

Project 2608 Date JUN 2026



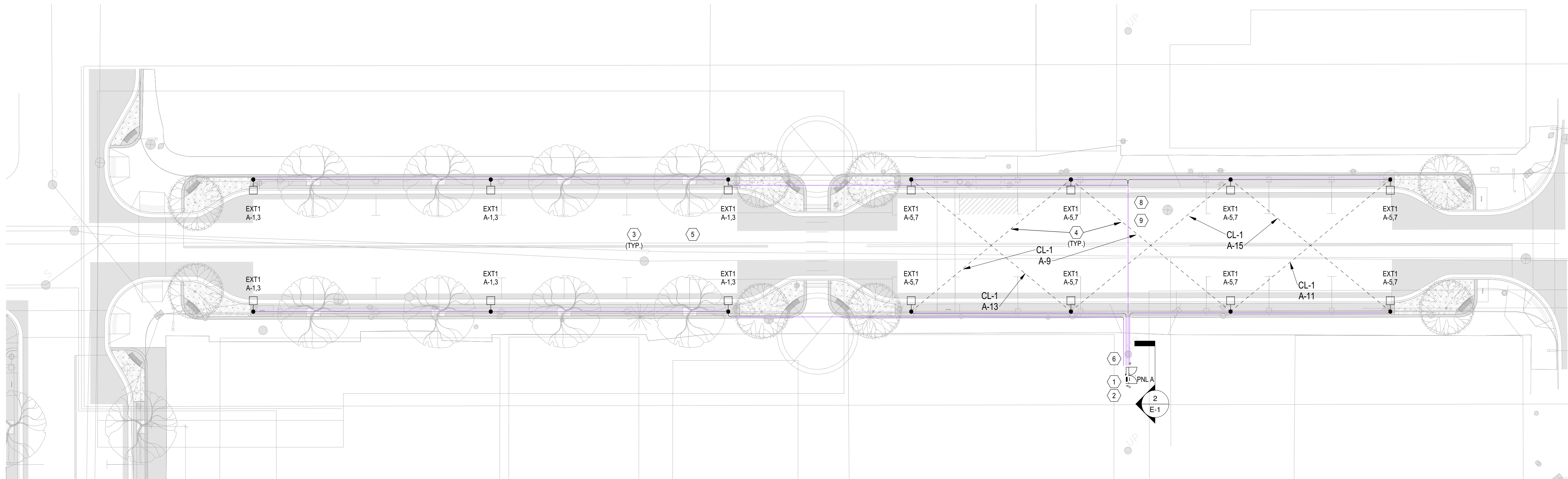
REVISION SCHEDULE		
#	DESCRIPTION	DATE
0	ISSUED FOR CONSTRUCTION	2026-06-24

NOTE Contractor to verify all dimensions. Do not scale drawings. Any errors or omissions to be reported to Consultant without delay.

