CONSTRUCTION
2021-07-30

LANDSCAPE LIMIT OF WORK	SOIL CELL DRAINAGE CHANNEL
SNOW STORAGE AREA	SOIL CELL LAYOUT

NOTE: AREAS DISTURBED BY CONSTRUCTION OUTSIDE LANDSCAPE LIMITS OF WORK TO BE RESTORED WITH 150mm TOPSOIL AND SEED PER PA. CONSTRUCTION HAUL ROADS AND OTHER AREAS COMPACTED BY CONSTRUCTION TO BE SCARIFIED TO DEPTH OF 150mm AND GRADED NATURALLY TO TIE INTO EXISTING LANDFORMS AND DRAINAGE PATTERNS PRIOR TO PLACEMENT OF TOPSOIL AND SEED.

TITLEBLOCK: 790mm x 534mm

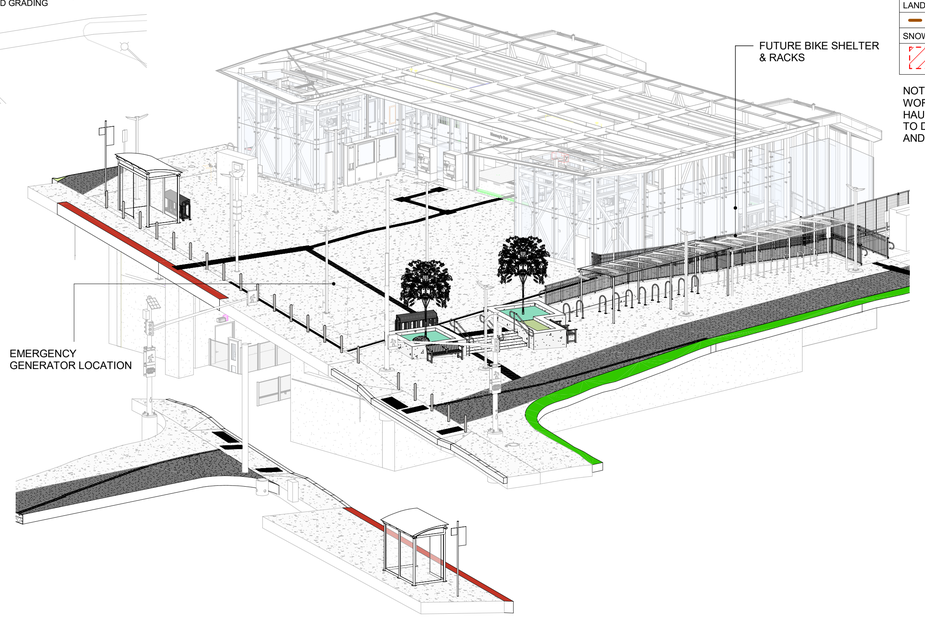


PLANTING LIST 01

SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	SPACING (meter O.C)	POT SIZE (g)	TOTAL QUANTITY
CONIFEROUS SHRUBS						
	Jss	*Juniperus sabina skandia*	Prince of Wales Juniper	1.2	40cm Spr.	8
	Pms	*pinus mugo slowmound*	Slowmound Mugho Pine	1.0	3g PT	201
DECIDUOUS SHRUBS						
	Csa	*cornus sericea 'farrow'*	Artic Fire Dogwood	1.0	3g PT	275
	Rag	*Rhus typhina*	Gro-Low Fragant Sumac	2.5	3g PT	152
	Vd	*Viburnum dentatum*	Arrowwood Viburnum	1.8	3g PT	178
ORNAMENTAL SHRUBS						
	Sh	*Sporobolus heterolepsis*	Prairie Dropseed	0.5	1g PT	12
SEED MIX						
	Smd	*Refer to the notes on drawing '0003'*	Dry Seed Mix	0	0	406 m²
	Sod	*Refer to the notes on drawing '0003'*	Sod	0	0	123 m²

FURNITURE LIST

SYMBOL	CODE	DESCRIPTION	QUANTITY
	2-D1	RECEPTACLE	2
	2-D2	BENCH	2
	2-D3	BIKE RACK	20
	2-D4	BOLLARD	21
	2-D6	BIKE SHELTER	2
	2-D9	ALGONQUIN WAYFINDING WHEEL	1
	5-D1	CHAIN LINK FENCE - (OPSD 972.130)	204 m
	5-D7	STEEL GUARDRAIL - (CoO F12)	43 m
		STREETLIGHT POLES REFER TO 47A PACKAGE	
		BUS SHELTER (REFER TO ARCHITECTURAL PACKAGE - 660373-0000-004-44DD-7200)	



HARDSCAPE LIST

SYMBOL	CODE	DESCRIPTION	QUANTITY
	1-D5	GUIDANCE TWSI	207
	1-D6	ATTENTION TWSI	25
	1-D7	TRENCH DRAIN	4
	1-D8	TRENCH DRAIN GRATE	59
	1-D10	DELINEATOR STRIP	90
	3-D2	CIP CONCRETE RETAINING WALL	11
	1-D1	ASPHALT WALKWAY - HEAVY DUTY (CoO SC21)	501 m²
	1-D2	CONCRETE PAVING - HEAVY DUTY (CoO SC23)	1008 m²
	1-D11	STEEL FACED CURB AND PLATFORM (CoO SC11.1)	18 m²

OTrain STAGE 2 ETAPE 2

Ottawa

LANDSCAPE
CORSO ITALIA STATION
SITE DRAWINGS
ENLARGEMENT PLAN

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
P. DUDLEY	S. COVELL
DRAWN	SEALED
T.ALSHAQSI	R. JAMES

DRAWING NUMBER
660373-1GSC-005-4UDD-1002

MODEL NUMBER
660373-1GSC-005-4UDM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF LANDSCAPE ARCHITECTS — JOHN G. JAMES — OALA — JUL 30 — MEMBER

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

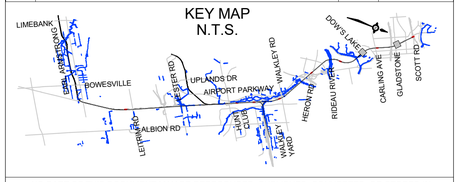
SCALE
HORIZONTAL 1 : 250 FULLSIZE / 1 : 500 HALF SIZE
0 2.5 5 10 20 m
VERTICAL 1 : 250 FULLSIZE / 1 : 500 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	SC	2021-03-29
01	REVISED ISSUED FOR CONSTRUCTION	SC	2021-07-30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

LANDSCAPE LIMIT OF WORK	SOIL CELL DRAINAGE CHANNEL
SNOW STORAGE AREA	SOIL CELL LAYOUT

NOTE: AREAS DISTURBED BY CONSTRUCTION OUTSIDE LANDSCAPE LIMITS OF WORK TO BE RESTORED WITH 150mm TOPSOIL AND SEED PER PA. CONSTRUCTION HAUL ROADS AND OTHER AREAS COMPACTED BY CONSTRUCTION TO BE SCARIFIED TO DEPTH OF 150mm AND GRADED NATURALLY TO TIE INTO EXISTING LANDFORMS AND DRAINAGE PATTERNS PRIOR TO PLACEMENT OF TOPSOIL AND SEED.

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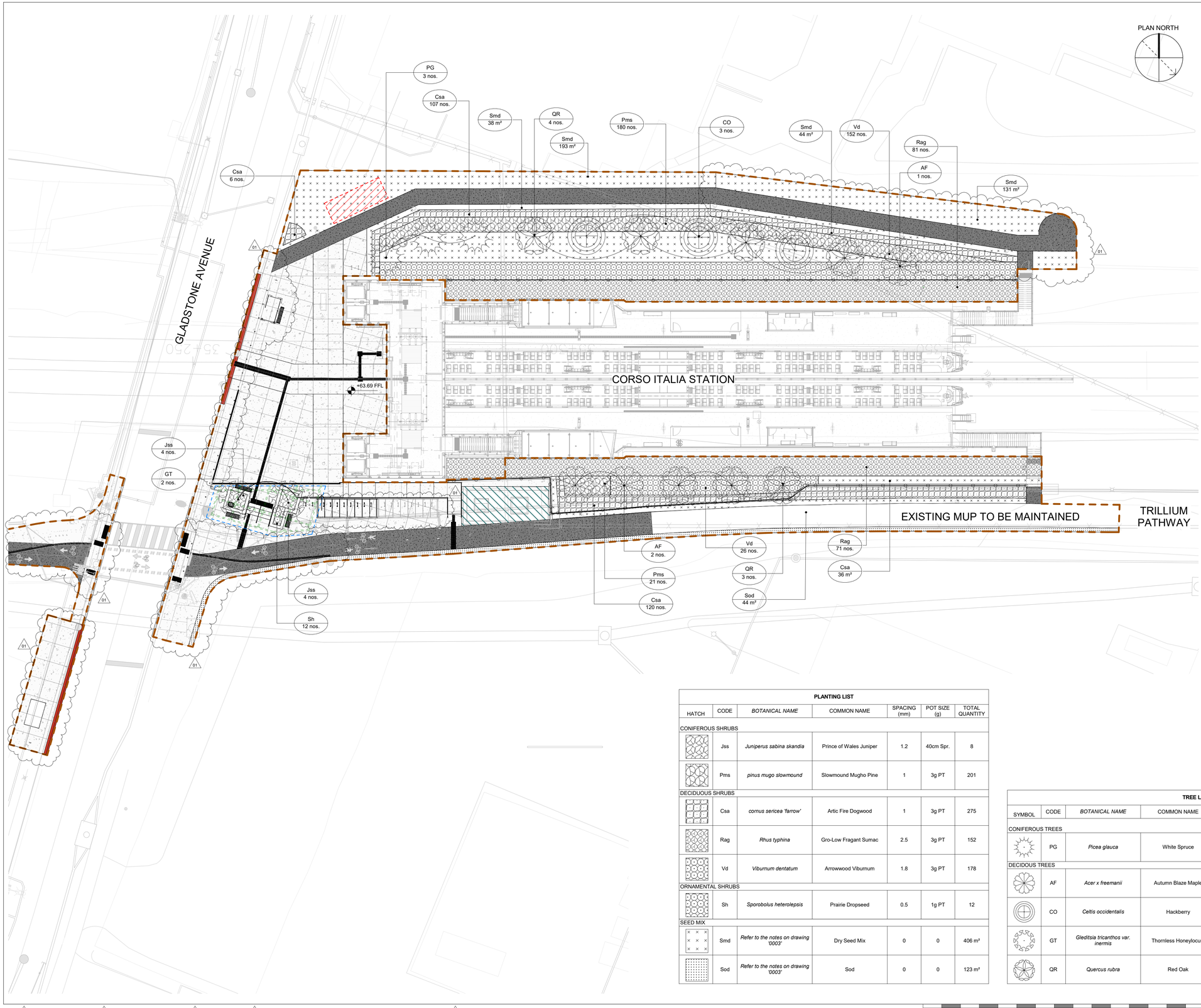

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Train STAGE 2 ETAPE 2

Ottawa

LANDSCAPE
CORSO ITALIA STATION
SITE DRAWINGS
PLANTING PLAN

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
P. DUDLEY	S. COVELL
DRAWN	SEALED
T.ALSHAQSI	R. JAMES

DRAWING NUMBER
660373-1GSC-005-4UDD-1003

MODEL NUMBER
660373-1GSC-005-4UDM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF LANDSCAPE ARCHITECTS
RAYAN G. JAMES
JUL 30 2021
MEMBER

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

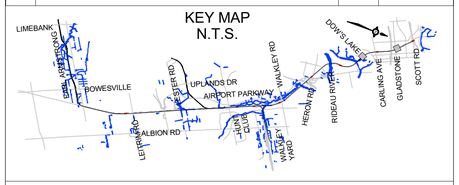
SCALE
HORIZONTAL 1 : 250 FULLSIZE / 1 : 500 HALF SIZE
0 2.5 5 10 20 m
VERTICAL 1 : 250 FULLSIZE / 1 : 500 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	SC	2021-03-29
01	REVISED ISSUED FOR CONSTRUCTION	SC	2021-07-30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

LANDSCAPE LIMIT OF WORK	SOIL CELL DRAINAGE CHANNEL
SNOW STORAGE AREA	SOIL CELL LAYOUT

NOTE: AREAS DISTURBED BY CONSTRUCTION OUTSIDE LANDSCAPE LIMITS OF WORK TO BE RESTORED WITH 150mm TOPSOIL AND SEED PER PA. CONSTRUCTION HAUL ROADS AND OTHER AREAS COMPACTED BY CONSTRUCTION TO BE SCARIFIED TO DEPTH OF 150mm AND GRADED NATURALLY TO TIE INTO EXISTING LANDFORMS AND DRAINAGE PATTERNS PRIOR TO PLACEMENT OF TOPSOIL AND SEED.

PLANTING LIST

HATCH	CODE	*BOTANICAL NAME*	COMMON NAME	SPACING (mm)	POT SIZE (g)	TOTAL QUANTITY
CONIFEROUS SHRUBS						
	Jss	*Juniperus sabina skandia*	Prince of Wales Juniper	1.2	40cm Spr.	8
	Pms	*pinus mugo slowmound*	Slowmound Mugho Pine	1	3g PT	201
DECIDUOUS SHRUBS						
	Csa	*cornus sericea 'farrow'*	Artic Fire Dogwood	1	3g PT	275
	Rag	*Rhus typhina*	Gro-Low Fragant Sumac	2.5	3g PT	152
	Vd	*Viburnum dentatum*	Arrowwood Viburnum	1.8	3g PT	178
ORNAMENTAL SHRUBS						
	Sh	*Sporobolus heterolepsis*	Prairie Dropseed	0.5	1g PT	12
SEED MIX						
	Smd	*Refer to the notes on drawing '0003'*	Dry Seed Mix	0	0	406 m²
	Sod	*Refer to the notes on drawing '0003'*	Sod	0	0	123 m²

TREE LIST

SYMBOL	CODE	*BOTANICAL NAME*	COMMON NAME	SUPPLIED HEIGHT	TRUNK HEIGHT	TRUNK CALIPER	SPACING	TOTAL QUANTITY
CONIFEROUS TREES								
	PG	*Picea glauca*	White Spruce	3500	2500	70 - 80	6000	3
DECIDOUS TREES								
	AF	*Acer x freemanii*	Autumn Blaze Maple	3500	2500	70 - 80	6000	3
	CO	*Celtis occidentalis*	Hackberry	3500	2500	70 - 80	6000	3
	GT	*Gleditsia tricanthos var. inermis*	Thornless Honeylocust	2500	2000	70 - 80	6000	2
	QR	*Quercus rubra*	Red Oak	3500	2500	70 - 80	6000	7

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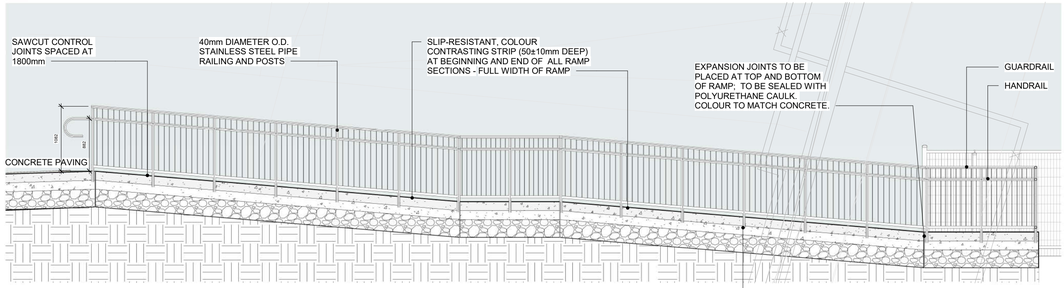

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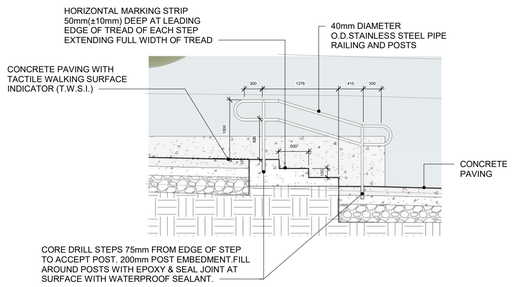

3 STEPS DETAIL
1 : 50

NOTE: AREAS DISTURBED BY CONSTRUCTION OUTSIDE LANDSCAPE LIMITS OF WORK TO BE RESTORED WITH 150mm TOPSOIL AND SEED PER PA. CONSTRUCTION HAUL ROADS AND OTHER AREAS COMPACTED BY CONSTRUCTION TO BE SCARIFIED TO DEPTH OF 150mm AND GRADED NATURALLY TO TIE INTO EXISTING LANDFORMS AND DRAINAGE PATTERNS PRIOR TO PLACEMENT OF TOPSOIL AND SEED.

OTrain STAGE 2 ETAPE 2

Ottawa

LANDSCAPE
CORSO ITALIA STATION
SITE DRAWINGS
LAYOUT AND GRADING PLAN

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
P. DUDLEY	S. COVELL
DRAWN	SEALED
T.ALSHAQSI	R. JAMES

DRAWING NUMBER 660373-1GSC-005-4UDD-1004

MODEL NUMBER 660373-1GSC-005-4UDM-1000

DESIGN/BUILDER: SNC·LAVALIN TransitNEXT

PRIMARY SEAL: ONTARIO ASSOCIATION OF LANDSCAPE ARCHITECTS — RYAN G. JAMES — MEMBER 2021

DESIGN FIRM: SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

SCALE
HORIZONTAL 1 : 100 FULLSIZE; 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE; 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	SC	2021-03-29
01	REVISED ISSUED FOR CONSTRUCTION	SC	2021-07-30

KEY MAP N.T.S.

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ISSUED FOR CONSTRUCTION
2021-07-30

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02/09/2021 16:19:47

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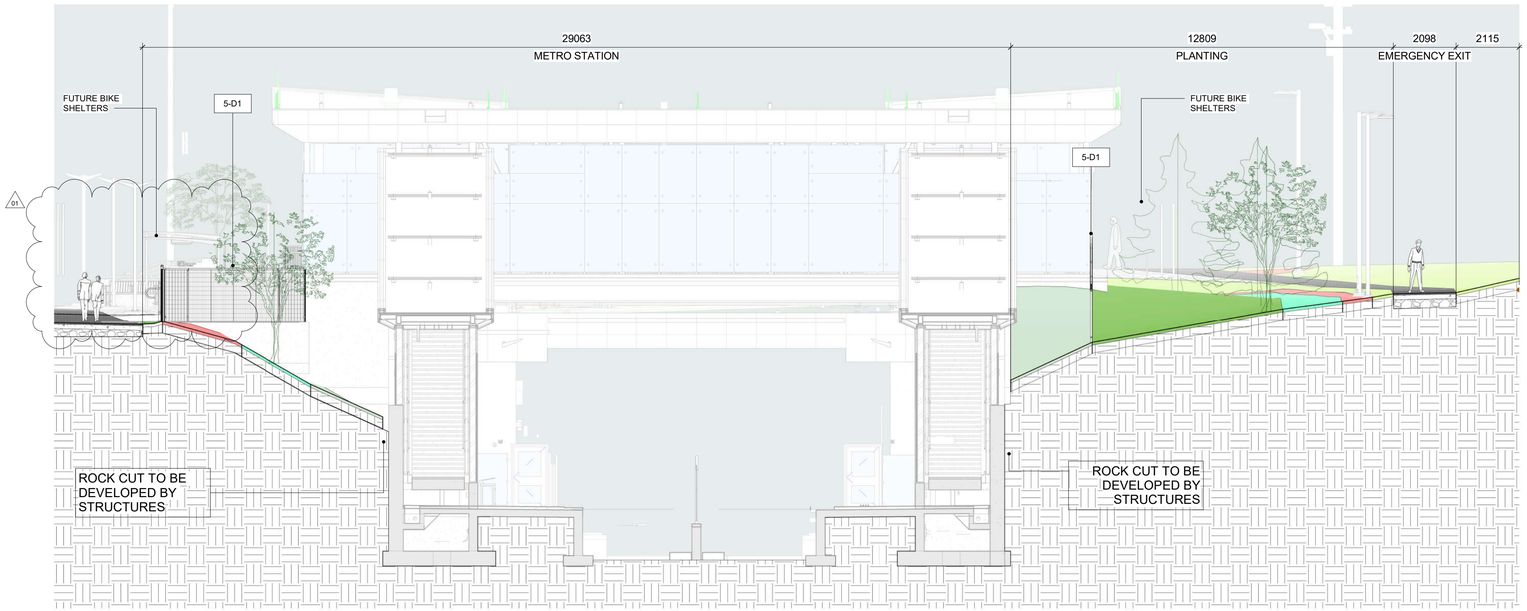
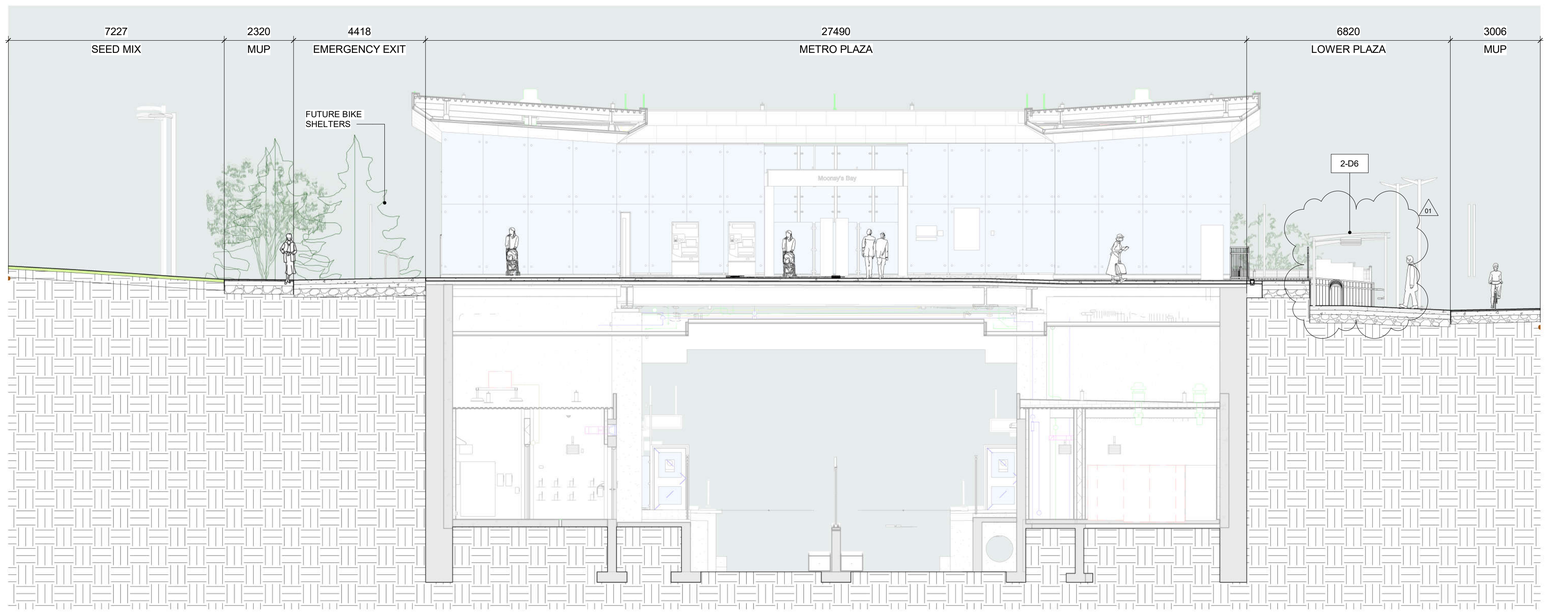


1 Section 1
1 : 100



2 Section 2
1 : 100

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02/09/2021 16:20:15

Train STAGE ETAPE 2

Ottawa

LANDSCAPE
CORSO ITALIA STATION
SITE DRAWINGS
SECTIONS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
P. DUDLEY	S. COVELL
DRAWN	SEALED
T.ALSHAQSI	R. JAMES

DRAWING NUMBER
660373-1GSC-005-4UDD-2001

MODEL NUMBER
660373-1GSC-005-4UDM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF LANDSCAPE ARCHITECTS
RYAN G. JAMES
OALA
MEMBER
JUL 30 21

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

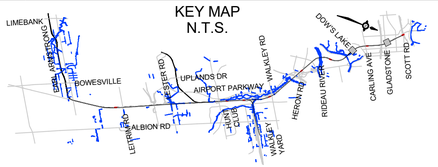
SCALE
HORIZONTAL 1 : 100 FULLSIZE
1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE
1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	SC	2021-03-29
01	REVISED ISSUED FOR CONSTRUCTION	SC	2021-07-30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

TITLEBLOCK 790mm x 534mm

TRILLIUM LINE EXTENSION PROJECT

ARCHITECTURAL

CORSO ITALIA

1GSS

ISSUED FOR CONSTRUCTION
JULY 30, 2021

CONTRACT NO. - LRT19-1025

JULY 30, 2021 C:\Users\nbarrett\Documents\660373-1GSS-001-44DM-1000_NBarrett-VF3UM.rvt

DRAWING No. 660373-1GSS-001-44DD-0001 | 03

SUPERCEDES PRINTS TO THIS NUMBER WITH LETTER PREVIOUS TO

HM:EBL:DOC - 594mm x 1400mm

ARCHITECTURAL DRAWING INDEX

DRAWING NUMBER	DRAWING DESCRIPTION	REV
660373-1GSS-001-44DD-0001	GENERAL INFORMATION - COVER PAGE	03
660373-1GSS-001-44DD-0010	GENERAL INFORMATION - ARCHITECTURAL DRAWING INDEX	04
660373-1GSS-001-44DD-0020	GENERAL INFORMATION - GENERAL NOTES AND ABBREVIATIONS	00
660373-1GSS-001-44DD-0030	GENERAL INFORMATION - ACCESSIBILITY DESIGN STANDARDS	00
660373-1GSS-001-44DD-0050	GENERAL INFORMATION - SCHEDULES & ASSEMBLIES	00
660373-1GSS-001-44DD-0060	GENERAL INFORMATION - OBC MATRIX & GENERAL NOTES	00
660373-1GSS-001-44DD-0061	GENERAL INFORMATION - FIRE SEPARATION PLANS	00
660373-1GSS-001-44DD-0062	GENERAL INFORMATION - FIRE SEPARATION SECTIONS	00
660373-1GSS-001-44DD-0070	GENERAL INFORMATION - DOOR SCHEDULE AND TYPE	01
660373-1GSS-001-44DD-0071	GENERAL INFORMATION - DOOR AND FRAME DETAILS	00
660373-1GSS-001-44DD-0080	GENERAL INFORMATION - ROOM FINISH SCHEDULE	00
660373-1GSS-001-44DD-0100	GENERAL INFORMATION - SETTING OUT DIAGRAM	00
660373-1GSS-001-44DD-1000	SITE DRAWINGS - CONTEXT SITE PLAN	00
660373-1GSS-001-44DD-1010	SITE DRAWINGS - SITE PLAN	00
660373-1GSS-001-44DD-2000	PASSENGER FLOW PLAN - CONCOURSE	00
660373-1GSS-001-44DD-2010	PASSENGER FLOW PLAN - PLATFORM	00
660373-1GSS-001-44DD-2100	OVERALL FLOOR PLAN - CONCOURSE	00
660373-1GSS-001-44DD-2110	OVERALL FLOOR PLAN - PLATFORM	00
660373-1GSS-001-44DD-2120	OVERALL PLAN - OVERALL ROOF PLAN - CONCOURSE	00
660373-1GSS-001-44DD-2121	OVERALL PLAN - OVERALL ROOF PLAN - PLATFORM	00
660373-1GSS-001-44DD-2150	SLAB EDGE PLANS - CONCOURSE SECTOR 1	00
660373-1GSS-001-44DD-2151	SLAB EDGE PLANS - CONCOURSE SECTOR 2	00
660373-1GSS-001-44DD-2160	SLAB EDGE PLANS - PLATFORM SECTOR 1	01
660373-1GSS-001-44DD-2161	SLAB EDGE PLANS - PLATFORM SECTOR 2	01
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660373-1GSS-001-44DD-2205	ENLARGED FLOOR PLAN - STATION ENTRANCE	00
660373-1GSS-001-44DD-2211	ENLARGED PLAN - PLATFORM SECTOR 1	00
660373-1GSS-001-44DD-2212	ENLARGED PLAN - PLATFORM SECTOR 2	01
660373-1GSS-001-44DD-2213	ENLARGED PLAN - ANCILLARY SPACE	00
660373-1GSS-001-44DD-2221	ENLARGED ROOF PLANS - CONCOURSE	01
660373-1GSS-001-44DD-2222	ENLARGED ROOF PLANS - PLATFORM	00
660373-1GSS-001-44DD-2300	REFLECTED CEILING PLAN - CONCOURSE	00
660373-1GSS-001-44DD-2310	RELFECTED CEILNG PLAN - PLATFORM	00
660373-1GSS-001-44DD-2400	ENLARGED REFLECTED CEILING PLAN - CONCOURSE SECTOR 1	00
660373-1GSS-001-44DD-2410	ENLARGED REFLECTED CEILING PLAN - PLATFORM SECTOR 1	00
660373-1GSS-001-44DD-2411	ENLARGED REFLECTED CEILING PLAN - PLATFORM SECTOR 2	00
660373-1GSS-001-44DD-2501	FLOOR FINISH PLAN - CONCOURSE SECTOR 1	00
660373-1GSS-001-44DD-2502	FLOOR FINISH PLAN - CONCOURSE SECTOR 2	00
660373-1GSS-001-44DD-2511	FLOOR FINISH PLAN - PLATFORM SECTOR 1	00
660373-1GSS-001-44DD-2512	FLOOR FINISH PLAN - PLATFORM SECTOR 2	00
660373-1GSS-001-44DD-2550	FLOOR FINISH PLAN - DETAILS	00
660373-1GSS-001-44DD-3000	ELEVATIONS - EXTERIOR ELEVATIONS	00
660373-1GSS-001-44DD-3001	ELEVATIONS - EXTERIOR ELEVATIONS	00
660373-1GSS-001-44DD-3002	ELEVATIONS - EXTERIOR ELEVATIONS	00
660373-1GSS-001-44DD-3100	ELEVATIONS - INTERIOR ELEVATIONS	00
660373-1GSS-001-44DD-4000	SECTIONS - BUILDING SECTIONS	01
660373-1GSS-001-44DD-4001	SECTIONS - BUILDING SECTIONS	01
660373-1GSS-001-44DD-4002	SECTIONS - BUILDING SECTIONS	01
660373-1GSS-001-44DD-4003	SECTIONS - BUILDING SECTIONS	01
660373-1GSS-001-44DD-4004	SECTIONS - BUILDING SECTIONS	01
660373-1GSS-001-44DD-4005	SECTIONS - BUILDING SECTIONS	01
660373-1GSS-001-44DD-4006	SECTIONS - BUILDING SECTIONS	01
660373-1GSS-001-44DD-4200	SECTIONS - WALL SECTIONS	01
660373-1GSS-001-44DD-4201	SECTIONS - WALL SECTIONS	01
660373-1GSS-001-44DD-4202	SECTIONS - WALL SECTIONS	00
660373-1GSS-001-44DD-5000	DETAILS - PLAN DETAILS	00
660373-1GSS-001-44DD-5001	DETAILS - PLAN DETAILS	00
660373-1GSS-001-44DD-5100	DETAILS - SECTION DETAILS	00
660373-1GSS-001-44DD-5101	DETAILS - SECTION DETAILS	00
660373-1GSS-001-44DD-5103	DETAILS - SECTION DETAILS	00
660373-1GSS-001-44DD-5104	DETAILS - SECTION DETAILS	00
660373-1GSS-001-44DD-5150	DETAILS - SECTION DETAILS	03
660373-1GSS-001-44DD-5151	DETAILS - SECTION DETAILS	03
660373-1GSS-001-44DD-6000	VERTICAL CIRCULATION - STAIRS	01
660373-1GSS-001-44DD-6001	VERTICAL CIRCULATION - STAIRS	01
660373-1GSS-001-44DD-6002	VERTICAL CIRCULATION - STAIRS	00
660373-1GSS-001-44DD-6003	VERTICAL CIRCULATION - STAIRS	01
660373-1GSS-001-44DD-6004	VERTICAL CIRCULATION - STAIRS	01
660373-1GSS-001-44DD-6050	VERTICAL CIRCULATION - STAIR DETAILS	01
660373-1GSS-001-44DD-6051	VERTICAL CIRCULATION - STAIR DETAILS	00
660373-1GSS-001-44DD-6052	VERTICAL CIRCULATION - STAIR DETAILS	01
660373-1GSS-001-44DD-6053	VERTICAL CIRCULATION - STAIR DETAILS	00
660373-1GSS-001-44DD-6054	VERTICAL CIRCULATION - STAIR DETAILS	00
660373-1GSS-001-44DD-6200	VERTICAL CIRCULATION - ELEVATORS	00
660373-1GSS-001-44DD-6201	VERTICAL CIRCULATION - ELEVATORS	00
660373-1GSS-001-44DD-6202	VERTICAL CIRCULATION - ELEVATORS	00
660373-1GSS-001-44DD-6203	VERTICAL CIRCULATION - ELEVATORS	00
660373-1GSS-001-44DD-6204	VERTICAL CIRCULATION - ELEVATORS	00
660373-1GSS-001-44DD-6250	VERTICAL CIRCULATION - ELEVATOR DETAILS	00
660373-1GSS-001-44DD-6251	VERTICAL CIRCULATION - ELEVATOR DETAILS	00
660373-1GSS-001-44DD-6252	VERTICAL CIRCULATION - ELEVATOR DETAILS	00
660373-1GSS-001-44DD-6253	VERTICAL CIRCULATION - ELEVATOR DETAILS	00
660373-1GSS-001-44DD-6254	VERTICAL CIRCULATION - ELEVATOR DETAILS	00
660373-1GSS-001-44DD-6256	VERTICAL CIRCULATION - ELEVATOR DETAILS	00
660373-1GSS-001-44DD-7012	VERTICAL CIRCULATION - FARE GATE DETAILS	00
660373-1GSS-001-44DD-7019	VERTICAL CIRCULATION - FARE GATE DETAILS	00
660373-1GSS-001-44DD-8301	FUTURE PHASE - FLOOR PLANS	00
660373-1GSS-001-44DD-8302	FUTURE PHASE - ELEVATIONS & SECTIONS	00
660373-1GSS-001-44DD-9000	EXTERIOR RENDERINGS	00
660373-1GSS-001-44DD-9100	INTERIOR RENDERINGS	00

04

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04/11/19

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
GENERAL INFORMATION
ARCHITECTURAL DRAWING INDEX

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	T. KAMPMAN
DRAWN	SEALED
K. SANIPE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-0010

MODEL NUMBER
660373-1GSS-001-44DM-1000

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
ROBERT A. BRISBIN
LICENCE 3782

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

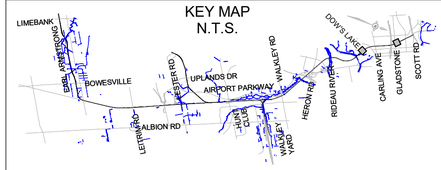
SCALE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION - EARLY WORKS, FOUNDATIONS ONLY	JJ	2020/09/25
01	ISSUED FOR BUILDING PERMIT	JJ	2020/11/27
02	ISSUED FOR CLIENT REVIEW - FDD SUBMISSION	JJ	2020/11/27
03	ISSUED FOR CONSTRUCTION	JJ	2021/03/29
04	REVISED ISSUE FOR CONSTRUCTION	JJ	2021/07/30

KEY MAP
N.T.S.



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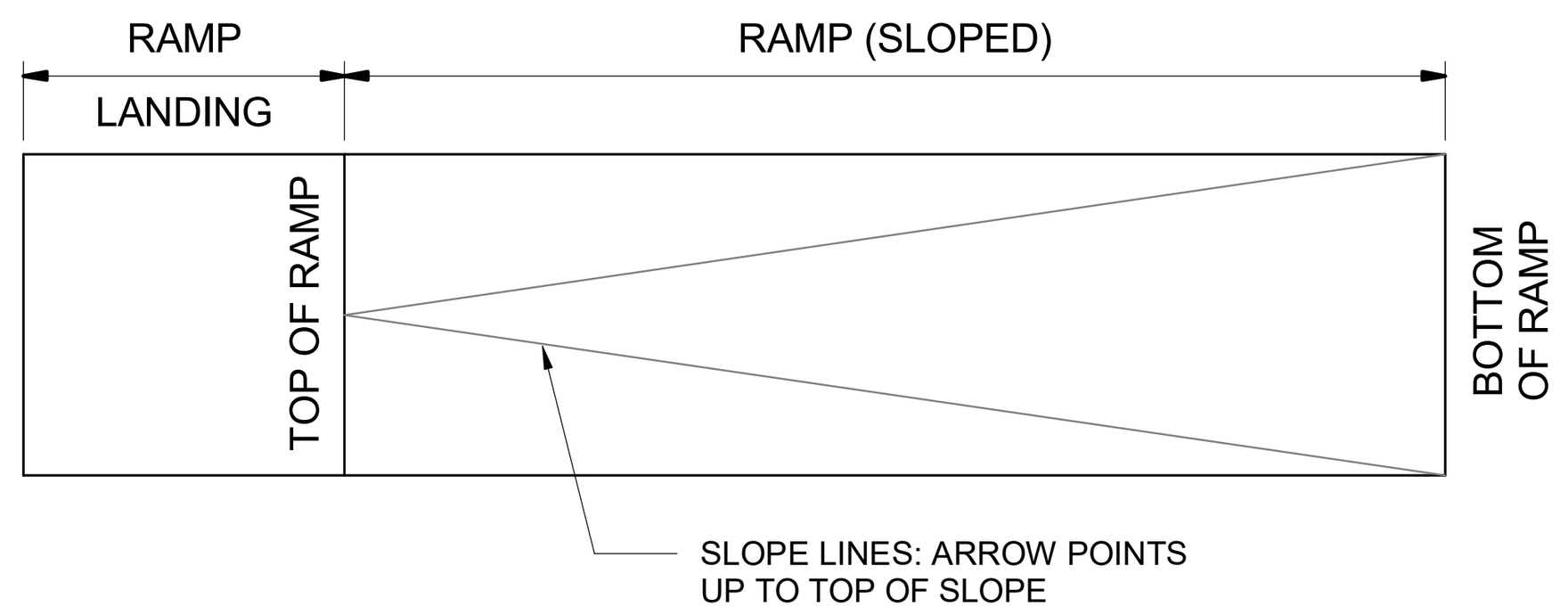
ISSUED FOR CONSTRUCTION
2021-07-30

04

TITLEBLOCK: 790mm x 534mm

RAMP GRAPHICS



ABBREVIATION LIST

A BOLT	Anchor Bolt
AC	Alternating Current
ACF	Architectural Concrete Finsih
ACPL	Acoustical Plaster
ACS	Adult Changing Station
ACT	Acoustic Tile
AD	Area Drain
ADD	Addendum
ADH	Adhesive
AFC	Air Fan Coil Unit
AFF	Above Finished Floor
AIFB	Asphalt Impregnated Fibreboard
ALUM	Aluminum
AMT	Agglomerate Tile
ANOD	Anodized
APPROX	Approximate
APT	Apartment
ARCH	Architectural
ASB	Asbestos
ASB CEM	Asbestos Cement
ASF	Acrylic Stucco Finish
ASPH	Asphalt
ASPH PVG	Asphalt Paving
AT	Ashtray
ATT	Asphalt Traffic Topping
AUTO	Automatic
@	At
BE	Baked Enamel
BED	Bedroom
BF	Barrier Free
BFD	Barrier Free Door Hardware
BH	Borehole
BHD	Bulkhead
BIPD	Bi Parting Doors
BLDG	Building
BLK	Block
BM	Bench Mark
BOT	Bottom
BPL	Base Plate
BR	Brick
BRP	Brick Paver
BRZ	Bronze
BSMT	Basement
BTU	British Thermal Unit
BTWN	Between
CABT	Cabinet
CARP	Carpet
CB	Catch Basin
CBD	Chalkboard
C CONC	Coloured Concrete
CEM	Cement
CER	Ceramic
CGWG	Cast Georgian Wire and Glass
CHAN	Channel
CI	Cast Iron
CIP	Cast in Place
CJ	Control Joint
CL	Centre Line
CLG	Ceiling
CLOS	Closet
CLR	Colour
CLT	Clay Tile
CMP	Composite Metal Panel
CMU	Concrete Masonry Unit
CO	Clean Out
COL	Column
CONC	Concrete
CONC BLK	Concrete Block
CONST	Construction
CONT	Continuous
CONTR	Contractor
CONV	Convector
CORR	Corridor
CRS	Courses
CT	Ceramic Tile
CU	Cubic
CWB	Cement Wall Board
C/W	Complete With
DAMPG	Damp-proofing
DB (db)	Decibel
DC	Direct Current
DET	Detail
DF	Drinking Fountain
DG	Door Grille
DIA (Ø)	Diameter
DIM	Dimension
DIV	Division
DL	Dead Lead
DML	Demolition
DS	Digital Screen
DSHWR	Dishwasher
DWL	Dowel
DWG	Drawing
E	East
EA	Each
ELEC	Electric
ELEV	Elevation
EMW	Elastomeric Membrane Waterproofing
EPY-PT	Epoxy Paint
EPY-PT-NC	Epoxy Paint Nonconductive
EPY-SDF	Epoxy Static Dissipative Flooring
EQ	Equal
EWP	Elastomeric Waterproofing
EXIST	Existing
EXP	Exposed
EXP AG	Exposed Aggregate
EXP STR	Exposed Structure
EXT	Exterior
FA	Fire Alarm
FB	Face Brick
FD	Floor Drain
FG	Foot Grille
FHC	Fire Hose Cabinet
FHR	Fire Hose Rack
FIN	Finish
FLR	Floor
FP	Fabric Panel
FR	Fire Rated
FS	Full Size
FT	Feet
FTG	Footing
FUT	Future
GA	Gauge
GALV	Galvanized
GB	Grab Bar

GBLK	Glazed Block
GCM	Galvanized Corrugated Metal
GCT	Glazed Ceramic Tile
GFS	Garage Floor Sealer
GI	Galvanized Iron
GL	Glass
GR	Grille
GRAN	Granite
GRND	Ground
GRT	Grout
GS	Galvanized Steel
GWB	Gypsum Wallboard
GYP	Gypsum
GYPL	Gypsum Lath
HALUM	Hardcolour Aluminum
HAGL	Heat Absorbing Glass
HB	Hose Bib
HCONC	Hardened Concrete
HD	Hand Dryer
HDWR	Hardware
HT	Height
HM	Hollow Metal
HMDR	Hollow Metal Door
HOR	Horizontal
HP	House Phone
HR	Hour
HSGL	Heat Strengthened Glass
HVAC	Heating Ventilating and Air Conditioning
ICOM	Intercom
ID	Inside Diameter
IN(“)	Inch
IND	Induction
INS	Insulation
INT	Interior
INVT	Invert
JAN	Janitor
JT	Joint
KAL	Kalemein
KD	Knocked Down
KIT	Kitchen
KP	Kick Plate
L	Length
LAM	Laminate
LAMGL	Laminated Glass
LAV	Lavatory
LB	Pound
LBR	Lumber
LCB	Lightweight Concrete Block
LH	Left Hand
LHR	Left Hand Reverse
LINO	Linoleum
LL	Live Load
LONG	Longitudinal
LSSJ	Long Span Steel Joist
MAP	Metal Acoustical Panel
MAT	Material
MAX	Maximum
MC	Medicine Cabinet
MECH	Mechanical
MET	Metal
METACT	Metal Acoustical Tile
METL	Metal Lath
MH	Manhole
MIN	Minimum
MISC	Miscellaneous
MLC	Metal Linear Ceiling
MO	Masonry Opening
MP	Metal Panel
MPE	Metal Panel Exterior
MPL	Maple
MR	Mirror
MSNRY	Masonry
MWP	Membrane Waterproofing
N	North
NAT	Natural
ND	Napkin Dispenser
NGAS	Neoprene Gasket
NHYP	Neoprene – Hypalon
NIC	Not in Contract
NO	Number
NOM	Nominal
NS	Non-Slip
NTD	Napkin/Tampon Disposal
NTS	Not to Scale
OBS	Obscure
OC	On Centre
OD	Outside Diameter
OFF	Office
OH	Overhead
OHD	Overhead Door
OPNG	Opening
OPP	Opposite
OWSJ	Open Web Steel Joist
PCONC	Precast Concrete
PDS	Parking Deck Sealer
PDO	Power Door Operator
PERF MET	Perforated Metal
PFL	Pedestal Floor
PFT	Porcelain Floor Tile
PGWG	Polished Georgian Wired Glass
PL	Plate
PLAM	Plastic Laminate
PLAS	Plaster
PLF	Pounds per Lineal Foot
PLGL	Plate Glass
PLWD	Plywood
PM	Pressed Metal
PMT	Painted Metal
POL	Polished
PP	Porcelain Panels
PPGL	Polished Plate Glass
PPT	Prime Painted
PRCST T	Precast Concete Tread
PREFAB	Prefabricated
PROJ	Projection
PS	Pressed Steel
PSF	Pounds per Square Foot
PSI	Pounds per Square Inch
PT	Paint
P.T.	Pressure Treated
PTD	Paper Towel Dispenser

PTDD	Paper Towel Dispenser/Disposal
PTERR	Precast Terrazzo
PTN	Partition
PVC	Polyvinyl Chloride
PWT	Porcelain Wall Tile
QT	Quarry Tile
QTZ	Quartz
R	Radius
RB	Rubber Base
RBCB	Rubber Cove Base
RBSF	Rubber Sheet Flooring
RBT	Rubber Tile
RBTL	Rubber Tightlock
RD	Roof Drain
REC	Recessed
REF	Referenced
REFLGL	Reflected Glass
REINF	Reinforced
RENOV	Renovation
REV	Revision
RH	Right Handed
RHR	Right Hand Reverse
RI	Rigid Insulation
RLG	Railing
RM	Room
RSF	Resilient Sheet Flooring
RWL	Rainwater Leader
S	South
SAB	Sound Attenuation Blanket
SC	Special Coating
SCHED	Schedule
SD	Soap Dispenser
SDT	Static Dissipative Tile
SEAL	Sealer
SECT	Section
SFL	Seamless Flooring
SFRM	Spray Applied Fireproofing
SGL	Safety Glass
SH	Shower
SHC	Shower Curtain
SHCR	Shower Curtain Rod
SHGL	Sheet Glass
SHTHG	Sheathing
SIM	Similar
SL	Slab
SLD	Sliding Door
SLNT	Sealant
SLT	Slate
SMF	Sprayed Mineral Fireproofing
SND	Sanitary Napkin Dispenser
SNDU	Sanitary Napkin Disposal Unit
SP	Spandrel
SPEC	Specification
SPF	Spray Foam Insulation
SPHP	Solid Phenolic Panel
SPT	Special Paint
SS	Solid Surface
SST	Stainless Steel
SSTGR	Stainless Steel Grille
ST	Steel
STD	Steel Deck
STN	Stain
STR	Stair
STRUC	Structural
STUC GLAZ	Stucco Glazed
SUSP	Suspend
SUSPD	Suspended
SV	Sheet Vinyl
TB	Thermal Barrier
TEL	Telephone
TEMP	Temperature
TEMPGL	Tempered Glass
TER	Terrazzo
T & G	Tongue and Groove
TH	Threshold
TMBR	Timber
TP	Toilet Partition
TPD	Toilet Paper Dispenser
TR	Transom
TRAV	Travertine
TS	Touch Screen
TT	Traffic Topping
TWR	Tower
TXF	Textured Finish
TYP	Typical
UCT	Unglazed Ceramic Tile
UNO	Unless Otherwise Noted
UR	Urinal
U/S	Underside
USSG	United States Steel Gauge
VAN	Vanity
VB	Vapour Barrier
VCB	Vinyl Cove Base
VCT	Vinyl Composition Tile
VERT	Vertical
VOL	Volume
VS	Vinyl Stucco
VSS	Vinyl Safety Sheet
VWC	Vinyl Wall Covering
W	West
W/	Wit
WC	Water Closet
WD	Wood
WDSLT	Wood Slat
WDU	Waste Disposal Unit
WDV	Wood Veneer
WEATHST	Weathering Steel
WG	Wired Glass
WI	Wrought Iron
WM	Wire Mesh
WP	Waterproofing
WS	Weather-Stripping
WWT	Window Washing Track
YD	Yard
Z	Zinc

SYMBOLS & NOTES

DRAWING TITLE

15 / A101 — VIEW NAME
DETAIL REFERENCE NUMBER
VIEW SCALE
SHEET DRAWING NUMBER REFERENCE

ELEVATION REFERENCE

X / XXXX
ELEVATION / VIEW NUMBER
ELEVATION DRAWING NUMBER REFERENCE

SECTION REFERENCE

X / XXXX
SECTION / VIEW NUMBER
SECTION DRAWING NUMBER REFERENCE

DETAIL REFERENCE

X / XXXX
SECTION / VIEW NUMBER
SECTION DRAWING NUMBER REFERENCE

ELEVATION

XXX LEVEL XX
LEVEL
ELEVATION

SPOT ELEVATION

XXXX
ELEVATION

GRID BUBBLE & LINE

0
0
END OF PLATFORM
EOP

NORTH ARROW

PLAN NORTH

CENTER LINE

℄

BREAKLINE

TAGS

ROOM TAGS

NAME — ROOM NAME
000 — ROOM NUMBER
150 SM — ROOM AREA

CEILING TAGS

XXXX — CEILING MATERIAL
0000 AFF — HEIGHT OF CEILING ABOVE FINISHED FLOOR

WALL TYPES

REFER TO WALL TYPES FOR NUMBERING

Wa1-1 — WALL PARTITION

KEYNOTE TAG

XX — KEYNOTE NUMBER
MXX — MATERIAL KEYNOTE NUMBER

HATCH & GRAPHICS

PATTERN	MATERIAL
	CONCRETE
	CONCRETE BLOCK (CMU)
	GYPSUM BOARD
	RIGID INSULATION
	SEMI-RIGID INSULATION
	CEMENTITIOUS SPRAY
	METAL
	EARTH
	GRAVEL
	EXISTING
	CLEAN AGENT
	SPRINKLERED SPACE

ELEVATIONS

	GLASS
	CONCRETE (CIP)
	CONCRETE (PRECAST)
	CONCRETE BLOCK
	PERFORATED METAL PANEL
	COMPOSITE METAL PANEL

CEILING TYPES

	GYPSUM
	ACOUSTIC CEILING TILE
	METAL LINEAR CEILING
	MINERAL FIBRE CEMENT SPRAY
	COMPOSITE METAL PANEL
	EXPOSED STRUCTURE

GENERAL NOTES

1. THE ARCHITECT IS NOT RESPONSIBLE FOR INFORMATION CONCERNING THE SITE AND SURVEY INFORMATION PREPARED BY OTHERS
2. THE CONTRACTOR SHALL SITE VERIFY SURVEY INFORMATION PRIOR TO PROCEEDING WITH THE WORK. FAILURE TO REPORT ANY DISCREPANCIES SHALL CONSTITUTE ACCEPTANCE OF THE SITE CONDITIONS
3. THE CONTRACT DOCUMENTS PREPARED BY THE ARCHITECT ARE THE ARCHITECTS COPYRIGHT PROPERTY AND SHALL BE RETURNED TO THE ARCHITECT UPON REQUEST. REPRODUCTION OF THESE CONTRACT DOCUMENTS IN WHOLE OR IN PART IS FORBIDDEN WITHOUT THE ARCHITECTS WRITTEN PERMISSION.
4. THE CONTRACTOR SHALL REVIEW THE CONTRACT DOCUMENTS FOR SCOPE OF DEMOLITION AND NEW WORK, INCLUDING ALL DISCIPLINES, AND SHALL COORDINATE WITH NEW WORK DRAWINGS FOR EXACT EXTENT OF DEMOLITION.
5. SCOPE OF WORK SHALL NOT BE LIMITED TO THAT SHOWN ON THE DRAWINGS AND SHALL INCLUDE WORK REQUIRED TO ELIMINATE ALL EXISTING, ABANDONED OR REDUNDANT COMPONENTS, AND TO FACILITATE PROPER EXECUTION OF THE WORK.
6. ALL DIMENSIONS AND SETTING-OUT GEOMETRIES, SHALL BE SITE VERIFIED BY THE CONTRACTOR PRIOR TO PROCEEDING WITH THE WORK.
7. REMOVAL AND DISPOSAL OF HAZARDOUS MATERIALS SHALL BE IN ACCORDANCE WITH LOCAL REGULATIONS AND AUTHORITIES HAVING JURISDICTION.
8. UNLESS NOTED OTHERWISE, MAKE GOOD ALL AREAS DISTURBED BY EXCAVATION AND/OR INSTALLATION OF CIVIL, MECHANICAL AND ELECTRICAL SERVICES, REFER TO CIVIL, MECHANICAL AND ELECTRICAL DRAWINGS.
9. THE CONTRACTOR SHALL COORDINATE BASE BUILDING WORKS WITH WORK OF OTHER CONTRACTORS, INCLUDING TENANT WORKS AS REQUIRED TO FACILITATE PROPER INSTALLATIONS.
10. ALL GLASS SHALL BE TEMPERED LAMINATE UNLESS NOTED OTHERWISE ON THE DRAWINGS OR AS INDICATED IN THE SPECIFICATIONS.
11. TOP OF PLATFORM HEIGHT AT EDGE OF PLATFORM FOR ALL STATIONS IS SET TO 565mm ABOVE TOP OF RAIL.
12. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR MECHANICAL, ELECTRICAL, AND SYSTEMS CEILING FIXTURE LOCATIONS ONLY.
13. REFER TO LANDSCAPE DRAWINGS FOR LANDSCAPE FEATURES
14. REFER CIVIL DRAWINGS FOR RIGHT OF WAY (ROW) DEFINITIONS
15. REFER TO POWER SUPPLY + DISTRIBUTION OVERHEAD CATENARY SYSTEM SUBMISSION FOR OCS AND TPSS INFORMATION
16. FARE LINE AND GATE EQUIPMENT SHOWN FOR SPACEPROOFING PURPOSES ONLY AND IS SUPPLIED BY THE CITY OF OTTAWA
17. REFER TO CPTED REPORT
18. REFER TO ACCESSIBILITY REPORT AND MATRIX FOR ADDITIONAL INFORMATION
19. REFER TO SIGNAGE AND WAYFINDING SUBMISSION FOR ALL STATION SIGNAGE
20. REFER TO CODE REPORTS FOR FIRE RATINGS, EXIT CALCULATIONS, AND ADDITIONAL INFORMATION
21. REFER TO COMBINED SERVICES SYSTEM WIDE SUBMISSION FOR SYSTEM WIDE REQUIREMENTS ASSOCIATED WITH THE GUIDEWAY DESIGN
22. REFER TO DESIGN CRITERIA TRACK ALIGNMENT AND GEOMETRIC DESIGN SUBMISSION FOR VEHICLE INFORMATION AND CLEARANCES
23. REFER TO TRACKWORK INSTALLATION SUBMISSION FOR TRACKWORK INFORMATION
24. REFER TO STRUCTURAL SUBMISSION FOR ALL STRUCTURAL INFORMATION
25. REFER TO ELECTRICAL SUBMISSION FOR ALL ELECTRICAL INFORMATION
26. REFER TO MECHANICAL SUBMISSION FOR ALL MECHANICAL INFORMATION
27. REFER TO CIVIL SUBMISSION FOR ALL GRADING, SITE SERVICES AND ROAD RELATED INFORMATION
28. REFER TO INTEGRATED ART DESIGN FOR ALL INTEGRATED PUBLIC ART
29. ALL WORK TO BE DONE IN ACCORDANCE WITH THE ONTARIO BUILDING CODE 2012 (OBC), THE NATIONAL BUILDING CODE OF CANADA 2015 (NBCC) , THE ONTARIO FIRE CODE 2015 (OFC), NFPA 130 AND ALL RELEVANT REVISIONS, RULES, REGULATIONS, CITY BYLAWS AND ACT RELATED TO THE WORK.
30. ARCHITECTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH STRUCTURAL, MECHANICAL, ELECTRICAL, CIVIL AND LANDSCAPE DRAWINGS, SPECIFICATIONS AND ALL OTHER RELEVANT DOCUMENTATION.
31. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.
32. DRAWINGS ARE NOT TO BE SCALED.
33. DIMENSIONS ON THIS DRAWING ARE SET TO CONCRETE, CONCRETE BLOCK OR TO STRUCTURAL GRID LINES AND CRITICAL WIDTH DIMENSIONS UNLESS OTHERWISE NOTED.
34. THE GENERAL CONTRACTOR HEREIN REFERRED TO AS THE CONTRACTOR.
35. THE CONTRACTOR SHALL CONFIRM AND PROVIDE STORM, SANITARY, WATER, ELECTRICITY AND GAS REQUIREMENTS. INSTALLATION SHALL MEET ALL APPLICABLE CODES AND LOCAL INSPECTIONS.
36. DOOR AND WINDOW SIZES ARE NOMINAL. CONTRACTOR TO CONSULT SUPPLIER FOR EXACT SIZES AND ROUGH OPENINGS.
37. PROVIDE ALL FRAMING / BLOCKING AS REQUIRED TO ENSURE PROPER SECUREMENT OF ALL MATERIALS, EQUIPMENT, ACCESSORIES, AND RELATED ITEMS.
38. PROVIDE FIRE AND SMOKE SEALS AT MECHANICAL DUCT AND ELECTRICAL CONDUIT PENETRATIONS THROUGH FIRE SEPARATIONS OR WALLS WHICH ARE CONSTRUCTED TO THE U/S OF STRUCTURE. SOUND SEALS SHALL BE PROVIDED AT ALL OTHER WALLS.
39. STATION-SPECIFIC DETAILS GOVERN OVER COMMON ELEMENTS DETAILS. REPORT ANY DISCREPANCIES FOR CLARIFICATION.
40. ALL GLASS WITH AN AREA LARGER THAN 2.0sqm SHALL BE BIRD FRIENDLY SAFETY GLASS.

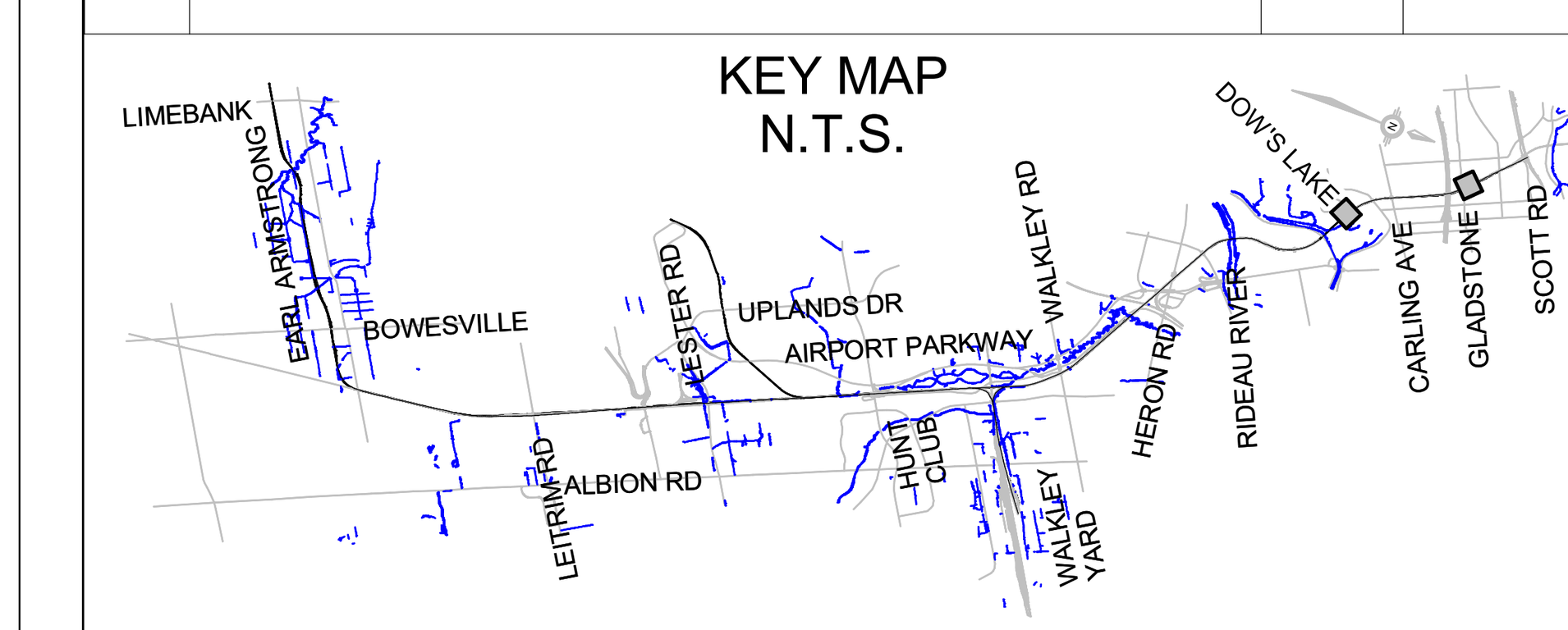
OTrain STAGE ETAPE 2 — Ottawa

ARCHITECTURAL
CORSO ITALIA
GENERAL INFORMATION
GENERAL NOTES AND ABBREVIATIONS

CONTRACT No.	LRT19-1025
DESIGNED	R.BRISBIN
CHECKED	T.KAMPMAN
DRAWN	K. SANIPE
SEALED	R. BRISBIN
DRAWING NUMBER	660373-1GSS-001-44DD-0020
MODEL NUMBER	660373-1GSS-001-44DM-1000
DESIGN/BUILDER	SNC·LAVALIN TransitNEXT
PRIMARY SEAL	ONTARIO ASSOCIATION OF ARCHITECTS — RICHARD BRISBIN — LICENCE 3782
DESIGN FIRM	bbb architects ottawa inc.
SECONDARY SEAL (IF REQUIRED)	
SCALE	
ASSET No.	
ASSET GROUP	

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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2021-03-29

LINE TYPES

- LRT - GRID
- LRT - GRIDLINE
- LRT - ROOF OVERHEAD
- LRT - SECTION LINE
- LRT - STATION EXTENTS
- LRT - PLATFORM EXTENTS
- LRT - EGRESS PATH
- LRT - SCOPE OF WORK
- LRT - 45min FRR
- LRT - 60min FRR
- LRT - 90min FRR
- LRT - 120min FRR
- LRT - 180min FRR
- LRT - POINT OF SAFETY
- LRT - FIRE ROUTE ACCESS
- LRT - PERMANENT PROPERTY LINE
- LRT - TEMPORARY PROPERTY LINE

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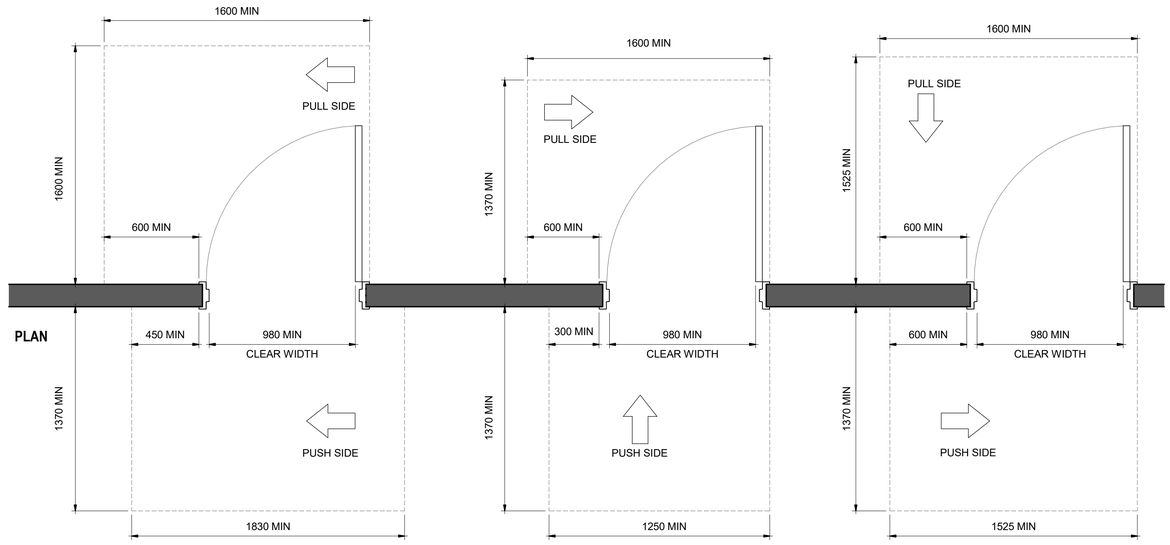
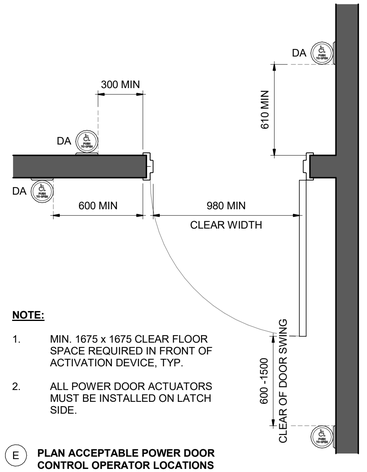
02/04/20

TITLEBLOCK: 790mm x 534mm



F **PLAN DOOR APPROACH CLEARANCES**



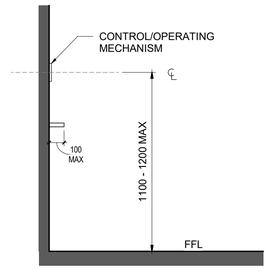
NOTE:

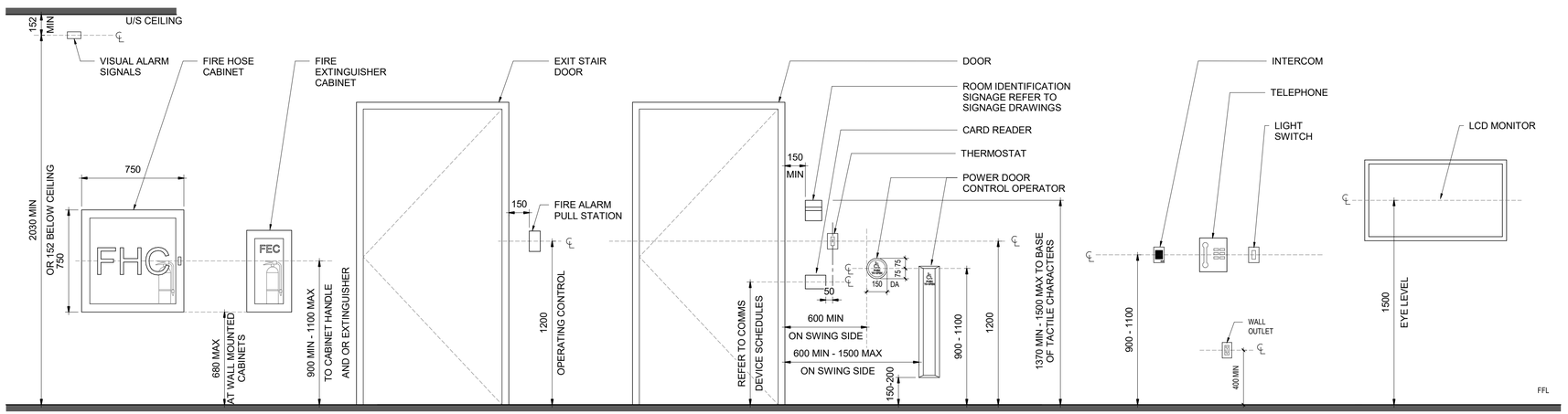
1. MIN. 1675 x 1675 CLEAR FLOOR SPACE REQUIRED IN FRONT OF ACTIVATION DEVICE, TYP.
2. ALL POWER DOOR ACTUATORS MUST BE INSTALLED ON LATCH SIDE.

E **PLAN ACCEPTABLE POWER DOOR CONTROL OPERATOR LOCATIONS**

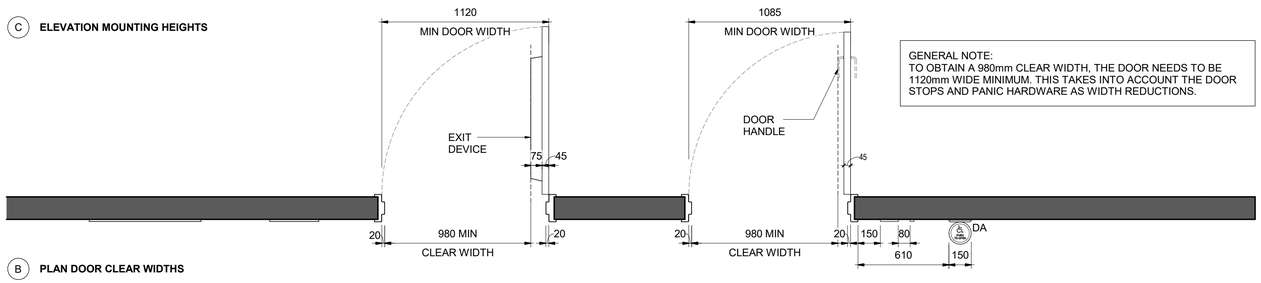
MOUNTING HEIGHTS AT OBSTRUCTIONS

SECTION



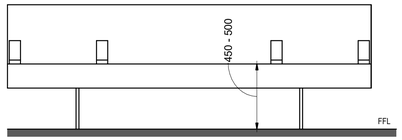


C **ELEVATION MOUNTING HEIGHTS**

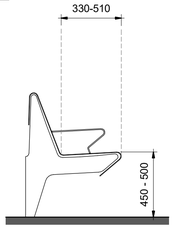


GENERAL NOTE:
TO OBTAIN A 980mm CLEAR WIDTH, THE DOOR NEEDS TO BE 1120mm WIDE MINIMUM. THIS TAKES INTO ACCOUNT THE DOOR STOPS AND PANIC HARDWARE AS WIDTH REDUCTIONS.

B **PLAN DOOR CLEAR WIDTHS**



A **ELEVATION BENCH**



ABBREVIATIONS

DA	DOOR ACTIVATOR
CB CR	CALL BUTTON CARD READER
FA	FIRE ALARM
HD	HAND DRYER
IC	INTERCOM
LS	LIGHT SWTICH
T	THERMOSTAT
TEL	TELEPHONE

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
GENERAL INFORMATION
ACCESSIBILITY DESIGN STANDARDS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	T. KAMPMAN
DRAWN	SEALED
K. SANIPE	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-0030

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER SNC·LAVALIN TransitNEXT

PRIMARY SEAL — ONTARIO ASSOCIATION OF ARCHITECTS — ROBERT BRISBIN LICENCE 3782

DESIGN FIRM bbb architects ottawa inc.

SECONDARY SEAL (IF REQUIRED)

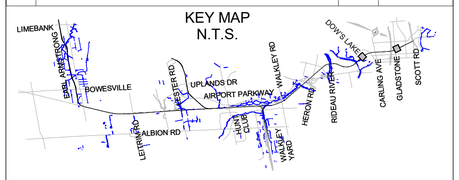
SCALE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

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04/13/20

TITLEBLOCK: 790mm x 534mm

ROOF TYPES

R1

13mm TPO ROOF MEMBRANE
ROOF SHEATHING
ON SLOPE STEEL DECK (REFER TO STRUCTURAL DRAWINGS)
TAPERED RIGID INSULATION (IF/AS REQUIRED TO ACHIEVE ROOF SLOPES)

R2

13mm TPO ROOF MEMBRANE
ROOF SHEATHING
152mm MIN. INSULATION SLOPED
VAPOUR BARRIER
13mm ROOF SHEATHING
ON STEEL DECK (REFER TO STRUCTURAL DRAWINGS)

RSI: 5.3

CEILING TYPES

CL01

STEEL STUD FRAMING, MAX. 1200mm OC OR AS REQUIRED FOR LOADING
22mm METAL FURRING @ 400mm OC
16mm MOISTURE RESISTANCE GYPSUM

CL01a

22mm METAL FURRING @ 400mm OC
16mm MOISTURE RESISTANCE GYPSUM

CL01b

REINFORCED CONCRETE SLAB, REFER TO STRUCTURAL DRAWINGS
92mm STEEL STUD @ 400mm OC
92mm CEMENTITIOUS SPRAY
22mm METAL FURRING CHANNELS @ 400mm O.C.
16mm MOISTURE RESISTANCE GYPSUM BOARD

CL02

STRUCTURAL SLAB, REFER TO STRUCTURAL DRAWINGS
92mm STEEL STUD @ 400mm OC
92mm CEMENTITIOUS SPRAY

CL03

92mm STEEL STUD @ 400mm OC
22mm METAL FURRING @ 400mm OC
12mm GYPSUM BOARD

CL04

PERF. ACOUSTIC

STEEL STUD FRAMING, MAX. 1200mm OC OR AS REQUIRED FOR LOADING (REFER TO DRAWINGS AND RCP FOR CEILING LAYOUT)
22mm METAL FURRING @ 400mm OC
25mm BLACK FACED ACOUSTIC INSULATION BOARD AT VENTED LINEAR PANELS, AS REQUIRED BY ACOUSTIC REPORT
12mm ALUMINUM WOODGRAIN LINEAR SOFFIT PANEL

CL05

STEEL STUD FRAMING, MAX. 1200mm OC OR AS REQUIRED FOR LOADING
50mm COMPOSITE METAL PANEL SYSTEM C/W NON-FERROUS CLIPS, FASTENERS AND SUPPORT

CL06

CEILING TEES
610mm x 1220mm ACOUSTIC CEILING TILE

NRC: 0.50

CL07

50mm ACOUSTIC TREATMENT

CL08

COMPRESSION POST AND HANGERS
45mm TEES
508mm x 1524mm(20"x 60") PERFORATED METAL ACOUSTIC PANEL W/ ACOUSTIBOND BACKER AND EDGE PERIMETER TRIM

NRC: 0.70

FLOOR TYPES

FL01

VARIES

FINISHED FLOOR, AS REQUIRED (REFER TO FINISH SCHEDULE)
CONCRETE TOPPING
WATERPROOFING MEMBRANE, REFER TO DETAILS
REINFORCED CONCRETE SLAB, REFER TO STRUCTURAL DRAWINGS

REFER TO STATION DETAILS FOR CONCRETE TOPPING THICKNESS

FL01a

VARIES

FINISHED FLOOR, AS REQUIRED (REFER TO FINISH SCHEDULE)
CONCRETE TOPPING W/ HEAT TRACE
WATERPROOFING MEMBRANE, REFER TO DETAILS
REINFORCED CONCRETE SLAB, REFER TO STRUCTURAL DRAWINGS

REFER TO STATION DETAILS FOR CONCRETE TOPPING THICKNESS

FL01b

VARIES

FINISHED FLOOR, AS REQUIRED (REFER TO FINISH SCHEDULE)
CONCRETE TOPPING
WATERPROOFING MEMBRANE, REFER TO DETAILS
PREFAB DIPSO SLAB SYSTEM, BY OTHERS

REFER TO STATION DETAILS FOR CONCRETE TOPPING THICKNESS

FL01c

VARIES

FINISHED FLOOR, AS REQUIRED (REFER TO FINISH SCHEDULE)
CONCRETE TOPPING W/ HEAT TRACE
WATERPROOFING MEMBRANE, REFER TO DETAILS
PREFAB DIPSO SLAB SYSTEM, BY OTHERS

REFER TO STATION DETAILS FOR CONCRETE TOPPING THICKNESS

FL02

VARIES

FINISHED FLOOR, AS REQUIRED (REFER TO FINISH SCHEDULE)
100mm MIN. CONCRETE TOPPING, UNLESS NOTED OTHERWISE
SEPARATION SHEET ON REINFORCED CONCRETE SLAB, REFER TO STRUCTURAL DRAWINGS
10mil POLYETHYLENE VAPOUR RETARDER ALL JOINTS SEALED WITH A 150mm MIN. OVERLAP
COMPACTED GRAVEL (REFER TO STRUCTURAL DRAWINGS)

25 mm MIN. RIGID FOAM INSULATION BELOW SLAB AT CONDITIONED SPACES, REFER TO STATION PACKAGES FOR LOCATIONS

FL02a

VARIES

FINISHED FLOOR, AS REQUIRED (REFER TO FINISH SCHEDULE)
100mm MIN. CONCRETE TOPPING
SEPARATION SHEET ON REINFORCED CONCRETE SLAB, (REFER TO STRUCTURAL DRAWINGS)
PVC WATERPROOFING AND HYDRO CARBON RESISTANT MEMBRANE (REFER TO STRUCTURAL DRAWINGS)
EPS (TYP.) (REFER TO STRUCTURAL DRAWINGS)

FL02b

RESERVED

FL02c

VARIES

FINISHED FLOOR, AS REQUIRED (REFER TO FINISH SCHEDULE)
100mm CONCRETE TOPPING
25mm RIGID FOAM INSULATION
SEPARATION SHEET
REINFORCED CONCRETE SLAB , REFER TO STRUCTURAL DRAWINGS
10mil POLYETHYLENE VAPOUR RETARDER ALL JOINTS SEALED WITH A 150mm MIN. OVERLAP

REFER TO DRAWINGS FOR SLOPES (WHERE REQUIRED)

FL02d

VARIES

FINISHED FLOOR, AS REQUIRED (REFER TO FINISH SCHEDULE)
100mm CONCRETE TOPPING
WATERPROOFING MEMBRANE, REFER TO DETAILS
REINFORCED CONCRETE SLAB, REFER TO STRUCTURAL DRAWINGS
WATERPROOFING MEMBRANE, REFER TO DETAILS
25mm HIGH DENSITY RIGID INSULATION
COMPACTED GRAVEL, REFER TO STRUCTURAL DRAWINGS

REFER TO DRAWINGS FOR SLOPES (WHERE REQUIRED)

FL02e

VARIES

FINISHED FLOOR, AS REQUIRED
REINFORCED CONCRETE SLAB , REFER TO STRUCTURAL DRAWINGS
WATERPROOFING MEMBRANE, REFER TO DETAILS
50mm HIGH DENSITY RIGID INSULATION
COMPACTED GRAVEL, REFER TO STRUCTURAL DRAWINGS

REFER TO DRAWINGS FOR SLOPES (WHERE REQUIRED)

FL02f

VARIES

FINISHED FLOOR, AS REQUIRED
100mm CONCRETE TOPPING W/ HEAT TRACE
WATERPROOFING MEMBRANE, REFER TO DETAILS
REINFORCED CONCRETE SLAB , REFER TO STRUCTURAL DRAWINGS
WATERPROOFING MEMBRANE, REFER TO DETAILS
25mm HIGH DENSITY RIGID INSULATION
COMPACTED GRAVEL, REFER TO STRUCTURAL DRAWINGS

REFER TO DRAWINGS FOR SLOPES (WHERE REQUIRED)

FL03

SLOPE

VARIES

100mm GRANULAR COVER
PROTECTION BOARD
WATERPROOFING MEMBRANE, REFER TO DETAILS
CONCRETE TOPPING, REFER TO STRUCTURAL DRAWINGS
PREFAB DIPSO SLAB SYSTEM, BY OTHERS

FL04

FINISHED FLOOR, AS REQUIRED (REFER TO FINISH SCHEDULE)
CONCRETE SLAB ON DECK (REFER TO STRUCTURAL DRWAINGS)

WALL TYPES

W01

102x203mm DOCK & PIN HSS MULLION
GLASS PANELS: 2 PANES OF MIN. 6mm THICK EACH TEMPERED LAMINATED GLASS WITH 1.6mm CLEAR SGP INTERLAYER W/ 13mm SEALED JOINTS (GLTL-01)
REFER TO STRUCTURAL FOR HSS MULLION

W01a

CAPLESS ALUMINUM MULLION
GLASS PANELS: 2 PANES OF MIN. 6mm THICK EACH TEMPERED LAMINATED GLASS WITH 1.6mm CLEAR SGP INTERLAYER W/ 13mm SEALED JOINTS (GLTL-01)

W01b

14mm FOUR ARM SPIDER W/ TAPERED-FACE BOLTS
GLASS PANELS: 2 PANES OF MIN. 6mm THICK EACH TEMPERED LAMINATED GLASS WITH 1.6mm CLEAR SGP INTERLAYER W/ 13mm SEALED JOINTS (GLTL-01)
REFER TO STRUCTURAL FOR HSS MULLION

W01c

102x203mm DOCK & PIN HSS MULLION
6mm MIN. TEMPERED CLEAR GLASS LAMINATED TO 6mm TEMPERED SOLARGRAY GLASS WITH 1.6mm CLEAR SGP INTERLAYER W/ 13mm SEALED JOINTS (GLTL-03)
REFER TO STRUCTURAL FOR HSS MULLION

W02

STRUCTURAL WALL (REFER TO STRUCTURAL)

W02a

BACKFILL
50mm RIGID INSULATION
DRAINAGE MAT
SUBGRADE WATERPROOFING MEMBRANE, REFER TO DETAILS
STRUCTURAL WALL (REFER TO STRUCTURAL)

W03

STRUCTURAL WALL (REFER TO STRUCTURAL)
92mm STEEL STUD FRAMING @ 400mm O.C. W/
92mm SEMI-RIGID INSULATION
AIR/VAPOUR BARRIER
16mm CEMENT BOARD

RSI: 3.52 (REFER TO ARCHITECTURAL SPECIFICATIONS)

W03a

50mm RIGID INSULATION
DRAINAGE MAT
SUBGRADE WATERPROOFING MEMBRANE, REFER TO DETAILS
STRUCTURAL WALL (REFER TO STRUCTURAL)
92mm STEEL STUD FRAMING @ 400mm OC W/
92mm SEMI-RIGID INSULATION
AIR/VAPOUR BARRIER
16mm CEMENT BOARD

RSI: 3.52 (REFER TO ARCHITECTURAL SPECIFICATIONS)

W04

STRUCTURAL WALL (REFER TO STRUCTURAL)
AIR / VAPOUR BARRIER
152mm ADJUSTABLE Z-GIRTS - VERTICAL & HORIZONTAL
102mm SEMI-RIGID INSULATION
50mm COMPOSITE METAL PANEL SYSTEM C/W NON-FERROUS CLIPS, FASTENERS AND SUPPORT

RSI: 3.52 (REFER TO ARCHITECTURAL SPECIFICATIONS)

W04a

190mm CONCRETE BLOCK
AIR / VAPOUR BARRIER
152mm ADJUSTABLE Z-GIRTS - VERTICAL & HORIZONTAL
102mm SEMI-RIGID INSULATION
50mm COMPOSITE METAL PANEL SYSTEM C/W NON-FERROUS CLIPS, FASTENERS AND SUPPORT

RSI: 3.52 (REFER TO ARCHITECTURAL SPECIFICATIONS)

W04b

STRUCTURAL WALL (REFER TO STRUCTURAL)
VAPOUR BARRIER
22mm METAL FURRING @ 600 O.C.
50mm COMPOSITE METAL PANEL SYSTEM C/W NON-FERROUS CLIPS, FASTENERS AND SUPPORT

W04c

STRUCTURAL WALL (REFER TO STRUCTURAL)
AIR / VAPOUR BARRIER
92mm ADJUSTABLE Z-GIRTS - VERTICAL & HORIZONTAL
89mm SEMI-RIGID INSULATION
50mm COMPOSITE METAL PANEL SYSTEM C/W NON-FERROUS CLIPS, FASTENERS AND SUPPORT

RSI: 2.5 (REFER TO ARCHITECTURAL SPECIFICATIONS)

W04d

STRUCTURAL STEEL STUD FRAMING @ 400mm OC
16mm FIBERGLASS FACED SHEATHING
50mm COMPOSITE METAL PANEL SYSTEM C/W NON-FERROUS CLIPS, FASTENERS AND SUPPORT

W04e

STRUCTURAL WALL (REFER TO STRUCTURAL)
152mm STEEL STUD FRAMING @ 400mm OC
50mm COMPOSITE METAL PANEL SYSTEM C/W NON-FERROUS CLIPS, FASTENERS AND SUPPORT

W05

EPS SYSTEM (TYP.) (REFER TO STRUCTURAL DRAWINGS)
100mm AIRSPACE
150mm PRECAST CONCRETE PANEL SYSTEM (REFER TO STRUCTURAL DRAWINGS)

W05a

RESERVED

W06

190mm CONCRETE BLOCK

W06a

190mm CONCRETE BLOCK
1hr FRR - ULC NO. U905

W06b

190mm CONCRETE BLOCK
1.5hr FRR - ULC NO.

W07

140mm CONCRETE BLOCK

W07a

90mm CONCRETE BLOCK

W08

92mm STEEL STUD FRAMING @ 400mm OC
16mm GYPSUM BOARD

W08a

92mm STEEL STUD FRAMING @ 400mm OC W/
92mm SEMI-RIGID INSULATION
AIR / VAPOUR BARRIER
16mm CEMENT BOARD

W09

STRUCTURAL STEEL STUD @ 400mm O.C. W/
13mm EXTERIOR GRADE SHEATHING BOARD
2mm PREFINISHED METAL PANEL

W10

152mm STEEL STUD @ 400mm O.C. W/
16mm EXTERIOR GRADE SHEATHING BOARD
50mm COMPOSITE METAL PANEL SYSTEM C/W NON-FERROUS CLIPS, FASTENERS AND SUPPORT

W11

190mm CONCRETE BLOCK
SELF ADHESIVE EXTERIOR MEMBRANE
25mm AIR SPACE
90mm MASONRY VENEER C/W MASONRY TIES @ 400 E/W COLOUR AND FINISH TO MATCH EXISTING

W12

16mm GYPSUM BOARD
152mm STEEL STUD
W/ SOUND ATTENUATION FIRE BLANKETS
16mm GYPSUM BOARD

W13

16mm TYPE X DRYWALL
152mm STEEL STUD
W/ SOUND ATTENUATION FIRE BLANKETS
16mm TYPE X DRYWALL
1hr - ULC U411, cUL U465 OR APPROVED EQUIVALENT

W14a

92mm STEELL STUD
W/ SOUND ATTENUATION FIRE BLANKETS
16mm TYPE X DRYWALL
16mm TYPE X DRYWALL
1.5hr - ULC U411, cUL U411 OR APPROVED EQUIVALENT

W14b

13mm TYPE X DRYWALL
152mm STEEL STUD
W/ SOUND ATTENUATION FIRE BLANKETS
13mm TYPE X DRYWALL
13mm TYPE X DRYWALL
1.5hr - ULC U411, cUL U411 OR APPROVED EQUIVALENT

OTrain STAGE 2 ETAPE

Ottawa

ARCHITECTURAL
CORSO ITALIA
GENERAL INFORMATION
SCHEDULES & ASSEMBLIES

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	T. KAMPMAN
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-0050

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS LICENSE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

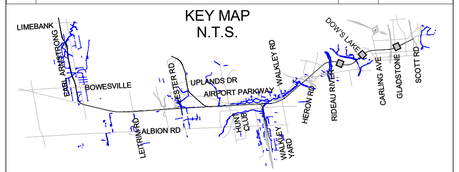
SCALE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

NOTE:

ALL ASSEMBLIES ARE AS PER SYSTEM WIDE DETAILS AND ARE NOT PRESENT IN ALL STATIONS

11/26/19

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06/11/20

Date of last revision: 2020-11-26

This form has been developed for the exclusive use of TransitNEXT to communicate the requirements for construction of light rail transit facilities of the Trillium Line extension. All Building Code References are to Division B of the Ontario Building Code unless otherwise noted.

Item	Ontario Building Code Data Matrix - Trillium Line Extension		OBC Reference
1	Project Type	X New ___ Renovation ___ Addition ___ Addition and renovation	[A] 1.1.2.
2	Project Description	Construction of Gladstone Station light rail station on Trillium Line.	
3	Building Classification	Light rail rapid transit station	3.13.
4	Construction Type	___ Combustible X Non-combustible ___ Combination	3.13.2.1.
5	Required Fire-Resistance Ratings	Horizontal Assembly: Floors — Rating: 1 h — Supporting Assembly: 1 h — Non-Combustible in Lieu of Rating: N/A Mezzanine — N/A — N/A — N/A Roof — 1 h — 1 h — N/A	3.13.2.1.(11)
6	Gross Area (m^2)	Description: Platform level — Existing: 0 — New: 1191 — Total: 1191 Concourse level — 0 — 273 — 273 Total — 0 — 1464 — 1464	[A] 1.4.1.2.
7	Building Height	2 Storeys above grade Description:	[A] 1.4.1.2. & 3.2.1.1.
8	Open vs. Enclosed Station	X Open Station ___ Enclosed Station Description: The station is defined as an open station under NFPA 130-2017 Article 3.3.55.2.	NFPA 130 3.3.55.2.
9	Number of Streets / Firefighter Access	Description: The fire department access route is located on Gladstone Avenue.	3.2.2.10. & 3.2.5.
10	Sprinkler System	___ Required X Not required **Proposed:** ___ Entire building ___ Basement ___ Selected compartments ___ In lieu of roof rating X Selected floor areas ___ None Description: M+R room will be sprinklered. Sprinklers may be used to provide fire-resistance rating for exposing building faces.	3.2.5.13.-16., 3.2.2.17. & 3.13.5.10.
11	Suppression System	Description: Novec 1230 suppression system provided in Comms Room. Installed in accordance with the requirements of NFPA 2001.	
12	Standpipe System	X Required ___ Not required Description: Automatic dry standpipe system is provided. Hose stations provided with 38 mm and 64 mm valves.	3.13.5.11.
13	Water Service / Supply is Adequate	X Yes ___ No	
14	Fire Alarm System	X Required ___ Not required Description: New fire alarm control panel (FACP) provided for the station. FACP is part of Trillium Line network and connected to TOCC.	3.2.4. & 3.13.5.
15	Emergency Communication System	X Yes ___ No Description: One-way and two-way communication systems provided throughout fixed guideway transit and passenger rail systems.	3.13.5.8.
16	Emergency Lighting and Emergency Power	X Yes ___ No Description: Emergency lighting provided to average levels not less than 10 lx at floor or tread level in public areas for not less than 30 min after a power failure.	3.13.3.7.
17	Emergency Ventilation	___ Yes X No Description: Open stations do not require emergency ventilation. Ventilation provided as necessary in other areas.	3.13.7.
18	Importance Category	___ Low ___ High X Normal ___ Post-disaster	4.1.2.1.(3) & T4.1.2.1.B
19	Seismic Hazard Index	$(I_E F_a S_a(0.2))$ = 0.728 Seismic design required for Table 4.1.8.18. items 6 to 21 X Yes ___ No	4.1.2.1.(3) & 4.1.8.18.(2)
20	Occupant Load	Floor Level: Platform — Occupancy Type: A2 — Based On: Model — Occupant Load: 894 — Platform Clearance Time: 3.8	3.13.4.
21	Barrier-Free Design	X Yes ___ No Description: Refer to barrier-free design and accessibility report.	3.13.8.
22	Hazardous Substances	___ Yes X No Description: Not more than 30 L of gasoline to be stored in M&R room in an approved container. The M&R room will have a 1 h fire-resistance rating.	3.3.1.2. & OFC 4.2.4.2.
23	Spatial Separation	Wall: North — EBF Area (m^2): 121 — Limiting Distance (m): >50 — L/H or H/L: 3:1 to 10:1 — Required FRR: N/A — Construction Type Required: C or NC — Cladding Type Required: C or NC South — 119 — 18.948 — 3:1 to 10:1 — N/A — C or NC — C or NC East — 130 — 9.229 — 3:1 to 10:1 — 50% - 45 min — C or NC — NC West — 94 — 14.442 — 3:1 to 10:1 — N/A — C or NC — C or NC Description: The spatial separation requirements for the East exposing building face is the subject of an alternative solution to eliminate the FRR requirement. Refer to alternative solution 660373-0000-003-40FER-0005.	3.2.3.
24	Plumbing Fixture Requirements	Floor Level / Area: Men's — Occ. Load: N/A — OBC Table: 3.13.6.2. — Fixtures Required: N/A — Fixtures Provided: 0 Women's — N/A — 3.13.6.2. — N/A — 0 Description: Washrooms not required unless a terminal station.	3.13.6.2.
25	Energy Efficiency	Compliance Path: Climatic Zone:	

1 OBC MATRIX
0060 N.T.S

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
GENERAL INFORMATION
OBC MATRIX & GENERAL NOTES

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R.BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A.RAFIE	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-0060

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS — ROBERT A. BRISBIN LICENCE 3782

DESIGN FIRM

bbb architects ottawa inc.

SECONDARY SEAL (IF REQUIRED)

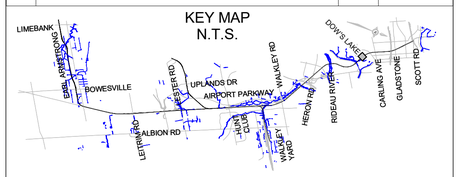
SCALE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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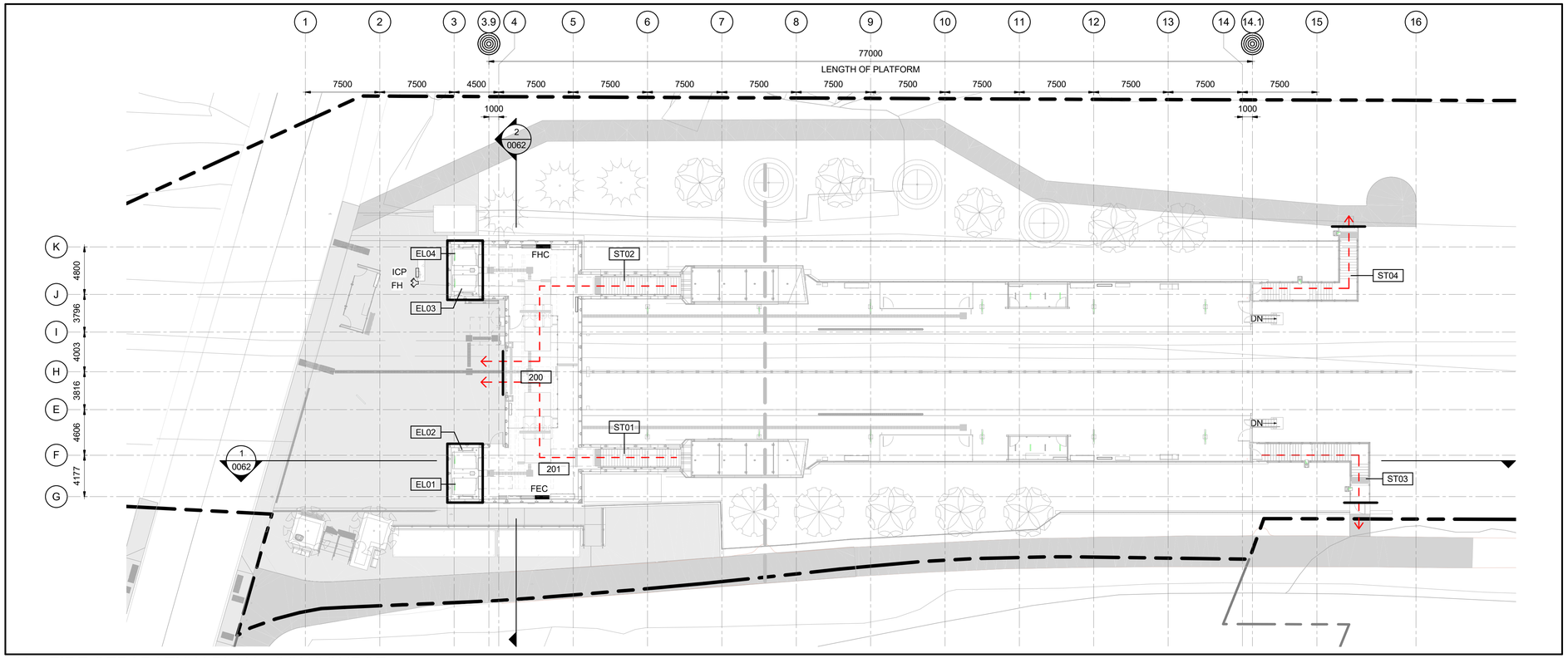
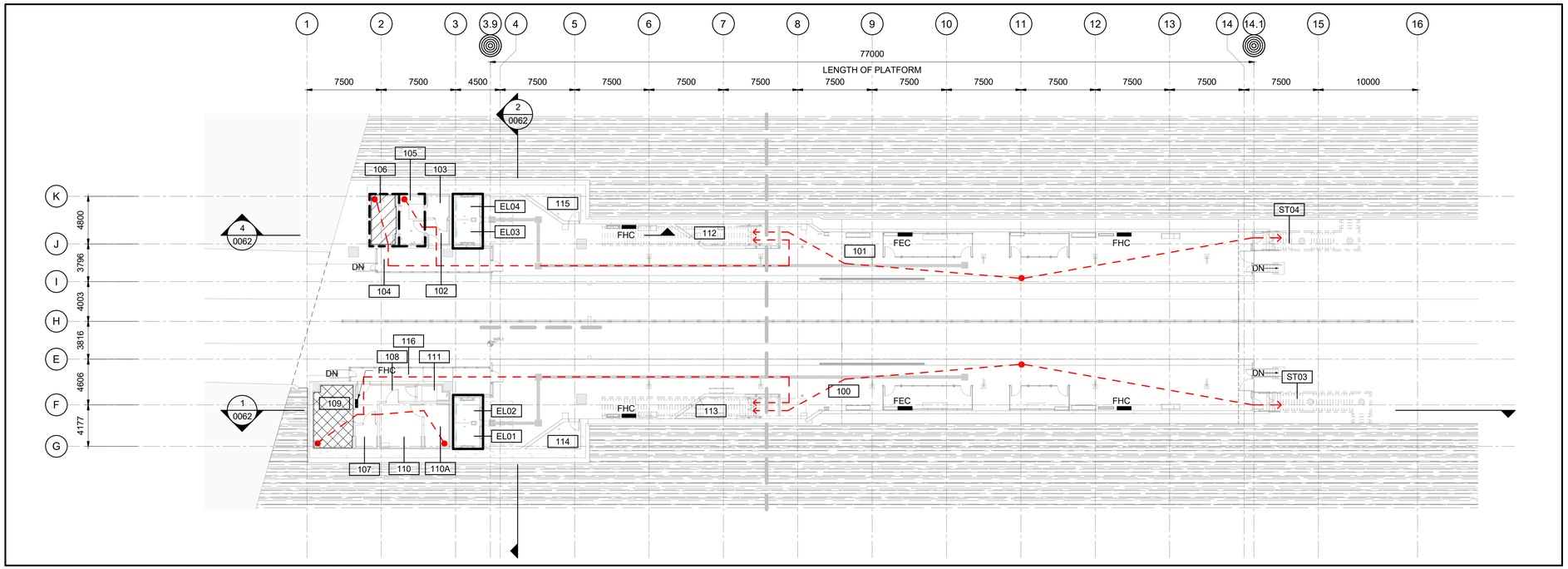
ISSUED FOR CONSTRUCTION
2021-03-29

TITLEBLOCK: 790mm x 534mm



2 / 0061 FIRE SEPARATION PLAN - CONCOURSE

1 : 250



1 / 0061 FIRE SEPARATION PLAN - PLATFORM

1 : 250

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06/11/20

Train STAGE ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
GENERAL INFORMATION
FIRE SEPARATION PLANS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R.BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A.RAFIE	R. BRISBIN

DRAWING NUMBER 00373-1GSS-001-44DD-0061

MODEL NUMBER 660373-1GSS-001-44DM-1000

PRIMARY SEAL

ONTARIO ASSOCIATION ARCHITECTS RICHARD BRISBIN LICENCE 3782

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

DESIGN FIRM

bbb architects ottawa inc.

SECONDARY SEAL (IF REQUIRED)

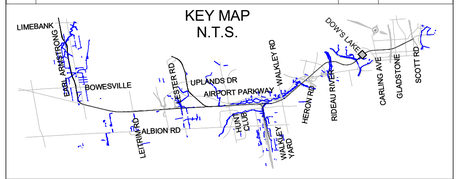
SCALE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-03-29

LEGEND

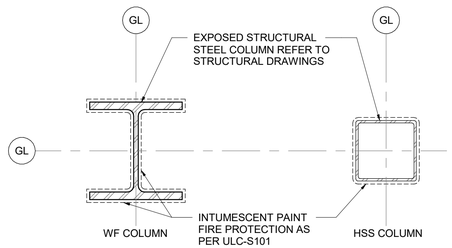
FIRE SEPARATION	
LINE TYPE	WALL
	45 MIN FIRE RESISTANCE RATING PROVIDE FIRE STOP ALL AROUND
	1 HR FIRE RESISTANCE RATING PROVIDE FIRE STOP ALL AROUND
	1.5 HR FIRE RESISTANCE RATING PROVIDE FIRE STOP ALL AROUND
	2 HR FIRE RESISTANCE RATING FOR ELEVATOR SHAFT. ALTERNATE SOLUTIONS FOR RATINGS ARE IN PROGRESS
	POINT OF SAFETY
HATCH TYPE	
	CLEAN AGENT
	SPRINKLERS
EXISITNG	
	TRAVEL PATH
FIRE CABINET	
FHC	FIRE EXTINGUISHER & HOSE VALVE CABINET
FEC	FIRE EXTINGUISHER CABINET

NOTES

FIRE SEPARATION AND EXITING DRAWINGS TO BE READ IN CONJUNCTION WITH STATION FIRE SAFETY CODE REPORT FOR CORSO ITALIA. REFER TO CODE REPORT 660373-1GSS-0003-40FER-0001, INCLUDING ALTERNATE SOLUTION FOR SPATIAL SEPARATION AND EXPOSURE PROTECTION, 660373-0000-0003-40FER-0005.

1HR FIRE RATING FOR STEEL MEMBERS WILL BE INTUMESCENT PAINT WHERE EXPOSED AND SPRAYED CEMENTITIOUS FIRE PROOFING ABOVE CEILINGS.

TITLEBLOCK: 790mm x 534mm

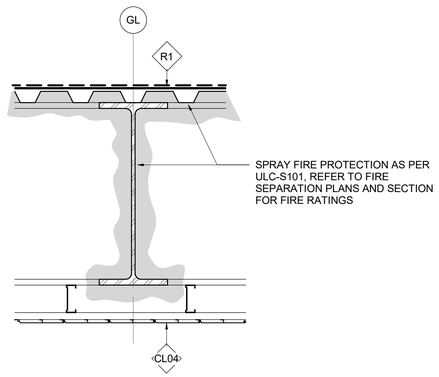


NOTES:

1. ENSURE COMPATIBILITY OF STEEL PAINT PROTECTION FROM PRIMER TO FINISH WITH INTUMESCENT PAINT.
2. PROVIDE CONTINUOUS FIRE PROTECTION AND OVERLAP AT TRANSITION BETWEEN SPRAY AND INTUMESCENT FIRE PROTECTION.
3. PROVIDE FIRE SEAL TO ALL FASTENERS AND SUPPORT PENETRATING FIRE PROTECTIVE COATING TO ENSURE CONTINUITY OF THE FIRE PROTECTION.
4. ENSURE CONTINUITY OF FIRE PROTECTION ON ALL TRANSITION COLUMN TO BEAM, BEAM TO METAL DECK AND ALL OTHER AREAS WHERE FIRE PROTECTION IS REQUIRED.

A

TYPICAL EXPOSED ARCHITECTURAL STRUCTURAL STEEL

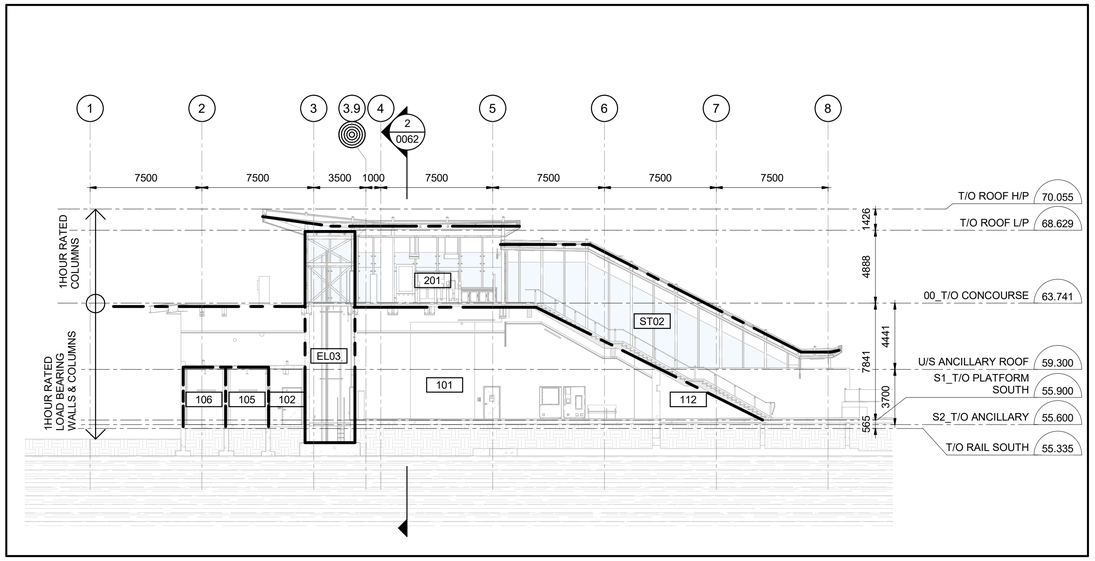


B

TYPICAL CONCEALED STRUCTURAL STEEL

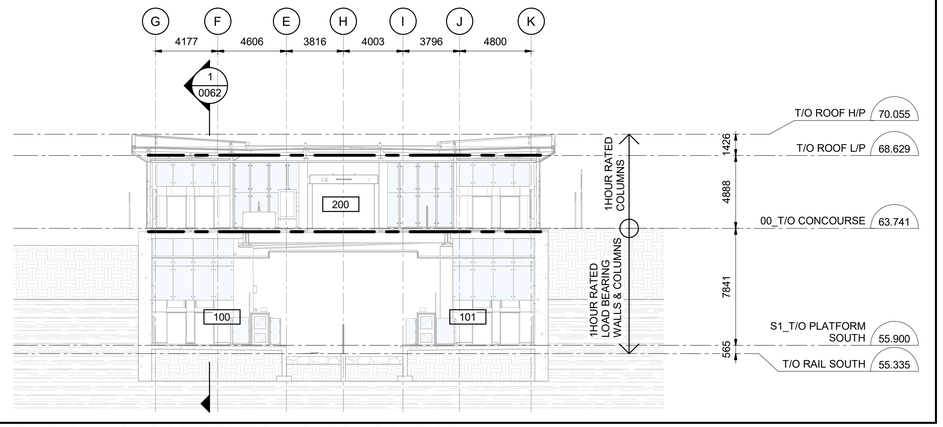
3 0062 TYPICAL FIRE PROTECTION DETAILS

1 : 10



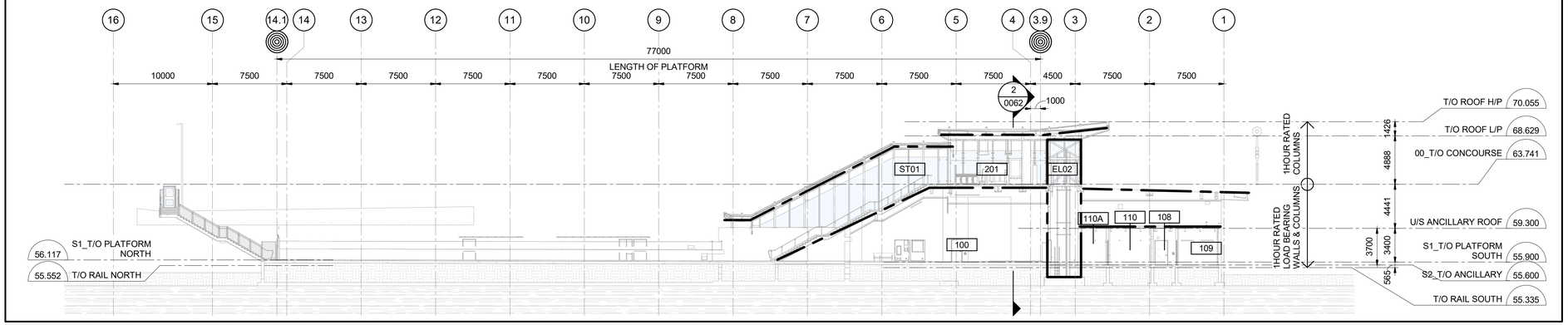
4 0062 FIRE SEPARATION - LONG SECTION @ WEST SERVICE SPACES AND CONCOURSE

1 : 200



2 0062 FIRE SEPARATION - CROSS SECTION @ CONCOURSE

1 : 200



1 0062 FIRE SEPARATION - LONG SECTION @ EAST SERVICE SPACES AND CONCOURSE

1 : 250

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
GENERAL INFORMATION
FIRE SEPARATION SECTIONS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R.BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A.RAFIE	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-0062

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS ROBERT A. BRISBIN LICENCE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

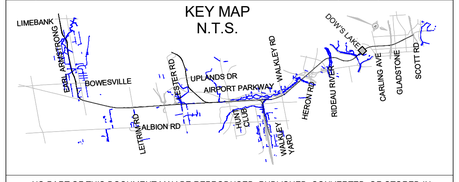
SCALE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-03-29

LEGEND

FIRE SEPARATION	
LINE TYPE	WALL
	45 MIN FIRE RESISTANCE RATING PROVIDE FIRE STOP ALL AROUND
	1 HR FIRE RESISTANCE RATING PROVIDE FIRE STOP ALL AROUND
	1.5 HR FIRE RESISTANCE RATING PROVIDE FIRE STOP ALL AROUND
	2 HR FIRE RESISTANCE RATING FOR ELEVATOR SHAFT. ALTERNATE SOLUTIONS FOR RATINGS ARE IN PROGRESS
	POINT OF SAFETY
HATCH TYPE	
	CLEAN AGENT
	SPRINKLERS
EXISITNG	
	TRAVEL PATH
FIRE CABINET	
FHC	FIRE EXTINGUISHER & HOSE VALVE CABINET
FEC	FIRE EXTINGUISHER CABINET

NOTES

FIRE SEPARATION AND EXITING DRAWINGS TO BE READ IN CONJUNCTION WITH STATION FIRE SAFETY CODE REPORT FOR CORSO ITALIA. REFER TO CODE REPORT 660373-1GSS-0003-40FER-0001, INCLUDING ALTERNATE SOLUTION FOR SPATIAL SEPARATION AND EXPOSURE PROTECTION, 660373-0000-0003-40FER-0005.

1HR FIRE RATING FOR STEEL MEMBERS WILL BE INTUMESCENT PAINT WHERE EXPOSED AND SPRAYED CEMENTITIOUS FIRE PROOFING ABOVE CEILINGS.

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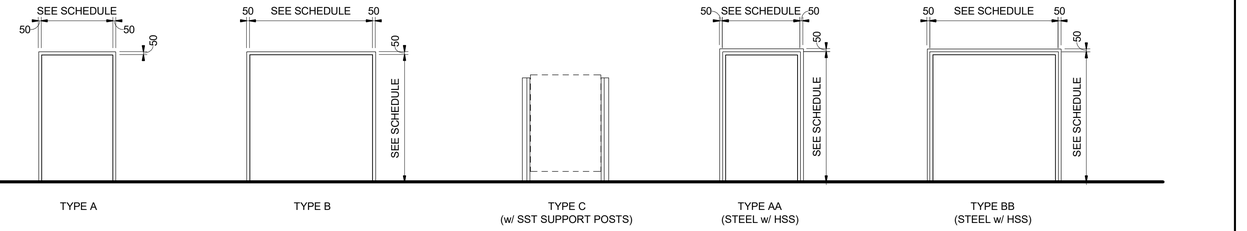
06/11/20

TITLEBLOCK: 790mm x 534mm

DOOR SCHEDULE

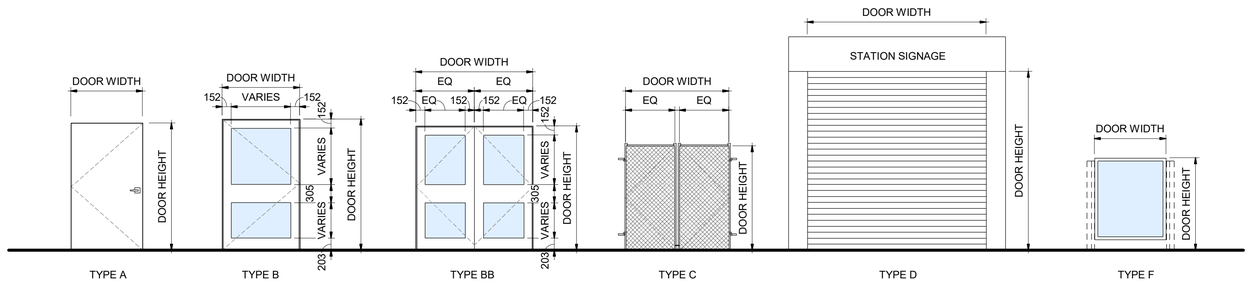
DOOR NUMBER	ROOM NAME	Construction Type	DOOR WIDTH	DOOR HEIGHT	DOOR THICKNESS	DOOR TYPE	DOOR MATERIAL	DOOR FINISH	GLASS	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	FRR	STC RATING	SECURITY	BFO	COMMENTS
100.1	NORTH PLATFORM	1 x 1067mm	1067	2135	45	B	HM	PT	GLTL-02	AA	HM	PT			SCADA		
100.2	NORTH PLATFORM	1 x 610mm	610	2135	45	B	HM	PT	GLTL-02	AA	HM	PT			SCADA (A)		
100.3	NORTH PLATFORM	1 x 1220mm	1220	2134	45	B	HM	PT	GLTL-02	AA	HM	PT			SCADA		50mm (MIN.) UNDERCUT REQUIRED FOR SNOW CLEARANCE
100.4	ELEC CLOSET	1 x 1017mm	1017	1524	45	A	HM	PT		A	HM	PT			IAC		
101.1	SOUTH PLATFORM	1 x 1067mm	1067	2135	45	B	HM	PT	GLTL-02	AA	HM	PT			SCADA		
101.2	SOUTH PLATFORM	1 x 610mm	610	2135	45	B	HM	PT	GLTL-02	AA	HM	PT			SCADA (A)		
101.3	SOUTH PLATFORM	1 x 1220mm	1220	2134	45	B	HM	PT	GLTL-02	AA	HM	PT			SCADA		50mm (MIN.) UNDERCUT REQUIRED FOR SNOW CLEARANCE
101.4	ELEC CLOSET	1 x 1017mm	1017	1524	45	A	HM	PT		A	HM	PT			IAC		
102.1	VESTIBULE	1 x 1220mm	1220	2350	45	A	HM	PT		A	HM	PT			IAC		INSULATED DOOR C/W THERMAL BREAK FRAME
103.1	EMR	1 x 1220mm	1220	2438	45	A	HM	PT		A	HM	PT	45MIN	38-SC	IAC		DOOR HT TO COORD WITH CONC BLOCK COURSING
104.1	WEST ANCILARY WALKWAY	1 x 610mm	610	2135	45	B	HM	PT	GLTL-02	AA	HM	PT			SCADA (A)		
105.1	WATER ENTRY / SUMP	1 x 1220mm	1220	2438	45	A	HM	PT		A	HM	PT	45MIN	38-SC	IAC		DOOR HT TO COORD WITH CONC BLOCK COURSING
106.1	M&R	1 x 1220mm	1220	2350	45	A	HM	PT		A	HM	PT	45MIN		IAC		
107.1	EMR	1 x 1220mm	1220	2438	45	A	HM	PT		A	HM	PT	45MIN	38-SC	IAC		DOOR HT TO COORD WITH CONC BLOCK COURSING
108.1	CORRIDOR	1 x 1220mm	1220	2350	45	A	HM	PT		A	HM	PT			IAC		INSULATED DOOR C/W THERMAL BREAK FRAME
109.1	COMMS	1 x 1220mm	1220	2438	45	A	HM	PT		A	HM	PT			IAC		DOOR HT TO COORD WITH CONC BLOCK COURSING
110.1	ELEC	1 x 1220mm	1220	2438	45	A	HM	PT		A	HM	PT			IAC		DOOR HT TO COORD WITH CONC BLOCK COURSING
110A.1	UPS ROOM	1 x 1220mm	1220	2438	45	A	HM	PT		A	HM	PT			IAC		DOOR HT TO COORD WITH CONC BLOCK COURSING
111.1	MECH CLOSET	1 x 1016mm	1016	2135	45	A	HM	PT		A	HM	PT			IAC		DOOR HT TO COORD WITH CONC BLOCK COURSING
111.2	SERVICE CLOSET	1 x 1016mm	1016	2135	45	A	HM	PT		A	HM	PT			IAC		
111.3	SERVICE CLOSET	1 x 1016mm	1016	2135	45	A	HM	PT		A	HM	PT			IAC		
116.1	EAST ANCILLARY WALKWAY	1 x 610mm	610	2135	45	B	HM	PT	GLTL-02	AA	HM	PT			SCADA (A)		
200.1		1 x 4157mm	4157	3000	80	D	SST	_			SST	_			SCADA (C)		
200.2	PUBLIC PLAZA	1 x 1300mm	1300	2438	45	B	HM	PT	GLTL-02	A	HM	PT			IAC		
200.3	PUBLIC CONCOURSE	1 x 1300mm	1300	1524	45	F	SST	_	GLTL-02	C	SST	_			IAC		175mm UNDERCUT/SWING-GATE STYLE BARRIER FREE DOOR OPERATOR/CARD READER REQ'D
ST03.1	EXIT STAIR	1 x 1067mm	1067	2135	45	B	HM	PT	GLTL-02	AA	HM	PT			SCADA		
ST03.2	EXIT STAIR	1 x 1067mm	1067	2135	45	B	HM	PT	GLTL-02	AA	HM	PT			SCADA		
ST04.1	EXIT STAIR	1 x 1067mm	1067	2135	45	B	HM	PT	GLTL-02	AA	HM	PT			SCADA		
ST04.2		1 x 1067mm	1067	2135	45	B	HM	PT	GLTL-02	AA	HM	PT			SCADA		

01



2 / 0070 FRAME TYPES

1 : 50



1 / 0070 DOOR TYPES

1 : 50

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
GENERAL INFORMATION
DOOR SCHEDULE AND TYPE

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	T. KAMPMAN
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-0070

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS LICENCE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

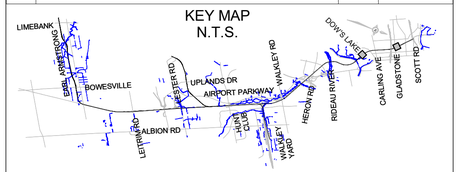
SCALE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29
01	REVISED ISSUE FOR CONSTRUCTION	JJ	2021/07/30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

GENERAL NOTES

1. FOR HARDWARE TYPES - REFER TO HARDWARE SCHEDULE
2. FOR SECURITY INTERFACES AND DEVICES - REFER TO SECURITY DOCUMENT
3. DOOR GRILLES TO BE SAME RATING AS DOOR

FINISHES AND ABBREVIATIONS

ALUM	ALUMINUM
GL	GLASS
HM	HOLLOW METAL
HMDR	HOLLOW METAL DOOR
GALV	GALVANIZED
INS	INSULATION
PLAM	PLASTIC LAMINATED
PS	PRESSED STEEL FRAME
PT	PAINTED
ST	STEEL
SST	STAINLESS STEEL
IAC	INTRUSION ACCESS CONTROL
SCADA	MONITORING
SCADA (A)	MONITORING WITH ALARM
SCADA (C)	MONITORING WITH CONTROL

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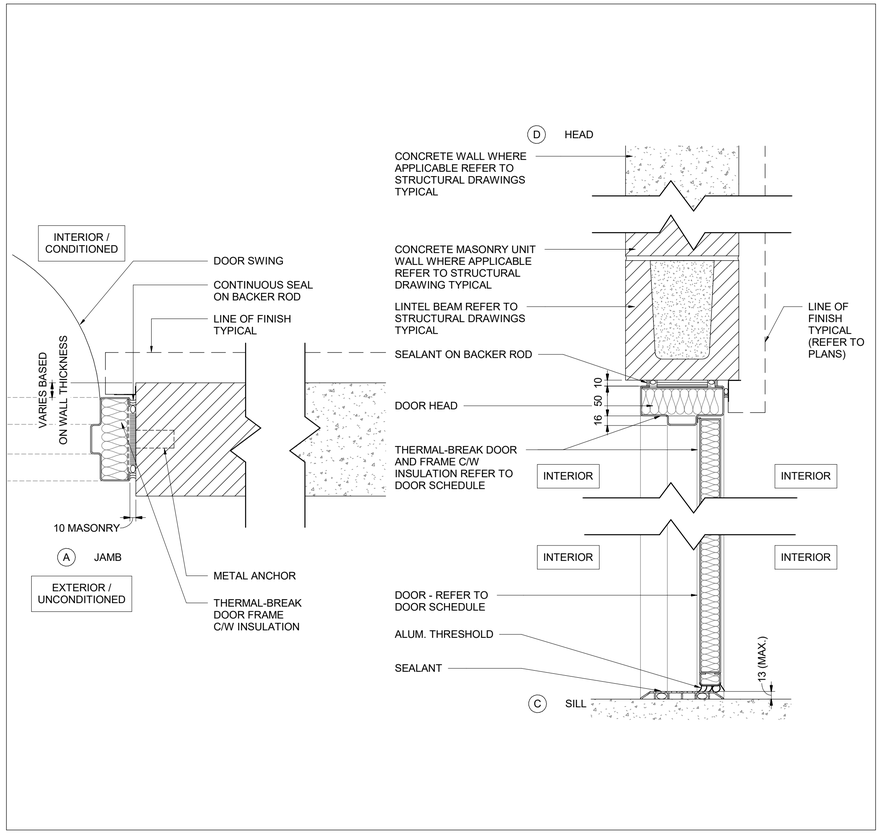
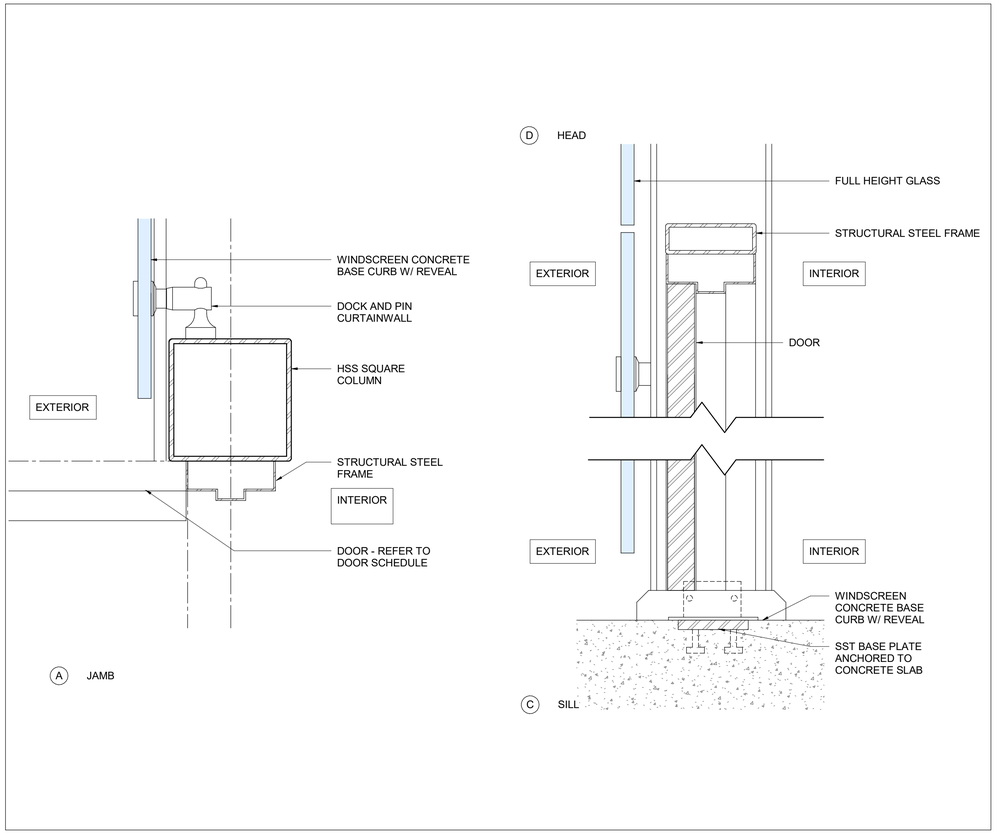
TITLEBLOCK: 790mm x 534mm



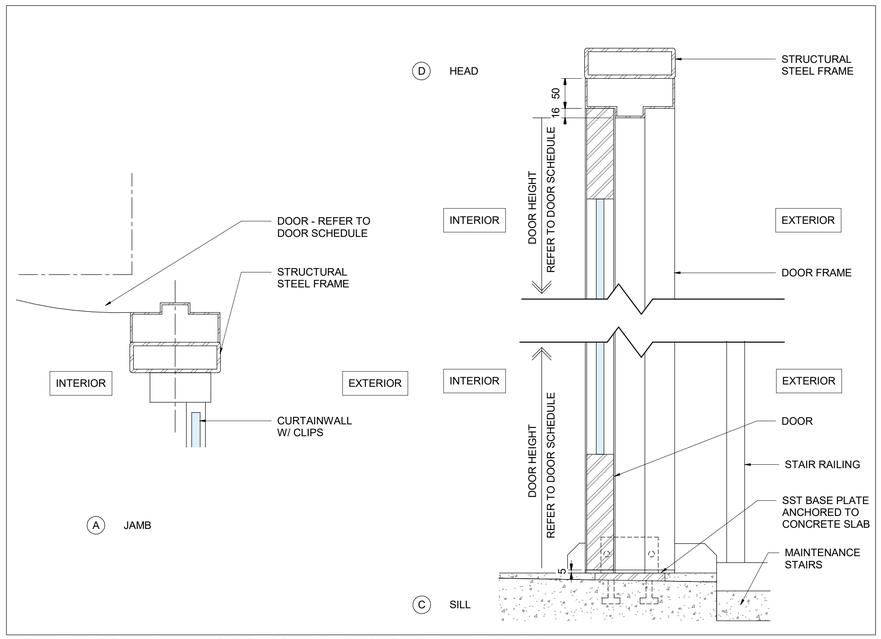
4 0071 TYPICAL PLAN/SECTION DETAILS (FRAME TYPE A W/ INSULATED DOOR)

1 : 5



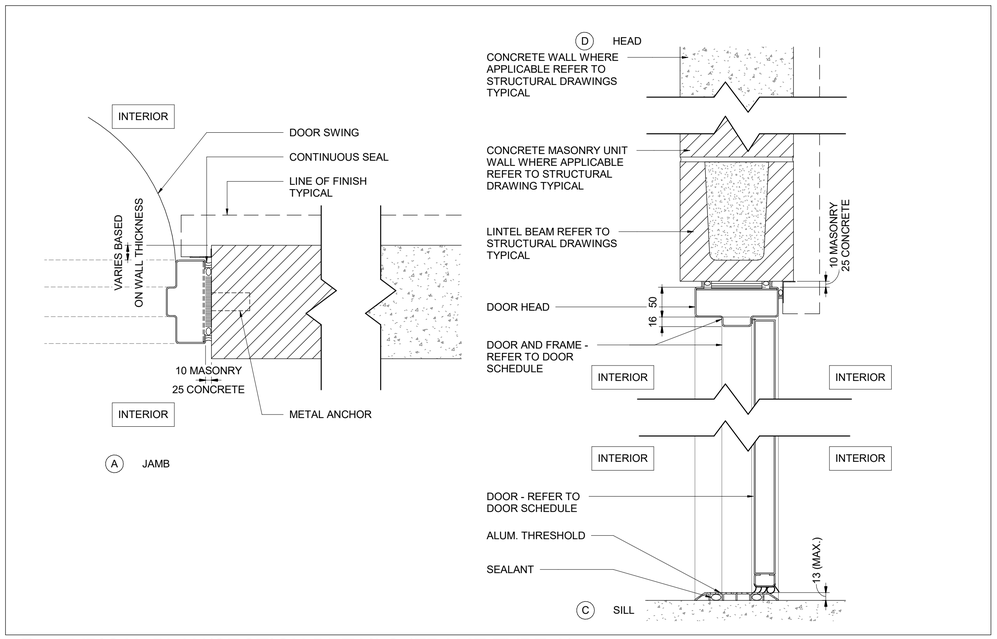
3 0071 TYPICAL PLAN/SECTION DETAILS (FRAME TYPE AA AT FULL SIZE GLASS)

1 : 5



2 0071 TYPICAL PLAN/SECTION DETAILS (FRAME TYPE AA)

1 : 5



1 0071 TYPICAL PLAN/SECTION DETAILS (FRAME TYPE A)

1 : 5

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
GENERAL INFORMATION
DOOR AND FRAME DETAILS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R.BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A.RAFIE	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-0071

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS LICENCE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

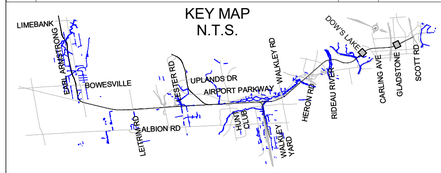
SCALE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-03-29

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10/07/20

TITLEBLOCK: 790mm x 534mm

NET AREA SCHEDULE (ROOMS)

NUMBER	NAME	Area
S1_T/O PLATFORM SOUTH		
100	NORTH PLATFORM	433 m²
101	SOUTH PLATFORM	433 m²
102	VESTIBULE	6 m²
103	EMR	5 m²
104	WEST ANCILLARY WALKWAY	29 m²
105	WATER ENTRY / SUMP	12 m²
106	M&R	12 m²
107	EMR	5 m²
108	CORRIDOR	15 m²
109	COMMS	24 m²
110	ELEC	19 m²
110A	UPS ROOM	11 m²
111	MECH CLOSET	4 m²
112	ELEC CLOSET	8 m²
113	ELEC CLOSET	10 m²
114	SERVICE CLOSET	10 m²
115	SERVICE CLOSET	10 m²
116	EAST ANCILLARY WALKWAY	26 m²
		1072 m²
00_T/O CONCOURSE		
200	PUBLIC CONCOURSE	59 m²
201	FARE PAID CONCOURSE	173 m²
EL01	ELEVATOR	8 m²
EL02	ELEVATOR	9 m²
EL03	ELEVATOR	9 m²
EL04	ELEVATOR	9 m²
ST01	PUBLIC STAIR	25 m²
ST02	PUBLIC STAIR	31 m²
ST03	EXIT STAIR	32 m²
ST04	EXIT STAIR	30 m²
		386 m²
TOTAL NET AREA		1458 m²

GROSS AREA SCHEDULE

NAME	AREA
PLATFORM LEVEL	1191 m²
T/O CONCOURSE	273 m²
TOTAL GROSS AREA	1464 m²

ROOM FINISH SCHEDULE

ROOM #	ROOM NAME	FLOOR		WALLS				CEILING		REMARKS
		FLOOR	BASE	NORTH	EAST	SOUTH	WEST	FINISH	HEIGHT	
S1_T/O PLATFORM SOUTH										
100	NORTH PLATFORM	CONC-02	CONC	-	ACF/-	-	-	-	-	REFER TO DRAWINGS FOR RAILINGS
101	SOUTH PLATFORM	CONC-02	CONC	-	-	-	ACF/-	-	-	REFER TO DRAWINGS FOR RAILINGS
102	VESTIBULE	EPY-PT	RB	CMU (PT)	CMU (PT)	CMU (PT)	CMU (PT)	EXP	3484	
103	EMR	SDFAF	RB	CMU (PT)	CMU (PT)	CMU (PT)	CMU (PT)	EXP	3484	
104	WEST ANCILLARY WALKWAY									REFER TO DRAWINGS FOR RAILINGS
105	WATER ENTRY / SUMP	EPY-PT	RB	CMU (PT)	CMU (PT)	CMU (PT)	CMU (PT)	EXP	3484	
106	M&R	EPY-PT	RB	CMU (PT)	CMU (PT)	CMU (PT)	CMU (PT)	EXP	3484	
107	EMR	SDFAF	RB	CMU (PT)	CMU (PT)	CMU (PT)	CMU (PT)	EXP	3484	
108	CORRIDOR	EPY-PT	RB	CMU (PT)	CMU (PT)	CMU (PT)	CMU (PT)	EXP	3484	
109	COMMS	SDFAF	RB	CMU (PT)	CMU (PT)	CMU (PT)	CMU (PT)	EXP	3484	
110	ELEC	SDFAF	RB	CMU (PT)	CMU (PT)	CMU (PT)	CMU (PT)	EXP	3484	
110A	UPS ROOM	SDFAF	RB	CMU (PT)	CMU (PT)	CMU (PT)	CMU (PT)	EXP	3484	
111	MECH CLOSET	EPY-PT	RB	CMU (PT)	CMU (PT)	CMU (PT)	CMU (PT)	EXP	3484	
112	ELEC CLOSET	SDFAF	CONC	CONC (PT)	CONC (PT)	CONC (PT)	CONC (PT)	EXP	VARIES	
113	ELEC CLOSET	SDFAF	CONC	CONC (PT)	CONC (PT)	CONC (PT)	CONC (PT)	EXP	VARIES	
114	SERVICE CLOSET	SDFAF	CONC	CONC (PT)	CONC (PT)	CONC (PT)	CONC (PT)	EXP	7407	
115	SERVICE CLOSET	SDFAF	CONC	CONC (PT)	CONC (PT)	CONC (PT)	CONC (PT)	EXP	7407	
116	EAST ANCILLARY WALKWAY	CONC-01	CONC	-	ACF/-	-	-	-	VARIES	REFER TO DRAWINGS FOR RAILINGS
00_T/O CONCOURSE										
200	PUBLIC CONCOURSE	CONC-01	CONC	GL	GL	GL	GL	MLC	4500	
201	FARE PAID CONCOURSE	CONC-01	CONC	GL	GL	GL	GL	MLC	4500	
ST01	PUBLIC STAIR	PRCST-T	-	-	GL	-	GL	MLC	VARIES	
ST02	PUBLIC STAIR	PRCST-T	-	-	GL	-	GL	MLC	VARIES	
ST03	EXIT STAIR	PRCST-T	-	-	-	-		-	-	REFER TO DRAWINGS FOR RAILINGS
ST04	EXIT STAIR	PRCST-T	-	-	-	-		-	-	REFER TO DRAWINGS FOR RAILINGS

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
GENERAL INFORMATION
ROOM FINISH SCHEDULE

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-0080

MODEL NUMBER
660373-1GSS-001-44DM-1000

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
ROBERT BRISBIN
LICENCE
3782

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

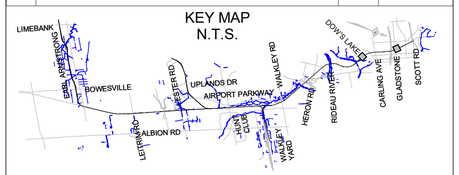
SCALE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

GENERAL NOTES

1. REFER TO ARCHITECTURAL SPECIFICATIONS 660373-0000-004-44EG-0001 FOR THE MATERIALS LIST.
2. REFER TO DRAWING 0050 FOR ASSEMBLY TYPES.
3. REFER TO FLOOR PLANS FOR WALL FINISH INFORMATION.
4. REFER TO REFLECTED CEILING PLANS FOR CEILING FINISH INFORMATION.
5. REFER TO FLOOR FINISH PLANS FOR FLOOR FINISH INFORMATION.

FINISHES AND ABBREVIATIONS

ACF	ARCHITECTURAL CONCRETE FINISH
ACT	ACOUSTIC CEILING TILE
CMP	COMPOSITE METAL PANEL
CONC	CONCRETE
CONC BLK	CONCRETE BLOCK
CWB	CEMENT WALL BOARD
CWT	CERAMIC GLAZED TILE
EPY-PT	EPOXY RESINOUS FLOORING
EXP STR	EXPOSED STRUCTURE
GLHSL	HEAT STRENGTHENED LAMINATED GLASS
GLTL	TEMPERED LAMINATED GLASS
GWB	GYPSUM WALL BOARD
MLC	EXTRUDED ALUMINUM LINEAR PANEL
MP	PERFORATED METAL PANEL
MTL	METAL
PFT	PORCELAIN TILE
PRCST	PRECAST
PT	PAINT
RB	RUBBER
SDFAF	STATIC DISSIPATED FLUID APPLIED FLOORING
SFRM	SPRAY FIRE RESISTIVE MATERIAL

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02/04/20

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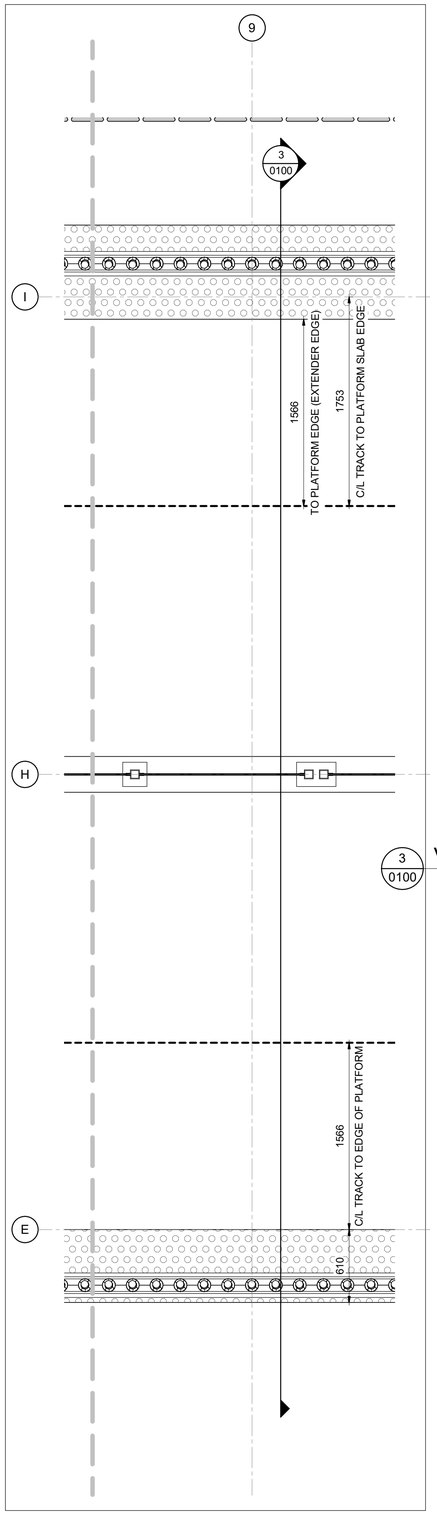

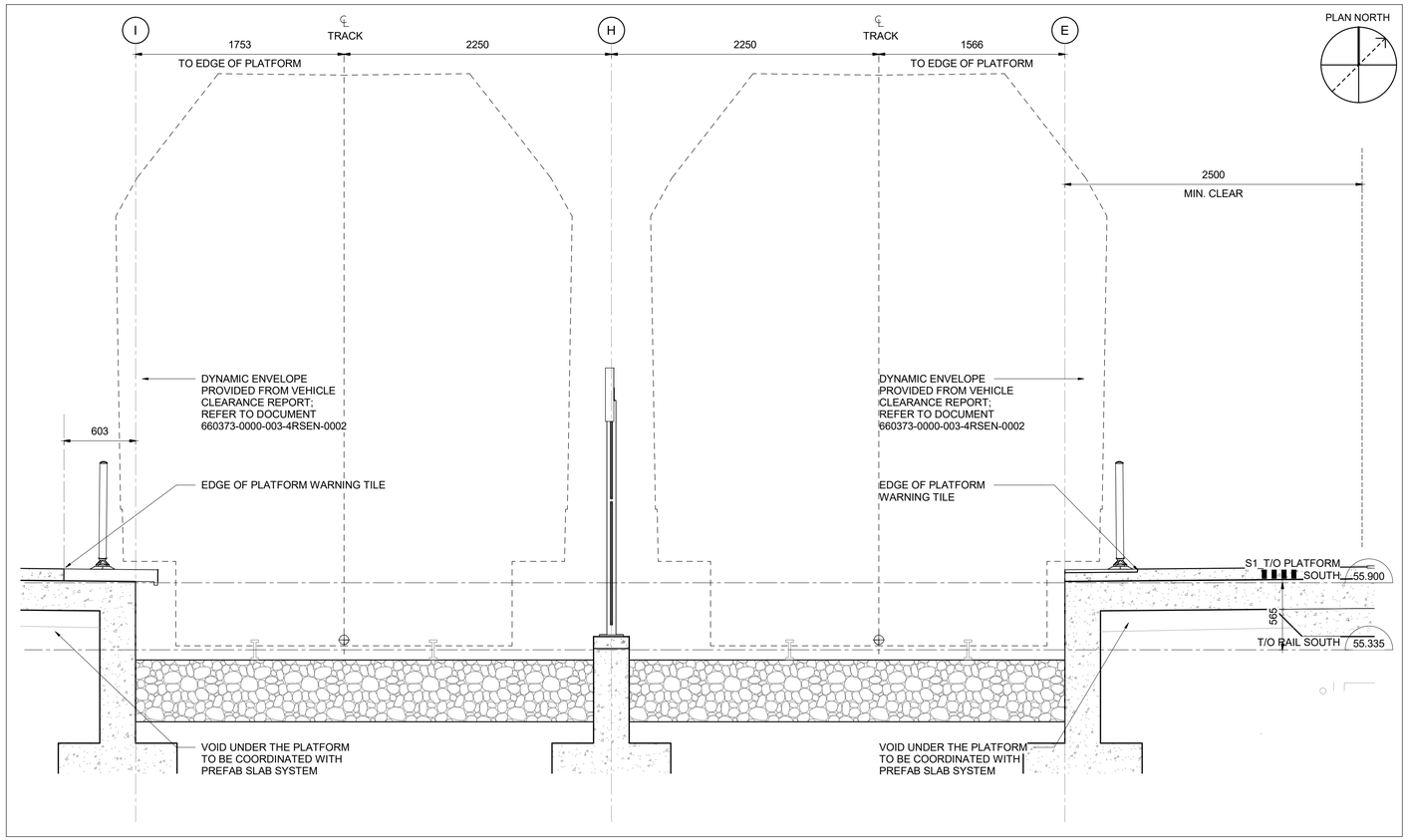

3 0100 VEHICLE SPACE ALLOWANCE DIAGRAM

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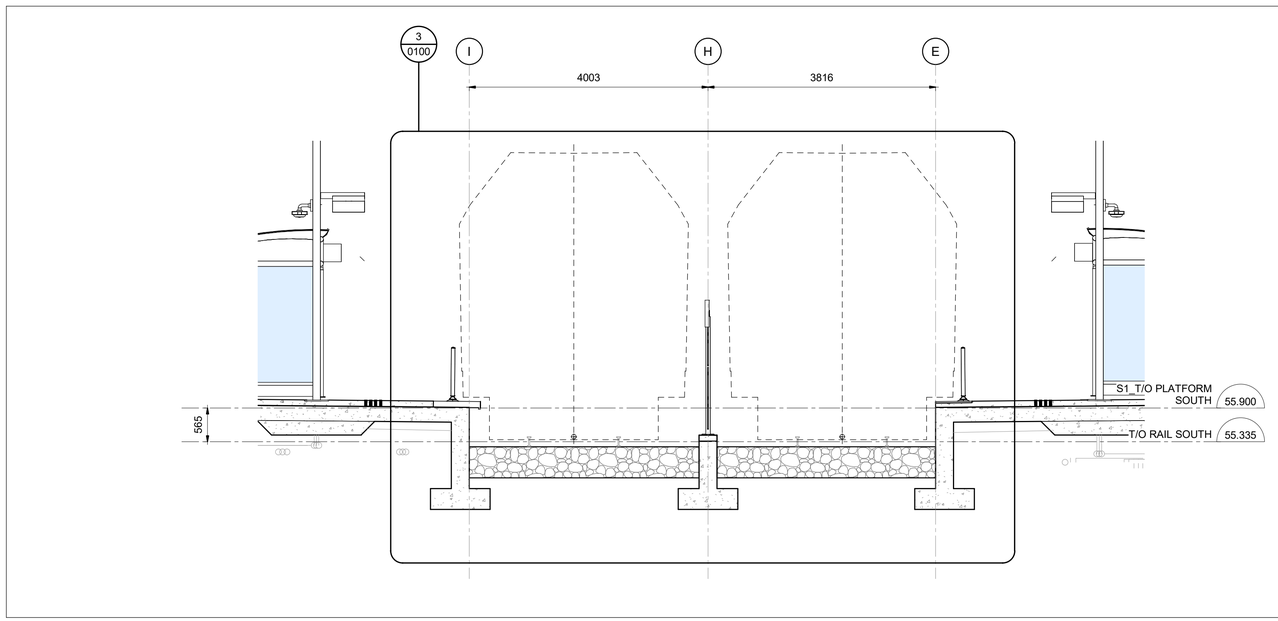

2 0100 SETTING OUT DIAGRAM - PLAN

1 : 25

1 0100 SECTION TRACK SETTING OUT DIAGRAM

1 : 50

ARCHITECTURAL
CORSO ITALIA
GENERAL INFORMATION
SETTING OUT DIAGRAM

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	M. PERKIC
DRAWN	SEALED
N.BARRETT	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-0100

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS LICENCE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE AS SHOWN

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-03-29

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02/25/21

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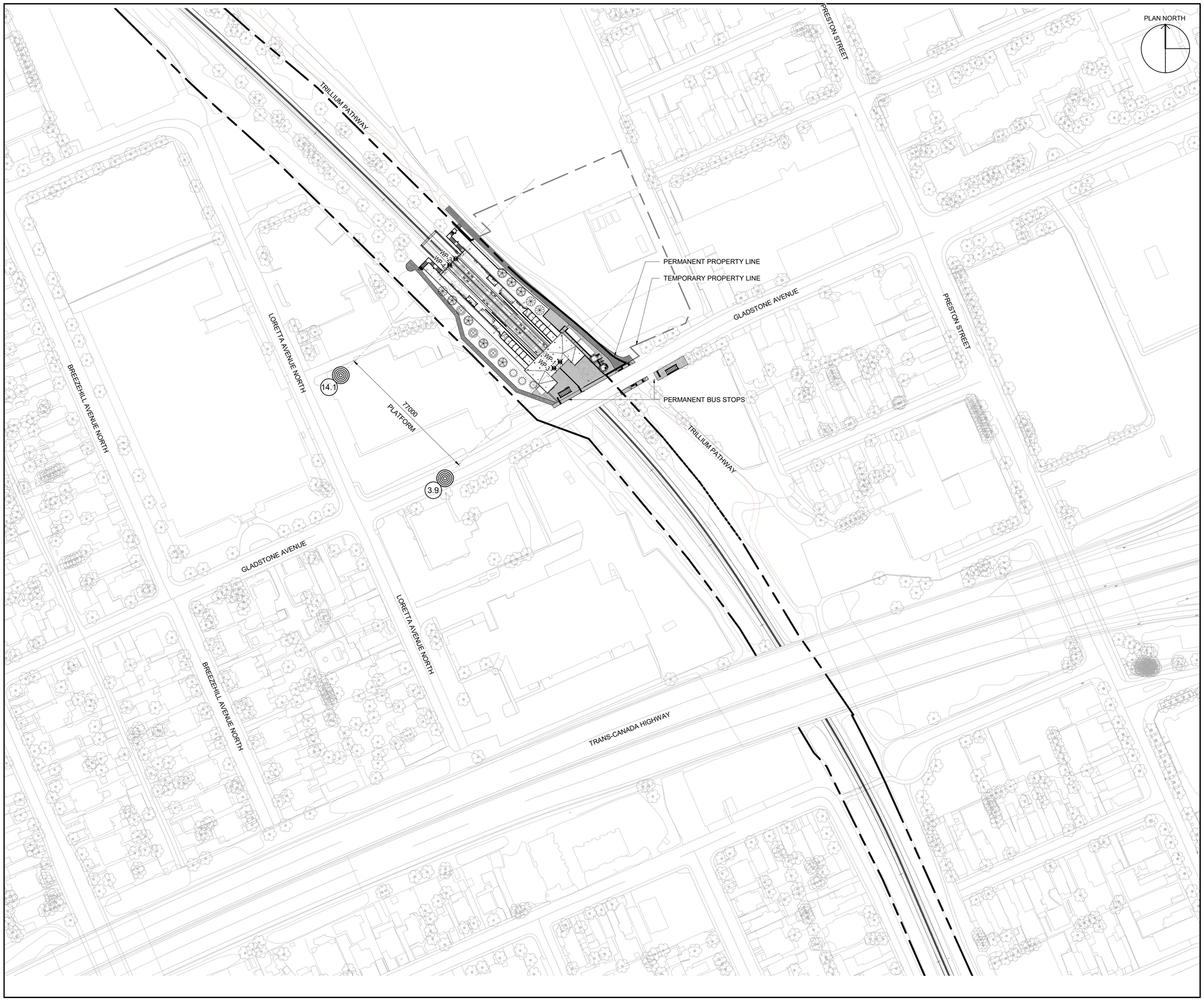

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
SITE DRAWINGS
CONTEXT SITE PLAN

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	T. KAMPMAN
DRAWN	SEALED
K. SANIPE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-1000

MODEL NUMBER
660373-1GSS-001-44DM-1000

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
ROBERT BRISBIN
LICENCE
3782

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

HORIZONTAL 1 : 1000 FULLSIZE / 1 : 2000 HALF SIZE
0 10 20 40 80 m
VERTICAL 1 : 1000 FULLSIZE / 1 : 2000 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

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03/23/16

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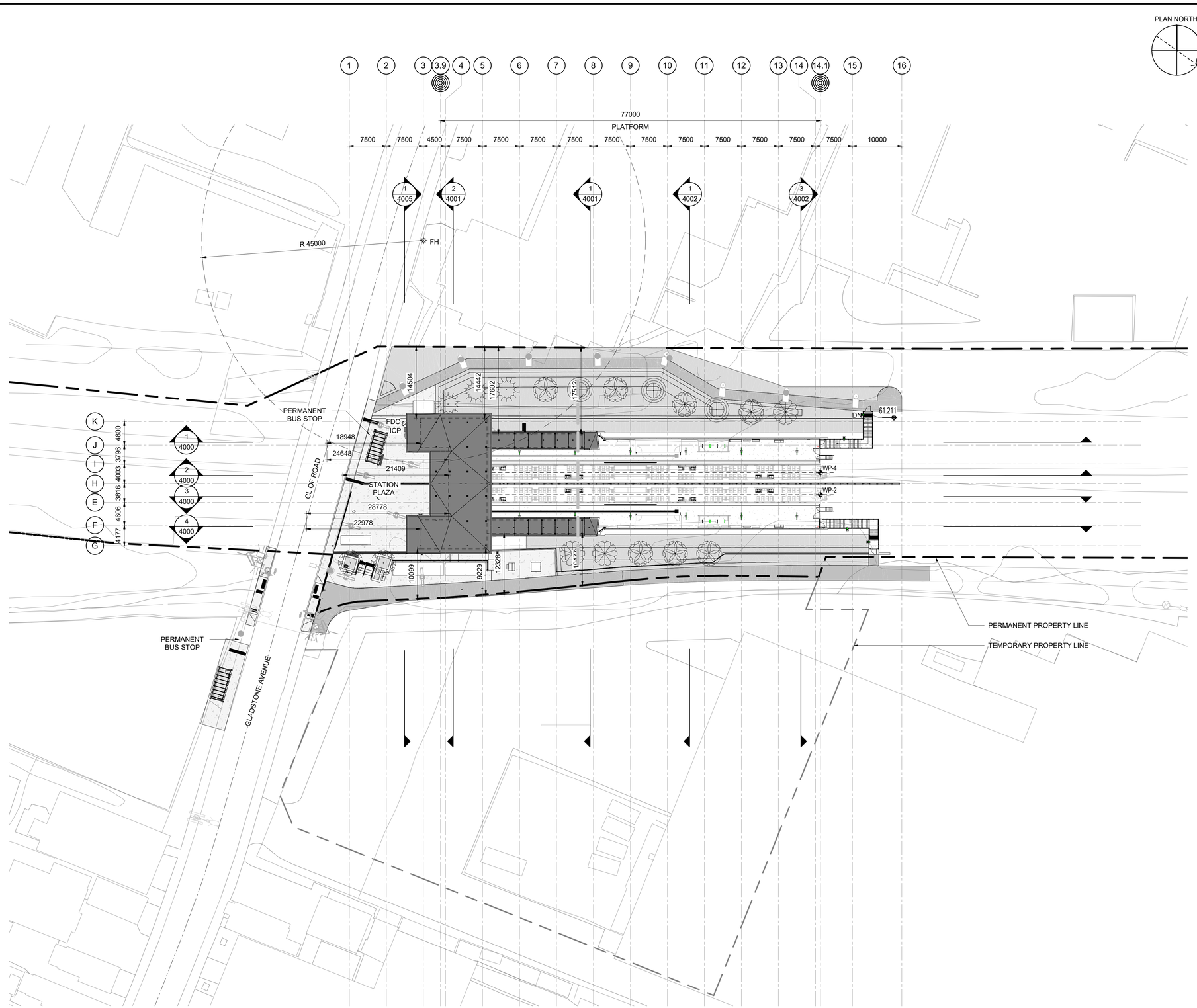


OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
SITE DRAWINGS
SITE PLAN

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	T. KAMPMAN
DRAWN	SEALED
K. SANIPE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-1010

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
R. BRISBIN LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

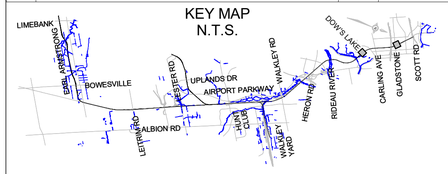
SCALE
HORIZONTAL 1 : 400 FULLSIZE / 1 : 800 HALF SIZE
0 2 4 16 32m
VERTICAL 1 : 400 FULLSIZE / 1 : 800 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

GENERAL NOTES

PRIMARY ENTRANCE

SECONDARY ENTRANCE / EXIT

FIRE HYDRANT	FH
FIRE DEPARTMENT CONNECTION	FDC
INCIDENT COMMAND POST c/w ANNUCIATOR PANEL	ICP
	LRT - FIRE ROUTE ACCESS
	LRT - PERMANENT PROPERTY LINE
	LRT - TEMPORARY PROPERTY LINE

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04/11/19

TITLEBLOCK: 790mm x 534mm

NET AREA SCHEDULE (ROOMS)

NUMBER	NAME	Area
S1_T/O PLATFORM SOUTH		
100	NORTH PLATFORM	433 m²
101	SOUTH PLATFORM	433 m²
102	VESTIBULE	6 m²
103	EMR	5 m²
104	WEST ANCILLARY WALKWAY	29 m²
105	WATER ENTRY / SUMP	12 m²
106	M&R	12 m²
107	EMR	5 m²
108	CORRIDOR	15 m²
109	COMMS	24 m²
110	ELEC	19 m²
110A	UPS ROOM	11 m²
111	MECH CLOSET	4 m²
112	ELEC CLOSET	8 m²
113	ELEC CLOSET	10 m²
114	SERVICE CLOSET	10 m²
115	SERVICE CLOSET	10 m²
116	EAST ANCILLARY WALKWAY	26 m²
		1072 m²
00_T/O CONCOURSE		
200	PUBLIC CONCOURSE	59 m²
201	FARE PAID CONCOURSE	173 m²
EL01	ELEVATOR	8 m²
EL02	ELEVATOR	9 m²
EL03	ELEVATOR	9 m²
EL04	ELEVATOR	9 m²
ST01	PUBLIC STAIR	25 m²
ST02	PUBLIC STAIR	31 m²
ST03	EXIT STAIR	32 m²
ST04	EXIT STAIR	30 m²
		386 m²
TOTAL NET AREA		1458 m²

GROSS BUILDING SCHEDULE

NAME	AREA
PLATFORM LEVEL	1191 m²
T/O CONCOURSE	273 m²
TOTAL GROSS AREA	1464 m²

BUILDING AREA SCHEDULE

STATION	635m²

PASSENGER FLOW LEGEND

- BUILDING ENTRANCE INDICATOR
- MAJOR PASSENGER FLOW
- SECONDARY PASSENGER FLOW

OCCUPANCY LEGEND

- CIRCULATION
- PAID CONCOURSE
- UNPAID CONCOURSE

PASSENGER FLOW NORMAL OPERATION - AM PEAK PASSENGER DEMAND

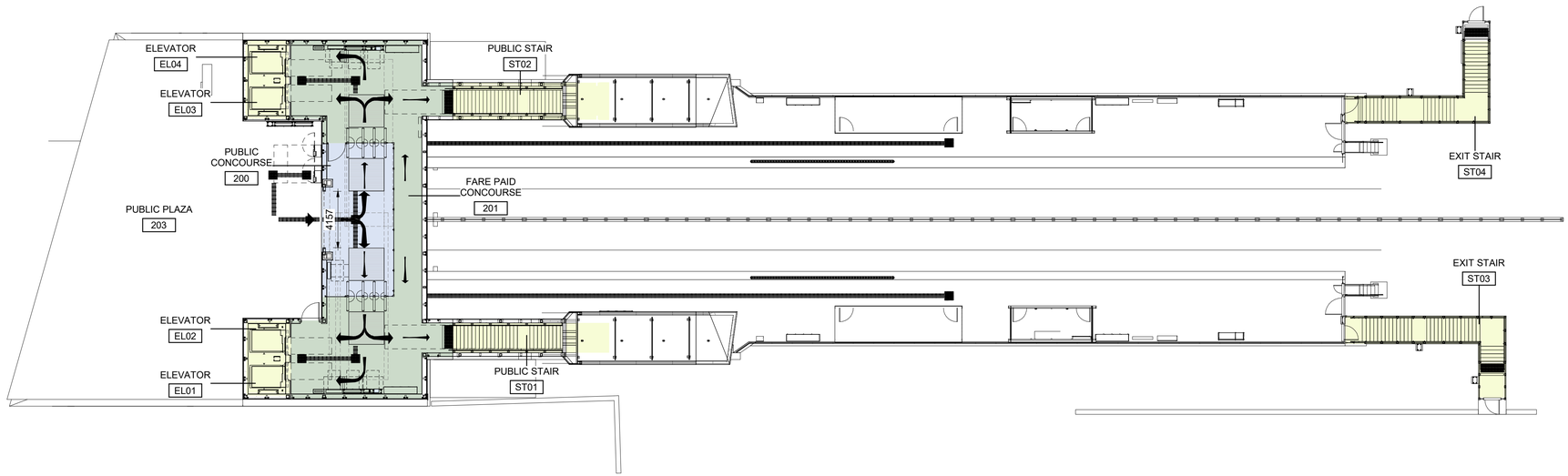
ENTRANCE 1	3900mm (WIDTH), PASSING REQUIREMENT: 40 ppl/m/min
FARE GATES	6 GATES, TOTAL FLOW RATE: 19.1p/min
PUBLIC STAIRS, ST01	1750mm (WIDTH), PASSING REQUIREMENT: 35 ppl/m/min
PUBLIC STAIRS, ST02	1750mm (WIDTH), PASSING REQUIREMENT: 35 ppl/m/min
EXIT STAIRS, ST03	REFER TO 660373-1GSS-003-4SEA-0001 FOR EGRESS CALCULATIONS
EXIT STAIRS, ST04	REFER TO 660373-1GSS-003-4SEA-0001 FOR EGRESS CALCULATIONS

	NET AREA* (m^2)	BOARDING LOAD	ALIGHTING LOAD	PLATFORM DENSITY (m^2/p)	CALCULATED CLEARANCE TIME (min)
SOUTH PLATFORM (101)	410	0	29	8.6	1.5
NORTH PLATFORM (100)	401	47	0	14.3	1.5

*NET AREA IS CLEAR PLATFORM AREA, EXCLUDING SHELTERS

DATA OBTAINED FROM PASSENGER MODELING REPORT, 660373-1GSS-003-4SEA-0001.
REFER TO THIS REPORT FOR MORE INFORMATION

PLAN NORTH



1 / 2000 PASSENGER FLOOW PLAN - CONCOURSE

1 : 200

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
PASSENGER FLOW PLAN
CONCOURSE

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	T. KAMPMAN
DRAWN	SEALED
K. SANIPE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-2000

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

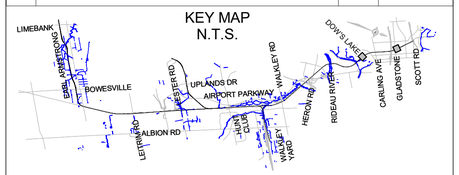
SCALE
HORIZONTAL 1 : 200 FULLSIZE / 1 : 400 HALF SIZE
0 2 4 8 16 m
VERTICAL 1 : 200 FULLSIZE / 1 : 400 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

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03/23/16

TITLEBLOCK: 790mm x 534mm

NET AREA SCHEDULE (ROOMS)

NUMBER	NAME	Area
S1_T/O PLATFORM SOUTH		
100	NORTH PLATFORM	433 m²
101	SOUTH PLATFORM	433 m²
102	VESTIBULE	6 m²
103	EMR	5 m²
104	WEST ANCILLARY WALKWAY	29 m²
105	WATER ENTRY / SUMP	12 m²
106	M&R	12 m²
107	EMR	5 m²
108	CORRIDOR	15 m²
109	COMMS	24 m²
110	ELEC	19 m²
110A	UPS ROOM	11 m²
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112	ELEC CLOSET	8 m²
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114	SERVICE CLOSET	10 m²
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		1072 m²
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201	FARE PAID CONCOURSE	173 m²
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ST01	PUBLIC STAIR	25 m²
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ST03	EXIT STAIR	32 m²
ST04	EXIT STAIR	30 m²
		386 m²
TOTAL NET AREA		1458 m²

GROSS BUILDING SCHEDULE

NAME	AREA
PLATFORM LEVEL	1191 m²
T/O CONCOURSE	273 m²
TOTAL GROSS AREA	1464 m²

BUILDING AREA SCHEDULE

STATION	635m²

PASSENGER FLOW LEGEND

- BUILDING ENTRANCE INDICATOR
- MAJOR PASSENGER FLOW
- SECONDARY PASSENGER FLOW

OCCUPANCY LEGEND

- BACK OF HOUSE
- CIRCULATION
- PLATFORM

PASSENGER FLOW NORMAL OPERATION - AM PEAK PASSENGER DEMAND

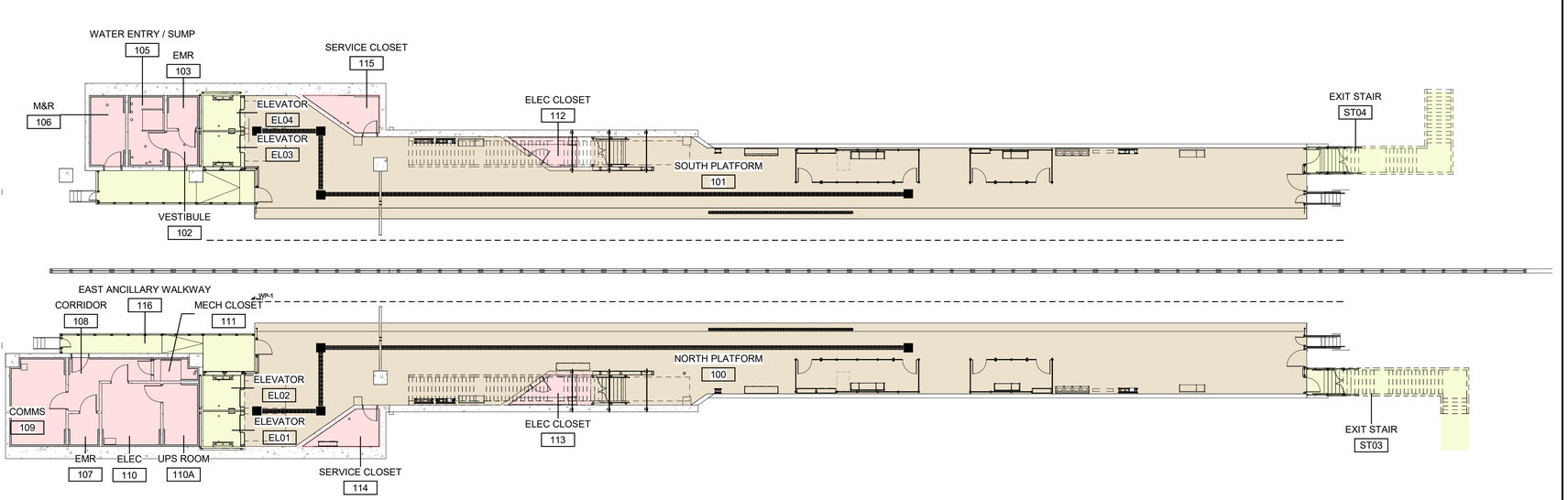
ENTRANCE 1	3900mm (WIDTH), PASSING REQUIREMENT: 40 ppl/m/min
FARE GATES	6 GATES, TOTAL FLOW RATE: 19.1p/min
PUBLIC STAIRS, ST01	1750mm (WIDTH), PASSING REQUIREMENT: 35 ppl/m/min
PUBLIC STAIRS, ST02	1750mm (WIDTH), PASSING REQUIREMENT: 35 ppl/m/min
EXIT STAIRS, ST03	REFER TO 660373-1GSS-003-4SEA-0001 FOR EGRESS CALCULATIONS
EXIT STAIRS, ST04	REFER TO 660373-1GSS-003-4SEA-0001 FOR EGRESS CALCULATIONS

	NET AREA* (m^2)	BOARDING LOAD	ALIGHTING LOAD	PLATFORM DENSITY (m^2/p)	CALCULATED CLEARANCE TIME (min)
SOUTH PLATFORM (101)	410	0	29	8.6	1.5
NORTH PLATFORM (100)	401	47	0	14.3	1.5

*NET AREA IS CLEAR PLATFORM AREA, EXCLUDING SHELTERS

DATA OBTAINED FROM PASSENGER MODELING REPORT, 660373-1GSS-003-4SEA-0001.
REFER TO THIS REPORT FOR MORE INFORMATION

PLAN NORTH



1 / 2010 PASSENGER FLOW PLAN - PLATFORM

1 : 200

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
PASSENGER FLOW PLAN
PLATFORM

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	T. KAMPMAN
DRAWN	SEALED
K. SANIPE	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-2010

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
ROBERT BRISBIN
LICENCE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

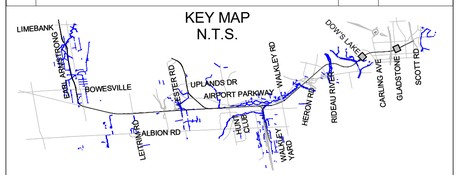
HORIZONTAL 1 : 200 FULLSIZE / 1 : 400 HALF SIZE
0 2 4 8 16 m
VERTICAL 1 : 200 FULLSIZE / 1 : 400 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

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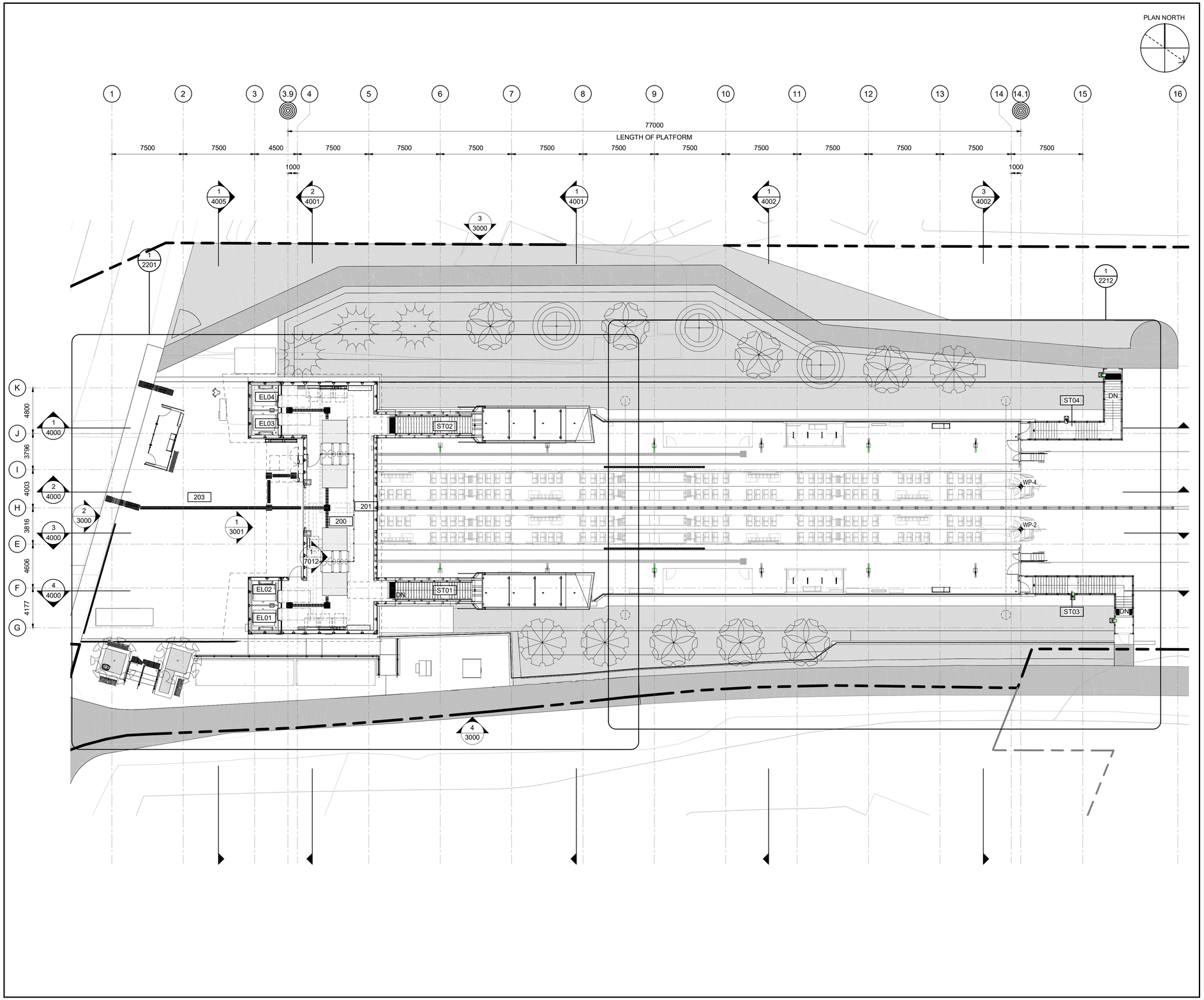
04/11/19



Train STAGE ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
OVERALL FLOOR PLAN
CONCOURSE

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	T. KAMPMAN
DRAWN	SEALED
K. SANIPE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-2100

MODEL NUMBER
660373-1GSS-001-44DM-1000

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
RICHARD BRISBIN
LICENCE
3782

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

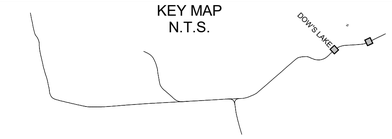
SCALE
HORIZONTAL 1 : 200 FULLSIZE
1 : 400 HALF SIZE
0 2 4 8 16 m
VERTICAL 1 : 200 FULLSIZE
1 : 400 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

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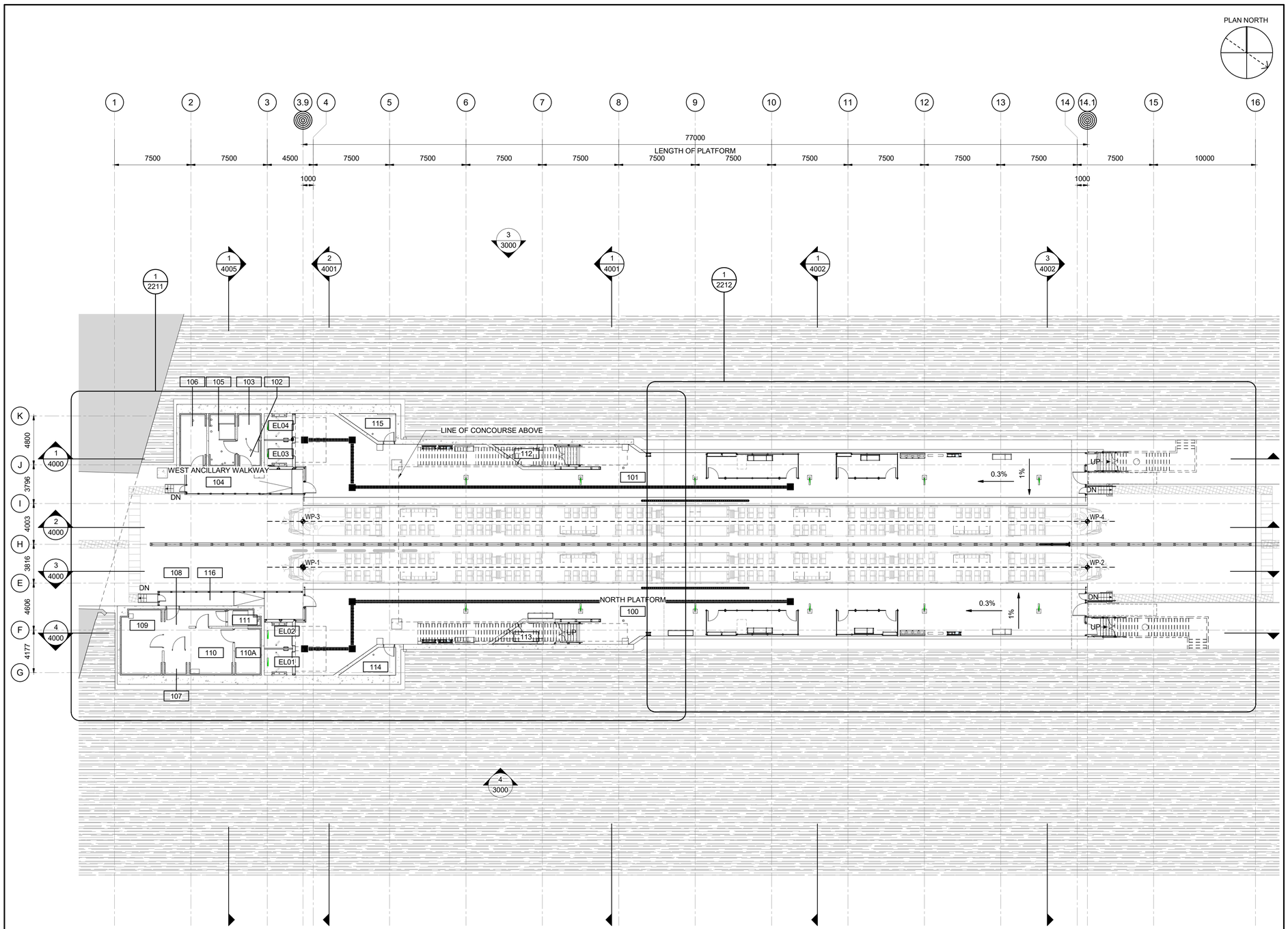
04/11/19

TITLEBLOCK: 790mm x 534mm



OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
OVERALL FLOOR PLAN
PLATFORM

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	T. KAMPMAN
DRAWN	SEALED
K. SANIPE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-2110

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS LICENSED 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

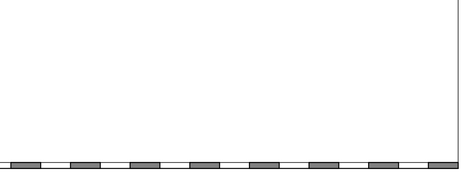
SCALE
HORIZONTAL 1 : 200 FULLSIZE / 1 : 400 HALF SIZE
0 2 4 8 16 m
VERTICAL 1 : 200 FULLSIZE / 1 : 400 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

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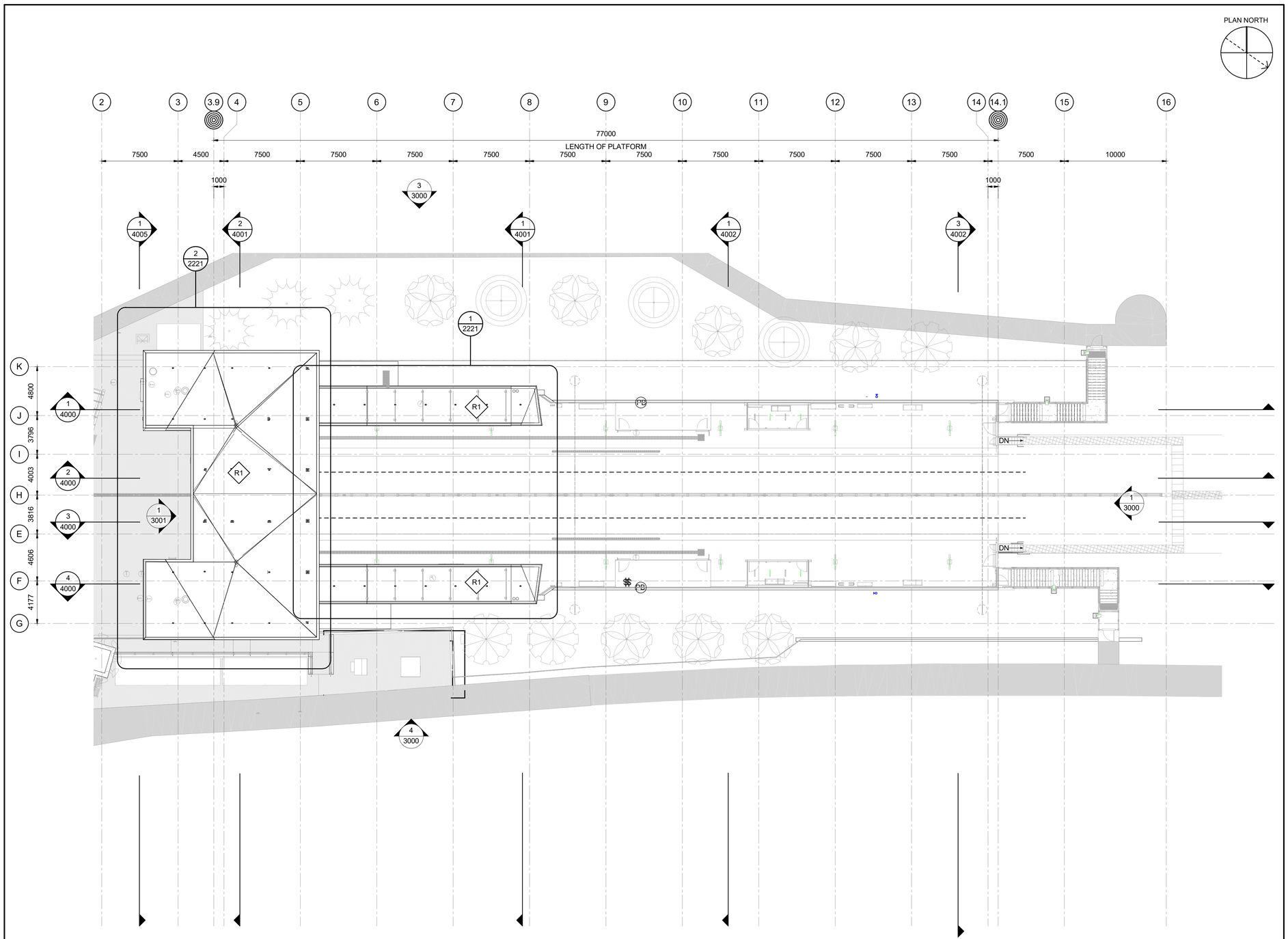
04/11/19

TITLEBLOCK: 790mm x 534mm



OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
OVERALL PLAN
OVERALL ROOF PLAN - CONCOURSE

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R.BRISBIN	T.KAMPMAN
DRAWN	SEALED
N.BARRETT	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-2120

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
ROBERT BRISBIN
LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

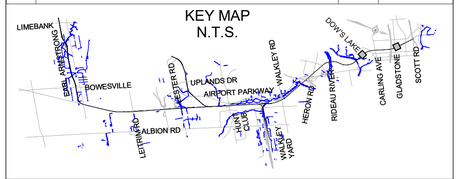
SCALE
HORIZONTAL 1 : 200 FULLSIZE / 1 : 400 HALF SIZE
0 2 4 8 16 m
VERTICAL 1 : 200 FULLSIZE / 1 : 400 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

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02/04/20

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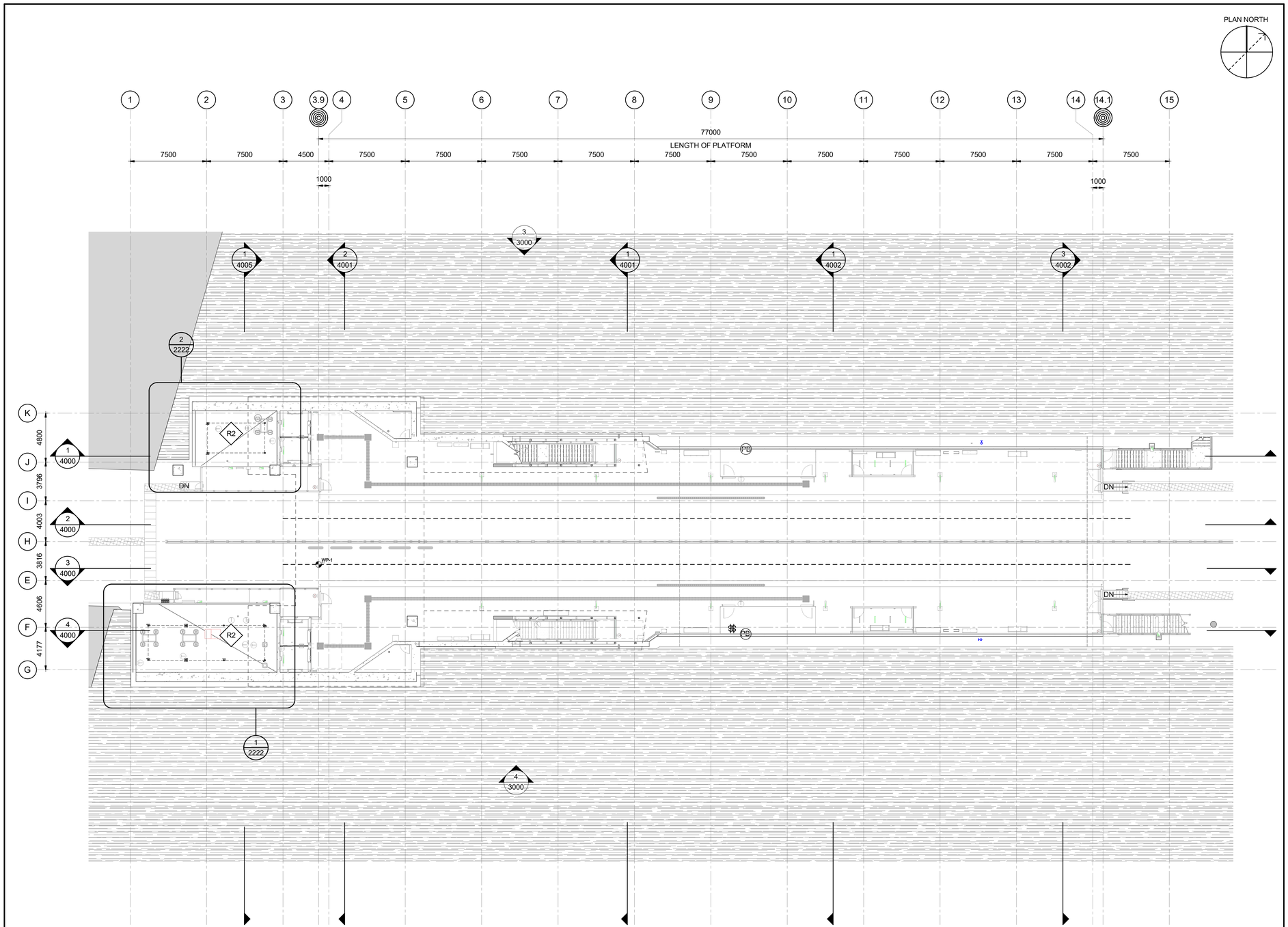


OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
OVERALL PLAN
OVERALL ROOF PLAN - PLATFORM

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	T. KAMPMAN
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-2121

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
ROBERT BRISBIN
LICENCE
3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

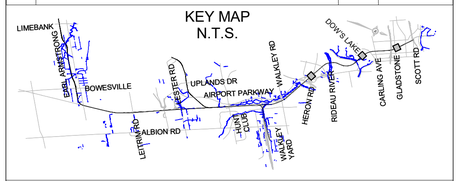
SCALE
HORIZONTAL 1 : 200 FULLSIZE / 1 : 400 HALF SIZE
0 2 4 8 16 m
VERTICAL 1 : 200 FULLSIZE / 1 : 400 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

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06/11/20

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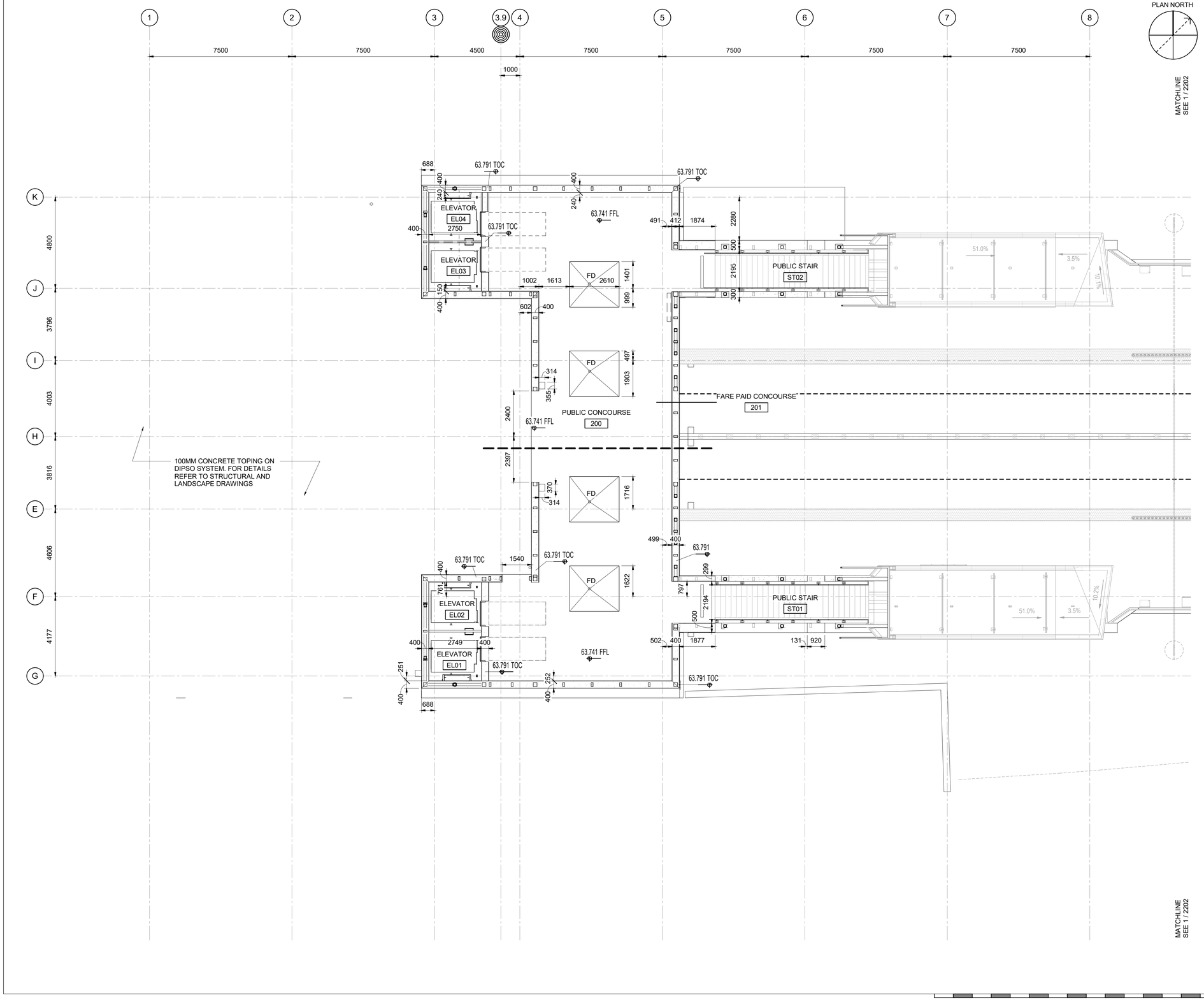


OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
SLAB EDGE PLANS
CONCOURSE SECTOR 1

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R.BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
N.BARRETT	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-2150

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
ROBERT A. BRISBIN
LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

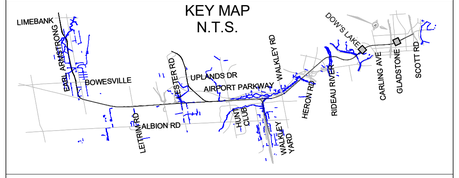
SCALE
HORIZONTAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

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09/23/20

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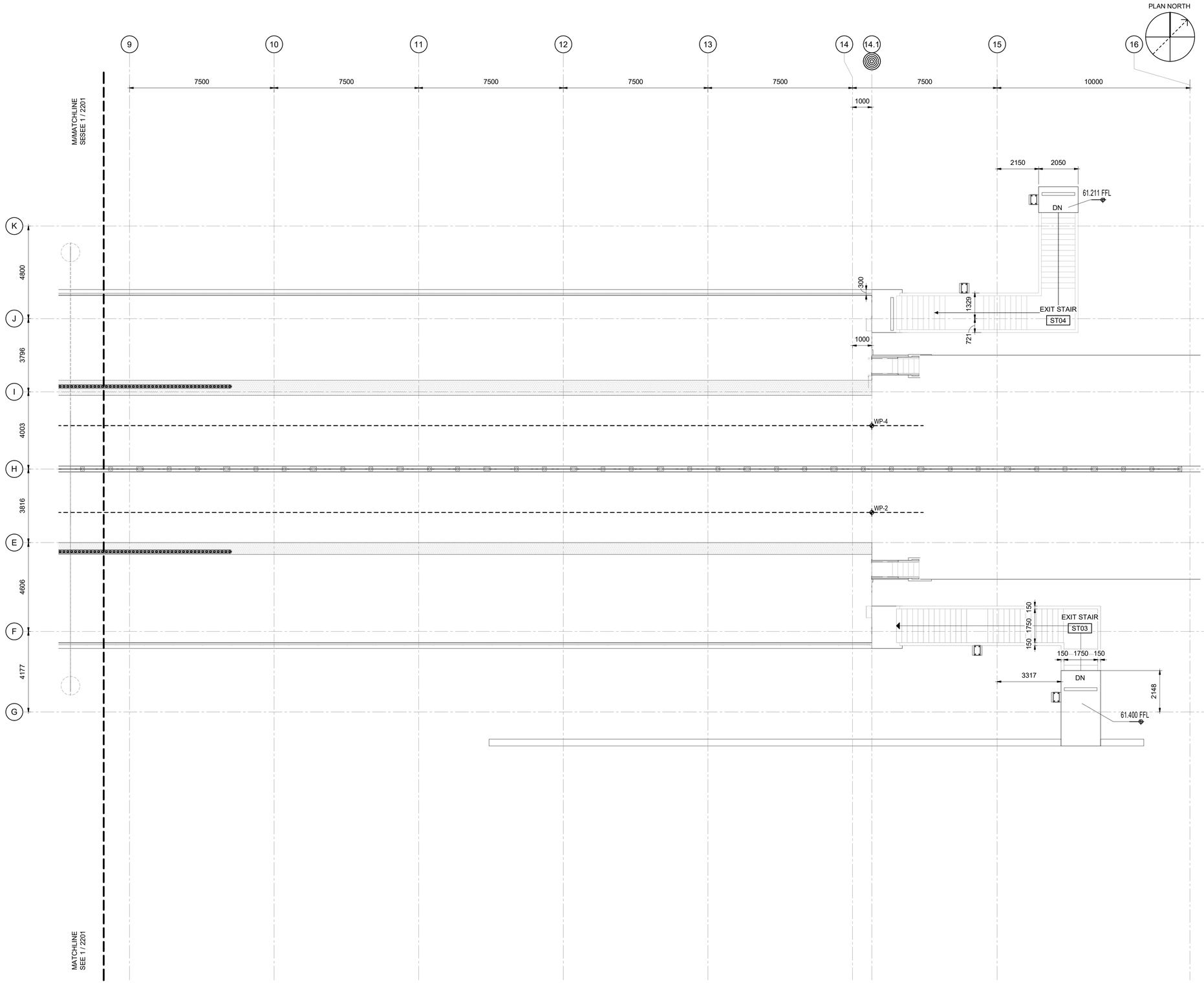


OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
SLAB EDGE PLANS
CONCOURSE SECTOR 2

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R.BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
N.BARRETT	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-2151

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

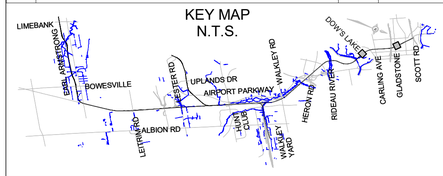
SCALE
HORIZONTAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

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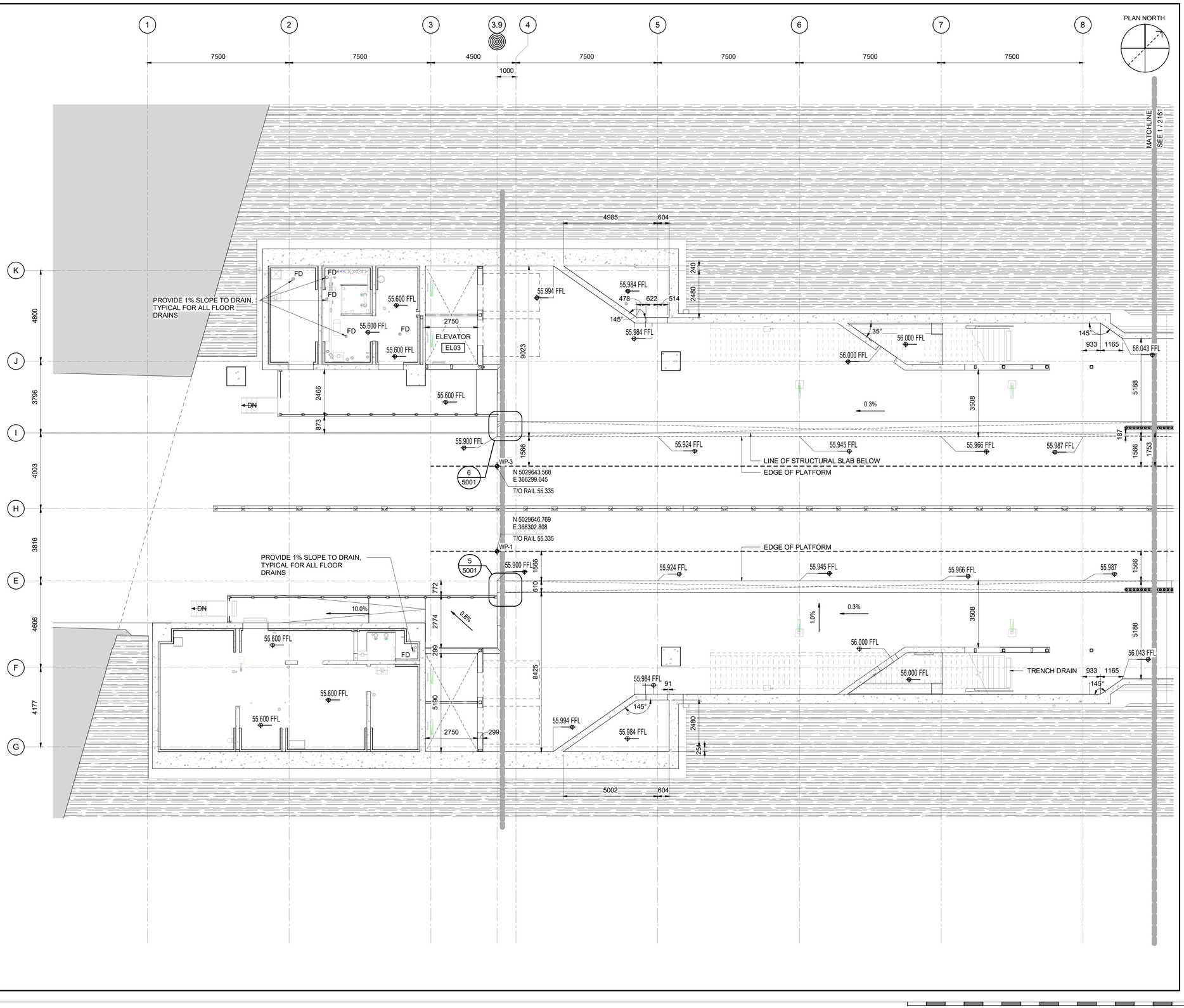


OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
SLAB EDGE PLANS
PLATFORM SECTOR 1

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R.BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A.RAFIE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-2160

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
ROBERT BRISBIN
LICENCE
3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

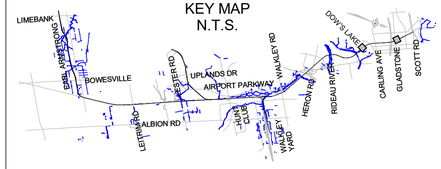
SCALE
HORIZONTAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION - EARLY WORKS, FOUNDATIONS ONLY	JJ	2020/09/25
01	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

09/23/20
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TITLEBLOCK: 790mm x 534mm

PLAN NORTH

9 10 11 12 13 14 14.1 15 16

7500 7500 7500 7500 7500 7500 1000 10000

MATCHLINE
SEE 1 / 2160

K J I H E F G

4800 3796 4003 3816 4606 4177

56.058 FFL 56.079 FFL 56.100 FFL 56.121 FFL 56.142 FFL

TRENCH DRAIN AT TSA SHELTERS, REFER TO PLANS FOR SHELTER LOCATIONS

300 5188

SOUTH PLATFORM
101

56.008 FFL 56.030 FFL 56.051 FFL 56.072 FFL 56.093 FFL

1753 1566 187

LINE OF STRUCTURAL SLAB BELOW

EDGE OF PLATFORM

57.238 TOW
56.166 FFL
56.184 FFL
56.204 TOC
56.198 TOC
56.178 FFL
56.130 FFL
56.117 FFL

977 150 450 1676
1217 1505 721 630 305
1348 1100 3341 DN 1200 1200 3405 738

TRENCH DRAIN

600MM ROUND CONCRETE COLUM. REFER TO STRUCTURAL DRAWINGS.

4
5001

N 5029697.688
E 366244.873
T/O RAIL 55.522
WP-4

N 5029700.889
E 366248.036
T/O RAIL 55.522
WP-2

3
5001

EDGE OF PLATFORM

56.008 FFL 56.030 FFL 56.051 FFL 56.072 FFL 56.093 FFL 56.117 FFL

1566 5188 300

NORTH PLATFORM
100

1.0% 0.3%

56.130 FFL
56.148 FFL
56.198 TOC
56.204 TOC
56.154 FFL
56.166 FFL
57.239 TOW

1073 1375 784
3290 DN 1200
1895 1200
604 1319
1294 882

TRENCH DRAIN

600MM ROUND CONCRETE COLUM. REFER TO STRUCTURAL DRAWINGS.

56.058 FFL 56.079 FFL 56.100 FFL 56.121 FFL 56.142 FFL

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
SLAB EDGE PLANS
PLATFORM SECTOR 2

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R.BRSIBIN	A.KOURKOUNAKIS
DRAWN	SEALED
N.BARRETT	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-2161

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
LICENSED
3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

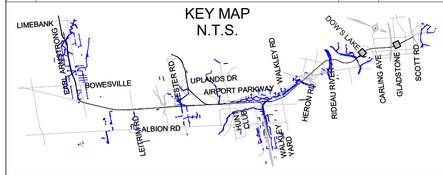
SCALE
HORIZONTAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION - EARLY WORKS, FOUNDATIONS ONLY	JJ	2020/09/25
01	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

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09/29/20

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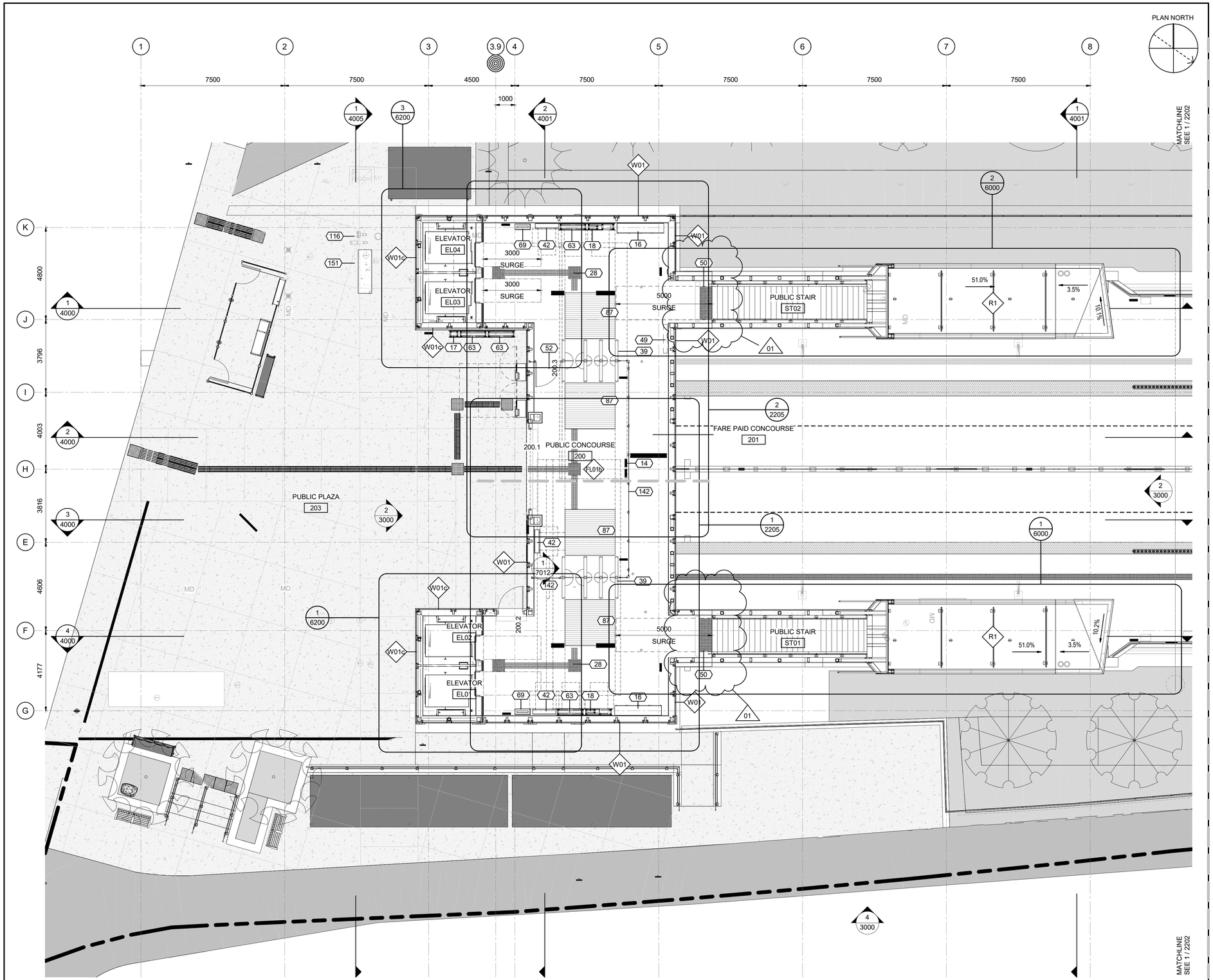


TransitNEXT STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
ENLARGED PLAN
CONCOURSE SECTOR 1

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	T. KAMPMAN
DRAWN	SEALED
K. SANIPE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-2201

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
LICENSED
3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

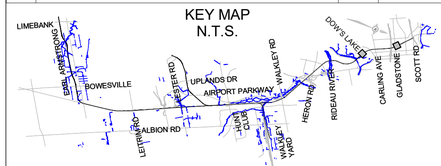
SCALE
HORIZONTAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29
01	REVISED ISSUE FOR CONSTRUCTION	JJ	2021/07/30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

KEYNOTE LEGEND

Key Value	Keynote Text
14	SIGN, REFER TO SIGNAGE PACKAGE
16	WASTE RECPETACLE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7305
17	UC-04, EMERGENCY PHONE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7115/7116
18	UC-02, FIRE CABINET, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7105/7106
28	TACTILE WALKING SURFACE INDICATOR (TWSI)
39	FARE GATE, PROVIDED BY THE CITY, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7012/7019
42	NEXUS PASSENGER INFORMATION DISPLAY, PROVIDED BY THE CITY
49	FUTURE ADVERTISING PANEL, TO BE PROVIDED BY CITY
50	ATTENTION STRIP, 610mm MIN
52	SECURITY GATE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7210
63	UC-01, TIP CABINET, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7100/7102
69	VERTICAL ELECTRICAL CHASE
87	RECESSED FLOOR GRILLE WITH HEAT TRACE DRAIN AND DRAINAGE PAN, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7012/7019
116	FIRE DEPARTMENT CONNECTION (FDC)
142	TYPE 1, GLASS GUARD, MIN 1800mm HIGH, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7215/7216
151	INCIDENT COMMAND POST (ICP) WITH ANNUNCIATOR PANEL

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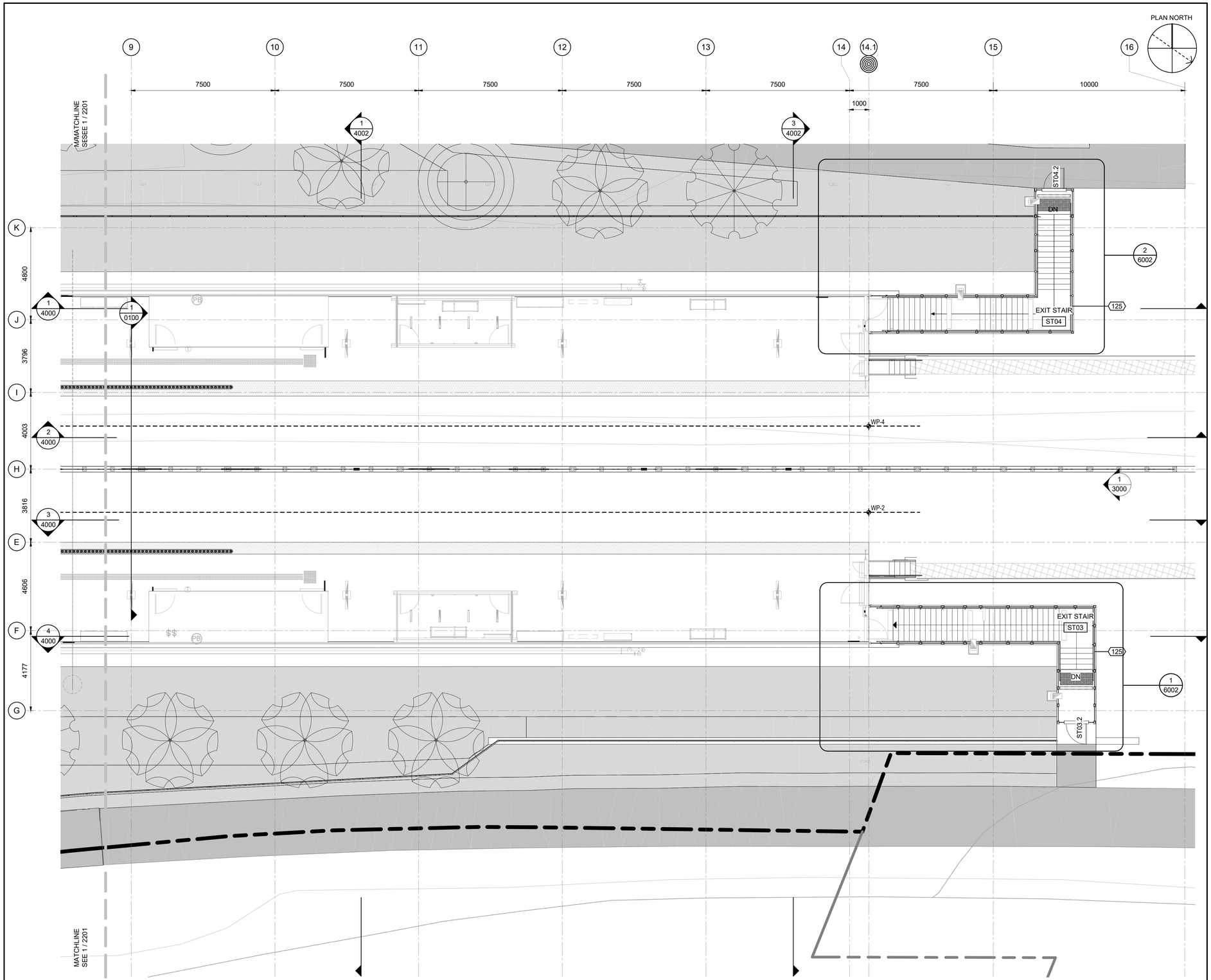
04/11/19

TITLEBLOCK: 790mm x 534mm



OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
ENLARGED PLAN
CONCOURSE SECTOR 2

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	T. KAMPMAN
DRAWN	SEALED
K. SANIPE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-2202

MODEL NUMBER
660373-1GSS-001-44DM-1000

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
ROBERT BRISBIN
LICENCE
3782

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

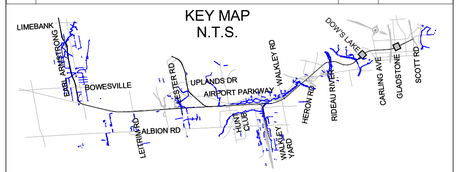
HORIZONTAL 1 : 100 FULLSIZE
1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE
1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

KEYNOTE LEGEND

Key Value	Keynote Text
125	TYPE 2 RAILING, PERFORATED METAL PANEL, MIN. 1070mm HIGH, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7220

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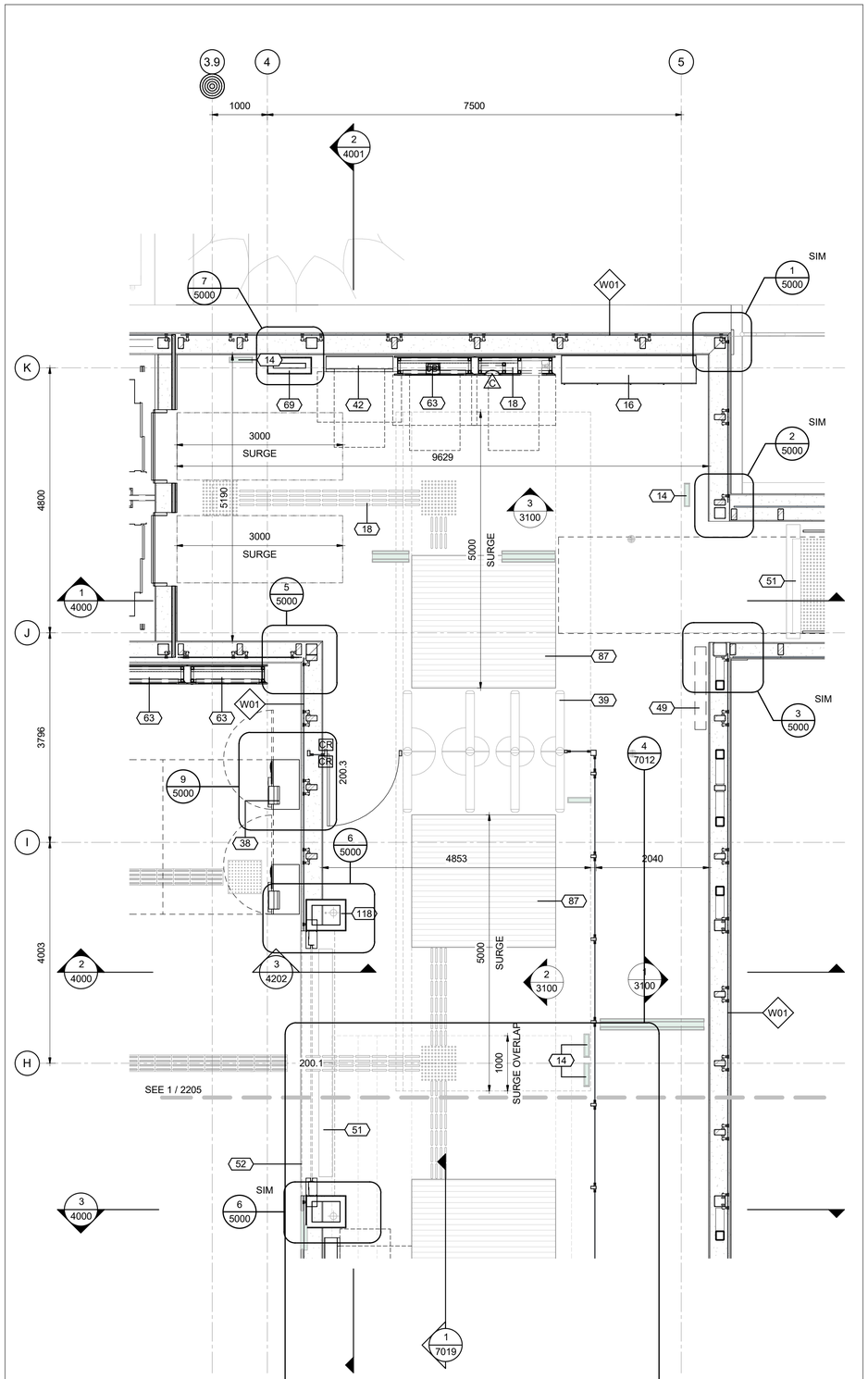
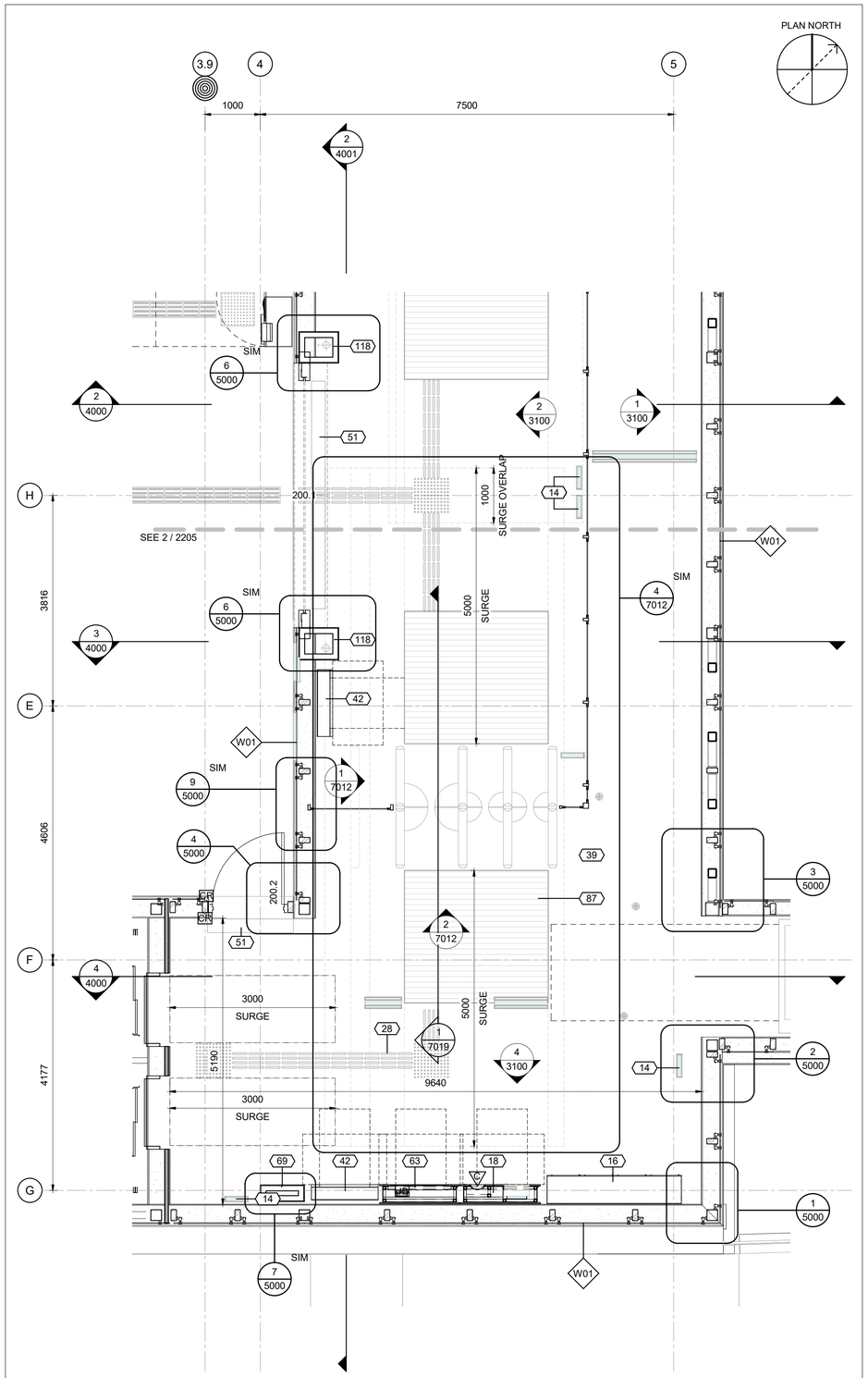
04/11/19

TITLEBLOCK: 790mm x 534mm



2 / 2205 ENLARGED PLAN - STATION ENTRANCE - WEST

1 : 50



1 / 2205 ENLARGED PLAN - STATION ENTRANCE - EAST

1 : 50

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09/23/20

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
ENLARGED FLOOR PLAN
STATION ENTRANCE

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R.BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
N.BARRETT	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-2205

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE
HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE
0 0.5 1 2 4 m
VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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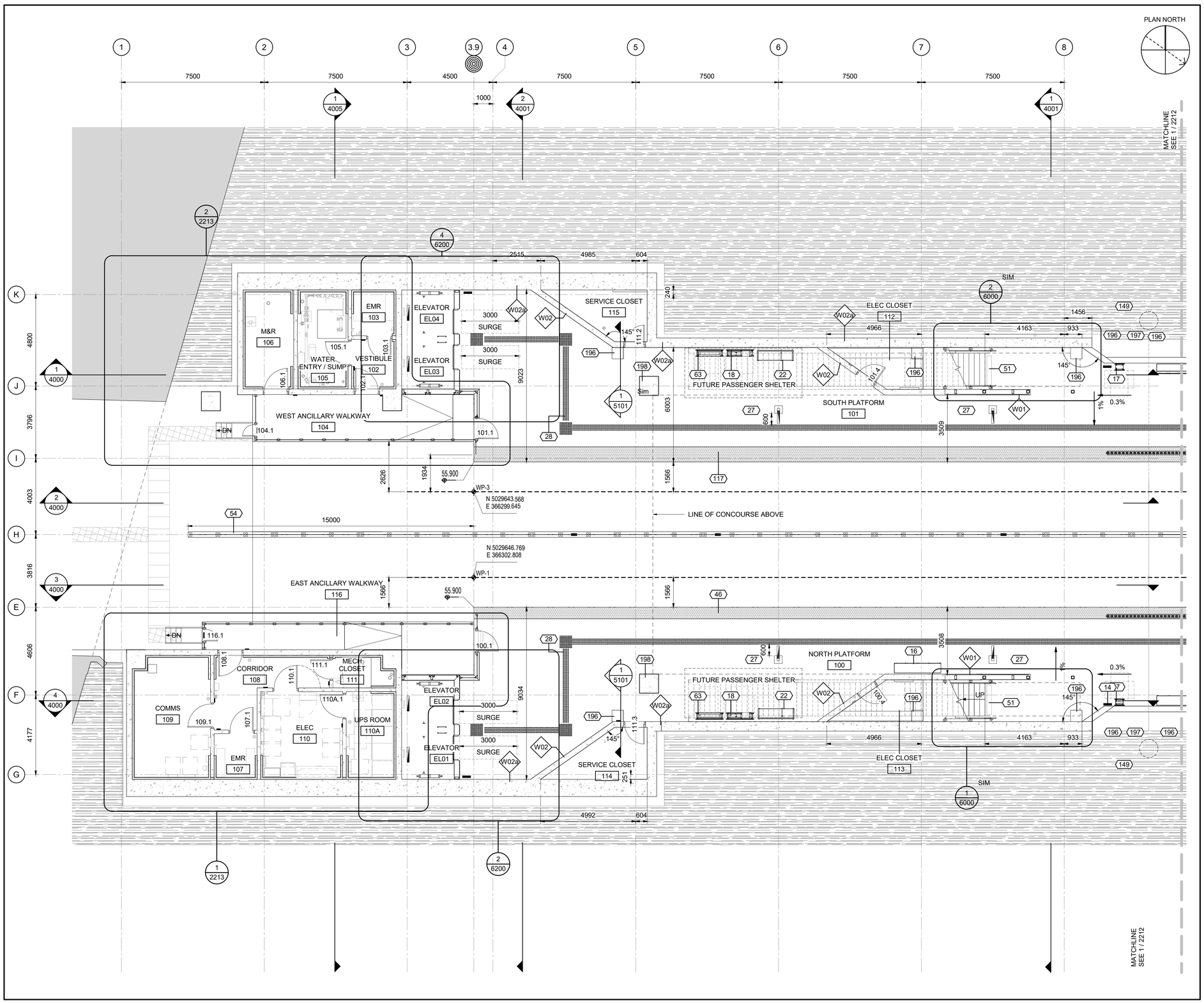
ISSUED FOR CONSTRUCTION
2021-03-29

KEYNOTE LEGEND

Key Value	Keynote Text
14	SIGN, REFER TO SIGNAGE PACKAGE
16	WASTE RECPETACLE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7305
18	UC-02, FIRE CABINET, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7105/7106
28	TACTILE WALKING SURFACE INDICATOR (TWSI)
38	TICKET VENDING MACHINE, PROVIDED BY THE CITY, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7013
39	FARE GATE, PROVIDED BY THE CITY, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7012/7019
42	NEXUS PASSENGER INFORMATION DISPLAY, PROVIDED BY THE CITY
49	FUTURE ADVERTISING PANEL, TO BE PROVIDED BY CITY
51	TRENCH DRAIN, REFER TO MECHANICAL DRAWGINS
52	SECURITY GATE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7210
63	UC-01, TIP CABINET, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7100/7102
69	VERTICAL ELECTRICAL CHASE
87	RECESSED FLOOR GRILLE WITH HEAT TRACE DRAIN AND DRAINAGE PAN, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7012/7019
118	ROOF DRAIN CHASE

TITLEBLOCK: 790mm x 534mm



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04/11/19

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
ENLARGED PLAN
PLATFORM SECTOR 1

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	T. KAMPMAN
DRAWN	SEALED
K. SANIPE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-2211

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
Ontario Association of Architects — Licensed — 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

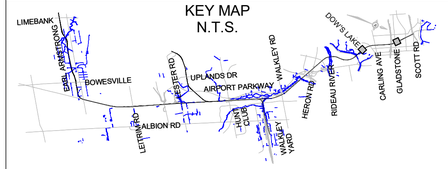
SCALE
HORIZONTAL 1 : 100 FULLSIZE; 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE; 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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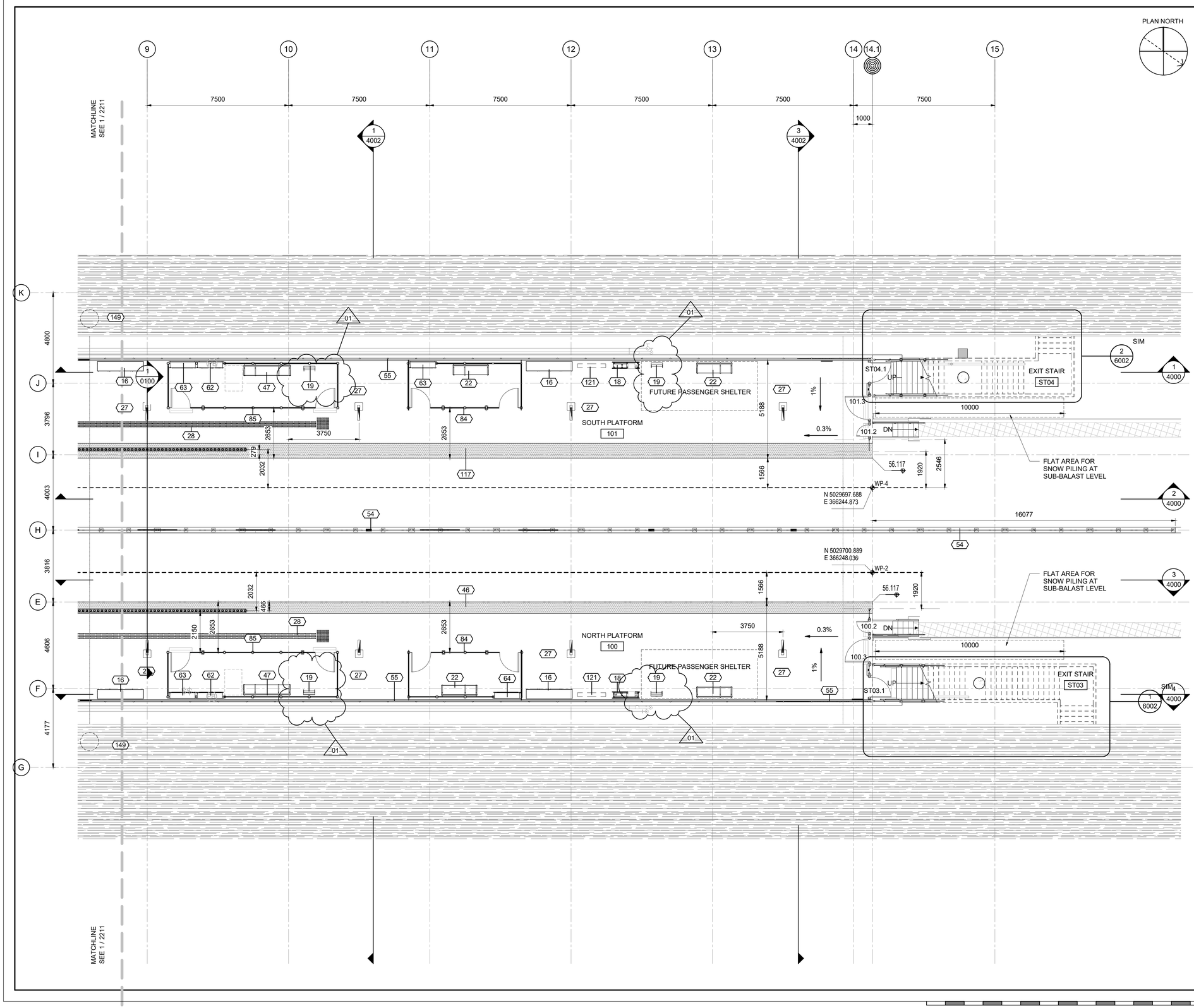
ISSUED FOR CONSTRUCTION
2021-03-29

KEYNOTE LEGEND

Key Value	Keynote Text
14	SIGN, REFER TO SIGNAGE PACKAGE
16	WASTE RECPETACLE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7305
17	UC-04, EMERGENCY PHONE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7115/7116
18	UC-02, FIRE CABINET, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7105/7106
22	BENCH WITH SEATING FOR 3
28	TACTILE WALKING SURFACE INDICATOR (TWSI)
46	PLATFORM EDGE
51	TRENCH DRAIN, REFER TO MECHANICAL DRAWGINS
54	TYPE 4, INTERTRACK BARRIER w/ REMOVABLE TOP, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7230
63	UC-01, TIP CABINET, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7100/7102
117	RETRACTABLE PLATFORM EDGE TILE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7315
196	SST ACCESS PANEL WITH CONCRETE INFILL FOR SERVICE TRENCH, COLOUR TO MATCH FLOOR FINISH
198	CONCRETE COLUMN, REFER TO STRUCTURAL DRAWINGS

TITLEBLOCK: 790mm x 534mm



TransitNEXT

ARCHITECTURAL
CORSO ITALIA
ENLARGED PLAN
PLATFORM SECTOR 2

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	T. KAMPMAN
DRAWN	SEALED
K. SANIPE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-2212

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

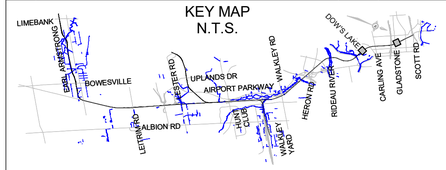
SCALE
HORIZONTAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29
01	REVISED ISSUE FOR CONSTRUCTION	JJ	2021/07/30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

KEYNOTE LEGEND

Key Value	Keynote Text
16	WASTE RECPETACLE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7305
18	UC-02, FIRE CABINET, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7105/7106
19	PAYPHONE (CONDUIT AND STRUCTURE), PROVIDED BY THE CITY
22	BENCH WITH SEATING FOR 3
28	TACTILE WALKING SURFACE INDICATOR (TWSI)
46	PLATFORM EDGE
47	BENCH WITH SEATING FOR 4
54	TYPE 4, INTERTRACK BARRIER w/ REMOVABLE TOP, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7230
55	TYPE 3, CHAINLINK FENCE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7225
62	UC-03, TSA FIRE EXTINGUISHER CABINET, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7110/7111/7112
63	UC-01, TIP CABINET, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7100/7102
64	UC-01, TIP CABINET c/w ROUGH-IN FOR FUTURE SHELTER, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7100/7102
84	PASSENGER SHELTER, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7200/7201
85	TSA SHELTER, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7205/7206
117	RETRACTABLE PLATFORM EDGE TILE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7315
121	ADVERTISING PANEL, 1.5m x 2.5m, TO BE PROVIDED BY THE CITY, PROVIDE PROVISIONS FOR POWER AND DATA

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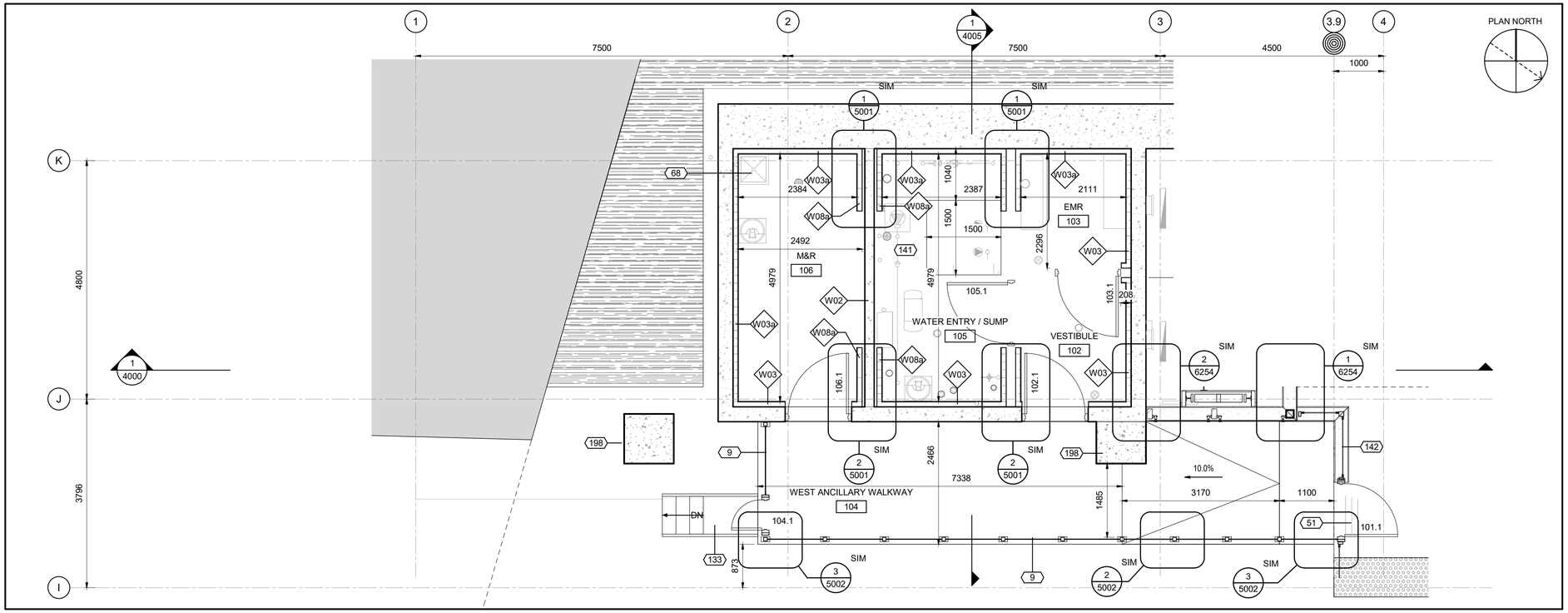
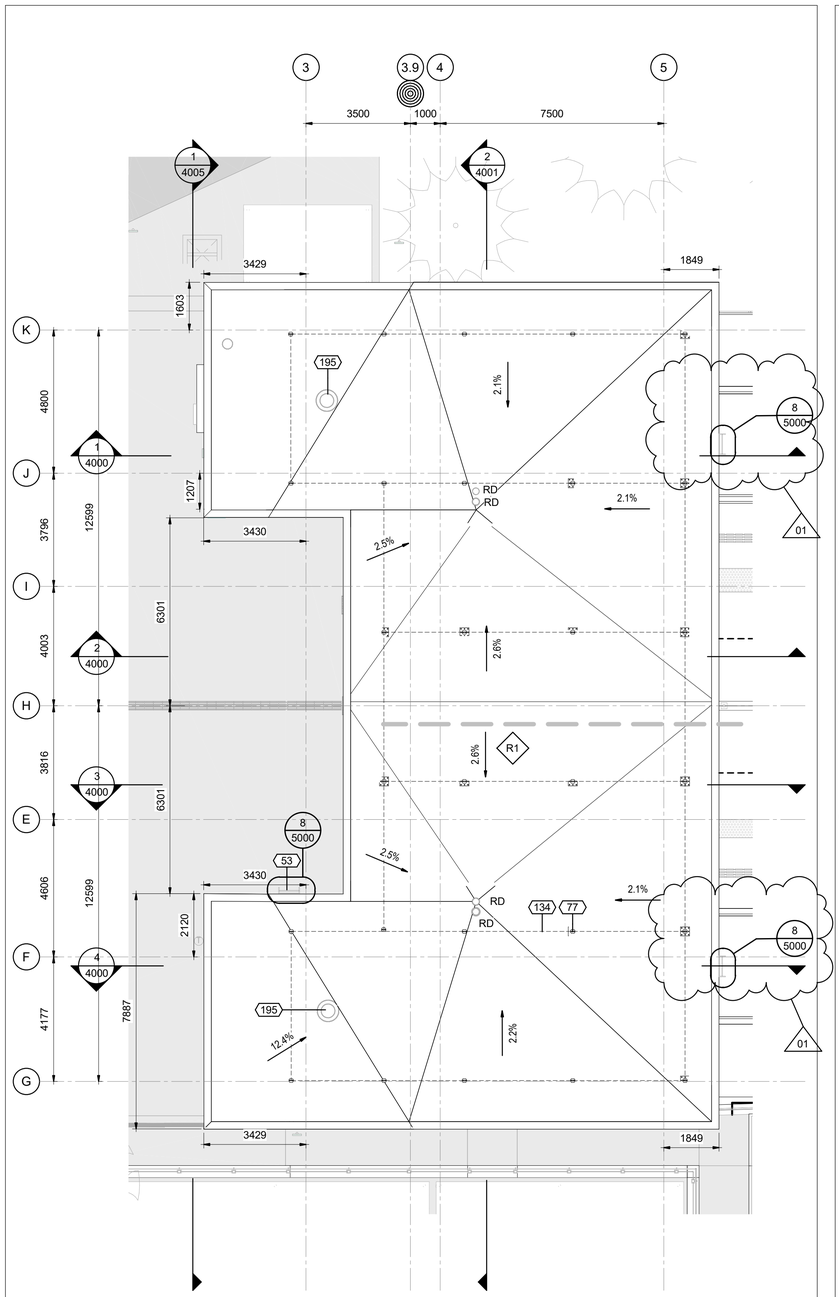
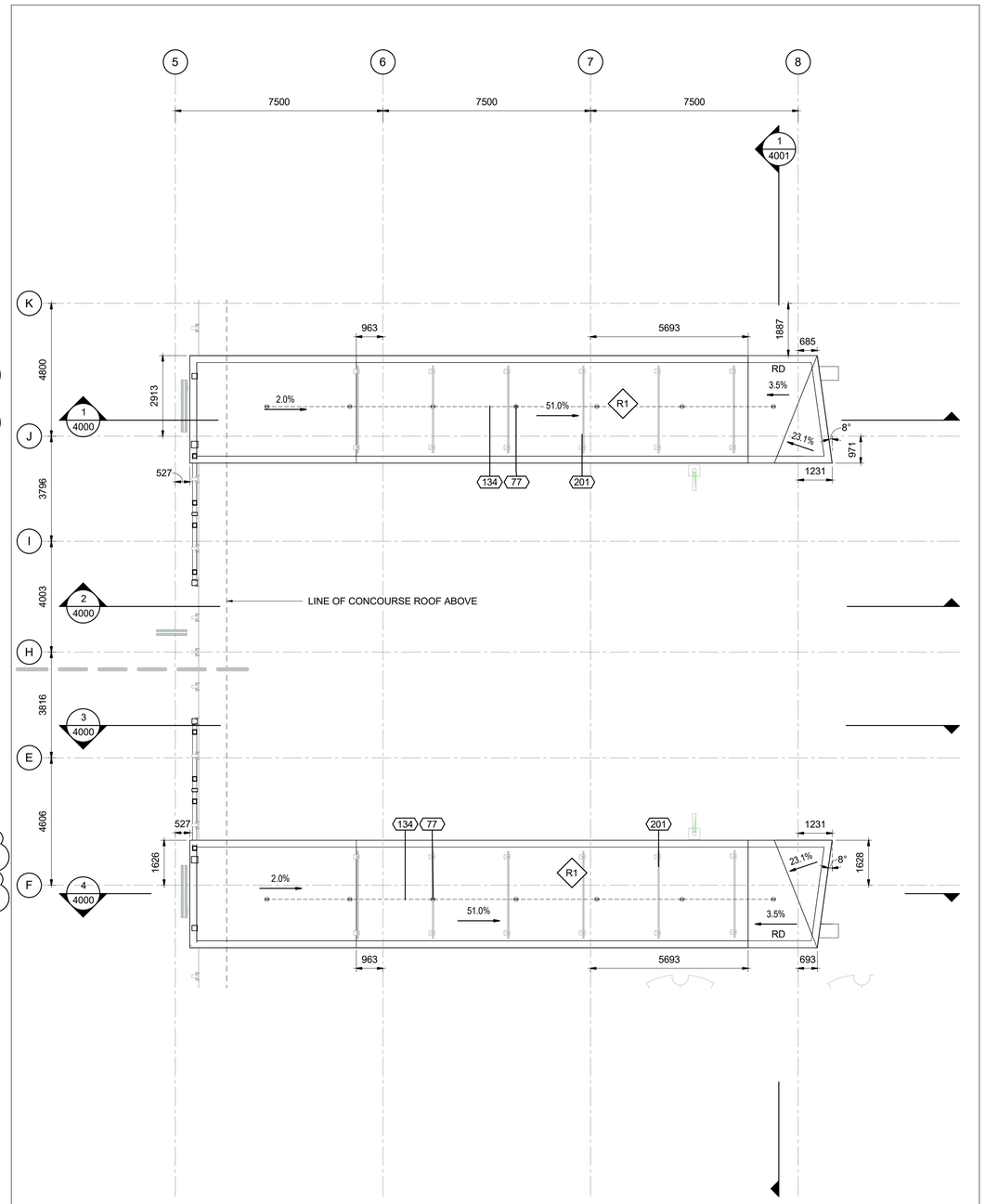


TITLEBLOCK: 790mm x 534mm



2 2221 ENLARGED ROOF PLAN - CONCOURSE

1 : 100



1 2221 ENLARGED ROOF PLAN - PUBLIC STAIRS

1 : 100

PLAN NORTH

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
ENLARGED ROOF PLANS
CONCOURSE

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R.BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A.RAFIE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-2221

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE
HORIZONTAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29
01	REVISED ISSUE FOR CONSTRUCTION	JJ	2021/07/30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

KEYNOTE LEGEND

Key Value	Keynote Text
53	LADDER BUMP
77	FALL ARREST ANCHOR FASTENED TO STRUCTURE - REFER TO STRUCTURAL FOR BEAM LOCATIONS, ANCHORS AND ANCHOR LAYOUT TO BE DESIGNED AND PROVIDED BY OTHERS, TYP.
134	LIFELINE AIRCRAFT CABLE, REFER TO FALL ARREST DRAWINGS, TYP.
195	ROOF TOP MECHANICAL EQUIPMENT, REFER TO MECHANICAL DRAWINGS
201	SNOW GUARD

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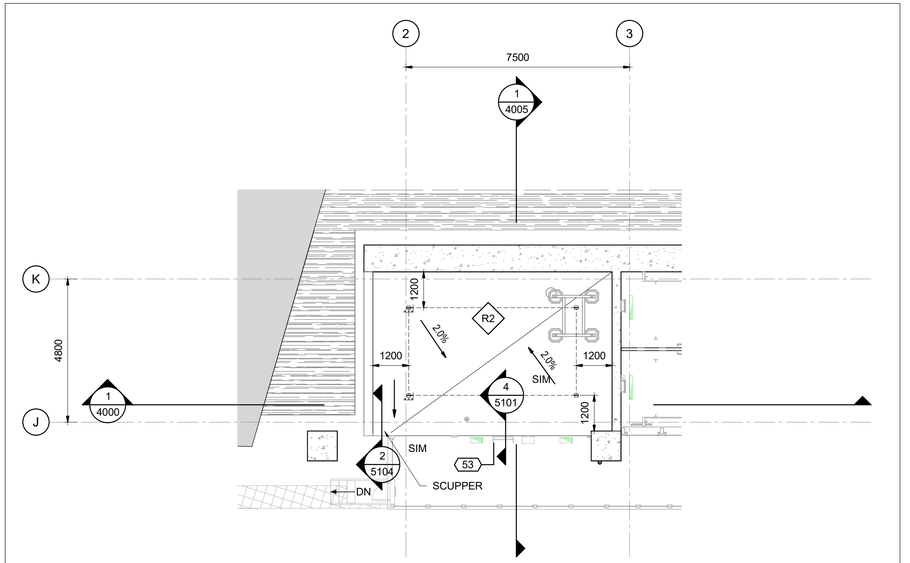
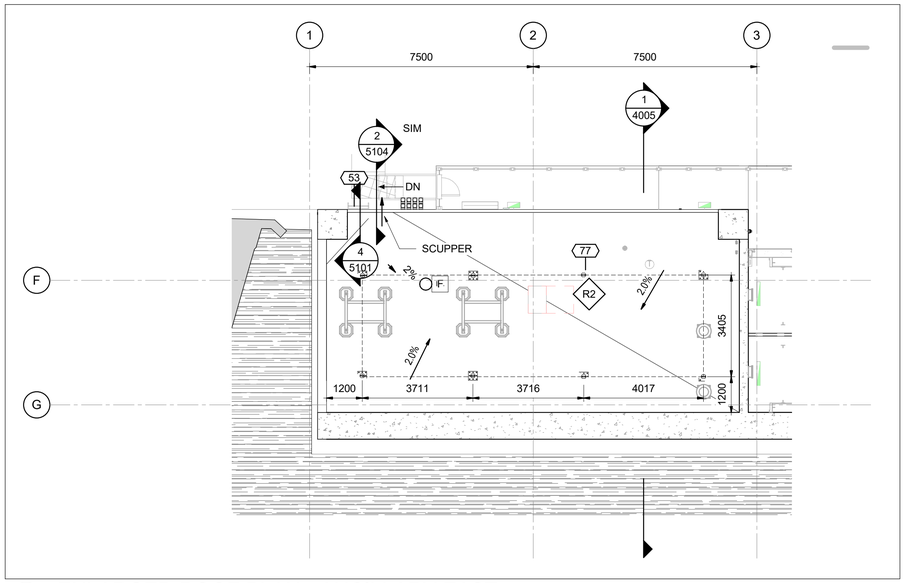
10/07/20

TITLEBLOCK: 790mm x 534mm



2 2222 ENLARGED ROOF PLAN - ANCILLARY WEST

1 : 100



1 2222 ENLARGED ROOF PLAN - ANCILLARY EAST

1 : 100

KEYNOTE LEGEND	
Key Value	Keynote Text
53	LADDER BUMP
77	FALL ARREST ANCHOR FASTENED TO STRUCTURE - REFER TO STRUCTURAL FOR BEAM LOCATIONS. ANCHORS AND ANCHOR LAYOUT TO BE DESIGNED AND PROVIDED BY OTHERS, TYP.
195	ROOF TOP MECHANICAL EQUIPMENT, REFER TO MECHANICAL DRAWINGS

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
ENLARGED ROOF PLANS
PLATFORM

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R.BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A.RAFIE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-2222

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
LICENCE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

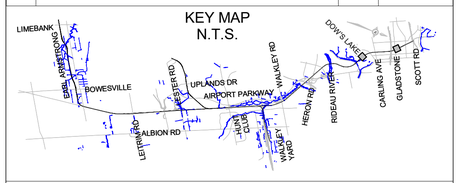
HORIZONTAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-03-29

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10/07/20

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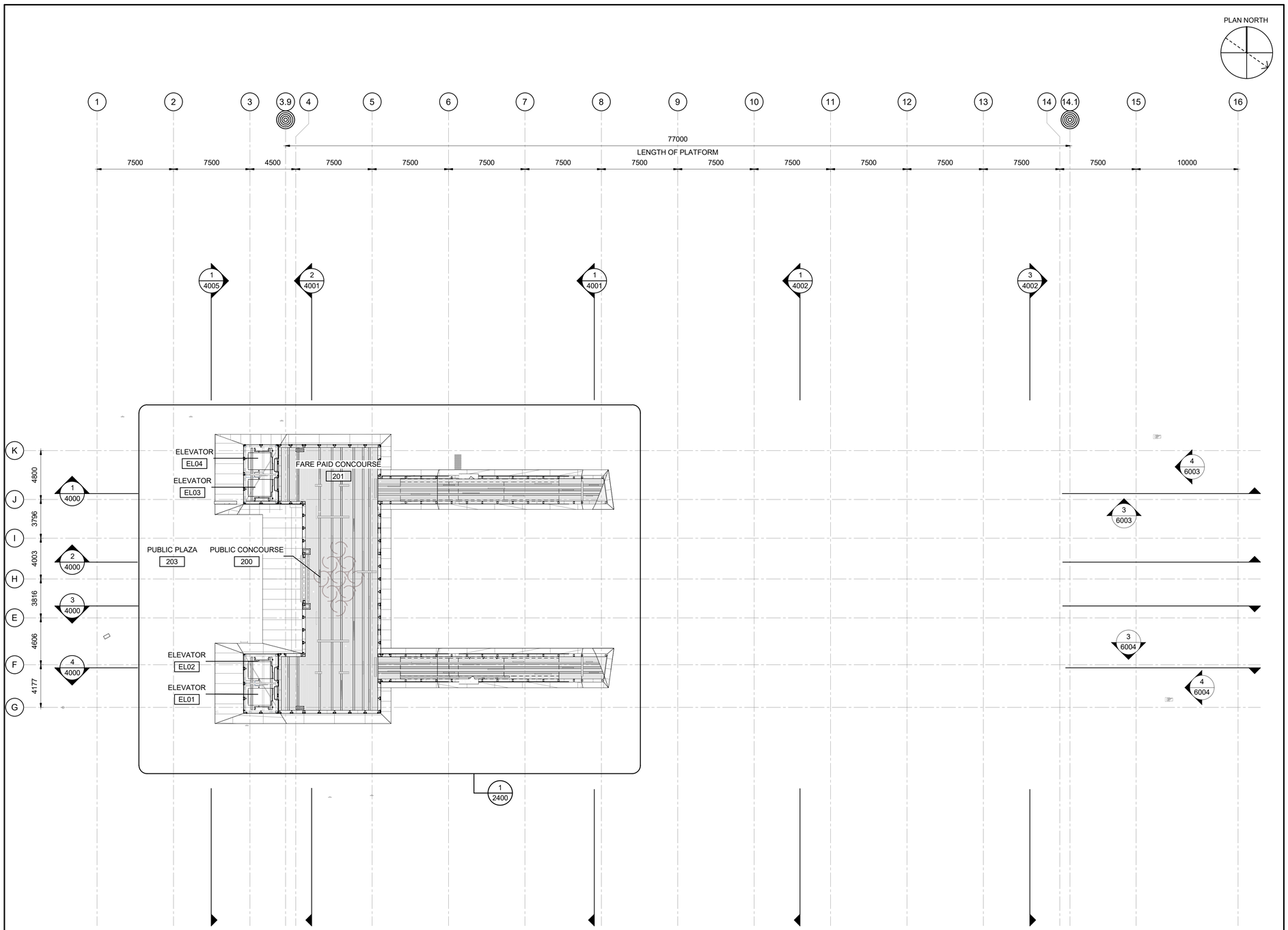

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02/04/20

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
REFLECTED CEILING PLAN
CONCOURSE

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R.BRISBIN	T.KAMPMAN
DRAWN	SEALED
N.BARRETT	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-2300

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

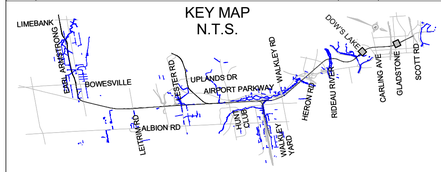
SCALE
HORIZONTAL 1 : 200 FULLSIZE / 1 : 400 HALF SIZE
0 2 4 8 16 m
VERTICAL 1 : 200 FULLSIZE / 1 : 400 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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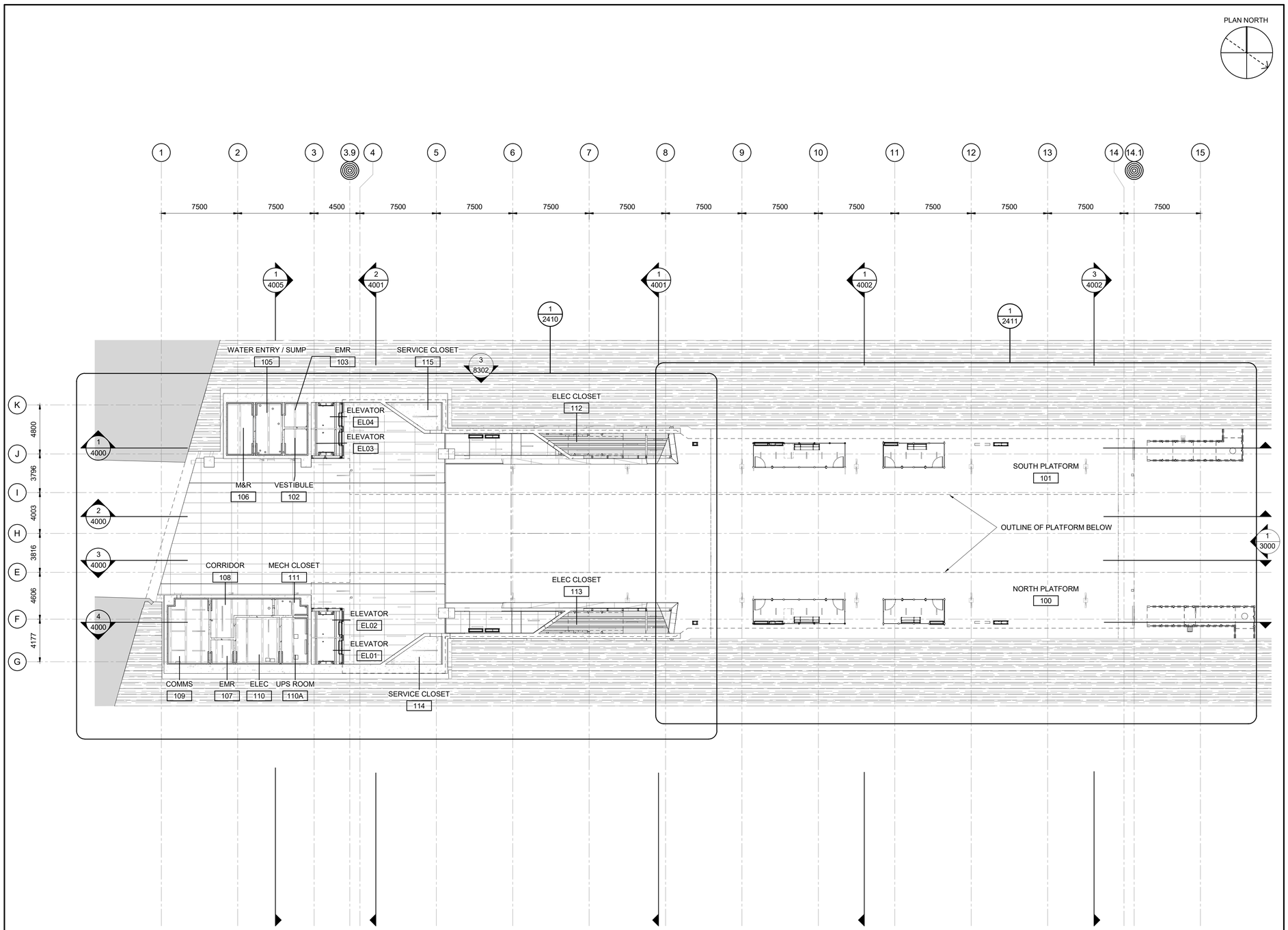
ISSUED FOR CONSTRUCTION
2021-03-29

TITLEBLOCK: 790mm x 534mm



OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
RELFECTED CEILNG PLAN
PLATFORM

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R.BRISBIN	T.KAMPMAN
DRAWN	SEALED
N.BARRETT	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-2310

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
LICENSE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

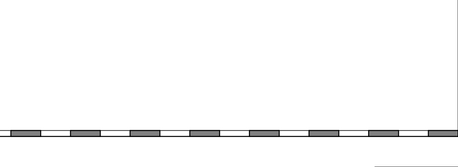
SCALE
HORIZONTAL 1 : 200 FULLSIZE; 1 : 400 HALF SIZE
0 2 4 8 16 m
VERTICAL 1 : 200 FULLSIZE; 1 : 400 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

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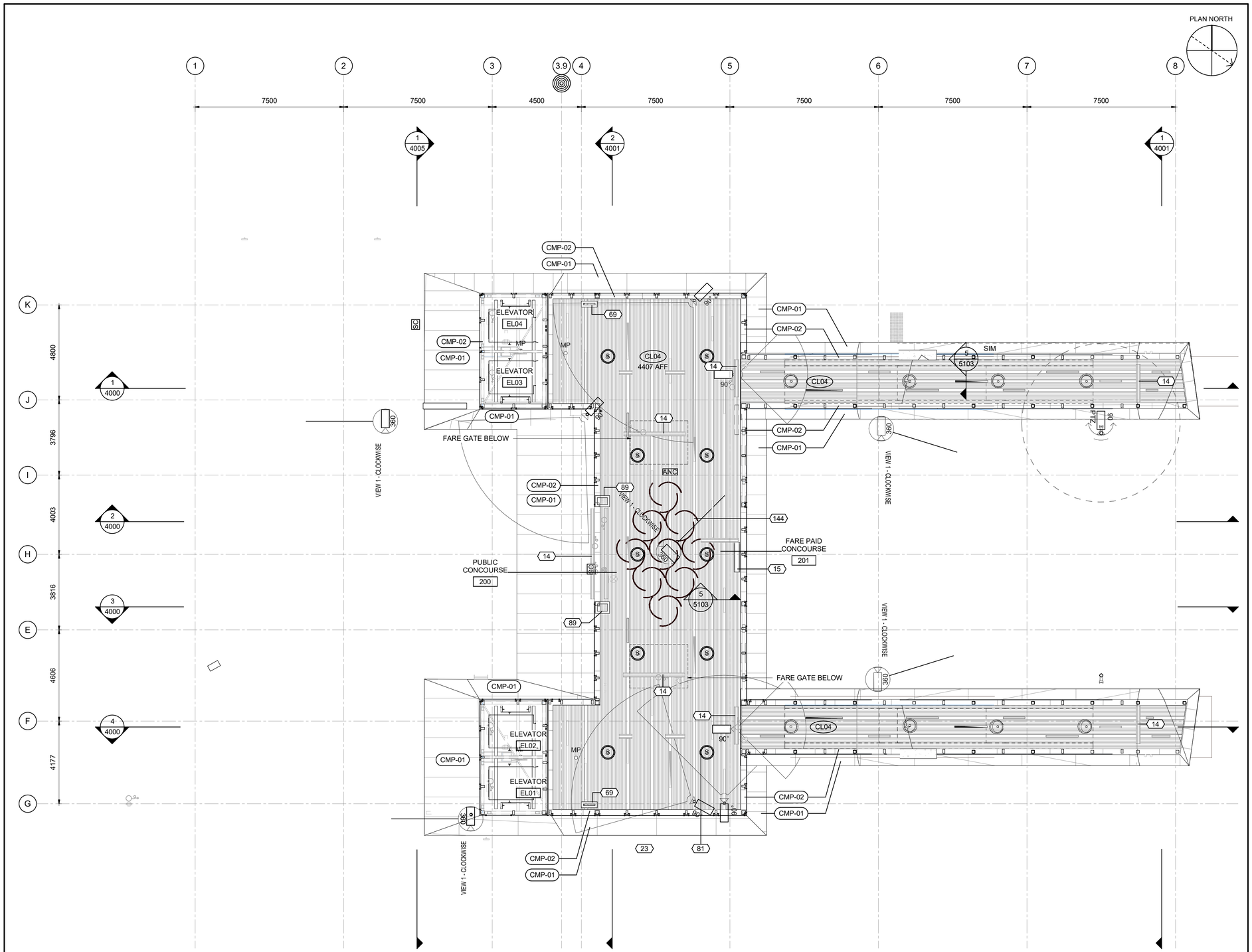
02/04/20

TITLEBLOCK: 790mm x 534mm



CONTRACT No.	LRT19-1025
DESIGNED	R. BRISBIN
CHECKED	T. KAMPMAN
DRAWN	K. SANIPE
SEALED	R. BRISBIN

ARCHITECTURAL
CORSO ITALIA
ENLARGED REFLECTED CEILING PLAN
CONCOURSE SECTOR 1

DRAWING NUMBER
660373-1GSS-001-44DD-2400

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE
HORIZONTAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

KEYNOTE LEGEND

Key Value	Keynote Text
14	SIGN, REFER TO SIGNAGE PACKAGE
15	PASSENGER INFORMATION DISPLAY (PID), REFER TO SYSTEM COMMUNICATIONS PACKAGE
69	VERTICAL ELECTRICAL CHASE
81	SPEAKER, REFER TO SYSTEM COMMUNICATIONS DRAWINGS
89	RAIN WATER LEADER ENCLOSURE
144	PUBLIC ART INSTALLATION, REFER TO ARTIST PACKAGE

GENERAL NOTES

1. ALL CEILING MOUNTED FIXTURES TO BE MOUNTED IN CENTRE OF CEILING PANEL, UNO.
2. REFER TO ELECTRICAL DRAWINGS FOR LIGHTING IN MECHANICAL, ELECTRICAL AND SERVICE SPACES.
3. REFER TO SIGNAGE AND WAYFINDING DRAWINGS FOR ALL SIGN TYPES, SIZES, LOCATION AND MOUTING TYPES.
4. REFER TO SYSTEMS DRAWINGS FOR ALL CAMERAS, SPEAKERS AND PIDS TYPES, SIZES, LOCATION AND MOUTING TYPES.

