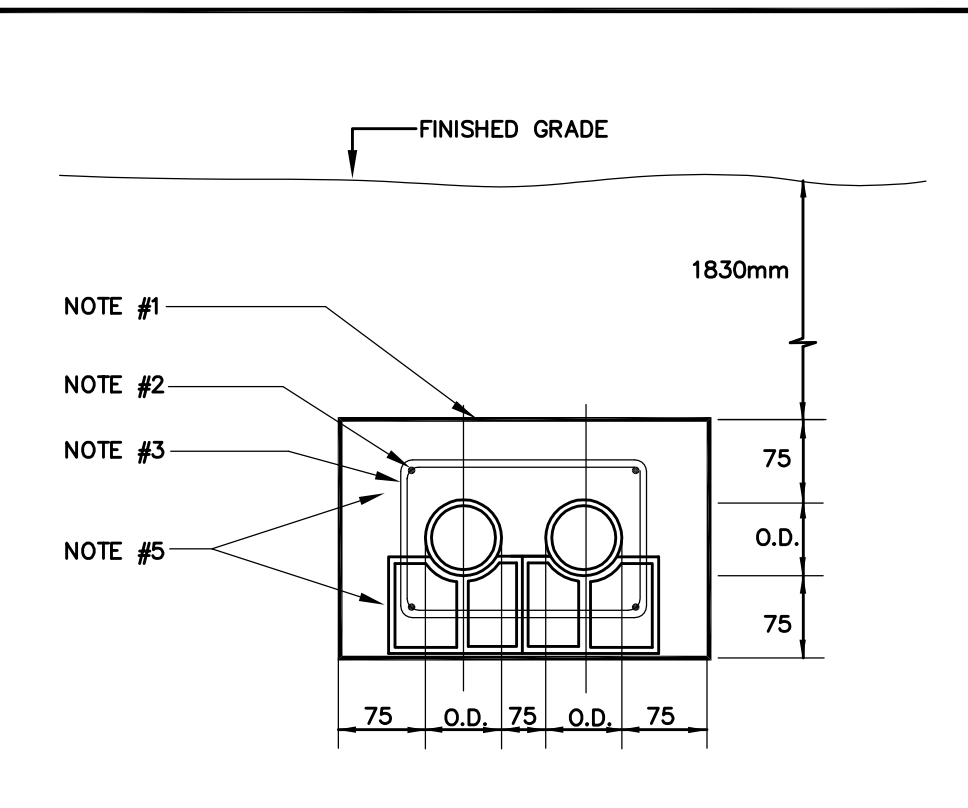


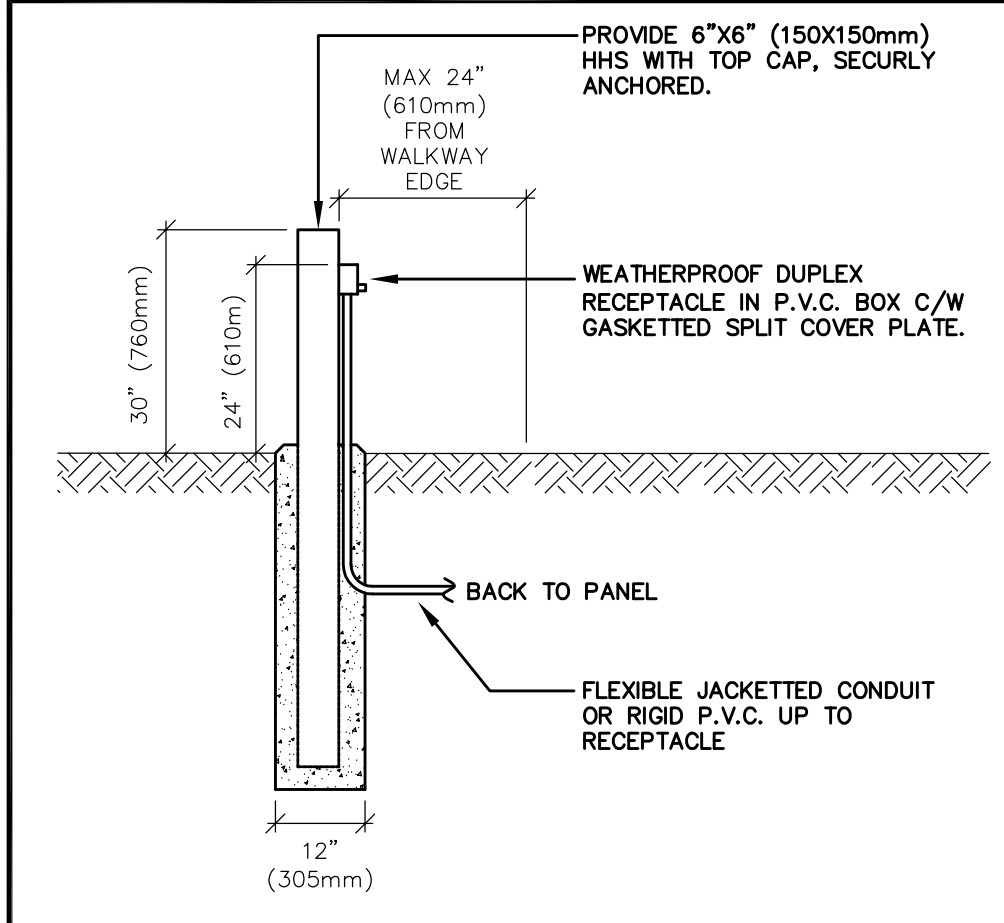
- NOTE:**
- 28 MPa CONCRETE ENVELOPE AFTER 28 DAYS.
 - No. 4 DEFORMED REINFORCING BARS.
 - No. 3 DEFORMED REINFORCING TIES SPACED @ 610mm O.C. UNDER ROADWAYS, PARKING AREAS ETC. & @ 1530mm O.C. IN OTHER AREAS.
 - 4" (100mm) TYPE 2 RIGID CONDUIT FOR CONCRETE ENCASUREMENT.
 - MOLDED PLASTIC INTERLOCKING DUCT SPACERS AT 1530mm INTERVALS ALONG ENTIRE LENGTH OF DUCT BANK.
 - ALL LONGITUDINAL REINFORCING BARS TO BE WIRED TOGETHER TO No. 3 TIE BARS & TO PLASTIC SPACERS. LONGITUDINAL REINFORCING BAR SHALL OVERLAP 40 BAR DIA. MIN.
 - DUCT BANK SHALL BE BURIED MIN. 900mm BELOW FINISHED GRADE. PROVIDE 152mm WIDE CONTINUOUS RED STRIP TAPE ALONG DUCT RUN AT 305mm BELOW GRADE.
 - SEAL ALL DUCT ENDS AFTER CABLES ARE INSTALLED.

SECTIONS THROUGH DUCTBANKS
NOT TO SCALE (SECONDARY HYDRO)