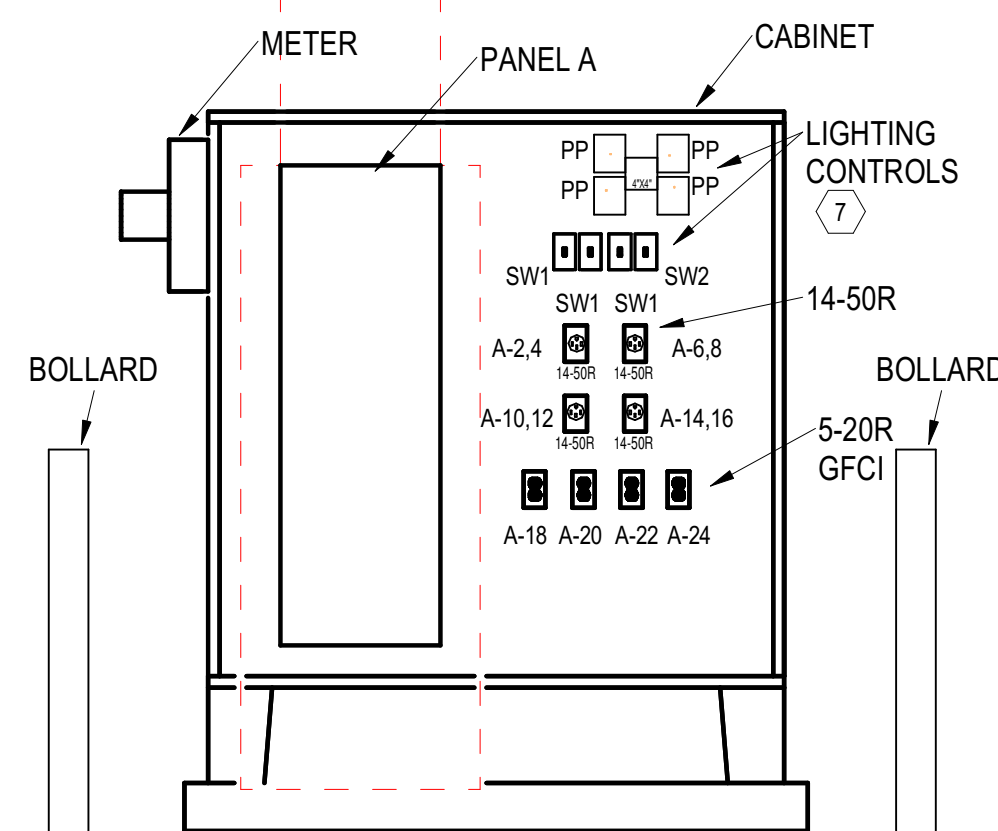


Scale As indicated

Sheet E-1



1 LIGHTING AND POWER PLAN
E-1 1 : 240



2 ELECTRICAL CABINET
E-1 NOT TO SCALE

PANELBOARD: A

LOCATION: MOUNTING: SURFACE NEMA 3R
MAIN DEVICE: 200.0 A MAIN CB
BUS AMPS: 225 AMPS

VOLTAGE: 120/240 V, 1 ø 3 W.
A.I.C. RATING: 10,000 AMPS SYMMETRICAL
SPECIAL: SERVICE ENTRANCE RATED

LOAD DESCRIPTION	BKR	P	CKT	PHASE A kVA	PHASE B kVA	CKT	P	BKR	LOAD DESCRIPTION
LITES (POLES WEST END)	15 A	2	1	0.5	3.6	2	2	50 A	RCPT
			3		0.5	3.6	4		
LITES (POLES EAST END)	15 A	2	5	0.7	3.6	6	2	50 A	RCPT
			7		0.7	3.6	8		
CATENARY LIGHTING	20 A	1	9	0.8	3.6	10	2	50 A	RCPT
CATENARY LIGHTING	20 A	1	11		0.8	3.6	12		
CATENARY LIGHTING	20 A	1	13	0.8	3.6	14	2	50 A	RCPT
CATENARY LIGHTING	20 A	1	15		0.8	3.6	16		
			17			18	1	20 A	RCPT
			19			0.2	1	20 A	RCPT
			21		0.2	22	1	20 A	RCPT
			23			0.2	1	20 A	RCPT
			25			24			
			27			26			
			29			28			
			31			30			
			33			32			
			35			34			
			37			36			
			39			38			
			41			40			
						42			
			TOTAL LOAD:		17 kVA	17 kVA			
			TOTAL AMPS:		145 A	145.0 A			
LOAD CLASSIFICATION	CONNECTED	DEMAND	ESTIMATED	PANEL TOTALS					
RCPT	29760 VA	66.80%	19880 VA	CONNECTED LOAD: 34802 VA					
LITES	5185 VA	100.00%	5185 VA	ESTIMATED DEMAND: 24932 VA					
				CONNECTED CURRENT: 145.0 A					
				EST. DEMAND CURRENT: 103.9 A					

NOTES:

