GENERAL NOTES

1. THE ONTARIO BUILDING CODE, 2012 EDITION (LATEST REVISIONS) AND THE CITY OF TORONTO'S ACCESSIBILITY AND DESIGN GUIDELINES (TADG) CURRENT DRAFT VERSION, SHALL BE THE BASIS FOR THE DESIGN AND CONSTRUCTION OF THIS WORK.
2. ALL DIMENSIONS GIVEN ON THE DRAWINGS MUST BE FIELD CHECKED AND ANY INCONSISTENCIES REPORTED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
3. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT 1980, REG. 213/91, LATEST REVISIONS.
4. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH CURRENT PROVINCE OF ONTARIO AND CITY OF TORONTO STANDARDS.

GENERAL CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL CONSTRUCT TEMPORARY MEASURES TO CONTROL SILT ENTERING THE STORM DRAINAGE SYSTEM TO THE SPECIFICATIONS OUTLINED IN THE GUIDELINES ON EROSION AND SEDIMENT CONTROL FOR URBAN CONSTRUCTION SITES PREPARED BY THE MINISTRY OF NATURAL RESOURCES. THESE MEASURES ARE TO BE INSTALLED PRIOR TO COMMENCING ANY CONSTRUCTION FOR THIS PROJECT AND ARE TO REMAIN IN PLACE UNTIL CONSTRUCTION HAS BEEN COMPLETED TO THE SPECIFICATIONS OF THE CITY ENGINEER.
2. THE CONTRACTOR IS TO MEET ALL THE REQUIREMENTS OF THE OWNERS OF THE UTILITIES ON THIS PLAN AND MUST MAKE SATISFACTORY ARRANGEMENTS WITH THE UTILITY COMPANIES FOR CROSSING THEIR INSTALLATIONS AND FOR PROVIDING ADEQUATE PROTECTION DURING CONSTRUCTION.
3. ALL ORGANIC, UNSTABLE OR UNSUITABLE MATERIALS BENEATH THE ROAD ALLOWANCE OR FOUNDATIONS MUST BE REMOVED AND THESE AREAS BACK FILLED WITH AN APPROVED FILL MATERIAL, ALL TO THE SATISFACTION OF AN INDEPENDENT TESTING COMPANY.

DEMOLITION & REMOVALS

1. REMOVE EXISTING MATERIALS AND COMPONENTS AS NOTED ON DRAWINGS. NOTIFY THE CONSULTANT IMMEDIATELY (AND PRIOR TO PROCEEDING) IF ADDITIONAL REMOVALS ARE REQUIRED IN ORDER TO FACILITATE THE COMPLETE SCOPE OF THE WORK.
2. THE CONTRACTOR SHALL NOTIFY THE CONSULTANT IF ADDITIONAL REMOVALS ARE REQUIRED IN DETERIORATED AREAS (WHERE REHABILITATION WORK IS INTENDED). CONTRACTOR IS NOT TO PROCEED UNTIL THEY HAVE WRITTEN APPROVAL TO DO SO.
3. ALL DEBRIS AND GARBAGE MUST BE PROMPTLY REMOVED FROM THE SITE AT THE END OF EACH DAY.
4. EVERY EFFORT SHALL BE MADE BY THE CONTRACTOR TO RECYCLE ALL BUILDING MATERIALS, WHERE FACILITIES EXIST. THE CONTRACTOR IS RESPONSIBLE FOR ALL CHARGES AND FEES ASSOCIATED WITH THE REMOVAL OF GARBAGE AND ITEMS FOR RECYCLING. THE CONTRACTOR IS ALSO ENTITLED TO ANY REIMBURSEMENT FROM THE RECYCLED MATERIALS.
5. EXERCISE SPECIAL CARE DURING REMOVALS IN FINISHED AREAS TO NOT DAMAGE EXISTING SURFACES.
6. ALL SURFACES DAMAGED DURING CONSTRUCTION ARE TO BE RESTORED TO PRE-CONSTRUCTION CONDITION OR BETTER.

SITE SAFETY

1. PORTIONS OF THE SITE ARE TO REMAIN IN-USE DURING CONSTRUCTION. ENCLOSE WORK AREA WITH STEEL MODULAR FENCE.
2. CONTRACTOR TO PROVIDE SIGNAGE ON EXTERIOR AND INTERIOR SIDE OF BUILDING ADVISING THAT THE VARIOUS ITEMS OF CONSTRUCTION INSIDE AND OUTSIDE ARE UNDER CONSTRUCTION.
3. CONTRACTOR TO EXERCISE SPECIAL ATTENTION TO NOISE AND DUST GENERATION WITH RESPECT TO OCCUPANTS AND VISITORS DURING ALL PHASES OF THE WORK.
4. CONTRACTOR SHALL ERECT TEMPORARY PLATFORMS, SCAFFOLDING, SHORING, RAMPS, STAIRS ETC. AS REQUIRED FOR THE SAFE EXECUTION OF THE WORK.

CLOSEOUT NOTE:

THE CONTRACTOR IS TO PROVIDE ALL CLOSEOUT DOCUMENTS IN ACCORDANCE WITH THE CITY'S FRONT-END. IN ADDITION, THE CONTRACTOR IS TO ENSURE THAT ALL CLOSEOUT DOCUMENTS (INCLUDING MAINTENANCE AND OPERATIONAL MANUALS) ARE PROVIDED IN PDF.

WARRANTY NOTE:

1. AT A MINIMUM, THE CONTRACTOR IS TO PROVIDE A TWENTY-FOUR (24) MONTH WARRANTY PERIOD FOR ALL WORK UNDERTAKEN AS PART OF THIS PROJECT.
2. AT A MINIMUM, ANY SUB-CONTRACTORS AND/OR SUB-TRADES ARE TO PROVIDE A TWENTY-FOUR (24) MONTH WARRANTY PERIOD FOR ALL WORK UNDERTAKEN AS PART OF THIS PROJECT.
3. THE CONTRACTOR IS TO REFER TO THE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION ON EXTENDED WARRANTIES FOR SPECIFIC EQUIPMENT AND/OR WORK.

SHOP DRAWINGS:

1. PRIOR TO THE SUBMISSION OF SHOP DRAWINGS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND PERFORM A DETAILED SITE SURVEY INCLUDING SITE MEASUREMENTS AND ELECTRICAL RATINGS.
2. CONTRACTOR RESPONSIBLE FOR SUBMITTING SHOP DRAWINGS FOR THE NEW WORK AND ALL ASSOCIATED COMPONENTS. THIS IS TO INCLUDE PRODUCT CUT SHEETS FOR ALL ITEMS.

SHOP DRAWING SUBMITTALS

THE FOLLOWING ITEMS REQUIRE TESTING OR INSPECTION BY A CERTIFIED INDEPENDENT TESTING OR INSPECTION AGENCY, UNLESS NOTED OTHERWISE. THE AGENCY SHALL SEND COPIES OF ALL TESTING AND INSPECTION REPORTS TO THE ENGINEER FOR REVIEW.

ITEM	REQUIRED?	COMMENTS
SOIL BEARING CAPACITY	YES	BY INDEPENDENT TESTING COMPANY
SOIL COMPACTION	YES	BY INDEPENDENT TESTING COMPANY
REINFORCING STEEL PLACEMENT	YES	INSPECT FINAL PLACEMENT
CONCRETE COMPRESSIVE TESTS	YES	MINIMUM 2 SETS/100m³
CONCRETE SLUMP	YES	
STRUCTURAL STEEL BOLTING	YES	
STRUCTURAL STEEL WELDING	YES	INSPECT ALL FIELD WELDS

THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION. SUBMIT TWO COPIES UNLESS NOTED OTHERWISE.

ITEM	REQUIRED SUBMITTAL?	P.ENG. STAMP REQUIRED
REBAR SHOP DRAWINGS	YES	NO
CONCRETE MIX DESIGNS	YES	NO
STRUCTURAL STEEL SHOP DRAWINGS	YES	YES (CONNECTIONS)
JOIST/TRUSS SHOP DRAWINGS	NO	YES
MISCELLANEOUS STEEL HAND/GUARD RAILS	NO	YES
DOOR SCHEDULES, DOOR HARDWARE	NO	NO
WINDOW SCHEDULES, WINDOW HARDWARE	NO	NO
BARRIER FREE COMPONENTS FOR DOORS/WINDOWS	NO	NO
MECHANICAL EQUIPMENT	NO	NO
ELECTRICAL EQUIPMENT	YES	NO

GENERAL NOTES FOR CONCRETE WORK

1. ALL WORK SHALL CONFORM TO CAN/CSA – A23.1–14 CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION.
2. PROPER INSTALLATION OF CONCRETE IS IMPORTANT TO MINIMIZE CRACKS AND OBTAIN DESIRED CONCRETE STRENGTH. CURING: A MINIMUM AMOUNT OF CURING IS RECOMMENDED TO OBTAIN A DURABLE HARD CONCRETE. THIS CAN BE OBTAINED BY COVERING THE SURFACE WITH VISQUEEN PLASTIC IMMEDIATELY AFTER THE CONCRETE HAS HARDENED. LEAVE PLASTIC IN PLACE FOR A MINIMUM OF 7 DAYS.
   a. COLD WEATHER INSTALLATION: DO NOT ALLOW CONCRETE TO FREEZE FOR AT LEAST 7 DAYS AFTER CONCRETE HAS SET. FOLLOW RECOMMENDATION OF ACI DOCUMENT 306 TITLED "COLD WEATHER CONCRETING".
   b. HOT WEATHER INSTALLATION: DO NOT ALLOW SURFACE TO DRY BEFORE APPLYING VISQUEEN PLASTIC OR OTHER CURING MEDIUM. FOLLOW RECOMMENDATION OF ACI DOCUMENT 305R–10 TILED "HOT WEATHER CONCRETING".
3. MATERIALS:
   a. CONCRETE: 35 MPa IN 28 DAYS, 6% AIR ENTRAINMENT.
   b. CLASS OF EXPOSURE: C–1
   c. REBAR: Fy = 400 MPa (CSA G30.18–09)
4. FINISH OF CONCRETE AS NOTED BELOW:
   a. RAMPS: BROOM FINISH ON SURFACE (PERPENDICULAR TO THE DIRECTION OF TRAVEL).
   b. VERTICAL FACES: SMOOTH FORM FINISH. FILL ALL VOIDS.
5. TO AVOID UNDERMINING, BACKFILL SHOULD BE WITHIN 102 (4") OF TOP OF SLAB.
6. CONTRACTION JOINTS MUST BE CUT WITHIN 24 HOURS OF CONCRETE PLACEMENT IN INTERVALS AS SHOWN ON THE DRAWINGS.
7. MAXIMUM SLUMP IS TO BE 76 (3").
8. FOR ALL HOUSEKEEPING PADS, CHAMFER ALL EXPOSED EDGES OF CONCRETE 25 (1").
9. BRING TO THE ATTENTION OF THE ENGINEER ANY OBJECTS, OLD FOUNDATIONS OR POOR SOILS ENCOUNTERED DURING EXCAVATION.
10. REMOVE SOFTENED OR LOOSE SOIL PRIOR TO PLACING CONCRETE. RE-LEVEL AND RE-COMPACT BASE AFTER REMOVALS.
11. COMPACT BACKFILL IN 203 (8") THICK LIFTS MAXIMUM. BACKFILL TO 98% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
12. JOINT SEALANT TO BE TYPE 1 CLASS B.
13. MAINTAIN A MINIMUM OF 76 (3") COVERAGE OVER REBAR IN SLABS.

