Addendum No. 1: CTY-MH-2024-2



Addendum 1: March 6, 2024 Contract: CTY-MH-2024-2

### Village Green Parkette Walkway Replacement

This Addendum is issued to provide clarification to the documents and respond to questions during the RFT process. This Addendum shall form part of the Tender requirements and shall be read in conjunction therewith. This Addendum shall take precedence. Failure to acknowledge this Addendum within the Tender package to the Township of Minden Hills shall render the Bidder's Tender null and void.

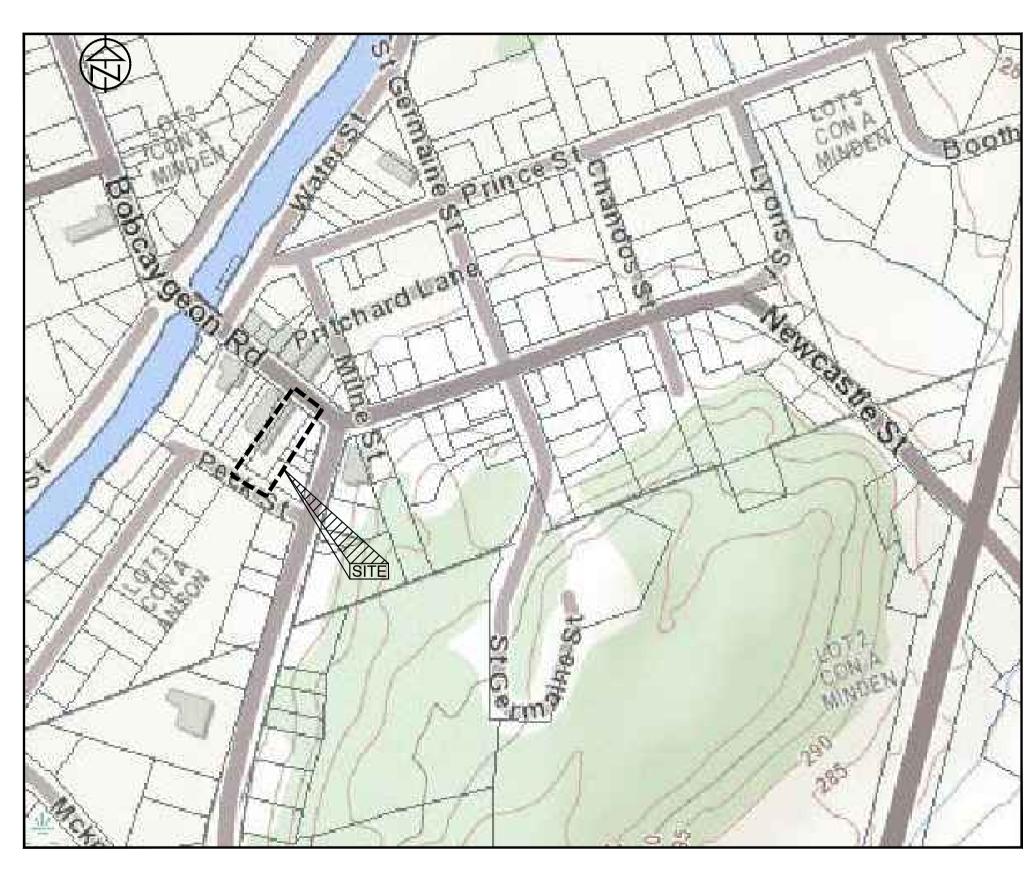
The Bidder shall sign this Addendum in the space provided below and submit this Addendum to the Township of Minden Hills as part of their Tender submission.

### **Vendor Questions**

Question 1: Do you have drawings you could provide?  Answer 1: Attached are the drawings for this project.			
This addendum is issued as part of "Contract: CTY-MH-2024-2".			
Name of Bidder:			
Signature of Bidder :			
Date:			
End of Addendum No. 1			