LIGHTING CONTROL DEVICE SCHEDULE				
TYPE	DESCRIPTION	MANUFACTURER	CATALOG No.	NOTES
PP	PHASE ADAPTIVE DIMMING POWER PACK	NLIGHT AIR	rPP PCD EPP G2	1
SW1	WALL MOUNTED, LINE VOLTAGE WIRELESS SWITCH WITH ON/OFF, RAISE/LOWER	NLIGHT AIR	RPDOLA DX MVOLT WH G2	1
SW2	WALL MOUNTED, LINE VOLTAGE WIRELESS SWITCH WITH FOUR PRESET SCENES, ON/OFF, RAISE/LOWER	NLIGHT AIR	RPDOLA 4S DX MVOLT WH G2	1
GENERAL NOTES:				
A. N/A				
SCHEDULE NOTES:				
1. CONTRACTOR TO PROGRAM NLIGHT AIR DEVICES WITH CLARITY PRO MOBILE APP.				

POWER GENERAL NOTES

- MINIMUM CONDUIT SIZE SHALL BE 21mm (3/4") UNLESS NOTED OTHERWISE.
- WHERE CONNECTED TO A 20A BRANCH CIRCUIT SUPPLYING AN INDIVIDUAL RECEPTACLE (SIMPLEX OR DUPLEX), THE RECEPTACLE SHALL BE RATED AT 20A.
- CONTRACTOR SHALL BE RESPONSIBLE FOR WIRING ALL ELECTRICAL ITEMS SHOWN ON THE DRAWINGS UNLESS NOTED OTHERWISE.
- VERIFY LOCATIONS AND ROUGH-IN REQUIREMENTS OF ALL OWNER FURNISHED EQUIPMENT PRIOR TO ROUGH-IN.
- SITE CONFIRM ANY ELECTRICAL WITHIN AREAS OF RENOVATION REQUIRING RELOCATION TO ACCOMMODATE THE RENOVATION.
- PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUITING AND SWITCHING SHOWN.
- CONFIRM ALL ROUTING AND INSTALLATION OF ELECTRICAL DEVICES, CABLES, PATHWAYS AND EQUIPMENT WITH OWNER'S ON SITE REPRESENTATIVE BEFORE ROUGH-IN.
- PROVIDE WEATHERPROOF TYPED WRITTEN PANEL DIRECTORIES AFFIXED TO THE INTERIOR OF THE PANEL DOOR FOR ALL CIRCUITING.

LIGHTING GENERAL NOTES

- MINIMUM CONDUIT SIZE SHALL BE 21mm (3/4") UNLESS NOTED OTHERWISE.
- CIRCUIT WIRING IS NOT SHOWN EXCEPT FOR SWITCHING INTENT OF FIXTURES AND CONTROL OF DEVICES.
- PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUITING AND SWITCHING SHOWN.
- CIRCUIT NUMBERS AT DEVICES CORRESPOND TO PANELBOARD BREAKERS (SEE PANELBOARD SCHEDULE). BRANCH CIRCUITS SHALL BE SIZED ACCORDING TO THE CIRCUIT BREAKER RATING, UNLESS INDICATED OTHERWISE ON THE ELECTRICAL EQUIPMENT SCHEDULE.
- CONFIRM MOUNTING OF LIGHT FIXTURES AND PROVIDE ALL REQUIRED MOUNTING BRACKETS AND HARDWARE AS REQUIRED.
- REFER TO MANUFACTURER'S INSTALLATION SHEETS FOR ALL LIGHTING CONTROL DEVICES. PROVIDE CONNECTIONS AS REQUIRED FOR INTENDED USE.
- CONTRACTOR SHALL PROGRAM LIGHTING SYSTEM TO MEET END USER'S REQUIREMENTS.

