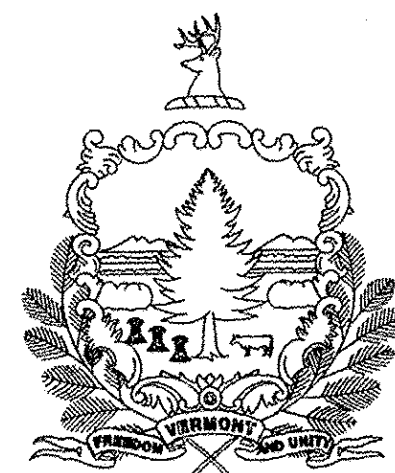


SEE SHEET 2 FOR INDEX OF SHEETS
AND LIST OF STANDARDS

STATE OF VERMONT AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT BRIDGE PROJECT

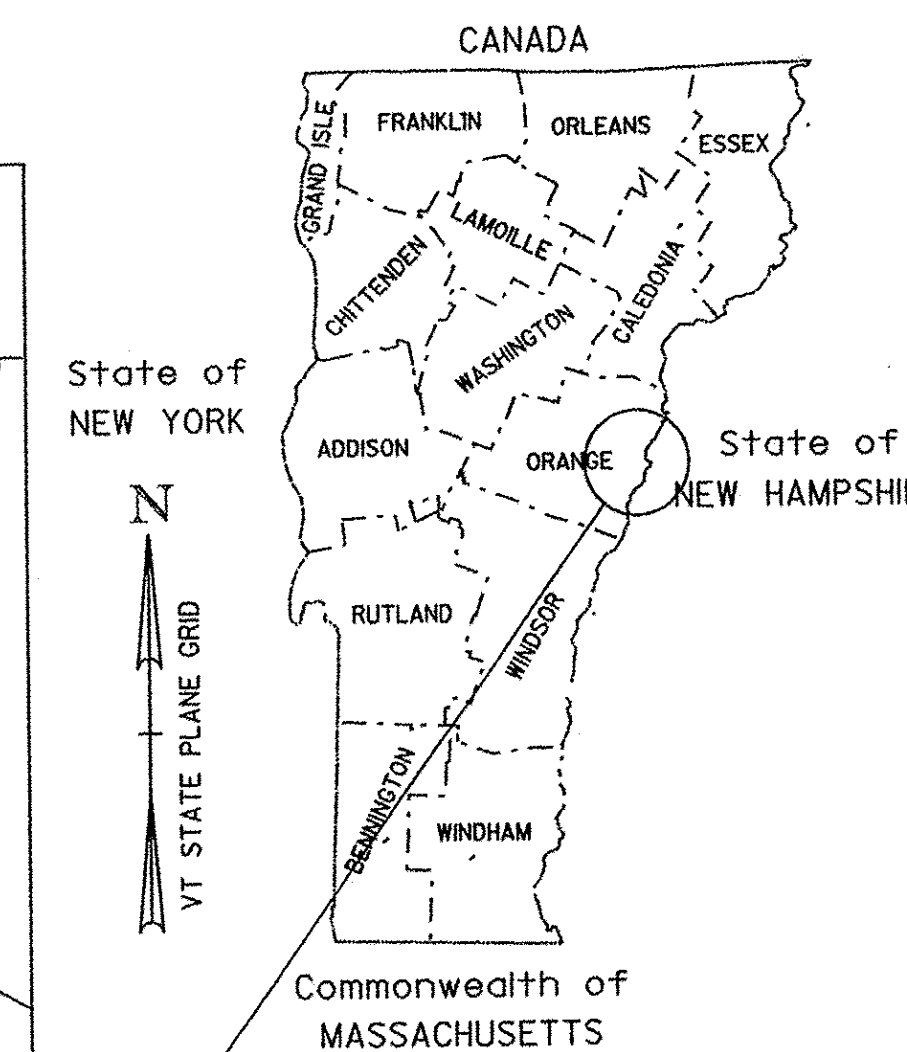
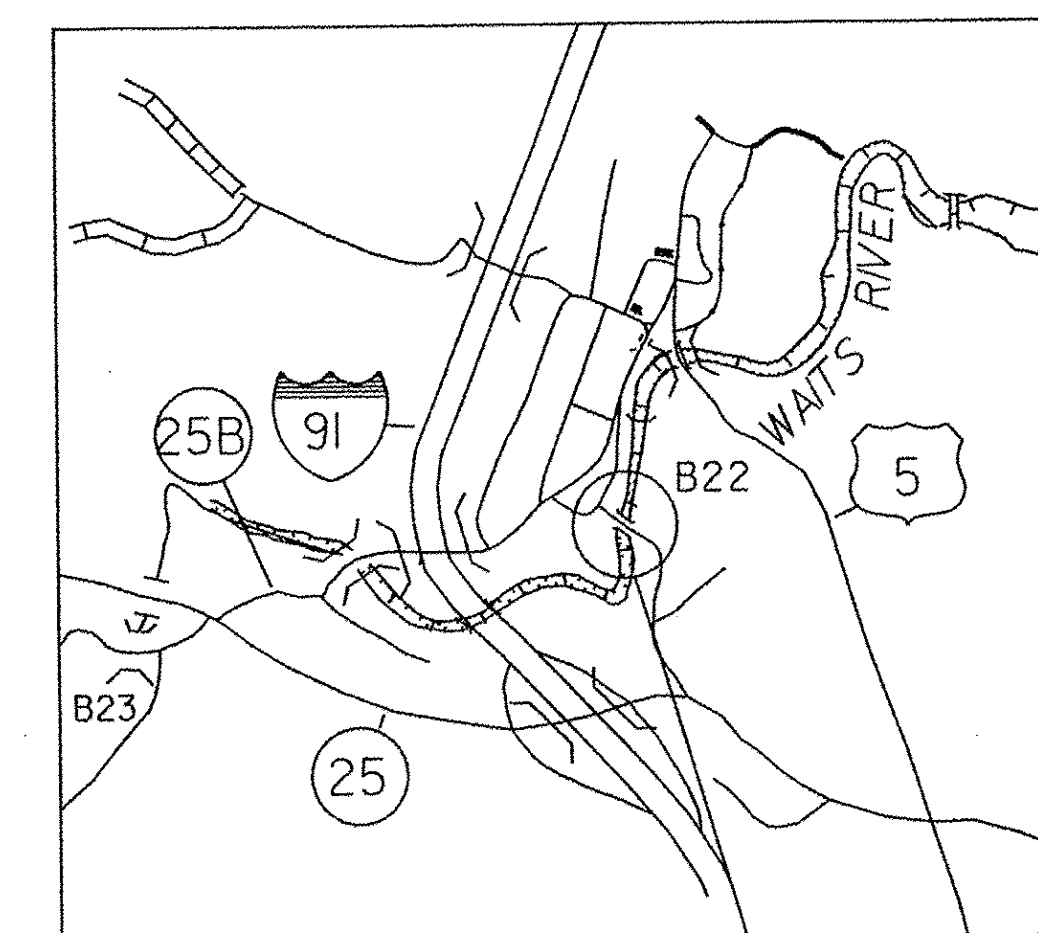
TOWN OF BRADFORD
COUNTY OF ORANGE

ROUTE NO : TH 27 (CLASS 3) BRIDGE NO : 22

PROJECT LOCATION : BEGINNING AT A POINT APPROX. 0.03 MI FROM THE JUNCTION OF MILL STREET AND TH 27 AND EXTENDING SOUTHEASTERLY ALONG TH 27 FOR 190 FEET.

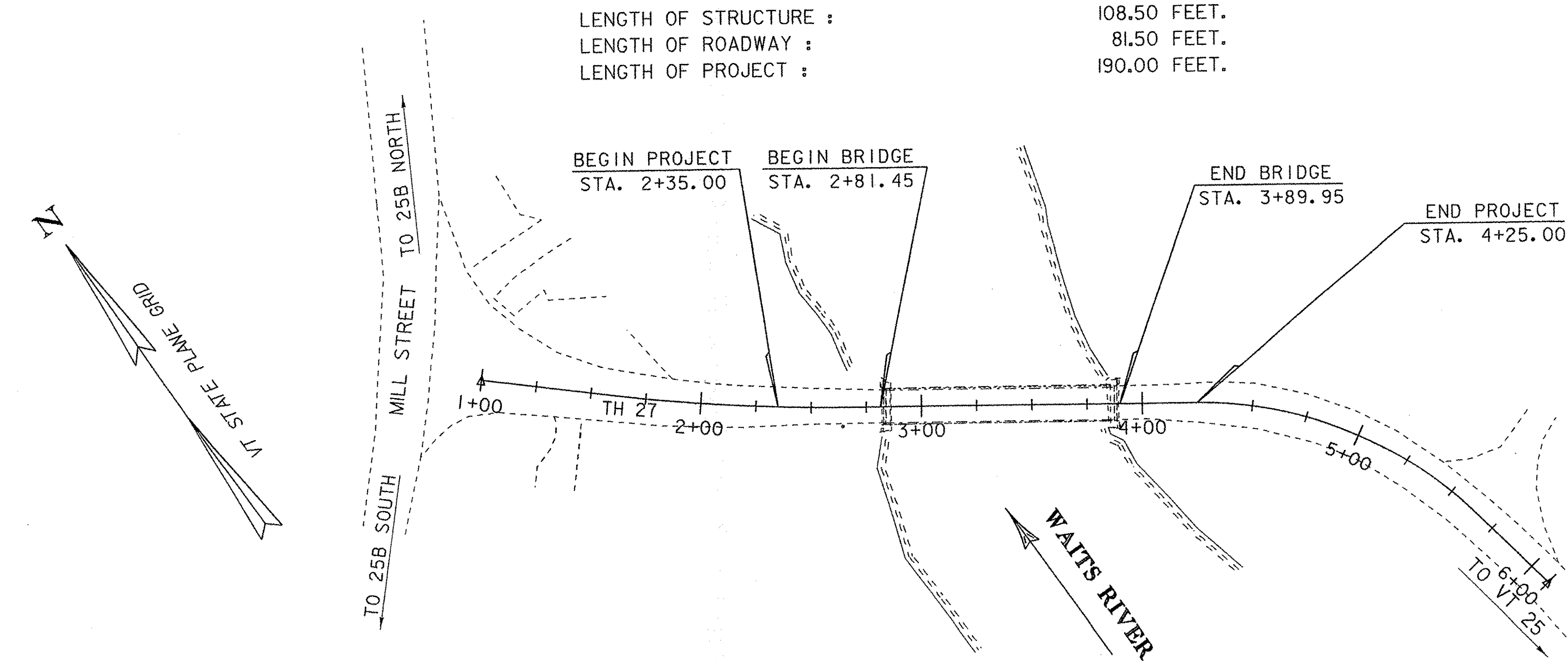
PROJECT DESCRIPTION : THE PROJECT SHALL CONSIST OF THE REHABILITATION OF THE EXISTING TRUSS WITH NEW ABUTMENTS INCLUDING THE RELATED APPROACH ROADWAY AND CHANNEL WORK

LENGTH OF STRUCTURE : 108.50 FEET.
LENGTH OF ROADWAY : 81.50 FEET.
LENGTH OF PROJECT : 190.00 FEET.



BRADFORD
STP 1447 (28)

RECORD PLANS	
CONTRACTOR:	AUSTIN CONSTRUCTION, INC.- CONCORD, VT
RESIDENT ENGINEER:	RON GRAY
CONSTRUCTION BEGAN:	APRIL 16, 2007
CONSTRUCTION COMPLETE:	NOVEMBER 4, 2011
RECORD PLANS BY:	RON GRAY & JENNA HYDE
I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.	
BY <i>Donald A. Gray</i>	RESIDENT ENGINEER
DATE <i>10/17/12</i>	
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	— o — o — o — o —
POINT OF ACCESS	X
FENCE LINE	X — X — X — X —
STONE WALL	— o — o — o — o —
TRAVELED WAY	— — — — —
GUARD RAIL	— o — o — o — o —
RAILROAD	— — — — —
SURVEY LINE	— — — — —
CULVERT	— — — — —
POWER POLE	⊕
TELEPHONE POLE	⊕
TREES	⊕
CONTROL OF ACCESS	— // — // — // —
PROPERTY LINE	— — — — —
R.O.W. TAKING LINE	— SR — SR — SR —
SLOPE RIGHTS	— — — — —
TOP OF CUT	— — — — —
TOE OF SLOPE	— — — — —

SURVEYED BY : R. GILMAN
SURVEYED DATE : 11/00

DATUM
VERTICAL : NAVD 88
HORIZONTAL : NAD 83/96

SCALE 1" = 40'-0"
40 0 40

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 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.

DIRECTOR OF PROGRAM DEVELOPMENT	APPROVED <i>R. Williams</i> DATE <i>11/2/06</i>
PROJECT MANAGER : C. WILLIAMS	
PROJECT NAME : BRADFORD	
PROJECT NUMBER : STP 1447 (28)	
SHEET 1 OF 63 SHEETS	

PLOTTED 01-NOV-2006

PRELIMINARY INFORMATION SHEET

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2. PRELIMINARY INFORMATION SHEET
- 3-4. QUANTITY SHEETS
- 5-6. TYPICAL SECTIONS
7. GPS CONTROL AND TRAVERSE TIES
8. LAYOUT SHEET
9. PROFILE SHEET
10. TRAFFIC CONTROL SHEET
11. TRAFFIC SIGN SUMMARY SHEET
- 12-13. BORING SHEETS
14. PLAN AND ELEVATION
15. GENERAL NOTES
16. TRUSS FLOOR & ELEVATION
17. TRUSS FLOOR PLAN
- 18-20. BEARING DETAILS
21. TRUSS END DETAILS
22. FRP DECK AND CURB DETAILS
23. APPROACH SLABS
24. ABUTMENT #1
25. ABUTMENT #2
- 26-27. WINGWALL DETAILS
28. FOOTINGS PLAN SHEET
29. BRIDGE RAIL DETAIL
- 30-33. WATER MAIN SHEETS
34. REINFORCING STEEL SCHEDULE
- 35-37. MAINLINE CROSS SECTIONS
- 38-42. CHANNEL CROSS SECTIONS
43. EROSION CONTROL NARRATIVE
44. EXISTING CONDITIONS SITE PLAN
45. EROSION PREVENTION AND SEDIMENT CONTROL PLAN
46. FINAL CONDITIONS SITE PLAN
47. EROSION CONTROL NOTES
- 48-52. EROSION CONTROL DETAIL SHEETS
- 53-63. REFERENCE SHEETS

LIST OF STANDARDS

E-100	CONSTRUCTION APPROACH SIGNS	1/2/2004
E-100A	SIDE ROAD CONSTRUCTION - APPROACH SIGNS	1/2/2004
E-102	CONSTRUCTION SIGN DETAILS	6/30/2003
E-102A	CONSTRUCTION SIGN DETAILS	5/1/2004
E-107	DELINEATION, BARRICADES AND DETOURS FOR CONSTRUCTION AREAS	6/30/2003
E-107A	BREAKAWAY BARRICADE DETAILS	8/8/1995
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD	8/8/1995
E-134	BRIDGE NUMBER PLAQUE	8/8/1995
E-138	MILE MARKER DETAILS - STATE & TOWN HIGHWAYS	5/30/2003
E-141	REGULATORY SIGN DETAILS	9/20/1995
E-142	REGULATORY SIGN DETAILS	9/20/1995
E-143	REGULATORY SIGN DETAILS	6/15/2004
E-146	REGULATORY SIGN DETAILS	9/20/1995
E-152	WARNING SIGN DETAILS	5/1/2004
E-160	FLANGED CHANNEL STEEL SIGN POST	5/20/1999
G-1	STEEL BEAM GUARDRAIL (50MPH & OVER) HEAVY DUTY STEEL BEAM GUARDRAIL TWISTED END TERMINAL ANCHOR FOR STEEL BEAM RAIL	1/3/2000
G-1D	STEEL BEAM GUARDRAIL (40MPH & LESS) HEAVY DUTY STEEL BEAM GUARDRAIL STEEL BEAM MEDIAN BARRIER ANCHOR FOR STEEL BEAM RAIL	1/3/2000
G-16	STEEL BEAM GUARDRAIL ATTACHMENTS TO EXISTING BRIDGE	6/1/1994
G-18	TERMINAL CONNECTOR FOR STEEL BEAM GUARDRAIL	6/1/1994
SB-R6-82	PRECAST CONCRETE TEMPORARY TRAFFIC BARRIER BRIDGE RAILING - HEAVY DUTY STEEL BEAM	1/6/1995

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: 2/7/05

DRAINAGE AREA : 153 Square Miles
 CHARACTER OF TERRAIN : Mostly Forested, Hilly to Mountainous
 STREAM CHARACTERISTICS : Sinuous, Wide Flood Plain
 NATURE OF STREAMBED : Sand and Gravel with Some Silt Closer to Dam

PEAK FLOW DATA

Q 2.33 =	4,000 cfs	Q 50 =	11,000 cfs
Q 10 =	6,850 cfs	Q 100 =	13,000 cfs
Q 25 =	9,000 cfs	Q 500 =	18,200 cfs

DATE OF FLOOD OF RECORD :
 ESTIMATED DISCHARGE :
 WATER SURFACE ELEV. :
 NATURAL STREAM VELOCITY : @ Q25 = 7.4 fps
 ICE CONDITIONS : Moderate
 DEBRIS : Light
 DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? No
 IS ORDINARY RISE RAPID? No
 IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? Yes
 IF YES, DESCRIBE : The Smith Hydroelectric Dam is approximately 1,200 feet downstream.

WATERSHED STORAGE : >1% HEADWATERS:
 UNIFORM : x
 IMMEDIATELY ABOVE SITE :

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE : Steel Warren Pony Truss
 YEAR BUILT : 1934
 CLEAR SPAN(NORMAL TO STREAM): 99'
 VERTICAL CLEARANCE ABOVE STREAMBED: 19'
 WATERWAY OF FULL OPENING: 1400 Sq. Ft.
 DISPOSITION OF STRUCTURE: Rehabilitation
 TYPE OF MATERIAL UNDER SUBSTRUCTURE: Unknown

WATER SURFACE ELEVATIONS AT:

Q2.33 =	463.4'	VELOCITY =	6.3 fps
Q10 =	466.1'	"	8.1 fps
Q25 =	467.8'	"	9.3 fps
Q50 =	469.2'	"	10.2 fps
Q100 =	470.5'	"	11.1 fps

LONG TERM STREAMBED CHANGES:

IS THE ROADWAY OVERTOPPED BELOW Q100: No
 FREQUENCY:
 RELIEF ELEVATION: 472.9'
 DISCHARGE OVER ROAD @Q100: 0 cfs

UPSTREAM STRUCTURE

TOWN: Bradford DISTANCE: 1,750'
 HIGHWAY #: 191 STRUCTURE #: B 59N
 CLEAR SPAN: 271' CLEAR HEIGHT: 36'
 YEAR BUILT: 1973 FULL WATERWAY: 9,700 Sq. Ft.
 STRUCTURE TYPE: 2-Span Plate Girder

DOWNSTREAM STRUCTURE

TOWN: Bradford DISTANCE: 1,650'
 HIGHWAY #: US 5 STRUCTURE #: Br 91
 CLEAR SPAN: 88' CLEAR HEIGHT: 16'
 YEAR BUILT: 1939 FULL WATERWAY: 1,470 Sq. Ft.
 STRUCTURE TYPE: Riveted 2-Girder

LOAD FACTOR - LOAD RATING (TONS)

LOADING LEVELS	TRUCK						
	H	HS	3S2	6 AXLE	3A. STR.	4A. STR.	5A. SEM
INVENTORY	14	19					
POSTED	17	25	30		17	18	30
OPERATING		28	35	31	19	20	

COMMENTS: H TRUCK REPRESENT H-15 TRUCK

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2006	1400	200	61	2	20
2026	1900	260	61	2	30

20 year ESAL for flexible pavement from 2006 to 2026 : 86 000
 40 year ESAL for flexible pavement from 2006 to 2046 : 197 000
 Design Speed : 25 mph

PROPOSED STRUCTURE

STRUCTURE TYPE: Rehabilitation of Existing Structure
 CLEAR SPAN(NORMAL TO STREAM): 103'
 VERTICAL CLEARANCE ABOVE STREAMBED: 19'
 WATERWAY OF FULL OPENING: 1,540 Sq. Ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	463.3'	VELOCITY =	6.1 fps
Q10 =	466.0'	"	7.9 fps
Q25 =	467.7'	"	9.0 fps
Q50 =	469.1'	"	10.0 fps
Q100 =	470.4'	"	10.8 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
 FREQUENCY:
 RELIEF ELEVATION: 473.1
 DISCHARGE OVER ROAD @Q100: 0 cfs

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 473.3'
 VERTICAL CLEARANCE: @ Q25 = 5.6'

SCOUR: Abutments will be poured onto ledge

REQUIRED CHANNEL PROTECTION: Stone Fill, Type III

PERMIT INFORMATION

AVERAGE DAILY FLOW: 126 cfs DEPTH OR ELEVATION:
 ORDINARY LOW WATER: 68 cfs Elevation = 461.5'
 ORDINARY HIGH WATER: 256 cfs Elevation = 461.5'

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: Road will be closed
 CLEAR SPAN(NORMAL TO STREAM):
 VERTICAL CLEARANCE ABOVE STREAMBED:
 WATERWAY AREA OF FULL OPENING:

ADDITIONAL INFORMATION

DESIGN CRITERIA

1. DESIGN LIVE LOAD AASHTO H 15
2. DESIGN SPAN 105 FEET
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL N/A
ON LEDGE 8 ksf Abutment No. 1 and 5.6 ksf Abutment No. 2
4. ALLOWABLE LOAD FOR PILING N/A
TYPE
5. ESTIMATED LENGTH
6. STRUCTURAL STEEL AASHTO M270M/M270 GRADE 36 OR 50 PAINTED
6. REINFORCING STEEL GRADE 60
7. CONCRETE, HIGH PERFORMANCE CLASS A fc: N/A
CONCRETE, HIGH PERFORMANCE CLASS B fc: 3500 psi
8. DESIGN SOIL UNIT WEIGHT 140 pcf
9. DESIGN LOAD FOR SPREAD FOOTINGS ON SOIL N/A

TRAFFIC MAINTENANCE

1. IS TRAFFIC TO BE MAINTAINED? NO
 IF YES, ON EXISTING STRUCTURE?
 OR ON TEMPORARY BRIDGE?
 ONE OR TWO-WAY TRAVEL?
2. TRAFFIC CONTROL SIGNALS REQUIRED? NO
3. ARE SIDEWALKS REQUIRED? NO
 IF SO, ON WHAT SIDE?