CEILING MATERIAL	CEILING / WALL MOUNTED FIXTURES
CMP COMPOSITE METAL PANEL	LIGHT FIXTURE
GL GLASS	EXIT SIGN
EXP EXPOSED CONCRETE	FIRE ALARM (S, HS)
MLC-02 METAL LINEAR CEILING	FIRE HEAT DETECTOR (MP)
MLC-01 METAL LINEAR CEILING	SMOKE DETECTOR
	REFER TO ELECTRICAL DRAWINGS
	SECURITY CAMERA
	SPEAKER
	PASSENGER INFORMATION DISPLAY SCREEN
	REFER TO SYSTEMS DRAWINGS
	SIGNAGE
	REFER TO SIGNAGE AND WAYFINDING DWGS

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04/11/19

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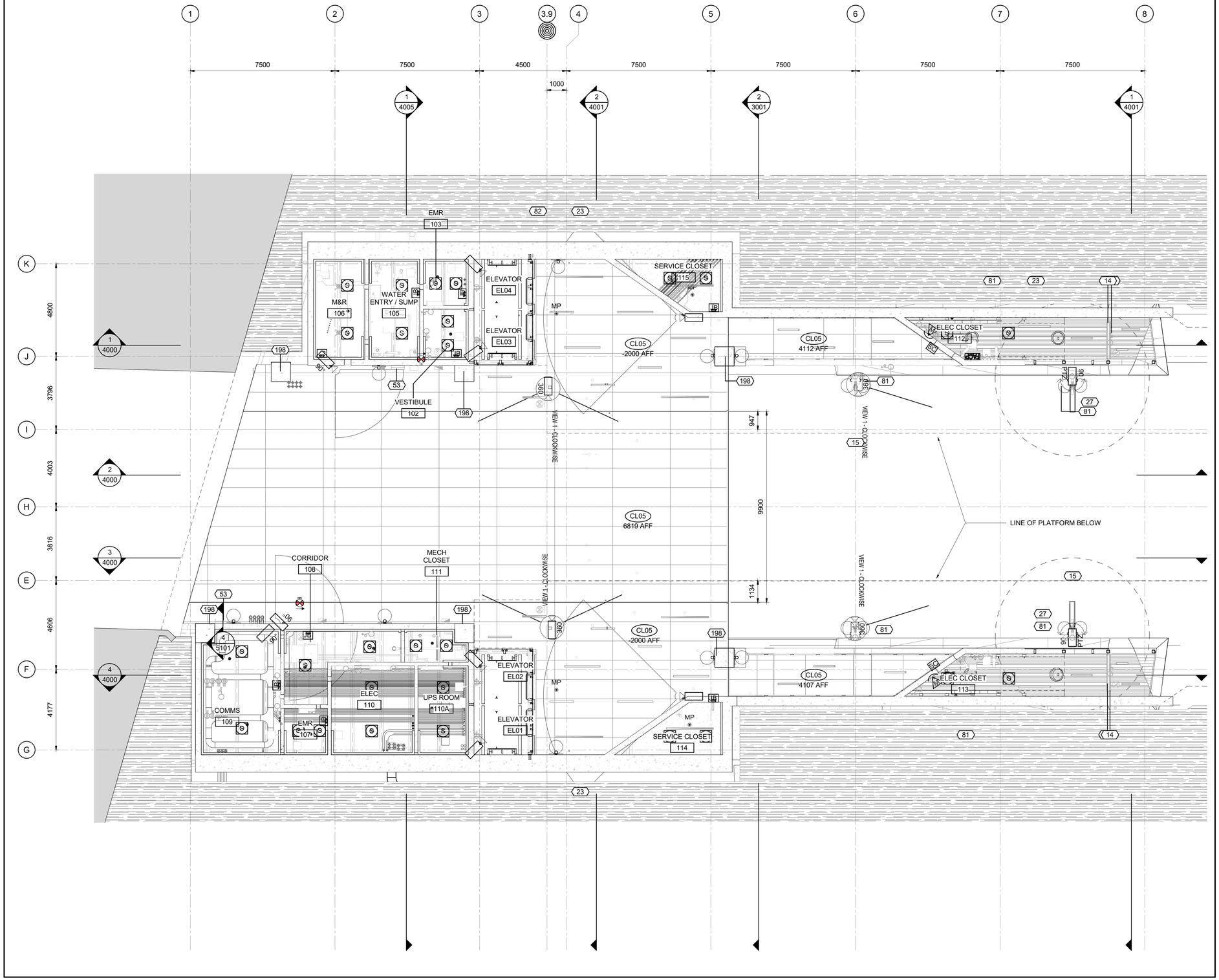

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04/11/19

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
ENLARGED REFLECTED CEILING PLAN
PLATFORM SECTOR 1

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	T. KAMPMAN
DRAWN	SEALED
K. SANIPE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-2410

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

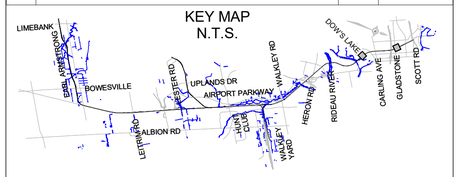
SCALE
HORIZONTAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

KEYNOTE LEGEND

Key Value	Keynote Text
14	SIGN, REFER TO SIGNAGE PACKAGE
53	LADDER BUMP
81	SPEAKER, REFER TO SYSTEM COMMUNICATIONS DRAWINGS
198	CONCRETE COLUMN, REFER TO STRUCTURAL DRAWINGS

GENERAL NOTES

1. ALL CEILING MOUNTED FIXTURES TO BE MOUNTED IN CENTRE OF CEILING PANEL, UNO.
2. REFER TO ELECTRICAL DRAWINGS FOR LIGHTING IN MECHANICAL, ELECTRICAL AND SERVICE SPACES.
3. REFER TO SIGNAGE AND WAYFINDING DRAWINGS FOR ALL SIGN TYPES, SIZES, LOCATION AND MOUTING TYPES.
4. REFER TO SYSTEMS DRAWINGS FOR ALL CAMERAS, SPEAKERS AND PIDS TYPES, SIZES, LOCATION AND MOUTING TYPES.

CEILING MATERIAL

- CMP — COMPOSITE METAL PANEL
- GL — GLASS
- EXP — EXPOSED CONCRETE
- MLC-02 — METAL LINEAR CEILING
- MLC-01 — METAL LINEAR CEILING

CEILING / WALL MOUNTED FIXTURES

- LIGHT FIXTURE
- EXIT SIGN
- S HS — FIRE ALARM
- MP — FIRE HEAT DETECTOR
- SMOKE DETECTOR

REFER TO ELECTRICAL DRAWINGS

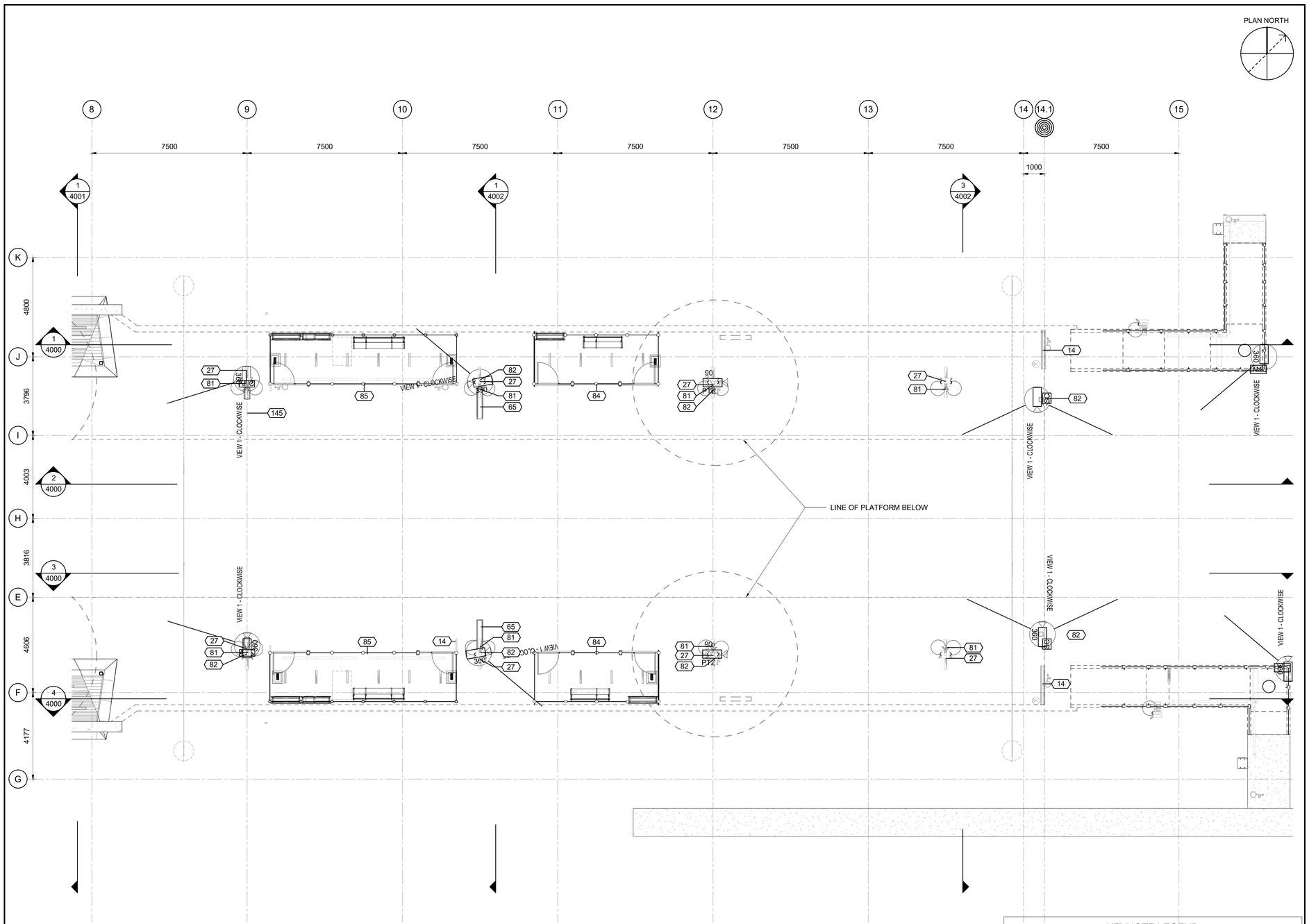
- SECURITY CAMERA
- SPEAKER
- PASSENGER INFORMATION DISPLAY SCREEN

REFER TO SYSTEMS DRAWINGS

- SIGNAGE

REFER TO SIGNAGE AND WAYFINDING DWGS

TITLEBLOCK: 790mm x 534mm



KEYNOTE LEGEND

Key Value	Keynote Text
14	SIGN, REFER TO SIGNAGE PACKAGE
27	LIGHT POLE, REFER TO ELECTRICAL AND STRUCTURAL DRAWINGS FOR LIGHT POLE AND FOUNDATION TYPE BASED ON LIGHT POLE LOCATION
65	PASSENGER INFORMATION DISPLAY (PID) - SUSPENDED FROM OUTRIGGER MOUNTED TO LIGHT POLE, REFER TO SYSTEM COMMUNCIATIONS PACKAGE
81	SPEAKER, REFER TO SYSTEM COMMUNICATIONS DRAWINGS
82	CAMERA, REFER TO SYSTEM COMMUNICATIONS DRAWINGS
84	PASSENGER SHELTER, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7200/7201
85	TSA SHELTER, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7205/7206
145	CLOCK, REFER TO SYSTEM COMMUNICATIONS

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
ENLARGED REFLECTED CEILING PLAN
PLATFORM SECTOR 2

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
N.BARRETT	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-2411

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
LICENSED
3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

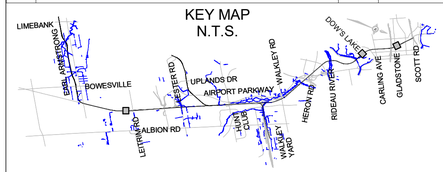
SCALE
HORIZONTAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

GENERAL NOTES

1. ALL CEILING MOUNTED FIXTURES TO BE MOUNTED IN CENTRE OF CEILING PANEL, UNO.
2. REFER TO ELECTRICAL DRAWINGS FOR LIGHTING IN MECHANICAL, ELECTRICAL AND SERVICE SPACES.
3. REFER TO SIGNAGE AND WAYFINDING DRAWINGS FOR ALL SIGN TYPES, SIZES, LOCATION AND MOUTING TYPES.
4. REFER TO SYSTEMS DRAWINGS FOR ALL CAMERAS, SPEAKERS AND PIDS TYPES, SIZES, LOCATION AND MOUTING TYPES.

CEILING MATERIAL

- CMP — COMPOSITE METAL PANEL
- GL — GLASS
- EXP — EXPOSED CONCRETE
- MLC-02 — METAL LINEAR CEILING
- MLC-01 — METAL LINEAR CEILING

CEILING / WALL MOUNTED FIXTURES

- LIGHT FIXTURE
- EXIT SIGN
- S HS — FIRE ALARM
- MP — FIRE HEAT DETECTOR
- SMOKE DETECTOR

REFER TO ELECTRICAL DRAWINGS

- SECURITY CAMERA
- SPEAKER
- PASSENGER INFORMATION DISPLAY SCREEN

REFER TO SYSTEMS DRAWINGS

- SIGNAGE

REFER TO SIGNAGE AND WAYFINDING DWGS

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10/06/20

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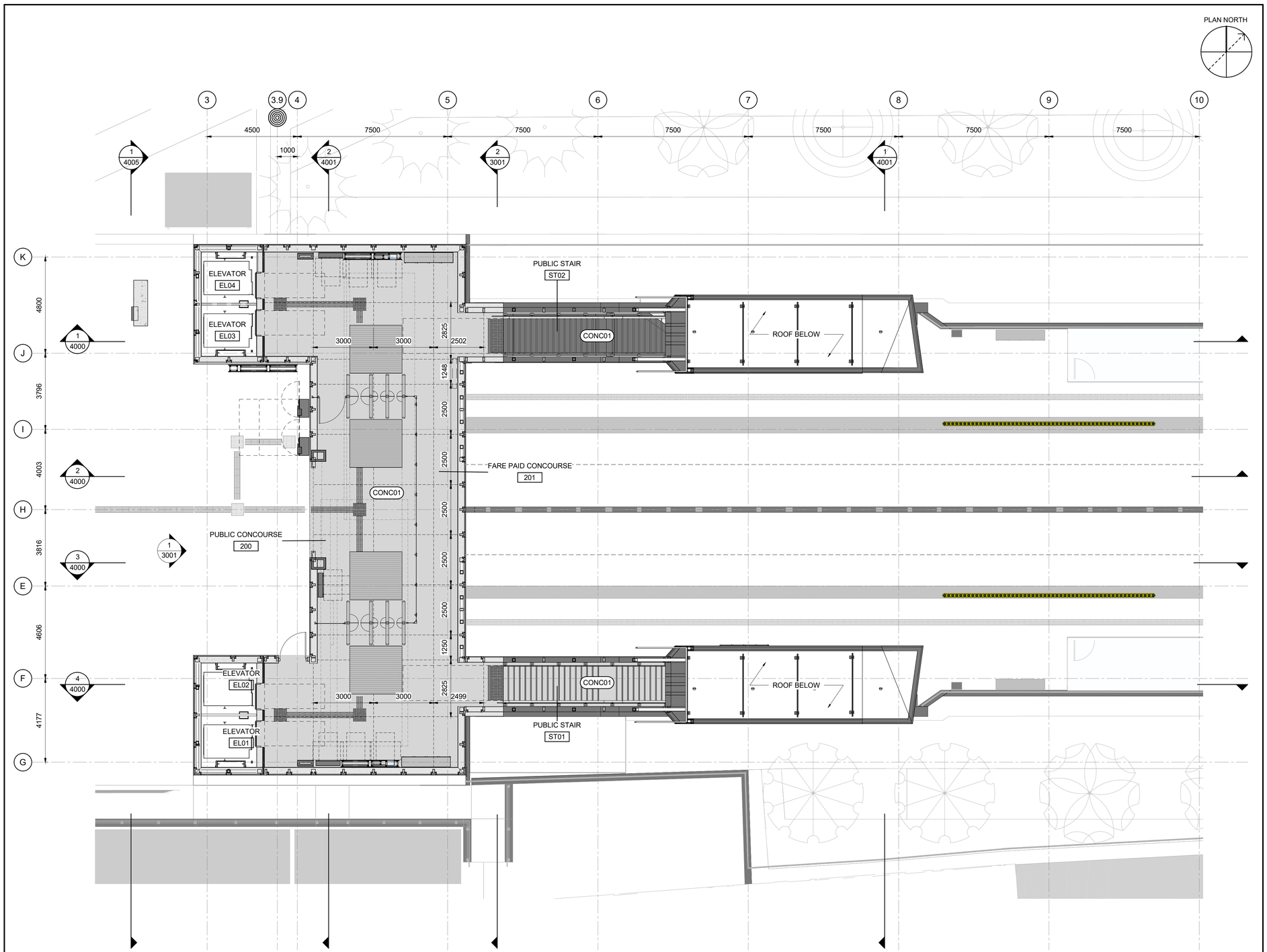

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10/06/20

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
FLOOR FINISH PLAN
CONCOURSE SECTOR 1

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-2501

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
ROBERT BRISBIN LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

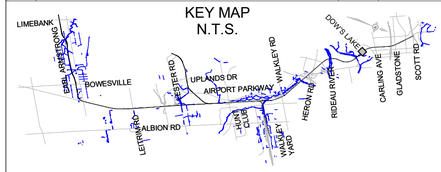
SCALE
HORIZONTAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

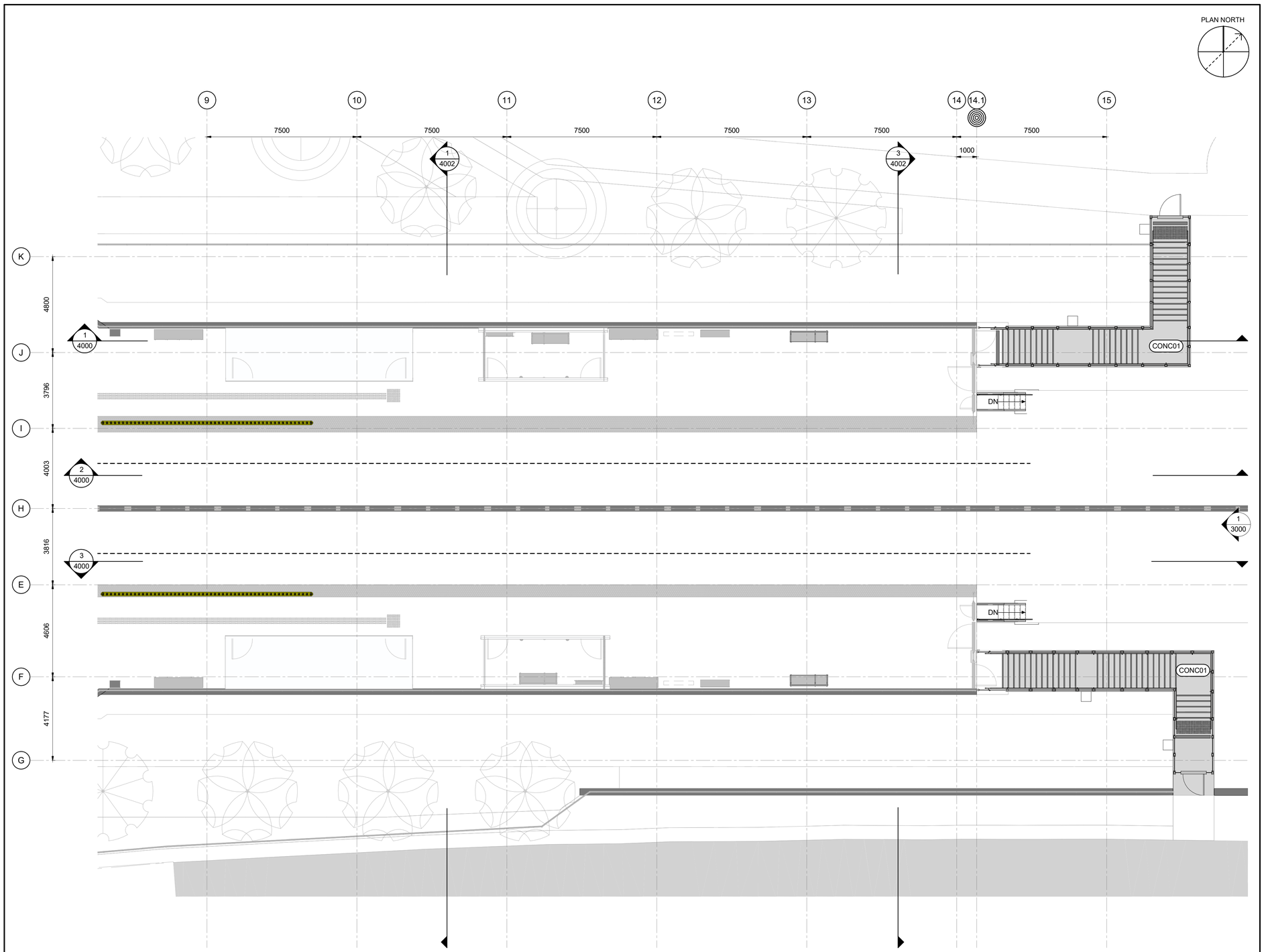
FLOOR PATTERN LEGEND

GENERAL NOTES:
1. TWSI LAYOUT PATTERNS TO FOLLOW ISO 23599
2. TWSI TO BE 600mm CLEAR FROM OBSTRUCTIONS

- TACTILE WARNING STRIP AT PLATFORM EDGE 610mm X 1200mm
- TACTILE WALKING SURFACE INDICATOR (TWSI)
- STAIR WARNING TRACK 610mm WIDE
- CONC 01
- CONC 02
- CONCRETE CONTROL JOINTS
- RECESSED SST FOOT GRILLE

CIP - CAST IN PLACE CONCRETE
EPY - EPOXY FINISH
EXIST - EXISTING FLOOR FINISH TO REMAIN
SDFAF - STATIC DISSIPATED FLUID APPLIED FLOORING

TITLEBLOCK: 790mm x 534mm



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10/06/20

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
FLOOR FINISH PLAN
CONCOURSE SECTOR 2

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-2502

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

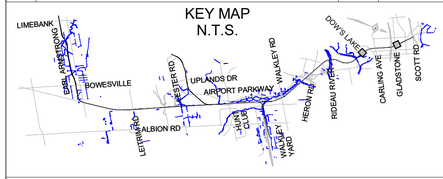
SCALE
HORIZONTAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

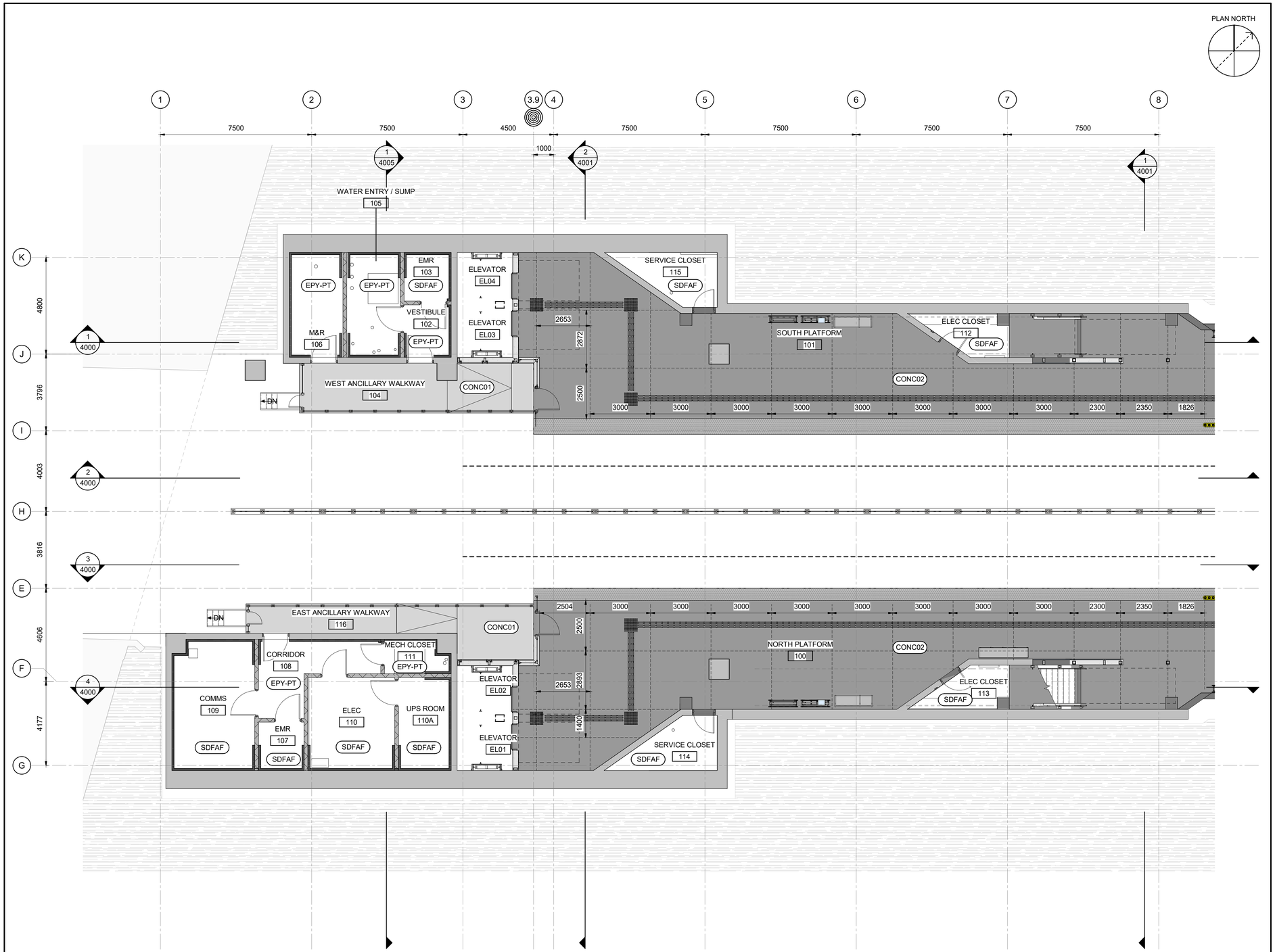
FLOOR PATTERN LEGEND

GENERAL NOTES:
1. TWSI LAYOUT PATTERNS TO FOLLOW ISO 23599
2. TWSI TO BE 600mm CLEAR FROM OBSTRUCTIONS

- TACTILE WARNING STRIP AT PLATFORM EDGE 610mm X 1200mm
- TACTILE WALKING SURFACE INDICATOR (TWSI)
- STAIR WARNING TRACK 610mm WIDE
- CONC 01
- CONC 02
- CONCRETE CONTROL JOINTS
- RECESSED SST FOOT GRILLE

CIP - CAST IN PLACE CONCRETE
EPY - EPOXY FINISH
EXIST - EXISTING FLOOR FINISH TO REMAIN
SDFAF - STATIC DISSIPATED FLUID APPLIED FLOORING

TITLEBLOCK: 790mm x 534mm



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10/06/20

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
FLOOR FINISH PLAN
PLATFORM SECTOR 1

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-2511

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
ROBERT A. BRISBIN LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

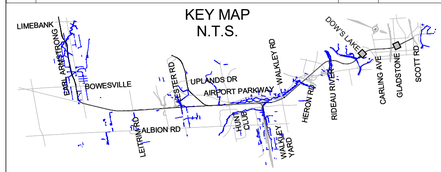
SCALE
HORIZONTAL 1 : 200 FULLSIZE / 1 : 400 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 200 FULLSIZE / 1 : 400 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

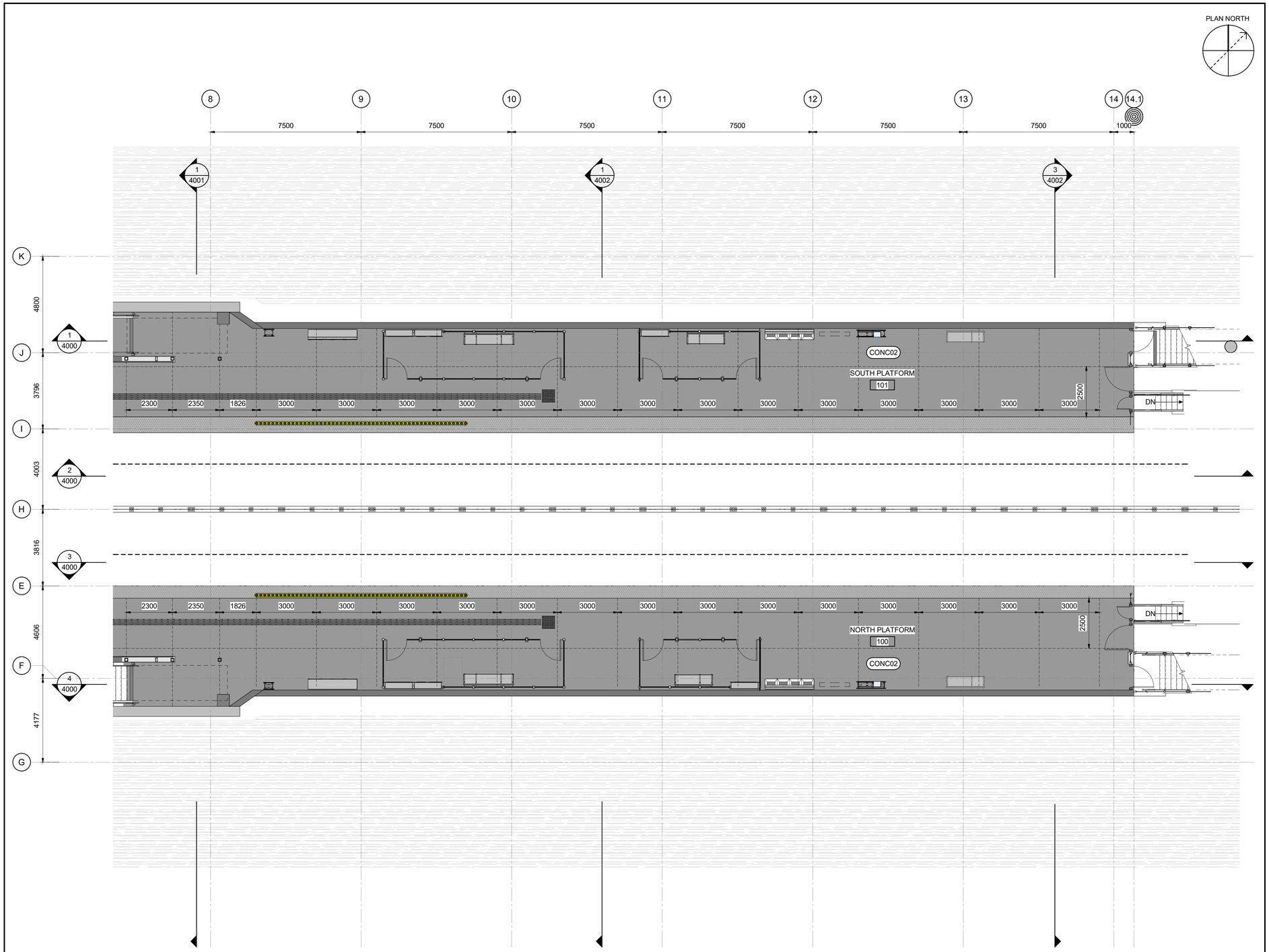
FLOOR PATTERN LEGEND

GENERAL NOTES:
1. TWSI LAYOUT PATTERNS TO FOLLOW ISO 23599
2. TWSI TO BE 600mm CLEAR FROM OBSTRUCTIONS

- TACTILE WARNING STRIP AT PLATFORM EDGE 610mm X 1200mm
- TACTILE WALKING SURFACE INDICATOR (TWSI)
- STAIR WARNING TRACK 610mm WIDE
- CONC 01
- CONC 02
- CONCRETE CONTROL JOINTS
- RECESSED SST FOOT GRILLE

CIP - CAST IN PLACE CONCRETE
EPY - EPOXY FINISH
EXIST - EXISTING FLOOR FINISH TO REMAIN
SDFAF - STATIC DISSIPATED FLUID APPLIED FLOORING

TITLEBLOCK: 790mm x 534mm



OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
FLOOR FINISH PLAN
PLATFORM SECTOR 2

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-2512

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
ROBERT BRISBIN LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

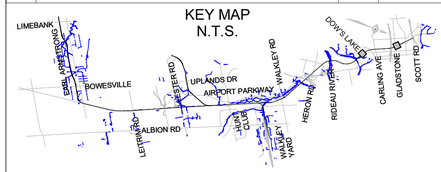
SCALE
HORIZONTAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

FLOOR PATTERN LEGEND

GENERAL NOTES:
1. TWSI LAYOUT PATTERNS TO FOLLOW ISO 23599
2. TWSI TO BE 600mm CLEAR FROM OBSTRUCTIONS

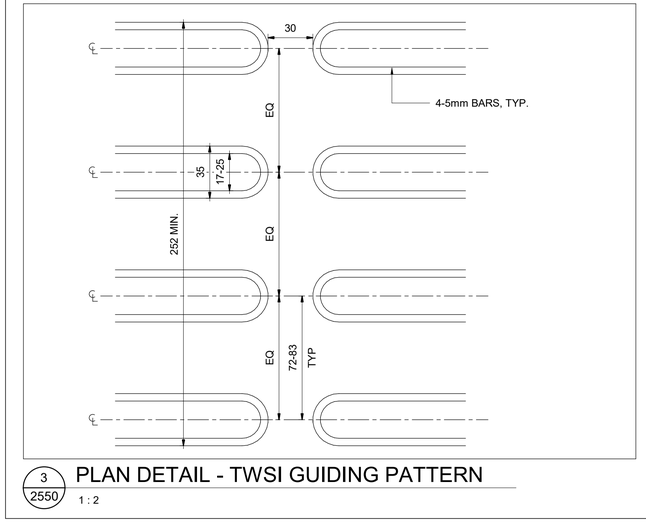
- TACTILE WARNING STRIP AT PLATFORM EDGE 610mm X 1200mm
- TACTILE WALKING SURFACE INDICATOR (TWSI)
- STAIR WARNING TRACK 610mm WIDE
- CONC 01
- CONC 02
- CONCRETE CONTROL JOINTS
- RECESSED SST FOOT GRILLE

CIP - CAST IN PLACE CONCRETE
EPY - EPOXY FINISH
EXIST - EXISTING FLOOR FINISH TO REMAIN
SDFAF - STATIC DISSIPATED FLUID APPLIED FLOORING

C:\Users\nbarrett\Documents\660373-1GSS-001-44DM-1000_NBarrettVF9UNI.rvt

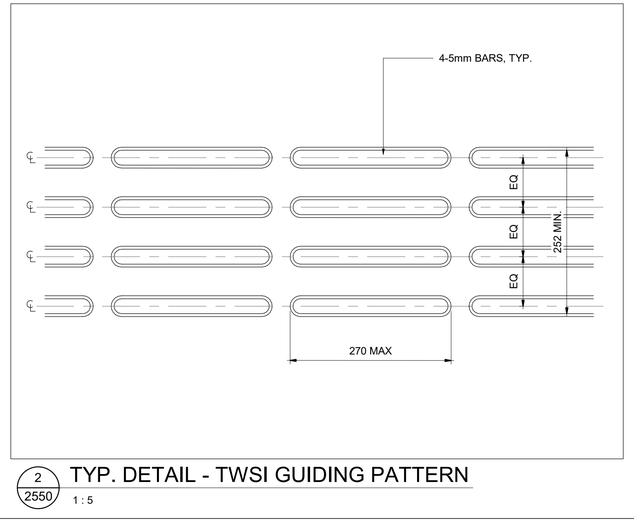
10/06/20

TITLEBLOCK: 790mm x 534mm



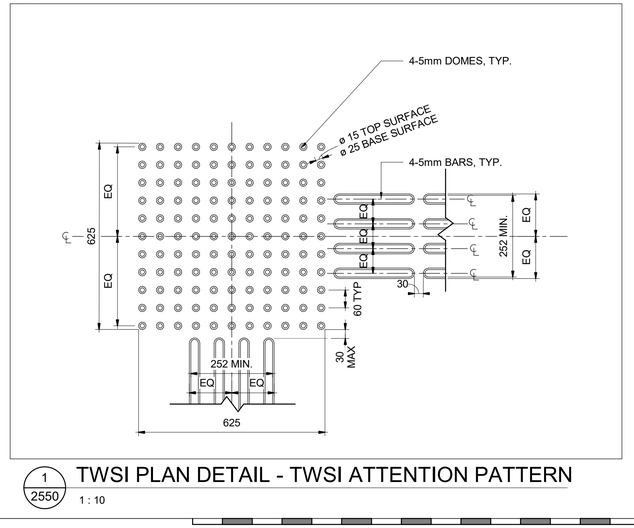
6 2550 JOINT AT CONCRETE AND COLUMN

1 : 2



5 2550 TYP. CONCRETE JOINT AT CURB

1 : 2



4 2550 TYP. CONCRETE SAW CUT

1 : 2

3 2550 PLAN DETAIL - TWSI GUIDING PATTERN

1 : 2

2 2550 TYP. DETAIL - TWSI GUIDING PATTERN

1 : 5

1 2550 TWSI PLAN DETAIL - TWSI ATTENTION PATTERN

1 : 10

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
FLOOR FINISH PLAN
DETAILS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R.BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A.RAFIE	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-2550

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
ROBERT A. BRISBIN
LICENCE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

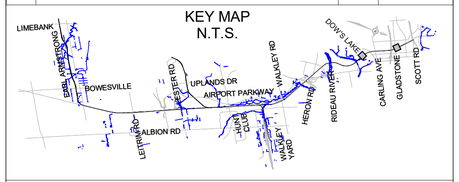
AS SHOWN

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-03-29

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10/07/20

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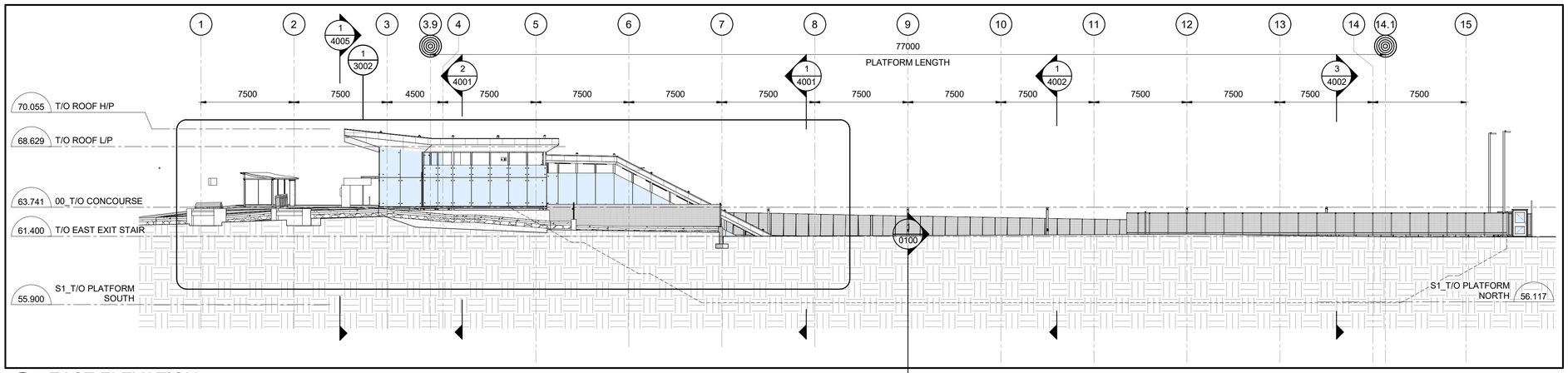
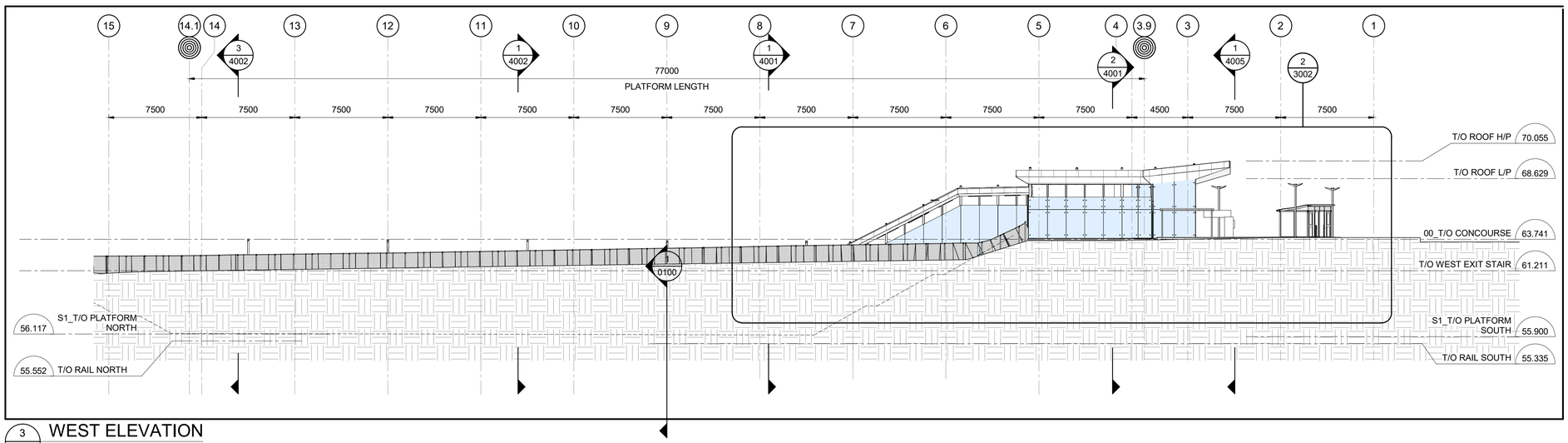


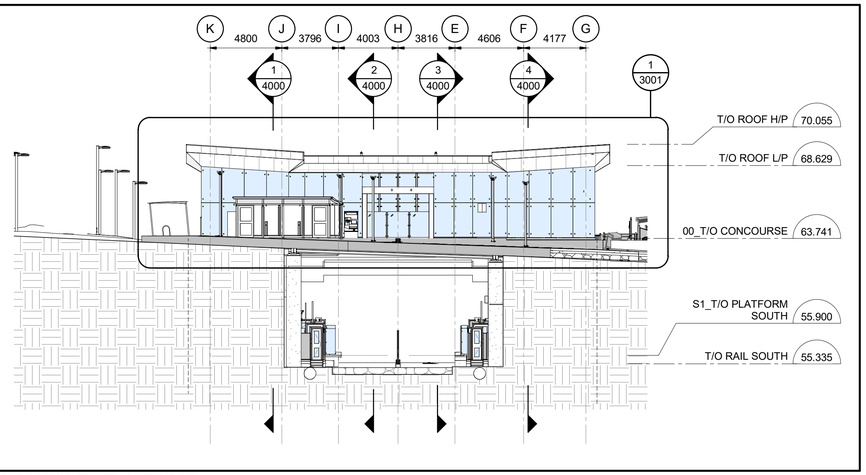
4 / 3000 EAST ELEVATION

1 : 200



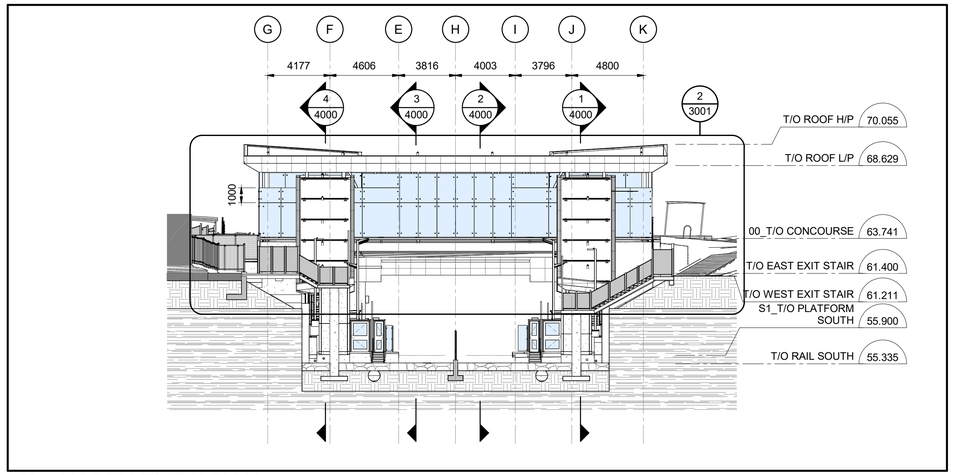
3 / 3000 WEST ELEVATION

1 : 200



2 / 3000 SOUTH ELEVATION

1 : 200



1 / 3000 NORTH ELEVATION

1 : 200

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03/23/16

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
ELEVATIONS
EXTERIOR ELEVATIONS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	T. KAMPMAN
DRAWN	SEALED
K. SANIPE	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-3000

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS LICENSE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

HORIZONTAL 1 : 200 FULLSIZE; 1 : 400 HALF SIZE

0 2 4 8 16 m

VERTICAL 1 : 200 FULLSIZE; 1 : 400 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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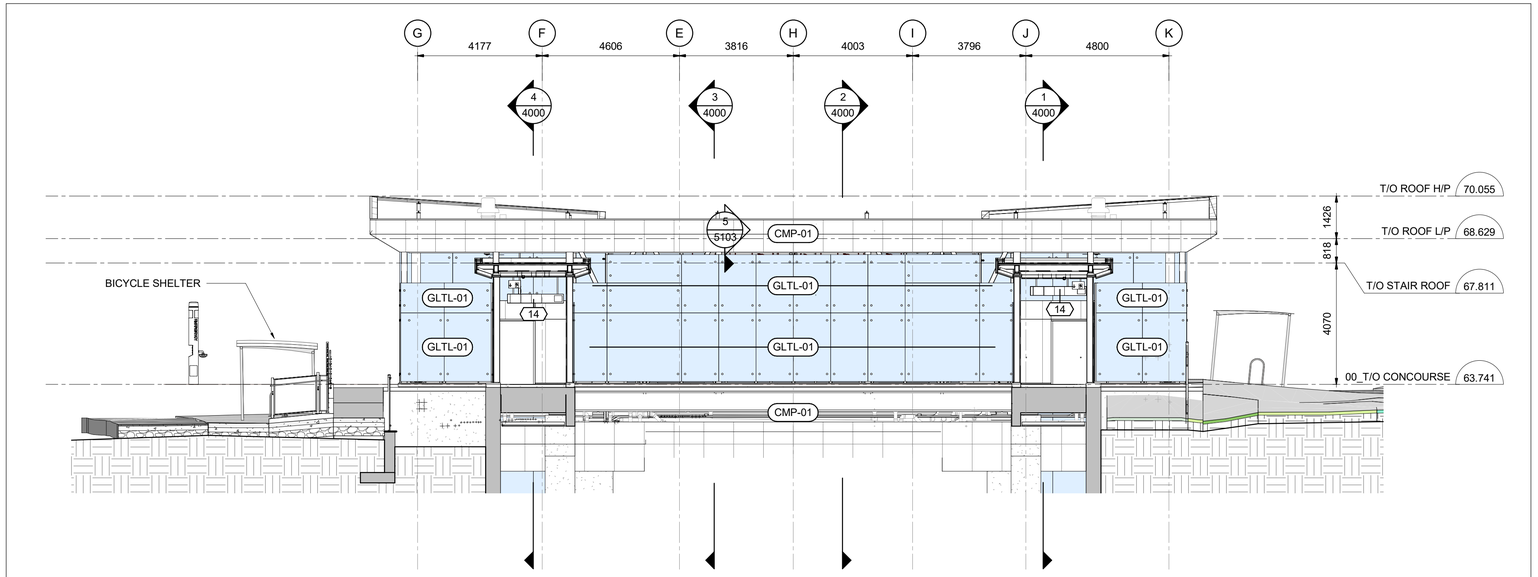
ISSUED FOR CONSTRUCTION

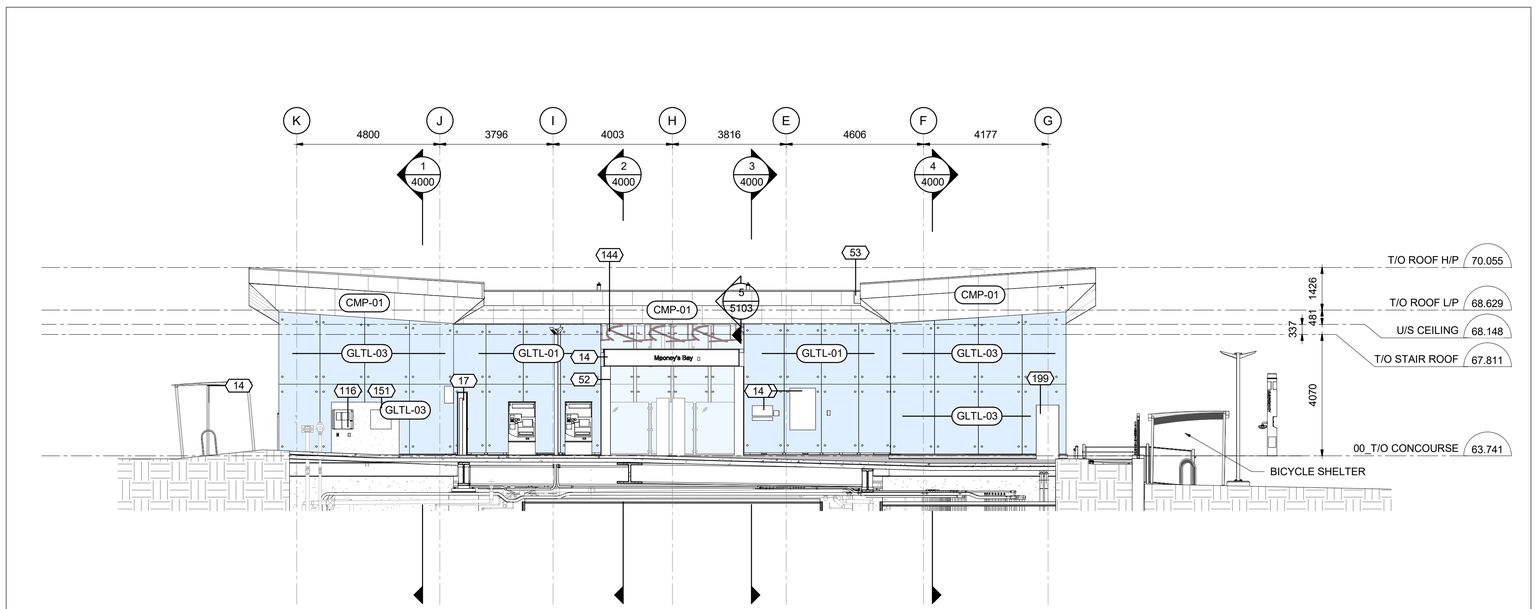
2021-03-29

TITLEBLOCK: 790mm x 534mm



2 / 3001 ENLARGED ELEVATION - CONCOURSE NORTH

1 : 100



1 / 3001 ENLARGED ELEVATION - CONCOURSE SOUTH

1 : 100

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
ELEVATIONS
EXTERIOR ELEVATIONS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-3001

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS — ROBERT BRISBIN LICENCE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

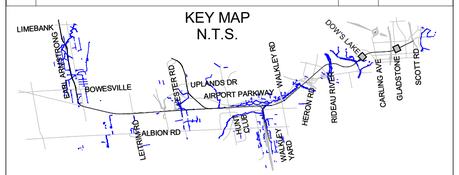
HORIZONTAL 1 : 100 FULLSIZE; 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE; 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

KEYNOTE LEGEND

Key Value	Keynote Text
14	SIGN, REFER TO SIGNAGE PACKAGE
17	UC-04, EMERGENCY PHONE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7115/7116
52	SECURITY GATE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7210
53	LADDER BUMP
116	FIRE DEPARTMENT CONNECTION (FDC)
144	PUBLIC ART INSTALLATION, REFER TO ARTIST PACKAGE
151	INCIDENT COMMAND POST (ICP) WITH ANNUNCIATOR PANEL
199	QUICK CONNECT FOR MOBILE GENERATOR, REFER TO ELECTRICAL DRAWINGS

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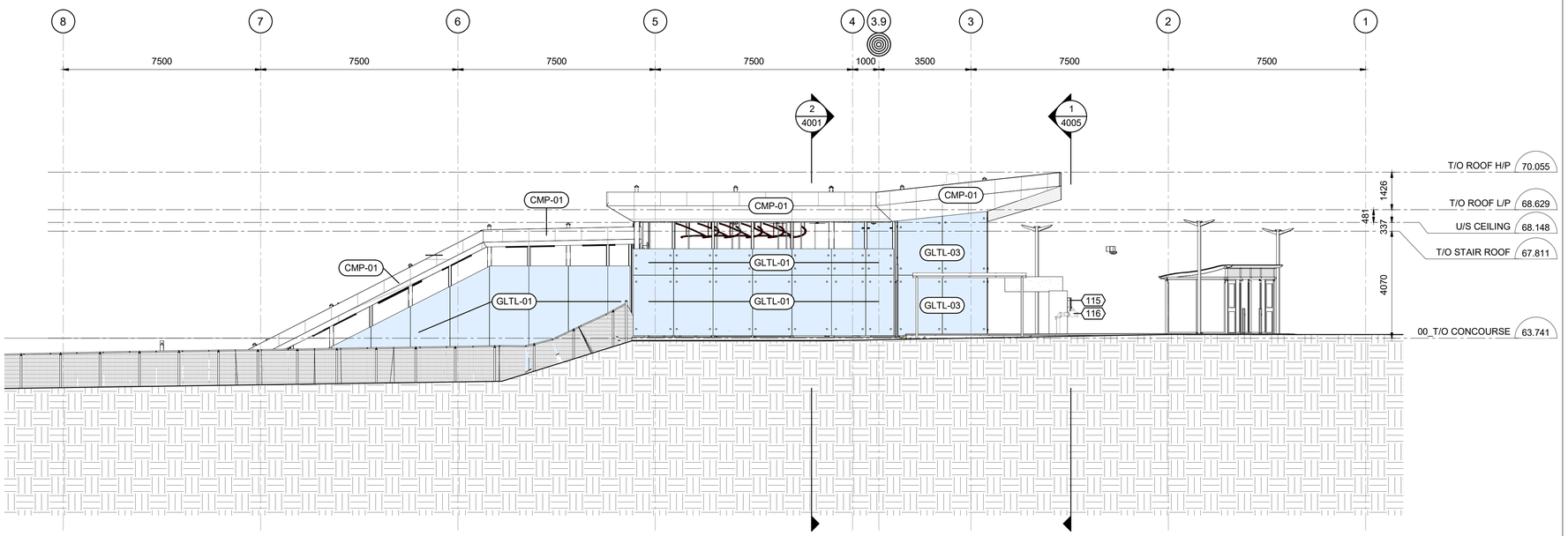
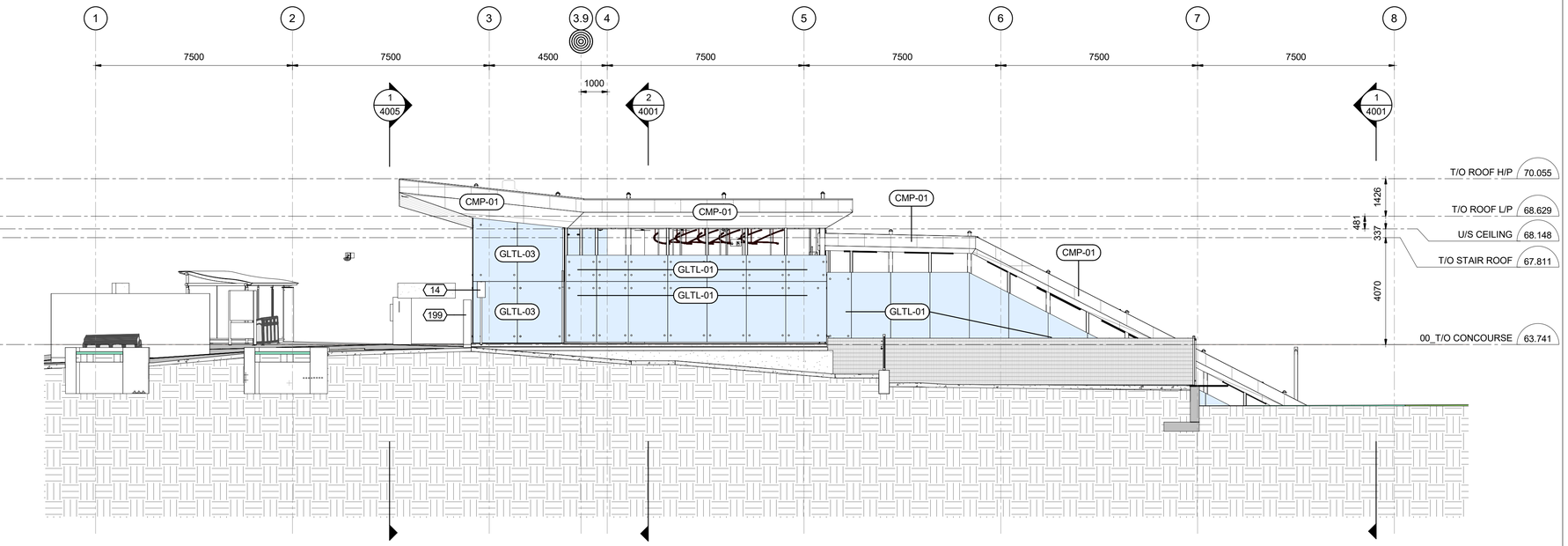
10/06/20

TITLEBLOCK: 790mm x 534mm



2 / 3002 ENLARGED ELEVATION - CONCOURSE WEST

1 : 100



1 / 3002 ENLARGED ELEVATION - CONCOURSE EAST

1 : 100

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10/06/20

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
ELEVATIONS
EXTERIOR ELEVATIONS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-3002

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
ROBERT A. BRISBIN
LICENCE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

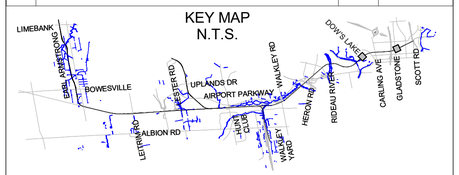
HORIZONTAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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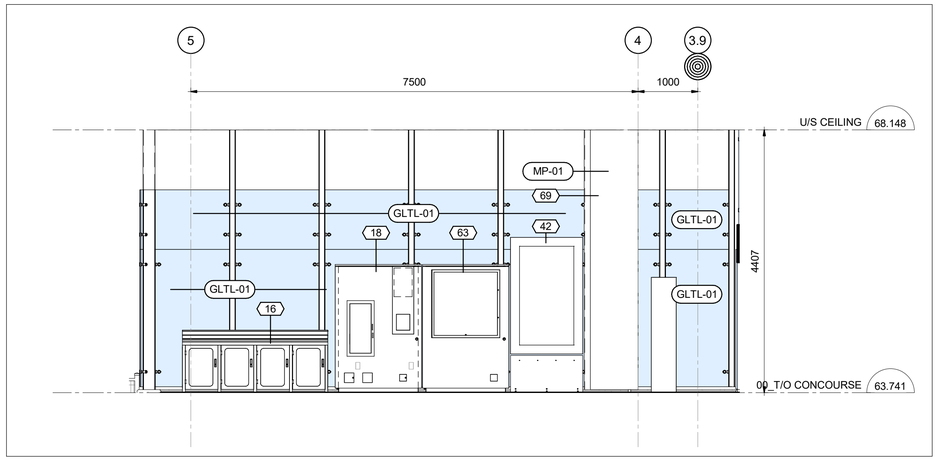
ISSUED FOR CONSTRUCTION
2021-03-29

KEYNOTE LEGEND

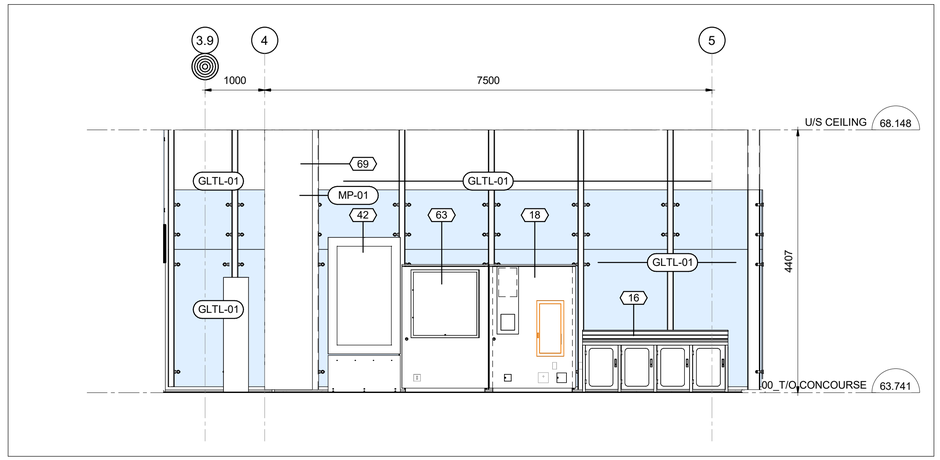
Key Value	Keynote Text
14	SIGN, REFER TO SIGNAGE PACKAGE
115	SEMI-RECESSED INCIDENT COMMAND POST (ICP) WITH ANNUNCIATOR PANEL
116	FIRE DEPARTMENT CONNECTION (FDC)
199	QUICK CONNECT FOR MOBILE GENERATOR, REFER TO ELECTRICAL DRAWINGS

TITLEBLOCK: 790mm x 534mm



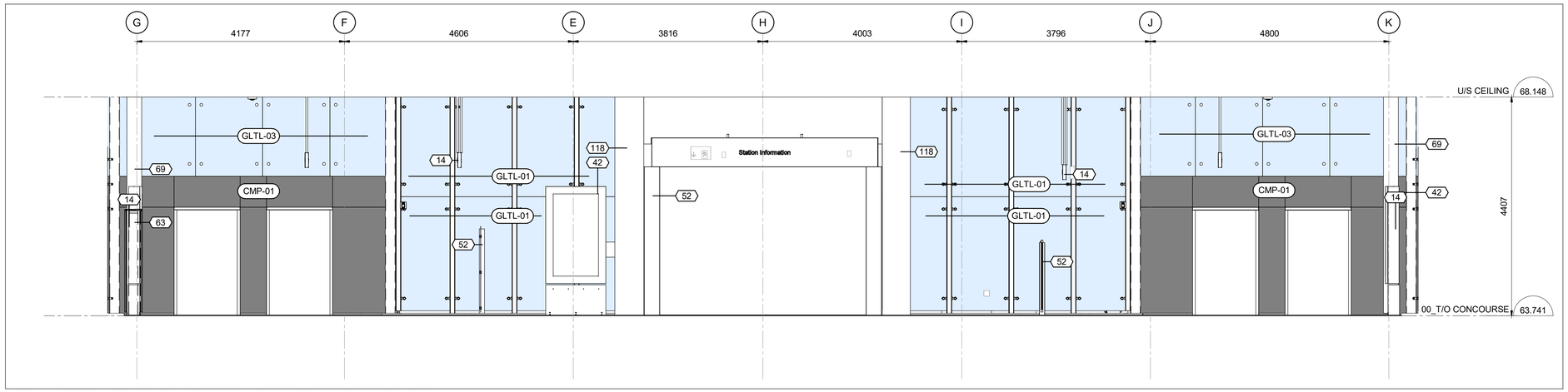
4 / 3100 INTERIOR ELEVATION - CONCOURSE EAST

1 : 50



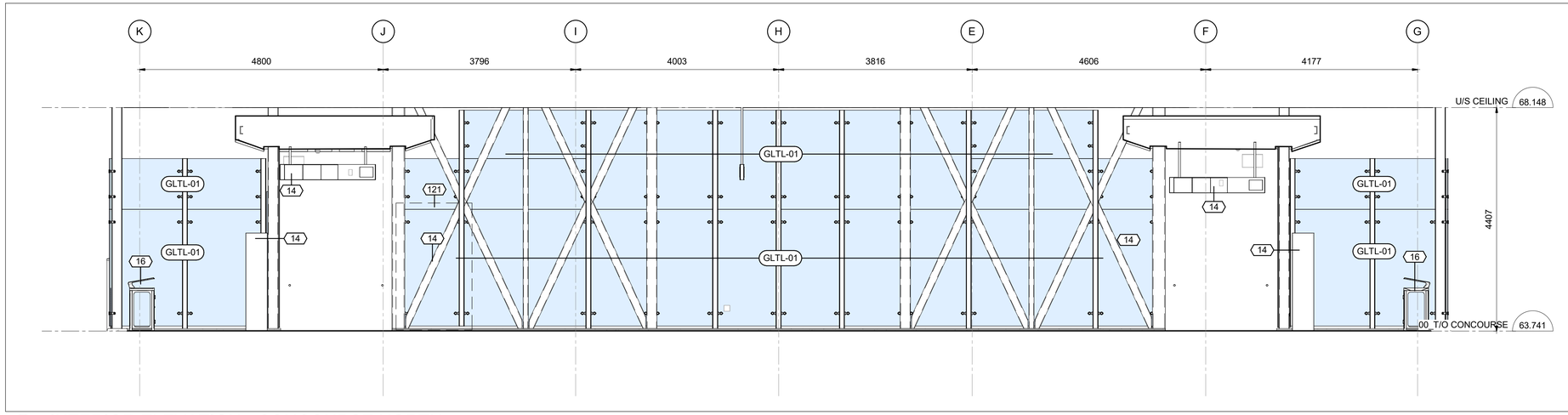
3 / 3100 INTERIOR ELEVATION - CONCOURSE WEST

1 : 50



2 / 3100 INTERIOR ELEVATION - CONCOURSE SOUTH

1 : 50



1 / 3100 INTERIOR ELEVATION - CONCOURSE NORTH

1 : 50

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04/11/19

STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
ELEVATIONS
INTERIOR ELEVATIONS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-3100

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
ROBERT BRISBIN
LICENCE
3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

0 0.5 1 2 4 m

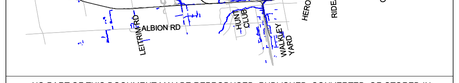
VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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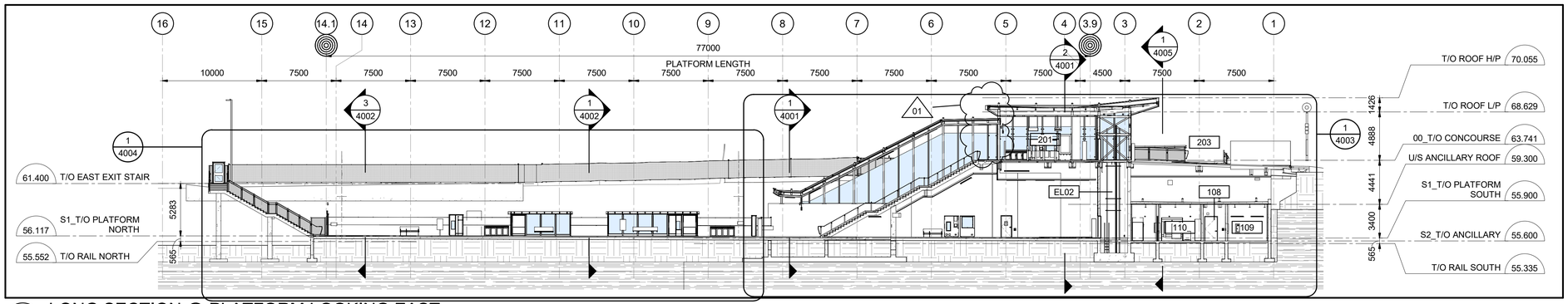
ISSUED FOR CONSTRUCTION

2021-03-29

KEYNOTE LEGEND

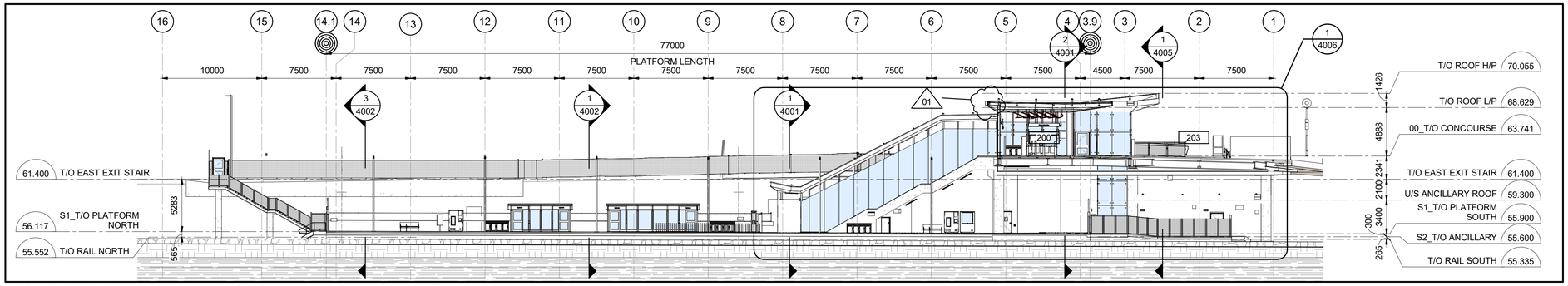
Key Value	Keynote Text
14	SIGN, REFER TO SIGNAGE PACKAGE
16	WASTE RECPETACLE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7305
18	UC-02, FIRE CABINET, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7105/7106
42	NEXUS PASSENGER INFORMATION DISPLAY, PROVIDED BY THE CITY
52	SECURITY GATE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7210
63	UC-01, TIP CABINET, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7100/7102
69	VERTICAL ELECTRICAL CHASE
118	ROOF DRAIN CHASE
121	ADVERTISING PANEL, 1.5m x 2.5m, TO BE PROVIDED BY THE CITY, PROVIDE PROVISIONS FOR POWER AND DATA

TITLEBLOCK: 790mm x 534mm



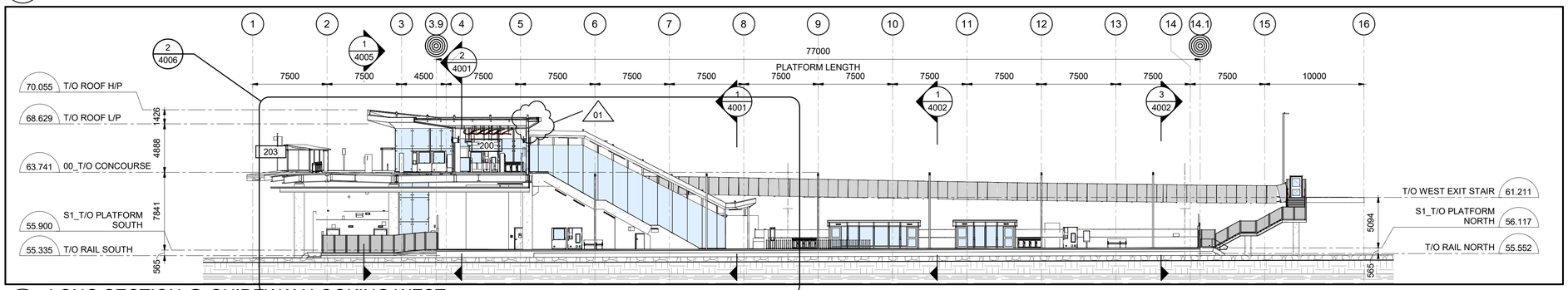
4 4000 LONG SECTION @ PLATFORM LOOKING EAST

1 : 250



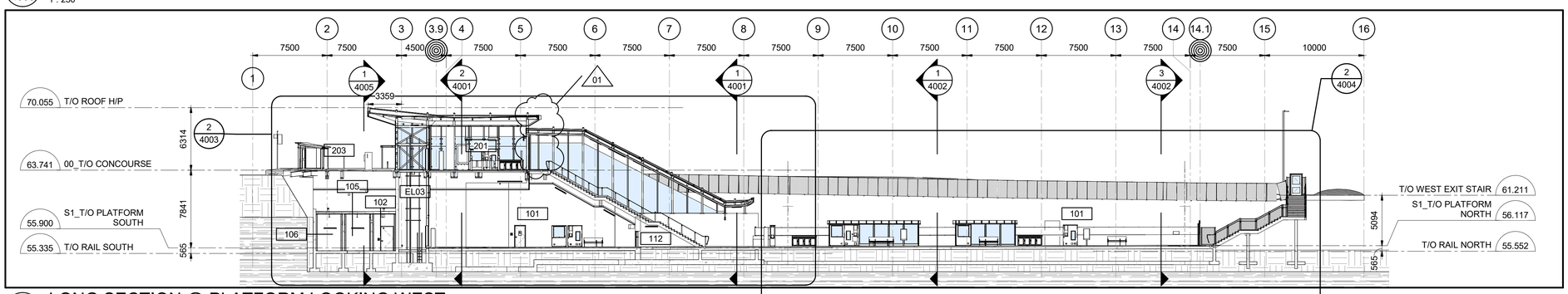
3 4000 LONG SECTION @ GUIDEWAY LOOKING EAST

1 : 250



2 4000 LONG SECTION @ GUIDEWAY LOOKING WEST

1 : 250



1 4000 LONG SECTION @ PLATFORM LOOKING WEST

1 : 250

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03/23/16

OTrain STAGE 2 ETAPE

Ottawa

ARCHITECTURAL
CORSO ITALIA
SECTIONS
BUILDING SECTIONS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	T. KAMPMAN
DRAWN	SEALED
K. SANIPE	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-4000

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS LICENCE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

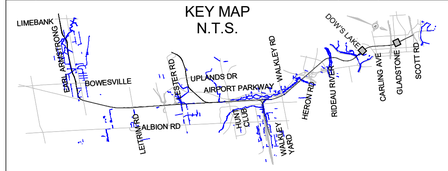
SCALE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29
01	REVISED ISSUE FOR CONSTRUCTION	JJ	2021/07/30

KEY MAP
N.T.S.



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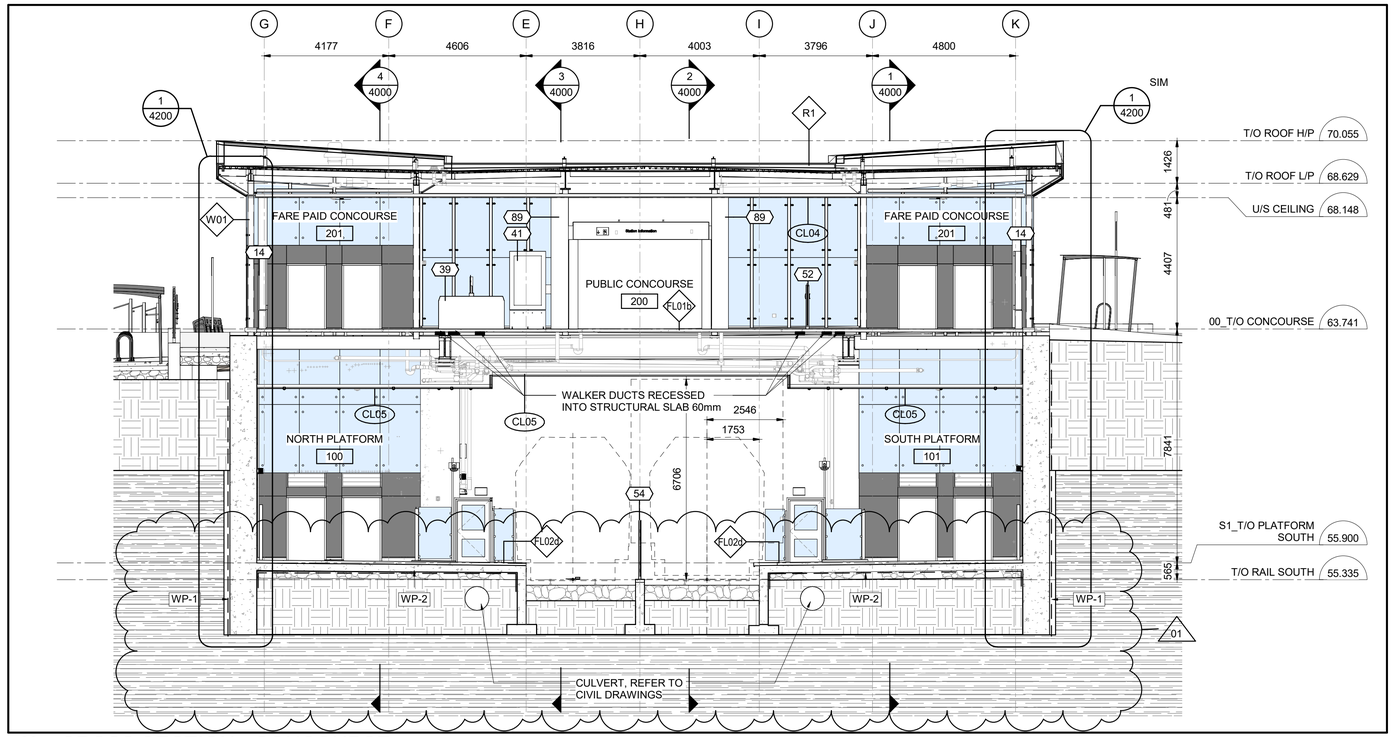
ISSUED FOR CONSTRUCTION

2021-07-30

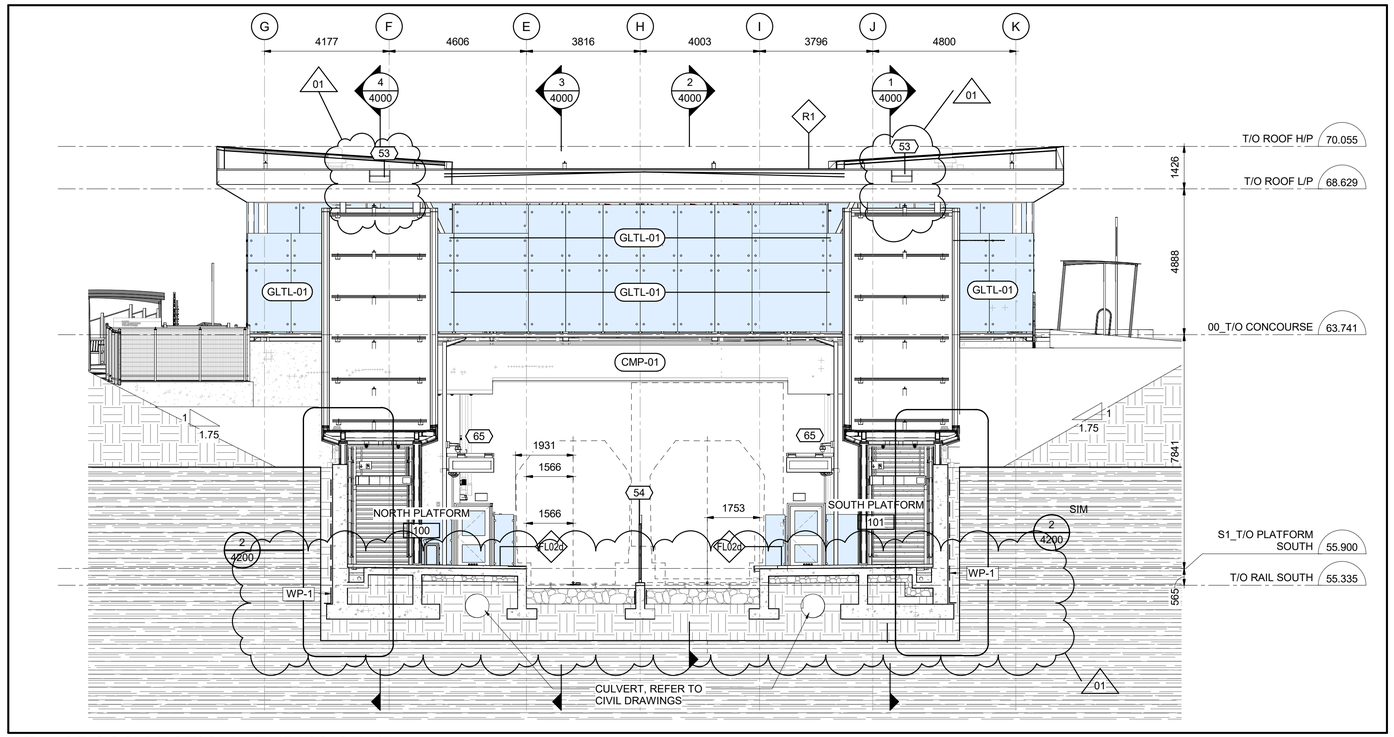
01

TITLEBLOCK: 790mm x 534mm



2 / 4001 CROSS SECTION - CONCOURSE

1 : 100



1 / 4001 CROSS SECTION - PUBLIC STAIR

1 : 100

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
SECTIONS
BUILDING SECTIONS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	T. KAMPMAN
DRAWN	SEALED
K. SANIPE	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-4001

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS LICENCE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

HORIZONTAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE

0 1 2 4 8 m

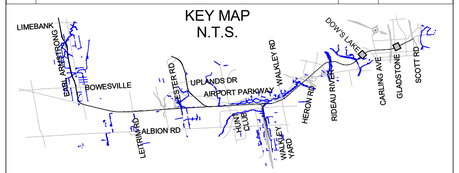
VERTICAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29
01	REVISED ISSUE FOR CONSTRUCTION	JJ	2021/07/30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

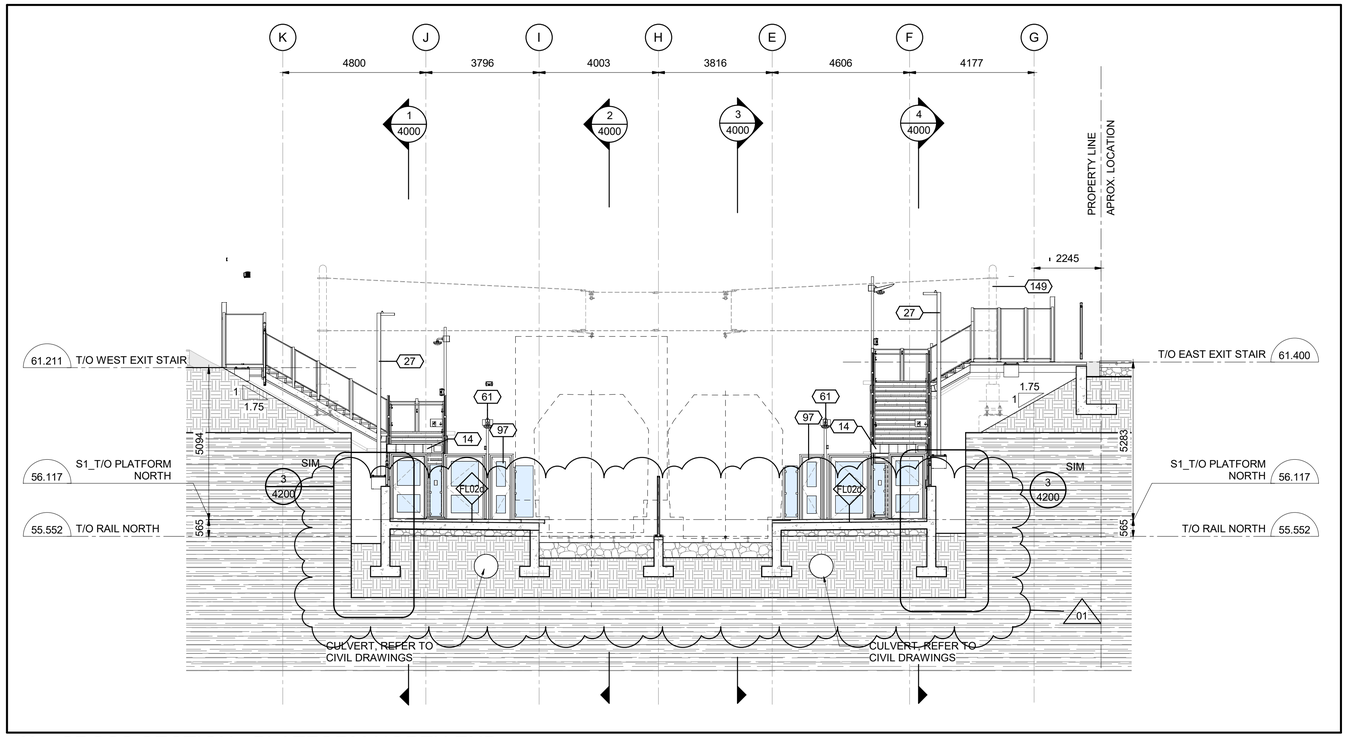
2021-07-30

KEYNOTE LEGEND

Key Value	Keynote Text
14	SIGN, REFER TO SIGNAGE PACKAGE
39	FARE GATE, PROVIDED BY THE CITY, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7012/7019
41	DOUBLE-SIDED NEXUS PASSENGER INFORMATION DISPLAY, PROVIDED BY THE CITY
52	SECURITY GATE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7210
53	LADDER BUMP
54	TYPE 4, INTERTRACK BARRIER w/ REMOVABLE TOP, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7230
89	RAIN WATER LEADER ENCLOSURE

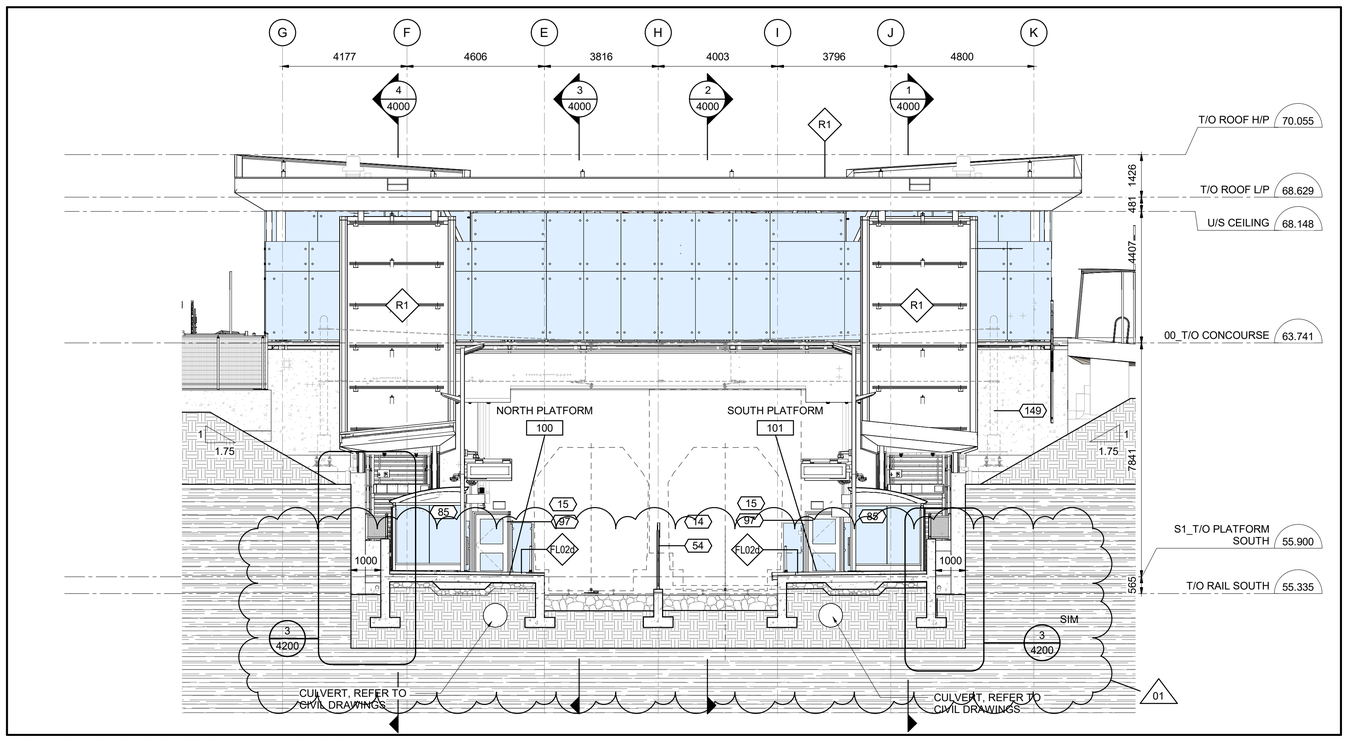
03/23/16 C:\Users\nbarrett\Documents\660373-1GSS-001-44DM-1000_NBarrettVF9UNI.rvt

TITLEBLOCK: 790mm x 534mm



3 4002 CROSS SECTION - PLATFORM NORTH END

1 : 100



1 4002 CROSS SECTION - PLATFORM

1 : 100

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
SECTIONS
BUILDING SECTIONS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	T. KAMPMAN
DRAWN	SEALED
K. SANIPE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-4002

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

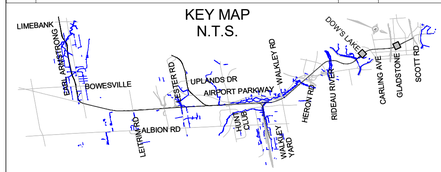
SCALE
HORIZONTAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29
01	REVISED ISSUE FOR CONSTRUCTION	JJ	2021/07/30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

KEYNOTE LEGEND

Key Value	Keynote Text
14	SIGN, REFER TO SIGNAGE PACKAGE
27	LIGHT POLE, REFER TO ELECTRICAL AND STRUCTURAL DRAWINGS FOR LIGHT POLE AND FOUNDATION TYPE BASED ON LIGHT POLE LOCATION
54	TYPE 4, INTERTRACK BARRIER w/ REMOVABLE TOP, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7230
61	RAISED GUARD POST TO SUPPORT CAMERA, REFER TO SYSTEM COMMUNICATIONS FOR CAMERA SPECIFICATIONS
85	TSA SHELTER, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7205/7206
97	END OF PLATFORM GATE
149	FUTURE OCS, REFER TO TRACKWORK COMBINED SERVICES PAKCAGE

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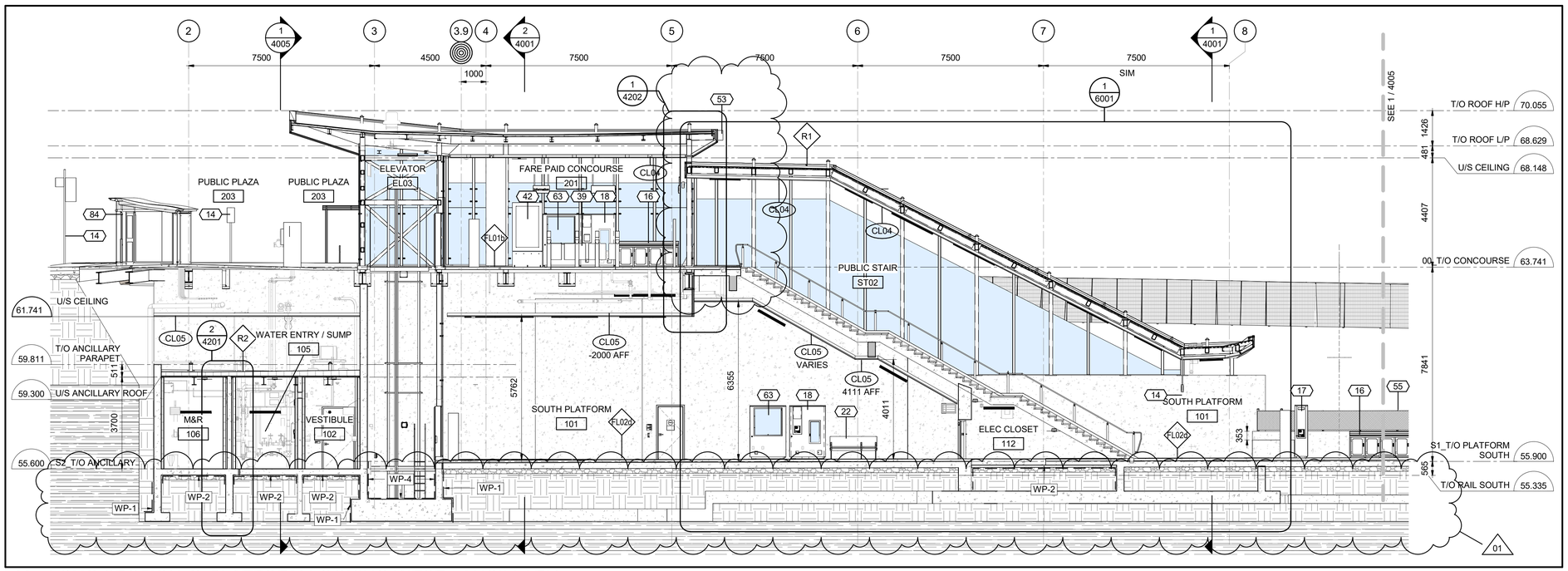
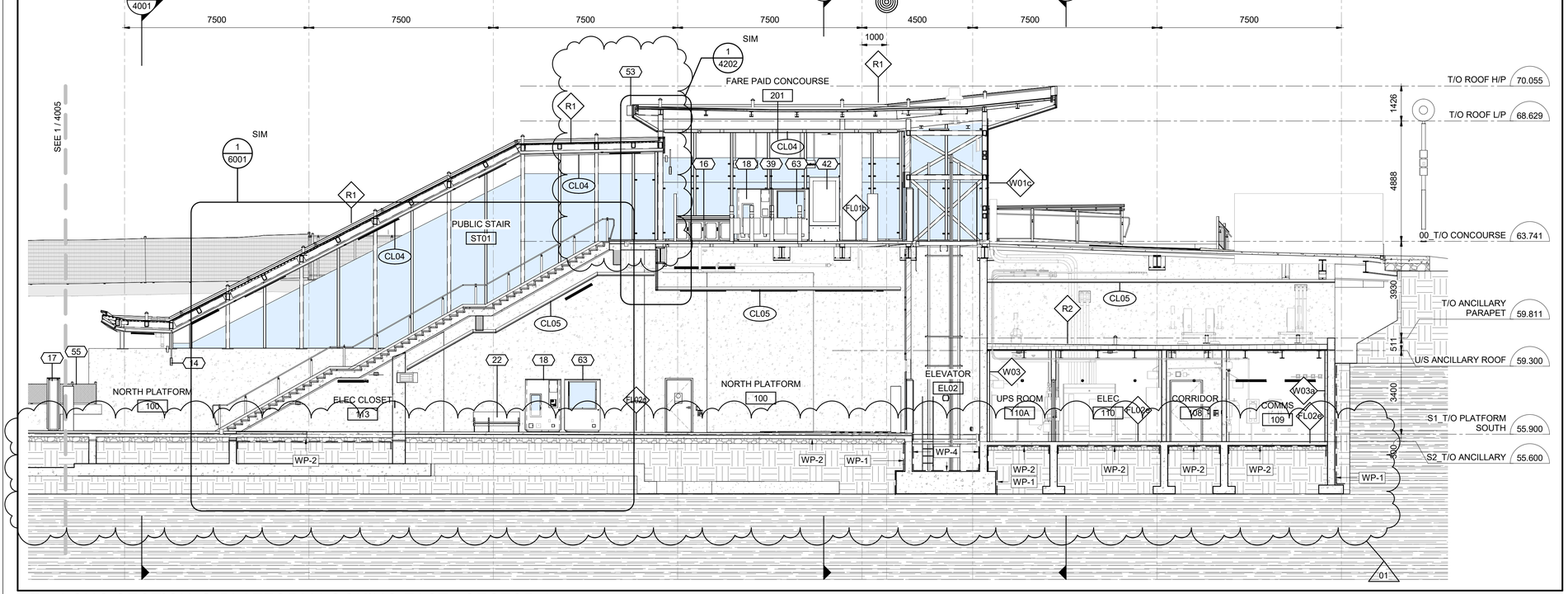
03/23/16

TITLEBLOCK: 790mm x 534mm



2 4003 LONG SECTION @ PLATFORM LOOKING WEST - ANCILLARY

1 : 100



1 4003 LONG SECTION @ PLATFORM LOOKING EAST - SECTOR 1

1 : 100

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
SECTIONS
BUILDING SECTIONS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	T. KAMPMAN
DRAWN	SEALED
K. SANIPE	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-4003

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

Ontario Association of Architects — Robert Brisbin — Licence 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

HORIZONTAL 1 : 200 FULLSIZE; 1 : 400 HALF SIZE

0 2 4 8 16 m

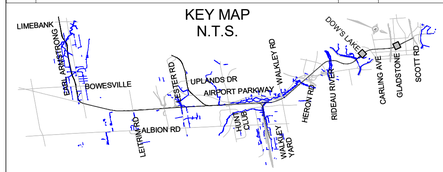
VERTICAL 1 : 200 FULLSIZE; 1 : 400 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29
01	REVISED ISSUE FOR CONSTRUCTION	JJ	2021/07/30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-07-30

KEYNOTE LEGEND

Key Value	Keynote Text
14	SIGN, REFER TO SIGNAGE PACKAGE
16	WASTE RECPETACLE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7305
17	UC-04, EMERGENCY PHONE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7115/7116
18	UC-02, FIRE CABINET, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7105/7106
22	BENCH WITH SEATING FOR 3
39	FARE GATE, PROVIDED BY THE CITY, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7012/7019
42	NEXUS PASSENGER INFORMATION DISPLAY, PROVIDED BY THE CITY
53	LADDER BUMP
55	TYPE 3, CHAINLINK FENCE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7225
63	UC-01, TIP CABINET, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7100/7102
84	PASSENGER SHELTER, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7200/7201

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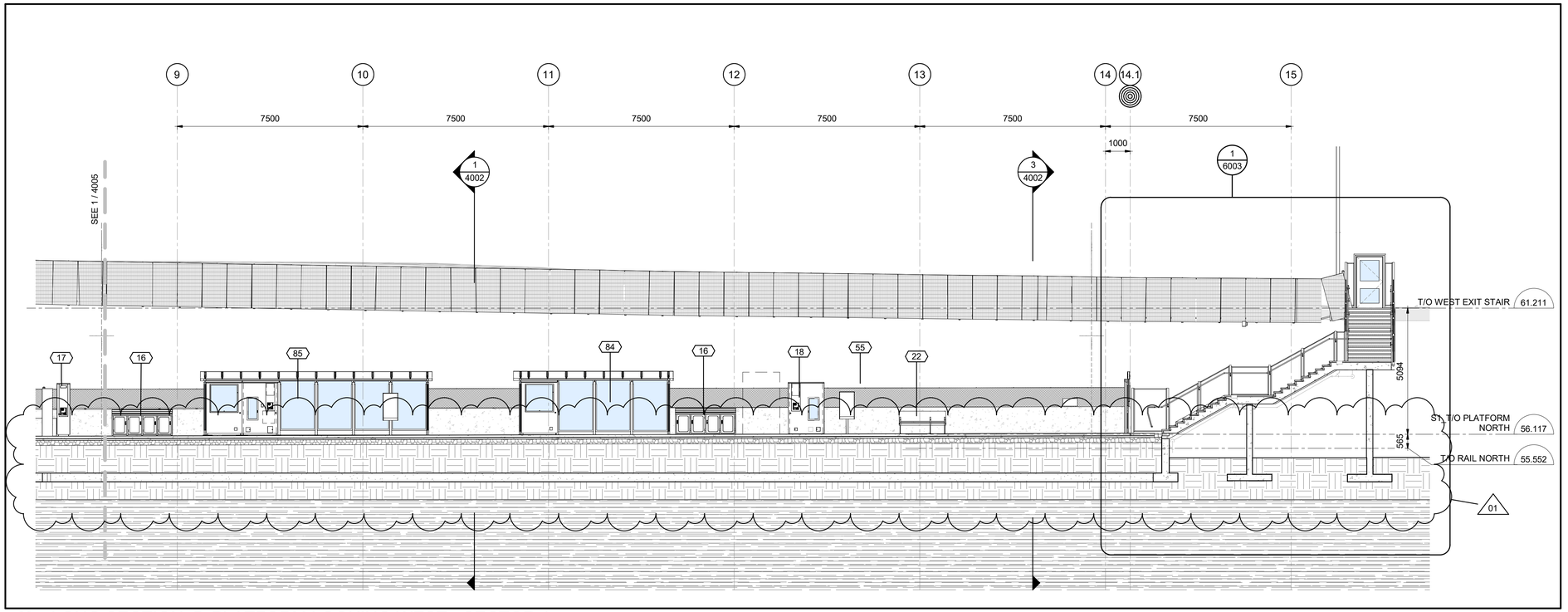
03/23/16

TITLEBLOCK: 790mm x 534mm



2 / 4004 LONG SECTION @ PLATFORM LOOKING WEST - SECTOR 1

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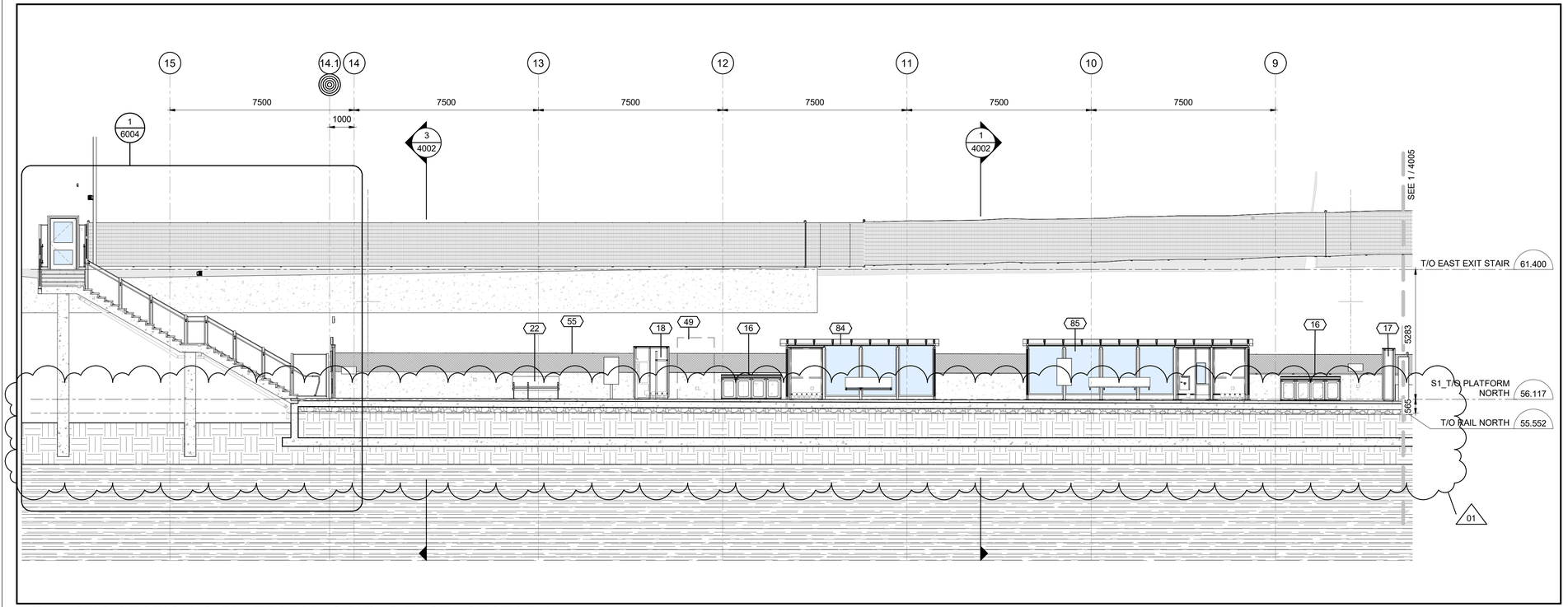


1 / 4004 LONG SECTION @ PLATFORM LOOKING EAST - SECTOR 2

1 : 100

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
SECTIONS
BUILDING SECTIONS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	T. KAMPMAN
DRAWN	SEALED
K. SANIPE	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-4004

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS ROBERT A. BRISBIN LICENCE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

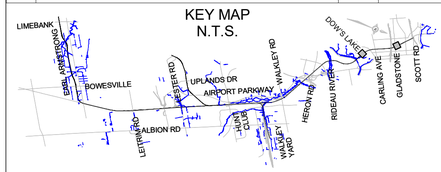
HORIZONTAL 1 : 200 FULLSIZE / 1 : 400 HALF SIZE
0 2 4 8 16 m
VERTICAL 1 : 200 FULLSIZE / 1 : 400 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29
01	REVISED ISSUE FOR CONSTRUCTION	JJ	2021/07/30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

KEYNOTE LEGEND

Key Value	Keynote Text
16	WASTE RECPETACLE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7305
17	UC-04, EMERGENCY PHONE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7115/7116
18	UC-02, FIRE CABINET, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7105/7106
22	BENCH WITH SEATING FOR 3
49	FUTURE ADVERTISING PANEL, TO BE PROVIDED BY CITY
55	TYPE 3, CHAINLINK FENCE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7225
84	PASSENGER SHELTER, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7200/7201
85	TSA SHELTER, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7205/7206

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03/23/16

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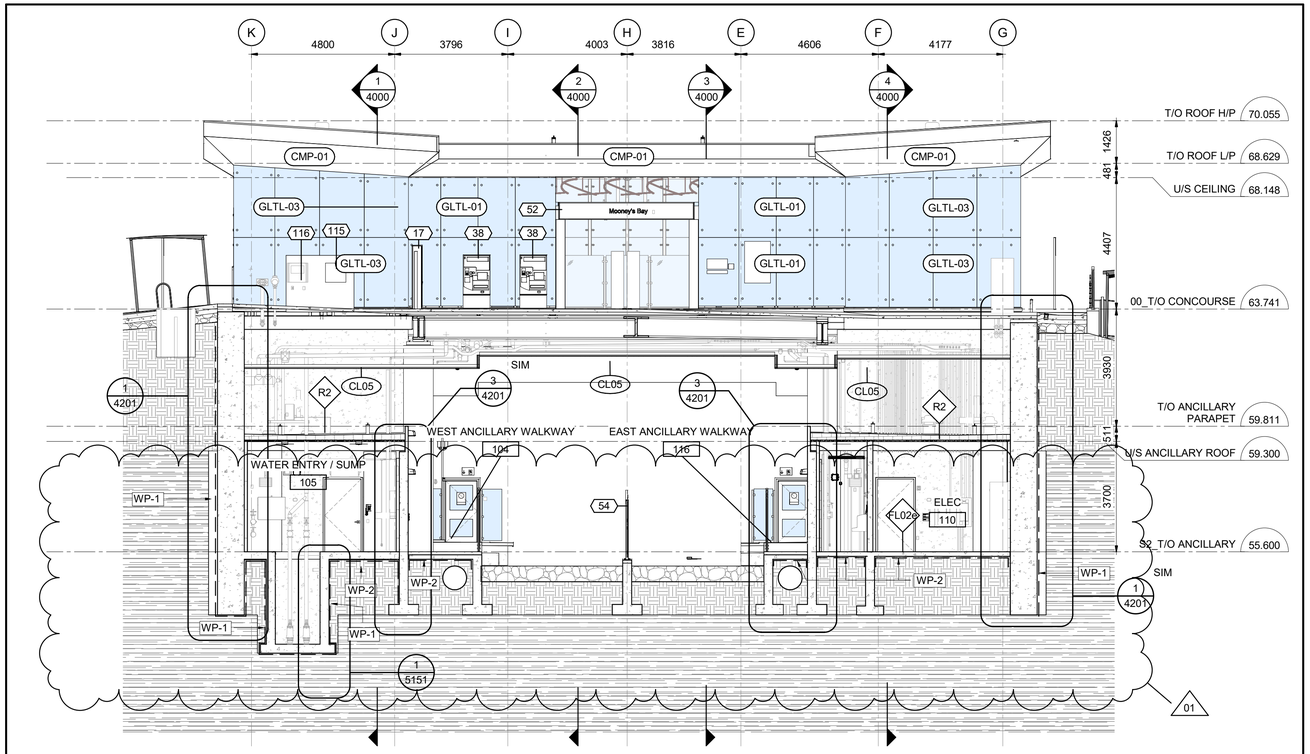


1 4005 CROSS SECTION - ANCILLARY

1 : 100

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
SECTIONS
BUILDING SECTIONS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
K. SANIPE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-4005

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

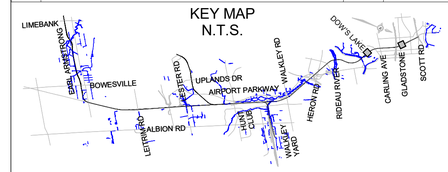
SCALE
HORIZONTAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29
01	REVISED ISSUE FOR CONSTRUCTION	JJ	2021/07/30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

KEYNOTE LEGEND

Key Value	Keynote Text
17	UC-04, EMERGENCY PHONE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7115/7116
38	TICKET VENDING MACHINE, PROVIDED BY THE CITY, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7013
52	SECURITY GATE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7210
54	TYPE 4, INTERTRACK BARRIER w/ REMOVABLE TOP, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7230
115	SEMI-RECESSED INCIDENT COMMAND POST (ICP) WITH ANNUNCIATOR PANEL
116	FIRE DEPARTMENT CONNECTION (FDC)

09/23/20 C:\Users\nbarrett\Documents\660373-1GSS-001-44DM-1000_NBarrettVF3UM.rvt

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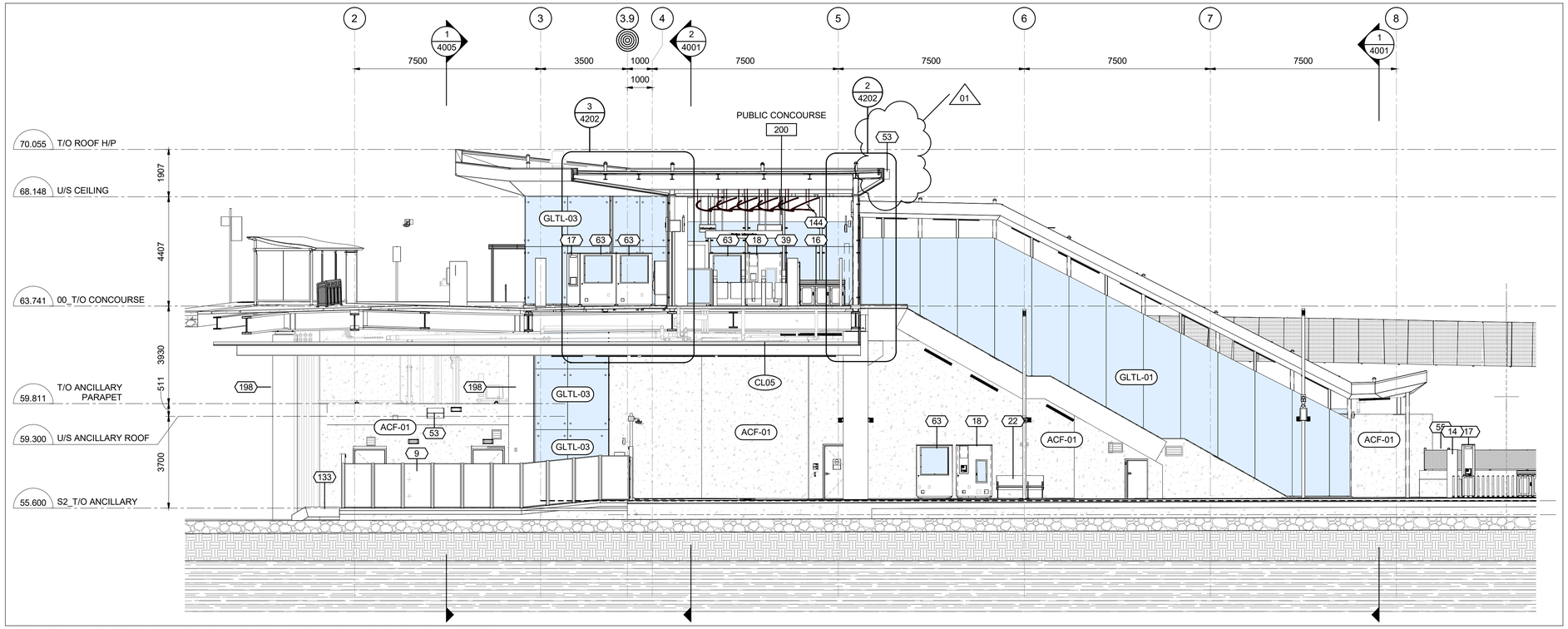

2/4006 ENLARGED SECTION @ GUIDEWAY LOOKING WEST

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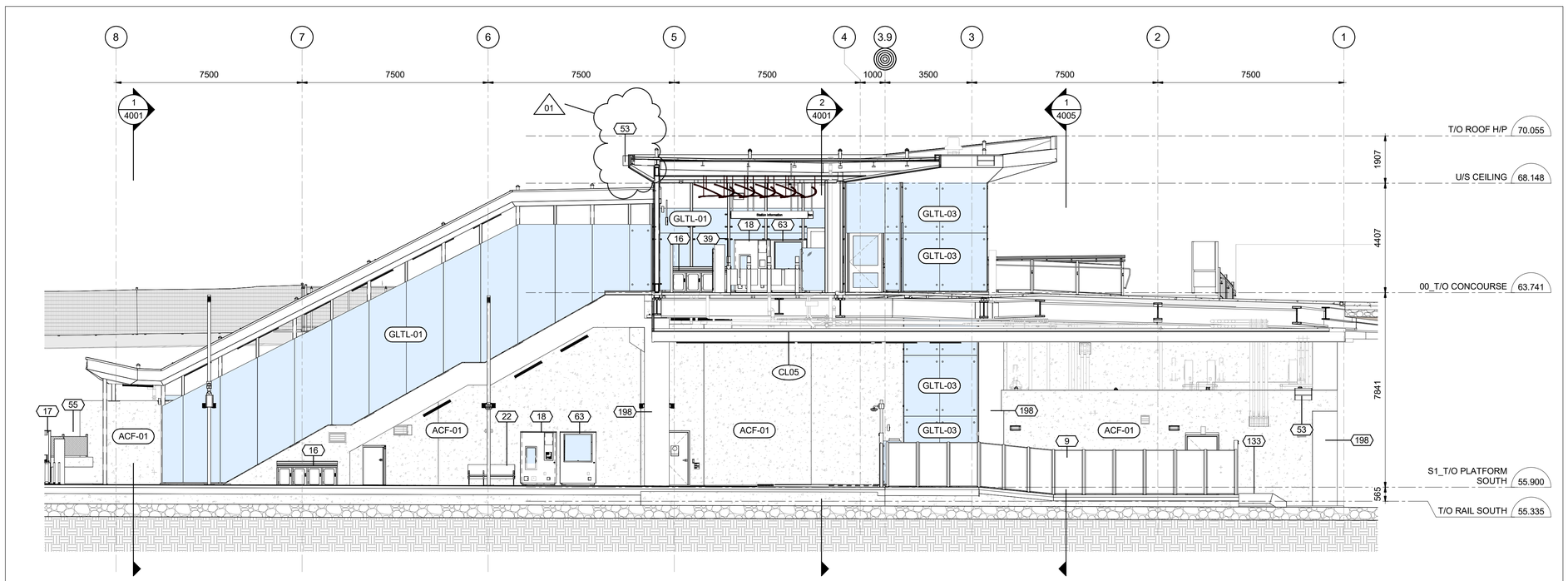

1/4006 ENLARGED SECTION @ GUIDEWAY LOOKING EAST

1 : 100

KEYNOTE LEGEND

Key Value	Keynote Text
9	TYPE 2, PERFORATED METAL PANEL GUARD, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7220
14	SIGN, REFER TO SIGNAGE PACKAGE
16	WASTE RECPETACLE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7305
17	UC-04, EMERGENCY PHONE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7115/7116
18	UC-02, FIRE CABINET, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7105/7106
22	BENCH WITH SEATING FOR 3
39	FARE GATE, PROVIDED BY THE CITY, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7012/7019
53	LADDER BUMP
55	TYPE 3, CHAINLINK FENCE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7225
63	UC-01, TIP CABINET, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7100/7102
133	GUIDEWAY EGRESS METAL STAIR WITH HANDRAIL, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7320/7321
144	PUBLIC ART INSTALLATION, REFER TO ARTIST PACKAGE
198	CONCRETE COLUMN, REFER TO STRUCTURAL DRAWINGS

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
SECTIONS
BUILDING SECTIONS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-4006

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS LICENCE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

HORIZONTAL 1 : 100 FULLSIZE; 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE; 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29
01	REVISED ISSUE FOR CONSTRUCTION	JJ	2021/07/30

KEY MAP
N.T.S.

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ISSUED FOR CONSTRUCTION

2021-07-30

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10/06/20

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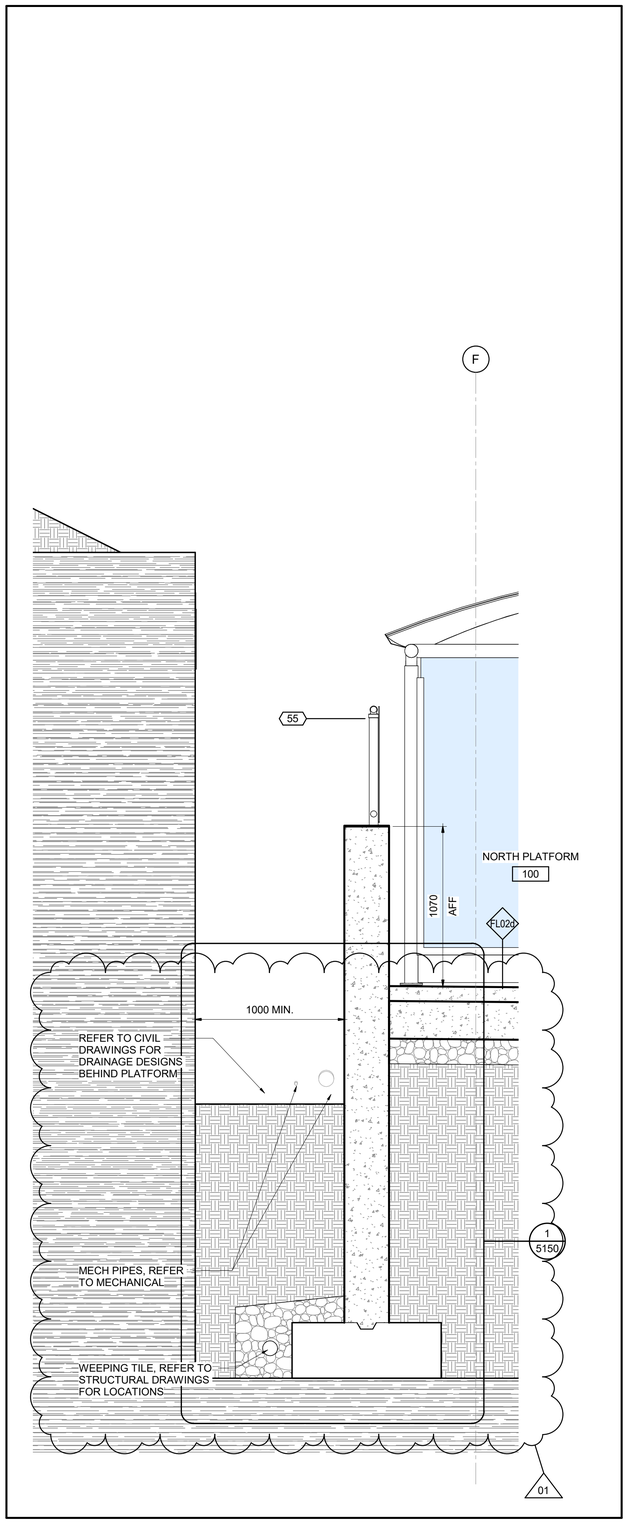
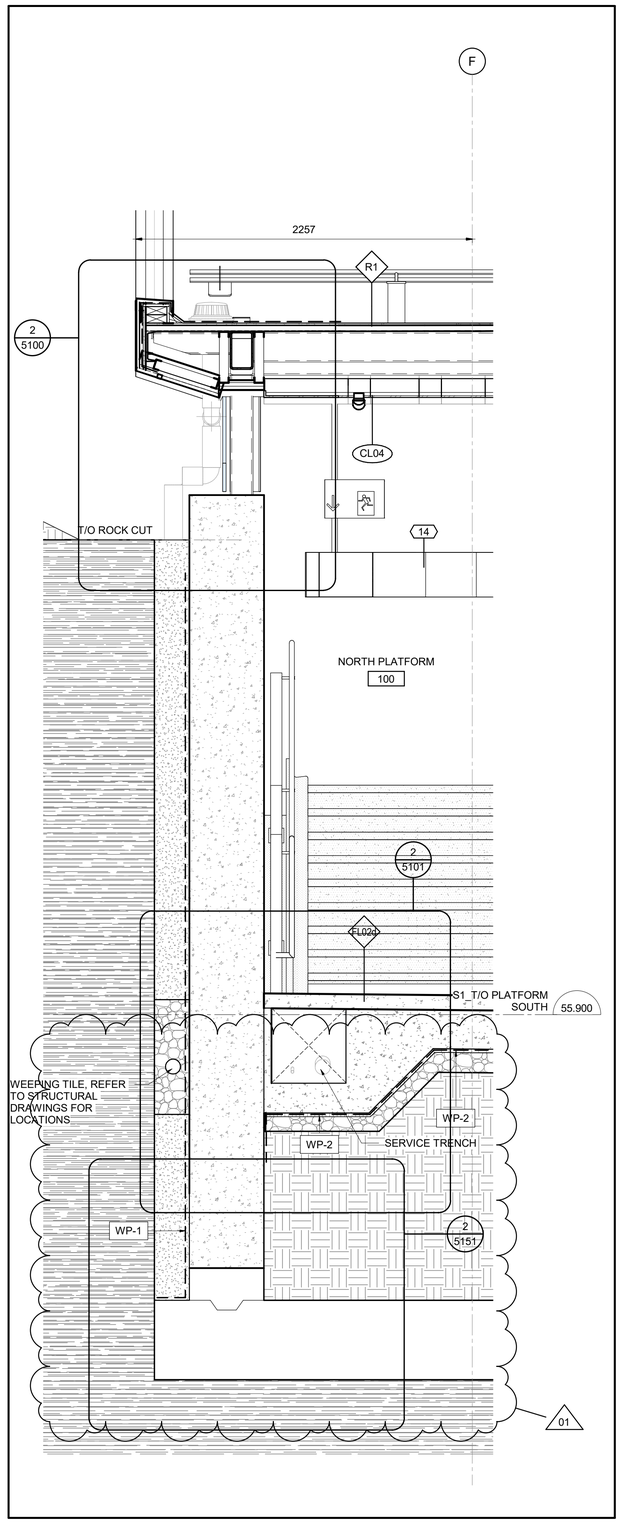


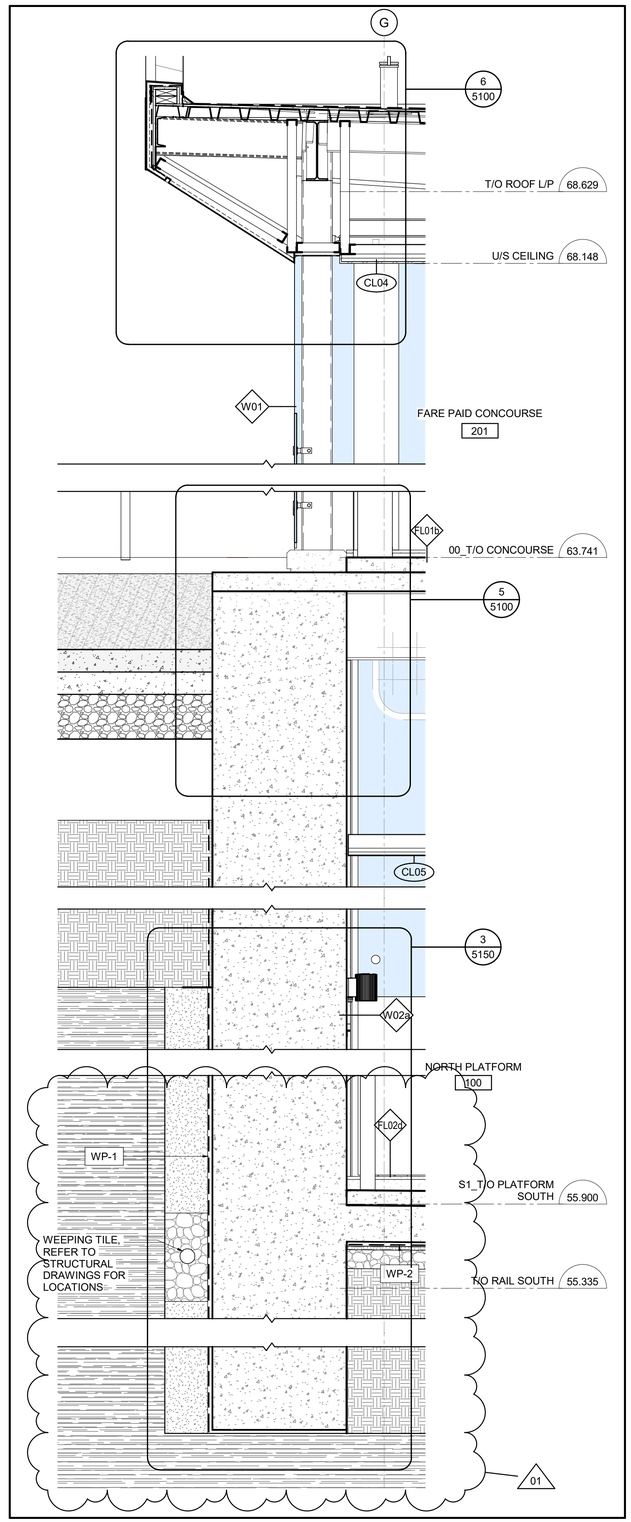
3 4200 WALL SECTION @ PLATFORM

1 : 20



2 4200 WALL SECTION @ PUBLIC STAIR

1 : 20



1 4200 WALL SECTION @ CONCOURSE

1 : 20

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
SECTIONS
WALL SECTIONS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R.BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
N.BARRETT	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-4200

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

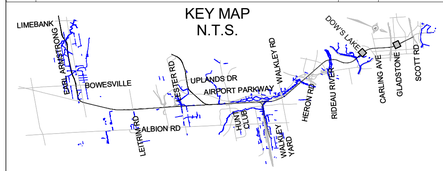
SCALE
HORIZONTAL 1 : 20 FULLSIZE / 1 : 40 HALF SIZE
0 0.2 0.4 0.8 1.6 m
VERTICAL 1 : 20 FULLSIZE / 1 : 40 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29
01	REVISED ISSUE FOR CONSTRUCTION	JJ	2021/07/30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

KEYNOTE LEGEND

Key Value	Keynote Text
14	SIGN, REFER TO SIGNAGE PACKAGE
55	TYPE 3, CHAINLINK FENCE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7225

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04/11/19

01

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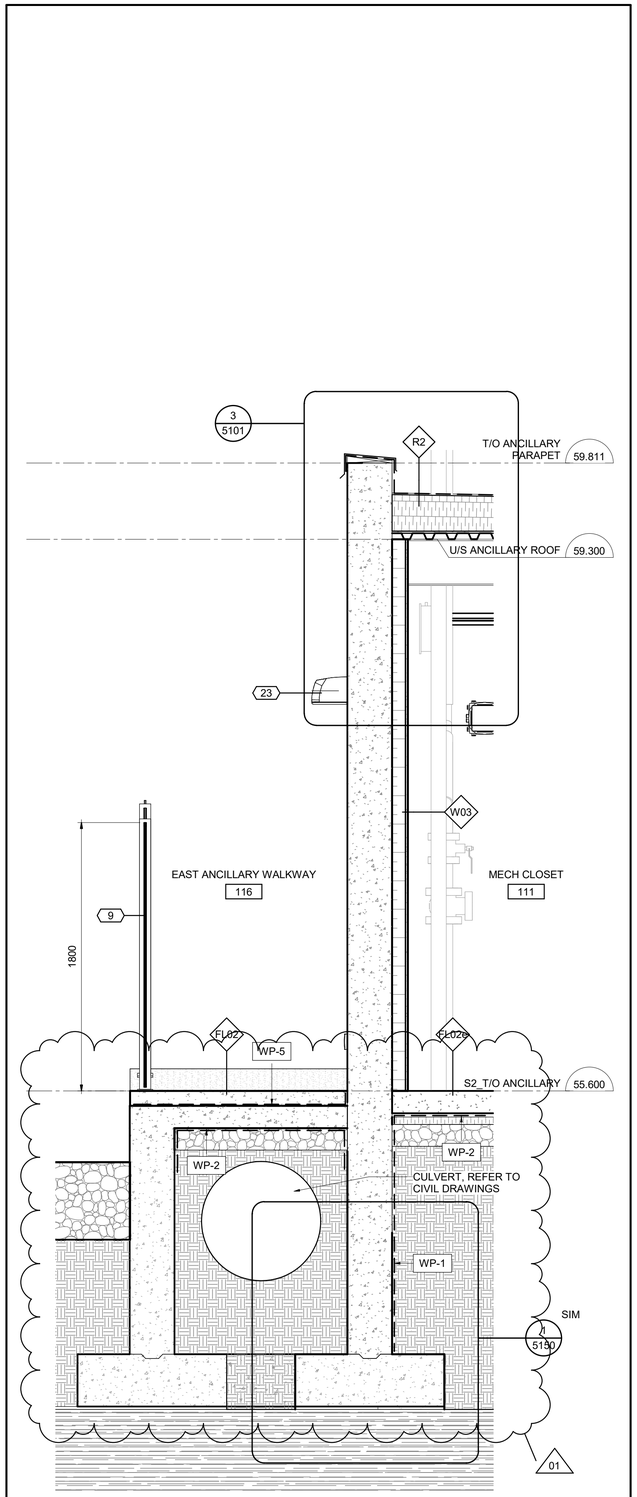
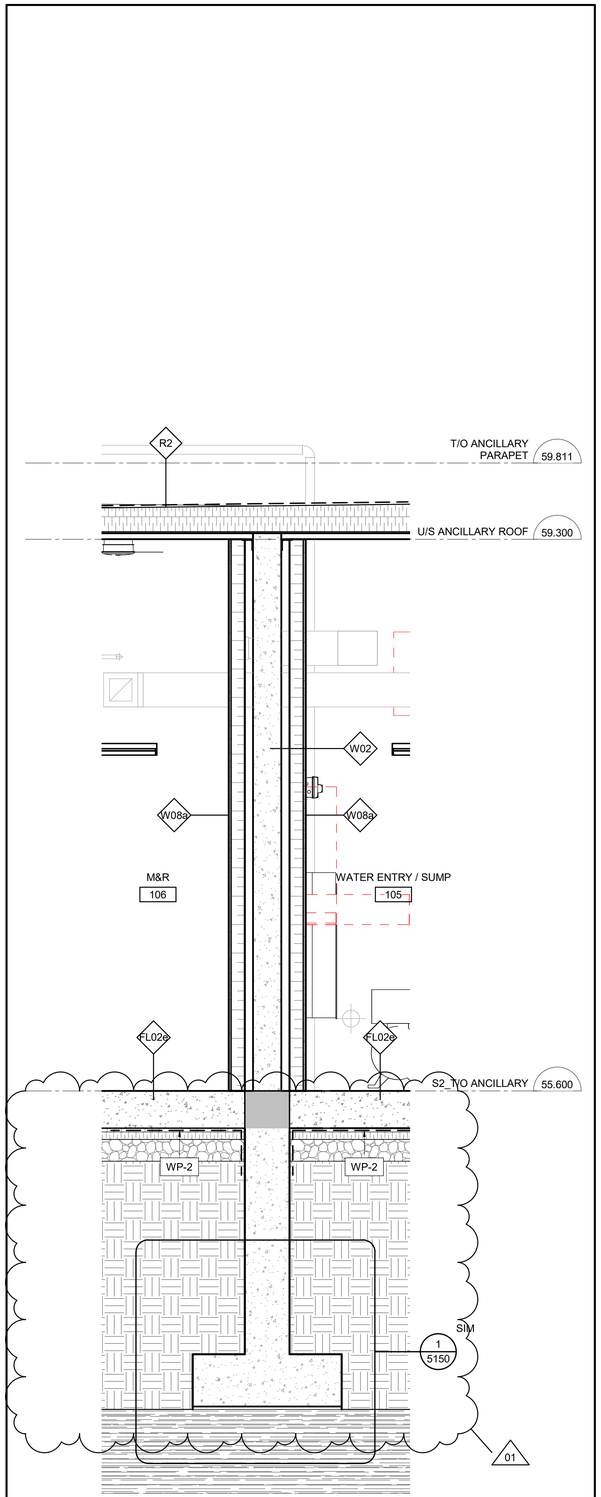


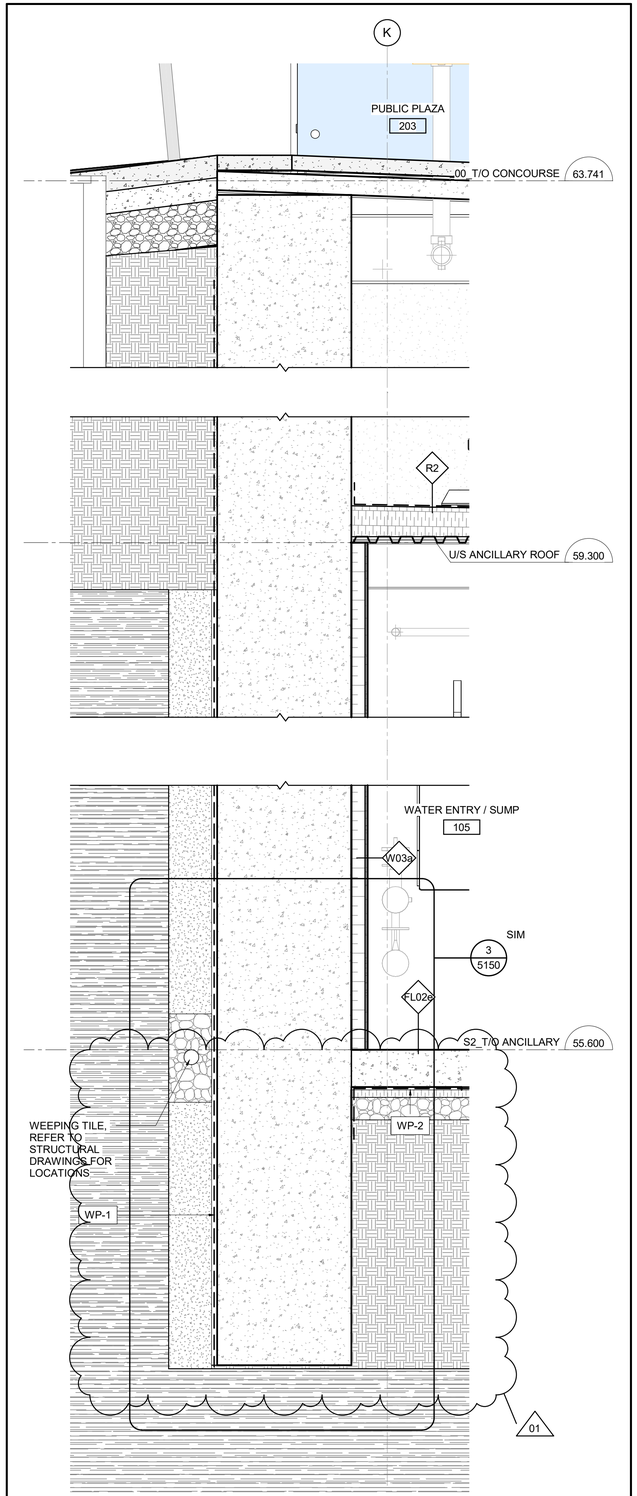
3 4201 WALL SECTION 3 @ ANCILLARY

1 : 20



2 4201 WALL SECTION 2 @ ANCILLARY

1 : 20



1 4201 WALL SECTION 1 @ ANCILLARY

1 : 20

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
SECTIONS
WALL SECTIONS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R.BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
N.BARRETT	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-4201

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
ARCHITECTURAL FIRM LICENCE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

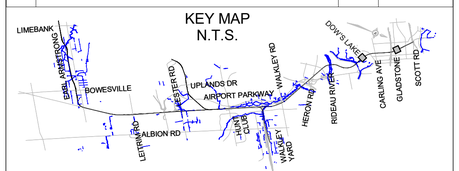
HORIZONTAL 1 : 20 FULLSIZE / 1 : 40 HALF SIZE
0 0.2 0.4 0.8 1.6 m
VERTICAL 1 : 20 FULLSIZE / 1 : 40 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29
01	REVISED ISSUE FOR CONSTRUCTION	JJ	2021/07/30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

KEYNOTE LEGEND

Key Value	Keynote Text
9	TYPE 2, PERFORATED METAL PANEL GUARD, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7220
23	LIGHT FIXTURE, REFER TO ELECTRICAL DRAWINGS

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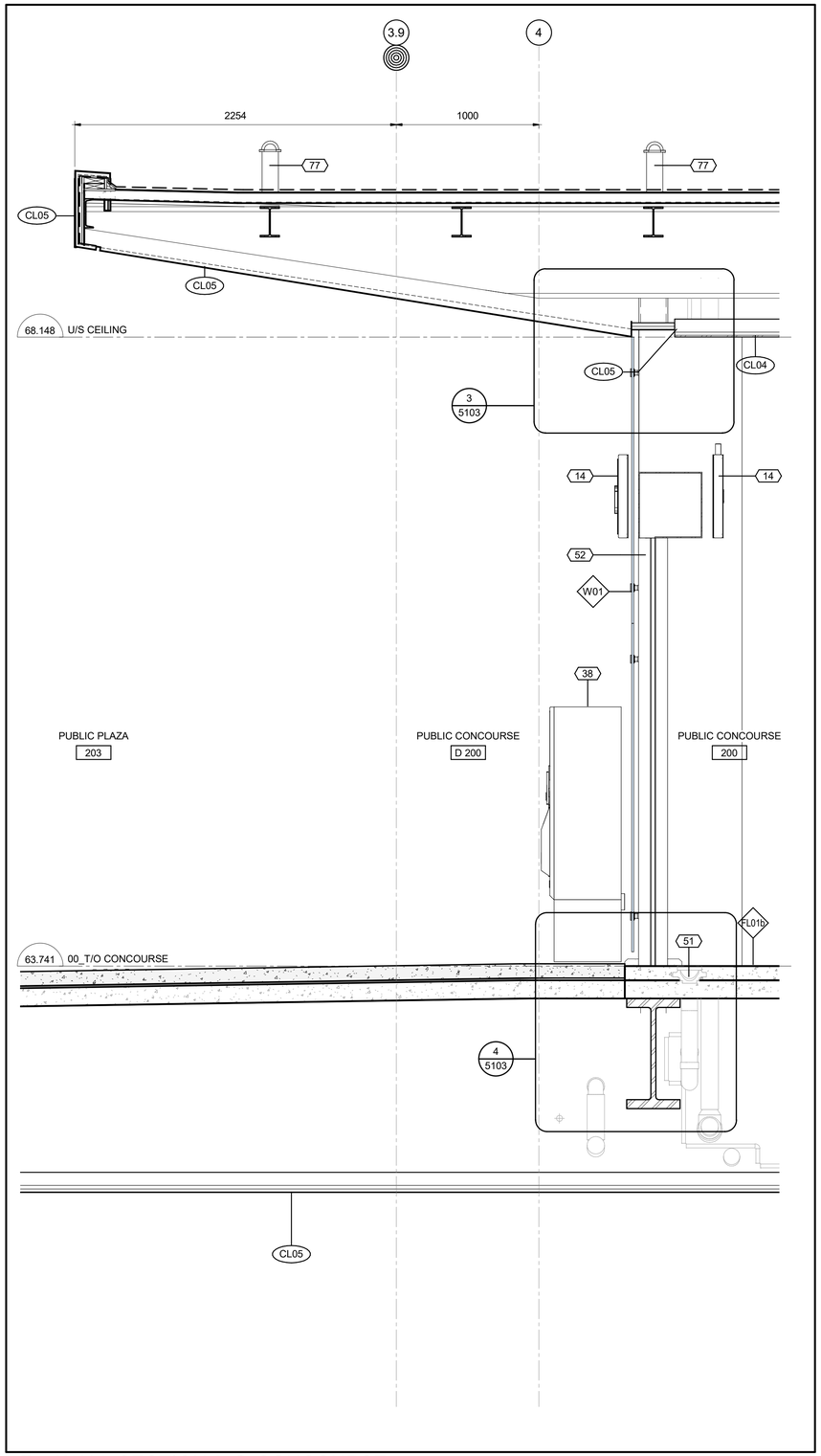
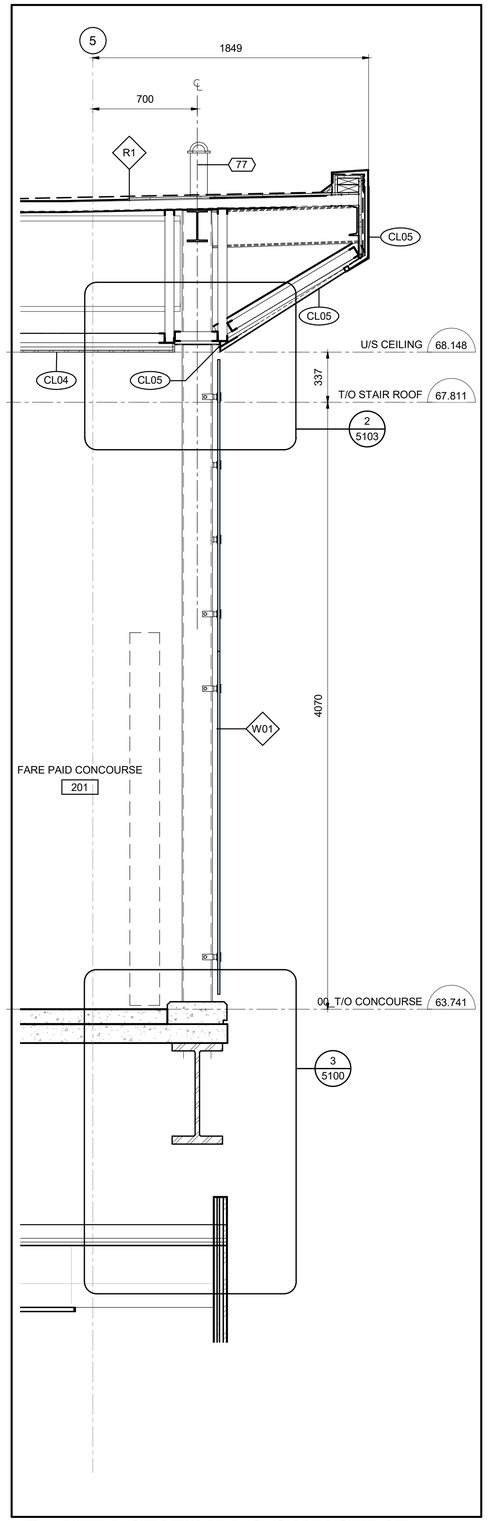
09/24/20

01

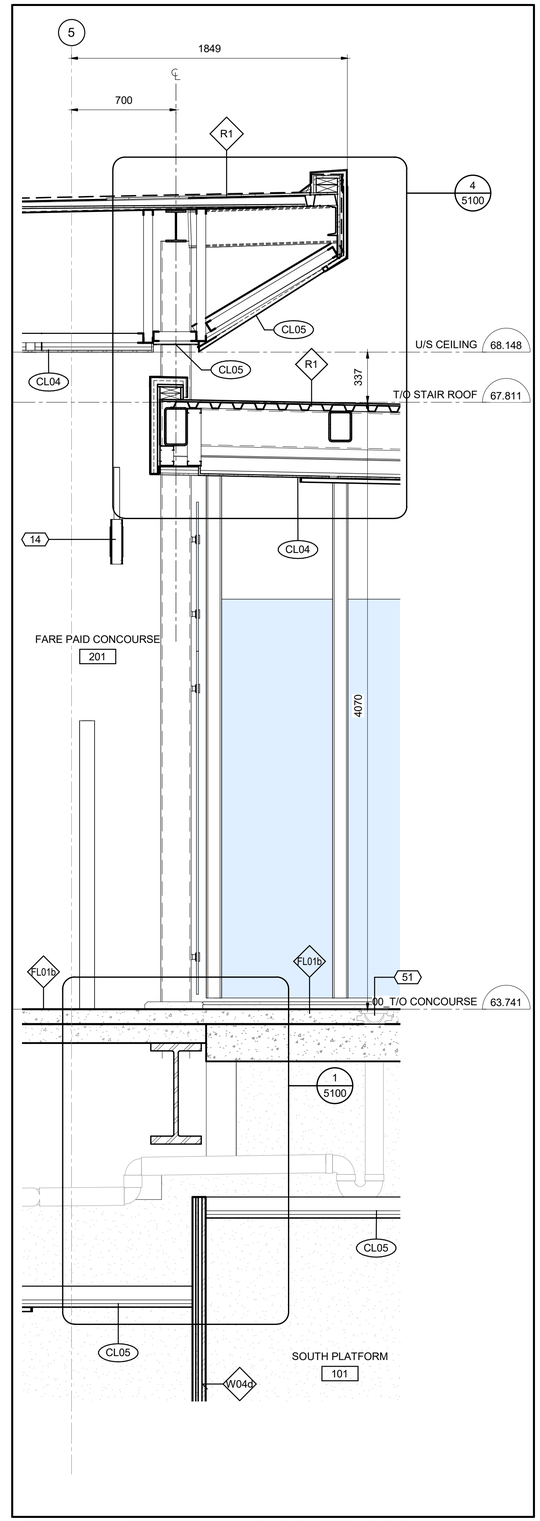
TITLEBLOCK: 790mm x 534mm



3 4202 WALL SECTION 3 @ CONCOURSE
1 : 20



2 4202 WALL SECTION 2 @ CONCOURSE
1 : 20



1 4202 WALL SECTION 1 @ CONCOURSE
1 : 20

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
SECTIONS
WALL SECTIONS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R.BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
N.BARRETT	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-4202

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

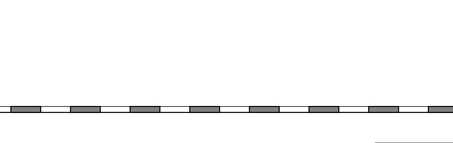
SCALE
HORIZONTAL 1 : 20 FULLSIZE / 1 : 40 HALF SIZE
0 0.2 0.4 0.8 1.6 m
VERTICAL 1 : 20 FULLSIZE / 1 : 40 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

KEYNOTE LEGEND

Key Value	Keynote Text
14	SIGN, REFER TO SIGNAGE PACKAGE
38	TICKET VENDING MACHINE, PROVIDED BY THE CITY, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7013
51	TRENCH DRAIN, REFER TO MECHANICAL DRAWGINS
52	SECURITY GATE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7210
77	FALL ARREST ANCHOR FASTENED TO STRUCTURE - REFER TO STRUCTURAL FOR BEAM LOCATIONS, ANCHORS AND ANCHOR LAYOUT TO BE DESIGNED AND PROVIDED BY OTHERS, TYP.

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09/25/20

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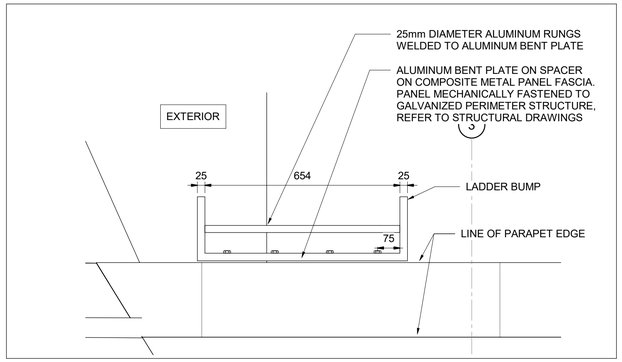
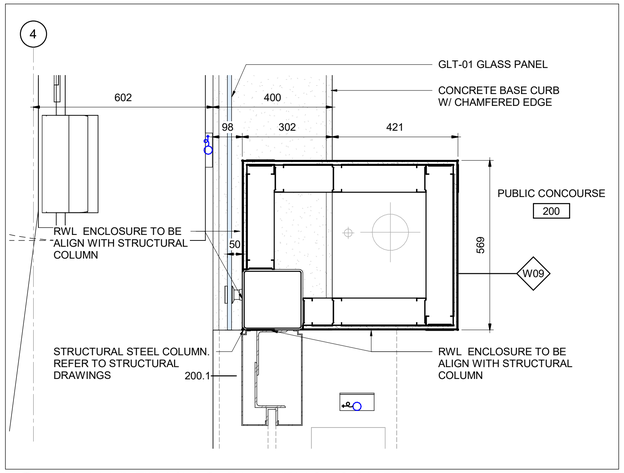


8/5000 PLAN DETAIL - LADDER BUMP
1 : 10



6/5000 PLAN DETAIL @ RWL ENCLOSURE
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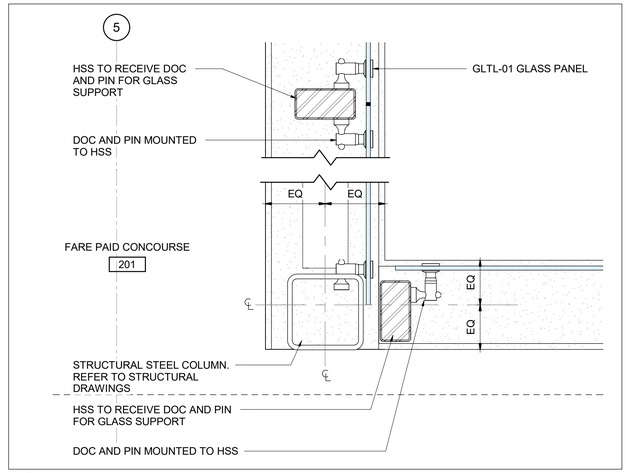
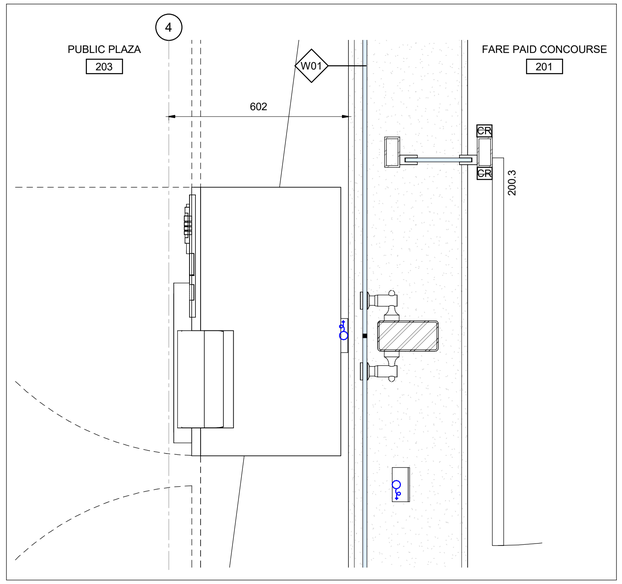
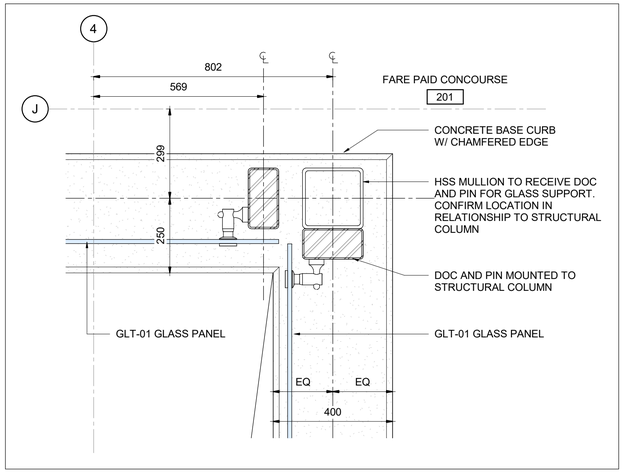


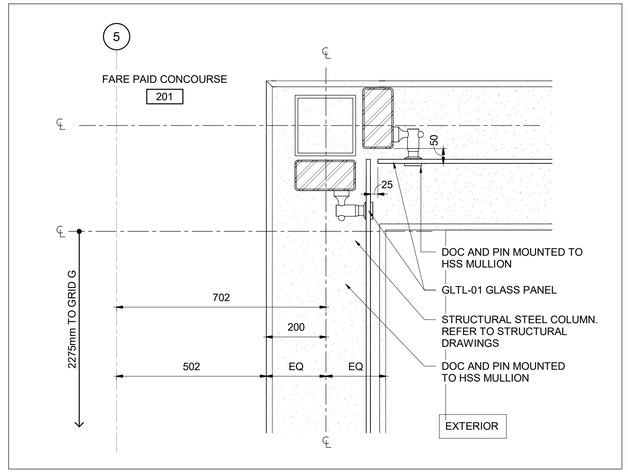
3/5000 PLAN DETAIL 3
1 : 10



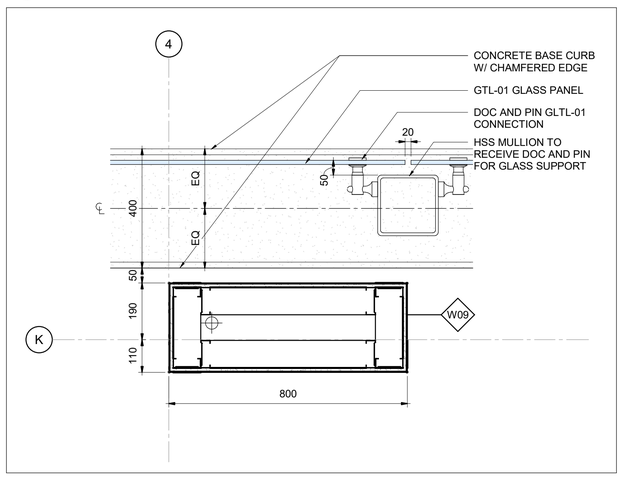
9/5000 PLAN DETAIL - FAIR GATE DOOR @ EXT. GLASS WALL
1 : 10



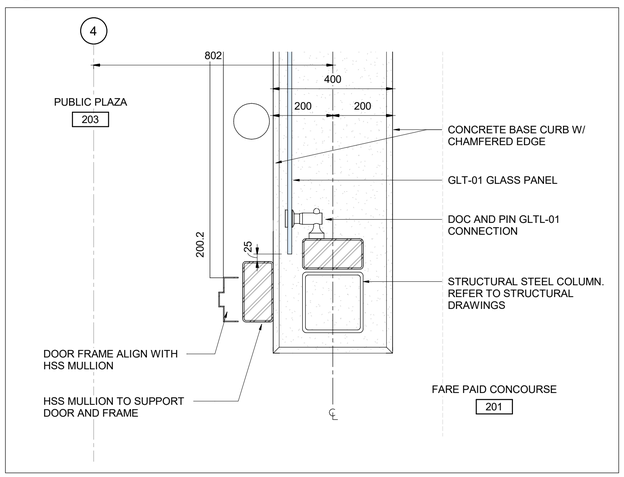
5/5000 PLAN DETAIL 5
1 : 10



2/5000 PLAN DETAIL 2
1 : 10



7/5000 PLAN DETAIL @ ELECTRICAL VERT. CHASE
1 : 10



4/5000 PLAN DETAIL 4
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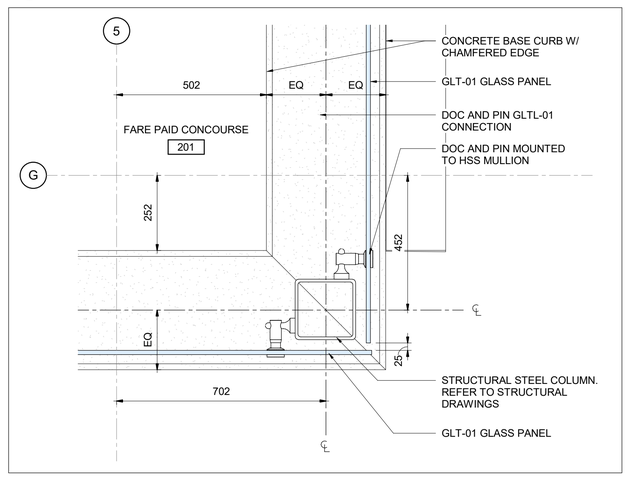

1/5000 PLAN DETAIL 1
1 : 10

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03/23/16

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
DETAILS
PLAN DETAILS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R.BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
N.BARRETT	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-5000

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
ROBERT BRISBIN LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

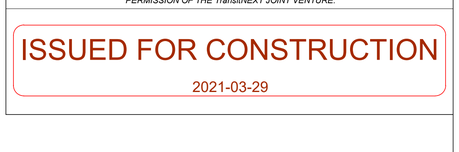
SCALE
HORIZONTAL 1 : 5 FULLSIZE / 1 : 10 HALF SIZE
0 0.05 0.1 0.2 0.4 m
VERTICAL 1 : 5 FULLSIZE / 1 : 10 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

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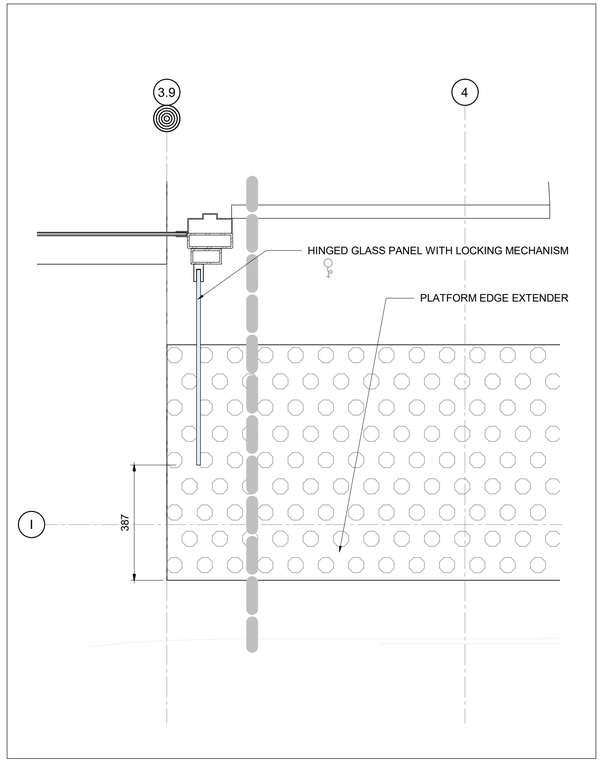
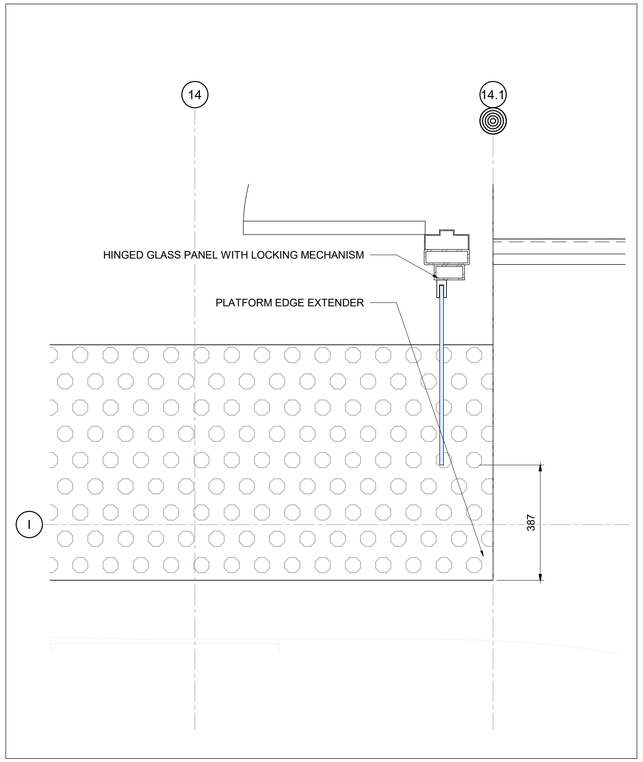


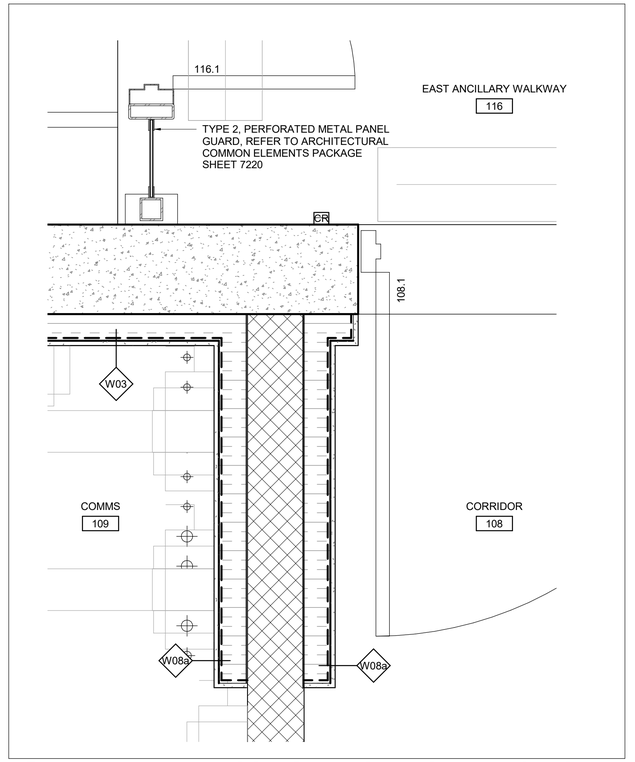
6/5001 DETAIL - END OF PLATFORM SOUTH AT GRIDLINE 3.9

1 : 10



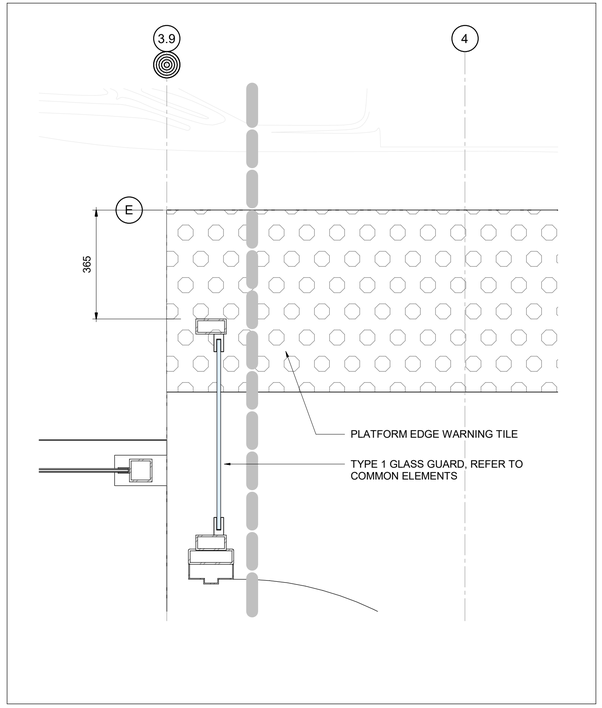
4/5001 DETAIL - END OF PLATFORM SOUTH @ GRIDLINE 14.1

1 : 10



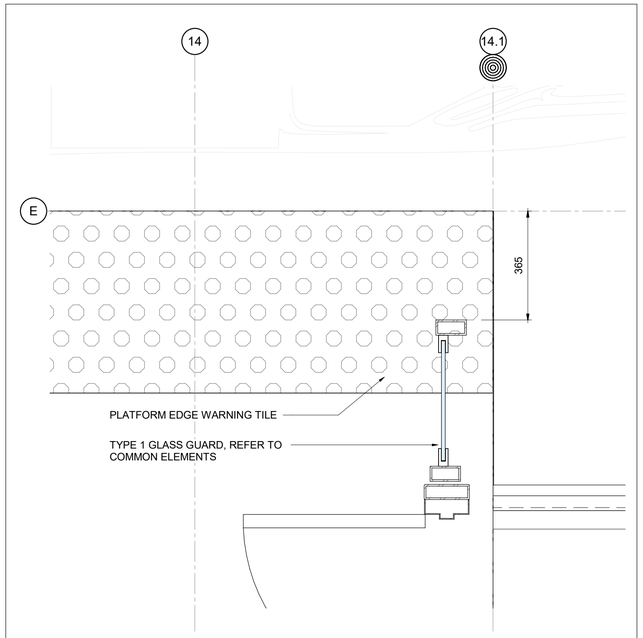
2/5001 PLAN DETAIL - DOOR @ EXT.OF ANCILLARY SPACE

1 : 10



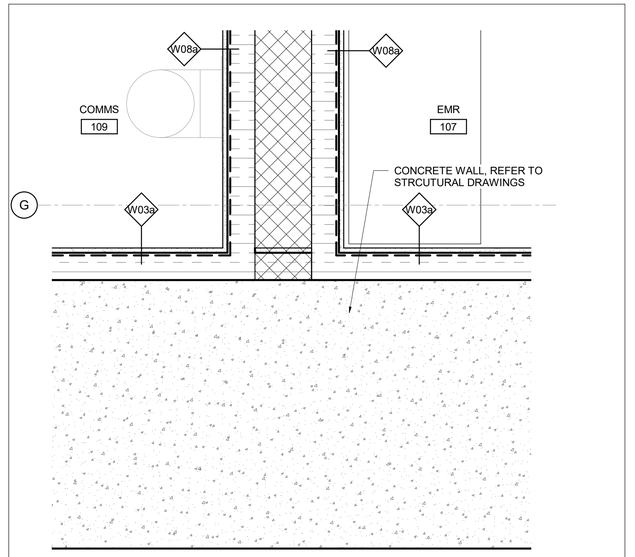
5/5001 DETAIL - END OF PLATFORM NORTH AT GRIDLINE 3.9

1 : 10



3/5001 DETAIL - END OF PLATFORM NORTH @ GRIDLINE 14.1

1 : 10



1/5001 PLAN DETAIL - DEMISING WALL AT EXTERIOR OF ANCILLARY SPACE

1 : 10

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
DETAILS
PLAN DETAILS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-5001

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
ROBERT A. BRISBIN LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

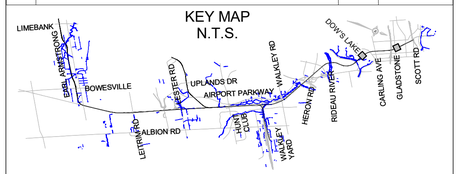
SCALE
HORIZONTAL 1 : 5 FULLSIZE / 1 : 10 HALF SIZE
0 0.05 0.1 0.2 0.4 m
VERTICAL 1 : 5 FULLSIZE / 1 : 10 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

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10/06/20

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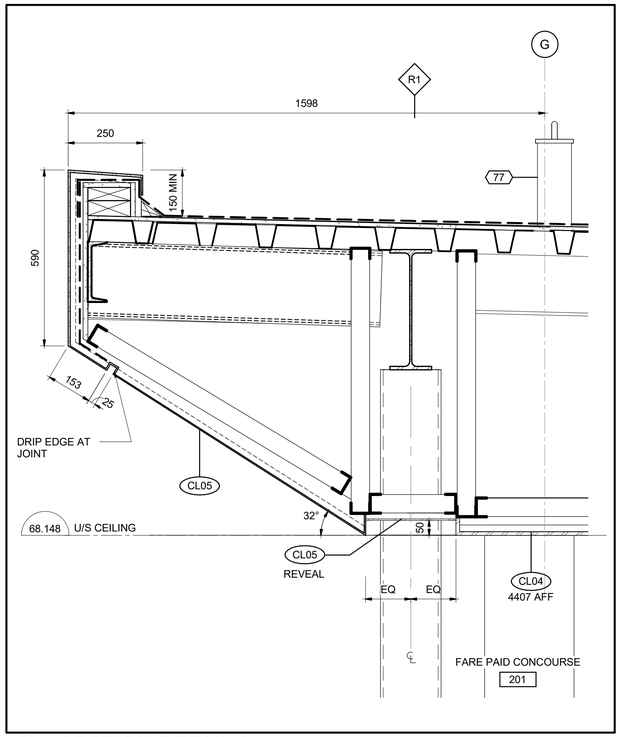
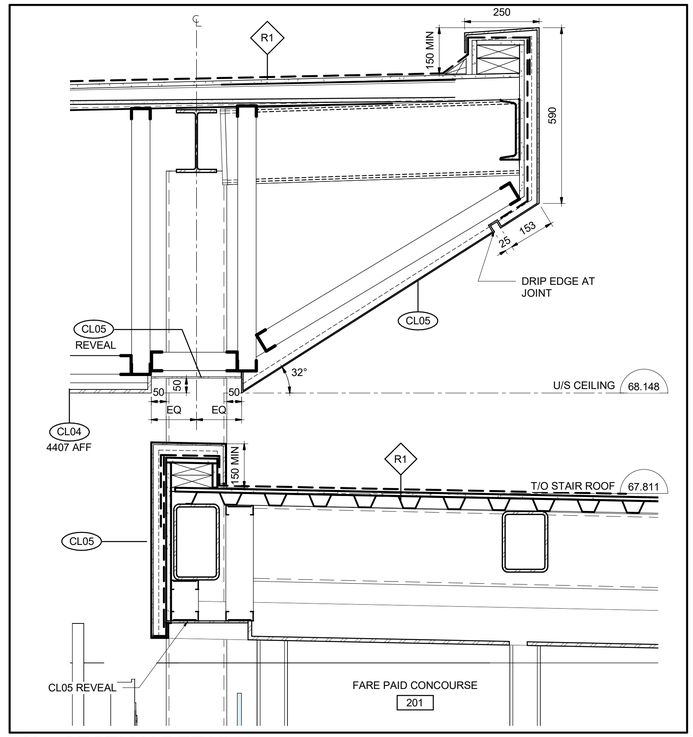


6 / 5100 SECTION DETAIL 6

1 : 10



4 / 5100 SECTION DETAIL 4

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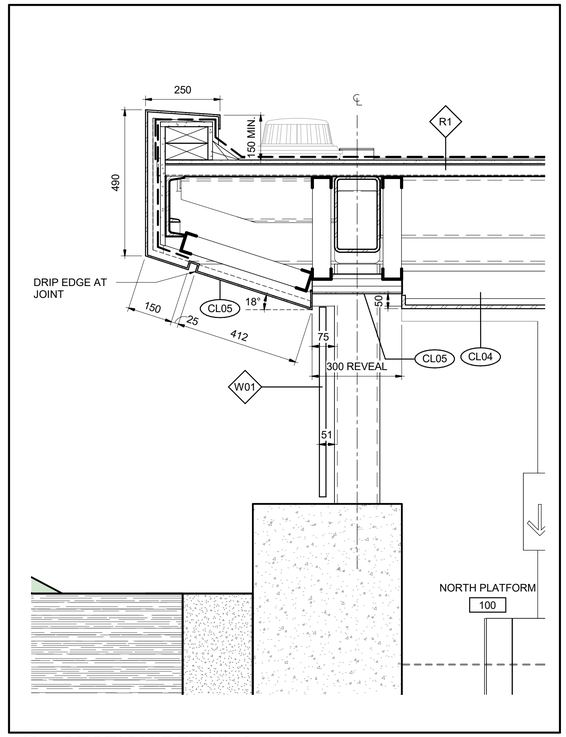

2 / 5100 SECTION DETAIL 2

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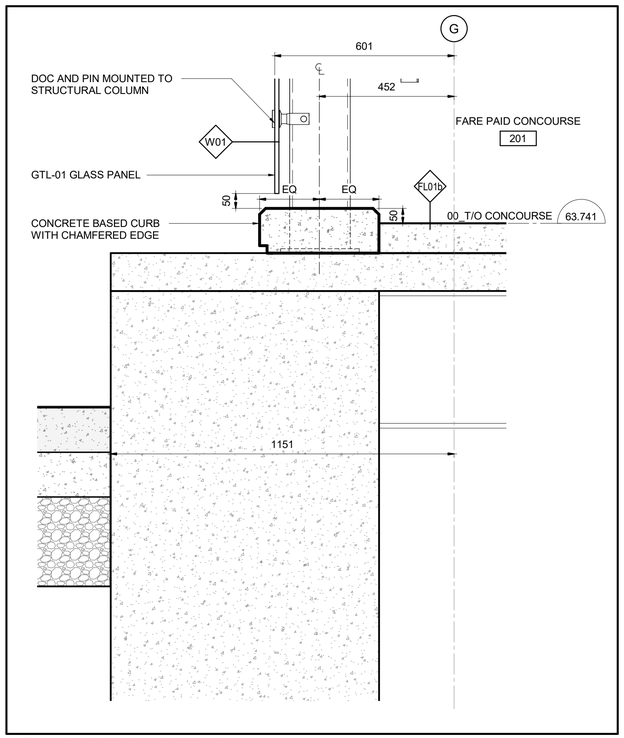

5 / 5100 SECTION DETAIL 5

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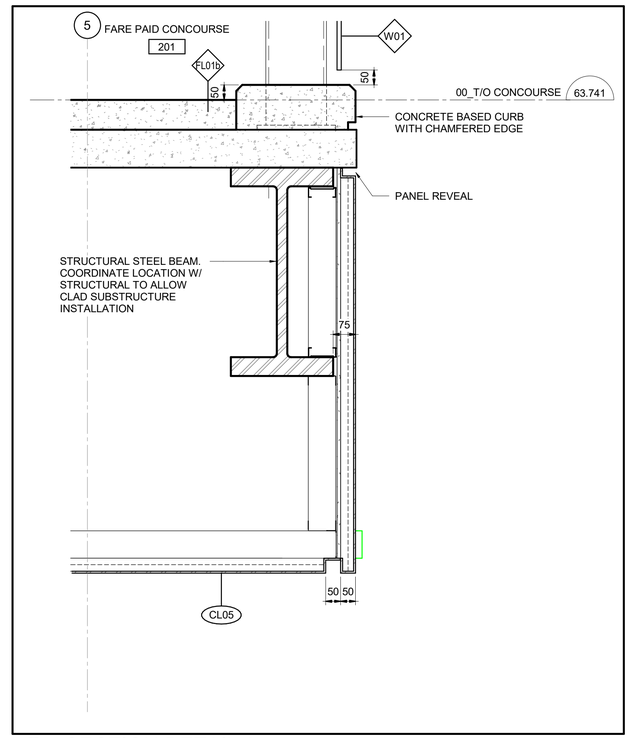

3 / 5100 SECTION DETAIL 3

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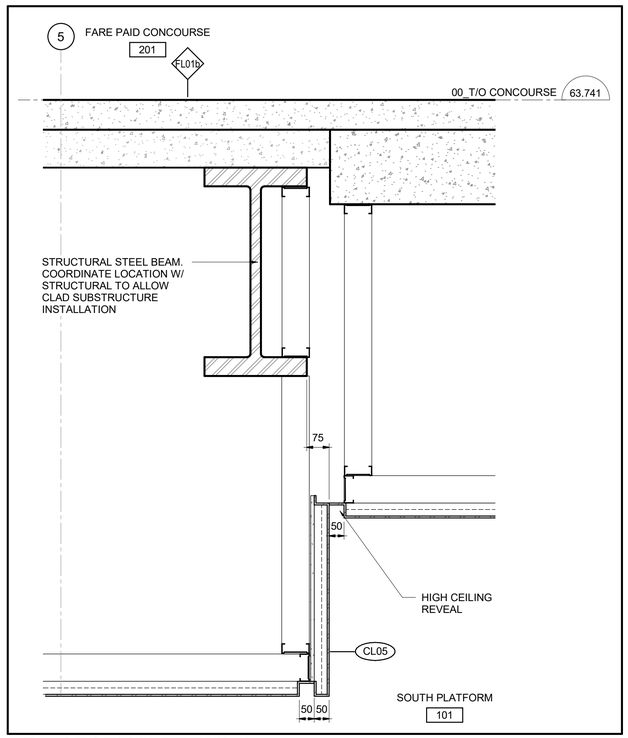

1 / 5100 SECTION DETAIL 1

1 : 10

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04/11/19

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
DETAILS
SECTION DETAILS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R.BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
N.BARRETT	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-5100

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER SNC·LAVALIN TransitNEXT

PRIMARY SEAL — ONTARIO ASSOCIATION OF ARCHITECTS — ROBERT BRISBIN LICENCE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

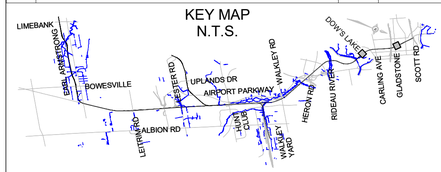
HORIZONTAL 1 : 10 FULLSIZE; 1 : 20 HALF SIZE
0 0.1 0.2
VERTICAL 0.4 1 : 10 FULLSIZE; 1 : 20 HALF SIZE 0.8 m

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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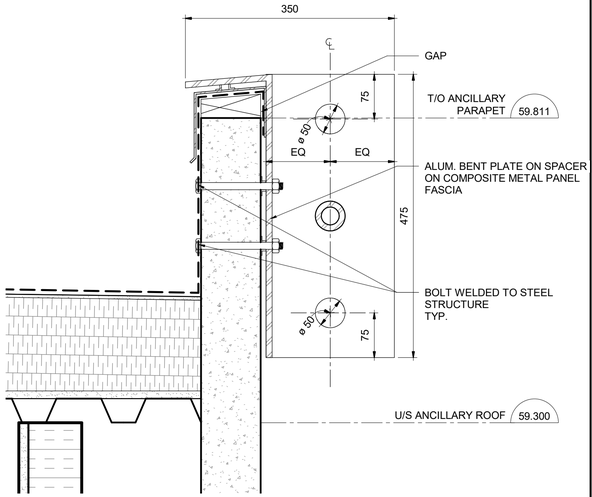
ISSUED FOR CONSTRUCTION
2021-03-29

KEYNOTE LEGEND

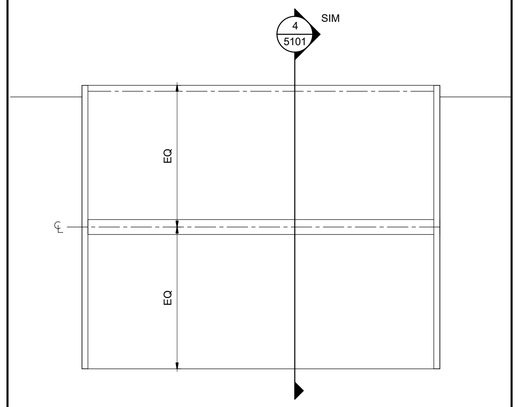
Key Value	Keynote Text
77	FALL ARREST ANCHOR FASTENED TO STRUCTURE - REFER TO STRUCTURAL FOR BEAM LOCATIONS, ANCHORS AND ANCHOR LAYOUT TO BE DESIGNED AND PROVIDED BY OTHERS, TYP.

TITLEBLOCK: 790mm x 534mm



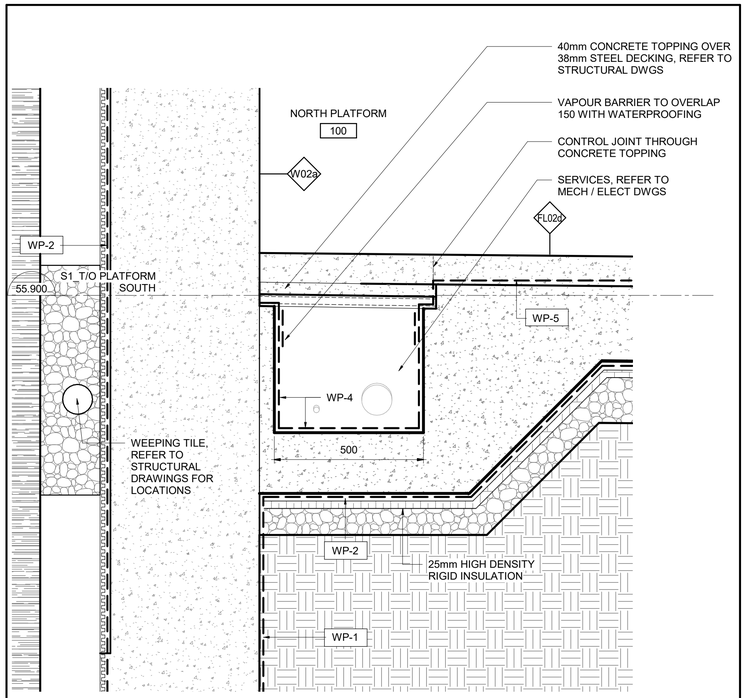
4/5101 SECTION DETAIL - LADDER BUMP

1 : 5



5/5101 ELEVATION - LADDER BUMPER ANCHOR

1 : 5



2/5101 SECTION DETAIL 8

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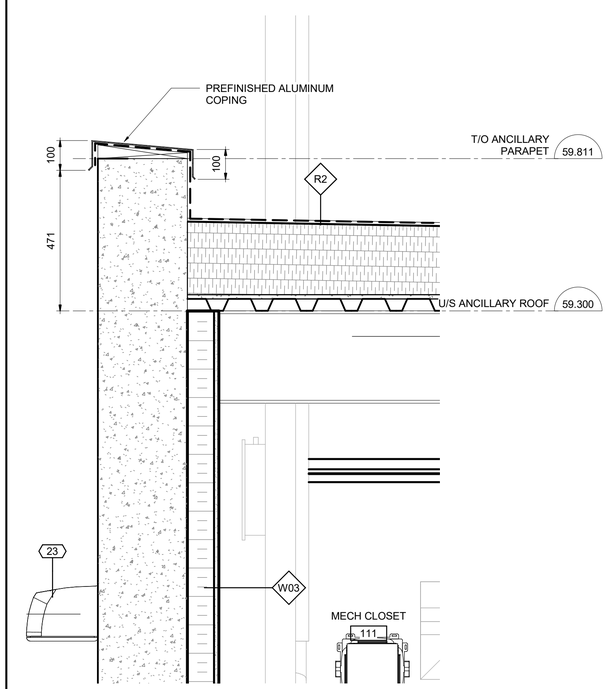
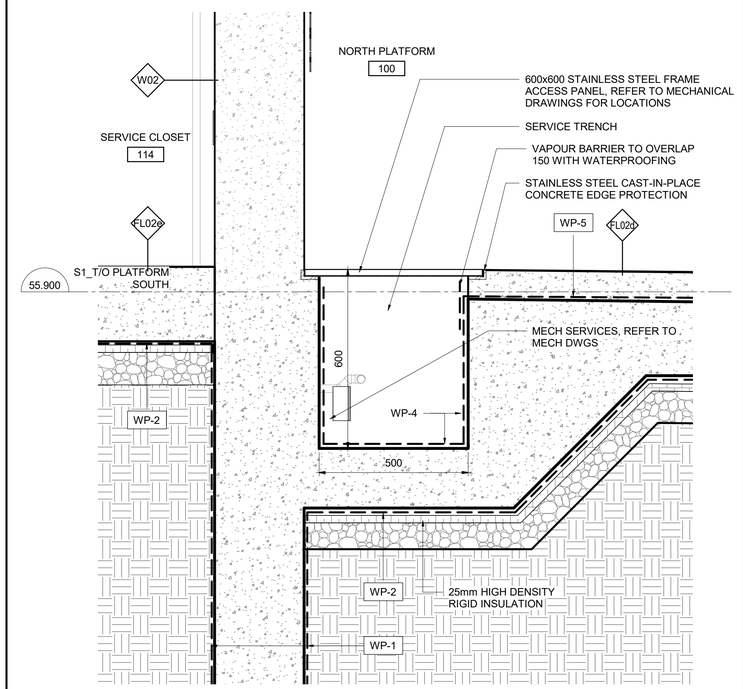


3/5101 SECTION DETAIL 9

1 : 10



1/5101 SECTION DETAIL 7

1 : 10

OTrain STAGE 2 ETAPE

Ottawa

ARCHITECTURAL
CORSO ITALIA
DETAILS
SECTION DETAILS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-5101

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE
HORIZONTAL 1 : 5 FULLSIZE / 1 : 10 HALF SIZE
0 0.05 0.1 0.2 0.4 m
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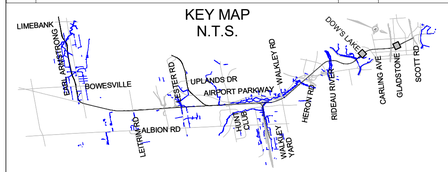
ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

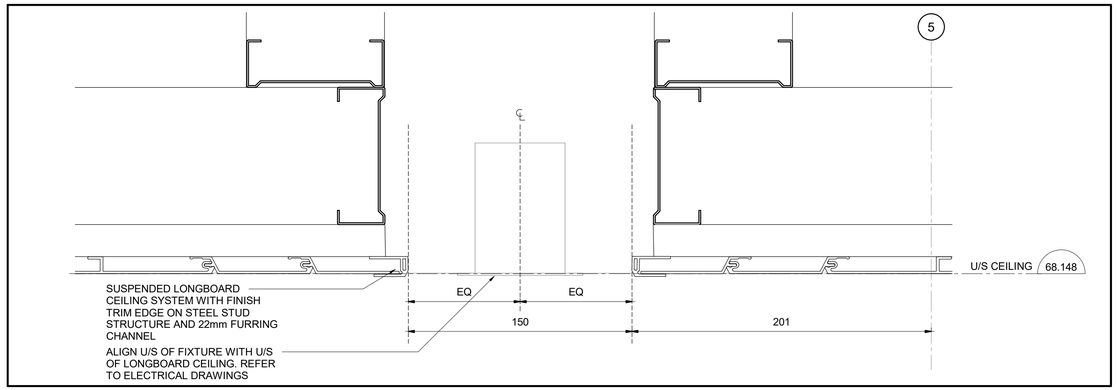
KEYNOTE LEGEND

Key Value	Keynote Text
23	LIGHT FIXTURE, REFER TO ELECTRICAL DRAWINGS

C:\Users\nbarret\Documents\660373-1GSS-001-44DM-1000_NBarretVF9UM.rvt

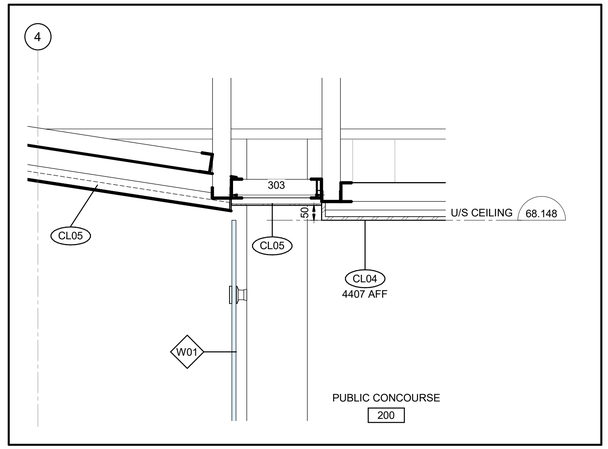
10/06/20

TITLEBLOCK: 790mm x 534mm



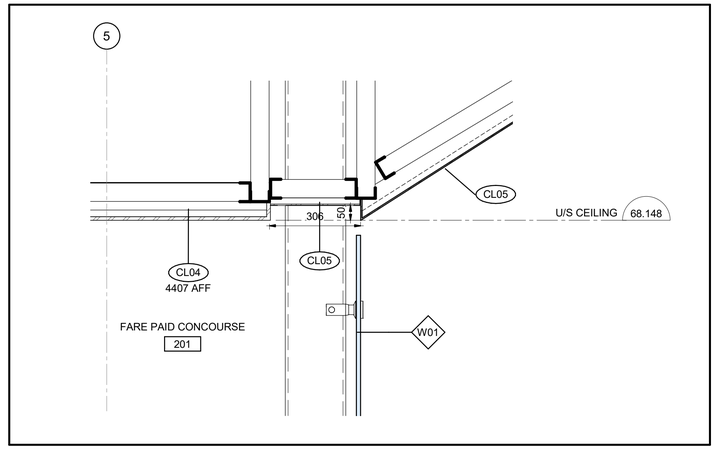
5 / 5103 SECTION DETAIL - CEILING SLOT W/ LINEAR LIGHTING

1 : 2



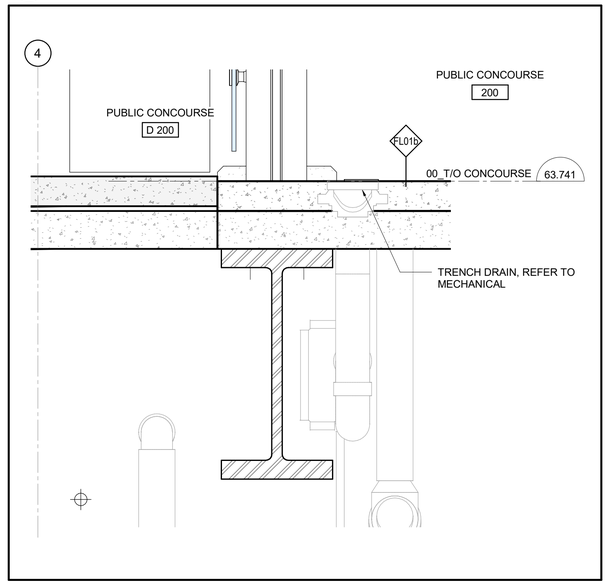
3 / 5103 SECTION DETAIL AT CEILING & GLAZING 2

1 : 10



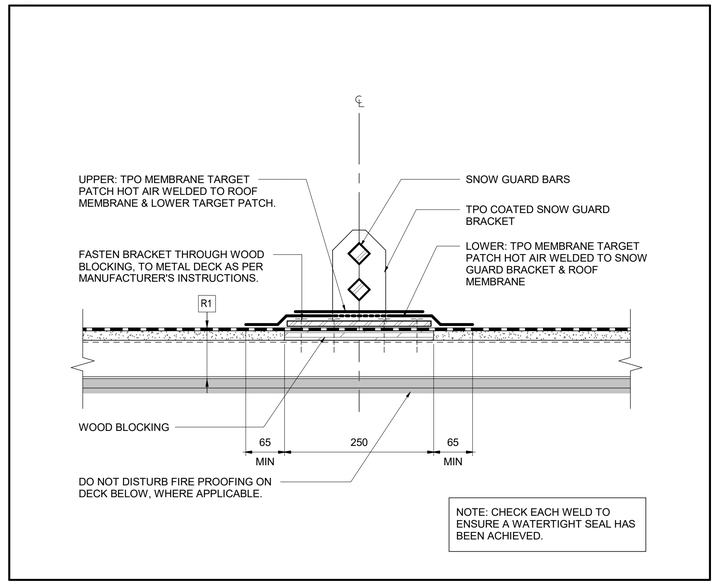
2 / 5103 SECTION DETAIL AT CEILING & GLAZING

1 : 10



4 / 5103 WALL SECTION 3 @ CONCOURSE - Callout 1

1 : 10



1 / 5103 SNOW GUARD

1 : 5

OTrain STAGE 2 ETAPE

Ottawa

ARCHITECTURAL
CORSO ITALIA
DETAILS
SECTION DETAILS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	M. PERKIC
DRAWN	SEALED
N.BARRETT	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-5103

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
ROBERT A. BRISBIN
LICENCE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

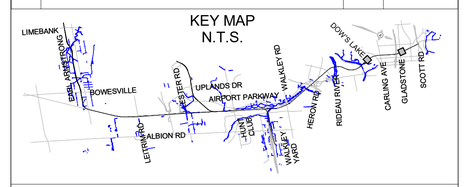
HORIZONTAL 1 : 5 FULLSIZE / 1 : 10 HALF SIZE
0 0.05 0.1 0.2 0.4 m
VERTICAL 1 : 5 FULLSIZE / 1 : 10 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-03-29

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02/25/21

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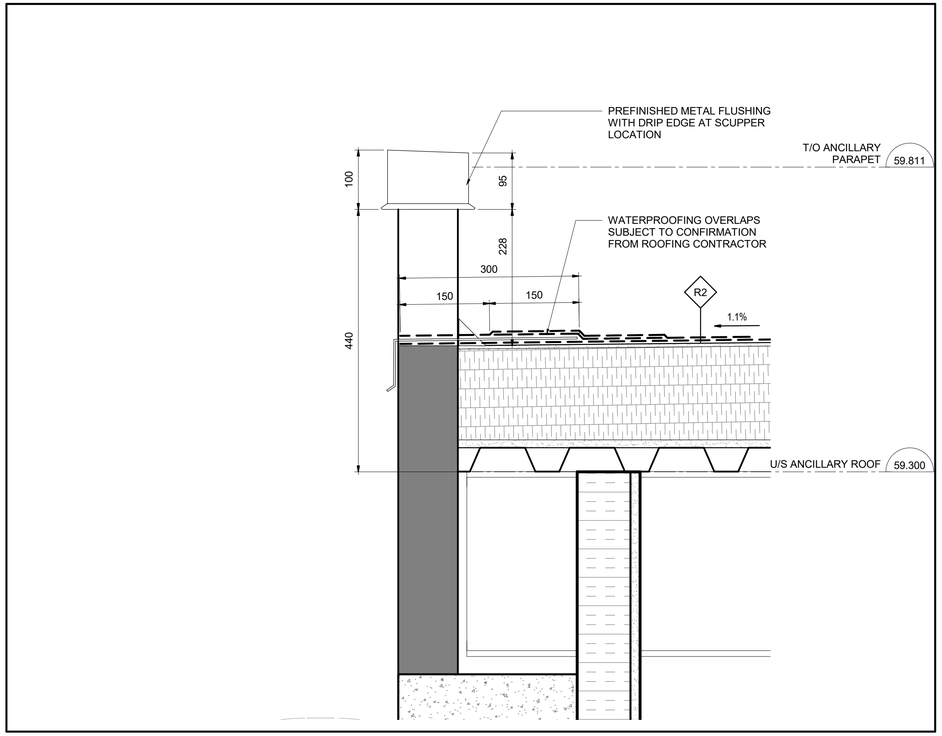

2 / 5104 SECTION DETAIL -SCUPPER

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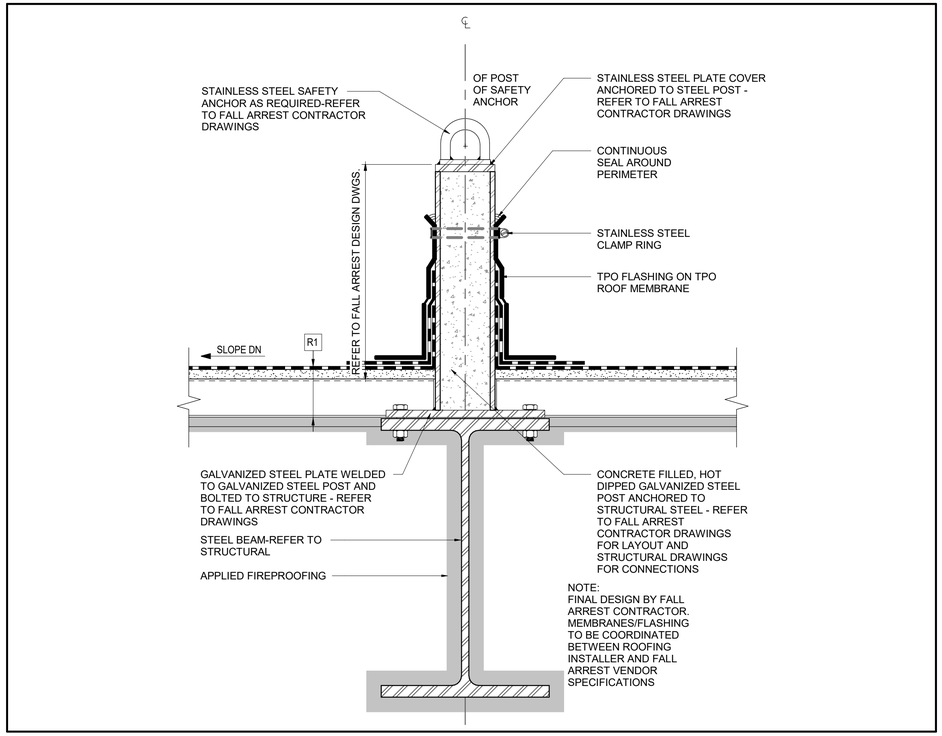
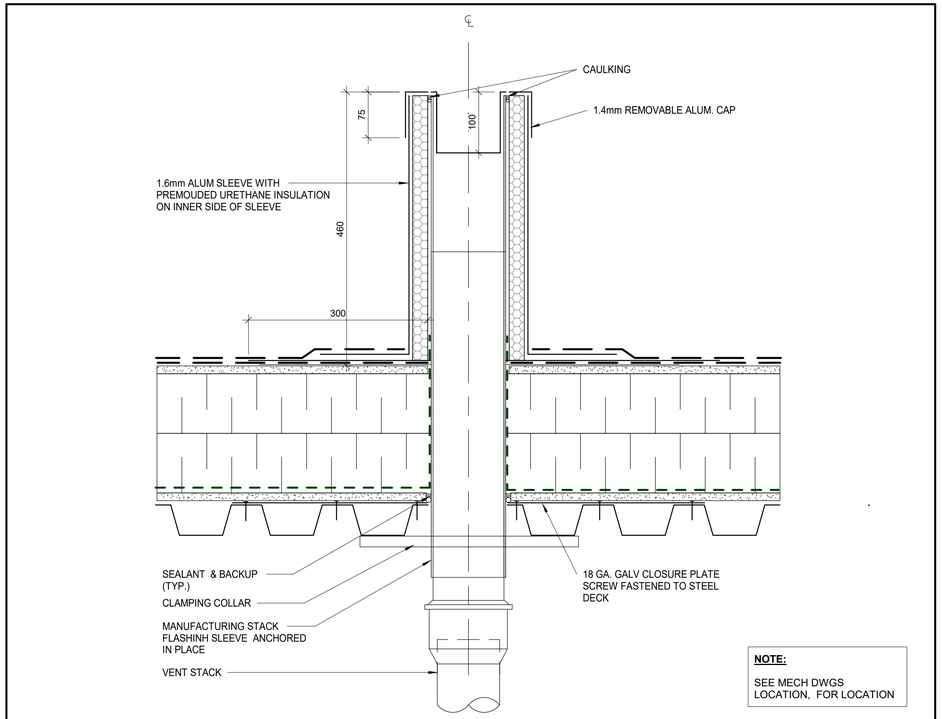


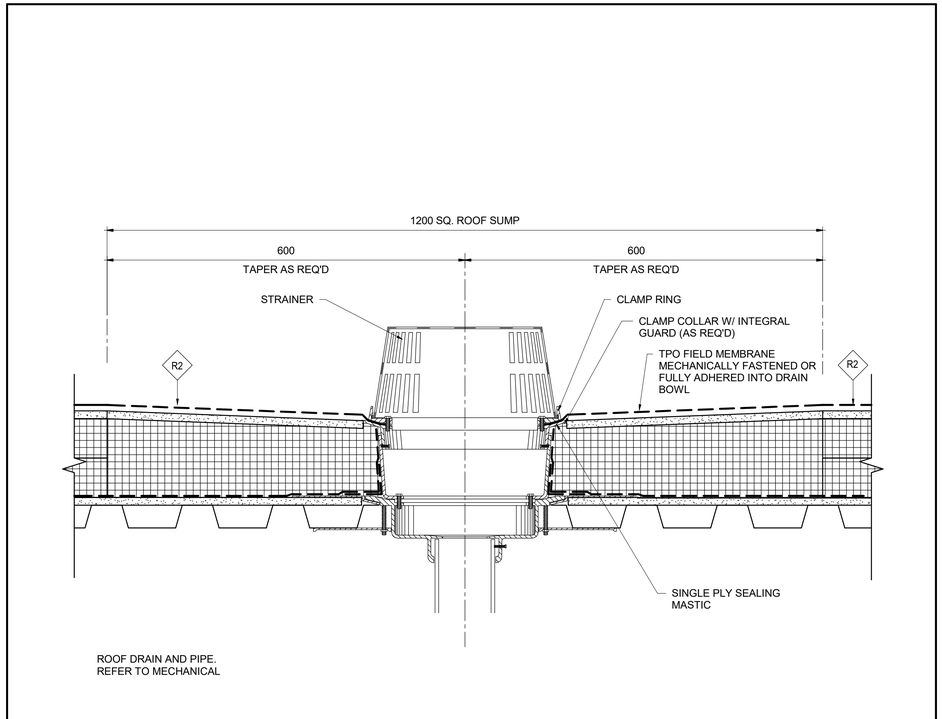
3 / 5104 FALL ARREST ANCHOR

1 : 5



C / 5104 PLUMBING PENETRATION

1 : 5



1 / 5104 ROOF DRAIN

1 : 5

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
DETAILS
SECTION DETAILS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	M. PERKIC
DRAWN	SEALED
N.BARRETT	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-5104

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS ROBERT M. BRISBIN LICENCE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

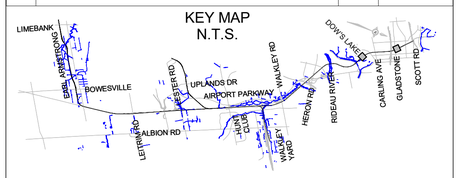
HORIZONTAL 1 : 5 FULLSIZE / 1 : 10 HALF SIZE
0 0.05 0.1 0.2 0.4 m
VERTICAL 1 : 5 FULLSIZE / 1 : 10 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

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02/25/21

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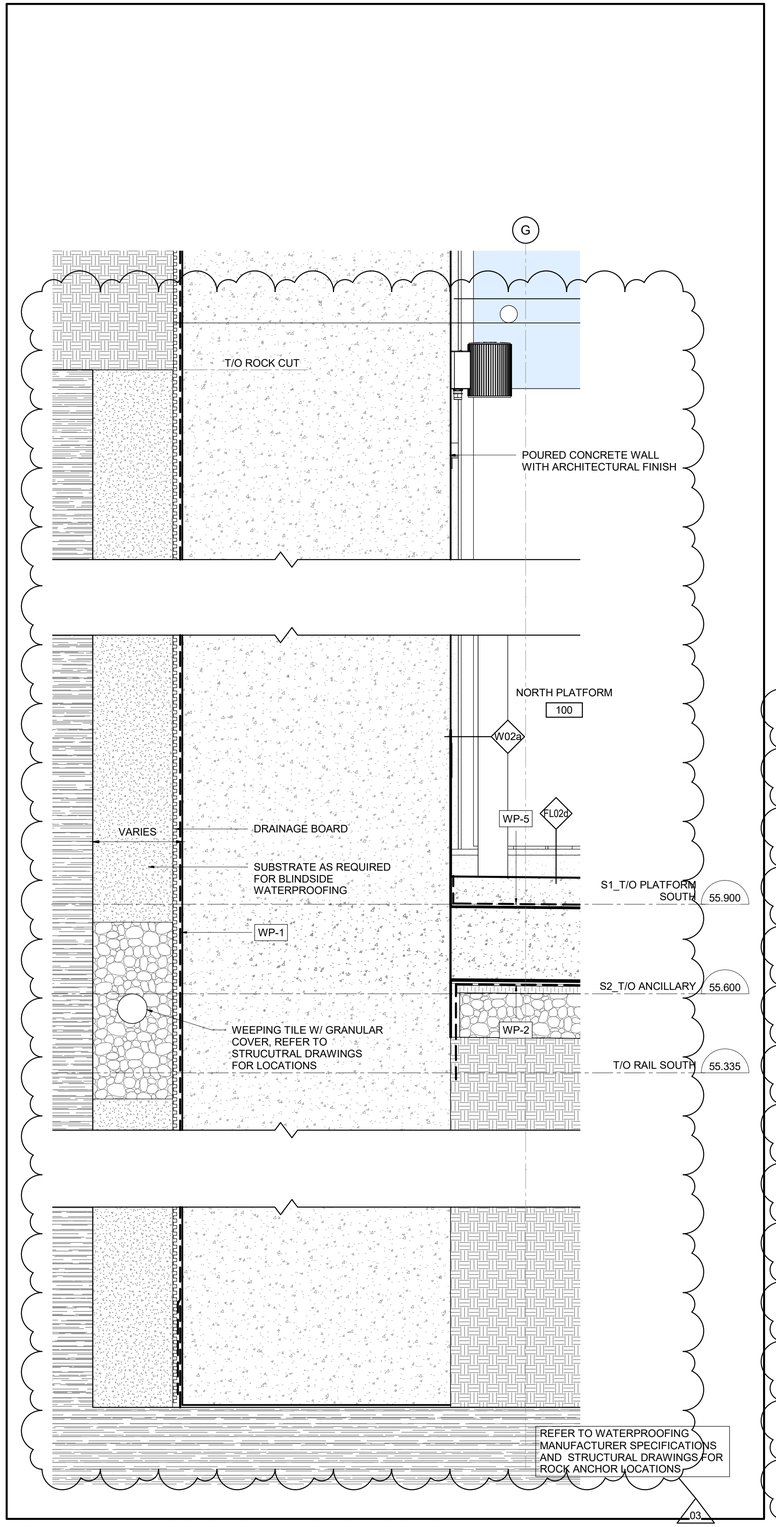
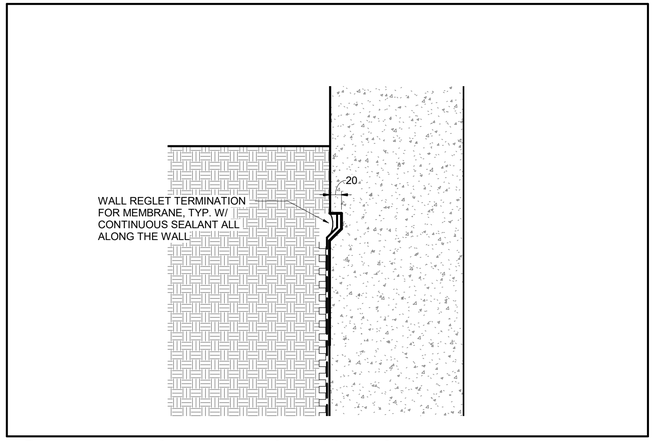


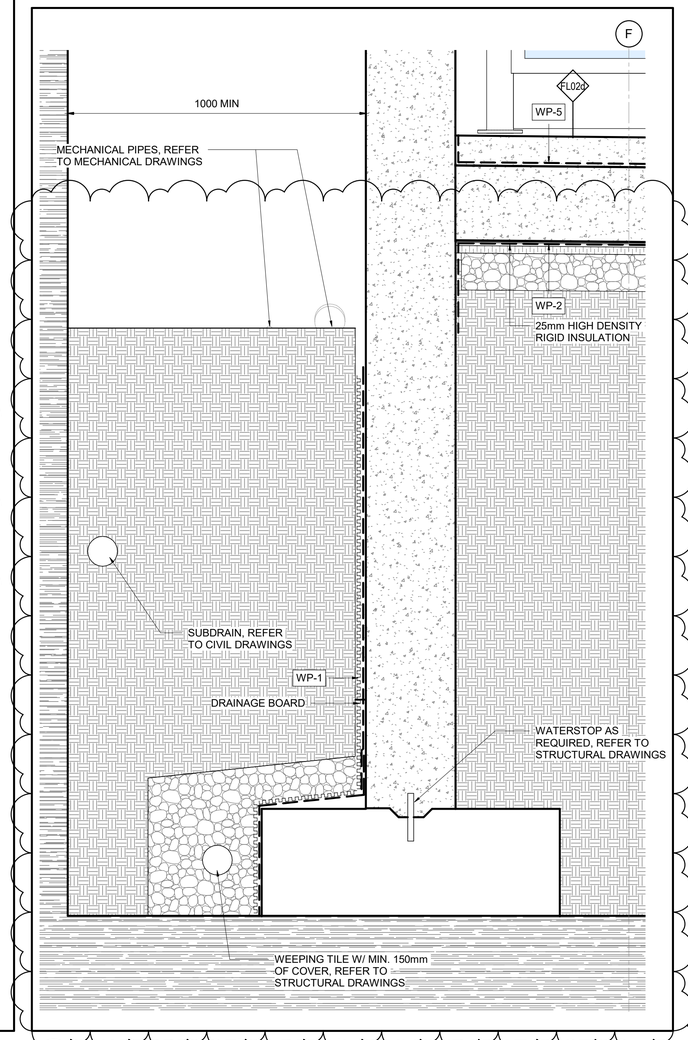
3 / 5150 WATERPROOFING DETAIL @ ROCK CUT

1 : 10



2 / 5150 WALL REGLET TERMINATION FOR MEMBRANE TYP.

1 : 5



1 / 5150 WATERPROOFING DETAIL - FULL WRAP AT FOOTING

1 : 10

Train STAGE ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
DETAILS
SECTION DETAILS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R.RISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
N.BARRETT	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-5150

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION ARCHITECTS ROCHARD RISBIN LICENCE 3782

DESIGN FIRM bbb architects ottawa inc.

SECONDARY SEAL (IF REQUIRED)

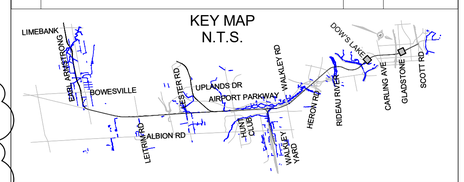
SCALE HORIZONTAL 1 : 5 FULLSIZE 1 : 10 HALF SIZE 0 0.05 0.1 0.2 0.4 m VERTICAL 1 : 5 FULLSIZE 1 : 10 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION - EARLY WORKS, FOUNDATIONS ONLY	JJ	2020/09/25
01	ISSUED FOR BUILDING PERMIT	JJ	2020/11/27
02	ISSUED FOR CONSTRUCTION	JJ	2021/03/29
03	REVISED ISSUE FOR CONSTRUCTION	JJ	2021/07/30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-07-30

KEYNOTE LEGEND

Key Value	Keynote Text

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09/24/20

03

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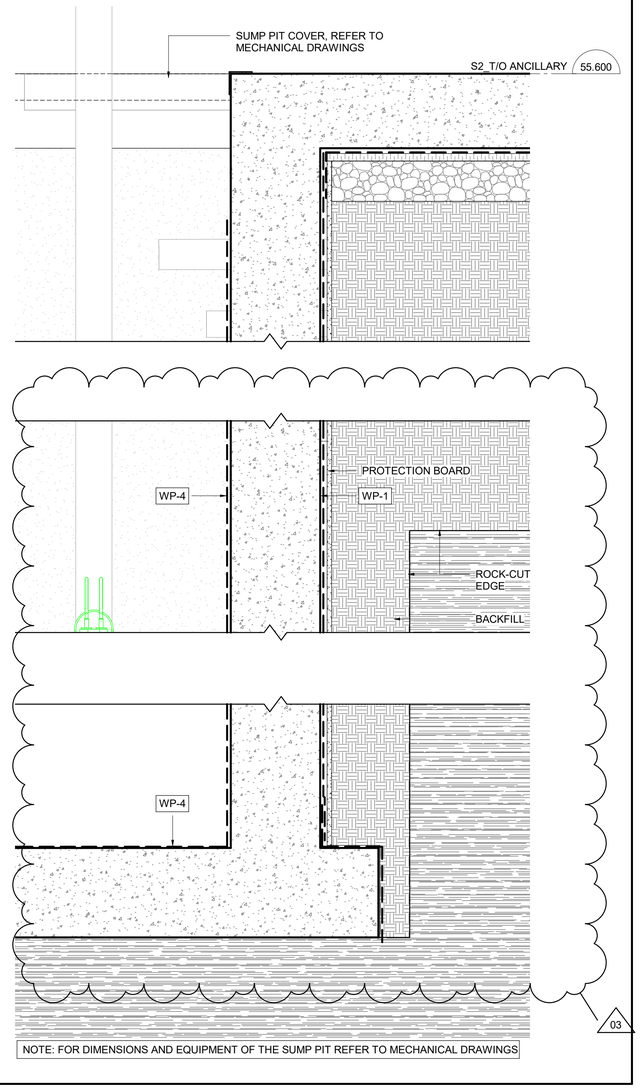
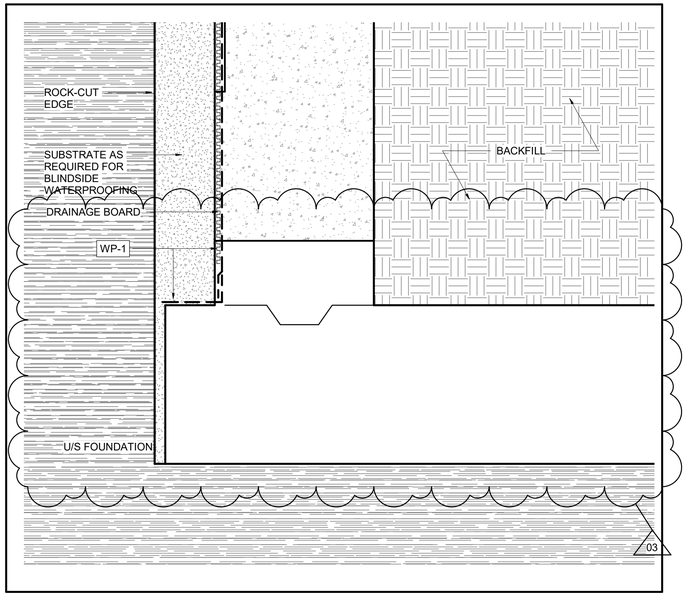


1 / 5151 SUMP PIT SECTION

1 : 10



2 / 5151 SECTION DETAIL @ PUBLIC STAIR

1 : 10

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
DETAILS
SECTION DETAILS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R.BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
N.BARRETT	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-5151

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
ROBERT A. BRISBIN LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

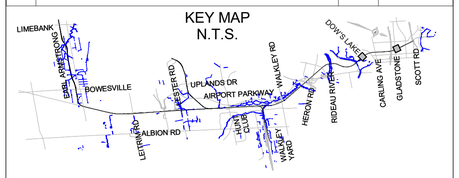
SCALE
HORIZONTAL 1 : 10 FULLSIZE
1 : 20 HALF SIZE
0 0.1 0.2 0.4 0.8 m
VERTICAL 1 : 10 FULLSIZE
1 : 20 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION - EARLY WORKS, FOUNDATIONS ONLY	JJ	2020/09/25
01	ISSUED FOR BUILDING PERMIT	JJ	2020/11/27
02	ISSUED FOR CONSTRUCTION	JJ	2021/03/29
03	REVISED ISSUE FOR CONSTRUCTION	JJ	2021/07/30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

KEYNOTE LEGEND

Key Value	Keynote Text

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09/26/20

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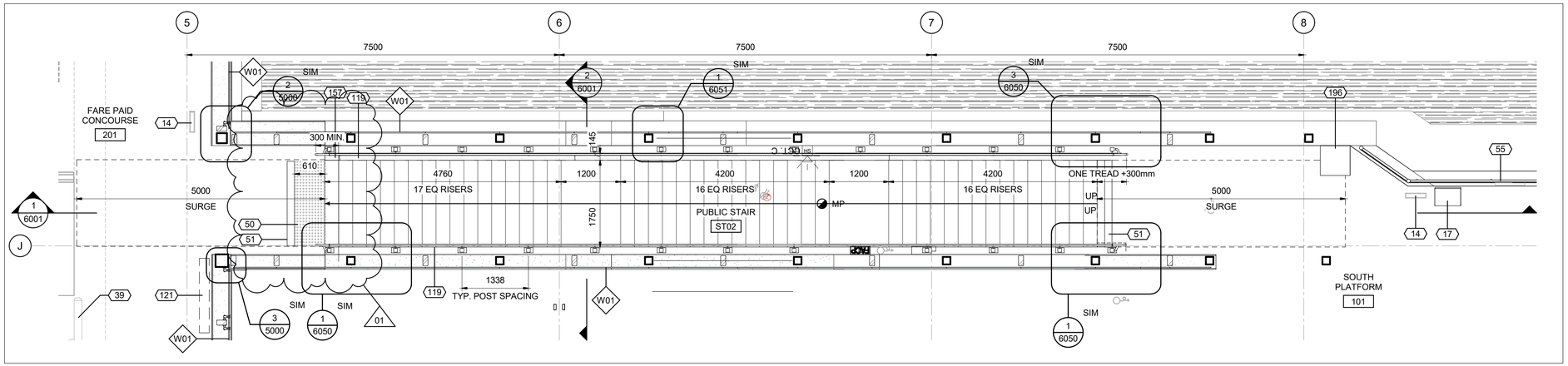
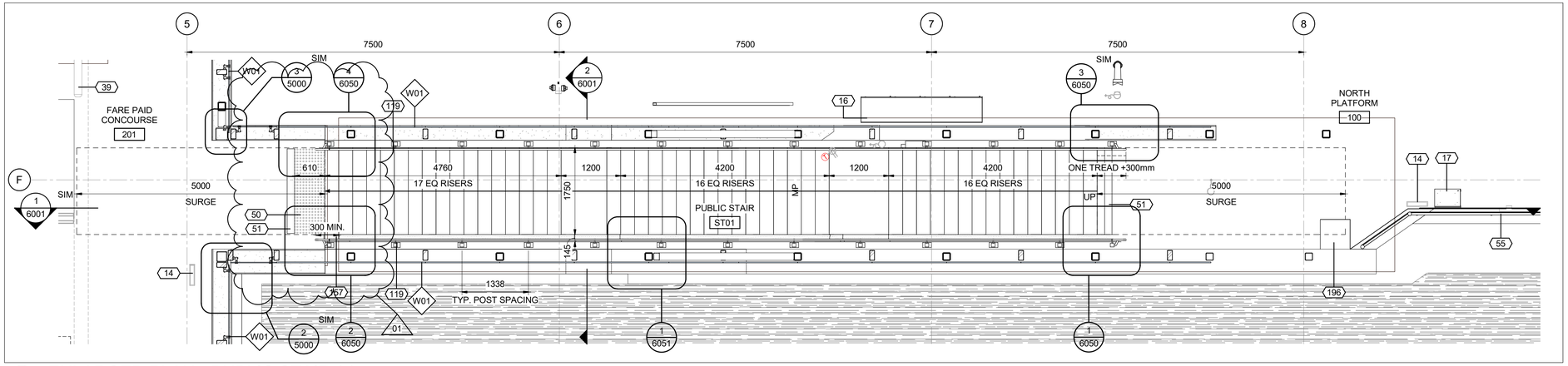


2 / 6000 ENLARGED PLAN - PUBLIC STAIR 02

1 : 50



1 / 6000 ENLARGED PLAN - PUBLIC STAIR 01

1 : 50

PLAN NORTH

OTrain STAGE 2 ÉTAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
VERTICAL CIRCULATION
STAIRS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R.BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
N.BARRETT	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-6000

MODEL NUMBER
660373-1GSS-001-44DM-1000

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
ROBERT A. BRISBIN
LICENCE
3782

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

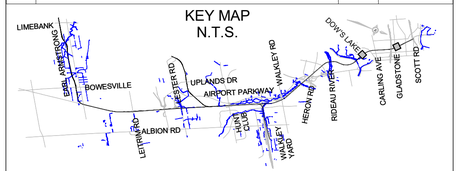
HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE
0 0.5 1 2 4 m
VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29
01	REVISED ISSUE FOR CONSTRUCTION	JJ	2021/07/30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

KEYNOTE LEGEND

Key Value	Keynote Text
14	SIGN, REFER TO SIGNAGE PACKAGE
16	WASTE RECPETACLE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7305
39	FARE GATE, PROVIDED BY THE CITY, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7012/7019
50	ATTENTION STRIP, 610mm MIN
51	TRENCH DRAIN, REFER TO MECHANICAL DRAWGINS
55	TYPE 3, CHAINLINK FENCE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7225
119	CONTINUOUS SST HANDRAIL
121	ADVERTISING PANEL, 1.5m x 2.5m, TO BE PROVIDED BY THE CITY, PROVIDE PROVISIONS FOR POWER AND DATA
157	PRECAST BIKE TROUGH
196	SST ACCESS PANEL WITH CONCRETE INFILL FOR SERVICE TRENCH, COLOUR TO MATCH FLOOR FINISH

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03/23/16

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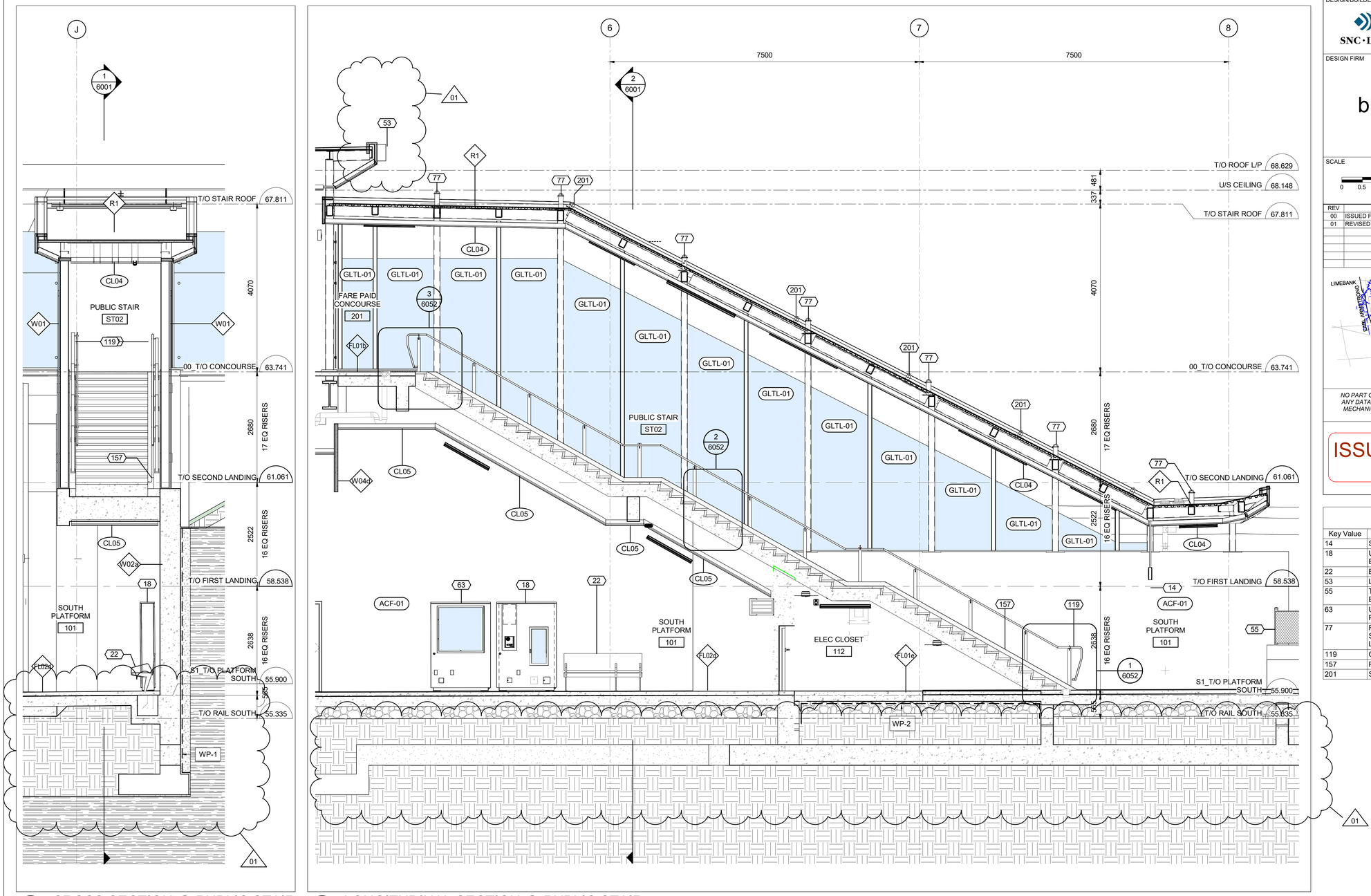

2 6001 CROSS SECTION @ PUBLIC STAIR
1 : 50

1 6001 LONGITUDINAL SECTION @ PUBLIC STAIR
1 : 50

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10/06/20

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
VERTICAL CIRCULATION
STAIRS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-6001

MODEL NUMBER
660373-1GSS-001-44DM-1000

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
LICENCE 3782

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE
HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE
0 0.5 1 2 4 m
VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29
01	REVISED ISSUE FOR CONSTRUCTION	JJ	2021/07/30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

KEYNOTE LEGEND

Key Value	Keynote Text
14	SIGN, REFER TO SIGNAGE PACKAGE
18	UC-02, FIRE CABINET, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7105/7106
22	BENCH WITH SEATING FOR 3
53	LADDER BUMP
55	TYPE 3, CHAINLINK FENCE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7225
63	UC-01, TIP CABINET, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7100/7102
77	FALL ARREST ANCHOR FASTENED TO STRUCTURE - REFER TO STRUCTURAL FOR BEAM LOCATIONS, ANCHORS AND ANCHOR LAYOUT TO BE DESIGNED AND PROVIDED BY OTHERS, TYP.
119	CONTINUOUS SST HANDRAIL
157	PRECAST BIKE TROUGH
201	SNOW GUARD

01

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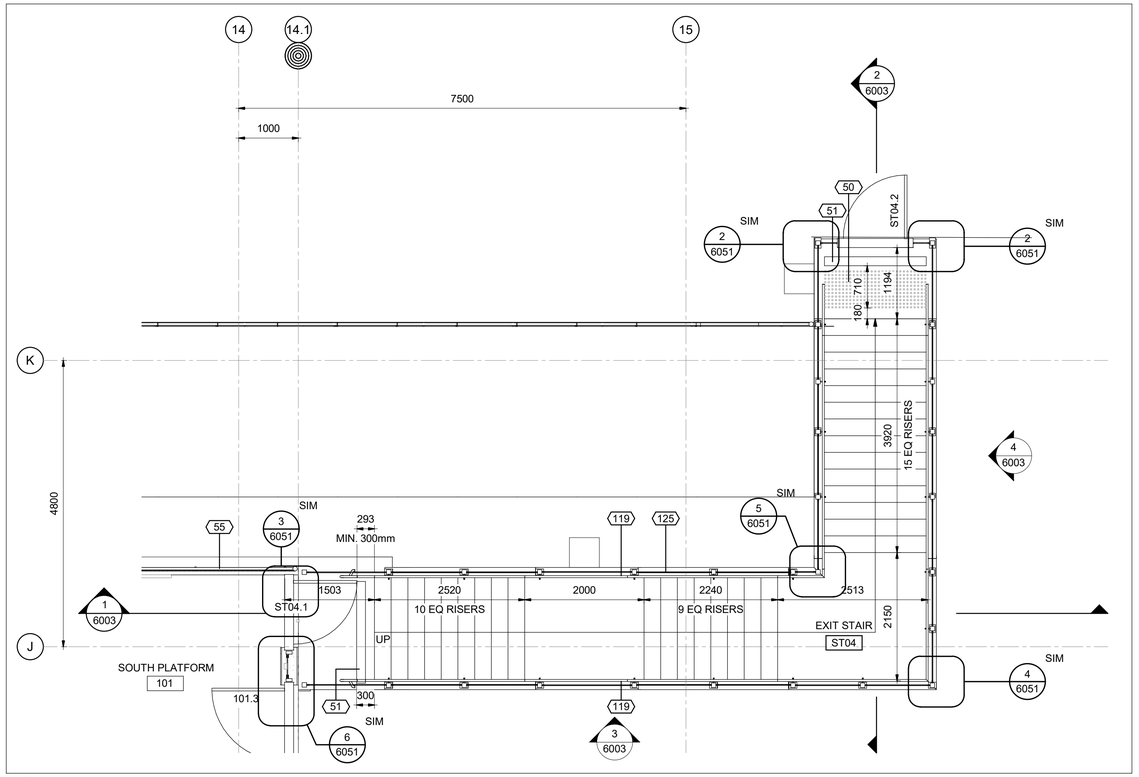
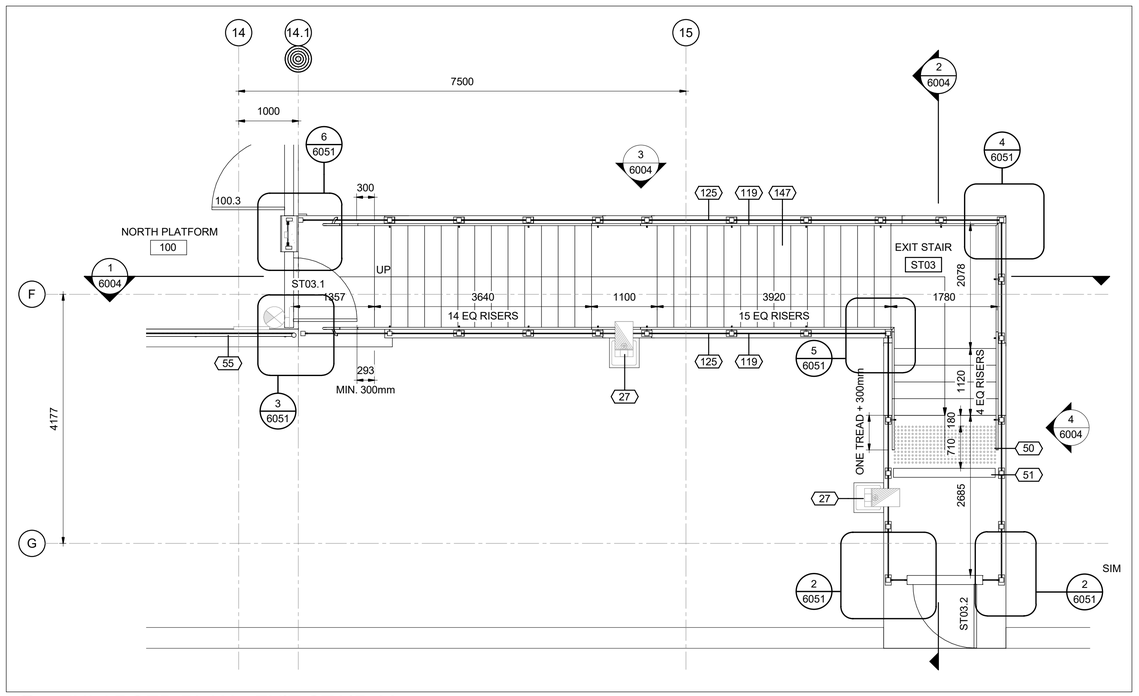


2 / 6002 ENLARGED PLAN - EXIT STAIR 04

1 : 50



1 / 6002 ENLARGED PLAN - EXIT STAIR 03

1 : 50

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
VERTICAL CIRCULATION
STAIRS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-6002

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS LICENSED 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

0 0.5 1 2 4 m

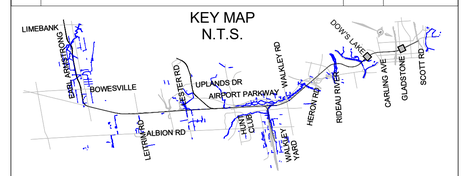
VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-03-29

KEYNOTE LEGEND

Key Value	Keynote Text
27	LIGHT POLE, REFER TO ELECTRICAL AND STRUCTURAL DRAWINGS FOR LIGHT POLE AND FOUNDATION TYPE BASED ON LIGHT POLE LOCATION

10/06/20 C:\Users\bbarrett\Document\660373-1GSS-001-44DM-1000_NBarrett\F3UM.rvt

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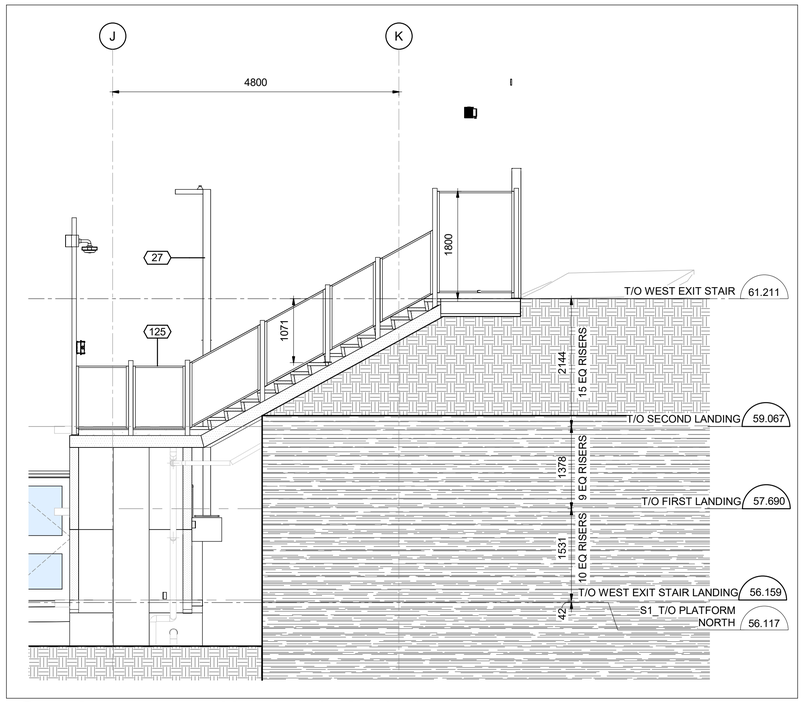
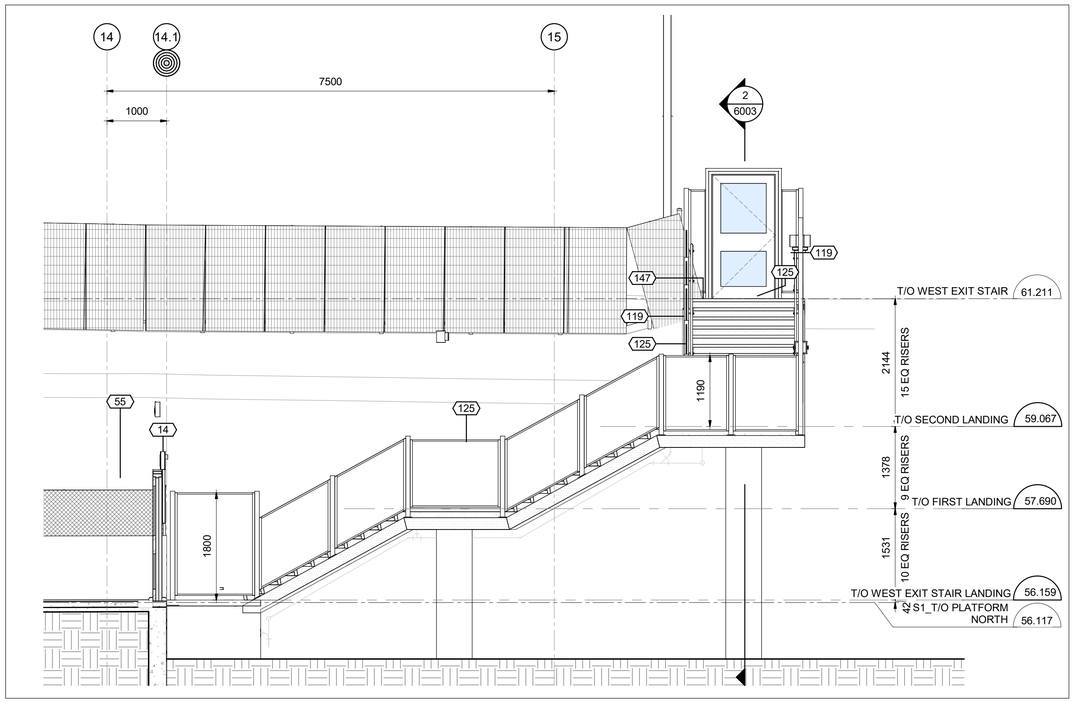


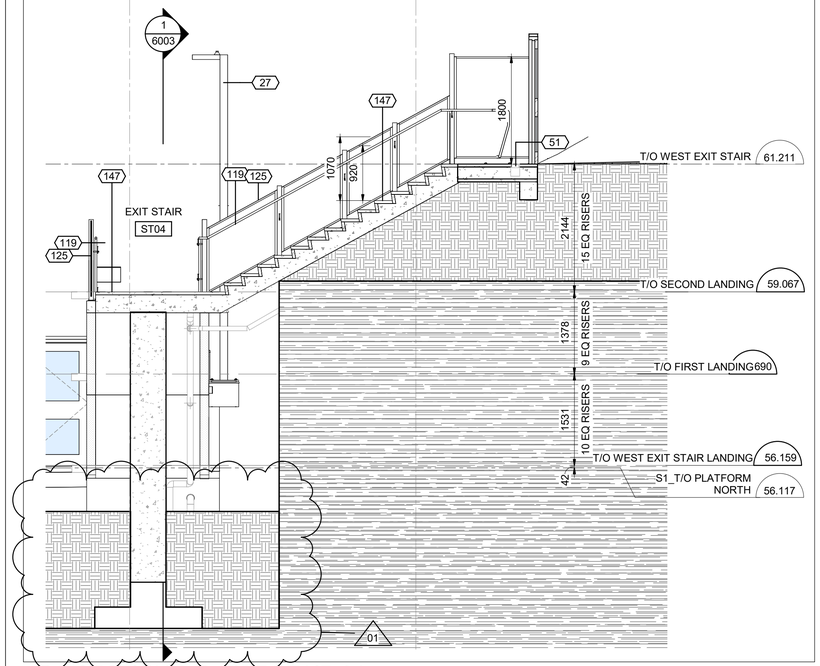
4 / 6003 NORTH ELEVATION @ EXIT STAIR 04

1 : 50



3 / 6003 EAST ELEVATION @ EXIT STAIR 04

1 : 50



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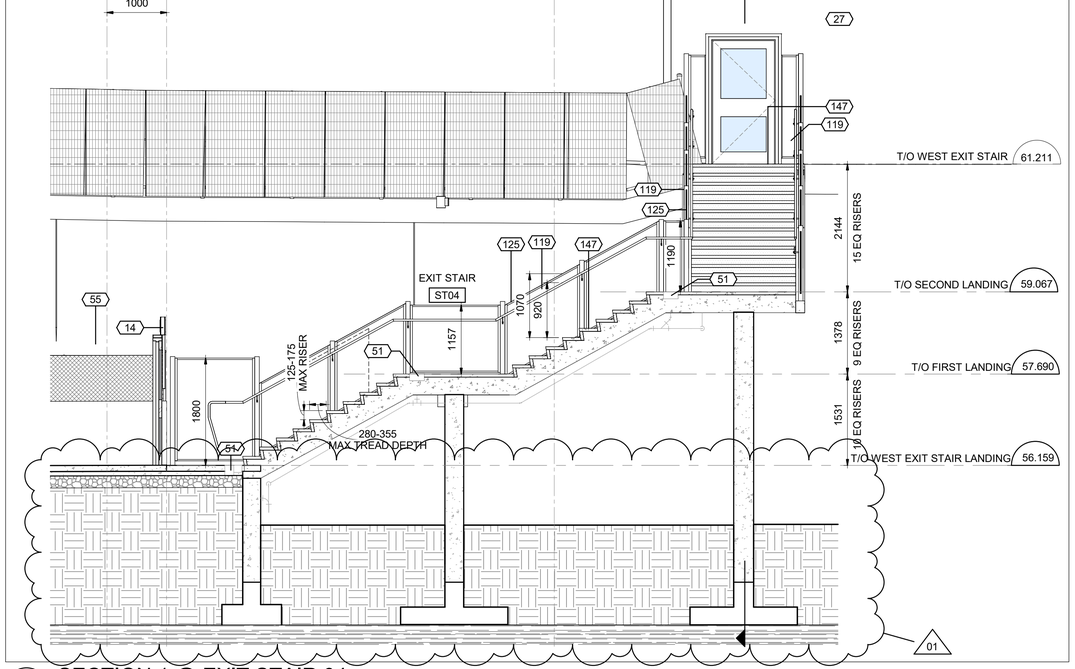

1 / 6003 SECTION 1 @ EXIT STAIR 04

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10/06/20

OTrain STAGE 2 ETAPE

Ottawa

ARCHITECTURAL
CORSO ITALIA
VERTICAL CIRCULATION
STAIRS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-6003

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

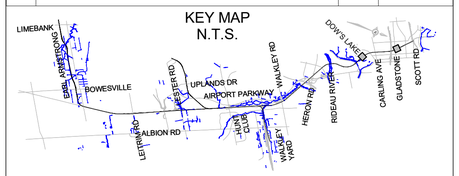
SCALE
HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE
0 0.5 1 2 4 m
VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29
01	REVISED ISSUE FOR CONSTRUCTION	JJ	2021/07/30

KEY MAP
N.T.S.