KEYNOTES

- PROVIDE WEATHERPROOF CABINET TO HOUSE PANEL A. BASIS OF DESIGN STRONG ELECTRIC TYPE 3R ENCLOSURE. COMPLETE WITH PROVISIONS TO MOUNT PANEL, METER, RECEPTACLES AND LIGHTING CONTROLS. REMOVABLE FRONT AND REAR SKIRTS. CABLE PASSTHROUGH FOR CORDS WHEN DOOR IS CLOSED, AND STANDS TO MOUNT TO CONCRETE FOUNDATION. COORDINATE FOUNDATION FOR CABINET WITH OTHER TRADES. PROVIDE CONDUITS TO ALL LIGHT POLES. PROVIDE METER ON CABINET AS REQUIRED. COORDINATE FINAL LOCATION OF CABINET ON SITE WITH OWNER AND MANITOBA HYDRO.
- PROVIDE NEW 120/240V 200A SINGLE PHASE SERVICE AND COORDINATE INSTALLATION WITH MANITOBA HYDRO. PROVIDE CABLE, CONDUIT, MAST AND METER BOX AS REQUIRED FOR NEW MANITOBA HYDRO SERVICE TO CABINET.
- PROVIDE 1 1/4" CONDUIT TO ALL LIGHT POLES FROM PANEL A AS REQUIRED. CONDUIT AND HELICAL PILES TO BE INSTALLED IN EARLY PHASES OF CONSTRUCTION. CONFIRM CONSTRUCTION SEQUENCE WITH OWNER.
- PROVIDE CATENARY LIGHTING AS SHOWN. DISTANCE BETWEEN POLES IS APPROXIMATELY 76'. CONFIRM EXACT DISTANCES ON SITE. PROVIDE ALL BRACKETS AND SUSPENSION CABLES AS REQUIRED FOR COMPLETE INSTALLATION OF CATENARY LIGHTING. CATENARY LIGHTING TO BE CONTROLLED FROM POWER PACKS AND SWITCHES IN CABINET.
- THREE MANITOBA HYDRO STREET LIGHTS TO BE MAINTAINED THROUGHOUT CONSTRUCTION. UPON ENERGIZATION OF NEW POLE LIGHTING, COORDINATE REMOVAL OF MANITOBA HYDRO STREET LIGHTS WITH MANITOBA HYDRO.
- PROVIDE BOLLARDS TO PROTECT NEW ELECTRICAL CABINET FROM VEHICULAR TRAFFIC.
- PROVIDE POWER PACKS FOR CONTROL OF CATENARY LIGHTING. PROVIDE POWER PACK AS REQUIRED FOR LOADS OF EACH STRING.
- ASPHALT ROAD IS EXISTING AND TO BE MAINTAINED. CONDUITS UNDER ROAD TO BE DIRECTIONALLY DRILLED OR ASPHALT CUT AND PATCHED. COORDINATE ALL REQUIREMENTS FOR CONDUIT PLACEMENT WITH OTHER TRADES AS REQUIRED.
- CONDUITS ARE REPRESENTATIONAL ONLY. CONTRACTOR TO CONFIRM ROUTING AND REQUIRED NUMBER OF CONDUITS.

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	LENS-LOUVER	MOUNTING	LED	DRIVER	VOLT	WATT	MFR	CATALOG SERIES	NOTE
CL-1	COMMERCIAL GRADE LIGHT STRING E26 SUSPENDED SERIES WITH 24" SPACING (BULK REEL AT 330')			E26 LED BULBS		120 V		AMERICAN LIGHTING	CGLS-MS-24-BK	3
EXT1	POLE MOUNTED AREA LUMINAIRE COMPLETE WITH 24" ROUND POLE AND SCREW PILE BASE, INTEGRATED OCCUPANCY SENSOR AND PHOTOCELL WITH WIRELESS CONTROL.	ACRYLIC LENSE	POLE	LED 20311lm 70CRI 3000K	WIRELESS CONTROLLED	240 V	149 W	LITHONIA	RSX2 LED P3 30K R5 MVOLT RPA NLTAIR2 PIRHN DBLXD	1
POLE	6.625" ROUND STRAIGHT STEEL POLE COMPELTE WITH HELICAL PILE BASE (6.6RS-24-250-0 & 10HP-10)			---	---			PRAIRIE POLE		2