PROJECT NAME: BRADFORD

PROJECT NUMBER: STP 1447 (28)

FILE NAME: s96j286.xls.dgn PLOT DATE: 12/1/2006
 PROJECT MANAGER: C.P.WILLIAMS DRAWN BY: M.FESSEL
 DESIGNED BY: M.GAGULIC CHECKED BY: R.S.YOUNG
 PRELIMINARY INFORMATION SHEET #1 SHEET 2 OF 63

QUANTITY SHEET

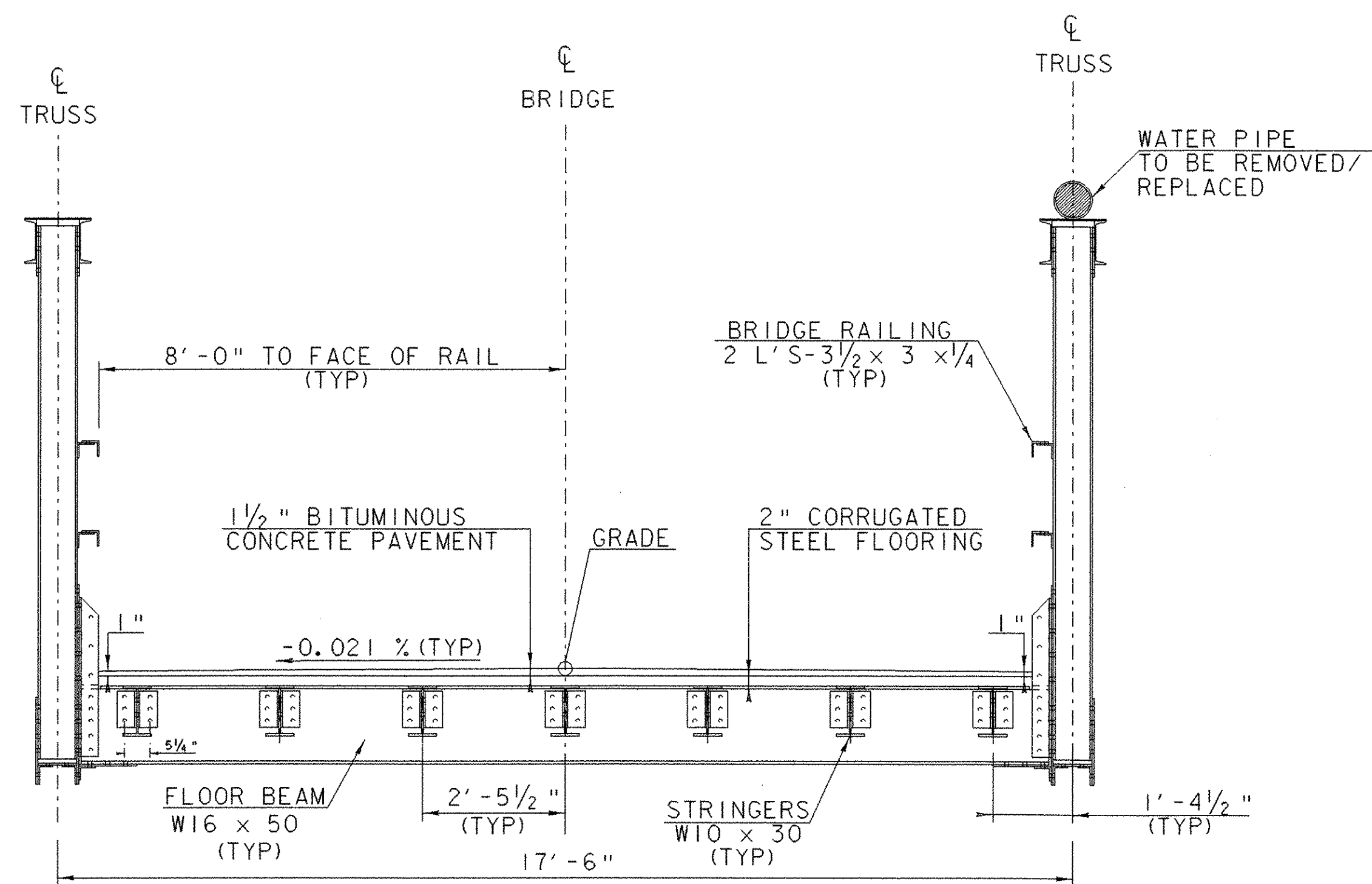
SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
					ROADWAY	EROSION CONTROL	BRIDGE	WATER MAIN (PARTICIPATING)	FULL C. E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
					1					1		LS	CLEARING AND GRUBBING (INCLUDING INDIVIDUAL TREES AND STUMPS)	201.10				
					142					142		CY	COMMON EXCAVATION	203.15				
							70			70		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27				
					10					10		CY	EARTH BORROW	203.30				
								15		15		CY	SAND BORROW	203.31				
						10		40		50		CY	TRENCH EXCAVATION OF EARTH	204.20				
							490	15		505		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30				
							750			750		CY	COFFERDAM EXCAVATION, EARTH	208.30				
							460			460		CY	COFFERDAM EXCAVATION, ROCK	208.35				
							1			1		LS	COFFERDAM (ABUTMENT #1)	208.40				
							1			1		LS	COFFERDAM (ABUTMENT #2)	208.40				
					170					170		SY	COLD PLANING-BIT. PAVEMENT	210.10				
					190					190		CY	SUBBASE OF GRAVEL	301.15				
					2					2		CWT	EMULSIFIED ASPHALT	404.65				
					93					93		TON	BITUMINOUS CONCRETE PAVEMENT (PG 58-28)	406.25				
							296			296		CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34				
							3260			3260		LB	STRUCTURAL STEEL (ROLLED BEAM)	506.50				
							2730			2730		LB	STRUCTURAL STEEL	506.60				
							35090			35090		LB	REINFORCING STEEL	507.15				
							124	35		159		LF	DRILLING AND GROUTING DOWELS	507.16				
							4920			4920		LB	EPOXY COATED REINFORCING STEEL	507.17				
							1			1		LS	STRUCTURAL PAINTING, SHOP APPLIED (2 TONS)	513.25				
							1			1		LS	STRUCTURAL PAINTING, FIELD APPLIED (23 TONS)	513.30				
							1			1		LS	CONTAINMENT & ENVIRONMENTAL PROTECTION, SHOP	513.35				
							1			1		LS	CONTAINMENT & ENVIRONMENTAL PROTECTION, FIELD	513.36				
							1			1		LS	SURFACE PREPARATION, SHOP (2 TONS)	513.40				
							1			1		LS	SURFACE PREPARATION, FIELD (23 TONS)	513.41				
							10			10		GAL	WATER REPELLENT (MOD. - SILANE)	514.10				
							16			16		LF	BRIDGE EXPANSION JOINT (ASPHALT PLUG) (MOD.)	516.10				
							1.23			1.23		MFBM	NON - STRUCTURAL LUMBER-TREATED	522.35				
							193			193		SY	REMOVAL OF BRIDGE PAVEMENT	529.10				
							1			1		EACH	REMOVAL OF STRUCTURE (1680 SF - EST.)	529.15				
							1			1		EACH	PARTIAL REMOVAL OF STRUCTURE	529.20				
							14			14		EACH	BEARING DEVICE ASSEMBLY (FABRIC)	531.10				
							193			193		SY	CONCRETE CLASS AA OVERLAY (MOD. - FIBER REINFORCED POLYMER DECK)	580.19				
						10				10		HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25				
					1					1		TON	DUST AND ICE CONTROL WITH CALCIUM CHLORIDE	609.15				
					5		1			6		CY	STONE FILL, TYPE I	613.10				
						10				10		CY	STONE FILL, TYPE I (MOD. - CHECK DAM)	613.10				
						16				16		CY	STONE FILL, TYPE I (MOD. - CONSTRUCTION ENTRANCE)	613.10				

PROJECT NAME: **BRADFORD**
 PROJECT NUMBER: **STP 1447(28)**
 FILE NAME: s96j286.xls.dgn
 PROJECT MANAGER: C.P.WILLIAMS
 DESIGNED BY: M.GAGULIC
 QUANTITY SHEET #1
 PLOT DATE: 11/02/2006
 DRAWN BY: M.FESSEL
 CHECKED BY: R.S.YOUNG
 SHEET 3 OF 63

QUANTITY SHEET

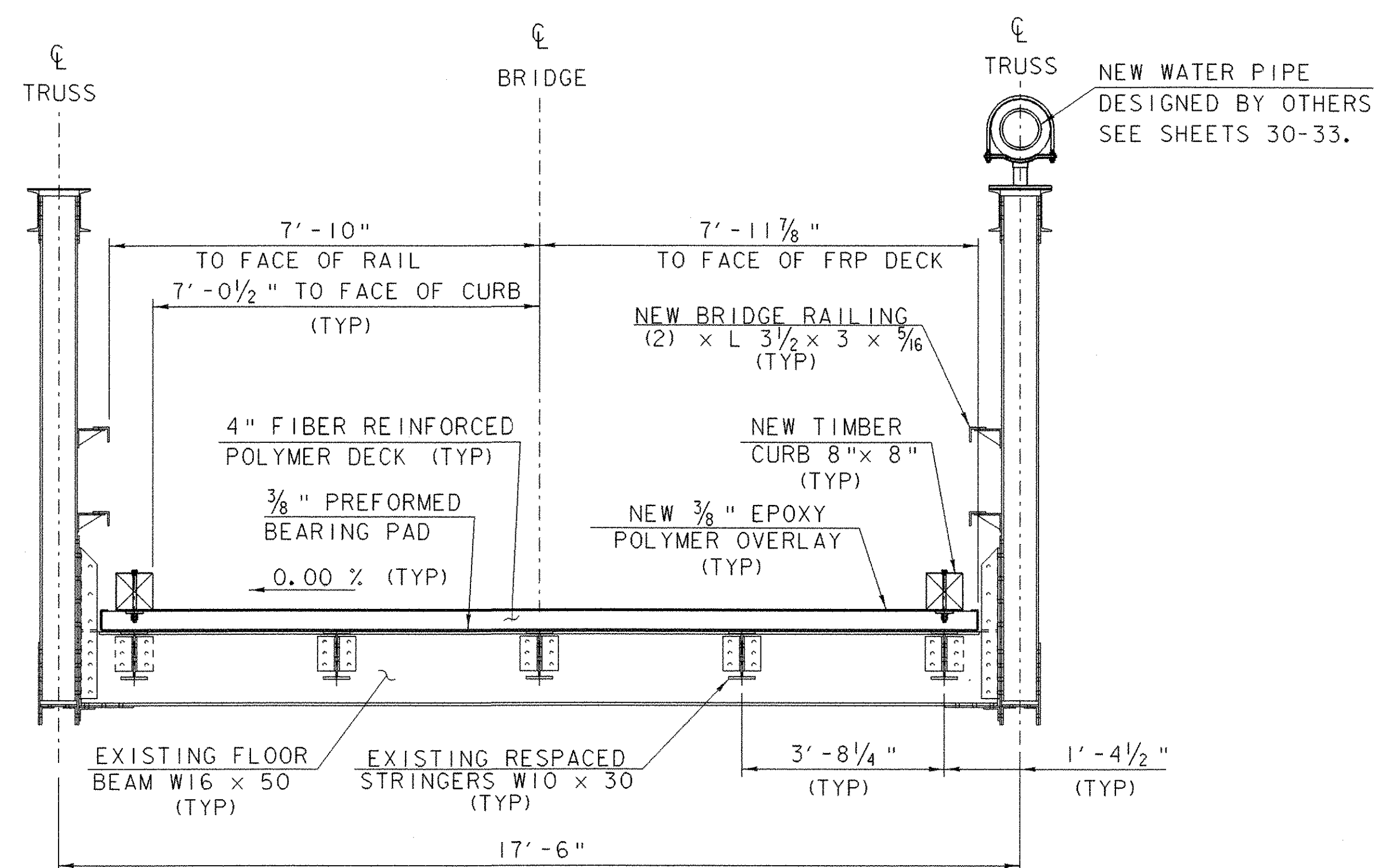
SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
					ROADWAY	EROSION CONTROL	BRIDGE	WATER MAIN (PARTICIPATING)	FULL C. E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
							130			130		CY	STONE FILL, TYPE III	613.12				
						410				410		LF	SNOW FENCE (MOD. - PDF)	620.70				
					243					243		LF	HEAVY DUTY STEEL BEAM GUARD RAIL (GALVANIZED) (MOD. - 8' POSTS)	621.21				
					4					4		EACH	TERMINAL CONNECTOR FOR STEEL BEAM GUARD RAIL	621.53				
					4					4		EACH	ANCHOR FOR STEEL BEAM RAIL	621.60				
					180					180		LF	REMOVL AND DISP OF GUARD RAIL	621.80				
					60					60		LF	TEMPORARY TRAFFIC BARRIER	621.90				
								70		70		LF	DUCTILE, IRON PIPE, CEM LINED (8")	629.24				
								2		2		EACH	GATE VALVE WITH VALVE BOX (8")	629.27				
								1		1		LS	TRANSFER TO NEW SYSTEM-WATER SYSTEM	629.42				
								1		1		LS	WATER MAIN ON BRIDGE (8")	629.60				
									1	1		LS	FIELD OFFICE-ENGINEERS	631.10				
									1	1		LS	TESTING EQUIPMENT - CONCRETE	631.16				
									1	1		LS	TESTING EQUIPMENT - BITUMINOUS	631.17				
									1	1		LS	TESTING EQUIPMENT - PROTECTIVE COATINGS	631.18				
									1	1		LU	FIELD OFFICE - TELEPHONE (N.A.B.I.)	631.25				
					1					1		LS	MOBILIZATION / DEMOBILIZATION	635.11				
					1					1		LS	TRAFFIC CONTROL	641.10				
					15	10	150			175		SY	GEOTEXTILE UNDER STONE FILL	649.31				
						90				90		SY	GEOTEXTILE FOR SILT FENCE	649.51				
						90				90		SY	GEOTEXTILE FOR FILTER CURTAIN	649.61				
						10				10		LB	SEED	651.15				
						10				10		LB	SEED-WINTER RYE	651.17				
						100				100		LB	FERTILIZER	651.18				
						1				1		TON	AGRICULTURAL LIMESTONE	651.20				
						1				1		TON	HAYMULCH	651.25				
						10				10		EACH	HAY BALES FOR EROSION CONTROL	651.26				
						80				80		SY	GRUBBING MATERIAL	651.40				
						1				1		LS	EROSION PREVENTION & SEDIMENT CONTROL PLAN	652.10				
						40				40		HR	MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN	652.20				
						1				1		LU	MAINTENANCE OF EROSION PREVENTION & SEDIMENT CONTROL PLAN (N.A.B.I.)	652.30				
						110				110		SY	EROSION MATTING	654.10				
					20					20		SF	TRAFFIC SIGNS, TYPE A	675.20				
					68					68		LF	FLANGED CHANNEL SIGN POST	675.301				
					7					7		EACH	REMOVING SIGNS	675.50				
					3					3		EACH	ERECTING SALVAGED SIGNS	675.60				

PROJECT NAME: **BRADFORD**
 PROJECT NUMBER: **STP 1447(28)**
 FILE NAME: s96j286xls.dgn PLOT DATE: 11/02/2006
 PROJECT MANAGER: C.P.WILLIAMS DRAWN BY: M.FESSEL
 DESIGNED BY: M.GAGULIC CHECKED BY: R.S.YOUNG
 QUANTITY SHEET #2 SHEET 4 OF 63



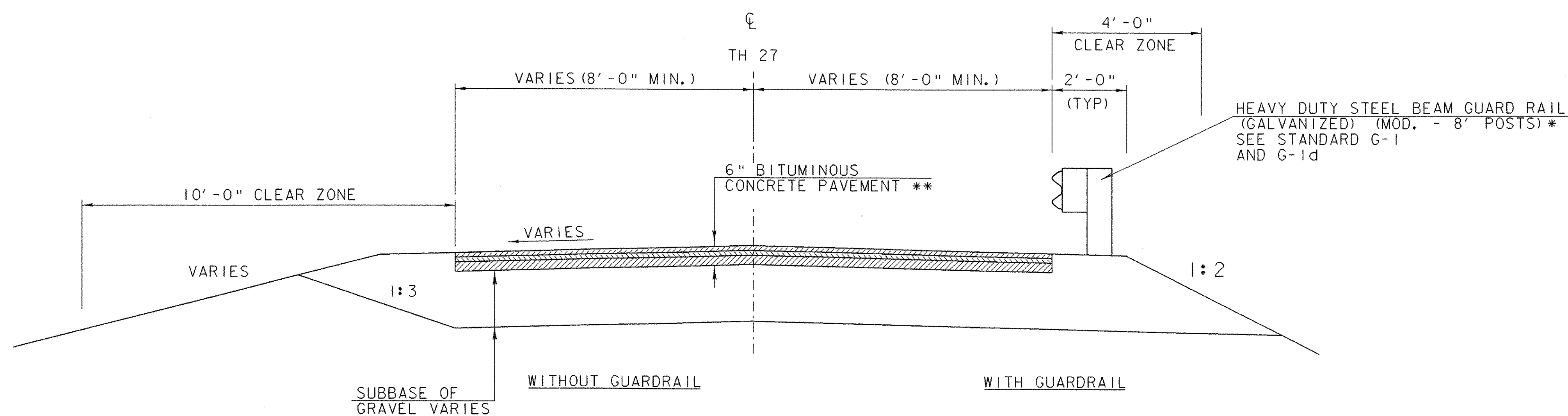
EXISTING TYPICAL BRIDGE SECTION

SCALE 1/2" = 1'-0



PROPOSED TYPICAL BRIDGE SECTION

SCALE 1/2" = 1'-0



TH 27 TYPICAL ROADWAY SECTION

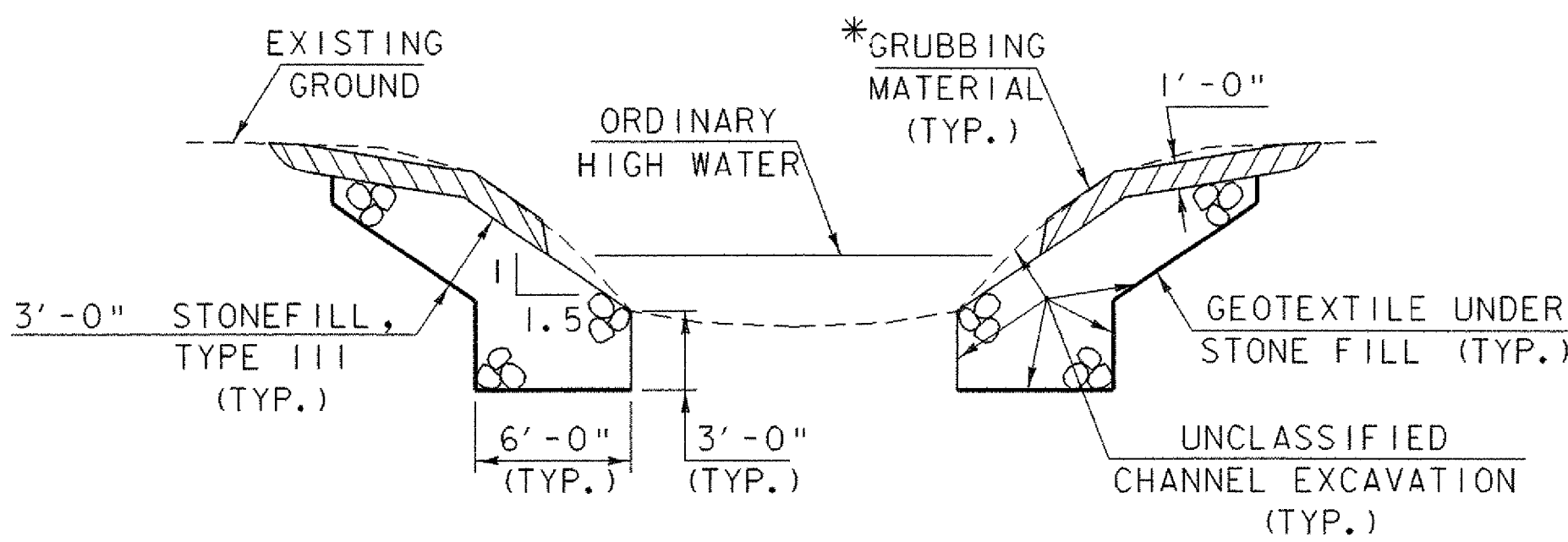
SCALE 1/2" = 1'-0

SCALE 1/2" = 1'-0



- * POST SHALL BE 8' LONG AND DRIVEN 1 FOOT DEEPER TO PROVIDE SAME STIFFNESS AS POST WITH 3 FOOT SHOULDER.
- ** 1 1/2" TYPE III OR IV OVER 1 1/2" TYPE III OR IV OVER 3" TYPE I OR II

PROJECT: BRADFORD	PROJECT NO.: STP 1447 (28)
DESIGN FILE NAME: 96j286/structures/s96j286typ.dgn	PLOT DATE: 22-NOV-2006
IPARM FILE NAME: s96j286typ.i	DRAWN BY: J. WHITE
DESIGNED BY: M. GAGULIC	CHECKED BY: R. S. YOUNG
SQUAD LEADER: C. P. WILLIAMS	SHEET: 5 OF 63
TYPICAL SECTIONS #1	