# VILLAGE GREEN PARKETTE WALKWAY REPLACEMENT THE TOWNSHIP OF MINDEN HILLS



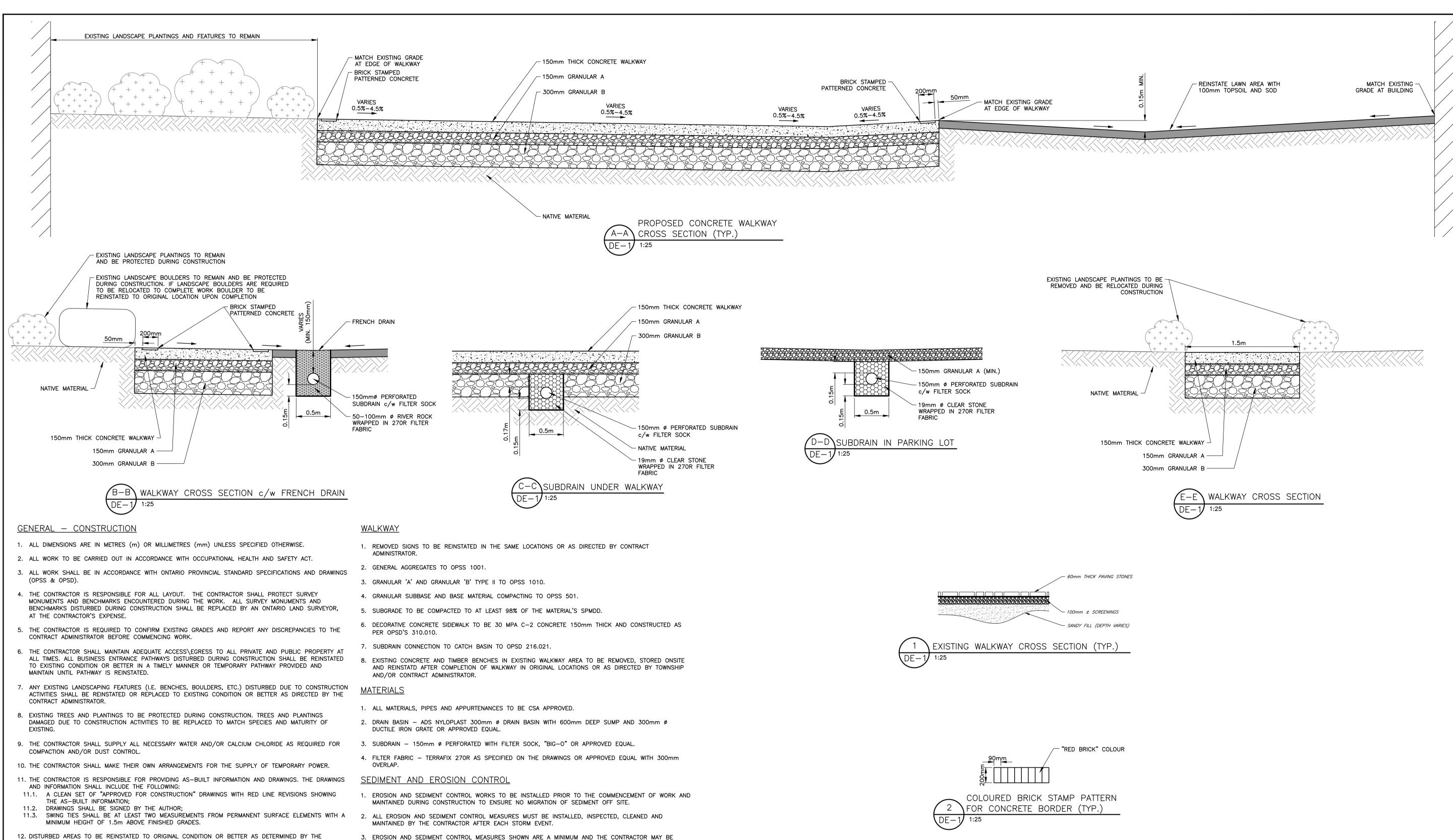
KEY PLAN N.T.S.



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GP-1	GRADING PLAN
E-1	ELECTRICAL SITE PLAN
E-2	ELECTRICAL DETAILS
E-3	ELECTRICAL SPECIFICATIONS

FEBRUARY 2024
CONTRACT NO. CTY-MH-2024-2
ISSUED FOR TENDER





13. CONTRACTOR TO SUBMIT CONCRETE MIX DESIGNS TO CONTRACT ADMINISTRATOR FOR REVIEW MINIMUM 2

### <u>REMOVALS</u>

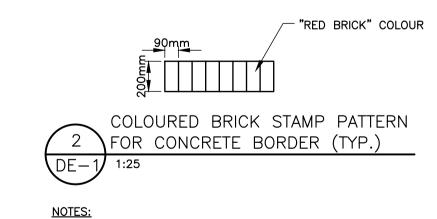
WEEKS PRIOR TO PLACEMENT.

- 1. ALL UNIT PAVER STONE WALKWAYS TO BE REMOVED AND DISPOSED OFF SITE AT A FACILITY LICENSED TO ACCEPT THE WASTE.
- 2. ALL EXISTING WALKWAY UNDERLYING GRANULARS TO BE EXCAVATED TO PROPOSED SUBGRADE ELEVATION AND DISPOSED OF OFF SITE IN ACCORDANCE WITH CURRENT MECP EXCESS SOIL MANAGEMENT
- 3. ALL TOPSOIL REMOVED DURING EXCAVATION AND GRADING OPERATIONS SHALL BE DISPOSED OF OFF SITE AT A FACILITY LICENSED TO ACCEPT THE WASTE.
- 4. TIMBER BENCHES IN THE EXISTING GAZEBO TO BE REMOVED AND DISPOSED OF OFF SITE.

### 4. ALL DISTURBED AREAS SHALL BE REINSTATED AS SOON AS PRACTICAL. <u>UTILITIES</u>

1. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR LOCATING, SUPPORTING AND PROTECTING ALL UNDERGROUND AND OVERHEAD UTILITIES AND STRUCTURES EXISTING AT THE TIME OF CONSTRUCTION IN THE AREA OF THE CONTRACTOR'S WORK, WHETHER SHOWN ON THE PLANS OR NOT, AND FOR ALL REPAIRS AND CONSEQUENCES RESULTING FROM DAMAGE TO SAME.

REQUIRED TO INSTALL ADDITIONAL WORKS, AS DIRECTED BY THE CONTRACT ADMINISTRATOR.



1. CONTRACTOR TO PROVIDE TOWNSHIP WITH PATTERN STAMP, DETAILS AND COLOUR SAMPLES FOR BRICK STAMP PATTERN FOR TOWNSHIP REVIEW AND ACCEPTANCE MIN. 2-WEEKS IN ADVANCE OF COORDINATING TO

### DISCLAIMER AND COPYRIGHT

CONTRACTOR MUST VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME. ANY DISCREPANCIES MUST BE REPORTED TO THE ENGINEER BEFORE COMMENCING WORK. DRAWINGS ARE NOT TO BE

TATHAM ENGINEERING LIMITED CLAIMS COPYRIGHT TO THIS DRAWING WHICH MAY NOT BE USED FOR ANY PURPOSE OTHER THAN THAT PROVIDED IN THE CONTRACT BETWEEN THE OWNER/CLIENT AND THE ENGINEER WITHOUT THE EXPRESS CONSENT OF

BENCHMARKS TBM1 - ELEVATION 100.00 (LOCAL) TOP OF THE SOUTH EAST CORNER OF THE CENTEPATH

1) AERIAL MAPPING PROVIDED BY TOWNSHIP OF MINDEN HILLS.