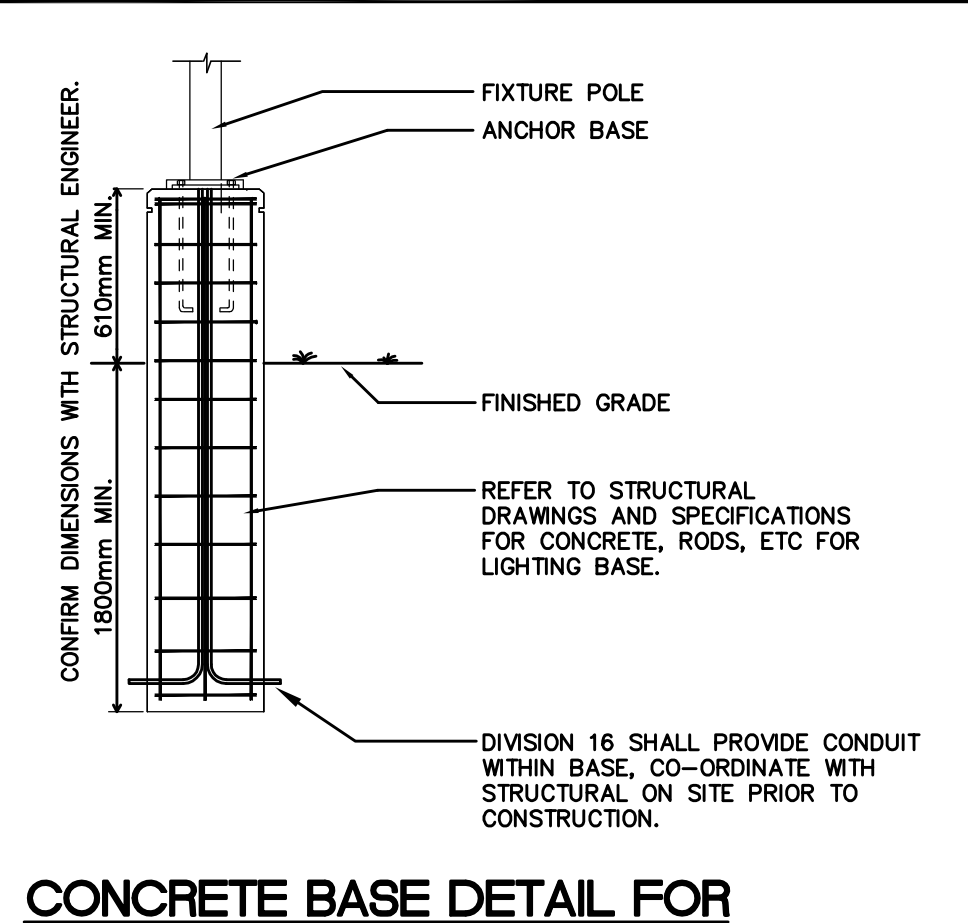


- NOTE:**
- 28 MPa CONCRETE ENVELOPE AFTER 28 DAYS.
 - No. 4 DEFORMED REINFORCING BARS.
 - No. 3 DEFORMED REINFORCING TIES SPACED @ 610mm O.C. UNDER ROADWAYS, PARKING AREAS ETC. & @ 1530mm O.C. IN OTHER AREAS.
 - DUCTS TO BE RIGID TYPE 2 (100mm) FOR CONCRETE ENCASUREMENT.
 - MOLDED PLASTIC INTERLOCKING DUCT SPACERS AT 1530mm INTERVALS ALONG ENTIRE LENGTH OF DUCT BANK.
 - ALL LONGITUDINAL REINFORCING BARS TO BE WIRED TOGETHER TO No. 3 TIE BARS & TO PLASTIC SPACERS. LONGITUDINAL REINFORCING BAR SHALL OVERLAP 40 BAR DIA. MIN.
 - DUCT BANK SHALL BE BURIED MIN. 900mm BELOW FINISHED GRADE. PROVIDE 152mm WIDE CONTINUOUS RED STRIP TAPE ALONG DUCT RUN AT 305mm BELOW GRADE.
 - SEAL ALL DUCT ENDS AFTER CABLES ARE INSTALLED.

SECTIONS THROUGH DUCTBANKS
NOT TO SCALE (TELEPHONE & TELEVISION)



