

GENERAL NOTES :

1. WARNING:

THIS DRAWING MUST BE READ IN CONJUNCTION WITH THE LATEST ARCHITECTURAL, STRUCTURAL AND MECHANICAL DRAWINGS.

BEFORE ROUGH-IN WIRING, REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LAYOUT, DIMENSIONS AND ELEVATIONS.

ANY CHANGES TO THESE DRAWINGS SHALL BE IN WRITING AND AUTHORIZED BY THE CONTRACT ADMINISTRATOR.

ELECTRICAL SUB-CONTRACTOR TO SUPPLY AND INSTALL ELECTRICAL EQUIPMENT NOTED ON PLANS FOR A WORKING SYSTEM UNLESS OTHERWISE NOTED.

DO NOT SCALE OFF OF THESE DRAWINGS.

PROMPTLY REPORT ALL ACCIDENTS AND POTENTIAL LIABILITY CLAIMS TO THE CONTRACT ADMINISTRATOR.

2. ELECTRICAL SUB-CONTRACTOR BID NOTES:

.1 EQUIPMENT:

- .1 THE ELECTRICAL SUB-CONTRACTOR SHALL SUBMIT THEIR BID BASED ON THE EQUIPMENT SPECIFIED IN THE WRITTEN SPECIFICATION AND ON THE DRAWINGS. NO ALTERNATIVES WILL BE CONSIDERED.
- .2 ALL WORK MUST SATISFY THE REQUIREMENTS OF THE CURRENT WINNIPEG ELECTRICAL BY-LAW, MANITOBA BUILDING CODE AND ALL AUTHORITIES HAVING JURISDICTION.
- .3 THE ELECTRICAL SUBCONTRACTOR SHALL NOT, UNDER ANY INSTANCE, REDUCE THE STANDARD ESTABLISHED BY THE CONTRACT DOCUMENTS OR BY ANY OF THESE CODES OR REGULATIONS REFERRED TO IN (4.1.2).
- .4 ANY PROPOSED RELOCATION(S) BY THE ELECTRICAL SUB-CONTRACTOR OF ELECTRICAL EQUIPMENT AND OTHER EQUIPMENT THAT REQUIRES ELECTRICAL POWER/CONNECTIONS (FROM THAT SHOWN ON THE DRAWINGS) MUST BE APPROVED BY THE CONTRACT ADMINISTRATOR IN WRITING.

2. DOCUMENTS:

- .1 ELECTRICAL SUB-CONTRACTOR'S PRICING/BIDDING MUST OBTAIN A COMPLETE SET OF CURRENT DOCUMENTS INCLUDING ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND ALL OTHER DRAWINGS / SPECIFICATIONS FOR THIS PROJECT.

3. WORKERS COMPENSATION BOARD (WCB):

- .1 THE CONTRACTOR AND SUB-CONTRACTORS ARE RESPONSIBLE TO ADMINISTER AND PROVIDE FOR ALL MATTERS RELATED TO THE JURISDICTION OF THE WORKERS COMPENSATION BOARD INCLUDING, BUT NOT LIMITED TO SITE SAFETY, TEMPORARY AND ANCILLARY WORKS, TRAINING AND CONTROL OF THE WORK AND WORK PROCESSES.
- .2 THE ELECTRICAL SUB-CONTRACTOR SHALL ENSURE COMPLIANCE WITH WORKERS COMPENSATION BOARD INDUSTRIAL HEALTH AND SAFETY REGULATIONS, PROVINCIAL OR LOCAL BY-LAWS AND ORDINANCES. GOOD WORK PRACTICES AND WHERE NECESSARY OR PRUDENT, SHALL PROVIDE ENGINEERING EXPERTISE TO CONFIRM SUCH COMPLIANCE.
- .3 THE ELECTRICAL SUB-CONTRACTOR ALONE IS RESPONSIBLE FOR SAFETY IN AND AROUND THE JOBSITE.