REVISION DESCRIPTION ISSUED FOR CLIENT REVIEW AUG 2023 FEB 2024 ISSUED FOR TENDER

**ENGINEER STAMP** 61 me B. J. MCKENZIE 100211168 FEB/01/2024

### **VILLAGE GREEN PARKETTE** WALKWAY REPLACEMENT **TOWNSHIP OF MINDEN HILLS**

DETAILS AND NOTES



DE-1

DESIGN:	GM	FILE:	222542-1	DWG:
DRAWN:	DFT	DATE:	FEB 2024	
CHECK:	RTM	SCALE:	AS NOTED	

TATHAM ENGINEERING LIMITED. Orawing Name: 222542-1 - DE01.dwg, Plotted: Jan 31, 2024





<u>LEGEND</u>

×97.90 PROPOSED SPOT ELEVATION

PROPOSED OVERLAND FLOW DIRECTION

#8.72

EXISTING SPOT ELEVATION

EXISTING OVERLAND FLOW DIRECTION (AREA TO REMAIN UNDISTURBED)

◆ <sup>7P-4</sup> TEST PIT LOCATION

☐ CB EXISTING CATCH BASIN

EXISTING CATCH BASIN

EXISTING DOUBLE CATCH

EXISTING DOUBLE CATCH BASIN

EXISTING EDGE OF GRAVEL PARKING AREA

PROPOSED CONCRETE

WALKWAY WITH BRICK STAMPED PATTERN BORDER

TEST PIT LOG

TP-1 - 60mm PAVERS - 100mm SCREENINGS

- 500mm SAND FILL

TP-2 - 60mm PATIO STONES

60mm PATIO STONES125mm ORGANICS (TOPSOIL)

700mm SAND FILL `500mm SANDY SILT (INCLUDING COBBLESTONE)

TP-3 - 60mm PAVERS - 100mm SCREENINGS

 700mm SAND FILL INCLUDING COBBLESTONE, ORGANICS AND ROOTS FROM GARDEN AREA

TP-4 - 200mm ORGANICS (TOPSOIL)

- 1000mm SAND FILL (SANDY SILT WITH MINOR

COBBLESTONE)

- THIN LAYER OF WINTER SAND

- 125mm ORGANICS (TOPSOIL)
- 700mm SAND FILL (SANDY SILT)
- 500mm SANDY SILT WITH MINOR COBBLESTONE

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BENCHMARKS

TBM1 - ELEVATION 100.00 (LOCAL)

TOP OF THE SOUTH EAST CORNER OF THE CENTEPATH

NOTES

1) AERIAL MAPPING PROVIDED BY TOWNSHIP OF MINDEN HILLS.

No. REVISION DESCRIPTION DATE

1. ISSUED FOR CLIENT REVIEW AUG 2023

2. ISSUED FOR TENDER FEB 2024



# VILLAGE GREEN PARKETTE WALKWAY REPLACEMENT TOWNSHIP OF MINDEN HILLS

ENGINEERING

GRADING PLAN

DESIGN: GM FILE: 222542-1

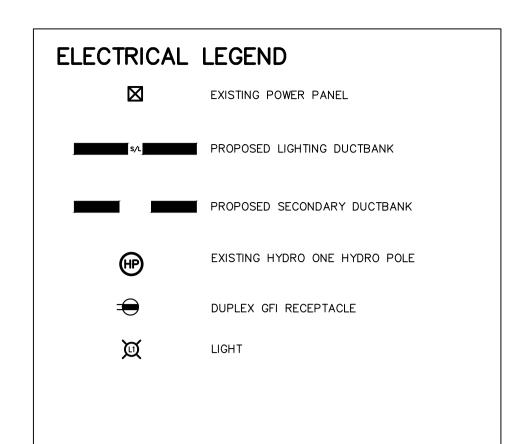
DRAWN: DFT DATE: FEB 2024

CHECK: RTM SCALE: 1:200

GP-1

TATHAM ENGINEERING LIMITED.

Drawing Name: 222542-1 - GP01.dwg, Plotted: Feb 01, 2024





ELECTRICAL LAYOUT

- SCALE 1:100

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BENCHMARKS TBM1 - ELEVATION 100.00 (LOCAL) TOP OF THE SOUTH EAST CORNER OF THE CENTEPATH AERIAL MAPPING PROVIDED BY TOWNSHIP OF MINDEN HILLS.

