

JRP ENGINEERING
Professional Engineers

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3	ISSUED FOR PERMIT & TENDER	MAY 29, 2026
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No	DESCRIPTION	DATE

REVISIONS

client:
BELL+ASSOCIATES
ARCHITECTURE
186 PEMBROKE STREET EAST
PEMBROKE, ON K8A 3J7

project:
MILLHAVEN GARAGE
ADMINISTRATION
BUILDING
240 COUNTY ROAD 4,
BATH, ONTARIO K0H 1G0

drawing title:
ELECTRICAL
LEGENDS, SCHEDULES
&
GENERAL NOTES

scale:	AS NOTED	drawn by:	C.M.
designed by:	C.M.	reviewed by:	M.G.
approved by:	M.G.	date:	JULY 2026

project no.:
420–2301–03

drawing no.:
E–1
of 5

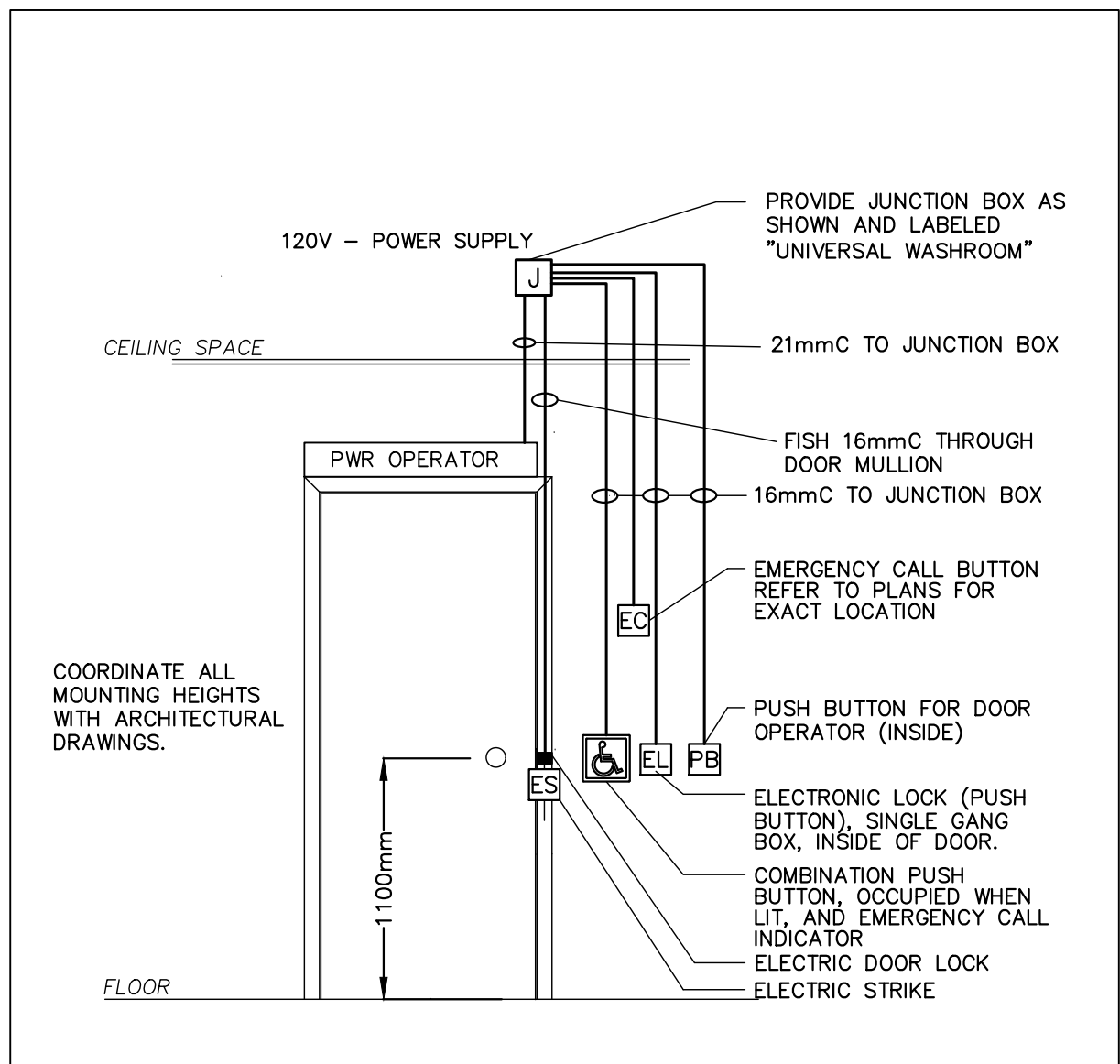
ELECTRICAL LEGEND

ITEM	DESCRIPTION
	T-BAR CEILING LIGHT FIXTURE
	EMERGENCY NIGHT LIGHTING FIXTURE
	2X2 T-BAR CEILING LIGHT FIXTURE
	DOWNLIGHT
	CEILING/WALL MOUNTED EXIT SIGN
	SWITCH
	WALL/CEILING MOUNTED OCCUPANCY SENSOR MUST REMAIN ON FOR 30 MINUTES
	ALARM PANEL
	ELECTRICAL PANEL
	CARD READER
	JUNCTION BOX
	OCCUPIED WHEN LIT INDICATOR
	PUSH BUTTON
	DOOR OPERATOR
	EMERGENCY CALL BUTTON
	EMERGENCY CALL LIGHT
	ELECTRONIC LOCK BUTTON
	ELECTRIC STRIKE
	DUPLEX RECEPTACLE WALL MOUNTED
	DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER
	SPECIALTY RECEPTACLE
	QUAD RECEPTACLE
	DATA OUTLET WALL MOUNTED
	VOICE OUTLET WALL MOUNTED
	27MMC FOR CAMERA
	WIFI CEILIGN MOUNTED OCTAGON BOX C/W 27MMC
	DATA/VOICE OUTLET WALL MOUNTED
	DATA/VOICE OUTLET DESK HEIGHT
	DEDICATED 5–20R DUPLEX RECEPTACLE
	DIRECT CONNECTION
	POWER POLE
	FLOOR/CEILING MOUNTED RECEPTACLE
	EMERGENCY BATTERY PACK LIGHTING
	WALL/CEILING MOUNTED EMERGENCY REMOTE LIGHT HEAD
	COMBINATION BATTERY PACK / EXIT SIGN
	TRANSFORMER
	NON–FUSED/FUSED DISCONNECT SWITCH
	1ø/3ø MOTOR DIRECT CONNECTION
NOT ALL SYMBOLS SHOWN IN LEGEND SET ARE NECESSARILY USED IN DRAWING SET.	

GENERAL NOTES:

- ALL ELECTRICAL EQUIPMENT SHOWN IN THICK SOLID LINES IS NEW TO BE PROVIDED UNDER THIS CONTRACT, TOGETHER WITH ALL ASSOCIATED CONDUITS AND WIRING.
- FOR ANY REQUIRED SHUT DOWN, CONTRACTOR TO COORDINATE WITH SITE MANAGER AND OBTAIN APPROVAL BEFORE SHUT DOWN CAN BE PERFORMED.
- PROVIDE NEW BREAKERS AS REQUIRED IN EXISTING ELECTRICAL PANELS TO ACCOMMODATE NEW CONNECTIONS, ALSO PROVIDE BLANK PLATES WHERE CIRCUIT BREAKERS ARE NOT INSTALLED, PROVIDE NEW TYPED PANEL LEGEND TYPICAL FOR ALL PANELS TOUCHED BY THIS CONTRACT. TURN OVER TO THE OWNER ALL BREAKERS REMOVED UNDER THIS CONTRACT.
- ALL EXISTING AND NEW CONDUITS AND WIRING PASSING THRU FLOOR AND FIRE RATED WALLS TO BE FIRESTOPPED USING FIRE RETARDANT MASTIC SEALANT, CAN/ULC–S115 RATED PRODUCT.
- ALL WIRING TO BE R/RW90, MINIMUM SIZE #12AWG COPPER, IN EMT CONDUIT UNLESS OTHERWISE NOTED.
- ALL ELECTRICAL CIRCUITS ARE SHOWN FOR GROUPING PURPOSES ONLY, CONTRACTOR TO USE AVAILABLE CIRCUITS IN EXISTING ELECTRICAL PANELS. REUSE EXISTING AND/OR PROVIDE NEW ELECTRICAL BREAKERS AS REQUIRED.
- COORDINATE ALL WORK WITH ARCHITECTURAL AND MECHANICAL CONTRACTORS.
- THIS DRAWING WAS BASED ON PARTIAL SITE REVIEW ONLY, ALL EQUIPMENT, ACCESSORIES, SIZES, LOCATIONS AND DETAILS OF INSTALLATIONS TO BE CONFIRMED ON SITE.
- SEISMIC RESTRAINT SYSTEM (SRS) – PROVIDE DESIGN, SUPPLY AND INSTALLATION OF COMPLETE SRS FOR ALL SYSTEMS, EQUIPMENT SPECIFIED FOR INSTALLATION ON THIS PROJECT AS PER ONTARIO BUILDING CODE LATEST EDITION. THIS INCLUDES ELECTRICAL LIGHT FIXTURES, TRANSFORMERS, MCC'S, UPS, DIESEL GENERATORS, FIRE PROTECTION, CONDUIT, COMMUNICATIONS, ELECTRICAL EQUIPMENT AND SYSTEMS, BOTH VIBRATION ISOLATED AND STATICALLY SUPPORTED.

