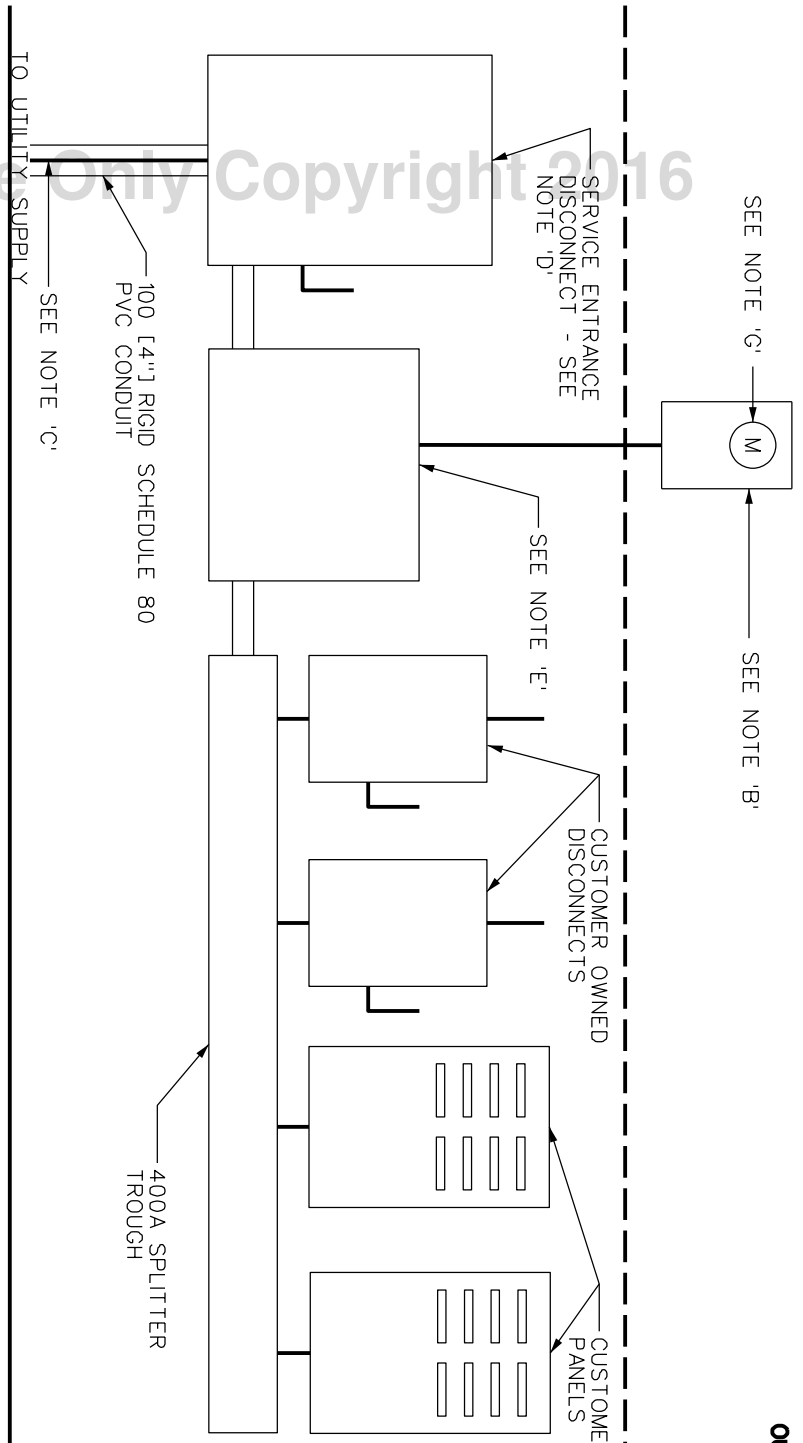


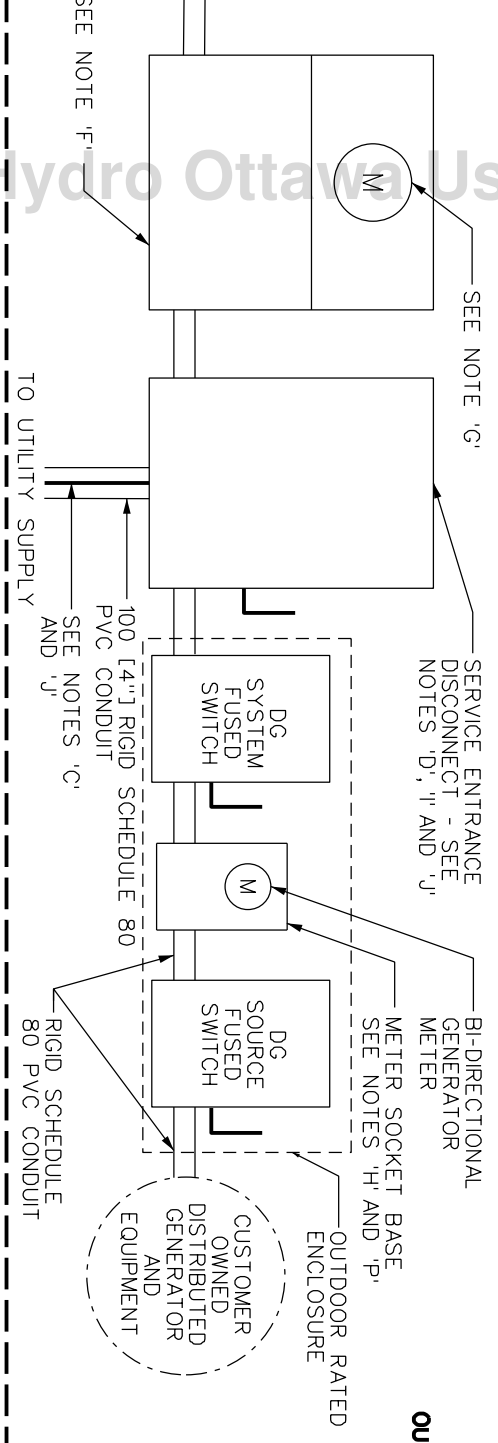
BEFORE: EXISTING RESIDENTIAL SECONDARY UNDERGROUND, 120V/240V, 1-PHASE, 3-WIRE, 400A SERVICE