4. UTILITY:

- .1 POWER/TELEPHONE/CABLEVISION INCOMING SERVICE (LOCATION OF EQUIPMENT, DUCT ROUTING) INFORMATION TO BE CONFIRMED. INFORMATION SHOWN IS TO FACILITATE DISCUSSION WITH AUTHORITY ON PROPOSED SERVICE ENTRY PREFERRED LOCATION AND ARE FOR THAT PURPOSE ONLY.

5. NOTES:

.1 UTILITIES:

- .1 THE ELECTRICAL SUB-CONTRACTOR SHALL INCLUDE IN THEIR QUOTE FOR INSTALLATION OF ELECTRICAL SERVICE FROM THE TOP OF THE MAST TO THE REST OF THE CUSTOMER-OWNED EQUIPMENT AS SHOWN ON THE DRAWINGS. INCOMING UTILITIES SERVICE TO THE TOP OF THE MAST SHOWN ON THE DRAWINGS ARE FOR COORDINATION PURPOSES AND ARE TO BE COORDINATED AND FINALIZED LATER WITH THE SUPPLY UTILITY. ALL UNDERGROUND UTILITY DUCTS, WHENEVER REQUIRED, AND WIRING ARE TO BE INSTALLED AS PER CEC 12-012 AND RUN IN JOINT TRENCH WHERE POSSIBLE. DUCT BENDS MUST BE MINIMUM 915mm RADIUS.
- .2 TELECOMMUNICATION UNDERGROUND DUCTS ARE SHOWN FOR COORDINATION TO THE NEAREST POSSIBLE TELECOMMUNICATION CONNECTION POINT. ELECTRICAL SUB-CONTRACTOR TO INCLUDE IN HIS PRICE THE SUPPLY AND INSTALLATION OF THE DUCTS TO THE PROPERTY LINE AS SHOWN. ELECTRICAL SUB-CONTRACTOR TO CONFIRM WITH SERVICE PROVIDERS THE EXACT ROUTING.
- .3 ALL UNDERGROUND UTILITY SLEEVES/DUCTS ARE TO BE INSTALLED AS PER CEC 12-012, ELECTRICAL & COMMUNICATION UNDERGROUND INSTALLATION TO RUN IN JOINT TRENCH WHERE POSSIBLE TO THE BUILDING. BENDS MUST BE A MINIMUM 915mm RADIUS.
- .4 ELECTRICAL SUB-CONTRACTOR MUST COORDINATE ROUTING AND INSTALLATION OF ALL UNDERGROUND DUCTS WITH:
 - .1 UTILITIES (HYDRO, TELEPHONE) REGARDING EXACT ROUTING, DEPTH OF BURIAL AND OTHER REQUIREMENTS.
 - .2 MECHANICAL AND OTHER CONTRACTORS REGARDING INTERFERENCE WITH STORM SEWER, SANITARY SEWER, GAS LINES, CATCH BASINS AND SIMILAR UNDERGROUND SITE/CITY SERVICES.

.5 SEAL THE DUCTS FROM UTILITY SIDE TO PREVENT WATER ACCUMULATION IN DUCTS. IF THIS CANNOT BE ENSURED, PROVIDE SERVICE DUCTS WITH A DRAIN CONNECTION BEFORE ENTRY TO THE BUILDING. THIS DRAIN IS INTENDED FOR RELIEF OF INCIDENTAL WATER ENTERING THE DUCT. THE DRAIN MUST NOT BE USED TO ACCOMMODATE ANY FORM OF AREA DRAINAGE.

.6 ALL SERVICE DUCTS MUST BE SEALED AT POINT OF ENTRY INTO BUILDING THROUGH WALLS. THE SEAL SHALL PREVENT WATER ENTRY INTO THE BUILDING THROUGH THE WALL PENETRATION AND IN ADDITION, THE INSIDE OF THE DUCTS (WHERE POSSIBLE) MUST ALSO BE SEALED AGAINST WATER ENTRY, ENSURE WATERPROOF MATERIAL DOES NOT OBSTRUCT DUCT DRAIN WHEN PROVIDED.

