

ATCO Electric Ltd.
APEGGA Permit to Practice
P00850

Jan 14, 2008

Authenticating Engineer's Stamp



O/H CONDUCTOR DATA					
COND.	PHASE TO GRD.	No.	MATERIAL	MAX. TEN.	U.T.S.

CONSTRUCTION, MAINTENANCE AND OPERATION OF THE LINE SHALL BE IN ACCORDANCE WITH TRANSPORT CANADA GENERAL ORDERS No. E-11 AND E-12 AND CSA STANDARDS CAN/CSA C22.3 No. 1-06 AND CAN 3-C22.3 No. 7-06 AS APPLICABLE.

U/G CONDUCTOR DATA (C#)						
COND.	PHASE TO GRD.	No.	MATERIAL	SIZE (DIAMETER)	WEIGHT	METHOD OF INSTALLATION
C1	14.4kV	3	25kV 100% CONCENTRIC NEUTRAL U/G #1 ALUMINUM	OUTER JACKET OVER DIAMETER 30.5mm +/- 1.5mm	0.973 kg/m	PULL CABLE THROUGH 100mm PVC PIPE IN 250mm STEEL CASING
C2	120V	1	600V JKTD U/G 2C #2 ALUMINUM 100% CONCENTRIC NEUTRAL	OVAL SHAPED 16.51mmX25.91mm	0.540 kg/m	PULL CABLE THROUGH 50mm PVC PIPE IN 250mm STEEL CASING

POLE DATA (P#)						
No.	LENGTH	MIN. CLASS	MATERIAL	SET	TREATED	ELEV.

PLAN SHOWING U/G POWER LINE CROSSING WITHIN CANADIAN NATIONAL RAILWAY R/W LOCATED NEAR CLAIRMONT, ALBERTA UNDERGROUND CONDUIT = 405.64m SOUTH OF MILE MARKER 39 ON PLAN 3285 BU within NE11 - TWP 73 - RG6 - W6M

CONDUIT DATA (D#)					
No.	SIZE O.D.	MATERIAL	LENGTH OF CONDUIT	DEPTH OF BURIAL BELOW TRACKS	METHOD OF INSTALLATION
D1	100mm	PVC	31.0m	3.2m COVER AT C/L TRACKS	PULL CONDUIT IN 250mm STEEL CASING.
D2	50mm	PVC	31.0m	3.2m COVER AT C/L TRACKS	PULL CONDUIT IN 250mm STEEL CASING.
D3	250mm	SCHEDULE 40 STEEL 3/8" WT	31.0m	3.2m COVER AT C/L TRACKS	CASE BORING TO GRADE. AUGER TO REMOVE SPOIL MATERIAL.

