

#### NOTES:

- CHAIN LINK ENCLOSURE FOR ELECTRICAL EQUIPMENT SHALL CONFORM TO CEC AND LOCAL ELECTRICAL CODE REQUIREMENTS.
- FENCE ENCLOSURES SHALL BE BONDED TO STATION BURIED GROUND GRID ELECTRODES.

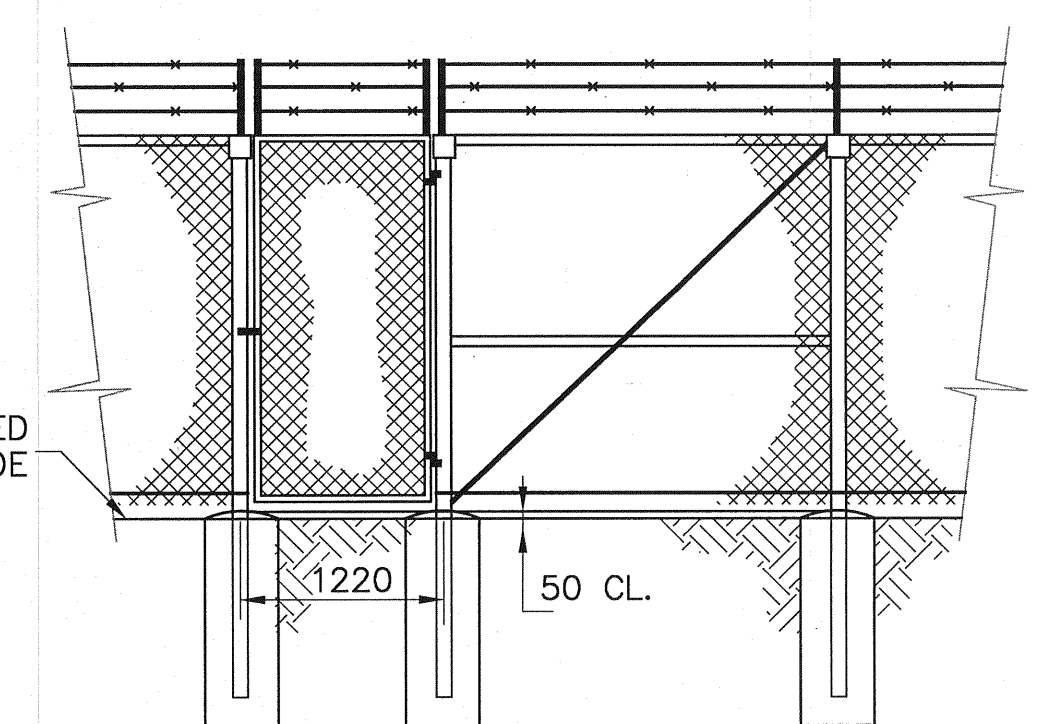
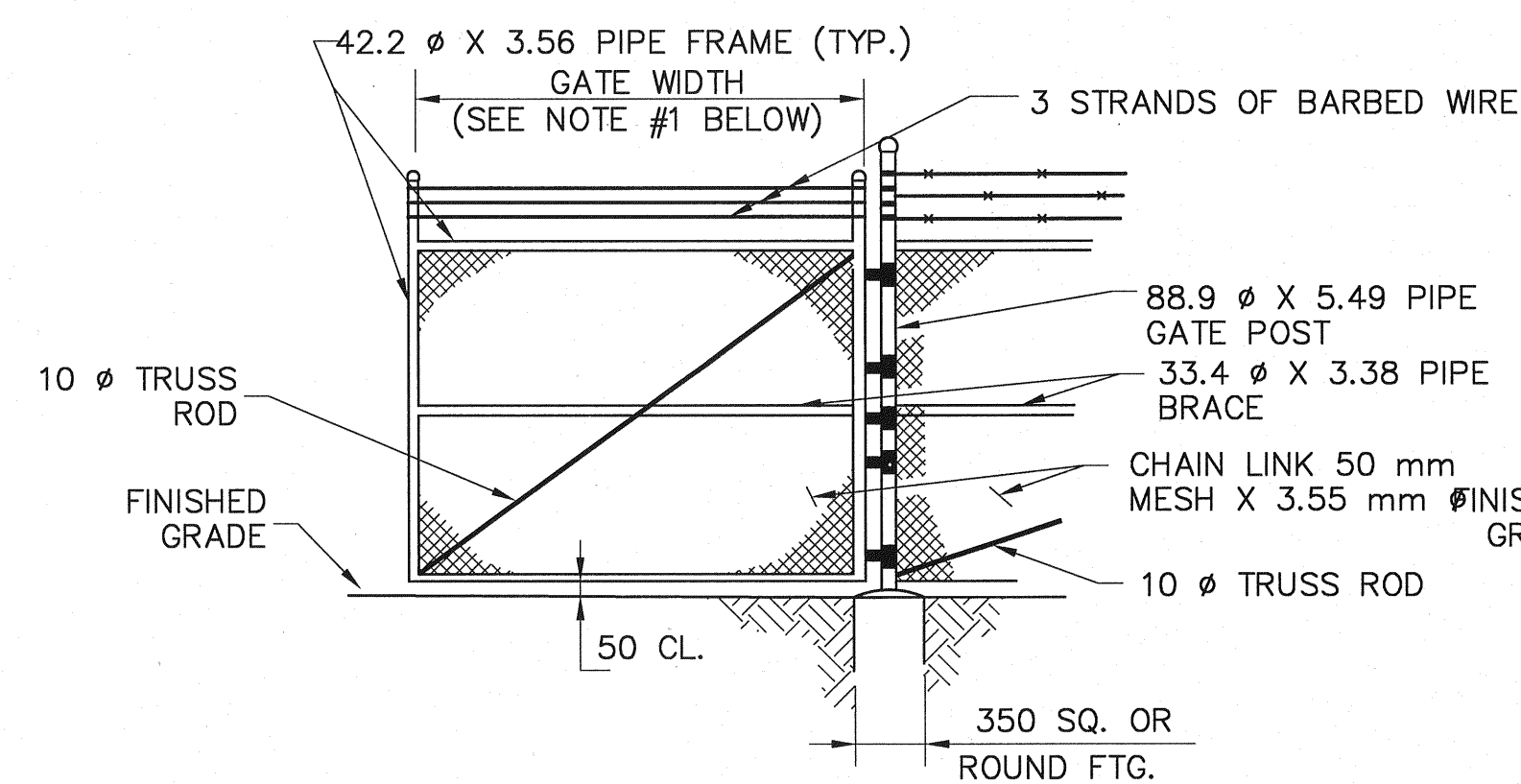
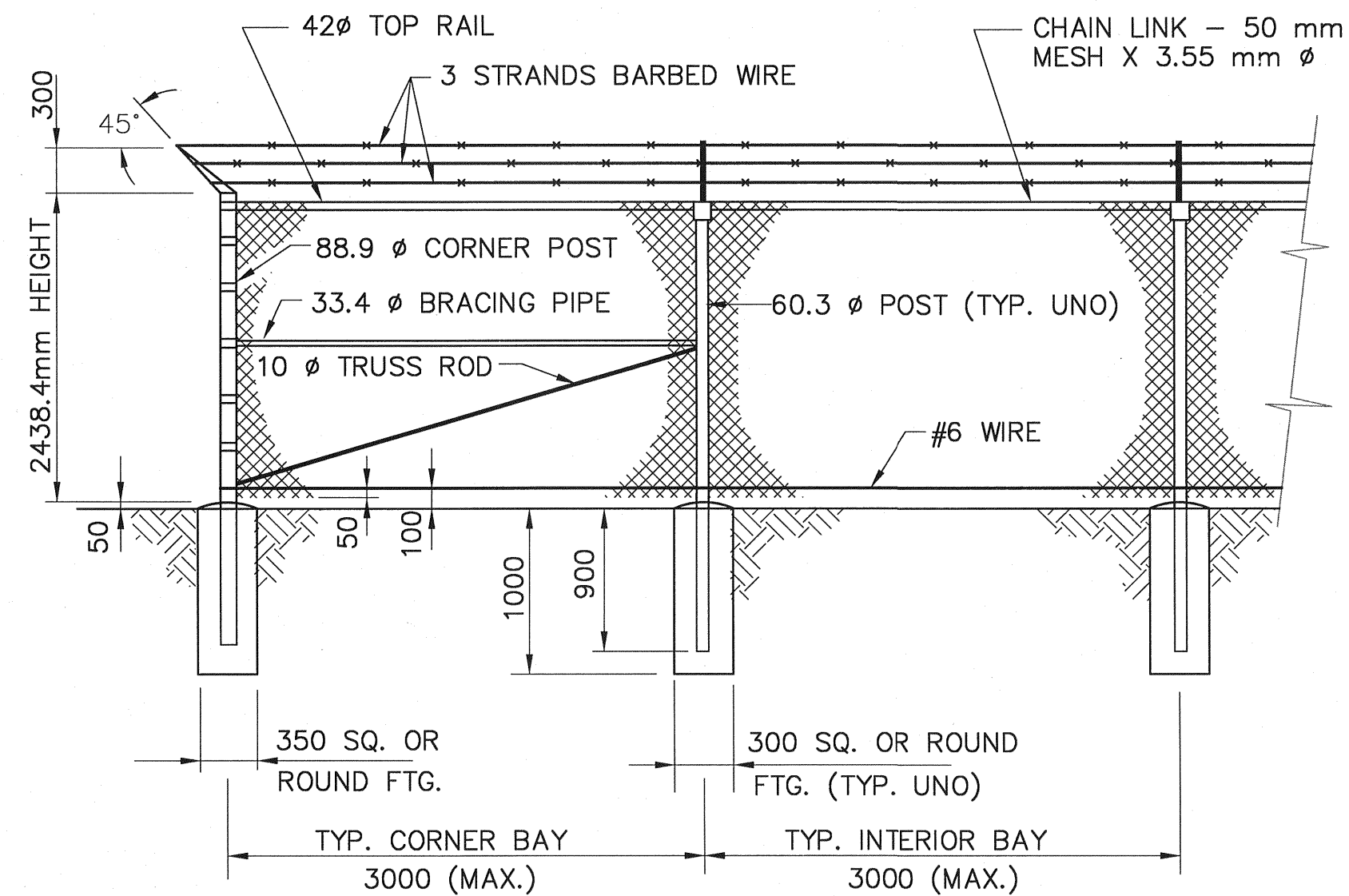
AUSENCO STANDARD 048-5406

