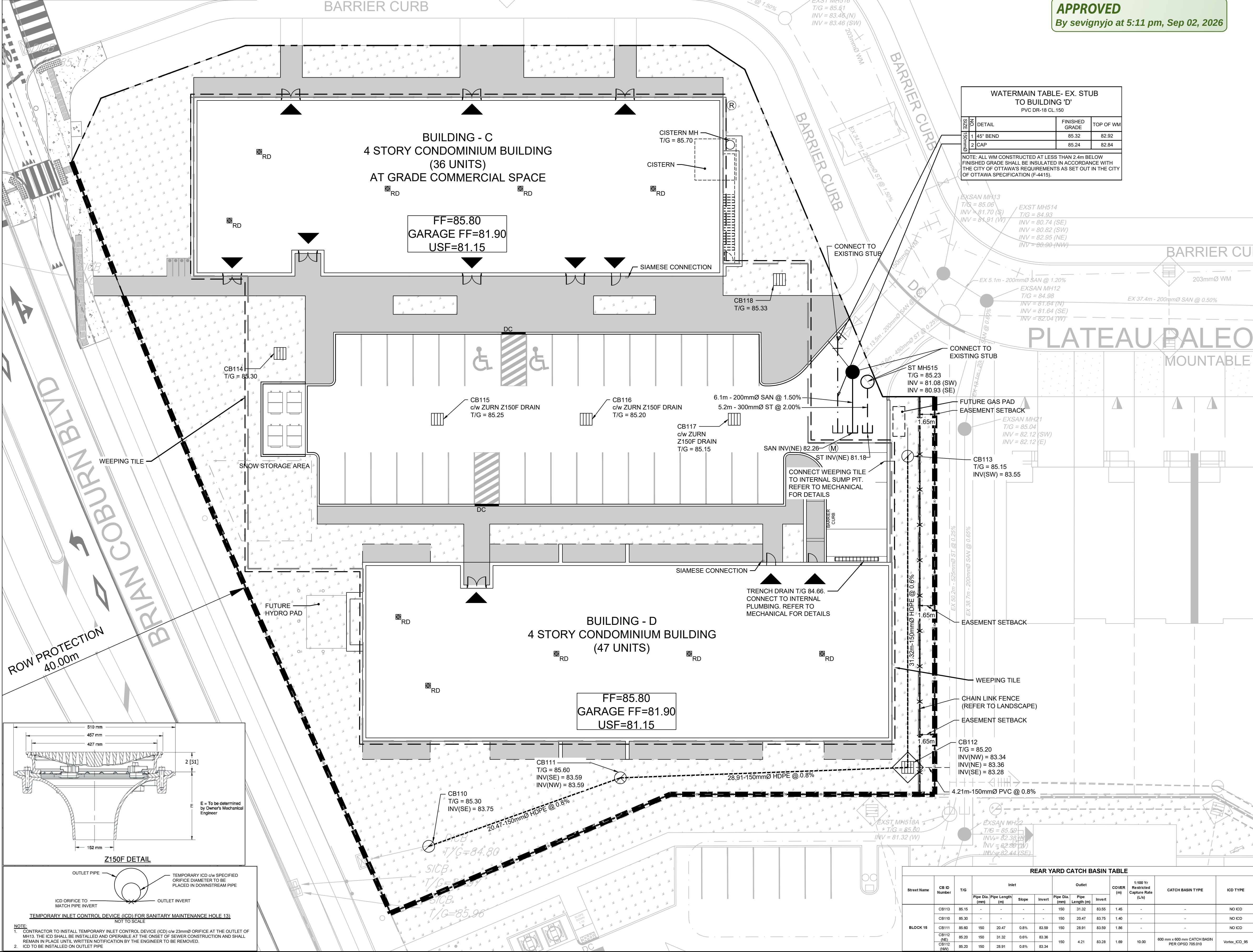


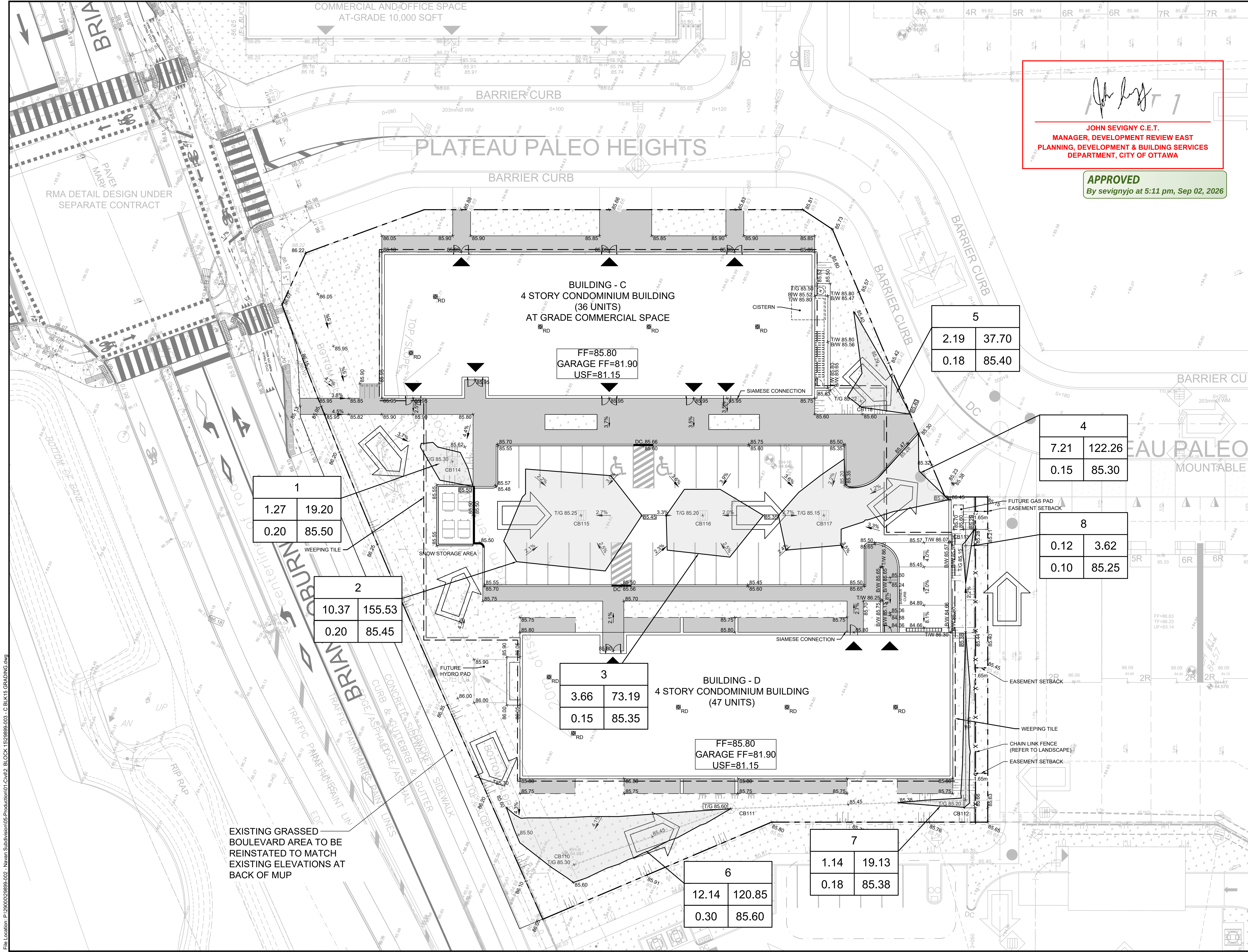
GENERAL CONSTRUCTION NOTES

- ALL MATERIAL (SANITARY, STORM & WATERMAIN) AND CONSTRUCTION METHODS TO BE IN ACCORDANCE WITH THE CURRENT CITY OF OTTAWA STANDARD DRAWINGS AND SPECIFICATIONS, AND ONTARIO PROVINCIAL STANDARD DRAWINGS AND SPECIFICATIONS.
- SERVICING DESIGN DRAWINGS TO BE READ IN CONJUNCTION WITH THE SITE SERVICING REPORT (OCTOBER 10, 2024) PREPARED BY J.L. RICHARDS & ASSOCIATES LIMITED (26989-002).
- DRAWINGS TO BE READ IN CONJUNCTION WITH UPDATED GEOTECHNICAL INVESTIGATION PROPOSED RESIDENTIAL DEVELOPMENT 2983, 3053 AND 3079 NAVAN ROAD OTTAWA, ONTARIO PREPARED BY EXP (DATED JANUARY 16, 2025), FOR SUBSURFACE CONDITIONS, CONSTRUCTION RECOMMENDATIONS AND GEOTECHNICAL INSPECTION REQUIREMENTS. THE GEOTECHNICAL CONSULTANT IS TO REVIEW ON-SITE CONDITIONS AFTER EXCAVATION PRIOR TO PLACEMENT OF THE GRANULAR MATERIAL.
- UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE TO THE CENTRELINE OF SEWER OR MAINTENANCE HOLE.
- THE NOMINAL DIAMETER OF PIPES ARE REFERRED TO IN PLAN VIEW.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING LOCATES FROM ALL UTILITY COMPANIES TO LOCATE EXISTING UTILITIES PRIOR TO EXCAVATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION, BACKFILL AND REINSTATEMENT OF ALL AREAS DISTURBED DURING CONSTRUCTION AND ALL ASSOCIATED WORKS TO THE SATISFACTION OF THE ENGINEER AND CITY OF OTTAWA.
- ALL CONNECTIONS TO EXISTING WATERMAIN STUBS (INCLUDING CONNECTIONS TO EXISTING WATERMAIN) TO BE COMPLETED BY CITY OF OTTAWA FORCES. CONTRACTOR TO PROVIDE EXCAVATION, BACKFILLING, COMPACTION AND REINSTATEMENTS, IN ACCORDANCE WITH CURRENT CITY SPECIFICATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO DETERMINE, VIA EXCAVATION, THE EXACT LOCATION AND ELEVATION OF THE EXISTING WATERMANS, SEWERS AND UNDERGROUND STRUCTURES AS REQUIRED FOR ALL CONNECTIONS, RELOCATIONS, AND BLANKINGS.
