

53 UNIT APARTMENT BUILDING

1055 KLONDIKE RD, OTTAWA, ON

ELECTRICAL

ELECTRICAL SPECIFICATIONS:

1. COMPLY WITH THE REQUIREMENTS OF THE INSTRUCTIONS TO BIDDERS, THE GENERAL CONDITIONS OF THE CONTRACT AND THE SUPPLEMENTARY GENERAL CONDITIONS INCLUDED IN THE TENDER DOCUMENTS.

2. CONTRACTOR SHALL FOLLOW THE BIDDING DOCUMENT PROJECT SCHEDULE UPON AWARD. CONTRACTOR SHALL SUBMIT WORK SCHEDULE AND EQUIPMENT DELIVERY SCHEDULE TO PROJECT MANAGER & ENGINEER FOR REVIEW AND APPROVAL.

3. ALL WORK TO BE CONDUCTED DURING HOURS SPECIFIED BY THE PROJECT MANAGER.

4. ALL INSTALLATIONS SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES AND BY-LAWS AND BE INSTALLED BY LICENSED WORKMEN SKILLED IN THAT PARTICULAR PORTION OF THE CONTRACT.

5. ANY CONFLICT OR QUESTIONS THAT ARISE IN RELATION TO THE DESIGN DOCUMENTS DURING THE TENDER PERIOD SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. IF THIS PROCEDURE IS NOT FOLLOWED, REROUTING AND MODIFICATION AS REQUIRED TO COMPLETE THE WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

6. GIVE ALL NOTICES, OBTAIN ALL NECESSARY PERMITS AND PAY ALL APPLICABLE FEES AND INSPECTION COSTS AND DELIVER TO ENGINEER ALL NECESSARY FINAL CERTIFICATES OF INSPECTION AND APPROVAL WHICH MAY BE REQUIRED BY AUTHORITIES HAVING JURISDICTION OVER WORK, AS EVIDENCE THAT WORK INSTALLED CONFORMS WITH LAWS AND REGULATIONS OF ALL GOVERNING AUTHORITIES, BEFORE FINAL CERTIFICATE OF PAYMENT MAY BE CONSIDERED DUE. FURNISH COPIES OF ALL DRAWINGS AS MAY BE REQUIRED TO COMPLY WITH ABOVE, NOTIFY INSPECTION AUTHORITIES IN SUFFICIENT TIME FOR THEM TO INSPECT WORK.

7. EXAMINE SITE AND LOCAL CONDITIONS AFFECTING WORK UNDER THIS DIVISION TO ENSURE THAT WORK UNDER THIS DIVISION CAN BE SATISFACTORILY CARRIED OUT WITHOUT CHANGES TO DRAWINGS. NO ALLOWANCE WILL BE MADE LATER FOR ANY EXPENSE INCURRED THROUGH FAILURE TO MAKE THIS EXAMINATION. START OF WORK WILL BE DEEMED EVIDENCE OF ACCEPTANCE OF, AND SATISFACTION WITH, EXISTING CONDITIONS.

8. GUARANTEE ALL WORK FOR 12 MONTHS FROM THE DATE OF ACCEPTANCE.

9. ENSURE THAT ALL PRECAUTIONS ARE TAKEN TO PROTECT ALL PERSONNEL FROM HAZARDS DURING THE WORK. PROTECT ALL EQUIPMENT FROM DAMAGE FROM ANY CAUSE INCLUDING WEATHER.

10. USE ONLY NEW, FULLY CSA AND UL/ULC APPROVED FOR USE AS INSTALLED MATERIALS, AND TO MEET THIS SPECIFICATION IN ALL RESPECTS.

