

SEE SHEET 2 FOR INDEX OF SHEETS
AND LIST OF STANDARDS.

STATE OF VERMONT AGENCY OF TRANSPORTATION



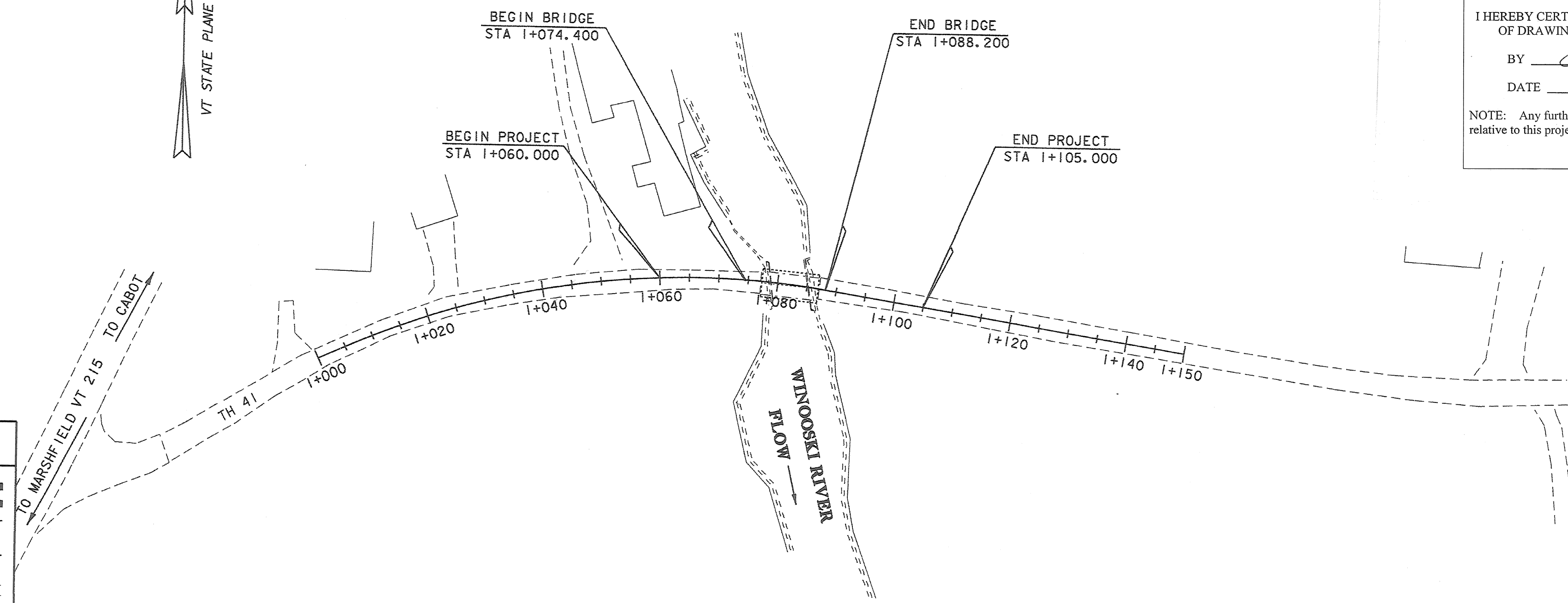
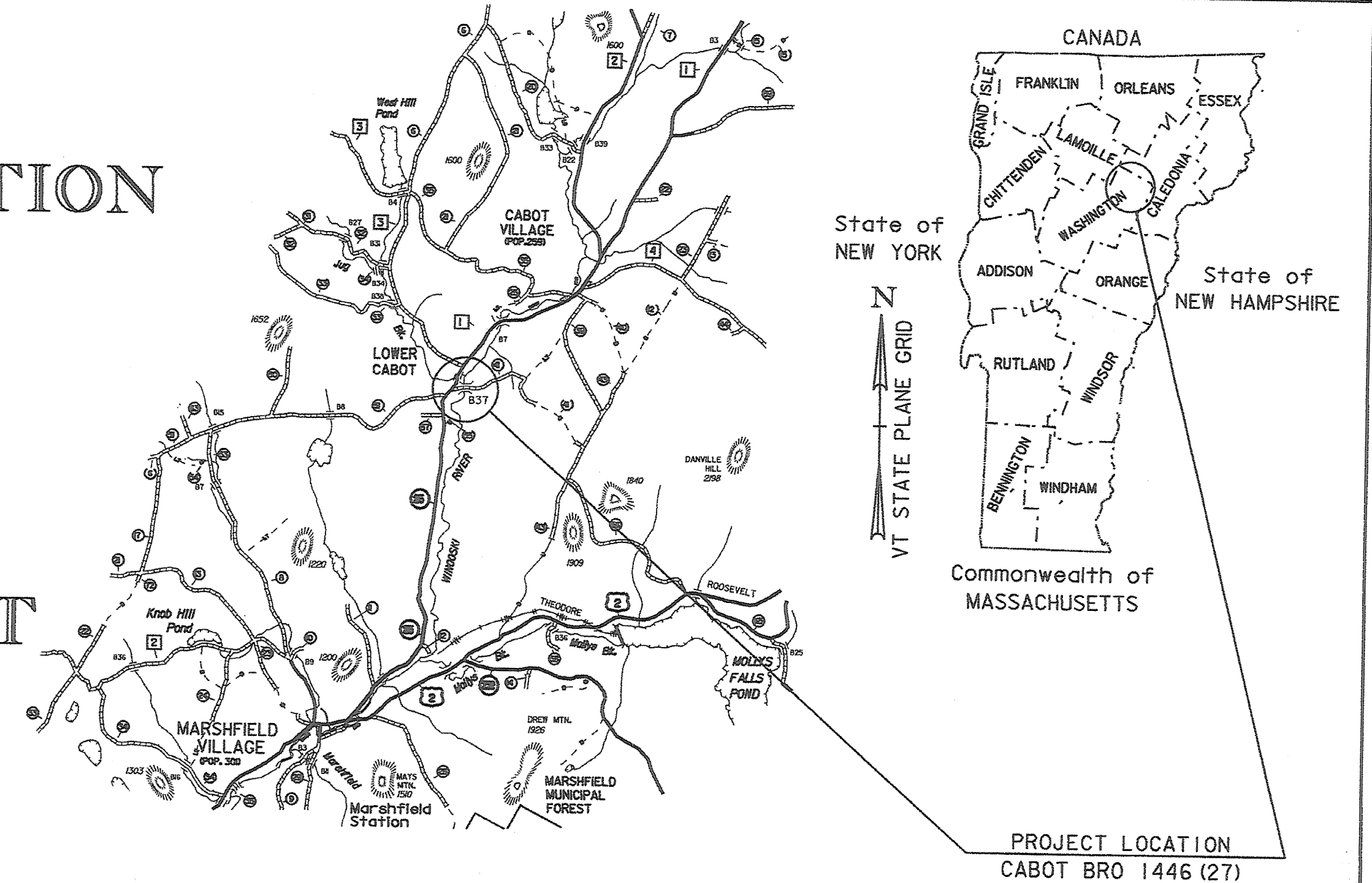
PROPOSED IMPROVEMENT BRIDGE PROJECT

TOWN OF CABOT
COUNTY OF WASHINGTON

ROUTE NO : TH 41, CL 3 BRIDGE NO : 37
PROJECT LOCATION : BEGINNING AT A POINT 0.105 KM EAST OF THE
JUNCTION OF VT 215 AND TH 41 AND EXTENDING
EASTERLY ALONG TH 41 FOR 50 METERS.

PROJECT DESCRIPTION : REPLACEMENT OF BRIDGE NO. 37 ALONG WITH
RELATED CHANNEL AND APPROACH WORK.

LENGTH OF STRUCTURE : 13.800 METERS
LENGTH OF ROADWAY : 31.200 METERS
LENGTH OF PROJECT : 45.000 METERS

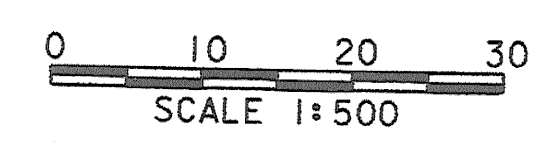


RECORD PLANS	
CONTRACTOR:	TREMBLAY CONSTRUCTION, LLC - WASHINGTON, VT
RESIDENT ENGINEER:	CHRIS CRAIG
CONSTRUCTION BEGAN:	5-12-08
CONSTRUCTION COMPLETE:	9-30-08
RECORD PLANS BY:	CHRIS CRAIG & C. PIERCE
I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.	
BY:	<i>Christopher Craig</i> RESIDENT ENGINEER
DATE:	9-30-09
NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.	

CONVENTIONAL SYMBOLS	
COUNTY LINE	
TOWN LINE	
LIMITS OF ACCESS	
POINT OF ACCESS	
FENCE LINE	
STONE WALL	
TRAVELED WAY	
GUARD RAIL	
RAILROAD	
SURVEY LINE	
CULVERT	
POWER POLE	
TELEPHONE POLE	
TREES	
CONTROL OF ACCESS	
PROPERTY LINE	
R.O.W. TAKING LINE	
SLOPE RIGHTS	
TOP OF CUT	
TOE OF SLOPE	

SURVEYED BY : R. GILMAN
SURVEYED DATE : 5/98

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)



THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

Metric
UNLESS NOTED OTHERWISE
STATIONS ARE IN KILOMETERS
ELEVATIONS ARE IN METERS
DIMENSIONS ARE IN MILLIMETERS

DIRECTOR OF PROGRAM DEVELOPMENT	
APPROVED <i>Paul Johnson</i>	DATE 12-7-07
PROJECT MANAGER : C. P. WILLIAMS	
PROJECT NAME : CABOT	
PROJECT NUMBER : BRO 1446 (27)	
SHEET 1 OF 42 SHEETS	

PRELIMINARY INFORMATION SHEET



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19. MISCELLANEOUS DETAILS
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| E-100 | 01/02/04 |
| E-100A | 01/02/04 |
| E-101 | 05/30/03 |
| E-102 | 06/30/03 |
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| E-153 | 05/01/04 |
| E-160 | 05/20/99 |
| G-1 | 01/03/00 |
| G-1D | 01/03/00 |
| G-18 | 06/01/84 |
| G-19 | 11/15/02 |
| SB-R6-82M | 07/10/97 |

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA Date: December 1999

DRAINAGE AREA: 59 sq km

CHARACTER OF TERRAIN: Rolling, rural, forested basin

STREAM CHARACTERISTICS: Stable, straight reach, probably incised

NATURE OF STREAMBED: Cobbles and Boulders

PEAK FLOW DATA

Q 2.33 =	25 cms	Q 50 =	82 cms
Q 10 =	50 cms	Q 100 =	110 cms
Q 25 =	67 cms	Q 500 =	142 cms

DATE OF FLOOD RECORD: Unknown

ESTIMATED DISCHARGE: Unknown

WATER SURFACE ELEV.: Unknown

NATURAL STREAM VELOCITY: @ Q25 = 2.9 m/sec

ICE CONDITIONS: Low - there is a falls at a dam 75m upstream

DEBRIS: Low Potential

DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? Yes

IS ORDINARY RISE RAPID? Yes

IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? Yes

IF YES, DESCRIBE: There is a dam located +/- 75m Upstream

WATERSHED STORAGE: 2% HEADWATERS:

UNIFORM: X

IMMEDIATELY ABOVE SITE:

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Single span steel I beam w/ wooden deck

YEAR BUILT: 1930

CLEAR SPAN(NORMAL TO STREAM): 8m

VERTICAL CLEARANCE ABOVE STREAMBED: 3.2m

WATERWAY OF FULL OPENING: 25.2 sq m

DISPOSITION OF STRUCTURE: Remove

TYPE OF MATERIAL UNDER SUBSTRUCTURE: Unknown

WATER SURFACE ELEVATIONS AT:

Q2.33 =	278.6m	VELOCITY =	2.9 m/sec
Q10 =	279.5m	"	4.0 m/sec
Q25 =	280.0m	"	4.4 m/sec
Q50 =	280.6m	"	2.9 m/sec
Q100 =	280.9m	"	3.3 m/sec

LONG TERM STREAMBED CHANGES: Stable channel

IS THE ROADWAY OVERTOPPED BELOW Q100: yes

FREQUENCY: Approximately the Q 30

RELIEF ELEVATION: 280.4 m

DISCHARGE OVER ROAD @Q100: 28cms

UPSTREAM STRUCTURE

TOWN: Cabot DISTANCE: 1.2km

HIGHWAY #: TH 1 STRUCTURE #: BR 7 (FAS-249)

CLEAR SPAN: 33' CLEAR HEIGHT: Unknown

YEAR BUILT: 1942 FULL WATERWAY: Unknown

STRUCTURE TYPE: Concrete T - Beam

DOWNSTREAM STRUCTURE

TOWN: Marshfield DISTANCE: 4.7km

HIGHWAY #: US 2 STRUCTURE #: BR 81

CLEAR SPAN: 13.7m CLEAR HEIGHT: 4m

YEAR BUILT: 1927 FULL WATERWAY: Unknown

STRUCTURE TYPE: Concrete T Beam

LFD LOAD RATING (METRIC TONS)

LOADING LEVELS	TRUCK						
	M	MS	3S2	6 AXLE	3A. STR.	4A. STR.	SA. SEMI
INVENTORY	35	47					
POSTED	49	66	92		54	57	82
OPERATING		79	110	106	65	68	

COMMENTS: $RF = \phi M_N - 1.3 M_{DL} / A \times M_{LL+1}$

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2003	60	10	---	<1	5
2023	60	10	---	<1	5

20 year ESAL for flexible pavement from 2003 to 2023 : <50000

20 year ESAL for flexible pavement from 2003 to 2043 : 92000

Design Speed : 30 km/h

PROPOSED STRUCTURE

STRUCTURE TYPE: Single Span Concrete Slab

CLEAR SPAN(NORMAL TO STREAM): 12m

VERTICAL CLEARANCE ABOVE STREAMBED: 3.2m

WATERWAY OF FULL OPENING: 36 sq m

WATER SURFACE ELEVATIONS AT:

Q2.33 =	278.2m	VELOCITY=	2.5 m/sec
Q10 =	278.7m	"	2.7 m/sec
Q25 =	279.0m	"	3.1 m/sec
Q50 =	279.4m	"	3.5 m/sec
Q100 =	279.9m	"	4.2 m/sec

IS THE ROADWAY OVERTOPPED BELOW Q100: No

FREQUENCY: > Q100

RELIEF ELEVATION: 280.4

DISCHARGE OVER ROAD @Q100: 0.0

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 279.9m

VERTICAL CLEARANCE: @ Q25 = 0.9m

SCOUR: 0.5m Contraction scour @ Q 100 through Q 500

REQUIRED CHANNEL PROTECTION: Stone Fill, Type III

PERMIT INFORMATION

AVERAGE DAILY FLOW: 1.3cms DEPTH OR ELEVATION:

ORDINARY LOW WATER: 0.6cms 0.1m

ORDINARY HIGH WATER: 10.7cms 0.7m

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: Single Span Bridge to be removed before winter

CLEAR SPAN (NORMAL TO STREAM): 8m

VERTICAL CLEARANCE ABOVE STREAMBED: 2m

WATERWAY AREA OF FULL OPENING: 16 sq m

ADDITIONAL INFORMATION

The Streambed elevation at the Approach Section is 277.4 m

The Streambed Elevation at the Bridge Section is 276.7 m

Water Surface Elevations are listed at a Location +/- 12 m upstream of the upstream bridge face

Velocities are Listed in the Area of the Bridge and Roadway

- DESIGN CRITERIA**
- DESIGN LIVE LOAD AASHTO MS-22.5
 - DESIGN SPAN 12.500m
 - ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL N/A
 - ALLOWABLE LOAD FOR PILING N/A
 - ESTIMATED LENGTH N/A
 - STRUCTURAL STEEL AASHTO GRADE N/A
 - REINFORCING STEEL GRADE 420
 - CONCRETE CLASS A(HPC-A) f'c : 30 Mpa
 - CONCRETE CLASS B(HPC-A) f'c : 25 Mpa
 - SOIL UNIT WEIGHT 22.00 kn/m3
 - DESIGN LOAD FOR SPREAD FOOTINGS ON SOIL N/A

TRAFFIC MAINTENANCE

1. IS TRAFFIC TO BE MAINTAINED? YES

IF YES, ON EXISTING STRUCTURE NO

OR ON TEMPORARY BRIDGE YES

2. TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY ONE WAY

TRAFFIC CONTROL SIGNALS REQUIRED NO

MINIMUM CLEAR SPAN (NORMAL TO STREAM): 8m

WATERWAY OF FULL OPENING: 16 sq. m

VERTICAL CLEARANCE ABOVE STREAMBED: 2m

ARE SIDEWALKS REQUIRED? No

IF SO, ON WHAT SIDE?

STRUCTURE TYPE:

PROJECT NAME: CABOT

PROJECT NUMBER: BRO 1446(27)

FILE NAME: 96j270pi.xls PLOT DATE: 9/13/2007

PROJECT LEADER: C.P. WILLIAMS DRAWN BY: D.G. BASSETT

DESIGNED BY: K.M. HIGGINS CHECKED BY: K.M. HIGGINS

PRELIMINARY INFORMATION SHEET SHEET 2 OF 42

QUANTITY SHEET



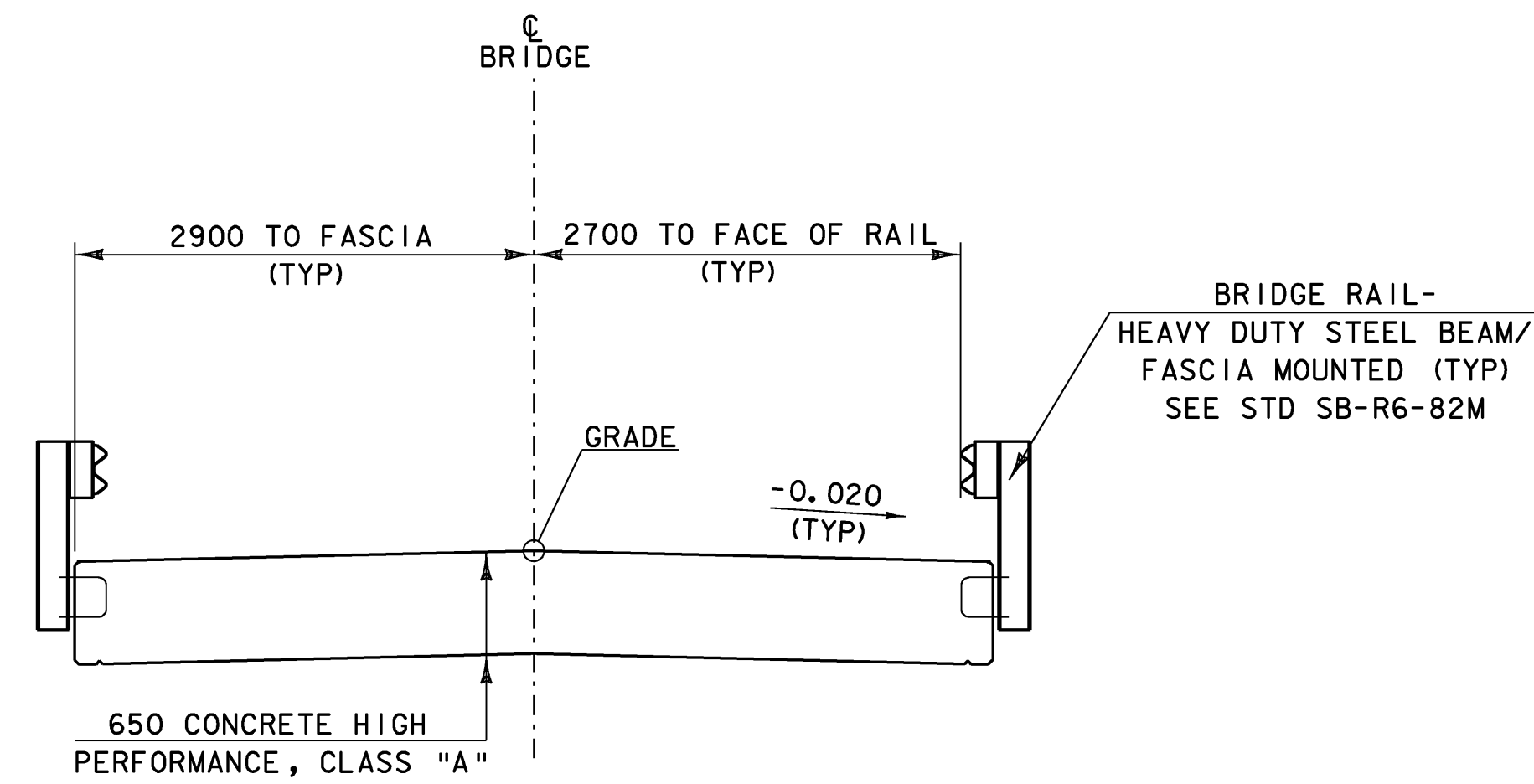
SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ABUT#1	ABUT#2	CHANNEL	SLAB			ROADWAY	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
						1				1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10				
						330				330		CM	COMMON EXCAVATION	203.15		100	CM	PLANMETERED FILL
		240						240		240		CM	UNCLASSIFIED CHANNEL EXCAVATION	203.27		52	CM	ROCK EXCAVATION (1.3 FACTOR)
						10				10		CM	SAND BORROW	203.31		48	CM	NET PLANMETERED FILL
50	50							100		100		CM	GRANULAR BACKFILL FOR STRUCTURES	204.30		55.2	CM	FACTORED FILL (1.15 NET PLANMETERED FILL)
340	320							660		660		CM	COFFERDAM EXCAVATION, EARTH	208.30		330	CM	COMMON EXCAVATION (1.0 FACTOR)
10	30							40		40		CM	COFFERDAM EXCAVATION, ROCK	208.35		72	CM	CHANNEL EXCAVATION (0.3 FACTOR)
1								1		1		LS	COFFERDAM (STA. 1+074.400)	208.40		198	CM	COFFERDAM EXCAVATION, EARTH (0.3 FACTOR)
	1							1		1		LS	COFFERDAM (STA. 1+088.200)	208.40		600	CM	TOTAL MATERIAL AVAILABLE FOR FILL
						280	10			290		CM	SUBBASE OF CRUSHED GRAVEL, COARSE GRADED	301.25		544.8	CM	TOTAL WASTE
						80				80		CM	AGGREGATE SURFACE COURSE	401.10				
			55					55		55		CM	CONCRETE, HIGH PERFORMANCE CLASS A (FPQ)	501.33				
60	62							122		122		CM	CONCRETE, HIGH PERFORMANCE CLASS B	501.34				
4580	4680							9260		9260		KG	REINFORCING STEEL	507.15				
21	16							37		37		M	DRILLING AND GROUTING DOWELS	507.16				
55	55		4950					5060		5060		KG	EPOXY COATED REINFORCING STEEL	507.17				
25	26		35					86		86		L	WATER REPELLENT, SILANE	514.10				
			30.5					30.5		30.5		M	BRIDGE RAILING, GALVANIZED HD STEEL BEAM/FASCIA MOUNTED (FPQ)	525.41				
						1				1		LS	ONE-WAY TEMPORARY BRIDGE (35.2 SM - EST.)	528.10				
			1					1		1		EACH	REMOVAL OF STRUCTURE (46 SM - EST.)	529.15				
26								26		26		CM	CONCRETE, CLASS C	541.30				
						2				2		EACH	CHANGING ELEVATION OF SEWER MANHOLES	604.42				
						10	10			20		HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25				
						1				1		T	DUST AND ICE CONTROL WITH CALCIUM CHLORIDE	609.15				
							10			10		CM	STONE FILL, TYPE I	613.10				
		180						180		180		CM	STONE FILL, TYPE III	613.12				
						43				43		M	HD STEEL BEAM GUARDRAIL, GALVANIZED	621.21				
						4				4		EACH	ANCHOR FOR STEEL BEAM RAIL	621.60				
						10				10		M	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80				
						240				240		HR	FLAGGERS	630.15				
									1	1		LS	FIELD OFFICE, ENGINEERS	631.10				
									1	1		LS	TESTING EQUIPMENT, CONCRETE	631.16				
									1	1		LS	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.25				
						1				1		LS	MOBILIZATION/DEMobilIZATION	635.11				
						1				1		LS	TRAFFIC CONTROL	641.10				
40	40	230						310		310		SM	GEOTEXTILE UNDER STONE FILL	649.31				
							25			25		SM	GEOTEXTILE FOR SILT FENCE	649.51				
							70			70		SM	GEOTEXTILE FOR FILTER CURTAIN	649.61				
							5			5		KG	SEED	651.15				
							5			5		KG	SEED, WINTER RYE	651.17				

PROJECT NAME:	CABOT
PROJECT NUMBER:	BRO 1446(27)
FILE NAME:	96j270\structures\sj270excel.dgn
PROJECT MANAGER:	C.P. WILLIAMS
DESIGNED BY:	K. HIGGINS
QUANTITY SHEET #1	
PLOT DATE:	11/21/2007
DRAWN BY:	M. FESSEL
CHECKED BY:	ERUSTAY
SHEET	3 OF 42

QUANTITY SHEET

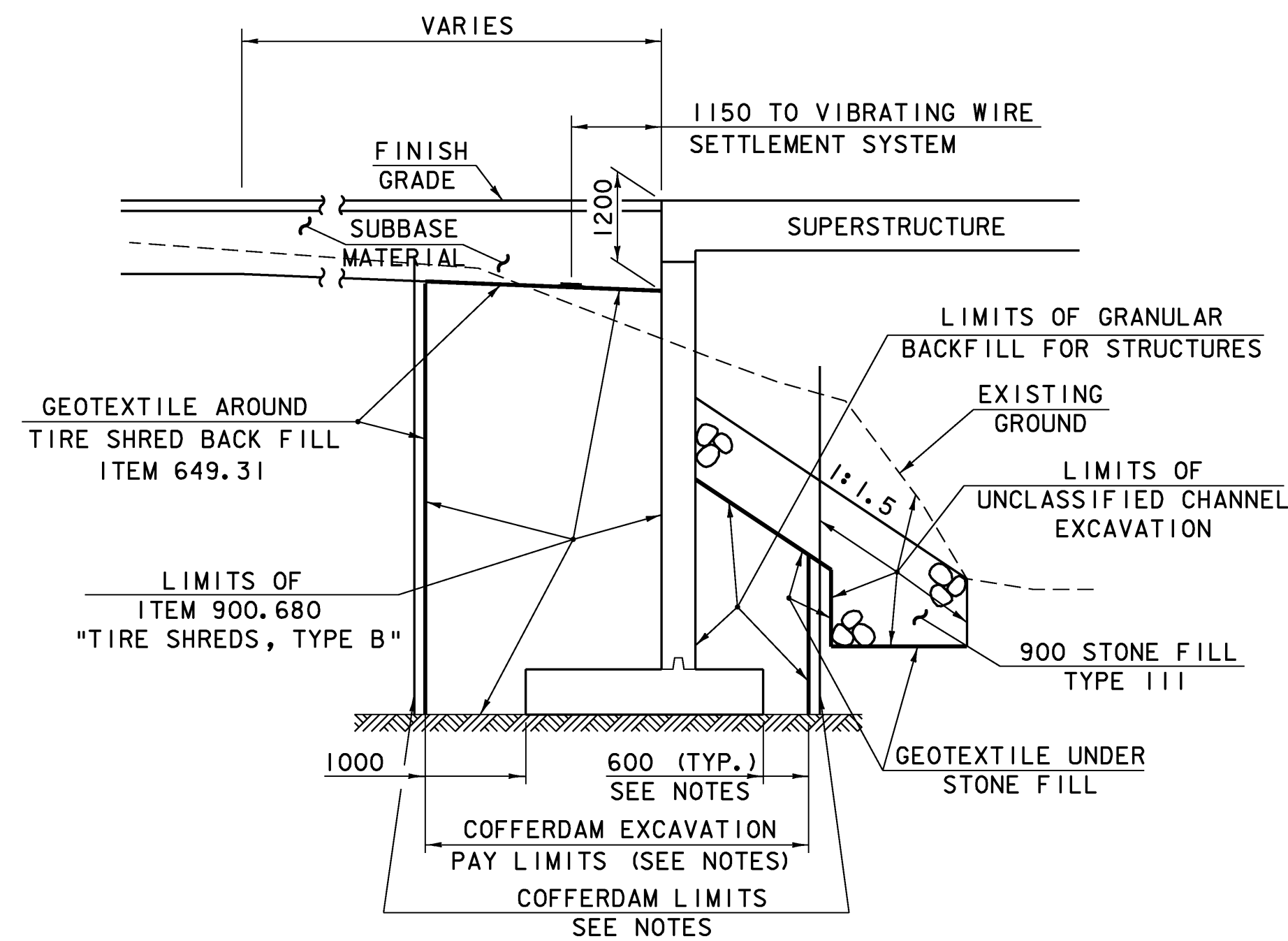


SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ABUT#1	ABUT#2	CHANNEL	SLAB			ROADWAY	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
							50			50		KG	FERTILIZER	651.18				
							1			1		T	AGRICULTURAL LIMESTONE	651.20				
							1			1		T	HAYMULCH	651.25				
							10			10		CM	TOPSOIL	651.35				
		90						90		90		SM	GRUBBING MATERIAL	651.40				
							1			1		LS	EPSC PLAN	652.10				
							100			100		HR	MONITORING EPSC PLAN	652.20				
							1			1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30				
							200			200		SM	PERMANENT EROSION MATTING	653.21				
							10			10		CM	TEMPORARY STONE CHECK DAM, TYPE I	653.25				
							13			13		CM	VEHICLE TRACKING PAD	653.35				
							150			150		M	BARRIER FENCE	653.50				
							35			35		M	PROJECT DEMARCATION FENCE	653.55				
						1.2				1.2		SM	TRAFFIC SIGNS, TYPE A	675.20				
						9				9		M	FLANGED CHANNEL SIGN POST	675.301				
						3				3		EACH	REMOVING SIGNS	675.50				
2	2							4		4		EACH	SPECIAL PROVISION (EARTH PRESSURE CELL)	900.620				
1	1							2		2		EACH	SPECIAL PROVISION (VIBRATING WIRE SETTLEMENT SYSTEM)	900.620				
90	95						70	185		115		SM	SPECIAL PROVISION (GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED)	900.675				ITEMS ELIMINATED BY C.O. #1
												T	SPECIAL PROVISION (TIRE SHREDS, TYPE B)	900.680				



TYPICAL BRIDGE SECTION

SCALE = 1:40

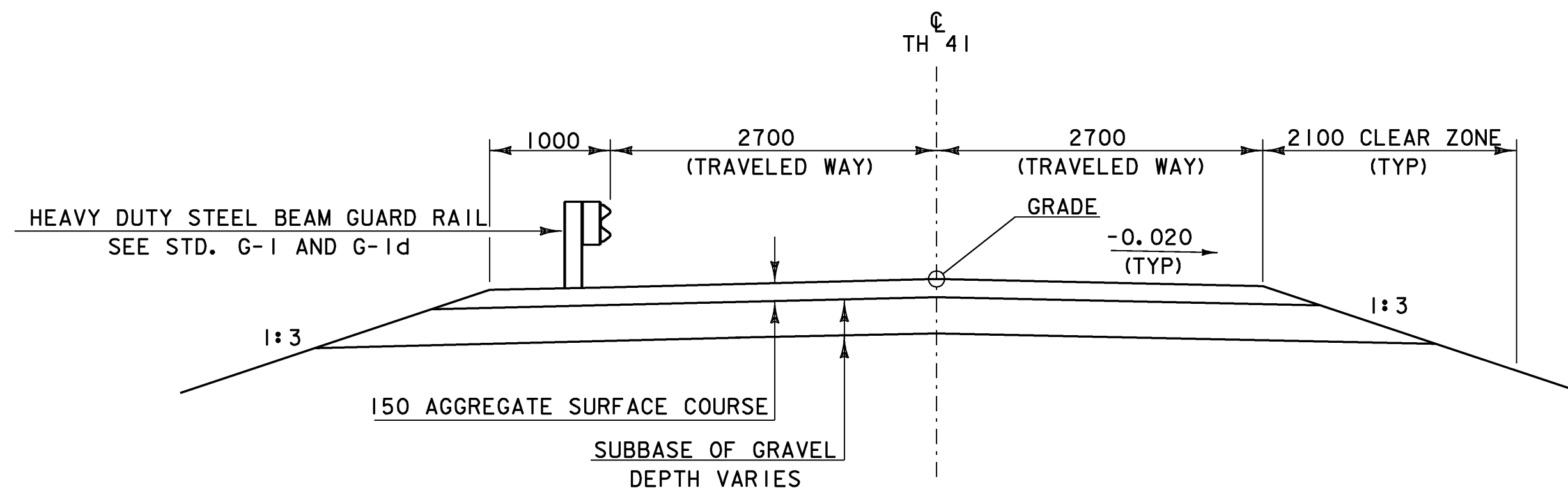


TYPICAL ABUTMENT SECTION

(NOT TO SCALE)

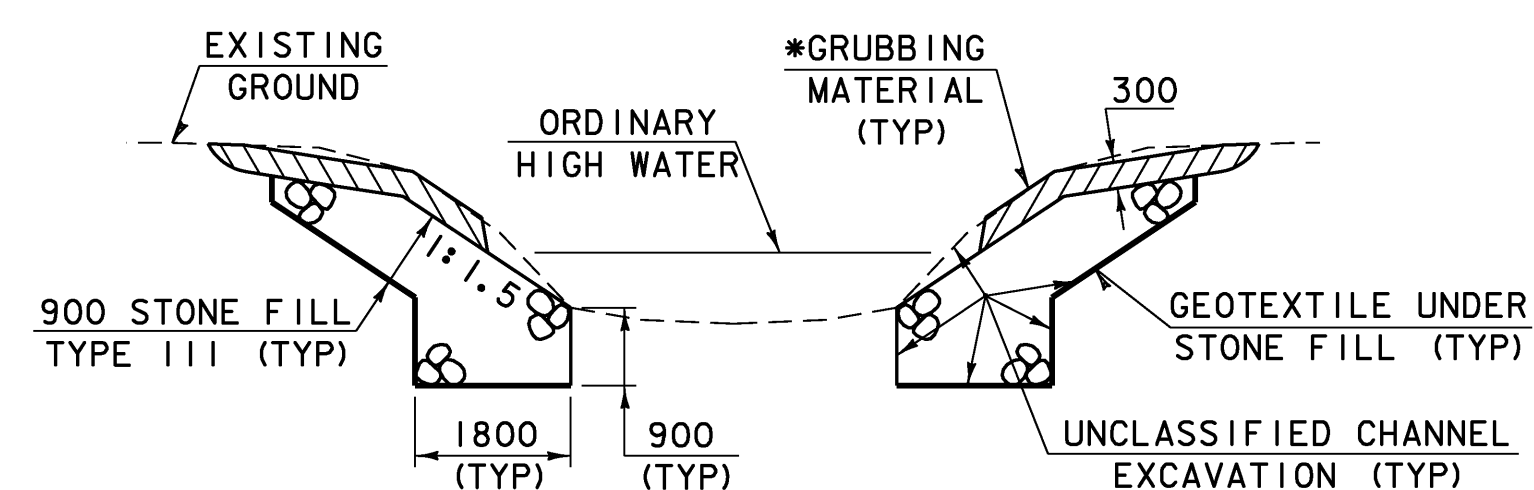
NOTES

1. COFFERDAM LIMITS TO BE DETERMINED BY THE CONTRACTOR
2. THE PAY LIMITS OF "COFFERDAM EXCAVATION, EARTH" AND "COFFERDAM EXCAVATION, ROCK" SHALL BE 1000 mm FROM THE HEEL OF THE FOOTING, AND 600 mm OUTSIDE THE REST OF THE PERIMETER OF THE FOOTING, UNLESS OTHERWISE SHOWN ON THE PLANS, UP TO EXISTING GROUND OR BOTTOM OF SUBBASE, WHICHEVER IS LOWER.
3. IF A COFFERDAM IS CONSTRUCTED WHICH IS LARGER THAN THE INDICATED COFFERDAM EXCAVATION PAY LIMITS, PAYMENT FOR ALL UNCLASSIFIED CHANNEL EXCAVATION, INCLUDING THAT PORTION WHICH IS INSIDE THE COFFERDAM BUT OUTSIDE THE COFFERDAM EXCAVATION LIMITS, WILL BE MADE AT THE CONTRACT UNIT PRICE FOR UNCLASSIFIED CHANNEL EXCAVATION.
4. SEE SHEETS 17 AND 20-21 FOR GEOTECHNICAL INSTRUMENTATION DETAILS.



TYPICAL ROAD SECTION

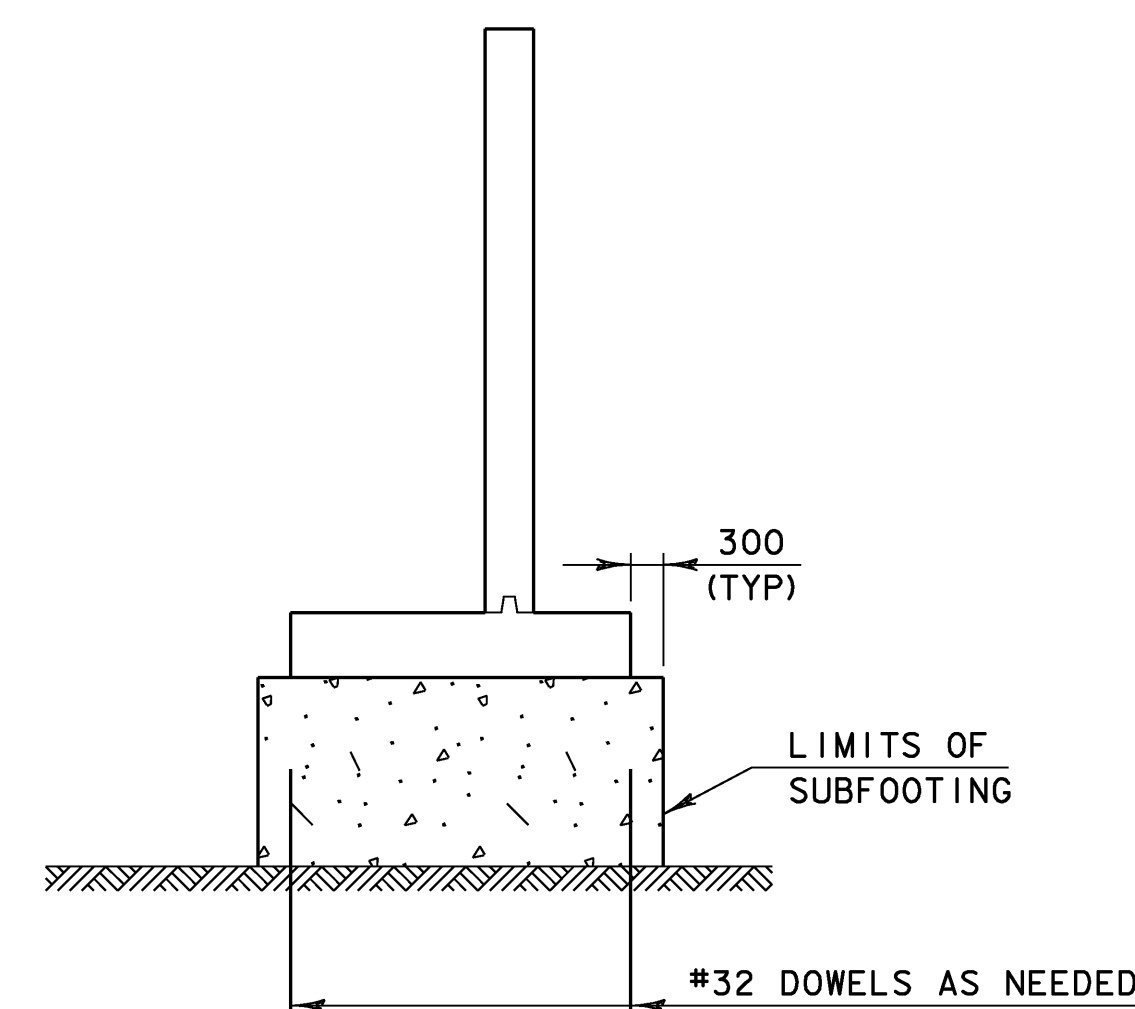
SCALE = 1:40



TYPICAL CHANNEL SECTION

(NOT TO SCALE)

*GRUBBING MATERIAL SHALL NOT BE PLACED ON THE STONE FILL IN THE AREA UNDER THE BRIDGE. WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE. GRUBBING MATERIAL SHALL NOT BE PLACED BELOW ORDINARY HIGH WATER (OHW).

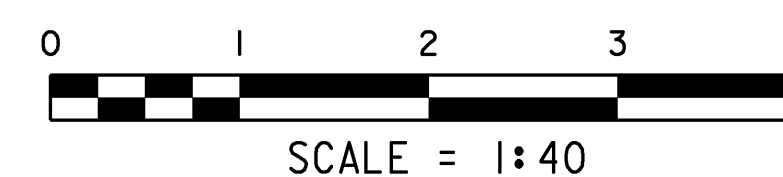


SUBFOOTING DETAILS

(NOT TO SCALE)

(SEE GENERAL NOTES, SHEET 17, FOR ADDITIONAL DETAILS)

MATERIAL ITEM	TOLERANCE
AGGREGATE SURFACE COURSE	± 10 mm
SUBBASE	± 30 mm



PROJECT: CABOT	PROJECT NO.: BRO 1446 (27)
DESIGN FILE NAME: 96j270\Structures\sj270typ.dgn	PLOT DATE: 07-DEC-2007
IPARM FILE NAME: sj270typ.i	DRAWN BY: P.G. JARVIS
DESIGNED BY: K.M. HIGGINS	CHECKED BY: K.M. HIGGINS
SQUAD LEADER: C.P. WILLIAMS	SHEET: 5 OF 42
TYPICAL SECTIONS SHEET	

CONTROL POINTS



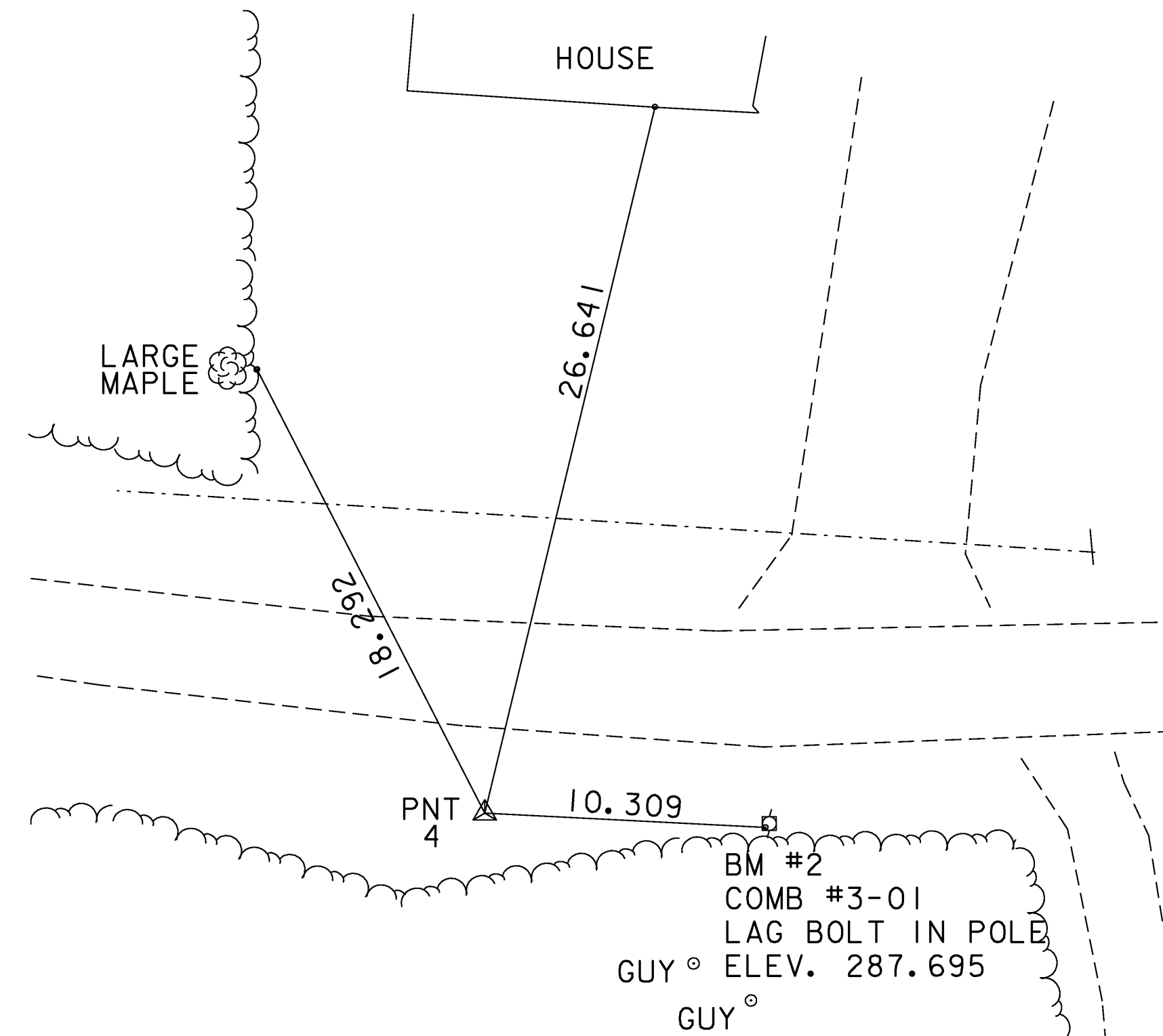
GENERAL LOCATION: CABOT, VT. OWNERSHIP: FRANK ALERIA, 84 GEORGE STREET, EAST HARTFORD, CT 06118. PHONE 860-528-0834 OR 860-528-4010. TO REACH FROM THE INTERSECTION OF VT ROUTE 215 AND U.S. ROUTE 2 IN MARSHFIELD GO NORTH ALONG VT ROUTE 215 FOR 3.0 MI (4.8 KM) TO THE INTERSECTION OF SAWMILL ROAD RIGHT. TURN RIGHT AND GO EAST ALONG SAWMILL ROAD FOR 0.25 MI (0.40 KM) TO THE INTERSECTION OF A GRAVEL DRIVE RIGHT, JUST PAST THE LOG CABIN AND TWO CAR GARAGE OF BENOIT. TURN RIGHT AND GO SOUTH ALONG THE GRAVEL DRIVE FOR 0.05 MI (0.08 KM) TO A LARGE BARN ON THE RIGHT, MR. ALERIA'S ONE STORY HOUSE ON THE LEFT AND THE SITE OF THE MARK ON THE LEFT IN A MOWED LAWN WEST OF THE HOUSE. THE MARK IS SET IN THE TOP OF A 1.2 X 1.5 M (4.9 FT) BOULDER WHICH PROJECTS ABOUT 0.6 M (2.0 FT) ABOVE GROUND SURFACE. IT IS 7.2 M (23.6 FT) WEST SOUTHWEST OF THE SOUTHWEST CEMENT BLOCK FOUNDATION CORNER OF THE HOUSE, 17.6 M (57.7 FT) SOUTHWEST OF THE SOUTHWEST CORNER OF THE MILK HOUSE ON THE LARGE BARN, AND 19.0 M (62.3 FT) SOUTHWEST OF A WELL AND A FIBERGLASS WITNESS POST.

"ALERIA"
NOT SHOWN
N = 209939.906m
E = 513774.827m
Z = 303.19 m
SURVEY DISK SET IN A BOULDER

GENERAL LOCATION: CABOT, VT. TO REACH FROM THE INTERSECTION OF VT ROUTE 215 AND U.S. ROUTE 2 IN MARSHFIELD GO NORTH ALONG VT ROUTE 215 FOR 2.2 MI (3.5 KM) TO THE SITE OF THE MARK ON THE RIGHT. IT IS 2.3 MI (3.7 KM) SOUTH ALONG VT ROUTE 215 FROM THE CABOT VILLAGE SCHOOL. THE MARK IS SET FLUSH WITH GROUND SURFACE IN THE TOP OF A FENO STYLE MONUMENT. IT IS 4.3 M (14.1 FT) SOUTHEAST OF AND ABOUT 0.2 M (0.7 FT) LOWER THAN THE CENTERLINE OF VT ROUTE 215, 17.5 M (57.4 FT) SOUTHWEST OF POLE NO. 32G/16/82, AND 0.8 M (2.6 FT) NORTHWEST OF A FIBERGLASS WITNESS POST.

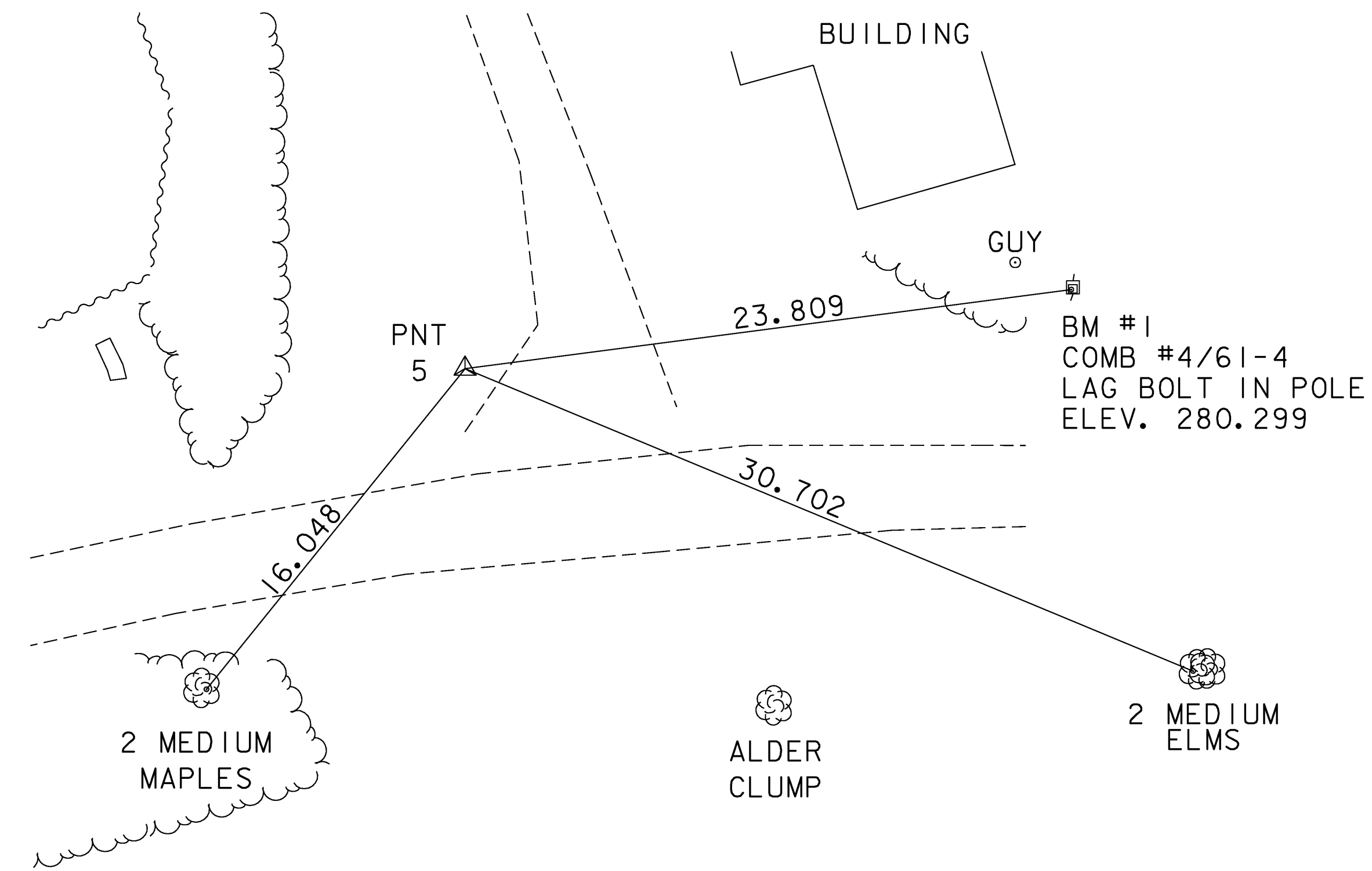
"ALERIA AZ MK"
NOT SHOWN
N = 208782.734m
E = 513197.826m
Z = 272.57m
SURVEY DISK SET INTO THE TOP OF A METAL PIPE DRIVEN INTO THE GROUND

SURVEY TIES



POINT #4
N: 210020.6332
E: 513594.6959
Z: 286.5030

BM #2
COMB #3-01
LAG BOLT IN POLE
GUY
ELEV. 287.695



POINT #5
N: 210046.3813
E: 513450.8359
Z: 280.4930

BM #1
COMB #4/61-4
LAG BOLT IN POLE
ELEV. 280.299

COORDINATES

POB
STA 1+000.000
N = 210027.265
E = 513407.824

PC
STA 1+004.061
N = 210028.958
E = 513411.515

PI
STA 1+048.000 BACK
STA 1+045.449 AHEAD
N = 210047.272
E = 513451.456

PT
STA 1+089.388
N = 210040.355
E = 513494.844

POE
STA 1+150.000
N = 210030.766
E = 513554.696

PROJECT: CABOT	PROJECT NO.: BRO 1446 (27)
DESIGN FILE NAME: 96J270/structures/sj270t1e.dgn	PLOT DATE: 07-DEC-2007
IPARM FILE NAME: sj270t1e.I	SURVEY DATE: 5/98
SURVEYED BY: R. GILMAN	DRAWN BY: D. G. BASSETT
SQUAD LEADER: C. P. WILLIAMS	SHEET: 6 OF 42
TIE SHEET	

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83/92

HD STEEL BEAM GUARDRAIL, GALVANIZED

STA 1+065.700 - 1+073.000 LT
 STA 1+088.000 - 1+095.400 LT
 STA 1+065.700 - 1+074.200 RT
 STA 1+089.800 - 1+097.100 RT

BRIDGE RAILING, GALVANIZED HD

STEEL BEAM/FASCIA MOUNTED
 STA 1+073.000 - 1+088.000 LT
 STA 1+074.200 - 1+089.800 RT

ANCHOR FOR STEEL BEAM RAIL

STA 1+067.000 LT
 STA 1+068.000 RT
 STA 1+094.000 LT
 STA 1+096.000 RT

TRAFFIC SIGN, TYPE A

STA 1+100 LT + 092
 STA 0+966 LT

REMOVAL AND DISPOSAL OF GUARDRAIL

STA 1+076 - 1+078 LT AND RT
 STA 1+087 - 1+089 LT AND RT

CONSTRUCT DRIVE

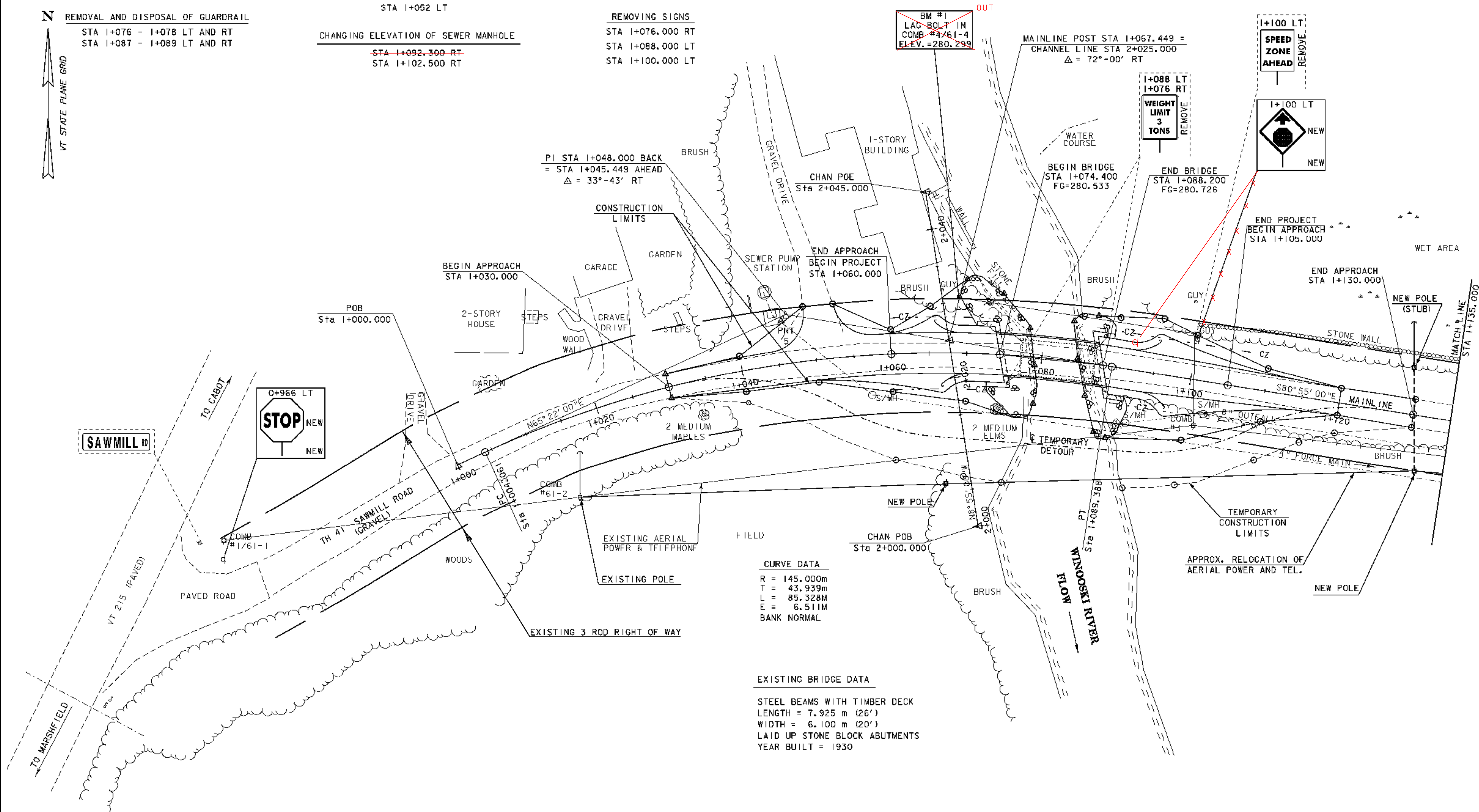
STA 1+052 LT

CHANGING ELEVATION OF SEWER MANHOLE

~~STA 1+092.300 RT~~
 STA 1+102.500 RT

REMOVING SIGNS

STA 1+076.000 RT
 STA 1+088.000 LT
 STA 1+100.000 LT

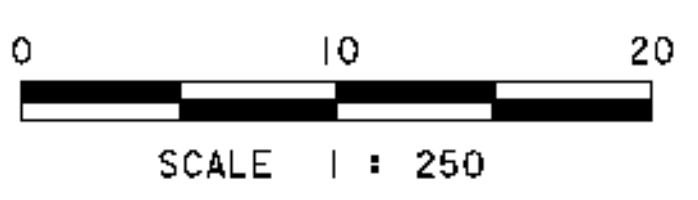


PI STA 1+048.000 BACK
 = STA 1+045.449 AHEAD
 $\Delta = 33^\circ - 43' RT$

CURVE DATA
 R = 145.000m
 T = 43.939m
 L = 85.328M
 E = 6.511M
 BANK NORMAL

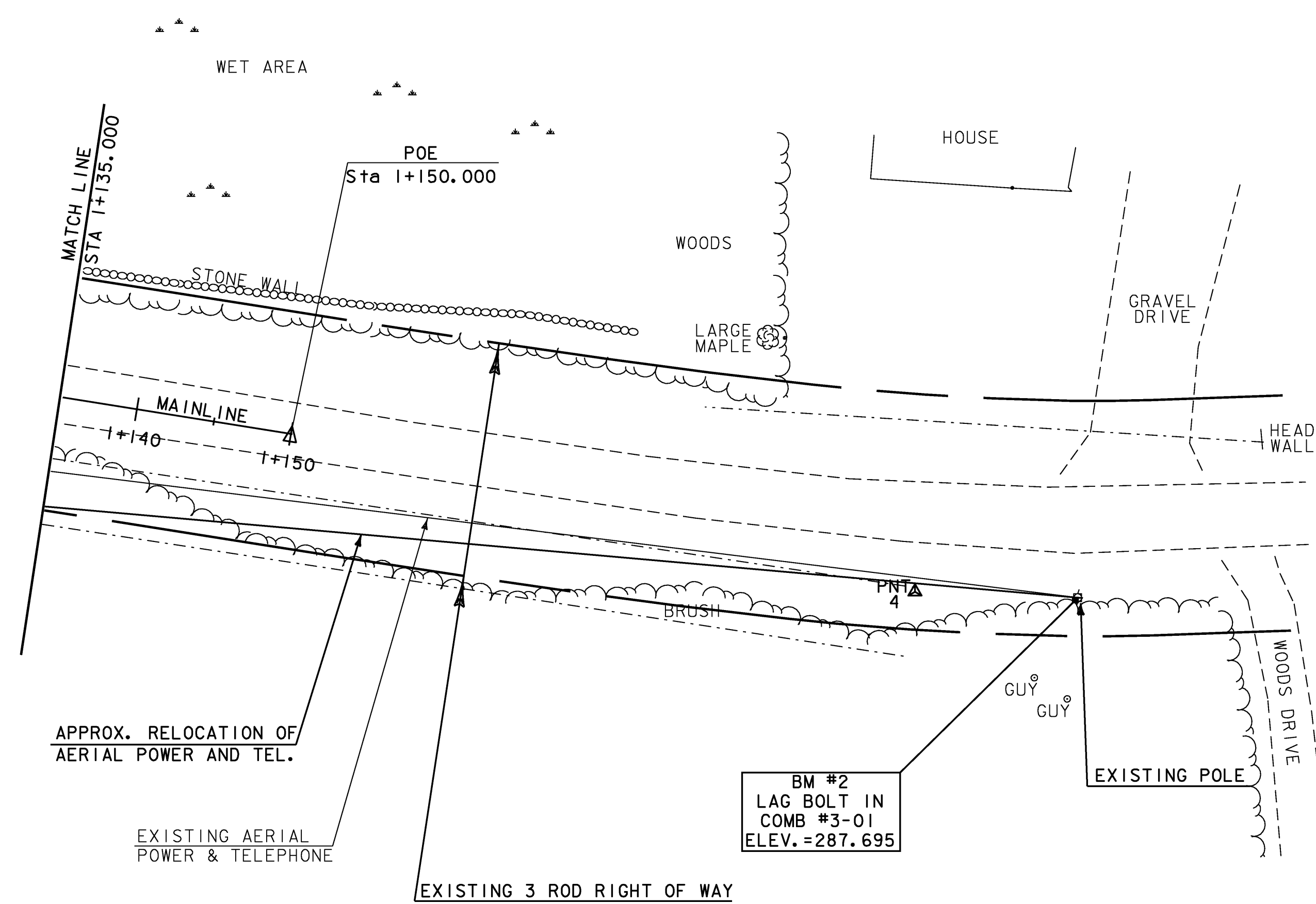
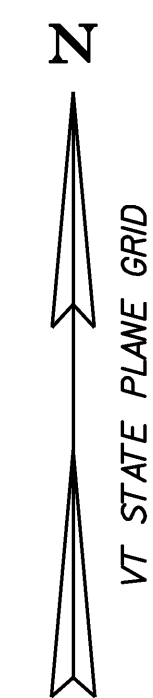
EXISTING BRIDGE DATA
 STEEL BEAMS WITH TIMBER DECK
 LENGTH = 7.925 m (26')
 WIDTH = 6.100 m (20')
 LAID UP STONE BLOCK ABUTMENTS
 YEAR BUILT = 1930