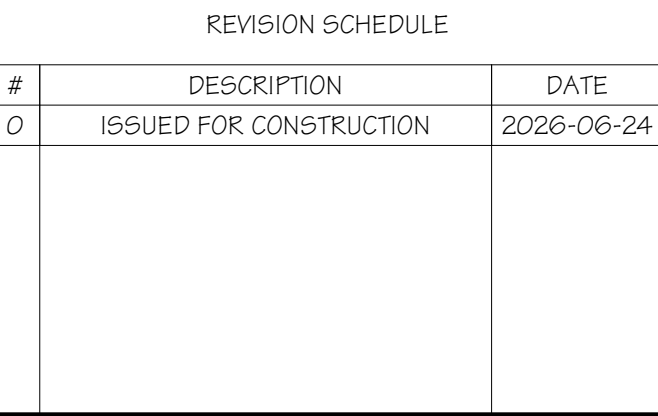
GENERAL NOTES:

- N/A

SCHEDULE NOTES:

- CONTRACTOR TO PROGRAM NLIGHT AIR DEVICES WITH CLARITY PRO MOBILE APP.
- SUPPLY AND INSTALL HELICAL PILE WITH POLE.
- PROVIDE LED E26 LAMPS, TERMINATIONS, CONNECTORS, CATENARY CABLE (LS-CABLE-500) AND ALL REQUIRED HANGERS AND BRACKETS FOR SUSPENSION OF CATENARY LIGHTING. REFER TO MANUFACTURER'S DETAILS AND INSTALLATION SHEETS FOR ALL REQUIREMENTS.

Project 2608	Date JUN 2026
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A circular professional engineer seal for the Province of Manitoba. The outer ring contains the text "PROVINCE OF MANITOBA" at the top and "REGISTERED PROFESSIONAL ENGINEER" at the bottom. The inner circle contains the date "2026-06-24", the name "W. M. DeE" (with a signature), the word "Member", and the number "33867".