SITE SPECIFIC NOTES FOR ADJACENT SURFACES

1. THERE SHALL BE ABSOLUTELY NO EQUIPMENT OR VEHICLES OR MATERIALS STORAGE ON ANY OF THE GRASSED AREAS. THE CONTRACTOR SHALL TAKE A THOROUGH PHOTO SURVEY OF THE ENTIRE WORK AREA PRIOR TO BEGINNING ANY WORKS – THIS INCLUDES ALL THE DEAD END ENTRANCES (VAN ALLAN ROAD AND KOLLAR DRIVE). ANY AREAS OF CONCERN ARE TO BE NOTED AND BROUGHT TO THE ATTENTION OF THE OWNER AND THE CONSULTANT.
2. THE CONTRACTOR SHALL DO A THOROUGH SITE SURVEY AND ACCURATE LOCATES. THERE IS AN EXISTING UNDERGROUND TWIN STORM MAIN LINE BURIED ACROSS THE PROJECT SCOPE AREA (600 DIA. CP) AND THE PIPES ARE TO BE ACCURATELY LOCATED. ANY SERVICES DAMAGED DURING THE WORKS ARE TO BE RECONNECTED AT THE CONTRACTORS EXPENSE. CONNECTION SHALL BE LIKE MATERIAL AND THE REPAIRS MUST ENSURE FUNCTIONING SYSTEMS. THIS INCLUDES FOR ALL UNDERGROUND SERVICES (STORM SEWER, SANITARY SEWER, WATERMAINS, IRRIGATION LINES, ELECTRICAL LINES, ETC.)
3. ALL ASPHALT SURFACES DAMAGED DURING CONSTRUCTION ARE TO BE RESTORED BY THE CONTRACTOR AT THEIR EXPENSE. ALL ASPHALT RESTORATION SHALL BE WITH A MINIMUM 50mm HL3 ASPHALT COMPACTED TO 93% MAXIMUM RELATIVE DENSITY, 150mm GRANULAR 'A' OR CRUSHER RUN LIMESTONE BASE COURSE COMPACTED TO 98% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD) AND 300mm GRANULAR 'B' OR CRUSHER RUN LIMESTONE BASE COMPACTED TO 98% SPMDD. ASPHALT SUPPLIED AND PLACED IN ACCORDANCE WITH ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS (OPSS) 310 & 1150.
4. ALL GRASSED SURFACES DAMAGED DURING CONSTRUCTION ARE TO BE RESTORED BY THE CONTRACTOR AT THEIR EXPENSE. ALL GRASSED SURFACES THAT ARE DAMAGED ARE TO BE RESTORED WITH 100mm TOPSOIL AND NURSERY SOD.
5. ANY PORTABLE ITEMS (GARBAGE CANS, ETC.) THAT NEED TO BE RELOCATED TO PERFORM THE WORKS ARE TO BE REINSTATED IN THEIR ORIGINAL LOCATIONS BY THE CONTRACTOR AT NO COST TO THE OWNER.

NEW POLE REQUIREMENTS

1. NEW POLES SHALL NOT BE DIRECT BURY. ALL NEW POLES SHALL BE MOUNTED ON BASE PLATES ON CAISSONS AS PER THE DETAILS ON THESE DRAWINGS.
2. THE CAISSONS SHALL BE A MINIMUM OF 610mm (2 FEET) ABOVE THE SURROUNDING GRADE, AS PER THE DETAIL ON THESE DRAWINGS.

SCOPE OF WORK
PARK ELECTRICAL SERVICE

REFER TO SHEET No. E1.0

TH1

NEW PARK ELECTRICAL SERVICE – TORONTO HYDRO:

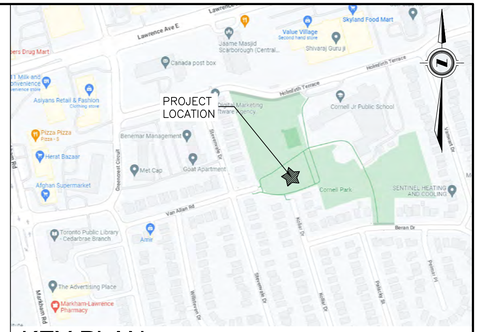
1. REFER TO TORONTO HYDRO DETAILS ON SHEET E0.2.
2. THE WORK TO BRING NEW ELECTRICAL SERVICE INTO THE PARK IS TO BE PERFORMED BY CITY OF TORONTO HYDRO CONTRACTORS AND SHALL BE PAID FOR OUT OF THE CONTRACT CASH ALLOWANCE.
3. THE GENERAL CONTRACTOR IS TO COORDINATE THIS WORK WITH TORONTO HYDRO CONTRACTOR.

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL INCLUDING ANCHOR BOLTS, PLATES AND ROLLED SECTIONS TO BE G40.21 – GRADE 44W.
2. ALL WELDING TO CONFORM TO:
   1) CSA STANDARD W59–18 "WELDED STEEL CONSTRUCTION" (METAL ARC WELDING).
   2) CSA STANDARD W55.3–08(R2018) "CERTIFICATION OF COMPANIES FOR RESISTANCE WELDING OF STEEL AND ALUMINUM".
3. STRUCTURAL STEEL FABRICATOR TO BE CERTIFIED BY THE CANADIAN WELDING BUREAU (CWB) – DIVISION 2.1.
4. ALL STRUCTURAL FIELD WELDING TO BE PERFORMED BY A CANADIAN WELDING BUREAU CERTIFIED WELDER.
   CERTIFICATES TO BE SUBMITTED TO OWNER PRIOR TO START OF WORK.
5. STRUCTURAL STEEL ERECTOR TO BE CWB CERTIFIED.
6. ALL STRUCTURAL STEEL TO RECEIVE SHOP PAINT IN ACCORDANCE WITH CANADIAN GENERAL STANDARDS BOARD (CGSB) SPECIFICATION 1–GP–40D. PRIMER, IRON OXIDE OIL ALKYD TYPE OR APPROVED EQUAL.

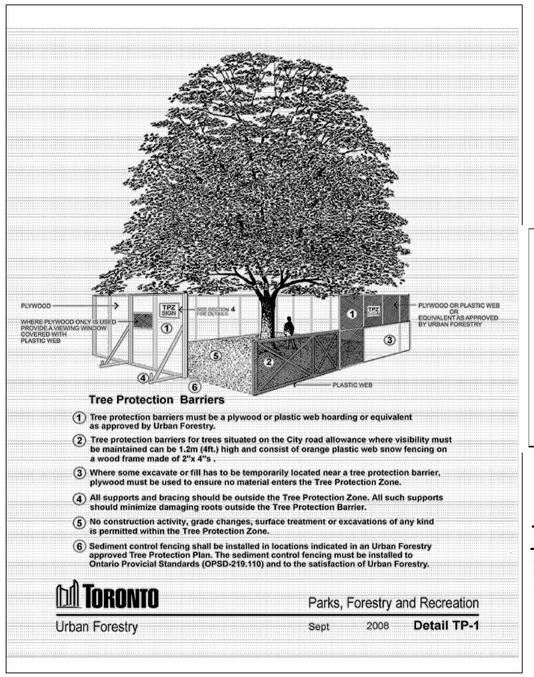
REFERENCE DOCUMENTS

1. TOPOGRAPHICAL SURVEY PREPARED BY D. POPPA SURVEYING INC., DATED 12 APRIL 2022, JOB NUMBER 22–1296.
2. PHOTOMETRIC PLAN PREPARED BY RAB DESIGN, DATED MARCH 20, 2023, REFERENCE No. LTG480a.
3. TORONTO HYDRO CONNECTION INFORMATION PREPARED BY DPM LOW VOLTAGE SERVICES, LOCATE FORM–18 BERAN DR., CREATED MAY 11, 2022.



KEY PLAN

NOT TO SCALE



TORONTO

TREE PROTECTION ZONE (TPZ)

No grade change, storage of materials or equipment is permitted within this TPZ. Tree protection barrier must not be removed without the written authorization of City of Toronto, Urban Forestry.

For information call Urban Forestry at:
(416) 338-TREE (8733)

TREE PROTECTION FENCING

NOT TO SCALE
INSTALL AS DIRECTED ON-SITE BASED ON TREE DRIPLINE(S)
APPROXIMATE QUANTITY 125 LINEAL METRES

LIST OF DRAWINGS

Sheet No. SP1	KEY PLAN, LIST OF DRAWINGS GENERAL NOTES	Sheet No. E0.0	SPECIFICATION
Sheet No. SP2	OVERALL SITE PLAN EXISTING CONDITIONS	Sheet No. E0.1	SCHEDULES & DETAILS
Sheet No. SP3	OVERALL SITE PLAN NEW WORK	Sheet No. E0.2	TORONTO HYDRO DETAILS
		Sheet No. E1.0	LIGHTING & POWER LAYOUT

	No.	REVISIONS	DATE	BY
DESIGN PTM/JAM	1	ISSUED FOR QUOTATION	APR 14/2023	JAM
DRAWN EMB/LD	2	ISSUED FOR QUOTATION	MAY 11/2023	JAM
CHECKED PTM/JAM				
APPROVED PTM/JAM				
DATE MARCH 2023				
CAD 6490Z63				

CONSULTANT

Peter T. Mitches & Associates Limited
Project Managers & Consulting Engineers
LONDON TORONTO

ENGINEER'S STAMP

REGISTERED PROFESSIONAL ENGINEER
J.A. MITCHES
100085848
MAY 11/2023
PROVINCE OF ONTARIO

ENGINEER'S STAMP

TORONTO
Parks, Forestry and Recreation
Parks Development and Infrastructure Management Branch
Capital Projects Section City of Toronto

The Contractor shall check and verify all dimensions and report all errors and omissions to OWNER Designee for his/her written direction before proceeding with the Work.