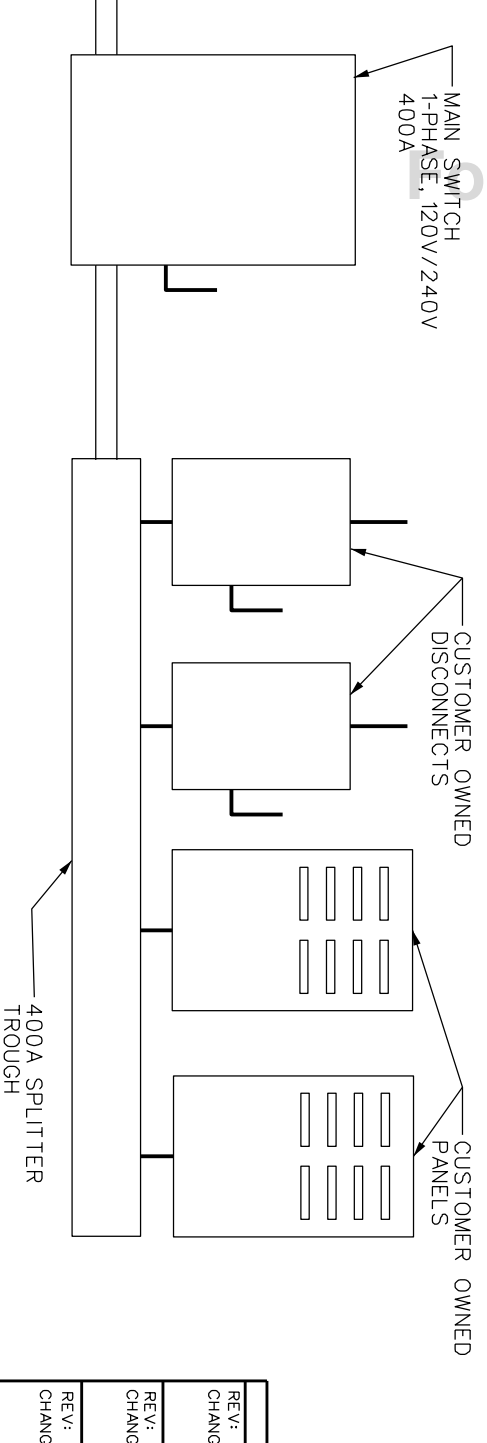
OUTDOOR LOCATION

- NOTES:**
- A. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
 - B. TRANSFORMER RATED METER SOCKET BASE.
 - C. INCOMING 120V/240V, 1-PHASE, 400A SERVICE CONDUCTOR FROM UNDERGROUND DISTRIBUTION SYSTEM SUPPLY POINT.
 - D. SERVICE ENTRANCE DISCONNECT, 1-PHASE, 400A, 3-WIRE, 120V/240V, MIN. NEMA-4/NEMA-4X RATED.
 - E. EXISTING INSTRUMENTATION TRANSFORMER CABINET.
 - F. NEW UNDERGROUND RATED, 1-PHASE, 400A, 120V/240V, COMBINATION SOCKETBASE METERING ENCLOSURE.
 - G. SMART METER 1-PHASE, 2-WIRE, 240V, 20A, TRANSFORMER RATED.
 - H. REFER TO HYDRO OTTAWA METERING SPECIFICATION GCS0008 FOR SPECIFIC REQUIREMENTS FOR INSTALLATION, METER SOCKET ENCLOSURE, AND CONDUIT.
 - I. MINIMUM OF 1000 [3'4"] OF CLEARANCE REQUIRED IN FRONT OF ALL ELECTRICAL AND REVENUE METERING EQUIPMENT IF INSTALLED AT OUTDOOR LOCATION; MINIMUM OF 1500 [5'1"] OF CLEARANCE REQUIRED IF INSTALLED AT INDOOR LOCATION.
 - J. THE PROPOSED INSTALLATION SHALL COMPLY WITH THE ONTARIO ELECTRICAL SAFETY CODE (OESC) AND IS SUBJECT TO THE ELECTRICAL SAFETY AUTHORITY (ESA) INSPECTION AND APPROVAL.
 - K. TO ENERGIZE THE DISTRIBUTED GENERATION (DG) SERVICE, HYDRO OTTAWA REQUIRES:
 - i. NOTIFICATION AND/OR A COPY OF THE ESA 'CONNECTION AUTHORIZATION CERTIFICATE', POSTING OF A LAMACOID PLATED ELECTRICAL SINGLE LINE DIAGRAM (SLD) AT THE FUSED DG SYSTEM DISCONNECT SWITCH. THE SLD MUST BE PLAINLY MARKED IDENTIFYING SWITCHING ARRANGEMENTS, THE DISCONNECT LOCATIONS, AND THE TYPE AND NAME PLATE RATING OF THE DISTRIBUTED GENERATOR.
