IRRIGATION SPECIFICATIONS

PART 1 - GENERAL

1.1 Description

.1 Division 1, General Requirements, is part of this Section and shall apply as if repeated here.

.2 Provide all labour, materials, tools, services and incidentals to do complete irrigation work required and/or indicated on the Drawings and specified herein.

1.2 Submittals

.1 Shop Drawings:
.1 Submit shop drawings of mechanical work for main line connection at sprinkler room showing winterization provision for approval.

.2 Record drawings:
.1 Submit record drawings to record location of installed Work of this Section.

.3 Maintenance and Operating instructions:
.1 Submit a warranty of the Work of this Section covering the period for one year beyond the expiration of the warranty period specified in the General Conditions to the Contract.

1.3 Prices

.1 Supply itemized prices for irrigation pipe and sprinkler heads and an itemized price for all irrigation Work as called for in the tender form.

.2 The layout of the system as shown on Irrigation Plan is schematic only. Prior to submitting a quotation, the design of the system and site conditions should be examined, any questions or concerns should be directed to the Landscape Architect at this time.

1.4 Quality Assurance

.1 The Contractor must have five (5) years experience minimum in large scale underground lawn sprinkler systems. Provide 3 references for large scale projects.

.2 Contractor shall provide manual for operation and warranty papers to Owner.

1.5 Inspection

.1 Obtain the approval of the Landscape Architect for sprinkler head location stake out before proceeding.

1.6 Related Work

.1 Site grading: Section 02

.2 Landscape finish grading: Section 02

.3 Trees, shrubs and groundcovers: Section 02

.4 Plumbing connections: Division 15

.5 Electrical connections: Division 16

PART 2 - PRODUCTS

2.1 Conduit

.1 4" PVC sleeves installed 18" below grade at pathways and at driveways are the responsibility of the irrigation contractor. Sleeves across roadway must receive the approval of the general contractor before proceeding.

2.2 Installed Inground (As per Irrigation Plan)

.1 Fixed spray pop-ups: except for shrub sprinklers which will be attached to an extension made of sch 80 PVC OR nipple, height to match shrub height, paint black and bury 10" into ground for stability. ALL SPRINKLERS ARE TO BE BY SAME MANUFACTURER.

A. ALL SPRINKLER HEADS SHALL BE POP-UP TYPE HEADS.ACCEPTABLE MANUFACTURERS LISTED BELOW:

HUNTER INDUSTRIES INC.OR APPROVED EQUIVALENT.

B. SPRAY NOZZLES FOR SPRINKLER BODIES SHALL BE OF HUNTER MP ROTATORS OR APPROVED EQUIVALENT.

C. SPRAY BODIES SHALL BE OF HUNTER MPR 40 OR APPROVED EQUIVALENT.

D. EACH SPRINKLER HEAD SHALL INCLUDE AN INTERNAL 40 PSI REGULATOR TO ENSURE THE MP ROTATORS ARE OPERALLNG AT THE OPTIMUM PRESSURE FOR HIGHEST EFFICIENCY.

PREFERRED SUPPLIER
.1 Hunter:
.1 TURF AREAS: S-TYPE PROS-06.
.2 SHRUB BEDS: PROS-00.

.2 RAIN BIRD:
.1 TURF AREAS: 1800 SERIES 1804, 1806
.2 SHRUB BEDS: PA-8S.
.3 HIGH POP-UPS: 1812

.3 TORO:
.1 TURF AREAS: 570Z SERIES 570Z-4P.
.2 SHRUB BEDS: 570 SHRUB.
.3 HIGH POP-UPS: 570Z-12P.

.2 Rotor spray pop-ups:
PREFERRED SUPPLIER
.1 Hunter:
.1 TURF AREAS: PGP.
.2 HIGH POP-UPS: PGP-12.

.3 RAIN BIRD:
.1 TURF AREAS: T-4-PC/FC
.2 SHRUB BEDS: T-5-PC/FC
.3 HIGH POP-UPS: T-12-PC/FC

.4 TORO:
.1 TURF AREAS: S600L PC/FC #3 NOZZLE.
.2 SHRUB BEDS: S600S PC/FC #3 NOZZLE
.3 HIGH POP-UPS: S600HP PC/FC #3 NOZZLE.

2.3 Electrical Wiring and Service

.1 High voltage:
.1 Electrical service to automatic controller shall be in accordance with Division 16. Provide final hookup to equipment as part of the Work of this Section. This work is to be done by and co-ordinated with electrical contract.

.2 Low voltage:
.1 Connections between controller and remote control valves shall be made with direct burial AWG-UF, 600 volt wire, 14 gauge or larger, insulation thickness 3/64", utilizing low density high molecular weight polyethylene insulation.
.2 Splices, where permitted, shall be waterproofed using Rainbird, Snap-Rite, Scotch-Lok No 3576 Connectors, or approved equal.
.3 pilot wires shall be a different colour for each 600V wire, 16 gage wire can be used.
.4 For distances less than 500 feet, direct burial, AWG-UF, controller. Common wires shall be white with a different colour stripe for each controller. Minimum size shall be No. 14 gage.