A Detail No.
B Sheet No. where detailed

SCALE

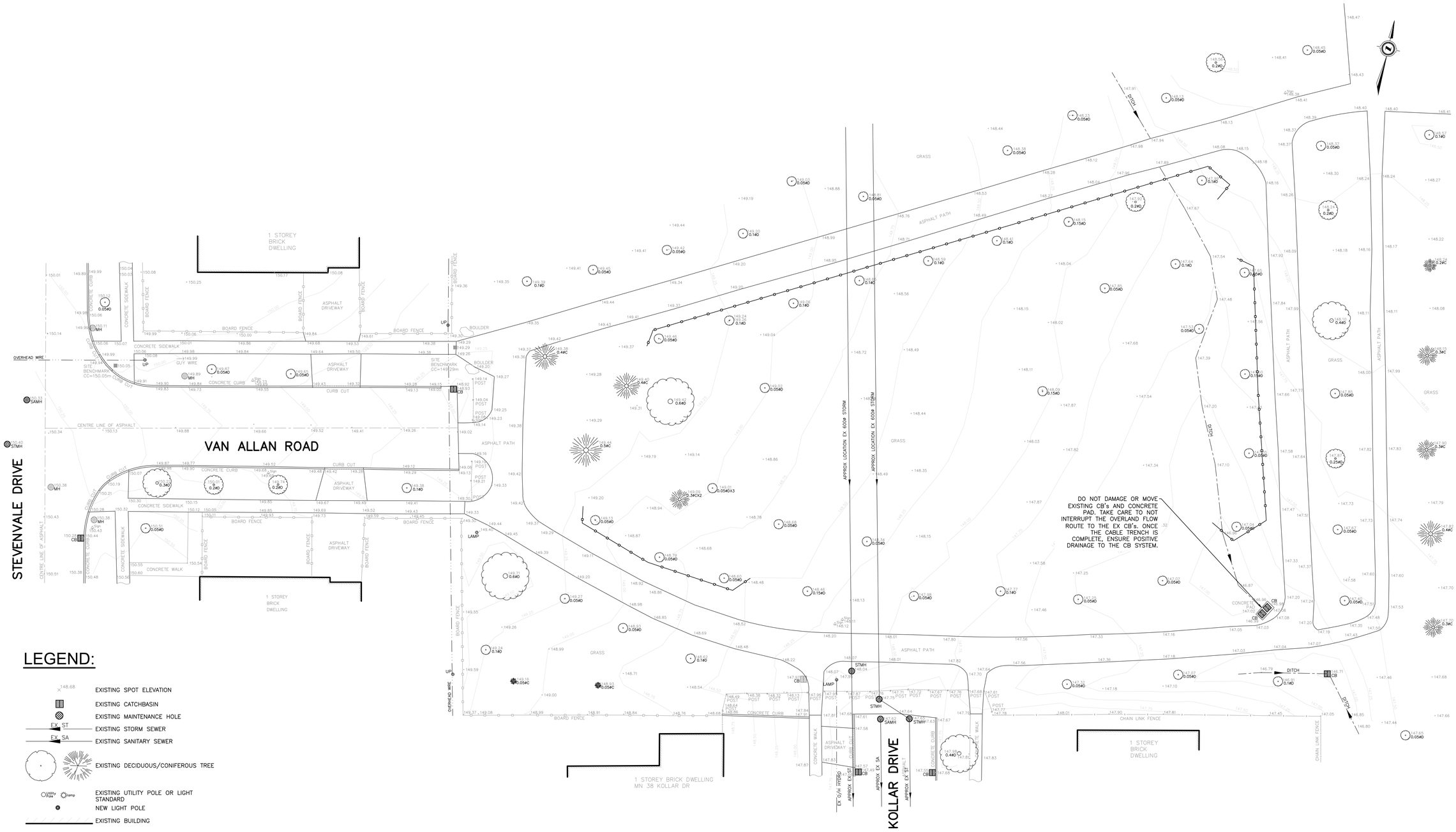
TITLE
NEW PATHWAY LIGHTING AT
CORNELL PARK TRAIL
18 BERAN DRIVE, CITY OF TORONTO

KEY PLAN
LIST OF DRAWINGS
GENERAL NOTES

PROJECT No. 6490/Z63

SHEET No. SP1

PLAN FILE No. 6490/Z63



LEGEND:

- EXISTING SPOT ELEVATION
- EXISTING CATCHBASIN
- EXISTING MAINTENANCE HOLE
- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING DECIDUOUS/CONIFEROUS TREE
- EXISTING UTILITY POLE OR LIGHT STANDARD
- NEW LIGHT POLE
- EXISTING BUILDING
- CUT CROSS
- EXISTING CONTOURS, 0.25m INTERVAL

		No.	REVISIONS	DATE	BY
DESIGN	PTM/JAM	1	ISSUED FOR QUOTATION	APR 14/2023	JAM
DRAWN	EMB/LD	2	ISSUED FOR QUOTATION	MAY 11/2023	JAM
CHECKED	PTM/JAM				
APPROVED	PTM/JAM				
DATE	MARCH 2023				
CAD	6490Z63				

CONSULTANT

Peter T. Mitches & Associates Limited
Project Managers & Consulting Engineers
LONDON TORONTO

ENGINEER'S STAMP

REGISTERED PROFESSIONAL ENGINEER
J.A. MITCHES
100085848
MAY 11/2023
PROVINCE OF ONTARIO

ENGINEER'S STAMP

TORONTO
Parks, Forestry and Recreation
Parks Development and Infrastructure Management Branch
Capital Projects Section City of Toronto

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A — Detail No.
B — Sheet No. where detailed

SCALE

SCALE – 1 : 200
2.0 0 4.0m

TITLE

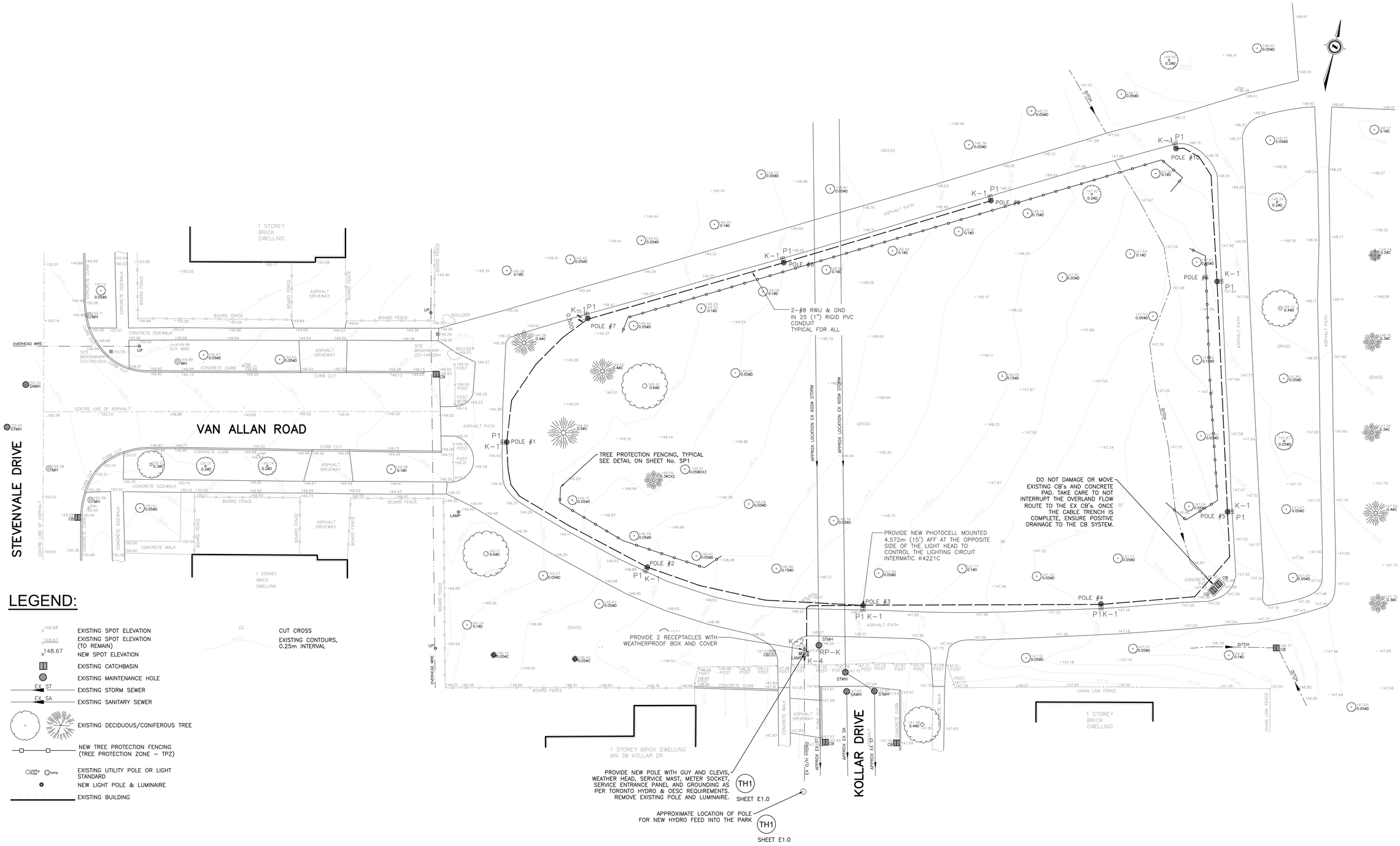
NEW PATHWAY LIGHTING AT
CORNELL PARK TRAIL
18 BERAN DRIVE, CITY OF TORONTO

OVERALL SITE PLAN EXISTING CONDITIONS

PROJECT No. 6490/Z63

SHEET No. SP2

PLAN FILE No. 6490/Z63



LEGEND:

- EXISTING SPOT ELEVATION
- EXISTING SPOT ELEVATION (TO REMAIN)
- NEW SPOT ELEVATION
- EXISTING CATCHBASIN
- EXISTING MAINTENANCE HOLE
- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING DECIDUOUS/CONIFEROUS TREE
- NEW TREE PROTECTION FENCING (TREE PROTECTION ZONE – TPZ)
- EXISTING UTILITY POLE OR LIGHT STANDARD
- NEW LIGHT POLE & LUMINAIRE
- EXISTING BUILDING
- CUT CROSS
- EXISTING CONTOURS, 0.25m INTERVAL

		No.	REVISIONS	DATE	BY
DESIGN	PTM/JAM	1	ISSUED FOR QUOTATION	APR 14/2023	JAM
DRAWN	EMB/LD	2	ISSUED FOR QUOTATION	MAY 11/2023	JAM
CHECKED	PTM/JAM				
APPROVED	PTM/JAM				
DATE	MARCH 2023				
CAD	6490Z63				

CONSULTANT

Peter T. Mitches & Associates Limited
Project Managers & Consulting Engineers
LONDON TORONTO

ENGINEER'S STAMP

REGISTERED PROFESSIONAL ENGINEER
J.A. MITCHES
100065848
MAY 11/2023
PROVINCE OF ONTARIO

ENGINEER'S STAMP

TORONTO
Parks, Forestry and Recreation
Parks Development and Infrastructure Management Branch
Capital Projects Section City of Toronto

The Contractor shall check and verify all dimensions and report all errors and omissions to OWNER Designee for his/her written direction before proceeding with the Work.