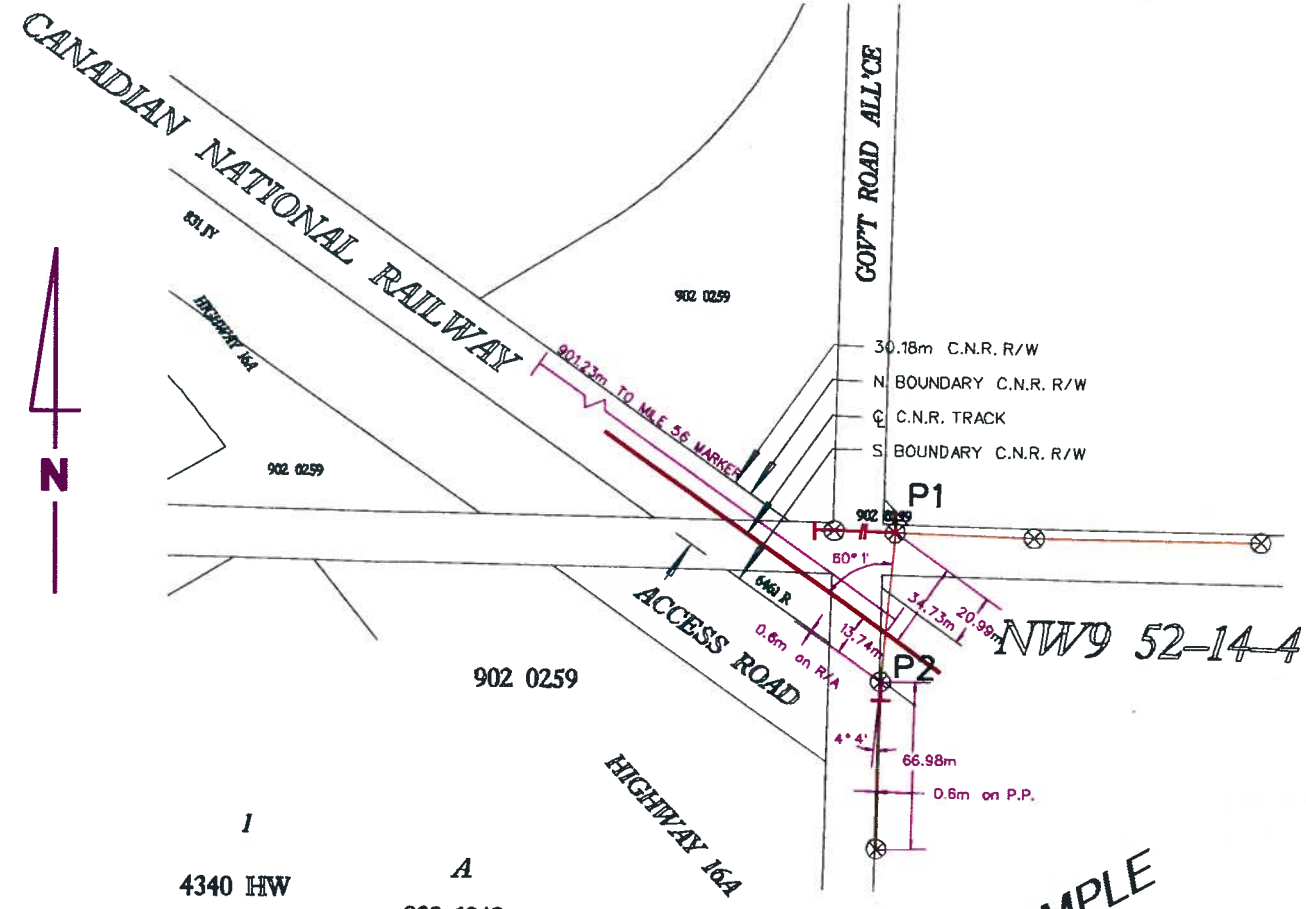
GUY DATA (G#)					
No.	SIZE	GRADE	TYPE	BR'K. STR.	STR. TYPE

DRAWN BY: DNN drafting
DATE: December 11th, 2008
CHECKED BY: J. MOIR
REVISD:
APPROVED: *Payan Chud*
P. ANDERSON, P. Eng.