- ALL DIMENSIONS AND INVERTS MUST BE VERIFIED PRIOR TO CONSTRUCTION. IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
- REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL, ORGANIC MATERIAL AND DEBRIS UNLESS OTHERWISE INSTRUCTED BY ENGINEER. EXCAVATE AND REMOVE FROM SITE ANY CONTAMINATED MATERIAL. ALL CONTAMINATED MATERIAL SHALL BE DISPOSED OF AT A LICENSED LANDFILL FACILITY.
- ALL WATERMANS SHALL CONFORM TO THE LATEST REVISIONS OF THE CITY OF OTTAWA, AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
- WATERMANS CROSSING BELOW OR OVER A SEWER SHALL BE IN ACCORDANCE WITH CITY STANDARD DRAWING W25 AND W25.2.
- PROVIDE A MINIMUM OF 2.4m COVER ON ALL WATERMANS AND WATER SERVICES. OTHERWISE PROVIDE THERMAL INSULATION AS PER THE CITY STANDARD DRAWING W22 (IN SHALLOW TRENCHES) AND W23 (AT OPEN STRUCTURES).
- WATERMAIN THRUST BLOCKS TO BE CONSTRUCTED PER CITY STANDARD DRAWINGS W25.3 AND W25.4. THRUST BLOCKS ARE REQUIRED AT ALL BENDS, TEES, PLUGS, DEAD END CAPS, VALVES, REDUCERS, OR OTHER FITTINGS WHERE CHANGES OCCUR IN PIPE DIAMETER OR DIRECTION ALL IN ACCORDANCE WITH CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
- WATERMAIN SERVICE LATERAL TO BUILDING TO BE PVC DR-18.
- ALL WATER DISTRIBUTION INFRASTRUCTURE TO BE PROVIDED WITH CATHODIC CORROSION PROTECTION AS PER CITY STANDARD W40.
- RESTORE ALL DISTURBED AREAS ON-SITE AND OFF-SITE, INCLUDING TRENCHES AND SURFACES ON PUBLIC ROAD ALLOWANCES TO EXISTING CONDITIONS OR BETTER TO THE SATISFACTION OF THE CITY OF OTTAWA AND ENGINEER. ASPHALT RESTORATION SHALL BE IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARD DRAWING No. R10.
- SANITARY AND STORM SERVICE LATERALS TO BUILDING TO BE PVC DR-28.
- SANITARY AND STORM SERVICES TO BE IN ACCORDANCE WITH CITY STANDARD DRAWING S11.1 AND PROVIDED WITH 0.3m MINIMUM VERTICAL CLEARANCE TO WATERMAIN. REFER TO WATERMAIN TABLE FOR CROSSING DETAILS.