Scale	Sheet
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2.05 00	COMMON WORK RESULTS FOR ELECTRICAL
1.1	GENERAL REQUIREMENTS
1.1	1 The specification covering the General Conditions of the Contract, General Specifications, Instructions to Bidders and all associated sections from an integral part of this specification and shall be read in conjunction herewith.
1.2	SCOPE
1.1	1 Provide all materials, labour, plant and equipment required for a complete and working installation as herein specified and as indicated drawings.
1.2	2 The electrical installation shall be in accordance with the current edition of the Canadian Electrical Code, Provincial and Municipal codes and regulations.
1.3	3 Obtain all permits, approvals and pay all related fees required for this installation.
1.4	4 All equipment supplied under this Contract shall be new and be C.S.A. approved.
1.5	5 Co-ordinate utility electrical service with Manitoba Hydro before installation begins.
1.6	6 Arrange for, and co-ordinate, rough-in and final inspections with Authority having Jurisdiction and Engineer.
1.3	DEFINITIONS
1.1	1 The following are definitions of terms and expressions used in the specification:
1.1	1 CONSULTANT means Electrical Engineering Consultant: LEE Electrical Engineering.
1.2	2 INSPECTION AUTHORITY means agent of any authority having jurisdiction over construction standards associated with any part of electrical work on site.
1.3	3 SUPPLY AUTHORITY means electrical power utility company responsible for delivery of electrical power to project.
1.4	4 ELECTRICAL CODE means the current edition of the Canadian Electrical Code or Local Electrical Code in effect at project location.
1.5	5 INDICATE means as shown or noted on the construction documents.
1.6	6 PROVIDE means to supply, install and leave in working order all materials and necessary wiring, supports, access panels, etc., as necessary for equipment indicated.
1.4	EXAMINATION
1.1	1 Prior to submitting a tender, examine the site and local conditions which will affect the work. Refer to Landscape and Civil and construction documents to ensure that the work under this Contract can be satisfactorily carried out. Report any discrepancies to the Consultant.
1.2	2 Examine all existing apparatus if any to be re-used and verify that the condition of this equipment is suitable for its intended use in the new construction.
1.5	SUPERVISION
1.1	1 Supervision shall be carried out at all times by a responsible and competent supervisor.
1.2	2 Full co-operation shall be shown with other trades to facilitate installations and to avoid delays in carrying out the work.
1.6	ACCURACY OF DATA
1.1	1 Drawings are schematic; exact locations, distances, levels and other dimensions shall be governed by the project as constructed.
1.2	2 Equipment shall be moved to any point within a 10' radius when the Consultant requests relocation before the work has been substantially completed, without additional cost.
1.3	3 Branch circuit wiring shall be installed with circuits arranged as indicated. Conduit and cable runs may be modified to suit the installation.
1.7	APPROVAL OF MATERIAL
1.1	1 Request for approval of material as equals or alternates to that specified shall be submitted to the Consultant via email minimum five (5) working days prior to the tender submittal. Samples shall be provided on request.
1.8	SUBMITTALS
1.1	1 Submit shop drawings to Consultant for review. Shop drawings shall be submitted to mike@leecorp.ca . Manufacture of equipment shall not proceed until Consultant has reviewed shop drawings. Shop drawings shall be reviewed by the electrical contractor, general contractor, and where applicable the Utility prior to submittal to Consultant, confirming that they meet all the design requirements.
1.2	2 Provide maintenance materials as specified. Turn over maintenance materials to owner at or near project completion.
1.3	3 Provide operation and maintenance data for incorporation into Operation and Maintenance Manuals (O&M's). Include technical data, schematic diagrams and contact information for local suppliers. O&M information shall be submitted to Consultant for review prior to completed manuals submittal to owner.
1.4	4 Submit a Certificate of Acceptance from the local Inspection Authority and include with the O&M data.
1.5	5 Maintain a record set of As-Built drawings on the site at all times recording any changes that may occur. At project completion, submit the As-Built to the Consultant complete with a printed pdf copy via email or internet transfer. As-Built shall include circuiting of new and existing equipment to remain, main conduit and feeder runs, including below floor/grade installations. Include depth of cables on where buried.
1.6	6 The Consultant will recommend a suitable deficiency holdback until required documentation and material is submitted.
1.9	TEST
1.1	1 The electrical installation shall be completely tested demonstrating that the equipment and systems installed perform in the manner intended.
1.10	REQUEST FOR CHANGE
1.1	1 All quotations in response to request for change shall be submitted complete with an itemized cost breakdown of all materials and labour required in the change.
1.11	GROUNDING
1.1	1 The entire installation shall be grounded in accordance with the Electrical Code.
1.12	WORKMANSHIP
1.1	1 Install equipment, conduit and cables in a workmanlike manner to present a neat appearance to the satisfaction of the Consultant. Install conduit and cable runs parallel and perpendicular in chases. In areas where systems are to be exposed install neatly and group to present a tidy appearance.
1.2	2 Install equipment and apparatus requiring maintenance, adjustment or eventual replacement with adequate clearances and accessibility for same.