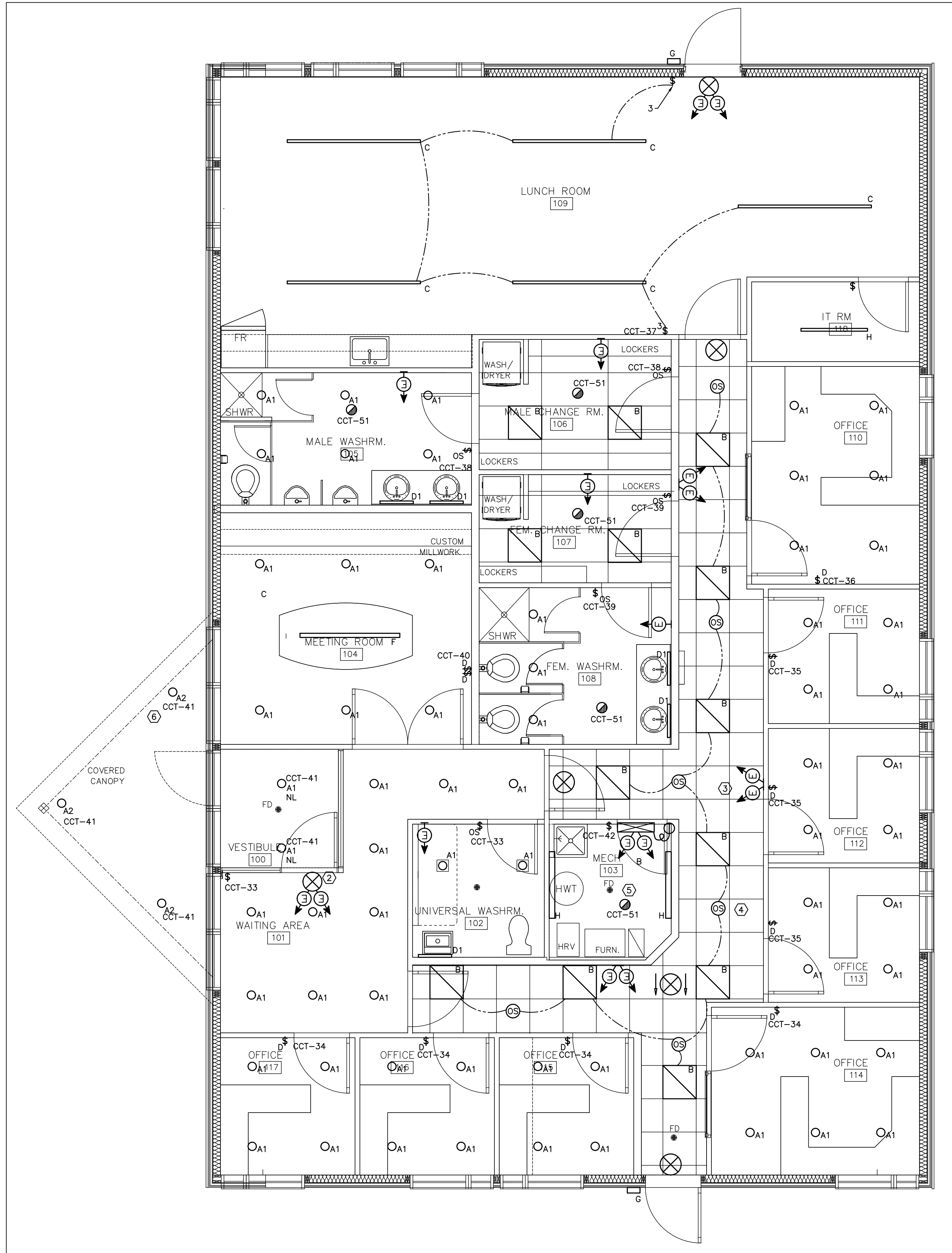
NEW PANEL AA 120/240V, 1PH, 3 WIRE, 125A					
DESCRIPTION	BREAKER SIZE	CIRCUIT NUMBER		CIRCUIT NUMBER	BREAKER SIZE
		1	φ	2	15
WASHING MACHINE	15	3	φ	4	30
RECEPTACLE	15	5	φ	6	
WASHING MACHINE	15	7	φ	8	30
		9	φ	10	
RECEPTACLES	15	11	φ	12	20
KITCHENETTE	20	13	φ	14	20
FRIDGE	20	15	φ	16	15
MEETING RM 104	15	17	φ	18	15
RM 101	15	19	φ	20	15
RECEPTACLES	15	21	φ	22	15
RECEPTACLES	15	23	φ	24	15
HOUSEKEEPING RECEPTACLES	15	25	φ	26	15
RECEPTACLES	15	27	φ	28	15
RECEPTACLES	15	29	φ	30	15
DOOR OPERATORS	15	31	φ	32	15
OUTDOOR RECEPTACLES	15	33	φ	34	15
LIGHTING	15	35	φ	36	15
LIGHTING	15	37	φ	38	15
LIGHTING RM 107	15	39	φ	40	15
OUTDOOR LIGHTING	15	41	φ	42	15
HOT WATER TANK	15	43	φ	44	50
EF–2	15	45	φ	46	
RM 108 EF–2	15	47	φ	48	20
RM 118	20	49	φ	50	20
SMOKE DETECTOR	15	51	φ	52	20
STOVE	50	53	φ	54	20
		55	φ	56	
		57	φ	58	
		59	φ	60	



1 UNIVERSAL WASHROOM – TYPICAL DETAIL
E–1 NTS

LIGHTING FIXTURE SCHEDULE						
TYPE	MAKE/MODEL	VOLTAGE	MOUNT	LAMPS	TEMP	NOTES
A1	LIGHTOLIER MODULE M4RDL	120V	RECESSED	LED	3500	DOWNLIGHT
A2	LIGHTOLIER MODULE M6RDL	120V	RECESSED	LED	3500	EXTERIOR RATED DOWNLIGHT
B	LEDALYTE PIQUE P2 22 DISTL93S A1 D E	120V	2X2 T–BAR	LED	3500	
C	LEDALYTE TRUGROOVE 2901L93540 LN 08 D E 1	120V	SUSPENDED	LED	3500	9'AFF USE AIRCRAFT CABLES
D1	ARTIKA PRO 24VAN–NU–EL10TE10	120V	VANITY	LED	3500	
F	LEDALYTE TRUVUE TV06L93540AA06B0D1BXBXBDVDE1	120V	SUSPENDED	LED	3500	7'AFF USE AIRCRAFT CABLES
G	ARTIKA PRO WALTON BLACK	120V	EXTERIOR WALL PACK	LED	3500	USE COMMON PHOTOCCELL
H	4ft LINEAR STRIP	120V	SURFACE	LED	3500	
P1	OPTIFORM OPF–S–20L–730–T4W	120V	POLE	LED	3500	USE COMMON PHOTOCCELL C/W CONCRETE BASE (USI)
P2	OPTIFORM OPF–S–20L–730–T3M	120V	POLE	LED	3501	USE COMMON PHOTOCCELL C/W CONCRETE BASE (USI)
P3	OPTIFORM OPF–S–20L–730–T2M	120V	POLE	LED	3502	USE COMMON PHOTOCCELL C/W CONCRETE BASE (USI)
W	GARCO GWM–A09–830–T4M	120V	WALL EXTERIOR	LED	3503	USE COMMON PHOTOCCELL

- DRAWING NOTES:
- ① TYPICAL: PROVIDE NEW LIGHT FIXTURE. TYPE AS INDICATED. C/W ALL CONDUIT, WIRING AND SWITCHING.
 - ② TYPICAL: PROVIDE NEW COMBINATION EXIT SIGN/ EXIT SIGN AS INDICATED C/W ALL CONDUIT AND WIRING.
 - ③ TYPICAL: PROVIDE NEW EM. REMOTE AS INDICATED, TIE INTO DC EM.LIGHTING CIRCUIT C/W ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE.
 - ④ PROVIDE NEW CEILING MOUNTED OCCUPANCY SENSORS FOR HALLWAY LIGHTING. ALL HALLWAY LIGHTING AND SENSORS TO BE CONNECTED AND COME ON/OFF AT SAME TIME. C/W ALL CONDUIT AND WIRING.
 - ⑤ PROVIDE NEW 120V COMBINATION SMOKE/CO DETECTOR. C/W ALL CONDUIT AND WIRING. ALL DETECTORS TO BE ON SAME CIRCUIT.
 - ⑥ TYPICAL: ALL EXTERIOR LIGHTING TO BE CONTROLLED BY COMMON PHOTOCELL.