ITEM NUMBERS UP TO 36 AS FOUND ON 1979 DRAWING 32-18-92

BILL OF MATERIALS (SEE SECTION A)		
ITEM	QTY	DESCRIPTION
9	EXISTING	138kV 600A, 3 POLE CENTER BREAK GROUP OPERATED SWITCH, C/W MULTI-REV. GROUND DEVICE AND INTERLOCK ADAPTOR, AND INSULATORS
14	EXISTING	138 kV FUSE MOUNTS AND HOLDERS. S&C SMD 2B
15	3	138 kV 25 AMP E-SPEED FUSE REFILLS (WAS 3E)
26	1	TRANSFORMER, 4 MVA, 3 PHASE, 138 KV-25 KV (OWNER SUPPLIED ONLY)
34	AS REQ'D	FENCE (REPLACE)
35	1	GRADIENT CONTROL MAT (REPLACE)
37	3	CONNECTOR, TERMINAL, 4/0 ACSR, 2 HOLE NEMA PAD TERMINAL, BOLTED CONNECTION, ALUMINUM, RIV 138 kV
38	AS REQ'D	4/0 ACSR, STR, COPPER, BARE
39	3	CONNECTOR, COMPRESSION, 4/0 ACSR, TAP, 4/0 ACSR
40	6	CONNECTOR, TERMINAL, 4/0 ACSR 4 HOLE NEMA PAD TERMINAL, BOLTED CONNECTION, ALUMINUM, RIV 138 kV

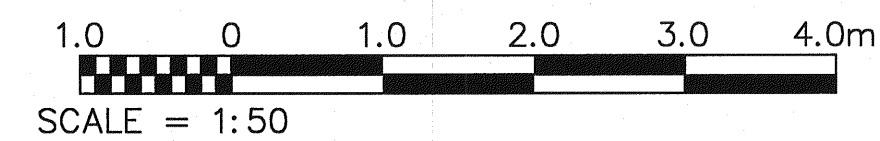
#### ELECTRICAL NOTES:

