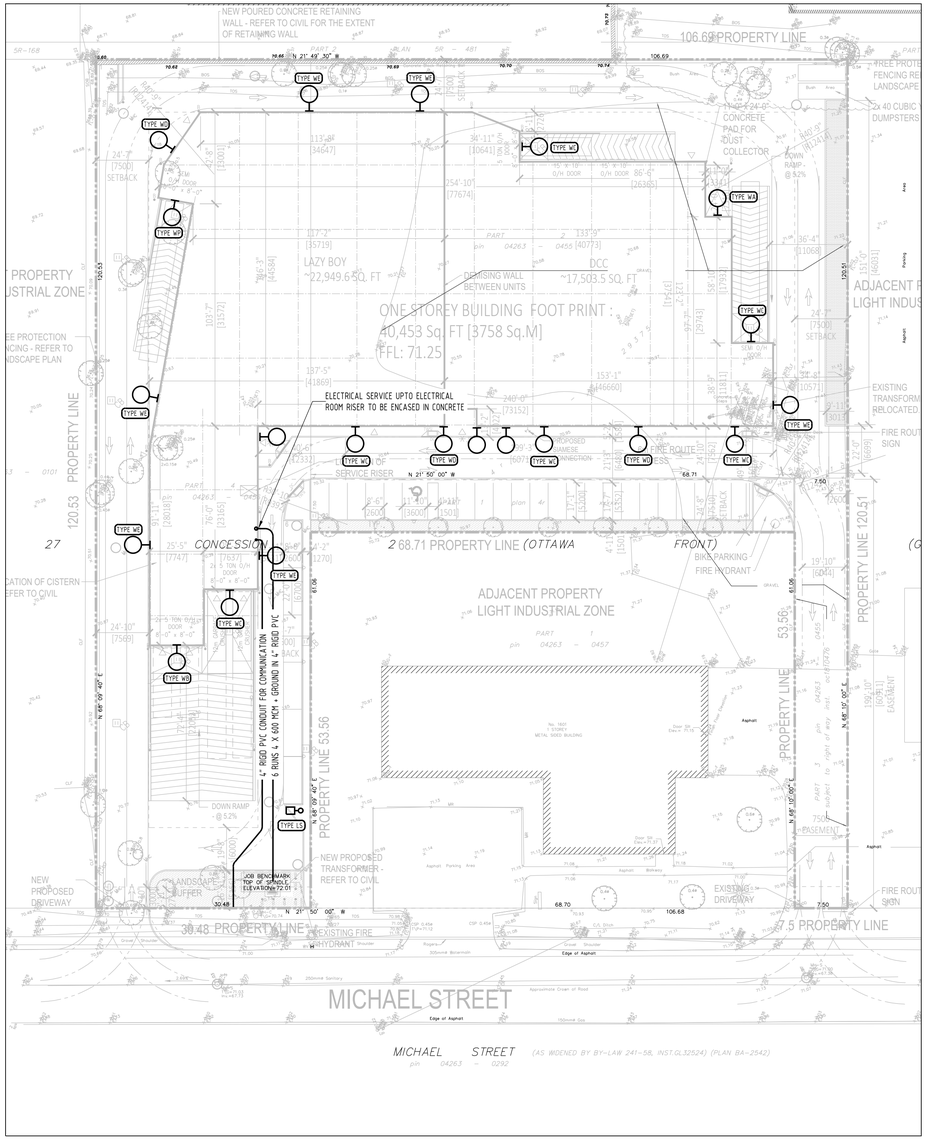


GENERAL NOTES:

1. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH:
   A) ELECTRICAL DRAWING E1, NOTES, AND
   B) ALL APPLICABLE CODES, BYLAWS AND BEST-RECOMMENDED PRACTICES.
2. DURING TENDER PHASE, CONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH THE TENDER DRAWINGS AND THE PROJECT SITE, AND REPORT TO THE ENGINEER ANY CONFLICTS OR SITE CONDITIONS WHICH MAY AFFECT WORK. IF THIS PROCEDURE IS NOT FOLLOWED, THE CONTRACTORS WILL BE RESPONSIBLE TO COMPLETE WORK REQUIRED AT NO EXTRA COSTS.
3. FOR THE PURPOSES OF THIS PROJECT, 'PROVIDE' SHALL MEAN TO SUPPLY, INSTALL, CONNECT AND TEST.
4. PROPOSED CONDUITS/CABLES AND EQUIPMENT LAYOUTS SHOWN ON DRAWINGS ARE INTENDED TO CONVEY THE GENERAL SCOPE OF WORK. LOCATION OF EQUIPMENT/DEVICES SHOWN ON ELECTRICAL DRAWINGS IS TO BE CONSIDERED AS APPROXIMATE. IT IS CONTRACTOR RESPONSIBILITY TO COORDINATE FINAL LAYOUTS WITH ALL COMPONENTS OF THE BUILDING SYSTEMS AND TO PROVIDE ALL PULL AND JUNCTION BOXES, SUPPORTS, FITTINGS, ETC. REQUIRED TO FULLY COMPLETE WORK.
5. PROVIDE ALL REQUIRED LADDERS, RIGGING, HOISTING, AND ALL OTHER EQUIPMENT TO FULLY COMPLETE THE WORK REQUIRED UNDER THIS PROJECT.
6. UPON FINAL COMPLETION, PROVIDE AS-BUILT DRAWINGS THAT SHALL INCLUDE MARK-UPS OF THE FINAL LOCATIONS AND DEPTHS OF ALL THE UNDERGROUND CONDUITS OR CABLES.
7. PRIOR TO ENERGIZING ANY NEW WIRING, PERFORM INSULATION RESISTANCE TESTS ON ALL NEW AND EXISTING WIRING AND EQUIPMENT PART OF THIS PROJECT. TEST AND CHECK THE ELECTRICAL SYSTEMS PERTAINING TO THIS PROJECT FOR THEIR CORRECT OPERATION.

HYDRO OTTAWA HAS PREPARED A NUMBER OF COMMENTS ON THE PROPOSAL.

1. THE OWNER IS ADVISED THAT THERE IS MEDIUM UNDERGROUND INFRASTRUCTURE ENTERING THE PROPERTY FROM MICHAEL ST

a. THE OWNER SHALL ENSURE CROSSING OF HYDRO OTTAWA UNDERGROUND ASSETS IS CARRIED OUT PER HYDRO OTTAWA'S ENGINEERING SPECIFICATION UDS0013, "TEMPORARY AND PERMANENT SUPPORT OF HYDRO OTTAWA DUCT BANKS WHEN UNDERCUT BY AN EXCAVATION" WHICH CAN BE FOUND AT HTTPS://HYDROOTTAWA.COM/ACCOUNTS-SERVICES/ACCOUNTS/CONTRACTORS-DEVELOPERS/COMMERCIAL-DESIGN-SPECIFICATIONS, THE ADOPTION OF THIS SPECIFICATION DOES NOT RELIEVE THE OWNER IN ANY WAY FOR DAMAGE MADE TO HYDRO OTTAWA PLANT.

b. PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION, THE OWNER SHALL ARRANGE FOR AN UNDERGROUND CABLE LOCATE BY CONTACTING ONTARIO ONE CALL AT 1-800-400-2255, NOT LESS THAN SEVEN (7) WORKING DAYS PRIOR TO EXCAVATING. THERE SHALL BE NO MECHANICAL EXCAVATION WITHIN ONE AND A HALF METERS (1.5M) OF ANY HYDRO OTTAWA UNDERGROUND PLANT UNLESS THE EXACT POSITION OF PLANT IS DETERMINED BY HAND DIGGING METHODS.

c. THE OWNER SHALL CONTACT HYDRO OTTAWA AND EXPOSE EXISTING DUCT BANKS AND/OR CABLE CHAMBERS. HYDRO OTTAWA WILL HAVE THE EXISTING DUCT BANK AND MANHOLES INSPECTED TO RECORD EXISTING CONDITIONS. ONCE PILING AND SHORING IS COMPLETED, HYDRO OTTAWA WILL RE-INSPECT THE UNDERGROUND PLANT FOR ANY DAMAGES. THE OWNER SHALL INFORM HYDRO OTTAWA OF ANY ACUTE SHOCK CONSTRUCTION PROCESS OR RUBBLIZATION TO BE USED DURING CONSTRUCTION, AND APPLY HYDRO OTTAWA'S WORK PROCEDURE UDS0022 "PROTECTING ELECTRICAL DISTRIBUTION PLANT & SUPPORT STRUCTURES FROM VIBRATIONS CAUSED BY CONSTRUCTION ACTIVITY" WHICH CAN BE FOUND AT HTTPS://HYDROOTTAWA.COM/ACCOUNTS-SERVICES/ACCOUNTS/CONTRACTORS-DEVELOPERS/MISCELLANEOUS.