1 GROUND FLOOR PLAN - REFLECTED CEILING PLAN
E-2 1/4" = 1' 0"

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186 PEMBROKE STREET EAST
PEMBROKE, ON K8A 3J7

project:
MILLHAVEN GARAGE
ADMINISTRATION
BUILDING
240 COUNTY ROAD 4,
BATH, ONTARIO K0H 1G0

drawing title:
ELECTRICAL
REFLECTED CEILING PLAN

scale:	AS NOTED	drawn by:	C.M.
designed by:	C.M.	reviewed by:	M.G.
approved by:	M.G.	date:	JULY 2026

project no.: 420-2301-03
drawing no.: E-2
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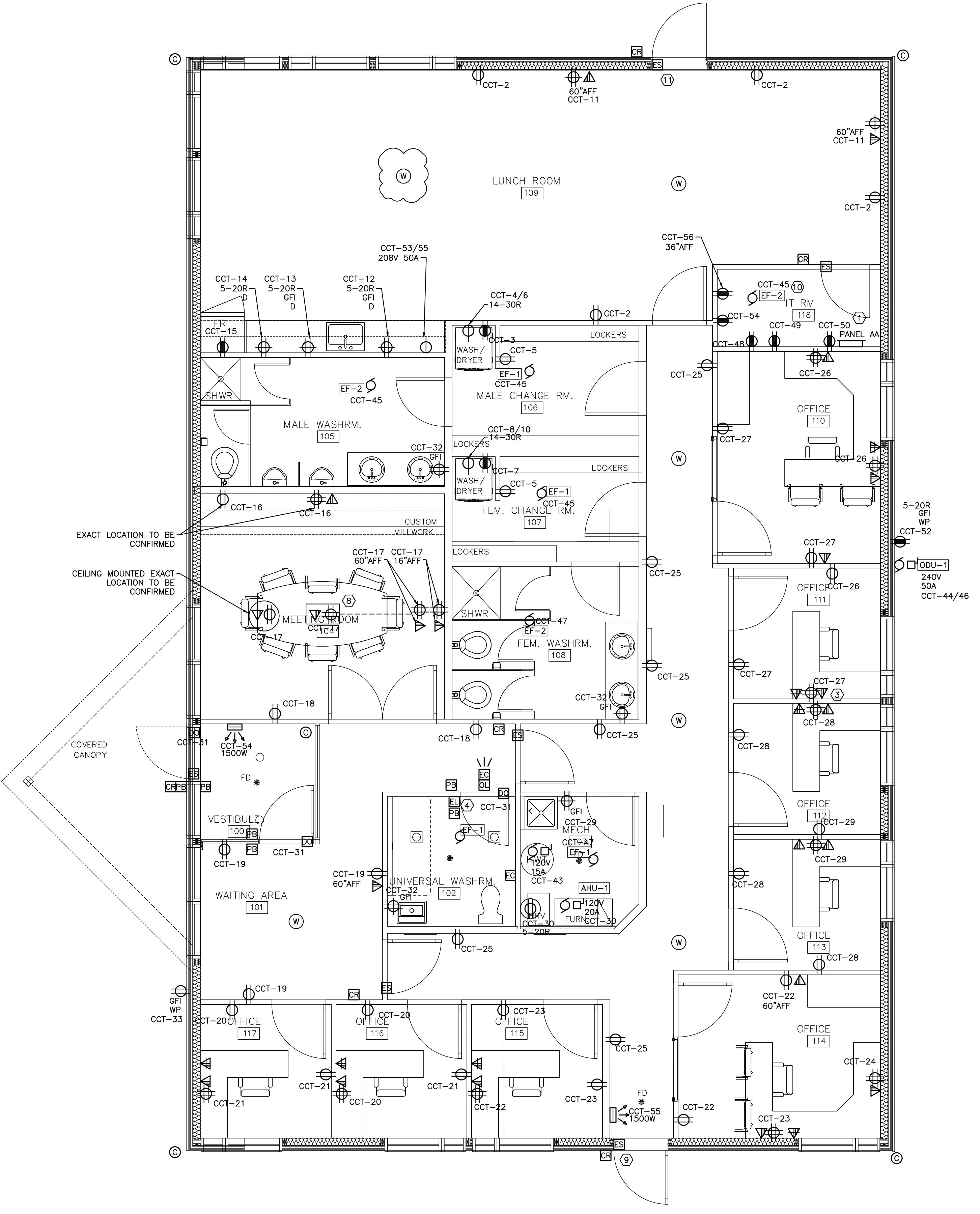
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DISTRIBUTION

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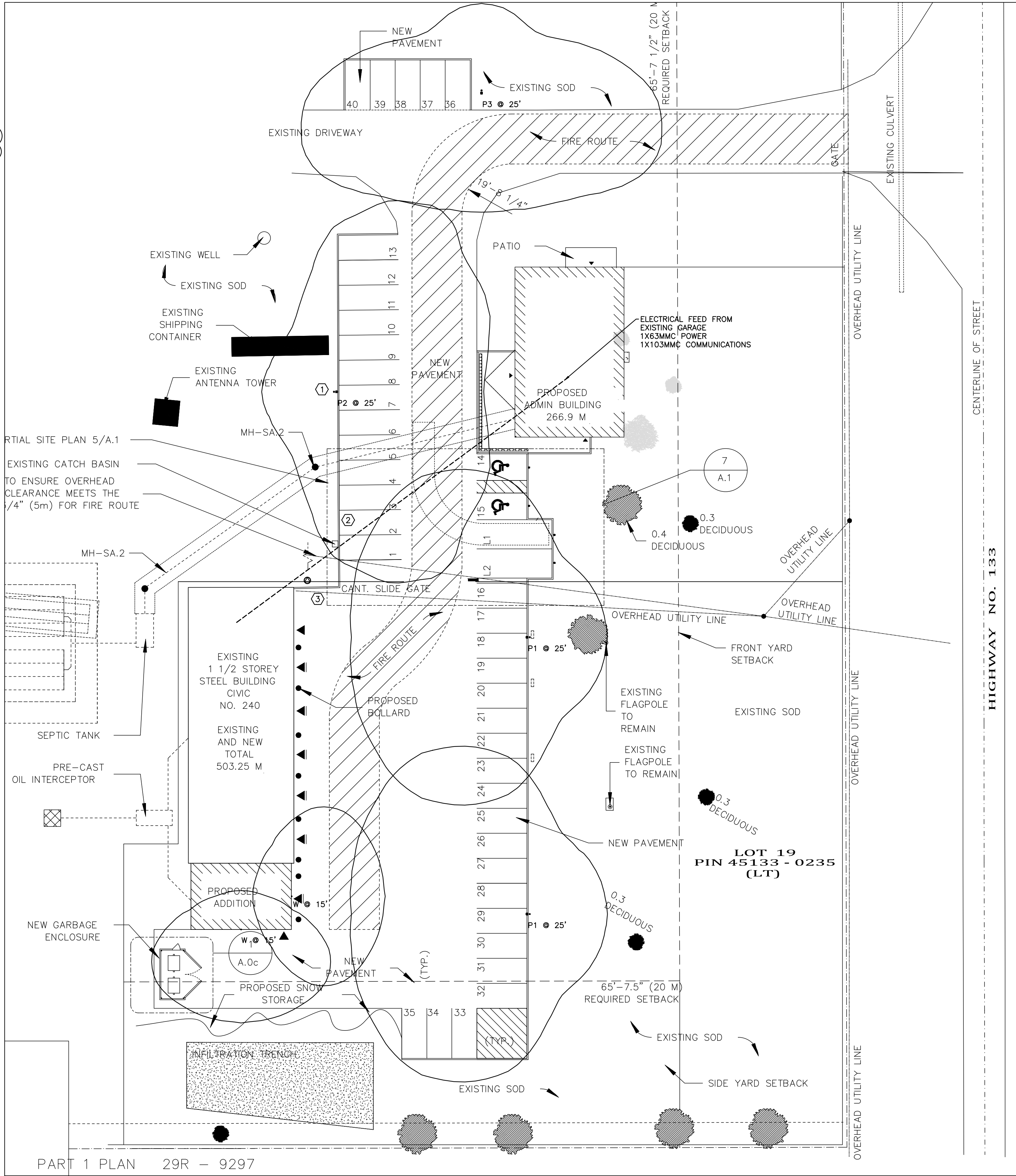
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420-2301-03
drawing no.:
E-3
of 5

DRAWING NOTES:

- 1 PROVIDE NEW ELECTRICAL PANEL. REFER TO PANEL LEGEND AND SINGLE LINE DIAGRAM FOR DETAILS. SERVICE FROM EXISTING GARAGE.
- 2 TYPICAL: PROVIDE NEW RECEPTACLE, TYPE AS INDICATED. C/W ALL CONDUIT AND WIRING. COORDINATE MOUNTING HEIGHTS WITH ARCHITECTURAL DRAWINGS.
- 3 PROVIDE NEW DATA OUTLET. C/W 27MMC RUN BACK TO IT ROOM. CONTRACTOR CAN GROUP CONDUITS TOGETHER AS REQUIRED. COORDINATE WITH IT CONTRACTOR.
- 4 PROVIDE AND INSTALL EMERGENCY CALL SYSTEM C/W AUDIBLE AND VISIBLE SIGNAL, PUSH BUTTONS, PULL STRING, ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE AS PER OBC 3.8.3.12.(2). FOR FULLY OPERATIONAL SYSTEM, SIGNAGE BY OTHERS. REFER TO UNIVERSAL WASHROOM TYPICAL DOOR DETAIL FOR FURTHER INFORMATION.
- 5 TYPICAL: PROVIDE NEW DIRECT CONNECTION TO MECHANICAL EQUIPMENT. C/W ALL CONDUIT, WIRING AND DISCONNECTING MEANS. COORDINATE WITH MECHANICAL DRAWINGS.
- 6 PROVIDE NEW DIRECT CONNECTION TO EXHAUST FAN. TIE INTO LIGHTING CIRCUIT. C/W ALL CONDUIT AND WIRING.
- 7 TYPICAL: PROVIDE NEW 27MMC CONDUIT AND BOX FOR CAMERA. CONDUIT RUN BACK TO IT ROOM. COORDINATE WITH CLIENT FOR FINAL MOUNTING LOCATION.
- 8 PROVIDE NEW FLUSH MOUNT FLOOR MONUMENT WITH INTEGRATED POWER + DATA. PROVIDE CONDUIT FROM FLOOR MONUMENT TO WALL WHERE DISPLAY IS PROJECTED TO GO. C/W ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE.
- 9 TYPICAL: PROVIDE NEW ROUGH-IN FOR CARD READER AND ELECTRIC STRIKE. C/W ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE.
- 10 PROVIDE NEW CONNECTION TO MECHANICAL SUPPLIED EXHAUST FAN. COORDINATE WITH MECHANICAL DRAWINGS FOR WALL MOUNTED SWITCH / THERMOSTAT. C/W ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE.
- 11 TYPICAL: PROVIDE NEW CARD READ WITH ELECTRIC STRIKE. C/W ALL CONDUIT.
- 12 PROVIDE NEW STELPRO FAN FORCED FLOW HEATER AS INDICATED. C/W ALL CONDUIT, WIRING AND INTEGRATED THERMOSTAT (STELPRO-WFA-LUX).
- 13 PROVIDE 2 X 27MMC FROM IT ROOM TO MECH ROOM FOR FUTURE POTENTIAL.
- 14 COORDINATE ALL OFFICE RECEPTACLE / DATA LOCATIONS WITH CLIENT FOR EXACT PLACEMENT.



- DRAWING NOTES:
- 1 PROVIDE NEW EXTERIOR, TYPE AS INDICATED. C/W ALL CONDUIT, WIRING, POLE AND ASSOCIATED HARDWARE. ALL EXTERIOR LIGHTING TO BE CONTROLLED BY COMMON PHOTOCELL. ALL POLE LIGHTING TO BE FED FROM GARAGE BUILDING.
 - 2 PROVIDE NEW ELECTRICAL FEED FROM EXISTING GARAGE TO NEW ADMIN BUILDING. PROVIDE NEW COMMUNICATION CONDUIT AS INDICATED. REFER TO FLOOR PLAN FOR FURTHER DETAILS.
 - 3 PROVIDE NEW 120V 20A DIRECT CONNECTION TO NEW POWER GATE. COORDINATE EXACT CONNECTIONS ON SITE. TO BE FED FROM GARAGE BUILDING. C/W ALL CONDUIT AND WIRING. PROVIDE 2 X 25MMC TO GATE.



1
E-4

ELECTRICAL SITE PLAN
3/32" = 1' 0"

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MILLHAVEN GARAGE
ADMINISTRATION
BUILDING

240 COUNTY ROAD 4,
BATH, ONTARIO K0H 1G0

drawing title:

ELECTRICAL
SITE PLAN

scale:	AS NOTED	drawn by:	C.M.
designed by:	C.M.	reviewed by:	M.G.
approved by:	M.G.	date:	JULY 2026

project no.: 420-2301-03

drawing no.: E-4
of 5

GENERAL INSTRUCTIONS

CONDITIONS OF CONTRACT

- THE OWNERS INSTRUCTIONS TO BIDDERS AND THE GENERAL CONDITIONS OF THE DESIGNERS SPECIFICATIONS ARE AN INTEGRAL PART OF THIS CONTRACT AND SHALL BE READ IN CONJUNCTION HERewith. THESE INSTRUCTIONS TO BIDDERS AND GENERAL CONDITIONS SHALL BE FULLY BINDING ON THE GENERAL CONTRACTOR AND HIS SUB-CONTRACTORS TO THE FULL SATISFACTION OF THE DESIGNER, ENGINEER AND OWNER.
- THE RESPONSIBILITY AND SCOPE OF EACH SUB-TRADE RESTS SOLELY WITH THE CONTRACTOR. EXTRAS WILL NOT BE CONSIDERED BASED ON THE GROUNDS OF DIFFERENCE IN INTERPRETATION OF SPECIFICATIONS AND DRAWINGS AS TO WHICH TRADE INVOLVED SHALL PROVIDE CERTAIN SPECIALTIES OR MATERIALS.
- IT IS A CONDITION OF THIS CONTRACT, THAT THE CONTRACTOR WILL, IN THE PERFORMANCE OF THE SERVICES FOR THE OWNER AS DESCRIBED IN THIS CONTRACT, PERFORM WORK IN ACCORDANCE WITH ONTARIO BUILDING CODE LATEST EDITION, THE ONTARIO HYDRO ELECTRICAL SAFETY CODE, THE SEWAGE SYSTEMS ENVIRONMENTAL PROTECTION ACT, ONTARIO, WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS), O.REG 844/88, THE ONTARIO GAS UTILIZATION CODE, AND ANY OTHER CODE OF PROVINCIAL OR LOCAL APPLICATION, INCLUDING HOURS OF WORK, RATES OF PAY, JOB SAFETY AND ALL OTHER MATTERS IN WHICH THE MUNICIPAL OR FEDERAL AUTHORITIES HAVE JURISDICTION, PROVIDED THAT IN ANY CASE OF CONFLICT OR DISCREPANCY, THE MORE STRINGENT REQUIREMENTS SHALL APPLY.
- COMPLY WITH STANDARD FOR BUILDING CONSTRUCTION OPERATIONS, ISSUED BY THE ONTARIO FIRE MARSHALL'S OFFICE AND ALL APPLICABLE FIRE SAFETY CODES, LAWS, AND REGULATIONS.
- IT IS INCUMBENT UPON THE CONTRACTOR TO INFORM ITSELF OF ANY SUCH LEGISLATION AND THE CONTRACTOR AGREES THAT IN THE EVENT OF NON-COMPLIANCE WITH THIS LEGISLATION, IT WILL INDEMNIFY AND HOLD HARMLESS THE OWNER FROM ANY COSTS AND DAMAGES RESULTING FROM SUCH NON-COMPLIANCE.
- ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH STANDARDS OF GOOD PRACTICE SUCH AS, BUT NOT LIMITED TO, SHOWN ON ASHRAE, MEET OR EXCEED REQUIREMENTS OF CONTRACT DOCUMENTS, SPECIFIED STANDARDS, CODES AND REFERENCED DOCUMENTS DESCRIBED IN THESE INSTRUCTIONS.

EXAMINATION OF WORK

- THIS PROJECT INVOLVES RENOVATIONS TO EXISTING BUILDING, THEREFORE EXAMINE THE SITE AND LOCAL CONDITIONS TO DETERMINE THE DIFFICULTIES IN CARRYING OUT THE WORK INDICATED AND SPECIFIED PRIOR TO SUBMITTING FINAL PRICE.

INTENT

- IT IS THE INTENT OF THIS SPECIFICATION AND DRAWINGS TO PROVIDE FOR A COMPLETE AND FULLY OPERATING SYSTEM IN COMPLETE ACCORD WITH ALL APPLICABLE CODES. THESE DOCUMENTS MAY NOT SHOW OR DESCRIBE EACH AND EVERY ITEM REQUIRED FOR THE COMPLETE INSTALLATION.THEREFORE, THE CONTRACTOR SHALL MAKE PROVISIONS FOR ALL LABOUR, MATERIAL AND EQUIPMENT DEEMED NECESSARY TO COMPLETE THE WORK INDICATED OR REASONABLY IMPLIED ON ALL DRAWINGS.

LIABILITY

- THIS CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR LAYING OUT HIS WORK AND FOR ANY DAMAGE OR EXTRA COSTS CAUSED TO THE OWNER BY HIS WORK OR OTHER CONTRACTORS BY IMPROPER LOCATION OR CARRYING OUT OF HIS WORK. CARRY ALL NECESSARY INSURANCE COVERAGE.