No.	REVISION DESCRIPTION	DATE	ENGINEER STAMP
1.	ISSUED FOR CLIENT REVIEW	JAN/24	
2.	ISSUED FOR TENDER	FEB/24	



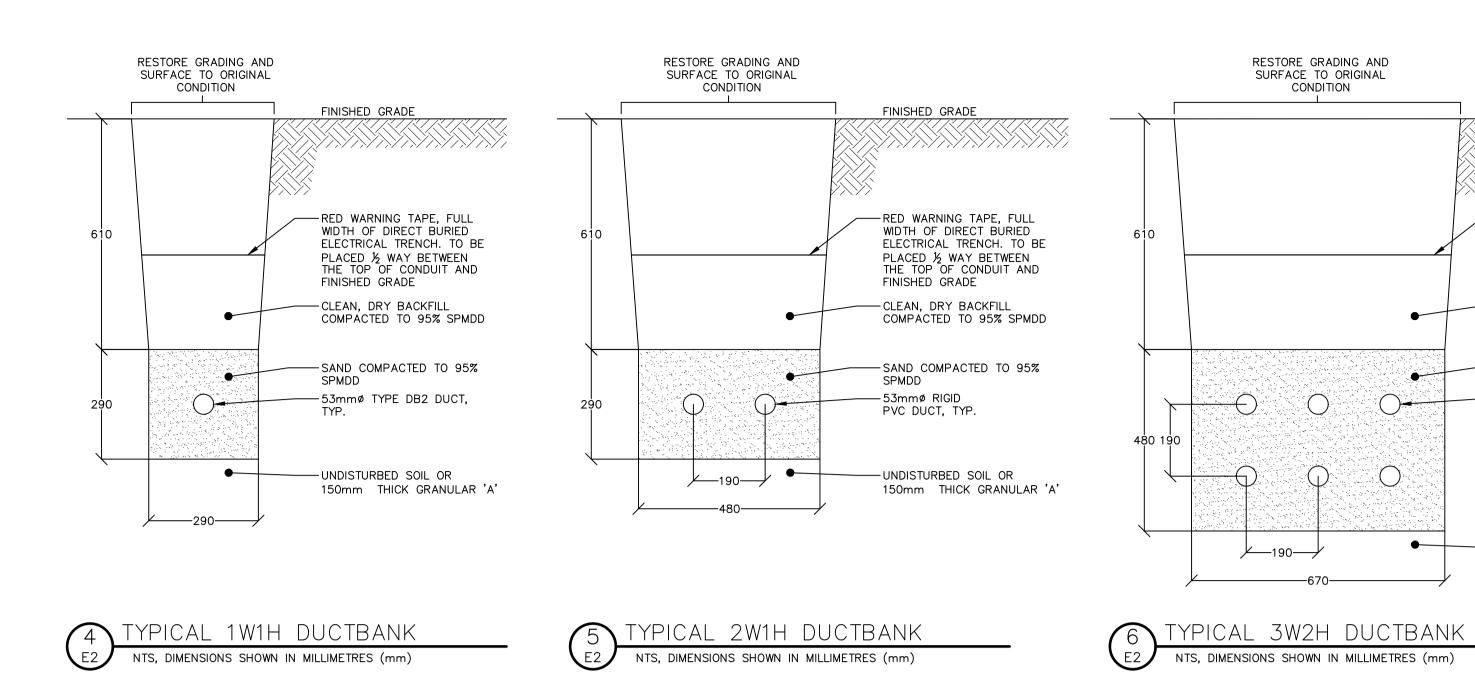
**VILLAGE GREEN PARKETTE WALKWAY REPLACEMENT TOWNSHIP OF MINDEN HILLS** 

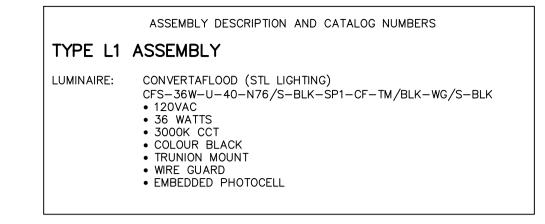


ELECTRICAL SITE PLAN

DESIGN:	AD	FILE:	222542-1	DWG:
DRAWN:	AD	DATE:	FEB 2024	
CHECK:	SRT	SCALE:	AS NOTED	

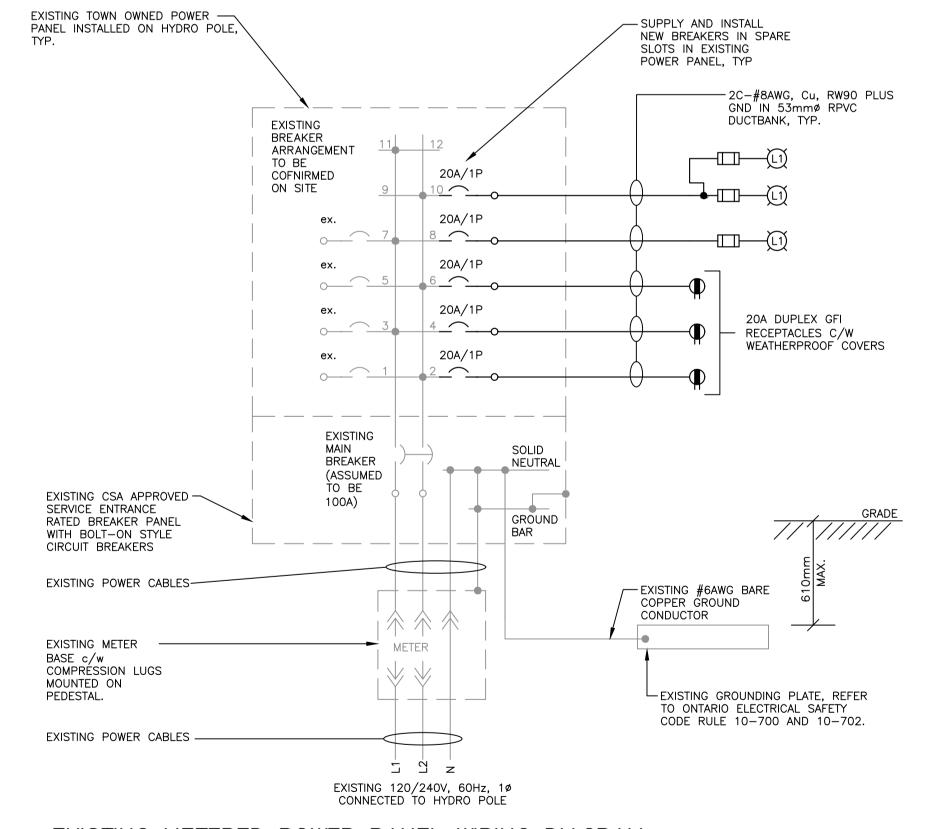
E-1





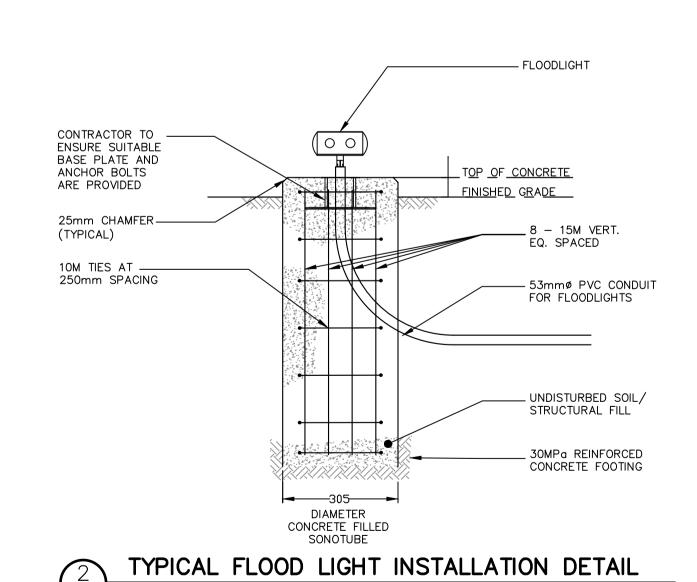
ASSEMBLY DESCRIPTION AND CATALOG NUMBERS TYPE L2 ASSEMBLY UFO PARKING GARAGE (ILP LIGHTING) UFO-28WLED-UNIV-30-SCON-BLK-SP1-WLOS 120VAC 28 WATTS 3000K CCT COLOUR BLACK SURFACE MOUNT SIDE CONDUIT EMBEDDED PHOTOCELL

TYPICAL LIGHTING SPECIFICATIONS NTS, DIMENSIONS SHOWN IN MILLIMETRES (mm)