11. INSPECT ALL EQUIPMENT UPON DELIVERY AND NOTIFY PROJECT ENGINEER OF ANY DAMAGE OR DEFICIENCIES.

12. COORDINATE MATERIAL STORAGE WITH THE SITE SUPERINTENDENT AND OTHER TRADES.

13. CONTRACTOR TO NOTIFY PROJECT MANAGER IN WRITING MINIMUM OF THREE (3) WORKING DAYS BEFORE SCHEDULED SUBSTANTIAL COMPLETION TO ARRANGE INTERIM INSPECTION AND EQUIPMENT COMMISSIONING. NOTIFY PROJECT MANAGER IN WRITING OF ANY CHANGES IN SCHEDULE.

14. DURING THE COURSE OF CONSTRUCTION AND UPON COMPLETION, REMOVE ALL DEBRIS AND WASTE RESULTING FROM THIS WORK, TO THE SATISFACTION OF THE ENGINEER. CHECK, CLEAN AND REPAINT WHERE NECESSARY, ALL ELECTRICAL EQUIPMENT AND LEAVE IN A FIRST CLASS CONDITION.

15. THE WORK AS COVERED BY THESE SPECIFICATIONS AND PLANS IS INTENDED TO COMPLY EXACTLY WITH THE LATEST RULES AND REGULATIONS OF THE INSPECTION AUTHORITIES, AND THESE RULES ARE TO BE CONSIDERED AN INTEGRAL PART OF THESE SPECIFICATIONS. IN CASE OF CONFLICT, ANY RULING BY THE INSPECTION AUTHORITY SHALL BE FINAL. ALL CHANGES AND ALTERATIONS TO THE CONTRACTOR'S WORK REQUIRED BY AN AUTHORIZED INSPECTOR OR ANY AUTHORITY HAVING JURISDICTION DUE TO THE CONTRACTORS WORK SHALL BE CARRIED OUT AT NO EXPENSE TO THE OWNER.

16. MANUFACTURER'S INSTRUCTIONS REGARDING THE HANDLING, INSTALLATION AND TESTING OF EQUIPMENT SPECIFIED HEREIN SHALL BE CONSIDERED PART OF THIS SPECIFICATION.

17. PROVIDE ELECTRONIC COPY (PDF FORMAT) OF SHOP DRAWINGS FOR ALL SYSTEMS AND EQUIPMENT FOR REVIEW. SHOP DRAWINGS SHALL INCLUDE BUT NOT BE LIMITED TO, THE FOLLOWING INFORMATION:

- FLOOR ANCHORING METHOD AND FOUNDATION TEMPLATE.
- DIMENSIONED CABLE ENTRY AND EXIT LOCATIONS.
- DIMENSIONED POSITION AND SIZE OF BUS.
- OVERALL WEIGHT, LENGTH, HEIGHT AND DEPTH, GAUGE AND TYPE OF MATERIALS.
- DIMENSIONED LAYOUT OF INTERNAL AND FRONT PANEL.
- MOUNTED COMPONENTS.
- ELECTRICAL CHARACTERISTICS AND PERFORMANCE DATA.
- WIRING DIAGRAMS.
- NAME OF CONTRACTOR C/W SIGNED REVIEW STAMP.
- NAME OF COMPONENT, SERVICE OR SYSTEM.
- NUMBER OF PAGES FOR EACH TYPED PAGE (I.E. PG 1 OF 5).

18. SUBMIT ELECTRONIC (PDF FORMAT) COPY OF OPERATION & MAINTENANCE (O&M) MANUALS FOR APPROVAL. PROVIDE A COPY OF THE FOLLOWING IN THE MANUALS:

- LETTER OF WARRANTY
- ELECTRICAL SAFETY AUTHORITY (ESA) INSPECTION CERTIFICATE.
- CITY INSPECTION REPORT
- UPDATED PANEL SCHEDULES, C/W ELECTRICAL COMPANY'S NAME, DATED AND CIRCUIT BREAKER SIZES.
- SHOP DRAWINGS
- AS BUILTS
- LIST OF SUPPLIERS C/W ADDRESS AND PHONE NUMBERS.
- SEISMIC REVIEW LETTER.