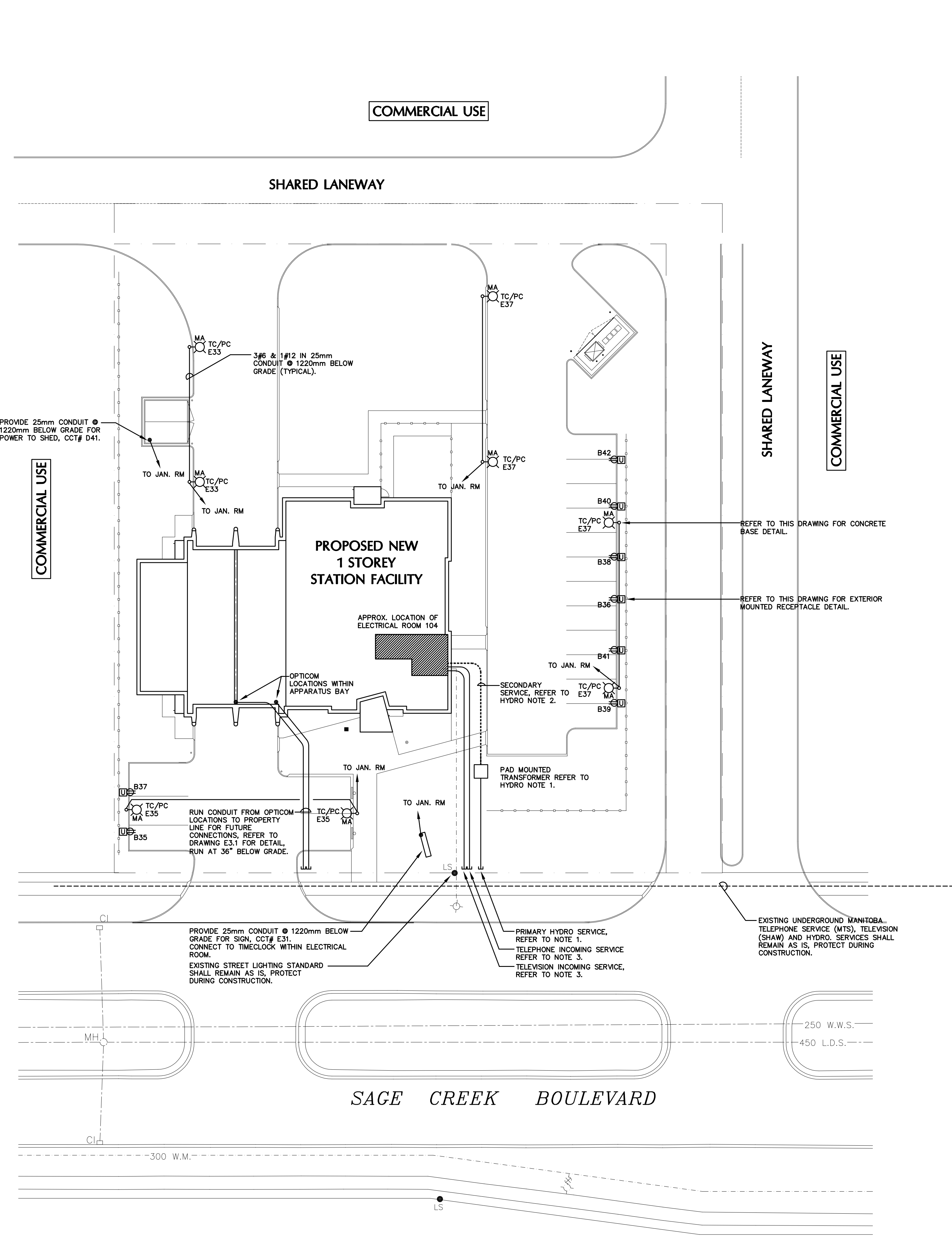
EXTERIOR MOUNTED RECEPTACLE
NOT TO SCALE



CONCRETE BASE DETAIL FOR FIXTURE TYPE
N.T.S.

- GENERAL SITE PLAN NOTES:**
- DIMENSIONS AND LOCATIONS SHOWN ON THIS PLAN ARE APPROXIMATE ONLY. ALL BIDDERS SHALL PROVIDE ON SITE INSPECTIONS TO VERIFY EXACT DUCT LENGTHS AND LOCATIONS OF EXISTING STRUCTURES BEFORE SUBMISSION OF BID.
 - WHERE EXISTING MATERIALS MUST BE REMOVED OR ALTERED TO FACILITATE INSTALLATION OF THE DUCTBANKS INDICATED, REPLACE MATERIALS AS REQUIRED TO MATCH ORIGINAL SITE CONDITIONS.
 - ALL BENDS TO BE LONG SWEEP, FACTORY MADE WHERE AVAILABLE AND ALL DUCTS TO END WITH BELL ENDS AT MANHOLES AND OTHER STRUCTURES.
 - REFER TO NEW SITE SERVICING PLANS AND OWNER'S RECORD DRAWINGS FOR BURIED SERVICES ALONG ROUTE OF NEW WORK. DO NOT UNDERMINE EXISTING SERVICES IF ENCOUNTERED AND MAINTAIN 150mm VERTICAL CLEARANCE AT CROSSINGS.
 - CLEAN DUCTS AND INSTALL PULLWIRE IN EACH AFTER PLACEMENT OF CONCRETE.
 - ALL CONDUIT JOINTS TO BE WATERTIGHT.
 - ALL DUCTBANKS TO BE MINIMUM 1.0m BELOW FINISHED GRADE TO TOP OF CONCRETE UNLESS OTHERWISE NOTED.
 - ALL UNDERGROUND ELECTRICAL SERVICES SHALL BE RUN MIN. 1220mm BELOW FINISHED GRADE UNLESS OTHERWISE NOTED.
 - REFER TO SITE SERVICES DRAWINGS FOR EXTENT AND APPROXIMATE LOCATION OF ALL UNDERGROUND SERVICES. CO-ORDINATE CROSSING OF THESE SERVICES CAREFULLY.
 - DIVISION 16, GENERAL TRADES AND SITE SERVICES SHALL CO-ORDINATE ALL SERVICES OVERLAPPING AT NEW SITE. CONFIRM ALL REQUIREMENTS AND ROUTING ON SITE PRIOR TO ANY CONSTRUCTION.