- ALL FLOWS FROM THE UNDERGROUND PARKING GARAGE ARE TO BE CONVEYED TO THE SANITARY SERVICE. SANITARY FLOWS ARE TO BE PUMPED TO THE PROPOSED SANITARY SERVICE (TYP.)
- THE OWNER SHALL REQUIRE THAT THE SITE SERVICING CONTRACTOR PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPSS 410.07.16, 410.07.16.04 AND 407.07.24. DYE TESTING IS TO BE COMPLETED ON ALL SANITARY SERVICES TO CONFIRM PROPER CONNECTION TO THE SANITARY SEWER MAIN. THE FIELD TESTS SHALL BE PERFORMED IN THE PRESENCE OF A CERTIFIED PROFESSIONAL ENGINEER WHO SHALL SUBMIT A CERTIFIED COPY OF THE TEST RESULTS.
- SERVICES TO BE TERMINATED 1.0m FROM BUILDING WALL (TYPICAL). FOR STRUCTURAL WORK PROPOSED SERVICES TO BE SLEEVED THROUGH FOUNDATION WALL.
- BUILDER TO INSTALL BACKWATER VALVES ON SANITARY AND STORM SERVICE LATERALS IN ACCORDANCE WITH CITY OF OTTAWA STANDARD DETAIL DRAWINGS S14, S14.1, S14.2.
- ALL STORM & SANITARY MAINTENANCE HOLES C/W FRAME AND COVER AS PER CITY STANDARD DRAWINGS 24 AND 24.1. SANITARY AND STORM MAINTENANCE HOLES TO HAVE WATERTIGHT COVERS PER OPSD 401.030.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT THE SITE BENCHMARK(S) HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION DEPICTED ON THIS PLAN. PLEASE REFER TO THE VERTICAL CONTROL POINTS' SKETCH PROVIDED BY STANTEC SEPTEMBER 27, 2024 FOR LOCATION AND DESCRIPTION OF CONTROL POINTS.
- CATCH BASINS FOR LANDSCAPED APPLICATION (CB110, CB111, CB113) TO BE IN ACCORDANCE WITH CITY STANDARD DETAIL S31 OR APPROVED EQUIVALENT. CB112 TO BE 600x600mm PRECAST CONCRETE PER OPSD 705.010 C/W FRAME AND COVER AS PER CITY OF OTTAWA STANDARD DRAWING S19.
- FILL USED FOR GRADING BENEATH THE BASE AND SUB-BASE LAYERS OF PAVED AREAS SHOULD CONSIST, UNLESS OTHERWISE SPECIFIED, OR CLEAN IMPORTED GRANULAR FILL, SUCH AS OPSS GRANULAR 'A', GRANULAR 'B' TYPE II OR SELECT SUB-GRADE MATERIAL. THIS MATERIAL SHOULD BE TESTED AND APPROVED PRIOR TO DELIVERY TO THE SITE. THE FILL SHOULD BE PLACED IN LIFTS NO GREATER THAN 300mm THICK AND COMPACTED USING SUITABLE COMPACTION EQUIPMENT FOR THE LIFT THICKNESS. FILL PLACED BENEATH THE PAVED AREAS SHOULD BE COMPACTED TO AT LEAST 100% OF ITS SPMDD.