19. SUPPLY ALL NECESSARY TOOLS, EQUIPMENT AND PERSONNEL AND PROVIDE DEMONSTRATION AND TRAINING TO OPERATING AND MAINTENANCE PERSONNEL IN OPERATING, CONTROLLING, ADJUSTING, TROUBLESHOOTING AND SERVICING OF ALL SYSTEMS AND EQUIPMENT DURING REGULAR WORK HOURS, PRIOR TO ACCEPTANCE.

20. AFTER AWARD OF CONTRACT, SUBMIT A DETAILED COST BREAKDOWN INDICATING MATERIAL AND LABOUR COSTS FOR EACH PORTION OF THE WORK, INCLUDING DEMOLITION, LIGHTING, POWER DISTRIBUTION, COMMUNICATIONS, FIRE ALARM, ETC. TO BE APPROVED BY THE ENGINEER.

21. EXISTING ELECTRICAL SYSTEMS HAVE BEEN ONLY PARTIALLY INDICATED. REGARD INFORMATION RELATED TO EXISTING INSTALLATION AS A GUIDE ONLY. DETERMINE STATUS, QUANTITIES AND LOCATION OF EQUIPMENT AND SYSTEMS, ON SITE, PRIOR TO COMMENCEMENT OF REMOVAL AND/OR EXTENSION OF SAME.

22. THE DRAWINGS SHALL BE CONSIDERED TO SHOW THE GENERAL CHARACTER AND SCOPE OF THE WORK AND NOT THE EXACT DETAILS OF THE INSTALLATION. THE INSTALLATION SHALL BE COMPLETE WITH ALL ACCESSORIES REQUIRED FOR A COMPLETE AND OPERATIVE INSTALLATION.

23. THESE ELECTRICAL DRAWINGS AND SPECIFICATIONS MUST BE READ IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.

24. THE WORD "PROVIDE" SHALL DENOTE "SUPPLY, INSTALL, CONNECT AND TEST".

25. LABELING:

- FOR ALL NEW, RELOCATED AND EXISTING-TO-REMAIN ELECTRICAL DEVICES WITHIN THE CONTRACT AREA, PROVIDE CLEAR BROTHER P-TOUCH LABELS INDICATING CIRCUIT AND PANEL AT ALL EQUIPMENT, DEVICES, RECEPTACLES AND JUNCTION BOXES.
- TRACE EXISTING CIRCUITS AND UPDATE PANEL SCHEDULES.

28. CHECK WITH BUILDING MANAGEMENT PRIOR TO CORE DRILLING AND CUTTING OF FLOOR SLAB, REGARDING BUILDING REQUIREMENTS AND POLICIES. PRIOR TO SLAB CUTTING OR CORING, FIRST SCAN THE SLAB AND COORDINATE DRILLING TO MINIMIZE CUTTING OF THE REINFORCING STEEL. FIRE STOP ALL NEW FIRE RATED PENETRATIONS. THE CONTRACTOR IS TO INCLUDE IN TENDER PRICE ALL WORK ASSOCIATED WITH CORE DRILLING AFTER NORMAL WORKING HOURS. OBTAIN WRITTEN VERIFICATION OF THE LOCATIONS FROM THE ARCHITECT AND/OR INTERIOR DESIGNER PRIOR TO DRILLING. CUTTING TORCHES SHALL NOT BE USED FOR MAKING HOLES. PATCH ALL HOLES THROUGH SLAB WITH FIRE-STOP CALKING (ULC LISTED). PATCHED SURFACES ARE TO BE PRIME FINISHED, READY FOR FINAL COVERING BY OTHERS.