 - ii. POSTING OF A LAMACOID PLATED LABEL AT THE DG SOURCE DISCONNECT SWITCH INDICATING THE GENERATOR:
 - (a) OPERATING CURRENT AND VOLTAGE.
 - (b) RATED OPEN CIRCUIT VOLTAGE.
 - (c) RATED SHORT CIRCUIT CURRENT. THE RATING IS BASED ON THE GENERATION FACILITY NAMEPLATE RATING; HOWEVER, FOR INVERTER BASED SYSTEMS, INDICATE THE RATING OF THE GENERATION SOURCE ARRAY AND INVERTER.
 - L. THE 'DG SOURCE DISCONNECT' AND 'DG SYSTEM FUSED DISCONNECT' SWITCHES MOUNTED OUTDOORS SHALL BE MIN. NEMA-4/NEMA-4X RATED AND SHALL BE EQUIPPED WITH AT LEAST:
 - i. COVER/DOOR INTERLOCK MECHANISM PREVENTING OPENING OF THE COVER WITH THE DISCONNECT SWITCH IN THE 'ON' POSITION.
 - ii. PAD-LOCKING PROVISION FOR THE SWITCH HANDLE IN THE 'OFF' POSITION.
 - iii. PAD-LOCKING PROVISION FOR THE COVER USEABLE BY HYDRO OTTAWA TO PLACE A TAMPER PREVENTION SEAL.
 - M. REFER TO HYDRO OTTAWA SPECIFICATION MCS0057 FOR WIRING DETAIL.
 - N. HYDRO OTTAWA WILL ACCEPT THE ADDITION OF MULTI-BARREL MECHANICAL LUGS WHERE PRACTICABLE (PREFERRED METHOD) AND POSSIBLE. TERMINATION OF TWO (2) CONDUCTORS IN THE SAME LUG BARREL SHALL NOT BE PERMITTED.
 - O. THE 'SERVICE ENTRANCE DISCONNECT', 'DG SOURCE DISCONNECT' AND 'DG SYSTEM FUSED DISCONNECT' SWITCHES INSTALLED AT THE MINIMUM AND MAXIMUM HEIGHTS:
 - i. MINIMUM- 1200 [4'1"]
 - ii. MAXIMUM- 1800 [6'1"]
 - P. THE MINIMUM AND MAXIMUM METER SOCKET BASE AND METER SOCKET ENCLOSURE HEIGHTS FROM THE CENTER LINE OF THE METER SOCKET BASE TO THE FINISHED GRADE:
 - i. MINIMUM- 1500 [5'1"]
 - ii. MAXIMUM- 1680 [5'6"]