2.4 Solenoid Valves

.1 Irritrol series 216B
for all stations (zones).

2.5 Controller

.1
MODEL ACC-99D-IMMS CONTROLLER, BY HUNTER INDUSTRIES, OR APPROVED EQUAL.

CONTROLLER TO BE WALL MOUNTED AS PER MANUFACTURERS SPECIFICATIONS.

THE ET SYSTEM SHALL BE HUNTER INDUSTRIES MODEL ET SYSTEM. THE WIND SPEED SENSOR SHALL BE HUNTER INDUSTRIES MODEL ET WIND.
THE COMPATIBLE IRRIGATION CONTROLLERS SHALL BE HUNTER INDUSTRIES MODEL [PRO-C, ICC, ACC] EQUIPPED WITH SMARTPORTS.
CONTROLLER MUST HAVE THE FOLLOWING FEATURES:

1. MASTER ON/OFF SWITCH THAT PERMITS SYSTEM SHUTDOWN WITH PROGRAMMING MAINTAINED.
2. ET CAPABILITY
3. INDEPENDENT STATION PROGRAMMING.
4. INDEPENDENT STALLON LIMING.
5. MANUAL OPERATION OFLLON.
6. VARIABLE DAY CYCLE.
7. BATTERY POWERED MODELS NOT PERMITTED.

(Include rain sensor)

2.6 Joint Cement and Primer

.1 Non-pressure plastic pipe and fittings (lateral pipes) shall be cemented in the same manner as pressure plastic pipe.

.2 Pressure plastic pipe and fittings shall be coated with a primer and then with a 100% active solvent.

.3 Both prime and solvent shall be similar in all respects to that manufactured by Christy's or approved equal.

2.7 Valves

.1 Gate valves:
.1 3" and smaller (unless otherwise noted on Drawings): ASTM B 62 brass body, 150 lb saturated steam-rated with screwed joints, non-rising stem, screwed bonnet, solid wedge disc. Provide with bronze handwheel. Nibco, or approved equal, by Mechanical Contract.

2.8 Valve Boxes

.1 Single valves: NDSO model VB010.

.2 Double valves: NDSO model VB012.

.3 More than two valves: NDSO Jumbo Series.

2.9 Piping and Fittings

.1 Pressure supply lines 1 1/2" and smaller downstream of backflow prevention unit shall be CSA approved 100 psi polyethylene pipe. Pressure lines 2" and larger shall be Class 160 PVC.
.1 Threaded nipples: standard weight, Schedule 80, CSA approved, with molded threads.
.2 All fittings under constant pressure: main line, turf valves and upstream side of automatic valves to be sch 80 pvc or galvanized steel. All galvanized insert fittings to be double clamped. Fittings on lateral pipe to be pvc insert fittings clamped with stainless steel bolt and clamp combination.

.2 Metal:
.1 Galvanized pipe: CSA Schedule 40 mild steel with threaded connections.
.2 Fittings: medium galvanized screwed beaded malleable iron.
.3 Protective coating: two coats of Koppers No. 50 Bitumastic.

.3 Visible pipe and fittings:
.1 General: integral gray colour.
.2 Threaded risers and nipples: Schedule 80 PVC.
.3 Other risers and fittings: Schedule 40 PVC, solvent weld.

.4 Sleeves:
.1 For roadways 6" drainage pipe or 4" PCV pipe, by irrigation contractor.
.2 For pathways 4" PVC pipe, by irrigation contractor.

.5 Conduit: Schedule 80 PVC.

.6 Water Supply and Backflow prenventor: Water supply will be provided in SPRINKLER-RM
Back Flow Prevention device to be provided as well, by Mechanical Contract. Size: 50MM per Municipal standards

2.10 Pump - IF REQUIRED

PUMP TO BE INSTALLED BY IRRIGATION CONTRACTOR, COORDINATE WITH ELECTRICAL CONTRACT, POWER OUTLET TO BE PROVIDE BY ELECTRICAL CONTRACT.
BERKELEY 11/2 HP, SINGLE PHASE.
MODEL # CP1XPHS
CAT # 539522
11/2" SUCTION INTAKE
11/4" DISCHARGE, HEX REDUCER UP TO 2" IMMEDIATELY AT PUMP TO ENSURE 55 GPM.

PART 3 - EXECUTION

3.1 Examination

.1 Examine surfaces for conditions that shall adversely affect execution, permanence and quality of Work.
.1 Verify that grading has been completed and the work of this Section can properly proceed.
.2 Exercise care in excavating and working near existing utilities. Be responsible for existing utilities and for damages to utilities which are caused by operations or neglect. Check existing utility drawings for locations.

3.2 Water Source

.1 50MM in SPRINKLER-RM

3.3 Electrical Requirement

.1 A 120 V outlet is to be provided in SPRINKLER-RM for sprinkler system. 120 V outlet by electrical contractor.