29. SEISMIC RESTRAINT SYSTEM (SRS):

a. GENERAL:

- PROVIDE DESIGN, SUPPLY AND INSTALLATION OF COMPLETE SRS FOR ALL SYSTEMS, EQUIPMENT SPECIFIED FOR INSTALLATION ON THIS PROJECT AS PER ONTARIO BUILDING CODE (2012), CSA S832-06(R2011).
- DESIGN TO BE BY PROFESSIONAL ENGINEER SPECIALIZING IN DESIGN OF SRS AND REGISTERED IN PROVINCE OF ONTARIO. INCLUDE ALL COSTS ASSOCIATED WITH THIS WORK AS IT RELATES TO DIVISION 28 INSTALLATIONS. SUBMIT DESIGN SKETCHES C/W PROFESSIONAL STAMP PRIOR TO START OF INSTALLATIONS, C/W INSTALLATION REQUIREMENTS.

a.c. ACCEPTABLE MATERIALS: KOPFUND-SIMPSON, MASON INDUSTRIES, TEOUSTICS, VIBRA-SOHC CONTROL, VIBRO.

- SUBMITTALS TO INCLUDE FULL DETAILS OF DESIGN CRITERIA.
- SUBMIT ADDITIONAL COPY OF SHOP DRAWINGS AND PRODUCT DATA TO STRUCTURAL ENGINEER FOR REVIEW OF CONNECTION POINTS TO BUILDING STRUCTURE.

- INSTALL VIBRATION ISOLATION EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND ADJUST MOUNTINGS TO LEVEL EQUIPMENT. ENSURE PIPE, DUCT AND ELECTRICAL CONNECTIONS TO ISOLATED EQUIPMENT DO NOT REDUCE SYSTEM FLEXIBILITY. ENSURE THAT PIPE, CONDUIT AND DUCT PASSING THROUGH WALLS AND FLOORS DO NOT TRANSMIT VIBRATIONS.

30. ANCHORING METHODS:

- ELECTRICAL EQUIPMENT, FIXTURES, CONDUIT AND CABLING IS TO BE SECURELY ANCHORED OR FASTENED TO THE BUILDING STRUCTURE USING DRILLED HOLE WEDGE ANCHORS FOR CONCRETE STRUCTURES OR STEEL CLAMPS FOR STEEL STRUCTURES.
- AIR, FUEL OR POWDER ACTUATED DEVICES OR ANY OTHER EQUIVALENT TYPE OF FASTENING DEVICES ARE NOT TO BE USED.
- WHERE ANCHORING METHOD FORMS PART OF SEISMIC RESTRAINT REQUIREMENTS, ANCHORING METHODS TO COMPLY WITH SEISMIC RESTRAINT SYSTEMS (SRS).

b. LUMINAIRE SUPPORTS:

- FOR RECESSED OR SURFACE MOUNTED LIGHTING IN SUSPENDED CEILING INSTALLATIONS, SUPPORT LUMINAIRES INDEPENDENTLY FROM CEILING, BY MEANS OF A MINIMUM OF TWO CHAIN HANGERS BOLTED TO DIAGONAL CORNERS OF THE FIXTURE BODY AND SECURED TO BUILDING STRUCTURE IN ACCORDANCE WITH ESA, AND SEISMIC RESTRAINT SYSTEMS (SRS).

32. GROUNDING AND BONDING:

- PROVIDE GROUNDING AND BONDING OF ALL EQUIPMENT WITH APPROVED FITTINGS AND CONDUCTORS OF AMPLIFIED CAPACITY IN ACCORDANCE WITH ONTARIO ELECTRICAL SAFETY CODE. ALL CONDUCTORS SHALL HAVE GREEN INSULATION OR BE COLOUR CODED WITH PERMANENTLY ATTACHED GREEN TAPE 21MM WIDE AT EACH END. PROVIDE INSULATED GROUND/BONDING CONDUCTOR IN EACH CONDUIT.