PROJECT No.: D28335
W.C. No. 7027
1 OF 1

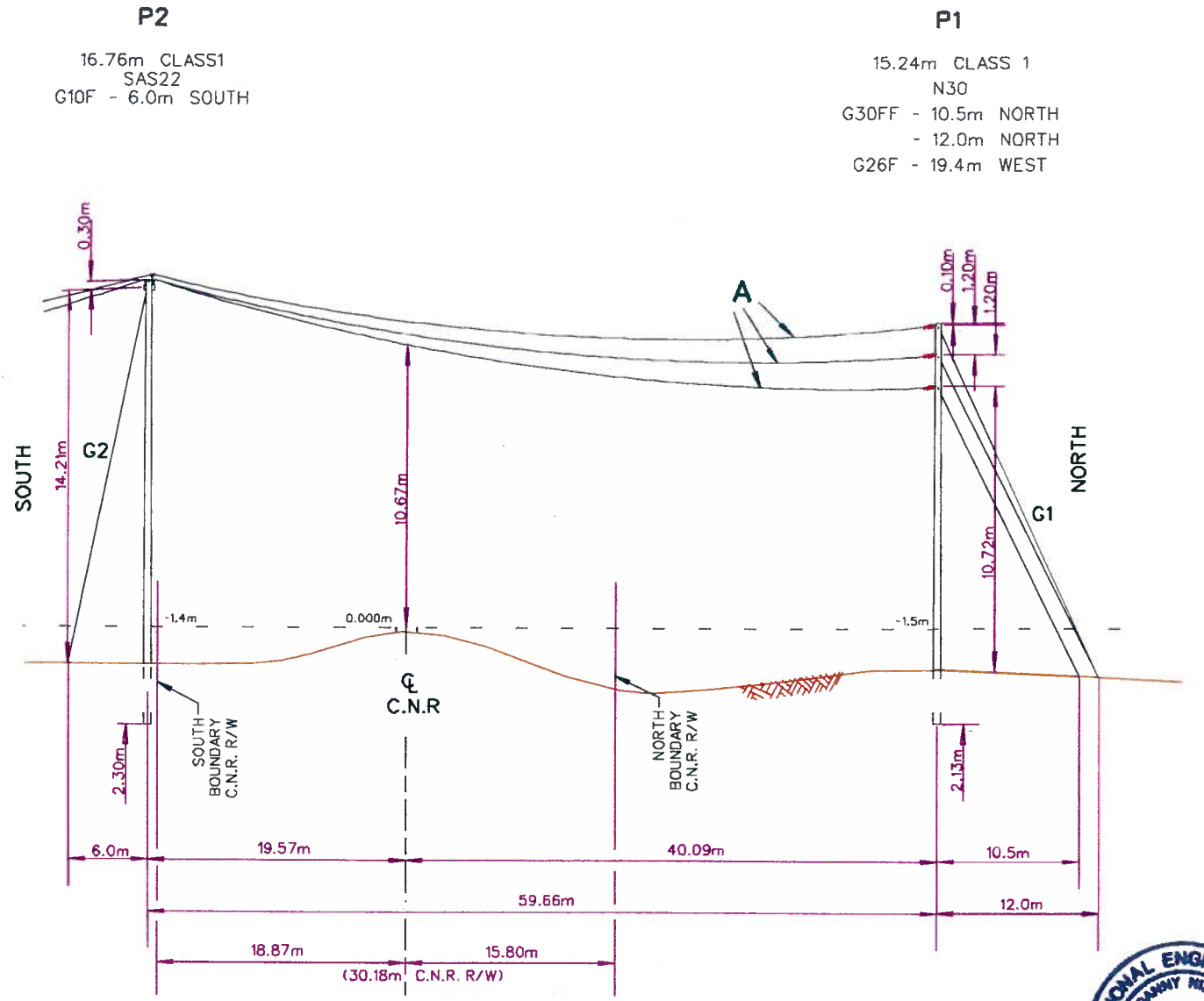
CLEARANCE	

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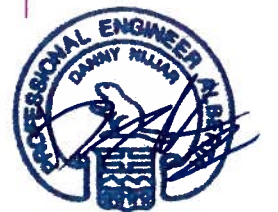


PLAN VIEW
SCALE - 1:3000

SAMPLE
OVERHEAD
ELECTRICAL CROSSING



CROSSING PROFILE
SCALE - HORIZONTAL = 1:500
SCALE - VERTICAL = 1:250



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CONDUCTOR DATA

COND./VOLT	No.	SIZE & MATERIAL	MAX. TEN.	U.T.S.
A - 24.9kV	3	2/0 ACSR 6/1 STD.	11 900 N	23 800 N

POLE DATA

No.	LENGTH	CLASS	MATERIAL	SET	TREATED
P1	15.24m	1	LOGEPOLE PINE	2.13m	FULL LENGTH
P2	16.76m	1	LOGEPOLE PINE	2.30m	FULL LENGTH

APPROVED AND ACCEPTED SUBJECT TO THE TERMS AND CONDITIONS CONTAINED IN THE MAIN AGREEMENT No. _____ DATED _____ BETWEEN CANADIAN NATIONAL RAILWAY AND ATCO Electric No. CHARGABLE POLES _____, ANCHORS _____ DATE _____ TOTAL PAYMENT _____

ACCEPTED: _____
ATCO Electric

APPROVED: _____
RAILWAY

GUY DATA

No.	SIZE	GRADE	TYPE	BR'K. STR.	STR.
G1	5/16"	180	CRUCIBLE	148 000 N	G30F
G2	5/16"	180	CRUCIBLE	49 600 N	G10F

CLEARANCE

	P2	MAIN TRACK	P1
MIN. OVER MAINLINE		10.67m	
LEVELS	-1.4m	0.000m	-1.5m

TENSION AND CLEARANCE MINIMUM OVER TRACK CALCULATED @ -20°C WITH 18mm RADIAL ICE LOAD AND 400pa OF WIND = 10.67m

SE REGION
DISTRICT : LLOYDMINSTER
VEGREVILLE SERVICE AREA



POWERLINE CROSSING
OVER CANADIAN NATIONAL RAILWAY
AT MILE 55.44 VEGREVILLE SUBDIVISION
1.3km EAST OF VEGREVILLE
N.W.1/4-SEC. 9, TWP. 52, RG. 14, W4M.

DRAWN BY: STEPHEN CHRISTIAN
DATE: MAY 1, 2009
Project No. D28128
CHECKED BY: SP
APPROVED: _____
Danny Nijjar, P. ENG.
ATCO Electric

W.C.
871