PERMITS, CERTIFICATES, FEES, ETC.

- ONE ALL NOTICES, OBTAIN ALL PERMITS AND PAY ALL FEES SO THAT THE WORK SPECIFIED HEREIN MAY BE CARRIED OUT, EXCEPT FOR OCCUPANCY PERMIT WHICH WILL BE OBTAINED BY THE OWNER. AT THE ENGINEER'S REQUEST, FURNISH ANY CERTIFICATES AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH THE LAWS AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION.

GUARANTEE

- THE CONTRACTOR, AS A CONDITION PRECEDENT TO FINAL PAYMENT AFTER COMPLETION OF THIS WORK, SHALL GIVE THE OWNER A WRITTEN GUARANTEE, WARRANTING ALL APPARATUS FURNISHED UNDER THE CONTRACT TO REMAIN IN PERFECT SERVICEABLE CONDITION FOR A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL PERFORMANCE OF HIS WORK AS ESTABLISHED BY THE PROJECT MANAGER AND ENGINEER.

DOCUMENTS REQUIRED

- MAINTAIN AT JOB SITE ONE COPY OF EACH OF THE FOLLOWING DOCUMENTS:
 - DRAWINGS.
 - SPECIFICATIONS.
 - ADDENDA.
 - CHANGE ORDERS.
 - OTHER MODIFICATIONS TO CONTRACT.
 - FIELD TEST REPORTS.
 - MANUFACTURERS' INSTALLATION AND APPLICATION INSTRUCTIONS.

EXTRA WORK

- NO EXTRA WORK IS TO BE CARRIED OUT WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER OR THE OWNER'S REPRESENTATIVE.
- CONTRACTOR SHALL PROVIDE QUOTATIONS FOR EXTRA WORK AS DIRECTED UNDER CONTEMPLATED CHANGE NOTICES (CCN'S) ISSUED IN WRITING BY THE ENGINEER OR THE OWNER'S REPRESENTATIVE.
- CONTRACTOR TO SUBMIT ITEMIZED BREAKDOWN FOR BOTH MATERIAL AND LABOUR FOR ALL CONTEMPLATED CHANGE NOTICES. CONTRACTOR WILL USE THE CCN FORMS PROVIDED WITH THE TENDER DOCUMENTS. ALL COLUMNS TO BE USED WHERE APPLICABLE AND EXTENSIONS MADE.
- AT THE START OF THE PROJECT THE CONTRACTOR SHALL SUBMIT FOR REVIEW THE HOURLY LABOUR RATE THAT IS PROPOSED FOR PRICING ON ALL EXTRA WORK THAT MAY ARISE ON THE PROJECT.
- LABOUR RATE TO INCLUDE ONLY:
 - PAY AND VACATION PAY.
 - WELFARE AS PER UNION COLLECTIVE AGREEMENT (ACCEPTED ONLY IF CONTRACTOR IS A UNION CONTRACTOR).
 - E.I. OR C.P.P. AS PER FEDERAL GOVERNMENT REQUIREMENTS.
 - W.C.B. PAYMENTS AS PER ONTARIO REGULATIONS.
 - INSURANCE AS PER REQUIREMENTS OR REGULATING BODY.
- MATERIAL WILL BE PRICES AT THE CONTRACTOR'S COST. COPIES OF SUPPLIER'S INVOICES MAY BE REQUIRED TO SUBSTANTIATE MATERIAL COSTS WHEN REQUESTED.
- THE AMOUNT OF MARK-UP ALLOWED FOR PROFIT AND OVERHEAD WILL BE IN ACCORDANCE WITH THOSE IN THE CONTRACT DOCUMENTS WITH THE TENDER. TO BE MODIFIED TO REFLECT THE ALLOWED PROFIT AND OVERHEAD STATED IN THE CONTRACT DOCUMENTS.
- THE MARK-UPS APPLY TO THE NET WHERE A CHANGE INCLUDES BOTH EXTRAS AND CREDITS.
- COST OF WORK BY A SUB-TRADE TO THE DIVISION 26 CONTRACTOR WILL BE DETERMINED BY THE SUB-TRADE USING THE SAME ITEMIZED BREAKDOWN FORMAT AND THE SAME CCN FORM.
- A MARK-UP OF 5% WILL BE PERMITTED BY THE DIVISION 26 CONTRACTOR FOR SUB-TRADE WORK.

PROGRESS BILLING

- CONTRACTOR TO SUBMIT ITEMIZED BREAKDOWN FOR THE PROJECT BASED ON THE CONTRACT PRICE AGREED TO FOR THIS PROJECT. CONTEMPLATED CHANGE NOTICES ONCE AUTHORIZED BY THE OWNER WILL BE ADDED TO THE MONTHLY PROGRESS CLAIM.
- CLAIMS FOR PAYMENT SHALL BE SUBMITTED FOR REVIEW PRIOR TO THE END OF THE PAY PERIOD TO ALLOW FOR A TIMELY REVIEW BY THE ENGINEER.
- CONTRACTOR SHALL SUBMIT PROGRESS CLAIMS FOR REVIEW AND PAYMENT AUTHORIZATION IN ACCORDANCE WITH THE TERMS OF THE CONTRACT.

AS-BUILT AND RECORD DRAWINGS

- OWNERS REPRESENTATIVE WILL PROVIDE TWO(2) SETS OF DRAWINGS AT THE START OF CONSTRUCTION TO ALLOW THE CONTRACTOR TO KEEP AND MAINTAIN ACCURATE AS-BUILT DRAWINGS.
- ONE SET SHALL BE KEPT ON SITE TO RECORD THE INFORMATION REFLECTING CHANGES AND INSTALLATION ON A DAILY BASIS DURING CONSTRUCTION. AT THE END OF THE PROJECT ALL INFORMATION FROM THE CONSTRUCTION SET SHALL BE TRANSFERRED ONTO THE CLEAN SET AND SENT TO THE ENGINEER FOR THE FINAL REVIEW.
- FAILURE TO KEEP UP TO DATE AS-BUILT DRAWING MAY JEOPARDIZE MONTHLY PROGRESS PAYMENTS. AS-BUILT DRAWING WILL BE REVIEWED AT THE SAME TIME AS MONTHLY PROGRESS PAYMENT INSPECTIONS ARE CONDUCTED.

SHOP DRAWINGS

- BEFORE FABRICATION OR DELIVERY OF ANY MATERIALS OR EQUIPMENT, SUBMIT ELECTRONIC COPIES OF SHOP DRAWINGS AND DATA SHEETS COVERING ALL ITEMS OF EQUIPMENT FURNISHED AND INTENDED FOR INSTALLATION UNDER THIS CONTRACT FOR APPROVAL BY THE ENGINEER.

TEMPORARY AND TRIAL USAGE

- TEMPORARY OR TRIAL USAGE BY THE OWNER OF ANY MACHINERY, APPARATUS, EQUIPMENT OR ANY OTHER WORK OR MATERIALS SUPPLIED UNDER THE CONTRACT BEFORE FINAL WRITTEN ACCEPTANCE BY THE ENGINEER IS NOT TO BE CONSTRUED AS EVIDENCE OF THE ACCEPTANCE OF SAME BY THE OWNER. THE OWNER SHALL HAVE THE PRIVILEGE OF SUCH TEMPORARY AND TRIAL USAGE AS SOON AS THIS CONTRACTOR CLAIMS THAT SAID WORK IS COMPLETED. ANY DAMAGE CAUSED BY DEFECTIVE MATERIAL OR WORKMANSHIP THROUGH TEMPORARY OR TRIAL USAGE BY THE OWNER SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR.
- ANY PERMANENT EQUIPMENT USED TEMPORARILY FOR TEMPORARY HEAT OR OTHERWISE WILL BE COMPLETELY REPAIRED, REPLACED, AND CLEANED TO THE FULL SATISFACTION OF THE OWNER.

EXPLOSIVES ACTUATED FASTENING DEVICES

- DO NOT EMPLOY POWER GUNS USING EXPLOSIVES, UNLESS EXPRESSLY PERMITTED BY THE PROJECT MANAGER; COMPLY WITH REQUIREMENTS OF CSA Z-186 (SAFETY CODE FOR EXPLOSIVE ACTUATED TOOLS).

STORAGE

- THE SECURITY OF THE CONTRACTOR'S EQUIPMENT AND MATERIALS SHALL BE HIS RESPONSIBILITY. CONTRACTOR SHALL LIAISE WITH THE BUILDING OPERATOR AS NECESSARY.

SIGNS

- PROVIDE WARNING SIGNS IN LOCATIONS WHERE RENOVATIONS AND ALTERATION WORK IS ADJACENT TO AREAS AFFECTING THE PUBLIC.