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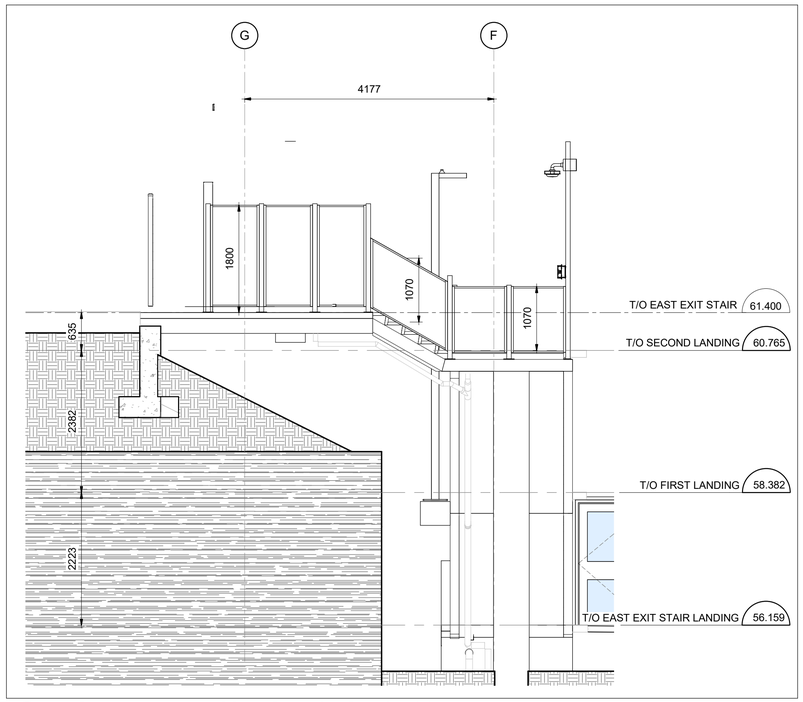
ISSUED FOR CONSTRUCTION
2021-07-30

KEYNOTE LEGEND

Key Value	Keynote Text
14	SIGN, REFER TO SIGNAGE PACKAGE
27	LIGHT POLE, REFER TO ELECTRICAL AND STRUCTURAL DRAWINGS FOR LIGHT POLE AND FOUNDATION TYPE BASED ON LIGHT POLE LOCATION
51	TRENCH DRAIN, REFER TO MECHANICAL DRAWGINS
55	TYPE 3, CHAINLINK FENCE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7225
119	CONTINUOUS SST HANDRAIL
125	TYPE 2 RAILING, PERFORATED METAL PANEL, MIN. 1070mm HIGH, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7220
147	PRECAST TREADS ON CAST-IN-PLACE CONCRETE STAIRS C/W HEAT TRACE

TITLEBLOCK: 790mm x 534mm



4 / 6004 NORTH ELEVATION @ EXIT STAIR 03

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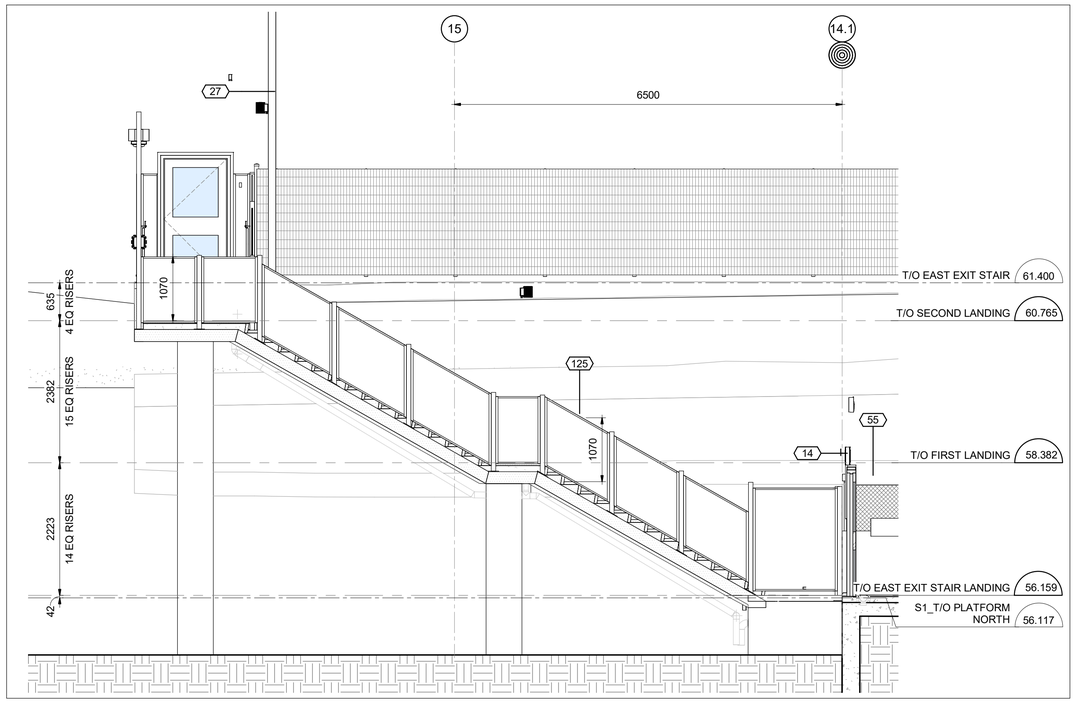

3 / 6004 WEST ELEVATION @ EXIT STAIR ST03

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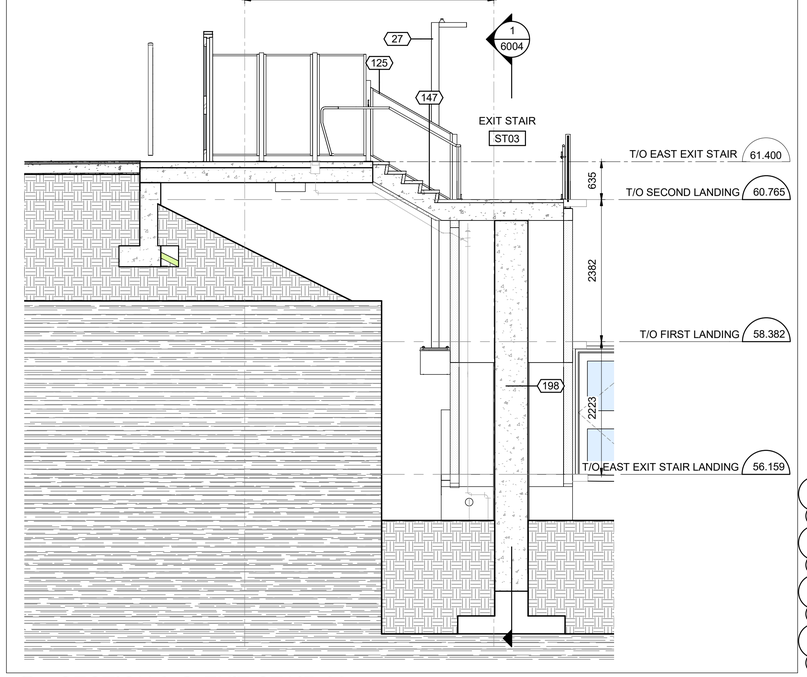

2 / 6004 SECTION 2 @ EXIT STAIR 03

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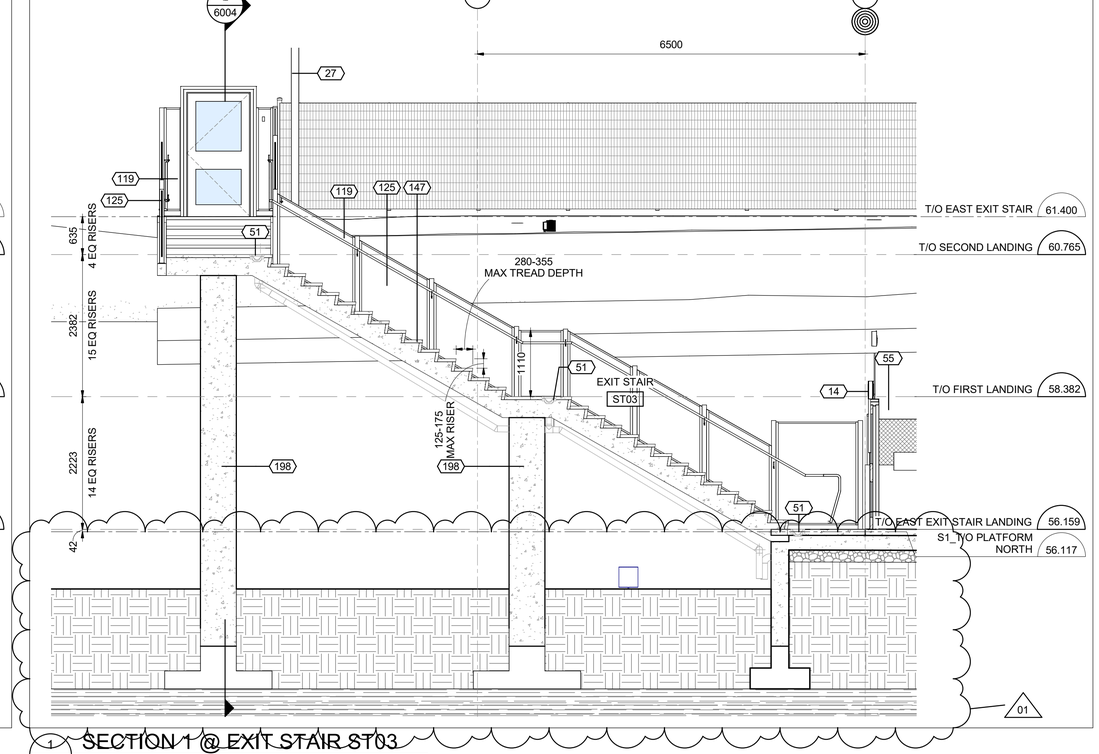

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10/06/20

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
VERTICAL CIRCULATION
STAIRS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-6004

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

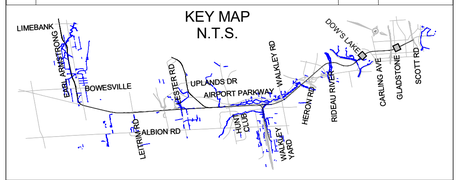
SCALE
HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE
0 0.5 1 2 4 m
VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29
01	REVISED ISSUE FOR CONSTRUCTION	JJ	2021/07/30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

KEYNOTE LEGEND

Key Value	Keynote Text
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55	TYPE 3, CHAINLINK FENCE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7225
119	CONTINUOUS SST HANDRAIL
125	TYPE 2 RAILING, PERFORATED METAL PANEL, MIN. 1070mm HIGH, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7220
147	PRECAST TREADS ON CAST-IN-PLACE CONCRETE STAIRS C/W HEAT TRACE
198	CONCRETE COLUMN, REFER TO STRUCTURAL DRAWINGS

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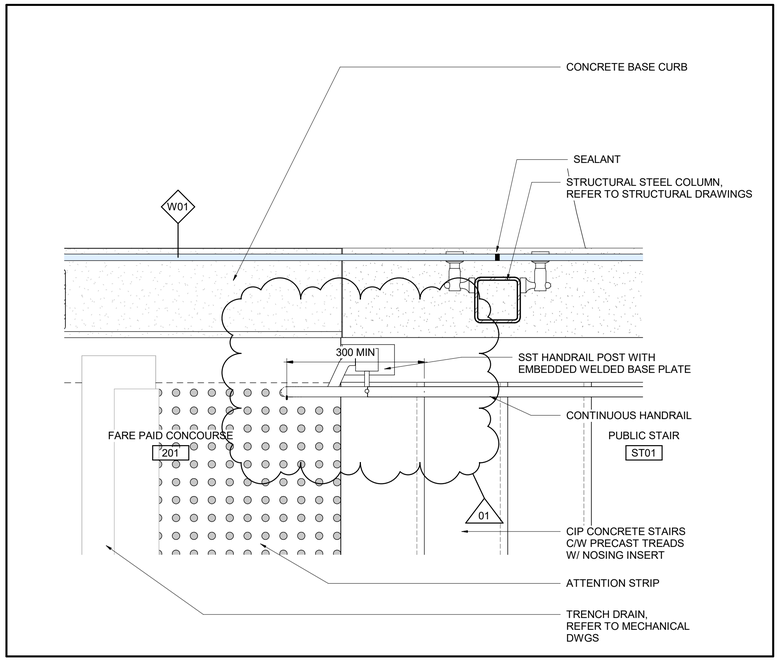
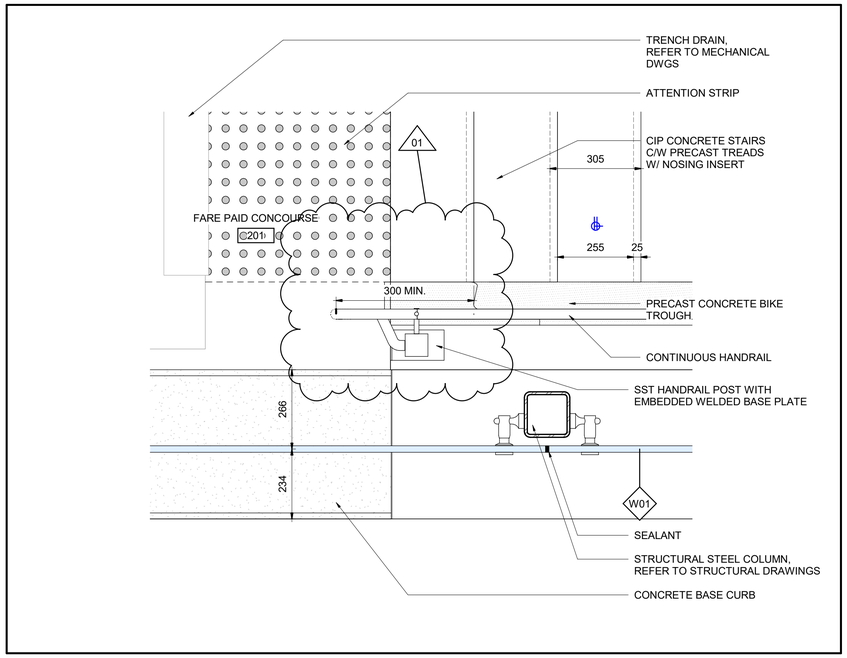


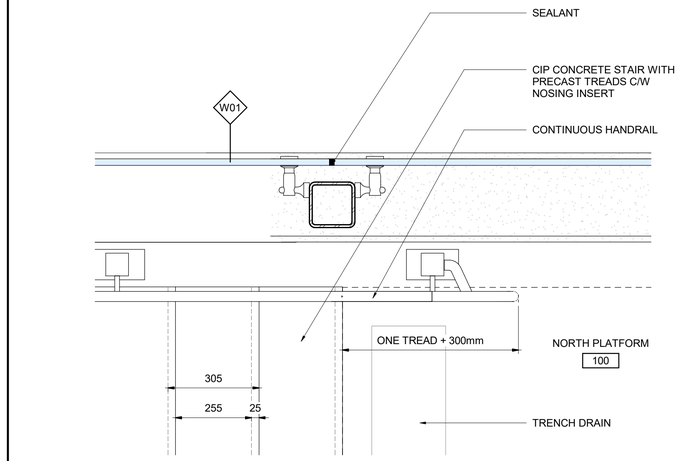
4 6050 PLAN DETAIL STAIR ST01 - CONCORSE LEVEL

1 : 10



2 6050 PLAN DETAIL STAIR ST01 - CONCOURSE LEVEL

1 : 10



3 6050 PLAN DETAIL STAIR ST01- PLATFORM LEVEL

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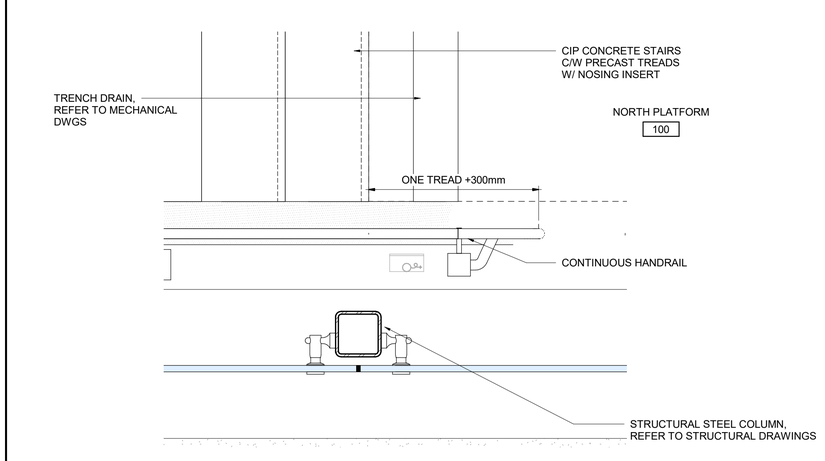


1 6050 PLAN DETAIL STAIR ST01 - PLATFORM LEVEL

1 : 10

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
VERTICAL CIRCULATION
STAIR DETAILS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-6050

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS LICENCE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

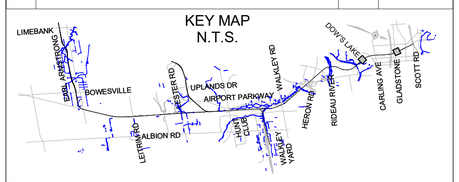
HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE
0 0.5 1 2 4 m
VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29
01	REVISED ISSUE FOR CONSTRUCTION	JJ	2021/07/30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

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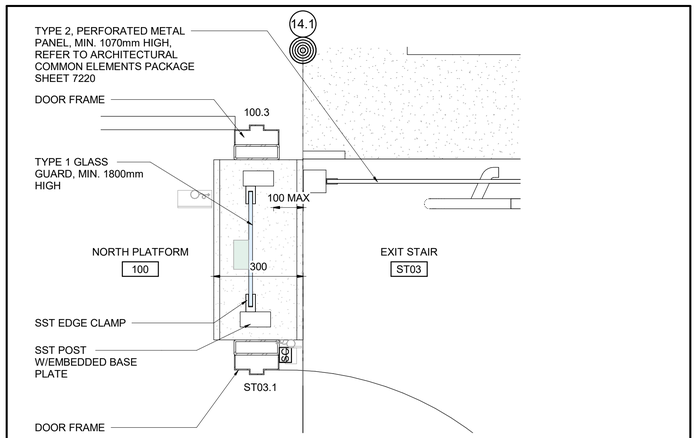
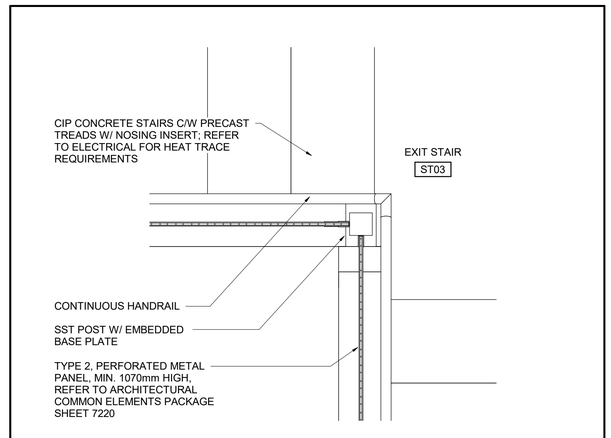
10/06/20

TITLEBLOCK: 790mm x 534mm



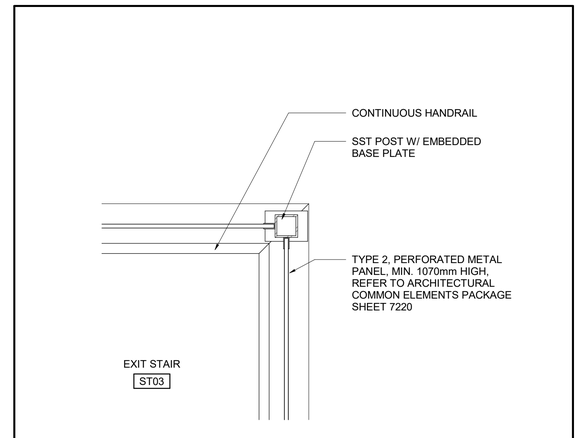
6 6051 DETAIL - ST03 GUARD/DOOR

1 : 10



5 6051 DETAIL - ST03 INSIDE CORNER

1 : 10



4 6051 DETAIL - ST03 OUTSIDE CORNER

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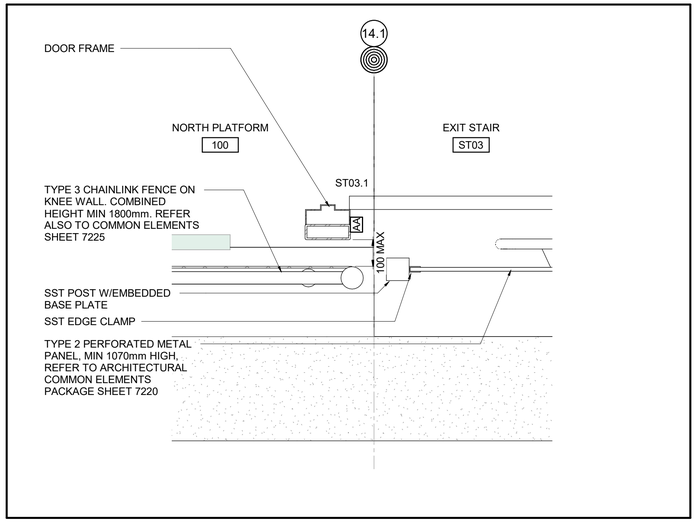
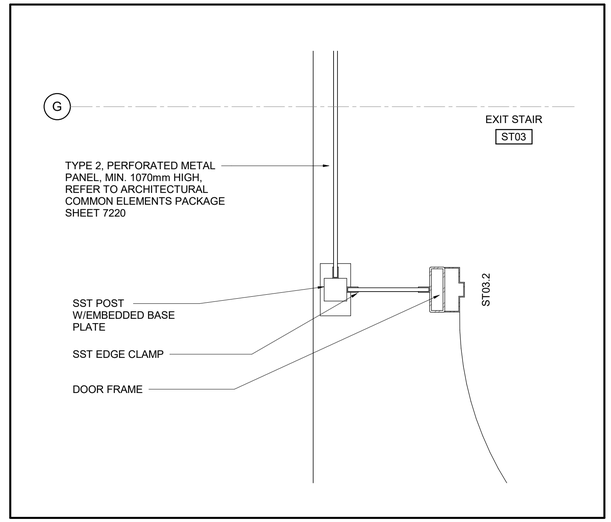


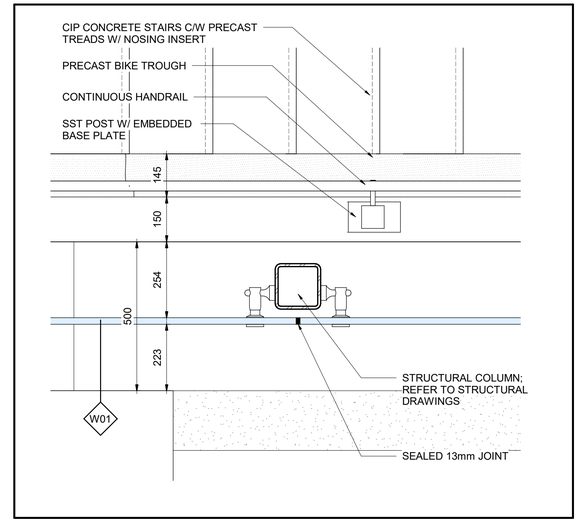
3 6051 PLAN DETAIL - GUARD @ CHAIN LINK FENCE PLATFORM LEVEL

1 : 10



2 6051 PLAN DETAIL - GUARD AT DOOR ST03

1 : 10



1 6051 PLAN DETAIL - ST01 AT FULL HEIGHT GLASS

1 : 10

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
VERTICAL CIRCULATION
STAIR DETAILS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-6051

MODEL NUMBER
660373-1GSS-001-44DM-1000

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
ROBERT A. BRISBIN
LICENCE 3782

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

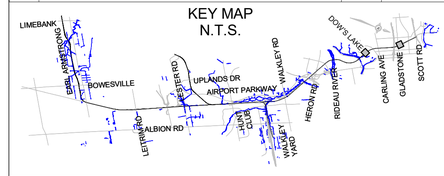
HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE
0 0.5 1 2 4 m
VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-02-25

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10/06/20

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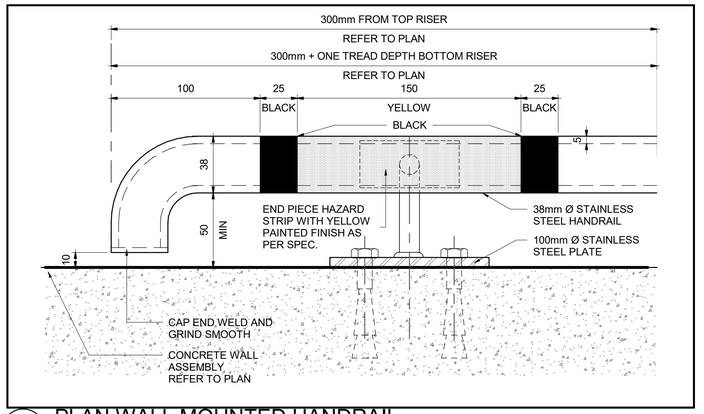
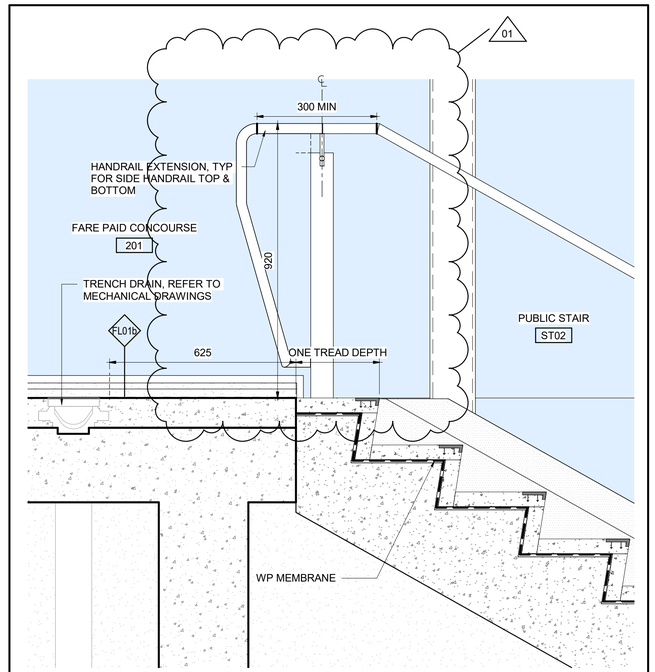


4 / 6052 PLAN WALL MOUNTED HANDRAIL

1 : 2



3 / 6052 SECTION - TOP OF STAIR

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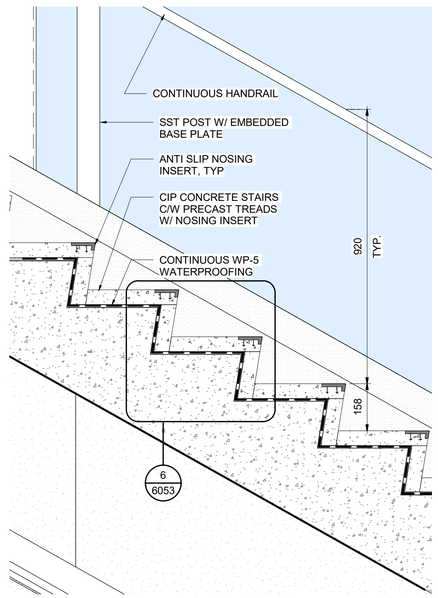
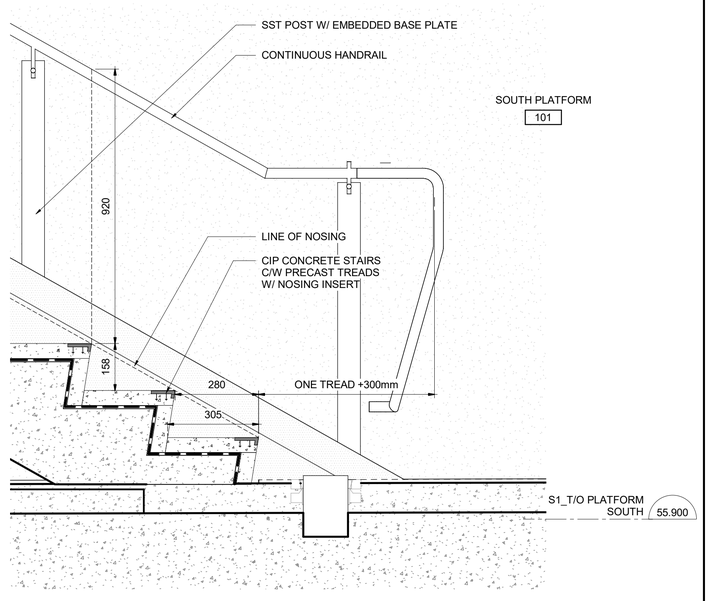


2 / 6052 SECTION - STAIR DETAIL

1 : 10



1 / 6052 SECTION DETAIL - BASE OF STAIR

1 : 10

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
VERTICAL CIRCULATION
STAIR DETAILS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-6052

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
LICENSED
3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE
0 0.5 1 2 4 m
VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
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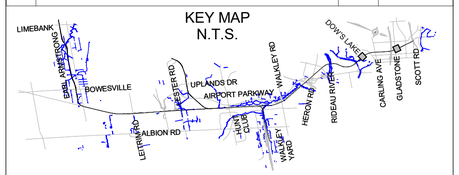
KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-02-25

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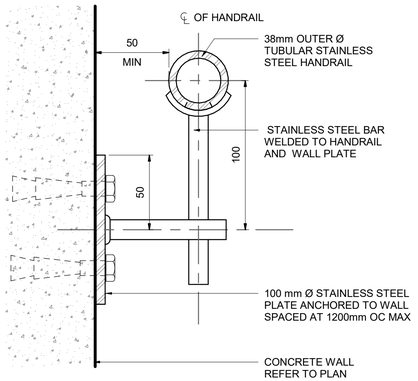
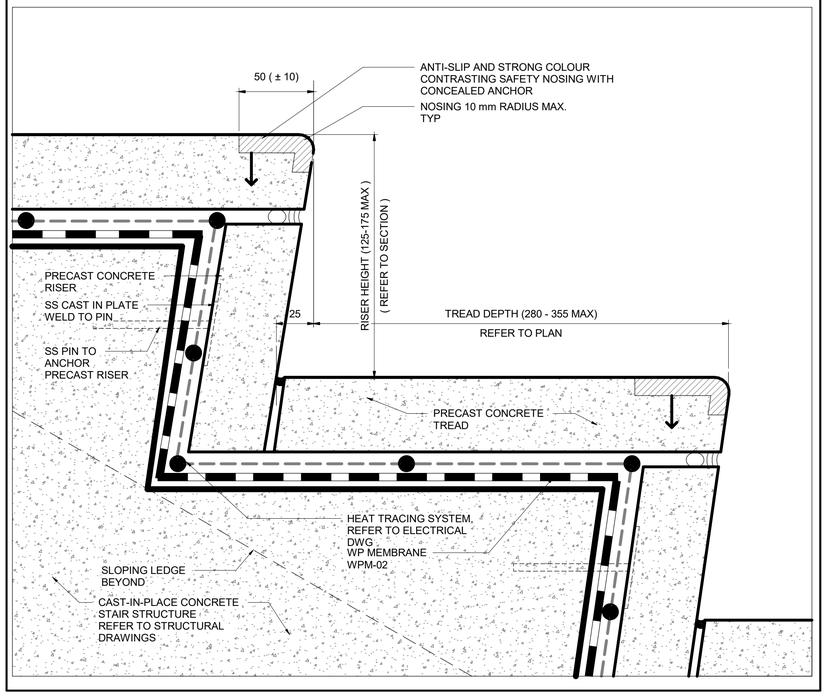
10/06/20

TITLEBLOCK: 790mm x 534mm



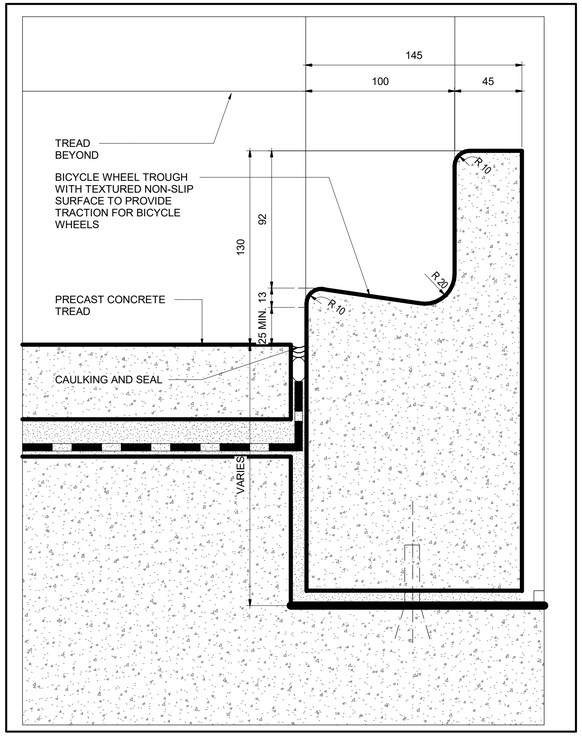
7 / 6053 SECTION - WALL MOUNTED HANDRAIL

1 : 2



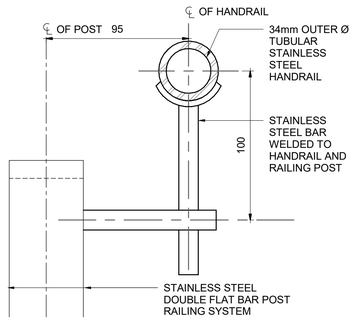
6 / 6053 SECTION - PRECAST STAIR TREAD

1 : 2



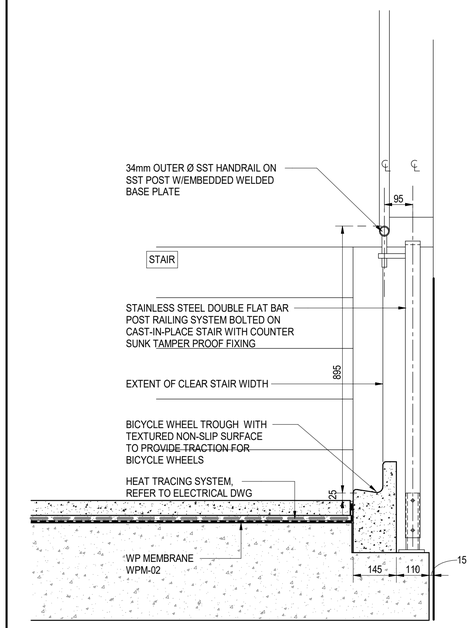
5 / 6053 BICYCLE WHEEL THROUGH DETAIL

1 : 2



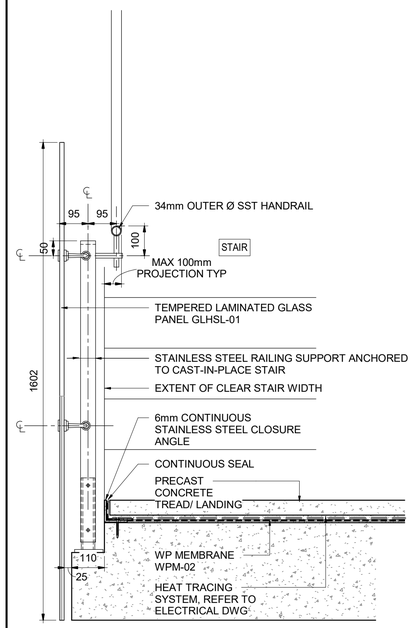
4 / 6053 HANDRAIL AT POST

1 : 2



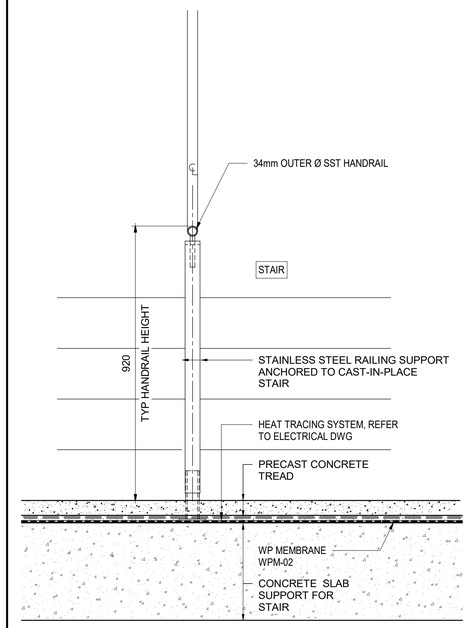
3 / 6053 SECTION AT BICYCLE WHEEL

1 : 10



2 / 6053 SECTION - STAIR HANDRAIL TYPE 3

1 : 10



1 / 6053 SECTION - STAIR HANDRAIL TYPE 2

1 : 10

OTrain STAGE 2 ETAPE

Ottawa

ARCHITECTURAL
CORSO ITALIA
VERTICAL CIRCULATION
STAIR DETAILS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-6053

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER: SNC·LAVALIN TransitNEXT

PRIMARY SEAL: ONTARIO ASSOCIATION OF ARCHITECTS — ROBERT BRISBIN LICENCE 3782

DESIGN FIRM: bbb architects ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

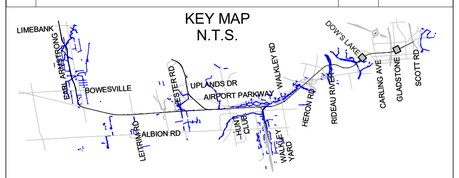
HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE
0 0.5 1 2 4 m
VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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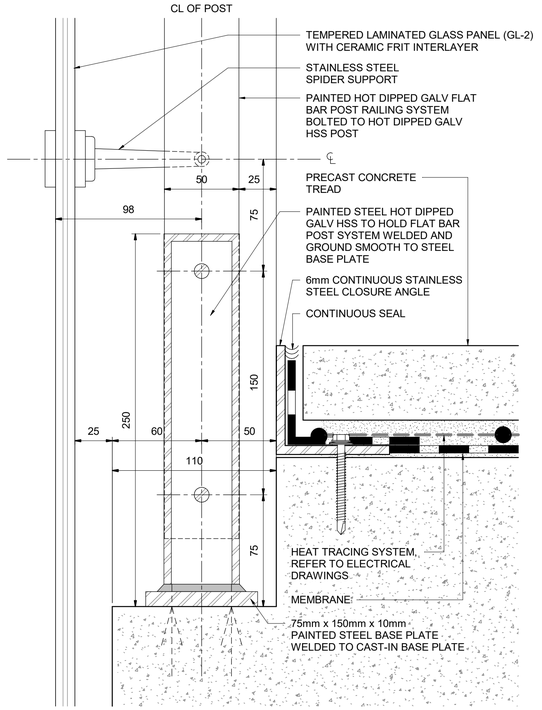
ISSUED FOR CONSTRUCTION

2021-02-25

C:\Users\rbarrett\Documents\660373-1GSS-001-44DM-1000_NBarrettVF3UM.rvt

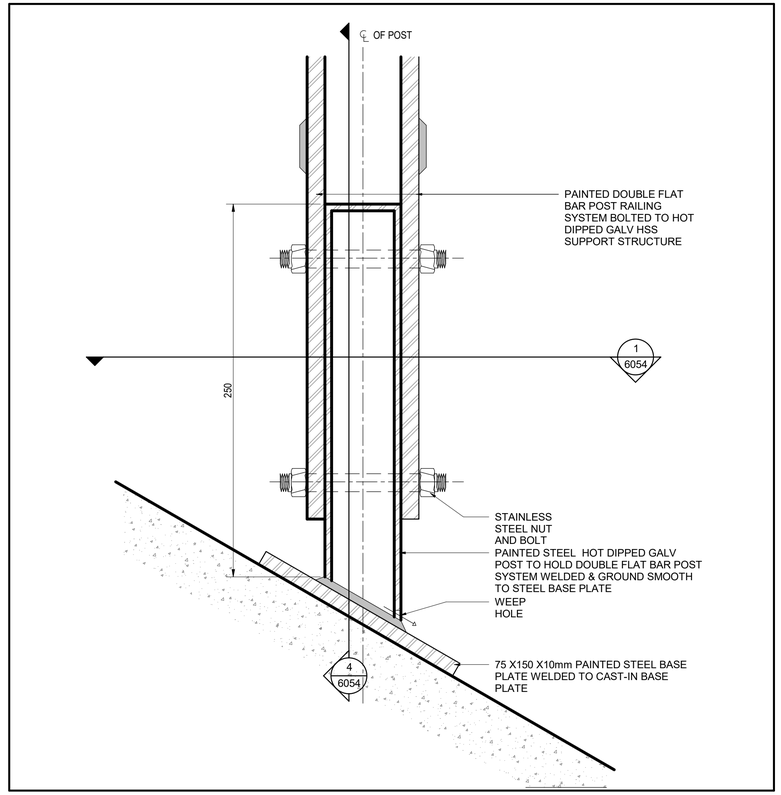
10/06/20

TITLEBLOCK: 790mm x 534mm



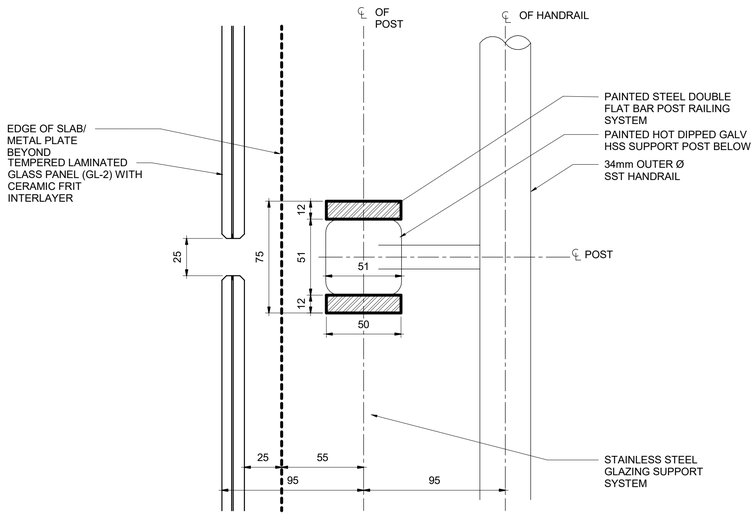
4 / 6054 SECTION DETAIL AT HANDRAIL POST

1 : 2



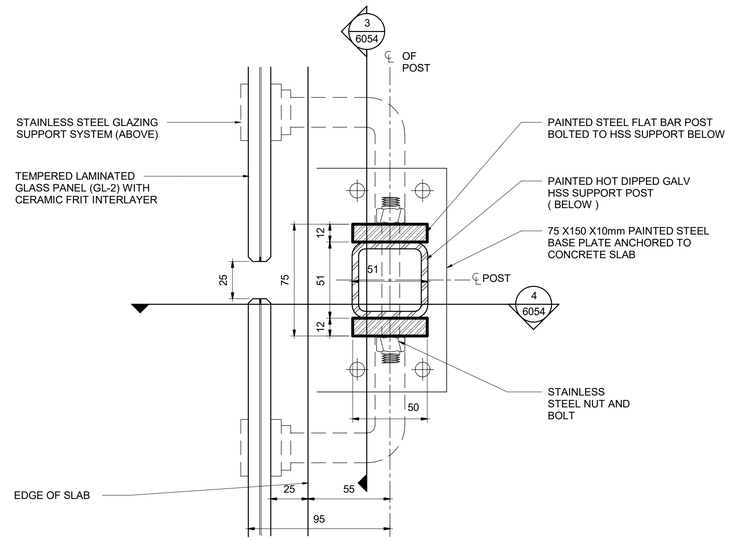
3 / 6054 SECTION DETAIL - HANDRAIL POST

1 : 2



2 / 6054 PLAN DETAIL AT HANDRAIL

1 : 2



1 / 6054 PLAN DETAIL - HANDRAIL POST - 3

1 : 2

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
VERTICAL CIRCULATION
STAIR DETAILS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-6054

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS R. BRISBIN LICENCE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

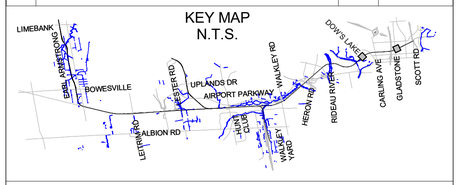
HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE
0 0.5 1 2 4 m
VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-02-25

10/06/20

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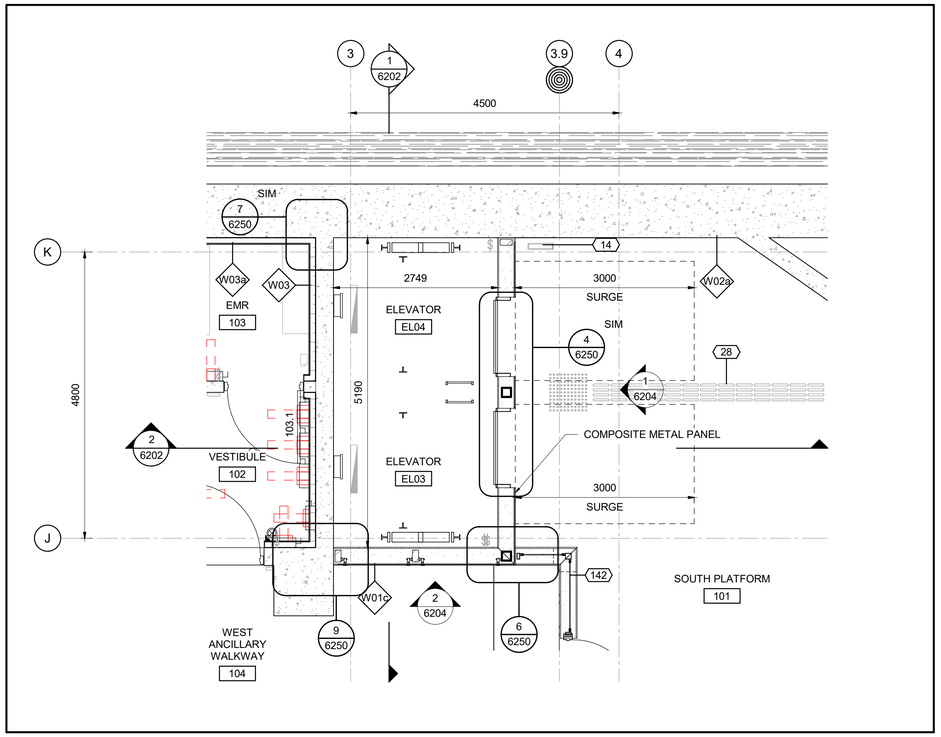
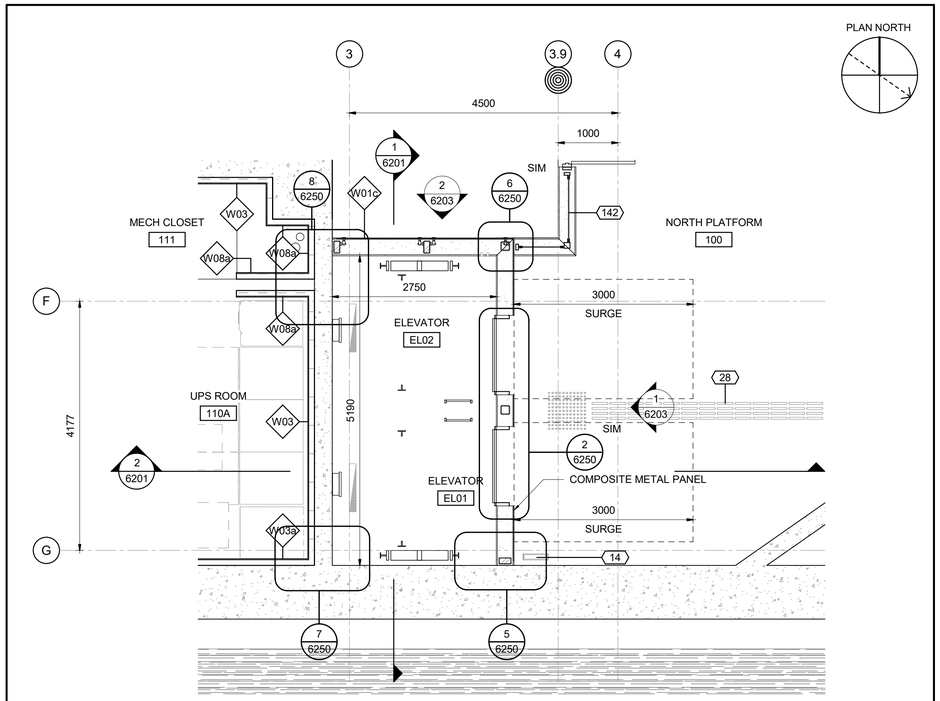
TITLEBLOCK: 790mm x 534mm



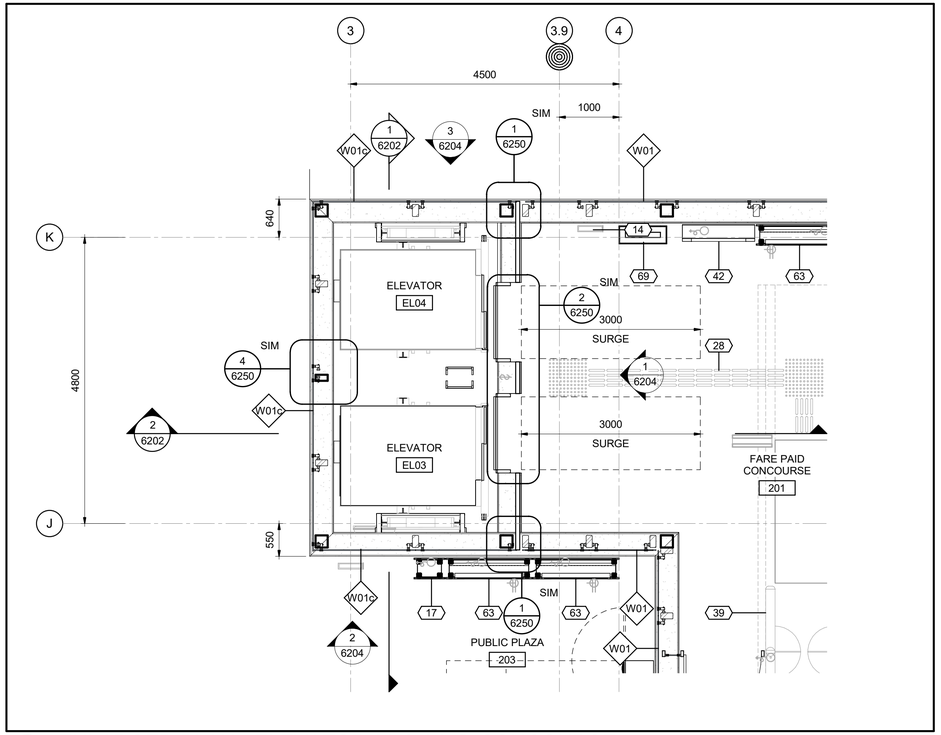
4 6200 ENLARGED PLAN - ELEVATOR 03 & 04 @ PLATFORM

1 : 50



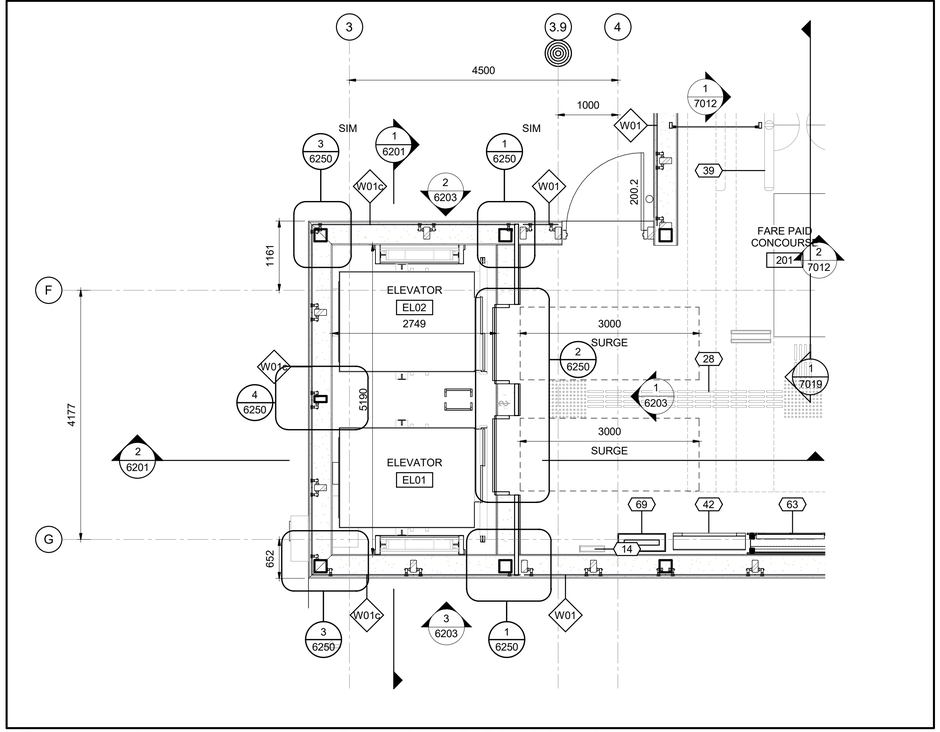
2 6200 ENLARGED PLAN - ELEVATOR 01 & 02 @ PLATFORM

1 : 50



3 6200 ENLARGED PLAN - ELEVATOR 03 & 04 @ CONCOURSE

1 : 50



1 6200 ENLARGED PLAN - ELEVATOR 01 & 02 @ CONCOURSE

1 : 50

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
VERTICAL CIRCULATION
ELEVATORS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R.BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
N.BARRETT	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-6200

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

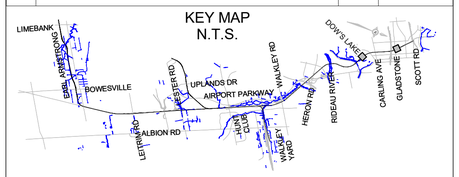
SCALE
HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE
0 0.5 1 2 4 m
VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

KEYNOTE LEGEND

Key Value	Keynote Text
14	SIGN, REFER TO SIGNAGE PACKAGE
17	UC-04, EMERGENCY PHONE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7115/7116
28	TACTILE WALKING SURFACE INDICATOR (TWSI)
39	FARE GATE, PROVIDED BY THE CITY, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7012/7019
42	NEXUS PASSENGER INFORMATION DISPLAY, PROVIDED BY THE CITY
63	UC-01, TIP CABINET, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7100/7102
69	VERTICAL ELECTRICAL CHASE
142	TYPE 1, GLASS GUARD, MIN 1800mm HIGH, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7215/7216

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04/11/19

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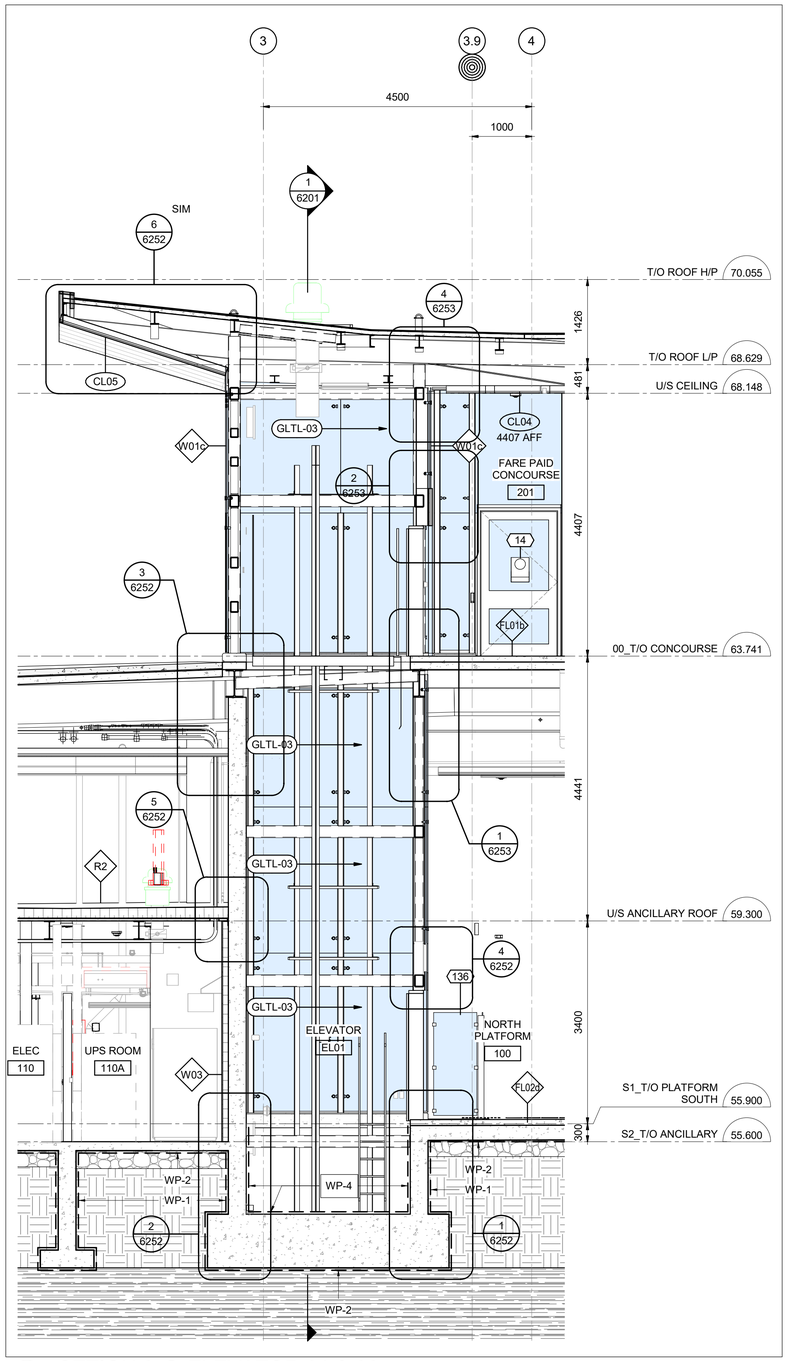
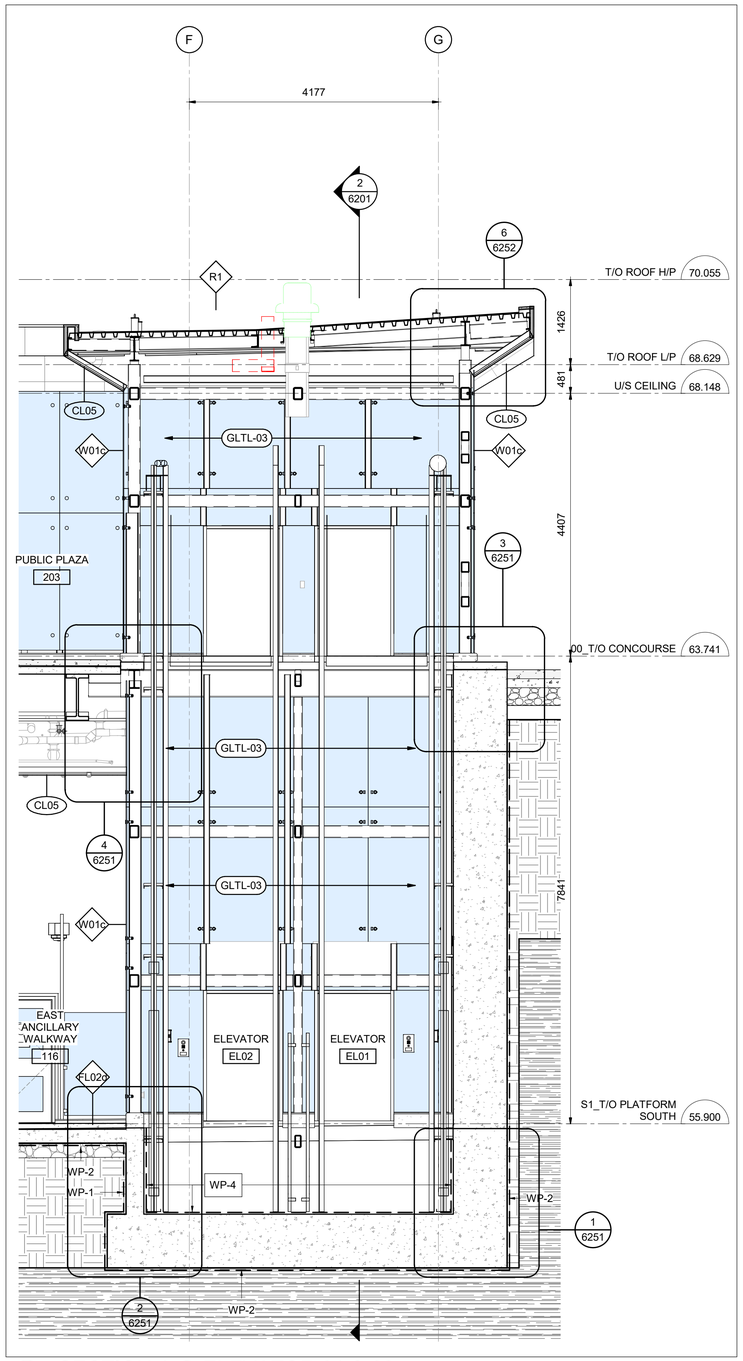


2 6201 SETION 2 @ ELEVATOR 01 & 02

1 : 50



1 6201 SECTION 1 @ ELEVATOR 01 & 02

1 : 50

OTrain STAGE ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
VERTICAL CIRCULATION
ELEVATORS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-6201

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
ROBERT A. BRISBIN
LICENCE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

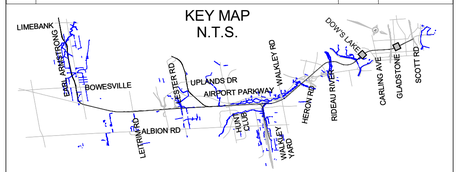
HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE
0 0.5 1 2 4 m
VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

KEYNOTE LEGEND

Key Value	Keynote Text
14	SIGN, REFER TO SIGNAGE PACKAGE
136	TYPE 1, GLASS GUARD, MIN. 2180mm HIGH, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7215/7216

10/06/20 C:\Users\nbarrett\Documents\660373-1GSS-001-44DM-1000_NBarrettVF3UM.rvt

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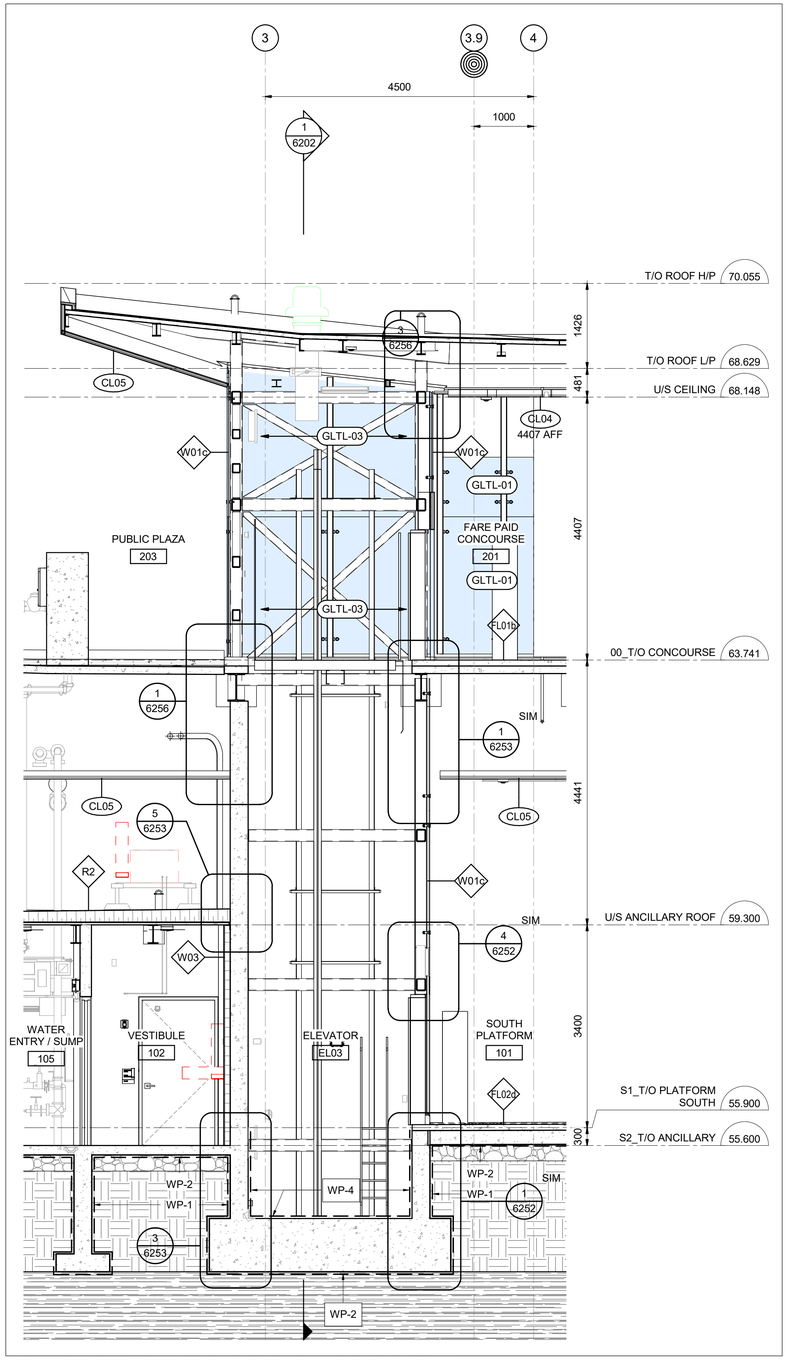
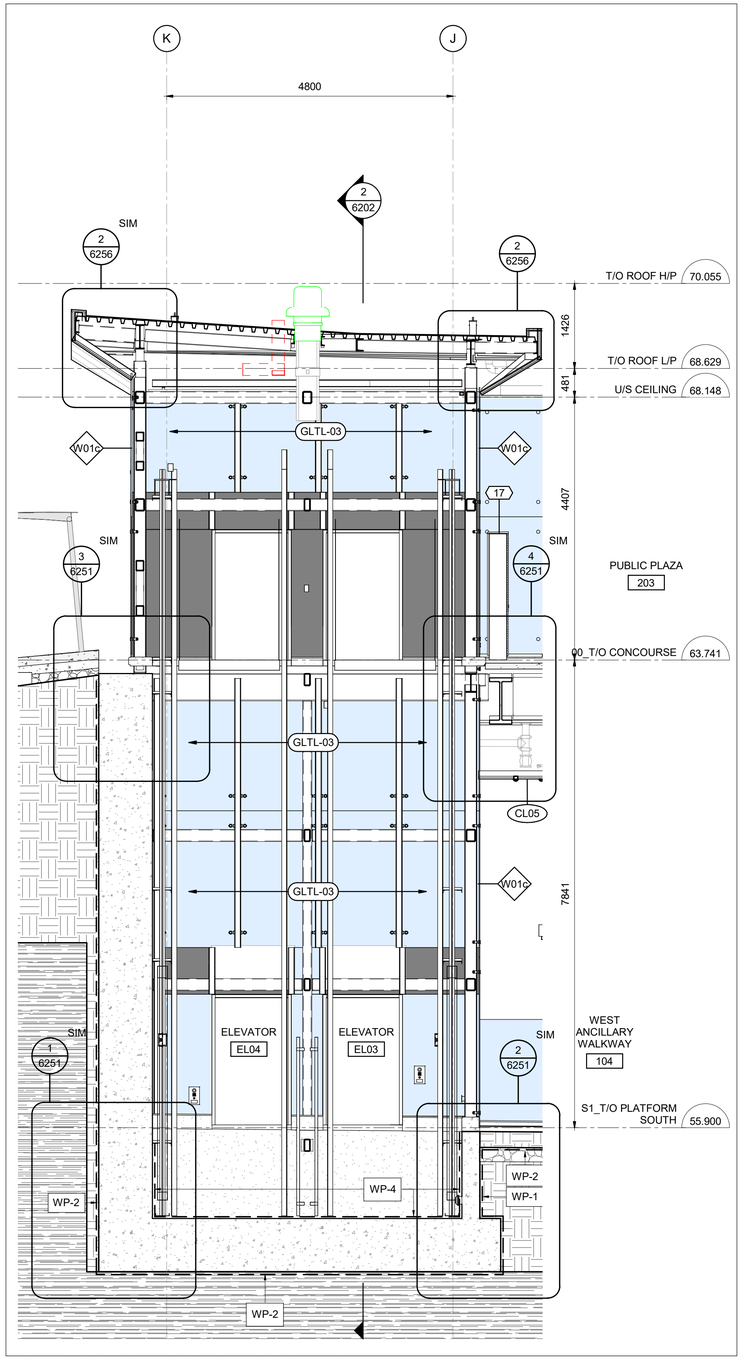


2 6202 CROSS SECTION @ ELEVATOR 03 & 04

1 : 50



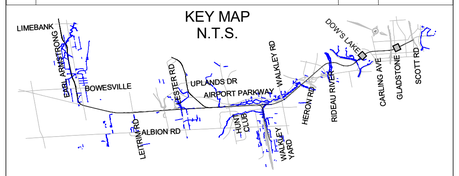
1 6202 SECTION @ ELEVATOR 03 & 04

1 : 50

OTrain STAGE 2 ETAPE 2	Ottawa
ARCHITECTURAL CORSO ITALIA VERTICAL CIRCULATION ELEVATORS	CONTRACT No. LRT19-1025
	DESIGNED R. BRISBIN / CHECKED A.KOURKOUNAKIS
	DRAWN A. RAFIE / SEALED R. BRISBIN
DRAWING NUMBER 660373-1GSS-001-44DD-6202	PRIMARY SEAL: ONTARIO ASSOCIATION OF ARCHITECTS, ROBERT BRISBIN, LICENCE 3782
MODEL NUMBER 660373-1GSS-001-44DM-1000	
DESIGN/BUILDER: SNC·LAVALIN TransitNEXT	
DESIGN FIRM: bbb architects ottawa inc.	SECONDARY SEAL (IF REQUIRED)
SCALE: HORIZONTAL 1 : 50 FULLSIZE, 1 : 100 HALF SIZE; 0 0.5 1 2 4 m; VERTICAL 1 : 50 FULLSIZE, 1 : 100 HALF SIZE	ASSET No. / ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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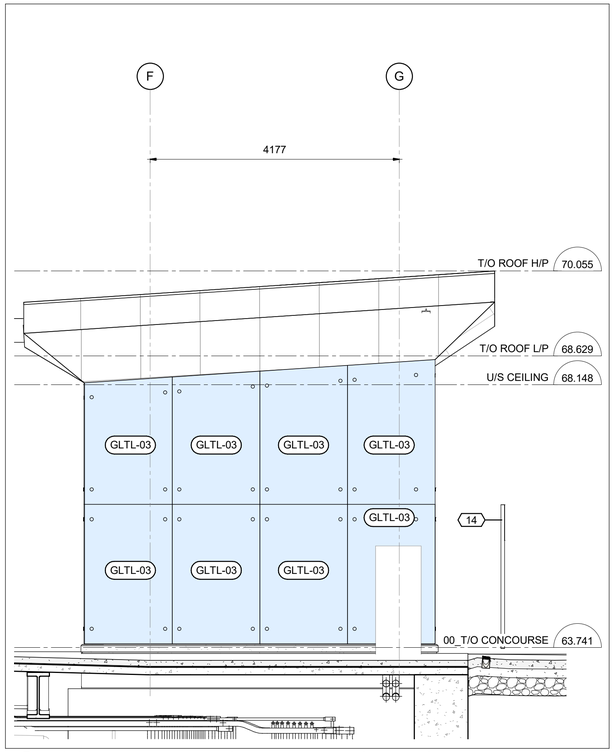
ISSUED FOR CONSTRUCTION
2021-03-29

KEYNOTE LEGEND

Key Value	Keynote Text
17	UC-04, EMERGENCY PHONE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7115/7116

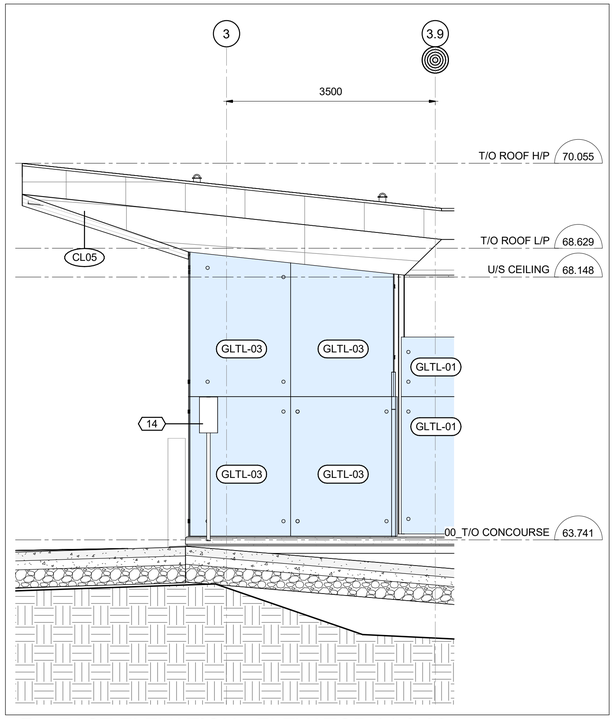
10/06/20 C:\Users\nbarrett\Documents\660373-1GSS-001-44DM-1000_NBarrettVF9UM.rvt

TITLEBLOCK: 790mm x 534mm



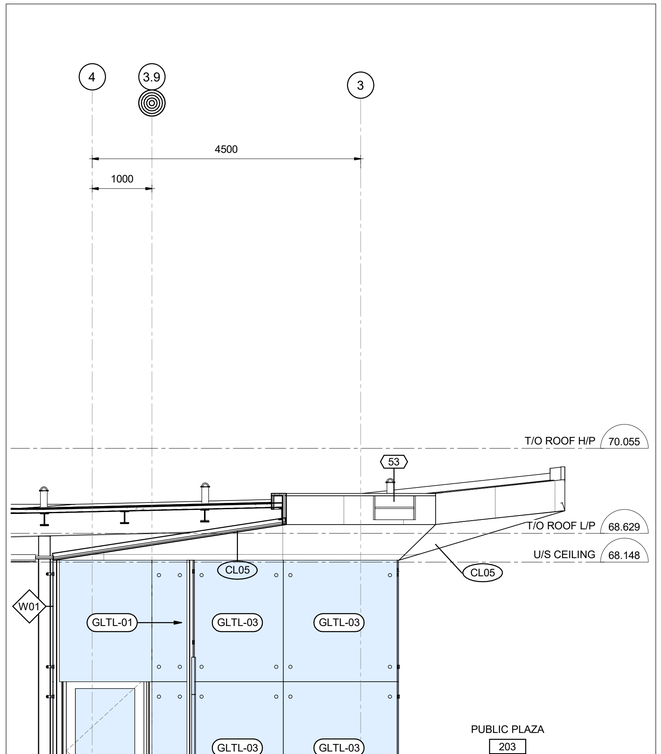
4 6203 SOUTH ELEVATION - ELEVATOR 01 & 02

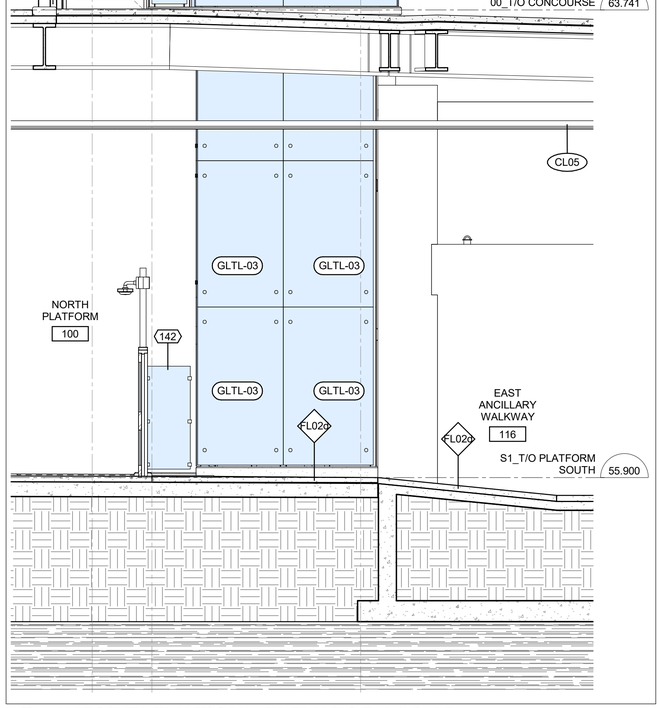
1 : 50



3 6203 EAST ELEVATION - ELEVATOR 01 & 02

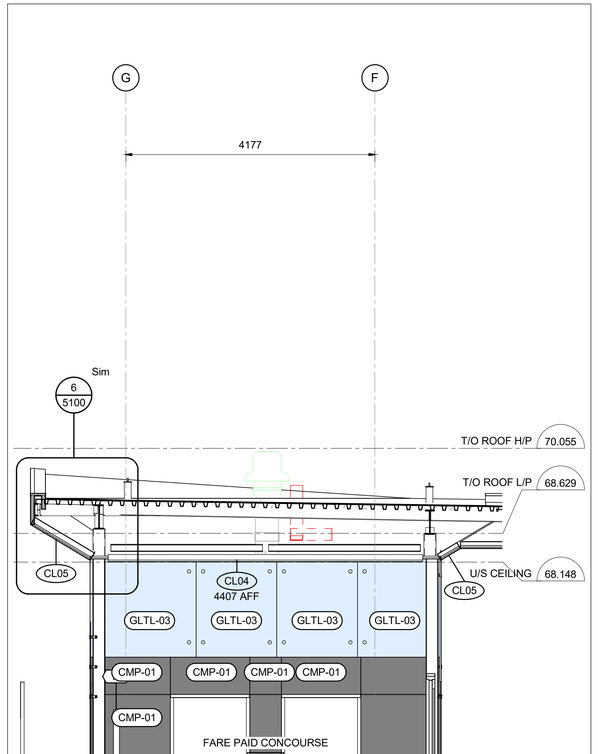
1 : 50

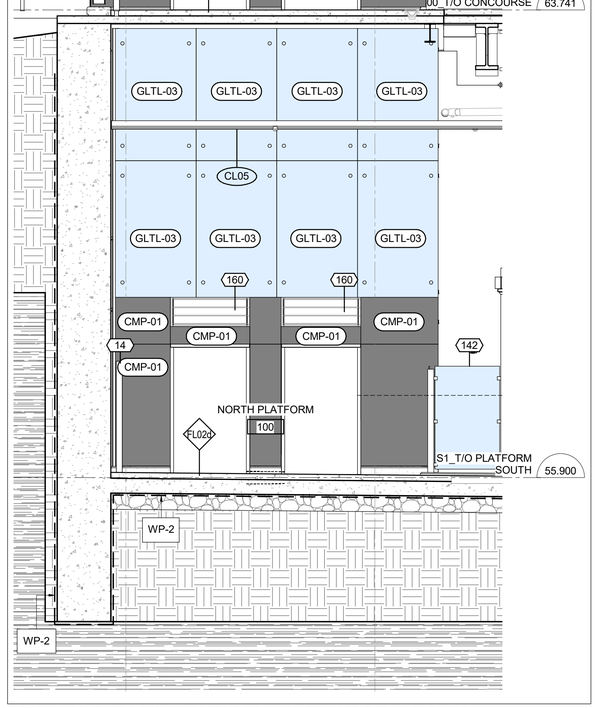




2 6203 WEST ELEVATION - ELEVATOR 01 & 02

1 : 50





1 6203 NORTH ELEVATION - ELEVATOR 01 & 02

1 : 50

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10/06/20

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
VERTICAL CIRCULATION
ELEVATORS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-6203

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS LICENCE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

0 0.5 1 2 4 m

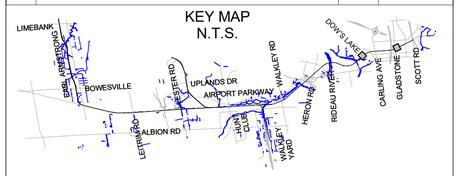
VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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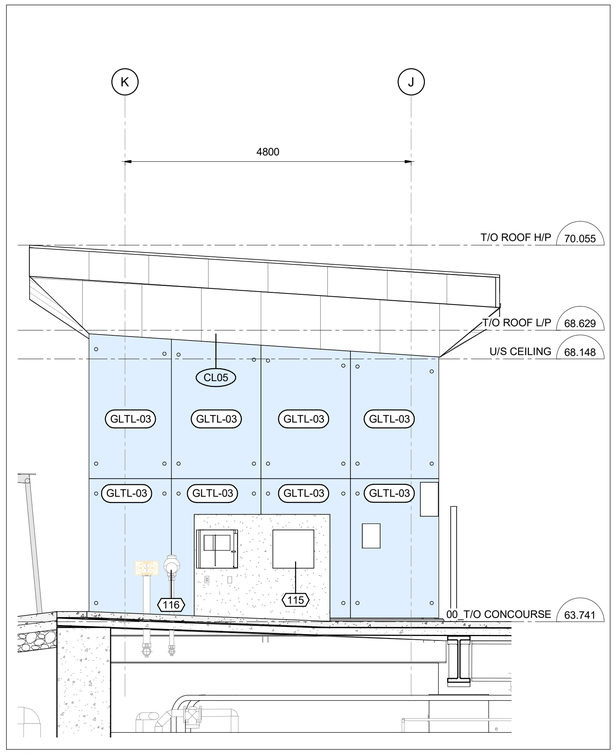
ISSUED FOR CONSTRUCTION
2021-03-29

KEYNOTE LEGEND

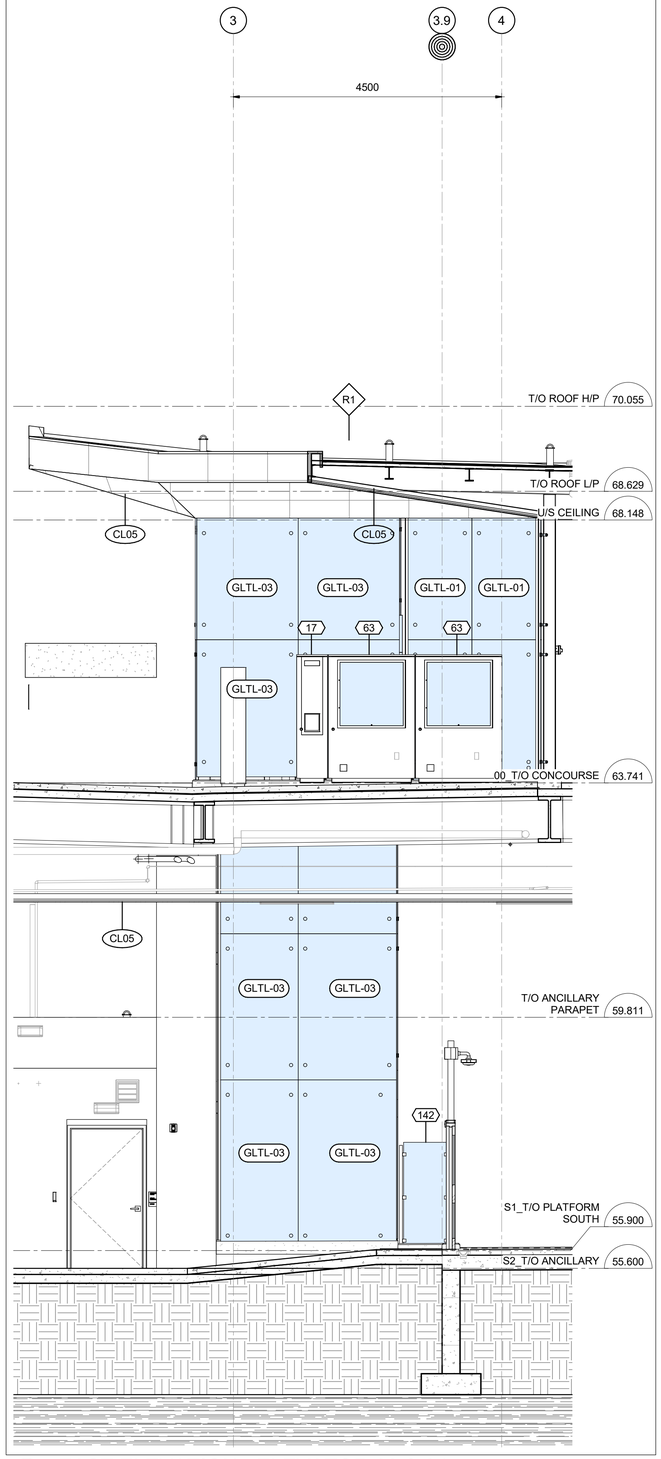
Key Value	Keynote Text
14	SIGN, REFER TO SIGNAGE PACKAGE
53	LADDER BUMP
142	TYPE 1, GLASS GUARD, MIN 1800mm HIGH, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7215/7216
160	LOUVRE, REFER TO MECHANICAL DRAWINGS

TITLEBLOCK: 790mm x 534mm



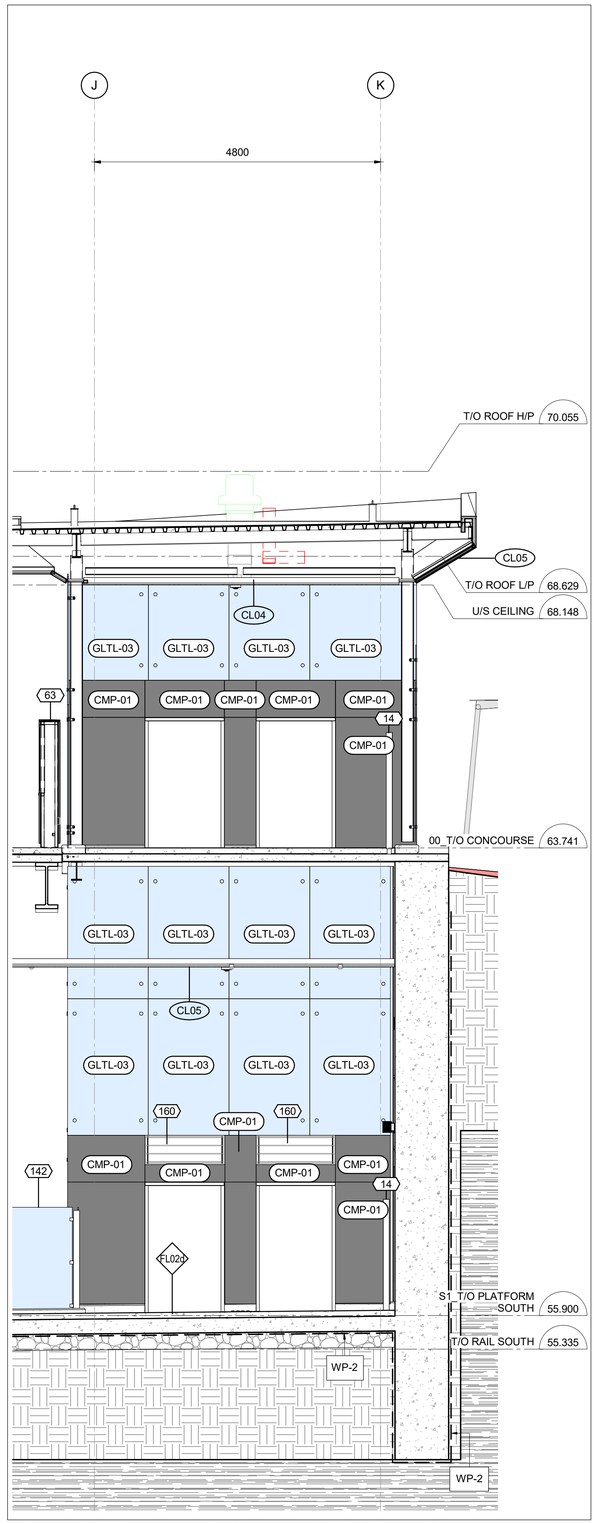
4 / 6204 SOUTH ELEVATION - ELEVATOR 03 & 04

1 : 50



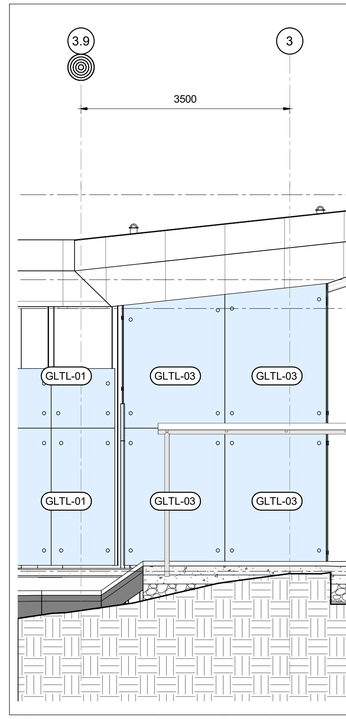
2 / 6204 EAST ELEVATION - ELEVATOR 03 & 04

1 : 50



1 / 6204 NORTH ELEVATION - ELEVATOR 03 & 04

1 : 50



3 / 6204 WEST ELEVATION - ELEVATOR 03 & 04

1 : 50

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10/06/20

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
VERTICAL CIRCULATION
ELEVATORS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-6204

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS — ARCHITECTURAL FIRM LICENCE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

HORIZONTAL 1 : 50 FULLSIZE; 1 : 100 HALF SIZE

0 0.5 1 2 4 m

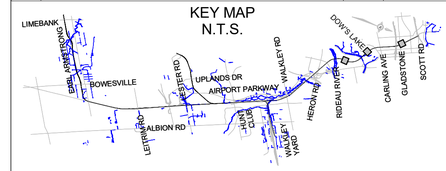
VERTICAL 1 : 50 FULLSIZE; 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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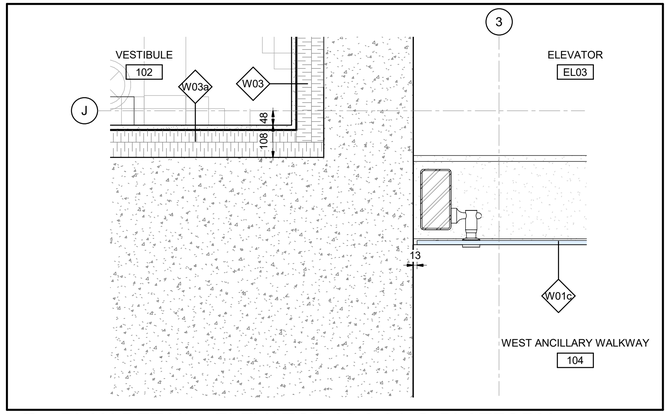
ISSUED FOR CONSTRUCTION

2021-03-29

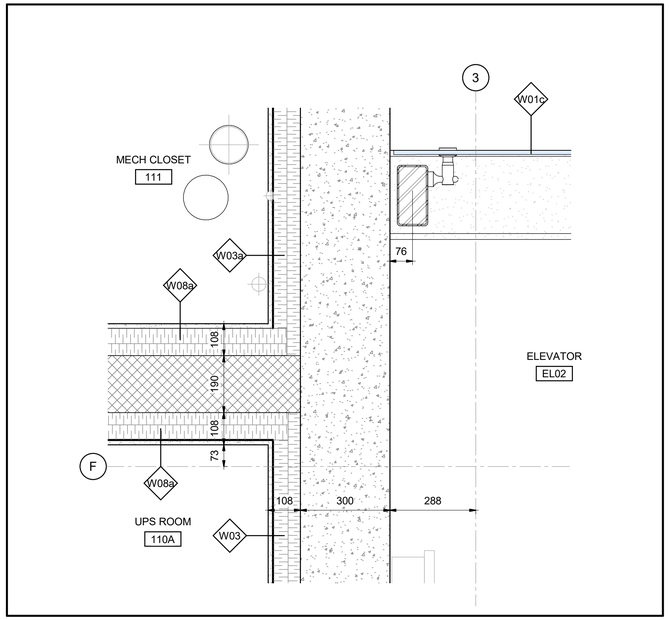
KEYNOTE LEGEND

Key Value	Keynote Text
14	SIGN, REFER TO SIGNAGE PACKAGE
17	UC-04, EMERGENCY PHONE, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7115/7116
63	UC-01, TIP CABINET, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7100/7102
115	SEMI-RECESSED INCIDENT COMMAND POST (ICP) WITH ANNUNCIATOR PANEL
116	FIRE DEPARTMENT CONNECTION (FDC)
142	TYPE 1, GLASS GUARD, MIN 1800mm HIGH, REFER TO ARCHITECTURAL COMMON ELEMENTS PACKAGE SHEET 7215/7216
160	LOUVRE, REFER TO MECHANICAL DRAWINGS



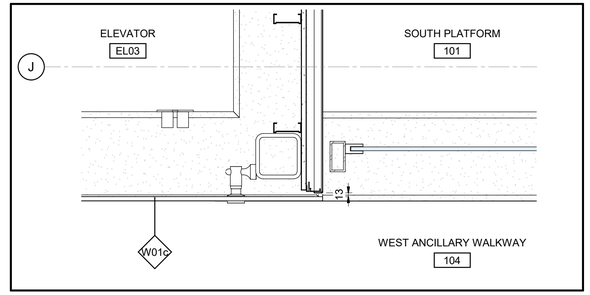
9/6250 PLAN DETAIL - ELEVATOR 03 & 04 @ PLATFORM

1 : 10



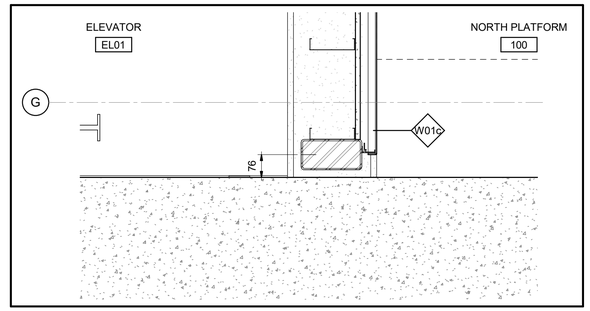
8/6250 PLAN DETAIL - ELEVATOR 02 & UPS ROOM WALL

1 : 10



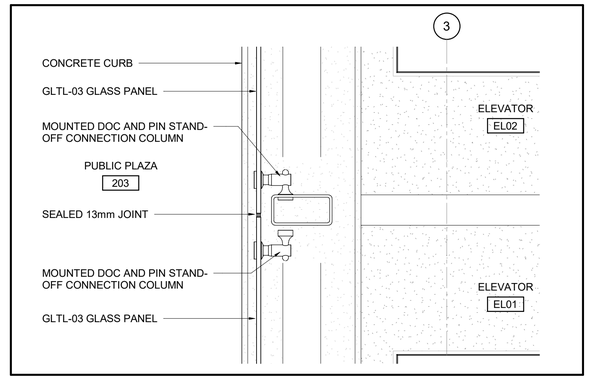
6/6250 ENLARGED PLAN - ELEVATOR 03 & 04 @PLATFORM

1 : 10



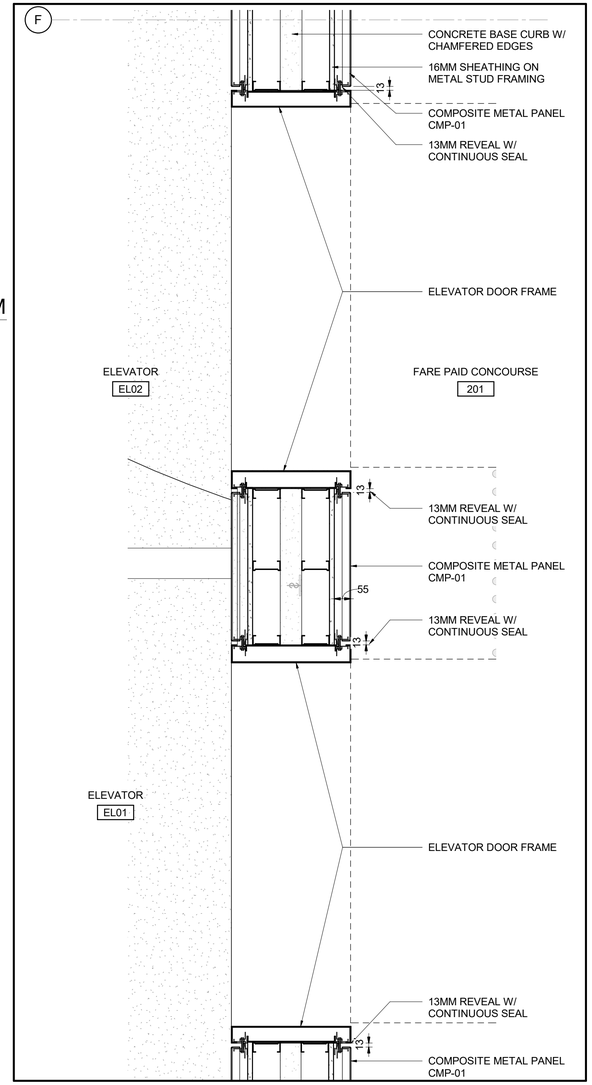
5/6250 PLAN - ELEVATOR 01 & 02 @ PLATFORM WALL

1 : 10



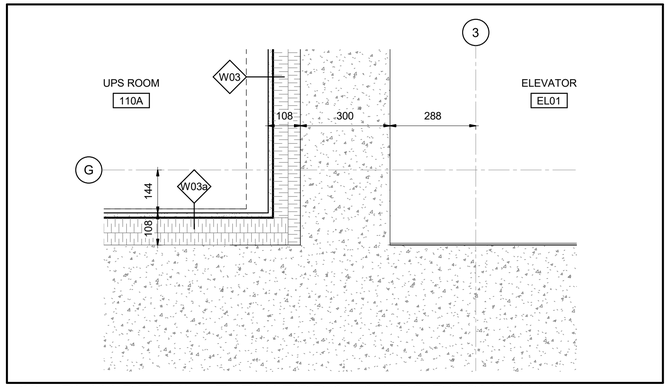
4/6250 PLAN DETAIL - EL01 & EL02 CONNECTION COLUMN

1 : 10



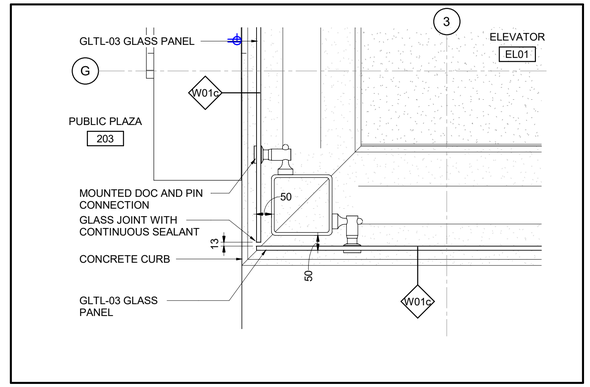
2/6250 PLAN DETAIL - ELEVATOR 01 & 02 @ CONCOURSE

1 : 10



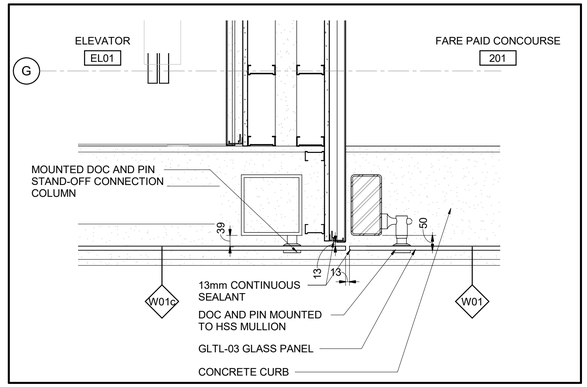
7/6250 PLAN DETAIL - ELEVATOR 01 & UPS ROOM WALL

1 : 10



3/6250 PLAN DETAIL - EL01 CORNER @ CONCOURSE

1 : 10



1/6250 PLAN DETAIL - EL01 CORNER @ HSS COLUMN

1 : 10

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
VERTICAL CIRCULATION
ELEVATOR DETAILS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-6250

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

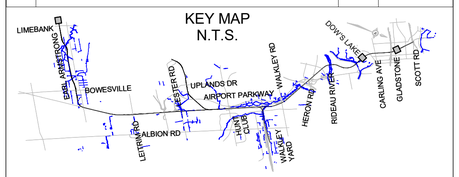
SCALE
HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE
0 0.5 1 2 4 m
VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-03-29

TITLEBLOCK: 790mm x 534mm

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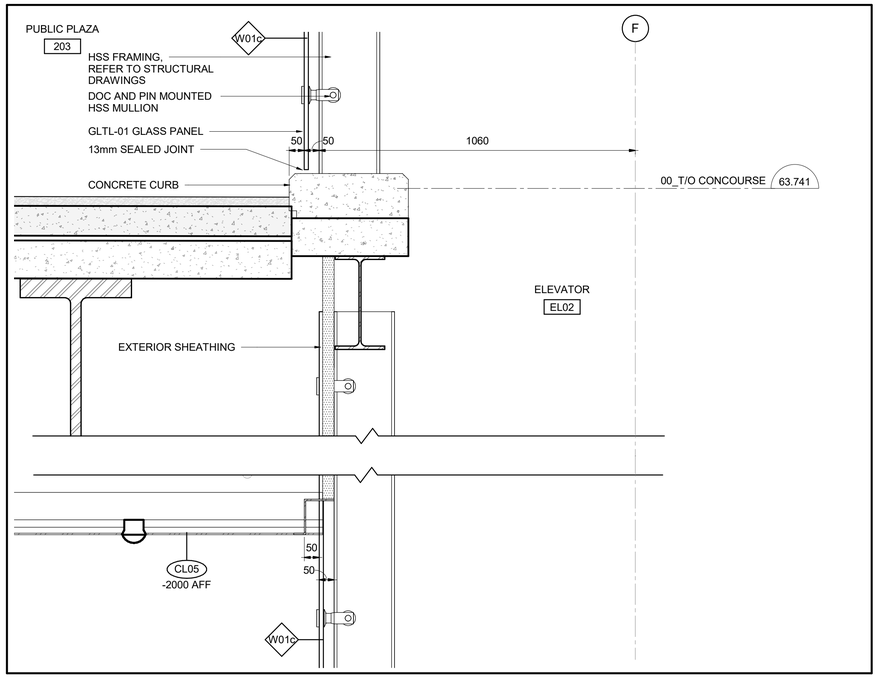
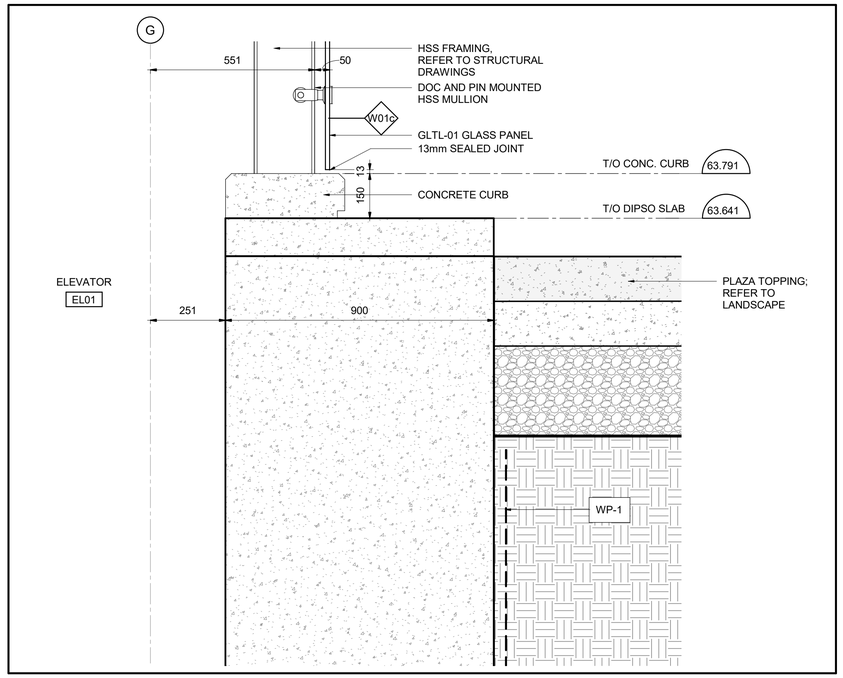
10/06/20



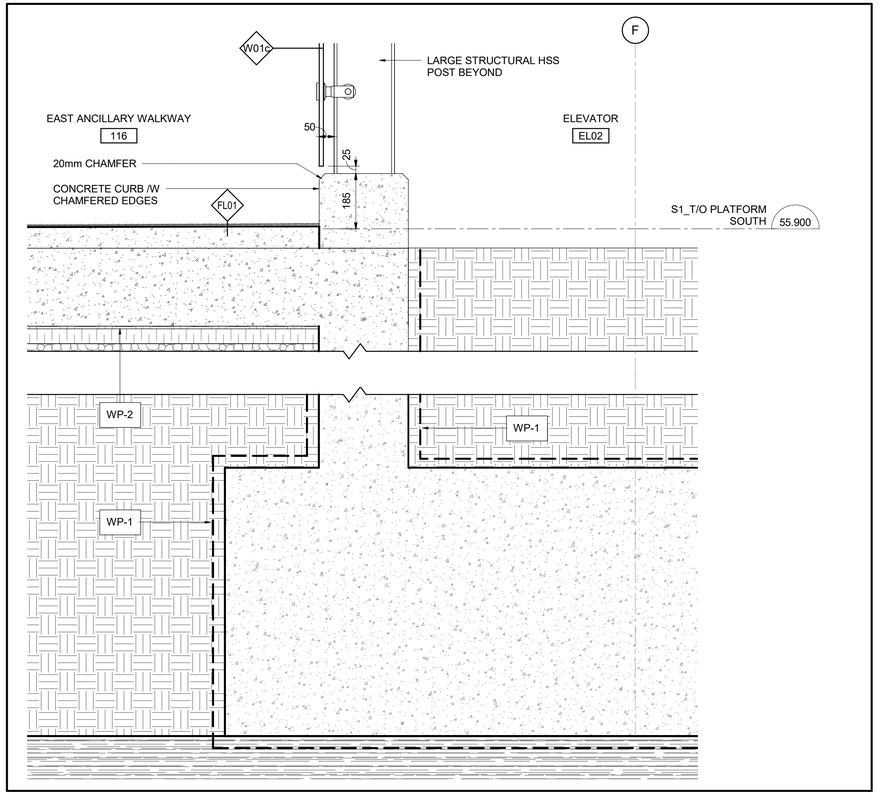
4 / 6251 SECTION 1 @ ELEVATOR 01 & 02 - PLAZA CURB

1 : 10



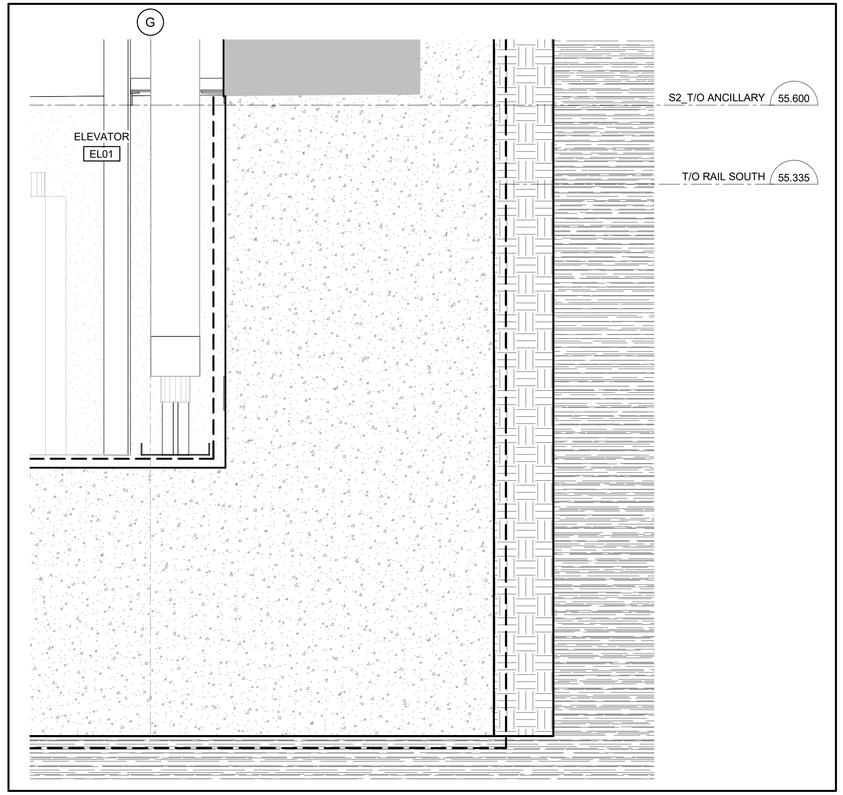
3 / 6251 SECTION 1 @ ELEVATOR 01 & 02 - PLAZA EDGE

1 : 10



2 / 6251 SECTION DETAIL - ELEVATOR 02 @ FOUNDATION WALL

1 : 10



1 / 6251 SECTION DETAIL - ELEVATOR 01 @ FOUNDATION WALL

1 : 10

TITLEBLOCK: 790mm x 534mm

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10/06/20

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
VERTICAL CIRCULATION
ELEVATOR DETAILS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	

DRAWING NUMBER
660373-1GSS-001-44DD-6251

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

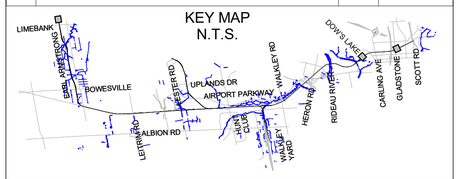
SCALE
HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE
0 0.5 1 2 4 m
VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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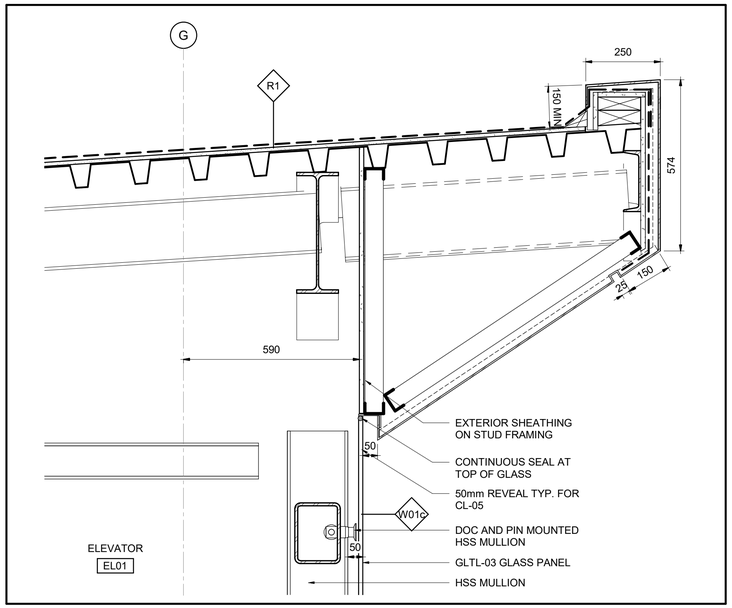
ISSUED FOR CONSTRUCTION

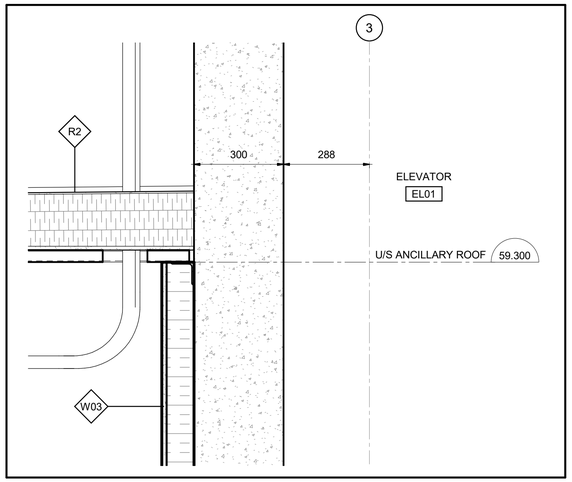
2021-02-25

TITLEBLOCK: 790mm x 534mm



6 / 6252 SECTION DETAIL - EL01 & 02 @ ROOF SOFFIT

1 : 10



5 / 6252 SECTION DETAIL - EL01 & 02 @ ANCILLARY ROOF

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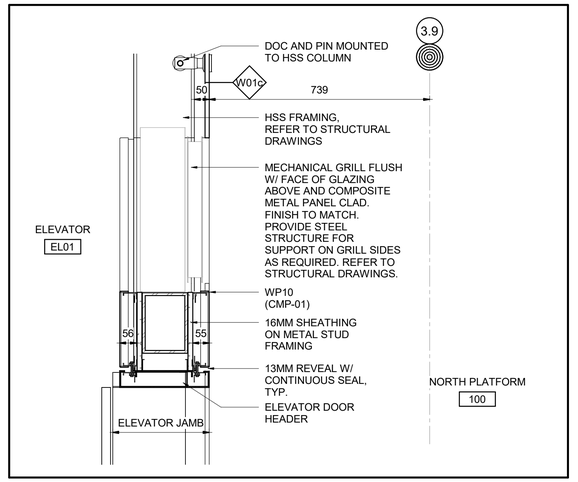
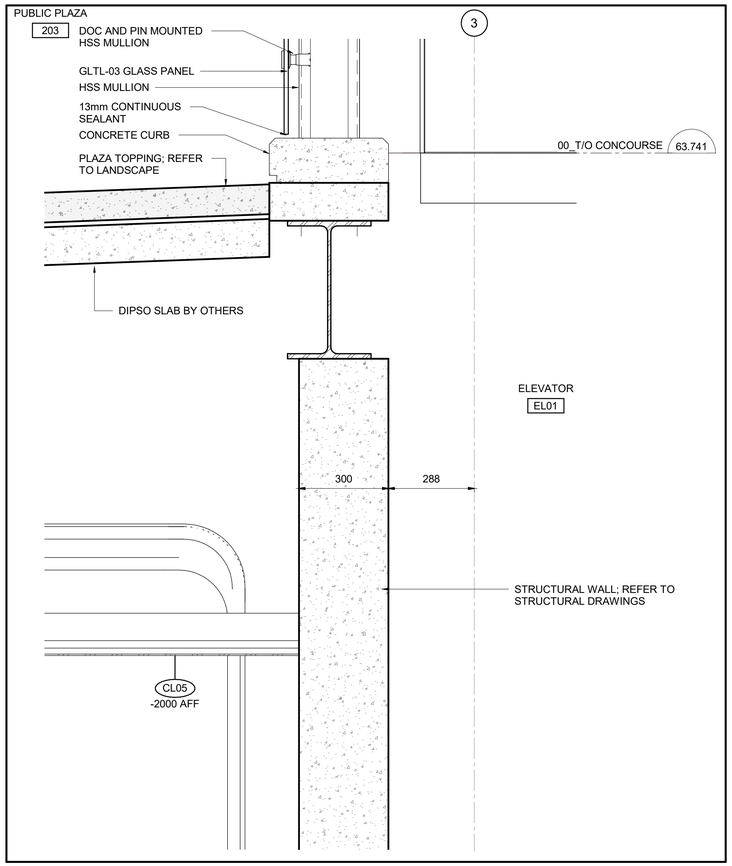


4 / 6252 SECTION DETAIL - ELEVATOR DOOR HEADER

1 : 10



3 / 6252 SECTION DETAIL - EL01 & 02 @ PUBLIC PLAZA LEVEL

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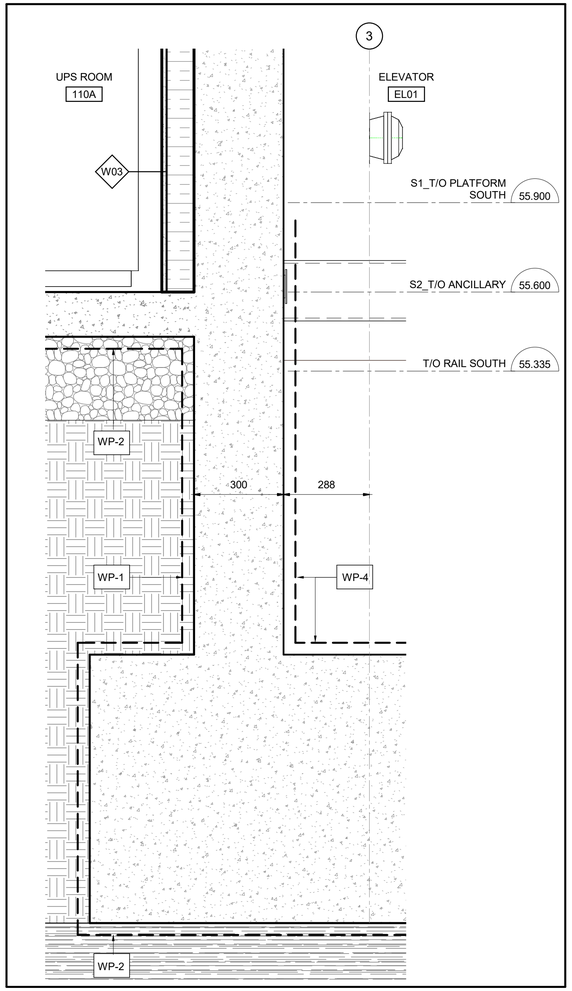
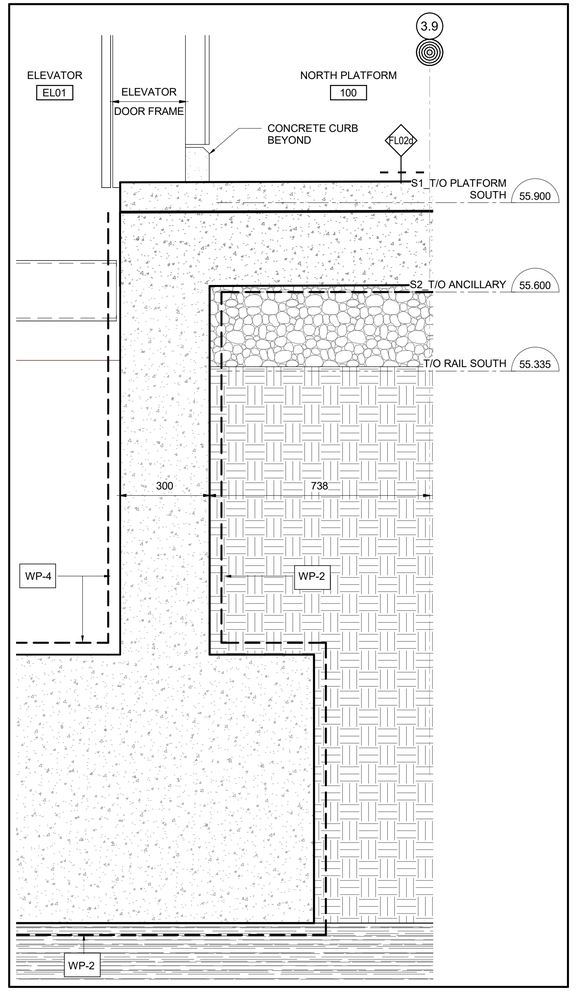


2 / 6252 SECTION DETAIL - EL01 & 02 @ FOUNDATION

1 : 10



1 / 6252 SECTION DETAIL - ELEVATOR DOOR @ PLATFORM LEVEL

1 : 10

ARCHITECTURAL
CORSO ITALIA
VERTICAL CIRCULATION
ELEVATOR DETAILS

CONTRACT No. LRT19-1025

DESIGNED R. BRISBIN | CHECKED A.KOURKOUNAKIS

DRAWN A. RAFIE | SEALED

DRAWING NUMBER 660373-1GSS-001-44DD-6252

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER SNC·LAVALIN TransitNEXT

PRIMARY SEAL — ONTARIO ASSOCIATION OF ARCHITECTS — LICENCE 3782

DESIGN FIRM bbb architects ottawa inc.

SECONDARY SEAL (IF REQUIRED)

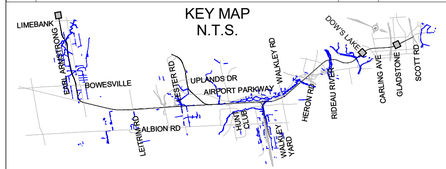
SCALE HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE; 0 0.5 1 2 4 m; VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP N.T.S.



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ISSUED FOR CONSTRUCTION

2021-02-25

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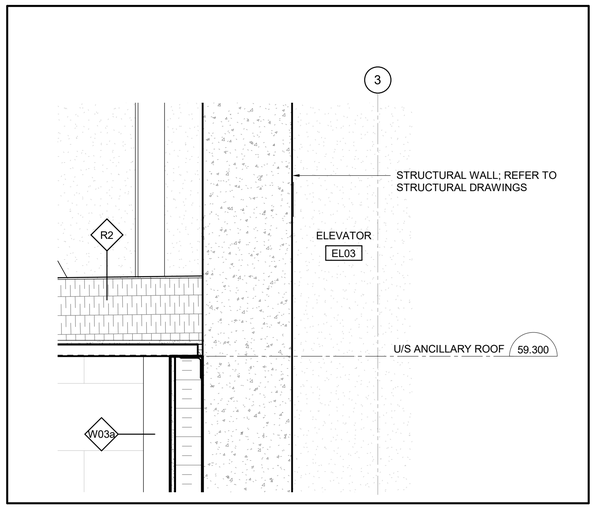
10/06/20



5 / 6253 SECTION DETAIL - EL0L 03 & 04 @ ANCILLARY ROOF

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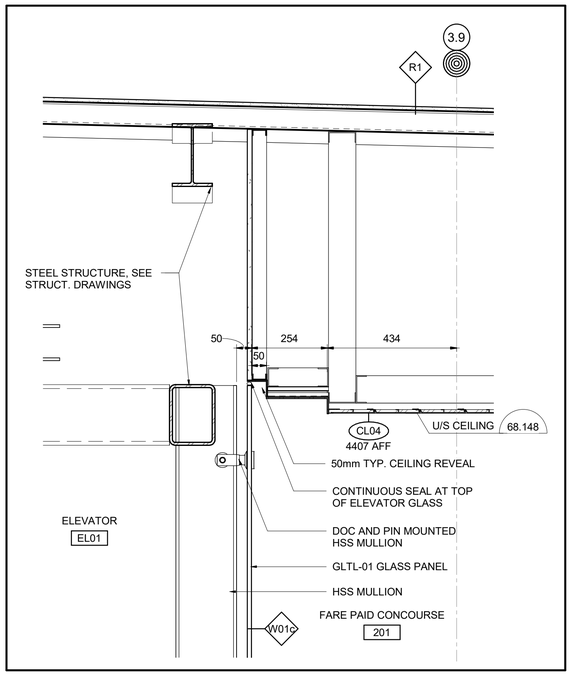

4 / 6253 SECTION DETAIL - EL01 & 02 @ CEILING REVEAL

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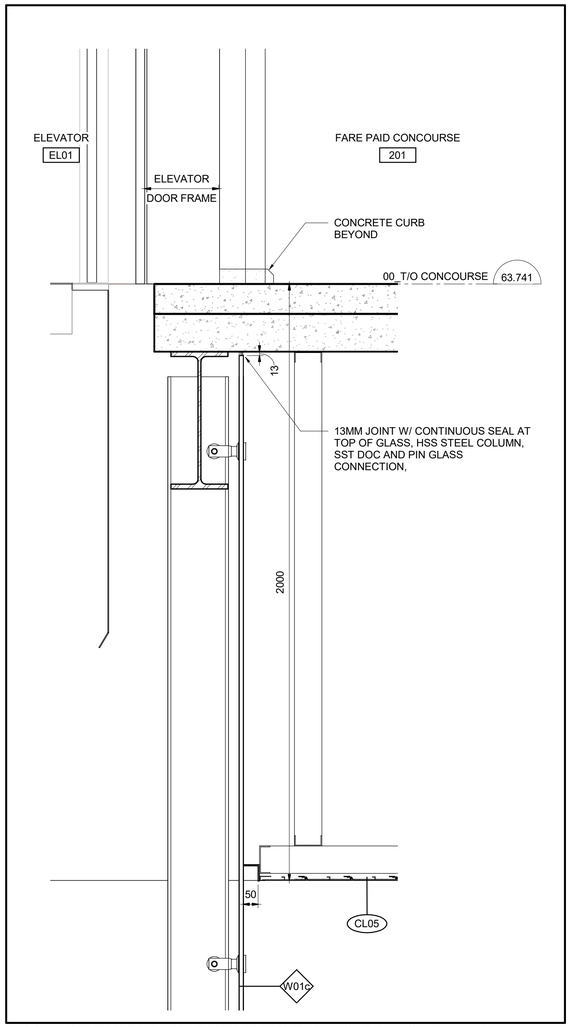

1 / 6253 SETION 2 @ ELEVATOR 01 & 02 - Callout 4

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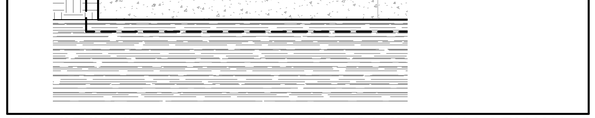
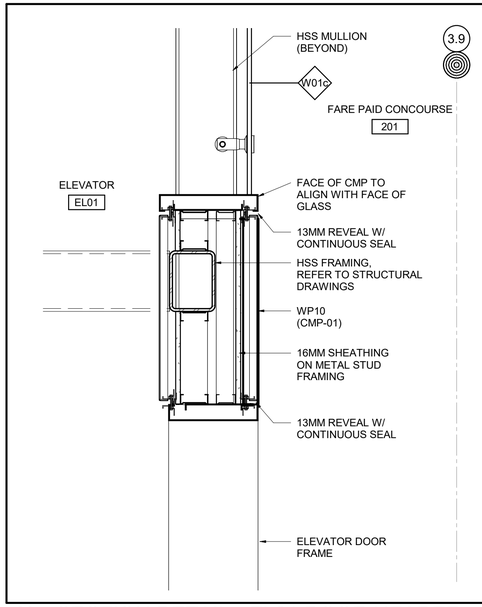


3 / 6253 SECTION DETAIL - EL0L 03 & 04 @ ANCILLARY WALL

1 : 10



2 / 6253 SECTION DETAIL - EL01 DOOR HEADER

1 : 10

Train STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
VERTICAL CIRCULATION
ELEVATOR DETAILS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	

DRAWING NUMBER
660373-1GSS-001-44DD-6253

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE
HORIZONTAL 1 : 50 FULLSIZE; 1 : 100 HALF SIZE
0 0.5 1 2 4 m
VERTICAL 1 : 50 FULLSIZE; 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-02-25

TITLEBLOCK: 790mm x 534mm
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10/06/20

TITLEBLOCK: 790mm x 534mm

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10/06/20

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
VERTICAL CIRCULATION
ELEVATOR DETAILS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-6254

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
LICENSE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

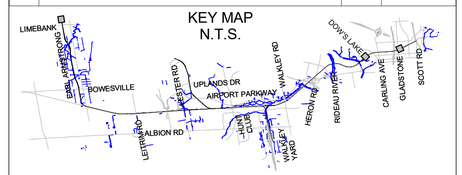
SCALE
HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE
0 0.5 1 2 4 m
VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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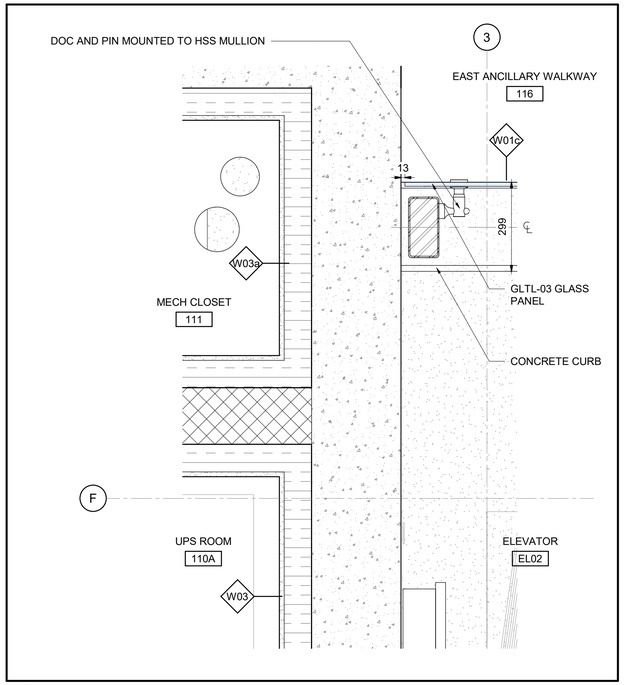
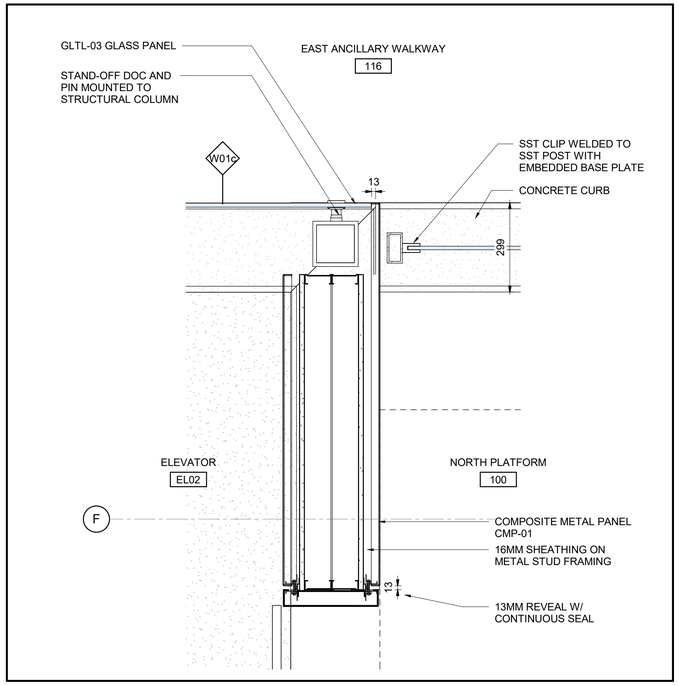
ISSUED FOR CONSTRUCTION
2021-03-29

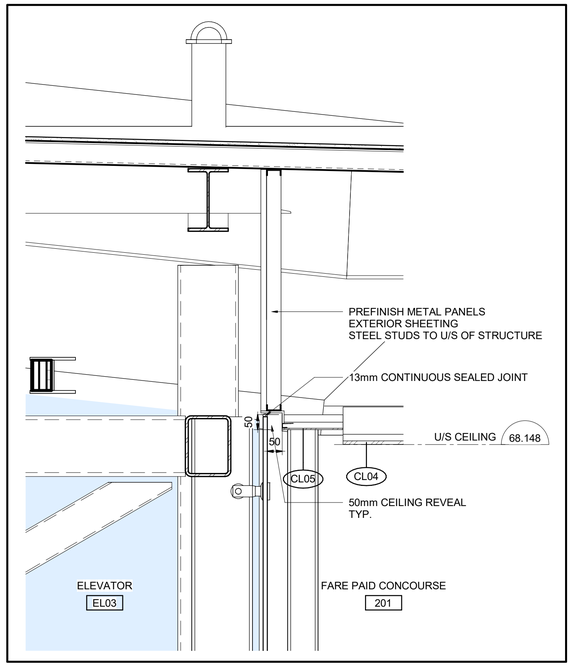


2 / 6254 ENLARGED PLAN - NORTH PLATFORM WALL DETAIL
1 : 10



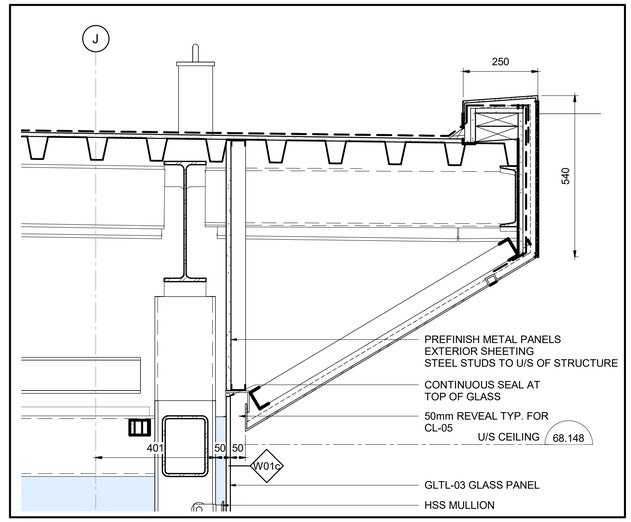
1 / 6254 ENLARGED PLAN - NORTH PLATFORM ANCILLARY WALKWAY
1 : 10

TITLEBLOCK: 790mm x 534mm



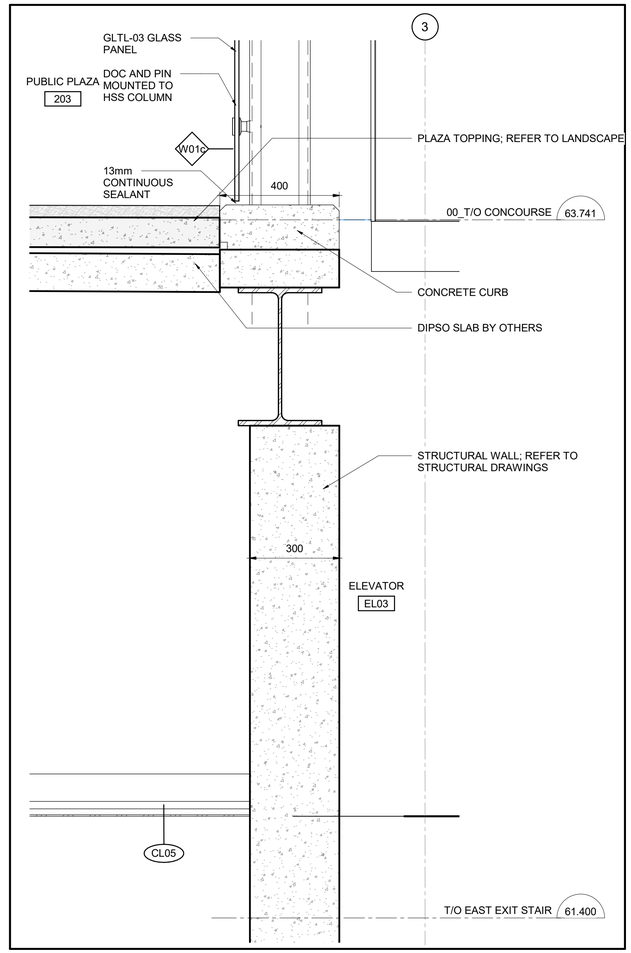
3 / 6256 ELEVATOR 03 & 04 - REVEAL

1 : 10



2 / 6256 SECTION DETAIL - EL03 & 04 @ ROOF SOFFIT

1 : 10



1 / 6256 CROSS SECTION @ ELEVATOR 03 & 04 - PLAZA CURB

1 : 10

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
VERTICAL CIRCULATION
ELEVATOR DETAILS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-6256

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS LICENCE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

0 0.5 1 2 4 m

VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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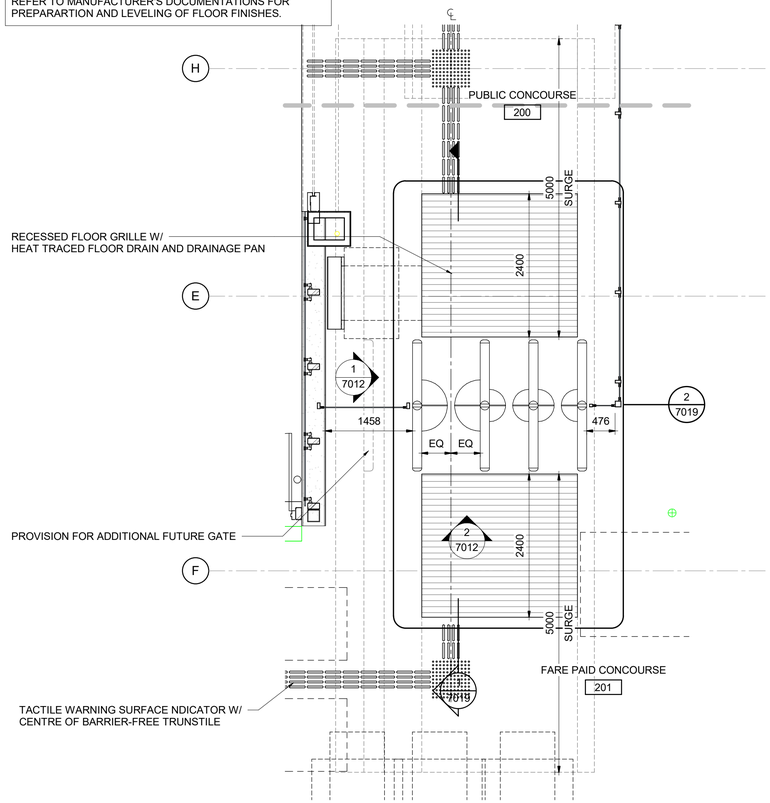
ISSUED FOR CONSTRUCTION

2021-03-29

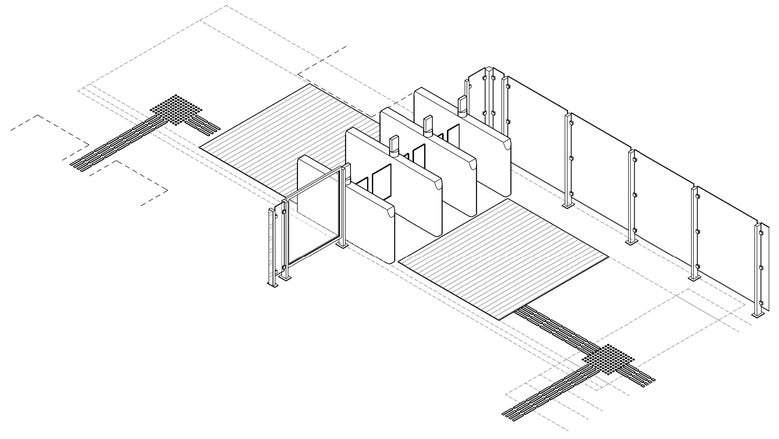
10/06/20 C:\Users\nbarrett\Documents\660373-1GSS-001-44DM-1000_NBarrettVF3UM.rvt

TITLEBLOCK: 790mm x 534mm

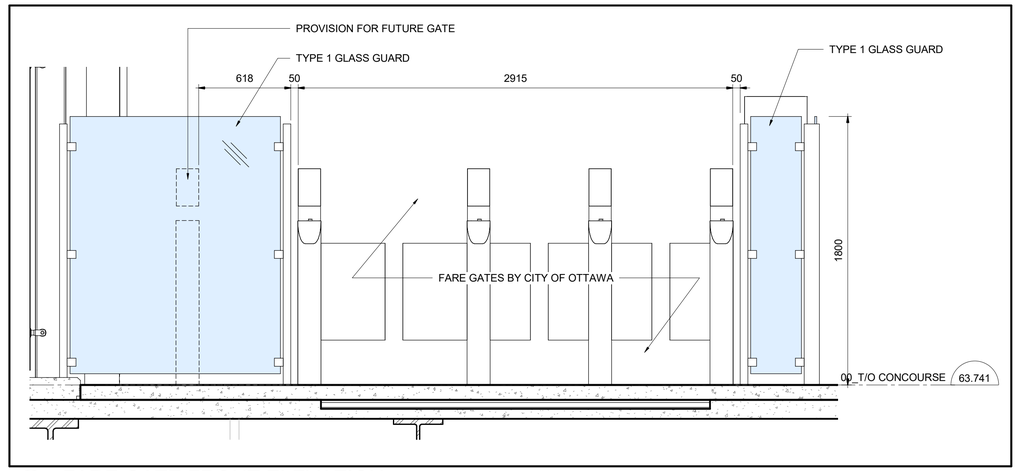
NOTE:
FARE GATE IS TO INSTALLED AND PROVIDED BY THE CITY.
REFER TO MANUFACTURER DRAWINGS AND SPECIFICATION.
REFER TO MANUFACTURER'S DOCUMENTATIONS FOR PREPARARTION AND LEVELING OF FLOOR FINISHES.



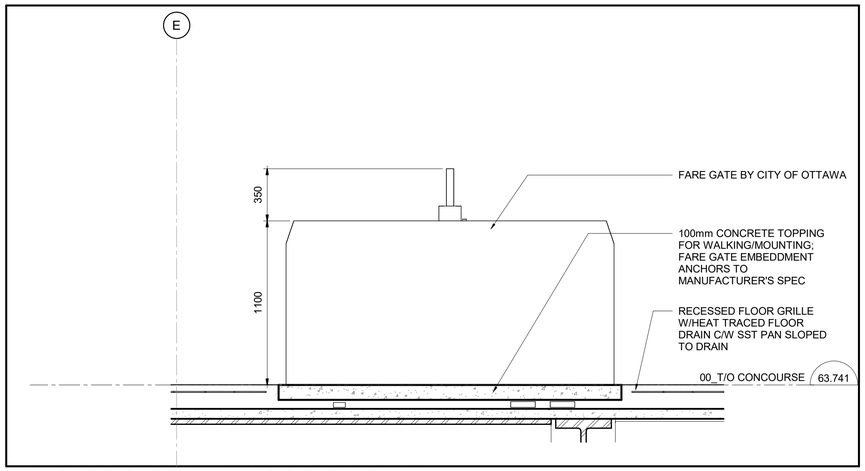
4 / 7012 FARE GATE PLAN
1 : 50



3 / 7012 FARE GATE ISOMETRIC VIEW



2 / 7012 FARE GATE FRONT ELEVATION
1 : 20



1 / 7012 FARE GATE PLAN SIDE ELEVATION
1 : 20

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
VERTICAL CIRCULATION
FARE GATE DETAILS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-7012

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE
AS SHOWN

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-02-25

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10/06/20

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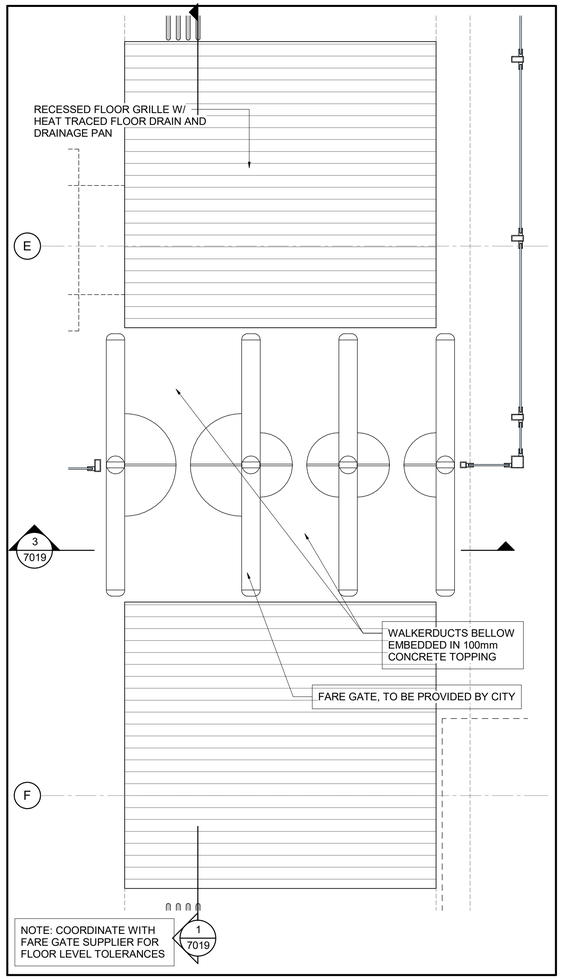
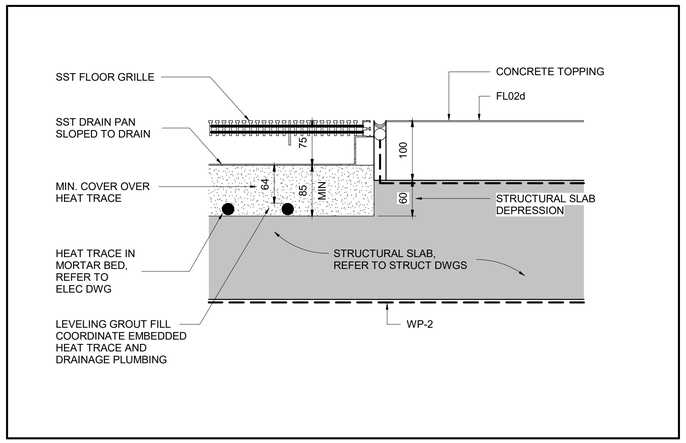


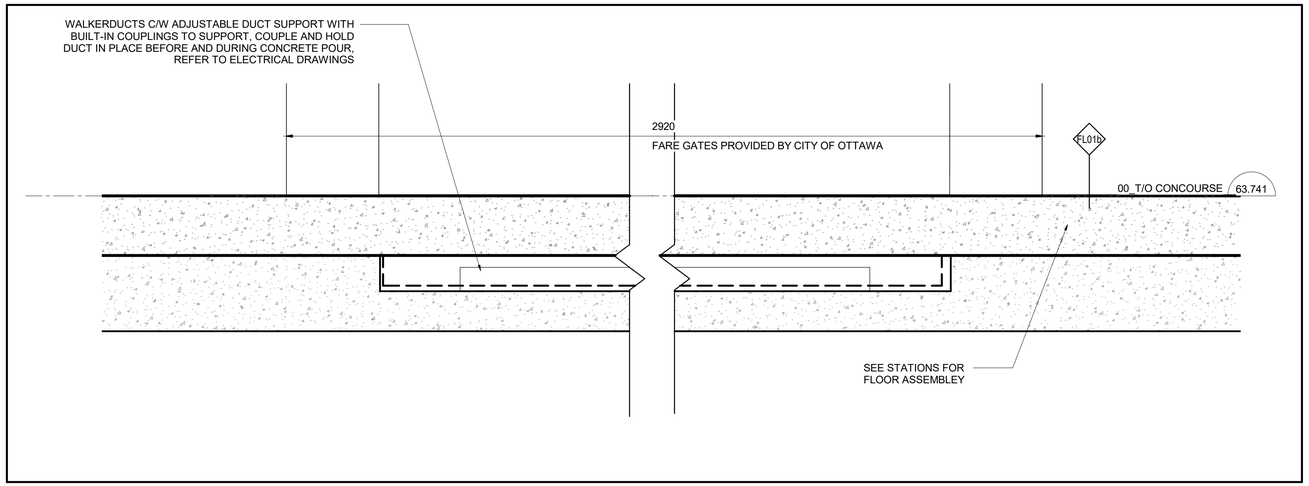
2 7019 WALKERDUCT PLAN DETAIL

1 : 25



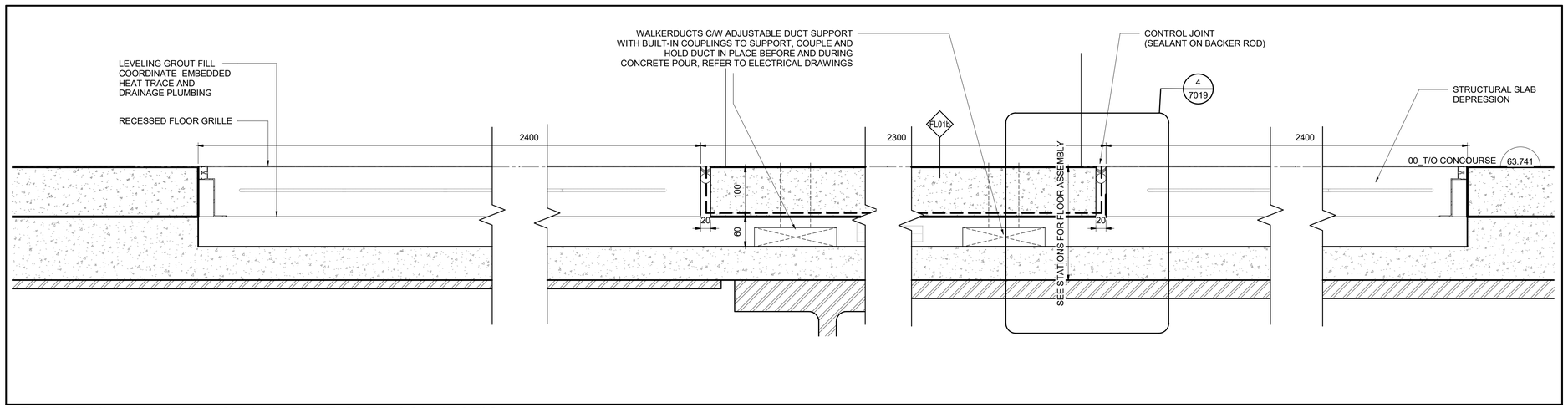
4 7019 DETAIL - FLOOR GRILLE CONNECTION

1 : 5



3 7019 DETAIL - WALKER DUCT CONNECTION TO JUNCTIONBOX

1 : 5



1 7019 DETAIL - WAKERDUCT AND FARE GATE CONNECTION

1 : 5

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10/06/20

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
VERTICAL CIRCULATION
FARE GATE DETAILS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
A. RAFIE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-7019

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS LICENCE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

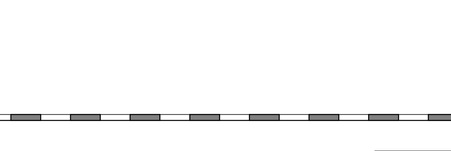
HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE
0 0.5 1 2 4 m
VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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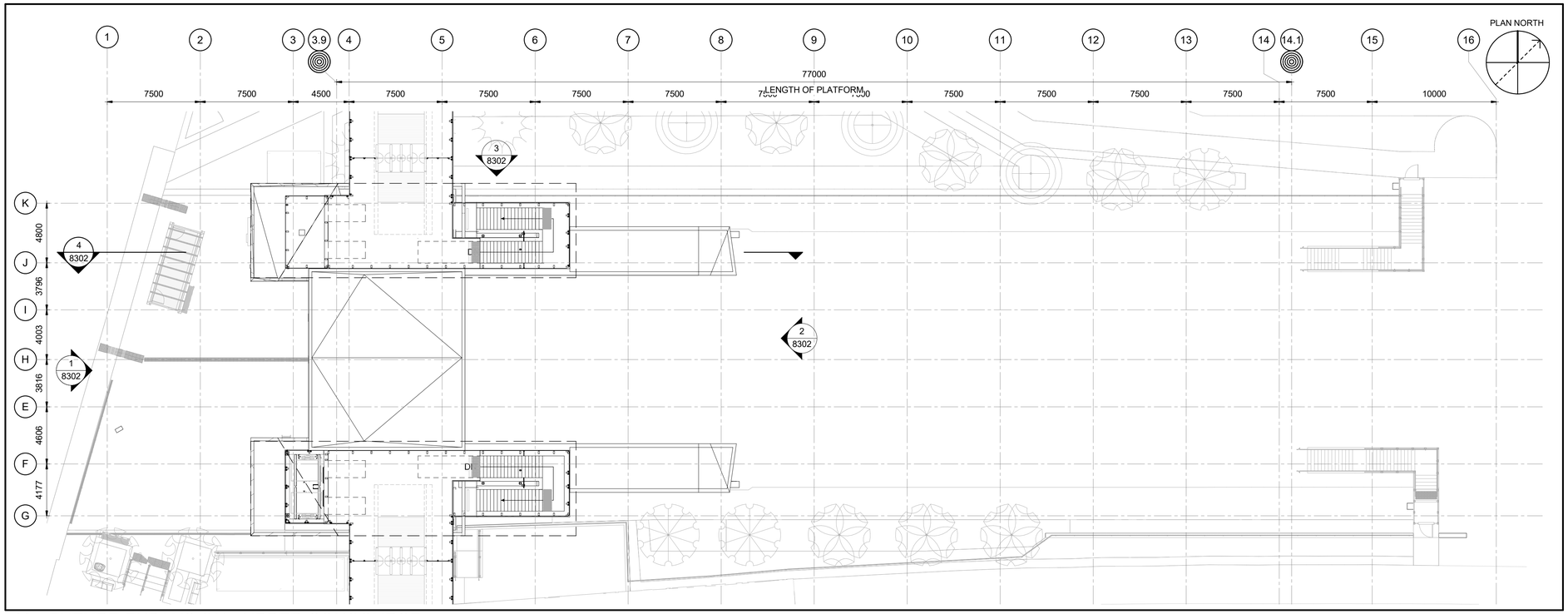
ISSUED FOR CONSTRUCTION

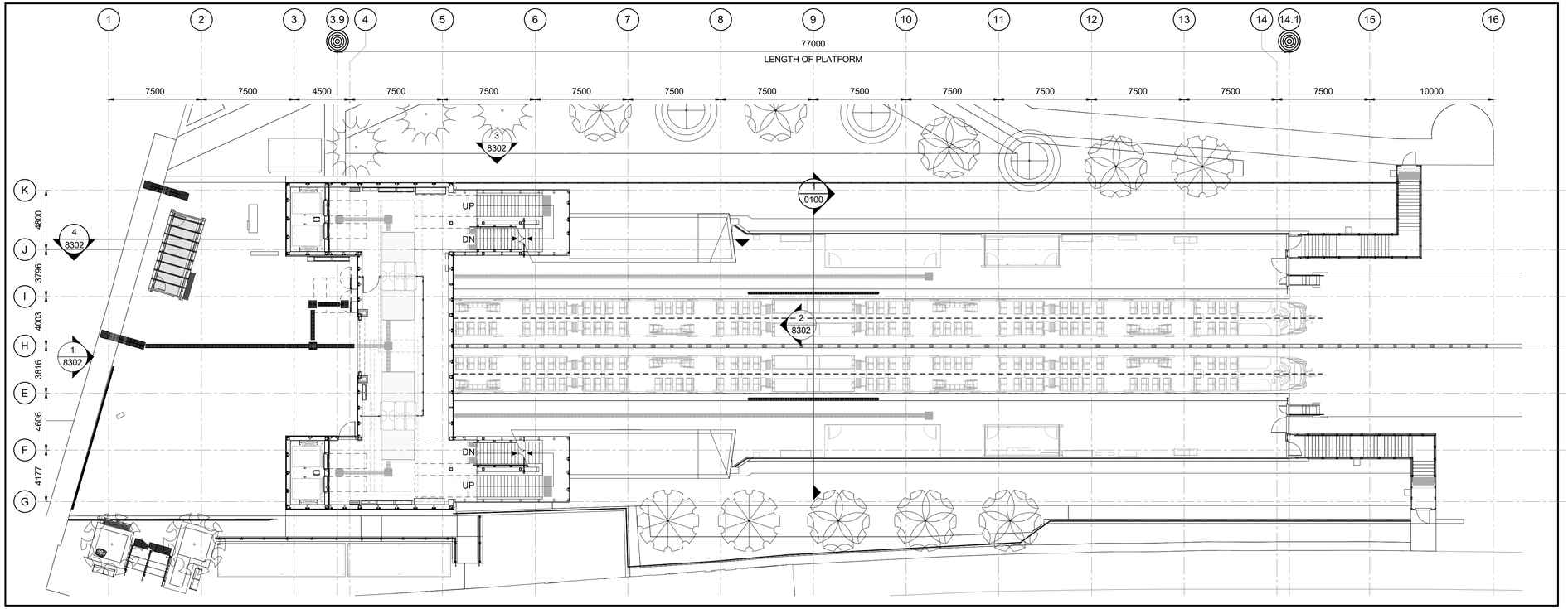
2021-03-29

TITLEBLOCK: 790mm x 534mm



2 / 8301 FUTURE EXPANSION - UPPER CONCOURSE

1 : 200



1 / 8301 FUTURE EXPANSION - CONCOURSE

1 : 200

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10/06/20

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
FUTURE PHASE
FLOOR PLANS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
N.BARRETT	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-8301

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

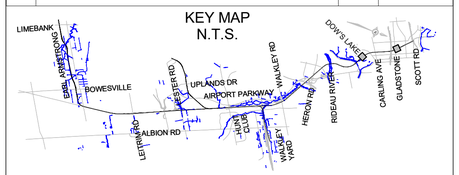
SCALE
HORIZONTAL 1 : 200 FULLSIZE / 1 : 400 HALF SIZE
0 2 4 8 16 m
VERTICAL 1 : 200 FULLSIZE / 1 : 400 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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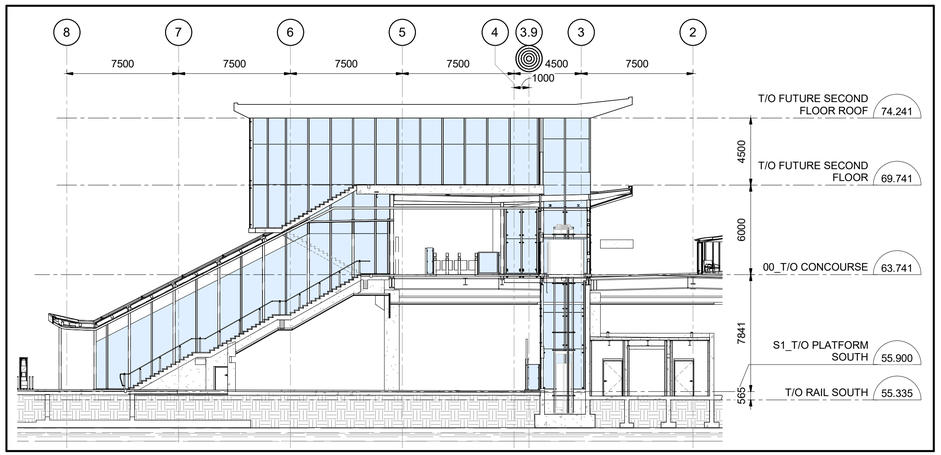
ISSUED FOR CONSTRUCTION

2021-03-29

TITLEBLOCK: 790mm x 534mm



4 / 8302 FUTURE EXPANSION - PARTIAL SECTION

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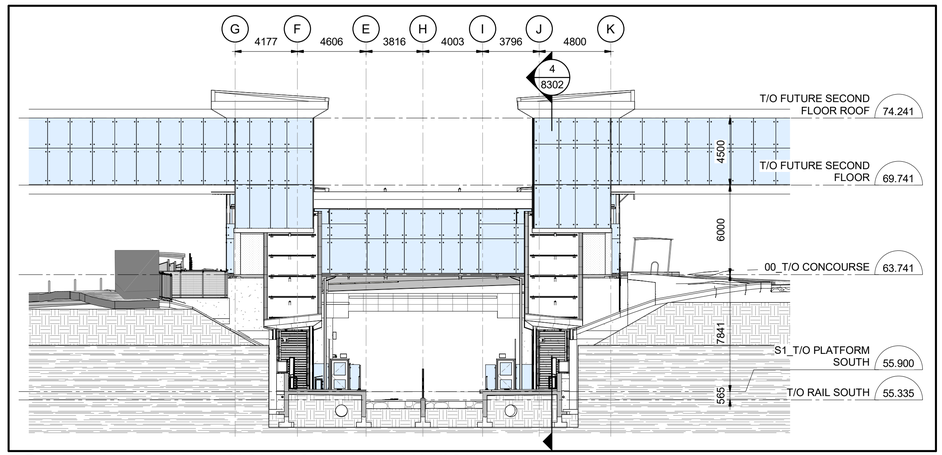
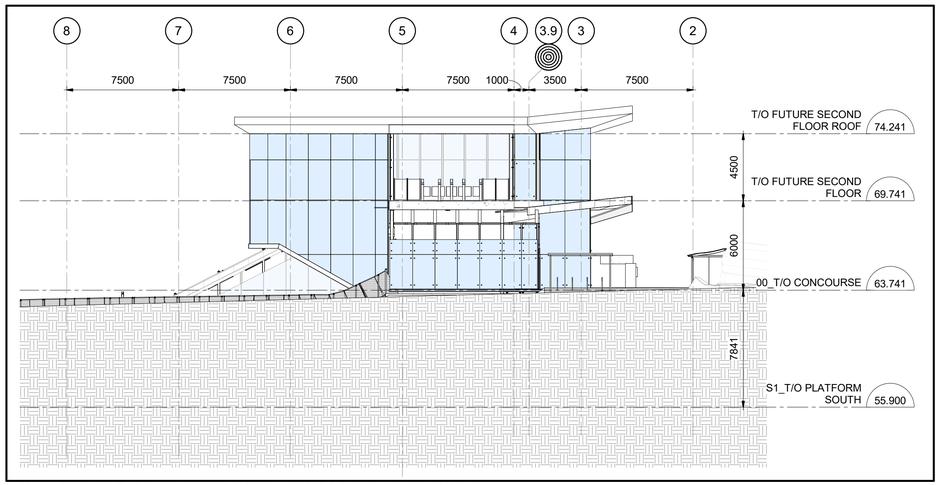


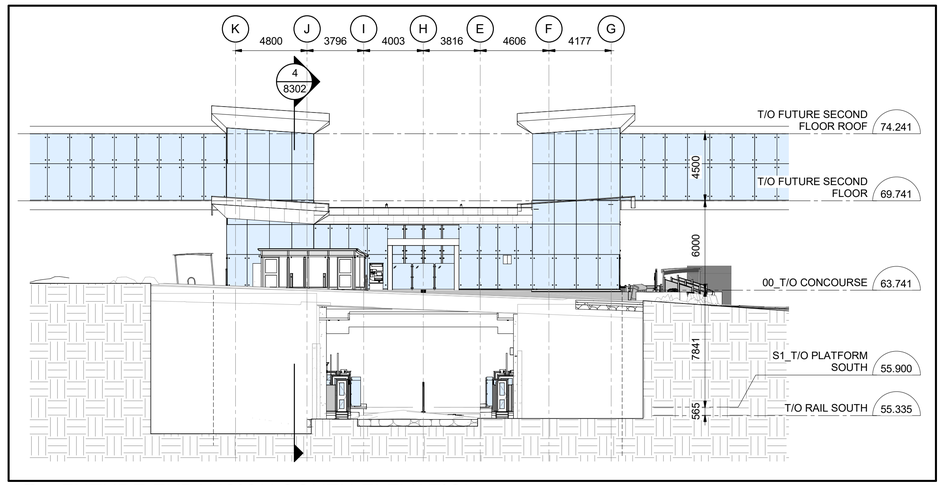
2 / 8302 FUTURE EXPANSION NORTH ELEVATION

1 : 200



3 / 8302 FUTURE EXPANSION - WEST ELEVATION

1 : 200



1 / 8302 FUTURE EXPANSION SOUTH ELEVATION

1 : 200

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA
FUTURE PHASE
ELEVATIONS & SECTIONS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	A.KOURKOUNAKIS
DRAWN	SEALED
N.BARRETT	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-8302

MODEL NUMBER
660373-1GSS-001-44DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
ONTARIO ASSOCIATION OF ARCHITECTS
LICENCE 3782

DESIGN FIRM
bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

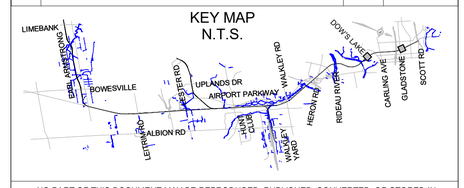
SCALE
HORIZONTAL 1 : 200 FULLSIZE / 1 : 400 HALF SIZE
0 2 4 8 16 m
VERTICAL 1 : 200 FULLSIZE / 1 : 400 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-03-29

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10/06/20



2
9000
EXTERIOR RENDERING 2
N.T.S



1
9000
EXTERIOR RENDERING 1
N.T.S

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA

EXTERIOR RENDERINGS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	T. KAMPMAN
DRAWN	SEALED
K. SANIPE	R. BRISBIN

DRAWING NUMBER
660373-1GSS-001-44DD-9000

MODEL NUMBER
660373-1GSS-001-44DM-1000

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
LICENCE 3782

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

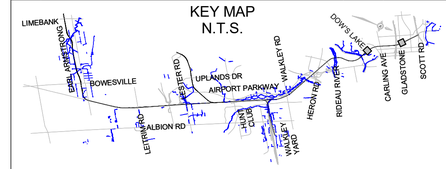
SCALE
NOT TO SCALE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

NOTE:
RENDERINGS EXHIBIT THE EXPECTED OVERALL QUALITY OF DESIGN RELATED ARCHITECTURAL LANGUAGE, MATERIAL USAGE, SPATIAL DESIGN AND IDENTITY CREATION. RENDERINGS DO NOT INDICATE ALL REQUIRED ELEMENTS INCLUDING, BUT NOT LIMITED TO, FENCING, SIGNAGE, PASSENGER AMENITIES, BIRD FRIENDLY DESIGN REQUIREMENTS ETC.

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03/23/16

TITLEBLOCK: 790mm x 534mm



2/9100 INTERIOR RENDERING 2

N.T.S



1/9100 INTERIOR RENDERING 1

N.T.S

OTrain STAGE 2 ETAPE 2

Ottawa

ARCHITECTURAL
CORSO ITALIA

INTERIOR RENDERINGS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
R. BRISBIN	T. KAMPMAN
DRAWN	SEALED
K. SANIPE	R. BRISBIN

DRAWING NUMBER 660373-1GSS-001-44DD-9100

MODEL NUMBER 660373-1GSS-001-44DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
ROBERT BRISBIN
LICENCE 3782

DESIGN FIRM

bbb architects
ottawa inc.

SECONDARY SEAL (IF REQUIRED)

SCALE

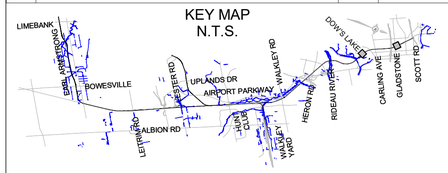
NOT TO SCALE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION	JJ	2021/03/29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-03-29

NOTE:
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04/11/19

TRILLIUM LINE EXTENSION PROJECT

STRUCTURAL
CORSO ITALIA STATION

ISSUED FOR CONSTRUCTION

JULY 30, 2021

CONTRACT NO. - LRT19-1025

30/08/2021 13:49:59
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DRAWING No. 660373-1GSS-003-43DD-0001 | 03

SUPERCEDES PRINTS TO THIS NUMBER WITH LETTER PREVIOUS TO

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DRAWING INDEX

DRAWING No	DESCRIPTION	REV.	
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660373-1GSS-003-43DD-0002	DRAWING INDEX	03	
660373-1GSS-003-43DD-0003	GENERAL NOTES	03	
660373-1GSS-003-43DD-0004	TYPICAL DETAILS	02	
660373-1GSS-003-43DD-0005	MASONRY NOTES & DETAILS	02	03
660373-1GSS-003-43DD-0006	SCHEDULES AND DETAILS	03	
660373-1GSS-003-43DD-1001	OVERALL PLAN	03	
660373-1GSS-003-43DD-1002	FOUNDATION PLAN - SECTOR 1	02	03
660373-1GSS-003-43DD-1003	FOUNDATION PLAN - SECTOR 2	03	
660373-1GSS-003-43DD-1004	PLATFORM PLAN - SECTOR 1	02	
660373-1GSS-003-43DD-1005	PLATFORM PLAN - SECTOR 2	03	03
660373-1GSS-003-43DD-1006	ANCILLARY ROOMS ROOF PLAN	01	
660373-1GSS-003-43DD-1007	CONCOURSE FRAMING PLAN	01	
660373-1GSS-003-43DD-1008	CONCOURSE PLAN	01	
660373-1GSS-003-43DD-1009	ROOF FRAMING PLAN	01	
660373-1GSS-003-43DD-1010	PLATFORM STAIR PLAN	00	03
660373-1GSS-003-43DD-1011	PLATFORM STAIR ROOF FRAMING PLAN	01	
660373-1GSS-003-43DD-3001	SECTIONS/DETAILS	02	
660373-1GSS-003-43DD-3002	SECTIONS/DETAILS	03	03
660373-1GSS-003-43DD-3003	SECTIONS/DETAILS	03	
660373-1GSS-003-43DD-3004	SECTIONS/DETAILS	03	
660373-1GSS-003-43DD-3005	SECTIONS/DETAILS	03	
660373-1GSS-003-43DD-3006	SECTIONS/DETAILS	03	
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660373-1GSS-003-43DD-3008	SECTIONS/DETAILS	01	
660373-1GSS-003-43DD-3009	SECTIONS/DETAILS	03	
660373-1GSS-003-43DD-3010	SECTIONS/DETAILS	03	
660373-1GSS-003-43DD-3011	SECTIONS/DETAILS	03	
660373-1GSS-003-43DD-3012	SECTIONS/DETAILS	03	

OTrain STAGE 2 ETAPE

Ottawa

STRUCTURAL
CORSO ITALIA STATION

DRAWING INDEX

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
M. IRISH	S. IBRAHIM
DRAWN	SEALED
J. PIDLAOAN	R. GILLARD

DRAWING NUMBER
660373-1GSS-003-43DD-0002

MODEL NUMBER
660373-1GSS-003-43DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER
R. G. GILLARD
16129504
2021-07-30
PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

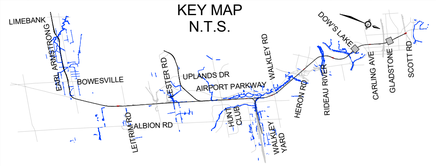
SCALE
N.T.S.

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION - EARLY WORKS	SI	2020-09-24
01	ISSUED FOR BUILDING PERMIT	SI	2020-11-27
02	ISSUED FOR FCR No. 660373-1GSS-003-40EI-0003	SI	2021-03-29
03	REVISED ISSUED FOR CONSTRUCTION	SI	2021-07-30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-07-30

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30/08/2021 13:50:00

TITLEBLOCK: 790mm x 534mm

GENERAL NOTES

1. THE DESIGN AND CONSTRUCTION OF THIS PROJECT SHALL CONFORM TO THE REQUIREMENTS OF THE 2015 NATIONAL BUILDING CODE OF CANADA, THE OBC 2012 AND THE CSA STANDARDS INDICATED THEREIN. THE LATEST REVISIONS TO ALL STANDARDS WILL GOVERN.
2. THE CONTRACTOR SHALL CHECK AND VERIFY ALL CONDITIONS AND MEASUREMENTS AT THE SITE AND REPORT ANY DISCREPANCIES OR UNSATISFACTORY CONDITIONS WHICH MAY ADVERSELY AFFECT THE PROPER COMPLETION OF THE WORK TO THE ENGINEER AND/OR PROJECT COORDINATOR PRIOR TO PROCEEDING WITH THE WORK.
3. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. DO NOT SCALE THESE DRAWINGS.
4. CONTRACTOR SHALL COORDINATE AND REFER TO ARCHITECTURAL, MECHANICAL & ELECTRICAL DRAWINGS FOR ALL OTHER DETAILS NECESSARY. ANY DISCREPANCIES WITH DIMENSIONS, ELEVATIONS, ANGLES & WORK POINTS SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER. WHEN IN DOUBT, THE CONSTRUCTION MANAGER WILL ISSUE INSTRUCTIONS ACCORDINGLY.
5. CONTRACTOR SHALL VERIFY ALL DIMENSIONS & ELEVATIONS, ON SITE AGAINST ARCHITECTURAL DRAWINGS, AND SHALL BE RESPONSIBLE FOR THESE.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DEWATERING REQUIRED TO UNDERTAKE THE WORK.
7. COORDINATE ALL WORK WITH THE OWNER AND USERS AT ALL TIMES. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THAT SAFETY IS MAINTAINED AT ALL TIMES.
8. CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ALL WASTE. CONTRACTOR SHALL KEEP WORK AREAS CLEAN AND WITHOUT OBSTRUCTIONS AT ALL TIMES.
9. CONTRACTOR SHALL PROVIDE SECURE WORK AND STORAGE AREAS DURING AND UNTIL WORK COMPLETION.
10. HEALTH AND SAFETY RULES FOR CONSTRUCTION SITES AND OTHER APPLICABLE LAWS SHALL BE RESPECTED AT ALL TIMES.
11. PARTICULAR ATTENTION IS TO BE TAKEN IN REGARDS TO EXISTING CONDUITS AND EQUIPMENT IN AND AROUND WORK ZONE.
12. SERVICE LIVE LOADS FOR EACH PORTION OF THE STRUCTURE ARE SHOWN. DO NOT EXCEED THESE LOADS DURING CONSTRUCTION.
13. CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY SUPPORTS REQUIRED TO COMPLETE THE WORK.
14. GENERAL CONTRACTOR IS RESPONSIBLE FOR TEMPORARY SHORING OF NEW AND EXISTING STRUCTURES AND SOILS STABILITY (AT ALL TIMES) DURING CONSTRUCTION. DETAILS OF SHORING SHALL BE STAMPED BY A P.E.O. AND SUBMITTED FOR REVIEW. THE CONTRACTOR SHALL NOT BACKFILL THE FOUNDATION WALLS BEFORE ALL THE ELEMENTS WHICH ENSURE THEIR STABILITY ARE IN PLACE.
15. GUARDS & RAILINGS, CURTAIN WALLS AND STEEL STUDS SHALL CONFORM TO NBCC 2015 LATEST EDITION. CONTRACTOR SHALL PROVIDE ENGINEERING DRAWINGS PREPARED BY A P.E.O. .

LEGEND:

ADD'L	: ADDITIONAL	u/s	: UNDERSIDE
TYP.	: TYPICAL	T & B	: TOP AND BOTTOM
CONT.	: CONTINUOUS	2-DIR.	: TWO DIRECTIONS
EXIST.	: EXISTING	B.	: BOTTOM
SIM.	: SIMILAR	ARCH.	: ARCHITECTURE
INV.	: INVERSE	MECH.-ELEC.	: MECHANICAL-ELECTRICAL
IND.	: INDICATES		: MODIFIED PROTOR
U.N.O.	: UNLESS NOTED OTHERWISE	M.P.	: MOMENT CONNECTION
		M.C.	: TOP OF STEEL
E.F.	: EACH FACE	T.O.S.	
c/w	: COMPLETE WITH		

DESIGN NOTES & CRITERIA

REINFORCING STEEL
CONTRACTOR TO SUBMIT SHOP DRAWINGS UNDER SEAL FOR ALL REINFORCING STEEL INCLUDING PLACEMENT OF REINFORCEMENT. INDICATED ON THE SHOP DRAWINGS SHALL BE BAR BENDING DETAILS, LISTS, QUANTITIES OF REINFORCEMENT, SIZES, SPACINGS, LOCATIONS OF REINFORCEMENT SPLICES (LAP OR MECHANICAL) WITH IDENTIFYING CODE MARKS TO PERMIT CORRECT PLACEMENT OF REINFORCEMENT WITHOUT REFERENCE TO THE STRUCTURAL DRAWINGS. PREPARE SHOP DRAWINGS IN ACCORDANCE WITH REINFORCING STEEL MANUAL OF STANDARD PRACTICE.

MISCELLANEOUS METALS
MISCELLANEOUS METALS SHALL BE DESIGNED AND DETAILED BY THE MISC. METALS SUPPLIER. SHOP DRAWINGS SHALL BE SUBMITTED TO SNC LAVALIN FOR REVIEW. SHOP DRAWINGS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO. ALL MISC. METALS AND STEEL STAIRS SHALL BE FIELD REVIEWED BY THE DESIGN ENGINEER.

RAILINGS AND GUARDS
ALL RAILINGS AND GUARDS SHALL BE DESIGNED AND DETAILED BY THE MISC. METALS SUPPLIER IN ACCORDANCE WITH NBCC 4.1.5.14, 3.4.1.5, 3.4.6.5 & 3.4.6.6. SHOP DRAWINGS SHALL BE SUBMITTED TO SNC LAVALIN FOR REVIEW. SHOP DRAWINGS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO. ALL RAILINGS AND GUARDS SHALL BE FIELD REVIEWED BY THE DESIGN ENGINEER.

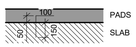
STRUCTURAL STEEL CONNECTIONS
STRUCTURAL STEEL CONNECTIONS SHALL BE DESIGNED AND DETAILED BY THE STRUCTURAL STEEL SUPPLIER. SHOP DRAWINGS ARE TO BE SUBMITTED TO SNC LAVALIN FOR REVIEW. SHOP DRAWINGS SHALL BE STAMPED AND SIGNED "FOR CONNECTIONS ONLY" BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO.

CONCRETE NOTES

1. CONCRETE (@ 28 DAYS):
   35 MPa : 'C-1' CONCRETE : SLAB-ON-GRADE
   35 MPa : 'C-1' CONCRETE : FOOTINGS (U.N.O.)
   35 MPa : 'C-1' CONCRETE : PIERS (U.N.O.)
   35 MPa : 'C-1' CONCRETE : CONCRETE FOUNDATION WALLS
2. ALL CONCRETE WORK SHALL CONFORM TO CAN/CSA-A23.1/A23.2 LATEST EDITION.
3. FINISH CONCRETE IN ACCORDANCE WITH CSA A23.1-14/A23.2-14. RUB EXPOSED SHARP EDGES OF CONCRETE WITH CARBORUNDUM TO PRODUCE 3 MM RADIUS EDGES UNLESS OTHERWISE INDICATED.
4. CONCRETE EXPOSED TO PUBLIC VIEW TO HAVE A SMOOTH-FORM FINISH UNLESS SPECIFIED OTHERWISE.
5. INSPECTION AND TESTING OF CONCRETE AND CONCRETE MATERIALS WILL BE CARRIED OUT BY A TESTING LABORATORY DESIGNATED BY OWNER IN ACCORDANCE WITH CSA A23.1-14/A23.2-14. COSTS OF TESTS WILL BE PAID FOR BY OWNER.
6. ENGINEER WILL TAKE ADDITIONAL TEST CYLINDERS DURING COLD WEATHER CONCRETING. CURE CYLINDERS ON JOB SITE UNDER SAME CONDITIONS AS CONCRETE WHICH THEY REPRESENT. INSPECTION OR TESTING BY CONSULTANT WILL NOT AUGMENT OR REPLACE CONTRACTOR QUALITY CONTROL NOR RELIEVE HIM OF HIS CONTRACTUAL RESPONSIBILITY.
7. SLABS-ON-GRADE SHALL HAVE A MONOLITHIC FINISH UNLESS NOTED OTHERWISE, SEE ARCH.
8. FOR PITS NOT EXCEEDING 36"x36" (900x900mm) USE 6" (150mm) WALLS AND 8" (200mm) RAFT REINFORCED WITH 10M @ 8" (200mm) o/c 2-DIRECTIONS. SEE TYPICAL DETAIL. SEE ARCH. & MECH. FOR QUANTITY AND LOCATION.
9. PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CSA A23.1-14/A23.2-14.
10. REINFORCING STEEL:
    -CAN/CSA-G30.18 LATEST EDITION Fy = 400 MPa
    -WIRE MESH: CSA G30.5 LATEST EDITION
    -USE CORNER BARS IN FOUNDATION WALLS
11. DETAIL BEND, SUPPORT AND PLACE REINFORCING STEEL TO CONFORM WITH R.S.I.O. MANUAL OF STANDARD PRACTICE U/N.
12. DO NOT FIELD BEND REINFORCEMENT EXCEPT WHERE INDICATED OR AUTHORIZED BY ENGINEER. WHEN FIELD BENDING IS AUTHORIZED, BEND WITHOUT HEAT, APPLYING A SLOW AND STEADY PRESSURE. REPLACE BARS WHICH DEVELOP CRACKS OR SPLITS.
13. PROVIDE 36 BAR-DIAMETER LAP SPLICES FOR ALL REINFORCING STEEL UNLESS OTHERWISE NOTED ON DRAWINGS.
14. CONCRETE COVER TO REINFORCING STEEL:

EXPOSURE TO EARTH, FILL OR WEATHER	EXPOSED	NOT EXPOSED
(a) WHEN CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH OR FILL	75mm	
(b) FOR		
(i) BEAMS, GIRDERS, COLUMNS AND PILES: PRINCIPAL REINFORCEMENT 35M AND SMALLER	50mm	40mm
TIES, STIRRUPS AND SPIRALS	40mm	30mm
(ii) SLABS, WALLS, JOISTS, SHELLS AND FOLDED PLATES: 20M AND SMALLER	30mm	20mm
(c) FOR BARS WITH A DIAMETER db LARGER THAN LISTED ABOVE, THE COVER SHALL BE AT LEAST BUT NEED NOT BE MORE THAN 60mm	1.5db	1.0db
(d) THE RATIO OF THE COVER TO THE NOMINAL MAXIMUM AGGREGATE SIZE SHALL BE AT LEAST	1.5	1.0
(e) THE COVER FOR A BUNDLE OF BARS SHALL BE THE SAME AS FOR A SINGLE BAR WITH EQUIVALENT AREA		

15. ALL EXPOSED CONCRETE CORNERS SHALL HAVE A 25mm CHAMFER.
16. ALL FORMWORK SHALL CONFORM TO CAN/CSA-A23.1/A23.2 LATEST EDITION, FURTHERMORE FORMWORK USED WHERE CONCRETE FINISH IS EXPOSED SHALL BE NEW.
17. OPENING IN FOUNDATION WALLS:
    USE 2-20M ALL AROUND OPENINGS AND EXTEND 600mm BEYOND OPENING + CORNER BARS, SEE TYPICAL DETAIL. SEE ARCH. AND MECH-ELEC. DRAWINGS FOR QUANTITIES AND LOCATIONS.
18. CONTROL JOINTS IN SLAB-ON-GRADE:
    CONTROL JOINTS SHALL BE SAWCUT INTO PANELS WHICH DO NOT EXCEED 3.6m x 3.6m WITHIN 24 HOURS OF SLAB POUR.
    JOINTS SHALL BE 6mm IN WIDTH BY 25mm (MIN.) IN DEPTH c/w APPROVED JOINT FILLER. SEE SPECIFICATIONS.
19. PROVIDE A DEPRESSION IN THE CONCRETE SLAB FOR FOOT GRILLS. REFER TO ARCHITECTURAL DWGS FOR LOCATIONS WHERE REQUIRED.
20. ALL MECHANICAL PADS AND BASES SHALL BE TIED TO CONCRETE SLABS (STRUCTURAL OR ON GRADE) WITH 10M x 300mm LG. DOWELS @ 450mm o/c 2-DIRECTIONS (PROVIDE EPOXY ADHESIVE IF NON-MONOLITHIC) c/w W.W.M. 152x152-18.7/18.7 (IN SHEETS) CENTER TYP. SEE MECHANICAL FOR SIZES, LOCATIONS AND QUANTITIES.



FOUNDATION & FORMWORK NOTES

1. FOUNDATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH CL. 4.1.8.16, & 2015 & OBC 2012. ALL EXCAVATION AND FOUNDATION CONSTRUCTION SHALL BE IN ACCORDANCE WITH GEOTECHNICAL REPORT 660373-1GSS-003-4GER-0001 (LATEST REVISION)
2. ALL FOUNDATIONS TO BEAR ON SOUND BEDROCK. ALLOWABLE BEARING CAPACITY USED FOR THE DESIGN OF FOOTINGS IS AS FOLLOWS: ASSUMED SLS= 4.0 MPA / ULS = 6.0 MPA. BEARING SURFACES SHALL BE REVIEWED BY GEOTECHNICAL ENGINEER BEFORE PLACING CONCRETE.
3. ROCK ANCHORS SHALL FOLLOW OPSS 942 WHICH COVERS THE REQUIREMENTS FOR THE DESIGN, INSTALLATION, AND TESTING.
4. ALL STRUCTURAL ELEMENTS, GRADE AND SUB GRADE SHALL BE PROTECTED AGAINST WATER AND FREEZING AT ALL TIMES.
5. UNDERSIDE OF HEATED EXTERIOR FOOTINGS SHALL REST AT LEAST 1500mm MIN. (U.N.O.) BELOW FINISHED EXTERIOR GRADE. UNDERSIDE OF UNHEATED EXTERIOR FOOTINGS SHALL REST AT LEAST 1800mm MIN. (U.N.O.) BELOW FINISHED EXTERIOR GRADE. CONSULT GEOTECHNICAL ENGINEER FOR INSULATION REQUIREMENTS WHERE COVER CAN NOT BE ATTAINED.
6. REFER TO GEOTECHNICAL REPORT FOR TYPE & COMPACTION OF GRANULAR SUPPORTING EXTERIOR & INTERIOR FOOTINGS & SLAB-ON-GRADE.
7. ALL MATERIAL USED FOR BACKFILL OF THE INTERIOR AND EXTERIOR FOUNDATION WALLS SHALL BE A COMPACTED GRANULAR FILL. REFER TO GEOTECHNICAL REPORT FOR COMPOSITION & COMPACTION OF GRANULAR FILL.
8. BACKFILLING TO PROCEED SIMULTANEOUSLY ON BOTH SIDES OF NEW FOUNDATION WALLS (EXCEPT WHERE TEMPORARY SUPPORT FOR THE WALL IS PROVIDED), AND COMPACTED IN LAYERS AS SPECIFIED BY GEOTECHNICAL ENGINEER.
9. CONSTRUCTION JOINTS AND CONTROL JOINTS IN WALLS SHALL BE POSITIONED AT MIDDLE ½rd SPAN BETWEEN TWO PIERS, UNLESS SHOWN OTHERWISE. MAXIMUM SPACING OF CONSTRUCTION JOINTS SHALL BE 20m U/N.
10. SLEEVES, PIPES, HOLES OR NOTCHES PLACED THROUGH FDN WALLS SHALL BE REINFORCED AS PER TYPICAL DETAILS. IF OPENINGS IN FDN WALLS ARE LARGER THAN SHOWN ON THE TYPICAL DETAIL, ENGINEER SHALL BE NOTIFIED.
11. NO SLEEVES, PIPES, HOLES OR NOTCHES SHALL BE PLACED THROUGH PIERS, COLUMNS OR BEAMS.
12. REFER TO ARCHITECTURAL SPECIFICATIONS FOR WATERPROOFING OF FOUNDATION WALLS.
13. IN THE PRESENCE OF PLUMBING / RAIN WATER LEADER, THE LEVEL OF THE FOOTINGS SHALL BE PLACED LOW ENOUGH SO AS NOT TO INTERFERE WITH THE PLUMBING. PROVIDE TRENCHES FOR MEC.-ELEC. SERVICES, AS REQUIRED. REFER TO MEC.-ELEC. DRAWINGS FOR LOCATIONS.
14. VERIFY LINES, LEVELS AND WALL CENTRES BEFORE PROCEEDING WITH FORMWORK AND ENSURE DIMENSIONS AGREE WITH DRAWINGS.
15. CONSTRUCT FORMS TO PRODUCE FINISHED CONCRETE CONFORMING TO SHAPE, DIMENSIONS, LOCATIONS AND LEVELS INDICATED WITHIN TOLERANCES REQUIRED BY CSA A23.1-14/A23.2-14. ALIGN FORM JOINTS AND MAKE WATERTIGHT. KEEP FORM JOINTS TO MINIMUM. LOCATE HORIZONTAL FORM JOINTS FOR EXPOSED WALLS TO APPROVAL OF ARCHITECT. CLEAN FORMWORK IN ACCORDANCE WITH CSA A23.1-14/A23.2-14, BEFORE PLACING CONCRETE.
16. FORM CHASES, SLOTS, OPENINGS, DRIPS, RECESSES EXPANSION AND CONTROL JOINTS AS INDICATED.
17. LEAVE FORMWORK IN PLACE FOR 48 HOURS MINIMUM PERIOD OF TIME AFTER PLACING CONCRETE. AFTER FORM REMOVAL COVER AND PROTECT CONCRETE FOR THE REMAINDER OF THE INITIAL CURING PERIOD. USE INSULATED TARPS FOR COLD WEATHER OPERATION.
18. OBTAIN ENGINEER'S PERMISSION BEFORE FRAMING OPENINGS NOT INDICATED IN CONCRETE SLABS, WALLS, PIERS AND FOOTINGS.
19. CONCRETE PLACED IN THE FOOTING SHALL BE ROUGHENED AT THE BOTTOM STEM TO A FULL AMPLITUDE OF ABOUT 5mm.
20. BACKFILL SHALL NOT BE PLACED AGAINST ANY CONCRETE COMPONENT UNTIL CONCRETE HAS REACHED 70% MINIMUM OF ITS DESIGN STRENGTH.
21. GLOBAL STABILITY OF RETAINING INCLUDING BUT NOT LIMITED TO, BEARING CAPACITY, SETTLEMENT AND SLOPE STABILITY SHALL BE VERIFIED BY THE GEOTECHNICAL ENGINEER.

STEEL NOTES

1. ALL STRUCTURAL STEEL WORK TO BE CARRIED OUT IN ACCORDANCE WITH CAN/CSA-S16 LATEST EDITION.
2. STEEL STRENGTHS SHALL BE AS FOLLOWS:
   - STRUCTURAL STEEL GRADE G40.20-13/G40.21-13 350W, Fy = 345 MPa FOR W SHAPES
   - STRUCTURAL STEEL GRADE G40.20-13/G40.21-13 300W, Fy = 300 MPa FOR OTHER THAN W SHAPES
   - HSS GRADE G40.20-13/G40.21-13 350W, CLASS C, Fy = 350 MPa
   - BOLTS A325/A325M (U/N); ANCHOR BOLTS A307/A307M (U/N)
3. ALL SHOP CONNECTIONS SHALL BE WELDED. ALL FIELD CONNECTIONS SHALL BE WELDED OR BOLTED, USING HIGH TENSILE BOLTS BEARING TYPE. CONNECTION SHALL BE C.I.S.C. DOUBLE ANGLE BEAM CONNECTIONS FOR A325 BOLTS AND E490XX FILLET WELDS, MINIMUM SIZE OF BOLTS - 3/4" (20 mm) DIA.
4. SHOP PAINT:
   ONE COAT PRIMER CONFORMING TO CPMA 2-75A, GREY COLOUR. UNLESS NOTED OTHERWISE
5. USE C150x12 FRAMES + CLOSURE 'L' FOR OPENINGS, SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR QUANTITY, DIMENSIONS AND LOCATIONS (OPENINGS ARE PARTIALLY SHOWN ON STRUCTURAL DWGS).
6. THE STEEL FABRICATOR SHALL CHECK AND CONFIRM ALL DIMENSIONS AND ELEVATIONS AGAINST THE ARCHITECTURAL DRAWINGS. SUBMIT ALL DISCREPANCIES TO THE ENGINEER FOR RESOLUTION PRIOR TO FABRICATION.
7. THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STEEL STRUCTURE UNTIL COMPLETE.
8. JOISTS BEING SUPPORTED ON THE SAME BEAM (FACE TO FACE), SHALL BE STAGGERED IF NECESSARY, TO PROVIDE THE MINIMAL SUPPORT LENGTH SPECIFIED BY THE JOISTS MANUFACTURER.
9. REFER TO MECHANICAL-ELECTRICAL AND ARCHITECTURAL DRAWINGS FOR LOCATION, QUANTITY AND WEIGHT OF MECHANICAL UNITS.
10. STEEL FABRICATOR SHALL CALCULATE ALL ROOF SLOPES. CALCULATE AND PROVIDE EACH BEAM'S ELEVATION WITH SHOP DRAWINGS FOR ENGINEER'S REVIEW.
11. PROVIDE ADDITIONAL REINFORCING (AS REQUIRED) TO STEEL STRUCTURE AT ROOF ANCHORS LOCATION. REFER TO ARCHITECTURAL DRAWINGS FOR QUANTITY AND LOCATION. CONTRACTOR SHALL PROVIDE DRAWINGS UNDER SEAL.
12. ALL SHELF ANGLES AND HANGERS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH CAN/CSA-G164 LATEST EDITION.
13. WELDING
    ALL WELDING WORKS SHALL BE CONFORM TO CAN/CSA-S-16 LATEST EDITION. WELDERS SHALL BE CONFORM TO CSA STANDARDS W47.1, W55.3 AND W59 LATEST EDITION. CONTRACTOR AND WELDERS SHALL BE MEMBERS OF THE CANADIAN WELDING BUREAU (C.W.B.).
14. GALVANIZATION
    GALVANIZATION SHALL BE HOT DIPPED GALVANIZED, IN CONFORMITY WITH CSA-G164 STANDARD. MINIMUM WEIGHT OF COAT SHALL BE 600 g/m2 . TOUCH-UP SHALL BE EXECUTED WITH "GALVANO SPRAY" BY "METAFLUX". OR APPROVED EQUIVALENT.
15. MASONRY SUPPORT PROVIDE 50x300x50x3.2mm @400c/c VERT. ANCHOR PLATES WELDED TO COLUMNS WHERE MASONRY WALLS BUTT AGAINST THESE. PROVIDE BRACKETS FOR MASONRY WALL LATERAL SUPPORT. REFER TO TYPICAL DETAILS. PROVIDE WELDED DOWELS ON STEEL STRUCTURE FOR MASONRY WALLS. REFER TO ARCHITECTURAL DRAWINGS FOR QUANTITY AND LOCATION.
16. THE CONTRACTOR SHALL SUBMIT FOR REVIEW SHOP DRAWINGS AND DESIGN CALCULATIONS. DRAWINGS SHALL BE STAMPED BY A ONTARIO CERTIFIED ENGINEER.
17. INSPECTION OF ALL STRUCTURAL STEEL CONNECTIONS SHALL BE PERFORMED BY A THIRD PARTY INSPECTOR DESIGNATED AND PAID BY THE OWNER. STEEL INSPECTOR SHALL BE QUALIFIED IN ACCORDANCE WITH THE REQUIREMENTS OF CSA STANDARD W178 "QUALIFICATION CODE FOR WELDING INSPECTION ORGANIZATIONS", AND APPROVED BY THE CANADIAN WELDING BUREAU. INSPECTOR TO BE LEVEL II OR III.
18. DESIGN, DETAIL AND FABRICATE ALL CONNECTIONS IN A QUALITY CONTROLLED SHOP TO CISC HANDBOOK OF STEEL CONSTRUCTION. UNLESS OTHERWISE INDICATED ON THE DRAWINGS CONNECTIONS ARE TO BE DESIGNED FOR 50% OF THE FACTORED SHEAR CAPACITY OF THE MEMBER, WITH A MINIMUM CONNECTION OF TWO BOLTS.
19. ALL EXPOSED STEEL (AESS) IS TO BE PROTECTED FROM THE ELEMENTS. REFER TO THE ARCHITECTURAL SPECIFICATIONS
20. WEEP HOLES SHALL BE PROVIDED FOR ALL HSS COLUMNS AND BEAMS USED IN UNCONTROLLED ENVIRONMENTS.
21. TOP OF HSS COLUMNS SHALL BE COVERED BY A WELDED COVER PLATE TO PREVENT MOISTURE INSIDE COLUMNS.

SEISMIC LOADS

SEISMIC FORCE RESISTING SYSTEM (SFRS)

SFRS: SYSTEM & CONNECTIONS: (2012 OBC CLAUSE 4.1.8.9/4.1.8.10)
LATERAL LOAD RESISTING SYSTEM:
CONVENTIONAL CONSTRUCTION (MOMENT RESISTING FRAMES & BRACED FRAMES)
Rd = 1.5
Ro = 1.3
CSA STANDARD: CAN/CSA-S16-14 & A23.3-14
APPLICABLE CLAUSE(S): 26.1 & 27.11

SFRS: DIAPHRAGMS & CONNECTIONS: (2012 OBC CLAUSE 4.1.8.15)
CSA STANDARD: CAN/CSA-S16-14

SFRS: SYSTEM FOUNDATIONS: (2012 OBC CLAUSE 4.1.8.16)
CSA STANDARD: CAN/CSA A23.3-04
APPLICABLE CLAUSE(S): 15.2 TO 15.12

☒ FOR ANCHORED FOOTINGS
☒ FOR UNANCHORED FOOTINGS

CONFIRMATION:
FOUNDATIONS HAVE BEEN DESIGNED TO RESIST THE LATERAL LOAD CAPACITY OF SFRS, INCLUDING ALL APPLICABLE AMPLIFICATION FACTORS.

IMPORTANCE FACTOR
(2012 OBC CLAUSE 4.1.8.5)
Ie = 1.0

PROJECT CITY
OTTAWA

SITE CLASS
THE NOTED SITE CLASSIFICATION FOR SEISMIC SITE RESPONSE AND SHEAR WAVE VELOCITY PARAMETERS INDICATED ARE AS REPORTED IN THE GEOTECHNICAL REPORT

☐ A ☒ B ☐ C ☐ D ☐ E ☐ F (SITE SPECIFIC SPECTRUM:)

HORIZONTAL SHEAR WAVE VELOCITY: N/A

PGA	PGV
0.141	0.074

RESPONSE SPECTRUM DATA
☐ PERFORMED
☒ NOT PERFORMED

5% DAMPED SPECTRAL RESPONSE ACCELERATION VALUES

Sa(0.2)	= 0.196
Sa(0.5)	= 0.090
Sa(1.0)	= 0.043
Sa(2.0)	= 0.021
Sa(5.0)	= 0.005
Sa(10.0)	= 0.002

DESIGN SPECTRAL RESPONSE ACCELERATION VALUES (DSRAV)

F(0.2)	= 0.77	Sa(0.2)	= 0.15
F(0.5)	= 0.65	Sa(0.5)	= 0.06
F(1.0)	= 0.63	Sa(1.0)	= 0.03
F(2.0)	= 0.63	Sa(2.0)	= 0.01
F(5.0)	= 0.64	Sa(4.0)	= 0.01
F(10.0)	= 0.69	Sa(5.0)	= 0.00
		Sa(10.0)	= 0.00

STRUCTURAL SEPARATION
☐ THE NEW & EXISTING STRUCTURAL HAVE BEEN SEPARATED IN ACCORDANCE WITH 4.1.8.14 (1) OF THE 2012 OBC.
☒ N/A

SYSTEM RESTRICTION VALUE
IoFaSa(0.2)=0.728 ≥ 0.35 ☒ YES ☐ NO

STATIC PERIOD DATA
(2012 OBC CLAUSE 4.1.8.11(3))

☐ STEEL MOMENT FRAME:	$T_{a@STATIC}$ = 0.085 (hn) ¾ = 0.00 sec $T_{a@MAX}$ = 1.5 $T_{a@STATIC}$ = 0.00 sec
☐ CONCRETE MOMENT FRAME:	$T_{a@STATIC}$ = 0.075 (hn) ¾ = 0.00 sec $T_{a@MAX}$ = 1.5 $T_{a@STATIC}$ = 0.00 sec
☐ OTHER MOMENT FRAMES:	$T_{a@STATIC}$ = 0.1N = 0.00 sec $T_{a@MAX}$ = 1.5 $T_{a@STATIC}$ = 0.00 sec
☒ BRACED FRAMES:	$T_{a@STATIC}$ = 0.025hn = 0.28 sec $T_{a@MAX}$ = 2.0 $T_{a@STATIC}$ = 0.58 sec
☐ SHEAR WALL AND OTHER STRUCTURES:	$T_{a@STATIC}$ = 0.05(hn) ¾ = 0.00 sec $T_{a@MAX}$ = 2.0 $T_{a@STATIC}$ = 0.00 sec

HIGHER MODE FACTOR
(2012 OBC CLAUSE 4.1.8.11(5))
Mv =1.0 J = 1.0

FUNDAMENTAL PERIOD BASED DSRAV:
STATIC: $S_{(TA)NS}$ = 0.28
$S_{(TA)EW}$ = 0.28

STRUCTURAL CONFIGURATION
(2012 OBC CLAUSE 4.1.8.11(9))
TORSIONAL SENSITIVITY: Bmax = 1.16 < 1.7

IRREGULARITY REVIEW
(2012 OBC CLAUSE 4.1.8.6)

1. VERTICAL STIFFNESS:	☐ YES	NO ☒
2. WEIGHT:	☐ YES	NO ☒
3. VERTICAL GEOMETRIC:	☐ YES	NO ☒
4. IN PLANE DISCONTINUITY:	☐ YES	NO ☒
5. OUT OF PLANE:	☐ YES	NO ☒
6. WEAK STOREY:	☐ YES	NO ☒
7. TORSIONAL:	☐ YES	NO ☒
8. NON-ORTHOGONAL:	☐ YES	NO ☒

CONCLUSION: BUILDING IS ☒ REGULAR ☐ IRREGULAR
DYNAMIC ANALYSIS: ☐ REQUIRED ☒ NOT REQUIRED
DYNAMIC PROCEDURE: METHOD: ☐ MODAL RESPONSE SPECTRUM ☐ NUMERICAL INTEGRATION TIME HISTORY ☒ N/A

ANALYSIS METHOD
☒ EQUIV. STATIC
☐ DYNAMIC

TORSIONAL ECCENTRICITY
☒ ± 0.10 Dnx (4.1.8.11(10a), ≤ B 1.7 EQUIV. STATIC FORCE PROCEDURE
☐ ± 0.10 Dnx (4.1.8.12(4a), ≥ B 1.7 (DYNAMIC ANALYSIS)
☐ ± 0.05 Dnx (4.1.8.12(4b), < B 1.7 (DYNAMIC ANALYSIS)

STATIC BASE SHEARS/MOMENTS
(2012 OBC CLAUSE 4.1.8.11)
W = 3948 kN (IN EACH DIRECTION)
V_{MIN} = S(2.0)MvIeW/(RdRo) = 27 kN
V = S(Ta)MvIeW/(RdRo) = 567 kN
V_{MAX} = 2/3 S(0.2) IeW/(RdRo) = 202 kN
Vdesign = 202 kN
Mbase = 1544 kN-m

03

LIVE LOADS

1. LOADING FOR CURRENT DESIGN AND FUTURE SECOND STORY EXPANSION HAS BEEN ACCOUNTED FOR IN ACCORDANCE WITH THE FOLLOWING:

LOCATION	LIVE LOAD
STATION FLOORS	4.8 kPa
PODIUM	4.8 kPa
STAIRS	4.8 kPa
PLATFORMS	7.2 kPa
MECHANICAL ROOMS	12.0 kPa

WIND LOADS

P = Iw q (1:50) Ce Cp Cg

where; q 1:50 = 0.41 kPa / q 1:10 = 0.32 kPa
Iw = 1.0
Ce: (ROUGH TERRAIN) Ce=0.7 ~ 0.97
N-S Cp Cg = 1.30 (avg) / 1.95 (max)
E-W Cp Cg = 1.30 (avg) / 1.95 (max)

(N-S)		(E-W)	
Vbase	178 kN	Vbase	206 kN
Mbase	736 kNm	Mbase	1218 kNm

STEEL DECK NOTES

1. STEEL DECK SHALL CONFORM TO CSSB.101 GRADE A: SEE PLANS FOR DECK GAUGE, GALVANIZED (U/N).
2. DECK SHALL BE INSTALLED IN SECTIONS TO SPAN OVER 3 SPANS MINIMUM. IF THE CONTRACTOR DEVIATES FROM THIS, THE DECK GAUGE SHALL BE DETERMINED BY THE MANUFACTURER FOR THE LOADS AND SPAN CONDITION USED. CONFIRM WITH ENGINEER PRIOR TO DEVIATION FOR GENERAL SPECIFICATION.
   STEEL DECK HAS BEEN DESIGNED FOR DIAPHRAGM ACTION TO TRANSMIT HORIZONTAL LOADS (WIND AND/OR SEISMIC) TO THE LATERAL FORCE RESISTING SYSTEMS.
3. STEEL DECK FIXATION:
   - SEE ROOF DECK LAYOUT/LEGEND ON PLANS
4. DESIGN ROOF DECK FOR MIN. 1.5 KPA NET SERVICE UPLIFT DUE TO WIND EFFECTS OR AS INDICATED ON DRAWINGS.
5. WHERE APPLICABLE USE STEEL WASHERS AT WELDING POINTS WHERE NECESSARY AND/OR DIRECTED BY ENGINEER TO PREVENT BURN-THRU OF DECK.
6. SUBMIT SHOP DRAWINGS UNDER SEAL, INDICATE DECK PLAN, PROFILE, DIMENSIONS, BASE STEEL THICKNESS, METALLIC COATING DESIGNATION, CONNECTIONS TO SUPPORTS AND SPACING, PROJECTIONS, OPENINGS, REINFORCEMENT DETAILS AND ACCESSORIES. INDICATE POSITION OF TEMPORARY SHORING OF FLOOR DECK IF REQUIRED.
7. THE DECK ERECTOR SHALL CUT ALL OPENINGS IN THE METAL DECK AND SHALL SUPPLY AND INSTALL REINFORCING FOR ALL OPENINGS UP TO 12" (300mm)
8. SQUARE OR 12" (300mm) DIAMETER. OPENINGS LARGER THAN 12" (300mm) SQUARE (OR DIAMETER) SHALL BE REINFORCED PER DRAWINGS.

DEAD LOADS

1. DEAD LOAD = SW OF STRUCTURE PLUS THE WEIGHT OF PERMANENT FIXTURES, PARTITIONS, EQUIPMENT, PIPING, CONDUIT, ETC.
2. LOADING FOR CURRENT DESIGN AND FUTURE SECOND STORY EXPANSION HAS BEEN ACCOUNTED FOR IN ACCORDANCE WITH THE FOLLOWING:

LOCATION	DESCRIPTION	SDL ALLOWANCE
INITIAL CONSTRUCTION		
STATION ROOF	M&E	1.25 kPa
	CEILING	0.25 kPa
	ART	0.25 kPa
STAIR CANOPY	M&E	1.25 kPa
PODIUM DECK	M&E	1.25 kPa
	FIREPROOFING	1.0 kPa
STAIRS	PRECAST TREADS	1.2 kPa
FUTURE EXPANSION		
STATION FLOOR	DECK & TOPPING	4.50 kPa
	M&E	1.25 kPa
STATION ROOF	ROOF ASSEMBLY	1.25 kPa
	M&E	1.25 kPa
	CEILING	0.25 kPa
STAIR CANOPY	STAIRS & CANO

TITLEBLOCK: 790mm x 534mm

GENERAL

STEEL : Fy = 400 MPa

BAR	TENSION	COMPRESSION
10M	450mm	300mm
15M	700mm	450mm
20M	1000mm	600mm
25M	1500mm	750mm
30M	1800mm	900mm
35M	2100mm	1050mm

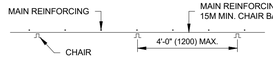
MINIMUM REINFORCEMENT SPLICE

OPENING	BRICK ANGLE SIZE
UP TO 1200mm	L90x90x6
1201-1500mm	L90x90x8
1501-2100mm	L100x90x8
2101-2400mm	L125x90x8
2401-2700mm	L125x90x10
2701-3610mm	L150x100x10

LOOSE LINTEL SCHEDULE FOR BRICK

BAR LENGTH	NO. OF CHAIRS
8'-0" (2400) OR LESS	3
8'-0" (2400) TO 12'-0" (3600)	4
12'-0" (3600) TO 16'-0" (4800)	5
CHAIRS AT 4'-0" (1200) o/c. MAX.	

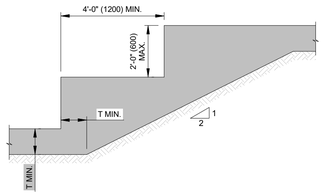
TOP STEEL ; GALVANIZED OR PLASTIC COVERED CHAIRS



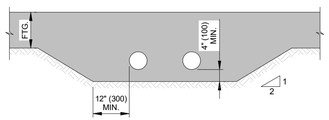
B: BOTTOM STEEL : PLASTIC BOLSTERS SLABS
BOLSTERS @ 48" (1200) c/c MAX. 2-DIR.
BEAMS : BOLSTERS @ 36" (900) c/c MAX.

TYP. REINFORCING CHAIR SCHEDULE

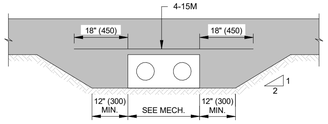
FOOTINGS



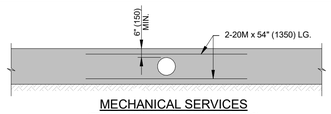
STEP FOOTINGS



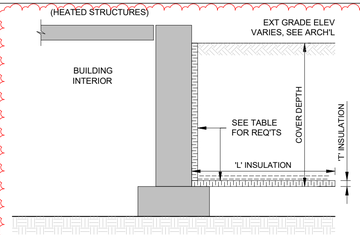
MECHANICAL SERVICES
(UNDER FOOTINGS)



MECHANICAL SERVICES TRENCH
(UNDER FOOTINGS)



MECHANICAL SERVICES
(TROUGH CONTINUOUS STRIP FOOTINGS)



TYPICAL EXTERIOR FOOTING INSULATION DETAIL

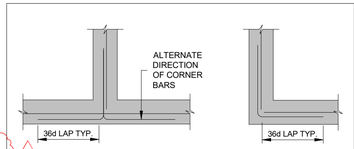
CONFIRM WITH GEOTECHNICAL ENGINEER

COVER DEPTH (mm)	INSULATION DIMENSIONS	
	L insulation (mm)	T insulation (mm)
LESS THAN 24" (600)	NOT RECOMMENDED	
24" (600) TO 30" (750)	72" (1800)	2" (50)
30" (750) TO 36" (900)	48" (1200)	2" (50)
36" (900) TO 48" (1200)	48" (1200)	1 1/2" (38)
48" (1200) TO 60" (1500)	36" (900)	1" (25)
GREATER THAN 60" (1500)	NOT REQUIRED	

NOTES:

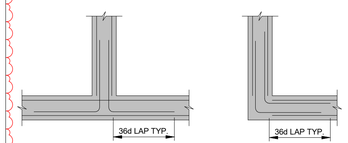
1. CONSULT GEOTECHNICAL ENGINEER FOR THERMAL RESISTANCE VALUES OF ACCEPTABLE INSULATION TYPES.
2. INSULATION REQUIRED DOWN OUTSIDE FACE OF FOUNDATION WALL AND OUTWARD FROM WALL AS SHOWN.
3. ALL EXTERIOR FOOTINGS ARE TO FOLLOW THESE REQUIREMENTS UNLESS DIRECTED OTHERWISE BY GEOTECHNICAL ENGINEER.
4. FOR UNHEATED STRUCTURES, WHERE 1.8M DEEP SOIL COVER CAN NOT BE ENSURED, INSULATION TO BE PROVIDED CONSIDERING 25mm OF INSULATION IS EQUIVALENT TO 300mm OF SOIL.

WALLS



02

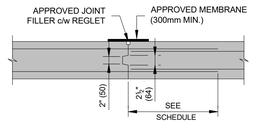
TYPICAL SINGLE LAYER REINFORCED WALL



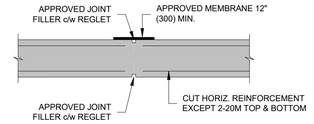
TYPICAL DOUBLE LAYER REINFORCED WALL

SEE PLANS AND SECTIONS FOR SIZE & REINF OF WALLS

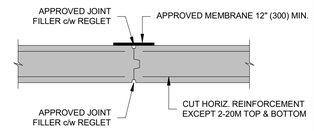
TYP FDN WALL INTERSECTION REINF'G



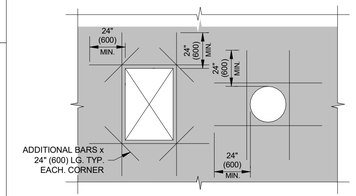
CONSTRUCTION JOINTS
(STANDARD WALLS)



CONTROL JOINTS
(STANDARD WALLS)



EXPANSION JOINTS
(STANDARD WALLS)

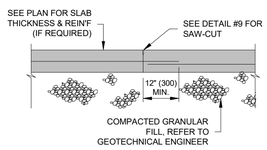


REINFORCING

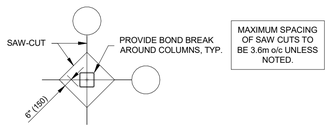
6"-8" (150-200) WALLS : 1-20M ON ONE FACE ALL AROUND OPENING U.N.O.
10" (250) & + WALLS : 1-20M EACH FACE ALL AROUND OPENING U.N.O.

HOLES IN FOUNDATION WALLS

SLAB-ON-GRADE

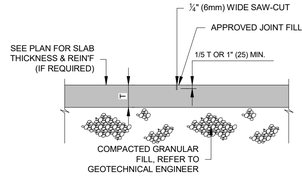


SLAB-ON-GRADE JOINT
(SLAB-ON-GRADE)



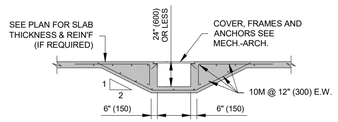
MAXIMUM SPACING OF SAW CUTS TO BE 3.6m o/c UNLESS NOTED.

SAW-CUT AT COLUMNS

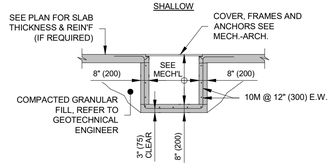


SAW-CUT DETAIL

TRENCHES / PITS

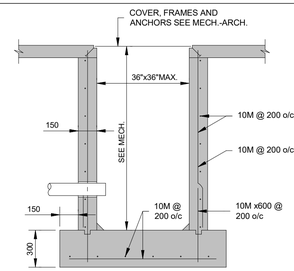


SHALLOW



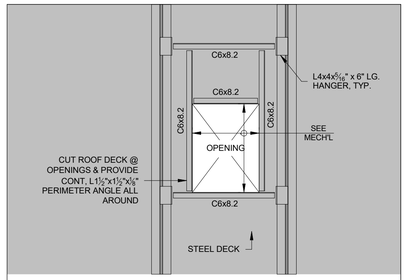
DEEP

TRENCHES

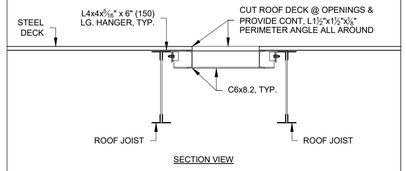


CATCH BASIN, SUMP PIT & OIL INTERCEPTOR

STEEL

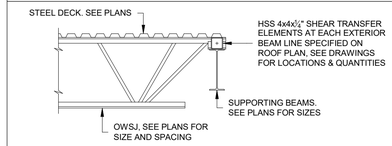


PLAN VIEW



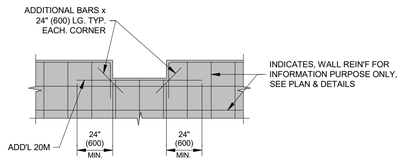
SECTION VIEW

TYP. FRAMING DETAIL - ROOF DECK OPENING



TYPICAL SHEAR TRANSFER ELEMENT DETAIL FOR STEEL DECK

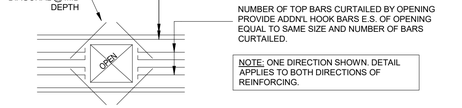
FOUNDATION WALL POCKETS



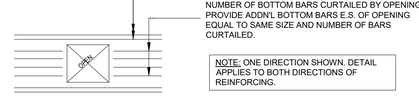
REINFORCING

6"-8" (150-200) WALLS : 1-20M ON ONE FACE ALL AROUND OPENING U.N.O.
10" (250) & + WALLS : 1-20M EACH FACE ALL AROUND OPENING U.N.O.

ADD'L WALL REINFORCING @ DOOR CHECK DOWN AND PIER POCKETS



TYPICAL TOP REINFORCING DETAIL FOR SLAB OPENINGS



TYPICAL BOTTOM REINFORCING DETAIL FOR SLAB OPENINGS

OTrain STAGE 2 ETAPE

Ottawa

STRUCTURAL
CORSO ITALIA STATION

TYPICAL DETAILS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
M. IRISH	S. IBRAHIM
DRAWN	SEALED
J. PIDLAOAN	R. GILLARD

DRAWING NUMBER
660373-1GSS-003-43DD-0004

MODEL NUMBER
660373-1GSS-003-43DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER
R. G. GILLARD
16129504
2021-03-29
PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

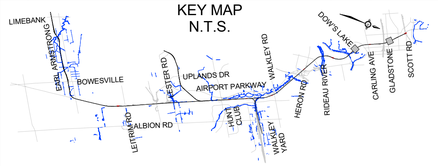
SCALE
N.T.S.

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION - EARLY WORKS	SI	2020-09-24
01	ISSUED FOR BUILDING PERMIT	SI	2020-11-27
02	ISSUED FOR FCR No. 660373-1GSS-003-40EI-0003	SI	2021-03-29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-03-29

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30/08/2021 13:50:05

TITLEBLOCK: 790mm x 534mm

MASONRY NOTES

1. ALL MASONRY WORK SHALL CONFORM TO LATEST EDITION OF THE O.B.C. AND S304, A370 & A371 LATEST EDITION.
2. BLOCK STRENGTH:
   USE H/15/A/M UNITS CONFORMING TO CSA A165.1 LATEST EDITION AS SPECIFIED IN CSA A179.
3. GROUT:
   USE 15 MPa MIX TO GROUT IN REINFORCED BLOCK CORES. USE 10mm Ø AGGREGATE AND A SLUMP OF 10" (250mm)
4. MORTAR:
   USE TYPE 'S' MORTAR AS SPECIFIED IN CSA A179.
5. HORIZONTAL REINFORCEMENT:
   USE HOT DIP GALVANIZED TRUSS TYPE REINFORCING, LAP 14" (350mm). REFER TO MASONRY WALL REINFORCING SCHEDULE & DETAILS ON DRAWING S2
6. ADD HORIZONTAL BOND BEAM AT EACH FLOOR AND ROOF LEVEL. REINFORCED WITH 1-15M CONT.
7. VERTICAL REINFORCEMENT:
   SEE SCHEDULE. USE 36 REBAR DIAMETER SPLICE LENGTH. PLACE ADDITIONAL 2-20M VERTICAL BARS AT ALL ENDS, CORNERS AND ON EACH SIDE OF ALL OPENINGS.
8. PROVIDE DOWELS FROM FOUNDATION WALL, SLAB THICKENING OR WELDED ON SUPPORTING STEEL STRUCTURE INTO MASONRY WALLS ABOVE. DOWELS TO MATCH MASONRY WALL REINF IN SIZE & SPACING. SEE ARCHITECTURE FOR QUANTITY AND LOCATIONS OF MASONRY WALLS.
9. ALL REINFORCED CORES SHALL BE COMPLETELY FILLED WITH GROUT (SEE NOTE 3).
10. GROUT THE CORES OF ALL BLOCKS LOCATED BELOW BEARING PLATES FOR TWO BLOCKS HIGH AND ONE BLOCK WIDER THAN BEARING PLATE ON E.S. EXCEPT WHERE THERE IS A CONTINUOUS LINTEL.
11. COORDINATE REINFORCING STEEL IN BLOCK WALLS WITH MECHANICAL AND ELECTRICAL CONDUITS/SERVICES. CONDUITS/SERVICES SHALL NOT BE LOCATED WITHIN REINFORCED CORES.
12. ALL MASONRY WORK SHALL BE LATERALLY SUPPORTED AND TIED TO THE STRUCTURE ABOVE, SEE TYPICAL DETAILS.
13. REFER TO STEEL STRUCTURE DRAWINGS & PILASTER SCHEDULE FOR BEAM BEARING PLATE LOCATIONS.
14. CONTRACTOR SHALL COORDINATE AND REFER TO ARCHITECTURAL AND MECHANICAL-ELECTRICAL DRAWINGS FOR ALL OTHER DETAILS NECESSARY.
15. PRIOR TO CONSTRUCTION, PREPARE AND SUBMIT SHOP DRAWINGS FOR REINFORCEMENT IN MASONRY WALLS & LINTELS. INDICATE ALL BAR DIAMETERS, LENGTH, LOCATIONS, DOWELS, CORNER DETAILS, ANCHOR PLATES, ETC. .
16. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL OPENINGS IN MASONRY WALLS.

MASONRY WALL REINFORCING SCHEDULE FOR SITES WITH SEISMIC HAZARD INDEX

0.35 < Ie x Fa x Sa (0.20) < 0.75

UNLESS NOTED OTHERWISE ON PLAN, ALL MASONRY WALLS SHALL BE REINFORCED AS FOLLOWS:

MASONRY WALL REINFORCING SCHEDULE
NON-LOAD BEARING WALLS: (INCLUDES INFILL WALLS)

WALL SIZE	HORIZONTAL REINF.	VERTICAL REINF.
4" (90mm)	N/A	N/A
6" (140mm)	STANDARD BLOCK-TRUSS (9GA.) @ 16" (400) o/c	1-15M @ 48" o/c + DWLS, SEE NOTES
8" (190mm)	STANDARD BLOCK-TRUSS (9GA.) @ 16" (400) o/c	1-20M @ 48" o/c + DWLS, SEE NOTES
10" (240mm)	HEAVY DUTY BLOCK-TRUSS (6GA.) @ 16" (400) o/c	1-20M @ 48" o/c + DWLS, SEE NOTES
12" (290mm)	HEAVY DUTY BLOCK-TRUSS (6GA.) @ 16" (400) o/c	2-15M @ 48" o/c + DWLS, SEE NOTES

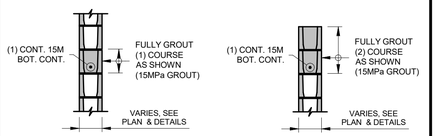
MASONRY WALL REINFORCING SCHEDULE
LOAD BEARING WALLS: (INCLUDES ELEVATOR SHAFTS & STAIRCASES)

WALL SIZE	HORIZONTAL REINF.	VERTICAL REINF.
4" (90mm)	N/A	N/A
6" (140mm)	HEAVY DUTY BLOCK-TRUSS (6GA.) @ 16" (400) o/c	1-15M @ 32" o/c + DWLS, SEE NOTES
8" (190mm)	HEAVY DUTY BLOCK-TRUSS (6GA.) @ 16" (400) o/c	1-20M @ 32" o/c + DWLS, SEE NOTES
10" (240mm)	HEAVY DUTY BLOCK-TRUSS (6GA.) @ 16" (400) o/c	2-15M @ 32" o/c + DWLS, SEE NOTES
12" (290mm)	HEAVY DUTY BLOCK-TRUSS (6GA.) @ 16" (400) o/c	2-15M @ 32" o/c + DWLS, SEE NOTES

MASONRY PILASTER SCHEDULE
(EACH SIDE ALL OPENINGS, END OF ALL WALLS & @ ALL CORNERS, U.N.O. ON PLANS)

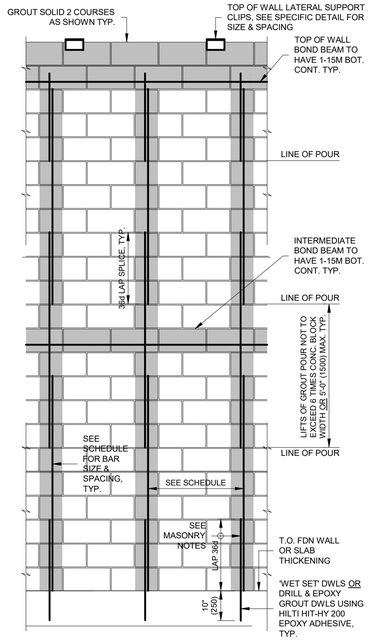
WALL SIZE	PILASTER	DETAIL
ALL WALLS	2 CELLS c/w 1-20M IN EACH CELL, FULLY GROUTED	SEE DETAILS ABOVE

MASONRY WALL REINFORCING SCHEDULES



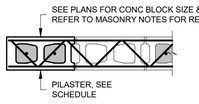
TYPICAL INTERMEDIATE BOND BEAM — TYPICAL BOND BEAM @ TOP OF WALL

TYPICAL BOND BEAM DETAILS

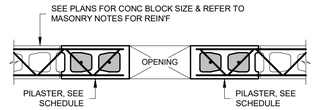


TYP. GROUT LIFT & BAR SPLICE DETAIL

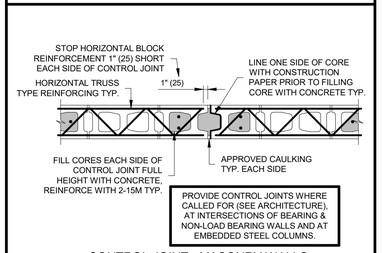
TYP. CORNER - MASONRY WALLS



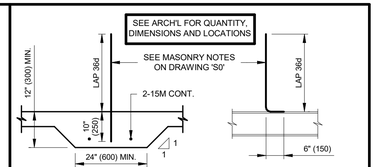
TYP. END - MASONRY WALLS



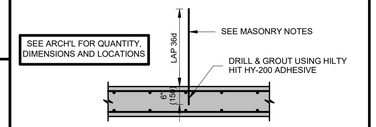
TYP. OPENING - MASONRY WALLS



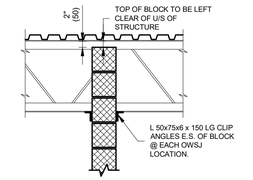
CONTROL JOINT - MASONRY WALLS



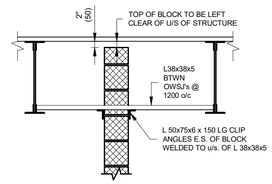
@ SLAB THICKENING (NON-LOAD BEARING MASONRY WALLS) — @ STEEL BEAM (NON-LOAD BEARING MASONRY WALLS)



@ SLAB SUSPENDED SLABS (NON-LOAD BEARING MASONRY WALLS)



WALL PERPENDICULAR TO OWSJ'S



WALL PARALLEL TO OWSJ'S

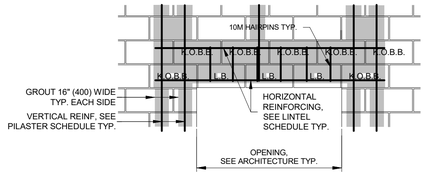
LATERAL SUPPORT FOR NON-LOAD BEARING PARTITIONS @ OWSJ'S

MASONRY LINTEL SCHEDULE

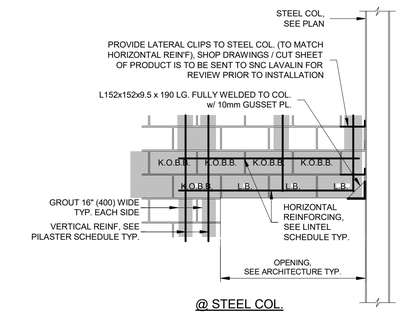
MARK	SIZE	REINFORCING DETAIL
SEE ARCH'L DRAWINGS FOR LOCATION OF OPENING	190/240 x 190 DP OPENINGS UP TO 1500mm	190 — 15 MPa CONCRETE; 1-15M BOTTOM CONTINUOUS
SEE ARCH'L DRAWINGS FOR LOCATION OF OPENING	190/240 x 390 DP OPENINGS 1501mm TO 2400mm	390 — 15 MPa CONCRETE; 1-15M BOTTOM CONTINUOUS
SEE ARCH'L DRAWINGS FOR LOCATION OF OPENING	190/240 x 390 DP OPENINGS 2401mm TO 3000mm	390 — 2-15M TOP CONTINUOUS; 15 MPa CONCRETE; 10M HAIR PINS @ 150mm o/c.; 2-15M BOTTOM CONTINUOUS

NOTES:
1. GROUT ALL LINTELS SOLID FOR DEPTH INDICATED, USE MIN. 15 MPa CONCRETE.
2. AT EACH END OF LINTEL (BEARING AREA) REINFORCE CORE AND GROUT SOLID. USE TYP. VERTICAL MASONRY REINFORCING FOR WALL THICKNESS.
3. ALL LINTELS TO HAVE MIN. 8" (200) BEARING AT EACH END.
4. ALL VERTICAL MASONRY REINFORCING TO PASS THRU ALL LINTELS U/N.

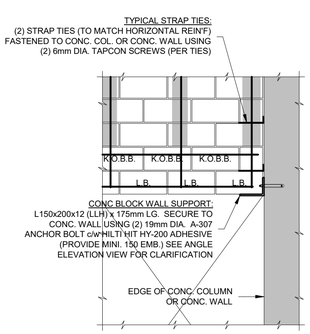
L.B. : LINTEL BLOCK
K.O.B.B. : KNOCK-OUT BOND BEAM



TYP.

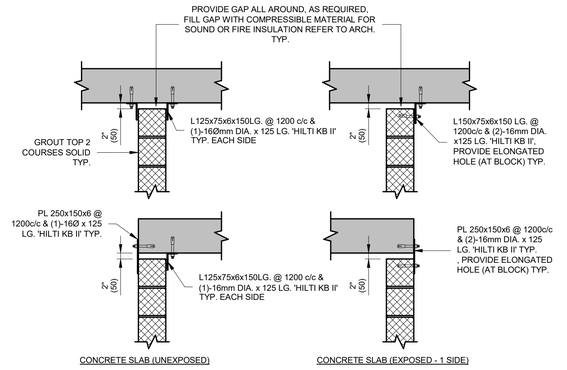


@ STEEL COL.



@ CONC WALL / CONC. COL.

MASONRY LINTEL SCHEDULES / DETAILS



CONCRETE SLAB (UNEXPOSED) — CONCRETE SLAB (EXPOSED - 1 SIDE)

SEE GENERAL NOTES FOR MASONRY REINFORCING

LATERAL SUPPORT FOR NON-LOAD BEARING PARTITIONS @ CONCRETE SLABS

OTrain STAGE 2 ETAPE 2 — Ottawa

STRUCTURAL
CORSO ITALIA STATION

MASONRY NOTES & DETAILS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
M. IRISH	S. IBRAHIM
DRAWN	SEALED
J. PIDLAOAN	R. GILLARD

DRAWING NUMBER 660373-1GSS-003-43DD-0005

MODEL NUMBER 660373-1GSS-003-43DM-1000

DESIGN/BUILDER: SNC·LAVALIN TransitNEXT

DESIGN FIRM: SNC·LAVALIN

PRIMARY SEAL: LICENSED PROFESSIONAL ENGINEER R. G. GILLARD 16129504 2021-03-29 PROVINCE OF ONTARIO

SECONDARY SEAL (IF REQUIRED)

SCALE: N.T.S.

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION - EARLY WORKS	SI	2020-09-24
01	ISSUED FOR BUILDING PERMIT	SI	2020-11-27
02	ISSUED FOR FCR No. 660373-1GSS-003-40EI-0003	SI	2021-03-29

KEY MAP N.T.S.

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ISSUED FOR CONSTRUCTION
2021-03-29

02
THE NEW REVISION NUMBER IS TO ACCOMMODATE THE IFC STAMP

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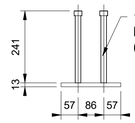
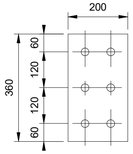
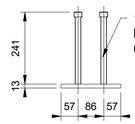


PLAN

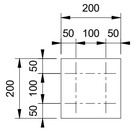


ELEVATION

WMPL1
200x360x13mm THK.
w/ (6) 19mm DIA.
NELSON STUD



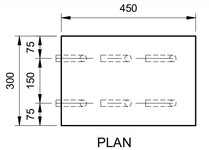
PLAN



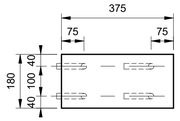
ELEVATION

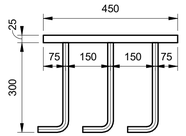
WMPL2
200x200x13mm THK.
w/ (4) 19mm DIA.
NELSON STUD

TYPICAL BEAM MOUNT PLATE DETAILS



PLAN





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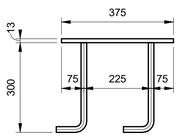
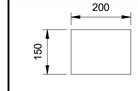
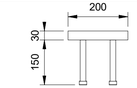
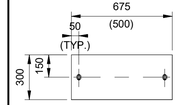
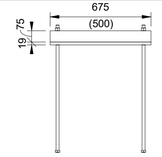
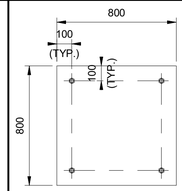
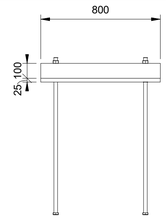


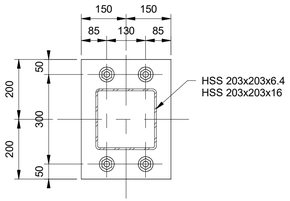
CP-1
300x450x25mm THK.
w/ (6) 22mm DIA.
WELDED J BOLTS

CP-2
180x375x13mm THK.
w/ (4) 19mm DIA.
WELDED J BOLTS

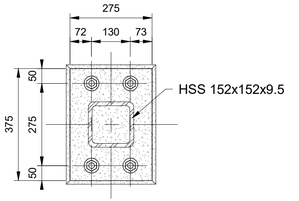
TYPICAL CAST-IN PLATE DETAILS

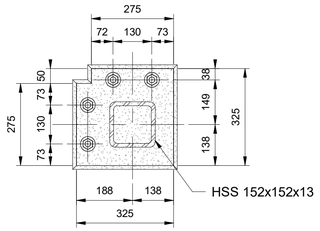
BEAM BEARING PLATE SCHEDULE

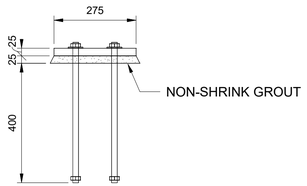
MARK	DESCRIPTION	PLAN	ELEVATION
BBPL1	GALV. PL. 30x150x200 w/ (2) 19mM DIA. GALV. NESON STUD		
BBPL2 BBPL4	GALV. STEEL PL. 75x300x675 (BBPL2) 75X300X500 (BBPL4), ELASTOMERIC BEARING PAD 19x300x675 UNDER, w/ (2) 38x22 SLOT HOLE. (2) 20M GALV. ROD, THREADED AT BOTH ENDS, 800mm LONG.		
BBPL3	GALV. STEEL PL. 100x800x800 w/ (4) 27mm DIA. HOLES, ELASTOMERIC BEARING PAD 25x800x800 UNDER w/ (4) 38x27 SLOT HOLES. (4) 25M GALV. ROD THREADED AT BOTH ENDS, 1000mm LONG.		



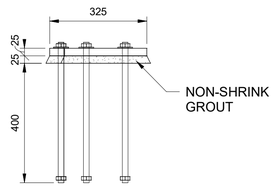
CBP-1
300x400x25mm THK.
w/ (4) 20mm DIA. BOLT c/w
NUT & WASHER







CBP-2
25mm THK. STEEL PLATE
w/ (4) 20mm DIA. BOLT c/w
NUTS & WASHER



CBP-3
25mm THK. STEEL PLATE
w/ (4) 20mm DIA. BOLT c/w
NUTS & WASHER

COLUMN BASE PLATE DETAIL

CONCRETE FLOOR SCHEDULE

MARK	THICKNESS	DESCRIPTION
FL-1	250	250 CONC. STRUCTURAL SLAB w/ 15M @ 300 o/c. T&B E.W.
FL-2	150	150 CONC. S.O.G. w/ 15M @ 300 o/c. E.W. MID DEPTH OVER COMPACTED GRANULAR BASE (REFER TO GEOTECHNICAL REPORT)
FL-4	550	2800x550 THK CONC. SLAB 25M@ 200 o/c TOP & BOT. E.W. c/w STD. HOOKS INTO WALL TO MATCH SLAB REINFORCING

FOUNDATION WALL SCHEDULE

MARK	WIDTH	REINFORCING
FDN-1	300	15M @ 250 o/c. E.F. E.W. TRANSV. BARS OUTER
FDN-2	300	25M @ 200 o/c E.F. E.W. VERT BARS OUTER
FDN-3	300	15M @ 300 o/c E.F. E.W. VERT BARS OUTER
FDN-4	500	25M @ 200 o/c E.F. E.W. VERT BARS OUTER
FDN-5	900	25M @ 200 E.F. E.W.
FDN-6	300	15M @ 200 o/c VERT BARS OUTER
FDN-7	350	15M @ 300 o/c E.F. E.W. VERT BARS OUTER
FDN-8	200	25M @ 200 o/c E.F. E.W. VERT BARS OUTER

WALL FOOTING SCHEDULE

MARK	WIDTH	THICKNESS	REINFORCING
WF-1	1000	350	4-15M TLL & BUL. CONT. LONGITUDINAL 15M TUL & BLL TRANSV. @ 300 o/c.
WF-2	900	300	6-15M BUL. CONT. LONGITUDINAL 15M BLL TRANSV. @ 300 o/c.
WF-3	1500	500	6-15M TLL & BUL CONT. LONGITUDINAL 15M TUL @ 200 o/c TRANSV. 20M BLL @ 200 o/c TRANSV.
WF-4	1700	500	6-15M TLL & BUL CONT. LONGITUDINAL 15M TUL @ 200 o/c TRANSV. 20M BLL @ 200 o/c TRANSV.
WF-5	1350	350	4-15M TLL & BUL. CONT. LONGIYUDINAL 15M TUL & BLL TRANSV. @ 300 o/c.

STEEL COLUMN SCHEDULE

MARK	DESCRIPTION
C1	HS203x203x6.4
C2	HS152x152x9.5
C3	HS203X203X13
C4	HSS254X254X15.9
C5	HSS152X152X13
C6	HSS203x102x8

03

PAD FOOTING SCHEDULE

MARK	WIDTH	LENGTH	THICKNESS	REINFORCING
PF-1	(AS SHOWN IN PLAN)		300	6-15M BOT. E.W.
PF-2	2500	2500	300	15M @ 200 o/c BOT. E.W.
PF-3	4050	5840	892	20M @ 300 o/c TOP & BOT . E.W.
PF-4	4050	5805	900	20M @ 300 o/c TOP & BOT. E.W.
PF-5	10544	17638	500	6-15M TLL & BUL CONT. LONGITUDINAL 20M TUL @ 200 o/c TRANSV. 20M BLL @ 200 o/c TRANSV.

CONCRETE COLUMN SCHEDULE

MARK	SIZE	VERT. REIN'F	TIES
CC-1	1000 x 1000	24-25M VERT. DOWEL EVERY SECOND VERT. MIN. 1200mm INTO SOUND BEDROCK AT COLUMN BASE	15M TIES @ 400 O.C.

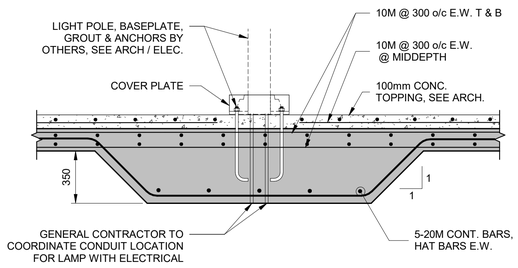
CONCRETE BEAM SCHEDULE

MARK	SIZE	REINFORCING
CB-1	300 x 900	3-35M TOP&BOT. CONT. 15M TIES @75 o/c. 5-15M FACE BARS EACH SIDE
CB-2	300 x 850	3-30M TOP & BOT. CONT. 15M TIES @ 75 o/c 2-15MFACE BARS EACH SIDE
CB-3	300 x1302	3-30M TOP&BOT CONT. 15M TIES @75 o/c. 6-15M FACE BARS EACH SIDE

03

CONCRETE PIER SCHEDULE

MARK	SIZE	VERT. REINF	TIES
P1	600 DIA.	8-25M VERT. FULL LENGTH	15M TIES @ 200 o/c. & 3 ADD'L TIES @ 75mm O/C TOP



TYPICAL LIGHT POLE BASE DETAIL

1 : 20

OTrain STAGE 2 ETAPE 2

Ottawa

STRUCTURAL
CORSO ITALIA STATION

SCHEDULES AND DETAILS

CONTRACT No. LRT19-1025

DESIGNED M. IRISH | CHECKED S. IBRAHIM

DRAWN J. PIDLAOAN | SEALED R. GILLARD

DRAWING NUMBER
660373-1GSS-003-43DD-0006

MODEL NUMBER
660373-1GSS-003-43DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER R. G. GILLARD 16129504 2021-07-30 PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

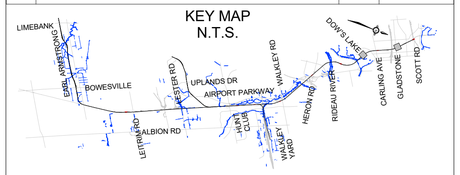
SCALE
N.T.S.