- NTS, DIMENSIONS SHOWN IN MILLIMETRES (mm)



- NTS, DIMENSIONS SHOWN IN MILLIMETRES (mm)

FINISHED GRADE

RED WARNING TAPE, FULL

FINISHED GRADE

SPMDD

-53mmø RIGID

PVC DUCT, TYP.

-UNDISTURBED SOIL OR

150mm THICK GRANULAR 'A'

-CLEAN, DRY BACKFILL

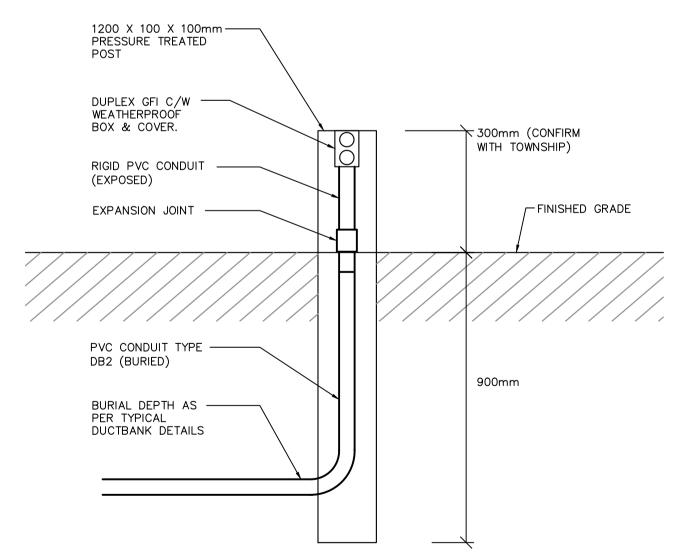
WIDTH OF DIRECT BURIED

ELECTRICAL TRENCH. TO BE

PLACED ½ WAY BETWEEN THE TOP OF CONDUIT AND

COMPACTED TO 95% SPMDD

-SAND COMPACTED TO 95%



TYPICAL RECEPTACLE POST INSTALLATION DETAIL NTS, DIMENSIONS SHOWN IN MILLIMETERS (mm)

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BENCHMARKS TBM1 - ELEVATION 100.00 (LOCAL) TOP OF THE SOUTH EAST CORNER OF THE CENTEPATH

1) AERIAL MAPPING PROVIDED BY TOWNSHIP OF MINDEN HILLS.

No.