.7 WHEN INSTALLED OUTDOORS, ARC PRODUCING ELECTRICAL EQUIPMENT/ POWER METER SHALL NOT BE INSTALLED WITHIN 1 METER OF THE COMBUSTIBLE GAS METER, GAS RELIEF DEVICE OR VENT.

.8 CO-ORDINATE WITH THE CONTRACTOR, HYDRO, ELECTRICAL INSPECTOR AND WITH ALL AUTHORITIES HAVING JURISDICTION FOR THE FOLLOWING:

- .1 MECHANICAL PROTECTION (STEEL PROTECTION) POSTS AND REQUIREMENTS OF POSTS PER UTILITY AND CODE.
- .2 MECHANICAL PROTECTION POSTS TO BE PROVIDED (SUPPLY / INSTALLATION) BY THE CONTRACTOR.
- .3 PROTECTION OF EXISTING TREES/SHRUBS: ELECTRICAL SUB-CONTRACTOR MUST COORDINATE ROUTING OF ALL UNDERGROUND DUCTS AND ALL UNDERGROUND WIRING WITH CONTRACT ADMINISTRATOR TO PROTECT AND MAINTAIN EXISTING TREES AND SHRUBS AS INDICATED ON ARCHITECTURAL DRAWINGS.

LIGHTING NOTES:

- 1. SUPPLY & INSTALL GAS DETECTION SYSTEM AS NOTED. SYSTEM AND SENSORS TO HAVE A WORKING TEMPERATURE OF -20 C OR COLDER. UNIT TO BE C/W NOTIFICATION AUDIO (95 DBA MIN)/ VISUAL (135 CD) DEVICE. PROVIDE CALIBRATION & INSPECTION REPORTS UPON COMPLETION FOR CONTRACT ADMINISTRATOR'S REVIEW. SUPPLY AN ALTERNATE PRICE FOR GAS DETECTION SYSTEM WITH BACNET COMPATIBILITY FOR CONTRACT ADMINISTRATOR'S REVIEW. REFER TO MECHANICAL DRAWINGS FOR CO ALARM SET POINT.
- 2. IN ROOMS WITHOUT A CEILING MEMBRANE, INSTALL LUMINAIRES TO UNDERSIDE OF ROOF TRUSSES. GC. TO PROVIDE ADDITIONAL BLOCKING WHERE NECESSARY. REFER TO ARCHITECTURAL DRAWINGS FOR DETAILS.
- 3. SUPPLY AND INSTALL OUTDOOR LUMINAIRES TO MOUNTING HEIGHTS AS NOTED ON ARCHITECTURAL DRAWINGS. ADJUST WALL-MOUNTED LIGHTS TO PREVENT DIRECT PROJECTION OF LIGHT BEYOND PERIMETER OF PARK PROPERTY.
- 4. SUPPLY AND INSTALL RECEPTACLES IN 'SHED 2' AT 3' [914mm] AFF. INSTALL QUADRUPEX RECEPTACLES 1' [305mm] ABOVE WORK BENCH LOCATION(S).
- 5. SUPPLY AND INSTALL STAINLESS STEEL HARDWARE FOR RECEPTACLES, ZINC-PLATED ELECTRICAL METALLIC INSTALLATION MATERIAL. BX CABLES AND PLASTIC CONDUITS ARE NOT ACCEPTED AS A SUBTITLE TO EMTS.
- 6. ALL SWITCH COVER PLATES TO BE STAINLESS STEEL.
- 7. ELECTRICAL SUB-CONTRACTOR TO ASSIGN DESIGNATIONS TO EACH OUTLET, DEVICE AND SWITCH. SUPPLY AND INSTALL RIVETED LAMACOID LABELS TO IDENTIFY EACH ELECTRICAL OUTLET, DEVICE AND SWITCH. USE CORROSION-RESISTANT RIVETS.
- 8. SUPPLY AND INSTALL PHOTOCCELL AND ASTRONOMICAL TIME-LOCK UNIT TO CONTROL OUTDOOR LIGHTING. INSTALL TIME-LOCK UNIT ADJACENT TO SUPPLY PANEL. PROGRAM AS REQUIRED BY CITY OF WINNIPEG.
- 9. ELECTRICAL SUB-CONTRACTOR TO SUPPLY AND INSTALL ALL CONDUITS REQUIRED FOR BURGLAR ALARM SYSTEM AS PER CITY OF WINNIPEG REQUIREMENTS. CONDUITS TO BE C/W PULL CORD AND LABELLED ON EACH END.
- 10. ELECTRICAL SUB-CONTRACTOR TO INSTALL MECHANICAL CONTROLS. PROVIDE CONTROL WIRING AND ELECTRICAL SERVICE WIRING TO MECHANICAL EQUIPMENT.
- 11. SHED BUILDING TO BE SOLIDLY GROUNDED AS PER CODE REQUIREMENTS.
- 12. ELECTRICAL INSTALLATION IN 'SHED 2' TO BE RATED TO WITHSTAND OPERATING TEMPERATURE RANGE OF -40 C TO +50 C.
- 13. COORDINATE LOCATION OF CO SENSOR WITH OTHER EQUIPMENT IN 'SHED 2'.
- 14. SUPPLY AND INSTALL 12x12" [305x305mm] PLASTIC BOX FOR BURGLAR ALARM WIRING. INSTALL BOX AT 6' [1830mm] AFF.
- 15. SUPPLY AND INSTALL MECHANICAL PROTECTION FOR ELECTRICAL INSTALLATION RUNNING IN VERTICAL DIRECTION WITH MAXIMUM SPACING OF 1' [305mm]. SUBMIT FOR CONTRACT ADMINISTRATOR'S REVIEW PRIOR TO ORDERING.

1. CIRCUIT BREAKER PROTECTION:

- 1. FULLY-RATED OR USING SERIES-RATED COMBINATIONS
 - 2. INTEGRATED EQUIPMENT RATED (IER) WHEN USING SERIES-RATED SYSTEMS, THEY SHALL BE TESTED/LABELLED AS A SERIES-RATED COMBINATION
 - 3. LABEL/NAMEPLATE TO BE INSTALLED IN A CONSPICUOUS AND LEGIBLE MANNER TO INDICATE THAT THEY SHOULD ONLY BE REPLACED WITH COMPONENTS OF THE SAME TYPE AND RATING. REFER TO CEC 14-014.
2. DOWNSTREAM OVERCURRENT DEVICES MUST BE SERIES-RATED COMBINATION WITH THE UPSTREAM PROTECTIVE DEVICE. FOR SERIES-RATED COMBINATION, EACH DEVICE MUST BE LABELLED TO INDICATE:
- 1. THAT REPLACEMENT COMPONENTS MUST BE OF THE SAME TYPE AND RATING ONLY.
 - 2. TESTED IER KA RATING
 - 3. SPECIFIC UPSTREAM PROTECTIVE DEVICE
 - 4. PERMISSIBLE BRANCH DEVICES
 - 5. PANEL BOARD DESIGNATION
 - 6. VOLTAGE
3. SERVICE ENTRANCE EQUIPMENT TO MEET UTILITY REQUIREMENTS.
4. SUPPLY AND INSTALL PANELS MFG: EATON (OR APPROVED EQUAL AS PER B7), PANEL CIRCUITING AS PER SCHEDULE. PANEL TO BE SUITABLE FOR WET ENVIRONMENT.
5. SUPPLY AND INSTALL GROUND BONDING WIRE SIZE #6 AWG-CU- STRANDED BACK TO MAIN BUILDING GROUND BONDING CONDUCTOR.
6. ELECTRICAL PANEL TO BE 200 A 120/208V, 3 PHASE – 4 WIRE. SUPPLY AND INSTALL PERMANENT ATTACHED LAMICOID LABEL TO IDENTIFY UNIT, SUPPLY & LOAD CIRCUITS.
7. ALL POWER OUTLET COVER PLATES TO BE STAINLESS STEEL.