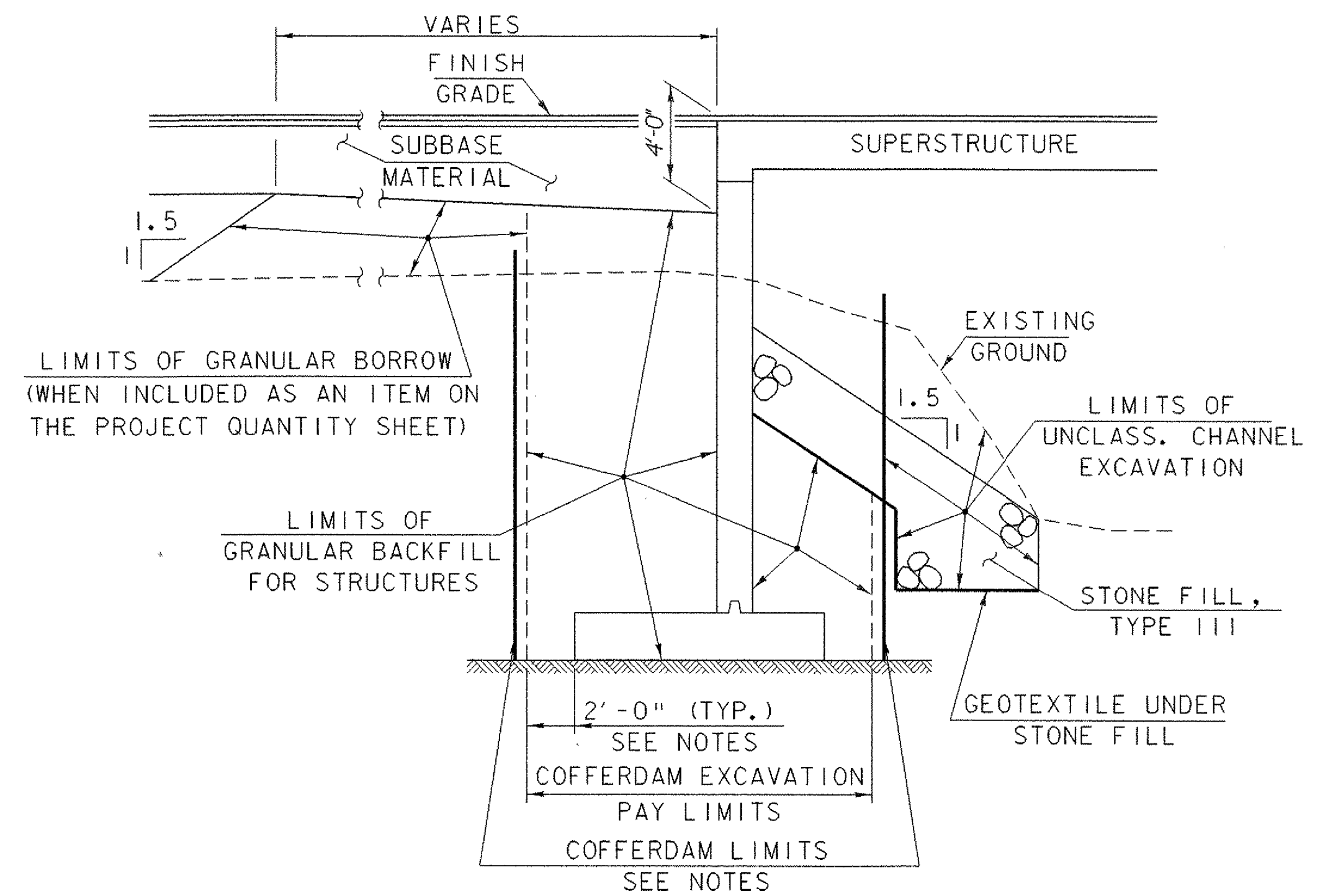
TYPICAL CHANNEL SECTION

(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.

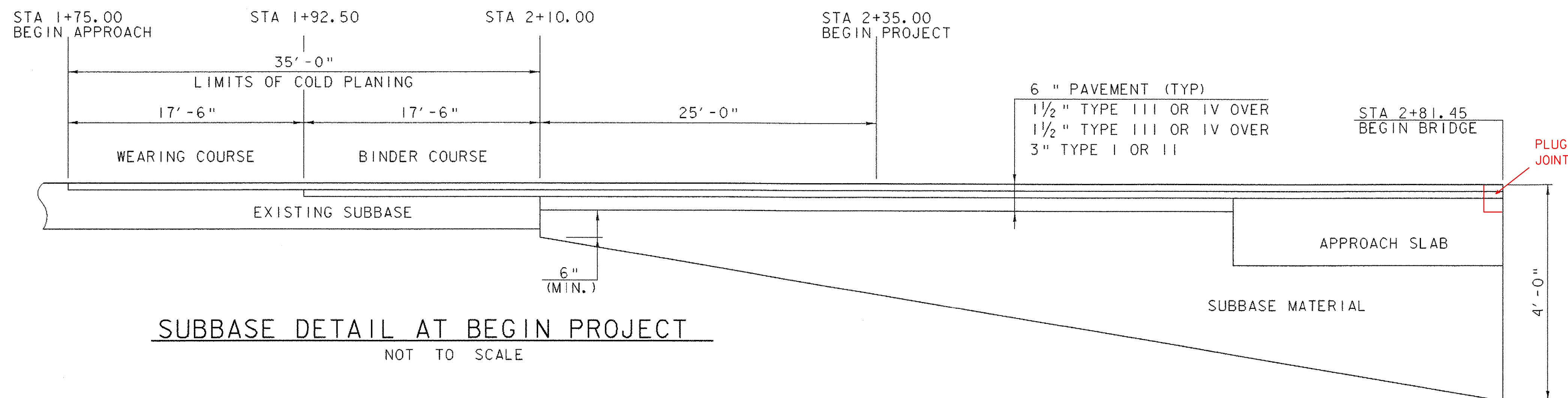
NOTES

1. COFFERDAM LIMITS TO BE DETERMINED BY THE CONTRACTOR.
2. THE PAY LIMITS OF "COFFERDAM EXCAVATION, EARTH" AND "COFFERDAM EXCAVATION, ROCK" SHALL BE 2'-0" OUTSIDE THE PERIMETER OF THE FOOTING, UP TO EXISTING GROUND OR BOTTOM OF SUBBASE, WHICHEVER IS LOWER.
3. ONE FOOT UNDERCUT AS DETERMINED NECESSARY BY THE RESIDENT ENGINEER.
4. 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, WILL BE MADE AT THE CONTRACT UNIT PRICE FOR UNCLASSIFIED CHANNEL EXCAVATION.



TYPICAL ABUTMENT SECTION

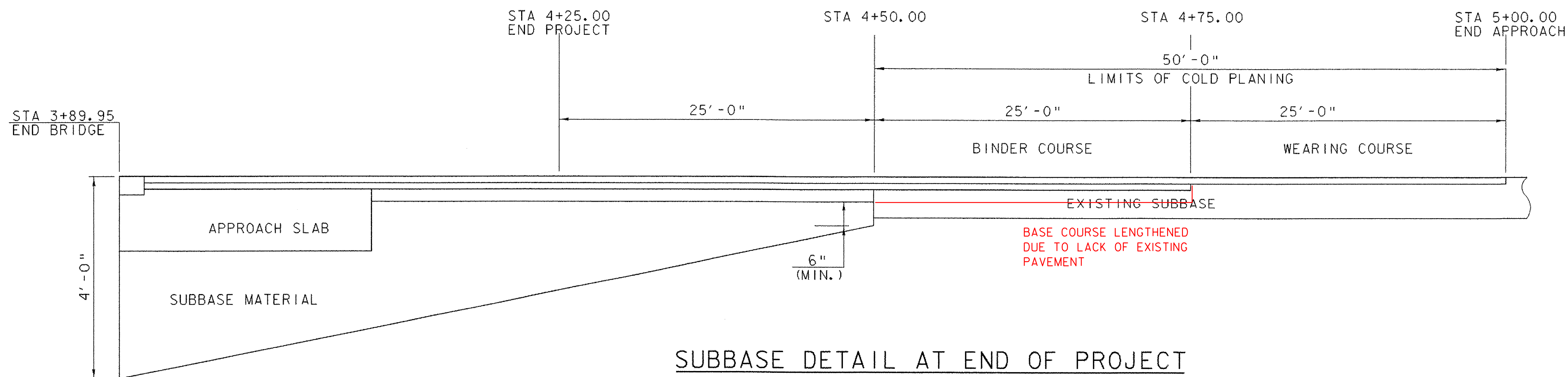
(NOT TO SCALE)



SUBBASE DETAIL AT BEGIN PROJECT

NOT TO SCALE

MATERIAL ITEM	TOLERANCE
PAVEMENT	± 1/4" TOTAL THICKNESS
AGGREGATE SURFACE COURSE	± 1/2"
BASE COURSE	± 1/2"
SUBBASE	± 1"
SAND BORROW	± 1"
GRANULAR BORROW	± 1"



SUBBASE DETAIL AT END OF PROJECT

NOT TO SCALE

PROJECT: BRADFORD	PROJECT NO.: STP 1447 (28)
DESIGN FILE NAME: 96j286/structures/s96j286typ.dgn	PLOT DATE: 22-NOV-2006
IPARM FILE NAME: s96j286typ2.i	DRAWN BY: J. WHITE
DESIGNED BY: M. GAGULIC	CHECKED BY: R. S. YOUNG
SQUAD LEADER: C.P. WILLIAMS	TYPICAL SECTIONS #2
	SHEET: 6 OF 63

GPS CONTROL POINTS

HVCTRL # 1

STANDARD DISK STAMPED

BRADFORD 189

N = 541211.490
E = 1738526.733
ELEV. = 487.180

DESCRIBED BY NATIONAL GEODETIC SURVEY 1992
THE STATION IS LOCATED ABOUT 8.85 KM (5.50 MI) NORTH-NORTHEAST OF FAIRLEE, 3.20 KM (2.00 MI) WEST OF PIERMONT NH, 1.3 KM (0.80 MI) SOUTH OF BRADFORD. OWNERSHIP--STATE OF VERMONT.
TO REACH FROM THE INTERSTATE HIGHWAY 91 NORTHBOUND BRIDGE OVER STATE ROUTE 25, GO EAST ALONG STATE ROUTE 25 FOR 0.15 MI (0.24 KM) TO A PARK AND RIDE LOT ON THE NORTH SIDE OF THE ROAD AND MARK SITE AT THE EAST END OF THE LOT.
STATION IS A PUNCH MARK ON THE TOP OF 5/8 INCH STAINLESS STEEL ROD UNDER ACCESS COVER, LOCATED 72 FT (21.9 M) NORTH OF THE CENTERLINE OF ROUTE 25, 32.5 FT (9.9 M) WEST OF THE EAST END OF A BOARD FENCE, 68.5 FT (20.9 M) EAST OF POLE NUMBER 5/14, 140 FT (42.7 M) NORTHEAST OF THE EAST END OF A TRAFFIC ISLAND, 1 FT (0.3 M) SOUTH OF A FIBERGLASS WITNESS POST IN THE EAST-WEST BOARD FENCE.

*TO ALLOW THE STATE PLANE COORDINATES TO FIT THE AGENCY DESIGN PLANE, SUBTRACT 500,000 FROM THE NORTING AND SUBTRACT 1,700,000 FROM THE EASTING.
* DESCRIPTION PROVIDED BY VERMONT AGENCY OF TRANSPORTATION GEODETIC SURVEY UNIT

HVCTRL # 2

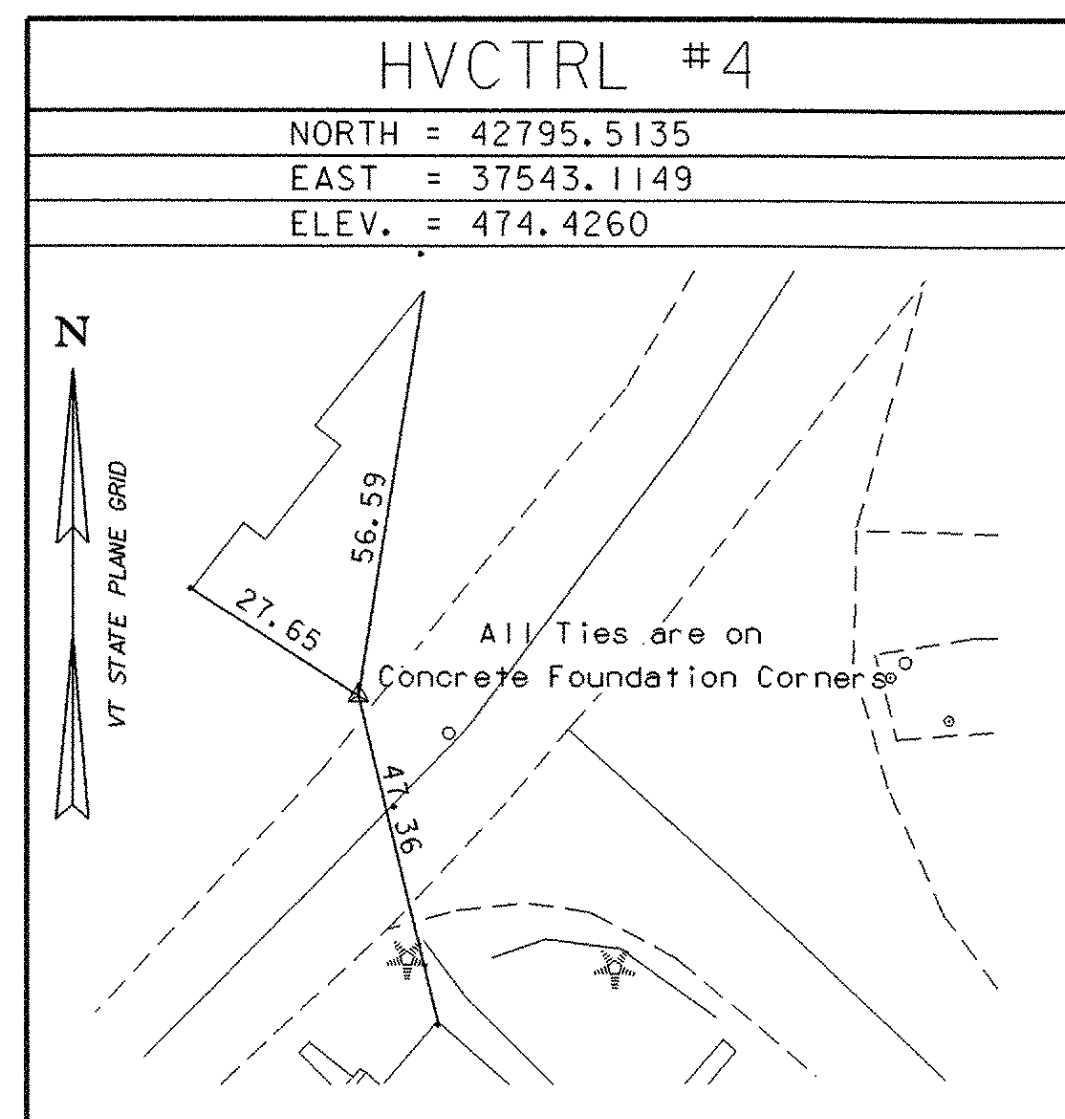
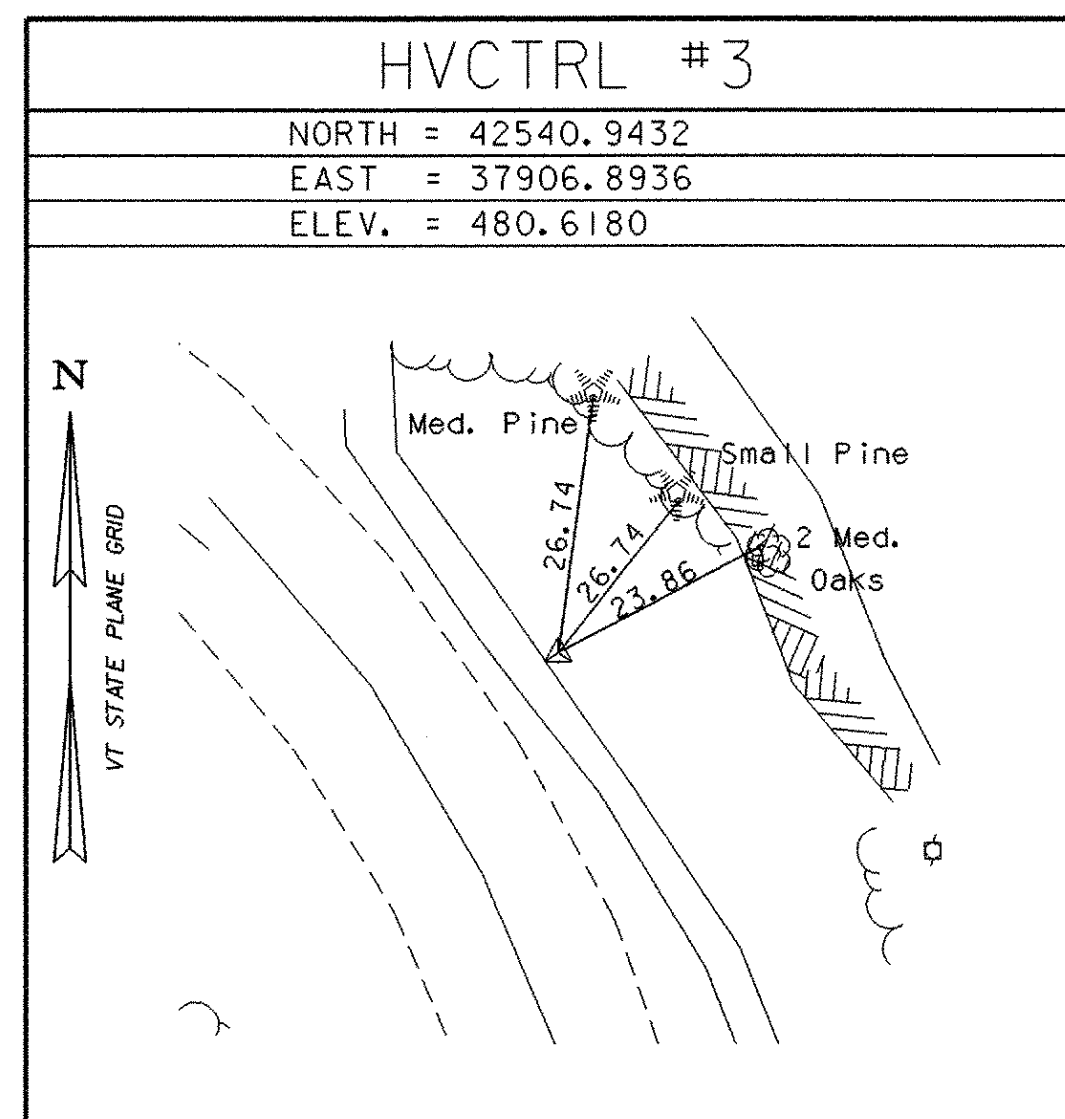
STANDARD DISK STAMPED

BRADFORD 189 AZ MK

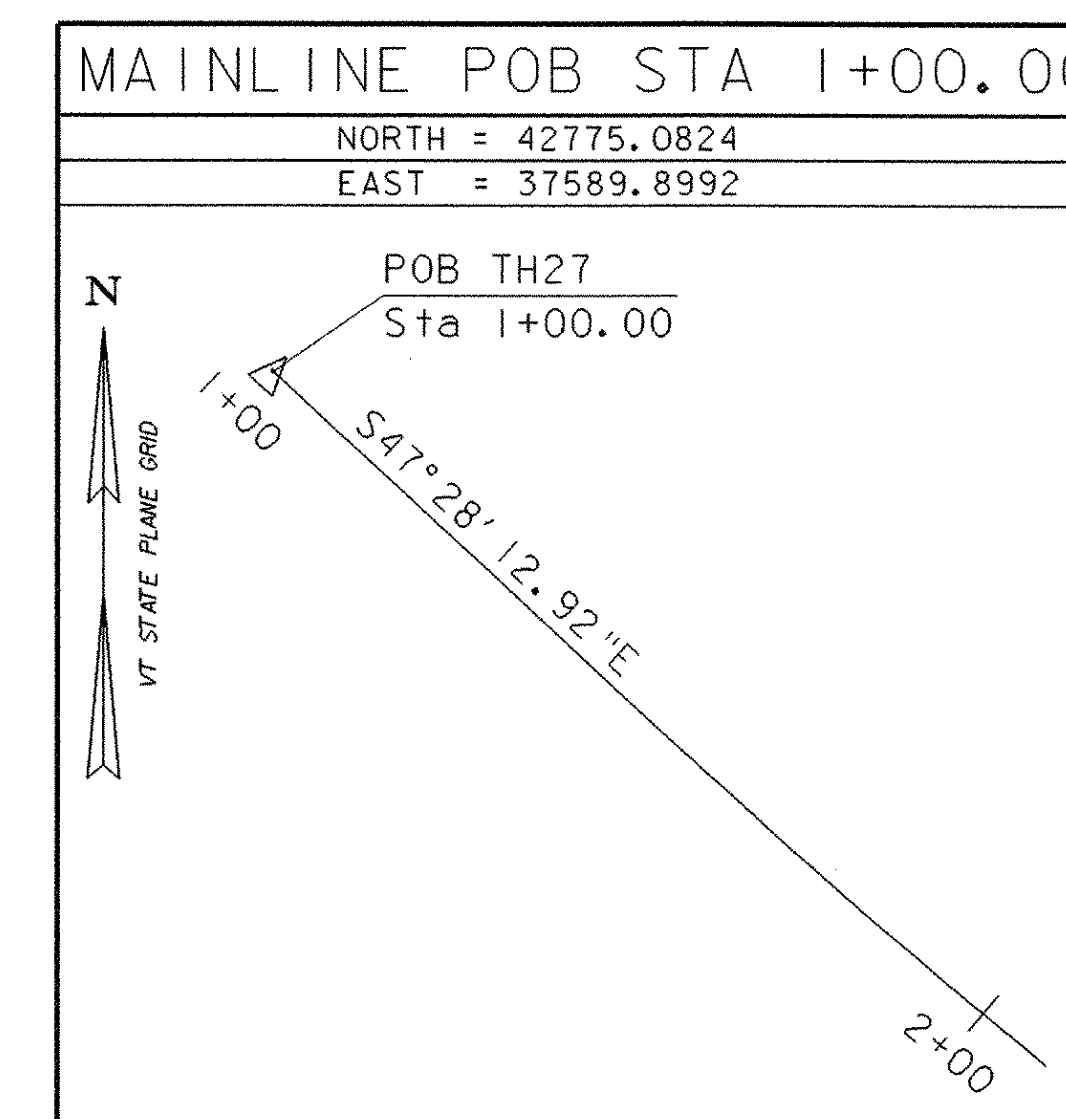
N = 541323.235
E = 1737142.365
ELEV. = 488.290

GENERAL LOCATION, BRADFORD, VT. THE MARK IS LOCATED AT THE NORTH END OF A GRASS TRIANGLE FORMED BY THE I-91 SOUTHBOUND LANE, VT ROUTE 25, AND THE I-91 SOUTHBOUND EXIT RAMP AT EXIT 16 IN BRADFORD. IT IS ABOUT 100 M (328.1 FT) NORTH OF THE NORTH END OF THE I-91 SOUTHBOUND BRIDGE OVER VT ROUTE 25. THE MARK IS SET FLUSH WITH GROUND SURFACE IN THE TOP OF A 30 CM DIAMETER CONCRETE MONUMENT ANCHORED TO ROCK 1 M (3.3 FT) DEEP. IT IS 2.3 M (7.5 FT) WEST OF AND ABOUT 0.2 M (0.7 FT) LOWER THAN THE WEST EDGE OF PAVEMENT OF THE I-91 SOUTHBOUND LANE, 40.2 M (131.9 FT) SOUTHWEST OF THE SOUTHWEST EDGE OF PAVEMENT OF THE I-91 SOUTHBOUND EXIT RAMP, 15.7 M (51.5 FT) SOUTHWEST OF A 40 CM CLUMP OF RED PINE, 14.3 M (46.9 FT) NORTHEAST OF A 15 CM HARDWOOD, 4.3 M (14.1 FT) NORTH OF THE NORTH END OF A STEEL BEAM GUARD RAIL, AND 0.3 M (1.0 FT) NORTH OF A FIBERGLASS WITNESS POST.