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION - EARLY WORKS	SI	2020-09-24
01	ISSUED FOR BUILDING PERMIT	SI	2020-11-27
02	ISSUED FOR FCR No. 660373-1GSS-003-40EI-0003	SI	2021-03-29
03	REVISED ISSUED FOR CONSTRUCTION	SI	2021-07-30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-07-30

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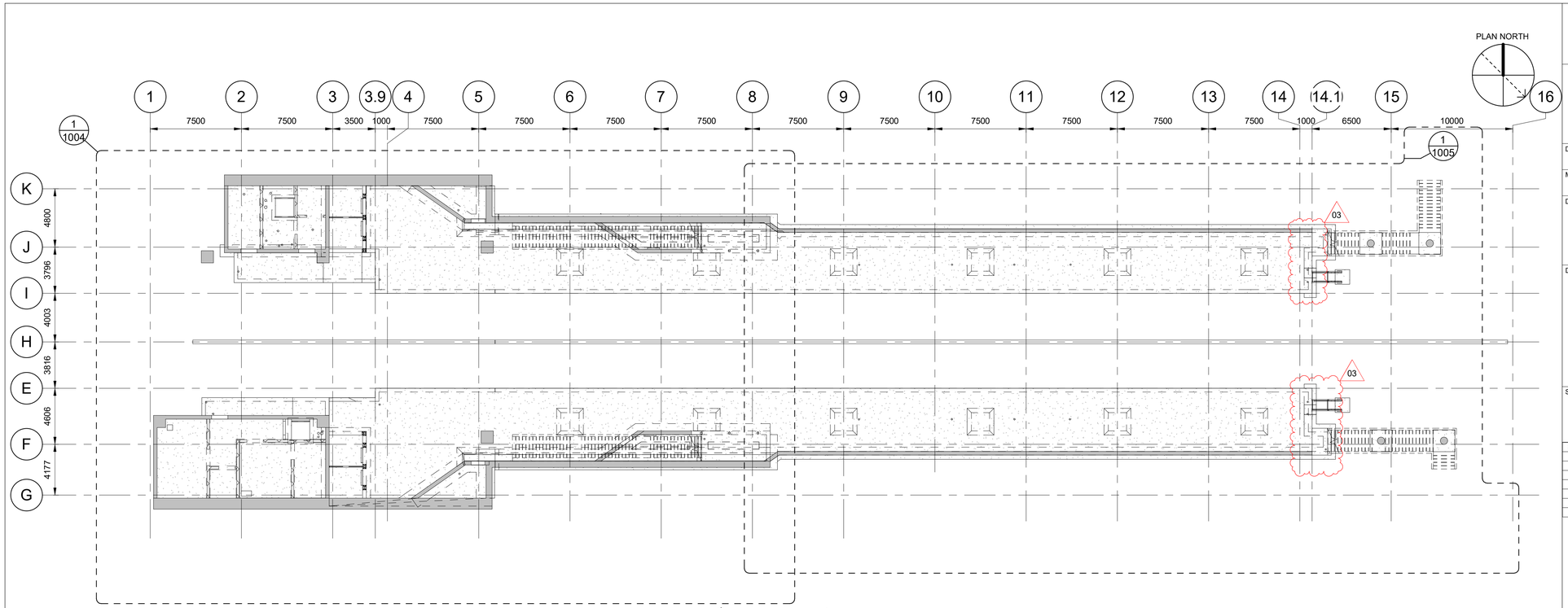
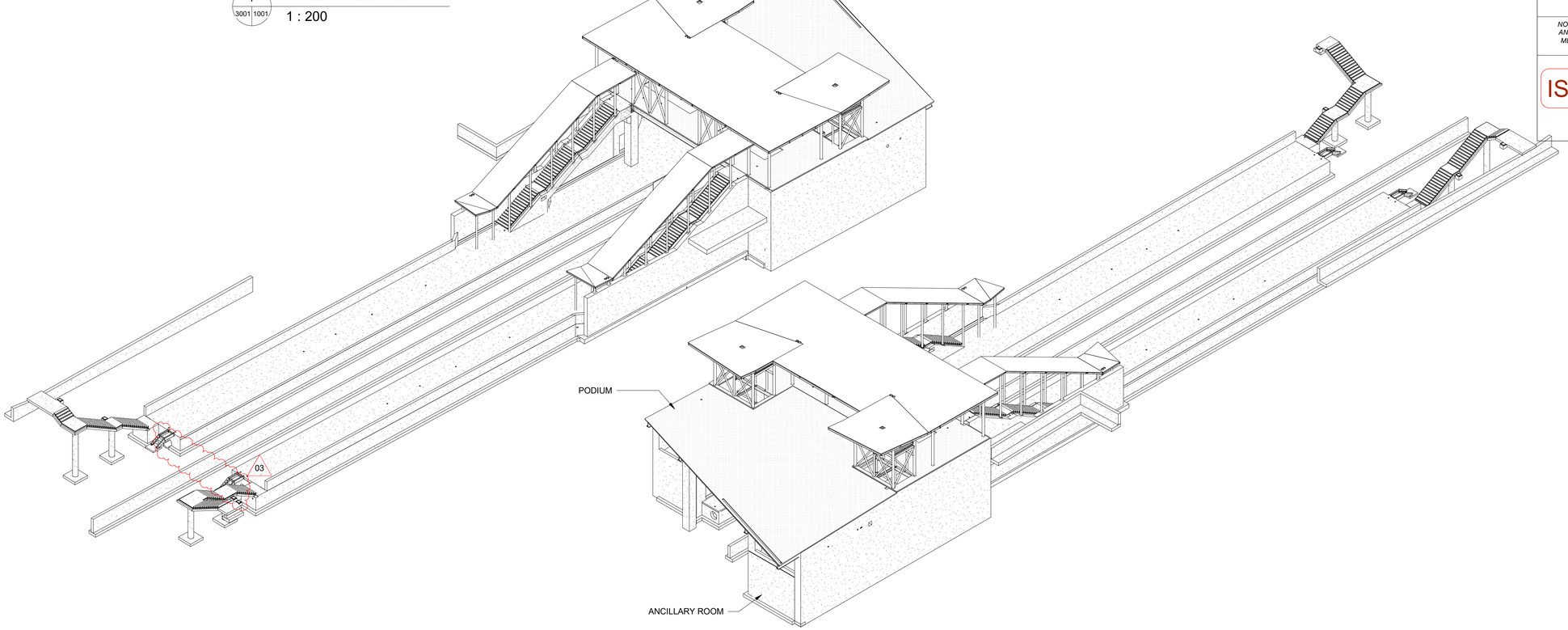


1 3001 1001 OVERALL PLAN

1 : 200



OTrain STAGE 2 ETAPE

Ottawa

STRUCTURAL
CORSO ITALIA STATION

OVERALL PLAN

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
M. IRISH	S. IBRAHIM
DRAWN	SEALED
J. PIDLAOAN	R. GILLARD

DRAWING NUMBER
660373-1GSS-003-43DD-1001

MODEL NUMBER
660373-1GSS-003-43DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER
R. G. GILLARD
16129504
2021-07-30
PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

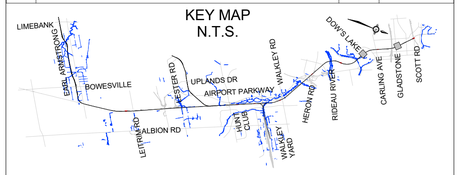
SCALE
HORIZONTAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION - EARLY WORKS	SI	2020-09-24
01	ISSUED FOR BUILDING PERMIT	SI	2020-11-27
02	ISSUED FOR FCR No. 660373-1GSS-003-40EI-0003	SI	2021-03-29
03	REVISED ISSUED FOR CONSTRUCTION	SI	2021-07-30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-07-30

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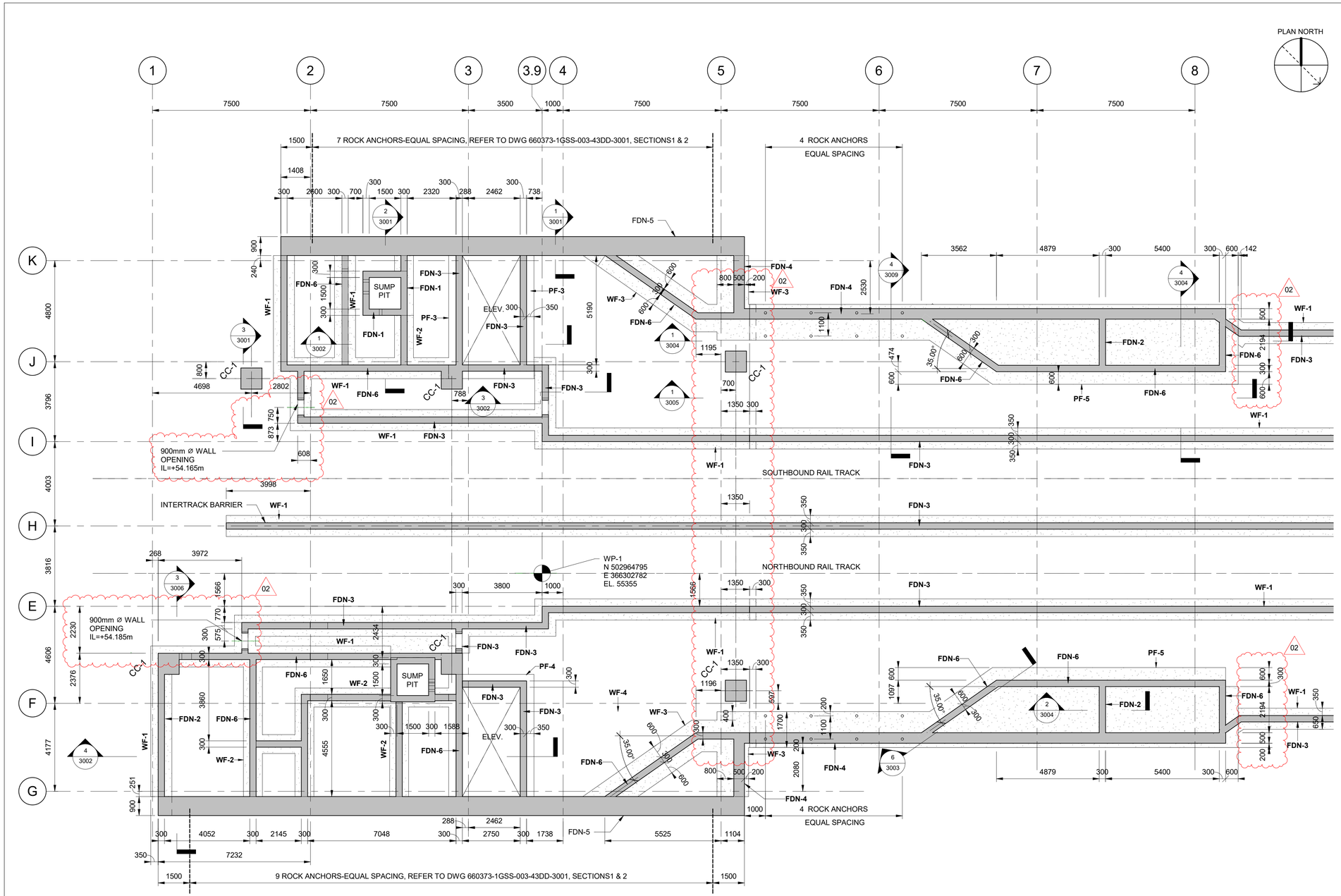

1 SK-2 1002

FOUNDATION PLAN - SECTOR 1

1 : 100

REFER TO DRAWING 0006 FOR FOUNDATION WALL, WALL FOOTING AND PAD FOOTING SCHEDULES

OTrain STAGE 2 ETAPE 2

Ottawa

STRUCTURAL
CORSO ITALIA STATION

FOUNDATION PLAN - SECTOR 1

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
M. IRISH	S. IBRAHIM
DRAWN	SEALED
J. PIDLAOAN	R. GILLARD

DRAWING NUMBER
660373-1GSS-003-43DD-1002

MODEL NUMBER
660373-1GSS-003-43DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER R. G. GILLARD 10129504 2021-03-29 PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

SCALE
HORIZONTAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION - EARLY WORKS	SI	2020-09-24
01	ISSUED FOR BUILDING PERMIT	SI	2020-11-27
02	ISSUED FOR FCR No. 660373-1GSS-003-40EI-0003	SI	2021-03-29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-03-29

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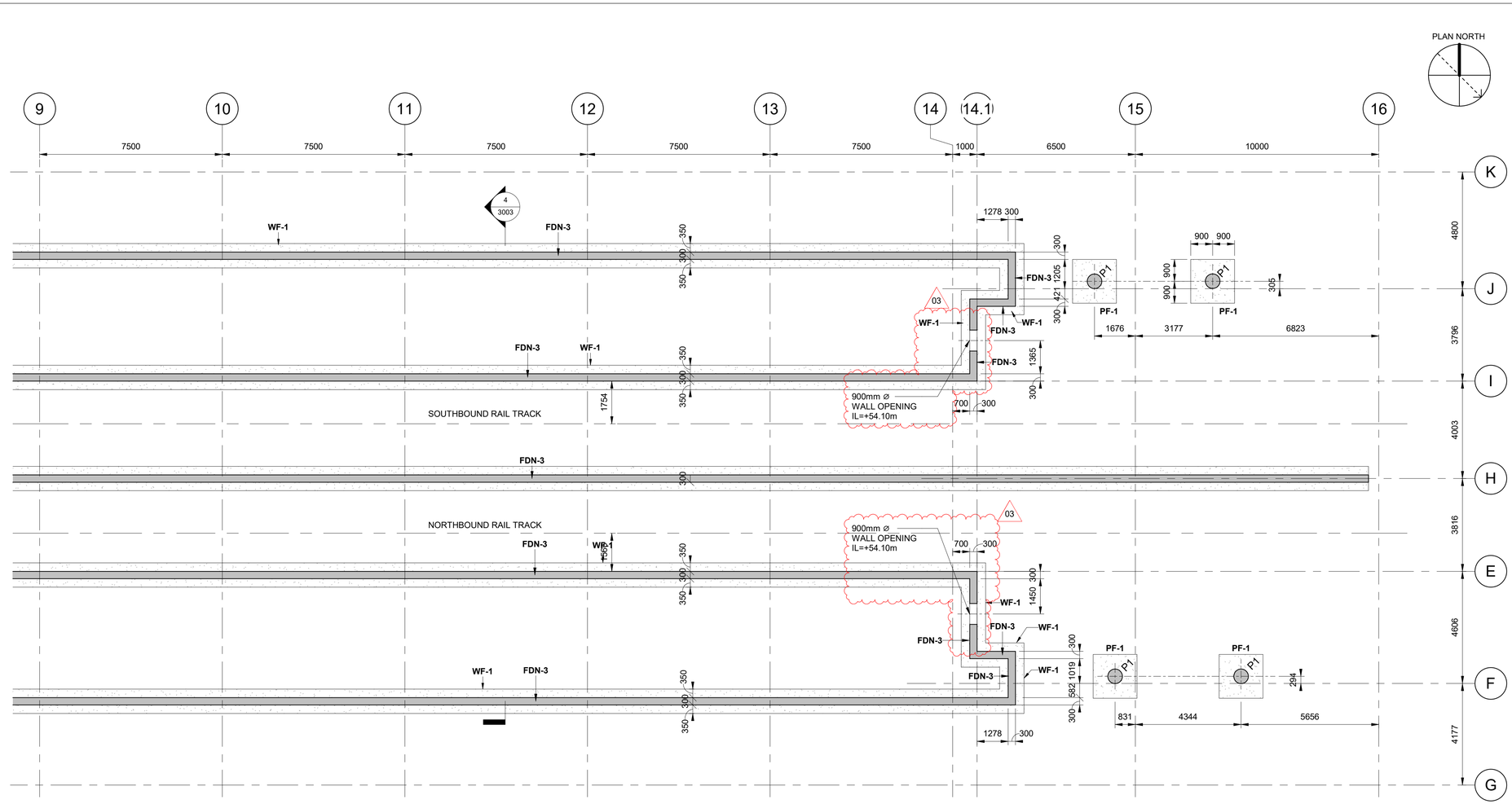


FOUNDATION PLAN - SECTOR 2

1 : 100

REFER TO DRAWING 0006 FOR FOUNDATION WALL, WALL FOOTING AND PAD AND FOOTING SCHEDULES

OTrain STAGE 2 ETAPE 2

Ottawa

STRUCTURAL
CORSO ITALIA STATION

FOUNDATION PLAN - SECTOR 2

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
M. IRISH	S. IBRAHIM
DRAWN	SEALED
J. PIDLAOAN	R. GILLARD

DRAWING NUMBER
660373-1GSS-003-43DD-1003

MODEL NUMBER
660373-1GSS-003-43DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER
R. G. GILLARD
16129504
2021-07-30
PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

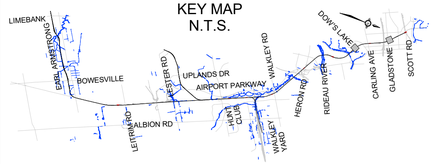
SCALE
HORIZONTAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION - EARLY WORKS	SI	2020-09-24
01	ISSUED FOR BUILDING PERMIT	SI	2020-11-27
02	ISSUED FOR FCR No. 660373-1GSS-003-40EI-0003	SI	2021-03-29
03	REVISED ISSUED FOR CONSTRUCTION	SI	2021-07-30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-07-30

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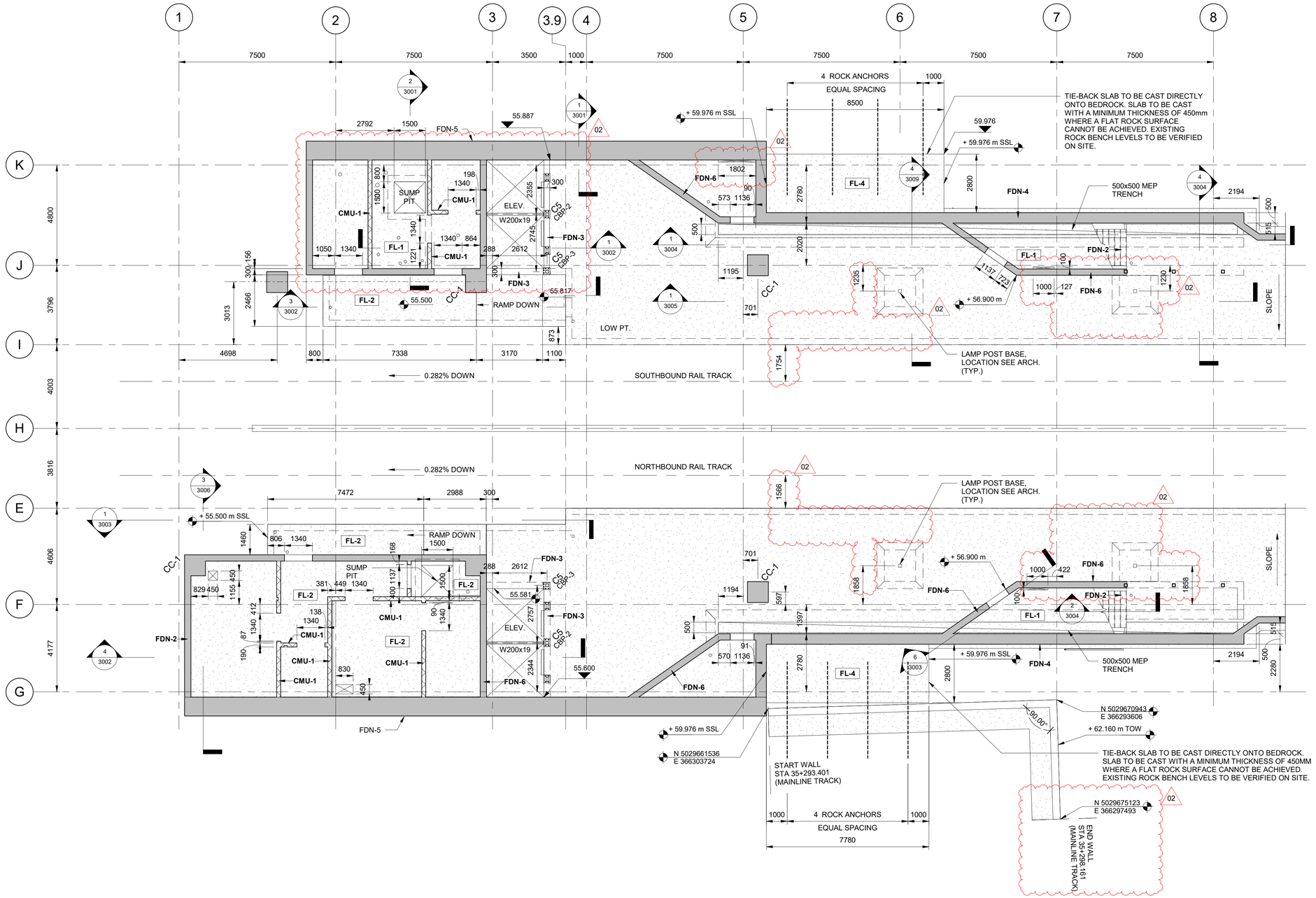


PLATFORM PLAN - SECTION 1

1 / 1001 1004

1 : 100

REFER TO DRAWING 0006 FOR CONCRETE FLOOR SCHEDULE

STAGE 2 ETAPE 2

STRUCTURAL
CORSO ITALIA STATION

PLATFORM PLAN - SECTOR 1

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
M. IRISH	S. IBRAHIM
DRAWN	SEALED
J. PIDLAOAN	R. GILLARD

DRAWING NUMBER
660373-1GSS-003-43DD-1004

MODEL NUMBER
660373-1GSS-003-43DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER R. G. GILLARD 16129504 2021-03-29 PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

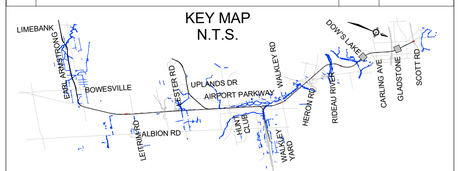
SCALE
HORIZONTAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION - EARLY WORKS	SI	2020-09-24
01	ISSUED FOR BUILDING PERMIT	SI	2020-11-27
02	ISSUED FOR FCR No. 660373-1GSS-003-40EI-0003	SI	2021-03-29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-03-29

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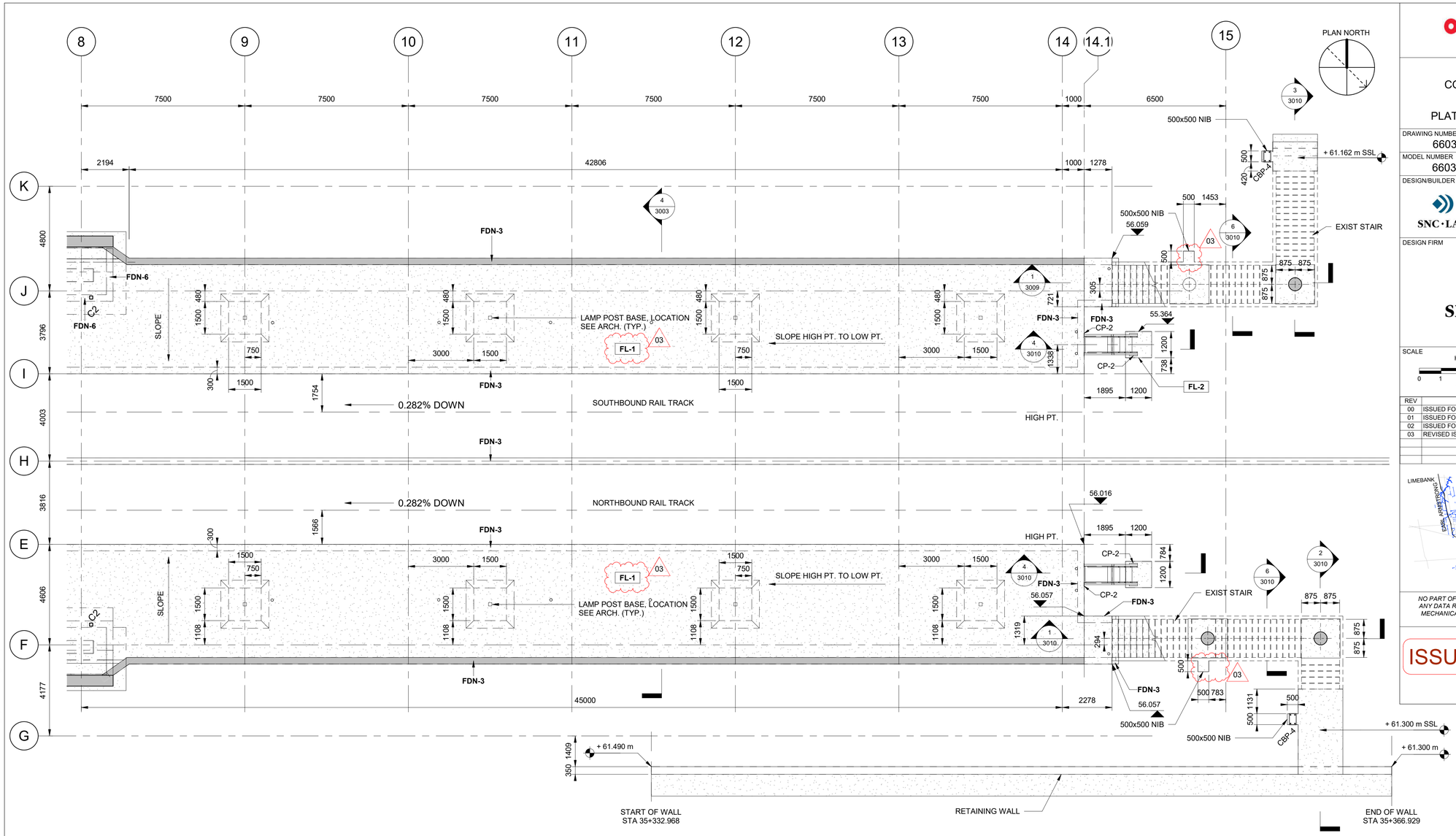


PLATFORM PLAN - SECTOR 2

1 : 100

REFER TO DRAWING 0006 FOR FOUNDATION WALL, WALL FOOTING AND PAD FOOTING SCHEDULES

OTrain STAGE 2 ETAPE 2

Ottawa

STRUCTURAL
CORSO ITALIA STATION

PLATFORM PLAN - SECTOR 2

CONTRACT No.	LRT19-1025
DESIGNED	M. IRISH
CHECKED	S. IBRAHIM
DRAWN	J. PIDLAOAN
SEALED	R. GILLARD

DRAWING NUMBER
660373-1GSS-003-43DD-1005

MODEL NUMBER
660373-1GSS-003-43DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

LICENSED PROFESSIONAL ENGINEER R. G. GILLARD 16129504 2021-07-30 PROVINCE OF ONTARIO

DESIGN FIRM

SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

SCALE

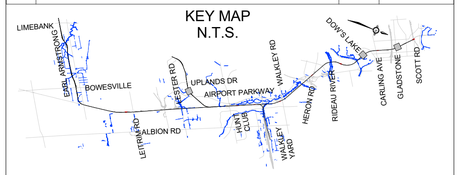
HORIZONTAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE / 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION - EARLY WORKS	SI	2020-09-24
01	ISSUED FOR BUILDING PERMIT	SI	2020-11-27
02	ISSUED FOR FCR No. 660373-1GSS-003-40EI-0003	SI	2021-03-29
03	REVISED ISSUED FOR CONSTRUCTION	SI	2021-07-30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-07-30

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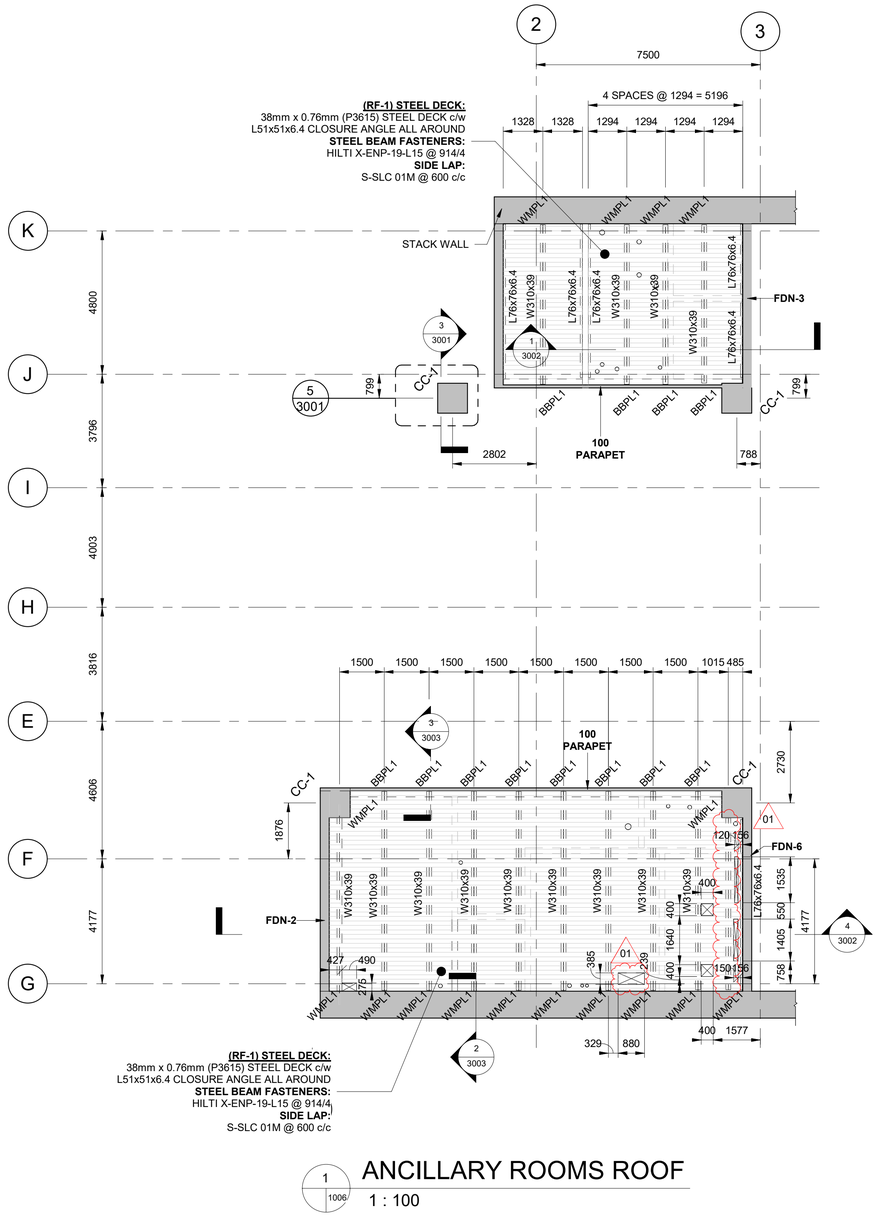


1 / 1006 ANCILLARY ROOMS ROOF

1 : 100

PLAN NORTH

OTrain STAGE 2 ETAPE 2

Ottawa

STRUCTURAL
CORSO ITALIA STATION

ANCILLARY ROOMS ROOF PLAN

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
M. IRISH	S. IBRAHIM
DRAWN	SEALED
J. PIDLAOAN	R. GILLARD

DRAWING NUMBER
660373-1GSS-003-43DD-1006

MODEL NUMBER
660373-1GSS-003-43DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER R. G. GILLARD 16129504 2021-07-30 PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

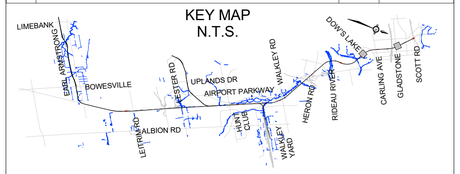
SCALE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CLIENT REVIEW-CD SUBMISSION	SI	2021-03-29
01	REVISED ISSUED FOR CONSTRUCTION	SI	2021-07-30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-07-30

TITLEBLOCK: 790mm x 534mm

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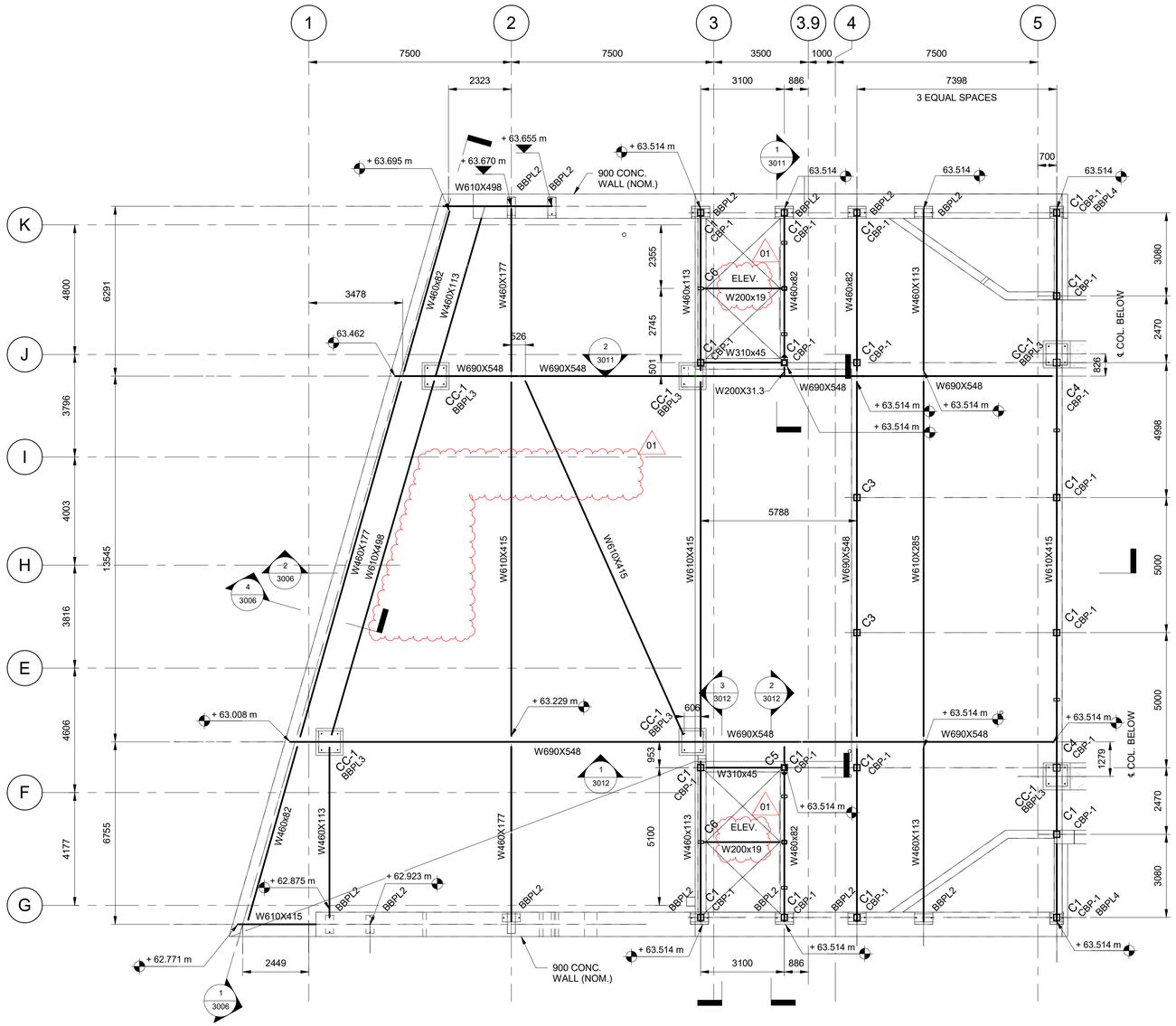
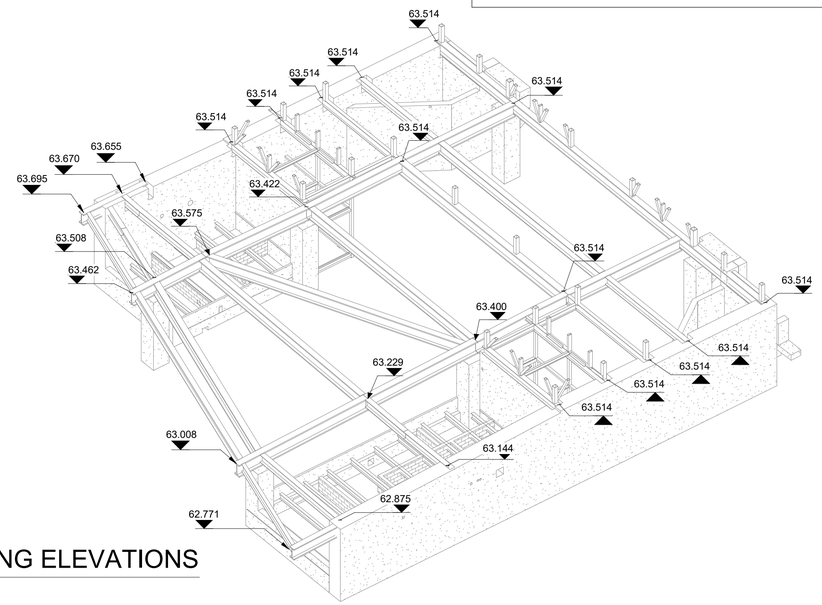


CONCOURSE FRAMING PLAN

1 / 3001 1007

1 : 100

REFER TO DRAWING 0006 FOR STEEL COLUMN SCHEDULE AND BASE PLATE DETAILS



CONCOURSE FRAMING ELEVATIONS

2 / 1007

PLAN NORTH

Train STAGE ETAPE 2

Ottawa

STRUCTURAL
CORSO ITALIA STATION

CONCOURSE FRAMING PLAN

CONTRACT No. LRT19-1025

DESIGNED M. IRISH | CHECKED S. IBRAHIM

DRAWN J. PIDLAOAN | SEALED R. GILLARD

DRAWING NUMBER 660373-1GSS-003-43DD-1007

MODEL NUMBER 660373-1GSS-003-43DM-1000

DESIGN/BUILDER SNC·LAVALIN TransitNEXT

PRIMARY SEAL

LICENSED PROFESSIONAL ENGINEER R. G. GILLARD 16129504 2021-07-30 PROVINCE OF ONTARIO

DESIGN FIRM SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

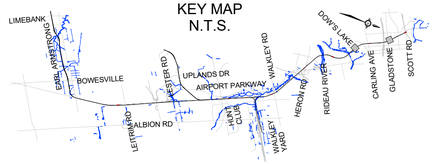
SCALE HORIZONTAL 1 : 100 FULLSIZE 1 : 200 HALF SIZE; VERTICAL 1 : 100 FULLSIZE 1 : 200 HALF SIZE; 0 1 2 4 8 m

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CLIENT REVIEW-CD SUBMISSION	SI	2021-03-29
01	REVISED ISSUED FOR CONSTRUCTION	SI	2021-07-30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-07-30

TITLEBLOCK: 790mm x 534mm

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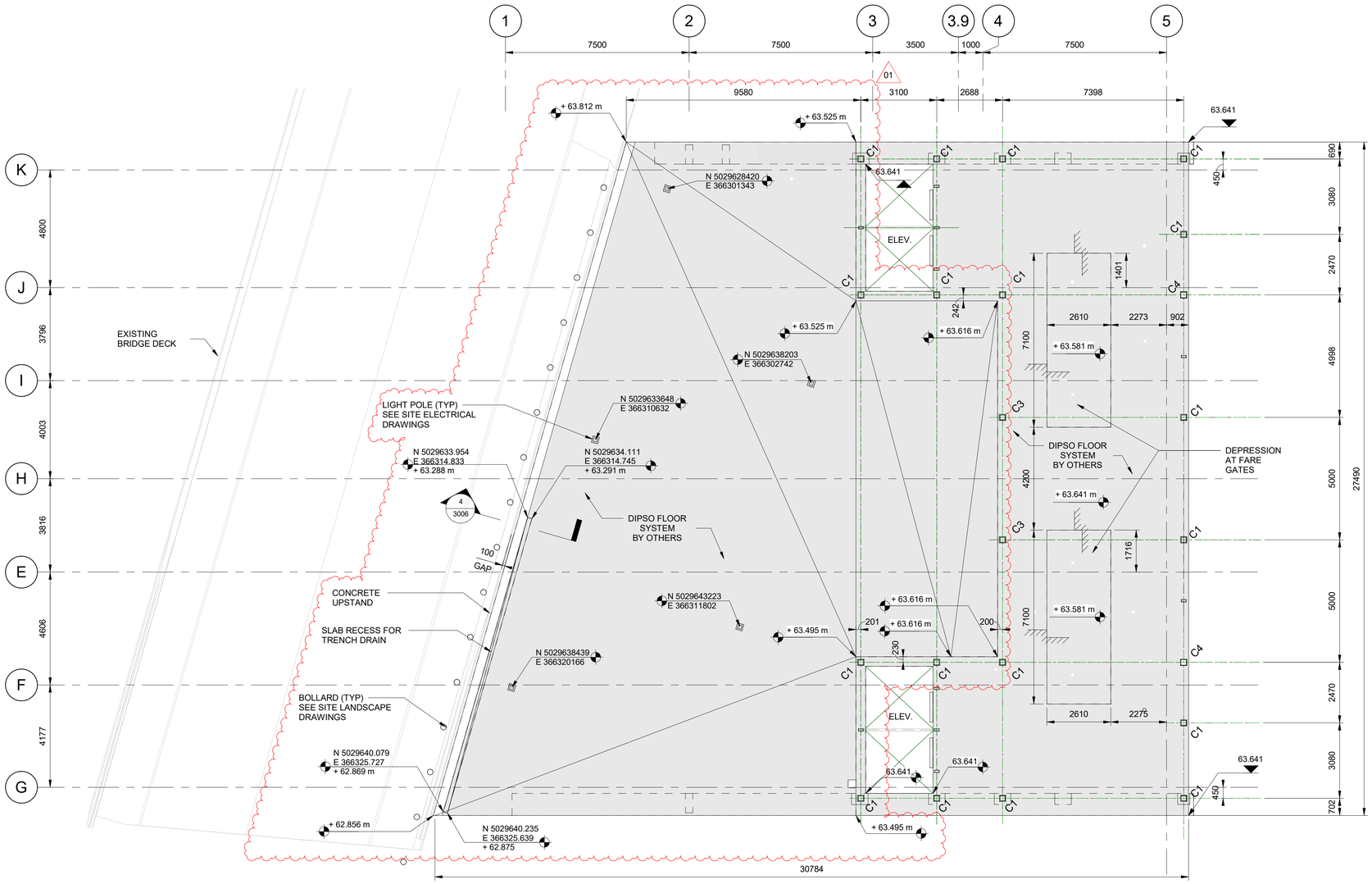


2 / 3001 1008

CONCOURSE PLAN

1 : 100

REFER TO DRAWING 0006 FOR STEEL COLUMN SCHEDULE AND BASE PLATE DETAILS

OTrain STAGE 2 ETAPE 2

Ottawa

STRUCTURAL
CORSO ITALIA STATION

CONCOURSE PLAN

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
M. IRISH	S. IBRAHIM
DRAWN	SEALED
J. PIDLAOAN	R. GILLARD

DRAWING NUMBER
660373-1GSS-003-43DD-1008

MODEL NUMBER
660373-1GSS-003-43DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER R. G. GILLARD 16129504 2021-07-30 PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

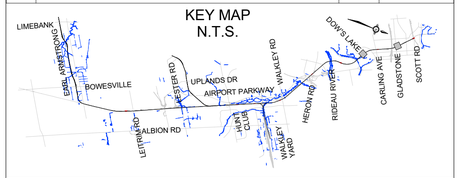
SCALE
HORIZONTAL 1 : 100 FULLSIZE; 1 : 200 HALF SIZE
0 1 2 4 8 m
VERTICAL 1 : 100 FULLSIZE; 1 : 200 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CLIENT REVIEW-CD SUBMISSION	SI	2021-03-29
01	REVISED ISSUED FOR CONSTRUCTION	SI	2021-07-30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-07-30

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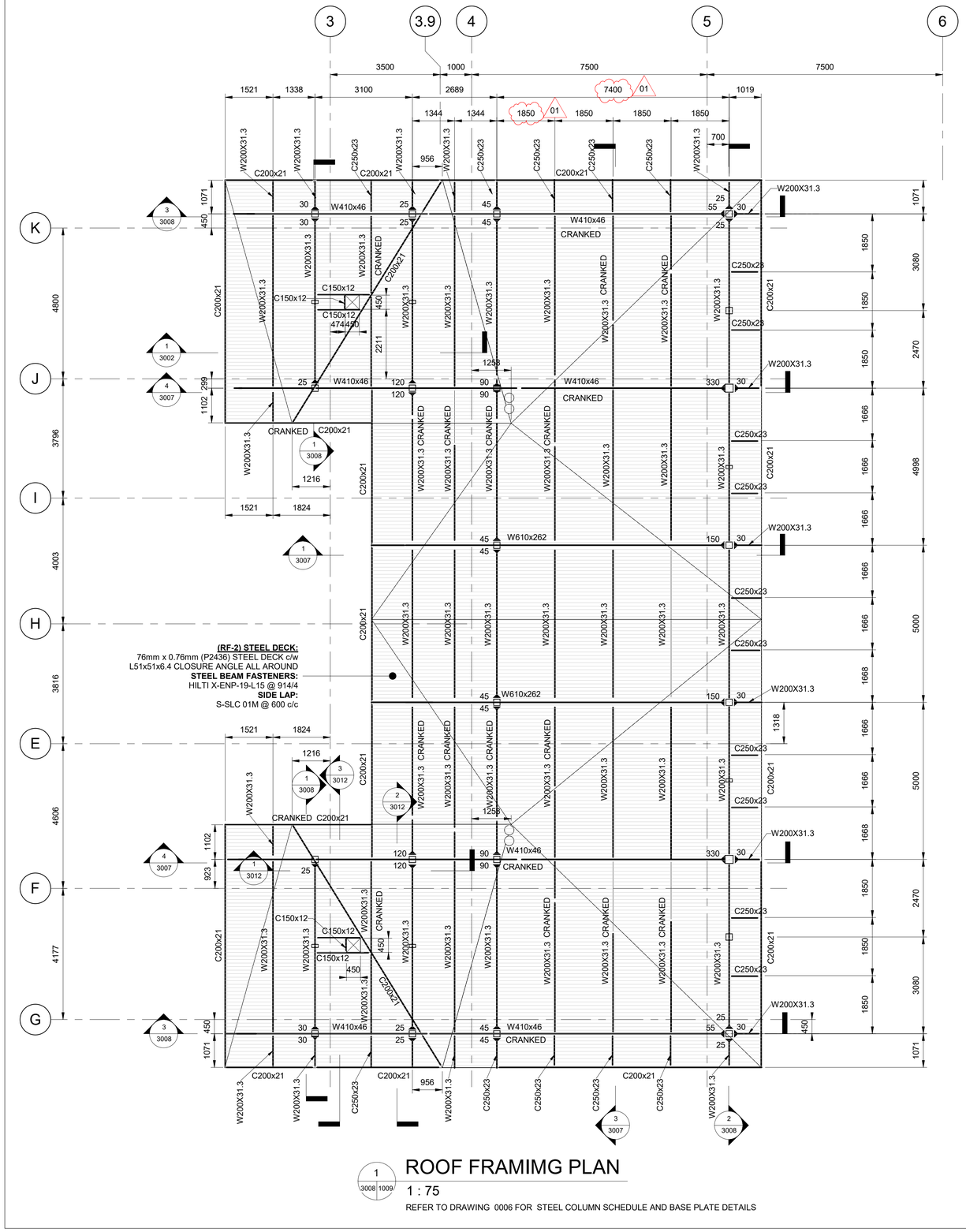


(RF-2) STEEL DECK:
76mm x 0.76mm (P2436) STEEL DECK c/w
L51x51x6.4 CLOSURE ANGLE ALL AROUND
STEEL BEAM FASTENERS:
HILTI X-ENP-19-L15 @ 914/4
SIDE LAP:
S-SLC 01M @ 600 c/c

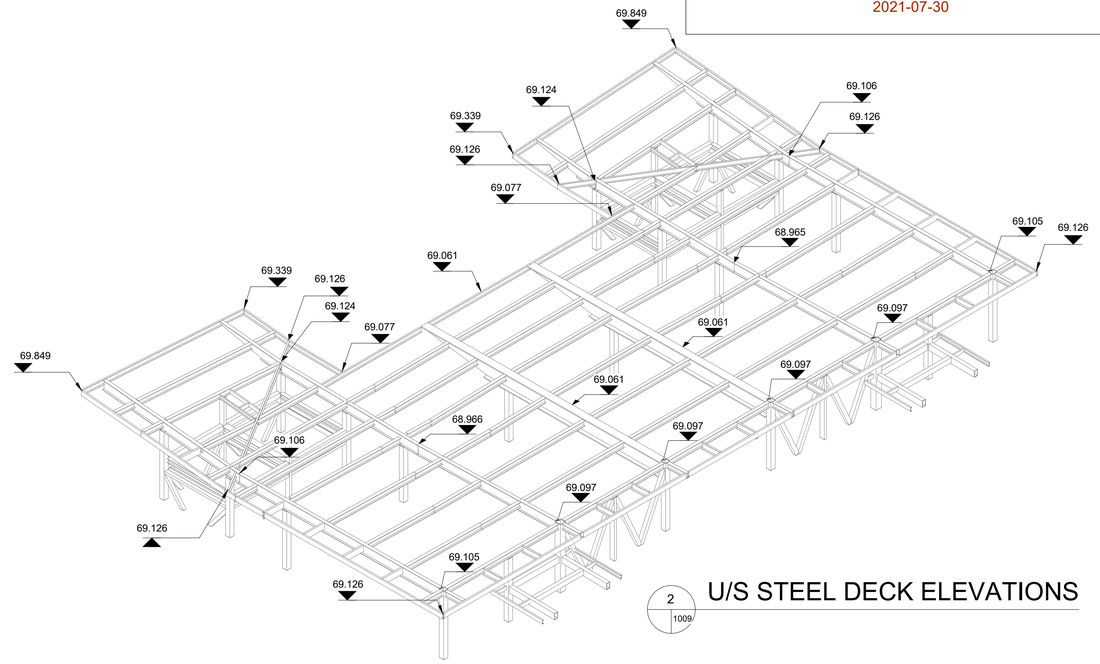
1 ROOF FRAMIMG PLAN

3008 1009

1 : 75

REFER TO DRAWING 0006 FOR STEEL COLUMN SCHEDULE AND BASE PLATE DETAILS

PLAN NORTH



2 U/S STEEL DECK ELEVATIONS

1009

OTrain STAGE 2 ETAPE

Ottawa

STRUCTURAL
CORSO ITALIA STATION

ROOF FRAMING PLAN

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
M. IRISH	S. IBRAHIM
DRAWN	SEALED
J. PIDLAOAN	R. GILLARD

DRAWING NUMBER
660373-1GSS-003-43DD-1009

MODEL NUMBER
660373-1GSS-003-43DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER R. G. GILLARD 16129504 2021-07-30 PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

SCALE
AS SHOWN

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CLIENT REVIEW-CD SUBMISSION	SI	2021-03-29
01	REVISED ISSUED FOR CONSTRUCTION	SI	2021-07-30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

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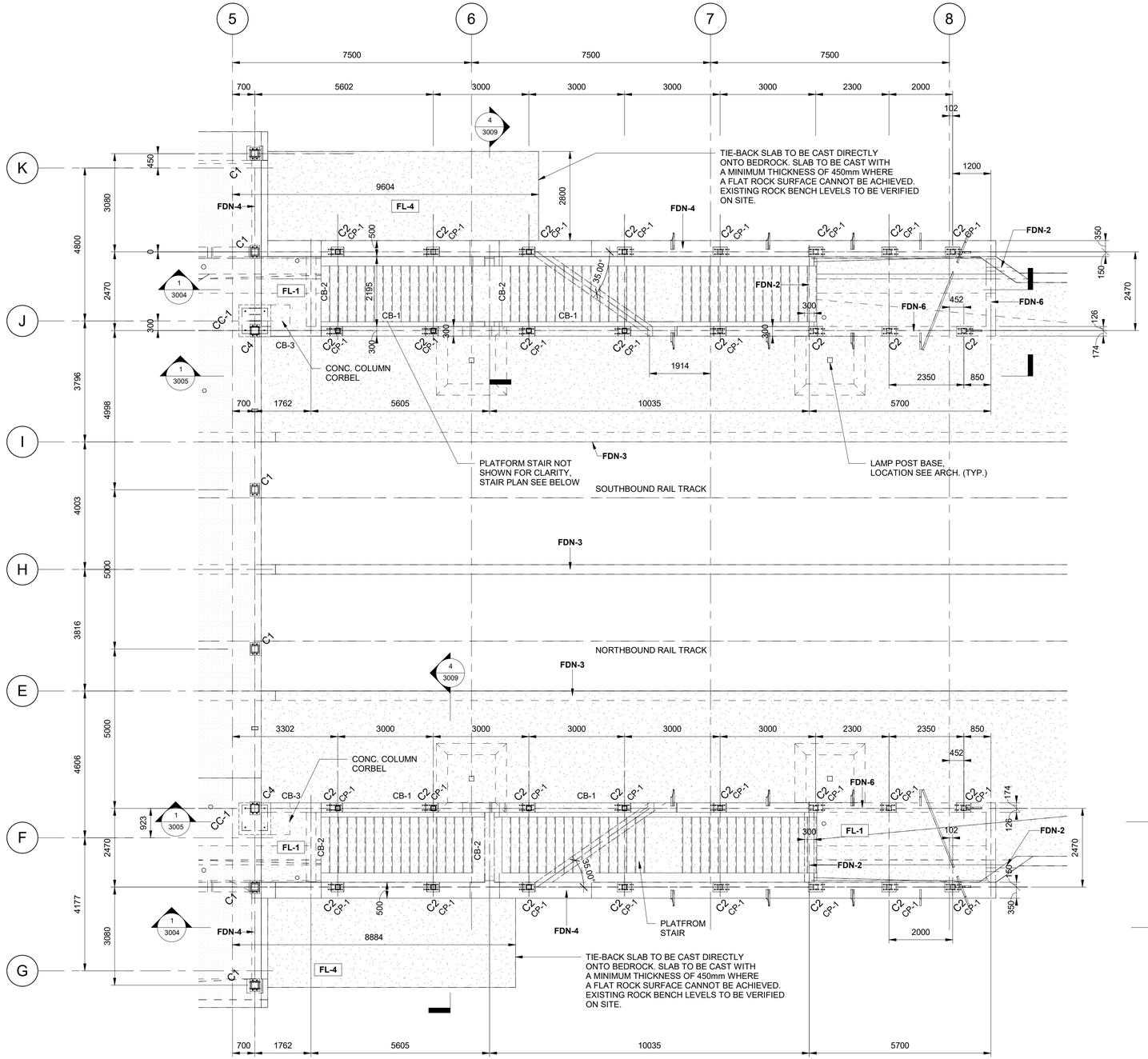


PLATFORM STAIR PLAN

1 : 75

REFER TO DRAWING 0006 FOR STEEL COLUMN SCHEDULE AND BASE PLATE DETAILS

PLAN NORTH

OTrain STAGE 2 ETAPE 2

Ottawa

STRUCTURAL
CORSO ITALIA STATION

PLATFORM STAIR PLAN

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
M. IRISH	S. IBRAHIM
DRAWN	SEALED
J. PIDLAOAN	R. GILLARD

DRAWING NUMBER
660373-1GSS-003-43DD-1010

MODEL NUMBER
660373-1GSS-003-43DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER R. G. GILLARD 16129504 2021-03-29 PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

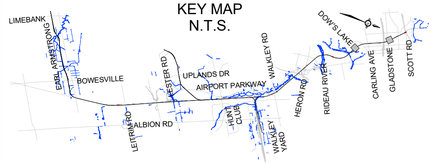
SCALE
AS SHOWN

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CLIENT REVIEW-CD SUBMISSION	SI	2021-03-29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-03-29

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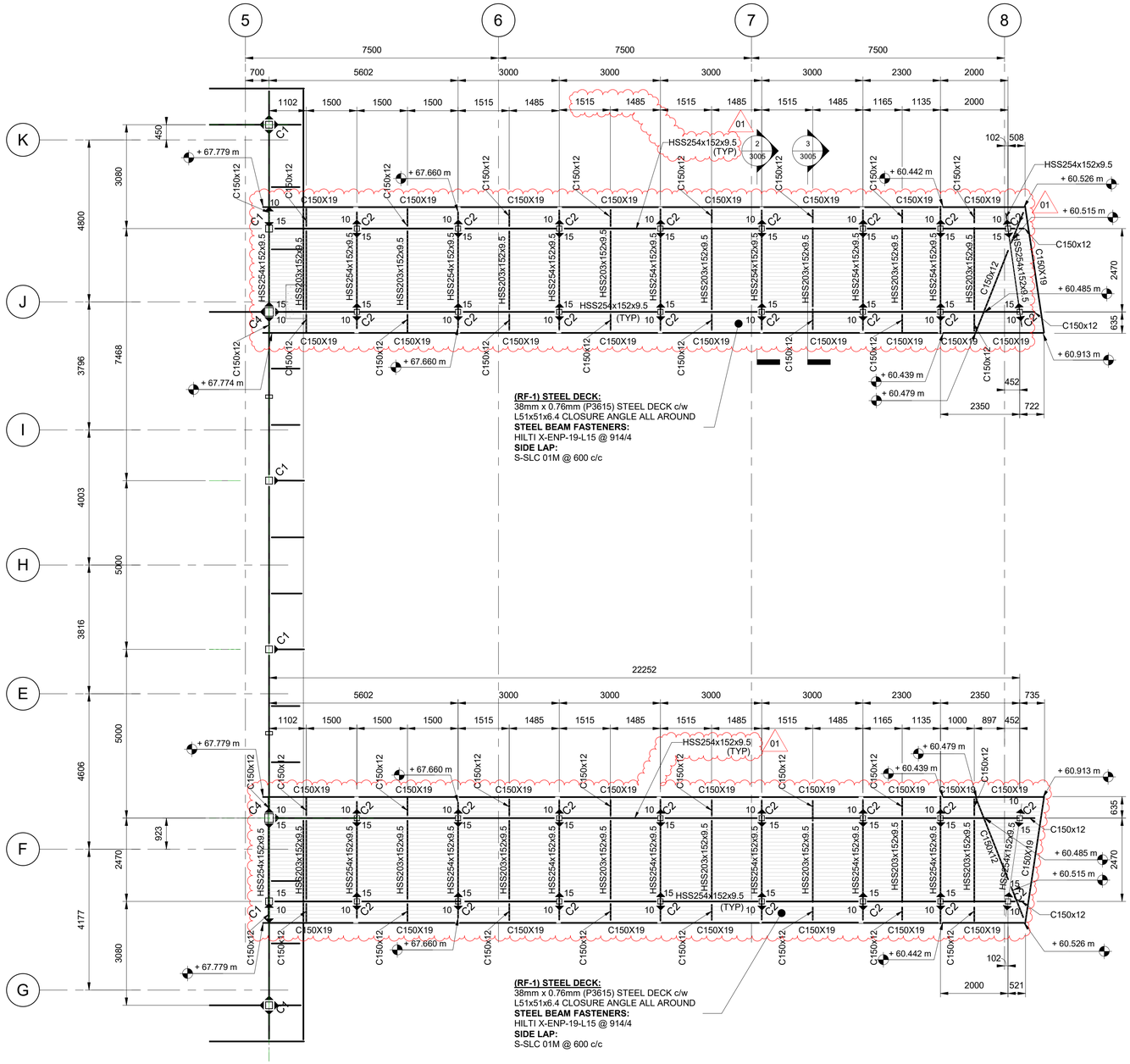
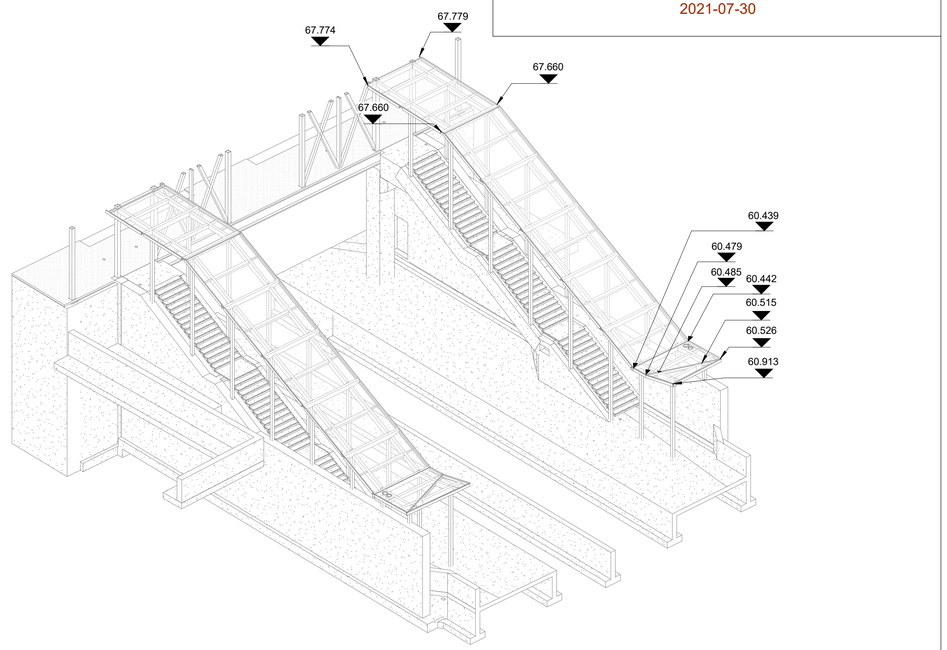


T/O ROOF PLATFORM STAIR

1 : 75

HS254 = HS254x152x9.5

REFER TO DRAWING 0006 FOR STEEL COLUMN SCHEDULE AND BASE PLATE DETAILS



PLAN NORTH

OTrain STAGE 2 ETAPE

Ottawa

STRUCTURAL
CORSO ITALIA STATION

PLATFORM STAIR ROOF FRAMING PLAN

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
M. IRISH	S. IBRAHIM
DRAWN	SEALED
J. PIDLAOAN	R. GILLARD

DRAWING NUMBER
660373-1GSS-003-43DD-1011

MODEL NUMBER
660373-1GSS-003-43DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER
R. G. GILLARD
16129504
2021-07-30
PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

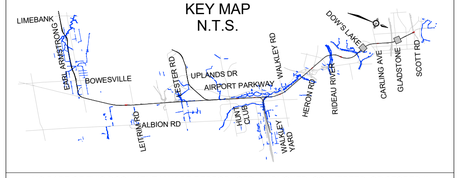
SCALE
AS SHOWN

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CLIENT REVIEW-CD SUBMISSION	SI	2021-03-29
01	REVISED ISSUED FOR CONSTRUCTION	SI	2021-07-30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-07-30

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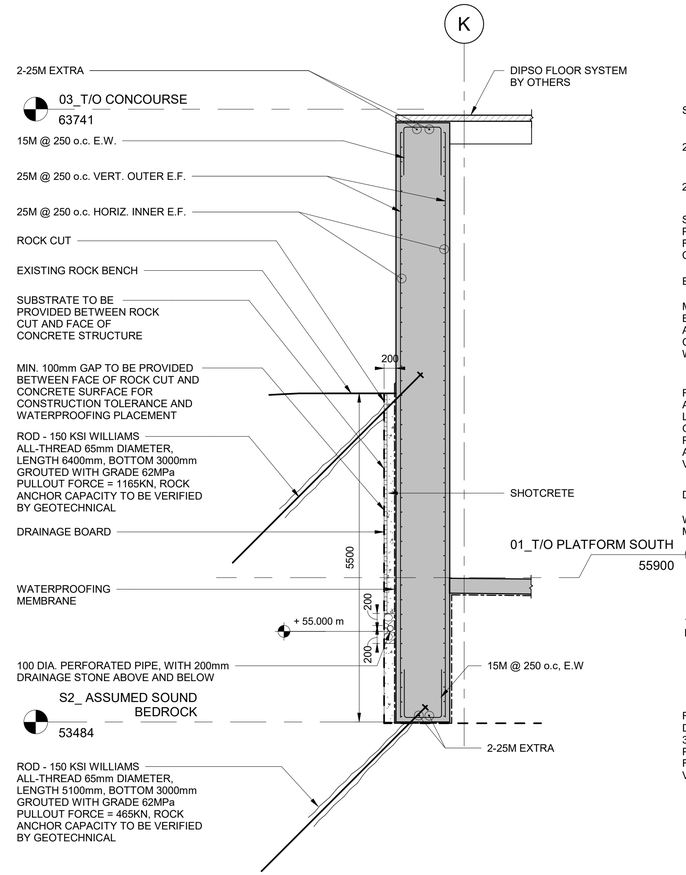
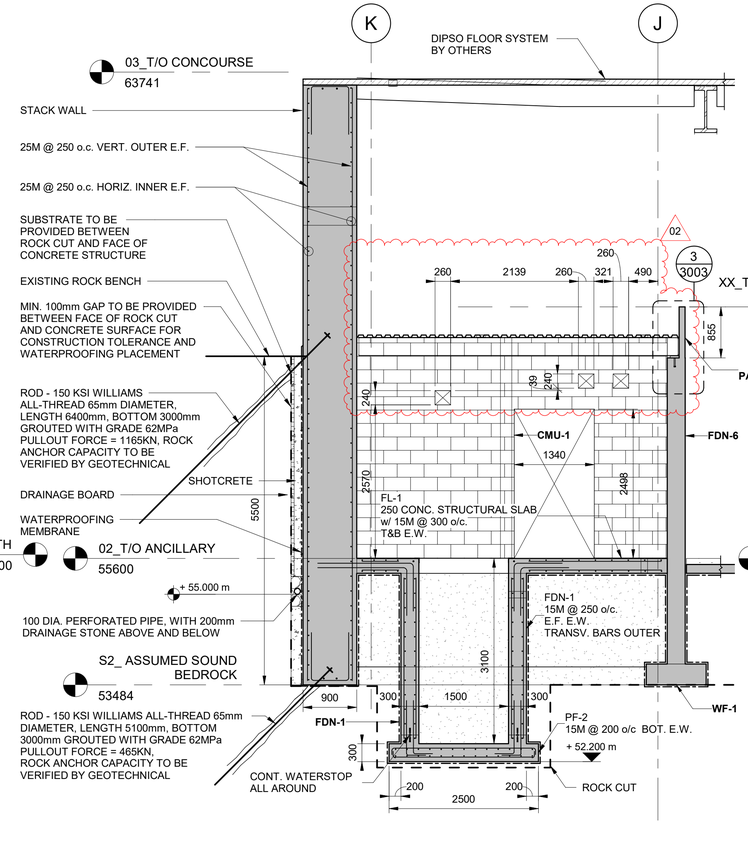
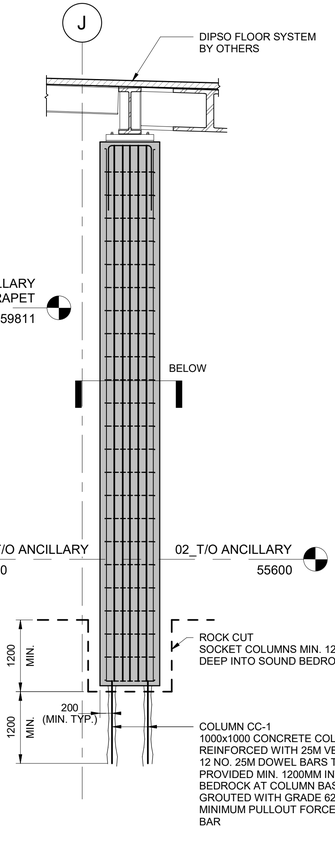
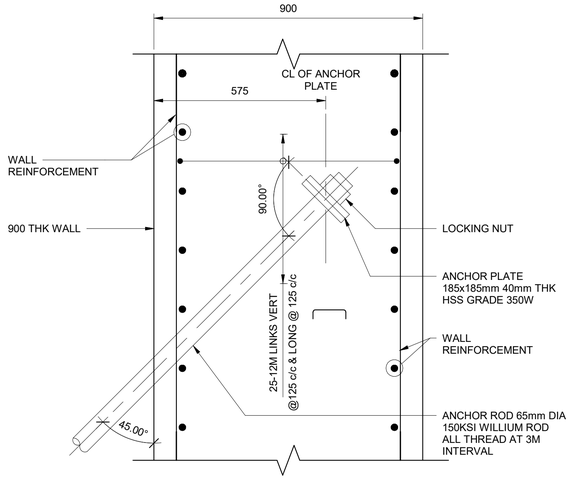




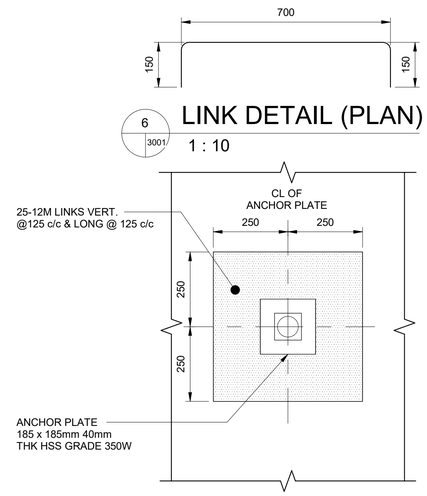


1 TYPICAL ABUTMENT WALL
1002 3001
1 : 50

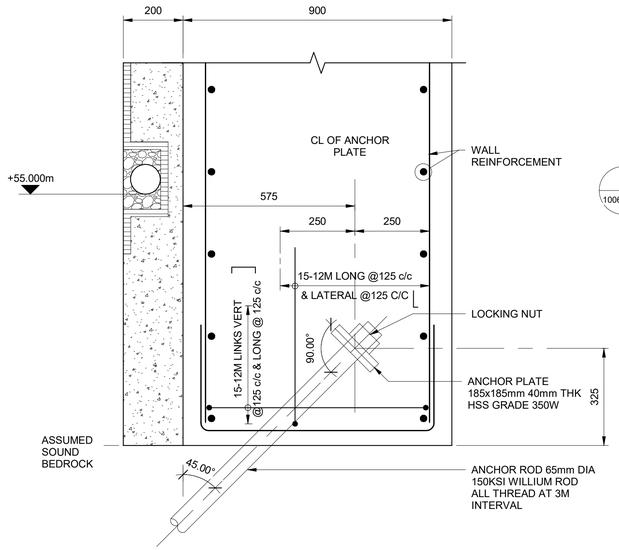


2 SECTION / DETAIL
1002 3001
1 : 50

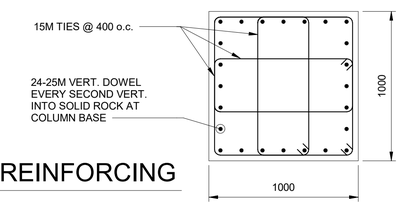
3 SECTION / DETAIL
1002 3001
1 : 50



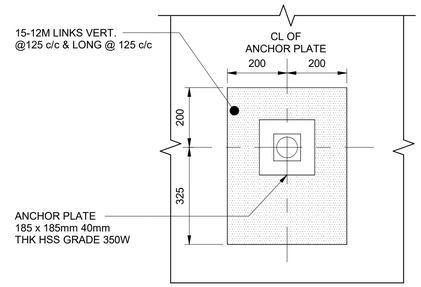
6 LINK DETAIL (PLAN)
3001
1 : 10



8 BOTTOM ANCHOR DETAIL (SECTION)
3001
1 : 10



5 COLUMN REINFORCING
1006 3001
1 : 20



9 BOTTOM ANCHOR DETAIL (ELEVATION)
3001
1 : 10

4 TOP ANCHOR DETAIL (SECTION)
3001
1 : 10

7 TOP ANCHOR DETAIL (ELEVATION)
3001
1 : 10

OTrain STAGE 2 ETAPE 2 — Ottawa

STRUCTURAL
CORSO ITALIA STATION

SECTIONS/DETAILS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
M. IRISH	S. IBRAHIM
DRAWN	SEALED
J. PIDLAOAN	R. GILLARD

DRAWING NUMBER
660373-1GSS-003-43DD-3001

MODEL NUMBER
660373-1GSS-003-43DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER R. G. GILLARD 16129504 2021-03-29 PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

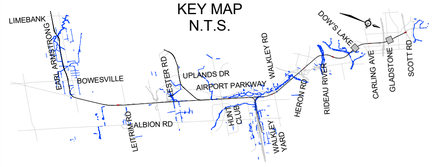
SCALE
AS SHOWN

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION - EARLY WORKS	SI	2020-09-24
01	ISSUED FOR BUILDING PERMIT	SI	2020-11-27
02	ISSUED FOR FCR No. 660373-1GSS-003-40EI-0003	SI	2021-03-29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-03-29

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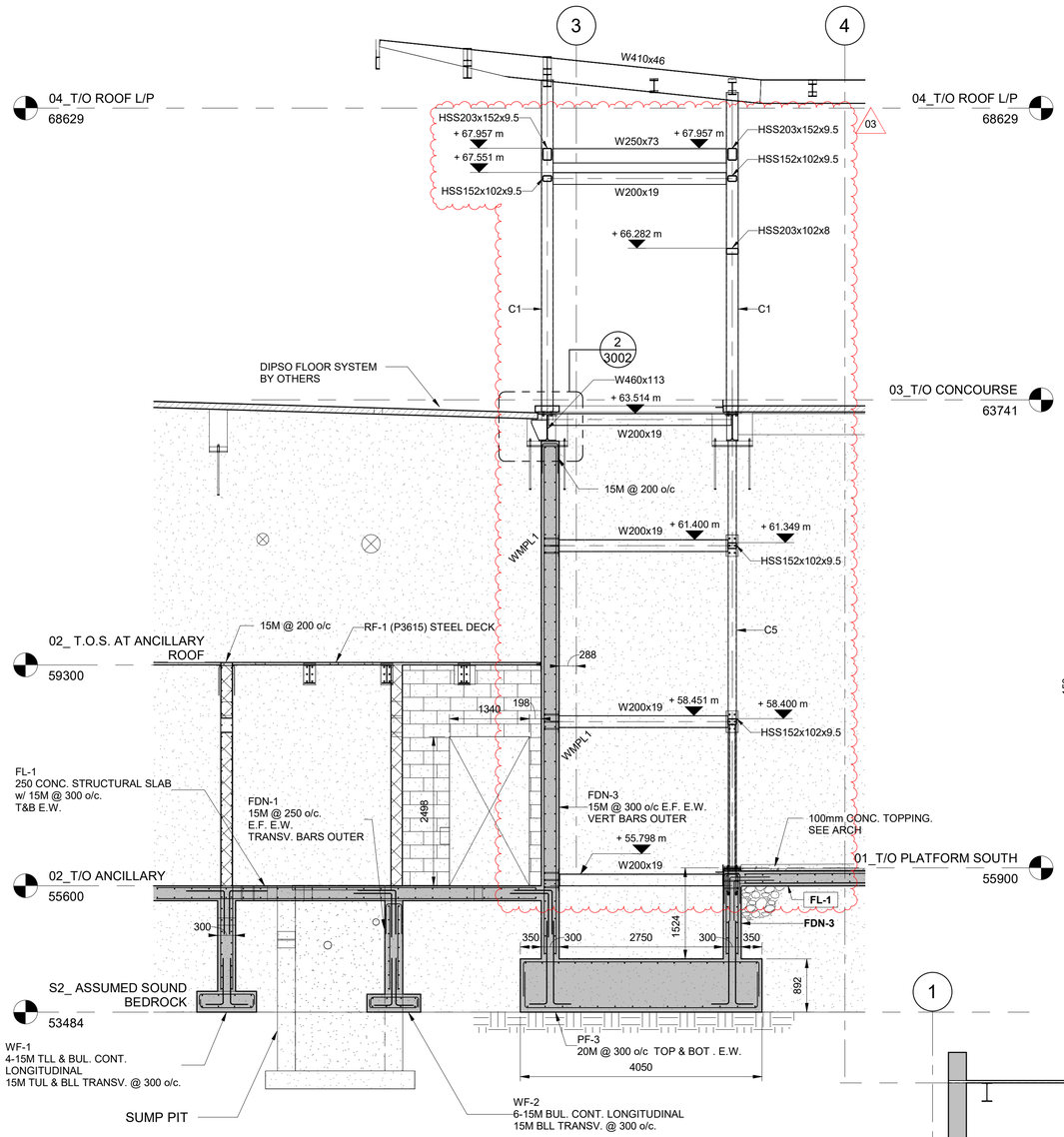

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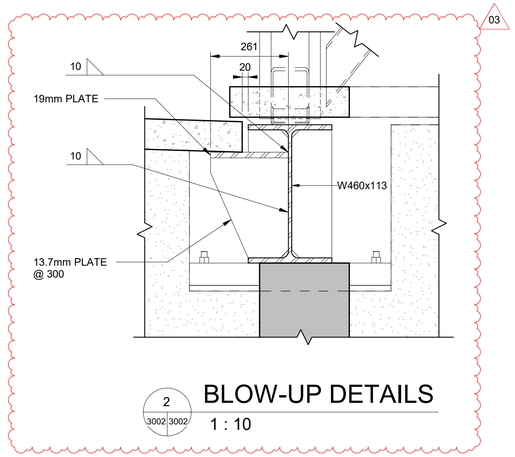
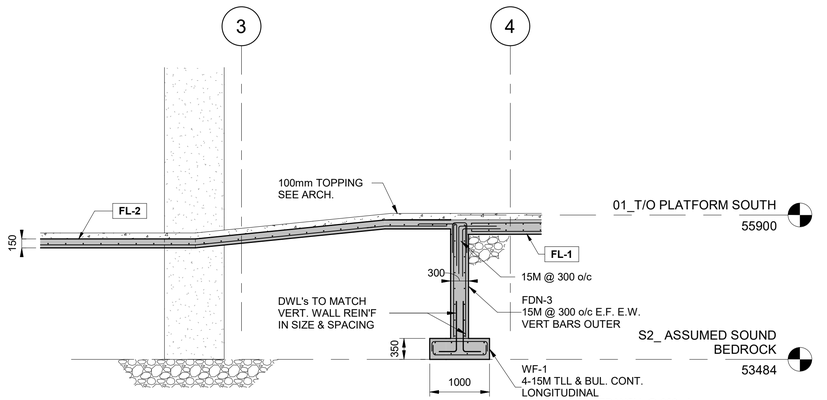


2 / 3002 3002 BLOW-UP DETAILS
1 : 10



3 / 1002 3002 SECTION / DETAIL
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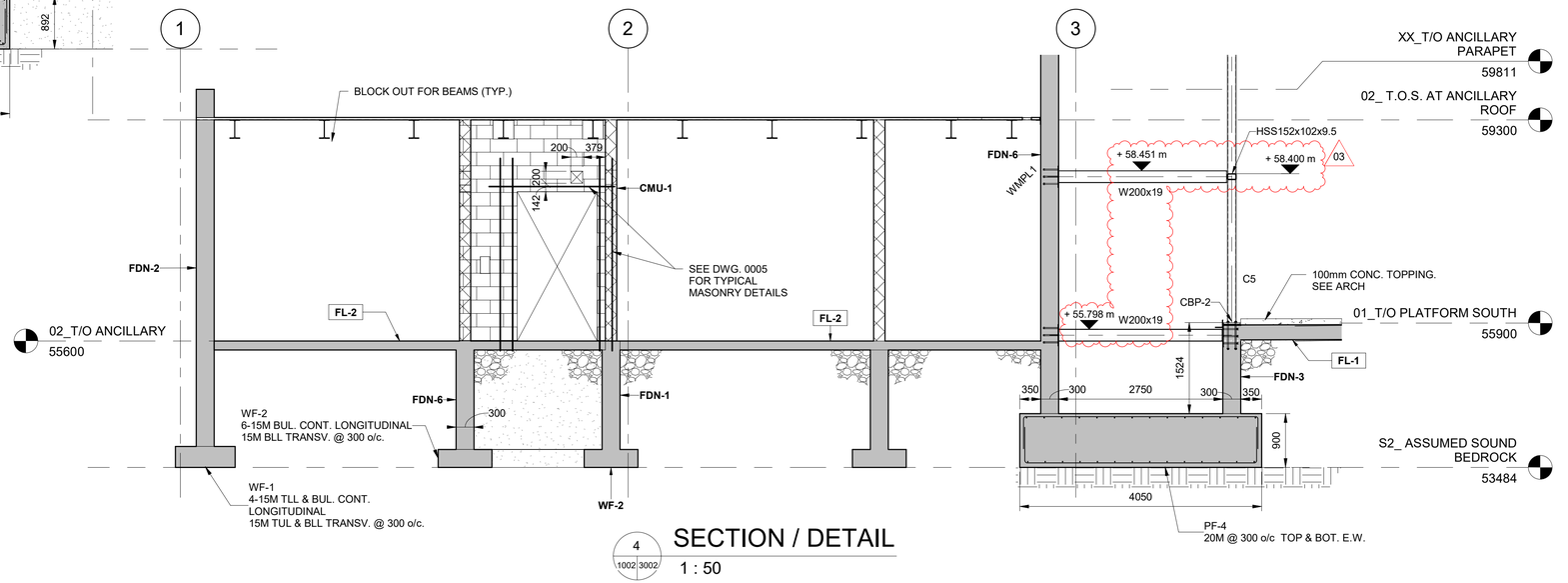


4 / 1002 3002 SECTION / DETAIL
1 : 50

OTrain STAGE 2 ETAPE 2

Ottawa

STRUCTURAL
CORSO ITALIA STATION

SECTIONS/DETAILS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
M. IRISH	S. IBRAHIM
DRAWN	SEALED
J. PIDLAOAN	R. GILLARD

DRAWING NUMBER
660373-1GSS-003-43DD-3002

MODEL NUMBER
660373-1GSS-003-43DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER
R. G. GILLARD
15129504
2021-07-30
PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

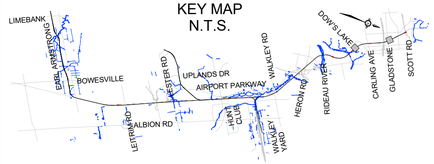
SCALE
HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE
0 0.5 1 2 4 m
VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION - EARLY WORKS	SI	2020-09-24
01	ISSUED FOR BUILDING PERMIT	SI	2020-11-27
02	ISSUED FOR FCR No. 660373-1GSS-003-40EI-0003	SI	2021-03-29
03	REVISED ISSUED FOR CONSTRUCTION	SI	2021-07-30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

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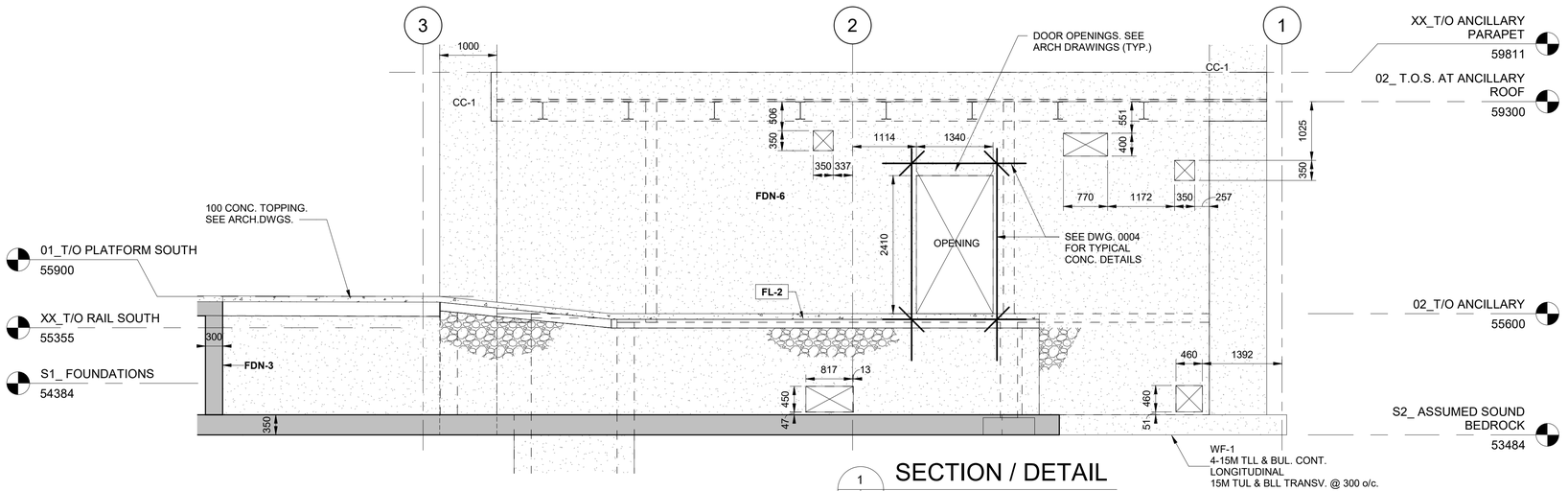
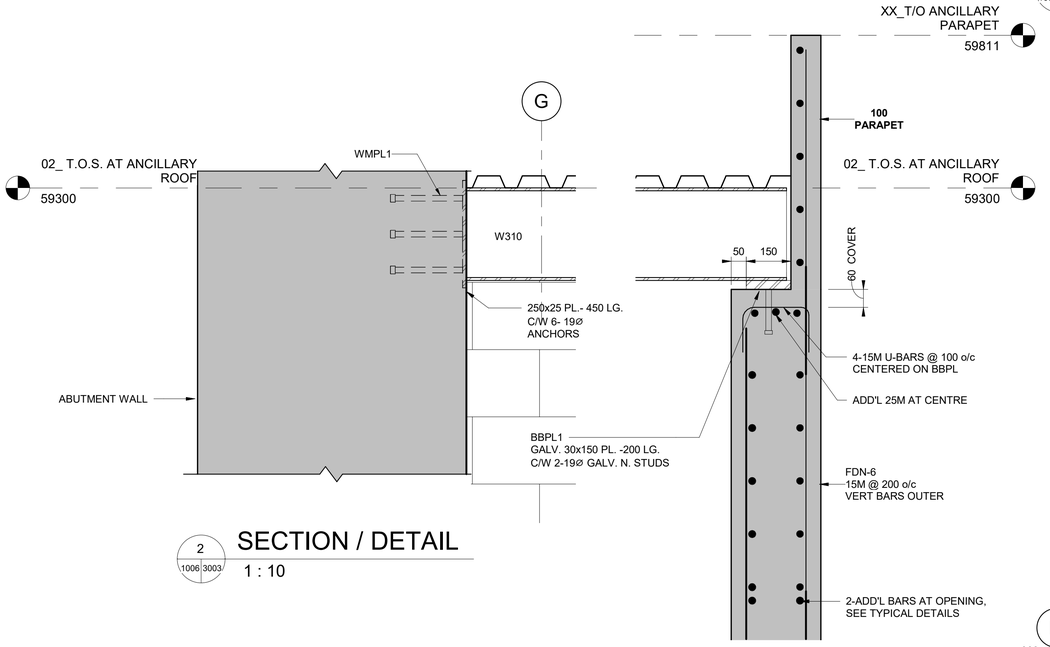


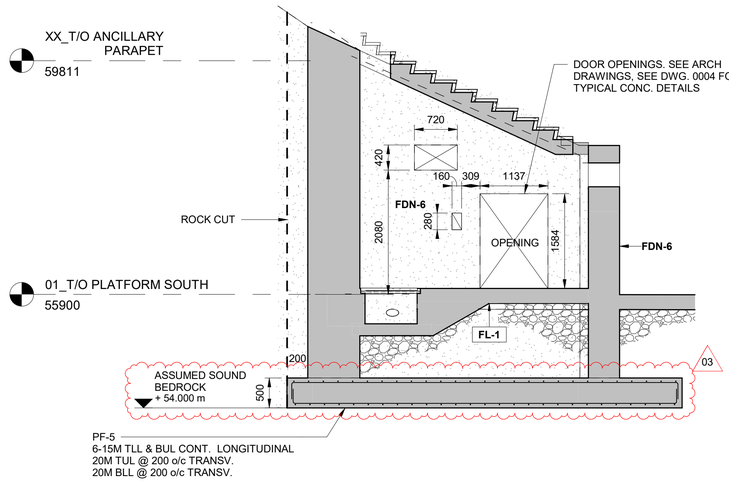
1 1004 3003 SECTION / DETAIL

1 : 50



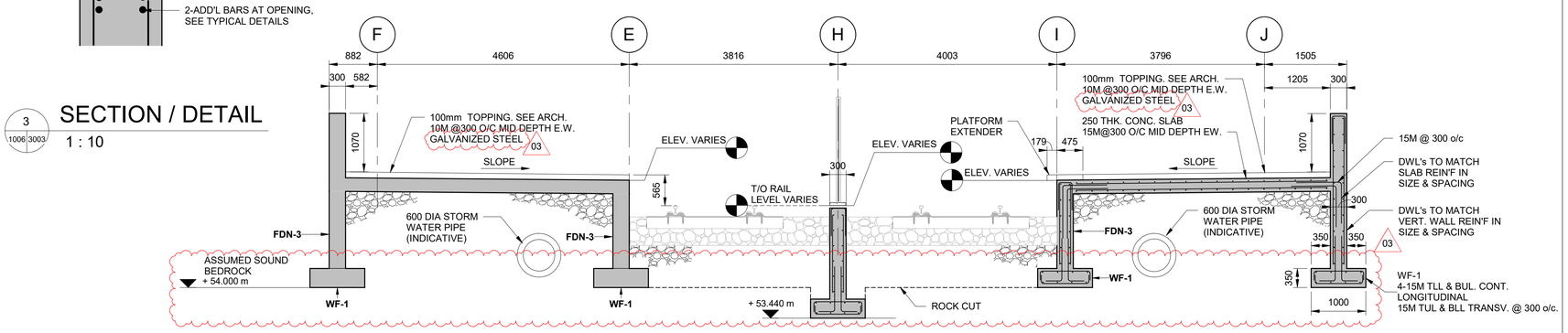
2 1006 3003 SECTION / DETAIL

1 : 10



6 1002 3003 SECTION / DETAIL

1 : 50



4 1003 3003 SECTION / DETAIL

1 : 50

OTrain STAGE 2 ETAPE 2

Ottawa

STRUCTURAL
CORSO ITALIA STATION

SECTIONS/DETAILS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
M. IRISH	S. IBRAHIM
DRAWN	SEALED
J. PIDLAOAN	R. GILLARD

DRAWING NUMBER
660373-1GSS-003-43DD-3003

MODEL NUMBER
660373-1GSS-003-43DM-1000

DESIGN/BUILDER

SNC·LAVALIN TransitNEXT

PRIMARY SEAL

LICENSED PROFESSIONAL ENGINEER
R. G. GILLARD
16129504
2021-07-30
PROVINCE OF ONTARIO

DESIGN FIRM

SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

SCALE

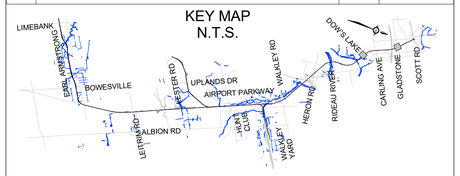
AS SHOWN

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION - EARLY WORKS	SI	2020-09-24
01	ISSUED FOR BUILDING PERMIT	SI	2020-11-27
02	ISSUED FOR FCR No. 660373-1GSS-003-40EI-0003	SI	2021-03-29
03	REVISED ISSUED FOR CONSTRUCTION	SI	2021-07-30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-07-30

TITLEBLOCK: 790mm x 534mm

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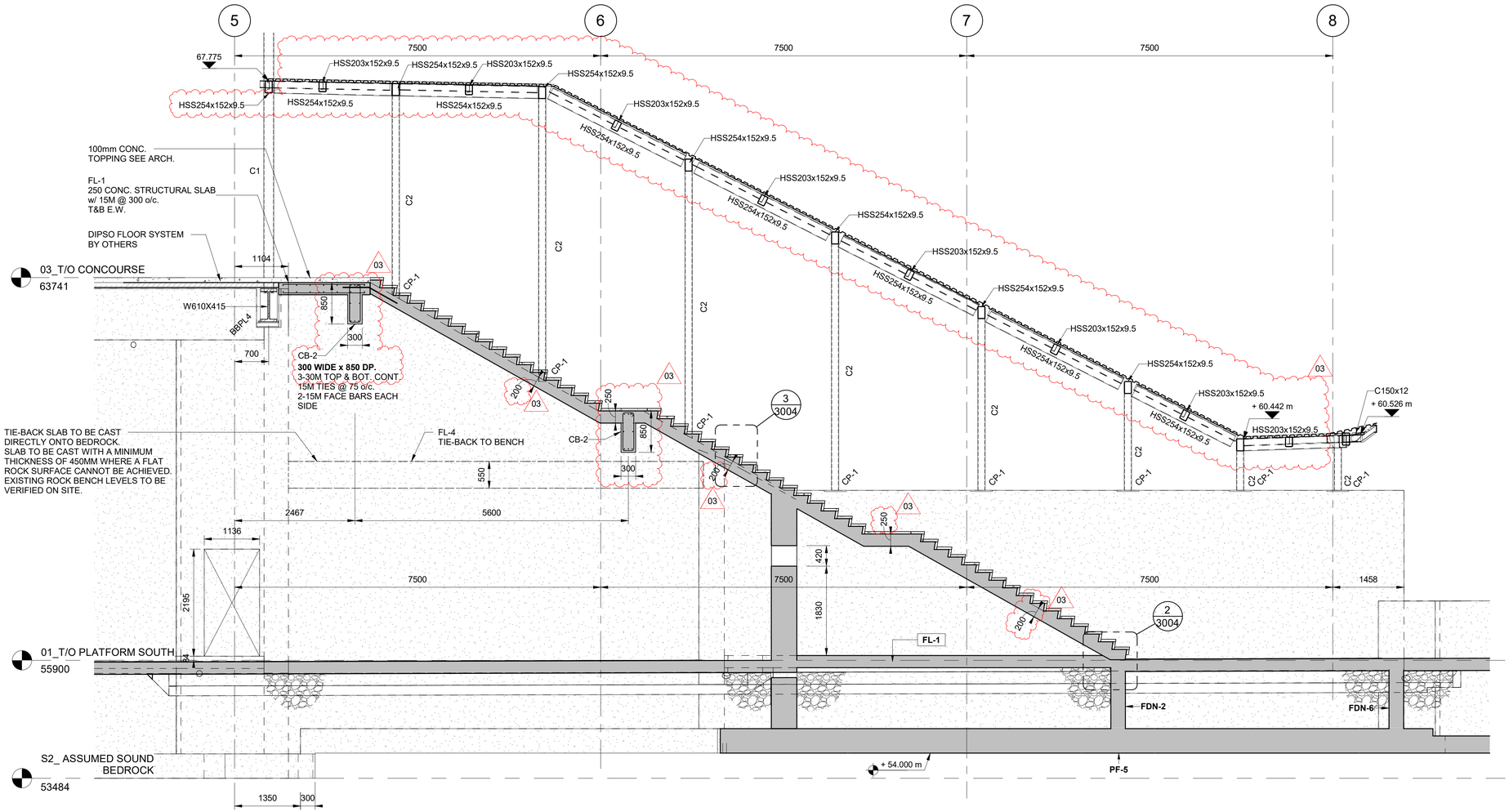

1 1002 3004 SECTION / DETAIL
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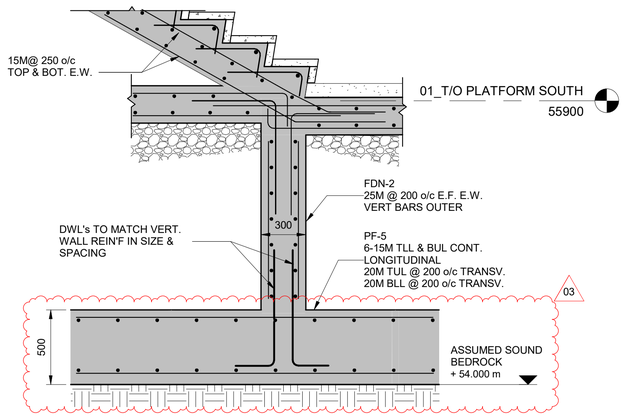

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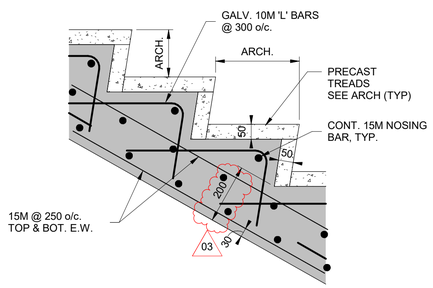
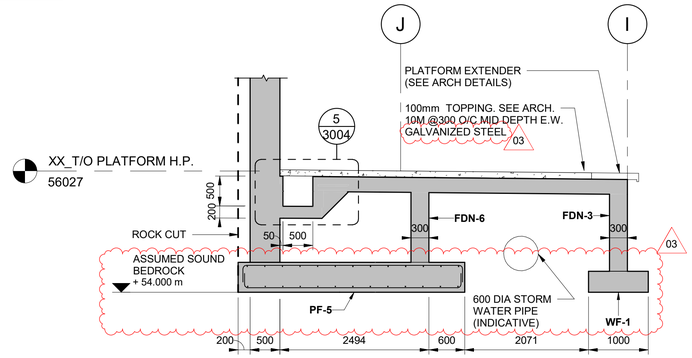


3 3004 3004 3004-PLATFORM STAIR DETAIL
1 : 10



4 1002 3004 SECTION / DETAIL
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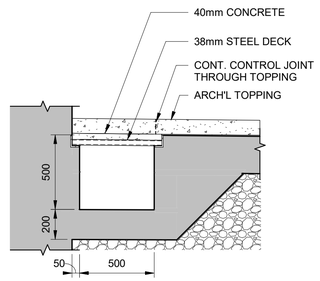


5 3004 3004 SECTION / DETAIL
1 : 20

OTrain STAGE 2 ETAPE 2

Ottawa

STRUCTURAL
CORSO ITALIA STATION

SECTIONS/DETAILS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
M. IRISH	S. IBRAHIM
DRAWN	SEALED
J. PIDLAOAN	R. GILLARD

DRAWING NUMBER
660373-1GSS-003-43DD-3004

MODEL NUMBER
660373-1GSS-003-43DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER R. G. GILLARD 16129504 2021-07-30 PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

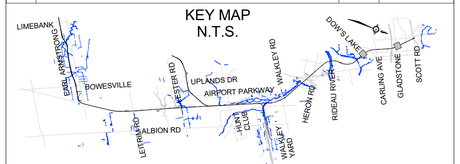
SCALE
AS SHOWN

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION - EARLY WORKS	SI	2020-09-24
01	ISSUED FOR BUILDING PERMIT	SI	2020-11-27
02	ISSUED FOR FCR No. 660373-1GSS-003-40EI-0003	SI	2021-03-29
03	REVISED ISSUED FOR CONSTRUCTION	SI	2021-07-30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

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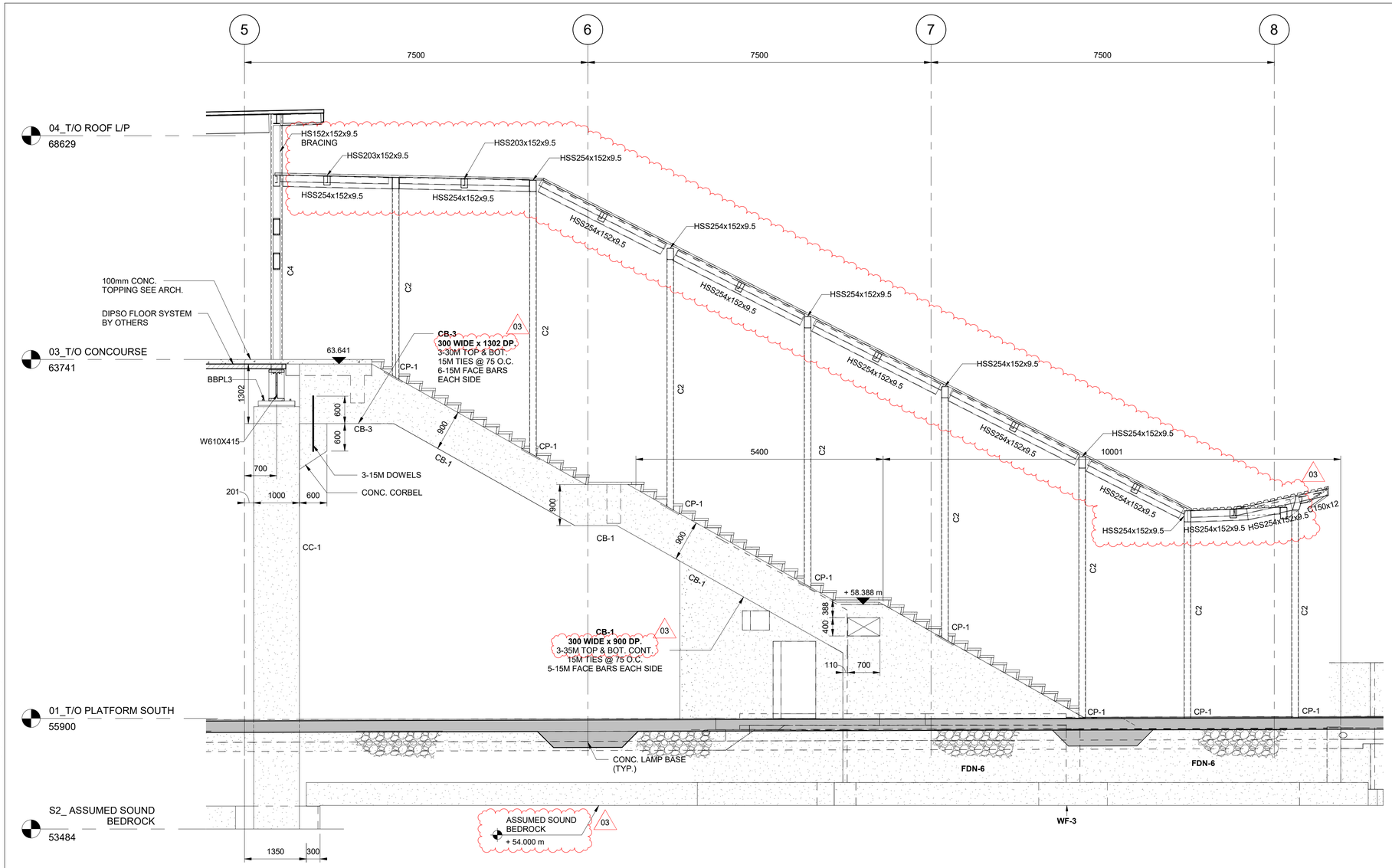

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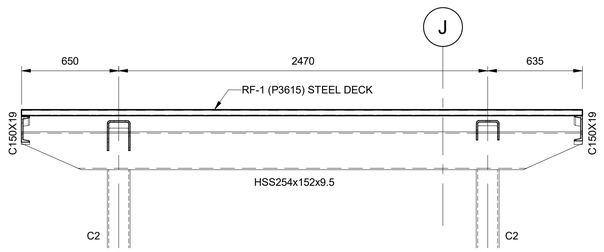

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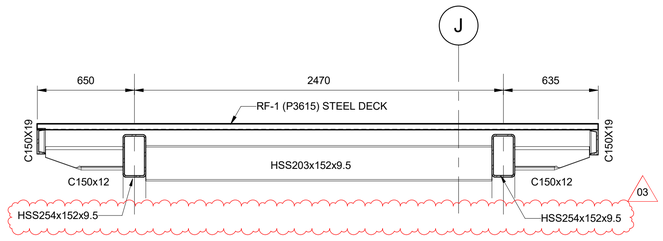
1011 3005

1 : 20



3 SECTION / DETAIL
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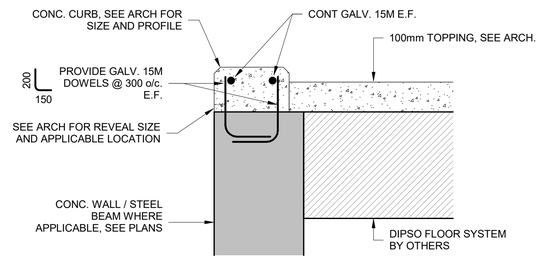
1 : 20



4 3005-TYPICAL CONC. CURB DETAIL
3005

1 : 10

OTrain STAGE 2 ETAPE 2

Ottawa

STRUCTURAL
CORSO ITALIA STATION

SECTIONS/DETAILS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
M. IRISH	S. IBRAHIM
DRAWN	SEALED
J. PIDLAOAN	R. GILLARD

DRAWING NUMBER
660373-1GSS-003-43DD-3005

MODEL NUMBER
660373-1GSS-003-43DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER
R. G. GILLARD
16129504
2021-07-30
PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

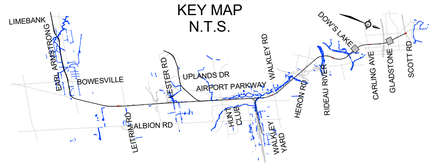
SCALE
HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE
0 0.5 1 2 4 m
VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION - EARLY WORKS	SI	2020-09-24
01	ISSUED FOR BUILDING PERMIT	SI	2020-11-27
02	ISSUED FOR FCR No. 660373-1GSS-003-40EI-0003	SI	2021-03-29
03	REVISED ISSUED FOR CONSTRUCTION	SI	2021-07-30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-07-30

TITLEBLOCK: 790mm x 534mm

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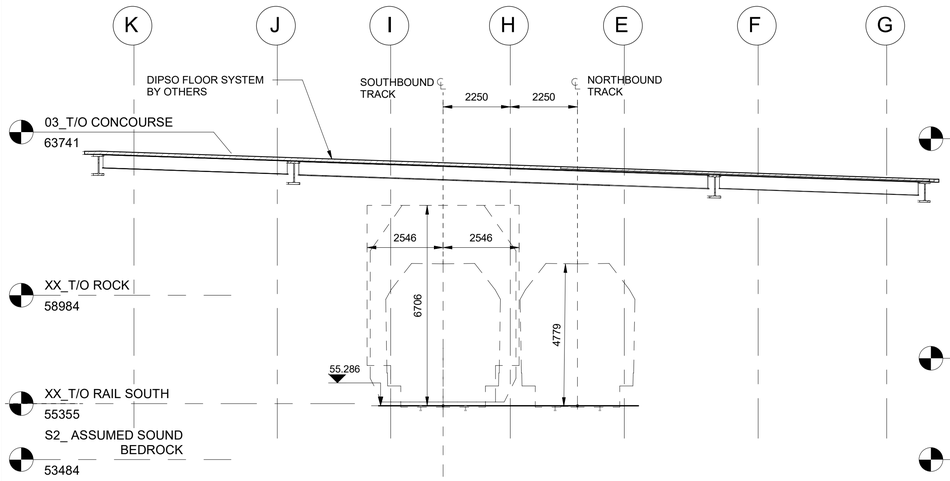

1 1007 3006 SECTION / DETAIL
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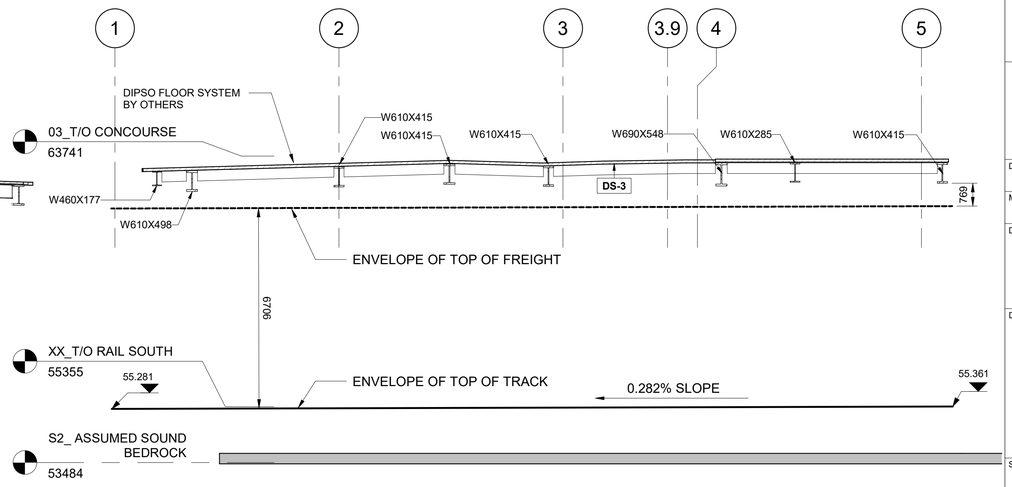

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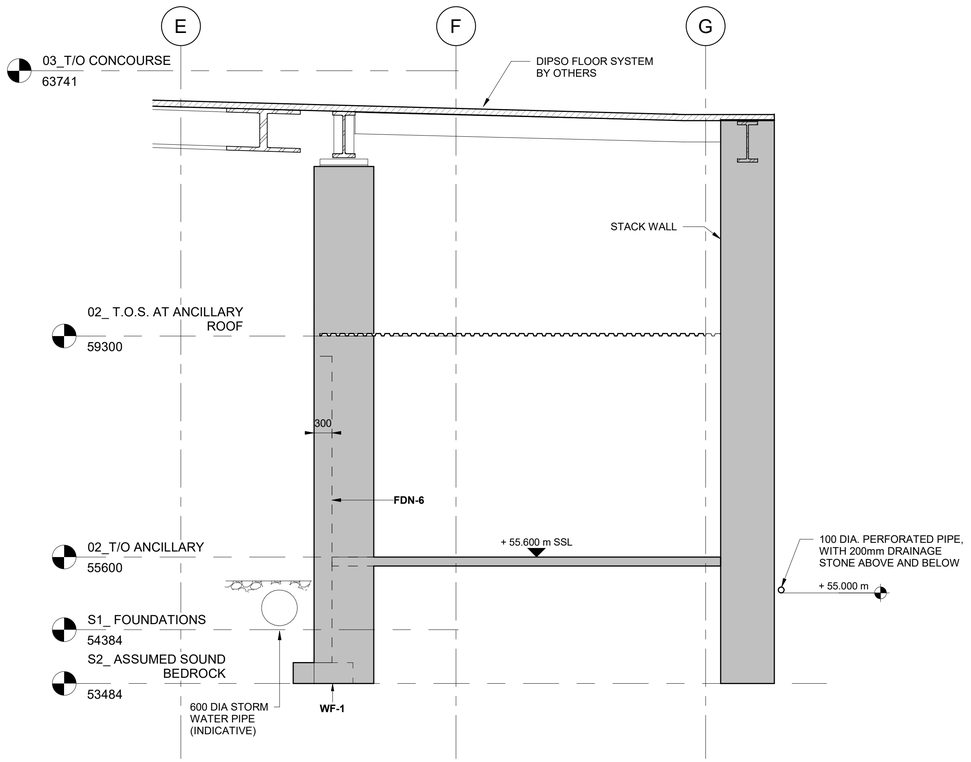

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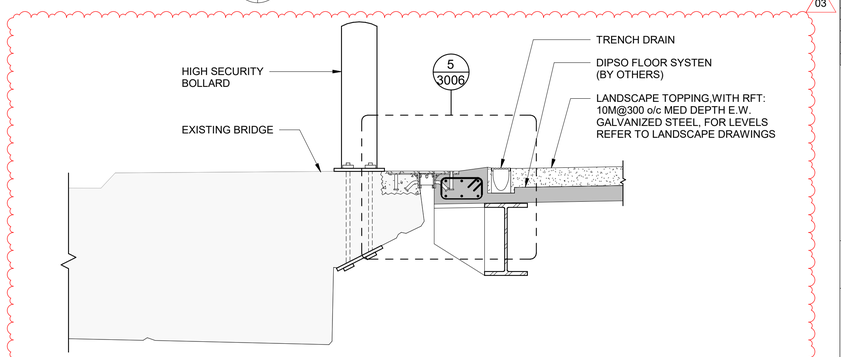

4 1007 3006 TYPICAL BRIDGE INTERFACE DETAILS
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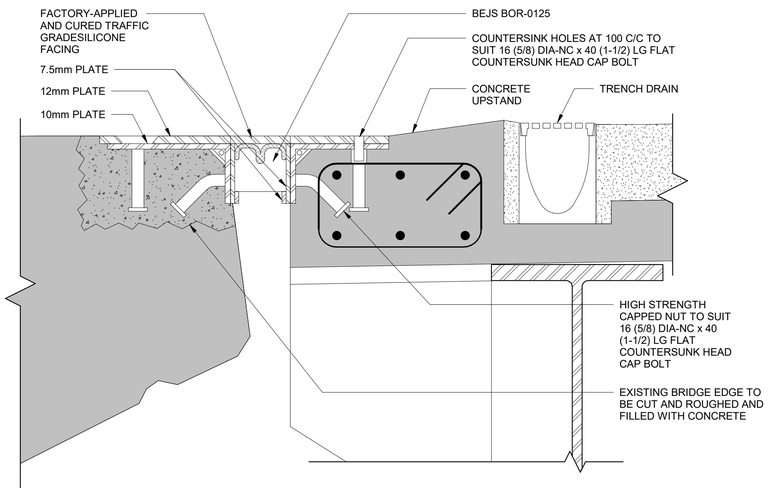

5 3006 3006 BLOW-UP DETAILS
1 : 5

TITLEBLOCK: 790mm x 534mm

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OTrain STAGE 2 ETAPE 2

Ottawa

STRUCTURAL
CORSO ITALIA STATION

SECTIONS/DETAILS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
M. IRISH	S. IBRAHIM
DRAWN	SEALED
J. PIDLAOAN	R. GILLARD

DRAWING NUMBER
660373-1GSS-003-43DD-3006

MODEL NUMBER
660373-1GSS-003-43DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER R. G. GILLARD 16129504 2021-07-30 PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

SCALE
HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE
0 0.5 1 2 4 m
VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
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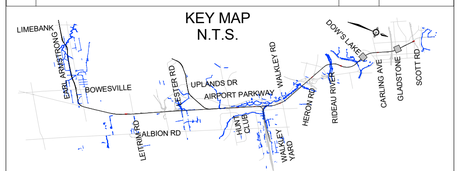
01	ISSUED FOR BUILDING PERMIT	SI	2020-11-27
02	ISSUED FOR FCR No. 660373-1GSS-003-40EI-0003	SI	2021-03-29
03	REVISED ISSUED FOR CONSTRUCTION	SI	2021-07-30

KEY MAP
N.T.S.



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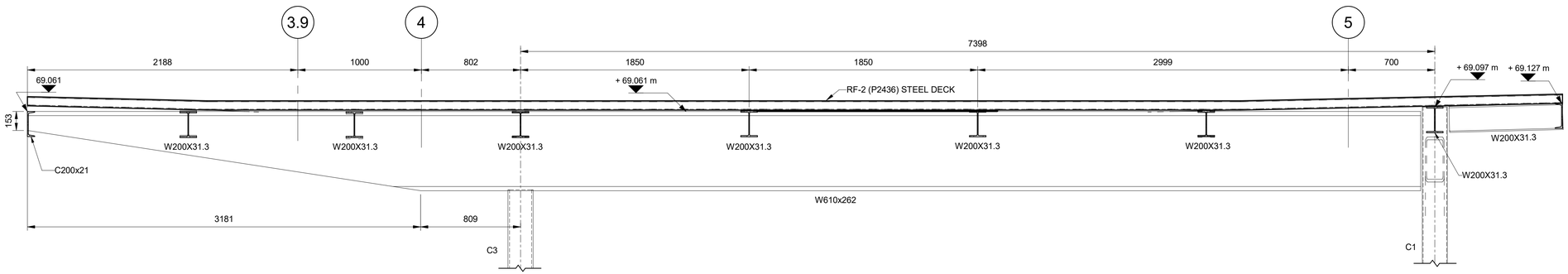
ISSUED FOR CONSTRUCTION

2021-07-30



1 / 1009 / 3007 SECTION / DETAIL

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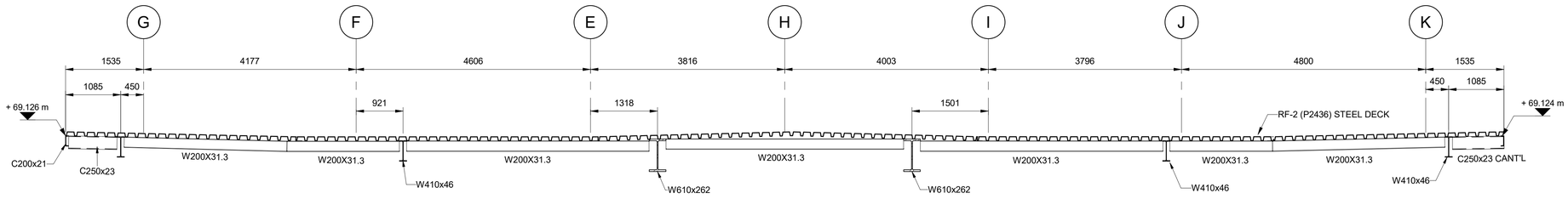

3 / 1009 / 3007 SECTION / DETAIL

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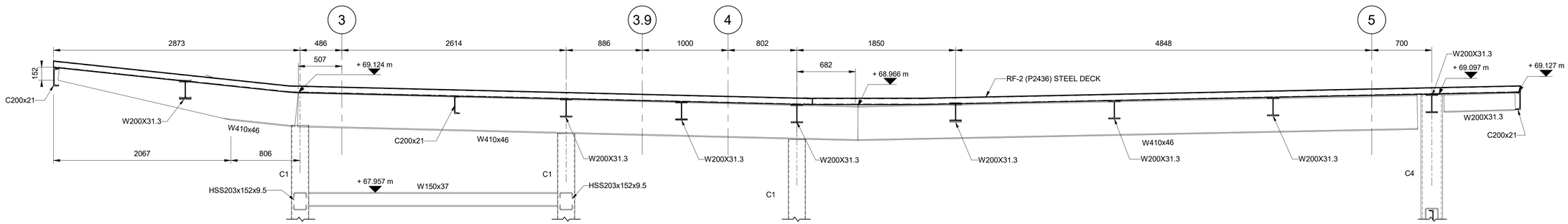


4 / 1009 / 3007 SECTION / DETAIL

1 : 25

OTrain STAGE 2 ETAPE 2

Ottawa

STRUCTURAL
CORSO ITALIA STATION

SECTIONS/DETAILS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
M. IRISH	S. IBRAHIM
DRAWN	SEALED
J. PIDLAOAN	R. GILLARD

DRAWING NUMBER
660373-1GSS-003-43DD-3007

MODEL NUMBER
660373-1GSS-003-43DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER
R. G. GILLARD
16129504
2021-03-29
PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

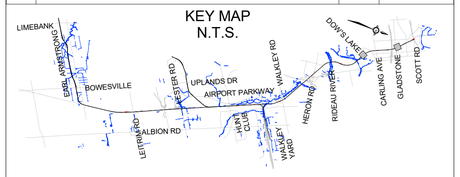
SCALE
AS SHOWN

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CLIENT REVIEW-CD SUBMISSION	SI	2021-03-29

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION

2021-03-29

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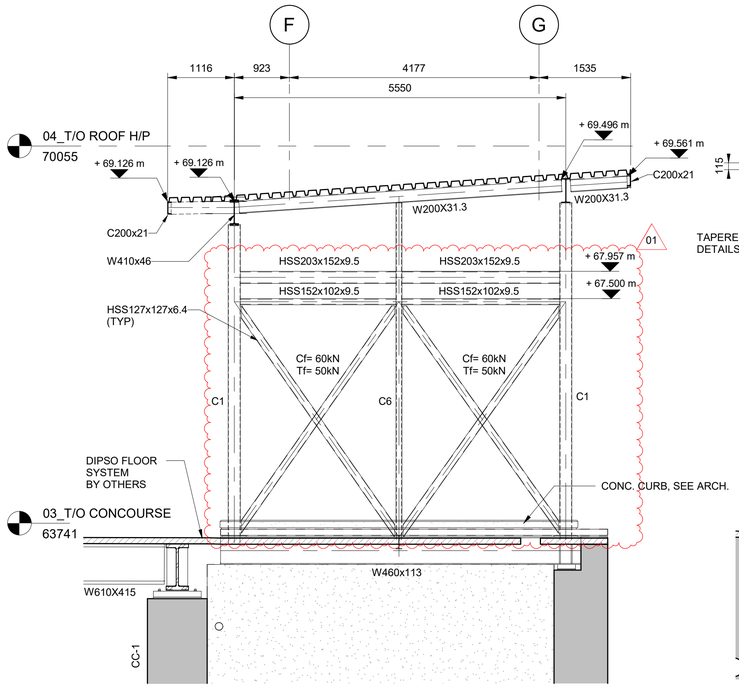

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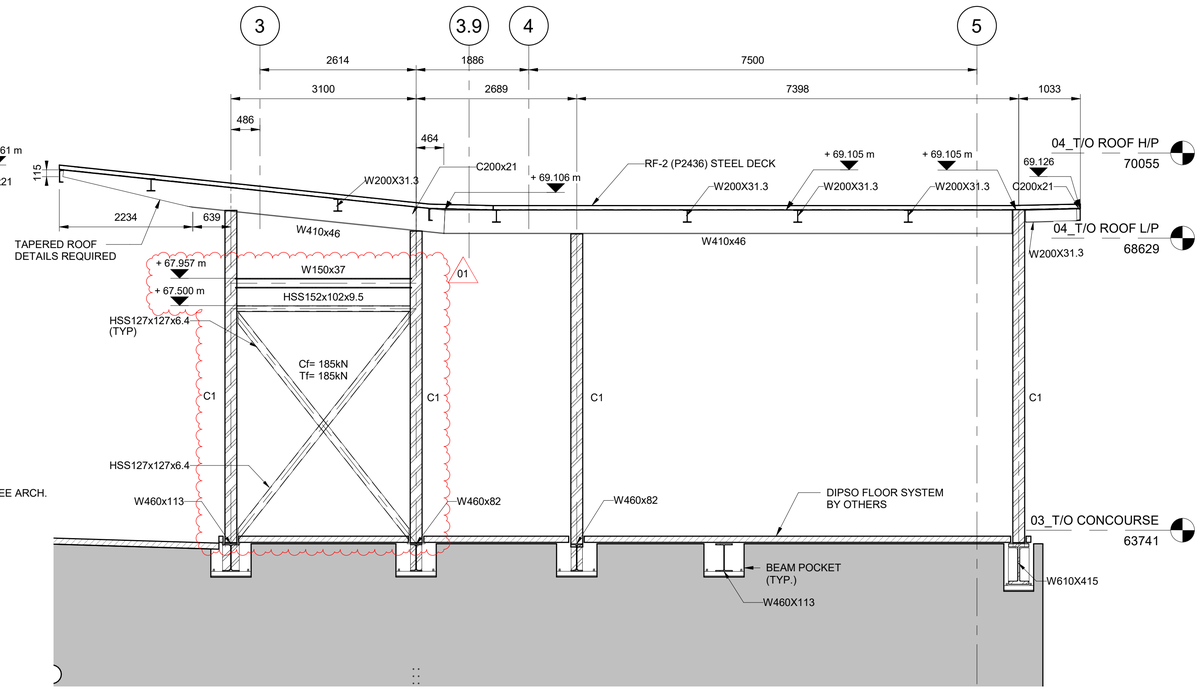

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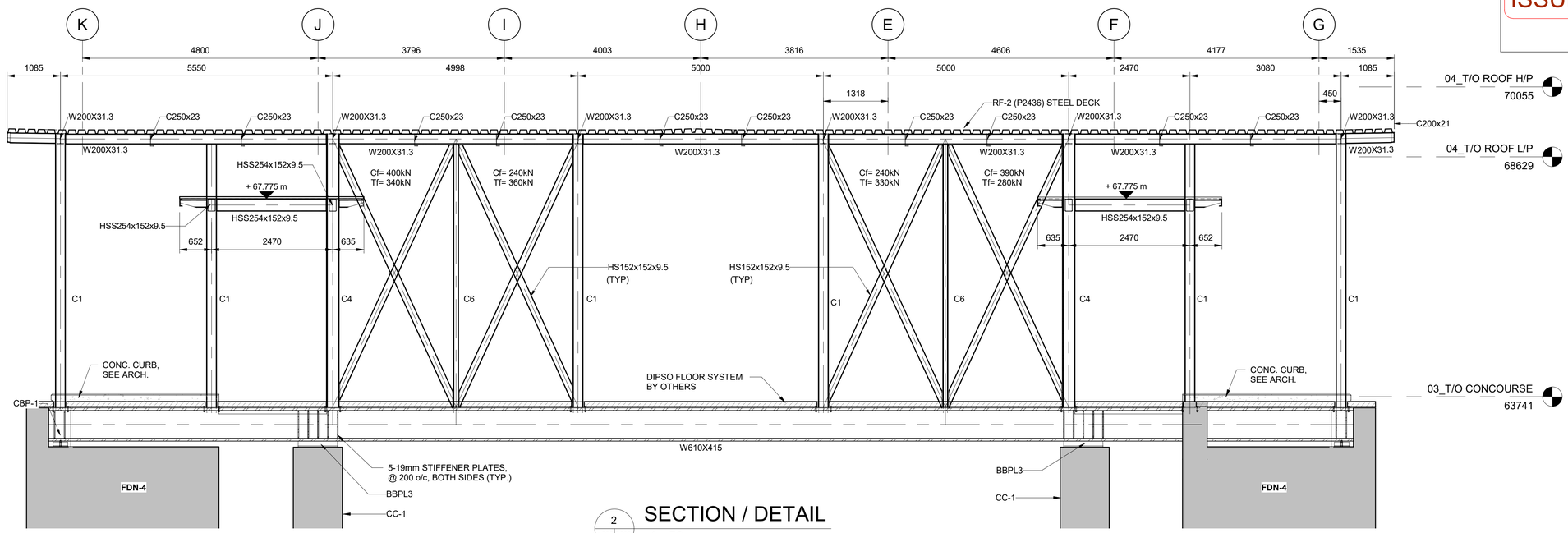

2 / 1009 3008 SECTION / DETAIL
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OTrain STAGE 2 ETAPE 2

Ottawa

STRUCTURAL
CORSO ITALIA STATION

SECTIONS/DETAILS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
M. IRISH	S. IBRAHIM
DRAWN	SEALED
J. PIDLAOAN	R. GILLARD

DRAWING NUMBER
660373-1GSS-003-43DD-3008

MODEL NUMBER
660373-1GSS-003-43DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER
R. G. GILLARD
16129504
2021-07-30
PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

SCALE
HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE
0 0.5 1 2 4 m
VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CLIENT REVIEW-CD SUBMISSION	SI	2021-03-29
01	REVISED ISSUED FOR CONSTRUCTION	SI	2021-07-30

KEY MAP
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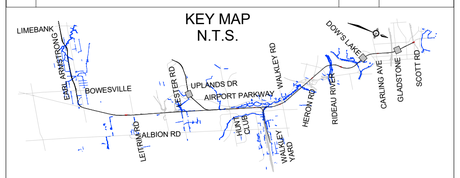

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ISSUED FOR CONSTRUCTION
2021-07-30

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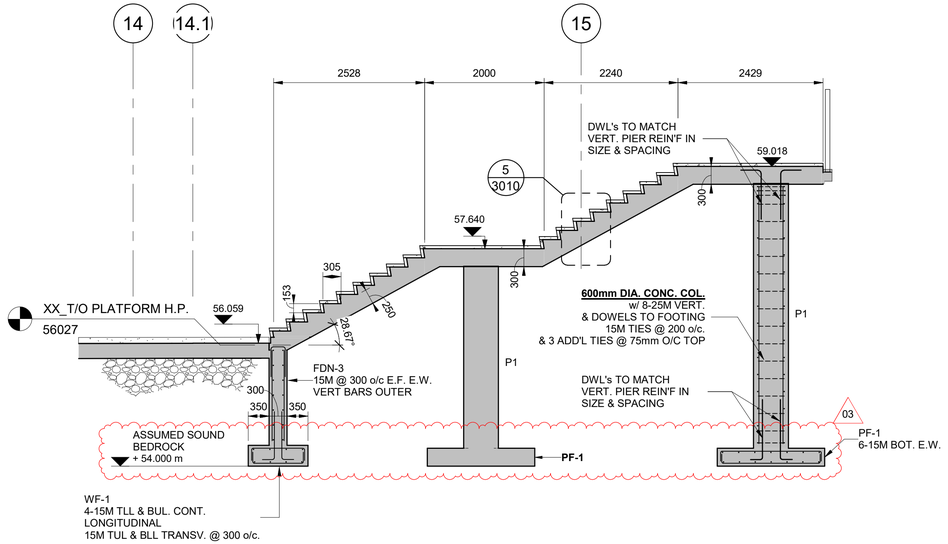

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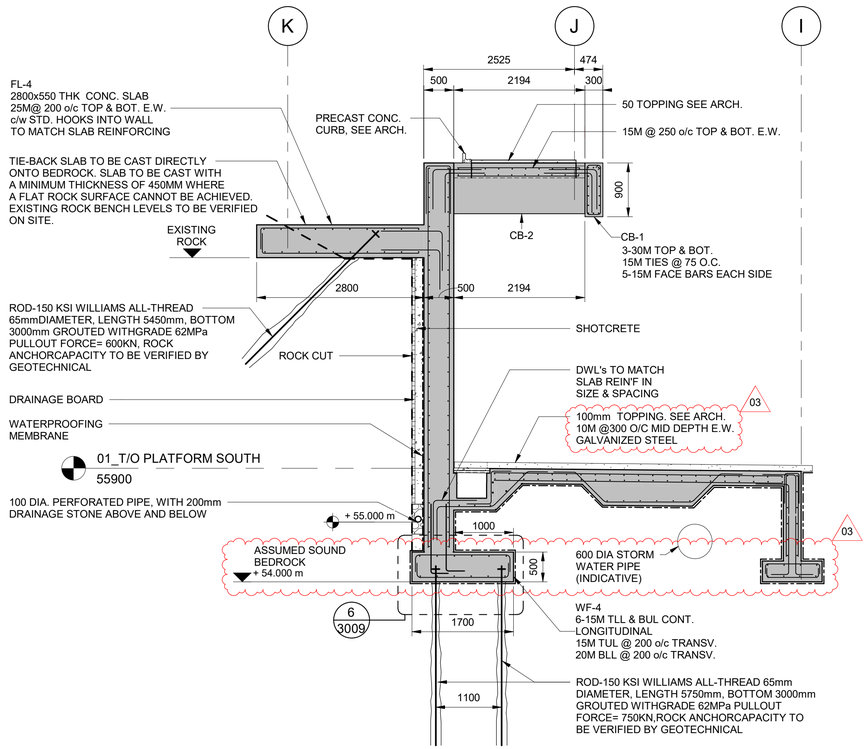

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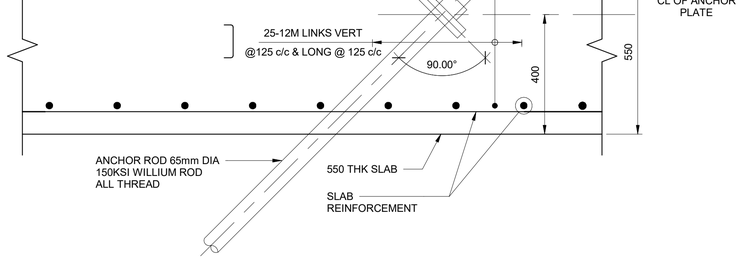

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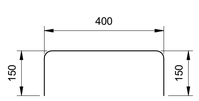

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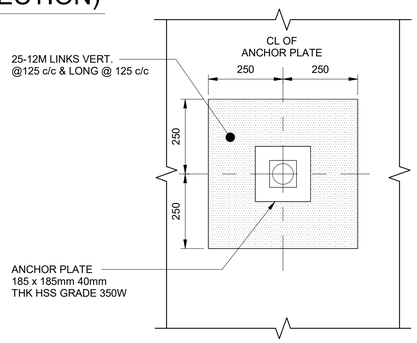

5 / 3009 SLAB ANCHOR DETAIL (PLAN)
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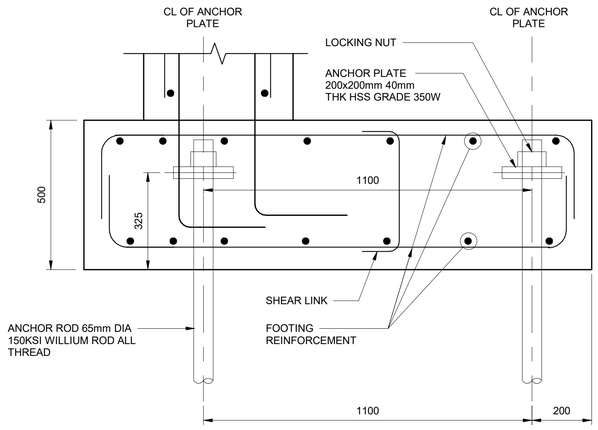
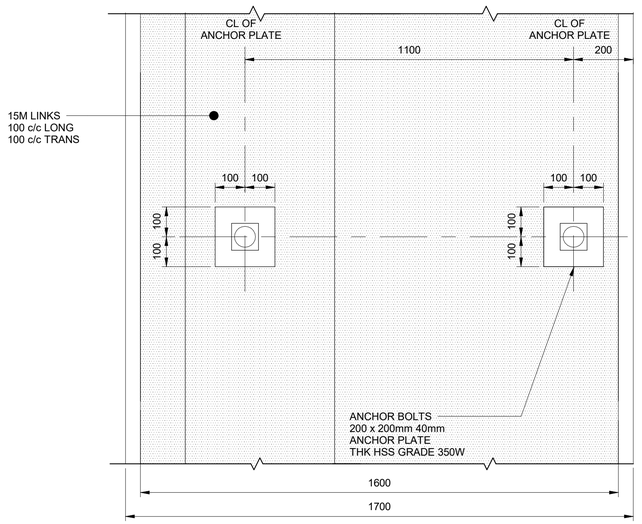


6 / 3009 3009 SECTION / DETAIL
1 : 10



7 / 3009 FOOTING SHEAR LINK DETAIL (PLAN)
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OTrain STAGE 2 ETAPE

Ottawa

STRUCTURAL
CORSO ITALIA STATION

SECTIONS/DETAILS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
M. IRISH	S. IBRAHIM
DRAWN	SEALED
J. PIDLAOAN	R. GILLARD

DRAWING NUMBER
660373-1GSS-003-43DD-3009

MODEL NUMBER
660373-1GSS-003-43DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER
R. G. GILLARD
16129504
2021-07-30
PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

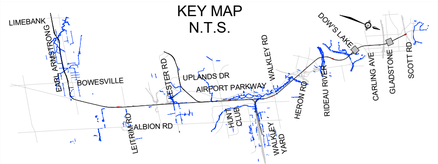
SCALE
AS SHOWN

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION - EARLY WORKS	SI	2020-09-24
01	ISSUED FOR BUILDING PERMIT	SI	2020-11-27
02	ISSUED FOR FCR No. 660373-1GSS-003-40EI-0003	SI	2021-03-29
03	REVISED ISSUED FOR CONSTRUCTION	SI	2021-07-30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

TITLEBLOCK: 790mm x 534mm
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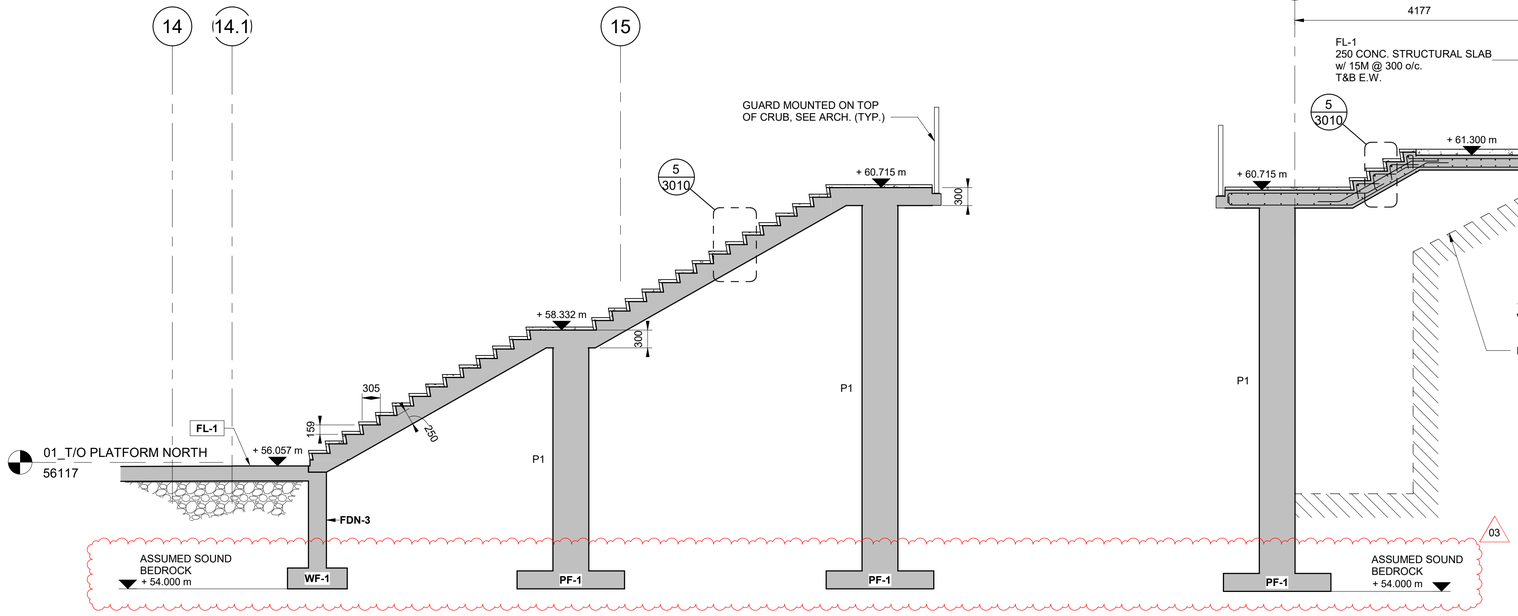
TITLEBLOCK: 790mm x 534mm



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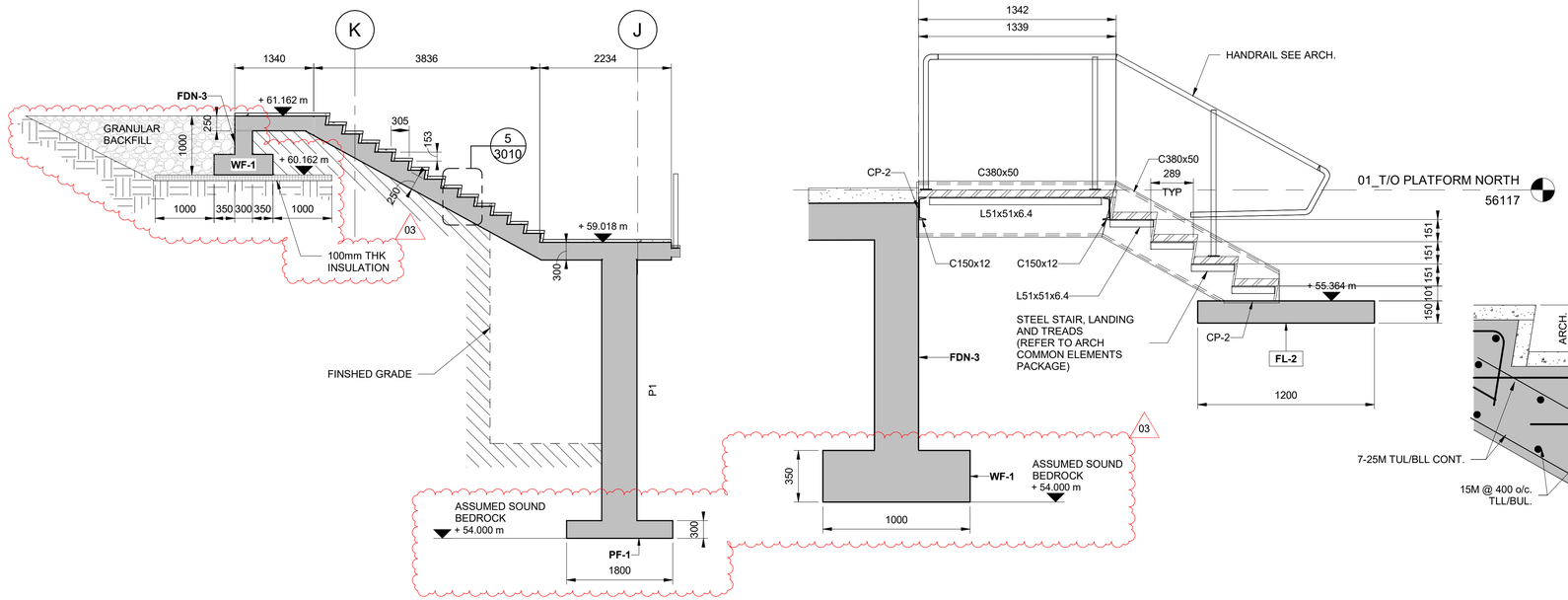
1 : 50

2 1005 3010 SECTION / DETAIL
1 : 50



3 1005 3010 SECTION / DETAIL
1 : 50

4 1005 3010 SECTION / DETAIL
1 : 20

5 3009 3010 STAIR DETAIL
1 : 10

6 1005 3010 SECTION / DETAIL
1 : 20

OTrain STAGE 2 ETAPE

Ottawa

STRUCTURAL
CORSO ITALIA STATION

SECTIONS/DETAILS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
M. IRISH	S. IBRAHIM
DRAWN	SEALED
J. PIDLAOAN	R. GILLARD

DRAWING NUMBER
660373-1GSS-003-43DD-3010

MODEL NUMBER
660373-1GSS-003-43DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER
R. G. GILLARD
16129504
2021-07-30
PROVINCE OF ONTARIO

DESIGN FIRM
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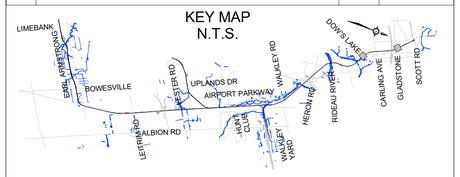
KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

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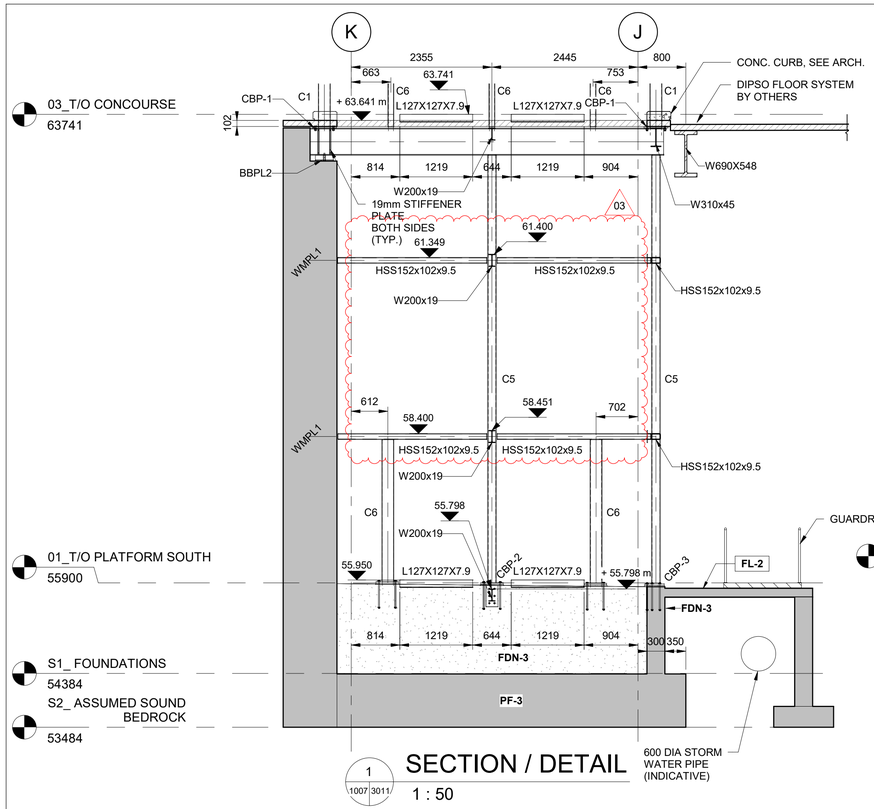

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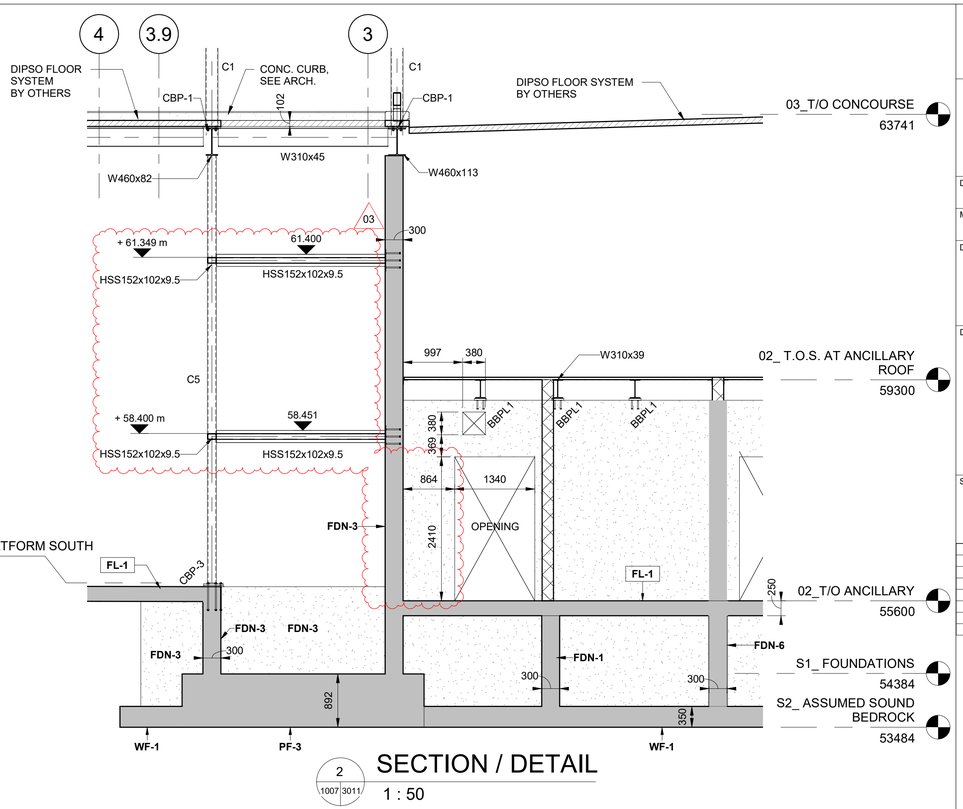

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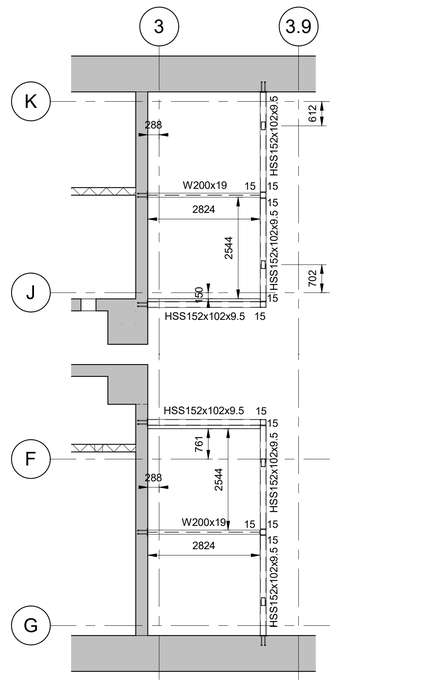
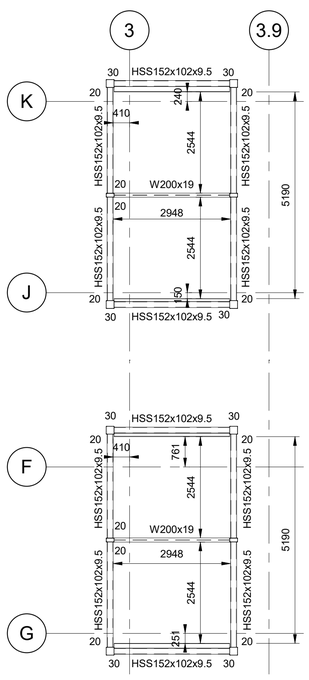
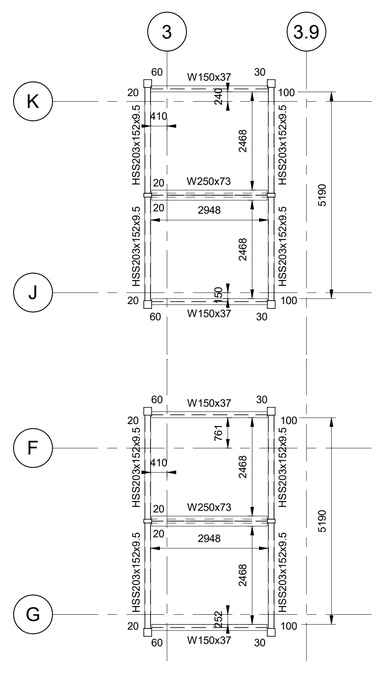


3 / 3001 3011 ELEVATOR PLAN @ T.O.S.
EL= +58.451m & +61.400m
03
1 : 75



4 / 3001 3011 ELEVATOR PLAN @ T.O.S.
EL= +67.551m
1 : 75



5 / 3002 3011 ELEVATOR PLAN @ T.O.S.
EL= +67.957m
1 : 75

OTrain STAGE 2 ETAPE 2

Ottawa

STRUCTURAL
CORSO ITALIA STATION

SECTIONS/DETAILS

CONTRACT No. LRT19-1025

DESIGNED	CHECKED
M. IRISH	S. IBRAHIM
DRAWN	SEALED
J. PIDLAOAN	R. GILLARD

DRAWING NUMBER
660373-1GSS-003-43DD-3011

MODEL NUMBER
660373-1GSS-003-43DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER R. G. GILLARD 16129504 2021-07-30 PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

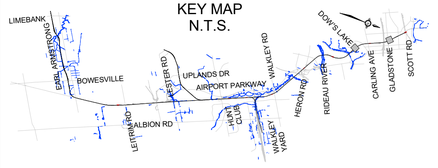
SCALE
HORIZONTAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE
0 0.5 1 2 4 m
VERTICAL 1 : 50 FULLSIZE / 1 : 100 HALF SIZE

ASSET No.

ASSET GROUP

REV	DESCRIPTION	BY	DATE
00	ISSUED FOR CONSTRUCTION - EARLY WORKS	SI	2020-09-24
01	ISSUED FOR BUILDING PERMIT	SI	2020-11-27
02	ISSUED FOR FCR No. 660373-1GSS-003-40EI-0003	SI	2021-03-29
03	REVISED ISSUED FOR CONSTRUCTION	SI	2021-07-30

KEY MAP
N.T.S.



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ISSUED FOR CONSTRUCTION
2021-07-30

TITLEBLOCK: 790mm x 534mm

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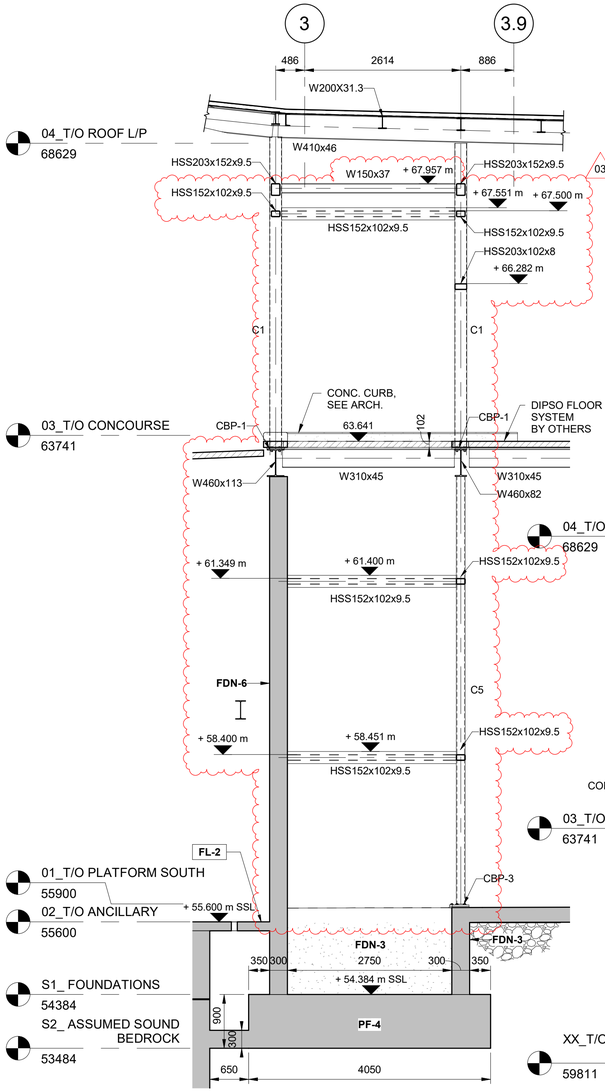

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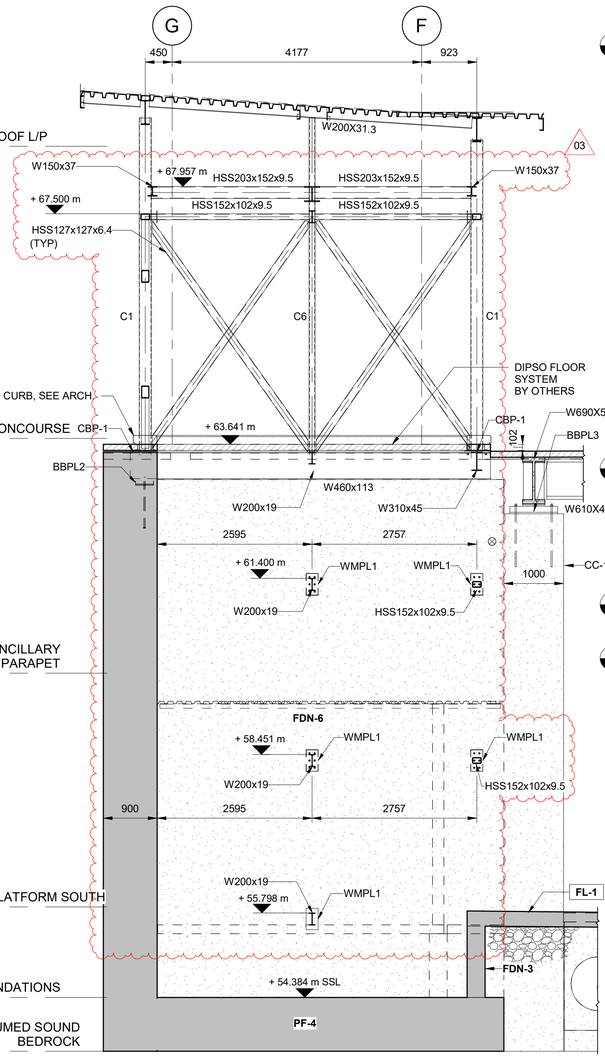

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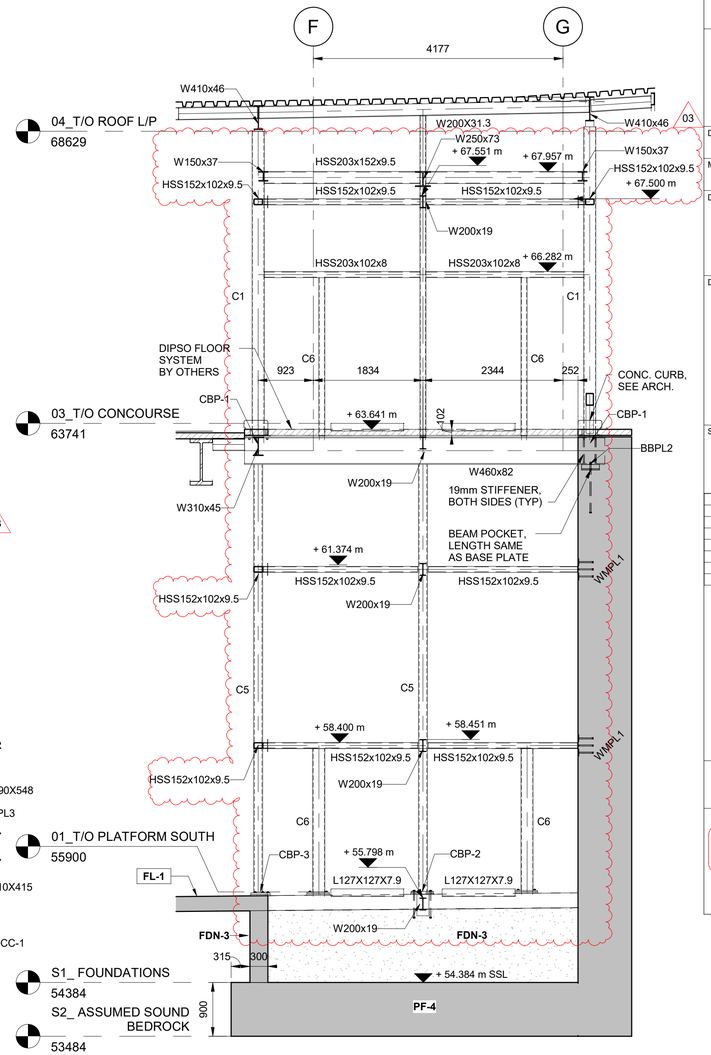

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OTrain STAGE 2 ETAPE 2

Ottawa

STRUCTURAL
CORSO ITALIA STATION

SECTIONS/DETAILS

CONTRACT No.
LRT19-1025

DESIGNED	CHECKED
M. IRISH	S. IBRAHIM
DRAWN	SEALED
J. PIDLAOAN	R. GILLARD

DRAWING NUMBER
660373-1GSS-003-43DD-3012

MODEL NUMBER
660373-1GSS-003-43DM-1000

DESIGN/BUILDER
SNC·LAVALIN TransitNEXT

PRIMARY SEAL
LICENSED PROFESSIONAL ENGINEER
R. G. GILLARD
16129504
2021-07-30
PROVINCE OF ONTARIO

DESIGN FIRM
SNC·LAVALIN

SECONDARY SEAL (IF REQUIRED)

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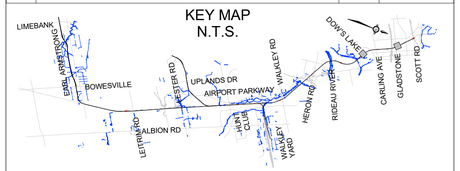

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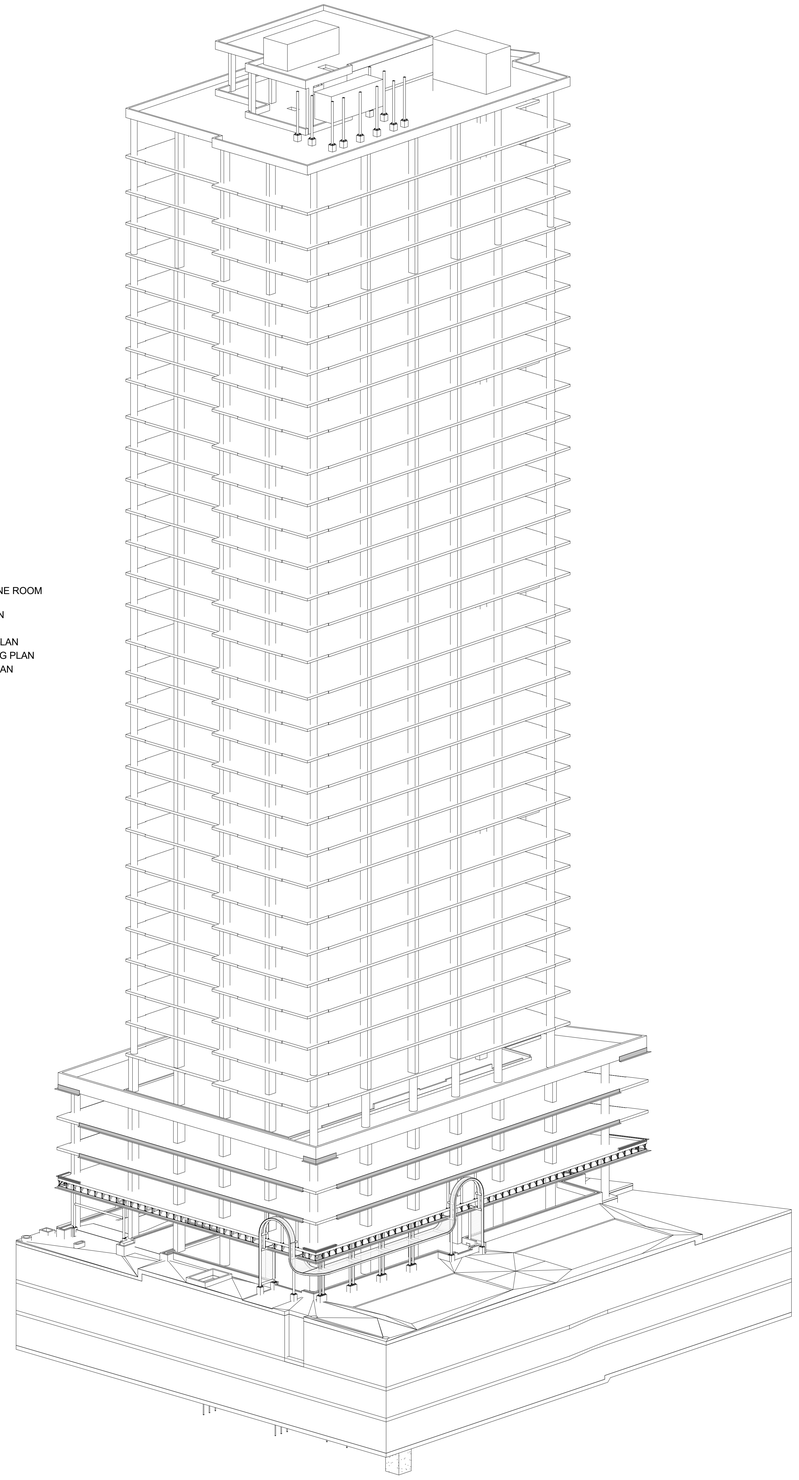
ISSUED FOR CONSTRUCTION
2021-07-30

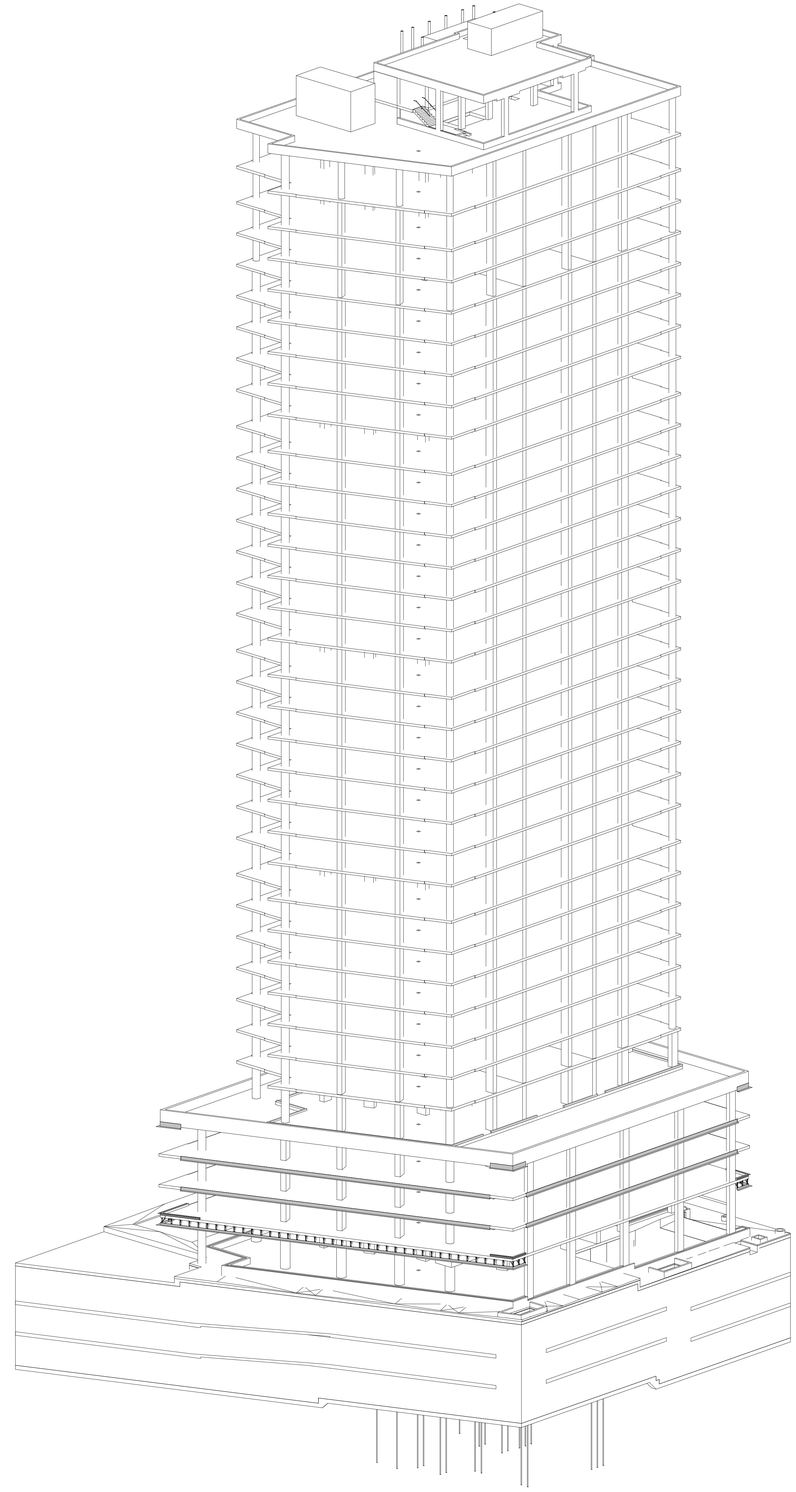
APPENDIX B4

STRUCTURAL DRAWINGS

Sheet List

Sheet Number	Sheet Name
S00	COVER SHEET
S01	GENERAL NOTES
S02	SEISMIC DATA
S03	TYPICAL DETAILS
S04	TYPICAL DETAILS
S05	SCHEDULES
S06	COLUMN SCHEDULE
S07	STAIR SECTIONS & DETAILS
S08	FEATURE CANOPY PLANS & DETAILS
S100	FOUNDATION / P3 PARKING PLAN
S101	P2 PARKING CONCRETE LAYOUT PLAN
S102	P2 PARKING BOTTOM REINFORCING PLAN
S103	P2 PARKING TOP REINFORCING PLAN
S104	P1 PARKING CONCRETE LAYOUT PLAN
S105	P1 PARKING BOTTOM REINFORCING PLAN
S106	P1 PARKING TOP REINFORCING PLAN
S107	LEVEL 01 CONCRETE LAYOUT PLAN
S108	LEVEL 01 BOTTOM REINFORCING PLAN
S109	LEVEL 01 TOP REINFORCING PLAN
S110	LEVEL 02 CONCRETE LAYOUT PLAN
S111	LEVEL 02 BOTTOM REINFORCING PLAN
S112	LEVEL 02 TOP REINFORCING PLAN
S113	LEVEL 03 CONCRETE LAYOUT PLAN
S114	LEVEL 03 BOTTOM REINFORCING PLAN
S115	LEVEL 03 TOP REINFORCING PLAN
S116	LEVEL 04 CONCRETE LAYOUT PLAN
S117	LEVEL 04 BOTTOM REINFORCING PLAN
S118	LEVEL 04 TOP REINFORCING PLAN
S119	LEVEL 05 CONCRETE LAYOUT PLAN
S120	LEVEL 05 BOTTOM REINFORCING PLAN
S121	LEVEL 05 TOP REINFORCING PLAN
S122	LEVEL 06 CONCRETE LAYOUT PLAN
S123	LEVEL 06 BOTTOM REINFORCING PLAN
S124	LEVEL 06 TOP REINFORCING PLAN
S125	LEVELS 07 - 30 CONCRETE LAYOUT PLAN
S126	LEVELS 07 - 30 BOTTOM REINFORCING PLAN
S127	LEVELS 07 - 30 TOP REINFORCING PLAN
S128	LEVEL 31-33 CONCRETE LAYOUT PLAN
S129	LEVEL 31 - 33 BOTTOM REINFORCING PLAN
S130	LEVEL 31 - 33 TOP REINFORCING PLAN
S131	LEVEL 34 CONCRETE LAYOUT PLAN
S132	LEVEL 34 BOTTOM REINFORCING PLAN
S133	LEVEL 34 TOP REINFORCING PLAN
S134	LEVEL 35 (PENTHOUSE) LEVEL 36 ELEVATOR MACHINE ROOM CONCRETE LAYOUT PLAN
S135	LEVEL 35 (PENTHOUSE) BOTTOM REINFORCING PLAN
S136	LEVEL 35 (PENTHOUSE) TOP REINFORCING PLAN
S137	LEVEL 36 (PENTHOUSE ROOF) CONCRETE LAYOUT PLAN
S138	LEVEL 36 (PENTHOUSE ROOF) BOTTOM REINFORCING PLAN
S139	LEVEL 36 (PENTHOUSE ROOF) TOP REINFORCING PLAN
S200	SHEARWALL ELEVATIONS
S201	SHEARWALL ELEVATIONS
S202	SHEARWALL ELEVATIONS
S203	SHEARWALL ELEVATIONS
S300	CROSS SECTIONS
S400	SECTIONS
S401	SECTIONS
S402	SECTIONS
S403	SECTIONS





CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

no	revisions	date
5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 60% MID & CLIENT BUDGETING	25-03-28
2	ISSUE FOR EXCAVATION TENDER	24-10-30
1	ISSUE FOR REVIEW	24-09-13

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
B. LARMSTRONG GOODKEY
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

Enter address here

drawing title | titre du dessin

COVER SHEET

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	
date | date	**05/28/24**

drawing number | numéro du dessin

S00

CONSTRUCTION NOTES

1. **CONSTRUCTION REVIEW**

- CONTRACTOR ASSUMES COMPLETE RESPONSIBILITY FOR FULL SUPERVISION OF CONSTRUCTION WORK.
- SITE VISITS AND REVIEWS BY THE DESIGN ENGINEER OR REPRESENTATIVE ARE INTENDED FOR THE PURPOSE OF ASCERTAINING GENERAL CONFORMANCE WITH THE DESIGN CONCEPT. THE SITE REVIEWS DO NOT MEAN THAT THE DESIGN ENGINEER HAS SEEN ALL OF THE CONSTRUCTION OR CONSTRUCTION PROCEDURES.
- REVIEW OF CONSTRUCTION BY THE DESIGN ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY FOR ERRORS AND OMISSIONS AND FOR MEETING ALL THE REQUIREMENTS OF THE CONSTRUCTION AND CONTRACT DOCUMENTS.
- NOTIFY THE DESIGN ENGINEER 24 HOURS IN ADVANCE OF ANY REQUIRED SITE VISITS.
- THIRD PARTY INSPECTIONS ARE TO BE CARRIED OUT AS PER PROJECT SPECIFICATIONS.
- CONTRACTOR IS RESPONSIBLE FOR ANY COSTS ASSOCIATED WITH THE REMOVAL OF FINISHES REQUIRED FOR INSPECTIONS OR TESTING THAT IS COVERED BEFOREINSPECTIONS ARE COMPLETED.
- OBTAIN A PROFESSIONAL GEOTECHNICAL ENGINEER APPROVAL OF THE FOLLOWING ITEMS:
  - **A.** ALL EXCAVATIONS, PRIOR TO CASTING CONCRETE FOR FOUNDATIONS.
  - **B.** ALL ENGINEERED (COMPACTED) BACKFILL AS WORK PROGRESSES
  - **C.** ALL EARTH SUPPORT SYSTEMS (SHORING/EXCAVATIONS)
  - **D.** ALL EARTH BANKS
  - **E.** DEWATERING FOR LOWERING WATER TABLE
  - **F.** ANY WORK INVOLVING SOIL/ROCK/WATER/GASES ETC., IN SOIL
- PRIOR TO CASTING CONCRETE OBTAIN ENGINEERS APPROVAL OF PLACEMENT OF REINFORCEMENT STEEL.
- AT LEAST 75% OF REINFORCEMENT STEEL IN ANY STRUCTURAL MEMBER IS TO BECOMPLETED BEFORE INSPECTION CAN BE COMPLETED.

2. **SHOP DRAWINGS NOTES**

- SUBMIT SHOP DRAWINGS FOR ALL STRUCTURAL WORK AND ANY WORK AFFECTING THE STRUCTURE TO THE ARCHITECT. OBTAIN ARCHITECTS AND ENGINEER'S CONSENT BEFORE PROCEEDING WITH THE FABRICATION.
- EACH OF THE FOLLOWING SHOP DRAWINGS MUST BEAR THE SIGNATURE AND STAMP OF A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE.
  - **A.** PRECAST CONCRETE DRAWINGS
  - **B.** DRAWINGS FOR ANY TEMPORARY WORK
  - **C.** DRAWINGS FOR ANY STRUCTURAL PARTS DESIGNED BY THE CONTRACTORS' FORCES, INCLUDING EXTERIOR BUILDING ENVELOPE.
- SHOP DRAWINGS MUST BE REVIEWED AND STAMPED REVIEWED BY THE GENERAL CONTRACTOR BEFORE ISSUING TO THE ARCHITECT. SHOP DRAWINGS NOT STAMPED BY THE GENERAL CONTRACTOR WILL BE REJECTED. ANY DELAYS IN THE CONSTRUCTION SCHEDULE DUE TO NON-COMPLIANCE WITH THIS REQUIREMENT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
- SUBMIT ALL RELEVANT SHOP DRAWINGS FOR THE STRUCTURAL ENGINEERS REVIEW BEFORE FABRICATION. ALL SHOP DRAWINGS SHALL BEAR THE SEAL OF A REGISTERED PROFESSIONAL ENGINEER LICENSED WITHIN THE APPROPRIATE JURISDICTION.
- GENERAL CONTRACTOR AND SUB-TRADES SHALL INCLUDE TIME IN THEIR SCHEDULE FOR PROPER SHOP DRAWING REVIEW BY CONSULTANTS. CONTRACTORS SHALL ALLOW 5 BUSINESS DAYS TIME FOR REVIEW BY THE STRUCTURAL CONSULTANT, IN ADDITION TO TIME REQUIRED BY OTHER PARTIES.
- SHOP DRAWINGS MUST BE ORIGINAL, AND PRODUCED BY THE RESPECTIVE SUB-TRADES. ANY DRAWINGS SUBMITTED FOR REVIEW WHICH CONTAIN DRAWINGS OR PARTS OF DRAWINGS PRODUCED BY CUNLIFFE & ASSOCIATES WILL BE REJECTED, AND THE CONTRACTOR RESPONSIBLE FOR PRODUCING THE SHOP DRAWINGS SHALL TAKE RESPONSIBILITY FOR ANY RESULTING DELAYS IN CONSTRUCTION.
- THE SHOP DRAWING REVIEW IS NOT AN APPROVAL PROCESS. CUNLIFFE & ASSOCIATES, WILL REVIEW SHOP DRAWINGS FOR THE SOLE PURPOSE OF ASCERTAINING GENERAL CONFORMANCE WITH THE DESIGN CONCEPT SHOWN ON THE STRUCTURAL DRAWINGS. REVIEW OF SHOP DRAWINGS SHALL NOT MEAN THAT CUNLIFFE & ASSOCIATES, APPROVES THE DETAIL DESIGN INHERENT IN THE SHOP DRAWINGS, RESPONSIBILITY FOR WHICH SHALL REMAIN WITH THE CONTRACTOR SUBMITTING SAME. REVIEW BY CUNLIFFE & ASSOCIATES, SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR ERRORS OR OMISSIONS IN THE SHOP DRAWINGS OR OF THEIR RESPONSIBILITY FOR MEETING ALL REQUIREMENTS OF THE CONSTRUCTION AND CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS TO BE CONFIRMED AND COORDINATED AT THE JOB SITE, FOR INFORMATION THAT PERTAINS SOLELY TO FABRICATION PROCESSES AND TO TECHNIQUES OF CONSTRUCTION AND INSTALLATION AND FOR COORDINATION OF THE WORK OF ALL SUB-TRADES.

3. **CONSTRUCTION PLANNING & SAFETY**

- REQUIREMENTS FOR MECH. EQUIPMENT, AND ANY TRADES OR SERVICES AFFECTING THE STRUCTURE, SHALL BE ESTABLISHED IN CONSULTATION WITH CORRESPONDING MANUFACTURERS OR SUPPLIERS AND THE ARCHITECT.
- LOCATION OF CONSTRUCTION JOINTS SHALL BE PLANNED IN ADVANCE.
- CUNLIFFE & ASSOCIATES SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION SAFETY, MEANS, TECHNIQUES AND CONSTRUCTION PROCEDURES OR TEMPORARY WORK AS REQUIRED BY THE CONSTRUCTOR TO BUILD AND COMPLETE THE STRUCTURE IN CONFORMITY WITH CONTRACT DOCUMENTS. ALL CONTRACTORS ARE TO RETAIN AN INDEPENDENT STRUCTURAL ENGINEER TO CARRY OUT THE NECESSARY TECHNIQUES TO BE USED TO BUILD AND COMPLETE THE STRUCTURE ACCORDING TO THE CONTRACT DOCUMENTS AND SAFETY GUIDELINES FROM LOCAL CODES/AUTHORITIES. ALL CONTRACTORS SHALL SUPPLY DRAWINGS STAMPED BY A PROFESSIONAL ENGINEER TO THE DESIGN TEAM FOR REVIEW. GENERAL CONTRACTOR IS TO REVIEW ALL BRACING PLANS TO ENSURE THEY ARE COORDINATED AND DO NOT INTERFERE WITH SITE ACTIVITIES. FINAL REMOVAL OF ANY TEMPORARY BRACING IS TO BE DONE ONLY WITH THE APPROVAL OF THEIR DESIGN ENGINEER IN WRITING, AND A SIGNOFF LETTER IS PROVIDED TO THE DESIGN TEAM FOR REVIEW.
- THE CONTRACTOR SHALL MAKE ADEQUATE PROVISIONS FOR CONSTRUCTION STRESSES AND FOR SUFFICIENT TEMPORARY BRACING TO KEEP THE STRUCTURE PLUMB AND IN TRUE ALIGNMENT AT ALL PHASES OF THE WORK, UNTIL COMPLETION (INCLUDING MASONRY WALLS, FLOOR AND ROOF DECKS, ETC.). ANY BRACING MEMBERS SHOWN ON PLANS ARE THOSE REQUIRED FOR THE FINISHED STRUCTURE, AND MAY NOT BE SUFFICIENT FOR ERECTION PURPOSES.
- ALL CONSTRUCTION WORK FOR TEMPORARY SHORING AND BRACING OF EXISTING STRUCTURE SHALL BE DONE ONLY AFTER PERMISSION HAS BEEN GRANTED BY THE CONSTRUCTION HEALTH AND SAFETY BRANCH OF THE GOVERNING MINISTRY OF LABOUR.
- PROTECT EXISTING BUILDINGS, TREES, FENCING, UTILITIES POLES, CABLES, ACTIVE UNDERGROUND SERVICES AND PAVING ON THE SITE OR ANY ADJOINING PROPERTIES FROM DAMAGE. DAMAGE RESULTING FROM THIS CONSTRUCTION WORK SHALL BE MADE GOOD TO THE APPROVAL OF THE ARCHITECT NO COST TO THE OWNER.
- TRUCKS, CRANES, HOISTS, OR ANY HEAVY EQUIPMENT OR MATERIALS ARE NOTALLOWED TO ENTER ANY STRUCTURAL FLOOR OR ROOF AREA UNLESS SPECIFICALLY DESIGNED AND DESIGNATED FOR THESE PURPOSES. INSTALL TEMPORARY BARRIERS TO PREVENT ACCIDENTAL OVERLOADING DURING CONSTRUCTION. DESIGN, INSTALL AND MAINTAIN ADEQUATE SHORING SYSTEM AS REQUIRED TO CARRY ANY SUCH TEMPORARY LOADING FROM CONSTRUCTION MATERIALS AND/OR EQUIPMENT.
- NOTIFY ARCHITECT IMMEDIATELY UPON DISCOVERY OF ANY CONSTRUCTION ERROR, OMISSION, DEFECTIVE WORK, ETC., SO THAT THE MOST ECONOMICAL REMEDIAL MEASURES MAY BE DESIGNED AT THE EARLIEST POSSIBLE TIME.
- GENERAL CONTRACTOR SHALL NOTIFY MECHANICAL/ELECTRICAL CONTRACTORS THAT SUPPORT AND THE DESIGN OF SUCH SUPPORTS TO CARRY MECHANICAL/ELECTRICAL EQUIPMENT SHALL BE BY THE MECHANICAL/ELECTRICAL CONTRACTORS. OBTAIN STRUCTURAL ENGINEERS APPROVAL TO CONNECT TO EXISTING/NEW MAIN BUILDING STRUCTURE. DESIGN OF SUPPORTS SHALL BE STAMPED BY A QUALIFIED STRUCTURAL ENGINEER RETAINED BY THE MECHANICAL/ELECTRICAL CONTRACTOR.

GENERAL NOTES

1. ANY DEVIATION FROM THE CONDITIONS SHOWN ON THESE DRAWINGS MUST BE REPORTED TO THE ENGINEER.
2. THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF PART 4 OF THE 2024 O.B.C. ONTARIO REGULATION 203/24
3. **STANDARDS**

- CSA STANDARD A23.3-19 DESIGN OF CONCRETE STRUCTURES
- CSA STANDARD A23.1-19 CONCRETE MATERIALS & METHODS OF CONCRETE CONSTRUCTION
- CSA-S16-19 LIMIT STATES DESIGNS OF STEEL STRUCTURES
- CSA STANDARD S304-14 DESIGN OF MASONRY STRUCTURES
- CSA-O86-19 ENGINEERING DESIGN IN WOOD

4. ANY MODIFICATIONS TO EXISTING STRUCTURES ARE TO BE LIMITED TO WORK NOTED ON THESE DRAWINGS. ANY ADDITIONAL OR PROPOSED MODIFICATIONS TO EXISTING STRUCTURES MUST BE APPROVED BY THE ENGINEER.
5. **FOUNDATIONS**

- ALL FOOTINGS ARE TO BEAR ON SOUND BEDROCK
- CONFIRM WITH GEOTECHNICAL REPORT/ENGINEER ANY REQUIREMENTS FOR MUD SLAB TO PROTECT INSITU SOILS.
- BEARING CAPACITY USED IN THE FOOTING DESIGN IS ASSUMED TO BE **SLS & ULS=4000 kPa**
- BEARING SURFACE IS TO BE INSPECTED BY GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE. FOR FURTHER INFORMATION SEE GEOTECHNICAL REPORT NUMBER PG5017-1 REVISION 3 & MEMO.08 PREPARED BY PATERSON GROUP
- STEP FOOTINGS WHERE INDICATED ON PLAN AT THE RATE OF 1 HORIZONTAL TO 1 VERTICAL.

6. **SLAB ON GRADE**

- SLABS ON GRADE TO BE UNREINFORCED UNLESS NOTED.
- FOR COMPOSITION & COMPACTION OF FILL SUPPORTING SLABS ON GRADE SEE GEOTECHNICAL REPORT.
- PROVIDE 12 mm ASPHALT IMPREGNATED FIBREBOARD BETWEEN SLABS ON GRADE & FOUNDATION WALLS OR COLUMNS.
- SAWCUT SLAB ON GRADE TO (1/4 x SLAB DEPTH) 8 HOURS AFTER CONCRETE PLACEMENT.
- SPACE SAWCUTS ON A 4500 mm x 4500 mm MAXIMUM GRID. AVOID LONG & NARROW SAWCUT PATTERNS. LOCATE SAWCUTS ALONG COLUMN LINES WHERE POSSIBLE. CONTRACTOR IS TO PROVIDE THE ENGINEER WITH DOCUMENTATION SHOWING PROPOSED SAWCUT LOCATIONS FOR APPROVAL UNLESS SAWCUTS LOCATIONS ARE OTHERWISE INDICATED ON THESE DRAWINGS.

7. **MATERIALS**

- CONCRETE STRENGTH AT 28 DAYS TO BE AS NOTED ON THESE DRAWINGS AND SPECIFICATIONS.
- REINFORCING STEEL TO BE DEFORMED BARS GRADE 400W WITH Fy= 400 MPa.
- HOLLOW STRUCTURAL STEEL SECTIONS TO BE ASTM A500 GRADE C OR G40.21 350W CLASS C.
- ALL 'W', 'WWP', 'C' & 'L' SHAPE STEEL SECTIONS TO BE GRADE G40.21 350W WITH Fy= 350 MPa.
- ALL OTHER STRUCTURAL STEEL TO BE GRADE G40.21 300W WITH Fy= 300 MPa UNLESS NOTED OTHERWISE.
- ALL STRUCTURAL STEEL TO RECEIVE 1 SHOP APPLIED COAT OF PRIMER UNLESS NOTED.
- ALL STRUCTURAL STEEL EXPOSED TO EXTERIOR IS TO BE HOT DIP GALVANIZED UNLESS NOTED.
- ANCHOR BOLTS TO BE A307.
- ALL OTHER BOLTS TO BE A325.
- A325 BOLTS EXPOSED TO EXTERIOR ARE TO BE GALVANIZED.
- A307 BOLTS EXPOSED TO EXTERIOR ARE TO BE GALVANIZED.
- CONCRETE BLOCK TO BE H15A/M.
- CONCRETE BLOCK MASONRY MORTAR TO BE 10 MPa TYPE 'S' U/N.
- CONCRETE BLOCK MASONRY GROUT TO BE 12 MPa "HIGH SLUMP" (200-250 mm SLUMP).
- ALL WOOD STUDS TO BE SPF NO.2 OR BETTER.
- ALL PLYWOOD TO BE D. FIR PLYWOOD TO CSA 0121 OR CANADIAN SOFTWOOD PLYWOOD TO 0151.
- ALL OSB TO MEET CSA 0325.
- ALL WOOD TO BE DRY SEASONED, WITH A MOISTURE CONTENT LESS THAN 15%.

8. **CONCRETE COVER**

- FOOTINGS 75 mm BOTTOM 50 mm SIDES
- WALLS/BEAMS 40 mm UNLESS NOTED OTHERWISE
- COLUMNS 40 mm
- SUSPENDED SLABS 25 mm U/N ON DRAWINGS
- PILE CAPS 75 mm BOTTOM-50 mm SIDE & TOP
- GRADE BEAMS 75 mm BOTTOM-50 mm SIDE & TOP

9. **REINFORCING STEEL DESIGNATION**

8-20M x 1500 T/B

8 = NUMBER OF BARS
20M = SIZE OF BARS
1500 = LENGTH OF BARS
T = BAR LOCATION - TOP
B = BAR LOCATION - BOT
LENGTH OF BARS DOES NOT INCLUDE HOOKS OR BENDS

10. **DOWELS**

DOWELS TO FOOTINGS TO BE OF SAME DIAMETER AS THE LOWEST LIFT OF VERTICAL REINFORCING IN COLUMNS, PIERS OR WALLS.

11. **REINFORCING STEEL SPLICES**

REINFORCING STEEL SPLICES TO BE AS NOTED IN REINFORCING BAR LAP LENGTH TABLE ON S01 U/N.

12. **OPENINGS**

- AT OPENINGS IN FLOOR SLABS PROVIDE 1-15M x 1500 Lg TOP & BOTTOM DIAGONALLY AT CORNERS OF OPENINGS.
- AT OPENINGS IN WALLS PROVIDE 2-20M T & B OF OPENING EXTENDING 600 mm MIN. BEYOND CORNERS OF OPENINGS.
- FOR ADDITIONAL OPENINGS 300 x 300 OR SMALLER SEE ARCHITECTURAL & MECHANICAL DRAWINGS.
- REPORT ANY OPENINGS LARGER THAN 300 x 300 NOT SHOWN ON THESE DRAWINGS TO THE ENGINEER.

13. **SUSPENDED SLABS**

- ALL BEAMS ARE TO BE PLACED MONOLITHICALLY WITH SLAB.
- AT SLAB OPENINGS DISPLACE SLAB REINFORCING TO EACH SIDE. DO NOT CUT BARS.

14. **LOADS**

- ALL LOADS & FORCES INDICATED ON THESE DRAWINGS ARE UNFACTORED WORKING LOADS UNLESS NOTED.

15. **CONCRETE BLOCK MASONRY**

ALL LOAD BEARING (INTERIOR & EXTERIOR) WALLS & NON-LOAD BEARING (EXTERIOR) WALLS U/N

140 mm CONCRETE BLOCK:
VERT: 1-15M @ 800 o/c (MAX WALL HEIGHT 3000 mm)
1-15M @ 400 o/c (WALL HEIGHT 3000-4200 mm)
HORIZ: SL2 @ 200 o/c

190 mm CONCRETE BLOCK:
VERT: 1-15M @ 800 o/c (MAX WALL HEIGHT 4400 mm)
1-15M @ 400 o/c (WALL HEIGHT 4400-5800 mm)
HORIZ: XHL2 @ 200 o/c

240 mm CONCRETE BLOCK:
VERT: 1-20M @ 800 o/c (MAX WALL HEIGHT 5400 mm)
1-20M @ 400 o/c (WALL HEIGHT 5400-6800 mm)
HORIZ: XHL2 @ 200 o/c

290 mm CONCRETE BLOCK:
VERT: 1-20M @ 600 o/c (MAX WALL HEIGHT 6800 mm)
1-20M @ 400 o/c (WALL HEIGHT 6800-8000 mm)
HORIZ: XHL2 @ 200 o/c + 1-20M HORIZ. @ 1800 o/c

NON-LOAD BEARING INTERIOR WALLS (U/N)

140 mm CONCRETE BLOCK:
VERT: 1-15M @ 800 o/c (MAX WALL HEIGHT 3000 mm)
1-15M @ 400 o/c (WALL HEIGHT 3000-4200 mm)
HORIZ: SL2 @ 200 o/c

190 mm CONCRETE BLOCK:
VERT: 1-15M @ 1200 o/c (MAX WALL HEIGHT 4400 mm)
1-15M @ 800 o/c (WALL HEIGHT 4400-5800 mm)
HORIZ: XHL2 @ 200 o/c OR SL2 @ 200 o/c

240 mm CONCRETE BLOCK:
VERT: 1-20M @ 1200 o/c (MAX WALL HEIGHT 5000 mm)
1-20M @ 600 o/c (WALL HEIGHT 5000-6800 mm)
HORIZ: SL2 @ 200 o/c

290 mm CONCRETE BLOCK:
VERT: 1-20M @ 600 o/c (MAX WALL HEIGHT 6800 mm)
1-20M @ 400 o/c (WALL HEIGHT 6800-8000 mm)
HORIZ: SL2 @ 200 o/c

LEGEND

S-STANDARD 9 GAUGE LONGITUDINAL & CROSS WIRES
H-HEAVY 5 mm LONGITUDINAL WIRES 9 GAUGE CROSS WIRES
L-LADDER TYPE REINFORCEMENT
T-TRUSS TYPE REINFORCEMENT 2-2 LONGITUDINAL WIRES

- SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR TYING MASONRY TO BACK UP WALLS.
- SHEARWALLS - SEE NOTES ON PLANS FOR ADDITIONAL REINFORCING AND GROUTING OTHER THAN INDICATED ABOVE
- REINFORCE CELLS @ END OF WALLS AT INTERSECTING WALLS & BESIDE OPENINGS.
- GROUT MASONRY SOLID BELOW BEARING BASE PLATES FOR 500mm MIN.
- PROVIDE A CONCRETE BOND BEAM COURSE c/w 1-20M CONT. DOWEL IN HW BLOCKS AT THE TOP OF WALLS, ROOF, AND AT EACH FLOOR LEVEL U/N. GROUT COURSE SOLID. ALL EXTERIOR WALLS ARE TO HAVE CONTINUOUS BOND BEAMS AT ALL FLOOR LEVELS.
- PROVIDE 1-20M CORNER BAR (925 BEND x 925 BEND) AT AT CONCRETE BOND BEAM COURSES @ BLOCK WALL INTERSECTIONS.
- PROVIDE "CLEAN OUTS" AT BOTTOM OF CELLS TO BE GROUTED TO ENSURE PROPER LAP LENGTH AND THAT CELL IS FILLED SOLIDLY. MAXIMUM GROUT LIFT IS 3 meters. GROUT TO HAVE 250mm SLUMP
- EMBEDMENT OF MASONRY DOWELS IN CONCRETE STRUCTURE BELOW CONCRETE BLOCK WALLS TO BE AS FOLLOWS:
  15M DOWELS = 600 mm EMBEDMENT - 1300 Lg. DOWEL
  20M DOWELS = 800 mm EMBEDMENT - 1700 Lg. DOWEL
- BLOCK CONTROL JOINT SPACED AT 9000 mm MAXIMUM VENEER CONTROL JOINT SPACED AT 12000 mm MAXIMUM. COORDINATE LOCATION OF JOINTS WITH ARCHITECT & ENGINEER

16. **LEGEND**

B = BOTTOM
B1 = BOTTOM LOWER LAYER
B2 = BOTTOM UPPER LAYER
BLL = BOTTOM LOWER LEVEL
BBP1 = BEAM (OR OWSJ) BEARING PLATE NUMBER
BP1 = BASE PLATE NUMBER
BUL = BOTTOM UPPER LAYER
C1 = CONCRETE COLUMN NUMBER
CJ = CONCRETE BLOCK WALL CONTROL JOINT
CONT = CONTINUOUS
DP = DEPTH
DWL = DOWELS
EE = EACH END
EF = EACH FACE
EL = ELEVATION
ES = EACH SIDE
EW = EACH WAY
F1 = PAD FOOTING NUMBER
H = HORIZONTAL
(H) = HOOKED BAR
(HR) = HOOKED BAR RIGHT
(HL) = HOOKED BAR LEFT
MP1 = MASONRY PIER NUMBER
O/C = ON CENTER
P1 = PIER NUMBER/PILE NUMBER
SC1 = STEEL COLUMN NUMBER
T = TOP
T1 = TOP UPPER LAYER
T2 = TOP LOWER LAYER
TLL = TOP LOWER LAYER
TUL = TOP UPPER LAYER
U/N = UNLESS NOTED OTHERWISE
V = VERTICAL
WF1 = WALL FOOTING NUMBER

DESIGN & DETAILING CRITERIA FOR SUPPLIERS

1. CURTAIN WALLS
SUPPORTS FOR CURTAIN WALLS ARE TO BE DESIGNED AND DETAILED BY CURTAIN WALL SUPPLIER. SHOP DRAWINGS ARE TO BE SUBMITTED TO DESIGN TEAM FOR REVIEW. SHOP DRAWINGS ARE TO BE STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO. ALL SUPPORTS ARE TO BE INSPECTED DURING CONSTRUCTION BY THE SUPPORT DESIGN ENGINEER.

2. STRUCTURAL STEEL CONNECTIONS
STRUCTURAL STEEL CONNECTIONS ARE TO BE DESIGNED AND DETAILED BY STRUCTURAL STEEL SUPPLIER. SHOP DRAWINGS ARE TO BE SUBMITTED TO DESIGN TEAM FOR REVIEW. SHOP DRAWINGS ARE TO BE STAMPED AND SIGNED FOR CONNECTIONS ONLY BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO. INSPECTION OF WELDS, CONNECTIONS & INSTALLATION IS TO BEUNDERTAKEN BY A 3RD PARTY, CERTIFIED INSPECTION SERVICE.

3. COLD FORMED STEEL STUDS & JOISTS
STEEL STUDS ARE TO BE DESIGNED AND DETAILED BY STEEL STUDS SUPPLIER. SHOP DRAWINGS ARE TO BE SUBMITTED TO DESIGN TEAM FOR REVIEW. SHOP DRAWINGS ARE TO BE STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO. ALL STEEL STUD WORK IS TO BE INSPECTED DURING CONSTRUCTION BY THE STEEL STUD DESIGN ENGINEER.
JOISTS ARE TO BE DESIGNED AND DETAILED BY JOISTS SUPPLIER. SHOP DRAWINGS ARE TO BE SUBMITTED TO DESIGN TEAM FOR REVIEW. SHOP DRAWINGS ARE TO BE STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO. ALL JOIST WORK IS TO BE INSPECTED DURING CONSTRUCTION BY THE JOIST DESIGN ENGINEER.

4. MISCELLANEOUS METALS & STEEL STAIRS
MISC METALS ARE TO BE DESIGNED AND DETAILED BY MISC METALS SUPPLIER. SHOP DRAWINGS ARE TO BE SUBMITTED TO DESIGN TEAM FOR REVIEW. SHOP DRAWINGS ARE TO BE STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO. ALL MISC METAL WORK IS TO BE INSPECTED DURING CONSTRUCTION BY THE MISC METALS DESIGN ENGINEER.
STEEL STAIRS ARE TO BE DESIGNED AND DETAILED BY STEEL STAIRS SUPPLIER. SHOP DRAWINGS ARE TO BE SUBMITTED TO DESIGN TEAM FOR REVIEW. SHOP DRAWINGS ARE TO BE STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO. ALL STEEL STAIR WORK IS TO BE INSPECTED DURING CONSTRUCTION BY THE STEEL STAIRS DESIGN ENGINEER.

5. GUARDS & HANDRAILS
GUARDS & HANDRAILS ARE TO BE DESIGNED AND DETAILED BY STEEL SUPPLIER IN ACCORDANCE WITH THE CURRENT BUILDING CODE REQUIREMENTS. SHOP DRAWINGS ARE TO BE SUBMITTED TO DESIGN TEAM FOR REVIEW. SHOP DRAWINGS ARE TO BE STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO. ALL GUARDS & HANDRAIL WORK IS TO BE INSPECTED DURING CONSTRUCTION BY THE GUARD & HANDRAIL DESIGN ENGINEER. ALL GLASS IN GUARDS IS TO BE IN COMPLIANCE WITH SB-13 OF THE ONTARIO BUILDING CODE. GLASS GUARD DESIGN IS TO MEET THE REQUIREMENTS OF PART 4.1.5.14 OF THE ONTARIO BUILDING CODE. GLASS GUARDS ARE TO COMPLY WITH CAN/CGSB - 12.20 - M89. PROVIDE A CONTINUOUS TOP RAIL ON ALL FREESTANDING GLASS GUARDS.

6. SEISMIC RESTRAINT OF MECH'L EQUIPMENT & PIPING
SEISMIC RESTRAINT OF MECHL EQUIPMENT & PIPING TO BE DETAILED BY MECHL EQUIPMENT & PIPING SUPPLIER OR CONTRACTOR. SHOP DRAWINGS ARE TO BE SUBMITTED TO DESIGN TEAM FOR REVIEW. SHOP DRAWINGS ARE TO BE STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO. ALL SEISMIC RESTRAINT INSTALLATIONS ARE TO BE INSPECTED DURING CONSTRUCTION BY THE SEISMIC RESTRAINT DESIGN ENGINEER.

7. SEISMIC RESTRAINT OF SUSPENDED CEILINGS
SEISMIC RESTRAINT OF SUSPENDED CEILINGS TO BE DETAILED BY CEILING SUPPLIER OR CONTRACTOR. SHOP DRAWINGS ARE TO BE SUBMITTED TO DESIGN TEAM FOR REVIEW. SHOP DRAWINGS ARE TO BE STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO. ALL SEISMIC RESTRAINT INSTALLATIONS ARE TO BE INSPECTED DURING CONSTRUCTION BY THE SEISMIC RESTRAINT DESIGN ENGINEER.

8. CONCRETE BLOCK MASONRY WALLS-TEMPORARY BRACING
ALL LOAD BEARING CONCRETE BLOCK MASONRY WALLS ARE TO BE LATERALLY BRACED DURING CONSTRUCTION UNTIL STRUCTURE AND DIAPHRAGM IS CONSTRUCTED ON WALL. ALL NON LOAD BEARING CONCRETE BLOCK MASONRY WALLS ARE TO BE LATERALLY BRACED DURING CONSTRUCTION UNTIL PERMANENT LATERAL BRACING IS INSTALLED AS PER TYPICAL DETAILS AND OR SECTIONS.

EACH TRADE SHALL SUBMIT TEMPORARY BRACING PLANS AND SAFE ERECTION PROCEDURES NECESSARY FOR THE COMPLETION OF THEIR WORK. THESE PLANS ARE TO BE COORDINATED WITH OTHER TRADES ON SITE TO ENSURE NO OVERLAP OF INTERFERENCE, AND SITE WORK IS NOT INTERRUPTED. DRAWINGS AND PROCEDURES ARE TO BE STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO, AND PROVIDED FOR THE DESIGN TEAM FOR REVIEW. ALL TEMPORARY BRACING IS TO BE REVIEWED ON SITE BY THE BRACING DESIGN ENGINEER, AND REPORTS PROVIDED TO THE DESIGN TEAM. ALL BRACING REMOVAL IS ONLY TO OCCUR AFTER RECEIVING WRITTEN PERMISSION BY THE BRACING ENGINEER CONFIRMING THE FINAL DESIGN CONDITION HAS BEEN MET AND IS STABLE. SIGNOFF LETTERS ARE TO BE PROVIDED TO THE DESIGN TEAM. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ENSURING COORDINATION OF BRACING AND TEMPORARY WORKS MEASURES BY SUB TRADES.

9. PRECAST PANELS
SUPPORTS FOR PRECAST PANELS ARE TO BE DESIGNED AND DETAILED BY PRECAST PANEL SUPPLIER. SHOP DRAWINGS ARE TO BE SUBMITTED TO DESIGN TEAM FOR REVIEW. SHOP DRAWINGS ARE TO BE STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO. ALL SUPPORTS ARE TO BE INSPECTED DURING CONSTRUCTION BY THE SUPPORT DESIGN ENGINEER.

10. PRECAST CONCRETE SLABS
PRECAST CONCRETE SLABS ARE TO BE DESIGNED AND DETAILED BY PRECAST CONCRETE SLAB SUPPLIER. SHOP DRAWINGS ARE TO BE SUBMITTED TO ESIGN TEAM FOR REVIEW. SHOP DRAWINGS ARE TO BE STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO.

11. WINDOW WASHING ANCHORS
WINDOW WASHING ANCHORS ARE TO BE DESIGNED AND DETAILED BY ANCHOR SUPPLIER TO MEET THE REQUIREMENTS OF CLAUSE 4.4.4.1 THE OBC, AND CAN/CSA-Z91. SHOP DRAWINGS ARE TO BE SUBMITTED TO DESIGN TEAM FOR REVIEW. SHOP DRAWINGS ARE TO BE STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO.ALL WORK IS TO BE INSPECTED DURING CONSTRUCTION BY THE ANCHOR ENGINEER.

12. TEMPORARY SHORING FOR DEMOLITION AND/OR CONSTRUCTION)
TEMPORARY SHORING FOR THE PURPOSES OF DEMOLITION AND/OR CONSTRUCTION IS TO BE DESIGNED & DETAILED BY A PROFESSIONAL ENGINEER LICENSED IN ONTARIO. SHOP DRAWINGS ARE TO BE SUBMITTED TO THE DESIGN TEAM FOR REVIEW. TEMPORARY SHORING TO BE REVIEWED BY SHORING ENGINEER PRIOR TO DEMOLITION AND/OR CONTRUCTION.

13. NOTICE TO FIRE PROTECTION CONTRACTORS
1. THE STRUCTURE HAS BEEN DESIGNED TO THE 2012 OBC AND HAS NOT BEEN DESIGNED WITH LOAD RESTRICTIONS THAT ARE DESCRIBED IN THE BXUVC GUIDE.
2. ASSUME THAT THE FLOOR STRUCTURE IS NOT "RESTRAINED" WITH RESPECT TO THERMAL EXPANSION UNLESS THIS IS VERIFIED BY A PROFESSIONAL ENGINEER LICENSED IN ONTARIO AND SEALED ALCULATIONS ARE SUBMITTED FOR REVIEW.
3. FIRE PROTECTION CONTRACTOR IS TO REVIEW ALL MEMBER SIZES SHOWN ON THE STRUCTURAL DRAWINGS TO ENSURE FIRE RATING APPLICATION IS COMPATIBLE AND MEETS THE FIRE RATING REQUIREMENTS PROVIDED BY THE ARCHITECT.
4. REFER TO OTHER NOTES ON THE PLANS RELATING TO COMPATIBILITYOF PRIMERS AND FIRE PROTECTION MATERIALS AND STRUCTURAL STEEL/OPEN WEB STEEL JOIST DESIGN AND COORDINATION.

NOTE:
INSPECTION REPORTS CREATED AS A RESULT OF THE ABOVE NOTED WORK MUST BE SUBMITTED TO THE CONSTRUCTION MANAGER. CONSTRUCTION MANAGER IS TO PROVIDE COPIES TO THE CONSULTANTS.

GUIDELINE FOR CONDUIT / PIPING CAST-IN AND PENETRATION THROUGH SUSPENDED REINFORCED CONCRETE SLABS

PLACEMENT DRAWINGS:

CONTRACTOR IS TO PROVIDE PLAN DRAWINGS, TO SCALE, WHICH INDICATE THE SIZE OF CONDUIT / PIPING, PENETRATIONS AND THEIR LOCATIONS. SUBMIT TO THE STRUCTURAL ENGINEER FOR REVIEW AND ALLOW SUFFICIENT TIME FOR REVIEW AND COMMENT PRIOR TO COMMENCEMENT OF WORK.

GENERAL GUIDELINES FOR CONDUIT / PIPING RUNS:

1. CONDUIT / PIPING RUNS SHALL BE PLANNED AND ORDERLY
2. SPACE RUNS 6 CONDUIT / PIPING DIAMETERS APART.
3. AVOID CROSSING OF CONDUIT / PIPING. WHERE AVOIDANCE IS NOT POSSIBLE, RU

SEISMIC SYSTEM/LOADING DATA:

MAIN BUILDING

SEISMIC FORCE RESISTING SYSTEM (SFRS)

SFRS: SYSTEM & CONNECTIONS: (2024 OBC CLAUSE 4.1.8.9/4.1.8.10)
LATERAL LOAD RESISTING SYSTEM: CONVENTIONAL CONSTRUCTION (CONCRETE SHEARWALLS)
R_d = 1.5
R_o = 1.3
CSA STANDARD: CAN/CSA 23.3-19
APPLICABLE CLAUSE(S): 21.6.3

SFRS: DIAPHRAGMS & CONNECTIONS: (2024 OBC CLAUSE 4.1.8.15)
CSA STANDARD: CAN/CSA A23.3-19
APPLICABLE CLAUSE(S): 21.9
CONFIRMATION: DIAPHRAGM DESIGNED TO LATER LOAD CAPACITY OF SFRS

SFRS: SYSTEM FOUNDATIONS: (2024 OBC CLAUSE 4.1.8.16 & CSA A23.3-19 CLAUSE 21.10)
CSA STANDARD: CAN/CSA A23.3-19 X RESTRAINED AGAINST ROTATION ☐ NON CAPACITY PROTECTED
APPLICABLE CLAUSE(S): 21.10.2 ☐ CAPACITY PROTECTED ☐ MAXIMUM OVERTURNING RESISTANCE
CONFIRMATION: FOUNDATIONS HAVE BEEN DESIGNED TO RESIST THE LATERAL LOAD CAPACITY OF THE SFRS INCLUDING ALL APPLICABLE AMPLIFICATION FACTORS

SEISMIC IMPORTANCE FACTOR: (2024 OBC CLAUSE 4.1.8.5)
I_E = 1.0

SITE INFOMATION: ADDRESS; 145 LORETTA AVE.N,OTTAWA,ON

SITE DESIGNATION: THE NOTED SITE DESIGNATION FOR SEISMIC SITE RESPONSE AND SHEAR WAVE VELOCITY PARAMETERS INDICATED ARE AS REPORTED IN THE GEOTECHNICAL REPORT # PGSS17-1 REV.3 BY PATTERSON GROUP
REFER TO THE NOTED GEOTECHNICAL REPORT FOR ADDITNL INFORMATION.
CONFIRMATION: LOCAL SOILS NOT SUSCEPTIBLE TO LIQUEFACTION
V_{S30} = 2416; X_A X X_{AB}☐ X_A ☐ X_B ☐ X_C ☐ X_D ☐ X_E ☐ X_F ☐

$PGA(X_{SITE})$: 0.299
$PGV(X_{SITE})$: 0.138

RESPONSE SPECTRUM DATA:

5% DAMPED SPECTRAL RESPONSE ACCELERATION VALUES: (2020 NATIONAL BUILDING CODE OF CANADA SEISMIC HAZARD TOOL)

2%/50 YRS PROBABILITY OF EXCEEDANCE:
S_a (0.2)(X_1) = 0.339
S_a (0.5)(X_2) = 0.175
S_a (1.0)(X_3) = 0.0938
S_a (2.0)(X_4) = 0.0446
S_a (5.0)(X_5) = 0.0126
S_a (10.0)(X_6) = 0.0048

DESIGN SPECTRAL RESPONSE ACCELERATION VALUES (DSRAV): (2024 OBC TABLE 4.1.8.4C.)

2%/50 YRS PROBABILITY OF EXCEEDANCE:

X CLASS X_{SITE}:
S (0.0) = 0.339
S (0.2) = 0.339
S (0.5) = 0.175
S (1.0) = 0.0938
S (2.0) = 0.0446
S (5.0) = 0.0126
S (10.0) = 0.0048

SIESMIC CATEGORY:(2024 OBC TABLE 4.1.8.5.-B):

$I_E S_a(0.2)$ = 0.339 } SC1 ☐ SC2 X SC3 ☐ SC4 ☐
$I_E S_a(1.0)$ = 0.0938 }

PERIOD DATA:

STATIC PERIOD: (2024 OBC CLAUSE 4.1.8.11(3))
hn = 114m
T_a (STATIC)$_{NS}$ = 1.74 sec
T_a (STATIC)$_{EW}$ = 1.74 sec

MODAL PERIOD: (2024 OBC CLAUSE 4.1.8.11(3) AND 4.1.8.3(8))

T_a (MODAL)$_{NS}$ = 5.0 sec
T_a (MODAL)$_{EW}$ = 5.7 sec
T_a MAX NS = 3.48 , T_a MAX EW = 3.48

DESIGN PERIODS/MODE & MOMENT FACTORS: (2024 NBCC CLAUSE (4.1.8.11(6))

S(0.2) / S(5.0) = 26.9

T_a (DESIGN)$_{NS}$ = 3.48 sec M_v = 2.2 J = 0.42
T_a (DESIGN)$_{EW}$ = 3.48 sec M_v = 2.2 J = 0.42

DESIGN FUNDAMENTAL PERIOD BASED DSRAV:

$S(T_a)_{NS}$ = 0.029
$S(T_a)_{EW}$ = 0.029

NOTE; LINEAR INERPOLATION USED TO DETERMINE $S(T_a)_{NS/EW}$

IRREGULARITY REVIEW (2024 OBC CLAUSE 4.1.8.6)

1. VERTICAL STIFFNESS: ☐ YES X NO
2. WEIGHT: ☐ YES X NO
3. VERTICAL GEOMETRIC: ☐ YES X NO
4. IN PLANE DISCONTINUITY: X YES ☐ NO
5. OUT OF PLANE: X YES ☐ NO
6. WEAK STOREY: ☐ YES X NO
7. TORSIONAL: X YES ☐ NO
   B_{NS} = 1.1
   B_{EW} = 1.15
8. NON-ORTHAGONAL: ☐ YES X NO
9. GRAVITY INDUCED LATERAL DEMAND: X YES ☐ NO
10. SLOPED COLUMN IRREGULARITY: ☐ YES X NO

CONCLUSION: BUILDING IS ☐ REGULAR X IRREGULAR
DYNAMIC ANALYSIS: ☐ REQUIRED X NOT REQUIRED
DYNAMIC PROCEDURE METHOD: X MODAL RESPONSE SPECTRUM ☐ NUMERICAL INTEGRATION TIME HISTORY ☐ N/A

TORSIONAL ECCENTRICITY:
☐ ± 0.10 Dnx (4.1.8.11(10a), B < 1.7 EQUIV. STATIC FORCE PROCEDURE)
☐ ± 0.10 Dnx (4.1.8.12(4a), B > 1.7)
X ± 0.05 Dnx (4.1.8.12(4b), B < 1.7, 3-D DYNAMIC ANALYSIS)

DEFLECTION & STRUCTURAL SEPARATION:

MAX. INVERSTOREY DRIFT, Δ_{MAX} = ?
X THE NEW AND EXISTING STRUCTURES HAVE BEEN SEPARATED IN ACCORDANCE WITH 4.1.8.14(1) OF THE 2024 OBC
☐ SEPARATION; $\sqrt{\Sigma\Delta_1^2 + \Sigma\Delta_2^2}$ = ?
X N/A

STATIC MAXIMUM/MINIMUM VALUES:
NORTH-SOUTH: (↕)

BASE SHEARS/MOMENTS: (2024 OBC CLAUSE 4.1.8.11)

V_{static} = $S(T_a)M_v I_E W/(R_d R_o)$ = 9600 kN W=295000 kN
V_{min} = $S(4.0)M_v I_E W/(R_d R_o)$ = 7800 kN W=295000 kN
V_{max} = 2/3 $S(0.2)I_E W/(R_d R_o)$ = 34200 kN W=295000 kN

EAST-WEST:(↔)

BASE SHEARS/MOMENTS: (2024 OBC CLAUSE 4.1.8.11)

V_{static} = $S(T_a)M_v I_E W/(R_d R_o)$ = 9600 kN W=295000 kN
V_{min} = $S(4.0)M_v I_E W/(R_d R_o)$ = 7800 kN W=295000 kN
V_{max} = 2/3 $S(0.2)I_E W/(R_d R_o)$ = 34200 kN W=295000 kN

SEISMIC LOADS

STATIC LOADS	DYNAMIC	DESIGN LOADS
NORTH-SOUTH: (↕)		
V_d = 6700 kN W = 295000 kN M_d = 700000 kNm	V_s = 9000 kN V_{dyn} = 9000 kN $\frac{2\,S(0.2)}{3\,S(T_a)}$ = XXX ≤ 1.0 ☐ (OBC 4.1.8.12(5)) OR $\frac{S(0.5)}{S(T_a)}$ = XXX ≤ 1.0 ☐ (OBC 4.1.8.12(6)) V_d = 3200 kN (OBC 4.1.8.12(7)) $V_{d\ final}$ = 5400 kN $V_{d\ final}$ = 0.8V_{st} X (OBC 4.1.8.12(8)) 0.8V_{st} < $V_{d\ final}$ ≤ 1.0V_{st} ☐ $V_{d\ final}$ = 1.0V_{st} ☐ (OBC 4.1.8.12(9)) $V_{d\ final}$ ≥ 1.0V_{st} ☐	V_d = 5400 kN M_d = 160000 kNm
EAST-WEST: (↔)		
V_d = 6700 kN W = 295000 kN M_d = 720000 kNm	V_s = 6400 kN V_{dyn} = 6400 kN $\frac{2\,S(0.2)}{3\,S(T_a)}$ = XXX ≤ 1.0 ☐ (OBC 4.1.8.12(5)) OR $\frac{S(0.5)}{S(T_a)}$ = XXX ≤ 1.0 ☐ (OBC 4.1.8.12(6)) V_d = 2300 kN (OBC 4.1.8.12(7)) $V_{d\ final}$ = 5400 kN $V_{d\ final}$ = 0.8V_{st} X (OBC 4.1.8.12(8)) 0.8V_{st} < $V_{d\ final}$ ≤ 1.0V_{st} ☐ $V_{d\ final}$ = 1.0V_{st} ☐ (OBC 4.1.8.12(9)) $V_{d\ final}$ ≥ 1.0V_{st} ☐	V_d = 5400 kN M_d = 190000 kNm

NOTES:

1) DYNAMIC LOAD SCALING FACTOR

S.F. = $\frac{g \cdot I_E}{R_d R_o}$ = 0.513 g

2) DESIGN LOAD SHEAR VALUES ARE BASED ON THE EVALUATION OF V_{st} AND V_d IN ACCORDANCE WITH 4.1.8.12 (5),(6),(7),(8), AND (9) OF THE 2024 OBC LOADS INDICATED SHOW THE DESIGN BASE SHEAR AND CORRESPONDING OVERTURNING MOMENT.

WIND

(2024 OBC 4.1.7)
P = I_w q C_e C_T C_g C_p

q = 0.41 kPa

$I_{w(ULS)}$ = 1.0 $I_{w\ (SLS)}$ = 0.75

C_e (WINDWARD) = N/A
C_e (LEEWARD) = N/A
C_T (TERRAIN TYPE) = N/A
C_g (WINDWARD) = N/A
C_g (LEEWARD) = N/A
C_p = N/A

DYNAMIC SENSITIVITY

h = 114m > 60m ☐ (OBC 4.1.7.2.(2)(b))
> 4w ☐ (OBC 4.1.7.2.(2)(c))

f_{N} = 0.185 ≤ 1Hz ☐ (OBC 4.1.7.2.(2)(a))

0.25Hz < f_N < 1.00 Hz ☐
> 0.25 Hz X

	N.S (↕)	E.W(↔)	UNITS
fn	0.23	0.181	Hz
VBASE	2980	4260	KN
MBASE	2110	3130	KN.m

CONCLUSION; BUILDING IS: ☐ NOT DYNAMICALLY SENSITIVE
☐ DYNAMICALLY SENSITITVE
X VERY DYNAMICALLY SNESITIVE

PROCEDURE; STATIC ☐ DYNAMIC ☐ WIND TUNNEL X

NORTH FOR THE PURPOSES OF THIS DATA IS AT THE TOP SIDE OF ALL PLANS IN THIS SET OF DRAWINGS

FOR THE PURRPOSE OF DYNAMIE SENSITIVITY, f_N REFERS TO THE LOWEST NATURAL FREQUENCY IN EITHER DIRETION

WIND UPLIFT (2024 OBC 4.1.7)

P = I_w q C_g C_t A_t I_w q C_p C_g C_e

P (UPLIFT) = 2.02 kPa

P (NET) = 1.4 W-0.9 D

DESIGN SNOW LOAD PARAMETERS
OTTAWA, ONTARIO, CANADA
S = I_s [S_s(C_b C_w C_s C_a)+S_r]
S_s = 2.4 kPa
S_r = 0.4 kPa
I_s = 1.0 FOR NORMAL
S = 1.0 [2.4(0.8x1.0x1.0x1.0)+0.4]
S = 2.32 kPa

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structeurs

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-14
3	ISSUE FOR 66% WD & CLIENT BUDGETING	25-03-28
2	ISSUE FOR EXCAVATION TENDER	24-10-30
1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

I CERTIFY THAT I AM A QUALIFIED PERSON WITHIN THE MEANING OF THE ONTARIO BUILDING CODE
25-06-09
B.J.ARMSTRONG
100068
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

Enter address here

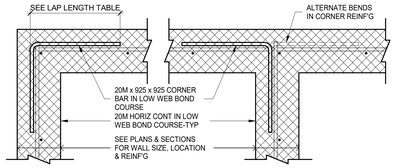
drawing title | titre du dessin

SEISMIC DATA

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/28/24**

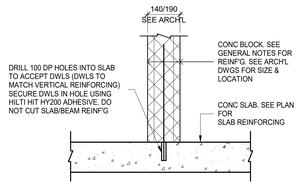
drawing number | numéro du dessin

S02

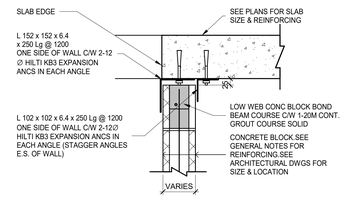


PLAN DETAIL-BLOCK WALL INTERSECTION REINFORCEMENT

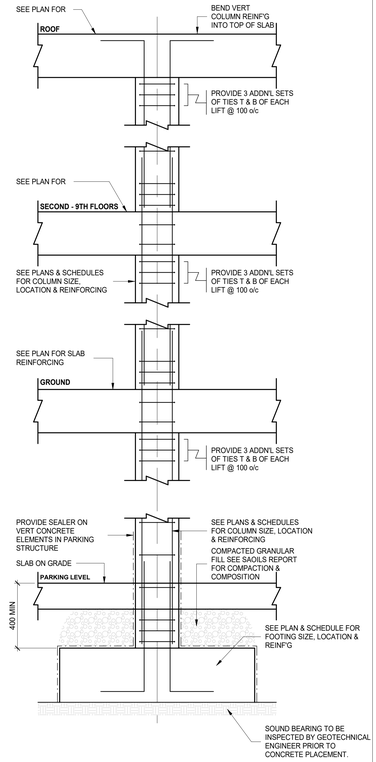
NEW CONCRETE CONCRETE WALLS



TYPICAL DETAIL AT NON-LOAD BEARING BLOCK WALLS ON SUSPENDED STRUCTURAL SLAB



MASONRY WALL LATERAL SUPPORT DETAIL AT CONCRETE SLAB EDGE OR TRANSFORMER ROOM



TYPICAL COLUMN DETAIL

SLAB REINFORCING NOTATION DETAILS

SLAB REINFORCINGNOTES

1. REINFORCING NOTATION:

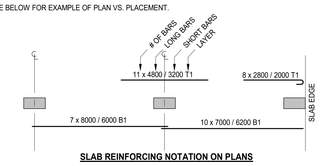
   # OF BARS - BAR SIZE **X** LONG/SHORT LAYER

   # OF BARS = TOTAL QUANTITY OF BARS (LONG + SHORT) – 50% MIN LONG BARS
   BAR SIZE = 15M U/N
   LONG = LENGTH OF LONG BAR (DOES NOT INCLUDE BENDS OR HOOKS)
   SHORT = LENGTH OF SHORT BAR (DOES NOT INCLUDE BENDS OR HOOKS)
   LAYER = PLACEMENT LAYER

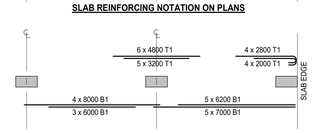
2. BAR PLACING ORDER

   T1 = TOP UPPER LAYER
   T2 = TOP LOWER LAYER
   B2 = BOTTOM UPPER LAYER
   B1 = BOTTOM LOWER LAYER
   B.I.3 = BOTTOM INTEGRITY BOT. UPPER UPPER LAYER
   B.I.2 = BOTTOM INTEGRITY BOT. UPPER LAYER
   B.I.1 = BOTTOM INTEGRITY BOT. LOWER LAYER

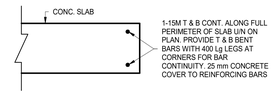
3. ALL REINFORCING BARS SHOWN ON PLAN TO **15M** UNLESS NOTED OTHERWISE.
4. B.I = BOTTOM INTEGRITY REINFORCING. SPACE @ 150 o/c.
5. CONCRETE COVER FOR SLABS U/N — 25 mm TOP, 25 mm BOT.
   SEE ADDITIONAL PARKING GARAGE NOTES FOR CONCRETE COVER REQUIREMENTS AT PARKING LEVELS. REFER TO ADDITIONAL NOTES FOR PARKING LEVELS IN GENERAL NOTES.
6. A MINIMUM OF 50% OF ANY REINFORCEMENT SET (LONG + SHORT) ARE TO BE LONG BARS
   a. ALL BARS NOTED WITH A SINGLE LENGTH ARE TO BE PLACED AS NOTED.
7. REINFORCEMENT IS TO BE PLACED AS FOLLOW U/N:
   a. BOTTOM REINFORCEMENT IS TO BE PLACED ON CENTRE OF SPAN.
   b. TOP REINFORCEMENT IS TO BE PLACED ON CENTRE OVER THE SUPPORT.
   c. SHORT BARS TO BE CENTRED ON THEIR LONG BARS.
   d. AT SLAB EDGES, BARS ARE TO BE PLACED FROM EDGE.
8. WHERE REINFORCING LENGTHS EXCEED MAXIMUM AVAILABLE LENGTH, SPLICE REINFORCING BARS AS NOTED ON REINFORCING BAR LAP LENGTH TABLE.
9. ONLY LONG BARS HAVE BEEN SHOWN GRAPHICALLY, SHORT BARS ARE STILL REQUIRED.
10. SEE BELOW FOR EXAMPLE OF PLAN VS. PLACEMENT.



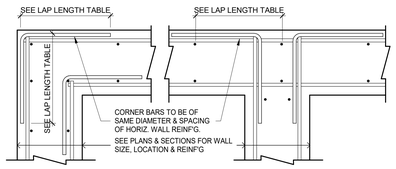
SLAB REINFORCING NOTATION ON PLANS



SLAB REINFORCING PLACEMENT

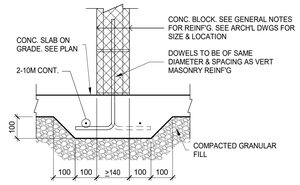


TYPICAL SLAB PERIMETER REINFORCEMENT DETAIL



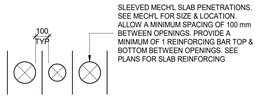
TYPICAL WALL INTERSECTION REINFORCEMENT

CONCRETE WALLS WITH 2 SHEETS OF REINFORCING (WALL THICKNESS GREATER THAN 215 mm) NOT APPLICABLE TO SHEARWALLS. SEE SHEARWALL ELEVATION DRAWINGS.

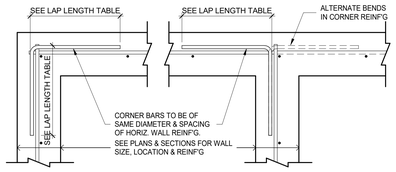


TYPICAL SLAB ON GRADE THICKENING DETAIL

BELOW NON LOAD BEARING CONC BLOCK MASONRY

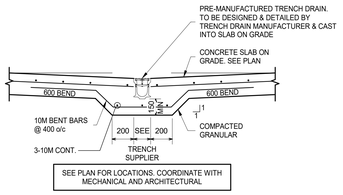


TYPICAL PLAN DETAIL-MECH'L PENETRATIONS THRU SLAB



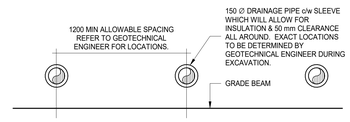
TYPICAL WALL INTERSECTION REINFORCEMENT

CONCRETE WALLS WITH 1 SHEET OF REINFORCING (WALL THICKNESS LESS THAN 215 mm) NOT APPLICABLE TO SHEARWALLS. SEE SHEARWALL ELEVATION DRAWINGS.



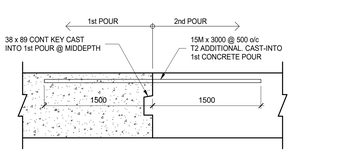
TYPICAL SLAB ON GRADE THICKENING DETAIL

BELOW PREFABRICATED TRENCH



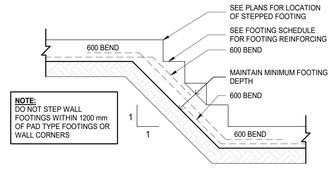
DETAIL-FOUNDATION AT UNDERSLAB DRAINAGE

SEE GEOTECHNICAL ENGINEER FOR LOCATIONS

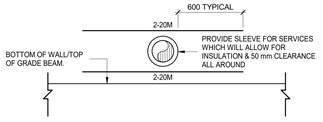


TYPICAL DETAIL AT SUSPENDED SLAB CONSTRUCTION JOINT

ALL REINFORCING THAT CROSSES THE CONSTRUCTION JOINT MUST BE CAST INTO THE 1st SLAB POUR. DO NOT CUT, MOVE OR DISPLACE SLAB REINF'G AT JOINT. SLAB REINFORCING IS TO BE PLACED ON FORMWORK AS IF THERE WAS NO CONSTRUCTION JOINT. LOCATION OF CONSTRUCTION JOINTS ARE TO BE APPROVED BY CUNLIFFE & ASSOCIATES.

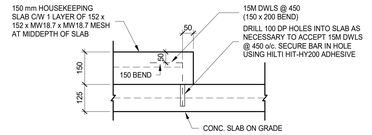


TYPICAL STEPPED WALL FOOTING DETAIL



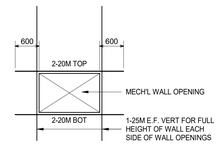
DETAIL-FOUNDATION AT SAN & STORM ENTRY

SEE PLANS AND MECHANICAL FOR LOCATION



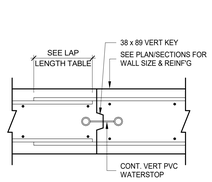
TYPICAL HOUSEKEEPING PAD DETAIL ON SLAB ON GRADE

COORDINATE LOCATION & DIMENSIONS WITH MECHANICAL DRAWINGS



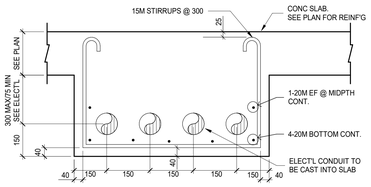
TYPICAL DETAIL AT CONCRETE WALL OPENINGS

APPLIES TO WALL OPENINGS THRU FOUNDATION WALL BELOW LEVEL 1 LOCATED ON GRID PF BETWEEN GRIDS P5 & P11



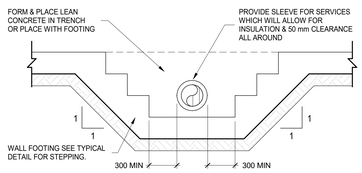
TYPICAL WALL CONSTRUCTION JOINT DETAIL

MAXIMUM SPACING OF CONSTRUCTION JOINTS TO BE 20 METERS



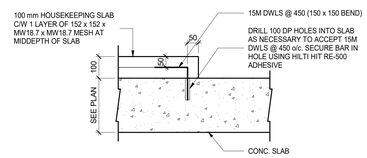
TYPICAL DETAIL - CAST-IN HYDRO DUCT BANK

SEE ELECTRICAL DRAWING FOR EXACT LOCATION &EXTENT
SEE DWG S107 FOR APPROXIMATE LOCATION & EXTENT



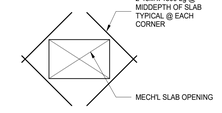
DETAIL-FOUNDATION AT UNDERGROUND SERVICE ENTRY

SEE PLANS AND MECHANICAL FOR LOCATION

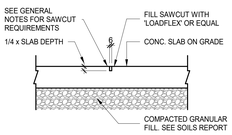


TYPICAL HOUSEKEEPING PAD DETAIL ON SUSPENDED SLAB

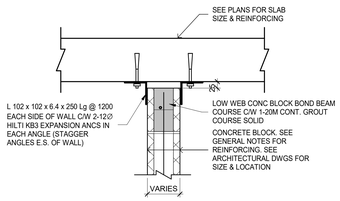
COORDINATE LOCATION & DIMENSIONS WITH MECHANICAL DRAWINGS



TYPICAL DETAIL AT CONCRETE SLAB OPENING U/N



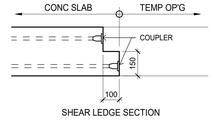
TYPICAL SAWCUT IN SLAB ON GRADE DETAIL



MASONRY WALL LATERAL SUPPORT DETAIL AT CONCRETE SLAB

NOTE: TEMPORARY OPENING

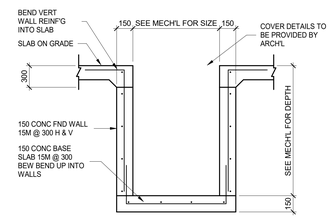
1. PROVIDE 100 mm WIDE SHEAR LEDGE AT 150 mm ABOVE BOTTOM OF SLAB CONT. ALL AROUND PERIMETER OF SLAB OPENING.
2. SEE REINFORCING PLANS FOR ADDITIONAL INFORMATION.



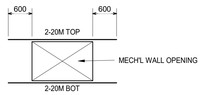
SHEAR LEDGE SECTION

TYP SECTION AT TEMPORARY CRANE & MATERIAL HOIST OPENINGS

REFER TO STRUCTURAL CONCRETE LAYOUT PLANS FOR LOCATION



TYPICAL PIT DETAIL



TYPICAL DETAIL AT CONCRETE WALL OPENING U/N

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet / project north

nord reel / true north

no	revisions	date
5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-14
3	ISSUE FOR 66% WD & CLIENT BUDGETING	25-03-28
2	ISSUE FOR EXCAVATION TENDER	24-10-30
1	ISSUE FOR REVIEW	24-09-13

stamp | timbre

I CERTIFY THAT THIS DESIGN IS IN ACCORDANCE WITH THE ONTARIO BUILDING CODE
25-06-09
B.J.ARMSTRONG
100068
PROFESSIONAL ENGINEER
PROVINCE OF ONTARIO

architect | architecte

linebox STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

Enter address here

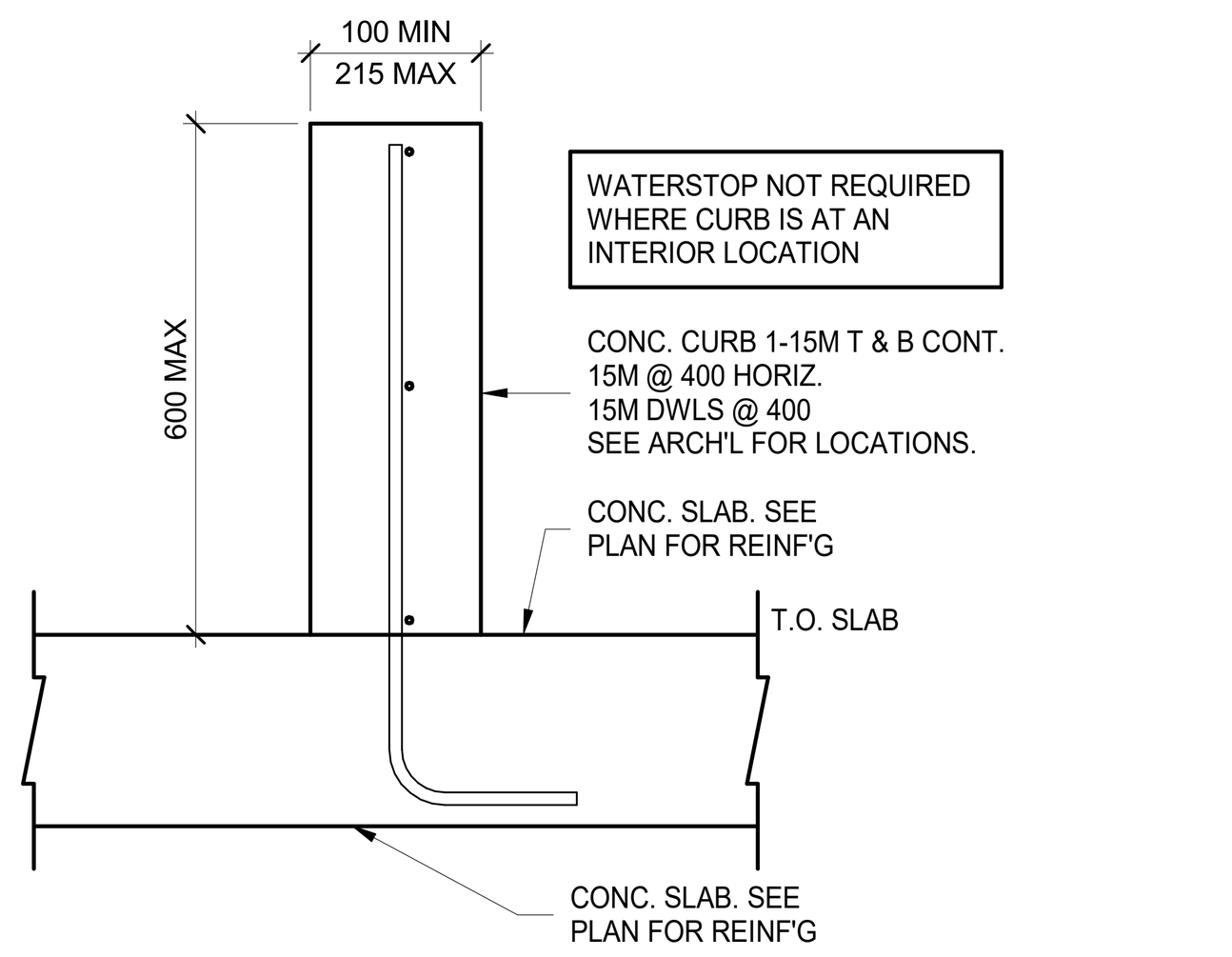
drawing title | titre du dessin

TYPICAL DETAILS

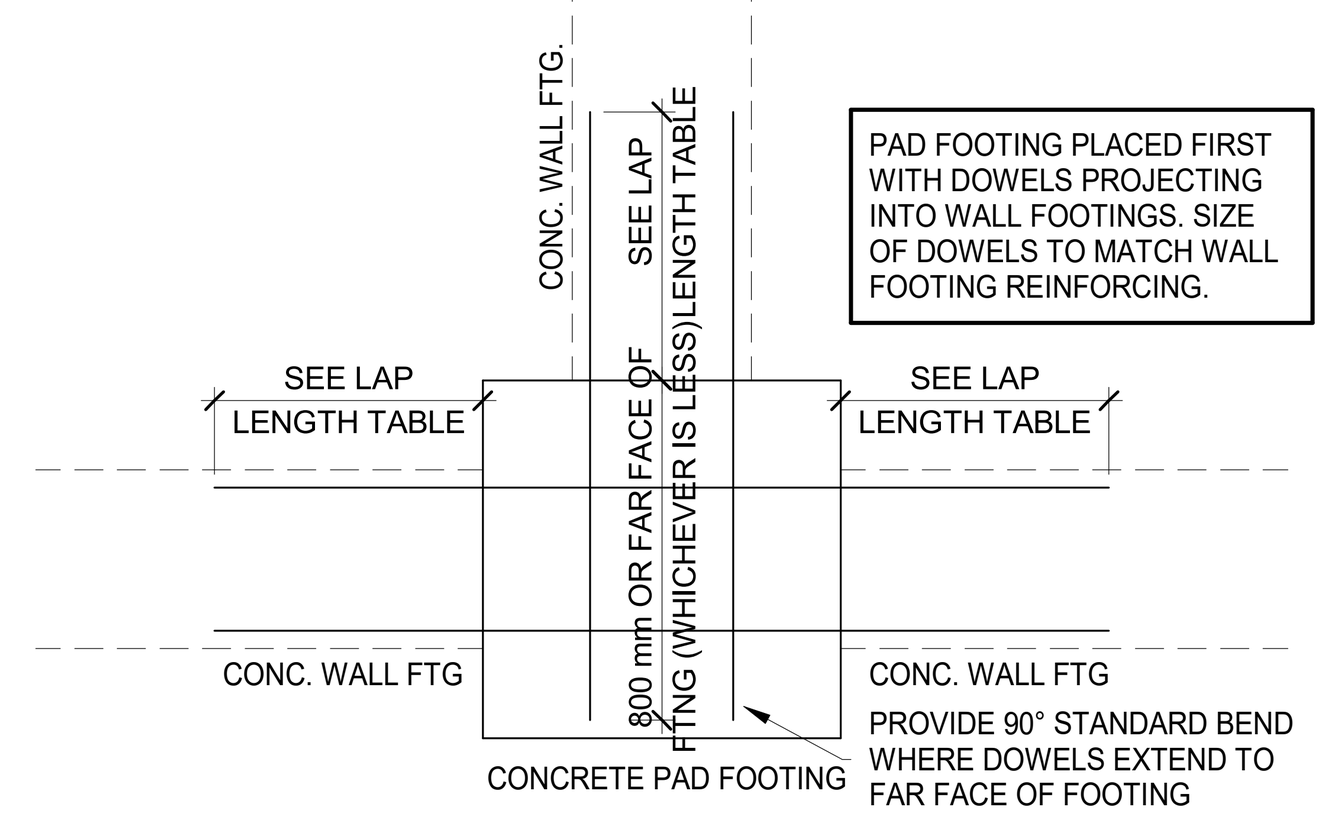
project number | numero du projet	21-045
drawn | dessiné	PMD/DG
checked | verifié	BA
scale | échelle	1 : 100
date | date	05/28/24

drawing number | numéro du dessin

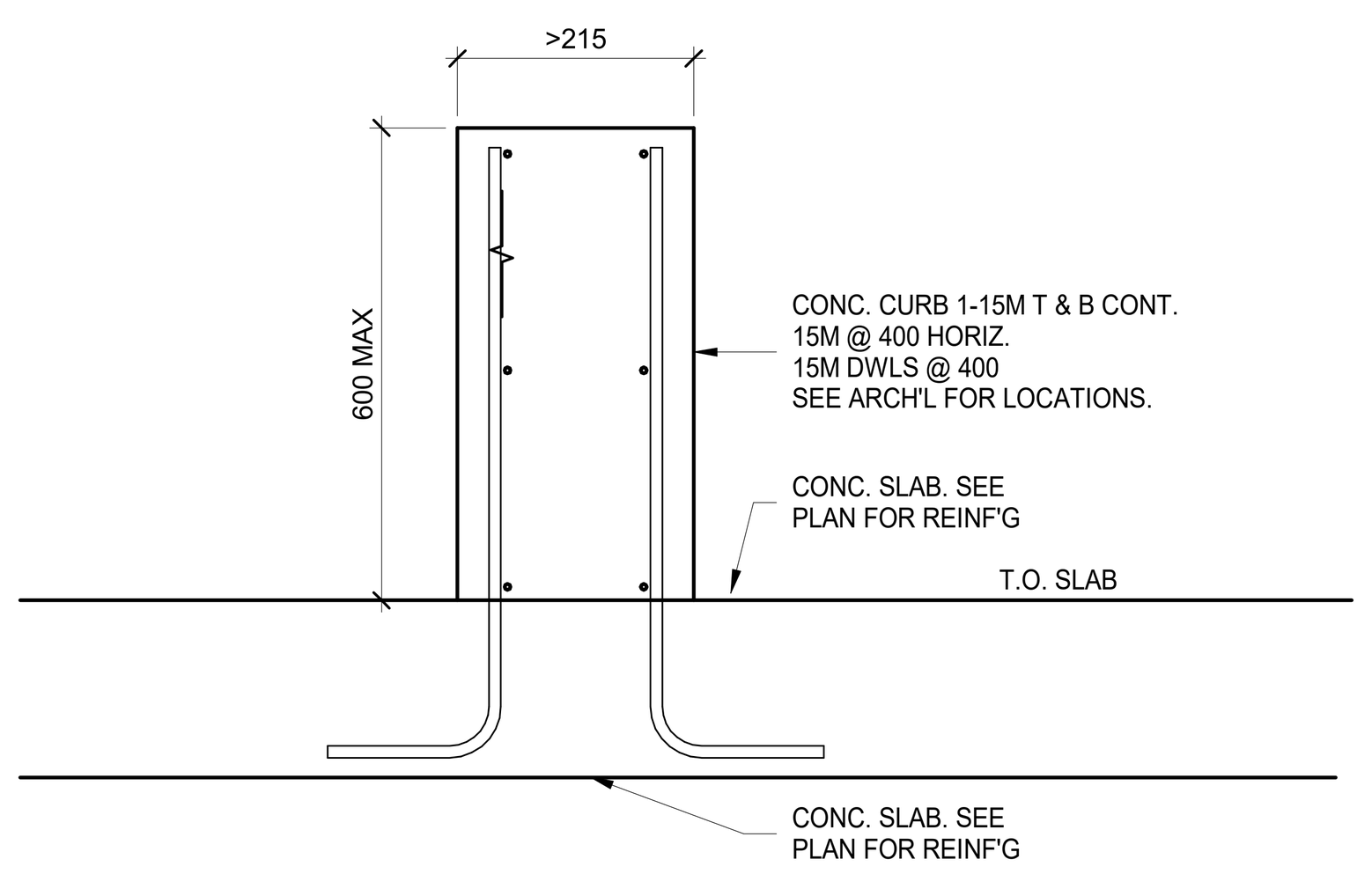
S03



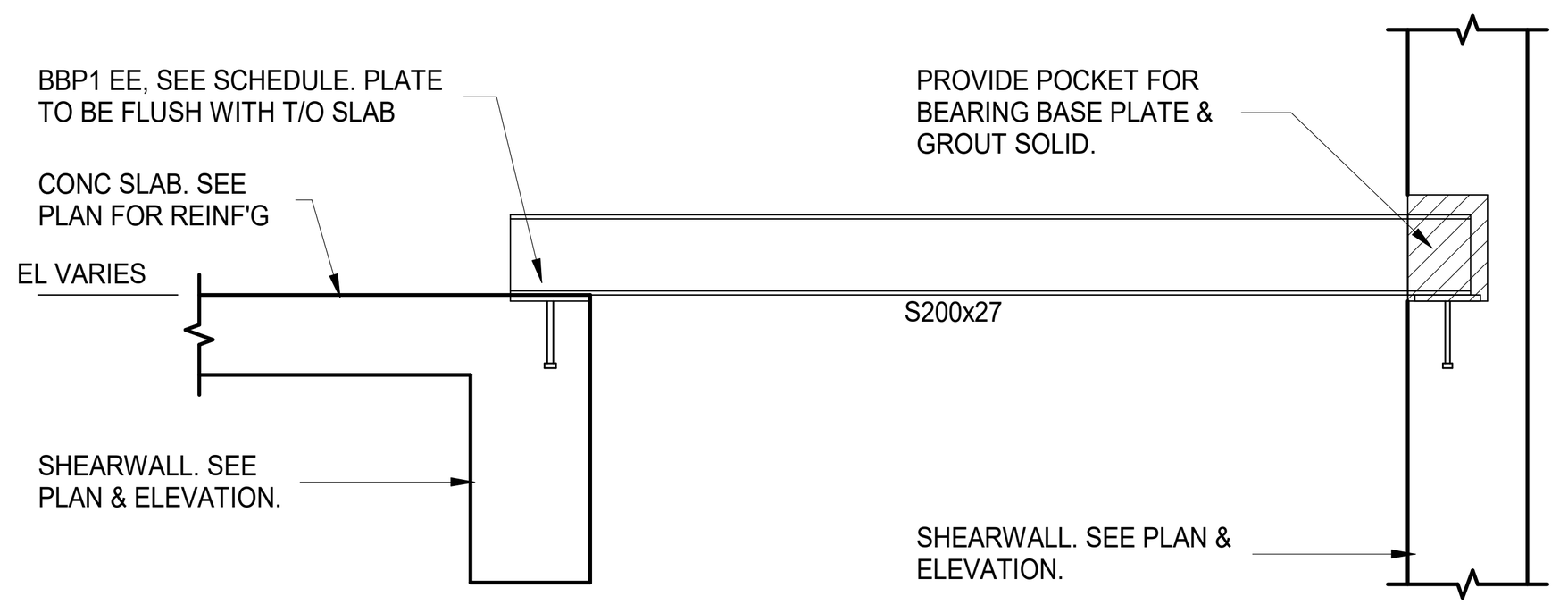
TYPICAL CONC CURB DETAIL - A
SEE PLANS FOR LOCATIONS



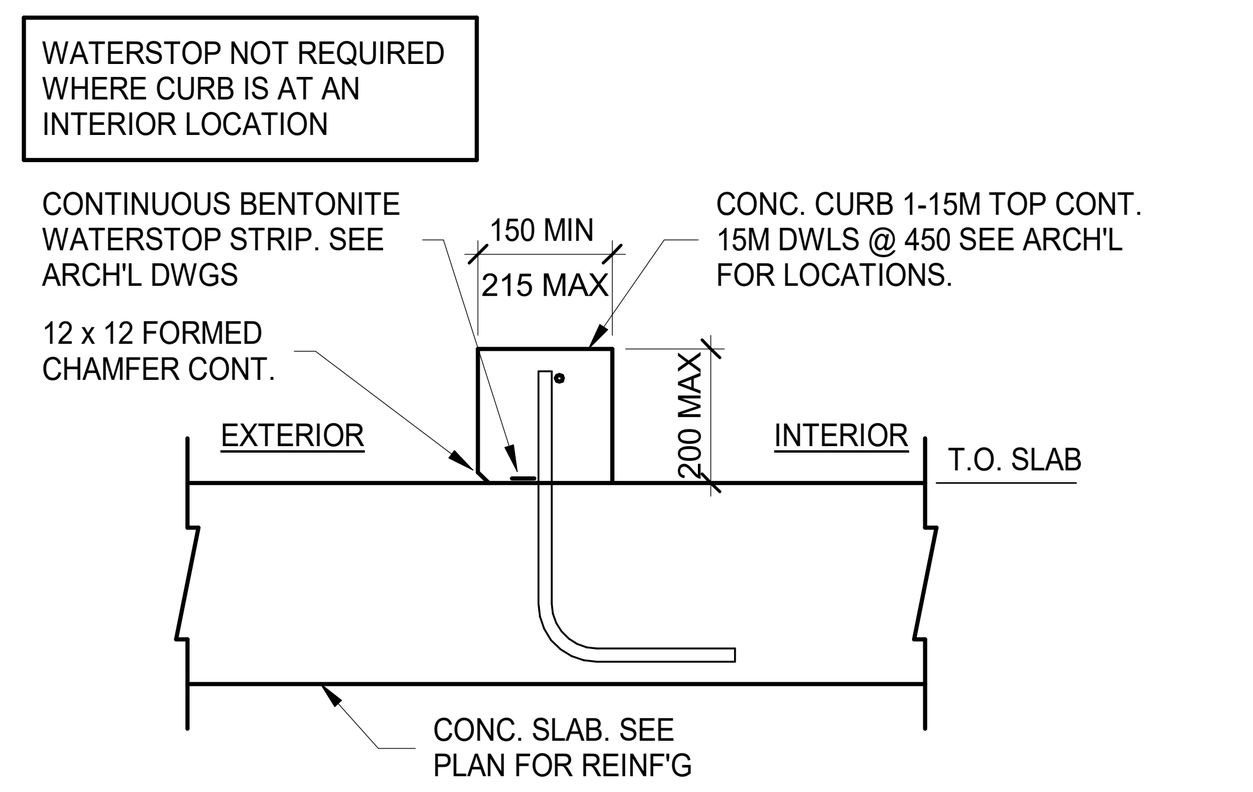
PLAN DETAIL AT INTERSECTION OF PAD FOOTING & WALL FOOTINGS



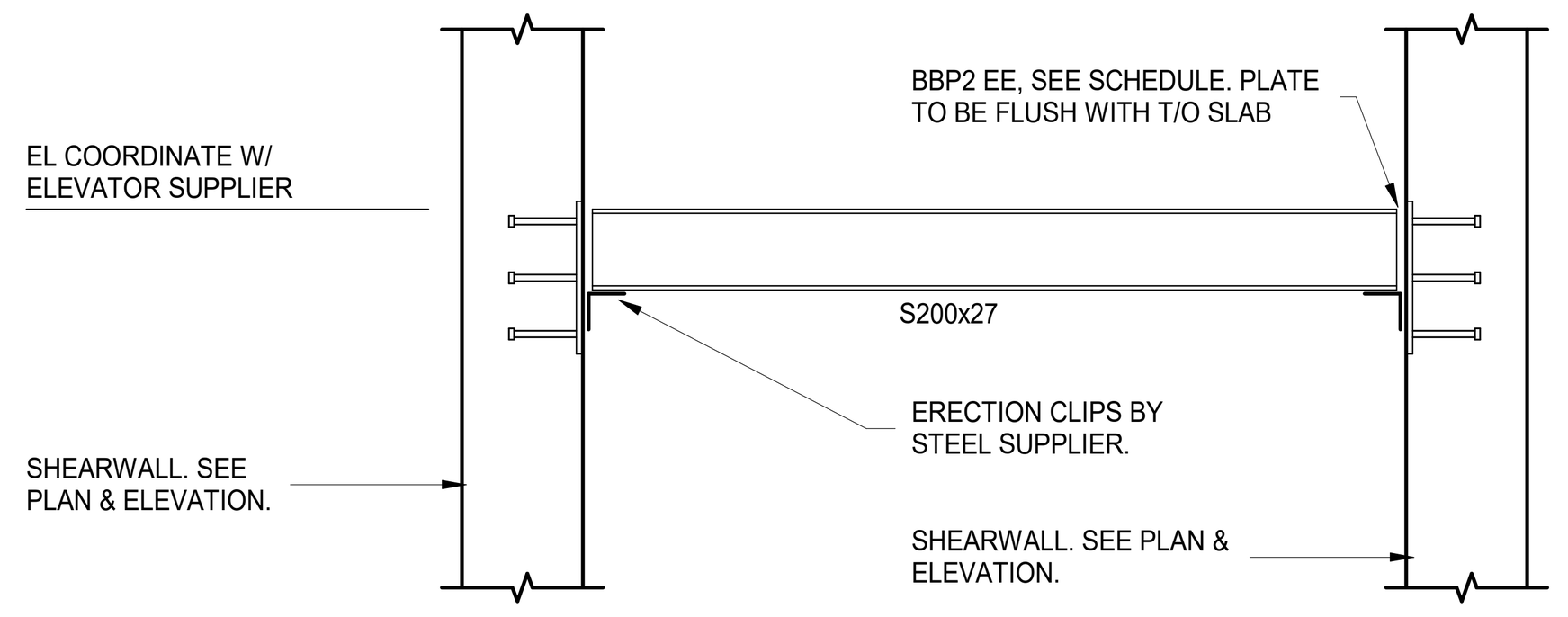
TYPICAL CONC CURB DETAIL - B
SEE PLANS FOR LOCATIONS



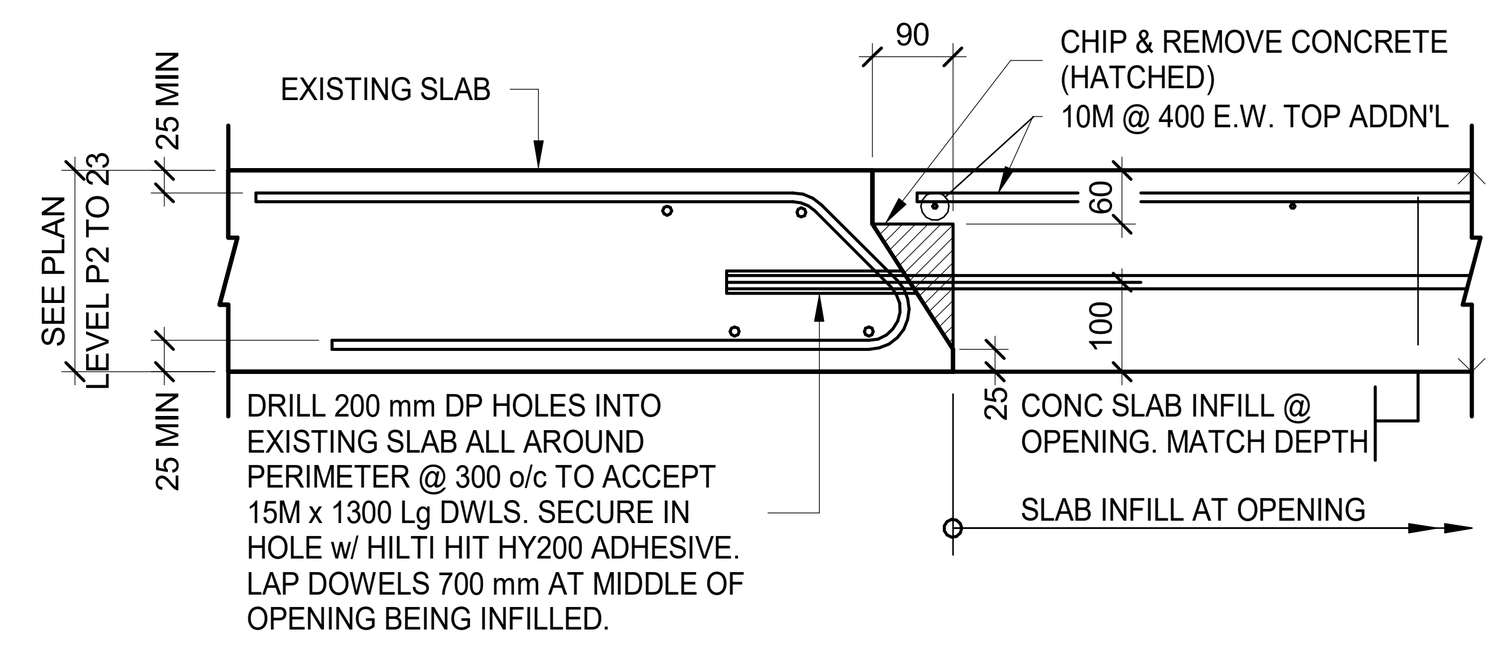
TYPICAL SECTION @ ELEVATOR SEPARATOR BEAM @ FLOORS



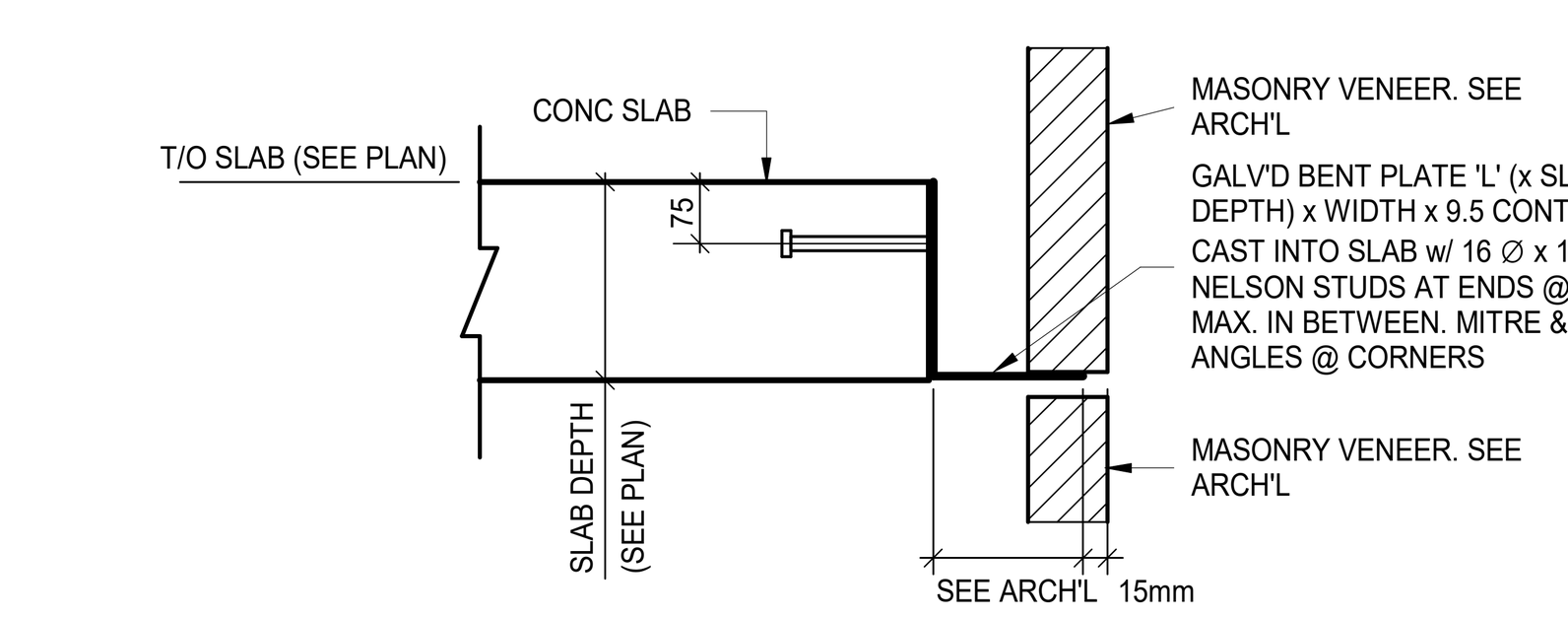
TYPICAL CONC CURB DETAIL - C
SEE PLANS FOR LOCATIONS



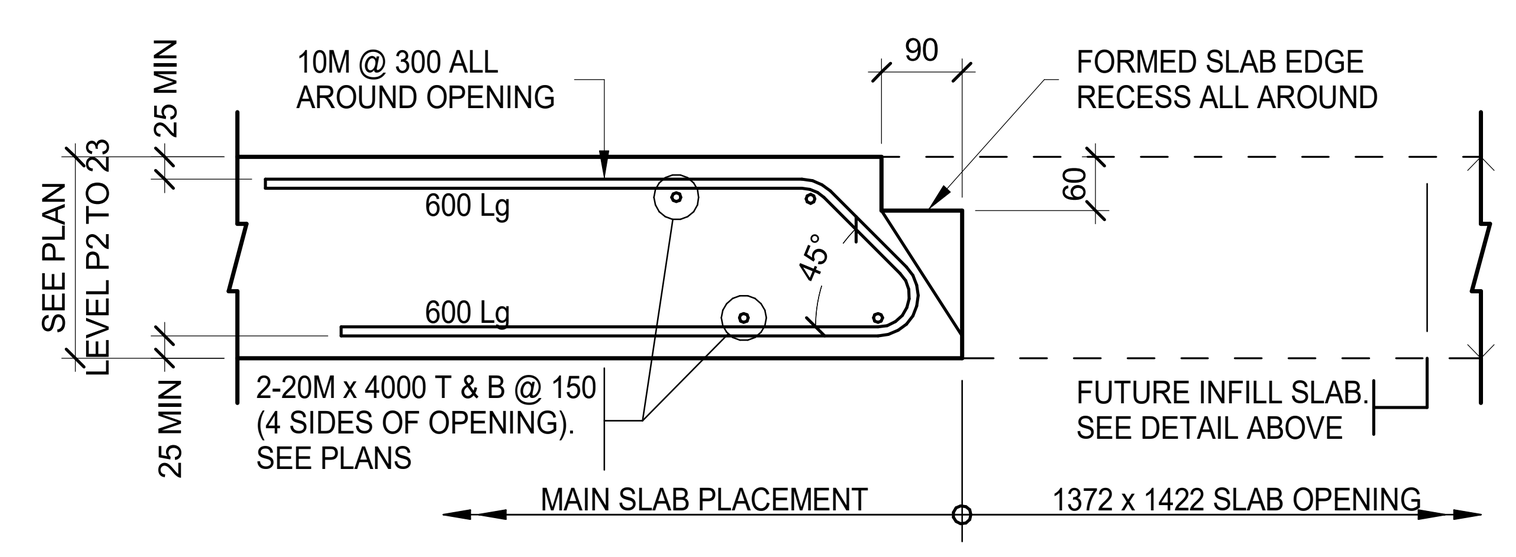
TYPICAL SECTION @ ELEVATOR SEPARATOR BEAM BETWEEN FLOORS



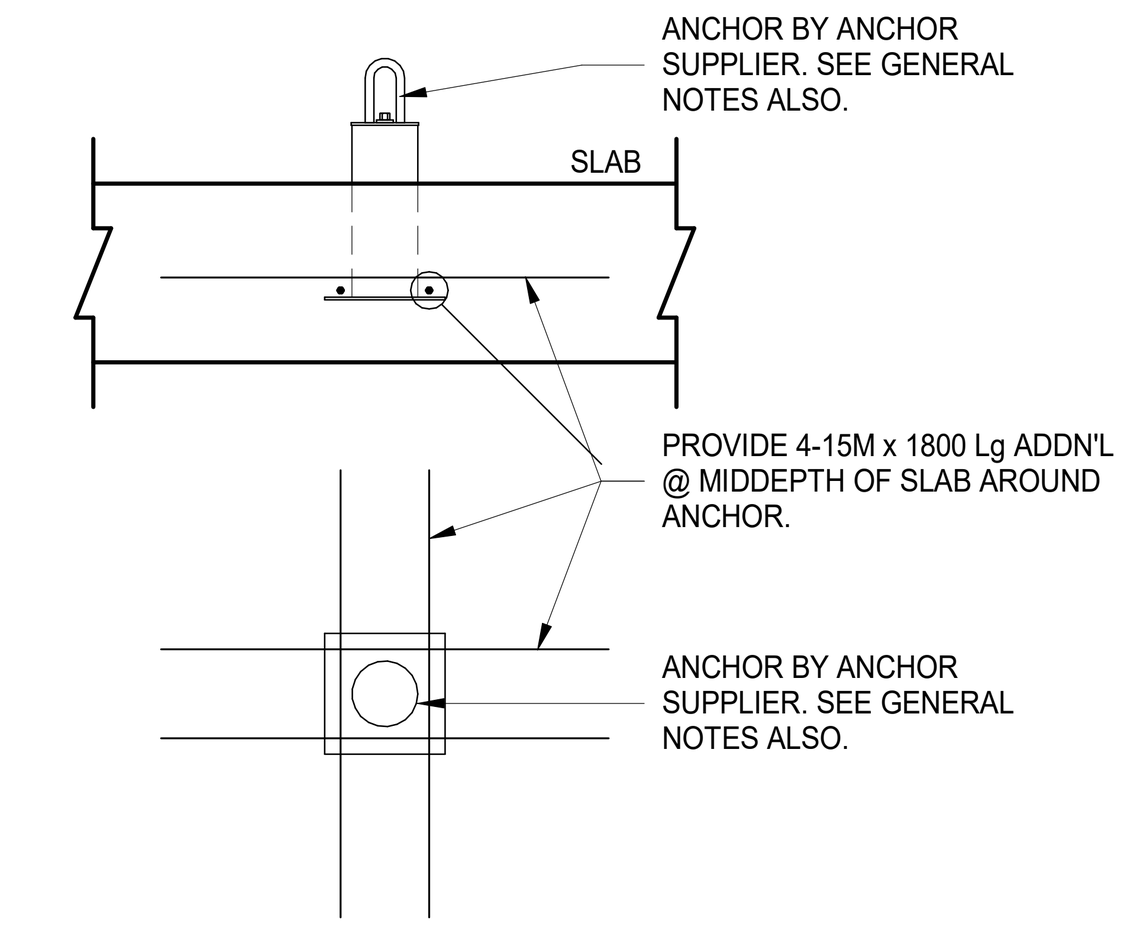
PLACING BOOM OPENING INFILL



TYPICAL DETAIL-CAST IN MASONRY SHELF ANGLE
SEE PLANS FOR LOCATION & EXTENT OF SHELF ANGLES.
COORDINATE WITH ARCH'L DRAWINGS.