- CONCRETE CURB TO BE BARRIER TYPE AS PER STANDARD DRAWING SC1.1.
- CONCRETE SIDEWALKS AND WALKWAYS TO BE CONSTRUCTED AS PER CITY OF OTTAWA DETAIL SC2 (OR SC1.4) AND SC4.
- EXCAVATION FOR THE INSTALLATION OF SERVICES ALONG OR IN PROXIMITY OF A BUILDING OR A STRUCTURE IS TO BE CONTAINED WITHIN A TRENCH BOX WIDTH AND IS TO ENSURE NO CONFLICT WITH ANY FUTURE FOOTINGS. SERVICE TRENCHES SHALL BE BACKFILLED WITH GRANULAR 'A' COMPACTED TO 100% SPMDD WHERE ADJACENT TO A BUILDING FOR THE SECTION PARALLEL TO THE UNIT PLUS 5.0 m PAST THE FRONT AND REAR OF THE UNIT. SELECT SUBGRADE MATERIAL, COMPACTED TO 100% SPD TO 1.0m BELOW EXISTING GRADE FOR FULL TRENCH WIDTH OF DISTURBED AREA SHALL BE USED FOR BACKFILL, INCLUDING ALONG ANY SEWERS AND WATERMANS ADJACENT TO A BUILDING OR OTHER STRUCTURE.
- MATCH EXISTING ELEVATIONS AT PROPERTY LIMITS. ENSURE POSITIVE DRAINAGE TOWARDS A SUITABLE OUTLET WHETHER INDICATED OR NOT.
- THE CONTRACTOR SHALL PROVIDE ALL PAVEMENT MARKINGS AS SHOWN, INCLUDING HANDICAPPED PARKING SYMBOLS.
- ALL GROUNDWATER PUMPED FROM THE SITE TO BE METERED AND A PERMIT TO TAKE WATER OBTAINED AS APPLICABLE.
- CONTRACTOR TO INSTALL TEMPORARY INLET CONTROL DEVICE C/w 23mm DIA. ORIFICE AT THE OUTLET OF MH18. THE ICD SHALL BE INSTALLED AND OPERABLE AT THE ONSET OF THE SANITARY SEWER CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL WRITTEN NOTIFICATION BY ENGINEER TO BE REMOVED.
- CONTROLLED ROOF DRAINS AND LANDSCAPED CB 112 ARE TO BE CONVEYED TO THE FREE FLOWING STORM SERVICE/SEWERS.
- THE PROPOSED AREA DRAINS (CB114, CB115, CB116, CB117 AND CB118) ARE TO BE INSTALLED WITH THE FOLLOWING:
 - ZURN Z150F FLOW FORE HIGH PERFORMANCE PROMENADE DECK DRAIN WITH ROTATABLE FRAME AND HEEL-PROOF GRATE. PIPE DIAMETER SHALL BE 150mm DIA.