d. THE OWNER SHALL CONTACT HYDRO OTTAWA TO ARRANGE FOR DISCONNECTING THE SERVICE FROM THE DISTRIBUTION SYSTEM AND REMOVAL OF ALL HYDRO OTTAWA ASSETS AT LEAST TEN (10) BUSINESS DAYS PRIOR TO DEMOLITION/REMOVAL OF THE SERVICED STRUCTURE.

e. IF THE CHANGE IN GRADE IS MORE THAN THREE TENTHS OF A METER (0.3M) IN THE VICINITY OF PROPOSED OR EXISTING ELECTRIC UTILITY EQUIPMENT. HYDRO OTTAWA REQUESTS TO BE CONSULTED TO PREVENT DAMAGES TO ITS EQUIPMENT.

f. THE OWNER SHALL NOT USE STEEL CURB AND SIDEWALK FORM SUPPORT PINS IN THE VICINITY OF HYDRO OTTAWA UNDERGROUND PLANT FOR ELECTRICAL SAFETY.

2. THE OWNER IS ADVISED THAT THERE ARE MEDIUM VOLTAGE OVERHEAD LINES ALONG THE WEST SIDE OF THE PROPERTY ALONG MICHAEL ST

a. THE APPLICANT IS ADVISED THAT PERMANENT STRUCTURES LOCATED WITHIN THE "RESTRICTED ZONE" SURROUNDING OVERHEAD LINES ARE PROHIBITED. THIS ZONE IS DEFINED BY HYDRO OTTAWA'S STANDARD OLS0002 "OVERHEAD HIGH VOLTAGE CLEARANCES TO ADJACENT BUILDING", WHICH CAN BE FOUND AT HTTPS://HYDROOTTAWA.COM/ACCOUNTS-SERVICES/ACCOUNTS/CONTRACTORS-DEVELOPERS/CLEARANCES. THIS STANDARD COMPLIES WITH THE REQUIREMENTS OF THE MINISTRY OF LABOUR'S OCCUPATIONAL HEALTH & SAFETY ACT, THE ONTARIO BUILDING CODE, AND THE ONTARIO ELECTRICAL SAFETY CODE. PERMANENT STRUCTURES INCLUDE BUILDINGS, SIGNS (EVEN LIT SIGNS WHEN OPEN FOR MAINTENANCE), ANTENNAS, POOLS, AND FENCES.

b. THE APPLICANT SHALL ENSURE THAT ANY LANDSCAPING OR SURFACE FINISHING DOES NOT ENCROACH INTO EXISTING OR PROPOSED HYDRO OTTAWA OVERHEAD OR UNDERGROUND ASSETS OR EASEMENT. WHEN PROPOSING TO PLANT TREES IN PROXIMITY OF EXISTING POWER LINES, THE OWNER SHALL REFER TO HYDRO OTTAWA'S FREE PUBLICATION "TREE PLANTING ADVICE" WHICH CAN BE FOUND AT HTTPS://HYDROOTTAWA.COM/OUTAGES-SAFETY/SAFETY-HOME/OUTSIDE-HOME/PLANTING-TREES. THE SHRUB OR TREE LOCATION AND EXPECTED GROWTH MUST BE CONSIDERED. IF ANY HYDRO OTTAWA RELATED ACTIVITY REQUIRES THE TRIMMING, CUTTING OR REMOVAL OF VEGETATION, OR REMOVAL OF OTHER LANDSCAPING OR SURFACE FINISHING, THE ACTIVITY AND THE RE-INSTATEMENT SHALL BE AT THE OWNER'S EXPENSE.