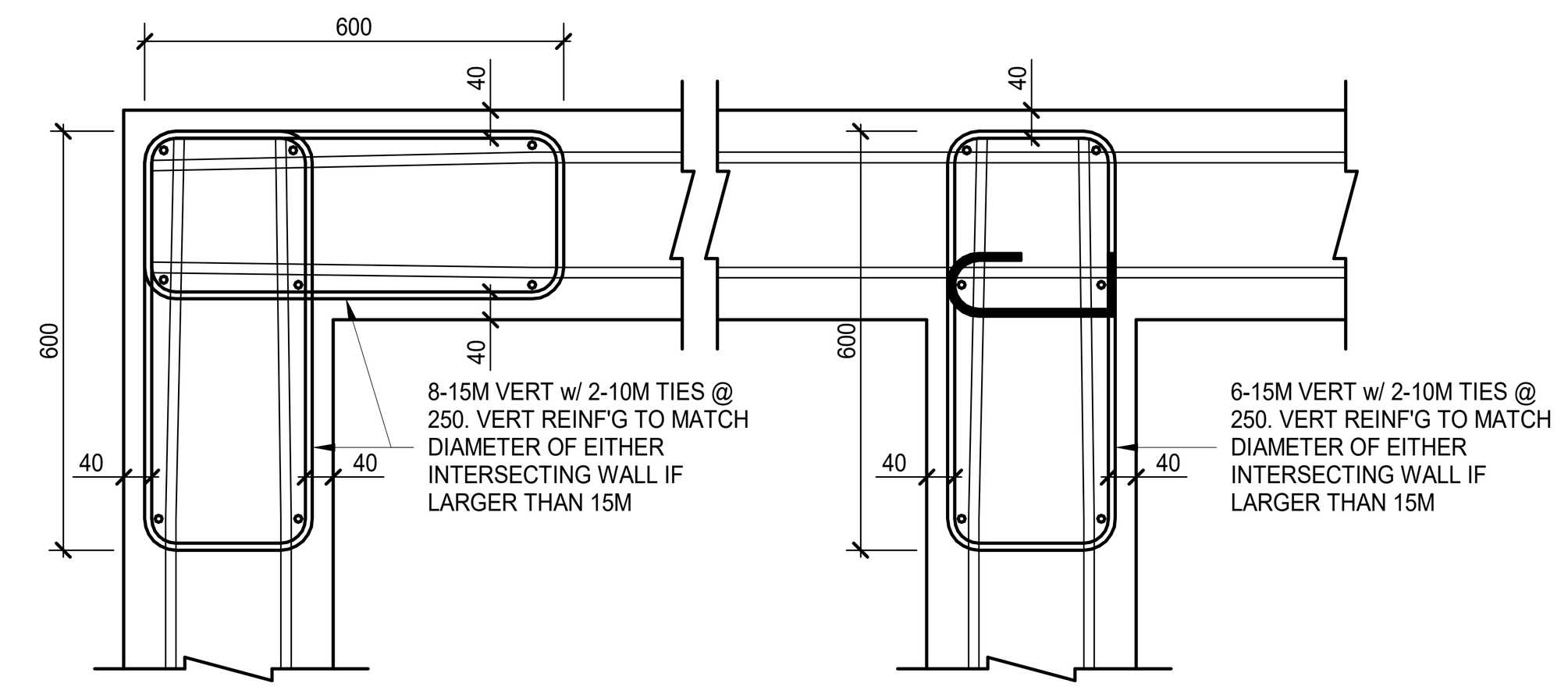


PLACING BOOM OPENING
TYPICAL DETAILS AT SLAB OPENING FOR PLACING BOOM
DETAILS ABOVE APPLY TO LEVEL P2 SLAB THRU ROOF SLAB



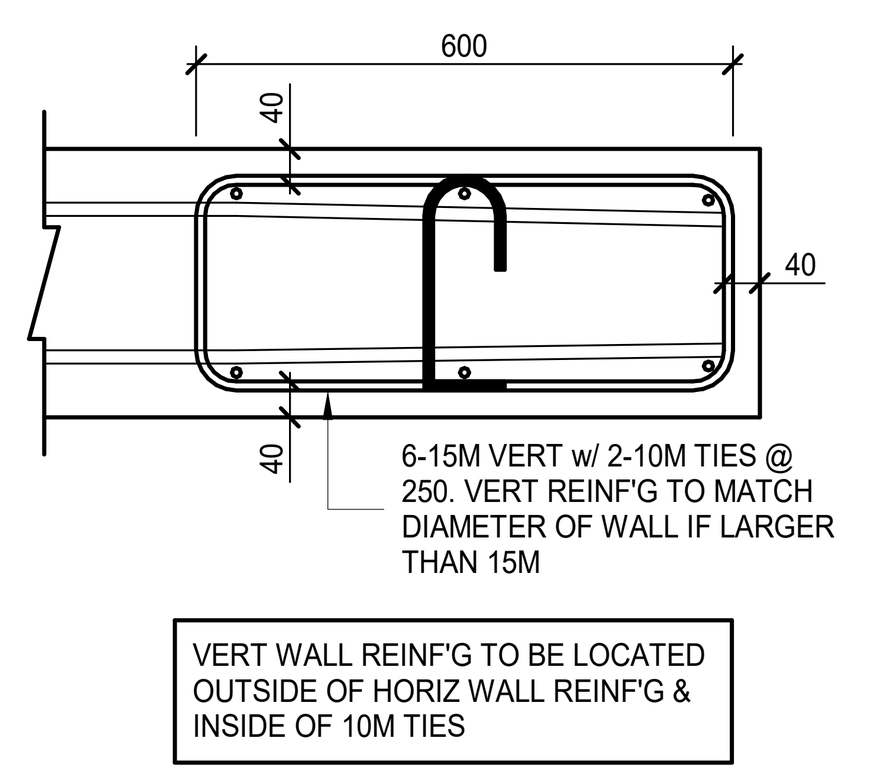
TYPICAL DETAILS AT SAFETY ANCHOR
SEE ARCH'L AND ANCHOR SUPPLIER DRAWINGS FOR DETAILS & EXACT LOCATIONS.

TYPICAL SHEARWALL REINFORCEMENT & NOTES



TYPICAL SHEARWALL INTERSECTION REINFORCEMENT

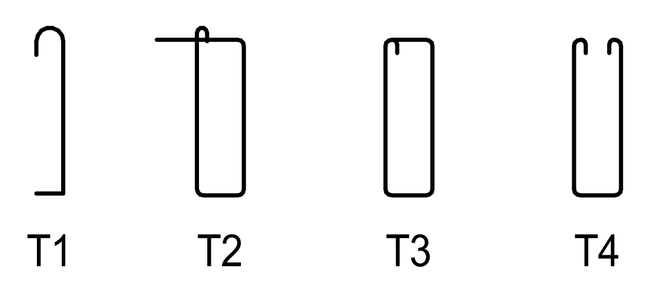
1. UNLESS NOTED OTHERWISE ON THESE DRAWINGS CONCRETE WALLS WITH 1 OR 2 SHEETS OF REINFORCING
2. DETAILS ABOVE ARE APPLICABLE TO WALLS WITH 15M AND/OR 20M HORIZONTALS.
3. FOR WALLS WITH 25M HORIZONTALS, EACH 600 mm TIE ZONE IS TO BE INCREASED TO 900 mm & 2 VERTICAL BARS ARE TO BE ADDED + 1-10M PIGTAIL @ 250.
4. WHERE VERTICAL BAR SPACING SHOWN ON SHEARWALL ELEVATIONS IS LESS THAN SPACING IN TYPICAL DETAILS, PROVIDE ADDITIONAL VERTICALS WITHIN 10M TIES TO MATCH SPACING ON SHEARWALL ELEVATION.
5. HORIZONTAL WALL REINFORCING BARS ARE TO BE DEVELOPED INTO TIE ZONE. EXTEND THRU TIE ZONE TO WALL FACE.
6. HORIZONTAL WALL REINFORCING BARS MAY NEED TO BE SKEWED SLIGHTLY WITHIN TIE ZONE TO ENSURE THAT THEY ARE LOCATED INSIDE OF THE VERTICAL REINFORCING BARS WITHOUT INTERFERENCE.
7. DOWELS & VERTICAL REINFORCING FROM BELOW ARE NOT SHOWN FOR CLARITY. PLACE VERTICAL REINFORCING SHOWN ABOVE AS CLOSE AS POSSIBLE TO REINFORCING FROM BELOW IN THE ARRANGEMENT SHOWN. HORIZONTAL REINFORCING IS TO BE PLACED INSIDE OF VERTICAL REINFORCING.
8. ALL CONCENTRATED & DISTRIBUTED VERTICAL REINFORCING IN SHEARWALLS IS NOT PERMITTED TO BE OFFEST, BENT OR NECKED.



TYPICAL SHEARWALL END & SIDE OF WALL OPENING REINFORCEMENT

1. UNLESS NOTED OTHERWISE ON THESE DRAWINGS CONCRETE WALLS WITH 1 OR 2 SHEETS OF REINFORCING
2. DETAILS ABOVE ARE APPLICABLE TO WALLS WITH 15M AND/OR 20M HORIZONTALS.
3. FOR WALLS WITH 25M HORIZONTALS, EACH 600 mm TIE ZONE IS TO BE INCREASED TO 900 mm & 2 VERTICAL BARS ARE TO BE ADDED + 1-10M PIGTAIL @ 250.
4. WHERE VERTICAL BAR SPACING SHOWN ON SHEARWALL ELEVATIONS IS LESS THAN SPACING IN TYPICAL DETAILS, PROVIDE ADDITIONAL VERTICALS WITHIN 10M TIES TO MATCH SPACING ON SHEARWALL ELEVATION.
5. HORIZONTAL WALL REINFORCING BARS ARE TO BE DEVELOPED INTO TIE ZONE. EXTEND THRU TIE ZONE TO WALL FACE.
6. HORIZONTAL WALL REINFORCING BARS MAY NEED TO BE SKEWED SLIGHTLY WITHIN TIE ZONE TO ENSURE THAT THEY ARE LOCATED INSIDE OF THE VERTICAL REINFORCING BARS WITHOUT INTERFERENCE.
7. DOWELS & VERTICAL REINFORCING FROM BELOW ARE NOT SHOWN FOR CLARITY. PLACE VERTICAL REINFORCING SHOWN ABOVE AS CLOSE AS POSSIBLE TO REINFORCING FROM BELOW IN THE ARRANGEMENT SHOWN. HORIZONTAL REINFORCING IS TO BE PLACED INSIDE OF VERTICAL REINFORCING.
8. ALL CONCENTRATED & DISTRIBUTED VERTICAL REINFORCING IN SHEARWALLS IS NOT PERMITTED TO BE OFFEST, BENT OR NECKED.

TIE LEGEND



TIE LEGEND
UNLESS NOTED OTHERWISE ON WALL ELEVATIONS, THE MINIMUM SPACING OF VERTICAL TIES ARE TO BE AS FOLLOWS:

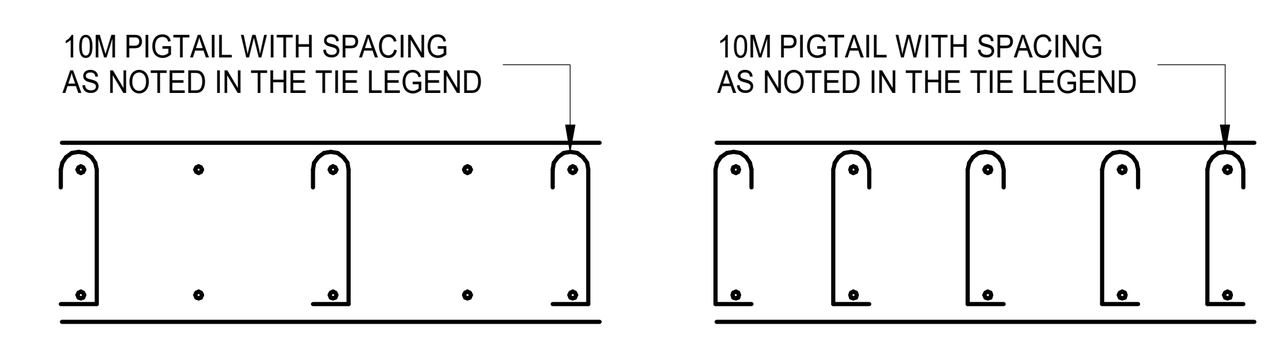
TYPICAL TIE SPACING
SPACING SHALL BE EQUAL TO THE LESSER OF;
a. WALL THICKNESS
OR
b. BASED ON THE VERTICAL BAR DIAMETER AS FOLLOWS;
15M VERTICAL = TIES @ 250 o/c
20M VERTICAL OR LARGER = TIES @ 300 o/c

NOTE:
- TIED VERTICAL BARS AT WALL ENDS ARE NOT SHOWN ON THE SHEARWALL ELEVATIONS.
- TIED VERTICAL BARS AT SIDES OF WALL OPENINGS ARE TO EXTEND FOR FULL FLOOR HEIGHT IN WHICH OPENING IS LOCATED (+ APPROPRIATE TENSION LAP ABOVE SLAB).
- TIED VERTICAL BARS AT WALL ENDS ARE TO EXTEND FOR FULL HEIGHT OF WALL. ADDITIONAL DETAILS MAY BE SHOWN THAT MATCH OR SUPERCEDE THE INFORMATION IN THESE TYPICAL DETAILS.

REINFORCING BAR LAP LENGTH TABLE

CONCRETE STRENGTH (MPa)	REINFORCING BAR LAP LENGTH (mm)					
	10M	15M	20M	25M	30M	35M
25	425	600	750	1200	1400	1675
30	400	550	675	1100	1275	1525
35	375	525	625	1000	1200	1425
40	350	475	600	950	1125	1325
45	325	450	550	900	1050	1250
50	300	425	525	850	1000	1200

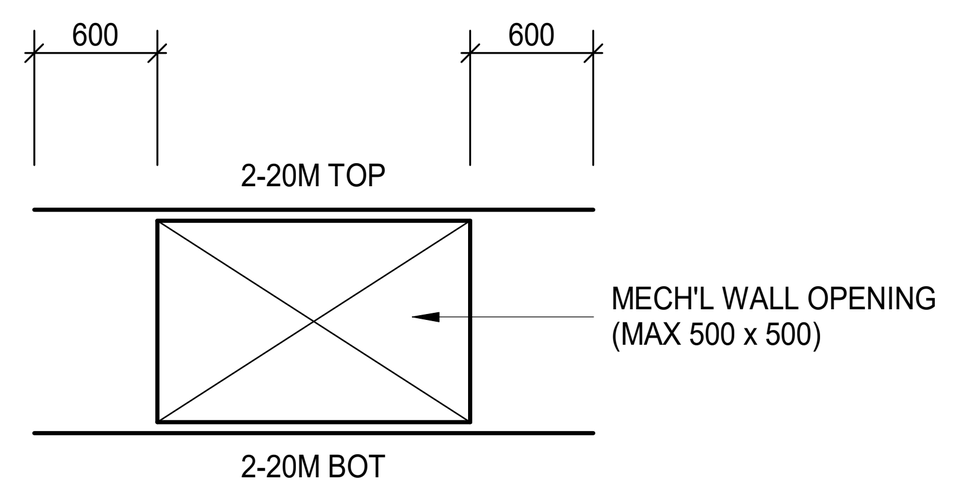
NOTE:
ALL PIGTAIL TIES ALTERNATE "ROUND" BEND OF PIGTAIL FROM 1 SIDE OF WALL TO OTHER-TYPICAL



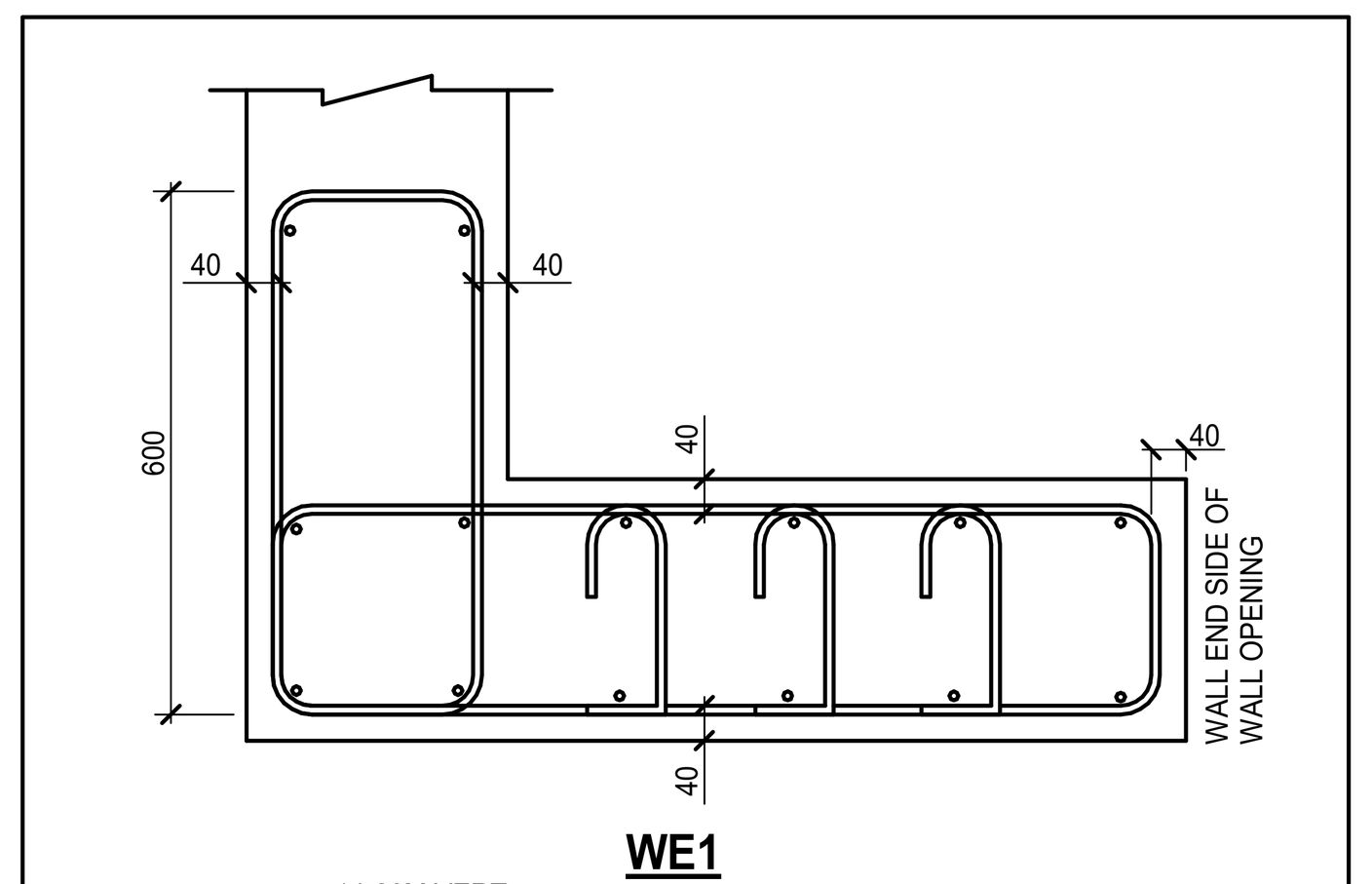
NOTE:
PIGTAIL DETAIL WHERE VETICAL REINFORCING SPACING IS ≤ 150 o/c

NOTE:
PIGTAIL DETAIL WHERE VETICAL REINFORCING SPACING IS > 150 o/c

PIGTAIL REINFORCING NOTED AS "T1" ON S200's



TYPICAL DETAIL AT MECH'L WALL OPENING U/N



WE1
14-20M VERT.
WITH 2-10M CLOSED TIES @ 300 + 3-10M T1 TIES @ 300

SHEARWALL NOTES

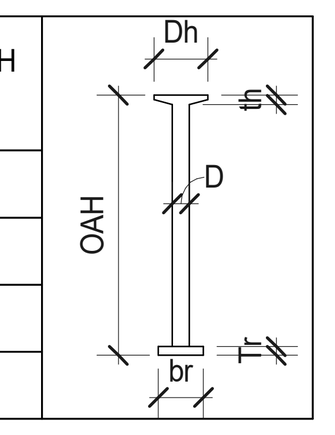
1. WALL THICKNESS IS TO BE AS INDICATED ON ELEVATION. SEE TYPICAL SHEARWALL REINFORCING BAR LAP LENGTH TABLES.
2. SEE PLANS FOR SHEARWALL CONCRETE COMPRESSIVE STRENGTHS UNLESS NOTED.
3. SEE TYPICAL SHEARWALL REINFORCING DETAILS.
4. ALL REINFORCING TO BE AS FOLLOWS U/N: 15M @ 450 E.F. U/N
5. DOWELS TO MATCH SIZE & SPACING OF VERTICAL REINFORCING UNLESS NOTED.
6. THE FIRST TIE LOCATED ABOVE AN OPENING SHALL BE PLACED NO MORE THAN 50 mm FROM THE SIDE OF THE OPENING.
7. ALL CONCRETE WALL ASSEMBLIES ARE TO BE PLACED MONOLITHICALLY FOR EACH LIFT

1) STUD RAIL ASSEMBLY MATERIAL PROPERTIES

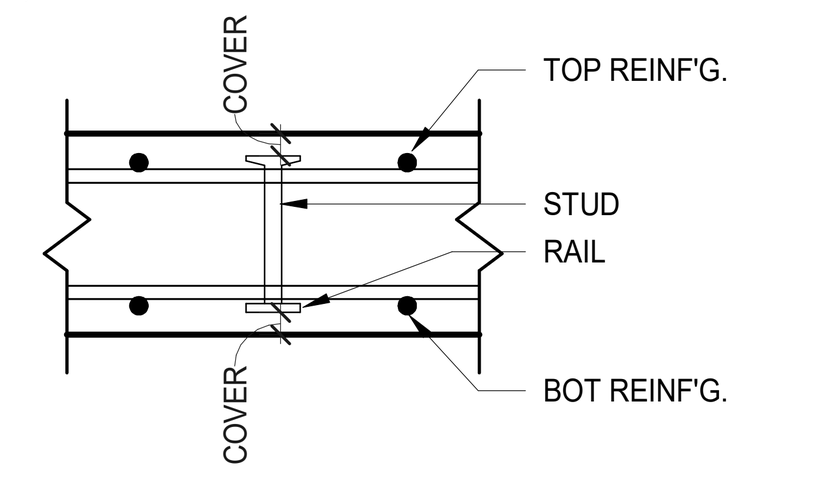
- **SHEAR STUDS**: TO BE FORMED FROM ASTM A108 GRADES 1010 THROUGH 1020 STEEL AND CONFROM TO THE MINIMUM PHYSICAL AND MECHANICAL PROPERTIES BELOW:
  - A) YIELD STRENGTH: 350MPa
  - B) TENSILE STRENGTH: 450MPa
  - C) ELONGATION: 20 PERCENT IN 51mm
  - D) REDUCTION OF AREA: 50 PERCENT
  - E) REFER TO TABLE BELOW FOR STUD DIMENSIONS
- **BASE RAILS**: TO BE FORMED FROM CSA 44W STEEL AND CONFROM TO THE MINIMUM PHYSICAL AND MECHANICAL PROPERTIES BELOW:
  - A) YIELD STRENGTH: 300MPa
  - B) TENSILE STRENGTH: 450 MPa
  - C) ELONGATION: 20 PERCENT IN 203mm
  - D) REFER TO TABLE BELOW FOR STUD DIMENSIONS
- **STUD WELDING**: TO BE FACTORY WELDED TO RAILS TO CONFORM WITH ASTM A1044 AND AWS D1.1

2) STUD RAIL DIMENSIONS

STUD DIAMETER (D) (mm)	AREA (mm^2)	HEAD DIAMETER (Dh) (mm)	HEAD THICKNESS (th) (mm)	RAIL WIDTH (br) (mm)	RAIL THICKNESS (tr) (mm)	MIN. OAH (mm)
9.5	71	30.1	5.3	25.4	4.8	100
12.7	127	40.2	7.1	31.8	6.5	100
15.9	199	50.2	8.9	44.5	7.9	125
19.1	287	60.2	10.7	50.8	9.5	125



3) STUD RAIL PLACEMENT WITHIN SLAB



4) NOTATION:
br = RAIL WIDTH
D = STUD DIAMETER
Dh = STUD HEAD DIAMETER
OAH = OVERALL ASSEMBLY HEIGHT
OAL = OVERALL ASSEMBLY LENGTH
S = SPACING BETWEEN STUDS (CENTRE-TO-CENTRE)
So = DISTANCE BETWEEN COLUMN FACE AND FIRST STUD LINE
tr = RAIL THICKNESS

5) SLEEVING, CORING, OR SLAB OPENINGS ARE NOT PERMITTED WITHIN A DISTANCE OF ONE SLAB THICKNESS FROM STUD RAILS.

CLV GROUP DEVELOPMENTS
client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS
structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.
electrical engineers | ingénieur electrique
mechanical engineer | ingénieur méchanique

wsp
civil engineers | ingénieur civil

CSW
landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

no	revisions	date
5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 66% WD & CLIENT BUDGETING	25-03-28
2	ISSUE FOR EXCAVATION TENDER	24-10-30
1	ISSUE FOR REVIEW	24-09-13

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
B.J.ARMSTRONG
100068864
PROVINCE OF ONTARIO

architect | architecte
linebox
STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet
GLADSTONE & LORETTA RESIDENTIAL TOWER
Enter address here

drawing title | titre du dessin
TYPICAL DETAILS

project number | numero du projet	21-045
drawn | dessiné	PMD/DG
checked | verifié	BA
scale | échelle	As indicated
date | date	05/28/24
drawing number | numéro du dessin	S04

NOTES:
1. SEE PLANS FOR CONCRETE COMPRESSIVE STRENGTHS.
2. ALL BEAMS TO BE POURED MONOLITHICALLY.
3. THE FIRST STIRRUP SHALL BE LOCATED NO MORE THAN 50 mm FROM THE FACE OF THE SUPPORT MEMBER.

CONCRETE BEAM SCHEDULE

MARK	SIZE	REINF'G	PLACEMENT	REMARKS
GB1	1900 x 2200 DP	10-30M x 6450 10-30M x 6450 10-20M x 6450 12-35M x 6450 12-35M x 6450 2-15M + 6-15M 2-15M + 2-15M	21 — 22	TUL TLL 5 E.F. EQ SPACING IN REM. BUL BLL 15 SETS OF 2 OUTER TIES + 6 PIGTAIL TIES @150 2 OUTER TIES + 2 PIGTAILS TIES @ 300 REM.
GB2	2000 x 2100/1675 DP	10-30M x 6900 10-30M x 6900 10-30M x 4000 10-30M x 4000 2-20M x 6900 8-20M x 9450 10-35M x 9450 10-35M x 9450 10-35M x 9450 2-15M + 6-15M 2-15M + 2-15M	Cc — B	TUL TLL TUL TLL } IN 2100 DP } IN 1675 DP 1 E.F. IN 2100 DP 4 E.F. EQ SPACED IN REM. IN 1675 DP BUL BML BLL 20 SETS OF 2 OUTER TIES + 6 PIGTAIL TIES @150 2 OUTER TIES + 2 PIGTAILS TIES @ 300 REM.
2BI	2000 x 2100 DP	10-30M x 8900 10-30M x 8900 10-20M x 8900 13-35M x 8900 13-35M x 8900 13-35M x 8900 2-15M + 4-15M 2-15M + 2-15M	C — B	TUL TLL 5 E.F. EQ SPACED IN REM. BUL BML BLL 20 SETS OF 2 OUTER TIES + 4 PIGTAIL TIES @175 2 OUTER TIES + 2 PIGTAILS TIES @ 300 REM.

MASONRY VENEER LOOSE LINTEL SCHEDULE

SPAN	SIZE	BEARING EE
0 - 1600 mm	L 89 x 89 x 8	100 mm
1601 TO 1900	L 102 x 89 x 8 LLV	100 mm
1901 - 2400	L 127 x 89 x 8 LLV	100 mm
2401 - 2800	L 152 x 102 x 8 LLV	150 mm
2801 - 3200	L 152 x 102 x 9.5 LLV	175 mm
3201 - 3600	L 178 x 102 x 9.5 LLV	200 mm

NOTES:
1. ALL EXTERIOR ANGLES TO BE HOT DIPPED GALVANIZED.
2. ALL INTERIOR ANGLES TO RECEIVE PRIMER.
3. MASONRY VENEER HEIGHT SHALL BE LIMITED TO 3000mm MAX.
4. ADDITIONAL STRUCTURAL SUPPORT MAY BE REQUIRED FOR LOOSE LINTELS EXCEEDING A SPAN OF 3600mm AND/OR A BRICK HEIGHT OF 3000mm

MASONRY LINTEL SCHEDULE NON-LOAD BEARING WALL

140 OR 190 WD REINF'D CONC BLOCK

SPAN	MASONRY LINTEL
0 - 400 mm	GROUT 200 mm ALL AROUND OPENING
400 - 1000 mm	200 DP 1-15M BOT CONT
1001 - 1900	400 DP 1-20M BOT CONT
1901 - 2500	600 DP 1-20M TOP & BOT CONT
2501 - 3200	800 DP 1-20M TOP & BOT CONT

NOTE:
1. ALL MASONRY LINTELS ARE TO BE GROUTED SOLID
2. GROUT WALL ENDS SOLID BELOW LINTEL FOR WIDTH OF 200 mm LINTEL BEARING
3. SEE DRAWING S01 FOR MASONRY REINFORCEMENT. PROVIDE 1-20M VERT IN EACH GROUTED CORE AT WALL ENDS EACH SIDE OF LINTEL OPENING UNLESS NOTED OTHERWISE ON PLANS.
4. USE LOW WEB BLOCKS FOR LINTEL COURSES CONTAINING HORIZONTAL REBAR
5. LINTEL TO NOT INTERRUPT CONCRETE BOND BEAM AT TOP OF WALL

FOOTING SCHEDULE

MARK	SIZE	REINF'G
F1	SEE PLANX1400 DP	30M @ 150 T EW (H) 30M @ 150 B EW (H)
F2	2700X2700X1025 DP	16-25M x 2600 BUL (H) 20-25M x 2025 BLL (H)
F3	1850x2450x900 DP	12-25M x 2350 BUL (H) 16-25M x 1750 BLL (H)
F4	1600x2100x800 DP	9-25M x 2000 BUL (H) 12-25M x 1500 BLL (H)
F5	1000x1400x450 DP	5-20M x 1300 BUL (H) 7-20M x 900 BLL (H)
F6	900x1700x450 DP	4-20M x 1600 BUL (H) 8-20M x 800 BLL (H)
F7	1000x1400x400 DP	4-20M x 1300 BUL (H) 5-20M x 900 BLL (H)
WF1	600X400 DP	3-15M BOT. CONT.

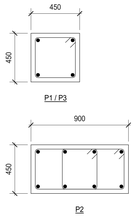
NOTES:
1. SEE GENERAL NOTES ALSO.
2. ALL FOOTINGS TO BE CENTERED UNDER PIERS, COLUMNS ORWALLS UNLESS NOTED.
3. WALL FOOTINGS TO EXTEND BEYOND ENDS OF WALLS A DISTANCE EQUAL TO THE SIDE PROJECTIONS.
4. SEE PLANS FOR CONCRETE COMPRESSIVE STRENGTHS.

CONCRETE PIER SCHEDULE

MARK	SIZE	REINF'G
P1	450x450	4-20M VERT + 1-10M TIE @ 300 + 4-20M DWLS
P2	450x900	8-20M VERT + 1-10M TIE @ 300 + 8-20M DWLS
P3	350x350	4-20M VERT + 1-10M TIE @ 300 + 4-20M DWLS

NOTES:
1. PROVIDE DWLS INTO FTG TO MATCH VERT. PIER REINF'G
2. PROVIDE 3 SETS OF TIES SPACED @ 75 o/c AT TOP OF PIERS.
3. HORIZ FND WALL REINF'G TO EXTEND THRU CONCRETE PIER.
4. TOP OF PIER TO BE 400 BELOW TOP OF SLAB TYP. U/N
5. SEE PLANS FOR CONCRETE COMPRESSIVE STRENGTHS.

PIER DETAILS



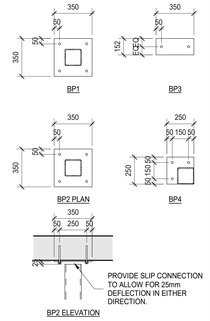
BASEPLATE SCHEDULE

MARK	SIZE	ANCHORS
BP1	350x350x12 THK PLATE	4-16Ø HILTI HAS SECURE USING HY-200 V3 ADHESIVE 150 MIN EMBEDMENT
BP2	350x350x12 THK PLATE	4-16Ø x140 Lg. HILTI KWIK HUS MIN 99 EFF EMEBEDMENT
BP3	350x152x10 THK PLATE	2-16Ø x140 Lg. HILTI KWIK HUS MIN 99 EFF EMEBEDMENT
BP4	250x250x12 THK PLATE	3-16Ø HILTI HAS SECURE USING HY-200 V3 ADHESIVE 150 MIN EMBEDMENT

BASEPLATE NOTES

NOTE:
1. PROVIDE 25MM NON SHRINK GROUT OR DRYPACK BELOW BASEPLATES EXTENDING 25MM BEYOND PERIMETER OF PLATE AND FOR FULL AREA BELOW PLATE (NOT APPLICABLE TO CAST-IN PLATES)
2. PROVIDE 50MM ANCHOR BOLT PROJECTION ABOVE PLATE.
3. ALL ANCHOR BOLTS TO HEADED AND TO BE ASTM A307 U/N
4. ALL BASE PLATES TO BE GRADE G40.21300W
5. ALL COLUMNS TO BE CENTRED ON BASEPLATES U/N
6. USE STEEL TEMPLATES AND PRECISE SURVEYING TEQHNIQUES TO ACCURATELY LOCATE BASE PLATE & ANCHOR BOLTS.
7. PROVIDE 50 Ø x 5 THK WASHERS FOR ANCHORS UP TO 25 Ø.
8. PROVIDE 76 Ø x 6 THK WASHERS FOR ANCHORS LARGER THAN 25 Ø.

BASEPLATE PLAN DETAILS



BEAM BEARING PLATE SCHEDULE

MARK	SIZE	ANCHORS
BBP1	200x350x12THK PLATE	3-16Ø x167 Lg. N. STUDS

NOTES:
1. BEAMS SUPPORTED ON BEAM BEARING BASE PLATES TO EXTEND ONTO PLATE A MINIMUMOF 80% OF LENGTH OF PLATE, IN DIRECTION OF BEAM UNLESS NOTED OTHERWISE ON PLAN.
2. ANCHORS ARE TO BE CENTERED ON PLATE & SPACED AT 200 o/c TO ALIGN WITH CORE VOIDS IN BLOCK UNLESS OTHERWISE NOTED
3. ENSURE BEAM BEARING POCKETS IN MASONRY WALLS ARE GROUTED SOLID.
4. ENSURE WALLS ARE GROUTED AT LEAST 3 COURSES BELOW BEAM BEARING PLATES.
5. ALL BBP'S MUST BE CAST INTO THE CONCRETE ELEMENT IN WHICH THEY ARE LOCATED. NO DRILLING INTO PLACED CONCRETE WILL BE PERMITTED FOR MISSED OR MIS-LOCATED BBP's.
6. WHEN BEAMS OF VARIABLE DEPTHS BEAR ON THE SAME PLATE, PLATE TO BE SET FOR THE DEEPER BEAM. STEEL CONTRACTOR TO PROVIDE SOLID SHIM TO SHALLOWER BEAM OR MAKE BEAM CONNECTION TO ACCOMMODATE DIFFERENCE IN HEIGHT.

STEEL COLUMN SCHEDULE

MARK	SIZE
SC1	HSS 152x152x6.4
SC2	HSS 152x152x13

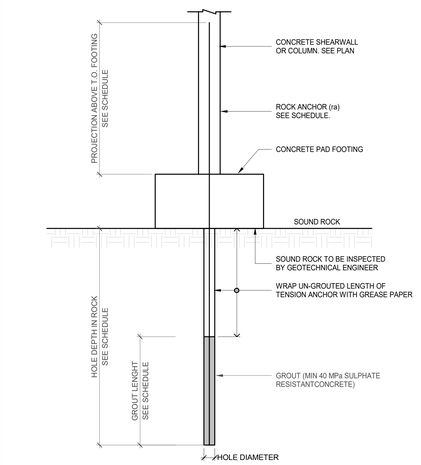
NOTES:
1. ALL HSS SECTIONS TO BE ASTM A500 (GRADE C) OR G40.21M350W (CLASS C).
2. SEE ALSO GENERAL NOTES ALSO
3. ALL GLULAM COLUMNS TO BE GRADE 20f-e

ROCK ANCHOR SCHEDULE

MARK	SIZE	GROUT LENGTH IN ROCK (G)	DEPTH INTO ROCK (E)	PROJECTION ABOVE FTN'G (L)	HOLE DIAMETER IN ROCK	TEST LOAD
RA1	75Ø THREADBAR (GRADE 150)	7000 mm	8500 mm	3000 mm	200 mm	2000 kN
RA2	75Ø THREADBAR (GRADE 150)	7000 mm	9500 mm	3000 mm	200 mm	2000 kN
RA3	75Ø THREADBAR (GRADE 150)	7000 mm	10000 mm	3000 mm	200 mm	2000 kN

NOTE:
1. THREAD BAR TO BE ASTM A615 / CSA G30.18 - M1982 GRADE 150
2. CONTRACTOR TO PROVIDE CORROSION PROTECTION & PERFORM PROOF TEST IN ACCORDANCE WITH OPSS 942 AND GEOTECHNICAL ENGINEERS RECOMMENDATIONS.
3. ROCK ANCHOR TO HAVE DOUBLE CORROSION PROTECTION MINIMUM FOR ANCHOR IN ROCK AND SOIL.
4. SHOP DRAWINGS TO BE SEALED AND SIGNED BY A P.ENG IN THE PROVINCE OF ONTARIO. INCLUDE ALL CORROSION PROTECTION DETAILS AND TRANSITIONS.

ROCK ANCHOR DETAIL



CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

no	revisions	date
5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 66% WD & CLIENT BUDGETING	25-03-28
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1	ISSUE FOR REVIEW	24-09-13

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LICENSED PROFESSIONAL ENGINEER
25-06-09
B.J.ARMSTRONG
100140788
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

Enter address here

drawing title | titre du dessin

SCHEDULES

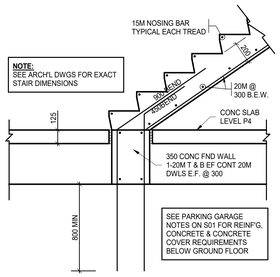
project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**As indicated**
date | date	**05/28/24**

drawing number | numéro du dessin

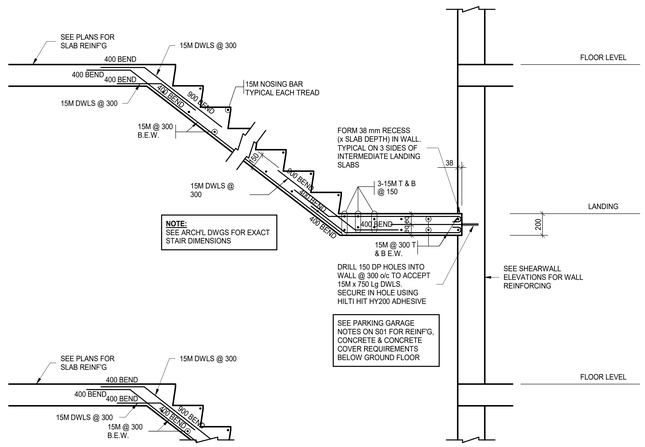
S05

TOWER COLUMN SCHEDULE

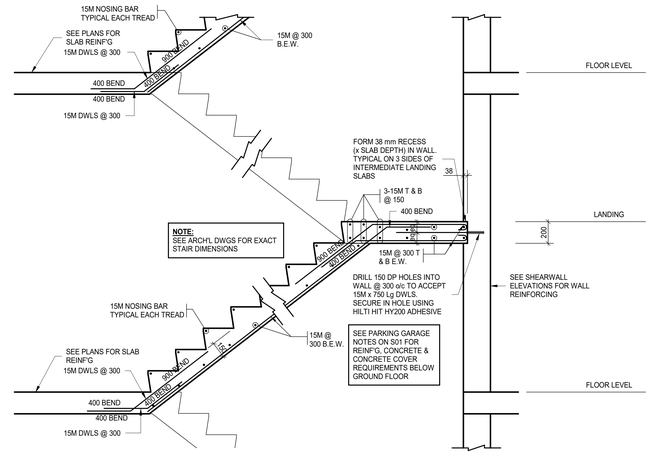
	C1	C1A	C2	C3	C4	C4A	C4B	C4C	C4D	C4E	C4F	C4G	C4H	C5	C5A	C6	C7	C8	C9	C10
36TH (PENTHOUSE ROOF)	350x600 6-25M VERT 2-10M TIES @ 300 TYPE 3		350x600 6-25M VERT 2-10M TIES @ 300 TYPE 3																	350x600 6-25M VERT 2-10M TIES @ 300 TYPE 3
35TH (PENTHOUSE)	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	600Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	600Ø 8-25M VERT 2-10M TIES @ 300 TYPE 1	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	600Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	600Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 6-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 6-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 6-25M VERT 1-10M TIE @ 300 TYPE 1				6-25M DWLS
34TH	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	600Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	600Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	650Ø 6-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 6-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 6-25M VERT 1-10M TIE @ 300 TYPE 1				
33RD	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	600Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	600Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	650Ø 6-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 6-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 6-25M VERT 1-10M TIE @ 300 TYPE 1				
32ND	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	600Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	600Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	650Ø 6-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 6-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 6-25M VERT 1-10M TIE @ 300 TYPE 1				
31ST	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	600Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	600Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	400x800 8-25M VERT 2-10M TIES @ 300 TYPE 4	650Ø 6-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 6-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 6-25M VERT 1-10M TIE @ 300 TYPE 1				
30TH	550x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	550x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	650x1000 14-25M VERT 4-10M TIES @ 300 TYPE 10	500x1000 10-25M VERT 3-10M TIES @ 300 TYPE 5	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1				
29TH	550x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	550x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	650x1000 14-25M VERT 4-10M TIES @ 300 TYPE 10	500x1000 10-25M VERT 3-10M TIES @ 300 TYPE 5	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1				
28TH	550x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	550x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	650x1000 14-25M VERT 4-10M TIES @ 300 TYPE 10	500x1000 10-25M VERT 3-10M TIES @ 300 TYPE 5	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1				
27TH	550x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	550x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	650x1000 14-25M VERT 4-10M TIES @ 300 TYPE 10	500x1000 10-25M VERT 3-10M TIES @ 300 TYPE 5	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1				
26TH	550x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	550x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	650x1000 14-25M VERT 4-10M TIES @ 300 TYPE 10	500x1000 10-25M VERT 3-10M TIES @ 300 TYPE 5	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1				
25TH	550x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	550x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	650x1000 14-25M VERT 4-10M TIES @ 300 TYPE 10	500x1000 10-25M VERT 3-10M TIES @ 300 TYPE 5	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1				
24TH	550x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	550x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	650x1000 14-25M VERT 4-10M TIES @ 300 TYPE 10	500x1000 10-25M VERT 3-10M TIES @ 300 TYPE 5	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1				
23RD	550x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	550x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	650x1000 14-25M VERT 4-10M TIES @ 300 TYPE 10	500x1000 10-25M VERT 3-10M TIES @ 300 TYPE 5	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-25M VERT 2-10M TIES @ 300 TYPE 4	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1				
22ND	550x900 8-35M VERT 2-10M TIES @ 300 TYPE 4	550x900 8-35M VERT 2-10M TIES @ 300 TYPE 4	650x1000 14-25M VERT 4-10M TIES @ 300 TYPE 10	500x1000 10-30M VERT 3-10M TIES @ 300 TYPE 5	475x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1				
21ST	550x900 8-35M VERT 2-10M TIES @ 300 TYPE 4	550x900 8-35M VERT 2-10M TIES @ 300 TYPE 4	650x1000 14-25M VERT 4-10M TIES @ 300 TYPE 10	500x1000 10-30M VERT 3-10M TIES @ 300 TYPE 5	475x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	475x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	750Ø 9-25M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-30M VERT 2-10M TIES @ 300 TYPE 4	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1				
20TH	550x900 8-35M VERT 2-10M TIES @ 300 TYPE 4	550x900 8-35M VERT 2-10M TIES @ 300 TYPE 4	650x1000 14-30M VERT 4-10M TIES @ 300 TYPE 10	500x1000 10-35M VERT 3-10M TIES @ 300 TYPE 5	475x900 8-35M VERT 3-10M TIES @ 300 TYPE 5	750Ø 9-30M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-35M VERT 3-10M TIES @ 300 TYPE 5	475x900 8-35M VERT 3-10M TIES @ 300 TYPE 5	475x900 8-35M VERT 3-10M TIES @ 300 TYPE 5	475x900 8-35M VERT 3-10M TIES @ 300 TYPE 5	750Ø 9-30M VERT 1-10M TIE @ 300 TYPE 1	750Ø 9-30M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-35M VERT 3-10M TIES @ 300 TYPE 5	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1				
19TH	550x900 8-35M VERT 2-10M TIES @ 300 TYPE 4	550x900 8-35M VERT 2-10M TIES @ 300 TYPE 4	650x1000 14-30M VERT 4-10M TIES @ 300 TYPE 10	500x1000 10-35M VERT 3-10M TIES @ 300 TYPE 5	475x900 8-35M VERT 3-10M TIES @ 300 TYPE 5	750Ø 9-30M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-35M VERT 3-10M TIES @ 300 TYPE 5	475x900 8-35M VERT 3-10M TIES @ 300 TYPE 5	475x900 8-35M VERT 3-10M TIES @ 300 TYPE 5	475x900 8-35M VERT 3-10M TIES @ 300 TYPE 5	750Ø 9-30M VERT 1-10M TIE @ 300 TYPE 1	750Ø 9-30M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-35M VERT 3-10M TIES @ 300 TYPE 5	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1				
18TH	550x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	550x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	650x1000 14-30M VERT 4-10M TIES @ 300 TYPE 10	500x1000 10-35M VERT 3-10M TIES @ 300 TYPE 5	475x900 8-35M VERT 3-10M TIES @ 300 TYPE 5	750Ø 9-30M VERT 1-10M TIE @ 300 TYPE 1	900Ø 16-35M VERT 1-10M TIE @ 300 TYPE 1	900Ø 16-35M VERT 1-10M TIE @ 300 TYPE 1	900Ø 16-35M VERT 1-10M TIE @ 300 TYPE 1	900Ø 16-35M VERT 1-10M TIE @ 300 TYPE 1	750Ø 9-30M VERT 1-10M TIE @ 300 TYPE 1	750Ø 9-30M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-35M VERT 3-10M TIES @ 300 TYPE 5	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1				
17TH	550x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	550x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	650x1000 14-30M VERT 4-10M TIES @ 300 TYPE 10	500x1000 10-35M VERT 3-10M TIES @ 300 TYPE 5	475x900 8-35M VERT 3-10M TIES @ 300 TYPE 5	750Ø 9-30M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-35M VERT 3-10M TIES @ 300 TYPE 5	475x900 8-35M VERT 3-10M TIES @ 300 TYPE 5	475x900 8-35M VERT 3-10M TIES @ 300 TYPE 5	475x900 8-35M VERT 3-10M TIES @ 300 TYPE 5	750Ø 9-30M VERT 1-10M TIE @ 300 TYPE 1	750Ø 9-30M VERT 1-10M TIE @ 300 TYPE 1	475x900 8-35M VERT 3-10M TIES @ 300 TYPE 5	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1				
16TH	550x900 12-35M VERT 3-10M TIES @ 300 TYPE 6	550x900 12-35M VERT 3-10M TIES @ 300 TYPE 6	650x1000 14-35M VERT 4-10M TIES @ 300 TYPE 10	500x1000 12-35M VERT 3-10M TIES @ 300 TYPE 6	475x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	750Ø 9-35M VERT 1-10M TIE @ 300 TYPE 1	475x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	475x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	475x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	475x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	750Ø 9-35M VERT 1-10M TIE @ 300 TYPE 1	750Ø 9-35M VERT 1-10M TIE @ 300 TYPE 1	475x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1				
15TH	550x900 12-35M VERT 3-10M TIES @ 300 TYPE 6	550x900 12-35M VERT 3-10M TIES @ 300 TYPE 6	650x1000 14-35M VERT 4-10M TIES @ 300 TYPE 10	500x1000 12-35M VERT 3-10M TIES @ 300 TYPE 6	475x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	750Ø 9-35M VERT 1-10M TIE @ 300 TYPE 1	475x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	475x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	475x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	475x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	750Ø 9-35M VERT 1-10M TIE @ 300 TYPE 1	750Ø 9-35M VERT 1-10M TIE @ 300 TYPE 1	475x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1				
14TH	550x900 12-35M VERT 3-10M TIES @ 300 TYPE 6	550x900 12-35M VERT 3-10M TIES @ 300 TYPE 6	650x1000 14-35M VERT 4-10M TIES @ 300 TYPE 10	500x1000 12-35M VERT 3-10M TIES @ 300 TYPE 6	475x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	750Ø 9-35M VERT 1-10M TIE @ 300 TYPE 1	475x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	475x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	475x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	475x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	750Ø 9-35M VERT 1-10M TIE @ 300 TYPE 1	750Ø 9-35M VERT 1-10M TIE @ 300 TYPE 1	475x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1				
13TH	550x900 12-35M VERT 3-10M TIES @ 300 TYPE 6	550x900 12-35M VERT 3-10M TIES @ 300 TYPE 6	650x1000 14-35M VERT 4-10M TIES @ 300 TYPE 10	500x1000 12-35M VERT 3-10M TIES @ 300 TYPE 6	475x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	750Ø 10-35M VERT 1-10M TIE @ 300 TYPE 1	475x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	475x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	475x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	475x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	750Ø 10-35M VERT 1-10M TIE @ 300 TYPE 1	750Ø 10-35M VERT 1-10M TIE @ 300 TYPE 1	475x900 10-35M VERT 3-10M TIES @ 300 TYPE 5	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1				
12TH	550x900 16-35M VERT 4-10M TIES @ 300 TYPE 8	550x900 16-35M VERT 4-10M TIES @ 300 TYPE 8	650x1000 16-35M VERT 4-10M TIES @ 300 TYPE 11	500x1000 16-35M VERT 4-10M TIES @ 300 TYPE 8	475x900 12-35M VERT 3-10M TIES @ 300 TYPE 6	750Ø 12-35M VERT 1-10M TIE @ 300 TYPE 1	475x900 12-35M VERT 3-10M TIES @ 300 TYPE 6	475x900 12-35M VERT 3-10M TIES @ 300 TYPE 6	475x900 12-35M VERT 3-10M TIES @ 300 TYPE 6	475x900 12-35M VERT 3-10M TIES @ 300 TYPE 6	750Ø 12-35M VERT 1-10M TIE @ 300 TYPE 1	750Ø 12-35M VERT 1-10M TIE @ 300 TYPE 1	475x900 12-35M VERT 3-10M TIES @ 300 TYPE 6	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1				
11TH	550x900 16-35M VERT 4-10M TIES @ 300 TYPE 8	550x900 16-35M VERT 4-10M TIES @ 300 TYPE 8	650x1000 16-35M VERT 4-10M TIES @ 300 TYPE 11	500x1000 16-35M VERT 4-10M TIES @ 300 TYPE 8	475x900 12-35M VERT 3-10M TIES @ 300 TYPE 6	750Ø 12-35M VERT 1-10M TIE @ 300 TYPE 1	475x900 12-35M VERT 3-10M TIES @ 300 TYPE 6	475x900 12-35M VERT 3-10M TIES @ 300 TYPE 6	475x900 12-35M VERT 3-10M TIES @ 300 TYPE 6	475x900 12-35M VERT 3-10M TIES @ 300 TYPE 6	750Ø 12-35M VERT 1-10M TIE @ 300 TYPE 1	750Ø 12-35M VERT 1-10M TIE @ 300 TYPE 1	475x900 12-35M VERT 3-10M TIES @ 300 TYPE 6	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1				
10TH	550x900 18-35M VERT 4-10M TIES @ 300 TYPE 12	550x900 18-35M VERT 4-10M TIES @ 300 TYPE 12	650x1000 20-35M VERT 4-10M TIES @ 300 TYPE 15	500x1000 18-35M VERT 4-10M TIES @ 300 TYPE 9	475x900 14-35M VERT 4-10M TIES @ 300 TYPE 7	750Ø 14-35M VERT 1-10M TIE @ 300 TYPE 1	475x900 14-35M VERT 4-10M TIES @ 300 TYPE 7	475x900 14-35M VERT 4-10M TIES @ 300 TYPE 7	475x900 14-35M VERT 4-10M TIES @ 300 TYPE 7	475x900 14-35M VERT 4-10M TIES @ 300 TYPE 7	750Ø 14-35M VERT 1-10M TIE @ 300 TYPE 1	750Ø 14-35M VERT 1-10M TIE @ 300 TYPE 1	475x900 14-35M VERT 4-10M TIES @ 300 TYPE 7	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1				
9TH	550x900 18-35M VERT 4-10M TIES @ 300 TYPE 12	550x900 18-35M VERT 4-10M TIES @ 300 TYPE 12	650x1000 20-35M VERT 4-10M TIES @ 300 TYPE 15	500x1000 18-35M VERT 4-10M TIES @ 300 TYPE 9	475x900 14-35M VERT 4-10M TIES @ 300 TYPE 7	750Ø 14-35M VERT 1-10M TIE @ 300 TYPE 1	475x900 14-35M VERT 4-10M TIES @ 300 TYPE 7	475x900 14-35M VERT 4-10M TIES @ 300 TYPE 7	475x900 14-35M VERT 4-10M TIES @ 300 TYPE 7	475x900 14-35M VERT 4-10M TIES @ 300 TYPE 7	750Ø 14-35M VERT 1-10M TIE @ 300 TYPE 1	750Ø 14-35M VERT 1-10M TIE @ 300 TYPE 1	475x900 14-35M VERT 4-10M TIES @ 300 TYPE 7	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-25M VERT 1-10M TIE @ 300 TYPE 1				
8TH	550x900 20-35M VERT 4-10M TIES @ 300 TYPE 15	550x900 20-35M VERT 4-10M TIES @ 300 TYPE 15	650x1000 24-35M VERT 4-10M TIES @ 300 TYPE 17	500x1000 20-35M VERT 4-10M TIES @ 300 TYPE 13	475x900 16-35M VERT 4-10M TIES @ 300 TYPE 11	750Ø 16-35M VERT 1-10M TIE @ 300 TYPE 1	475x900 16-35M VERT 4-10M TIES @ 300 TYPE 11	475x900 16-35M VERT 4-10M TIES @ 300 TYPE 11	475x900 16-35M VERT 4-10M TIES @ 300 TYPE 11	475x900 16-35M VERT 4-10M TIES @ 300 TYPE 11	750Ø 16-35M VERT 1-10M TIE @ 300 TYPE 1	750Ø 16-35M VERT 1-10M TIE @ 300 TYPE 1	475x900 16-35M VERT 4-10M TIES @ 300 TYPE 11	650Ø 8-30M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-30M VERT 1-10M TIE @ 300 TYPE 1	650Ø 8-30M VERT 1-10M TIE @ 300 TYPE 1				
7TH	550x900 20-35M VERT 4-10M TIES @ 300 TYPE 15	550x900 20-35M VERT 4-10M TIES @ 300 TYPE 15	650x1000 24-35M VERT 4-10M TIES @ 300 TYPE 17	500x1000 20-35M VERT 4-10M TIES @ 300 TYPE 13	475x900 18-35M VERT 4-10M TIES @ 300 TYPE 14	750Ø 16-35M VERT 1-10M TIE @ 300 TYPE 1	475x900 18-35M VERT 4-10M TIES @ 300 TYPE 14	475x900 18-35M VERT 4-10M TIES @ 300 TYPE 14	475x900 18-35M VERT 4-10M TIES @ 300 TYPE 14	475x900 18-35M VERT 4-10M TIES @ 300 TYPE 14	750Ø 16-35M VERT 1-10M TIE @ 300 TYPE 1	750Ø 16-35M VERT



TYPICAL STAIR A & B SECTION AT FOOTING

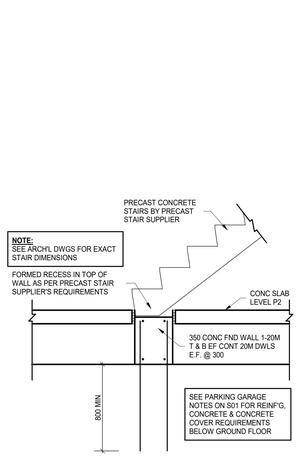


TYPICAL STAIR SECTION FROM LANDING TO FLOOR LEVEL

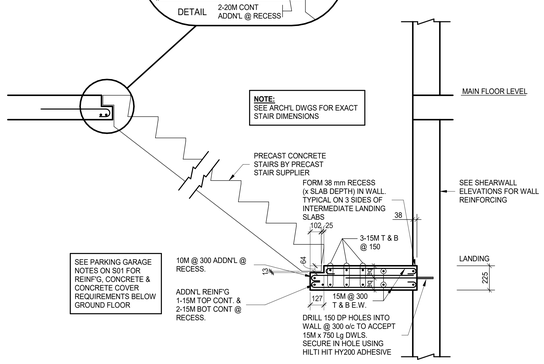


TYPICAL STAIRSECTION FROM FLOOR LEVEL TO LANDING

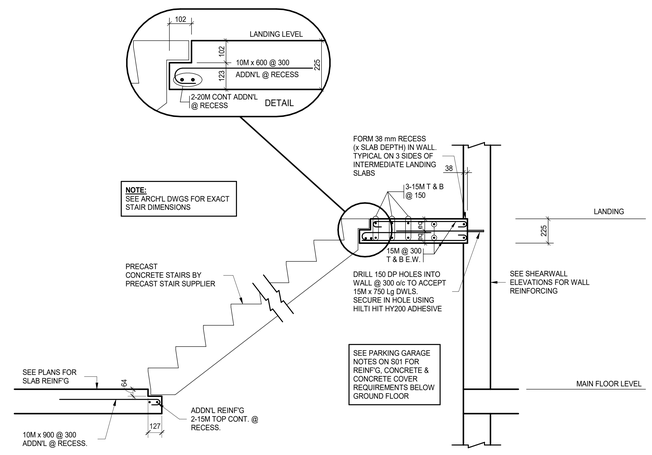
TYPICAL DETAILS @ CAST-IN PLACE STAIRS



TYPICAL STAIR A & B SECTION AT FOOTING

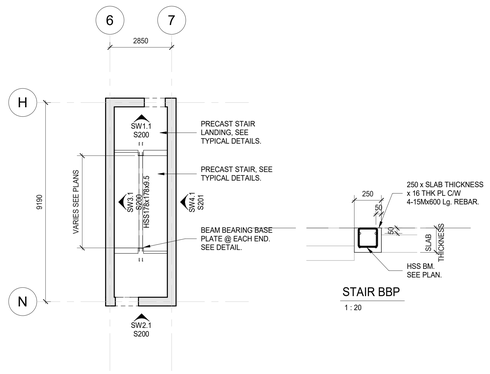


TYPICAL STAIR SECTION FROM LANDING TO FLOOR LEVEL



TYPICAL STAIR SECTION FROM FLOOR LEVEL TO LANDING

TYPICAL DETAILS @ PRECAST STAIRS



STAIR SEPARATOR PLAN DETAIL
1 : 100

STAIR BBP
1 : 20

TYPICAL STAIR SECTION FROM LANDING TO FLOOR LEVEL

TYPICAL STAIR SECTION FROM FLOOR LEVEL TO LANDING

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landscape architect | architecte paysagiste

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project north

nord reel
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no	revisions	date
5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 66% IRG & CLIENT BUDGETING	25-03-28
2	ISSUE FOR EXCAVATION TENDER	24-10-30
1	ISSUE FOR REVIEW	24-09-13

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
B. J. ARMSTRONG
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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project title | titre du projet

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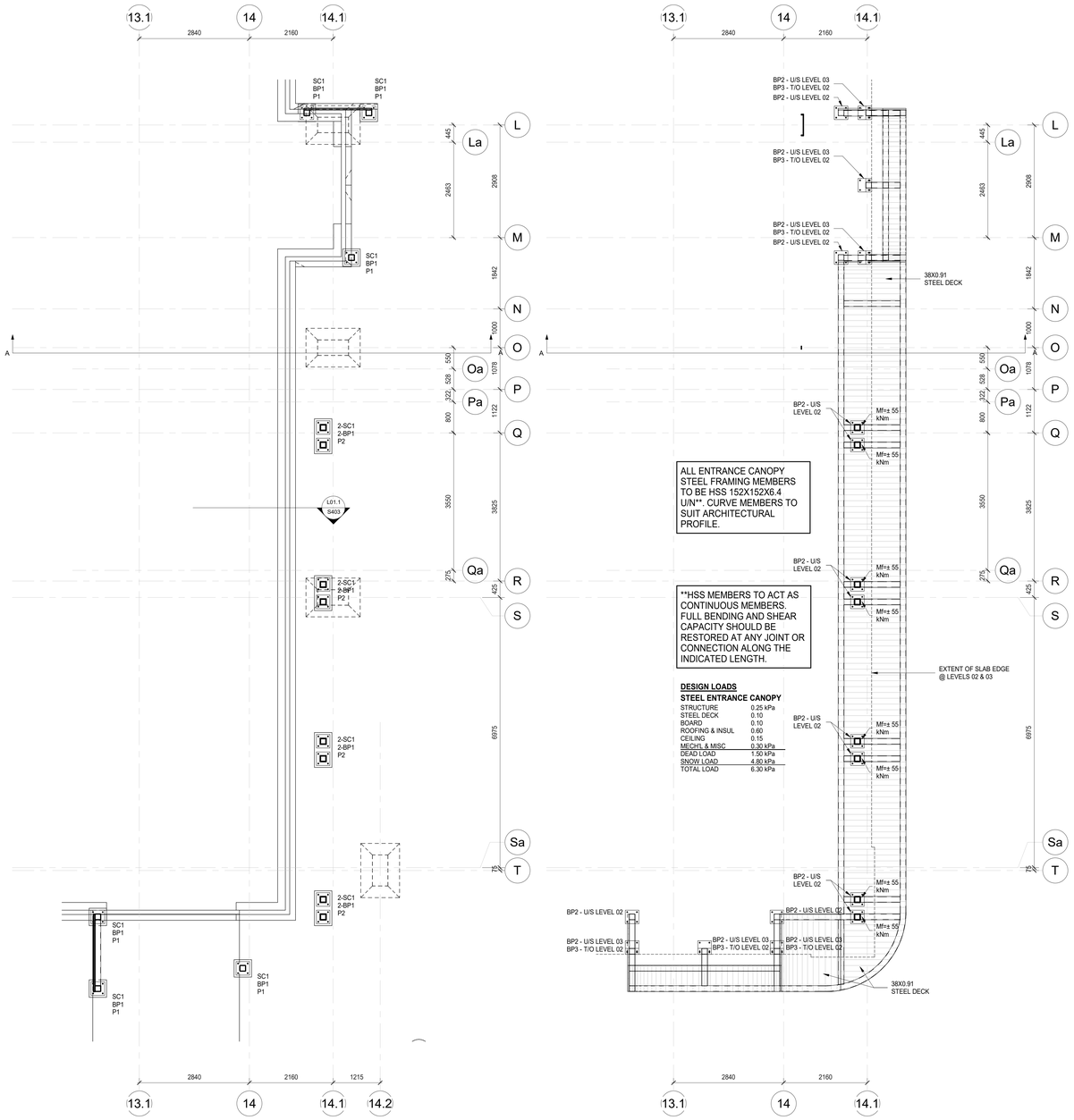
STAIR SECTIONS & DETAILS

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**As indicated**
date | date	**05/28/24**

drawing number | numéro du dessin

S07



FEATURE CANOPY LEVEL 01 PLAN

1 : 50

FEATURE CANOPY FRAMING PLAN

1 : 50

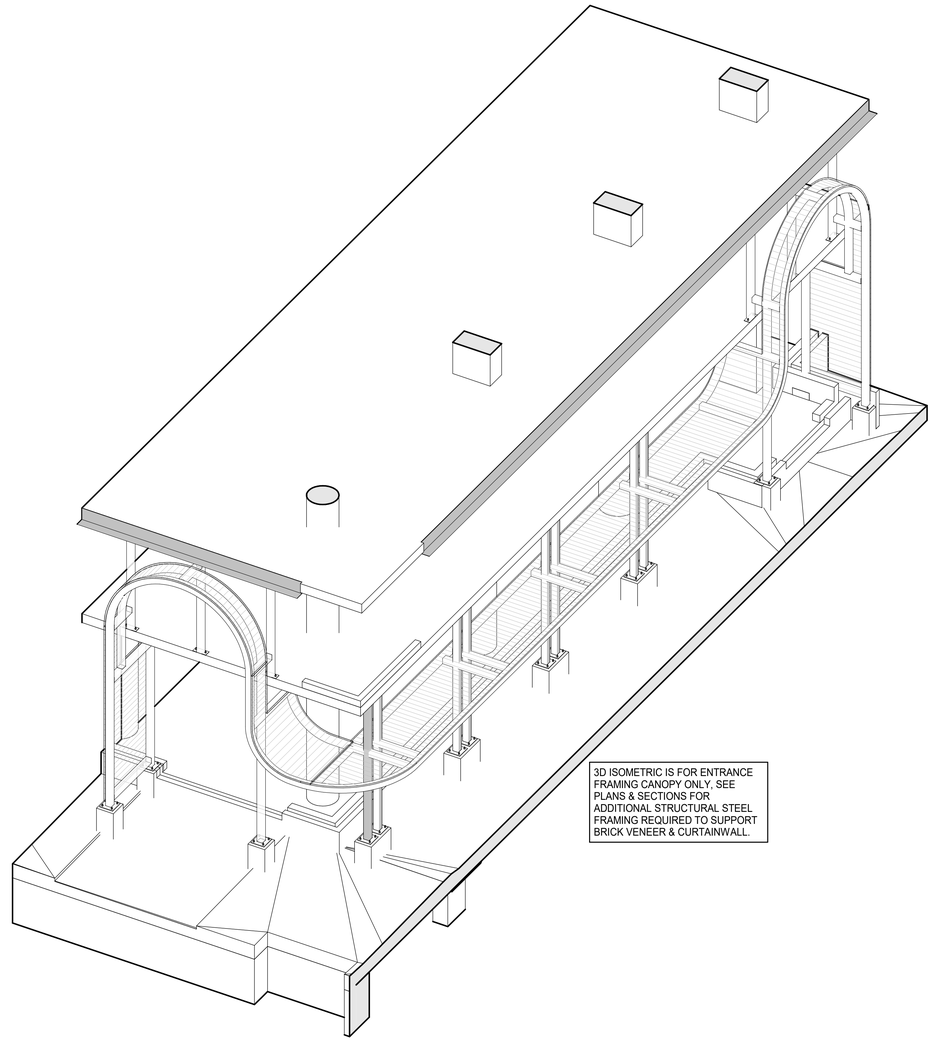
ALL ENTRANCE CANOPY STEEL FRAMING MEMBERS TO BE HSS 152X152X6.4 U/N**. CURVE MEMBERS TO SUIT ARCHITECTURAL PROFILE.

**HSS MEMBERS TO ACT AS CONTINUOUS MEMBERS. FULL BENDING AND SHEAR CAPACITY SHOULD BE RESTORED AT ANY JOINT OR CONNECTION ALONG THE INDICATED LENGTH.

DESIGN LOADS

STEEL ENTRANCE CANOPY

STRUCTURE	0.25 kPa
STEEL DECK	0.10
BOARD	0.10
ROOFING & INSUL	0.60
CEILING	0.15
MECHL & MISC	0.30 kPa
DEAD LOAD	1.50 kPa
SNOW LOAD	4.80 kPa
TOTAL LOAD	6.30 kPa



3D ISOMETRIC IS FOR ENTRANCE FRAMING CANOPY ONLY, SEE PLANS & SECTIONS FOR ADDITIONAL STRUCTURAL STEEL FRAMING REQUIRED TO SUPPORT BRICK VENEER & CURTAINWALL.

CLV GROUP DEVELOPMENTS

client

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Goodkey, Weedmark & Associates Ltd.

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mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

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project north

nord reel
true north

5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
no	revisions	date

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
B.A.ARMSTRONG
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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GLADSTONE & LORETTA RESIDENTIAL TOWER

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drawing title | titre du dessin

FEATURE CANOPY PLANS & DETAILS

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 50**
date | date	**06/14/25**

drawing number | numéro du dessin

S08

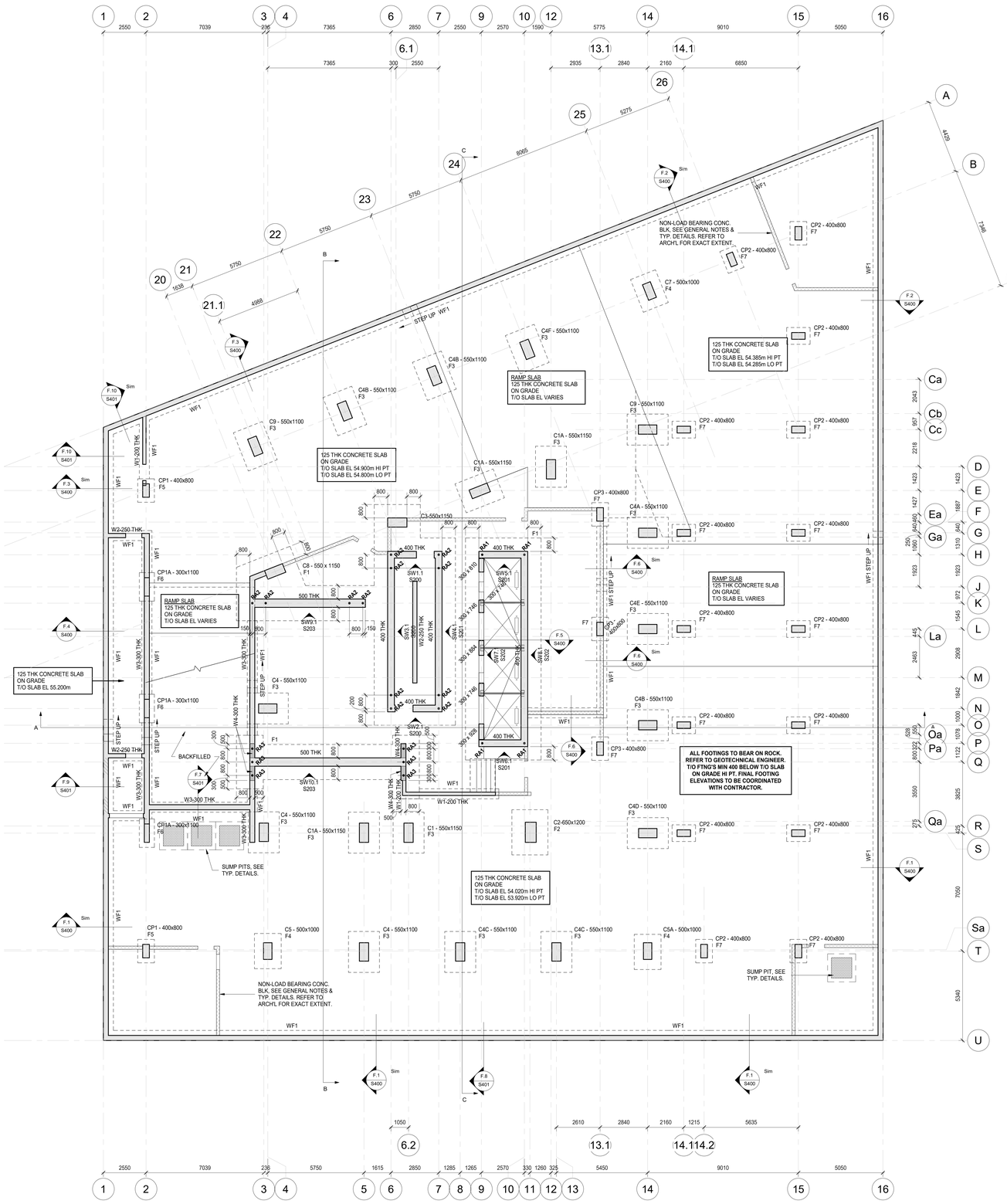
DESIGN LOADS

CONCRETE STAIRS

CONCRETE STAIR THROAT	3.60 kPa
CONCRETE TREADS	2.40 kPa
DEAD LOAD	6.00 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.80 kPa

CONCRETE STAIR LANDINGS

200 CONC SLAB	4.75 kPa
DEAD LOAD	4.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	9.55 kPa



CONCRETE WALL REINF'G SCHEDULE

W1 - 200 THK WALL
15M T & B CONT. EF
15M @ 450 VERT EF
15M @ 450 HORIZ EF
15M DWLS @ 450 EF

W2 - 250 THK WALL
15M T & B CONT. EF
15M @ 300 VERT EF
15M @ 300 HORIZ EF
15M DWLS @ 300 EF

W3 - 300 THK WALL
15M T & B CONT. EF
15M @ 300 VERT EF
15M @ 300 HORIZ EF
15M DWLS @ 300 EF

W4 - 300 THK WALL (45 MPa)
25M T & B CONT. EF
25M @ 200 VERT EF
25M @ 200 HORIZ EF
25M DWLS @ 200 EF

W5 - 300 THK WALL BEAM
4-25M T & B CONT. @ 75 EF
15M @ 200 VERT EF
15M @ 200 HORIZ EF
15M DWLS @ 200 EF
ALL REINF'G TO BE CONTINUOUS W/ 90° BENDS @ ENDS

NOTES

1. SEE S200's DWGS. FOR SHEARWALL ELEVATIONS. THE ELEVATION VIEW OF THE SHEARWALL IS TAKEN FROM THE SIDE OF THE WALL ON WHICH THE SHEARWALL DESIGNATION (SW#) IS SHOWN ON PLAN.

2. SUPPORTS FOR CURTAIN WALLS & PRECAST PANELS ARE TO BE DESIGNED & DETAILED BY CURTAIN WALL AND PRECAST SUPPLIERS RESPECTIVELY. SHOP DRAWINGS ARE TO BE STAMPED & SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN ONTARIO. ALL SUPPORTS ARE TO BE INSPECTED DURING CONSTRUCTION BY THE SUPPORT DESIGN ENGINEER.

3. ONLY MECHANICAL SLAB OPENINGS LARGER THAN 300 x 300 OR 300 ∅ ARE SHOWN ON THIS DRAWING. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF MECHANICAL SLAB OPENINGS SMALLER THAN THOSE NOTED ABOVE. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF OPENINGS WHICH ARE SHOWN ON THIS DRAWING. REFER TO GENERAL NOTES & TYPICAL DETAILS ON DRAWING S01, S02 & S03 FOR ADDITIONAL REINFORCING REQUIREMENTS AROUND OPENINGS SHOWN ON THIS DRAWING.

CONCRETE COMPRESSIVE STRENGTHS:

SLAB ON GRADE - 25 MPa (TYPE C-4 NO AIR ENTRAINMENT)
FOUNDATION WALLS - 35 MPa (TYPE C-1)
RAMP & MISC WALLS - 35 MPa (TYPE C-1)
FOOTINGS - 35 MPa (TYPE C-1)
RAMP SLAB - 35 MPa (TYPE C-1) W/ CORROSION INHIBITOR
CURBS - 25 MPa (TYPE N)
TOWER COLUMNS & SHEARWALLS - 50 MPa (TYPE C-1)
PODIUM COLUMNS DESIGNATED "CPX" - 35 MPa (TYPE C-1)

CLV GROUP DEVELOPMENTS

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CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

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Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-14
3	ISSUE FOR 66% WD & CLIENT BUDGETING	25-03-28
2	ISSUE FOR EXCAVATION TENDER	24-10-30
no	revisions	date

stamp | timbre

PROFESSIONAL ENGINEER
25-04-07
B.J.ARMSTRONG
100067882
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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FOUNDATION / P3 PARKING PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/28/24**

drawing number | numéro du dessin

S100

DESIGN LOADS

CONCRETE STAIRS

CONCRETE STAIR THROAT	3.60 kPa
CONCRETE TREADS	2.40 kPa
DEAD LOAD	6.00 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.80 kPa

CONCRETE STAIR LANDINGS

200 CONC SLAB	4.75 kPa
DEAD LOAD	4.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	9.55 kPa

SUSPENDED RAMP

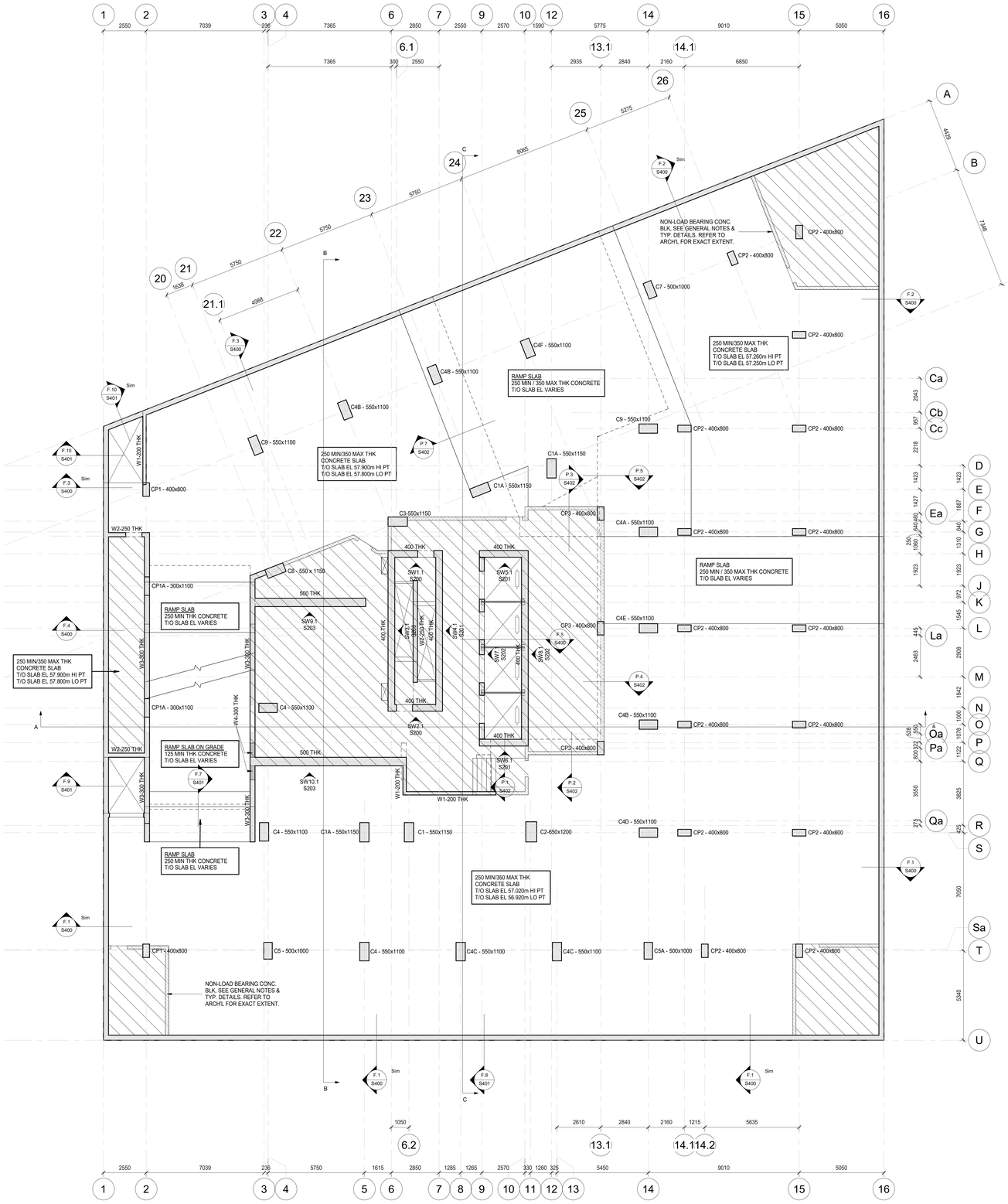
250 CONC SLAB	5.90 kPa
MEMBRANE	0.25
MECH / MISC	0.25
DEAD LOAD	6.40 kPa
LIVE LOAD	2.40 kPa
TOTAL LOAD	8.80 kPa

PARKING TYPICAL

250 CONC SLAB	5.90 kPa
67 AVG TOPPING	1.60
MEMBRANE	0.25
MECH / MISC	0.25
DEAD LOAD	8.00 kPa
LIVE LOAD	2.40 kPa
TOTAL LOAD	10.40 kPa

PARKING MECH'L / STORAGE AREAS / CORRIDORS

250 CONC SLAB	5.90 kPa
100 AVG TOPPING	2.40
MECH / MISC	0.25
DEAD LOAD	8.55 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	13.35 kPa



CONCRETE WALL REINF'G SCHEDULE

W1 - 200 THK WALL
15M T & B CONT. EF
15M @ 450 VERT EF
15M @ 450 HORIZ EF
15M DWLS @ 450 EF

W2 - 250 THK WALL
15M T & B CONT. EF
15M @ 300 VERT EF
15M @ 300 HORIZ EF
15M DWLS @ 300 EF

W3 - 300 THK WALL
15M T & B CONT. EF
15M @ 300 VERT EF
15M @ 300 HORIZ EF
15M DWLS @ 300 EF

W4 - 300 THK WALL (45 MPa)
25M T & B CONT. EF
25M @ 200 VERT EF
25M @ 200 HORIZ EF
25M DWLS @ 200 EF

W5 - 300 THK WALL BEAM
4-25M T & B CONT. @ 75 EF
15M @ 200 VERT EF
15M @ 200 HORIZ EF
15M DWLS @ 200 EF
ALL REINF'G TO BE CONTINUOUS W/ 90° BENDS @ ENDS

NOTES

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CONCRETE COMPRESSIVE STRENGTHS:

FOUNDATION WALLS - 35 MPa (TYPE C-1)
PARKING, RAMP & MISC WALLS - 35 MPa (TYPE C-1)
W/ CORROSION INHIBITOR
CURBS - 25 MPa (TYPE N)
TOWER COLUMNS & SHEARWALLS - 50 MPa (TYPE C-1)
PODIUM COLUMNS DESIGNATED "CPX" - 35 MPa (TYPE C-1)

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wsp

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2	ISSUE FOR EXCAVATION TENDER	24-10-30
no	revisions	date

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
B.J.ARMSTRONG
100068861
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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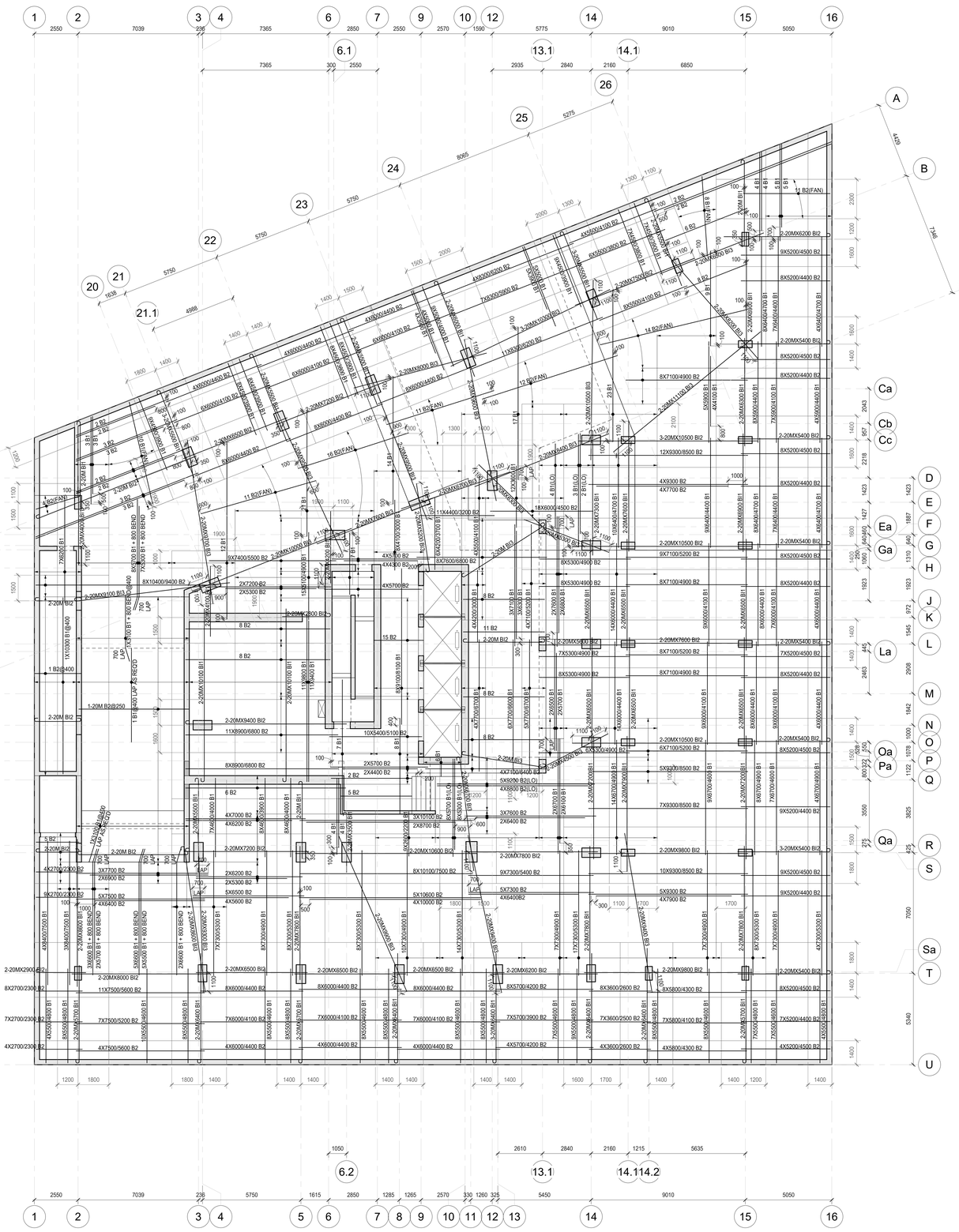
P2 PARKING CONCRETE LAYOUT PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S101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A B C Ca Cb Cc D E F Ea G Ga H J K L La M N O Oa P Pa Q R S Qa Sa T U
2550 7039 230 7365 2850 2550 2570 1590 5775 9010 5050
7365 300 2550 2935 2840 2160 6850
1050 2610 2840 2160 1215 5635
2550 7039 230 5750 1615 2850 1285 1265 2570 330 1260 325 5450 9010 5050
5750 8065 5750 5750 5750 1638 4988
2300 2300 2300



SLAB REINFORCING NOTES:

1. BAR PLACING ORDER
T1 = TOP UPPER LAYER
T2 = TOP LOWER LAYER
B2 = BOTTOM UPPER LAYER
B1 = BOTTOM LOWER LAYER
B.I.3 = BOTTOM INTEGRITY BOT. UPPER UPPER LAYER
B.I.2 = BOTTOM INTEGRITY BOT. UPPER LAYER
B.I.1 = BOTTOM INTEGRITY BOT. LOWER LAYER
2. ALL REINFORCING BARS SHOWN ON PLAN TO 15M UNLESS NOTED OTHERWISE
3. B.I.= BOTTOM INTEGRITY REINFORCING. SPACE @ 150 o/c.
4. CONCRETE COVER U/N
PARKING 40 mm TOP
30 mm BOT.

GROUND TO ROOF 25 mm TOP
25 mm BOT.

SEE ADDITIONAL PARKING LEVEL NOTES FOR CONCRETE COVER REQUIREMENTS AT PARKING LEVELS

5.WHERE REINFORCING LENGTHS EXCEED MAXIMUM AVAILABLE LENGTH, SPLICE REINFORCING BARS AS NOTED ON REINFORCING BAR LAP LENGTH TABLE ON S01

SHEAR REINFORCING (NOTED AS SR#)

NOTES:
1. SEE PLAN FOR LOCATIONS
2. ALL SHEAR REINF'G IS TO SPACED EQUALLY ACROSS COLUMN WIDTH
3. SHEAR REINF'G TO BE TIED AT ALL INTERSECTIONS
4. AT WALL ENDS ASSUME COLUMN LENGTH OF 1000 mm FOR DETAILING OF SHEAR REINF'G
5. COLUMN LENGTH INCLUDES COLUMN CAPITALS IF PRESENT
6. SEE SHEAR REINFORCING DETAILS ALSO.

NOTE: REINFORCING AT TEMPORARY MAN & MAT'L HOIST OPENING

1. SLAB REINFORCING THAT CROSSES PERIMETER OF SLAB OPENING IS TO BE CUT AT POINT WHERE IT CROSSES.
2. WHEN REINFORCING CROSSES ENTIRE SLAB OPENING, PROVIDE A COUPLED REINFORCING BAR INTO COUPLER ON EACH SIDE OF THE OPENING & LAP 1000 mm MINIMUM AT CENTER OF CRANE OPENING.
3. PROVIDE THE APPROPRIATE THREADED CAST-IN REINFORCING BAR COUPLER FOR EACH CUT REINFORCING BAR.
4. AFTER REMOVAL OF HOIST, THREAD CUT-OFF REINFORCING BARS INTO COUPLERS IN ADVANCE OF SLAB OPENING INFILL.
5. REFER TO CONCRETE LAYOUT DRAWING & DRAWING S02 FOR ADDITIONAL OPENING INFORMATION.
6. SLAB ALL AROUND TEMPORARY SLAB OPENING TO BE RESHORED UNTIL TEMPORARY SLAB OPENING IS INFILLED.

NOTE:
REFER TO TYPICAL DETAILS FOR SLAB REINFORCING NOTATION & SHEAR REINFORCING DETAILS

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 66% WD & CLIENT BUDGETING	25-03-28
1	ISSUE FOR REVIEW	24-09-13

no revisions date

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
B.J. ARMSTRONG
100068867
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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drawing title | titre du dessin

P2 PARKING TOP REINFORCING PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S103

DESIGN LOADS

CONCRETE STAIRS

CONCRETE STAIR THROAT	3.60 kPa
CONCRETE TREADS	2.40 kPa
DEAD LOAD	6.00 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.80 kPa

CONCRETE STAIR LANDINGS

200 CONC SLAB	4.75 kPa
DEAD LOAD	4.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	9.55 kPa

SUSPENDED RAMP

250 CONC SLAB	5.90 kPa
MEMBRANE	0.25
MECH / MISC	0.25
DEAD LOAD	6.40 kPa
LIVE LOAD	2.40 kPa
TOTAL LOAD	8.80 kPa

PARKING TYPICAL

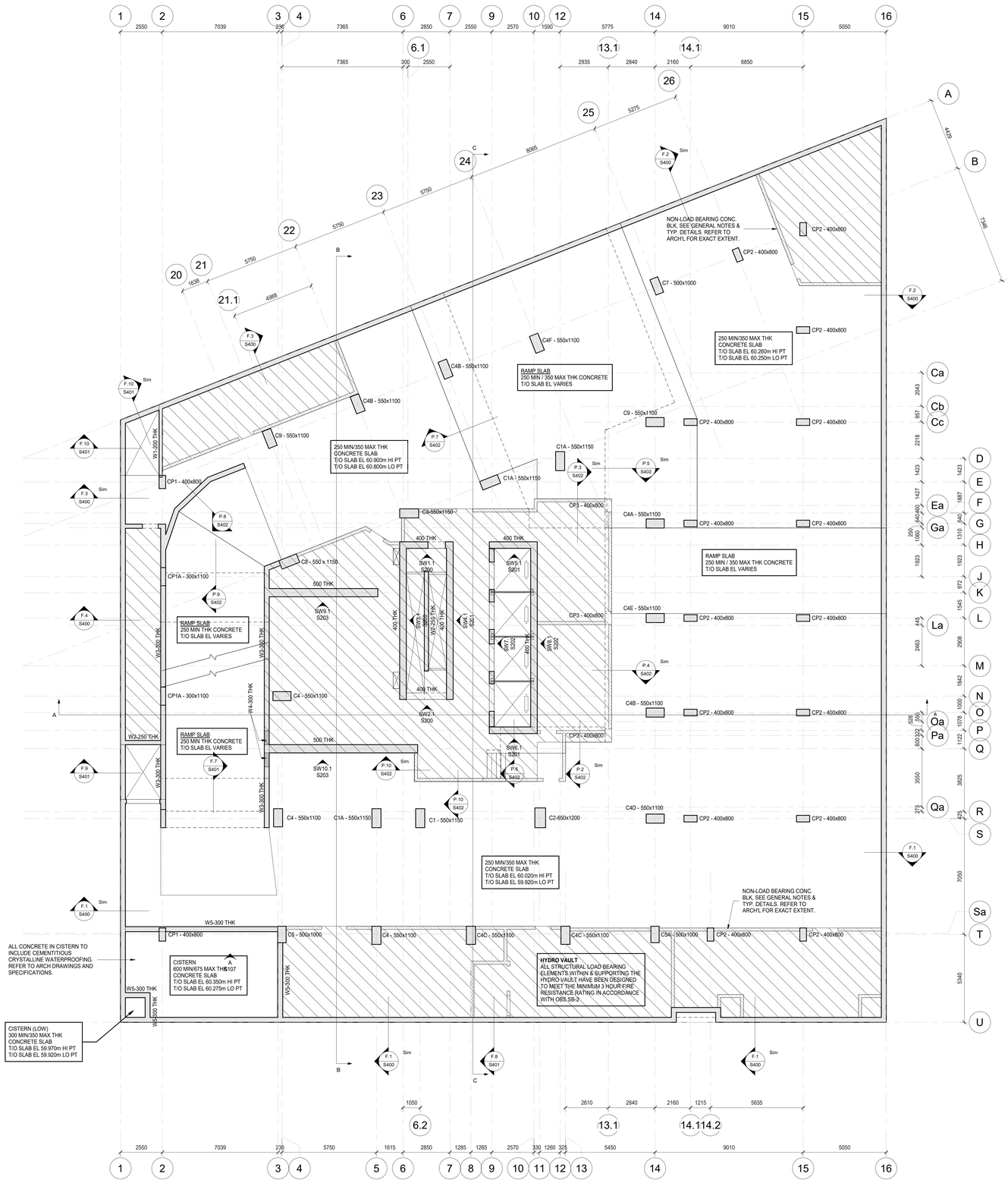
250 CONC SLAB	5.90 kPa
67 AVG TOPPING	1.60
MEMBRANE	0.25
MECH / MISC	0.25
DEAD LOAD	8.00 kPa
LIVE LOAD	2.40 kPa
TOTAL LOAD	10.40 kPa

PARKING MECH'L / STORAGE AREAS / CORRIDORS

250 CONC SLAB	5.90 kPa
109 AVG TOPPING	2.40
MECH / MISC	0.25
DEAD LOAD	8.55 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	13.35 kPa

CISTERN

600 CONC SLAB	14.20 kPa
50 AVG TOPPING	0.60
MEMBRANE	0.25
MECH / MISC	0.25
DEAD LOAD	15.30 kPa
LIVE LOAD	18.00 kPa
TOTAL LOAD	33.30 kPa



CONCRETE WALL REINF'G SCHEDULE

W1 - 200 THK WALL
15M T & B CONT. EF
15M @ 450 VERT EF
15M @ 450 HORIZ EF
15M DWLS @ 450 EF

W2 - 250 THK WALL
15M T & B CONT. EF
15M @ 300 VERT EF
15M @ 300 HORIZ EF
15M DWLS @ 300 EF

W3 - 300 THK WALL
15M T & B CONT. EF
15M @ 300 VERT EF
15M @ 300 HORIZ EF
15M DWLS @ 300 EF

W4 - 300 THK WALL (45 MPa)
25M T & B CONT. EF
25M @ 200 VERT EF
25M @ 200 HORIZ EF
25M DWLS @ 200 EF

W5 - 300 THK WALL BEAM
4-25M T & B CONT. @ 75 EF
15M @ 200 VERT EF
15M @ 200 HORIZ EF
15M DWLS @ 200 EF
ALL REINF'G TO BE CONTINUOUS W/ 90° BENDS @ ENDS

NOTES

1. SEE S200's DWGS. FOR SHEARWALL ELEVATIONS. THE ELEVATION VIEW OF THE SHEARWALL IS TAKEN FROM THE SIDE OF THE WALL ON WHICH THE SHEARWALL DESIGNATION (SW#) IS SHOWN ON PLAN.

2. SUPPORTS FOR CURTAIN WALLS & PRECAST PANELS ARE TO BE DESIGNED & DETAILED BY CURTAIN WALL AND PRECAST SUPPLIERS RESPECTIVELY. SHOP DRAWINGS ARE TO BE STAMPED & SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN ONTARIO. ALL SUPPORTS ARE TO BE INSPECTED DURING CONSTRUCTION BY THE SUPPORT DESIGN ENGINEER.

3. ONLY MECHANICAL SLAB OPENINGS LARGER THAN 300 x 300 OR 300 ∅ ARE SHOWN ON THIS DRAWING. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF MECHANICAL SLAB OPENINGS SMALLER THAN THOSE NOTED ABOVE. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF OPENINGS WHICH ARE SHOWN ON THIS DRAWING. REFER TO GENERAL NOTES & TYPICAL DETAILS ON DRAWING S01, S02 & S03 FOR ADDITIONAL REINFORCING REQUIREMENTS AROUND OPENINGS SHOWN ON THIS DRAWING.

CONCRETE COMPRESSIVE STRENGTHS:

FOUNDATION WALLS - 35 MPa (TYPE C-1)
PARKING, RAMP & MISC WALLS - 35 MPa (TYPE C-1)
W/ CORROSION INHIBITOR
CURBS - 25 MPa (TYPE N)
TOWER COLUMNS & SHEARWALLS - 50 MPa (TYPE C-1)
PODIUM COLUMNS DESIGNATED "CPX" - 35 MPa (TYPE C-1)

CLV GROUP DEVELOPMENTS

client

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CONSULTING STRUCTURAL ENGINEERS

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GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-14
3	ISSUE FOR 66% WD & CLIENT BUDGETING	25-03-28
2	ISSUE FOR EXCAVATION TENDER	24-10-30
1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

CONSTRUCTION PRACTICES ACT
25-06-09
B.J.ARMSTRONG
100068
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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GLADSTONE & LORETTA RESIDENTIAL TOWER

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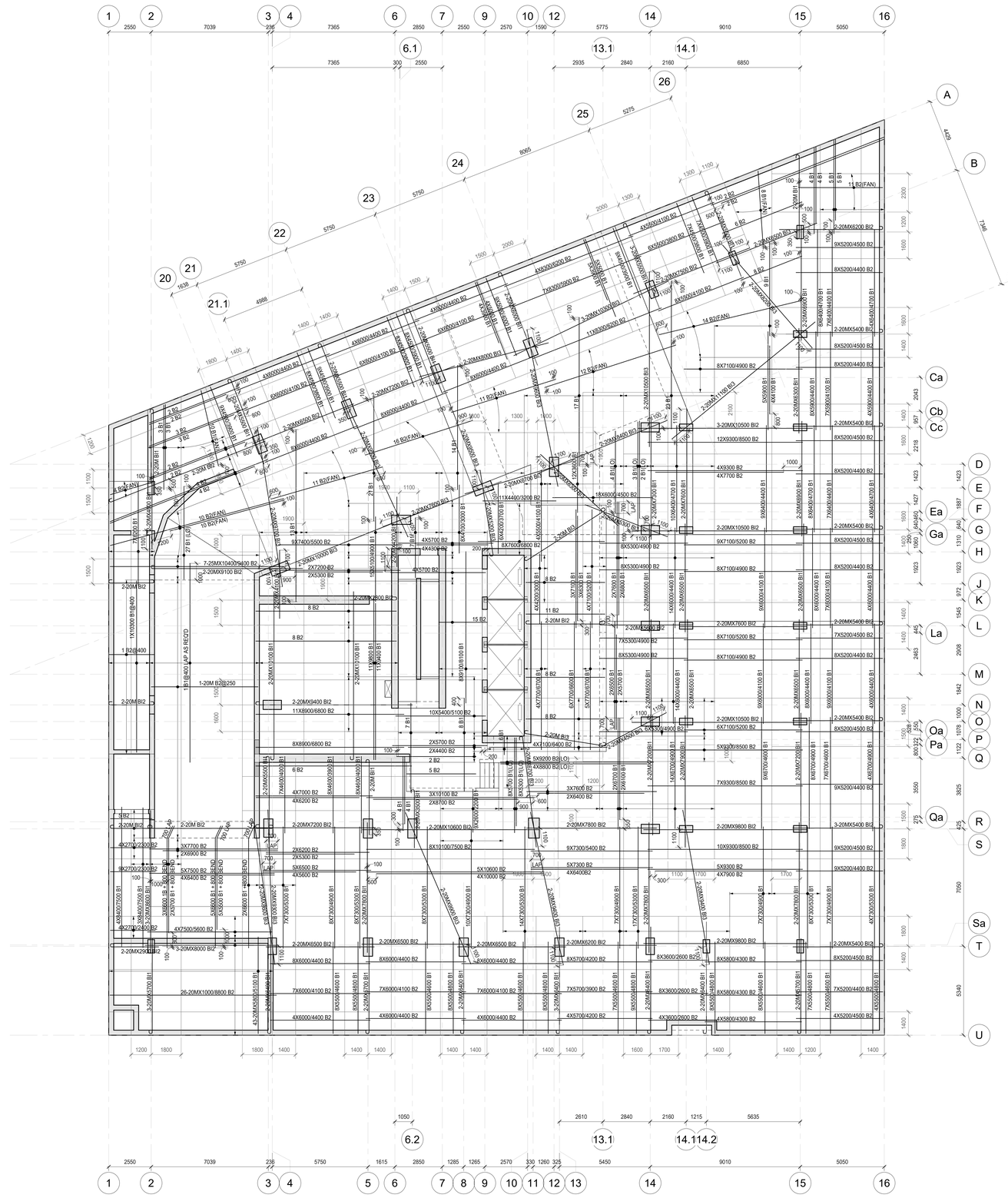
drawing title | titre du dessin

P1 PARKING CONCRETE LAYOUT PLAN

project number | numero du projet	21-045
drawn | dessiné	PMD/DG
checked | verifié	BA
scale | échelle	1 : 100
date | date	05/31/24

drawing number | numéro du dessin

S104



SLAB REINFORCING NOTES:

1. BAR PLACING ORDER
T1 = TOP UPPER LAYER
T2 = TOP LOWER LAYER
B2 = BOTTOM UPPER LAYER
B1 = BOTTOM LOWER LAYER
B.1.3 = BOTTOM INTEGRITY BOT. UPPER UPPER LAYER
B.1.2 = BOTTOM INTEGRITY BOT. UPPER LAYER
B.1.1 = BOTTOM INTEGRITY BOT. LOWER LAYER
2. ALL REINFORCING BARS SHOWN ON PLAN TO 15M UNLESS NOTED OTHERWISE
3. B.I.= BOTTOM INTEGRITY REINFORCING. SPACE @ 150 o/c.
4. CONCRETE COVER UIN
PARKING 40 mm TOP
30 mm BOT.
GROUND TO ROOF 25 mm TOP
25 mm BOT.

SEE ADDITIONAL PARKING LEVEL NOTES FOR CONCRETE COVER REQUIREMENTS AT PARKING LEVELS

5.WHERE REINFORCING LENGTHS EXCEED MAXIMUM AVAILABLE LENGTH, SPLICE REINFORCING BARS AS NOTED ON REINFORCING BAR LAP LENGTH TABLE ON S01

SHEAR REINFORCING (NOTED AS SR#)

NOTES:
1. SEE PLAN FOR LOCATIONS
2. ALL SHEAR REINFG IS TO SPACED EQUALLY ACROSS COLUMN WIDTH
3. SHEAR REINFG TO BE TIED AT ALL INTERSECTIONS
4. AT WALL ENDS ASSUME COLUMN LENGTH OF 1000 mm FOR DETAILING OF SHEAR REINFG
5. COLUMN LENGTH INCLUDES COLUMN CAPITALS IF PRESENT
6. SEE SHEAR REINFORCING DETAILS ALSO.

NOTE: REINFORCING AT TEMPORARY MAN & MAT'L HOIST OPENING

1. SLAB REINFORCING THAT CROSSES PERIMETER OF SLAB OPENING IS TO BE CUT AT POINT WHERE IT CROSSES.
2. WHEN REINFORCING CROSSES ENTIRE SLAB OPENING, PROVIDE A COUPLED REINFORCING BAR INTO COUPLER ON EACH SIDE OF THE OPENING & LAP 1000 mm MINIMUM AT CENTER OF CRANE OPENING.
3. PROVIDE THE APPROPRIATE THREADED CAST-IN REINFORCING BAR COUPLER FOR EACH CUT REINFORCING BAR.
4. AFTER REMOVAL OF HOIST, THREAD CUT-OFF REINFORCING BARS INTO COUPLERS IN ADVANCE OF SLAB OPENING INFILL.
5. REFER TO CONCRETE LAYOUT DRAWING & DRAWING S02 FOR ADDITIONAL OPENING INFORMATION.
6. SLAB ALL AROUND TEMPORARY SLAB OPENING TO BE RESHORED UNTIL TEMPORARY SLAB OPENING IS INFILLED.

NOTE:
REFER TO TYPICAL DETAILS FOR SLAB REINFORCING NOTATION & SHEAR REINFORCING DETAILS

CLV GROUP DEVELOPMENTS

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CONSULTING STRUCTURAL ENGINEERS

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Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur mécanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord réel
true north

5	ISSUED FOR TENDER	25-04-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 66% WD & CLIENT BUDGETING	25-03-28
1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

I CERTIFY THAT I AM A QUALIFIED PERSON
25-04-09
B. ARMSTRONG
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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GLADSTONE & LORETTA RESIDENTIAL TOWER

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drawing title | titre du dessin

P1 PARKING BOTTOM REINFORCING PLAN

project number | numero du projet	21-045
drawn | dessiné	PMD/DG
checked | verifié	BA
scale | échelle	1 : 100
date | date	05/31/24

drawing number | numéro du dessin

S105



SLAB REINFORCING NOTES:

1. BAR PLACING ORDER
T1 = TOP UPPER LAYER
T2 = TOP LOWER LAYER
B2 = BOTTOM UPPER LAYER
B1 = BOTTOM LOWER LAYER
B.1.3 = BOTTOM INTEGRITY BOT. UPPER UPPER LAYER
B.1.2 = BOTTOM INTEGRITY BOT. UPPER LAYER
B.I.1 = BOTTOM INTEGRITY BOT. LOWER LAYER
2. ALL REINFORCING BARS SHOWN ON PLAN TO 15M UNLESS NOTED OTHERWISE
3. B.I.= BOTTOM INTEGRITY REINFORCING. SPACE @ 150 o/c.
4. CONCRETE COVER UIN
PARKING 40 mm TOP
30 mm BOT.
GROUND TO ROOF 25 mm TOP
25 mm BOT.

SEE ADDITIONAL PARKING LEVEL NOTES FOR CONCRETE COVER REQUIREMENTS AT PARKING LEVELS

5.WHERE REINFORCING LENGTHS EXCEED MAXIMUM AVAILABLE LENGTH, SPLICE REINFORCING BARS AS NOTED ON REINFORCING BAR LAP LENGTH TABLE ON S01

SHEAR REINFORCING (NOTED AS SR#)

NOTES:
1. SEE PLAN FOR LOCATIONS
2. ALL SHEAR REINFG IS TO SPACED EQUALLY ACROSS COLUMN WIDTH
3. SHEAR REINFG TO BE TIED AT ALL INTERSECTIONS
4. AT WALL ENDS ASSUME COLUMN LENGTH OF 1000 mm FOR DETAILING OF SHEAR REINFG
5. COLUMN LENGTH INCLUDES COLUMN CAPITALS IF PRESENT
6. SEE SHEAR REINFORCING DETAILS ALSO.

NOTE: REINFORCING AT TEMPORARY MAN & MAT'L HOIST OPENING

1. SLAB REINFORCING THAT CROSSES PERIMETER OF SLAB OPENING IS TO BE CUT AT POINT WHERE IT CROSSES.
2. WHEN REINFORCING CROSSES ENTIRE SLAB OPENING, PROVIDE A COUPLED REINFORCING BAR INTO COUPLER ON EACH SIDE OF THE OPENING & LAP 1000 mm MINIMUM AT CENTER OF CRANE OPENING.
3. PROVIDE THE APPROPRIATE THREADED CAST-IN REINFORCING BAR COUPLER FOR EACH CUT REINFORCING BAR.
4. AFTER REMOVAL OF HOIST, THREAD CUT-OFF REINFORCING BARS INTO COUPLERS IN ADVANCE OF SLAB OPENING INFILL.
5. REFER TO CONCRETE LAYOUT DRAWING & DRAWING S02 FOR ADDITIONAL OPENING INFORMATION.
6. SLAB ALL AROUND TEMPORARY SLAB OPENING TO BE RESHORED UNTIL TEMPORARY SLAB OPENING IS INFILLED.

NOTE:
REFER TO TYPICAL DETAILS FOR SLAB REINFORCING NOTATION & SHEAR REINFORCING DETAILS

CLV GROUP DEVELOPMENTS

client

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CONSULTING STRUCTURAL ENGINEERS

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GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 60% IFD & CLIENT BUDGETING	25-03-28
1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
ELIANOTTO
100048586
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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drawing title | titre du dessin

P1 PARKING TOP REINFORCING PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S106

DESIGN LOADS

COMMERICAL/AMENITY

250 CONC SLAB	5.90 kPa
PARTITION ALLOWANCE	1.00
FLOORING	0.15
MECH'L & MISC	0.25 kPa
DEAD LOAD	7.30 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	12.10 kPa

CORRIDOR / M & E / STORAGE

250 CONC SLAB	5.90 kPa
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	6.20 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	11.00 kPa

MOVE-IN & GARBAGE ROOM

250 CONC SLAB	5.90 kPa
67 AVG TOPPING	1.60
PARTITION ALLOWANCE	1.00
MECH'L & MISC	0.25 kPa
DEAD LOAD	8.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	13.55 kPa

LOADING BAY

300 CONC SLAB	7.10 kPa
100 AVG TOPPING	2.40
MECH'L & MISC	0.40 kPa
DEAD LOAD	9.90 kPa
LIVE LOAD	7.20 kPa
TOTAL LOAD	17.20 kPa

CONCRETE STAIRS

CONCRETE STAIR THROAT	3.60 kPa
CONCRETE TREADS	2.40 kPa
DEAD LOAD	6.00 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.80 kPa

CONCRETE STAIR LANDINGS

200 CONC SLAB	4.75 kPa
DEAD LOAD	4.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	9.55 kPa

RAMP

250 CONC SLAB	5.90 kPa
MEMBRANE	0.25
MECH / MISC	0.25
DEAD LOAD	6.40 kPa
LIVE LOAD	2.40 kPa
TOTAL LOAD	8.80 kPa

HYDRO TRENCH

250 SLAB	5.90 kPa
67 AVG TOPPING	1.60 kPa
ROOFING & INSULATION	0.60
LANDING SCAPE (1200 MAX)	24.00 kPa
MECH'L & MISC	0.25 kPa
DEAD LOAD	32.35 kPa
LIVE LOAD	12.00 kPa
TOTAL LOAD	44.35 kPa

EXTERIOR PODIUM

LANDSCAPING (600 mm MAX)	12.00 kPa
ROOFING & INSULATION	0.60
100 AVG TOPPING	2.40
300 CONC SLAB	7.10
MECH'L & MISC	0.25 kPa
DEAD LOAD	22.35 kPa
LIVE LOAD	12.00 kPa
TOTAL LOAD	34.35 kPa

NOTE: EXTERIOR BALCONY SLABS

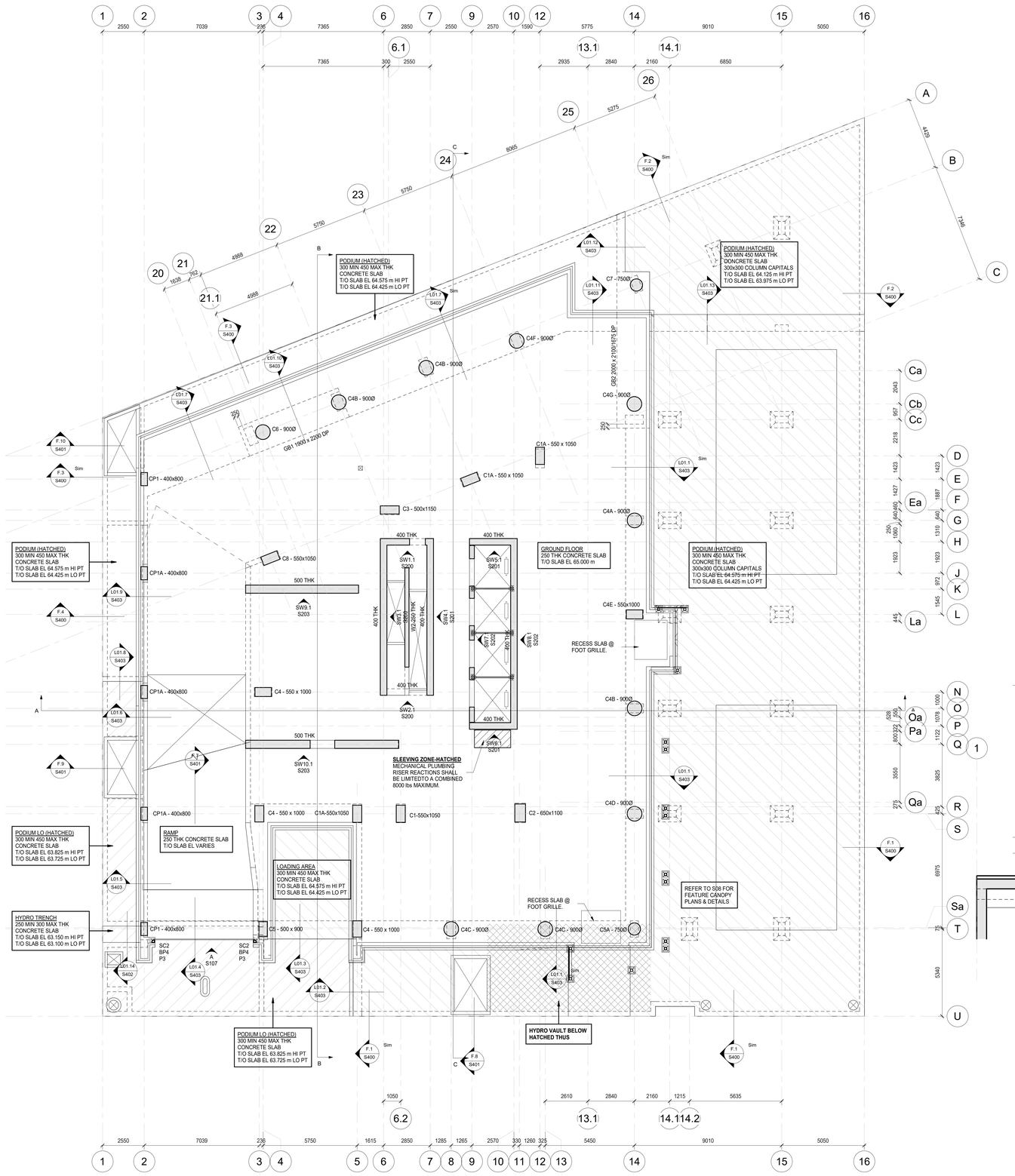
PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-23.1-04 TO GIVE THE FOLLOWING PROPERTIES FOR ALL EXTERIOR EXPOSED CONCRETE BALCONY SLABS.
1. TYPE GU PORTLAND CEMENT
2. MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS = 35 MPa
3. CLASS OF EXPOSURE TO BE C1
4. NOMINAL SIZE OF COARSE AGGREGATE TO BE 20 mm
5. SLUMP AT TIME AND POINT OF DISCHARGE TO BE 75 mm
6. AIR CONTENT TO BE 5-8%

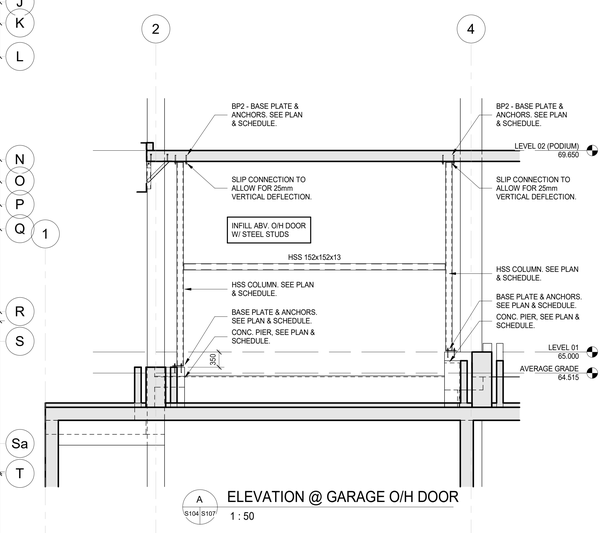
NOTES

1. SEE S200's DWGS. FOR SHEARWALL ELEVATIONS. THE ELEVATION VIEW OF THE SHEARWALL IS TAKEN FROM THE SIDE OF THE WALL ON WHICH THE SHEARWALL DESIGNATION (SW#) IS SHOWN ON PLAN.

2. SUPPORTS FOR CURTAIN WALLS & PRECAST PANELS ARE TO BE DESIGNED & DETAILED BY CURTAIN WALL AND PRECAST SUPPLIERS RESPECTIVELY. SHOP DRAWINGS ARE TO BE STAMPED & SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN ONTARIO. ALL SUPPORTS ARE TO BE INSPECTED DURING CONSTRUCTION BY THE SUPPORT DESIGN ENGINEER.

3. ONLY MECHANICAL SLAB OPENINGS LARGER THAN 300 x 300 OR 300 ∅ ARE SHOWN ON THIS DRAWING. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF MECHANICAL SLAB OPENINGS SMALLER THAN THOSE NOTED ABOVE. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF OPENINGS WHICH ARE SHOWN ON THIS DRAWING. REFER TO GENERAL NOTES & TYPICAL DETAILS ON DRAWING S01, S02 & S03 FOR ADDITIONAL REINFORCING REQUIREMENTS AROUND OPENINGS SHOWN ON THIS DRAWING.





A S104 S107 ELEVATION @ GARAGE O/H DOOR
1 : 50

SLABS & BEAMS - 35 MPa TYPE N
INTERIOR CURBS - 25 MPa TYPE N
EXTERIOR CURBS & PIERS - 35 MPa CLASS C1
RAMP SLAB - 35 MPa (TYPE C-1)
W/ CORROSION INHIBITOR
CURBS - 25 MPa (TYPE N)
TOWER COLUMNS & SHEARWALLS - 50 MPa (TYPE C-1)
PODIUM COLUMNS DESIGNATED "CPX" - 35 MPa (TYPE C-1)

CLV GROUP DEVELOPMENTS

client

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landscape architect | architecte paysagiste

nord du projet
project north

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1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
B.J.ARMSTRONG
100068580
25-04-09
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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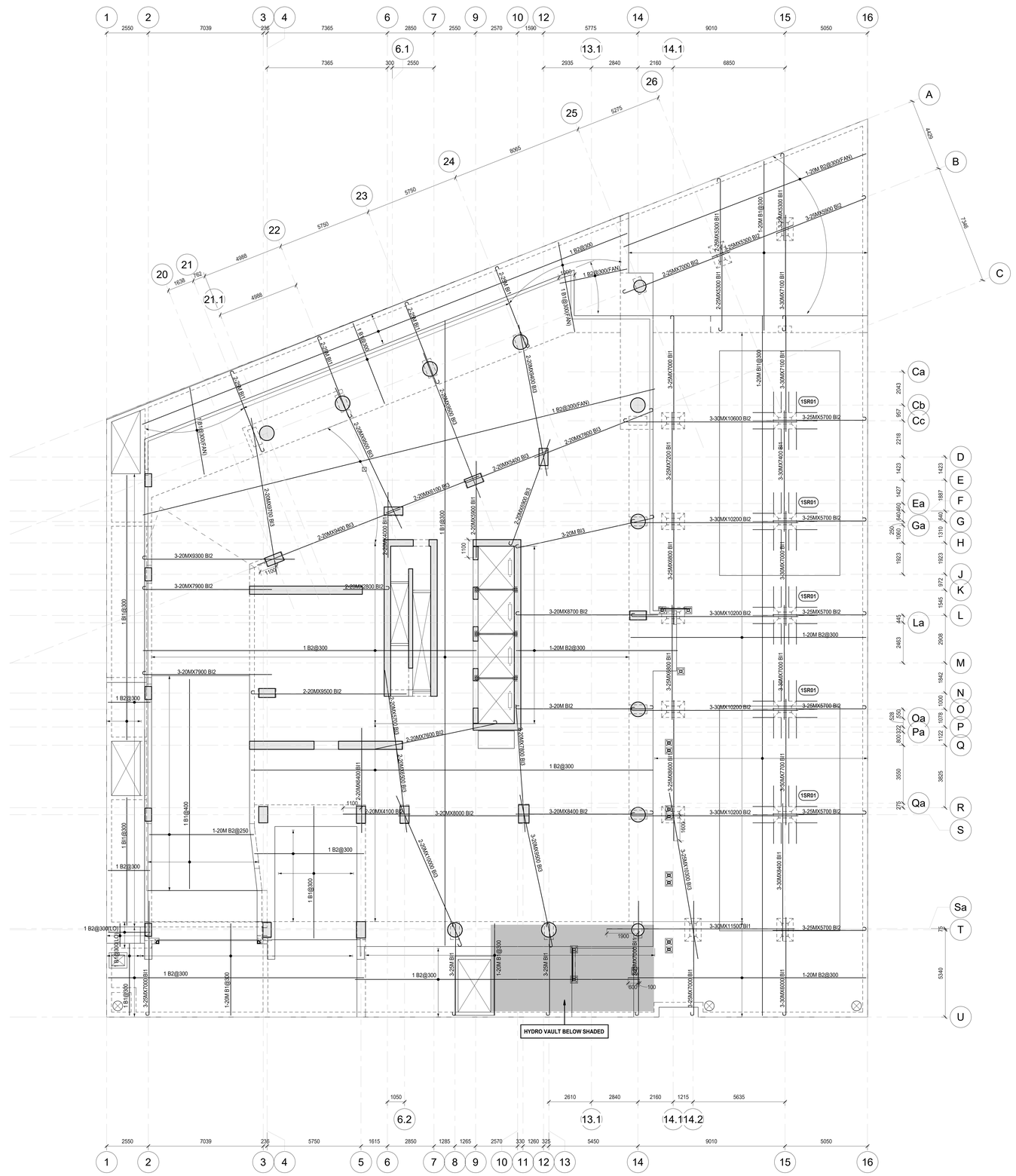
drawing title | titre du dessin

LEVEL 01 CONCRETE LAYOUT PLAN

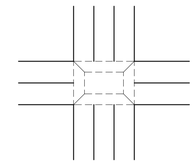
project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**As indicated**
date | date	**05/31/24**

drawing number | numéro du dessin

S107



STUD RAIL LEGEND:



1SR01

14 RAILS
STUDS PER RAIL = 7-12.7Ø
So = 95mm
S = 180mm
OAH = 250mm
OAL = 1270mm
REFER TO STUD RAIL DETAIL FOR ADD'L INFORMATION.

SLAB REINFORCING NOTES:

1. BAR PLACING ORDER
T1 = TOP UPPER LAYER
T2 = TOP LOWER LAYER
B2 = BOTTOM UPPER LAYER
B1 = BOTTOM LOWER LAYER
B.1.3 = BOTTOM INTEGRITY BOT. UPPER UPPER LAYER
B.I.2 = BOTTOM INTEGRITY BOT. UPPER LAYER
B.I.1 = BOTTOM INTEGRITY BOT. LOWER LAYER
2. ALL REINFORCING BARS SHOWN ON PLAN TO 15M UNLESS NOTED OTHERWISE
3. B.I.= BOTTOM INTEGRITY REINFORCING. SPACE @ 150 o/c.
4. CONCRETE COVER U/N
PARKING 40 mm TOP
30 mm BOT.
GROUND TO ROOF 25 mm TOP
25 mm BOT.

SEE ADDITIONAL PARKING LEVEL NOTES FOR CONCRETE COVER REQUIREMENTS AT PARKING LEVELS

5.WHERE REINFORCING LENGTHS EXCEED MAXIMUM AVAILABLE LENGTH, SPLICE REINFORCING BARS AS NOTED ON REINFORCING BAR LAP LENGTH TABLE ON S01

SHEAR REINFORCING (NOTED AS SR#)

NOTES:
1. SEE PLAN FOR LOCATIONS
2. ALL SHEAR REINFG IS TO SPACED EQUALLY ACROSS COLUMN WIDTH
3. SHEAR REINFG TO BE TIED AT ALL INTERSECTIONS
4. AT WALL ENDS ASSUME COLUMN LENGTH OF 1000 mm FOR DETAILING OF SHEAR REINFG
5. COLUMN LENGTH INCLUDES COLUMN CAPITALS IF PRESENT
6. SEE SHEAR REINFORCING DETAILS ALSO.

NOTE: REINFORCING AT TEMPORARY MAN & MAT'L HOIST OPENING

1. SLAB REINFORCING THAT CROSSES PERIMETER OF SLAB OPENING IS TO BE CUT AT POINT WHERE IT CROSSES.
2. WHEN REINFORCING CROSSES ENTIRE SLAB OPENING, PROVIDE A COUPLED REINFORCING BAR INTO COUPLER ON EACH SIDE OF THE OPENING & LAP 1000 mm MINIMUM AT CENTER OF CRANE OPENING.
3. PROVIDE THE APPROPRIATE THREADED CAST-IN REINFORCING BAR COUPLER FOR EACH CUT REINFORCING BAR.
4. AFTER REMOVAL OF HOIST, THREAD CUT-OFF REINFORCING BARS INTO COUPLERS IN ADVANCE OF SLAB OPENING INFILL.
5. REFER TO CONCRETE LAYOUT DRAWING & DRAWING S02 FOR ADDITIONAL OPENING INFORMATION.
6. SLAB ALL AROUND TEMPORARY SLAB OPENING TO BE RESHORED UNTIL TEMPORARY SLAB OPENING IS INFILLED.

NOTE:
REFER TO TYPICAL DETAILS FOR SLAB REINFORCING NOTATION & SHEAR REINFORCING DETAILS

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur mécharique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 66% WD & CLIENT BUDGETING	25-03-28
1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
B. ANASTHONY GOODKEY
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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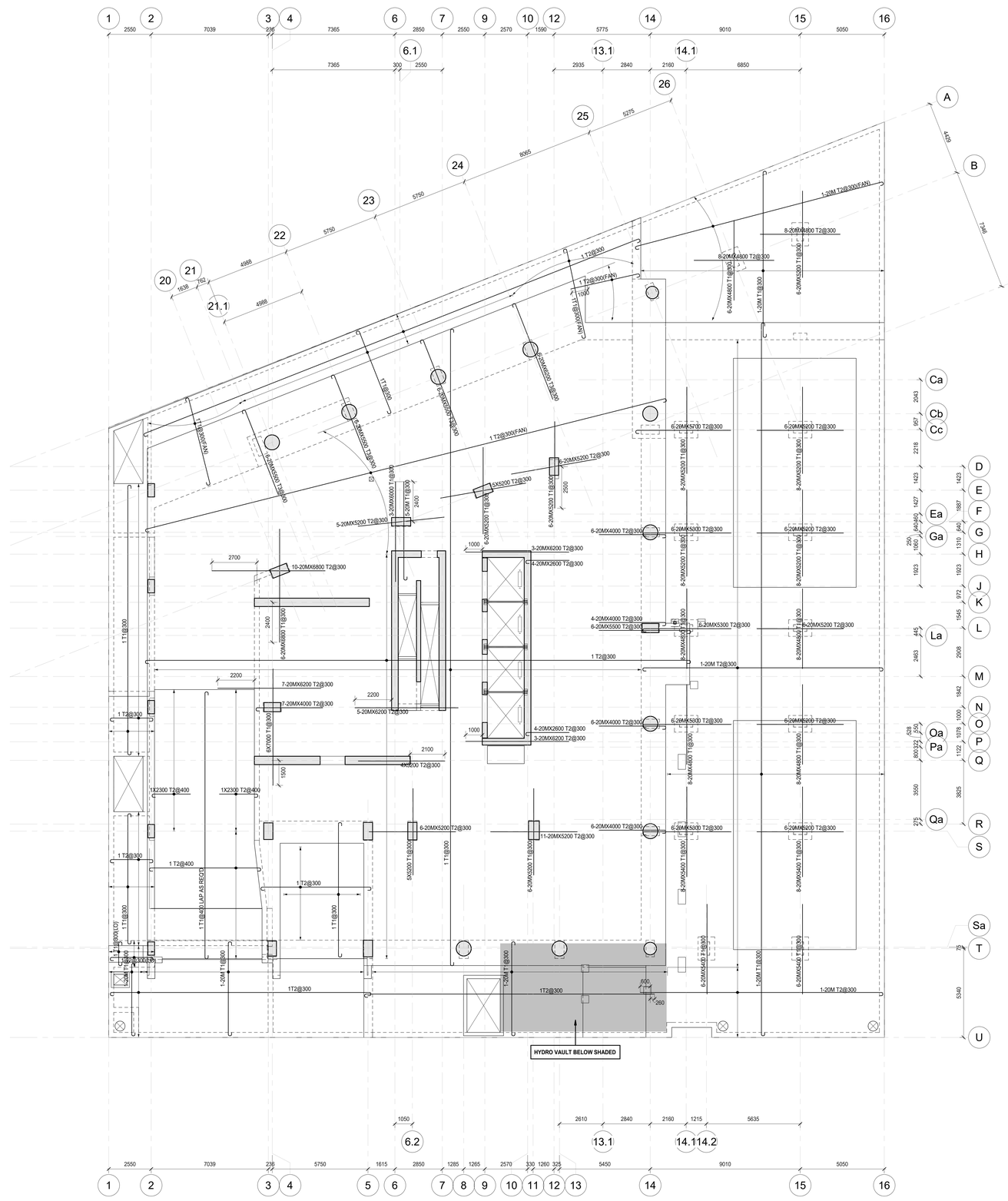
drawing title | titre du dessin

LEVEL 01 BOTTOM REINFORCING PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**As indicated**
date | date	**05/31/24**

drawing number | numéro du dessin

S108



SLAB REINFORCING NOTES:

1. BAR PLACING ORDER
T1 = TOP UPPER LAYER
T2 = TOP LOWER LAYER
B2 = BOTTOM UPPER LAYER
B1 = BOTTOM LOWER LAYER
B.I.3 = BOTTOM INTEGRITY BOT. UPPER UPPER LAYER
B.I.2 = BOTTOM INTEGRITY BOT. UPPER LAYER
B.I.1 = BOTTOM INTEGRITY BOT. LOWER LAYER
2. ALL REINFORCING BARS SHOWN ON PLAN TO 15M UNLESS NOTED OTHERWISE
3. B.I.= BOTTOM INTEGRITY REINFORCING. SPACE @ 150 o/c.
4. CONCRETE COVER UIN
PARKING 40 mm TOP
30 mm BOT.
GROUND TO ROOF 25 mm TOP
25 mm BOT.

SEE ADDITIONAL PARKING LEVEL NOTES FOR CONCRETE COVER REQUIREMENTS AT PARKING LEVELS

5.WHERE REINFORCING LENGTHS EXCEED MAXIMUM AVAILABLE LENGTH, SPLICE REINFORCING BARS AS NOTED ON REINFORCING BAR LAP LENGTH TABLE ON S01

SHEAR REINFORCING (NOTED AS SR#)

NOTES:
1. SEE PLAN FOR LOCATIONS
2. ALL SHEAR REINFG IS TO SPACED EQUALLY ACROSS COLUMN WIDTH
3. SHEAR REINFG TO BE TIED AT ALL INTERSECTIONS
4. AT WALL ENDS ASSUME COLUMN LENGTH OF 1000 mm FOR DETAILING OF SHEAR REINFG
5. COLUMN LENGTH INCLUDES COLUMN CAPITALS IF PRESENT
6. SEE SHEAR REINFORCING DETAILS ALSO.

NOTE: REINFORCING AT TEMPORARY MAN & MAT'L HOIST OPENING

1. SLAB REINFORCING THAT CROSSES PERIMETER OF SLAB OPENING IS TO BE CUT AT POINT WHERE IT CROSSES.
2. WHEN REINFORCING CROSSES ENTIRE SLAB OPENING, PROVIDE A COUPLED REINFORCING BAR INTO COUPLER ON EACH SIDE OF THE OPENING & LAP 1000 mm MINIMUM AT CENTER OF CRANE OPENING.
3. PROVIDE THE APPROPRIATE THREADED CAST-IN REINFORCING BAR COUPLER FOR EACH CUT REINFORCING BAR.
4. AFTER REMOVAL OF HOIST, THREAD CUT-OFF REINFORCING BARS INTO COUPLERS IN ADVANCE OF SLAB OPENING INFILL.
5. REFER TO CONCRETE LAYOUT DRAWING & DRAWING S02 FOR ADDITIONAL OPENING INFORMATION.
6. SLAB ALL AROUND TEMPORARY SLAB OPENING TO BE RESHORED UNTIL TEMPORARY SLAB OPENING IS INFILLED.

NOTE:
REFER TO TYPICAL DETAILS FOR SLAB REINFORCING NOTATION & SHEAR REINFORCING DETAILS

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur mécanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

5	ISSUED FOR TENDER	25-04-09
4	ISSUED FOR PRICING	25-03-14
3	ISSUE FOR 40% XO & CLIENT BUDGETING	25-03-28
1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

I HEREBY RECOGNIZE THAT I AM A MEMBER IN GOOD STANDING OF THE PROFESSIONAL ENGINEERS AND GEOSCIENTISTS ASSOCIATION (PEGA) AND THAT I AM AUTHORIZED TO PRACTICE IN THE PROVINCE OF ONTARIO
25-04-09
B.J.ARMSTRONG
100068980

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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drawing title | titre du dessin

LEVEL 01 TOP REINFORCING PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S109

DESIGN LOADS

UNIT AREAS

250 CONC SLAB	5.90 kPa
PARTITIONS	1.00
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	7.20 kPa
LIVE LOAD	1.90 kPa
TOTAL LOAD	9.10 kPa

CORRIDOR / M & E / STORAGE

250 CONC SLAB	5.90 kPa
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	6.20 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	11.00 kPa

CONCRETE STAIRS

CONCRETE STAIR THROAT	3.60 kPa
CONCRETE TREADS	2.40 kPa
DEAD LOAD	6.00 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.80 kPa

CONCRETE STAIR LANDINGS

200 CONC SLAB	4.75 kPa
DEAD LOAD	4.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	9.55 kPa

NOTE: EXTERIOR BALCONY SLABS

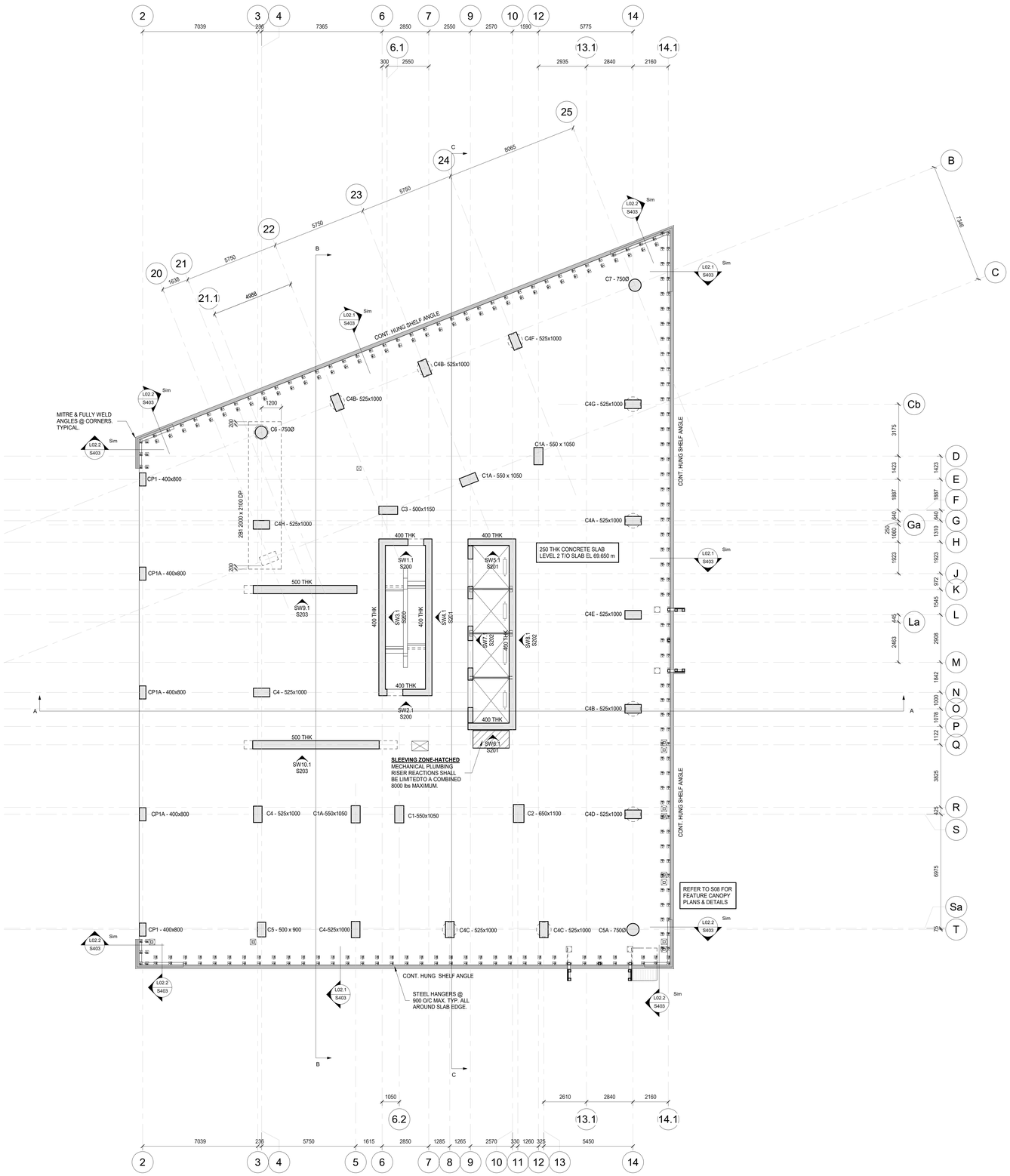
PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-23.1-04 TO GIVE THE FOLLOWING PROPERTIES FOR ALL EXTERIOR EXPOSED CONCRETE BALCONY SLABS.
1. TYPE GU PORTLAND CEMENT
2. MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS = 35 MPa
3. CLASS OF EXPOSURE TO BE C1
4. NOMINAL SIZE OF COARSE AGGREGATE TO BE 20 mm
5. SLUMP AT TIME AND POINT OF DISCHARGE TO BE 75 mm
6. AIR CONTENT TO BE 5-8%

NOTES

1. SEE S200's DWGS. FOR SHEARWALL ELEVATIONS. THE ELEVATION VIEW OF THE SHEARWALL IS TAKEN FROM THE SIDE OF THE WALL ON WHICH THE SHEARWALL DESIGNATION (SW#) IS SHOWN ON PLAN.

2. SUPPORTS FOR CURTAIN WALLS & PRECAST PANELS ARE TO BE DESIGNED & DETAILED BY CURTAIN WALL AND PRECAST SUPPLIERS RESPECTIVELY. SHOP DRAWINGS ARE TO BE STAMPED & SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN ONTARIO. ALL SUPPORTS ARE TO BE INSPECTED DURING CONSTRUCTION BY THE SUPPORT DESIGN ENGINEER.

3. ONLY MECHANICAL SLAB OPENINGS LARGER THAN 300 x 300 OR 300 ∅ ARE SHOWN ON THIS DRAWING. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF MECHANICAL SLAB OPENINGS SMALLER THAN THOSE NOTED ABOVE. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF OPENINGS WHICH ARE SHOWN ON THIS DRAWING. REFER TO GENERAL NOTES & TYPICAL DETAILS ON DRAWING S01, S02 & S03 FOR ADDITIONAL REINFORCING REQUIREMENTS AROUND OPENINGS SHOWN ON THIS DRAWING.



CONCRETE COMPRESSIVE STRENGTHS:
SLABS & BEAMS - 35 MPa TYPE N
INTERIOR CURBS - 25 MPa TYPE N
TOWER COLUMNS & SHEARWALLS - 45 MPa (TYPE C-1)
PODIUM COLUMNS DESIGNATED "CPX" - 35 MPa (TYPE C-1)

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structures

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

5	ISSUED FOR TENDER	25-04-09
4	ISSUED FOR PRICING	25-03-18
3	ISSUE FOR 66% WD & CLIENT BUDGETING	25-03-28
2	ISSUE FOR EXCAVATION TENDER	24-10-30
1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

I CERTIFY THAT I AM A QUALIFIED PERSON
25-04-09
B.J.ARMSTRONG
100068582
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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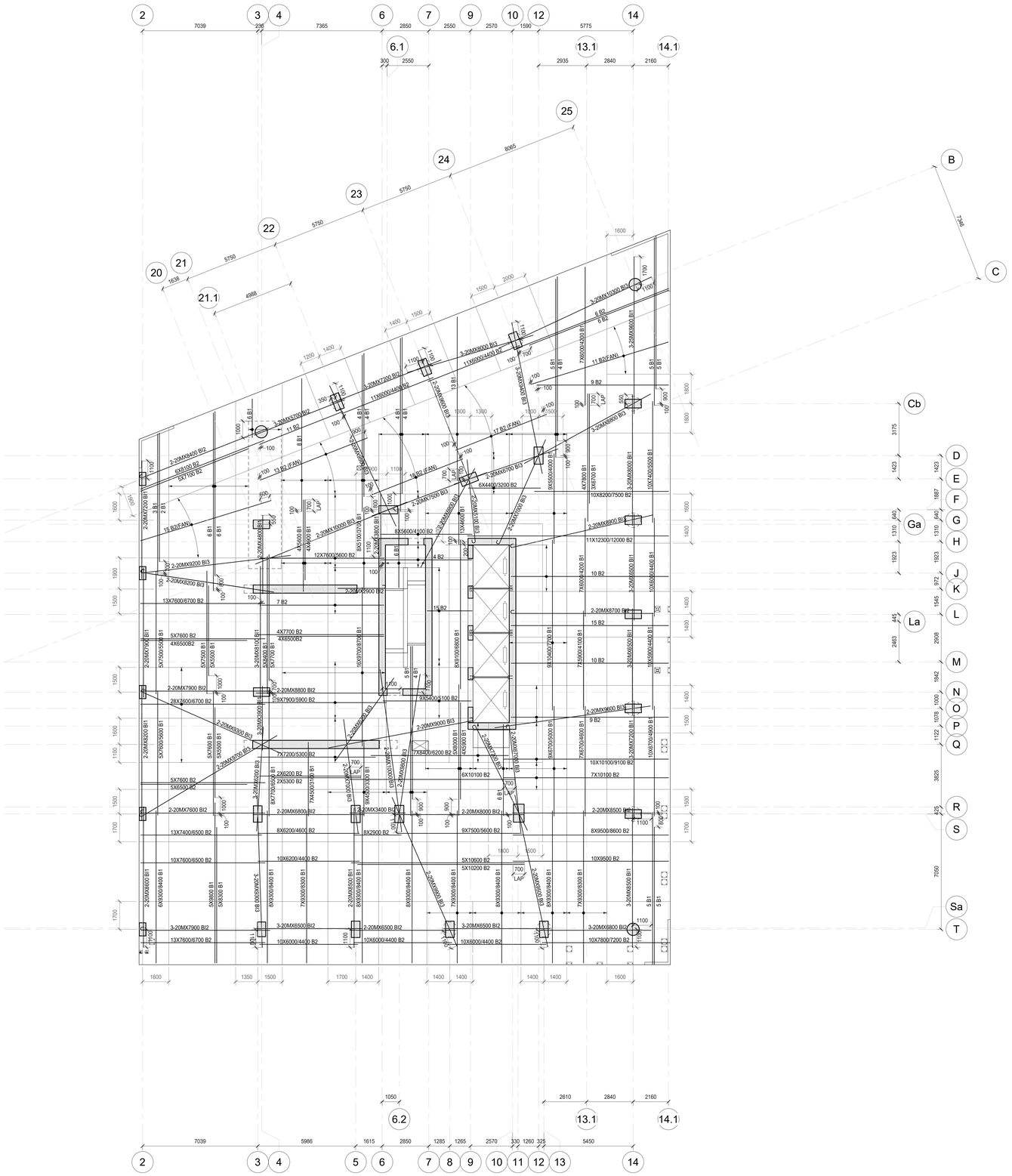
drawing title | titre du dessin

LEVEL 02 CONCRETE LAYOUT PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S110



SLAB REINFORCING NOTES:

1. BAR PLACING ORDER
T1 = TOP UPPER LAYER
T2 = TOP LOWER LAYER
B2 = BOTTOM UPPER LAYER
B1 = BOTTOM LOWER LAYER
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B.I.2 = BOTTOM INTEGRITY BOT. UPPER LAYER
B.I.1 = BOTTOM INTEGRITY BOT. LOWER LAYER
2. ALL REINFORCING BARS SHOWN ON PLAN TO 15M UNLESS NOTED OTHERWISE
3. B.I.= BOTTOM INTEGRITY REINFORCING. SPACE @ 150 o/c.
4. CONCRETE COVER U/N
PARKING 40 mm TOP
30 mm BOT.

GROUND TO ROOF 25 mm TOP
25 mm BOT.

SEE ADDITIONAL PARKING LEVEL NOTES FOR CONCRETE COVER REQUIREMENTS AT PARKING LEVELS

5.WHERE REINFORCING LENGTHS EXCEED MAXIMUM AVAILABLE LENGTH, SPLICE REINFORCING BARS AS NOTED ON REINFORCING BAR LAP LENGTH TABLE ON S01

SHEAR REINFORCING (NOTED AS SR#)

NOTES:
1. SEE PLAN FOR LOCATIONS
2. ALL SHEAR REINF'G IS TO SPACED EQUALLY ACROSS COLUMN WIDTH
3. SHEAR REINF'G TO BE TIED AT ALL INTERSECTIONS
4. AT WALL ENDS ASSUME COLUMN LENGTH OF 1000 mm FOR DETAILING OF SHEAR REINF'G
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NOTE: REINFORCING AT TEMPORARY MAN & MAT'L HOIST OPENING

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4. AFTER REMOVAL OF HOIST, THREAD CUT-OFF REINFORCING BARS INTO COUPLERS IN ADVANCE OF SLAB OPENING INFILL.
5. REFER TO CONCRETE LAYOUT DRAWING & DRAWING S02 FOR ADDITIONAL OPENING INFORMATION.
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NOTE:
REFER TO TYPICAL DETAILS FOR SLAB REINFORCING NOTATION & SHEAR REINFORCING DETAILS

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

no	revisions	date
5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 66% WD & CLIENT BUDGETING	25-03-28
1	ISSUE FOR REVIEW	24-09-13

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
B.J.ARMSTRONG
100068861
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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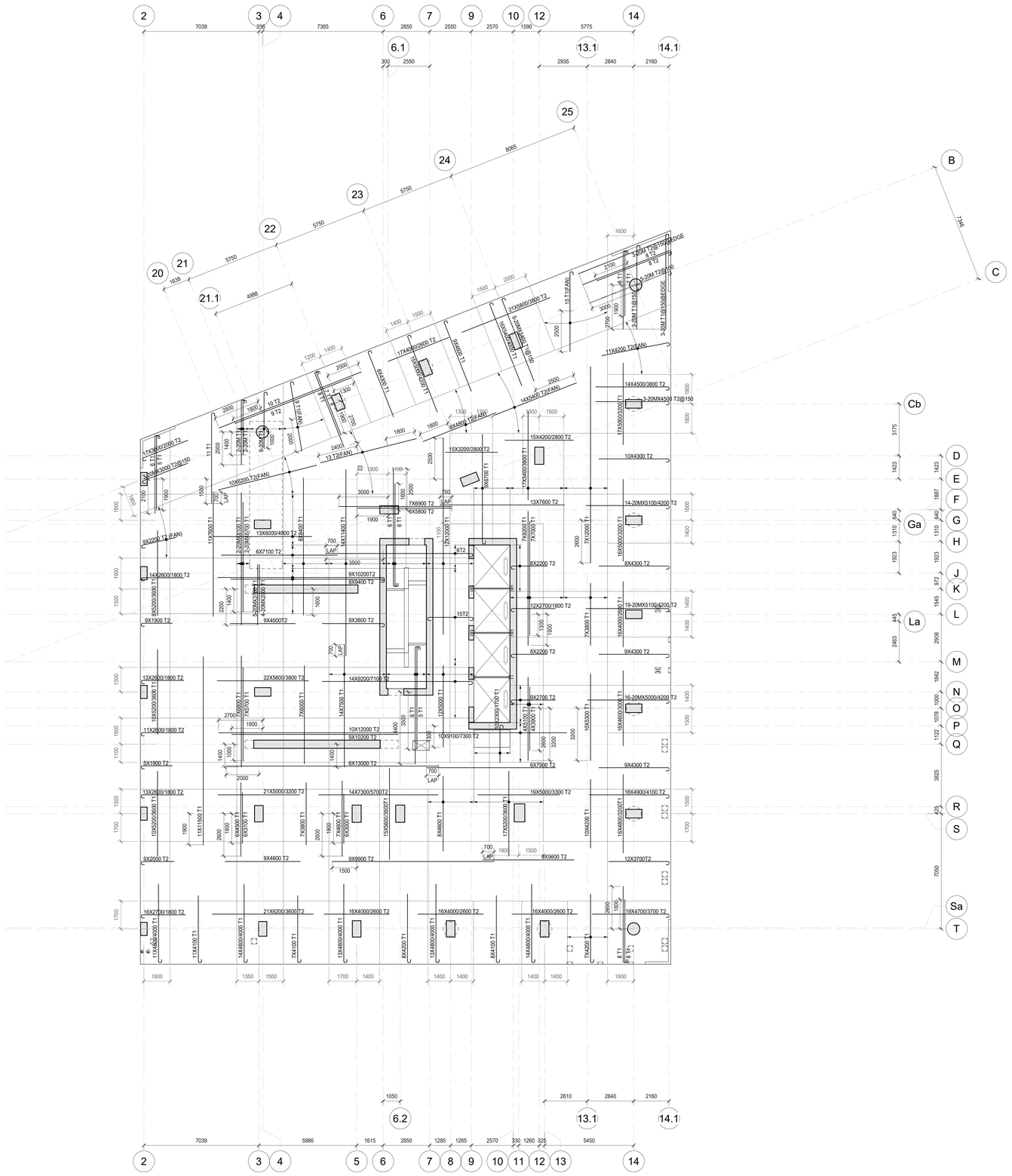
drawing title | titre du dessin

LEVEL 02 BOTTOM REINFORCING PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S111



SLAB REINFORCING NOTES:

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B2 = BOTTOM UPPER LAYER
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4. CONCRETE COVER U/N
PARKING 40 mm TOP
30 mm BOT.

GROUND TO ROOF 25 mm TOP
25 mm BOT.

SEE ADDITIONAL PARKING LEVEL NOTES FOR CONCRETE COVER REQUIREMENTS AT PARKING LEVELS

5.WHERE REINFORCING LENGTHS EXCEED MAXIMUM AVAILABLE LENGTH, SPLICE REINFORCING BARS AS NOTED ON REINFORCING BAR LAP LENGTH TABLE ON S01

SHEAR REINFORCING (NOTED AS SR#)

NOTES:
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2. ALL SHEAR REINF'G IS TO SPACED EQUALLY ACROSS COLUMN WIDTH
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NOTE:
REFER TO TYPICAL DETAILS FOR SLAB REINFORCING NOTATION & SHEAR REINFORCING DETAILS

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mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

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landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

no	revisions	date
5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 66% WD & CLIENT BUDGETING	25-03-28
1	ISSUE FOR REVIEW	24-09-13

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
B.J.ARMSTRONG
100068803
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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GLADSTONE & LORETTA RESIDENTIAL TOWER

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drawing title | titre du dessin

LEVEL 02 TOP REINFORCING PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S112

DESIGN LOADS

UNIT AREAS

250 CONC SLAB	5.90 kPa
PARTITIONS	1.00
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	7.20 kPa
LIVE LOAD	1.90 kPa
TOTAL LOAD	9.10 kPa

CORRIDOR / M & E / STORAGE

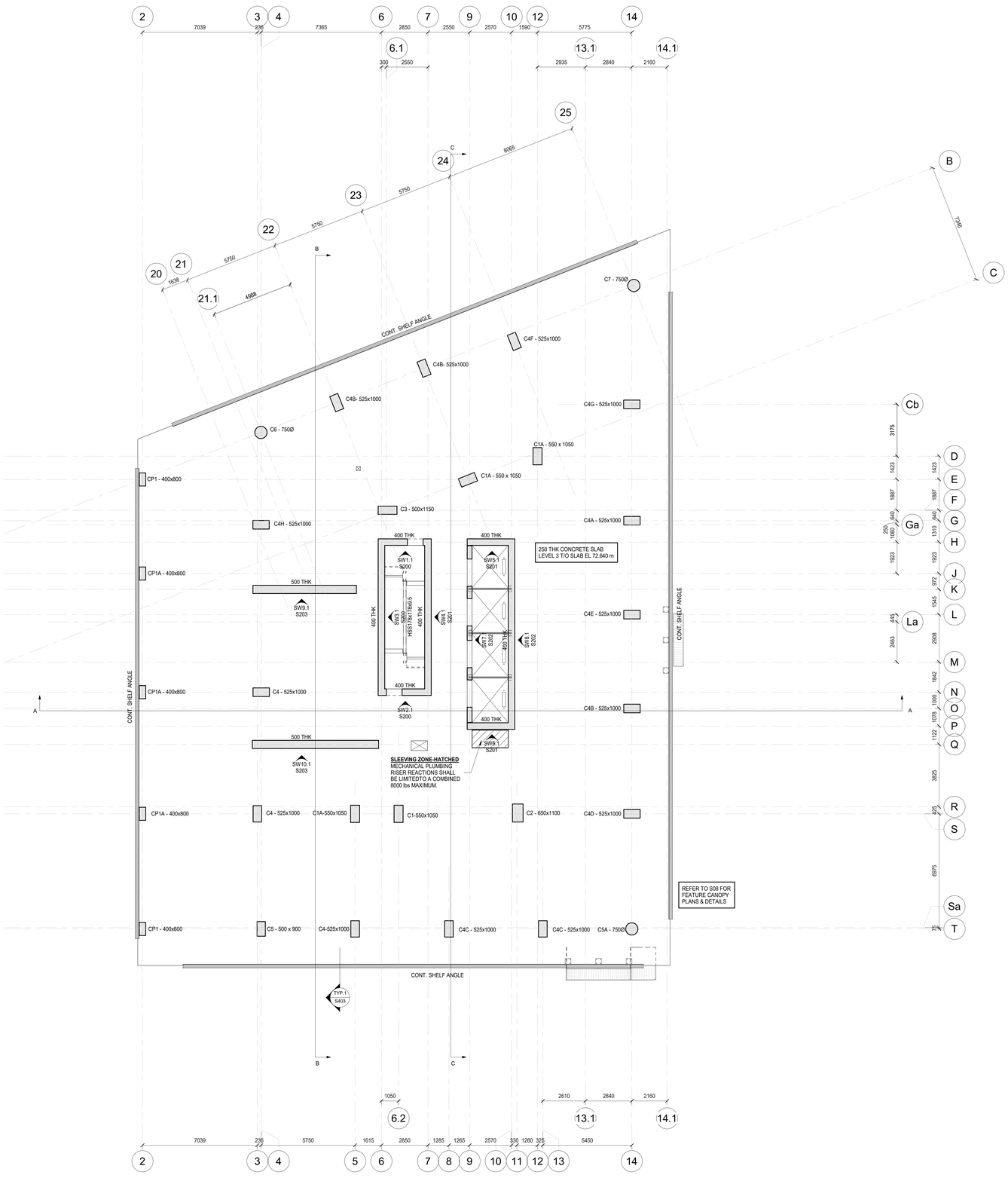
250 CONC SLAB	5.90 kPa
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	6.20 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	11.00 kPa

CONCRETE STAIRS

CONCRETE STAIR THROAT	3.60 kPa
CONCRETE TREADS	2.40 kPa
DEAD LOAD	6.00 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.80 kPa

CONCRETE STAIR LANDINGS

200 CONC SLAB	4.75 kPa
DEAD LOAD	4.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	9.55 kPa



NOTE: EXTERIOR BALCONY SLABS

PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-23.1-04 TO GIVE THE FOLLOWING PROPERTIES FOR ALL EXTERIOR EXPOSED CONCRETE BALCONY SLABS.
1. TYPE GU PORTLAND CEMENT
2. MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS = 35 MPa
3. CLASS OF EXPOSURE TO BE C1
4. NOMINAL SIZE OF COARSE AGGREGATE TO BE 20 mm
5. SLUMP AT TIME AND POINT OF DISCHARGE TO BE 75 mm
6. AIR CONTENT TO BE 5-8%

NOTES

1. SEE S200's DWGS. FOR SHEARWALL ELEVATIONS. THE ELEVATION VIEW OF THE SHEARWALL IS TAKEN FROM THE SIDE OF THE WALL ON WHICH THE SHEARWALL DESIGNATION (SW#) IS SHOWN ON PLAN.

2. SUPPORTS FOR CURTAIN WALLS & PRECAST PANELS ARE TO BE DESIGNED & DETAILED BY CURTAIN WALL AND PRECAST SUPPLIERS RESPECTIVELY. SHOP DRAWINGS ARE TO BE STAMPED & SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN ONTARIO. ALL SUPPORTS ARE TO BE INSPECTED DURING CONSTRUCTION BY THE SUPPORT DESIGN ENGINEER.

3. ONLY MECHANICAL SLAB OPENINGS LARGER THAN 300 x 300 OR 300 ∅ ARE SHOWN ON THIS DRAWING. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF MECHANICAL SLAB OPENINGS SMALLER THAN THOSE NOTED ABOVE. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF OPENINGS WHICH ARE SHOWN ON THIS DRAWING. REFER TO GENERAL NOTES & TYPICAL DETAILS ON DRAWING S01, S02 & S03 FOR ADDITIONAL REINFORCING REQUIREMENTS AROUND OPENINGS SHOWN ON THIS DRAWING.

CONCRETE COMPRESSIVE STRENGTHS:
SLABS & BEAMS - 35 MPa TYPE N
INTERIOR CURBS - 25 MPa TYPE N
TOWER COLUMNS & SHEARWALLS - 45 MPa (TYPE C-1)
PODIUM COLUMNS DESIGNATED "CPX" - 35 MPa (TYPE C-1)

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 90% MID & CLIENT BUDGETING	25-03-28
2	ISSUE FOR EXCAVATION TENDER	24-10-30
1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
B.J.ARMSTRONG
100068855
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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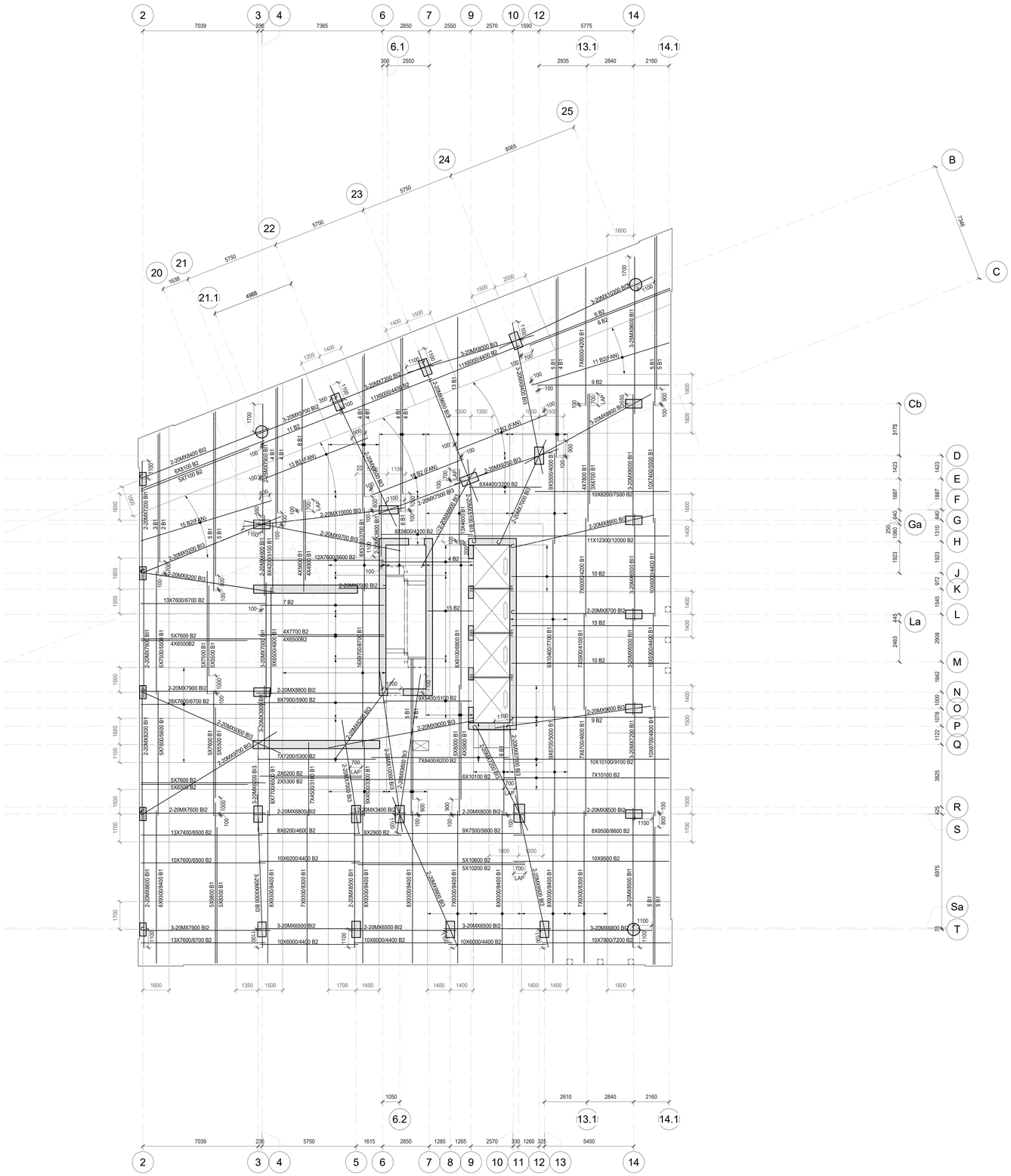
drawing title | titre du dessin

LEVEL 03 CONCRETE LAYOUT PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S113



SLAB REINFORCING NOTES:

1. BAR PLACING ORDER
T1 = TOP UPPER LAYER
T2 = TOP LOWER LAYER
B2 = BOTTOM UPPER LAYER
B1 = BOTTOM LOWER LAYER
B.I.3 = BOTTOM INTEGRITY BOT. UPPER UPPER LAYER
B.I.2 = BOTTOM INTEGRITY BOT. UPPER LAYER
B.I.1 = BOTTOM INTEGRITY BOT. LOWER LAYER
2. ALL REINFORCING BARS SHOWN ON PLAN TO 15M UNLESS NOTED OTHERWISE
3. B.I.= BOTTOM INTEGRITY REINFORCING. SPACE @ 150 o/c.
4. CONCRETE COVER U/N
PARKING 40 mm TOP
30 mm BOT.
GROUND TO ROOF 25 mm TOP
25 mm BOT.

SEE ADDITIONAL PARKING LEVEL NOTES FOR CONCRETE COVER REQUIREMENTS AT PARKING LEVELS

5.WHERE REINFORCING LENGTHS EXCEED MAXIMUM AVAILABLE LENGTH, SPLICE REINFORCING BARS AS NOTED ON REINFORCING BAR LAP LENGTH TABLE ON S01

SHEAR REINFORCING (NOTED AS SR#)

NOTES:
1. SEE PLAN FOR LOCATIONS
2. ALL SHEAR REINF'G IS TO SPACED EQUALLY ACROSS COLUMN WIDTH
3. SHEAR REINF'G TO BE TIED AT ALL INTERSECTIONS
4. AT WALL ENDS ASSUME COLUMN LENGTH OF 1000 mm FOR DETAILING OF SHEAR REINF'G
5. COLUMN LENGTH INCLUDES COLUMN CAPITALS IF PRESENT
6. SEE SHEAR REINFORCING DETAILS ALSO.

NOTE: REINFORCING AT TEMPORARY MAN & MAT'L HOIST OPENING

1. SLAB REINFORCING THAT CROSSES PERIMETER OF SLAB OPENING IS TO BE CUT AT POINT WHERE IT CROSSES.
2. WHEN REINFORCING CROSSES ENTIRE SLAB OPENING, PROVIDE A COUPLED REINFORCING BAR INTO COUPLER ON EACH SIDE OF THE OPENING & LAP 1000 mm MINIMUM AT CENTER OF CRANE OPENING.
3. PROVIDE THE APPROPRIATE THREADED CAST-IN REINFORCING BAR COUPLER FOR EACH CUT REINFORCING BAR.
4. AFTER REMOVAL OF HOIST, THREAD CUT-OFF REINFORCING BARS INTO COUPLERS IN ADVANCE OF SLAB OPENING INFILL.
5. REFER TO CONCRETE LAYOUT DRAWING & DRAWING S02 FOR ADDITIONAL OPENING INFORMATION.
6. SLAB ALL AROUND TEMPORARY SLAB OPENING TO BE RESHORED UNTIL TEMPORARY SLAB OPENING IS INFILLED.

NOTE:
REFER TO TYPICAL DETAILS FOR SLAB REINFORCING NOTATION & SHEAR REINFORCING DETAILS

CLV GROUP DEVELOPMENTS

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CONSULTING STRUCTURAL ENGINEERS

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Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

5	ISSUED FOR TENDER	25-04-09
4	ISSUED FOR PRICING	25-03-14
3	ISSUE FOR 66% WD & CLIENT BUDGETING	25-03-28
1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

I HEREBY GIVE PROFESSIONAL ENGINEERING SERVICE
25-04-09
B.J.ARMSTRONG
100068
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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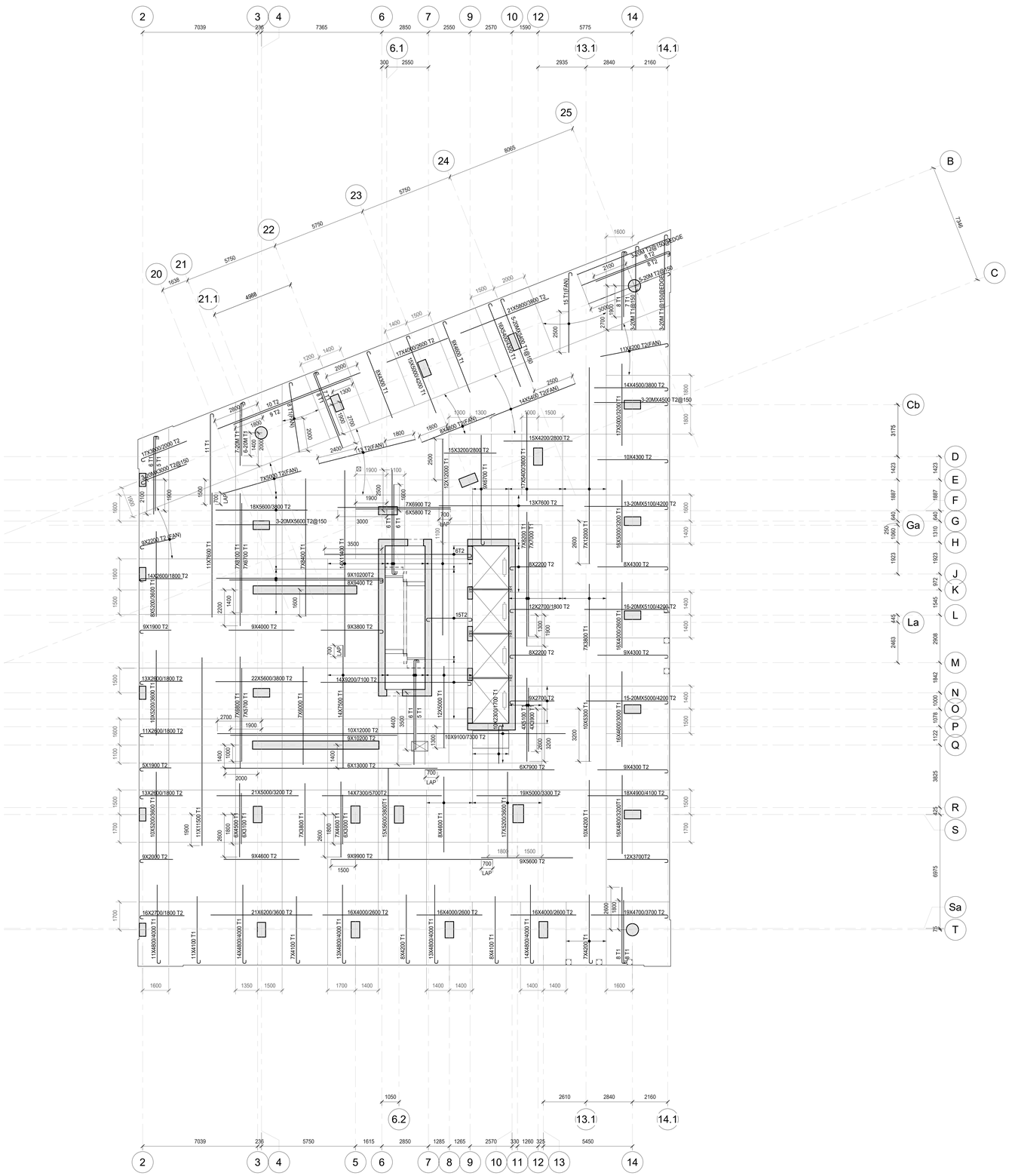
drawing title | titre du dessin

LEVEL 03 BOTTOM REINFORCING PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S114



SLAB REINFORCING NOTES:

1. BAR PLACING ORDER
T1 = TOP UPPER LAYER
T2 = TOP LOWER LAYER
B2 = BOTTOM UPPER LAYER
B1 = BOTTOM LOWER LAYER
B.I.3 = BOTTOM INTEGRITY BOT. UPPER UPPER LAYER
B.I.2 = BOTTOM INTEGRITY BOT. UPPER LAYER
B.I.1 = BOTTOM INTEGRITY BOT. LOWER LAYER
2. ALL REINFORCING BARS SHOWN ON PLAN TO 15M UNLESS NOTED OTHERWISE
3. B.I.= BOTTOM INTEGRITY REINFORCING. SPACE @ 150 o/c.
4. CONCRETE COVER U/N
PARKING 40 mm TOP
30 mm BOT.
GROUND TO ROOF 25 mm TOP
25 mm BOT.

SEE ADDITIONAL PARKING LEVEL NOTES FOR CONCRETE COVER REQUIREMENTS AT PARKING LEVELS

5.WHERE REINFORCING LENGTHS EXCEED MAXIMUM AVAILABLE LENGTH, SPLICE REINFORCING BARS AS NOTED ON REINFORCING BAR LAP LENGTH TABLE ON S01

SHEAR REINFORCING (NOTED AS SR#)

NOTES:
1. SEE PLAN FOR LOCATIONS
2. ALL SHEAR REINFG IS TO SPACED EQUALLY ACROSS COLUMN WIDTH
3. SHEAR REINFG TO BE TIED AT ALL INTERSECTIONS
4. AT WALL ENDS ASSUME COLUMN LENGTH OF 1000 mm FOR DETAILING OF SHEAR REINFG
5. COLUMN LENGTH INCLUDES COLUMN CAPITALS IF PRESENT
6. SEE SHEAR REINFORCING DETAILS ALSO.

NOTE: REINFORCING AT TEMPORARY MAN & MAT'L HOIST OPENING

1. SLAB REINFORCING THAT CROSSES PERIMETER OF SLAB OPENING IS TO BE CUT AT POINT WHERE IT CROSSES.
2. WHEN REINFORCING CROSSES ENTIRE SLAB OPENING, PROVIDE A COUPLED REINFORCING BAR INTO COUPLER ON EACH SIDE OF THE OPENING & LAP 1000 mm MINIMUM AT CENTER OF CRANE OPENING.
3. PROVIDE THE APPROPRIATE THREADED CAST-IN REINFORCING BAR COUPLER FOR EACH CUT REINFORCING BAR.
4. AFTER REMOVAL OF HOIST, THREAD CUT-OFF REINFORCING BARS INTO COUPLERS IN ADVANCE OF SLAB OPENING INFILL.
5. REFER TO CONCRETE LAYOUT DRAWING & DRAWING S02 FOR ADDITIONAL OPENING INFORMATION.
6. SLAB ALL AROUND TEMPORARY SLAB OPENING TO BE RESHORED UNTIL TEMPORARY SLAB OPENING IS INFILLED.

NOTE:
REFER TO TYPICAL DETAILS FOR SLAB REINFORCING NOTATION & SHEAR REINFORCING DETAILS

CLV GROUP DEVELOPMENTS

client

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CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

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Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 66% MD & CLIENT BUDGETING	25-03-28
1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
B.J.ARMSTRONG
100068
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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LEVEL 03 TOP REINFORCING PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S115

DESIGN LOADS

AMENITY UNIT AREAS

250 CONC SLAB	5.90 kPa
PARTITIONS	1.00
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	7.20 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	12.00 kPa

CORRIDOR / M & E / STORAGE

250 CONC SLAB	5.90 kPa
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	6.20 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	11.00 kPa

CONCRETE STAIRS

CONCRETE STAIR THROAT	3.60 kPa
CONCRETE TREADS	2.40 kPa
DEAD LOAD	6.00 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.80 kPa

CONCRETE STAIR LANDINGS

200 CONC SLAB	4.75 kPa
DEAD LOAD	4.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	9.55 kPa

NOTE: EXTERIOR BALCONY SLABS

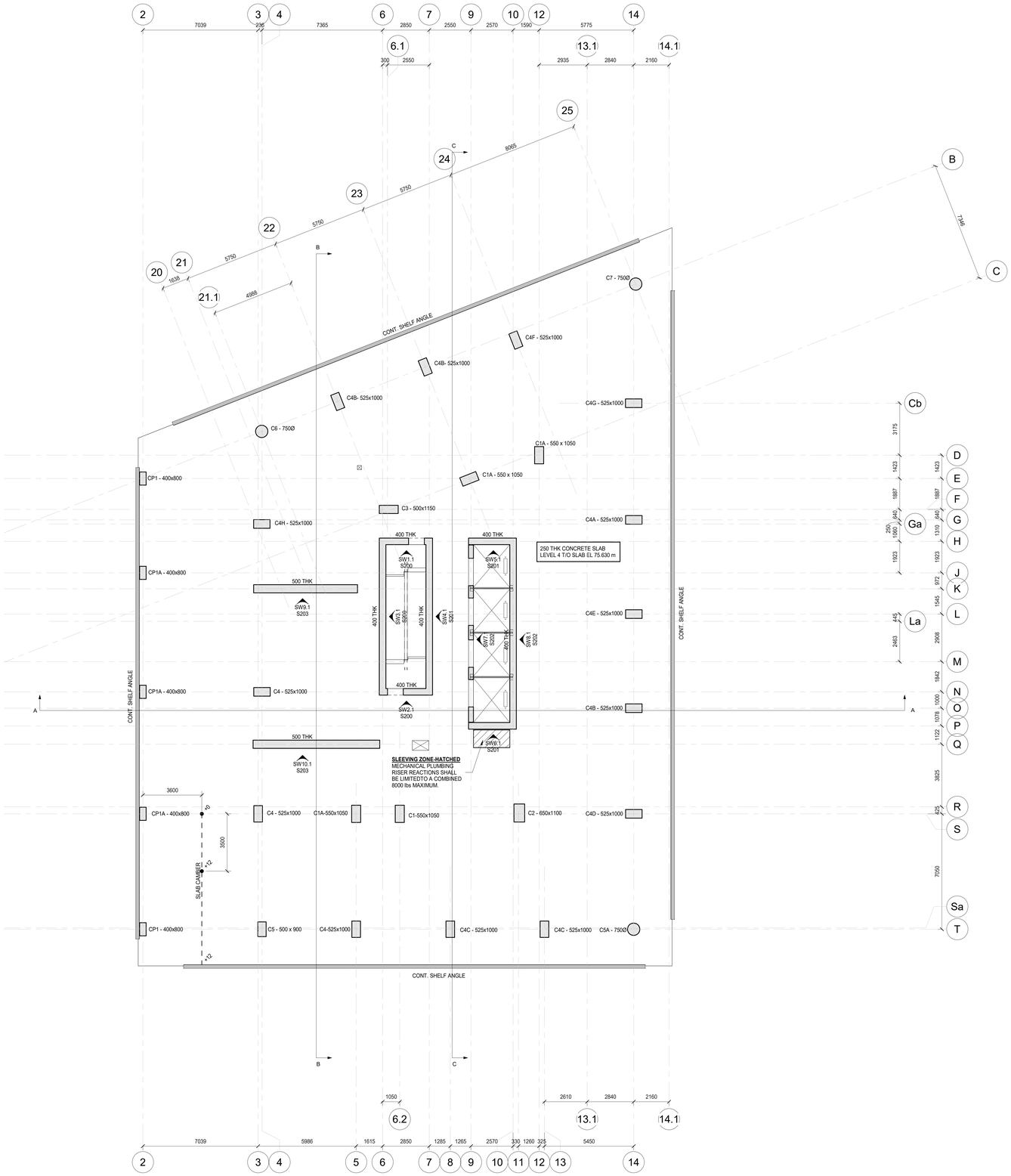
PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-23.1-04 TO GIVE THE FOLLOWING PROPERTIES FOR ALL EXTERIOR EXPOSED CONCRETE BALCONY SLABS.
1. TYPE GU PORTLAND CEMENT
2. MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS = 35 MPa
3. CLASS OF EXPOSURE TO BE C1
4. NOMINAL SIZE OF COARSE AGGREGATE TO BE 20 mm
5. SLUMP AT TIME AND POINT OF DISCHARGE TO BE 75 mm
6. AIR CONTENT TO BE 5-8%

NOTES

1. SEE S200's DWGS. FOR SHEARWALL ELEVATIONS. THE ELEVATION VIEW OF THE SHEARWALL IS TAKEN FROM THE SIDE OF THE WALL ON WHICH THE SHEARWALL DESIGNATION (SW#) IS SHOWN ON PLAN.

2. SUPPORTS FOR CURTAIN WALLS & PRECAST PANELS ARE TO BE DESIGNED & DETAILED BY CURTAIN WALL AND PRECAST SUPPLIERS RESPECTIVELY. SHOP DRAWINGS ARE TO BE STAMPED & SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN ONTARIO. ALL SUPPORTS ARE TO BE INSPECTED DURING CONSTRUCTION BY THE SUPPORT DESIGN ENGINEER.

3. ONLY MECHANICAL SLAB OPENINGS LARGER THAN 300 x 300 OR 300 ∅ ARE SHOWN ON THIS DRAWING. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF MECHANICAL SLAB OPENINGS SMALLER THAN THOSE NOTED ABOVE. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF OPENINGS WHICH ARE SHOWN ON THIS DRAWING. REFER TO GENERAL NOTES & TYPICAL DETAILS ON DRAWING S01, S02 & S03 FOR ADDITIONAL REINFORCING REQUIREMENTS AROUND OPENINGS SHOWN ON THIS DRAWING.



CONCRETE COMPRESSIVE STRENGTHS:
SLABS & BEAMS - 35 MPa TYPE N
INTERIOR CURBS - 25 MPa TYPE N
TOWER COLUMNS & SHEARWALLS - 45 MPa (TYPE C-1)
PODIUM COLUMNS DESIGNATED "CPX" - 35 MPa (TYPE C-1)

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

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Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 40% MD & CLIENT BUDGETING	25-03-28
2	ISSUE FOR EXCAVATION TENDER	24-10-30
1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
R.J.ARMSTRONG
100067867
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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GLADSTONE & LORETTA RESIDENTIAL TOWER

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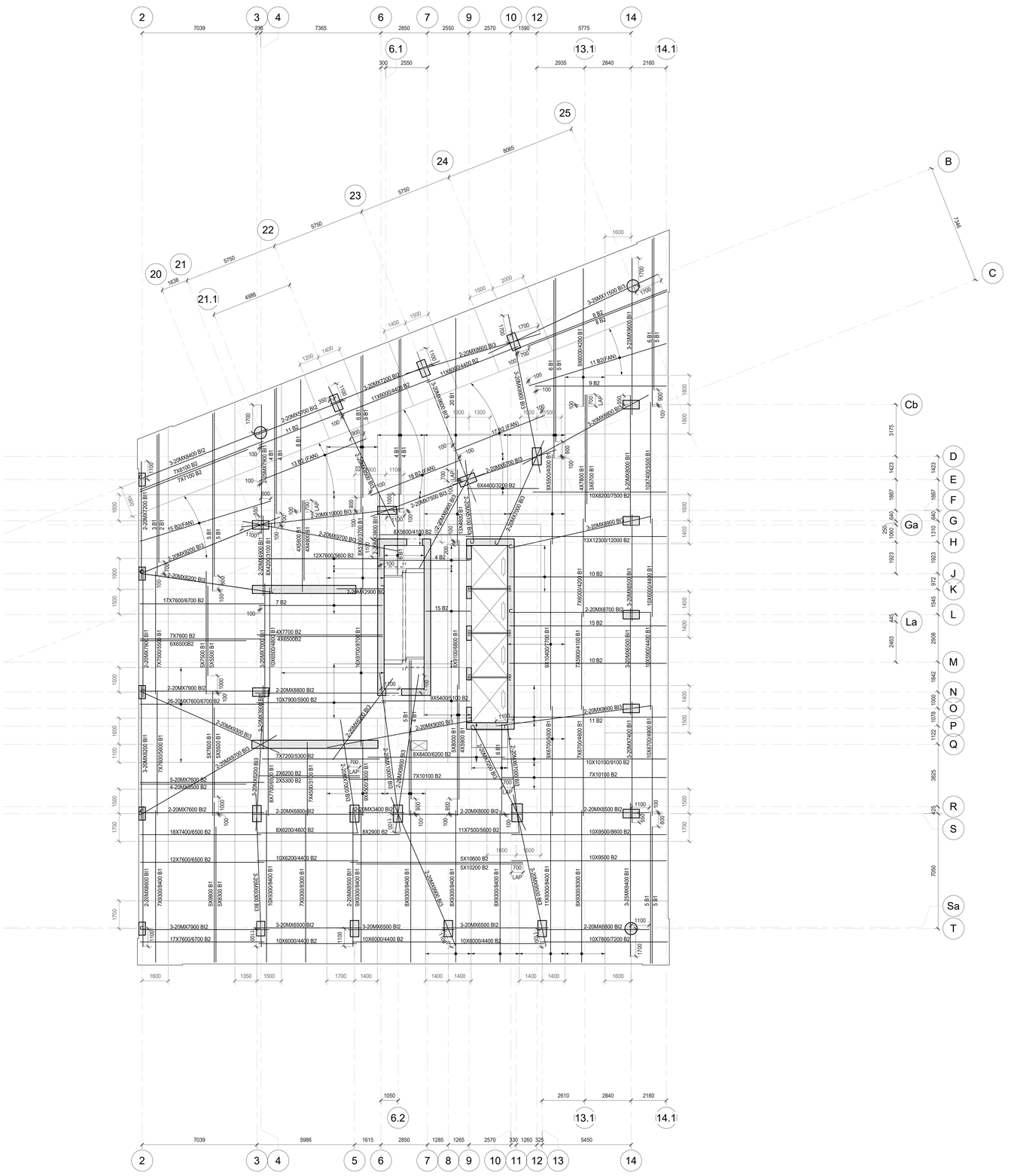
LEVEL 04 CONCRETE LAYOUT PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S116



SLAB REINFORCING NOTES:

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T2 = TOP LOWER LAYER
B2 = BOTTOM UPPER LAYER
B1 = BOTTOM LOWER LAYER
B.I.3 = BOTTOM INTEGRITY BOT. UPPER UPPER LAYER
B.I.2 = BOTTOM INTEGRITY BOT. UPPER LAYER
B.I.1 = BOTTOM INTEGRITY BOT. LOWER LAYER
2. ALL REINFORCING BARS SHOWN ON PLAN TO 15M UNLESS NOTED OTHERWISE
3. B.I.= BOTTOM INTEGRITY REINFORCING. SPACE @ 150 o/c.
4. CONCRETE COVER U/N
PARKING 40 mm TOP
30 mm BOT.

GROUND TO ROOF 25 mm TOP
25 mm BOT.

SEE ADDITIONAL PARKING LEVEL NOTES FOR CONCRETE COVER REQUIREMENTS AT PARKING LEVELS

5.WHERE REINFORCING LENGTHS EXCEED MAXIMUM AVAILABLE LENGTH, SPLICE REINFORCING BARS AS NOTED ON REINFORCING BAR LAP LENGTH TABLE ON S01

SHEAR REINFORCING (NOTED AS SR#)

NOTES:
1. SEE PLAN FOR LOCATIONS
2. ALL SHEAR REINF'G IS TO SPACED EQUALLY ACROSS COLUMN WIDTH
3. SHEAR REINF'G TO BE TIED AT ALL INTERSECTIONS
4. AT WALL ENDS ASSUME COLUMN LENGTH OF 1000 mm FOR DETAILING OF SHEAR REINF'G
5. COLUMN LENGTH INCLUDES COLUMN CAPITALS IF PRESENT
6. SEE SHEAR REINFORCING DETAILS ALSO.

NOTE: REINFORCING AT TEMPORARY MAN & MAT'L HOIST OPENING

1. SLAB REINFORCING THAT CROSSES PERIMETER OF SLAB OPENING IS TO BE CUT AT POINT WHERE IT CROSSES.
2. WHEN REINFORCING CROSSES ENTIRE SLAB OPENING, PROVIDE A COUPLED REINFORCING BAR INTO COUPLER ON EACH SIDE OF THE OPENING & LAP 1000 mm MINIMUM AT CENTER OF CRANE OPENING.
3. PROVIDE THE APPROPRIATE THREADED CAST-IN REINFORCING BAR COUPLER FOR EACH CUT REINFORCING BAR.
4. AFTER REMOVAL OF HOIST, THREAD CUT-OFF REINFORCING BARS INTO COUPLERS IN ADVANCE OF SLAB OPENING INFILL.
5. REFER TO CONCRETE LAYOUT DRAWING & DRAWING S02 FOR ADDITIONAL OPENING INFORMATION.
6. SLAB ALL AROUND TEMPORARY SLAB OPENING TO BE RESHORED UNTIL TEMPORARY SLAB OPENING IS INFILLED.

NOTE:
REFER TO TYPICAL DETAILS FOR SLAB REINFORCING NOTATION & SHEAR REINFORCING DETAILS

CLV GROUP DEVELOPMENTS

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CSW

landscape architect | architecte paysagiste

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true north

no	revisions	date
5	ISSUED FOR TENDER	25-06-09
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3	ISSUE FOR 66% WD & CLIENT BUDGETING	25-03-28
1	ISSUE FOR REVIEW	24-09-13

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
B.J. ARMSTRONG
100068882
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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GLADSTONE & LORETTA RESIDENTIAL TOWER

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drawing title | titre du dessin

LEVEL 04 BOTTOM REINFORCING PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S117



SLAB REINFORCING NOTES:

1. BAR PLACING ORDER
T1 = TOP UPPER LAYER
T2 = TOP LOWER LAYER
B2 = BOTTOM UPPER LAYER
B1 = BOTTOM LOWER LAYER
B.I.3 = BOTTOM INTEGRITY BOT. UPPER UPPER LAYER
B.I.2 = BOTTOM INTEGRITY BOT. UPPER LAYER
B.I.1 = BOTTOM INTEGRITY BOT. LOWER LAYER
2. ALL REINFORCING BARS SHOWN ON PLAN TO 15M UNLESS NOTED OTHERWISE
3. B.I.= BOTTOM INTEGRITY REINFORCING. SPACE @ 150 o/c.
4. CONCRETE COVER UIN
PARKING 40 mm TOP
30 mm BOT.
GROUND TO ROOF 25 mm TOP
25 mm BOT.

SEE ADDITIONAL PARKING LEVEL NOTES FOR CONCRETE COVER REQUIREMENTS AT PARKING LEVELS

5.WHERE REINFORCING LENGTHS EXCEED MAXIMUM AVAILABLE LENGTH, SPLICE REINFORCING BARS AS NOTED ON REINFORCING BAR LAP LENGTH TABLE ON S01

SHEAR REINFORCING (NOTED AS SR#)

NOTES:
1. SEE PLAN FOR LOCATIONS
2. ALL SHEAR REINFG IS TO SPACED EQUALLY ACROSS COLUMN WIDTH
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NOTE: REINFORCING AT TEMPORARY MAN & MAT'L HOIST OPENING

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4. AFTER REMOVAL OF HOIST, THREAD CUT-OFF REINFORCING BARS INTO COUPLERS IN ADVANCE OF SLAB OPENING INFILL.
5. REFER TO CONCRETE LAYOUT DRAWING & DRAWING S02 FOR ADDITIONAL OPENING INFORMATION.
6. SLAB ALL AROUND TEMPORARY SLAB OPENING TO BE RESHORED UNTIL TEMPORARY SLAB OPENING IS INFILLED.

NOTE:
REFER TO TYPICAL DETAILS FOR SLAB REINFORCING NOTATION & SHEAR REINFORCING DETAILS

CLV GROUP DEVELOPMENTS

client

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CONSULTING STRUCTURAL ENGINEERS

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CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

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no	revisions	date

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
B. LAWRENCE GODDERSHIP
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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LEVEL 04 TOP REINFORCING PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S118

DESIGN LOADS

AMENITY AREAS

250 CONC SLAB	5.90 kPa
PARTITIONS	1.00
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	7.20 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	12.00 kPa

CORRIDOR / M & E / STORAGE

250 CONC SLAB	5.90 kPa
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	6.20 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	11.00 kPa

CONCRETE STAIRS

CONCRETE STAIR THROAT	3.60 kPa
CONCRETE TREADS	2.40 kPa
DEAD LOAD	6.00 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.80 kPa

CONCRETE STAIR LANDINGS

200 CONC SLAB	4.75 kPa
DEAD LOAD	4.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	9.55 kPa

TERRACE/ROOF

HARD LANDSCAPING	2.40 kPa
ROOFING & INSULATION	0.60 kPa
100 AVG TOPPING	2.40
300 CONC SLAB	7.10
CEILING	0.15
MECH'L & MISC	0.25 kPa
DEAD LOAD	12.90 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	17.70 kPa

GREEN ROOF

GREEN LANDSCAPING	2.40 kPa
ROOFING & INSULATION	0.60
100 AVG TOPPING	2.40
300 CONC SLAB	7.10
CEILING	0.15
MECH'L & MISC	0.25 kPa
DEAD LOAD	12.90 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	17.70 kPa

NOTE: EXTERIOR BALCONY SLABS

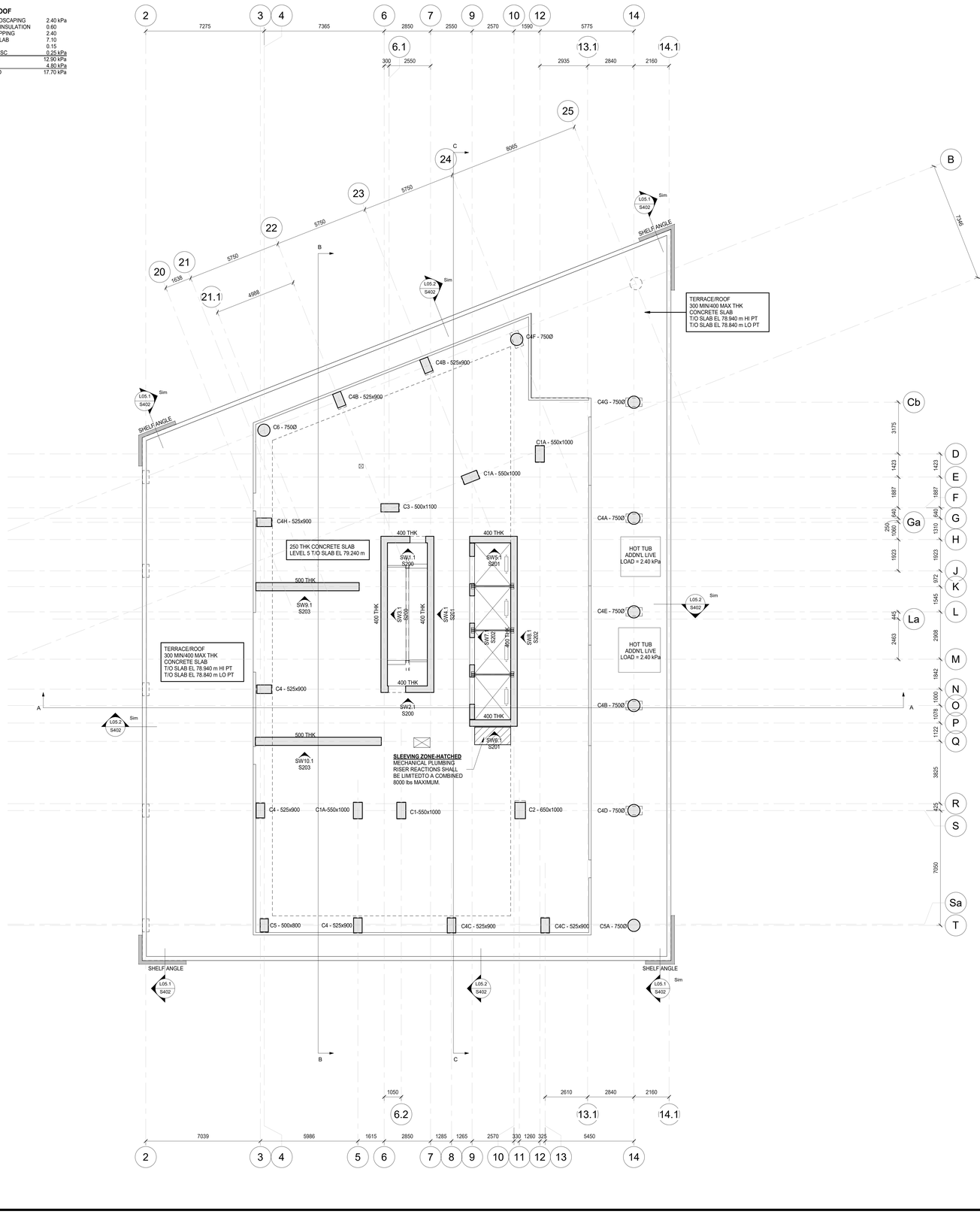
PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-23.1-04 TO GIVE THE FOLLOWING PROPERTIES FOR ALL EXTERIOR EXPOSED CONCRETE BALCONY SLABS.
1. TYPE GU PORTLAND CEMENT
2. MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS = 35 MPa
3. CLASS OF EXPOSURE TO BE C1
4. NOMINAL SIZE OF COARSE AGGREGATE TO BE 20 mm
5. SLUMP AT TIME AND POINT OF DISCHARGE TO BE 75 mm
6. AIR CONTENT TO BE 5-8%

NOTES

1. SEE S200's DWGS. FOR SHEARWALL ELEVATIONS. THE ELEVATION VIEW OF THE SHEARWALL IS TAKEN FROM THE SIDE OF THE WALL ON WHICH THE SHEARWALL DESIGNATION (SW#) IS SHOWN ON PLAN.

2. SUPPORTS FOR CURTAIN WALLS & PRECAST PANELS ARE TO BE DESIGNED & DETAILED BY CURTAIN WALL AND PRECAST SUPPLIERS RESPECTIVELY. SHOP DRAWINGS ARE TO BE STAMPED & SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN ONTARIO. ALL SUPPORTS ARE TO BE INSPECTED DURING CONSTRUCTION BY THE SUPPORT DESIGN ENGINEER.

3. ONLY MECHANICAL SLAB OPENINGS LARGER THAN 300 x 300 OR 300 ∅ ARE SHOWN ON THIS DRAWING. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF MECHANICAL SLAB OPENINGS SMALLER THAN THOSE NOTED ABOVE. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF OPENINGS WHICH ARE SHOWN ON THIS DRAWING. REFER TO GENERAL NOTES & TYPICAL DETAILS ON DRAWING S01, S02 & S03 FOR ADDITIONAL REINFORCING REQUIREMENTS AROUND OPENINGS SHOWN ON THIS DRAWING.



CONCRETE COMPRESSIVE STRENGTHS:
SLABS & BEAMS - 35 MPa TYPE N
INTERIOR CURBS - 25 MPa TYPE N
COLUMNS & SHEARWALLS - 45 MPa TYPE N

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structures

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 40% MD & CLIENT BUDGETING	25-03-28
2	ISSUE FOR EXCAVATION TENDER	24-10-30
1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
B.J.ARMSTRONG
100209855
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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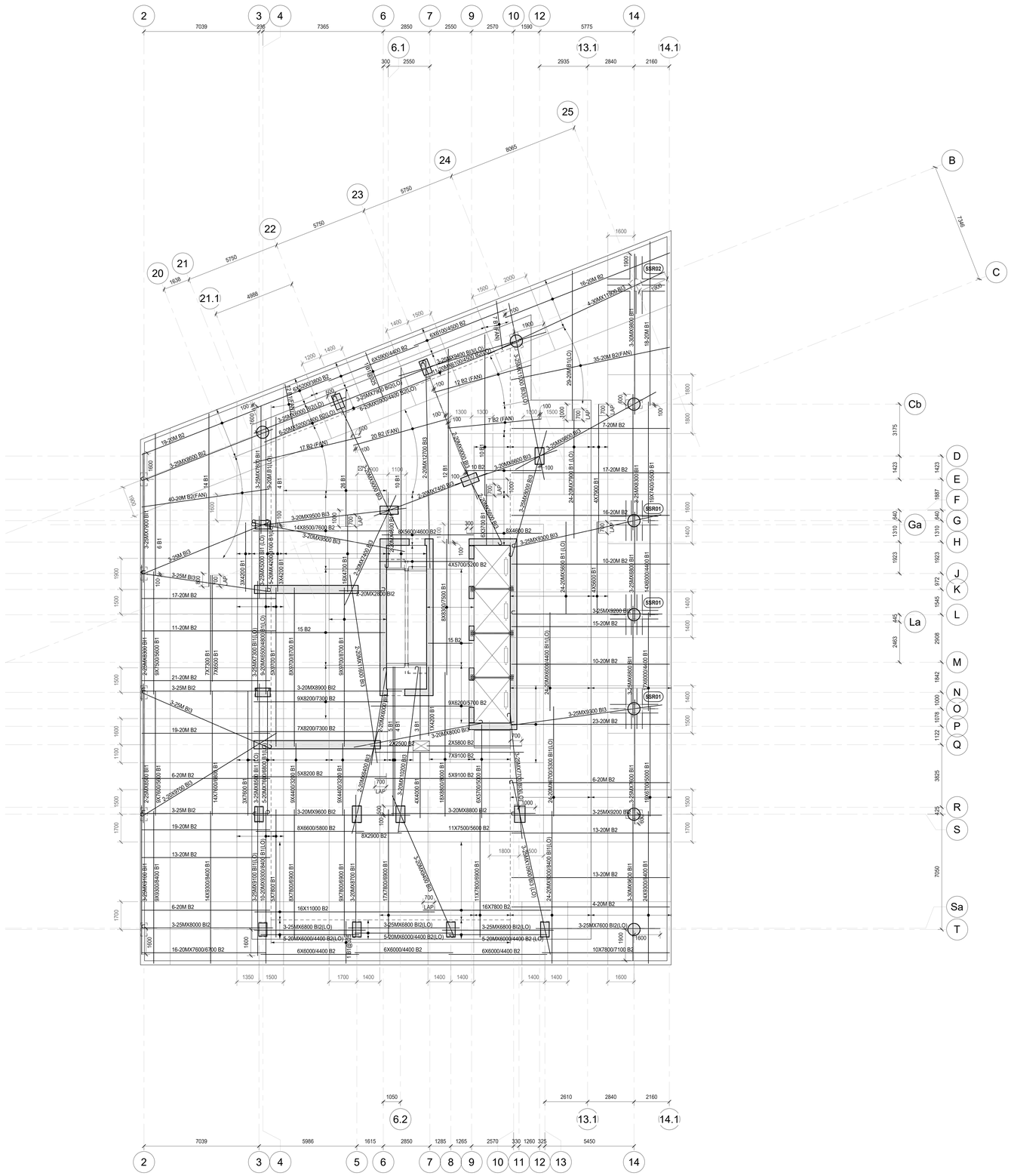
drawing title | titre du dessin

LEVEL 05 CONCRETE LAYOUT PLAN

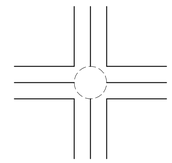
project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S119

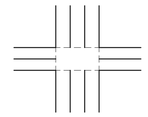


STUD RAIL LEGEND:



5SR02

12 RAILS
STUDS PER RAIL = 13-12.7Ø
So = 90mm
S = 100mm
OAH = 250mm
OAL = 1380mm
REFER TO STUD RAIL DETAIL FOR ADD'L INFORMATION.



5SR01

14 RAILS
STUDS PER RAIL = 6-12.7Ø
So = 95mm
S = 155mm
OAH = 250mm
OAL = 965mm
REFER TO STUD RAIL DETAIL FOR ADD'L INFORMATION.

SLAB REINFORCING NOTES:

1. BAR PLACING ORDER
T1 = TOP UPPER LAYER
T2 = TOP LOWER LAYER
B2 = BOTTOM UPPER LAYER
B1 = BOTTOM LOWER LAYER
B.I.3 = BOTTOM INTEGRITY BOT. UPPER UPPER LAYER
B.I.2 = BOTTOM INTEGRITY BOT. UPPER LAYER
B.I.1 = BOTTOM INTEGRITY BOT. LOWER LAYER
2. ALL REINFORCING BARS SHOWN ON PLAN TO 15M UNLESS NOTED OTHERWISE
3. B.I.= BOTTOM INTEGRITY REINFORCING. SPACE @ 150 o/c.
4. CONCRETE COVER U/N
PARKING 40 mm TOP
30 mm BOT.

GROUND TO ROOF 25 mm TOP
25 mm BOT.

SEE ADDITIONAL PARKING LEVEL NOTES FOR CONCRETE COVER REQUIREMENTS AT PARKING LEVELS

5.WHERE REINFORCING LENGTHS EXCEED MAXIMUM AVAILABLE LENGTH, SPLICE REINFORCING BARS AS NOTED ON REINFORCING BAR LAP LENGTH TABLE ON S01

SHEAR REINFORCING (NOTED AS SR#)

NOTES:
1. SEE PLAN FOR LOCATIONS
2. ALL SHEAR REINF'G IS TO SPACED EQUALLY ACROSS COLUMN WIDTH
3. SHEAR REINF'G TO BE TIED AT ALL INTERSECTIONS
4. AT WALL ENDS ASSUME COLUMN LENGTH OF 1000 mm FOR DETAILING OF SHEAR REINF'G
5. COLUMN LENGTH INCLUDES COLUMN CAPITALS IF PRESENT
6. SEE SHEAR REINFORCING DETAILS ALSO.

NOTE: REINFORCING AT TEMPORARY MAN & MAT'L HOIST OPENING

1. SLAB REINFORCING THAT CROSSES PERIMETER OF SLAB OPENING IS TO BE CUT AT POINT WHERE IT CROSSES.
2. WHEN REINFORCING CROSSES ENTIRE SLAB OPENING, PROVIDE A COUPLED REINFORCING BAR INTO COUPLER ON EACH SIDE OF THE OPENING & LAP 1000 mm MINIMUM AT CENTER OF CRANE OPENING.
3. PROVIDE THE APPROPRIATE THREADED CAST-IN REINFORCING BAR COUPLER FOR EACH CUT REINFORCING BAR.
4. AFTER REMOVAL OF HOIST, THREAD CUT-OFF REINFORCING BARS INTO COUPLERS IN ADVANCE OF SLAB OPENING INFILL.
5. REFER TO CONCRETE LAYOUT DRAWING & DRAWING S02 FOR ADDITIONAL OPENING INFORMATION.
6. SLAB ALL AROUND TEMPORARY SLAB OPENING TO BE RESHORED UNTIL TEMPORARY SLAB OPENING IS INFILLED.

NOTE:
REFER TO TYPICAL DETAILS FOR SLAB REINFORCING NOTATION & SHEAR REINFORCING DETAILS

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

no	revisions	date
5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 66% WD & CLIENT BUDGETING	25-03-28
1	ISSUE FOR REVIEW	24-09-13

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
B.J.ARMSTRONG
100068864
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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GLADSTONE & LORETTA RESIDENTIAL TOWER

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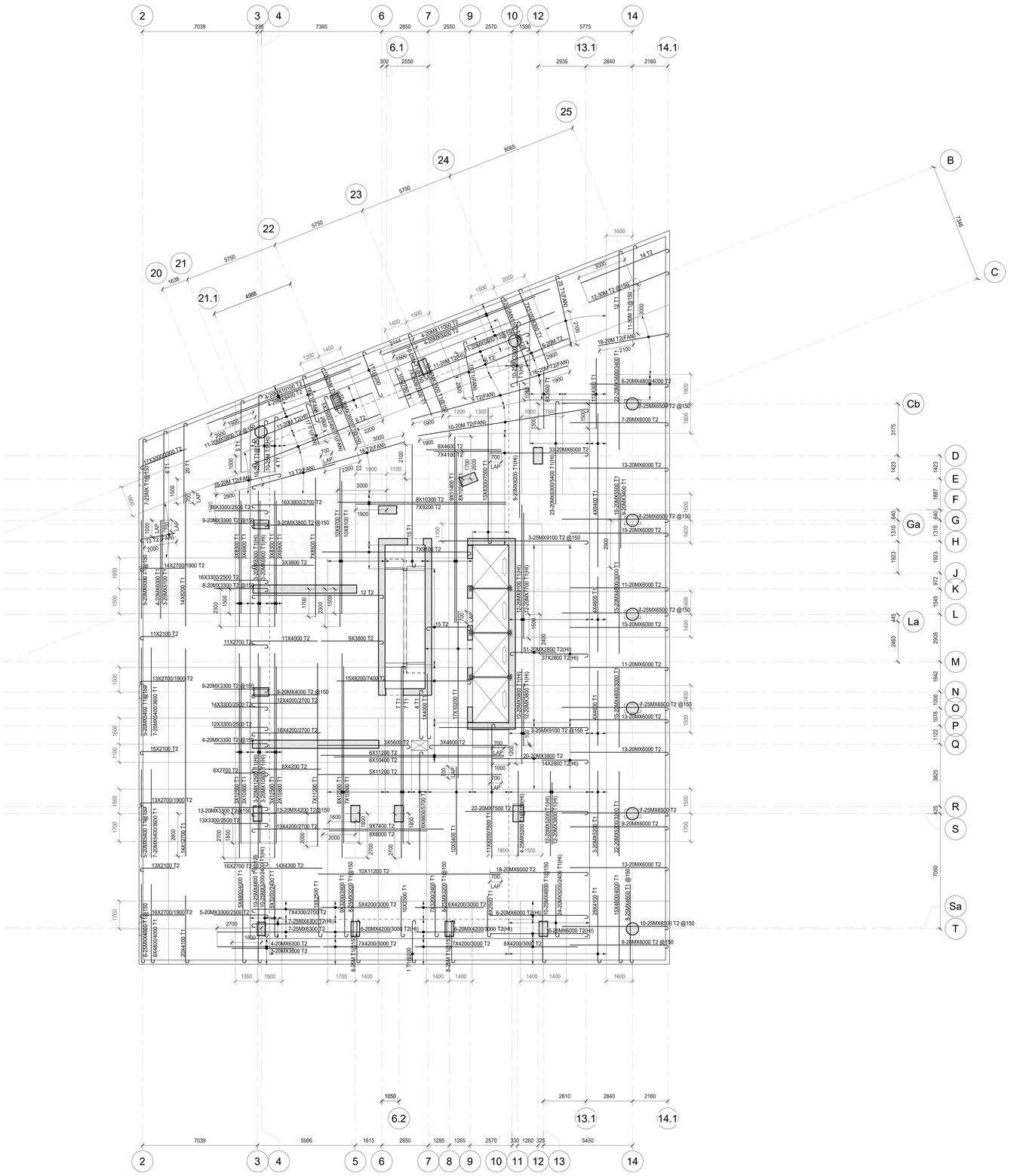
drawing title | titre du dessin

LEVEL 05 BOTTOM REINFORCING PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**As indicated**
date | date	**05/31/24**

drawing number | numéro du dessin

S120



SLAB REINFORCING NOTES:

1. BAR PLACING ORDER
T1 = TOP UPPER LAYER
T2 = TOP LOWER LAYER
B2 = BOTTOM UPPER LAYER
B1 = BOTTOM LOWER LAYER
B.I.3 = BOTTOM INTEGRITY BOT. UPPER UPPER LAYER
B.I.2 = BOTTOM INTEGRITY BOT. UPPER LAYER
B.I.1 = BOTTOM INTEGRITY BOT. LOWER LAYER
2. ALL REINFORCING BARS SHOWN ON PLAN TO 15M UNLESS NOTED OTHERWISE
3. B.I.= BOTTOM INTEGRITY REINFORCING. SPACE @ 150 o/c.
4. CONCRETE COVER UIN
PARKING 40 mm TOP
30 mm BOT.
GROUND TO ROOF 25 mm TOP
25 mm BOT.

SEE ADDITIONAL PARKING LEVEL NOTES FOR CONCRETE COVER REQUIREMENTS AT PARKING LEVELS

5.WHERE REINFORCING LENGTHS EXCEED MAXIMUM AVAILABLE LENGTH, SPLICE REINFORCING BARS AS NOTED ON REINFORCING BAR LAP LENGTH TABLE ON S01

SHEAR REINFORCING (NOTED AS SR#)

NOTES:
1. SEE PLAN FOR LOCATIONS
2. ALL SHEAR REINFG IS TO SPACED EQUALLY ACROSS COLUMN WIDTH
3. SHEAR REINFG TO BE TIED AT ALL INTERSECTIONS
4. AT WALL ENDS ASSUME COLUMN LENGTH OF 1000 mm FOR DETAILING OF SHEAR REINFG
5. COLUMN LENGTH INCLUDES COLUMN CAPITALS IF PRESENT
6. SEE SHEAR REINFORCING DETAILS ALSO.

NOTE: REINFORCING AT TEMPORARY MAN & MAT'L HOIST OPENING

1. SLAB REINFORCING THAT CROSSES PERIMETER OF SLAB OPENING IS TO BE CUT AT POINT WHERE IT CROSSES.
2. WHEN REINFORCING CROSSES ENTIRE SLAB OPENING, PROVIDE A COUPLED REINFORCING BAR INTO COUPLER ON EACH SIDE OF THE OPENING & LAP 1000 mm MINIMUM AT CENTER OF CRANE OPENING.
3. PROVIDE THE APPROPRIATE THREADED CAST-IN REINFORCING BAR COUPLER FOR EACH CUT REINFORCING BAR.
4. AFTER REMOVAL OF HOIST, THREAD CUT-OFF REINFORCING BARS INTO COUPLERS IN ADVANCE OF SLAB OPENING INFILL.
5. REFER TO CONCRETE LAYOUT DRAWING & DRAWING S02 FOR ADDITIONAL OPENING INFORMATION.
6. SLAB ALL AROUND TEMPORARY SLAB OPENING TO BE RESHORED UNTIL TEMPORARY SLAB OPENING IS INFILLED.

NOTE:
REFER TO TYPICAL DETAILS FOR SLAB REINFORCING NOTATION & SHEAR REINFORCING DETAILS

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineer | ingénieur electrique

mechanical engineer | ingénieur mécharique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 40% W/D & CLIENT BUDGETING	25-03-28
1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

I CERTIFY THAT THIS DESIGN IS IN ACCORDANCE WITH THE PROFESSIONAL ENGINEERS ACT
25-06-09
B.LAMSTRONG 100048852
PROFESSIONAL ENGINEER
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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drawing title | titre du dessin

LEVEL 05 TOP REINFORCING PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S121

DESIGN LOADS

AMENITY AREAS

250 CONC SLAB	5.90 kPa
PARTITIONS	1.00
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	7.20 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	12.00 kPa

CORRIDOR / M & E / STORAGE

250 CONC SLAB	5.90 kPa
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	6.20 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	11.00 kPa

CONCRETE STAIRS

CONCRETE STAIR THROAT	3.60 kPa
CONCRETE TREADS	2.40 kPa
DEAD LOAD	6.00 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.80 kPa

CONCRETE STAIR LANDINGS

200 CONC SLAB	4.75 kPa
DEAD LOAD	4.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	9.55 kPa

NOTE: EXTERIOR BALCONY SLABS

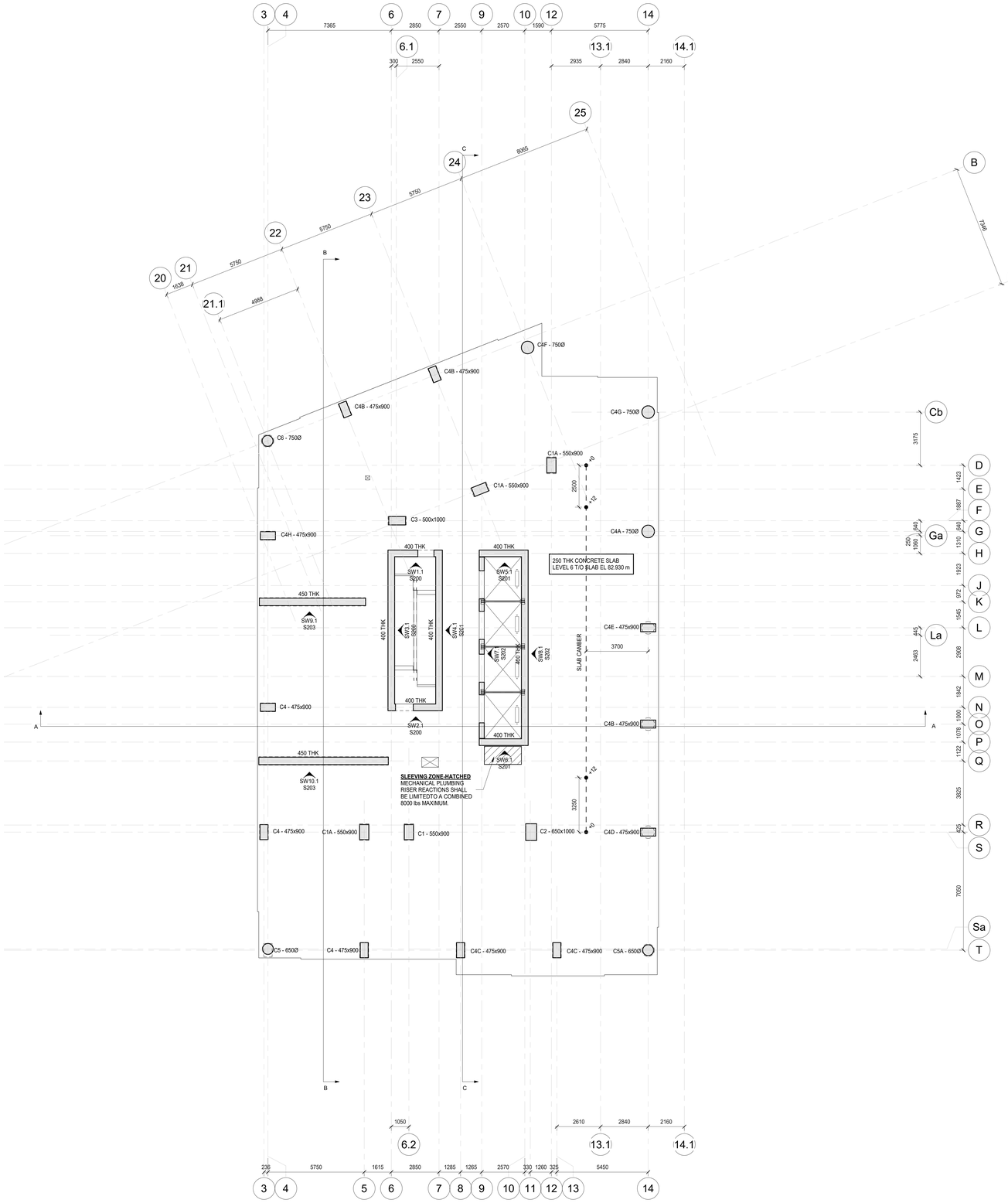
PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-23.1-04 TO GIVE THE FOLLOWING PROPERTIES FOR ALL EXTERIOR EXPOSED CONCRETE BALCONY SLABS.
1. TYPE GU PORTLAND CEMENT
2. MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS = 35 MPa
3. CLASS OF EXPOSURE TO BE C1
4. NOMINAL SIZE OF COARSE AGGREGATE TO BE 20 mm
5. SLUMP AT TIME AND POINT OF DISCHARGE TO BE 75 mm
6. AIR CONTENT TO BE 5-8%

NOTES

1. SEE S200's DWGS. FOR SHEARWALL ELEVATIONS. THE ELEVATION VIEW OF THE SHEARWALL IS TAKEN FROM THE SIDE OF THE WALL ON WHICH THE SHEARWALL DESIGNATION (SW#) IS SHOWN ON PLAN.

2. SUPPORTS FOR CURTAIN WALLS & PRECAST PANELS ARE TO BE DESIGNED & DETAILED BY CURTAIN WALL AND PRECAST SUPPLIERS RESPECTIVELY. SHOP DRAWINGS ARE TO BE STAMPED & SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN ONTARIO. ALL SUPPORTS ARE TO BE INSPECTED DURING CONSTRUCTION BY THE SUPPORT DESIGN ENGINEER.

3. ONLY MECHANICAL SLAB OPENINGS LARGER THAN 300 x 300 OR 300 ∅ ARE SHOWN ON THIS DRAWING. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF MECHANICAL SLAB OPENINGS SMALLER THAN THOSE NOTED ABOVE. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF OPENINGS WHICH ARE SHOWN ON THIS DRAWING. REFER TO GENERAL NOTES & TYPICAL DETAILS ON DRAWING S01, S02 & S03 FOR ADDITIONAL REINFORCING REQUIREMENTS AROUND OPENINGS SHOWN ON THIS DRAWING.



CONCRETE COMPRESSIVE STRENGTHS:
SLABS & BEAMS - 35 MPa TYPE N
EXPOSED/BALCONY SLABS - 35 MPa CLASS C1
INTERIOR CURBS - 25 MPa TYPE N
COLUMNS & SHEARWALLS - 45 MPa TYPE N

CLV GROUP DEVELOPMENTS

client

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CONSULTING STRUCTURAL ENGINEERS

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mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

no	revisions	date
5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 90% MD & CLIENT BUDGETING	25-03-28
2	ISSUE FOR EXCAVATION TENDER	24-10-30
1	ISSUE FOR REVIEW	24-09-13

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
B.J.ARMSTRONG
100029852
PROVINCE OF ONTARIO

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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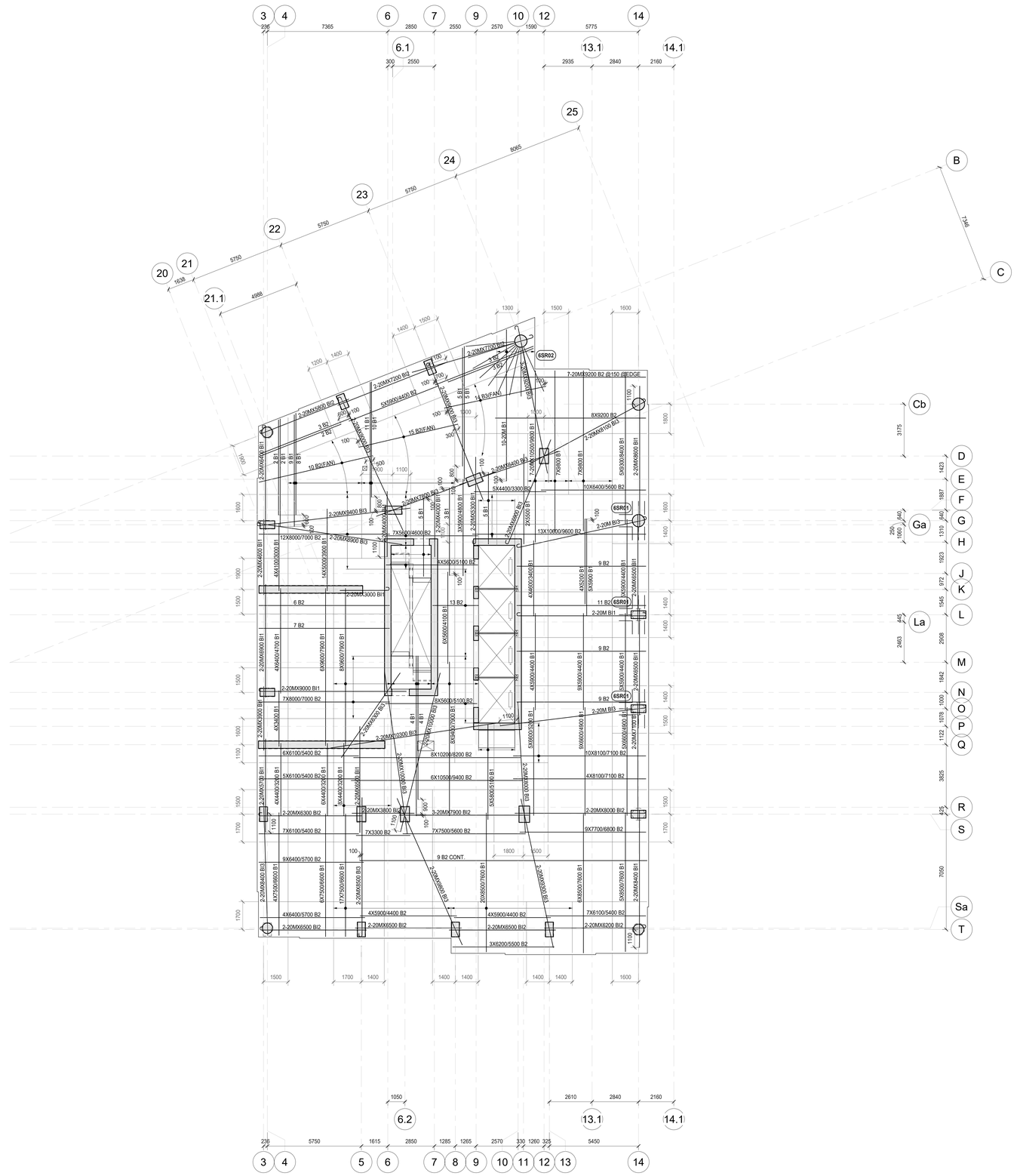
drawing title | titre du dessin

LEVEL 06 CONCRETE LAYOUT PLAN

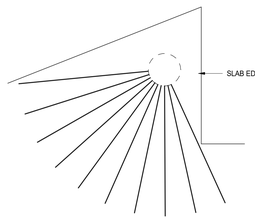
project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S122

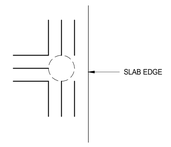


STUD RAIL LEGEND:



6SR02

10 RAILS
STUDS PER RAIL = 22-12.7Ø
So = 65mm
S = 90mm
OAH = 175mm
OAL = 2020mm
REFER TO STUD RAIL DETAIL FOR ADD'L INFORMATION.



6SR01

9 RAILS
STUDS PER RAIL = 7-9.5Ø
So = 60mm
S = 115mm
OAH = 175mm
OAL = 810mm
REFER TO STUD RAIL DETAIL FOR ADD'L INFORMATION.

SLAB REINFORCING NOTES:

1. BAR PLACING ORDER
T1 = TOP UPPER LAYER
T2 = TOP LOWER LAYER
B2 = BOTTOM UPPER LAYER
B1 = BOTTOM LOWER LAYER
B.I.3 = BOTTOM INTEGRITY BOT. UPPER UPPER LAYER
B.I.2 = BOTTOM INTEGRITY BOT. UPPER LAYER
B.I.1 = BOTTOM INTEGRITY BOT. LOWER LAYER
2. ALL REINFORCING BARS SHOWN ON PLAN TO 15M UNLESS NOTED OTHERWISE
3. B.I.= BOTTOM INTEGRITY REINFORCING. SPACE @ 150 o/c.
4. CONCRETE COVER U/N
PARKING 40 mm TOP
30 mm BOT.
GROUND TO ROOF 25 mm TOP
25 mm BOT.

SEE ADDITIONAL PARKING LEVEL NOTES FOR CONCRETE COVER REQUIREMENTS AT PARKING LEVELS

5.WHERE REINFORCING LENGTHS EXCEED MAXIMUM AVAILABLE LENGTH, SPLICE REINFORCING BARS AS NOTED ON REINFORCING BAR LAP LENGTH TABLE ON S01

SHEAR REINFORCING (NOTED AS SR#)

NOTES:
1. SEE PLAN FOR LOCATIONS
2. ALL SHEAR REINF'G IS TO SPACED EQUALLY ACROSS COLUMN WIDTH
3. SHEAR REINF'G TO BE TIED AT ALL INTERSECTIONS
4. AT WALL ENDS ASSUME COLUMN LENGTH OF 1000 mm FOR DETAILING OF SHEAR REINF'G
5. COLUMN LENGTH INCLUDES COLUMN CAPITALS IF PRESENT
6. SEE SHEAR REINFORCING DETAILS ALSO.

NOTE: REINFORCING AT TEMPORARY MAN & MAT'L HOIST OPENING

1. SLAB REINFORCING THAT CROSSES PERIMETER OF SLAB OPENING IS TO BE CUT AT POINT WHERE IT CROSSES.
2. WHEN REINFORCING CROSSES ENTIRE SLAB OPENING, PROVIDE A COUPLED REINFORCING BAR INTO COUPLER ON EACH SIDE OF THE OPENING & LAP 1000 mm MINIMUM AT CENTER OF CRANE OPENING.
3. PROVIDE THE APPROPRIATE THREADED CAST-IN REINFORCING BAR COUPLER FOR EACH CUT REINFORCING BAR.
4. AFTER REMOVAL OF HOIST, THREAD CUT-OFF REINFORCING BARS INTO COUPLERS IN ADVANCE OF SLAB OPENING INFILL.
5. REFER TO CONCRETE LAYOUT DRAWING & DRAWING S02 FOR ADDITIONAL OPENING INFORMATION.
6. SLAB ALL AROUND TEMPORARY SLAB OPENING TO BE RESHORED UNTIL TEMPORARY SLAB OPENING IS INFILLED.

NOTE:
REFER TO TYPICAL DETAILS FOR SLAB REINFORCING NOTATION & SHEAR REINFORCING DETAILS

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

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GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

no	revisions	date
5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-14
3	ISSUE FOR 66% WD & CLIENT BUDGETING	25-03-28
1	ISSUE FOR REVIEW	24-09-13

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
B. LAWRENCE
100068862
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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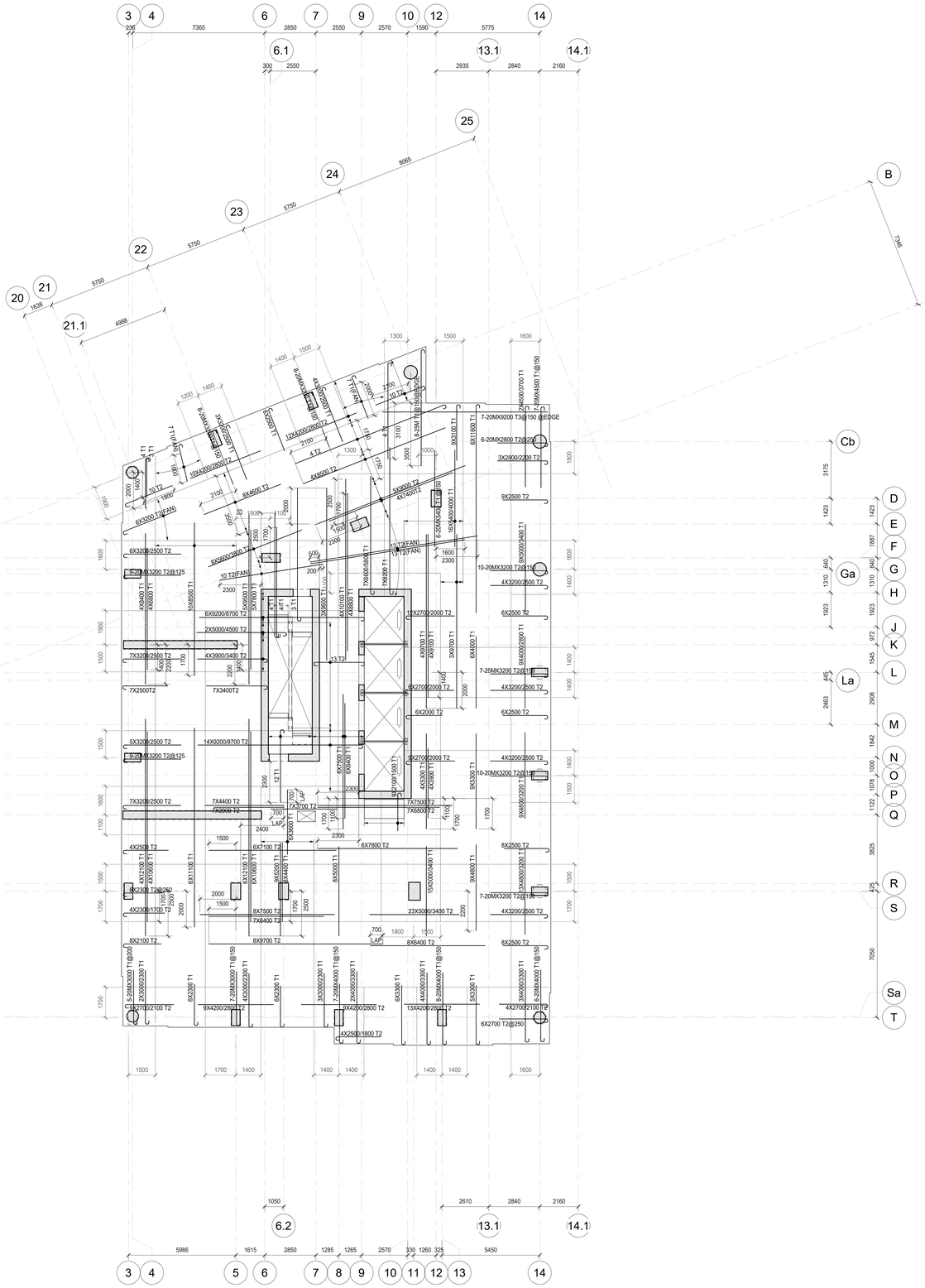
drawing title | titre du dessin

LEVEL 06 BOTTOM REINFORCING PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**As indicated**
date | date	**05/31/24**

drawing number | numéro du dessin

S123



SLAB REINFORCING NOTES:

1. BAR PLACING ORDER
T1 = TOP UPPER LAYER
T2 = TOP LOWER LAYER
B2 = BOTTOM UPPER LAYER
B1 = BOTTOM LOWER LAYER
B.I.3 = BOTTOM INTEGRITY BOT. UPPER UPPER LAYER
B.I.2 = BOTTOM INTEGRITY BOT. UPPER LAYER
B.I.1 = BOTTOM INTEGRITY BOT. LOWER LAYER
2. ALL REINFORCING BARS SHOWN ON PLAN TO 15M UNLESS NOTED OTHERWISE
3. B.I.= BOTTOM INTEGRITY REINFORCING. SPACE @ 150 o/c.
4. CONCRETE COVER UIN
PARKING 40 mm TOP
30 mm BOT.
GROUND TO ROOF 25 mm TOP
25 mm BOT.

SEE ADDITIONAL PARKING LEVEL NOTES FOR CONCRETE COVER REQUIREMENTS AT PARKING LEVELS

5.WHERE REINFORCING LENGTHS EXCEED MAXIMUM AVAILABLE LENGTH, SPLICE REINFORCING BARS AS NOTED ON REINFORCING BAR LAP LENGTH TABLE ON S01

SHEAR REINFORCING (NOTED AS SR#)

NOTES:
1. SEE PLAN FOR LOCATIONS
2. ALL SHEAR REINF'G IS TO SPACED EQUALLY ACROSS COLUMN WIDTH
3. SHEAR REINF'G TO BE TIED AT ALL INTERSECTIONS
4. AT WALL ENDS ASSUME COLUMN LENGTH OF 1000 mm FOR DETAILING OF SHEAR REINF'G
5. COLUMN LENGTH INCLUDES COLUMN CAPITALS IF PRESENT
6. SEE SHEAR REINFORCING DETAILS ALSO.