TRAVERSE TIES

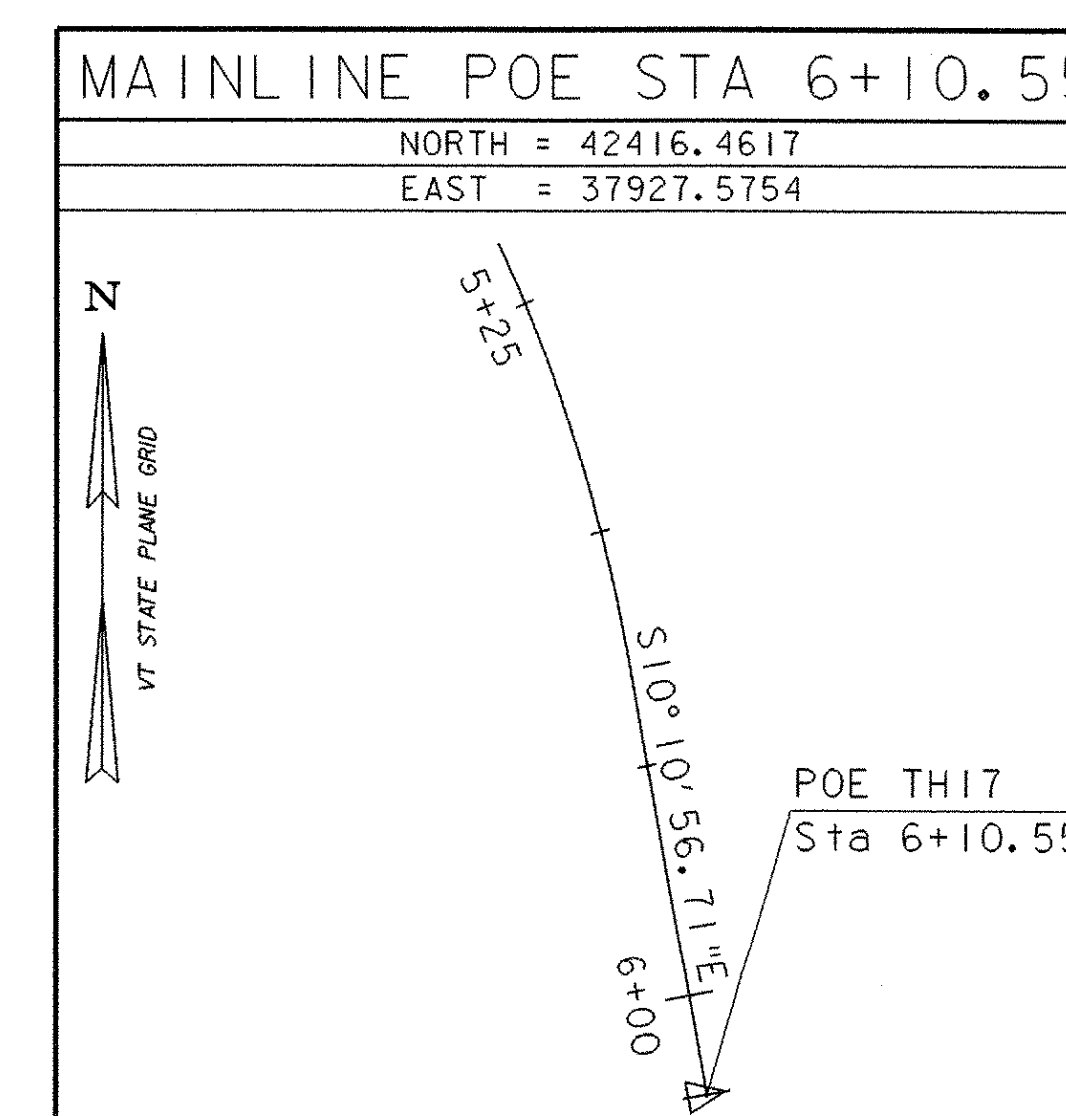
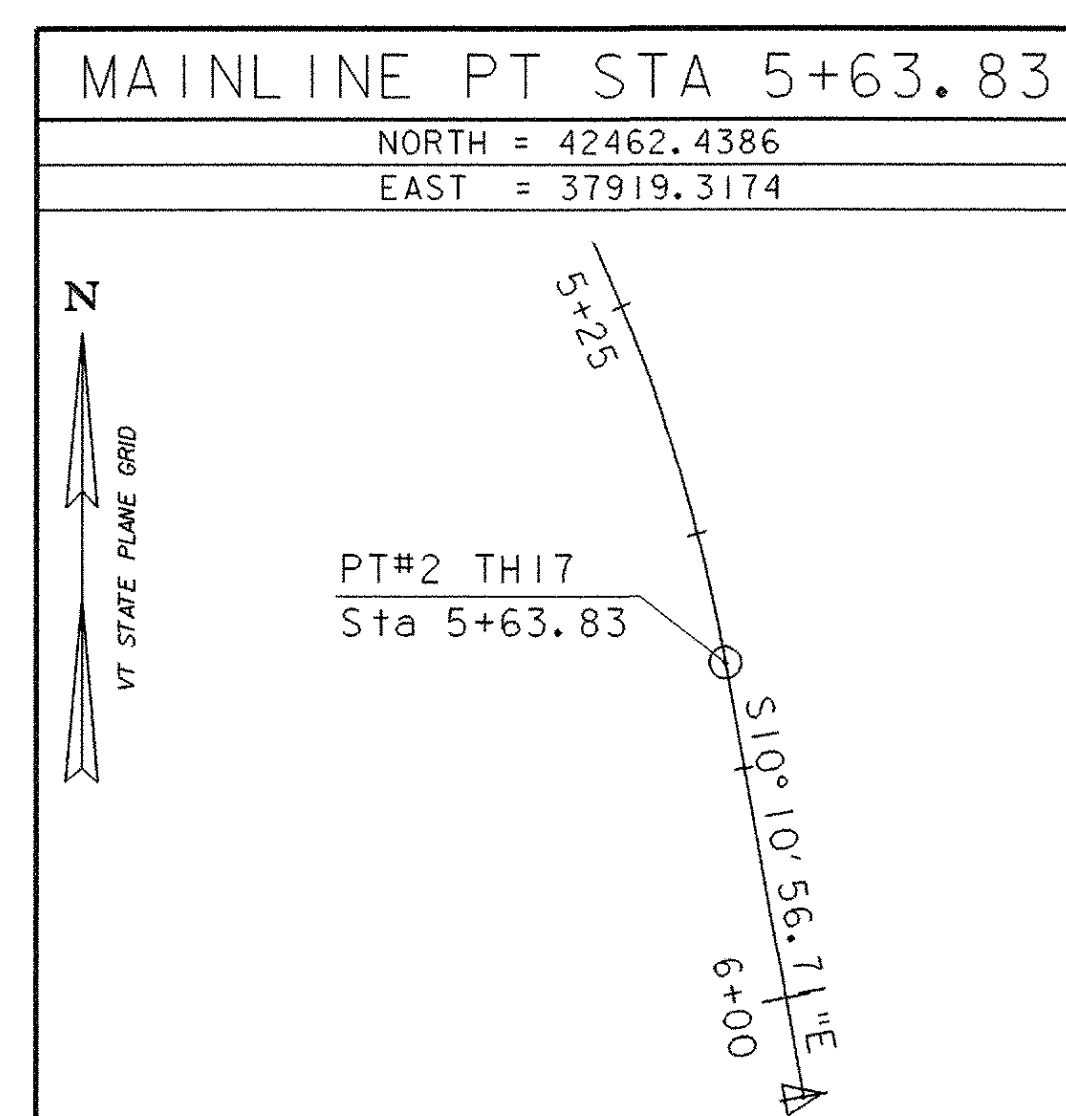
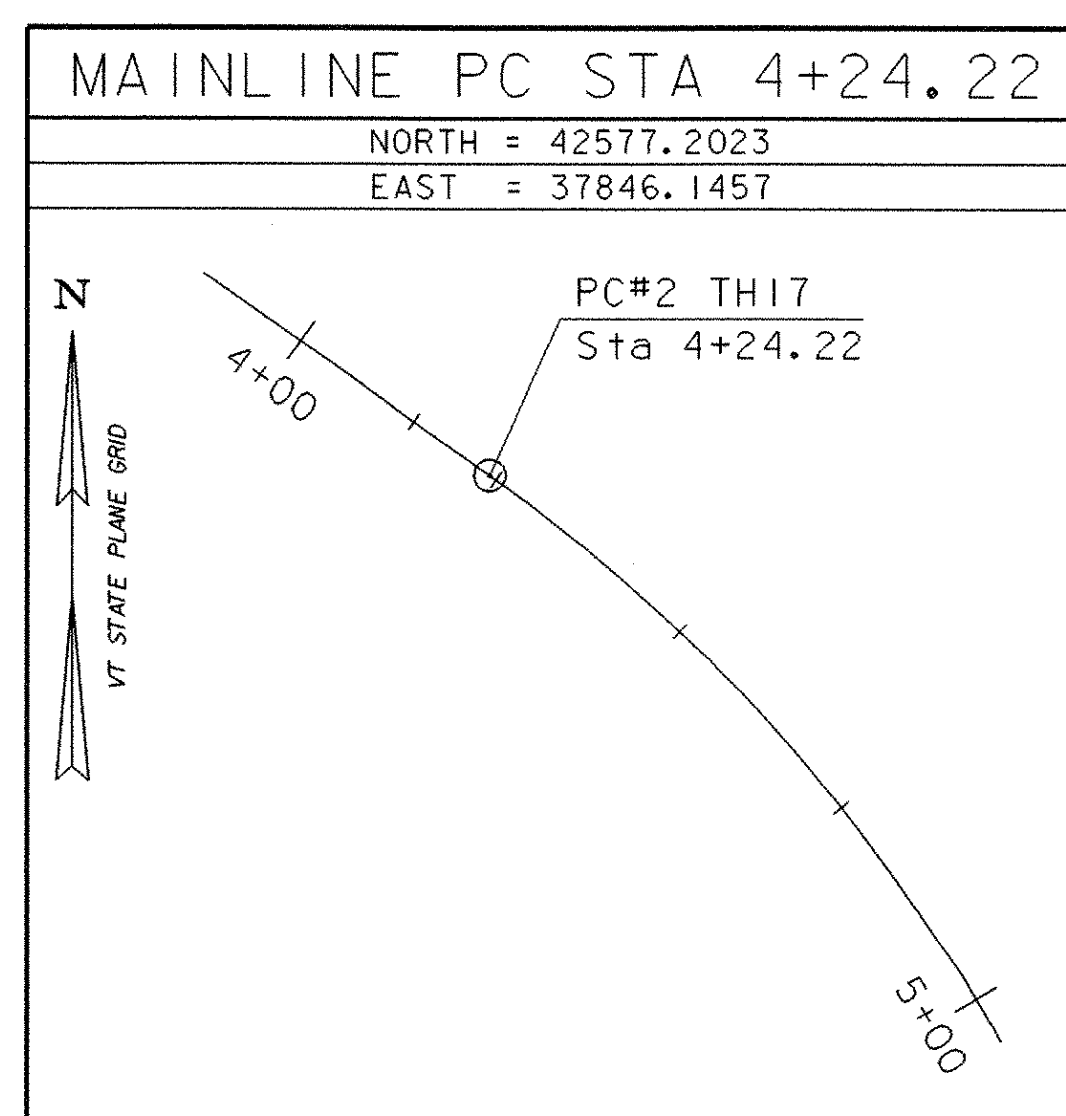
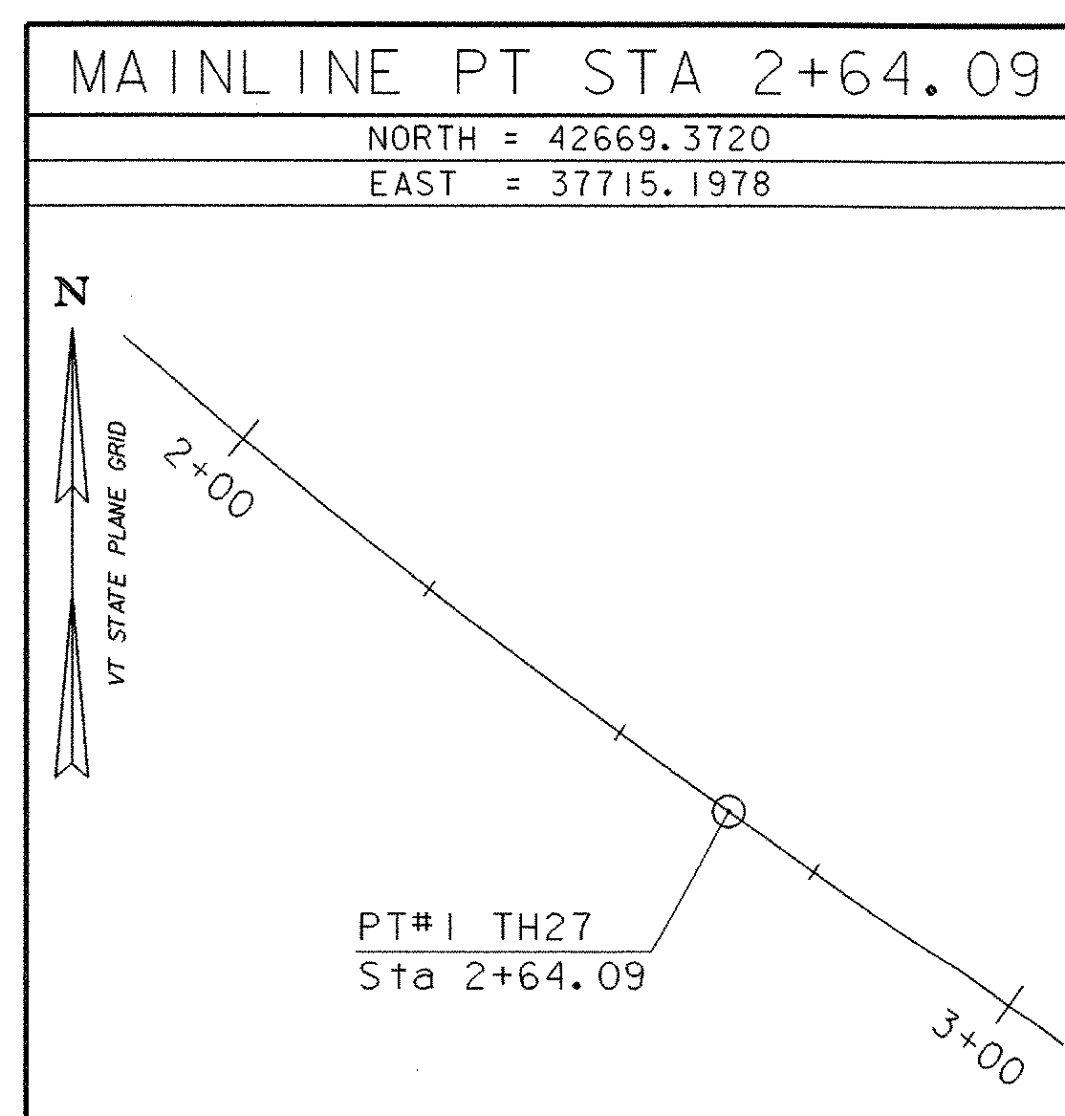
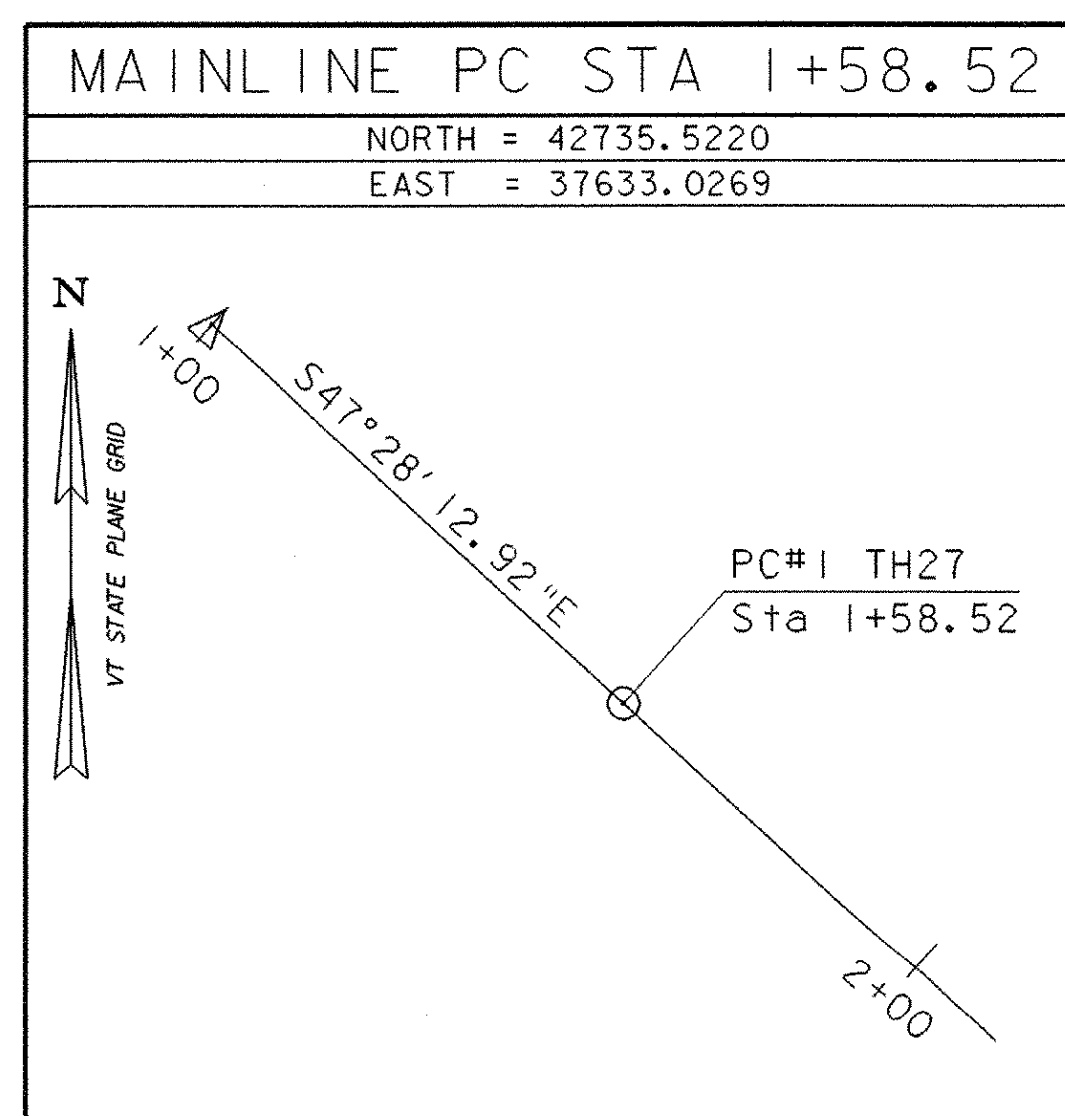


ALIGNMENT TIES



* MAIN TRAVERSE COMPLETED November 28, 2000 By R. Gilman and R. Bullock

ALIGNMENT TIES
(CONT.)