c. SHOULD ANY ACTIVITY, SUCH AS TREE TRIMMING OR WORKING ON THE SIDES OF A BUILDING, BE ANTICIPATED WITHIN THREE METERS (3M) OF HYDRO OTTAWA'S OVERHEAD LINES, CONTACT HYDRO OTTAWA TO DISCUSS ARRANGEMENTS BEFORE ANY ACTIVITY IS UNDERTAKEN. IN LINE WITH THE MINISTRY OF LABOUR'S OCCUPATIONAL HEALTH & SAFETY ACT, ONLY A HYDRO OTTAWA EMPLOYEE OR HYDRO OTTAWA APPROVED CONTRACTOR CAN WORK IN PROXIMITY OF THESE LINES.

d. IF THE CHANGE IN GRADE IS MORE THAN THREE TENTHS OF A METER (0.3M) IN THE VICINITY OF PROPOSED OR EXISTING ELECTRIC UTILITY EQUIPMENT. HYDRO OTTAWA REQUESTS TO BE CONSULTED TO PREVENT DAMAGES TO ITS EQUIPMENT.

3. THE OWNER IS TO CONTACT HYDRO OTTAWA IF THE ELECTRICAL SERVICING OF THE SITE IS TO CHANGE IN LOCATION OR IN SIZE. A LOAD SUMMARY WILL BE NEEDED FOR THE TECHNICAL EVALUATION.
4. THE APPLICANT MAY BE RESPONSIBLE FOR A CAPITAL CONTRIBUTION PAYMENT(S) TOWARDS A DISTRIBUTION SYSTEM EXPANSION IF THE PROPOSED DEVELOPMENT REQUIRES ELECTRICAL SERVICING GREATER THAN CAN BE PROVIDED BY THE EXISTING DISTRIBUTION SYSTEM IN THE VICINITY, EITHER IN CAPACITY OR IN EXTENSION LIMIT. THIS AMOUNT SHALL BE IN ACCORDANCE WITH HYDRO OTTAWA'S CONTRIBUTED CAPITAL POLICY AND CONDITIONS OF SERVICE.
5. THE OWNER SHALL ENTER AN INSTALLATION AND SERVICE AGREEMENT WITH HYDRO OTTAWA.
6. THE OWNER SHALL BE RESPONSIBLE FOR SERVICING THE BUILDINGS WITHIN THE PROPERTY. ONLY ONE SERVICE ENTRANCE PER PROPERTY SHALL BE PERMITTED.
7. THE OWNER SHALL BE RESPONSIBLE FOR ALL COSTS FOR FEASIBLE RELOCATIONS, PROTECTION OR ENCASEMENT OF ANY EXISTING HYDRO OTTAWA PLANT.
8. THE OWNER SHALL CONVEY, AT THEIR COST, ALL REQUIRED EASEMENTS AS DETERMINED BY HYDRO OTTAWA.

9. THE APPLICANT SHALL COMPLY WITH HYDRO OTTAWA'S CONDITIONS OF SERVICE AND THUS SHOULD BE CONSULTED FOR THE SERVICING TERMS. THE DOCUMENT, INCLUDING REFERENCED STANDARDS, GUIDELINES AND DRAWINGS, MAY BE FOUND AT HTTPS://HYDROOTTAWA.COM/ABOUT-US/POLICIES/CONDITIONS-SERVICE. THE OWNER SHOULD CONSULT HYDRO OTTAWA PRIOR TO COMMENCING ENGINEERING DESIGNS TO ENSURE COMPLIANCE WITH THESE DOCUMENTS.
10. HYDRO OTTAWA RESERVES THE RIGHT TO RAISE CONDITIONS THROUGHOUT THE DEVELOPMENT OF THIS PROPOSAL SHOULD THE REVISIONS CONTAIN NON-CONFORMANCES WITH. FOR EXAMPLE, HYDRO OTTAWA'S CONDITIONS OF SERVICE OR STANDARDS. TO ENSURE THE BEST OUTCOME, HYDRO OTTAWA WELCOMES AN EARLY DISCUSSION ON THE PROPOSAL.