A Detail No.
B Sheet No. where detailed

SCALE
SCALE – 1 : 200
2.0 0 4.0m

TITLE
NEW PATHWAY LIGHTING AT CORNELL PARK TRAIL
18 BERAN DRIVE, CITY OF TORONTO

OVERALL SITE PLAN NEW WORK

PROJECT No. 6490/Z63
SHEET No. SP3
PLAN FILE No. 6490/Z63

GENERAL ELECTRICAL REQUIREMENTS

1. CODES & STANDARDS

1.1 Complete the installation of the work in accordance with the latest editions of the Ontario Building Code, Ontario Electrical Safety Code, C.S.A. Standards, U.L.C., N.F.P.A., O.H.S.A. and other Codes, as required. Comply with Electrical and Building Code Bulletins in force at time of Bid submission. While not identified and specified by number in this division, they are to be considered as forming part of related standards. Also, all electrical work shall comply with Toronto Hydro standards.

2. EXISTING CONDITIONS

2.1 Visit the site and examine the existing conditions affecting the work of this Division. No claim for extra payment shall be made for extra work made necessary by circumstances encountered due to conditions which were visible upon, or reasonably inferable from an examination of the site prior to submission of the Bid.

2.2 Be aware that there may be asbestos fibres present in various finishes or on various surfaces, in certain areas of the building. Arrange work so as not to disrupt these materials, or take full and necessary means to protect all personnel from contact with them, in a way to be approved by the landlord. Include all costs associated with any remedial work, in the bid.

3. DEFINITIONS

3.1 Wherever the words "provide" or "supply and install", are used, it shall be understood to mean "provide and install, inclusive of all labour, materials, installation, testing, and connections" for the item to which it references.

3.2 Wherever the words "equal", "approved", or "approved equal" are used, it shall be understood to mean "equal", "approved", or "approved equal" in the opinion of the Consultant only.

4. MATERIALS AND EQUIPMENT

4.1 All materials and equipment shall be new, C.S.A. certified and manufactured to the Standards specified

4.2 Where there is no alternative to supplying equipment which is not C.S.A. certified, obtain special approval from the Electrical Safety Authority.

5. PERMITS AND FEES

5.1 The Electrical Contractor shall act as the Owner's agent in accordance with Section 2 of the O.E.S.C. and shall immediately upon award of contract, submit to the local Electrical Inspection Department, the necessary number of Documents for examination, special inspection and approval, prior to the commencement of the work, and pay all costs and associated fees. If required, prepare any additional drawings/documents required by the authority.

5.2 The consultant will provide upon request, at the contractor's cost, the required quantity of drawings.

5.3 Provide Certificate(s) of Acceptance from the Authorities Inspection Department, upon completion of work.

6. INSURANCE

6.1 Provide and maintain insurance to protect the Landlord, Tenant and Trades from all possible claims. Submit with Bid for an amount acceptable to Landlord and Tenant.

7. CONTRACT DOCUMENTS

7.1 The Drawings for the Electrical work are diagrammatic performance Drawings only, intended to convey the scope of work and indicate the general arrangement and approximate size and location of electrical equipment. The Drawings do not intend to show Architectural, Interior Design, Mechanical, Structural or base building details. Be responsible for a thorough knowledge of same before proceeding with the work.

7.2 Do not scale or measure Drawings, but obtain information regarding accurate dimensions from the dimensions shown on the Design Consultant's/Architect's Drawings, or by site requirements.

7.3 Any discrepancies between Drawings and/or Specifications and existing conditions, must be referred to the Design Consultant/Architect before any work affected is begun.

7.4 Cooperate and coordinate with other Contractors in laying out of work so as not to conflict with the work of other Contractors. Carry out work promptly as per construction schedule and coordinate with work of other Contractors.

7.5 Make, at no additional cost, any changes or additions to materials and equipment necessary to accommodate Structural conditions (offsets around beams, column, etc.)

8. INTENT

8.1 It is the intent of these drawings and specifications that the Contractor provide complete and operational systems as required, where differences occur, the maximum condition shall govern.

8.2 Any miscellaneous items, hardware, devices, wiring, etc., not specifically described, but required for the operation of the system, must be provided and included as part of the Bid.

9. SHOP DRAWINGS

9.1 Submit four (4) copies of shop drawings of all specified equipment for review and records before commencement of work.

9.2 Changes made to the shop drawings by the Consultant will not affect the Contract Price.

10. INSERTS, HANGERS AND SLEEVES

10.1 Provide hangers, inserts, sleeves and supports as required.

10.2 Inserts are to be of a lead shield type.

10.3 Hangers must not be welded to structural steel members and burning of holes in structural steel is prohibited.

10.4 Sleeves are to be of a type suitable for the application and be sealed and made watertight. Sleeves through concrete shall be schedule 40 steel pipe, sized for free passage of conduit and installed flush with undersize of concrete slab and extend 100mm (4") above finished floor unless otherwise noted.

10.5 Do not use any base building supports or equipment, including ceiling support system.

11. CUTTING AND PATCHING

11.1 All cutting and patching required to the existing building structure for the work shall be included under this contract and be acceptable to the Landlord. Obtain written approval from Landlord before any cutting is carried out.

11.2 Where conduits pass through fire rated walls or floors, provide fire stopping material listed with, and bear label of CSA and ULC, and maintain same fire rating of building component penetration.

12. CORE DRILLING

12.1 Before core drilling floor slab or structural walls, X-ray slab or walls and have the locations accepted by the Landlord in writing.

12.2 Any existing building service damaged by core drilling must be repaired immediately at no cost to Landlord or Tenant.

12.3 Floor drilling to be carried out after normal working hours and at a time acceptable to Landlord and allowances for this work shall be included in Bid Price submitted.

13. NOISE AND VIBRATION

13.1 Electrical equipment is to operate without objectionable noise or vibration. If, in the opinion of the Consultant, the equipment operates with excessive noise or vibration, then the equipment must be replaced or noise or vibration eliminated.

13.2 Connections to noise-producing and vibrating equipment must be made with liquid-tight flexible conduit and associated connectors. This includes transformers, dimming equipment racks, and motors. Use a minimum of 1m (3ft) of flexible cable with slack at each device.

13.3 Vibration isolators are to be provided where indicated or required. Transformers to be isolated from the structure, with spring and rubber isolators when wall mounted or suspended and 12mm (1/2") high density neoprene sandwich pads (type MWP) when floor mounted.

14. WORK IN NEW AND RENOVATED AREAS

14.1 When deleting and/or making safe existing electrical work, ensure that it includes removal of all disconnected wiring back to the associated panel board or distribution equipment.

14.2 Disconnect and remove existing luminaires, devices, outlets, etc., which are not to be reused. Such items shall be cartoned and turned over to the Landlord at a place designated by the Landlord. Cut back and cap unused raceway and outlets and remove unused wiring back to panelboard in an approved manner. Remove all redundant communications cables back to hub rooms and/or telephone riser rooms.

14.3 Ensure that all existing equipment which are to be reused and/or relocated is thoroughly inspected and refurbished to ensure correct operation when put back into service and meets the local Electrical Safety Authority's approval. Outlet boxes and wiring and/or conduits which are corroded or damaged are to be replaced.

14.4 All existing electrical equipment which are no longer required shall be removed and disposed of, off site.

14.5 Where existing outlet boxes are removed from existing under floor ducts, plug and cap existing holes flush with floor using approved fittings. Remove all redundant wire and cable back to service.

14.6 Be responsible and pay for any damage to the base building incurred by work of this Division, or repair to the satisfaction of the Consultant.

14.7 Carry out the work with a minimum of noise, dust and disturbance.

14.8 Provide tools and clean up equipment. Obtain the Landlord's permission for the use of electrical, elevator, plumbing or drainage outlets.

14.9 Provide daily clean up and proper disposal of debris generated by daily operations. On completion of the work, all tools, surplus materials and waste materials shall be removed and the premises left in a clean and perfect condition.

14.10 Remove and reroute existing conduits which are to remain in "Finished" areas which are to be exposed.

14.11 Conduits which are to be cut back are to terminate in a junction box.

14.12 Clean luminaire reflectors and lenses, lamps, and other surfaces that have been exposed to construction dust and dirt. clean the insides and outsides of panelboards, splitters and other electrical equipment, and completely remove all debris and tools from the project.

15. INTERRUPTION OF SERVICES

15.1 Interruption of electrical service to any part of the building shall occur only by pre-arrangement with and at times suitable to the client.

16. IDENTIFICATION

16.1 Provide lamacoid nameplates on all panels, disconnect switches, splitters, etc., to match base building. Lamacoids shall identify equipment designation, voltage, phase, number of wires and location of feed. Nameplates shall be mechanically attached to equipment by means of rivets or self tapping screws.

16.2 Provide typewritten directories for new and existing panels. Confirm existing identification and correct where necessary.

16.3 Clearly mark all exposed conduit, pullboxes, junction boxes, etc., to indicate the nature of the service to match base building standards.