3.	Include, in the work, all requirements shown on the shop drawings or manufacturers' installation instructions.
4.	Replace work unsatisfactory to the Consultant without extra cost.
5.	All conduit must be clipped to structural concrete by means of anchors or supported by Unistrut hangers as close to U/S as possible. Tie wraps for wire hanging and fastening is not acceptable, unless otherwise indicated. Perforated strapping is also unacceptable.
6.	All support material for all luminaires, outlet boxes, junction boxes, etc. in a non-combustible building shall be of non-combustible material. Wood is not acceptable.
1.13	IDENTIFICATION OF EQUIPMENT
1.	Electrical equipment including distribution, cabinets, exterior pole mounted luminaires and stainless steel device cover plates shall be identified using an engraved lamacoid nameplate, either screwed or riveted in place.
2.	Where nylon cover plates are utilized for wiring devices, the identification shall be of the plastic self-adhesive type, weather proof as required. The utilization of Dymo 6000 or equal is acceptable.
3.	Exterior identification shall be UV and weather resistant.
1.14	WIRING METHODS
1.	Unless otherwise indicated, all wiring shall be copper, minimum #12 AWG with 90°C x-link insulation.
2.	All wiring to be installed in conduit.
3.	Conduit and wiring shall be grouped where possible and clipped in a neat and workmanlike manner.
4.	Electrical contractor to perform voltage drop calculations on site with final installation lengths to confirm wire size.
26 05 35	OUTLET BOXES
1.	Outlet, junction and switch boxes shall be sheet metal galvanized steel of size and type to suit each individual application.
1.	Gang boxes shall be used. Sectional boxes shall not be used.
26 06 22	MISCELLANEOUS APPARATUS AND APPLIANCES
1.1	GENERAL
1.	Provide all required electrical devices, components, conduits, fittings, wiring, disconnects, and miscellaneous equipment to make all connections to equipment.
2.	Be familiar with the apparatus being supplied and carefully coordinate and cooperate with the supplier/installer to ensure a proper and complete installation.
3.	Provide all control wiring for Owner supplied equipment and as indicated.
26 24 01	UTILITY SERVICE ENTRANCE
1.1	WEATHERPROOF PAD MOUNTED CSTE
1.	Manufacturers:
1.	Strong
2.	Description: Weatherproof Type 3R 12 gauge sheet metal enclosure complete with tin plated aluminum bus. Ratings as indicated.
1.2	METERING TRANSFORMER CABINETS
1.	Description: Sheet metal cabinet with hinged door, conforming to utility company requirements, with provisions for locking and sealing.
2.	Size: As required by utility.
1.3	PREFABRICATED PAD FOR CSTE
1.	Description: Fibreglass reinforced plastic with cable pit sized as required for pad mounted CSTE.
26 24 16	PANELBOARDS
1.	Panelboards shall incorporate primary lugs/primary breakers and sub-breakers as indicated..
1.	Panels shall be complete with panel trim having concealed hinges and trim mounting screws, locking door with flush catch. For buildings with a sprinkler system, enclosures to be Type 3R as required. Provide two keys for each panel.
2.	Panelboard bus shall be copper or aluminum..
3.	Affix weatherproof typewritten directory to the inside of the panelboard indicating loads controlled by each circuit.
4.	Panelboards to be surface or recessed mounted as indicated.
5.	Panelboards with plug-in style breakers are acceptable.
6.	Panelboards shall be identified indicating voltage, amp rating, and designation. Include distribution panel and location feed for sub-panels. Distribution panels sub-breakers shall be labelled to indicate panel or equipment feed. Include the location of the sub panel or equipment in the identification.
7.	Installation shall include the connection of the primary feeders to the primary lugs or breaker and the sub-feeds and branch feeds to the secondary sub-breakers. Check factory-made connections for mechanical security and electrical continuity.
26 27 26	WIRING DEVICES
1.	Colours of receptacles, switches and outlets shall be white with stainless steel coverplates.
2.	Utilize weather resistant receptacles complete with UV rated nylon and stainless steel mounting screws complete with metallic while-in-use covers for exterior applications. Substitute metallic covers with thermoplastic covers for residential suite applications only.
26 50 00	LUMINAIRES
1.	Supply and install all luminaires complete with lamps. Include ballasts, and drivers where applicable.
2.	Where applicable, all luminaires, lamps, ballasts, drivers, lighting controls and other related equipment, shall adhere to the Efficiency Manitoba guidelines.
3.	Install luminaires plumb and adjust to align with building lines and with each other.
4.	Refer to drawings for luminaire types and specifications.