DATUM

VERTICAL	NAVD 88
HORIZONTAL	NAD 83/96
ADJUSTMENT	COMPASS

* ALIGNMENT STAKED

PROJECT NAME:	BRADFORD
PROJECT NUMBER:	STP 1447 (28)
FILE NAME:	96j286/Str/s96j286tie.dgn
PROJECT MANAGER:	C.P.WILLIAMS
DESIGNED BY:	M.GAGULIC
GPS CONTROL AND TRAVERSE TIES	
PLOT DATE:	22-NOV-2006
DRAWN BY:	M.FESSEL
CHECKED BY:	R.S.YOUNG
SHEET	7 OF 63

REMOVAL AND DISPOSAL OF GUARD RAIL

STA 2+16.00 LT - 2+80.00 LT
 STA 2+23.00 RT - 2+81.00 RT
 STA 3+90.00 LT - 4+16.00 LT
 STA 3+89.00 RT - 4+10.00 RT

ANCHOR FOR STEEL BEAM RAIL

STA 2+13.00 LT
 STA 2+27.00 RT
 STA 4+19.00 LT
 STA 4+19.00 RT

REMOVE WATERLINE PIPE

STA 2+80.00 RT - STA 3+90.00 RT

ERECTING SALVAGED SIGNS

STA 2+04 LT
 STA 2+22 RT
 STA 2+42 RT
 STA 3+89 RT
 STA 5+17 LT

NOTE:
 REFER TO SHEET 30 FOR
 PLAN VIEW OF WATER LINE
 DETAILS.

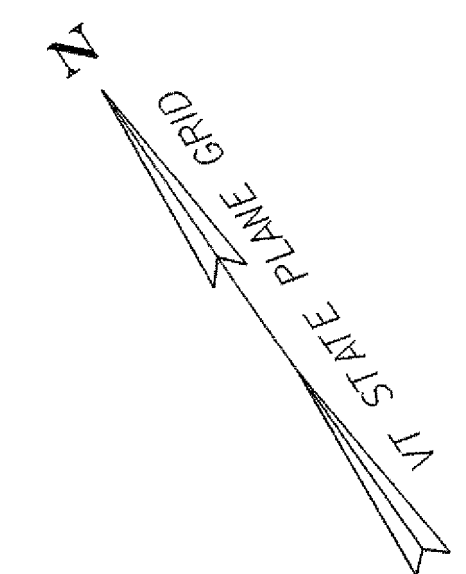
HEAVY DUTY STEEL BEAM GUARD RAIL

(GALVANIZED) (MOD. - 8' POST)
 STA 2+06.00 LT - 2+81.00 LT
 STA 2+20.00 RT - 2+81.00 RT
 STA 3+90.00 LT - 4+26.00 LT
 STA 3+90.00 RT - 4+26.00 RT

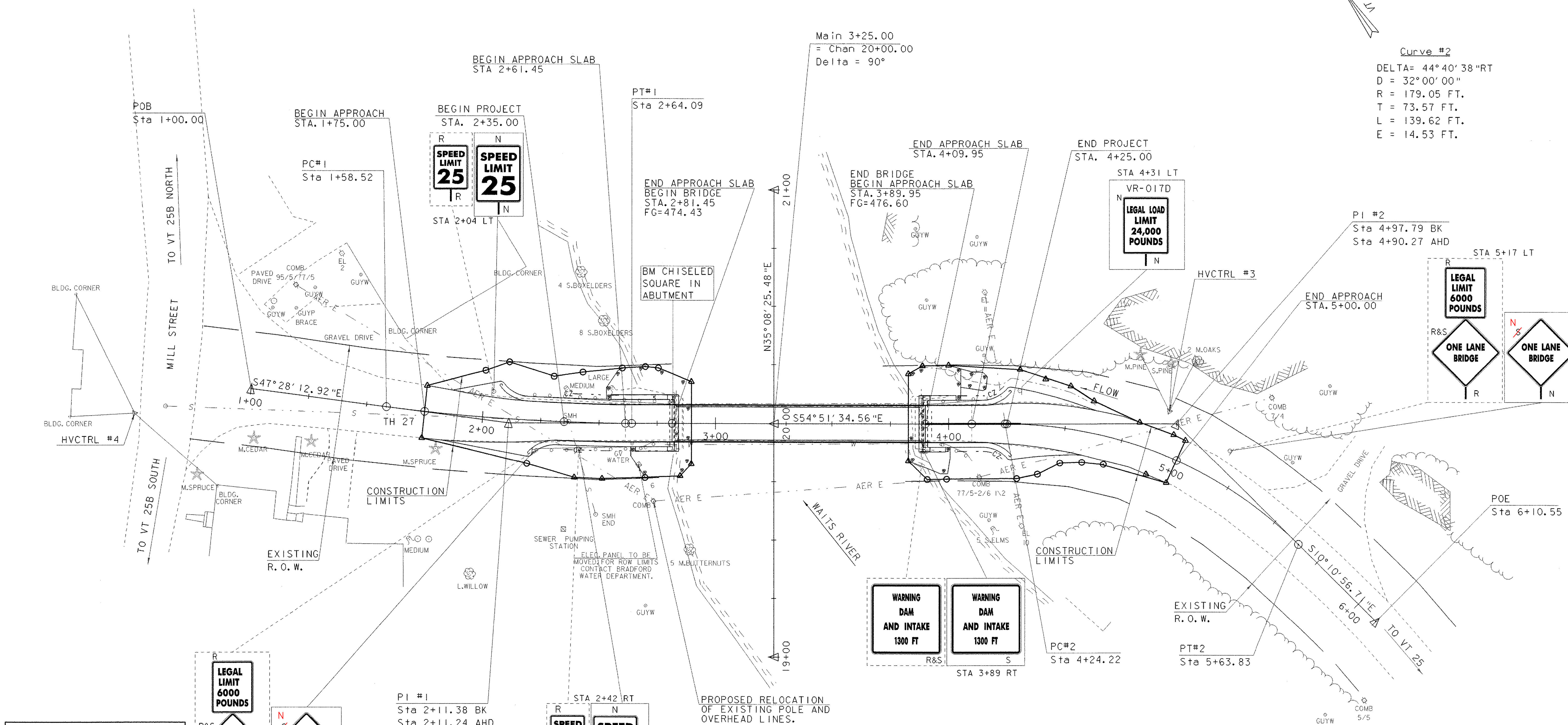
REMOVING SIGNS

STA 2+04 LT
 STA 2+22 RT
 STA 2+42 RT
 STA 3+89 RT
 STA 5+17 LT

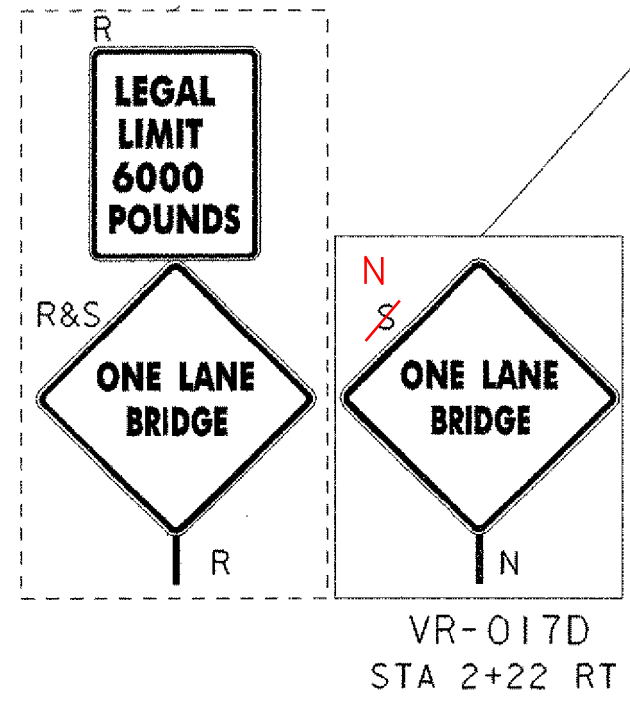
ONE LANE BRIDGE SIGNS REPLACED DUE TO IMPROPER REFLECTIVITY



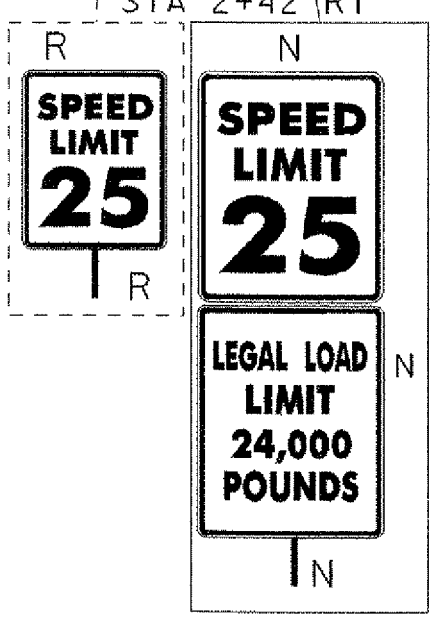
Curve #2
 DELTA= 44°40'38"RT
 D = 32°00'00"
 R = 179.05 FT.
 T = 73.57 FT.
 L = 139.62 FT.
 E = 14.53 FT.



LEGEND	
N	- NEW
R	- REMOVE
R&S	- REMOVE & SALVAGE
S	- ERECTING SALVAGED SIGNS
DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83/96



PI #1
 Sta 2+11.38 BK
 Sta 2+11.24 AHD
Curve #1
 DELTA= 7°23'22"LT
 D = 7°00'00"
 R = 818.51 FT.
 T = 52.85 FT.
 L = 105.56 FT.
 E = 1.70 FT.

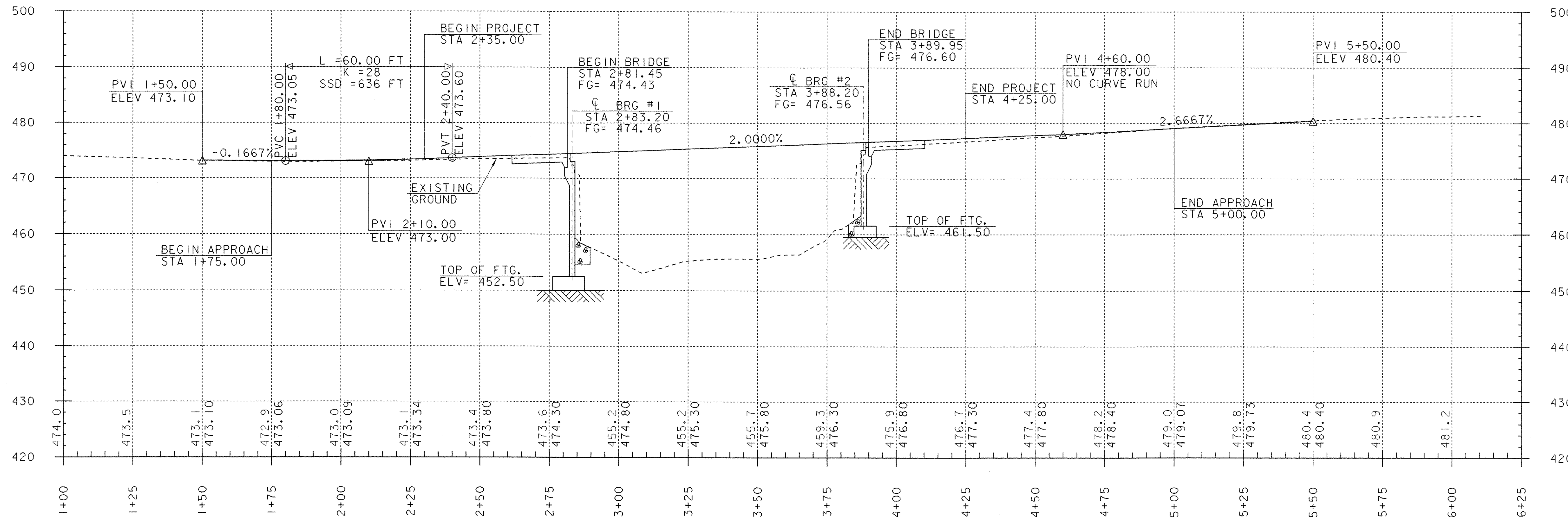


LAYOUT
 SCALE 1" = 20'-0"
 20 0 20

EXISTING BRIDGE DATA
 STEEL WARREN PONY TRUSS
 105'-0" SINGLE SPAN
 16'-0" ROADWAY
 18'-8" OUTSIDE TO OUTSIDE OF TRUSS
 ONE LANE OF TRAFFIC
 BUILT IN 1934 BY THE
 AMERICAN BRIDGE COMPANY

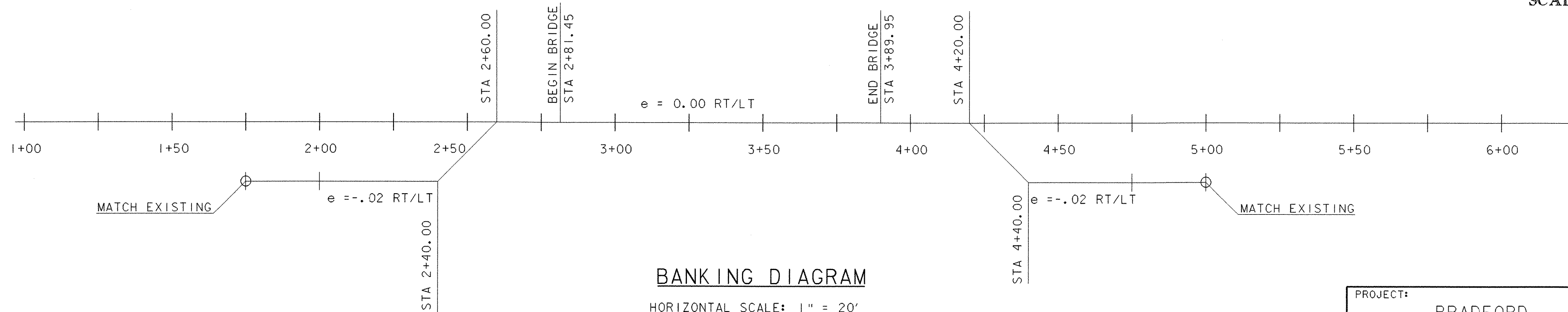
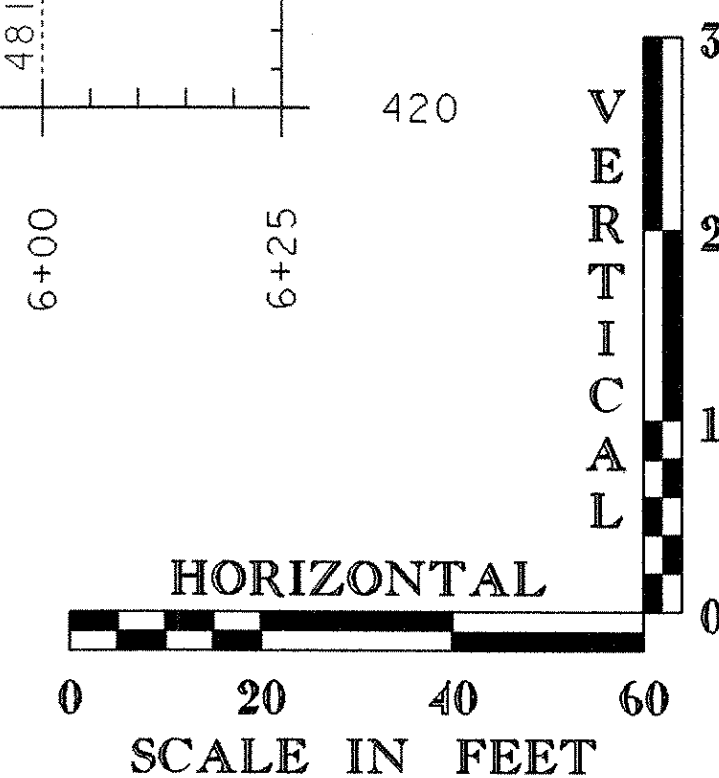
PROJECT: BRADFORD	PROJECT NO.: STP 1447 (28)
DESIGN FILE NAME: 96j286/Structures/s96j286bdr.dgn	PLOT DATE: 22-NOV-2006
IPARM FILE NAME: s96j286lay.i	SURVEY DATE: 11/00
SURVEYED BY: R. GILMAN	DRAWN BY: M. FESSEL
SQUAD LEADER: C.P. WILLIAMS	SHEET: 8 OF 63
LAYOUT SHEET	

TH 27



PROFILE ALONG TH 27

NOTES:
 GRADES SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG \varnothing
 GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE ALONG \varnothing



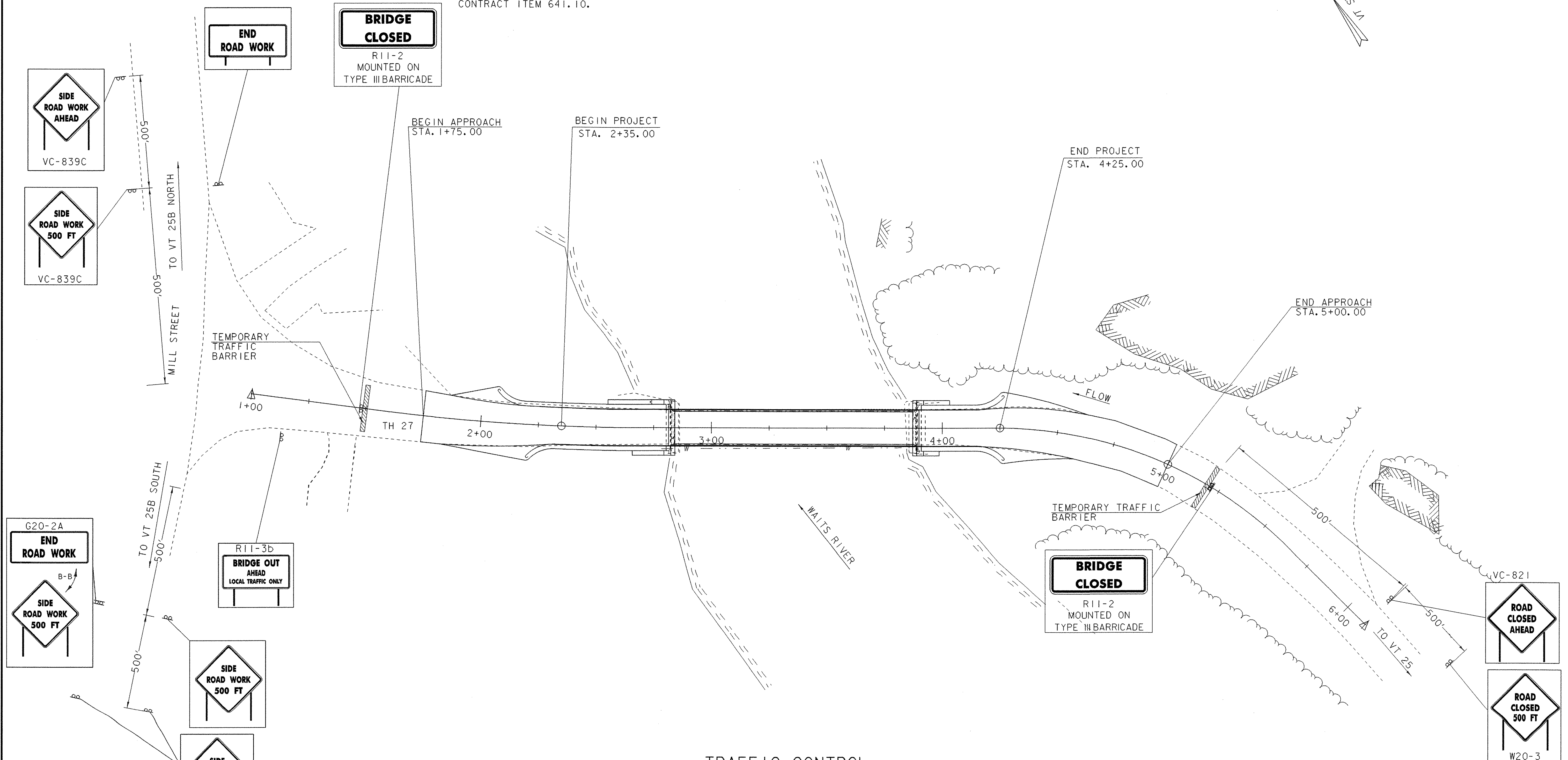
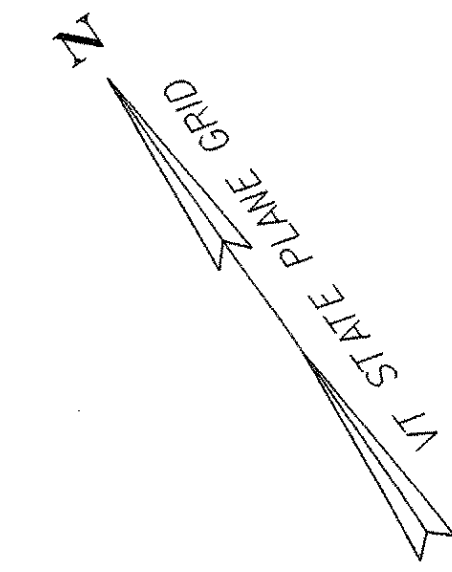
BANKING DIAGRAM

HORIZONTAL SCALE: 1" = 20'
 VERTICAL SCALE: 1" = 0.02 FT/FT

PROJECT:	BRADFORD	PROJECT NO.:	STP 1447 (28)
DESIGN FILE NAME:	96j286/structures/s96j286pro.dgn	PLOT DATE:	22-NOV-2006
IPARM FILE NAME:	s96j286pro.i	DRAWN BY:	J. WHITE
DESIGNED BY:	M. GAGULIC	CHECKED BY:	R. YOUNG
SQUAD LEADER:	C. P. WILLIAMS	SHEET:	9 OF 63
PROFILE SHEET			

TRAFFIC NOTES

- BRIDGE WILL BE CLOSED DURING REHABILITATION
- TEMPORARY APPROACH TRAFFIC SIGNS SHALL BE PLACED ACCORDING TO VERMONT STANDARDS E100, E100A, E102A AND E107 UNLESS DETAILED OTHERWISE ON THIS SHEET.
- THE RESIDENT ENGINEER SHALL DETERMINE THE FINAL LOCATION OF ALL SIGNS AND MAY ADD NEW SIGNS AS REQUIRED. ALL NEW OR SALVAGED SIGNS NOT SHOWN ON THE PLANS SHALL BE PAID FOR UNDER THEIR APPROPRIATE PAY ITEMS.
- PAYMENT WILL BE MADE UNDER CONTRACT ITEM 641.10.