33. WIRING AND RACEWAYS:

- ALL INTERIOR WIRING SHALL BE COPPER RW90 #12 CONDUCTOR MINIMUM.
- ALL EXTERIOR UNDERGROUND WIRING TO BE COPPER RWU-90, MINUS 40 C RATED.
- AC-90 (BX) MAY BE USED IN REMOVABLE CEILINGS AND METAL PARTITION WALLS. MAXIMUM LENGTH 3 METERS.
- ALL NEW RACEWAYS SHALL BE THIN WALL ELECTRICAL METALLIC TUBING (EMT) RAIN-TIGHT COUPLING AND CONNECTORS UNLESS OTHERWISE INDICATED. CONDUITS TO BE COMPLETE WITH STEEL SET-SCREW COUPLINGS AND CONNECTORS AND NYLON BUSHING.
- USE LIQUID TIGHT FLEXIBLE METAL CONDUIT FOR CONNECTION TO MOTORS.
- USE LIQUID TIGHT FLEXIBLE METAL CONDUIT FOR CONNECTION TO EQUIPMENT IN DAMP, WET OR CORROSIVE LOCATIONS.
- SURFACE CONDUIT TO RUN PARALLEL OR PERPENDICULAR TO BUILDING LINES.
- ALL CONDUITS AND JUNCTION BOXES TO BE ANCHORED TO THE BUILDING STRUCTURE.
- PROVIDE A POLYPROPYLENE PULL STRING IN ALL EMPTY CONDUITS.
- EXISTING FEEDERS RELOCATED UNDER THIS CONTRACT TO BE REWIRED: SPlice NEW WIRE TO EXISTING WIRE FROM JUNCTION BOX TO JUNCTION BOX, OR FROM JUNCTION BOX TO EXISTING EQUIPMENT.
- CONTRACTOR MAY RE-USE EXISTING CONDUIT AND/OR GRID PULL BOXES WHERE SUITABLE FOR RE-USE WITH NEW OR RELOCATED RUNS.
- REMOVE AND DISPOSE OF ANY REDUNDANT EXISTING WIRING.
- 120V CIRCUITS OF LENGTH GREATER THAN 25m TO BE #10 AWG MINIMUM OR AS REQUIRED TO LIMIT VOLTAGE DROP WITH CODE SPECIFIED VALUE.
- MINIMUM SIZE CONDUIT TO BE 21mm UNLESS SPECIFIED OTHERWISE.

35. LUMINAIRES:

- PROVIDE LIGHTING FIXTURES, COMPLETE WITH LAMPS, AS INDICATED IN LIGHT FIXTURE SCHEDULE.
- EACH LUMINAIRE CONNECTED TO A BRANCH CIRCUIT EXCEEDING 150V-TO-GROUND, WITH DOUBLE-ENDED LAMPS AND CONNECTED TO A BALLAST OR DRIVER, SHALL HAVE INTEGRAL DISCONNECTING MEANS AS PER THE CANADIAN ELECTRICAL CODE.

36. FIXTURE INSTALLATION: DO NOT MOUNT FIXTURES ABOVE PIPES, DUCTS OR EQUIPMENT. CHECK LAYOUTS OF WORK BY OTHER TRADES ON PROJECTS AND PLAN COOPERATIVELY WITH OTHERS TO AVOID CONFLICT. PROVIDE LONGER HANGERS TO CLEAR OBSTRUCTIONS, IN EVENT OF UNAVOIDABLY TIGHT LOCATIONS. PROVIDE CHAIN HANGERS FOR ALL FIXTURES IN T-BAR CEILINGS.

37. MOLDED CASE CIRCUIT BREAKERS:

- BOLT-ON MOLDED CASE CIRCUIT BREAKER: QUICK-MAKE, QUICK-BREAK TYPE, FOR MANUAL AND AUTOMATIC OPERATION WITH TEMPERATURE COMPENSATION FOR 40 C AMBIENT.
- COMMON-TRIP BREAKERS: WITH SINGLE HANDLE FOR MULTI-POLE APPLICATIONS.
- CIRCUIT BREAKERS WITH INTERCHANGEABLE TRIPS AS INDICATED.
- MOLDED CASE CIRCUIT BREAKER TO OPERATE AUTOMATICALLY BY MEANS OF CURRENT AND MAGNETIC TRIPPING DEVICES TO PROVIDE INVERSE TIME CURRENT TRIPPING AND INSTANTANEOUS TRIPPING FOR SHORT CIRCUIT PROTECTION.