NOTE: REINFORCING AT TEMPORARY MAN & MAT'L HOIST OPENING

1. SLAB REINFORCING THAT CROSSES PERIMETER OF SLAB OPENING IS TO BE CUT AT POINT WHERE IT CROSSES.
2. WHEN REINFORCING CROSSES ENTIRE SLAB OPENING, PROVIDE A COUPLED REINFORCING BAR INTO COUPLER ON EACH SIDE OF THE OPENING & LAP 1000 mm MINIMUM AT CENTER OF CRANE OPENING.
3. PROVIDE THE APPROPRIATE THREADED CAST-IN REINFORCING BAR COUPLER FOR EACH CUT REINFORCING BAR.
4. AFTER REMOVAL OF HOIST, THREAD CUT-OFF REINFORCING BARS INTO COUPLERS IN ADVANCE OF SLAB OPENING INFILL.
5. REFER TO CONCRETE LAYOUT DRAWING & DRAWING S02 FOR ADDITIONAL OPENING INFORMATION.
6. SLAB ALL AROUND TEMPORARY SLAB OPENING TO BE RESHORED UNTIL TEMPORARY SLAB OPENING IS INFILLED.

NOTE:
REFER TO TYPICAL DETAILS FOR SLAB REINFORCING NOTATION & SHEAR REINFORCING DETAILS

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 50% WD & CLIENT BUDGETING	25-03-28
1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
B.J.ARMSTRONG
1000195B
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

Enter address here

drawing title | titre du dessin

LEVEL 06 TOP REINFORCING PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S124

DESIGN LOADS

UNIT AREAS

225 CONC SLAB	5.30 kPa
PARTITIONS	1.00
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	6.60 kPa
LIVE LOAD	1.90 kPa
TOTAL LOAD	8.50 kPa

CORRIDOR / M & E / STORAGE

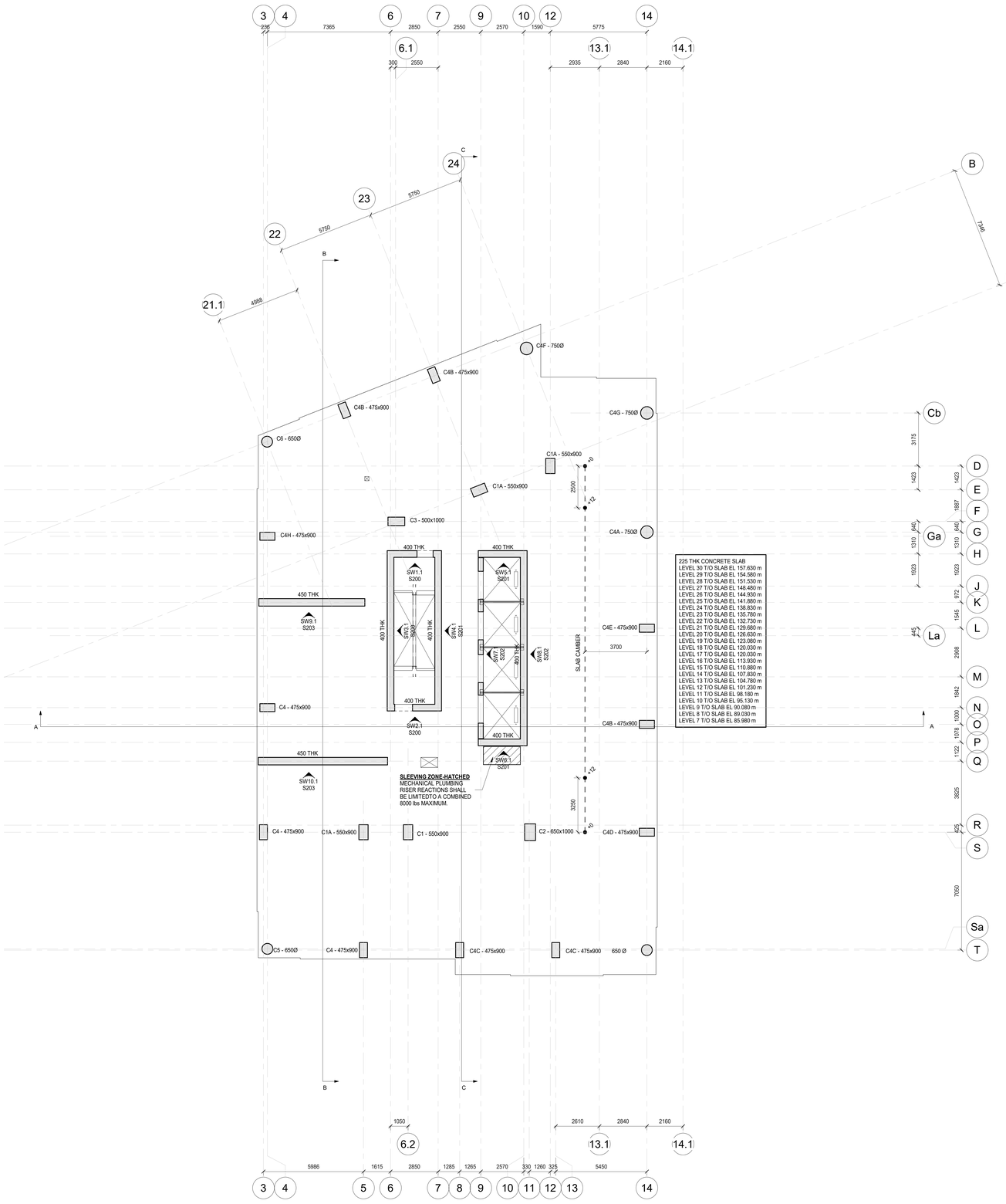
225 CONC SLAB	5.30 kPa
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	5.60 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.40 kPa

CONCRETE STAIRS

CONCRETE STAIR THROAT	3.60 kPa
CONCRETE TREADS	2.40 kPa
DEAD LOAD	6.00 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.80 kPa

CONCRETE STAIR LANDINGS

200 CONC SLAB	4.75 kPa
DEAD LOAD	4.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	9.55 kPa



NOTE: EXTERIOR BALCONY SLABS

PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-23.1-04 TO GIVE THE FOLLOWING PROPERTIES FOR ALL EXTERIOR EXPOSED CONCRETE BALCONY SLABS.
1. TYPE GU PORTLAND CEMENT
2. MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS = 35 MPa
3. CLASS OF EXPOSURE TO BE C1
4. NOMINAL SIZE OF COARSE AGGREGATE TO BE 20 mm
5. SLUMP AT TIME AND POINT OF DISCHARGE TO BE 75 mm
6. AIR CONTENT TO BE 5-8%

NOTES

1. SEE S200's DWGS. FOR SHEARWALL ELEVATIONS. THE ELEVATION VIEW OF THE SHEARWALL IS TAKEN FROM THE SIDE OF THE WALL ON WHICH THE SHEARWALL DESIGNATION (SW#) IS SHOWN ON PLAN.

2. SUPPORTS FOR CURTAIN WALLS & PRECAST PANELS ARE TO BE DESIGNED & DETAILED BY CURTAIN WALL AND PRECAST SUPPLIERS RESPECTIVELY. SHOP DRAWINGS ARE TO BE STAMPED & SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN ONTARIO. ALL SUPPORTS ARE TO BE INSPECTED DURING CONSTRUCTION BY THE SUPPORT DESIGN ENGINEER.

3. ONLY MECHANICAL SLAB OPENINGS LARGER THAN 300 x 300 OR 300 ∅ ARE SHOWN ON THIS DRAWING. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF MECHANICAL SLAB OPENINGS SMALLER THAN THOSE NOTED ABOVE. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF OPENINGS WHICH ARE SHOWN ON THIS DRAWING. REFER TO GENERAL NOTES & TYPICAL DETAILS ON DRAWING S01, S02 & S03 FOR ADDITIONAL REINFORCING REQUIREMENTS AROUND OPENINGS SHOWN ON THIS DRAWING.

CONCRETE COMPRESSIVE STRENGTHS:
SLABS & BEAMS - 30 MPa TYPE N
INTERIOR CURBS - 25 MPa TYPE N
LEVELS 07-14 COLUMNS & SHEARWALLS - 40 MPa TYPE N
LEVELS 15-18 COLUMNS & SHEARWALLS - 35 MPa TYPE N
LEVELS 19-30 COLUMNS & SHEARWALLS - 30 MPa TYPE N

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur mécharique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

no	revisions	date
5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 90% MD & CLIENT BUDGETING	25-03-28
2	ISSUE FOR EXCAVATION TENDER	24-10-30
1	ISSUE FOR REVIEW	24-09-13

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
R. LAMSTRONG
1100CR8EP
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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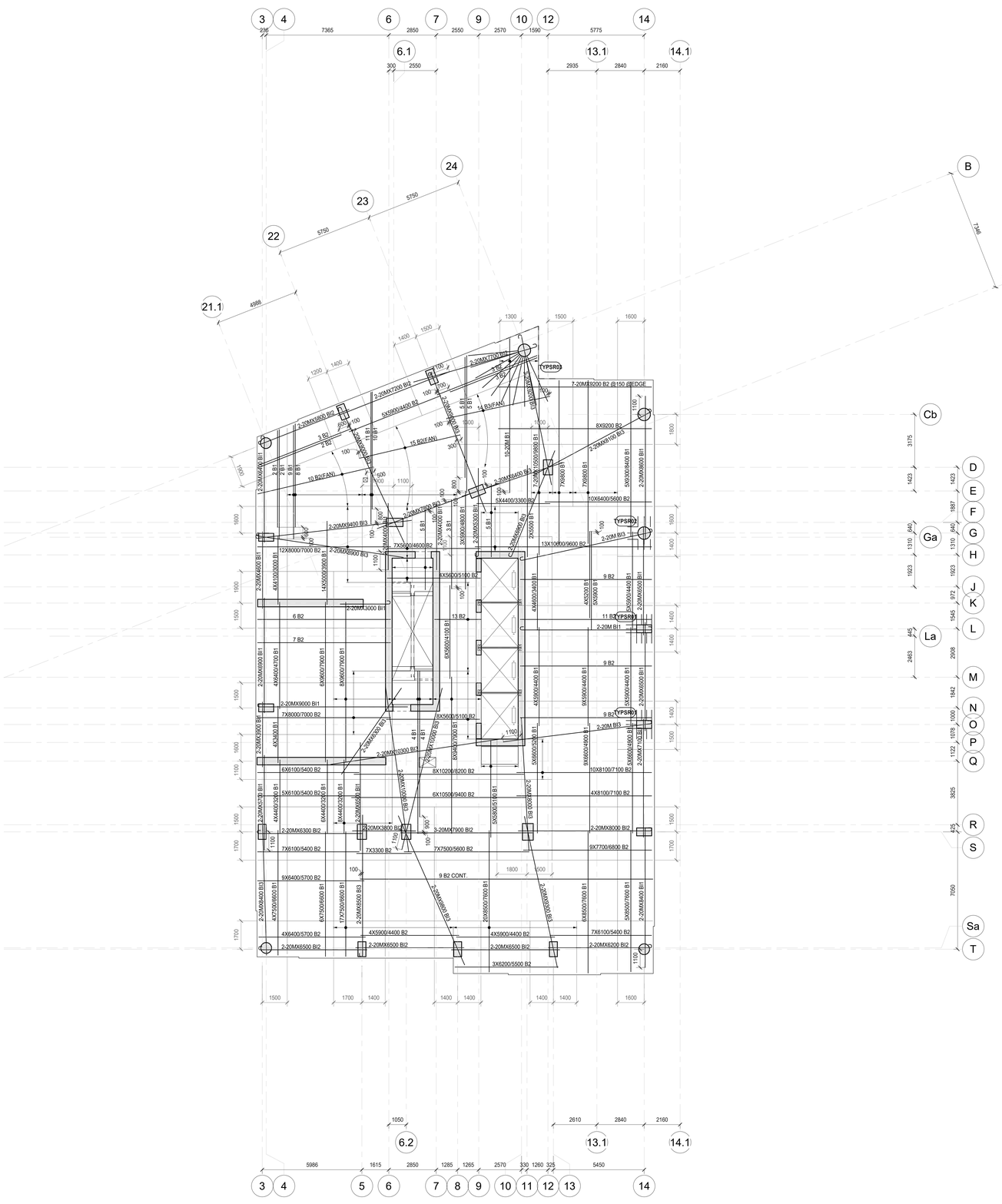
drawing title | titre du dessin

LEVELS 07 - 30 CONCRETE LAYOUT PLAN

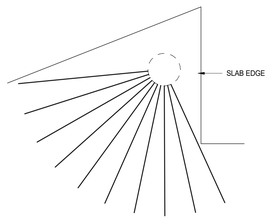
project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S125

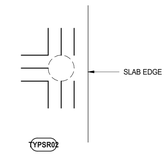


STUD RAIL LEGEND:



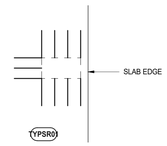
YPSR01

10 RAILS
STUDS PER RAIL = 22-12.7Ø
So = 65mm
S = 90mm
OAH = 175mm
OAL = 2020mm
REFER TO STUD RAIL DETAIL
FOR ADD'L INFORMATION.



YPSR02

9 RAILS
STUDS PER RAIL = 5-9.5Ø
So = 60mm
S = 125mm
OAH = 175mm
OAL = 920mm
REFER TO STUD RAIL DETAIL
FOR ADD'L INFORMATION.



YPSR03

11 RAILS
STUDS PER RAIL = 5-9.5Ø
So = 65mm
S = 125mm
OAH = 175mm
OAL = 630mm
REFER TO STUD RAIL DETAIL
FOR ADD'L INFORMATION.

SLAB REINFORCING NOTES:

1. BAR PLACING ORDER
T1 = TOP UPPER LAYER
T2 = TOP LOWER LAYER
B2 = BOTTOM UPPER LAYER
B1 = BOTTOM LOWER LAYER
B.I.3 = BOTTOM INTEGRITY BOT. UPPER UPPER LAYER
B.I.2 = BOTTOM INTEGRITY BOT. UPPER LAYER
B.I.1 = BOTTOM INTEGRITY BOT. LOWER LAYER
2. ALL REINFORCING BARS SHOWN ON PLAN TO 15M UNLESS NOTED OTHERWISE
3. B.I.= BOTTOM INTEGRITY REINFORCING. SPACE @ 150 o/c.
4. CONCRETE COVER U/N
PARKING 40 mm TOP
30 mm BOT.
GROUND TO ROOF 25 mm TOP
25 mm BOT.

SEE ADDITIONAL PARKING LEVEL NOTES FOR CONCRETE COVER REQUIREMENTS AT PARKING LEVELS

5.WHERE REINFORCING LENGTHS EXCEED MAXIMUM AVAILABLE LENGTH, SPLICE REINFORCING BARS AS NOTED ON REINFORCING BAR LAP LENGTH TABLE ON S01

SHEAR REINFORCING (NOTED AS SR#)

NOTES:
1. SEE PLAN FOR LOCATIONS
2. ALL SHEAR REINF'G IS TO SPACED EQUALLY ACROSS COLUMN WIDTH
3. SHEAR REINF'G TO BE TIED AT ALL INTERSECTIONS
4. AT WALL ENDS ASSUME COLUMN LENGTH OF 1000 mm FOR DETAILING OF SHEAR REINF'G
5. COLUMN LENGTH INCLUDES COLUMN CAPITALS IF PRESENT
6. SEE SHEAR REINFORCING DETAILS ALSO.

NOTE: REINFORCING AT TEMPORARY MAN & MAT'L HOIST OPENING

1. SLAB REINFORCING THAT CROSSES PERIMETER OF SLAB OPENING IS TO BE CUT AT POINT WHERE IT CROSSES.
2. WHEN REINFORCING CROSSES ENTIRE SLAB OPENING, PROVIDE A COUPLED REINFORCING BAR INTO COUPLER ON EACH SIDE OF THE OPENING & LAP 1000 mm MINIMUM AT CENTER OF CRANE OPENING.
3. PROVIDE THE APPROPRIATE THREADED CAST-IN REINFORCING BAR COUPLER FOR EACH CUT REINFORCING BAR.
4. AFTER REMOVAL OF HOIST, THREAD CUT-OFF REINFORCING BARS INTO COUPLERS IN ADVANCE OF SLAB OPENING INFILL.
5. REFER TO CONCRETE LAYOUT DRAWING & DRAWING S02 FOR ADDITIONAL OPENING INFORMATION.
6. SLAB ALL AROUND TEMPORARY SLAB OPENING TO BE RESHORED UNTIL TEMPORARY SLAB OPENING IS INFILLED.

NOTE:
REFER TO TYPICAL DETAILS FOR SLAB REINFORCING NOTATION & SHEAR REINFORCING DETAILS

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

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GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 60% WD & CLIENT BUDGETING	25-03-28
1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

LICENCED PROFESSIONAL ENGINEER
25-06-09
B. A. GLADSTONE
TOOGOOBRAM
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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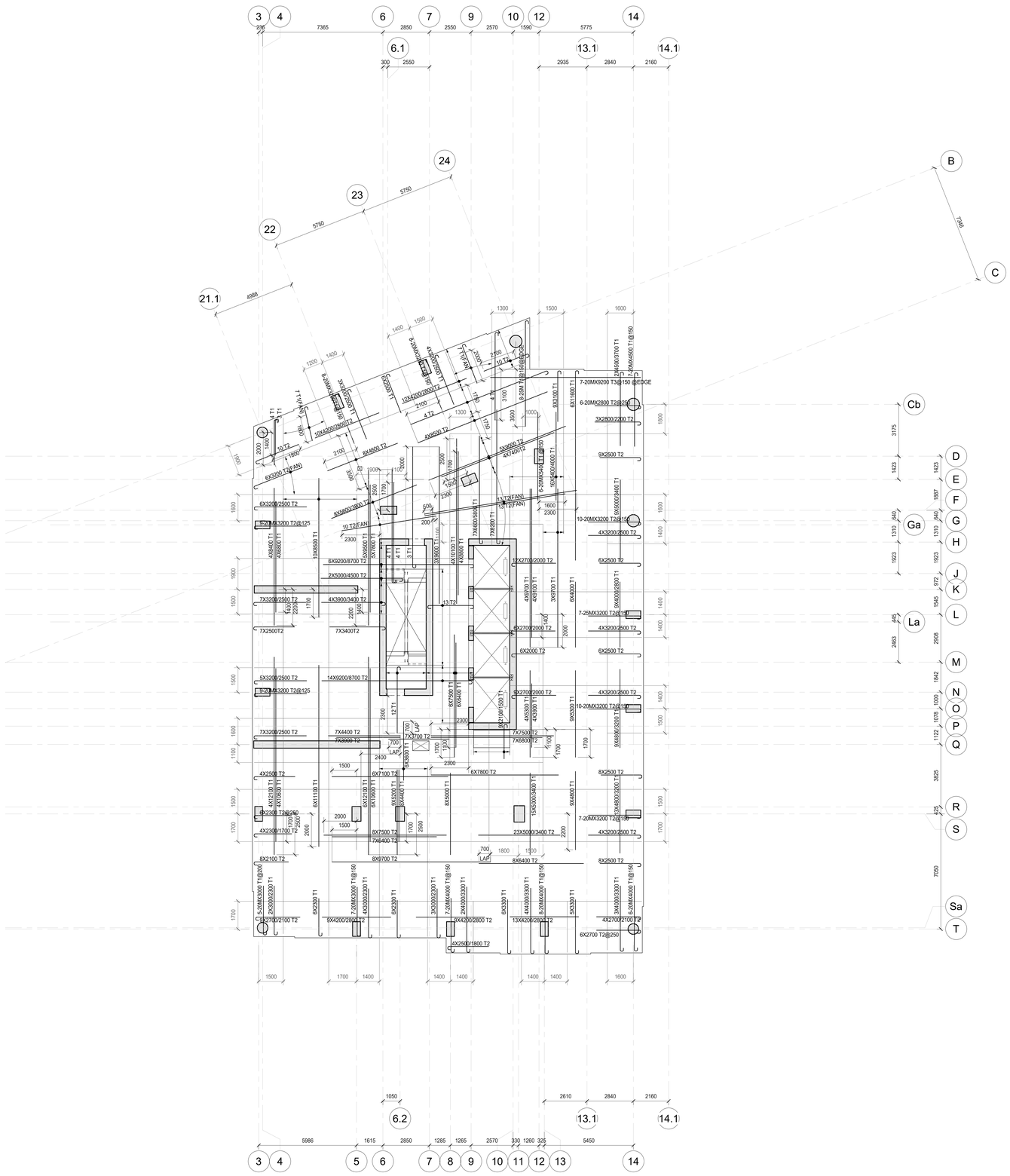
drawing title | titre du dessin

LEVELS 07 - 30 BOTTOM REINFORCING PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**As indicated**
date | date	**05/31/24**

drawing number | numéro du dessin

S126



SLAB REINFORCING NOTES:

1. BAR PLACING ORDER
T1 = TOP UPPER LAYER
T2 = TOP LOWER LAYER
B2 = BOTTOM UPPER LAYER
B1 = BOTTOM LOWER LAYER
B.I.3 = BOTTOM INTEGRITY BOT. UPPER UPPER LAYER
B.I.2 = BOTTOM INTEGRITY BOT. UPPER LAYER
B.I.1 = BOTTOM INTEGRITY BOT. LOWER LAYER
2. ALL REINFORCING BARS SHOWN ON PLAN TO 15M UNLESS NOTED OTHERWISE
3. B.I.= BOTTOM INTEGRITY REINFORCING. SPACE @ 150 o/c.
4. CONCRETE COVER U/N
PARKING 40 mm TOP
30 mm BOT.

GROUND TO ROOF 25 mm TOP
25 mm BOT.

SEE ADDITIONAL PARKING LEVEL NOTES FOR CONCRETE COVER REQUIREMENTS AT PARKING LEVELS

5.WHERE REINFORCING LENGTHS EXCEED MAXIMUM AVAILABLE LENGTH, SPLICE REINFORCING BARS AS NOTED ON REINFORCING BAR LAP LENGTH TABLE ON S01

SHEAR REINFORCING (NOTED AS SR#)

NOTES:
1. SEE PLAN FOR LOCATIONS
2. ALL SHEAR REINF'G IS TO SPACED EQUALLY ACROSS COLUMN WIDTH
3. SHEAR REINF'G TO BE TIED AT ALL INTERSECTIONS
4. AT WALL ENDS ASSUME COLUMN LENGTH OF 1000 mm FOR DETAILING OF SHEAR REINF'G
5. COLUMN LENGTH INCLUDES COLUMN CAPITALS IF PRESENT
6. SEE SHEAR REINFORCING DETAILS ALSO.

NOTE: REINFORCING AT TEMPORARY MAN & MAT'L HOIST OPENING

1. SLAB REINFORCING THAT CROSSES PERIMETER OF SLAB OPENING IS TO BE CUT AT POINT WHERE IT CROSSES.
2. WHEN REINFORCING CROSSES ENTIRE SLAB OPENING, PROVIDE A COUPLED REINFORCING BAR INTO COUPLER ON EACH SIDE OF THE OPENING & LAP 1000 mm MINIMUM AT CENTER OF CRANE OPENING.
3. PROVIDE THE APPROPRIATE THREADED CAST-IN REINFORCING BAR COUPLER FOR EACH CUT REINFORCING BAR.
4. AFTER REMOVAL OF HOIST, THREAD CUT-OFF REINFORCING BARS INTO COUPLERS IN ADVANCE OF SLAB OPENING INFILL.
5. REFER TO CONCRETE LAYOUT DRAWING & DRAWING S02 FOR ADDITIONAL OPENING INFORMATION.
6. SLAB ALL AROUND TEMPORARY SLAB OPENING TO BE RESHORED UNTIL TEMPORARY SLAB OPENING IS INFILLED.

NOTE:
REFER TO TYPICAL DETAILS FOR SLAB REINFORCING NOTATION & SHEAR REINFORCING DETAILS

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

no	revisions	date
5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 66% WD & CLIENT BUDGETING	25-03-28
1	ISSUE FOR REVIEW	24-09-13

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
B.J.ARMSTRONG
100068864
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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drawing title | titre du dessin

LEVELS 07 - 30 TOP REINFORCING PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S127

DESIGN LOADS

UNIT AREAS

225 CONC SLAB	5.30 kPa
PARTITIONS	1.00
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	6.60 kPa
LIVE LOAD	1.90 kPa
TOTAL LOAD	8.50 kPa

CORRIDOR / M & E / STORAGE

225 CONC SLAB	5.30 kPa
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	5.60 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.40 kPa

CONCRETE STAIRS

CONCRETE STAIR THROAT	3.60 kPa
CONCRETE TREADS	2.40 kPa
DEAD LOAD	6.00 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.80 kPa

CONCRETE STAIR LANDINGS

200 CONC SLAB	4.75 kPa
DEAD LOAD	4.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	9.55 kPa

NOTE: EXTERIOR BALCONY SLABS

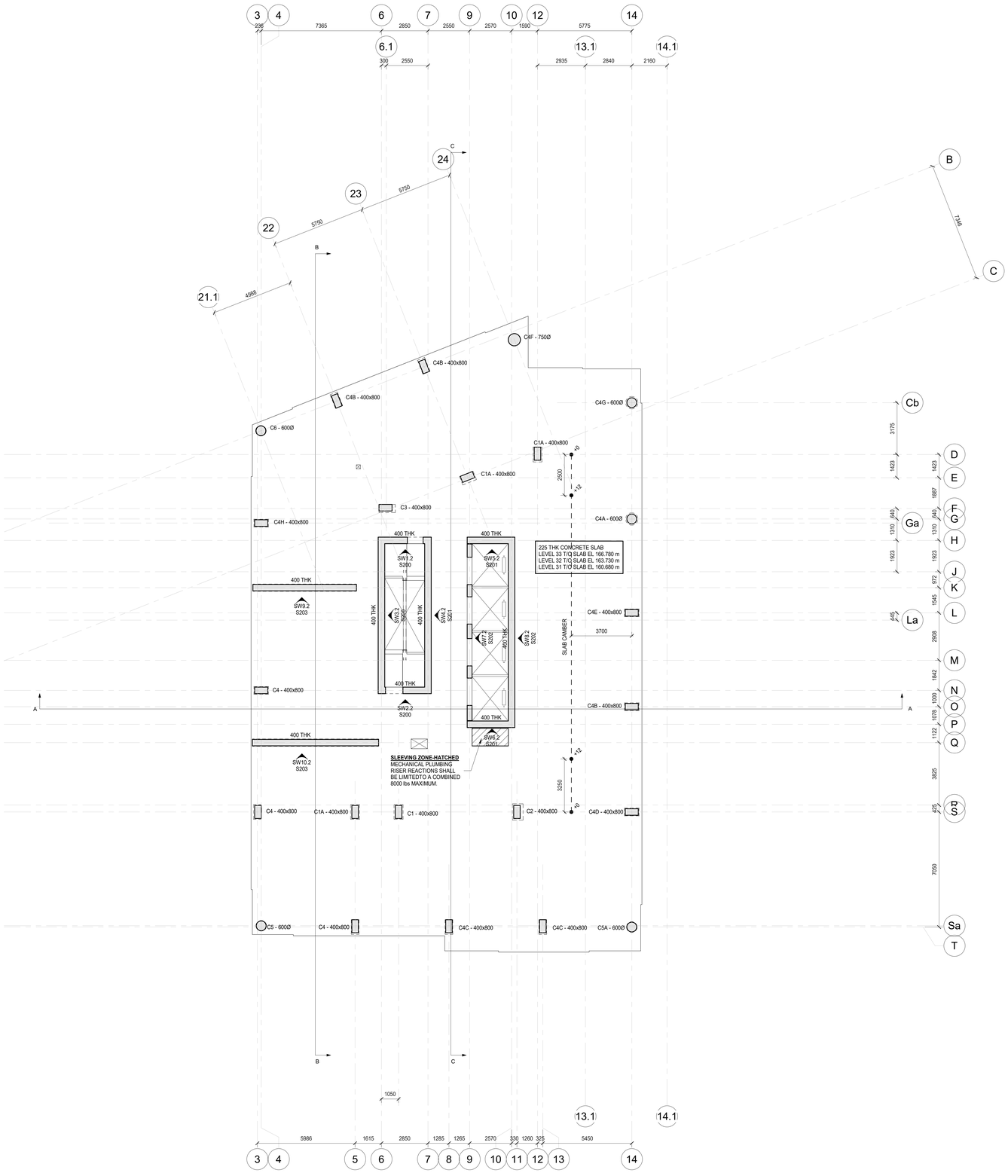
PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-23.1-04 TO GIVE THE FOLLOWING PROPERTIES FOR ALL EXTERIOR EXPOSED CONCRETE BALCONY SLABS.
1. TYPE GU PORTLAND CEMENT
2. MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS = 35 MPa
3. CLASS OF EXPOSURE TO BE C1
4. NOMINAL SIZE OF COARSE AGGREGATE TO BE 20 mm
5. SLUMP AT TIME AND POINT OF DISCHARGE TO BE 75 mm
6. AIR CONTENT TO BE 5-8%

NOTES

1. SEE S200's DWGS. FOR SHEARWALL ELEVATIONS. THE ELEVATION VIEW OF THE SHEARWALL IS TAKEN FROM THE SIDE OF THE WALL ON WHICH THE SHEARWALL DESIGNATION (SW#) IS SHOWN ON PLAN.

2. SUPPORTS FOR CURTAIN WALLS & PRECAST PANELS ARE TO BE DESIGNED & DETAILED BY CURTAIN WALL AND PRECAST SUPPLIERS RESPECTIVELY. SHOP DRAWINGS ARE TO BE STAMPED & SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN ONTARIO. ALL SUPPORTS ARE TO BE INSPECTED DURING CONSTRUCTION BY THE SUPPORT DESIGN ENGINEER.

3. ONLY MECHANICAL SLAB OPENINGS LARGER THAN 300 x 300 OR 300 ∅ ARE SHOWN ON THIS DRAWING. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF MECHANICAL SLAB OPENINGS SMALLER THAN THOSE NOTED ABOVE. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF OPENINGS WHICH ARE SHOWN ON THIS DRAWING. REFER TO GENERAL NOTES & TYPICAL DETAILS ON DRAWING S01, S02 & S03 FOR ADDITIONAL REINFORCING REQUIREMENTS AROUND OPENINGS SHOWN ON THIS DRAWING.



CONCRETE COMPRESSIVE STRENGTHS:
SLABS & BEAMS - 30 MPa TYPE N
INTERIOR CURBS - 25 MPa TYPE N
COLUMNS & SHEARWALLS - 30 MPa TYPE N

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur mécharique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

no	revisions	date
5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 40% MD & CLIENT BUDGETING	25-03-28
2	ISSUE FOR EXCAVATION TENDER	24-10-30
1	ISSUE FOR REVIEW	24-09-13

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
21-06-09
D. LAMONTAGNE
GOODKEY
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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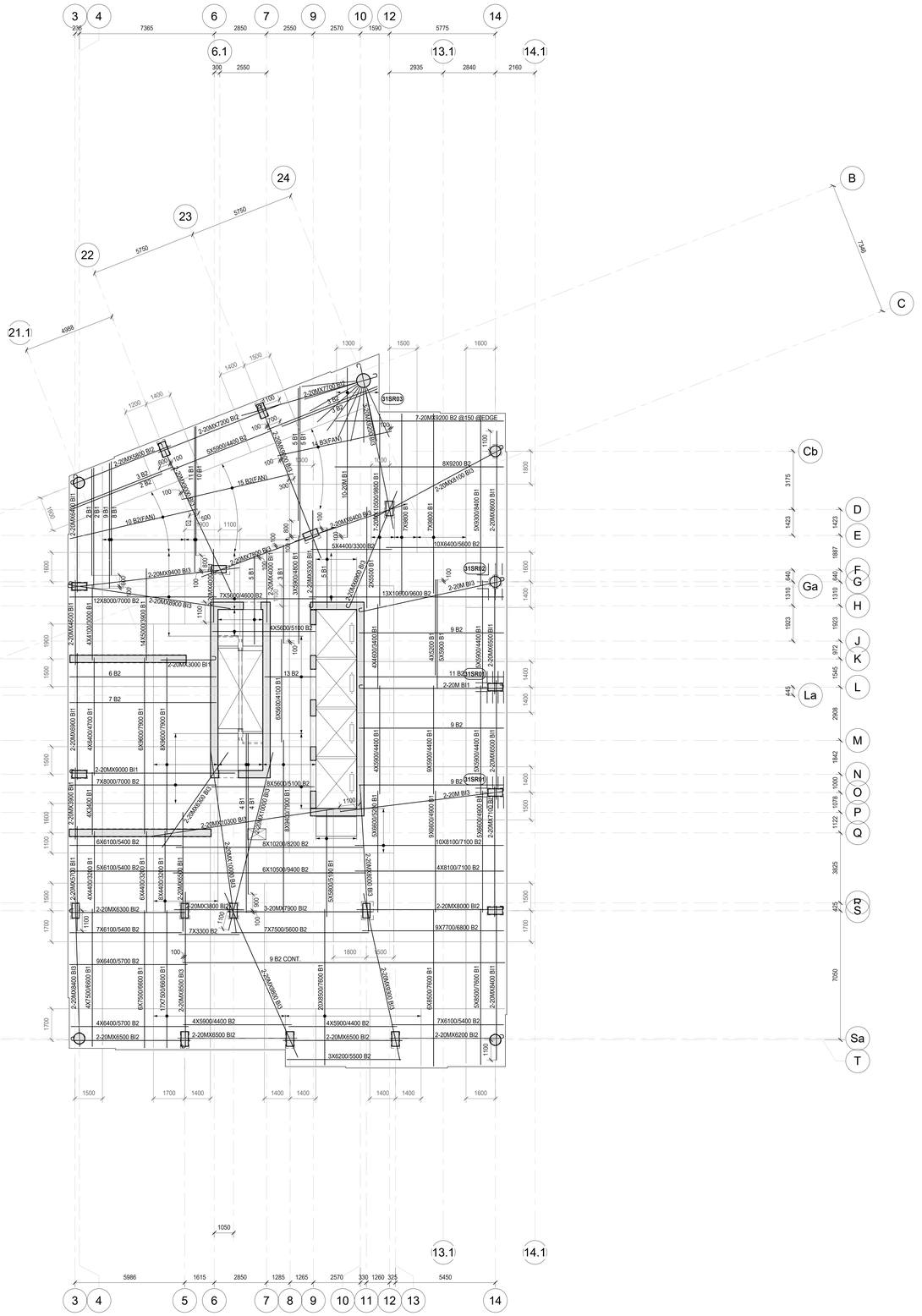
drawing title | titre du dessin

LEVEL 31-33 CONCRETE LAYOUT PLAN

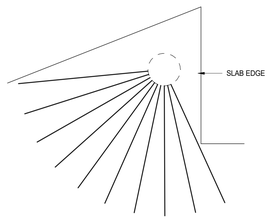
project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S128

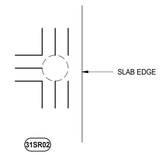


STUD RAIL LEGEND:



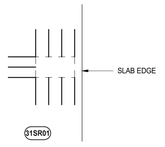
31SR03

10 RAILS
STUDS PER RAIL = 22-12.7Ø
So = 65mm
S = 90mm
OAH = 175mm
OAL = 2020mm
REFER TO STUD RAIL DETAIL FOR ADD'L INFORMATION.



31SR02

9 RAILS
STUDS PER RAIL = 5-9.5Ø
So = 60mm
S = 125mm
OAH = 175mm
OAL = 620mm
REFER TO STUD RAIL DETAIL FOR ADD'L INFORMATION.



31SR01

11 RAILS
STUDS PER RAIL = 5-9.5Ø
So = 65mm
S = 125mm
OAH = 175mm
OAL = 630mm
REFER TO STUD RAIL DETAIL FOR ADD'L INFORMATION.

SLAB REINFORCING NOTES:

1. BAR PLACING ORDER
T1 = TOP UPPER LAYER
T2 = TOP LOWER LAYER
B2 = BOTTOM UPPER LAYER
B1 = BOTTOM LOWER LAYER
B.I.3 = BOTTOM INTEGRITY BOT. UPPER UPPER LAYER
B.I.2 = BOTTOM INTEGRITY BOT. UPPER LAYER
B.I.1 = BOTTOM INTEGRITY BOT. LOWER LAYER
2. ALL REINFORCING BARS SHOWN ON PLAN TO 15M UNLESS NOTED OTHERWISE
3. B.I.= BOTTOM INTEGRITY REINFORCING. SPACE @ 150 o/c.
4. CONCRETE COVER U/N
PARKING 40 mm TOP
30 mm BOT.
GROUND TO ROOF 25 mm TOP
25 mm BOT.

SEE ADDITIONAL PARKING LEVEL NOTES FOR CONCRETE COVER REQUIREMENTS AT PARKING LEVELS

5.WHERE REINFORCING LENGTHS EXCEED MAXIMUM AVAILABLE LENGTH, SPLICE REINFORCING BARS AS NOTED ON REINFORCING BAR LAP LENGTH TABLE ON S01

SHEAR REINFORCING (NOTED AS SR#)

NOTES:
1. SEE PLAN FOR LOCATIONS
2. ALL SHEAR REINF'G IS TO SPACED EQUALLY ACROSS COLUMN WIDTH
3. SHEAR REINF'G TO BE TIED AT ALL INTERSECTIONS
4. AT WALL ENDS ASSUME COLUMN LENGTH OF 1000 mm FOR DETAILING OF SHEAR REINF'G
5. COLUMN LENGTH INCLUDES COLUMN CAPITALS IF PRESENT
6. SEE SHEAR REINFORCING DETAILS ALSO.

NOTE: REINFORCING AT TEMPORARY MAN & MAT'L HOIST OPENING

1. SLAB REINFORCING THAT CROSSES PERIMETER OF SLAB OPENING IS TO BE CUT AT POINT WHERE IT CROSSES.
2. WHEN REINFORCING CROSSES ENTIRE SLAB OPENING, PROVIDE A COUPLED REINFORCING BAR INTO COUPLER ON EACH SIDE OF THE OPENING & LAP 1000 mm MINIMUM AT CENTER OF CRANE OPENING.
3. PROVIDE THE APPROPRIATE THREADED CAST-IN REINFORCING BAR COUPLER FOR EACH CUT REINFORCING BAR.
4. AFTER REMOVAL OF HOIST, THREAD CUT-OFF REINFORCING BARS INTO COUPLERS IN ADVANCE OF SLAB OPENING INFILL.
5. REFER TO CONCRETE LAYOUT DRAWING & DRAWING S02 FOR ADDITIONAL OPENING INFORMATION.
6. SLAB ALL AROUND TEMPORARY SLAB OPENING TO BE RESHORED UNTIL TEMPORARY SLAB OPENING IS INFILLED.

NOTE:
REFER TO TYPICAL DETAILS FOR SLAB REINFORCING NOTATION & SHEAR REINFORCING DETAILS

CLV GROUP DEVELOPMENTS

client

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CONSULTING STRUCTURAL ENGINEERS

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Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 40% IFO & CLIENT BUDGETING	25-03-28
1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
T. SANDTROO
100048586
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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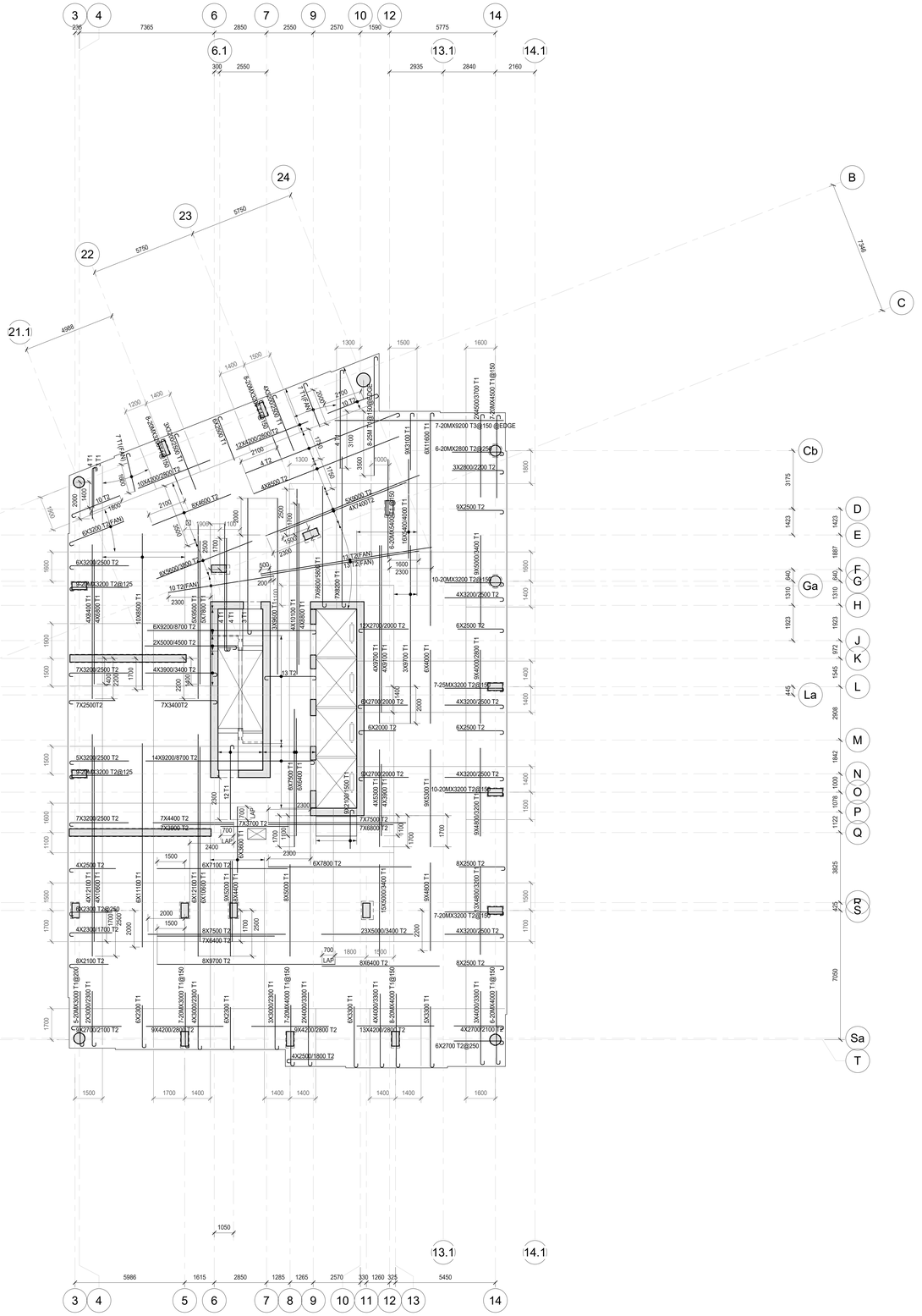
drawing title | titre du dessin

LEVEL 31 - 33 BOTTOM REINFORCING PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**As indicated**
date | date	**05/31/24**

drawing number | numéro du dessin

S129



SLAB REINFORCING NOTES:

1. BAR PLACING ORDER
T1 = TOP UPPER LAYER
T2 = TOP LOWER LAYER
B2 = BOTTOM UPPER LAYER
B1 = BOTTOM LOWER LAYER
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B.I.2 = BOTTOM INTEGRITY BOT. UPPER LAYER
B.I.1 = BOTTOM INTEGRITY BOT. LOWER LAYER
2. ALL REINFORCING BARS SHOWN ON PLAN TO 15M UNLESS NOTED OTHERWISE
3. B.I.= BOTTOM INTEGRITY REINFORCING. SPACE @ 150 o/c.
4. CONCRETE COVER U/N
PARKING 40 mm TOP
30 mm BOT.
GROUND TO ROOF 25 mm TOP
25 mm BOT.

SEE ADDITIONAL PARKING LEVEL NOTES FOR CONCRETE COVER REQUIREMENTS AT PARKING LEVELS

5.WHERE REINFORCING LENGTHS EXCEED MAXIMUM AVAILABLE LENGTH, SPLICE REINFORCING BARS AS NOTED ON REINFORCING BAR LAP LENGTH TABLE ON S01

SHEAR REINFORCING (NOTED AS SR#)

NOTES:
1. SEE PLAN FOR LOCATIONS
2. ALL SHEAR REINF'G IS TO SPACED EQUALLY ACROSS COLUMN WIDTH
3. SHEAR REINF'G TO BE TIED AT ALL INTERSECTIONS
4. AT WALL ENDS ASSUME COLUMN LENGTH OF 1000 mm FOR DETAILING OF SHEAR REINF'G
5. COLUMN LENGTH INCLUDES COLUMN CAPITALS IF PRESENT
6. SEE SHEAR REINFORCING DETAILS ALSO.

NOTE: REINFORCING AT TEMPORARY MAN & MAT'L HOIST OPENING

1. SLAB REINFORCING THAT CROSSES PERIMETER OF SLAB OPENING IS TO BE CUT AT POINT WHERE IT CROSSES.
2. WHEN REINFORCING CROSSES ENTIRE SLAB OPENING, PROVIDE A COUPLED REINFORCING BAR INTO COUPLER ON EACH SIDE OF THE OPENING & LAP 1000 mm MINIMUM AT CENTER OF CRANE OPENING.
3. PROVIDE THE APPROPRIATE THREADED CAST-IN REINFORCING BAR COUPLER FOR EACH CUT REINFORCING BAR.
4. AFTER REMOVAL OF HOIST, THREAD CUT-OFF REINFORCING BARS INTO COUPLERS IN ADVANCE OF SLAB OPENING INFILL.
5. REFER TO CONCRETE LAYOUT DRAWING & DRAWING S02 FOR ADDITIONAL OPENING INFORMATION.
6. SLAB ALL AROUND TEMPORARY SLAB OPENING TO BE RESHORED UNTIL TEMPORARY SLAB OPENING IS INFILLED.

NOTE:
REFER TO TYPICAL DETAILS FOR SLAB REINFORCING NOTATION & SHEAR REINFORCING DETAILS

CLV GROUP DEVELOPMENTS

client

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CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

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Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-14
3	ISSUE FOR 66% WD & CLIENT BUDGETING	25-03-28
1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
B.J.ANTHONY
100088882
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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drawing title | titre du dessin

LEVEL 31 - 33 TOP REINFORCING PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S130

DESIGN LOADS

UNIT AREAS

250 CONC SLAB	5.90 kPa
PARTITIONS	1.00
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	7.20 kPa
LIVE LOAD	1.90 kPa
TOTAL LOAD	9.10 kPa

CORRIDOR / M & E / STORAGE

250 CONC SLAB	5.90 kPa
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	6.20 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	11.00 kPa

AMENITY AREAS

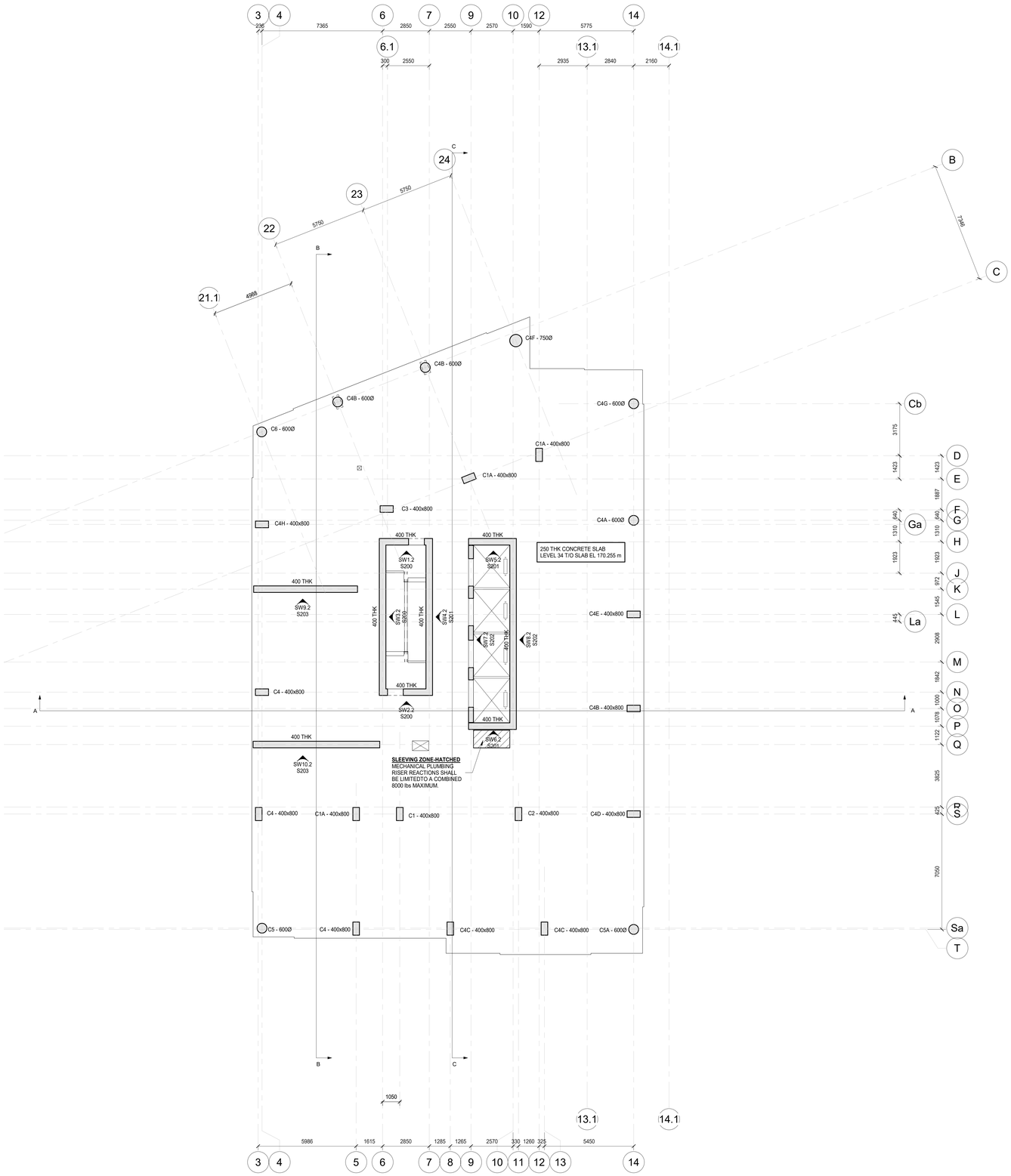
250 CONC SLAB	5.90 kPa
PARTITIONS	1.00
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	7.20 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	12.00 kPa

CONCRETE STAIRS

CONCRETE STAIR THROAT	3.60 kPa
CONCRETE TREADS	2.40 kPa
DEAD LOAD	6.00 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.80 kPa

CONCRETE STAIR LANDINGS

200 CONC SLAB	4.75 kPa
DEAD LOAD	4.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	9.55 kPa



NOTE: EXTERIOR BALCONY SLABS

PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-23.1-04 TO GIVE THE FOLLOWING PROPERTIES FOR ALL EXTERIOR EXPOSED CONCRETE BALCONY SLABS.
1. TYPE GU PORTLAND CEMENT
2. MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS = 35 MPa
3. CLASS OF EXPOSURE TO BE C1
4. NOMINAL SIZE OF COARSE AGGREGATE TO BE 20 mm
5. SLUMP AT TIME AND POINT OF DISCHARGE TO BE 75 mm
6. AIR CONTENT TO BE 5-8%

NOTES

1. SEE S200's DWGS. FOR SHEARWALL ELEVATIONS. THE ELEVATION VIEW OF THE SHEARWALL IS TAKEN FROM THE SIDE OF THE WALL ON WHICH THE SHEARWALL DESIGNATION (SW#) IS SHOWN ON PLAN.

2. SUPPORTS FOR CURTAIN WALLS & PRECAST PANELS ARE TO BE DESIGNED & DETAILED BY CURTAIN WALL AND PRECAST SUPPLIERS RESPECTIVELY. SHOP DRAWINGS ARE TO BE STAMPED & SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN ONTARIO. ALL SUPPORTS ARE TO BE INSPECTED DURING CONSTRUCTION BY THE SUPPORT DESIGN ENGINEER.

3. ONLY MECHANICAL SLAB OPENINGS LARGER THAN 300 x 300 OR 300 ∅ ARE SHOWN ON THIS DRAWING. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF MECHANICAL SLAB OPENINGS SMALLER THAN THOSE NOTED ABOVE. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF OPENINGS WHICH ARE SHOWN ON THIS DRAWING. REFER TO GENERAL NOTES & TYPICAL DETAILS ON DRAWING S01, S02 & S03 FOR ADDITIONAL REINFORCING REQUIREMENTS AROUND OPENINGS SHOWN ON THIS DRAWING.

CONCRETE COMPRESSIVE STRENGTHS:
SLABS & BEAMS - 35 MPa TYPE N
INTERIOR CURBS - 25 MPa TYPE N
COLUMNS & SHEARWALLS - 30 MPa TYPE N

CLV GROUP DEVELOPMENTS

client

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Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur mécharique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 40% MD & CLIENT BUDGETING	25-03-28
2	ISSUE FOR EXCAVATION TENDER	24-10-30
1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
R. LAWRENCE TOODGERSON
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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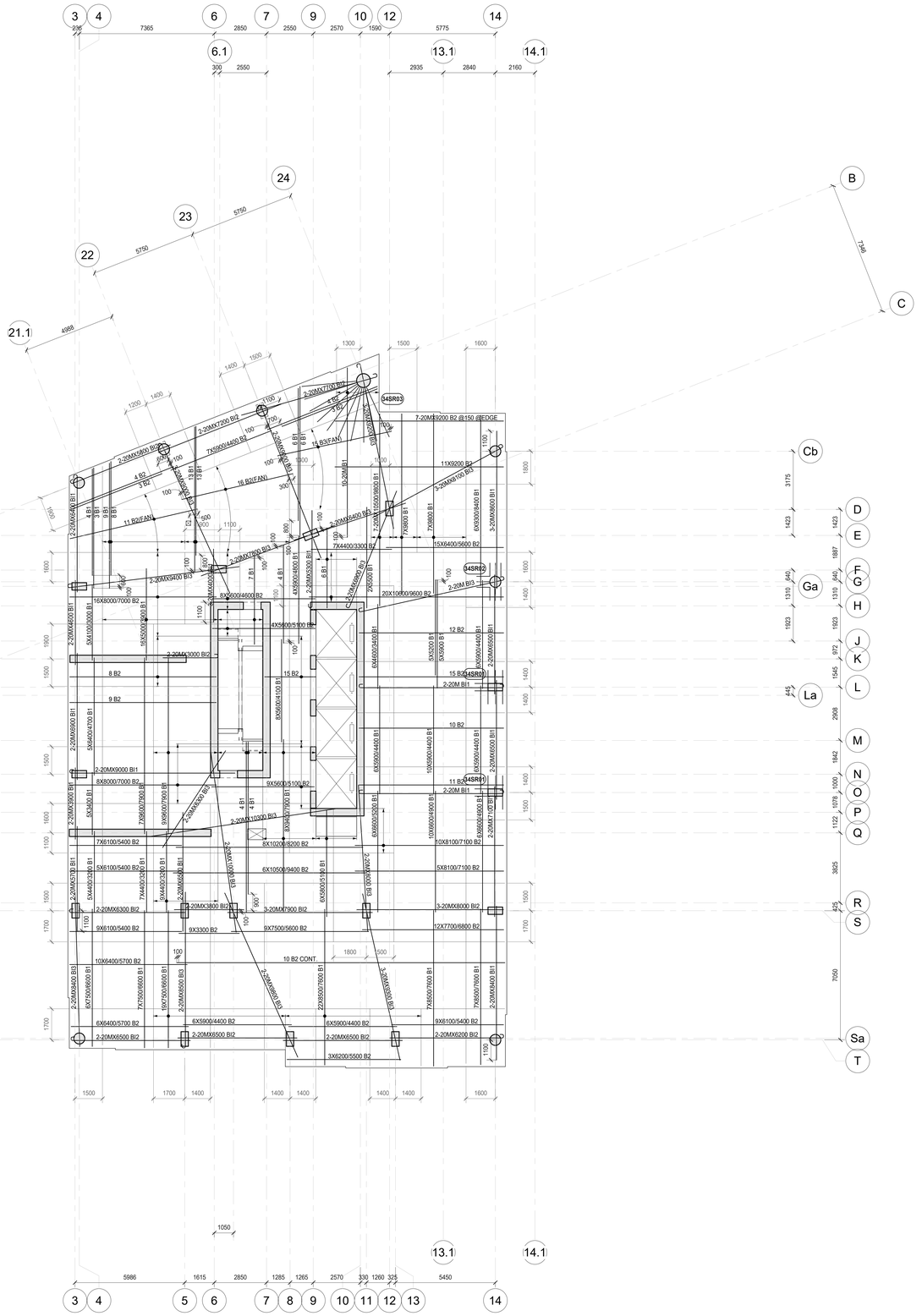
drawing title | titre du dessin

LEVEL 34 CONCRETE LAYOUT PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S131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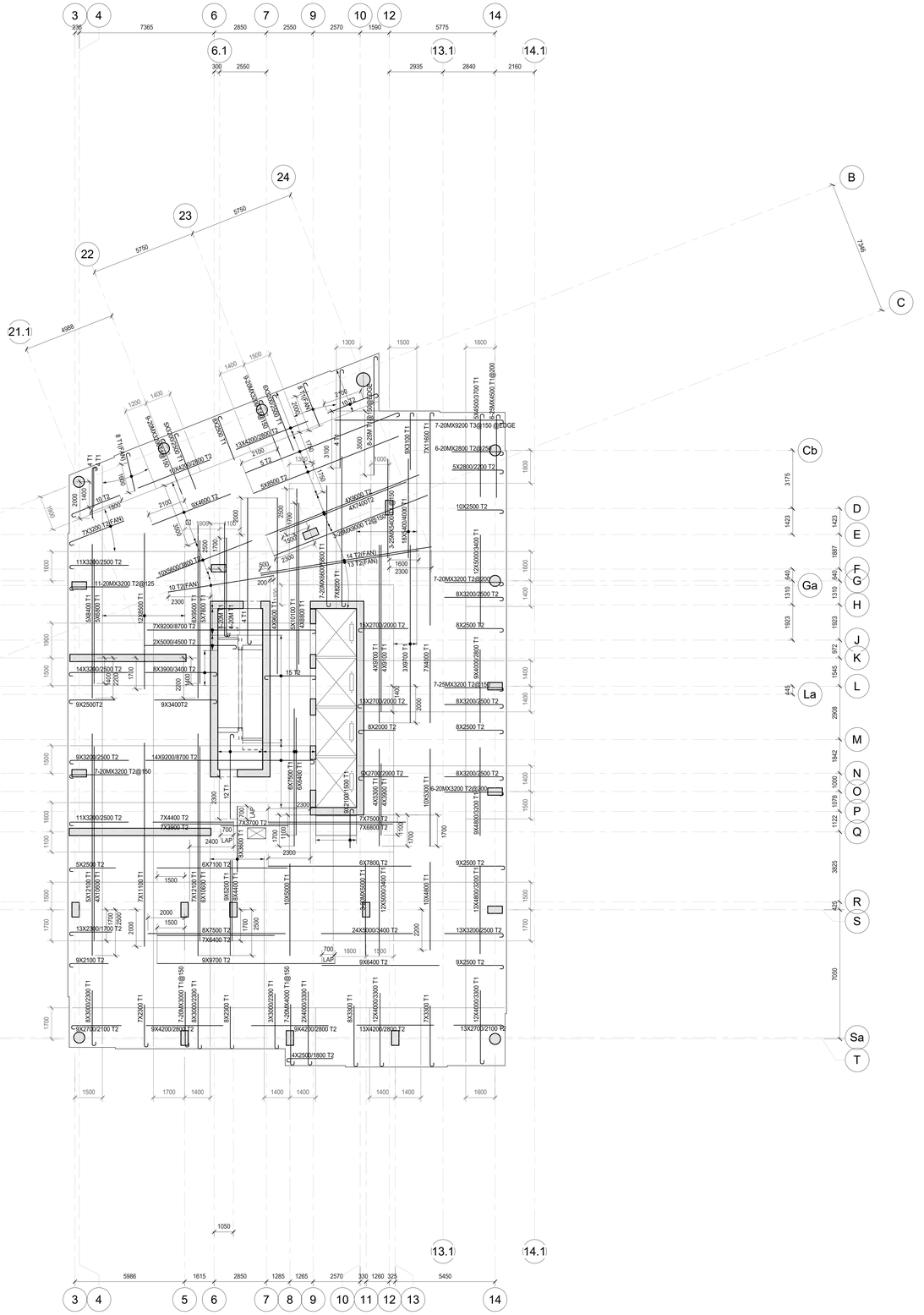

SLAB REINFORCING NOTES:

1. BAR PLACING ORDER
T1 = TOP UPPER LAYER
T2 = TOP LOWER LAYER
B2 = BOTTOM UPPER LAYER
B1 = BOTTOM LOWER LAYER
B.I.3 = BOTTOM INTEGRITY BOT. UPPER UPPER LAYER
B.I.2 = BOTTOM INTEGRITY BOT. UPPER LAYER
B.I.1 = BOTTOM INTEGRITY BOT. LOWER LAYER
2. ALL REINFORCING BARS SHOWN ON PLAN TO 15M UNLESS NOTED OTHERWISE
3. B.I.= BOTTOM INTEGRITY REINFORCING. SPACE @ 150 o/c.
4. CONCRETE COVER U/N
PARKING 40 mm TOP
30 mm BOT.
GROUND TO ROOF 25 mm TOP
25 mm BOT.

SEE ADDITIONAL PARKING LEVEL NOTES FOR CONCRETE COVER REQUIREMENTS AT PARKING LEVELS

5.WHERE REINFORCING LENGTHS EXCEED MAXIMUM AVAILABLE LENGTH, SPLICE REINFORCING BARS AS NOTED ON REINFORCING BAR LAP LENGTH TABLE ON S01

SHEAR REINFORCING (NOTED AS SR#)

NOTES:
1. SEE PLAN FOR LOCATIONS
2. ALL SHEAR REINF'G IS TO SPACED EQUALLY ACROSS COLUMN WIDTH
3. SHEAR REINF'G TO BE TIED AT ALL INTERSECTIONS
4. AT WALL ENDS ASSUME COLUMN LENGTH OF 1000 mm FOR DETAILING OF SHEAR REINF'G
5. COLUMN LENGTH INCLUDES COLUMN CAPITALS IF PRESENT
6. SEE SHEAR REINFORCING DETAILS ALSO.

NOTE: REINFORCING AT TEMPORARY MAN & MAT'L HOIST OPENING

1. SLAB REINFORCING THAT CROSSES PERIMETER OF SLAB OPENING IS TO BE CUT AT POINT WHERE IT CROSSES.
2. WHEN REINFORCING CROSSES ENTIRE SLAB OPENING, PROVIDE A COUPLED REINFORCING BAR INTO COUPLER ON EACH SIDE OF THE OPENING & LAP 1000 mm MINIMUM AT CENTER OF CRANE OPENING.
3. PROVIDE THE APPROPRIATE THREADED CAST-IN REINFORCING BAR COUPLER FOR EACH CUT REINFORCING BAR.
4. AFTER REMOVAL OF HOIST, THREAD CUT-OFF REINFORCING BARS INTO COUPLERS IN ADVANCE OF SLAB OPENING INFILL.
5. REFER TO CONCRETE LAYOUT DRAWING & DRAWING S02 FOR ADDITIONAL OPENING INFORMATION.
6. SLAB ALL AROUND TEMPORARY SLAB OPENING TO BE RESHORED UNTIL TEMPORARY SLAB OPENING IS INFILLED.

NOTE:
REFER TO TYPICAL DETAILS FOR SLAB REINFORCING NOTATION & SHEAR REINFORCING DETAILS

CLV GROUP DEVELOPMENTS

client

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CONSULTING STRUCTURAL ENGINEERS

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mechanical engineer | ingénieur méchanique

wsp

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CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

no	revisions	date
5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-14
3	ISSUE FOR 66% WD & CLIENT BUDGETING	25-03-28
1	ISSUE FOR REVIEW	24-09-13

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
ELAHI THONG
100068862
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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drawing title | titre du dessin

LEVEL 34 TOP REINFORCING PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S133

DESIGN LOADS

ROOF

300 CONC SLAB	7.10 kPa
67 AVG TOPPING	1.60
ROOFING & INSUL.	1.00
BALLAST	1.50
CEILING	0.15
MECH'L & MISC	0.25 kPa
DEAD LOAD	11.60 kPa
LIVE LOAD	2.40 kPa OR SNOW
TOTAL LOAD	14.00 kPa

EXTERIOR MECH'L AREA

300 CONC SLAB	7.10
67 AVG TOPPING	1.60
ROOFING & INSUL.	1.00 kPa
BALLAST	1.50
CEILING	0.15
MECH'L & MISC	0.25 kPa
DEAD LOAD	11.60 kPa
LIVE LOAD	7.20 kPa
TOTAL LOAD	18.80 kPa

INTERIOR MECH'L AREA

300 CONC SLAB	7.10 kPa
PAD ALLOWANCE	1.20
CEILING	0.15
MECH'L & MISC	0.25 kPa
DEAD LOAD	8.70 kPa
LIVE LOAD	7.20 kPa
TOTAL LOAD	15.90 kPa

NOTE: EXTERIOR BALCONY SLABS

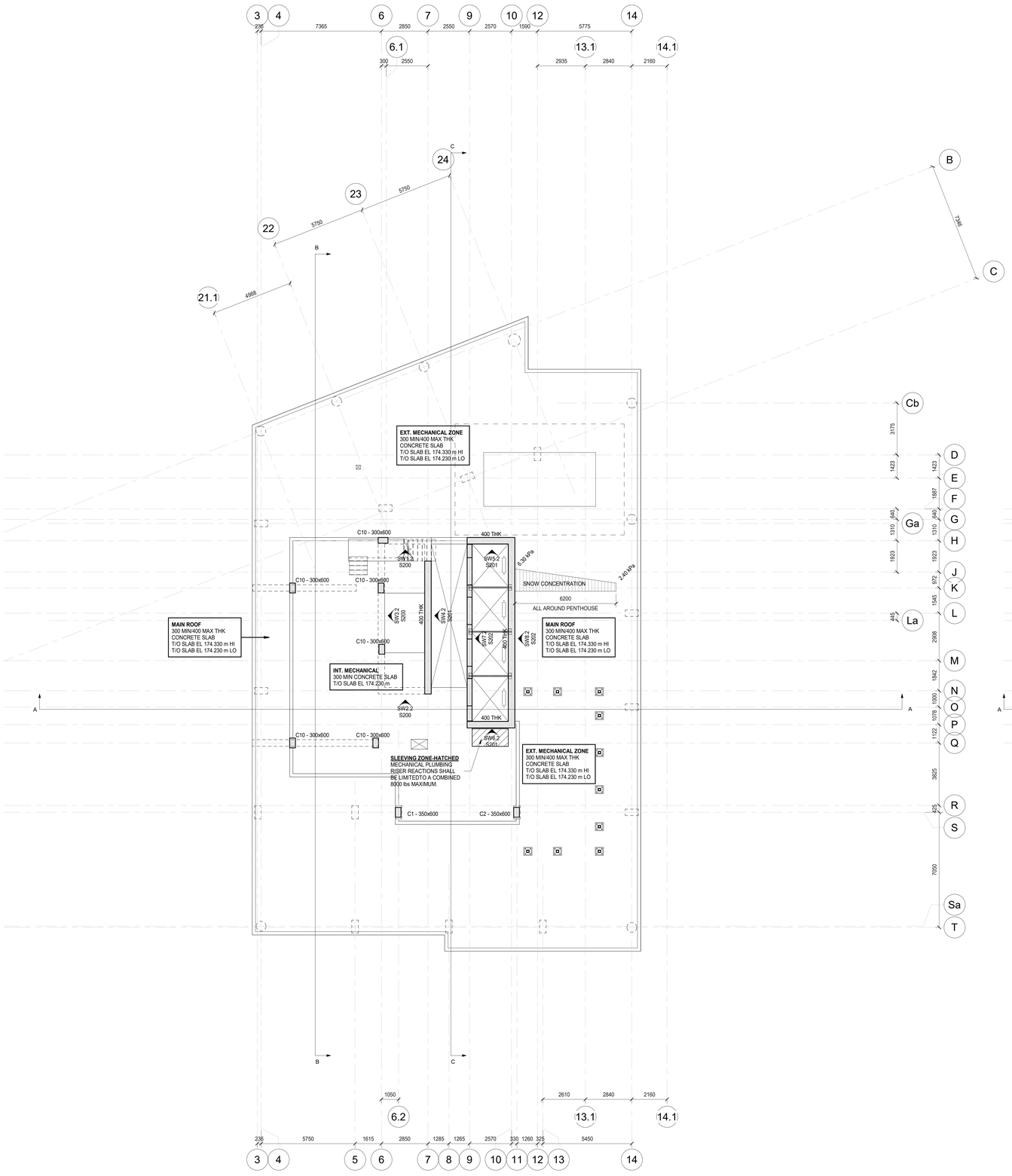
PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-23.1-04 TO GIVE THE FOLLOWING PROPERTIES FOR ALL EXTERIOR EXPOSED CONCRETE BALCONY SLABS.
1. TYPE GU PORTLAND CEMENT
2. MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS = 35 MPa
3. CLASS OF EXPOSURE TO BE C1
4. NOMINAL SIZE OF COARSE AGGREGATE TO BE 20 mm
5. SLUMP AT TIME AND POINT OF DISCHARGE TO BE 75 mm
6. AIR CONTENT TO BE 5-8%

NOTES

1. SEE S200's DWGS. FOR SHEARWALL ELEVATIONS. THE ELEVATION VIEW OF THE SHEARWALL IS TAKEN FROM THE SIDE OF THE WALL ON WHICH THE SHEARWALL DESIGNATION (SW#) IS SHOWN ON PLAN.

2. SUPPORTS FOR CURTAIN WALLS & PRECAST PANELS ARE TO BE DESIGNED & DETAILED BY CURTAIN WALL AND PRECAST SUPPLIERS RESPECTIVELY. SHOP DRAWINGS ARE TO BE STAMPED & SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN ONTARIO. ALL SUPPORTS ARE TO BE INSPECTED DURING CONSTRUCTION BY THE SUPPORT DESIGN ENGINEER.

3. ONLY MECHANICAL SLAB OPENINGS LARGER THAN 300 x 300 OR 300 ∅ ARE SHOWN ON THIS DRAWING. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF MECHANICAL SLAB OPENINGS SMALLER THAN THOSE NOTED ABOVE. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF OPENINGS WHICH ARE SHOWN ON THIS DRAWING. REFER TO GENERAL NOTES & TYPICAL DETAILS ON DRAWING S01, S02 & S03 FOR ADDITIONAL REINFORCING REQUIREMENTS AROUND OPENINGS SHOWN ON THIS DRAWING.



ELEVATOR MACHINE ROOM

1 : 100

CONCRETE COMPRESSIVE STRENGTHS:
SLABS & BEAMS - 35 MPa TYPE N
INTERIOR CURBS - 25 MPa TYPE N
EXTERIOR CURBS & PIERS - 35 MPa CLASS C1
COLUMNS & SHEARWALLS - 30 MPa TYPE N

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur mécharique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
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nord reel
true north

5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-14
3	ISSUE FOR 66% WD & CLIENT BUDGETING	25-03-28
2	ISSUE FOR EXCAVATION TENDER	24-10-30
1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

I CERTIFY THAT THE DESIGNS CONTAINED HEREIN ARE IN CONFORMANCE WITH THE ONTARIO BUILDING CODE
25-06-09
B.J.ARMSTRONG
100069
PROVINCE OF ONTARIO

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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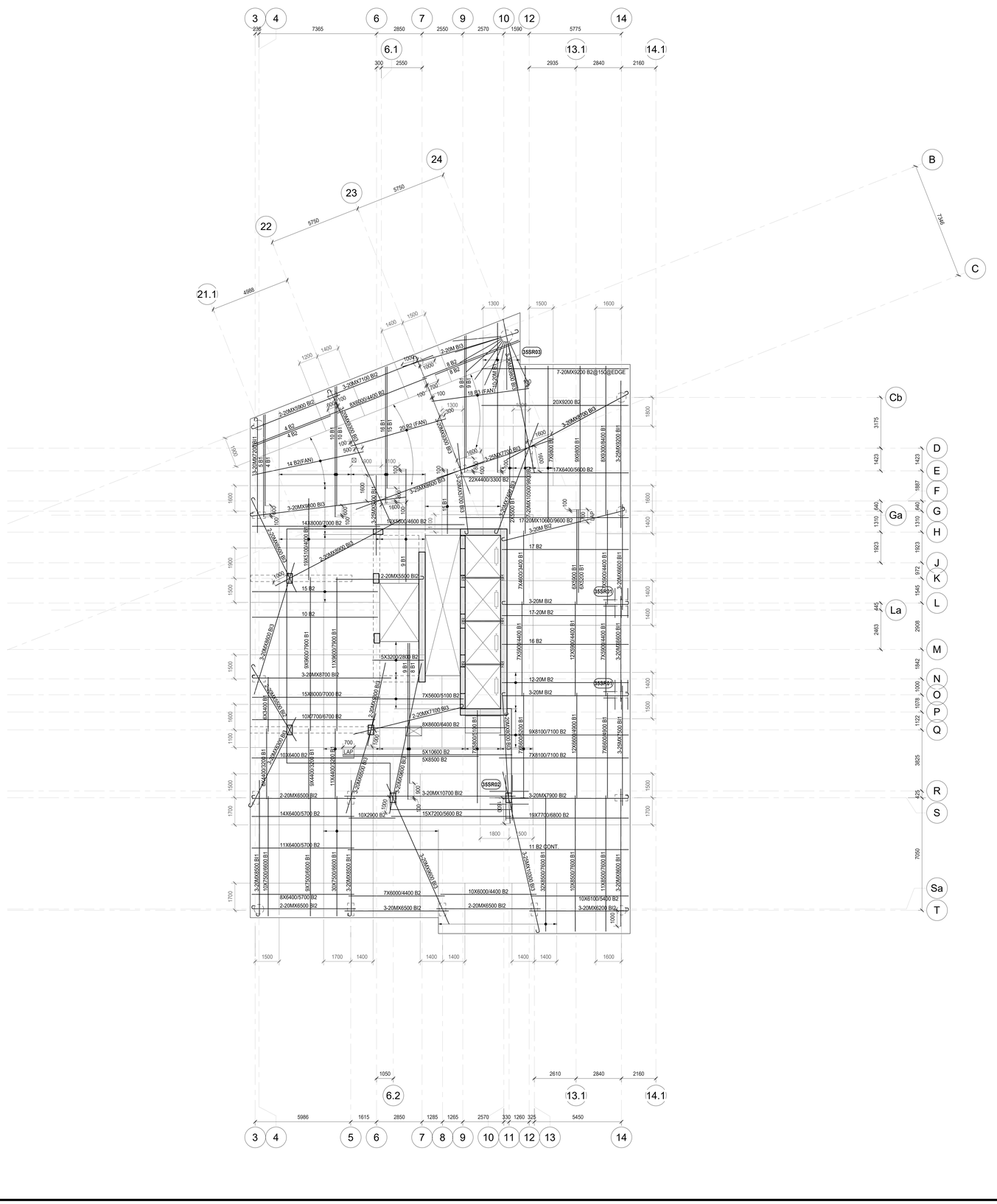
drawing title | titre du dessin

LEVEL 35 (PENTHOUSE) LEVEL 36 ELEVATOR MACHINE ROOM CONCRETE LAYOUT PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S134



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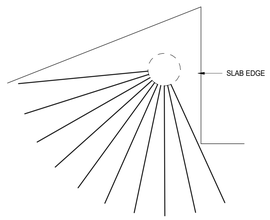
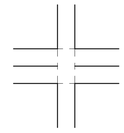


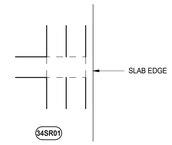
35SR03

10 RAILS
STUDS PER RAIL = 22-12.7Ø
So = 90mm
S = 90mm
OAH = 250mm
OAL = 2070mm
REFER TO STUD RAIL DETAIL FOR ADD'L INFORMATION.



35SR02

10 RAILS
STUDS PER RAIL = 6-12.7Ø
So = 95mm
S = 165mm
OAH = 250mm
OAL = 1015mm
REFER TO STUD RAIL DETAIL FOR ADD'L INFORMATION.



34SR01

8 RAILS
STUDS PER RAIL = 4-12.7Ø
So = 95mm
S = 170mm
OAH = 250mm
OAL = 700mm
REFER TO STUD RAIL DETAIL FOR ADD'L INFORMATION.

SLAB REINFORCING NOTES:

1. BAR PLACING ORDER
T1 = TOP UPPER LAYER
T2 = TOP LOWER LAYER
B2 = BOTTOM UPPER LAYER
B1 = BOTTOM LOWER LAYER
B.I.3 = BOTTOM INTEGRITY BOT. UPPER UPPER LAYER
B.I.2 = BOTTOM INTEGRITY BOT. UPPER LAYER
B.I.1 = BOTTOM INTEGRITY BOT. LOWER LAYER
2. ALL REINFORCING BARS SHOWN ON PLAN TO 15M UNLESS NOTED OTHERWISE
3. B.I.= BOTTOM INTEGRITY REINFORCING. SPACE @ 150 o/c.
4. CONCRETE COVER U/N
PARKING 40 mm TOP
30 mm BOT.
GROUND TO ROOF 25 mm TOP
25 mm BOT.

SEE ADDITIONAL PARKING LEVEL NOTES FOR CONCRETE COVER REQUIREMENTS AT PARKING LEVELS

5.WHERE REINFORCING LENGTHS EXCEED MAXIMUM AVAILABLE LENGTH, SPLICE REINFORCING BARS AS NOTED ON REINFORCING BAR LAP LENGTH TABLE ON S01

SHEAR REINFORCING (NOTED AS SR#)

NOTES:
1. SEE PLAN FOR LOCATIONS
2. ALL SHEAR REINF'G IS TO SPACED EQUALLY ACROSS COLUMN WIDTH
3. SHEAR REINF'G TO BE TIED AT ALL INTERSECTIONS
4. AT WALL ENDS ASSUME COLUMN LENGTH OF 1000 mm FOR DETAILING OF SHEAR REINF'G
5. COLUMN LENGTH INCLUDES COLUMN CAPITALS IF PRESENT
6. SEE SHEAR REINFORCING DETAILS ALSO.

NOTE: REINFORCING AT TEMPORARY MAN & MAT'L HOIST OPENING

1. SLAB REINFORCING THAT CROSSES PERIMETER OF SLAB OPENING IS TO BE CUT AT POINT WHERE IT CROSSES.
2. WHEN REINFORCING CROSSES ENTIRE SLAB OPENING, PROVIDE A COUPLED REINFORCING BAR INTO COUPLER ON EACH SIDE OF THE OPENING & LAP 1000 mm MINIMUM AT CENTER OF CRANE OPENING.
3. PROVIDE THE APPROPRIATE THREADED CAST-IN REINFORCING BAR COUPLER FOR EACH CUT REINFORCING BAR.
4. AFTER REMOVAL OF HOIST, THREAD CUT-OFF REINFORCING BARS INTO COUPLERS IN ADVANCE OF SLAB OPENING INFILL.
5. REFER TO CONCRETE LAYOUT DRAWING & DRAWING S02 FOR ADDITIONAL OPENING INFORMATION.
6. SLAB ALL AROUND TEMPORARY SLAB OPENING TO BE RESHORED UNTIL TEMPORARY SLAB OPENING IS INFILLED.

NOTE:
REFER TO TYPICAL DETAILS FOR SLAB REINFORCING NOTATION & SHEAR REINFORCING DETAILS

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CONSULTING STRUCTURAL ENGINEERS

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Goodkey, Weedmark & Associates Ltd.

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mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

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project north

nord reel
true north

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1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
ELAINETHONG
100068862
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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GLADSTONE & LORETTA RESIDENTIAL TOWER

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LEVEL 35 (PENTHOUSE) BOTTOM REINFORCING PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**As indicated**
date | date	**05/31/24**

drawing number | numéro du dessin

S135



SLAB REINFORCING NOTES:

1. BAR PLACING ORDER
T1 = TOP UPPER LAYER
T2 = TOP LOWER LAYER
B2 = BOTTOM UPPER LAYER
B1 = BOTTOM LOWER LAYER
B.I.3 = BOTTOM INTEGRITY BOT. UPPER UPPER LAYER
B.I.2 = BOTTOM INTEGRITY BOT. UPPER LAYER
B.I.1 = BOTTOM INTEGRITY BOT. LOWER LAYER
2. ALL REINFORCING BARS SHOWN ON PLAN TO 15M UNLESS NOTED OTHERWISE
3. B.I.= BOTTOM INTEGRITY REINFORCING. SPACE @ 150 o/c.
4. CONCRETE COVER U/N
PARKING 40 mm TOP
30 mm BOT.
GROUND TO ROOF 25 mm TOP
25 mm BOT.

SEE ADDITIONAL PARKING LEVEL NOTES FOR CONCRETE COVER REQUIREMENTS AT PARKING LEVELS

5.WHERE REINFORCING LENGTHS EXCEED MAXIMUM AVAILABLE LENGTH, SPLICE REINFORCING BARS AS NOTED ON REINFORCING BAR LAP LENGTH TABLE ON S01

SHEAR REINFORCING (NOTED AS SR#)

NOTES:
1. SEE PLAN FOR LOCATIONS
2. ALL SHEAR REINF'G IS TO SPACED EQUALLY ACROSS COLUMN WIDTH
3. SHEAR REINF'G TO BE TIED AT ALL INTERSECTIONS
4. AT WALL ENDS ASSUME COLUMN LENGTH OF 1000 mm FOR DETAILING OF SHEAR REINF'G
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4. AFTER REMOVAL OF HOIST, THREAD CUT-OFF REINFORCING BARS INTO COUPLERS IN ADVANCE OF SLAB OPENING INFILL.
5. REFER TO CONCRETE LAYOUT DRAWING & DRAWING S02 FOR ADDITIONAL OPENING INFORMATION.
6. SLAB ALL AROUND TEMPORARY SLAB OPENING TO BE RESHORED UNTIL TEMPORARY SLAB OPENING IS INFILLED.

NOTE:
REFER TO TYPICAL DETAILS FOR SLAB REINFORCING NOTATION & SHEAR REINFORCING DETAILS

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wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

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no	revisions	date

stamp | timbre

PROFESSIONAL ENGINEER
25-06-09
B. ANMUTHONG
POWER OF ONTARIO

architect | architecte

linebox
STUDIO

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LEVEL 35 (PENTHOUSE) TOP REINFORCING PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S136

DESIGN LOADS

ROOF

300 CONC SLAB	7.10 kPa
67 AVG TOPPING	1.60
ROOFING & INSUL	1.00
BALLAST	1.50
MECH'L & MISC	0.40 kPa
DEAD LOAD	11.60 kPa
LIVE LOAD	2.40 kPa OR SNOW
TOTAL LOAD	14.00 kPa

NOTE: EXTERIOR BALCONY SLABS

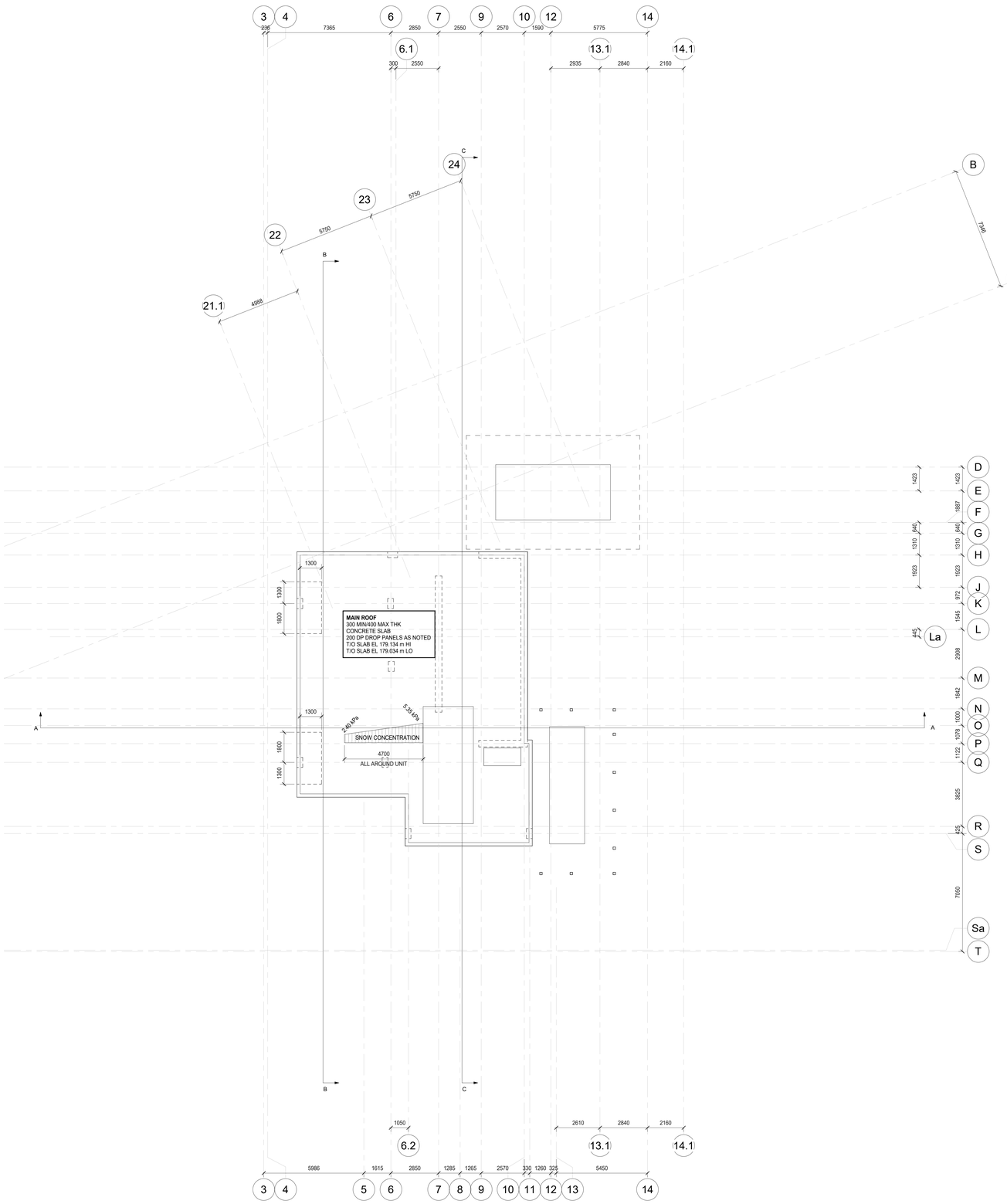
PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-23.1-04 TO GIVE THE FOLLOWING PROPERTIES FOR ALL EXTERIOR EXPOSED CONCRETE BALCONY SLABS.
1. TYPE GU PORTLAND CEMENT
2. MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS = 35 MPa
3. CLASS OF EXPOSURE TO BE C1
4. NOMINAL SIZE OF COARSE AGGREGATE TO BE 20 mm
5. SLUMP AT TIME AND POINT OF DISCHARGE TO BE 75 mm
6. AIR CONTENT TO BE 5-8%

NOTES

1. SEE S200's DWGS. FOR SHEARWALL ELEVATIONS. THE ELEVATION VIEW OF THE SHEARWALL IS TAKEN FROM THE SIDE OF THE WALL ON WHICH THE SHEARWALL DESIGNATION (SW#) IS SHOWN ON PLAN.

2. SUPPORTS FOR CURTAIN WALLS & PRECAST PANELS ARE TO BE DESIGNED & DETAILED BY CURTAIN WALL AND PRECAST SUPPLIERS RESPECTIVELY. SHOP DRAWINGS ARE TO BE STAMPED & SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN ONTARIO. ALL SUPPORTS ARE TO BE INSPECTED DURING CONSTRUCTION BY THE SUPPORT DESIGN ENGINEER.

3. ONLY MECHANICAL SLAB OPENINGS LARGER THAN 300 x 300 OR 300 ∅ ARE SHOWN ON THIS DRAWING. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF MECHANICAL SLAB OPENINGS SMALLER THAN THOSE NOTED ABOVE. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF OPENINGS WHICH ARE SHOWN ON THIS DRAWING. REFER TO GENERAL NOTES & TYPICAL DETAILS ON DRAWING S01, S02 & S03 FOR ADDITIONAL REINFORCING REQUIREMENTS AROUND OPENINGS SHOWN ON THIS DRAWING.



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wsp

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landscape architect | architecte paysagiste

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LICENSED PROFESSIONAL ENGINEER
25-06-09
B.J.ARMSTRONG
100068867
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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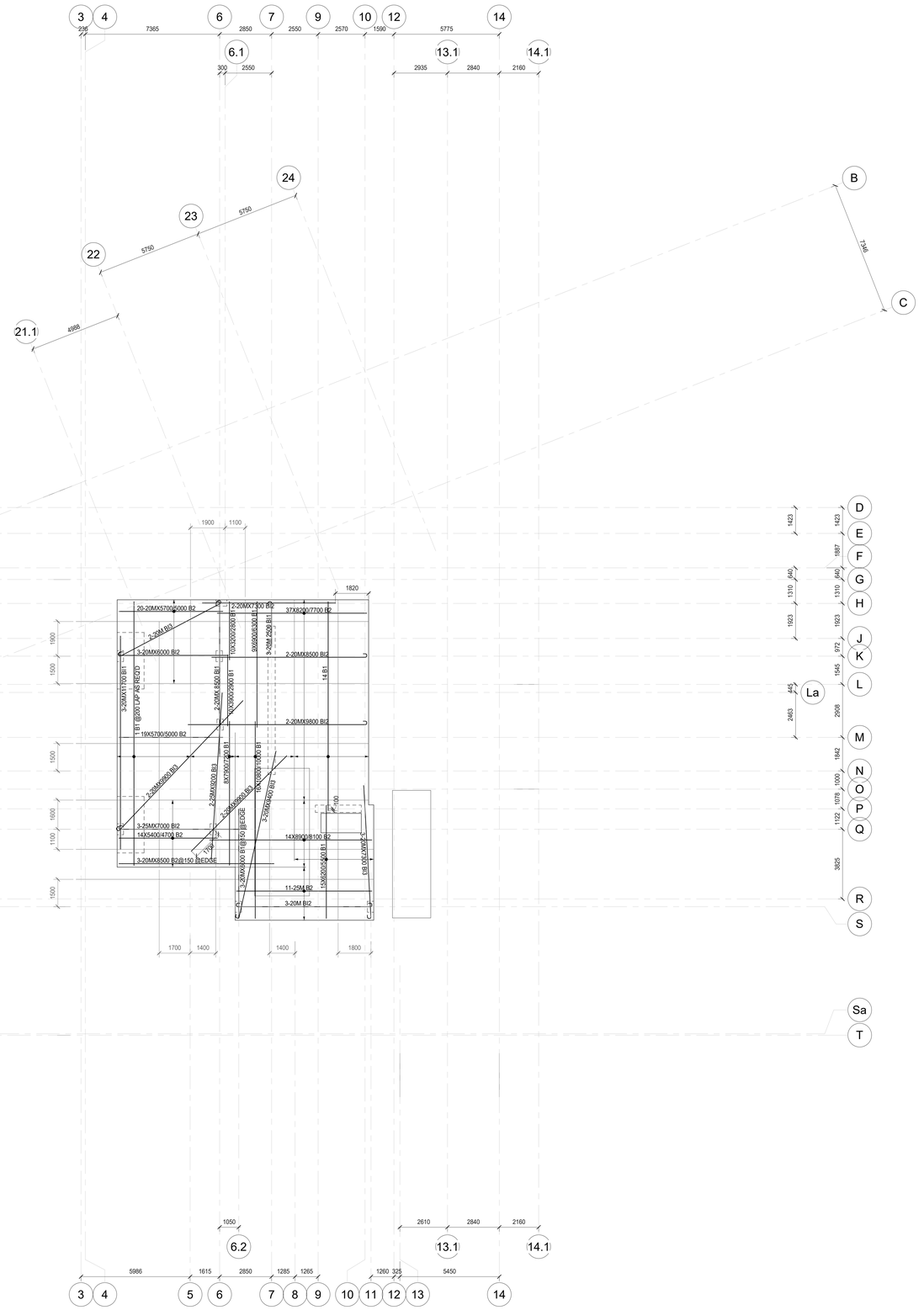
LEVEL 36 (PENTHOUSE ROOF) CONCRETE LAYOUT PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S137



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B.I.2 = BOTTOM INTEGRITY BOT. UPPER LAYER
B.I.1 = BOTTOM INTEGRITY BOT. LOWER LAYER
2. ALL REINFORCING BARS SHOWN ON PLAN TO 15M UNLESS NOTED OTHERWISE
3. B.I.= BOTTOM INTEGRITY REINFORCING. SPACE @ 150 o/c.
4. CONCRETE COVER U/N
PARKING 40 mm TOP
30 mm BOT.
GROUND TO ROOF 25 mm TOP
25 mm BOT.

SEE ADDITIONAL PARKING LEVEL NOTES FOR CONCRETE COVER REQUIREMENTS AT PARKING LEVELS

5.WHERE REINFORCING LENGTHS EXCEED MAXIMUM AVAILABLE LENGTH, SPLICE REINFORCING BARS AS NOTED ON REINFORCING BAR LAP LENGTH TABLE ON S01

SHEAR REINFORCING (NOTED AS SR#)

NOTES:
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NOTE:
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CLV GROUP DEVELOPMENTS

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CONSULTING STRUCTURAL ENGINEERS

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wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

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project north

nord reel
true north

no	revisions	date
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stamp | timbre

PROFESSIONAL ENGINEER
25-06-09
B. ANASTASOPOULOS
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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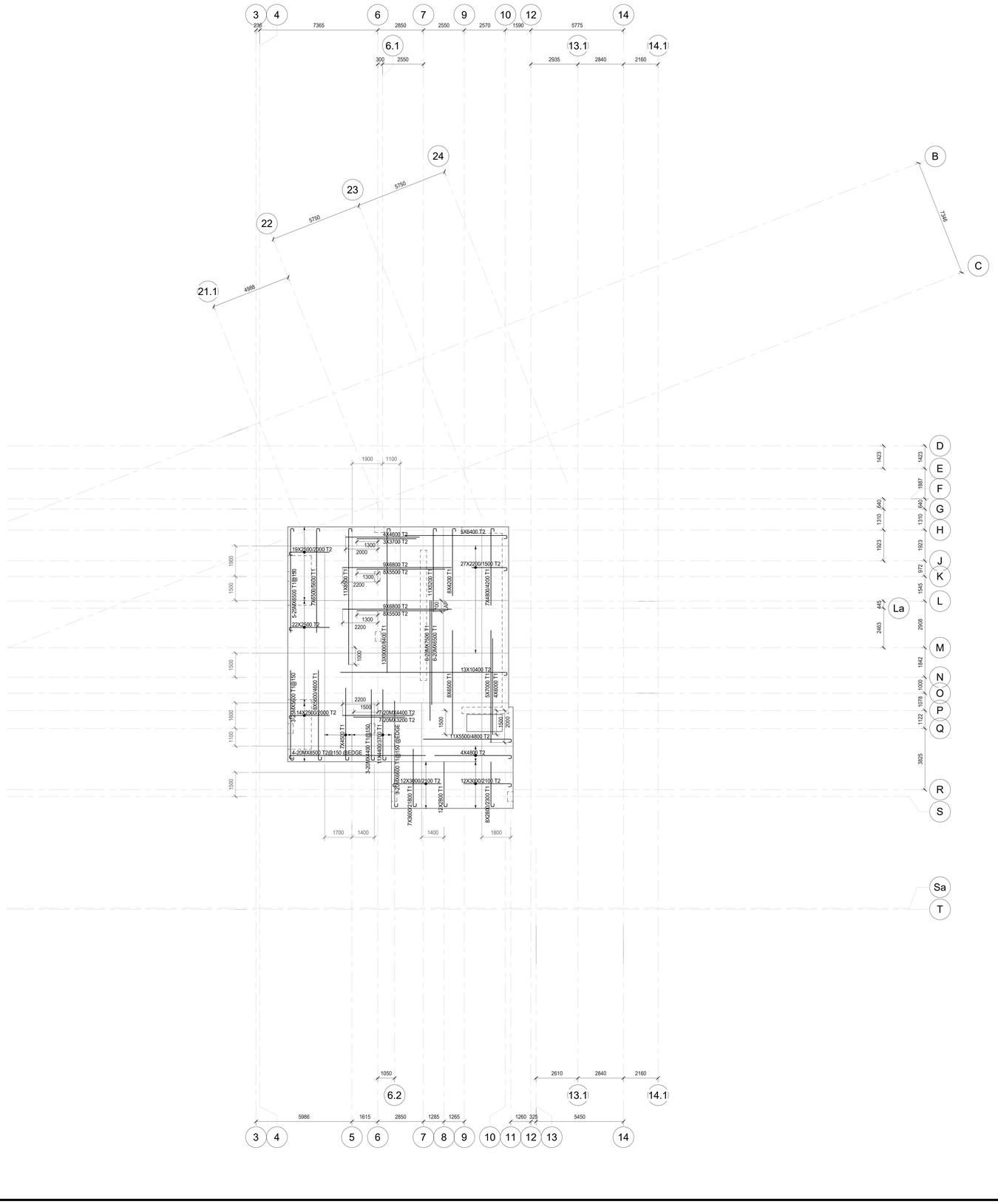
drawing title | titre du dessin

LEVEL 36 (PENTHOUSE ROOF) BOTTOM REINFORCING PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S138



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B.I.1 = BOTTOM INTEGRITY BOT. LOWER LAYER
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GROUND TO ROOF 25 mm TOP
25 mm BOT.

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SHEAR REINFORCING (NOTED AS SR#)

NOTES:
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LICENSED PROFESSIONAL ENGINEER
25-06-09
B. J. ARMSTRONG
100146168
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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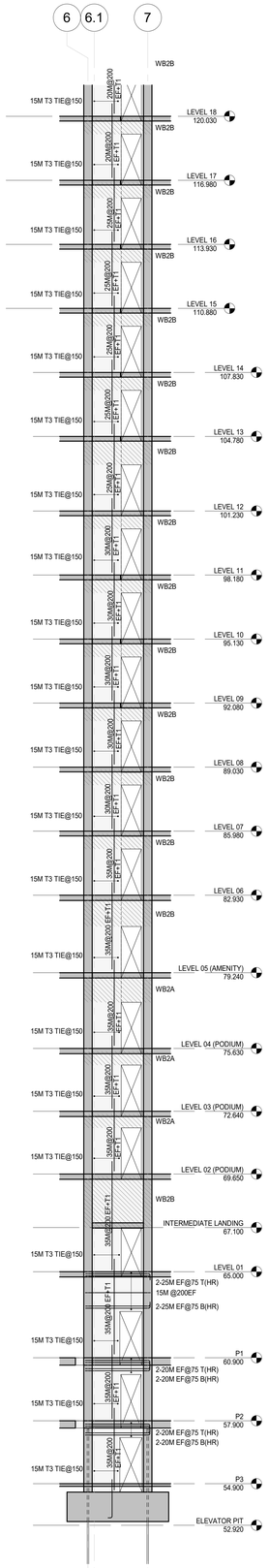
drawing title | titre du dessin

LEVEL 36 (PENTHOUSE ROOF) TOP REINFORCING PLAN

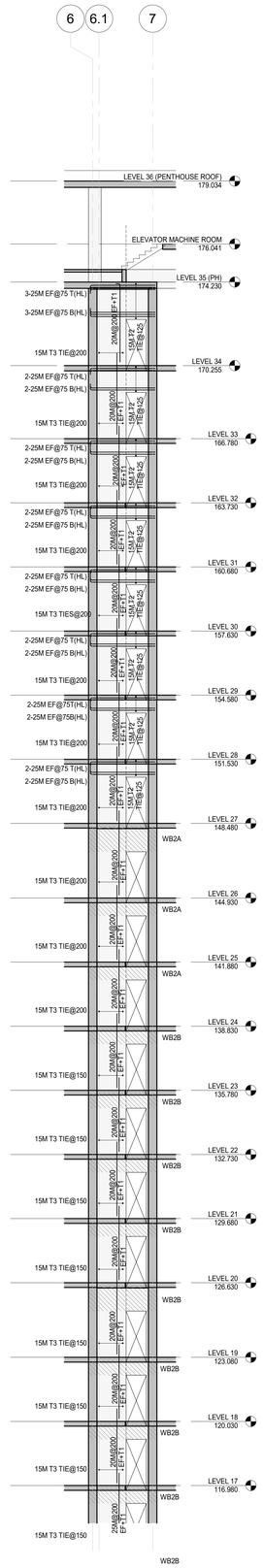
project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

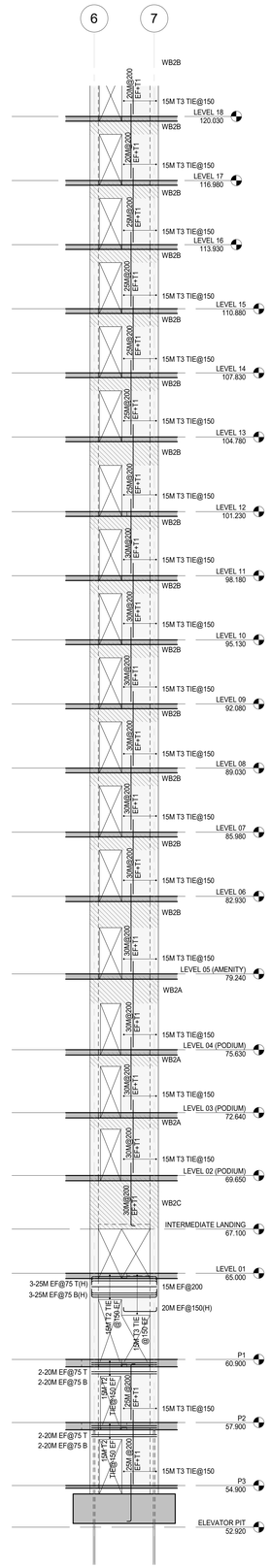
S139



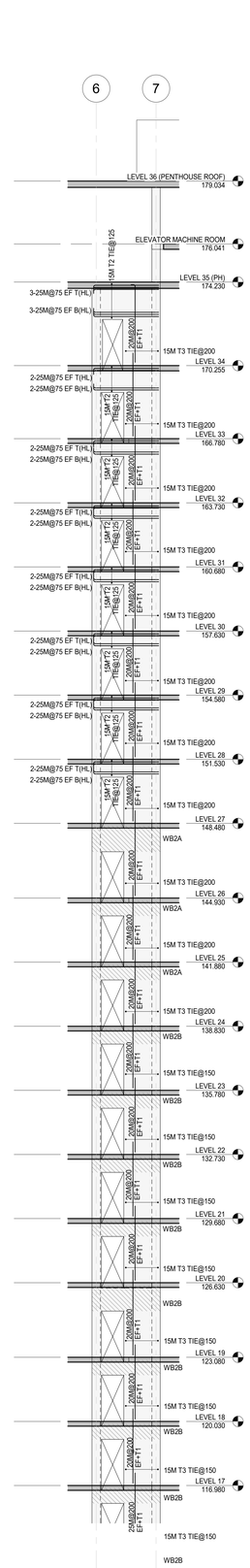
SW1.1 (S07|S200) SHEARWALL ELEVATION
1 : 100



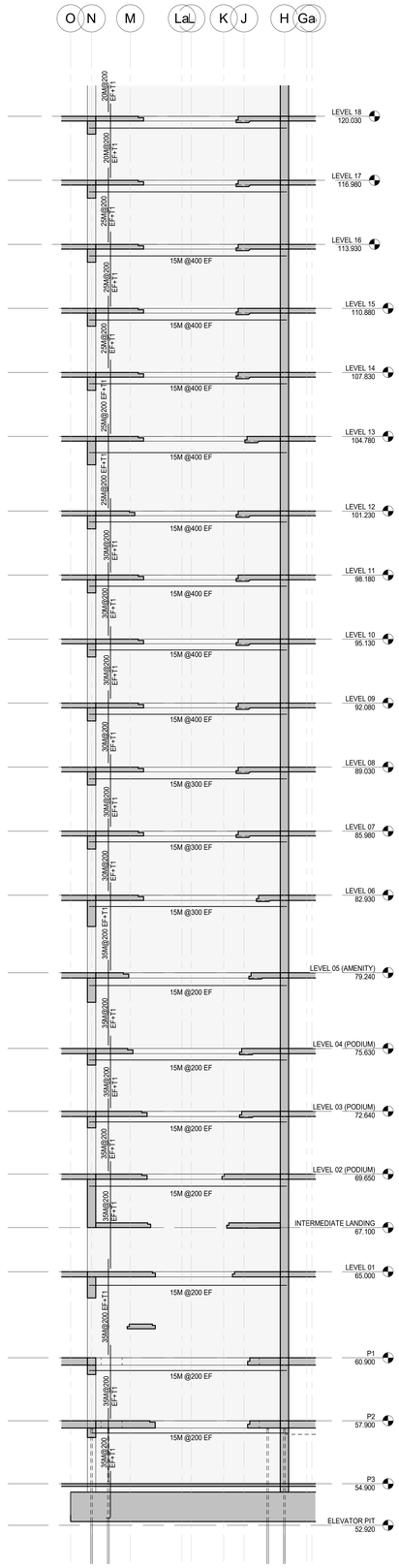
SW1.2 (S128|S200) SHEARWALL ELEVATION
1 : 100



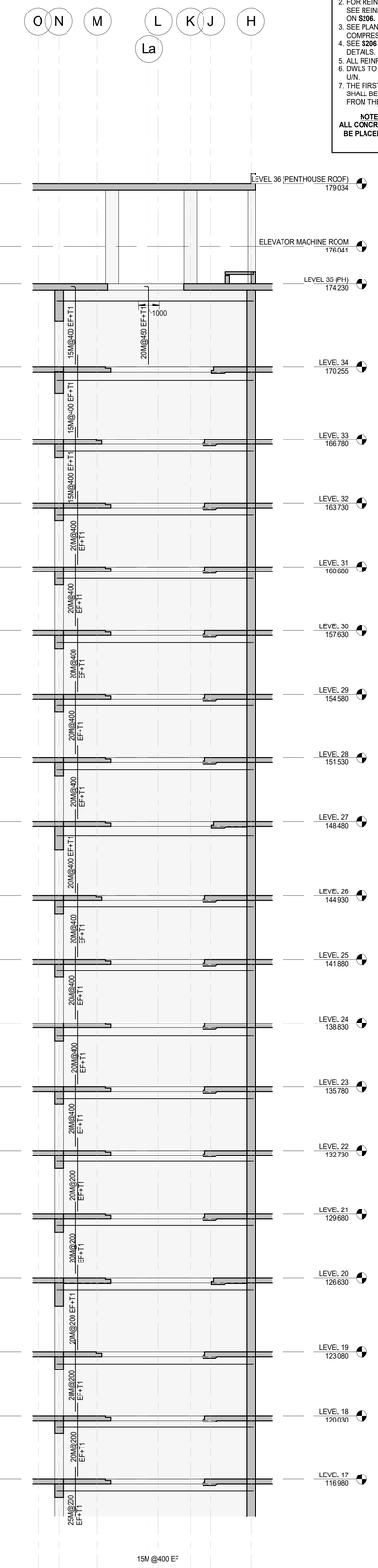
SW2.1 (S07|S200) SHEARWALL ELEVATION
1 : 100



SW2.2 (S128|S200) SHEARWALL ELEVATION
1 : 100



SW3.1 (S07|S200) SHEARWALL ELEVATION
1 : 100

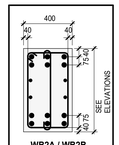


SW3.2 (S128|S200) SHEARWALL ELEVATION
1 : 100

SHEARWALL NOTES

1. WALL THICKNESS IS AS INDICATED ON PLANS.
2. FOR REINFORCING TENSION LAP LENGTHS SEE REINFORCING BAR LAP LENGTH TABLE ON **S206**.
3. SEE PLANS FOR SHEARWALL CONCRETE COMPRESSIVE STRENGTHS UNLESS NOTED.
4. SEE **S206** FOR TYPICAL WALL REINFORCING DETAILS.
5. ALL REINFORCING TO BE **15M@450 EF U/N**.
6. DWLS TO MATCH VERTICAL REINFORCING U/N.
7. THE FIRST TIE LOCATED ABOVE AN OPENING SHALL BE PLACED NO MORE THAN 50 mm FROM THE FACE OF THE OPENING.

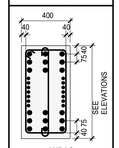
NOTE: CONCRETE PLACEMENT
ALL CONCRETE WALL ASSEMBLIES ARE TO BE PLACED MONOLITHICALLY FOR EACH LIFT



WB2A / WB2B

WB2A
6-25M T&B (HOOKED)
15M @ 200 EF. IN REM.
15M CLOSED TIE @ 125
15M T1 TIE @ 125

WB2B
6-30M T&B (HOOKED)
15M @ 200 EF. IN REM.
15M CLOSED TIE @ 125
15M T1 TIE @ 125



WB2C
9-30M T&B (HOOKED)
15M @ 200 EF. IN REM.
15M CLOSED TIE @ 125
15M T1 TIE @ 125

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mechanical engineer | ingénieur méchanique

wsp
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CSW
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nord du projet
project north

nord reel
true north

5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-14
3	ISSUE FOR 66% W/D & CLIENT BUDGETING	25-03-28
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1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
B.J.ARMSTRONG
1000195
PROVINCE OF ONTARIO

architect | architecte
linebox STUDIO

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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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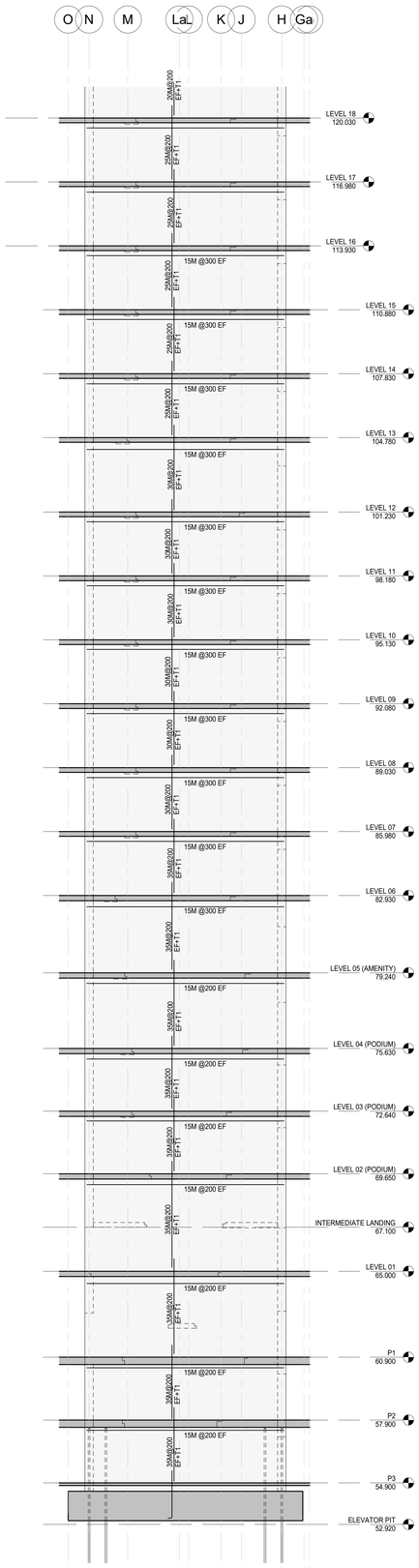
drawing title | titre du dessin

SHEARWALL ELEVATIONS

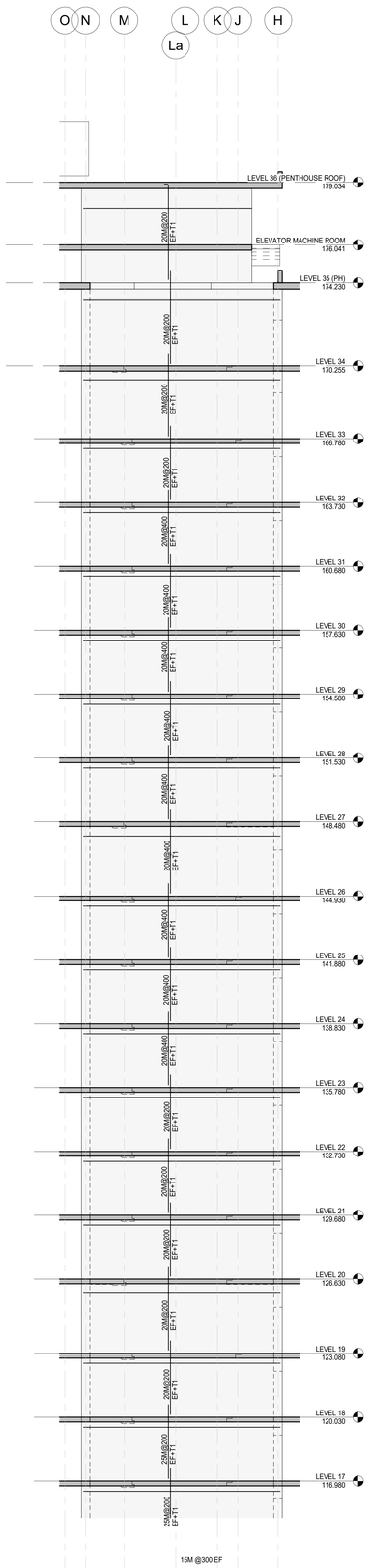
project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**As indicated**
date | date	**06/18/24**

drawing number | numéro du dessin

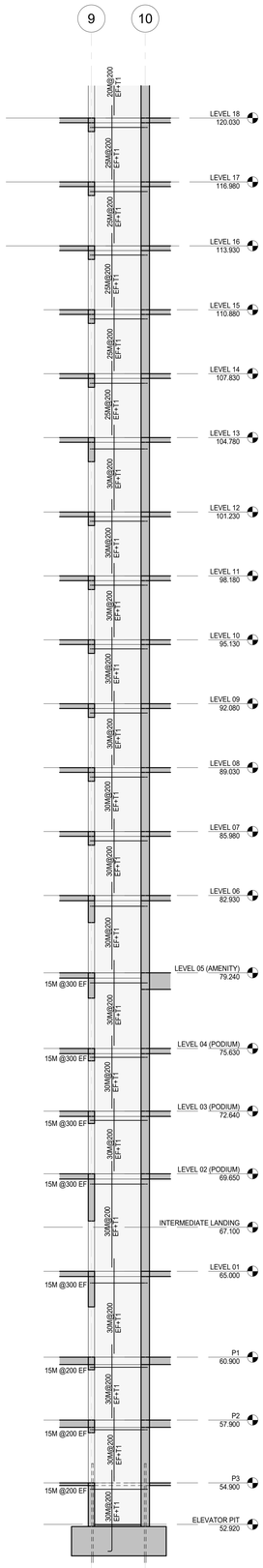
S200



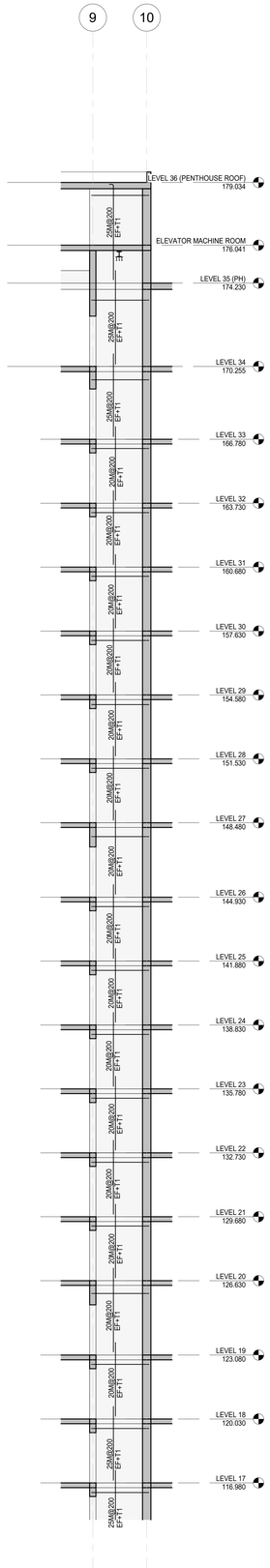
SW4.1 S07 S201 SHEARWALL ELEVATION
1 : 100



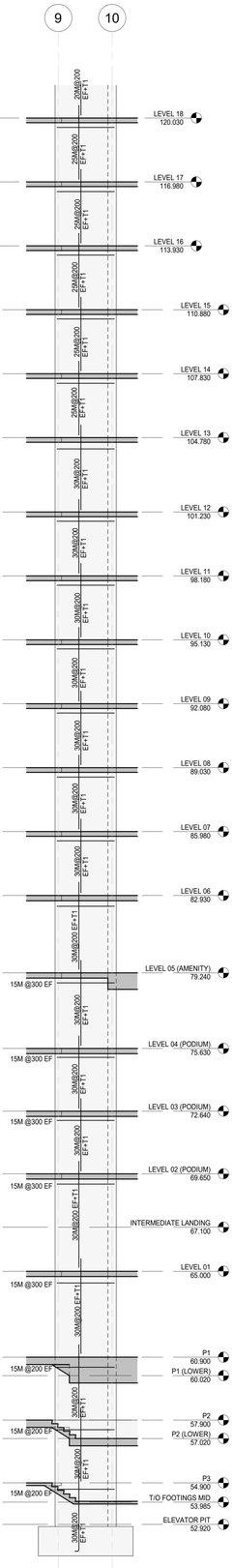
SW4.2 S12B S201 SHEARWALL ELEVATION
1 : 100



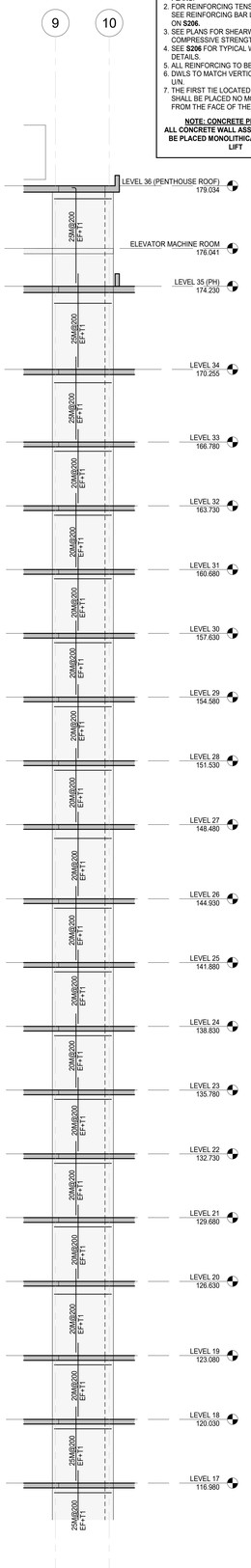
SW5.1 S10D S201 SHEARWALL ELEVATION
1 : 100



SW5.2 S12B S201 SHEARWALL ELEVATION
1 : 100



SW6.1 S10D S201 SHEARWALL ELEVATION
1 : 100



SW6.2 S12B S201 SHEARWALL ELEVATION
1 : 100

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wsp

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CSW

landscape architect | architecte paysagiste

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nord reel
true north

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3	ISSUE FOR 60% MD & CLIENT BUDGETING	25-03-28
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1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

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LICENSED PROFESSIONAL ENGINEER
25-06-09
T. LAMSTRONG
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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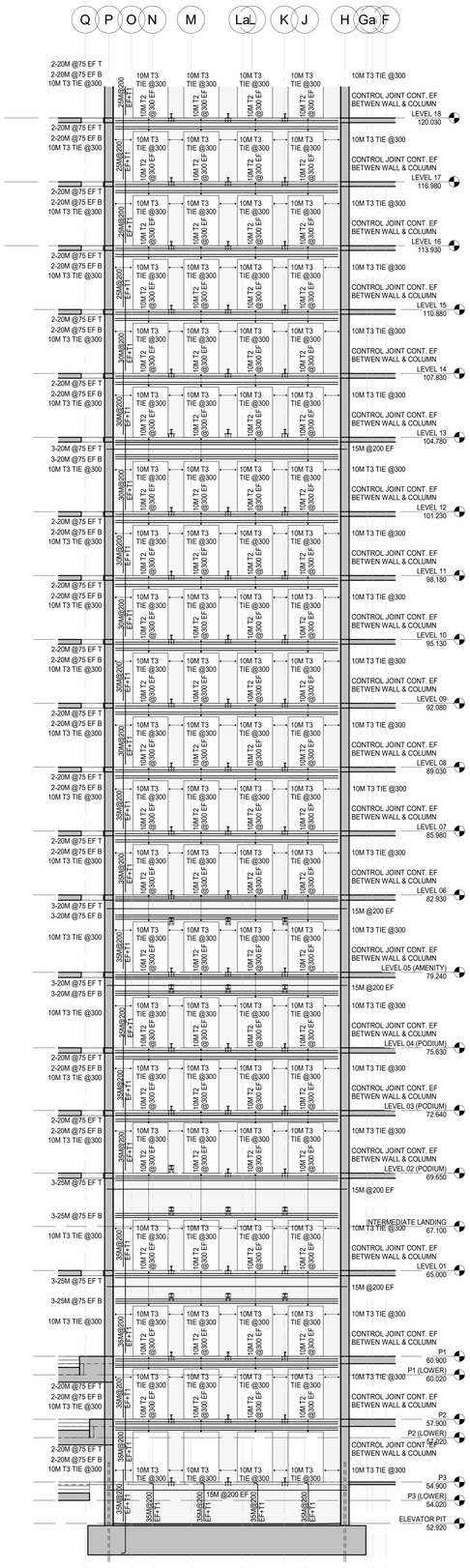
SHEARWALL ELEVATIONS

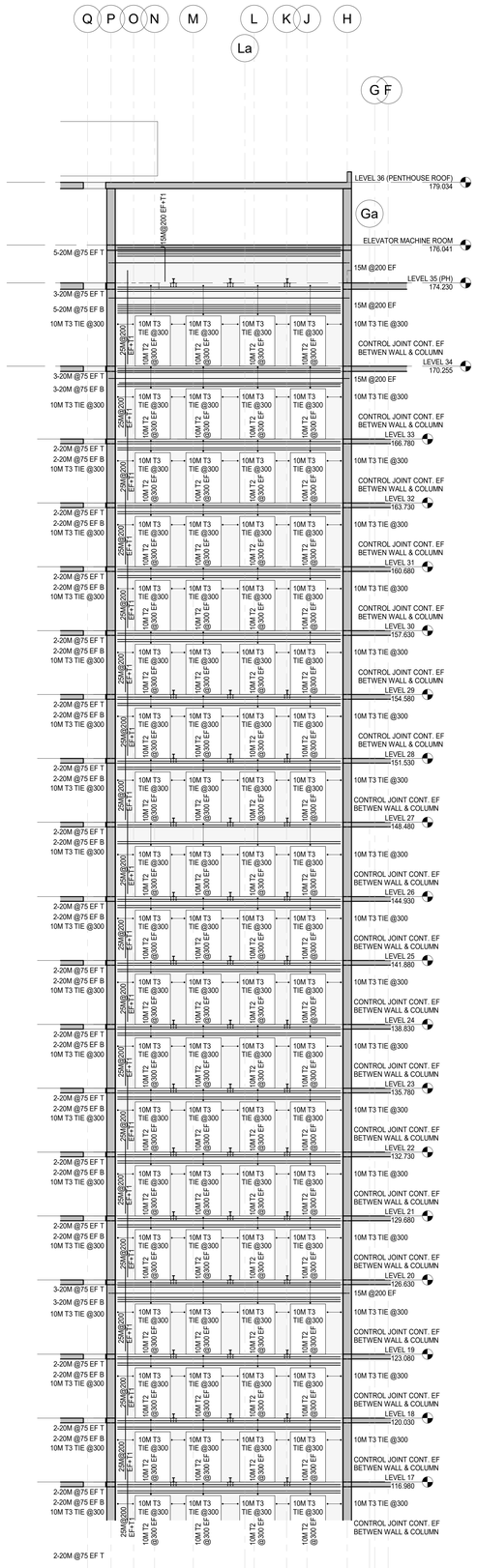
project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**06/19/24**

drawing number | numéro du dessin

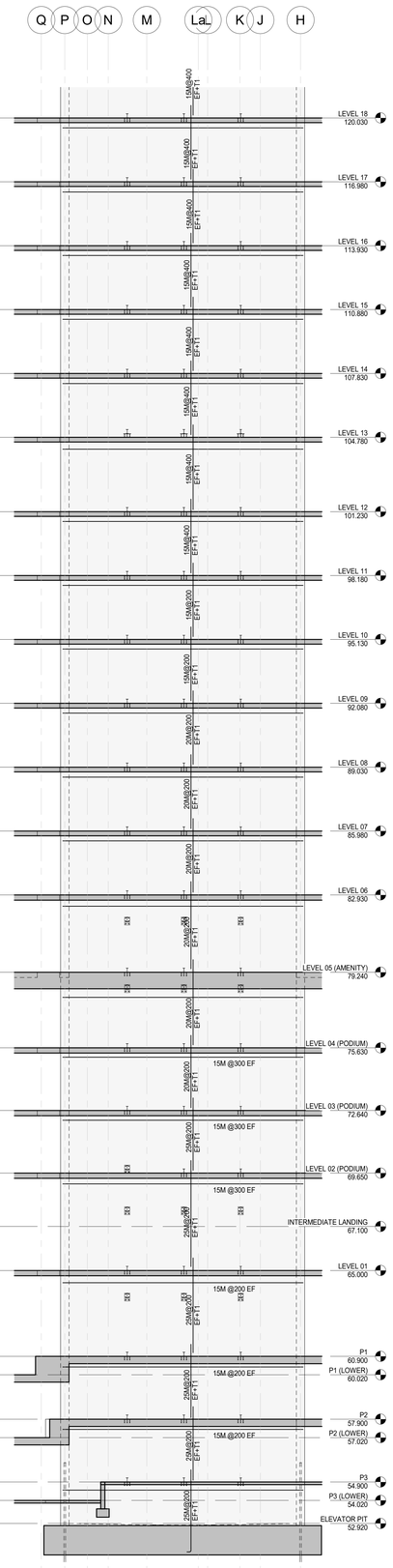
S201



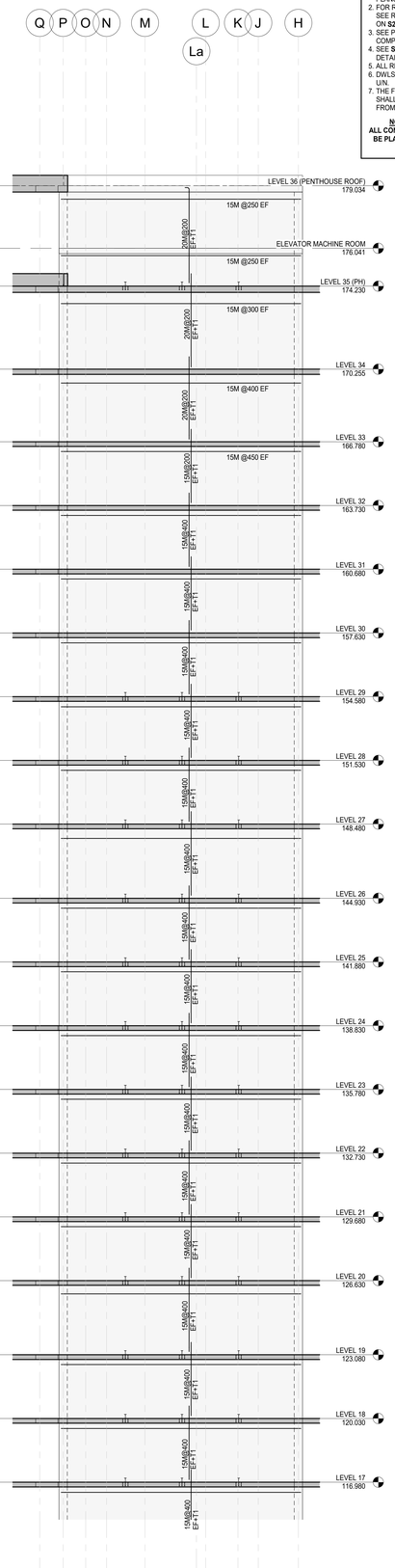
SW7.1 S100 S202 SHEARWALL ELEVATION
1 : 100



SW7.2 S128 S202 SHEARWALL ELEVATION
1 : 100



SW8.1 S100 S202 SHEARWALL ELEVATION
1 : 100



SW8.2 S128 S202 SHEARWALL ELEVATION
1 : 100

SHEARWALL NOTES

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CONSULTING STRUCTURAL ENGINEERS

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project north

nord reel
true north

no	revisions	date
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1	ISSUE FOR REVIEW	24-09-13

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
B.J.LAMPSTONE
1000489
25-06-09
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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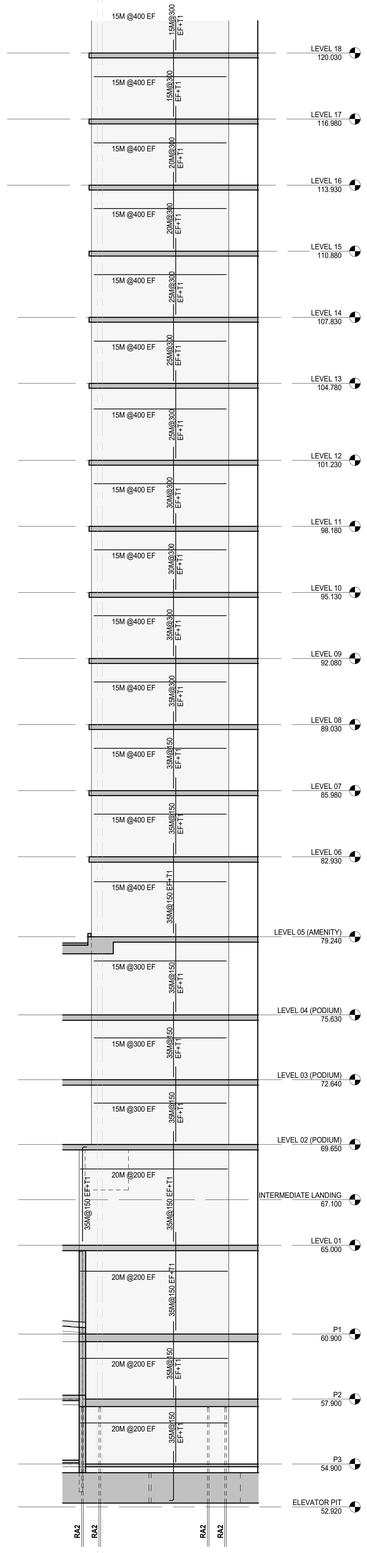
SHEARWALL ELEVATIONS

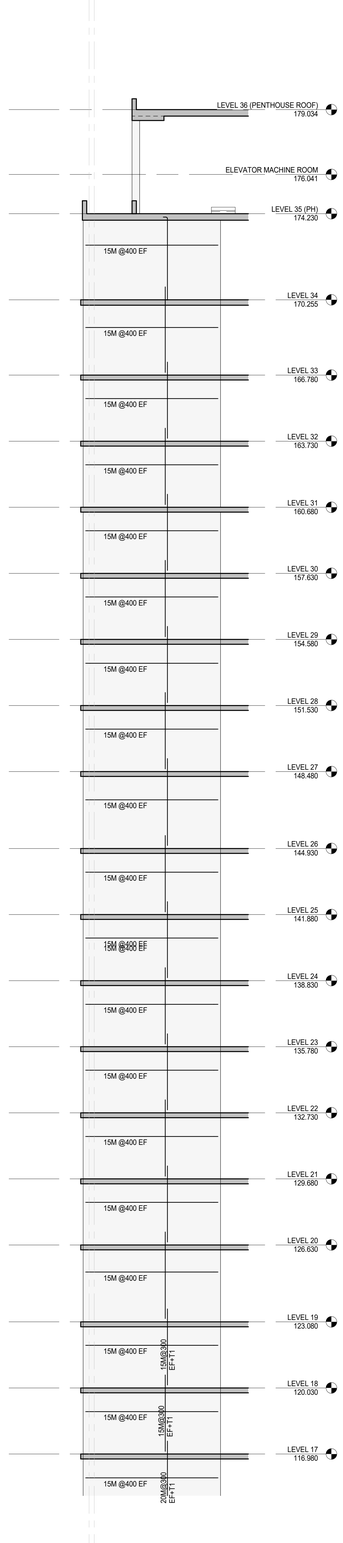
project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**06/19/24**

drawing number | numéro du dessin

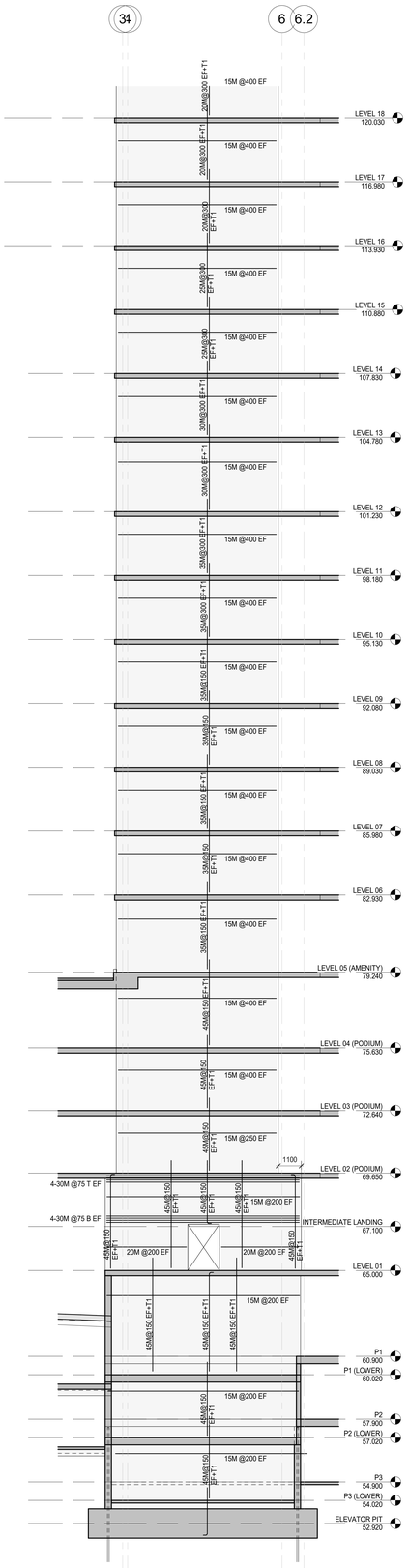
S202



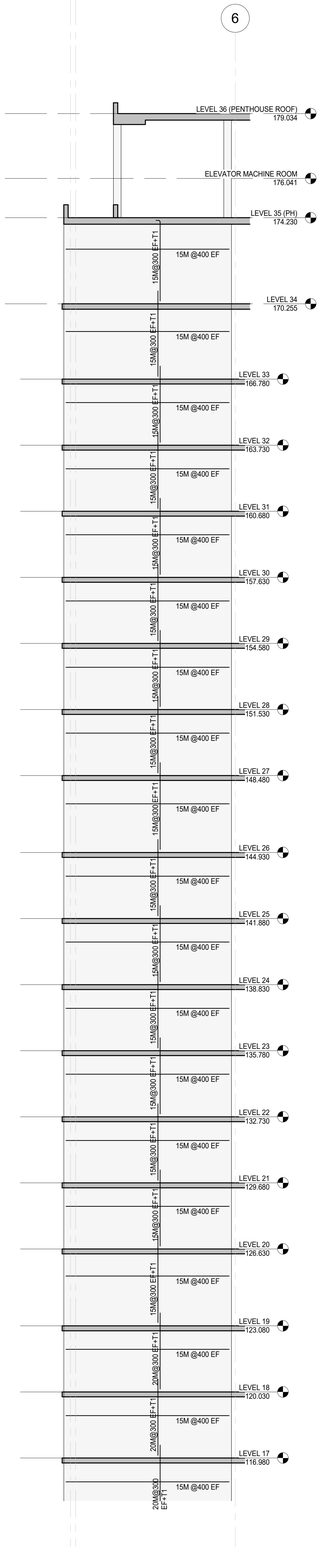
SW9.1 SHEARWALL ELEVATION
S100 S203 1 : 100



SW9.2 SHEARWALL ELEVATION
S128 S203 1 : 100



SW10.1 SHEARWALL ELEVATION
S100 S203 1 : 100



SW10.2 SHEARWALL ELEVATION
S128 S203 1 : 100

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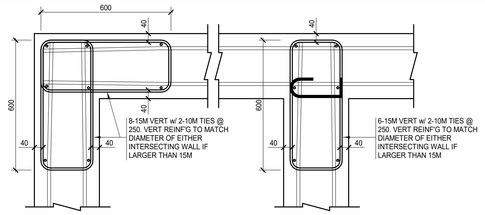
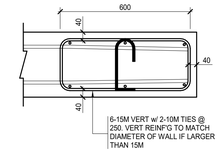
TYPICAL SHEARWALL NOTES & DETAILS



TYPICAL SHEARWALL INTERSECTION DETAIL

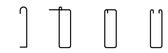


TYPICAL SHEARWALL END & SIDE OF WALL OPENING DETAIL

VERT WALL REINF'G TO BE LOCATED OUTSIDE OF HORIZ WALL REINF'G & INSIDE OF 10M TIES

SHEARWALL NOTES
1. UNLESS NOTED OTHERWISE ON THESE DRAWINGS CONCRETE WALLS WITH 1 OR 2 SHEETS OF REINFORCING
2. DETAILS ABOVE ARE APPLICABLE TO WALLS WITH 15M AND/OR 20M HORIZONTALS.
3. FOR WALLS WITH 25M HORIZONTALS, EACH 600 mm TIE ZONE IS TO BE INCREASED TO 900 mm & 2 VERTICAL BARS ARE TO BE ADDED + 1-10M PIGTAIL @ 250.
4. WHERE VERTICAL BAR SPACING SHOWN ON SHEARWALL ELEVATIONS IS LESS THAN SPACING IN TYPICAL DETAILS, PROVIDE ADDITIONAL VERTICALS WITHIN 10M TIES TO MATCH SPACING ON SHEARWALL ELEVATION.
5. HORIZONTAL WALL REINFORCING BARS ARE TO BE DEVELOPED INTO TIE ZONE. EXTEND THRU TIE ZONE TO WALL FACE.
6. HORIZONTAL WALL REINFORCING BARS MAY NEED TO BE SKEWED SLIGHTLY WITHIN TIE ZONE TO ENSURE THAT THEY ARE LOCATED INSIDE OF THE VERTICAL REINFORCING BARS WITHOUT INTERFERENCE.
7. DOWELS & VERTICAL REINFORCING FROM BELOW ARE NOT SHOWN FOR CLARITY. PLACE VERTICAL REINFORCING SHOWN ABOVE AS CLOSE AS POSSIBLE TO REINFORCING FROM BELOW IN THE ARRANGEMENT SHOWN. HORIZONTAL REINFORCING IS TO BE PLACED INSIDE OF VERTICAL REINFORCING.
8. ALL CONCENTRATED & DISTRIBUTED VERTICAL REINFORCING IN SHEARWALLS IS NOT PERMITTED TO BE OFFEST, BENT OR NECKED.

TIE LEGEND



TIE LEGEND

UNLESS NOTED OTHERWISE ON WALL ELEVATIONS, THE MINIMUM SPACING OF VERTICAL TIES ARE TO BE AS FOLLOWS:

TYPICAL TIE SPACING

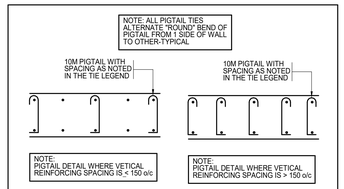
SPACING SHALL BE EQUAL TO THE LESSER OF;
a) WALL THICKNESS
OR
b) BASED ON THE VERTICAL BAR DIAMETER AS FOLLOWS;
15M VERTICAL = TIES @ 250 o/c
20M VERTICAL OR LARGER = TIES @ 300 o/c

REINFORCING BAR LAP LENGTH TABLE

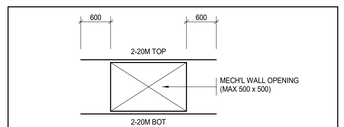
CONCRETE STRENGTH (MPa)	REINFORCING BAR LAP LENGTH (mm)					
	10M	15M	20M	25M	30M	35M
25	425	600	750	1200	1400	1675
30	400	550	675	1100	1275	1525
35	375	525	625	1000	1200	1425
40	350	475	600	950	1125	1325
45	325	450	550	900	1050	1250
50	300	425	525	850	1000	1200

NOTE:
TIED VERTICAL BARS AT WALL ENDS ARE NOT SHOWN ON THE SHEARWALL ELEVATIONS.

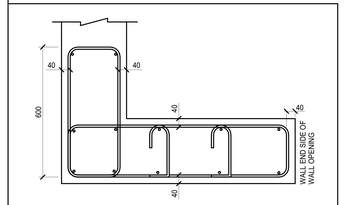
TIED VERTICAL BARS AT SIDES OF WALL OPENINGS ARE TO EXTEND FOR FULL FLOOR HEIGHT IN WHICH OPENING IS LOCATED (+ APPROPRIATE TENSION LAP ABOVE SLAB).TIED VERTICAL BARS AT WALL ENDS ARE TO EXTEND FOR FULL HEIGHT OF WALL. ADDITIONAL DETAILS MAY BE SHOWN THAT MATCH OR SUPERCEDE THE INFORMATION IN THESE TYPICAL DETAILS.



PIGTAIL REINFORCING NOTED AS "T1" ON S200's



TYPICAL DETAIL AT MECH'L WALL OPENING U/N



WE1
12-20M VERT. (U/N ON ELEVATION)
WITH 2-10M CLOSED TIES @ 300 +
2-10M T/TIES @ 300

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CONSULTING STRUCTURAL ENGINEERS
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nord du projet project north
nord reel true north

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no	revisions	date

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
P. J. ARMSTRONG
P. J. ARMSTRONG
PROVINCE OF ONTARIO

architect | architecte
linebox STUDIO

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project title | titre du projet
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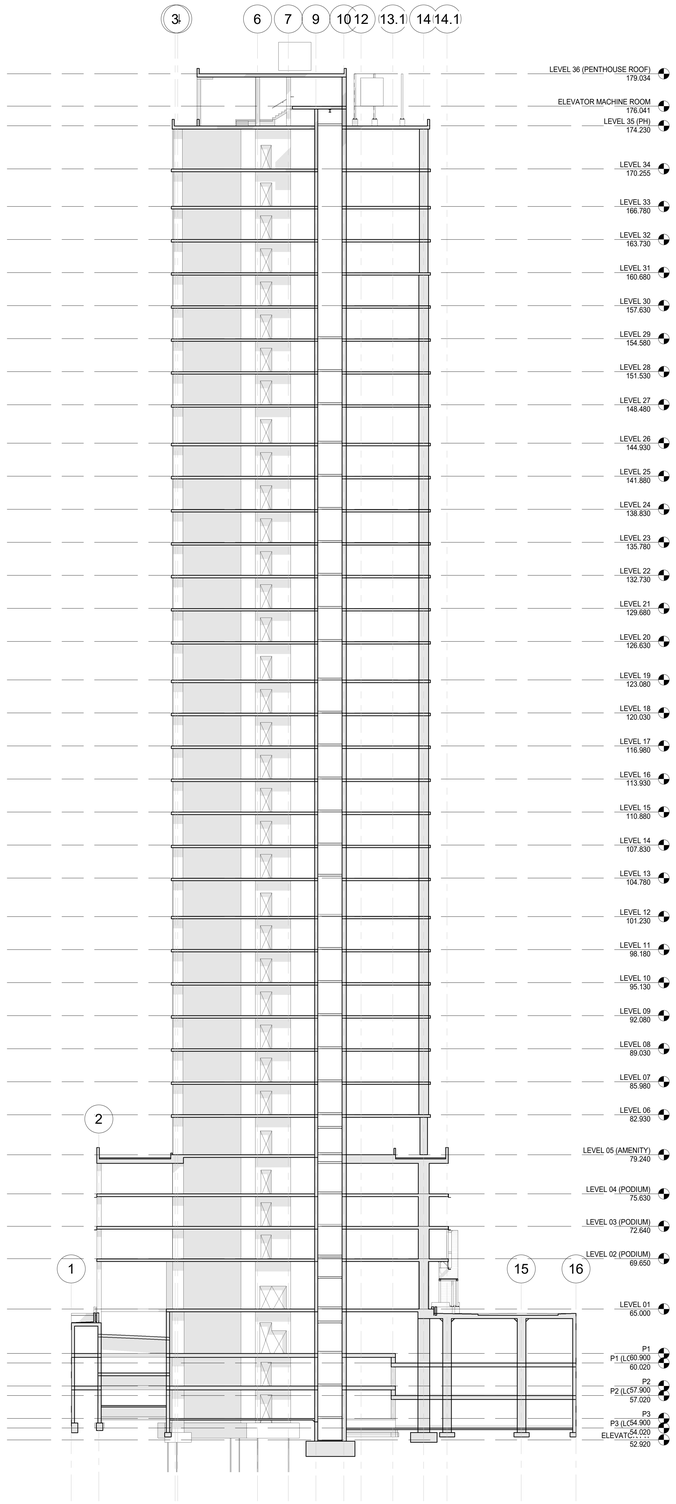
drawing title | titre du dessin
SHEARWALL ELEVATIONS

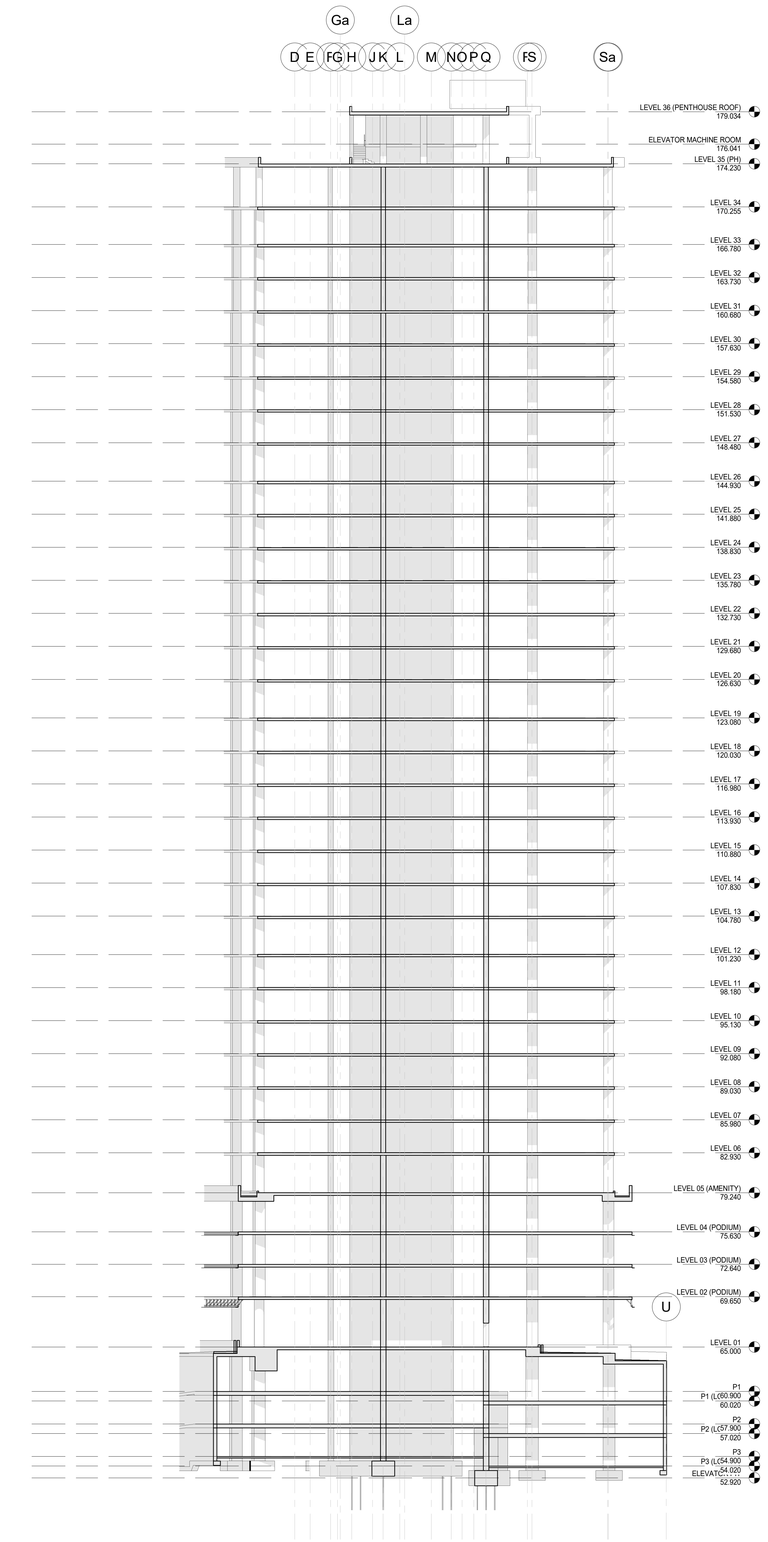
project number | numero du projet	21-045
drawn | dessiné	PMD/DG
checked | verifié	BA
scale | échelle	1 : 100
date | date	06/19/24

drawing number | numéro du dessin
S203



A S08 S300 SECTION

1 : 200



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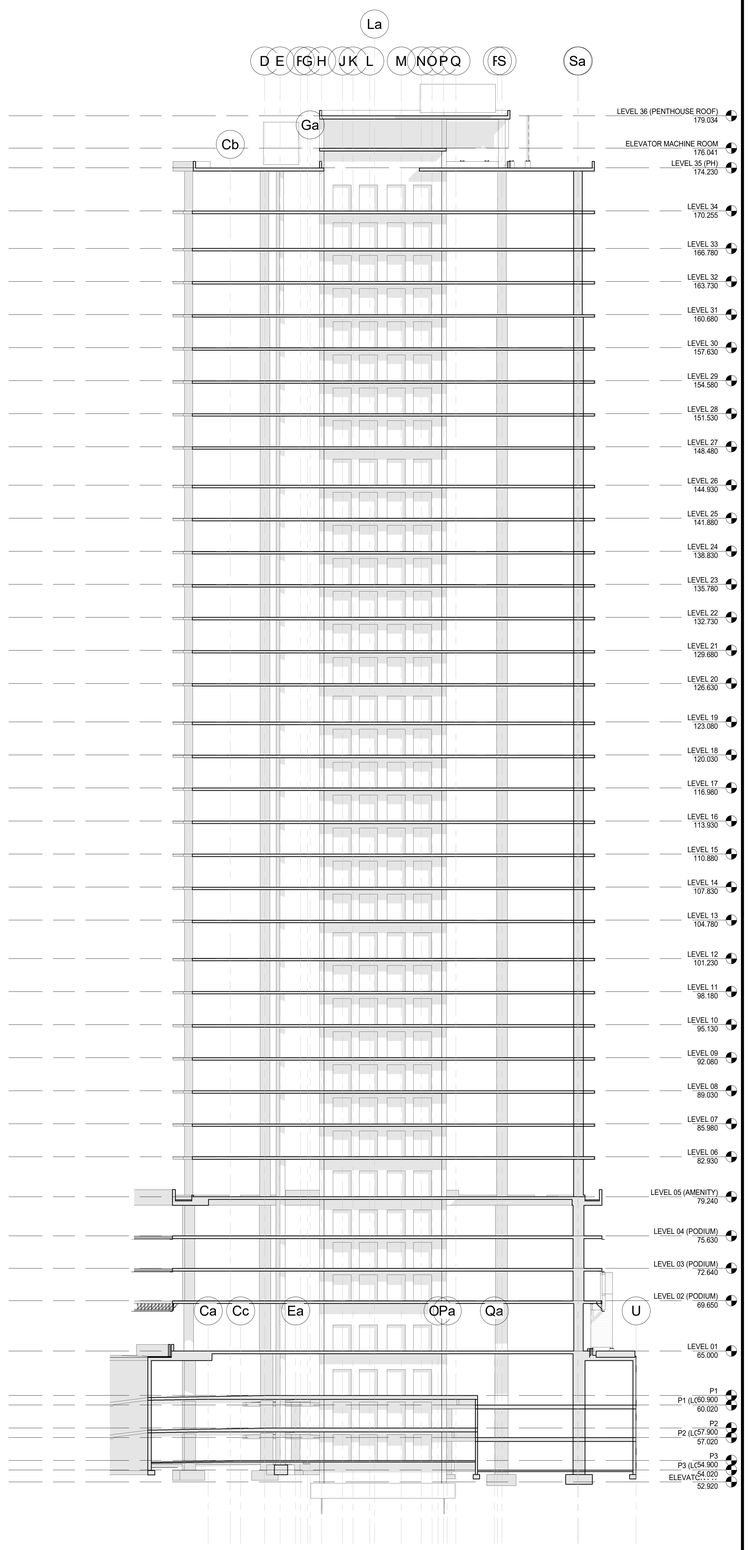


C S100 S300 SECTION

1 : 200

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur mécharique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

no	revisions	date
5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 66% WD & CLIENT BUDGETING	25-03-28
2	ISSUE FOR EXCAVATION TENDER	24-10-30
1	ISSUE FOR REVIEW	24-09-13

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-06-09
B.J.ARMSTRONG
100068980
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

Enter address here

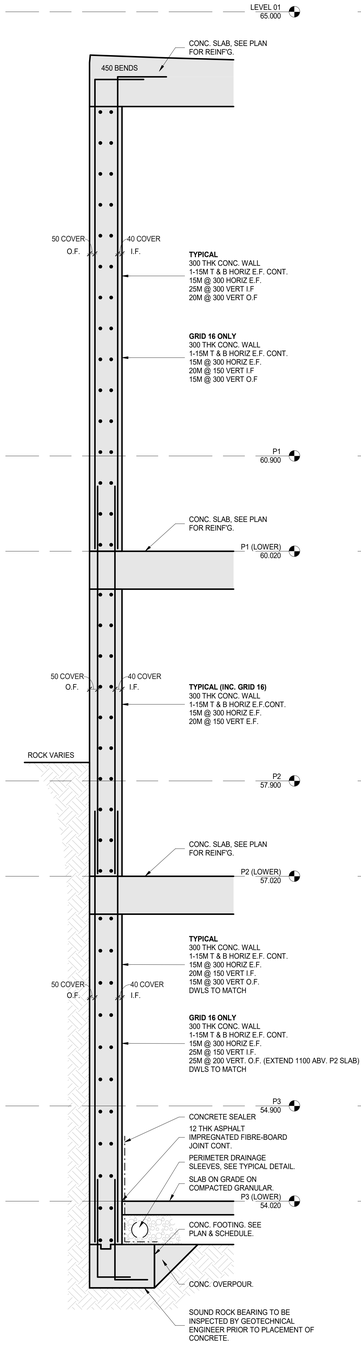
drawing title | titre du dessin

CROSS SECTIONS

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 200**
date | date	**06/19/24**

drawing number | numéro du dessin

S300



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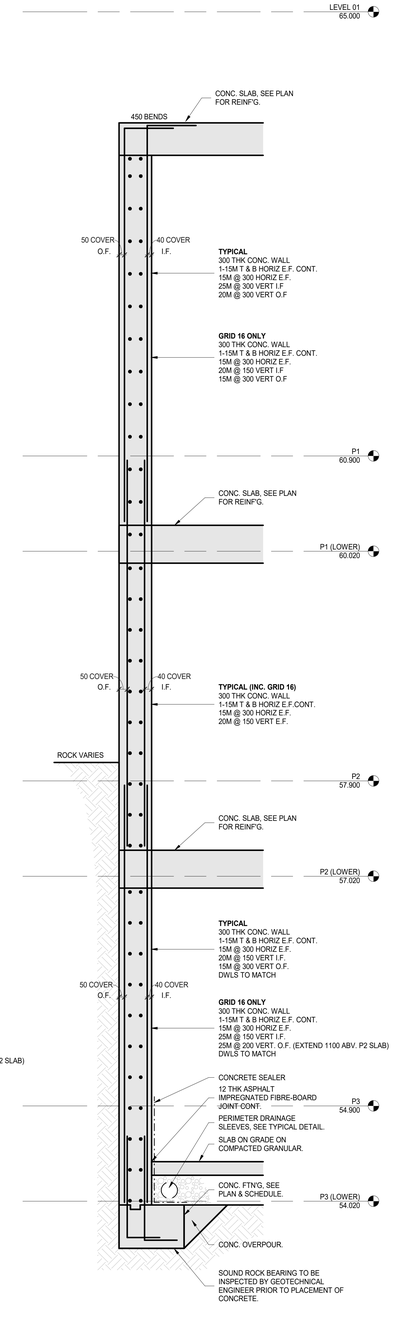

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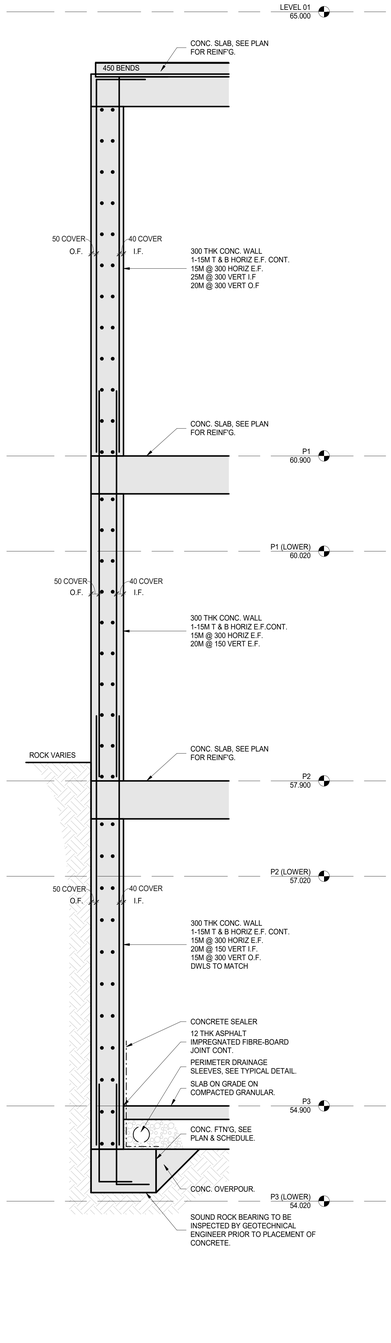

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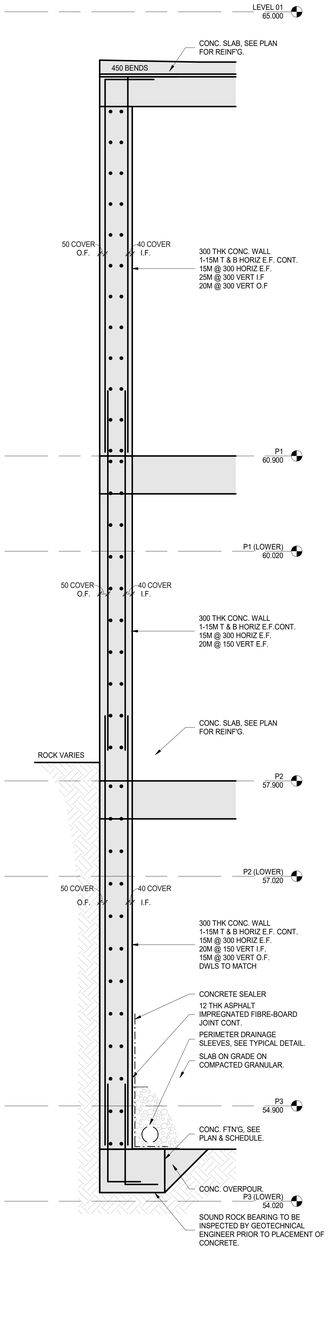

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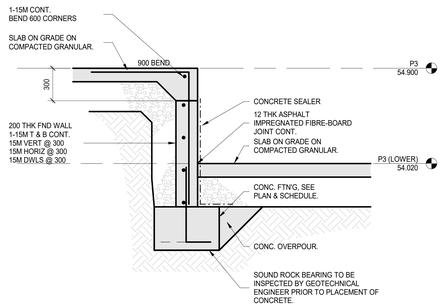

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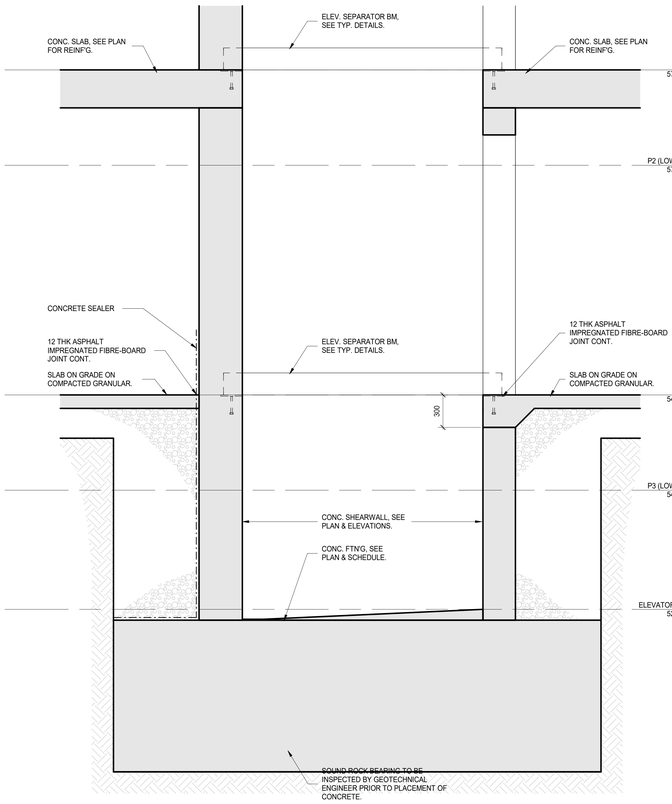

F.5 S100 S400 SECTION 1 : 20

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
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electrical engineers | ingénieur electrique

mechanical engineer | ingénieur mécharique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

no	revisions	date
5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 66% IPG & CLIENT BUDGETING	25-03-28
2	ISSUE FOR EXCAVATION TENDER	24-10-30
1	ISSUE FOR REVIEW	24-09-13

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
B. J. ARMSTRONG
25-06-09
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

Enter address here

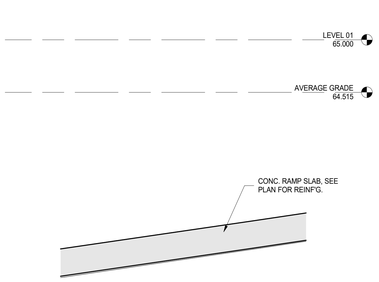
drawing title | titre du dessin

SECTIONS

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 20**
date | date	**06/19/24**

drawing number | numéro du dessin

S400



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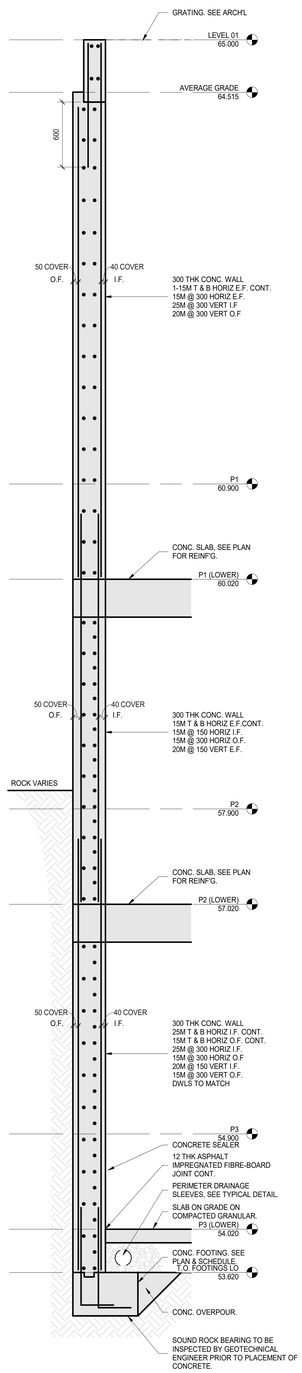

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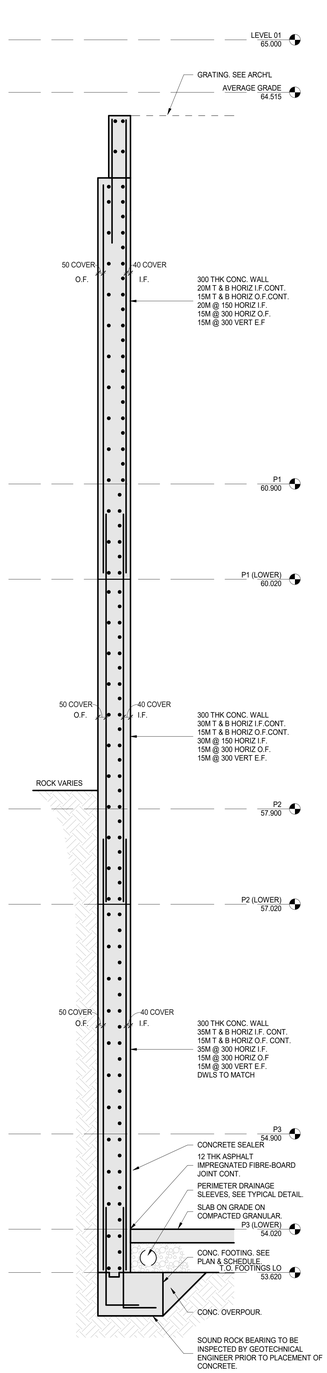

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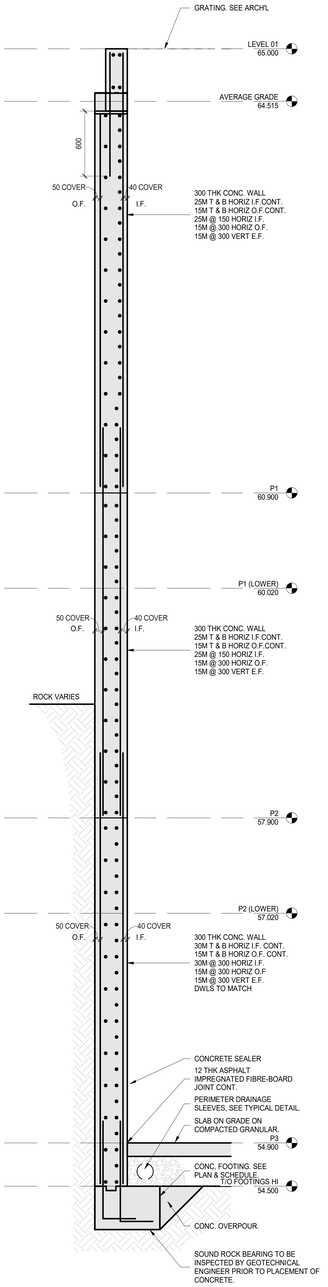

F.10 S100|S401 SECTION
1 : 20

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineer | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-14
3	ISSUE FOR 66% IRG & CLIENT BUDGETING	25-03-28
2	ISSUE FOR EXCAVATION TENDER	24-10-30
1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

LICENSED PROFESSIONAL ENGINEER
25-04-09
B. ARMSTRONG
100090468
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

Enter address here

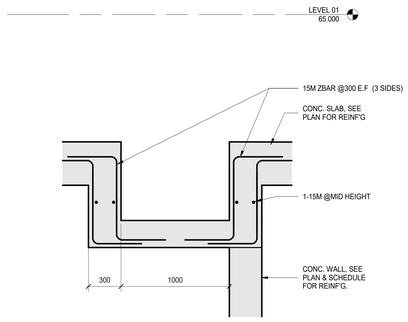
drawing title | titre du dessin

SECTIONS

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 20**
date | date	**06/19/24**

drawing number | numéro du dessin

S401



L01.14 / S107 S402 SECTION
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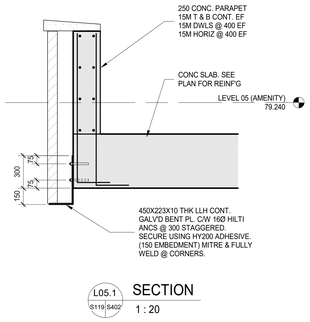

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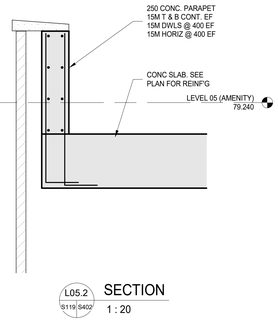

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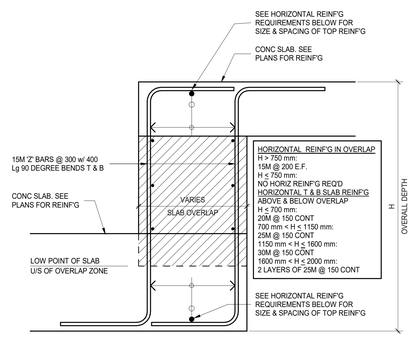
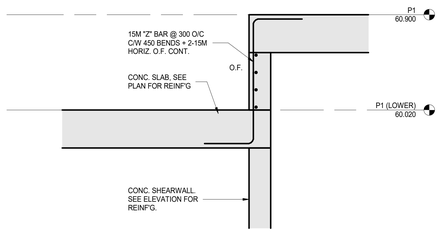


TYPICAL OVERLAPPING SLAB DETAIL
SEE PLANS & SECTIONS FOR LOCATIONS



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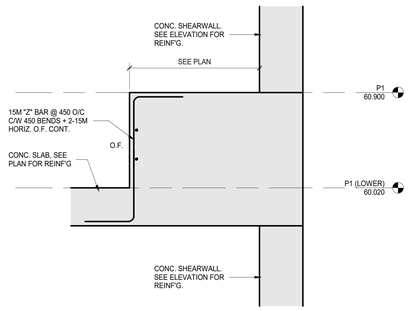

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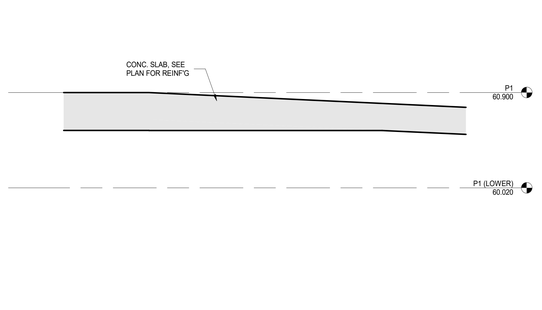

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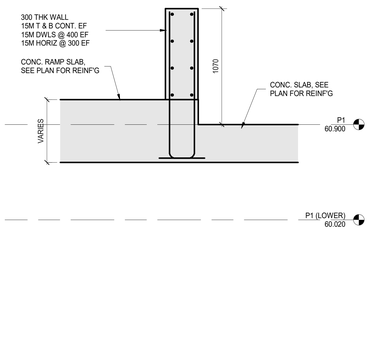

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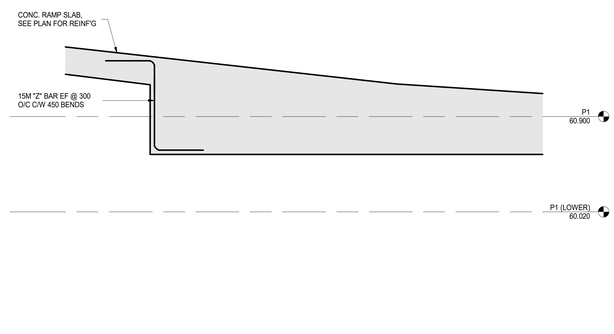

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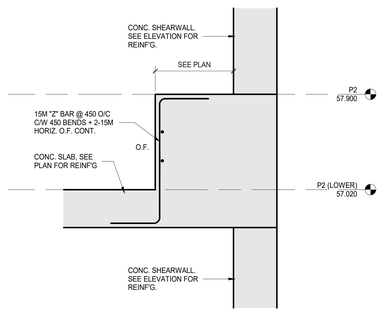

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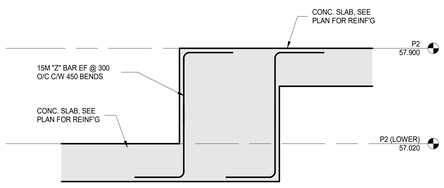

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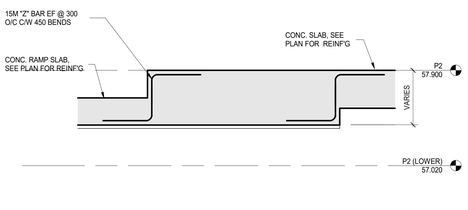

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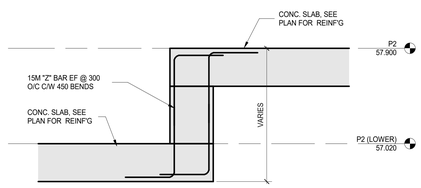

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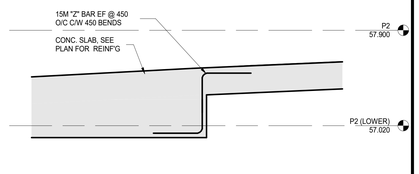

P.5 / S101 S402 SECTION
1 : 20

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
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electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

5	ISSUED FOR TENDER	25-04-09
4	ISSUED FOR PRICING	25-06-18
3	ISSUE FOR 66% WD & CLIENT BUDGETING	25-03-28
2	ISSUE FOR EXCAVATION TENDER	24-10-30
1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

I CONFIRM THIS PROFESSIONAL DESIGN MEETS THE REQUIREMENTS OF THE BUILDING CODE AND MY PROFESSIONAL PRACTICE OF DISCIPLINE
25-06-09
B.J.ARMSTRONG
100068
BCIN

architect | architecte

linebox
STUDIO

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Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

Enter address here

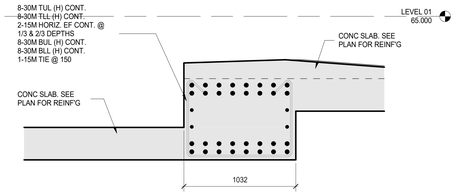
drawing title | titre du dessin

SECTIONS

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**As indicated**
date | date	**06/19/24**

drawing number | numéro du dessin

S402



L01.13 (S107 S403) SECTION
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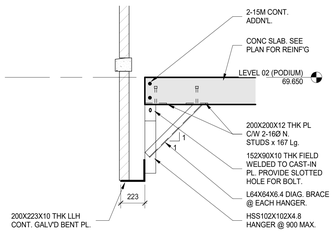

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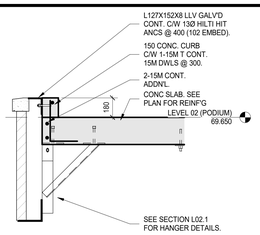

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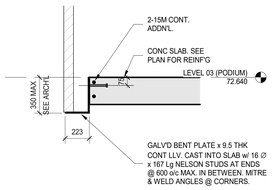

TYP.1 (S113 S403) SECTION
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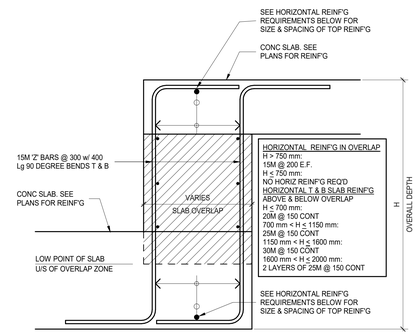
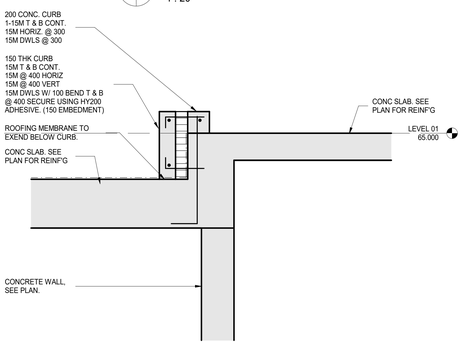


TYPICAL OVERLAPPING SLAB DETAIL
SEE PLANS & SECTIONS FOR LOCATIONS



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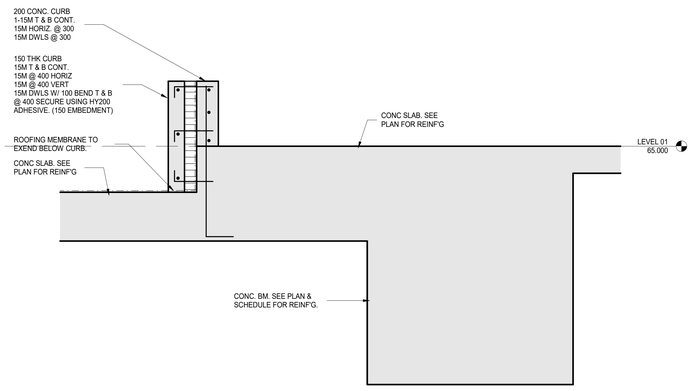

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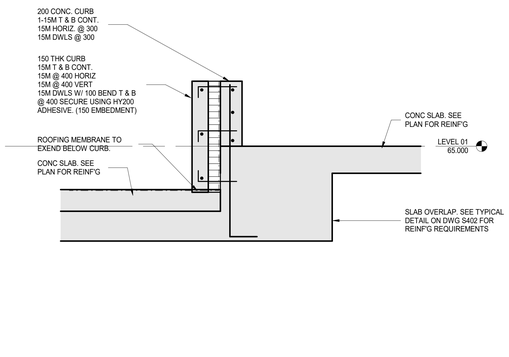

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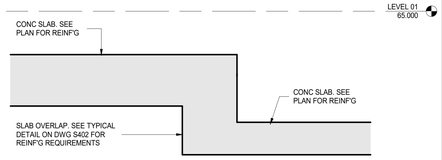

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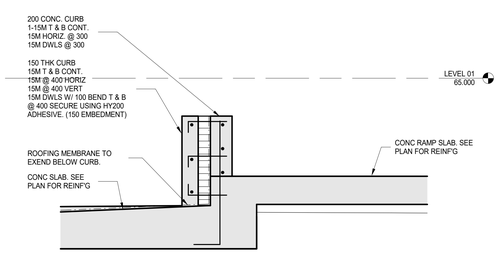

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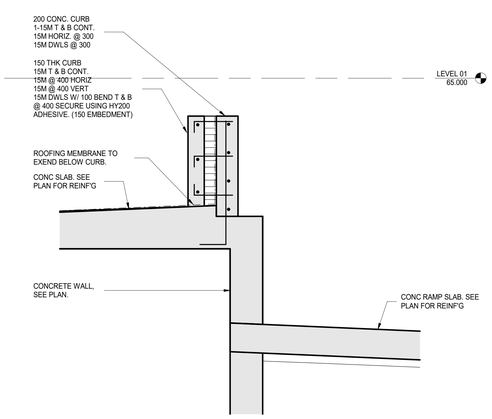

L01.6 (S107 S403) SECTION
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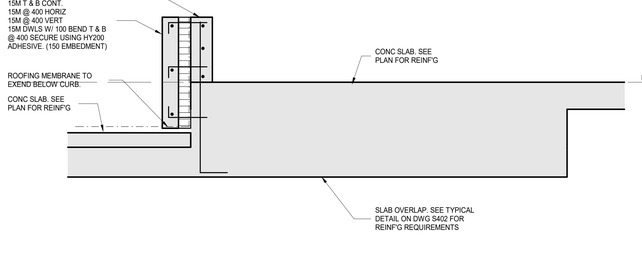

L01.7 (S107 S403) SECTION
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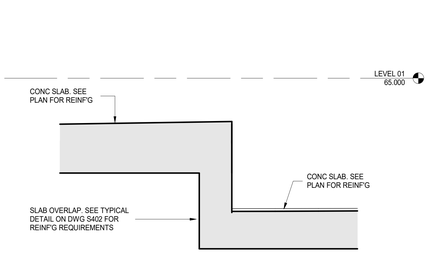

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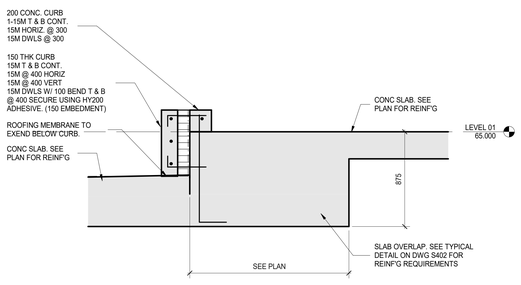

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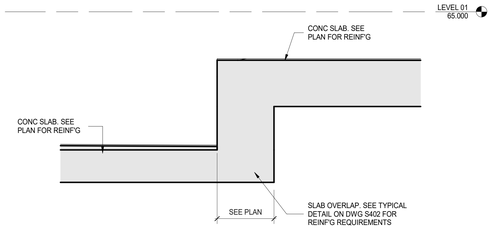

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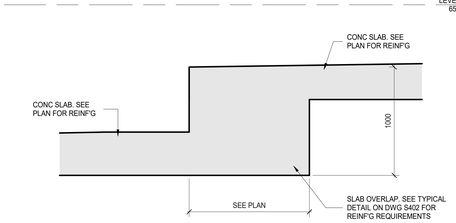

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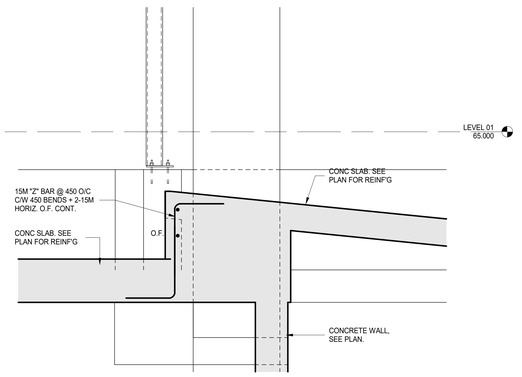

L01.4 (S107 S403) SECTION
1 : 20

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

no	revisions	date
5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR M/E W.D. & CLIENT BUDGETING	25-03-28
2	ISSUE FOR EXCAVATION TENDER	24-10-30
1	ISSUE FOR REVIEW	24.09-13

stamp | timbre

LICENCED PROFESSIONAL ENGINEER
25-06-09
ELANCTHONG TOOGOOD
PROVINCE OF ONTARIO

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
Contractor shall check and verify all dimensions and report all error and omissions to the Architect.
Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

Enter address here

drawing title | titre du dessin

SECTIONS

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**As indicated**
date | date	**06/19/24**

drawing number | numéro du dessin

S403

APPENDIX B5

SHORING DRAWINGS

SPECIAL NOTES:

S1. EXACT SHORING WALL ALIGNMENT TO BE CONFIRMED PRIOR TO PILE INSTALLATION BASED ON PROPERTY LINE, ALIGNMENT OF FOUNDATION WALL, AND LOCATION OF UNDERGROUND UTILITIES.
S2. DESIGN SHOWN ON THESE DRAWINGS IS FOR CONSTRUCTION BY MARATHON UNDERGROUND CONSTRUCTORS CORPORATION ONLY.

GENERAL NOTES:

1. STRUCTURAL DESIGN OF SHORING COMPLETED IN ACCORDANCE WITH:
a. CANADIAN FOUNDATION ENGINEERING MANUAL.
b. CSA S16-09 DESIGN OF STEEL STRUCTURES (MEMBER STRENGTH PROVISIONS).
2. GROUND CONDITIONS EVALUATED FROM GEOTECHNICAL REPORT BY PATERSON GROUP, DATED DECEMBER 19, 2024 (REPORT PG SS17-1 REVISION 3).
3. FOUNDATION WALL POSITION FOR SHORING ALIGNMENT FROM STRUCTURAL DRAWING NUMBER S100 BY CUNLIFFE & ASSOCIATES INC. DATED 25-06-17 REV 6 (ISSUED FOR TENDER) AND ARCHITECTURAL DRAWING A2-098 BY LINBOX STUDIO INC. DATED 25-08-## REV 26 (REISSUED FOR ENVELOPE AND INTERIOR GYPSUM ASSEMBLIES TENDER).
4. PROPERTY LINE POSITION AND UTILITIES FROM CIVIL DRAWINGS BY WSP DATED APRIL 15, 2025 (REVISED AS PER UPDATED LANDSCAPE PLAN).
5. DESIGN LOADING:
a. SURCHARGE OF 12 kPa ABOVE/BEHIND SHORING WALL.
b. EARTH PRESSURES - TRIANGULAR ACTIVE DISTRIBUTION.

MATERIAL	UNIT WEIGHT (kN/m^3)	FRICTION ANGLE (degrees)	EFFECTIVE COHESION (kPa)	COHESION (kPa)
SAND	20	33	0	0
CLAY	17	33	2.5	50
GLACIAL TILL	19	35	0	0

c. NO GROUNDWATER PRESSURE, SINCE SHORING WALL IS PERVIOUS.
6. MATERIALS
a. SOLDIER PILES: SHALL CONFORM TO CSA-G40.20/G40.21 350W
b. ALL OTHER STRUCTURAL STEEL: CSA G40.20/G40.21 350W, OR ASTM A992, OR ASTM A572 GR. 50 (MIN. Fy =345 MPa).
c. TIMBER LAGGING - 4” ROUGH CUT CONSTRUCTION-GRADE HARDWOOD LUMBER (E.G., POPLAR OR SIMILAR)
d. TIE-BACKS. 0.6" 7-WIRE STRAND 270 KSI PER ASTM A-416. MS CABLE GROUT (MIN. 40 MPa)
7. WELDING TO CSA W59-13. E49XX WELDING ELECTRODES.
8. PROVIDE RAILING ON TOP OF WALL AS REQUIRED (REF. O/REG. 213/91).
9. ALL EXISTING UTILITIES TO BE LOCATED PRIOR TO SHORING INSTALLATION.
a. IF BURIED UTILITIES ARE LOCATED WITHIN 1.5m OF SOLDIER PILE LOCATIONS OR TIE-BACK TRAJECTORIES, EXPOSE UTILITY (HYDROVAC) TO CONFIRM LOCATION.
8. ANY CHANGES TO DESIGN AND CONSTRUCTION METHODOLOGY TO BE APPROVED BY SHORING DESIGNER PRIOR TO IMPLEMENTATION.
9. ALL DIMENSIONS SHOWN IN MILLIMETERS UNLESS NOTED. ELEVATIONS SHOWN IN METERS.
10. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT.
11. TOE ANCHORS: 32mm DIAM (≠ 8) THREADED BAR, 150 KSI STEEL. USE COMPATIBLE RESIN GROUT OR MRN. 40MPa CEMENT GROUT. USE NUT AND PLATE FROM SUPPLIER. TOE ANCHOR TO EXTEND AT LEAST 3.5m INTO BEDROCK.

INSTALLATION PROCEDURE:

1. LOCATE ALL BURIED UTILITIES INCLUDING EXISTING SERVICE LATERALS. CONFIRM NO CONFLICTS WITH SOLDIER PILE LOCATIONS OR TIE-BACK TRAJECTORIES.
2. CONFIRM EXACT SHORING ALIGNMENT WITH OWNER, G.C., AND SURVEYOR. SHORING TO BE INSTALLED TO SERVE AS EXTERIOR BLIND-SIDE FORM FOR FOUNDATION WALL. CONFIRM REQUIRED OFF-SET FROM FOUNDATION WALLS FOR DRAINGE, WATER-PROOFING AND INSULATION WITH G.C. (IF APPLICABLE). ALSO ALLOW TOLERANCE FOR PILE POSITION, VERTICALITY, AND DEFLECTION WHERE APPROPRIATE. NOTE: ENCROACHMENT AGREEMENTS FOR PILES OR TIE-BACKS ARE RESPONSIBILITY OF CLIENT.
3. CONFIRM REQUIRED BOTTOM-OF-EXCAVATION (B.O.E.) LEVEL WITH G.C.
4. DRILL PILE LOCATIONS INTO BEDROCK. MIN 1.0M TOE REQUIRED BELOW BOTTOM OF EXCAVATION. INSTALL WIDE FLANGE BEAMS AND FILL DRILL HOLES/ SOCKET WITH CONCRETE AS INDICATED.
5. MONITOR ROCK DEPTHS AS PILE INSTALLATION PROGRESSES ALONG WALL. IF ROCK DEPTH IS GREATER THAN DEPTHS INDICATED ON DRAWINGS, ALERT DESIGNER IMMEDIATELY AND CONFIRM IF PILE SPACING NEEDS TO BE REDUCED.
6. INSTALL MONITORING TARGETS.
7. SOIL IN FRONT OF PILES TO BE EXCAVATED (BY OTHERS) IN MAXIMUM 1.2 m LIFTS PRIOR TO LAGGING INSTALLATION. USE SHORTER LIFTS IF NEEDED TO AVOID SLOUGHING OF BACKFILL.
8. INSTALL LAGGING (NO GAPS). PACK BEHIND LAGGING WITH STONE DUST AS REQUIRED TO ENSURE NO VOID IS CREATED AND BACKFILL IS IN GOOD CONTACT WITH LAGGING.
9. EXCAVATE TO A MAXIMUM OF 0.5M BELOW UNDERSIDE OF WALER LEVEL. DRILL, INSTALL, AND GROUT STRAND TIEBACK WHERE INDICATED. INSTALL WALER AND BRACKET. NOTE: CONFIRM NO CONFLICT WITH EXISTING UTILITIES PRIOR TO TIEBACK DRILLING.
10. STRESS, TEST, AND LOCK-OFF TIEBACKS. TEST RESULTS TO BE PROVIDED TO SHORING ENGINEER. TESTING TO GENERALLY CONFORM TO OPSS942.07.12.06.03. MEASURE WALL DEFLECTION DURING STRESSING AND TESTING. IF WALL MOVEMENT REACHES 25MM, LOCK-OFF ANCHOR AND REPORT LOCK-OFF LOAD TO DESIGNER.
11. CONTINUE EXCAVATION AND LAGGING SEQUENCE TO BEDROCK LEVEL. INSTALL TOE ANCHORS WHERE INDICATED ON DRAWINGS, SNUG TIGHTEN (PASSIVE ANCHOR). DESIGNER TO INSPECT ROCK. TEST 100% OF THE ANCHOR TO MAX. LOAD OF 454 kN.CONTINUE EXCAVATION TO BOTTOM OF EXCAVATION.
12. DESIGNER TO INSPECT EXPOSED ROCK TO CONFIRM ALL PILES ARE SOCKETED IN ROCK OF GOOD QUALITY. ALERT SHORING DESIGNER IF ROCK IS WEATHERED OR HIGHLY FRACTURED. ADDITIONAL TOE SUPPORT COULD BE REQUIRED.

REMOVAL PROCEDURE:

1. ONLY CUT TIEBACKS AND REMOVE WALERS ONCE SLAB BELOW TIE-BACK LEVEL IS CURED AND STRUCTURAL DESIGNER HAS CONFIRMED CAPACITY TO SUPPORT SHORING LOAD.
2. CUT PILES OFF 1.2 m BELOW GRADE OR AS REQUIRED.

MONITORING AND INSPECTIONS:

1. SHORING INSTALLATION TO BE INSPECTED WEEKLY BY SHORING DESIGN ENGINEER DURING EXCAVATION.
2. CONTINUOUS INSPECTION BY SHORING DESIGN ENGINEER DURING EXCAVATION AND REMOVAL [PER OBC 4.2.2.2(2)(a)(ii)].
3. MONITORING TARGETS TO BE INSTALLED AT TOPS OF SELECTED PILES - EVERY 10m
4. OBTAIN BASELINE READINGS ONCE TARGETS INSTALLED.
5. TARGETS TO BE MONITORED WEEKLY THEREAFTER, UNLESS DIRECTED OTHERWISE BY

LICENSED PROFESSIONAL ENGINEER
M. I. CUNNINGHAM
NOV 28/25
PROVINCE OF ONTARIO

No.	REVISION	DATE
1	ISSUED FOR PERMIT	2025.11.28
0	ISSUED FOR REVIEW	2025.11.11

MARATHON
Marathon Underground Constructors Corporation
49 Auriga Drive, Ottawa, ON, K2E 8A1
Tel: (613) 821-4800
Fax: (613) 821-3182
www.marathonunderground.com

PROJECT
EXCAVATION SHORING
LORETTA & GLADSTONE

LOCATION
951 GLADSTONE AVENUE &
145 LORETTA AVENUE NORTH
OTTAWA, ON

JOB No.

DESCRIPTION
NOTES

DRAWN BY	SCALE
AC	AS NOTED
DESIGNED BY: RW	DRAWING No. MU0
CHECKED BY: MIC	

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SHORING DESIGN ENGINEER.

6. SHORING DESIGN ENGINEER TO BE NOTIFIED IMMEDIATELY IF DEFLECTION EXCEEDS 15mm. IF DEFLECTION EXCEEDS 25mm, EXCAVATION SHOULD STOP UNTIL CONDITIONS ARE REVIEWED BY SHORING DESIGN ENGINEER.
7. ON-SITE STAFF SHOULD CARRY OUT DAILY VISUAL INSPECTION DURING EXCAVATION AND SHORING CONSTRUCTION, INCLUDING OF GROUND SURFACE BEHIND SHORING. IF ANY DEFORMATIONS OR GROUND SURFACE CRACKING OR SETTLEMENT ARE OBSERVED, SHORING DESIGN ENGINEER TO BE IMMEDIATELY NOTIFIED.
8. VIBRATION MONITORING AND PRE-CONSTRUCTION SURVEY BY OTHERS, IF REQUIRED.

TIE-BACK SCHEDULE

TIE-BACK LABEL	NUMBER OF STRANDS	LOCK-OFF LOAD (kN)	TEST LOAD (kN)	ELEVATION (m)	BOND LENGTH (m)	ESTIMATED TOTAL LENGTH (m)
T1 - T6	TB11	1650	2195	62.00	8.25	16.20
T7 - T8	TB10	1440	1916	62.00	7.5	16.5
T9 - T10	TB10	1440	1916	62.00	7.5	16.8

TABLE OF CONTENTS

SHEET NUMBER	DESCRIPTION
MU0	NOTES
MU0A	NOTES
MU1	SITE PLAN
MU2	SHORING PLAN
MU3	SECTION
MU4	SECTION
MU5	SECTION



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PROJECT

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LORETTA & GLADSTONE

LOCATION

951 GLADSTONE AVENUE &
145 LORETTA AVENUE NORTH
OTTAWA, ON

JOB No.

DESCRIPTION

NOTES

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DESIGNED BY	DRAWING No.
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MIC	

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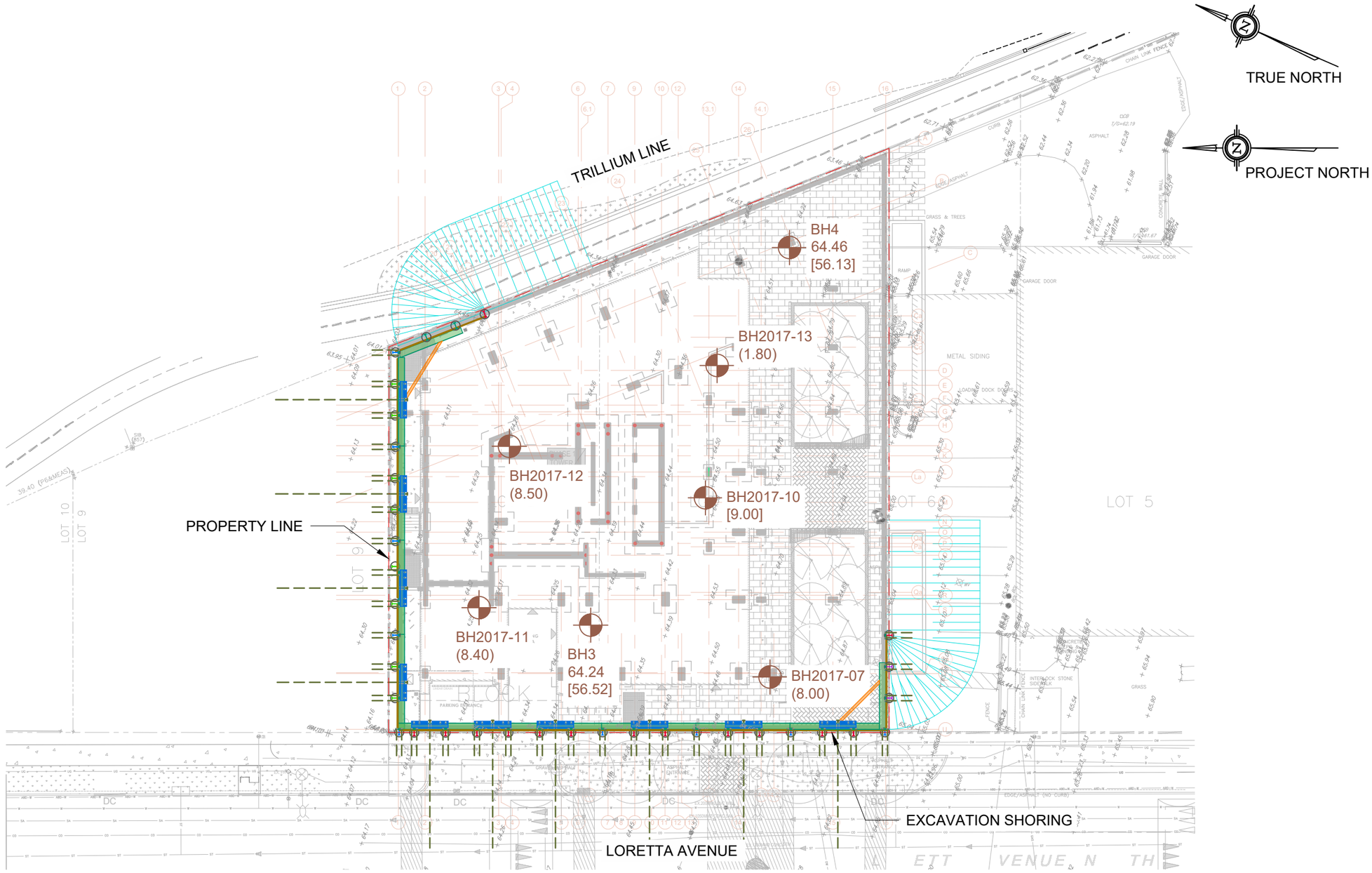

1 SITE PLAN
MU1 SCALE: 1:400

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JOB No.

DESCRIPTION
SITE PLAN

DRAWN BY: AC	SCALE: AS NOTED
DESIGNED BY: RW	DRAWING No.: MU1
CHECKED BY: MIC	

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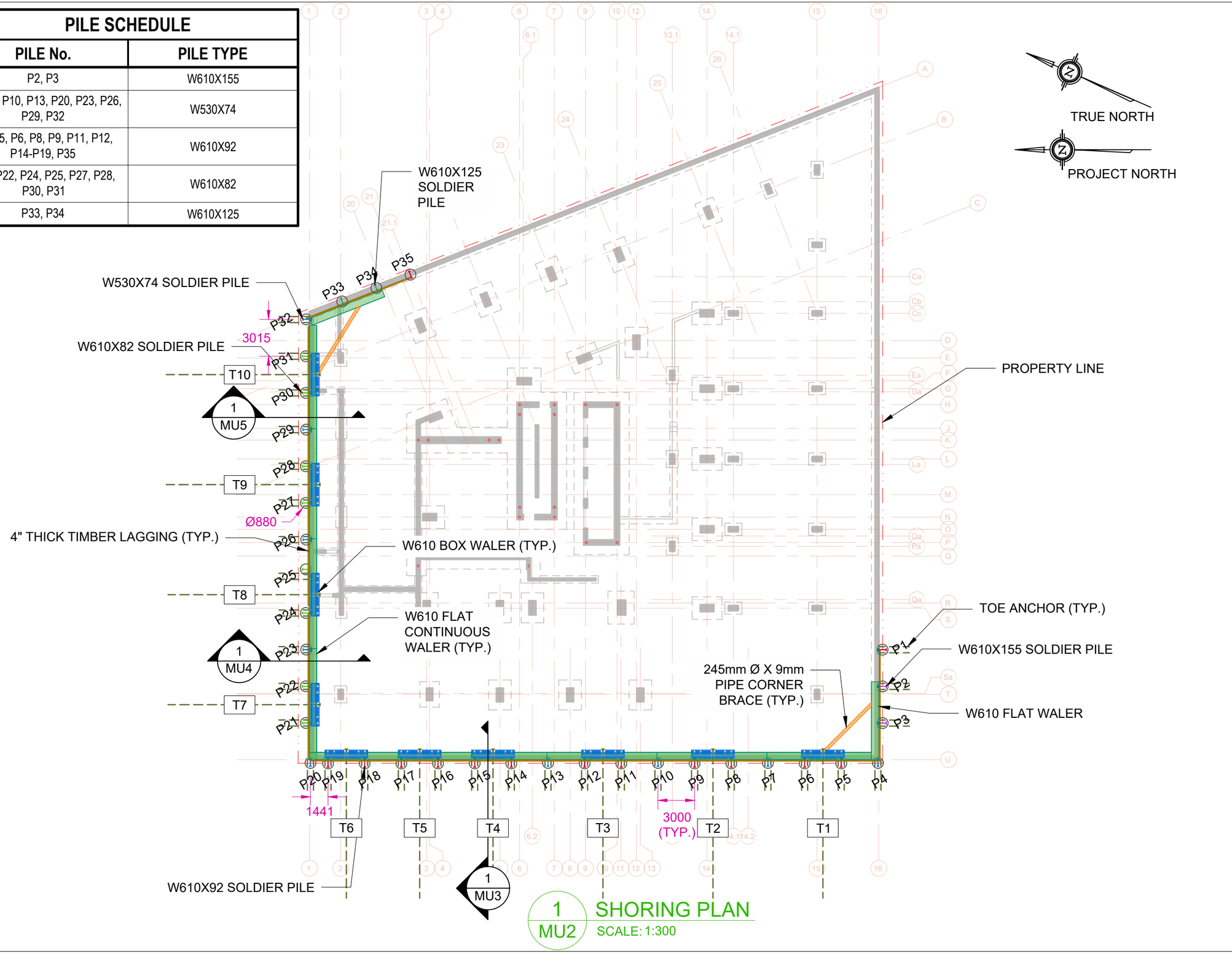
PILE SCHEDULE

PILE No.	PILE TYPE
P2, P3	W610X155
P4, P7, P10, P13, P20, P23, P26, P29, P32	W530X74
P1, P5, P6, P8, P9, P11, P12, P14-P19, P35	W610X92
P21, P22, P24, P25, P27, P28, P30, P31	W610X82
P33, P34	W610X125



1 MU2 **SHORING PLAN**
SCALE: 1:300

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M. I. CUNNINGHAM
2025 11 28
PROVINCE OF ONTARIO

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LORETTA & GLADSTONE

LOCATION
951 GLADSTONE AVENUE &
145 LORETTA AVENUE NORTH
OTTAWA, ON

JOB No.

DESCRIPTION
SHORING PLAN

DRAWN BY: AC	SCALE: AS NOTED
DESIGNED BY: RW	DRAWING No.: MU2
CHECKED BY: MIC	

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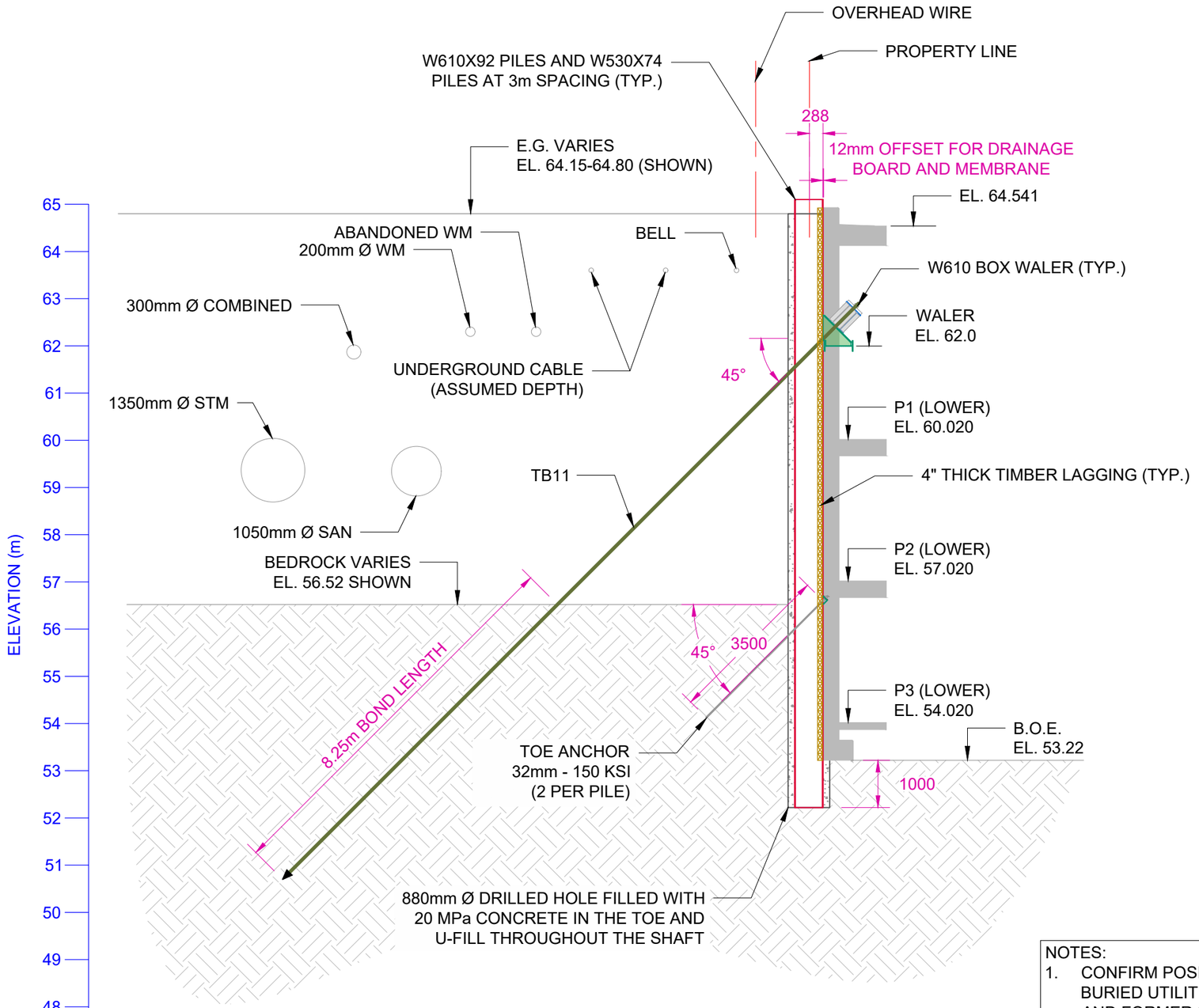

NOTES:
1. CONFIRM POSITION AND DEPTH OF ALL BURIED UTILITIES INCLUDING EXISTING AND FORMER SERVICE LATERALS.
2. STRUCTURE DETAILS SHOWN ON THIS DRAWING ARE APPROXIMATE.

1 MU3 SECTION
SCALE: 1:100

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LOCATION
951 GLADSTONE AVENUE &
145 LORETTA AVENUE NORTH
OTTAWA, ON

JOB No. ---

DESCRIPTION
SECTION

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DESIGNED BY	DRAWING No.
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CHECKED BY	
MIC	

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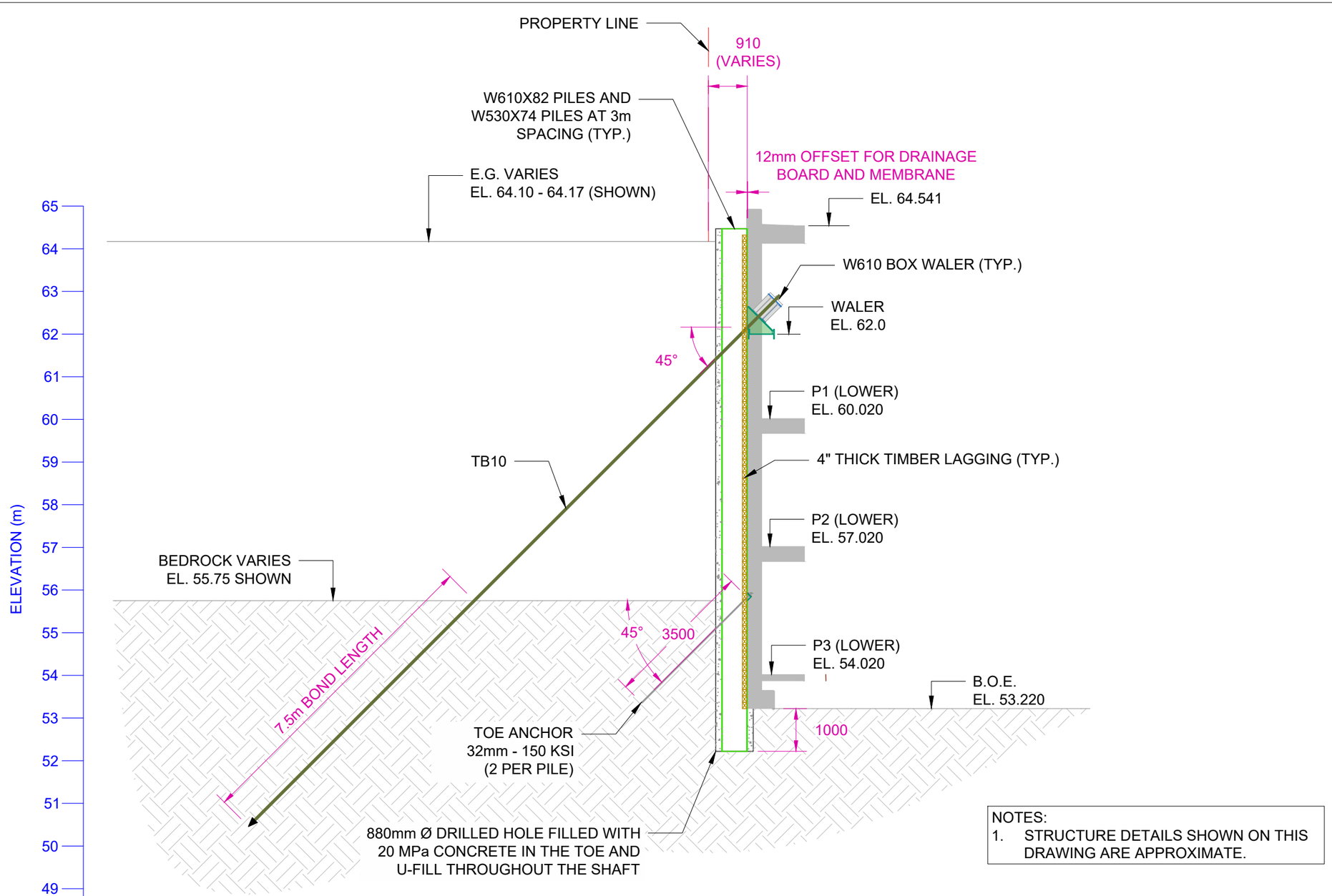

NOTES:
1. STRUCTURE DETAILS SHOWN ON THIS DRAWING ARE APPROXIMATE.

1 MU4 SECTION
SCALE: 1:100

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PROJECT
EXCAVATION SHORING
LORETTA & GLADSTONE

LOCATION
951 GLADSTONE AVENUE &
145 LORETTA AVENUE NORTH
OTTAWA, ON

JOB No.

DESCRIPTION
SECTION

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AC	AS NOTED
DESIGNED BY	DRAWING No.
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CHECKED BY	
MIC	

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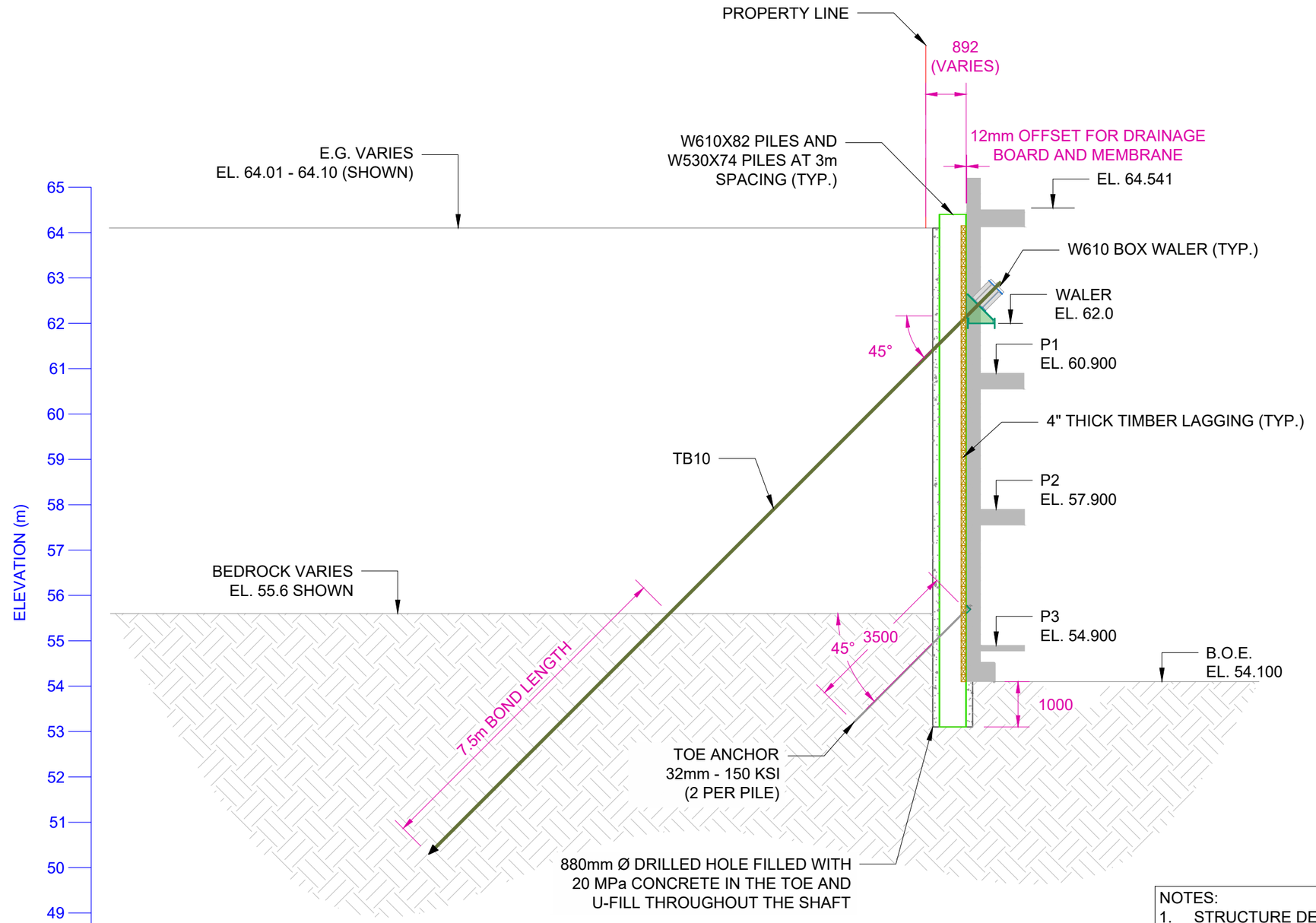

NOTES:
1. STRUCTURE DETAILS SHOWN ON THIS DRAWING ARE APPROXIMATE.

1 / MU5 SECTION
SCALE: 1:100

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NOV 28/25
PROVINCE OF ONTARIO

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PROJECT
EXCAVATION SHORING
LORETTA & GLADSTONE

LOCATION
951 GLADSTONE AVENUE &
145 LORETTA AVENUE NORTH
OTTAWA, ON

JOB No.

DESCRIPTION
SECTION

DRAWN BY	SCALE
AC	AS NOTED
DESIGNED BY	DRAWING No.
RW	MU5
CHECKED BY	
MIC	

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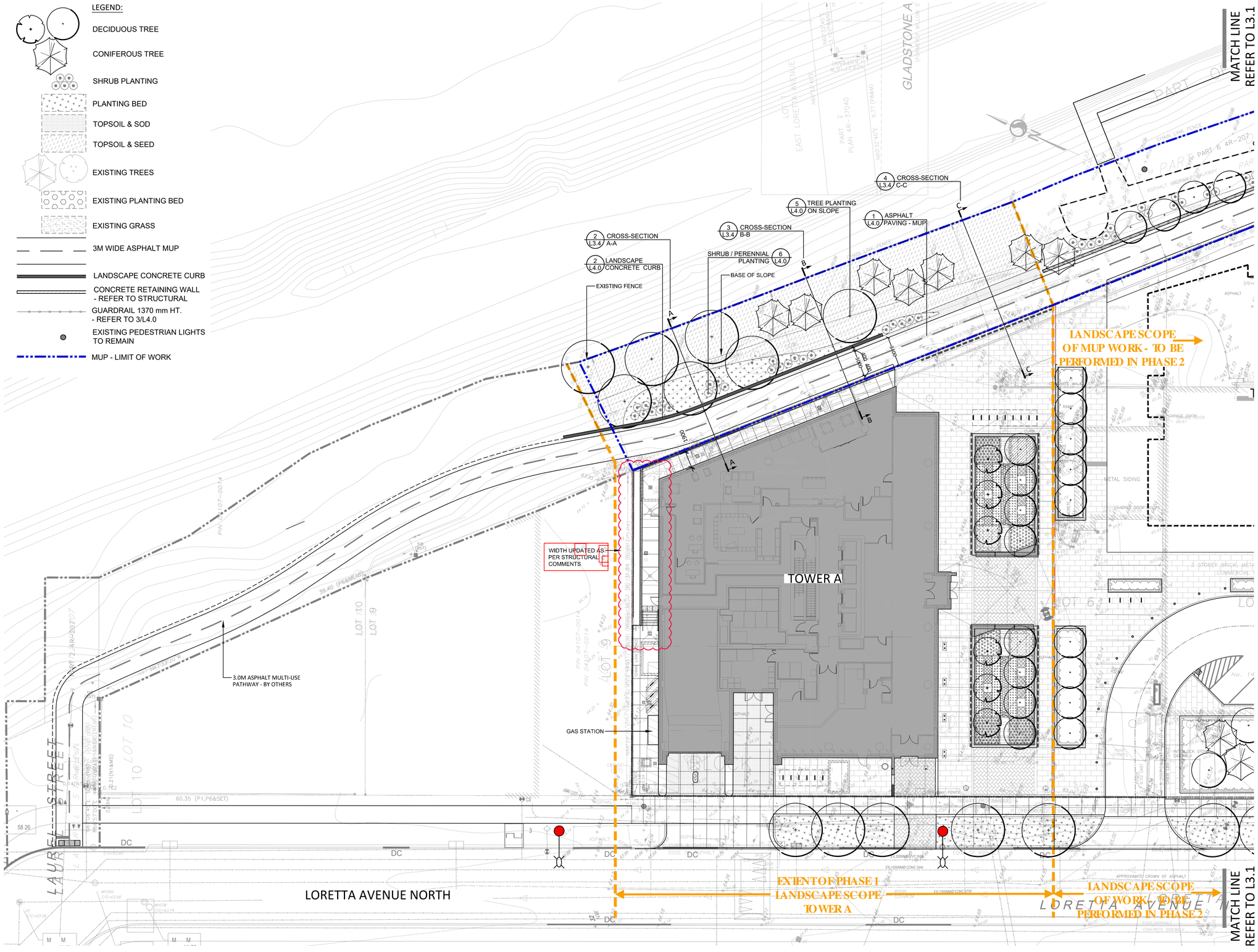
APPENDIX B6

LANDSCAPE DRAWINGS

LEGEND:

- DECIDUOUS TREE
- CONIFEROUS TREE
- SHRUB PLANTING
- PLANTING BED
- TOPSOIL & SOD
- TOPSOIL & SEED
- EXISTING TREES
- EXISTING PLANTING BED
- EXISTING GRASS
- 3M WIDE ASPHALT MUP
- LANDSCAPE CONCRETE CURB
- CONCRETE RETAINING WALL - REFER TO STRUCTURAL
- GUARDRAIL 1370 mm HT. - REFER TO 3/L4.0
- EXISTING PEDESTRIAN LIGHTS TO REMAIN
- MUP - LIMIT OF WORK



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2. Copyright reserved. This drawing is the exclusive property of CSW Landscape Architects Ltd. and shall not be used without the consent thereof.
3. This Drawing may not be used for construction until signed by the landscape architect. It is the responsibility of the contractor to:
   - check and verify all dimensions on site;
   - report all errors and/or omissions to the landscape architect;
   - comply with all pertinent codes and by-laws;
   - check and verify locations of all underground services with all local utilities prior to any digging.

No.	Revision	Date
17	RE-ISSUED FOR TENDER	04 NOV 2025
16	ISSUED FOR TENDER	08 JUL 2025
15	ISSUED FOR CD 99%	07 JUL 2025
14	ISSUED FOR CD 66%	03 APR 2025
13	RE-ISSUED FOR SPA	31 JAN 2025
12	RE-ISSUED FOR SPA	20 NOV 2024
11	RE-ISSUED FOR SPA	30 AUG 2024
10	RE-ISSUED FOR SPA	18 APR 2024
9	RE-ISSUED FOR SPA	21 AUG 2023
8	RE-ISSUED FOR SPA	22 FEB 2023
7	RE-ISSUED FOR SPA	15 SEP 2022
6	RE-ISSUED FOR SPA	01 MAR 2022
5	RE-ISSUED FOR SPA	17 DEC 2021
4	ISSUED FOR SPC	21 APR 2021
3	ISSUED FOR SPC	09 APR 2021
2	ISSUED FOR SPA / COORD.	17 OCT 2020
1	ISSUED FOR SPA / REZONING	08 AUG 2019

North:

Stamp:

CSW
Landscape Architecture
Urban Design
Site Planning
Recreation and Park Planning
Project Management

319 McRae Avenue, Suite 502, Ottawa, Ontario, K1Z 0B9
Tel: (613) 729-4536

CLV GROUP DEVELOPMENTS

PBCGROUP

Project:

951 Gladstone Avenue & 145 Loretta Avenue North

OTTAWA, ONTARIO

Drawing:

LAYOUT PLAN MUP

Scale:	Date:
1:200	July 2019
Design By:	**Drawn By:**
CM	AB
Project Number:	**Sheet Number:**
1987-01	L3.0 A

D07-12-21-0053

18526

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LEGEND:

- DECIDUOUS TREE
- CONIFEROUS TREE
- SHRUB PLANTING
- PLANTING BED
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- EXISTING TREES
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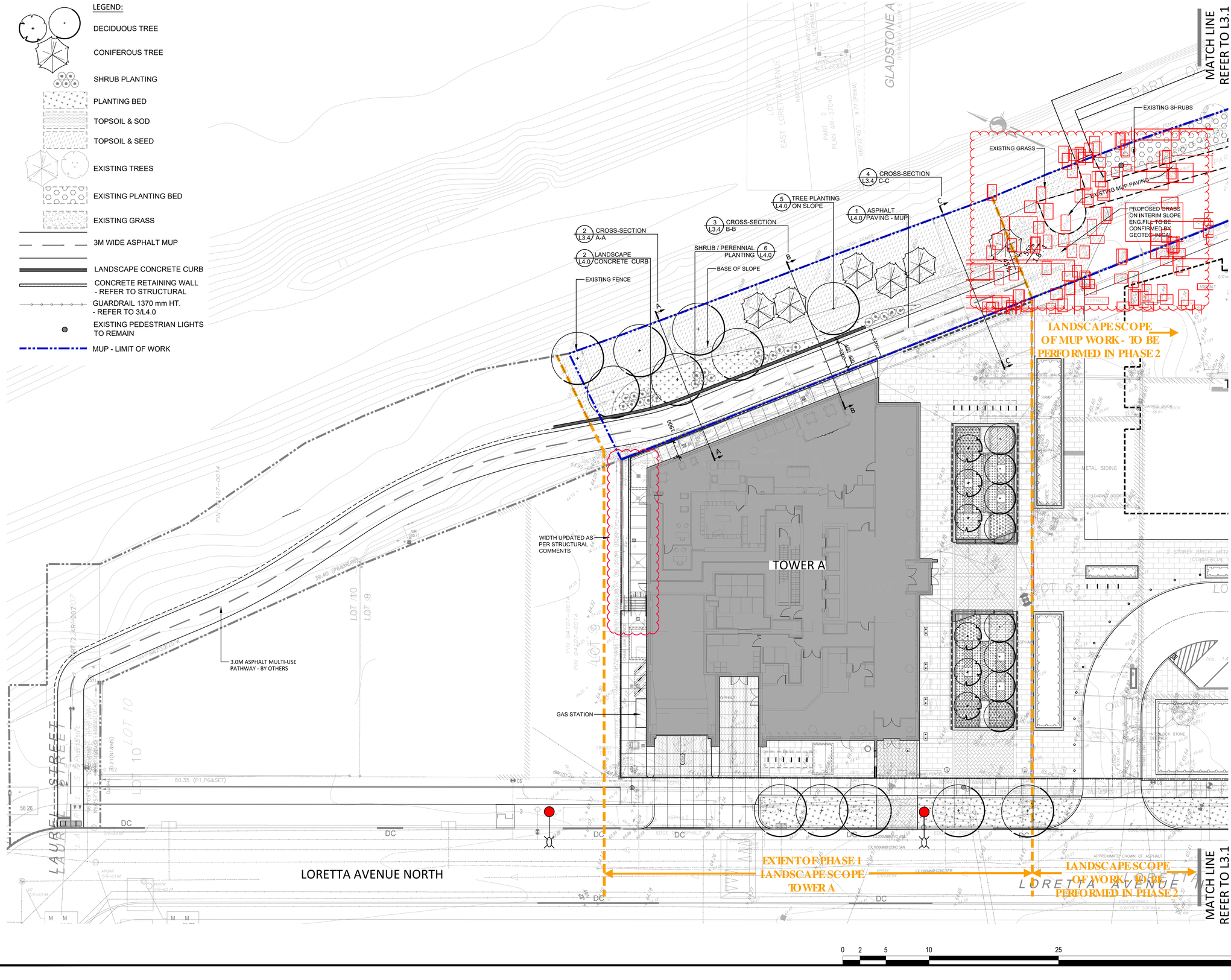

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   - check and verify locations of all underground services with all local utilities prior to any digging.

No.	Revision	Date
17	RE-ISSUED FOR TENDER	04 NOV 2025
16	ISSUED FOR TENDER	08 JUL 2025
15	ISSUED FOR CD 99%	07 JUL 2025
14	ISSUED FOR CD 66%	03 APR 2025
13	RE-ISSUED FOR SPA	31 JAN 2025
12	RE-ISSUED FOR SPA	20 NOV 2024
11	RE-ISSUED FOR SPA	30 AUG 2024
10	RE-ISSUED FOR SPA	18 APR 2024
9	RE-ISSUED FOR SPA	21 AUG 2023
8	RE-ISSUED FOR SPA	22 FEB 2023
7	RE-ISSUED FOR SPA	15 SEP 2022
6	RE-ISSUED FOR SPA	01 MAR 2022
5	RE-ISSUED FOR SPA	17 DEC 2021
4	ISSUED FOR SPC	21 APR 2021
3	ISSUED FOR SPC	09 APR 2021
2	ISSUED FOR SPA / COORD.	17 OCT 2020
1	ISSUED FOR SPA / REZONING	08 AUG 2019

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Recreation and Park Planning
Project Management

319 McRae Avenue, Suite 502, Ottawa, Ontario, K1Z 0B9
Tel: (613) 729-4536

CLV GROUP DEVELOPMENTS

PBCGROUP

Project:

951 Gladstone Avenue & 145 Loretta Avenue North

OTTAWA, ONTARIO

Drawing:

INTERIM LAYOUT PLAN MUP

Scale:	Date:
1:200	July 2019
Design By:	**Drawn By:**
CM	AB
Project Number:	**Sheet Number:**
1987-01	L3.0 B

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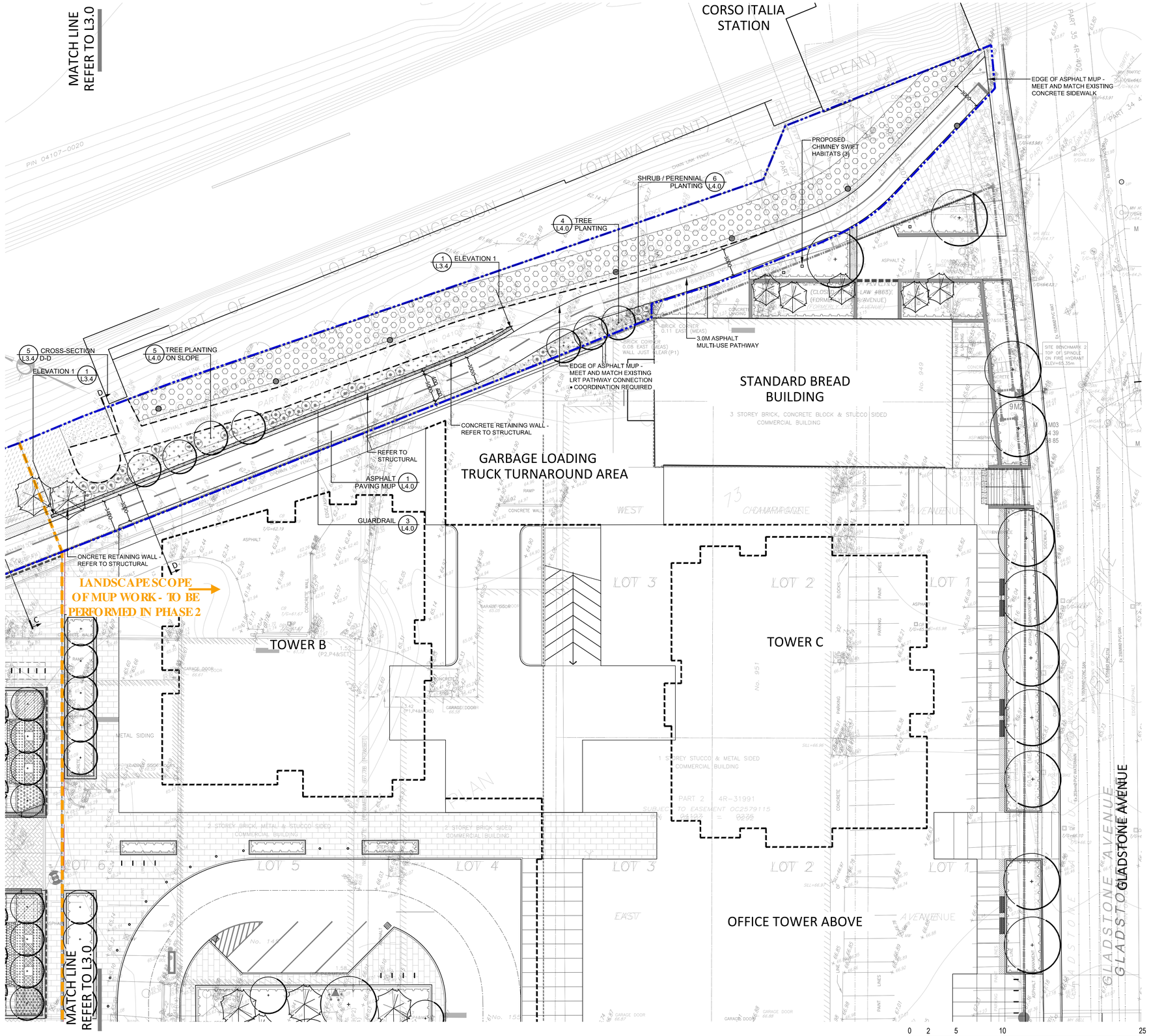

LEGEND:

- DECIDUOUS TREE
- CONIFEROUS TREE
- SHRUB PLANTING
- PLANTING BED
- TOPSOIL & SOD
- TOPSOIL & SEED
- EXISTING TREES
- EXISTING PLANTING BED
- EXISTING GRASS
- 3M WIDE ASPHALT MUP
- LANDSCAPE CONCRETE CURB
- CONCRETE RETAINING WALL - REFER TO STRUCTURAL
- GUARDRAIL 1370 mm HT. - REFER TO 3/L4.0
- EXISTING PEDESTRIAN LIGHTS TO REMAIN
- MUP - LIMIT OF WORK

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Tel: (613) 729-4536

CLV GROUP DEVELOPMENTS

PBCGROUP

Project:

951 Gladstone Avenue & 145 Loretta Avenue North

OTTAWA, ONTARIO

Drawing:

LAYOUT PLAN MUP

Scale:	Date:
1:200	July 2019
Design By: CM	Drawn By: AB
Project Number: 1987-01	Sheet Number: L3.1

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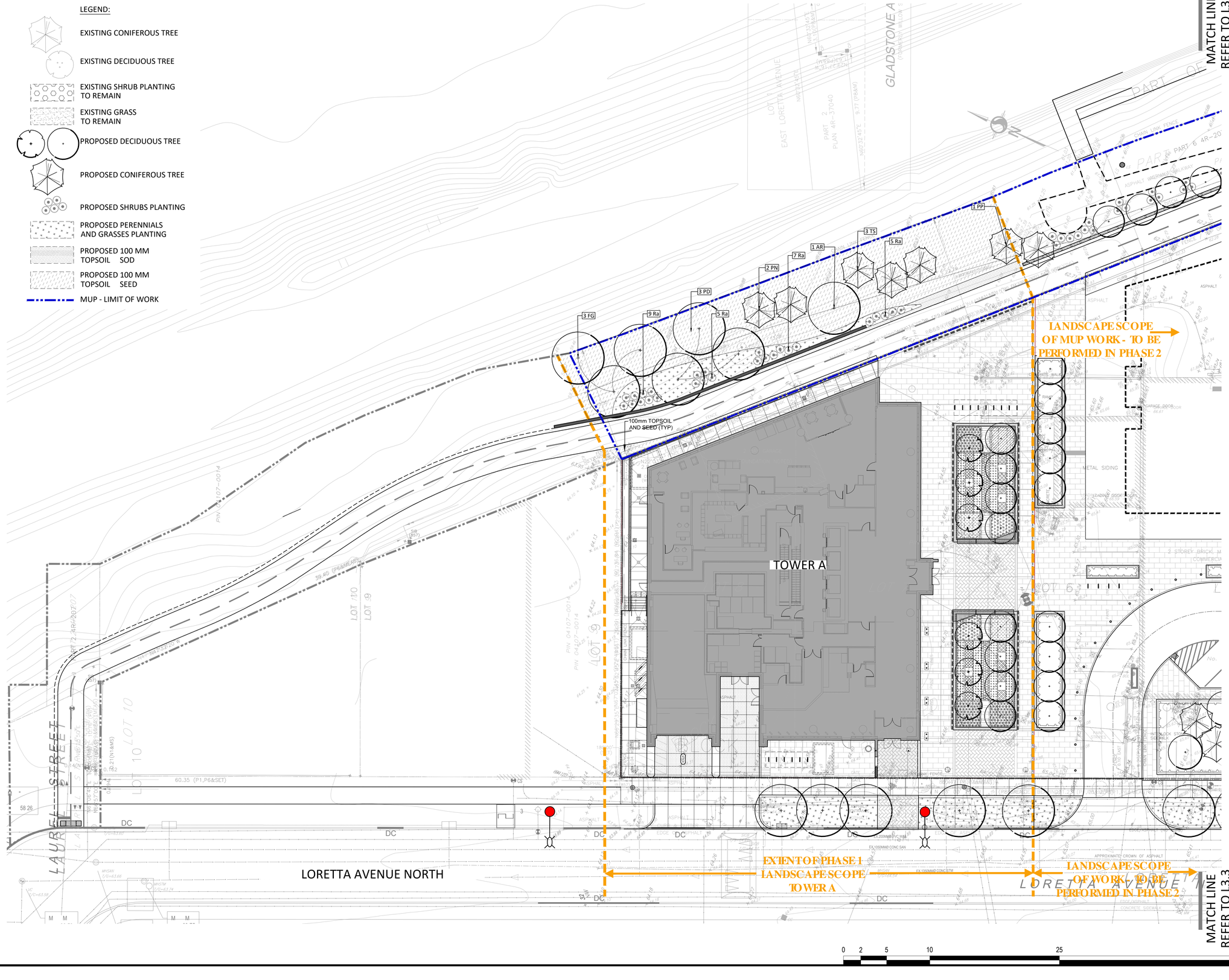
LEGEND:

- EXISTING CONIFEROUS TREE
- EXISTING DECIDUOUS TREE
- EXISTING SHRUB PLANTING TO REMAIN
- EXISTING GRASS TO REMAIN
- PROPOSED DECIDUOUS TREE
- PROPOSED CONIFEROUS TREE
- PROPOSED SHRUBS PLANTING
- PROPOSED PERENNIALS AND GRASSES PLANTING
- PROPOSED 100 MM TOPSOIL SOD
- PROPOSED 100 MM TOPSOIL SEED
- MUP - LIMIT OF WORK



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Tel: (613) 729-4536

CLV GROUP DEVELOPMENTS

PBCGROUP

Project:

951 Gladstone Avenue & 145 Loretta Avenue North

OTTAWA, ONTARIO

Drawing:

PLANTING PLAN MUP

Scale:	Date:
1:200	July 2019
Design By:	**Drawn By:**
CM	AB
Project Number:	**Sheet Number:**
1987-01	L3.2

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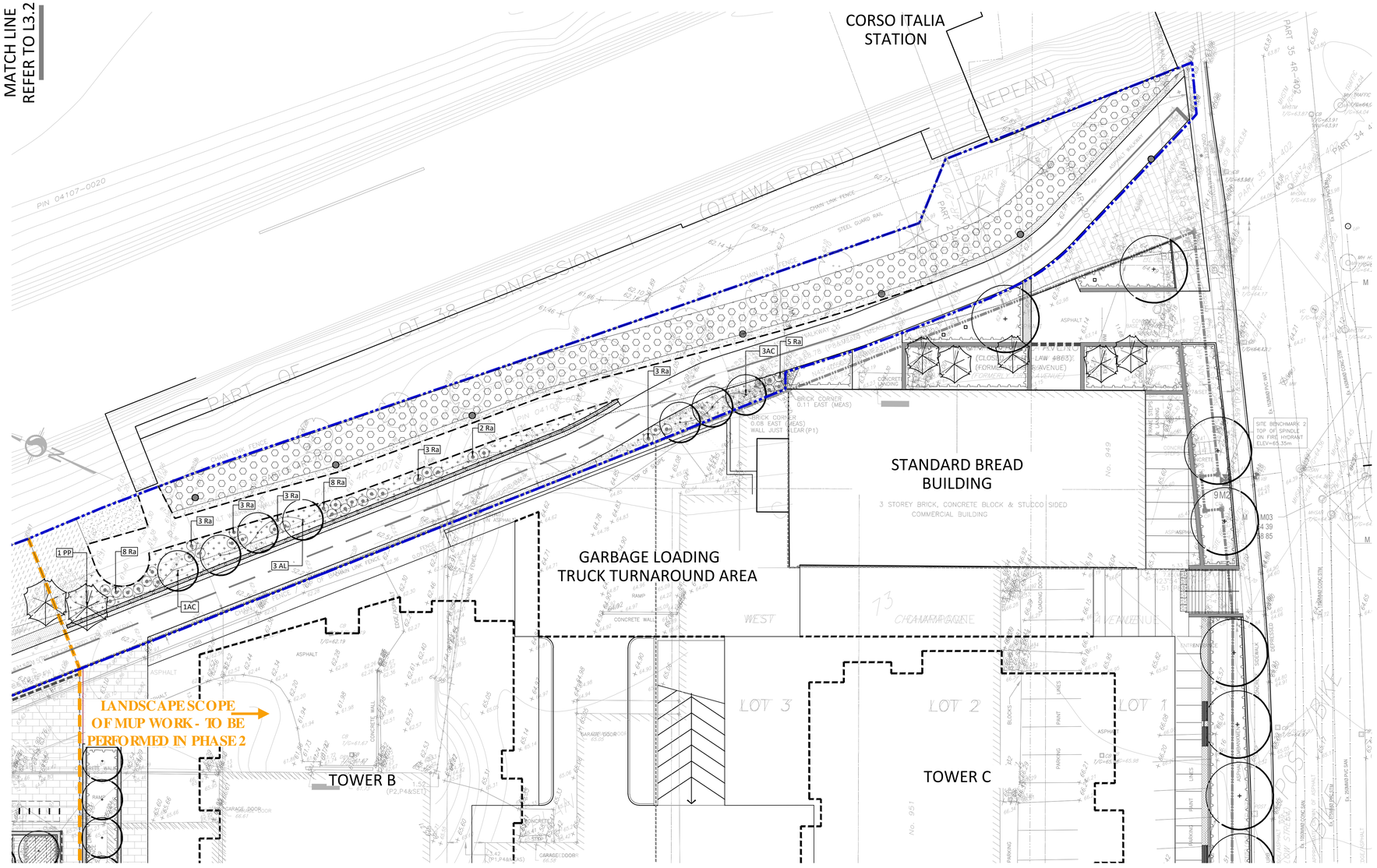
REFER TO L3.2



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- EXISTING DECIDUOUS TREE
- EXISTING SHRUB PLANTING TO REMAIN
- EXISTING GRASS TO REMAIN
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PLANT LIST - MUP

KEY	BOTANICAL NAME	COMMON NAME	PH 1 QTY	PH 2 QTY	SIZE	REMARKS
DECIDUOUS TREES						
AC	AMELANCHIER CANADENSIS	CANADIAN SERVICEBERRY	0	4	50mm CAL.	MULTI STEM
AR	ACER RUBRUM	RED MAPLE	1	0	70mm CAL.	B B / W.B MUP
AL	AMELANCHIER LAEVIS SPRING FLURRY	SPRING FLURRY SERVICEBERRY	0	3	2500 MM	MULTI STEM
FG	FAGUS GRANDIFOLIA	AMERICAN BEECH	3	0	70mm CAL.	B B / W.B MUP
PD	POPULUS DELTOIDES	EASTERN COTTONWOOD	3	0	50mm CAL.	POTTED MUP
CONIFEROUS TREES						
PN	PINUS STROBUS	EASTERN WHITE PINE	2	0	2.0M HT.	B B / W.B MUP
PP	PICEA PUNGENS	COLORADO SPRUCE	1	1	2.0M HT	B B / W.B MUP
TC	TSUGA CANADENSIS	EASTERN HEMLOCK	3	0	2.0M HT	B B / W.B MUP
SHRUBS						
Ra	RHUS AROMATICA GRO-LOW	GRO-LOW FRAGRANT SUMAC	26	38	1 GAL. POT	POT. 1000mm O.C.
PERENNIALS AND GRASSES						
cm	CAREX MUSKINGUMENSIS	PALM SEDGE GRASS	20	30	1 GAL. POT	POT. 600mm O.C.
dc	DESCHAMPSIA CESPITOSA	TUFTED HAIR GRASS	20	30	1 GAL. POT	POT. 600mm O.C.
em	ERANIUM MACULATUM	WILD GERANIUM	20	30	1 GAL. POT	POT. 600mm O.C.
hh	HELIOSIS HELIANTHOIDES	FALSE SUNFLOWER	20	30	1 GAL. POT	POT. 600mm O.C.
rh	RUDBEKIA HIRTA	BLACK-EYED SUSAN	20	30	1 GAL. POT	POT. 600mm O.C.
sh	SPOROBOLUS HETEROLEPIAS	PRAIRIE DROPSEED	20	30	1 GAL. POT	POT. 600mm O.C.
ss	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	20	30	1 GAL. POT	POT. 600mm O.C.