17. VALUATION OF CHANGES

17.1 Provide complete breakdown of material, labour, overhead, profit, etc., when submitting quotations for change notices on this project.

17.2 The hourly labour rate shall be inclusive of all charges for supervision, variable labour factors, hand tools, payroll burdens, height factors, warranties, storage, rentals, additional bonding, parking, clean-up, as-built drawings, hoisting, freight and delivery, but exclusive of overhead and profit.

17.3 The labour hours shall be based on the latest issue of the National Electrical Contractors Association (NECA) labour units, column one normal for the duration of this contract.

17.4 The material prices shall be based on the current National Prices System (NPS) catalogue less applicable trade discounts.

18. ENGINEERS FINAL INSPECTION

18.1 Final inspection is imperative. Prior to closing of ceilings, this contractor shall contact PETER T. MICHES & ASSOCIATED LIMITED and the landlord's representative to perform a final inspection.

19. COMPLETION OF CONTRACT

19.1 All equipment must be cleaned and tested before final acceptance by Consultant.

19.2 Defects and deficiencies which originate or become evident during the warranty period must be repaired or replaced, at no cost.

19.3 If, during the warranty period, transformers, ballasts or other noise and vibration producing equipment are considered by the Consultant to exceed acceptable standards, then these must be replaced without delay or additional cost to the Tenant. All work relating to the replacement of defective items, must be carried out after normal working hours and at a time which is acceptable to the Tenant.

20. AS-BUILT DRAWINGS

20.1 At the completion of work and before final acceptance, provide As-Built drawings of the installation in AutoCAD 2010 or newer. An electronic copy (AutoCad format) of all drawings will be provided to the electrical contractor by the Consultant at no cost. The drawings will reflect the tender and/or construction set of drawings. Should the Contractor require additional electronic copies during construction, a cost of $250.00 per drawing (plus HST) will be charged by the consultant.

20.2 Incorporate all changes and deviations from tender drawings, utilizing normal recognized drafting procedures that match the original drafting methodology.

20.3 All main branch conduit runs, junction box locations, conduit runs for all floor outlets, etc., must be reflected on the drawings.

20.4 Remove the Electrical Engineer's stamp from all as-built drawings.

20.5 Clearly indicate the words "As-Built" in the title block column of the drawings as well as the Electrical Contractor's name and address.

20.6 Submit a single (1) print to Consultant for review. When found acceptable by the Consultant, submit three (3) sets of prints together with the cad-disk for presentation to the Landlord and Tenant.

21. OPERATION AND MAINTENANCE MANUALS

21.1 Provide 2 (two) sets of operation and maintenance manuals submitted in hard cover 3-ring binders. Include the following information in the Operations and Maintenance manuals:
- Names and address of local suppliers for the items included.
- Technical data, product data, supplemented by bulletins, component illustrations, exploded views, technical descriptions of items, and parts lists. Advertising or sales literature is not acceptable.
- The Consultant's reviewed shop drawings.
- Certificate(s) of acceptance from the Authorities Inspection Department.
- Verification reports and certificate(s) for any new fire alarm components tie-ins and any base building tie-ins for miscellaneous systems (i.e. security, lighting control, digital metering).
- Load balance report
- Written guarantee
- List of each fixture type identifying type of lamp, wattage and Manufacturer's Contact info.
- Coordination Study

22. DEMOLITION

22.1 Visit the site, examine the existing conditions and become familiar with the extent of the necessary removal, relocation, reconnecting, and rerouting of electrical equipment and wiring as necessary for the completion of the Project.

22.2 Review and confirm with the Architect/Designer's drawings for the complete extent of demolition and alteration.

22.3 Make safe and disconnect all power and systems, as and when, and to the extent required to facilitate with the demolition.

22.4 Ensure that all electrical, life safety services, and services for existing equipment, in areas outside the areas of this work, that are required to remain in service, shall do so.

22.5 Relocate any electrical feeders or equipment that are required to remain in service, that are secured to existing walls, floors or ceilings to be demolished or that are buried and required to be excavated for new work.

22.6 Remove and replace any electrical equipment on walls or ceilings that will be demolished and rebuilt.

22.7 When deleting and/or making safe existing electrical work, ensure that it includes all conduit and wiring back to the associated panelboards or control panel. Where floorboxes are being removed, ensure under-floor conduit is removed back to source and fill all core holes, in floors and win walls, with appropriate concrete.

22.8 All existing electrical equipment which is no longer required shall be removed and disposed of, off site.

23. COORDINATION OF PROTECTIVE DEVICES

23.1 For all new electrical services greater than and equal to: 200A, 600V 3PH OR 400A, 120/208V 3PH, retain the services of a specialty coordination Consultant, for the purpose of providing coordination and testing services.

23.2 Ensure circuit protective devices such as overcurrent trips, relays, circuit breakers and fuses are installed to values and settings so as to provide protection by means of opening the closest device to the fault.

23.3 Submit a short circuit, protection and coordination study as follows:

23.3.1 Obtain and organize all electrical protection data for all the equipment.

23.3.2 Perform a short circuit analysis to determine short circuit current levels at all critical points in the distribution system, having obtained the available short circuit current available from the Local Electrical Supply Authority.

23.3.3 Generate appropriate settings for all relays and protective devices from the level of the Local Electrical Supply Authority feeder protective devices to the largest downstream device on all the feeder secondary distribution levels.

23.4 Provide a complete, comprehensive report at the conclusion of the short circuit, protection and coordination study consisting of the following:

23.4.1 A set of time current curve characteristics of all protective devices in the system plotted on log/log graph paper with corresponding short circuit current levels.

23.4.2 Time current damage curves for all transformers, motors, and cables.

23.4.3 Provide a complete schedule of all main protective relays, fuses and other protective device listing device locations, manufacturer, model number, size, range, setting, etc.

23.5 The complete study will illustrate and ensure that the settings and sizes of all protective devices for each voltage level have been chosen to ensure maximum or optional protection and coordination during electrical fault or overload conditions.

23.6 These generated settings will then be applied by 'in-field' testing methods to the respective devices.

MATERIALS AND INSTALLATION

1. CONDUITS AND CONDUIT FITTINGS

1.1 Provide all conduit up to and including 100mm (4") size, as EMT thin wall with steel set screw type fittings and weatherproof connectors with "O" rings in sprinklered buildings. Bushings and connectors to be c/w insulated throat.

1.2 Provide flexible liquid-tight conduit for connection to motors, transformers and when crossing building expansion joints.

1.3 Install conduits to conserve headroom, parallel and perpendicular to building lines. Do not caddie clip conduits to ceiling hangers.

1.4 All empty conduits shall be complete with nylon fish wire.

1.5 Provide plenum-rated liquid-tight flexible metal conduits under raised floor areas in computer rooms and LAN rooms. Conduits to run parallel to the raised floor grid and lay flat against the floor slab.

1.6 Run two (2) 25mm (1") spare conduits up to ceiling space for each recessed panelboard. Terminate these conduits in a 150mmx150mmx100mm (6"x6"x4") covered junction box in ceiling space.

1.7 All communications conduit shall be installed complete with insulated bushings at each end. The contractor shall inform the consultant of any communications conduit lengths in excess of 70m (230 ft.) prior to installation.

1.8 Use rigid steel conduit up to 2.4m (8'-0") above finished floor where exposed indoors and in all outdoor locations.

1.9 The minimum conduit size (including all undimensioned conduits in these drawings) shall be 19 mm (3/4").

2. SPLITTERS, JUNCTION BOXES AND PULL BOXES

2.1 Splitters shall have sheet steel enclosure, with welded corners and formed hinged cover suitable for locking in closed position. Connection bars are to match required size and number of incoming and outgoing conductors as indicated.

2.2 Junction boxes and pullboxes shall be suitable for surface mounting and be of welded steel construction with screw-on flat covers.

2.3 For flush-mounted pull and junction boxes, provide covers with 25mm (1") minimum extension all around.

2.4 Install junction and pull boxes in inconspicuous but accessible locations.

2.5 A minimum of one pull box shall be installed for every 100 ft. (30m) of conduit. (Note: each 90 deg. bend shall equate to a 30 ft. (9m) length of conduit).

2.6 No more than two (2) - 90 deg. bends shall be installed between any two adjacent pull boxes.

3. OUTLET BOXES

3.1 Outlet boxes shall be electro-galvanized steel, sized as required by code.

3.2 Provide each light switch, receptacle, communication and other outlet with an outlet box. Install plumb and true. Provide 76mm (3") deep 1004 boxes for dimming switches.

3.3 Adapt all outlet boxes to their respective locations and support independently of the conduit. Do not caddie clip to ceiling hangers.

3.4 Provide blank coverplates for boxes without wiring devices.

3.5 Do not install outlet boxes back to back in partitions. Stagger to prevent sound transfer.

3.6 Two or more outlet boxes that occur at the same location shall be ganged together in the same coverplate unless otherwise noted.

3.7 Provide "FS" or "FD" feralay boxes for all surface mounted devices, including fire alarm, security and auxiliary systems.

4. GROUNDING

4.1 Ground all equipment in accordance with latest edition of the Electrical Safety Code. Provide separate green insulated ground conductor in every conduit to all devices, luminaires and feeders (panelboards, splitters, disconnect switches, etc.).

5. WIRE AND CABLE

5.1 All wire and cable shall be copper, minimum 12 gauge, No. 12 and No. 10 solid, No. 8 and larger stranded, with RW90 insulation, 600Volt rating.

5.2 Bx#12 may be used in ceiling space from ceiling distribution box down to receptacles in partitions. Bx runs in ceiling space not to exceed 3048mm(10'-0") in length. Do not run Bx cables into panelboards.

5.3 Wall mounted devices shall be fed vertically. Horizontal runs through partitions shall not be permitted, except in low height partitions or where noted on drawings.

5.4 Size all wire for maximum 2% voltage drop.

6. MEGGERING

6.1 Megger all power circuit feeders. If ground resistance on any circuit is less than that required by CSA or other governing regulations, such circuits are to be considered defective and must be replaced.

7. SERVICE EQUIPMENT

7.1 All new switchboard, panelboards, disconnect switches, meters, transformers, etc., to be copper windings/bus-bars, same manufacture. The following manufacturers are approved:

Schneider
Cutler-Hammer
Siemens

7.2 Dry type transformers shall be copper windings. The following manufacturers are approved:

Schneider	Delta	Acme
Hammond	Magnetek/Polygon	

7.3 All floor mounted distribution equipment, including transformers, panelboards and/or UPS Modules shall be installed on a 100mm (4") high concrete base to extend 50mm (2") on all sides with chamfered corners. All concrete work to be included in this Division.