DEMOLITION NOTES:

- UNLESS OTHERWISE NOTED, MATERIALS FOR REMOVAL BECOME THE CONTRACTOR'S PROPERTY AND SHALL BE TAKEN FROM SITE AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE CODES, STANDARDS AND REGULATIONS.
- DISCONNECT AND MAKE SAFE ALL SYSTEMS TO BE DEMOLISHED INCLUDING PANELS, FEEDERS, BRANCH CIRCUITS AND EQUIPMENT BY OTHER DIVISIONS. COORDINATE WITH OTHER DIVISIONS.
- MAINTAIN EXISTING REMAINING CIRCUITS, SYSTEMS, ETC., WHICH PASS THROUGH AREA OF CONSTRUCTION AND IN CLOSE PROXIMITY. PROVIDE NECESSARY COMPONENTS TO MAINTAIN SYSTEMS. ENSURE COMPONENTS WILL BE CONCEALED WHEN CONSTRUCTION IS COMPLETE.
- REINSTATE IMMEDIATELY ANY REMAINING EXISTING SYSTEMS IN-ADVERTENTLY INTERRUPTED DURING CONSTRUCTION.
- THE DRAWINGS INDICATE KNOWN CONDITIONS AND MAY NOT INDICATE ALL DEMOLITION REQUIREMENTS. ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO TENDER SUBMISSION AND VERIFY REQUIREMENTS AND INCLUDE ALL COSTS IN TENDER.
- REMOVE REDUNDANT CONDUIT AND WIRING BACK TO SOURCE UNLESS OTHERWISE NOTED, AND MAKE SAFE.
- DEVICES FROM DEMOLITION ARE NOT TO BE REUSED UNLESS NOTED OTHERWISE. NEW DEVICES SHALL BE SUPPLIED WHERE NECESSARY.
- ALL FIRE ALARM DEVICES TO REMAIN IN OPERATION. PROTECT SMOKE DETECTORS FROM DUST EXPOSURE DURING CONSTRUCTION.
- ENSURE FIRE ALARM SYSTEM IS OPERATIONAL AT THE END OF EACH SHIFT.
- AFTER DEMOLITION WORK IS COMPLETE AND MINIMUM THREE (3) WORKING DAYS PRIOR TO PROCEEDING WITH NEW WORK, NOTIFY ENGINEER FOR INSPECTION.

GENERAL NOTES:

- ELECTRICAL WORK TO BE DONE IN ACCORDANCE WITH THE ELECTRICAL SAFETY CODE OF ONTARIO, AND WITH NEW ARCHITECTURAL/INTERIOR DESIGNER'S LAYOUT (LOCATION/MOUNTING HEIGHTS). CONTRACTOR TO OBTAIN ALL NECESSARY PERMITS, PAY ALL APPLICABLE FEES AND INSPECTION COSTS.
- COORDINATE WORK WITH ALL OTHER TRADES TO AVOID INTERFERENCE.
- ENSURE ELECTRICAL COMPONENTS (I.E. WIRING, CONDUIT, ETC.) RELATING TO THE AREA OF WORK ARE INDEPENDENTLY SECURED TO COMPLY WITH CODE REQUIREMENTS. IT IS NOT ACCEPTABLE TO SECURE THE COMPONENTS TO DUCTWORK, DUCT WORK TO CONDUIT, OR ANY OTHER SYSTEMS.
- ENSURE ALL EXISTING CEILING MOUNTED BOXES ARE CLOSED PRIOR TO COMPLETION OF PROJECT. PROVIDE LABELED AND COLOUR CODED COVER PLATES (I.E. PANEL NAME AND CIRCUIT NUMBER) AS REQUIRED.
- MINIMUM THREE (3) WORKING DAYS PRIOR TO CLOSING CEILING, NOTIFY THE ENGINEER FOR CEILING INSPECTION.