INDOOR LOCATION



AFTER: UPGRADE RESIDENTIAL SECONDARY UNDERGROUND, 120V/240V, 1-PHASE, 3-WIRE, 400A SERVICE AND MICROFIT DG INSTALLATION



INDOOR LOCATION

DEFINITIONS:

"DG SYSTEM FUSED DISCONNECT" MEANS AN ELECTRICAL SAFETY AUTHORITY (ESA) APPROVED DEVICE WITH FACTORY INSTALLED OVER-CURRENT PROTECTION RATED AT EITHER 100% FULL-LOAD AMPS (FLA) OR 80% OF THE AVAILABLE FAULT AMPS OF THE CUSTOMER'S GENERATION OR ENERGY STORAGE EQUIPMENT, WHICHEVER IS GREATER; MOULDED CASE BREAKERS ARE NOT ACCEPTABLE. IT SHALL PROVIDE AN OBVIOUSLY VISIBLE OPEN POINT. THIS DEVICE IS USED TO ISOLATE THE CUSTOMER'S DISTRIBUTED GENERATION (DG) EQUIPMENT, OR ENERGY RESOURCE FACILITY (ERF) EQUIPMENT, FROM THE UTILITY DISTRIBUTION SYSTEM.

"DG SOURCE FUSED DISCONNECT" MEANS AN ELECTRICAL SAFETY AUTHORITY (ESA) APPROVED DEVICE WITH FACTORY INSTALLED OVER-CURRENT PROTECTION RATED AT EITHER 100% FULL-LOAD AMPS (FLA) OR 80% OF THE AVAILABLE FAULT AMPS FROM THE CUSTOMER'S GENERATION OR ENERGY STORAGE EQUIPMENT, WHICHEVER IS GREATER; MOULDED CASE BREAKERS ARE NOT ACCEPTABLE. IT SHALL PROVIDE AN OBVIOUSLY VISIBLE OPEN POINT. THIS DEVICE IS USED TO ISOLATE THE CUSTOMER'S DISTRIBUTION GENERATION (DG) EQUIPMENT, OR ENERGY RESOURCE FACILITY (ERF) EQUIPMENT, FROM THE EQUIPMENT THAT IT SUPPLIES.

REVISIONS		PREP	CHKD	APPD	TITLE
REV:	DATE:	JD	SMC	CSM	
1	2016-02-05				ENGINEERING SPECIFICATION
CHANGE: UPDATE TITLE					
WWW.HYDROOTTAWA.COM					
PREP: G. MOLNAR (E.I.T.)					
CHKD: S. McNALLY (E.I.T.)					
APPD: C. MALONE (P.Eng.)					
DATE: 2014-09-03					
SCALE: N.T.S. @ ANSIB					
NO:					NO:
MCS0078					1
CONSTRUCTION DETAIL					1