TRAFFIC CONTROL

SCALE 1" = 20'-0"
 20 0 20

LEGEND	
	TEMPORARY TRAFFIC BARRIER
	SIGN POSTS

PROJECT: BRADFORD	PROJECT NO.: STP 1447 (28)
DESIGN FILE NAME: 96j286/Structures/s96j286bdr.dgn	PLOT DATE: 22-NOV-2006
IPARM FILE NAME: s96j286trfctr1.i	SURVEY DATE: 11/00
SURVEYED BY: R.GILMAN	DRAWN BY: M.FESSEL
SQUAD LEADER: C.P.WILLIAMS	SHEET: 10 OF 63
TRAFFIC CONTROL SHEET	

DATUM
 VERTICAL NAVD 88
 HORIZONTAL NAD 83/96

VC-839A
 SIDE ROAD WORK AHEAD

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.O.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 P.S.F.	CONSISTENCY
<250	Very Soft
250-500	Soft
500-1000	Med. Stiff
1000-2000	Stiff
2000-4000	Very Stiff
>4000	Hard

CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

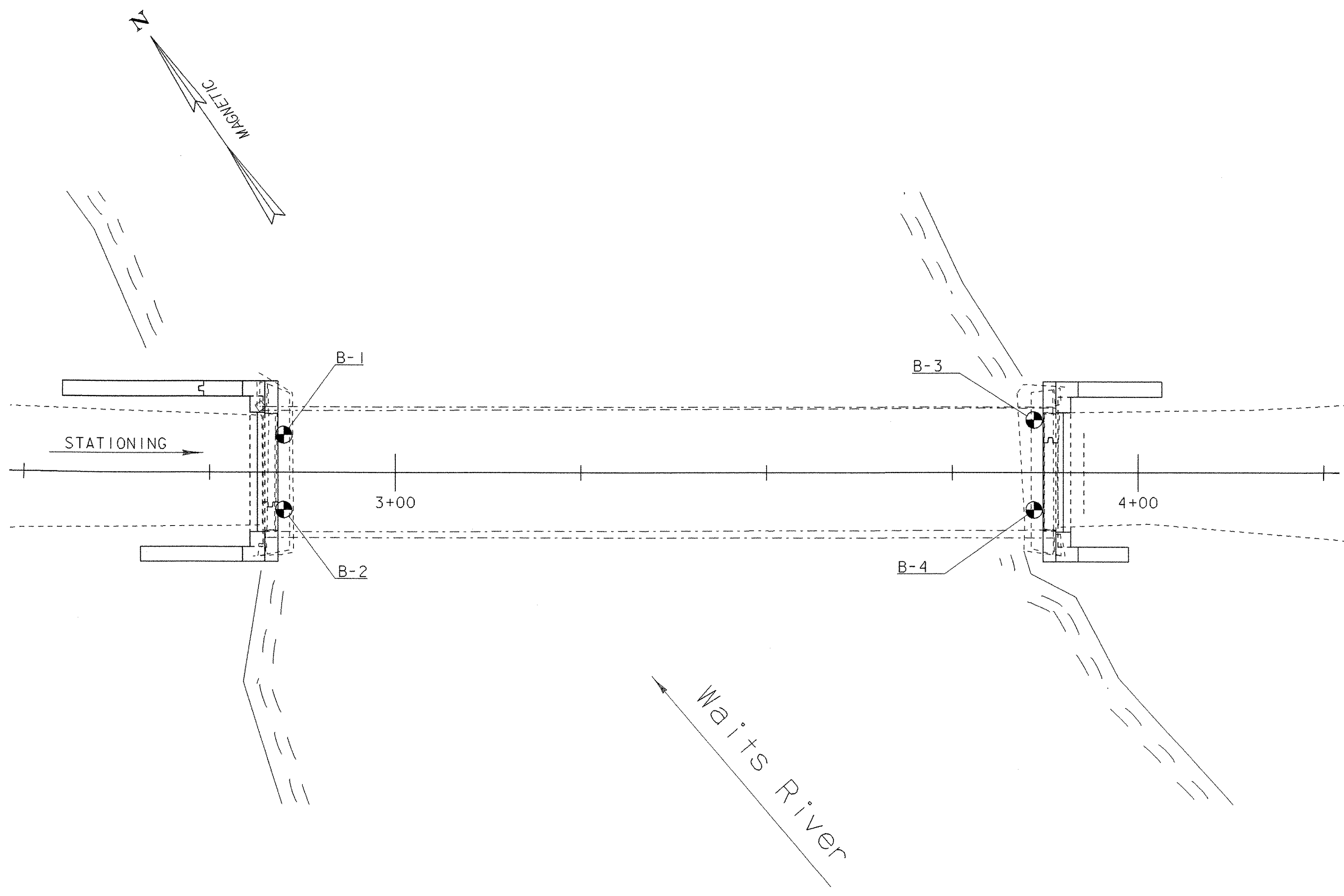
DENSITY (GRANULAR SOILS)		CONSISTENCY (COHESIVE SOILS)	
N	DESCRIPTIVE TERM	N	DESCRIPTIVE TERM
<5	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-24	Med. Dense	5-8	Med. Stiff
25-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

COMMONLY USED SYMBOLS

▼	Water Elevation
⊕	Standard Penetration Boring
⊗	Auger Boring
○	Rod Sounding
S	Sample
N	Standard Penetration Test
	Blow Count Per Foot For:
	2" O.D. Sampler
	1 3/8" I.D. Sampler
	Hammer Weight Of 140 Lbs.
	Hammer Fall Of 30"
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 1 1/8"
BX	Core Size 1 3/8"
NX	Core Size 2 1/8"
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		



BORING CHART

HOLE NO.	SURV. STATION	OFFSET	GROUND ELEV.	ELEV. TLOB
B-1	2+85	5' LT	473.73	452.73
B-2	2+85	5' RT	473.79	451.89
B-3	3+86	7' LT	475.61	465.61
B-4	3+86	5' RT	475.68	461.68

BORING LAYOUT

SCALE 1" = 10'-0"
10 0 10

DEFINITIONS (AASHTO)

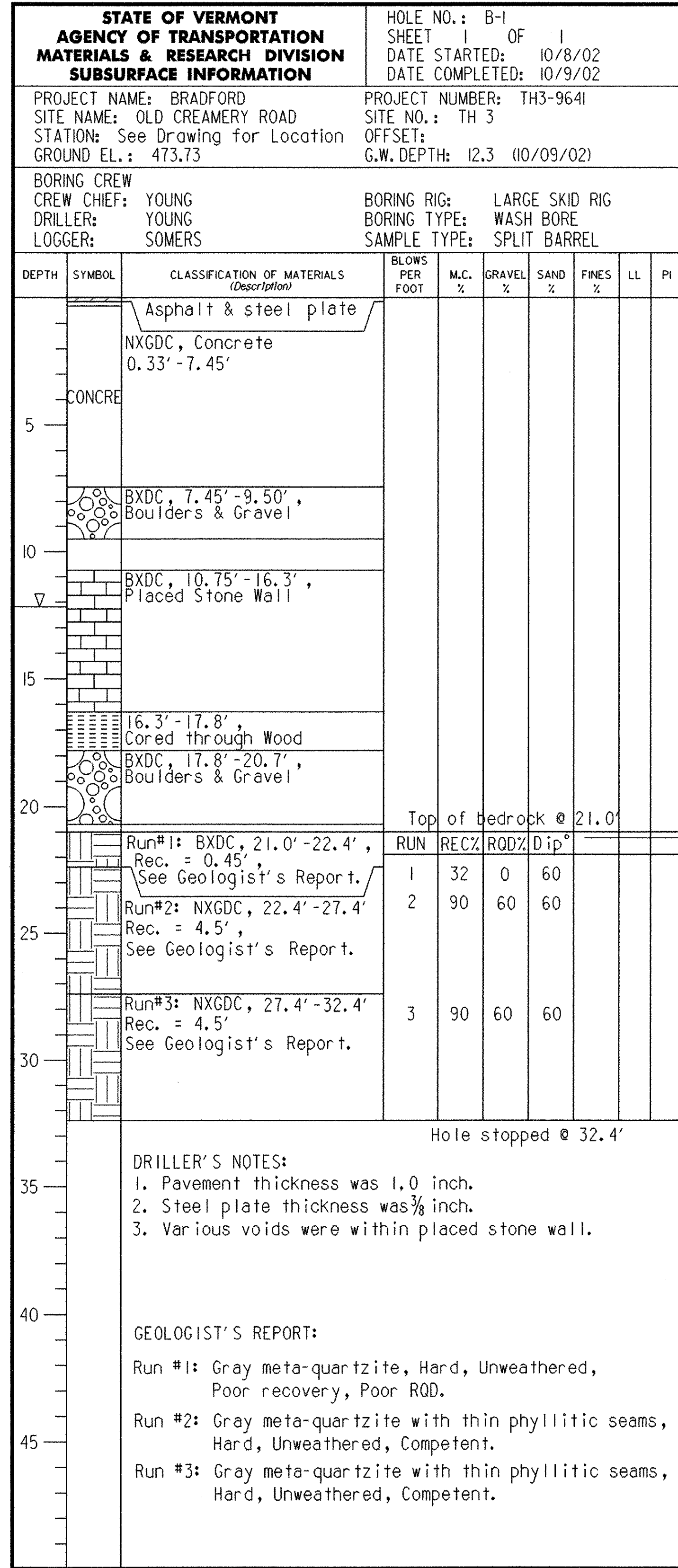
- BEDROCK (LEDGE)** - Rock in its native location of indefinite thickness.
- BOULDER** - A rock fragment with an average dimension > 12 inches.
- COBBLE** - Rock fragments with an average dimension between 3 and 12 inches.
- GRAVEL** - Rounded particles of rock < 3" and > 0.075" (#10 sieve).
- SAND** - Particles of rock < 0.075" (#10 sieve) and > 0.0029" (#200 sieve).
- SILT** - Soil < 0.0029" (#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

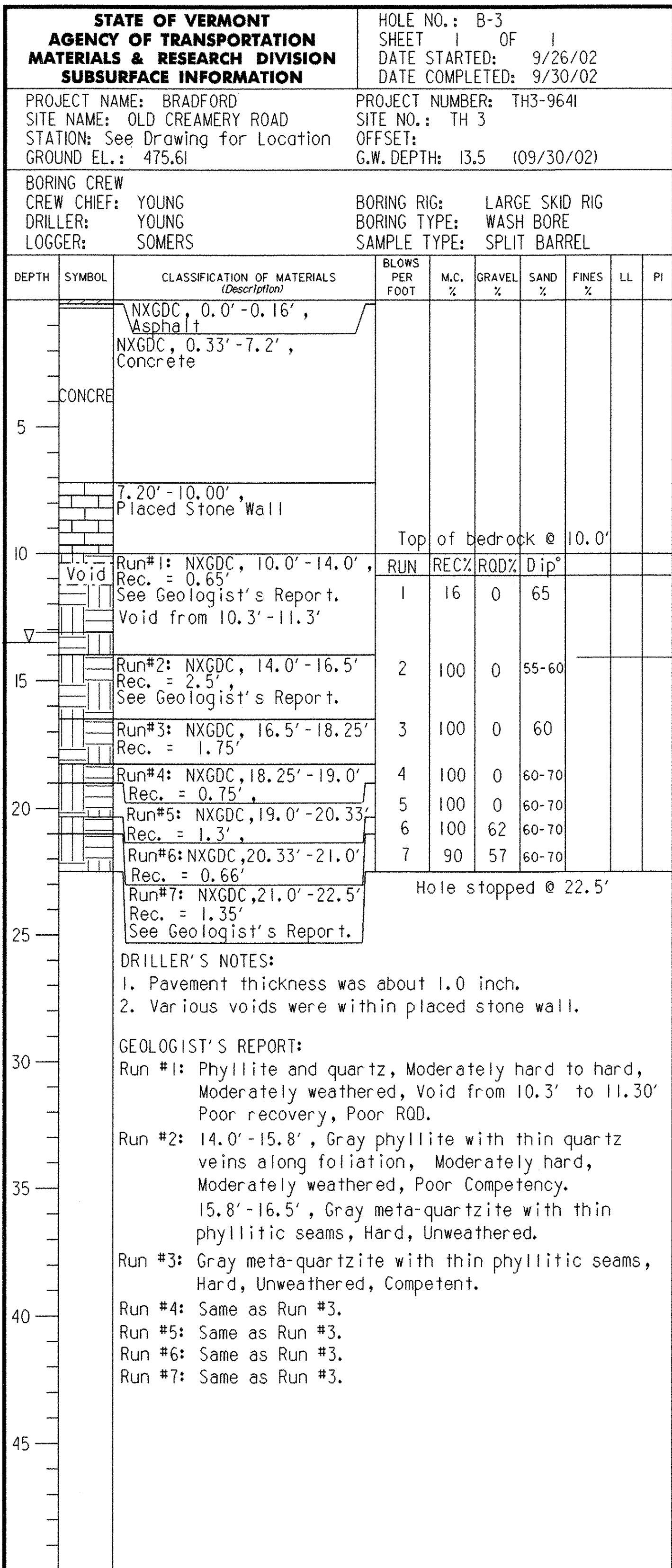
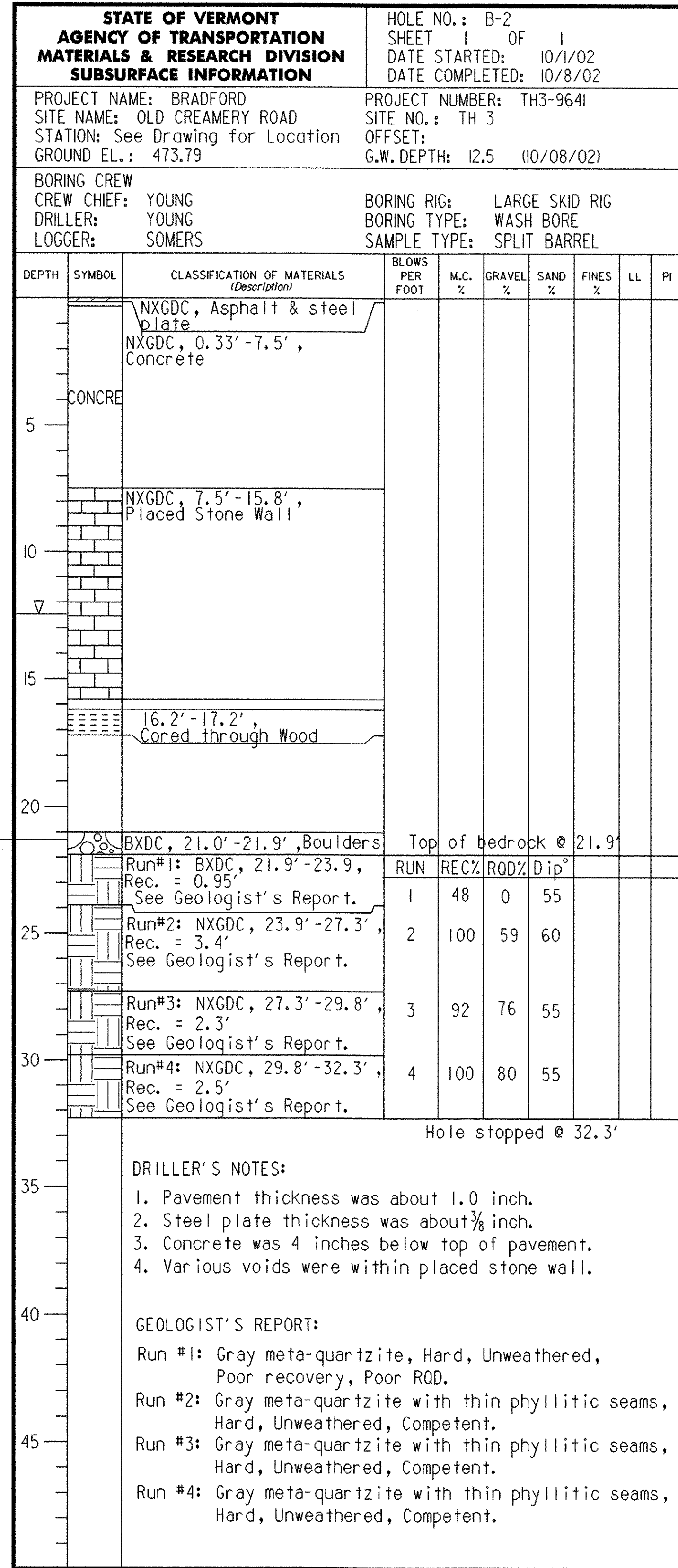
- The subsurface explorations shown herein were made between 9/26/02 and 10/9/02 by the Agency.
- Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in 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 Subsurface Investigations, 1988.

STATE OF VERMONT AGENCY OF TRANSPORTATION

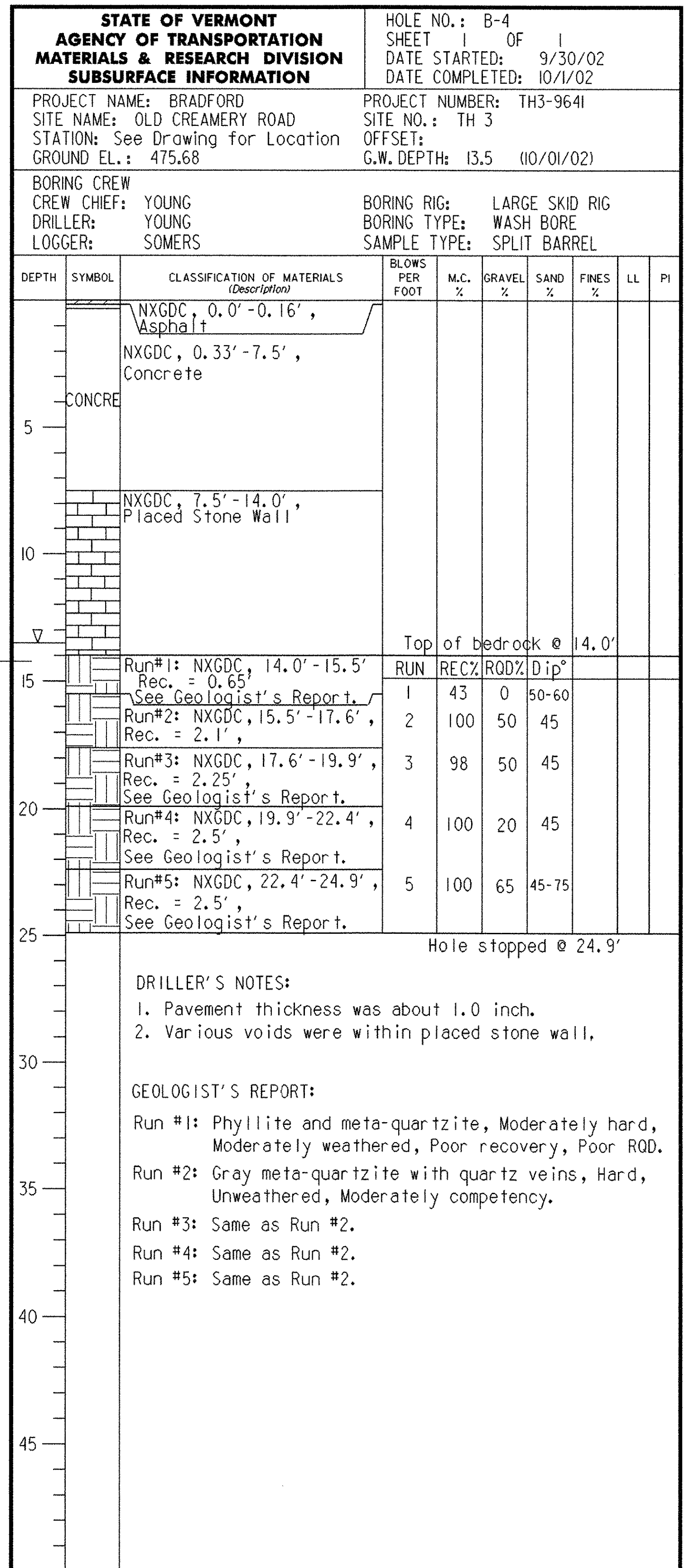
Town Of	BRADFORD	Bridge No.	BR 22
Highway No.	TH 27	Log Sta.	
		Surv. Sta.	12+51
BORING SHEET			
TH 27 OVER WAITS RIVER			
Designed By		Drawn By	M. FESSEL
Checked By	M. GAGULIC	Date	9/15/04
		Bridge Design Supervisor	C.P. WILLIAMS Date 1/98
PROJECT	BRADFORD	PROJECT NO.	STP 1447 (28)
I.G.C. Info.	m:\Projects\96j286\Structures\96j286bor.dgn		
Bridge Sheet No.		Sheet	12 of 63