REVISION DESCRIPTION DATE ISSUED FOR CLIENT REVIEW JAN/24 ISSUED FOR TENDER FEB/24

ENGINEER STAMP <u> 100223176</u> 1FEB'24

# **VILLAGE GREEN PARKETTE WALKWAY REPLACEMENT**

**TOWNSHIP OF MINDEN HILLS** 

DESIGN: AD FILE: 222542-1

**E-2** 

ELECTRICAL DETAILS DRAWN: AD DATE: FEB 2024 CHECK: SRT SCALE: AS NOTED

### Electrical Specifications Electrical Specifications Electrical Specifications Page 1 of 8 Page 2 of 8 Page 3 of 8 Electrical Specifications Page 4 of 8 significant changes in location of equipment to meet field conditions and receive their authorization Power and lighting circuits. Class B stranded copper conductors, 600V rated, Teck90 multi-PART 1 – GENERAL before proceeding. Obtain from the site Consultant the location of equipment not definitely located in conductor cable or RW90 insulated conductors for installation in conduit, as indicated on Shop-finish metal enclosures by application of rust resistant primer inside and out, and at least two Contract Drawings. coats of finishing enamel Size power wiring as per electrical code for all loads, with minimum #12AWG wire size. 1.1 Scope of Work Locations of ductbanks, pedestals and other equipment indicated in the drawings are approximate and Clean and touch up any surfaces on shop-painted surfaces marred during shipment or installation with Control circuits (120V): Class B standard copper, minimum size #14AWG, 600V rated, Teck90 may be subject to revision found necessary or desirable by the Consultant or Town at the time the Remove and dispose of existing GFI receptacles, as indicated on the contract drawings. paint selected to match the original multi-conductor cable or RW90 insulated conductors for installations in conduit, as indicated. work is installed. The Consultant or Town may, at their discretion, request the relocation of electrical Include an insulated green copper conductor for ground wire in all conduits and cables. Supply and install new flood lighting, including power cables in ductbank, as indicated on the contract equipment within three metres of that shown prior to roughing in. This relocation shall be at no Wire brush and prime using a zinc-rich coating on any non-coated steel hangers, racks and fasteners Contractor to verify voltage drop per rating for each load from panel board. additional cost. to prevent rusting. Supply and install new GFI receptacles complete with waterproof covers, including power cables in Drawings do not generally indicate the number of wires within conduits for outlets and fixtures. Provide 2.2 Rigid PVC 1.10 Equipment Identification ductbank, as indicated on the contract drawings the correct wire size and quantity as required by the indicated circuitry and control diagrams Direct Buried ducts: Rigid PVC conduit, schedule 40 pipe dimensions, complies with CSA C22.2 No. Supply and install new canopy mounted lighting in gazebo and reconnect to existing wiring, as Provide nameplates for all electrical equipment listing equipment identifier and function. 211.2-06. Unless otherwise required by the local hydro utility standards 1.6 Shop Drawings indicated on the contract drawings. Concrete encased ducts: PVC type DB2 conduit, complies with CSA C22.2 No.211.1-06. Submit shop drawings in accordance with general Contract Conditions and include arrangement .1 Lamicoid 3 mm thick plastic engraving sheet, black face, white ore, mechanically attached with Coordinate equipment locations and ductbank routing with Town staff, ensure suitable clearances to drawings, bill of materials, diagrams, nameplate drawings and product data as applicable for the existing infrastructure. stainless steel screws or rivets. following equipment: NAMEPLATES: Coordination with civil contractor accordingly. Panelboard and breakers PVC, opaque solvent welded type couplings, bell end fittings, plugs, caps, adaptors, split ducts as Size 1: 1 line, 3 mm high letters Flood lights All fees for Electrical Safety Authority and Hydro One (HONI), including connection fees are to be required to make complete installation. Size 2: 1 line, 6 mm high letters Canopy lights Expansion joints and wobble joints. GFI receptacles and waterproof covers Size 3: 2 lines, 6 mm high letters Coordinate all inspections required by ESA, HONI and Town during construction. .3 PVC angle couplings: 90°, 45° and 22.5° bends with 915mm diameter radius bends (long sweeps). Size 4: 1 line, 12 mm high letters .2 Shop drawings shall provide all necessary details and information: .9 All service entrance and distribution equipment as noted on drawings is provided under this contract. to allow the Consultant to assess that the equipment is in accordance with the Contract Size 5: 2 lines, 12 mm high letters Solvent weld compound for all PVC duct joints. Provide all required equipment, verification, testing and third-party commissioning as required by this Size 6: 1 line, 25 mm high letters to be suitable for binding into the operations and maintenance manuals; and specification. 2.4 Markers Size 7: 2 lines, 25 mm high letters to be stamped and signed by the Contractor, thereby indicating that they have checked that the Concrete type cable markers: 600 x 600 x 100 mm, with the words "cable," "joint" or "conduit" equipment offered conforms to the requirements of the Contract Documents. Wording on nameplates to be approved by Engineer prior to manufacture. 1.2 Standards impressed in top surface, with arrows to indicate change in direction of duct runs. Product data sheets shall include the name of the manufacturer and be clearly marked to show which Allow for average of twenty-five (25) letters per nameplate. Provide all products and services in accordance with the latest addition of the following codes and items, features and options are offered. Identification to be English. Ontario Electrical Safety Code, latest edition applicable. Shop drawings that are not presented as required will be returned for revision and resubmission. .1 Rigid interlocking plastic material, for the conduit diameters and spacing required on drawings. Disconnects, starters and contactors: Size 4, indicate equipment description and voltage. Canadian Standards Association Shop drawings will be returned marked 'Revise and Re-submit for Review,' 'Reviewed as Modified' or Ontario Building Code, Latest Edition. Terminal cabinets, pull and junction boxes: Size 2, indicate panelboard system and voltage. 2.6 Cable Pulling Equipment 'Reviewed.' Do not procure or start manufacture before receipt of submitted drawings stamped as HONI installation standards. 'Reviewed' or 'Reviewed as Modified' by the Consultant. Transformers: Size 5 indicate tag number, kVA capacity, phases, system primary and secondary .1 6 mm stranded nylon pull rope with tensile strength of 5 kN installed in all ductbanks 1.3 Permits, Fees and Inspection The review of shop drawings by the Consultant does not relieve the Contractor of their responsibilities for compliance with the Contract Documents. Coordinate all requirements for power service and electrical inspection with local hydro authority Provide a typewritten circuit directory with clear plastic cover for each panel board in a suitable holder on the inside of each panel door. Indicate breaker circuit number, rating, load description, and (HONI), as required. Panelboards: product of one manufacturer. 1.7 Construction Record Drawings associated load data. On outside of panel board door, indicate tag number, capacity, phases and .2 Provide all licenses, permits and certificates required by the local authorities at no additional expense Designed for service entrance (as indicated) c/w main breaker rated 22kAIC. Main and feeder breakers Keep one set of all applicable contract (including updates) and shop drawings at the site. must be series rated for 22kAIC. Arrange and pay for inspection(s) of the Works by the authorities having jurisdiction For all buried incoming ducts provide a "buried cable" marker on the building where the buried service Ensure that the latest issue drawings are marked up to reflect the work as installed and have these Panelboard: bus and feeder breakers rated for 10,000 A (symmetrical) interrupting capacity or as Upon completion of the Work, provide the Consultant with final, unconditional certificates of approval available for the Consultant's review at site. by the local inspection authorities. Upon completion of the work, transfer all revisions to a clean set of prints and update electronic PART 2 – PRODUCTS Sequence phase bussing with odd numbered breakers on left and even on right, with each breaker AutoCAD drawings submit them to the Consultant as part of the final job documentation. 1.4 Examination of the Site and Contract Documents identified by permanent number identification as to circuit number and phase. 