

**NOTES:**

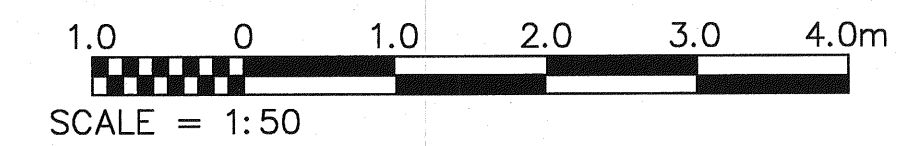
1. FIELD VERIFY LOCATION OF ALL EXISTING GROUND RODS INCLUDING NUMBER & DIRECTION OF GROUND WIRES CONNECTED AND MARK-UP ON AN 'AS-FOUND' GROUNDING LAYOUT DRAWING.
2. MAKE GOOD ANY GROUNDING FOUND BROKEN OR DAMAGED DURING THE WORK.
3. GROUND RODS AND GROUNDING CONDUCTORS UNDER THE NEW SPILL CONTAINMENT AREA AND FOUNDATIONS SHALL REMAIN AND CONDUCTORS SHALL BE DUPLICATED BY CADWELD CONNECTION TO THE LOWEST HORIZONTAL RE-BARS (APPROXIMATELY 500 TO 600mm BELOW GRADE) IN THE NEW CONTAINMENT SLAB, AS INDICATED.
4. BURIED DUCTS SHALL HAVE 900mm BENDS AND BE CONCRETE ENCASED WITH MINIMUM 100mm OF COVER ALL ROUND AND A WARNING TAPE SHALL BE PLACED ABOVE, 300mm BELOW GRADE OR ON FOUNDING MATERIAL WHERE COVERED BY NEW CONTAINMENT SLAB.
5. REMOVE EXISTING DROPS. NEW 138kV DROPS TO SURGE ARRESTERS WITH TAP TO XFMR (3-PLACES) SHALL BE MIN #4/0 ACSR (PENGUIN).
6. CRUSHED ROCK SURFACING SHALL BE MINIMUM 150mm DEEP AND SHALL BE FRACTURED ON AT LEAST TWO FACES, PASS A 35mm SCREEN AND NOT A 20mm SCREEN AND BE CLEAN AND FREE OF ANY VEGETATIVE MATTER. THE SURFACING SHALL COVER THE ENTIRE SUBSTATION SURFACE AND EXTEND TO MINIMUM 1500mm OUTSIDE SUBSTATION FENCING.
7. ROD AND GROUND WIRES CONNECTED TO IT SHALL BE REMOVED (TYP FOR 4). OTHER EXISTING BURIED GROUNDS SHALL REMAIN.
8. DRIVE EXISTING GROUND RODS DEEPER; TO BE BENEATH CONCRETE SLAB (TYP 7 PLACES). TOP OF OTHER RODS SHALL BE 100mm BELOW TOP OF CRUSHED ROCK SURFACE.
9. EXISTING BURIED GROUND CONDUCTORS UNDER CONTAINMENT SLAB PERMITTED TO DROP TO EXTENT OF EXCAVATION. MAKE GOOD ANY DAMAGE.
10. GROUND SURGE ARRESTERS ON T1 (3)
11. TRANSFORMER & SURGE ARRESTER GROUNDS SHALL BE ENCOMPASSED BY CONCRETE FOUNDATION
12. PASS GROUND THROUGH 27 SLEEVE IN CURB WALL 70mm BELOW T.O.C. SEAL BOTH ENDS.

**DEMOLITION/REMOVAL NOTES:**

1. EXISTING 300kVA TRANSFORMER ASSEMBLY SHALL BE REMOVED WITH CARE, FOR LATER RE-USE BY OWNER, AND PLACED ON TEMPORARY STORAGE TIMBERS ON-SITE IN THE LOCATION DESIGNATED BY HATCHERY MANAGER.
2. ALL EXISTING FENCING SHALL BE REMOVED, BE DISPOSED OF, AND REPLACED WITH NEW FENCING.
3. EXISTING 150mm CRUSHED ROCK SURFACING WITHIN AND TO 1.5m OUTSIDE SUBSTATION FENCE, SHALL BE REMOVED AND: EITHER WASHED COMPLETELY CLEAN OF ALL SOIL AND VEGETATIVE MATTER AND THEN USED TO SUPPLEMENT THE NEW CRUSHED ROCK SURFACING OR REPLACED WITH NEW CRUSHED STONE.

**LEGEND**

- TO BE REMOVED
- EXISTING GROUND CONDUCTOR
- NEW GROUND CONDUCTOR
- COMPRESSION CONNECTION
- CONNECTION TO REBAR
- EXISTING GROUND ROD (3m)
- NEW GROUND ROD (\* = 3m / \*\* = 6m)
- FENCING



**PRELIMINARY**

**ISSUED FOR TENDER ONLY**

ENGINEERING CONSULTANT

**Ausenco**

PROJECT / DRAWING NO: 101101-02-0000-S-101

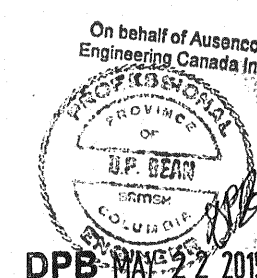
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**FISHERIES AND OCEANS CANADA**  
REAL PROPERTY AND TECHNICAL SUPPORT

**CONUMA RIVER HATCHERY**  
CONTRACT NO. F1700-150694  
**138 kV SUBSTATION UPGRADE**  
**ELECTRICAL LAYOUT-PLAN**  
**AND GROUNDING-PLAN**

SCALE	AS SHOWN
DATE	APRIL 2015
DRAWING NUMBER	32-18-289
REVISION	0



DWG. NO.	32-18-91
DRAWING REFERENCES	LAYOUT AND GROUNDING

NOTES	
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DESIGNED	MHM
DRAWN	JM
CHECKED	DFB
RECOMMENDED	
APPROVED	JL
APPROVED	

NO.	0	DATE	MAY 25/2015	ISSUED FOR TENDER
REVISIONS				