LIGHTING NOTES:

- CLEAN LAMPS, LENSES, INTERIOR AND VISIBLE SURFACES OF LUMINAIRES. REPLACE DEFECTIVE LAMPS, BALLAST AND DAMAGED LENSES.
- LUMINAIRES IN CONSTRUCTION AREA ARE TO BE INDEPENDENTLY SUPPORTED, INCLUDING EXISTING TO REMAIN, RELOCATED AND NEW, TO COMPLY WITH CODE REQUIREMENTS.
- ADD, RELOCATE AND CONNECT LIGHT FIXTURES TO SUIT INDICATED LAYOUT, EXTEND CONDUIT AND WIRING AS NECESSARY AND CONNECT LUMINAIRES TO EXISTING CIRCUITS. TURN OVER SURPLUS FIXTURES TO OWNER.
- WHERE AIR SUPPLY TROFFER ARE BEING RELOCATED BY MECHANICAL CONTRACTOR TO EXISTING LIGHT FIXTURE, ELECTRICAL CONTRACTOR TO COORDINATE DISCONNECTION AND RECONNECTION AS REQUIRED.
- MODIFY ALL AFFECTED (RELOCATED OR REWIRED) 24V LIGHT FIXTURES TO PROVIDE BALLAST DISCONNECTS AS PER OECS.
- BRING TO THE ATTENTION OF THE ENGINEER ANY CONFLICTS OR REQUIRED CLARIFICATION.
- FAILING TO COORDINATE, THE CONTRACTOR WILL MODIFY THE INSTALLATION AT HIS EXPENSE, IF REQUIRED.

COLOR CODING:

- APPLICABLE TO NEW OR RELOCATED WORK UNLESS OTHERWISE NOTED.
- TO CONFORM TO CLIENT'S BUILDING CODING SYSTEM.
 - COLOR CODE CONDUITS AND BOXES.
 - CODE WITH PLASTIC TAPE OR PAINT WHERE CONDUITS ENTER WALLS, CEILING, OR FLOOR AND AT 15 METER INTERVALS.
 - COLOURS: 25mm WIDE PRIME COLOUR AND 20mm WIDE AUXILIARY COLOUR.

SERVICE	PRIME COLOUR	AUXILIARY COLOUR
UP TO 250V	BLUE	
UP TO 600V	YELLOW	

DRAWING LIST	
SYMBOL	DESCRIPTION
E1	ELECTRICAL TITLE SHEET
E2	ELECTRICAL SITE LIGHTING WORK

LINE TYPE LEGEND	
LINE TYPE	DESCRIPTION
---	PROPERTY LINE

LIGHTING LEGEND	
SYMBOL	DESCRIPTION
⊙	CEILING MOUNTED LIGHT FIXTURE - TYPE AS SHOWN
⊗	WALL MOUNTED LIGHT FIXTURE - TYPE AS SHOWN
⊕	EXTERIOR POLE MOUNTED LIGHT FIXTURE - TYPE AS SHOWN

LIGHTING FIXTURE SCHEDULE									
TYPE	DESCRIPTION	CATALOG NUMBER	LAMPS PER FIXTURE			VOLT	MOUNTING	REMARKS	
			QTY	TYPE	WATTS				
1	NEW LED EXTERIOR DOWNLIGHT	LIGHTOLIER FD4R07930TE1W	1	LED	32W	4000K	120V	RECESSED	--
2	NEW LED EXTERIOR WALL PACK	GARDCO 101L-16L-530-NW-G1-2	1	LED	28W	4000K	120V	SURFACE	--
3	NEW LED EXTERIOR POLE FIXTURE	GARDCO EGF-S-32L-365-NW-G2-4-HIS	1	LED	56W	4000K	120V	POLE	--
4	NEW LED EXTERIOR WALL PACK	GARDCO 101L-16L-530-NW-G1-2	1	LED	14W	4000K	120V	SURFACE	--

NOTES:
1. COORDINATE AMING OF FIXTURES WITH ARCHITECT AND CLIENT REPRESENTATIVE.