EQUIPMENT AND SITE CLEANLINESS

- DUCTS AND EQUIPMENT SHALL BE THOROUGHLY CLEANED OF DIRT, CUTTINGS AND OTHER FOREIGN SUBSTANCES. DISCONNECT, CLEAN AND RECONNECT WHENEVER NECESSARY FOR THE PURPOSE OF LOCATING AND REMOVING OBSTRUCTIONS. REPAIR WORK DAMAGED IN THE COURSE OF REMOVING OBSTRUCTIONS.
- THE CONTRACTOR SHALL AT ALL TIMES KEEP THE PREMISES FREE FROM THE ACCUMULATION OF WASTE MATERIAL TO THE SATISFACTION OF THE PROJECT MANAGER. PLACE DUST PROTECTION IN THE FORM OF COVER SHEETS OVER EQUIPMENT AND FURNITURE TO ENSURE NO DUST INFILTRATION. CLEANING TO BE COMPLETED AT THE END OF EACH SHIFT TO THE SATISFACTION OF THE PROJECT MANAGER.

OPERATING AND MAINTENANCE DATA

- FURNISH THREE (3) SETS OF OPERATING AND MAINTENANCE DATA FOR ALL NEW EQUIPMENT AND SYSTEMS. DATA SHALL BE ASSEMBLED IN BOOKLET FORM WITH HARD COVER AND INDEX. IDENTIFY FRONT COVER WITH NAME AND LOCATION OF THE PROJECT, CONSULTING ENGINEER AND CONTRACTOR. SUBMIT ONE COPY TO THE ENGINEER FOR APPROVAL.

MATERIALS

- MATERIALS AND EQUIPMENT INSTALLED SHALL BE NEW, FULL WEIGHT AND OF BEST QUALITY SPECIFIED. USE SAME BRAND OF MANUFACTURER FOR EACH SPECIFIC APPLICATION. STATICALLY AND DYNAMICALLY BALANCE ROTATING EQUIPMENT FOR MINIMUM VIBRATION AND LOW OPERATING NOISE LEVEL. REPLACE MATERIAL OR WORKMANSHIP BELOW SPECIFIED QUALITY AND RELOCATE WORK WRONGLY PLACED TO THE SATISFACTION OF THE ENGINEER.

APPROVALS

- THE PRICE SUBMITTED FOR THIS CONTRACT SHALL BE BASED ON THE USE OF MATERIALS AND EQUIPMENT AS SPECIFIED. IF THIS CONTRACTOR WISHES TO QUOTE ON EQUIVALENT MATERIALS AND EQUIPMENT, HE MUST QUOTE ON PRODUCTS APPROVED BY THE ENGINEER, IN WRITING, AS AN EQUIVALENT TO THE PRODUCT SPECIFIED. THIS CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY ADDITIONAL WORK OR MATERIALS REQUIRED BY ALL OTHER CONTRACTORS TO ACCOMMODATE APPROVED EQUIPMENT MATERIALS OR EQUIPMENT. EXTRAS WILL NOT BE APPROVED TO COVER SUCH WORK.

CUTTING AND PATCHING

- THE CONTRACTOR IS RESPONSIBLE FOR THIS WORK AND SHALL CO-ORDINATE LOCATIONS FOR ALL HOLES FOR PIPES, DUCTS THROUGH FLOORS AND ROOF, ETC., AND PROVIDE SLEEVES REQUIRED TO EXECUTE THE INSTALLATION. X-RAY FLOORS AND STRUCTURAL WALLS BEFORE CUTTING TO LOCATE EXISTING REBAR AND CONDUITS, AND MUST OBTAIN PROJECT MANAGER'S APPROVAL FOR PROPOSED CUTTING BEFORE PROCEEDING. PROVIDE ULC APPROVED FIRE STOPPING SYSTEM FOR ALL PENETRATIONS THROUGH RATED ASSEMBLIES.

SHUTDOWNS

- ANY SHUTDOWN THAT MAY BE REQUIRED OF EXISTING EQUIPMENT MUST HAVE PRIOR APPROVAL FROM THE PROJECT MANAGER AND ENGINEER. PROVIDE A MINIMUM OF 48 HOURS NOTICE.

MATERIALS REMOVED

- ALL MATERIALS REMOVED DURING DEMOLITION SHALL BECOME THE PROPERTY OF THE OWNER AND STOCKPILED AS DIRECTED ON SITE. MATERIAL REJECTED BY THE OWNER SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.

ELECTRICAL SPECIFICATIONS

MINIMUM STANDARDS

- ELECTRICAL INSTALLATION: TO CSA C22.1-LATEST EDITION
- LIGHTING FIXTURES: TO CSA C22.2 No. 9-LATEST EDITION
- FIXTURE BALLAST: TO CSA C22.2 No. 74-LATEST EDITION
- ONTARIO BUILDING CODE-LATEST EDITION
- ONTARIO ELECTRICAL SAFETY CODE-LATEST EDITION.

MOUNTING HEIGHTS

- INSTALL ELECTRICAL EQUIPMENT AT FOLLOWING HEIGHTS UNLESS INDICATED OTHERWISE:
 - LOCAL SWITCHES: 1100mm
 - WALL RECEPTACLES:
 - GENERAL: 400mm
 - ABOVE COUNTERS: 175mm
 - PANEL BOARDS: 1800mm FROM TOP
 - TELECOMMUNICATION OUTLETS: 400mm

DEMOLITION

- CONTRACTOR TO CO-ORDINATE WITH OTHER TRADES TO ENSURE THAT ELECTRICAL EQUIPMENT AND FEEDERS ASSOCIATED WITH MECHANICAL EQUIPMENT AND/OR IS LOCATED IN WALLS BEING DEMOLISHED IS ALSO BEING REMOVED.
- EXISTING EQUIPMENT SHOWN AS RELOCATED TO BE CLEANED AND MADE OPERATIONAL BY THIS CONTRACTOR PRIOR TO ITS RELOCATION.
- CONTRACTOR TO REPLACE BROKEN AND DISCOLOURED LIGHT FIXTURE ACRYLIC LENSES AS INDICATED BY THE ENGINEER.

EQUIPMENT SHUT-DOWN

- ANY SHUTDOWN THAT MAY BE REQUIRED OF EXISTING EQUIPMENT, MUST HAVE PRIOR APPROVAL FROM THE ENGINEER.

IDENTIFICATION

- IDENTIFY WITH LAMACOID NAMEPLATES ALL ELECTRICAL EQUIPMENT SHOWN ON THE DRAWINGS AND/OR MENTIONED IN THE SPECIFICATION SUCH AS MOTORS, SWITCHES, STARTERS, PANEL BOARDS, TRANSFORMERS, CONTROLS, AND SPECIAL RECEPTACLES, REGARDLESS OF WHETHER OR NOT THE ELECTRICAL EQUIPMENT WAS FURNISHED UNDER THIS SECTION OF THE SPECIFICATION. IDENTIFICATION REVIEWED BY ENGINEER.
- UNLESS OTHERWISE SPECIFIED, NAMEPLATES SHALL BE RIGID LAMACOID, MINIMUM 1.5mm THICK WITH BLACK LETTERS ENGRAVED ON A WHITE BACKGROUND. NAMEPLATES TO BE NEATLY PLACED, AND SQUARE TO SURROUNDING BUILDING OR EQUIPMENT LINES, AND FASTENED IN PLACE WITH MECHANICAL FASTENERS (SCREWS OR POP RIVETS) AS REVIEWED BY ENGINEER.

- PROVIDE NEATLY TYPED UPDATED CIRCUIT DIRECTORIES IN A PLASTIC HOLDER ON THE INSIDE DOOR OF NEW PANEL BOARDS, WITH COPY IN MANUAL.

- IDENTIFY ALL PULL AND JUNCTION BOXES, WITH P-TOUCH LABEL IDENTIFICATION, INDICATING SOURCE PANEL AND CIRCUIT NUMBERS.
- IDENTIFY ALL RECEPTACLES AND SWITCHES WITH P-TOUCH LABELS, BLACK LETTERING ON TRANSPARENT TAPE, INDICATING SOURCE PANEL AND CIRCUIT NUMBER. LABELS TO BE LOCATED ON FRONT OF COVERPLATE.

LOCATION OF OUTLETS

- LOCATE OUTLETS AS SHOWN ON DRAWINGS. REFER TO INTERIOR DESIGNER DRAWINGS FOR LOCATION OF OUTLETS WHICH ARE DIMENSIONED OR OTHERWISE LOCATED. DO NOT INSTALL OUTLETS BACK-TO-BACK IN WALL; ALLOW MINIMUM 150mm HORIZONTAL SPACING BETWEEN JUNCTION BOXES, AND LOCATE IN SEPARATE STUD CAVITIES WHEREVER POSSIBLE.
- CHANGE LOCATION OF OUTLETS AT NO EXTRA COST OR CREDIT, PROVIDING DISTANCE DOES NOT EXCEED 3 METERS AND INFORMATION IS GIVEN BEFORE INSTALLATION.

ELECTRIC MOTORS AND WIRING

- THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO SUPPLY ALL MOTOR STARTERS, EXCEPT ON PRE-WIRED PACKAGED EQUIPMENT, DISCONNECT SWITCHES FOR ALL MOTORS FOR THE PROJECT, AND ALL WIRING TO STARTERS AND MOTORS EXCEPT WHERE SHOWN OR NOTED OTHERWISE. EQUIPMENT REQUIRING CONNECTION TO AN ELECTRICAL POWER SOURCE SHALL BE CSA OR HYDRO APPROVED FOR USE AT LOCATION OF INSTALLATION. THE MECHANICAL CONTRACTOR SHALL SUPPLY AND INSTALL 4/0 VOLTAGE CONTROL WIRING WITHIN "EMT" CONDUIT FOR A COMPLETE AND OPERATING INSTALLATION UNLESS OTHERWISE SPECIFIED.

SCOPE OF WORK

- DISCONNECTION AND REMOVALS OF ALL EXISTING ELECTRICAL EQUIPMENT WHICH BECOMES UNUSED OR IS PRESENTLY UNUSED.
- MODIFICATION AND ADDITION TO NORMAL AND EMERGENCY LIGHTING SYSTEMS.
- MODIFICATION AND ADDITION TO RECEPTACLES AND POWER DISTRIBUTION SYSTEM.
- MODIFICATION AND ADDITION TO FIRE ALARM SYSTEM.
- MODIFICATION AND ADDITION TO RACEWAY SYSTEM FOR TELECOMMUNICATION SYSTEM INCLUDING CABLE TV SYSTEM.
- MODIFICATION AND ADDITION TO CONNECTION MECHANICAL EQUIPMENT.

WIRING

- ALL WIRING TO BE COPPER, R90 XLPE, STRANDED WITH "BRADY LABEL" MAKING SLEEVES AT EACH END, UNLESS OTHERWISE NOTED ON DRAWINGS. WIRING TO BE COLOUR CODED AS PER CODE. MINIMUM WIRE SIZE TO BE No.12 AWG FOR POWER AND LIGHTING.
- LEAVE ADEQUATE LENGTHS OF WIRE IN JUNCTION BOXES FOR CONNECTIONS TO EQUIPMENT.
- "BX" WIRING IN WALLS ONLY.
- RUN A GREEN INSULATED GROUND WIRE SIZED AS PER CODE IN ALL CONDUIT RUNS. DO NOT RELY ON CONDUIT AS GROUND.
- CONDUITS
 - EACH LENGTH OF CONDUIT TO BE NEW AND BEAR CSA STAMP OF APPROVAL.
 - ALL CONDUITS RUN ABOVE THE SUSPENDED CEILING TO BE "EMT".
 - PROVIDE NYLON PULLROPS IN ALL EMPTY CONDUIT RUNS.
- MODULAR TO MATCH EXISTING; NOCOM MODULAR WIRING CABLES SYSTEM FOR CONNECTION OF FLUORESCENT TROFFER LIGHT FIXTURES, CONSISTENT WITH BASE BUILDING.
- SMART-CONNECT CABLES: START, JOINER, DROP, SWITCH DROP CABLES AS REQUIRED.
- CONNECTORS: MOULDED PVC RECEPTACLES AND ADAPTERS.
- REMOVE AND RECONNECT AS REQUIRED TO OBTAIN LIGHTING CIRCUITS INDICATED AND ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- TERMINATE STARTER AND DROP CABLES AT LIGHT SWITCHES AND LIGHT FIXTURES NOT OUTFITTED WITH NOCOM RECEPTACLES.
- TURN OVER UNUSED CABLES TO BUILDING OWNER.

OUTLET BOXES

- ELECTRO-GALVANIZED STEEL, COATING EQUAL TO THAT TO THE CONDUIT.
- MINIMUM 37 mm DEEP 100 mm SQUARE OR OCTAGONAL AS REQUIRED.
- EQUIP WITH PLASTER RINGS DEEP ENOUGH FOR WALL FINISH MATERIAL TO FIT OVER THE BOX AND WITHIN 6 mm OF THE COVER OPENING.

PULL BOXES

- PROVIDE PULLBOXES WHERE RUNS EXCEED 30 METERS IN LENGTH AND HAVE MORE THAN 2-90° BENDS.

GENERATOR

- PROVIDE NEW GENERAC SG250 14.2L NATURAL GAS GENSET
 - C/W HEATER, LIGHTING, RECEPTACLE ETC.
 - PROVISION FOR LOAD BANK TESTING VIA SECOND 100% RATED SHUNT TRIP BREAKER.
 - C/W PANELS AND ASSOCIATED HARDWARE.
 - C/W ALL CONTROLS WIRING, CALL TO START
 - GENERATOR TO BE SUPPLIED BY NATURAL GAS
 - PROVIDE SHORE POWER AS PER SHOP DRAWINGS (BATTERY CHARGER, LIGHTING, ETC)
 - C/W LEVEL 3 SOUND ENCLOSURE. EXTERIOR MOUNTED.
 - PROVIDE FOUR (4) POLE ATS AS SHOWN (SWITCHED NEUTRAL)

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 - PROVIDE FOUR (4) POLE ATS AS SHOWN (SWITCHED NEUTRAL)

WIRING DEVICES

- RECEPTACLES:
 - DUPLEX RECEPTACLES, CSA TYPE 5-15R 125 VOLT, 15A 'U' GROUND WITH FOLLOWING WITH THE FOLLOWING FEATURES:
 - RECEPTACLES OF SPECIFICATION GRADE.
 - RECEPTACLES OF ONE MANUFACTURER THROUGHOUT PROJECT.
 - UNBREAKABLE NYLON FACE
 - SUITABLE FOR No. 10 AWG FOR BACK AND SIDE WIRING. SIDE WIRING.
 - BREAK-OFF LINKS FOR USE AS SPLIT RECEPTACLES.
 - EIGHT (8) BACK WIRED ENTRANCES, FOUR(4) SIDE WIRING SCREWS.
 - DOUBLE WIPE CONTACTS AND RIVETED GROUNDING CONTACTS.
 - COLOUR: REFER TO ARCHITECTURAL FINISHES
 - RECEPTACLE TO BE DECORA TYPE.
- SWITCHES:
 - TO CSA C22.2 NO. 111-M1986 (R1992)
 - 15A, 120 VOLT SINGLE POLE, 3 WAY SWITCHES, AS INDICATED.
 - MANUALLY OPERATED GENERAL PURPOSE AC SWITCHES WITH THE FOLLOWING FEATURES:
 - TERMINAL HOLES APPROVED FOR NO. 10 AWG WIRE.
 - SILVER ALLOY CONTACTS.
 - UREA OR MELAMINE MOULDING FOR PARTS SUBJECT TO CARBON TRACKING
 - SUITABLE FOR BACK AND SIDE WIRING.
 - NOVY TOGGLE.
 - TOGGLE OPERATED LOCKING FULLY RATED FOR TUNGSTEN FILAMENT AND FLUORESCENT LAMPS, AND UP TO 80% OF RATED CAPACITY OF MOTOR LOADS.
 - SWITCHES OF ONE MANUFACTURER THROUGH OUT.
 - SWITCHES TO BE DECORA TYPE.
- ISOLATED GROUND RECEPTACLES:
 - DUPLEX RECEPTACLES, CSA TYPE 5-15R 125 VOLT, 15A, ISOLATED GROUND, WITH THE FOLLOWING FEATURES:
 - ORAMATE-UREA MOULDED HOUSING.
 - SUITABLE FOR No. 10 AWG FOR BACK AND SIDE WIRING.
 - BREAK-OFF LINKS FOR USE AS SPLIT RECEPTACLES.
 - EIGHT BACK WIRED ENTRANCES, FOUR(4) SIDE WIRING SCREWS.
 - DOUBLE WIPE CONTACTS AND RIVETED GROUNDING CONTACTS.
 - RECEPTACLES OF SPECIFICATION GRADE.
 - RUN ADDITION GREEN ISOLATED GROUND WIRE PER CIRCUIT FROM PANEL TO EACH WIRING

MODULAR WIRING

- SWITCH ADAPTERS AND MULTI-TAP ADAPTERS BY SYSTEM CONNECTORS MODULAR WIRING SYSTEM MANUFACTURER
- MANUFACTURER: NOCOM.

PANEL BOARDS

- TO CSA C22.2 No. 29-M1989
- TO CSA C22.2 No. 5.1-M91
- AMPERAGE AS INDICATED, VOLTAGE AS INDICATED, 3 PHASE, 4 WIRE PANEL BOARD RATED 10,000A (SYMMETRICAL) INTERRUPTING CAPACITY.
- COPPER BUS WITH COPPER NEUTRAL OF SAME AMPERE RATING AS MAINS.
- MAINS: SUITABLE FOR BOLT ON BREAKERS
- TRIM AND DOOR FINISH: BAKED GREY ENAMEL WITH TWO(2) KEYS FOR DOOR
- PANEL BOARD MAINS, NUMBER OF CIRCUITS AND NUMBER OF BRANCH BREAKERS AS INDICATED.