MATCH LINE
REFER TO L3.2

0 2 5 10 25 50 M

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CLV GROUP DEVELOPMENTS

PBCGROUP

Project:

951 Gladstone Avenue & 145 Loretta Avenue North

OTTAWA, ONTARIO

Drawing:

PLANTING PLAN MUP

Scale:	Date:
1:200	July 2019
Design By:	Drawn By:
CM	AB
Project Number:	Sheet Number:
1987-01	L3.3

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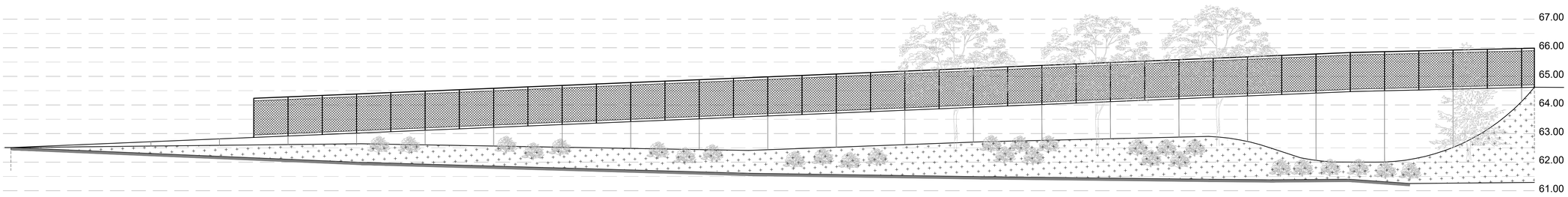

01 GLADSTONE AVE MUP - RETAINING WALL ELEVATION (PHASE 2)

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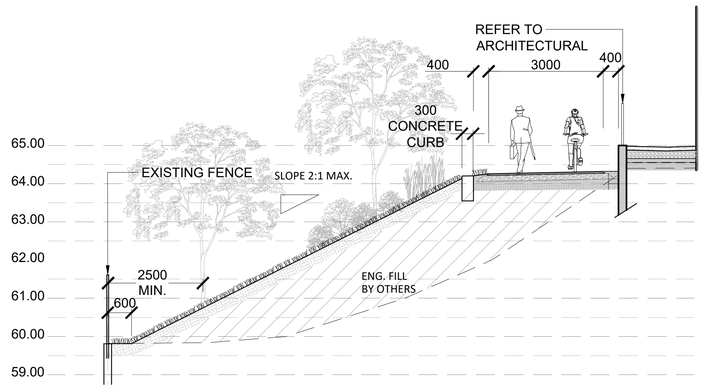

02 GLADSTONE AVE MUP - SECTION A (PHASE 1)

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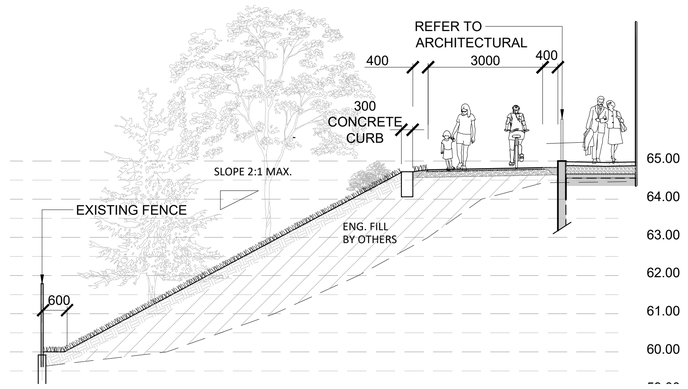

03 GLADSTONE AVE MUP - SECTION B (PHASE 1)

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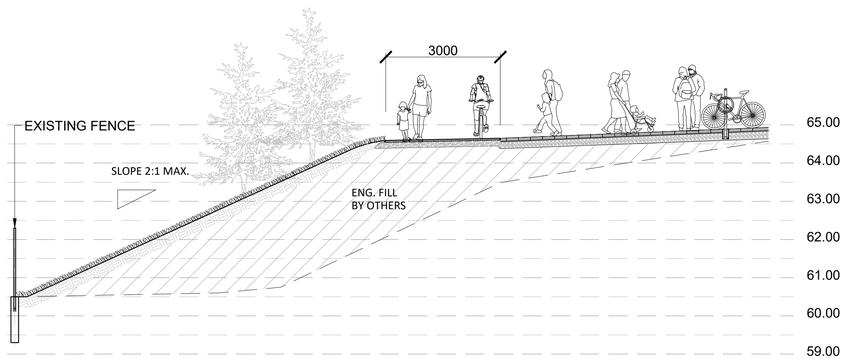

04 GLADSTONE AVE MUP - SECTION C (PHASE 1)

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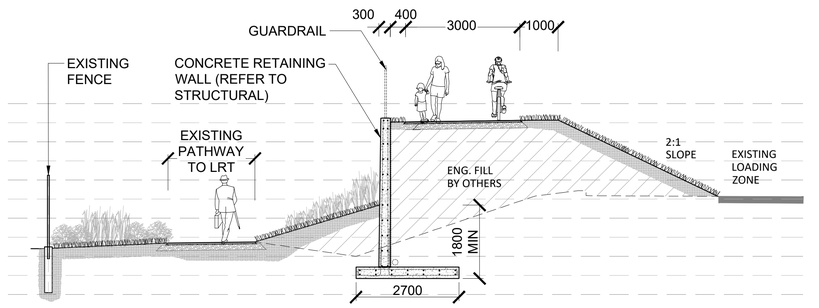

05 GLADSTONE AVE MUP - SECTION D (PHASE 2)

Scale: 1:75

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Tel: (613) 729-4536

CLV GROUP DEVELOPMENTS

PBCGROUP

Project:

951 Gladstone Avenue & 145 Loretta Avenue North

OTTAWA, ONTARIO

Drawing:

SECTIONS & ELEVATIONS MUP

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Project Number: 1987-01	Sheet Number: L3.4

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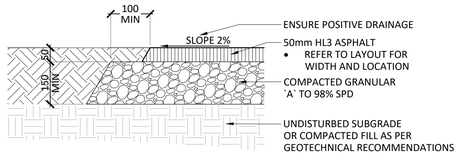

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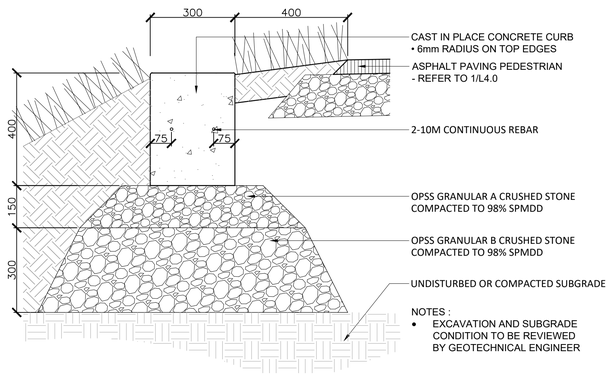

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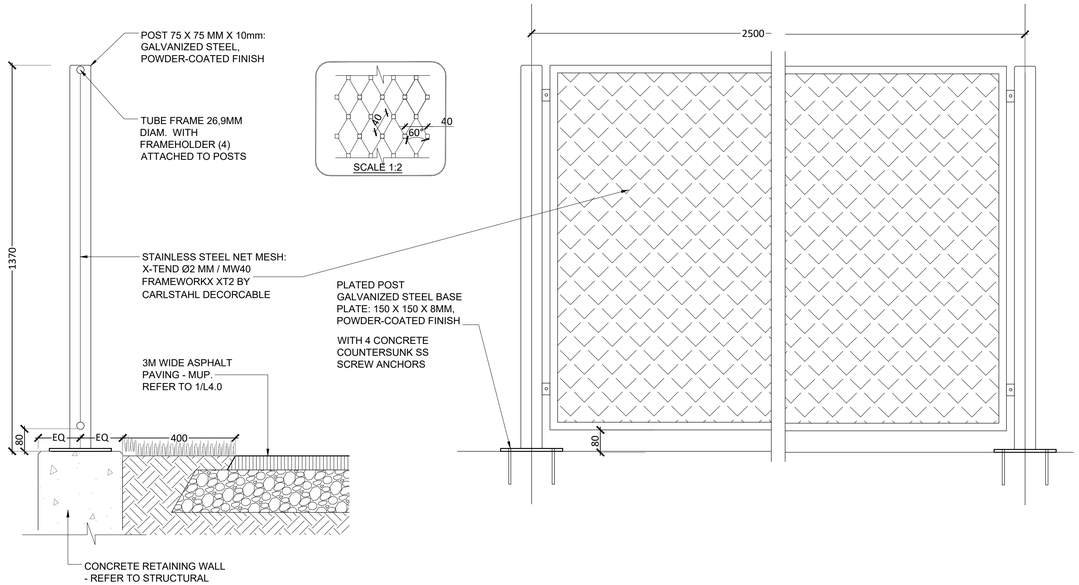
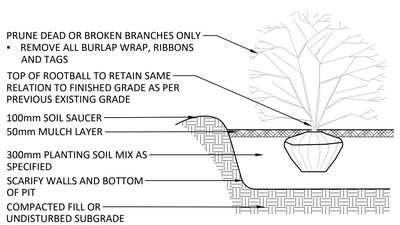
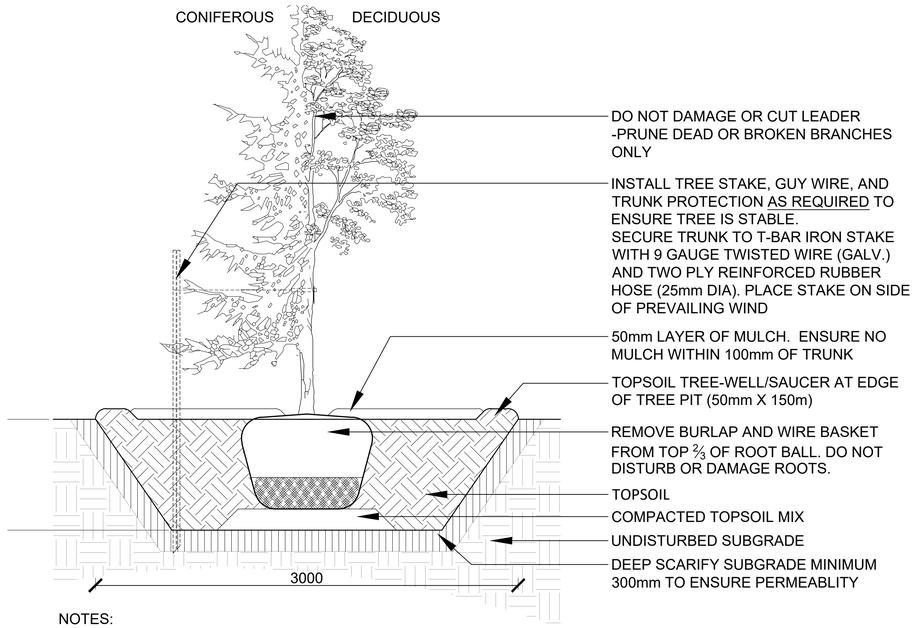


03 GUARDRAIL
Scale 1:10

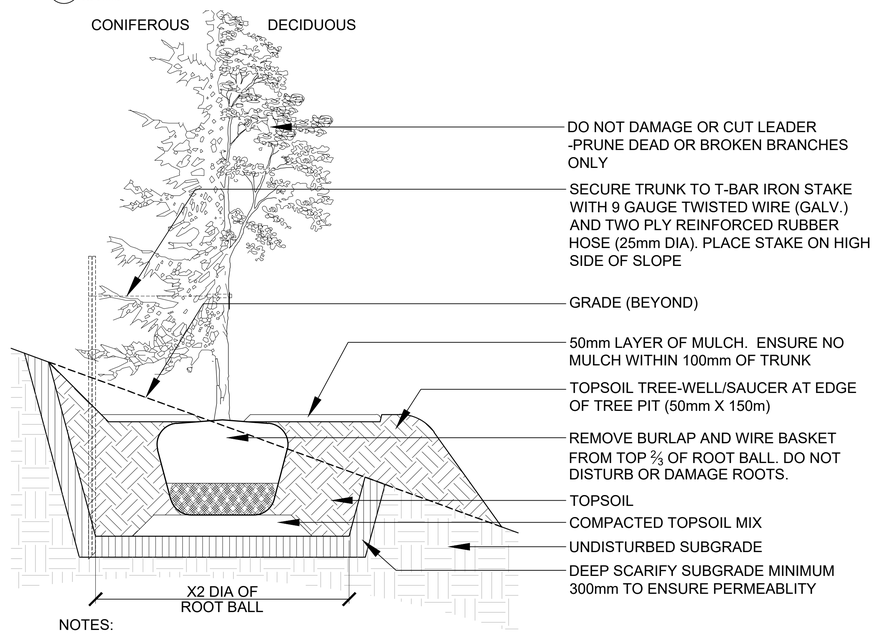


06 SHRUB / PERENNIAL PLANTING
Scale N.T.S.



NOTES:
- TREE STAKES ARE GENERALLY ARE TO BE USED FOR CONDITIONS WHERE THE INSTALLED TREE IS UNSTABLE AND/OR BECOMES UNSTABLE
- ALLOW 10mm TO 25mm SLACK ON GUY WIRE SUPPORT FOR TREE
- TOP OF ROOT BALL TO RETAIN SAME ELEVATION AS GROWING CONDITIONS
- REMOVE STAKES ONE YEAR AFTER INSTALL
- INSTALL STAKE BEYOND EDGE OF ROOT BALL

04 TREE PLANTING
Scale N.T.S.



NOTES:
- CUT AND FILL SLOPES SHALL BE 3:1 MAXIMUM
- TOP OF ROOT BALL TO RETAIN SAME ELEVATION AS GROWING CONDITIONS
- ALLOW 10mm TO 25mm SLACK ON GUY WIRE SUPPORT FOR TREE
- REMOVE STAKES ONE YEAR AFTER INSTALL
- INSTALL STAKE BEYOND EDGE OF ROOT BALL

05 TREE PLANTING ON SLOPE
Scale N.T.S.

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CLV GROUP DEVELOPMENTS

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OTTAWA, ONTARIO

Drawing:

LANDSCAPE DETAILS MUP

Scale:	Date:
As Shown	July 2019
Design By: CM	Drawn By: JA
Project Number: 1987-01	Sheet Number: L4.0

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APPENDIX C

GEOTECHNICAL DOCUMENTS

APPENDIX C1

GEOTECHNICAL REPORT

DUE DILIGENCE GEOTECHNICAL INVESTIGATION REPORT

FOR THE PROPOSED RESIDENTIAL AND COMMERCIAL DEVELOPMENT AT

971 GLADSTONE AVENUE AND 145 LORETTA AVENUE

OTTAWA, ONTARIO

Prepared for:

Trinity Development Group Inc.
Sun Life Financial Centre, East Tower
3250 Bloor Street West, Suite 1000,
Toronto, Ontario
M8X 2X9

16 August 2017

DST File No.: TS-SO-029563

DST Consulting Engineers Inc.

203-2150 Thurston Drive, Ottawa, Ontario, K1G 5T9
Tel.: 1-613-247-2409 Fax: 1-888-979-6772
Web: www.dstgroup.com

Table of Contents

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1. INTRODUCTION

DST Consulting Engineers Inc. (DST) was retained by Trinity Development Group Inc. (TDG) to conduct a geotechnical investigation and provide general foundation and earthworks design recommendations for the potential acquisition and construction of the proposed residential and commercial development with two or four levels of underground parking at the north-east corner of Gladstone Avenue and Loretta Avenue North, Ottawa, Ontario.

A limited preliminary geotechnical investigation was completed by DST in 2009 consisting of three (3) boreholes drilled at the west and the south sides of the 955 and 953 Gladstone Avenue building. That preliminary investigation did not cover the entire area of the proposed development. Therefore, additional geotechnical investigation was required to characterize the subsurface conditions across the site.

The primary objectives of this investigation and report are to obtain the necessary subsurface information and provide the general recommendations for conceptual design of the proposed development and to assist Trinity Development Group Inc. (TDG), in due diligence prior to the property acquisition. The investigation focused on the important issues from both geotechnical and environmental standpoints which could lead to potential cost premiums for the proposed multi-storey development.

The current geotechnical investigation was completed in general accordance with the work plan described in DST's proposal dated May 17, 2017. Written authorization to proceed with the investigation was provided by Mr. Ryan Moore, senior development manager of TDG in an email dated May 29, 2017.

This report is prepared for the sole use of TDG. The use of the report, or any reliance on it by any third party, is the responsibility of such third party. This preliminary geotechnical engineering report is also subject to the limitations shown in Appendix A and is not intended for detailed design purposes. It should be noted that the details of proposed development such as proposed grades, vertical extent of the proposed underground parking structure and anticipated loading information have not been specified by TDG and/or made available to DST at this stage.

2. PROJECT DESCRIPTION

The proposed project for the site is a multi-storey residential and commercial development, including mid and high rise residential buildings, commercial/retail spaces, ground surface parking lots, two to

four levels of below ground parking, sewers and water pipes installation. The proposed new buildings include one 18-storey tower, one 20-storey tower, one building with 20-story at one side and 5-story at another side, and one 5-storey residential building. The proposed buildings are as follows;

1) Building 1, for residential and retail, approximately 160,000 square feet (SF) and 1,900 SF, respectively.
2) Building 2, for residential and retail, approximately 177,000 SF and 4,300 SF, respectively.
3) Building 3, for residential and retail, approximately 216,500 SF and 12,340 SF, respectively.
4) Building 4, for residential and retail, approximately 33,660 SF and 3,600 SF, respectively.

The actual number of underground parking levels and proposed elevations of the underground parking structure had not been provided to DST at this stage. However, the proposed tentative development plan, provided by the client, includes construction of two levels of underground parking and deep excavation to approximately 7 to 8 m below existing grades for the two levels of underground parking option over the entire development site. Another option provided by the client includes four levels of underground parking to approximately 14 m below grade. . The proposed towers and mid-rise residential buildings will be built over the underground parking structure.

This geotechnical investigation is intended to confirm the subsurface conditions in general across the site and to provide preliminary foundation and geotechnical recommendations for the proposed development.

A site plan with the borehole locations are shown in Figure 1, Appendix B.

3. SITE DESCRIPTION

The project site is surrounded by Gladstone Avenue at the south, Loretta Avenue at the west, a small commercial property at the north and rail track at the east and north-east. The site is relatively flat and sloping ground to the rail track at the east and north-east boundary of the property. The project site is approximately 100 m wide at Gladstone Avenue, approximately 30 m wide at the north side, and approximately 150 m long at Loretta Avenue. The site is occupied with Gladstone center buildings and surface parking lots presently.

4. REGIONAL GEOLOGY

Based on the Ontario Geological Survey Open File Report 5770, and the surficial geological map of Ottawa, this general area is predominantly underlain by fine grained deposits of silt and clay. Based on the geological survey report, fine-grained soils are deposited in the potentially marine environment, named by geologists as Champlain Sea deposits.

Bedrock geology in the area is predominantly underlain by limestone, dolostone, shale, arkose, sandstone of Ottawa Group, Simcoe Group, and Shadow Lake Formation, respectively.

5. FIELD INVESTIGATION AND LABORATORY TESTING

5.1 Field Investigation

The geotechnical field investigation was conducted between June 27 and July 10, 2017 and consisted of thirteen (13) boreholes drilling, depths between 1.8 m and 13.5 m. The boreholes were distributed across the site, as shown in the borehole location plan, Figure 1, Appendix B.

Before the drilling work, underground and above ground utility services were located by CCC drilling to make sure the drilling locations are clear of the underground services. Boreholes were drilled using a specialize drilling contractor, CCC Drilling Inc. A truck mounted drill rig was used for the drilling work. Standard Penetration Test (SPT) was carried out at 0.75 m interval up to auger refusal depth. The SPT sampler was advanced by dropping a 63.5 kg hammer (auto trip) for approximately 760 mm height, in accordance with the Standard Penetration Test (SPT) method (ASTM D1586). The results of these penetration tests are reported as SPT ‘N’ values on the borehole logs at the corresponding depths.

Disturbed soil samples were collected from the SPT samplers. All the collected soil samples were inspected upon retrieval and classified the soil types, colour and kept in the airtight plastic bags, labelled the sample identifications and sent back to the DST laboratory using cooler boxes. After arrival of the samples at the laboratory, soil samples were examined by a geotechnical engineer and assigned the appropriate laboratory tests.

Boreholes locations were surveyed using GPS readings and borehole elevations were surveyed using a survey bench mark located at mid of north east of the property (near BH2017-09) marked by Benchmarks (PK nail and S.I.B.), as shown on the borehole location plan on Drawing 1 in Appendix B. Groundwater monitoring wells were installed at eleven (11) drilled boreholes.

All boreholes were backfilled with bentonite pellets to the near ground surface and capped with auger cuttings at the near ground surface. The borehole locations are shown on the borehole location plan on Figure 1 in Appendix B. Summary of borehole coordinates are presented in Table 5.1 below.

Table 5-1: Summary of Boreholes Coordinates and Termination Depths

Borehole/Well ID	Ground Surface Elevation (m)	Location (UTM Zone 18T)		Borehole Termination Depth, m
		Nothing, m	Easting, m	
BH2017-01	104.9	5028029	443991.0	7.6
BH2017-02	104.2	5028045	444017.3	6.5
BH2017-03	103.4	5028054	444056.8	13.5
BH2017-04	100.7	5028076	444057.7	4.6
BH2017-05A	102.7	5028096	444019.2	1.8
BH2017-05	102.7	5028096	444017.3	13.5
BH2017-06	104.3	5028066	443975.0	7.8
BH2017-07	102.4	5028127	443952.3	8.0
BH2017-08	103.9	5028091	443979.6	13.6
BH2017-09	99.6	5028115	444005.2	4.5
BH2017-10	102.3	5028139	443965.7	16.6
BH2017-11	102.1	5028155	443947.7	8.4
BH2017-12	102.1	5028159	443963.2	8.5
BH2017-13	102.2	5028143	443977.7	1.8

5.2 Laboratory Testing Program

The laboratory geotechnical tests were completed for confirmation of soil classification. Chemical analysis were carried out for evaluation of corrossivity of subsoil. The laboratory geotechnical testing program consisted of determination of moisture content (for all recovered soil samples), particle size

analysis, and Atterberg limit test. Compressive strength of rock cores were tested on selected rock core samples.

A total of four (4) particle size analyses, and five (5) Atterberg limit tests were completed. One (1) soil sample was analysed for corrosion package consisting of measurement of chlorides, sulphides, sulphate, conductivity, pH, resistivity of soil, and oxidation-reduction potential to assess the potential for subsoil corrossivity. The results of the moisture content determination and grain size analysis are shown on the borehole logs. The moisture contents and grain size analysis results are shown on the borehole logs in Appendix C and the laboratory test results shown in Appendix D.

6. DESCRIPTION OF SUBSURFACE CONDITIONS

Based on the subsurface conditions encountered in the boreholes, the generalized subsoil profile consists of fill underlain by clay deposit and limestone bedrock. A sand and gravel, and sandy clay layer were also encountered in some boreholes between clay and bedrock, as shown in the borehole logs and summarized in Table 6-1 below.

Table 6-1: Summary of Stratigraphy at Exploratory Boreholes

Borehole ID	Fill (m)	Depth of Clay Layer (m)	Sand and Gravel/Probable Till (m)	Bedrock/Auger Refusal (EOB) (m)
BH2017-01	0 – 2.3	2.3 – 7.3	7.3 – 7.6	Auger Refusal
BH2017-02	0 – 2.1	2.1 – 6.5	-	Auger Refusal
BH2017-03	0 – 2.4	2.4 – 6.4	-	6.4 – 13.5
BH2017-04	0 – 1.8	1.8 – 4.6	-	Auger Refusal
BH2017-05	0 – 3.1	3.1 – 6.9	-	6.9 – 13.5
BH2017-06	0 – 1.4	1.4 – 7.8	-	Auger Refusal
BH2017-07	0 – 4.3	4.3 – 7.3	7.3 – 8.0	Auger Refusal
BH2017-08	0 - 2.5	2.5 – 7.0	-	7.0 – 13.6
BH2017-09	0 – 0.7	0.7 – 4.5	-	Auger Refusal
BH2017-10	0 – 4.3	4.3 – 8.3	8.3 – 9.0	9.0 -16.6
BH2017-11	0 – 3.4	3.4 – 7.3	7.3 – 8.4	Auger Refusal
BH2017-12	0 – 3.0	3.0 – 7.9	7.9 – 8.5	Auger Refusal
BH2017-13	0 – 1.4	1.4 – 1.8 (EOB)	-	Auger Refusal

EOB = Termination Depth/End of Borehole

The details of the subsurface conditions encountered in the boreholes can be reviewed in the borehole logs shown in Appendix C. The soil type was classified in accordance with Unified Soil Classification System and as per Section 3 of 2006 Canadian Foundation Engineering Manual, Fourth Edition (CFEM), entitled identification and classification of soil and rock.

6.1 Fill

A fill layer was encountered in all boreholes. The fill depths were found between 1.4 m and 4.3 m. Fill material generally consisted of sand and gravel, gravelly sand, and sand and clay. A clay fill layer was also encountered in the BH2017-10 at about 3 m depth. Standard penetration test (SPT) N

values varied widely across the site ranging between 1 and over 100 indicating very loose to very dense conditions. The moisture contents of the fill ranged between 1 and 30%. The results of Particle size analyses are summarized in Table 6.2.

Table 6-2: Summary of Particle Size Analysis Result

Sample ID	Sample Depth (m)	Gravel, %	Sand, %	Silt/Clay, %
BH2017-5/SS-4	1.7 – 2.1	52	37	11
BH2017-9/SS-2	0.4 – 1.1	5	42	53
BH2017-10/SS-4	1.7 – 2.1	32	59	9
BH2017-11/SS6	3.0 – 3.6	7	60	43

6.2 Clay

Clay was encountered in all boreholes except Borehole BH2017-5A, where the borehole was terminated in fill at 0.7 m depth. Clay soil layer was encountered at depths between 1.4 and 8.3 m depths. Detailed clay soil depths are shown in Table 6.1.

Standard penetration test (SPT) N values tested in the clay layer ranged between 5 and 30 indicating soft to very stiff in consistency. A few SPT results in the clay layers were below 5 blows, and the result indicating very soft. A few SPT tests at near the bedrock surface are resulted over 100 blows, it could be due to the SPT sampler reached to the bedrock surface during the test. Field vane test results varied from 19 kPa to over 200 kPa. The moisture contents of the clay ranged between 5 and 50 %. The clay soil layer becomes sandy at deeper depth. Atterberg Limit test results are shown in Table 6.3.

Table 6-3: Summary of Atterberg Limit Test Results

Sample ID	Sample Depth (m)	Plastic Limit, %	Liquid Limit, %	Plasticity Index, PI
BH2017-2, SS4	1.7 – 2.1	48	24	24
BH2017-3, SS7	3.6 – 4.1	38	19	19
BH2017-3, SS10	5.4 – 5.9	33	15	18
BH2017-6, SS-8	4.1 – 4.6	15	12	3
BH2017-8, SS7	3.6 – 4.1	47	24	23

6.3 Sand and Gravel

A sand and gravel layer was encountered between clay and bedrock in Boreholes BH2017-1 at between 7.3 m to 7.6 m depth, BH2017-7 at between 7.3 m and 8.0 m depth, BH2017-10 at between 8.3 m and 9.0 m depth, and BH2017-11 at between 7.3 m and 8.4 m depth. Standard penetration test (SPT) N values tested in the sand and gravel layers ranged between 17 and 100+ indicating compact to very dense in compactness. The moisture content of the sand and gravel ranged between 6 and 11 %.

6.4 Sandy Clay Till

Sandy clay till was encountered in BH2017-12 at between 7.9 m and 8.5 m depth, below the clay soil layer. Standard penetration test (SPT) N value tested in the sandy clay layer was 100+. However, SPT test is partially on the bedrock, therefore, SPT blow count number is not representative to soil compactness condition. The sandy clay is evaluated as firm in consistency. The moisture content of the sandy clay was 15 %.

6.5 Bedrock

Bedrock coring was completed in Boreholes BH2017-3 (7.0 m to 13.5 m depth), BH2017-5 (6.9 m to 7.4 m depth), BH2017-8 (6.9 m to 13.6 m depth) and BH2017-10 (9.0 m to 16.6 m depth). All the recovered cores are classified as grey limestone. Total core recovery, solid core recovery and rock quality designation of the rock cores were evaluated and reported in the rock core photos (Appendix E) and shown in Table 6.4. Unconfined compressive strength (UCS) of the rock test was carried out on the selected rock core samples. Summary of UCS test results is shown in Table 6.5. The UCS test results are provided in Appendix D.

Table 6-4: Summary of Rock Cores Logging

BH No.	Core Run No.	Depth (m)	TCR (%)	SCR (%)	RQD (%)
BH2017-03	1	6.4 – 7.5	100	79	58
BH2017-03	2	7.5 – 9.0	100	92	90
BH2017-03	3	9.0 – 10.4	93	93	92
BH2017-03	4	10.4 – 11.9	100	100	92

BH2017-03	5	11.9 – 13.5	100	100	95
BH2017-05	1	6.9 – 7.4	100	100	100
BH2017-05	2	7.4 – 8.8	100	98	95
BH2017-05	3	8.8 – 10.3	100	100	100
BH2017-05	4	10.3 – 11.8	100	100	96
BH2017-05	5	11.8 – 13.5	100	100	100
BH2017-08	1	7.0 – 7.6	100	96	93
BH2017-08	2	7.6 – 9.1	85	78	75
BH2017-08	3	9.1 – 10.6	100	100	98
BH2017-08	4	10.6 – 12.1	98	98	90
BH2017-08	5	12.1 – 13.6	100	100	100
BH2017-10	1	9.0 – 10.5	98	92	85
BH2017-10	2	10.5 – 12.1	100	100	100
BH2017-10	3	12.1 – 13.6	98	98	98
BH2017-10	4	13.6 – 15.1	100	100	100
Bh2017-10	5	15.1 – 16.6	100	100	100

Table 6-5: Summary of Limestone Bedrock Field and Laboratory Test Results

BH No.	Core Run No.	Depth, (m)	Unconfined Compressive Strength, (MPa)
BH2017-3	1	96.1 – 95.9	127.6
BH2017-3	5	90.1 – 89.8	125.7
BH2017-5	2	94.5 – 94.1	121.5
BH2017-8	3	93.5 – 93.3	113.1
BH2017-10	1	93.2 – 92.9	97.2
BH2017-10	4	88.1 – 87.8	129.6

6.6 Groundwater

The groundwater depths were measured in the installed monitoring wells. The measured groundwater depths are summarized in Table 6.6. The groundwater elevations varied with location and over time between 1.7 m and 4.4 m below grade (Elevations 101.0 m and 97.9 m).

Table 6-6: Summary of Groundwater Measurement in the Installed Monitoring Wells

Borehole/Well ID	Ground Surface Elevation (m)	Measured Date	Groundwater Depth (m)	Groundwater Elevation (m)
BH2017-02	104.2	July 17, 2017	4.4	99.8
BH2017-03	103.4	July 20, 2017	5.0	98.4
BH2017-04	100.7	July 17, 2017	2.2	98.5
BH2017-05	102.7	July 20, 2017	3.3	99.4
BH2017-06	104.3	July 17, 2017	3.3	101.0
BH2017-07	102.4	July 17, 2017	4.1	98.3
BH2017-08	103.9	July 20, 2017	5.6	98.3
BH2017-09	99.6	July 17, 2017	1.7	97.9
BH2017-10	102.3	July 20, 2017	4.1	98.2
BH2017-11	102.1	July 17, 2017	3.9	98.2

It shall be noted that the groundwater levels measured at the time of geotechnical field investigation may not be representative of the stabilized groundwater conditions at the site during the construction period. It should be noted that the groundwater levels are transient and tend to fluctuate with the seasons and periods of precipitation potentially up to 1 or 2 m compared to the recorded short-term measurements.

7. PRELIMINARY GEOTECHNICAL DESIGN RECOMMENDATIONS

The geotechnical recommendations presented herein are intended for conceptual design of the proposed development and for the sole use of the designers/planners of the project and are also subject to the limitations in Appendix A. All recommendations presented in this report are based on the assumptions that preliminary foundation design will be reviewed by DST during subsequent detailed design stage and an adequate level of construction monitoring of excavations and installations will be provided at the time of construction.

An adequate level of construction monitoring is expected to include periodic to full time monitoring of excavations and shoring installations, footing base evaluations, inspection and testing by a professional engineer specialized in geotechnical engineering.

7.1 Geotechnical Design parameters

The general site stratigraphy found in the boreholes consists of fill underlain by native clay deposit and some till/sand and gravel and limestone bedrock, as summarized in Table 6.1. A layer of sand & gravel (0.3 to 0.7 m thick) was encountered between clay and bedrock formation. The clay layer was found sandy at the deeper depth. The detailed subsurface conditions can be seen in the borehole logs, which are provided in Appendix C.

The stratigraphy and engineering parameters recommendations are provided for Tables 7.1. The internal friction angles of granular materials were estimated from standard penetration tests (SPTs) applying Wolff (1989) which provides an empirical correlation between SPT and internal friction angle. Internal friction angles of normally consolidated clay were estimated from the Plasticity Index of the sample. Undrained shear strengths of the cohesive soils were estimated based on the in-situ vane shear test results as well as from the SPT test results.

Table 7-1: Geotechnical Soil Design Parameters

Soil Type	Depths, m	Elevation, m	Unit weight, γ (kN/m³)	c, kPa	ϕ	K_0	K_a	K_p
Fill	0 – 4.3	104.8 – 98.0	18	-	(30) 28 - 42	0.50	0.33	3.00
Clay	1.4 – 8.3	102.9 – 94.0	17	-	(26)* 26 - 30	0.56	0.39	2.56
Sand & Gravel	7.3 – 9.0	94.8 – 93.3	20	-	(32)* 32 - 33	0.47	0.30	3.25
Sandy Clay Till	7.9 – 8.5	94.2 – 93.6	19	-	30	0.50	0.33	3.00

*value in ( ) are recommended value

7.2 Bedrock Profile and Bedrock Quality

7.2.1 Bedrock Profile

The bedrock depths were estimated from the rock core data and the depth of auger refusal encountered in the boreholes. The bedrock could be encountered at depths between 4.5 m and 9.0 m (Elevations 97.7 m and 93.3 m). The depths and elevations of the bedrock are tabulated and shown in the Table 7.2.

Bedrock excavation quantities for foundation preparation were estimated and provided in the Table 7.3. Used total area of the bedrock excavation for the volume calculation is 10,030 m². Bedrock excavation quantity will vary with the elevation of the bedrock excavation. Based on the boreholes data, bedrock surface was found to be sloping to the northeast side. It should be noted that actual bedrock depths may vary between the boreholes, and therefore the estimated volume may vary from the actual excavation volume.

Table 7-2: Inferred and Confirmed Bedrock Depths and Elevations

Borehole/Well ID	Ground Surface Elevation (m)	Inferred Bedrock Depth, (m)	Inferred Bedrock Elevation (m)	Remark
BH2017-01	104.9	7.6	97.3*	Possible bedrock/Auger Refusal
BH2017-02	104.2	6.5	97.7*	Possible bedrock/Auger Refusal
BH2017-03	103.4	6.4	97.0	Confirmed Top of Bedrock
BH2017-04	100.7	4.6	96.1*	Possible bedrock/Auger Refusal
BH2017-05	102.7	6.9	95.8	Confirmed Top of Bedrock
BH2017-06	104.3	7.8	96.5*	Possible bedrock/Auger Refusal
BH2017-07	102.4	8.0	94.4*	Possible bedrock/Auger Refusal
BH2017-08	103.9	7.0	96.9	Confirmed Top of Bedrock
BH2017-09	99.6	4.5	95.1*	Possible bedrock/Auger Refusal
BH2017-10	102.3	9.0	93.3	Confirmed Top of Bedrock
BH2017-11	102.1	8.4	93.7*	Possible bedrock/Auger Refusal
BH2017-12	102.1	8.5	93.6*	Possible bedrock/Auger Refusal

*No bedrock coring was carried out – Top of bedrock elevation to be confirmed during detailed stage and/or construction.

Table 7-3: Possible Bedrock Excavation Volumes

Assumed Excavation to Elevation (m)	Cumulative Rock Excavation Volume (m^3)	-15% estimate (m^3)	+ 15% estimate (m^3)	Remark
104.9	-	-	-	The highest ground surface elevation at BH2017-01 location
101.0	-	-	-	-
99.0	-	-	-	-
97.4	165	143	190	-
96.4	2,670	2,322	3,071	-
95.4	8,545	7,430	9,827	-
94.4	16,100	14,000	18,515	-
93.4	25,205	21,917	28,986	-
92.4	35,230	30,634	40,514	-
91.4	45,260	39,356	52,049	-
90.4	55,290	48,078	63,584	-
89.4	65,320	56,800	75,118	-

7.2.2 Bedrock Quality

Type of the bedrock are predominantly grey limestone bedrock. The rock core samples collected were logged for Total Core Recovery (TCR), Solid Core Recovery (SCR) and Rock Quality Designation (RQD) and provided in Table 6.4 and the rock core photos, provided in the Appendix E. The TCR of rock cores were between 85% and 100 %, SCR of rock cores were between 78 % and 100 %, RQD of rock cores were between 58 % and 100 % and indicating fair to good quality. The unconfined compressive strengths of the tested samples were between 97.2 MPa and 129.6 MPa, indicating strong to very strong rocks and can be classified as Grade R4, accordance with ISRM (1981) classification, (Ref.: Table 3.5 of CFEM 2006 document).

The Rock mass qualities of recovered rock core samples were generally evaluated as fair (near top) to good rock below. It is recommended that further detailed evaluation bedrock quality should be carried out once the elevation of the bottom of excavation for underground parking structure is known and can be rated using Rock Mass Rating (RMR) System (After Bieniawski, 1989). The RMR rating will include the compressive strength of rock core, RQD, the bedrock fracture spacing, fracture condition, groundwater conditions at all cored locations across the site.

If the extent of bedrock excavation is deemed to be limited to the top bedrock, the upper bedrock could potentially be ripped with heavy duty rock rippers, due of the weaker and fractured rock at the top layer of limestone bedrock. It is recommended that the rippability of top of the bedrock (whether fractured rocks up to excavation depth) should be further evaluated when the bedrock exact depth is confirmed.

7.2.3 Bedrock Excavation by Blasting

The limestone bedrock mass below overburden and at depth is found to be generally strong to very strong and the fracture frequency generally drops with depth. Rock mass quality of rock cores could be rated as Class I to III. Rock mass quality Classes I to III required rock blasting, to loosen or fracture the bedrock for the excavation. Where relatively sound bedrock is encountered, blasting is generally required for fragmentation of very strong bedrock, as per OPSS 120 (governing the procedure for blasting).

A pre-construction survey of all buildings and facilities located within 50 meters of the excavation site shall be carried out by the firm specializing in pre-construction surveys and is independent of the contractor (similar to pre-blast survey as described in OPSS 120). Vibration monitoring will be required for the blasting work. Acceptable vibration levels induced by the excavation operations shall be determined following a risk assessment carried out by the independent vibration specialist.

7.3 Foundation Recommendations

Based on the information provided by the client, excavation for the entire site area for about 8 m depth (Elevation 96.7 m) is anticipated for the construction of two-levels underground parking. Therefore, the subsurface condition below the foundation for the proposed building could be on the bedrock and partially on the soil (e.g. 3 m of clay soil between foundation and bedrock at BH2017-10, if foundation is at Election 96.7 m).

It shall be noted that the clay soil is not recommended for the foundation bearing soil since it has low bearing resistance as well as it may cause excessive settlement for the proposed development. Clay soil shall be removed up to the bedrock surface depth. Foundation could be founded directly on the bedrock surface.

7.3.1 Spread Footings and Mat Foundation on Bedrock

Based on the borehole log, the type of bedrock encountered at the foundation depth is limestone. Limestone has fair to good RQD in first core run of BH2017-03, BH2017-10 and second core run of BH2017-08. Other core runs were excellent RQD condition (RQD 90 – 100).

The compressive strengths of tested sound rock core samples were 97 MPa to 129 MPa. Where spread footings/mat foundations are considered to support commercial building, due to the fair rock mass quality at the upper rock cores, an allowable design bearing pressure of 1,000 kPa is recommended for the foundation on the upper limestone bedrock formation. At this preliminary design stage, a modulus of deformation of 20 GPa can be used for the rock formation.

If more than 1,000 kPa design bearing capacity of the foundation is required, the mat foundations or cast-in-place concrete caissons, founded on competent bedrock could be considered. Competent bedrock has excellent rock mass quality and provide higher bearing capacity for the foundation. It is recommended that the potential for the presence of fractured/rubble zones should be checked for the entire footprint of the proposed tower. Further foundation consultations will be required for the detailed foundation design.

Limestone bedrock is susceptible to chemical erosion and may develop underground cavity. However, no significant open fractures or cavity was encountered in the four (4) boreholes cored up to 6.5 to 7.6 m below top of the bedrock (for). Therefore, relatively intact bedrock is expected underneath the proposed two levels of underground parking structure and the building foundation. A geophysical method such as ground-penetrating-radar (GPR), electromagnetic conductivity measurement (EM), could be used for detecting the cavities at a deeper depth.

Prepared bearing surface for the foundation should be free of disturbed soil, and free of unsuitable materials such as organic material, loose materials. All the disturbed soil during excavation should be removed for off side removal. A minimum 300 mm thick Granular A material, compacted to 100%

standard proctor maximum dry density, shall be prepared on top of the prepared foundation bedrock surface. The mat/raft foundation could be founded on the prepared 300 mm thick Granular “A” layer.

Considering the reported high ground water table, waterproofing layer is required below the floor slab and around the basement wall. The waterproofing design for the basement wall is required to protect from the water and moisture intrusion into the basement. Waterproofing design and specifications should be incorporated in the basement floor and walls construction design drawings.

Preparation and construction of mat/raft foundation requires shoring system and dewatering work for the anticipated deep excavations. Foundation shoring system should be designed to provide the sufficient support for the lateral earth pressure. Significant dewatering work is expected and further discussed in Section 7.6.2.

7.4 Slab-on-Grade

Should the basement foundation be on the bedrock, slab-on-grade construction will not be required for the basement floor construction. However, if foundation is planned on the overburden soil, the slab-on-grade for the foundation could be required.

Clay soil layer encountered in the boreholes at before the bedrock surface is not suitable for the foundation. Therefore, this unsuitable soil shall be removed up to bedrock surface and backfilled with engineered fills. Once the exposed excavated bedrock surface has been inspected and approved, the site grades within the floor slab area could be raised by the placement of engineered fill to the underside of the granular base of the slab. The engineered fill should consist of Ontario Provincial Standard Specification (OPSS) Granular “A”, placed in 300 mm maximum loose lift thicknesses, with each lift compacted to 100% standard Proctor maximum dry density (SPMDD). The slab subgrade could be constructed on a 300 mm thick bed of OPSS Granular material. The subgrade beneath the slab-on-grade should be protected at all times from rain, snow, freezing temperatures, excessive drying, and the ingress of water. This applies during and after the construction period. The prepared subgrade should be inspected by a geotechnical engineer prior to the placement of the engineered fill.

If the ground is disturbed, the disturbed soil should be removed and replaced with Granular “A” and compacted to 100 % maximum standard Proctor dry density.

The finished exterior grade at the ground surface of the surrounding building, should be sloped away from the building to prevent ponding of surface water close to the exterior walls of the building.

7.5 Lateral Earth Pressure

Shoring for excavation support and foundation walls require design with resistance to the lateral earth pressures and groundwater pressures. The lateral earth pressure for the static condition, could be estimated using the following equation:

$$P = K_O \gamma h + K_O (\gamma - \gamma_w)(H-h) + \gamma_w (H - h) + K_O q$$

Where:

P	=	Total static lateral earth pressure in kPa;
K_o	=	coefficient of earth pressure for at rest condition
γ	=	estimated bulk unit weight of soil
γ_w	=	unit weight of water = 9.81 kN/m^3
H	=	height of wall (m)
h	=	depth of groundwater table below ground surface (m)
q	=	any surcharge pressure at ground level (kPa)

The thrust against the foundation wall during a seismic event may be estimated from the following equation (Wood, 1973):

$$P = \gamma H^2 (ah/g)$$

Where:

P = dynamic thrust component (kN/m)
γ = unit weight
H = height of wall (m)
(ah/g) = dimensionless horizontal pseudostatic coefficient

Active and passive earth pressures coefficients for the various soil types encountered at the site are provided in the Table 7.1.

7.6 Excavation and Dewatering

7.6.1 Excavations and Shoring System

Excavation must be undertaken in accordance with the Occupational Health and Safety Act (OHSA). The soil between ground surface and up to 8 m depth could be considered as Types 2 to 4 soils for excavation work as per Occupational Health and Safety Act and Regulation for Construction Projects. The excavation in overburden may be carried out with a cut slope of 2H:1V or using a suitable shoring system designed by a professional engineer.

Deep excavations of 8 - 9 m deep for the 2-levels basement parking construction and up to 14 m for 4-level parking option will require a specially designed shoring system. The potential shoring systems are tangent pile wall and secant pile wall. Given the reported bedrock elevations, it will be difficult to drive sufficient embedment pile lengths to anchor soldier piles into the bedrock. However, boring into the upper fractured bedrock may be considered given the reported bedrock qualities. Bracing, raking, anchoring should be considered for the excavation support of tangent and secant pile shoring systems. Shoring system should be considered for the needs for groundwater control (cut off wall) and the needs for the temporary and permanent retaining for the basement parking structure. The base heave during excavation with shoring is not expected for bedrock formation at the base of the excavation.

Instrumentation and monitoring during excavation will be required to monitor the performance of the shoring system as well as monitoring ground movement. The instrumentation and monitoring plan should be prepared for the shoring excavation.

7.6.2 Dewatering

Based on the groundwater levels encountered during the geotechnical investigations and subsequent groundwater monitoring results, perched groundwater could be encountered at shallow depth between 1.7 m and 5.6 m (Elevations 101.0 m and 97.9 m) above clay deposit, as well as below the clay deposit in the fractured limestone bedrock. Therefore, potentially significant groundwater control work will be required during construction and potentially afterwards. Evaluation of the hydraulic properties of the bedrock and overburden soil formations will be required for the dewatering analysis. Hydrogeological investigation is recommended for the detailed dewatering analysis and groundwater control work.

It shall be noted that the groundwater elevations vary with location, precipitation and seasons. Groundwater elevations at the site varied from elevation 101 m at west of the property to elevation 97.9 m at northeast of the property.

Based on present information, the potential dewatering/groundwater control systems are cut-off walls with collection pond and sump pump system or cut-off wall with wells points system. It should be noted that dewatering effort will depend on a number of factors, including excavation depth, season and weather conditions and the length of time the excavation is left open. The suitable dewatering system should be selected based on the size, depth, and required volume of groundwater removal during the excavation work. It is recommended that the dewatering work be designed and inspected by an experienced hydrogeologist/qualified professional engineer for the dewatering work. Ground settlement analysis and impact assessment due to dewatering shall also be analysed and evaluated during detailed design stage.

Note that dewatering volumes in excess of 50,000 L/day will require a Permit to Take Water (PTTW) or Environmental Activity Sector Registry (EASR), depending on the total dewatering volumes. PTTW application require supporting document of a hydrogeological assessment report as well as impact assessment by dewatering work carried out by a qualified person.

7.7 Pipe Installations

Installation of utilities services including pipes will be in overburden soils. Based on the depth of the pipe installation, dewatering requirements should be evaluated for the installation of the utilities. If installation trench is in the clay soil, it may be possible to use sump pumping techniques for dewatering, since clay has low permeability and less water to handle. It should be determined by the contractor on the methods of dewatering necessary to meet the project requirements and align with their construction methodology and schedule.

It should be noted that soft clay soil was encountered in the boreholes. Therefore, the pipe, which is installed in the clay formation, may encounter ground settlement and pipes shall be designed to resist and allow the large ground settlement.

7.7.1 Pipe Bedding

Pipe bedding should be in accordance with the following Ontario Provincial Standard Drawings (OPSD) design standards for the class and size of pipe being used as well as manufactures recommendations. The applicable standards for the pipe bedding are:

- OPSD 0802.010 Flexible Pipe Embedment and Backfill – Earth Excavation
- OPSD 0802.013 Flexible Pipe Embedment and Backfill – Rock Excavation
- OPSD 0802.030 Rigid Pipe Bedding, Cover and Backfill – Type 1 and 2 Soil - Earth Excavation
- OPSD 0802.031 Rigid Pipe Bedding, Cover and Backfill – Type 3 Soil - Earth Excavation
- OPSD 0802.033 Rigid Pipe Bedding, Cover and Backfill – Rock Excavation

Other OPSD Standards or manufacturer requirements may apply to the construction of the buried services and the designer should consult these as appropriate for the materials being employed.

It is recommended that a minimum 0.3 m of compacted bedding below the pipe shall be included in the bedding design.

Clear stone could be used for bedding and backfilling; if bedding is placed below groundwater.

7.7.2 Trench Backfill and Compaction Standard

Compaction of the trench backfill will be necessary in some cases for the following reasons:

- To control settlement of the trench fill;
- To provide lateral support to the trench sidewall; and
- To minimize soil loads on the pipe.

A Granular “B” Type I material could be used for the backfill above the pipe. Trench backfill should be compacted to 95% of standard Proctor maximum dry density. Heavy compaction equipment should not be used until at least 1 m of compacted backfill exists above the pipe. During backfilling, care should be taken to ensure the backfill proceeds in equal stages simultaneously on both sides of the pipe. If organic soils are encountered at the pipe bedding surface, this organic soil should be removed. No frozen material should be used as backfill; neither should the trench base be allowed

to freeze. The quality and workmanship in the construction is as important as the compaction standards themselves. It is imperative that the guidelines for the compaction be followed for the full depth of the trench to achieve satisfactory performance.

7.8 Corrosiveness of Soil

A selected soil sample at potential foundation depth was submitted to Maxxam Analytics, for chemical analyses to assess the potential sulphate attack on buried concrete and ductile iron structures (Soluble Chloride - Cl, Conductivity, Available pH, Resistivity, Soluble Sulphate – SO4). The Laboratory Certificate of analysis from Maxxam is provided in Appendix G. A summary of the results is provided in Table 7.4. The analytical results of the soil samples were compared with applicable Canadian Standards Association (CSA) standards and are given in Table 7.5.

Table 7-4: Summary of Corrosivity Analytical Test Results

Sample ID	pH	Soluble Sulphate (%)	Resistivity, ohm-cm	Soluble Chloride (20:1) (ug/g)	Conductivity (mS/cm)
BH2017-10, SS10	7.83	0.038	690	700	1.5

Table 7.5 Sulphate Content and Exposure Class

Class of Exposer	Degree of Exposure	Water soluble Sulphate in soil sample (%)	Cementing Material to be used
S-1	Very Severe	> 2.0	HS or HSb
S-2	Severe	0.20 – 2.0	HS or HSb
S-3	Moderate	0.10 – 0.20	MS, MSb, LH, HS, or HSb

*Information from Table 3 of CSA Standards A23.1-04

The sulphate content for the selected soil sample resulted a concentration of 0.038 %. The result was compared with Canadian Standards Association (CSA) Standards A23.1 for sulphate attack potential on concrete structures and possess a “negligible” risk for sulphate attack on concrete material. Accordingly, conventional GU or MS Portland cement may be used in the construction of the proposed concrete elements. pH result was 7.8 and it indicates it is not a corrosive environment for ductile iron pipes.

Soluble chloride content result was 700 ug/g and considered as negligible harmful environment for concrete or steel reinforcement. The resistivity of clay soil was 700 ohm-cm, which indicate poor drainage soil condition and could be considered as corrosive environment.

7.9 Seismic Site Classification

Based on the soil profile above the bedrock formation, it could be concluded that seismic site class for the overburden clay soil formation is classified as Site Class E. However, if the foundation is to be founded on the bedrock, seismic site class for the bedrock could be classified as Site Class “B”.

The site coefficients Fa and Fv could be assumed based on Table 6.1B and Table 6.1C of the Canadian Foundation Engineering Manual (CFEM, 4th edition, 2006) as well as NBCC 2005 Table 4.1.8.4.B and Table 4.1.8.4.C.

The seismic hazard from 2015 National Building Code Seismic Hazard Calculation for the site is provided in Appendix F.

7.10 Liquefaction Potential of Soils

The soil formation at the site is soft to hard clay soils. Majority of tested clay samples resulted plasticity index of 19 to 24 and therefore clay soil is considered non-liquefiable soil.

Two tests results of soil samples from sandy clay layer, resulted plasticity index 3 and non-plastic clay. The sandy clay soil, could be considered as liquefiable soil, therefore, DST recommend not to use as foundation bearing formation on sandy clay soil. It shall be further tested for the liquification potential and seismic loading capacities.

If the proposed development will use the bedrock formation as the foundation bearing, further analyses for liquefaction potential of the sandy clay soil may not be required.

7.11 Frost Protection and Foundation Insulation Requirements

Based on the Ministry of Environment published data, which is based on an 85% probability, the design freezing index for Ottawa area has been estimated to be 1,050 degrees-days Celsius (1,922

degree-days Fahrenheit). The estimated frost penetration depth for an engineered fill is approximately 1.8 m. The soil at the site is silt/clay in nature and highly frost susceptible soil.

All footings subject to frost action should be provided with the minimum 1.8 m of soil cover. If required soil cover over foundation footing is not feasible, foundation insulation can be used. Insulation detail design shall be prepared with the insulation product manufacture's design guidelines.

Present proposed development with foundation at below 10 m depth, will not require insulation for the foundation since the foundation will be beyond the potential frost penetration depth. However, the project requires shallow foundations, DST can review the foundation and provide design recommendation for frost protection.

7.12 Pavement

DST provided pavement structure recommendations for parking lot and drive way for light and heavy vehicle and provided in Table 7.6 and Table 7.7.

Table 7.6 Pavement Structure Recommendation for Parking Lot and Drive Way (car only)

Pavement Layer	Compaction Requirement	Recommended Minimum Thickness (mm)
Surface Course, Asphaltic Concrete	As per OPSS 310	40
Binder Course, Asphaltic Concrete	As per OPSS 310	60
Granular 'A', Base Course (OPSS 1010)	100 % SPMDD	150
Granular 'B', Type II, Subbase (OPSS 1010)	100 % SPMDD	300

Table 7.7 Pavement Structure Recommendation for Truck and Heavy Vehicle

Pavement Layer	Compaction Requirement	Recommended Minimum Thickness (mm)
Surface Course, Asphaltic Concrete	As per OPSS 310	40
Upper Binder Course, Asphaltic Concrete	As per OPSS 310	50
Lower Binder Course, Asphaltic Concrete	As per OPSS 310	50
Granular 'A', Base Course (OPSS 1010)	100 % SPMDD	150
Granular 'B', Type II, Subbase (OPSS 1010)	100 % SPMDD	450

Note:

1) OPSS – Ontario Provincial Standard Specifications
2) All pavement layer materials should meet OPSS requirements and/or municipality standards.
3) Granular materials should be compacted to 100% standard Proctor maximum dry density (SPMDD) and placed in lifts not exceeding 150 mm thick.
4) SPMDD – Standard Proctor Maximum Dry Density (ASTM-D698)
5) All granular and asphalt construction methods are to meet local standards (City of Ottawa OPSS).

8. MONITORING DURING CONSTRUCTION

All foundation and earth works recommendations presented in this report are based on the assumptions that an adequate level of construction monitoring by qualified geotechnical personnel during construction will be provided. An adequate level of construction monitoring is considered to be:

a) Foundations: full-time monitoring and design review during construction.
b) Earthworks: full-time quality control and compaction testing.

An important purpose of providing an adequate level of monitoring is to check that recommendations, based on data obtained at discrete borehole locations, are relevant to other areas of the Site. To provide an adequate level of construction monitoring, qualified geotechnical personnel should manage and supervise the following tasks during construction:

Foundations:

- Confirm that materials and methods meet specifications.
- Inspect foundation subgrades.
- Inspect excavation.
- Inspect shoring structures.
- Review shallow foundation installation/testing methods.
- Review compaction testing records.
- Provide review comments, including any discrepancies found with respect to specifications as well as this report, and the need for any modifications to the design or methods.

Earthworks:

- Confirm that materials and methods meet specifications.
- Inspect subgrade prior to fill placement.
- Quality control of fill material.
- Review compaction testing records.

DST can review the final design and layout of structures and foundation elements for the proposed development. DST can be contacted to offer additional recommendations.

9. CLOSURE

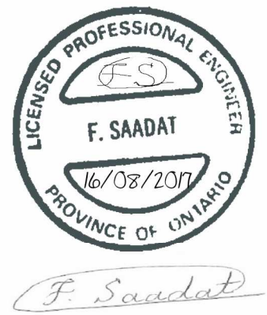
We trust this report meets your present requirements. Should you have any questions, please do not hesitate to contact our office. A description of limitations which are inherent in carrying out site investigation studies is given in Appendix A and forms an integral part of this report.

Sincerely,

For DST CONSULTING ENGINEERS INC.



Tun Lwin, P.Eng., P.Geo, M.Eng., M.Sc.
Senior Geotechnical Engineer



Farbod Saadat, Ph.D., P.Eng.
Chief Geotechnical Engineer

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APPENDIX A

LIMITATIONS OF REPORT

LIMITATIONS OF REPORT

GEOTECHNICAL STUDIES

The data, conclusions and recommendations which are presented in this report, and the quality thereof, are based on a scope of work authorized by the Client. Note that no scope of work, no matter how exhaustive, can identify all conditions below ground. Subsurface and groundwater conditions between and beyond the boreholes may differ from those encountered at the specific locations tested, and conditions may become apparent during construction which were not detected and could not be anticipated at the time of the site investigation. Conditions can also change with time. It is recommended practice that DST Consulting Engineers Inc. be retained during construction to confirm that the subsurface conditions throughout the site do not deviate materially from those encountered in the boreholes.

The design recommendations given in this report are applicable only to the project described in the text and then only if constructed substantially in accordance with details stated in this report. Since all details of the design may not be known, we recommend that we be retained during the final stage to verify that the design is consistent with our recommendations, and that assumptions made in our analysis are valid. Unless otherwise noted, the information contained herein in no way reflects on environmental aspects of either the site or the subsurface conditions.

The comments given in this report on potential construction problems and possible methods are intended only for the guidance of the designer. The number of boreholes may not be sufficient to determine all the factors that may affect construction methods and costs, e.g. the thickness of surficial topsoil or fill layers may vary markedly and unpredictably. The contractors bidding on this project or undertaking the construction should, therefore, make their own interpretation of the factual information presented and draw their own conclusion as to how the subsurface conditions may affect their work.

Any results from an analytical laboratory or other subcontractor reported herein have been carried out by others, and DST Consulting Engineers Inc. cannot warranty their accuracy. Similarly, DST cannot warranty the accuracy of information supplied by the Client.

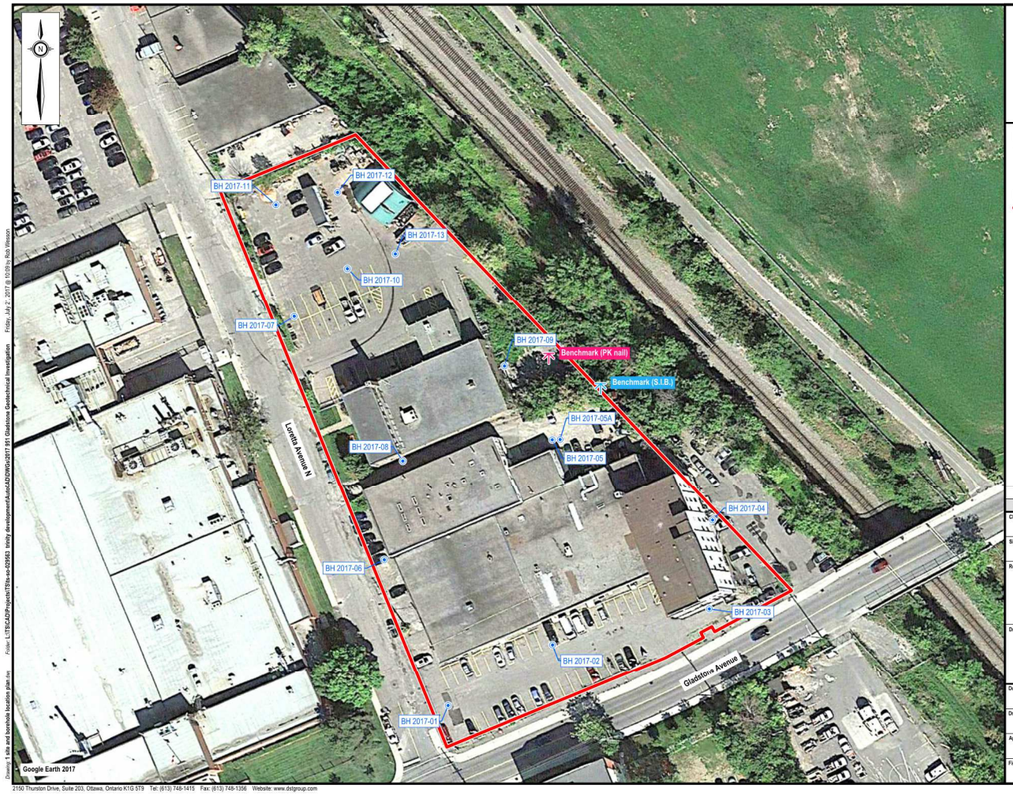
Geotechnical Investigation Report
Gladstone Avenue and Loretta Avenue North, Ottawa, Ontario
DST Reference No. TS-SO-029563

APPENDIX B

SITE AND BOREHOLES

LOCATION PLAN

DST CONSULTING ENGINEERS INC.



DST consulting engineers

Notes

1. This drawing shall be read in conjunction with the associated technical report.
2. Do not scale drawing.

Legend

- Property boundary
- Borehole location
- Benchmark

0 5 10 20 30 m

Scale 1:750

Revision	Date	Issue	Approval
A	17.07.17	Preliminary	S.V.

Client: Trinity

Site: 951 Gladstone Avenue, Ottawa, Ontario

Report Title: Geotechnical Investigation
Gladstone Avenue and Loretta Avenue North, Ottawa

Drawing Title: Site and Borehole Location Plan

Designed By: S.V.	Scale: As shown
Drawn By: R.W.	Date: July 2017
Approved By: S.V.	Project No.: TS-SO-029563

Figure No. 1

DRAFT

Dwang: 1 site and borehole locations plan.dwg Plotted: Friday, July 7, 2017 @ 10:09 by Rob Wesson

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APPENDIX C
BOREHOLE LOGS &
CROSS SECTION

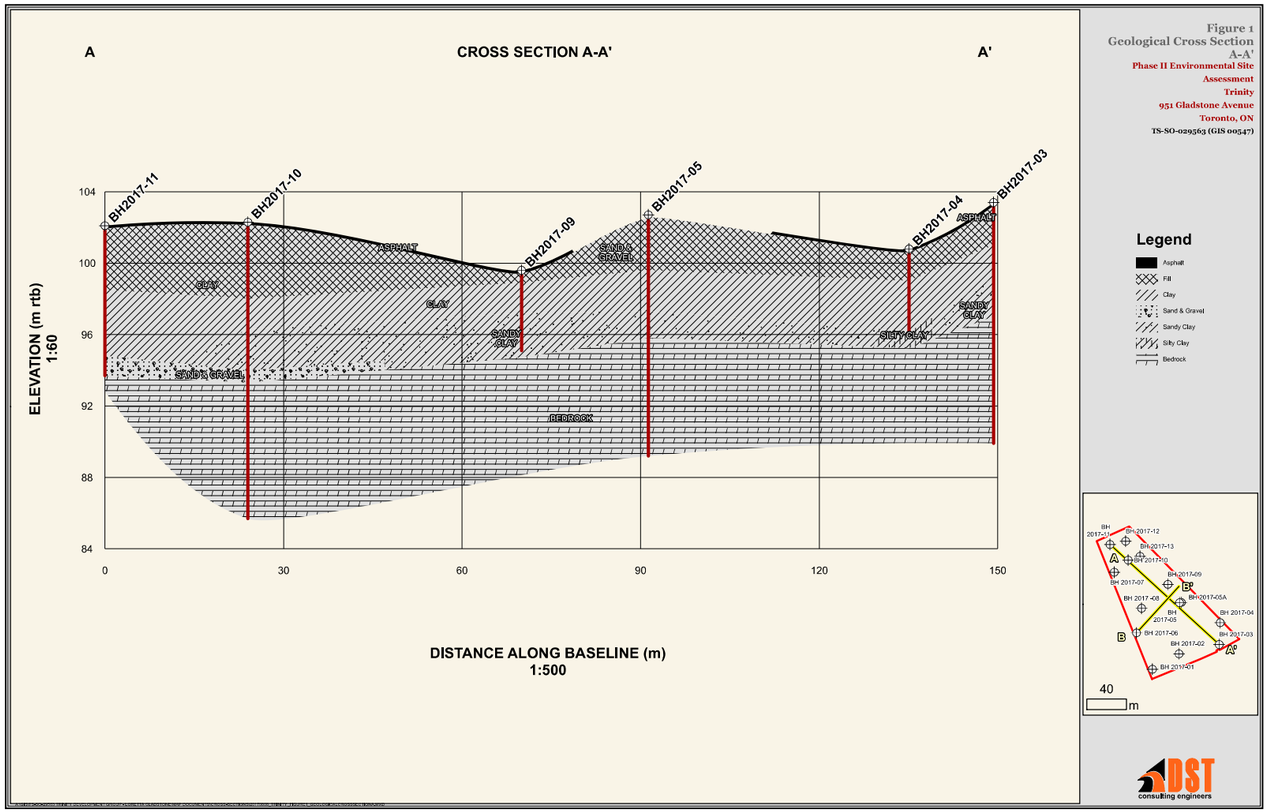

Figure 1
Geological Cross Section
A-A'
Phase II Environmental Site
Assessment
Trinity
951 Gladstone Avenue
Toronto, ON
TS-SO-029563 (GIS 00547)

DST consulting engineers

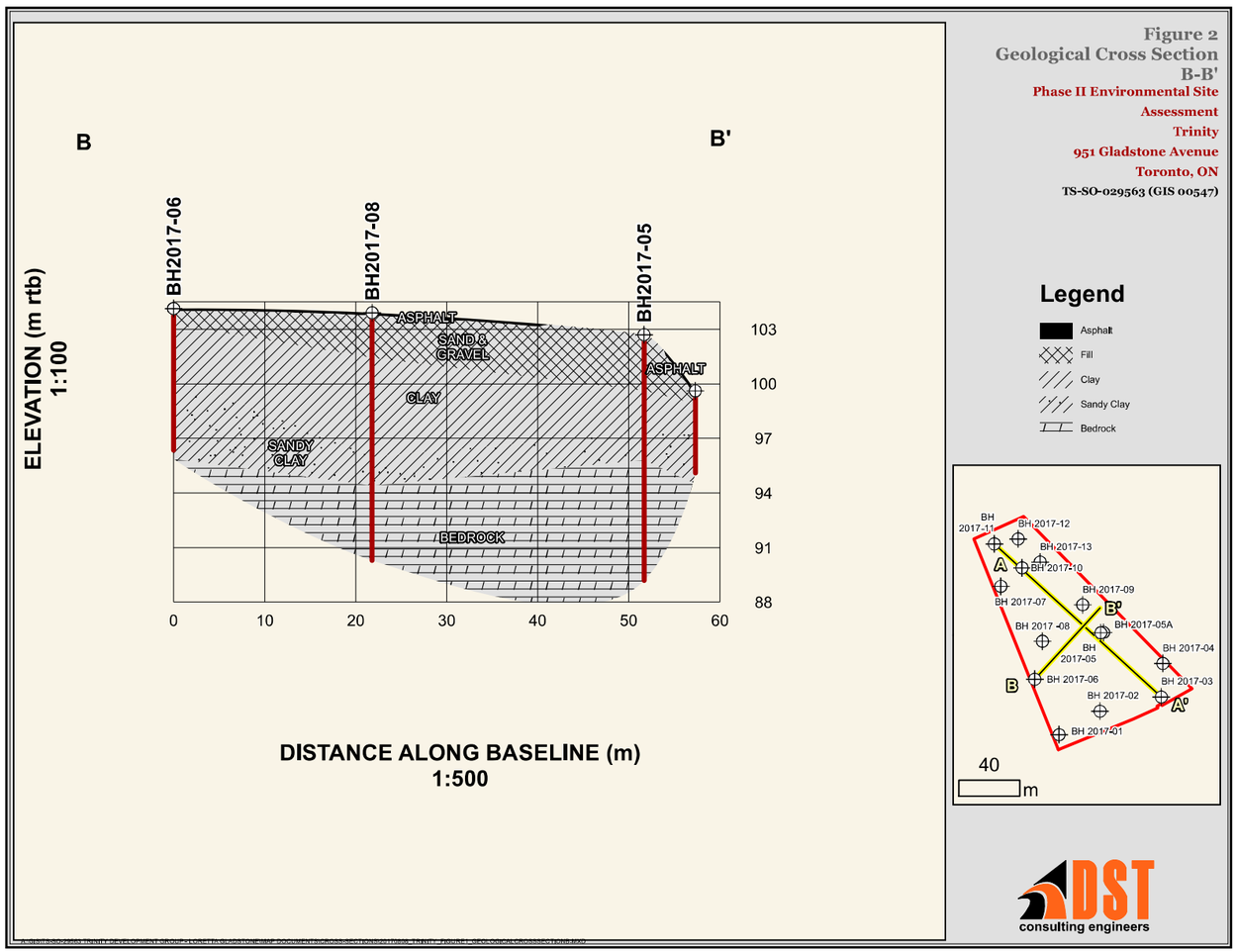

Figure 2
Geological Cross Section
B-B'
Phase II Environmental Site
Assessment
Trinity
951 Gladstone Avenue
Toronto, ON
TS-SO-029563 (GIS 00547)

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LOG OF BOREHOLE BH2017-01

DST REF. No.: **TS-SO-29563**
CLIENT: **Trinity Development Group Inc.**
PROJECT: **Geotechnical Drilling for the Proposed Development**
LOCATION: **951 Gladstone Avenue, Ottawa, ON**
SURFACE ELEV.: **104.9 metres**

Drilling Data
METHOD: **Hollow Stem Auger**
START DATE: **7/5/2017**
COMPLETION DATE: **7/5/2017**
COORDINATES: **5028029** m N, **443991** m E

DEPTH (m)	ELEV. (m)	Water Data	% MOISTURE (W_p W W_l)	Symbol	MATERIAL DESCRIPTION	SAMPLE #	SAMPLE TYPE	'N' VALUE	VANE (kPa) × / SPT (N) □ Blows/0.3m / DCPT ◆	REMARKS & GRAINSIZE DISTRIBUTION (%) GR SA SI CL
0.0	104.9				ASPHALT (75 mm)					
					FILL - SAND and GRAVEL to trace Gravel, Brown, Loose to Compact	SS1		17		
1.0	104					SS2		5		
						SS3		16		
2.0	103					SS4		14		
					CLAY, Brown to Grey, Firm to Very Stiff	SS5		9		
3.0	102					SS6		6		Odour in samples from 3.7 m to 7.6 m
						SS7		23		
4.0	101				SANDY, trace Gravel	SS8		3		
						SS9		6		
5.0	100					SS10		6		
						SS11		7		
6.0	99					SS12		5		
						SS13		100+		
7.0	98				SAND and GRAVEL, Grey, Very Dense					
					End of Borehole at 7.6 m due to Auger Refusal.					
8.0	97									
	96									

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SAMPLE TYPE LEGEND

Auger Sample; Split Spoon Sample; Bulk Sample; Rock Core; Hiller Peat Sampler; Shelby Tube; Bentonite; Sand; x^3 Numbers refers to Sensitivity

ENCLOSURE 1

BOREHOLE (OTTAWA) TS-SO-29563.GPJ DATA TEMPLATE.GDT 28/7/17

LOG OF BOREHOLE BH2017-02

DST REF. No.: **TS-SO-29563**
CLIENT: **Trinity Development Group Inc.**
PROJECT: **Geotechnical Drilling for the Proposed Development**
LOCATION: **951 Gladstone Avenue, Ottawa, ON**
SURFACE ELEV.: **104.2 metres**

Drilling Data
METHOD: **Hollow Stem Auger**
START DATE: **7/6/2017**
COMPLETION DATE: **7/6/2017**
COORDINATES: **5028045** m N, **444017** m E

DEPTH (m)	ELEV. (m)	Water Data	% MOISTURE (W_p W W_l)	Symbol	MATERIAL DESCRIPTION	SAMPLE #	SAMPLE TYPE	'N' VALUE	VANE (kPa) × / SPT (N) □ Blows/0.3m / DCPT ◆	REMARKS & GRAINSIZE DISTRIBUTION (%) GR SA SI CL
0.0	104				ASPHALT (75 mm)					
					FILL - SAND and GRAVEL, Brown, Compact to Dense	SS1		19		
1.0	103					SS2		29		
						SS3		30		
2.0	102				CLAY, Brown to Grey, Firm to Very Stiff	SS4		25		
						SS5		12		
3.0	101					SS6		10		
						SS7		14		
4.0	100	▼			SANDY, some Rock Fragment	SS8		2	>>x^3	> 200 kPa
						SS9		8		
5.0	99					SS10		10		Odour in sample # SS10
						SS11		100+		
6.0	98				Rock Fragment					
					End of Borehole at 6.5 m due to Auger Refusal.					
7.0	97									
8.0	96									

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Web: www.dstgroup.com

SAMPLE TYPE LEGEND

Auger Sample; Split Spoon Sample; Bulk Sample; Rock Core; Hiller Peat Sampler; Shelby Tube; Bentonite; Sand; x^3 Numbers refers to Sensitivity

ENCLOSURE 2

BOREHOLE (OTTAWA) TS-SO-29563.GPJ DATA TEMPLATE.GDT 28/7/17

LOG OF BOREHOLE BH2017-03

DST REF. No.: **TS-SO-29563**
CLIENT: **Trinity Development Group Inc.**
PROJECT: **Geotechnical Drilling for the Proposed Development**
LOCATION: **951 Gladstone Avenue, Ottawa, ON**
SURFACE ELEV.: **103.4 metres**

Drilling Data
METHOD: **Hollow Stem Auger**
START DATE: **7/5/2017**
COMPLETION DATE: **7/5/2017**
COORDINATES: **5028054** m N, **444057** m E

DEPTH (m)	ELEV. (m)	Water Data	% MOISTURE (W_p W W_l)	Symbol	MATERIAL DESCRIPTION	SAMPLE #	SAMPLE TYPE	'N' VALUE	VANE (kPa) × / SPT (N) □ Blows/0.3m / DCPT ◆	REMARKS & GRAINSIZE DISTRIBUTION (%) GR SA SI CL
0.0	103				ASPHALT (85 mm)					
					FILL - SAND and GRAVEL, Brown, Very Loose to Compact	SS1		1		
1.0	102					SS2		4		
						SS3		21		
2.0	101					SS4		28		
					CLAY, trace Sand, trace Gravel, Brown to Grey, Firm to Very Stiff	SS5		14		
3.0	100					SS6		13		
						SS7		18		
4.0	99				SANDY, trace Rock Fragment	SS8		5	>>×5	> 200 kPa
5.0	98	▼				SS9		13		
						SS10		4		
6.0	97					SS11		100+		Odour in sample # SS11
					BEDROCK Limestone, Grey	RC1				TCR = 100% SCR = 79% RQD = 58%
7.0	96									
8.0	95					RC2				TCR = 100% SCR = 92% RQD = 90%

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SAMPLE TYPE LEGEND

Auger Sample · Rock Core · Bentonite
Split Spoon Sample · Hiller Peat Sampler · Sand
Bulk Sample · Shelby Tube · ×3 Numbers refers to Sensitivity

ENCLOSURE 3

LOG OF BOREHOLE BH2017-03

DST REF. No.: **TS-SO-29563**
CLIENT: **Trinity Development Group Inc.**
PROJECT: **Geotechnical Drilling for the Proposed Development**
LOCATION: **951 Gladstone Avenue, Ottawa, ON**
SURFACE ELEV.: **103.4 metres**

Drilling Data
METHOD: **Hollow Stem Auger**
START DATE: **7/5/2017**
COMPLETION DATE: **7/5/2017**
COORDINATES: **5028054** m N, **444057** m E

DEPTH (m)	ELEV. (m)	Water Data	% MOISTURE (W_p W W_l)	Symbol	MATERIAL DESCRIPTION	SAMPLE #	SAMPLE TYPE	'N' VALUE	VANE (kPa) × / SPT (N) □ Blows/0.3m / DCPT ◆	REMARKS & GRAINSIZE DISTRIBUTION (%) GR SA SI CL
10.0	94					RC3				TCR = 93% SCR = 93% RQD = 92%
	93									
11.0	92					RC4				TCR = 100% SCR = 100% RQD = 92%
12.0	91									
						RC5				TCR = 100% SCR = 100% RQD = 95%
13.0	90				End of Borehole at 13.5 m					
14.0	89									
15.0	88									
16.0	87									
17.0	86									

TS-SO-29563.GPJ DATA TEMPLATE.GDT 28/7/17
BOREHOLE (OTTAWA)

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SAMPLE TYPE LEGEND

Auger Sample · Rock Core · Bentonite
Split Spoon Sample · Hiller Peat Sampler · Sand
Bulk Sample · Shelby Tube · ×3 Numbers refers to Sensitivity

ENCLOSURE 4

LOG OF BOREHOLE BH2017-04

DST REF. No.: **TS-SO-29563**
CLIENT: **Trinity Development Group Inc.**
PROJECT: **Geotechnical Drilling for the Proposed Development**
LOCATION: **951 Gladstone Avenue, Ottawa, ON**
SURFACE ELEV.: **100.8 metres**

Drilling Data
METHOD: **Hollow Stem Auger**
START DATE: **7/6/2017**
COMPLETION DATE: **7/6/2017**
COORDINATES: **5028076** m N, **444058** m E

DEPTH (m)	ELEV. (m)	Water Data	% MOISTURE (W_P W W_I)	Symbol	MATERIAL DESCRIPTION	SAMPLE #	SAMPLE TYPE	'N' VALUE	VANE (kPa) × / SPT (N) □ Blows/0.3m / DCPT ◆	REMARKS & GRAINSIZE DISTRIBUTION (%) GR SA SI CL
0.0	100				ASPHALT (25 mm)					
					FILL - SAND and GRAVEL, Brown, Compact to Loose	SS1		12		
1.0						SS2		100+		
	99					SS3		5		
2.0					CLAY, some Sand, some Gravel, Brown to Grey, Firm to Very Stiff	SS4		4		
	98				Rock Fragment	SS5		6		
3.0						SS6		4		
	97				SILTY, with Sand and Gravel	SS7		16		
4.0						SS8		100+		
	96				End of Borehole at 4.6 m due to Auger Refusal.					
5.0										
	95									
6.0										
	94									
7.0										
	93									
8.0										
	92									

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SAMPLE TYPE LEGEND

Auger Sample; Split Spoon Sample; Bulk Sample; Rock Core; Hiller Peat Sampler; Shelby Tube; Bentonite; Sand; ×3 Numbers refers to Sensitivity

ENCLOSURE 5

BOREHOLE (OTTAWA) TS-SO-29563.GPJ DATA TEMPLATE.GDT 28/7/17

LOG OF BOREHOLE BH2017-05

DST REF. No.: **TS-SO-29563**
CLIENT: **Trinity Development Group Inc.**
PROJECT: **Geotechnical Drilling for the Proposed Development**
LOCATION: **951 Gladstone Avenue, Ottawa, ON**
SURFACE ELEV.: **102.7 metres**

Drilling Data
METHOD: **Hollow Stem Auger**
START DATE: **7/7/2017**
COMPLETION DATE: **7/7/2017**
COORDINATES: **5028096** m N, **444017** m E

DEPTH (m)	ELEV. (m)	Water Data	% MOISTURE (W_P W W_I)	Symbol	MATERIAL DESCRIPTION	SAMPLE #	SAMPLE TYPE	'N' VALUE	VANE (kPa) × / SPT (N) □ Blows/0.3m / DCPT ◆	REMARKS & GRAINSIZE DISTRIBUTION (%) GR SA SI CL
0.0	102				FILL - SAND and GRAVEL, Brown, Loose to Compact	SS1		24		
1.0						SS2		11		
	101					SS3		9		
2.0						SS4		15		52 37 (11)
	100					SS5		27		
3.0		▼			CLAY, trace Sand, trace Gravel, Brown to Grey, Firm to Very Stiff	SS6		12		
	99					SS7		19		
4.0						SS8		4	>>×3	> 200 kPa
	98					SS9		7	>>×	> 200 kPa
5.0										
	97				SANDY	SS10		1		
6.0						SS11		7		
	96					SS12		100+		
7.0					BEDROCK Limestone, Grey	RC1				TCR = 100% SCR = 100% RQD = 100%
	95									
8.0						RC2				TCR = 100% SCR = 98% RQD = 96%
	94									

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SAMPLE TYPE LEGEND

Auger Sample; Split Spoon Sample; Bulk Sample; Rock Core; Hiller Peat Sampler; Shelby Tube; Bentonite; Sand; ×3 Numbers refers to Sensitivity

ENCLOSURE 6

BOREHOLE (OTTAWA) TS-SO-29563.GPJ DATA TEMPLATE.GDT 28/7/17

LOG OF BOREHOLE BH2017-05

DST REF. No.: **TS-SO-29563**
CLIENT: **Trinity Development Group Inc.**
PROJECT: **Geotechnical Drilling for the Proposed Development**
LOCATION: **951 Gladstone Avenue, Ottawa, ON**
SURFACE ELEV.: **102.7 metres**

Drilling Data
METHOD: **Hollow Stem Auger**
START DATE: **7/7/2017**
COMPLETION DATE: **7/7/2017**
COORDINATES: **5028096** m N, **444017** m E

DEPTH (m)	ELEV. (m)	Water Data	% MOISTURE (W_p W W_l)	Symbol	MATERIAL DESCRIPTION	SAMPLE #	SAMPLE TYPE	'N' VALUE	VANE (kPa) × / SPT (N) □ Blows/0.3m / DCPT ◆	REMARKS & GRAINSIZE DISTRIBUTION (%) GR SA SI CL
10.0	93					RC3				TCR = 100% SCR = 100% RQD = 100%
11.0	92					RC4				TCR = 100% SCR = 100% RQD = 96%
12.0	91									
13.0	90					RC5				TCR = 100% SCR = 100% RQD = 100%
14.0	89				End of Borehole at 13.5 m					
15.0	88									
16.0	87									
17.0	86									
	85									

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SAMPLE TYPE LEGEND

Auger Sample · Split Spoon Sample · Bulk Sample · Rock Core · Hiller Peat Sampler · Shelby Tube · Bentonite · Sand · ×3 Numbers refers to Sensitivity

ENCLOSURE 7

LOG OF BOREHOLE BH2017-05A

DST REF. No.: **TS-SO-29563**
CLIENT: **Trinity Development Group Inc.**
PROJECT: **Geotechnical Drilling for the Proposed Development**
LOCATION: **951 Gladstone Avenue, Ottawa, ON**
SURFACE ELEV.: **102.7 metres**

Drilling Data
METHOD: **Hollow Stem Auger**
START DATE: **7/7/2017**
COMPLETION DATE: **7/7/2017**
COORDINATES: **5028096** m N, **444019** m E

DEPTH (m)	ELEV. (m)	Water Data	% MOISTURE (W_p W W_l)	Symbol	MATERIAL DESCRIPTION	SAMPLE #	SAMPLE TYPE	'N' VALUE	VANE (kPa) × / SPT (N) □ Blows/0.3m / DCPT ◆	REMARKS & GRAINSIZE DISTRIBUTION (%) GR SA SI CL
1.0	102				FILL - SAND and GRAVEL, Brown, Loose to Compact	SS1		11		
2.0	101					SS2		12		
3.0	100				End of Borehole at 1.8 m due to Auger Refusal.	SS3		4		Hit possibly old engine tank; smells like engine oil
4.0	99									
5.0	98									
6.0	97									
7.0	96									
8.0	95									
	94									

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SAMPLE TYPE LEGEND

Auger Sample · Split Spoon Sample · Bulk Sample · Rock Core · Hiller Peat Sampler · Shelby Tube · Bentonite · Sand · ×3 Numbers refers to Sensitivity

ENCLOSURE 8

LOG OF BOREHOLE BH2017-06

DST REF. No.: **TS-SO-29563**
CLIENT: **Trinity Development Group Inc.**
PROJECT: **Geotechnical Drilling for the Proposed Development**
LOCATION: **951 Gladstone Avenue, Ottawa, ON**
SURFACE ELEV.: **104.3 metres**

Drilling Data
METHOD: **Hollow Stem Auger**
START DATE: **7/7/2017**
COMPLETION DATE: **7/7/2017**
COORDINATES: **5028066** m N, **443975** m E

DEPTH (m)	ELEV. (m)	Water Data	% MOISTURE (W_P W W_I)	Symbol	MATERIAL DESCRIPTION	SAMPLE #	SAMPLE TYPE	'N' VALUE	VANE (kPa) × / SPT (N) □ Blows/0.3m / DCPT ◆	REMARKS & GRAINSIZE DISTRIBUTION (%) GR SA SI CL
0.0	104				FILL - SAND and GRAVEL, Brown, Compact	SS1		14		
1.0	103					SS2		11		
					CLAY, trace Sand, trace Gravel, Brown to Grey, Firm to Very Stiff	SS3		9		
2.0	102					SS4		15		
3.0	101					SS5		10		
						SS6		9	>>×	> 200 kPa
4.0	100				SANDY	SS7		12	>>×3	> 200 kPa
5.0	99					SS8		15	>>×	> 200 kPa
						SS9		9		
6.0	98					SS10		4		
7.0	97					SS11		4		
						SS12		7		
8.0	96				End of Borehole at 7.8 m due to Auger Refusal.	SS13		100+		

% MOISTURE: 20 40 60 80 — VANE (kPa) ×: 40 80 120 160 — SPT (N) □ Blows/0.3m / DCPT ◆: 20 40 60 80

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SAMPLE TYPE LEGEND

- Auger Sample
- Split Spoon Sample
- Bulk Sample
- Rock Core
- Hiller Peat Sampler
- Shelby Tube
- Bentonite
- Sand
- ×3 Numbers refers to Sensitivity

ENCLOSURE 9

LOG OF BOREHOLE BH2017-07

DST REF. No.: **TS-SO-29563**
CLIENT: **Trinity Development Group Inc.**
PROJECT: **Geotechnical Drilling for the Proposed Development**
LOCATION: **951 Gladstone Avenue, Ottawa, ON**
SURFACE ELEV.: **102.4 metres**

Drilling Data
METHOD: **Hollow Stem Auger**
START DATE: **6/27/2017**
COMPLETION DATE: **6/27/2017**
COORDINATES: **5028127** m N, **443952** m E

DEPTH (m)	ELEV. (m)	Water Data	% MOISTURE (W_P W W_I)	Symbol	MATERIAL DESCRIPTION	SAMPLE #	SAMPLE TYPE	'N' VALUE	VANE (kPa) × / SPT (N) □ Blows/0.3m / DCPT ◆	REMARKS & GRAINSIZE DISTRIBUTION (%) GR SA SI CL
0.0	102				ASPHALT (75 mm)					
					FILL - SAND and GRAVEL, trace Silt, Brown, Compact to Very Dense	SS1		11		
1.0	101					SS2		13		
						SS3		35		
2.0	100					SS4		11		
3.0	99					SS5		53		
						SS6		32		
4.0	98				SILTY CLAY, Brown to Grey, Soft to Very Stiff	SS7		13		
						SS8		5		
5.0	97					SS9		6	×	
6.0	96				SANDY, trace Gravel	SS10		2	×3	
						SS11		12		
7.0	95					SS12		18		
					SAND and GRAVEL, Dark Grey, Compact	SS13		24		
8.0	94				End of Borehole at 8.0 m due to Auger Refusal.	SS14		100+		

% MOISTURE: 20 40 60 80 — VANE (kPa) ×: 40 80 120 160 — SPT (N) □ Blows/0.3m / DCPT ◆: 20 40 60 80

BOREHOLE (OTTAWA) TS-SO-29563.GPJ DATA TEMPLATE.GDT 28/7/17

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SAMPLE TYPE LEGEND

- Auger Sample
- Split Spoon Sample
- Bulk Sample
- Rock Core
- Hiller Peat Sampler
- Shelby Tube
- Bentonite
- Sand
- ×3 Numbers refers to Sensitivity

ENCLOSURE 10

LOG OF BOREHOLE BH2017-08

DST REF. No.: **TS-SO-29563**
CLIENT: **Trinity Development Group Inc.**
PROJECT: **Geotechnical Drilling for the Proposed Development**
LOCATION: **951 Gladstone Avenue, Ottawa, ON**
SURFACE ELEV.: **103.9 metres**

Drilling Data
METHOD: **Hollow Stem Auger**
START DATE: **7/10/2017**
COMPLETION DATE: **7/10/2017**
COORDINATES: **5028091** m N, **443980** m E

DEPTH (m)	ELEV. (m)	MATERIAL DESCRIPTION	SAMPLE #	'N' VALUE	REMARKS & GRAINSIZE DISTRIBUTION (%) GR SA SI CL
		ASPHALT (25 mm)			
		FILL - SAND and GRAVEL, Brown, Loose to Compact	SS1	20	
1.0	103		SS2	8	
			SS3	8	
2.0	102		SS4	11	
		CLAY, some Sand, some Gravel, Brown to Grey, Soft to Very Stiff	SS5	8	
3.0	101		SS6	10	
4.0	100		SS7	9	> 200 kPa
			SS8	6	> 200 kPa
5.0	99		SS9	13	> 200 kPa
		SANDY, trace Rock Fragment	SS10	3	
6.0	98		SS11	10	
			SS12	100+	
7.0	97	BEDROCK Limestone, Grey	RC1		TCR = 100% SCR = 96% RQD = 93%
8.0	96		RC2		TCR = 85% SCR = 78% RQD = 75%
	95				

Water Data: Wp W Wl; % MOISTURE 20 40 60 80; Symbol; SAMPLE TYPE; VANE (kPa) × 40 80 120 160; SPT (N) □ Blows/0.3m DCPT ◆ 20 40 60 80

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SAMPLE TYPE LEGEND
Auger Sample; Split Spoon Sample; Bulk Sample; Rock Core; Hiller Peat Sampler; Shelby Tube; Bentonite; Sand; ×3 Numbers refers to Sensitivity

ENCLOSURE 11

BOREHOLE (OTTAWA) TS-SO-29563.GPJ DATA TEMPLATE.GDT 28/7/17

LOG OF BOREHOLE BH2017-08

DST REF. No.: **TS-SO-29563**
CLIENT: **Trinity Development Group Inc.**
PROJECT: **Geotechnical Drilling for the Proposed Development**
LOCATION: **951 Gladstone Avenue, Ottawa, ON**
SURFACE ELEV.: **103.9 metres**

Drilling Data
METHOD: **Hollow Stem Auger**
START DATE: **7/10/2017**
COMPLETION DATE: **7/10/2017**
COORDINATES: **5028091** m N, **443980** m E

DEPTH (m)	ELEV. (m)	MATERIAL DESCRIPTION	SAMPLE #	'N' VALUE	REMARKS & GRAINSIZE DISTRIBUTION (%) GR SA SI CL
10.0	94		RC3		TCR = 100% SCR = 100% RQD = 98%
11.0	93		RC4		TCR = 98% SCR = 98% RQD = 90%
12.0	92				
13.0	91		RC5		TCR = 100% SCR = 100% RQD = 100%
		End of Borehole at 13.6 m.			
14.0	90				
15.0	89				
16.0	88				
17.0	87				
	86				

Water Data: Wp W Wl; % MOISTURE 20 40 60 80; Symbol; SAMPLE TYPE; VANE (kPa) × 40 80 120 160; SPT (N) □ Blows/0.3m DCPT ◆ 20 40 60 80

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SAMPLE TYPE LEGEND
Auger Sample; Split Spoon Sample; Bulk Sample; Rock Core; Hiller Peat Sampler; Shelby Tube; Bentonite; Sand; ×3 Numbers refers to Sensitivity

ENCLOSURE 12

BOREHOLE (OTTAWA) TS-SO-29563.GPJ DATA TEMPLATE.GDT 28/7/17

LOG OF BOREHOLE BH2017-09

DST REF. No.: **TS-SO-29563**
CLIENT: **Trinity Development Group Inc.**
PROJECT: **Geotechnical Drilling for the Proposed Development**
LOCATION: **951 Gladstone Avenue, Ottawa, ON**
SURFACE ELEV.: **99.6 metres**

Drilling Data
METHOD: **Hollow Stem Auger**
START DATE: **7/6/2017**
COMPLETION DATE: **7/6/2017**
COORDINATES: **5028115** m N, **444005** m E

DEPTH (m)	ELEV. (m)	Water Data	% MOISTURE (W_p W W_l)	Symbol	MATERIAL DESCRIPTION	SAMPLE #	SAMPLE TYPE	'N' VALUE	VANE (kPa) × / SPT (N) □ Blows/0.3m / DCPT ◆	REMARKS & GRAINSIZE DISTRIBUTION (%) GR SA SI CL
0.0	99.6				ASPHALT (125 mm)					
					FILL - SAND and GRAVEL, Brown, Compact	SS1		17		
1.0	98.6				CLAY, trace Sand, trace Gravel, Brown to Grey, Soft to Very Stiff	SS2		11		5 42 (53)
						SS3		7		
2.0	97.6					SS4		17	>>×2	> 200 kPa
					SANDY, some Gravel	SS5		4	>>×	> 200 kPa
3.0	96.6					SS6		26		
					some Gravel	SS7		11		
4.0	95.6					SS8		100+		
					End of Borehole at 4.5 m due to Auger Refusal.					
5.0	94.6									
6.0	93.6									
7.0	92.6									
8.0	91.6									

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SAMPLE TYPE LEGEND
Auger Sample; Split Spoon Sample; Bulk Sample; Rock Core; Hiller Peat Sampler; Shelby Tube; Bentonite; Sand; ×3 Numbers refers to Sensitivity

ENCLOSURE 13

LOG OF BOREHOLE BH2017-10

DST REF. No.: **TS-SO-29563**
CLIENT: **Trinity Development Group Inc.**
PROJECT: **Geotechnical Drilling for the Proposed Development**
LOCATION: **951 Gladstone Avenue, Ottawa, ON**
SURFACE ELEV.: **102.3 metres**

Drilling Data
METHOD: **Hollow Stem Auger**
START DATE: **6/27/2017**
COMPLETION DATE: **6/27/2017**
COORDINATES: **5028139** m N, **443966** m E

DEPTH (m)	ELEV. (m)	Water Data	% MOISTURE (W_p W W_l)	Symbol	MATERIAL DESCRIPTION	SAMPLE #	SAMPLE TYPE	'N' VALUE	VANE (kPa) × / SPT (N) □ Blows/0.3m / DCPT ◆	REMARKS & GRAINSIZE DISTRIBUTION (%) GR SA SI CL
0.0	102.3				ASPHALT (75 mm)					
					FILL - SAND and GRAVEL, Brown, Very Loose to Dense	SS1		36		
1.0	101.3					SS2		35		
						SS3		17		
2.0	100.3					SS4		13		32 59 (9)
					FILL - CLAY	SS5		3		
3.0	99.3					SS6		5		
					CLAY, Brown to Grey, Soft to Stiff	SS7		11		
4.0	98.3					SS8		8		
						SS9		7	×	
5.0	97.3					SS10		3	×	
					SANDY, trace Gravel	SS11		1	×	
6.0	96.3					SS12		9		
					Rock Fragment	SS13		8		
7.0	95.3					SS14		29		
8.0	94.3				SAND and GRAVEL, Grey	SS15		100+		

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SAMPLE TYPE LEGEND
Auger Sample; Split Spoon Sample; Bulk Sample; Rock Core; Hiller Peat Sampler; Shelby Tube; Bentonite; Sand; ×3 Numbers refers to Sensitivity

ENCLOSURE 14

LOG OF BOREHOLE BH2017-10

DST REF. No.: **TS-SO-29563**
CLIENT: **Trinity Development Group Inc.**
PROJECT: **Geotechnical Drilling for the Proposed Development**
LOCATION: **951 Gladstone Avenue, Ottawa, ON**
SURFACE ELEV.: **102.3 metres**

Drilling Data
METHOD: **Hollow Stem Auger**
START DATE: **6/27/2017**
COMPLETION DATE: **6/27/2017**
COORDINATES: **5028139** m N, **443966** m E

DEPTH (m)	ELEV. (m)	Water Data	% MOISTURE (W_p W W_l)	Symbol	MATERIAL DESCRIPTION	SAMPLE #	SAMPLE TYPE	'N' VALUE	VANE (kPa) × / SPT (N) □ Blows/0.3m / DCPT ◆	REMARKS & GRAINSIZE DISTRIBUTION (%) GR SA SI CL
	93				BEDROCK Limestone, Grey					
10.0	92					RC1				TCR = 98% SCR = 92% RQD = 85%
11.0	91					RC2				TCR = 100% SCR = 100% RQD = 100%
12.0	90									
13.0	89					RC3				TCR = 98% SCR = 98% RQD = 98%
14.0	88					RC4				TCR = 100% SCR = 100% RQD = 100%
15.0	87									
16.0	86					RC5				TCR = 100% SCR = 100% RQD = 100%
17.0	85				End of Borehole at 16.6 m.					

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SAMPLE TYPE LEGEND
Auger Sample; Split Spoon Sample; Bulk Sample; Rock Core; Hiller Peat Sampler; Shelby Tube; Bentonite; Sand; ×3 Numbers refers to Sensitivity

ENCLOSURE 15

LOG OF BOREHOLE BH2017-11

DST REF. No.: **TS-SO-29563**
CLIENT: **Trinity Development Group Inc.**
PROJECT: **Geotechnical Drilling for the Proposed Development**
LOCATION: **951 Gladstone Avenue, Ottawa, ON**
SURFACE ELEV.: **102.1 metres**

Drilling Data
METHOD: **Hollow Stem Auger**
START DATE: **7/4/2017**
COMPLETION DATE: **7/4/2017**
COORDINATES: **5028155** m N, **443948** m E

DEPTH (m)	ELEV. (m)	Water Data	% MOISTURE (W_p W W_l)	Symbol	MATERIAL DESCRIPTION	SAMPLE #	SAMPLE TYPE	'N' VALUE	VANE (kPa) × / SPT (N) □ Blows/0.3m / DCPT ◆	REMARKS & GRAINSIZE DISTRIBUTION (%) GR SA SI CL
	102				ASPHALT					
					FILL - SAND and GRAVEL, Brown, Loose to Compact	SS1		10		
1.0	101					SS2		8		
						SS3		11		
2.0	100					SS4		16		
						SS5		14		
3.0	99				CLAYEY	SS6		9		7 50 (43)
					CLAY, Brown to Grey, Soft to Very Stiff	SS7		19		
4.0	98					SS8		8		
5.0	97					SS9		9		
						SS10		3	×3	
6.0	96					SS11		2		
						SS12		13		
7.0	95					SS13		17		
8.0	94				SAND and GRAVEL, Grey, Compact to Very Dense	SS14		100+		
					End of Borehole at 8.4 m due to Auger Refusal.					

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SAMPLE TYPE LEGEND
Auger Sample; Split Spoon Sample; Bulk Sample; Rock Core; Hiller Peat Sampler; Shelby Tube; Bentonite; Sand; ×3 Numbers refers to Sensitivity

ENCLOSURE 16

LOG OF BOREHOLE BH2017-12

DST REF. No.: **TS-SO-29563**
CLIENT: **Trinity Development Group Inc.**
PROJECT: **Geotechnical Drilling for the Proposed Development**
LOCATION: **951 Gladstone Avenue, Ottawa, ON**
SURFACE ELEV.: **102.1 metres**

Drilling Data
METHOD: **Hollow Stem Auger**
START DATE: **7/4/2017**
COMPLETION DATE: **7/4/2017**
COORDINATES: **5028159** m N, **443963** m E

DEPTH (m)	ELEV. (m)	Water Data	% MOISTURE (W_p W W_l)	Symbol	MATERIAL DESCRIPTION	SAMPLE #	SAMPLE TYPE	'N' VALUE	VANE (kPa) × / SPT (N) □ Blows/0.3m / DCPT ◆	REMARKS & GRAINSIZE DISTRIBUTION (%) GR SA SI CL
0.0	102				ASPHALT (75 mm)					
					FILL - SAND and GRAVEL, Black, Loose to Dense	SS1		11		
1.0	101					SS2		6		
						SS3		45		
2.0	100					SS4		11		
						SS5		4		
3.0	99				CLAY, Brown to Grey, Soft to Very Stiff	SS6		9		
						SS7		22		
4.0	98					SS8		6		
5.0	97					SS9		5	×	
						SS10		1	×	
6.0	96					SS11		2	×2	
						SS12		3		
7.0	95					SS13		5	×2	
8.0	94				SANDY CLAY, some Gravel, Grey, Loose	SS14		100+		
					End of Borehole at 8.5 m due to Auger Refusal.					

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SAMPLE TYPE LEGEND

Auger Sample · Rock Core · Bentonite
Split Spoon Sample · Hiller Peat Sampler · Sand
Bulk Sample · Shelby Tube · ×3 Numbers refers to Sensitivity

ENCLOSURE 17

BOREHOLE (OTTAWA) TS-SO-29563.GPJ DATA TEMPLATE.GDT 28/7/17

LOG OF BOREHOLE BH2017-13

DST REF. No.: **TS-SO-29563**
CLIENT: **Trinity Development Group Inc.**
PROJECT: **Geotechnical Drilling for the Proposed Development**
LOCATION: **951 Gladstone Avenue, Ottawa, ON**
SURFACE ELEV.: **102.2 metres**

Drilling Data
METHOD: **Hollow Stem Auger**
START DATE: **6/28/2017**
COMPLETION DATE: **6/28/2017**
COORDINATES: **5028143** m N, **443978** m E

DEPTH (m)	ELEV. (m)	Water Data	% MOISTURE (W_p W W_l)	Symbol	MATERIAL DESCRIPTION	SAMPLE #	SAMPLE TYPE	'N' VALUE	VANE (kPa) × / SPT (N) □ Blows/0.3m / DCPT ◆	REMARKS & GRAINSIZE DISTRIBUTION (%) GR SA SI CL
0.0	102				ASPHALT (75 mm)					
					FILL - SAND and GRAVEL, Brown	SS1		15		
1.0	101					SS2		14		
					CLAY, trace Gravel, Brown, Stiff	SS3		9		
2.0	100				End of Borehole at 1.8 m due to Auger Refusal.					
3.0	99									
4.0	98									
5.0	97									
6.0	96									
7.0	95									
8.0	94									

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SAMPLE TYPE LEGEND

Auger Sample · Rock Core · Bentonite
Split Spoon Sample · Hiller Peat Sampler · Sand
Bulk Sample · Shelby Tube · ×3 Numbers refers to Sensitivity

ENCLOSURE 18

BOREHOLE (OTTAWA) TS-SO-29563.GPJ DATA TEMPLATE.GDT 28/7/17

APPENDIX D

GEOTECHNICAL LABORATORY TEST RESULTS

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MOISTURE CONTENT DATA SHEET

PROJECT NO.: TS-SO-29563 **PROJECT:** Trinity Development Group Geotech Investigation

TEST DATE: 2017-07-18 **TECH :** E.RP.

SAMPLE #	DEPTH (m)	DATE SAMPLED (mm/dd/yy)	WET WT. + TARE	DRY WT. + TARE	TARE	PAN #	% MOISTURE	DESCRIPTION
BH2017-1 SS-1	Refer to borehole logs	2017-07-05	282.7	273.2	70		4.7	Refer to borehole logs
BH2017-1 SS-2	Refer to borehole logs	2017-07-05	262.8	252.8	109.8		7.0	Refer to borehole logs
BH2017-1 SS-3	Refer to borehole logs	2017-07-05	298.6	289.9	109.1		4.8	Refer to borehole logs
BH2017-1 SS-4	Refer to borehole logs	2017-07-05	262.8	230.3	110.4		27.1	Refer to borehole logs
BH2017-1 SS-5	Refer to borehole logs	2017-07-05	257.2	218	110.3		36.4	Refer to borehole logs
BH2017-1 SS-6	Refer to borehole logs	2017-07-05	277.6	239.9	123.5		32.4	Refer to borehole logs
BH2017-1 SS-7	Refer to borehole logs	2017-07-05	308.7	288.7	98.6		10.5	Refer to borehole logs
BH2017-1 SS-8	Refer to borehole logs	2017-07-05	323	306.6	115.6		8.6	Refer to borehole logs
BH2017-1 SS-9	Refer to borehole logs	2017-07-05	353	331.8	93.3		8.9	Refer to borehole logs
BH2017-1 SS-10	Refer to borehole logs	2017-07-05	288.7	273.3	120.9		10.1	Refer to borehole logs
BH2017-1 SS-11	Refer to borehole logs	2017-07-05	283.5	276.8	126.7		4.5	Refer to borehole logs
BH2017-1 SS-12	Refer to borehole logs	2017-07-05	628.5	609.8	403.5		9.1	Refer to borehole logs
BH2017-1 SS-13	Refer to borehole logs	2017-07-05	511.3	505.2	402.2		5.9	Refer to borehole logs

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MOISTURE CONTENT DATA SHEET

PROJECT NO.: TS-SO-29563 **PROJECT:** Trinity Development Group Geotech Investigation

TEST DATE: 2017-07-18 **TECH :** E.RP.

SAMPLE #	DEPTH (m)	DATE SAMPLED (mm/dd/yy)	WET WT. + TARE	DRY WT. + TARE	TARE	PAN #	% MOISTURE	DESCRIPTION
BH2017-2 SS-1	Refer to borehole logs	2017-07-06	140.71	136.56	4.25	M36	3.1	Refer to borehole logs
BH2017-2 SS-2	Refer to borehole logs	2017-07-06	148.14	141.84	4.28	M33	4.6	Refer to borehole logs
BH2017-2 SS-3	Refer to borehole logs	2017-07-06	108.73	105.31	4.24	M6	3.4	Refer to borehole logs
BH2017-2 SS-4	Refer to borehole logs	2017-07-06	137.25	128.28	4.25	M21	7.2	Refer to borehole logs
BH2017-2 SS-5	Refer to borehole logs	2017-07-06	31.53	24.01	4.39	M29	38.3	Refer to borehole logs
BH2017-2 SS-6	Refer to borehole logs	2017-07-06	1046.67	761.27	85.33	A4	42.2	Refer to borehole logs
BH2017-2 SS-7	Refer to borehole logs	2017-07-06	110.82	81.77	4.24	M4	37.5	Refer to borehole logs
BH2017-2 SS-8	Refer to borehole logs	2017-07-06	200.08	174.2	4.3	M3	15.2	Refer to borehole logs
BH2017-2 SS-9	Refer to borehole logs	2017-07-06	145.22	127.76	4.28	M7	14.1	Refer to borehole logs
BH2017-2 SS-10	Refer to borehole logs	2017-07-06	124.22	111.48	4.28	M38	11.9	Refer to borehole logs
BH2017-2 SS-11	Refer to borehole logs	2017-07-06	131.44	124.52	4.32	M15	5.8	Refer to borehole logs
BH2017-3 SS-1	Refer to borehole logs	2017-07-05	93.06	90.89	4.33	M5	2.5	Refer to borehole logs
BH2017-3 SS-2	Refer to borehole logs	2017-07-05	108.97	101.84	4.56	M11	7.3	Refer to borehole logs
BH2017-3 SS-3	Refer to borehole logs	2017-07-05	86.48	78.79	4.18	M23	10.3	Refer to borehole logs
BH2017-3 SS-4	Refer to borehole logs	2017-07-05	177.3	169.06	4.86	M2	5.0	Refer to borehole logs
BH2017-3 SS-5	Refer to borehole logs	2017-07-05	149	110.31	4.49	M35	36.6	Refer to borehole logs
BH2017-3 SS-6	Refer to borehole logs	2017-07-05	176.7	133.26	4.37	M32	33.7	Refer to borehole logs
BH2017-3 SS-7	Refer to borehole logs	2017-07-05	862.93	686.16	167.33	B16	34.1	Refer to borehole logs
BH2017-3 SS-8	Refer to borehole logs	2017-07-05	184.43	161.38	4.18	M18	14.7	Refer to borehole logs
BH2017-3 SS-9	Refer to borehole logs	2017-07-05	210.03	178.23	4.2	M22	18.3	Refer to borehole logs
BH2017-3 SS-10	Refer to borehole logs	2017-07-05	228.03	209.48	4.25	M25	9.0	Refer to borehole logs
BH2017-3 SS-11	Refer to borehole logs	2017-07-05	113.53	104.98	4.39	M12	8.5	Refer to borehole logs
BH2017-4 SS-1	Refer to borehole logs	2017-07-06	89.35	86.89	4.38	M31	3.0	Refer to borehole logs
BH2017-4 SS-2	Refer to borehole logs	2017-07-06	107.97	103.06	4.67	M39	5.0	Refer to borehole logs
BH2017-4 SS-3	Refer to borehole logs	2017-07-06	107.66	103.38	4.46	M40	4.3	Refer to borehole logs
BH2017-4 SS-4	Refer to borehole logs	2017-07-06	146.85	113.02	4.56	M26	31.2	Refer to borehole logs
BH2017-4 SS-5	Refer to borehole logs	2017-07-06	92.78	82.83	4.29	M17	12.7	Refer to borehole logs

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MOISTURE CONTENT DATA SHEET

PROJECT NO.: TS-SO-29563 **PROJECT:** Trinity Development Group Geotech Investigation

TEST DATE: 7/18/2017 & 7/24/17 **TECH :** E.RP. / M.C.

SAMPLE #	DEPTH (m)	DATE SAMPLED (mm/dd/yy)	WET WT. + TARE	DRY WT. + TARE	TARE	PAN #	% MOISTURE	DESCRIPTION
BH2017-4 SS-6	Refer to borehole logs	2017-07-06	167.91	143.81	4.33	M37	17.3	Refer to borehole logs
BH2017-4 SS-7	Refer to borehole logs	2017-07-06	173.17	153.86	4.37	M14	12.9	Refer to borehole logs
BH2017-4 SS-8	Refer to borehole logs	2017-07-06	92.91	84.41	4.32	M27	10.6	Refer to borehole logs
BH2017-5 SS-1	Refer to borehole logs	2017-07-07	139.51	136.67	4.34	M30	2.1	Refer to borehole logs
BH2017-5 SS-2	Refer to borehole logs	2017-07-07	144.94	138.12	4.29	M9	5.1	Refer to borehole logs
BH2017-5 SS-3	Refer to borehole logs	2017-07-07	120.79	112.97	4.3	M10	7.2	Refer to borehole logs
BH2017-5 SS-4	Refer to borehole logs	2017-07-07	546.28	517.73	179.86	B11	8.4	Refer to borehole logs
BH2017-5 SS-5	Refer to borehole logs	2017-07-07	109.67	107.51	4.27	M8	2.1	Refer to borehole logs
BH2017-5 SS-6	Refer to borehole logs	2017-07-07	95.07	72.85	4.38	M16	32.5	Refer to borehole logs
BH2017-5 SS-7	Refer to borehole logs	2017-07-07	103.67	78.08	4.24	M34	34.7	Refer to borehole logs
BH2017-5 SS-8	Refer to borehole logs	2017-07-07	83.21	63.42	4.28	M24	33.5	Refer to borehole logs
BH2017-5 SS-9	Refer to borehole logs	2017-07-07	201.28	164.95	4.37	M41	22.6	Refer to borehole logs
BH2017-5 SS-10	Refer to borehole logs	2017-07-07	206.99	184.28	4.36	M13	12.6	Refer to borehole logs
BH2017-5 SS-11	Refer to borehole logs	2017-07-07	172.3	150.2	4.4	M11	15.2	Refer to borehole logs
BH2017-5 SS-12	Refer to borehole logs	2017-07-07	159.5	141.6	4.1	M23	13.0	Refer to borehole logs
BH2017-6 SS-1	Refer to borehole logs	2017-07-07	124.4	117	4.2	M36	6.6	Refer to borehole logs
BH2017-6 SS-2	Refer to borehole logs	2017-07-07	111.5	110.2	4.1	M33	1.2	Refer to borehole logs
BH2017-6 SS-3	Refer to borehole logs	2017-07-07	155.7	117	4	M6	34.2	Refer to borehole logs
BH2017-6 SS-4	Refer to borehole logs	2017-07-07	158.7	114.3	4.2	M21	40.3	Refer to borehole logs
BH2017-6 SS-5	Refer to borehole logs	2017-07-07	159.9	117.3	4.3	M29	37.7	Refer to borehole logs
BH2017-6 SS-6	Refer to borehole logs	2017-07-07	157.8	112.4	4.3	M41	42.0	Refer to borehole logs
BH2017-6 SS-7	Refer to borehole logs	2017-07-07	161.9	114.5	4.2	M3	43.0	Refer to borehole logs
BH2017-6 SS-8	Refer to borehole logs	2017-07-07	801.1	747.48	177.02	B7	9.4	Refer to borehole logs
BH2017-6 SS-9	Refer to borehole logs	2017-07-07	160	145	4.3	M15	10.7	Refer to borehole logs
BH2017-6 SS-10	Refer to borehole logs	2017-07-07	159.6	146.4	4.3	M5	9.3	Refer to borehole logs
BH2017-6 SS-11	Refer to borehole logs	2017-07-07	161.8	148	4.1	M38	9.6	Refer to borehole logs
BH2017-6 SS-12	Refer to borehole logs	2017-07-07	158.9	146.6	4.4	M35	8.6	Refer to borehole logs

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MOISTURE CONTENT DATA SHEET

PROJECT NO.: TS-SO-29563 **PROJECT:** Trinity Development Group Geotech Investigation

TEST DATE: 2017-07-24 **TECH :** M.C.

SAMPLE #	DEPTH (m)	DATE SAMPLED (mm/dd/yy)	WET WT. + TARE	DRY WT. + TARE	TARE	PAN #	% MOISTURE	DESCRIPTION
BH2017-6 SS-13	Refer to borehole logs	2017-07-07	158.1	144.7	4.1	M32	9.5	Refer to borehole logs
BH2017-7 SS-1	Refer to borehole logs	2017-06-27	99.1	96.3	4.1	M11	3.0	Refer to borehole logs
BH2017-7 SS-2	Refer to borehole logs	2017-06-27	154	136.5	4.4	M23	13.2	Refer to borehole logs
BH2017-7 SS-3	Refer to borehole logs	2017-06-27	107.1	101.4	4.1	M18	5.9	Refer to borehole logs
BH2017-7 SS-4	Refer to borehole logs	2017-06-27	107.8	105.6	4.3	M23	2.2	Refer to borehole logs
BH2017-7 SS-5	Refer to borehole logs	2017-06-27	156.8	145.3	4.3	M22	8.2	Refer to borehole logs
BH2017-7 SS-6	Refer to borehole logs	2017-06-27	161.9	153.8	4.2	M25	5.4	Refer to borehole logs
BH2017-7 SS-7	Refer to borehole logs	2017-06-27	158	140.5	4.3	M12	12.8	Refer to borehole logs
BH2017-7 SS-8	Refer to borehole logs	2017-06-27	158	114.7	4.3	M31	39.2	Refer to borehole logs
BH2017-7 SS-9	Refer to borehole logs	2017-06-27	159.3	115.5	4.4	M39	39.4	Refer to borehole logs
BH2017-7 SS-10	Refer to borehole logs	2017-06-27	128.8	114.3	4.2	M40	13.2	Refer to borehole logs
BH2017-7 SS-11	Refer to borehole logs	2017-06-27	159.4	144.2	4.4	M26	10.9	Refer to borehole logs
BH2017-7 SS-12	Refer to borehole logs	2017-06-27	164	148.3	4.5	M17	10.9	Refer to borehole logs
BH2017-7 SS-13	Refer to borehole logs	2017-06-27	158	145.8	4.2	M37	8.6	Refer to borehole logs
BH2017-7 SS-14	Refer to borehole logs	2017-06-27	162.8	150.7	4.2	M14	8.3	Refer to borehole logs
BH2017-8 SS-1	Refer to borehole logs	2017-07-10	154.9	150.8	4.2	M10	2.8	Refer to borehole logs
BH2017-8 SS-2	Refer to borehole logs	2017-07-10	160.7	151.4	4.2	M9	6.3	Refer to borehole logs
BH2017-8 SS-3	Refer to borehole logs	2017-07-10	151.6	143.3	4.1	M8	6.0	Refer to borehole logs
BH2017-8 SS-4	Refer to borehole logs	2017-07-10	170	161.7	4.2	M34	5.3	Refer to borehole logs
BH2017-8 SS-5	Refer to borehole logs	2017-07-10	154.1	113.2	4.1	M24	37.5	Refer to borehole logs
BH2017-8 SS-6	Refer to borehole logs	2017-07-10	157	109.9	4.2	M41	44.6	Refer to borehole logs
BH2017-8 SS-7	Refer to borehole logs	2017-07-10	1323.85	973.91	169.39	B5	43.5	Refer to borehole logs
BH2017-8 SS-8	Refer to borehole logs	2017-07-10	157.2	115.8	4.2	M16	37.1	Refer to borehole logs
BH2017-8 SS-9	Refer to borehole logs	2017-07-10	160.8	121.4	4.3	M13	33.6	Refer to borehole logs
BH2017-8 SS-10	Refer to borehole logs	2017-07-10	168.1	144.3	4.2	M28	17.0	Refer to borehole logs
BH2017-8 SS-11	Refer to borehole logs	2017-07-10	158	141.3	4.3	M1	12.2	Refer to borehole logs
BH2017-8 SS-12	Refer to borehole logs	2017-07-10	253.8	235.7	89.6	A3	12.4	Refer to borehole logs

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MOISTURE CONTENT DATA SHEET

PROJECT NO.: TS-SO-29563 **PROJECT:** Trinity Development Group Geotech Investigation

TEST DATE: 7/24/2017 & 7/25/17 **TECH :** M.C.

SAMPLE #	DEPTH (m)	DATE SAMPLED (mm/dd/yy)	WET WT. + TARE	DRY WT. + TARE	TARE	PAN #	% MOISTURE	DESCRIPTION
BH2017-9 SS-1	Refer to borehole logs	2017-07-10	253.5	251.1	94.8	A8	1.5	Refer to borehole logs
BH2017-9 SS-2	Refer to borehole logs	2017-07-10	394.4	347.53	168.98	B2	26.3	Refer to borehole logs
BH2017-9 SS-3	Refer to borehole logs	2017-07-10	257.7	213.8	94	A1	36.6	Refer to borehole logs
BH2017-9 SS-4	Refer to borehole logs	2017-07-10	240.6	208.6	84.5	A6	25.8	Refer to borehole logs
BH2017-9 SS-5	Refer to borehole logs	2017-07-10	53	49.1	14.2	A6	11.2	Refer to borehole logs
BH2017-9 SS-6	Refer to borehole logs	2017-07-10	320.4	306.5	169.5	B5	10.1	Refer to borehole logs
BH2017-9 SS-7	Refer to borehole logs	2017-07-10	321.1	306.2	164	B17	10.5	Refer to borehole logs
BH2017-9 SS-8	Refer to borehole logs	2017-07-10	No Recovery					Refer to borehole logs
BH2017-10 SS-1	Refer to borehole logs	2017-06-27	324.9	319.9	164.6	B8	3.2	Refer to borehole logs
BH2017-10 SS-2	Refer to borehole logs	2017-06-27	253.1	247	166.6	B10	7.6	Refer to borehole logs
BH2017-10 SS-3	Refer to borehole logs	2017-06-27	320.4	303.9	173.5	B6	12.7	Refer to borehole logs
BH2017-10 SS-4	Refer to borehole logs	2017-06-27	586.57	518.01	171.22	B3	19.8	Refer to borehole logs
BH2017-10 SS-5	Refer to borehole logs	2017-06-27	88.1	80.05	4.2	M15	10.6	Refer to borehole logs
BH2017-10 SS-6	Refer to borehole logs	2017-06-27	155.6	124.88	4.2	M3	25.5	Refer to borehole logs
BH2017-10 SS-7	Refer to borehole logs	2017-06-27	111	98.62	4.2	M32	13.1	Refer to borehole logs
BH2017-10 SS-8	Refer to borehole logs	2017-06-27	163	124.71	4.2	M6	31.8	Refer to borehole logs
BH2017-10 SS-9	Refer to borehole logs	2017-06-27	166.8	114.07	4.3	M35	48.0	Refer to borehole logs
BH2017-10 SS-10	Refer to borehole logs	2017-06-27	158.6	119.58	4.2	M38	33.8	Refer to borehole logs
BH2017-10 SS-11	Refer to borehole logs	2017-06-27	160	137.92	4	M18	16.5	Refer to borehole logs
BH2017-10 SS-12	Refer to borehole logs	2017-06-27	168.6	153.26	4.1	M23	10.3	Refer to borehole logs
BH2017-10 SS-13	Refer to borehole logs	2017-06-27	163	151.16	4.3	M11	8.1	Refer to borehole logs
BH2017-10 SS-14	Refer to borehole logs	2017-06-27	165.4	152.01	4.2	M22	9.1	Refer to borehole logs
BH2017-10 SS-15	Refer to borehole logs	2017-06-27	380.66	367.03	164.82	B8	6.7	Refer to borehole logs
BH2017-11 SS-1	Refer to borehole logs	2017-07-04	166.5	149.23	4.3	M25	11.9	Refer to borehole logs
BH2017-11 SS-2	Refer to borehole logs	2017-07-04	70.1	64.64	4.4	M2	9.1	Refer to borehole logs
BH2017-11 SS-3	Refer to borehole logs	2017-07-04	114.1	98.12	4.2	M39	17.0	Refer to borehole logs
BH2017-11 SS-4	Refer to borehole logs	2017-07-04	146	142.18	4.2	M31	2.8	Refer to borehole logs

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MOISTURE CONTENT DATA SHEET

PROJECT NO.: TS-SO-29563 **PROJECT:** Trinity Development Group Geotech Investigation

TEST DATE: 2017-07-25 **TECH :** M.C.

SAMPLE #	DEPTH (m)	DATE SAMPLED (mm/dd/yy)	WET WT. + TARE	DRY WT. + TARE	TARE	PAN #	% MOISTURE	DESCRIPTION
BH2017-11 SS-5	Refer to borehole logs	2017-07-04	169.5	136.17	4.3	M12	25.3	Refer to borehole logs
BH2017-11 SS-6	Refer to borehole logs	2017-07-04	914.4	726.02	173.88	B20	34.1	Refer to borehole logs
BH2017-11 SS-7	Refer to borehole logs	2017-07-04	157.4	113.4	4.2	M33	40.3	Refer to borehole logs
BH2017-11 SS-8	Refer to borehole logs	2017-07-04	161.8	118.26	4.3	M36	38.2	Refer to borehole logs
BH2017-11 SS-9	Refer to borehole logs	2017-07-04	161.8	101.76	4.1	M4	61.5	Refer to borehole logs
BH2017-11 SS-10	Refer to borehole logs	2017-07-04	166.3	121.91	4.4	M29	37.8	Refer to borehole logs
BH2017-11 SS-11	Refer to borehole logs	2017-07-04	165.2	139.5	4.3	M21	19.0	Refer to borehole logs
BH2017-11 SS-12	Refer to borehole logs	2017-07-04	186.2	159.56	4.2	M5	17.1	Refer to borehole logs
BH2017-11 SS-13	Refer to borehole logs	2017-07-04	200.5	180.66	4.3	M14	11.2	Refer to borehole logs
BH2017-11 SS-14	Refer to borehole logs	2017-07-04	172.4	163.2	4.2	M17	5.8	Refer to borehole logs
BH2017-12 SS-1	Refer to borehole logs	2017-07-04	156.4	152.52	4.3	M37	2.6	Refer to borehole logs
BH2017-12 SS-2	Refer to borehole logs	2017-07-04	178.1	146.42	4.5	M40	22.3	Refer to borehole logs
BH2017-12 SS-3	Refer to borehole logs	2017-07-04	156.7	125.59	4.3	M26	25.6	Refer to borehole logs
BH2017-12 SS-4	Refer to borehole logs	2017-07-04	161.8	124.92	4.3	M30	30.6	Refer to borehole logs
BH2017-12 SS-5	Refer to borehole logs	2017-07-04	167.3	136.59	4.3	M27	23.2	Refer to borehole logs
BH2017-12 SS-6	Refer to borehole logs	2017-07-04	165.3	122.82	4.2	M10	35.8	Refer to borehole logs
BH2017-12 SS-7	Refer to borehole logs	2017-07-04	161.9	117.66	4.1	M9	39.0	Refer to borehole logs
BH2017-12 SS-8	Refer to borehole logs	2017-07-04	163.3	115.72	4	M8	42.6	Refer to borehole logs
BH2017-12 SS-9	Refer to borehole logs	2017-07-04	160.6	102.62	4.2	M34	58.9	Refer to borehole logs
BH2017-12 SS-10	Refer to borehole logs	2017-07-04	1523.12	1105.73	163.96	B17	44.3	Refer to borehole logs
BH2017-12 SS-11	Refer to borehole logs	2017-07-04	168.4	113.66	4.2	M24	50.0	Refer to borehole logs
BH2017-12 SS-12	Refer to borehole logs	2017-07-04	155	125.1	4.1	M41	24.7	Refer to borehole logs
BH2017-12 SS-13	Refer to borehole logs	2017-07-04	164.1	145.58	4.4	M16	13.1	Refer to borehole logs
BH2017-12 SS-14	Refer to borehole logs	2017-07-04	164.2	144.01	4.3	M13	14.5	Refer to borehole logs

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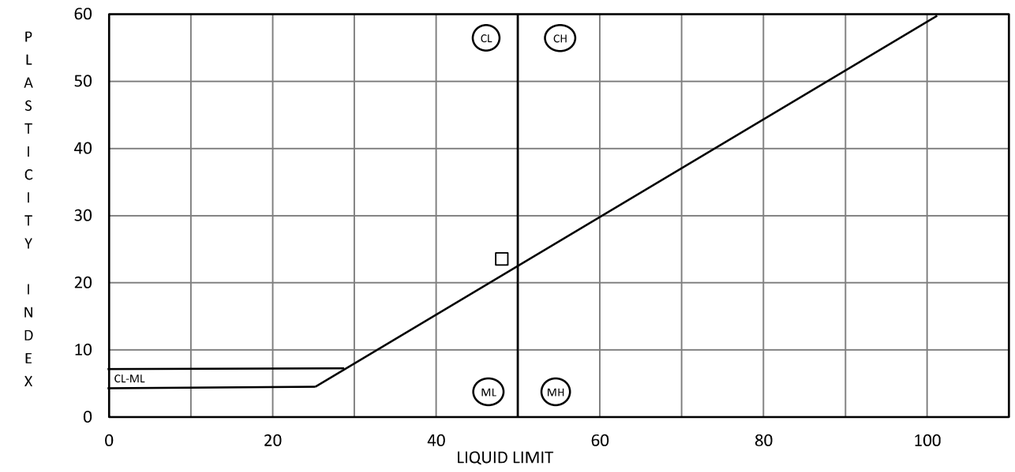
DST Ref. No.:	TS-SO-29563	**Date Sampled:**	
Project:	Trinity Development Group Geotech Investiga	**Sampled By:**	
Client:	Trinity Development Group	**Source:**	BH2017-2, SS-4
Project Location:		**Location:**	
Sample #:	**KWG-016-4**		
Description:			



ATTERBERG LIMIT AND MOISTURE RESULTS:

SUMMARY OF ATTERBERG AND MOISTURE CONTENT:	
Liquid Limit, LL	48
Plastic Limit, PL	24
Plasticity Index, PI	24
In Place Moisture Content (ASTM D2216) %	0.0

TESTING EQUIPMENT USED		
Plastic Limit	Hand Rolled	X
	Mechanical Rolling Device	
Liquid Limit Apparatus	Manual	X
	Mechanical	
Casagrande ASTM Tool	Metal	X
	Plastic	

SPECIMEN PREPARATION			
Wet		Washed on #40 Sieve	
Dry (Air)		Dry Sieved on #40 Sieve	X
Dry (Oven)	X		

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Hugh Arthur - Laboratory Supervisor

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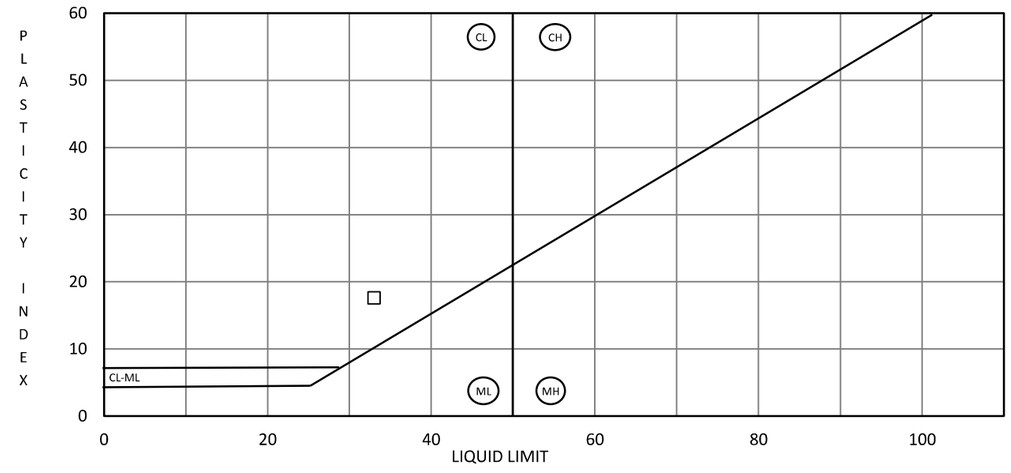
DST Ref. No.:	TS-SO-29563	**Date Sampled:**	
Project:	Trinity Development Group Geotech Investiga	**Sampled By:**	
Client:	Trinity Development Group	**Source:**	BH2017-3, SS-10
Project Location:		**Location:**	
Sample #:	**KWG-016-13**		
Description:			



ATTERBERG LIMIT AND MOISTURE RESULTS:

SUMMARY OF ATTERBERG AND MOISTURE CONTENT:	
Liquid Limit, LL	33
Plastic Limit, PL	15
Plasticity Index, PI	18
In Place Moisture Content (ASTM D2216) %	0.0

TESTING EQUIPMENT USED		
Plastic Limit	Hand Rolled	X
	Mechanical Rolling Device	
Liquid Limit Apparatus	Manual	X
	Mechanical	
Casagrande ASTM Tool	Metal	X
	Plastic	

SPECIMEN PREPARATION			
Wet		Washed on #40 Sieve	
Dry (Air)		Dry Sieved on #40 Sieve	X
Dry (Oven)	X		

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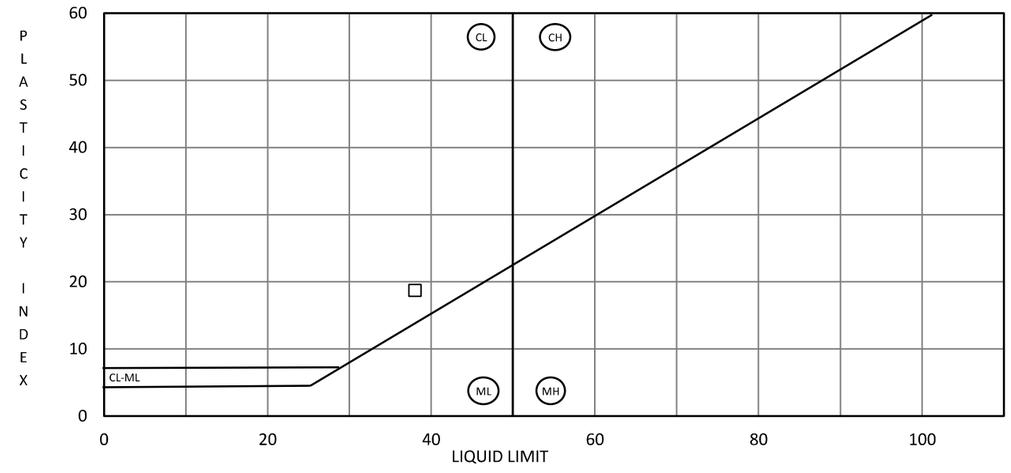
DST Ref. No.:	TS-SO-29563	**Date Sampled:**	
Project:	Trinity Development Group Geotech Investiga	**Sampled By:**	
Client:	Trinity Development Group	**Source:**	BH2017-3, SS-7
Project Location:		**Location:**	
Sample #:	**KWG-016-5**		
Description:			



ATTERBERG LIMIT AND MOISTURE RESULTS:

SUMMARY OF ATTERBERG AND MOISTURE CONTENT:	
Liquid Limit, LL	38
Plastic Limit, PL	19
Plasticity Index, PI	19
In Place Moisture Content (ASTM D2216) %	0.0

TESTING EQUIPMENT USED		
Plastic Limit	Hand Rolled	X
	Mechanical Rolling Device	
Liquid Limit Apparatus	Manual	X
	Mechanical	
Casagrande ASTM Tool	Metal	X
	Plastic	

SPECIMEN PREPARATION			
Wet		Washed on #40 Sieve	
Dry (Air)		Dry Sieved on #40 Sieve	X
Dry (Oven)	X		

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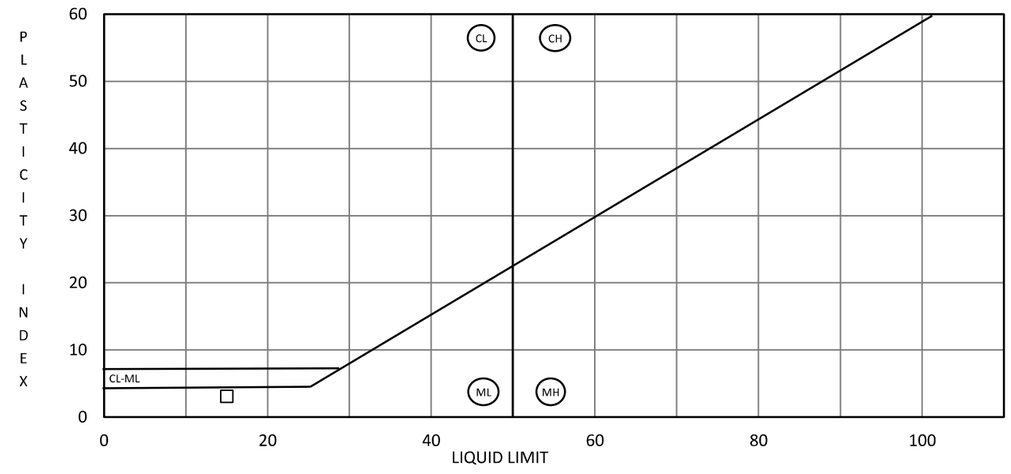
DST Ref. No.:	TS-SO-29563	**Date Sampled:**	
Project:	Trinity Development Group Geotech Investiga	**Sampled By:**	
Client:	Trinity Development Group	**Source:**	BH2017-6, SS-8
Project Location:		**Location:**	
Sample #:	**KWG-016-7**		
Description:			



ATTERBERG LIMIT AND MOISTURE RESULTS:

SUMMARY OF ATTERBERG AND MOISTURE CONTENT:	
Liquid Limit, LL	15
Plastic Limit, PL	12
Plasticity Index, PI	3
In Place Moisture Content (ASTM D2216) %	0.0

TESTING EQUIPMENT USED		
Plastic Limit	Hand Rolled	X
	Mechanical Rolling Device	
Liquid Limit Apparatus	Manual	X
	Mechanical	
Casagrande ASTM Tool	Metal	X
	Plastic	

SPECIMEN PREPARATION			
Wet		Washed on #40 Sieve	
Dry (Air)		Dry Sieved on #40 Sieve	X
Dry (Oven)	X		

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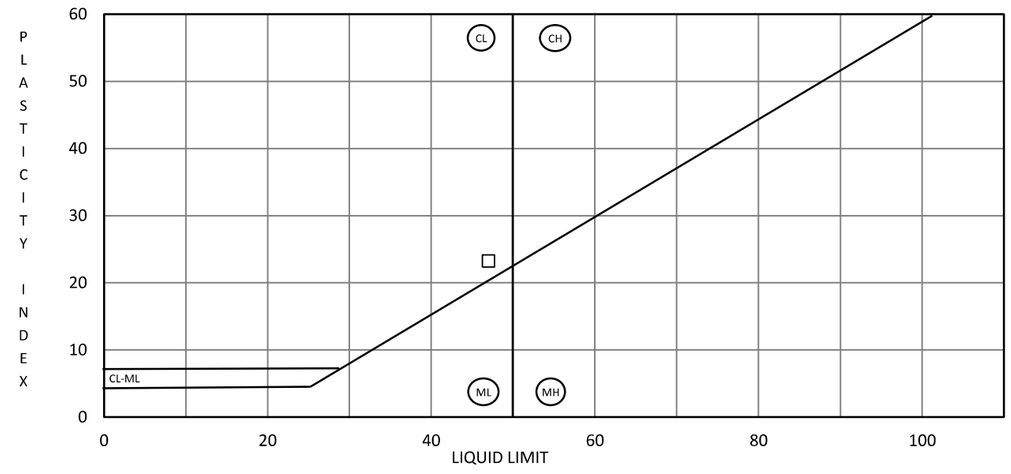
DST Ref. No.:	TS-SO-29563	**Date Sampled:**	
Project:	Trinity Development Group Geotech Investiga	**Sampled By:**	
Client:	Trinity Development Group	**Source:**	BH2017-8, SS-7
Project Location:		**Location:**	
Sample #:	**KWG-016-8**		
Description:			



ATTERBERG LIMIT AND MOISTURE RESULTS:

SUMMARY OF ATTERBERG AND MOISTURE CONTENT:	
Liquid Limit, LL	47
Plastic Limit, PL	24
Plasticity Index, PI	23
In Place Moisture Content (ASTM D2216) %	0.0

TESTING EQUIPMENT USED		
Plastic Limit	Hand Rolled	X
	Mechanical Rolling Device	
Liquid Limit Apparatus	Manual	X
	Mechanical	
Casagrande ASTM Tool	Metal	X
	Plastic	

SPECIMEN PREPARATION			
Wet		Washed on #40 Sieve	
Dry (Air)		Dry Sieved on #40 Sieve	X
Dry (Oven)	X		

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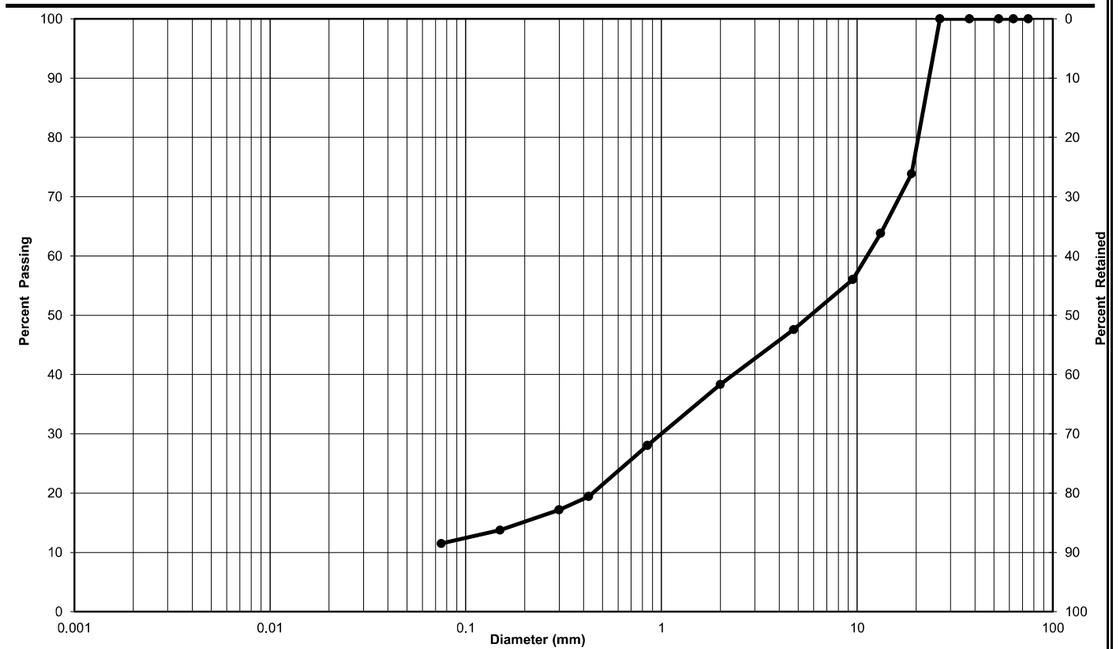
PARTICLE SIZE ANALYSIS OF SOILS

DST Ref. No.:	TS-SO-29563	**Date Sampled:**	January 0, 1900
Project:	Trinity Development Group Geotech Investig	**Sampled By:**	1900-01-00
Client:	Trinity Development Group	**Source:**	BH2017-5, SS-4
Project Location:	Ottawa, ON	**Location:**	0
Sample #:	KWG-016-6	**Description:**	Gravel and Sand, trace Clay/Silt



Clay & Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse
Particle-Size Limits as per USCS (ASTM D-2487)					

Soil Description	Gravel (%)	Sand (%)	Clay & Silt (%)
Gravel and Sand, trace Clay/Silt	52	37	11

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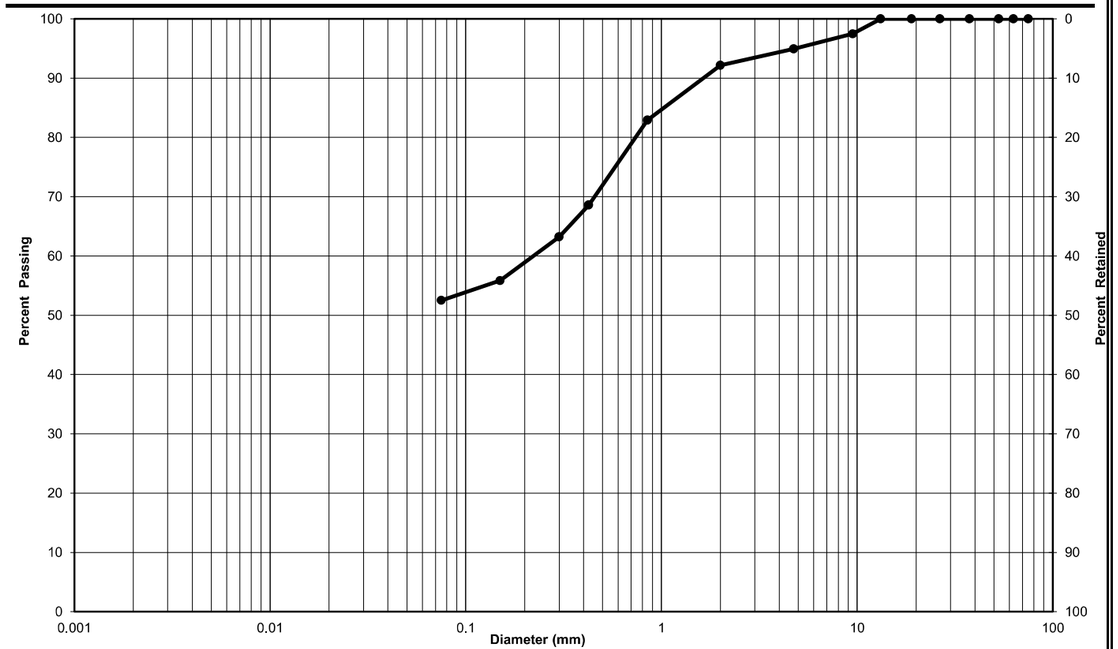
PARTICLE SIZE ANALYSIS OF SOILS

DST Ref. No.:	TS-SO-29563	**Date Sampled:**	January 0, 1900
Project:	Trinity Development Group Geotech Investig	**Sampled By:**	1900-01-00
Client:	Trinity Development Group	**Source:**	BH2017-9, SS-2
Project Location:	Ottawa, ON	**Location:**	0
Sample #:	KWG-016-9	**Description:**	Sand and Clay/Silt, trace Gravel



Clay & Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse
Particle-Size Limits as per USCS (ASTM D-2487)					

Soil Description	Gravel (%)	Sand (%)	Clay & Silt (%)
Sand and Clay/Silt, trace Gravel	5	42	53

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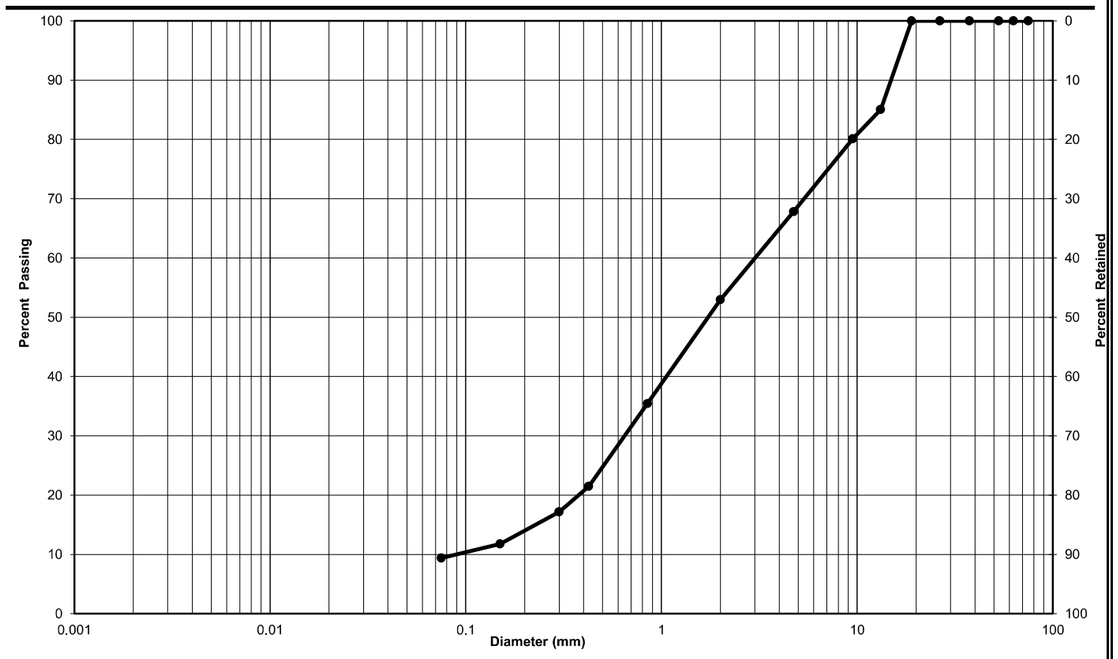
PARTICLE SIZE ANALYSIS OF SOILS

DST Ref. No.:	TS-SO-29563	**Date Sampled:**	January 0, 1900
Project:	Trinity Development Group Geotech Investig	**Sampled By:**	1900-01-00
Client:	Trinity Development Group	**Source:**	BH2017-10, SS-4
Project Location:	Ottawa, ON	**Location:**	0
Sample #:	KWG-016-10	**Description:**	Gravelley Sand, trace Clay & Silt



Clay & Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse
Particle-Size Limits as per USCS (ASTM D-2487)					

Soil Description	Gravel (%)	Sand (%)	Clay & Silt (%)
Gravelley Sand, trace Clay & Silt	32	59	9

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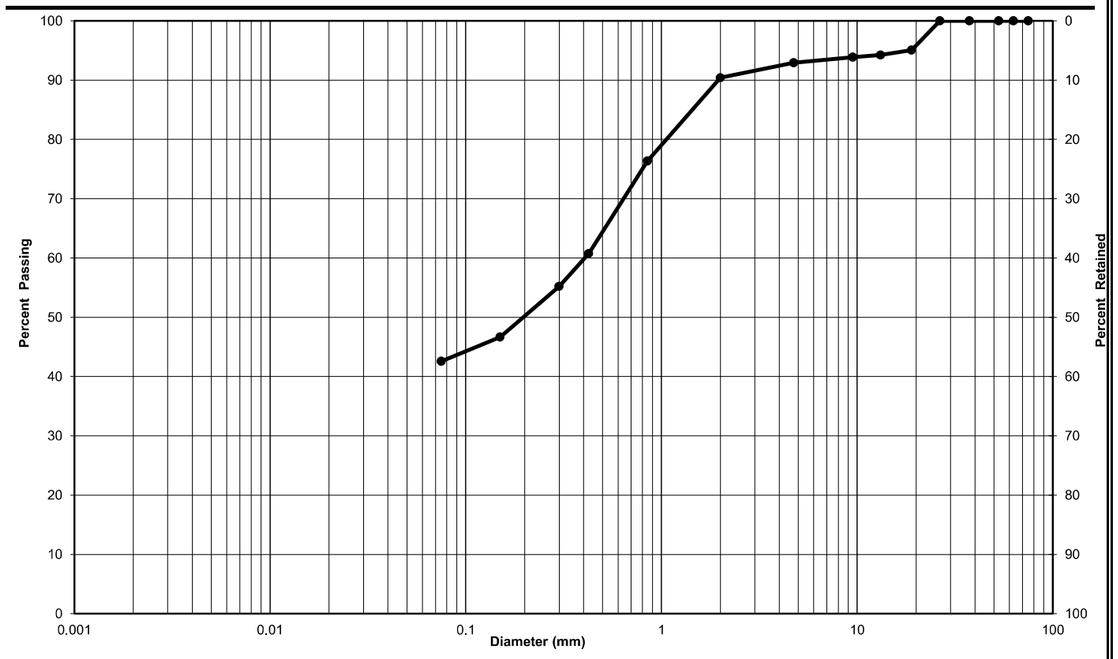
PARTICLE SIZE ANALYSIS OF SOILS

DST Ref. No.:	TS-SO-29563	**Date Sampled:**	January 0, 1900
Project:	Trinity Development Group Geotech Investig	**Sampled By:**	1900-01-00
Client:	Trinity Development Group	**Source:**	BH2017-11, SS-6
Project Location:	Ottawa, ON	**Location:**	0
Sample #:	KWG-016-12	**Description:**	Clay/Silt and Sand, trace Gravel



Clay & Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse
Particle-Size Limits as per USCS (ASTM D-2487)					

Soil Description	Gravel (%)	Sand (%)	Clay & Silt (%)
Clay/Silt and Sand, trace Gravel	7	50	43

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CONSULTING ENGINEERS •
Materials Testing and Inspection

File: L17-0460RC

July 19, 2017

DST Consulting Engineers Inc.
2150 Thurston Drive, Suite 203
Ottawa, Ontario
K1G 5T9

Attn: Mr. Amer Mohammad
amohammad@dstgroup.com

Dear Sir;

Unconfined Compressive Strength Testing
Rock Core Sample
Trinity Development – Geotechnical Investigation
DST Project No.: TS-SO-29563

Further to receipt of six (6) 60.5 to 63.5 mm diameter size rock core samples in our laboratory on July 18, 2017, Davroc Testing Laboratories Inc. is pleased to report the results of our tests.

As instructed, the core sample ends were ground, and the prepared core samples were tested for compressive strength in accordance with ASTM D 7012 Standard Test Method for "Compressive Strength and Elastic Moduli of Intact Rock Core Specimens under Varying States of Stress and Temperatures".

Test Results

The results of our tests are summarized on the following Table No. 1, and detailed test data are shown on the attached Rock Core Test Certificates.

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Unit 20 And Unit 21
Brampton, Ontario
Canada, L6S 5T4
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Fax: (905) 792-7829
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Table No. 1
Trinity Development – Geotechnical Investigation
DST Project No.: TS-SO-29563
Rock Core Unconfined Compressive Strength Test Result Summary

Davroc Sample No.	Borehole/Core No.	Depth	Unconfined Compressive Strength (MPa)
C974-1	BH2017-3/CR1	96.081 – 95.916	*127.6
C974-2	BH2017-3/CR5	90.124 – 89.845	125.7
C974-3	BH2017-5/CR2	94.468 – 94.138	121.5
C974-4	BH2017-8/CR3	93.526 – 93.348	*113.1
C974-5	BH2017-10/CR1	93.198 - 92.919	97.2
C974-6	BH2017-10/CR4	88.117 – 87.787	129.6

*- L/D ratio for these samples were <2.0.

We trust the above is satisfactory. Should you require any further information, please do not hesitate to contact the undersigned.

Yours very truly,
Davroc Testing Laboratories Inc.

Kateryna Fiyalko, C.E.T.
Concrete Laboratory Supervisor

Sal Fasullo, C.E.T.
Vice President

SF/kf
17-0460-1RC

ROCK CORE TEST REPORT

File No.: L17-0460RC
Davroc Sample No.: C974
DST Project No.: TS-SO-29563
Project Name: Trinity Development – Geological Investigation

Core No.	1	2	3
Borehole/Core No.	BH2017-3/CR1	BH2017-3/CR5	BH2017-5/CR2
Depth	96.081 – 95.916	90.124 – 89.845	94.468 – 94.138
Date Cored	N/R	N/R	N/R
Date Tested	July 19, 2017	July 19, 2017	July 19, 2017
Height (mm)	95.4	151.0	151.0
Average Diameter (mm)	62.5	60.5	60.5
L/D Ratio	1.53	2.50	2.50
Density (kg/m^3)	-	-	-
Compressive Strength (MPa)	127.6	125.7	121.5
Mode of Failure	*	*	*
Direction of Loading	Not Known	Not Known	Not Known
Moisture Condition at Time of Test	As Received	As Received	As Received

Remarks: * - See attached photographs.

Date: July 19, 2017 **Signed:** _____
Sal Fasullo, C.E.T.

ROCK CORE TEST REPORT

File No.: L17-0460RC
Davroc Sample No.: C974
DST Project No.: TS-SO-29563
Project Name: Trinity Development – Geological Investigation

Core No.	4	5	6
Borehole/Core No.	BH2017-8/CR3	BH2017-10/CR1	BH2017-10/CR4
Depth	93.526 – 93.348	93.198 – 92.919	88.117 – 87.787
Date Cored	N/R	N/R	N/R
Date Tested	July 19, 2017	July 19, 2017	July 19, 2017
Height (mm)	115.0	152.5	152.5
Average Diameter (mm)	62.5	63.5	63.5
L/D Ratio	1.84	2.40	2.40
Density (kg/m^3)	-	-	-
Compressive Strength (MPa)	113.1	97.2	129.6
Mode of Failure	*	*	*
Direction of Loading	Not Known	Not Known	Not Known
Moisture Condition at Time of Test	As Received	As Received	As Received

Remarks: * - See attached photographs.

Date: July 19, 2017 **Signed:** _____
Sal Fasullo, C.E.T.



Photograph No. 1, Davroc Sample C974 -1 to 6 before testing.



Photograph No. 1, Davroc Sample C974 -1 to 6, break failure after testing.

APPENDIX E
CORE PHOTOS

Project: Geotechnical Investigation – Gladstone and Loretta Avenue, Ottawa

Client: Trinity Development Group Inc.

BH2017-03



Core Run	Depth, m	Description	TCR	SCR	RQD
CR1	6.4 – 7.5	Limestone, grey	100%	79%	58%
CR2	7.5 – 9.0	Limestone, grey	100%	92%	90%
CR3	9.0 – 10.4	Limestone, grey	93%	93%	92%
CR4	10.4 – 11.9	Limestone, grey	100%	100%	92%
CR5	11.9 – 13.5	Limestone, grey	100%	100%	95%

BH2017-05



Core Run	Depth, m	Description	TCR	SCR	RQD
CR1	6.9 – 7.4	Limestone, grey	100%	100%	100%
CR2	7.4 – 8.8	Limestone, grey	100%	98%	96%
CR3	8.8 – 10.3	Limestone, trace calcite, grey	100%	100%	100%
CR4	10.3 – 11.8	Limestone, trace calcite, grey	100%	100%	96%
CR5	11.8 – 13.5	Limestone, trace calcite, grey	100%	100%	100%

BH2017-08



Core Run	Depth, m	Description	TCR	SCR	RQD
CR1	7.0 – 7.6	Limestone, grey	100%	96%	93%
CR2	7.6 – 9.1	Limestone, grey	85%	78%	75%
CR3	9.1 – 10.6	Limestone, grey	100%	100%	98%
CR4	10.6 – 12.1	Limestone, grey	98%	98%	90%
CR5	12.1 – 13.6	Limestone, grey	100%	100%	100%

BH2017-10



Core Run	Depth, m	Description	TCR	SCR	RQD
CR1	9.0 – 10.5	Limestone, grey	98%	92%	85%
CR2	10.5 – 12.1	Limestone, grey	100%	100%	100%
CR3	12.1 – 13.6	Limestone, grey	98%	98%	98%
CR4	13.6 – 15.1	Limestone, grey	100%	100%	100%
CR5	15.1 – 16.6	Limestone, grey	100%	100%	100%

APPENDIX F

2015 NATIONAL BUILDING CODE SEISMIC HAZARD CALCULATION

2015 National Building Code Seismic Hazard Calculation

INFORMATION: Eastern Canada English (613) 995-5548 français (613) 995-0600 Facsimile (613) 992-8836
Western Canada English (250) 363-6500 Facsimile (250) 363-6565

July 17, 2017

Site: 45.4039 N, 75.7154 W User File Reference: Gladstone

Requested by: , DST Consulting Engineers Inc.

National Building Code ground motions: 2% probability of exceedance in 50 years (0.000404 per annum)

Sa(0.05)	Sa(0.1)	**Sa(0.2)**	Sa(0.3)	**Sa(0.5)**	**Sa(1.0)**	**Sa(2.0)**	**Sa(5.0)**	**Sa(10.0)**	**PGA (g)**	**PGV (m/s)**
0.445	0.521	**0.437**	0.332	**0.236**	**0.117**	**0.056**	**0.015**	**0.0054**	**0.279**	**0.196**

Notes. Spectral (Sa(T), where T is the period in seconds) and peak ground acceleration (PGA) values are given in units of g (9.81 m/s^2). Peak ground velocity is given in m/s. Values are for "firm ground" (NBCC 2015 Site Class C, average shear wave velocity 450 m/s). NBCC2015 and CSAS6-14 values are specified in **bold** font. Three additional periods are provided - their use is discussed in the NBCC2015 Commentary. Only 2 significant figures are to be used. ***These values have been interpolated from a 10-km-spaced grid of points. Depending on the gradient of the nearby points, values at this location calculated directly from the hazard program may vary. More than 95 percent of interpolated values are within 2 percent of the directly calculated values.***

Ground motions for other probabilities:

Probability of exceedance per annum	0.010	0.0021	0.001
Probability of exceedance in 50 years	40%	10%	5%
Sa(0.05)	0.044	0.147	0.245
Sa(0.1)	0.060	0.185	0.298
Sa(0.2)	0.055	0.160	0.253
Sa(0.3)	0.043	0.123	0.194
Sa(0.5)	0.031	0.088	0.138
Sa(1.0)	0.015	0.044	0.069
Sa(2.0)	0.0061	0.020	0.032
Sa(5.0)	0.0012	0.0047	0.0081
Sa(10.0)	0.0006	0.0019	0.0032
PGA	0.032	0.101	0.162
PGV	0.021	0.067	0.110

References

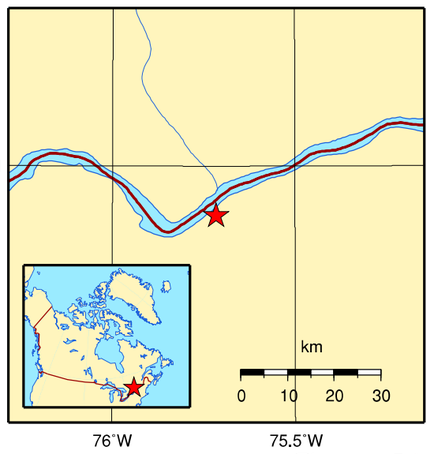
National Building Code of Canada 2015 NRCC no. 56190;
Appendix C: Table C-3, Seismic Design Data for Selected Locations in Canada

User's Guide - NBC 2015, Structural Commentaries NRCC no. xxxxxx (in preparation)
Commentary J: Design for Seismic Effects

Geological Survey of Canada Open File 7893 Fifth Generation Seismic Hazard Model for Canada: Grid values of mean hazard to be used with the 2015 National Building Code of Canada

See the websites *www.EarthquakesCanada.ca* and *www.nationalcodes.ca* for more information

Aussi disponible en français



Natural Resources Canada Ressources naturelles Canada

Canada

APPENDIX G

CORROSION ANALYSES (SOIL) TEST RESULTS

Your Project #: TS-SO-29563
Your C.O.C. #: 100264

Attention:Tun Lwin

DST Consulting Engineers Inc
Waterloo - Standing Offer
550 Parkside Drve
Unit C10
Waterloo, ON
CANADA N2L 5V4

Report Date: 2017/07/28
Report #: R4618965
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B7F4617
Received: 2017/07/20, 15:09

Sample Matrix: Soil
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Chloride (20:1 extract)	1	N/A	2017/07/26	CAM SOP-00463	EPA 325.2 m
Conductivity	1	2017/07/25	2017/07/25	CAM SOP-00414	OMOE E3530 v1 m
pH CaCl2 EXTRACT	1	2017/07/25	2017/07/25	CAM SOP-00413	EPA 9045 D m
Resistivity of Soil	1	2017/07/20	2017/07/25	CAM SOP-00414	SM 22 2510 m
Sulphate (20:1 Extract)	1	N/A	2017/07/26	CAM SOP-00464	EPA 375.4 m

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported: unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Your Project #: TS-SO-29563
Your C.O.C. #: 100264

Attention:Tun Lwin

DST Consulting Engineers Inc
Waterloo - Standing Offer
550 Parkside Drve
Unit C10
Waterloo, ON
CANADA N2L 5V4

Report Date: 2017/07/28
Report #: R4618965
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B7F4617
Received: 2017/07/20, 15:09

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Augustyna Dobosz, Project Manager
Email: ADobosz@maxxam.ca
Phone# (905)817-5700 Ext:5798
==========
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B7F4617
Report Date: 2017/07/28

DST Consulting Engineers Inc
Client Project #: TS-SO-29563

RESULTS OF ANALYSES OF SOIL

Maxxam ID		EUC556	EUC556		
Sampling Date		2017/06/27	2017/06/27		
COC Number		100264	100264		
	UNITS	BH2017-10, SS-10	BH2017-10, SS-10 Lab-Dup	RDL	QC Batch
Calculated Parameters					
Resistivity	ohm-cm	690			5085001
Inorganics					
Soluble (20:1) Chloride (Cl)	ug/g	700	690	20	5090772
Conductivity	mS/cm	1.5		0.002	5089376
Available (CaCl2) pH	pH	7.83			5088780
Soluble (20:1) Sulphate (SO4)	%	0.038	0.039	0.002	5090773

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Maxxam Job #: B7F4617
Report Date: 2017/07/28

DST Consulting Engineers Inc
Client Project #: TS-SO-29563

TEST SUMMARY

Maxxam ID: EUC556
Sample ID: BH2017-10, SS-10
Matrix: Soil

Collected: 2017/06/27
Shipped:
Received: 2017/07/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride (20:1 extract)	KONE/EC	5090772	N/A	2017/07/26	Alina Dobreanu
Conductivity	AT	5089376	2017/07/25	2017/07/25	Xuanhong Qiu
pH CaCl2 EXTRACT	AT	5088780	2017/07/25	2017/07/25	Tahir Anwar
Resistivity of Soil		5085001	2017/07/25	2017/07/25	Automated Statchk
Sulphate (20:1 Extract)	KONE/EC	5090773	N/A	2017/07/26	Alina Dobreanu

Maxxam ID: EUC556 Dup
Sample ID: BH2017-10, SS-10
Matrix: Soil

Collected: 2017/06/27
Shipped:
Received: 2017/07/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride (20:1 extract)	KONE/EC	5090772	N/A	2017/07/26	Alina Dobreanu
Sulphate (20:1 Extract)	KONE/EC	5090773	N/A	2017/07/26	Alina Dobreanu

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	6.0°C

Results relate only to the items tested.

Maxxam Job #: B7F4617
Report Date: 2017/07/28

DST Consulting Engineers Inc
Client Project #: TS-SO-29563

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
5088780	TA1	Spiked Blank	Available (CaCl2) pH	2017/07/25		99	%	97 - 103
5088780	TA1	RPD	Available (CaCl2) pH	2017/07/25	0.083		%	N/A
5089376	XQI	Spiked Blank	Conductivity	2017/07/25		101	%	90 - 110
5089376	XQI	Method Blank	Conductivity	2017/07/25	<0.002		mS/cm	
5089376	XQI	RPD	Conductivity	2017/07/25	6.5		%	10
5090772	ADB	Matrix Spike [EUC556-01]	Soluble (20:1) Chloride (Cl)	2017/07/26		NC	%	70 - 130
5090772	ADB	Spiked Blank	Soluble (20:1) Chloride (Cl)	2017/07/26		103	%	70 - 130
5090772	ADB	Method Blank	Soluble (20:1) Chloride (Cl)	2017/07/26	<20		ug/g	
5090772	ADB	RPD [EUC556-01]	Soluble (20:1) Chloride (Cl)	2017/07/26	0.74		%	35
5090773	ADB	Matrix Spike [EUC556-01]	Soluble (20:1) Sulphate (SO4)	2017/07/26		NC	%	70 - 130
5090773	ADB	Spiked Blank	Soluble (20:1) Sulphate (SO4)	2017/07/26		104	%	70 - 130
5090773	ADB	Method Blank	Soluble (20:1) Sulphate (SO4)	2017/07/26	<0.002		%	
5090773	ADB	RPD [EUC556-01]	Soluble (20:1) Sulphate (SO4)	2017/07/26	1.6		%	35

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B7F4617
Report Date: 2017/07/28

DST Consulting Engineers Inc
Client Project #: TS-SO-29563

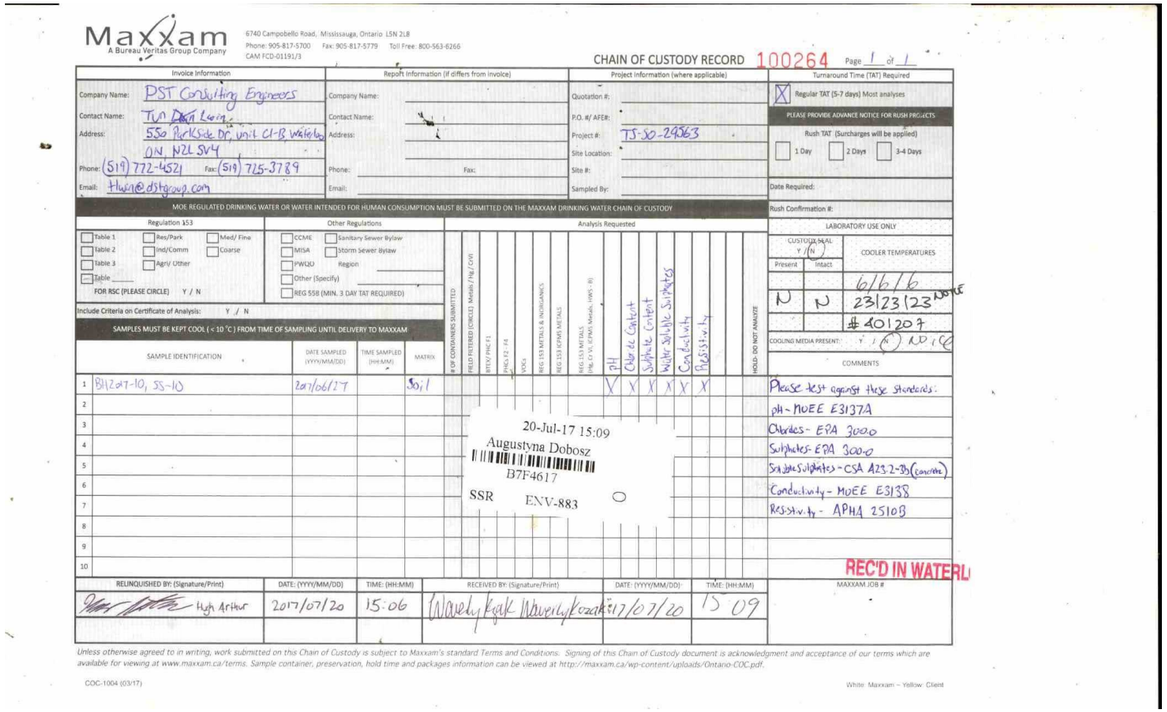
VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere

Cristina Carriere, Scientific Services

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



Maxxam
A Bureau Veritas Group Company
6740 Campobello Road, Mississauga, Ontario L5N 2L8
Phone: 905-817-5700 Fax: 905-817-5779 Toll Free: 800-563-6266
CAM FCD-01191/3

CHAIN OF CUSTODY RECORD 100264 Page 1 of 1

Invoice Information: Company Name: DST Consulting Engineers; Contact Name: Tim Dark Lung; Address: 550 Parkside Dr. unit C1-B, Waterloo ON, N2L 5V4; Phone: (519) 772-4521 Fax: (519) 725-3789; Email: tlung@dstgroup.com

Report Information (if differs from invoice): Company Name: ; Contact Name: ; Address: ; Phone: Fax: ; Email:

Project Information (where applicable): Quotation #: ; P.O. #/ AFE#: ; Project #: TS-SO-29563; Site Location: ; Site #: ; Sampled By:

Turnaround Time (TAT) Required: [X] Regular TAT (5-7 days) Most analyses. PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS. Rush TAT (Surcharges will be applied): [ ] 1 Day [ ] 2 Days [ ] 3-4 Days. Date Required: ; Rush Confirmation #:

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY

Regulation 153: [ ] Table 1 [ ] Table 2 [ ] Table 3 [ ] Table ___ [ ] Res/Park [ ] Ind/Comm [ ] Agri/ Other [ ] Med/ Fine [ ] Coarse. FOR RSC (PLEASE CIRCLE) Y / N

Other Regulations: [ ] CCME [ ] MISA [ ] PWQO [ ] Other (Specify) [ ] Sanitary Sewer Bylaw [ ] Storm Sewer Bylaw Region: [ ] REG 558 (MIN. 3 DAY TAT REQUIRED)

Include Criteria on Certificate of Analysis: Y / N

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested: # OF CONTAINERS SUBMITTED; FIELD FILTERED (CHECK); Metals / Hg / CrVI; BTEX / F(BTEX); PAHs; F2 - F4; VOCs; REG 153 METALS & INORGANICS; REG 153 ICPMS METALS; REG 558 ICP METALS (Mg, Ca, Na, ICPMS); Metals, HWSI - RI; pH; Chloride Content; Sulphate Content; Water Soluble Sulphates; Conductivity; Resistivity; HOLD - DO NOT ANALYZE

	SAMPLE IDENTIFICATION	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	MATRIX	# OF CONTAINERS SUBMITTED	FIELD FILTERED (CHECK)	Metals / Hg / CrVI	BTEX / F(BTEX)	PAHs	F2 - F4	VOCs	REG 153 METALS & INORGANICS	REG 153 ICPMS METALS	REG 558 ICP METALS (Mg, Ca, Na, ICPMS); Metals, HWSI - RI	pH	Chloride Content	Sulphate Content	Water Soluble Sulphates	Conductivity	Resistivity	HOLD - DO NOT ANALYZE
1	BH17-10, SS-10	2017/06/27		Soil											Y	X	X	X	X	X	
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

20-Jul-17 15:09
Augustyna Dobosz
B7F4617
SSR ENV-883

LABORATORY USE ONLY: CUSTODY SEAL Y / N (N); COOLER TEMPERATURES: Present / Intact; 6/6/6; N N 23/23/23 NOTE; # 401207; COOLING MEDIA PRESENT: Y / N (N) ND / Ice

COMMENTS: Please test against these standards: pH - MOEE E3137A; Chlorides - EPA 300.0; Sulphates - EPA 300.0; Soluble Sulphates - CSA A23.2-3B (concrete); Conductivity - MOEE E3138; Resistivity - APHA 2510B

REC'D IN WATERL

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Hugh Arthur	2017/07/20	15:06	Waverly Kozak Waverly Kozak	17/07/20	15 09	

Unless otherwise agreed to in writing, work submitted on this Chain of Custody is subject to Maxxam's standard Terms and Conditions. Signing of this Chain of Custody document is acknowledgment and acceptance of our terms which are available for viewing at www.maxxam.ca/terms. Sample container, preservation, hold time and packages information can be viewed at http://maxxam.ca/wp-content/uploads/Ontario-COC.pdf.

COC-1004 (03/17) White: Maxxam – Yellow: Client

APPENDIX C2

PROXIMITY ASSESSMENT

PATERSON GROUP
Consulting Engineers
9 Auriga Drive
Ottawa, Ontario
K2E 7S8
Tel: (613) 226-7381

Geotechnical Engineering
Environmental Engineering
Hydrogeology
Materials Testing
Building Science
Noise and Vibration Studies

patersongroup.ca

November 27, 2025
File: PG5517-LET.02 Revision 1

TIP Gladstone Limited Partnership
by its General Partner TIP Gladstone GP Inc.
145 Loretta Avenue North
Ottawa, ON
K1Y 4W5

Attention: **Ms. Jenn Morrison**

Subject: **Proximity Assessment**
Proposed Development
145 Loretta Avenue North - Ottawa, Ontario

Further to your request and authorization, Paterson Group (Paterson) prepared this letter to summarize construction issues which could occur due to the proximity of the proposed development with respect to the subject alignment of the existing LRT Trillium Line. This letter should be read in conjunction with the Geotechnical Investigation Report (Paterson Group Report PG5517-1 Revision 4 dated July 31, 2025).

1.0 Background Information

Based on the current development plans, Phase 1 of the proposed development at the subject site will consist of a high-rise building with 3 underground parking levels. The following sections summarize our existing soil information and construction precautions for the proposed development, as they pertain to the subject alignment of the Trillium Line.

2.0 Site Description

Subsurface Conditions

Based on existing geotechnical information, the subsurface conditions in the immediate area of the subject site and subject Trillium Line alignment generally consist of the following:

- The existing surface grade is at a geodetic elevation of approximately 64 m.
- The overburden thickness is about 8 m.
- Bedrock surface elevation is at an approximate geodetic elevation of 56 m.
- The bedrock underlying the site consists of a good to excellent quality limestone.

Trillium Line Location

Available aerial mapping indicates that an approximate setback of 27 m is present between the proposed building limits and the Trillium Line. This is illustrated on the attached sketch SK-1.

In reviewing available information, the Trillium Line is located at an approximate geodetic elevation of 58 m, which is recessed below surrounding grades. The founding elevation of the proposed building is at geodetic elevation 53 m. Therefore, a vertical differential of approximately 5 m is present between the founding levels of the two structures, with a horizontal separation of around 27 m.

3.0 Construction Precautions and Recommendations

Influence of Proposed Development on Trillium Line Corridor

From existing subsurface information and building design details, the proposed building will be founded on footings bearing on the clean, surface sounded bedrock. Therefore, lateral loads due to the building footings will be transferred directly to the bedrock within a conservative 1H:6V zone of influence from the outside face of the footing.

Accordingly, in reviewing available information, the proposed development will not cause additional loading on the subject alignment of the Trillium Line.

Furthermore, due to the 27 m distance between the proposed building and the Trillium Line, the soils and rock supporting the rail line will not be undermined by the building excavation.

Excavation and Temporary Shoring

During the proposed building excavation, the overburden soils along the LRT property will be sloped at a suitable incline of 1H:1V or flatter. This is illustrated on the attached sketch SK-1. Temporary shoring is not anticipated along the LRT property, although a temporary shoring system will be used for other sides of the proposed building excavation.

The primary issue with the proposed building excavation will be vibrations associated with blasting for bedrock removal. Accordingly, a vibration monitoring program will be implemented to ensure vibration levels remain below recommended tolerances. Details of the recommended vibration monitoring program are presented below.

Vibration Monitoring and Control Plan

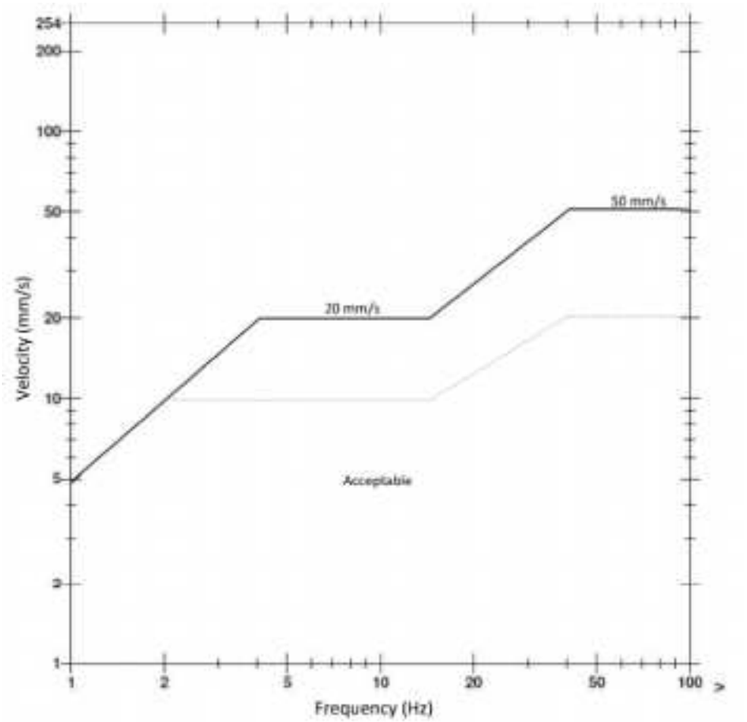
A vibration monitor will be installed either adjacent to or within the Trillium Line corridor as part of the Vibration Monitoring and Control Program to monitor vibrations during blasting operations:

The vibration monitoring program will incorporate real-time results at the adjacent LRT Trillium Line, located in the vicinity of the subject site. The monitoring equipment will consist of a tri-axial seismograph, capable of continuously measuring vibration intensities up to 254 mm/s at a frequency response of 2 to 250 Hz.

The location of the seismograph along or within the LRT property should be reviewed periodically throughout construction to ensure that the monitoring equipment is at the closest radius to the construction activities. The seismograph location should be approved by the project manager prior to installation.

The following figure outlines the recommended vibration limits for the LRT Trillium Line

Figure 1 - Proposed Vibration Limits at the future LRT Trillium Line



Pre-Construction Survey

A pre-construction survey will be required for the portion of the Trillium Line located in the vicinity of the proposed development at 145 Loretta Avenue. Any existing structures in the immediate area of the proposed building will also undergo a pre-construction survey as per standard construction practices, where blasting is required.

Groundwater Control

Groundwater observations during the geotechnical investigation indicated groundwater levels 4 to 5 m below the existing ground surface. Further, due to the approximate 27 m distance between the proposed development and the Trillium Line, any dewatering during the excavation will not impact the Confederation Line.

Long-Term Effects of Dewatering

Based on available elevations, the Trillium Rail Line is located below the depth of the silty clay and is likely bearing on the glacial till deposit and/or bedrock, which are not susceptible to settlement from temporary dewatering during construction.

Further, due to the presence of the waterproofing which will be installed over the perimeter foundation walls, groundwater will not be drawn down during the permanent condition, and long-term groundwater lowering is anticipated to be negligible for the area. Therefore, no adverse effects to the Trillium Line are expected from potential dewatering.

4.0 Conclusions and Recommendations

Based on the currently available information, construction of the proposed development will not cause settlement or have adverse impacts on the adjacent LRT Trillium Line infrastructure or operations, provided the vibration monitoring criteria herein is not exceeded.

We trust that this information meets your immediate request.

Best Regards,

Paterson Group Inc.

Otillia McLaughlin, B.Eng.

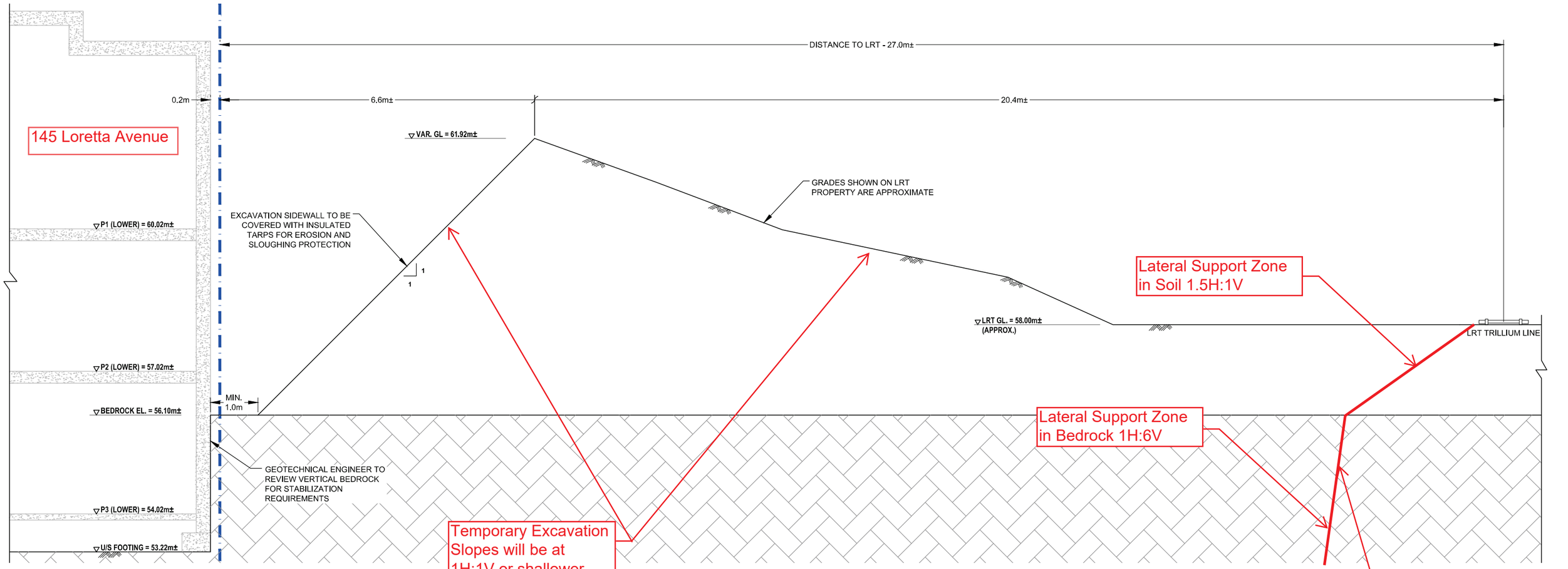
LICENSED PROFESSIONAL ENGINEER
Nov. 27, 2025
S. S. DENNIS
100519516
PROVINCE OF ONTARIO

Scott S. Dennis, P.Eng.

Attachments:

-Sketch Sk-1

PG5517-LET.02
Proximity Assessment
Sketch SK-1
November 7, 2025



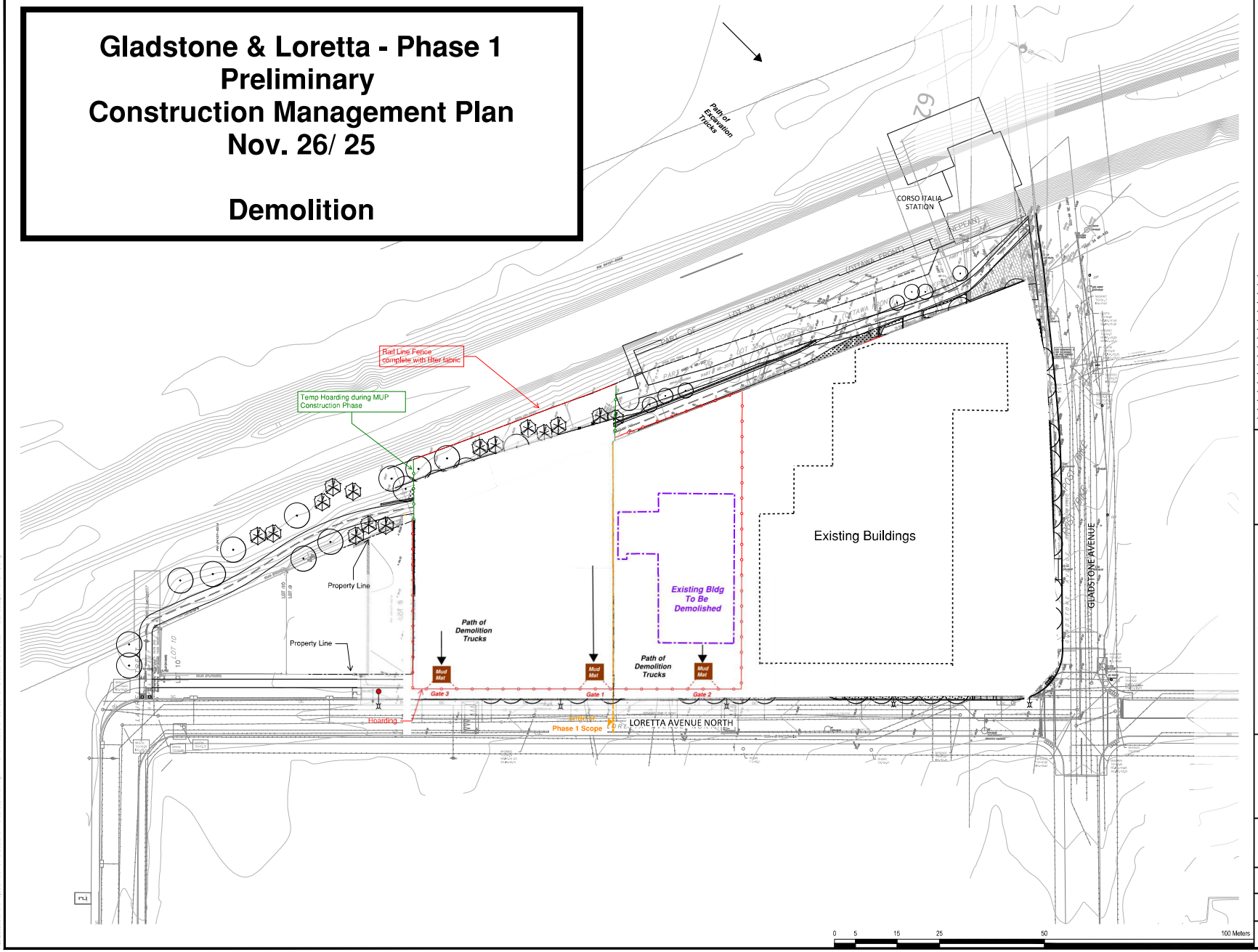
Not to Scale

APPENDIX D

CONSTRUCTION PLAN DOCUMENTS

Gladstone & Loretta - Phase 1
Preliminary
Construction Management Plan
Nov. 26/ 25

Demolition



GENERAL NOTES:

1. All measurements in millimeters unless specified otherwise. Do not scale drawing. All drawings to be read in conjunction with written specifications.
2. Copyright reserved. This drawing is the exclusive property of CSW Landscape Architects Ltd. and shall not be used without the consent thereof.
3. This Drawing may not be used for construction until signed by the landscape architect. It is the responsibility of the contractor to:
   - check and verify all dimensions on site;
   - report all errors and/or omissions to the landscape architect;
   - comply with all pertinent codes and by-laws;
   - check and verify locations of all underground services with all local utilities prior to any digging.
4. Minimum soil volume required for trees:

No.	Revision	Date
16	ISSUED FOR TENDER	08 JUL 2025
15	ISSUED FOR CD 99%	07 JUL 2025
14	ISSUED FOR CD 66%	03 APR 2025
13	RE-ISSUED FOR SPA	31 JAN 2025
12	RE-ISSUED FOR SPA	20 NOV 2024
11	RE-ISSUED FOR SPA	30 AUG 2024
10	RE-ISSUED FOR SPA	18 APR 2024
9	RE-ISSUED FOR SPA	21 AUG 2023
8	RE-ISSUED FOR SPA	22 FEB 2023
7	RE-ISSUED FOR SPA	15 SEP 2022
6	RE-ISSUED FOR SPA	01 MAR 2022
5	RE-ISSUED FOR SPA	17 DEC 2021
4	ISSUED FOR SPC	21 APR 2021
3	ISSUED FOR SPC	09 APR 2021
2	ISSUED FOR SPA / COORD.	17 OCT 2020
1	ISSUED FOR SPA / REZONING	08 AUG 2019

North:

Stamp:

CSW
Landscape Architecture
Urban Design
Site Planning
Recreation and Park Planning
Project Management

319 McRae Avenue, Suite 502, Ottawa, Ontario, K1Z 0B9
Tel: (613) 729-4536

CLV GROUP DEVELOPMENTS

PBCGROUP

Project:

951 Gladstone Avenue &
145 Loretta Avenue North

OTTAWA, ONTARIO

Drawing:

SITE PLAN
TOWER A

Scale:	Date:
1:400	July 2019
Design By: CM	Drawn By: AB
Project Number: 1987-01	Sheet Number: L1.0

D07-12-21-0053

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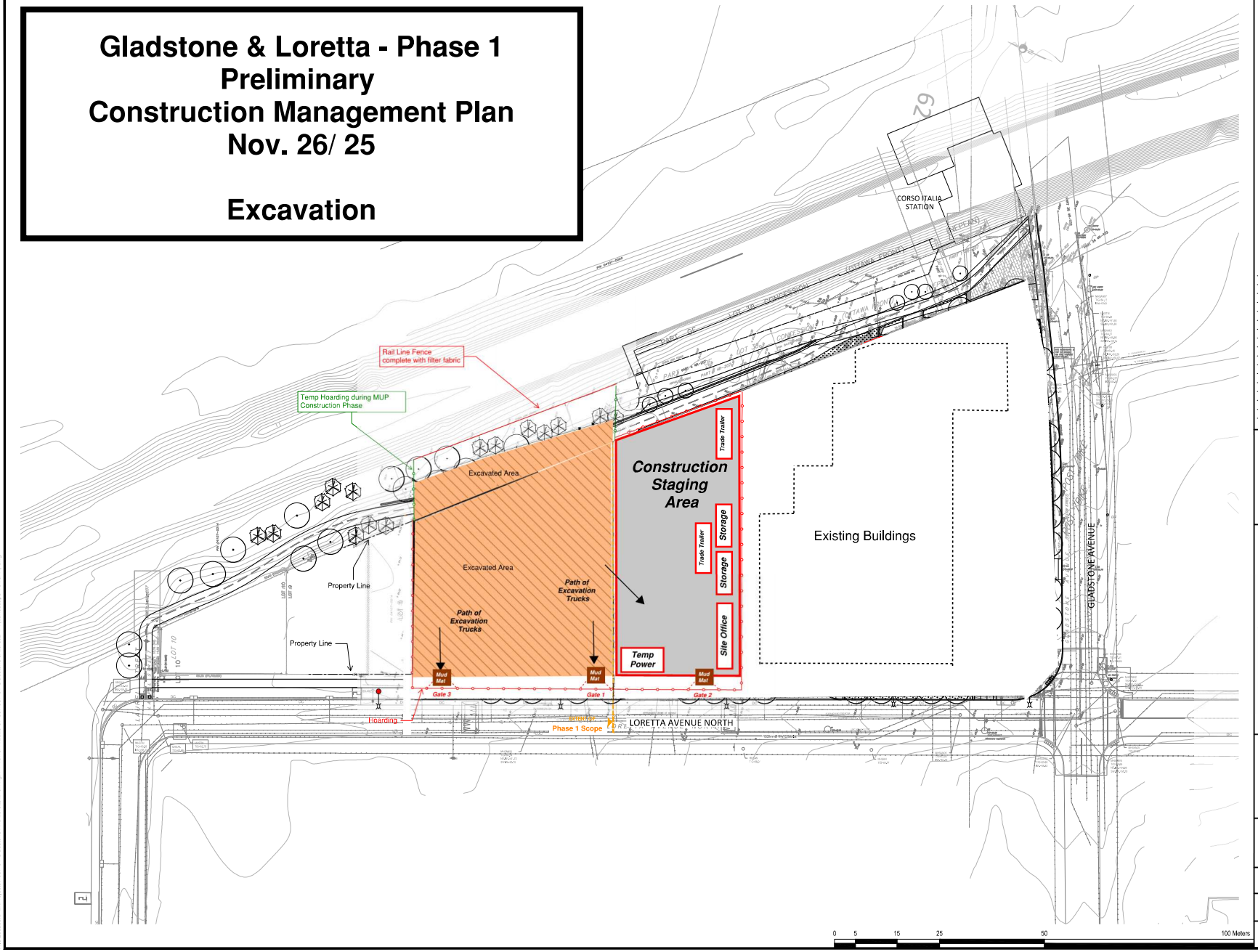
Gladstone & Loretta - Phase 1
Preliminary
Construction Management Plan
Nov. 26/ 25

Excavation



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1	ISSUED FOR SPA / REZONING	08 AUG 2019

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Urban Design
Site Planning
Recreation and Park Planning
Project Management
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Tel: (613) 729-4536

CLV GROUP DEVELOPMENTS

PBCGROUP

Project:

951 Gladstone Avenue & 145 Loretta Avenue North

OTTAWA, ONTARIO

Drawing:

SITE PLAN TOWER A

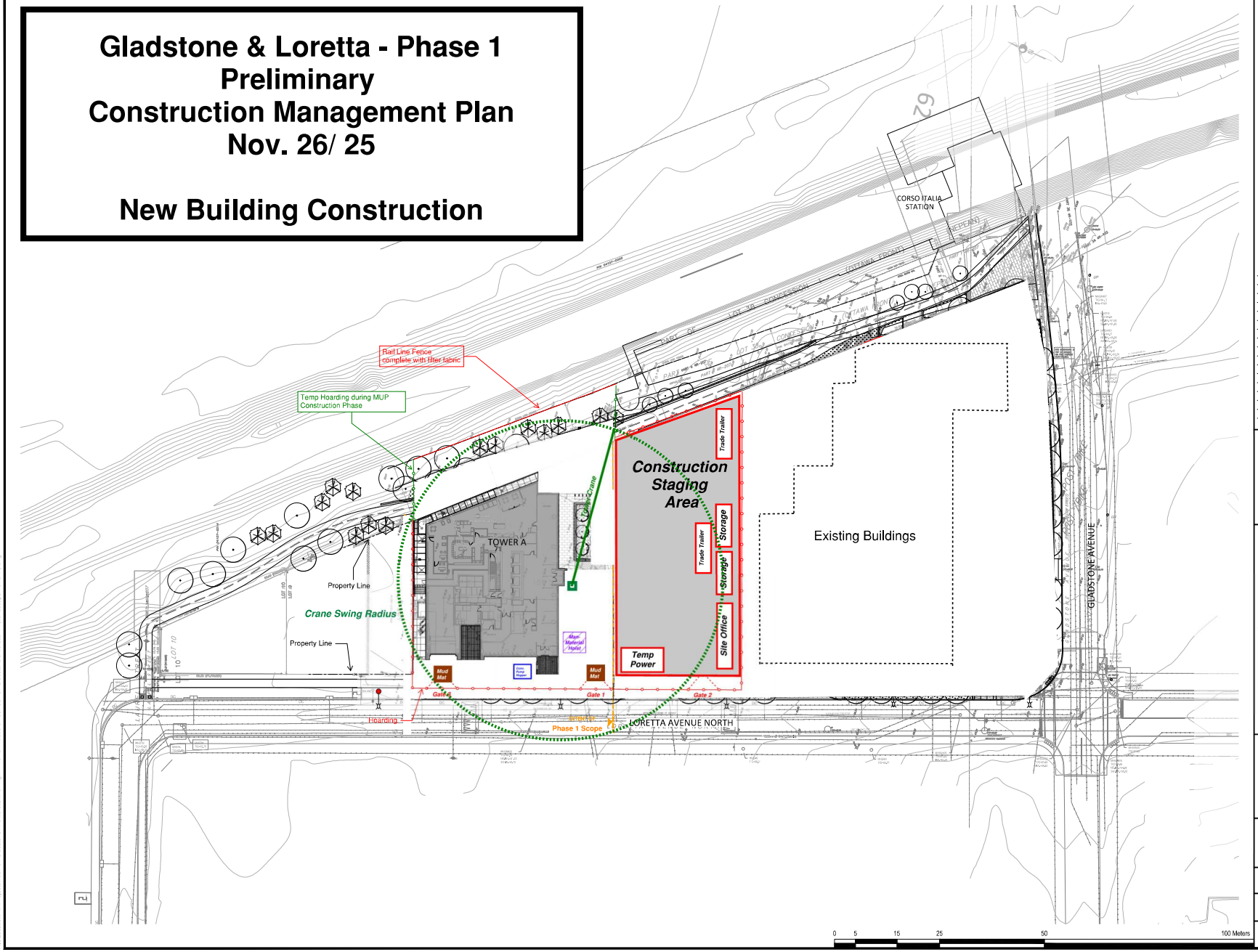
Scale: 1:400	Date: July 2019
Design By: CM	Drawn By: AB
Project Number: 1987-01	Sheet Number: L1.0

D07-12-21-0053

18526

Gladstone & Loretta - Phase 1
Preliminary
Construction Management Plan
Nov. 26/ 25

New Building Construction



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145 Loretta Avenue North

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TOWER A

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1:400	July 2019
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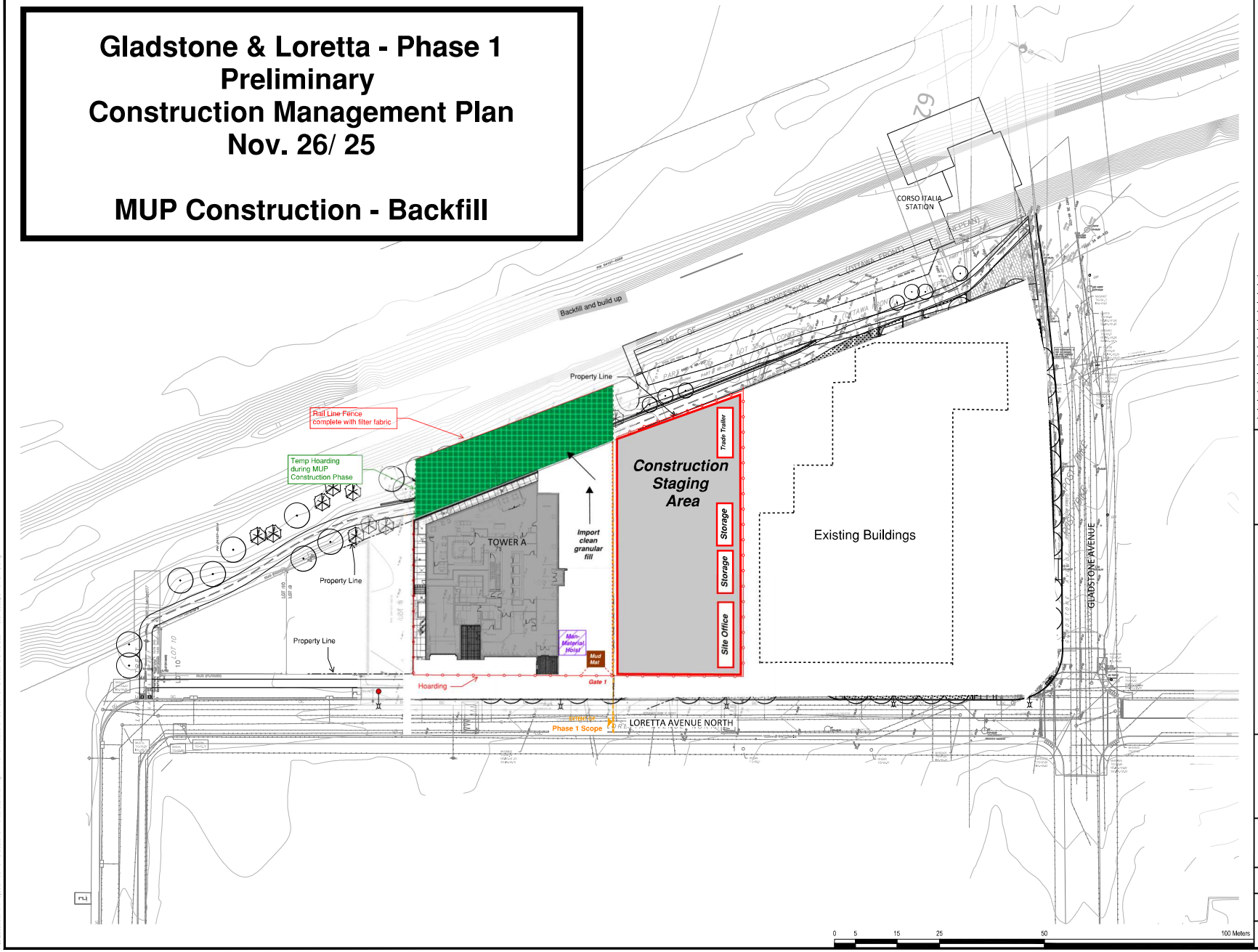
Gladstone & Loretta - Phase 1
Preliminary
Construction Management Plan
Nov. 26/ 25

MUP Construction - Backfill



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PBCGROUP

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145 Loretta Avenue North

OTTAWA, ONTARIO

Drawing:

SITE PLAN
TOWER A

Scale:	Date:
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Design By: CM	Drawn By: AB
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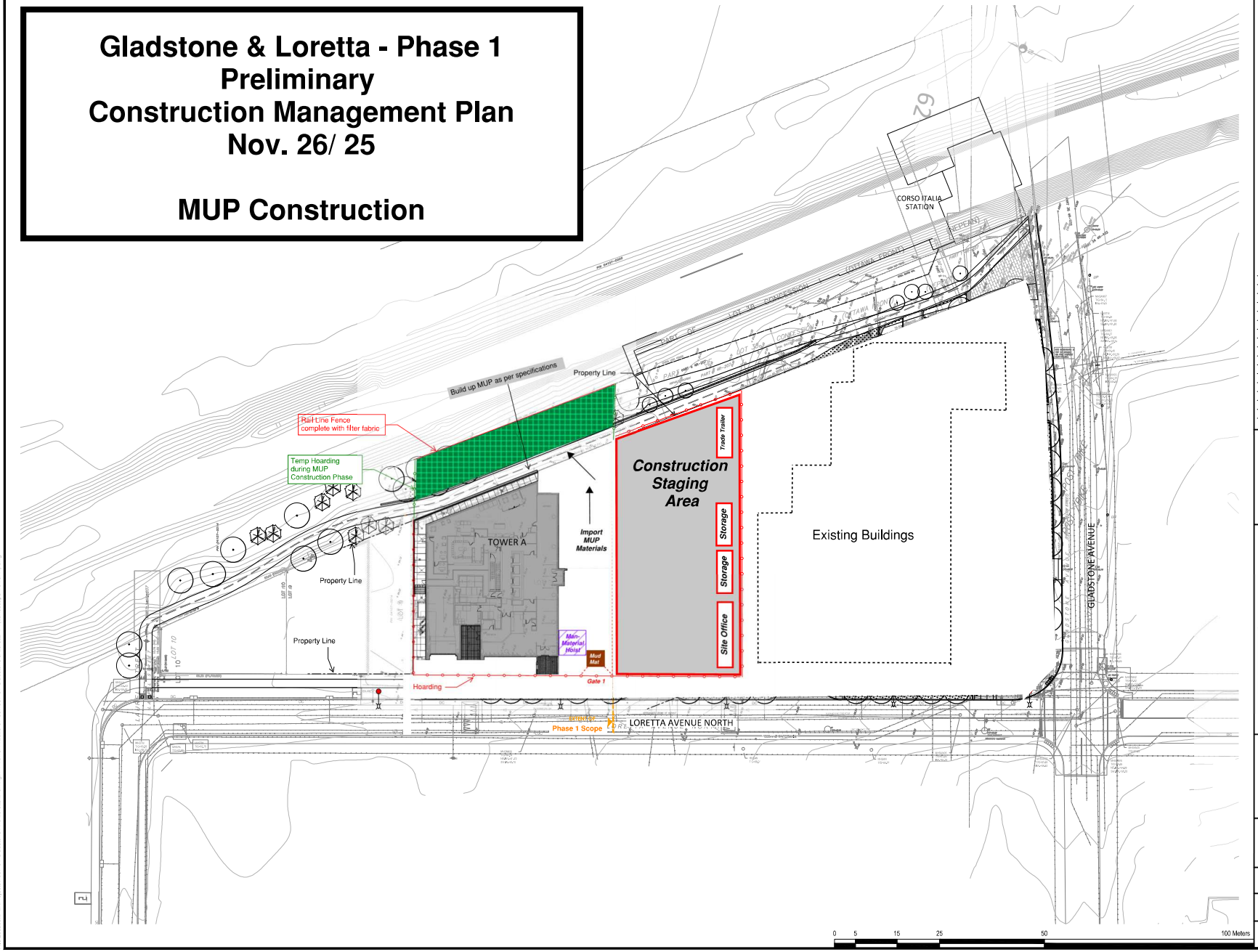
Gladstone & Loretta - Phase 1
Preliminary
Construction Management Plan
Nov. 26/ 25

MUP Construction



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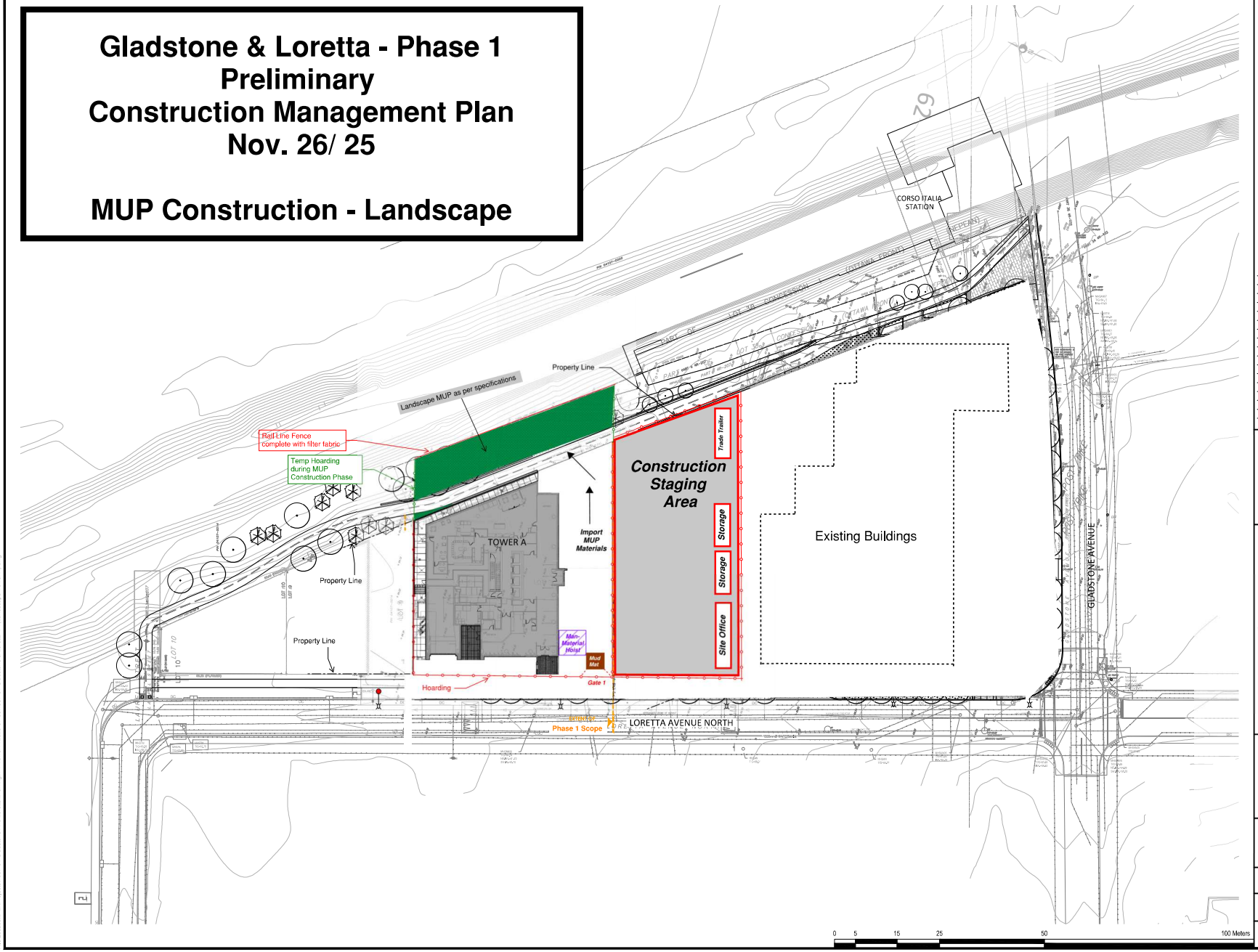
Gladstone & Loretta - Phase 1
Preliminary
Construction Management Plan
Nov. 26/ 25

MUP Construction - Landscape



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951 Gladstone Avenue &
145 Loretta Avenue North

OTTAWA, ONTARIO

Drawing:

SITE PLAN
TOWER A

Scale:	Date:
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Design By: CM	Drawn By: AB
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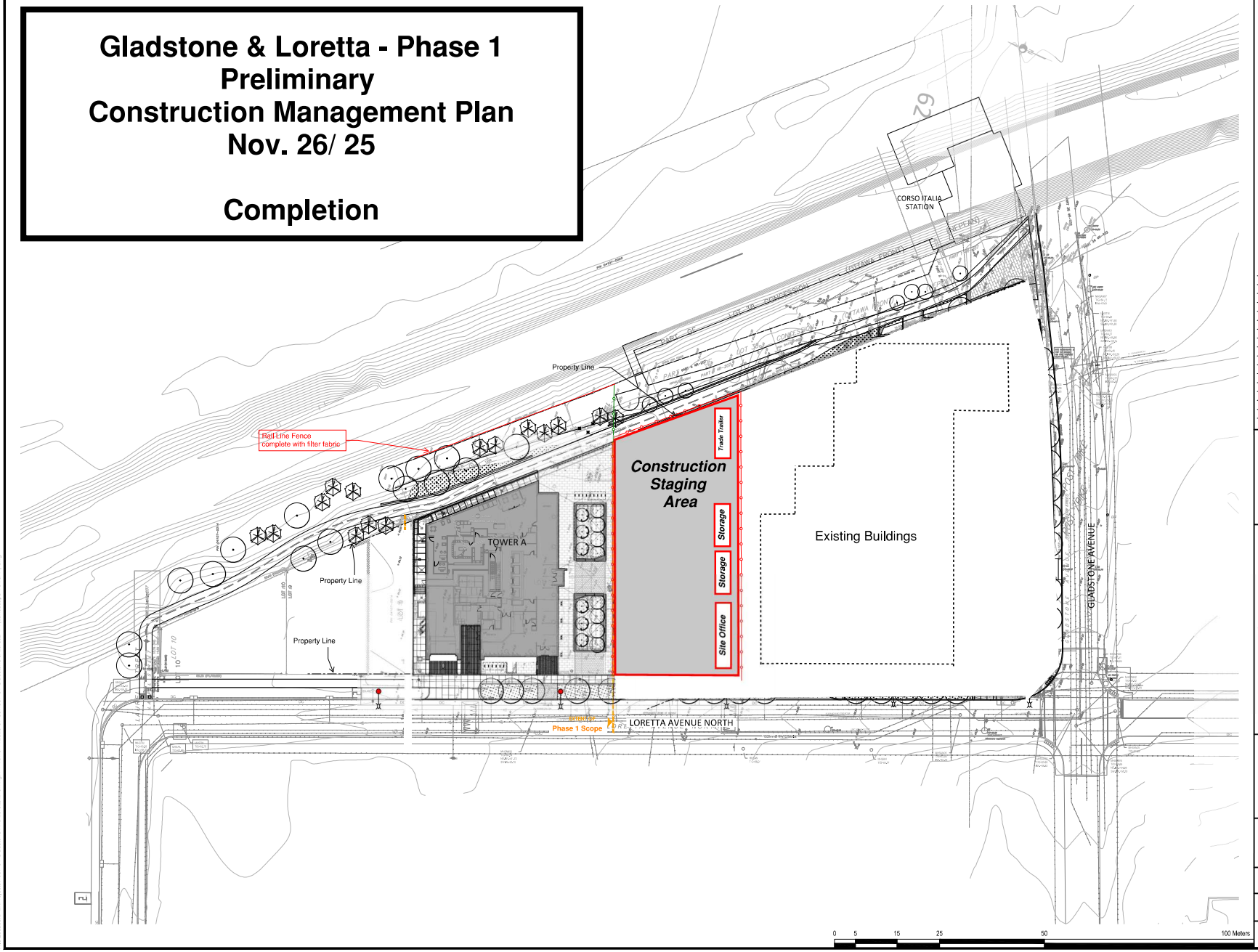
Gladstone & Loretta - Phase 1
Preliminary
Construction Management Plan
Nov. 26/ 25

Completion



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TOWER A

Scale:	Date:
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Design By: CM	Drawn By: AB
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D07-12-21-0053

18526

MOBILE CRANE ERECTION SETUP LOCATION AND LOGISTICS FOR TOWER CRANE E&D

ModelReachAnti collision software
Mobile crane GMK 635040 meters with 120 tonsYES

Tower craneTerex40 meters YES

DESIGN LOADS

COMMERICAL/AMENITY

250 CONC SLAB	5.90 kPa
PARTITION ALLOWANCE	1.00
FLOORING	0.15
MECH'L & MISC	0.25 kPa
DEAD LOAD	7.30 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	12.10 kPa

CORRIDOR / M & E / STORAGE

250 CONC SLAB	5.90 kPa
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	6.20 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	11.00 kPa

MOVE-IN & GARBAGE ROOM

250 CONC SLAB	5.90 kPa
67 AVG TOPPING	1.60
PARTITION ALLOWANCE	1.00
MECH'L & MISC	0.25 kPa
DEAD LOAD	8.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	13.55 kPa

LOADING BAY

300 CONC SLAB	7.10 kPa
100 AVG TOPPING	2.40
MECH'L & MISC	0.40 kPa
DEAD LOAD	9.90 kPa
LIVE LOAD	7.20 kPa
TOTAL LOAD	17.20 kPa

CONC
CONCR
CONCR
DEAD L
LIVE LO
TOTAL

CONC
200 CO
DEAD L
LIVE LO
TOTAL

RAMP
250 CO
MEMBR
MECH /
DEAD L
LIVE LO
TOTAL

HYDR
250 SL
67 AVG
ROOFI
LANDI
MECH
DEAD L
LIVE LO
TOTAL

CENTRELINE OF LRT TRACKS IS APPROX
FORMATION IS PROVIDED FOR REFERENCE

+/- 18.877
APPROX. CENTRELINE OF RAIL LINE
ZONE 1 DRAFT
V = 242.5 km/hr

+/- 29.031
APPROX. CENTRELINE OF RAIL LINE

MUP (MULTI-USE PATHWAY)

NO LIVE LOADS OVER THIS AREA
(Tower Crane AGS System)

145 LORETTA AVE W PROPERTY LINE

OUTLINE OF PODIUM & LEVEL 5 TERRACE

Mobile crane - 40 meter reach

14,042

1,200
TOWER SETBACK

Concrete Placing Boom #1

BLUE LINE DENOTES OUTLINE OF TOWER

145 LORETTA TOWER A (PHASE 1)

Tower Crane #1

24,044

1,200
TOWER SETBACK

OUTLINE OF TOWER & LEVEL 5 EXT. WALLS

3,000
SETBACK

TOWER SETBACK

LOADING AREA

2,000
TOWER SETBACK

3,000
TOWER SETBACK

1,800
TOWER SETBACK

PODIUM ABOVE

PARKING ENTRANCE

3,000
SETBACK

MAN HOIST

36,840

145 LORETTA AVE W PROPERTY LINE

145 LORETTA AVE W PROPERTY LINE

FH

SURFACE PARKING LOT

N.I.C.

32,950
MAX WIDTH AS PER ZONING SCHEDULE

47,830

+0.65
-0.65

SEVERANCE LINE TBD

+/- 20.21
APPROX. DISTANCE TO NEIGHBOURS PROPERTY LINE

EXISTING 2 STOREY BRICK, METAL AND STUCCO SIDED COMMERCIAL BUILDING TO REMAIN

EXISTING LOADING BAY STRUCTURE TO BE DEMOLISHED

2,207

3,961 m

HOOK RADIUS
40.000 m

JIB LENGTH
41.770 m

5.000 m

GAS FEED

MAN HOLE FOR SANITATION MONITORING (REFER TO CIVIL)

DIMENSIONS SHOWN FOR THE NEIGHBOURING PROPERTY ARE APPROXIMATE (+/-). THIS INFORMATION HAS NOT BEEN VERIFIED BY SURVEY AND IS PROVIDED FOR REFERENCE ONLY.

975 GLADSTONE AVE PROPERTY LINE

CITY OF OTTAWA PROPERTY

CANADIAN BANK NOTE PROPERTY

CITY OF OTTAWA PROPERTY

BELLAI ALLIANCE

2025.10.10
Tower Crane Layout and Plan
145 Loretta Ave. Ottawa. ON

CLV GROUP DEVELOPMENTS

CUNLIFFE & ASSOCIATES
CIVIL | STRUCTURAL ENGINEERS

structural engineers | ingénieurs structures

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur électrique

mechanical engineer | ingénieur mécanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord réel
true north

ISSUED FOR TENDER	25-06-09
ISSUED FOR PRICING	25-05-16
ISSUED FOR 66% WD & CLIENT BUDGETING	25-03-28
ISSUE FOR EXCAVATION TENDER	24-10-30
ISSUE FOR REVIEW	24-09-13
revisions	date

timbre

Not For Construction

architect | architecte

inebox STUDIO

dimensions are shown in metric.
entractor shall check and verify all dimensions and
ort all error and omissions to the Architect.
not scale the drawings.
t for construction until signed by the Architect.

project title | titre du projet

GLADSTONE & LORETTA
RESIDENTIAL TOWER

Enter address here

drawing title | titre du dessin

LEVEL 01 CONCRETE LAYOUT PLAN

project number | numéro du projet 21-045

PMD/DG

As Indicated

drawing number | numéro du dessin

S107

LORE

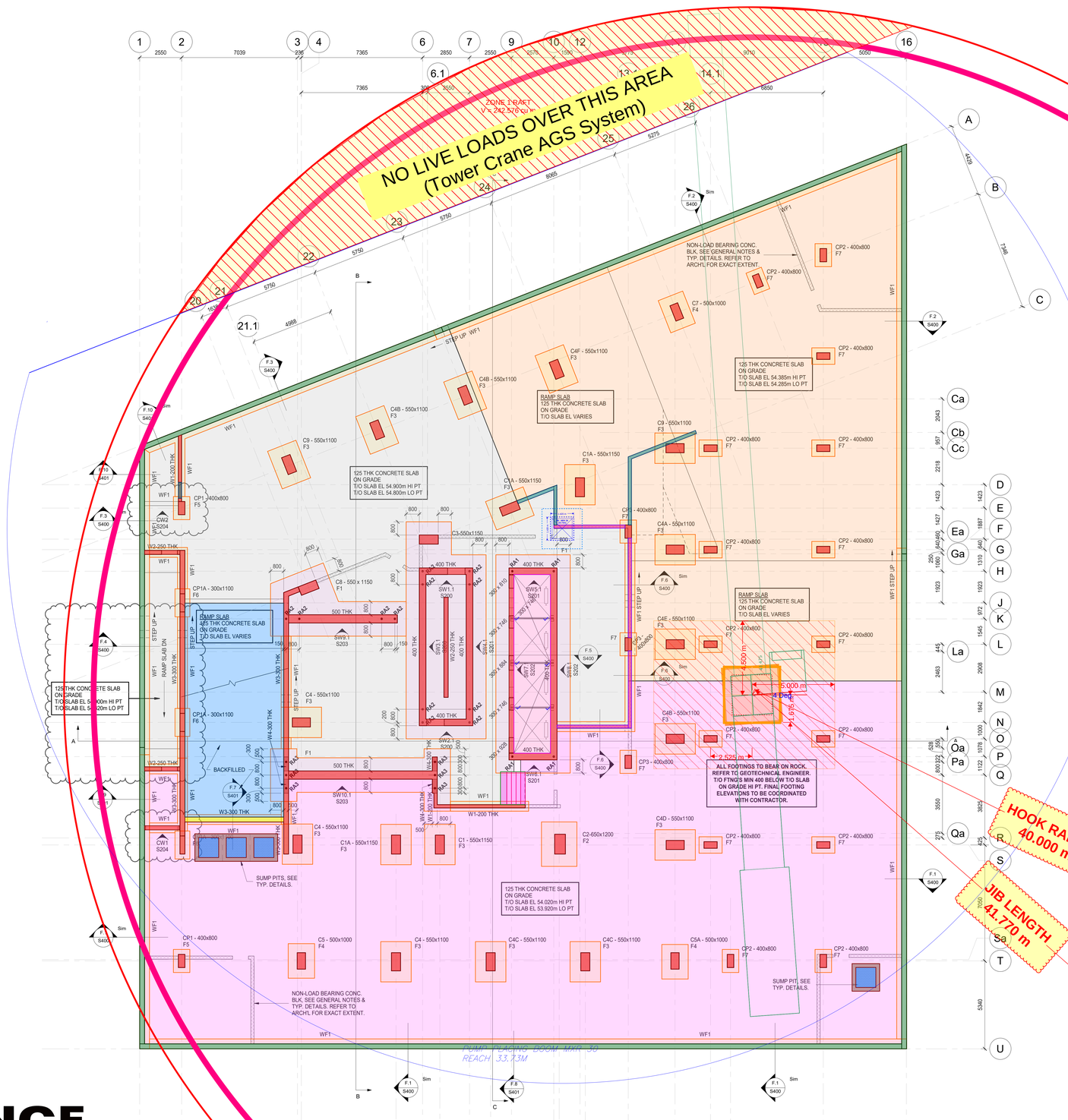
DESIGN LOADS

CONCRETE STAIRS

CONCRETE STAIR THROAT	3.60 kPa
CONCRETE TREADS	2.40 kPa
DEAD LOAD	6.00 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.80 kPa

CONCRETE STAIR LANDINGS

200 CONC SLAB	4.75 kPa
DEAD LOAD	4.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	9.55 kPa



CONCRETE WALL REINF'G SCHEDULE

W1 - 200 THK WALL
15M T & B CONT. EF
15M @ 450 VERT EF
15M @ 450 HORIZ EF
15M DWLS @ 450 EF

W2 - 250 THK WALL
15M T & B CONT. EF
15M @ 300 VERT EF
15M @ 300 HORIZ EF
15M DWLS @ 300 EF

W3 - 300 THK WALL
15M T & B CONT. EF
15M @ 300 VERT EF
15M @ 300 HORIZ EF
15M DWLS @ 300 EF

W4 - 300 THK WALL (45 MPa)
25M T & B CONT. EF
25M @ 200 VERT EF
25M @ 200 HORIZ EF
25M DWLS @ 200 EF

W5 - 300 THK WALL BEAM
4-25M T & B CONT. @ 75 EF
15M @ 200 VERT EF
15M @ 200 HORIZ EF
15M DWLS @ 200 EF
ALL REINF'G TO BE CONTINUOUS
W/ 90° BENDS @ ENDS

NOTES

1. SEE S200's DWGS. FOR SHEARWALL ELEVATIONS. THE ELEVATION VIEW OF THE SHEARWALL IS TAKEN FROM THE SIDE OF THE WALL ON WHICH THE SHEARWALL DESIGNATION (SW#) IS SHOWN ON PLAN.

2. SUPPORTS FOR CURTAIN WALLS & PRECAST PANELS ARE TO BE DESIGNED & DETAILED BY CURTAIN WALL AND PRECAST SUPPLIERS RESPECTIVELY. SHOP DRAWINGS ARE TO BE STAMPED & SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN ONTARIO. ALL SUPPORTS ARE TO BE INSPECTED DURING CONSTRUCTION BY THE SUPPORT DESIGN ENGINEER.

3. ONLY MECHANICAL SLAB OPENINGS LARGER THAN 300 x 300 OR 300 ∅ ARE SHOWN ON THIS DRAWING. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF MECHANICAL SLAB OPENINGS SMALLER THAN THOSE NOTED ABOVE. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF OPENINGS WHICH ARE SHOWN ON THIS DRAWING. REFER TO GENERAL NOTES & TYPICAL DETAILS ON DRAWING S01, S02 & S03 FOR ADDITIONAL REINFORCING REQUIREMENTS AROUND OPENINGS SHOWN ON THIS DRAWING.

CONCRETE COMPRESSIVE STRENGTHS:
SLAB ON GRADE - 25 MPa (TYPE C-4 NO AIR ENTRAINMENT)
FOUNDATION WALLS - 35 MPa (TYPE C-1)
RAMP & MISC WALLS - 35 MPa (TYPE C-1)
FOOTINGS - 35 MPa (TYPE C-1)
RAMP SLAB - 35 MPa (TYPE C-1) W/ CORROSION INHIBITOR
CURBS - 25 MPa (TYPE N)
TOWER COLUMNS & SHEARWALLS - 50 MPa (TYPE C-1)
PODIUM COLUMNS DESIGNATED "CPX" - 35 MPa (TYPE C-1)

BELLAI ALLIANCE

2025.10.10
Tower Crane Layout and Plan
145 Loretta Ave. Ottawa. ON

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur mécanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

4	ISSED WITH STA-CI	TBD
3	ISSUED FOR TENDER	25-06-09
2	ISSUED FOR PRICING	25-05-16
1	ISSUE FOR ARTL W/D & CLIENT BUDGETING	25-03-28
0	ISSUE FOR EXCAVATION TENDER	24-10-30
no	revisions	date

stamp | timbre

Not For Construction

architect | architecte

linebox
STUDIO

All dimensions are shown in metric.
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Do not scale the drawings.
Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

Enter address here

drawing title | titre du dessin

FOUNDATION / P3 PARKING PLAN

project number | numero du projet	21-045
drawn | dessiné	PMD/DG
checked | verifié	BA
scale | échelle	1 : 100
date | date	05/28/24

drawing number | numéro du dessin

S100

DESIGN LOADS

CONCRETE STAIRS

CONCRETE STAIR THROAT	3.60 kPa
CONCRETE TREADS	2.40 kPa
DEAD LOAD	6.00 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.80 kPa

CONCRETE STAIR LANDINGS

200 CONC SLAB	4.75 kPa
DEAD LOAD	4.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	9.55 kPa

SUSPENDED RAMP

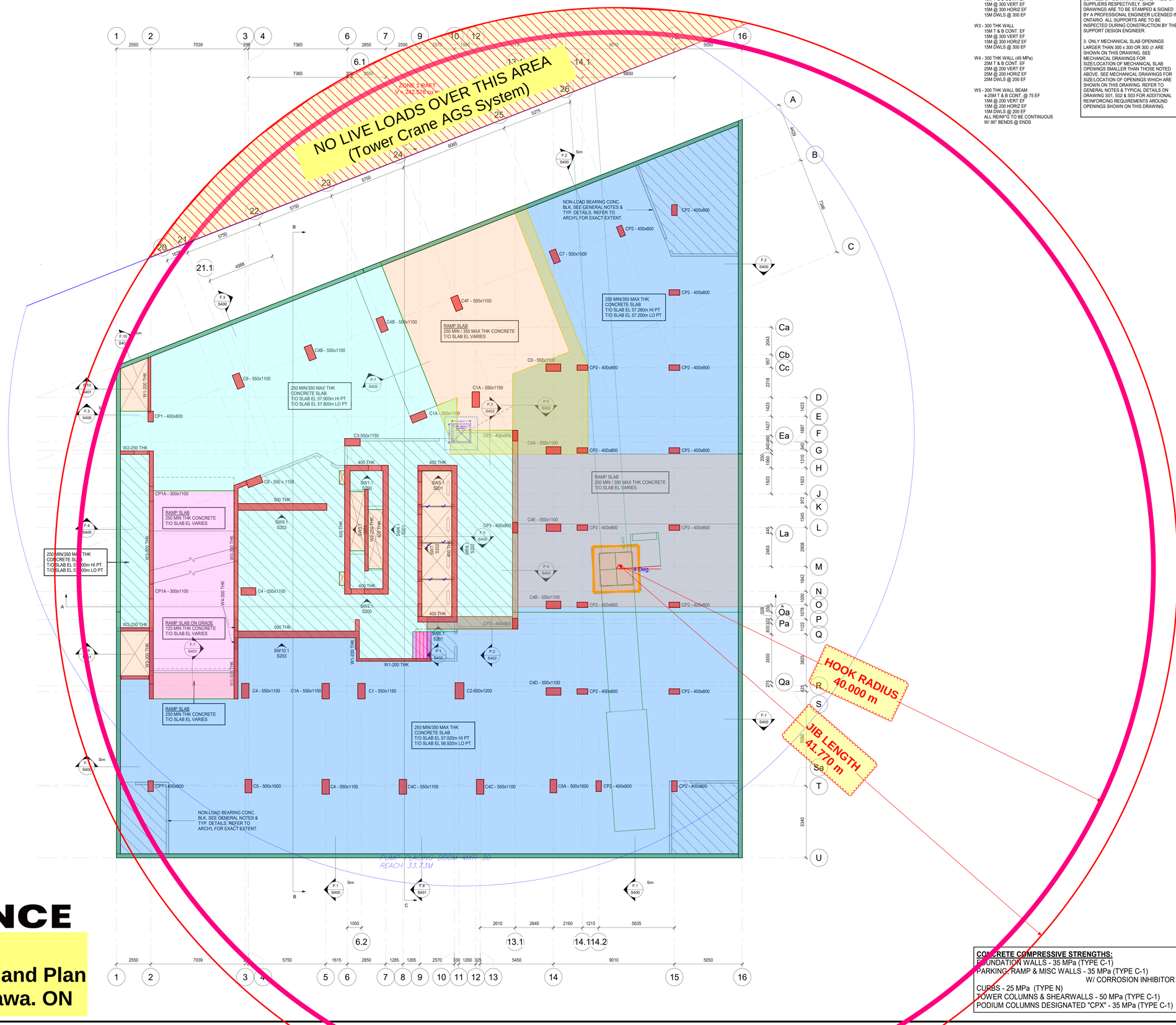
250 CONC SLAB	5.90 kPa
MEMBRANE	0.25
MECH / MISC	0.25
DEAD LOAD	6.40 kPa
LIVE LOAD	2.40 kPa
TOTAL LOAD	8.80 kPa

PARKING TYPICAL

250 CONC SLAB	5.90 kPa
67 AVG TOPPING	1.60
MEMBRANE	0.25
MECH / MISC	0.25
DEAD LOAD	8.00 kPa
LIVE LOAD	2.40 kPa
TOTAL LOAD	10.40 kPa

PARKING MECH'L / STORAGE AREAS / CORRIDORS

250 CONC SLAB	5.90 kPa
100 AVG TOPPING	2.40
MECH / MISC	0.25
DEAD LOAD	8.55 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	13.35 kPa



CONCRETE WALL REINF'G SCHEDULE

W1 - 200 THK WALL
15M T & B CONT. EF
15M @ 450 VERT EF
15M @ 450 HORIZ EF
15M DWLS @ 450 EF

W2 - 250 THK WALL
15M T & B CONT. EF
15M @ 300 VERT EF
15M @ 300 HORIZ EF
15M DWLS @ 300 EF

W3 - 300 THK WALL
15M T & B CONT. EF
15M @ 300 VERT EF
15M @ 300 HORIZ EF
15M DWLS @ 300 EF

W4 - 300 THK WALL (45 MPa)
25M T & B CONT. EF
25M @ 200 VERT EF
25M @ 200 HORIZ EF
25M DWLS @ 200 EF

W5 - 300 THK WALL BEAM
4-25M T & B CONT. @ 75 EF
15M @ 200 VERT EF
15M @ 200 HORIZ EF
15M DWLS @ 200 EF
ALL REINF'G TO BE CONTINUOUS
W/ 90° BENDS @ ENDS

NOTES

1. SEE S200's DWGS. FOR SHEARWALL ELEVATIONS. THE ELEVATION VIEW OF THE SHEARWALL IS TAKEN FROM THE SIDE OF THE WALL ON WHICH THE SHEARWALL DESIGNATION (SW#) IS SHOWN ON PLAN.

2. SUPPORTS FOR CURTAIN WALLS & PRECAST PANELS ARE TO BE DESIGNED & DETAILED BY CURTAIN WALL AND PRECAST SUPPLIERS RESPECTIVELY. SHOP DRAWINGS ARE TO BE STAMPED & SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN ONTARIO. ALL SUPPORTS ARE TO BE INSPECTED DURING CONSTRUCTION BY THE SUPPORT DESIGN ENGINEER.

3. ONLY MECHANICAL SLAB OPENINGS LARGER THAN 300 x 300 OR 300 ∅ ARE SHOWN ON THIS DRAWING. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF MECHANICAL SLAB OPENINGS SMALLER THAN THOSE NOTED ABOVE. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF OPENINGS WHICH ARE SHOWN ON THIS DRAWING. REFER TO GENERAL NOTES & TYPICAL DETAILS ON DRAWING S01, S02 & S03 FOR ADDITIONAL REINFORCING REQUIREMENTS AROUND OPENINGS SHOWN ON THIS DRAWING.

CONCRETE COMPRESSIVE STRENGTHS:
FOUNDATION WALLS - 35 MPa (TYPE C-1)
PARKING RAMP & MISC WALLS - 35 MPa (TYPE C-1)
W/ CORROSION INHIBITOR
CURBS - 25 MPa (TYPE N)
TOWER COLUMNS & SHEARWALLS - 50 MPa (TYPE C-1)
PODIUM COLUMNS DESIGNATED "CPX" - 35 MPa (TYPE C-1)

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nord du projet
project north

nord reel
true north

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no	revisions	date

stamp | timbre

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architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

Enter address here

drawing title | titre du dessin

P2 PARKING CONCRETE LAYOUT PLAN

project number | numero du projet	21-045
drawn | dessiné	PMD/DG
checked | verifié	BA
scale | échelle	1 : 100
date | date	05/31/24

drawing number | numéro du dessin

S101

DESIGN LOADS

CONCRETE STAIRS

CONCRETE STAIR THROAT	3.60 kPa
CONCRETE TREADS	2.40 kPa
DEAD LOAD	6.00 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.80 kPa

CONCRETE STAIR LANDINGS

200 CONC SLAB	4.75 kPa
DEAD LOAD	4.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	9.55 kPa

SUSPENDED RAMP

250 CONC SLAB	5.90 kPa
MEMBRANE	0.25
MECH / MISC	0.25
DEAD LOAD	6.40 kPa
LIVE LOAD	2.40 kPa
TOTAL LOAD	8.80 kPa

PARKING TYPICAL

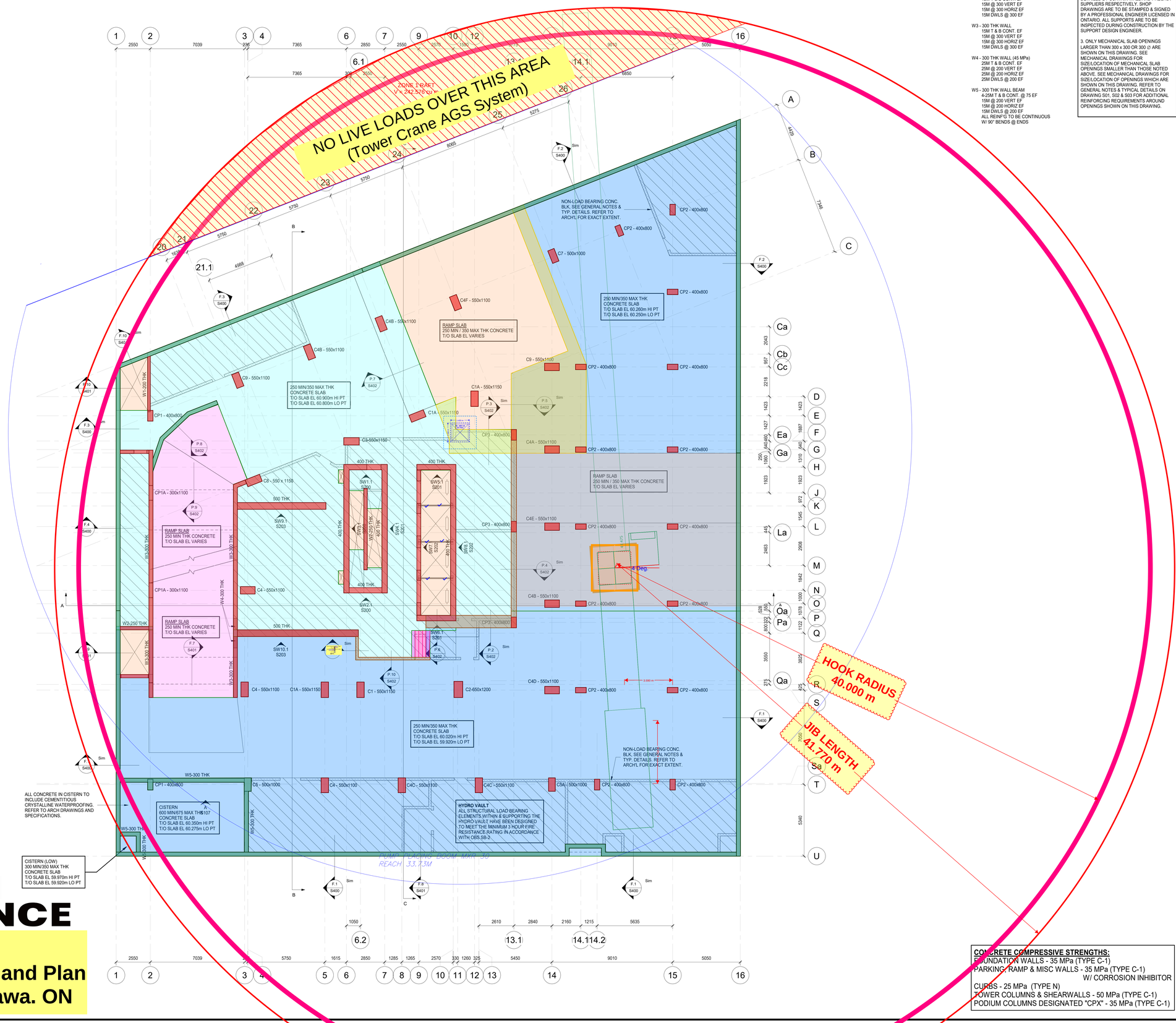
250 CONC SLAB	5.90 kPa
67 AVG TOPPING	1.60
MEMBRANE	0.25
MECH / MISC	0.25
DEAD LOAD	8.00 kPa
LIVE LOAD	2.40 kPa
TOTAL LOAD	10.40 kPa

PARKING MECH'L / STORAGE AREAS / CORRIDORS

250 CONC SLAB	5.90 kPa
109 AVG TOPPING	2.40
MECH / MISC	0.25
DEAD LOAD	8.55 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	13.35 kPa

CISTERN

600 CONC SLAB	14.20 kPa
50 AVG TOPPING	0.60
MEMBRANE	0.25
MECH / MISC	0.25
DEAD LOAD	15.30 kPa
LIVE LOAD	18.00 kPa
TOTAL LOAD	33.30 kPa



CONCRETE WALL REINF'G SCHEDULE

W1 - 200 THK WALL
15M T & B CONT. EF
15M @ 450 VERT EF
15M @ 450 HORIZ EF
15M DWLS @ 450 EF

W2 - 250 THK WALL
15M T & B CONT. EF
15M @ 300 VERT EF
15M @ 300 HORIZ EF
15M DWLS @ 300 EF

W3 - 300 THK WALL
15M T & B CONT. EF
15M @ 300 VERT EF
15M @ 300 HORIZ EF
15M DWLS @ 300 EF

W4 - 300 THK WALL (45 MPa)
25M T & B CONT. EF
25M @ 200 VERT EF
25M @ 200 HORIZ EF
25M DWLS @ 200 EF

W5 - 300 THK WALL BEAM
4-25M T & B CONT. @ 75 EF
15M @ 200 VERT EF
15M @ 200 HORIZ EF
15M DWLS @ 200 EF
ALL REINF'G TO BE CONTINUOUS
W/ 90° BENDS @ ENDS

NOTES

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CONCRETE COMPRESSIVE STRENGTHS:

FOUNDATION WALLS - 35 MPa (TYPE C-1)
PARKING RAMP & MISC WALLS - 35 MPa (TYPE C-1)
W/ CORROSION INHIBITOR
CURBS - 25 MPa (TYPE N)
TOWER COLUMNS & SHEARWALLS - 50 MPa (TYPE C-1)
PODIUM COLUMNS DESIGNATED "CPX" - 35 MPa (TYPE C-1)

BELLAI ALLIANCE

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nord du projet
project north

nord reel
true north

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1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

Not For Construction

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

Enter address here

drawing title | titre du dessin

P1 PARKING CONCRETE LAYOUT PLAN

project number | numero du projet	21-045
drawn | dessiné	PMD/DG
checked | verifié	BA
scale | échelle	1 : 100
date | date	05/31/24

drawing number | numéro du dessin

S104

DESIGN LOADS

COMMERICAL/AMENITY

250 CONC SLAB	5.90 kPa
PARTITION ALLOWANCE	1.00
FLOORING	0.15
MECH'L & MISC	0.25 kPa
DEAD LOAD	7.30 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	12.10 kPa

CORRIDOR / M & E / STORAGE

250 CONC SLAB	5.90 kPa
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	6.20 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	11.00 kPa

MOVE-IN & GARBAGE ROOM

250 CONC SLAB	5.90 kPa
67 AVG TOPPING	1.60
PARTITION ALLOWANCE	1.00
MECH'L & MISC	0.25 kPa
DEAD LOAD	8.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	13.55 kPa

LOADING BAY

300 CONC SLAB	7.10 kPa
100 AVG TOPPING	2.40
MECH'L & MISC	0.40 kPa
DEAD LOAD	9.90 kPa
LIVE LOAD	7.20 kPa
TOTAL LOAD	17.20 kPa

CONC
CONCR
CONCR
DEAD L
LIVE LO
TOTAL

CONC
200 CO
DEAD L
LIVE LO
TOTAL

RAMP
250 CO
MEMBR
MECH /
DEAD L
LIVE LO
TOTAL

HYDR
250 SL
67 AVG
ROOFI
LANDI
MECH
DEAD L
LIVE LO
TOTAL

CENTRELINE OF LRT TRACKS IS APPROXIMATE
INFORMATION IS PROVIDED FOR REFERENCE ONLY

MUP (MULTI-USE PATHWAY)

+/- 28,951
APPROX. CENTRELINE OF RAIL LINE

+/- 28,877
APPROX. CENTRELINE OF RAIL LINE

+/- 29,031
APPROX. CENTRELINE OF RAIL LINE

ZONE LIMIT
V = 242.5m

NO LIVE LOADS OVER THIS AREA
(Tower Crane AGS System)

145 LORETTA AVE W PROPERTY LINE

OUTLINE OF PODIUM &
LEVEL 5 TERRACE

EXISTING
LOADING BAY
STRUCTURE TO
BE DEMOLISHED

2 STOREY BRICK, METAL
AND STUCCO SIDED
COMMERCIAL BUILDING
EXISTING TO REMAIN

TOWER SETBACK 1,200

14,042

2,207

Concrete Placing
Boom #1

BLUE LINE DENOTES
OUTLINE OF TOWER

145 LORETTA
TOWER A
(PHASE 1)

Tower Crane #1

24,044

4 Deg.

1,200
TOWER SETBACK

OUTLINE OF TOWER &
LEVEL 5 EXT. WALLS

36,840

3,000
SETBACK

TOWER SETBACK

1,800
TOWER SETBACK

PODIUM ABOVE

HOOK RADIUS
40.000 m

JIB LENGTH
41.770 m

GAS FEED

LOADING
AREA

2,000
TOWER SETBACK

1,000
TOWER SETBACK

3,000
SETBACK

PARKING
ENTRANCE

MAN HOLE

MAN HOLE FOR
SANITATION MONITORING
(REFER TO CIVIL)

145 LORETTA AVE W PROPERTY LINE

145 LORETTA AVE W PROPERTY LINE

FH

SURFACE PARKING LOT

N.I.C.

32,950
MAX WIDTH AS PER ZONING SCHEDULE
47,830

SEVERANCE LINE TBD

+/- 20,213
APPROX. DISTANCE TO NEIGHBOURS PROPERTY LINE

DIMENSIONS SHOWN FOR THE NEIGHBOURING PROPERTY ARE APPROXIMATE (+/-). THIS INFORMATION HAS NOT BEEN VERIFIED BY SURVEY AND IS PROVIDED FOR REFERENCE ONLY.

975 GLADSTONE AVE PROPERTY LINE

CITY OF OTTAWA PROPERTY

CANADIAN BANK NOTE PROPERTY

CITY OF OTTAWA PROPERTY

BELLAI ALLIANCE

2025.10.10
Tower Crane Layout and Plan
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CLV GROUP DEVELOPMENTS

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CONSULTING STRUCTURAL ENGINEERS

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wsp

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project north

nord réel
true north

ISSUED FOR TENDER	25-06-09
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ISSUE FOR 60% BID & CLIENT BUDGETING	25-03-28
ISSUE FOR EXCAVATION TENDER	24-10-30
ISSUE FOR REVIEW	24-09-13
revisions	date

Not For Construction

inebox STUDIO

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not scale the drawings.
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GLADSTONE & LORETTA
RESIDENTIAL TOWER

Enter address here

LEVEL 01 CONCRETE
LAYOUT PLAN

project number | numéro du projet	21-045
drawn | dessiné	PMD/DG
checked | vérifié	BA
scale | échelle	As indicated
date | date	05/31/24
drawing number | numéro du dessin	S107

LORE

DESIGN LOADS

UNIT AREAS

250 CONC SLAB	5.90 kPa
PARTITIONS	1.00
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	7.20 kPa
LIVE LOAD	1.90 kPa
TOTAL LOAD	9.10 kPa

CORRIDOR / M & E / STORAGE

250 CONC SLAB	5.90 kPa
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	6.20 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	11.00 kPa

CONCRETE STAIRS

CONCRETE STAIR THROAT	3.60 kPa
CONCRETE TREADS	2.40 kPa
DEAD LOAD	6.00 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.80 kPa

CONCRETE STAIR LANDINGS

200 CONC SLAB	4.75 kPa
DEAD LOAD	4.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	9.55 kPa

NOTE: EXTERIOR BALCONY SLABS

PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-23.1-04 TO GIVE THE FOLLOWING PROPERTIES FOR ALL EXTERIOR EXPOSED CONCRETE BALCONY SLABS.
1. TYPE GU PORTLAND CEMENT
2. MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS = 35 MPa
3. CLASS OF EXPOSURE TO BE C1
4. NOMINAL SIZE OF COARSE AGGREGATE TO BE 20 mm
5. SLUMP AT TIME AND POINT OF DISCHARGE TO BE 75 mm
6. AIR CONTENT TO BE 5-8%

NOTES

1. SEE S200's DWGS. FOR SHEARWALL ELEVATIONS. THE ELEVATION VIEW OF THE SHEARWALL IS TAKEN FROM THE SIDE OF THE WALL ON WHICH THE SHEARWALL DESIGNATION (SW#) IS SHOWN ON PLAN.