2.1 Basic Materials Examine Drawings and Specifications of the complete Project and become familiar with all local site Panelboards: voltage mains, number of circuits, and number and size of branch circuit breakers as 1.8 Operating and Maintenance Manual Grounding Produce operating and maintenance manuals for all Division 16 work and submit two complete Ground and bond metallic water pipes and electrical equipment in accordance with hydro Submission of Tender confirms the Contractor accepts the Contract and site conditions without Two keys for each panelboard (and key alike). preliminary copies for the Consultant's review. Ground secondary surge protection to 3mx20mm galvanized steel ground rod buried at position Copper buses with neutral of same ampere rating as mains. Submit four final approved copies of the operating and maintenance manuals at project completion. of protective device without damage to other services. .3 Failure to determine the existing conditions or the nature of the construction shall not be a basis for Copper ground bar Coordinate installation of materials and equipment with work of other trades. Report any conflicts to Install an AC ground grid system as per section 10 of the Electrical Code. granting compensation. Mains: suitable for bolt on breakers. .2 Ducts, Conduits and Fittings 1.5 Construction Drawings Coordinate with local utilities (hydro and telephone) and obtain all necessary information to ensure Rigid PVC conduit, CSA approved, sizes as indicated on drawings for direct buried duct banks .10 Trim and door finish in accordance with Section 16010 – Electrical General Requirements. proper functioning of all the installed equipment. Notify the Consultant in writing of any resultant The electrical drawings are diagrammatic, intended to convey the scope of work and indicate general Base panelboards on CSA C22.2 No. 29 - specification. All exterior exposed conduits to be rigid PVC, sunlight resistant arrangements of equipment. Do not scale drawings unless a scale is identified. .12 Panelboard Breakers: Relocate equipment and/or material installed, but not coordinated with the work of other trades as Wire and Cable Have the location of ductbanks, pedestals and other equipment shown in the drawings reviewed by the Breakers with thermal and magnetic tripping in panelboards except as indicated otherwise. .1 Service entrance cables: refer to contract drawings directed by the Consultant, at no extra cost. Consultant or Town before proceeding with the installation. Inform the Consultant or Town of Electrical Specifications Electrical Specifications Electrical Specifications Page 5 of 8 Page 6 of 8 Electrical Specifications Page 8 of 8 Pull through each duct wooden mandrel not less than 300 mm long and of diameter 6 mm less than Main breaker: separately mounted on top or bottom of panel to suit service and cable entry. 3.7 Field Quality Control When mounted vertically, down position should open breaker. internal diameter of duct, followed by stiff bristle brush to remove sand, earth and other foreign matter. .1 After installation perform potential and continuity tests and ensure that all ground connections are Pull stiff bristle brush through each duct immediately before pulling-in cables. properly made and made good any equipment or material which fails the tests before energizing the Bolt-on moulded case circuit breaker: quick-make, quick-break type, for manual and automatic Install markers as required or as indicated. operation with temperature compensation for 40°C ambient. 3.1 Coordination of Protective Devices (Coordination Study) Common-trip breakers; with single handle for multi-pole applications. 3.4 Markers 3.8 Testing and Commissioning Ground fault protection circuit breakers: Class A type, 120V AC, complete with automatic shunt It is understood that the gather of information to complete the Protection Device Evaluation is the trip, zero sequence transformer and facilities for testing and reset pushbuttons. Mark location of duct runs under hard surfaced areas not terminating in manhole with railway spike .1 Provide testing and commissioning of all electrical work. Notify the Consultant at least three working responsibility of the contractor. driven flush in edge of pavement, directly over run. Place concrete duct marker at ends of such duct days before the testing and commissioning is scheduled to start. The Consultant may request Ensure all protective devices ratings and settings are properly coordinated to suit the actual equipment 2.8 Lighting – Luminaire Schedule runs. Construct markers and install flush with grade. repetition of any test for which due notification was not received supplied and/or installed or to which it is being connected. Refer to Contract Drawings for all lighting products (i.e., luminaries, exit signs, emergency battery Mark ducts every 150 m along straight runs and changes in direction. .2 Provide insulation test using 500V megger on the utility supply cables. Record and submit to Engineer all protective devices settings. Where markers are removed to permit installation of additional duct, reinstall existing markers. Provide a system co-ordination time-current curves on Log-Log paper (Keuffel & Esser Co., #48-5258) .2 Provide all necessary mounting brackets, hangers, etc., as required for installation. for all protective devices. Include but not be limited to the following: Lay concrete markers flat and centered over duct with top 25 mm above earth surface. **END OF SECTION** All protective devices on 600V and 240/120V systems. 2.9 LED Luminaire Assemblies Provide drawings showing locations of markers. Supply authority's power cables and fuse curves. The LED driver shall be securely mounted inside the fitter, for optimized performance and Damage curves for main power supply transformer(s): 3-phase, phase-ground, phase-phase 3.5 Cable Installation in Ducts and inrush current point The LED driver shall be supplied with a quick-disconnect electrical connector on the power Molded case circuit breaker trips - thermal and instantaneous. Install cables as indicated in ducts. supply, providing easy power connections and fixture installation Starting current of largest motor on the system including the offset of the running load. The driver shall be UL Listed or Recognized, have a power factor not less than 90%, and a Do not pull spliced cables inside ducts. Damage curves for high and low voltage power cables. THD no greater than 20% at full load. Three-phase RMS bolted fault values, phase-to-phase and phase-to-ground. Install multiple cables in duct simultaneously. The driver shall have overload as well as short circuit protection. Engine-Generator Set 1-phase RMS bolted fault valves, phase-to-phase and phase-to-ground. The driver current shall be constant current design. Use CSA approved lubricants of type compatible with cable jacket to reduce pulling tension. The driver shall be a DC voltage output. Submit all data for review sufficiently in advance of equipment ordering. To facilitate matching of colour coded multiconductor control cables reel off in same direction during The driver shall have a minimum efficiency of 90%. installation. 3.2 Grounding .2 Light Sources Before pulling cable into ducts and until cables properly terminated, seal ends of lead covered cables The luminaire shall use high output, high brightness LEDs. Provide a complete grounding system in accordance with the code and any service having jurisdiction. with wiping solder; seal ends of non leaded cables with moisture seal tape. The LEDs shall be attached to the printed circuit board with not less than 90% pure silver to Ground all electrical equipment, including distribution panels, lighting fixtures, motors, conduits, insure optimal electrical and thermal conductivity receptacles, wiring and control devices. Ensure conduits make a good mechanical connection at all The LEDs and printed circuit boards shall be protected from moisture and corrosion by a points to maintain a continuous metallic ground throughout the complete system. conformal coating of 1 to 3 mm. .1 Install lighting luminaries as shown on the drawings and in accordance with the manufacturer's The LEDs and printed circuit board construction shall be environmentally friendly and 100% Ground all plumbing and mechanical services inside buildings to ensure that no item of equipment is recyclable. They shall not contain lead, mercury or any other hazardous substances and shall Replace any new luminaries showing marks or scratches due to handling or tool marks at no cost to be RoHS compliant. Provide ground bushings to all stubbed-up metallic conduits under panels and interconnect to ground The LED life rating data shall be determined in accordance with IESNA LM-80-08. Testing must be done with a complete assembled luminaire. Install all luminaries accurately in line and level. Align luminaries shown in continuous rows and in Provide grounding electrodes in accordance with the requirements of the code and any service .3 Performance The LED arrays are built in series-parallel circuits which maintain overall light output in the Provide and install any additional support brackets, clamps, channels, hangers, etc., necessary to event of single LED failures. Provide separate insulated ground wire in all metal or plastic conduits buried in earth or installed in or install the luminaries where shown. Do not support luminaries from ducts, piping or equipment. Ensure The LED and LED driver shall operate over -40°C to +50°C ambient air temperature range. that all installed luminaries are freely accessible.