LAYOUT #1

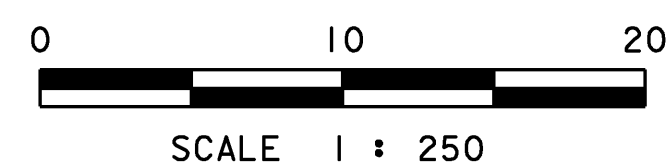


DATUM	
VERTICAL	NAV83
HORIZONTAL	NAD 83 (92)

PROJECT: CABOT	PROJECT NO.: BRO 1446 (27)
DESIGN FILE NAME: 96J270/structures/sj270bdr.dgn	PLOT DATE: 07-DEC-2007
IPARM FILE NAME: sj270a1.l	SURVEY DATE: 5/98
SURVEYED BY: R. GILMAN	DRAWN BY: D. G. BASSETT
SQUAD LEADER: C. P. WILLIAMS	SHEET: 7 OF 42
LAYOUT SHEET #1	



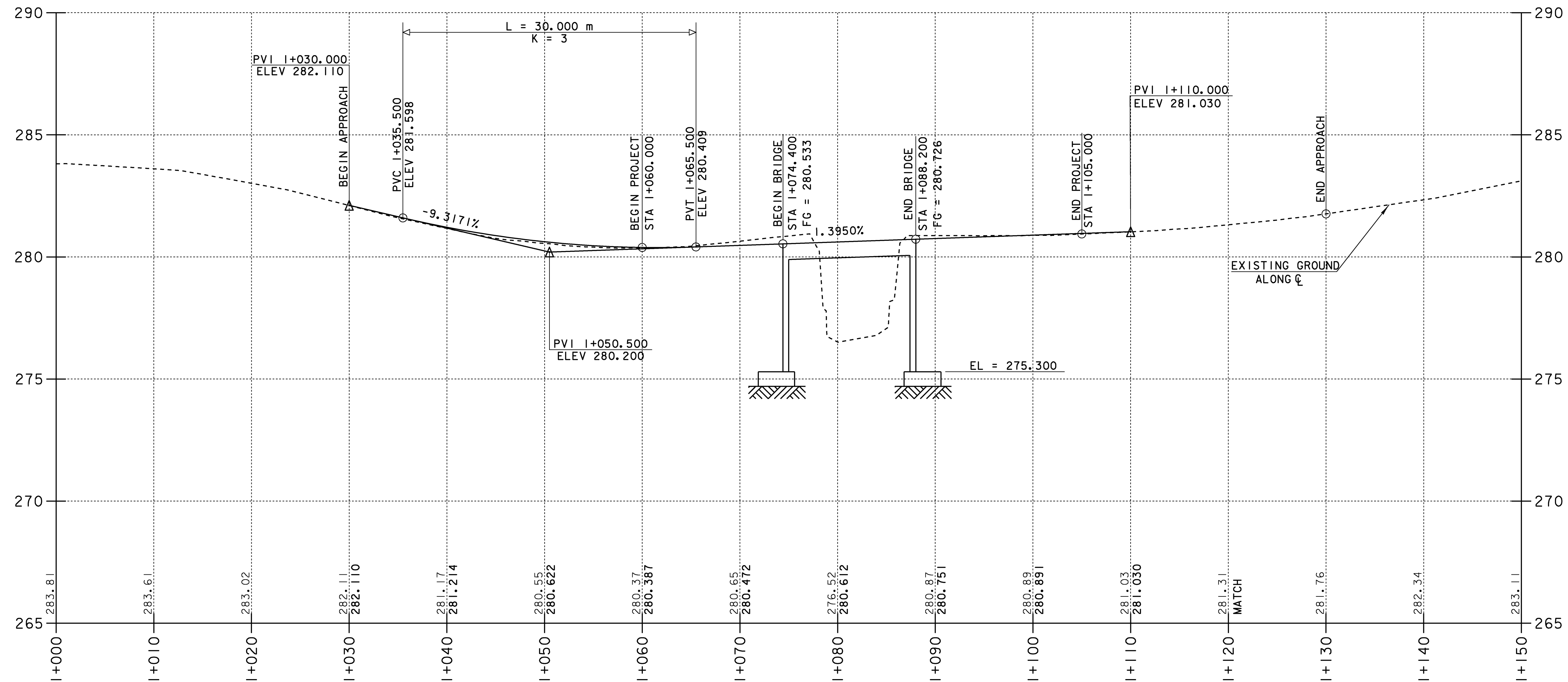
LAYOUT #2



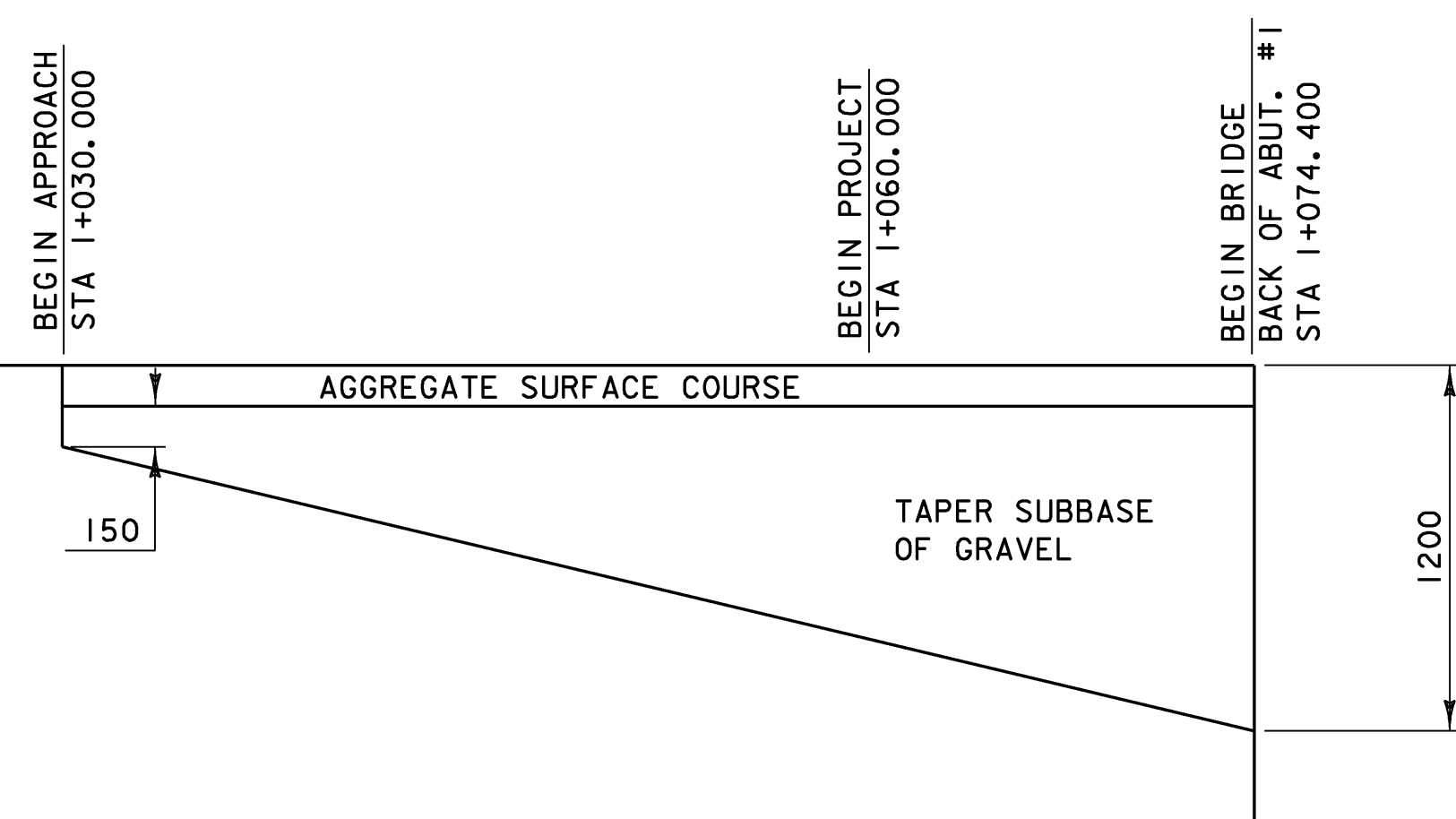
DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (92)

PROJECT: CABOT	PROJECT NO. : BRO 1446 (27)
DESIGN FILE NAME: 96J270/structures/sj270bdr.dgn	PLOT DATE: 07-DEC-2007
IPARM FILE NAME: sj270a2.1	SURVEY DATE: 5/98
SURVEYED BY: R. GILMAN	DRAWN BY: D. G. BASSETT
SQUAD LEADER: C. P. WILLIAMS	SHEET: 8 OF 42
LAYOUT SHEET #2	

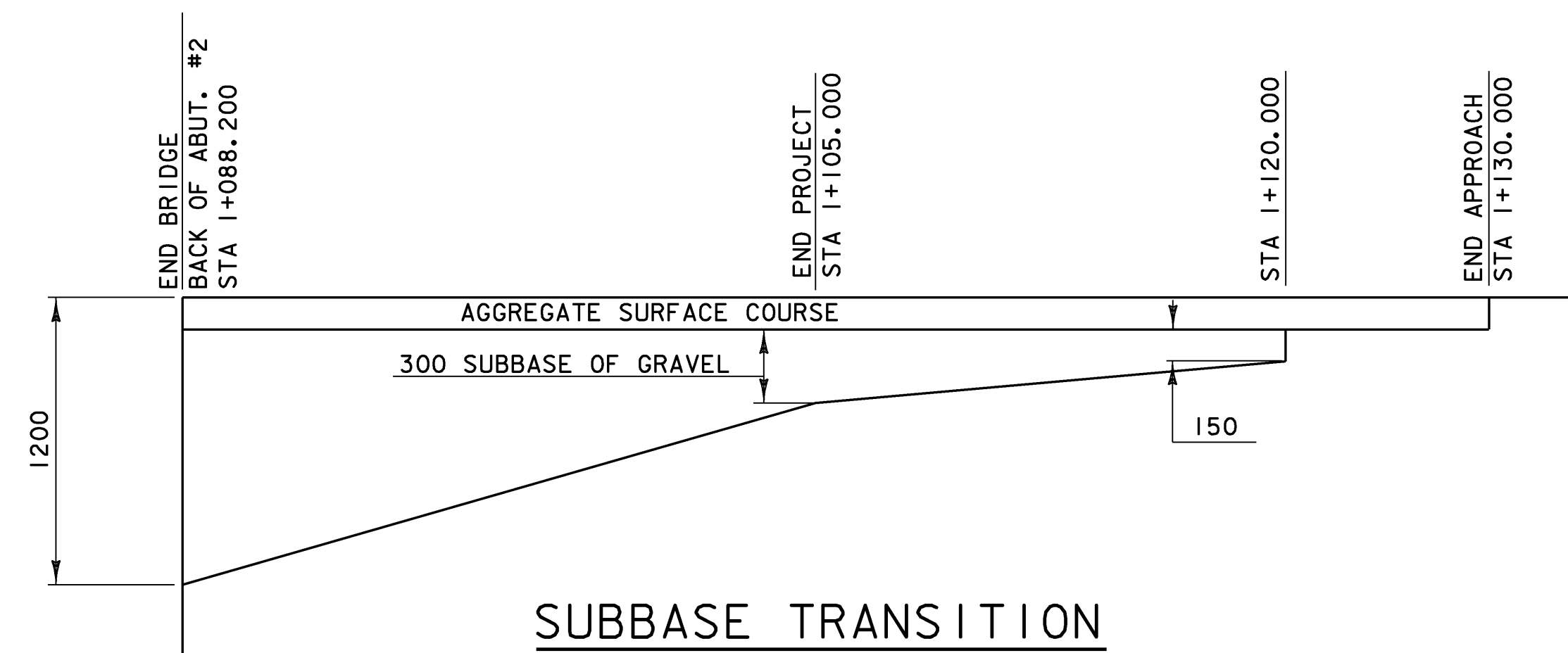
Profile TH 41



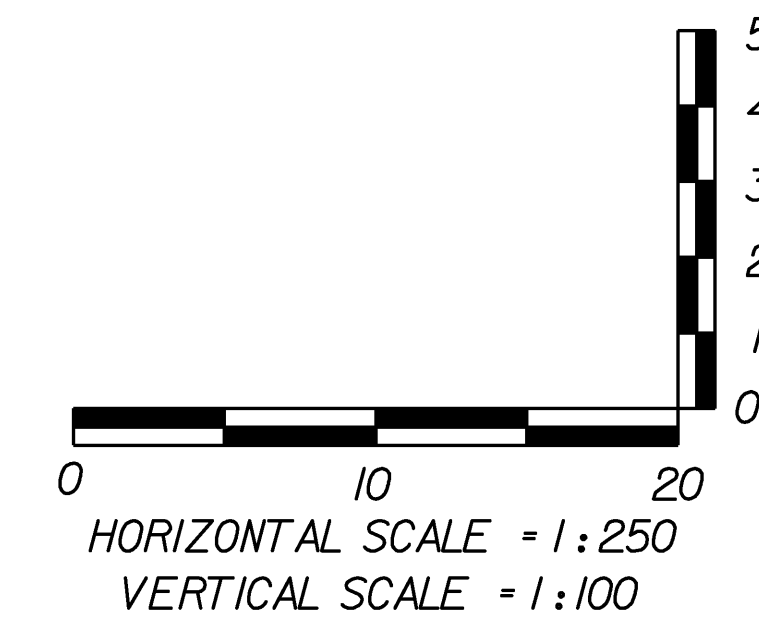
NOTE:
EXISTING CENTERLINE ELEVATIONS ARE SHOWN TO THE HUNDREDTH.
PROPOSED CENTERLINE ELEVATIONS ARE SHOWN TO THE THOUSANDTH.



SUBBASE TRANSITION @ BEGIN PROJECT
nts

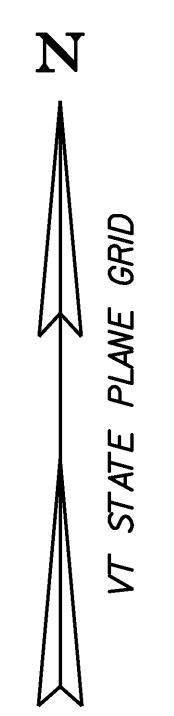
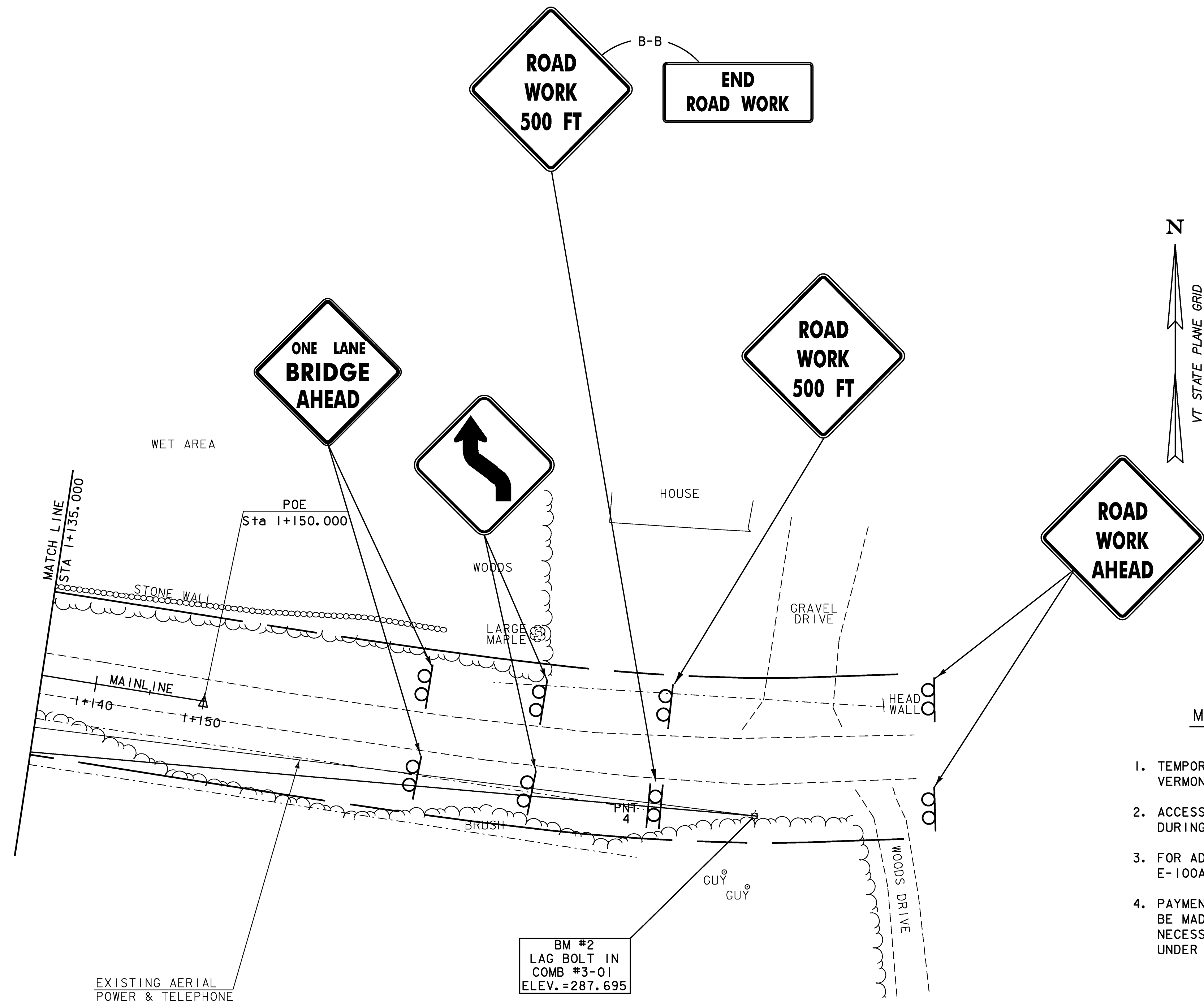


SUBBASE TRANSITION @ END PROJECT
nts



DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

PROJECT: CABOT	PROJECT NO. : BRO 1446 (27)
DESIGN FILE NAME: 96J270/structures/sj270pro.dgn	PLOT DATE: 07-DEC-2007
IPARM FILE NAME: sj270pro.i	SURVEY DATE: 5/98
SURVEYED BY: R. GILMAN	DRAWN BY: KMH
SQUAD LEADER: C. P. WILLIAMS	SHEET: 9 OF 42
TH 41 PROFILE	



MAINTENANCE OF TRAFFIC NOTES:

1. TEMPORARY APPROACH TRAFFIC SIGNS SHALL BE ACCORDING TO VERMONT STANDARD E-107 AND E-100A AND THE MUTCD.
2. ACCESS TO ALL DRIVES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
3. FOR ADDITIONAL SIGNING INSTRUCTIONS SEE STDS E-100, E-100A, E-101, E-102A, E-106, E-107A.
4. PAYMENT FOR CONSTRUCTION SIGNING AND BARRICADES WILL BE MADE UNDER CONTRACT ITEM 641.10. PAYMENT FOR ANY NECESSARY APPROACH OR BRIDGE RAILING WILL BE MADE UNDER CONTRACT ITEM 528.10

NOTE:

SIGN LOCATIONS NOT TO SCALE
 SIGNS TO BE PLACED IN ACCORDANCE
 WITH APPLICABLE AGENCY STANDARDS

**TRAFFIC DETOUR LAYOUT
 NTS**

LEGEND	
	- SIGN POSTS
	- TYPE III BARRICADES
	- TYPE III BARRICADES (MOD.)

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (92)

PROJECT: CABOT	PROJECT NO.: BRO 1446 (27)
DESIGN FILE NAME: 96J270/structures/sj270bdr.dgn	PLOT DATE: 07-DEC-2007
IPARM FILE NAME: sj270tr2.1	SURVEY DATE: 5/98
SURVEYED BY: R. GILMAN	DRAWN BY: D. G. BASSETT
SQUAD LEADER: C. P. WILLIAMS	SHEET: II OF 42
TRAFFIC DETOUR LAYOUT SHEET #2	

SOIL CLASSIFICATION

AASHTO

A1	Gravel and Sand
A3	Fine Sand
A2	Silty or Clayey Gravel and Sand
A4	Silty Soil - Low Compressibility
A5	Silty Soil - Highly Compressible
A6	Clayey Soil - Low Compressibility
A7	Clayey Soil - Highly Compressible

ROCK QUALITY DESIGNATION

R.Q.D. (%)	ROCK DESCRIPTION
<25	Very Poor
25 to 50	Poor
51 to 75	Fair
76 to 90	Good
>90	Excellent

SHEAR STRENGTH

UNDRAINED SHEAR STRENGTH IN kPa	CONSISTENCY
<12	Very Soft
12-24	Soft
24-48	Med. Stiff
48-96	Stiff
96-192	Very Stiff
>192	Hard

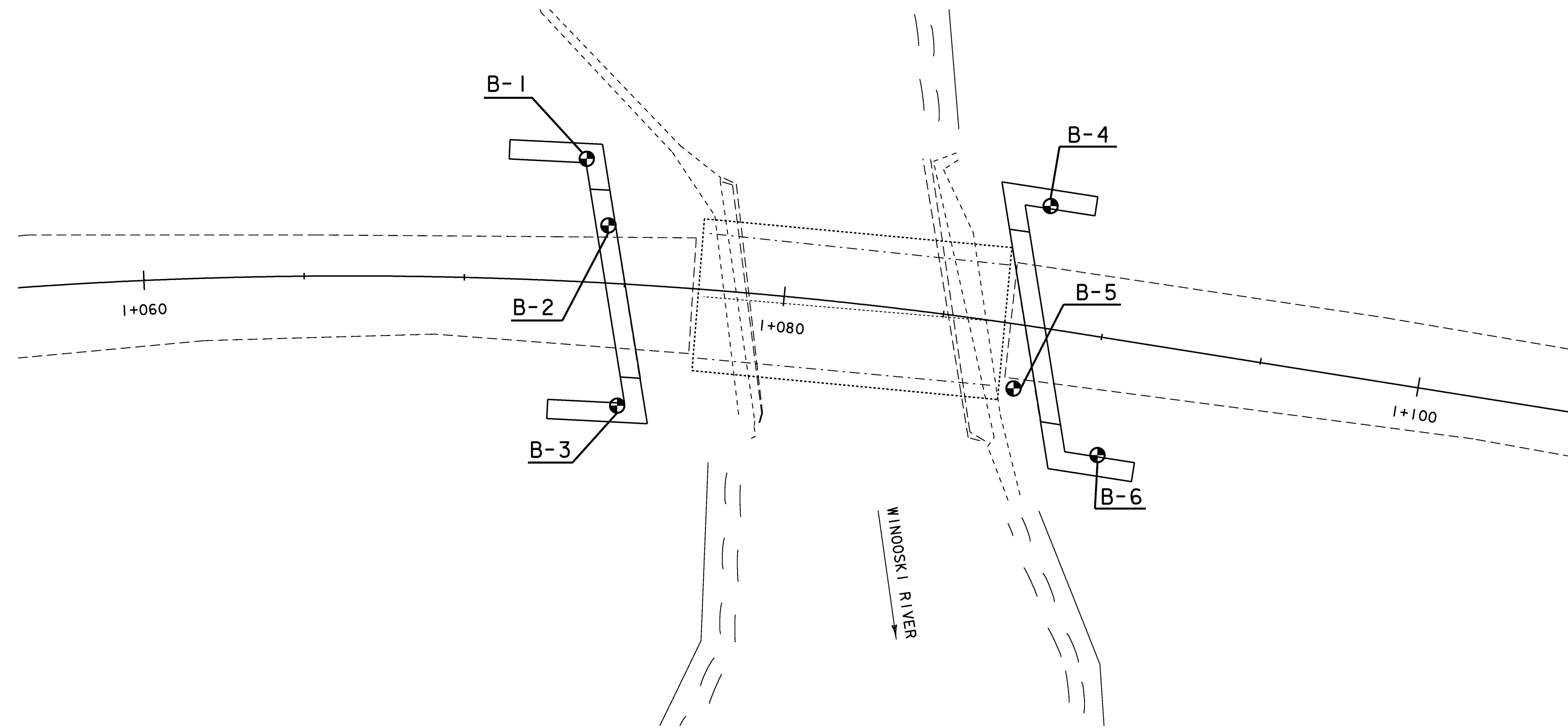
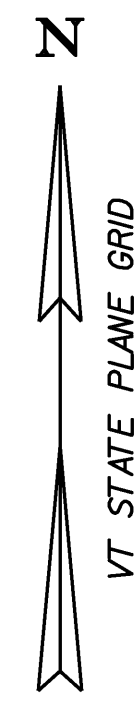
CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

DENSITY (GRANULAR SOILS)		CONSISTENCY (COHESIVE SOILS)	
N	DESCRIPTIVE TERM	N	DESCRIPTIVE TERM
<5	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-24	Med. Dense	5-8	Med. Stiff
25-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

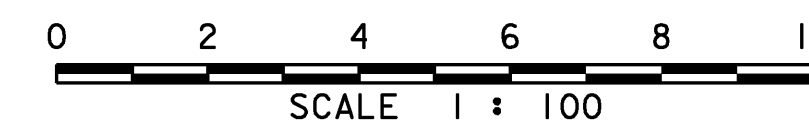
COMMONLY USED SYMBOLS

▼	Water Elevation
⊕	Standard Penetration Boring
⊙	Auger Boring
⊖	Rod Sounding
S	Sample
N	Standard Penetration Test Blow Count Per 300 mm For: 50.8 mm O.D. Sampler 35.0 mm I.D. Sampler Hammer Weight Of 63.5 kg. Hammer Fall Of 762 mm
VS	Field Vane Shear Test
US	Undisturbed Soil Sample
B	Blast
DC	Diamond Core
MD	Mud Drill
WA	Wash Ahead
HSA	Hollow Stem Auger
AX	Core Size 30.1mm
BX	Core Size 42.0 mm
NX	Core Size 54.7 mm
M	Double Tube Core Barrel Used
LL	Liquid Limit
PL	Plastic Limit
PI	Plasticity Index
NP	Non Plastic
w	Moisture Content (Dry Wgt. Basis)
D	Dry
M	Moist
MTW	Moist To Wet
W	Wet
Sat	Saturated
Bo	Boulder
Gr	Gravel
Sa	Sand
SI	Silt
Cl	Clay
HP	Hardpan
Le	Ledge
NLTD	No Ledge To Depth
CNPF	Can Not Penetrate Further
TLOB	To Ledge Or Boulder
NR	No Recovery
Rec.	Recovery
%Rec.	Percent Recovery
RQD	Rock Quality Designation
CBR	California Bearing Ratio
<	Less Than
>	Greater Than
R	Refusal (N > 100)

COLOR			
blk	Black	pnk	Pink
bl	Blue	pu	Purple
brn	Brown	rd	Red
dk	Dark	tn	Tan
gry	Gray	wh	White
gn	Green	yel	Yellow
lt	Light	mltc	Multicolored
or	Orange		



BORING LAYOUT



BORING CHART

HOLE NO.	STATION	OFFSET (m)	GROUND ELEV.	TLOB
B-1	1+073.600	3.8 LT	280.274	273.874
B-2	1+074.400	1.8 LT	281.024	276.244
B-3	1+075.000	3.8 RT	280.707	273.107
B-4	1+087.810	3.8 LT	280.747	274.747
B-5	1+087.500	2.0 RT	280.978	274.988
B-6	1+090.450	3.65 RT	280.710	274.770

DEFINITIONS (AASHTO)

BEDROCK (LEDGE) - Rock in its native location of indefinite thickness.

BOULDER - A rock fragment with an average dimension > 304.8 mm.

COBBLE - Rock fragments with an average dimension between 76.2 and 304.8 mm.

GRAVEL - Rounded particles of rock < 76.2 mm and > 2 mm (#10 sieve).

SAND - Particles of rock < 2 mm (#10 sieve) and > 75 μm (#200 sieve).

SILT - Soil < 75 μm (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.

CLAY - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.

VARVED - Alternate layers of silt and clay.

HARDPAN - Extremely dense soil, cemented layer, not softened when wet.

MUCK - Soft organic soil (containing > 10% organic material).

MOISTURE CONTENT - Weight of water divided by dry weight of soil.

FLOWING SAND - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.

STRIKE - Angle from magnetic north to line of intersection of bed with a horizontal plane.

DIP - Inclination of bed with a horizontal plane.

GENERAL NOTES

- The subsurface explorations shown herein were made between 12/16/99 and 2/11/00 by the Agency.
- Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
- Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.
- Engineering judgement was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgement by the Contractor.
- Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.
- Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.

PROJECT NAME: CABOT
PROJECT NUMBER: BRO 1446 (27)

FILE NAME: 96\270\s\270bor.dgn
IPARM NAME:s\270bor.i
PROJECT LEADER: C. P. WILLIAMS
DESIGNED BY: K. M. HIGGINS
BORING LAYOUT SHEET

PLOT DATE: 07-DEC-2007
DRAWN BY:
CHECKED BY: K. M. HIGGINS
SHEET 13 OF 42

TOP OF FOOTING, ABUTMENT #1, ELEV. 275.300

STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH DIVISION SUBSURFACE INFORMATION									
PROJECT NAME: CABOT SITE NAME: BR 37 STATION: H+073.60 GROUND EL.: 280.274					PROJECT NUMBER: BRO 1446 (27) SITE NO.: TH 4I OFFSET: -3.80 G.W. DEPTH:				
BORING CREW CREW CHIEF: TALLMAN DRILLER: RUSSELL LOGGER: YOUNG ADDITIONAL CREW:					BORING RIG: SKID RIG BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL				
DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 0.3 m	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		No sample, Boulders							
		BXDC, 2.7m-3.5m, No sample, Boulders							
		BXDC, 4.11m-5.63m Rec. = 1.44 m, Boulders							
		BXDC, 5.63m-6.23m, Rec. = 0.30m No sample, Boulder							
		Run #1: BXDC, 6.40m-6.70m, Rec. = 0.27m, See Geologist's Report.	RUN	REC%	RQD%	Dip°			
		Run #2: BXDC, 6.70m-8.22m, Rec. = 1.52m, See Geologist's Report.	2	100	100	40			
		Run #3: BXDC, 8.22m-8.52m, Rec. = 0.22m, See Geologist's Report.	3	73	65	40			
		Run #4: BXDC, 8.52m-9.59m, Rec. = 1.07m, See Geologist's Report.	4	100	100	40			
		Hole stopped @ 9.59m							
GEOLOGISTS REPORT:									
Run #1: Gray amphibolitic limestone, Hard, Unweathered, Competent.									
Run #2: Gray mica-garnet schist, Moderately hard, Unweathered, Competent.									
Run #3: Same as Run #2, Competent.									
Run #4: Same as Run #2, Competent.									

TOP OF FOOTING, ABUTMENT #1, ELEV. 275.300

STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH DIVISION SUBSURFACE INFORMATION									
PROJECT NAME: CABOT SITE NAME: BR 37 STATION: H+074.40 GROUND EL.: 281.024					PROJECT NUMBER: BRO 1446 (27) SITE NO.: TH 4I OFFSET: -1.80 G.W. DEPTH: 4.0 m				
BORING CREW CREW CHIEF: TALLMAN DRILLER: RUSSELL LOGGER: YOUNG ADDITIONAL CREW:					BORING RIG: SKID RIG BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL				
DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 0.3 m	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		BXDC, 1.21m-1.50m, No sample, Boulder							
		BXDC, 2.48m-3.00m, No sample, Boulders							
		A-4, SiSa HP, gry, Moist, Rec. = 0.23m Run #1: BXDC, 4.78m-6.30m, Rec. = 1.49m, See Geologist's Report.	RUN	REC%	RQD%	Dip°			
		Run #2: BXDC, 6.30m-7.82m, Rec. = 1.48m, See Geologist's Report.	2	97	97	35			
		Hole stopped @ 7.82m							
GEOLOGISTS REPORT:									
Run #1: Gray mica-garnet schist with limestone, Moderately hard, Unweathered, Competent.									
Run #2: Same as Run #1, Competent.									

TOP OF FOOTING, ABUTMENT #1, ELEV. 275.300

STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH DIVISION SUBSURFACE INFORMATION									
PROJECT NAME: CABOT SITE NAME: BR 37 STATION: H+075.00 GROUND EL.: 280.707					PROJECT NUMBER: BRO 1446 (27) SITE NO.: TH 4I OFFSET: 3.80 G.W. DEPTH: 2.4 m				
BORING CREW CREW CHIEF: MCGLYNN DRILLER: CHABOT LOGGER: ADDITIONAL CREW:					BORING RIG: SKID RIG BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL				
DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 0.3 m	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		A-1-a, Gr (Possible fill), brn, Moist, Rec. = 0.20m	31	18.6	69.1	18.3	12.6		
		Visual Classification Possible fill.	R	13.8					
		No Rec.	R						
		BXDC, 4.82m-7.60m, Boulders							
		Run #1: BXDC, 7.60m-9.12m, Rec. = 1.43m, See Geologist's Report.	RUN	REC%	RQD%	Dip°			
		Run #2: BXDC, 9.12m-10.64m, Rec. = 1.52m, See Geologist's Report.	2	100	95	35			
		Hole stopped @ 10.64m							
GEOLOGISTS REPORT:									
Run #1: Gray mica-garnet schist with limestone, Moderately hard, Unweathered, Competent.									
Run #2: Same as Run #1, Competent.									

TOP OF FOOTING, ABUTMENT #2, ELEV. 275.300

STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH DIVISION SUBSURFACE INFORMATION									
PROJECT NAME: CABOT SITE NAME: BR 37 STATION: H+087.8I GROUND EL.: 280.747					PROJECT NUMBER: BRO 1446 (27) SITE NO.: TH 4I OFFSET: -3.80 G.W. DEPTH:				
BORING CREW CREW CHIEF: TALLMAN DRILLER: RUSSELL LOGGER: RUSSELL ADDITIONAL CREW:					BORING RIG: SKID RIG BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL				
DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 0.3 m	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		BXDC, Cleaned out casing before sampling.							
		A-2-4, SiSaGr, brn, MTW, Rec. = 0.14m	8	24	37.6	36.4	26		
		BXDC, 2.1m-2.9m, Cleaned out casing, No Rec.							
		A-4, SaSi, gry, Moist, Rec. = 0.15m	5	13.9	15.6	38.8	45.6		
		A-4, SaSi HP, gry, Moist, Rec. = 0.14m	R	11.5	7.9	42.2	49.9		
		Run #1: BXDC, 6.00m-7.52m, Rec. = 1.39m, See Geologist's Report.	RUN	REC%	RQD%	Dip°			
		Run #2: BXDC, 7.52m-9.04m, Rec. = 1.24m, Seam at 7.82m-8.07m, See Geologist's Report.	2	82	82	30			
		Hole stopped @ 9.04m							
GEOLOGISTS REPORT:									
Run #1: Gray mica-garnet schist with limestone, Moderately hard, Unweathered, Competent.									
Run #2: Same as Run #1, Competent.									



PROJECT:	CABOT	PROJECT NO.:	BRO 1446 (27)
DESIGN FILE NAME:	/matres/96j270/mj270bor.dgn	PLOT DATE:	07-DEC-2007
IPARM FILE NAME:	sj270bo2.i	SURVEY DATE:	1/00
SURVEYED BY:	R. GILMAN	DRAWN BY:	J. TOUCHETTE
SQUAD LEADER:	C. C. BENDA	SHEET:	14 OF 42
DATE:	02/00		

STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH DIVISION SUBSURFACE INFORMATION										HOLE NO.: B-5 SHEET 1 OF 1 DATE STARTED: 1/06/00 DATE COMPLETED: 1/10/00	
PROJECT NAME: CABOT SITE NAME: BR 37 STATION: I+087.50 GROUND EL.: 280.978					PROJECT NUMBER: BRO 1446 (27) SITE NO.: TH 41 OFFSET: 2.00 G.W. DEPTH: 4.8 m						
BORING CREW CREW CHIEF: MCGLYNN DRILLER: CHABOT LOGGER: YOUNG ADDITIONAL CREW:					BORING RIG: SKID RIG BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL						
DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 0.3 m	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI		
		A-1-b, SaGr, brn, Moist, Rec. = 0.45m	20	10.1	51.8	33.2	15				
		No sample, Boulder									
		BXDC, 3.96m-4.72m, Boulders									
5		A-4, GrSaSi HP, gry, Moist, Rec. = 0.18m	R	8.2	25.9	28.9	45.2				
		Top of bedrock @ 5.99 m									
		Run #1: BXDC, 5.99m-6.39m, Rec. = 0.40m, See Geologist's Report.	RUN	RECZ	RQDZ	Dip*					
		Run #2: BXDC, 6.39m-7.91m, Rec. = 1.44m, See Geologist's Report.	1	100	100	40					
		Run #3: BXDC, 7.91m-9.43m, Rec. = 1.45m, See Geologist's Report.	2	95	95	40					
		Hole stopped @ 9.43m	3	95	95	40					
10											
GEOLOGISTS REPORT:											
Run #1: Gray mica-garnet schist with limestone, Moderately hard, Unweathered, Competent.											
Run #2: Same as Run #1, Competent.											
Run #3: Same as Run #1, Competent.											

TOP OF FOOTING, ABUTMENT #2, ELEV. 275.300

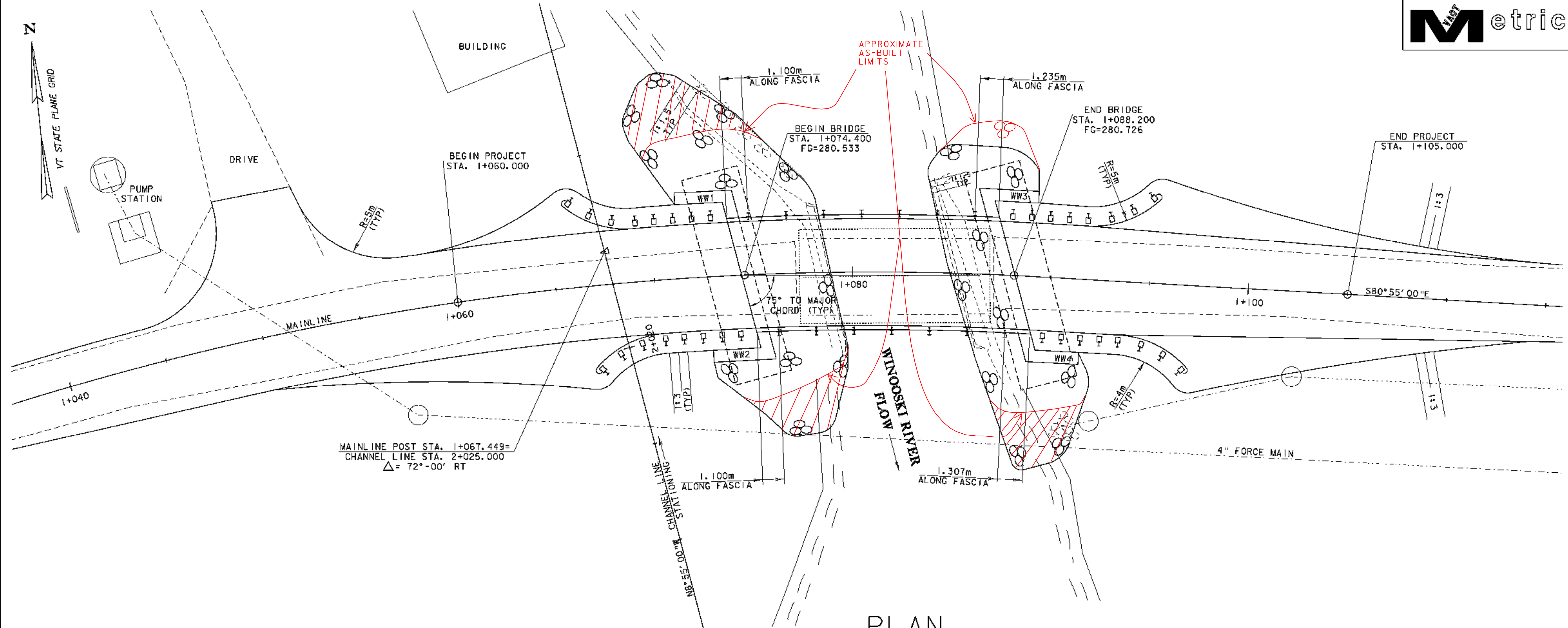
STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH DIVISION SUBSURFACE INFORMATION										HOLE NO.: B-6 SHEET 1 OF 1 DATE STARTED: 1/10/00 DATE COMPLETED: 1/13/00	
PROJECT NAME: CABOT SITE NAME: BR 37 STATION: I+090.45 GROUND EL.: 280.710					PROJECT NUMBER: BRO 1446 (27) SITE NO.: TH 41 OFFSET: 3.65 G.W. DEPTH: 3.8 m						
BORING CREW CREW CHIEF: MCGLYNN DRILLER: CHABOT LOGGER: WILLIAMS ADDITIONAL CREW:					BORING RIG: SKID RIG BORING TYPE: WASH BORE SAMPLE TYPE: SPLIT BARREL						
DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 0.3 m	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI		
		A-2-4, GrSiSa, brn, MTW, Rec. = 0.45m	4	23	27.7	38.8	33.5				
		A-2-4, GrSaSi, brn, Moist, Rec. = 0.30m	15	13.5	31.5	34.1	34.4				
		BXDC, 4.50m-4.9m, Boulder									
5		A-4, GrSaSi HP, gry, Moist, Rec. = 0.43m	R	8.9	21.1	31.4	47.5				
		Top of bedrock @ 5.94 m									
		Run #1: BXDC, 5.94m-7.31m, Rec. = 0.96m, See Notes See Geologist's Report.	RUN	RECZ	RQDZ	Dip*					
		Run #2: BXDC, 7.31m-8.22m, Rec. = 0.87m, See Notes, See Geologist's Report.	1	70	60	30					
		Run #3: BXDC, 8.22m-8.37m, No Rec., See Notes See Geologist's Report.	2	96	90	30					
		Run #4: BXDC, 8.37m-9.20m, Rec. = 0.76m, See Notes See Geologist's Report.	3 4	0 92	92	30					
		Hole stopped @ 9.20m									
10											
GEOLOGISTS REPORT:											
Run #1: Gray mica-garnet schist, Moderately hard, Unweathered, Competent.											
Run #2: Same as Run #1, But with limestone, Competent.											
Run #3: No Recovery											
Run #4: Same as Run #2, Competent.											

TOP OF FOOTING, ABUTMENT #2, ELEV. 275.300

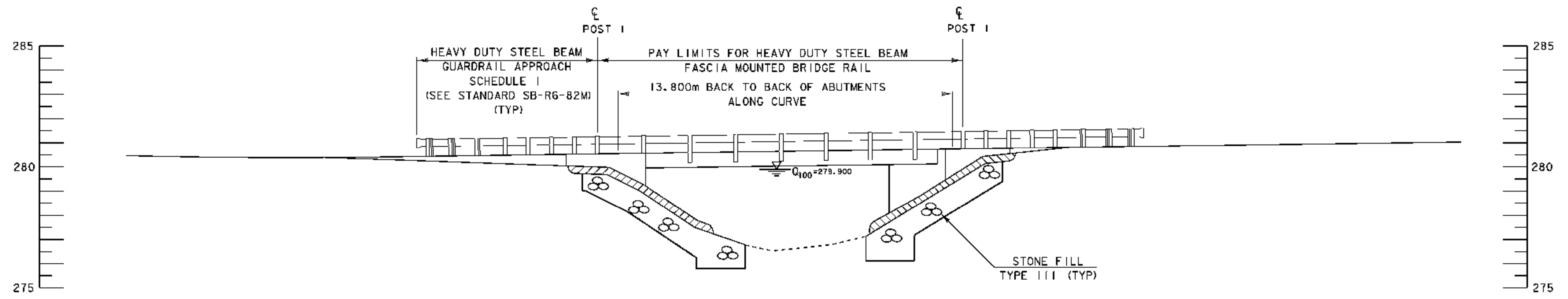
Notes:
Run #1: Three seams from 7.15m-7.31m.
No water return.
Run #2: Bit plugged.
No water return.
Run #3: Bit plugged.
Bit broke.
Run #4: Piece of broken bit lodged in new bit.

PROJECT:	CABOT	PROJECT NO.:	BRO 1446 (27)
DESIGN FILE NAME:	/matres/96]270/mj270bor.dgn	PLOT DATE:	07-DEC-2007
IPARM FILE NAME:	sj270bol.i	SURVEY DATE:	1/00
SURVEYED BY:	R. GILMAN	DRAWN BY:	J. TOUCHETTE
SQUAD LEADER:	C. C. BENDA	SHEET:	15 OF 42
DATE:	02/00		



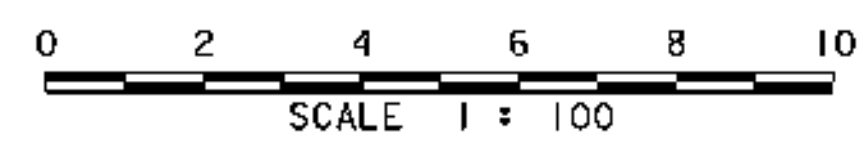


PLAN
SCALE 1 : 100



ELEVATION
SCALE 1 : 100

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (92)



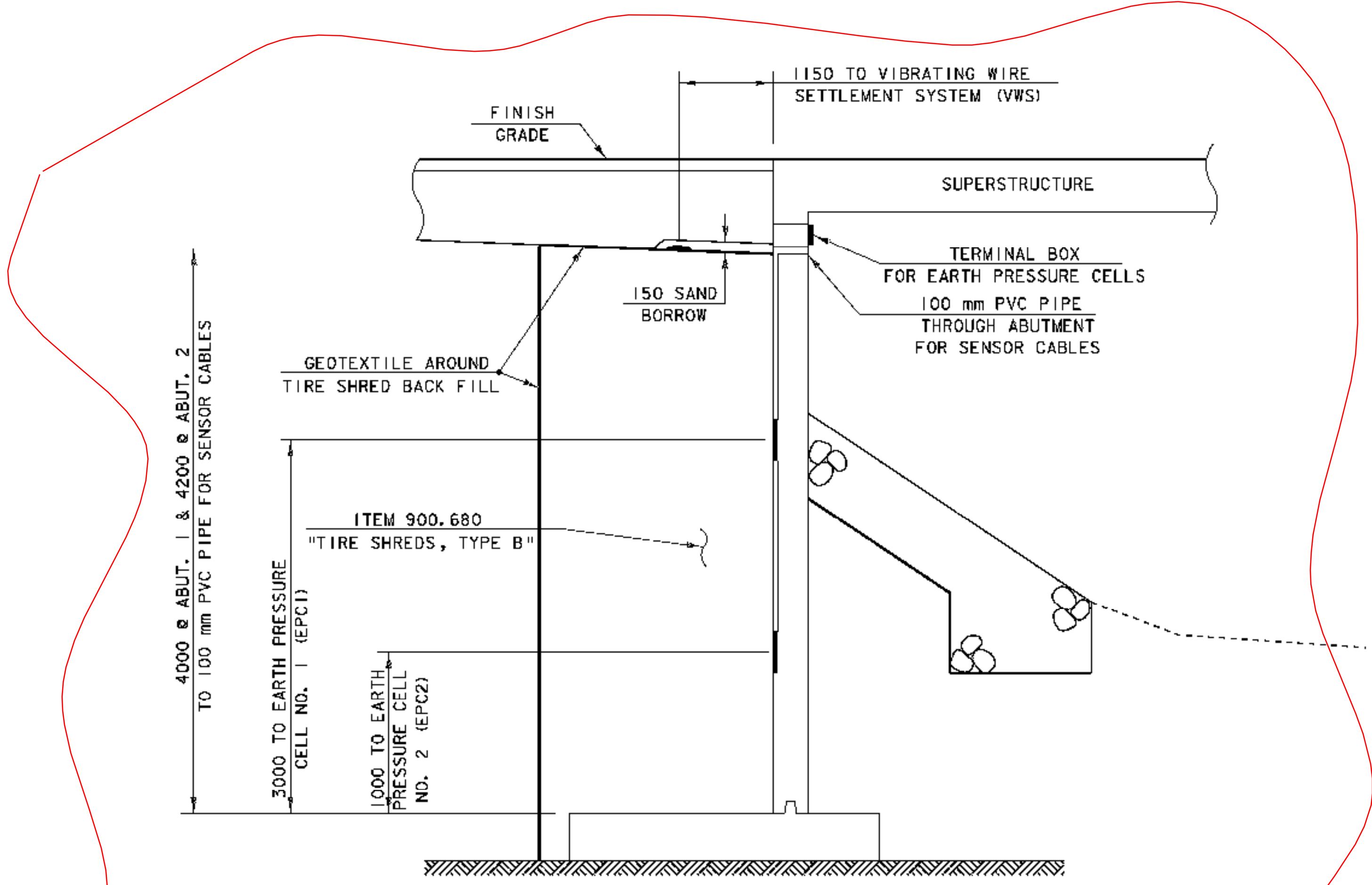
PROJECT: CABOT	PROJECT NO.: BRO 1446 (27)
DESIGN FILE NAME: 96J270/structures/sj270pe.dgn	PLOT DATE: 07-DEC-2007
IPARM FILE NAME: sj270pe.i	SURVEY DATE: 5/98
SURVEYED BY: R. GILMAN	DRAWN BY: D. G. BASSETT
SQUAD LEADER: C. P. WILLIAMS	SHEET: 16 OF 42
PLAN AND ELEVATION	

GENERAL NOTES

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SEVENTEENTH EDITION.
2. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 20° C, UNLESS OTHERWISE NOTED.
3. REINFORCING STEEL PLACEMENT TOLERANCE SHALL BE AS FOLLOWS:
 SPACING +/- 25mm
 CLEARANCE +/- 6mm
4. A ONE WAY TEMPORARY BRIDGE WILL BE USED TO MAINTAIN TRAFFIC DOWNSTREAM FROM EXISTING STRUCTURE.
5. ALL REINFORCING STEEL IN THE CONCRETE BRIDGE SLAB SHALL BE EPOXY COATED AND PAID FOR UNDER THE ITEM 507.17. WHEN EPOXY COATED REINFORCING STEEL IS CUT THE UNCOATED ENDS SHALL BE REPAIRED WITH MATERIALS AND PROCEDURES APPROVED BY THE COATING MANUFACTURER. FLAME CUTTING OF EPOXY COATED REINFORCING STEEL WILL NOT BE PERMITTED.
6. THE MINIMUM COVER FOR REINFORCING STEEL IN THE SUBSTRUCTURES SHALL BE 50mm ALONG WALL FACES AGAINST TIRE SHREDS, AND 80mm ELSEWHERE UNLESS DETAILED OTHERWISE
7. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 25mm X 25mm.
8. JOINTS AND SCORE MARKS IN THE CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
9. THE BRIDGE DECK SURFACE SHALL BE TEXTURED TRANSVERSELY USING A BROOM OR OTHER METHOD APPROVED BY THE ENGINEER. THE TEXTURING OPERATION SHALL BE DONE SO AS NOT TO INTERFERE WITH THE APPLICATION OF THE INITIAL CURE.
10. CONCRETE PORTIONS OF THE ABUTMENT AND WING WALL ABOVE THE ADJACENT BRIDGE SEAT ELEVATIONS SHALL NOT BE PLACED UNTIL THE FINISH GRADE HAS BEEN DETERMINED BY THE RESIDENT ENGINEER.
11. THE KEY IN THE CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT. UPWARD KEYS SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.
12. SILANE WATER REPELLENT SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE UNDERSIDE OF THE SLAB BETWEEN DRIP NOTCHES.
13. ANY EXISTING SIGNS NOT REUSED SHALL REMAIN THE PROPERTY OF THE TOWN OF CABOT.
14. FULL ACCESS TO ALL THE DRIVES WITHIN THE PROJECT SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
15. ITEM 529.15 "REMOVAL OF STRUCTURE" SHALL BE USED FOR REMOVAL OF THE EXISTING SUPERSTRUCTURE AND ANY PORTION OF THE SUBSTRUCTURE NOT REMOVED UNDER THE ITEM 208.35 "COFFERDAM EXCAVATION ROCK" OR ITEM 203.27 "UNCLASSIFIED CHANNEL EXCAVATION".
16. "STONE FILL TYPE III" SHALL BE PLACED IN FRONT OF THE ABUTMENTS BEFORE THE SLAB IS POURED.
17. THE BRIDGE PLAQUE SHALL BE FURNISHED BY THE AGENCY OF TRANSPORTATION AND INSTALLED BY THE CONTRACTOR AS SHOWN ON THE DETAILS SHEET 19.

SUBSTRUCTURES ON LEDGE:

18. THE FOOTINGS FOR THE SUBSTRUCTURES SHALL BE FOUNDED ON LEDGE, WHICH SHALL BE CLEANED OF ALL LOOSE ROCK AND OTHER DEBRIS. THE LEDGE SHALL BE REMOVED AS REQUIRED TO ENSURE THE FOOTINGS ARE PLACED ON COMPETENT ROCK.
19. UPON COMPLETION OF STRUCTURE EXCAVATION AND PRIOR TO PLACING FORMWORK, THE RESIDENT ENGINEER SHALL CONTACT THE SOILS AND FOUNDATION ENGINEER/ENGINEERING GEOLOGIST FROM THE VERMONT AGENCY OF TRANSPORTATION TO INSPECT THE LEDGE TO DETERMINE IF IT IS COMPETENT TO SUPPORT THE DESIGN PRESSURE AS SHOWN ON THE PLANS. THE GEOLOGIST SHALL BE ALLOWED 5 WORKING DAYS FROM NOTICE OF EXCAVATION TO MAKE THE INSPECTION AND THE DETERMINATION OF THE COMPETENCY OF THE LEDGE.
20. LEDGE THAT IS EXCAVATED FOR THE PLACEMENT OF FOOTINGS SHALL BE EXCAVATED TO PROVIDE A LEVEL SURFACE OR AS DIRECTED BY THE RESIDENT ENGINEER.
21. A MAXIMUM OF 150mm OVERBREAKAGE WILL BE ALLOWED AND REPLACED WITH "CONCRETE, HIGH PERFORMANCE CLASS B". OVERBREAKAGE BEYOND 150mm WILL BE REPLACED WITH "CONCRETE, HIGH PERFORMANCE CLASS B" AT THE EXPENSE OF THE CONTRACTOR.
22. FOR ALL SUBSTRUCTURE UNITS WHERE LEDGE IS WITHIN 300mm OF THE BOTTOM OF THE FOOTING AS DESIGNED, THE FOOTING MAY BE POURED TO THE TOP OF THE LEDGE USING "CONCRETE, HIGH PERFORMANCE CLASS B".
23. FOR ALL SUBSTRUCTURE UNITS WHERE LEDGE IS BELOW THE BOTTOM OF FOOTING BY MORE THAN 300mm, A LEDGE PROFILE SHALL BE PROVIDED TO THE PROJECT MANAGER TO DETERMINE IF THE FOOTING MAY BE LOWERED OR IF A SUBFOOTING IS REQUIRED. IF A SUBFOOTING IS REQUIRED IT WILL BE PAID FOR UNDER THE ITEM 541.30 "CONCRETE, CLASS C".
24. IF LEDGE IS ABOVE THE DESIGN BOTTOM OF FOOTING, THE FOOTING ELEVATION MAY BE RAISED. BEFORE ANY ADJUSTMENT IS MADE IN FOOTING ELEVATIONS THE PROJECT MANAGER SHALL BE CONTACTED FOR APPROVAL.
25. #25 DOWELS SHALL BE DRILLED AND GROUTED INTO LEDGE AS SHOWN ON THE PLANS. THE DOWELS SHALL HAVE A 600mm EMBEDMENT IN THE LEDGE AND SHALL EXTEND IN THE FOOTING A MINIMUM OF 450mm UNLESS NOTED OTHERWISE. THE DRILLING AND GROUTING SHALL BE PAID FOR UNDER THE ITEM 507.16 "DRILLING AND GROUTING DOWELS". HOWEVER, THE DOWELS SHALL BE PAID FOR UNDER THE ITEM 507.15 "REINFORCING STEEL".



THIS WORK ELIMINATED AS PER C.O. #1 GRANULAR BACKFILL FOR STRUCTURES USED TO REPLACE THE "TIRE SHREDS, TYPE B".

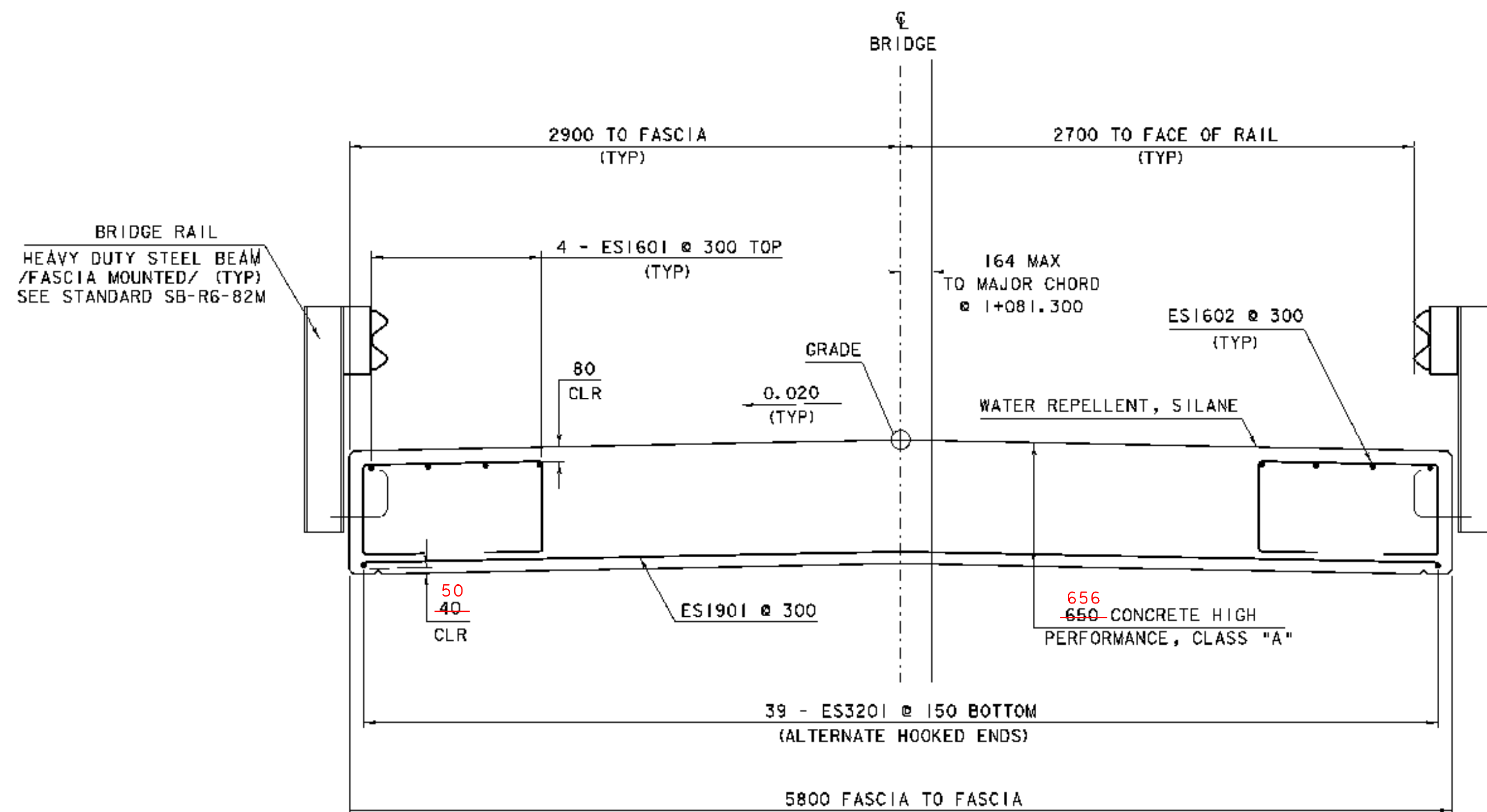
GEOTECHNICAL INSTRUMENTATION LOCATION AT ABUTMENTS
 NTS

GEOTECHNICAL INSTRUMENTATION NOTES:

1. ALL EARTH PRESSURE CELLS AND THE VIBRATING WIRE SETTLEMENT SYSTEM SHALL BE PLACED AS SHOWN, AT THE ROADWAY CENTERLINE.
2. CONCRETE RECESSES SHALL BE PROVIDED FOR ALL EARTH PRESSURE CELLS AND WIRING. SEE RECESS DIMENSIONS ON SHEETS 20-21.
3. THE TERMINAL BOX FOR THE EARTH PRESSURE CELLS WILL BE LOCATED ON THE FRONT FACE OF THE ABUTMENT BENEATH THE BRIDGE AS SHOWN ON SHEETS 20-21.
4. THE TERMINAL BOX FOR THE VIBRATING WIRE SETTLEMENT SYSTEM WILL BE MOUNTED ON THE FRONT FACE OF THE ABUTMENT AS SHOWN ON SHEETS 20-21.
5. THE EARTH PRESSURE CELLS SHALL BE PAID FOR UNDER THE ITEM 900.620 SPECIAL PROVISION (EARTH PRESSURE CELL)
6. THE VIBRATING WIRE SETTLEMENT SYSTEM SHALL BE PAID FOR UNDER THE ITEM 900.620 SPECIAL PROVISION (VIBRATING WIRE SETTLEMENT SYSTEM).
7. THE 100 mm PVC PIPE REQUIRED FOR THE SENSOR CABLES SHALL BE INCIDENTAL TO ITEM 900.620 SPECIAL PROVISION (VIBRATING WIRE SETTLEMENT SYSTEM).

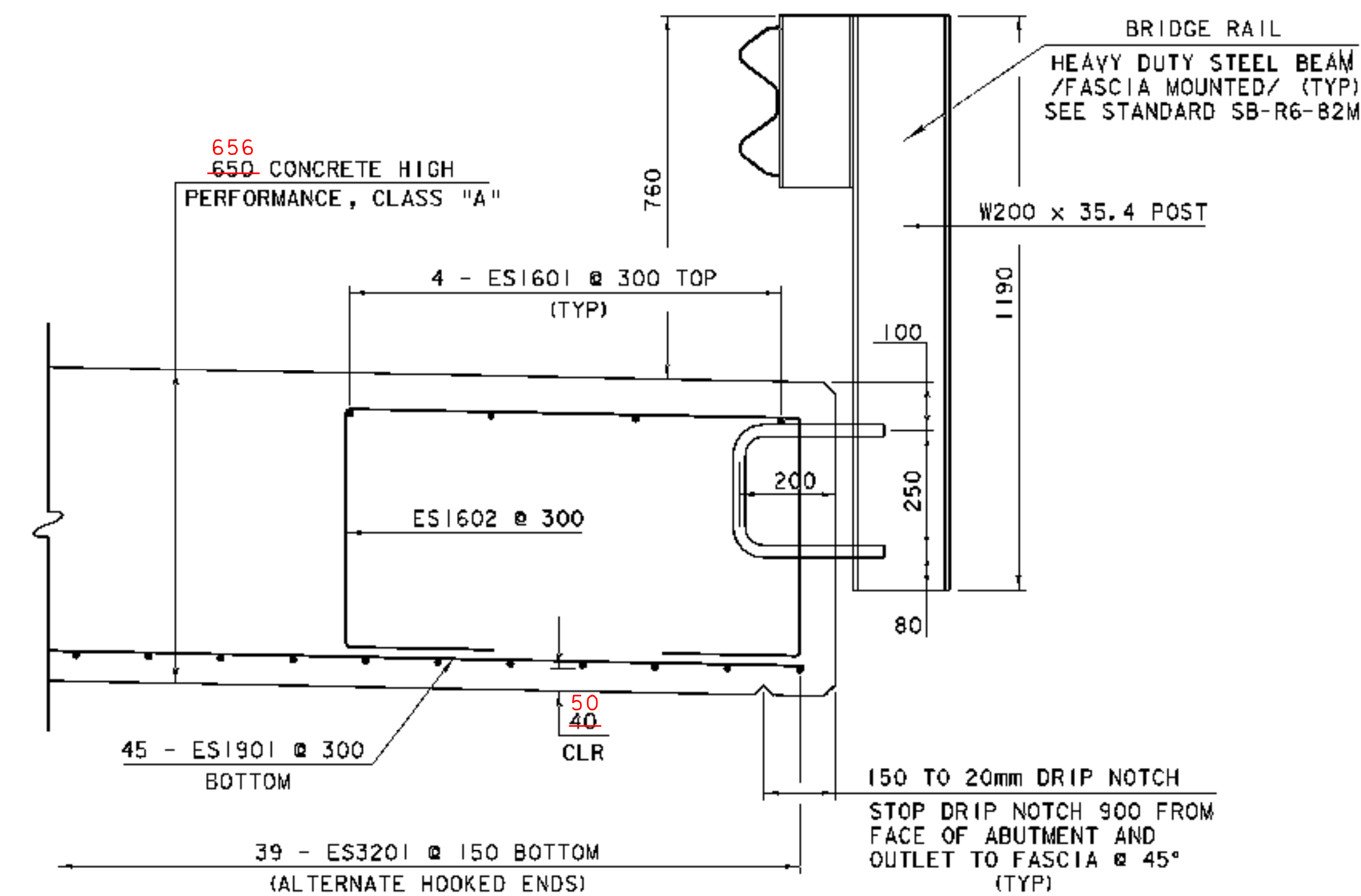
PROJECT: CABOT	PROJECT NO. # BRO 1446 (27)
DESIGN FILE NAME: /96]270/structures/sj270g1b.dgn	PLOT DATE: 07-DEC-2007
IPARM FILE NAME: sj270note.i	DRAWN BY: J.B. HUSSEY
DESIGNED BY: J.B. HUSSEY	CHECKED BY: K.M. HIGGINS
SQUAD LEADER: C.P. WILLIAMS	SHEET: 17 OF 42
GENERAL NOTES	

NOTE - SLAB THICKNESS INCREASED TO ALLOW 50mm CLEARANCE TO THE BOTTOM INSTEAD OF THE CALLED FOR 40mm.



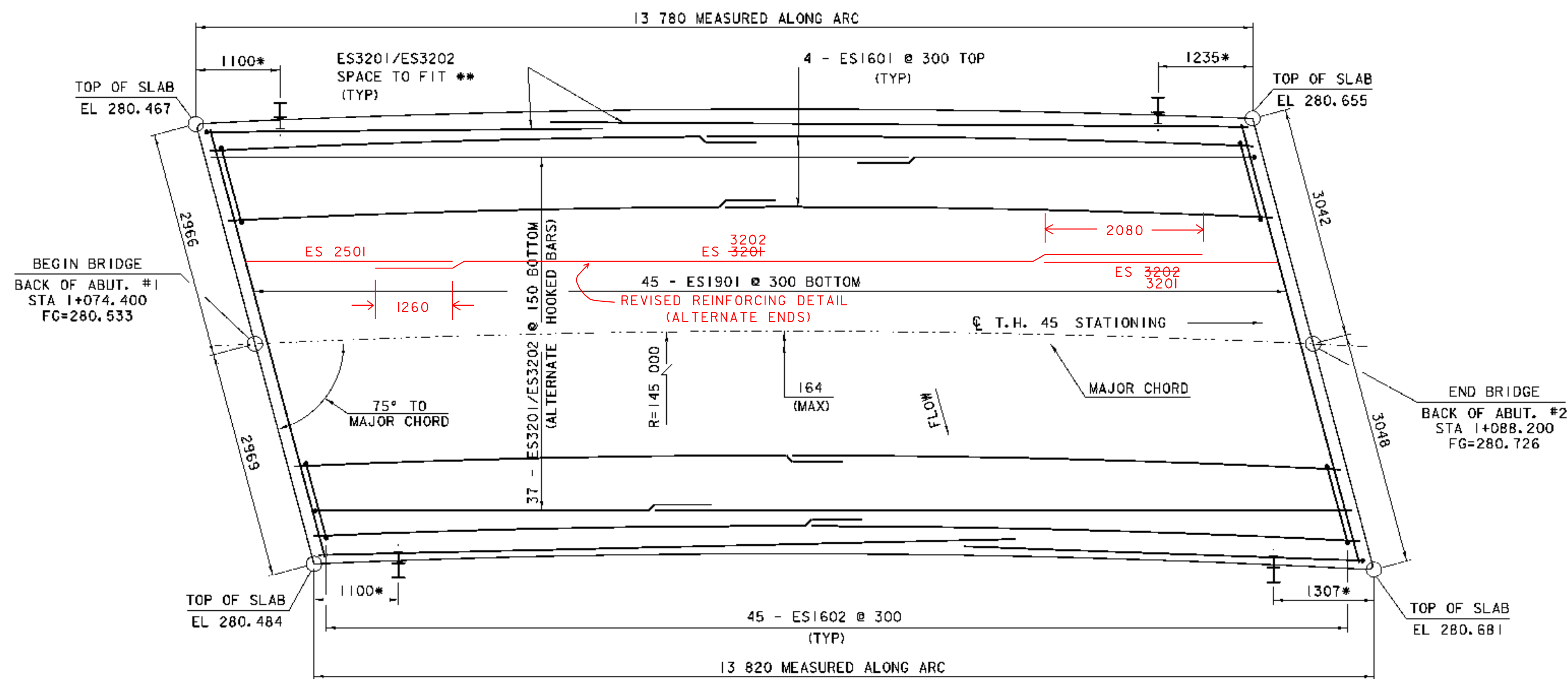
BRIDGE TYPICAL SECTION

SCALE 1 : 20



FASCIA & RAILING DETAILS

SCALE 1 : 10

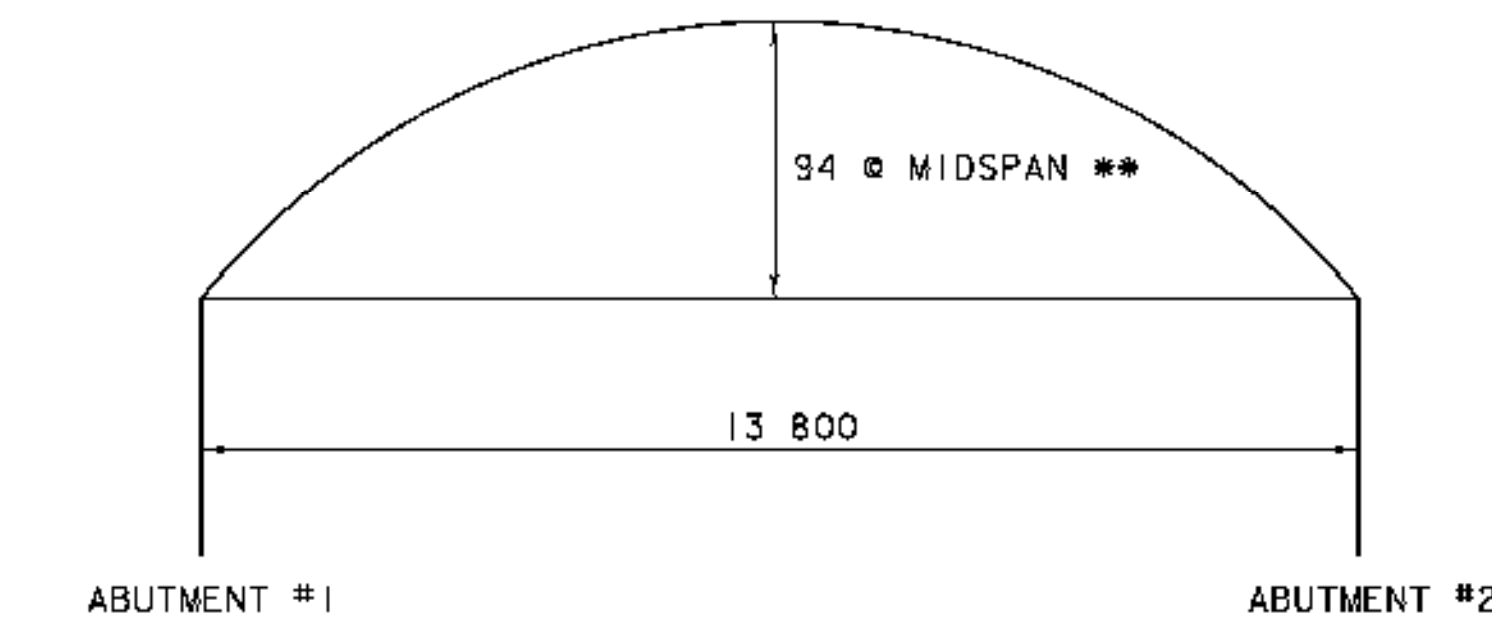


BRIDGE PLAN

SCALE 1 : 40

* MEASURED ALONG FASCIA

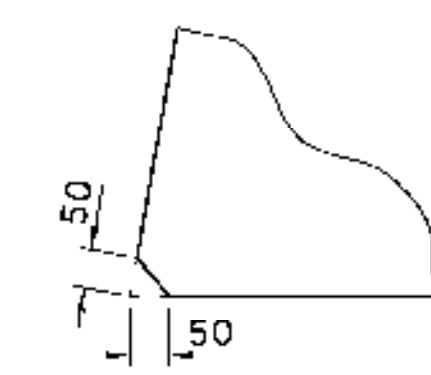
** REINFORCING BARS ES3201 & ES3202 WILL BE PLACED ALONG EDGES IN SUCH A WAY TO ACCOMMODATE RADIUS OF CURVED SLAB WHILE MAINTAINING 80mm CLEARANCE REQUIREMENTS.



** SET CONSTRUCTION FORMS TO THIS CAMBER CAMBER SHALL APPROXIMATE A CIRCULAR CURVE

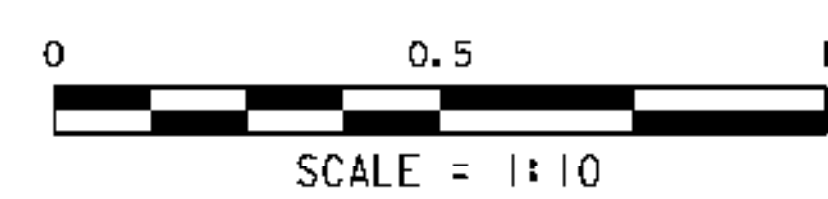
CAMBER

NTS

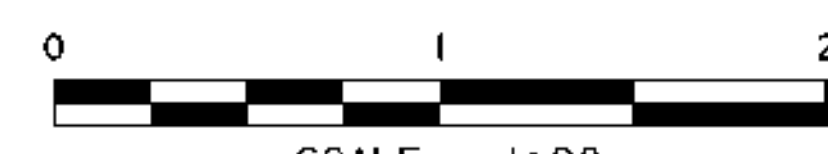


ACUTE CORNER DETAIL

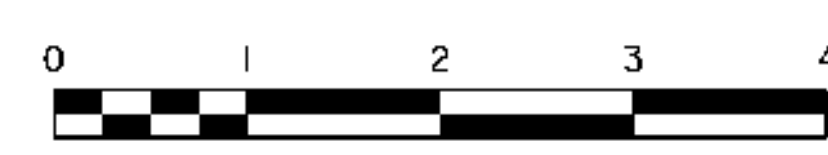
SCALE 1 : 10



SCALE = 1 : 10

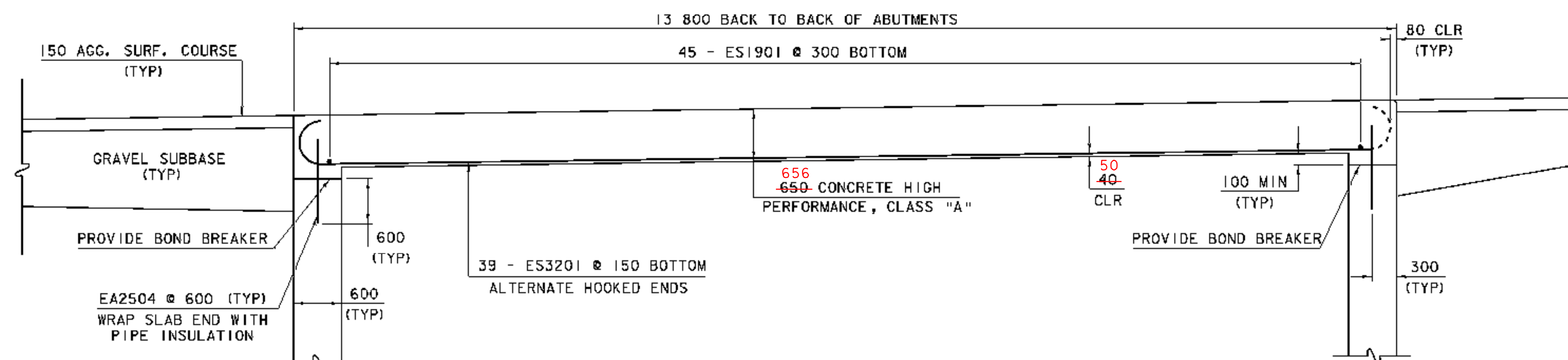


SCALE = 1 : 20



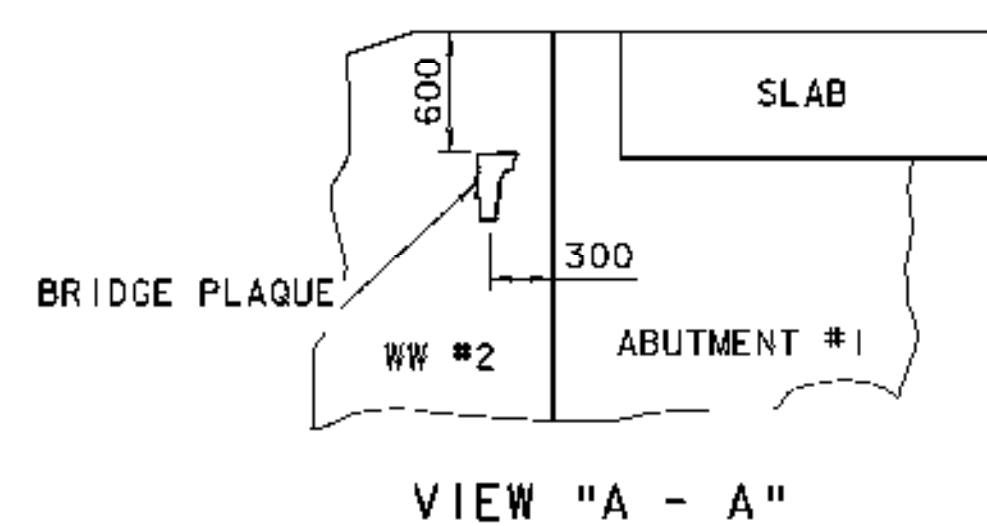
SCALE = 1 : 40

PROJECT: CABOT	PROJECT NO.: BRO 1446 (27)
DESIGN FILE NAME: /96j270/structures/sj270s1b.dgn	PLOT DATE: 07-DEC-2007
IPARM FILE NAME: sj270s1b.i	DRAWN BY: J.B.HUSSEY
DESIGNED BY: J.B.HUSSEY	CHECKED BY: K.M.HIGGINS
SQUAD LEADER: C.P.WILLIAMS	SHEET: 18 OF 42
SLAB DETAILS	



ELEVATION ALONG ROADWAY

SCALE 1 : 40

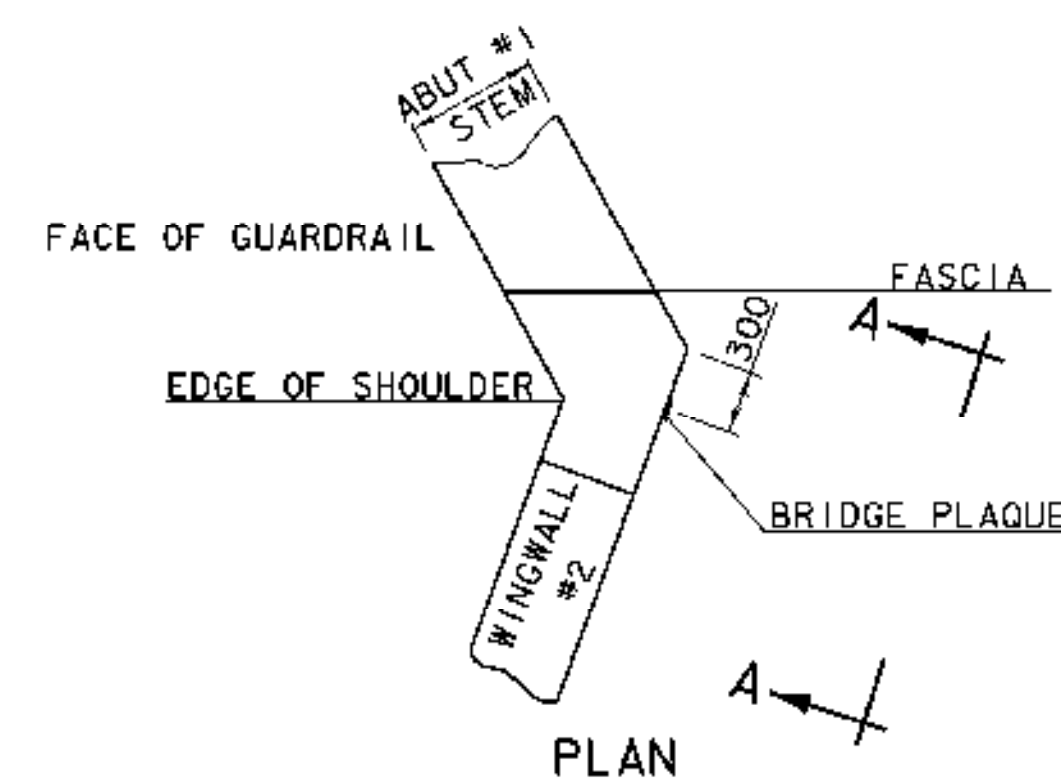


VIEW "A - A"

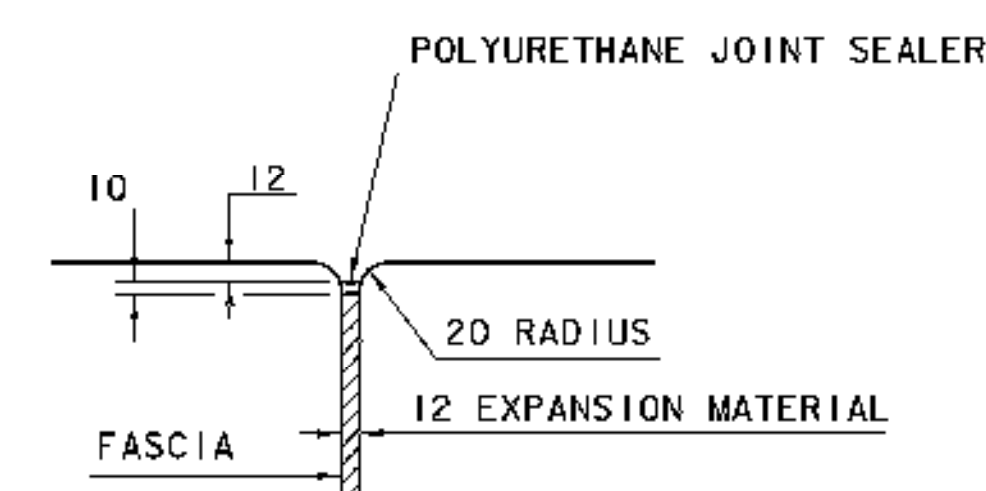
LOCATE BRIDGE PLAQUE

NTS

The bridge plaque will be supplied by The Agency of Transportation and shall be installed by the contractor at abutment #1 on the right side as shown or as directed by the engineer. Payment will be considered incidental to contract item 501.34



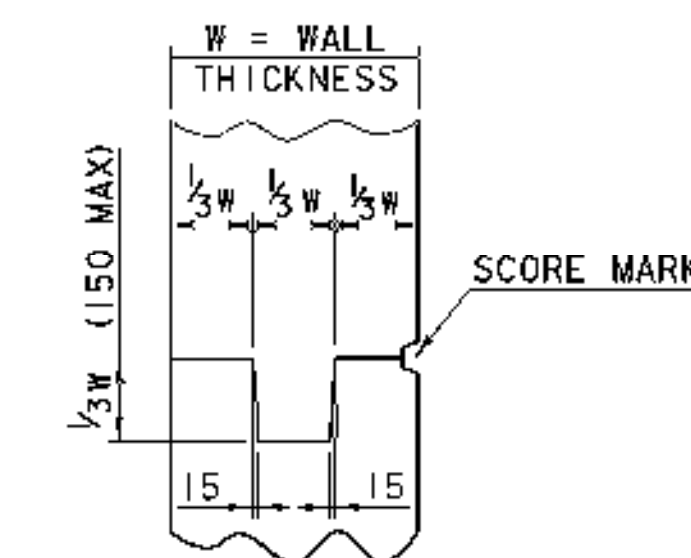
PLAN



NOTE: PAYMENT FOR JOINT SEALER AND EXPANSION MATERIAL WILL BE CONSIDERED INCIDENTAL TO CONTRACT ITEM 501.34

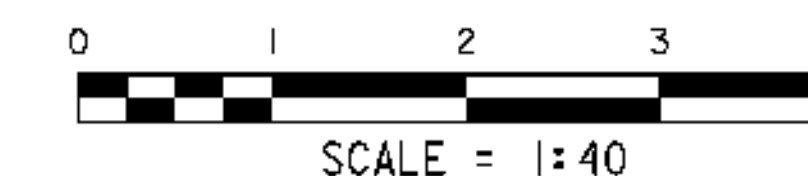
JOINT BETWEEN FASCIA AND WINGWALL

NTS



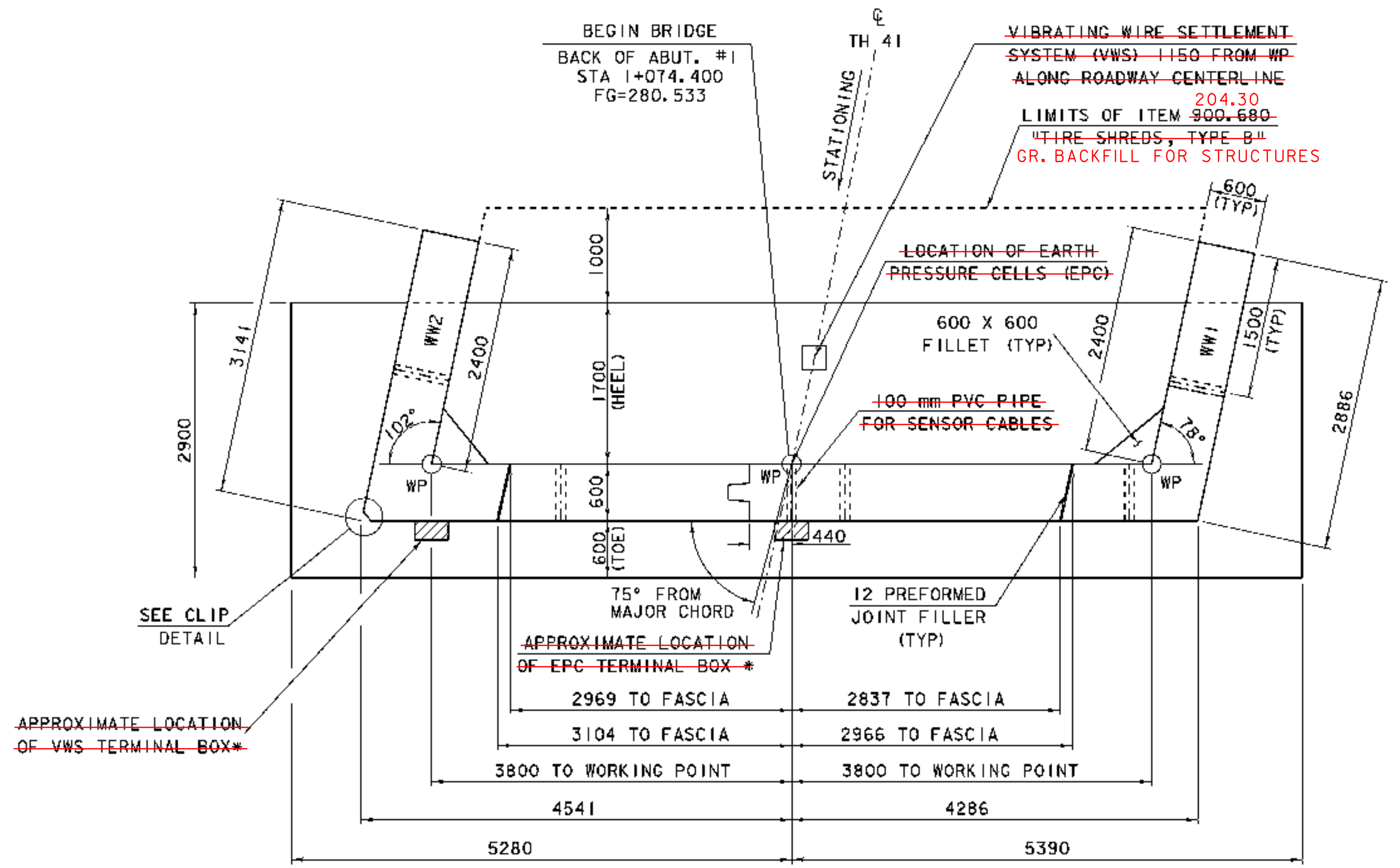
TYPICAL CONCRETE CONSTRUCTION JOINT

NTS

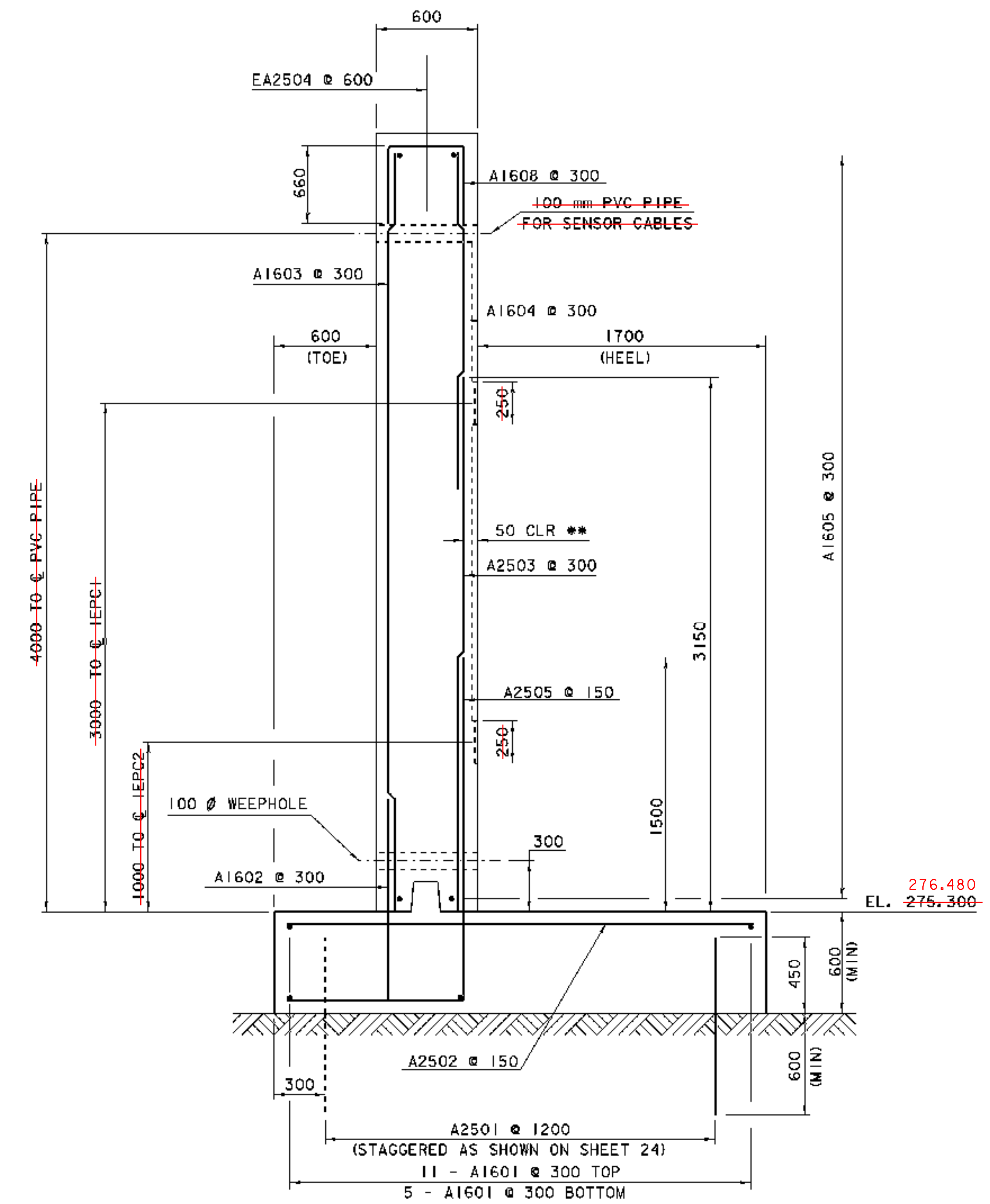


PROJECT: CABOT	PROJECT NO. # BRO 1446 (27)
DESIGN FILE NAME: /96j270/structures/sj270s1b.dgn	PLOT DATE: 07-DEC-2007
IPARM FILE NAME: sj270misdet.i	DRAWN BY: J.B. HUSSEY
DESIGNED BY: J.B. HUSSEY	CHECKED BY: K.M. HIGGINS
SQUAD LEADER: C.P. WILLIAMS	SHEET: 19 OF 42
MISCELLANEOUS DETAILS	

NOTE 2: VWS, EPC, AND ITEM 900.680 ALL ELIMINATED AS PER C.O. #1.



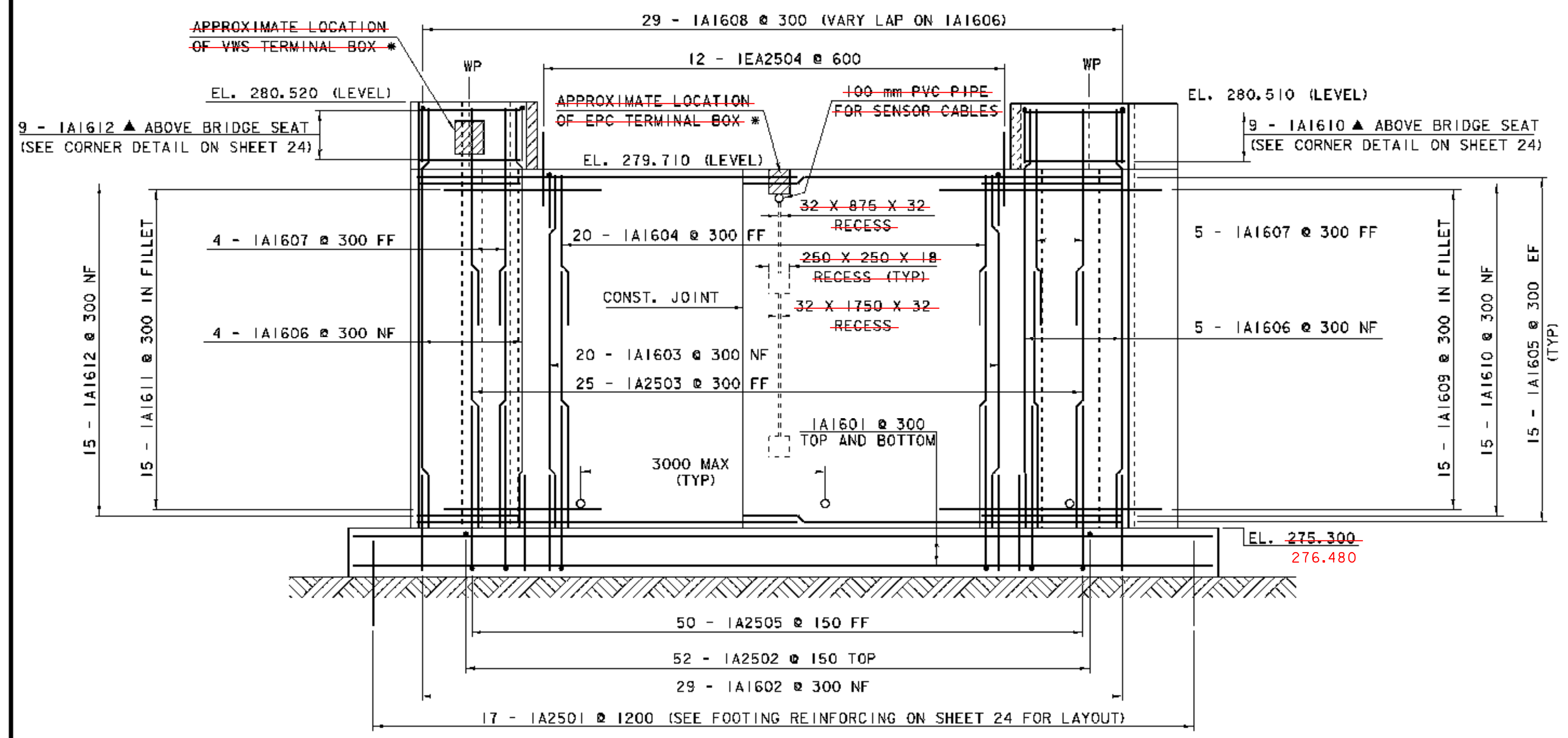
ABUTMENT NO. 1 PLAN
SCALE 1:40



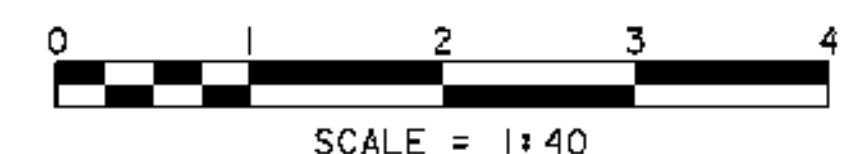
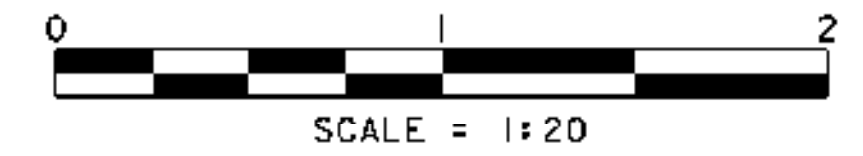
ABUTMENT NO. 1 TYPICAL SECTION
SCALE 1:20

- NOTES:**
- NF = NEAR FACE
 - FF = FAR FACE
 - EF = EACH FACE
 - ▲ = CUT TO FIT IN FIELD
 - 80mm CLEAR UNLESS OTHERWISE SPECIFIED ON THE PLANS.
 - ALL LAP SPLICES NOT DETAILED SHALL BE 660mm
 - ** MOVE REINFORCING STEEL TO MAINTAIN 50 mm CLEAR AT RECESS

NOTE 1: FOOTING ELEVATION RAISED UPON ENCOUNTERING COMPETENT LEDGE AT A HIGHER ELEVATION THAN ANTICIPATED.

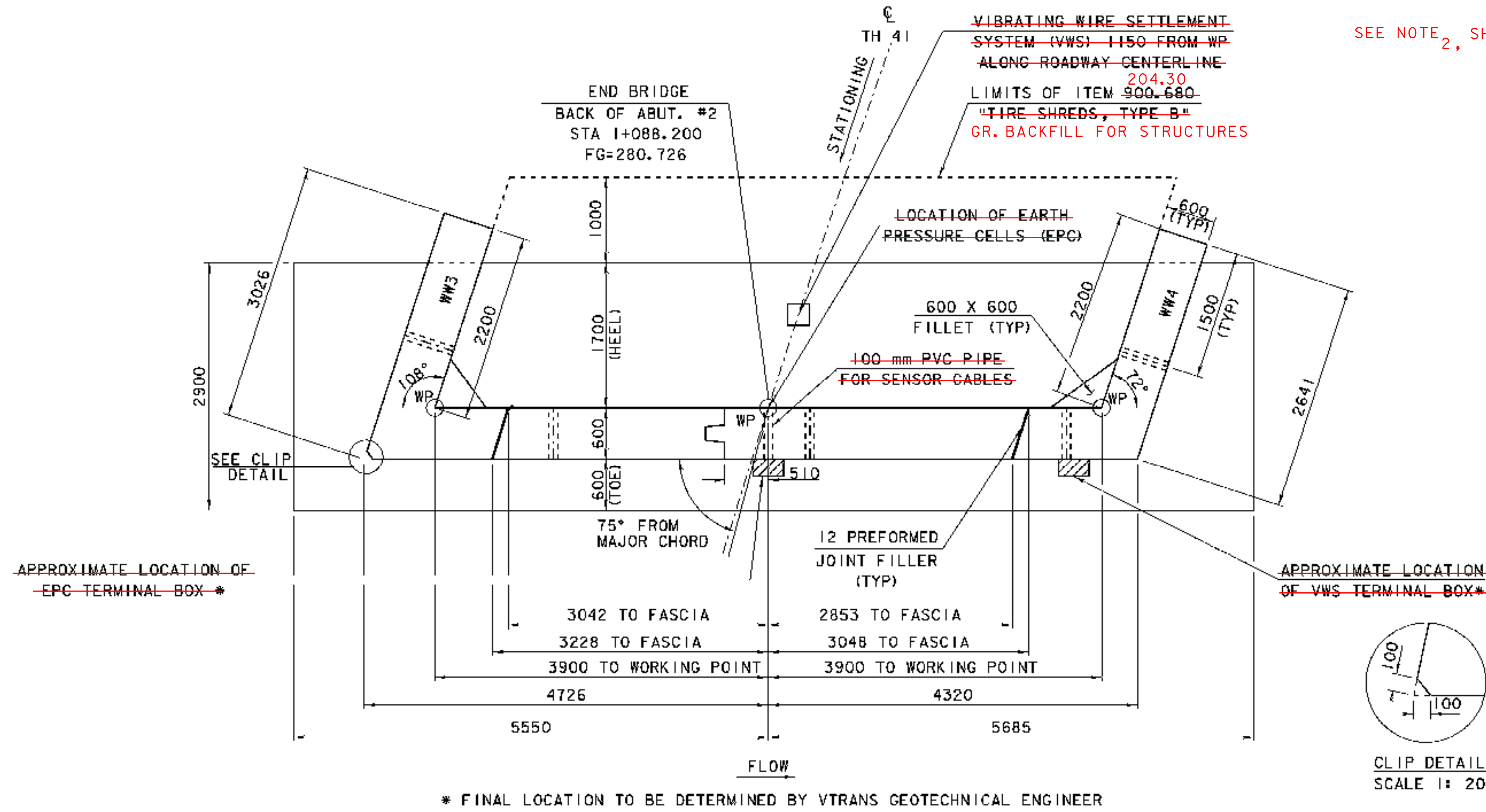


ABUTMENT NO. 1 ELEVATION
SCALE 1:40



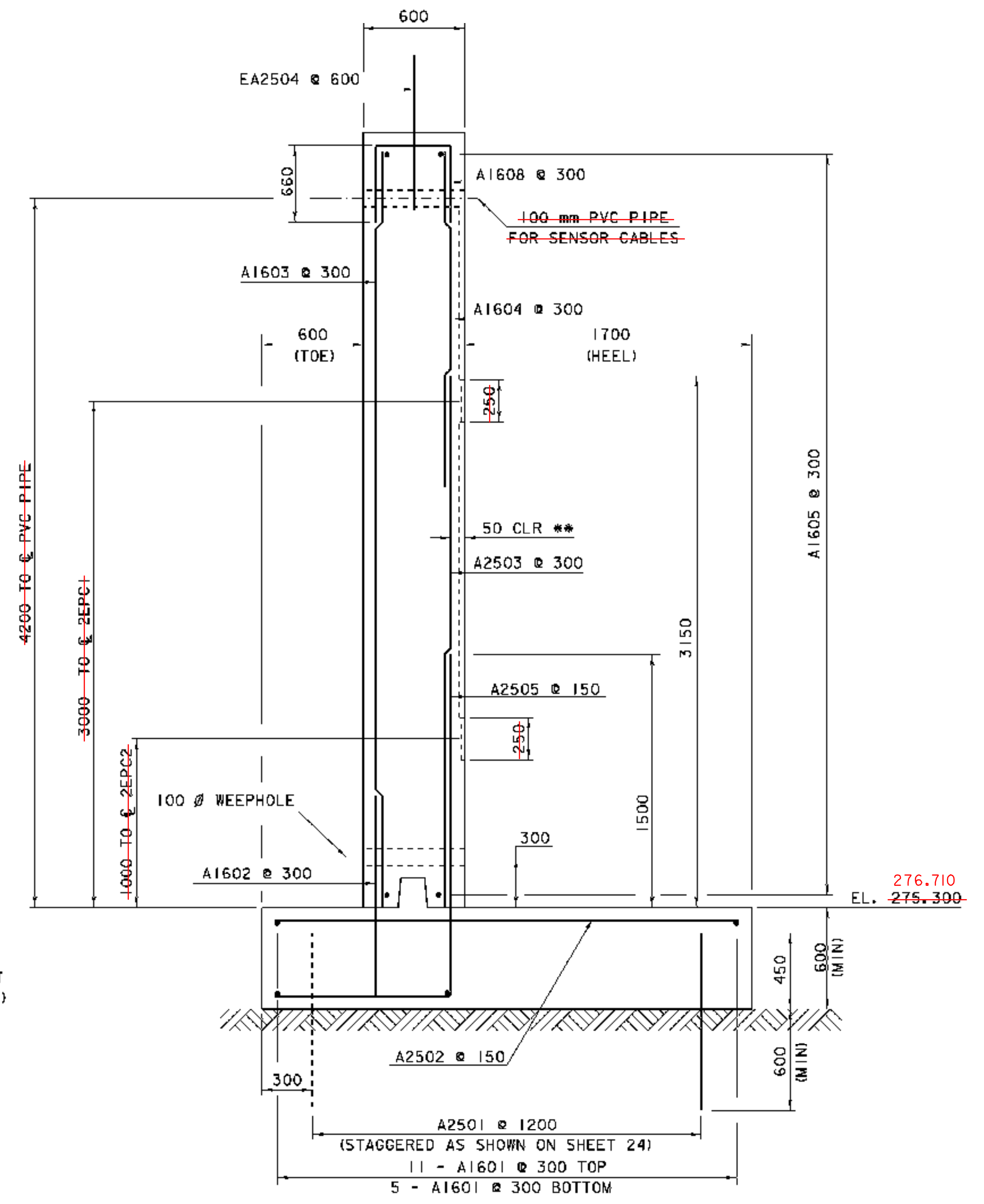
PROJECT: CABOT	PROJECT NO.: BRO 1446 (27)
DESIGN FILE NAME: /96j270/structures/sj270sub.dgn	PLOT DATE: 07-DEC-2007
IPARM FILE NAME: sj270abi.i	DESIGNED BY: J. B. HUSSEY
DESIGNED BY: J. B. HUSSEY	DRAWN BY: L. C. ASHWORTH
SQUAD LEADER: C. P. WILLIAMS	CHECKED BY: K. M. HIGGINS
ABUTMENT #1 DETAIL SHEET	SHEET: 20 OF 42

SEE NOTE 2, SHEET 20 OF 42.



ABUTMENT NO. 2 PLAN

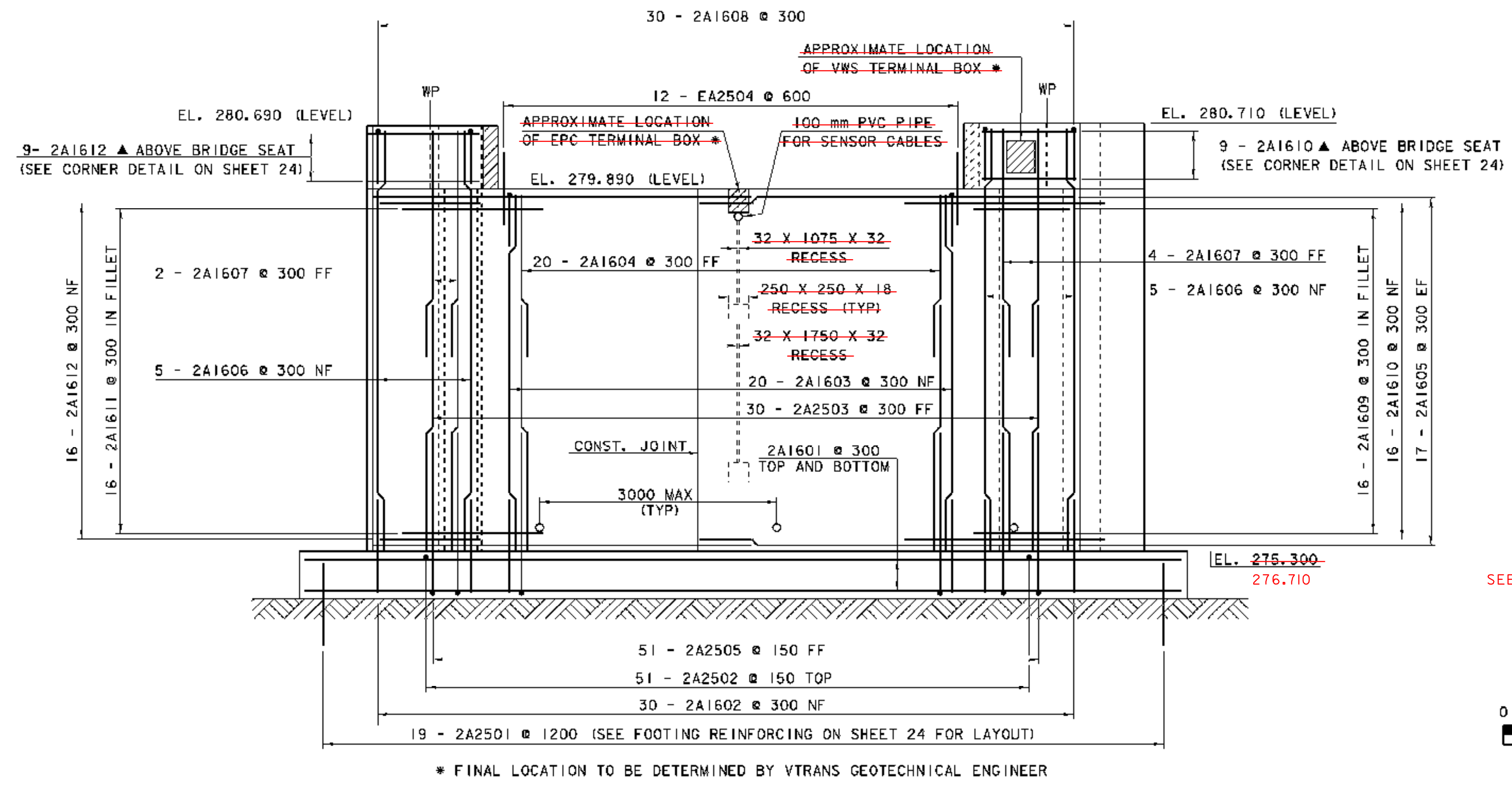
SCALE 1:40



ABUTMENT NO. 2 TYPICAL SECTION

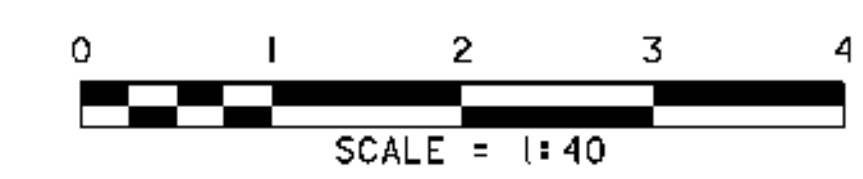
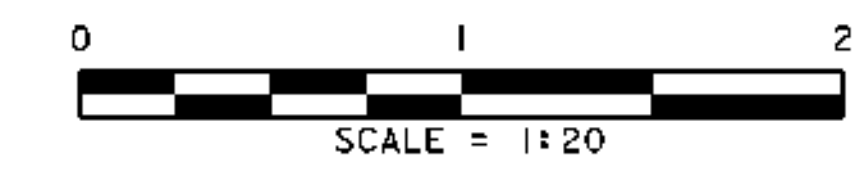
SCALE 1:20

- NOTES:**
- NF = NEAR FACE
 - FF = FAR FACE
 - EF = EACH FACE
 - ▲ = CUT TO FIT IN FIELD
 - 80mm CLEAR UNLESS OTHERWISE SPECIFIED ON THE PLANS.
 - ALL LAP SPLICES NOT DETAILED SHALL BE 660mm
 - ** MOVE REINFORCING STEEL TO MAINTAIN 50 mm CLEAR AT RECESS



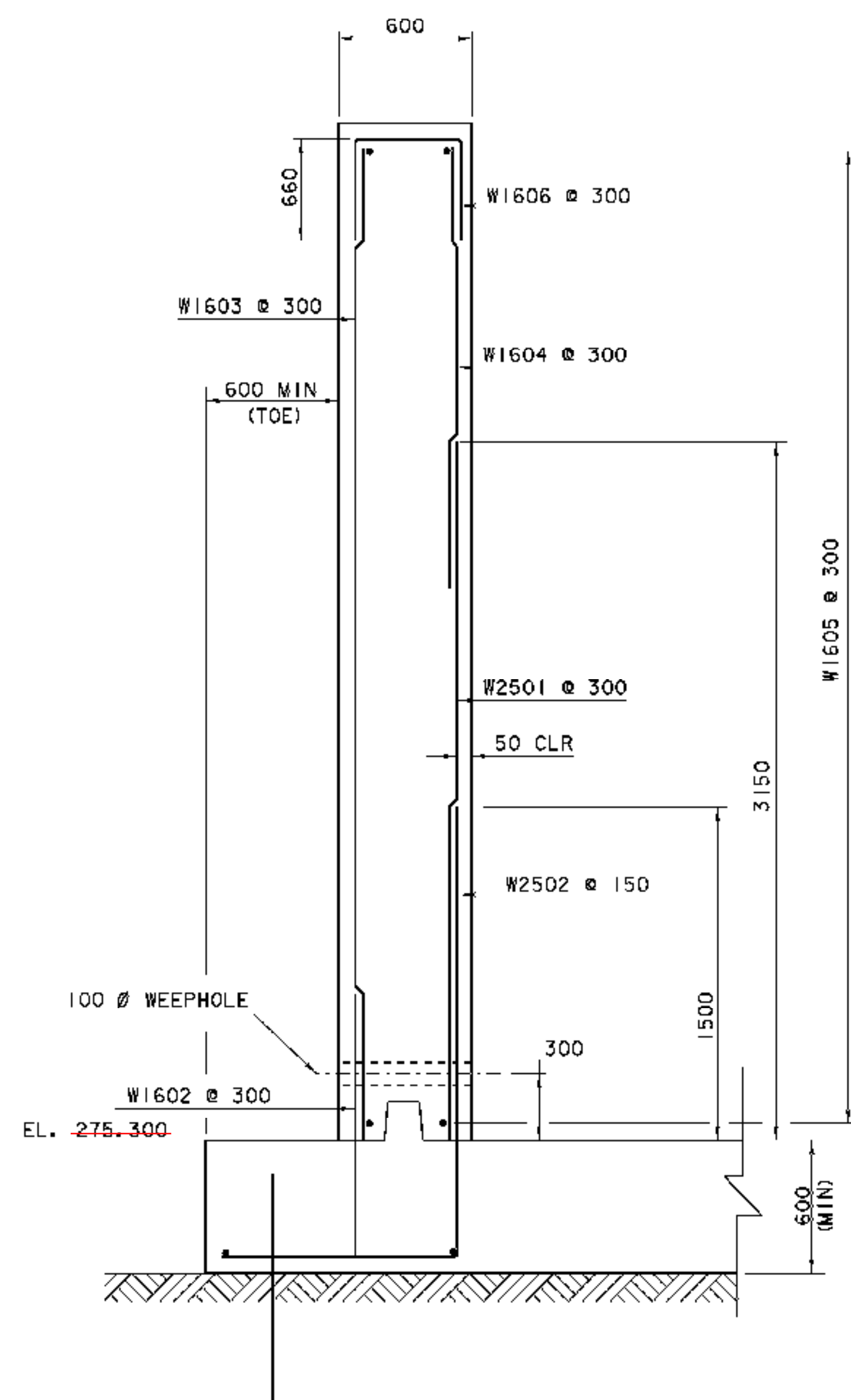
ABUTMENT NO. 2 ELEVATION

SCALE 1:40



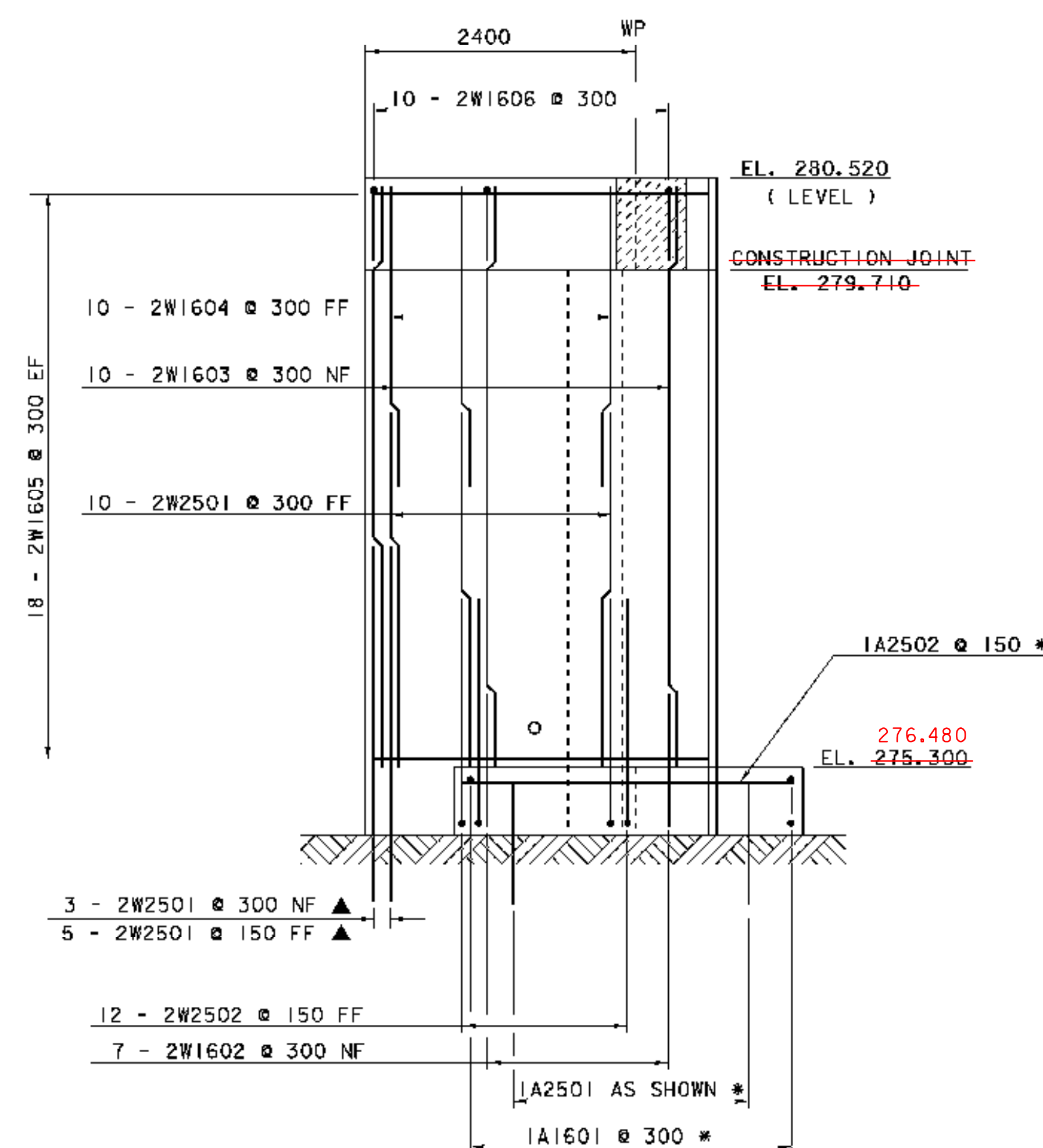
SEE NOTE 1, SHEET 20 OF 42

PROJECT: CABOT	PROJECT NO.: BRO 1446 (27)
DESIGN FILE NAME: /96/270/structures/s/270sub.dgn	PLOT DATE: 07-DEC-2007
IPARM FILE NAME: s/270ab2.1	DRAWN BY: L. C. ASHWORTH
DESIGNED BY: J. B. HUSSEY	CHECKED BY: K. M. HIGGINS
SQUAD LEADER: C. P. WILLIAMS	SHEET: 21 OF 42
ABUTMENT#2 DETAIL SHEET	



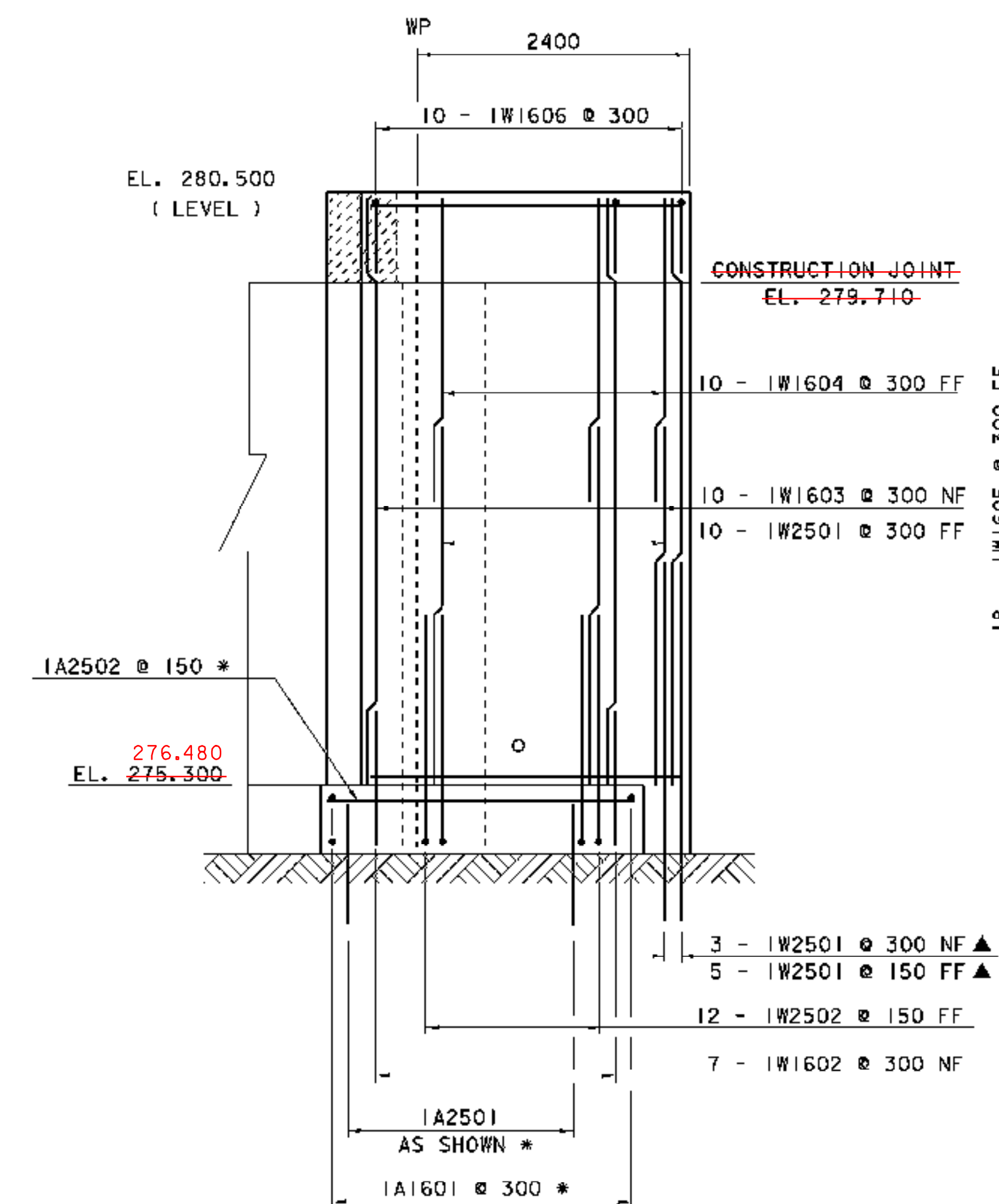
WINGWALL TYPICAL SECTION

SCALE 1:20



WINGWALL #2 ELEVATION

SCALE 1:40



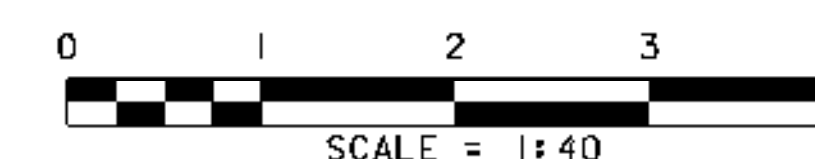
WINGWALL #1 ELEVATION

SCALE 1:40

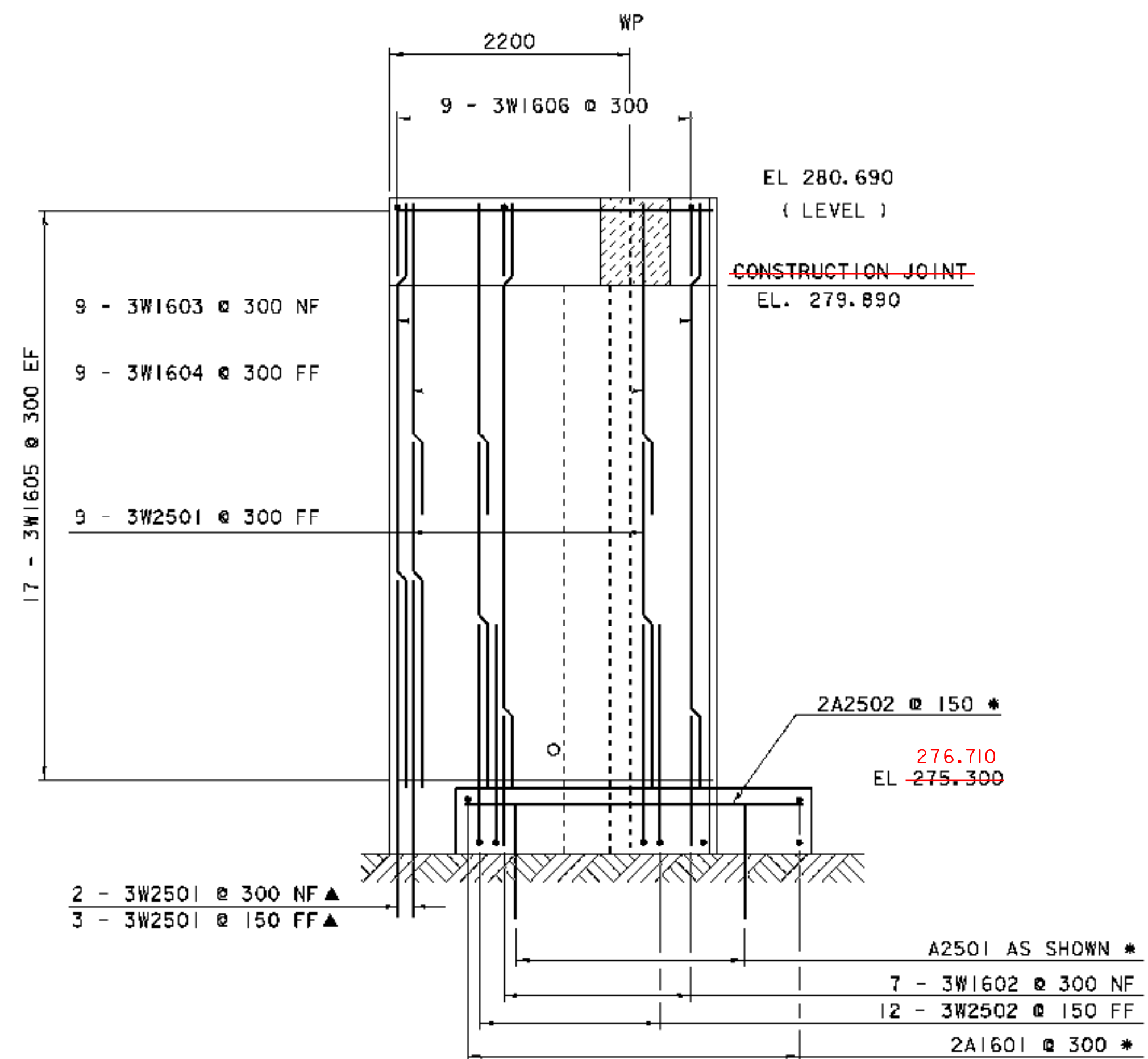
* SEE FOOTING REINFORCING PLAN ON SHEET 24 FOR LAYOUT

NOTES:

- NF = NEAR FACE
- FF = FAR FACE
- EF = EACH FACE
- ▲ = CUT TO FIT IN FIELD
- 80mm CLEAR UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- ALL LAP SPLICES NOT DETAILED SHALL BE 660mm

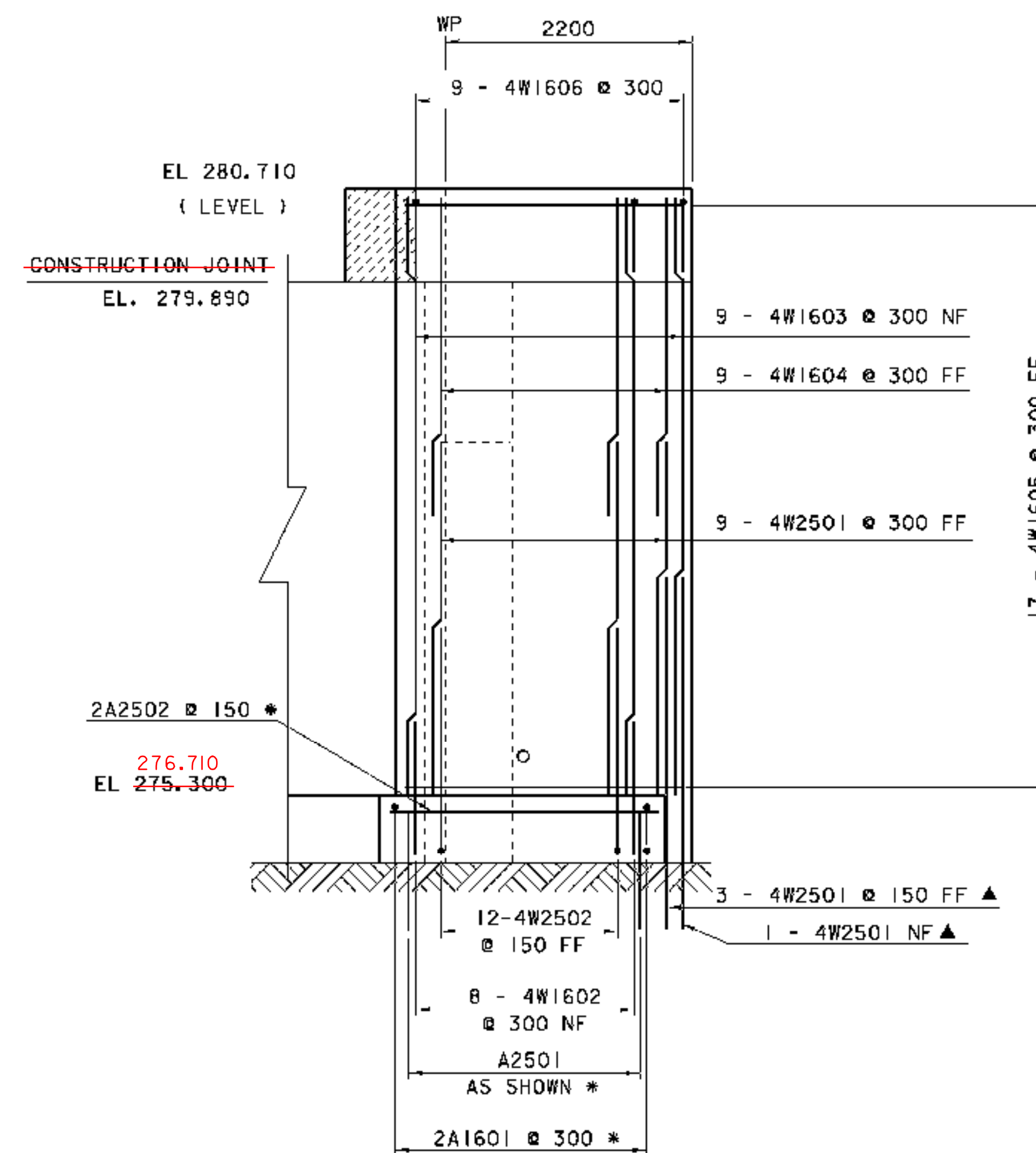


PROJECT: CABOT	PROJECT NO.: BRO 1446 (27)
DESIGN FILE NAME: /96j270/structures/sh270sub.dgn	PLOT DATE: 07-DEC-2007
IPARM FILE NAME: sj270ww1.1	DRAWN BY: L. C. ASHWORTH
DESIGNED BY: J. B. HUSSEY	CHECKED BY: K. M. HIGGINS
SQUAD LEADER: C. P. WILLIAMS	SHEET: 22 OF 42
WINGWALL DETAIL SHEET #1	



WINGWALL #3 ELEVATION

SCALE 1:40



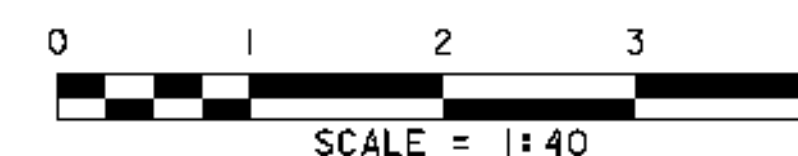
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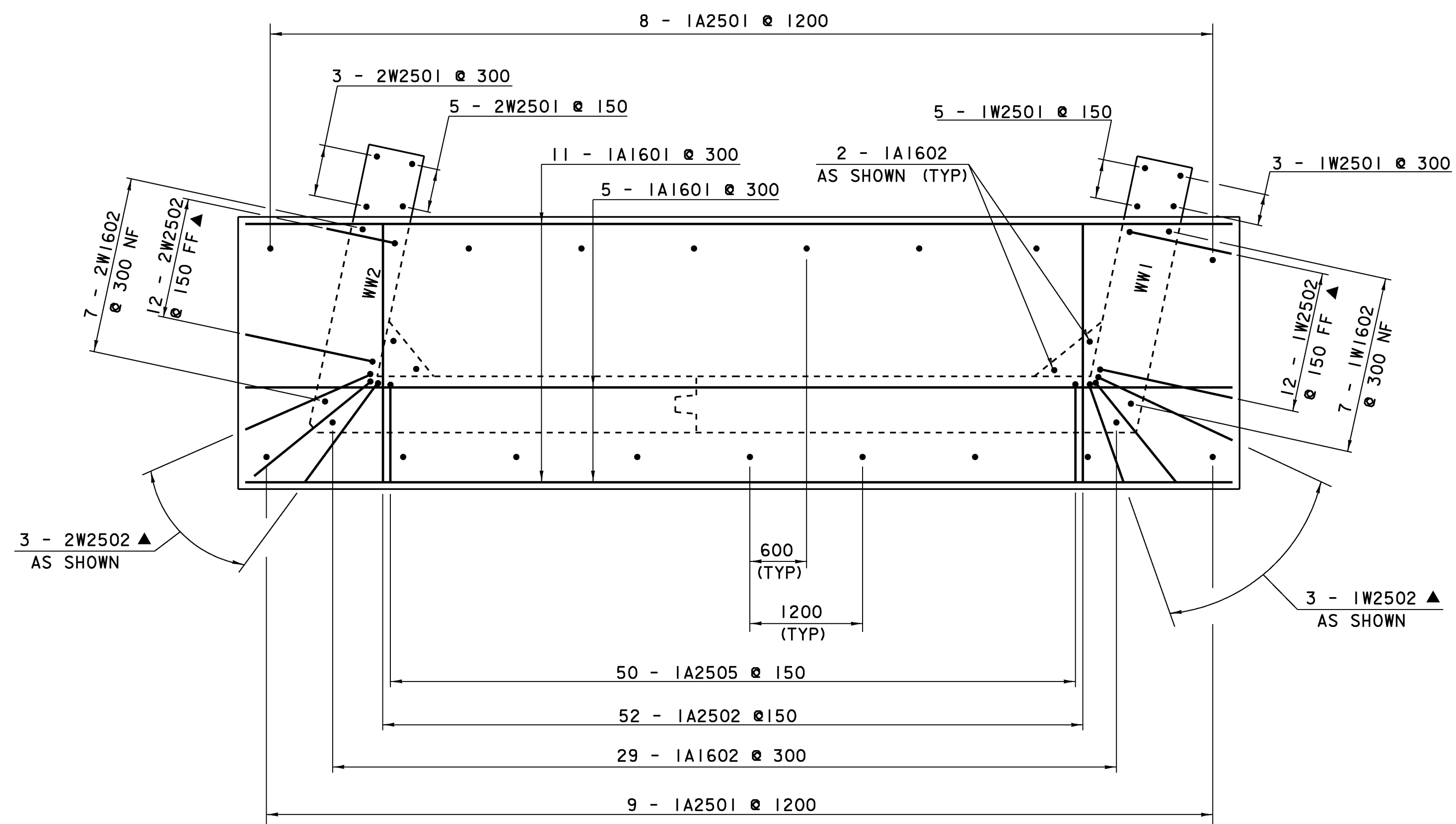
* SEE FOOTING REINFORCING PLAN ON SHEET 24 FOR LAYOUT

NOTES:

- NF = NEAR FACE
- FF = FAR FACE
- EF = EACH FACE
- ▲ = CUT TO FIT IN FIELD
- 80mm CLEAR UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- ALL LAP SPLICES NOT DETAILED SHALL BE 660mm

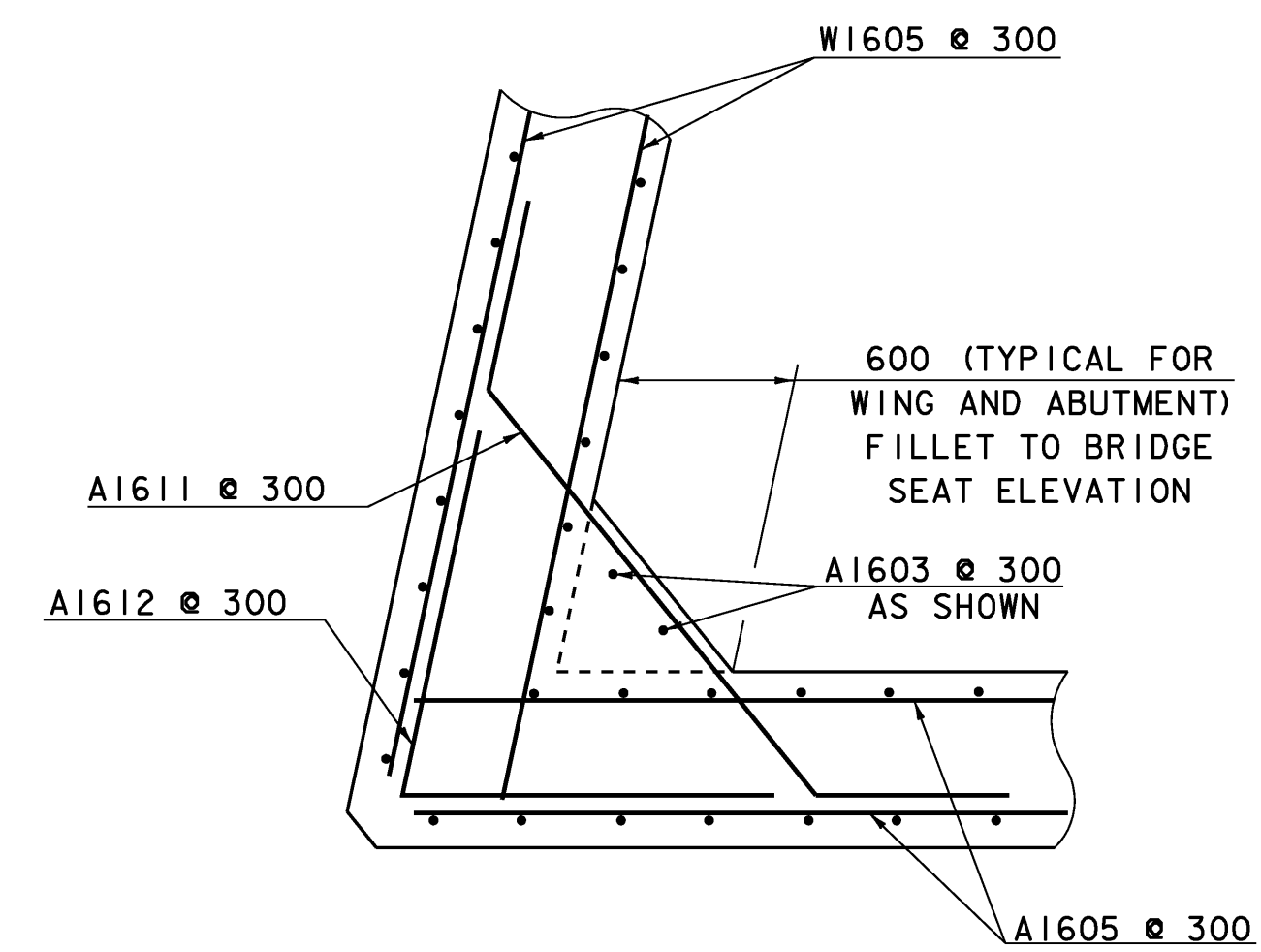


PROJECT: CABOT	PROJECT NO.: BRO 1446 (27)
DESIGN FILE NAME: /96j270/structures/sj270sub.dgn	PLOT DATE: 07-DEC-2007
IPARM FILE NAME: sj270ww2.i	DESIGNED BY: J. B. HUSSEY
DESIGNED BY: J. B. HUSSEY	DRAWN BY: L. C. ASHWORTH
SQUAD LEADER: C. P. WILLIAMS	CHECKED BY: K. M. HIGGINS
WINGWALL DETAIL SHEET #2	SHEET# 23 OF 42

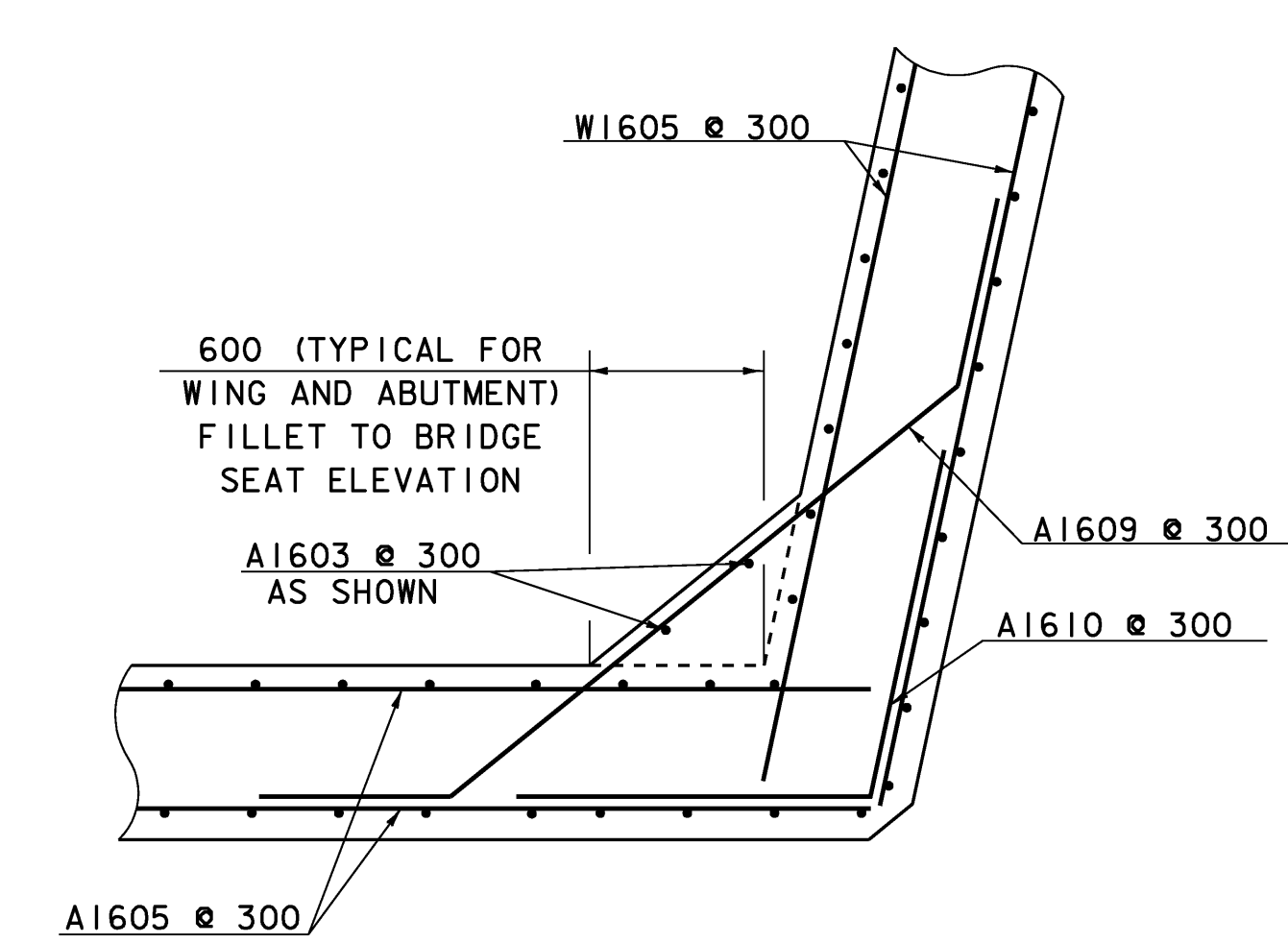


ABUTMENT NO. 1 FOOTING REINFORCING PLAN

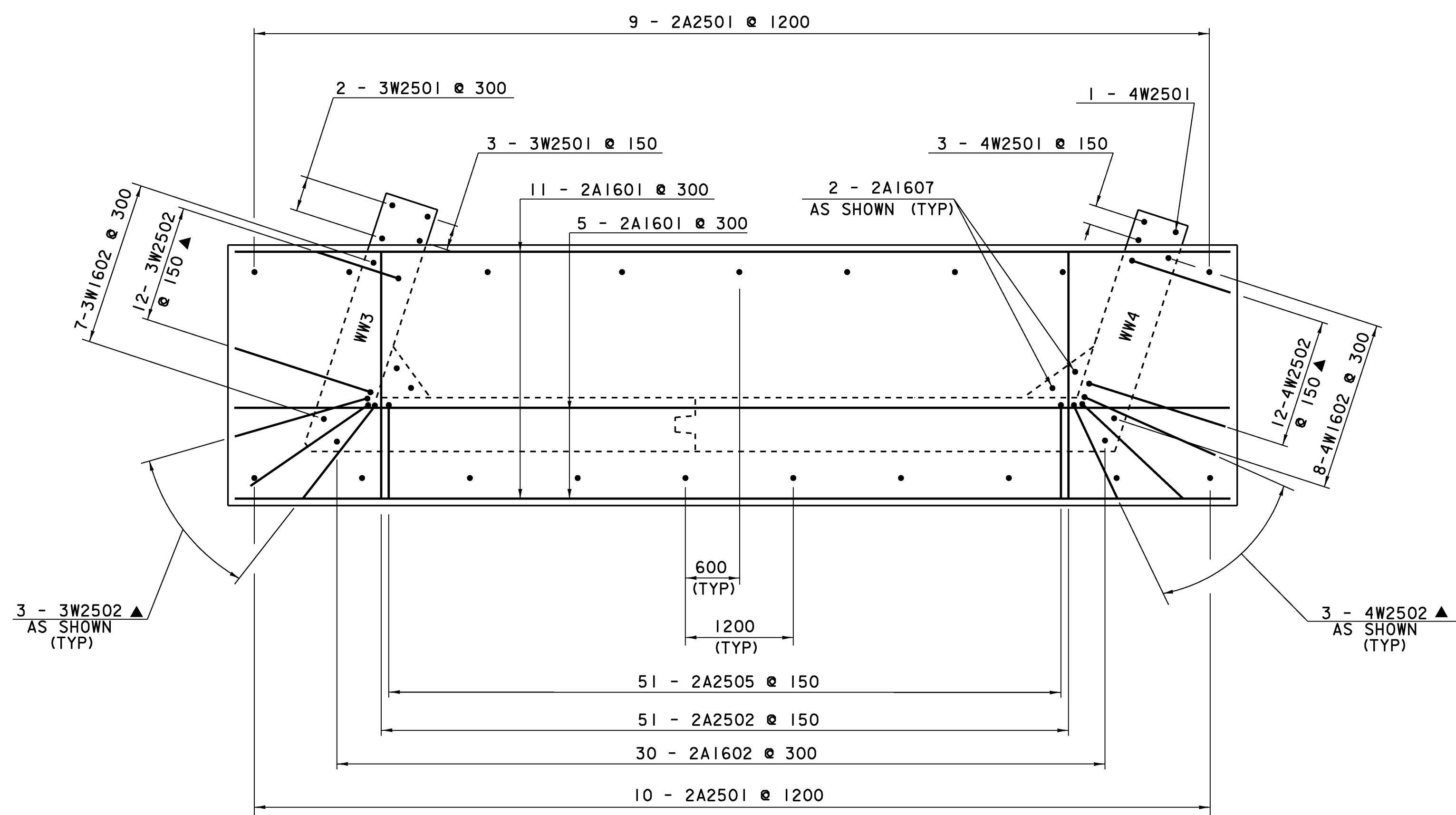
SCALE 1:40



**WINGWALL 2
(WW3 SIMILAR)
CORNER DETAIL
BELOW BRIDGE SEAT**
nts

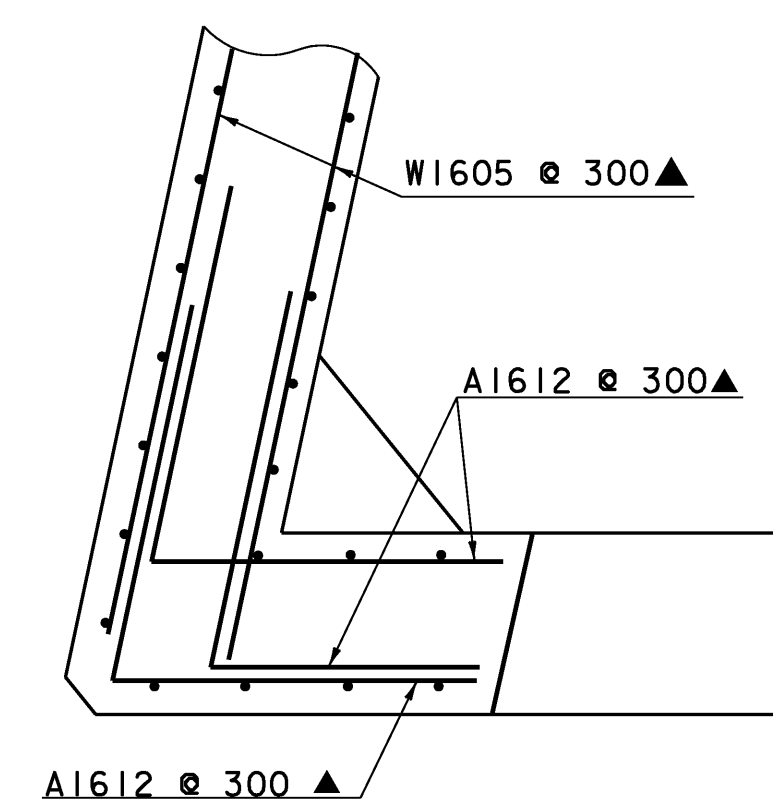


**WINGWALL 1
(WW4 SIMILAR)
CORNER DETAIL
BELOW BRIDGE SEAT**
nts

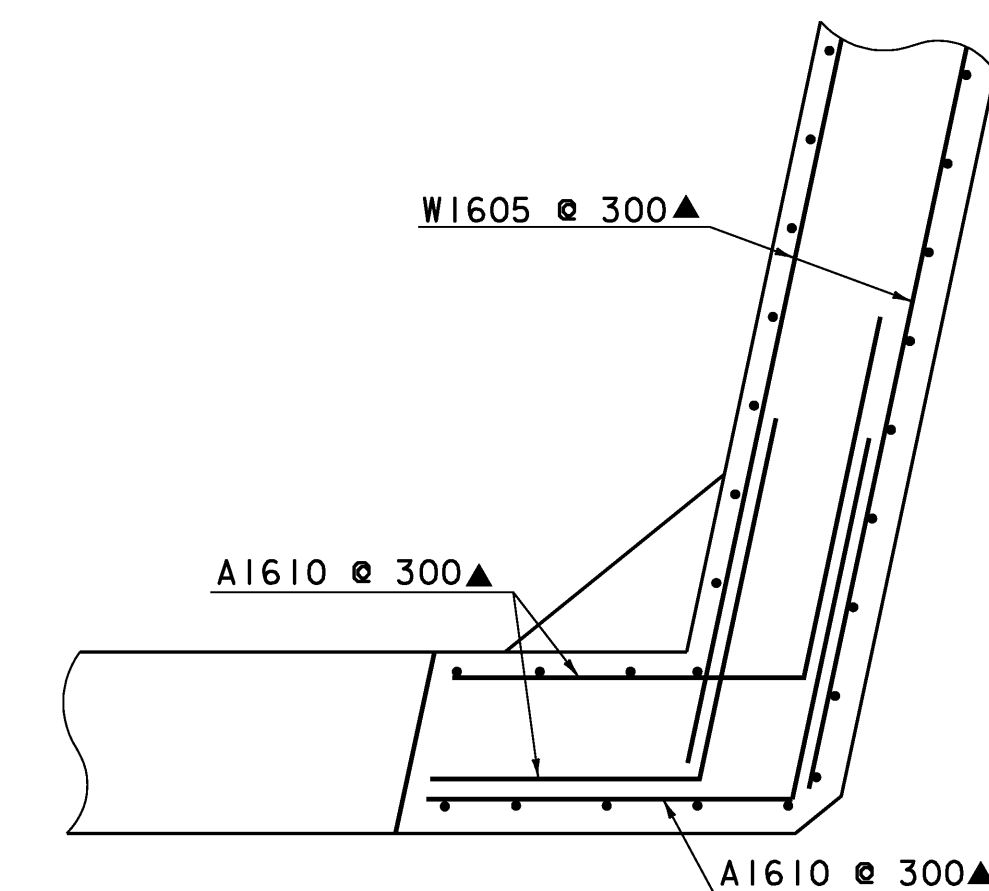


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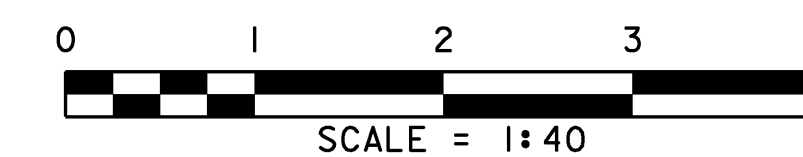
SCALE 1:40



**WINGWALL 2
(WW3 SIMILAR)
CORNER DETAIL
ABOVE BRIDGE SEAT**
nts



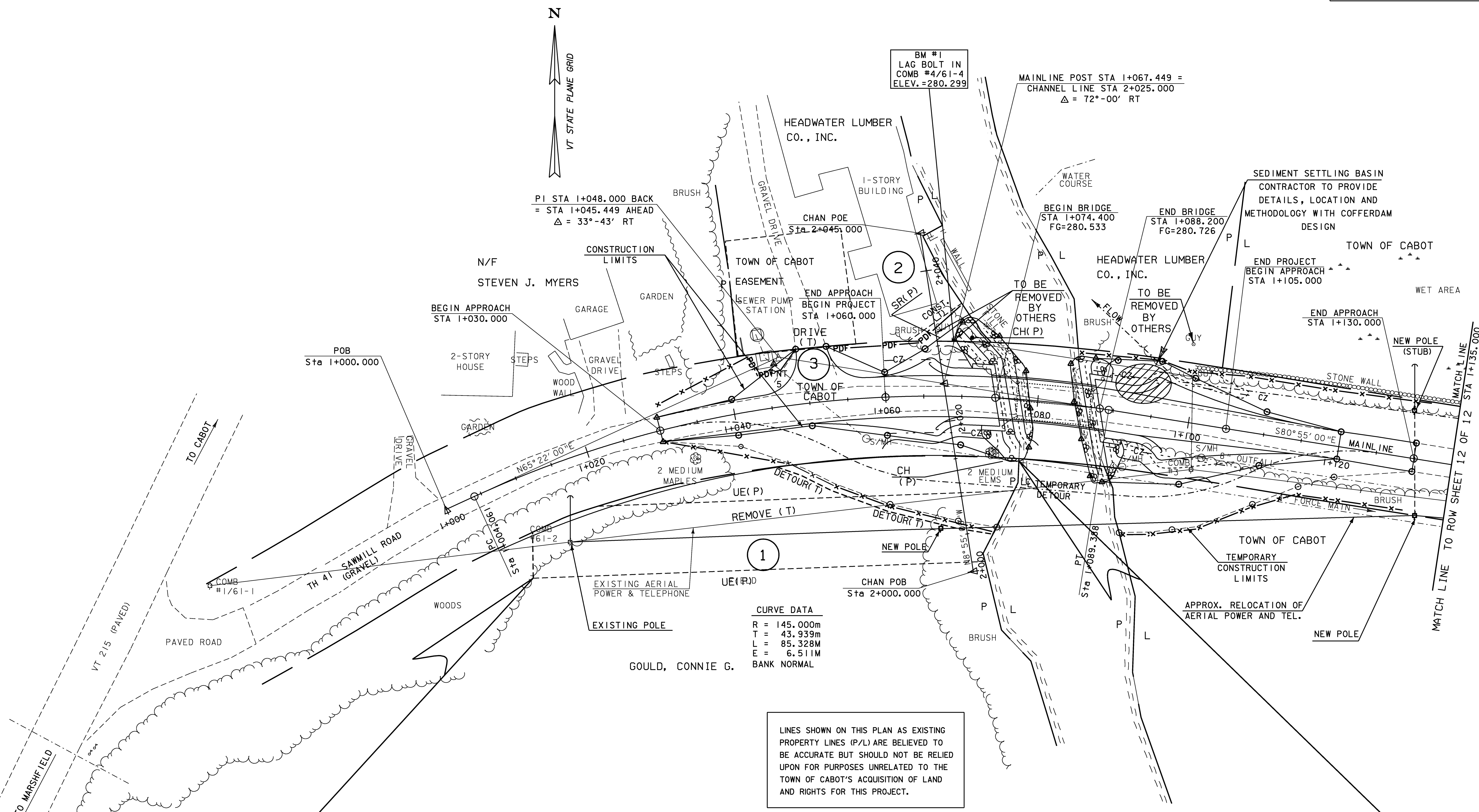
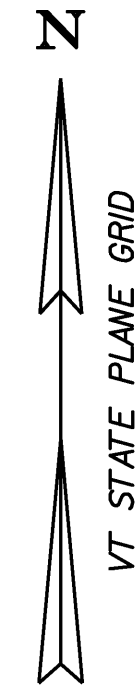
**WINGWALL 1
(WW4 SIMILAR)
CORNER DETAIL
ABOVE BRIDGE SEAT**
nts



NOTES:

- NF = NEAR FACE
- FF = FAR FACE
- EF = EACH FACE
- ▲ = CUT TO FIT IN FIELD
- 80mm CLEAR UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- ALL LAP SPLICES NOT DETAILED SHALL BE 660mm

PROJECT: CABOT	PROJECT NO.: BRO 1446 (27)
DESIGN FILE NAME: /96j270/structures/sj270sub.dgn	PLOT DATE: 07-DEC-2007
IPARM FILE NAME: sj270ftg.i	DRAWN BY: L.C.ASHWORTH
DESIGNED BY: J. B. HUSSEY	CHECKED BY: K.M.HIGGINS
SQUAD LEADER: C.P.WILLIAMS	SHEET: 24 OF 42
FOOTING AND CORNER DETAILS	



PI STA 1+048.000 BACK
= STA 1+045.449 AHEAD
Δ = 33°-43' RT

BM #1
LAG BOLT IN
COMB #4/61-4
ELEV. = 280.299

MAINLINE POST STA 1+067.449 =
CHANNEL LINE STA 2+025.000
Δ = 72°-00' RT

SEDIMENT SETTLING BASIN
CONTRACTOR TO PROVIDE
DETAILS, LOCATION AND
METHODOLOGY WITH COFFERDAM
DESIGN

CURVE DATA
R = 145.000m
T = 43.939m
L = 85.328M
E = 6.511M
BANK NORMAL

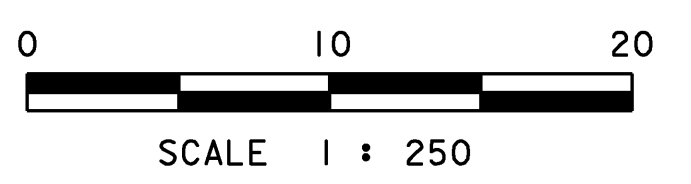
LINES SHOWN ON THIS PLAN AS EXISTING
PROPERTY LINES (P/L) ARE BELIEVED TO
BE ACCURATE BUT SHOULD NOT BE RELIED
UPON FOR PURPOSES UNRELATED TO THE
TOWN OF CABOT'S ACQUISITION OF LAND
AND RIGHTS FOR THIS PROJECT.

BEGIN R. O. W. PROJECT
BRO 1446(27) STA. 1+006.319 13.3M (43.6') RT.

END R. O. W. PROJECT
BRO 1446(27) STA. 1+078.186
7.8M (25.6') RT.

**FOR R.O.W.
USE ONLY**

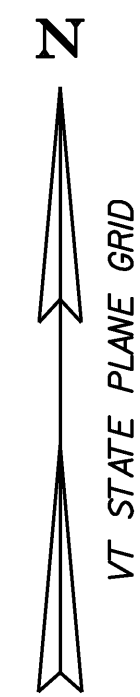
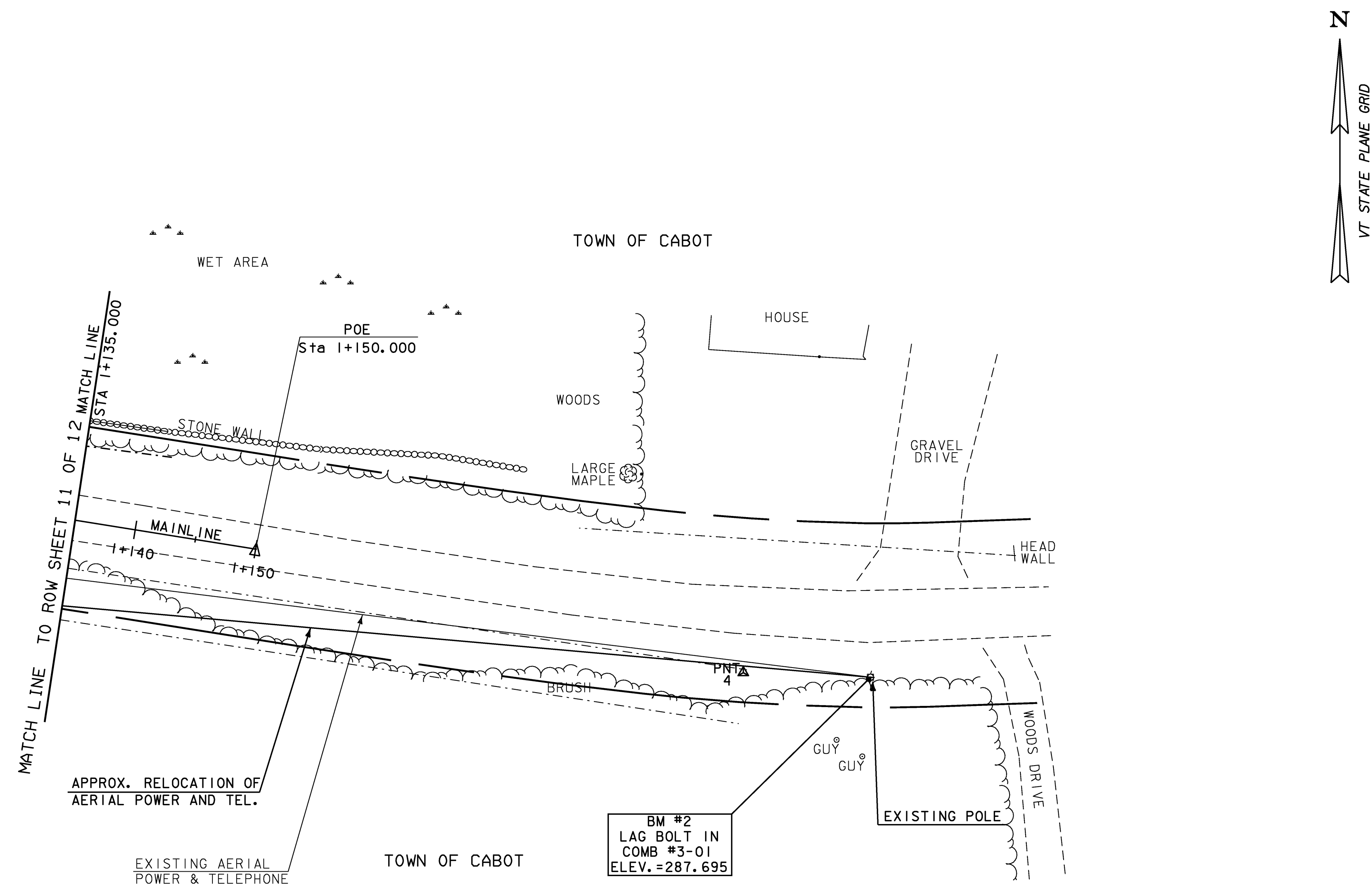
LAYOUT #1



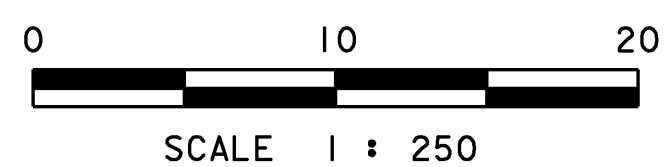
R.O.W. AGENT OF PROJECT
FRANK J. MALNATI JR.

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (92)

PROJECT: CABOT	PROJECT NO. : BRO 1446 (27)
DESIGN FILE NAME: 96j270/structures/sj270bdr.dgn	PLOT DATE: 07-DEC-2007
IPARM FILE NAME: sj270al.j	SURVEY DATE: 5/98
SURVEYED BY: R. GILMAN	DRAWN BY: D. G. BASSETT
SQUAD LEADER: C. P. WILLIAMS	SHEET 26 OF 42
R. O. W. SHEET 11 OF 12 SHEETS	



LAYOUT #2



LINES SHOWN ON THIS PLAN AS EXISTING PROPERTY LINES (P/L) ARE BELIEVED TO BE ACCURATE BUT SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE TOWN OF CABOT'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

FOR R.O.W. USE ONLY

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (92)

R.O.W. AGENT OF PROJECT
FRANK J. MALNATI JR.

PROJECT: CABOT	PROJECT NO. : BRO 1446 (27)
DESIGN FILE NAME: 96J270/structures/sj270bdr.dgn	PLOT DATE: 07-DEC-2007
IPARM FILE NAME: sj270ig2.1	SURVEY DATE: 5/98
SURVEYED BY: R. GILMAN	DRAWN BY: D. G. BASSETT
SQUAD LEADER: C. P. WILLIAMS	
ROW SHEET 12 OF 12 SHEETS	SHEET 27 OF 42 SHEETS



**STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET**

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS	
1	GOULD, CONNIE G.	11	1+006.319 RT.	1+078.005 RT.			UTILITY EASE. (P) 0.05HA±	WDOE	04-15-04	CABOT	63	14-	0.13A±	
			1+075.370 RT.	1+078.186 RT.			CHANNEL (P) 0.9 SM±						15	9.7 S.F. ±
			1+044.438 RT.	1+078.186 RT.			DETOUR (T) 195 SM±							ONE WAY VEHICULAR INCLUDES EROSION CONTROL 2099 S.F. ±
			1+013.653 RT.	1+077.886 RT.			REMOVE (T)							OLD POWER LINE
2	HEADWATER LUMBER CO. INC.	11	1+052.000 LT.				DRIVE (T)	WDOE	06-17-04	CABOT	63	303-	GRAVEL 4M (13')	
			1+063.028 LT.	1+070.903 LT.			CONST (T) 14 SM±						304	INCLUDES EROSION CONTROL 150.7 S.F. ±
			1+066.697 LT.	1+070.000 LT.			SLOPE (P) 3 SM±							32.3 S.F. ±
			1+069.051 LT.	1+073.453 LT.			CHANNEL (P) 9 SM±							96.9 S.F. ±
3	TOWN OF CABOT											UTILITY (SEWER)		
4	GREEN MOUNTAIN POWER CORPORATION											UTILITY		
5	NORTHLAND TELEPHONE COMPANY OF VERMONT											UTILITY		

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1	10	PARCEL NO. 1 GOULD. CHANGE AREA OF UTILITY EASEMENT TO 0.05HA± ; 0.13A± PER C.O. 9321.	10-02-03	M. J. R.	R. P. D.
2	11	PARCEL NO. 1 GOULD. RELOCATE NEW POLE FROM STA. 1+060RT. TO A POINT ALONG THE AERIAL POWER LINE, SIX METERS CLOSER TO THE RIVER. PER C.O. 9325. ELECTRONIC FILES TO STRUCTURES 1-22-07	01-08-04	P. J. H.	R. P. D.

DR. (P)- DRAINAGE RIGHT
DIT. (P)- DITCHING RIGHT
CH. (P)- CHANNEL RT.
DRIVE (T)- DRIVE RIGHT
CUL. (P)- CULVERT RIGHT
[W]- WATER SOURCES

PRESENT R.O.W.
TAKING WITHOUT ACCESS
TAKING WITHOUT ACCESS ALONG PROPERTY LINE
TAKING WITH ACCESS
PERMANENT EASEMENT
TEMPORARY EASEMENT

LEGEND
 --- C&T (P) --- CLEARING & TRIMMING
 ... CZ (P) ... CLEAR ZONE
 --- CONST. (T) --- CONSTRUCTION EASEMENT
 SR SR SLOPE RIGHTS
 P PROPERTY LINE
 △ △ TOP OF CUT
 ○ ○ TOE OF SLOPE
 --- UE (P) --- PERMANENT UTILITY EASEMENT
 ROW AGENT OF PROJECT
 FRANK MALNATI
 APPROVED: ROGER P. DUMAS DATE: 05-12-03
 CHIEF, PLANS & TITLES

R. O. W. PLANS
CABOT
BRO 1446(27)
 R. O. W. SHEET 10 OF 12 SHEETS
 SHEET 28 OF 42



EROSION CONTROL NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT IS LOCATED ON TH 41 IN THE TOWN OF CABOT, APPROXIMATELY 0.105 KM EAST OF THE JUNCTION OF RT 215 AND TH 41. THIS PROJECT INVOLVES THE REMOVAL AND REPLACEMENT OF BRIDGE 37, THE ABUTMENTS AND MINIMAL APPROACH WORK ON TH 41. THE NEW BRIDGE WILL BE A TWO LANE CONCRETE SLAB SPANNING 12 METERS. THE NEW BRIDGE WILL BE ON THE SAME HORIZONTAL ALIGNMENT AS THE OLD BRIDGE. THE VERTICAL ALIGNMENT VARIES ONLY SLIGHTLY FROM EXISTING. A TEMPORARY BRIDGE WILL BE CONSTRUCTED DOWNSTREAM OF THE EXISTING BRIDGE TO MAINTAIN TRAFFIC DURING CONSTRUCTION. AFTER THE TEMPORARY BRIDGE IS REMOVED THE AREA IS TO BE RETURNED TO ITS ORIGINAL CONDITION THROUGH GRADING, SEEDING, AND MULCHING. OVERHEAD UTILITIES WILL BE RELOCATED BEFORE THE BRIDGE CONSTRUCTION BEGINS. THE LIMITS OF CONSTRUCTION DO NOT APPROACH ANY BUILDINGS OR STRUCTURES BUT THERE IS AN OLD MILL AND A DAM LOCATED ABOUT 91 METERS UPSTREAM FROM THE BRIDGE.

NOTE: AREA OF DISTURBANCE SHALL INCLUDE LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, INCLUDING ANY WASTE, STAGING AND BORROW AREAS WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS.

TOTAL AREA OF DISTURBANCE IS APPROXIMATELY 0.33 ACRES. (0.13 HA)

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON.

1.2 SITE INVENTORY

1.2.1 OFF SITE DRAINAGE CHARACTERISTICS (UP AND DOWN-GRADIENT)

THE PROPERTY SURROUNDING THE PROJECT SITE CONSISTS OF WELL ESTABLISHED VEGETATION WITH MODERATE TO SLIGHTLY SLOPING TERRAIN. A SMALL WETLAND WITH BRUSH, SHRUBS, AND A WELL DEFINED DRAINAGE WAY IS LOCATED ON THE NORTH-EAST SIDE OF THE BRIDGE. DUE TO THE NATURE OF THE SURROUNDING TERRAIN, RUNOFF WATER ENTERING THE PROJECT WILL BE PRIMARILY LIMITED TO THAT WHICH IS CONVEYED ALONG THE ROADWAY DITCH THAT FOLLOWS TH 41.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

THE WINOOSKI RIVER, A SMALL STONE DAM, AND AN AREA OF WETLANDS ARE ALL LOCATED IN THE PROJECT AREA. THIS SECTION OF THE RIVER IS CLASSIFIED AS ROLLING, RURAL, AND RISES RAPIDLY. IT HAS A FORESTED BASIN AND A STREAMBED COVERED WITH COBBLES AND BOULDERS. THE CONTRIBUTING DRAINAGE AREA AT THE BRIDGE CROSSING IS 59 SQ. KM. THE CLOSEST DISTURBED SOILS TO THE RECEIVING WATERS ARE AT A DISTANCE OF 0 METERS.

1.2.3 TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

THE TOPOGRAPHY OF THE AREA IS GENTLY ROLLING HILLS WITH BRUSH AND A FEW TREES. TH 41 CROSSES PERPENDICULARLY OVER THE WINOOSKI RIVER. DEVELOPMENT ALONG TH 41 CONSISTS OF A FEW RESIDENCIES ALONG WITH THE OLD MILL AND DAM SITE. THERE IS ALSO AN OVERHEAD UTILITY LINE RUNNING ALONG THE SIDE OF TH 41 THAT WILL BE RELOCATED. THERE ARE TWO UNDERGROUND SEWER LINES LOCATED IN THE PROJECT SITE. ONE IS A 4" FORCE MAIN AND THE OTHER IS AN 8" RETURN LINE FROM A WASTEWATER TREATMENT PLANT FURTHER UP TH 41. THESE LINES WILL BE AVOIDED DURING CONSTRUCTION.

1.2.4 VEGETATION

THE VEGETATION IN THE PROJECT AREA IS MOSTLY BRUSH WITH A FEW TREES AND SOME FARM LAND IN THE OUTER REACHES. IMPACT TO VEGETATION WILL BE LIMITED BY THAT WHICH IS AFFECTED BY THE CONSTRUCTION OF THE NEW AND TEMPORARY BRIDGES AND THEIR ABUTMENTS. A FEW TREES AND SOME BRUSH WILL BE REMOVED DURING THE CONSTRUCTION OF THE PROJECT. AFTER THE PROJECT IS COMPLETED THE SLOPES WILL BE STABILIZED WITH STONE FILL, TYPE III AND VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.5 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF WASHINGTON, VERMONT. THERE ARE TWO TYPES OF SOILS FOUND ON THE PROJECT SITE. SALMON-ADAMANT SOIL IS FOUND ON THE WEST SIDE OF THE BRIDGE, HYDROLOGIC GROUP B, 8-15% SLOPES, AND A K-VALUE OF 0.49. THIS SOIL IS CONSIDERED TO BE HIGHLY ERODIBLE. ADAMS LOAMY FINE SAND IS FOUND ON THE EAST SIDE OF THE BRIDGE, HYDROLOGIC GROUP A, 8-15% SLOPES, AND A K-VALUE OF 0.17. THIS SOIL IS CONSIDERED TO BE MODERATELY ERODIBLE DUE TO THE SLOPE.

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING: 0.0-0.23 = LOW EROSION POTENTIAL; 0.24-0.36 = MODERATE EROSION POTENTIAL; 0.37 AND HIGHER = HIGH EROSION POTENTIAL.

1.2.6 SENSITIVE RESOURCE AREAS

NO 'THREATENED OR ENDANGERED' SPECIES HAVE BEEN IDENTIFIED WITHIN THE PROJECT LIMITS AND THERE WILL BE NO ADVERSE EFFECT TO HISTORIC OR ARCHEOLOGICAL FEATURES. HOWEVER, THE WINOOSKI RIVER, A SMALL PARCEL OF WETLANDS, THE OLD MILL AND THE DAM SITE ARE ALL IN THE GENERAL AREA OF CONSTRUCTION. IN ADDITION, THE PROJECT SITE IS ENCLOSED ON THREE SIDES BY ARCHEOLOGICALLY SENSITIVE AREAS. BARRIER FENCE WILL BE USED TO DELINEATE THE PROJECT AREA TO MINIMIZE IMPACT TO SENSITIVE AREAS.

1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF CONSTRUCTION GENERAL PERMIT 3-9020 (2006) BASED ON THE PROJECT IMPACT AREA. SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN ONE OR MORE ACRES OF EARTH DISTURBANCE OR SHOULD THE PROJECT BECOME PART OF A LARGER PLAN OF DEVELOPMENT, THEN THE SELECTED CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL PERMITTING WITH VAHR VIA FILING OF THE APPROPRIATE NOTICE OF INTENT UNDER THE CONSTRUCTION GENERAL PERMIT PROCESS.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE WORK OUTLINED IN THIS NARRATIVE CONSISTS OF APPLYING MEASURES THROUGHOUT THE LIFE OF THE PROJECT MINIMIZING SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION CONTROLS.

EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES (PHASING) AS CONSTRUCTION PROCEEDS. ADDITIONAL MEASURES MAY BE NEEDED DUE TO THE PHASING OF THE PROJECT AND AS DIRECTED BY THE ENGINEER.

PREVENTING INITIAL SOIL EROSION IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. THEREFORE, STABILIZE ALL DISTURBED AREAS PROMPTLY AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED. MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

(REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR EACH PRACTICE REQUIRED ON THE PROJECT, WHICH MAY INCLUDE BUT IS NOT LIMITED TO THE FOLLOWING.)

1.4.1 MARK SITE BOUNDARIES PROJECT DEMARCATION FENCE AND BARRIER FENCE

1.4.2 LIMIT DISTURBANCE AREA PHASING PLAN

1.4.3 VEHICLE TRACKING PAD VEHICLE TRACKING PAD

1.4.4 INSTALL SILT FENCE SILT FENCE

1.4.5 DIVERT UPLAND RUNOFF SWALE (STORM WATER FROM STREET COLLECTIONS DRAINAGE SYSTEM)

1.4.6 SLOW DOWN CHANNELIZED RUNOFF CHECK DAM

1.4.7 CONSTRUCT PERMANENT CONTROLS TYPE III STONE FOR SLOPE LINING AND CHANNEL PROTECTION SEED AND MULCH

1.4.8 STABILIZE EXPOSED SOILS SEED AND MULCH EROSION MATTING

1.4.9 WINTER STABILIZATION VARIOUS MEASURES SPECIFIC TO WINTER (SEE LOW RISK HANDBOOK)

1.4.10 STABILIZE SOIL AT FINAL GRADE SEED AND MULCH EROSION MATTING

1.4.11 DE-WATERING ACTIVITIES SEDIMENT BASINS FOR PIER WORK

1.4.12 INSPECT YOUR SITE INSPECT SITE BASED ON PERMIT AUTHORIZATION REQUIREMENTS

TEMPORARY EROSION PREVENTION MEASURES TO BE UTILIZED INCLUDE:

PROJECT DEMARCATION FENCING, DENOTED -PDF- ON THE PLANS, AND BARRIER FENCE TO DELINEATE THE LIMITS THE CONTRACTOR CAN ACCESS WITH CONSTRUCTION EQUIPMENT. THIS MEASURE LIMITS THE AREA THAT CAN BE DISTURBED AND EXPOSED TO EROSION.

TRACKING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, WILL ALSO BE UTILIZED ON A REGULAR BASIS. ANY SLOPES TO BE EXPOSED FOR SEVERAL DAYS PRIOR TO FINAL GRADING SHALL BE TRACKED AND MULCHED. SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF FORECASTED RAIN.

SEEDING, MULCHING AND BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3. THESE SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE OR DURING INTERMITTENT PHASES OF CONSTRUCTION.

SILT FENCE SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK. INSTALLATION SHALL BE PERFORMED PER INCLUDED DETAIL SHEET.

MEASURES SUCH AS SILT FENCE SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT BUILD-UP SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT REACHES ONE-HALF THE HEIGHT OF THE CONTROL MEASURE. SEDIMENT SHALL BE DISPOSED AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

PERMANENT EROSION CONTROL

SEVERAL PERMANENT EROSION CONTROL MEASURES WILL BE UTILIZED

STREAM BANKS WILL BE ARMORED WITH STONE FILL TYPE III AS SPECIFIED BY VTRANS ON THE PROJECT PLANS. THE STONE FILL WILL STABILIZE THE EXISTING BANK IN ORDER TO PROTECT FROM EROSION DURING STORM AND HIGH WATER EVENTS.

ALL DISTURBED AREAS WILL BE SEEDED AND MULCHED. AREAS WITH SLOPES STEEPER THAN 1:3 SHALL UTILIZE BIODEGRADABLE EROSION CONTROL MATTING.

STREAM BANK VEGETATION WILL BE INTRODUCED IN THE GRUBBING MATERIAL THAT IS TO BE PLACED OVER THE STREAM BANK STONE FILL.

PROJECT: CABOT	PROJECT NO. : BRO 1446 (27)
DESIGN FILE NAME: 96J270/structures/sj270ecs.dgn	
IPARM FILE NAME: sj270ecnar.l	PLOT DATE: 07-DEC-2007
SURVEYED BY: R. MOREAU	SURVEY DATE: 3/93
SQUAD LEADER: C. P. WILLIAMS	DRAWN BY: D.D. BEARD
EROSION CONTROL NARRATIVE	SHEET: 29 OF 42

EROSION PREVENTION AND SEDIMENT CONTROL NOTES:

1. A SEPERATE TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL PLAN SHALL BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BY THE AGENCY OF TRANSPORTATION.
2. TIME ALL GRADING TO MINIMIZE SOIL EXPOSURE.
3. AT THE END OF EACH DAY'S GRADING OPERATIONS, SHAPE EARTHWORK TO MINIMIZE THE EROSION FROM STORM RUNOFF.
4. PREPARE TEMPORARY DRAINAGEWAYS TO HANDLE CONCENTRATED FLOW UNTIL PERMANENT DRAINAGE IS CONSTRUCTED AND STABILIZED.
5. SPECIAL CONSIDERATION MUST BE GIVEN TO THE FIRST PUMP-DOWN OF THE COFFERDAMS. THIS WILL CONTAIN THE GREATEST VOLUME OF WATER WITH A HIGH SEDIMENT LOAD. THE CONTRACTOR MAY PROVIDE ADDITIONAL SEDIMENT SETTLING BASINS WITHIN THE RIGHT-OF-WAY IF REQUIRED OR CONTROL THE RATE OF DRAW-DOWN. ADDITIONAL SEDIMENT SETTLING BASINS MUST BE APPROVED BY THE RESIDENT ENGINEER.
6. AFTER COMPLETION OF THE SUBSTRUCTURE, THE SEDIMENT IN THE SETTLING BASINS SHALL BE REMOVED AND THE GROUND RESTORED TO ITS ORIGINAL SLOPES OR GRADED AS SHOWN ON THE CONSTRUCTION DRAWINGS.
7. SEE SHEETS 34-35 FOR EROSION PREVENTION AND SEDIMENT CONTROL DETAILS.
8. ASK FOR ASSISTANCE AND RECOMMENDATIONS AS NEEDED.

PERIMETER CONTROL NOTES:

1. IDENTIFY SENSITIVE AREAS AND AREAS PRONE TO EROSION BASED ON SITE EVALUATION.
2. CLEARLY DEMARCATTE SENSITIVE AREAS TO AVOID DISTURBANCE USING BARRIER FENCE.
3. PROTECT ALL SENSITIVE AREAS AND WATER FEATURES FROM SEDIMENT.
4. DIVERT OR OTHERWISE KEEP ALL CONCENTRATED OFF-SITE "RUN-ON" FROM AREAS TO BE DISTURBED.
5. PERIMETER CONTROLS (SILT FENCE, FILTER CURTAIN, ETC.) TO BE INSTALLED PRIOR TO SOIL DISTURBANCE AND MAINTAINED UNTIL SITE IS PERMANENTLY STABILIZED TO THE SATISFACTION OF THE ENGINEER AND ON-SITE COORDINATOR.
6. SEED AND MULCH SHALL BE APPLIED IMMEDIATELY TO ALL LAWNS DISTURBED BEYOND THE WORK AREA DELINEATED ON THESE PLANS.
7. PREVENT SEDIMENT FROM LEAVING THE SITE BY MAINTAINING AND MODIFYING PERIMETER CONTROLS AS NEEDED.

GENERAL NOTES:

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE THE FOLLOWING ADDITIONAL INFORMATION FOR APPROVAL AND INCLUSION IN THE COMPLETE EROSION PREVENTION AND SEDIMENT CONTROL PLANS:
 - LOCATION OF WASTE, BORROW AND STAGING AREAS, MATERIAL STOCKPILES, REFUELING AND MAINTENANCE AREAS AND CONCRETE TRUCK WASHOUT LOCATION (ATTACH MAP IF NECESSARY). A DISCUSSION AND ADDITIONAL DETAILS NEEDED FOR PROTECTION AND STABILIZATION OF THESE AREAS SHALL BE INCLUDED AS WELL.
 - MODIFICATIONS REQUIRED TO THESE EROSION PREVENTION AND SEDIMENT CONTROL PLANS.
 - GRADING PLAN / CONSTRUCTION SEQUENCE (INCLUDING PROPOSED DATES ASSOCIATED WITH JOB MILESTONES AS INDICATED ON THE SEQUENCE CONSISTENT WITH PROJECT CRITICAL PATH METHOD SCHEDULE.)
 - REVISED NARRATIVE MATCHING THE GRADING PLAN AND CONSTRUCTION SEQUENCE (RE: TEMPORARY SEEDING AND MULCHING / STABILIZATION).
 - NAME, ADDRESS, PHONE NUMBER AND BASIC QUALIFICATIONS OF "ON-SITE COORDINATOR".
2. WORK SHALL BE GENERALLY CONSISTENT WITH GUIDANCE PROVIDED IN THE LATEST REVISION OF THE VERMONT HANDBOOK FOR SOIL EROSION AND SEDIMENT CONTROL ON CONSTRUCTION SITES AND THE ASSOCIATED GENERAL CONTRACTORS OF VERMONT FIELD HANDBOOK.

**SEEDING FORMULA
RURAL AREAS**

% WT.	kg/ha	NAME	PUR %	GERM %
37.5	26.0	CREEPING RED FESCUE	98	85
37.5	26.0	TALL FESCUE	95	90
5.0	4.0	RED TOP	95	90
15.0	10.0	BIRDSFOOT TREFOIL	98	85
5.0	4.0	ANNUAL RYE GRASS	95	85
100.0	70.0			

GENERAL NOTES

SEED MIXTURE: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.

SEED: TO BE APPLIED PER SEEDING FORMULAS OR AS DIRECTED BY THE ENGINEER.

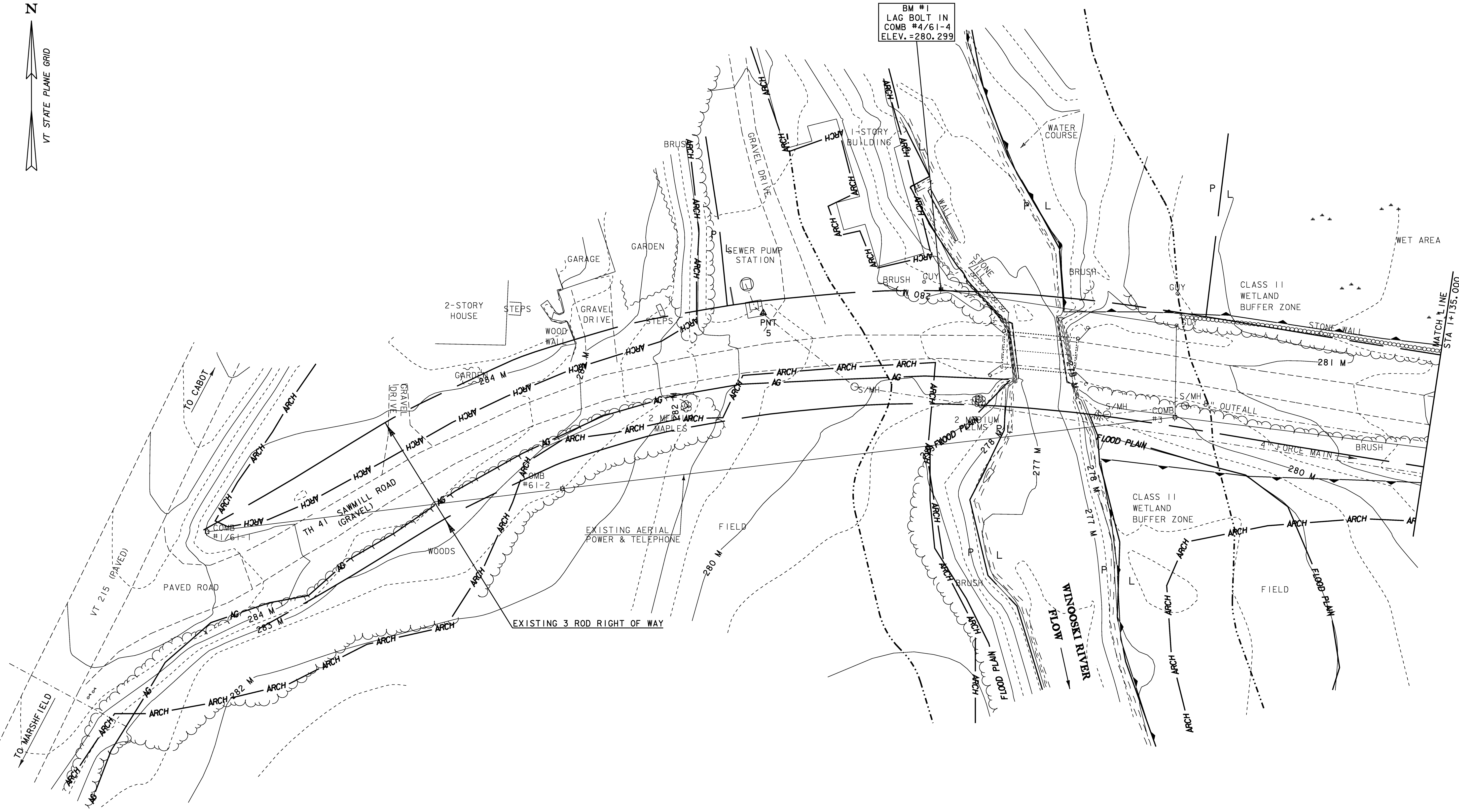
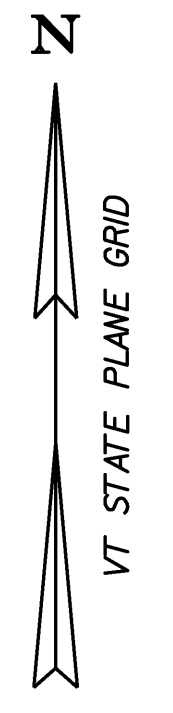
FERTILIZER: FORMULA 10-20-10, TO BE USED WITH SEED, APPLIED AT THE RATE OF 560 kg/ha. (HYDRO SEEDERS MAY USE 19-19-19 FORMULA).

AGRICULTURAL LIMESTONE: TO BE APPLIED AT THE RATE OF 4500 kg/ha, OR AS DIRECTED BY THE ENGINEER.

HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 4500 kg/ha, OR AS DIRECTED BY THE ENGINEER.

TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

PROJECT: CABOT	PROJECT NO.: BRO 1446 (27)
DESIGN FILE NAME: 96J270/structures/sj270ecs.dgn	PLOT DATE: 07-DEC-2007
IPARM FILE NAME: sj270ecnotes.l	SURVEY DATE: 3/93
SURVEYED BY: R. MOREAU	DRAWN BY: E.L. RUSTAY
SQUAD LEADER: C. P. WILLIAMS	SHEET: 30 OF 42
EROSION CONTROL NOTES	



LEGEND	
	RIPARIAN BUFFER ZONE
	WETLANDS BUFFER ZONE
	ARCHEOLOGICALLY SENSITIVE AREA
	ARCH
	AG

EXISTING CONDITIONS



DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (92)

PROJECT: CABOT	PROJECT NO. : BRO 1446 (27)
DESIGN FILE NAME: 96J270/structures/sj270bdr_ero.dgn	PLOT DATE: 07-DEC-2007
IPARM FILE NAME: sj270excond.l	DRAWN BY: M.FESSEL
PROJECT LEADER: C.P.WILLIAMS	CHECKED BY: E.L.RUSTAY
DESIGNED BY: K.M.HIGGINS	SHEET: 31 OF 42
EXISTING CONDITIONS	

NOTES:

1. THESE PLANS SHOW A CONCEPTUAL EROSION CONTROL PLAN, THE CONTRACTOR MUST SUBMIT A TEMPORARY EROSION CONTROL PLAN FOR APPROVAL.
2. TEMPORARY EROSION CONTROL MEASURES ARE CONCEPTUALLY SHOWN. THE CONTRACTOR MAY RELOCATE TEMPORARY MEASURES TO IMPROVE EROSION CONTROL WITH APPROVAL OF THE RESIDENT ENGINEER AND ON SITE COORDINATOR. SILT FENCE SHALL NOT BE INSTALLED ACROSS CONTOURS.
3. THE CONTRACTOR SHALL USE OTHER TEMPORARY EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION OR AS DIRECTED BY THE RESIDENT ENGINEER AND ON SITE COORDINATOR.
4. REFER TO TEMPORARY EROSION CONTROL DETAIL SHEETS FOR ADDITIONAL DETAILS.
5. WHERE LEDGE IS EXPOSED, GRAVEL BAGS MAY BE USED INSTEAD OF FILTER CURTAIN. PAYMENT FOR THIS ITEM SHALL BE INCIDENTAL TO ITEM 649.61 "GEOTEXTILE FOR FILTER CURTAIN".

LEGEND	
PDF — PDF —	PROJECT DEMARCATION FENCE
x — x — x — x	BARRIER FENCE
— ◆ — ◆ —	FILTER CURTAIN
— ■ — ■ —	SILT FENCE
○ - - - ○ - - - ○	TEMPORARY SLOPE LIMITS
— ▾ — ▾ —	WETLAND BUFFER ZONE
▶ ▶ ▶ ▶ ▶	CHECK DAM
- - - - -	RIPARIAN BUFFER ZONE



SOIL INFORMATION
SALMON-ADAMANT COMPLEX, 8 -15% SLOPES
HYDROLOGIC SOIL GROUP B
DEPTH TO BED ROCK: 5-7m
DEPTH TO WATER TABLE: 2 - 4m
HIGHLY ERODIBLE LAND

BEGIN APPROACH
STA 1+030.000

POB
Sta 1+000.000

CHAN POE
Sta 2+045.000

END APPROACH
BEGIN PROJECT
STA 1+060.000

BEGIN BRIDGE
STA 1+074.400
FG=280.533

END BRIDGE
STA 1+088.200
FG=280.726

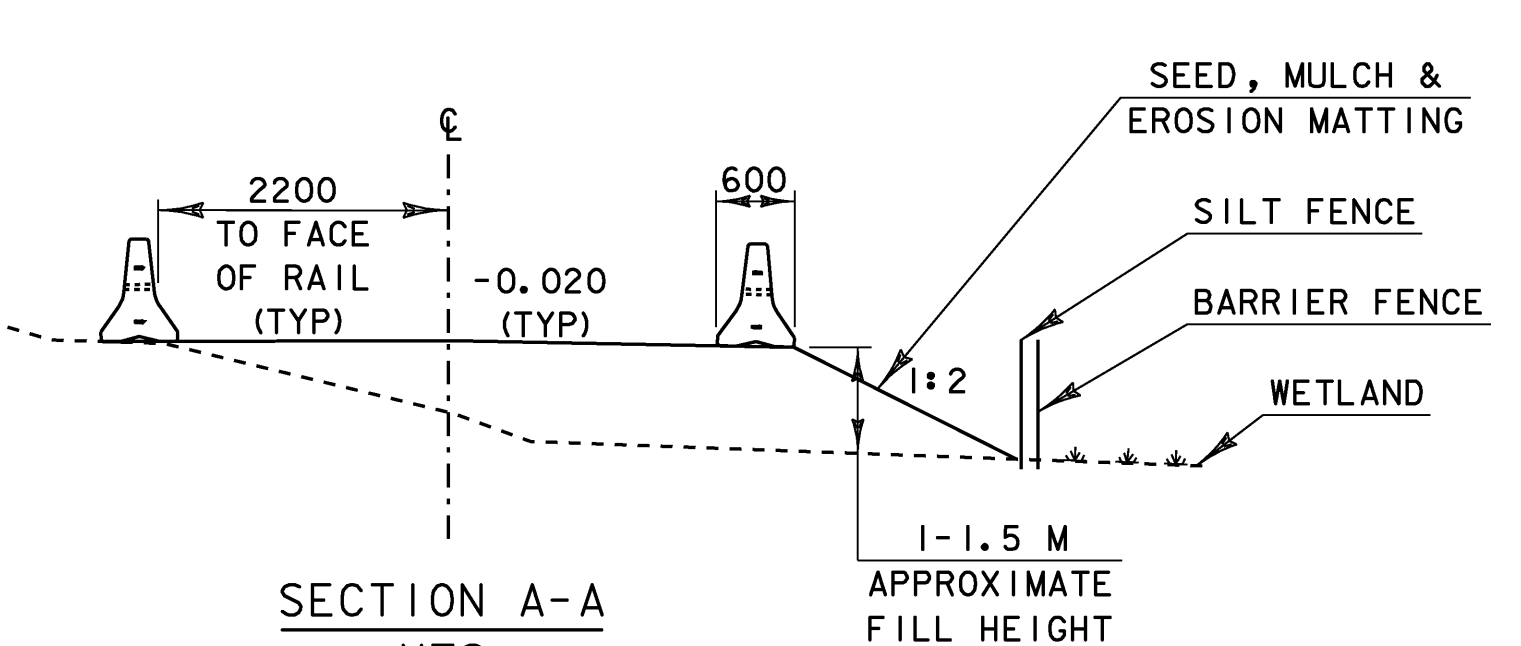
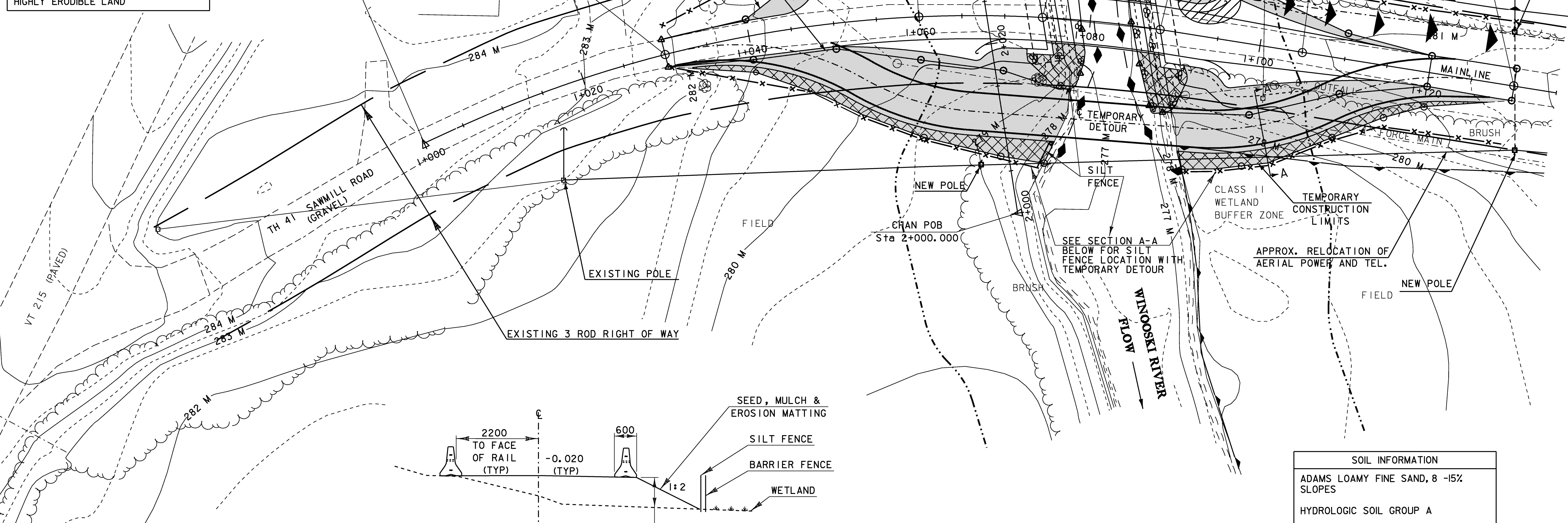
SEDIMENT SETTLING BASIN
CONTRACTOR TO PROVIDE
DETAILS, LOCATION AND
METHODOLOGY WITH COFFERDAM
DESIGN

END PROJECT
BEGIN APPROACH
STA 1+105.000

END APPROACH
STA 1+130.000

CLASS II
WETLAND
BUFFER ZONE

NEW POLE
(STUB)

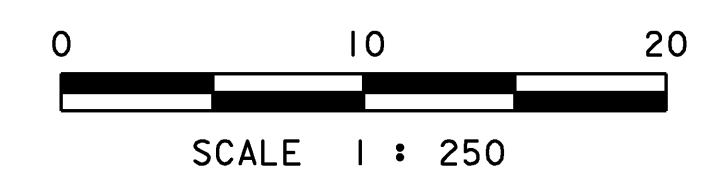


SOIL INFORMATION
ADAMS LOAMY FINE SAND, 8 -15% SLOPES
HYDROLOGIC SOIL GROUP A
DEPTH TO BED ROCK: 6m
DEPTH TO WATER TABLE: 4 - 5m
POTENTIALLY HIGHLY ERODIBLE LAND

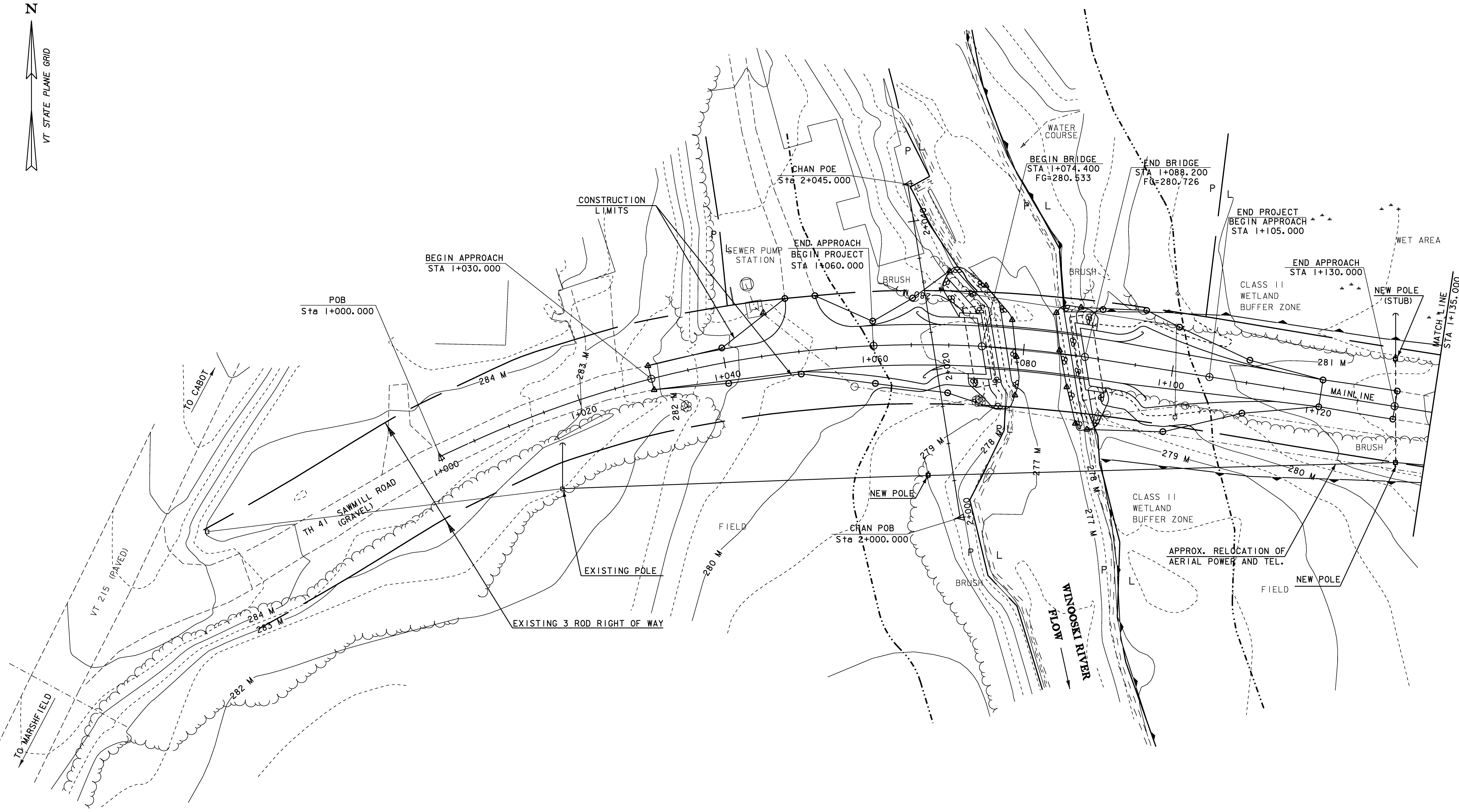
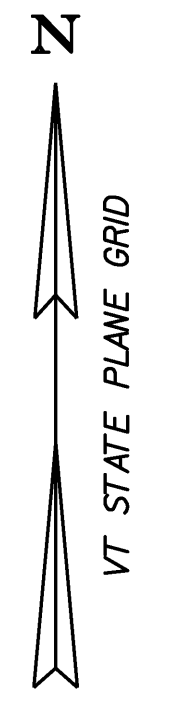
LEGEND	
	SEED AND MULCH
	EROSION MATTING

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (92)



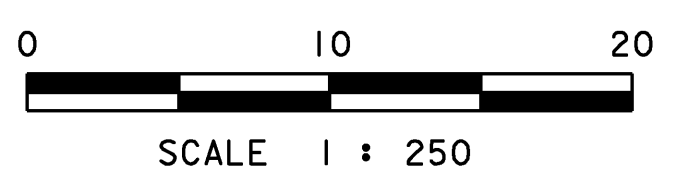
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DESIGN FILE NAME: 96j270/structures/sj270bdr_ero.dgn	PLOT DATE: 07-DEC-2007
IPARM FILE NAME: sj270ero.i	DRAWN BY: M.FESSEL
PROJECT LEADER: C.P.WILLIAMS	CHECKED BY: E.L.RUSTAY
DESIGNED BY: K.M.HIGGINS	SHEET: 32 OF 42
EROSION AND SEDIMENT CONTROL PLAN	



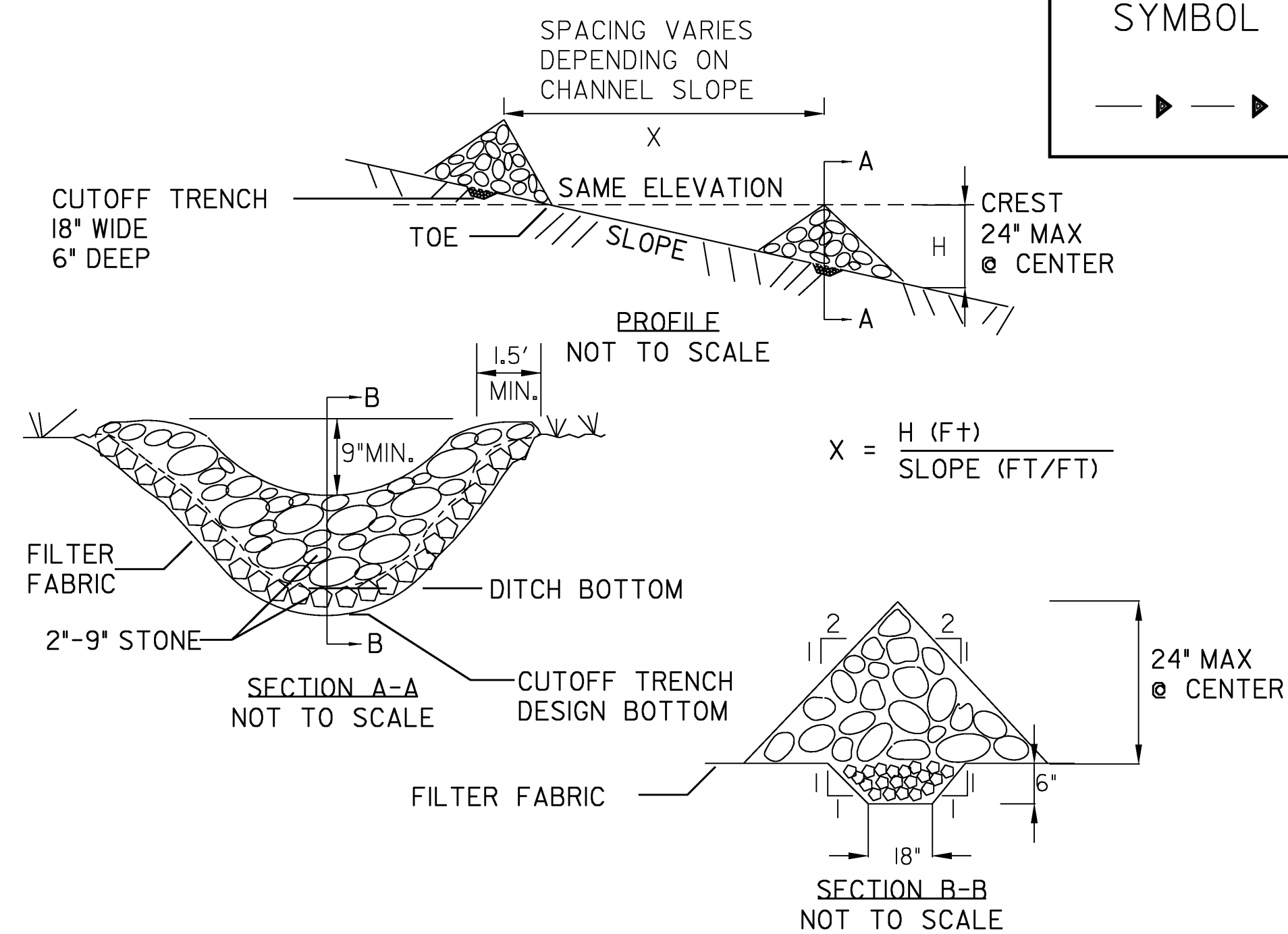
LEGEND	
	RIPARIAN BUFFER ZONE
	WETLANDS BUFFER ZONE
	ARCHEOLOGICALLY SENSITIVE AREA
	AGRICULTURAL AREA

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (92)

FINAL CONDITIONS



PROJECT: CABOT	PROJECT NO. : BRO 1446 (27)
DESIGN FILE NAME: 96J270/structures/sj270bdr_ero.dgn	PLOT DATE: 07-DEC-2007
IPARM FILE NAME: sj270fincnd.1	DRAWN BY: M.FESSEL
PROJECT LEADER: C.P.WILLIAMS	CHECKED BY: E.L.RUSTAY
DESIGNED BY: K.M.HIGGINS	SHEET: 33 OF 42
FINAL CONDITIONS	



CONSTRUCTION SPECIFICATIONS

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION.
2. SET SPACING OF CHECK DAMS SO THAT THE ELEVATION OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION AS THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE. MAXIMUM DRAINAGE AREA 2 ACRES.

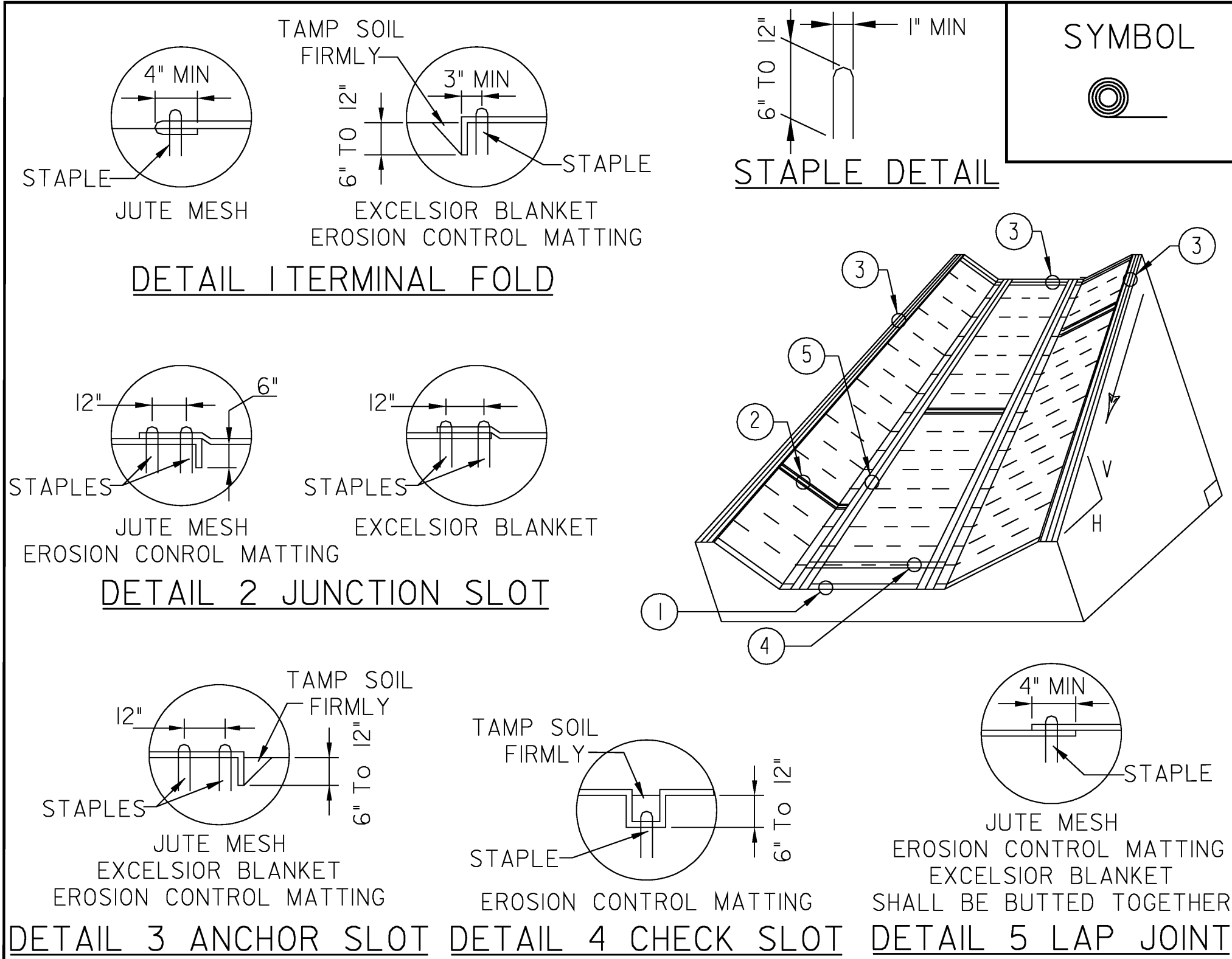
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DECORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

CHECK DAM

REVISIONS	
MARCH 8, 2007	JMF

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER ITEM 653.25 TEMPORARY STONE CHECK DAM, TYPE I



CONSTRUCTION SPECIFICATIONS

1. EROSION MATTING, CHECK SLOTS, SHALL BE SPACED IN DITCH CHANNEL SO THAT ONE OCCURS WITHIN EACH 50' ON SLOPES OF MORE THAN 4% AND LESS THAN 6%. ON SLOPES OF 6% OR MORE, THEY SHALL BE SPACED SO THAT ONE OCCURS WITHIN EACH 25'.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

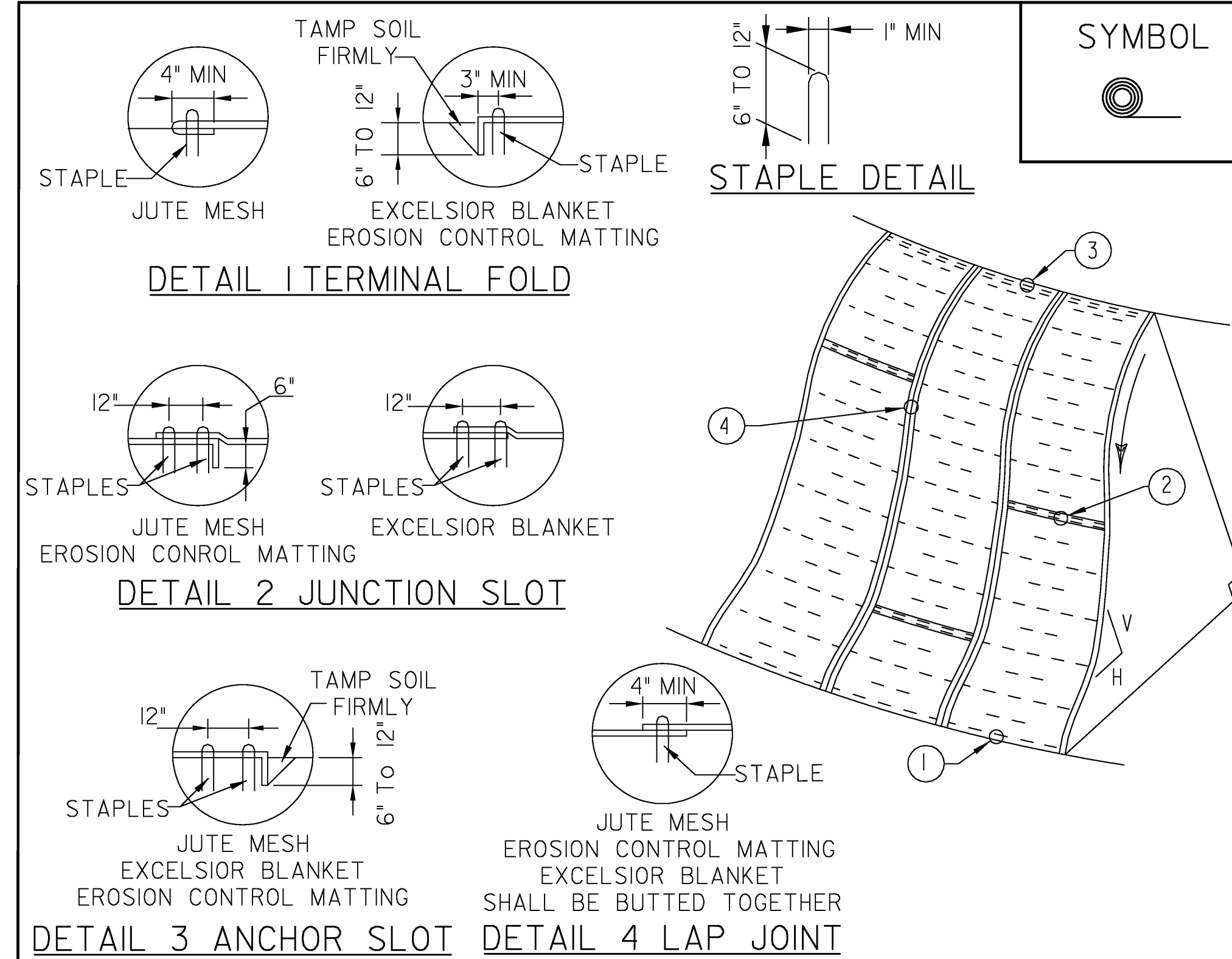
ADAPTED FROM DETAILS PROVIDED BY: ILLINOIS USDA-NRCS ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ROLLED EROSION CONTROL PRODUCT (RECP) DITCH

REVISIONS	
MARCH 8, 2007	JMF
APRIL 16, 2007	WHF

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER ITEM 653.20 TEMPORARY EROSION MATTING OR 653.21 PERMANENT EROSION MATTING



CONSTRUCTION SPECIFICATIONS

1. APPLY TO SLOPES GREATER THAN 3H:4V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME AND SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

ADAPTED FROM DETAILS PROVIDED BY: ILLINOIS USDA-NRCS ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

REVISIONS	
APRIL 16, 2007	WHF

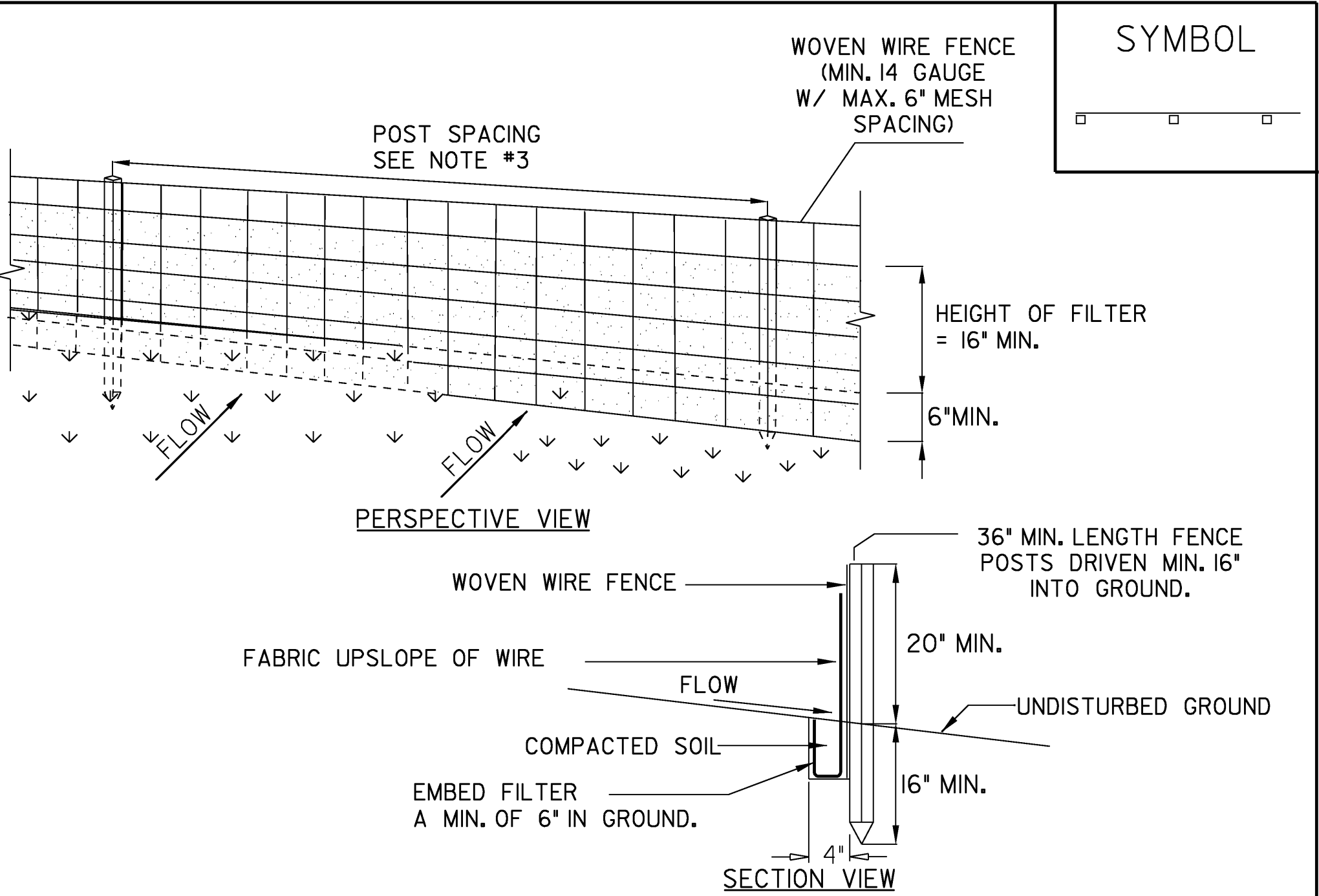
NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER ITEM 653.20 TEMPORARY EROSION MATTING OR 653.21 PERMANENT EROSION MATTING

EPSC DETAIL SHEETS

PROJECT: CABOT	PROJECT NO.: BRO 1446 (27)
DESIGN FILE NAME: 96j270\structures\sj270erodet.dgn	PLOT DATE: 07-DEC-2007
IPARM FILE NAME: sj270epsc1.i	DRAWN BY: CONST. ENV. SECT.
DESIGNED BY: CONST. ENV. SECTION	CHECKED BY: A. CABRAL
SQUAD LEADER: C.P. WILLIAMS	SHEET: 34 OF 42
EPSC DETAILS I	

NTS



SYMBOL

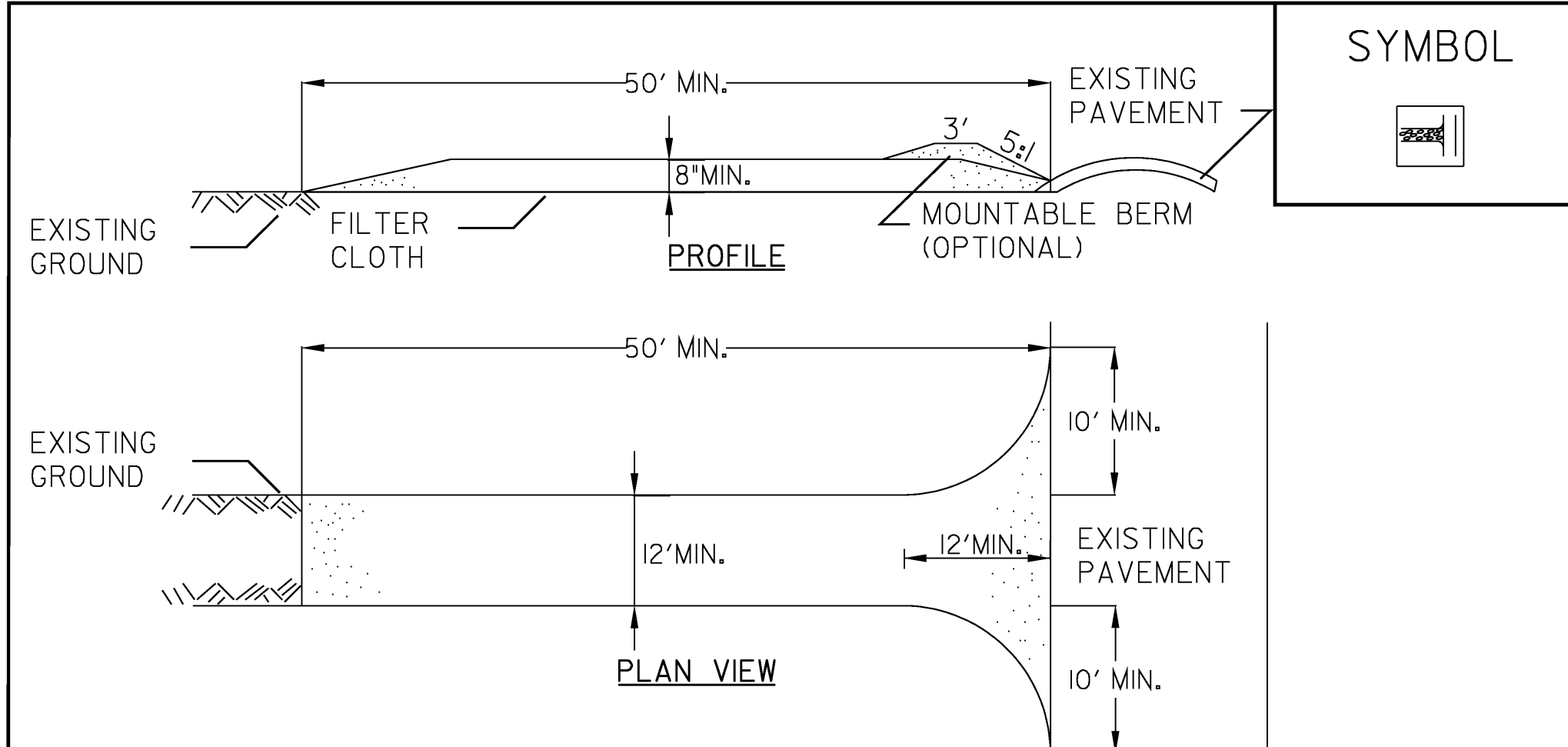
- ### CONSTRUCTION SPECIFICATIONS
- WOVEN WIRE FENCE REINFORCEMENT IS ONLY REQUIRED WITHIN 100 FT UPSLOPE OF RECEIVING WATERS.
 - WHERE REQUIRED FENCE SHALL BE WOVEN WIRE, MIN. 14 GAUGE WITH A 6" MAXIMUM MESH OPENING. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAF100X, STABILINKA T140N OR APPROVED EQUIVALENT.
 - POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4'. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
 - WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
 - WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED.
 - PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
 - MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SILT FENCE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER ITEM STANDARD SPECIFICATION 649.51(GEOTEXTILE FOR SILT FENCE OR SPECIAL PROVISION 900.675 (GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED)



SYMBOL

- ### CONSTRUCTION SPECIFICATIONS
- STONE SIZE - USE 1-4" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
 - LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH APPLIES).
 - THICKNESS - NOT LESS THAN EIGHT (8) INCHES.
 - WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
 - GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
 - SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
 - MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
 - WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
 - PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.

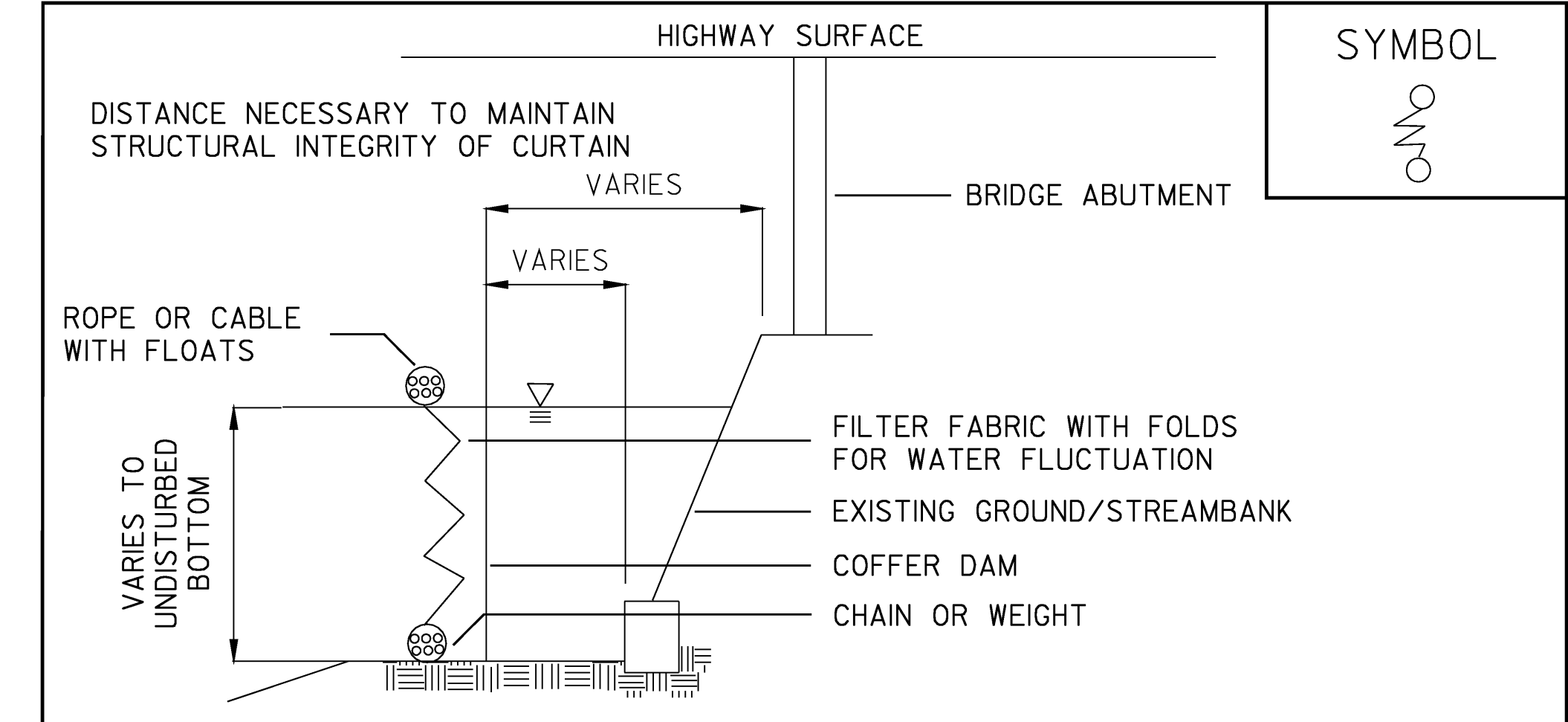
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

STABILIZED CONSTRUCTION ENTRANCE

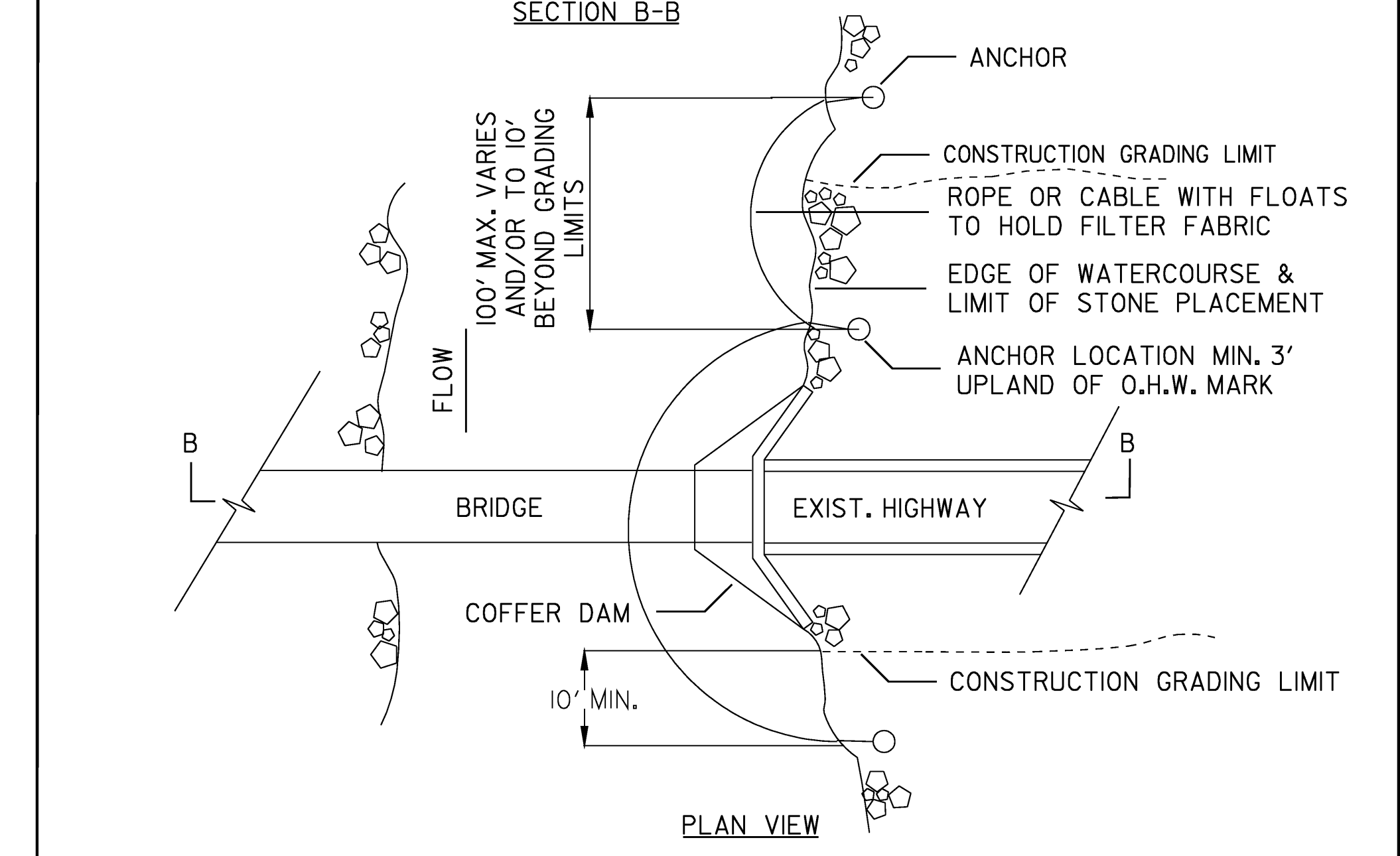
NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER ITEM 653.35 VEHICLE TRACKING PAD

REVISIONS	
FEBRUARY 9, 2007	WHF
MARCH 8, 2007	JMF



SYMBOL



ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT AGENCY OF TRANSPORTATION

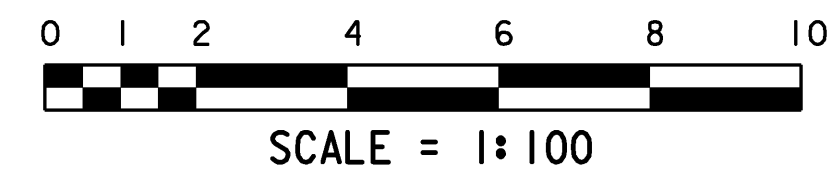
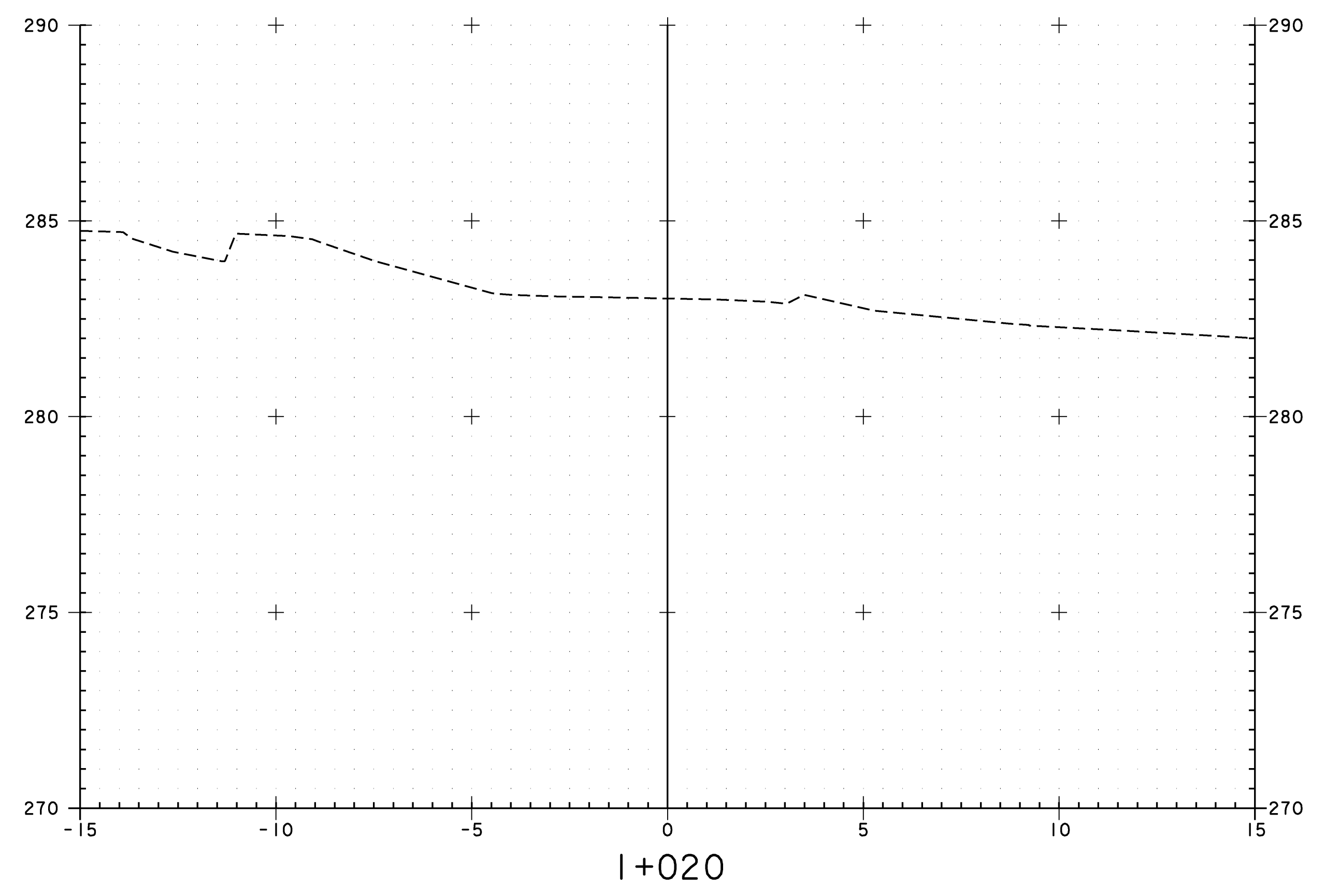
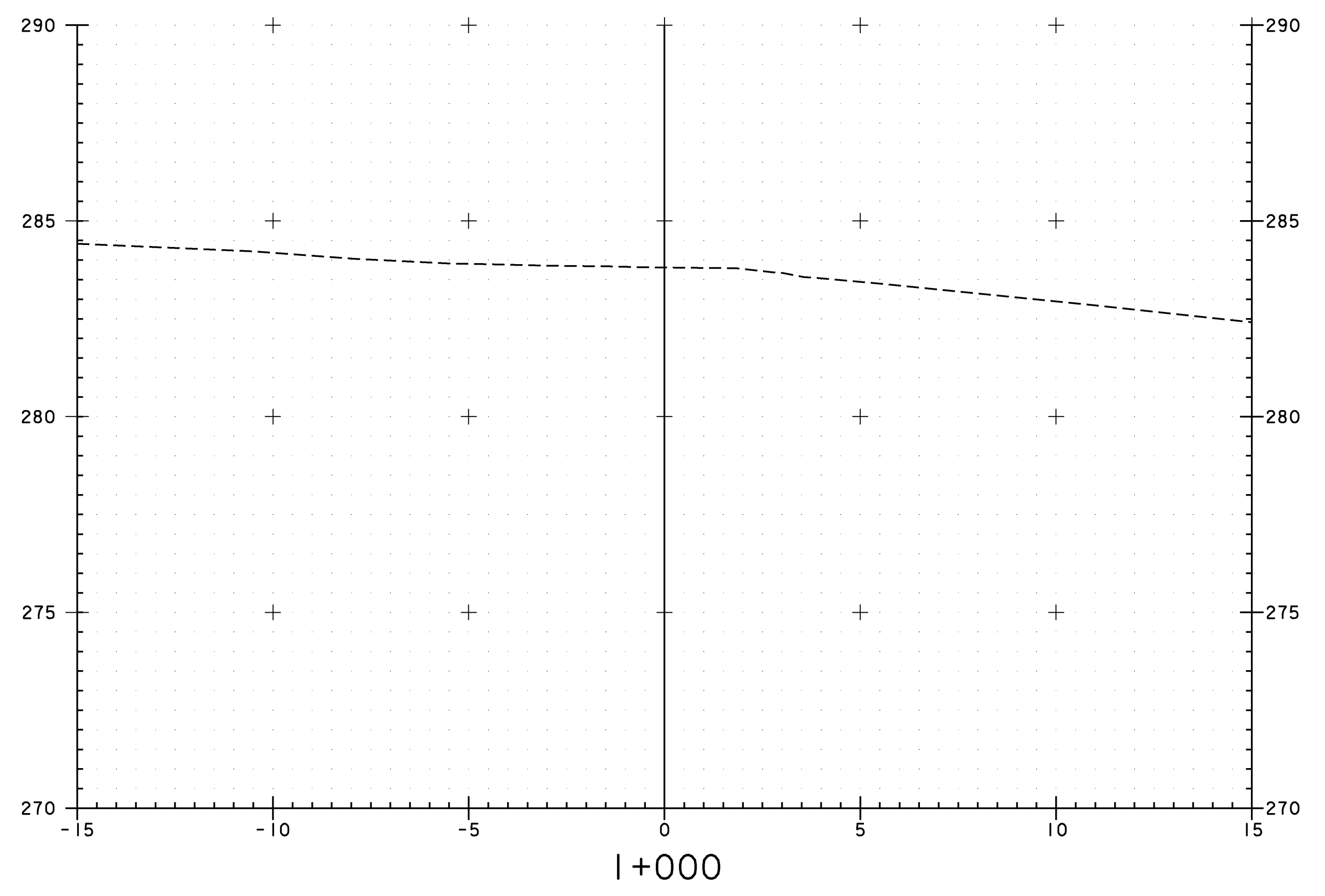
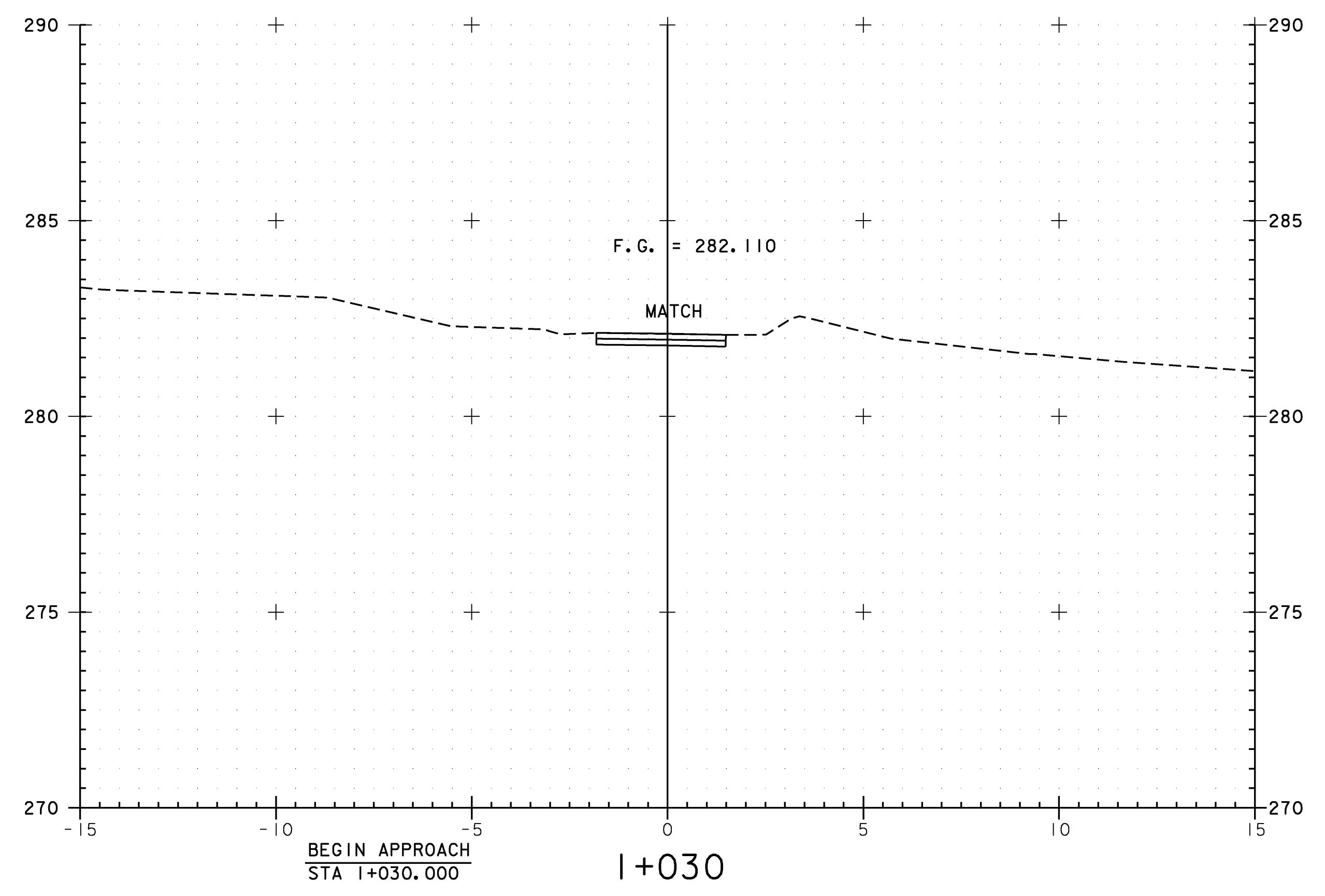
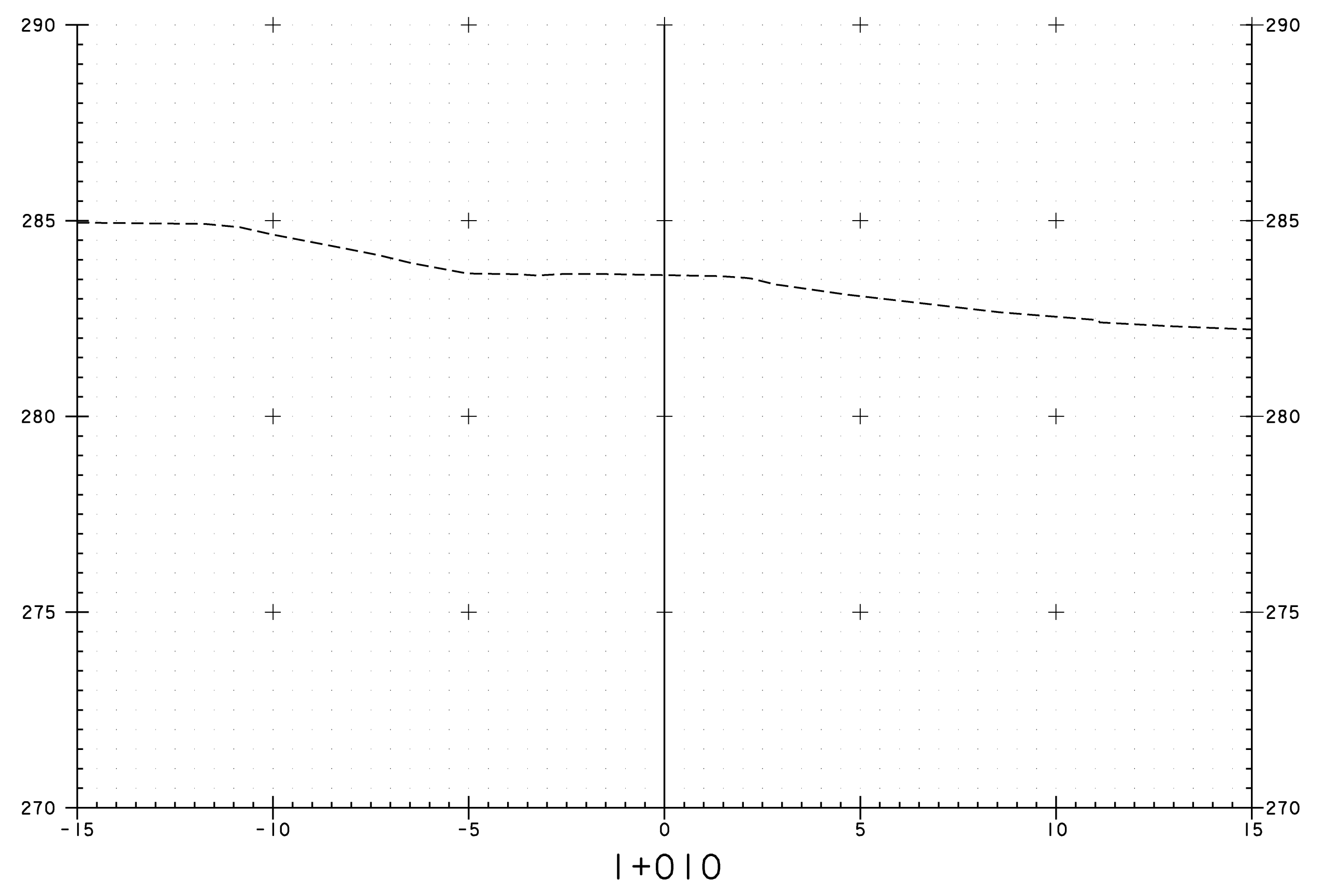
TURBIDITY CURTAIN

NOTES:
THIS ITEM SHALL BE PAID FOR UNDER ITEM 649.61(GEOTEXTILE FOR FILTER CURTAIN)

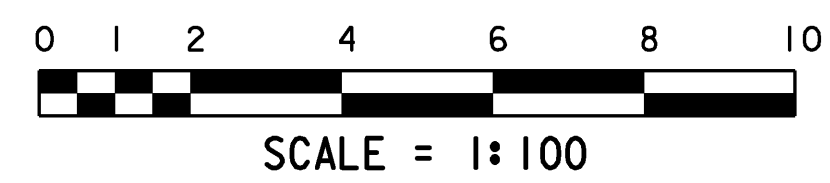
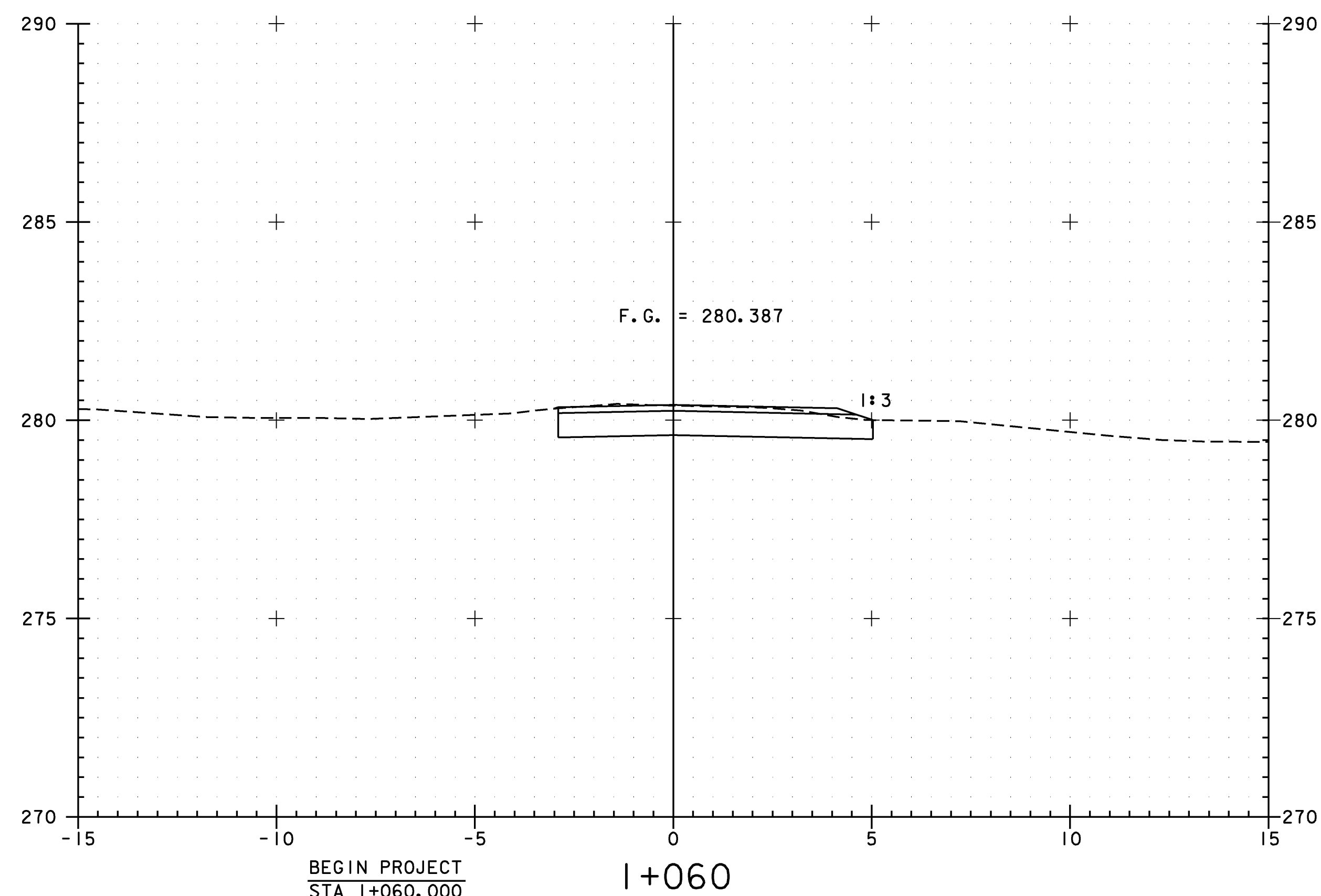
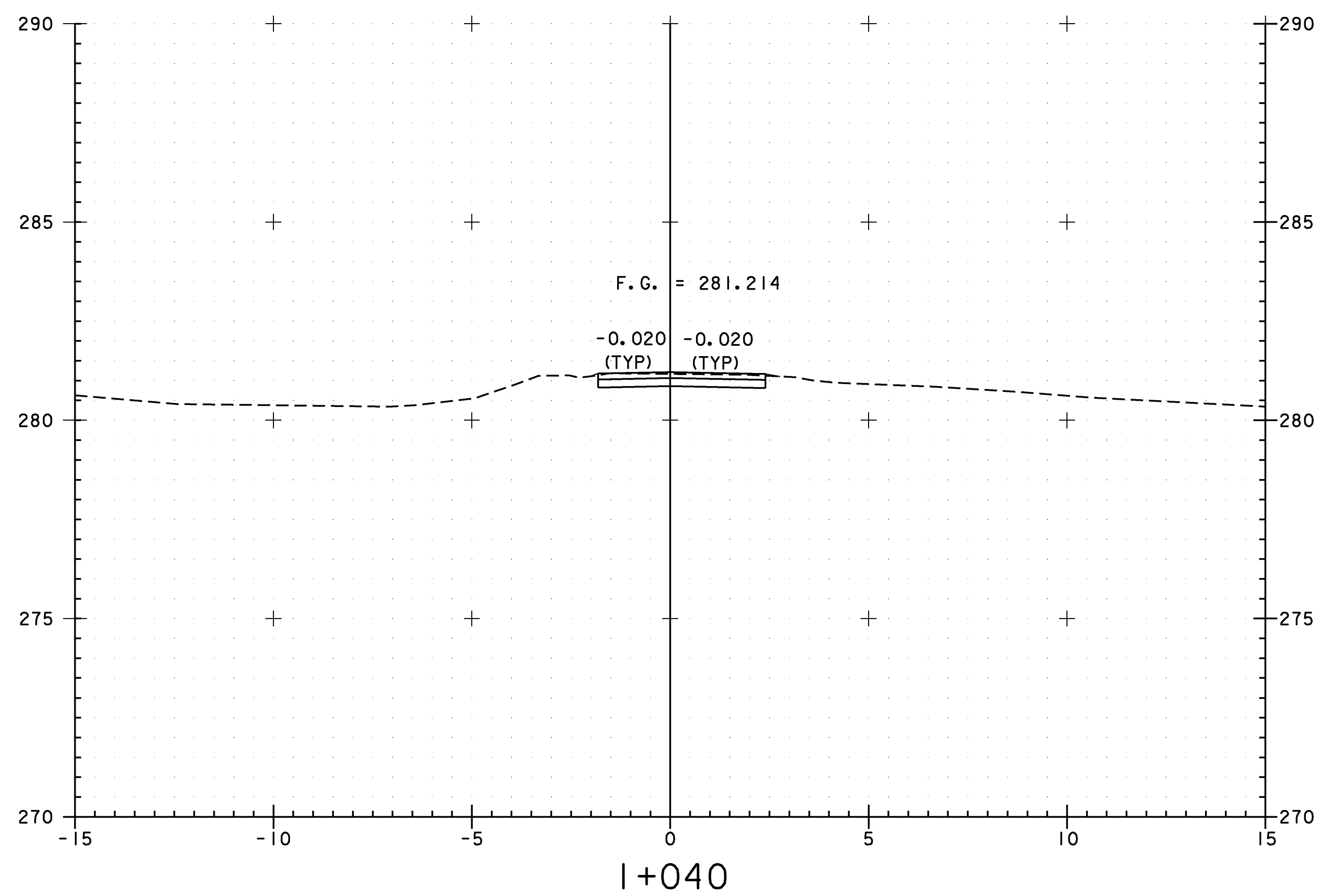
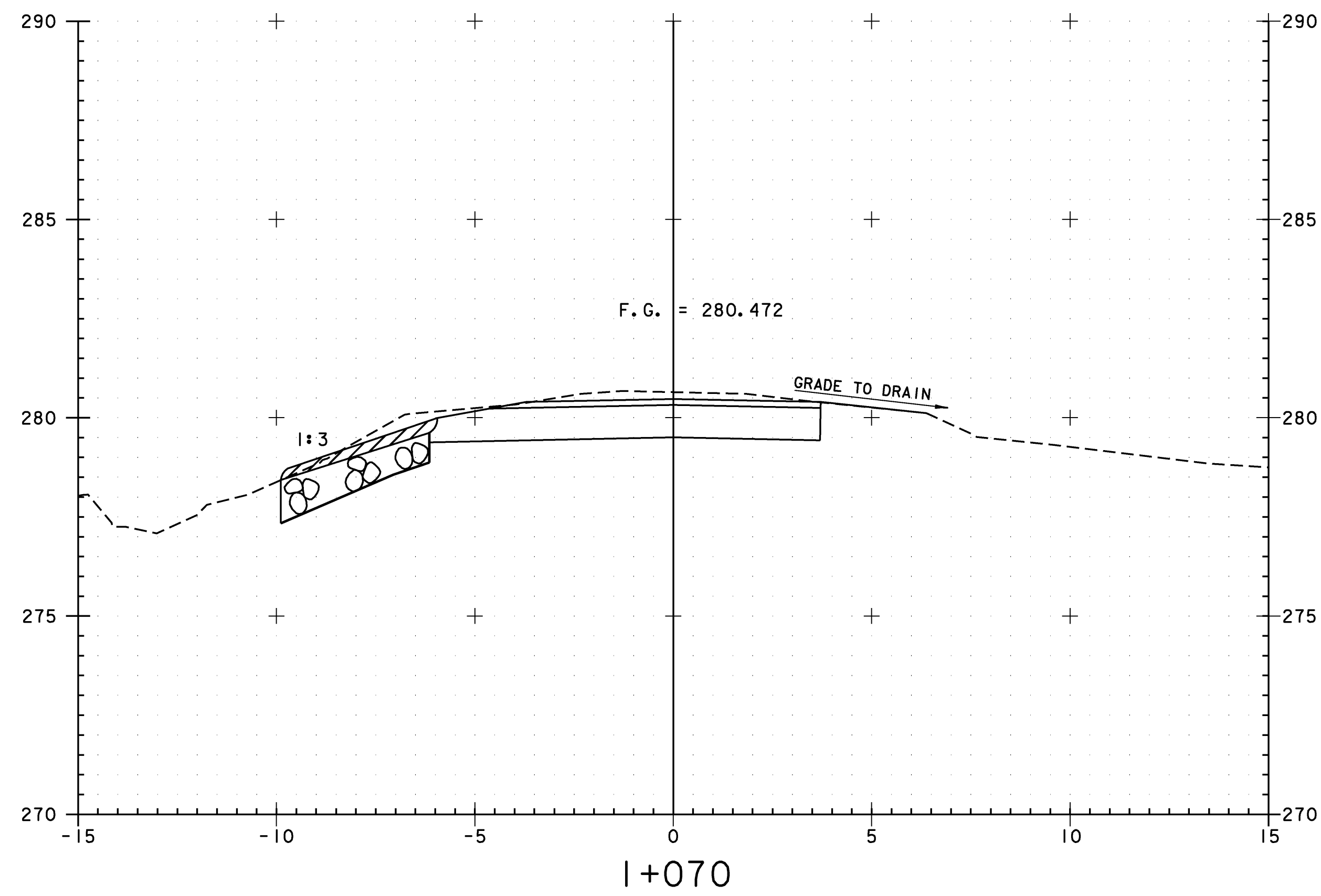
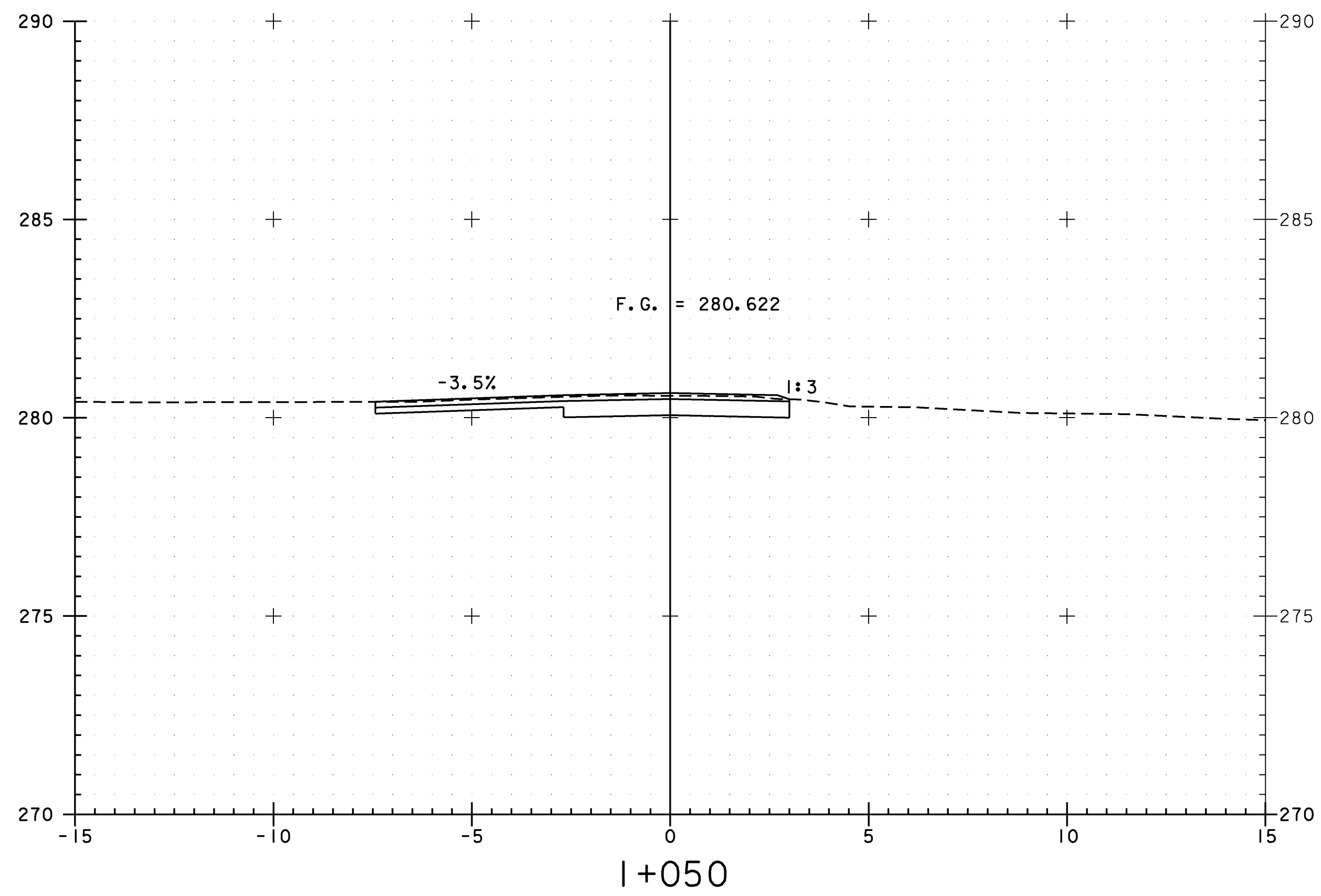
NTS

EPSC DETAIL SHEETS

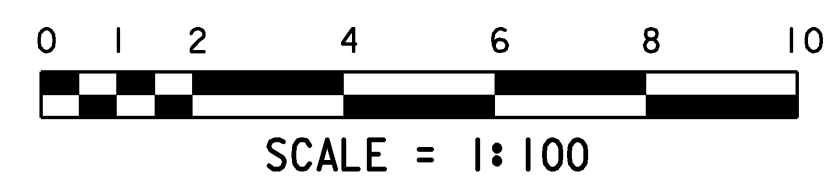
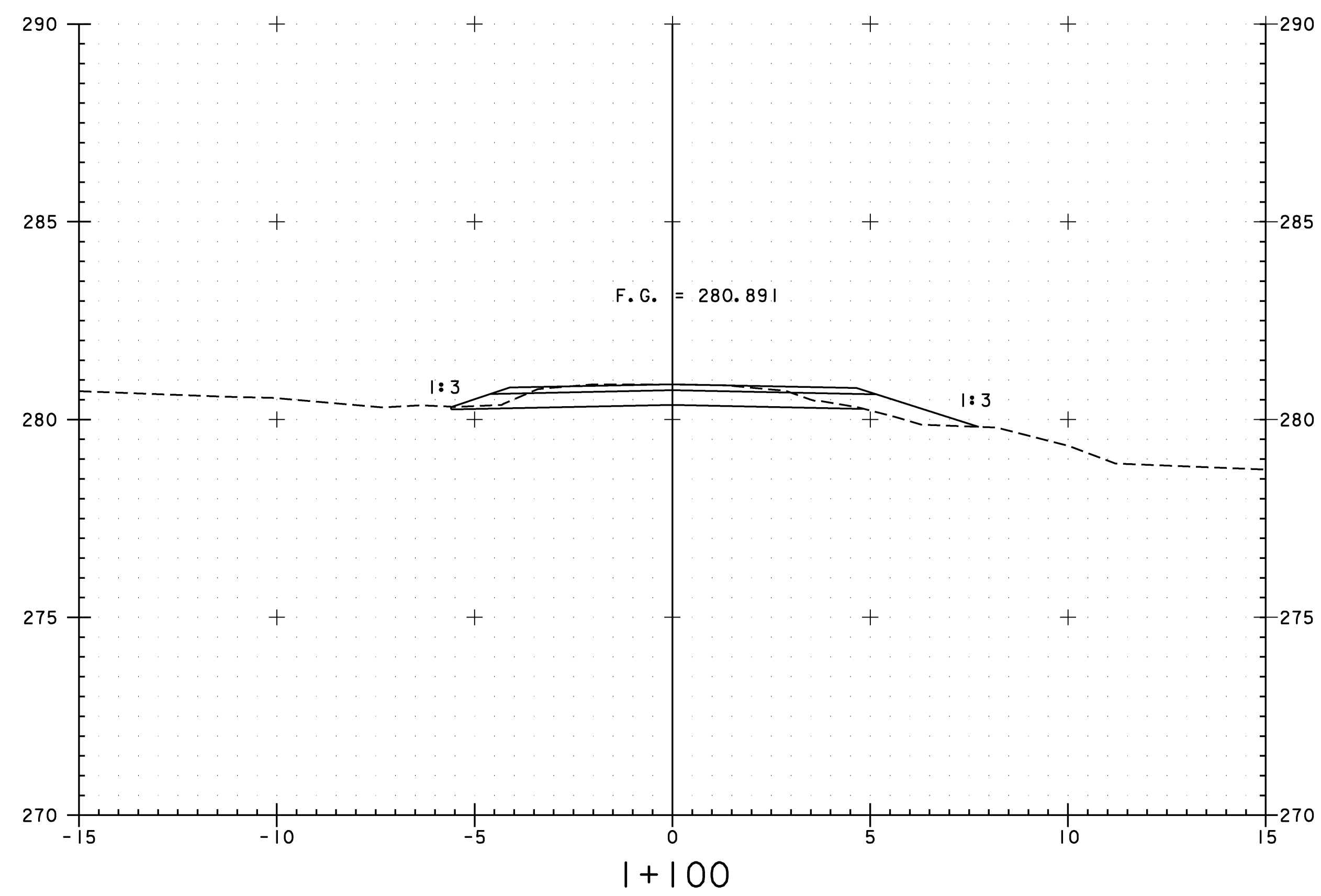
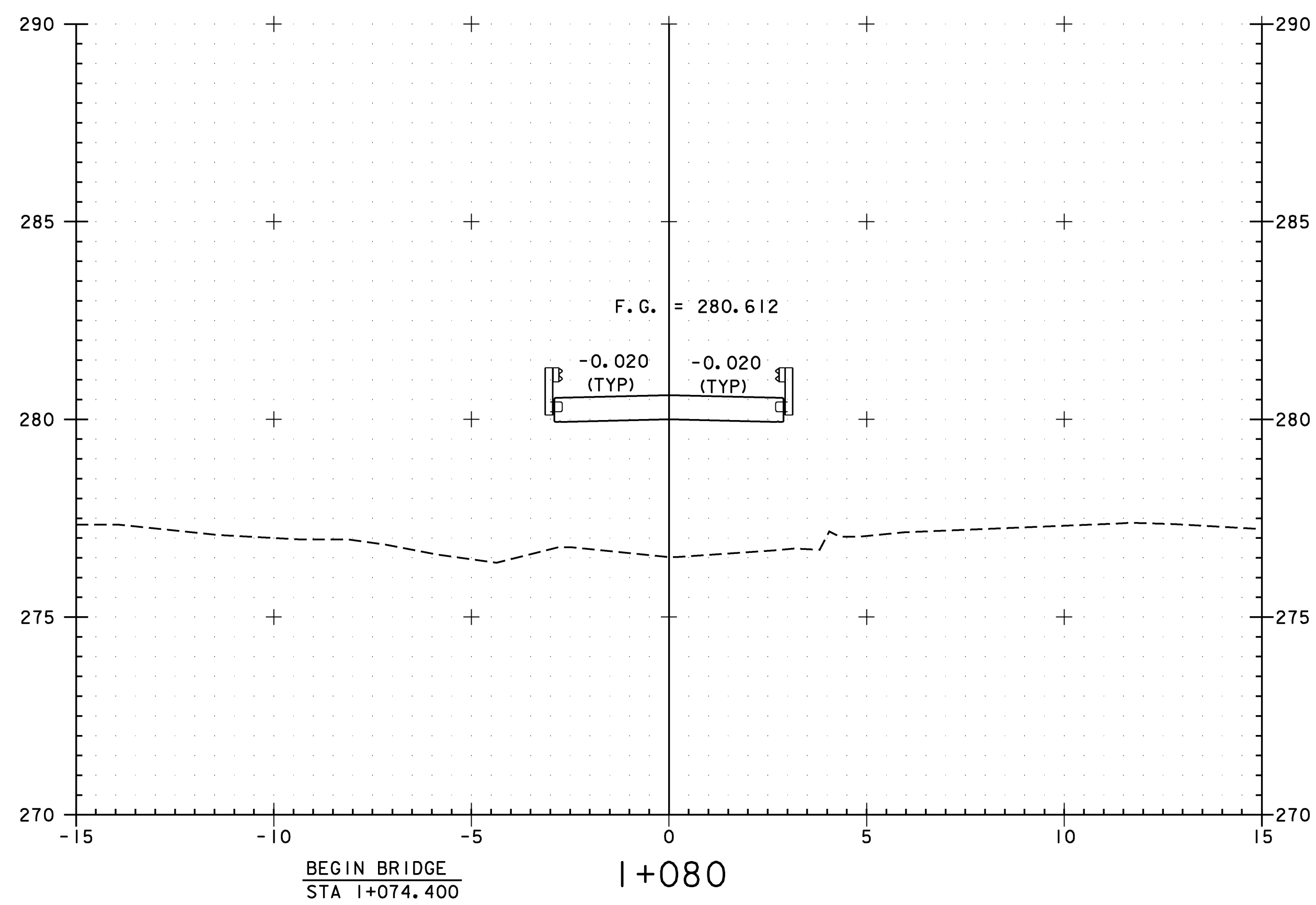
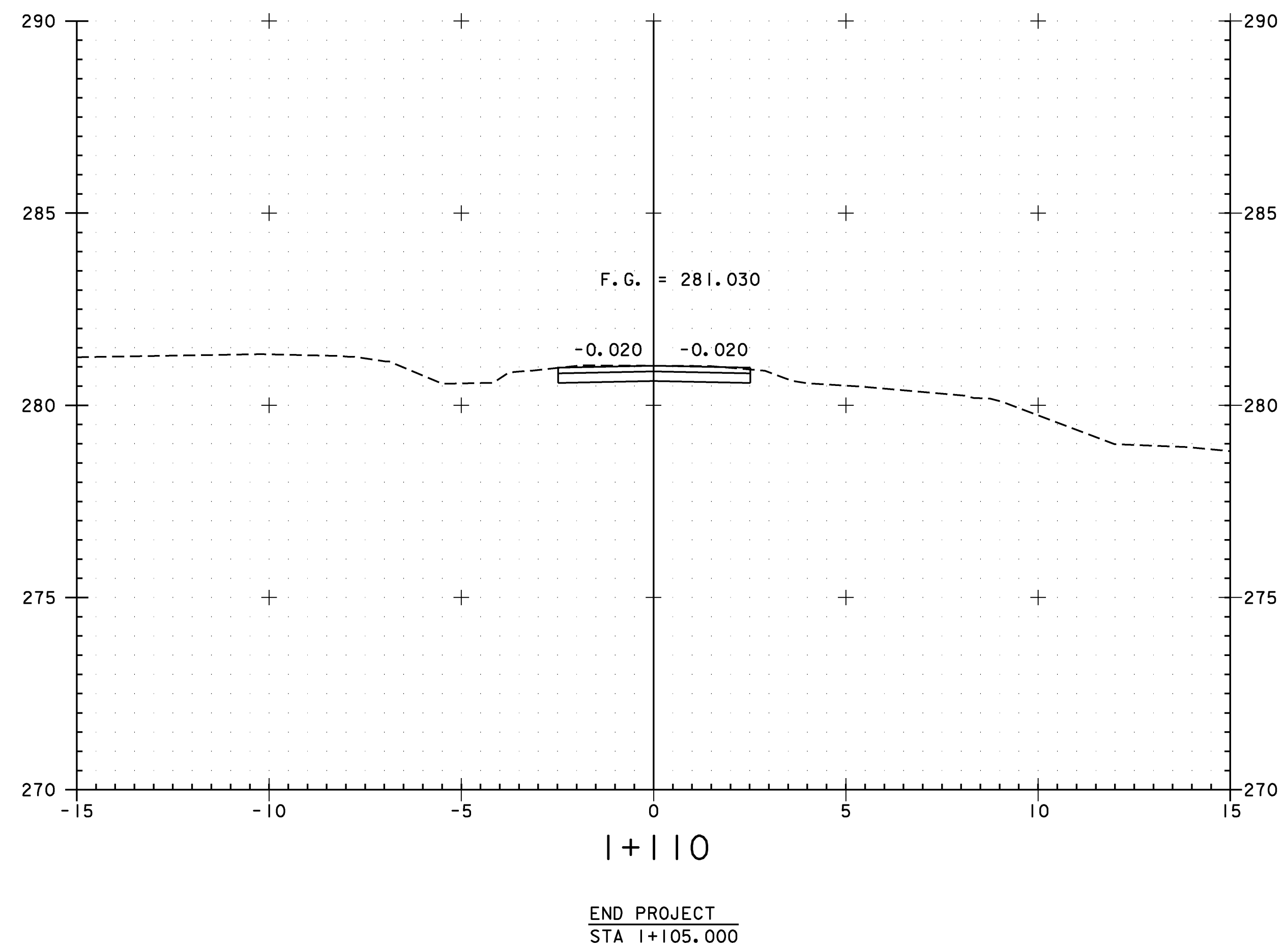
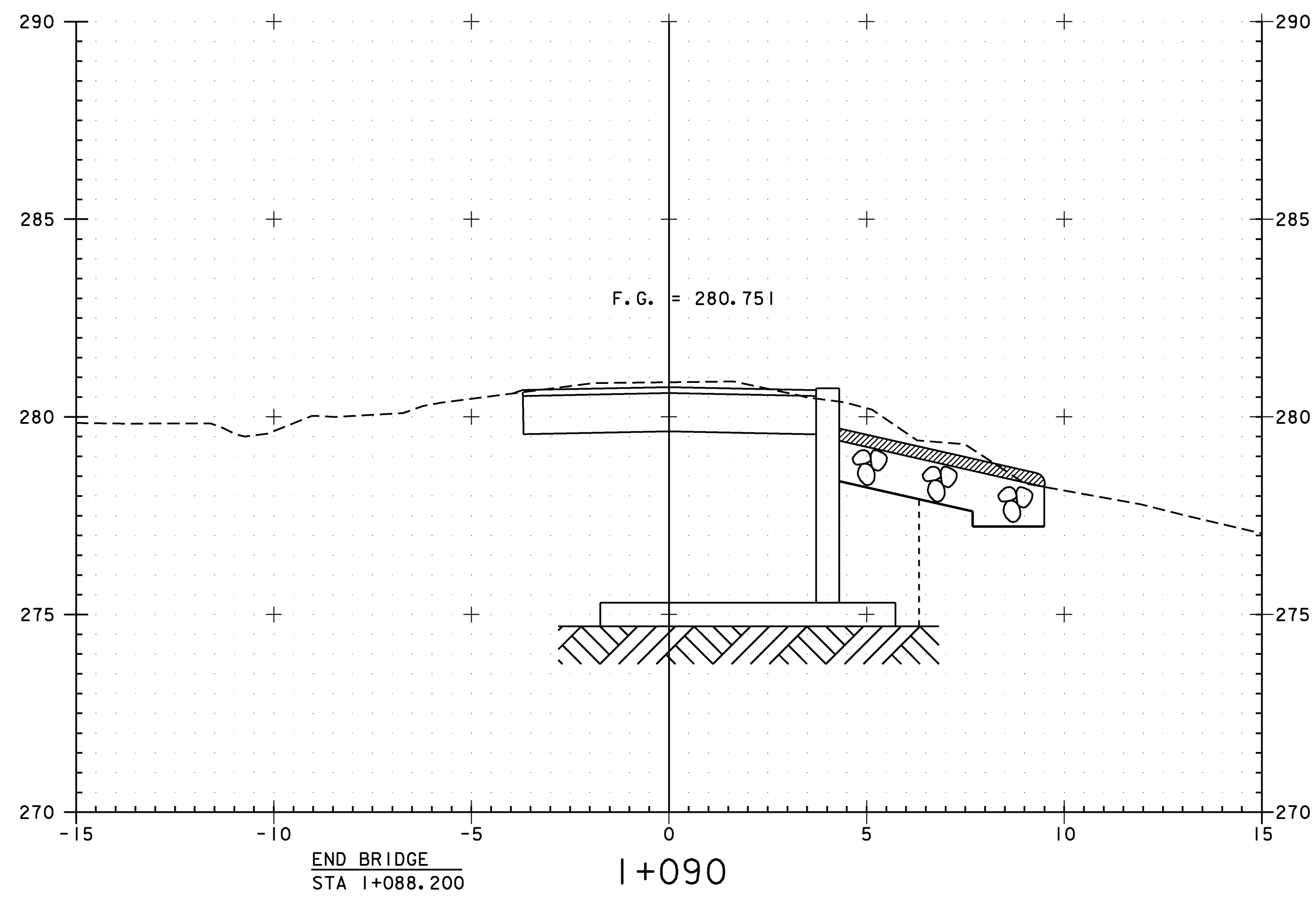
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IPARM FILE NAME: sj270epsc2.i	DRAWN BY: CONST. ENV. SECT.
DESIGNED BY: CONST. ENV. SECTION	CHECKED BY: A. CABRAL
SQUAD LEADER: C.P. WILLIAMS	SHEET: 35 OF 42
EPSC DETAILS 2	



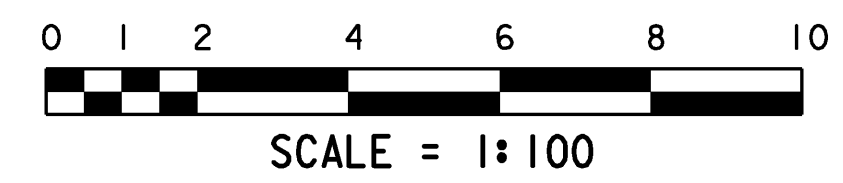
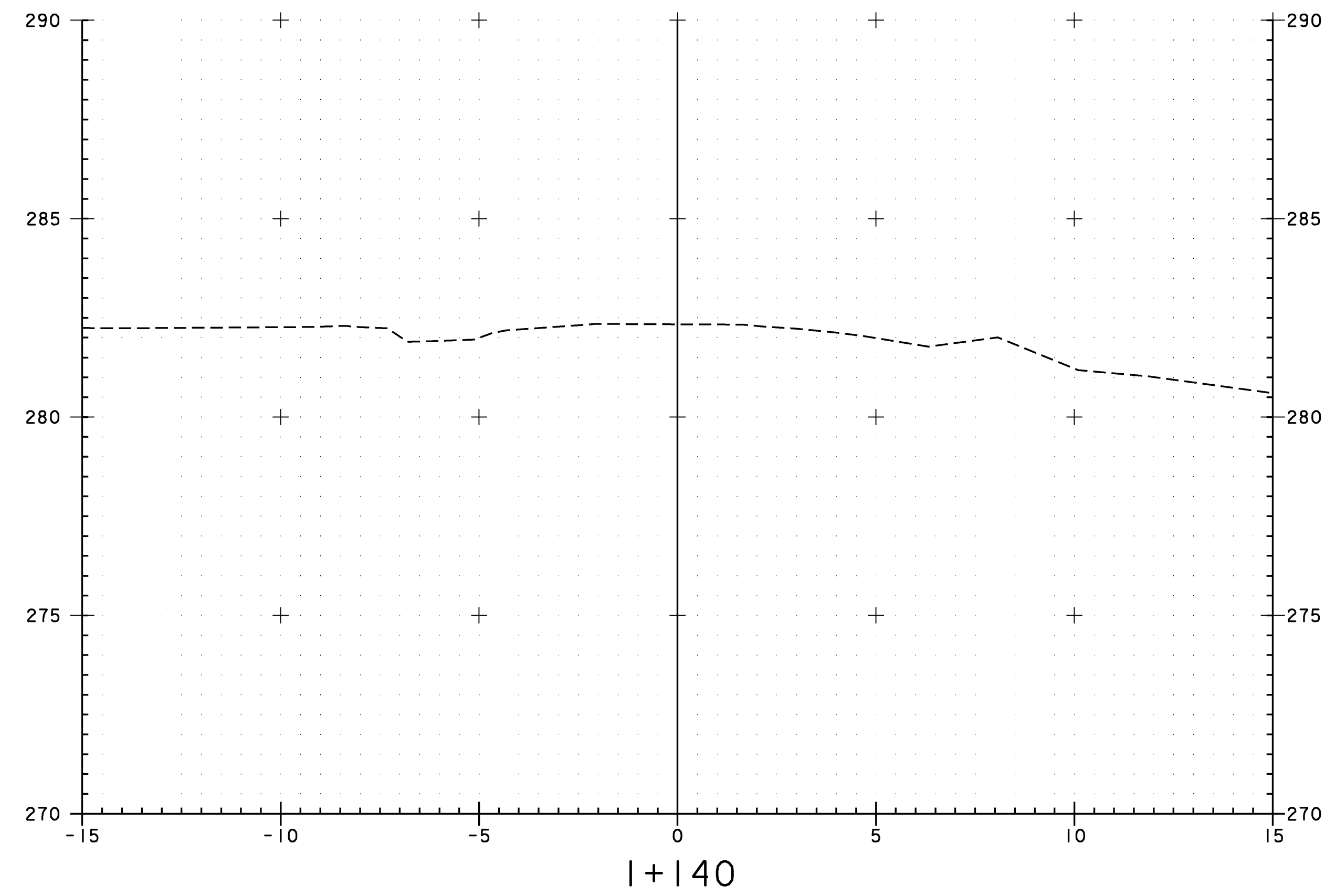
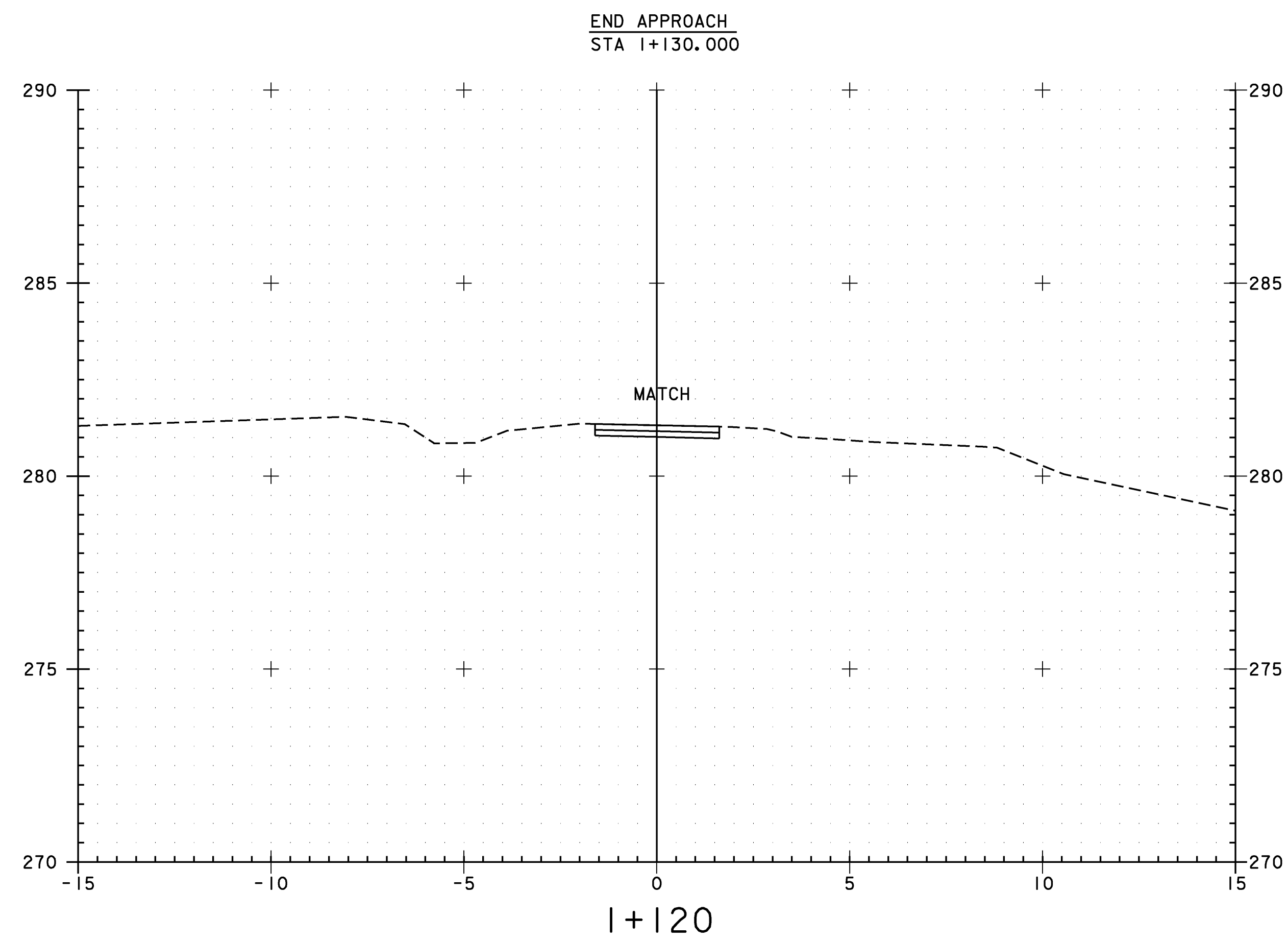
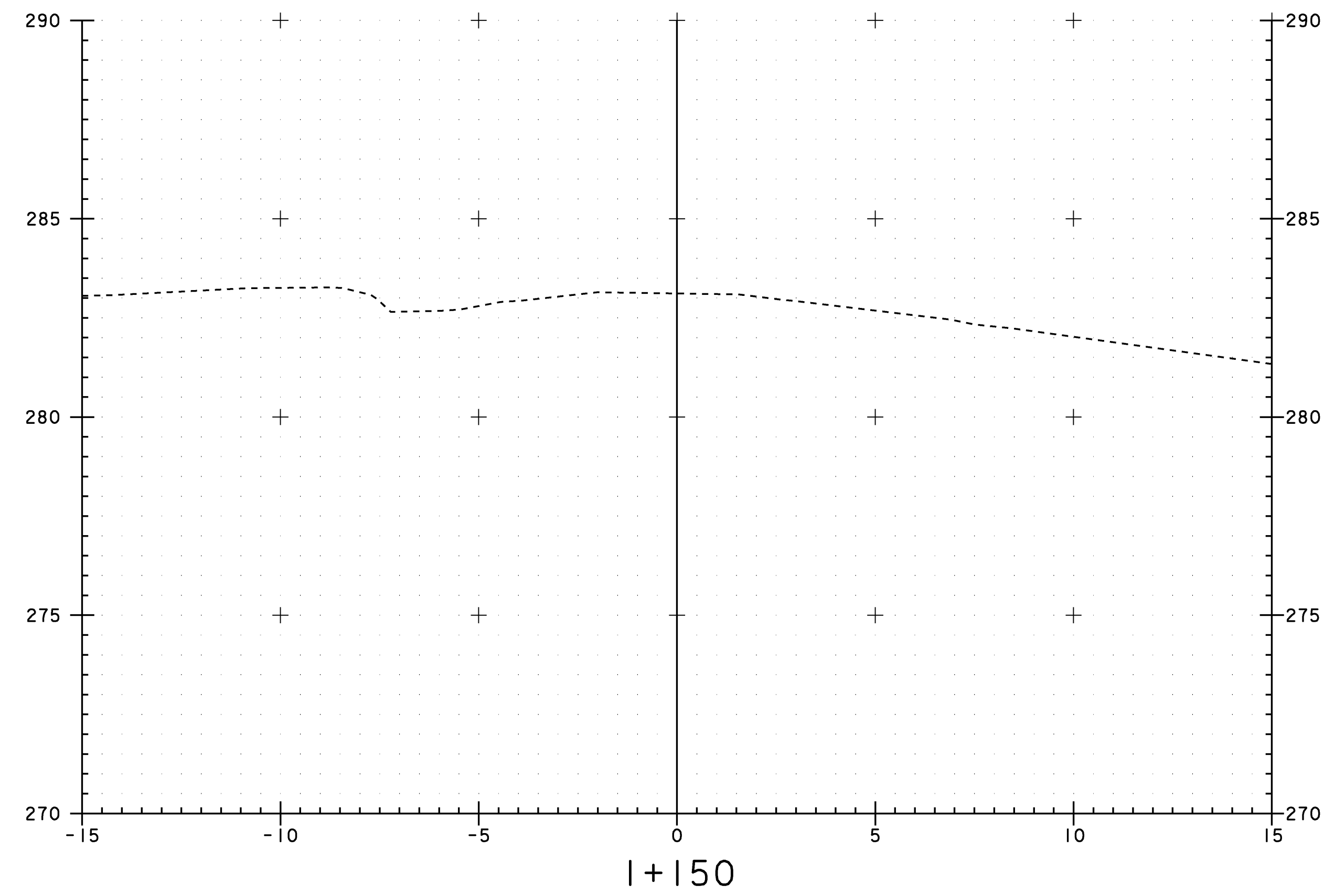
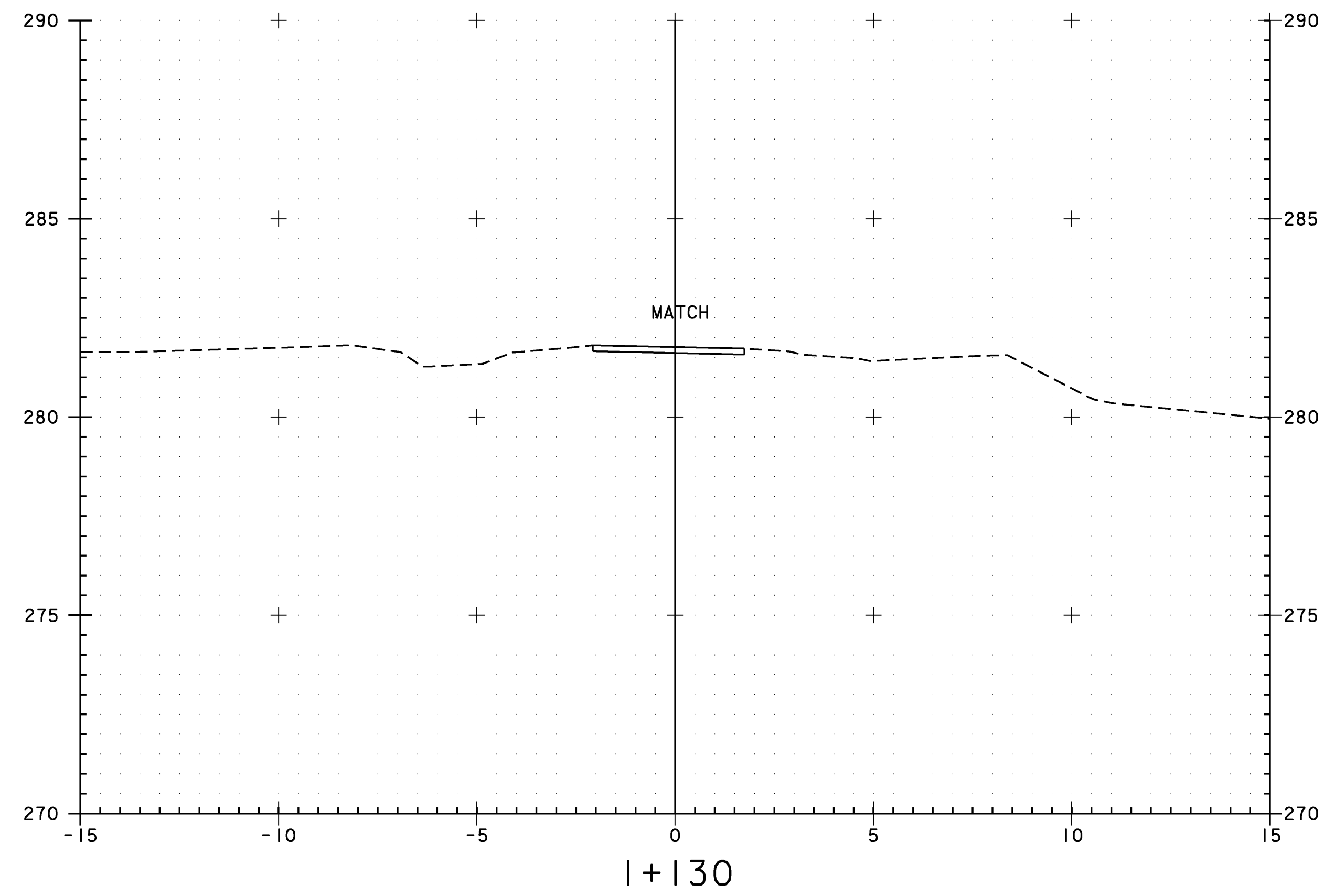
PROJECT: CABOT	PROJECT NO. : BRO 1446 (27)
DESIGN FILE NAME: 96J270/structures/sj270xsl.dgn	PLOT DATE: 07-DEC-2007
MAINLINE CROSS SECTIONS	
SECTION I+000 THROUGH I+030	SHEET: 36 OF 42



PROJECT: CABOT	PROJECT NO. : BRO 1446 (27)
DESIGN FILE NAME: 96j270/structures/sj270xsl.dgn	PLOT DATE: 07-DEC-2007
MAINLINE CROSS SECTIONS	
SECTION I+040 THROUGH I+070	SHEET: 37 OF 42

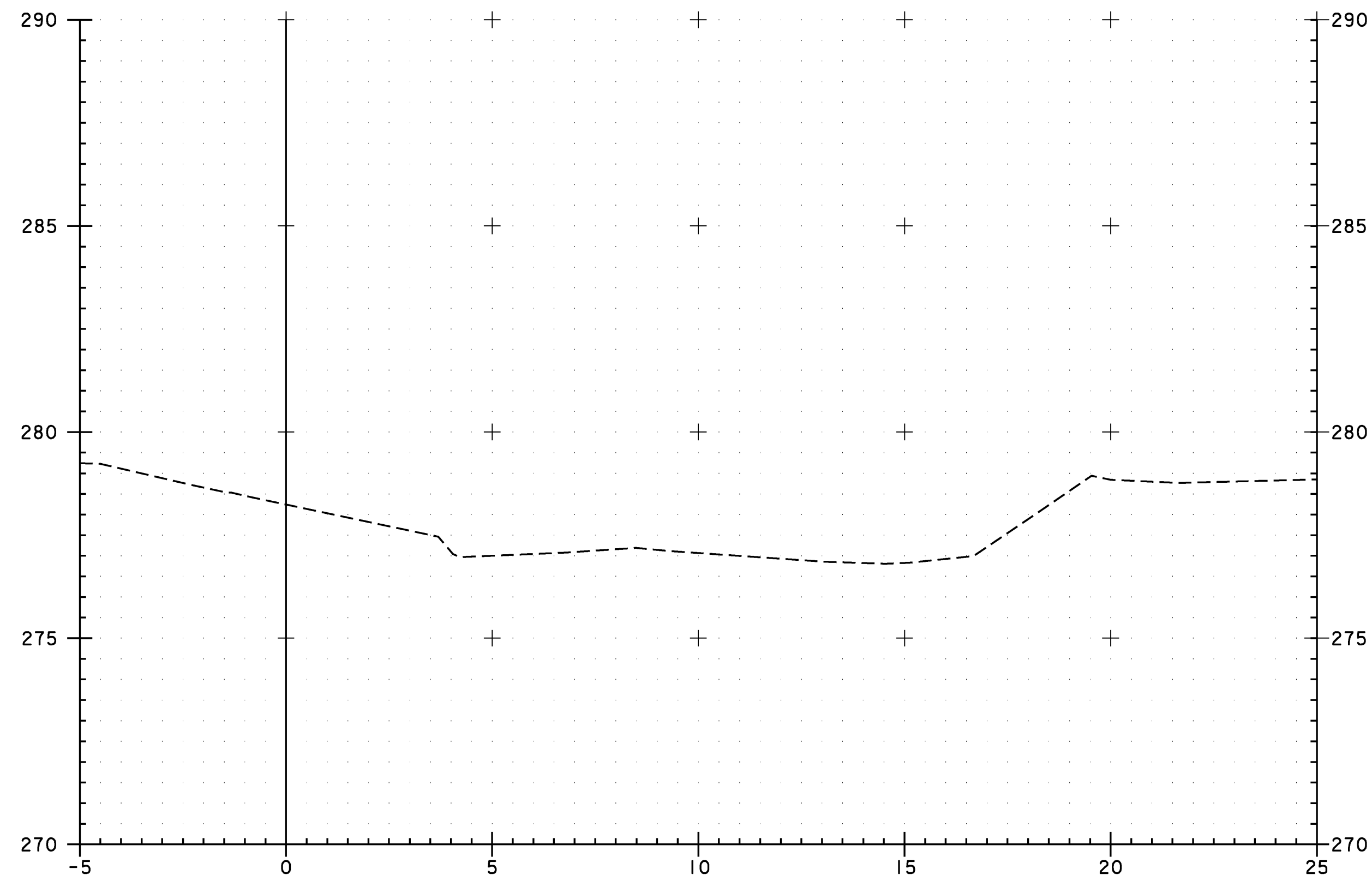


PROJECT: CABOT	PROJECT NO. : BRO 1446 (27)
DESIGN FILE NAME: 96J270/structures/sj270xsl.dgn	PLOT DATE: 07-DEC-2007
MAINLINE CROSS SECTIONS	
SECTION I+080 THROUGH I+110	SHEET: 38 OF 42

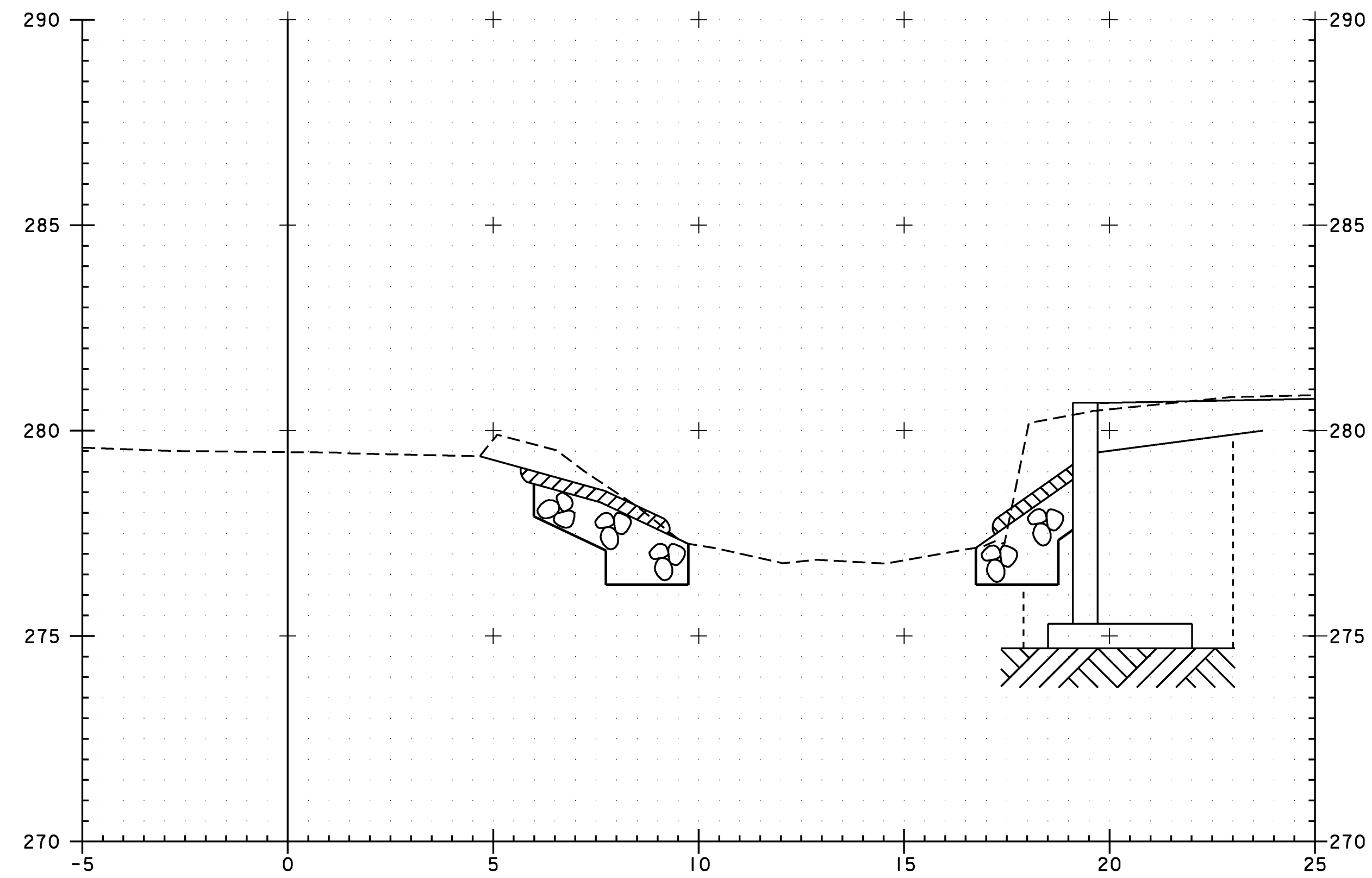


PROJECT: CABOT	PROJECT NO.: BRO 1446 (27)
DESIGN FILE NAME: 961270/structures/sj270xsl.dgn	PLOT DATE: 07-DEC-2007
MAINLINE CROSS SECTIONS	
SECTION I+120 THROUGH I+150	SHEET: 39 OF 42

STA 2+009.000 RT (ABUT 2)
 BEGIN STONE FILL TYPE III
 BEGIN GEOTEXTILE UNDER STONE FILL
 BEGIN GRUBBING MATERIAL
 BEGIN UNCLASSIFIED CHANNEL EXCAVATION

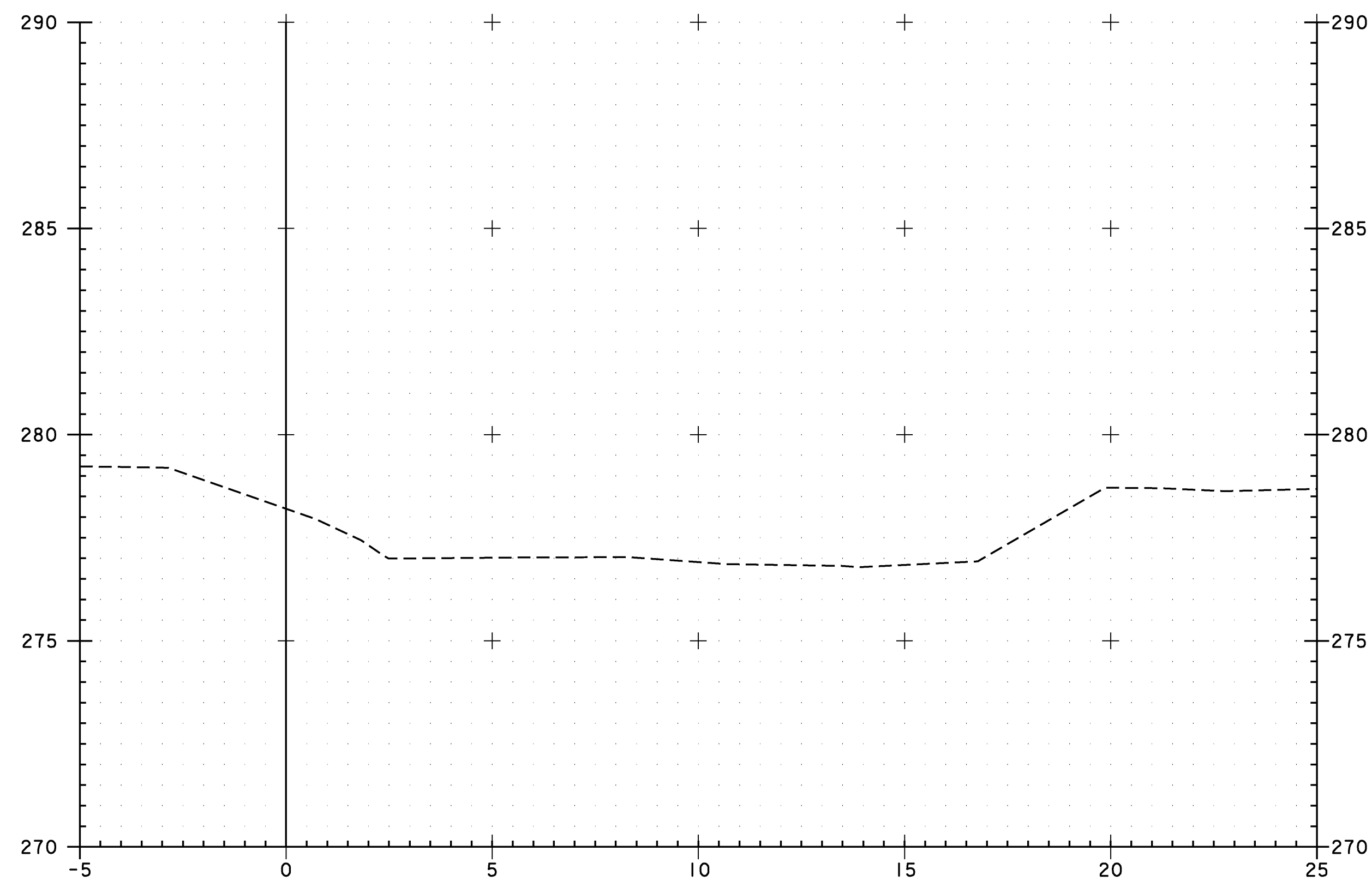


2+005

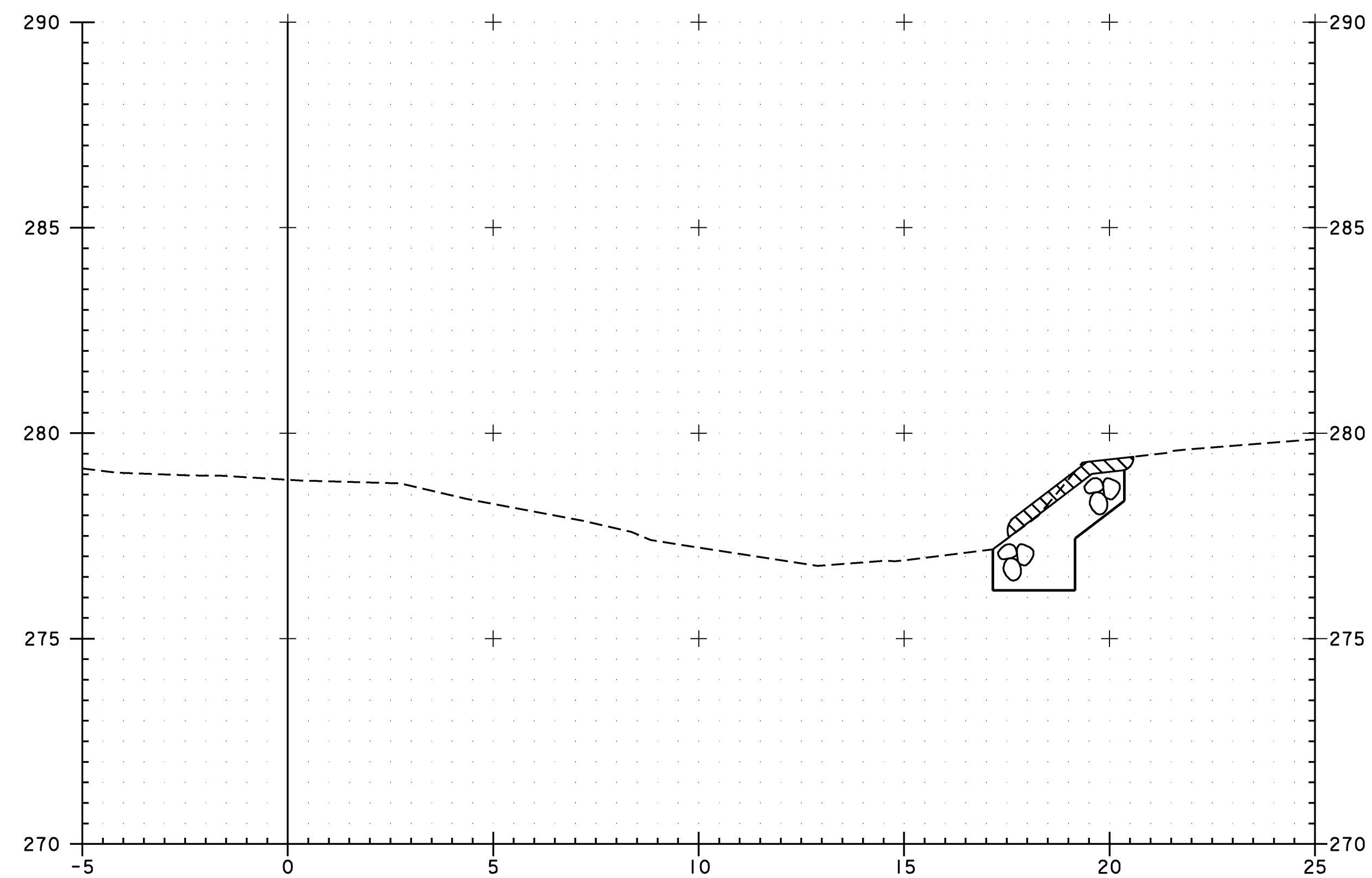


2+015

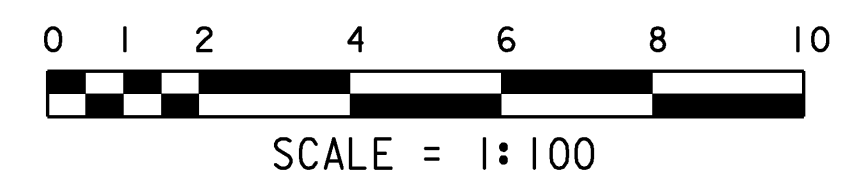
STA 2+013.500 RT (ABUT 1)
 BEGIN STONE FILL TYPE III
 BEGIN GEOTEXTILE UNDER STONE FILL
 BEGIN GRUBBING MATERIAL
 BEGIN UNCLASSIFIED CHANNEL EXCAVATION



2+000

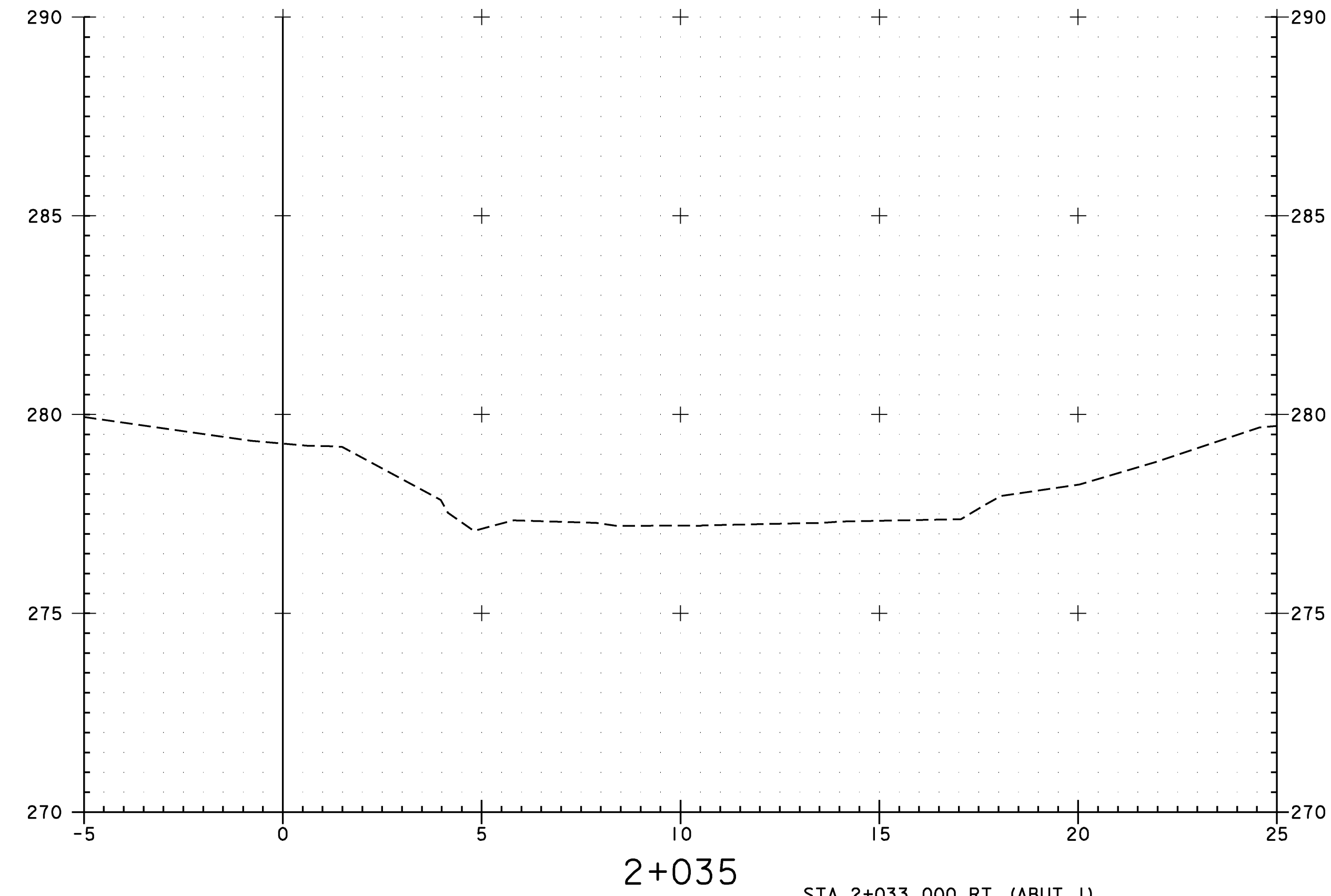
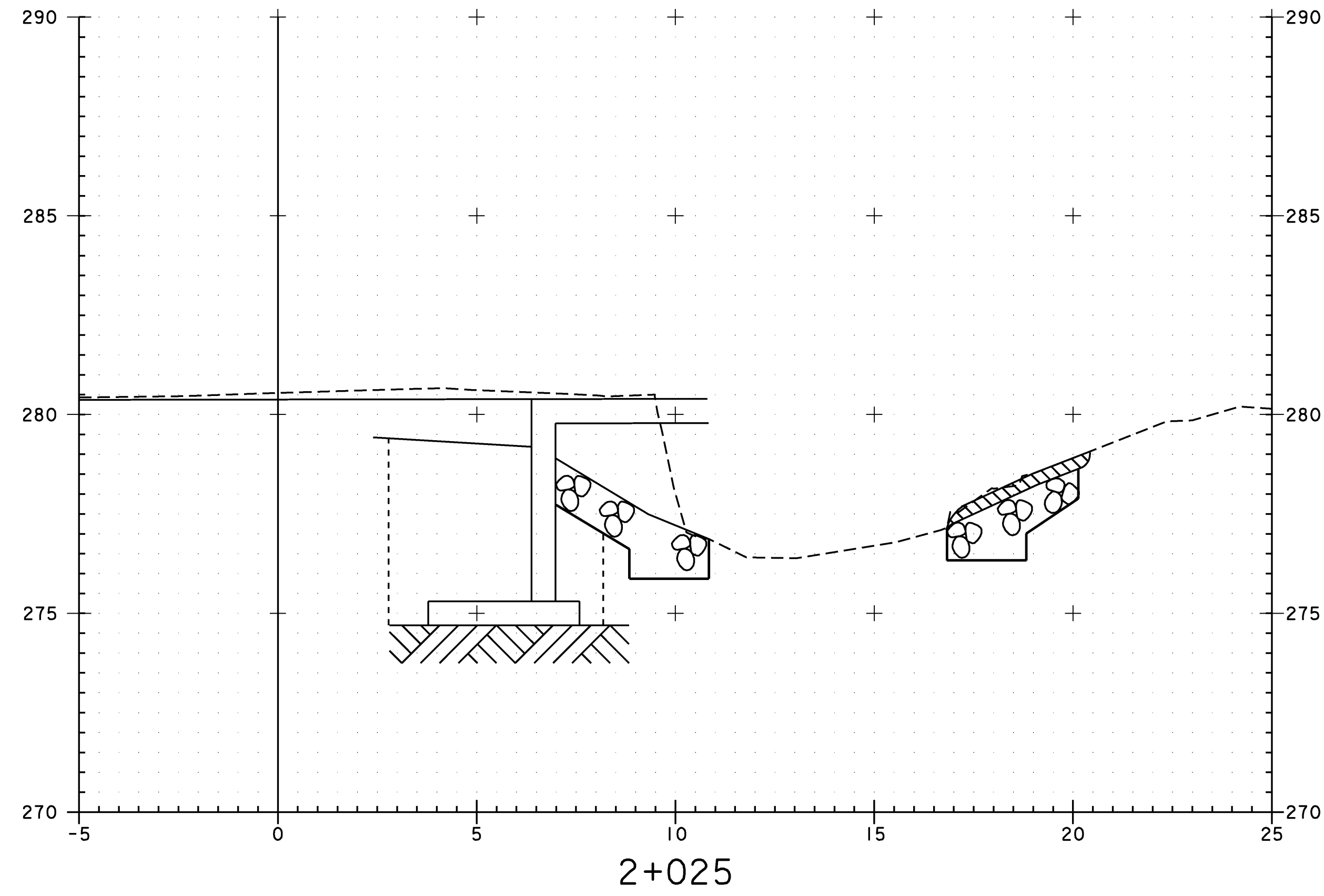


2+010

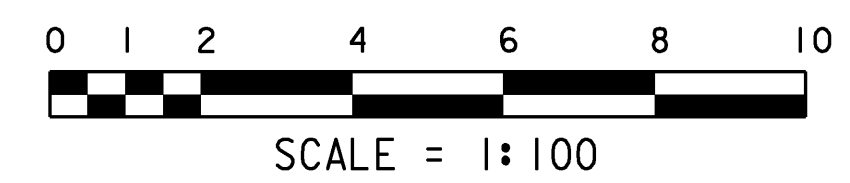
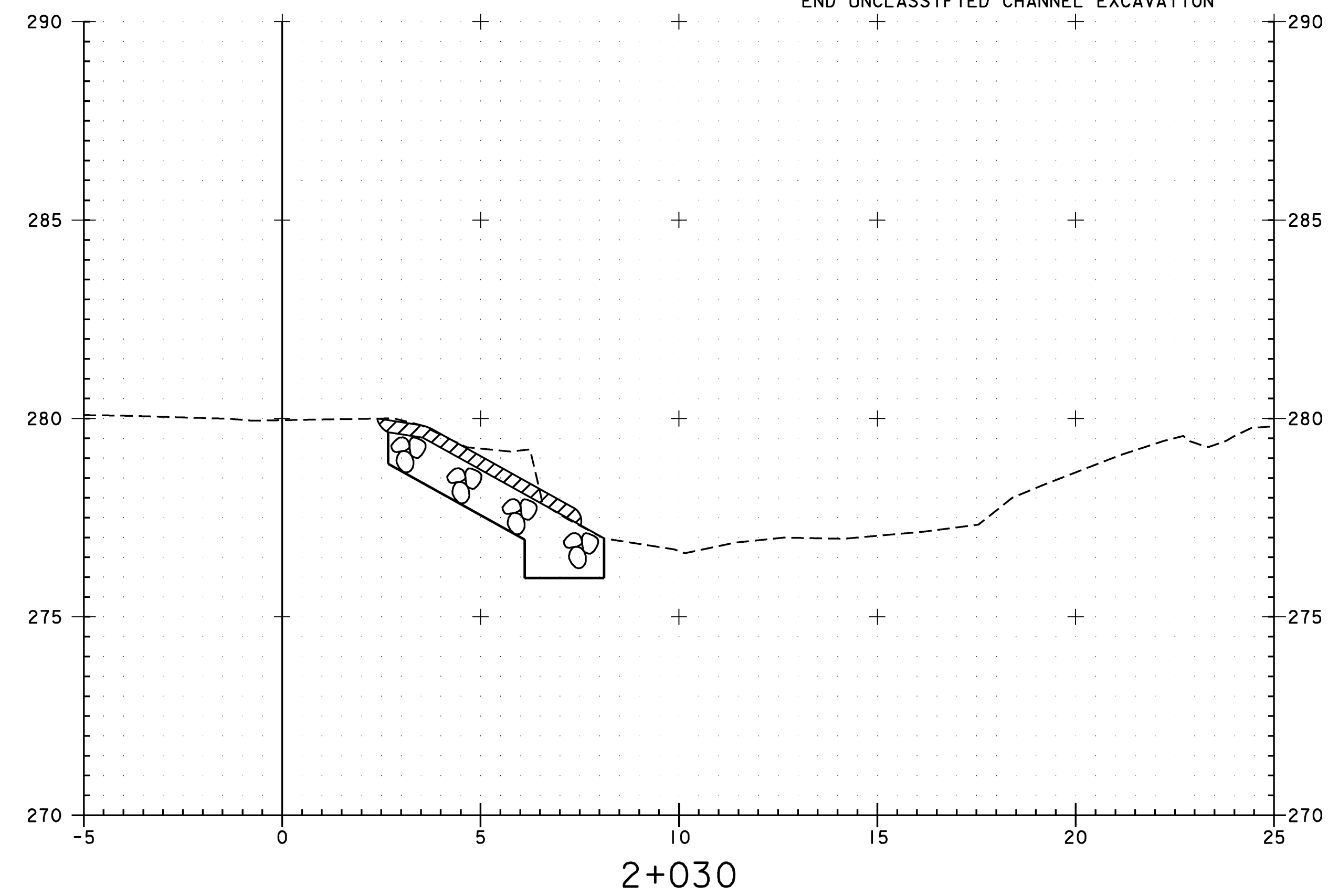
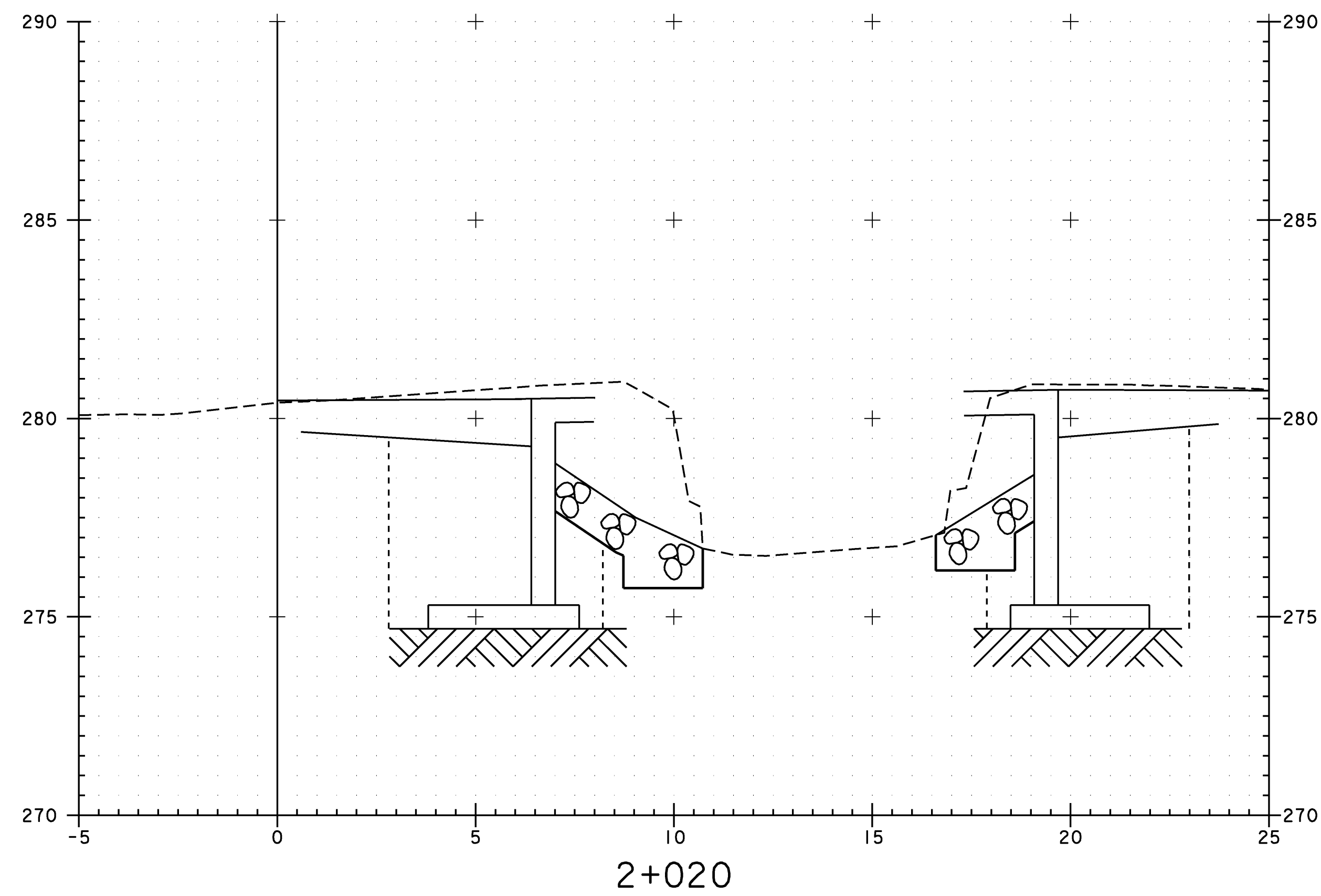


PROJECT: CABOT	PROJECT NO.: BRO 1446 (27)
DESIGN FILE NAME: 96j270/structures/sj270xsl.dgn	PLOT DATE: 07-DEC-2007
IPARM FILE NAME: sj270chl.l	
CHANNEL CROSS SECTIONS	
SECTION 2+000 THROUGH 2+015	SHEET: 40 OF 42

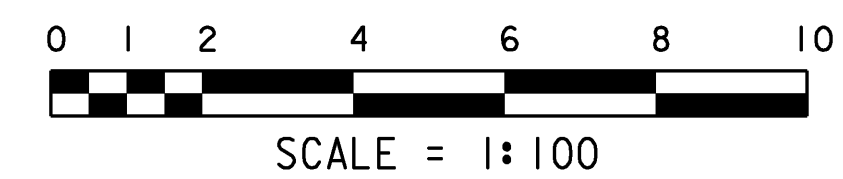
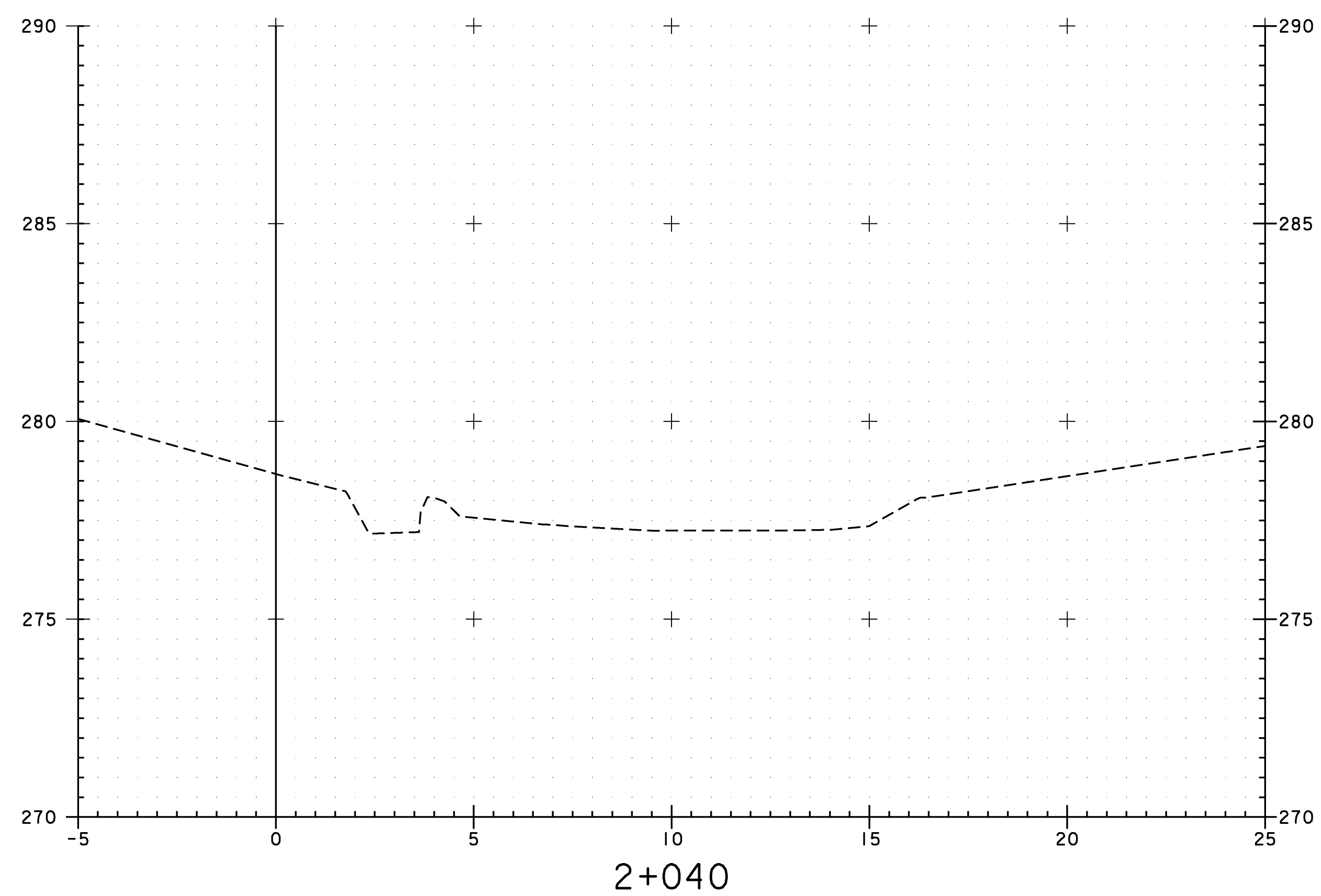
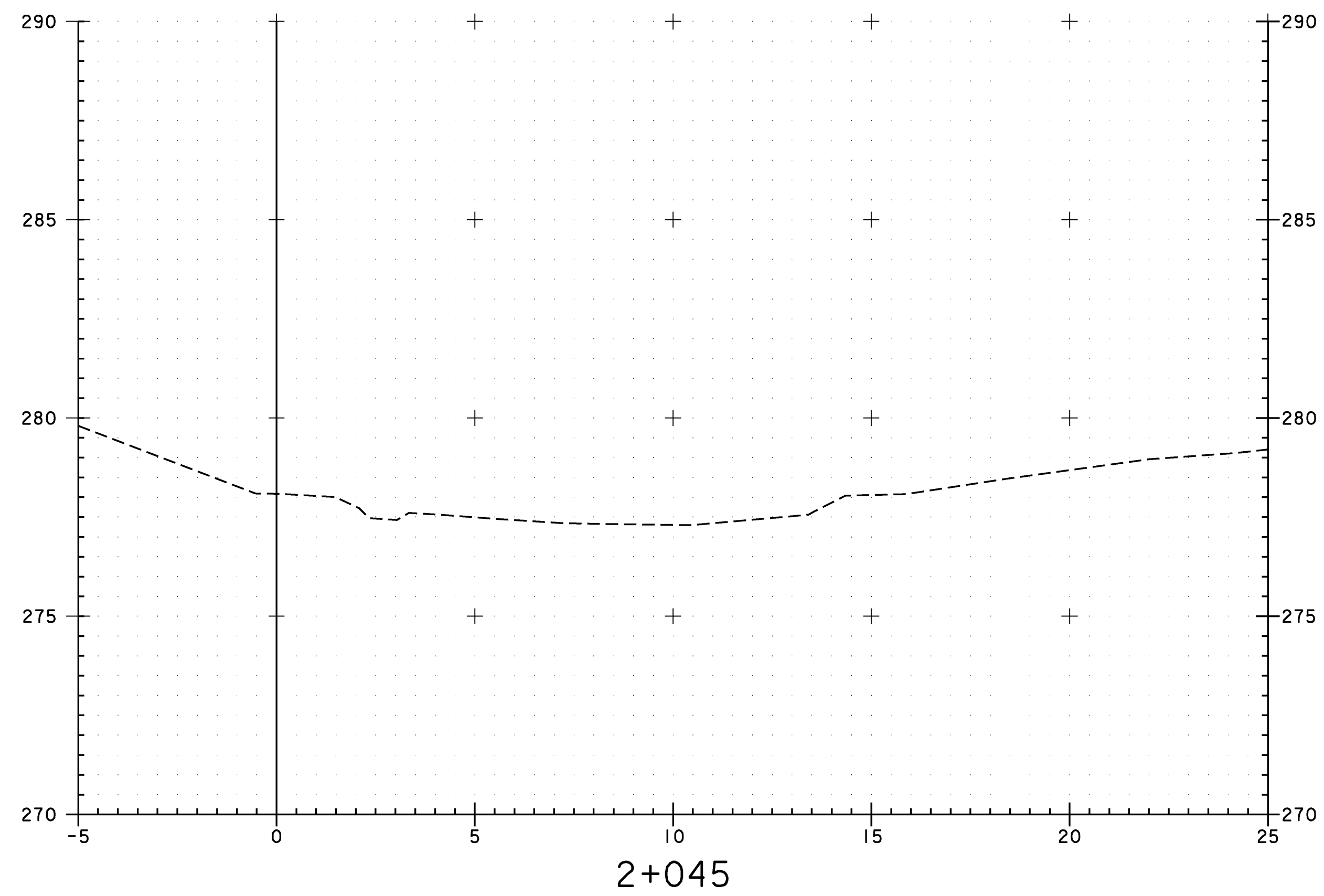
STA 2+026.000 RT (ABUT 2)
 END STONE FILL TYPE III
 END GEOTEXTILE UNDER STONE FILL
 END GRUBBING MATERIAL
 END UNCLASSIFIED CHANNEL EXCAVATION



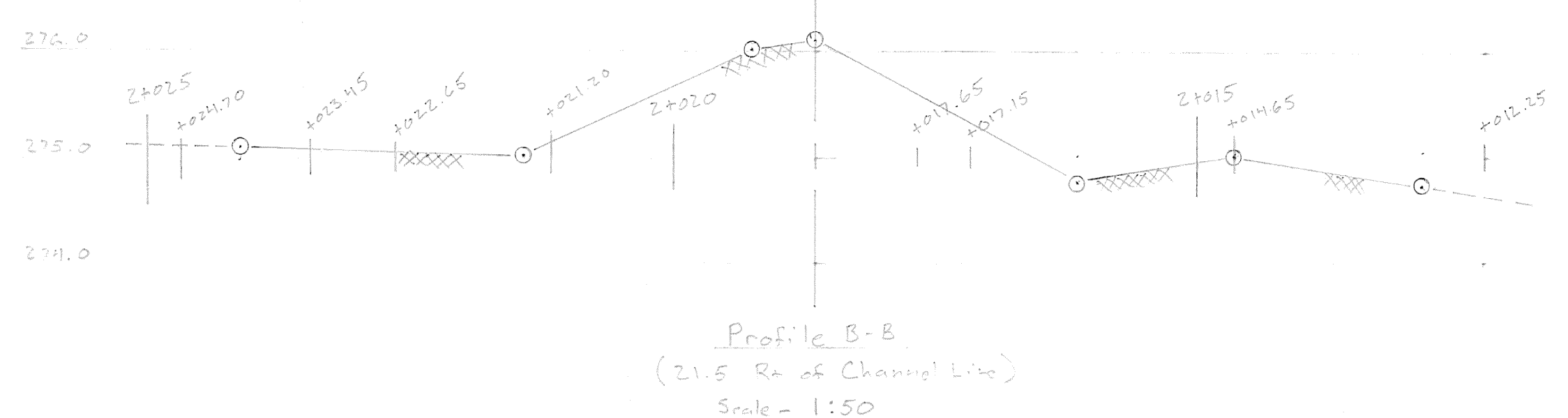
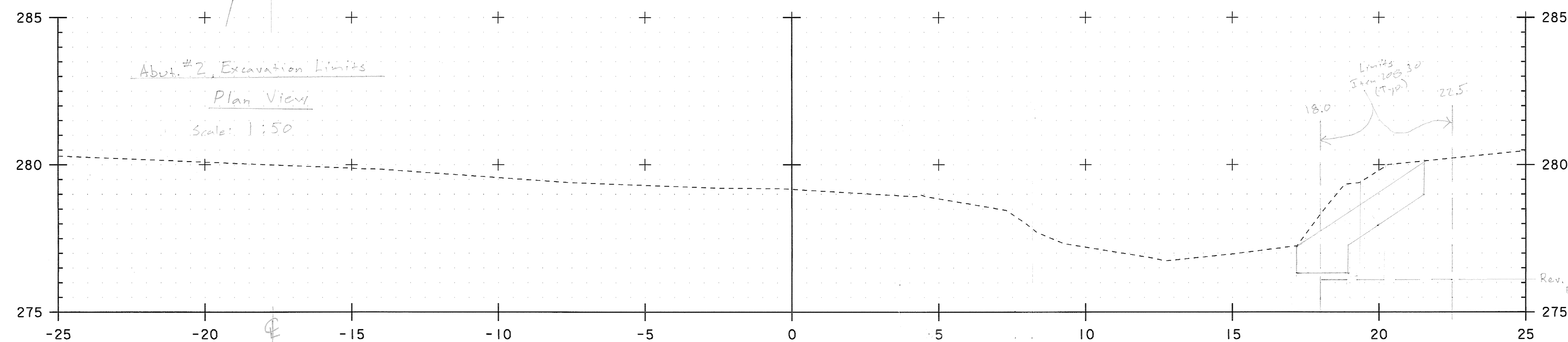
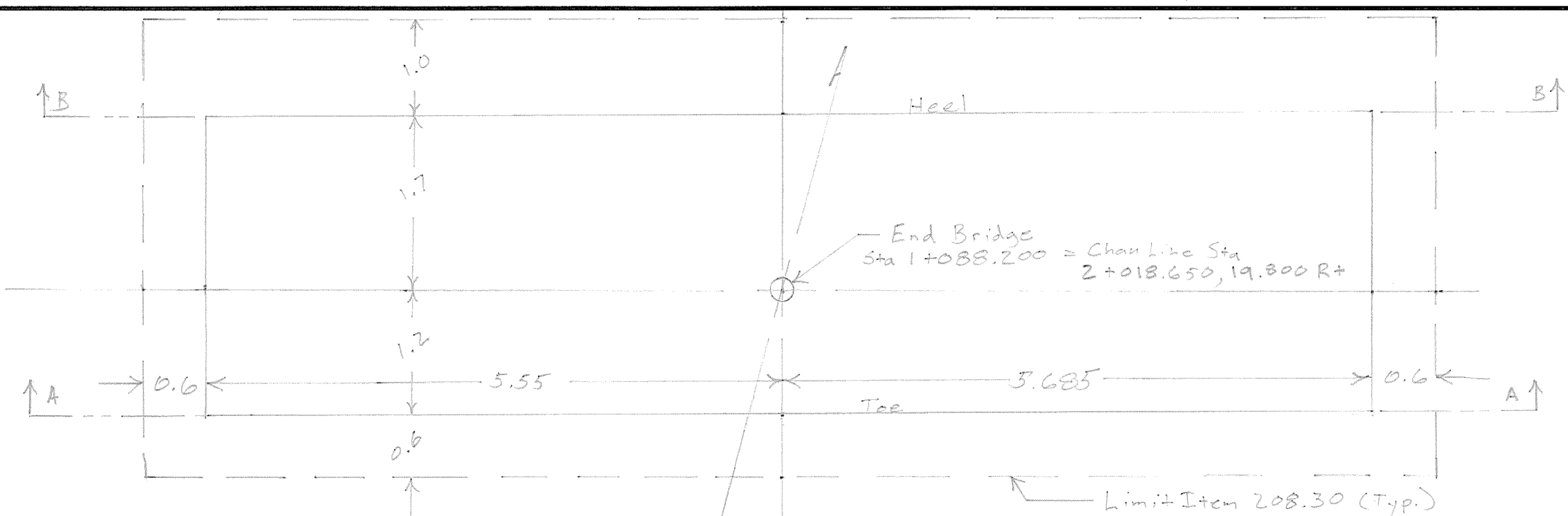
STA 2+033.000 RT (ABUT 1)
 END STONE FILL TYPE III
 END GEOTEXTILE UNDER STONE FILL
 END GRUBBING MATERIAL
 END UNCLASSIFIED CHANNEL EXCAVATION



PROJECT: CABOT	PROJECT NO.: BRO 1446 (27)
DESIGN FILE NAME: 96j270/structures/sj270xsl.dgn	PLOT DATE: 07-DEC-2007
IPARM FILE NAME: sj270ch2.i	
CHANNEL CROSS SECTIONS	
SECTION 2+020THROUGH 2+035	SHEET: 41 OF 42



PROJECT: CABOT	PROJECT NO.: BRO 1446 (27)
DESIGN FILE NAME: 96j270/structures/sj270xsl.dgn	PLOT DATE: 07-DEC-2007
CHANNEL CROSS SECTIONS	
SECTION 2+040THROUGH 2+045	SHEET: 42 OF 42

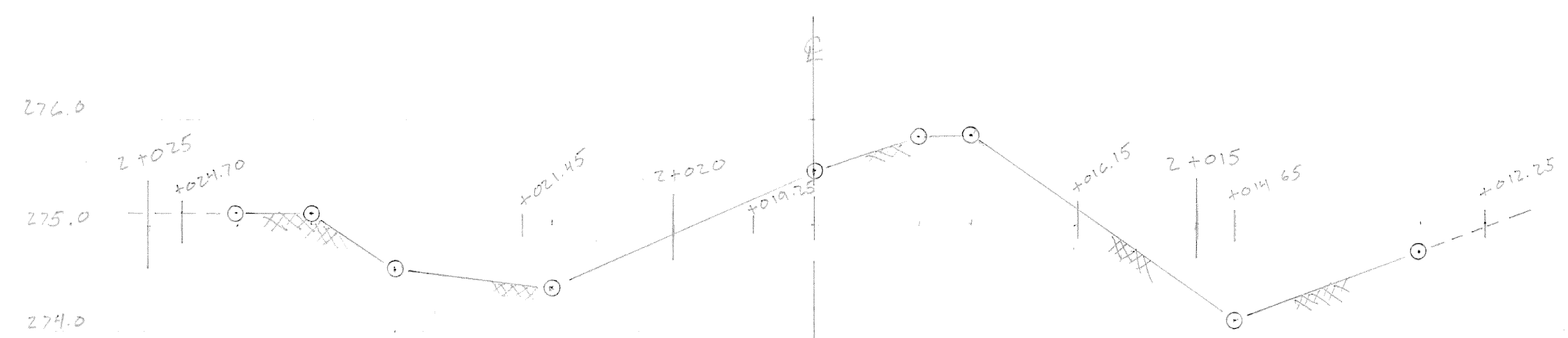


2+012.25
Beg. Item 208.30 @ Abut. #2 (Butt)

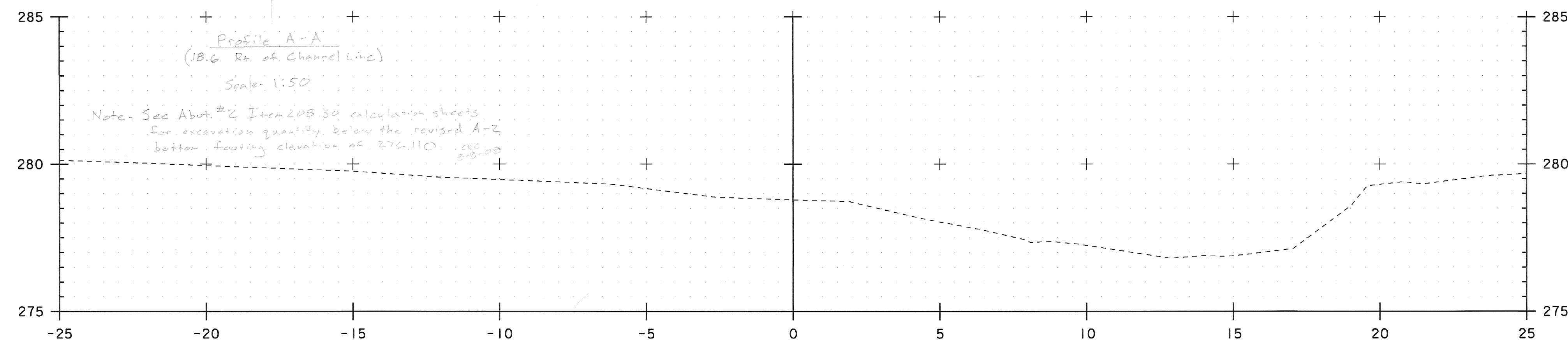
A-2: Item 208.30, $A = \frac{1}{2} \{ (2+3.25)(0.9) + (3.25+3.3)(0.5) + (3.3+3.9)(0.85) + (3.9+4.1)(2.25) \}$
 $A = 16.15 \text{ M}^2$ CDC 8-2-08 SWS 12-2-08

Item 203.27
 Ahead, $A = \frac{1}{2} (0.9 + 1.9)(0.8)$
 $A = 1.12 \text{ M}^2$ CDC 8-2-08 SWS 12-2-08

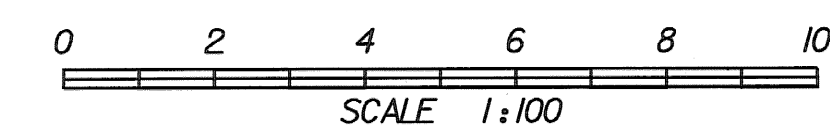
Back, $A = 1.12 + \frac{1}{2} [(1.9+3.0)(1.0) + (3.0+1.8)(0.5) + (1.8+1.9)(0.9) + (1.9+1.0)(1.3)]$
 $A = 8.07 \text{ M}^2$ CDC 8-2-08 SWS 12-1-08



2+011.80, Beg. Item 203.27 @ A-2 (Butt)
 (Same as 2+012.25, BK: $A = 8.07 \text{ M}^2$)
CDC 8-2-08 SWS 12-2-08

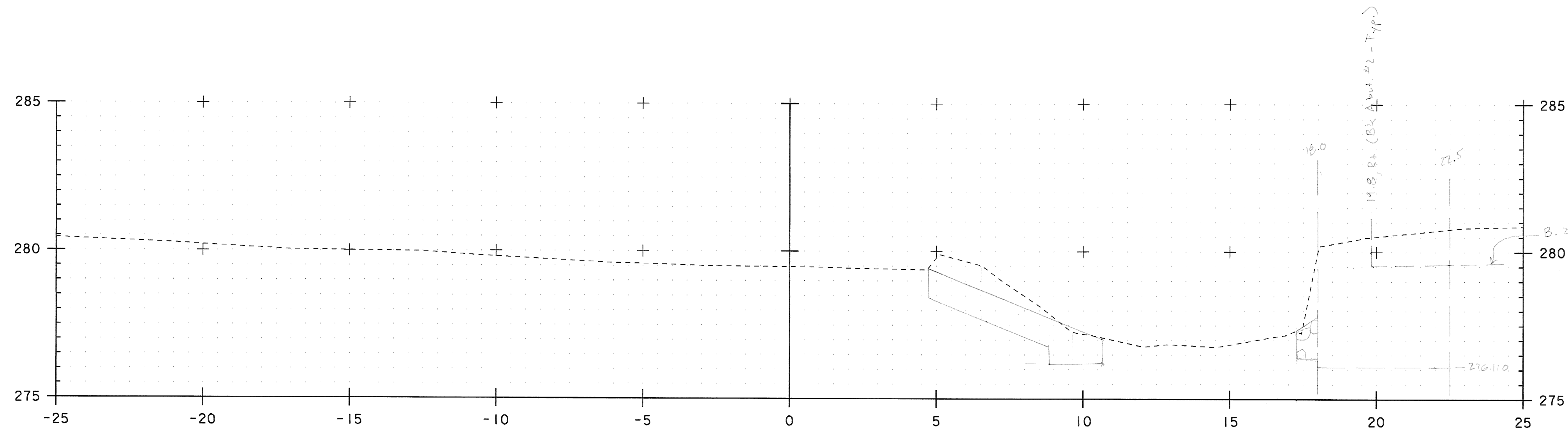


2+009.00



STA. 2+009 TO STA. 2+012

PROJECT: CABOT	PROJECT NO.: BRO 1446 (27)
DESIGN FILE NAME:	PLOT DATE: 10-JUN-2008
IPARM FILE NAME:	SURVEY DATE: 5/98
SURVEYED BY: R. GILMAN	DRAWN BY: M.FESSEL
SQUAD LEADER: C. P. WILLIAMS	SHEET: 1 OF 7
CHANNEL CROSS SECTIONS	

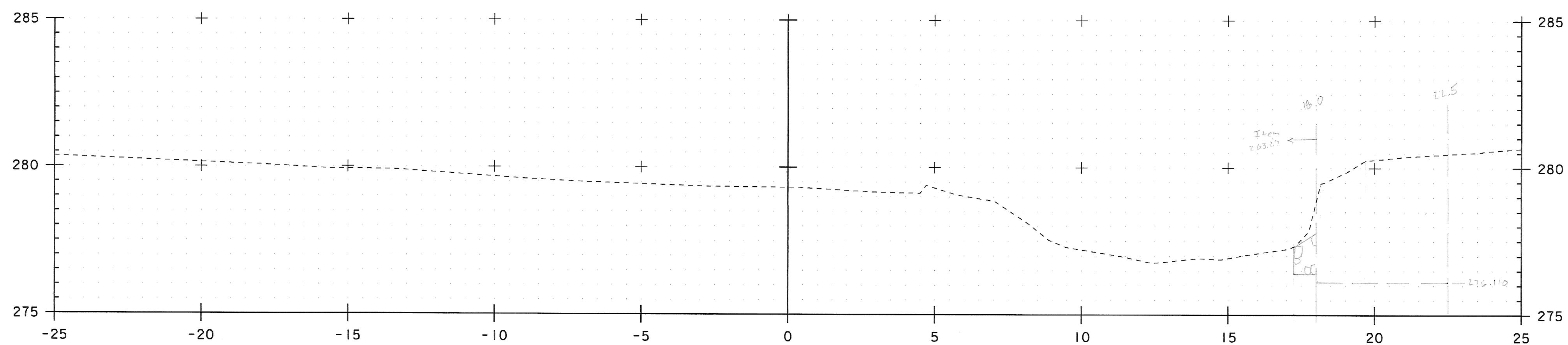


A-2:
 Item 208.30, $A = \frac{1}{2}(4.1+4.4)(1.8) + 3.45(2.7)$
 $A = 16.97 \text{ M}^2$ CPG 5-6-08 SWS 12-2-08

Item 203.27,
 $A = 0.2(0.85) + \frac{1}{2}(0.8+3.9)(0.5)$
 $A = 1.35 \text{ M}^2$ CPG 5-6-08 SWS 12-1-08

2+015.00 = 2+015.50, Begin A-1 Item 203.27 (Butt)

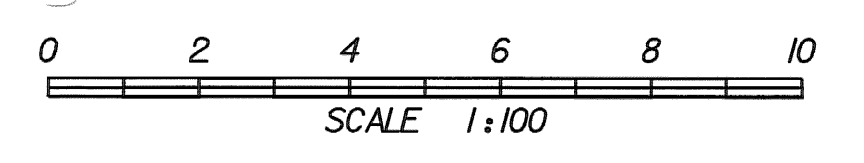
A-1: Item 203.27 $A = \frac{1}{2} \{ (1+1)(0+7) + (1.6+1.0)(1.4) + (1.8+1.1)(2.3) + (1.7+1.1)(0.8) + (1+0.4)(1.0) \}$
 $A = 8.36 \text{ M}^2$ CPG 5-6-08 SWS 12-1-08



A-2: Item 208.30, $A = \frac{1}{2} \{ (2.25+3.35)(0.15) + (3.35+4.15)(1.5) + (4.15+4.4)(2.85) \}$
 $A = 18.27 \text{ M}^2$ CPG 5-6-08 SWS 12-3-08

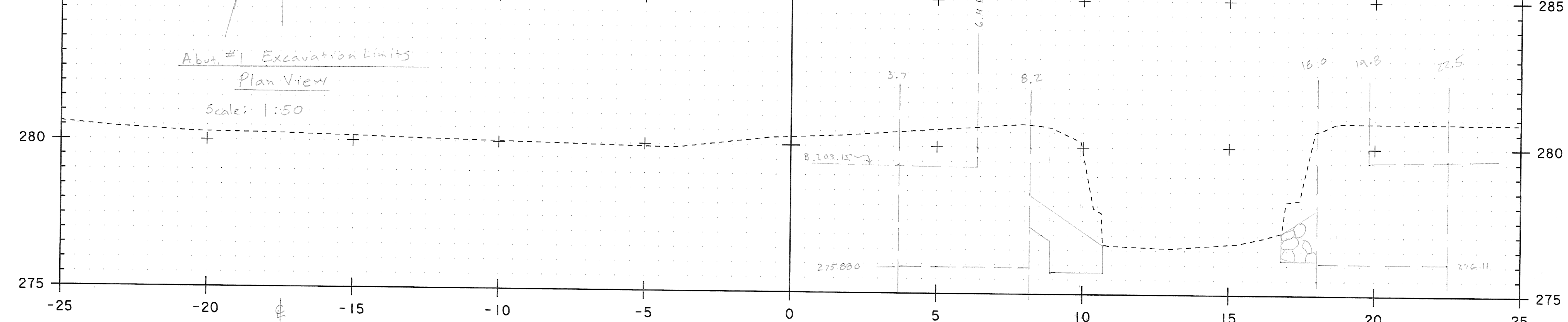
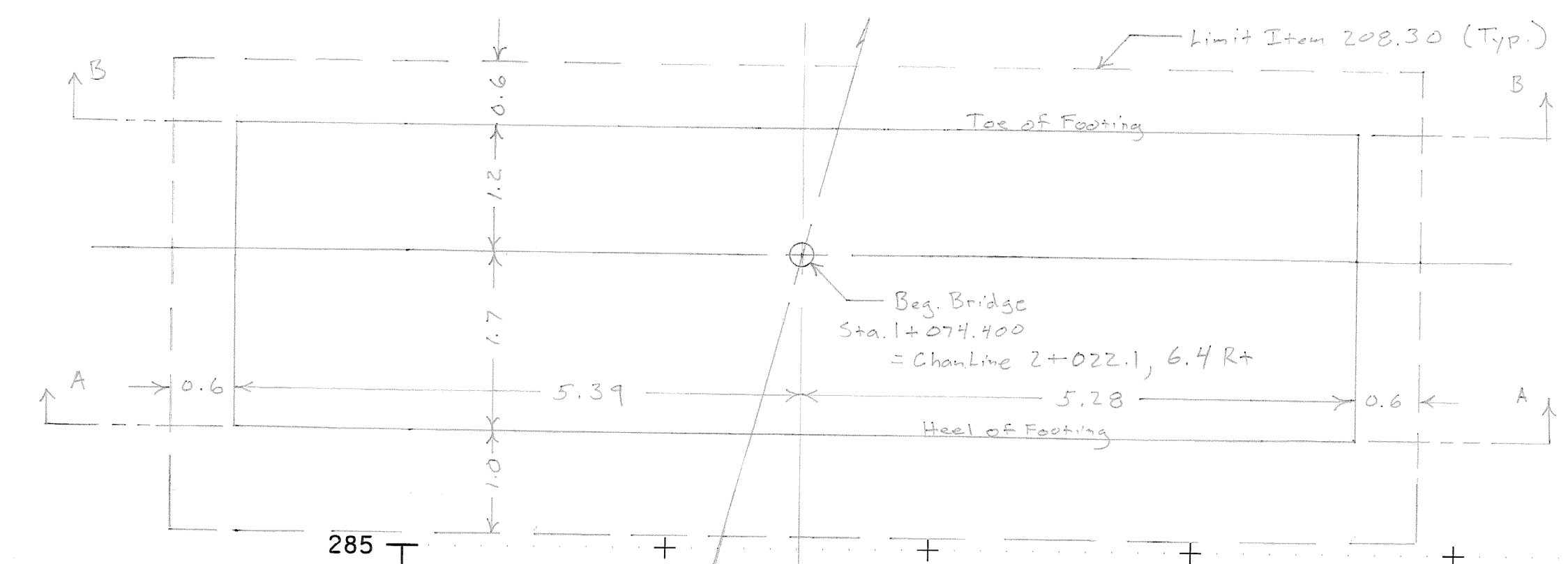
Item 203.27,
 $A = \frac{1}{2} \{ (0.9+1.4)(0.5) + (1.4+2.7)(0.3) \}$
 $A = 1.19 \text{ M}^2$ CPG 5-6-08 SWS 12-1-08

2+013.50



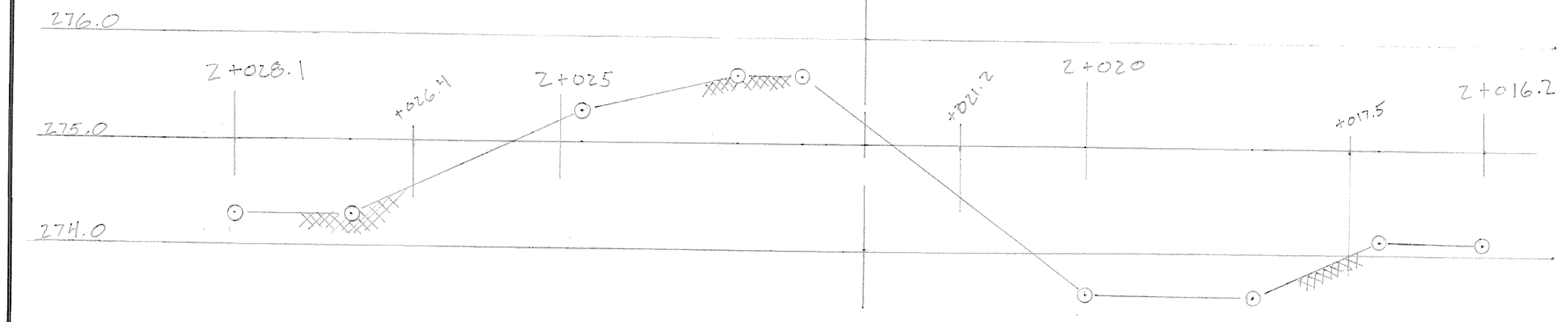
STA. 2+000 TO STA. 2+010

PROJECT: CABOT	PROJECT NO.: BRO 1446 (27)
DESIGN FILE NAME:	PLOT DATE: 10-JUN-2008
IPARM FILE NAME:	SURVEY DATE: 5/98
SURVEYED BY: R. GILMAN	DRAWN BY: M.FESSEL
SQUAD LEADER: C. P. WILLIAMS	SHEET: 2 OF 7
CHANNEL CROSS SECTIONS	



A-2:
 Item 208.30, $A = \frac{1}{2} [(4.5+4.8)(0.7) + 4.8(1.1) + 3.45(2.7)]$
 $A = 17.85 \text{ M}^2$ CPG 8-6-08 SWS 12-2-08

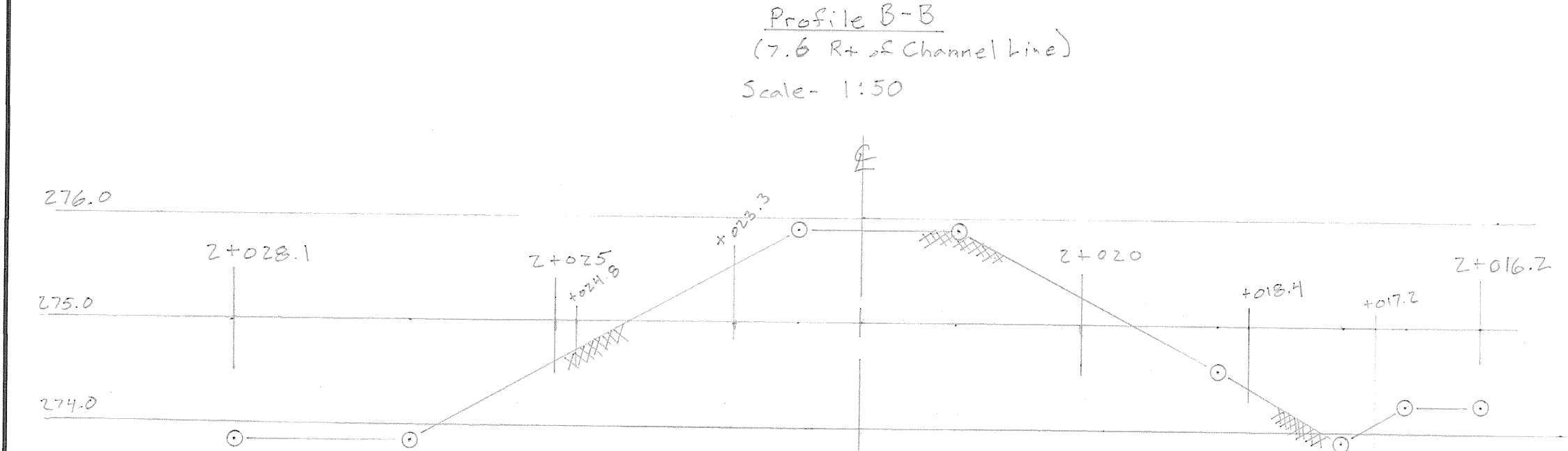
Item 203.27,
 $A = \frac{1}{2} [(0.9+2.0)(0.7) + (7.0+2.1)(0.4) + (2.1+4.5)(0.2)]$
 $A = 3.09 \text{ M}^2$ CPG 8-6-08 SWS 12-1-08



2+018.90

A-1: Item 208.30, $A = \frac{1}{2} (3.4+3.4)(2.7) + 4.85(1.5)$
 $A = 17.98 \text{ M}^2$ CPG 8-6-08 SWS 12-2-08

Item 203.27, $A = \frac{1}{2} [(3.5+3.8)(0.7) + (4.9+4.5)(1.0) + (4.9+2.2)(0.5) + (2.2+2.0)(0.3)]$
 $A = 9.66 \text{ M}^2$ CPG 8-6-08 SWS 12-1-08

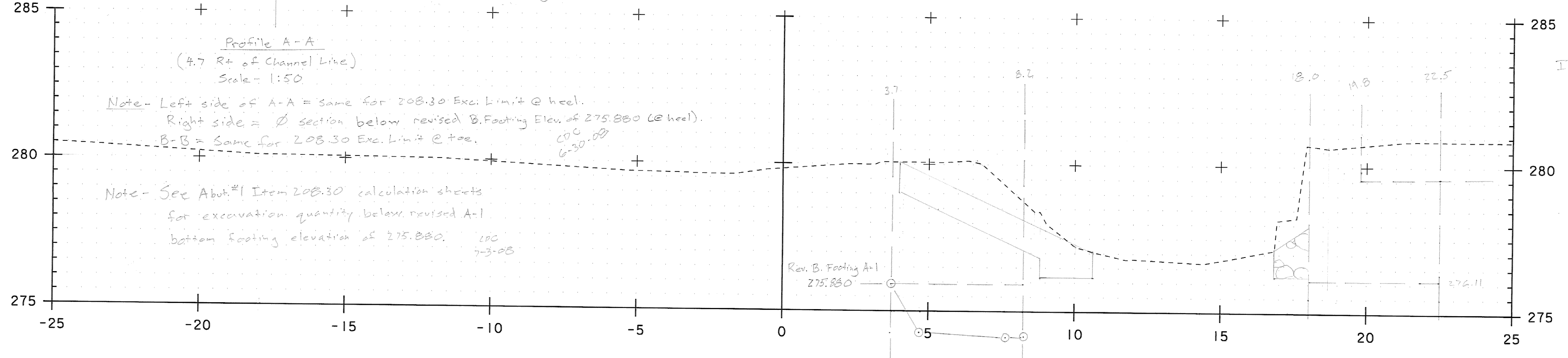


2+016.20

Beg Item 208.30, Abut #1 (Butt)
A-1: Item 208.30, $A = 3.0(4.2) + \frac{1}{2}(4.2+2.8)(1.5)$
 $A = 17.85 \text{ M}^2$ CPG 8-6-08 SWS 12-2-08

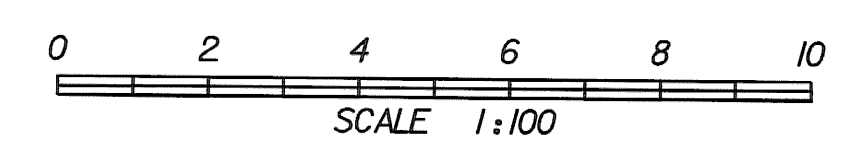
Item 203.27,
 (BK) $A = \frac{1}{2} [(10.2+3)(2.7) + (2.3+1.5)(1.0) + (1.5+1.2)(0.2) + (2.2+1.0)(0.2) + (1.0+0.7)(0.2)]$
 $A = 11.06 \text{ M}^2$ CPG 8-6-08 SWS 12-1-08

(A4) $A = 11.06 - \frac{1}{2} [(10.2+3)(2.7) + (2.3+1.6)(1.2)] = 3.49 \text{ M}^2$ CPG 8-6-08 SWS 12-1-08



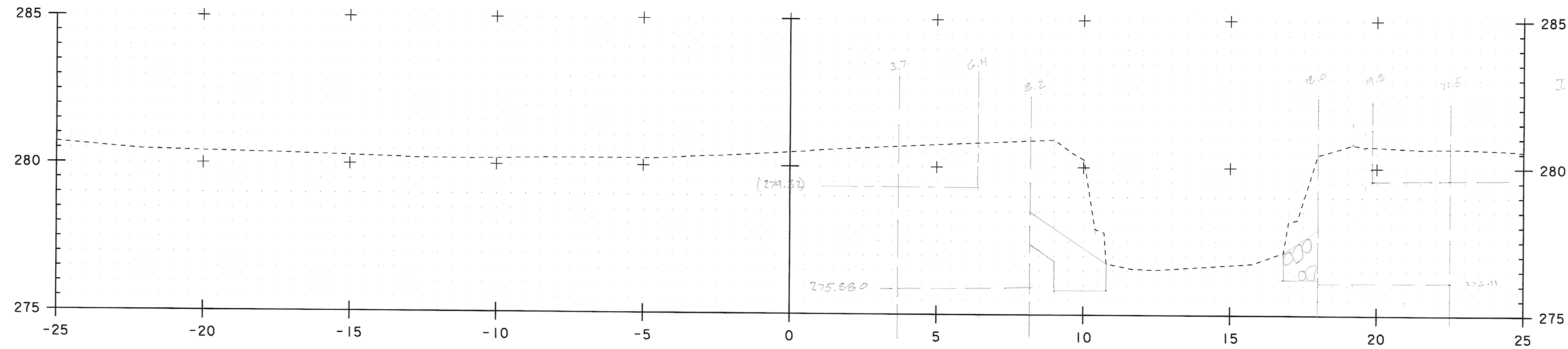
A-2:
 Item 208.30, $A = \frac{1}{2} [(4.6+4.5)(0.65) + (4.5+2.465)(1.15)] + 3.45(2.7)$
 $A = 17.53 \text{ M}^2$ CPG 8-6-08 SWS 12-2-08

Item 203.27,
 $A = \text{Same as } 2+018.90 = 3.09 \text{ M}^2$ CPG 8-6-08 SWS 12-1-08



STA. 2+008 TO STA. 2+018

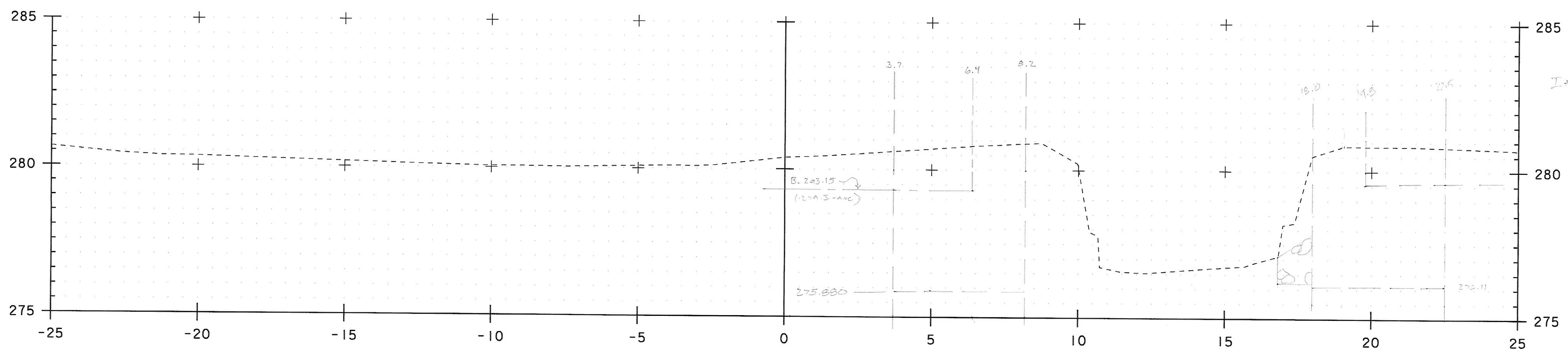
PROJECT: CABOT	PROJECT NO. : BRO 1446 (27)
DESIGN FILE NAME: IPARM FILE NAME: SURVEYED BY: R. GILMAN SQUAD LEADER: C. P. WILLIAMS CHANNEL CROSS SECTIONS	PLOT DATE: 10-JUN-2008 SURVEY DATE: 5/98 DRAWN BY: M.FESSEL SHEET: 3 OF 7



2+021.20

$A-1: I_{\text{item } 208.30} \quad A = 3.44(2.7) + 4.95(1.0)$
 $A = 18.20 \text{ M}^2$ CPG 5WS 12-2-08
 $I_{\text{item } 203.27}, A = \frac{1}{2} \{ (3.5+9.1)(0.0) + (5.1+4.4)(1.0) + (4.4+2.1)(0.4) + (2.1+1.9)(0.4) \}$
 $A = 9.87 \text{ M}^2$ CPG 5WS 12-1-08

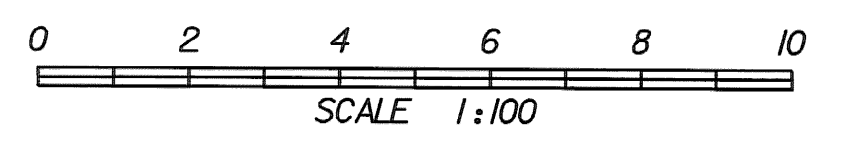
$A-2:$
 $I_{\text{item } 208.30}, A = \frac{1}{2} \{ (4.35+4.75)(1.2) + (4.25+4.6)(0.4) \} + 4.6(0.2) + 3.45(2.7)$
 $A = 17.57 \text{ M}^2$ CPG 5WS 12-2-08
 $I_{\text{item } 203.27},$
 $A = \frac{1}{2} \{ (0.9+1.4)(0.2) + (1.4+2.1)(0.3) + (2.1+4.4)(0.7) \}$
 $A = 3.16 \text{ M}^2$ CPG 5WS 12-1-08



2+020.00

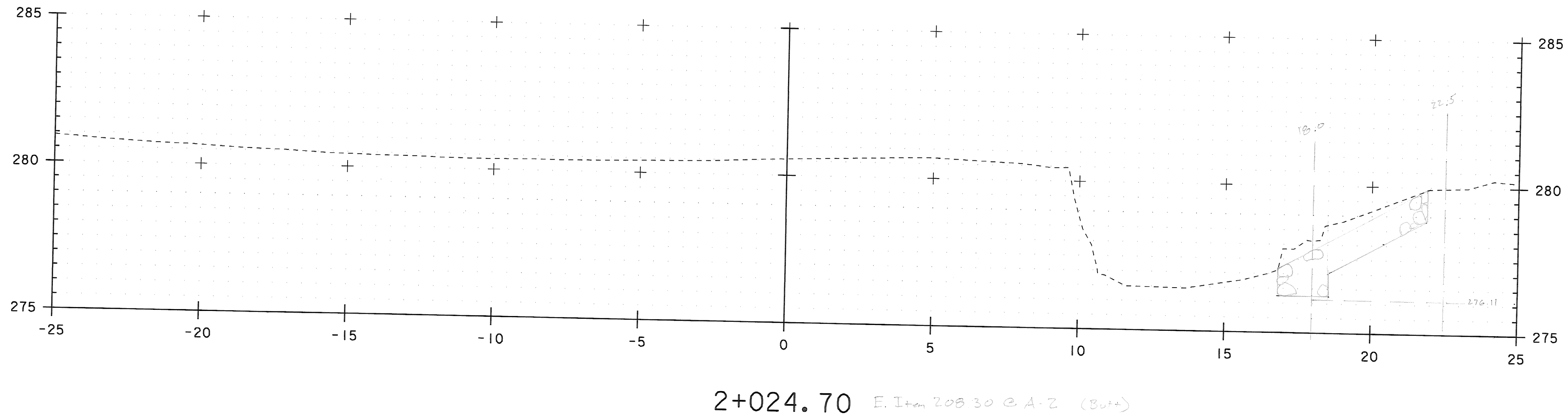
$A-1: I_{\text{item } 208.30} \quad A = 3.42(2.7) + 5.0(1.0)$
 $A = 18.23 \text{ M}^2$ CPG 5WS 12-2-08
 $I_{\text{item } 203.27} \text{ (Same as Sta } 2+021.20)$
 $A = 9.87 \text{ M}^2$ CPG 5WS 12-1-08

$A-2:$
 $I_{\text{item } 208.30}, A = \frac{1}{2} \{ (4.4+4.75)(1.1) + 4.75(0.7) \} + 3.45(2.7)$
 $A = 17.67 \text{ M}^2$ CPG 5WS 12-2-08



STA. 2+000 TO STA. 2+022

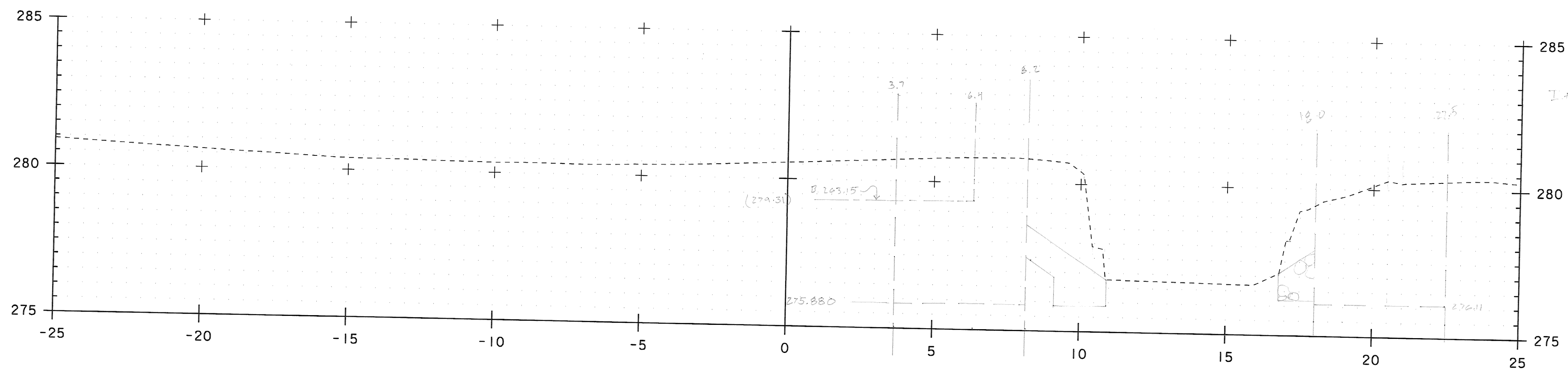
PROJECT: CABOT	PROJECT NO.: BRO 1446 (27)
DESIGN FILE NAME: IPARM FILE NAME: SURVEYED BY: R. GILMAN SQUAD LEADER: C. P. WILLIAMS CHANNEL CROSS SECTIONS	PLOT DATE: 10-JUN-2008 SURVEY DATE: 5/98 DRAWN BY: M.FESSEL SHEET: 4 OF 7



A-2:
 Item 208.30, $A = 2.0(0.3) + 2.75(0.1) + \frac{1}{2}(2.5+3.8)(3.5) + 3.8(0.6)$
 $A = 14.13 \text{ M}^2$ CPC 5/5 2-19-08 SWS 12-2-08

Item 203.27
 Back, $A = \frac{1}{2}(0.9+1.6)(0.2) + (1.6)(0.1) + \frac{1}{2}(1.6+1.4)(0.4) + (1.4)(0.2)$
 $A = 1.97 \text{ M}^2$ CPC 5/5 2-19-08 SWS 12-1-08

Ahead, $A = 1.97 + 1.9(0.3) + \frac{1}{2}(1.4+2.4)(0.2) + \frac{1}{2}(1.0+1.0)(3.4)$
 $A = 7.39 \text{ M}^2$ CPC 5/5 2-19-08 SWS 12-1-08

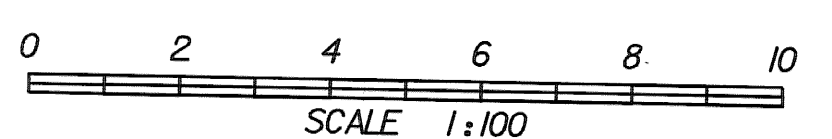


A-2:
 Item 208.30, $A = \frac{1}{2} [(3.35+4.2)(2.5) + (4.2+4.1)(0.5) + (4.1+4.25)(1.5)]$
 $A = 17.78 \text{ M}^2$ CPC 5/5 2-19-08 SWS 12-2-08

Item 203.27,
 $A = \frac{1}{2}(0.9+2.0)(0.2) + (2.0)(0.2) + \frac{1}{2}(2.0+3.0)(0.3) + \frac{1}{2}(3.0+3.3)(0.5)$
 $A = 3.02 \text{ M}^2$ CPC 5/5 2-19-08 SWS 12-1-08

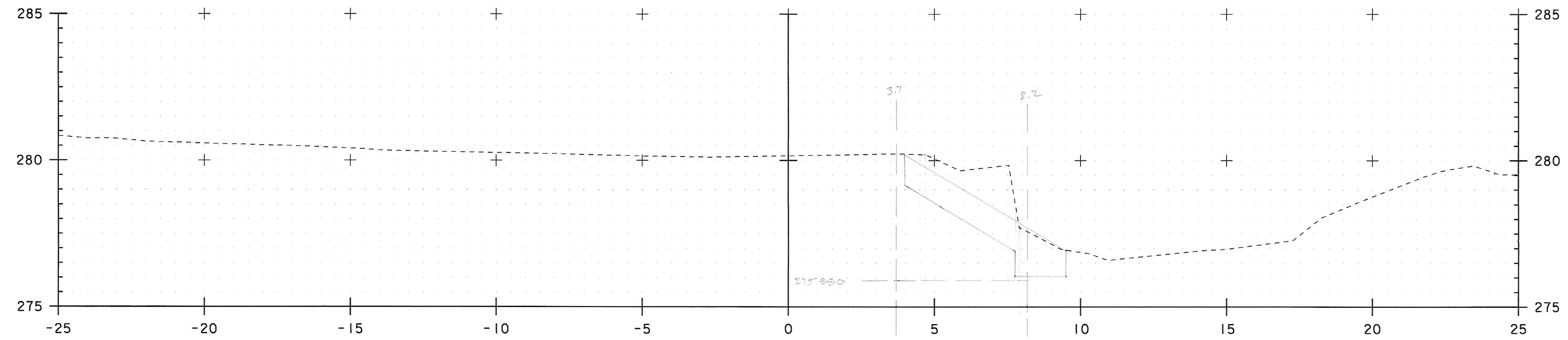
A-1: Item 208.30 $A = 3.43(2.7) + 5.0(1.2)$
 $A = 18.26 \text{ M}^2$ CPC 5/5 12-2-08 SWS 12-2-08

Item 203.27 $A = \frac{1}{2} [(3.4+3.4)(0.2) + (4.9+4.4)(0.4) + (4.4+4.3)(0.5) + (4.5+2.0)(0.7) + (2.0+1.4)(0.4)]$
 $A = 9.44 \text{ M}^2$ CPC 5/5 12-1-08 SWS 12-1-08



STA. 2+000 TO STA. 2+028

PROJECT: CABOT	PROJECT NO.: BRO 1446 (27)
DESIGN FILE NAME:	PLOT DATE: 10-JUN-2008
IPARM FILE NAME:	SURVEYED BY: R. GILMAN
SURVEYED BY:	SQUAD LEADER: C. P. WILLIAMS
SQUAD LEADER:	CHANNEL CROSS SECTIONS
SHEET: 5 OF 7	



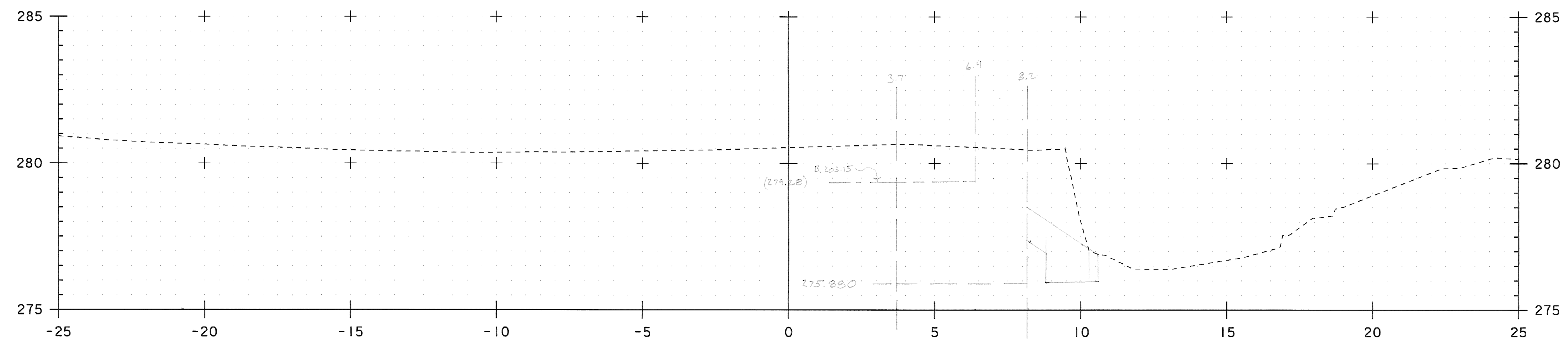
2+028.10 E. Item 208.30 @ A-1 (Butt)

A-1: Item 208.30 $A = 1.0(4.3) + 1.2(4.3) + 1.45(3.9) + 0.4(2.6) + 0.25(1.7)$
 $A = 17.00 \text{ M}^2$ calc 5/98 12-1-08

Item 203.27
 (BK) $A = \frac{1}{2}(1.5 + 0.9)(1.3) = 1.56 \text{ M}^2$ calc 5/98 12-1-08

(AH) $A = \frac{1}{2} \{ (1.0 + 1.4)(0.7) + (1.4 + 1.6)(1.7) + (1.6 + 2.8)(1.6) + (2.8 + 1.4)(2.3) + (2.3 + 1.0)(0.1) + (1.6 + 0.9)(1.6) \}$
 $A = 8.63 \text{ M}^2$ calc 5/98 12-1-08

2+025.80, E. Item 203.27 @ A-2 (Ø section)



2+025.00

A-1: Item 208.30 $A = 3.40(2.7) + 4.6(1.8)$
 $A = 17.96 \text{ M}^2$ calc 5/98 12-1-08

Item 203.27 $A = \frac{1}{2} \{ (3.1 + 3.5)(0.7) + (4.5 + 4.6)(0.7) + (4.6 + 1.0)(0.8) + (1.0 + 0.9)(0.3) \}$
 $A = 8.02 \text{ M}^2$ calc 5/98 12-1-08



STA. 2+009 TO STA. 2+028

PROJECT: CABOT	PROJECT NO.: BRO 1446 (27)
DESIGN FILE NAME:	PLOT DATE: 10-JUN-2008
IPARM FILE NAME:	SURVEY DATE: 5/98
SURVEYED BY: R. GILMAN	DRAWN BY: M.FESSEL
SQUAD LEADER: C. P. WILLIAMS	SHEET: 6 OF 7
CHANNEL CROSS SECTIONS	

Abutment No. 1

Item 208.30 - Cofferdam Excavation, Earth

Sta	Dist.	Area	Volume
(Butt) 2+016.2		17.85	48.371
	2.7	17.98	
2+018.9	1.1	19.916	
	1.2	18.23	21.858
2+021.2	2.4	18.20	43.752
	1.4	18.26	25.009
2+023.6	3.1	17.46	53.413
(Butt) 2+028.1		17.00	

Excavation Below Revised Footing Elev.
(See Abut #1 Item 208.30 calc. sheet 6 of 6)

212.314 M³
+ 66.614

278.928 M³
- 15.0

Item 208.35 (F. Meas. Boulders)

263.928 M³

DC
2-20-08
SWS
12-2-08

Item 203.27 - Unclassified Channel Excavation

Sta	Dist.	Area	Volume
(Butt) 2+015.50		8.36	6.797
	0.7	11.06	
(BK) 2+016.2		3.49	17.753
(AH) 2+016.2		9.66	10.736
	1.1	9.89	11.868
2+018.9	1.2	9.89	23.196
	2.4	9.44	12.222
2+020.0	1.4	8.02	14.849
	3.1	1.56	8.63
(BK) 2+020.1		8.63	10.356
(AH) 2+020.1		∅	
2+028.1	2.4	∅	
2+030.5			

107.777 M³
DC
7-17-08
SWS
12-2-08

Abutment No. 2

Item 208.30 - Cofferdam Excavation, Earth

Sta	Dist.	Area	Volume
(Butt) 2+012.25		16.15	21.513
	1.25	18.27	26.430
2+013.50	1.50	16.97	20.700
	1.20	17.53	47.763
2+016.20	2.70	17.85	19.536
	1.10	17.67	21.144
2+018.90	1.20	17.57	42.420
	2.40	17.78	17.551
2+020.00	1.10	14.13	
(Butt) 2+024.70			

Excavation Below Revised Footing Elev.
(See Abut #2 Item 208.30 calc. sheet 7 of 7)

217.057 M³
+ 62.737

279.794 M³

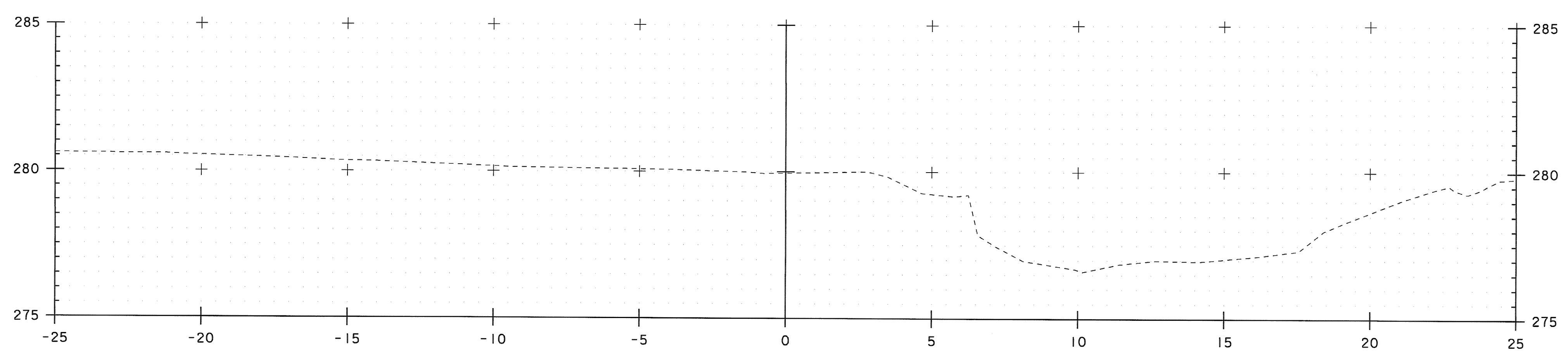
DC
8-19-08
SWS
12-3-08

Item 203.27 - Unclassified Channel Excavation

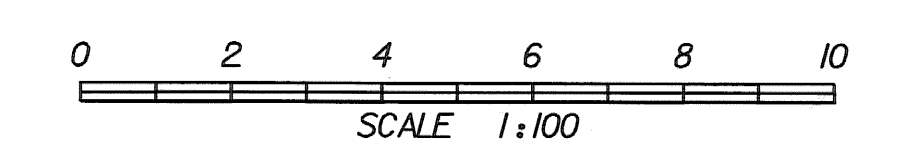
Sta	Dist.	Area	Volume
(Butt) 2+011.80		8.07	3.632
	0.45	8.07	1.12
(BK) 2+012.25		1.12	1.444
(AH) 2+012.25		1.25	1.405
	1.50	1.35	2.664
2+013.50	1.20	3.09	8.343
	2.70	3.09	7.183
2+015.00	2.30	3.16	7.416
	2.40	3.02	2.745
2+016.20	1.10	1.97	7.39
(BK) 2+024.70		∅	
(AH) 2+024.70		∅	
2+025.80			

39.402 M³
DC
8-20-08
SWS
12-2-08

2+030.50, End Item 203.27, Abut #1 (∅ section)

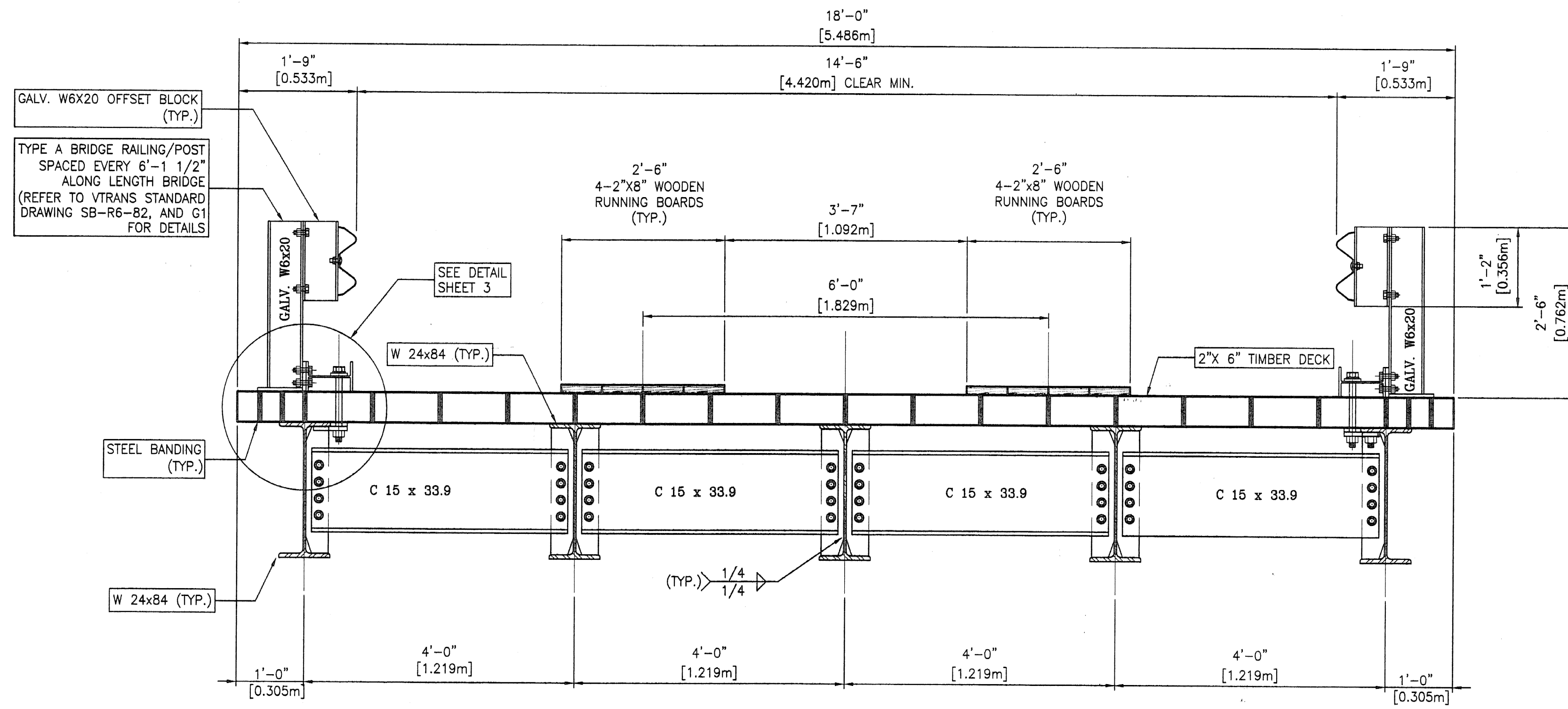


2+030.00

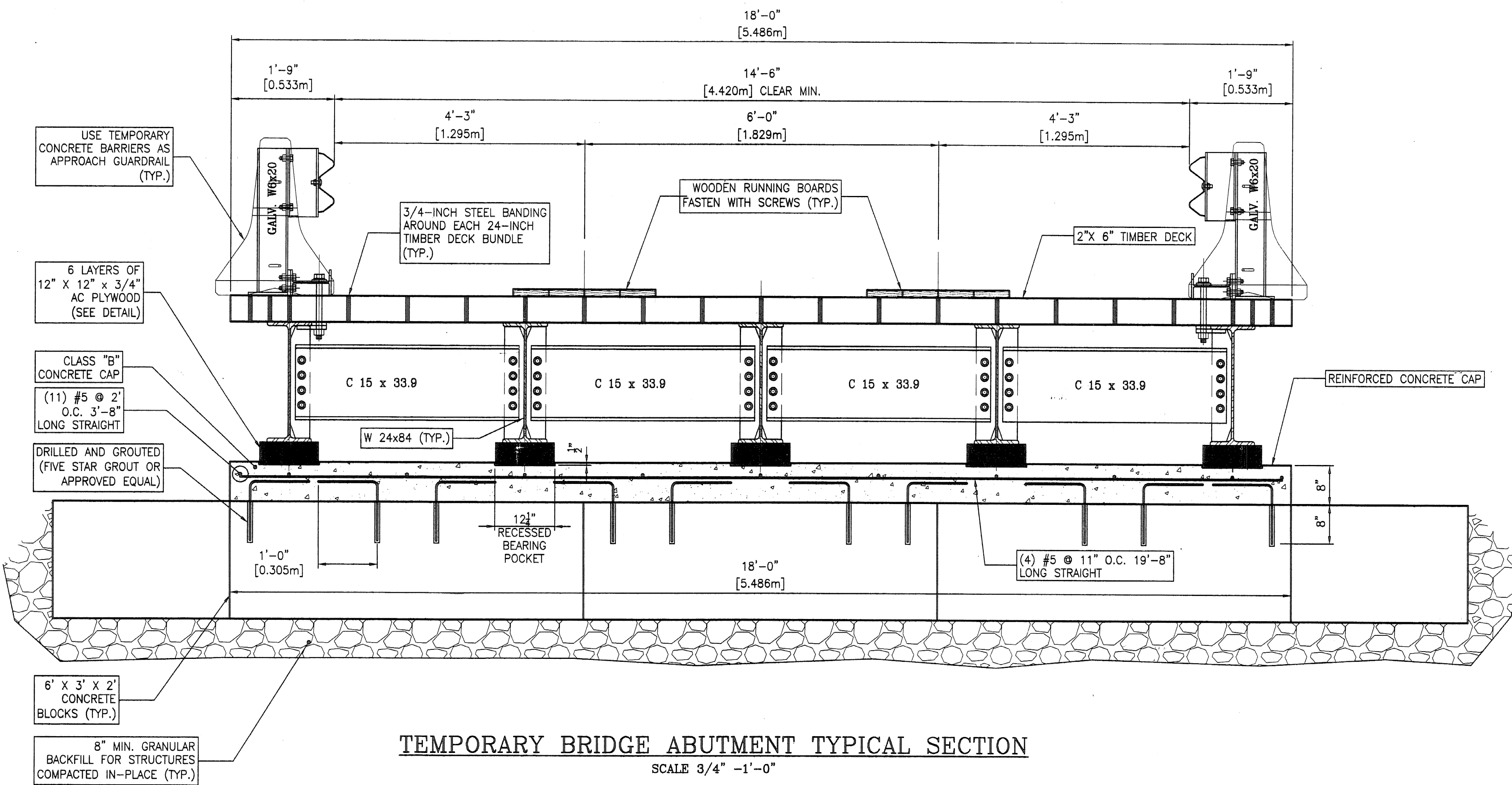


STA. 2+000 TO STA. 2+030

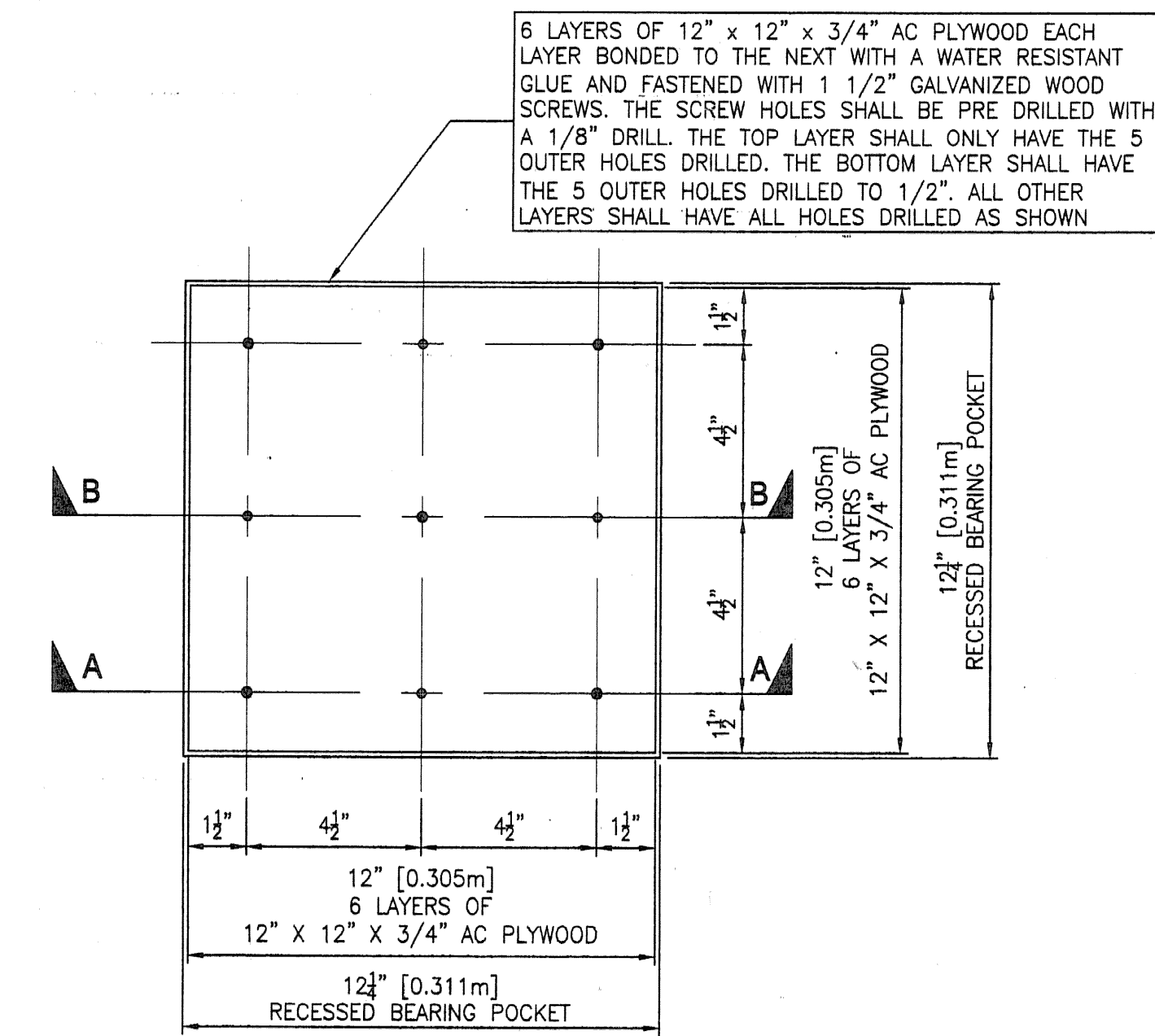
PROJECT: CABOT	PROJECT NO.: BRO 1446 (27)
DESIGN FILE NAME: IPARM FILE NAME: SURVEYED BY: R. GILMAN SQUAD LEADER: C. P. WILLIAMS CHANNEL CROSS SECTIONS	PLOT DATE: 10-JUN-2008 SURVEY DATE: 5/98 DRAWN BY: M.FESSEL SHEET: 7 OF 7



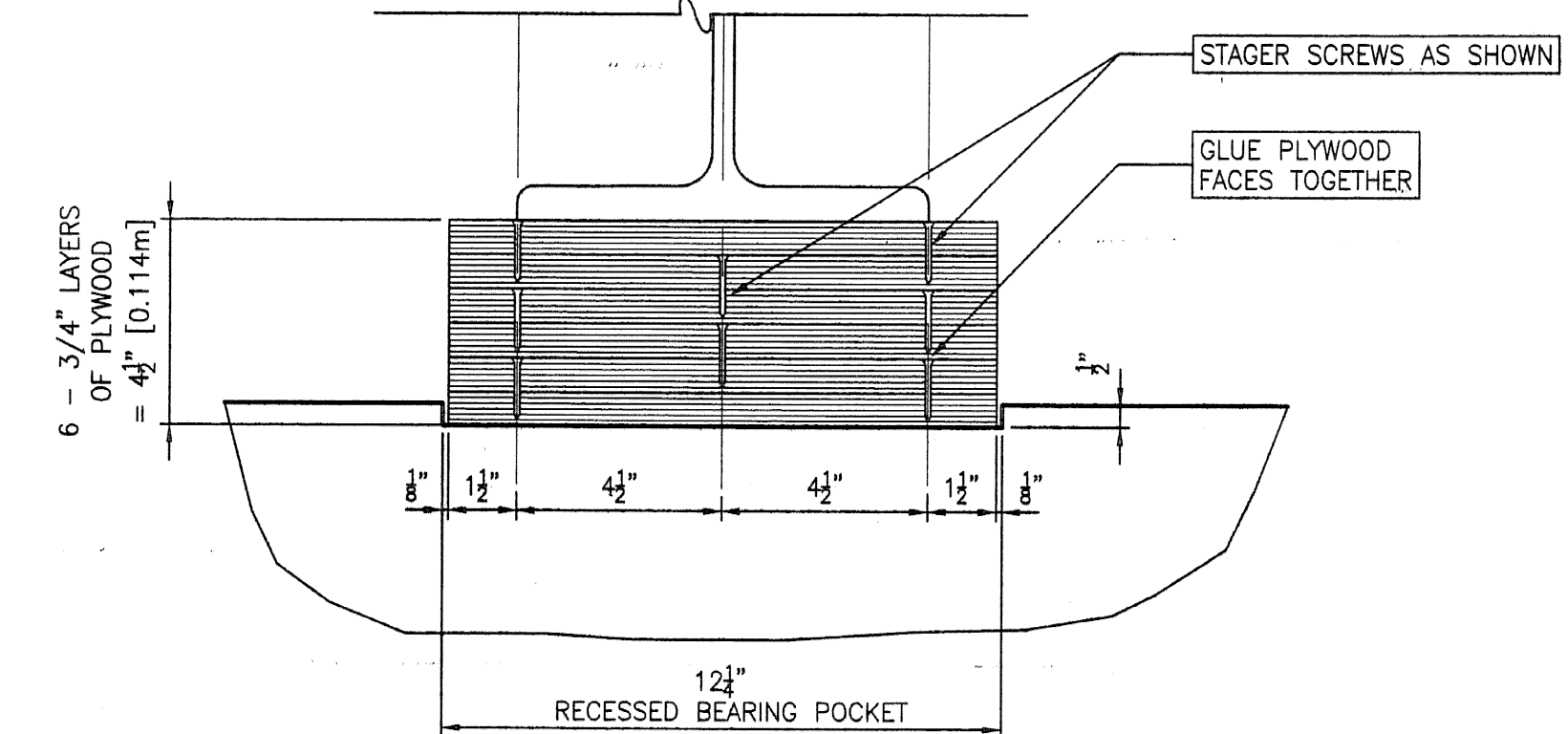
TEMPORARY BRIDGE TYPICAL SECTION
SCALE 3/4" = 1'-0"



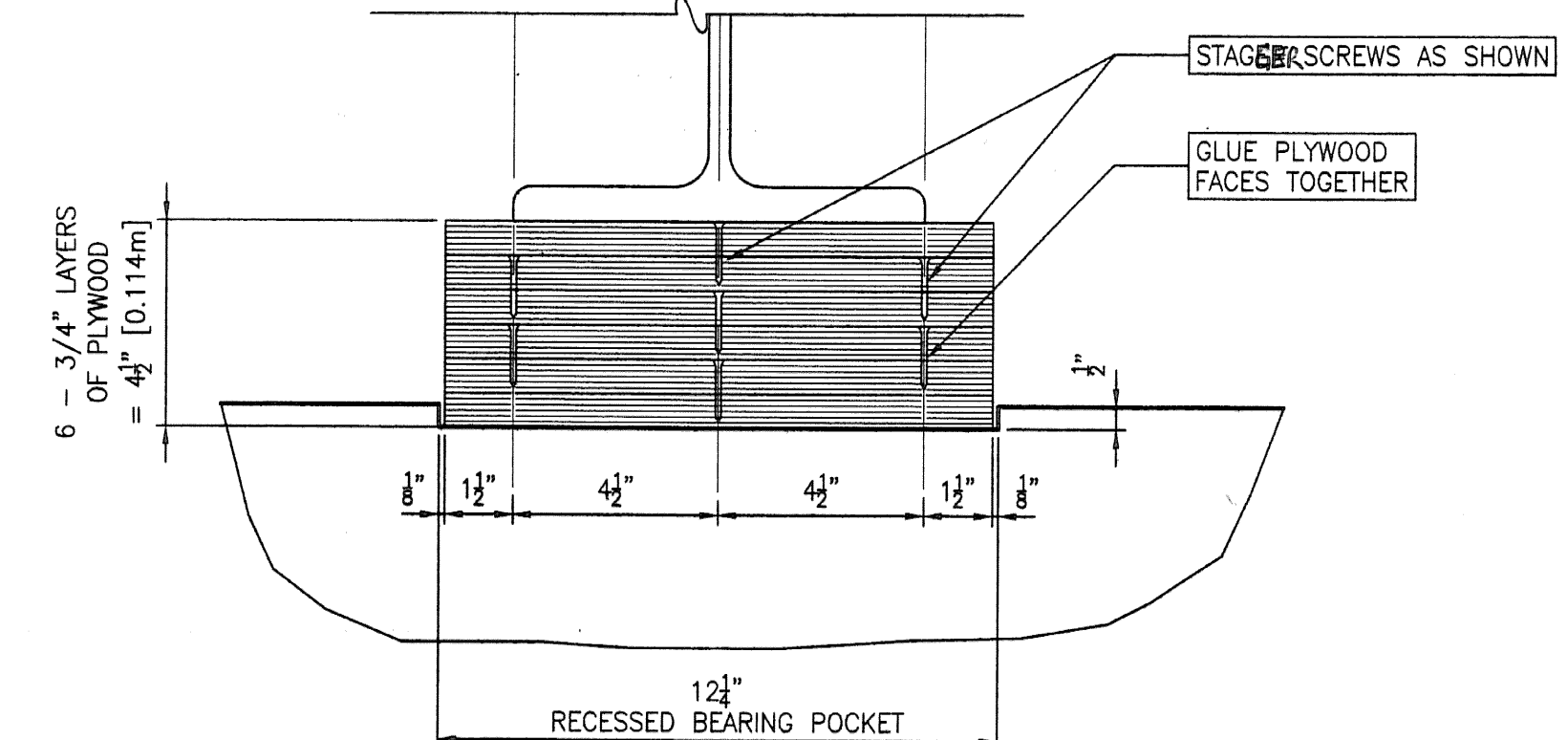
TEMPORARY BRIDGE ABUTMENT TYPICAL SECTION
SCALE 3/4" = 1'-0"



PLAN



SECTION A-A



SECTION B-B

NOTES:

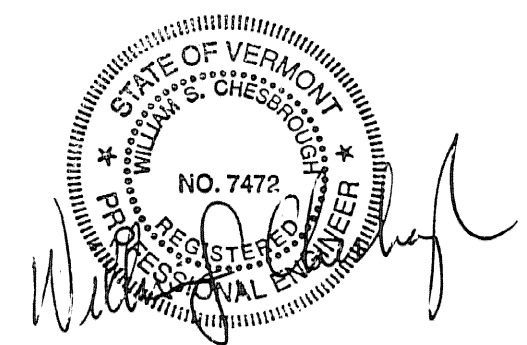
1. THE PLYWOOD MUST BE RECEIVED DRY AND MOISTURE FREE. CONSEQUENTLY STORED IN DRY PLACE PRIOR TO FABRICATION.
2. THERE WILL BE ± 1/32" TOLERANCE ON ANY MEASUREMENT SHOWN ON THIS SHEET.
3. THE BEARING SHALL BE CONSTRUCTED WITH THE SMOOTH SIDE OF THE PLYWOOD FACING OUTWARD FOR THE TOP AND BOTTOM LAYERS.

BEARING ASSEMBLY DETAIL

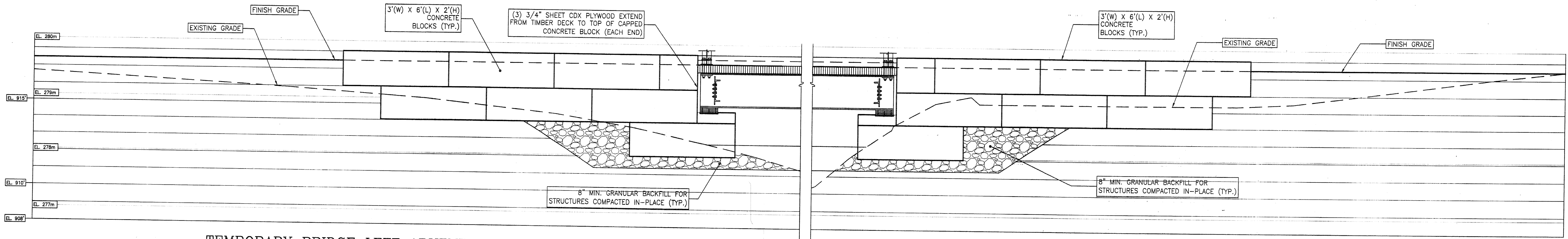
SCALE 3" = 1'-0"

NOTES:

1. DESIGN LOADING IS HS-20-44.
2. STRUCTURAL STEEL TO BE GRADE 36 (FY = 36 KSI).
3. TIMBER DECKING TO BE SPRUCE-PINE FIR NO. 2 (SPF 2) GRADE OR HIGHER.

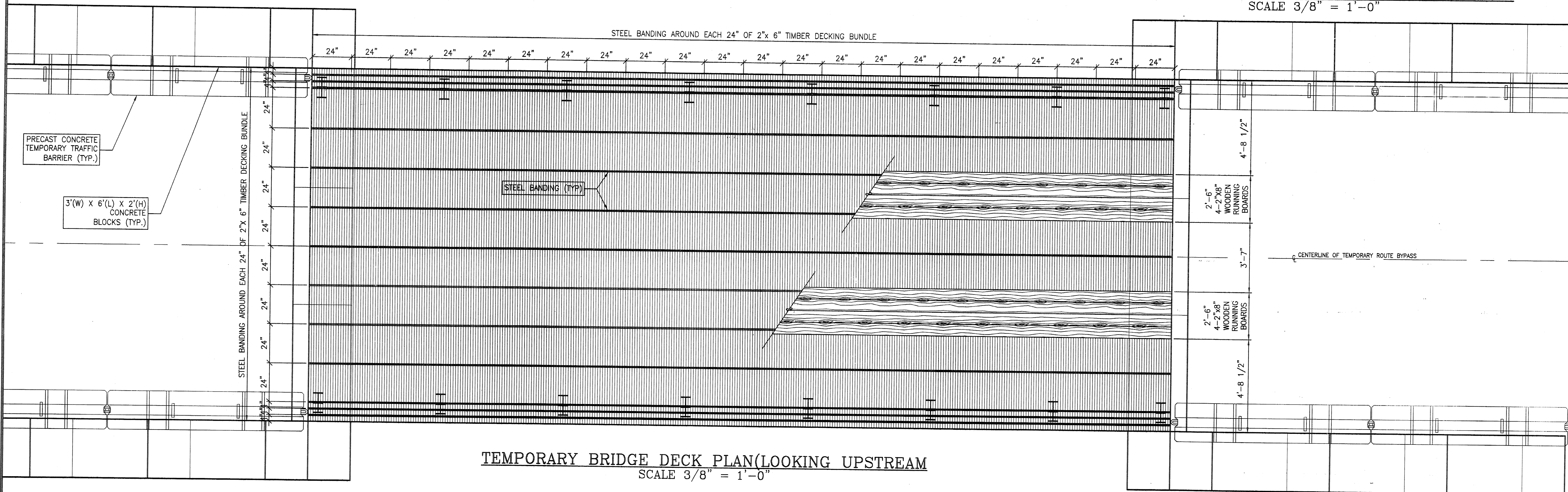


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CHESBROUGH CONSULTING, P.C.			
P.O. BOX 8822 Burlington, Vermont 05402		Tel: (802) 658-7600 Fax: (802) 658-7613 ccandcc@verizon.net	
PROJECT NAME:	PROPOSED IMPROVEMENT TEMPORARY BRIDGE PROJECT CABOT, VERMONT	DESIGN NOTE ADDITION	REVISIONS
TITLE:	TYPICAL SECTION BEARING ASSEMBLY DETAILS	NO DATE	
DRAWN BY:	GEW	CHECKED BY:	WSC
PROJECT NO.:	081301	DATE:	APRIL 17, 2008
SHEET:	1	OF 3	

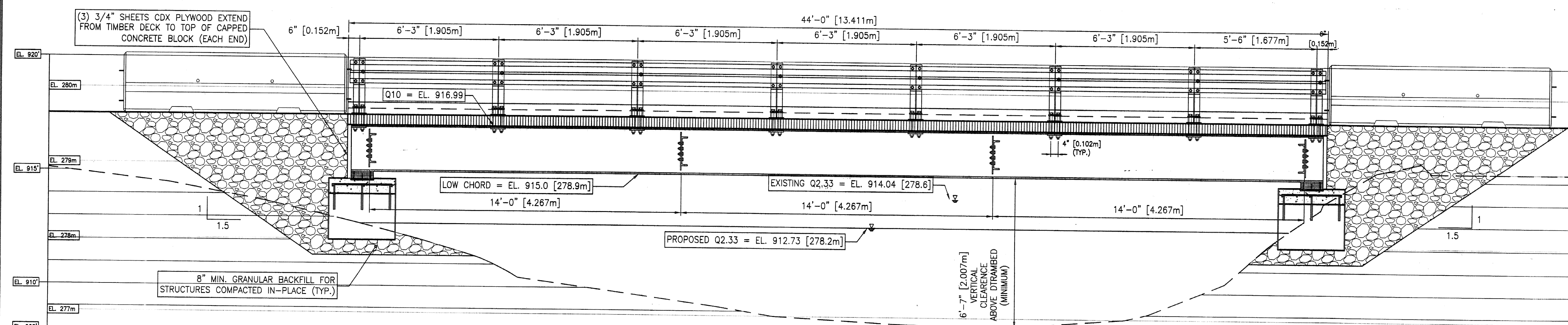


TEMPORARY BRIDGE LEFT ABUTMENT DETAILS
SCALE 3/8" = 1'-0"

TEMPORARY BRIDGE RIGHT ABUTMENT DETAILS
SCALE 3/8" = 1'-0"

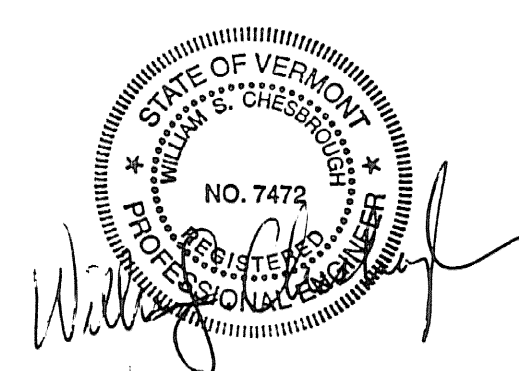


TEMPORARY BRIDGE DECK PLAN (LOOKING UPSTREAM)
SCALE 3/8" = 1'-0"



TEMPORARY BRIDGE PROFILE
SCALE 3/8" = 1'-0"

- NOTES:**
- DESIGN LOADING IS HS-20-44.
 - STRUCTURAL STEEL TO BE GRADE 36 (FY = 36 KSI).
 - TIMBER DECKING TO BE SPRUCE-PINE FIR NO. 2 (SPF 2) GRADE OR HIGHER.



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ccandco@verizon.net

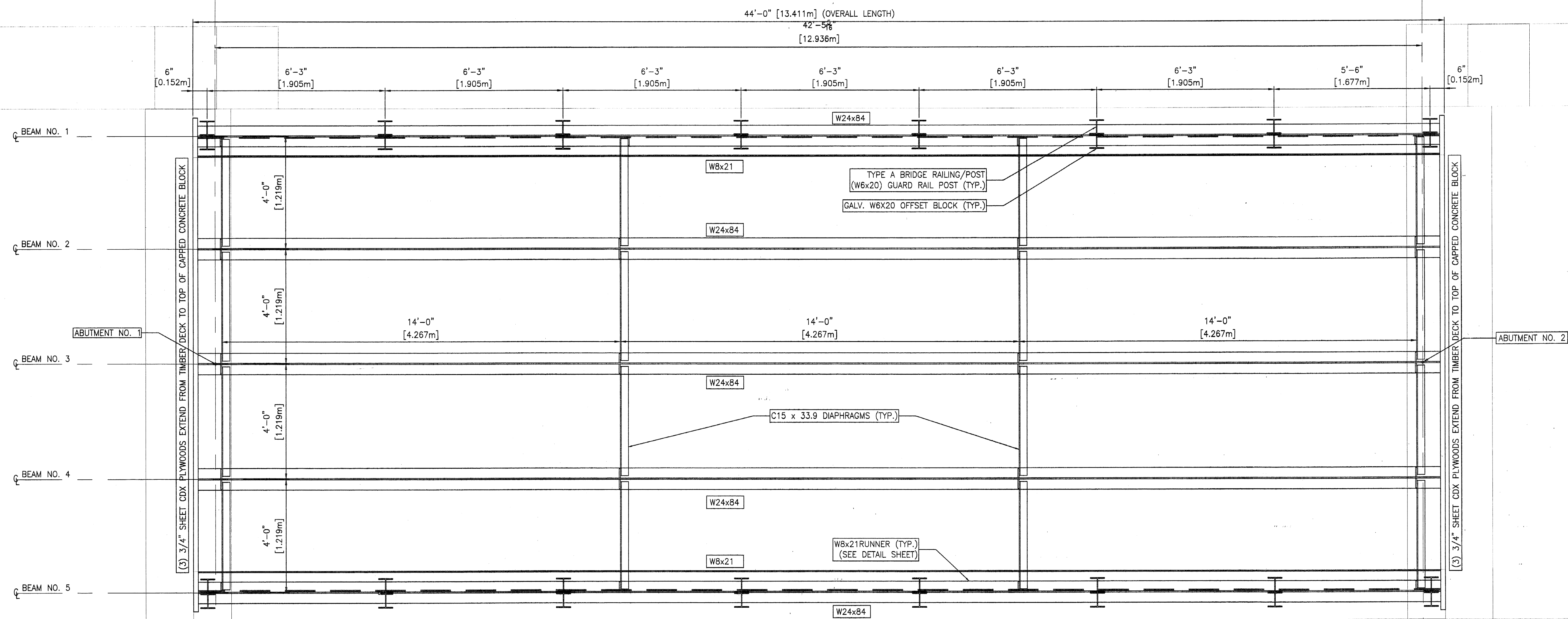
PROJECT NAME: **PROPOSED IMPROVEMENT TEMPORARY BRIDGE PROJECT CABOT, VERMONT**

TITLE: **TIMBER DECK PLAN, PROFILE AND ABUTMENT DETAIL**

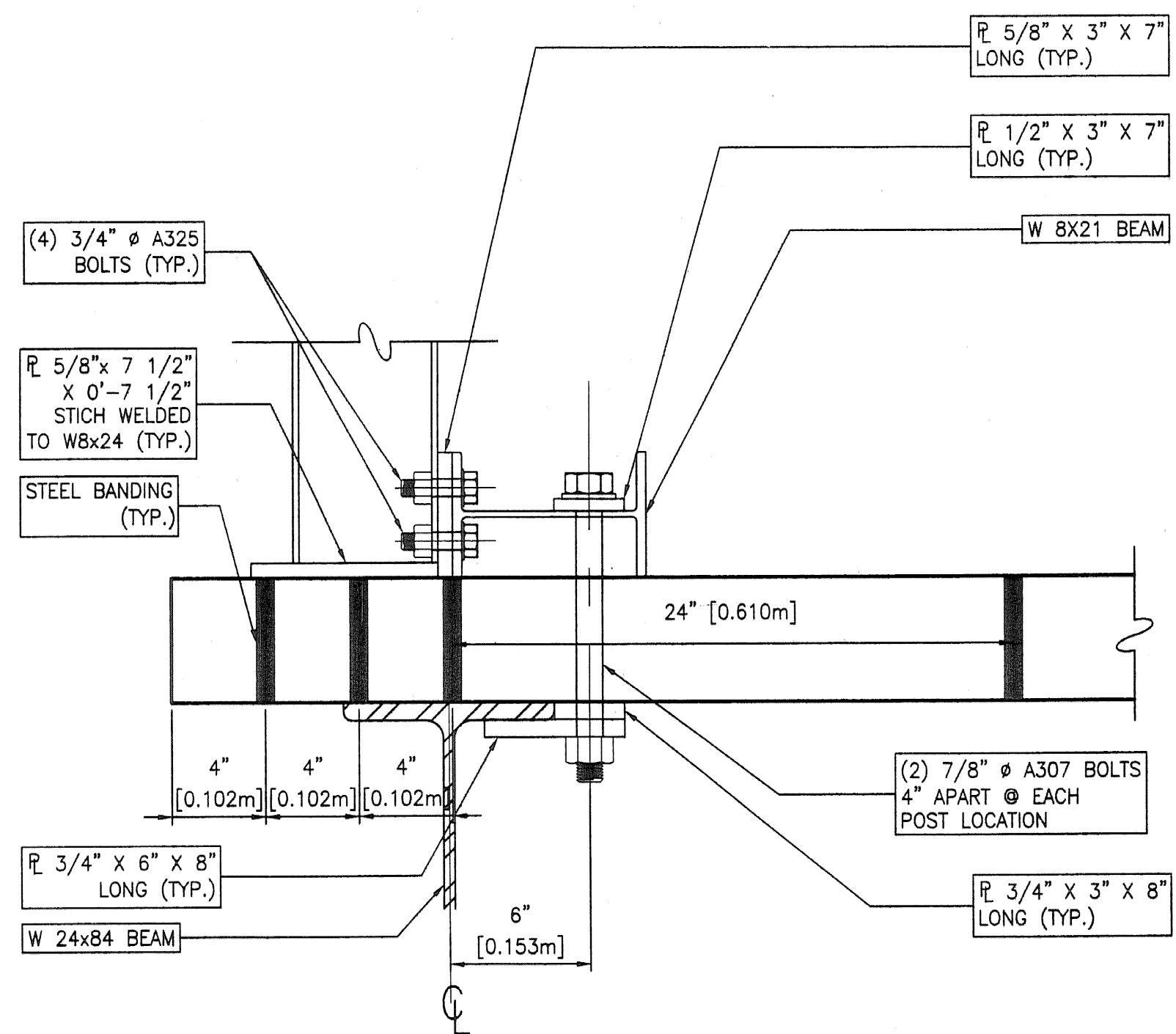
DESIGN NOTE ADDITION: 05-15-08
NO DATE REVISIONS

DRAWN BY: **GEW**
CHECKED BY: **WSC**
PROJECT NO: **081301**
DATE: **APRIL 17, 2008**
SHEET: **2 OF 3**

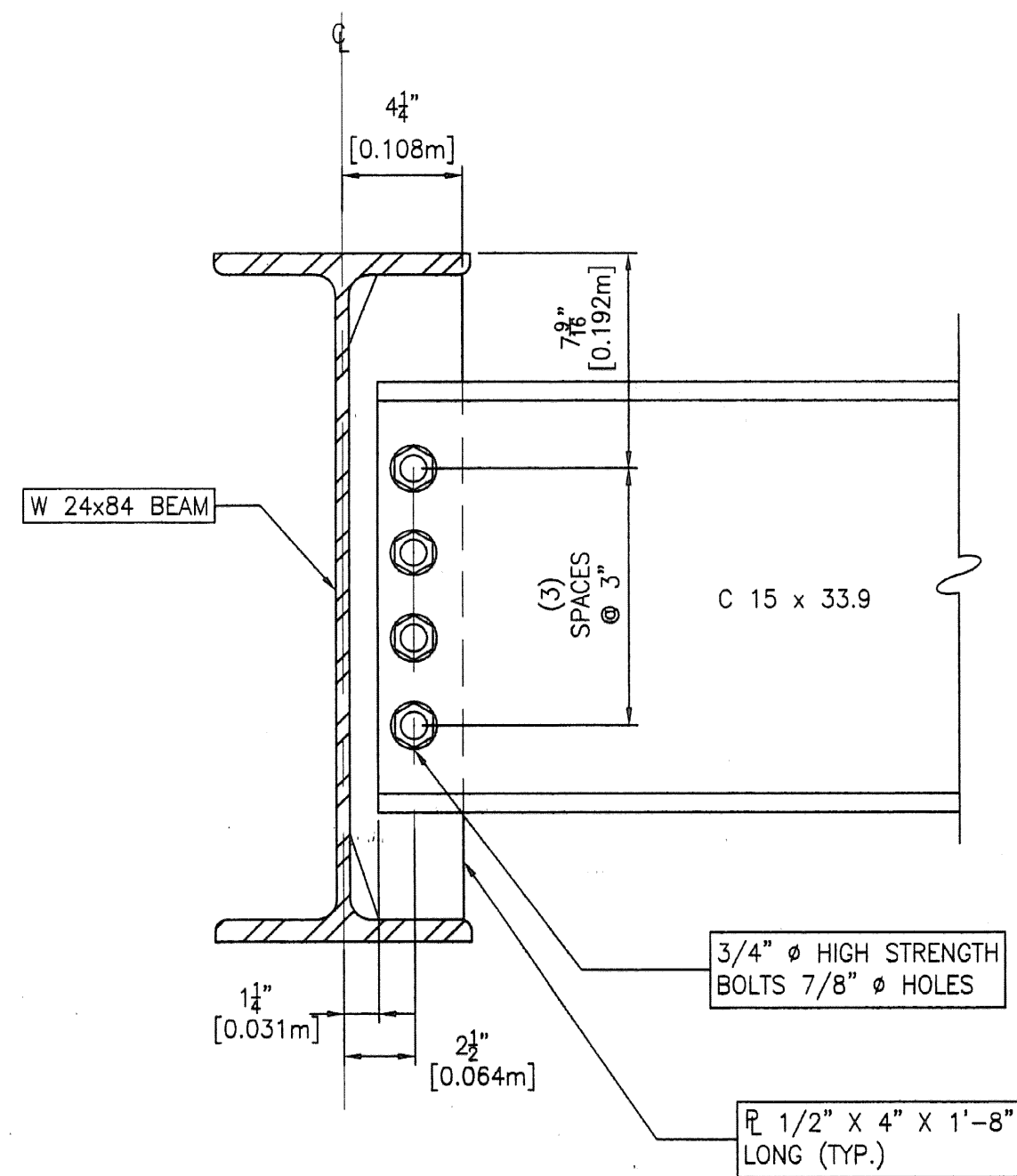
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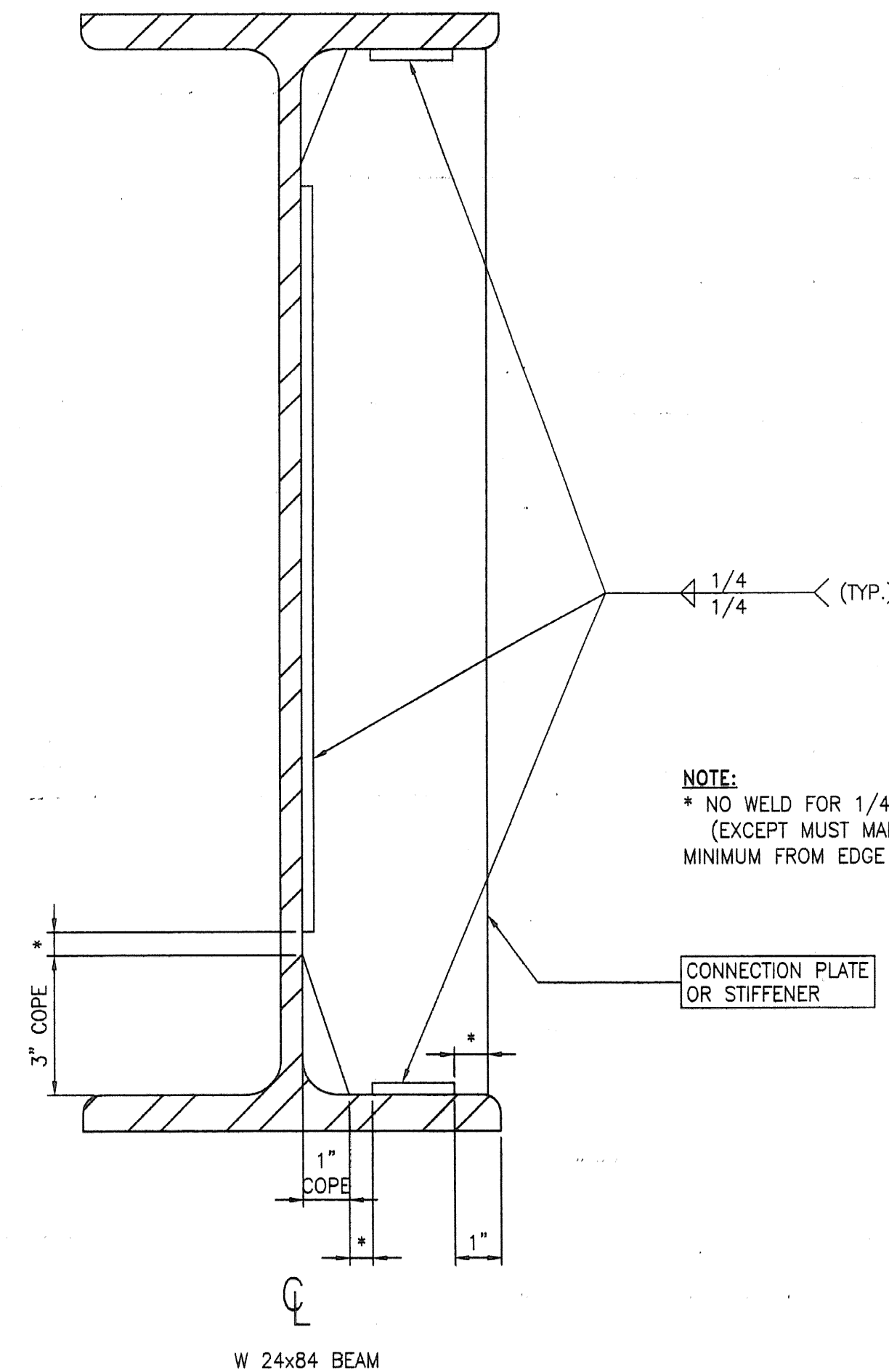
TEMPORARY BRIDGE FRAMING PLAN
SCALE 1/2" = 1'-0"



DECK / GUARDPOST CONNECTION DETAIL
SCALE 1/2" = 1'-0"

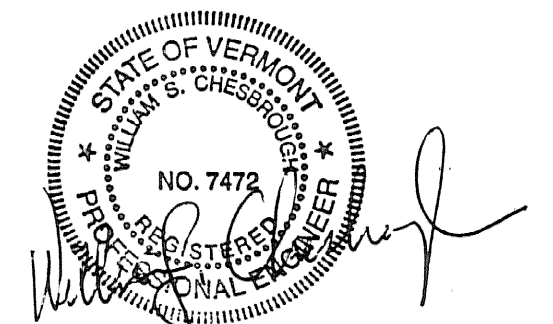


DIAPHRAGMS CONNECTION DETAIL
SCALE 1/2" = 1'-0"



**WELD TERMINATION AND COPING
DETAILS FOR STEEL MEMBERS**
SCALE 1/4" = 1'-0"

- NOTES:**
- DESIGN LOADING IS HS-20-44.
 - STRUCTURAL STEEL TO BE GRADE 36 (FY = 36 KSI).
 - TIMBER DECKING TO BE SPRUCE-PINE FIR NO. 2 (SPF 2) GRADE OR HIGHER.



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ccandco@verizon.net

PROJECT NAME: **PROPOSED IMPROVEMENT TEMPORARY BRIDGE PROJECT CABOT, VERMONT**

TITLE: **FRAMING PLAN BEAM, DIAPHRAGMS AND DECK/GUARDPOST CONNECTION DETAILS**

DESIGN NOTE ADDITION: 05-15-08

REVISIONS: NO DATE

DRAWN BY: **GEW**
CHECKED BY: **WSC**

PROJECT NO: **081301**
DATE: **APRIL 17, 2008**
SHEET: **3 OF 3**

FILE: P:\Project Files\2008\081301 - Trembly Ave\Structural\081301B\bridge\details.dwg May 15, 2008 - 11:34am