- PVC.
- INSTALLATION OF THE ZURN PRODUCT SHALL INCLUDE AT MINIMUM A 100mm CONCRETE COLLAR AROUND THE ZURN SYSTEM AND PIPE FROM THE TOP OF SLAB TO 50mm BELOW T/G ELEVATION.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
- PROPOSED PARKING AREA DRAINS (CB115, CB116 AND CB117), Cbs ABOVE THE PODIUM (CB114 AND CB118) AND RAMP TRENCH DRAIN ARE TO BE CONVEYED TO THE PROPOSED CISTERN VIA THE INTERNAL PLUMBING. REFER TO THE MECHANICAL DRAWINGS FOR DETAILS.
- PAVEMENT STRUCTURE: FROM GEOTECHNICAL INVESTIGATION PROPOSED RESIDENTIAL DEVELOPMENT 2983, 3053, AND 3079 NAVAN ROAD OTTAWA, ONTARIO PREPARED BY EXP DATED JANUARY 16, 2025:
 - A 10 HORIZONTAL: 1 VERTICAL LONGITUDINAL TRANSITION ZONE SHOULD BE USED AT THE BOTTOM OF THE PAVEMENT STRUCTURES FOR ABUTTING PAVEMENT STRUCTURES WITH DIFFERENT PAVEMENT STRUCTURE THICKNESS.
 - THE JOINT BETWEEN A RIGID PAVEMENT STRUCTURE (CONCRETE PAVEMENT STRUCTURE) AND FLEXIBLE PAVEMENT STRUCTURE (ASPHALT PAVEMENT STRUCTURE) SHOULD BE SEALED WITH A POLYMER MODIFIED BITUMEN STRIP TO PREVENT INGRESS OF WATER, DIRT, VEGETATION AND OTHER PARTICLES THAT WOULD COMPROMISE THE PERFORMANCE OF THE PAVEMENTS AND TO WITHSTAND DIFFERENT RATES OF EXPANSION BETWEEN THE 2 DIFFERENT TYPES OF PAVEMENT STRUCTURES.
- ACCESS LANE, FIRE TRUCK LANE, RAMP AND HEAVY TRUCK PARKING AREAS (ABOVE PODIUM DECK)
 - 40mm WEAR COURSE - 12.5 CAT B/H/L3
 - 50mm BASE COURSE - 19.0 CAT B/H/L8
 - C300mm - OPSS 1010 GRANULAR 'A' BASE CRUSHED STONE COMPACTED TO 100% SPMDD
 - 150mm RIGID INSULATION, WATERPROOFING MEMBRANE AND PROTECTION BOARD
- ACCESS LANE, FIRE TRUCK LANE, RAMP AND HEAVY TRUCK PARKING AREAS (OUTSIDE PODIUM DECK)
 - 50mm WEAR COURSE - SP 12.5
 - 60mm BINDER COURSE - SP 19.0
 - 150mm - OPSS 1010 GRANULAR 'A' BASE CRUSHED STONE COMPACTED TO 100% SPMDD
 - 600mm - OPSS 1010 GRANULAR 'B' SUB-BASE TYPE II COMPACTED TO 100% SPMDD