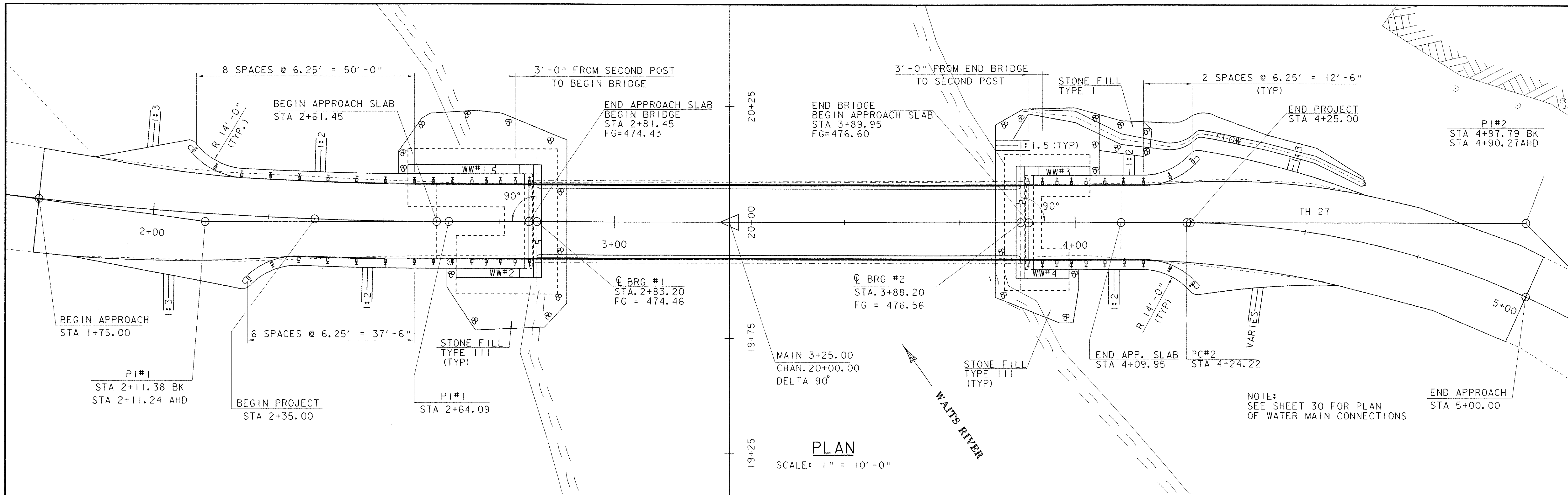
TOP OF FOOTING ABUT. #1 EL = 452.50



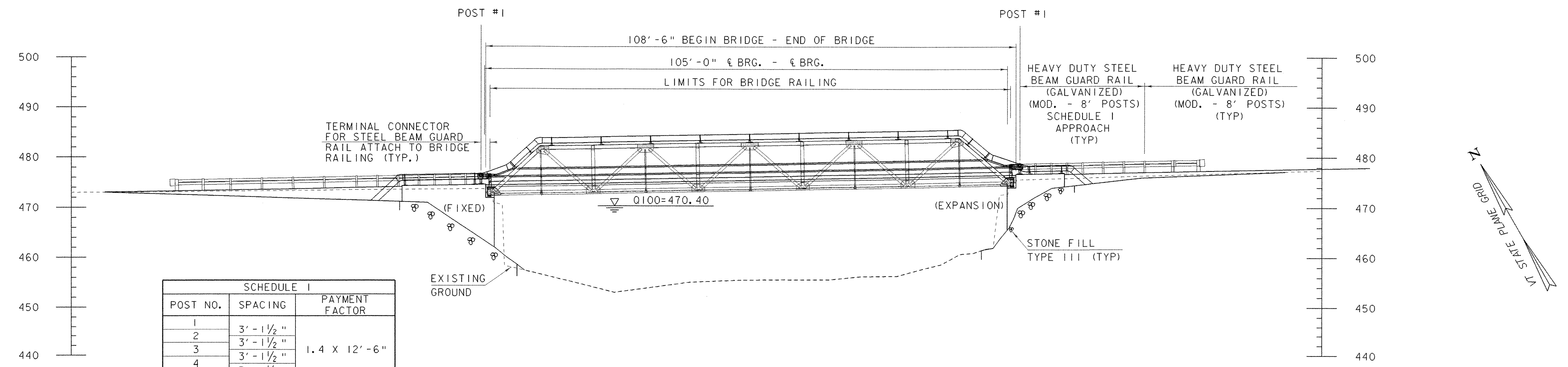
TOP OF FOOTING ABUT. #2 EL = 461.50



SURVEYED BY: R. GILMAN DATE: 11/00
 DRAWN BY: J. TOUCHETTE DATE: 10/02
 SQUAD LEADER: C. C. BENDA
 DESIGN FILE NO.: /M&R/96J286/mj286bor.dgn
 IPARM FILE: s96j286bor2.i DATE PLOTTED: 22-NOV-2006
 PROJ. NAME: BRADFORD
 PROJ. NO.: STP 1447 (28)
 SHEET 13 OF 63 SHEETS

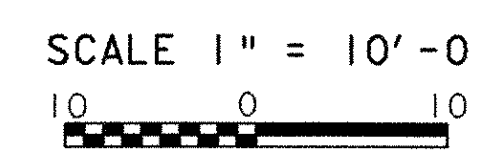


PLAN
SCALE: 1" = 10'-0"



ELEVATION @ UPSTREAM FASCIA
SCALE: 1" = 10'-0"

SCHEDULE I		
POST NO.	SPACING	PAYMENT FACTOR
1		
2	3' - 1 1/2"	1.4 X 12' - 6"
3	3' - 1 1/2"	
4	3' - 1 1/2"	
5	3' - 1 1/2"	1.2 X 12' - 6"
6	4' - 2"	
7	4' - 2"	
8	4' - 2"	1.0 (TYP.)
9	6' - 3" (TYP.)	



PROJECT: BRADFORD	PROJECT NO.: STP 1447 (28)
DESIGN FILE NAME: 96j286/structures/s96j286pe.dgn	PLOT DATE: 22-NOV-2006
IPARM FILE NAME: s96j286pe.i	DRAWN BY: J. WHITE
DESIGNED BY: M. GAGULIC	CHECKED BY: R. S. YOUNG
SQUAD LEADER: C. P. WILLIAMS	SHEET: 14 OF 63
PLAN AND ELEVATION	

GENERAL NOTES

- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2001, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SEVENTEENTH EDITION.
- ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES F, UNLESS OTHERWISE NOTED.
- ANY EXISTING SIGNS NOT REUSED SHALL REMAIN THE PROPERTY OF THE TOWN OF BRADFORD AND SHALL BE STOCKPILED IN A SUITABLE PLACE FOR REMOVAL BY THE TOWN.
- ITEM 529.20 "PARTIAL REMOVAL OF STRUCTURE" SHALL INCLUDE THE FOLLOWING:
 - REMOVAL AND RESPACING OF EXISTING STRINGERS INCLUDING REMOVAL OF END STRINGERS BASE PLATES AS SHOWN ON SHEET 17.
 - REMOVAL AND DISPOSAL OF TRUSS BEARINGS AS DETAILED IN THE CONTRACT PLANS OR AS ORDERED BY THE ENGINEER.
 - REMOVAL AND DISPOSAL OF EXISTING WATERLINE.
 - DISCONNECTION OF FLOOR BEAMS, GUSSET PLATES AND ANY OTHER PLATES OR ANGLES NECESSARY TO COMPLETE REPAIRS TO THE TRUSS.
 - REMOVAL AND DISPOSAL OF ANY MEMBER WITH MORE THAN 35% SECTION LOSS, AS DETERMINED BY THE ENGINEER.
 - REMOVAL AND DISPOSAL OF THE EXISTING CORRUGATED STEEL DECKING.
 - REMOVAL AND DISPOSAL OF BRIDGE RAILING.
- THESE PLANS WERE PREPARED BASED ON THE INFORMATION OBTAINED FROM REFERENCE SHEETS 53-63. THE CONTRACTOR MAY BE REQUIRED TO MAKE CHANGES TO THE DIMENSIONS SHOWN ON THE PLANS TO FIT THE ACTUAL FIELD CONDITIONS. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION.
- ITEM 529.15 "REMOVAL OF STRUCTURE" SHALL BE USED TO PAY FOR MOVING THE TRUSSES TO A STAGING AREA AND RETURNING THEM BACK ONTO THE ABUTMENTS AT THE NEW BRIDGE SEAT ELEVATIONS. EACH TRUSS SHALL BE DISASSEMBLED INTO A MAXIMUM OF TWO SECTIONS.

CONCRETE NOTES

- THE MINIMUM COVER FOR REINFORCING STEEL SHALL BE TWO INCHES ALONG WALL FACES AGAINST EARTH, AND THREE INCHES ELSEWHERE UNLESS DETAILED OTHERWISE.
- REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE AS FOLLOWS:

SPACING	+/- 1"
CLEARANCE	+/- 1/4"
- ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1"X 1".
- WATER REPELLENT (MOD. - SILANE) SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES.
- JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- SURFACES OF TRUSS SEATS AND STRINGER SEATS UNDER THE BEARING DEVICES SHALL BE LEVEL. THE ENTIRE BRIDGE SEAT SURFACE SHALL BE GIVEN A MAGNESIUM FLOAT FINISH.
- 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.
- CONCRETE PORTIONS OF THE ABUTMENT AND WINGWALLS ABOVE ADJACENT STRINGER SEAT ELEVATIONS SHALL NOT BE PLACED UNTIL THE FINISH GRADE HAS BEEN DETERMINED BY THE RESIDENT ENGINEER.

LEDGE NOTES

- NO LEDGE SHALL BE EXCAVATED TO PLACE THE STONE FILL TYPE III. ANY SMOOTH LEDGE SHALL BE MECHANICALLY ROUGHENED TO KEY IN THE STONE FILL IF DEEMED NECESSARY BY THE RESIDENT ENGINEER. PAYMENT FOR ROUGHENING LEDGE SHALL BE CONSIDERED INCIDENTAL TO STONE FILL TYPE III.
- #8 DOWELS SHALL BE DRILLED AND GROUTED INTO LEDGE AS SHOWN ON THE PLANS. THE DOWELS SHALL HAVE A 2'-0" EMBEDMENT IN THE LEDGE AND SHALL EXTEND INTO FOOTING A MINIMUM OF 1'-6" UNLESS NOTED OTHERWISE. THE DRILLING AND GROUTING SHALL BE PAID UNDER THE ITEM 507.16 "DRILLING AND GROUTING DOWELS", HOWEVER THE DOWELS SHALL BE PAID FOR UNDER THE ITEM 507.15 "REINFORCING STEEL".
- THE FOOTING SHALL BE FOUNDED ON LEDGE WHICH HAS BEEN CLEANED OF ALL LOOSE ROCK AND OTHER DEBRIS. THE LEDGE SHALL BE REMOVED AS REQUIRED TO ENSURE THE FOOTINGS ARE PLACED ON COMPETENT ROCK.
- LIMITED NUMBER OF BORINGS WERE TAKEN FOR THIS PROJECT. THE SUBSTRUCTURE UNITS HAVE BEEN DESIGNED FOR TOP OF FOOTING ELEVATIONS AS SHOWN ON THE PLANS. IF THE LEDGE ELEVATION IS GREATER THAN 4'-0" BELOW THE DESIGN TOP OF FOOTING, THE PROJECT MANAGER SHALL BE NOTIFIED AND PROVIDED WITH LEDGE PROFILE. NO FURTHER WORK SHALL BE DONE UNTIL APPROVAL OF CONFIGURATION IS RECEIVED IN WRITING. FOR ABUTMENT NO. 1: IF THE LEDGE ELEVATION IS LESS THAN 4'-0" BUT MORE THAN 2'-6" BELOW THE DESIGN TOP OF FOOTING ELEVATION A SUBFOOTING SHALL BE POURED USING "CONCRETE, HIGH PERFORMANCE CLASS B". FOR ABUTMENT NO. 2: IF THE LEDGE ELEVATION IS LESS THAN 4'-0" BUT MORE THAN 2'-0" BELOW THE DESIGN TOP OF FOOTING ELEVATION A SUBFOOTING SHALL BE POURED USING "CONCRETE, HIGH PERFORMANCE CLASS B".
- FOR ABUTMENT NO. 1: IF THE LEDGE IS LESS THAN 2'-6" BELOW THE DESIGN TOP OF FOOTING ELEVATIONS, THE LEDGE SHALL BE EXCAVATED DOWN TO 2'-6" BELOW DESIGN TOP OF FOOTING ELEVATION. FOR ABUTMENT NO. 2: IF LEDGE IS LESS THAN 2'-0" BELOW THE DESIGN TOP OF FOOTING ELEVATIONS, THE LEDGE SHALL BE EXCAVATED DOWN TO 2'-0" BELOW THE DESIGN TOP OF FOOTING ELEVATIONS. A MAXIMUM OF 6" AVERAGE DEPTH OF OVER BREAKAGE WILL BE REPLACED WITH "CONCRETE, HIGH PERFORMANCE CLASS B". OVER BREAKAGE BEYOND 6" SHALL BE REPLACED WITH "CONCRETE, HIGH PERFORMANCE CLASS B" AT THE EXPENSE OF THE CONTRACTOR.
- IF LEDGE IS ABOVE THE DESIGN TOP OF FOOTING, THE FOOTING MAY BE RAISED. BEFORE ANY UPWARD ADJUSTMENT IS MADE IN FOOTING ELEVATION, THE PROJECT MANAGER SHALL BE NOTIFIED AND PROVIDED WITH A LEDGE PROFILE. NO FURTHER WORK SHALL BE DONE UNTIL THE APPROVAL OF THE CONFIGURATION IS RECEIVED IN WRITING.

- UPON COMPLETION OF THE STRUCTURE EXCAVATION, AND PRIOR TO THE PLACING OF THE CONCRETE FORMS, THE RESIDENT ENGINEER SHALL CONTACT THE SOILS AND FOUNDATIONS ENGINEER/ENGINEERING GEOLOGIST FROM THE VERMONT AGENCY OF TRANSPORTATION, TO INSPECT THE ROCK TO DETERMINE IF IT IS COMPETENT TO SUPPORT THE DESIGN BEARING PRESSURE SHOWN ON THE PLANS. THE GEOLOGIST SHALL BE ALLOWED 5 WORKING DAYS FROM NOTICE OF EXCAVATION TO MAKE HIS INSPECTION AND REPORT HIS DETERMINATION ON THE COMPETENCY OF THE ROCK.

STEEL NOTES

- ALL NEW STEEL FOR THE TRUSS SHALL CONFORM TO AASHTO M-270 GRADE 36 OR 50.
- ANY RIVETS THAT ARE REMOVED FOR REPAIRS DETAILED ON THE PLANS OR AS ORDERED BY THE ENGINEER SHALL BE REPLACED WITH 7/8" DIAMETER HIGH STRENGTH BOLTS MEETING AASHTO M-164 TYPE 1. ALL BOLTS SHALL BE FULL DIAMETER BODY HEX HEAD BOLTS MEETING ANSI/ASME B 18.5 REQUIREMENTS.
- CONNECTIONS NOT DETAILED SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE PROJECT MANAGER FOR APPROVAL.
- ALL BOLTS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M-298. FASTENERS FOR THE TRUSS SHALL RECEIVE INTERMEDIATE AND FINAL COATS OF PAINT AFTER INSTALLATION. BOLTS SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCIDENTAL TO ITEMS 506.50 "STRUCTURAL STEEL" (ROLLED BEAM) AND 506.60 "STRUCTURAL STEEL".
- THE EXISTING STEEL NOT DESIGNATED FOR RE-USE IS PAINTED WITH A MATERIAL THAT MAY CONTAIN LEAD. THE CONTRACTOR MAY DISPOSE OF IT OR RETAIN FOR FUTURE USE. THE CONTRACTOR SHALL INFORM RESIDENT ENGINEER OF HIS/HER PLANS FOR STEEL PRIOR TO ITS REMOVAL.
- ALL NEW STRUCTURAL STEEL ELEMENTS SUBJECT TO TENSION SHALL BE CHARPY V- NOTCHED TESTED. THESE MEMBERS ARE DESIGNATED BY (CVN) IN THE APPLICABLE DETAILS.
- ALL STEEL ROLLED SHAPES SUCH AS W-SHAPES, CHANNELS AND ANGLES THAT WILL BE USED ON THIS PROJECT SHALL BE PAID FOR UNDER ITEM 506.50 "STRUCTURAL STEEL" (ROLLED BEAM). EXCEPTION SHALL BE MADE FOR CLIP ANGLES NECESSARY FOR ATTACHMENTS (e.g. STRINGERS, LATERAL BRACINGS, BRIDGE RAILING, ETC.). SUCH ANGLES SHALL BE PAID FOR UNDER ITEM 506.60 "STRUCTURAL STEEL".
- ALL HORIZONTAL AND VERTICAL GUSSET PLATES, COVER PLATES, PLATES USED TO ATTACH LATERAL BRACINGS, ANGLES USED TO ATTACH COVER PLATES, STRINGERS, FLOOR BEAMS, VERTICAL MEMBERS, DIAGONALS, RAILINGS ETC. SHALL BE PAID FOR UNDER ITEM 506.60 "STRUCTURAL STEEL".

PAINTING NOTES

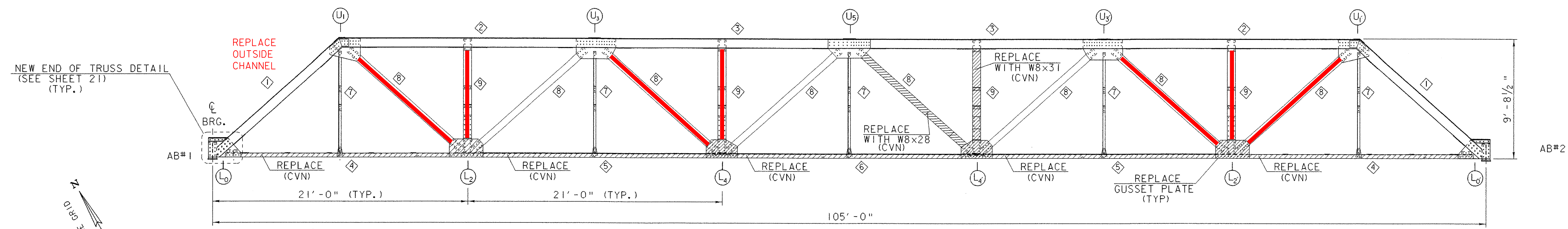
- THE SURFACE PREPARATION OF THE EXISTING STEEL SHALL INCLUDE 100% REMOVAL OF THE EXISTING PAINT SYSTEM.
- THE COLOR OF THE FINAL COAT OF PAINT SHALL BE GREEN AND SHALL CONFORM WITH FEDERAL STANDARD NO. 595 COLOR CHIP #14062
- ALL STEEL UNDER ITEM 506.50 "STRUCTURAL STEEL" (ROLLED BEAM) SHALL BE GIVEN A SHOP APPLIED PAINT SYSTEM PER SUPPLEMENTAL SPECIFICATION 513. ALL EXISTING STEEL AND NEW STEEL UNDER ITEMS 506.60 "STRUCTURAL STEEL" SHALL BE GIVEN A FIELD APPLIED PAINT SYSTEM PER SUPPLEMENTAL SPECIFICATION 513.
- THE PAINT SYSTEM USED IN THE SHOP SHALL BE THE SAME SYSTEM AS EMPLOYED IN THE FIELD APPLIED SYSTEM.
- ALL FAYING SURFACES SHALL MEET THE CLASS "B" SLIP COEFFICIENT AS SPECIFIED IN THE "AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES". THE FAYING SURFACES ON THE TRUSS WHERE THE RESPACED STRINGERS CONNECT AND AT THE NEW END TRUSS DETAIL SHALL BE BLAST CLEANED AND PRIMED IN ACCORDANCE WITH SUPPLEMENTAL 513, PRIOR TO INSTALLATION OF THE NEW STEEL ELEMENTS.
- AFTER THE FINAL COAT OF PAINT HAS BEEN APPLIED, AND HAS THOROUGHLY CURED, THE FOLLOWING STRUCTURAL STEEL SHALL BE GREASED PER SUPPLEMENTAL SPECIFICATION 513:
 - ALL TRUSS COMPONENTS BELOW THE FRP DECK
 - TRUSS AND STRINGER BEARINGS
- PAYMENT FOR GREASE SHALL BE INCIDENTAL TO THE ITEM 513.30 "STRUCTURAL PAINTING, FIELD APPLIED". THE COLOR OF THE GREASE SHALL BE GREEN.
- THE EDGES OF THE GUSSET PLATES SHALL BE CAULKED AT THE LOCATION WHERE THEY MEET THE TRUSS MEMBERS. THE CAULK SHALL BE APPLIED BEFORE THE FINAL COAT OF PAINT. THE CONTRACTOR SHALL SUBMIT TO THE PROJECT MANAGER THE TYPE OF CAULK TO BE USED ALONG WITH THE MANUFACTURER'S RECOMMENDED USE. PAYMENT FOR THE CAULKING SHALL BE INCIDENTAL TO ITEM 513.30 "STRUCTURAL PAINTING, FIELD APPLIED".

FRP DECK NOTES

- EXISTING DECK SHALL BE REPLACED WITH FIBER REINFORCED POLYMER COMPOSITE DECK. THE FRP COMPOSITE DECK SHALL BE PAID FOR UNDER ITEM 580.19 "CONCRETE CLASS AA OVERLAY" - (MOD. - FIBER REINFORCED POLYMER DECK) SEE SPECIAL PROVISIONS.
- THE CURBS SHALL BE FULL SAWN SOUTHERN PINE NO. 1 (OR BETTER) GRADE NON STRUCTURAL LUMBER. THE CURBS SHALL BE PRESSURE TREATED WITH A TYPE V (ALKALINE COPPER QUAT) PER SUPPLEMENTAL SPECIFICATION SECTION 726. THE CURBS SHALL BE PAID UNDER CONTRACT ITEM 522.35.