7.4 Provide a concrete base 100mm (4") high at all sleeve locations and conduits penetrating the floor slab. Concrete base to extend 100mm (4") beyond the edge of the sleeve or conduit. All concrete work to be included in this Division.

		No.	REVISIONS	DATE	BY
DESIGN	PTM/JAM	1	ISSUED FOR QUOTATION	APR 14/2023	JAM
DRAWN	EMB/LD	2	ISSUED FOR QUOTATION	MAY 11/2023	JAM
CHECKED	PTM/JAM				
APPROVED	PTM/JAM				
DATE	MARCH 2023				
CAD	6490Z63				

CONSULTANT

Peter T. Mitches & Associates Limited
Project Managers & Consulting Engineers
LONDON TORONTO

ENGINEER'S STAMP

REGISTERED PROFESSIONAL ENGINEER
J.A. MITCHES
100085848
MAY 11/2023
PROVINCE OF ONTARIO

ENGINEER'S STAMP

TORONTO
Parks, Forestry and Recreation
Parks Development and Infrastructure Management Branch
Capital Projects Section City of Toronto

The Contractor shall check and verify all dimensions and report all errors and omissions to OWNER Designee for his/her written direction before proceeding with the Work.

A Detail No.
B Sheet No. where detailed

SCALE N/A

TITLE
NEW PATHWAY LIGHTING AT
CORNELL PARK TRAIL
18 BERAN DRIVE, CITY OF TORONTO

SPECIFICATION

PROJECT No. 6490/Z63

SHEET No. E0.0

PLAN FILE No. 6490/Z63

LUMINAIRE SCHEDULE

Luminaire Schedule								
Symbol	Qty	Label	Arrangement	Description	LLF	Luminaire Lumens	Luminaire Watts	Total Watts
	10	P1	Single	SKY-LED35-B-4K-T2-DIM-PLM	0.900	4874	36.8	368

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Light Trespass	Illuminance	Lux	0.30	4.6	0.0	N.A.	N.A.
Pathway	Illuminance	Lux	24.49	71.2	1.0	24.49	71.20

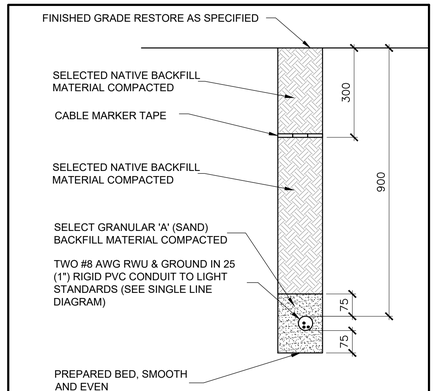
Expanded Luminaire Location Summary						
		Insertion Point				
LumNo	Label	X	Y	Z	Orient	Tilt
1	P1	491742.14	7270226	15	211.35	0
2	P1	491807.89	7270194	15	266.918	0
3	P1	491892.9	7270205	15	286.227	0
4	P1	491978.52	7270232	15	291.801	0
5	P1	492012.22	7270280	15	20.679	0
6	P1	491983.98	7270362	15	19.406	0
7	P1	491760.56	7270279	15	123.69	0
8	P1	491825.37	7270320	15	114.08	0
9	P1	491956.33	7270403	15	126.87	0
10	P1	491895.15	7270364	15	121.232	0

RP- 'K'									
CCT	BRKR	Description	A	B	A	B	Description	BRKR	CCT
1	15	PARK LIGHTING	0.4		0.1		GFCI REC	15	2
3	20	FUTURE SPLASH PAD				0.1	GFCI REC	15	4
5	20	SPARE					SPARE	15	6
7	20	SPARE					SPARE	15	8
9									10
11									12
13									14
15									16
17									18
19									20
21									22
23									24
AMPS		MAINS	0.4	0.0	0.1	0.1	PHASE/WIRE	VOLTS	
100		60A MAIN BREAKER	A: 0.5		B: 0.1		1/3	120/240	

SURFACE MOUNTING 120KA SPD TOTAL CONNECTED LOAD (KW): 0.6

THE PANEL IS TO BE NEMA 3R WITH A PADLOCK-CAPABLE DOOR
THE MAIN BREAKER IS TO BE RATED FOR 25KAIC OR HIGHER AT 240V
A BUILT-IN SURGE PROTECTIVE DEVICE IS TO BE RATED 120KA OR HIGHER
ALL CIRCUIT BREAKERS ARE TO BE BOLT-ON GFCI TYPE AND RATED FOR 10KAIC OR HIGHER

LEGEND	
SYMBOL	DESCRIPTION
	STANDARD 15A U-GROUND DUPLEX RECEPTACLE 120V MTG HEIGHT: 48"AFF
	PANELBOARD SEE SCHEDULE
M	METER SOCKET SEE TORONTO HYDRO REQUIREMENT



BURIED CONDUIT DETAIL

NOT TO SCALE

LUMINAIRE CUTSHEET

RAB DESIGN

SKYLINE-LED35

LED Area Light

SPECIFICATIONS*	
Watts	38W
Lumens	4335
Efficacy	115.83 lm/W
Replaces Up To	150W MH
Colour Temp	5000K, 4000K*, 3000K
Operating Temp	-40°C to +40°C
Voltage	120-277V*, 347V
LED Life (L80)	>100,000 hours
Beam Distribution	Type V*, Type II, Type III, Type IV
Certification	cETLus, DLC
Housing Material	Die Cast Aluminum
Lens	Clear Glass
Power Factor	0.990
Total Harmonic Distortion	10.0%
CRI	>70
Mounting	Post top Mounting, 2-3/8" tenon, Pole Mount
Controls	Photocell, 3/7 PIN Receptacle

DESCRIPTION

SKYLINE is an architectural post top area light featuring a modern, European look. Intelligently designed, this fixture provides advanced optics available with Type II, Type III, Type IV, Type V options.

APPLICATIONS

Condos · Pathways · Commercial Properties

FEATURES

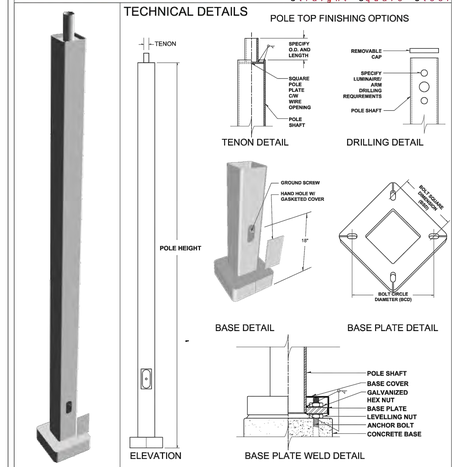
- Sleek modern design.
- Mounting options include traditional 3 arm post top, stylish curved arm with post top, and the elegant pole mount arm for round or square poles.
- Photocell, 3/7 PIN Receptacle are optional.
- 10kV surge protection is standard.
- Advanced optics available with Type II, Type III, Type IV, Type V options.

NOTE:
POLE #1, POLE #2, POLE #3 & POLE #4 WILL REQUIRE HOUSE SIDE CUT OFFS TO PREVENT LIGHT BLEED ONTO THE ADJACENT PRIVATE HOMES

POLE

SSS series — straight square steel

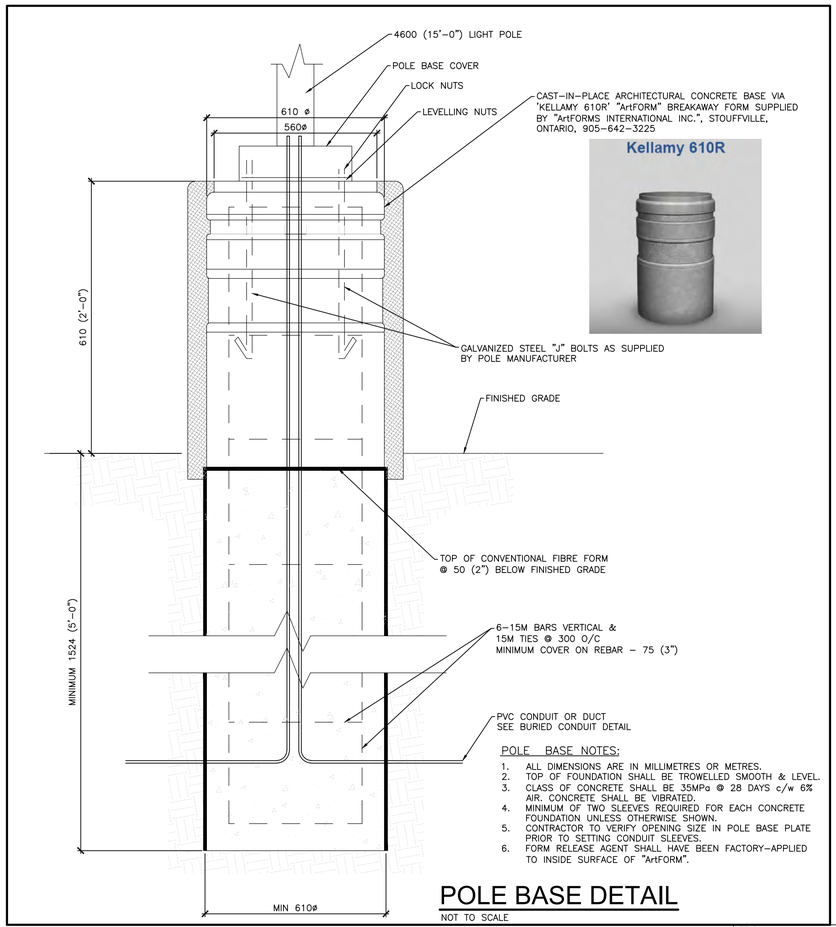
4" SQUARE POLE, 15' HEIGHT
MODEL/PART No. SSS4-15



DYNAPOLE
www.dynapole.com
2425 Lucknow Drive, Mississauga ON L5S 1N1 Canada
Tel. (905) 671-1507 Fax (905) 671-4506 Toll-Free 1-877-DYNAPOLE

DRAWING TITLE	STRAIGHT SQUARE STEEL
MODEL	SSS
PART No.	CGT
DATE	06/28/04
SCALE	NTS

NOTES: MATERIAL STEEL SHAFT: 60,000 PSI MIN. YIELD BASE PLATE: 44,000 PSI MIN. YIELD



POLE BASE NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES OR METRES.
2. TOP OF FOUNDATION SHALL BE TROWELLED SMOOTH & LEVEL.
3. CLASS OF CONCRETE SHALL BE 35MPa @ 28 DAYS c/w 6% AIR. CONCRETE SHALL BE VIBRATED.
4. MINIMUM OF TWO SLEEVES REQUIRED FOR EACH CONCRETE FOUNDATION UNLESS OTHERWISE SHOWN.
5. CONTRACTOR TO VERIFY OPENING SIZE IN POLE BASE PLATE PRIOR TO SETTING CONDUIT SLEEVES.
6. FORM RELEASE AGENT SHALL HAVE BEEN FACTORY-APPLIED TO INSIDE SURFACE OF "ArtFORM".