Client

DATE	REVISION	REF
2021.05.21	ISSUED FOR SITE PLAN APPROVAL	0

THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHER FAILURE TO OBTAIN AND / OR FOLLOW THE ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES, AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.

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NE PAS MESURER LES DESSINS À L'ÉCHELLE

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LICENSED PROFESSIONAL ENGINEER
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2021.05.21
PROVINCE OF ONTARIO

Project/Projet
1055 KLONDIKE RD. - 53 UNIT
APARTMENT BUILDING

Drawing title/Titre du dessin
ELECTRICAL
TITLE SHEET

Scale
Échelle AS NOTED
Project no./No. du projet
2021-174

Design by
Conçu par J. MOFFAT
Drawing/Dessin

Drawn by
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Reviewed by
Examiné par J. MOFFAT

Date
Date MAY 2021

Revision no.
Acad file/Fichier: -

E1 OF 2



SITE PLAN LIGHTING NEW WORK
 1
 E2 1:200

- DRAWING NOTES**
- ① **TYPICAL:**
 PROVIDE NEW TYPE (1) LIGHT FIXTURE C/W CONDUIT AND WIRE AND CONNECT TO NEW TIME CLOCK SYSTEM AND NEW EXTERIOR LIGHTING CIRCUIT. COORDINATE EXACT LOCATION, MOUNTING AND MOUNTING HEIGHT ON SITE WITH CLIENT REPRESENTATIVE AND ARCHITECT.
 - ② **TYPICAL:**
 PROVIDE NEW TYPE (2) LIGHT FIXTURE C/W CONDUIT AND WIRE AND CONNECT TO NEW TIME CLOCK SYSTEM AND NEW EXTERIOR LIGHTING CIRCUIT. COORDINATE EXACT LOCATION, MOUNTING AND MOUNTING HEIGHT ON SITE WITH CLIENT REPRESENTATIVE AND ARCHITECT.
 - ③ **TYPICAL:**
 PROVIDE NEW TYPE (3) LIGHT FIXTURE C/W CONDUIT AND WIRE AND CONNECT TO NEW TIME CLOCK SYSTEM AND NEW EXTERIOR LIGHTING CIRCUIT. COORDINATE EXACT LOCATION, MOUNTING AND MOUNTING HEIGHT ON SITE WITH CLIENT REPRESENTATIVE AND ARCHITECT.
 - ④ **TYPICAL:**
 PROVIDE NEW TYPE (4) LIGHT FIXTURE C/W MOTION SENSOR, CONDUIT AND WIRE AND CONNECT TO NEW EXTERIOR LIGHTING CIRCUIT. COORDINATE EXACT LOCATION, MOUNTING AND MOUNTING HEIGHT ON SITE WITH CLIENT REPRESENTATIVE AND ARCHITECT.

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Project/north
 Nord du projet

Seal/Scieu

Project/Projet
1055 KLONDIKE RD. - 53 UNIT APARTMENT BUILDING

Drawing title/Titre du dessin
ELECTRICAL SITE LIGHTING WORK

Scale Échelle	AS NOTED	Project no./No. du projet 2021-174
Design by Conçu par	J. MOFFAT	Drawing/Dessin
Drawn by Dessiné par	N. YARASKAVITCH	E2 OF 2
Reviewed by Examiné par	J. MOFFAT	
Date	MAY 2021	Revision no: Acad file/Fichier: