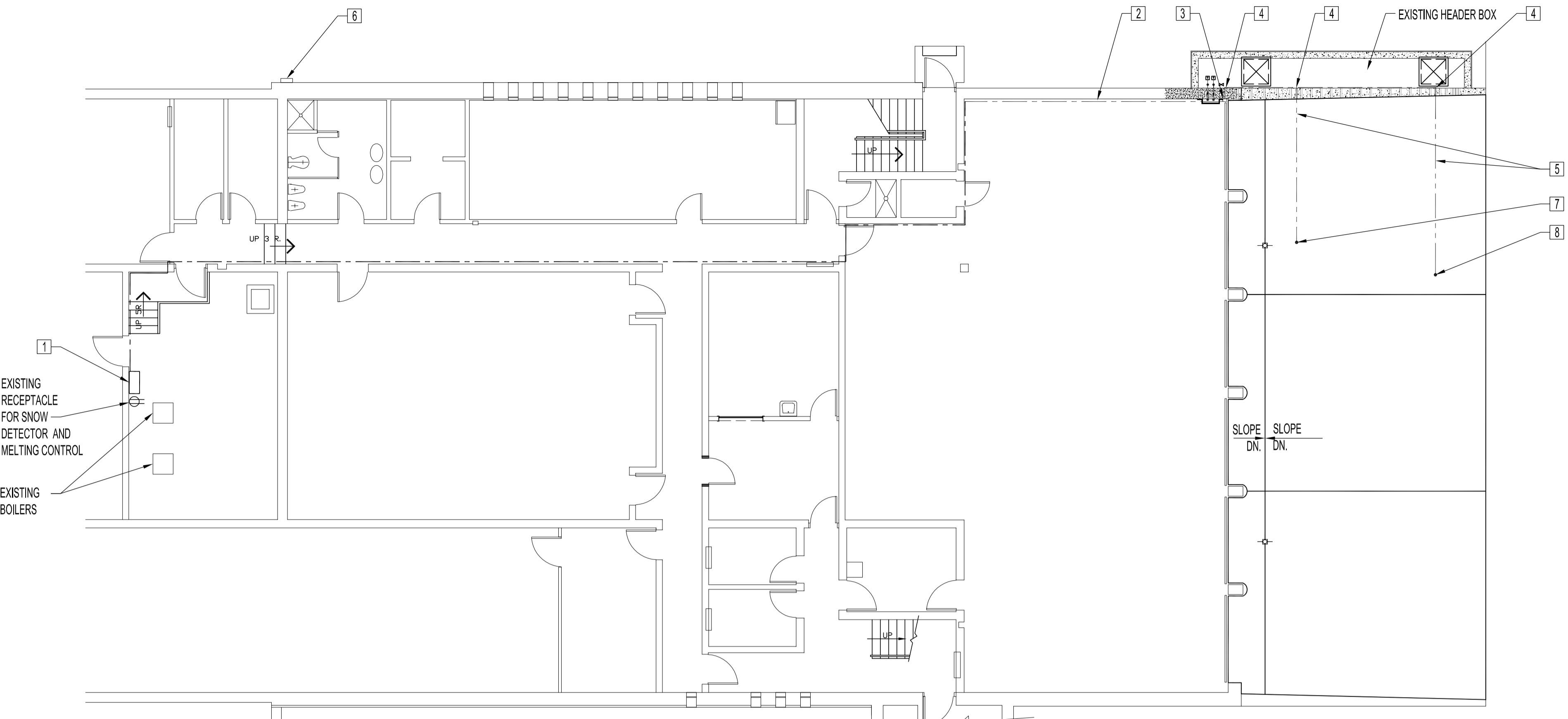
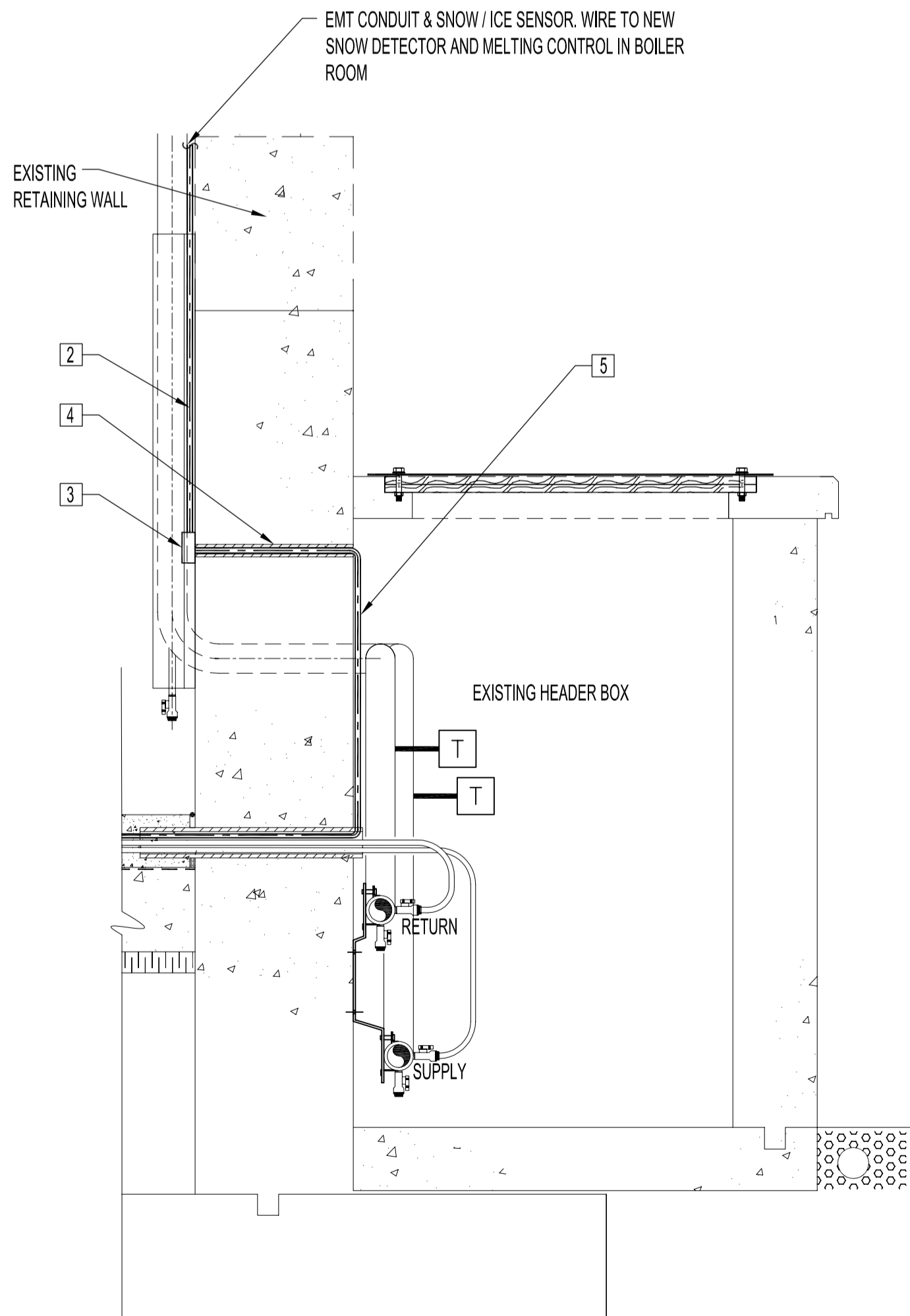


FILE NAME: 200510810.dwg DATE: 20070309 DESCRIPTION: PARTIAL FLOOR PLAN SECTION ELECTRICAL SPECIFICATIONS PROJECT NO: 2005-108 ADDRESS: 227 PROVENCHEUR BLVD.



**PARTIAL BASEMENT FLOOR PLAN - ELECTRICAL RENOVATION**  
SCALE: 1/8"=1'-0"



**RENOVATION NOTES**  
(SUPPLY & INSTALL WITH ALL REQUIRED COMPONENTS FOR A FULLY-FUNCTIONAL SYSTEM INCLUDING ELECTRICAL & CONTROLS)

- 1 SNOW DETECTOR AND MELTING CONTROL. TEKMAR MODEL # 664.
- 2 EMT CONDUIT TO SNOW DETECTOR AND MELTING CONTROL.
- 3 JUNCTION BOX
- 4 CORE HOLE TO ACCOMMODATE PVC CONDUIT
- 5 PVC CONDUIT IN CONCRETE TOPPING FROM SNOW/ICE SENSOR SOCKET. INSTALL AS PER MANUFACTURER'S SNOW/ICE SENSOR INSTALLATION MANUAL.
- 6 EXISTING OUTDOOR AIR TEMPERATURE SENSOR TO BE REPLACED WITH NEW TO SUIT TEKMAR SNOW DETECTOR & MELTING CONTROL 664.
- 7 SNOW / ICE SENSOR: TEKMAR 090  
SNOW/ICE SENSOR SOCKET: TEKMAR 091  
INSTALL & WIRE TO TEKMAR SNOW DETECTOR & MELTING CONTROL 664 & AS PER TEKMAR MANUALS & SNOW/ICE SENSOR INSTALLATION MANUAL.
- 8 BACK-UP LOCATION FOR SNOW/ICE SENSOR.  
SNOW/ICE SENSOR SOCKET: TEKMAR 091  
INSTALL AS PER MANUFACTURER'S SNOW/ICE SENSOR INSTALLATION MANUAL.

NOTES :  
SEE NOTES ON DRAWING C1.

**ELECTRICAL SPECIFICATIONS**

**PART 1 - ELECTRICAL GENERAL CONDITIONS**

- 1.1 GENERAL**  
A. THE SPECIFICATION COVERING THE GENERAL CONDITIONS OF THE CONTRACT, GENERAL SPECIFICATIONS, INSTRUCTIONS TO CONTRACTORS AND ALL ASSOCIATED SECTIONS FORM AN INTEGRAL PART OF THIS SPECIFICATION AND SHALL BE READ IN CONJUNCTION HEREWITH.
- 1.2 SCOPE**  
A. PROVIDE ALL MATERIALS, LABOUR, PLANT AND EQUIPMENT REQUIRED FOR A COMPLETE AND WORKING INSTALLATION AS HEREIN SPECIFIED AND AS SHOWN ON THE DRAWINGS.  
B. THE ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CANADIAN ELECTRICAL CODE, AND ALL PROVINCIAL AND MUNICIPAL CODES AND REGULATIONS.  
C. OBTAIN ALL NECESSARY PERMITS AND APPROVALS AND PAY ALL RELATED FEES REQUIRED FOR THIS PROJECT.  
D. ALL EQUIPMENT SUPPLIED UNDER THIS CONTRACT SHALL BE NEW AND SHALL BE C.S.A. APPROVED.
- 1.3 COORDINATION WITH OTHER TRADES**  
A. REFER TO MECHANICAL, STRUCTURAL AND ARCHITECTURAL SPECIFICATIONS FOR ADDITIONAL ELECTRICAL WORK IN CONNECTION WITH OTHER DIVISIONS WHERE SUCH WORK IS INCLUDED IN OTHER SECTIONS OF THE SPECIFICATIONS. PROVIDE LABOUR, EQUIPMENT, CONDUIT, WIRING, ETC. AS REQUIRED FOR OPERATION OF THE SPECIFIED EQUIPMENT.  
B. SCHEDULE EXECUTION OF ELECTRICAL WORK WITH ASSOCIATED WORK SPECIFIED IN OTHER DIVISIONS.  
C. COORDINATE ELECTRICAL WORK WITH WORK OF OTHER TRADES TO AVOID CONFLICTS WITH PIPES, AIR DUCTS OR OTHER EQUIPMENT. PROVIDE ADDITIONAL SUPPORTS, WIRING, ETC. TO RELOCATE ELECTRICAL EQUIPMENT AS REQUIRED WHERE STRUCTURAL MEMBERS, AIR DUCTS, PIPING OR OTHER EQUIPMENT INTERFERES WITH ELECTRICAL INSTALLATION.
- 1.4 EXAMINATION OF SITE AND CONSTRUCTION DOCUMENTS**  
A. EXAMINE THE SITE AND LOCAL CONDITIONS WHICH WILL AFFECT THE WORK. REPORT ANY DISCREPANCIES TO THE CONTRACT ADMINISTRATOR PRIOR TO COMMENCING ANY WORK. EXTRA PAYMENTS RESULTING FROM CONDITIONS WHICH COULD REASONABLY BE FORESEEN FROM EXAMINATION OF THE DOCUMENTS AND/OR SITE WILL BE BORNE BY THE CONTRACTOR.
- 1.5 SUPERVISION**  
A. SUPERVISE THE WORK AT ALL TIMES THROUGH A RESPONSIBLE AND COMPETENT SUPERVISOR.  
B. FULL COOPERATION SHALL BE SHOWN WITH OTHER TRADES TO FACILITATE INSTALLATIONS AND AVOID DELAYS IN CARRYING OUT THE WORK.
- 1.6 ACCURACY OF DATA**  
A. DRAWINGS ARE SCHEMATIC. EXACT LOCATIONS, DISTANCES, LEVELS AND OTHER DIMENSIONS SHALL BE GOVERNED BY THE BUILDING AS CONSTRUCTED.  
B. OUTLETS OR EQUIPMENT SHALL BE MOVED TO ANY POINT WITHIN A 10" RADIUS WHEN RELOCATION IS REQUESTED BY THE CONTRACT ADMINISTRATOR BEFORE THE WORK HAS BEEN SUBSTANTIALLY COMPLETED, WITHOUT ADDITIONAL COST.
- 1.7 APPROVAL OF MATERIAL**  
A. REQUEST FOR APPROVAL OF MATERIAL AS EQUALS OR ALTERNATES TO THAT SPECIFIED SHALL BE SUBMITTED TO THE CONTRACT ADMINISTRATOR A MINIMUM OF (5) WORKING DAYS PRIOR TO THE BID SUBMITTAL, IN ACCORDANCE WITH 66 OF THE SPECIFICATION.

- 1.8 SHOP DRAWINGS**  
A. SUBMIT SHOP DRAWINGS OF ELECTRICAL EQUIPMENT TO THE CONTRACT ADMINISTRATOR FOR REVIEW. FABRICATION OF THE EQUIPMENT SHALL NOT COMMENCE UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED BY THE CONTRACT ADMINISTRATOR. FIVE (5) SETS SHALL BE SUBMITTED WITH LOCAL INSPECTION DEPARTMENT FOR APPROVAL.
- 1.9 RECORD DRAWINGS**  
A. KEEP A RECORD SET OF DRAWINGS ON THE SITE AT ALL TIMES RECORDING ALL CHANGES THAT MAY OCCUR. SUBMIT THESE DRAWINGS TO THE CONTRACT ADMINISTRATOR, UPON COMPLETION OF THE WORK.  
B. SUBMIT A CERTIFICATE OF INSPECTION FROM THE LOCAL INSPECTION AUTHORITY UPON COMPLETION OF THE WORK.  
C. CONTRACTOR TO PAY FOR AND BE RESPONSIBLE FOR THE REPRODUCTION OF RECORD DRAWINGS.  
D. WHERE ORIGINAL DRAWINGS HAVE BEEN PRODUCED ON CAD, RECORD DRAWINGS ARE TO BE ON CAD. THE CAD SYSTEM MUST BE COMPATIBLE WITH THAT USED TO PRODUCE ORIGINAL DRAWINGS. CONTRACTOR TO PROVIDE CONTRACT ADMINISTRATOR WITH ELECTRONIC COPY OF COMPLETED RECORD DRAWINGS, OR PAY THE CONTRACT ADMINISTRATOR TO PRODUCE CAD DRAWINGS.
- 1.10 TEST**  
THE ELECTRICAL INSTALLATION SHALL BE COMPLETELY TESTED DEMONSTRATING THAT THE EQUIPMENT AND SYSTEMS INSTALLED PERFORMED IN MANNER INTENDED.
- 1.11 NOT APPLICABLE**
- 1.12 GROUNDING**  
A. THE ENTIRE INSTALLATION SHALL BE GROUNDED IN ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE.
- 1.13 WORKMANSHIP**  
A. INSTALL EQUIPMENT, CONDUIT AND CABLES IN A MANNER TO PRESENT A NEAT APPEARANCE TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR.  
B. INSTALL CONDUIT AND CABLE RUNS PARALLEL AND PERPENDICULAR IN CHASES BEHIND FURRING OR CEILINGS WHERE SUCH CONCEALMENT IS POSSIBLE. IN AREAS WHERE SYSTEMS ARE TO BE EXPOSED, INSTALL NEATLY AND GROUP TO PRESENT A TIDY APPEARANCE.  
C. INSTALL EQUIPMENT REQUIRING MAINTENANCE, ADJUSTMENT OR EVENTUAL REPLACEMENT WITH ADEQUATE CLEARANCES AND ACCESSIBILITY FOR SAME. INCLUDE, IN THE WORK, ALL REQUIREMENTS SHOWN ON THE SHOP DRAWINGS OR MANUFACTURER'S INSTALLATION INSTRUCTIONS.  
D. REPLACE WORK UNSATISFACTORY TO THE CONTRACT ADMINISTRATOR WITHOUT EXTRA COST. REPLACEMENT WITH ADEQUATE CLEARANCES AND ACCESSIBILITY FOR SAME. INCLUDE, IN THE WORK, ALL REQUIREMENTS SHOWN ON THE SHOP DRAWINGS OR MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 1.14 WORK IN EXISTING BUILDING**  
A. THE BUILDING SHALL REMAIN OPEN AND IN NORMAL OPERATION DURING THE CONSTRUCTION PERIOD OF THIS CONTRACT. COMPLY WITH CONTRACT ADMINISTRATOR'S INSTRUCTIONS REGARDING ACCEPTABLE WORKING HOURS ON PROJECT AND HOURS DURING WHICH POWER SHUTDOWN IS PERMISSIBLE. DURING CONSTRUCTION 2 OVERHEAD DOORS & RAMPS SHALL BE ACCESSIBLE AT ALL TIMES.  
B. WHERE EXISTING SERVICES SUCH AS ELECTRICAL POWER, FIRE, ALARM SYSTEM, TELEPHONE SYSTEM, ETC. ARE REQUIRED TO BE DISRUPTED AND/OR SHUTDOWN CO-ORDINATE THE SHUTDOWNS WITH THE CONTRACT ADMINISTRATOR AND CARRY OUT THE WORK AT A TIME AND IN A MANNER ACCEPTABLE TO THEM. SCHEDULE ALL DISRUPTIONS AND/OR SHUTDOWNS AND ENSURE THAT THE DURATION OF SAME IS KEPT TO A MINIMUM. SUBMIT FOR APPROVAL A WRITTEN SCHEDULE OF EACH DISRUPTION AT LEAST 72 HOURS IN ADVANCE OF PREFORMING WORK AND OBTAIN CONTRACT ADMINISTRATOR'S WRITTEN CONSENT PRIOR TO IMPLEMENTING.  
C. SHOULD ANY CONNECTIONS BE REQUIRED TO MAINTAIN SERVICES DURING WORK IN THE EXISTING BUILDING. SUPPLY AND INSTALL ALL NECESSARY MATERIAL AND EQUIPMENT AND PROVIDE ALL LABOUR AT NO EXTRA COST. SHOULD ANY EXISTING SYSTEM BE DAMAGED. MAKE FULL REPAIRS WITHOUT EXTRA COST, AND TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR.

- D. THE DRAWINGS INDICATE MAJOR ITEMS OF EQUIPMENT TO BE DELETED OR RELOCATED BUT MAY NOT INDICATE EVERY ITEM OF EQUIPMENT OR CONDUIT TO BE DELETED OR RELOCATED. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING WHICH EXISTING EQUIPMENT IS TO BE DELETED OR RELOCATED BY EXAMINING THE SITE AND CONSTRUCTION DOCUMENTS.
- 1.15 CUTTING AND PATCHING**  
A. PAY THE COSTS OF ALL CUTTING AND PATCHING FOR INSTALLATION OF ELECTRICAL WORK.  
B. CUTTING AND PATCHING REQUIRED FOR INSTALLATION OF ELECTRICAL WORK SHALL BE DONE BY THE PARTICULAR TRADE WHOSE WORK IS INVOLVED. NO CUTTING OR PATCHING SHALL BE CARRIED OUT BY THE TRADESMAN EMPLOYED ON THE ELECTRICAL WORK.  
C. OBTAIN THE APPROVAL OF THE CONTRACT ADMINISTRATOR BEFORE ARRANGING FOR ANY CUTTING. PATCHING SHALL RESTORE THE AFFECTED AREA TO THE ORIGINAL CONDITION. MATERIALS AND METHODS USED FOR PATCHING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CORRESPONDING DIVISIONS.
- 1.16 ACCESS DOORS**  
A. PROVIDE ACCESS DOORS IN INACCESSIBLE CONSTRUCTION TO GIVE ACCESS TO ALL CONCEALED JUNCTION BOXES, PULL BOXES, CONDUCTOR JOINTS AND OTHER SIMILAR ELECTRICAL WORK WHICH MAY REQUIRE MAINTENANCE OR REPAIR. BE COMPLETE WITH FLUSH FRAME AND ANCHOR, CONCEALED HINGES, POSITIVE LOCKING SCREWDRIVER LOCK, AND MOUNTING AND FINISHING PROVISIONS TO SUIT THE FINISH MATERIAL FOR WHICH THEY ARE SUPPLIED. ACCESS DOORS TO BE INSTALLED BY THE DIVISION RESPONSIBLE FOR THE PARTICULAR TYPE OF CONSTRUCTION IN WHICH ACCESS DOORS ARE REQUIRED. SUPPLY THE ACCESS DOORS TO THE DIVISION INSTALLING SAME AT THE PROPER TIME TO AVOID CONSTRUCTION DELAYS.

**PART 2 - MATERIALS, INSTALLATION & POWER**

- 2.1 OUTLET BOXES**  
A. OUTLET, JUNCTION AND SWITCH BOXES SHALL BE GALVANIZED PRESSED STEEL OF SIZE AND TYPE TO SUIT EACH INDIVIDUAL APPLICATION.
- 2.2 WIRING METHODS**  
A. UNLESS OTHERWISE SHOWN ON THE DRAWINGS, ALL WIRE SHALL BE COPPER, MINIMUM #12 WITH 90 DEGREES CELSIUS X-LINK INSULATION.  
B. ALL WIRING IN FINISHED AREAS SHALL BE CONCEALED. CONDUITS SHALL BE RUN AT RIGHT ANGLES TO THE BUILDING LINES.  
C. CABLES SHALL BE GROUPED WHERE POSSIBLE AND CLIPPED IN A NEAT AND WORKMANSHIP MANNER.
- 2.3 CONDUIT**  
A. USE ELECTRICAL METALLIC TUBING (EMT) EXCEPT WHERE NOTED OTHERWISE. WIRING HOMERUNS TO PANELS AND MAIN BRANCH WIRING IN CEILING SPACES TO BE RUN IN CONDUIT.  
B. USE FLEXIBLE METAL CONDUIT FOR CONNECTION TO MOTORS, TRANSFORMERS, AND EQUIPMENT SUBJECT TO MOVEMENT OR VIBRATION. PROVIDE A SEPARATE INSULATED GROUND CONDUCTOR WITHIN FLEXIBLE CONDUIT.  
C. USE LIQUID TIGHT FLEXIBLE METAL CONDUIT FOR CONNECTION TO EQUIPMENT DESCRIBED ABOVE WHERE EXPOSED TO WET OR CORROSIVE CONDITIONS.
- 2.4 FASTENING AND SUPPORTS**  
A. PROVIDE METAL BRACKETS, FRAMES, HANGERS, CLAMPS AND RELATED TYPE OF SUPPORT STRUCTURES WHERE INDICATED OR AS REQUIRED TO SUPPORT CONDUIT AND CABLE RUNS.
- 2.5 MECHANICAL EQUIPMENT WIRING**  
A. PROVIDE STARTERS, DISCONNECTS AND WIRING FOR ALL HEATING AND VENTILATING EQUIPMENT UNLESS SPECIFIED OTHERWISE. POWER AND CONTROL WIRING FOR THE MECHANICAL EQUIPMENT 50V OR OVER SHALL BE PERFORMED BY THE ELECTRICAL SUB-CONTRACTOR. CONTROL WIRING UNDER 50V SHALL BE PERFORMED BY THE MECHANICAL SUB-CONTRACTOR. IN ALL CASES WHERE ELECTRICAL SUB-CONTRACTOR IS TO PERFORM CONTROL WIRING, A WIRING DIAGRAM IS TO BE OBTAINED FROM THE MECHANICAL SUB-CONTRACTOR.  
B. ENSURE MOTOR ROTATION IS AS REQUIRED.  
C. REFER TO THE MECHANICAL DRAWINGS FOR THE EXACT LOCATION OF MECHANICAL EQUIPMENT REQUIRING AN ELECTRICAL CONNECTION.

NO.	REVISION/DESCRIPTION	BY	DATE
SEALS			

DRAWN BY	RCPI/DTA	CHECKED BY	APPROVED
DATE	20070308	USER APPROVAL	

**CITY OF WINNIPEG**  
PLANNING, PROPERTY & DEVELOPMENT DEPARTMENT  
CIVIC ACCOMMODATIONS DIVISION  
300 - 65 GARRY ST. R3C 4K4

PROJECT  
DISTRICT 5 POLICE STATION  
REPLACEMENT OF CONCRETE RAMP  
SNOW MELT SYSTEM  
227 PROVENCHEUR BLVD.

SHEET TITLE  
PARTIAL FLOOR PLAN  
SECTION  
ELECTRICAL SPECIFICATIONS

SCALE	PROJECT NO.	SHEET NO.
AS NOTED	2005-108	E1