.2 Conduit: all exposed wires to be installed in rigid conduit.

3.4 Pipe Installation

.1 Trenching:
.1 Trenches for sprinkler lines and wiring shall be of sufficient width (minimum of 8") to permit proper handling and installation of the pipe and fittings. A depth of 18" should be maintained.
.2 The first 4" of backfill material over the pipe shall be free of stone or any foreign objects greater than 3/4" in diameter. The top 6" of backfill shall be free of rocks over 1" or trash. Piping greater than 1¤" in diameter shall have a minimum cover of 12"
.3 Backfill shall be thoroughly compacted to 95 % Standard Proctor Density in 6" lifts and evened off with a minimum of 2" of topsoil.
.4 In rocky areas, the trenching depth shall be 2" below normal trench depth, to allow for placement of selected fill.
.5 All trenches that are opened during any particular working day shall be closed and backfilled the same day.

3.5 Pulling

.1 Where soil conditions allow the pipe depth of 18" to be met, the irrigation piping may be directly installed without trenching by use of vibratory plow. The feed blade must be equipped with a minimum bullet diameter of 1.5 times the O.D. of the pipe to be installed.

3.6 Utility Services

.1 50MM supply to be connected in SPRINKLER-RM as indicated on Drawing and make minor changes in location necessary due to actual site conditions as work of this Section.

.2 Connect to electrical service as indicated on Irrigation Plan and make minor changes in location as necessary due to actual site conditions as work of this Section.

3.7 Wiring

.1 Place wiring in the same trench and along the same routing as the pressure supply lines, unless otherwise approved.
.1 Install wiring prior to main line whenever possible.
.2 When more than one wire is placed in a trench, tape wires together at maximum 10' O.C.

.2 Provide a 12" expansion loop at each connection and directional change. Provide a sufficient length at each splice to allow valve bonnet to be brought to the surface without disconnection.

.3 If wires under paved areas cannot be continuous, splices shall be enclosed in an approved junction box.

3.8 Field Quality Control

.1 Contractor's responsibility:
.1 Notify Landscape Architect for the following reviews, with 1 week minimum notice.
.1 System layout.

PART 4 - MAINTENANCE

4.1 Winterization

.1 Irrigation contractor is responsible for winterizing the system in the fall and activating the system in the spring of the following year.

1
IR-3 NTS

GW Wildman

GERALDINE WILDMAN
MANAGER, DEVELOPMENT REVIEW SOUTH
PLANNING, DEVELOPMENT AND BUILDING SERVICES
DEPARTMENT, CITY OF OTTAWA

APPROVED
By wildmange at 3:42 pm, Jun 19, 2026

LEGEND

DEVELOPER: RIOCAN HOLDINGS INC.
2200 - 2300 YONGE ST. TORONTO
ARCHITECT: LLA ARCHITECTURE+
365A - 700 LAWRENCE AVE. WEST TORONTO

GENERAL NOTES

1. Do not scale the drawings. All dimensions are in millimeters unless noted otherwise.
2. This drawing is to be read in conjunction with the overall master plan and engineering drawings prepared by the project engineer and site plans prepared by the project architect.
3. The contractor shall check and verify all existing and proposed grading and conditions on the project and immediately report any discrepancies to the consultant before proceeding with any work.
4. The contractor is to be aware of all existing and proposed services and utilities. The contractor is responsible for having all underground services and utility lines staked by each agency having jurisdiction prior to commencing work.
5. This drawing is to be used for development approval only. For layout of all work refer to construction drawings.
6. Plant quantities indicated on the plan supercede the quantities from the plant list (report any discrepancies to the landscape architect).
7. Do not leave any holes open overnight.
8. Keep area outside construction zone clean and useable by others at all times. Contractor shall thoroughly clean areas surrounding the construction zone at the end of each work day.
9. Contractor to make good any and all damages outside of the development area that may occur as a result of construction at no extra cost.
10. This drawing is Copyright MHBC 2026.

REVISION NO.	DATE	ISSUED / REVISION	BY
6.	2026.03.12	REVISED PER CITY COMMENTS 3	TT
5.	2026.02.13	ISSUED FOR TENDER	MB/TT
4.	2026.01.15	REVISED PER CITY COMMENTS 2	MB
3.	2025.10.31	REVISED PER CITY COMMENTS 1	MB
2.	2025.07.08	ISSUED FOR SITE PLAN APPLICATION	RF
1.	2025.03.21	ISSUED FOR SITE PLAN APPLICATION	RF

MHBC PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
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ASSOCIATION OF LANDSCAPE ARCHITECTS ONTARIO · GREG A. COSTA · OALA · MEMBER

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CHECKED BY: GC
CITY FILE NO.: D07-12-25-0064

PROJECT
PROPOSED REDEVELOPMENT OF WESTGATE SC
1309 CARLING AVENUE
OTTAWA, ONTARIO

NORTH

DWG NAME
IRRIGATION NOTES

DWG NO.
IR-3