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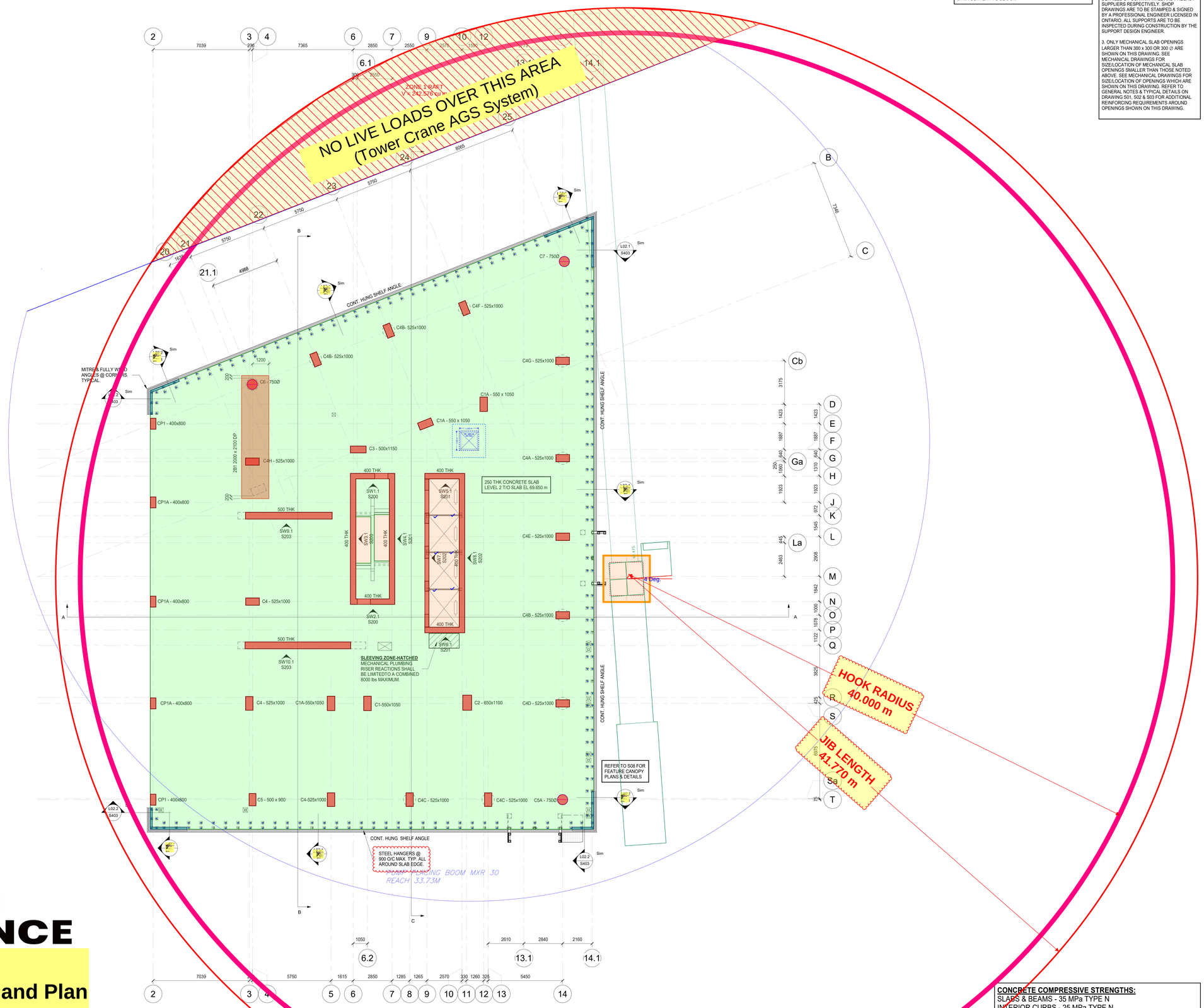

CONCRETE COMPRESSIVE STRENGTHS:
SLABS & BEAMS - 35 MPa TYPE N
INTERIOR CURBS - 25 MPa TYPE N
TOWER COLUMNS & SHEARWALLS - 45 MPa (TYPE C-1)
PODIUM COLUMNS DESIGNATED "CPX" - 35 MPa (TYPE C-1)

BELLAI ALLIANCE

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nord reel
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stamp | timbre

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architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

Enter address here

drawing title | titre du dessin

LEVEL 02 CONCRETE LAYOUT PLAN

project number | numero du projet	21-045
drawn | dessiné	PMD/DG
checked | verifié	BA
scale | échelle	1 : 100
date | date	05/31/24

drawing number | numéro du dessin

S110

DESIGN LOADS

UNIT AREAS

250 CONC SLAB	5.90 kPa
PARTITIONS	1.00
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	7.20 kPa
LIVE LOAD	1.90 kPa
TOTAL LOAD	9.10 kPa

CORRIDOR / M & E / STORAGE

250 CONC SLAB	5.90 kPa
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	6.20 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	11.00 kPa

CONCRETE STAIRS

CONCRETE STAIR THROAT	3.60 kPa
CONCRETE TREADS	2.40 kPa
DEAD LOAD	6.00 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.80 kPa

CONCRETE STAIR LANDINGS

200 CONC SLAB	4.75 kPa
DEAD LOAD	4.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	9.55 kPa

NOTE: EXTERIOR BALCONY SLABS

PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-23.1-04 TO GIVE THE FOLLOWING PROPERTIES FOR ALL EXTERIOR EXPOSED CONCRETE BALCONY SLABS.
1. TYPE GU PORTLAND CEMENT
2. MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS = 35 MPa
3. CLASS OF EXPOSURE TO BE C1
4. NOMINAL SIZE OF COARSE AGGREGATE TO BE 20 mm
5. SLUMP AT TIME AND POINT OF DISCHARGE TO BE 75 mm
6. AIR CONTENT TO BE 5-8%

NOTES

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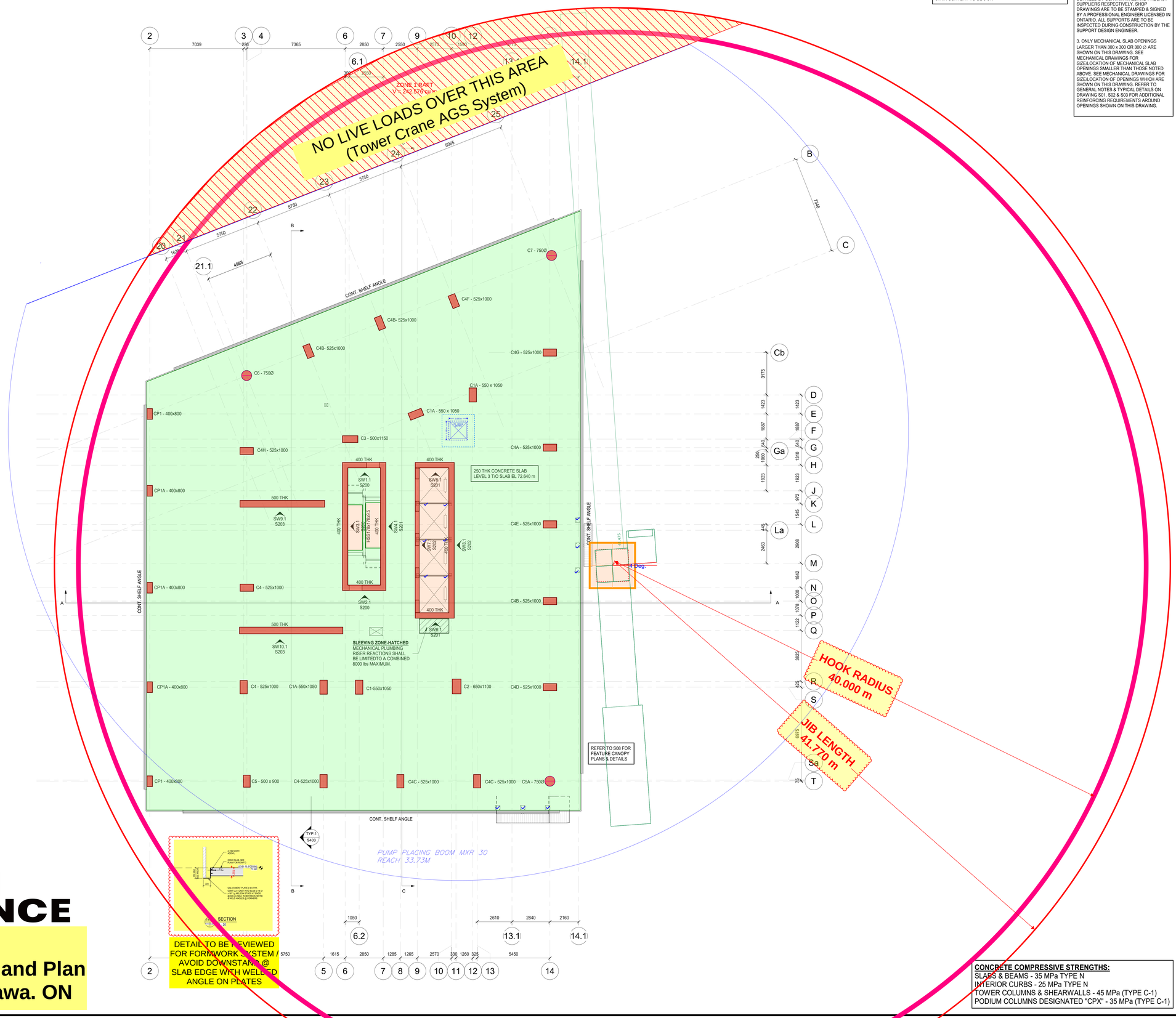

BELLAI ALLIANCE

2025.10.10
Tower Crane Layout and Plan
145 Loretta Ave. Ottawa. ON

CONCRETE COMPRESSIVE STRENGTHS:
SLABS & BEAMS - 35 MPa TYPE N
INTERIOR CURBS - 25 MPa TYPE N
TOWER COLUMNS & SHEARWALLS - 45 MPa (TYPE C-1)
PODIUM COLUMNS DESIGNATED "CPX" - 35 MPa (TYPE C-1)

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structures

GWAL
Goodkey, Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

5	ISSUED FOR TENDER	25-06-09
4	ISSUED FOR PRICING	25-05-16
3	ISSUE FOR 60% MID & CLIENT BUDGETING	25-03-28
2	ISSUE FOR EXCAVATION TENDER	24-10-30
1	ISSUE FOR REVIEW	24-09-13
no	revisions	date

stamp | timbre

Not For Construction

architect | architecte

linebox STUDIO

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Not for construction until signed by the Architect.

project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

Enter address here

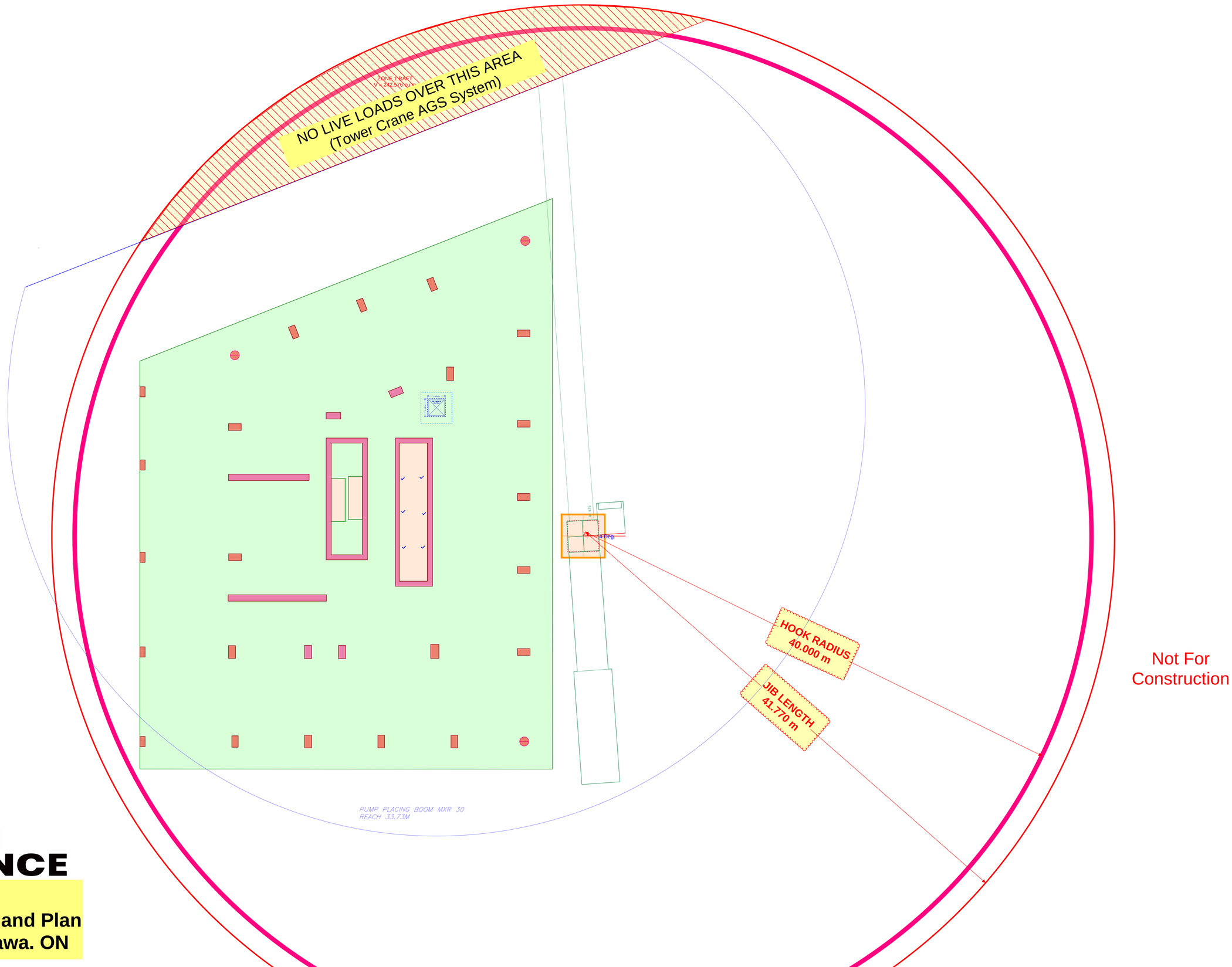
drawing title | titre du dessin

LEVEL 03 CONCRETE LAYOUT PLAN

project number | numero du projet	21-045
drawn | dessiné	PMD/DG
checked | verifié	BA
scale | échelle	1 : 100
date | date	05/31/24

drawing number | numéro du dessin

S113



BELLAI ALLIANCE

2025.10.10
Tower Crane Layout and Plan
145 Loretta Ave. Ottawa. ON

Not For Construction

DESIGN LOADS

AMENITY AREAS

250 CONC SLAB	5.90 kPa
PARTITIONS	1.00
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	7.20 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	12.00 kPa

CORRIDOR / M & E / STORAGE

250 CONC SLAB	5.90 kPa
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	6.20 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	11.00 kPa

CONCRETE STAIRS

CONCRETE STAIR THROAT	3.60 kPa
CONCRETE TREADS	2.40 kPa
DEAD LOAD	6.00 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.80 kPa

CONCRETE STAIR LANDINGS

200 CONC SLAB	4.75 kPa
DEAD LOAD	4.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	9.55 kPa

TERRACE/ROOF

HARD LANDSCAPING	2.40 kPa
ROOFING & INSULATION	0.60 kPa
100 AVG TOPPING	2.40
300 CONC SLAB	7.10
CEILING	0.15
MECH'L & MISC	0.25 kPa
DEAD LOAD	12.90 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	17.70 kPa

GREEN ROOF

GREEN LANDSCAPING	2.40 kPa
ROOFING & INSULATION	0.60
100 AVG TOPPING	2.40
300 CONC SLAB	7.10
CEILING	0.15
MECH'L & MISC	0.25 kPa
DEAD LOAD	12.90 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	17.70 kPa

NOTE: EXTERIOR BALCONY SLABS

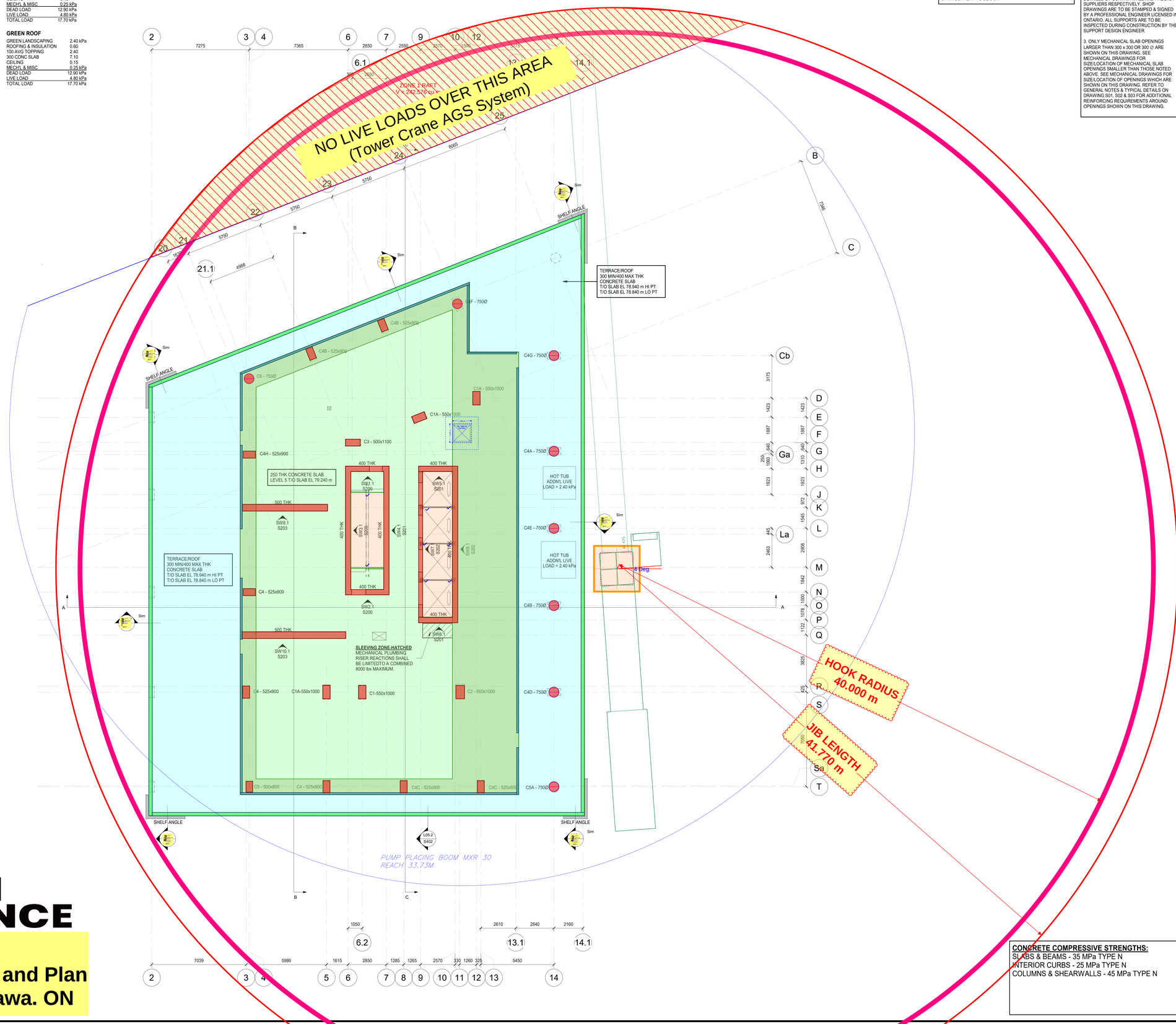
PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-23.1-04 TO GIVE THE FOLLOWING PROPERTIES FOR ALL EXTERIOR EXPOSED CONCRETE BALCONY SLABS.
1. TYPE GU PORTLAND CEMENT
2. MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS = 35 MPa
3. CLASS OF EXPOSURE TO BE C1
4. NOMINAL SIZE OF COARSE AGGREGATE TO BE 20 mm
5. SLUMP AT TIME AND POINT OF DISCHARGE TO BE 75 mm
6. AIR CONTENT TO BE 5-8%

NOTES

1. SEE S200's DWGS. FOR SHEARWALL ELEVATIONS. THE ELEVATION VIEW OF THE SHEARWALL IS TAKEN FROM THE SIDE OF THE WALL ON WHICH THE SHEARWALL DESIGNATION (SW#) IS SHOWN ON PLAN.

2. SUPPORTS FOR CURTAIN WALLS & PRECAST PANELS ARE TO BE DESIGNED & DETAILED BY CURTAIN WALL AND PRECAST SUPPLIERS RESPECTIVELY. SHOP DRAWINGS ARE TO BE STAMPED & SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN ONTARIO. ALL SUPPORTS ARE TO BE INSPECTED DURING CONSTRUCTION BY THE SUPPORT DESIGN ENGINEER.

3. ONLY MECHANICAL SLAB OPENINGS LARGER THAN 300 x 300 OR 300 ∅ ARE SHOWN ON THIS DRAWING. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF MECHANICAL SLAB OPENINGS SMALLER THAN THOSE NOTED ABOVE. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF OPENINGS WHICH ARE SHOWN ON THIS DRAWING. REFER TO GENERAL NOTES & TYPICAL DETAILS ON DRAWING S01, S02 & S03 FOR ADDITIONAL REINFORCING REQUIREMENTS AROUND OPENINGS SHOWN ON THIS DRAWING.



CONCRETE COMPRESSIVE STRENGTHS:
SLABS & BEAMS - 35 MPa TYPE N
INTERIOR CURBS - 25 MPa TYPE N
COLUMNS & SHEARWALLS - 45 MPa TYPE N

BELLAI ALLIANCE

2025.10.10
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145 Loretta Ave. Ottawa. ON

CLV GROUP DEVELOPMENTS

client

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structural engineers | ingénieurs structurels

GWAL
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electrical engineer | ingénieur electrique

mechanical engineer | ingénieur mécanique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

5	ISSUED FOR TENDER	25-06-09
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no	revisions	date

stamp | timbre

Not For Construction

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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drawing title | titre du dessin

LEVEL 05 CONCRETE LAYOUT PLAN

project number | numero du projet	21-045
drawn | dessiné	PMD/DG
checked | verifié	BA
scale | échelle	1 : 100
date | date	05/31/24

drawing number | numéro du dessin

S119

DESIGN LOADS

AMENITY AREAS

250 CONC SLAB	5.90 kPa
PARTITIONS	1.00
CEILING & FLOORING	0.15
MECHFL & MISC	0.15 kPa
DEAD LOAD	7.20 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	12.00 kPa

CORRIDOR / M & E / STORAGE

250 CONC SLAB	5.90 kPa
CEILING & FLOORING	0.15
MECHFL & MISC	0.15 kPa
DEAD LOAD	6.20 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	11.00 kPa

CONCRETE STAIRS

CONCRETE STAIR THROAT	3.60 kPa
CONCRETE TREADS	2.40 kPa
DEAD LOAD	6.00 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.80 kPa

CONCRETE STAIR LANDINGS

200 CONC SLAB	4.75 kPa
DEAD LOAD	4.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	9.55 kPa

NOTE: EXTERIOR BALCONY SLABS

PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-23.1-04 TO GIVE THE FOLLOWING PROPERTIES FOR ALL EXTERIOR EXPOSED CONCRETE BALCONY SLABS.
1. TYPE GU PORTLAND CEMENT
2. MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS = 35 MPa
3. CLASS OF EXPOSURE TO BE C1
4. NOMINAL SIZE OF COARSE AGGREGATE TO BE 20 mm
5. SLUMP AT TIME AND POINT OF DISCHARGE TO BE 75 mm
6. AIR CONTENT TO BE 5-8%

NOTES

1. SEE S200's DWGS. FOR SHEARWALL ELEVATIONS. THE ELEVATION VIEW OF THE SHEARWALL IS TAKEN FROM THE SIDE OF THE WALL ON WHICH THE SHEARWALL DESIGNATION (SW#) IS SHOWN ON PLAN.

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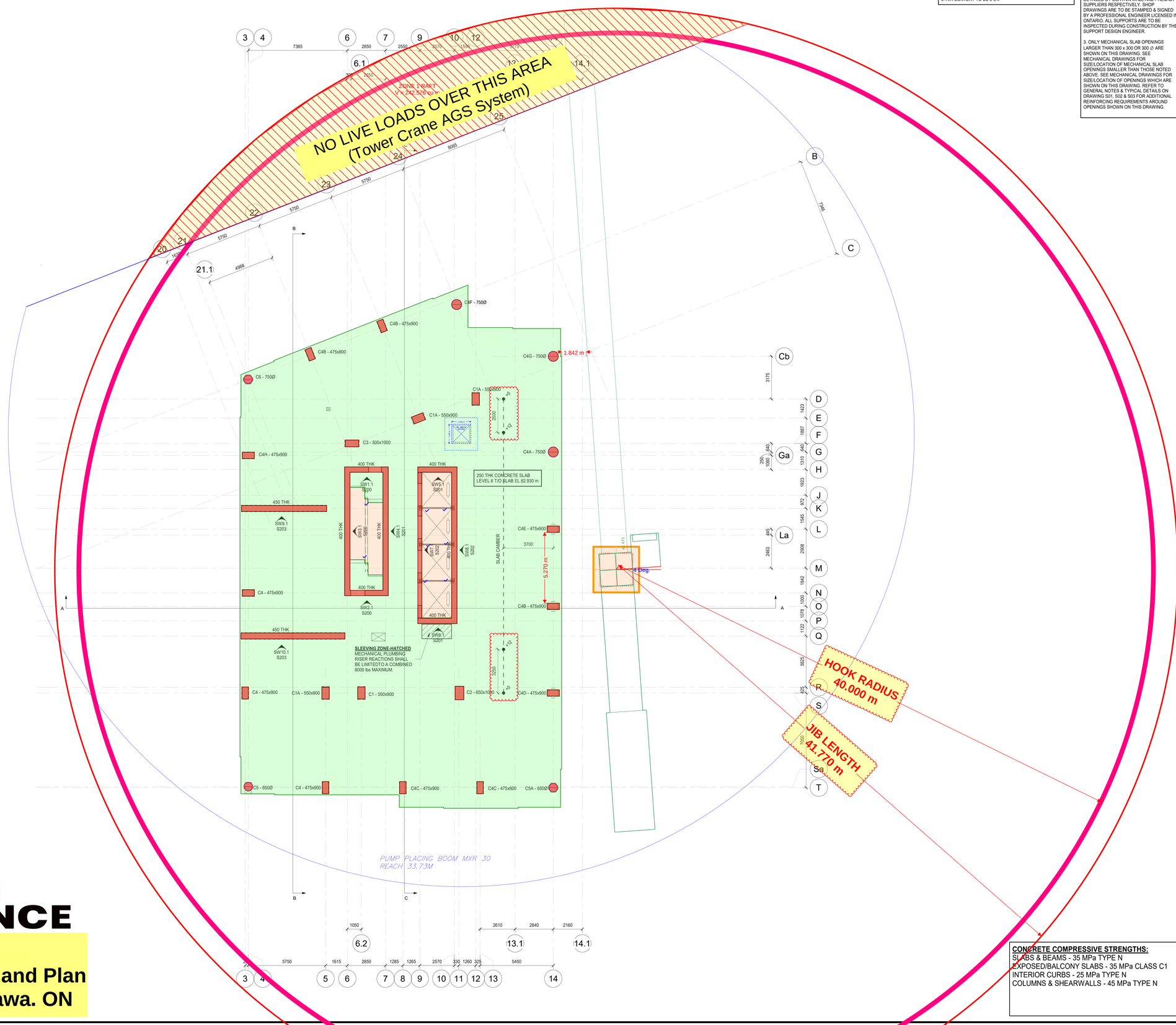

CONCRETE COMPRESSIVE STRENGTHS:
SLABS & BEAMS - 35 MPa TYPE N
EXPOSED/BALCONY SLABS - 35 MPa CLASS C1
INTERIOR CURBS - 25 MPa TYPE N
COLUMNS & SHEARWALLS - 45 MPa TYPE N

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2025.10.10
Tower Crane Layout and Plan
145 Loretta Ave. Ottawa. ON

CLV GROUP DEVELOPMENTS

client

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CONSULTING STRUCTURAL ENGINEERS

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GWAL
Goodkey Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur mécharique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

no	revisions	date
5	ISSUED FOR TENDER	25-06-09
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stamp | timbre

Not For Construction

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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drawing title | titre du dessin

LEVEL 06 CONCRETE LAYOUT PLAN

project number | numero du projet	21-045
drawn | dessiné	PMD/DG
checked | verifié	BA
scale | échelle	1 : 100
date | date	05/31/24

drawing number | numéro du dessin

S122

DESIGN LOADS

UNIT AREAS

225 CONC SLAB	5.30 kPa
PARTITIONS	1.00
CEILING & FLOORING	0.15
MECHFL & MISC	0.15 kPa
DEAD LOAD	6.60 kPa
LIVE LOAD	1.90 kPa
TOTAL LOAD	8.50 kPa

CORRIDOR / M & E / STORAGE

225 CONC SLAB	5.30 kPa
CEILING & FLOORING	0.15
MECHFL & MISC	0.15 kPa
DEAD LOAD	5.60 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.40 kPa

CONCRETE STAIRS

CONCRETE STAIR THROAT	3.60 kPa
CONCRETE TREADS	2.40 kPa
DEAD LOAD	6.00 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.80 kPa

CONCRETE STAIR LANDINGS

200 CONC SLAB	4.75 kPa
DEAD LOAD	4.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	9.55 kPa

NOTE: EXTERIOR BALCONY SLABS

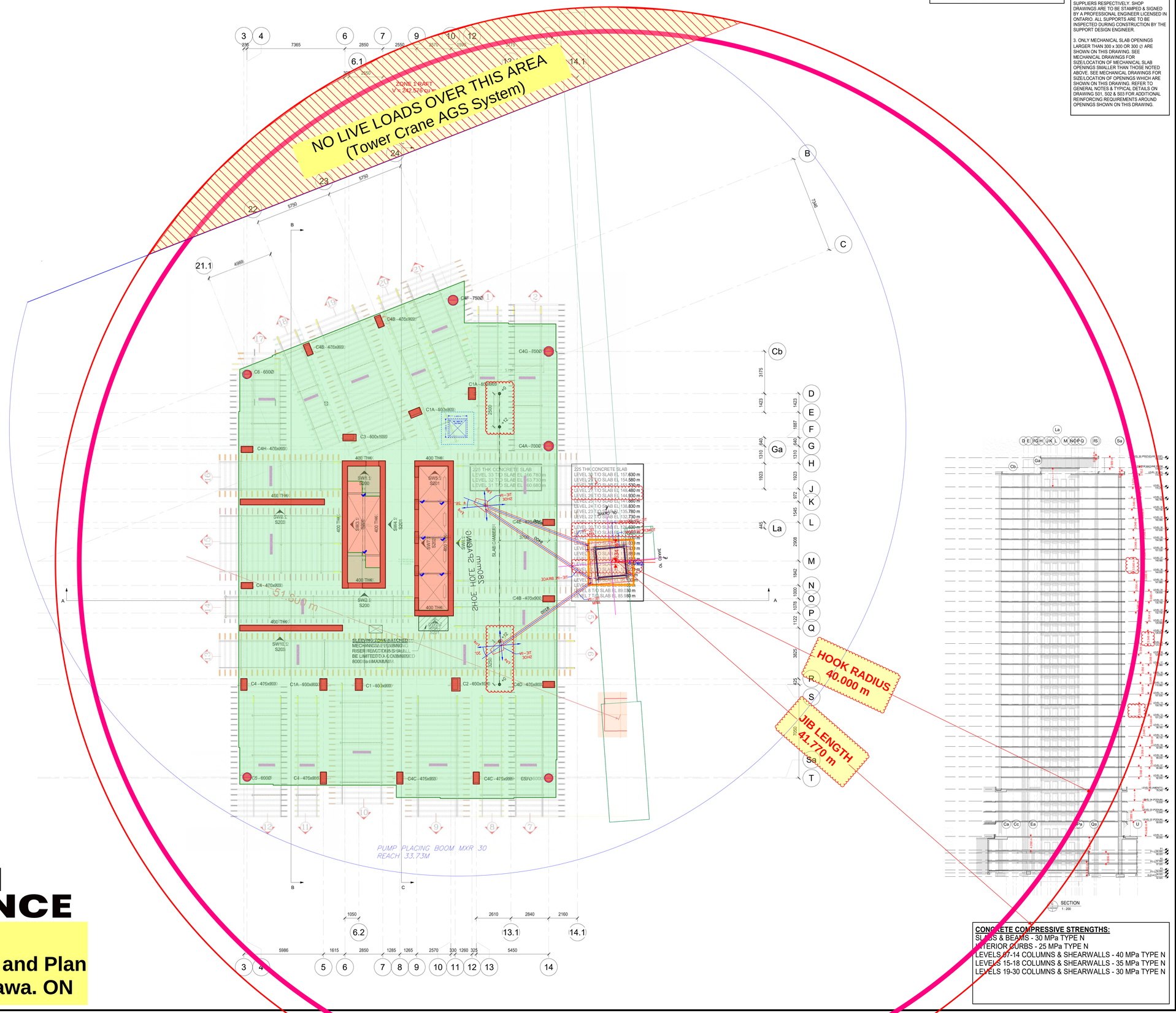
PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-23.1-04 TO GIVE THE FOLLOWING PROPERTIES FOR ALL EXTERIOR EXPOSED CONCRETE BALCONY SLABS.
1. TYPE GU PORTLAND CEMENT
2. MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS = 35 MPa
3. CLASS OF EXPOSURE TO BE C1
4. NOMINAL SIZE OF COARSE AGGREGATE TO BE 20 mm
5. SLUMP AT TIME AND POINT OF DISCHARGE TO BE 75 mm
6. AIR CONTENT TO BE 5-8%

NOTES

1. SEE S200's DWGS. FOR SHEARWALL ELEVATIONS. THE ELEVATION VIEW OF THE SHEARWALL IS TAKEN FROM THE SIDE OF THE WALL ON WHICH THE SHEARWALL DESIGNATION (SW#) IS SHOWN ON PLAN.

2. SUPPORTS FOR CURTAIN WALLS & PRECAST PANELS ARE TO BE DESIGNED & DETAILED BY CURTAIN WALL AND PRECAST SUPPLIERS RESPECTIVELY. SHOP DRAWINGS ARE TO BE STAMPED & SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN ONTARIO. ALL SUPPORTS ARE TO BE INSPECTED DURING CONSTRUCTION BY THE SUPPORT DESIGN ENGINEER.

3. ONLY MECHANICAL SLAB OPENINGS LARGER THAN 300 x 300 OR 300 ∅ ARE SHOWN ON THIS DRAWING. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF MECHANICAL SLAB OPENINGS SMALLER THAN THOSE NOTED ABOVE. SEE MECHANICAL DRAWINGS FOR SIZE/LOCATION OF OPENINGS WHICH ARE SHOWN ON THIS DRAWING. REFER TO GENERAL NOTES & TYPICAL DETAILS ON DRAWING S01, S02 & S03 FOR ADDITIONAL REINFORCING REQUIREMENTS AROUND OPENINGS SHOWN ON THIS DRAWING.



CONCRETE COMPRESSIVE STRENGTHS:
SLABS & BEAMS - 30 MPa TYPE N
EXTERIOR CURBS - 25 MPa TYPE N
LEVELS 07-14 COLUMNS & SHEARWALLS - 40 MPa TYPE N
LEVELS 15-18 COLUMNS & SHEARWALLS - 35 MPa TYPE N
LEVELS 19-30 COLUMNS & SHEARWALLS - 30 MPa TYPE N

BELLAI ALLIANCE

2025.10.10
Tower Crane Layout and Plan
145 Loretta Ave. Ottawa. ON

CLV GROUP DEVELOPMENTS

client

CUNLIFFE & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

structural engineers | ingénieurs structurels

GWAL
Goodkey Weedmark & Associates Ltd.

electrical engineers | ingénieur electrique

mechanical engineer | ingénieur méchanique

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

nord du projet
project north

nord reel
true north

5	ISSUED FOR TENDER	25-06-09
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no	revisions	date

stamp | timbre

Not For Construction

architect | architecte

linebox STUDIO

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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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drawing title | titre du dessin

LEVELS 07 - 30 CONCRETE LAYOUT PLAN

project number | numero du projet	21-045
drawn | dessiné	PMD/DG
checked | vertifié	BA
scale | échelle	1 : 100
date | date	05/31/24

drawing number | numéro du dessin

S125

DESIGN LOADS

UNIT AREAS

225 CONC SLAB	5.30 kPa
PARTITIONS	1.00
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	6.60 kPa
LIVE LOAD	1.90 kPa
TOTAL LOAD	8.50 kPa

CORRIDOR / M & E / STORAGE

225 CONC SLAB	5.30 kPa
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	5.60 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.40 kPa

CONCRETE STAIRS

CONCRETE STAIR THROAT	3.60 kPa
CONCRETE TREADS	2.40 kPa
DEAD LOAD	6.00 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.80 kPa

CONCRETE STAIR LANDINGS

200 CONC SLAB	4.75 kPa
DEAD LOAD	4.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	9.55 kPa

NOTE: EXTERIOR BALCONY SLABS

PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-23.1-04 TO GIVE THE FOLLOWING PROPERTIES FOR ALL EXTERIOR EXPOSED CONCRETE BALCONY SLABS.
1. TYPE GU PORTLAND CEMENT
2. MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS = 35 MPa
3. CLASS OF EXPOSURE TO BE C1
4. NOMINAL SIZE OF COARSE AGGREGATE TO BE 20 mm
5. SLUMP AT TIME AND POINT OF DISCHARGE TO BE 75 mm
6. AIR CONTENT TO BE 5-8%

NOTES

1. SEE S200's DWGS. FOR SHEARWALL ELEVATIONS. THE ELEVATION VIEW OF THE SHEARWALL IS TAKEN FROM THE SIDE OF THE WALL ON WHICH THE SHEARWALL DESIGNATION (SW#) IS SHOWN ON PLAN.

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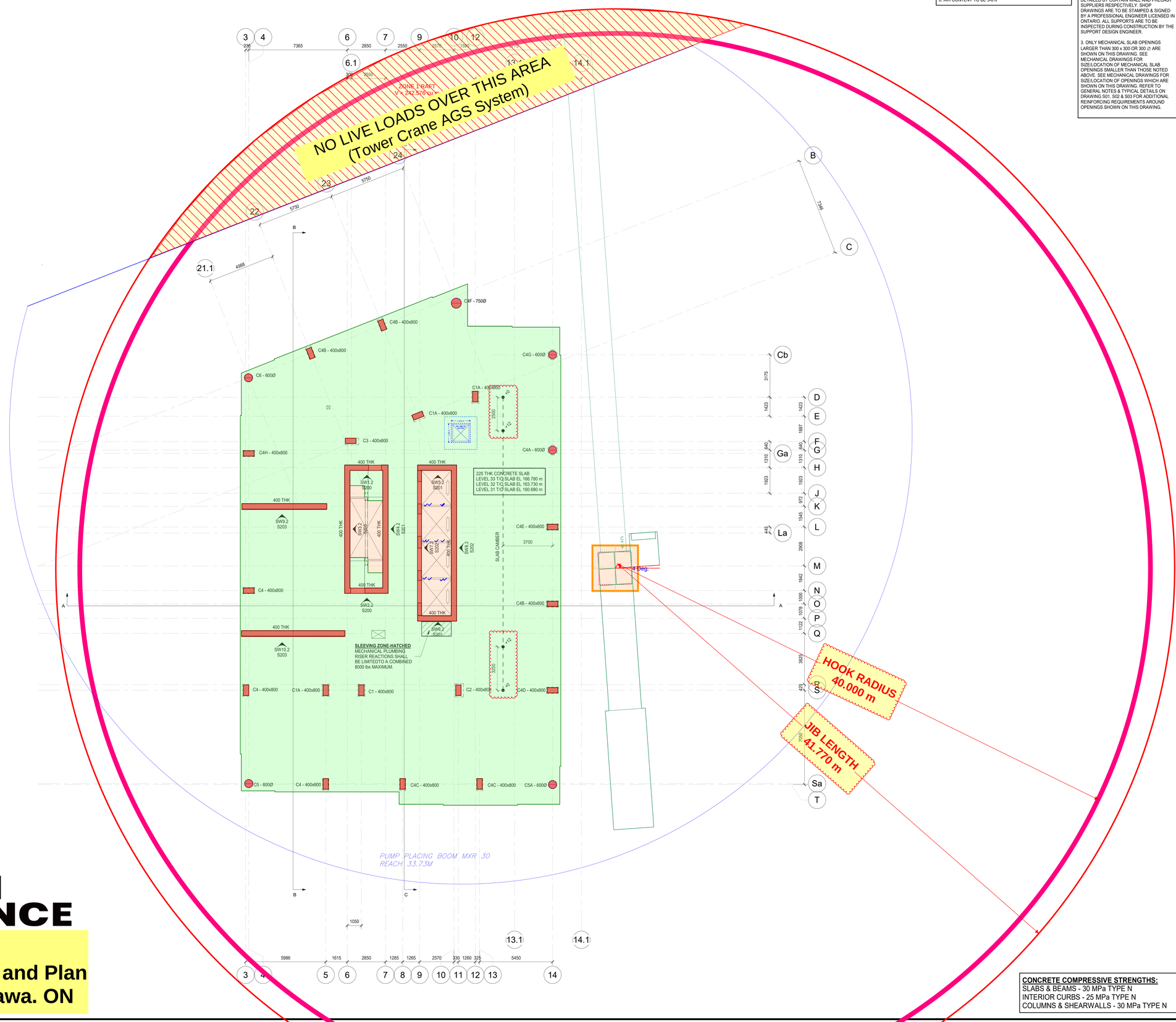

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2025.10.10
Tower Crane Layout and Plan
145 Loretta Ave. Ottawa. ON

CONCRETE COMPRESSIVE STRENGTHS:
SLABS & BEAMS - 30 MPa TYPE N
INTERIOR CURBS - 25 MPa TYPE N
COLUMNS & SHEARWALLS - 30 MPa TYPE N

CLV GROUP DEVELOPMENTS

client

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nord du projet
project north

nord reel
true north

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stamp | timbre

Not For Construction

architect | architecte

linebox
STUDIO

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project title | titre du projet

GLADSTONE & LORETTA RESIDENTIAL TOWER

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drawing title | titre du dessin

LEVEL 31-33 CONCRETE LAYOUT PLAN

project number | numero du projet	**21-045**
drawn | dessiné	**PMD/DG**
checked | verifié	**BA**
scale | échelle	**1 : 100**
date | date	**05/31/24**

drawing number | numéro du dessin

S128

DESIGN LOADS

UNIT AREAS

225 CONC SLAB	5.30 kPa
PARTITIONS	1.00
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	6.60 kPa
LIVE LOAD	1.90 kPa
TOTAL LOAD	8.50 kPa

CORRIDOR / M & E / STORAGE

225 CONC SLAB	5.30 kPa
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	5.60 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.40 kPa

CONCRETE STAIRS

CONCRETE STAIR THROAT	3.60 kPa
CONCRETE TREADS	2.40 kPa
DEAD LOAD	6.00 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.80 kPa

CONCRETE STAIR LANDINGS

200 CONC SLAB	4.75 kPa
DEAD LOAD	4.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	9.55 kPa

NOTE: EXTERIOR BALCONY SLABS

PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-23.1-04 TO GIVE THE FOLLOWING PROPERTIES FOR ALL EXTERIOR EXPOSED CONCRETE BALCONY SLABS.
1. TYPE GU PORTLAND CEMENT
2. MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS = 35 MPa
3. CLASS OF EXPOSURE TO BE C1
4. NOMINAL SIZE OF COARSE AGGREGATE TO BE 20 mm
5. SLUMP AT TIME AND POINT OF DISCHARGE TO BE 75 mm
6. AIR CONTENT TO BE 5-8%

NOTES

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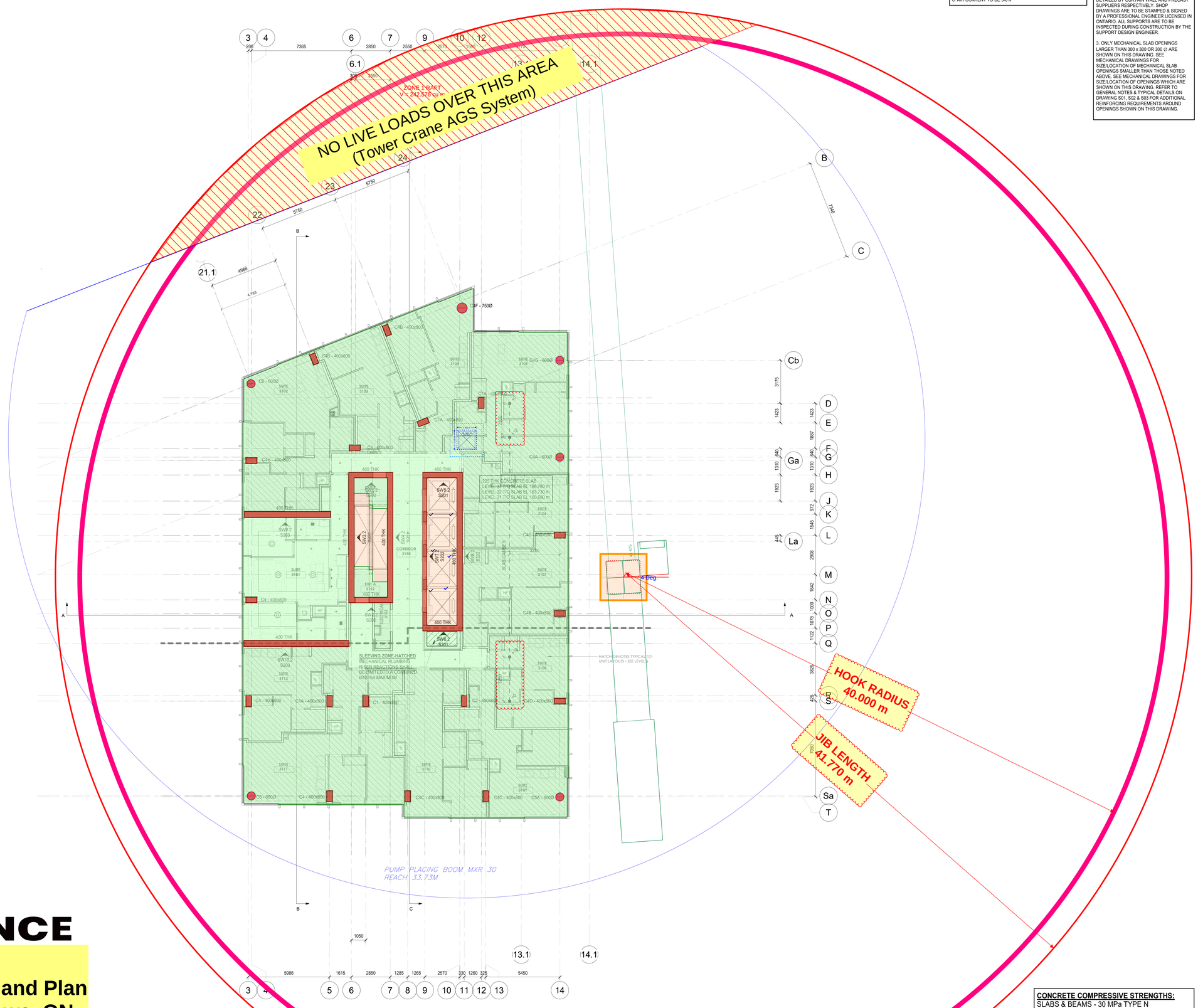

BELLAI ALLIANCE

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CONCRETE COMPRESSIVE STRENGTHS:
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INTERIOR CURBS - 25 MPa TYPE N
COLUMNS & SHEARWALLS - 30 MPa TYPE N

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LEVEL 31-33 CONCRETE LAYOUT PLAN

project number | numero du projet	21-045
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checked | verifié	BA
scale | échelle	1 : 100
date | date	05/31/24

drawing number | numéro du dessin

S128

DESIGN LOADS

UNIT AREAS

250 CONC SLAB	5.90 kPa
PARTITIONS	1.00
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	7.20 kPa
LIVE LOAD	1.90 kPa
TOTAL LOAD	9.10 kPa

CORRIDOR / M & E / STORAGE

250 CONC SLAB	5.90 kPa
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	6.20 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	11.00 kPa

AMENITY AREAS

250 CONC SLAB	5.90 kPa
PARTITIONS	1.00
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	7.20 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	12.00 kPa

CONCRETE STAIRS

CONCRETE STAIR THROAT	3.60 kPa
CONCRETE TREADS	2.40 kPa
DEAD LOAD	6.00 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	10.80 kPa

CONCRETE STAIR LANDINGS

200 CONC SLAB	4.75 kPa
DEAD LOAD	4.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	9.55 kPa

NOTE: EXTERIOR BALCONY SLABS

PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-23.1-04 TO GIVE THE FOLLOWING PROPERTIES FOR ALL EXTERIOR EXPOSED CONCRETE BALCONY SLABS.
1. TYPE GU PORTLAND CEMENT
2. MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS = 35 MPa
3. CLASS OF EXPOSURE TO BE C1
4. NOMINAL SIZE OF COARSE AGGREGATE TO BE 20 mm
5. SLUMP AT TIME AND POINT OF DISCHARGE TO BE 75 mm
6. AIR CONTENT TO BE 5-8%

NOTES

1. SEE S200's DWGS. FOR SHEARWALL ELEVATIONS. THE ELEVATION VIEW OF THE SHEARWALL IS TAKEN FROM THE SIDE OF THE WALL ON WHICH THE SHEARWALL DESIGNATION (SW#) IS SHOWN ON PLAN.

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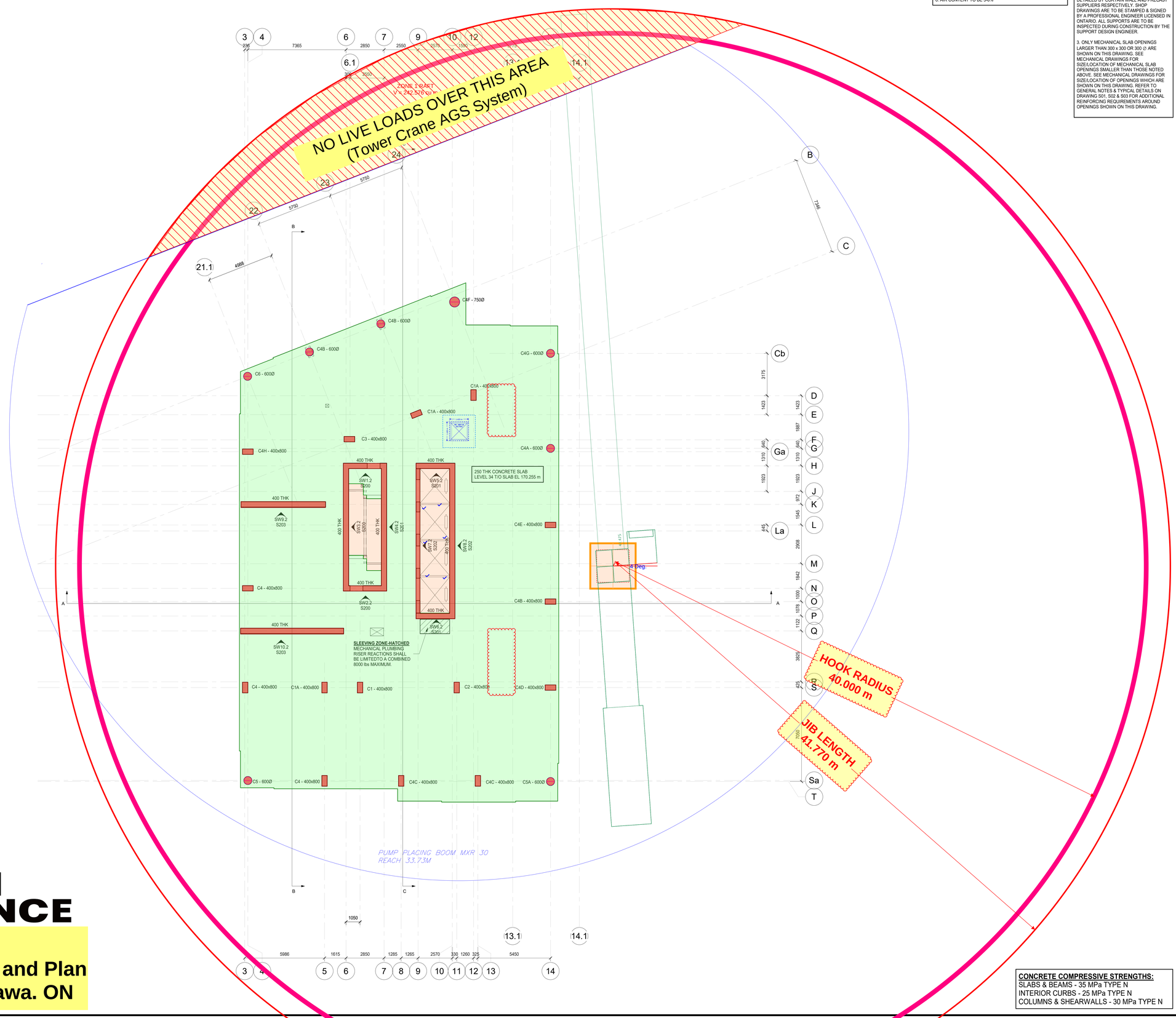

CONCRETE COMPRESSIVE STRENGTHS:
SLABS & BEAMS - 35 MPa TYPE N
INTERIOR CURBS - 25 MPa TYPE N
COLUMNS & SHEARWALLS - 30 MPa TYPE N

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LEVEL 34 CONCRETE LAYOUT PLAN

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DESIGN LOADS

ROOF

300 CONC SLAB	7.10 kPa
67 AVG TOPPING	1.60
ROOFING & INSUL.	1.00
BALLAST	1.50
CEILING	0.15
MECH'L & MISC	0.25 kPa
DEAD LOAD	11.60 kPa
LIVE LOAD	2.40 kPa OR SNOW
TOTAL LOAD	14.00 kPa

EXTERIOR MECH'L AREA

300 CONC SLAB	7.10
67 AVG TOPPING	1.60
ROOFING & INSUL.	1.00 kPa
BALLAST	1.50
CEILING	0.15
MECH'L & MISC	0.25 kPa
DEAD LOAD	11.60 kPa
LIVE LOAD	7.20 kPa
TOTAL LOAD	18.80 kPa

INTERIOR MECH'L AREA

300 CONC SLAB	7.10 kPa
PAD ALLOWANCE	1.20
CEILING	0.15
MECH'L & MISC	0.25 kPa
DEAD LOAD	8.70 kPa
LIVE LOAD	7.20 kPa
TOTAL LOAD	15.90 kPa

NOTE: EXTERIOR BALCONY SLABS

PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN/CSA-23.1-04 TO GIVE THE FOLLOWING PROPERTIES FOR ALL EXTERIOR EXPOSED CONCRETE BALCONY SLABS.
1. TYPE GU PORTLAND CEMENT
2. MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS = 35 MPa
3. CLASS OF EXPOSURE TO BE C1
4. NOMINAL SIZE OF COARSE AGGREGATE TO BE 20 mm
5. SLUMP AT TIME AND POINT OF DISCHARGE TO BE 75 mm
6. AIR CONTENT TO BE 5-8%

NOTES

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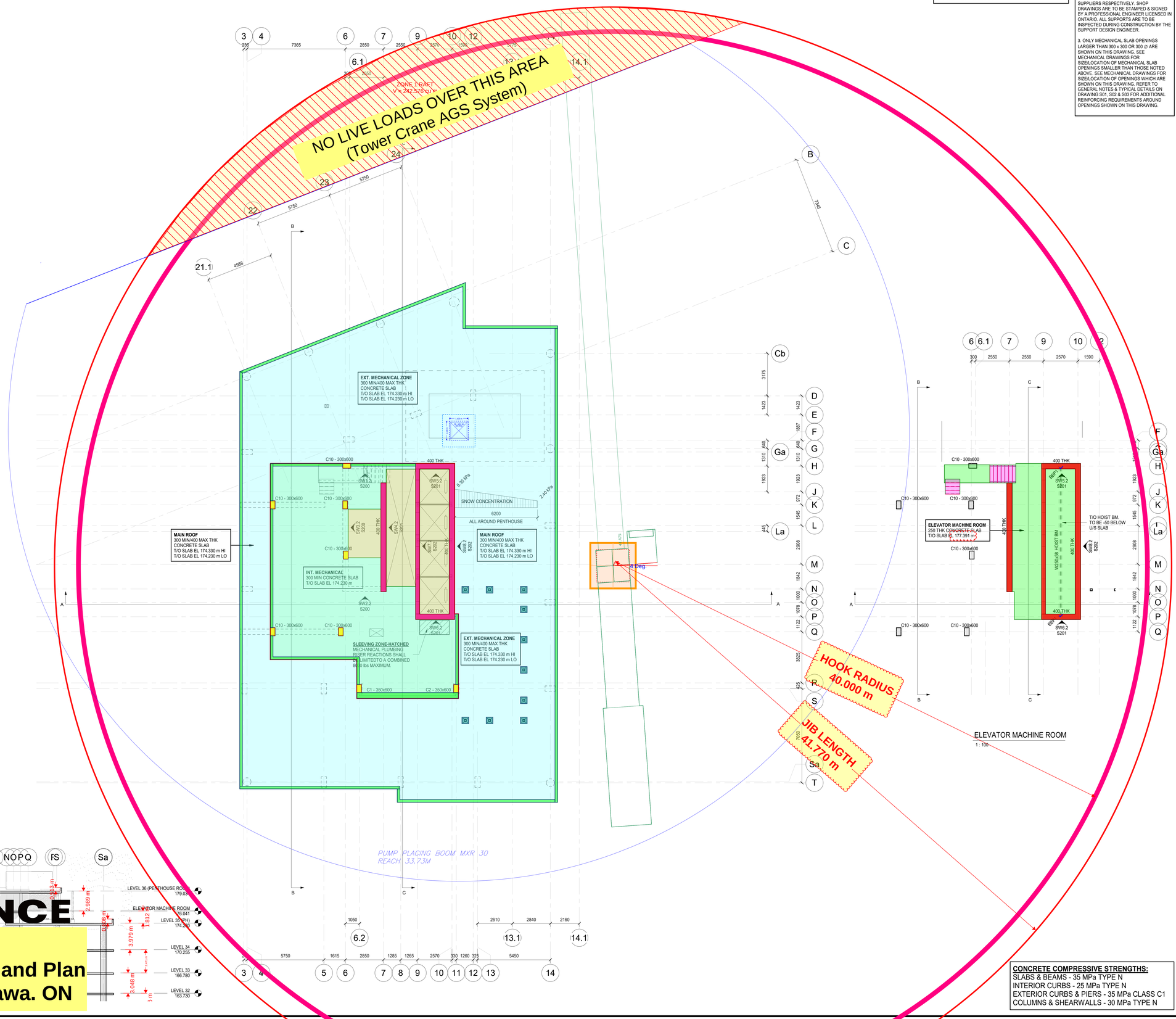

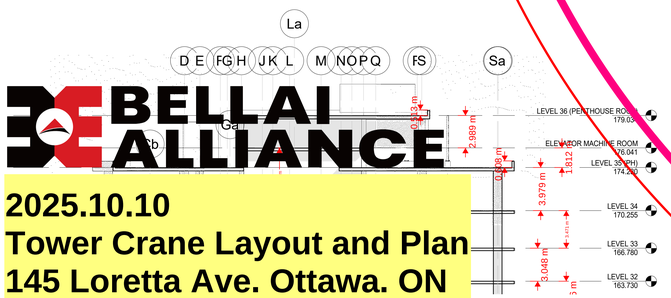

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CONCRETE COMPRESSIVE STRENGTHS:
SLABS & BEAMS - 35 MPa TYPE N
INTERIOR CURBS - 25 MPa TYPE N
EXTERIOR CURBS & PIERS - 35 MPa CLASS C1
COLUMNS & SHEARWALLS - 30 MPa TYPE N

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mechanical engineer | ingénieur méchanique

wsp

civil engineers | ingénieur civil

CSW

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LEVEL 35 (PENTHOUSE) LEVEL 36 ELEVATOR MACHINE ROOM CONCRETE LAYOUT PLAN

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S134

DESIGN LOADS

ROOF

300 CONC SLAB	7.10 kPa
67 AVG TOPPING	1.60
ROOFING & INSUL.	1.00
BALLAST	1.50
MECHL & MISC	0.40 kPa
DEAD LOAD	11.60 kPa
LIVE LOAD	2.40 kPa OR SNOW
TOTAL LOAD	14.00 kPa

NOTE: EXTERIOR BALCONY SLABS

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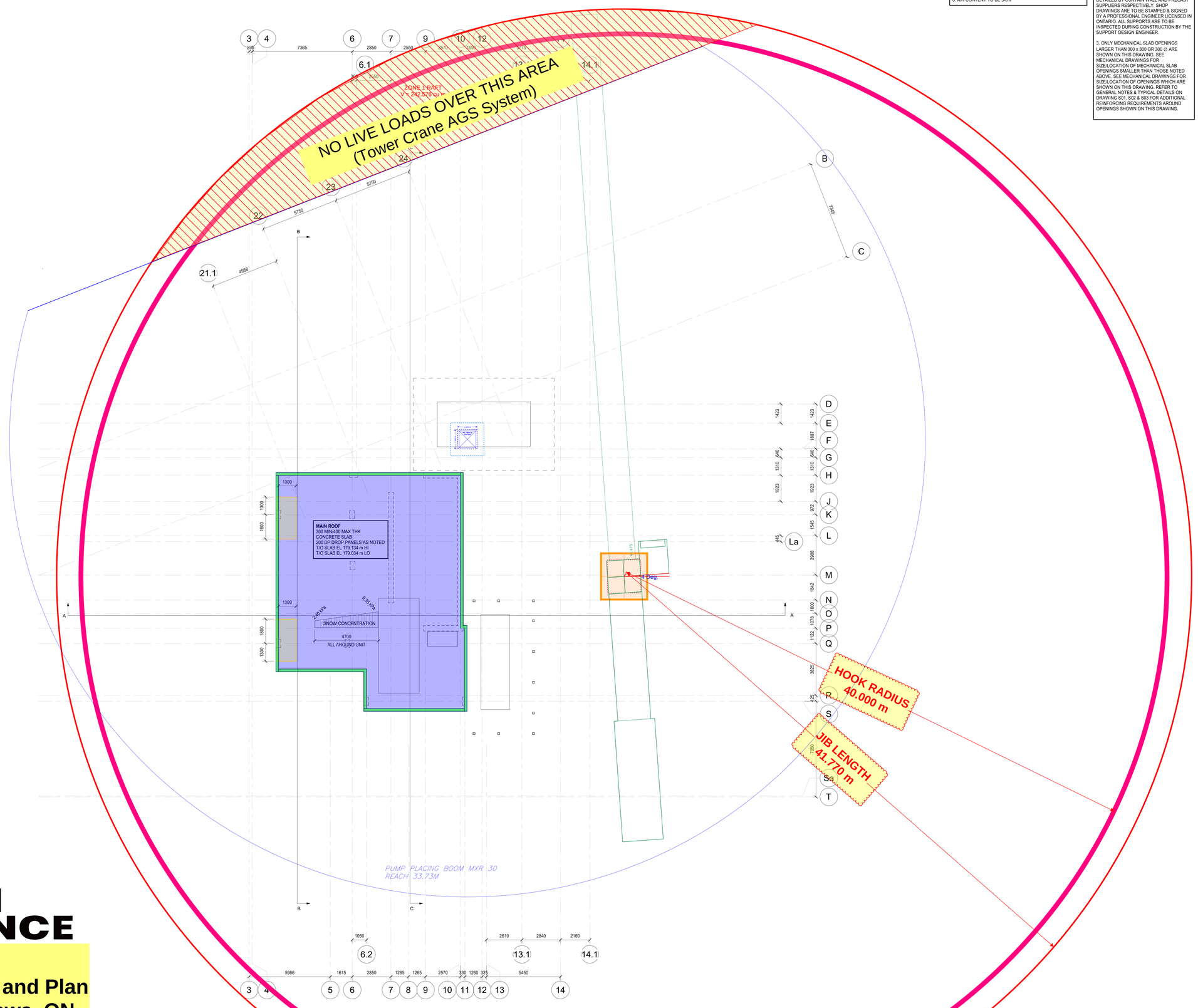

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GWAL
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mechanical engineer | ingénieur mécharique

wsp

civil engineers | ingénieur civil

CSW

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LEVEL 36 (PENTHOUSE ROOF) CONCRETE LAYOUT PLAN

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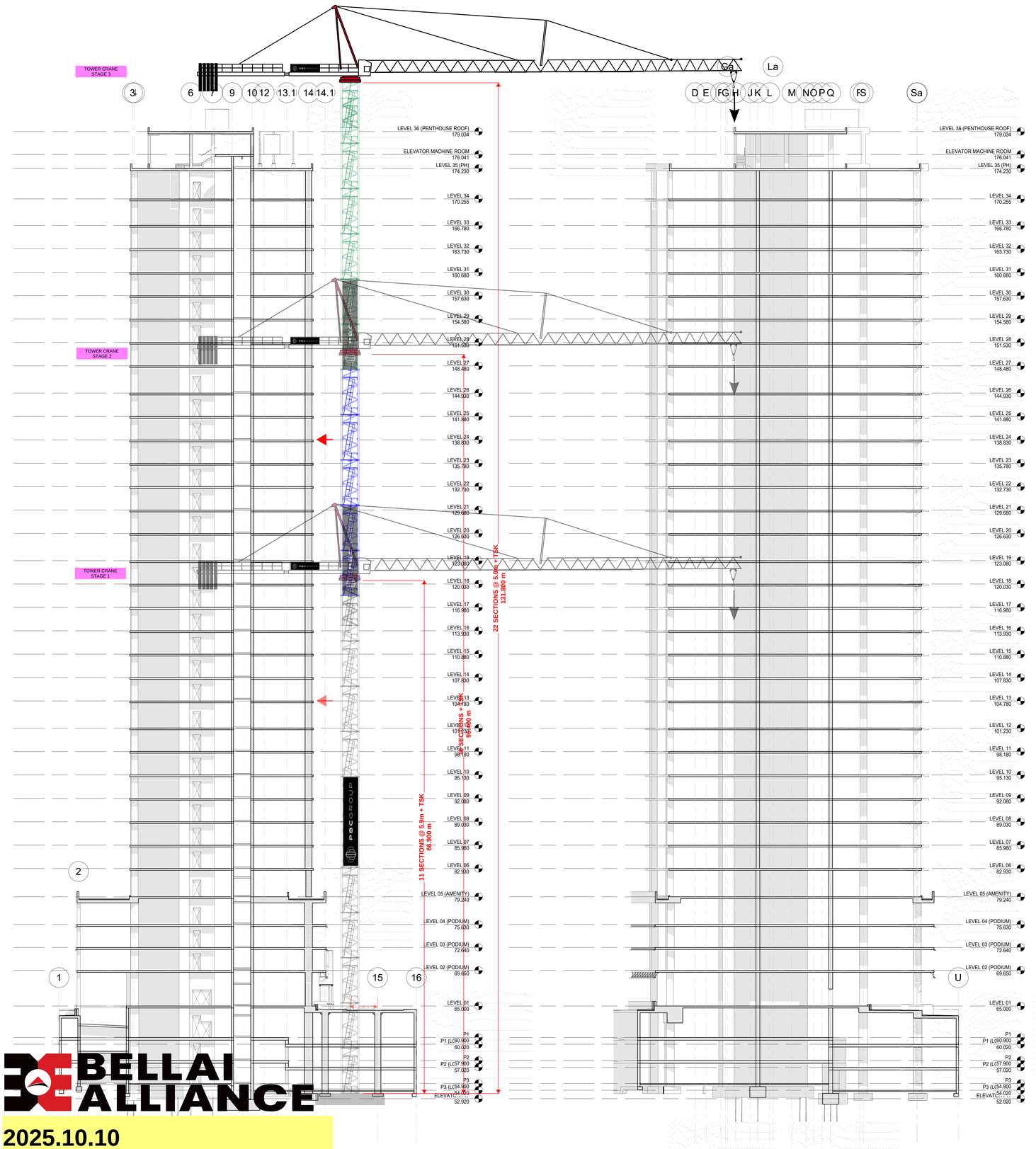

B S100 S300 SECTION 1 : 200

C S100 S300 SECTION 1 : 200

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mechanical engineer | ingénieur mécharique

wsp

civil engineers | ingénieur civil

CSW

landscape architect | architecte paysagiste

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project north

nord reel
true north

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CROSS SECTIONS

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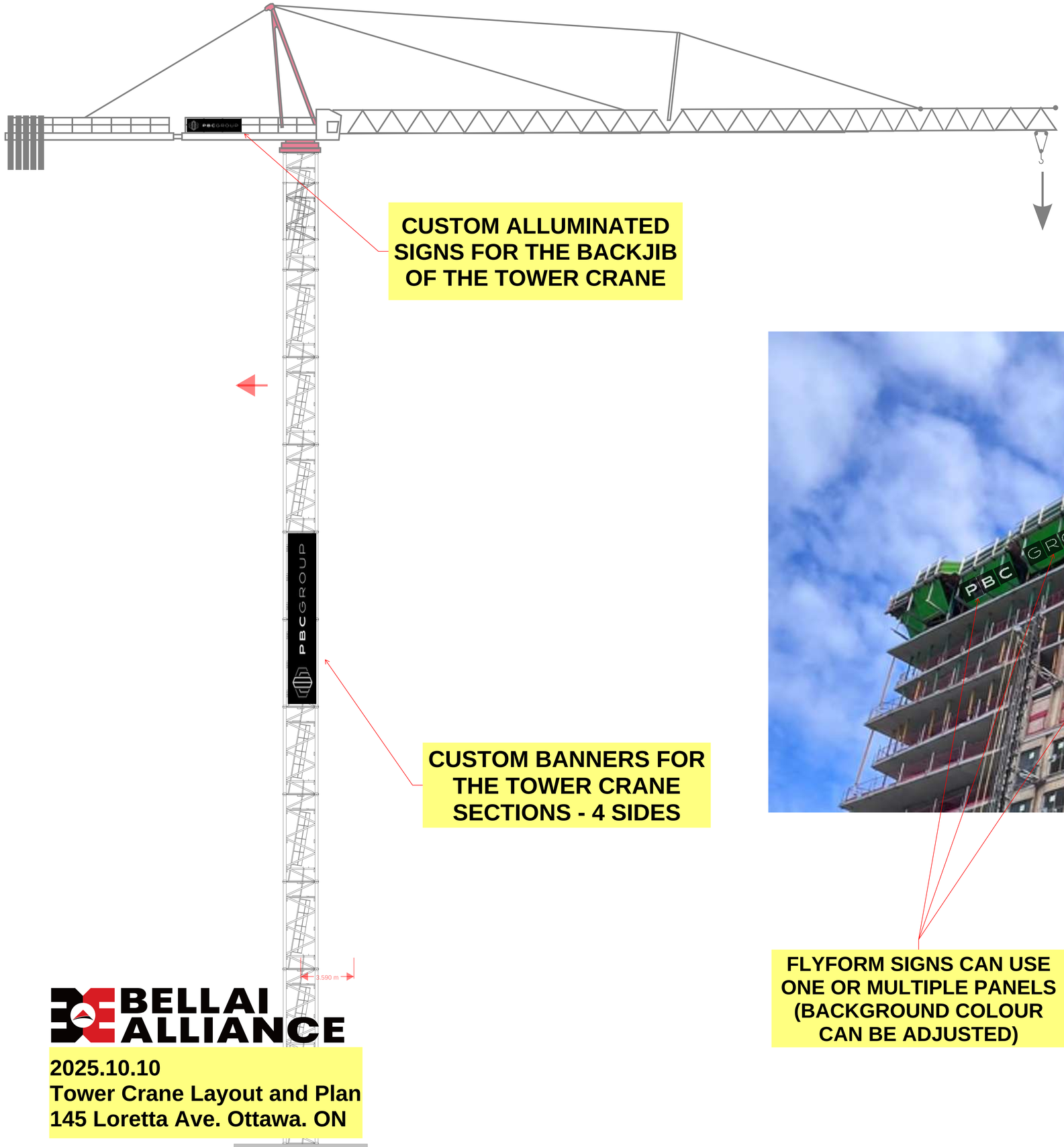
S300

TOWER CRANE AND FLYFORM ADVERTISING OPTIONS



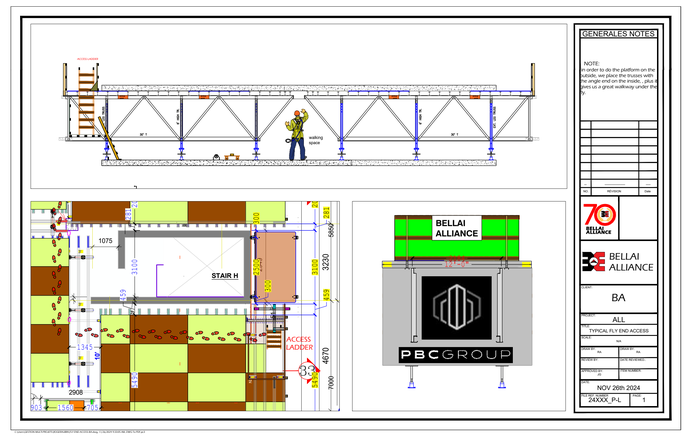
CUSTOM ALLUMINATED SIGNS FOR THE BACKJIB OF THE TOWER CRANE

CUSTOM BANNERS FOR THE TOWER CRANE SECTIONS - 4 SIDES



FLYFORM SIGNS CAN USE ONE OR MULTIPLE PANELS (BACKGROUND COLOUR CAN BE ADJUSTED)

Not For Construction



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MOBILE CRANE ERECTION SETUP LOCATION AND LOGISTICS FOR TOWER CRANE E&D

DESIGN LOADS

COMMERICAL/AMENITY

250 CONC SLAB	5.90 kPa
PARTITION ALLOWANCE	1.00
FLOORING	0.15
MECH'L & MISC	0.25 kPa
DEAD LOAD	7.30 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	12.10 kPa

CORRIDOR / M & E / STORAGE

250 CONC SLAB	5.90 kPa
CEILING & FLOORING	0.15
MECH'L & MISC	0.15 kPa
DEAD LOAD	6.20 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	11.00 kPa

MOVE-IN & GARBAGE ROOM

250 CONC SLAB	5.90 kPa
67 AVG TOPPING	1.60
PARTITION ALLOWANCE	1.00
MECH'L & MISC	0.25 kPa
DEAD LOAD	8.75 kPa
LIVE LOAD	4.80 kPa
TOTAL LOAD	13.55 kPa

LOADING BAY

300 CONC SLAB	7.10 kPa
100 AVG TOPPING	2.40
MECH'L & MISC	0.40 kPa
DEAD LOAD	9.90 kPa
LIVE LOAD	7.20 kPa
TOTAL LOAD	17.20 kPa

CONC

CONCR
CONCR
DEAD L
LIVE LO
TOTAL

CONC

200 CO
DEAD L
LIVE LO
TOTAL

RAMP

250 CO
MEMBR
MECH /
DEAD L
LIVE LO
TOTAL

HYDR

250 SLA
67 AVG
ROOFIN
LANDIN
MECH'L
DEAD L
LIVE LO
TOTAL

CENTRELINE OF LRT TRACKS IS APPROX
FORMATION IS PROVIDED FOR REFERENCE

MUP (MULTI-USE PATHWAY)

+/- 18.877
APPROX. CENTRELINE OF RAIL LINE

ZONE 1 DRAFT
V = 242.5 km/hr

NO LIVE LOADS OVER THIS AREA
(Tower Crane AGS System)

+/- 29.031
APPROX. CENTRELINE OF RAIL LINE

145 LORETTA AVE W PROPERTY LINE

OUTLINE OF PODIUM & LEVEL 5 TERRACE

1.200
TOWER SETBACK

Concrete Placing Boom #1

BLUE LINE DENOTES OUTLINE OF TOWER

145 LORETTA TOWER A (PHASE 1)

Tower Crane #1

14.042

24,044

1,200
TOWER SETBACK

OUTLINE OF TOWER & LEVEL 5 EXT. WALLS

36,840

3.000
SETBACK

TOWER SETBACK

LOADING AREA

2.000
TOWER SETBACK

1.000
TOWER SETBACK

1,800
TOWER SETBACK

PODIUM ABOVE

PARKING ENTRANCE

3.000
SETBACK

MAN HOIST

145 LORETTA AVE W PROPERTY LINE

FH

N.I.C.

SURFACE PARKING LOT

32,950

MAX WIDTH AS PER ZONING SCHEDULE

47,830

SEVERANCE LINE TBD

+/- 20.213
APPROX. DISTANCE TO NEIGHBOURS PROPERTY LINE

2,207

EXISTING LOADING BAY STRUCTURE TO BE DEMOLISHED

2 STOREY BRICK, METAL AND STUCCO SIDED COMMERCIAL BUILDING EXISTING TO REMAIN

3.961 m

HOOK RADIUS 40.000 m

JIB LENGTH 41.570 m

5.000 m

GAS FEED

MAN HOLE FOR SANITATION MONITORING (REFER TO CIVIL)

DIMENSIONS SHOWN FOR THE NEIGHBOURING PROPERTY ARE APPROXIMATE (+/-). THIS INFORMATION HAS NOT BEEN VERIFIED BY SURVEY AND IS PROVIDED FOR REFERENCE ONLY.

975 GLADSTONE AVE PROPERTY LINE

CITY OF OTTAWA PROPERTY

CANADIAN BANK NOTE PROPERTY

CITY OF OTTAWA PROPERTY

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LEVEL 01 CONCRETE LAYOUT PLAN

21-045

PMD/DG

As Indicated

S107

L O R E

APPENDIX E

NOISE AND VIBRATION ASSESSMENT

APPENDIX E1

NOISE AND VIBRATION STUDY

NOISE & VIBRATION IMPACT FEASIBILITY STUDY
145 LORETTA AVENUE & 951 GLADSTONE AVENUE
OTTAWA, ONTARIO

FOR

TRINITY DEVELOPMENT GROUP

PREPARED BY



HOWARD R. PATLIK, C.E.T.



CHECKED BY



JOHN E. COULTER, B.A.Sc., P.ENG.



J.E. COULTER ASSOCIATES LIMITED
1210 SHEPPARD AVENUE EAST, SUITE 211
TORONTO, ONTARIO
M2K 1E3

AUGUST 8, 2019

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APPENDIX E: REFERENCES

INTRODUCTION

At the request of Trinity Developments, J.E. COULTER ASSOCIATES LIMITED has reviewed the proposed mixed-use (residential, commercial and office) development at 145 Loretta Avenue and 951 Gladstone Avenue in Ottawa, Ontario, for potential noise and vibration impact (see Appendix A, Figure 1). The purpose of this feasibility study is to establish noise mitigation measures that may be necessary as a result of transportation (road and rail) and stationary (mechanical equipment) sources to satisfy the requirements of the City of Ottawa noise guidelines (see Appendix D, Reference 1).

SITE DESCRIPTION

The proposed site is located at 145 Loretta Avenue and 951 Gladstone Avenue (see Appendix A, Figures 2 to 4 for plans and elevations). This proposed mixed-use development includes three residential towers with the following uses and heights:

a. Tower 1: 35 storeys (Retail /Amenity (Flr. 1)/Office (Flr. 2-5)/Residential (Flr. 6-35))
b. Tower 2: 33 storeys (Retail /Amenity (Flr. 1)/Office (Flr. 2-5)/Residential (Flr. 6-33))
c. Tower 3: 30 storeys (Amenity (Flr. 1)/Live/Work Studios (Flr. 2-4)/Residential (Flr. 5-30))

NOISE CRITERIA

The City of Ottawa Environmental Noise Control Guidelines (ENCG) apply to the proposed mixed-use development site, as explained below.

Transportation Sources

Where the sound levels at the exterior of the building façade exceed 55 dB L_{eq} daytime or 50 dB L_{eq} nighttime, the dwelling units must be provided with forced air heating, with a provision for future installation of air conditioning by the owner. An excess up to 10 dB is permissible, provided a warning clause is given. Where the sound levels exceed this limit (i.e., 65 dB daytime or 60 dB nighttime), air conditioning must be incorporated into the building prior to occupancy. Warning clauses are applicable as well.

Air-conditioning requirements are applied so that adequate interior sound levels can be maintained by closing the windows.

Table 1 gives a summary of the above criteria.

Table 1: Sound Level Limits – Road And Rail			
Type of Space	Time Period	L_{eq} (dBA)	
		Road	Rail
INDOOR LIMITS			
Living/dining, den areas of residences, hospitals, nursing homes, schools, daycare centres, etc.	07:00 – 23:00	45	40
Living/dining, den areas of residences, hospitals, nursing homes, etc. (except schools or daycare centres)	23:00 – 07:00	45	40
Sleeping quarters	07:00 – 23:00	45	40
	23:00 – 07:00	40	35
OUTDOOR LIMITS			
Outdoor recreation areas[1] [2]	07:00 – 23:00	55	55
Outside bedroom window	23:00 – 07:00	50	50
Outside living room window	07:00 – 23:00	55	55

[1] Up to 5 dB excess above criteria is allowed, provided a warning clause is given. Above 60 dB L_{eq}, exterior noise mitigation measures (i.e. noise barriers, intervening structures, additional setback from source) are required.

[2] An outdoor living area is used in reference to a private outdoor patio (4m or more in depth) or backyard.

Stationary Sources

MECP recommends the guidelines found in *NPC-300* as the current noise criteria for stationary sources. The MECP noise guideline basically states that the average sound level of the stationary source (impulse noise such as banging and mechanical equipment) should not exceed the average sound level of the total roadway noise during the same hourly period.

This study has been based on the sound level criteria for a Class 1 Area (Urban). MECP *NPC-300* also refers to a Class 4 designation, which may be considered in the case of this development. This designation is stated as follows:

"Class 4 Area" means an area or specific site that would otherwise be defined as Class 1 or 2 and which:

1. is an area intended for development with new noise sensitive land use(s) not yet built;
2. is in proximity to existing, lawfully established stationary source(s); and
3. has formal confirmation from the land use planning authority with the Class 4 area classification, which is determined during the land use planning process.

The Class 4 designation would allow stationary source sound level to reach a maximum of 60 dB daytime and 55 dB nighttime. This designation must be approved by the Municipality.

As a Class 4 designation, an "Enclosed noise buffer" may be used. This means an enclosed area outside the exterior wall of a building such as an enclosed balcony, specifically intended to buffer one or more windows of noise sensitive spaces. In order for the concept of enclosed noise buffer to be acceptable within the context of an MECP approval of stationary sources, it can only apply to high-rise multi-unit buildings in a Class 4 area. The characteristics of an enclosed noise buffer are listed below:

1. not less than one metre and not more than two metres deep;
2. fully enclosed with floor to ceiling glazing or a combination of solid parapet plus glazing above – glazing can potentially be operable to the maximum permitted by the Ontario Building Code;
3. separated from interior space with a weatherproof boundary of exterior grade wall, exterior grade window, exterior grade door, or any combination, in compliance with exterior envelope requirements of the Ontario Building Code;
4. of sufficient horizontal extent to protect windows of noise sensitive spaces;
5. the architectural design is not amenable to converting the enclosed space to being noise sensitive.

Note that for Class 1, 2 and 3 areas, the plane-of-window limits apply to a window that is assumed to be open. For Class 4 areas, the plane-of-window limits apply to a window that is assumed to be closed. This distinction does not affect the prediction of plane-of-window sound levels.

The MECP considers the higher of the quietest ambient sound level or the minimum sound levels, as follows:

Table 2: Exclusion Limit Values of One-Hour Equivalent Sound Level (L_{eq}, dBA) – Plane-of-Window of Noise Sensitive Spaces				
Time of Day	Class 1 Area	Class 2 Area	Class 3 Area	Class 4 Area
07:00 – 19:00	50	50	45	60
19:00 – 23:00	50	50	40	60
23:00 – 0:700	45	45	40	55

Note: Where the ambient sound levels are higher than the minimum exclusion limits noted above, the higher of the two values is used.

NOISE SOURCES

Transportation Noise Sources

The potential transportation noise concerns for this proposed development are the traffic sound levels on The Queensway, Gladstone Avenue, and the O-Train movements.

Based on the City of Ottawa's Environmental Noise Control Guidelines (Table 1.7), the following traffic volumes were assumed:

Table 3: Traffic Volume Projection

Roadway	AADT (Veh/Day)	Truck Percentage		Day/Night Split (%)	Posted Speed Limit
		Medium	Heavy		
Queensway (8-lane highway)	146,664 (18,333 per lane)	7%	5%	92/8	100 kph
Queensway (8-lane highway)	184,100 (2016)	7%	5%	92/8	100 kph
Queensway (8-lane highway)	229,500 (2029)	7%	5%	92/8	100 kph
Gladstone Avenue (2-lane urban arterial)	15,000	7%	5%	92/8	40 kph

Note: The Queensway is currently an 8-lane configuration highway. It is noted that the latest (2016) volume on this section of The Queensway is 184,100 vehicles AADT (greater than the assumptions in the City of Ottawa's Noise Control Guideline, Table 1.7) and has a historical annual growth rate of 1.71%, compounded. Based on a 10-year projection and current growth rates, The Queensway in 2029 is expected to have 229,500 vehicles AADT. This is equivalent to widening The Queensway to a 12-lane configuration, considered to be a worst-case scenario. Acoustically, this represents an increase of 1 dB, a very minor change.

For the O-Train movements, the following schedule was used based on OC Transpo's schedule of rush-hour service (5-minute headways), off-peak (10-minute headways), and 15-minute headways after midnight.

Table 4: O-Train Movements

Time		Service*	Train Movements (Both Directions)
To	From		
Midnight	1:00	N	8
1:00	2:00	N	8
2:00	3:00	N	0
3:00	4:00	N	0
4:00	5:00	N	0
5:00	6:00	N	12
6:00	7:00	R	24
7:00	8:00	R	24
8:00	9:00	R	24
9:00	10:00	D	12
10:00	11:00	D	12
11:00	Noon	D	12
Noon	1:00	D	12
1:00	2:00	D	12
2:00	3:00	D	12
3:00	4:00	D	12
4:00	5:00	R	24
5:00	6:00	R	24
6:00	7:00	R	24
7:00	8:00	D	12
8:00	9:00	D	12
9:00	10:00	D	12
10:00	11:00	D	12
11:00	Midnight	N	12
Total Day (0700-2300)			**252**
Total Night (2300-0700)			**136**
* R = Rush Hour, D = Day Off-Peak, N = Night Service			

PROJECTED SOUND LEVELS

The MECP's *ORNAMENT* noise prediction procedure (*STAMSON version 5.04* computer programme) was used to predict the sound levels. *STAMSON 5.04* uses the daily traffic volumes for the road and basic topographical information for the site in its calculations (see Appendix B). Initially, elevated terraces are assumed to be is 1.1m high (minimum) with a solid safety railing.

Table 3, below, provides the projected unmitigated sound levels at various locations exposed to the adjacent arterial roadways.

Table 5: Traffic L_{eq} Sound Levels

	Daytime Sound Level (dB L_{eq})				Nighttime Sound Level (dB L_{eq})			
Location	**Queensway**	**O-Trains**	**Gladstone Avenue**	**Total**	**Queensway**	**O-Trains**	**Gladstone Avenue**	**Total**
TOWER 1								
R1 – SE	75	56	66	**76**	68	57	58	**68**
R2 – SW	75	51	66	**76**	68	51	58	**68**
R3 – NW	72	50	59	**72**	64	50	51	**65**
R4 – NE	72	60	59	**72**	64	55	51	**65**
Terrace (6th Level)	58	47	43	**58**	--	--	--	--
TOWER 2								
R5 – SE	73	59	58	**73**	66	59	51	**67**
R6 – SW	73	50	58	**73**	66	51	51	**66**
R7 – NW	71	52	55	**71**	63	53	48	**64**
R8 – NE	71	60	55	**71**	63	60	47	**65**
Terrace (Grade Level)	56	57	43	**60**	--	--	--	--
Terrace (3rd Level)	65	45	45	**65**	--	--	--	--
TOWER 3								
R9 – SE	69	59	53	**69**	61	59	45	**63**
R10 – SW	71	49	55	**71**	64	49	47	**64**
R11 – NW	70	55	54	**70**	62	55	46	**63**
R12 – NE	69	60	53	**70**	61	60	45	**64**
Terrace (5th Level)	56	45	43	**56**	--	--	--	--

EXTERIOR NOISE CONTROL MEASURES

All outdoor amenity areas located at Towers 1 and 2 achieve 60 dB L_{eq} daytime or less. Standard height railings (1.1m high and solid along its entire length) for the elevated amenity areas will be sufficient without the need for additional noise control measures. At Tower 3, the 5th floor outdoor amenity area will require that the parapet height be increased to at least 1.25m from 1.1m along the eastern perimeter (see Appendix A, Figure 5). The sound level is expected to be less than 60 dB L_{eq} daytime (including the added shielding provided by Queensway 4m high noise barrier along north R-O-W. As the sound levels are above 55 dB, warning clauses should be provided for all residents notifying them of the excess above the criterion.

VENTILATION AND WARNING CLAUSE REQUIREMENTS

The sound levels generated by combination of The Queensway, Gladstone Avenue, and the O-Trains are greater than 65 dB L_{eq} daytime and 60 dB L_{eq} nighttime at the exterior façades. As a result, the installation of central air conditioning is required prior to occupancy.

The sound levels are above the City of Ottawa's noise criteria such that a warning clause is required. The warning clause must be inserted into the *Agreement of Purchase and Sale* for those affected units as noted above, indicating that the sound levels will exceed the noise guidelines.

FAÇADE COMPONENTS

At this time, there are no detailed suite layouts and window details available for the three towers, thus our comments are general in nature. A detailed review is recommended once the final architectural and elevations are available.

On the basis of the predicted sound levels (see Table 5, above) the south, east and west façades may require upgrades from the minimum OBC requirements. The glazing requirements are determined by the ratio of the window area to floor area. Thus, large window-area to floor-area ratios (such as a corner bedroom) may require upgraded glazing. High-rise condominium towers typically utilize 6mm double-glazing with a 13 or 25mm air space between the panes of glass. This is a standard commercial window typically rated at STC 34-39.

The following table illustrates the estimated window requirements for the three towers. The window types noted in Table 6, below, should be verified by the acoustic consultant on the basis of the final architectural layouts, when they become available.

Table 6: Preliminary Window Requirements			
Location	**Minimum STC Requirement for Fixed Windows**	**Minimum STC Requirement for Operable Windows**	**Minimum STC Requirement for Operable Doors**
TOWER 1			
Living rooms (up to 40% of window/floor area ratio)	STC 36 (6mm glass, 13mm air space, 6mm glass)	STC 33 (6mm glass, 13mm air space, 6mm glass)	STC 32
Living rooms (up to 41 to 80% of window/floor area ratio)	STC 36 (6mm glass, 25mm air space, 6mm glass)	STC 33 (6mm glass, 13mm air space, 6mm glass)	STC 32
Bedrooms (up to 125% of window/floor area ratio)	STC 36 (6mm glass, 13mm air space, 6mm glass)	STC 33 (6mm glass, 13mm air space, 6mm glass)	--
TOWER 2			
Living rooms (up to 80% of window/floor area ratio)	STC 36 (6mm glass, 13mm air space, 6mm glass)	STC 33 (6mm glass, 13mm air space, 6mm glass)	STC 32
Bedrooms (up to 80% of window/floor area ratio)	STC 34 (6mm glass, 13mm air space, 6mm glass)	STC 33 (6mm glass, 13mm air space, 6mm glass)	STC 32
TOWER 3			
Living rooms (up to 135% of window/floor area ratio)	STC 34 (6mm glass, 13mm air space, 6mm glass)	STC 33 (6mm glass, 13mm air space, 6mm glass)	STC 32
Bedrooms (up to 135% of window/floor area ratio)	STC 34 (6mm glass, 13mm air space, 6mm glass)	STC 33 (6mm glass, 13mm air space, 6mm glass)	STC 32

Note: Spandrel panels along the south, east and west façades exposed to the highway may need to be upgraded, depending upon the configuration of the exterior façade.

A detailed review is recommended to finalize the glazing and façade requirements.

The lowest floors of the tower will experience lower sound levels from the transportation sources compared to the upper floors fully exposed to the Queensway. While the glazing requirements can be reduced here, it is recommended the glazing remain consistent up the building.

ON-SITE MECHANICAL EQUIPMENT

At the time of final design, the rooftop mechanical exhaust equipment and grade level parking exhausts should be reviewed to ensure the development itself meets the MECP's *NPC-300* noise criteria. If noise control measures are required, this may include but not be limited to the installation of exhaust silencers, partial enclosure, barriers, or the selection of quieter equipment.

O-TRAIN VIBRATION ANALYSIS

On-site vibration monitoring was conducted at the proposed location of the east façade closest to the O-Train line. The monitoring took place on October 5, 2018. The vibration monitoring location was 2m west of the eastern property line, the location of the closest building façade. The tracks are located in a cut, approximately 4 to 5m below grade. Continuous vibration monitoring was conducted during the afternoon and p.m. rush hour.

As stated in the document, "Railway Association of Canada, Guidelines for New Developments in Proximity to Railway Operations, 2013", the criterion for ground-borne vibration is 0.14 mm/sec. (velocity), the level of perception. Ground-borne vibration transmission is to be estimated through site testing and evaluation, to determine if dwellings within 75 metres of the railway right-of-way will be impacted by vibration conditions in excess of 0.14 mm/sec. RMS between 4 Hz and 200 Hz. The monitoring system should be capable of measuring frequencies between 4 Hz and 200 Hz ± 3 dB, with an RMS averaging time constant of 1 second. If in excess, appropriate isolation measures are recommended to be undertaken to ensure living areas do not exceed 0.14 mm/sec. RMS on and above the first floor of the dwelling.

Table 7: O-Train Vibration Monitoring		
Time	**Train Direction**	**Vibration Level (mm/sec. velocity)**
1:28p	NB	0.01
1:29p	SB	0.01
1:40p	NB	0.01
1:41p	SB	0.02
1:52p	NB	0.01
1:53p	SB	0.01
2:04p	NB	0.01
2:06p	SB	0.01
2:16p	NB	0.01
2:17p	SB	0.01
2:28p	NB	0.01
2:29p	SB	0.01
4:52p	NB	0.01
4:53p	SB	0.02
5:04p	NB	0.01
5:05p	SB	0.01
5:24p	NB	0.01

As summarized above, the ground-borne vibration levels from operation of the City of Ottawa's O-Trains were found to be no more than 0.02 mm/sec. velocity at the east limit of the buildings closest to the train. These vibration levels are well below the criterion (0.14 mm/sec. velocity). No additional vibration control measures as a result of the O-Train passbys are needed for this development.

STATIONARY NOISE SOURCES

To the west at 975 Gladstone Avenue is the existing Canadian Bank Note (CBN) building. This building incorporates the CBN head office and plant. There are several rooftop mechanical ventilation systems used for production as well as loading doors and an outdoor forklift. Information was provided by CBN regarding the projected sound levels from their facility. CBN also noted that idling trucks can wait (temperature controlled trucks with a refrigeration unit) on Loretta Avenue North, waiting to access the eastern entrance directly across from this proposed development. This data was used to determine if a potential noise impact would be present at the proposed development.

Based on the quietest ambient hourly sound levels during day and night, the following table outlines the anticipated sound levels at each tower. The analysis first looks at using Class 1 (default, urban classification). Class 1 is based on an open window noise criteria where the

stationary noise source must meet the criteria in the plane of open window (air conditioning and closed windows are not acceptable mitigation measures). Any noise control measures would need to be implemented at source.

The analysis also looked at the results under a proposed Class 4 designation, which effectively permits high exterior sound levels with the windows closed. Point of reception is taken 6m above grade level (second-storey level, fully exposed to CBN rooftop), considered to the worst-case scenario (see Appendix A, Figure 6).

Table 8: Projected Sound Level (Stationary Sources) TOWER 1 Daytime (0700-2300 Hours)				
Sources	**Total Sound Level (dB L_{eq})**			
	NE	**NW**	**SE**	**SW**
Canadian Bank Note (Mechanical Equipment)	52	54	32	53
Idling Truck (on Loretta Ave)	29	41	15	39
Total Sound Level (dB)	52	54	32	53
Noise Criteria (dB L_{eq}), Class 1	50	50	57	57
Noise Impact (dB), Class 1	**2**	**4**	**-25**	**- 4**
Noise Criteria (dB L_{eq}), Class 4	60	60	60	60
Noise Impact (dB), Class 4	**- 8**	**- 6**	**-28**	**- 7**

Table 9: Projected Sound Level (Stationary Sources) TOWER 1 Nighttime (2300-0700 Hours)				
Sources	**Total Sound Level (dB L_{eq})**			
	NE	**NW**	**SE**	**SW**
Canadian Bank Note (Mechanical Equipment)	52	54	32	53
Idling Truck (on Loretta Ave)	29	41	15	39
Total Sound Level (dB)	52	54	32	53
Noise Criteria (dB L_{eq}), Class 1	45	45	52	52
Noise Impact (dB), Class 1	**7**	**9**	**-20**	**1**
Noise Criteria (dB L_{eq}), Class 4	55	55	55	55
Noise Impact (dB), Class 4	**- 3**	**- 1**	**-23**	**- 2**

Table 10: Projected Sound Level (Stationary Sources)
TOWER 2
Daytime (0700-2300 Hours)

Sources	Total Sound Level (dB L_{eq})			
	NE	NW	SE	SW
Canadian Bank Note (Mechanical Equipment)	53	56	47	56
Idling Truck (on Loretta Ave)	32	46	19	45
Total Sound Level (dB)	53	56	47	56
Noise Criteria (dB L_{eq}), Class 1	50	50	57	57
Noise Impact (dB), Class 1	**3**	**6**	**-10**	**- 1**
Noise Criteria (dB L_{eq}), Class 4	60	60	60	60
Noise Impact (dB), Class 4	**- 7**	**- 4**	**-13**	**- 4**

Table 11: Projected Sound Level (Stationary Sources)
TOWER 2
Nighttime (2300-0700 Hours)

Sources	Total Sound Level (dB L_{eq})			
	NE	NW	SE	SW
Canadian Bank Note (Mechanical Equipment)	53	56	47	56
Idling Truck (on Loretta Ave)	32	46	19	45
Total Sound Level (dB)	53	56	47	56
Noise Criteria (dB L_{eq}), Class 1	45	47	49	49
Noise Impact (dB), Class 1	**8**	**9**	**- 2**	**7**
Noise Criteria (dB L_{eq}), Class 4	55	55	55	55
Noise Impact (dB), Class 4	**- 2**	**1**	**- 8**	**1**

Table 12: Projected Sound Level (Stationary Sources)
TOWER 3
Daytime (0700-2300 Hours)

Sources	Total Sound Level (dB L_{eq})			
	NE	NW	SE	SW
Canadian Bank Note (Mechanical Equipment)	50	55	51	59
Idling Truck (on Loretta Ave)	35	49	26	56
Total Sound Level (dB)	50	56	51	61
Noise Criteria (dB L_{eq}), Class 1	50	51	50	52
Noise Impact (dB), Class 1	**0**	**5**	**1**	**9**
Noise Criteria (dB L_{eq}), Class 4	60	60	60	60
Noise Impact (dB), Class 4	**-10**	**- 4**	**- 9**	**1**

Table 13: Projected Sound Level (Stationary Sources)
TOWER 3
Nighttime (2300-0700 Hours)

Sources	Total Sound Level (dB L_{eq})			
	NE	NW	SE	SW
Canadian Bank Note (Mechanical Equipment)	50	55	51	59
Idling Truck (on Loretta Ave)	35	49	26	56
Total Sound Level (dB)	50	56	51	61
Noise Criteria (dB L_{eq}), Class 1	45	45	45	47
Noise Impact (dB), Class 1	**5**	**11**	**6**	**14**
Noise Criteria (dB L_{eq}), Class 4	55	55	55	55
Noise Impact (dB), Class 4	**- 5**	**1**	**- 4**	**6**

As summarized in Tables 8 to 13, the sound levels under the existing Class 1 designation would exceed the criteria between 2 and 14 dB (a very significant impact at nighttime). Under a proposed Class 4 designation, the sound levels would be up to 6 dB above the criteria. It is also noted that our calculations indicate the rooftop mechanical equipment would have an impact for the existing dwelling to the west of CBN. In both cases, noise control measures would need to be discussed with CBN.

Meeting Class 1 at the proposed development will be difficult as a significant number of the rooftop mechanical ventilation units will need to be fitted with intake and discharge silencers to reduce the overall sound levels by 14 dB (a significant reduction). Implementing noise control at the proposed residential building is not feasible as the MECP criterion does not permit closed windows and air conditioning under a Class 1 designation. There are a number of feasibility issues including whether the roof of CBN can support the additional load of physically fitting the noise control measures on the equipment, as the footprint would be a significant increase above the current configuration. As expected, this requires discussion with CBN and their accepting these measures. Alternatively, consideration for applying Class 4 to all three towers would require some noise control measures at CBN resulting in a 5 dB reduction (compared to 14 dB under Class 1). Incorporating noise control measures for this proposed development would also mitigate the sound levels (an estimated 5 to 6 dB excess) for the existing housing as well on Breezehill Avenue North.

CONCLUSIONS

The analysis indicates a modest impact from traffic noise at the proposed mixed-use development. It is feasible to meet the City of Ottawa's noise criteria using standard measures found at many residential buildings. Noise control measures including the installation of central air conditioning prior to occupancy and warning clauses to deal with traffic noise will be required to satisfy the various noise criteria.

The ground-borne vibration levels generated by the O-Trains were not an issue and clearly satisfy the criterion.

The Canadian Bank Note facility at 975 Gladstone Avenue to the west was found under the existing Class 1 designation to exceed the MECP's criteria. Consideration should be given to applying for a Class 4 designation and providing all prospective homeowners with a warning clause has been recommended. The Class 4 designation would require some noise control measures at the CBN facility.

RECOMMENDATIONS

To meet the current noise guidelines of the City of Ottawa, the following recommendations are proposed:

TRANSPORATION SOURCES

1. It is recommended all residential units in Towers 1, 2 and 3 be equipped with central air conditioning prior to occupancy.

2. A warning clause is to be inserted into all occupancy agreements for this development, notifying them of the exterior sound levels (see Appendix C: Warning Clauses).

3. On the basis of the predicted sound levels (see Table 5, above), façades may require upgrades from the minimum OBC requirements. High-rise condominium towers typically utilize 6mm double-glazing with a 13 or 25mm air space between the panes of glass. This is a standard commercial window typically rated at STC 34-39.

4. At Tower 3, the 5th floor outdoor amenity area will require that the parapet height be increased to at least 1.25m at the east perimeter (see Appendix A, Figure 5).

5. It is recommended that once detailed architectural drawings and suite configurations are available, the acoustic consultant confirm the final façade requirements.

STATIONARY SOURCES

1. It is recommended that the City of Ottawa consider designating this development as Class 4 under MECP guidelines.

2. Discussions with CBN are necessary in order to outline the noise impacts and potential noise control measures. Based on our preliminary review, an overall reduction of 5 dB is required based on a Class 4 designation. Reducing the sound levels will also reduce the sound levels at the existing housing to the west on Breezehill Avenue North.

3. At the time of final design for this proposed development, the rooftop mechanical exhaust equipment and grade level parking exhausts should be reviewed to ensure the development itself meets the MECP's *NPC-300* noise criteria. If noise control measures are required, this may include but not be limited to the installation of exhaust silencers, partial enclosure, barriers, or the selection of quieter equipment.

4. It is recommended that all Agreements of Purchase and Sale include a warning clause notifying prospective homeowners of the Class 4 designation (see Warning Clauses).

/pt/hp

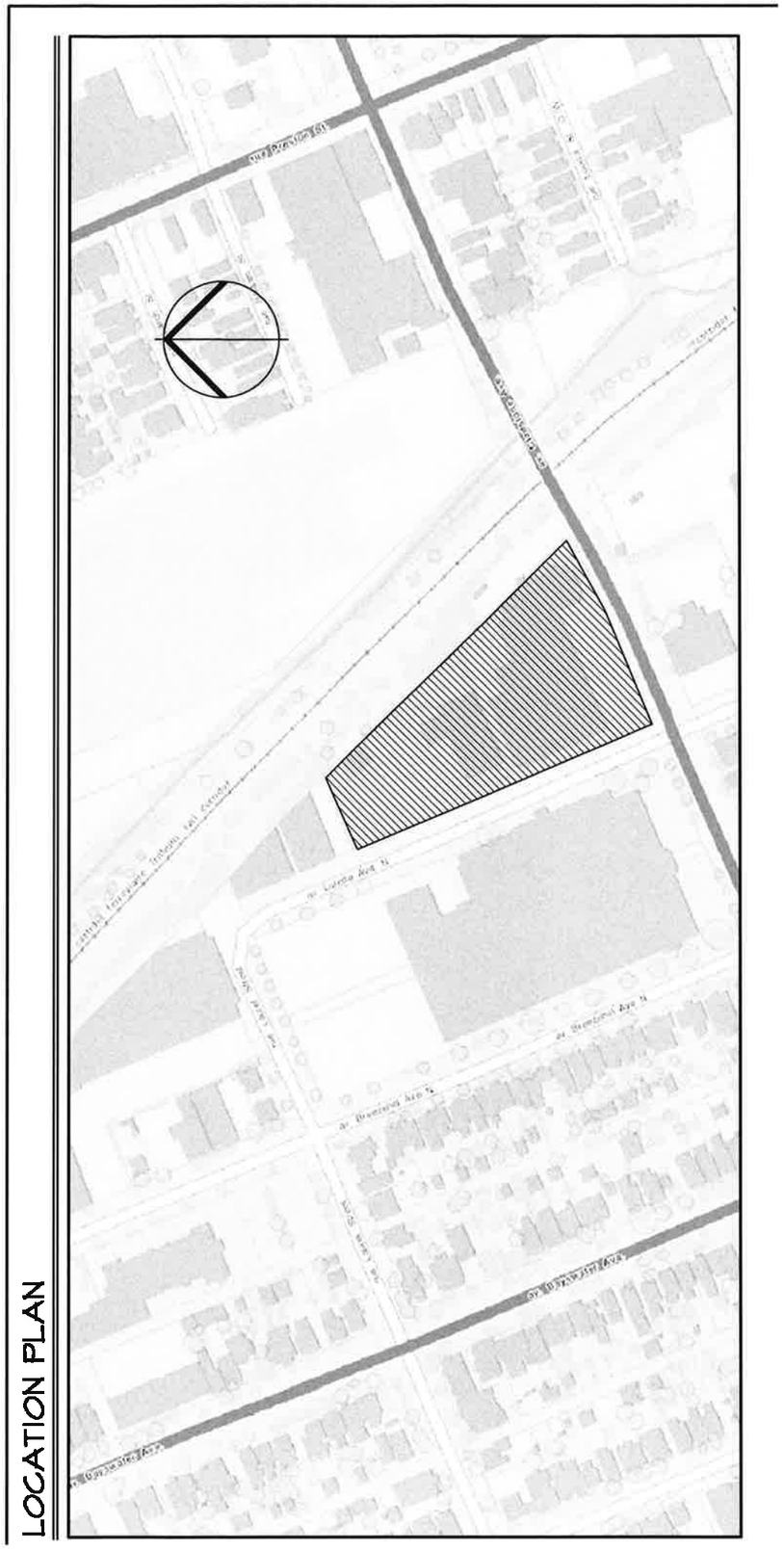


FIGURE 1

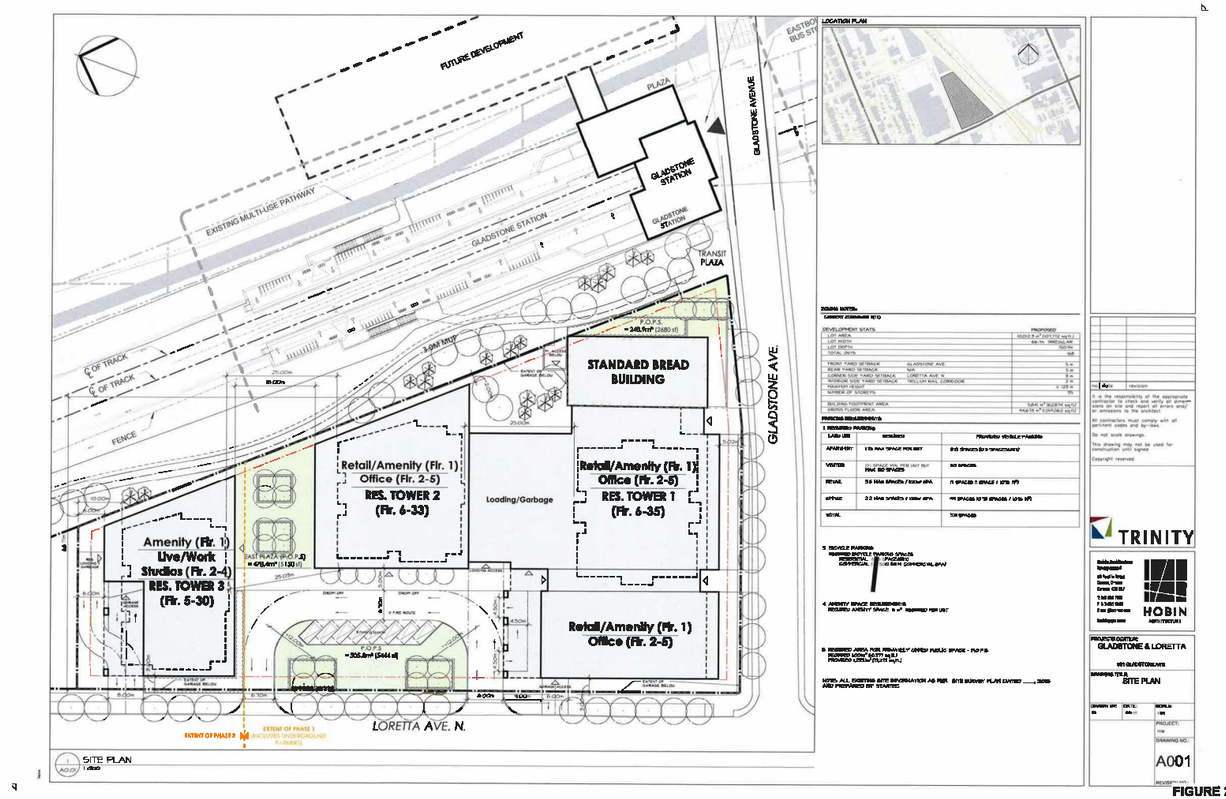
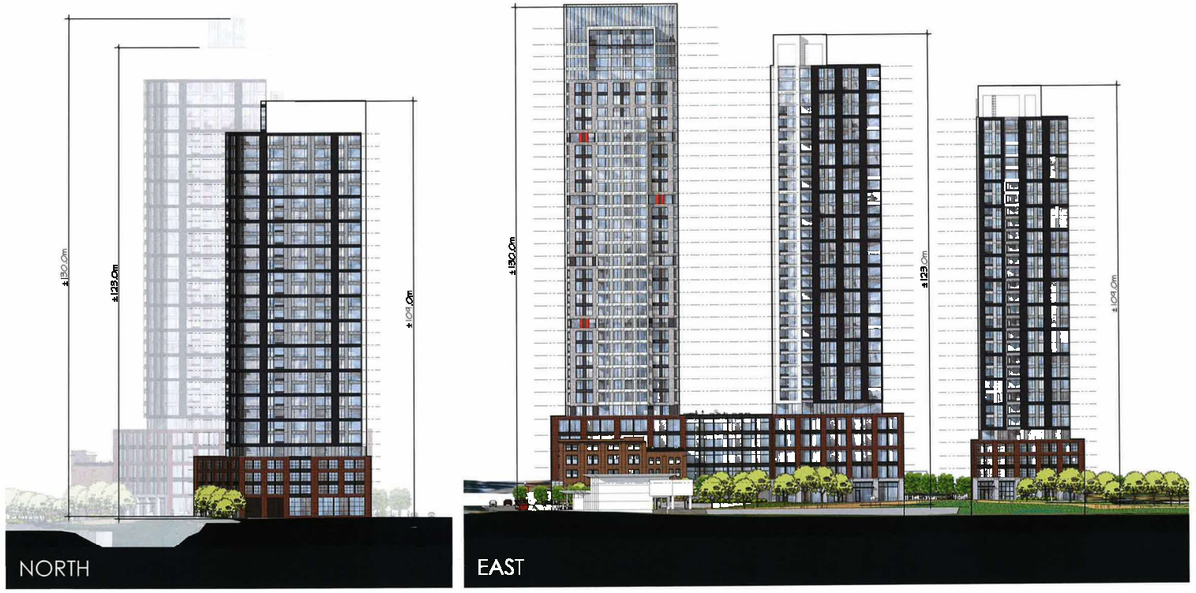


FIGURE 2



HOBIN

GLADSTONE + LORETTA

Site Elevations

scale 1:750

TRINITY

FIGURE 3



HOBIN

GLADSTONE + LORETTA

Site Elevations

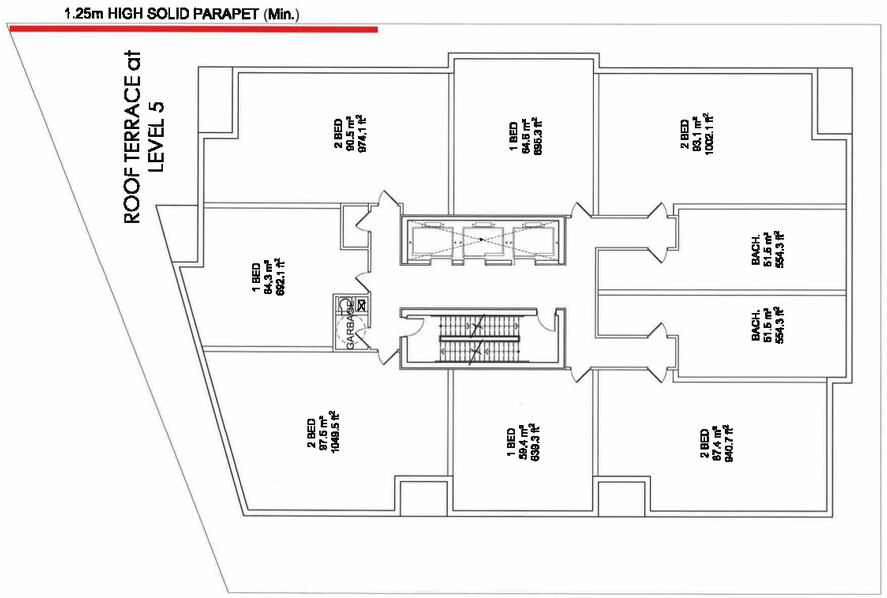
scale 1:750

TRINITY

FIGURE 4

LOWER FLOOR x 5 (Flr. 5-9)		
GFA	8,311 ft²	(772.2 m²)
NET RES.	7,110 ft²	(660.6 m²)
EFFICIENCY	85.5%	
UNITS	9	
Bachelor	2	
1 Bed	3	
2 Bed	4	

RES. TOWER 3 TOTALS (30 Flrs.)		
GFA	217,496 ft²	(20,206m²)
NET RES.	187,446 ft²	(17,414m²)
EFFICIENCY	86.2 %	
UNITS	192 (Total)	
Bachelor	10	(-5%)
1 Bed	36	(~19%)
2 Bed	104	(~54%)
3 Bed	42	(~22%)



HOBIN

GLADSTONE + LORETTA
Residential Tower 3

Typical Level (Flr. 5-9)

scale 1:150

TRINITY

FIGURE 5

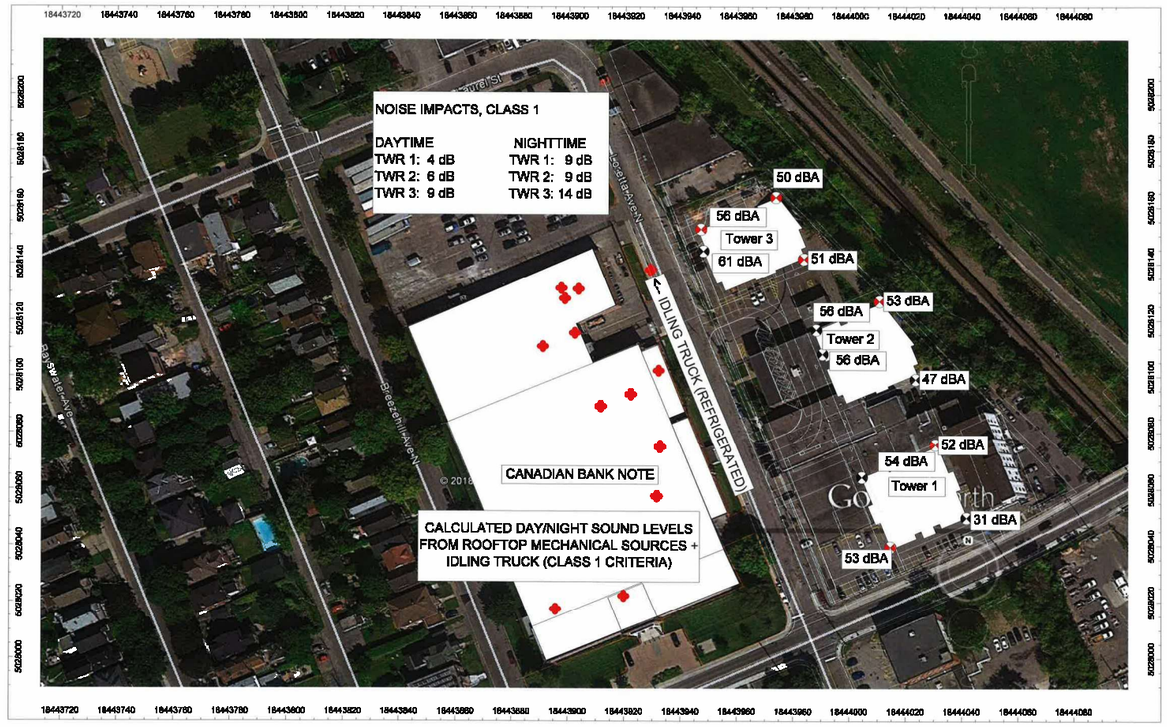


FIGURE 6

APPENDIX A: FIGURES

APPENDIX B: SOUND LEVEL CALCULATIONS

```
STAMSON 5.0        NORMAL REPORT        Date: 29-07-2019 07:10:18
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: b1_ne.te              Time Period: Day/Night 16/8 hours
Description: Bldg 1 - NE Facade

Road data, segment # 1: Queensway (day/night)
----------------------------------------------
Car traffic volume  : 185803/16157 veh/TimePeriod  *
Medium truck volume : 14780/1285  veh/TimePeriod  *
Heavy truck volume  : 10557/918   veh/TimePeriod  *
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT): 229500
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :  10.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 1: Queensway (day/night)
----------------------------------------------
Angle1   Angle2           : -90.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 217.00 / 217.00 m
Receiver height           : 123.00 / 123.00 m
Topography                :      1       (Flat/gentle slope; no barrier)

Road data, segment # 2: Gladstone (day/night)
----------------------------------------------
Car traffic volume  : 12144/1056  veh/TimePeriod  *
Medium truck volume :   966/84    veh/TimePeriod  *
Heavy truck volume  :   690/60    veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  15000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :  10.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: Gladstone (day/night)
----------------------------------------------
Angle1   Angle2           : -90.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  46.50 / 46.50  m
Receiver height           : 123.00 / 123.00 m
Topography                :      1       (Flat/gentle slope; no barrier)

Results segment # 1: Queensway (day)
----------------------------------------------

Source height = 1.50 m

ROAD (0.00 + 71.74 + 0.00) = 71.74 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90      0   0.00  86.35   0.00 -11.60  -3.01   0.00   0.00   0.00  71.74
-------------------------------------------------------------------------------

Segment Leq : 71.74 dBA


Results segment # 2: Gladstone (day)
----------------------------------------------

Source height = 1.50 m

ROAD (0.00 + 58.76 + 0.00) = 58.76 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90      0   0.00  66.69   0.00  -4.91  -3.01   0.00   0.00   0.00  58.76
-------------------------------------------------------------------------------

Segment Leq : 58.76 dBA

Total Leq All Segments: 71.95 dBA

Results segment # 1: Queensway (night)
----------------------------------------------

Source height = 1.50 m

ROAD (0.00 + 64.14 + 0.00) = 64.14 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90      0   0.00  78.75   0.00 -11.60  -3.01   0.00   0.00   0.00  64.14
-------------------------------------------------------------------------------

Segment Leq : 64.14 dBA


Results segment # 2: Gladstone (night)
----------------------------------------------

Source height = 1.50 m

ROAD (0.00 + 51.17 + 0.00) = 51.17 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90      0   0.00  59.09   0.00  -4.91  -3.01   0.00   0.00   0.00  51.17
-------------------------------------------------------------------------------

Segment Leq : 51.17 dBA

Total Leq All Segments: 64.35 dBA
```

RT/Custom data, segment # 1: O-Train (day/night)

1 - 6-car Subway:
Traffic volume : 576/108 veh/TimePeriod
Speed : 50 km/h

Data for Segment # 1: O-Train (day/night)

Angle1 Angle2	: -90.00 deg	90.00 deg
Wood depth	: 0	(No woods.)
No of house rows	: 0 / 0	
Surface	: 2	(Reflective ground surface)
Receiver source distance	: 48.00 / 48.00 m	
Receiver height	: 123.00 / 123.00 m	
Topography	: 1	(Flat/gentle slope; no barrier)

Results segment # 1: O-Train (day)

Source height = 0.50 m

RT/Custom (0.00 + 59.54 + 0.00) = 59.54 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	64.60	-5.05	0.00	0.00	0.00	0.00	59.54

Segment Leq : 59.54 dBA

Total Leq All Segments: 59.54 dBA

Results segment # 1: O-Train (night)

Source height = 0.50 m

RT/Custom (0.00 + 55.28 + 0.00) = 55.28 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	60.34	-5.05	0.00	0.00	0.00	0.00	55.28

Segment Leq : 55.28 dBA

Total Leq All Segments: 55.28 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 72.20
(NIGHT): 64.86

STAMSON 5.0 NORMAL REPORT Date: 29-07-2019 07:10:29
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: b1_nw.te Time Period: Day/Night 16/8 hours
Description: Bldg 1 - NW Facade

Road data, segment # 1: Queensway (day/night)

Car traffic volume	: 185803/16157 veh/TimePeriod *
Medium truck volume	: 14780/1285 veh/TimePeriod *
Heavy truck volume	: 10557/918 veh/TimePeriod *
Posted speed limit	: 100 km/h
Road gradient	: 0 %
Road pavement	: 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT)	: 229500
Percentage of Annual Growth	: 0.00
Number of Years of Growth	: 10.00
Medium Truck % of Total Volume	: 7.00
Heavy Truck % of Total Volume	: 5.00
Day (16 hrs) % of Total Volume	: 92.00

Data for Segment # 1: Queensway (day/night)

Angle1 Angle2	: 0.00 deg	90.00 deg
Wood depth	: 0	(No woods.)
No of house rows	: 0 / 0	
Surface	: 2	(Reflective ground surface)
Receiver source distance	: 217.00 / 217.00 m	
Receiver height	: 123.00 / 123.00 m	
Topography	: 1	(Flat/gentle slope; no barrier)

Road data, segment # 2: Gladstone (day/night)

Car traffic volume	: 12144/1056 veh/TimePeriod *
Medium truck volume	: 966/84 veh/TimePeriod *
Heavy truck volume	: 690/60 veh/TimePeriod *
Posted speed limit	: 40 km/h
Road gradient	: 0 %
Road pavement	: 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT)	: 15000
Percentage of Annual Growth	: 0.00
Number of Years of Growth	: 10.00
Medium Truck % of Total Volume	: 7.00
Heavy Truck % of Total Volume	: 5.00
Day (16 hrs) % of Total Volume	: 92.00

Data for Segment # 2: Gladstone (day/night)

Angle1 Angle2	: 0.00 deg	90.00 deg
Wood depth	: 0	(No woods.)
No of house rows	: 0 / 0	
Surface	: 2	(Reflective ground surface)
Receiver source distance	: 46.50 / 46.50 m	
Receiver height	: 123.00 / 123.00 m	
Topography	: 1	(Flat/gentle slope; no barrier)

Results segment # 1: Queensway (day)

Source height = 1.50 m

ROAD (0.00 + 71.74 + 0.00) = 71.74 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	86.35	0.00	-11.60	-3.01	0.00	0.00	0.00	71.74

Segment Leq : 71.74 dBA

Results segment # 2: Gladstone (day)

Source height = 1.50 m

ROAD (0.00 + 58.76 + 0.00) = 58.76 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	66.69	0.00	-4.91	-3.01	0.00	0.00	0.00	58.76

Segment Leq : 58.76 dBA

Total Leq All Segments: 71.95 dBA

Results segment # 1: Queensway (night)

Source height = 1.50 m

ROAD (0.00 + 64.14 + 0.00) = 64.14 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	78.75	0.00	-11.60	-3.01	0.00	0.00	0.00	64.14

Segment Leq : 64.14 dBA

Results segment # 2: Gladstone (night)

Source height = 1.50 m

ROAD (0.00 + 51.17 + 0.00) = 51.17 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	59.09	0.00	-4.91	-3.01	0.00	0.00	0.00	51.17

Segment Leq : 51.17 dBA

Total Leq All Segments: 64.35 dBA

RT/Custom data, segment # 1: O-Train (day/night)
---

1 - 6-car Subway:
Traffic volume : 252/136 veh/TimePeriod
Speed : 60 km/h

Data for Segment # 1: O-Train (day/night)

Angle1 Angle2	: -30.00 deg	20.00 deg
Wood depth	: 0	(No woods.)
No of house rows	: 0 / 0	
Surface	: 2	(Reflective ground surface)
Receiver source distance	: 75.00 / 75.00	m
Receiver height	: 123.00 / 123.00	m
Topography	: 1	(Flat/gentle slope; no barrier)

Results segment # 1: O-Train (day)

Source height = 0.50 m

RT/Custom (0.00 + 50.04 + 0.00) = 50.04 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-30	20	0.00	62.59	-6.99	-5.56	0.00	0.00	0.00	50.04

Segment Leq : 50.04 dBA

Total Leq All Segments: 50.04 dBA

Results segment # 1: O-Train (night)

Source height = 0.50 m

RT/Custom (0.00 + 50.37 + 0.00) = 50.37 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-30	20	0.00	62.92	-6.99	-5.56	0.00	0.00	0.00	50.37

Segment Leq : 50.37 dBA

Total Leq All Segments: 50.37 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 71.98
(NIGHT): 64.52

```
STAMSON 5.0        NORMAL REPORT        Date: 29-07-2019 07:10:41
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: b1_se.te              Time Period: Day/Night 16/8 hours
Description: Bldg 1 - SE Facade

Road data, segment # 1: Queensway (day/night)
-----------------------------------------------
Car traffic volume  : 185803/16157 veh/TimePeriod  *
Medium truck volume : 14780/1285  veh/TimePeriod  *
Heavy truck volume  : 10557/918   veh/TimePeriod  *
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT): 229500
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :  10.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 1: Queensway (day/night)
-------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 190.00 / 190.00 m
Receiver height           : 123.00 / 123.00 m
Topography                :      1       (Flat/gentle slope; no barrier)

Road data, segment # 2: Gladstone (day/night)
-----------------------------------------------
Car traffic volume  : 12144/1056  veh/TimePeriod  *
Medium truck volume :   966/84    veh/TimePeriod  *
Heavy truck volume  :   690/60    veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  15000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :  10.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: Gladstone (day/night)
-------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  19.50 / 19.50  m
Receiver height           : 123.00 / 123.00 m
Topography                :      1       (Flat/gentle slope; no barrier)
```

```
Results segment # 1: Queensway (day)
-------------------------------------

Source height = 1.50 m

ROAD (0.00 + 75.33 + 0.00) = 75.33 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.00  86.35   0.00 -11.03   0.00   0.00   0.00   0.00  75.33
-------------------------------------------------------------------------------

Segment Leq : 75.33 dBA


Results segment # 2: Gladstone (day)
-------------------------------------

Source height = 1.50 m

ROAD (0.00 + 65.55 + 0.00) = 65.55 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.00  66.69   0.00  -1.14   0.00   0.00   0.00   0.00  65.55
-------------------------------------------------------------------------------

Segment Leq : 65.55 dBA

Total Leq All Segments: 75.76 dBA


Results segment # 1: Queensway (night)
---------------------------------------

Source height = 1.50 m

ROAD (0.00 + 67.73 + 0.00) = 67.73 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.00  78.75   0.00 -11.03   0.00   0.00   0.00   0.00  67.73
-------------------------------------------------------------------------------

Segment Leq : 67.73 dBA


Results segment # 2: Gladstone (night)
---------------------------------------

Source height = 1.50 m

ROAD (0.00 + 57.95 + 0.00) = 57.95 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.00  59.09   0.00  -1.14   0.00   0.00   0.00   0.00  57.95
-------------------------------------------------------------------------------

Segment Leq : 57.95 dBA

Total Leq All Segments: 68.16 dBA
```

RT/Custom data, segment # 1: O-Train (day/night)
---
1 - 6-car Subway:
Traffic volume : 252/136 veh/TimePeriod
Speed : 60 km/h

Data for Segment # 1: O-Train (day/night)

Angle1 Angle2 : -70.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 58.00 / 58.00 m
Receiver height : 123.00 / 123.00 m
Topography : 1 (Flat/gentle slope; no barrier)

Results segment # 1: O-Train (day)

Source height = 0.50 m

RT/Custom (0.00 + 56.20 + 0.00) = 56.20 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-70	90	0.00	62.59	-5.87	-0.51	0.00	0.00	0.00	56.20

Segment Leq : 56.20 dBA

Total Leq All Segments: 56.20 dBA

Results segment # 1: O-Train (night)

Source height = 0.50 m

RT/Custom (0.00 + 56.54 + 0.00) = 56.54 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-70	90	0.00	62.92	-5.87	-0.51	0.00	0.00	0.00	56.54

Segment Leq : 56.54 dBA

Total Leq All Segments: 56.54 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 75.81
(NIGHT): 68.45

STAMSON 5.0 NORMAL REPORT Date: 29-07-2019 07:10:53
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: b1_sw.te Time Period: Day/Night 16/8 hours
Description: Bldg 1 - SW Facade

Road data, segment # 1: Queensway (day/night)

Car traffic volume : 185803/16157 veh/TimePeriod *
Medium truck volume : 14780/1285 veh/TimePeriod *
Heavy truck volume : 10557/918 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 229500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Queensway (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 190.00 / 190.00 m
Receiver height : 123.00 / 123.00 m
Topography : 1 (Flat/gentle slope; no barrier)

Road data, segment # 2: Gladstone (day/night)

Car traffic volume : 12144/1056 veh/TimePeriod *
Medium truck volume : 966/84 veh/TimePeriod *
Heavy truck volume : 690/60 veh/TimePeriod *
Posted speed limit : 40 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 15000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Gladstone (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 19.50 / 19.50 m
Receiver height : 123.00 / 123.00 m
Topography : 1 (Flat/gentle slope; no barrier)

Results segment # 1: Queensway (day)

Source height = 1.50 m

ROAD (0.00 + 75.33 + 0.00) = 75.33 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	86.35	0.00	-11.03	0.00	0.00	0.00	0.00	75.33

Segment Leq : 75.33 dBA

Results segment # 2: Gladstone (day)

Source height = 1.50 m

ROAD (0.00 + 65.55 + 0.00) = 65.55 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	66.69	0.00	-1.14	0.00	0.00	0.00	0.00	65.55

Segment Leq : 65.55 dBA

Total Leq All Segments: 75.76 dBA

Results segment # 1: Queensway (night)

Source height = 1.50 m

ROAD (0.00 + 67.73 + 0.00) = 67.73 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	78.75	0.00	-11.03	0.00	0.00	0.00	0.00	67.73

Segment Leq : 67.73 dBA

Results segment # 2: Gladstone (night)

Source height = 1.50 m

ROAD (0.00 + 57.95 + 0.00) = 57.95 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	59.09	0.00	-1.14	0.00	0.00	0.00	0.00	57.95

Segment Leq : 57.95 dBA

Total Leq All Segments: 68.16 dBA

RT/Custom data, segment # 1: O-Train (day/night)
---

1 - 6-car Subway:
Traffic volume : 252/136 veh/TimePeriod
Speed : 60 km/h

Data for Segment # 1: O-Train (day/night)

Angle1 Angle2	: 20.00 deg	90.00 deg
Wood depth	: 0	(No woods.)
No of house rows	: 0 / 0	
Surface	: 2	(Reflective ground surface)
Receiver source distance	: 85.00 / 85.00 m	
Receiver height	: 123.00 / 123.00 m	
Topography	: 1	(Flat/gentle slope; no barrier)

Results segment # 1: O-Train (day)

Source height = 0.50 m

RT/Custom (0.00 + 50.95 + 0.00) = 50.95 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
20	90	0.00	62.59	-7.53	-4.10	0.00	0.00	0.00	50.95

Segment Leq : 50.95 dBA

Total Leq All Segments: 50.95 dBA

Results segment # 1: O-Train (night)

Source height = 0.50 m

RT/Custom (0.00 + 51.29 + 0.00) = 51.29 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
20	90	0.00	62.92	-7.53	-4.10	0.00	0.00	0.00	51.29

Segment Leq : 51.29 dBA

Total Leq All Segments: 51.29 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 75.78
(NIGHT): 68.25

```
STAMSON 5.0        NORMAL REPORT        Date: 29-07-2019 07:11:06
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: b2_ne.te              Time Period: Day/Night 16/8 hours
Description: Bldg 2 - NE Facade

Road data, segment # 1: Queensway (day/night)
----------------------------------------------
Car traffic volume  : 185803/16157 veh/TimePeriod  *
Medium truck volume : 14780/1285  veh/TimePeriod  *
Heavy truck volume  : 10557/918   veh/TimePeriod  *
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT): 229500
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :  10.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 1: Queensway (day/night)
-------------------------------------------
Angle1   Angle2           : -90.00 deg   -5.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 271.00 / 271.00 m
Receiver height           : 105.00 / 105.00 m
Topography                :      1       (Flat/gentle slope; no barrier)

Road data, segment # 2: Gladstone (day/night)
----------------------------------------------
Car traffic volume  : 12144/1056  veh/TimePeriod  *
Medium truck volume :   966/84    veh/TimePeriod  *
Heavy truck volume  :   690/60    veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  15000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :  10.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: Gladstone (day/night)
-------------------------------------------
Angle1   Angle2           : -90.00 deg   -5.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 107.00 / 107.00 m
Receiver height           : 105.00 / 105.00 m
Topography                :      1       (Flat/gentle slope; no barrier)

Results segment # 1: Queensway (day)
-------------------------------------

Source height = 1.50 m

ROAD (0.00 + 70.52 + 0.00) = 70.52 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     -5   0.00  86.35   0.00 -12.57  -3.26   0.00   0.00   0.00  70.52
-------------------------------------------------------------------------------

Segment Leq : 70.52 dBA


Results segment # 2: Gladstone (day)
-------------------------------------

Source height = 1.50 m

ROAD (0.00 + 54.89 + 0.00) = 54.89 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     -5   0.00  66.69   0.00  -8.53  -3.26   0.00   0.00   0.00  54.89
-------------------------------------------------------------------------------

Segment Leq : 54.89 dBA

Total Leq All Segments: 70.64 dBA


Results segment # 1: Queensway (night)
---------------------------------------

Source height = 1.50 m

ROAD (0.00 + 62.93 + 0.00) = 62.93 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     -5   0.00  78.75   0.00 -12.57  -3.26   0.00   0.00   0.00  62.93
-------------------------------------------------------------------------------

Segment Leq : 62.93 dBA


Results segment # 2: Gladstone (night)
---------------------------------------

Source height = 1.50 m

ROAD (0.00 + 47.30 + 0.00) = 47.30 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     -5   0.00  59.09   0.00  -8.53  -3.26   0.00   0.00   0.00  47.30
-------------------------------------------------------------------------------

Segment Leq : 47.30 dBA

Total Leq All Segments: 63.05 dBA
```

RT/Custom data, segment # 1: O-Train (day/night)
---
1 - 6-car Subway:
Traffic volume : 252/136 veh/TimePeriod
Speed : 60 km/h

Data for Segment # 1: O-Train (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 28.50 / 28.50 m
Receiver height : 105.00 / 105.00 m
Topography : 1 (Flat/gentle slope; no barrier)

Results segment # 1: O-Train (day)

Source height = 0.50 m

RT/Custom (0.00 + 59.80 + 0.00) = 59.80 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	62.59	-2.79	0.00	0.00	0.00	0.00	59.80

Segment Leq : 59.80 dBA

Total Leq All Segments: 59.80 dBA

Results segment # 1: O-Train (night)

Source height = 0.50 m

RT/Custom (0.00 + 60.13 + 0.00) = 60.13 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	62.92	-2.79	0.00	0.00	0.00	0.00	60.13

Segment Leq : 60.13 dBA

Total Leq All Segments: 60.13 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 70.98
(NIGHT): 64.84

STAMSON 5.0 NORMAL REPORT Date: 29-07-2019 07:11:21
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: b2_nw.te Time Period: Day/Night 16/8 hours
Description: Bldg 2 - NW Facade

Road data, segment # 1: Queensway (day/night)

Car traffic volume : 185803/16157 veh/TimePeriod *
Medium truck volume : 14780/1285 veh/TimePeriod *
Heavy truck volume : 10557/918 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 229500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Queensway (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 271.00 / 271.00 m
Receiver height : 105.00 / 105.00 m
Topography : 1 (Flat/gentle slope; no barrier)

Road data, segment # 2: Gladstone (day/night)

Car traffic volume : 12144/1056 veh/TimePeriod *
Medium truck volume : 966/84 veh/TimePeriod *
Heavy truck volume : 690/60 veh/TimePeriod *
Posted speed limit : 40 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 15000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Gladstone (day/night)

Angle1 Angle2 : 0.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 107.00 / 107.00 m
Receiver height : 105.00 / 105.00 m
Topography : 1 (Flat/gentle slope; no barrier)

Results segment # 1: Queensway (day)

Source height = 1.50 m

ROAD (0.00 + 70.77 + 0.00) = 70.77 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	86.35	0.00	-12.57	-3.01	0.00	0.00	0.00	70.77

Segment Leq : 70.77 dBA

Results segment # 2: Gladstone (day)

Source height = 1.50 m

ROAD (0.00 + 55.14 + 0.00) = 55.14 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	66.69	0.00	-8.53	-3.01	0.00	0.00	0.00	55.14

Segment Leq : 55.14 dBA

Total Leq All Segments: 70.89 dBA

Results segment # 1: Queensway (night)

Source height = 1.50 m

ROAD (0.00 + 63.18 + 0.00) = 63.18 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	78.75	0.00	-12.57	-3.01	0.00	0.00	0.00	63.18

Segment Leq : 63.18 dBA

Results segment # 2: Gladstone (night)

Source height = 1.50 m

ROAD (0.00 + 47.55 + 0.00) = 47.55 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
0	90	0.00	59.09	0.00	-8.53	-3.01	0.00	0.00	0.00	47.55

Segment Leq : 47.55 dBA

Total Leq All Segments: 63.30 dBA

RT/Custom data, segment # 1: O-Train (day/night)
---

1 - 6-car Subway:
Traffic volume : 252/136 veh/TimePeriod
Speed : 60 km/h

Data for Segment # 1: O-Train (day/night)

Angle1 Angle2	: -40.00 deg	20.00 deg
Wood depth	: 0	(No woods.)
No of house rows	: 0 / 0	
Surface	: 2	(Reflective ground surface)
Receiver source distance	: 54.00 / 54.00	m
Receiver height	: 105.00 / 105.00	m
Topography	: 1	(Flat/gentle slope; no barrier)

Results segment # 1: O-Train (day)

Source height = 0.50 m

RT/Custom (0.00 + 52.26 + 0.00) = 52.26 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-40	20	0.00	62.59	-5.56	-4.77	0.00	0.00	0.00	52.26

Segment Leq : 52.26 dBA

Total Leq All Segments: 52.26 dBA

Results segment # 1: O-Train (night)

Source height = 0.50 m

RT/Custom (0.00 + 52.59 + 0.00) = 52.59 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-40	20	0.00	62.92	-5.56	-4.77	0.00	0.00	0.00	52.59

Segment Leq : 52.59 dBA

Total Leq All Segments: 52.59 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 70.95
(NIGHT): 63.65

STAMSON 5.0 NORMAL REPORT Date: 29-07-2019 07:11:33
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: b2_se.te Time Period: Day/Night 16/8 hours
Description: Bldg 2 - SE Facade

Road data, segment # 1: Queensway (day/night)

Car traffic volume : 185803/16157 veh/TimePeriod *
Medium truck volume : 14780/1285 veh/TimePeriod *
Heavy truck volume : 10557/918 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 229500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Queensway (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 244.00 / 244.00 m
Receiver height : 105.00 / 105.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : 0.00 deg Angle2 : 40.00 deg
Barrier height : 123.00 m
Barrier receiver distance : 47.00 / 47.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m

Road data, segment # 2: Gladstone (day/night)

Car traffic volume : 12144/1056 veh/TimePeriod *
Medium truck volume : 966/84 veh/TimePeriod *
Heavy truck volume : 690/60 veh/TimePeriod *
Posted speed limit : 40 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 15000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Gladstone (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 78.00 / 78.00 m
Receiver height : 105.00 / 105.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : 0.00 deg Angle2 : 40.00 deg
Barrier height : 123.00 m
Barrier receiver distance : 47.00 / 47.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m

Results segment # 1: Queensway (day)

Source height = 1.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.50	105.00	85.06	85.06

ROAD (71.23 + 47.71 + 68.68) = 73.16 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	86.35	0.00	-12.11	-3.01	0.00	0.00	0.00	71.23
0	40	0.00	86.35	0.00	-12.11	-6.53	0.00	0.00	-20.00	47.71
40	90	0.00	86.35	0.00	-12.11	-5.56	0.00	0.00	0.00	68.68

Segment Leq : 73.16 dBA

Results segment # 2: Gladstone (day)

Source height = 1.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.50	105.00	42.63	42.63

ROAD (56.52 + 32.99 + 53.96) = 58.45 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	66.69	0.00	-7.16	-3.01	0.00	0.00	0.00	56.52
0	40	0.00	66.69	0.00	-7.16	-6.53	0.00	0.00	-20.00	32.99
40	90	0.00	66.69	0.00	-7.16	-5.56	0.00	0.00	0.00	53.96

Segment Leq : 58.45 dBA
Total Leq All Segments: 73.30 dBA

Results segment # 1: Queensway (night)

Source height = 1.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.50	105.00	85.06	85.06

ROAD (63.63 + 40.11 + 61.08) = 65.56 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	78.75	0.00	-12.11	-3.01	0.00	0.00	0.00	63.63
0	40	0.00	78.75	0.00	-12.11	-6.53	0.00	0.00	-20.00	40.11
40	90	0.00	78.75	0.00	-12.11	-5.56	0.00	0.00	0.00	61.08

Segment Leq : 65.56 dBA

Results segment # 2: Gladstone (night)

Source height = 1.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.50	105.00	42.63	42.63

ROAD (48.92 + 25.40 + 46.37) = 50.85 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	0	0.00	59.09	0.00	-7.16	-3.01	0.00	0.00	0.00	48.92
0	40	0.00	59.09	0.00	-7.16	-6.53	0.00	0.00	-20.00	25.40
40	90	0.00	59.09	0.00	-7.16	-5.56	0.00	0.00	0.00	46.37

Segment Leq : 50.85 dBA

Total Leq All Segments: 65.70 dBA

RT/Custom data, segment # 1: O-Train (day/night)
---

1 - 6-car Subway:
Traffic volume : 252/136 veh/TimePeriod
Speed : 60 km/h

Data for Segment # 1: O-Train (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 37.00 / 37.00 m
Receiver height : 105.00 / 105.00 m
Topography : 1 (Flat/gentle slope; no barrier)

Results segment # 1: O-Train (day)

Source height = 0.50 m

RT/Custom (0.00 + 58.67 + 0.00) = 58.67 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	62.59	-3.92	0.00	0.00	0.00	0.00	58.67

Segment Leq : 58.67 dBA

Total Leq All Segments: 58.67 dBA

Results segment # 1: O-Train (night)

Source height = 0.50 m

RT/Custom (0.00 + 59.00 + 0.00) = 59.00 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	62.92	-3.92	0.00	0.00	0.00	0.00	59.00

Segment Leq : 59.00 dBA

Total Leq All Segments: 59.00 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 73.45
(NIGHT): 66.55

```
STAMSON 5.0        NORMAL REPORT        Date: 29-07-2019 07:11:52
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: b2_sw.te              Time Period: Day/Night 16/8 hours
Description: Bldg 2 - SW Facade

Road data, segment # 1: Queensway (day/night)
----------------------------------------------
Car traffic volume  : 185803/16157 veh/TimePeriod  *
Medium truck volume : 14780/1285  veh/TimePeriod  *
Heavy truck volume  : 10557/918   veh/TimePeriod  *
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT): 229500
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :  10.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 1: Queensway (day/night)
----------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 244.00 / 244.00 m
Receiver height           : 105.00 / 105.00 m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            :  50.00 deg   Angle2 : 90.00 deg
Barrier height            : 123.00 m
Barrier receiver distance :  47.00 / 47.00  m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m

Road data, segment # 2: Gladstone (day/night)
----------------------------------------------
Car traffic volume  : 12144/1056  veh/TimePeriod  *
Medium truck volume :   966/84    veh/TimePeriod  *
Heavy truck volume  :   690/60    veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  15000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :  10.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: Gladstone (day/night)
----------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  79.00 / 79.00  m
Receiver height           : 105.00 / 105.00 m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            :  50.00 deg   Angle2 : 90.00 deg
Barrier height            : 123.00 m
Barrier receiver distance :  47.00 / 47.00  m
Source elevation          :   0.00 m
Receiver elevation        :   0.00 m
Barrier elevation         :   0.00 m

Results segment # 1: Queensway (day)
----------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
----------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+-------------
       1.50 !      105.00 !       85.06 !        85.06

ROAD (73.15 + 49.24 + 0.00) = 73.16 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     50   0.00  86.35   0.00 -12.11  -1.09   0.00   0.00   0.00  73.15
-------------------------------------------------------------------------------
    50     90   0.00  86.35   0.00 -12.11  -6.53   0.00   0.00 -18.47  49.24
-------------------------------------------------------------------------------

Segment Leq : 73.16 dBA

Results segment # 2: Gladstone (day)
----------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
----------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+-------------
       1.50 !      105.00 !       43.42 !        43.42

ROAD (58.38 + 33.56 + 0.00) = 58.39 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     50   0.00  66.69   0.00  -7.22  -1.09   0.00   0.00   0.00  58.38
-------------------------------------------------------------------------------
    50     90   0.00  66.69   0.00  -7.22  -6.53   0.00   0.00 -19.37  33.56
-------------------------------------------------------------------------------

Segment Leq : 58.39 dBA

Total Leq All Segments: 73.30 dBA
```

Results segment # 1: Queensway (night)

Source height = 1.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.50	105.00	85.06	85.06

ROAD (65.55 + 41.64 + 0.00) = 65.57 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	50	0.00	78.75	0.00	-12.11	-1.09	0.00	0.00	0.00	65.55
50	90	0.00	78.75	0.00	-12.11	-6.53	0.00	0.00	-18.47	41.64

Segment Leq : 65.57 dBA

Results segment # 2: Gladstone (night)

Source height = 1.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.50	105.00	43.42	43.42

ROAD (50.78 + 25.97 + 0.00) = 50.80 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	50	0.00	59.09	0.00	-7.22	-1.09	0.00	0.00	0.00	50.78
50	90	0.00	59.09	0.00	-7.22	-6.53	0.00	0.00	-19.37	25.97

Segment Leq : 50.80 dBA

Total Leq All Segments: 65.71 dBA

RT/Custom data, segment # 1: O-Train (day/night)

1 - 6-car Subway:
Traffic volume : 252/136 veh/TimePeriod
Speed : 60 km/h

Data for Segment # 1: O-Train (day/night)

Angle1 Angle2	:	20.00 deg 90.00 deg
Wood depth	:	0 (No woods.)
No of house rows	:	0 / 0
Surface	:	2 (Reflective ground surface)
Receiver source distance	:	64.00 / 64.00 m
Receiver height	:	105.00 / 105.00 m
Topography	:	2 (Flat/gentle slope; with barrier)
Barrier angle1	:	65.00 deg Angle2 : 90.00 deg
Barrier height	:	123.00 m
Barrier receiver distance	:	15.00 / 15.00 m
Source elevation	:	0.00 m
Receiver elevation	:	0.00 m
Barrier elevation	:	0.00 m

Results segment # 1: O-Train (day)

Source height = 0.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
0.50	105.00	80.51	80.51

RT/Custom (50.27 + 29.01 + 0.00) = 50.30 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
20	65	0.00	62.59	-6.30	-6.02	0.00	0.00	0.00	50.27
65	90	0.00	62.59	-6.30	-8.57	0.00	0.00	-18.71	29.01

Segment Leq : 50.30 dBA

Total Leq All Segments: 50.30 dBA

Results segment # 1: O-Train (night)

Source height = 0.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
0.50	105.00	80.51	80.51

RT/Custom (50.60 + 29.34 + 0.00) = 50.63 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
20	65	0.00	62.92	-6.30	-6.02	0.00	0.00	0.00	50.60
65	90	0.00	62.92	-6.30	-8.57	0.00	0.00	-18.71	29.34

Segment Leq : 50.63 dBA

Total Leq All Segments: 50.63 dBA
TOTAL Leq FROM ALL SOURCES (DAY): 73.32
(NIGHT): 65.85

STAMSON 5.0 NORMAL REPORT Date: 29-07-2019 07:12:08
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: b3_ne.te Time Period: Day/Night 16/8 hours
Description: Bldg 3 - NE Facade

Road data, segment # 1: Queensway (day/night)

Car traffic volume : 185803/16157 veh/TimePeriod *
Medium truck volume : 14780/1285 veh/TimePeriod *
Heavy truck volume : 10557/918 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 229500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Queensway (day/night)

Angle1 Angle2 : -90.00 deg -20.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 317.00 / 317.00 m
Receiver height : 90.00 / 90.00 m
Topography : 1 (Flat/gentle slope; no barrier)

Road data, segment # 2: Gladstone (day/night)

Car traffic volume : 12144/1056 veh/TimePeriod *
Medium truck volume : 966/84 veh/TimePeriod *
Heavy truck volume : 690/60 veh/TimePeriod *
Posted speed limit : 40 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 15000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 2: Gladstone (day/night)

Angle1 Angle2 : -90.00 deg -20.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 152.00 / 152.00 m
Receiver height : 90.00 / 90.00 m
Topography : 1 (Flat/gentle slope; no barrier)

Results segment # 1: Queensway (day)

Source height = 1.50 m

ROAD (0.00 + 69.00 + 0.00) = 69.00 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-20	0.00	86.35	0.00	-13.25	-4.10	0.00	0.00	0.00	69.00

Segment Leq : 69.00 dBA

Results segment # 2: Gladstone (day)

Source height = 1.50 m

ROAD (0.00 + 52.53 + 0.00) = 52.53 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-20	0.00	66.69	0.00	-10.06	-4.10	0.00	0.00	0.00	52.53

Segment Leq : 52.53 dBA

Total Leq All Segments: 69.10 dBA

Results segment # 1: Queensway (night)

Source height = 1.50 m

ROAD (0.00 + 61.40 + 0.00) = 61.40 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-20	0.00	78.75	0.00	-13.25	-4.10	0.00	0.00	0.00	61.40

Segment Leq : 61.40 dBA

Results segment # 2: Gladstone (night)

Source height = 1.50 m

ROAD (0.00 + 44.93 + 0.00) = 44.93 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-20	0.00	59.09	0.00	-10.06	-4.10	0.00	0.00	0.00	44.93

Segment Leq : 44.93 dBA

Total Leq All Segments: 61.50 dBA

RT/Custom data, segment # 1: O-Train (day/night)
---

1 - 6-car Subway:
Traffic volume : 252/136 veh/TimePeriod
Speed : 60 km/h

Data for Segment # 1: O-Train (day/night)

Angle1 Angle2	:	-90.00 deg 90.00 deg
Wood depth	:	0 (No woods.)
No of house rows	:	0 / 0
Surface	:	2 (Reflective ground surface)
Receiver source distance	:	28.50 / 28.50 m
Receiver height	:	90.00 / 90.00 m
Topography	:	1 (Flat/gentle slope; no barrier)

Results segment # 1: O-Train (day)

Source height = 0.50 m

RT/Custom (0.00 + 59.80 + 0.00) = 59.80 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	62.59	-2.79	0.00	0.00	0.00	0.00	59.80

Segment Leq : 59.80 dBA

Total Leq All Segments: 59.80 dBA

Results segment # 1: O-Train (night)

Source height = 0.50 m

RT/Custom (0.00 + 60.13 + 0.00) = 60.13 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	62.92	-2.79	0.00	0.00	0.00	0.00	60.13

Segment Leq : 60.13 dBA

Total Leq All Segments: 60.13 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 69.58
(NIGHT): 63.88

```
STAMSON 5.0        NORMAL REPORT        Date: 29-07-2019 07:12:30
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: b3_nw.te              Time Period: Day/Night 16/8 hours
Description: Bdlg 3 - NW Facade

Road data, segment # 1: Queensway (day/night)
----------------------------------------------
Car traffic volume  : 185803/16157 veh/TimePeriod  *
Medium truck volume : 14780/1285  veh/TimePeriod  *
Heavy truck volume  : 10557/918   veh/TimePeriod  *
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT): 229500
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :  10.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 1: Queensway (day/night)
----------------------------------------------
Angle1   Angle2           :   0.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 317.00 / 317.00 m
Receiver height           :  90.00 / 90.00  m
Topography                :      1       (Flat/gentle slope; no barrier)

Road data, segment # 2: Gladstone (day/night)
----------------------------------------------
Car traffic volume  : 12144/1056  veh/TimePeriod  *
Medium truck volume :   966/84    veh/TimePeriod  *
Heavy truck volume  :   690/60    veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  15000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :  10.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: Gladstone (day/night)
----------------------------------------------
Angle1   Angle2           :   0.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 152.00 / 152.00 m
Receiver height           :  90.00 / 90.00  m
Topography                :      1       (Flat/gentle slope; no barrier)

Results segment # 1: Queensway (day)
---------------------------------------

Source height = 1.50 m

ROAD (0.00 + 70.09 + 0.00) = 70.09 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     90   0.00  86.35   0.00 -13.25  -3.01   0.00   0.00   0.00  70.09
-------------------------------------------------------------------------------

Segment Leq : 70.09 dBA


Results segment # 2: Gladstone (day)
---------------------------------------

Source height = 1.50 m

ROAD (0.00 + 53.62 + 0.00) = 53.62 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     90   0.00  66.69   0.00 -10.06  -3.01   0.00   0.00   0.00  53.62
-------------------------------------------------------------------------------

Segment Leq : 53.62 dBA

Total Leq All Segments: 70.19 dBA


Results segment # 1: Queensway (night)
---------------------------------------

Source height = 1.50 m

ROAD (0.00 + 62.49 + 0.00) = 62.49 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     90   0.00  78.75   0.00 -13.25  -3.01   0.00   0.00   0.00  62.49
-------------------------------------------------------------------------------

Segment Leq : 62.49 dBA


Results segment # 2: Gladstone (night)
---------------------------------------

Source height = 1.50 m

ROAD (0.00 + 46.02 + 0.00) = 46.02 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
     0     90   0.00  59.09   0.00 -10.06  -3.01   0.00   0.00   0.00  46.02
-------------------------------------------------------------------------------

Segment Leq : 46.02 dBA

Total Leq All Segments: 62.59 dBA
```

RT/Custom data, segment # 1: O-Train (day/night)

1 - 6-car Subway:
Traffic volume : 252/136 veh/TimePeriod
Speed : 60 km/h

Data for Segment # 1: O-Train (day/night)

Angle1 Angle2	: -90.00 deg	20.00 deg
Wood depth	: 0	(No woods.)
No of house rows	: 0 / 0	
Surface	: 2	(Reflective ground surface)
Receiver source distance	: 57.00 / 57.00	m
Receiver height	: 90.00 / 90.00	m
Topography	: 1	(Flat/gentle slope; no barrier)

Results segment # 1: O-Train (day)

Source height = 0.50 m

RT/Custom (0.00 + 54.65 + 0.00) = 54.65 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	20	0.00	62.59	-5.80	-2.14	0.00	0.00	0.00	54.65

Segment Leq : 54.65 dBA

Total Leq All Segments: 54.65 dBA

Results segment # 1: O-Train (night)

Source height = 0.50 m

RT/Custom (0.00 + 54.98 + 0.00) = 54.98 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	20	0.00	62.92	-5.80	-2.14	0.00	0.00	0.00	54.98

Segment Leq : 54.98 dBA

Total Leq All Segments: 54.98 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 70.31
(NIGHT): 63.28

STAMSON 5.0 NORMAL REPORT Date: 29-07-2019 07:12:45
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: b3_se.te Time Period: Day/Night 16/8 hours
Description: Bdlg 3 - SE Facade

Road data, segment # 1: Queensway (day/night)

Car traffic volume	: 185803/16157 veh/TimePeriod *
Medium truck volume	: 14780/1285 veh/TimePeriod *
Heavy truck volume	: 10557/918 veh/TimePeriod *
Posted speed limit	: 100 km/h
Road gradient	: 0 %
Road pavement	: 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT)	: 229500
Percentage of Annual Growth	: 0.00
Number of Years of Growth	: 10.00
Medium Truck % of Total Volume	: 7.00
Heavy Truck % of Total Volume	: 5.00
Day (16 hrs) % of Total Volume	: 92.00

Data for Segment # 1: Queensway (day/night)

Angle1 Angle2	: -90.00 deg	-30.00 deg
Wood depth	: 0	(No woods.)
No of house rows	: 0 / 0	
Surface	: 2	(Reflective ground surface)
Receiver source distance	: 293.00 / 293.00	m
Receiver height	: 90.00 / 90.00	m
Topography	: 1	(Flat/gentle slope; no barrier)

Road data, segment # 2: Gladstone (day/night)

Car traffic volume	: 12144/1056 veh/TimePeriod *
Medium truck volume	: 966/84 veh/TimePeriod *
Heavy truck volume	: 690/60 veh/TimePeriod *
Posted speed limit	: 40 km/h
Road gradient	: 0 %
Road pavement	: 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT)	: 15000
Percentage of Annual Growth	: 0.00
Number of Years of Growth	: 10.00
Medium Truck % of Total Volume	: 7.00
Heavy Truck % of Total Volume	: 5.00
Day (16 hrs) % of Total Volume	: 92.00

Data for Segment # 2: Gladstone (day/night)

Angle1 Angle2	: -90.00 deg	-30.00 deg
Wood depth	: 0	(No woods.)
No of house rows	: 0 / 0	
Surface	: 2	(Reflective ground surface)
Receiver source distance	: 129.00 / 129.00	m
Receiver height	: 90.00 / 90.00	m
Topography	: 1	(Flat/gentle slope; no barrier)

Results segment # 1: Queensway (day)

Source height = 1.50 m

ROAD (0.00 + 68.67 + 0.00) = 68.67 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-30	0.00	86.35	0.00	-12.91	-4.77	0.00	0.00	0.00	68.67

Segment Leq : 68.67 dBA

Results segment # 2: Gladstone (day)

Source height = 1.50 m

ROAD (0.00 + 52.57 + 0.00) = 52.57 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-30	0.00	66.69	0.00	-9.34	-4.77	0.00	0.00	0.00	52.57

Segment Leq : 52.57 dBA

Total Leq All Segments: 68.78 dBA

Results segment # 1: Queensway (night)

Source height = 1.50 m

ROAD (0.00 + 61.08 + 0.00) = 61.08 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-30	0.00	78.75	0.00	-12.91	-4.77	0.00	0.00	0.00	61.08

Segment Leq : 61.08 dBA

Results segment # 2: Gladstone (night)

Source height = 1.50 m

ROAD (0.00 + 44.97 + 0.00) = 44.97 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-30	0.00	59.09	0.00	-9.34	-4.77	0.00	0.00	0.00	44.97

Segment Leq : 44.97 dBA

Total Leq All Segments: 61.19 dBA

RT/Custom data, segment # 1: O-Train (day/night)
---

1 - 6-car Subway:
Traffic volume : 252/136 veh/TimePeriod
Speed : 60 km/h

Data for Segment # 1: O-Train (day/night)

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 35.00 / 35.00 m
Receiver height : 90.00 / 90.00 m
Topography : 1 (Flat/gentle slope; no barrier)

Results segment # 1: O-Train (day)

Source height = 0.50 m

RT/Custom (0.00 + 58.91 + 0.00) = 58.91 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	62.59	-3.68	0.00	0.00	0.00	0.00	58.91

Segment Leq : 58.91 dBA

Total Leq All Segments: 58.91 dBA

Results segment # 1: O-Train (night)

Source height = 0.50 m

RT/Custom (0.00 + 59.24 + 0.00) = 59.24 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	62.92	-3.68	0.00	0.00	0.00	0.00	59.24

Segment Leq : 59.24 dBA

Total Leq All Segments: 59.24 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 69.20
(NIGHT): 63.33

```
STAMSON 5.0        NORMAL REPORT        Date: 29-07-2019 07:12:58
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: b3_sw.te              Time Period: Day/Night 16/8 hours
Description: Bdlg 3 - SW Facade

Road data, segment # 1: Queensway (day/night)
----------------------------------------------
Car traffic volume  : 185803/16157 veh/TimePeriod  *
Medium truck volume : 14780/1285  veh/TimePeriod  *
Heavy truck volume  : 10557/918   veh/TimePeriod  *
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT): 229500
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :  10.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 1: Queensway (day/night)
----------------------------------------------
Angle1   Angle2           : -15.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 293.00 / 293.00 m
Receiver height           :  90.00 / 90.00  m
Topography                :      1       (Flat/gentle slope; no barrier)

Road data, segment # 2: Gladstone (day/night)
----------------------------------------------
Car traffic volume  : 12144/1056  veh/TimePeriod  *
Medium truck volume :   966/84    veh/TimePeriod  *
Heavy truck volume  :   690/60    veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  15000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :  10.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: Gladstone (day/night)
----------------------------------------------
Angle1   Angle2           : -15.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 129.00 / 129.00 m
Receiver height           :  90.00 / 4.50   m
Topography                :      1       (Flat/gentle slope; no barrier)

Results segment # 1: Queensway (day)
----------------------------------------------

Source height = 1.50 m

ROAD (0.00 + 71.10 + 0.00) = 71.10 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -15     90   0.00  86.35   0.00 -12.91  -2.34   0.00   0.00   0.00  71.10
-------------------------------------------------------------------------------

Segment Leq : 71.10 dBA


Results segment # 2: Gladstone (day)
----------------------------------------------

Source height = 1.50 m

ROAD (0.00 + 55.00 + 0.00) = 55.00 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -15     90   0.00  66.69   0.00  -9.34  -2.34   0.00   0.00   0.00  55.00
-------------------------------------------------------------------------------

Segment Leq : 55.00 dBA

Total Leq All Segments: 71.21 dBA


Results segment # 1: Queensway (night)
----------------------------------------------

Source height = 1.50 m

ROAD (0.00 + 63.51 + 0.00) = 63.51 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -15     90   0.00  78.75   0.00 -12.91  -2.34   0.00   0.00   0.00  63.51
-------------------------------------------------------------------------------

Segment Leq : 63.51 dBA


Results segment # 2: Gladstone (night)
----------------------------------------------

Source height = 1.50 m

ROAD (0.00 + 47.40 + 0.00) = 47.40 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -15     90   0.00  59.09   0.00  -9.34  -2.34   0.00   0.00   0.00  47.40
-------------------------------------------------------------------------------

Segment Leq : 47.40 dBA

Total Leq All Segments: 63.62 dBA
```

RT/Custom data, segment # 1: O-Train (day/night)

1 - 6-car Subway:
Traffic volume : 252/136 veh/TimePeriod
Speed : 60 km/h

Data for Segment # 1: O-Train (day/night)

Angle1 Angle2	:	20.00 deg 90.00 deg
Wood depth	:	0 (No woods.)
No of house rows	:	0 / 0
Surface	:	2 (Reflective ground surface)
Receiver source distance	:	64.00 / 64.00 m
Receiver height	:	90.00 / 90.00 m
Topography	:	2 (Flat/gentle slope; with barrier)
Barrier angle1	:	45.00 deg Angle2 : 85.00 deg
Barrier height	:	105.00 m
Barrier receiver distance	:	38.00 / 38.00 m
Source elevation	:	0.00 m
Receiver elevation	:	0.00 m
Barrier elevation	:	0.00 m

Results segment # 1: O-Train (day)

Source height = 0.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
0.50	90.00	36.86	36.86

RT/Custom (47.72 + 29.76 + 40.73) = 48.56 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
20	45	0.00	62.59	-6.30	-8.57	0.00	0.00	0.00	47.72
45	85	0.00	62.59	-6.30	-6.53	0.00	0.00	-20.00	29.76
85	90	0.00	62.59	-6.30	-15.56	0.00	0.00	0.00	40.73

Segment Leq : 48.56 dBA

Total Leq All Segments: 48.56 dBA

Results segment # 1: O-Train (night)

Source height = 0.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
0.50	90.00	36.86	36.86

RT/Custom (48.05 + 30.09 + 41.06) = 48.90 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
20	45	0.00	62.92	-6.30	-8.57	0.00	0.00	0.00	48.05
45	85	0.00	62.92	-6.30	-6.53	0.00	0.00	-20.00	30.09
85	90	0.00	62.92	-6.30	-15.56	0.00	0.00	0.00	41.06

Segment Leq : 48.90 dBA

Total Leq All Segments: 48.90 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 71.23
(NIGHT): 63.76

```
STAMSON 5.0        NORMAL REPORT        Date: 29-07-2019 07:13:37
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: terr_3rd.te          Time Period: Day/Night 16/8 hours
Description: Terrace - 3rd Floor

Road data, segment # 1: Queensway (day/night)
----------------------------------------------
Car traffic volume  : 185803/16157 veh/TimePeriod  *
Medium truck volume : 14780/1285  veh/TimePeriod  *
Heavy truck volume  : 10557/918   veh/TimePeriod  *
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT): 229500
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :  10.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 1: Queensway (day/night)
----------------------------------------------
Angle1   Angle2           : -90.00 deg   -45.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 281.00 / 281.00 m
Receiver height           :   1.50 / 90.00  m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -90.00 deg   Angle2 : -45.00 deg
Barrier height            :   1.10 m
Barrier receiver distance :   3.00 / 3.00   m
Source elevation          :   3.00 m
Receiver elevation        :   5.50 m
Barrier elevation         :   5.50 m

Road data, segment # 2: Gladstone (day/night)
----------------------------------------------
Car traffic volume  : 12144/1056  veh/TimePeriod  *
Medium truck volume :   966/84    veh/TimePeriod  *
Heavy truck volume  :   690/60    veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  15000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :  10.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: Gladstone (day/night)
----------------------------------------------
Angle1   Angle2           : -90.00 deg   -45.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 118.00 / 118.00 m
Receiver height           :   1.50 / 90.00  m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -90.00 deg   Angle2 : -45.00 deg
Barrier height            :   1.10 m
Barrier receiver distance :   3.00 / 3.00   m
Source elevation          :   0.00 m
Receiver elevation        :   5.50 m
Barrier elevation         :   5.50 m

Results segment # 1: Queensway (day)
-------------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
-------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        1.50 !        1.47 !         6.97

ROAD (0.00 + 56.18 + 0.00) = 56.18 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90    -45   0.59  86.35   0.00 -20.29  -8.79   0.00   0.00  -4.51  52.77*
   -90    -45   0.66  86.35   0.00 -21.13  -9.05   0.00   0.00   0.00  56.18
-------------------------------------------------------------------------------

 * Bright Zone !

Segment Leq : 56.18 dBA


Results segment # 2: Gladstone (day)
-------------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
-------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        1.50 !        1.36 !         6.86

ROAD (0.00 + 42.77 + 0.00) = 42.77 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90    -45   0.59  66.69   0.00 -14.28  -8.79   0.00   0.00  -4.77  38.85*
   -90    -45   0.66  66.69   0.00 -14.87  -9.05   0.00   0.00   0.00  42.77
-------------------------------------------------------------------------------

 * Bright Zone !

Segment Leq : 42.77 dBA

Total Leq All Segments: 56.37 dBA
```

RT/Custom data, segment # 1: O-Train (day/night)
---

1 - 6-car Subway:
Traffic volume : 252/136 veh/TimePeriod
Speed : 60 km/h

Data for Segment # 1: O-Train (day/night)

Angle1 Angle2 : -45.00 deg 20.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 44.00 / 44.00 m
Receiver height : 1.50 / 90.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -45.00 deg Angle2 : 20.00 deg
Barrier height : 1.10 m
Barrier receiver distance : 3.00 / 3.00 m
Source elevation : -5.00 m
Receiver elevation : 5.50 m
Barrier elevation : 5.50 m

Results segment # 1: O-Train (day)

Source height = 0.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
0.50	1.50	0.72	6.22

RT/Custom (0.00 + 47.40 + 0.00) = 47.40 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	20	0.00	62.59	-4.67	-4.42	0.00	0.00	-6.10	47.40

Segment Leq : 47.40 dBA

Total Leq All Segments: 47.40 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 56.89

STAMSON 5.0 NORMAL REPORT Date: 29-07-2019 07:14:00
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: terr_6th.te Time Period: Day/Night 16/8 hours
Description: Terrace - 6th Floor

Road data, segment # 1: Queensway (day/night)

Car traffic volume : 185803/16157 veh/TimePeriod *
Medium truck volume : 14780/1285 veh/TimePeriod *
Heavy truck volume : 10557/918 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 229500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

Data for Segment # 1: Queensway (day/night)

Angle1 Angle2 : -90.00 deg -45.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface)
Receiver source distance : 196.00 / 196.00 m
Receiver height : 1.50 / 90.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg Angle2 : -45.00 deg
Barrier height : 1.10 m
Barrier receiver distance : 18.00 / 18.00 m
Source elevation : 3.00 m
Receiver elevation : 18.00 m
Barrier elevation : 18.00 m

Road data, segment # 2: Queensway (day/night)

Car traffic volume : 185803/16157 veh/TimePeriod *
Medium truck volume : 14780/1285 veh/TimePeriod *
Heavy truck volume : 10557/918 veh/TimePeriod *
Posted speed limit : 100 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 229500
Percentage of Annual Growth : 0.00
Number of Years of Growth : 10.00
Medium Truck % of Total Volume : 7.00
Heavy Truck % of Total Volume : 5.00
Day (16 hrs) % of Total Volume : 92.00

```
Data for Segment # 2: Queensway (day/night)
--------------------------------------------
Angle1   Angle2           : -45.00 deg   55.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 196.00 / 196.00 m
Receiver height           :   1.50 / 90.00  m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -45.00 deg   Angle2 : 55.00 deg
Barrier height            : 100.00 m
Barrier receiver distance :  18.00 / 18.00  m
Source elevation          :   3.00 m
Receiver elevation        :  18.00 m
Barrier elevation         :  18.00 m

Road data, segment # 3: Queensway (day/night)
--------------------------------------------
Car traffic volume  : 185803/16157 veh/TimePeriod  *
Medium truck volume : 14780/1285  veh/TimePeriod  *
Heavy truck volume  : 10557/918   veh/TimePeriod  *
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT): 229500
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :  10.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 3: Queensway (day/night)
--------------------------------------------
Angle1   Angle2           :  55.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 196.00 / 196.00 m
Receiver height           :   1.50 / 90.00  m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            :  55.00 deg   Angle2 : 90.00 deg
Barrier height            :   1.10 m
Barrier receiver distance :  18.00 / 18.00  m
Source elevation          :   3.00 m
Receiver elevation        :  18.00 m
Barrier elevation         :  18.00 m

Road data, segment # 4: Gladstone (day/night)
--------------------------------------------
Car traffic volume  : 12144/1056  veh/TimePeriod  *
Medium truck volume :   966/84    veh/TimePeriod  *
Heavy truck volume  :   690/60    veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  15000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :  10.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 4: Gladstone (day/night)
--------------------------------------------
Angle1   Angle2           : -90.00 deg   -45.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  32.00 / 32.00  m
Receiver height           :   1.50 / 90.00  m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -90.00 deg   Angle2 : -45.00 deg
Barrier height            :   1.10 m
Barrier receiver distance :  18.00 / 18.00  m
Source elevation          :   0.00 m
Receiver elevation        :  18.00 m
Barrier elevation         :  18.00 m

Road data, segment # 5: Gladstone (day/night)
--------------------------------------------
Car traffic volume  : 12144/1056  veh/TimePeriod  *
Medium truck volume :   966/84    veh/TimePeriod  *
Heavy truck volume  :   690/60    veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  15000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :  10.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 5: Gladstone (day/night)
--------------------------------------------
Angle1   Angle2           : -45.00 deg   55.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  :  32.00 / 32.00  m
Receiver height           :   1.50 / 90.00  m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -45.00 deg   Angle2 : 55.00 deg
Barrier height            : 100.00 m
Barrier receiver distance :  18.00 / 18.00  m
Source elevation          :   0.00 m
Receiver elevation        :  18.00 m
Barrier elevation         :  18.00 m
```

Road data, segment # 6: Gladstone (day/night)

Car traffic volume	: 12144/1056	veh/TimePeriod *
Medium truck volume	: 966/84	veh/TimePeriod *
Heavy truck volume	: 690/60	veh/TimePeriod *
Posted speed limit	: 40 km/h	
Road gradient	: 0 %	
Road pavement	: 1 (Typical asphalt or concrete)	

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT)	: 15000
Percentage of Annual Growth	: 0.00
Number of Years of Growth	: 10.00
Medium Truck % of Total Volume	: 7.00
Heavy Truck % of Total Volume	: 5.00
Day (16 hrs) % of Total Volume	: 92.00

Data for Segment # 6: Gladstone (day/night)

Angle1 Angle2	: 55.00 deg	90.00 deg
Wood depth	: 0	(No woods.)
No of house rows	: 0 / 0	
Surface	: 1	(Absorptive ground surface)
Receiver source distance	: 32.00 / 32.00	m
Receiver height	: 1.50 / 90.00	m
Topography	: 2	(Flat/gentle slope; with barrier)
Barrier angle1	: 55.00 deg	Angle2 : 90.00 deg
Barrier height	: 1.10 m	
Barrier receiver distance	: 18.00 / 18.00	m
Source elevation	: 0.00 m	
Receiver elevation	: 18.00 m	
Barrier elevation	: 18.00 m	

Results segment # 1: Queensway (day)

Source height = 1.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.50	1.50	0.12	18.12

ROAD (0.00 + 54.24 + 0.00) = 54.24 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-45	0.59	86.35	0.00	-17.79	-8.79	0.00	0.00	-5.53	54.24

Segment Leq : 54.24 dBA

Results segment # 2: Queensway (day)

Source height = 1.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.50	1.50	0.12	18.12

ROAD (0.00 + 52.64 + 0.00) = 52.64 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	55	0.00	86.35	0.00	-11.16	-2.55	0.00	0.00	-20.00	52.64

Segment Leq : 52.64 dBA

Results segment # 3: Queensway (day)

Source height = 1.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.50	1.50	0.12	18.12

ROAD (0.00 + 52.65 + 0.00) = 52.65 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
55	90	0.59	86.35	0.00	-17.79	-10.48	0.00	0.00	-5.43	52.65

Segment Leq : 52.65 dBA

Results segment # 4: Gladstone (day)

Source height = 1.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.50	1.50	-8.63	9.37

ROAD (0.00 + 36.93 + 0.00) = 36.93 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-45	0.59	66.69	0.00	-5.25	-8.79	0.00	0.00	-15.72	36.93

Segment Leq : 36.93 dBA

Results segment # 5: Gladstone (day)

Source height = 1.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.50	1.50	-8.63	9.37

ROAD (0.00 + 40.84 + 0.00) = 40.84 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-45	55	0.00	66.69	0.00	-3.29	-2.55	0.00	0.00	-20.00	40.84

Segment Leq : 40.84 dBA

Results segment # 6: Gladstone (day)

Source height = 1.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.50	1.50	-8.63	9.37

ROAD (0.00 + 35.95 + 0.00) = 35.95 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
55	90	0.59	66.69	0.00	-5.25	-10.48	0.00	0.00	-15.01	35.95

Segment Leq : 35.95 dBA

Total Leq All Segments: 58.16 dBA

RT/Custom data, segment # 1: O-Train (day/night)

1 - 6-car Subway:
Traffic volume : 252/136 veh/TimePeriod
Speed : 60 km/h

Data for Segment # 1: O-Train (day/night)

Angle1 Angle2 : -90.00 deg 20.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 85.00 / 85.00 m
Receiver height : 1.50 / 90.00 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -90.00 deg Angle2 : 20.00 deg
Barrier height : 1.10 m
Barrier receiver distance : 3.00 / 3.00 m
Source elevation : -5.00 m
Receiver elevation : 18.00 m
Barrier elevation : 18.00 m

Results segment # 1: O-Train (day)

Source height = 0.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
0.50	1.50	0.65	18.65

RT/Custom (0.00 + 46.88 + 0.00) = 46.88 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	20	0.00	62.59	-7.53	-2.14	0.00	0.00	-6.04	46.88

Segment Leq : 46.88 dBA

Total Leq All Segments: 46.88 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 58.47

```
STAMSON 5.0        NORMAL REPORT        Date: 29-07-2019 07:14:12
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: terr_grd.te          Time Period: Day/Night 16/8 hours
Description: Terrace - Ground Floor

Road data, segment # 1: Queensway (day/night)
----------------------------------------------
Car traffic volume  : 185803/16157 veh/TimePeriod  *
Medium truck volume : 14780/1285  veh/TimePeriod  *
Heavy truck volume  : 10557/918   veh/TimePeriod  *
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT): 229500
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :  10.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 1: Queensway (day/night)
----------------------------------------------
Angle1   Angle2           : -90.00 deg   -45.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 281.00 / 281.00 m
Receiver height           :   1.50 / 90.00  m
Topography                :      1       (Flat/gentle slope; no barrier)

Road data, segment # 2: Gladstone (day/night)
----------------------------------------------
Car traffic volume  : 12144/1056  veh/TimePeriod  *
Medium truck volume :   966/84    veh/TimePeriod  *
Heavy truck volume  :   690/60    veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  15000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :  10.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: Gladstone (day/night)
----------------------------------------------
Angle1   Angle2           : -90.00 deg   -45.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 118.00 / 118.00 m
Receiver height           :   1.50 / 90.00  m
Topography                :      1       (Flat/gentle slope; no barrier)

Results segment # 1: Queensway (day)
----------------------------------------------

Source height = 1.50 m

ROAD (0.00 + 56.18 + 0.00) = 56.18 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90    -45   0.66  86.35   0.00 -21.13  -9.05   0.00   0.00   0.00  56.18
-------------------------------------------------------------------------------

Segment Leq : 56.18 dBA


Results segment # 2: Gladstone (day)
----------------------------------------------

Source height = 1.50 m

ROAD (0.00 + 42.77 + 0.00) = 42.77 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90    -45   0.66  66.69   0.00 -14.87  -9.05   0.00   0.00   0.00  42.77
-------------------------------------------------------------------------------

Segment Leq : 42.77 dBA

Total Leq All Segments: 56.37 dBA


Results segment # 1: Queensway (night)
----------------------------------------------

Source height = 1.50 m

ROAD (0.00 + 60.01 + 0.00) = 60.01 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90    -45   0.00  78.75   0.00 -12.73  -6.02   0.00   0.00   0.00  60.01
-------------------------------------------------------------------------------

Segment Leq : 60.01 dBA


Results segment # 2: Gladstone (night)
----------------------------------------------

Source height = 1.50 m

ROAD (0.00 + 44.11 + 0.00) = 44.11 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90    -45   0.00  59.09   0.00  -8.96  -6.02   0.00   0.00   0.00  44.11
-------------------------------------------------------------------------------

Segment Leq : 44.11 dBA

Total Leq All Segments: 60.12 dBA
```

RT/Custom data, segment # 1: O-Train (day/night)
---

1 - 6-car Subway:
Traffic volume : 252/136 veh/TimePeriod
Speed : 60 km/h

Data for Segment # 1: O-Train (day/night)

Angle1 Angle2	: -90.00 deg	20.00 deg
Wood depth	: 0	(No woods.)
No of house rows	: 0 / 0	
Surface	: 2	(Reflective ground surface)
Receiver source distance	: 32.00 / 32.00	m
Receiver height	: 1.50 / 90.00	m
Topography	: 1	(Flat/gentle slope; no barrier)

Results segment # 1: O-Train (day)

Source height = 0.50 m

RT/Custom (0.00 + 57.16 + 0.00) = 57.16 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	20	0.00	62.59	-3.29	-2.14	0.00	0.00	0.00	57.16

Segment Leq : 57.16 dBA

Total Leq All Segments: 57.16 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 59.79

STAMSON 5.0 NORMAL REPORT Date: 29-07-2019 07:35:14
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: terr_5th.te Time Period: Day/Night 16/8 hours
Description: Terrace - 5th Floor

Road data, segment # 1: Queensway (day/night)

Car traffic volume	: 185803/16157	veh/TimePeriod *
Medium truck volume	: 14780/1285	veh/TimePeriod *
Heavy truck volume	: 10557/918	veh/TimePeriod *
Posted speed limit	: 100 km/h	
Road gradient	: 0 %	
Road pavement	: 1 (Typical asphalt or concrete)	

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT)	: 229500
Percentage of Annual Growth	: 0.00
Number of Years of Growth	: 10.00
Medium Truck % of Total Volume	: 7.00
Heavy Truck % of Total Volume	: 5.00
Day (16 hrs) % of Total Volume	: 92.00

Data for Segment # 1: Queensway (day/night)

Angle1 Angle2	: -90.00 deg	-30.00 deg
Wood depth	: 0	(No woods.)
No of house rows	: 0 / 0	
Surface	: 1	(Absorptive ground surface)
Receiver source distance	: 317.00 / 317.00	m
Receiver height	: 1.50 / 90.00	m
Topography	: 4	(Elevated; with barrier)
Barrier angle1	: -90.00 deg	Angle2 : -30.00 deg
Barrier height	: 1.10	m
Elevation	: 15.00	m
Barrier receiver distance	: 7.50 / 7.50	m
Source elevation	: 3.00	m
Receiver elevation	: 15.00	m
Barrier elevation	: 15.00	m

Road data, segment # 2: Gladstone (day/night)

Car traffic volume	: 12144/1056	veh/TimePeriod *
Medium truck volume	: 966/84	veh/TimePeriod *
Heavy truck volume	: 690/60	veh/TimePeriod *
Posted speed limit	: 40 km/h	
Road gradient	: 0 %	
Road pavement	: 1 (Typical asphalt or concrete)	

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT)	: 15000
Percentage of Annual Growth	: 0.00
Number of Years of Growth	: 10.00
Medium Truck % of Total Volume	: 7.00
Heavy Truck % of Total Volume	: 5.00
Day (16 hrs) % of Total Volume	: 92.00

Data for Segment # 2: Gladstone (day/night)

Angle1 Angle2	:	-90.00 deg	-30.00 deg
Wood depth	:	0	(No woods.)
No of house rows	:	0 / 0	
Surface	:	1	(Absorptive ground surface)
Receiver source distance	:	152.00 / 152.00 m	
Receiver height	:	1.50 / 90.00 m	
Topography	:	4	(Elevated; with barrier)
Barrier angle1	:	-90.00 deg	Angle2 : -30.00 deg
Barrier height	:	1.10 m	
Elevation	:	15.00 m	
Barrier receiver distance	:	7.50 / 7.50 m	
Source elevation	:	3.00 m	
Receiver elevation	:	15.00 m	
Barrier elevation	:	15.00 m	

Results segment # 1: Queensway (day)

Source height = 1.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.50	1.50	1.22	16.22

ROAD (0.00 + 64.70 + 0.00) = 64.70 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-30	0.14	86.35	0.00	-15.16	-5.37	0.00	0.00	-4.98	60.85*
-90	-30	0.21	86.35	0.00	-16.03	-5.62	0.00	0.00	0.00	64.70

* Bright Zone !

Segment Leq : 64.70 dBA

Results segment # 2: Gladstone (day)

Source height = 1.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
1.50	1.50	0.91	15.91

ROAD (0.00 + 44.75 + 0.00) = 44.75 dBA

Angle1	Angle2	Alpha	RefLeq	P.Adj	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	-30	0.14	66.69	0.00	-11.51	-5.37	0.00	0.00	-5.06	44.75

Segment Leq : 44.75 dBA

Total Leq All Segments: 64.74 dBA

RT/Custom data, segment # 1: O-Train (day/night)
---

1 - 6-car Subway:

Traffic volume	:	252/136 veh/TimePeriod
Speed	:	60 km/h

Data for Segment # 1: O-Train (day/night)

Angle1 Angle2	:	-90.00 deg	90.00 deg
Wood depth	:	0	(No woods.)
No of house rows	:	0 / 0	
Surface	:	2	(Reflective ground surface)
Receiver source distance	:	28.50 / 28.50 m	
Receiver height	:	1.50 / 90.00 m	
Topography	:	2	(Flat/gentle slope; with barrier)
Barrier angle1	:	-90.00 deg	Angle2 : 90.00 deg
Barrier height	:	1.10 m	
Barrier receiver distance	:	7.50 / 3.00 m	
Source elevation	:	-5.00 m	
Receiver elevation	:	15.00 m	
Barrier elevation	:	15.00 m	

Results segment # 1: O-Train (day)

Source height = 0.50 m

Barrier height for grazing incidence

Source Height (m)	Receiver Height (m)	Barrier Height (m)	Elevation of Barrier Top (m)
0.50	1.50	-4.03	10.97

RT/Custom (0.00 + 44.75 + 0.00) = 44.75 dBA

Angle1	Angle2	Alpha	RefLeq	D.Adj	F.Adj	W.Adj	H.Adj	B.Adj	SubLeq
-90	90	0.00	62.59	-2.79	0.00	0.00	0.00	-15.05	44.75

Segment Leq : 44.75 dBA

Total Leq All Segments: 44.75 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 64.79

```
STAMSON 5.0        NORMAL REPORT        Date: 29-07-2019 07:35:52
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: terr_5th.te          Time Period: Day/Night 16/8 hours
Description: Terrace - 5th Floor - 1.25m high parapet + Dbl Bar

Road data, segment # 1: Queensway (day/night)
----------------------------------------------
Car traffic volume  : 185803/16157 veh/TimePeriod  *
Medium truck volume : 14780/1285  veh/TimePeriod  *
Heavy truck volume  : 10557/918   veh/TimePeriod  *
Posted speed limit  :   100 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT): 229500
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :  10.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 1: Queensway (day/night)
----------------------------------------------
Angle1   Angle2           : -90.00 deg   -30.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 317.00 / 317.00 m
Receiver height           :   1.50 / 90.00  m
Topography                :      4       (Elevated; with barrier)
Barrier angle1            : -90.00 deg   Angle2 : -30.00 deg
Barrier height            :   1.25 m
Elevation                 :  15.00 m
Barrier receiver distance :   7.50 / 7.50   m
Source elevation          :   3.00 m
Receiver elevation        :  15.00 m
Barrier elevation         :  15.00 m

Road data, segment # 2: Gladstone (day/night)
----------------------------------------------
Car traffic volume  : 12144/1056  veh/TimePeriod  *
Medium truck volume :   966/84    veh/TimePeriod  *
Heavy truck volume  :   690/60    veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  15000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :  10.00
    Medium Truck % of Total Volume     :   7.00
    Heavy Truck  % of Total Volume     :   5.00
    Day (16 hrs) % of Total Volume     :  92.00

Data for Segment # 2: Gladstone (day/night)
----------------------------------------------
Angle1   Angle2           : -90.00 deg   -30.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      1       (Absorptive ground surface)
Receiver source distance  : 152.00 / 152.00 m
Receiver height           :   1.50 / 90.00  m
Topography                :      4       (Elevated; with barrier)
Barrier angle1            : -90.00 deg   Angle2 : -30.00 deg
Barrier height            :   1.25 m
Elevation                 :  15.00 m
Barrier receiver distance :   7.50 / 7.50   m
Source elevation          :   3.00 m
Receiver elevation        :  15.00 m
Barrier elevation         :  15.00 m

Results segment # 1: Queensway (day)
------------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        1.50 !        1.22 !        16.22

ROAD (0.00 + 60.98 + 0.00) = 60.98 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90    -30   0.14  86.35   0.00 -15.04  -5.33   0.00   0.00  -5.00  60.98
-------------------------------------------------------------------------------

Segment Leq : 60.98 dBA


Results segment # 2: Gladstone (day)
------------------------------------

Source height = 1.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       1.50 !        1.50 !        0.91 !        15.91

ROAD (0.00 + 44.73 + 0.00) = 44.73 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90    -30   0.14  66.69   0.00 -11.42  -5.33   0.00   0.00  -5.20  44.73
-------------------------------------------------------------------------------

Segment Leq : 44.73 dBA

Total Leq All Segments: 61.08 dBA
```

```
RT/Custom data, segment # 1: O-Train (day/night)
-------------------------------------------------
1 - 6-car Subway:
Traffic volume    :   252/136   veh/TimePeriod
Speed             :    60 km/h

Data for Segment # 1: O-Train (day/night)
-----------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  28.50 / 28.50  m
Receiver height           :   1.50 / 90.00  m
Topography                :      2       (Flat/gentle slope; with barrier)
Barrier angle1            : -90.00 deg   Angle2 : 90.00 deg
Barrier height            :   1.10 m
Barrier receiver distance :   7.50 / 3.00   m
Source elevation          :  -5.00 m
Receiver elevation        :  15.00 m
Barrier elevation         :  15.00 m

Results segment # 1: O-Train (day)
----------------------------------

Source height = 0.50 m

Barrier height for grazing incidence
------------------------------------
Source      ! Receiver    ! Barrier     ! Elevation of
Height  (m) ! Height  (m) ! Height  (m) ! Barrier Top  (m)
------------+-------------+-------------+--------------
       0.50 !        1.50 !       -4.03 !        10.97

RT/Custom (0.00 + 44.75 + 0.00) = 44.75 dBA

Angle1 Angle2  Alpha RefLeq  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------
   -90     90   0.00  62.59  -2.79   0.00   0.00   0.00 -15.05  44.75
-------------------------------------------------------------------

Segment Leq : 44.75 dBA

Total Leq All Segments: 44.75 dBA

TOTAL Leq FROM ALL SOURCES (DAY):  61.18
Double barrier effect (Queensway): -2.27
Final Leq:                         58.91
```

Receiver
Name: TWR3-SW - R3B
ID: R3B
X: 18443947.80 m
Y: 5028144.57 m
Z: 7.00 m

Point Source, ISO 9613, Name: "Idling Truck", ID: "TRUCK"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
93	18443928.96	5028138.05	2.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	37.3	0.0	-3.0	0.0	0.0	0.0	0.0	0.0	55.7

Point Source, ISO 9613, Name: "Condenser2", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
94	18443898.64	5028127.81	8.00	0	DEN	500	95.0	0.0	0.0	0.0	0.0	45.3	0.1	-2.8	0.0	0.0	0.0	0.0	0.0	52.4

Point Source, ISO 9613, Name: "Condenser1", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
95	18443897.37	5028131.47	8.00	0	DEN	500	95.0	0.0	0.0	0.0	0.0	45.3	0.1	-2.8	0.0	0.0	0.0	0.0	0.0	52.3

Point Source, ISO 9613, Name: "Condenser4", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
96	18443890.90	5028110.75	8.50	0	DEN	500	97.0	0.0	0.0	0.0	0.0	47.4	0.1	-2.8	0.0	0.0	0.0	0.0	0.0	52.3

Point Source, ISO 9613, Name: "Condenser3", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
97	18443903.42	5028131.18	8.00	0	DEN	500	92.0	0.0	0.0	0.0	0.0	44.3	0.1	-2.7	0.0	0.0	0.0	0.0	0.0	50.3

Point Source, ISO 9613, Name: "Condenser Exh", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
98	18443902.16	5028115.54	8.50	0	DEN	500	90.0	0.0	0.0	0.0	0.0	45.7	0.1	-2.8	0.0	0.0	0.0	0.0	0.0	47.0

Point Source, ISO 9613, Name: "ExhFan1", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
99	18443922.06	5028093.64	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	46.1	0.1	-2.9	0.0	0.0	0.0	0.0	0.0	46.6

Point Source, ISO 9613, Name: "ExhFan2", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
100	18443911.42	5028089.38	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	47.4	0.1	-3.0	0.0	0.0	0.0	0.0	0.0	45.5

Point Source, ISO 9613, Name: "ExhFan3", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
101	18443932.44	5028075.13	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	48.0	0.1	-2.6	0.0	0.0	0.0	0.0	0.0	44.4

Point Source, ISO 9613, Name: "Stack", ID: "STACK"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
102	18443895.63	5028017.53	25.50	0	DEN	500	95.0	0.0	0.0	0.0	0.0	53.8	0.3	-2.8	0.0	0.0	0.0	0.0	0.0	43.7

Point Source, ISO 9613, Name: "HVAC", ID: "HVAC"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
103	18443931.31	5028057.67	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	49.9	0.2	-2.6	0.0	0.0	0.0	0.0	0.0	42.5

SOUND LEVELS (DAY/NIGHT) - MECHANICAL (HVAC/TRUCKS)

Point Source, ISO 9613, Name: "ExhFan4", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
104	18443931.87	5028102.16	5.70	0	DEN	500	83.0	0.0	0.0	0.0	0.0	44.1	0.1	-2.4	0.0	0.0	0.0	0.0	0.0	41.2

Point Source, ISO 9613, Name: "HVAC", ID: "HVAC"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
105	18443919.76	5028022.18	16.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	53.0	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	39.5

Receiver
Name: TWR2-SW-R2B
ID: R2B
X: 18443990.30 m
Y: 5028107.98 m
Z: 7.00 m

Point Source, ISO 9613, Name: "Condenser4", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
44	18443890.90	5028110.75	8.50	0	DEN	500	97.0	0.0	0.0	0.0	0.0	51.0	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	48.7

Point Source, ISO 9613, Name: "Condenser2", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
46	18443898.64	5028127.81	8.00	0	DEN	500	95.0	0.0	0.0	0.0	0.0	50.4	0.2	-3.0	0.0	0.0	0.0	0.0	0.0	47.4

Point Source, ISO 9613, Name: "Condenser1", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
50	18443897.37	5028131.47	8.00	0	DEN	500	95.0	0.0	0.0	0.0	0.0	50.6	0.2	-3.0	0.0	0.0	0.0	0.0	0.0	47.2

Point Source, ISO 9613, Name: "ExhFan3", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
52	18443932.44	5028075.13	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	47.5	0.1	-2.7	0.0	0.0	0.0	0.0	0.0	45.1

Point Source, ISO 9613, Name: "Idling Truck", ID: "TRUCK"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
80	18443928.96	5028138.05	2.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	47.7	0.1	-3.0	0.0	0.0	0.0	0.0	0.0	45.2

Point Source, ISO 9613, Name: "ExhFan1", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
82	18443922.06	5028093.64	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	47.9	0.1	-2.7	0.0	0.0	0.0	0.0	0.0	44.7

Point Source, ISO 9613, Name: "Condenser3", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
91	18443903.42	5028131.18	8.00	0	DEN	500	92.0	0.0	0.0	0.0	0.0	50.1	0.2	-3.0	0.0	0.0	0.0	0.0	0.0	44.7

Point Source, ISO 9613, Name: "Stack", ID: "STACK"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
151	18443895.63	5028017.53	25.50	0	DEN	500	95.0	0.0	0.0	0.0	0.0	53.4	0.3	-2.9	0.0	0.0	0.0	0.0	0.0	44.2

Point Source, ISO 9613, Name: "HVAC", ID: "HVAC"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
152	18443931.31	5028057.67	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	48.8	0.1	-2.8	0.0	0.0	0.0	0.0	0.0	43.8

Point Source, ISO 9613, Name: "ExhFan2", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
153	18443911.42	5028089.38	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	49.2	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	43.5

Point Source, ISO 9613, Name: "Condenser Exh", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
154	18443902.16	5028115.54	8.50	0	DEN	500	90.0	0.0	0.0	0.0	0.0	49.9	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	42.7

SOUND LEVELS (DAY/NIGHT) - MECHANICAL (HVAC/TRUCKS)

Point Source, ISO 9613, Name: "HVAC", ID: "HVAC"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
155	18443919.76	5028022.18	16.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	51.9	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	40.7

Point Source, ISO 9613, Name: "ExhFan4", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
156	18443931.87	5028102.16	5.70	0	DEN	500	83.0	0.0	0.0	0.0	0.0	46.4	0.1	-2.7	0.0	0.0	0.0	0.0	0.0	39.2

Receiver
Name: TWR1-NW-1A
ID: R1A
X: 18444004.46 m
Y: 5028064.20 m
Z: 24.00 m

Point Source, ISO 9613, Name: "Condenser4", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
1	18443890.90	5028110.75	8.50	0	DEN	500	97.0	0.0	0.0	0.0	0.0	52.8	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	46.7

Point Source, ISO 9613, Name: "Stack", ID: "STACK"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
5	18443895.63	5028017.53	25.50	0	DEN	500	95.0	0.0	0.0	0.0	0.0	52.5	0.2	-3.0	0.0	0.0	0.0	0.0	0.0	45.3

Point Source, ISO 9613, Name: "Condenser2", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
8	18443898.64	5028127.81	8.00	0	DEN	500	95.0	0.0	0.0	0.0	0.0	52.9	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	44.6

Point Source, ISO 9613, Name: "Condenser1", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
10	18443897.37	5028131.47	8.00	0	DEN	500	95.0	0.0	0.0	0.0	0.0	53.1	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	44.4

Point Source, ISO 9613, Name: "ExhFan3", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
12	18443932.44	5028075.13	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	48.5	0.1	-2.7	0.0	0.0	0.0	0.0	0.0	44.1

Point Source, ISO 9613, Name: "HVAC", ID: "HVAC"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
14	18443931.31	5028057.67	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	48.5	0.1	-2.8	0.0	0.0	0.0	0.0	0.0	44.1

Point Source, ISO 9613, Name: "ExhFan1", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
16	18443922.06	5028093.64	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	50.0	0.2	-2.7	0.0	0.0	0.0	0.0	0.0	42.6

Point Source, ISO 9613, Name: "HVAC", ID: "HVAC"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
18	18443919.76	5028022.18	16.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	50.5	0.2	-3.0	0.0	0.0	0.0	0.0	0.0	42.3

Point Source, ISO 9613, Name: "Condenser3", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
20	18443903.42	5028131.18	8.00	0	DEN	500	92.0	0.0	0.0	0.0	0.0	52.7	0.2	-2.7	0.0	0.0	0.0	0.0	0.0	41.8

Point Source, ISO 9613, Name: "ExhFan2", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
22	18443911.42	5028089.38	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	50.8	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	41.8

Point Source, ISO 9613, Name: "Idling Truck", ID: "TRUCK"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
24	18443928.96	5028138.05	2.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	51.7	0.2	-3.0	0.0	0.0	0.0	0.0	0.0	41.1

SOUND LEVELS (DAY/NIGHT) - MECHANICAL (HVAC/TRUCKS)

Point Source, ISO 9613, Name: "Condenser Exh", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
26	18443902.16	5028115.54	8.50	0	DEN	500	90.0	0.0	0.0	0.0	0.0	52.3	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	40.3

Point Source, ISO 9613, Name: "ExhFan4", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
28	18443931.87	5028102.16	5.70	0	DEN	500	83.0	0.0	0.0	0.0	0.0	49.5	0.2	-2.7	0.0	0.0	0.0	0.0	0.0	36.0

Receiver
Name: TWR3-NW - R3A
ID: R3A
X: 18443946.88 m
Y: 5028152.35 m
Z: 7.00 m

Point Source, ISO 9613, Name: "Idling Truck", ID: "TRUCK"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
90	18443928.96	5028138.05	2.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	38.4	0.0	-3.0	0.0	0.0	5.8	0.0	0.0	48.7

Point Source, ISO 9613, Name: "Condenser1", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
139	18443897.37	5028131.47	8.00	0	DEN	500	95.0	0.0	0.0	0.0	0.0	45.6	0.1	-2.8	0.0	0.0	0.0	0.0	0.0	52.1

Point Source, ISO 9613, Name: "Condenser2", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
140	18443898.64	5028127.81	8.00	0	DEN	500	95.0	0.0	0.0	0.0	0.0	45.7	0.1	-2.8	0.0	0.0	4.7	0.0	0.0	47.3

Point Source, ISO 9613, Name: "Condenser4", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
141	18443890.90	5028110.75	8.50	0	DEN	500	97.0	0.0	0.0	0.0	0.0	47.9	0.1	-2.8	0.0	0.0	5.5	0.0	0.0	46.3

Point Source, ISO 9613, Name: "Condenser3", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
142	18443903.42	5028131.18	8.00	0	DEN	500	92.0	0.0	0.0	0.0	0.0	44.7	0.1	-2.8	0.0	0.0	4.6	0.0	0.0	45.3

Point Source, ISO 9613, Name: "Condenser Exh", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
143	18443902.16	5028115.54	8.50	0	DEN	500	90.0	0.0	0.0	0.0	0.0	46.3	0.1	-2.8	0.0	0.0	5.9	0.0	0.0	40.5

Point Source, ISO 9613, Name: "ExhFan1", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
144	18443922.06	5028093.64	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	47.1	0.1	-3.0	0.0	0.0	10.3	0.0	0.0	35.5

Point Source, ISO 9613, Name: "ExhFan2", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
145	18443911.42	5028089.38	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	48.2	0.1	-3.0	0.0	0.0	9.4	0.0	0.0	35.3

Point Source, ISO 9613, Name: "ExhFan3", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
146	18443932.44	5028075.13	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	48.9	0.2	-2.6	0.0	0.0	11.9	0.0	0.0	31.7

Point Source, ISO 9613, Name: "Stack", ID: "STACK"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
147	18443895.63	5028017.53	25.50	0	DEN	500	95.0	0.0	0.0	0.0	0.0	54.3	0.3	-2.9	0.0	0.0	10.6	0.0	0.0	32.9

Point Source, ISO 9613, Name: "HVAC", ID: "HVAC"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
148	18443931.31	5028057.67	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	50.6	0.2	-2.7	0.0	0.0	12.0	0.0	0.0	29.8

SOUND LEVELS (DAY/NIGHT) - MECHANICAL (HVAC/TRUCKS)

Point Source, ISO 9613, Name: "ExhFan4", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
149	18443931.87	5028102.16	5.70	0	DEN	500	83.0	0.0	0.0	0.0	0.0	45.4	0.1	-2.5	0.0	0.0	11.2	0.0	0.0	28.9

Point Source, ISO 9613, Name: "HVAC", ID: "HVAC"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
150	18443919.76	5028022.18	16.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	53.5	0.3	-2.8	0.0	0.0	11.7	0.0	0.0	27.3

Receiver
Name: TWR2-NW - R2A
ID: R2A
X: 18443988.05 m
Y: 5028116.56 m
Z: 7.00 m

Point Source, ISO 9613, Name: "Condenser4", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
37	18443890.90	5028110.75	8.50	0	DEN	500	97.0	0.0	0.0	0.0	0.0	50.8	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	48.9

Point Source, ISO 9613, Name: "Condenser2", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
39	18443898.64	5028127.81	8.00	0	DEN	500	95.0	0.0	0.0	0.0	0.0	50.1	0.2	-3.0	0.0	0.0	0.0	0.0	0.0	47.7

Point Source, ISO 9613, Name: "Condenser1", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
41	18443897.37	5028131.47	8.00	0	DEN	500	95.0	0.0	0.0	0.0	0.0	50.3	0.2	-3.0	0.0	0.0	0.0	0.0	0.0	47.5

Point Source, ISO 9613, Name: "Idling Truck", ID: "TRUCK"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
43	18443928.96	5028138.05	2.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	47.0	0.1	-3.0	0.0	0.0	0.0	0.0	0.0	45.9

Point Source, ISO 9613, Name: "Condenser3", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
45	18443903.42	5028131.18	8.00	0	DEN	500	92.0	0.0	0.0	0.0	0.0	49.7	0.2	-2.9	0.0	0.0	0.0	0.0	0.0	45.1

Point Source, ISO 9613, Name: "ExhFan3", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
47	18443932.44	5028075.13	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	47.8	0.1	-2.7	0.0	0.0	5.5	0.0	0.0	39.3

Point Source, ISO 9613, Name: "ExhFan1", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
49	18443922.06	5028093.64	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	47.9	0.1	-2.8	0.0	0.0	0.0	0.0	0.0	44.7

Point Source, ISO 9613, Name: "Stack", ID: "STACK"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
53	18443895.63	5028017.53	25.50	0	DEN	500	95.0	0.0	0.0	0.0	0.0	53.7	0.3	-2.9	0.0	0.0	7.0	0.0	0.0	36.9

Point Source, ISO 9613, Name: "ExhFan2", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
55	18443911.42	5028089.38	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	49.2	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	43.4

Point Source, ISO 9613, Name: "HVAC", ID: "HVAC"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
57	18443931.31	5028057.67	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	49.3	0.2	-2.8	0.0	0.0	6.9	0.0	0.0	36.5

Point Source, ISO 9613, Name: "Condenser Exh", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
59	18443902.16	5028115.54	8.50	0	DEN	500	90.0	0.0	0.0	0.0	0.0	49.7	0.2	-3.0	0.0	0.0	0.0	0.0	0.0	43.2

SOUND LEVELS (DAY/NIGHT) - MECHANICAL (HVAC/TRUCKS)

Point Source, ISO 9613, Name: "HVAC", ID: "HVAC"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
61	18443919.76	5028022.18	16.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	52.4	0.2	-2.8	0.0	0.0	8.2	0.0	0.0	32.1

Point Source, ISO 9613, Name: "ExhFan4", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
63	18443931.87	5028102.16	5.70	0	DEN	500	83.0	0.0	0.0	0.0	0.0	46.3	0.1	-2.7	0.0	0.0	0.0	0.0	0.0	39.3

Receiver
Name: TWR3-SE - R3C
ID: R3C
X: 18443983.58 m
Y: 5028141.75 m
Z: 7.00 m

Point Source, ISO 9613, Name: "Condenser4", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
106	18443890.90	5028110.75	8.50	0	DEN	500	97.0	0.0	0.0	0.0	0.0	50.8	0.2	-3.0	0.0	0.0	10.3	0.0	0.0	38.7

Point Source, ISO 9613, Name: "Condenser2", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
107	18443898.64	5028127.81	8.00	0	DEN	500	95.0	0.0	0.0	0.0	0.0	49.7	0.2	-2.8	0.0	0.0	18.5	0.0	0.0	29.5

Point Source, ISO 9613, Name: "Condenser1", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
108	18443897.37	5028131.47	8.00	0	DEN	500	95.0	0.0	0.0	0.0	0.0	49.8	0.2	-2.9	0.0	0.0	19.5	0.0	0.0	28.4

Point Source, ISO 9613, Name: "Idling Truck", ID: "TRUCK"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
109	18443928.96	5028138.05	2.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	45.8	0.1	-3.0	0.0	0.0	21.2	0.0	0.0	25.9

Point Source, ISO 9613, Name: "Condenser3", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
110	18443903.42	5028131.18	8.00	0	DEN	500	92.0	0.0	0.0	0.0	0.0	49.2	0.2	-2.8	0.0	0.0	19.4	0.0	0.0	26.2

Point Source, ISO 9613, Name: "ExhFan1", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
111	18443922.06	5028093.64	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	48.9	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	43.8

Point Source, ISO 9613, Name: "ExhFan3", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
112	18443932.44	5028075.13	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	49.5	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	43.1

Point Source, ISO 9613, Name: "Condenser Exh", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
113	18443902.16	5028115.54	8.50	0	DEN	500	90.0	0.0	0.0	0.0	0.0	49.6	0.2	-3.0	0.0	0.0	11.4	0.0	0.0	31.8

Point Source, ISO 9613, Name: "Stack", ID: "STACK"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
114	18443895.63	5028017.53	25.50	0	DEN	500	95.0	0.0	0.0	0.0	0.0	54.7	0.3	-2.9	0.0	0.0	0.0	0.0	0.0	42.9

Point Source, ISO 9613, Name: "ExhFan2", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
115	18443911.42	5028089.38	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	50.0	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	42.6

Point Source, ISO 9613, Name: "HVAC", ID: "HVAC"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
116	18443931.31	5028057.67	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	50.9	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	41.7

SOUND LEVELS (DAY/NIGHT) - MECHANICAL (HVAC/TRUCKS)

Point Source, ISO 9613, Name: "HVAC", ID: "HVAC"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
117	18443919.76	5028022.18	16.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	53.7	0.3	-2.8	0.0	0.0	0.0	0.0	0.0	38.9

Point Source, ISO 9613, Name: "ExhFan4", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
118	18443931.87	5028102.16	5.70	0	DEN	500	83.0	0.0	0.0	0.0	0.0	47.3	0.1	-2.7	0.0	0.0	0.0	0.0	0.0	38.3

Receiver
Name: TWR3-NE - R3D
ID: R3D
X: 18443973.58 m
Y: 5028163.58 m
Z: 7.00 m

Point Source, ISO 9613, Name: "Condenser4", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
119	18443890.90	5028110.75	8.50	0	DEN	500	97.0	0.0	0.0	0.0	0.0	50.8	0.2	-2.9	0.0	0.0	12.9	0.0	0.0	35.9

Point Source, ISO 9613, Name: "Condenser1", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
120	18443897.37	5028131.47	8.00	0	DEN	500	95.0	0.0	0.0	0.0	0.0	49.4	0.2	-2.9	0.0	0.0	0.0	0.0	0.0	48.3

Point Source, ISO 9613, Name: "Condenser2", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
121	18443898.64	5028127.81	8.00	0	DEN	500	95.0	0.0	0.0	0.0	0.0	49.4	0.2	-2.9	0.0	0.0	6.4	0.0	0.0	41.9

Point Source, ISO 9613, Name: "Idling Truck", ID: "TRUCK"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
122	18443928.96	5028138.05	2.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	45.3	0.1	-3.0	0.0	0.0	12.3	0.0	0.0	35.3

Point Source, ISO 9613, Name: "Condenser3", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
123	18443903.42	5028131.18	8.00	0	DEN	500	92.0	0.0	0.0	0.0	0.0	48.8	0.1	-2.8	0.0	0.0	5.7	0.0	0.0	40.2

Point Source, ISO 9613, Name: "Condenser Exh", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
124	18443902.16	5028115.54	8.50	0	DEN	500	90.0	0.0	0.0	0.0	0.0	49.7	0.2	-2.9	0.0	0.0	14.0	0.0	0.0	29.0

Point Source, ISO 9613, Name: "ExhFan1", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
125	18443922.06	5028093.64	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	49.8	0.2	-2.8	0.0	0.0	20.3	0.0	0.0	22.5

Point Source, ISO 9613, Name: "Stack", ID: "STACK"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
126	18443895.63	5028017.53	25.50	0	DEN	500	95.0	0.0	0.0	0.0	0.0	55.4	0.3	-2.9	0.0	0.0	20.8	0.0	0.0	21.3

Point Source, ISO 9613, Name: "ExhFan2", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
127	18443911.42	5028089.38	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	50.7	0.2	-2.9	0.0	0.0	19.6	0.0	0.0	22.5

Point Source, ISO 9613, Name: "ExhFan3", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
128	18443932.44	5028075.13	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	50.8	0.2	-2.8	0.0	0.0	21.3	0.0	0.0	20.4

Point Source, ISO 9613, Name: "HVAC", ID: "HVAC"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
129	18443931.31	5028057.67	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	52.1	0.2	-2.8	0.0	0.0	21.4	0.0	0.0	19.0

SOUND LEVELS (DAY/NIGHT) - MECHANICAL (HVAC/TRUCKS)

Point Source, ISO 9613, Name: "HVAC", ID: "HVAC"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
130	18443919.76	5028022.18	16.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	54.6	0.3	-2.8	0.0	0.0	21.3	0.0	0.0	16.6

Point Source, ISO 9613, Name: "ExhFan4", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
131	18443931.87	5028102.16	5.70	0	DEN	500	83.0	0.0	0.0	0.0	0.0	48.4	0.1	-2.7	0.0	0.0	20.8	0.0	0.0	16.4

Receiver
Name: TWR2-NE - R2D
ID: R2D
X: 18444010.52 m
Y: 5028126.75 m
Z: 7.00 m

Point Source, ISO 9613, Name: "Condenser4", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
68	18443890.90	5028110.75	8.50	0	DEN	500	97.0	0.0	0.0	0.0	0.0	52.6	0.2	-3.0	0.0	0.0	0.0	0.0	0.0	47.1

Point Source, ISO 9613, Name: "Condenser2", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
69	18443898.64	5028127.81	8.00	0	DEN	500	95.0	0.0	0.0	0.0	0.0	52.0	0.2	-2.9	0.0	0.0	0.0	0.0	0.0	45.7

Point Source, ISO 9613, Name: "Condenser1", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
70	18443897.37	5028131.47	8.00	0	DEN	500	95.0	0.0	0.0	0.0	0.0	52.1	0.2	-2.9	0.0	0.0	0.0	0.0	0.0	45.6

Point Source, ISO 9613, Name: "Idling Truck", ID: "TRUCK"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
71	18443928.96	5028138.05	2.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	49.3	0.2	-3.0	0.0	0.0	11.3	0.0	0.0	32.2

Point Source, ISO 9613, Name: "Condenser3", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
72	18443903.42	5028131.18	8.00	0	DEN	500	92.0	0.0	0.0	0.0	0.0	51.6	0.2	-2.9	0.0	0.0	0.0	0.0	0.0	43.1

Point Source, ISO 9613, Name: "Stack", ID: "STACK"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
73	18443895.63	5028017.53	25.50	0	DEN	500	95.0	0.0	0.0	0.0	0.0	55.1	0.3	-2.9	0.0	0.0	16.4	0.0	0.0	26.1

Point Source, ISO 9613, Name: "ExhFan3", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
74	18443932.44	5028075.13	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	50.4	0.2	-2.8	0.0	0.0	11.8	0.0	0.0	30.4

Point Source, ISO 9613, Name: "ExhFan1", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
75	18443922.06	5028093.64	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	50.5	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	42.1

Point Source, ISO 9613, Name: "HVAC", ID: "HVAC"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
76	18443931.31	5028057.67	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	51.4	0.2	-2.8	0.0	0.0	15.8	0.0	0.0	25.3

Point Source, ISO 9613, Name: "ExhFan2", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
77	18443911.42	5028089.38	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	51.5	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	41.1

Point Source, ISO 9613, Name: "Condenser Exh", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
78	18443902.16	5028115.54	8.50	0	DEN	500	90.0	0.0	0.0	0.0	0.0	51.7	0.2	-3.0	0.0	0.0	0.0	0.0	0.0	41.0

SOUND LEVELS (DAY/NIGHT) - MECHANICAL (HVAC/TRUCKS)

Point Source, ISO 9613, Name: "HVAC", ID: "HVAC"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
79	18443919.76	5028022.18	16.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	53.8	0.3	-2.9	0.0	0.0	18.2	0.0	0.0	20.6

Point Source, ISO 9613, Name: "ExhFan4", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
84	18443931.87	5028102.16	5.70	0	DEN	500	83.0	0.0	0.0	0.0	0.0	49.3	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	36.3

Receiver
Name: TWR2-SE - R2C
ID: R2C
X: 18444023.45 m
Y: 5028098.95 m
Z: 7.00 m

Point Source, ISO 9613, Name: "Condenser4", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
48	18443890.90	5028110.75	8.50	0	DEN	500	97.0	0.0	0.0	0.0	0.0	53.5	0.3	-2.9	0.0	0.0	20.7	0.0	0.0	25.4

Point Source, ISO 9613, Name: "Condenser2", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
51	18443898.64	5028127.81	8.00	0	DEN	500	95.0	0.0	0.0	0.0	0.0	53.2	0.2	-3.0	0.0	0.0	21.8	0.0	0.0	22.8

Point Source, ISO 9613, Name: "Condenser1", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
54	18443897.37	5028131.47	8.00	0	DEN	500	95.0	0.0	0.0	0.0	0.0	53.3	0.3	-3.0	0.0	0.0	21.9	0.0	0.0	22.5

Point Source, ISO 9613, Name: "Stack", ID: "STACK"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
56	18443895.63	5028017.53	25.50	0	DEN	500	95.0	0.0	0.0	0.0	0.0	54.7	0.3	-2.9	0.0	0.0	0.0	0.0	0.0	42.9

Point Source, ISO 9613, Name: "ExhFan3", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
58	18443932.44	5028075.13	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	50.5	0.2	-2.8	0.0	0.0	10.1	0.0	0.0	32.1

Point Source, ISO 9613, Name: "Condenser3", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
60	18443903.42	5028131.18	8.00	0	DEN	500	92.0	0.0	0.0	0.0	0.0	52.9	0.2	-3.0	0.0	0.0	22.0	0.0	0.0	19.9

Point Source, ISO 9613, Name: "HVAC", ID: "HVAC"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
62	18443931.31	5028057.67	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	51.1	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	41.6

Point Source, ISO 9613, Name: "ExhFan1", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
64	18443922.06	5028093.64	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	51.1	0.2	-2.8	0.0	0.0	18.8	0.0	0.0	22.7

Point Source, ISO 9613, Name: "Idling Truck", ID: "TRUCK"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
65	18443928.96	5028138.05	2.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	51.2	0.2	-3.0	0.0	0.0	22.9	0.0	0.0	18.7

Point Source, ISO 9613, Name: "ExhFan2", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
66	18443911.42	5028089.38	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	52.0	0.2	-2.8	0.0	0.0	17.9	0.0	0.0	22.7

Point Source, ISO 9613, Name: "Condenser Exh", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
67	18443902.16	5028115.54	8.50	0	DEN	500	90.0	0.0	0.0	0.0	0.0	52.8	0.2	-2.8	0.0	0.0	21.2	0.0	0.0	18.6

SOUND LEVELS (DAY/NIGHT) - MECHANICAL (HVAC/TRUCKS)

Point Source, ISO 9613, Name: "HVAC", ID: "HVAC"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
81	18443919.76	5028022.18	16.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	53.2	0.2	-2.9	0.0	0.0	0.0	0.0	0.0	39.4

Point Source, ISO 9613, Name: "ExhFan4", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
92	18443931.87	5028102.16	5.70	0	DEN	500	83.0	0.0	0.0	0.0	0.0	50.2	0.2	-2.8	0.0	0.0	20.4	0.0	0.0	15.0

Receiver
Name: TWR1-NE - R1D
ID: R1D
X: 18444030.52 m
Y: 5028075.78 m
Z: 7.00 m

Point Source, ISO 9613, Name: "Condenser4", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
2	18443890.90	5028110.75	8.50	0	DEN	500	97.0	0.0	0.0	0.0	0.0	54.2	0.3	-2.8	0.0	0.0	0.0	0.0	0.0	45.4

Point Source, ISO 9613, Name: "Condenser2", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
4	18443898.64	5028127.81	8.00	0	DEN	500	95.0	0.0	0.0	0.0	0.0	54.0	0.3	-2.9	0.0	0.0	0.0	0.0	0.0	43.6

Point Source, ISO 9613, Name: "Condenser1", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
6	18443897.37	5028131.47	8.00	0	DEN	500	95.0	0.0	0.0	0.0	0.0	54.2	0.3	-3.0	0.0	0.0	0.0	0.0	0.0	43.5

Point Source, ISO 9613, Name: "Stack", ID: "STACK"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
19	18443895.63	5028017.53	25.50	0	DEN	500	95.0	0.0	0.0	0.0	0.0	54.4	0.3	-3.0	0.0	0.0	4.8	0.0	0.0	38.5

Point Source, ISO 9613, Name: "ExhFan3", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
21	18443932.44	5028075.13	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	50.8	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	41.8

Point Source, ISO 9613, Name: "HVAC", ID: "HVAC"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
23	18443931.31	5028057.67	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	51.1	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	41.6

Point Source, ISO 9613, Name: "ExhFan1", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
30	18443922.08	5028093.64	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	51.8	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	40.8

Point Source, ISO 9613, Name: "Condenser3", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
32	18443903.42	5028131.18	8.00	0	DEN	500	92.0	0.0	0.0	0.0	0.0	53.8	0.3	-3.0	0.0	0.0	0.0	0.0	0.0	40.9

Point Source, ISO 9613, Name: "Idling Truck", ID: "TRUCK"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
35	18443928.96	5028138.05	2.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	52.5	0.2	-3.0	0.0	0.0	10.8	0.0	0.0	29.4

Point Source, ISO 9613, Name: "ExhFan2", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
36	18443911.42	5028089.38	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	52.6	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	40.0

Point Source, ISO 9613, Name: "HVAC", ID: "HVAC"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
38	18443919.76	5028022.18	16.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	52.8	0.2	-2.8	0.0	0.0	7.2	0.0	0.0	32.6

SOUND LEVELS (DAY/NIGHT) - MECHANICAL (HVAC/TRUCKS)

Point Source, ISO 9613, Name: "Condenser Exh", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
40	18443902.16	5028115.54	8.50	0	DEN	500	90.0	0.0	0.0	0.0	0.0	53.6	0.3	-2.8	0.0	0.0	0.0	0.0	0.0	39.0

Point Source, ISO 9613, Name: "ExhFan4", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
42	18443931.87	5028102.16	5.70	0	DEN	500	83.0	0.0	0.0	0.0	0.0	51.2	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	34.4

Receiver
Name: TWR1-SW - R1B
ID: R1B
X: 18444014.50 m
Y: 5028039.48 m
Z: 7.00 m

Point Source, ISO 9613, Name: "Condenser4", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3	18443890.90	5028110.75	8.50	0	DEN	500	97.0	0.0	0.0	0.0	0.0	54.1	0.3	-2.8	0.0	0.0	0.0	0.0	0.0	45.4

Point Source, ISO 9613, Name: "Stack", ID: "STACK"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
7	18443895.63	5028017.53	25.50	0	DEN	500	95.0	0.0	0.0	0.0	0.0	52.7	0.2	-2.7	0.0	0.0	0.0	0.0	0.0	44.7

Point Source, ISO 9613, Name: "Condenser2", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
9	18443898.64	5028127.81	8.00	0	DEN	500	95.0	0.0	0.0	0.0	0.0	54.3	0.3	-2.8	0.0	0.0	0.0	0.0	0.0	43.2

Point Source, ISO 9613, Name: "Condenser1", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
11	18443897.37	5028131.47	8.00	0	DEN	500	95.0	0.0	0.0	0.0	0.0	54.5	0.3	-2.8	0.0	0.0	0.0	0.0	0.0	43.0

Point Source, ISO 9613, Name: "HVAC", ID: "HVAC"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
13	18443931.31	5028057.67	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	49.6	0.2	-2.9	0.0	0.0	0.0	0.0	0.0	43.1

Point Source, ISO 9613, Name: "ExhFan3", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
15	18443932.44	5028075.13	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	50.0	0.2	-2.7	0.0	0.0	0.0	0.0	0.0	42.5

Point Source, ISO 9613, Name: "HVAC", ID: "HVAC"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
17	18443919.76	5028022.18	16.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	50.7	0.2	-2.6	0.0	0.0	0.0	0.0	0.0	41.7

Point Source, ISO 9613, Name: "ExhFan1", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
25	18443922.06	5028093.64	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	51.6	0.2	-2.7	0.0	0.0	0.0	0.0	0.0	40.9

Point Source, ISO 9613, Name: "Condenser3", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
27	18443903.42	5028131.18	8.00	0	DEN	500	92.0	0.0	0.0	0.0	0.0	54.2	0.3	-2.7	0.0	0.0	0.0	0.0	0.0	40.3

Point Source, ISO 9613, Name: "ExhFan2", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
29	18443911.42	5028089.38	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	52.2	0.2	-2.8	0.0	0.0	0.0	0.0	0.0	40.4

Point Source, ISO 9613, Name: "Idling Truck", ID: "TRUCK"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
31	18443928.96	5028138.05	2.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	53.3	0.3	-3.0	0.0	0.0	0.0	0.0	0.0	39.4

SOUND LEVELS (DAY/NIGHT) - MECHANICAL (HVAC/TRUCKS)

Point Source, ISO 9613, Name: "Condenser Exh", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
33	18443902.16	5028115.54	8.50	0	DEN	500	90.0	0.0	0.0	0.0	0.0	53.6	0.3	-2.8	0.0	0.0	0.0	0.0	0.0	38.9

Point Source, ISO 9613, Name: "ExhFan4", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
34	18443931.87	5028102.16	5.70	0	DEN	500	83.0	0.0	0.0	0.0	0.0	51.3	0.2	-2.7	0.0	0.0	0.0	0.0	0.0	34.1

Receiver
Name: TWR1-SE - R1C
ID: R1C
X: 18444041.62 m
Y: 5028049.83 m
Z: 10.00 m

Point Source, ISO 9613, Name: "Condenser4", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
83	18443890.90	5028110.75	8.50	0	DEN	500	97.0	0.0	0.0	0.0	0.0	55.2	0.3	-2.9	0.0	0.0	22.6	0.0	0.0	21.7

Point Source, ISO 9613, Name: "Stack", ID: "STACK"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
85	18443895.63	5028017.53	25.50	0	DEN	500	95.0	0.0	0.0	0.0	0.0	54.5	0.3	-2.8	0.0	0.0	16.3	0.0	0.0	26.6

Point Source, ISO 9613, Name: "Condenser2", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
86	18443898.64	5028127.81	8.00	0	DEN	500	95.0	0.0	0.0	0.0	0.0	55.2	0.3	-2.8	0.0	0.0	22.5	0.0	0.0	19.8

Point Source, ISO 9613, Name: "Condenser1", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
87	18443897.37	5028131.47	8.00	0	DEN	500	95.0	0.0	0.0	0.0	0.0	55.4	0.3	-2.8	0.0	0.0	22.5	0.0	0.0	19.6

Point Source, ISO 9613, Name: "HVAC", ID: "HVAC"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
88	18443931.31	5028057.67	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	51.9	0.2	-2.8	0.0	0.0	21.7	0.0	0.0	19.0

Point Source, ISO 9613, Name: "ExhFan3", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
89	18443932.44	5028075.13	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	52.0	0.2	-2.8	0.0	0.0	22.5	0.0	0.0	18.1

Point Source, ISO 9613, Name: "HVAC", ID: "HVAC"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
132	18443919.76	5028022.18	16.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	52.9	0.2	-2.7	0.0	0.0	16.3	0.0	0.0	23.3

Point Source, ISO 9613, Name: "ExhFan1", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
133	18443922.06	5028093.64	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	53.1	0.2	-2.8	0.0	0.0	22.6	0.0	0.0	16.8

Point Source, ISO 9613, Name: "Condenser3", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
134	18443903.42	5028131.18	8.00	0	DEN	500	92.0	0.0	0.0	0.0	0.0	55.1	0.3	-2.9	0.0	0.0	22.5	0.0	0.0	17.0

Point Source, ISO 9613, Name: "ExhFan2", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
135	18443911.42	5028089.38	7.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	53.7	0.3	-2.8	0.0	0.0	22.5	0.0	0.0	16.4

Point Source, ISO 9613, Name: "Idling Truck", ID: "TRUCK"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
136	18443928.96	5028138.05	2.00	0	DEN	500	90.0	0.0	0.0	0.0	0.0	54.1	0.3	-3.0	0.0	0.0	23.9	0.0	0.0	14.7

SOUND LEVELS (DAY/NIGHT) - MECHANICAL (HVAC/TRUCKS)

Point Source, ISO 9613, Name: "Condenser Exh", ID: "COND"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
137	18443902.16	5028115.54	8.50	0	DEN	500	90.0	0.0	0.0	0.0	0.0	54.8	0.3	-2.8	0.0	0.0	22.6	0.0	0.0	15.2

Point Source, ISO 9613, Name: "ExhFan4", ID: "EXH_FAN"

Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
138	18443931.87	5028102.16	5.70	0	DEN	500	83.0	0.0	0.0	0.0	0.0	52.7	0.2	-2.8	0.0	0.0	22.7	0.0	0.0	10.2

APPENDIX C: WARNING CLAUSES

Applicable to all units within this development

"Occupants/tenants are advised that despite the inclusion of noise control features in this development area and within the building units, sound levels from increasing road and light rail traffic may continue to be of concern, occasionally interfering with some activities of the dwelling occupants as the sound level exceeds the Ministry of the Environment, Conservation and Parks and the City of Ottawa's noise criteria.

"This dwelling unit has been supplied with a central air conditioning system which will allow the windows and exterior doors to remain closed, thereby ensuring that the interior sound levels are within the Ministry of the Environment, Conservation and Parks and the City of Ottawa's noise criteria."

TYPE F: (Class 4 Designation)

"Purchasers/tenants are advised that sound levels due to the adjacent industry (Canadian Bank Note, 975 Gladstone Avenue, Ottawa) are required to comply with sound level limits that are protective of indoor areas and are based on the assumption that windows and exterior doors are closed. This dwelling unit has been supplied with a ventilation/air conditioning system which will allow windows and exterior doors to remain closed."

APPENDIX D: NOISE CRITERIA

The noise study will be based on the following criteria for residential units, as required by the City of Ottawa.

SOUND LEVEL LIMITS ROAD AND RAIL			
Type of Space	**Time Period**	**L_{eq} (dBA)**	
		Road	**Rail**
INDOOR LIMITS			
Living/dining, den areas of residences, hospitals, nursing homes, schools, daycare centres, etc.	07:00 – 23:00	45	40
Living/dining, den areas of residences, hospitals, nursing homes, etc. (except schools or daycare centres)	23:00 – 07:00	45	40
Sleeping quarters	07:00 – 23:00	45	40
	23:00 – 07:00	40	35
OUTDOOR LIMITS			
Outdoor recreation areas[1]	07:00 – 23:00	55	55
Outside bedroom window	23:00 – 07:00	50	50
Outside living room window	07:00 – 23:00	55	55

[1] Up to 5 dB excess above criteria is allowed, provided a warning clause is given. Above 60 dB L_{eq}, exterior noise mitigation measures (i.e. noise barriers, intervening structures, additional setback from source) are required.

All calculations are based on the Architectural drawings by Hobin Architect dated July 19, 2019.

L_{eq} (Definition)

The L_{eq} is defined as the mean energy of the noise level averaged over the measurement period. It can be considered as the continuous steady noise level which would have the same acoustic energy as the real fluctuating noise measured over the same period of time.

APPENDIX E: REFERENCES

1. "City of Ottawa Environmental Noise Control Guidelines", January 2016.

2. Ministry of the Environment's *STAMSON* Computer Programme (*Version 5.04*) for the IBM PC.

3. Ministry of the Environment, *ORNAMENT*, "Ontario Road Noise Analysis Method for Environment and Transportation", November 1988.

4. Ministry of the Environment, "Publication NPC-300, Environmental Noise Guideline – Stationary and Transportation Sources – Approval and Planning", August 2013.

APPENDIX E2

NOISE MITIGATION AND VIBRATION MEMO

116 Lisgar St. Suite 110
Ottawa, ON
K2P 0C2
613.216.2609
linebox.ca

Gladstone-Loretta - Proximity letter

December 1st, 2025

To: Jenn Morrison, Vice President Planning & Land Development CLV Group

Due to proximity of the proposed development to the O-Train Line 2 light rail corridor, noise & vibration impact from rail operations are considered in the Noise Impact Assessment prepared by GHD, dated Feb. 9, 2022. Design of Tower A follows the recommendations included in Section 8 of this report to mitigate noise impacts from LRT operations with regard to building envelope construction, ventilation, and acoustic barriers as updated through continued coordination with the authors of this report.

The Noise Impact Assessment prepared by GHD, dated Feb. 9, 2022 references an earlier Noise & Vibration Impact Feasibility Study issued by J.E. Coulter Associates Ltd and dated Aug. 8, 2019. The section titled "O-Train Vibration Analysis" summarizes the results of on-site vibration monitoring and concludes that no additional vibration control measures to mitigate impacts from O-Train passbys are required for this development.

Regards,
Josée Anne Pronovost
Architect, Partner, OAA, OAQ

On behalf of



Andrew Reeves,
Senior Architect, Principal Partner, OAA, RAIC

APPENDIX F

GROUNDWATER CONTROL

APPENDIX F1

STORMWATER MANAGEMENT

2025-10-09

Without Prejudice

Marko Cholich, Right of Way Contract Supervisor, Light Rail
Transit Engineering Services
Transportation Services Department
City of Ottawa
3101 Albion Road N

Subject: Confirmation of No Adverse Impact on Adjacent LRT Lands – 951 Gladstone Ave & 145 Loretta Ave N

Dear Mr Cholich:

On behalf of CLV Group Developments Inc., and as part of the Site Plan Application for the proposed mixed-use development at 951 Gladstone Avenue and 145 Loretta Avenue North, we are writing to confirm that the project will have no adverse impact on the adjacent LRT lands with respect to grading and stormwater runoff.

Stormwater Management and Grading Summary:

- The site is directly adjacent to the O-Train Trillium Line (LRT corridor) to the east.
- The stormwater management (SWM) design has been developed in accordance with the City of Ottawa Sewer Design Guidelines (2012), Servicing Study Guidelines (2009), and in consultation with the Rideau Valley Conservation Authority (RVCA).
- Site grading has been specifically designed to direct all runoff away from the LRT corridor and toward internal building drains and storm sewers. All site runoff is collected and conveyed to underground storage tanks before controlled release to the municipal storm sewer on Loretta Avenue.
- No runoff will be directed toward the adjacent LRT corridor. This is confirmed in both the SWM report and the City's pre-application consultation requirements.
- The post-development stormwater discharge is controlled to pre-development (2-year) rates, with on-site storage sized for all storms up to and including the 100-year event. Enhanced water quality treatment (80% TSS removal) is provided prior to discharge.
- The design and calculations have been reviewed and accepted by the City of Ottawa and the RVCA, and all grading and drainage plans ensure no adverse impact to adjacent properties, including the LRT lands.

Supporting Documentation:

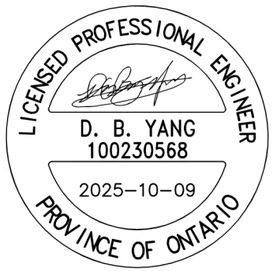
- Please refer to the Civil Drawings (WSP, July 30, Rev 10) and Stormwater Management Report (WSP, July 30, 2025, Rev 4) for detailed grading plans, drainage patterns, and SWM calculations.
- Pre-application consultation minutes and City comments are included in Appendix A of the report.

Should you require any further information or clarification, please do not hesitate to contact us.

Yours sincerely,

Prepared by

Ding Bang Yang, P.Eng., PMP.
Lead Engineer – Technical Lead
Land Development & Municipal Engineering, Ottawa



Suite 300
2611 Queensview Drive
Ottawa, ON, Canada K2B 8K2

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wsp.com

APPENDIX F2

GROUNDWATER CONTROL AND LONG-TERM EFFECTS OF DEWATERING

PATERSON GROUP
Consulting Engineers
9 Auriga Drive
Ottawa, Ontario
K2E 7S8
Tel: (613) 226-7381

Geotechnical Engineering
Environmental Engineering
Hydrogeology
Materials Testing
Building Science
Noise and Vibration Studies

patersongroup.ca

November 27, 2025
File: PG5517-LET.02 Revision 1

TIP Gladstone Limited Partnership
by its General Partner TIP Gladstone GP Inc.
145 Loretta Avenue North
Ottawa, ON
K1Y 4W5

Attention: **Ms. Jenn Morrison**

Subject: **Proximity Assessment**
Proposed Development
145 Loretta Avenue North - Ottawa, Ontario

Further to your request and authorization, Paterson Group (Paterson) prepared this letter to summarize construction issues which could occur due to the proximity of the proposed development with respect to the subject alignment of the existing LRT Trillium Line. This letter should be read in conjunction with the Geotechnical Investigation Report (Paterson Group Report PG5517-1 Revision 4 dated July 31, 2025).

1.0 Background Information

Based on the current development plans, Phase 1 of the proposed development at the subject site will consist of a high-rise building with 3 underground parking levels. The following sections summarize our existing soil information and construction precautions for the proposed development, as they pertain to the subject alignment of the Trillium Line.

2.0 Site Description

Subsurface Conditions

Based on existing geotechnical information, the subsurface conditions in the immediate area of the subject site and subject Trillium Line alignment generally consist of the following:

- The existing surface grade is at a geodetic elevation of approximately 64 m.
- The overburden thickness is about 8 m.
- Bedrock surface elevation is at an approximate geodetic elevation of 56 m.
- The bedrock underlying the site consists of a good to excellent quality limestone.

Trillium Line Location

Available aerial mapping indicates that an approximate setback of 27 m is present between the proposed building limits and the Trillium Line. This is illustrated on the attached sketch SK-1.

In reviewing available information, the Trillium Line is located at an approximate geodetic elevation of 58 m, which is recessed below surrounding grades. The founding elevation of the proposed building is at geodetic elevation 53 m. Therefore, a vertical differential of approximately 5 m is present between the founding levels of the two structures, with a horizontal separation of around 27 m.

3.0 Construction Precautions and Recommendations

Influence of Proposed Development on Trillium Line Corridor

From existing subsurface information and building design details, the proposed building will be founded on footings bearing on the clean, surface sounded bedrock. Therefore, lateral loads due to the building footings will be transferred directly to the bedrock within a conservative 1H:6V zone of influence from the outside face of the footing.

Accordingly, in reviewing available information, the proposed development will not cause additional loading on the subject alignment of the Trillium Line.

Furthermore, due to the 27 m distance between the proposed building and the Trillium Line, the soils and rock supporting the rail line will not be undermined by the building excavation.

Excavation and Temporary Shoring

During the proposed building excavation, the overburden soils along the LRT property will be sloped at a suitable incline of 1H:1V or flatter. This is illustrated on the attached sketch SK-1. Temporary shoring is not anticipated along the LRT property, although a temporary shoring system will be used for other sides of the proposed building excavation.

The primary issue with the proposed building excavation will be vibrations associated with blasting for bedrock removal. Accordingly, a vibration monitoring program will be implemented to ensure vibration levels remain below recommended tolerances. Details of the recommended vibration monitoring program are presented below.

Vibration Monitoring and Control Plan

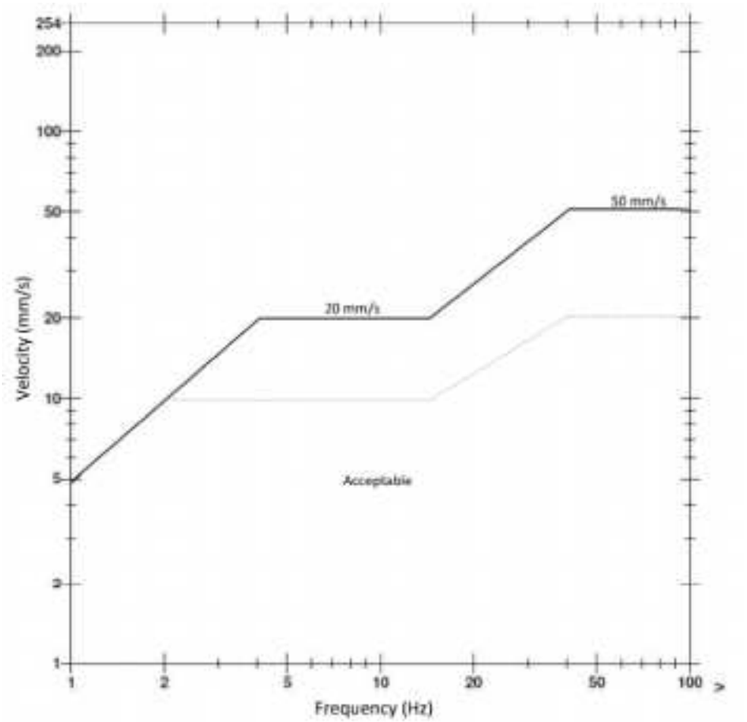
A vibration monitor will be installed either adjacent to or within the Trillium Line corridor as part of the Vibration Monitoring and Control Program to monitor vibrations during blasting operations:

The vibration monitoring program will incorporate real-time results at the adjacent LRT Trillium Line, located in the vicinity of the subject site. The monitoring equipment will consist of a tri-axial seismograph, capable of continuously measuring vibration intensities up to 254 mm/s at a frequency response of 2 to 250 Hz.

The location of the seismograph along or within the LRT property should be reviewed periodically throughout construction to ensure that the monitoring equipment is at the closest radius to the construction activities. The seismograph location should be approved by the project manager prior to installation.

The following figure outlines the recommended vibration limits for the LRT Trillium Line

Figure 1 - Proposed Vibration Limits at the future LRT Trillium Line



Pre-Construction Survey

A pre-construction survey will be required for the portion of the Trillium Line located in the vicinity of the proposed development at 145 Loretta Avenue. Any existing structures in the immediate area of the proposed building will also undergo a pre-construction survey as per standard construction practices, where blasting is required.

Groundwater Control

Groundwater observations during the geotechnical investigation indicated groundwater levels 4 to 5 m below the existing ground surface. Further, due to the approximate 27 m distance between the proposed development and the Trillium Line, any dewatering during the excavation will not impact the Confederation Line.

Long-Term Effects of Dewatering

Based on available elevations, the Trillium Rail Line is located below the depth of the silty clay and is likely bearing on the glacial till deposit and/or bedrock, which are not susceptible to settlement from temporary dewatering during construction.

Further, due to the presence of the waterproofing which will be installed over the perimeter foundation walls, groundwater will not be drawn down during the permanent condition, and long-term groundwater lowering is anticipated to be negligible for the area. Therefore, no adverse effects to the Trillium Line are expected from potential dewatering.

4.0 Conclusions and Recommendations

Based on the currently available information, construction of the proposed development will not cause settlement or have adverse impacts on the adjacent LRT Trillium Line infrastructure or operations, provided the vibration monitoring criteria herein is not exceeded.

We trust that this information meets your immediate request.

Best Regards,

Paterson Group Inc.

Otillia McLaughlin, B.Eng.

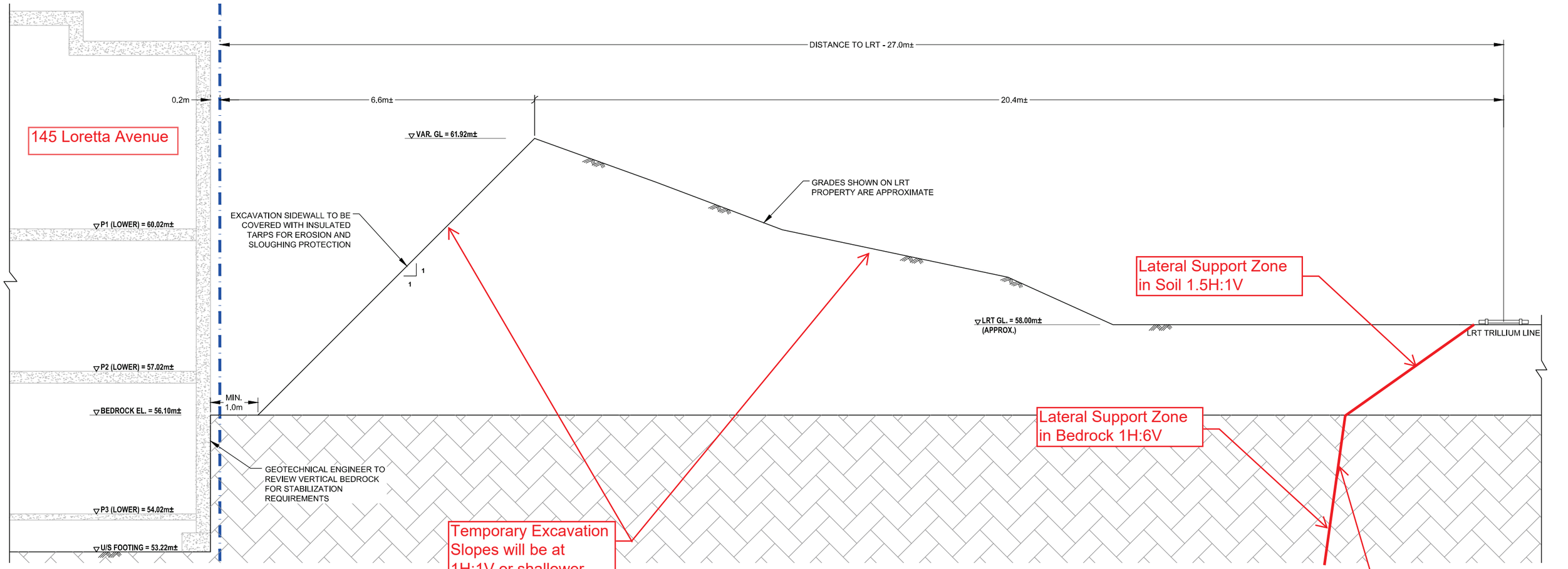
LICENSED PROFESSIONAL ENGINEER
Nov. 27, 2025
S. S. DENNIS
100519516
PROVINCE OF ONTARIO

Scott S. Dennis, P.Eng.

Attachments:

-Sketch Sk-1

PG5517-LET.02
Proximity Assessment
Sketch SK-1
November 7, 2025



Not to Scale

APPENDIX G
ELECTROMAGNETIC INTERFERANCE

GWAL
Goodkey, Weedmark & Associates Ltd.

Managing Principal & Directors
F.W.A. Bann, P.Eng.
R. Lefebvre, P.Eng. LEED® AP
D.R. Vyas, P.Eng., MIEEE
S. Hamilton, P.Eng.
E. Pérusse, P.Eng., ing.
R. Boivin, P.Eng., ing.
R. Leonard, P.Eng.
M. Sarasin, P.Eng.

November 25, 2025

TIP Gladstone Limited Partnership by its General Partner TIP Gladstone GP Inc.
c/o CLV Group Developments Inc.
485 Bank Street, Suite 200
Ottawa, ON
K2P 1Z2

ATTENTION: JENN MORRISON, RPP, RPP, MCIP, DIRECTOR OF DEVELOPMENT

SUBJECT: GLADSTONE & LORETTA – MIXED USE 3 TOWER DEVELOPMENT
TRILLIUM RAIL LINE- ELECTROMAGNETIC FORCES AND STRAY VOLTAGE
GWAL PROJECT NO. 2023-291

We have reviewed the information available from the City of Ottawa - O Train Right of Way department that the Trillium line operates with Diesel multiple units. As the line operates with Diesel multiple units which will not generate any electromagnetic forces or stray voltage which can affect the proposed building operations.

As there will be no electro-magnetic interference and stray voltage from Trillium Line operations the proposed building will not require any additional measures to mitigate electromagnetic forces and stray voltage.

Your truly,

GOODKEY, WEEDMARK & ASSOCIATES LTD.

Divyakant (Raj) Vyas, P.Eng., MIEEE | Director, Senior Electrical Engineer

DRV/nh

APPENDIX H

PROXIMITY STUDY CHECKLIST

Proximity Study Checklist

Legend

1.#	Level 1 Project Requirements as listed in the O-Train Proximity Study Guidelines 2024.
2.#	Level 2 Project Requirements as listed in the O-Train Proximity Study Guidelines 2024.
3.#	Level 3 Project Requirements as listed in the O-Train Proximity Study Guidelines 2024.
4.#	Conditions of Approval Requirements as listed in the O-Train Proximity Study Guidelines 2024.
	Item that is, in our professional opinion, not applicable or will not be required to be submitted for the development.
	Item received and incorporated into Proximity Report/Drawings.
	Item requires information/input from the City before it can be provided by the responsible party.
	Item outstanding but requires further development of the design before it can be provided by the responsible party.
	Item outstanding.

Item	Description	Comments	Report Location/Status
1.1/2.1	**Site plan** with the centerline or reference line of the Trillium Line structure and/or right-of-way located and the relevant distances between the Trillium Line and developer's structure shown clearly		**Section 3 & Appendix A1**
1.2/2.2	**Floor Plans** for the development including underground and ground levels with clearances from the Trillium Line.		**Section 4 & Appendix B1**
1.3/2.3	**Development cross-section** locating the Trillium Line structure/right-of-way and founding elevations relative to the development, including any underground storage tanks, services, structures, etc.		**Section 5 & Appendix B4**
1.4/2.4	**Geotechnical investigation report** showing up-to-date geotechnical conditions at the site of the development. The geotechnical investigation shall be prepared in accordance with the Geotechnical Investigation and Reporting Guidelines for Development Applications in the City		**Section 6 & Appendix C1**
1.5/2.5	**Survey** of existing and proposed property lines.		**Section 7 & Appendix A2**
1.6/2.6	**Utility Servicing Plan**		**Section 8 & Appendix B2**
1.7/2.7	**Stormwater Management Plan and Grading Plan**		**Section 9 & Appendix B2**
1.8a/2.8a	**Architectural Drawings**		**Section 10 & Appendix B1**
1.8b/2.8b	**Landscape Plans**		**Section 11 & Appendix B6**
1.9/2.9	**Noise and Vibration Study**	Acknowledgement that the potential for **noise and vibration** from Trillium Line operations have been considered in the design of the project, and appropriate mitigation measures applied	**Section 12 & Appendix E1**
2.10	**Fire/life safety and HVAC Report**		**N/A**
2.11	**Excavation Plan**		**Section 13 & Appendix B5**
2.12	**Construction Plan**	Crane locations and crane swing indicated	**Section 14 & Appendix D**

2.13	**Air Quality Analysis**		**N/A**
2.14	**Smoke Dispersal Analysis**		**N/A**
2.15	**Engineering statement regarding impacts of proposed development**		**N/A**
2.16	**Shoring Plans**		**Section 15 & Appendix B5**
2.17	**Structural analysis showing effects of loadings on the O-Train**		
2.18	**Monitoring Plan** for movement of the shoring		**Appendix B5**
2.19	**Pre-construction and post-construction condition surveys**		**Section 17**
2.20	**Demolition Plan**	To be provided if requested.	**N/A**
2.21	**Plans showing hoarding and stockpiling of materials**		**N/A**
2.22	**Other plans/documents** such as Environment Site Assessment, record of site condition, risk assessments, Transportation Impact Study, etc.		**N/A**
3.1	**Building Code Compliance Report**		**N/A**
3.2	Materials specific to situations where development is proposed or approved to be integrated with an existing/planned station and modifications are proposed to any part of the O-Train		**N/A**
3.3	**Temporary conditions during construction**		**N/A**
3.4	**Separate requirement and information relating to construction agreements, crossing agreements, cost sharing agreements, etc.**		**N/A**
4.1	**Foundation drawings** with structural loading analysis confirming that the building's footing and foundation walls will not adversely impact the O-Train	Drawings provided. Calculations to be provided if requested.	Section 16 & Appendix B4
4.2	**Pre and post-construction surveys** of Trillium Line infrastructure and assets	To be provided if requested.	Section 17
4.3	**Blasting Plan**	To be provided if requested.	
4.4	**Vibration and Movement Monitoring Plan**	To be provided if requested.	Section 13 & Appendix C2
4.5	**Dust Control and Monitoring Plan**	To be provided if requested.	
4.6	**Groundwater Control and Monitoring Plan**		Section 18 & Appendix F1 & F2
4.7	**Safety protection measures** (eg. Hoarding, overhead protection, flagging, signage, dust-barriers, etc.)	To be provided if requested.	
4.8	**Construction Schedules, Staging Plans and Construction Coordination Protocols**	To be provided prior to construction if requested.	Appendix D
4.9	**Traffic Management Plans** including site access provisions during construction, lane closures, haul routes and staging.	To be provided prior to construction if requested.	
4.10	Requirements related to **noise and vibration, stray current and electromagnetic interference (EMI)** including **c**ovenants and environmental impact warning clauses, implementation of noise control attenuation measures, restrictions on generating stray current, EMI, or vibration.		Section 19 & Appendix G
4.11	**Completion of legal agreements such as Crane Swing Agreements**	To be provided prior to construction	
4.12	**Submission of as-built drawings**	To be provided after construction if requested.	Section 20
4.13	**Fulfilment of Insurance Requirements**	To be provided prior to construction	
4.14	**Completion of City safety training or orientation for work in proximity to the O-Train**	To be completed prior to construction if requested.	

4.15	**Temporary and Permanent Easements**	To be completed prior to approval if requested.	
4.16	**Crossing agreements**	To be completed prior to approval if requested.	**N/A**
4.17	**Licensed Use of Air Rights**	To be completed prior to approval if requested.	**N/A**
4.18	**Post development conditions survey**	To be provided after construction if requested.	