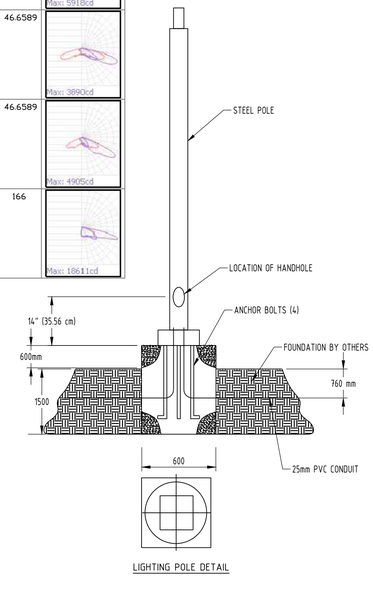
FOR MORE INFORMATION ON ELECTRICAL SERVICING, THE FOLLOWING LINK OUTLINES HYDRO OTTAWA'S SERVICES FOR COMMERCIAL, OVERHEAD AND UNDERGROUND, AND RESIDENTIAL PROJECTS, TOGETHER WITH CONTACT INFORMATION FOR HYDRO OTTAWA REPRESENTATIVES:
HTTPS://HYDROOTTAWA.COM/ACCOUNTS-SERVICES/ACCOUNTS/CONTRACTORS-DEVELOPERS/DISTRIBUTION-SYSTEM-DESIGN

Schedule

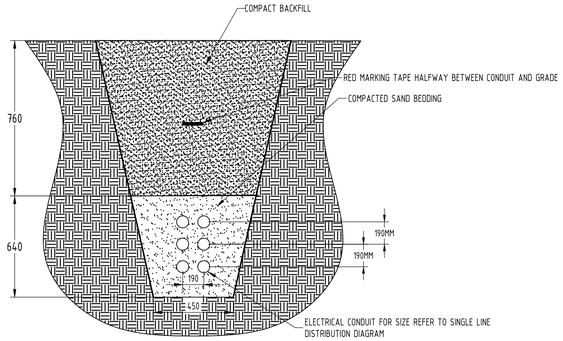
Symbol	Label	Image	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power	Polar Plot
	WA		1	Lithonia Lighting	WDGE3 LED P4 70CRI R4 40K	WDGE3 LED WITH P4 - PERFORMANCE PACKAGE, 4000K, 70CRI, TYPE 4 OPTIC	1	12537	0.9	87.8914	Max: 7398cd
	WB		2	Lithonia Lighting	WDGE3 LED P2 70CRI RFT 40K	WDGE3 LED WITH P2 - PERFORMANCE PACKAGE, 4000K, 70CRI, FORWARD THROW OPTIC	1	8596	0.9	59.2761	Max: 4144cd
	WC		6	Lithonia Lighting	WDGE3 LED P4 70CRI RFT 40K	WDGE3 LED WITH P4 - PERFORMANCE PACKAGE, 4000K, 70CRI, FORWARD THROW OPTIC	1	12277	0.9	87.8914	Max: 5918cd
	WD		3	Lithonia Lighting	WDGE2 LED P4 40K 70CRI T2M	WDGE2 LED WITH P4 - PERFORMANCE PACKAGE, 4000K, 70CRI, TYPE 2 MEDIUM OPTIC	1	4815	0.9	46.6589	Max: 3890cd
	WE		6	Lithonia Lighting	WDGE2 LED P4 40K 70CRI T1S	WDGE2 LED WITH P4 - PERFORMANCE PACKAGE, 4000K, 70CRI, TYPE 1 SHORT OPTIC	1	4627	0.9	46.6589	Max: 4905cd
	LS		1	Lithonia Lighting	DSXO LED P7 40K RCCO MVOLT	DSXO LED P7 40K RCCO MVOLT	1	11199	0.9	166	Max: 18611cd

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	1.7 fc	17.0 fc	0.0 fc	N/A	N/A



LIGHTING POLE DETAIL

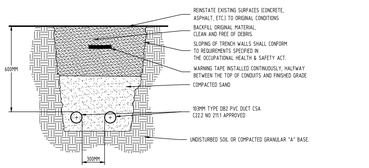


TYPICAL TRENCH DETAIL FOR 6 CONDUITS

NOTES:

1. REINFORCING RODS FULL LENGTH OF CONCRETE ENCASED DUCTS. OVERLAP JOINTS BY 150mm ON BASE OF SPACERS AND TIE BOTH ENDS. DRILL AND DOWEL RODS 85mm INTO WALL(S) OF CONCRETE STRUCTURE.
2. DUCT SPACERS TO BE PLACED AT A MAXIMUM OF 1500mm AND WITHIN 150mm OF COUPLING. PLASTIC DUCT SPACERS TO BE UNSED ONLY IF CONCRETE DUCT SPACERS ARE UNAVAILABLE.
3. FORMS REQUIRED FOR BOTH SIDES OF THE FULL LENGTH OF CONCRETE ENCASED DUCT STRUCTURE.
4. DUCTS AND TRENCHES MUST BE INSPECTED BY ESA AND MIRITON BEFORE ANY CONCRETE IS POURED.
5. CONTRACTOR MUST ENSURE THAT ALL DUCTS ARE CLEANED, RODDED AND THAT A 8mm POLYPROPYLENE ROPE IS LEFT IN EACH DUCT.
6. BELL END TERMINATORS ARE TO BE USED WHEN TERMINATING DUCTS IN STRUCTURES.

2 / E1 — TRENCH DETAIL - POWER
N.T.S



NOTES:
1. CONTRACTOR MUST ENSURE THAT ALL DUCTS ARE CLEANED, RODDED AND THAT A 8MM POLYPROPYLENE ROPE IS LEFT IN EACH DUCT.
2. BELL END TERMINATORS ARE TO BE USED WHEN TERMINATING DUCTS IN STRUCTURES.

3 / E1 — TRENCH DETAIL - TELECOM CONDUITS
N.T.S

ingénierie miriton engineering

ISSUE	DESCRIPTION	CHECKED	DATE
1	ISSUED FOR SITE APPLICATION	MY	2023-01-30
2	RE-ISSUED FOR SITE APPLICATION	MY	2023-12-20

KEY PLAN

DRAWINGS ARE TO BE READ AS A PACKAGE AND ARE NOT INTENDED TO BE SEPARATED AND VIEWED INDIVIDUALLY BY DISCIPLINE.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND DETAILS (WHETHER SHOWN ON THE DRAWINGS OR NOT) AND TO ACCURATELY ESTIMATE MATERIAL AND LABOUR COST FOR THE PROJECT, SHORTAGE OF MATERIAL AND LABOUR DUE TO WRONG SCALE SHALL NOT INCUR EXTRA COST TO THE OWNER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INVESTIGATE AND INQUIRE IN WRITING ABOUT AN AMBIGUITY, INCONSISTENCY, OR MISTAKE DURING THE TENDER PHASE OF THE PROJECT. THE CONTRACTOR ASSUMES FULL RESPONSIBILITY TO VERIFY THE CONDITIONS, DIMENSIONS, AND DETAILS OF THE BUILDING AND ASSUMES FULL LIABILITY FOR ANY PROBLEMS THAT MAY ARISE DUE TO POSSIBLE ERRORS ON THESE PLANS. ALL FEDERAL, PROVINCIAL, AND LOCAL CODES, REGULATIONS, ETC. SHALL BE CONSIDERED PART OF THE SPECIFICATIONS OF THIS PROJECT AND SHALL TAKE PRECEDENCE OVER ANYTHING SHOWN, DESCRIBED OR IMPLIED WHERE SAME ARE AT VARIANCE. USE OF THESE PLANS AND SPECIFICATION CONSTITUTES COMPLIANCE WITH ITS TERMS AND CONDITION.

DESIGNED BY:	MRITON
DRAWN BY:	SY
CHECKED BY:	MY
CLIENT:	

PROJECT:
MICHAEL STREET
1591 & 1611 MICHAEL STREET,
OTTAWA, ON
K1B 3T3

DRAWING TITLE:
SITE PLAN ELECTRICAL LAYOUT

SEAL:
LICENCED PROFESSIONAL ENGINEER
M. YAZDANI
DEC. 20, 2023
PROVINCE OF ONTARIO

SCALE:	
SHEET NO:	#OF#
PROJECT NO:	22017

E-1