POLE BASE DETAIL

NOT TO SCALE

		No.	REVISIONS	DATE	BY
DESIGN	PTM/JAM	1	ISSUED FOR QUOTATION	APR 14/2023	JAM
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CONSULTANT

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LONDON TORONTO

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The Contractor shall check and verify all dimensions and report all errors and omissions to OWNER Designee for his/her written direction before proceeding with the work.

A/B — A Detail No. B Sheet No. where detailed

SCALE: N/A

TITLE: NEW PATHWAY LIGHTING AT CORNELL PARK TRAIL 18 BERAN DRIVE, CITY OF TORONTO

SCHEDULES & DETAILS

PROJECT No. 6490/Z63

SHEET No. E0.1

PLAN FILE No. 6490/Z63

COS-FRM-026 Rev. 2

Electrical Service Location Report
416-542-8000 option #4

TORONTO HYDRO

Date: 11-May-2022

☐ West District ☑ East District

Address: 18 Beran Dr.

☐ Residential
☑ Commercial
☐ Temporary
☐ Commercial Sub Service

☑ 60 Amp
☐ 100 Amp
☐ 200 Amp
☐ 400 Amp
☐ Other _____

☑ 120/240V
☐ 120/208V, 1ph, 3w
☐ 120/208V, 3ph, 4w
☐ 347/600V, 3ph, 4w
☐ 600V, 3ph, 3w (Delta)
☐ Other _____

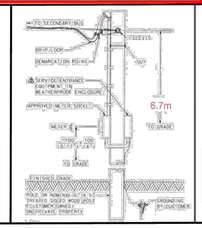
☑ Overhead ☑ New
☐ Underground ☐ Upgrade

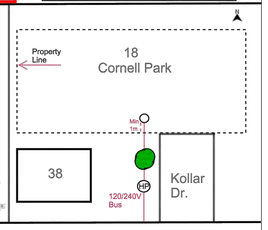
Number of meters: 1

Verify Transformer Configuration With THESL GEAR: Other

TORONTO HYDRO REQUIREMENTS

- ☐ 200 Amp Clevis Required
- ☐ Double/Extended Clevis Req'd
- ☐ 4.9m From Grade (max 6.7m)
- ☑ 6.7m From Grade (max 6.7m)
- ☐ Within 1m From Front Wall
- ☐ Major Tree Trimming required
- ☐ Weather Head & Clevis in Front of Downspout
- ☐ Letter of Permission Required (attached)
- ☐ Identify Services on Meter Sockets
- ☐ Service Transfer/Isolation





COMMENTS: INSTALL 200A RATED CLEVIS, WEATHER HEAD, & SERVICE MAST ON POLE

INSTALL 100A RATED C.S.A APPROVED METER BASE 1.73m FROM GRADE

CLEVIS TO BE INSTALLED BETWEEN 15cm AND 30cm FROM WEATHER HEAD

INSTALL WOOD POLE WITHIN LOT BOUNDARY WITH CLEAR LINE OF SIGHT TO O/H LINES

TREE TRIMMING REQUIRED BY CUSTOMER, IF NECESSARY

ESA Rule 2-012 requires ESA connection authorization prior to reconnection of power.

☐ Connection charges may apply and are due prior to service connection. Contact Toronto Hydro office to arrange for payment.

☑ For New Services - The roof, windows and doors must be installed. The exterior of the building and area around the service point must be clear and unobstructed from debris, scaffolding etc. as per OHSA before Toronto Hydro will make connections.

METERING
☐ 5 Jaw Meter Required ☑ 4 Jaw Meter Required ☐ 600V Delta ☐ 7 Jaw Meter Required
☐ Reinstall Meter ☐ Jumper Meter Jaws ☐ Leave meter at panelboard for pickup by Toronto Hydro

1. It is the account holder/owner's responsibility to secure the meter for pickup by Toronto Hydro. Missing/lost meters will be charged to your account.
2. See meter socket configuration on second page
3. Standard meter mounting height is 1.73m to centre of meter face unless noted otherwise in "Comments" section.

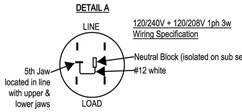
Inspector: Juan Castro Phone: 647-668-1007 Email: juanc@dpmenergy.com

1. If you have any questions regarding this service layout, please contact the Inspector noted.
2. No permanent connections to services will be made until we have received an Electrical Safety Authority Connection Authorization, connection fees (if applicable) have been paid, and Toronto Hydro has approved the installation.
3. Installation of a meter does not constitute approval of a service
4. Electrical Safety Authority Connection Authorization and Toronto Hydro Inspection/Approval are required for all installations.
5. Toronto Hydro reserves the right to approve a service based on Toronto Hydro's Conditions of Service and related service supply documents.
6. Information given in this document expires in 90 days.
7. Customer is to provide SR3 metal meter ring.
8. All existing flat rate water heaters must be connected to distribution panel as metered rental on upgrades or service alterations.
9. Temporary services will be disconnected on connection of permanent service.
10. Service transfer (Disconnection of old service & connection of new service by Toronto Hydro or a service isolation will require an appointment. You will be contacted by our office to schedule. Charges apply.
11. Service locations are subject to site conditions at time of issue.
12. Service locations are based on visual references. Customer is responsible for providing full disclosure of property documents, easements, and property encumbrances.

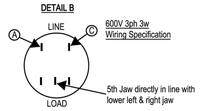
APPROVED METER SOCKET TYPES

	120/240 V 1 ph 3 w	120/208 V 1 ph 3 w see detail A	120/208 V 3 ph 4 w	UNDERGROUND 120/240 V 1 ph 3 w	UNDERGROUND 120/208 V 1 ph 3 w	347/600 V 3 ph 4 w	600 V 3 ph 3 w see detail B
100 A	4 jaw square socket	square socket (with 5th jaw @ 9 o'clock position as specified)	7 jaw socket	CRIMP ON LUG TYPE (with 5th jaw @ 9 o'clock position as specified)	CRIMP ON LUG TYPE (with 5th jaw @ 9 o'clock position as specified)	7 jaw socket	5 jaw socket with 5th jaw @ 6 o'clock position
200 A	4 jaw square socket	socket (with 5th jaw @ 9 o'clock position as specified					ESA requires ground fault lights.
400 A	see comments	see comments	4x4 meter cabinet c/w neutral block	see comments	see comments	4x4 meter cabinet c/w neutral block	4x4 meter cabinet

DETAIL A



DETAIL B



TORONTO HYDRO PROVIDES THIS INFORMATION TO "GET YOU CONNECTED"

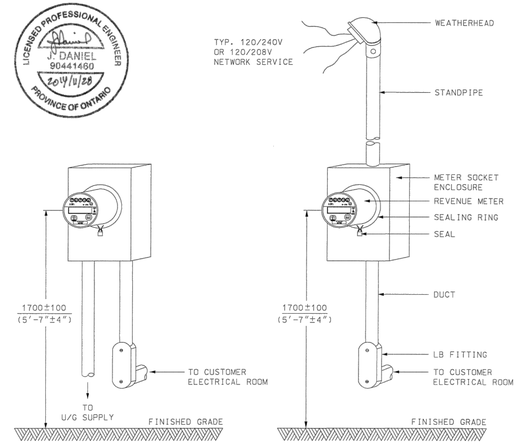
13. All electrical work requires inspection by the Electrical Safety Authority. * Without this inspection Toronto Hydro cannot connect/reconnect your service.
14. The Electrical Safety Authority will send Toronto Hydro a connection authorization once they have passed the installation. Upon receipt of this, our inspector will verify that the work was completed in accordance with Toronto Hydro standards as indicated on your service location sheet.
15. Once all Toronto Hydro requirements have been met and our Inspector has passed the installation we will issue service and meter connection orders, provided there is a customer on record responsible for billing consumption (see Customer Accounts below). Any temporary obstructions must be removed and all applicable costs must be paid.
16. For Existing Services - The Ontario Health and Safety Act requires that adequate safety precautions are in place when working near energized service lines.
17. Time Lines for Connection:
New Services
Will be connected within 5 working days of all customer conditions met (subject to weather and emergency conditions).
Upgrades, Permanent Connections to Service Changes
Will be done on the day of a pre-arranged appointment or connected as workloads and weather permit.

Customer Accounts:
Before Toronto Hydro connects your new service, there must be an active customer account on record to take responsibility for the electrical consumption.
Any services that are found to be operating but are not currently billed will be disconnected without notice.
For Service Changes:
Toronto Hydro - Service Connections and Projects (416) 542-8000 option 4
For Information/Changes to your Account: Toronto Hydro - Customer Care (416) 542-8000

Electrical Safety Authority: 1-877-ESA-SAFE (372-7233) www.esasafe.com

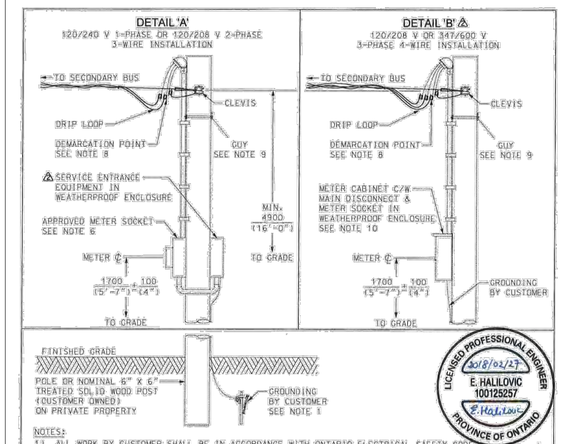
*Electrical work done without this inspection is subject to prosecution under the Ontario Energy Act.