- REFER TO STRUCTURAL FOR DETAILS OF THE PAVEMENT STRUCTURE FOR THE RAMP INTO THE PARKING GARAGE
- PAVEMENT STRUCTURE TRANSITIONS: FROM GEOTECHNICAL INVESTIGATION PROPOSED RESIDENTIAL DEVELOPMENT 2983, 3053, AND 3079 NAVAN ROAD OTTAWA, ONTARIO PREPARED BY EXP DATED JANUARY 16, 2025:
 - A 10 HORIZONTAL: 1 VERTICAL LONGITUDINAL TRANSITION ZONE SHOULD BE USED AT THE BOTTOM OF THE PAVEMENT STRUCTURES FOR ABUTTING PAVEMENT STRUCTURES WITH DIFFERENT PAVEMENT STRUCTURE THICKNESS.
 - THE JOINT BETWEEN A RIGID PAVEMENT STRUCTURE (CONCRETE PAVEMENT STRUCTURE) AND FLEXIBLE PAVEMENT STRUCTURE (ASPHALT PAVEMENT STRUCTURE) SHOULD BE SEALED WITH A POLYMER MODIFIED BITUMEN STRIP TO PREVENT INGRESS OF WATER, DIRT, VEGETATION AND OTHER PARTICLES THAT WOULD COMPROMISE THE PERFORMANCE OF THE PAVEMENTS AND TO WITHSTAND DIFFERENT RATES OF EXPANSION BETWEEN THE 2 DIFFERENT TYPES OF PAVEMENT STRUCTURES.





KEY PLAN
N.T.S.

LEGEND

- SITE BOUNDARY
- UNDERGROUND GARAGE LIMITS
- PROPOSED ELEVATION
- PROPOSED SUBDIVISION ELEVATION
- PROPOSED INTERSECTION ELEVATION
- PROPOSED HIGH POINT
- ORIGINAL SURVEY
- PROPOSED SWALE
- PROPOSED TERRACING (MAX 3:1)
- SURFACE SLOPE
- MAJOR/EMERGENCY OVERLAND FLOW DIRECTION (> 1:100 YR)
- DEPRESSED CURB
- FF=86.25
- GARAGE FF=82.40
- USF=1.65
- BUILDING ENTRANCE
- BOREHOLE NUMBER
- GROUND SURFACE ELEVATION (m)
- GROUND WATER ELEVATION (m)
- CONC. SIDEWALK
- EX CONC. SIDEWALK UNDER SEPARATE CONTRACT
- MAXIMUM WATER LEVEL (STATIC)
- MAX. PONDING VOLUME (m³)
- AREA ID
- MAX. PONDING AREA (m²)
- MAX. WATER LEVEL (STATIC)
- PONDING DEPTH (STATIC)

No.	ISSUE / REVISION	DD/MM/YY
5	ISSUED FOR FIFTH ENGINEERING SUBMISSION	11/11/25
4	ISSUED FOR FOURTH ENGINEERING SUBMISSION	04/03/25
3	ISSUED FOR THIRD ENGINEERING SUBMISSION	10/10/24
2	ISSUED FOR SECOND ENGINEERING SUBMISSION	28/07/24
1	ISSUED FOR FIRST ENGINEERING SUBMISSION	22/03/24

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VERIFY SHEET SIZE AND SCALES. THE BAR TO THE RIGHT IS 25mm IF THIS IS A FULL SIZE DRAWING.

SCALE: 1:200

CLIENT:

Heafey
GROUP

CONSULTANT:

J.L. Richards
ENGINEERS - ARCHITECTS - PLANNERS

CONSULTANT:

J.L. Richards
ENGINEERS - ARCHITECTS - PLANNERS

PROFESSIONAL STAMP

K.R. FERREY MORENO
100122432
2025-11-14
PROVINCE OF ONTARIO

PROJECT NORTH

PROJECT:

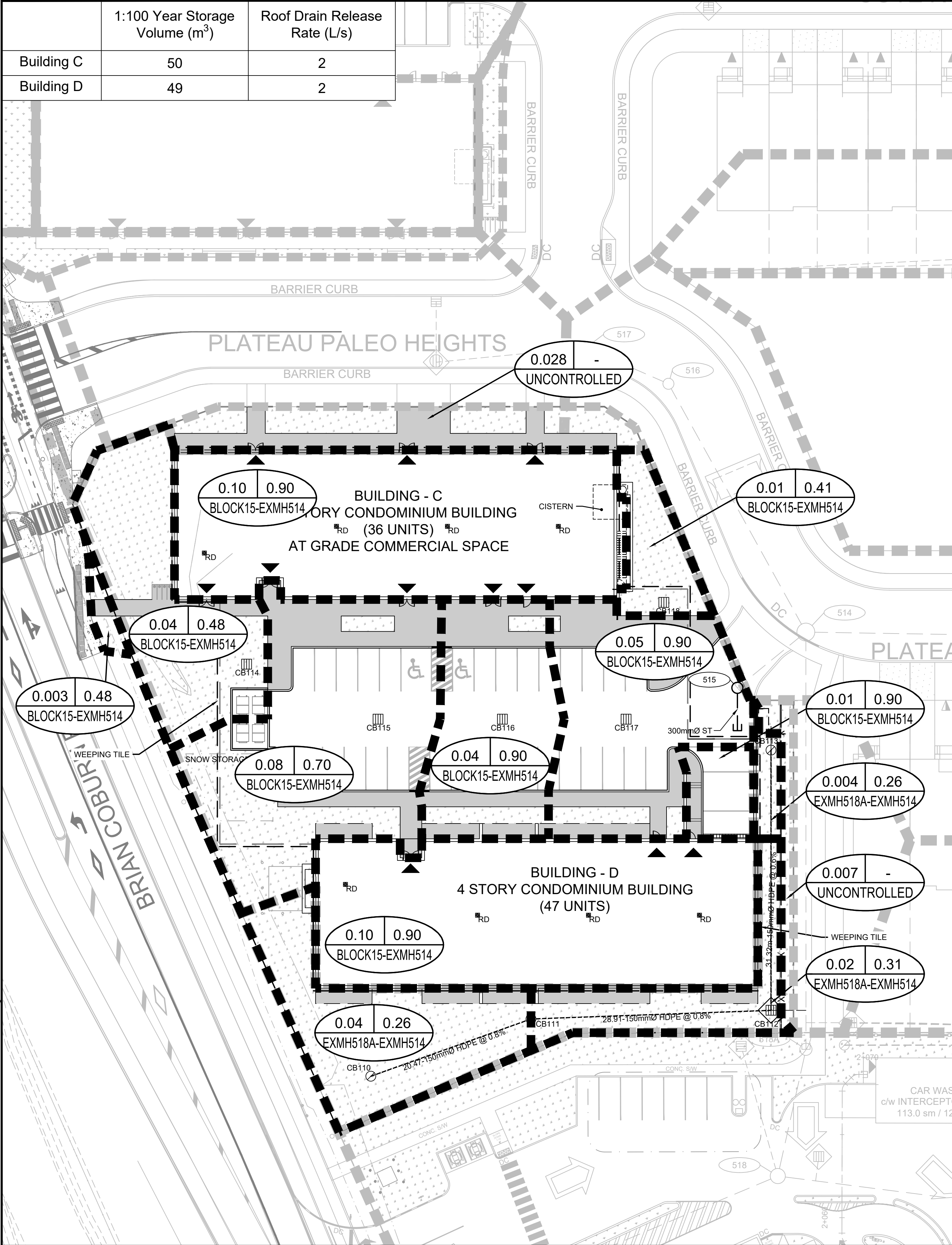
NAVAN RESIDENTIAL AND COMMERCIAL BLOCK 15