CIRCUIT BREAKERS

- PROVIDE CIRCUIT BREAKERS IN PANEL BOARD AS INDICATED.
- BRANCH CIRCUIT BREAKERS QUICK MAKE, QUICK BREAK, AMBIENT COMPENSATED, COMMON TRIP ON ALL MULTIPLE BREAKERS, TRIP INDICATING CLEARLY SHOWN BY BREAKER HANDLE TAKING POSITION MIDWAY BETWEEN ON AND OFF.
- BREAKER INTERRUPTING CAPACITY:
 - 250V PANELBOARDS AND COP PANELBOARDS: 10kA SYMMETRICAL
 - 600V CDP PANELBOARDS: 25kA SYMMETRICAL

TELEPHONE DATA AND CABLEVISION

- COMPLETE EMPTY RACEWAYS SYSTEM CONSISTS OF OUTLET BOXES, CONDUITS, FISH WIRES.
- CONDUITS:
 - 21mm "EMT" RISERS BETWEEN DOUBLE GANGED DEVICES BOXES AND CEILING PLENUM BY DIVISION 26. EXACT LOCATION TO BE DETERMINED ON SITE.
- FISH WIRE: POLYPROPYLENE TYPE.
- COVERPLATES INSTALLED BY OTHERS.

COVERPLATES

- POUSHED STAINLESS STEEL COVER PLATES, THICKNESS 1.0mm FOR WIRING DEVICES MOUNTED IN A FLUSH MOUNTED BOX.
- INSTALL COVER PLATES ONLY AFTER PAINTING AND OTHER WORK IS FINISHED.
- INSTALL SUITABLE COMMON COVER PLATES WHERE WIRING DEVICES ARE GROUPED.
- COVER PLATES FOR WIRING DEVICES. COMMUNICATION OUTLET COVERLETS PROVIDED BY SYSTEM CONTRACTOR.
- COVER PLATES FROM ONE MANUFACTURER THROUGHOUT PROJECT.

DISCONNECT SWITCH

- DISCONNECT SWITCH TO BE RATED HORSEPOWER AND BE EQUIPPED WITH PROVISIONS FOR THREE(3) LOCKING DEVICES AND TO BE CEWA 1 UNLESS OTHERWISE INDICATED, AMPERAGE AS INDICATED ON DRAWINGS AND MOUNTED 1500mm ABOVE FINISHED FLOOR TO CENTRELINE OF HANDLE.

FUSES

- FUSE TYPE REFERENCE J1, HAS BEEN ADOPTED FOR USE IN THIS SPECIFICATION.
- FUSES: PRODUCT OF ONE MANUFACTURER.
- HRC-J FUSES.
- TYPE J1, TIME DELAY, CAPABLE OF CARRYING 500% OF ITS RATED CURRENT FOR 10 SECOND MINIMUM.
- INSTALL FUSES IN MOUNTING DEVICES IMMEDIATELY BEFORE ENERGIZING CIRCUIT.

TESTING

- PRIOR TO ENERGIZING THE VARIOUS PORTIONS OF THE ELECTRICAL SYSTEMS, PERFORM MEGGER TESTS ON ALL FEEDERS AND BRANCH CIRCUITS. ALSO PERFORM RESISTANCE-TO-GROUND OHM TESTS FOR GROUNDING CONDUCTORS IN ELECTRICAL ROOMS AFFECTED BY THIS RENOVATION. RESULTS SHALL COMPLY WITH THE REQUIREMENTS OF THE ONTARIO ELECTRICAL SAFETY CODE (2009) AND THE LOCAL INSPECTION AUTHORITY. SUBMIT RESULTS TO THE PROJECT MANAGER.
- UPON COMPLETION OF THE PROJECT AND IMMEDIATELY PRIOR TO FINAL INSPECTION, CHECK THE LOAD BALANCE OF ALL AFFECTED PANELS, ETC. THESE TESTS SHALL BE CARRIED OUT BY TURNING ON ALL POSSIBLE LOADS DERIVED FROM PANEL(S) AND CHECKING LOAD CURRENT BALANCE. IF LOAD UNBALANCE EXCEEDS 15%, RECONNECT CIRCUITS TO BALANCE THE LOAD. SUBMIT FINAL READINGS TO PROJECT MANAGER.

COLOUR CODING

- ALL EQUIPMENT AND COMPONENTS, FIELD WIRED OR FACTORY ASSEMBLED, SHALL BE IDENTIFIED.
- ALL CONDUCTORS SHALL BE IDENTIFIABLE BY COLOURED INSULATION AND MARKERS AT EVERY TERMINAL AND ACCESSIBLE POINT THROUGHOUT ITS ENTIRE RUN, AS FOLLOWS:
 - 120/240 VOLT, 1 PHASE, 3 WIRE - RED, BLACK AND BLUE
 - NEUTRAL CONDUCTOR - WHITE
 - GROUND CONDUCTOR - GREEN.

SEISMIC RESTRAINT SYSTEM (SRS)

- PROVIDE DESIGN, SUPPLY AND INSTALLATION OF COMPLETE SRS FOR ALL SYSTEMS, EQUIPMENT SPECIFIED FOR INSTALLATION ON THIS PROJECT AS PER ONTARIO BUILDING CODE LATEST EDITION AND NFPA13. THE INCLUDES ELECTRICAL LIGHT FIXTURES, TRANSFORMERS, MCC'S, UPS DIESEL GENERATORS, FIRE PROTECTION, CONDUIT, COMMUNICATIONS, ELECTRICAL EQUIPMENT AND SYSTEMS, BOTH VIBRATION ISOLATED AND STATICALLY SUPPORTED.
- DESIGN TO BE BY PROFESSIONAL ENGINEER SPECIALIZING IN DESIGN OF SRS AND REGISTERED IN THE PROVINCE OF ONTARIO. ELECTRICAL CONTRACTOR TO INCLUDE COSTS ASSOCIATED WITH THIS WORK AS IT RELATES TO ELECTRICAL CONTRACTOR INSTALLATIONS. SUBMIT DESIGN SKETCHES/DRAWINGS PRIOR TO START OF INSTALLATIONS, C/W INSTALLATION REQUIREMENTS.
- PROVIDE LETTER FROM SEISMIC ENGINEER STATING ALL ELECTRICAL INSTALLATIONS HAVE BEEN INSTALLED IN CONFORMANCE WITH SEISMIC RESTRAINT REQUIREMENTS AS PER ONTARIO BUILDING CODE.

1. GENERATOR

GENERAL DESCRIPTION:

MODEL: SG80
POWER OUTPUT: 80 KW / 313 KVA @ 60 HZ
VOLTAGE: 240V
AMPERAGE: 273A
FUEL TYPE: NATURAL GAS
ENGINE DISPLACEMENT: 4.5 LITERS
MANUFACTURER: GENERAC

ENCLOSURE:

WEATHER PROTECTED: STEEL
SOUND ATTENUATED LEVEL: LEVEL 2
ENCLOSURE HEATER
DOOR OPEN ALARMS
MOTORIZED DAMPERS

ATS

MANUFACTURER: ASCO POWER TECHNOLOGIES
SERIES: 300 SERIES

APPLICATION: NON-LIFE SAFETY, OPTIONAL STANDBY POWER SYSTEMS
TYPE: ELECTRICALLY OPERATED, MECHANICALLY HELD AUTOMATIC TRANSFER SWITCH

NFPA 70 (NEC) ARTICLE 702 COMPLIANT
MEETS ANSI C87.90A SURGE WITHSTAND
VOLTAGE RATING: 240V 60HZ
AMPERAGE RANGE: 400A
POLES: 3 POLE
TRANSFER TYPE: OPEN TRANSITION
SWITCH MECHANISM: RELIABLE SOLENOID-OPERATED
ENCLOSURE TYPE: NEMA 1 (STANDARD BASED)
CONTROLLER: MICROPROCESSOR-BASED GROUP G CONTROLLER
LED STATUS INDICATORS FOR SOURCE AVAILABILITY AND SWITCH POSITION

GENERATOR PAD:

BY OTHERS: TO BE DESIGNED AND SIGNED OFF BY STRUCTURAL ENGINEER.

JRP ENGINEERING

Professional Engineers

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4	ISSUED FOR ADDENDUM E1	JULY 13, 2026
3	ISSUED FOR PERMIT & TENDER	MAY 29, 2026
2	ISSUED FOR REVIEW	APR. 24, 2026
1	ISSUED FOR PERMIT AND PRICING	FEB. 21, 2025
0	ISSUED FOR REVIEW	APR. 24, 2024
No	DESCRIPTION	DATE

REVISIONS

client:

BELL+ ASSOCIATES ARCHITECTURE

186 PEMBROKE STREET EAST
PEMBROKE, ON K8A 3J7

project:

MILLHAVEN GARAGE ADMINISTRATION BUILDING

240 COUNTY ROAD 4,
BATH, ONTARIO K0H 1G0

drawing title:

ELECTRICAL SPECIFICATIONS

scale:	AS NOTED	drawn by:	C.M.
designed by:	C.M.	reviewed by:	M.G.
approved by:	M.G.	date:	JULY 2026