LICENSED PROFESSIONAL ENGINEER J. DANIEL 90441460 2019/10/28 PROVINCE OF ONTARIO



TYPICAL UNDERGROUND SUPPLY TYPICAL OVERHEAD SUPPLY

DISTRIBUTION CONSTRUCTION STANDARD Revenue Metering						
TORONTO HYDRO	Approved By: 2019/10/28		SECONDARY - RESIDENTIAL TYPICAL MOUNTING LOCATION			
	Drafted By: Y.A.	Designed By: J.D.	Original Issue: L.G. 2000-03-27	Scale: N.T.S.	Rev: 2	17-2300 1/1



NOTES:
1) ALL WORK BY CUSTOMER SHALL BE IN ACCORDANCE WITH ONTARIO ELECTRICAL SAFETY CODE. CUSTOMER SHALL FOLLOW THE LATEST ESA BULLETIN ON "TEMPORARY SERVICES".
2) CUSTOMER SHALL CONSULT TORONTO HYDRO FOR LOCATION OF POLE/POST.
3) ELECTRICAL SAFETY AUTHORITY CONNECTION AUTHORIZATION AND TORONTO HYDRO CONNECTION FEES ARE REQUIRED PRIOR TO SERVICE CONNECTION.
4) WHERE THE TEMPORARY SERVICE IS MOUNTED ON A POST, SUPPLY CONDUCTOR SLACK SPAN NOT TO EXCEED 10 METRES IN LENGTH: STREET AND LANE CROSSINGS OF SUPPLY CONDUCTOR NOT PERMITTED.
△5 5) CUSTOMER SHALL BE RESPONSIBLE FOR SUPPLY AND INSTALLATION OF WEATHERHEAD, SERVICE MAST, CLEVIS AND SPOOL, METER SOCKET AND SERVICE ENTRANCE EQUIPMENT (DETAIL 'A'), METER CABINET (DETAIL "B").
6) CUSTOMER SHALL CONSULT TORONTO HYDRO FOR LIST OF APPROVED METER SOCKETS.
7) MAXIMUM 200 A SERVICE AT 120/240 V, 120/208 V OR 347/600 V SERVICE.
8) SECONDARY SERVICE CONNECTION AT DEMARCATION POINT SHALL BE DONE BY TORONTO HYDRO. REFER TO STD. 08-3300 FOR MINI WEDGE AND STD. 08-3260 FOR STANDARD WEDGE SELECTION TABLE.
9) GUYING SHALL BE INSTALLED BY CUSTOMER.
△10 10) METER SHALL BE INSTALLED ON THE LOAD SIDE OF THE MAIN DISCONNECT INSIDE THE METER CABINET (DETAIL "B").

LICENSED PROFESSIONAL ENGINEER 2018/02/27 E. HALILOVIC 100125257 PROVINCE OF ONTARIO

NOTES:
1) REFER TO ONTARIO ELECTRICAL SAFETY CODE (LATEST REVISION) FOR ADDITIONAL INFO.
△ 2) REFER TO STD. 17-2250 FOR METER SOCKET CLEARANCE REQUIREMENTS.

DISTRIBUTION CONSTRUCTION STANDARD OH Secondary & Primary Services						
TORONTO HYDRO	Approved By: 2018/02/27		TEMPORARY SERVICE CONNECTION UP TO 200 A SERVICE			
	Drafted By: B.W.	Designed By: E.H.	Original Issue: K.S. 2011-11-22	Scale: N.T.S.	Rev: 2	11-2050 1/1

	No.	REVISIONS	DATE	BY
DESIGN PTM/JAM	1	ISSUED FOR QUOTATION	APR 14/2023	JAM
DRAWN EMB/LD	2	ISSUED FOR QUOTATION	MAY 11/2023	JAM
CHECKED PTM/JAM				
APPROVED PTM/JAM				
DATE MARCH 2023				
CAD 6490Z63				

CONSULTANT
Peter T. Mitches & Associates Limited
Project Managers & Consulting Engineers
LONDON TORONTO

ENGINEER'S STAMP: REGISTERED PROFESSIONAL ENGINEER J.A. MITCHES 100085848 MAY 11/2023 PROVINCE OF ONTARIO

ENGINEER'S STAMP

TORONTO
Parks, Forestry and Recreation
Parks Development and Infrastructure Management Branch
Capital Projects Section City of Toronto

The Contractor shall check and verify all dimensions and report all errors and omissions to OWNER Designee for his/her written direction before proceeding with the Work.

A Detail No.
B Sheet No. where detailed

SCALE: N/A

TITLE: NEW PATHWAY LIGHTING AT CORNELL PARK TRAIL 18 BERAN DRIVE, CITY OF TORONTO

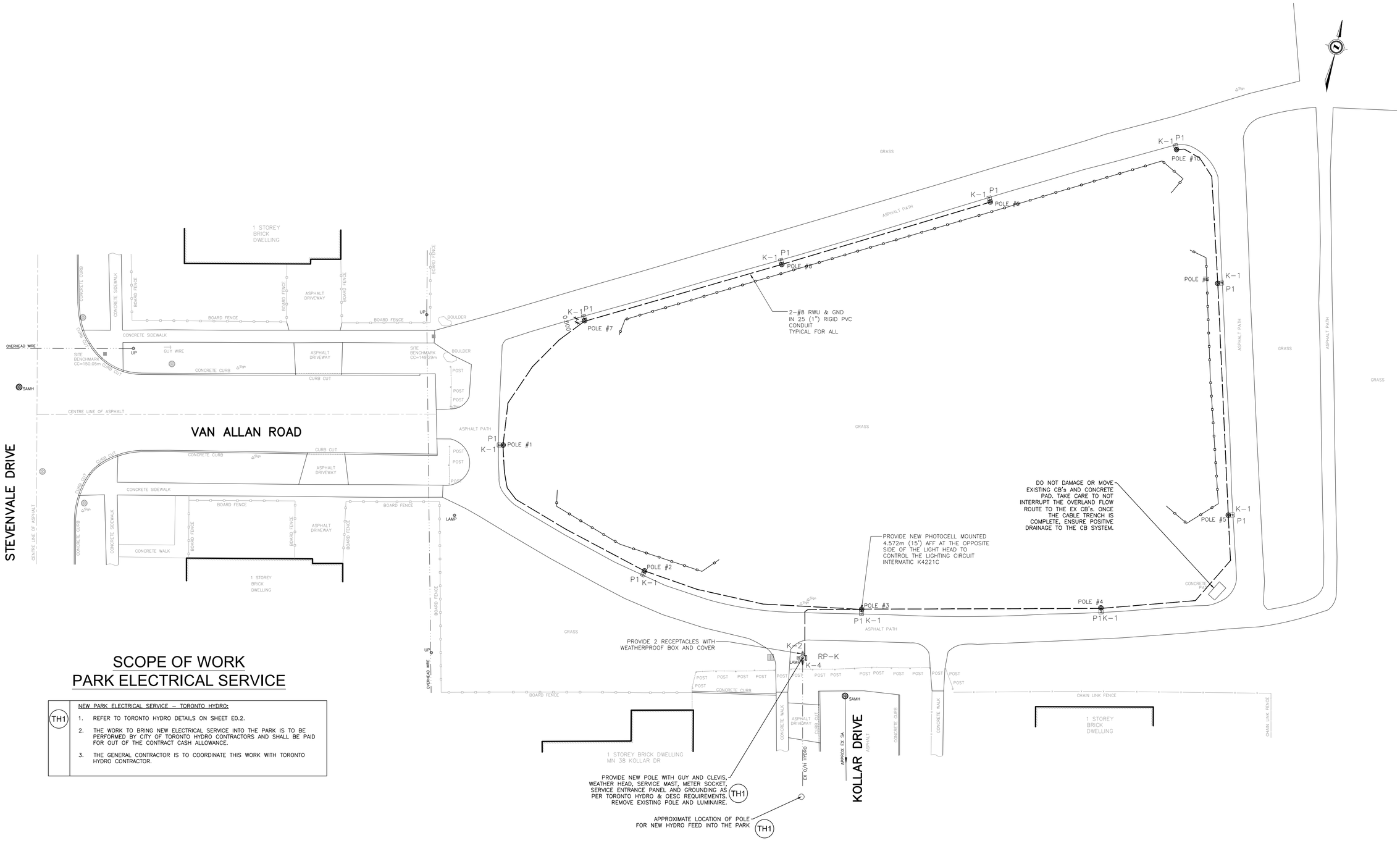
TORONTO HYDRO DETAILS

REFER TO SHEET No. E1.0 TH1

PROJECT No. 6490/Z63

SHEET No. E0.2

PLAN FILE No. 6490/Z63



SCOPE OF WORK
PARK ELECTRICAL SERVICE

TH1

NEW PARK ELECTRICAL SERVICE – TORONTO HYDRO:

1. REFER TO TORONTO HYDRO DETAILS ON SHEET E0.2.
2. THE WORK TO BRING NEW ELECTRICAL SERVICE INTO THE PARK IS TO BE PERFORMED BY CITY OF TORONTO HYDRO CONTRACTORS AND SHALL BE PAID FOR OUT OF THE CONTRACT CASH ALLOWANCE.
3. THE GENERAL CONTRACTOR IS TO COORDINATE THIS WORK WITH TORONTO HYDRO CONTRACTOR.

		No.	REVISIONS	DATE	BY
DESIGN	PTM/JAM	1	ISSUED FOR QUOTATION	APR 14/2023	JAM
DRAWN	EMB/LD	2	ISSUED FOR QUOTATION	MAY 11/2023	JAM
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CAD	6490Z63				

CONSULTANT

Peter T. Mitches & Associates Limited
Project Managers & Consulting Engineers
LONDON TORONTO

ENGINEER'S STAMP

REGISTERED PROFESSIONAL ENGINEER
J.A. MITCHES
100085848
MAY 11/2023
PROVINCE OF ONTARIO

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TORONTO
Parks, Forestry and Recreation
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A Detail No.
B Sheet No. where detailed

SCALE
SCALE – 1 : 200
2.0 0 4.0m

TITLE
NEW PATHWAY LIGHTING AT CORNELL PARK TRAIL
18 BERAN DRIVE, CITY OF TORONTO

LIGHTING & POWER LAYOUT

PROJECT No. 6490/Z63
SHEET No. E1.0
PLAN FILE No. 6490/Z63