- HYDRO NOTES:**
- MANITOBA HYDRO FORCES SHALL SUPPLY AND INSTALL THE FOLLOWING:
 - ALL MATERIAL UP TO AND INCLUDING PADMOUNT TRANSFORMER.
 - THE SECONDARY LUGS AND CONNECTION OF THE SECONDARY CONDUCTORS AT TRANSFORMER.
 - CABLE FROM TRANSFORMER TO SWITCHGEAR.
 - TRANSFORMER PAD & FOUNDATION.
 - CONSTRUCT A PERIMETER GROUND GRADIENT CONTROL GRID.
 - GROUNDING & BONDING.
 - TERMINATE BOTH PRIMARY & SECONDARY CONDUCTORS.
 - SUPPLY REVENUE METERING EQUIPMENT TO ELECTRICAL CONTRACTOR.
 - DIVISION 16 SHALL SUPPLY AND INSTALL THE FOLLOWING:
 - SYSTEM NEUTRAL FROM TRANSFORMER TO CUSTOMER'S SWITCHGEAR & TO THE METERING SECTION OF SWITCHGEAR.
 - METER CABINET WITHIN ELECTRICAL ROOM.
 - 31mm CONDUIT COMPLETE WITH PULLWIRE FROM CABINET TO SWITCHGEAR.
 - DIVISION 16 SHALL PROVIDE THE FOLLOWING FOR COMMUNICATION SERVICES INTO BUILDING:
 - RUN A TOTAL OF 2 @ 100mm (4") CONDUITS FROM PROPERTY LINE @ 915mm (36") BELOW GRADE INTO THE ELECTRICAL ROOM.



SITE PLAN ELECTRICAL LAYOUT
SCALE: 1:250

ISSUES:		
NO.	DATE	DESCRIPTION
1	MAY 14, 2010	ISSUED FOR CLIENT REVIEW
2	MAY 19, 2010	ISSUED FOR CLIENT REVIEW
3	SEPT. 24, 2010	ISSUED FOR BUILDING PERMIT
4	DEC. 10, 2010	ISSUED FOR TENDER

VRM
VANDERWESTEN RUTHERFORD MANTECON INC.
CONSULTING STRUCTURAL/MECHANICAL/ELECTRICAL ENGINEERS
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REVIEW ALL DRAWINGS AND VERIFY ALL DIMENSIONS AT THE SITE. DO NOT SCALE THE DRAWINGS. REPORT ALL DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH ANY CONSTRUCTION OR SHOP FABRICATION. ALL DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF VANDERWESTEN RUTHERFORD MANTECON AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN PART OR WHOLE IS FORBIDDEN WITHOUT THE CONSULTANT'S WRITTEN PERMISSION.

PROJECT NAME:
NEW WINNIPEG STATION No. 27 PROJECT
SAGE CREEK, WINNIPEG, MANITOBA

DRAWING TITLE:
ELECTRICAL SITE PLAN

PROJECT NORTH:

SCALE: AS NOTED

DATE: DECEMBER 10, 2010

ISSUED: DECEMBER 10, 2010

DRAWN BY: PDL

CHECKED BY: ELC

PROJECT NO.: 2261

FILE NAME:

DRAWING NO.: E1.1

NOT VALID FOR CONSTRUCTION UNLESS SIGNED