DISCLAIMER AND	COPYRIGHT
CONTRACTOR MUST V BE RESPONSIBLE FOR	

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ENSIONS AND **NISCREPANCIES** MUST BE REPORTED TO THE ENGINEER BEFORE COMMENCING WORK. DRAWINGS ARE NOT TO BE TATHAM ENGINEERING LIMITED CLAIMS COPYRIGHT

Warranty

TO THIS DRAWING WHICH MAY NOT BE USED FOR ANY PURPOSE OTHER THAN THAT PROVIDED IN THE CONTRACT BETWEEN THE OWNER/CLIENT AND THE ENGINEER WITHOUT THE EXPRESS CONSENT OF

(outdoor) with a minimum 70 CRI (+/- 5%).

BENCHMARKS TBM1 - ELEVATION 100.00 (LOCAL)

TOP OF THE SOUTH EAST CORNER OF THE CENTEPATH

The indoor high performance white LEDs will have a minimum 50,000 hour L<sub>70</sub> value rated at

The outdoor luminaires and drivers shall be free from all defects in materials and workmanship

Manufacturer shall warrant the LED boards/system, during the stated warranty period, against

The high brightness, high output LEDs shall be a maximum colour temperature of 3000K

for a minimum period of ten (10) years from the date of manufacture.

failure defined as more than three (3) simultaneous non-operating LEDs.

Warranty shall include all labour costs associated with replacement of the luminaires.

1) AERIAL MAPPING PROVIDED BY TOWNSHIP OF MINDEN HILLS.

3.3 Direct Buried Duct Banks

throughout their entire length.

Provide separate ground conductor through all flexible conduit connections.

Rigid PVC ducts for direct burial shall be of the type approved for direct burial.

Slope ducts with 1 to 400 minimum slope. Solvent weld (glue) all PVC duct joints.

approved PVC solvent supplied by the conduit manufacture Provide protection covers or planks, where required or indicated.

Ensure that the trench bottom is of undisturbed soil or soil compacted to a density of 95% of the

Ensure all couplings used to join PVC conduits are given a tight fit. Make connections with an

Install pull cord in each duct with 3 m spare cord at each end and cap until ready for use.

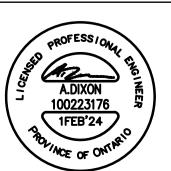
maximum dry density, free of stones and uniformly graded to give continuous support to the rigid ducts

No. REVISION DESCRIPTION DATE ISSUED FOR CLIENT REVIEW JAN/24 ISSUED FOR TENDER FEB/24

ENGINEER STAMP

the Engineer before proceeding with fixture installation.

immediately and do not proceed until adjustments are approved



Check area for interference from piping, ductwork and equipment, and obtain written authorization from

Cooperate with the ceiling materials contractor. Ensure installation of a luminaries are in correct

All interior fluorescent luminaires to be installed directly to ceiling structure or as noted on drawings

location in relation to ceiling, and luminaries are suitable for the ceiling installed. Ensure no

Provide fire rated drywall enclosure for all recessed luminaires mounted in fire rated ceilings.

Coordinate work with all other divisions. If interferences are discovered advise the engineer

obstructions exist over ceiling, which will interfere with the installation of the luminaries.

# **VILLAGE GREEN PARKETTE WALKWAY REPLACEMENT**

ELECTRICAL SPECIFICATIONS

**TOWNSHIP OF MINDEN HILLS** 

DESIGN: AD FILE: 222542-1 DRAWN: AD DATE: FEB 2024 CHECK: SRT SCALE: AS NOTED

**E-3**