- AFTER PLACING, ASSEMBLE TRANSFORMER COMPONENTS: HV BUSHINGS, SURGE ARRESTERS INCL GROUNDING CONDUCTORS TO GROUND GRID, RADIATOR, ETC.
- CONNECT THREE SURGE ARRESTERS TO GROUND WITH MINIMUM 4/0 AWG BARE STRANDED COPPER AT EACH END
- PERFORM RECOMMENDED MAINTENANCE ON ITEM 9 ASSEMBLY (INSTALLED CIRCA 1980).
- CONTRACTOR SHALL SUPPLY NUTS, CAPSCREWS, FLAT AND SPRING WASHERS FOR TERMINAL CONNECTORS



#### FENCING NOTES:

- GATE WIDTH FOR: DOUBLE SWING = 3048mm EACH GATE  
SINGLE SWING = 3657.6mm  
PERSONNEL GATE = 1000mm NOM
- MATERIALS: CONCRETE - 30MPa  
PIPES FOR POSTS, RAILS, & BRACING - ASTM A53 GR B  
FABRIC - 50mm MESH
- FINISHES: USE HOT DIP GALVANIZED PIPES & FITTINGS  
USE GALVANIZED WIRE AND FABRIC
- PROVIDE PERSONNEL GATES WITH HINGES, LATCHES, LATCH CATCHES, CHAIN HOOKS, CENTER RESTS, DROP BOLTS, AND SOCKETS EMBEDDED IN CONCRETE INTO WHICH DROP BOLTS CAN SECURELY PENETRATE.
- PROVIDE SINGLE, HARDENED ALLOY STEEL CHAIN (MIN. 8mm (5/16") THICK) AND SINGLE WEATHERPROOF PADLOCK (MASTER LOCK HEAVY DUTY WEATHERPROOF, MODEL #911DPF, OR APPROVED EQUIVALENT).
- PROVIDE BRACKETS AND BARBED WIRE OVERHANGS FOR ENTIRE LENGTH OF FENCE, INCLUDING GATES. SLOPE OVERHANG OUTWARDS.
- GRIND ALL WELDS SMOOTH AND TOUCH UP WITH 2 COATS OF ZINC COATING AFTER FABRICATION.
- USE HIGHER STANDARDS OF MATERIALS AND CONSTRUCTION IF REQUIRED BY LOCAL CODES AND STANDARDS HAVING JURISDICTION.
- SEE GATE DETAILS. PERSONNEL GATE IN FENCE SIMILAR.
- CONFER WITH OWNER'S REPRESENTATIVE IF THERE IS ANY CONFLICT WITH THE NOTES AND DETAILS SHOWN HERE.



**PRELIMINARY**

**ISSUED FOR TENDER ONLY**

ENGINEERING CONSULTANT

**Ausenco**

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

DRAWING IMPORTED FROM DWG 32-18-276 Rev. 0 AND REVISED BY AUSENCO (PROJECT 101101-02) FOR ELECTRICAL PROJECT UPGRADE WITH FOC PERMISSION. AUSENCO IS RESPONSIBLE ONLY FOR ITS REVISIONS: 0



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

**CONUMA RIVER HATCHERY**  
**CONTRACT NO. F1700-150694**  
**138 kV SUBSTATION UPGRADE**  
**SUBSTATION SECTIONS, DETAILS**  
**AND FENCING**

SCALE  
AS SHOWN  
DATE  
MAY 2015  
DRAWING NUMBER  
**32-18-290**  
REVISION  
**0**

Revised By: [Redacted] Date: 2015-05-22 10:45:15 AM Project: 101101-02-0000-S-101 Drawing: 32-18-290 Title: 138 kV SUBSTATION UPGRADE

DWG. NO. 32-18-92

DRAWING REFERENCES  
138 kV SUBSTATION SECTIONS

NOTES

DESIGNED  
MHM  
DRAWN  
JM  
CHECKED  
DFB  
RECOMMENDED  
APPROVED  
JL  
APPROVED

0 MAY 25/2015 ISSUED FOR TENDER

NO. DATE REVISIONS

DPB MAY 22 2015