2983 NAVAN ROAD OTTAWA, ONTARIO

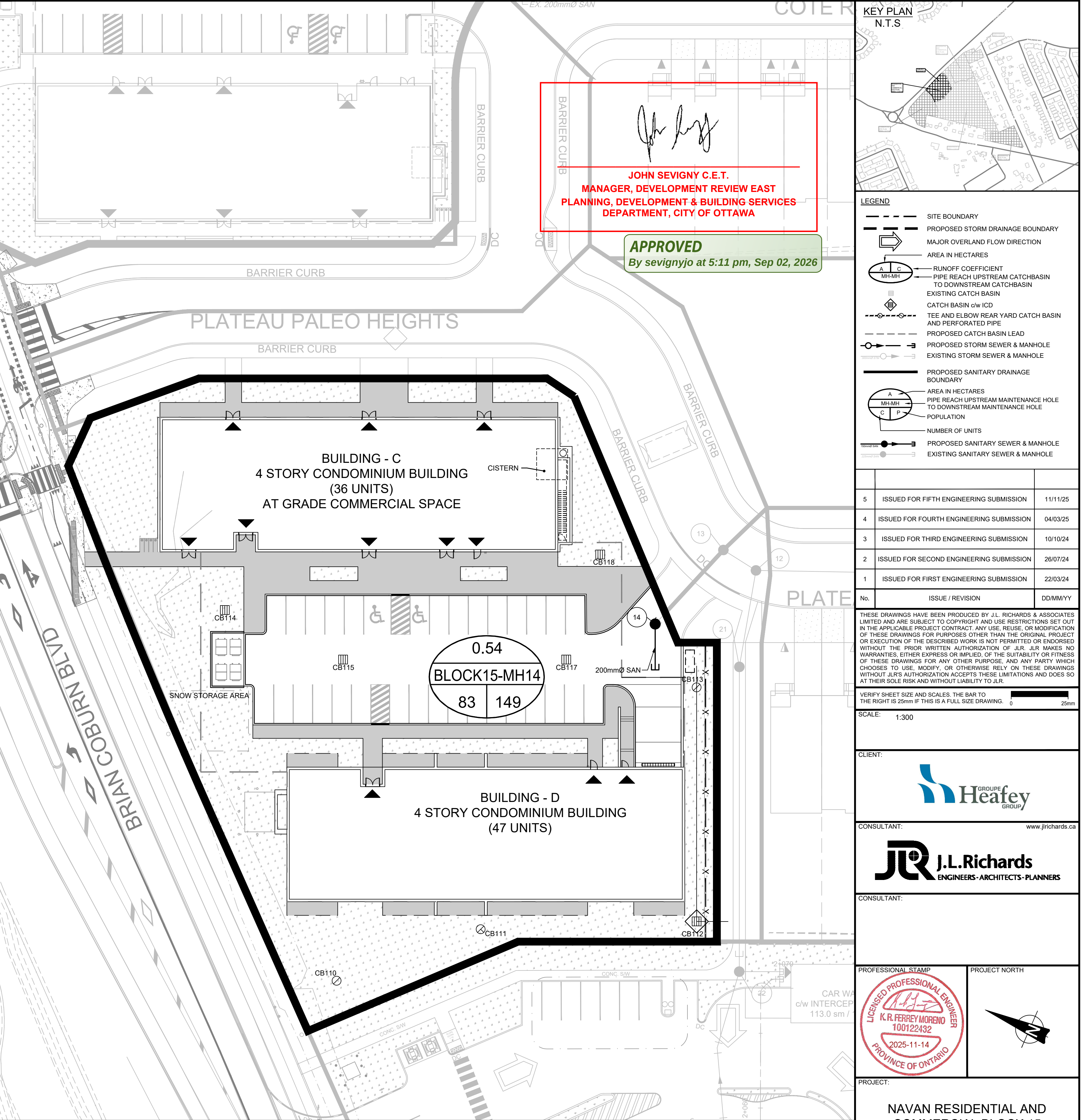
DRAWING:

GRADING AND PONDING PLAN

DESIGN:	KF/MM	DRAWING #:	C02
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CHECKED:	KF		
JLR #:	29899-002		



STORM DRAINAGE



SANITARY DRAINAGE

KEY PLAN
N.T.S.

LEGEND

5

ISSUED FOR FIFTH ENGINEERING SUBMISSION

11/11/25

4

ISSUED FOR FOURTH ENGINEERING SUBMISSION

04/03/25

3

ISSUED FOR THIRD ENGINEERING SUBMISSION

10/10/24

2

ISSUED FOR SECOND ENGINEERING SUBMISSION

28/07/24

1

ISSUED FOR FIRST ENGINEERING SUBMISSION

22/03/24

No.

ISSUE / REVISION

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CONSULTANT:

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ENGINEERS - ARCHITECTS - PLANNERS

CONSULTANT:

PROJECT NORTH

PROJECT:

NAVAN RESIDENTIAL AND COMMERCIAL BLOCK 15

2983 NAVAN ROAD OTTAWA, ONTARIO

DRAWING:

STORM AND SANITARY DRAINAGE PLANS

DESIGN: KF/MM

DRAWN: KC

CHECKED: KF

JLR #: 29899-002

DRAWING #:

C03