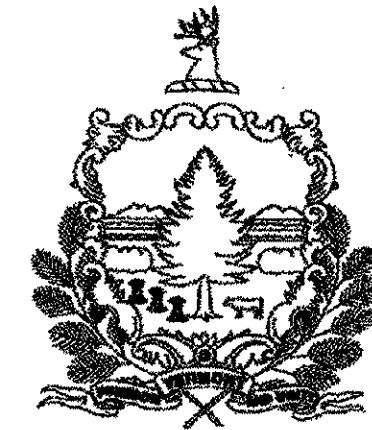
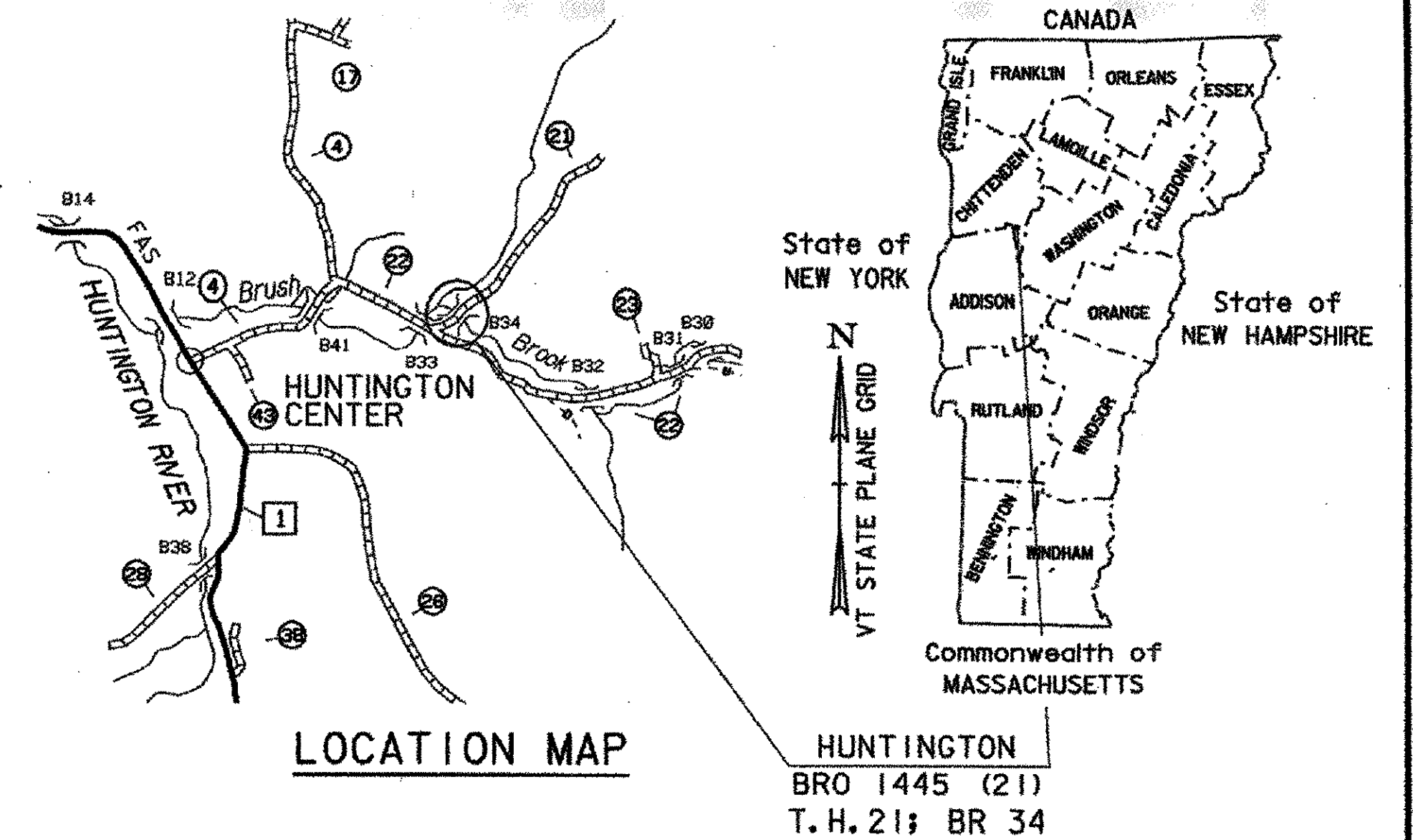


STATE OF VERMONT AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT BRIDGE PROJECT TOWN OF HUNTINGTON COUNTY OF CHITTENDEN



INDEX OF SHEETS	
1.	TITLE SHEET
2.	PRELIMINARY INFORMATION SHEET
3-4.	QUANTITY SHEETS
5-6.	R.O.W. SHEETS
7.	TIE SHEET
8.	LAYOUT SHEET
9.	PROFILE SHEET
10-11.	BORING INFORMATION SHEETS
12.	PLAN AND ELEVATION
13.	EROSION CONTROL SHEET
14.	RESOURCES SHEET
15.	PROJECT NOTES
16.	SLAB DETAILS
17.	ABUTMENT NO. 1 DETAILS
18.	ABUTMENT NO. 2 DETAILS
19.	WINGWALL DETAILS
20.	FOOTING REINFORCING DETAILS
21.	MISCELLANEOUS PROJECT DETAILS
22.	REINFORCING STEEL SCHEDULE
23.	ADDITIONAL ROADWAY DETAILS
24-27.	MAINLINE CROSS SECTIONS
28-34.	CHANNEL CROSS SECTIONS

LIST OF STANDARDS

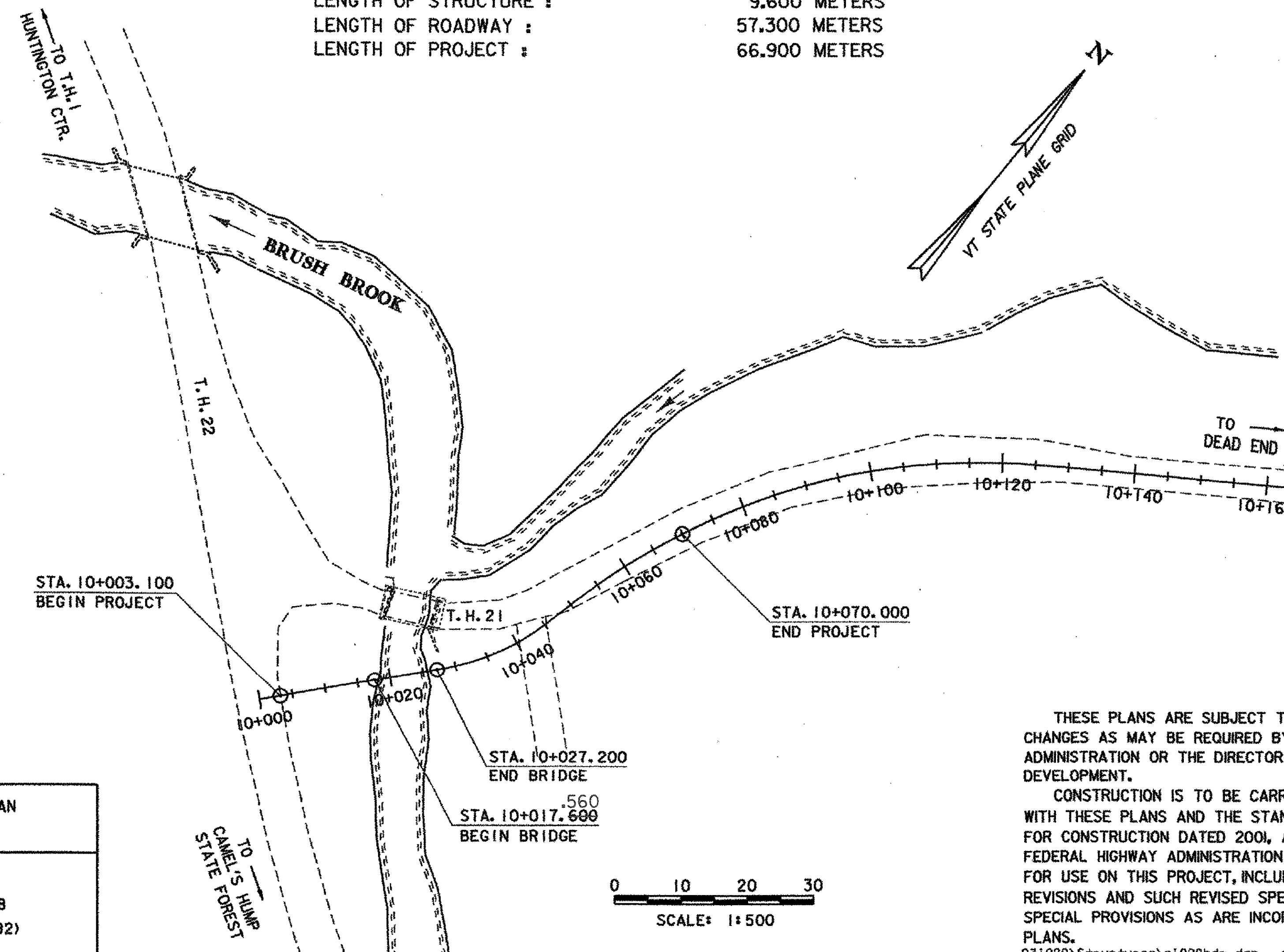
B-12M	01-03-00
B-71M	03-01-01
E-100M	06-13-97
E-101M	05-30-03
E-102M	06-30-03
E-102AM	06-13-97
E-121M	06-13-97
E-143M	06-13-97
E-160M	06-13-97
G-1M	01-03-00
G-1dM	01-03-00
J-3M	06-13-97
SB-R6-82M	07-10-97
T-1M	06-13-97
T-2M	06-13-97

ROUTE NO : T. H. 21, CLASS 3 BRIDGE NO : 34

PROJECT LOCATION : BEGINNING NEAR THE INTERSECTION OF T.H. 21 AND T. H. 22
AND CONTINUING NORTHEASTERLY 0.067 KM ON T.H. 21.

PROJECT DESCRIPTION : REPLACEMENT OF THE EXISTING BRIDGE WITH A NEW STRUCTURE,
WITH RELATED APPROACH ROADWAY AND CHANNEL WORK.

LENGTH OF STRUCTURE : 9.600 METERS
LENGTH OF ROADWAY : 57.300 METERS
LENGTH OF PROJECT : 66.900 METERS



CONVENTIONAL SYMBOLS

COUNTY LINE	— — — — —
TOWN LINE	— — — — —
LIMITS OF ACCESS	— — — — —
POINT OF ACCESS	X
FENCE LINE	X — — — — — X
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 : 12/93

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

RECORD PLANS

CONTRACTOR: PARENT CONSTRUCTION, INC. - HINESBURG, VT
RESIDENT ENGINEER: DAVID F. HALE
CONSTRUCTION BEGAN: JUNE 3, 2004
CONSTRUCTION COMPLETE: NOVEMBER 5, 2004
RECORD PLANS BY: D. HALE

I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY
THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.

BY *David F. Hale* RESIDENT ENGINEER
DATE 1-5-06

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.

Metric

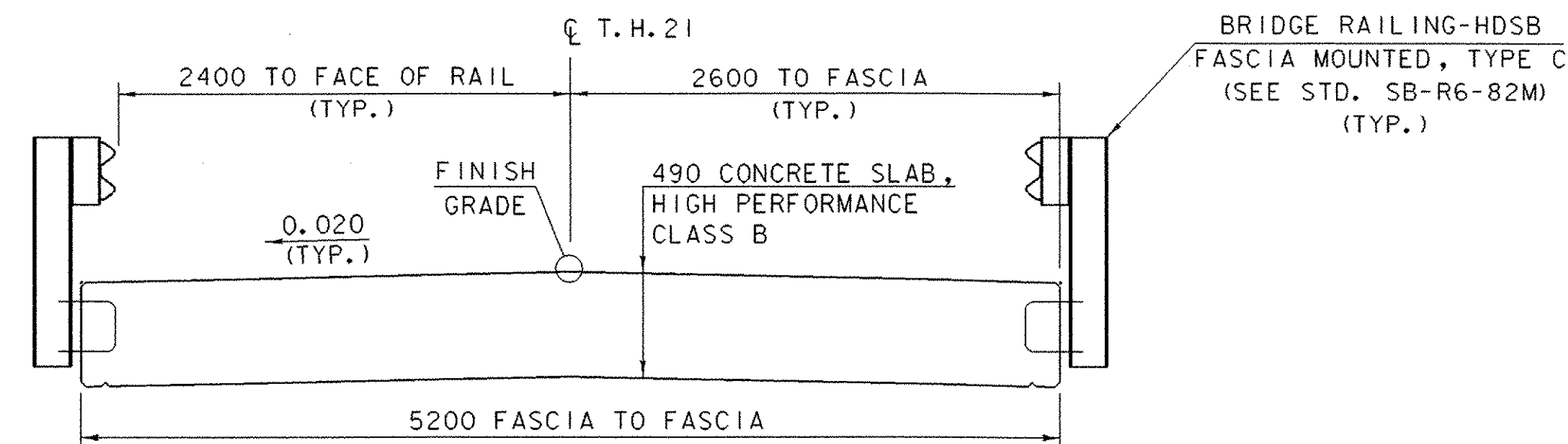
UNLESS NOTED OTHERWISE
STATIONS ARE IN KILOMETERS
ELEVATIONS ARE IN METERS
DIMENSIONS ARE IN MILLIMETERS

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

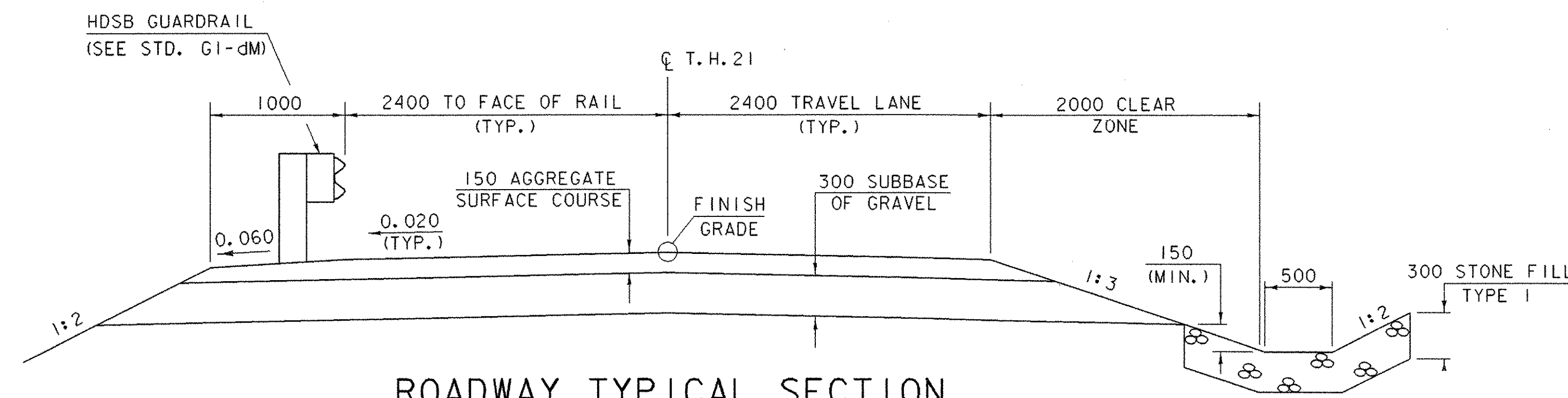
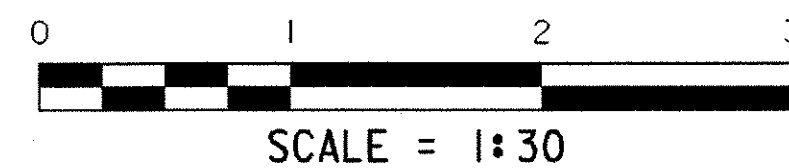
CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE
WITH THESE PLANS AND THE STANDARD SPECIFICATIONS
FOR CONSTRUCTION DATED 2001, AS APPROVED BY THE
FEDERAL HIGHWAY ADMINISTRATION ON JANUARY 4, 2001
FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT
REVISIONS AND SUCH REVISED SPECIFICATIONS AND
SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE
PLANS.

93j029\Structures\sj029bdr.dgn sj029tit.t 12-JAN-2004

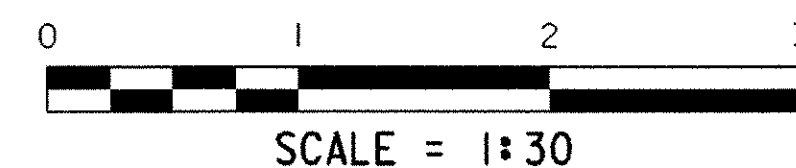
DIRECTOR OF PROJECT DEVELOPMENT	
APPROVED <i>[Signature]</i>	DATE 1/13/04
PROJECT MANAGER : R.R. WHITCOMB	
PROJECT NAME : HUNTINGTON	
PROJECT NUMBER : BRO 1445 (21)	
SHEET 1 OF 34 SHEETS	



BRIDGE TYPICAL SECTION

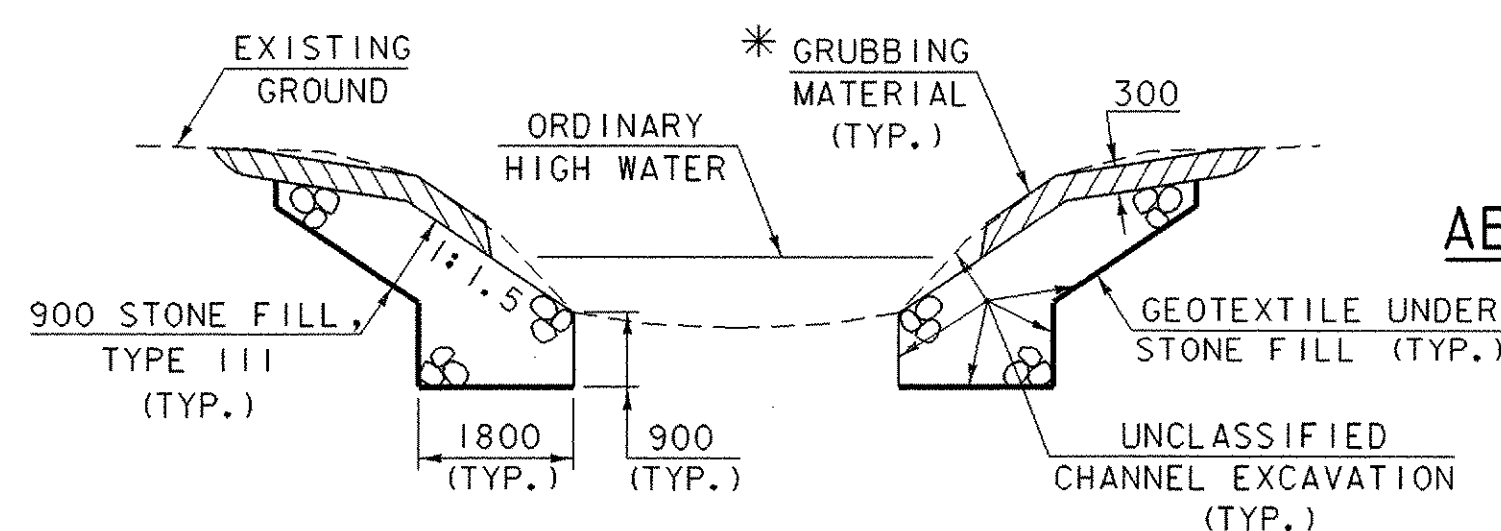


ROADWAY TYPICAL SECTION



NOTES

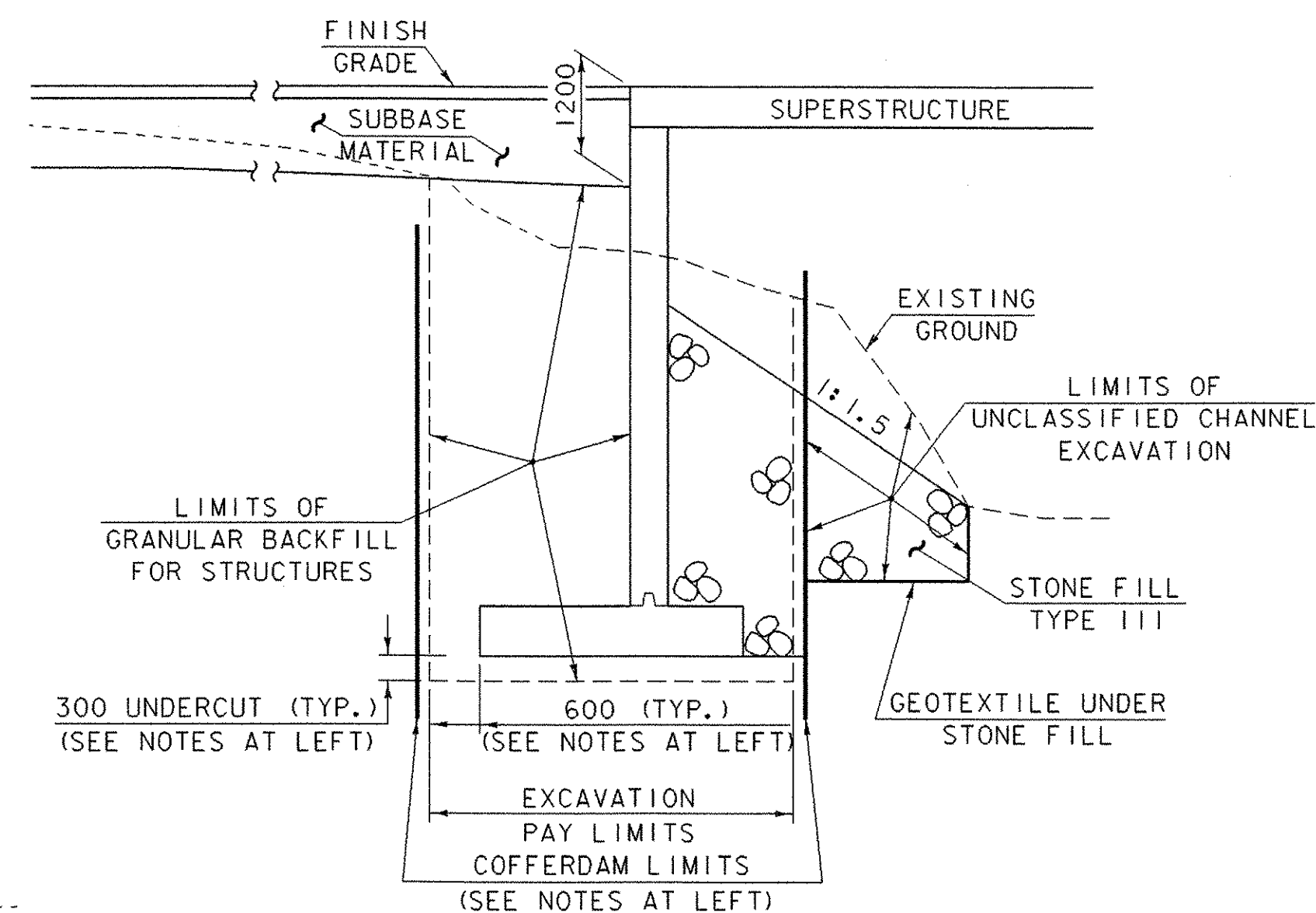
- COFFERDAM SIZE TO BE DETERMINED BY THE CONTRACTOR.
- THE PAY LIMITS OF "COFFERDAM EXCAVATION, EARTH" AND "COFFERDAM EXCAVATION, ROCK" SHALL BE 600 OUTSIDE THE PERIMETER OF THE FOOTING, UP TO EXISTING GROUND OR BOTTOM OF SUBBASE, WHICHEVER IS LOWER, AND DOWN TO THE ELEVATION SHOWN ON THIS SHEET AS DETERMINED BY THE RESIDENT ENGINEER.
- 300 UNDERCUT AS DETERMINED NECESSARY BY THE RESIDENT ENGINEER.
- 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 PAY LIMITS, SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR UNCLASSIFIED CHANNEL EXCAVATION.
- SEE PROJECT NOTES (SHEET 15) FOR ADDITIONAL INFORMATION.



CHANNEL TYPICAL 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.



ABUTMENT EARTHWORK TYPICAL SECTION

(NOT TO SCALE)

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

FINAL HYDRAULICS REPORT



HYDROLOGIC DATA

DRAINAGE AREA: 15.9 sq. km
 CHARACTER OF TERRAIN: Hilly to mountainous, mostly forested
 CHARACTER & TYPE OF STREAM: Perennial but flashy, straight, & stable.
 Not braided or anabranching.
 NATURE OF STREAMBED: Gravel, cobbles, and boulders

02.33= 11 cms 050= 42 cms
 010= 25 cms 0100= 51 cms
 025= 34 cms 0500= 87 cms

DATE OF FLOOD OF RECORD: Unknown
 WATER SURFACE ELEV.: Unknown ESTIMATED DISCHARGE: Unknown
 NATURAL STREAM VELOCITY @ 025 = 2.9 mps
 ICE CONDITIONS: Moderate DEBRIS: Moderate
 DOES THE STREAM REACH MAXIMUM HIGHWATER ELEVATION RAPIDLY? Yes
 IS ORDINARY RISE RAPID? Yes
 IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
 IF YES, DESCRIBE.

WATERSHED STORAGE 1% HEADWATERS UNIFORM THROUGHOUT WATERSHED X
 IMMEDIATELY ABOVE SITE

EXISTING STRUCTURE

STRUCTURE TYPE: Single span steel beam bridge YEAR BUILT: 1950
 CLEAR SPAN (NORMAL TO STREAM): 7.0 m
 VERTICAL CLEARANCE ABOVE STREAMBED: 2.2 m
 WATERWAY OF FULL OPENING: 16 sq. m
 DISPOSITION OF STRUCTURE: Remove

TYPE OF MATERIAL UNDER SUBSTRUCTURE: Unknown

WATER SURFACE ELEV. @ 02.33= 251.4 VELOCITY= 2.5 mps
 010= 252.0 " 3.3 mps
 025= 252.3 " 3.6 mps
 050= 252.6 " 3.1 mps
 0100= 252.9 " 3.0 mps

LONG TERM STREAM BED CHANGES: None noted.

IS THE ROADWAY OVERTOPPED BELOW THE 0100? Yes FREQUENCY: 025
 RELIEF ELEVATION: 252.3 DISCHARGE OVER ROAD @ 0100: 12 cms

UPSTREAM STRUCTURE: TOWN: Huntington DISTANCE: 300 m
 HIGHWAY NO.: T.H. 22 STRUCTURE NO.: 32
 STRUCTURE TYPE: Single span steel beam bridge
 CLEAR SPAN: 10.7 m CLEAR HEIGHT: 3.0 m
 YEAR BUILT: 1925 FULL WATERWAY: 30 sq. m

DOWNSTREAM STRUCTURE: TOWN: Huntington DISTANCE: 75 m
 HIGHWAY NO.: T.H. 22 STRUCTURE NO.: 33
 STRUCTURE TYPE: Single span concrete slab bridge
 CLEAR SPAN: 9.1 m CLEAR HEIGHT: 2.4 m
 YEAR BUILT: 1992 FULL WATERWAY: 20 sq. m

PROPOSED STRUCTURE

STRUCTURE TYPE: Single span concrete slab bridge, upstream of existing

CLEAR SPAN (NORMAL TO STREAM): 8.0 m
 VERTICAL CLEARANCE ABOVE STREAMBED: 2.2 m
 WATERWAY OF FULL OPENING: 17.0 sq. m

WATER SURFACE ELEV. @ 02.33= 251.7* VELOCITY= 2.4 mps
 010= 252.1* " 2.9 mps
 025= 252.3* " 3.1 mps
 050= 252.6* " 3.1 mps
 0100= 253.1* " 3.2 mps

IS THE ROADWAY OVERTOPPED BELOW THE 0100? Yes FREQUENCY: 050
 RELIEF ELEVATION: 252.7 DISCHARGE OVER ROAD @ 0100: 9 cms

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 252.7
 VERTICAL CLEARANCE @ 0.25 = 0.4 m

SCOUR: 0.6 m of contraction scour at 0100 & 0.9 m at 0500
 REQUIRED CHANNEL PROTECTION: Stone Fill, Type III

PERMIT INFORMATION

AVERAGE DAILY FLOW: 0.3 cms
 ORDINARY LOW WATER: 0.2 cms DEPTH: 0.1 m
 ORDINARY HIGH WATER: 5.0 cms DEPTH: 0.7 m

ADDITIONAL COMMENTS

* The new bridge is about 10 m upstream of the existing bridge. Therefore, water surface elevations are given for a point further upstream, and thus may be higher even though the new bridge is longer.

DESIGN CRITERIA:

- DESIGN LIVE LOAD AASHTO MS 22.5
- DESIGN SPAN 9.134 m
- ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL 325 KPa ON LEDGE N/A
- ALLOWABLE LOAD FOR PILING N/A TYPE N/A ESTIMATED LENGTH N/A
- STRUCTURAL STEEL AASHTO GRADE N/A
- REINFORCING STEEL GRADE 420
- CONCRETE, HIGH PERFORMANCE CLASS B f_c: 25 MPa

TRAFFIC MAINTENANCE:

- IS TRAFFIC TO BE MAINTAINED? YES IF YES, ON EXISTING STRUCTURE YES OR ON TEMPORARY BRIDGE NO
 - TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY N/A TRAFFIC CONTROL SIGNALS REQUIRED N/A
- MINIMUM CLEAR SPAN (NORMAL TO STREAM): N/A VERTICAL CLEARANCE ABOVE STREAMBED: N/A
 WATERWAY OF FULL OPENING: N/A
 ARE SIDEWALKS REQUIRED? N/A IF SO, ON WHAT SIDE? N/A
 STRUCTURE TYPE: Traffic will be maintained on existing bridge.

LOAD RATING (TONS)

LOADING LEVELS (LOAD FACTOR)	M	MS	3S2	6 AXLE	3A. STR.	4A. STR.	5A. SEMI
INVENTORY A = 2.17	27	44					
POSTED A = 1.55	38	62	78		46	47	94
OPERATING A = 1.30		74	94	85	55	56	

STRENGTH RF = $\frac{\phi M_n - 1.3 M_{DL}}{A \times M_{LL+I}}$

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
1998	20	5	50	<1	--
2018	30	10	50	<1	--

Design speed: 30km/h

STATE OF VERMONT AGENCY OF TRANSPORTATION

Town of **HUNTINGTON** Bridge No. **34**
 Highway No. **T.H. 21** Log Sta.
 Surv. Sta.

T.H. 21 OVER BRUSH BROOK

PRELIMINARY INFORMATION SHEET

Designed By **RRW / JEL** Drawn By **JBA / BMW**
 Checked By **M. LOZIER** Date **5/03** Project Manager **R.R. WHITCOMB** Date **6/03**

PROJECT **HUNTINGTON** PROJECT NO. **BRO 1445 (21)**

I.G.C. Info. **93 J029 Structures's J029pl.dgn** s J029pl.dgn
 Bridge Sheet No. Sheet **2** of **34**

QUANTITY SHEET



SUMMARY OF ESTIMATED QUANTITIES																TOTALS			DESCRIPTIONS			DETAILED SUMMARY OF QUANTITIES				
		FULL E&C		EROSION CONTROL		ROADWAY		CHANNEL		ABUTMENT NO. 2		ABUTMENT NO.1		SLAB		BRIDGE QUANTITY	ROUND	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS	
						1												1			LS	CLEARING AND GRUBBING (INCLUDING INDIVIDUAL TREES AND STUMPS)	201.10			UNCLASSIFIED CHANNEL EXCAVATION
						0.01															HA	THINNING AND TRIMMING	201.30	170	CM	ABUTMENT NO.1
						250												250			CM	COMMON EXCAVATION	203.15	120	CM	ABUTMENT NO.2
								290									290		290		CM	UNCLASSIFIED CHANNEL EXCAVATION	203.27	290	CM	TOTAL
				10		50												60			CM	TRENCH EXCAVATION OF EARTH	204.20			STONE FILL, TYPE III
										80		70					150		150		CM	GRANULAR BACKFILL FOR STRUCTURES	204.30	160	CM	ABUTMENT NO.1
										120		100					220		220		CM	COFFERDAM EXCAVATION, EARTH	208.30	120	CM	ABUTMENT NO.2
										60		50					110		110		CM	COFFERDAM EXCAVATION, ROCK	208.35	280	CM	TOTAL
												1					1		1		LS	COFFERDAM (STA 10 + 017.600)	208.40			GEOTEXTILE UNDER STONE FILL
										1							1		1		LS	COFFERDAM (STA. 10 + 027.200)	208.40	230	SM	ABUTMENT NO.1
				20		280												300			CM	SUBBASE OF GRAVEL	301.15	170	SM	ABUTMENT NO.2
						100												100			CM	AGGREGATE SURFACE COURSE	401.10	400	SM	TOTAL
										39		37		25			101		101		CM	CONCRETE, HIGH PERFORMANCE CLASS B	501.34			GRUBBING MATERIAL
										2630		2540					5170		5170		KG	REINFORCING STEEL	507.15	140	SM	ABUTMENT NO.1
										50		50		2340			2440		2440		KG	EPOXY COATED REINFORCING STEEL	507.17	110	SM	ABUTMENT NO.2
										8		7		4			19		19		L	WATER REPELLENT	514.10	250	SM	TOTAL
														23			23		23		M	BRIDGE RAILING - HD STEEL BEAM/FASCIA MOUNTED	525.41			TEMPORARY EROSION CONTROL ITEMS (INCLUDED IN EROSION CONTROL ITEMS)
						1												1			LS	MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECTS	527.10	10	CM	TRENCH EXCAVATION OF EARTH
														1			1		1		EACH	REMOVAL OF STRUCTURE	529.15	20	CM	SUBBASE OF GRAVEL
						5												5			M	600 mm CPEP (SL)	601.2820	10	HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I
						1												1			EACH	600 mm CPEPES	601.7020	10	CM	STONE FILL TYPE I
						11												11			M	RE-LAYING PIPE CULVERTS	601.99	170	SM	GEOTEXTILE FOR SILT FENCE
				10														10			HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25	110	SM	GEOTEXTILE FOR FILTER CURTAINS
				10		30				1		1					2		42		CM	STONE FILL, TYPE I	613.10	5	KG	SEED - WINTER RYE *
								280									280		280		CM	STONE FILL, TYPE III	613.12	10	EACH	HAY BALES FOR EROSION CONTROL
						1												1			EACH	RELOCATE MAIL BOX, SINGLE SUPPORT	617.10	10	SM	EROSION MATTING
						4												4			EACH	RELOCATE MAILBOX, MULTIPLE SUPPORT	617.12			* 50/50 MIX OF ANNUAL RYEGRASS (LOLIUM MULTIFLORUM) AND CEREAL (WINTER) RYE
						62												62			M	HEAVY DUTY STEEL BEAM GUARDRAIL	621.21			EARTHWORKS SUMMARY
						4												4			EACH	ANCHOR FOR STEEL BEAM RAIL	621.60	0	CM	FILL REQUIRED
						10												10			HR	FLAGGERS	630.15	250	CM	COMMON EXCAVATION 250 X 1.0
		1																1			LS	FIELD OFFICE-ENGINEERS	631.10	180	CM	UNCLASSIFIED CHANNEL EXCAVATION 290 X 0.6
		1																1			LS	TESTING EQUIPMENT - CONCRETE	631.16	36	CM	TRENCH EXCAVATION OF EARTH 60 X 0.6
		1																1			LS	FIELD OFFICE TELEPHONE (N. A. B. I.)	631.25	132	CM	COFFERDAM EXCAVATION, EARTH 220 X 0.6
						1												1			LS	MOBILIZATION	635.10	598	CM	SUBTOTAL
								400									400		400		SM	GEOTEXTILE UNDER STONE FILL	649.31	2	CM	ROUNDING
				170														170			SM	GEOTEXTILE FOR SILT FENCE	649.51	600	CM	TOTAL
				110														110			SM	GEOTEXTILE FOR FILTER CURTAINS	649.61	600	CM	FILL AVAILABLE
				10														10			KG	SEED	651.15	0	CM	FILL REQUIRED
				5														5			KG	SEED-WINTER RYE	651.17	600	CM	WASTE
				40														40			KG	FERTILIZER	651.18			
				1														1			T	AGRICULTURAL LIMESTONE	651.20			
				1														1			T	HAY MULCH	651.25			
				10														10			EACH	HAY BALES FOR EROSION CONTROL	651.26			

DETAILED SUMMARY OF QUANTITIES		
QUANTITIES	UNIT	ITEMS
		UNCLASSIFIED CHANNEL EXCAVATION
170	CM	ABUTMENT NO.1
120	CM	ABUTMENT NO.2
290	CM	TOTAL
		STONE FILL, TYPE III
160	CM	ABUTMENT NO.1
120	CM	ABUTMENT NO.2
280	CM	TOTAL
		GEOTEXTILE UNDER STONE FILL
230	SM	ABUTMENT NO.1
170	SM	ABUTMENT NO.2
400	SM	TOTAL
		GRUBBING MATERIAL
140	SM	ABUTMENT NO.1
110	SM	ABUTMENT NO.2
250	SM	TOTAL
		TEMPORARY EROSION CONTROL ITEMS (INCLUDED IN EROSION CONTROL ITEMS)
10	CM	TRENCH EXCAVATION OF EARTH
20	CM	SUBBASE OF GRAVEL
10	HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I
10	CM	STONE FILL TYPE I
170	SM	GEOTEXTILE FOR SILT FENCE
110	SM	GEOTEXTILE FOR FILTER CURTAINS
5	KG	SEED - WINTER RYE *
10	EACH	HAY BALES FOR EROSION CONTROL
10	SM	EROSION MATTING
		* 50/50 MIX OF ANNUAL RYEGRASS (LOLIUM MULTIFLORUM) AND CEREAL (WINTER) RYE
		EARTHWORKS SUMMARY
0	CM	FILL REQUIRED
250	CM	COMMON EXCAVATION 250 X 1.0
180	CM	UNCLASSIFIED CHANNEL EXCAVATION 290 X 0.6
36	CM	TRENCH EXCAVATION OF EARTH 60 X 0.6
132	CM	COFFERDAM EXCAVATION, EARTH 220 X 0.6
588	CM	SUBTOTAL
2	CM	ROUNDING
600	CM	TOTAL
600	CM	FILL AVAILABLE
0	CM	FILL REQUIRED
600	CM	WASTE

	PROJECT NAME:	HUNTINGTON		
	PROJECT NUMBER:	BRO 1445 (21)		
	FILE NAME:	193j029structures1j029qt.xls	PLOT DATE:	10/01/2003
	PROJECT MANAGER:	R. WHITCOMB	DRAWN BY:	S. SCRIBNER
	DESIGNED BY:	J. LACRIOX	CHECKED BY:	M. LOZIER
	QUANTITY SHEET TWO		SHEET	4 OF 34

TABLE OF PROJECT PROPERTY ACQUISITION

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

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS	REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1	BRYAN, JOHN BILLIS, CHRIS LIVAK, ROMAN SMITH, GUTHRIE	7	10+007.31 LT.	10+097.06 RT.	417 S.M.±					HUNTINGTON			4489 S.F.±						
			10+007.80 RT.	10+020.0 RT.			CONST. (T) 36.8 S.M.±						396 S.F.±						
													INCLUDES EROSION CONTROL						
			10+007.57 RT.	10+013.4 RT.			SLOPE (T) 33.2 S.M.±						357 S.F.±						
			10+012.7 RT.	10+017.9 RT.			CHANNEL (P) 26.8 S.M.±						288 S.F.±						
			10+021.5 RT.	10+033.4 RT.			CONST. (T) 33.7 S.M.±						363 S.F.±						
													INCLUDES EROSION CONTROL						
			10+023.9 RT.	10+029.6 RT.			CHANNEL (P) 14.8 S.M.±						159 S.F.±						
			10+038.3 RT.	10+041.0 RT.			INSTALL (T) 5.2 S.M.±						EROSION CONTROL, 56 S.F.±						
			10+042 RT.				DRIVE (T)						FIELD DRIVE						
			10+043.4 RT.	10+072.78 RT.			SLOPE (T) 11.15 S.M.±						120 S.F.±						
			10+043.4 RT.	10+072.70 RT.			CONST. (T) 40.0 S.M.±						431 S.F.±						
2	SMALL, MELVIN H. & NORMA A. & SMALL, JEFFREY C.	7	10+007.0 LT.	10+026.1 LT.			CONST. (T) 71.8 S.M.±			HUNTINGTON			773 S.F.±						
													INCLUDES EROSION CONTROL						
			10+007.1 LT.	10+015.5 LT.			SLOPE (T) 40.0 S.M.±						431 S.F.±						
			10+020.8 LT.	10+023.0 LT.			CHANNEL (P) 5.5 S.M.±						59 S.F.±						
			10+029.9 LT.	10+040.4 LT.			INSTALL (T) 3.8 S.M.±						EROSION CONTROL, 41 S.F.±						
			10+045.0 LT.	10+052.8 LT.			CONST. (T) 3.6 S.M.±						39 S.F.±						
													INCLUDES EROSION CONTROL						
			10+050.0 LT.				DITCH & DR. (P)												

ACCT, Gfunk
\\vaot_cadd\fillingcabin\93J029\RightOfWay\vrj029d.dgn
DATE PLOTTED 07-MAY-2002

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

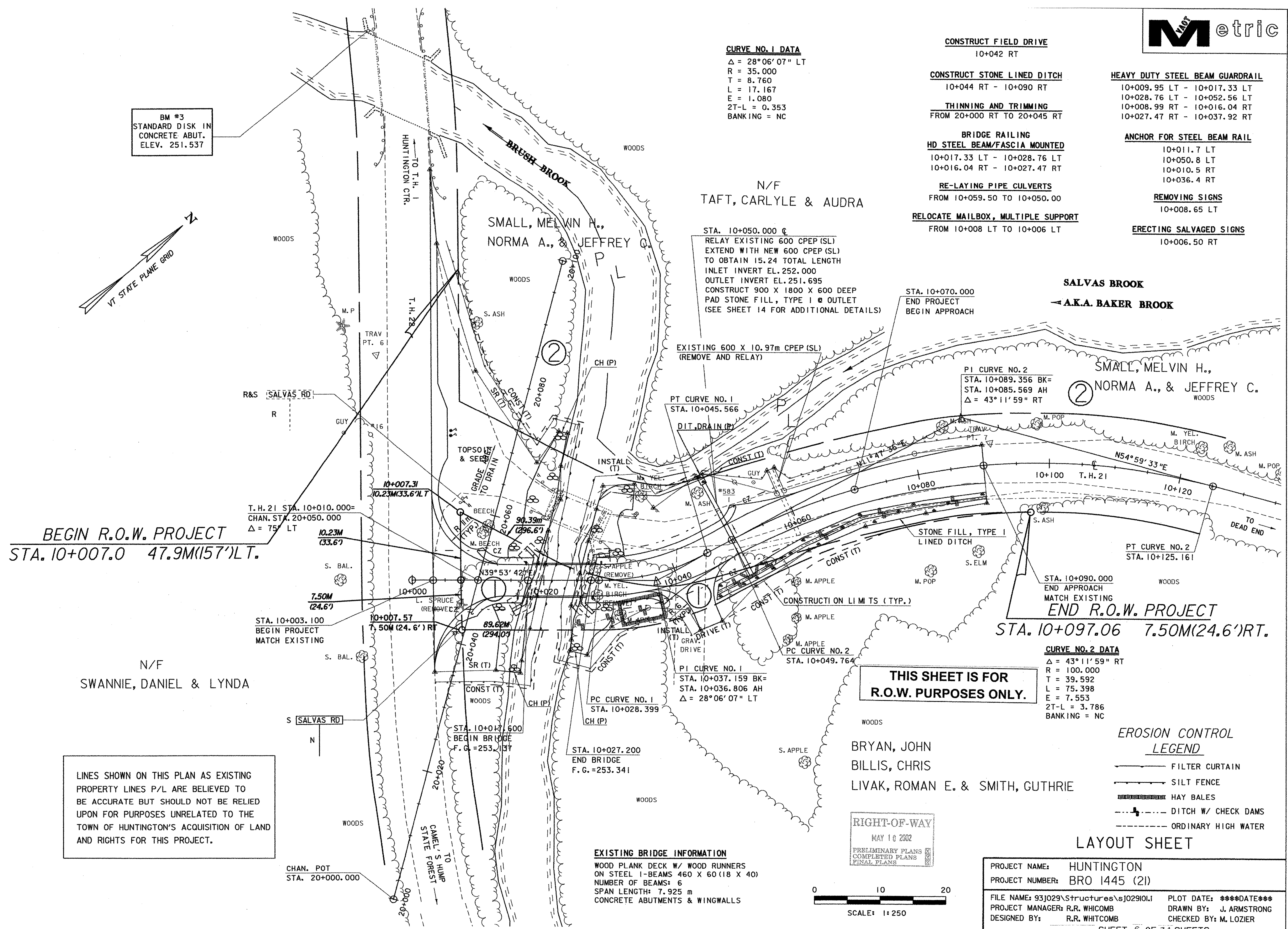
C&T (P) CLEARING & TRIMMING
CZ (P) CLEAR ZONE
CONST. (T) CONSTRUCTION EASEMENT
SR SLOPE RIGHTS
P PROPERTY LINE
L TOP OF CUT
O TOE OF SLOPE

PERMANENT UTILITY EASEMENT

APPROVED: ROGER P. DUMAS DATE: 04-15-02
CHIEF, PLANS & TITLES

RIGHT-OF-WAY
MAY 10 2002
PRELIMINARY PLANS
COMPLETED PLANS
FINAL PLANS

R. O. W. PLANS
HUNTINGTON
BRO 1445(21)
SHEET 5 OF 34



CURVE NO. 1 DATA
 $\Delta = 28^{\circ}06'07''$ LT
 $R = 35.000$
 $T = 8.760$
 $L = 17.167$
 $E = 1.080$
 $2T-L = 0.353$
 BANKING = NC

CONSTRUCT FIELD DRIVE
 10+042 RT

CONSTRUCT STONE LINED DITCH
 10+044 RT - 10+090 RT

THINNING AND TRIMMING
 FROM 20+000 RT TO 20+045 RT

BRIDGE RAILING
HD STEEL BEAM/FASCIA MOUNTED
 10+017.33 LT - 10+028.76 LT
 10+016.04 RT - 10+027.47 RT

RE-LAYING PIPE CULVERTS
 FROM 10+059.50 TO 10+050.00

RELOCATE MAILBOX, MULTIPLE SUPPORT
 FROM 10+008 LT TO 10+006 LT

HEAVY DUTY STEEL BEAM GUARDRAIL
 10+009.95 LT - 10+017.33 LT
 10+028.76 LT - 10+052.56 LT
 10+008.99 RT - 10+016.04 RT
 10+027.47 RT - 10+037.92 RT

ANCHOR FOR STEEL BEAM RAIL
 10+011.7 LT
 10+050.8 LT
 10+010.5 RT
 10+036.4 RT

REMOVING SIGNS
 10+008.65 LT

ERECTING SALVAGED SIGNS
 10+006.50 RT

N/F
 TAFT, CARLYLE & AUDRA

STA. 10+050.000 C
 RELAY EXISTING 600 CPEP (SL)
 EXTEND WITH NEW 600 CPEP (SL)
 TO OBTAIN 15.24 TOTAL LENGTH
 INLET INVERT EL. 252.000
 OUTLET INVERT EL. 251.695
 CONSTRUCT 900 X 1800 X 600 DEEP
 PAD STONE FILL, TYPE I @ OUTLET
 (SEE SHEET 14 FOR ADDITIONAL DETAILS)

EXISTING 600 X 10.97m CPEP (SL)
 (REMOVE AND RELAY)

PT CURVE NO. 1
 STA. 10+045.566

STA. 10+070.000
 END PROJECT
 BEGIN APPROACH

SALVAS BROOK
-A.K.A. BAKER BROOK

PI CURVE NO. 2
 STA. 10+089.356 BK=
 STA. 10+085.569 AH
 $\Delta = 43^{\circ}11'59''$ RT

SMALL, MELVIN H.,
 NORMA A., & JEFFREY C.

BEGIN R.O.W. PROJECT
 STA. 10+007.0 47.9M(157')LT.

T.H. 21 STA. 10+010.000=
 CHAN. STA. 20+050.000
 $\Delta = 75^{\circ}$ LT

STA. 10+003.100
 BEGIN PROJECT
 MATCH EXISTING

N/F
 SWANNIE, DANIEL & LYNDIA

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 HUNTINGTON'S ACQUISITION OF LAND
 AND RIGHTS FOR THIS PROJECT.

END R.O.W. PROJECT
 STA. 10+097.06 7.50M(24.6')RT.

CURVE NO. 2 DATA
 $\Delta = 43^{\circ}11'59''$ RT
 $R = 100.000$
 $T = 39.592$
 $L = 75.398$
 $E = 7.553$
 $2T-L = 3.786$
 BANKING = NC

**THIS SHEET IS FOR
 R.O.W. PURPOSES ONLY.**

BRYAN, JOHN
 BILLIS, CHRIS
 LIVAK, ROMAN E. & SMITH, GUTHRIE

RIGHT-OF-WAY
 MAY 10 2002
 PRELIMINARY PLANS
 COMPLETED PLANS
 FINAL PLANS

EXISTING BRIDGE INFORMATION
 WOOD PLANK DECK W/ WOOD RUNNERS
 ON STEEL I-BEAMS 460 X 60 (18 X 40)
 NUMBER OF BEAMS: 6
 SPAN LENGTH: 7.925 m
 CONCRETE ABUTMENTS & WINGWALLS

0 10 20
 SCALE: 1:250

**EROSION CONTROL
 LEGEND**

— FILTER CURTAIN
 — SILT FENCE
 — HAY BALES
 - - - DITCH W/ CHECK DAMS
 - - - ORDINARY HIGH WATER

LAYOUT SHEET

PROJECT NAME: HUNTINGTON
 PROJECT NUMBER: BRO 1445 (21)

FILE NAME: 93J029\Structures\sj029101.i PLOT DATE: ****DATE***
 PROJECT MANAGER: R.R. WHITCOMB DRAWN BY: J. ARMSTRONG
 DESIGNED BY: R.R. WHITCOMB CHECKED BY: M. LOZIER

SHEET 6 OF 34 SHEETS

GPS CONTROL POINTS

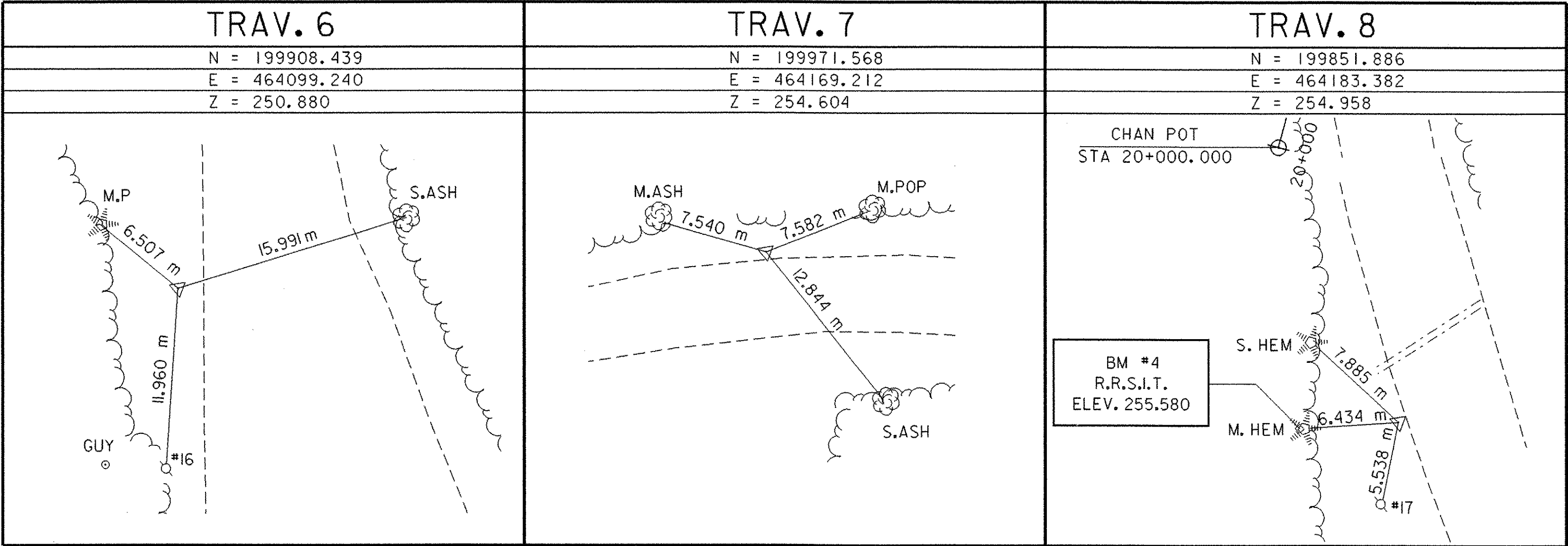
K-1:
STATION MARK IS A SURVEY DISK WITH SETTING IN TOP OF A LARGE ROCK OUTCROP.
THE MARK IS STAMPED K-1 RESET 1986.

NORTHING: NOT AVAILABLE
EASTING: NOT AVAILABLE
ELEVATION: 249.147 M (817.41 FT)

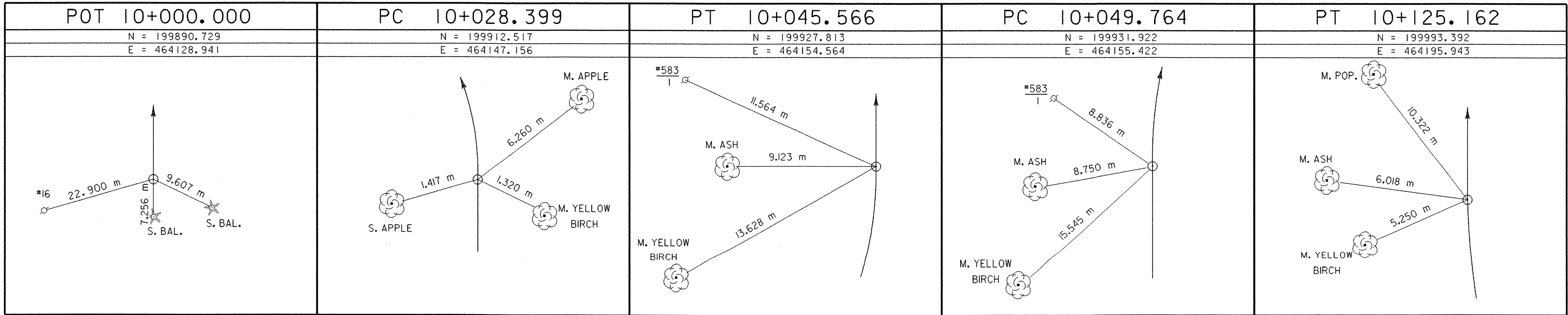
LOCATION:
HUNTINGTON CENTER

TO REACH FROM JUNCTION OF MAIN RD. (CL 2-1) AND EAST ST. (CL 3-4) PROCEED EAST ALONG EAST ST. FOR 0.6 MI (0.97 KM) TO THE JUNCTION OF FOREST CITY RD. (CL 3-22) AND THEN SOUTHEAST ALONG FOREST CITY RD. FOR 0.2 MI (0.32 KM). BENCHMARK IS APPROX. 550 FT (167.6 M) NORTHWEST OF THE FOREST CITY RD. BRIDGE OVER BRUSH BROOK; APPROX. 600 FT (182.9 M) SOUTHEAST OF THE "TAFT" RESIDENCE; 91 FT (27.7 M) SOUTHWEST OF FOREST CITY RD. CENTERLINE; 68 FT (20.7 M) SOUTHWEST OF NW-SE WIRE FENCE; 35.5 FT (10.8 M) NORTHWEST OF A NE-SW WIRE FENCE; 36 FT (11.0 M) NNW OF THE NORTHEAST GATEPOST OF AN IRON GATE IN THE NE-SW WIRE FENCE; 10 FT (3.0 M) WEST OF A 24 IN CLUMP MAPLE; 5 FT (1.5 M) SOUTHEAST OF AN 18 IN CLUMP MAPLE; IN A PASTURE; SET IN THE TOP OF A LARGE ROCK OUTCROP WHICH PROJECTS 4 FT (1.2 M) ABOVE GROUND.

TRAVERSE TIES



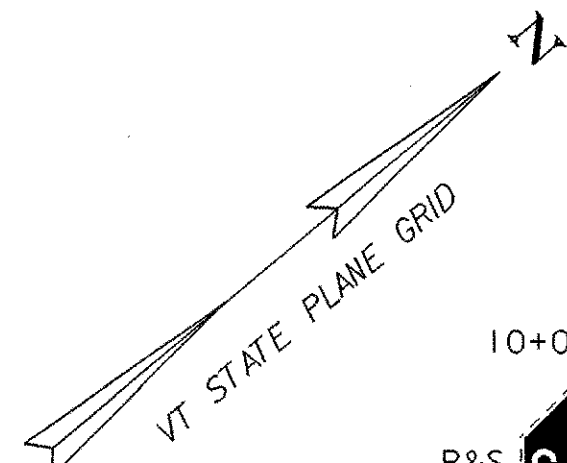
ALIGNMENT TIES



DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (92)

PROJECT NAME: HUNTINGTON	
PROJECT NUMBER: BRO 1445 (21)	
FILE NAME: 93j029\Structures\sj029tie.1	PLOT DATE: 09-JAN-2004
PROJECT MANAGER: R.R. WHITCOMB	DRAWN BY: J. ARMSTRONG
DESIGNED BY: VAOT SURVEY	CHECKED BY: M. LOZIER
SHEET 7 OF 34	

BM #3
STANDARD DISK IN
CONCRETE ABUT.
ELEV. 251.537



CURVE NO. 1 DATA
 $\Delta = 28^\circ 06' 07''$ LT
 $R = 35.000$
 $T = 8.760$
 $L = 17.167$
 $E = 1.080$
 $2T-L = 0.353$
 BANKING = NC

CONSTRUCT FIELD DRIVE
 10+042 RT

CONSTRUCT STONE LINED DITCH
 10+044 RT - 10+090 RT

THINNING AND TRIMMING
 FROM 20+000 RT TO 20+045 RT

BRIDGE RAILING
HD STEEL BEAM/FASCIA MOUNTED
 10+017.33 LT - 10+028.76 LT
 10+016.04 RT - 10+027.47 RT

RE-LAYING PIPE CULVERTS
 FROM 10+059.50 TO 10+050.00

RELOCATE MAILBOX, SINGLE SUPPORT
 FROM 10+008 LT TO 10+006 LT (1 EA)

RELOCATE MAILBOX, MULTIPLE SUPPORT
 FROM 10+008 LT TO 10+006 LT (4 EA)

HEAVY DUTY STEEL BEAM GUARDRAIL
 10+009.95 LT - 10+017.33 LT
 10+028.76 LT - 10+052.56 LT
 10+008.99 RT - 10+016.04 RT
 10+027.47 RT - 10+037.92 RT

ANCHOR FOR STEEL BEAM RAIL
 10+011.7 LT
 10+050.8 LT
 10+010.5 RT
 10+036.4 RT

REMOVING SIGNS
 10+008.7 LT
 10+017.0 LT
 10+019.2 LT
 10+040.4 LT

ERECTING SALVAGED SIGNS
 10+006.5 RT
 10+014.0 LT
 10+040.0 LT

STA. 10+050.000
 RE-LAY EXISTING 600 CPEP (SL)
 EXTEND WITH NEW 600 CPEP (SL)
 TO OBTAIN 15.24 TOTAL LENGTH
 INLET INVERT EL. 252.000
 OUTLET INVERT EL. 251.695
 PROVIDE END SECTION @ INLET
 CONSTRUCT 900 X 1800 X 600 DEEP
 PAD STONE FILL, TYPE I @ OUTLET
 (SEE SHEET 26 FOR ADDITIONAL DETAILS)

STA. 10+070.000
 END PROJECT
 BEGIN APPROACH

EXISTING 600 X 10.97m CPEP (SL)
 (REMOVE AND RELAY)

PT CURVE NO. 1
 STA. 10+045.566

PI CURVE NO. 2
 STA. 10+089.356 BK=
 STA. 10+085.569 AH
 $\Delta = 43^\circ 11' 59''$ RT

EXISTING R.O.W.

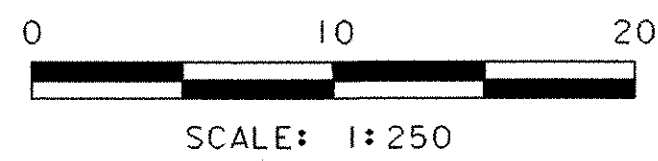
EXISTING R.O.W.

STA. 10+090.000
 END APPROACH
 MATCH EXISTING

CURVE NO. 2 DATA
 $\Delta = 43^\circ 11' 59''$ RT
 $R = 100.000$
 $T = 39.592$
 $L = 75.398$
 $E = 7.553$
 $2T-L = 3.786$
 BANKING = NC

EXISTING BRIDGE INFORMATION

WOOD PLANK DECK W/ WOOD RUNNERS
 ON STEEL I-BEAMS W/ 460 X 60 (18 X 40)
 NUMBER OF BEAMS: 6
 SPAN LENGTH: 7.925 m
 CONCRETE ABUTMENTS & WINGWALLS

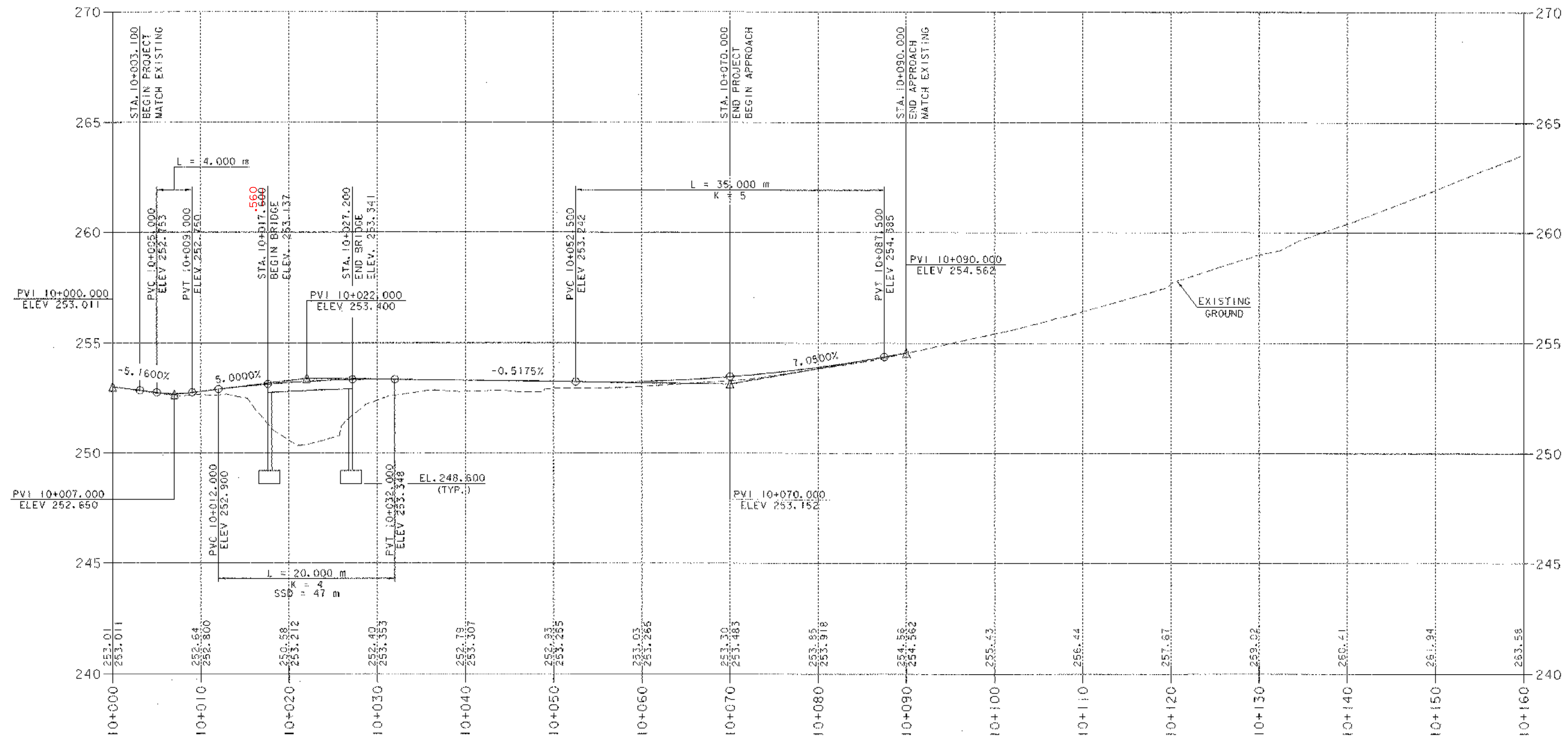


LAYOUT SHEET

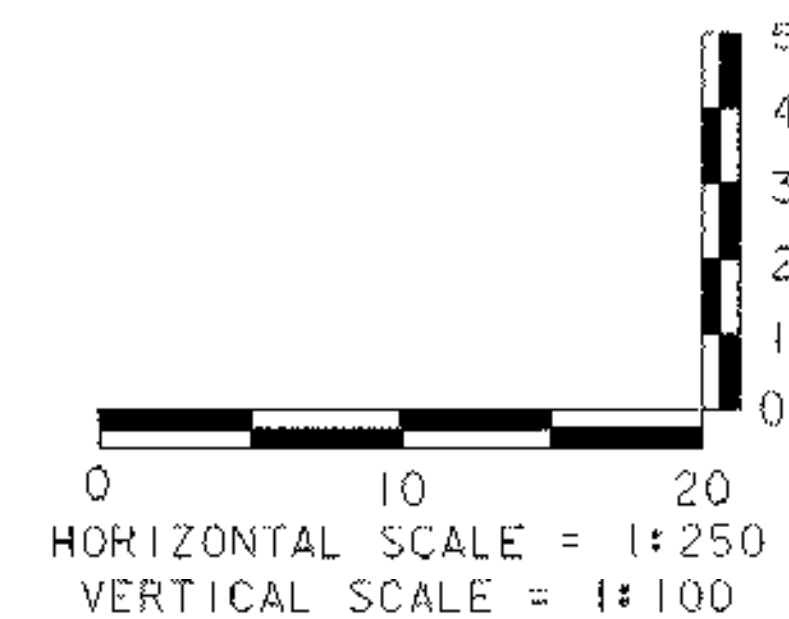
PROJECT NAME: HUNTINGTON
 PROJECT NUMBER: BRO 1445 (21)

FILE NAME: 93j029\Structures\sj029101.i
 PROJECT MANAGER: R.R. WHITCOMB
 DESIGNED BY: R.R. WHITCOMB
 PLOT DATE: 09-JAN-2004
 DRAWN BY: J. ARMSTRONG
 CHECKED BY: M. LOZIER
 SHEET 8 OF 34

PROFILE ALONG PROPOSED T.H. 21 CENTERLINE



NOTE:
ELEVATIONS TO THE NEAREST HUNDREDTH ARE
EXISTING GROUND ALONG PROPOSED CENTERLINE.
ELEVATIONS TO THE NEAREST THOUSANDTH ARE
FINISH GRADE ALONG PROPOSED CENTERLINE.



PROFILE SHEET

PROJECT NAME:	HUNTINGTON	FILE NAME:	93J029\Structure\sj029pf.1	PLT DATE:	03-JAN-2004
PROJECT NUMBER:	BRO 1445 (21)	PROJECT MANAGER:	R.R. WHITCOMB	DRAWN BY:	J. ARMSTRONG
		DESIGNED BY:	R.R. WHITCOMB	CHECKED BY:	M. LOZIER
				SHEET	9 OF 34

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 30.1 mm
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
Sl	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		

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.

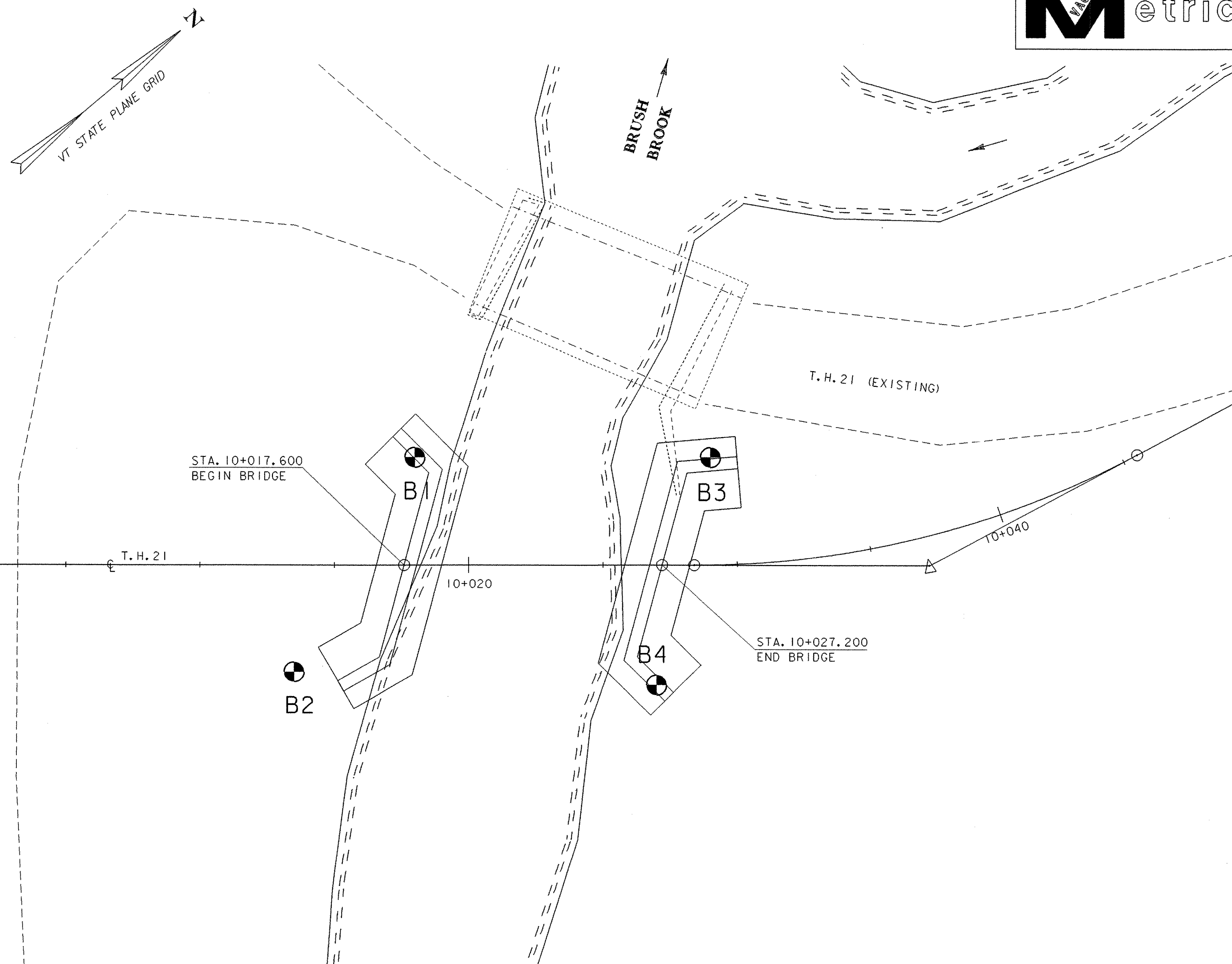
STRIKE - Angle from magnetic north to line of intersection of bed with a horizontal plane.

DIP - Inclination of bed with a horizontal plane.

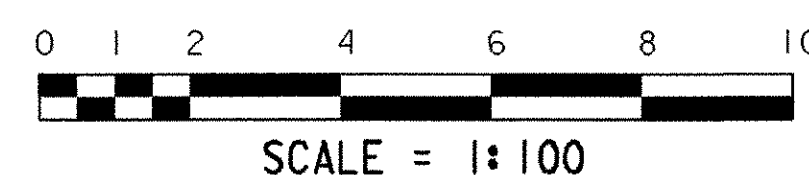
- The subsurface explorations shown herein were made between 04-24-98 and 05-08-98 by the Agency.
- Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations 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.



BORING PLAN



BORING CHART

HOLE NO.	STATION	OFFSET (m)	GROUND ELEV.	ELEV. TLOB
B1	10+018.0	4.0 LT	252.226	NLTD
B2	10+013.5	4.0 RT	252.750	NLTD
B3	10+029.0	4.0 LT	253.061	NLTD
B4	10+027.0	4.5 RT	252.259	NLTD

BORING INFORMATION SHEET ONE

PROJECT NAME: HUNTINGTON
PROJECT NUMBER: BRO 1445 (21)

FILE NAME: 93J029\Structures\sj029b01
PROJECT MANAGER: R.R. WHITCOMB
DESIGNED BY: RRW / JEL
PLOT DATE: 09-JAN-2004
DRAWN BY: C. ROY
CHECKED BY: M. LOZIER
SHEET 10 OF 34

STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH DIVISION SUBSURFACE INFORMATION				HOLE NO.: B-1 SHEET 1 OF 1 DATE STARTED: 4/24/98 DATE COMPLETED: 4/29/98					
PROJECT NAME: HUNTINGTON SITE NAME: BR-34 STATION: 10+018.00 GROUND EL.: 252.226				PROJECT NUMBER: BRO 1445(21) SITE NO.: TH-21 OFFSET: -4.00 G.W. DEPTH:					
BORING CREW CREW CHIEF: WILLIS DRILLER: MCGLYNN LOGGER: CHABOT ADDITIONAL CREW:				BORING RIG: UNI-MOG 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, SaGr, brn, Moist, Rec. = 0.07m	64	10.9	39.8	48.9	11.3		
		No Rec.	R						
		BXDC, 3.048m-3.657m No Rec., Boulders	R						
		No Rec.	R						
5		A-4, GrSaSi, gry, Moist, Rec. = 0.45m	R	10.9	20.8	22	57.2		
		A-4, SaGrSi, gry, Moist, Rec. = 0.30m	R	12.4	29.9	26.5	43.6		
		A-4, SaSi, gry, Moist, Rec. = 0.33m	74	16.3	15.3	20.6	64.1		
		A-4, SiSa (Highly weathered material), brn, Moist, Rec. = 0.25m	88	13.3	6.4	50.4	43.2		
		A-4, SaSi (Highly weathered material), brn, MTW, Rec. = 0.38m	46	23.1	1.5	44.4	54.1		
10		A-4, SiSa (Highly weathered material), brn, MTW, Rec. = 0.36m	80	24.4	6	51.9	42.1		
		A-4, SiSa (Highly weathered material), brn, Moist, Rec. = 0.38m	R	17.6	7.3	49.3	43.4		
		A-4, GrSiSa (Highly weathered material), brn, Moist, Rec. = 0.10m	R	18.1	24.9	38.4	36.7		
			Hole stopped @				12.3m		
GEOLOGISTS REPORT:									

STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH DIVISION SUBSURFACE INFORMATION				HOLE NO.: B-2 SHEET 1 OF 1 DATE STARTED: 5/5/98 DATE COMPLETED: 5/8/98					
PROJECT NAME: HUNTINGTON SITE NAME: BR-34 STATION: 10+013.50 GROUND EL.: 252.750				PROJECT NUMBER: BRO 1445(21) SITE NO.: TH-21 OFFSET: 4.00 G.W. DEPTH:					
BORING CREW CREW CHIEF: WILLIS DRILLER: MERRILL LOGGER: ADDITIONAL CREW:				BORING RIG: UNI-MOG 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, 1.5m-2.1m No Rec., Boulders	R						
		A-2-4, SaSiGr (HP), gry, Dry, Rec. = 0.15m	R	8.7	48.7	23.4	27.9		
5		No Rec.	R						
		A-2-4, SaSiGr (HP), gry, Dry, Rec. = 0.18m	R	9.1	56.8	21.3	21.9		
		A-4, SiSa (Highly weathered material), brn, Moist, Rec. = 0.19m	72	14.5	19.4	42.4	38.2		
		A-4, SiSa (Highly weathered material), brn, Moist, Rec. = 0.35m	81	12.7	14.3	46.6	39.1		
10		A-4, SaSi (Highly weathered material), brn, MTW, Rec. = 0.15m	R	23.3	17.3	39.9	42.8		
		A-2-4, GrSiSa (Highly weathered material), brn, Moist, Rec. = 0.18m	R	13.9	28.7	41.6	29.7		
			Hole stopped @				12.3m		
GEOLOGISTS REPORT:									

STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH DIVISION SUBSURFACE INFORMATION				HOLE NO.: B-3 SHEET 1 OF 1 DATE STARTED: 5/1/98 DATE COMPLETED: 5/8/98					
PROJECT NAME: HUNTINGTON SITE NAME: BR-34 STATION: 10+029.00 GROUND EL.: 253.061				PROJECT NUMBER: BRO 1445(21) SITE NO.: TH-21 OFFSET: -4.00 G.W. DEPTH:					
BORING CREW CREW CHIEF: WILLIS DRILLER: MERRILL LOGGER: ADDITIONAL CREW:				BORING RIG: UNI-MOG 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, 1.5m-3.0m No Rec., Boulders	R						
		BXDC, 3.0m-4.5m No Rec., Boulders	R						
5		A-2-4, SiSaGr (Highly weathered material), brn, Moist, Rec. = 0.17m	R	13	35.8	35.5	28.7		
		A-2-4, SiSaGr (Highly weathered material), brn, Moist, Rec. = 0.16m	43	19.4	36.3	35.2	28.5		
		A-1-b, SaGr (Highly weathered material), brn, MTW, Rec. = 0.13m	30	21.4	57.8	25.8	16.4		
		A-1-b, SiGrSa (Highly weathered material), brn, Moist, Rec. = 0.20m	62	12.5	37.1	39	23.9		
10		A-2-4, SiGrSa (Highly weathered material), brn, Moist, Rec. = 0.17m	R	15.2	29.4	44.3	26.3		
		A-1-b, SaGr (Highly weathered material), brn, Moist, Rec. = 0.15m	R	11.2	60.2	24.6	15.2		
			Hole stopped @				12.3m		
GEOLOGISTS REPORT:									

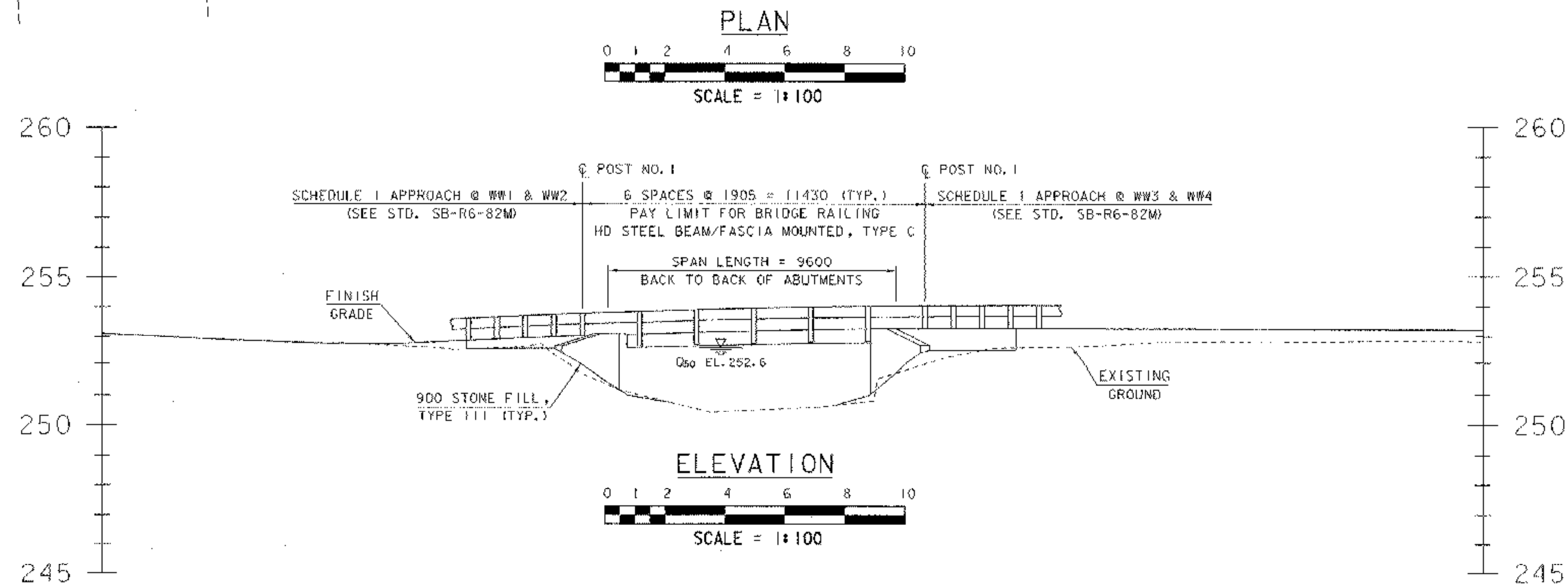
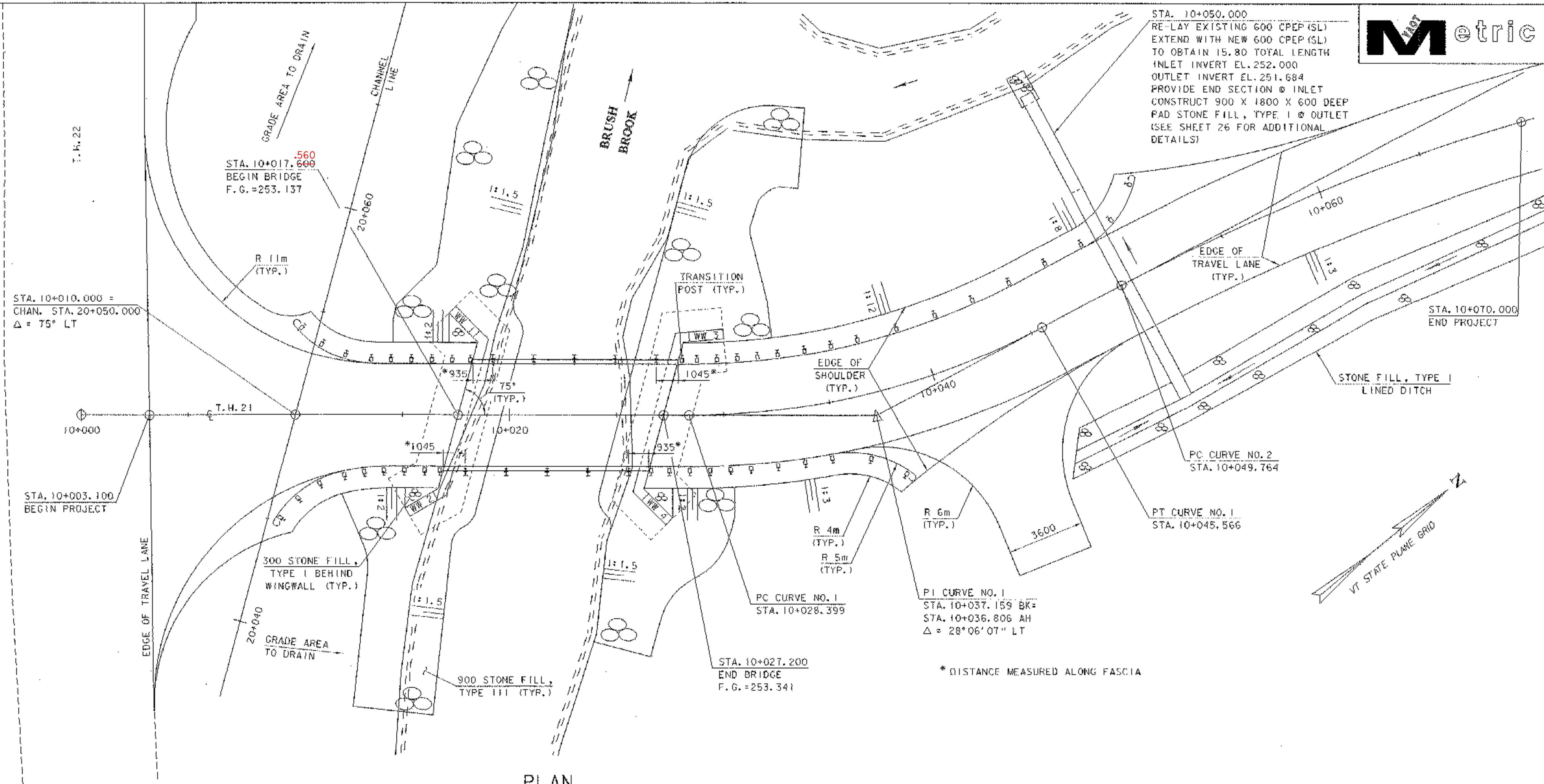
STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH DIVISION SUBSURFACE INFORMATION				HOLE NO.: B-4 SHEET 1 OF 1 DATE STARTED: 4/29/98 DATE COMPLETED: 4/30/98					
PROJECT NAME: HUNTINGTON SITE NAME: BR-34 STATION: 10+027.00 GROUND EL.: 252.259				PROJECT NUMBER: BRO 1445(21) SITE NO.: TH-21 OFFSET: 4.50 G.W. DEPTH:					
BORING CREW CREW CHIEF: WILLIS DRILLER: MERRILL LOGGER: ADDITIONAL CREW:				BORING RIG: UNI-MOG 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, SaGr, brn, Moist, Rec. = 0.10m	R	10.9	54.2	32.1	13.7		
		A-4, SaSi (HP), gry, Moist, Rec. = 0.30m	68	10.9	19.2	24.5	56.3		
5		A-4, SaSi (HP), gry, Moist, Rec. = 0.15m	85	12.7	6.4	24.5	69.1		
		A-4, SaSi (HP), gry, Moist, Rec. = 0.30m	R	10.6	10.3	25.5	64.2		
		A-4, SiSa (Highly weathered material), brn, MTW, Rec. = 0.20m	32	20.1	16.7	43.8	39.5		
		A-4, GrSiSa (Highly weathered material), brn, Moist, Rec. = 0.15m	87	15.5	22.6	39.6	37.8		
10		A-2-4, SiSaGr (Highly weathered material), brn, Moist, Rec. = 0.15m	R	18.1	35.2	33.9	30.9		
		A-2-4, GrSiSa (Highly weathered material), brn, Moist, Rec. = 0.15m	R	15.6	21.8	49	29.2		
			Hole stopped @				12.3m		
GEOLOGISTS REPORT:									

BORING INFORMATION SHEET TWO

PROJECT NAME: HUNTINGTON
PROJECT NUMBER: BRO 1445 (21)

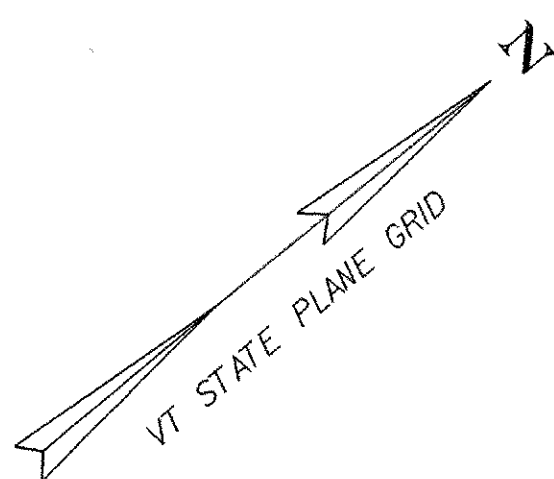
FILE NAME: 93j029\Structures\sj029b02.f
PROJECT MANAGER: R.R. WHITCOMB
DESIGNED BY: VAOT MAT&RESEARCH
PLOT DATE: 09-JAN-2004
DRAWN BY: G. ROY
CHECKED BY: M. LOZIER
SHEET 11 OF 34





PLAN AND ELEVATION

PROJECT NAME:	HUNTINGTON	PLOT DATE:	09-JAN-2004
PROJECT NUMBER:	BRO 1445 (2)	DRAWN BY:	J. ARMSTRONG
FILE NAME:	93J029\structures\j029pe1	CHECKED BY:	M. LOZIER
PROJECT MANAGER:	R.R. WHITCOMB	SHEET	12 OF 34
DESIGNED BY:	RRW / JEL		



NOTE:

PRIOR TO THE BEGINNING OF WORK AND IN ACCORDANCE WITH SECTION 652 OF THE SPECIAL PROVISIONS, THE CONTRACTOR SHALL SUBMIT FOR THE RESIDENT ENGINEER'S APPROVAL AN EROSION AND SEDIMENT CONTROL PLAN SEPARATE FROM THIS SHEET.

**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.

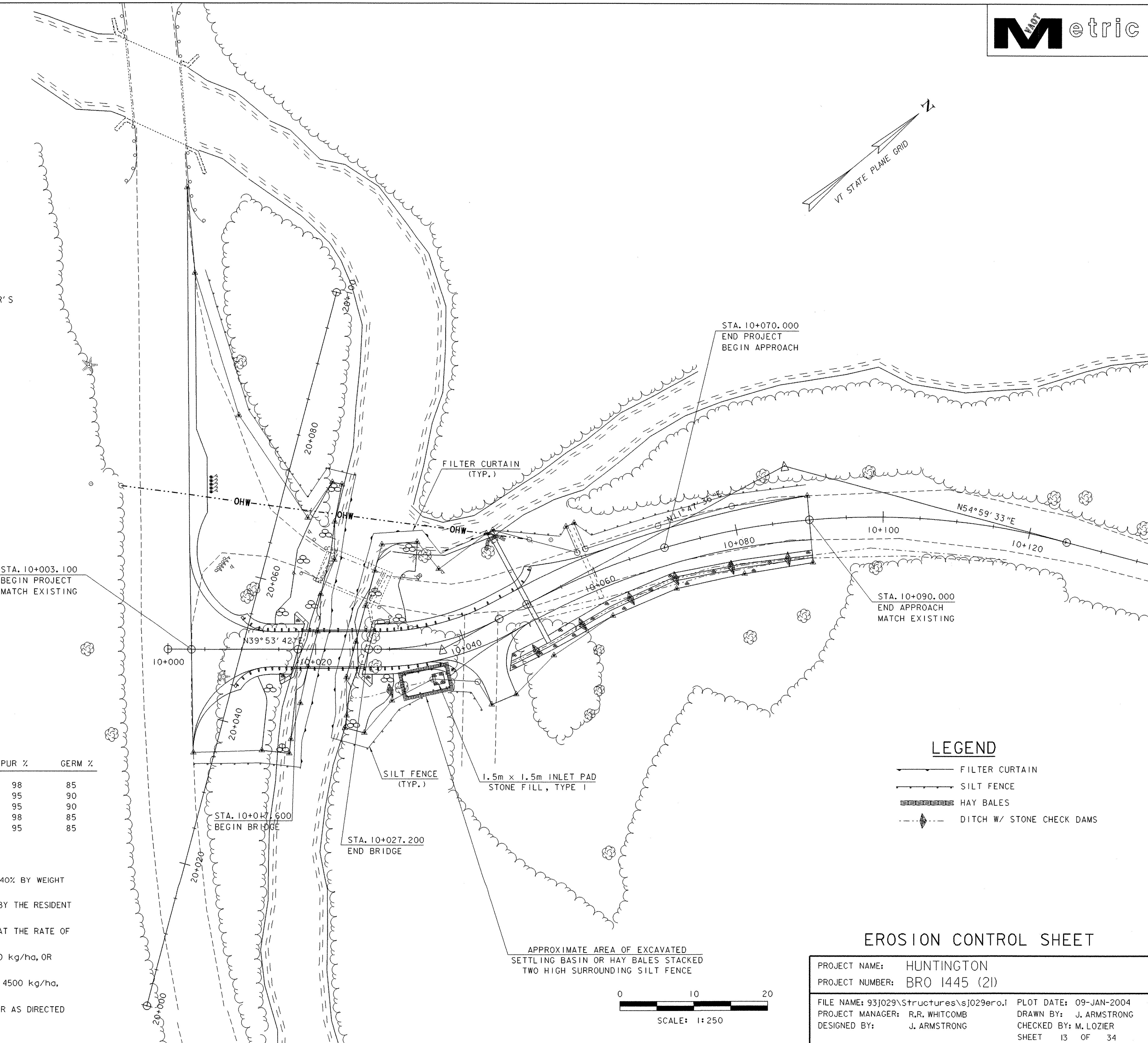
SEED: TO BE APPLIED PER SEEDING FORMULAS OR AS DIRECTED BY THE RESIDENT ENGINEER.

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 RESIDENT ENGINEER.

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

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



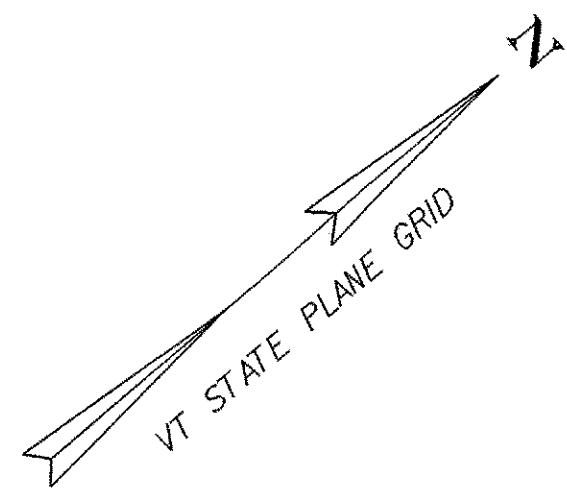
LEGEND

- FILTER CURTAIN
- SILT FENCE
- HAY BALES
- DITCH W/ STONE CHECK DAMS

EROSION CONTROL SHEET

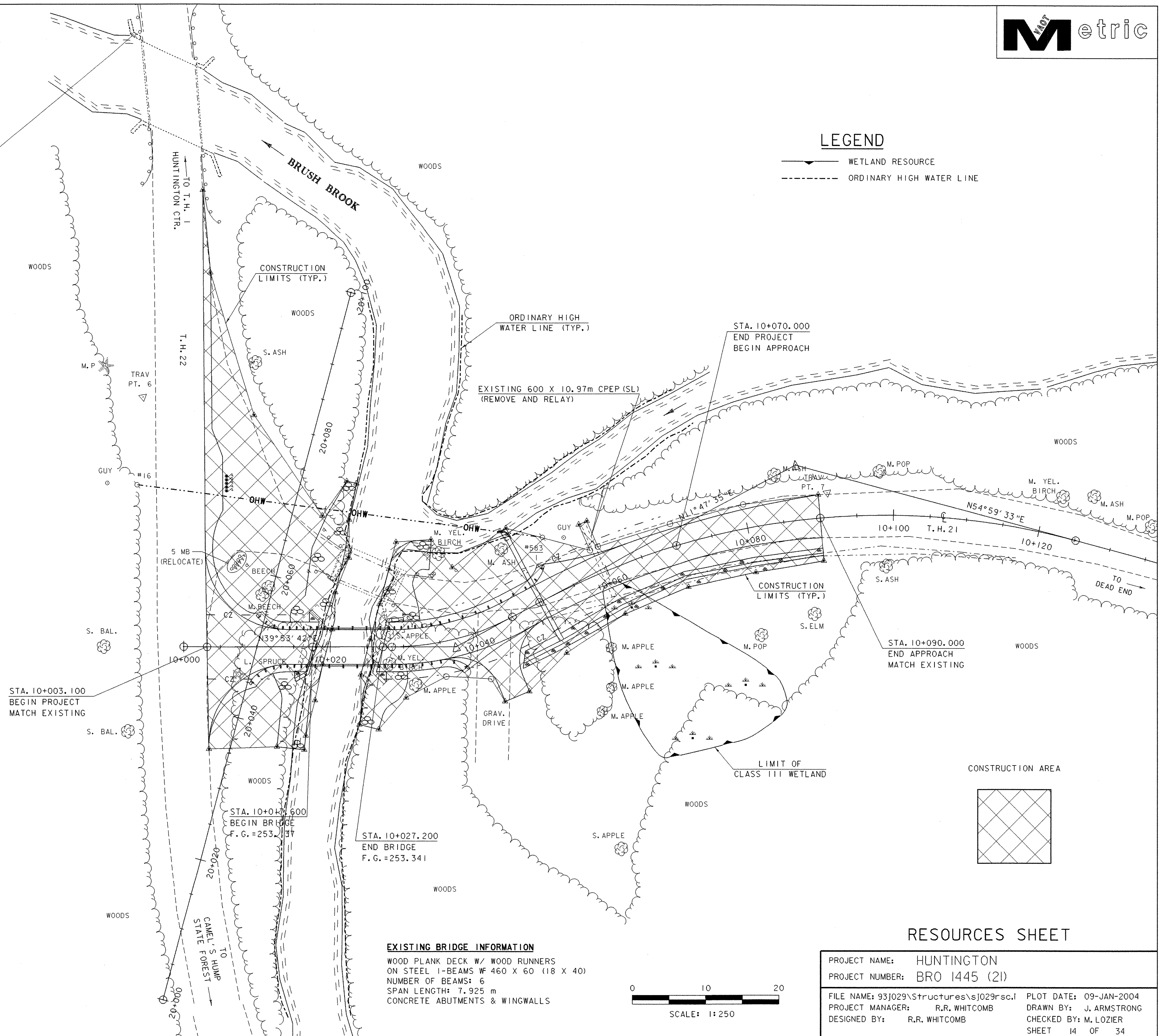
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PROJECT NUMBER:	BRO 1445 (21)	PROJECT MANAGER:	R.R. WHITCOMB	DRAWN BY:	J. ARMSTRONG
		DESIGNED BY:	J. ARMSTRONG	CHECKED BY:	M. LOZIER
				SHEET	13 OF 34

BM #3
STANDARD DISK IN
CONCRETE ABUT.
ELEV. 251.537



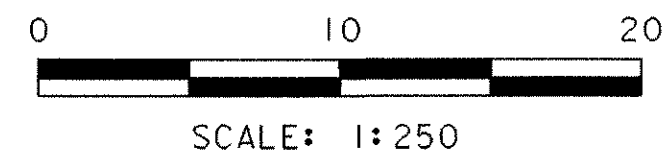
LEGEND

- WETLAND RESOURCE
- - - ORDINARY HIGH WATER LINE



EXISTING BRIDGE INFORMATION

WOOD PLANK DECK W/ WOOD RUNNERS
ON STEEL I-BEAMS W/ 460 X 60 (18 X 40)
NUMBER OF BEAMS: 6
SPAN LENGTH: 7.925 m
CONCRETE ABUTMENTS & WINGWALLS



RESOURCES SHEET

PROJECT NAME: HUNTINGTON
PROJECT NUMBER: BRO 1445 (21)

FILE NAME: 93j029\Structures\sj029rsc.i
PROJECT MANAGER: R.R. WHITCOMB
DESIGNED BY: R.R. WHITCOMB
PLOT DATE: 09-JAN-2004
DRAWN BY: J. ARMSTRONG
CHECKED BY: M. LOZIER
SHEET 14 OF 34

PROJECT NOTES

GENERAL

- 1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2001, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DATED 2001, AND ITS LATEST REVISIONS.
- 2. DURING CONSTRUCTION, TRAFFIC SHALL BE MAINTAINED ON THE EXISTING STRUCTURE. ACCESS TO ALL EXISTING SIDE ROADS, DRIVES, AND PARKING AREAS SHALL BE MAINTAINED AT ALL TIMES. ALL COSTS INCURRED FOR MAINTAINING THE EXISTING STRUCTURE AND ROADWAY APPROACHES DURING CONSTRUCTION, INCLUDING ANY SHORING OF THE EXISTING STRUCTURE, SHALL BE PAID FOR UNDER ITEM 527.10, "MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECTS".
- 3. ALL CONSTRUCTION SIGNING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE CONSIDERED SUBSIDIARY TO ITEM 635.10, "MOBILIZATION". EXISTING SIGNS NOT REUSED SHALL REMAIN THE PROPERTY OF THE TOWN OF HUNTINGTON.
- 4. THE EXISTING STRUCTURAL STEEL IS PAINTED WITH A MATERIAL THAT MAY CONTAIN LEAD. THE CONTRACTOR SHALL FOLLOW ALL APPLICABLE REGULATIONS WHEN HANDLING AND WORKING WITH THIS STEEL. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS, AND EMPLOYEES HARMLESS CONCERNING THE CONTRACTOR'S DISPOSITION OF THE EXISTING STRUCTURAL STEEL.
- 5. ALL DIMENSIONS SHOWN ON THE PLANS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 20 DEGREES CELSIUS.

EARTHWORK AND RELATED ITEMS

- 6. TO IMPROVE SIGHT DISTANCE TO THE SOUTH FOR MOTORISTS ENTERING ONTO T.H. 22 FROM THE RECONSTRUCTED FACILITY, THINNING AND TRIMMING OF BRUSH AND TREES ON THE EAST SIDE OF T.H. 21 SHALL BE PERFORMED AT THE LOCATION INDICATED ON THE PLANS. THIS WORK SHALL BE PERFORMED WITHIN THE EXISTING R.O.W. LIMITS AS DIRECTED BY THE RESIDENT ENGINEER. PAYMENT SHALL BE MADE UNDER ITEM 201.30, "THINNING AND TRIMMING".
- 7. THE "STONE FILL, TYPE I" SHALL BE USED AS SHOWN IN THE PLANS AND AT THE DISCRETION OF THE RESIDENT ENGINEER TO PREVENT EROSION BEHIND THE WINGWALLS.
- 8. THE "STONE FILL, TYPE III" UNDER THE BRIDGE AS SHOWN IN THE PLANS SHALL BE PLACED PRIOR TO FORMING THE CONCRETE DECK SLAB.
- 9. AT THE DISCRETION OF THE RESIDENT ENGINEER, AREAS OF EXISTING CHANNEL BANKS THAT APPEAR ADEQUATELY ANCHORED IN THOSE AREAS OF PROPOSED NEW "STONE FILL, TYPE III" AS SHOWN IN THE PLANS, MAY REMAIN UNDISTURBED. THE TRANSITION FROM NEW STONE FILL TO EXISTING STONE FILL SHALL BE SMOOTH AND SHALL NOT IMPEDE NORMAL CHANNEL FLOW.
- 10. THE CONTRACTOR SHALL TAKE THE MEASURES NECESSARY TO NOT DISTURB THE EXISTING APPLE TREES WHEN PERFORMING NEW DITCH CONSTRUCTION IN THE AREA OF STA. 10+050 RT.
- 11. THE EXISTING STRUCTURE SHALL BE REMOVED IN ITS ENTIRETY. REMOVAL OF THE EXISTING SUPERSTRUCTURE AND THOSE PORTIONS OF THE EXISTING SUBSTRUCTURE NOT REMOVED UNDER ITEM 208.35, "COFFERDAM EXCAVATION, ROCK" OR ITEM 203.27, "UNCLASSIFIED CHANNEL EXCAVATION" SHALL BE PAID FOR UNDER ITEM 529.15, "REMOVAL OF STRUCTURE".
- 12. PAYMENT UNDER ITEM 529.15, "REMOVAL OF STRUCTURE" SHALL INCLUDE REMOVAL AND DISPOSAL OF ALL EXISTING CONCRETE BLOCKS AND MASONRY IN THE STREAM AND WITHIN PROJECT CONSTRUCTION LIMITS.
- 13. THE CONTRACTOR SHALL DEVELOP A PLAN FOR SEPARATING THE TRAVELING PUBLIC FROM NEW BRIDGE CONSTRUCTION AT ABUTMENT NO.2. ALL COSTS ASSOCIATED WITH THE DESIGN, DETAILING, INSTALLATION AND REMOVAL UNDER THE PROPOSED PLAN SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 208.40, "COFFERDAM (STA. 10+027.200)".

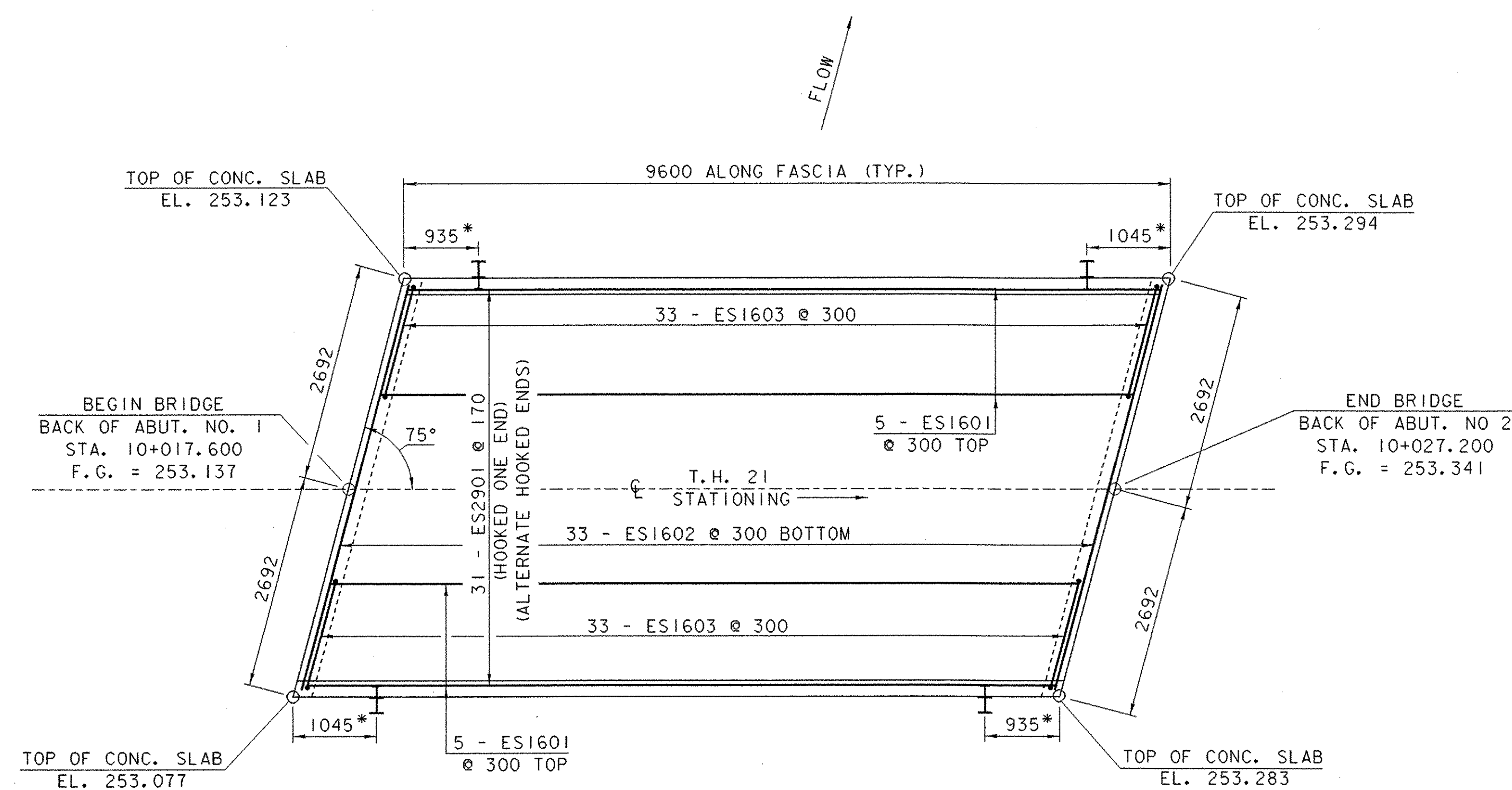
CONCRETE AND REINFORCING STEEL

- 14. ALL DECK SLAB AND SUBSTRUCTURE CONCRETE SHALL BE HIGH PERFORMANCE CLASS B AND SHALL BE PAID FOR UNDER ITEM 501.34, "CONCRETE, HIGH PERFORMANCE CLASS B".
- 15. WHEN POURING THE DECK SLAB, THE CONCRETE SHALL BE PLACED PARALLEL TO THE CENTERLINE OF BEARING.
- 16. WATER REPELLENT SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE TOP OF DECK SLAB AND THE UNDERSIDE OF DECK SLAB BETWEEN DRIP NOTCHES.
- 17. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 25 MILLIMETERS X 25 MILLIMETERS.
- 18. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS SHOWN IN THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER.
- 19. THE KEY IN 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.
- 20. ALL SUPERSTRUCTURE REINFORCING STEEL SHALL BE EPOXY COATED AND PAID FOR UNDER ITEM 507.17, "EPOXY COATED REINFORCING STEEL". WHEN EPOXY COATED REINFORCING STEEL IS TO BE 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.
- 21. MINIMUM COVER FOR REINFORCING STEEL SHALL BE AS INDICATED IN THE PLANS.
- 22. REINFORCING PLACEMENT TOLERANCES SHALL BE:
SPACING: +/- 25 MILLIMETERS
CLEARANCE: +/- 25 MILLIMETERS

NO CONSTRUCTION JOINT IN ABUT #1 OR ABUT #2
PER ROGER WHITCOMB, PROJECT MANAGER

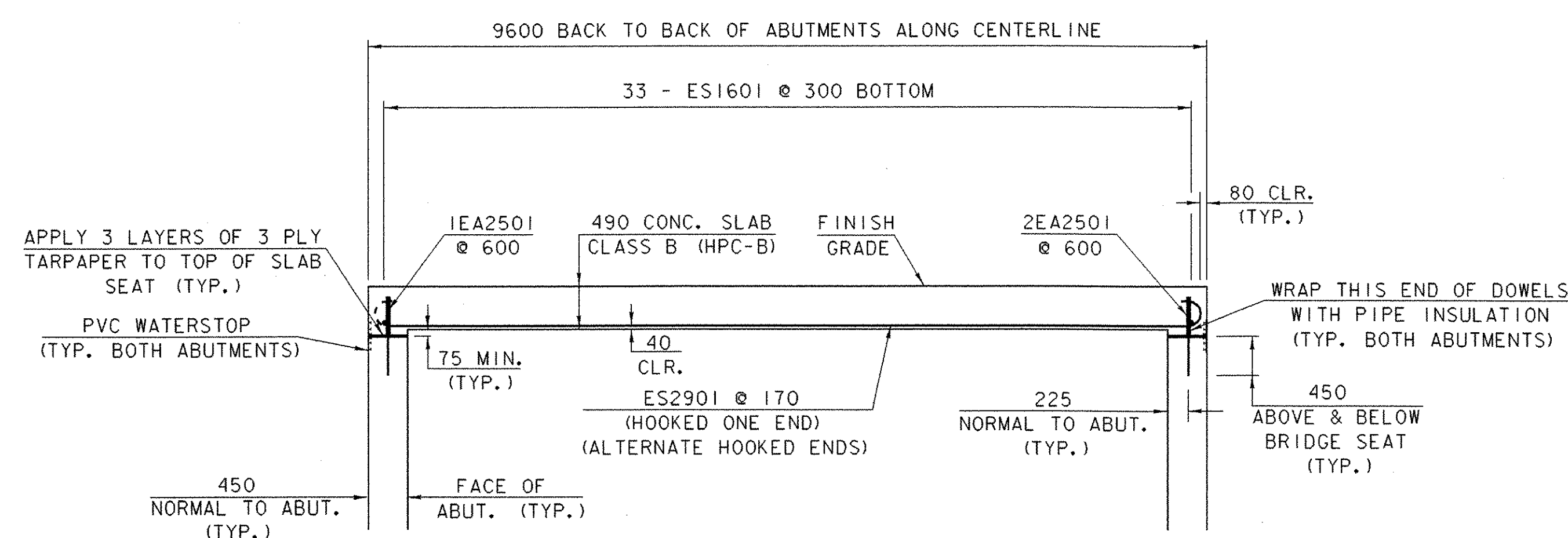
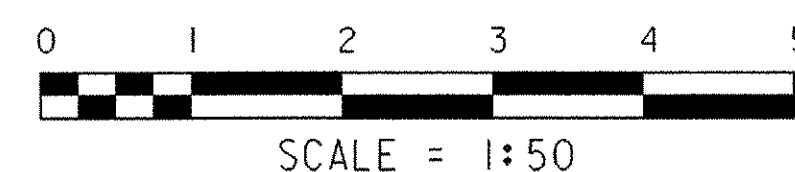
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of	HUNTINGTON	Bridge No.	34
Highway No.	T.H. 21	Log Sta.	
		Surv. Sta.	
T.H. 21 OVER BRUSH BROOK			
PROJECT NOTES			
Designed By	M. LOZIER	Drawn By	L. BULLOCK
Checked By	M. LOZIER	Date	5/03
		PROJECT MANAGER	R.R. WHITCOMB Date 6/03
PROJECT	HUNTINGTON	PROJECT NO.	BR01445 (21)
I.G.C. Info.		sfr3/93/029/s/029pndgn s/029pnl	
Bridge Sheet No.		Sheet 15 of 34	

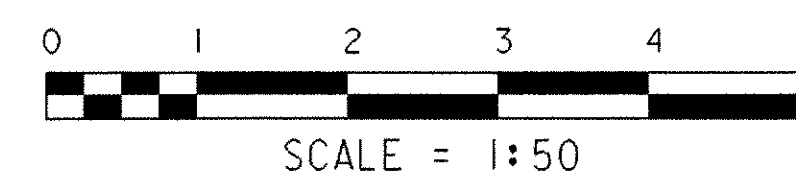


* DISTANCE MEASURED ALONG FASCIA

SLAB REINFORCING PLAN

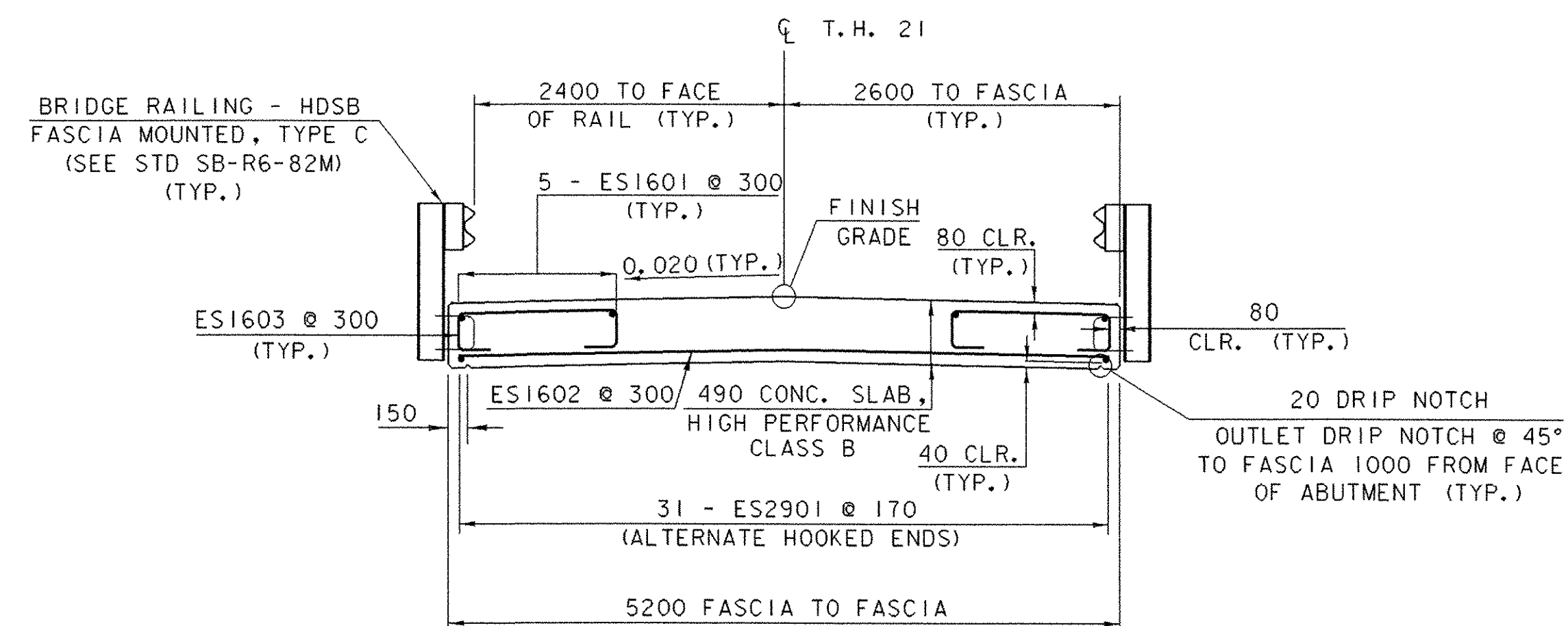


ELEVATION ALONG CENTERLINE

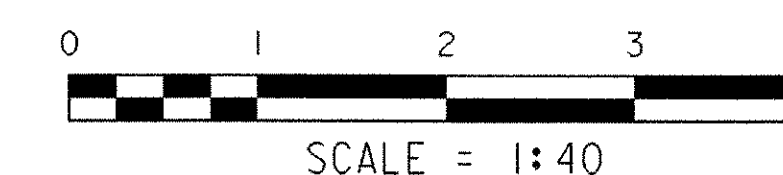


NOTE:

PAYMENT FOR TAR PAPER, PIPE INSULATION, WATERSTOPS AND THEIR INSTALLATIONS SHALL BE MADE SUBSIDIARY TO ITEM 501.34, "CONCRETE, HIGH PERFORMANCE CLASS B".



BRIDGE TYPICAL SECTION

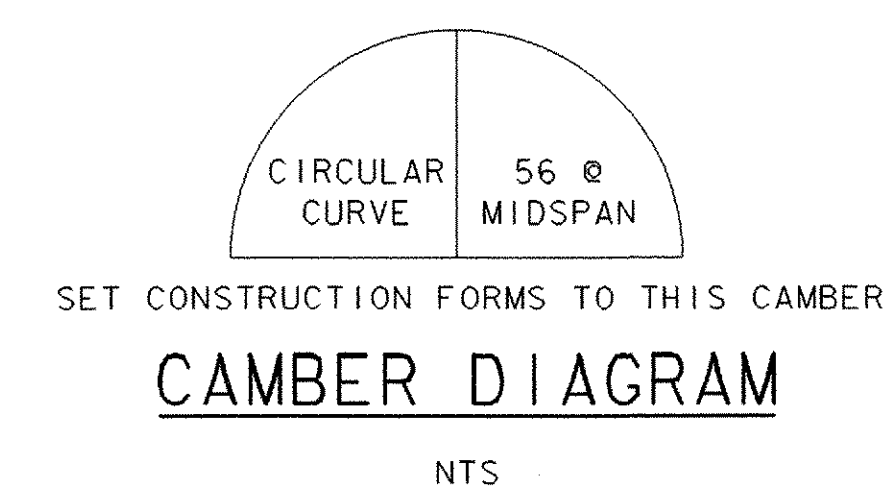


P.V.C. WATERSTOP FOR EXPANSION JOINTS

NOT TO SCALE

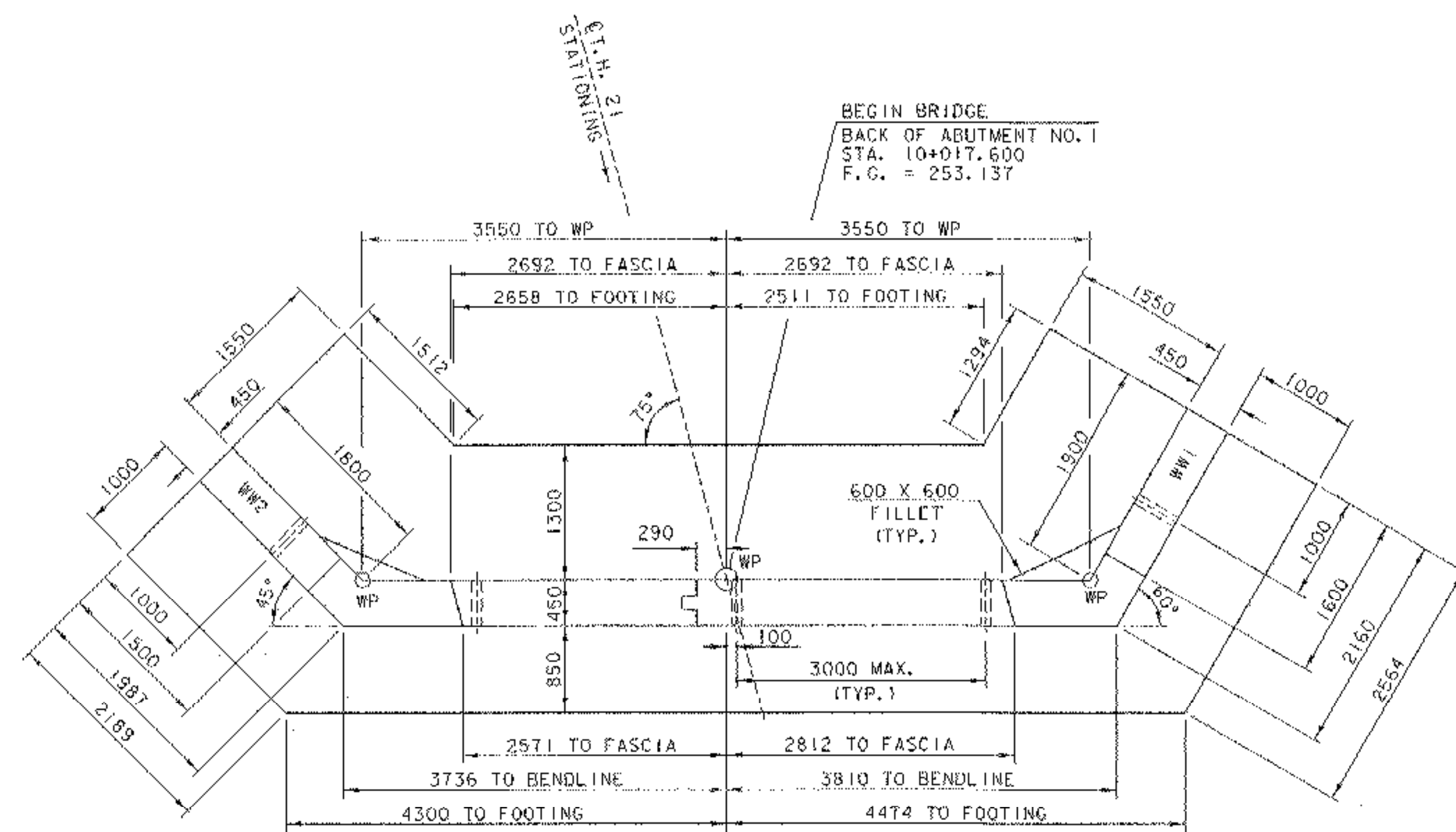
NOTE:

THE COST FOR P.V.C. WATERSTOP SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 501.34, "CONCRETE, HIGH PERFORMANCE CLASS B". OTHER CONFIGURATIONS MAY BE USED UPON APPROVAL OF THE STRUCTURES ENGINEER.

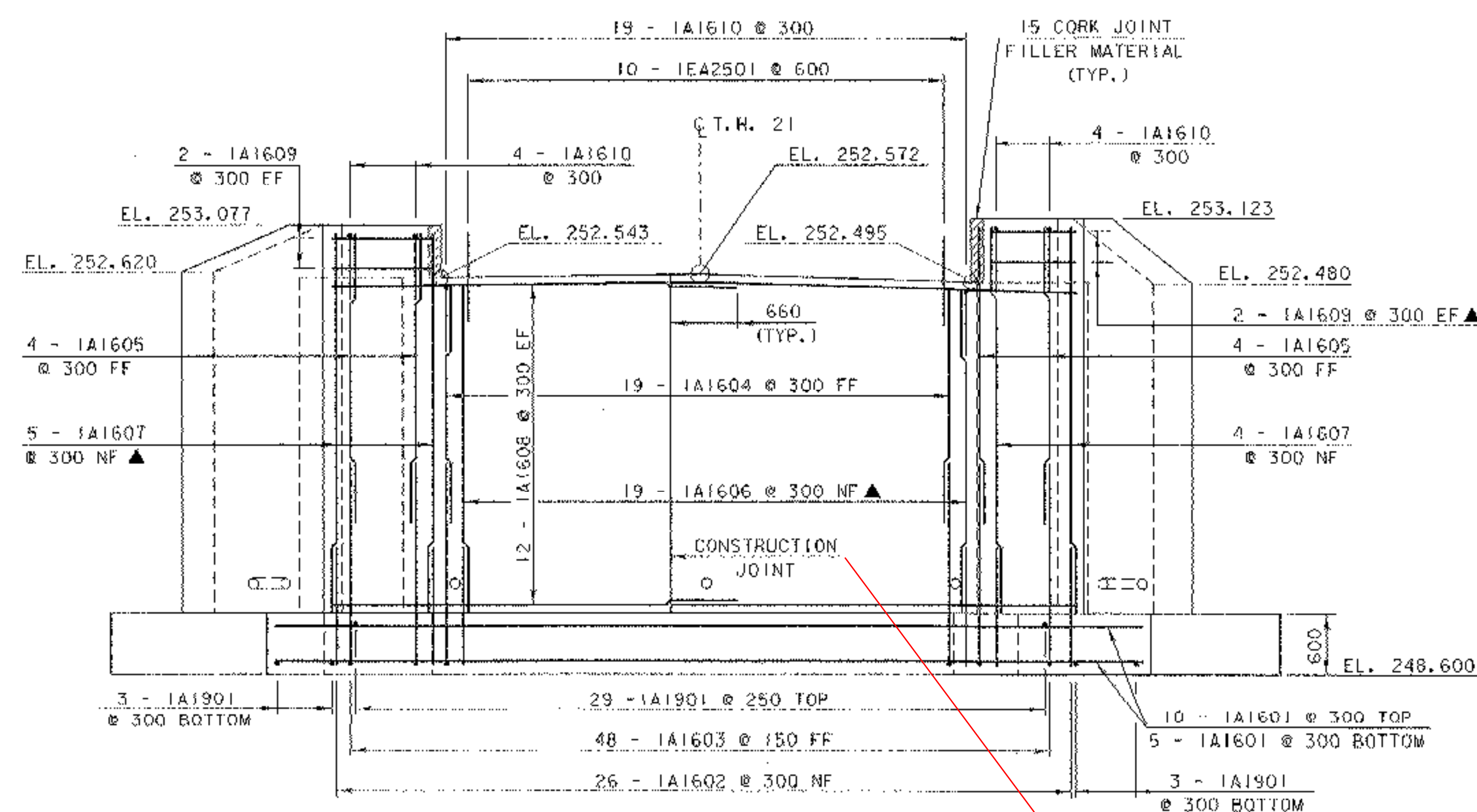
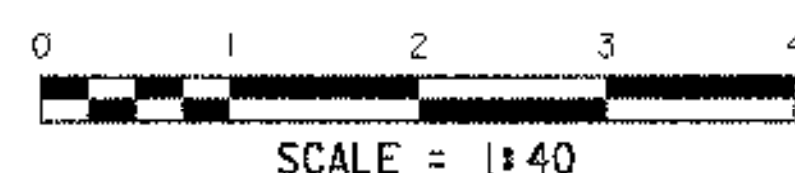


STATE OF VERMONT AGENCY OF TRANSPORTATION

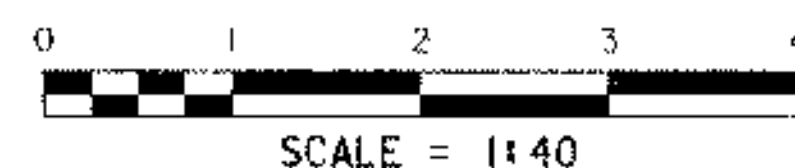
Town Of	HUNTINGTON	Bridge No.	34
Highway No.	T.H. 21	Log Sta.	
		Surv. Sta.	
T.H. 21 OVER BRUSH BROOK			
SLAB DETAILS			
Designed By	J. LACROIX	Drawn By	SS / BMM
Checked By	M. LOZIER	Date	5/03
		Project Manager	R.R. WHITCOMB Date 6/03
PROJECT	HUNTINGTON	PROJECT NO.	BRO 1445 (21)
I.G.C. Info.	str3/93j029/sj029slb.dgn		sj029slb.i
Bridge Sheet No.		Sheet 16	of 34



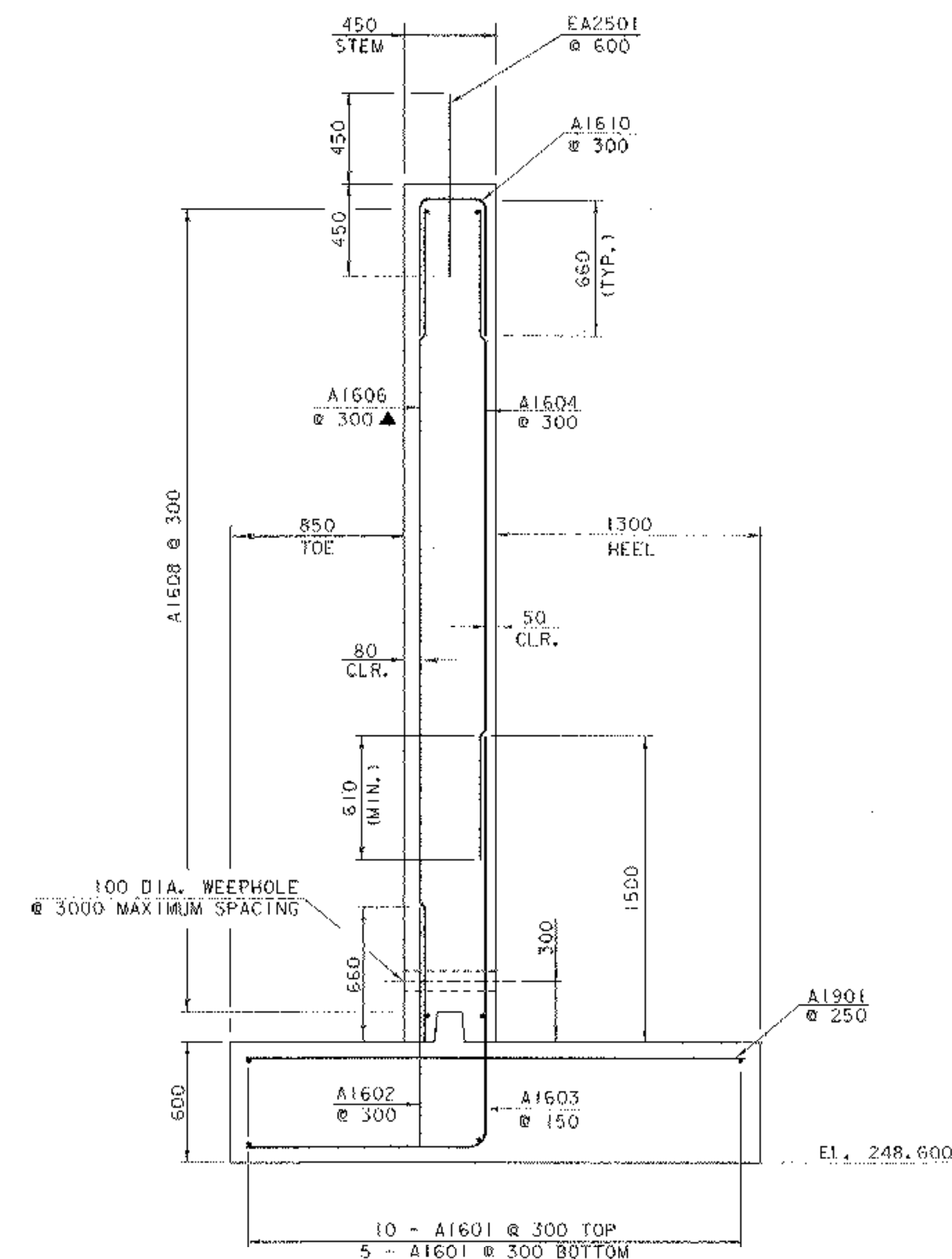
ABUTMENT NO. 1 PLAN



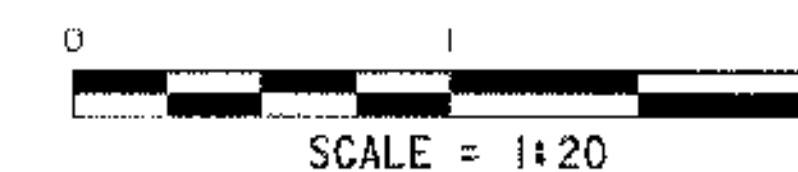
ABUTMENT NO. 1 ELEVATION



POURED WITHOUT CONSTRUCTION JOINT
PER ROGER WHITCOMB, PROJECT MANAGER



ABUTMENT TYPICAL SECTION

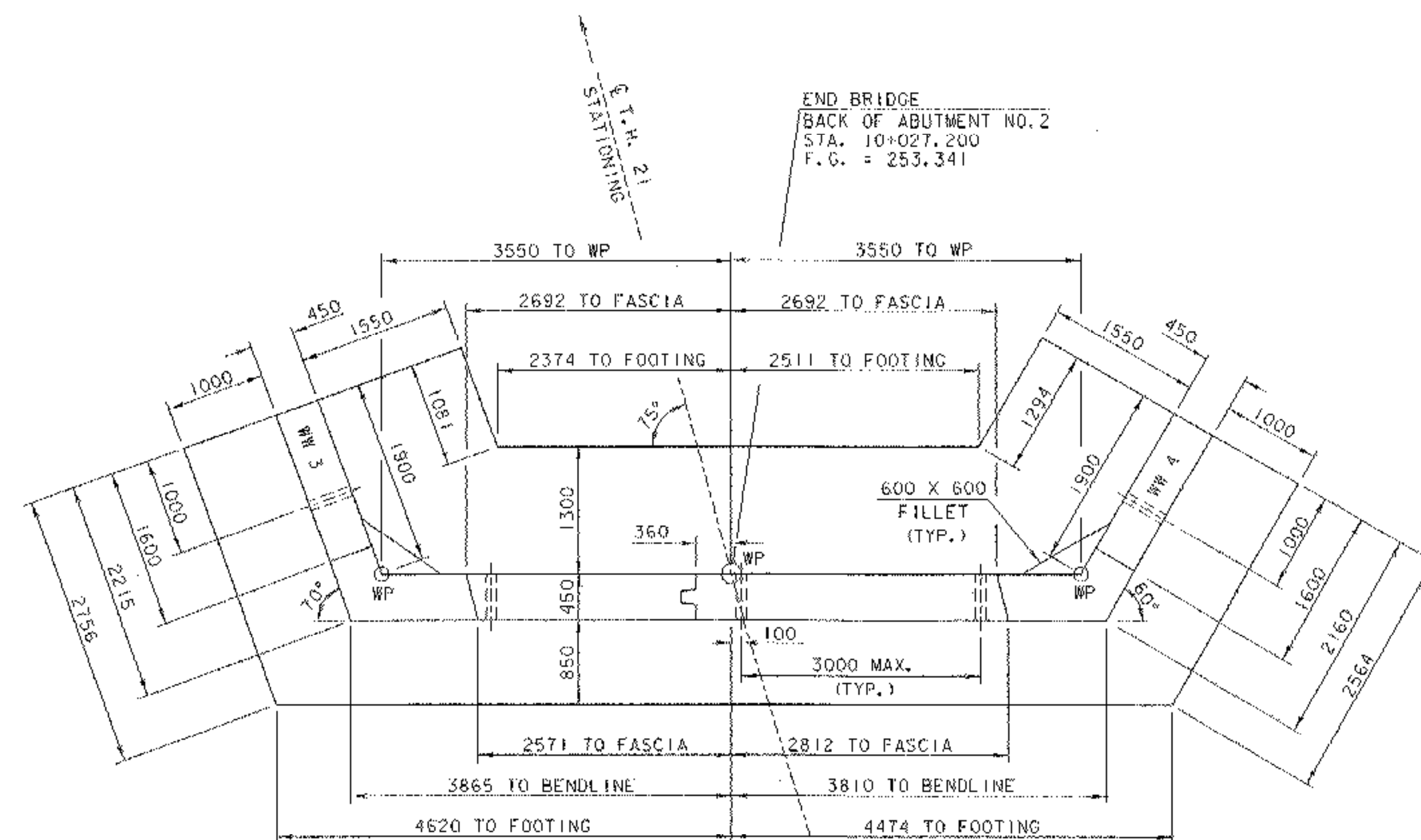


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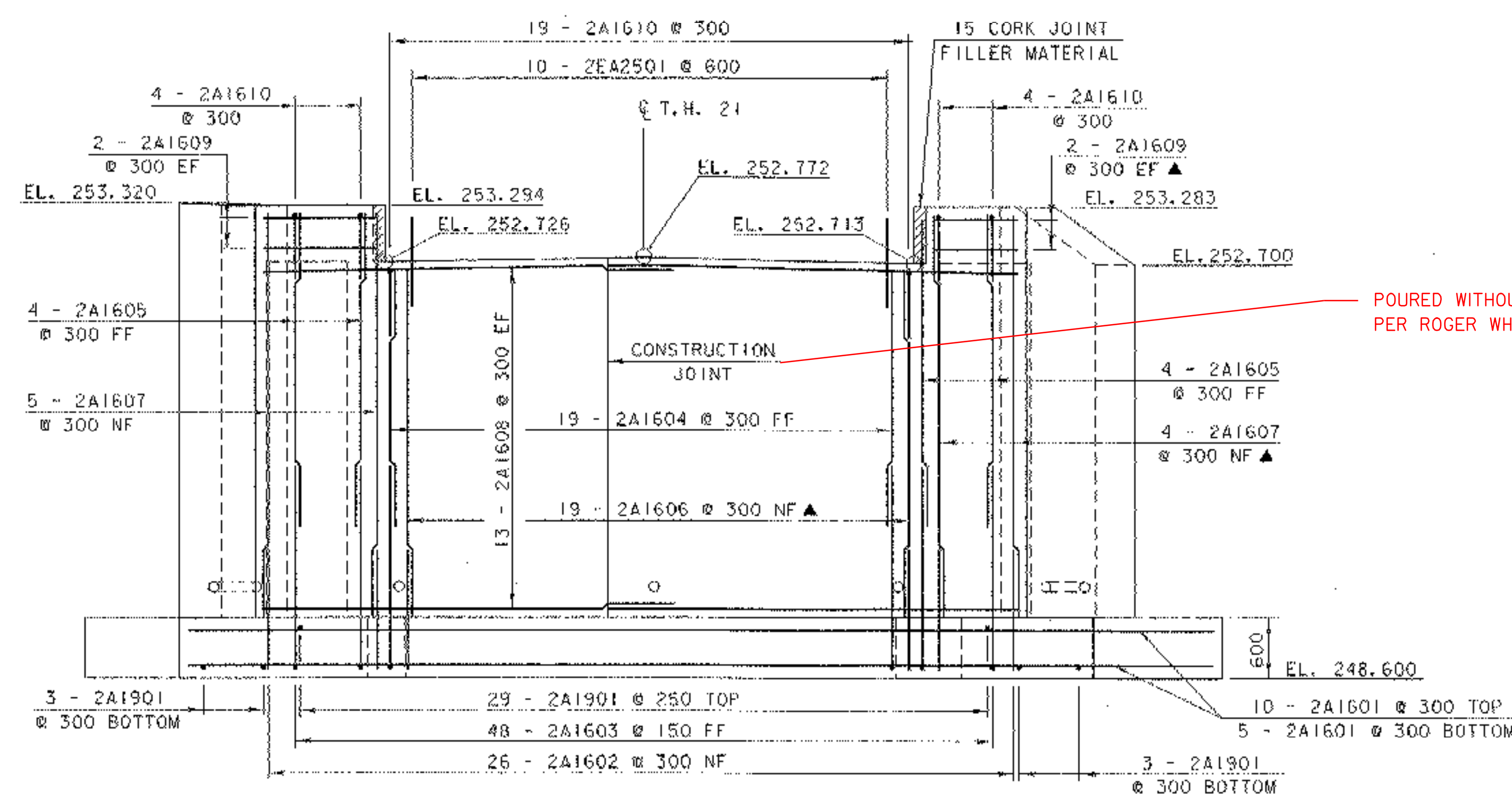
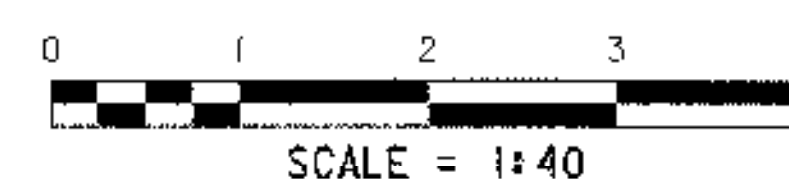
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
80 CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

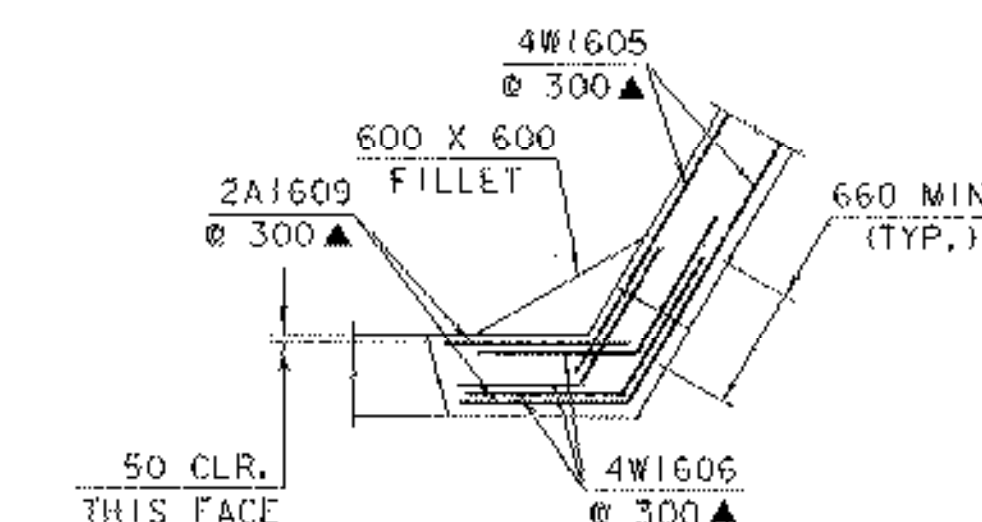
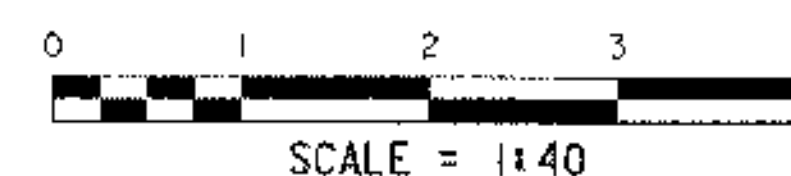
Town Of	HUNTINGTON	Bridge No.	34
Highway No.	T.H. 21	Log Sta.	
		Surv. Sta.	
T.H. 21 OVER BRUSH BROOK			
ABUTMENT NO. 1 DETAILS			
Designed By	J. LACROIX	Drawn By	M. LOZIER
Checked By	M. LOZIER	Date	5/03
		Project Manager	R.R. WHITCOMB Date 6/03
PROJECT	HUNTINGTON	PROJECT NO.	BR01445 (21)
I.G.C. Info. str3/93 J029/s J029abdn		s J029abdl	
Bridge Sheet No.		Sheet 17 of 34	



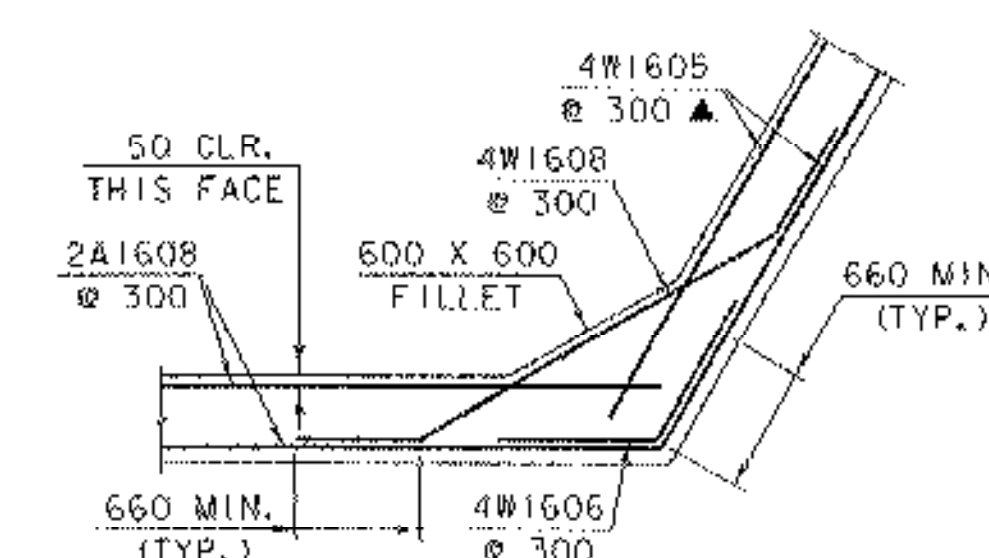
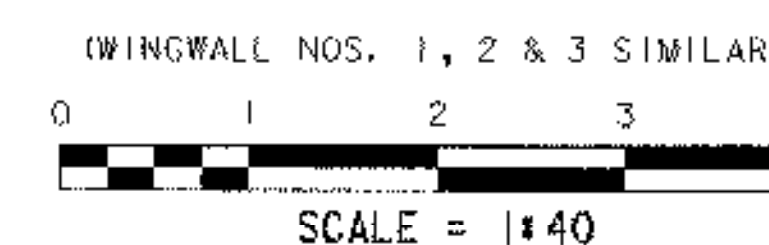
ABUTMENT NO. 2 PLAN



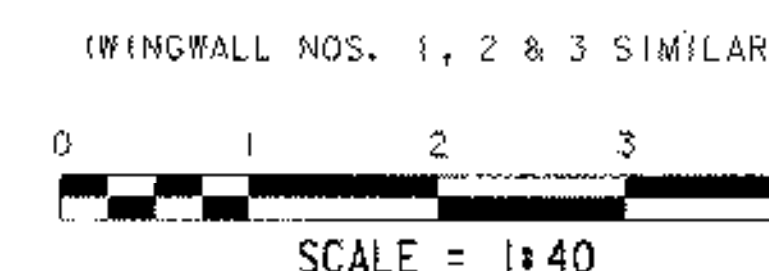
ABUTMENT NO. 2 ELEVATION



WINGWALL NO. 4
CORNER REINFORCING DETAIL
ABOVE BRIDGE SEAT



WINGWALL NO. 4
CORNER REINFORCING DETAIL
BELOW BRIDGE SEAT

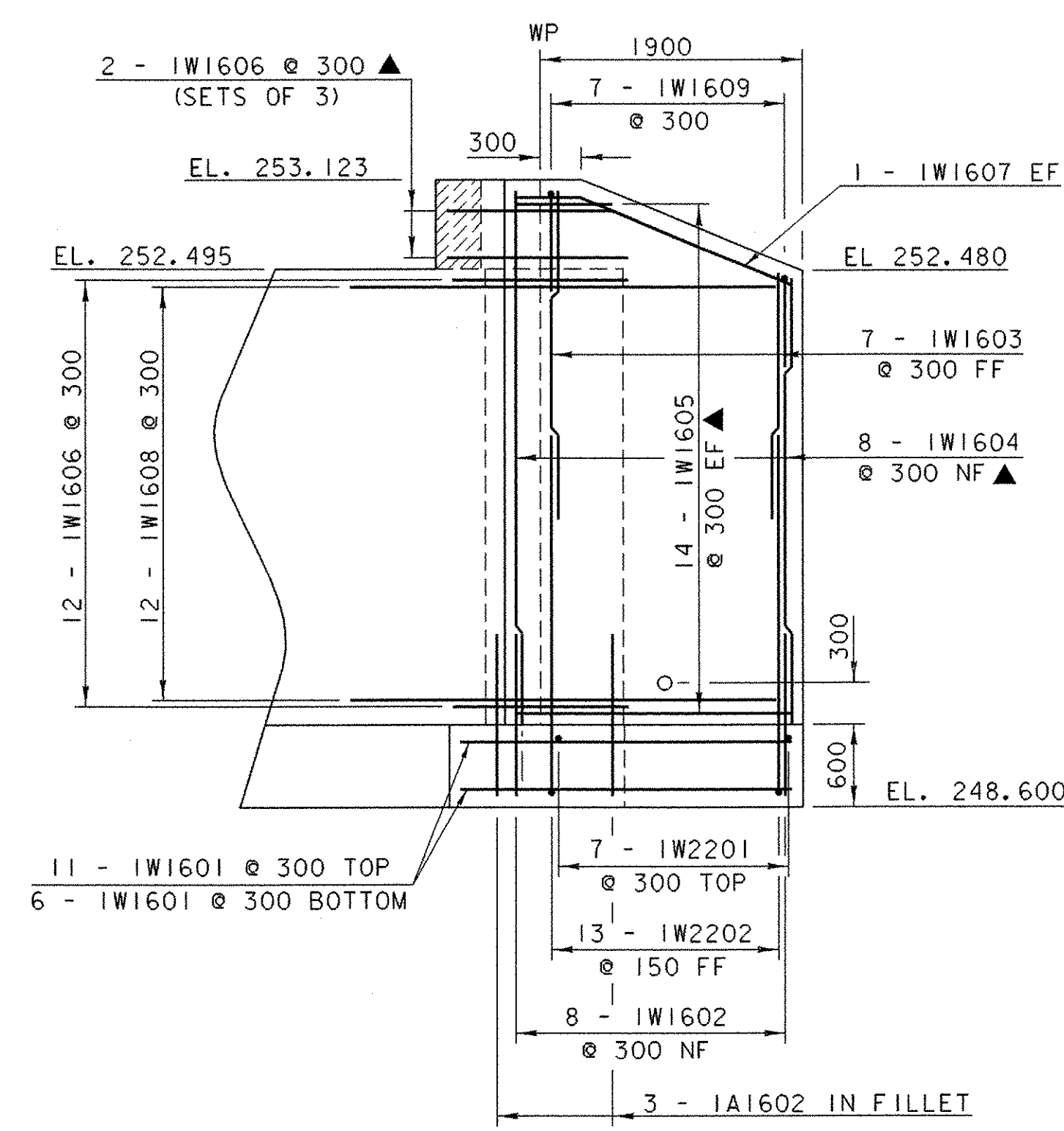


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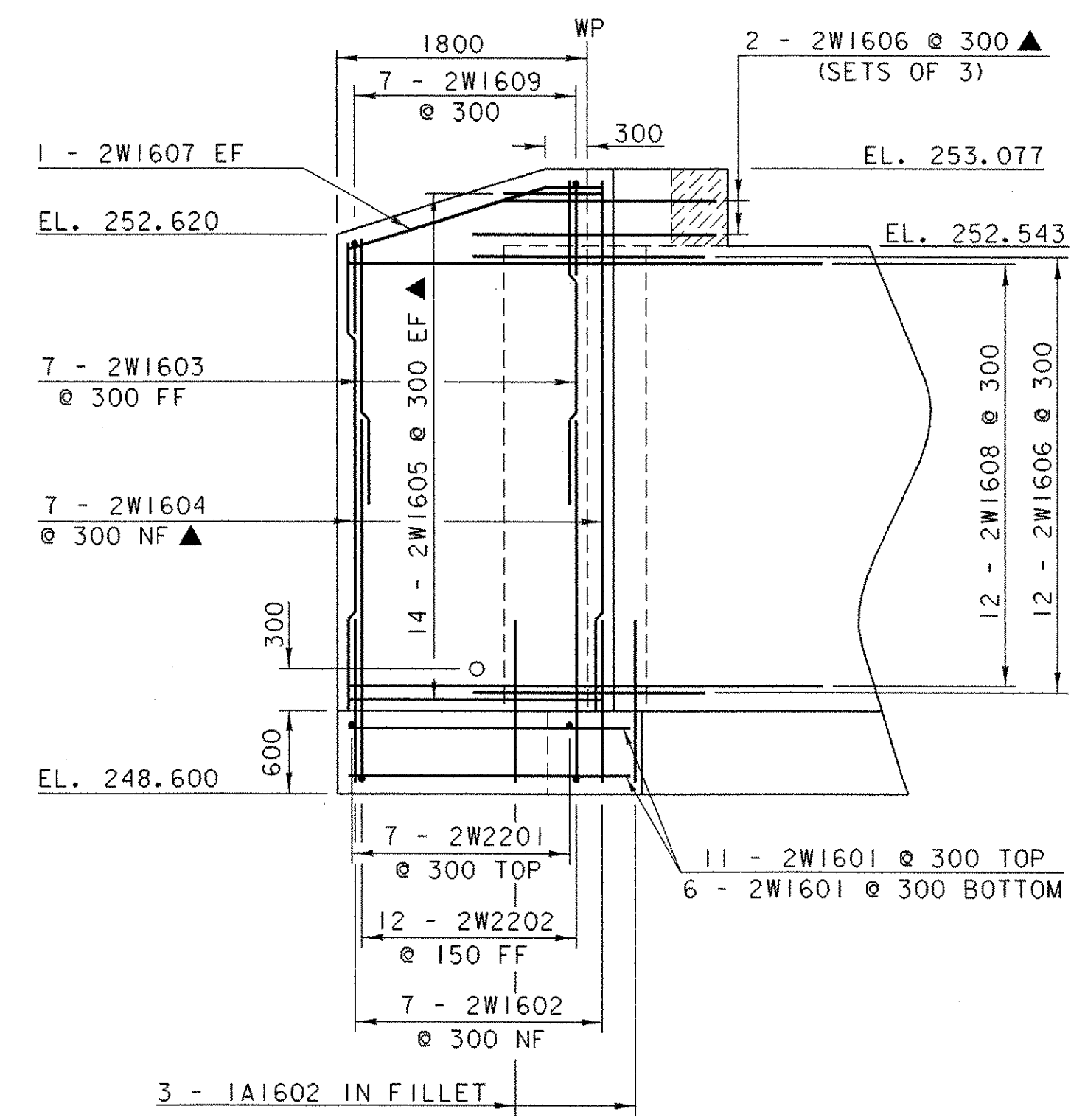
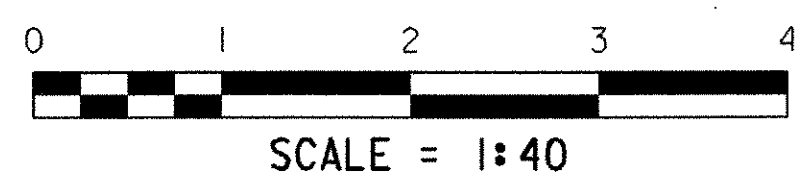
NF = NEAR FACE
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80 CLR. UNLESS OTHERWISE
SPECIFIED ON THE PLANS.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

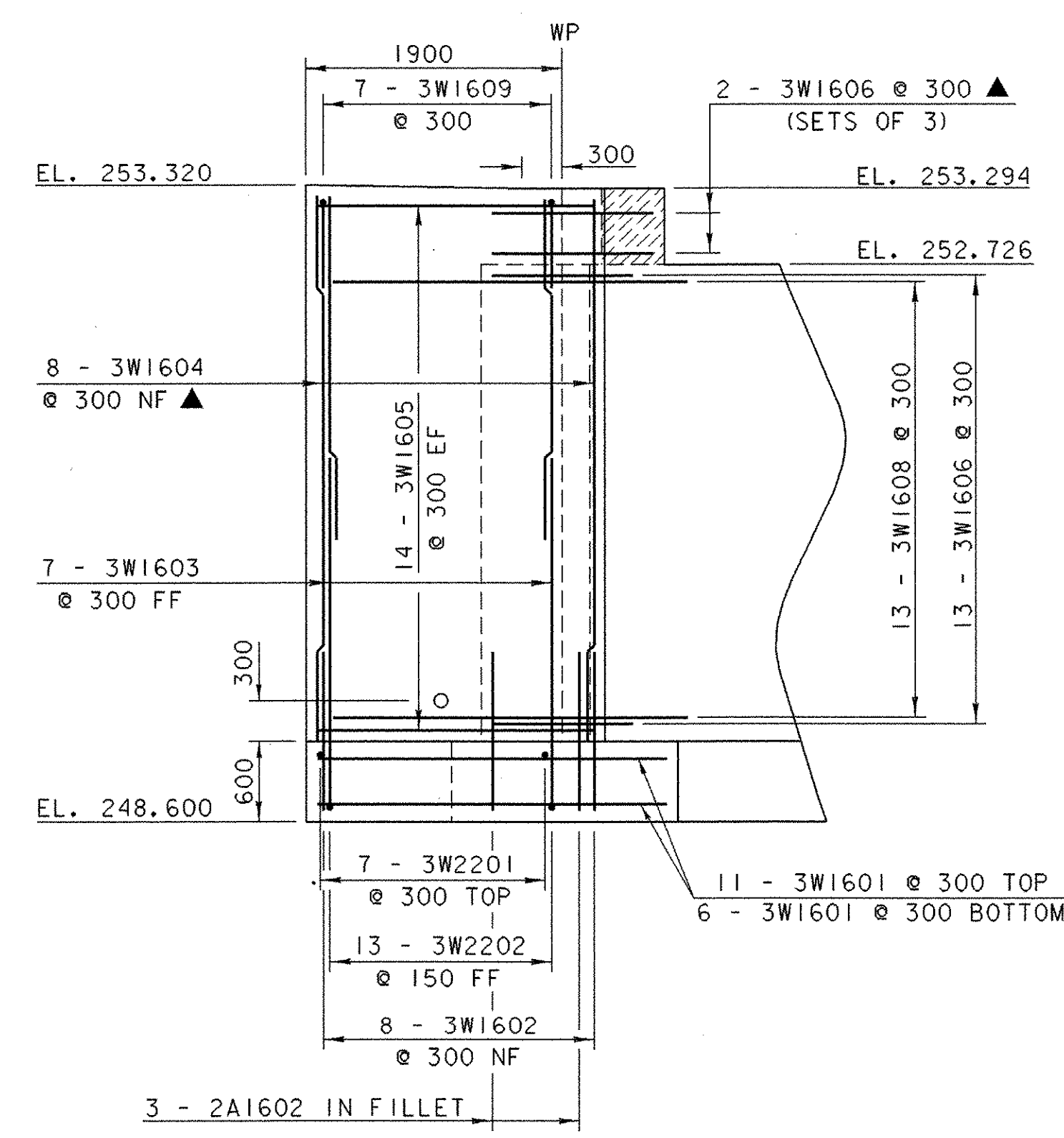
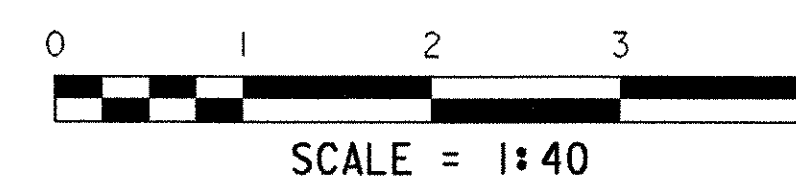
Town Of	HUNTINGTON	Bridge No.	34
Highway No.	T.H. 21	Log. Sta.	
		Surv. Sta.	
T.H. 21 OVER BRUSH BROOK			
ABUTMENT NO. 2 DETAILS			
Designed By	J. LACROIX	Drawn By	M. LOZIER
Checked By	M. LOZIER	Date	5/03
		Project Manager	R.R. WHITCOMB Date 6/03
PROJECT	HUNTINGTON	PROJECT NO.	BRO1445 (21)
LOG. Info.	str3/93/029/sj029adgn		sj029ad21
Bridge Sheet No.		Sheet	18 of 34



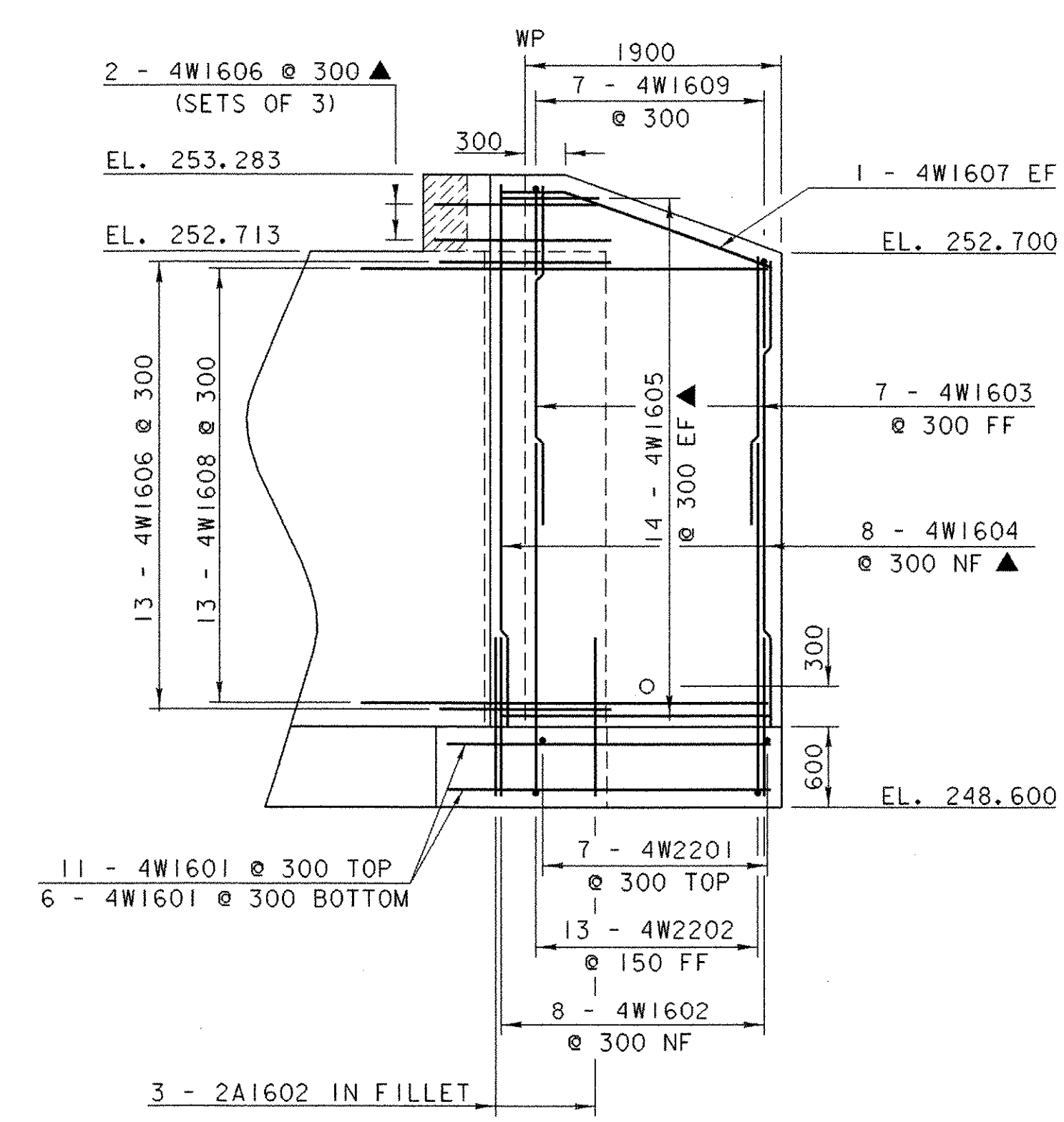
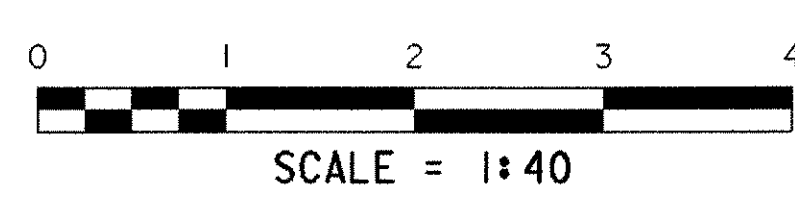
WINGWALL NO. 1 ELEVATION



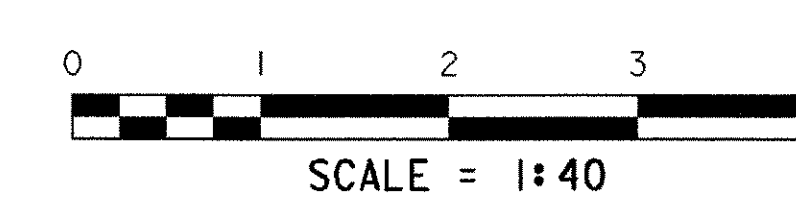
WINGWALL NO. 2 ELEVATION



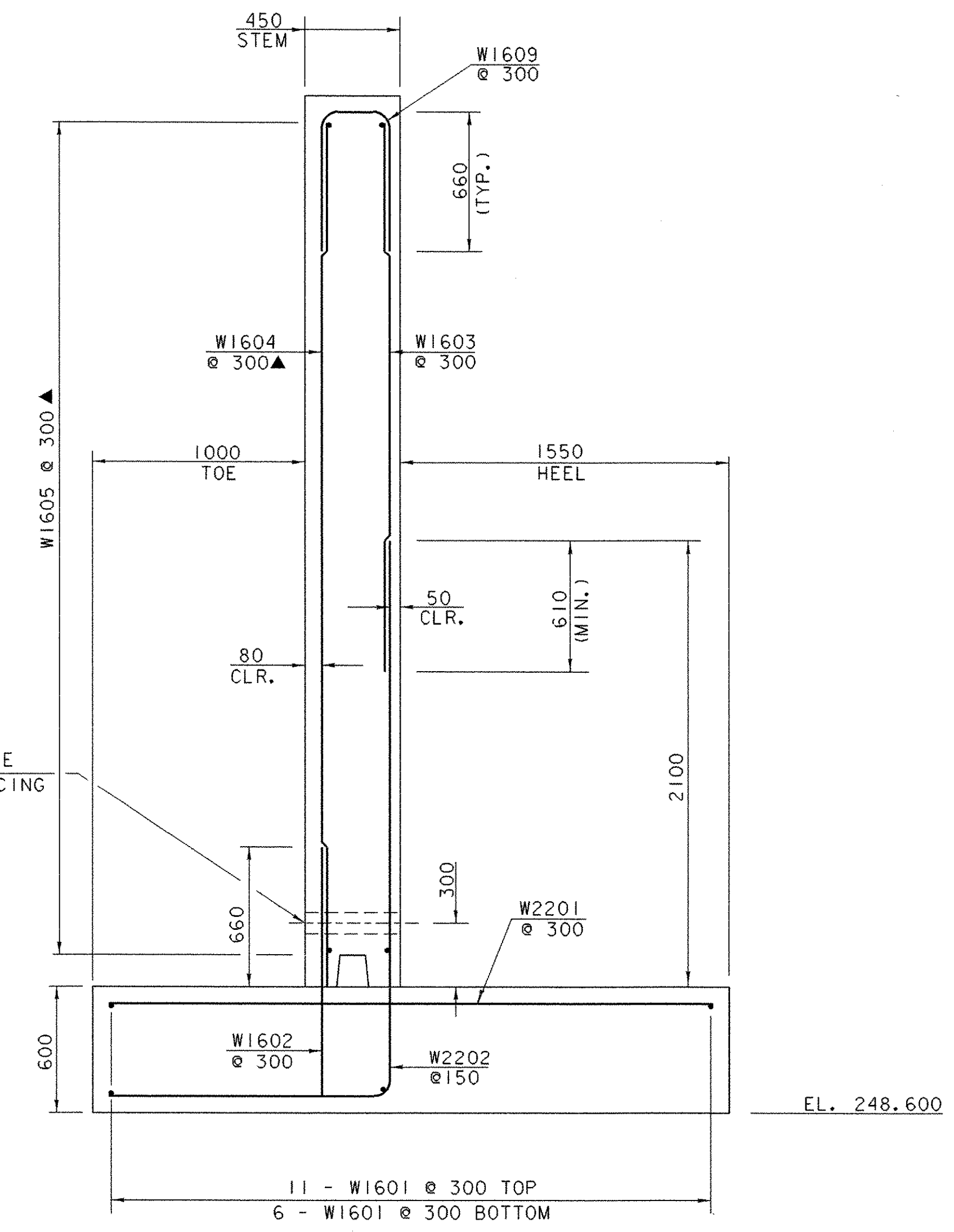
WINGWALL NO. 3 ELEVATION



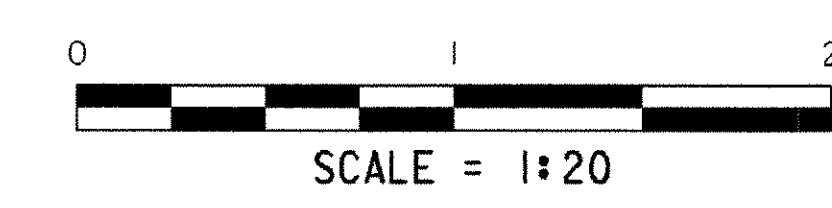
WINGWALL NO. 4 ELEVATION



100 DIA. WEEPHOLE
 @ 3000 MAXIMUM SPACING

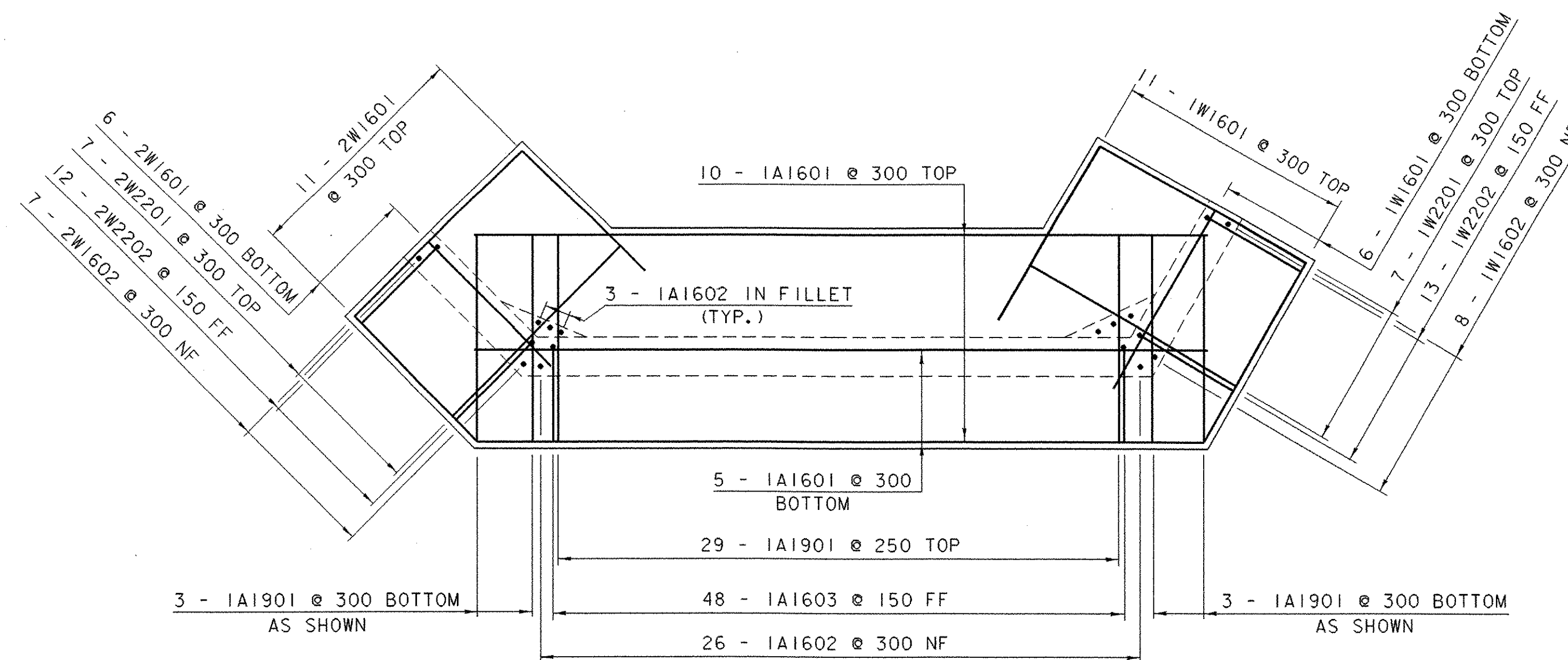


WINGWALL TYPICAL SECTION

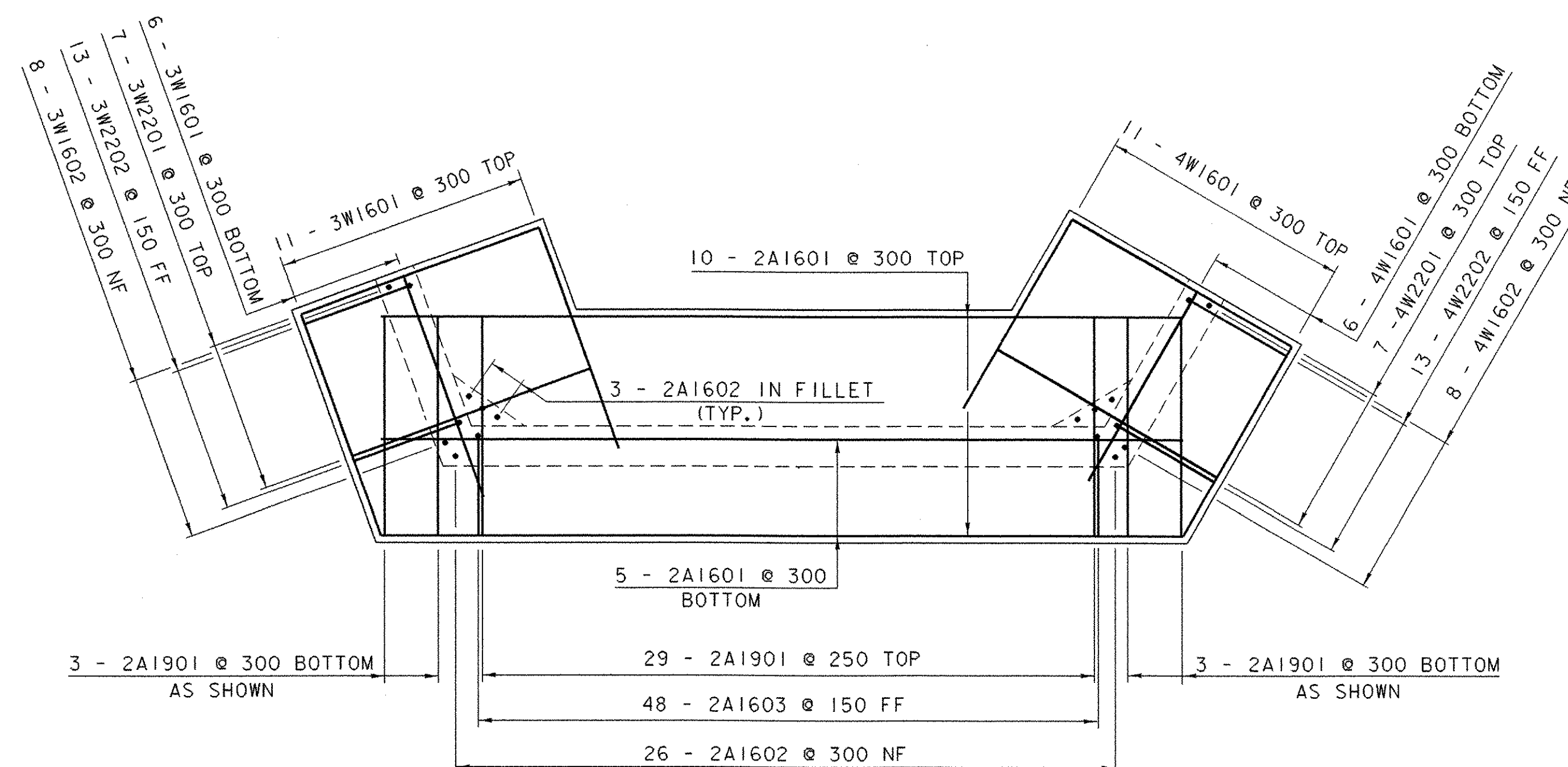
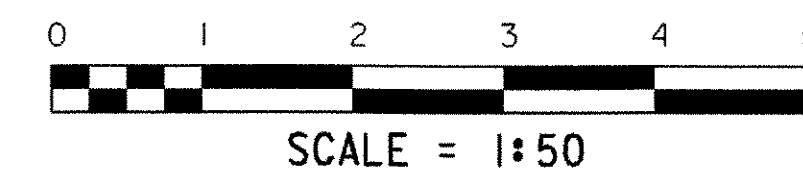


NOTE:
 NF = NEAR FACE
 FF = FAR FACE
 EF = EACH FACE
 ▲ = CUT TO FIT IN FIELD
 80 CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

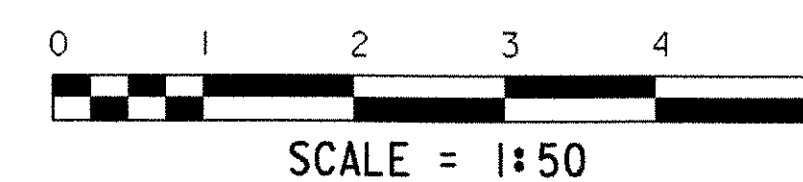
STATE OF VERMONT AGENCY OF TRANSPORTATION			
Town Of HUNTINGTON		Bridge No. 34	
Highway No. T.H. 21		Log Sta.	
T.H. 21 OVER BRUSH BROOK		Surv. Sta.	
WINGWALL DETAILS			
Designed By J. LACROIX		Drawn By M. LOZIER	
Checked By Date		Project Manager	
M. LOZIER 5/03		R.R. WHITCOMB Date 6/03	
PROJECT HUNTINGTON		PROJECT NO. BR01445 (21)	
I.G.C. Info. str3/93j029/sj029abdgn		s/j029mw1	
Bridge Sheet No.		Sheet 19 of 34	



ABUTMENT NO. 1 FOOTING REINFORCING PLAN



ABUTMENT NO. 2 FOOTING REINFORCING PLAN

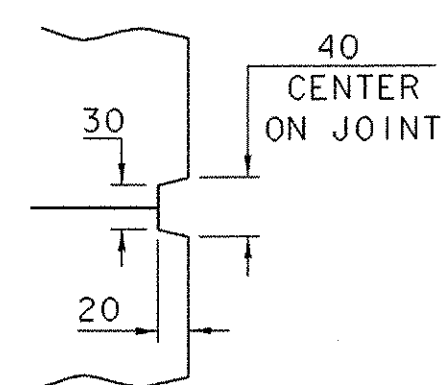


NOTE:

NF = NEAR FACE
 FF = FAR FACE
 EF = EACH FACE
 ▲ = CUT TO FIT IN FIELD
 80 CLR. UNLESS OTHERWISE
 SPECIFIED ON THE PLANS.

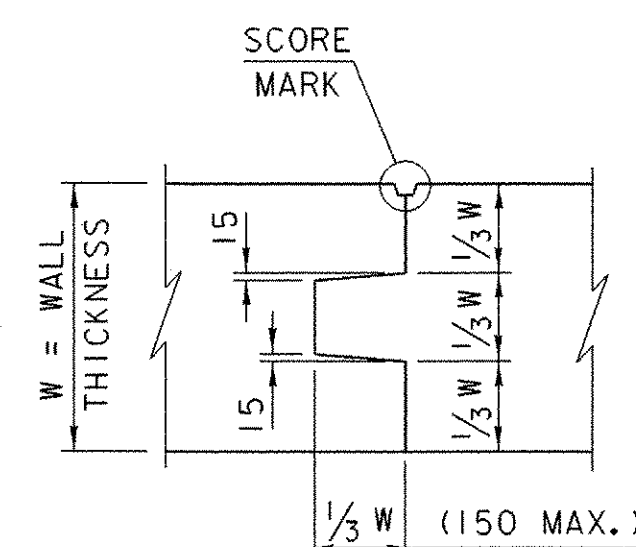
**STATE OF VERMONT
 AGENCY OF TRANSPORTATION**

Town Of	HUNTINGTON	Bridge No.	34
Highway No.	T.H. 21	Log Sta.	
		Surv. Sta.	
T.H. 21 OVER BRUSH BROOK			
FOOTING REINFORCING DETAILS			
Designed By	J. LACROIX	Drawn By	SSS/BMM
Checked By	M. LOZIER	Date	5/03
		Project Manager	R.R. WHITCOMB Date 6/03
PROJECT	HUNTINGTON	PROJECT NO.	BR01445 (21)
I.G.C. Info. str3/93j029/sj029abdg		s/j029ftgJ	
Bridge Sheet No.		Sheet 20 of 34	



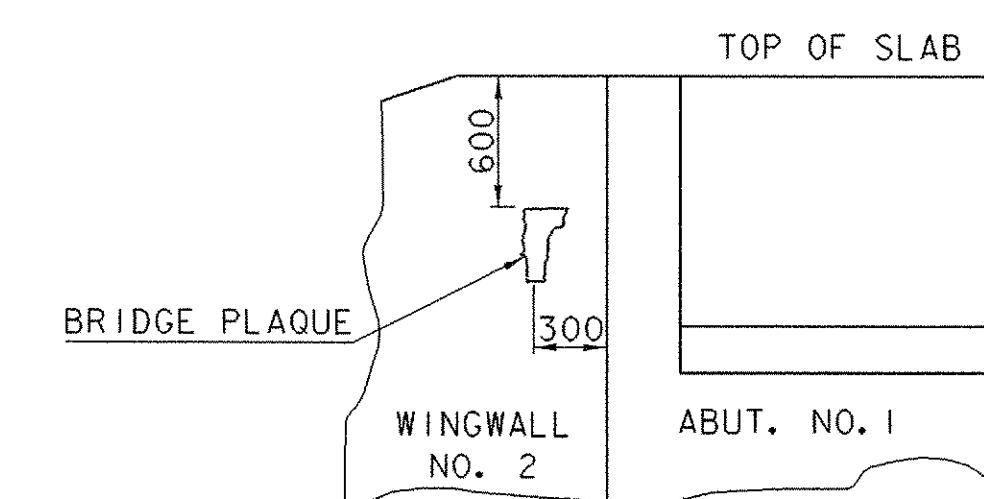
SCORE MARK DETAIL

NOT TO SCALE



**TYPICAL CONCRETE
CONSTRUCTION JOINT**

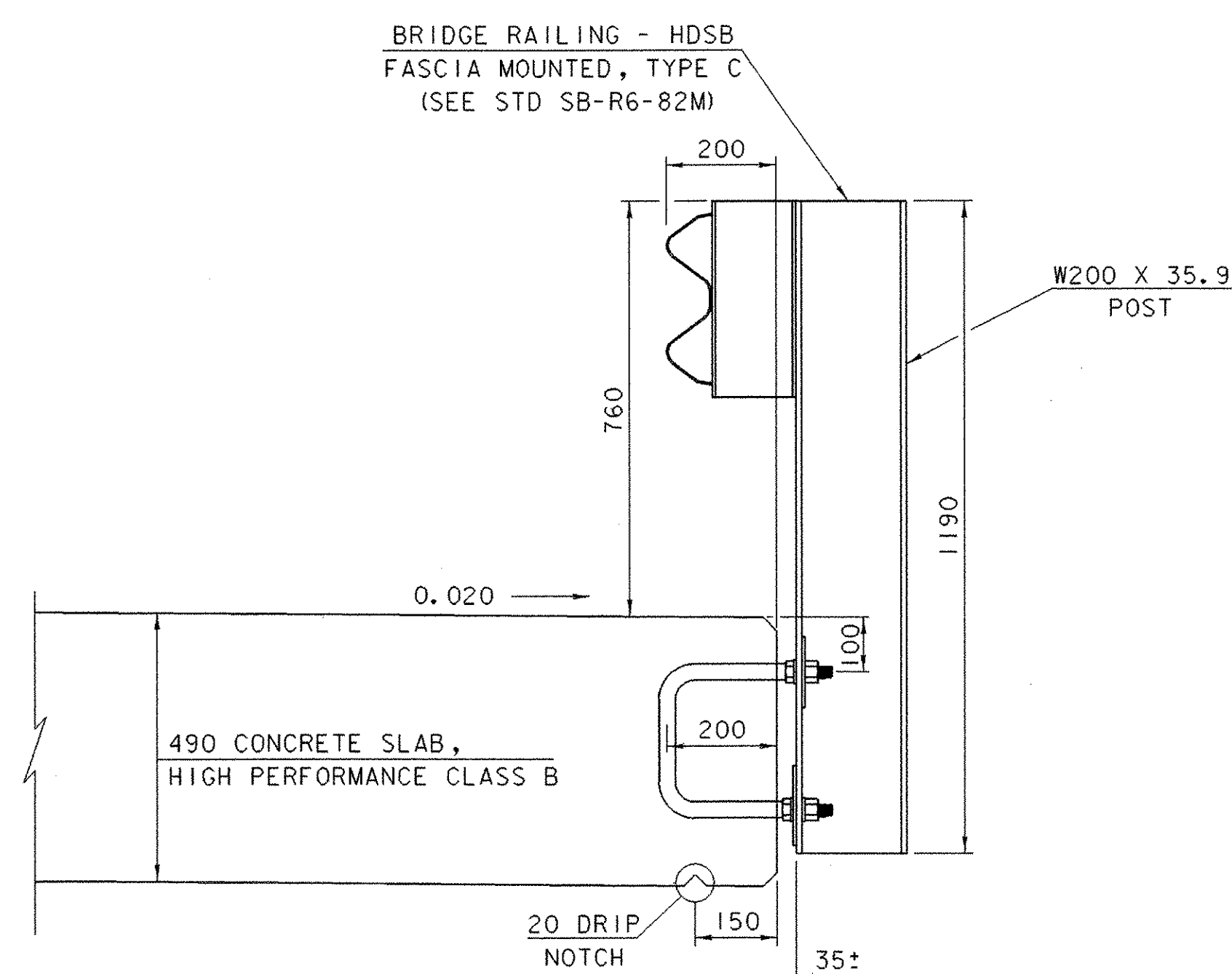
NOT TO SCALE



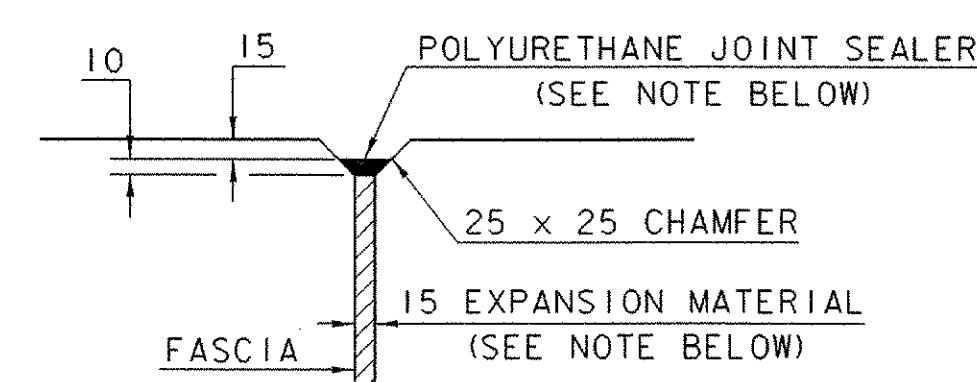
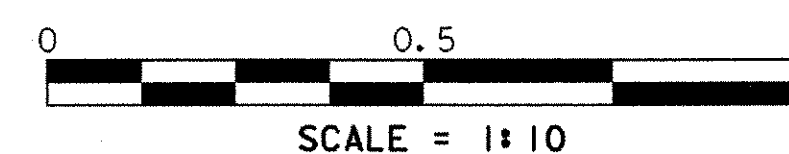
LOCATE BRIDGE PLAQUE

NOT TO SCALE

THE BRIDGE PLAQUE WILL BE SUPPLIED BY THE VERMONT AGENCY OF TRANSPORTATION. IT SHALL BE INSTALLED BY THE CONTRACTOR AT ABUTMENT NO. 1 ON THE RIGHT SIDE AS SHOWN OR AS DIRECTED BY THE RESIDENT ENGINEER.



BRIDGE RAILING DETAIL



**JOINT BETWEEN FASCIA
AND WINGWALL**

NOT TO SCALE

NOTE:

COST OF THE POLYURETHANE JOINT SEALER AND EXPANSION MATERIAL TO BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 501.34, "CONCRETE, HIGH PERFORMANCE CLASS B".

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town Of	HUNTINGTON	Bridge No.	34
Highway No.	T.H. 21	Log Sta.	
		Surv. Sta.	
T.H. 21 OVER BRUSH BROOK			
MISCELLANEOUS PROJECT DETAILS			
Designed By	J. LACROIX	Drawn By	KC / BMM
Checked By	M. LOZIER	Date	5/03
		Project Manager	R.R. WHITCOMB Date 6/03
PROJECT	HUNTINGTON	PROJECT NO.	BR01445 (21)
I.G.C. Info. str3/93j029/sj029abdgn		sj029mpd1	
Bridge Sheet No.		Sheet 21 of 34	

~ NOTES ~

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING 55M SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31M (ASTM A 615M-SI). ALL BARS SHALL BE GRADE 420, UNLESS OTHERWISE DESIGNATED.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
5. "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
8. ▲ DENOTES BARS TO BE CUT IN FIELD.
9. * DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
10. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
11. E IN BAR MARK DENOTES EPOXY COATED REINFORCING STEEL.

ASTM STANDARD REINFORCING BARS				
BAR SIZE	NOMINAL MASS (kg/m)	NOMINAL DIMENSIONS ROUND SECTION		
		DIAMETER (mm)	CROSS SECTIONAL AREA (mm²)	PERIMETER (mm)
#10	0.560	9.5	71	29.84
#13	0.994	12.7	129	39.90
#16	1.552	15.9	199	49.95
#19	2.235	19.1	284	60.00
#22	3.042	22.2	387	69.74
#25	3.973	25.4	510	79.80
#29	5.060	28.7	645	90.16
#32	6.404	32.3	819	101.47
#36	7.907	35.8	1006	112.47
#43	11.380	43.0	1452	135.09
#57	20.240	57.3	2581	180.01

PROJECT NAME: **HUNTINGTON**

PROJECT NUMBER: **BRO 1445 (21)**

FILE NAME: 193j029\structures\j029ref.xls

PROJECT MANAGER: **R. WHITCOMB**

DESIGNED BY: **J. LACROIX**

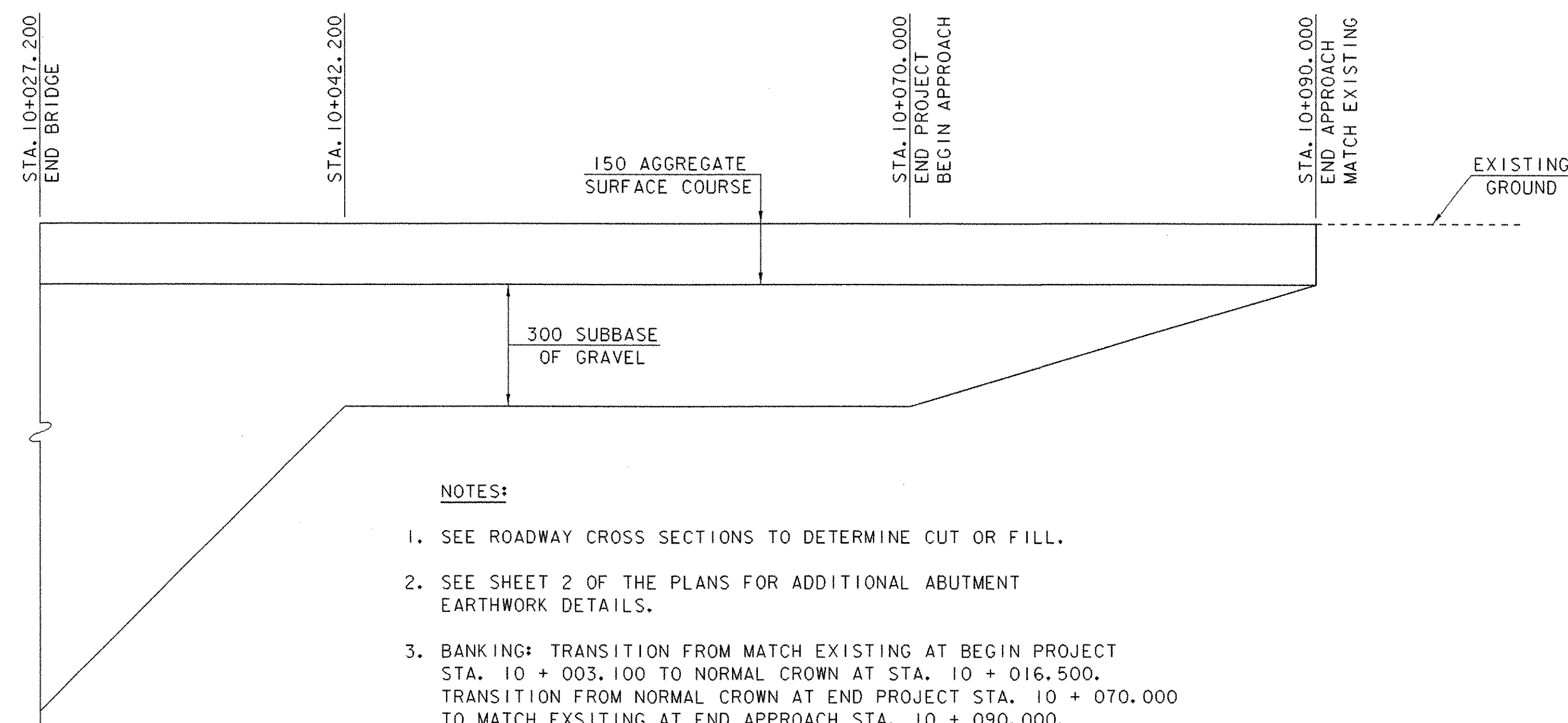
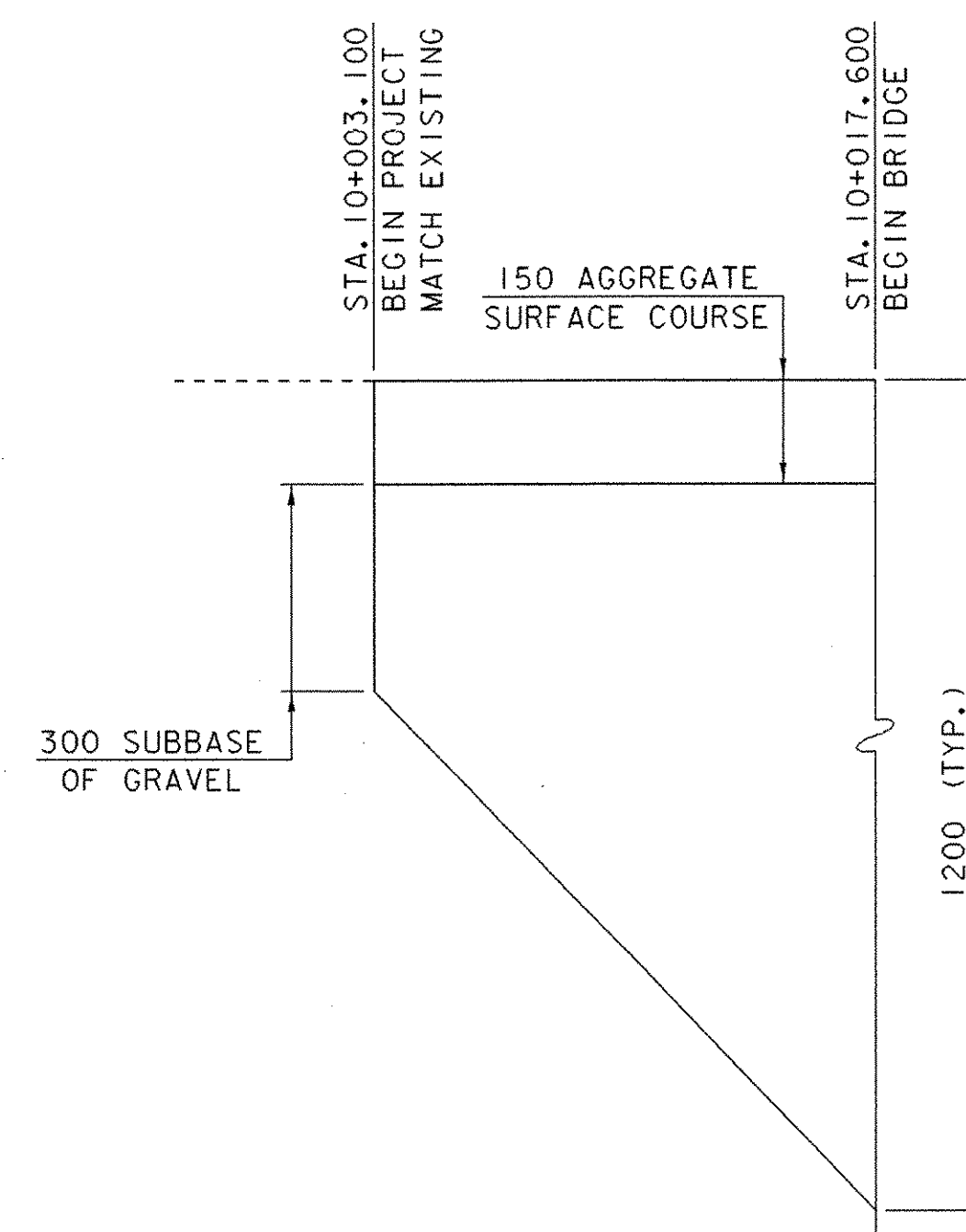
REINFORCING STEEL SCHEDULE SHEET #1

PLOT DATE: **10/01/2003**

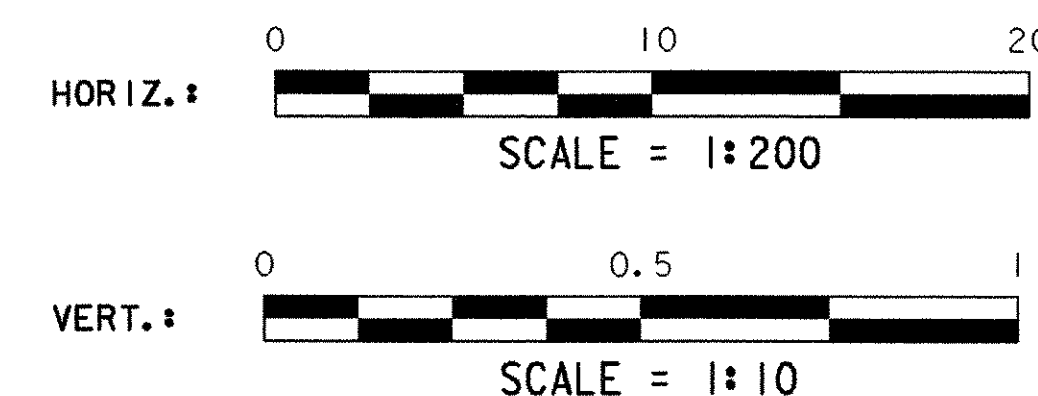
DRAWN BY: **S. SCRIBNER**

CHECKED BY: **M. LOZIER**

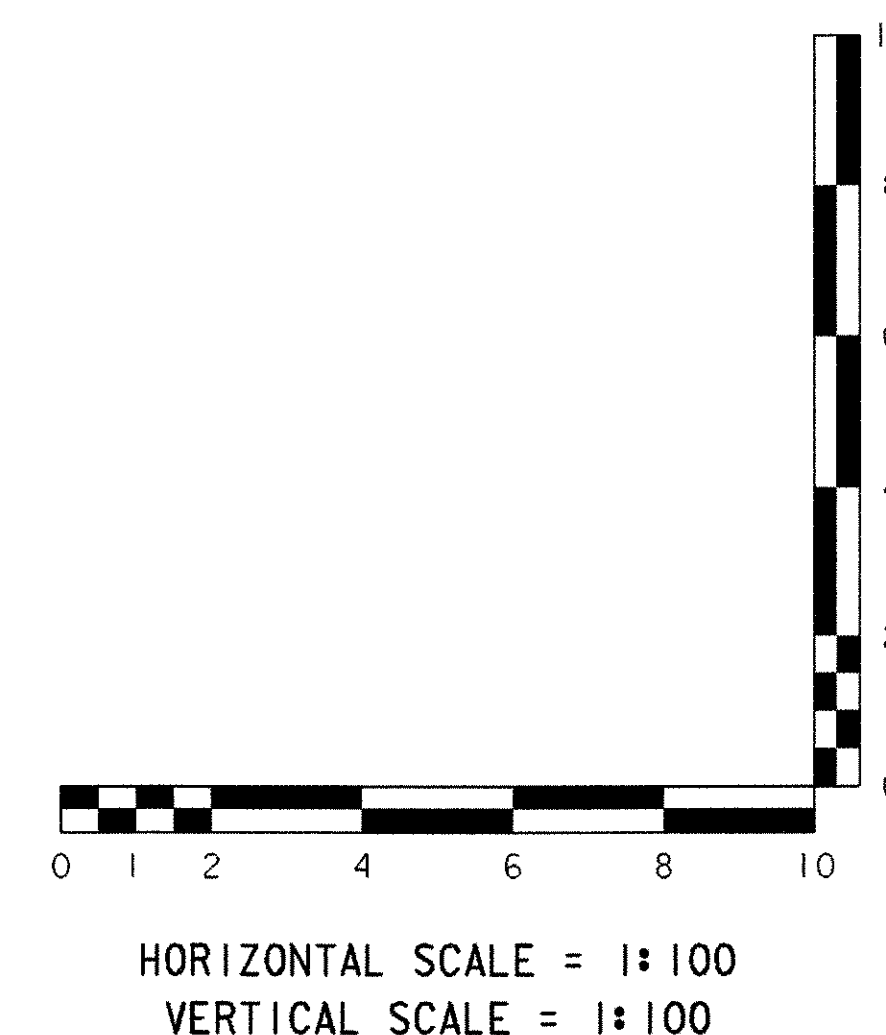
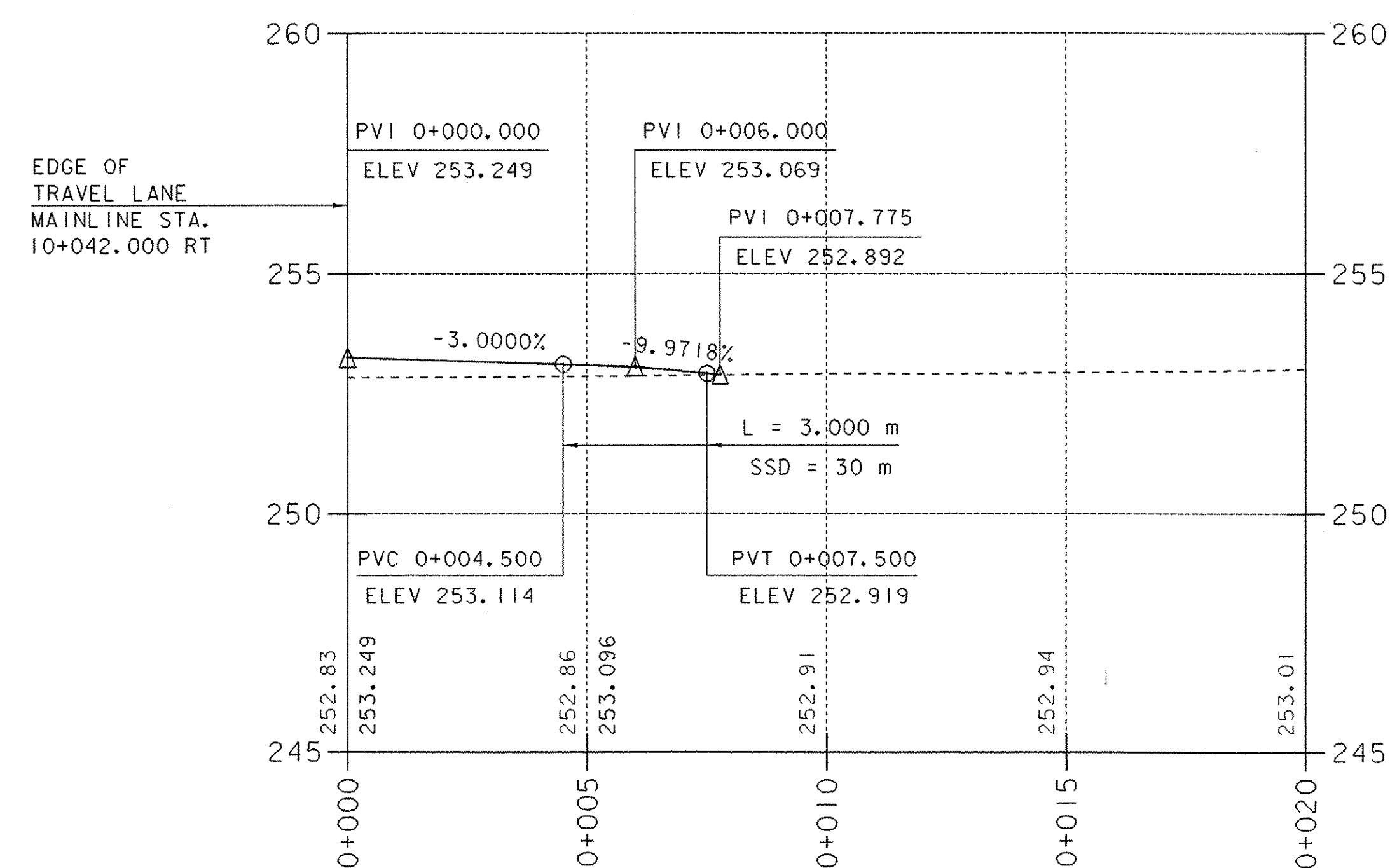
SHEET **22** OF **34**



MATERIAL TRANSITION DETAIL

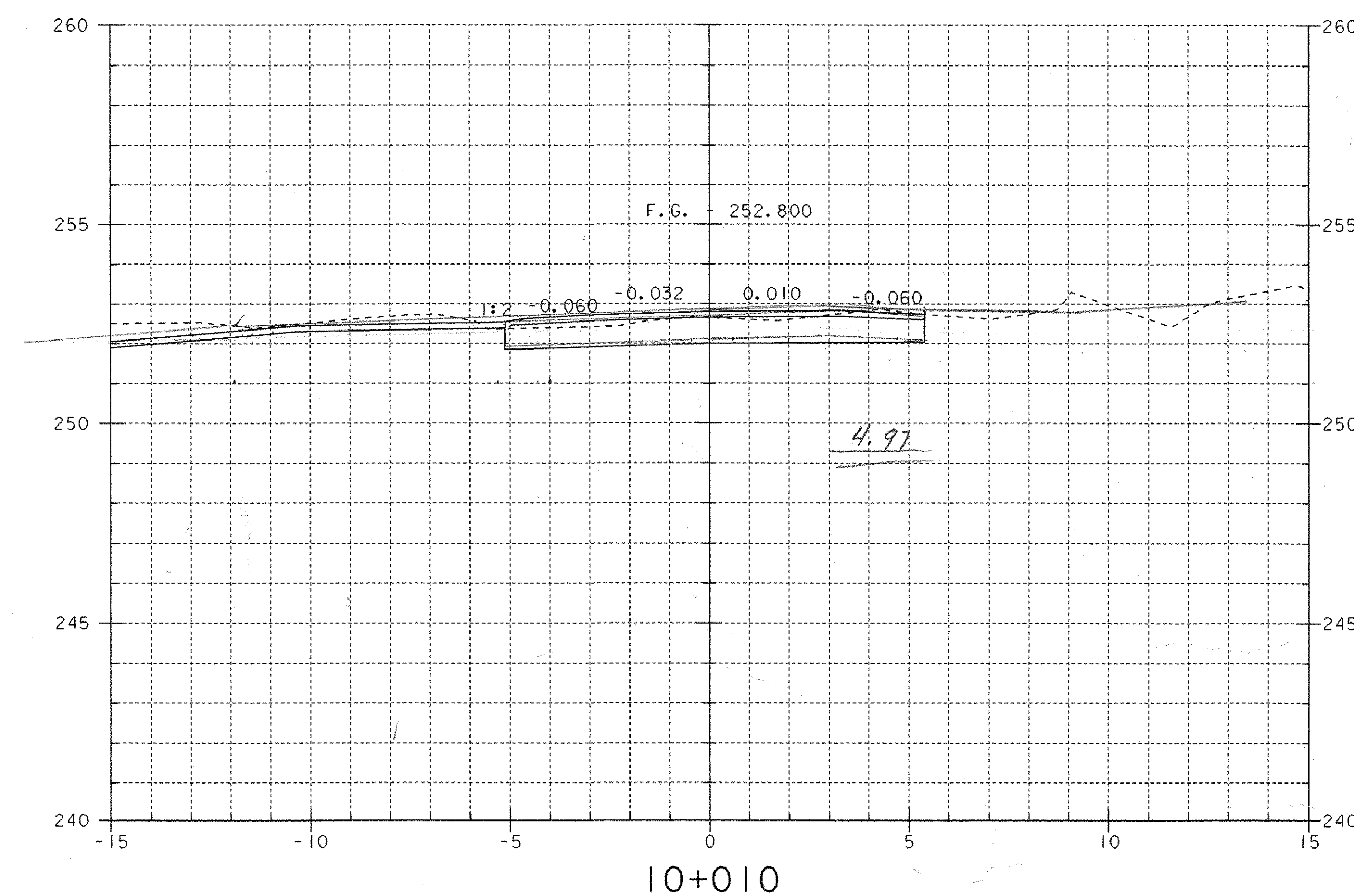
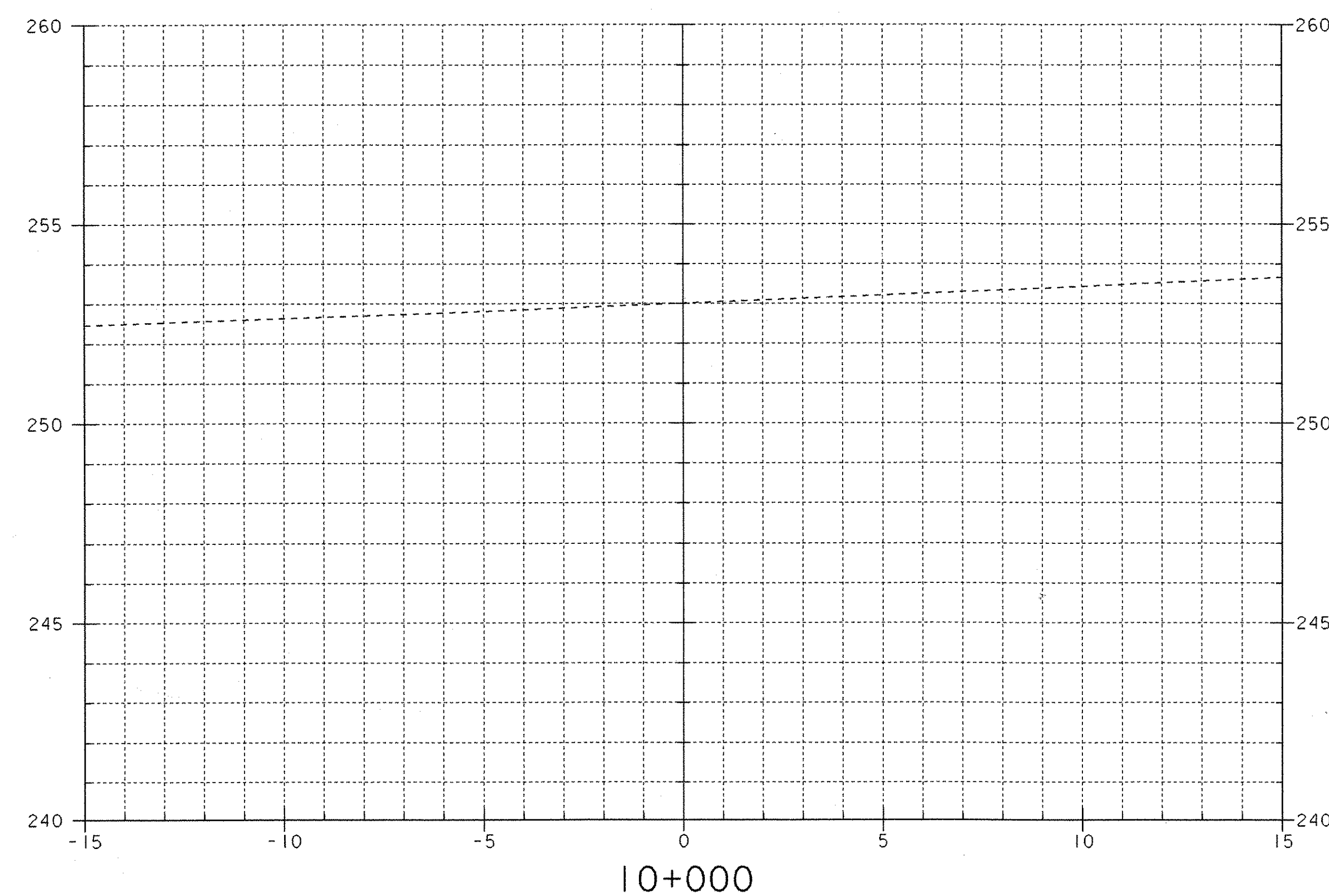
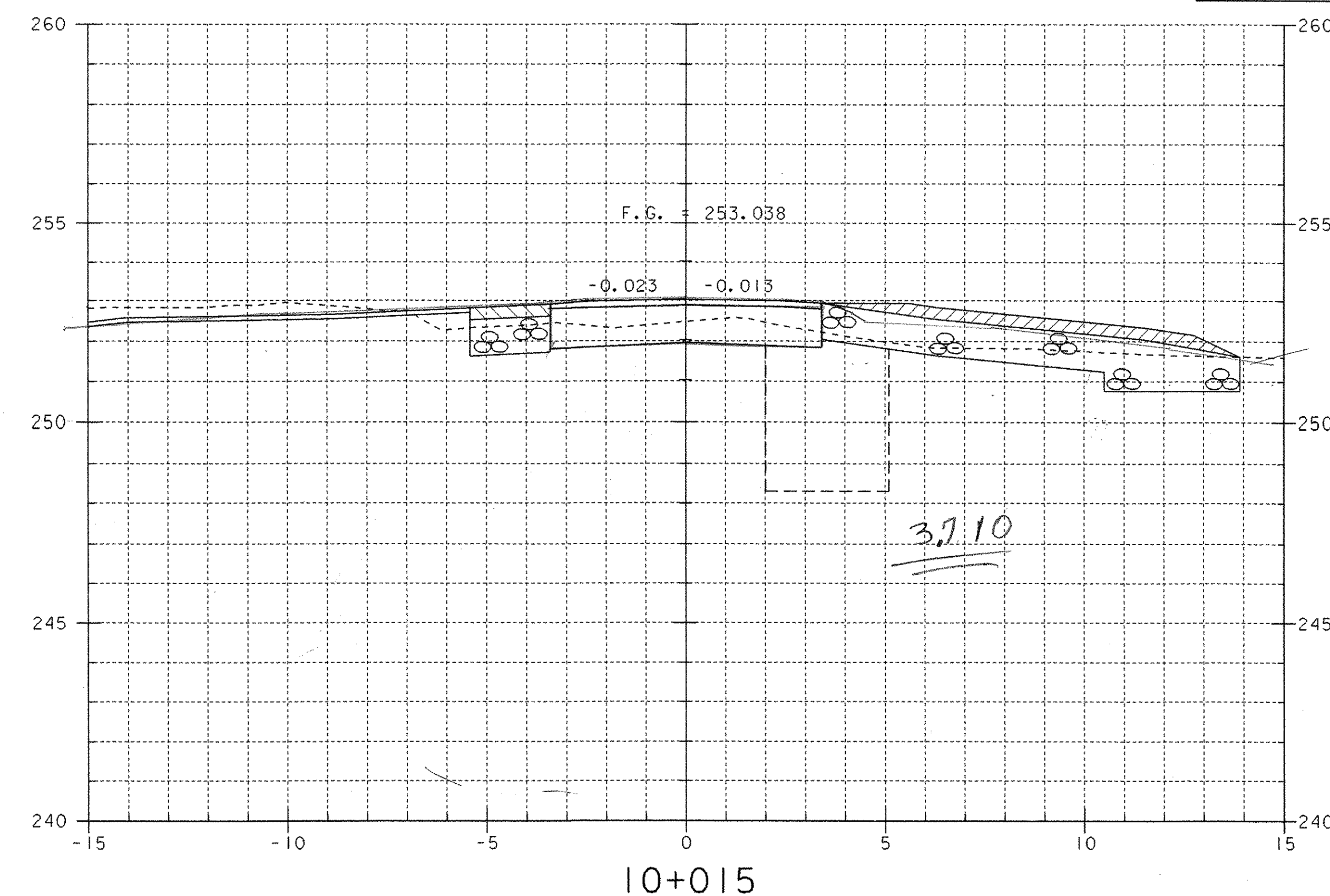
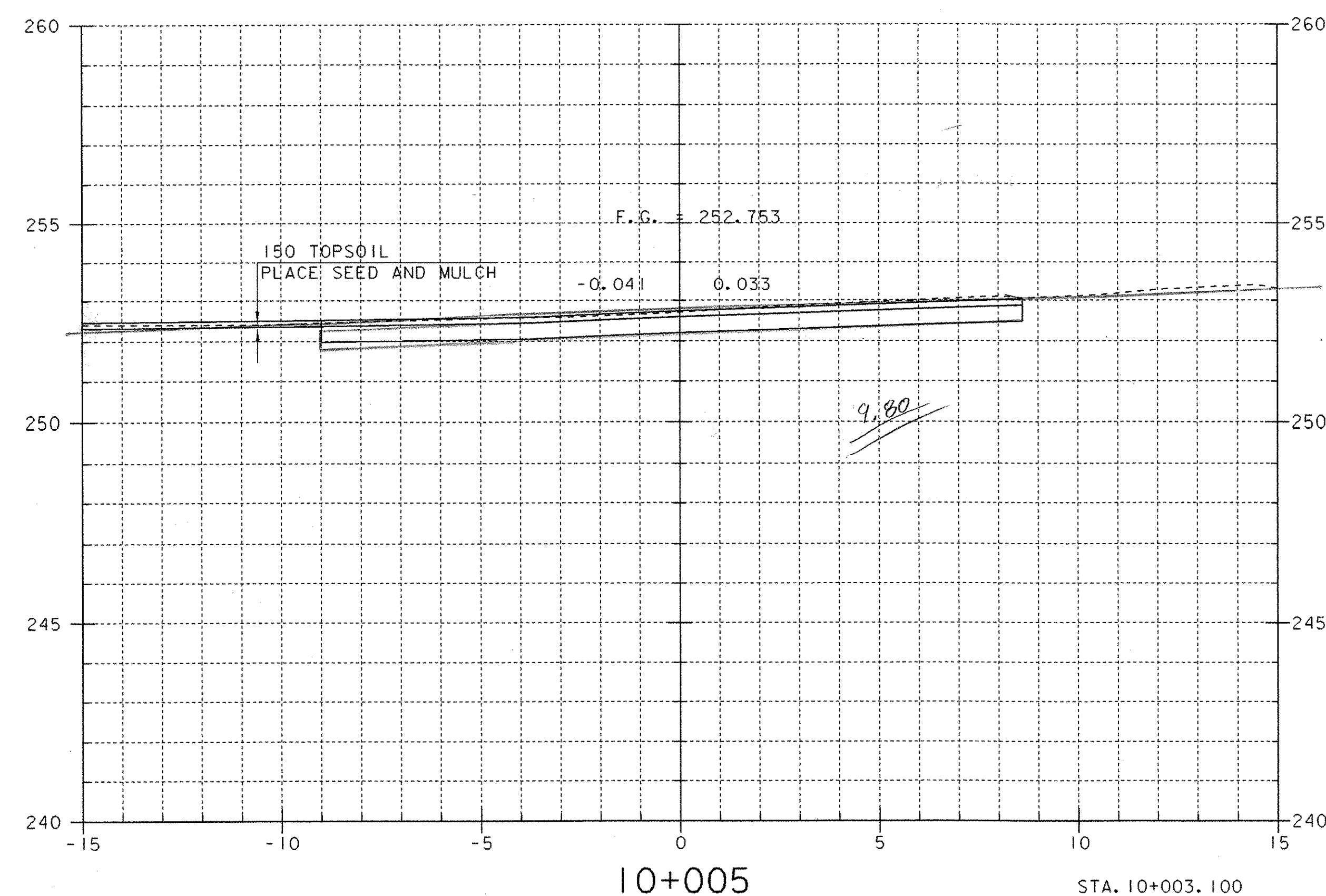


Field Drive Profile Sta. 10+042.000 Rt.



ADDITIONAL ROADWAY DETAILS

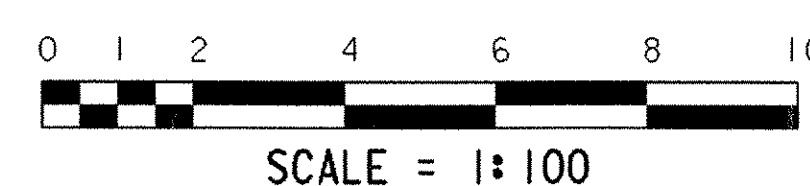
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PROJECT NUMBER:	BRO 1445 (21)
FILE NAME:	93j029\Structures\sj029mat.j
PROJECT MANAGER:	R.R. WHITCOMB
DESIGNED BY:	R.R. WHITCOMB
PLOT DATE:	09-JAN-2004
DRAWN BY:	JBA / BMM
CHECKED BY:	M. LOZIER
SHEET	23 OF 34

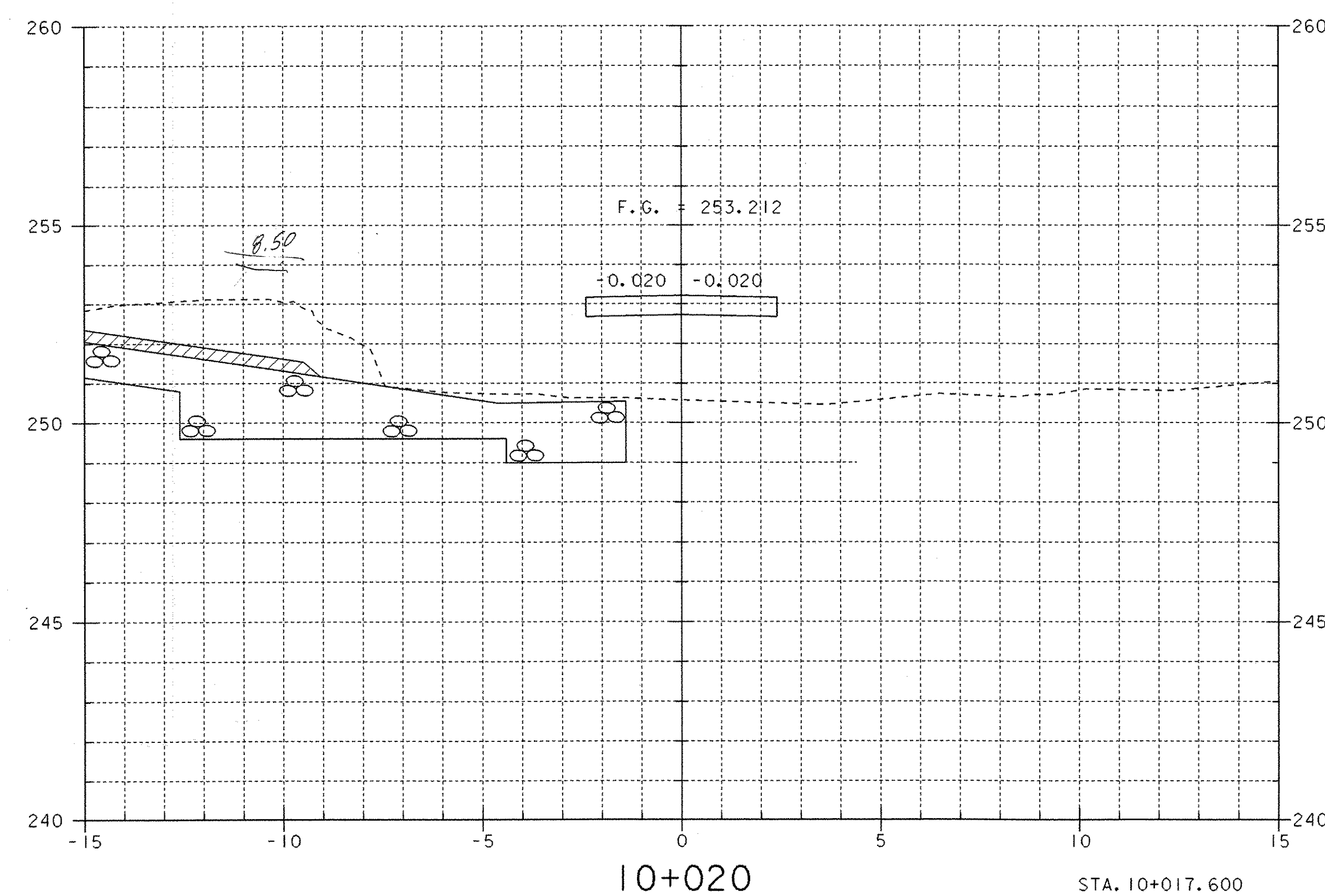
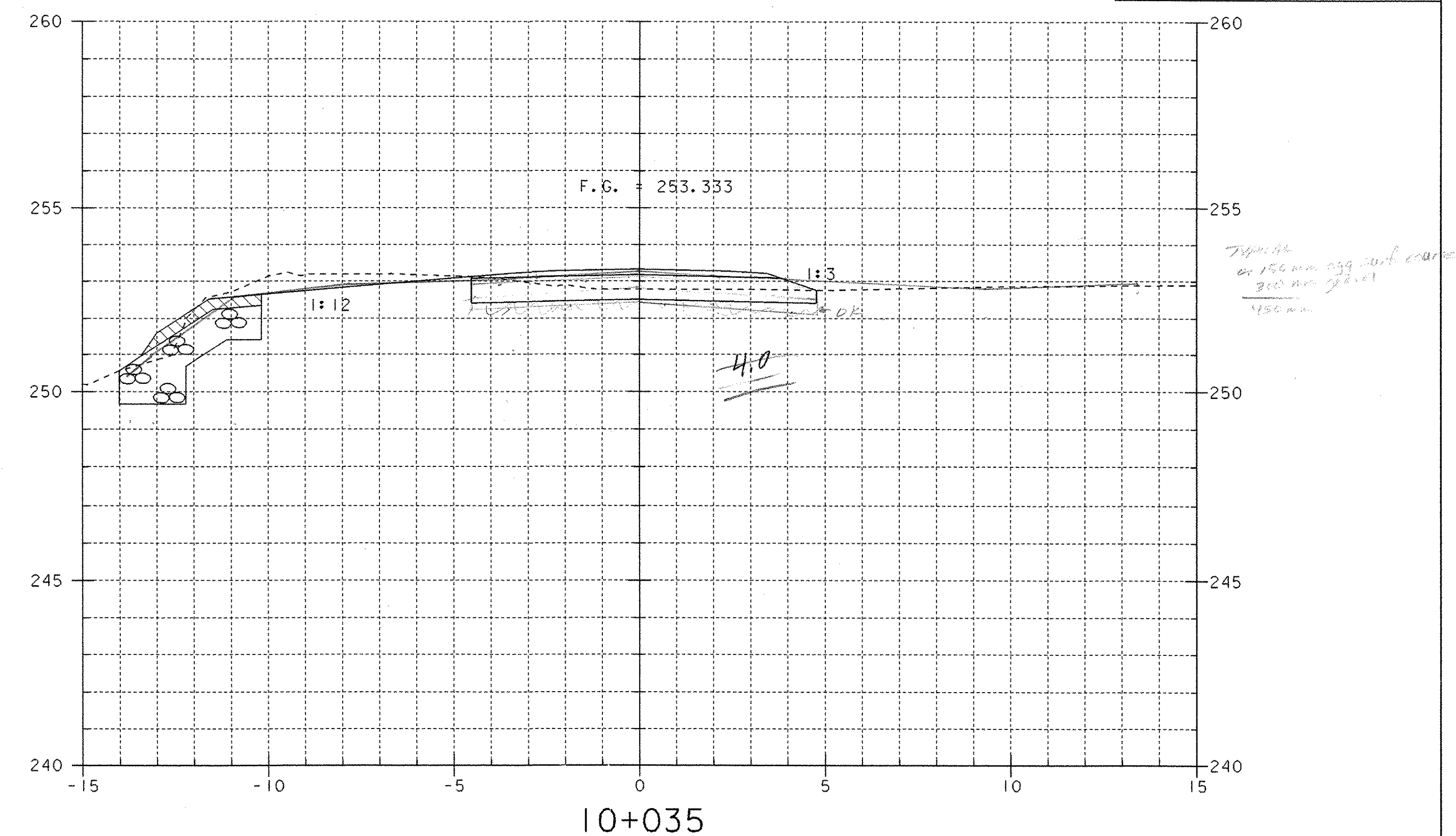
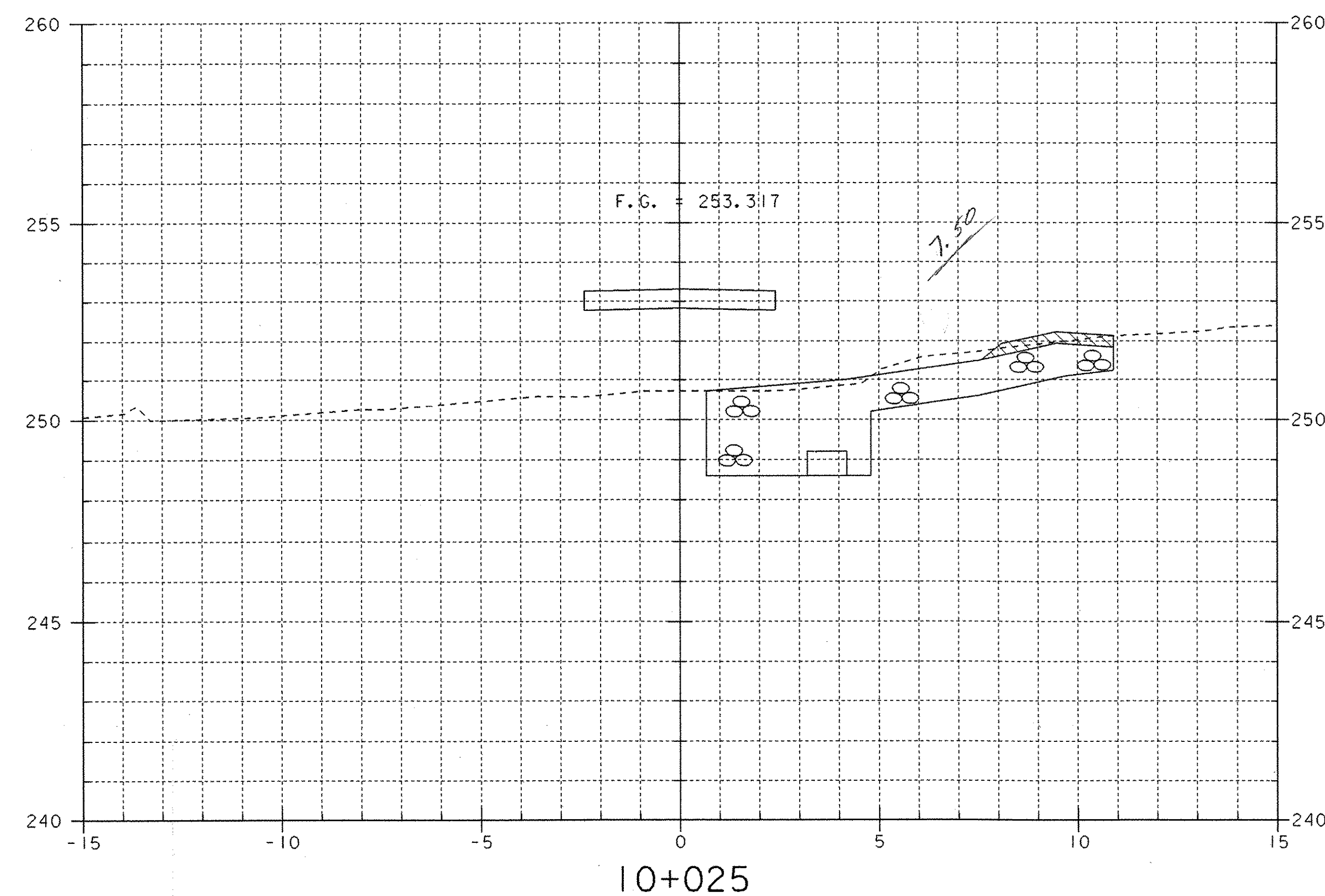


MAINLINE CROSS SECTIONS (1)

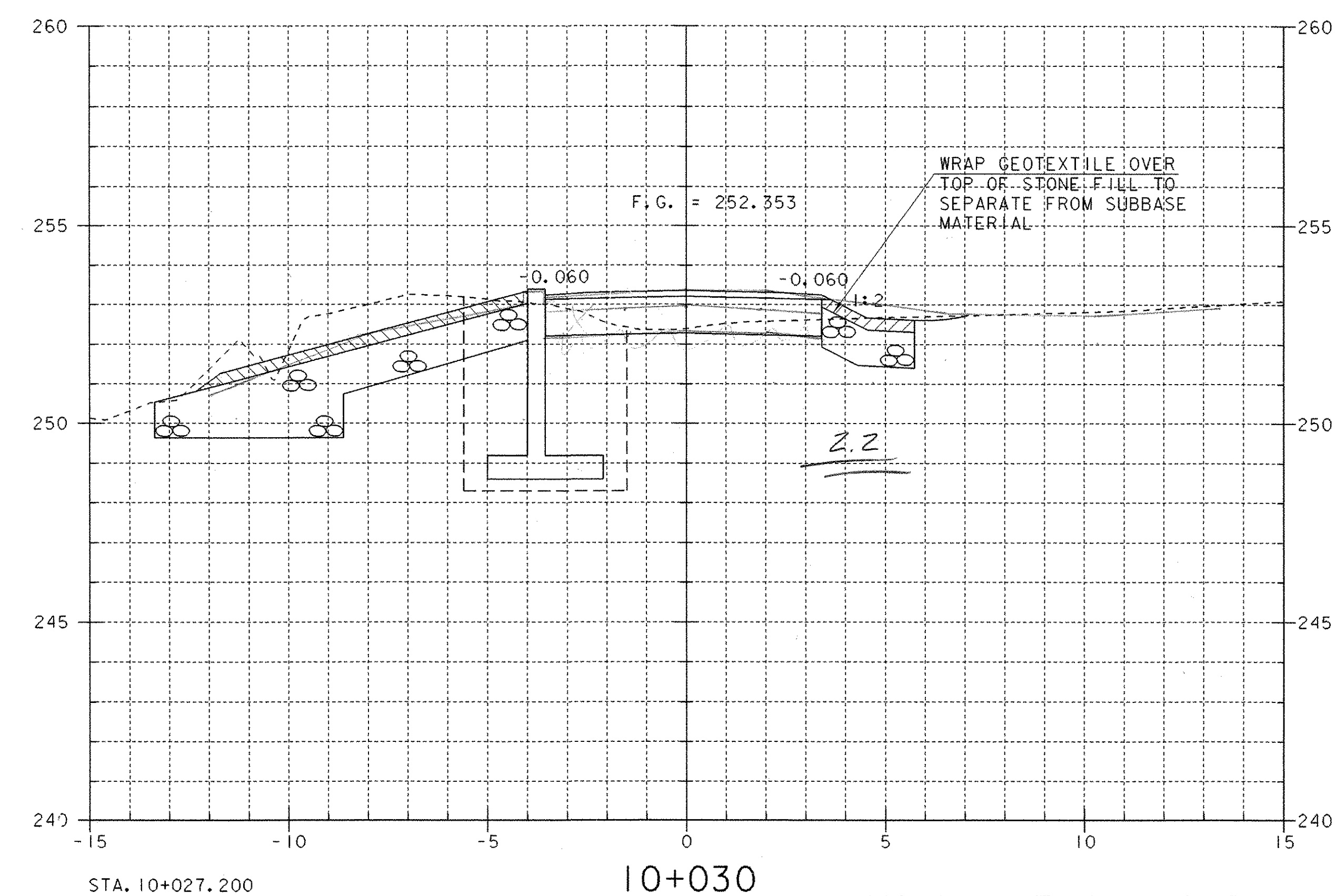
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PROJECT NUMBER: BRO 1445 (21)

FILE NAME: 93J029\Structures\sj029m01.i PLOT DATE: 09-JAN-2004
PROJECT MANAGER: R.R. WHITCOMB DRAWN BY: J. ARMSTRONG
DESIGNED BY: J. ARMSTRONG CHECKED BY: M. LOZIER
SHEET 24 OF 34





STA. 10+017.600
BEGIN BRIDGE

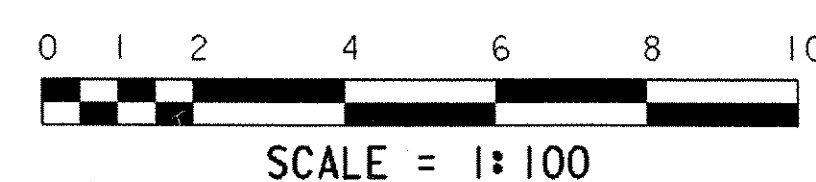


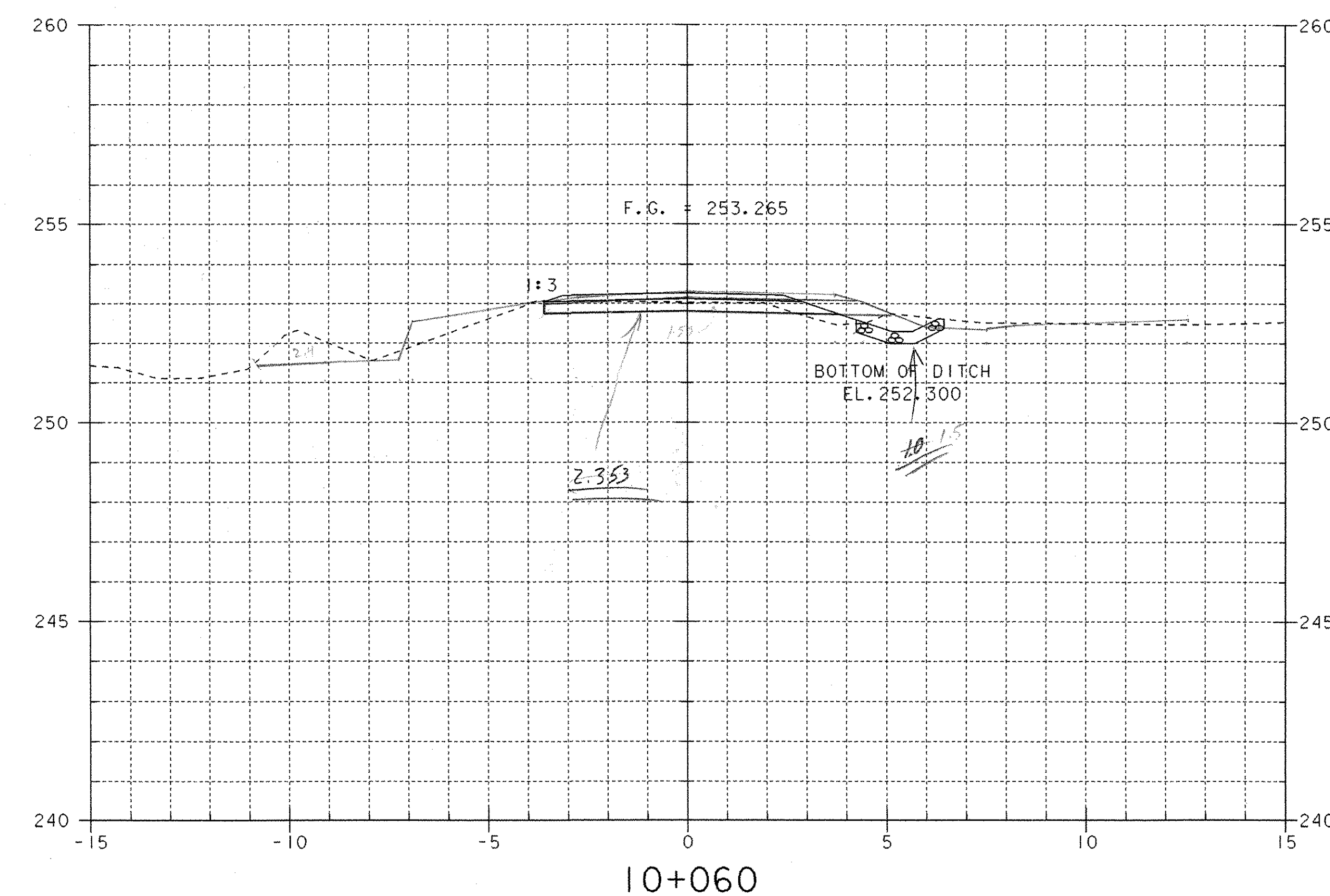
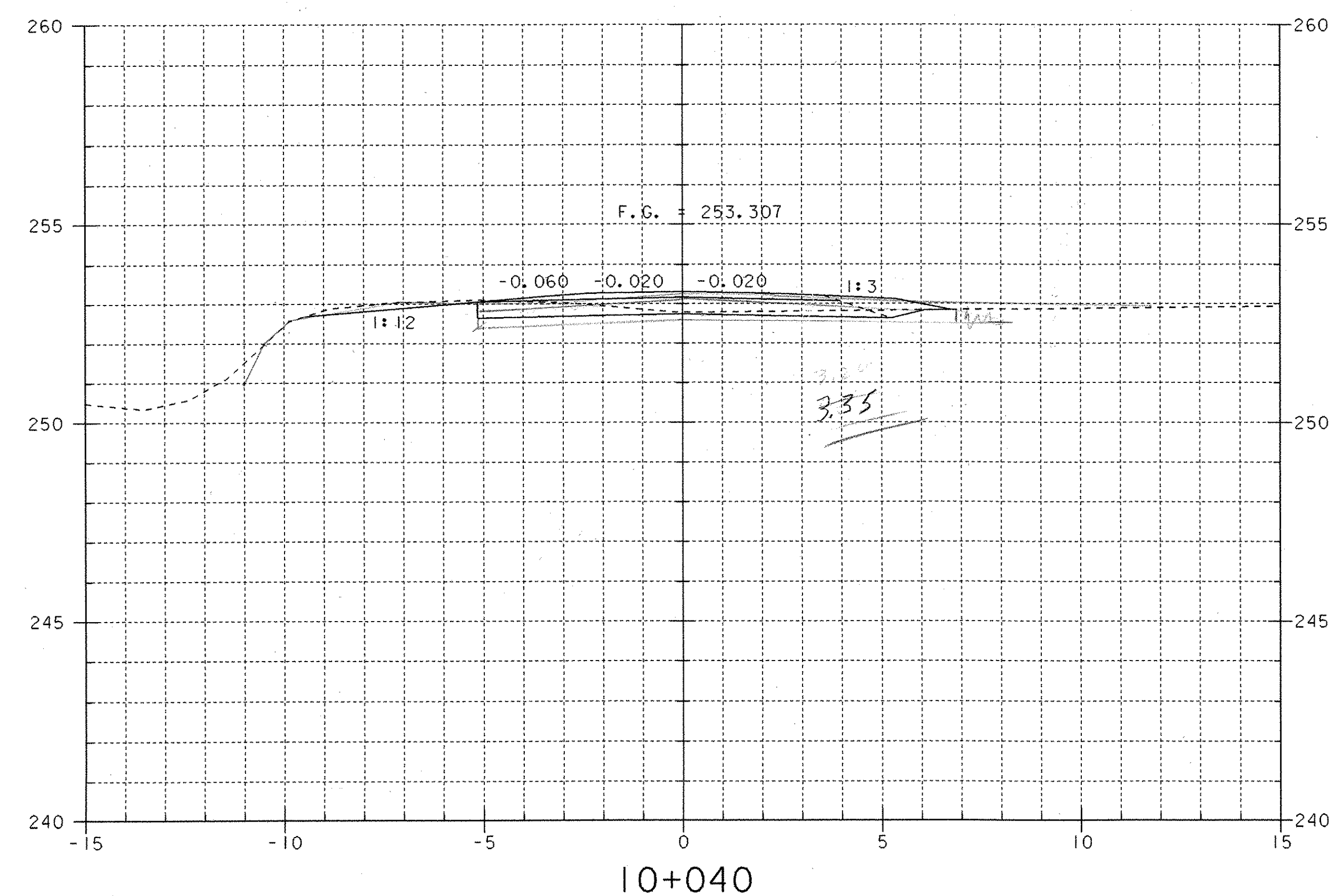
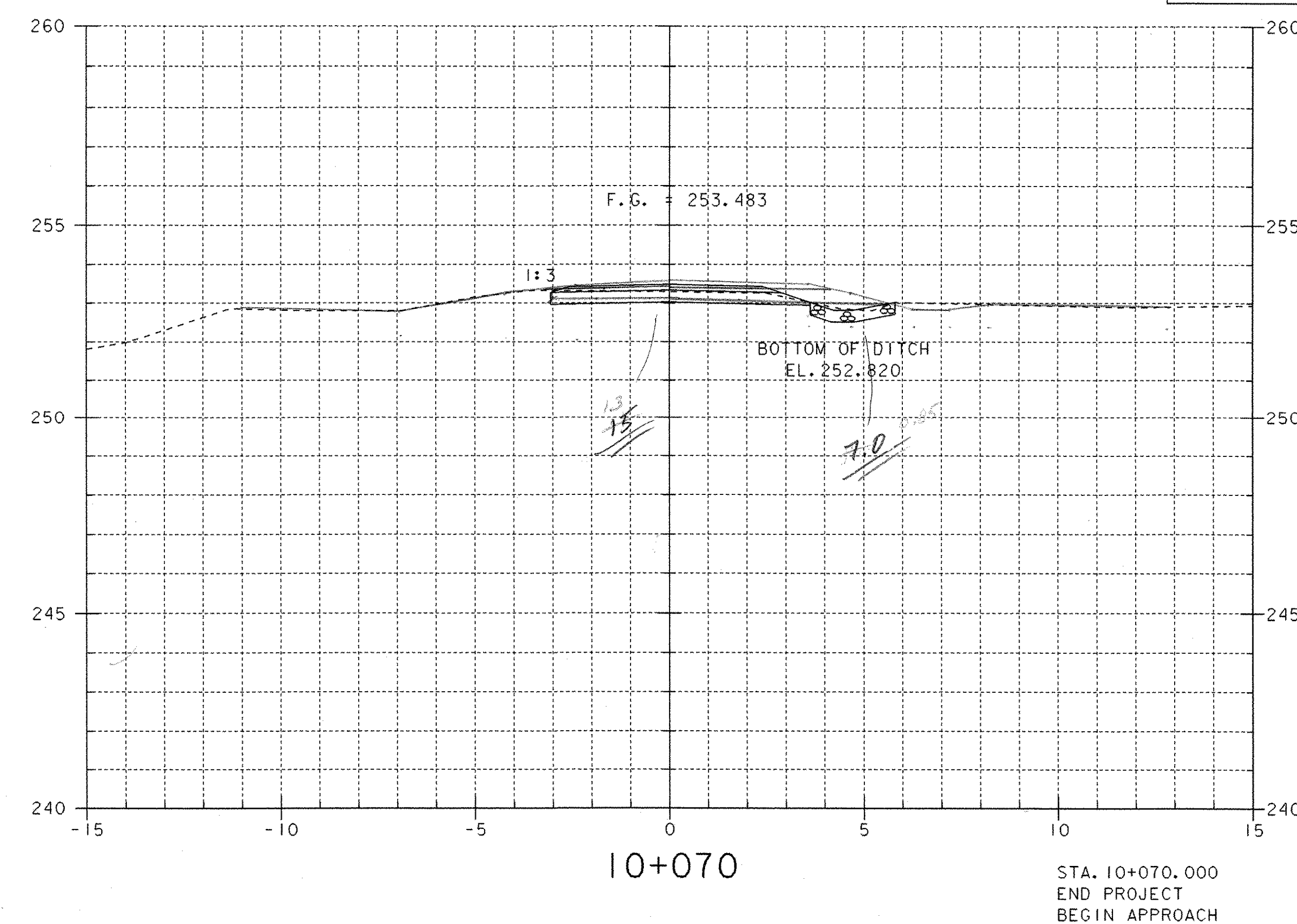
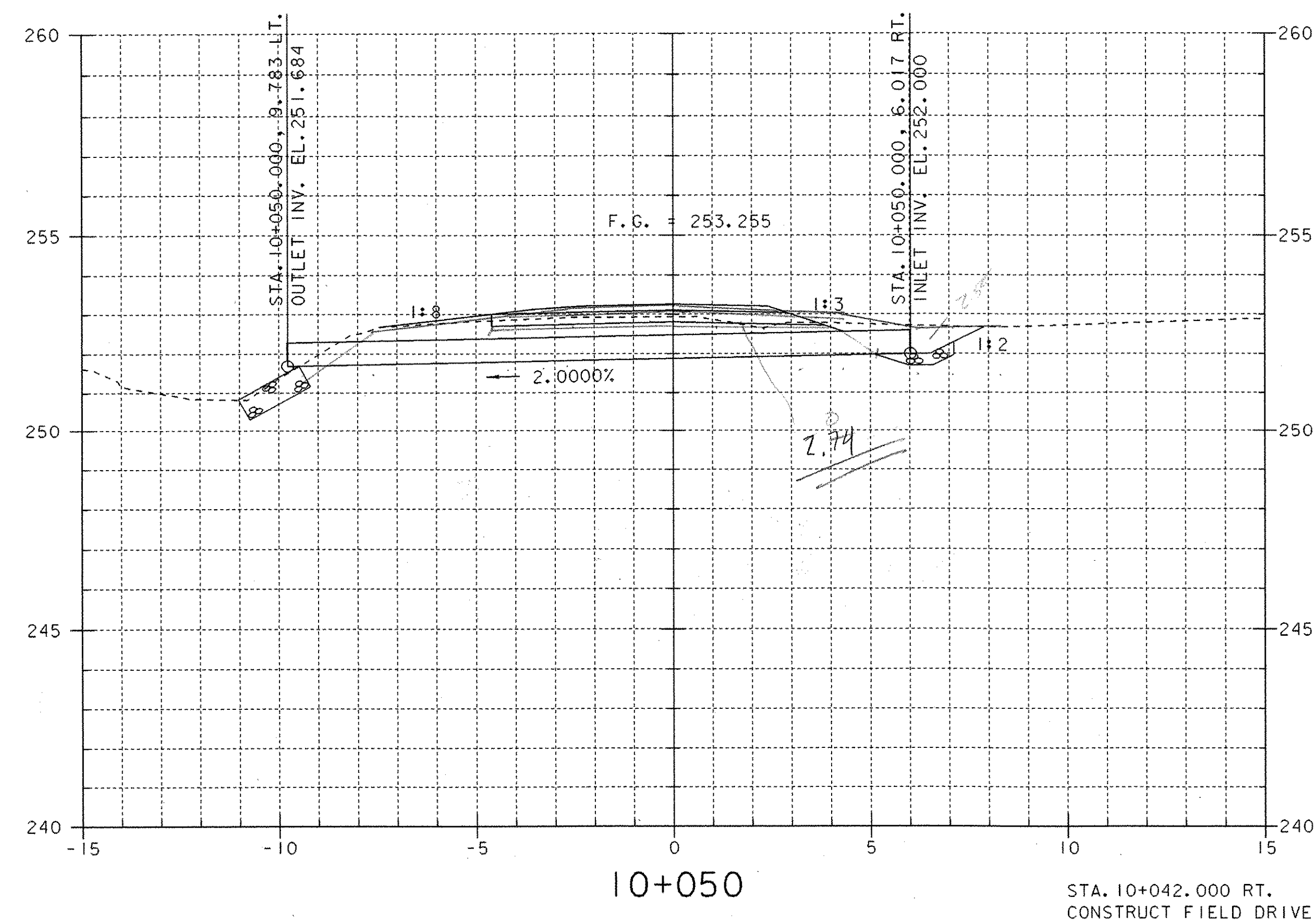
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END BRIDGE

MAINLINE CROSS SECTIONS (2)

PROJECT NAME: HUNTINGTON
PROJECT NUMBER: BRO 1445 (21)

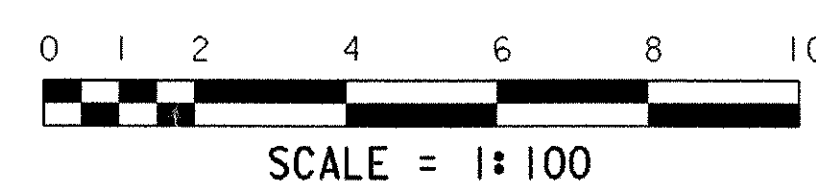
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PROJECT MANAGER: R.R. WHITCOMB DRAWN BY: J. ARMSTRONG
DESIGNED BY: J. ARMSTRONG CHECKED BY: M. LOZIER
SHEET 25 OF 34

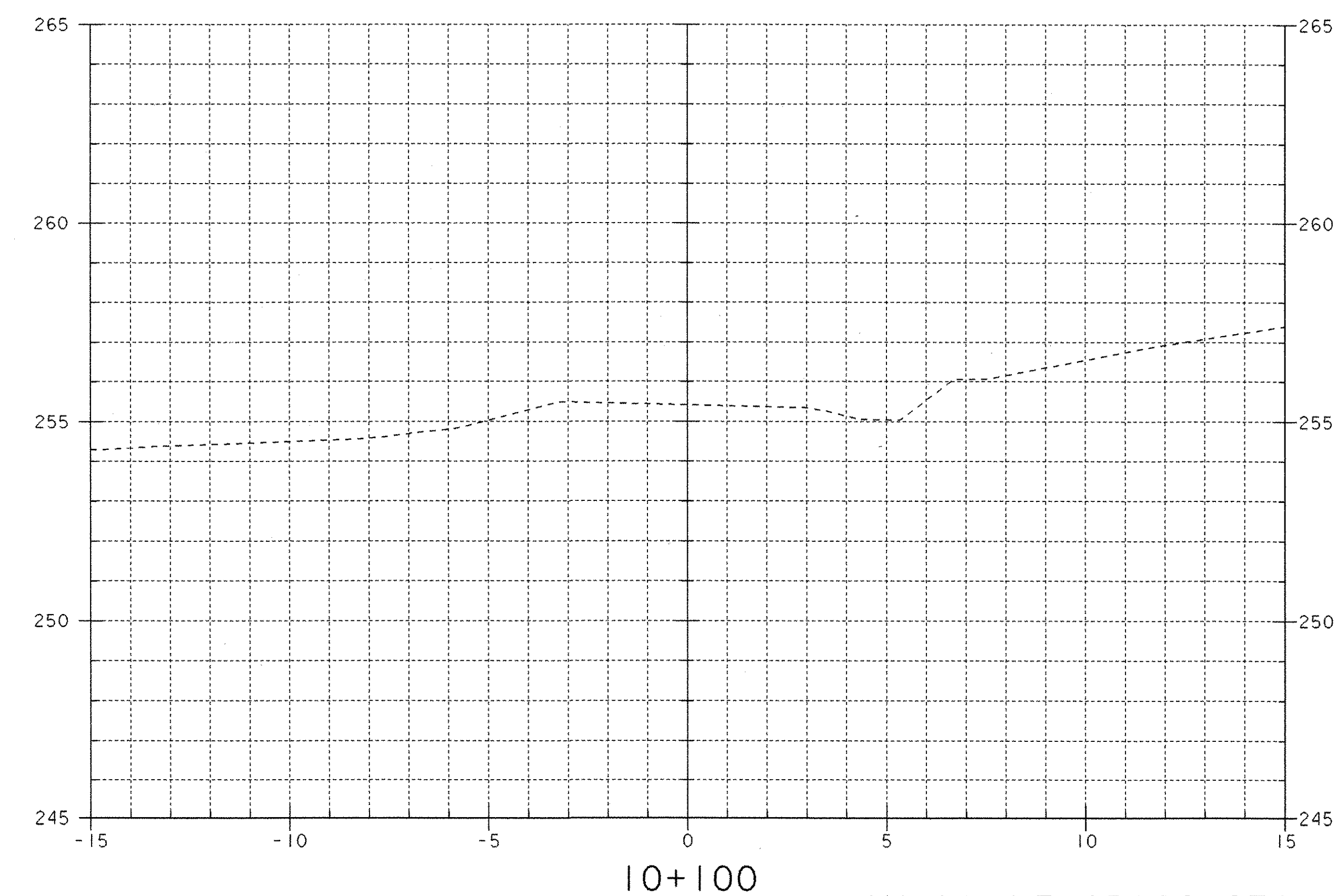
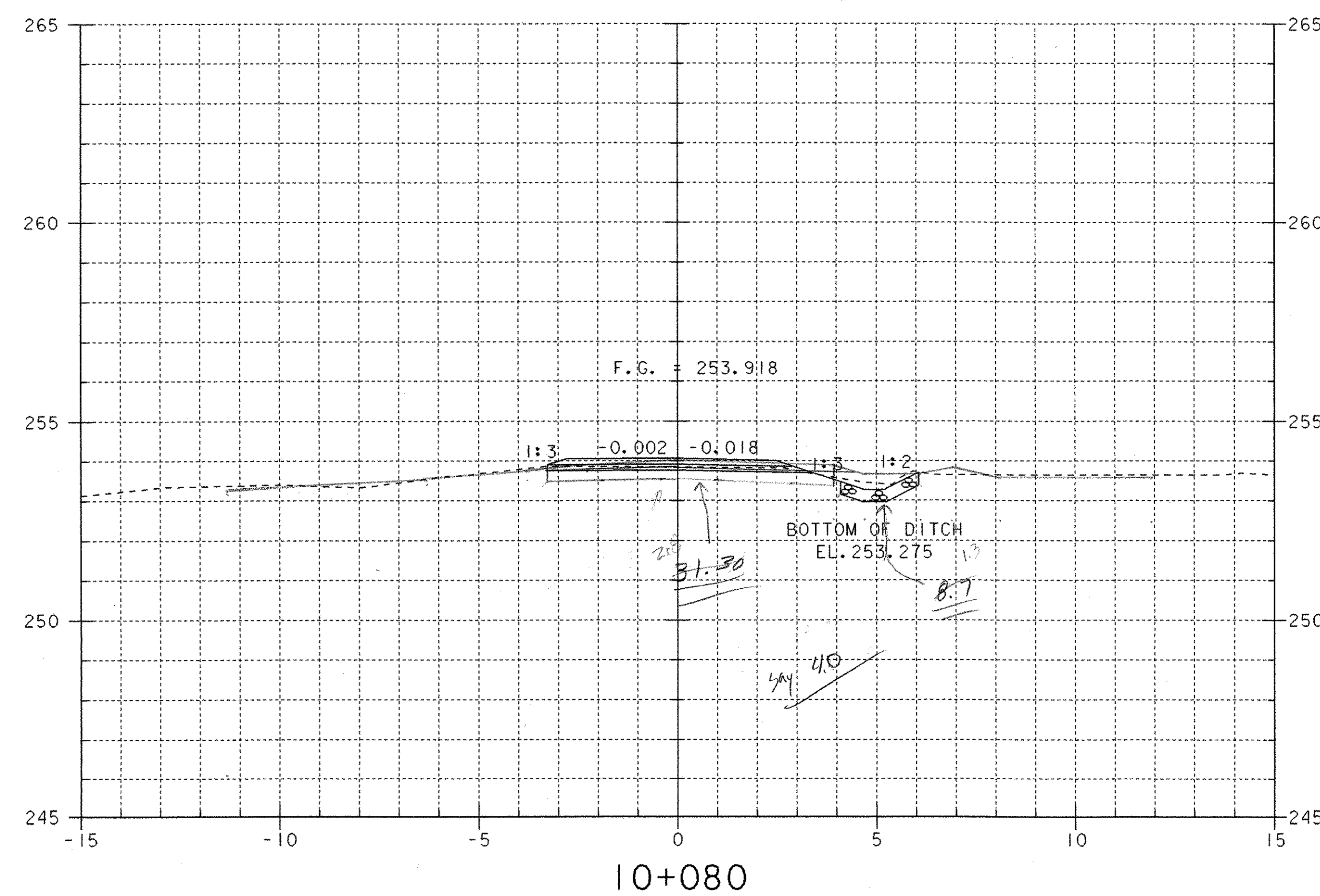
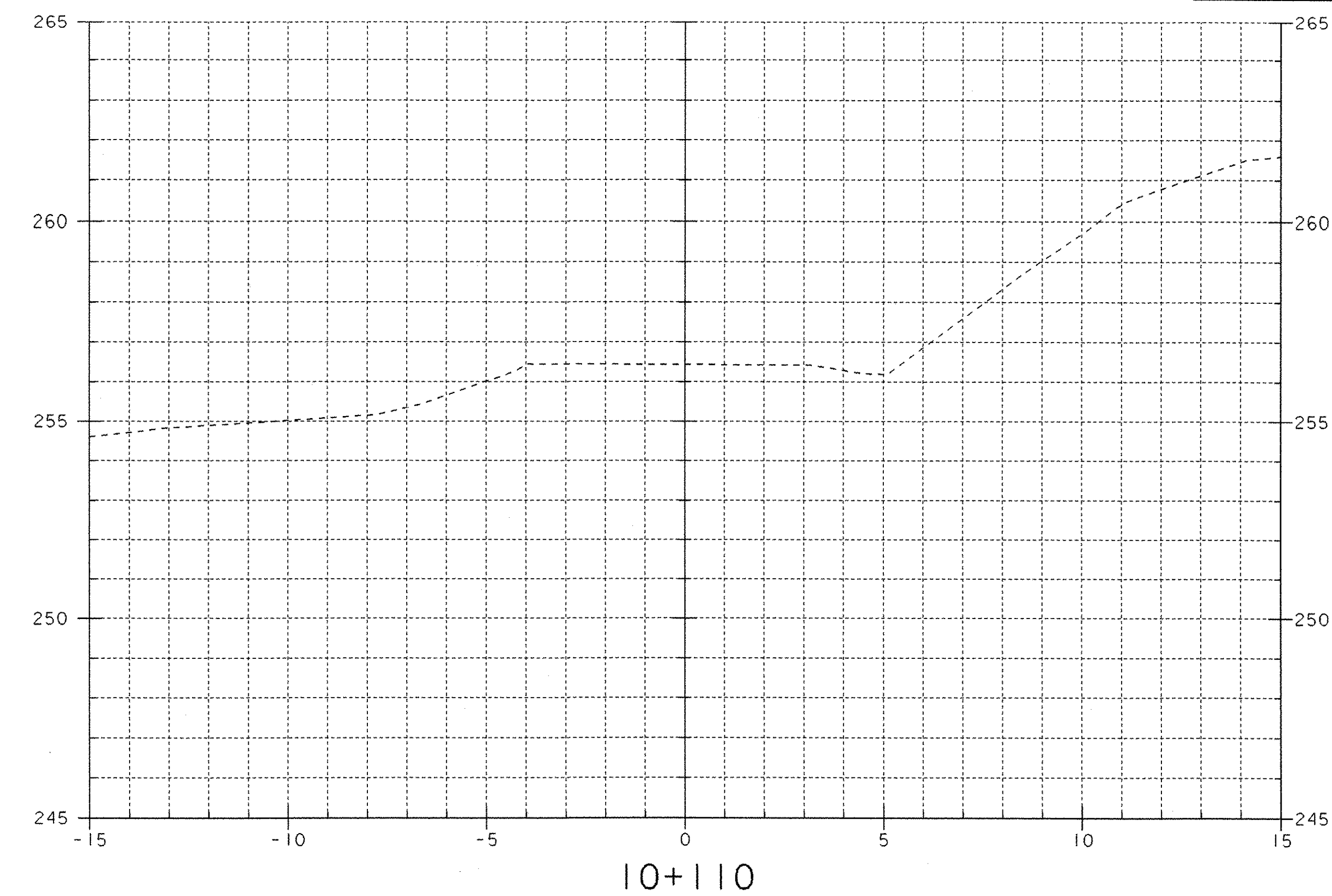
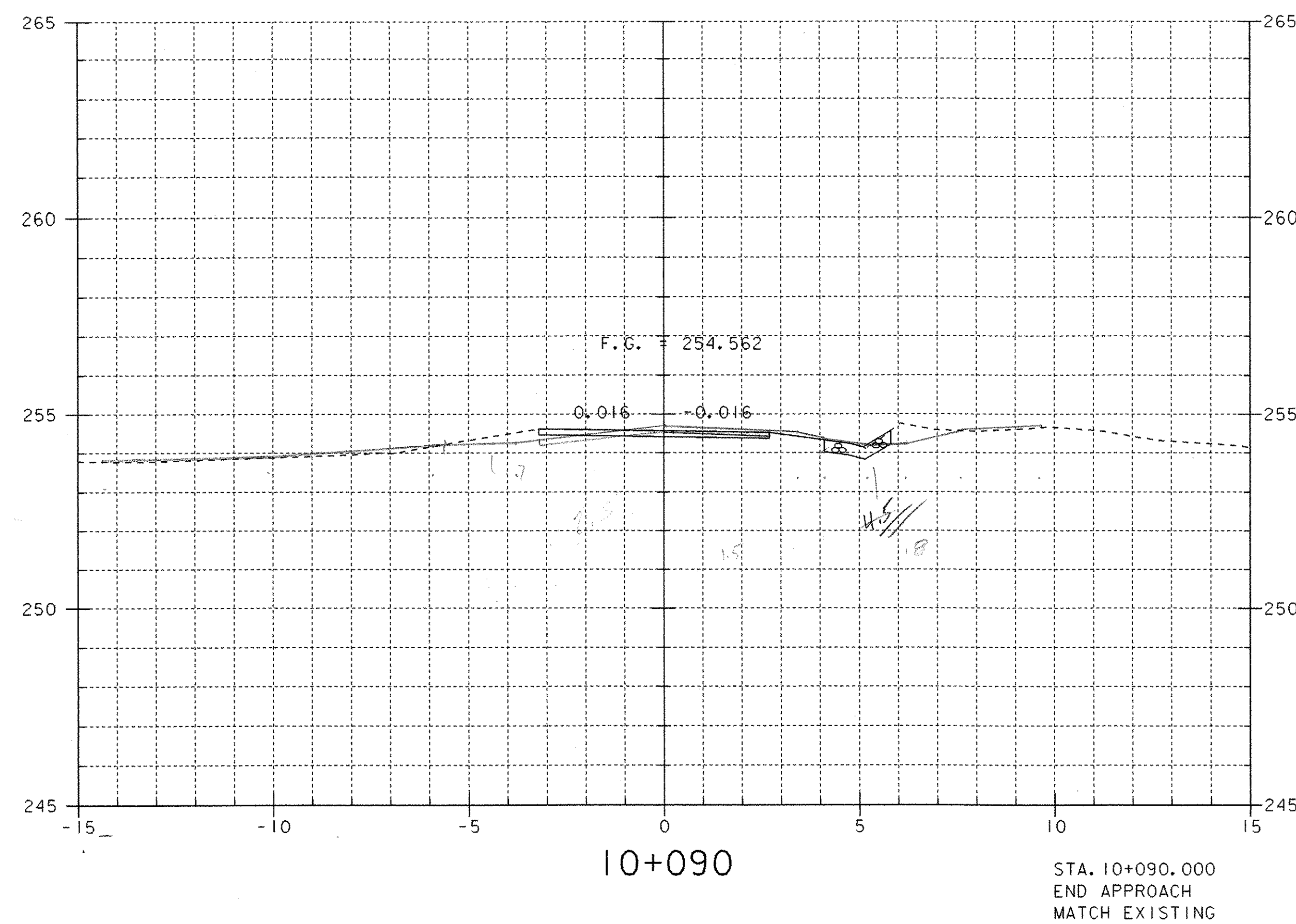




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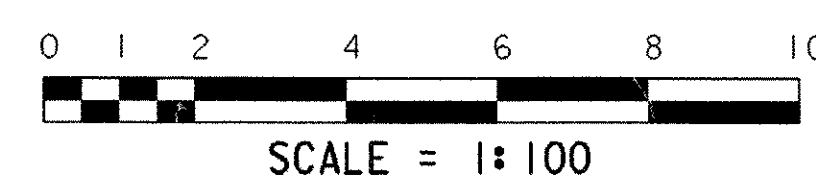
PROJECT NAME:	HUNTINGTON	PLOT DATE:	09-JAN-2004
PROJECT NUMBER:	BRO 1445 (21)	DRAWN BY:	J. ARMSTRONG
FILE NAME:	93J029\Structures\sj029m03.1	CHECKED BY:	M. LOZIER
DESIGNED BY:	J. ARMSTRONG	SHEET	26 OF 34

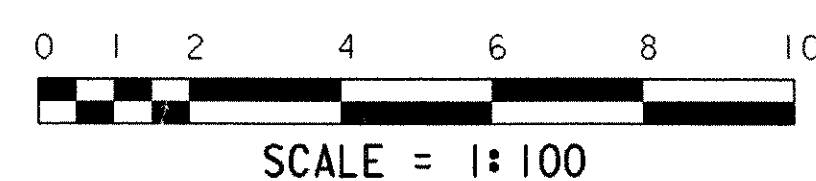
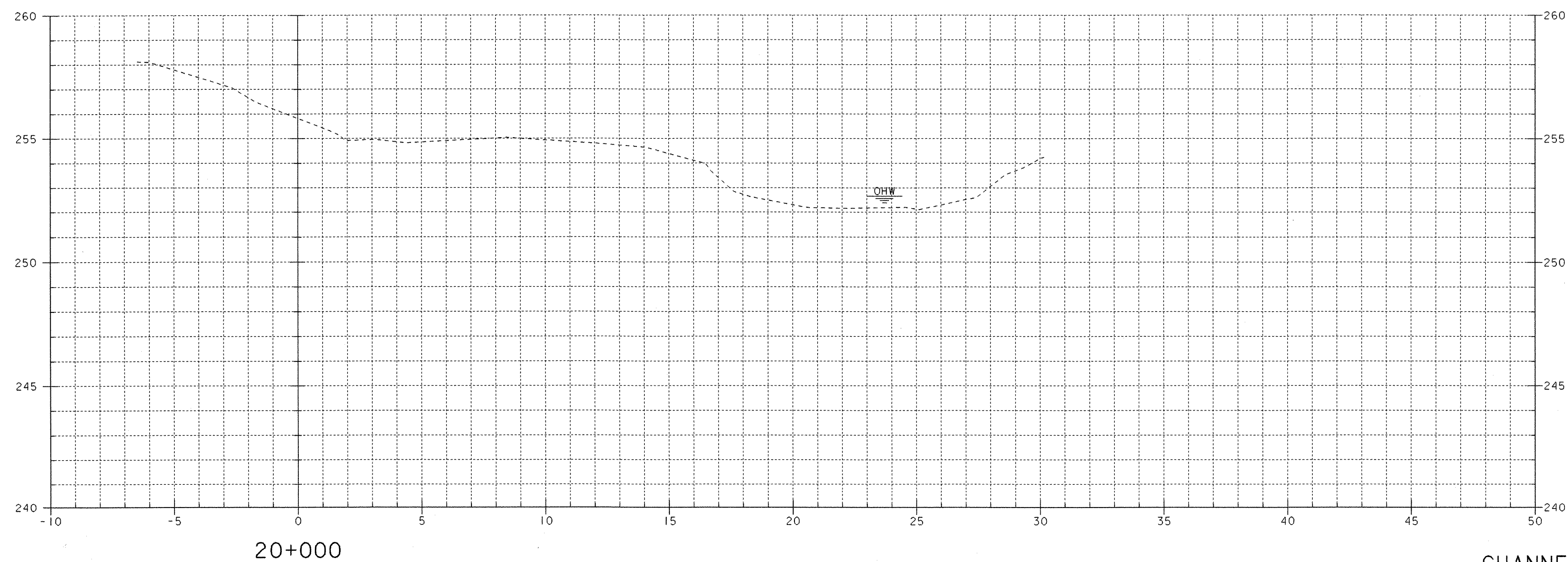
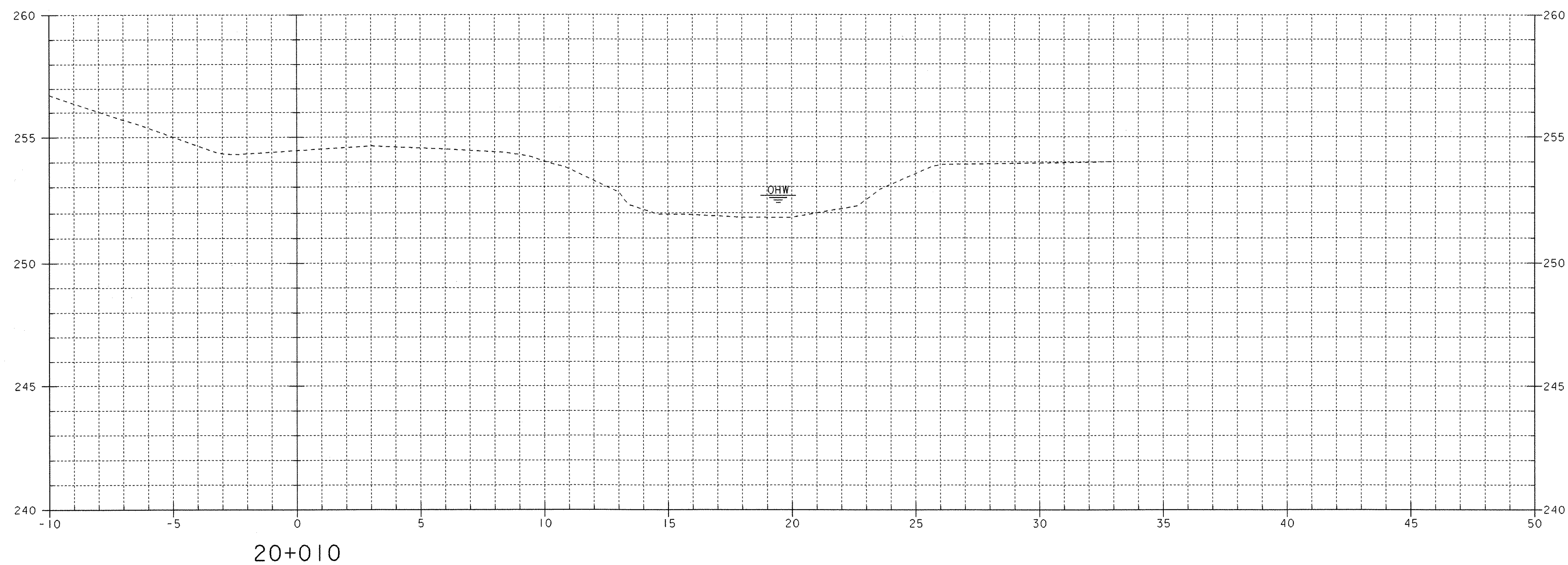




MAINLINE CROSS SECTIONS (4)

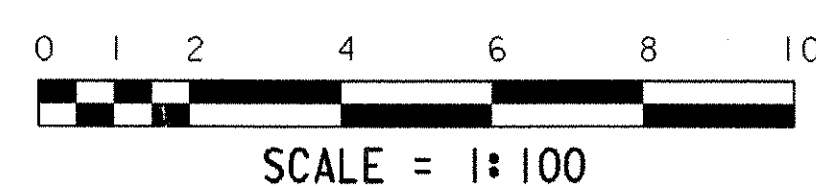
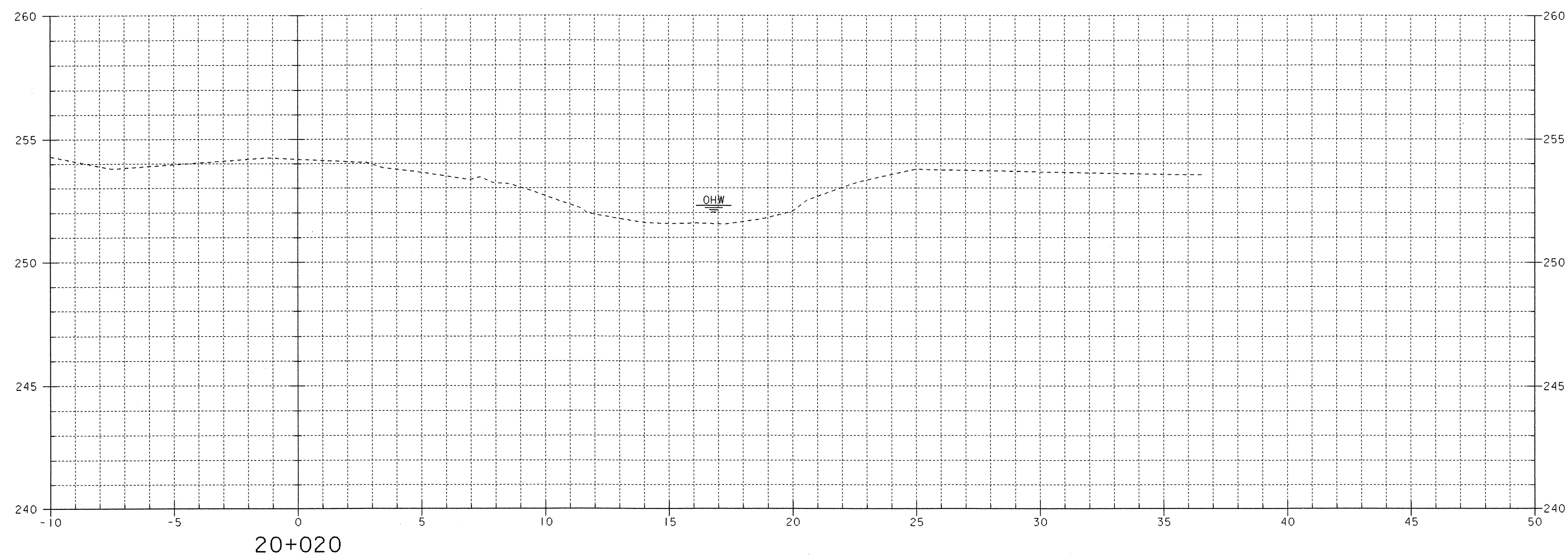
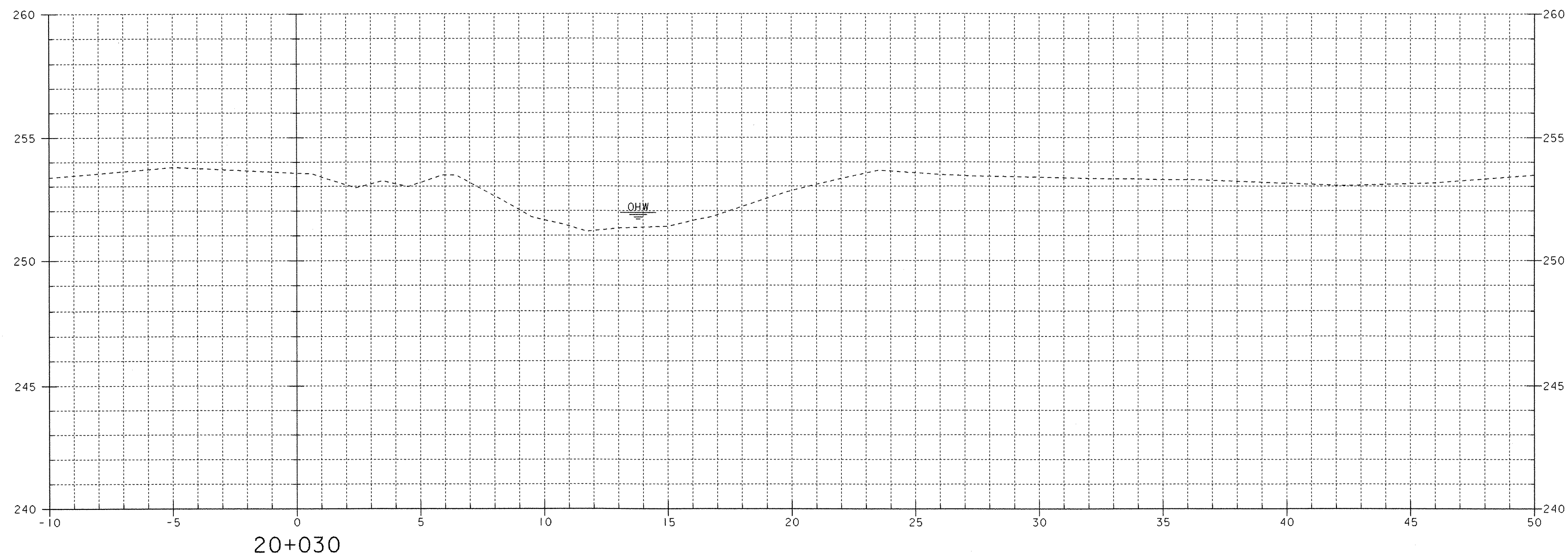
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PROJECT NUMBER:	BRO 1445 (21)
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PROJECT MANAGER:	R.R. WHITCOMB
DESIGNED BY:	J. ARMSTRONG
PLOT DATE:	09-JAN-2004
DRAWN BY:	J. ARMSTRONG
CHECKED BY:	M. LOZIER
SHEET	27 OF 34





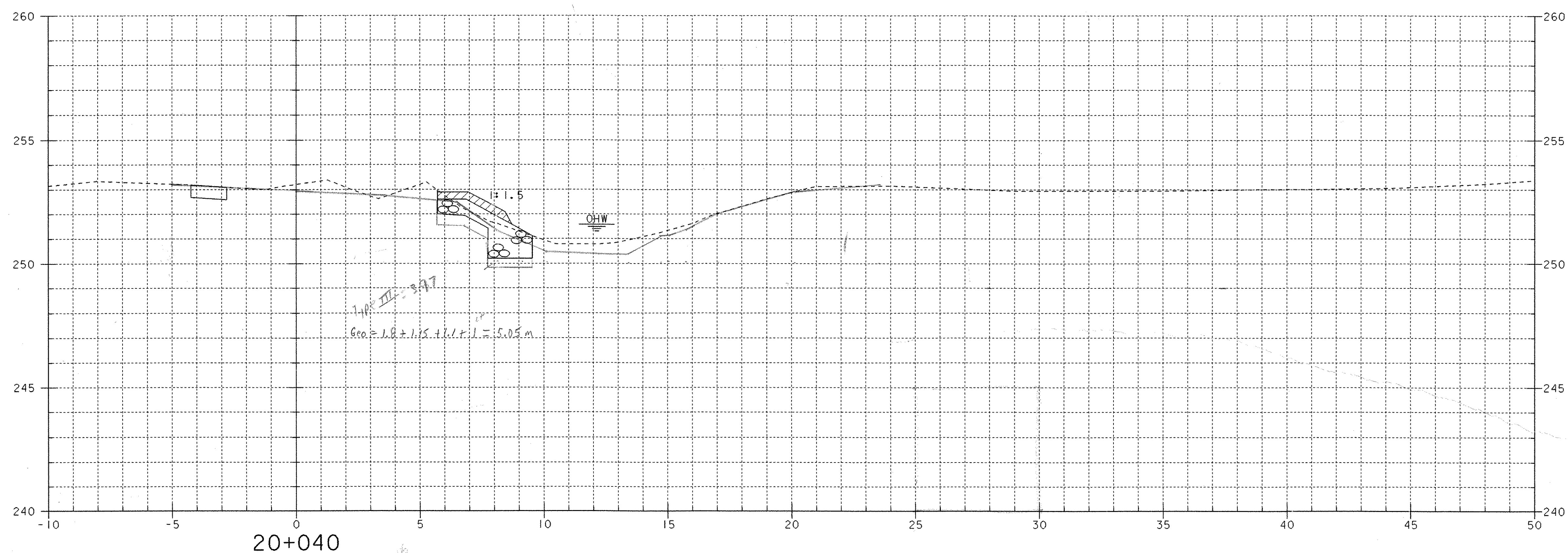
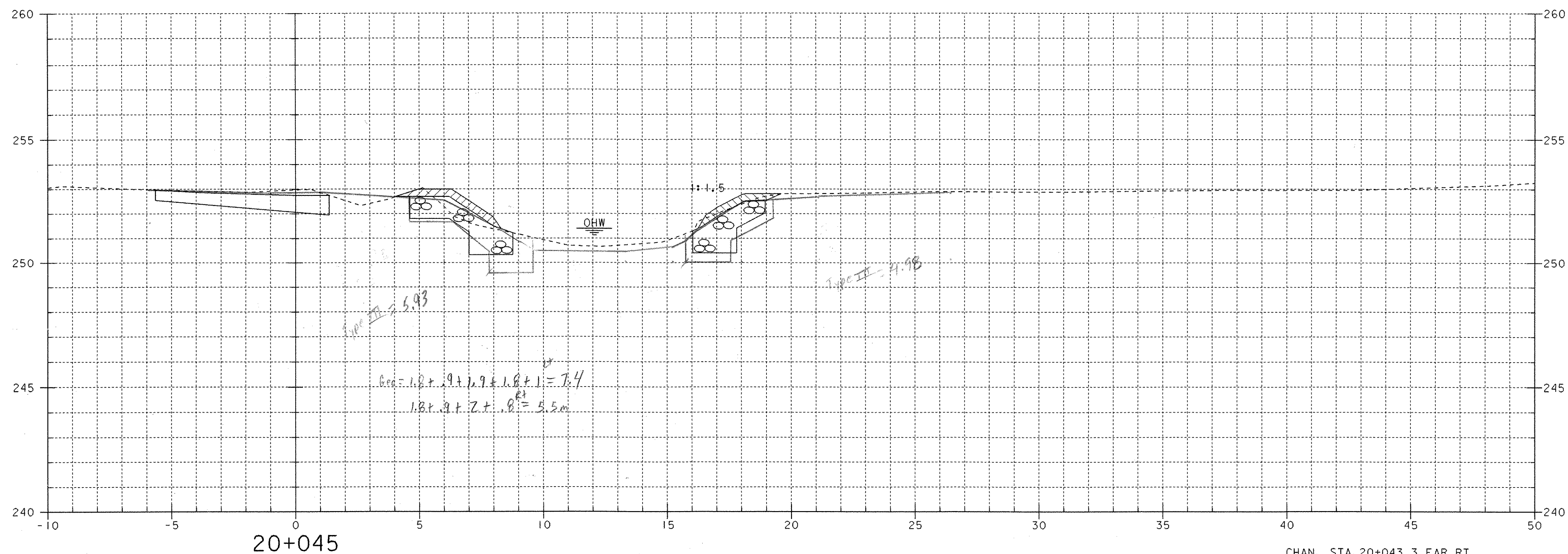
CHANNEL CROSS SECTIONS (1)

PROJECT NAME: HUNTINGTON	
PROJECT NUMBER: BRO 1445 (21)	
FILE NAME: 93J029\Structures\sj029c01.i	PLOT DATE: 09-JAN-2004
PROJECT MANAGER: R.R. WHITCOMB	DRAWN BY: J. ARMSTRONG
DESIGNED BY: J. ARMSTRONG	CHECKED BY: M. LOZIER
	SHEET 28 OF 34



CHANNEL CROSS SECTIONS (2)

PROJECT NAME:	HUNTINGTON
PROJECT NUMBER:	BRO 1445 (21)
FILE NAME:	93J029\Structures\sj029c02.1
PROJECT MANAGER:	R.R. WHITCOMB
DESIGNED BY:	J. ARMSTRONG
PLOT DATE:	09-JAN-2004
DRAWN BY:	J. ARMSTRONG
CHECKED BY:	M. LOZIER
SHEET	29 OF 34



CHANNEL CROSS SECTIONS (3)

PROJECT NAME:	HUNTINGTON
PROJECT NUMBER:	BRO 1445 (21)
FILE NAME:	93J029\Structures\sj029c03.i
PROJECT MANAGER:	R.R. WHITCOMB
DESIGNED BY:	J. ARMSTRONG
PLOT DATE:	09-JAN-2004
DRAWN BY:	J. ARMSTRONG
CHECKED BY:	M. LOZIER
SHEET	30 OF 34

0 1 2 4 6 8 10

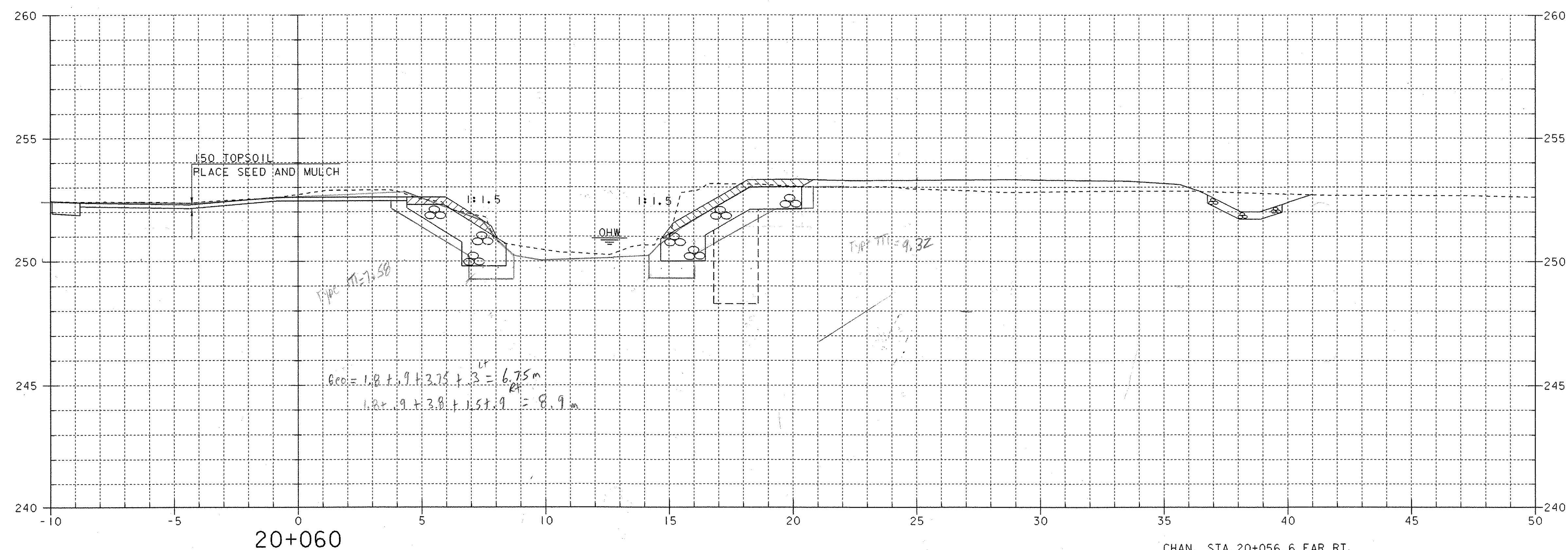
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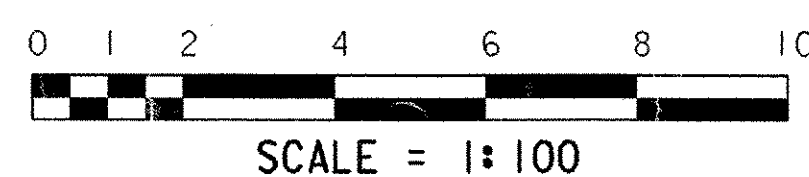
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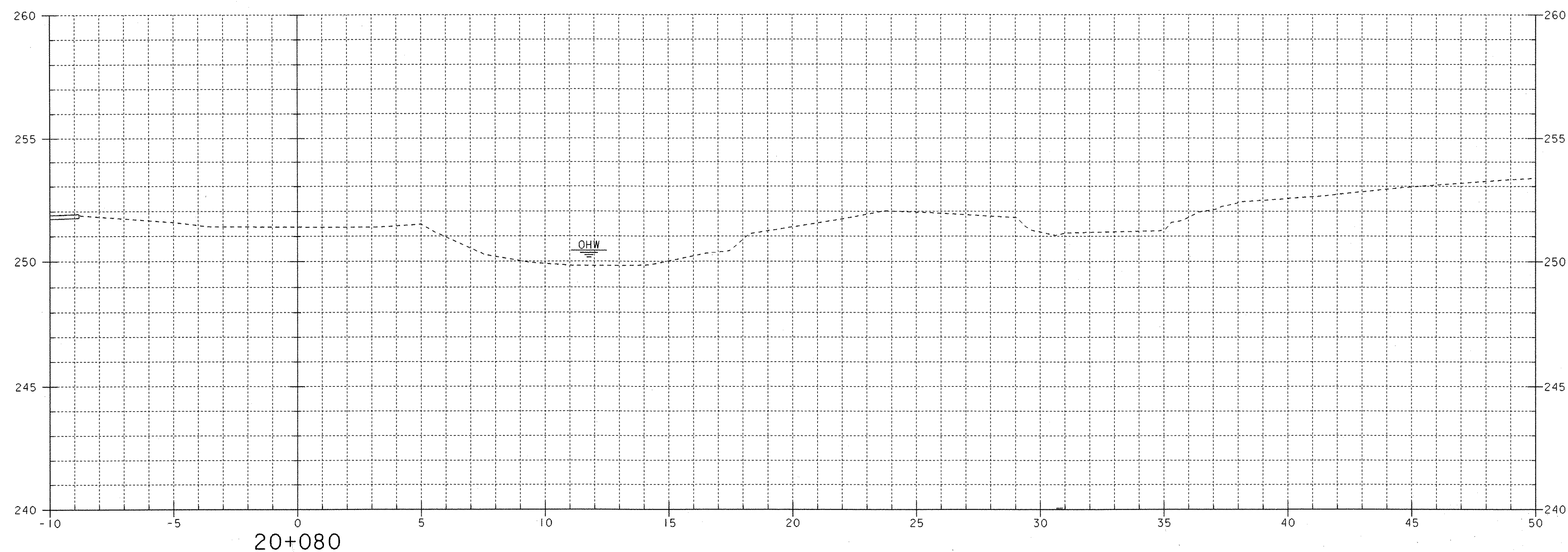
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PROJECT MANAGER: R.R. WHITCOMB	DRAWN BY: J. ARMSTRONG
DESIGNED BY: J. ARMSTRONG	CHECKED BY: M. LOZIER
	SHEET 31 OF 34

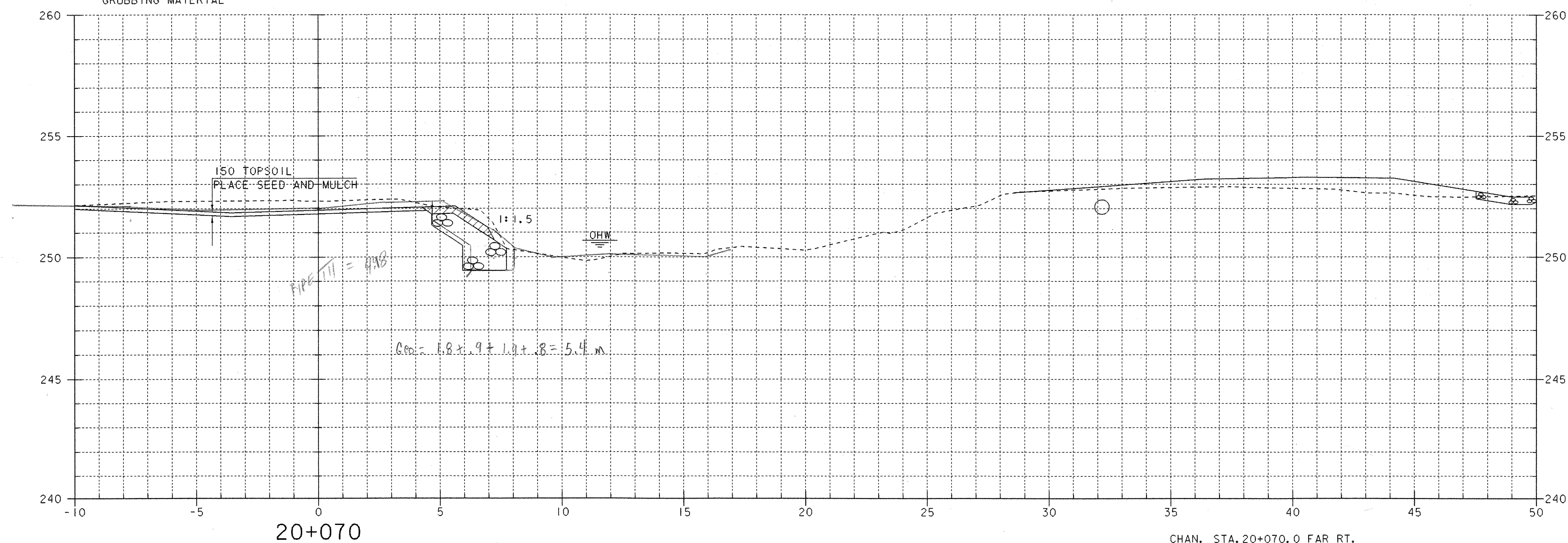


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PROJECT MANAGER: R.R. WHITCOMB	DRAWN BY: J. ARMSTRONG
DESIGNED BY: J. ARMSTRONG	CHECKED BY: M. LOZIER
	SHEET 32 OF 34





CHAN. STA. 20+075.0 RT.
END UNCLASSIFIED CHANNEL EXCAVATION
GEOTEXTILE UNDER STONE FILL
STONE FILL, TYPE III
GRUBBING MATERIAL

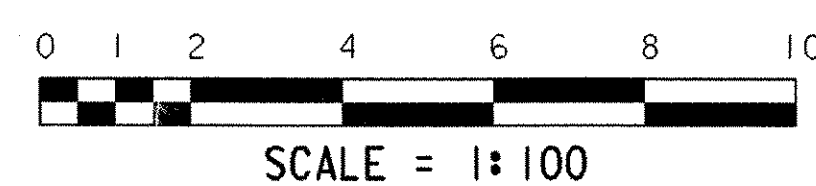


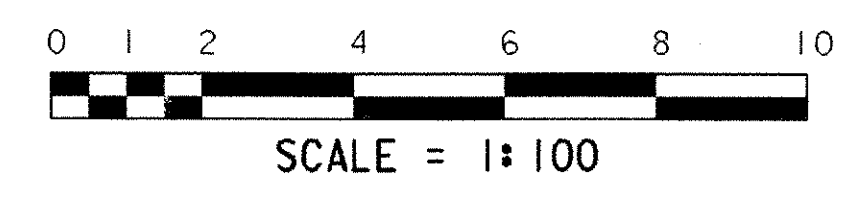
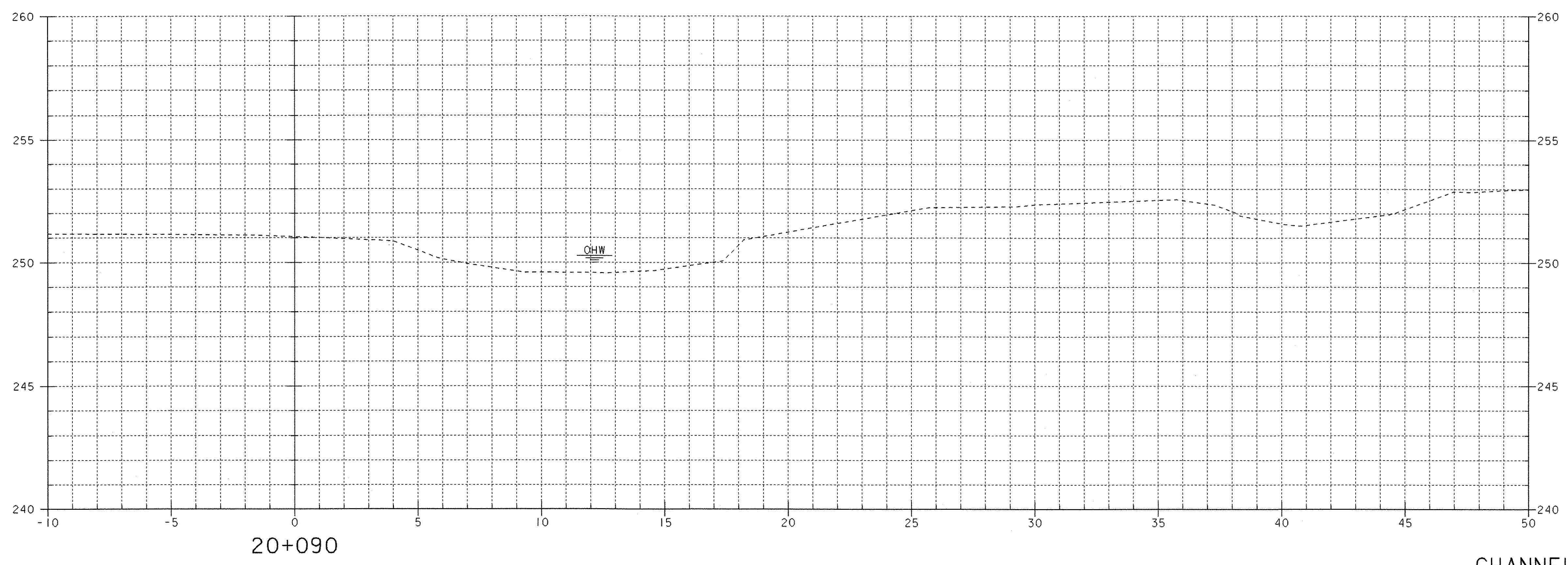
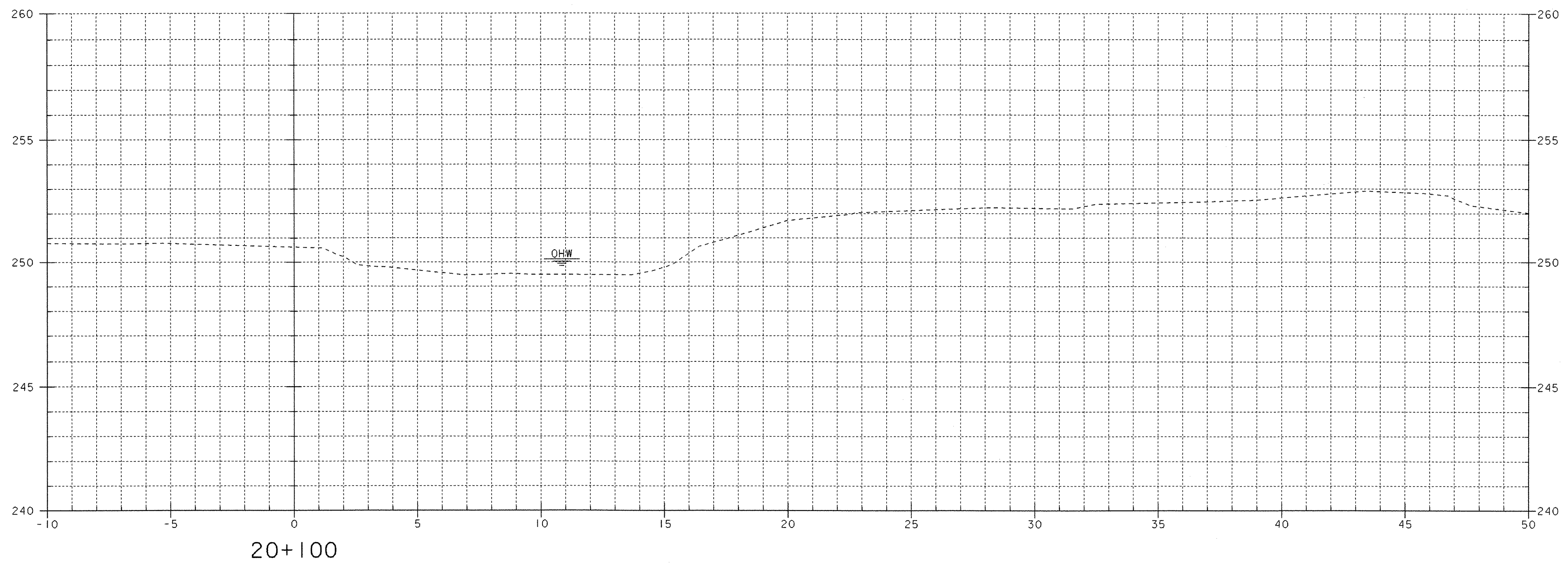
CHAN. STA. 20+070.0 FAR RT.
END UNCLASSIFIED CHANNEL EXCAVATION
GEOTEXTILE UNDER STONE FILL
STONE FILL, TYPE III
GRUBBING MATERIAL

CHANNEL CROSS SECTIONS (6)

PROJECT NAME: HUNTINGTON
PROJECT NUMBER: BRO 1445 (21)

FILE NAME: 93J029\Structures\sj029c06.i PLOT DATE: 09-JAN-2004
PROJECT MANAGER: R.R. WHITCOMB DRAWN BY: J. ARMSTRONG
DESIGNED BY: J. ARMSTRONG CHECKED BY: M. LOZIER
SHEET 33 OF 34





CHANNEL CROSS SECTIONS (7)

PROJECT NAME: HUNTINGTON	
PROJECT NUMBER: BRO 1445 (21)	
FILE NAME: 93J029\Structures\sj029c07.1	PLOT DATE: 09-JAN-2004
PROJECT MANAGER: R.R. WHITCOMB	DRAWN BY: J. ARMSTRONG
DESIGNED BY: J. ARMSTRONG	CHECKED BY: M. LOZIER
	SHEET 34 OF 34