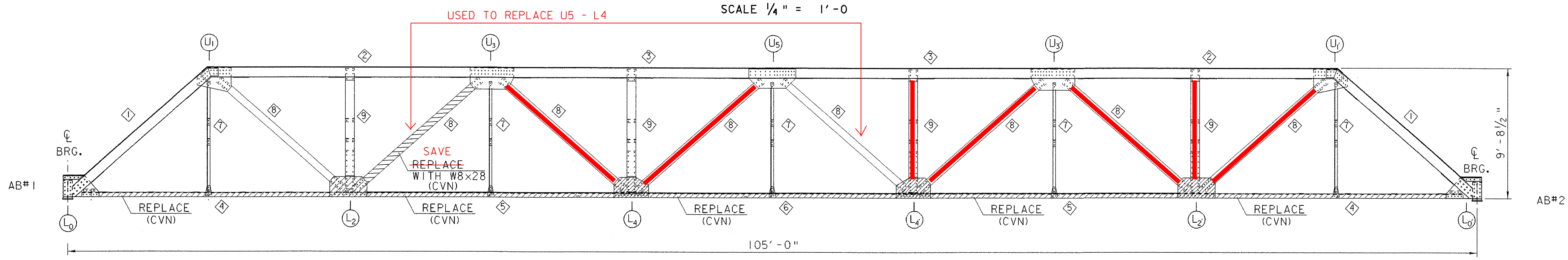
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DESIGN FILE NAME:	96j286/Str/s96j286note.dgn	PLOT DATE:	22-NOV-2006
IPARM FILE NAME:	96j286note.i	DRAWN BY:	M. GAGULIC
DESIGNED BY:	M. GAGULIC	CHECKED BY:	R. S. YOUNG
SQUAD LEADER:	C. P. WILLIAMS	SHEET:	15 OF 63
GENERAL NOTES			

- REPLACE AS PER CO #1



NORTH TRUSS ELEVATION
LOOKING NORTH

SCALE 1/4" = 1'-0"



SOUTH TRUSS ELEVATION
LOOKING NORTH

SCALE 1/4" = 1'-0"

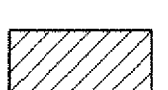


NOTE:

1. TRUSS REHABILITATION SHALL REQUIRE REPLACING TRUSS MEMBERS AS SHOWN ON THIS SHEET. THE ENTIRE BOTTOM CHORD, VERTICAL GUSSET PLATES, HORIZONTAL GUSSET PLATES AND COVER PLATES ATTACHED TO THE BOTTOM CHORD SHALL BE REPLACED IN KIND AS DETAILED IN REFERENCE SHEETS.
2. THE ANGLES USED TO ATTACH RESPACED STRINGERS TO THE FLOOR BEAMS SHALL BE REPLACED IN KIND AS DETAILED IN REFERENCE SHEETS.
3. PAYMENTS FOR NEW DIAGONAL TRUSS MEMBERS, VERTICAL TRUSS MEMBER, LATERAL BRACINGS, W8x35 (NEW END OF THE TRUSS) AND W6x25 (TRUSS RAIL POST) SHALL BE PAID FOR UNDER ITEM 506.50 "STRUCTURAL STEEL" (ROLLED BEAM). ALL OTHER STEEL SHALL BE PAID FOR UNDER ITEM 506.60 "STRUCTURAL STEEL".
4. NEW HOLES SHALL BE DRILLED IN THE NEW AND EXISTING LATERAL BRACING (LB1, LB2, AND LB3) TO ACCOMMODATE NEW STRINGER SPACING. ALL WORK NECESSARY TO PROPERLY ATTACH LATERAL BRACING'S TO THE TRUSS SHALL BE INCLUDED UNDER ITEM 506.50 "STRUCTURAL STEEL" (ROLLED BEAM).
5. THE DESIRED CAMBER IN THE TRUSS WILL BE AS SHOWN IN REFERENCE SHEETS.

TRUSS MEMBER DESCRIPTIONS

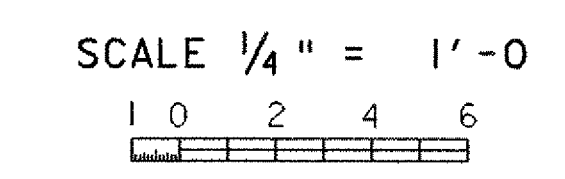
TRUSS MEMBER NUMBER	TRUSS MEMBER	MEMBER DESCRIPTION
①	UPPER CHORD DIAGONAL	TWO (2) C 9 x 13.4 CHANNELS ONE (1) 14" x 1/4" COVER PLATE
②	UPPER CHORD MEMBER	TWO (2) C 9 x 13.4 CHANNELS ONE (1) 14" x 1/4" COVER PLATE
③	UPPER CHORD MEMBER	TWO (2) C 9 x 20 CHANNELS ONE (1) 14" x 5/16" COVER PLATE
④	LOWER CHORD MEMBER	TWO (2) L 4 x 3 x 3/8 ANGLES ONE (1) 8" x 3/8" COVER PLATE
⑤	LOWER CHORD MEMBER	TWO (2) L 4 x 3 x 3/8 ANGLES ONE (1) 8" x 3/8" COVER PLATE
⑥	LOWER CHORD MEMBER	TWO (2) L 4 x 3 x 3/8 ANGLES ONE (1) 8" x 3/8" COVER PLATE
⑦	VERTICAL WEB MEMBER	ONE (1) L 2 1/2 x 2 1/2 x 1/4 ANGLE
⑧	DIAGONAL WEB MEMBER	ONE (1) 8 CB 27 ROLLED I-BEAM
⑨	VERTICAL WEB MEMBER	ONE (1) 8 CB 31 ROLLED I-BEAM

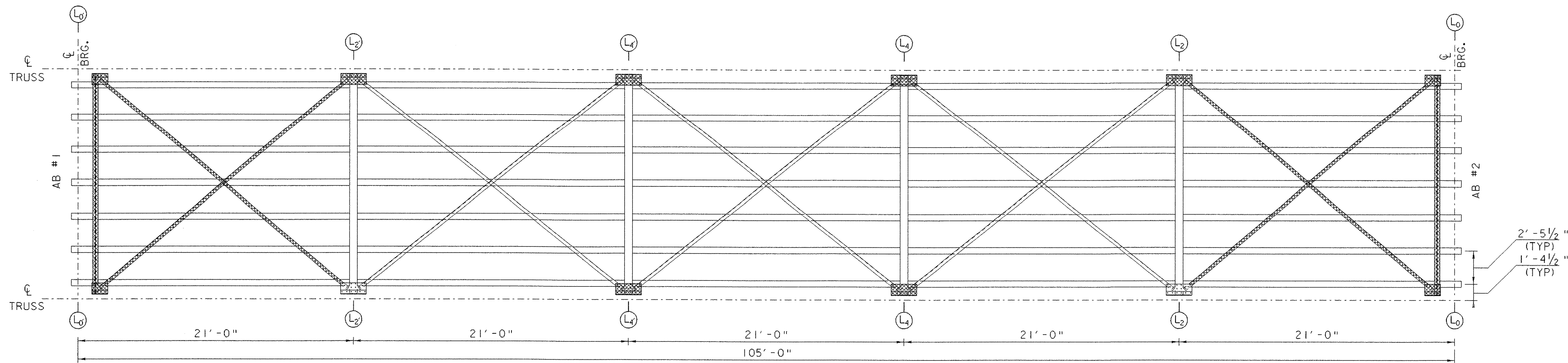
LEGEND

-  TRUSS MEMBER TO BE REPLACED
-  TRUSS NODE
-  TRUSS MEMBER NUMBER

NOTE: SOUTH TRUSS MEMBERS IDENTICAL TO NORTH TRUSS

PROJECT: BRADFORD	PROJECT NO.: STP 1447 (28)
DESIGN FILE NAME: 96j286/structures/s96j286truss.dgn	PLOT DATE: 22-NOV-2006
IPARM FILE NAME: s96j286truss.i	DESIGNED BY: M. GAGULIC
SQUAD LEADER: C. P. WILLIAMS	DRAWN BY: J. WHITE
TRUSS FLOOR & ELEVATION	CHECKED BY: R. S. YOUNG
	SHEET: 16 OF 63

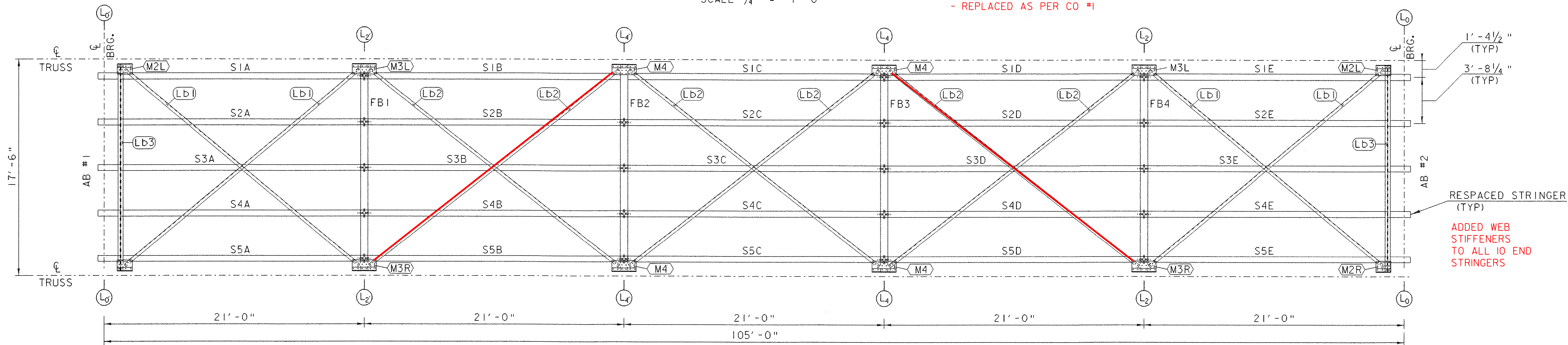




EXISTING FLOOR PLAN

SCALE 1/4" = 1'-0"

- REPLACED AS PER CO #1



PROPOSED FLOOR PLAN

SCALE 1/4" = 1'-0"

FLOOR MEMBER DESCRIPTIONS

FLOOR MEMBER	SYMBOL	DESCRIPTION
STRINGER BEAM	S1A-S5A AND S1E-S5E	ONE (1) W10 x 30 x 21'-5"
STRINGER BEAM	S1B-S5B; S1C-S5C; S1D-S5D	ONE (1) W10 x 30 x 20'-9 3/4"
FLOOR BEAM	FB#1 - FB#4	ONE (1) W16 x 50 x 16'-8 1/4"
LATERAL BRACING	(Lb1)	ONE (1) L3 x 2 1/2 x 5/16 x 24'-8 1/4"
LATERAL BRACING	(Lb2)	ONE (1) L3 x 2 1/2 x 5/16 x 25'-7 7/8"
LATERAL BRACING	(Lb3)	TWO (2) L2 1/2 x 2 1/2 x 5/16 x 16'-8 1/4"
GUSSET PLATE-HORIZONTAL	(M2L)	ONE (1) 10 1/2" x 5/16" x 1'-2 1/2" PLATE
GUSSET PLATE-HORIZONTAL	(M2R)	ONE (1) 10 1/2" x 5/16" x 1'-2 1/2" PLATE
GUSSET PLATE-HORIZONTAL	(M3L)	ONE (1) 10 1/2" x 5/16" x 1'-11 1/2" PLATE
GUSSET PLATE-HORIZONTAL	(M3R)	ONE (1) 10 1/2" x 5/16" x 1'-11 1/2" PLATE
GUSSET PLATE-HORIZONTAL	(M4)	ONE (1) 10 1/2" x 5/16" x 2'-1" PLATE

NOTE:

- THE BEST FIVE STRINGERS PER BAY WILL BE RECHECKED AND RESPACED AS SHOWN ON THE PLANS. REMAINING TWO STRINGERS (PER BAY) WILL BE HANDLED AS DESCRIBED IN NOTE 26 ON SHEET 15.

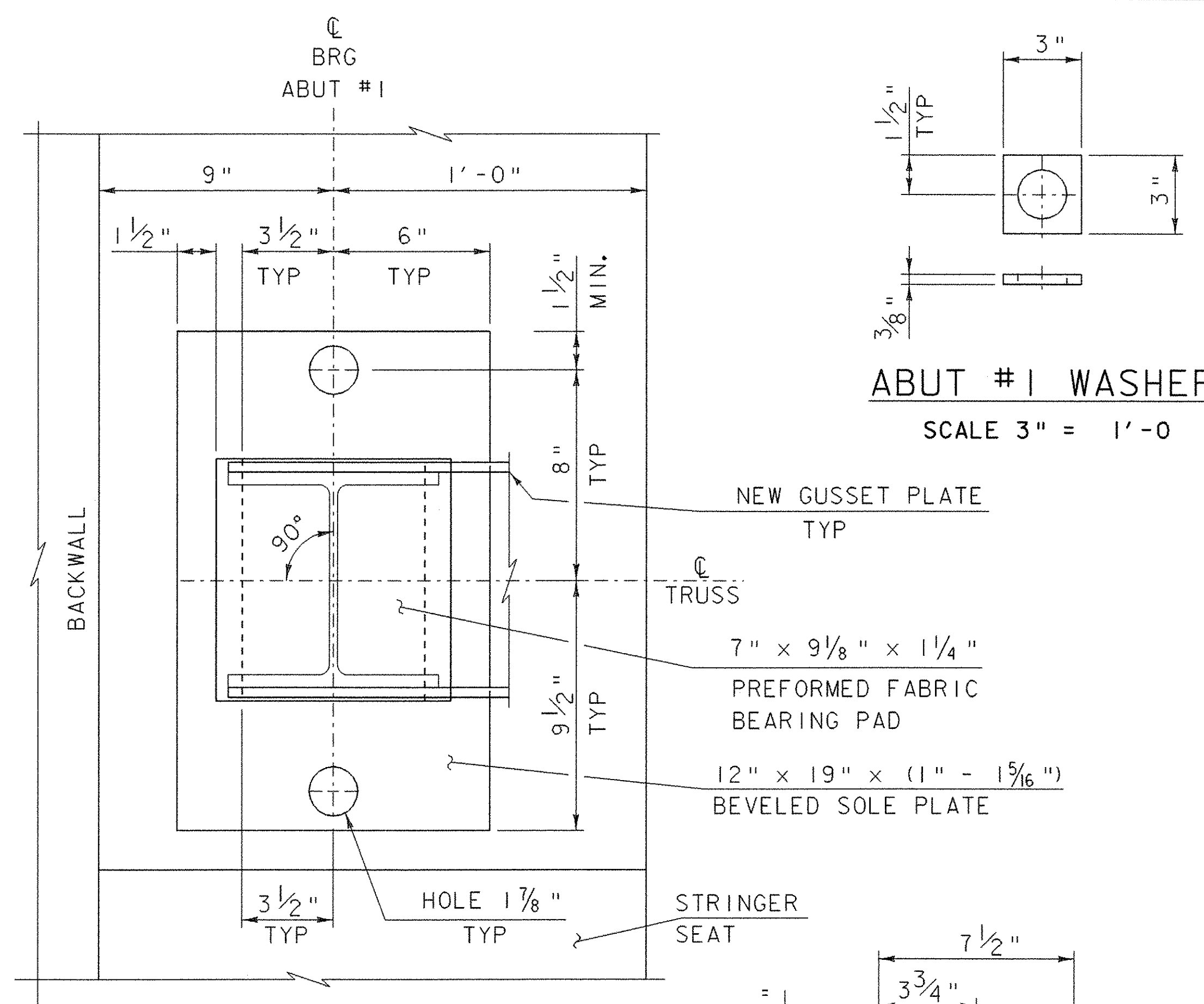
LEGEND

- FLOOR MEMBER TO BE REPLACED
- LATERAL BRACING
- TRUSS NODE
- GUSSET PLATE

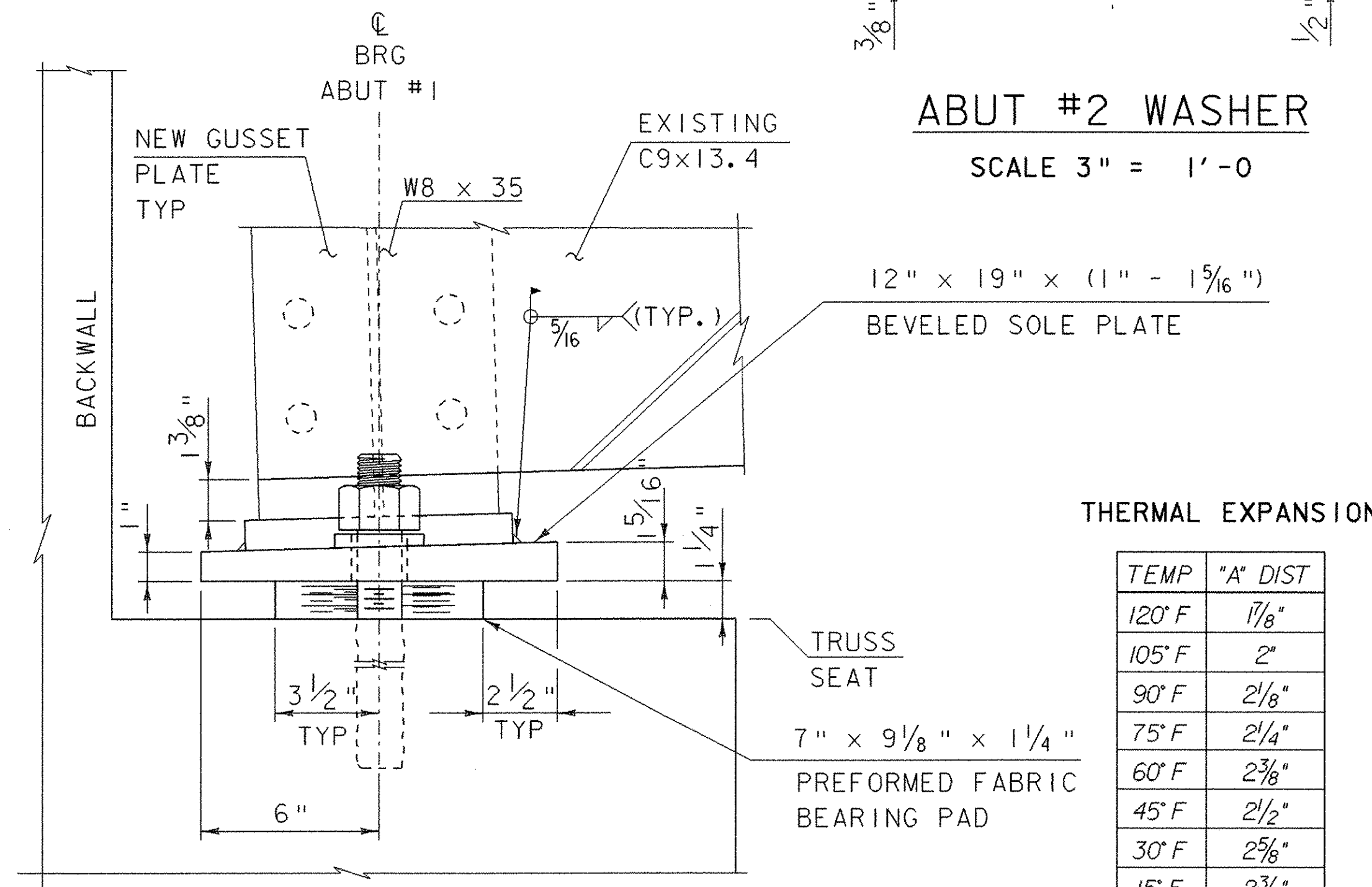
SCALE 1/4" = 1'-0"



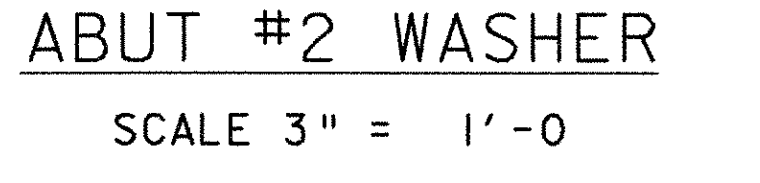
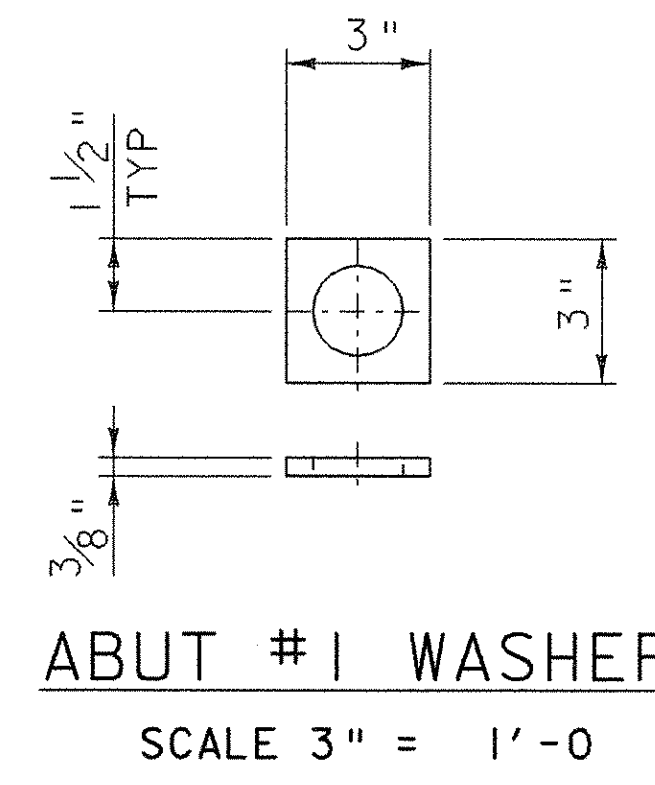
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DESIGN FILE NAME: 96j286/structures/s96j286truss.dgn	PLOT DATE: 22-NOV-2006
IPARM FILE NAME: s96j286truss2.i	DESIGNED BY: M. GAGULIC
DESIGNED BY: M. GAGULIC	DRAWN BY: M. GAGULIC
SQUAD LEADER: C.P. WILLIAMS	CHECKED BY: R.S. YOUNG
TRUSS FLOOR PLAN	SHEET: 17 OF 63



ABUT. #1 - PLAN VIEW
(FIXED BEARING)
SCALE 3" = 1'-0"

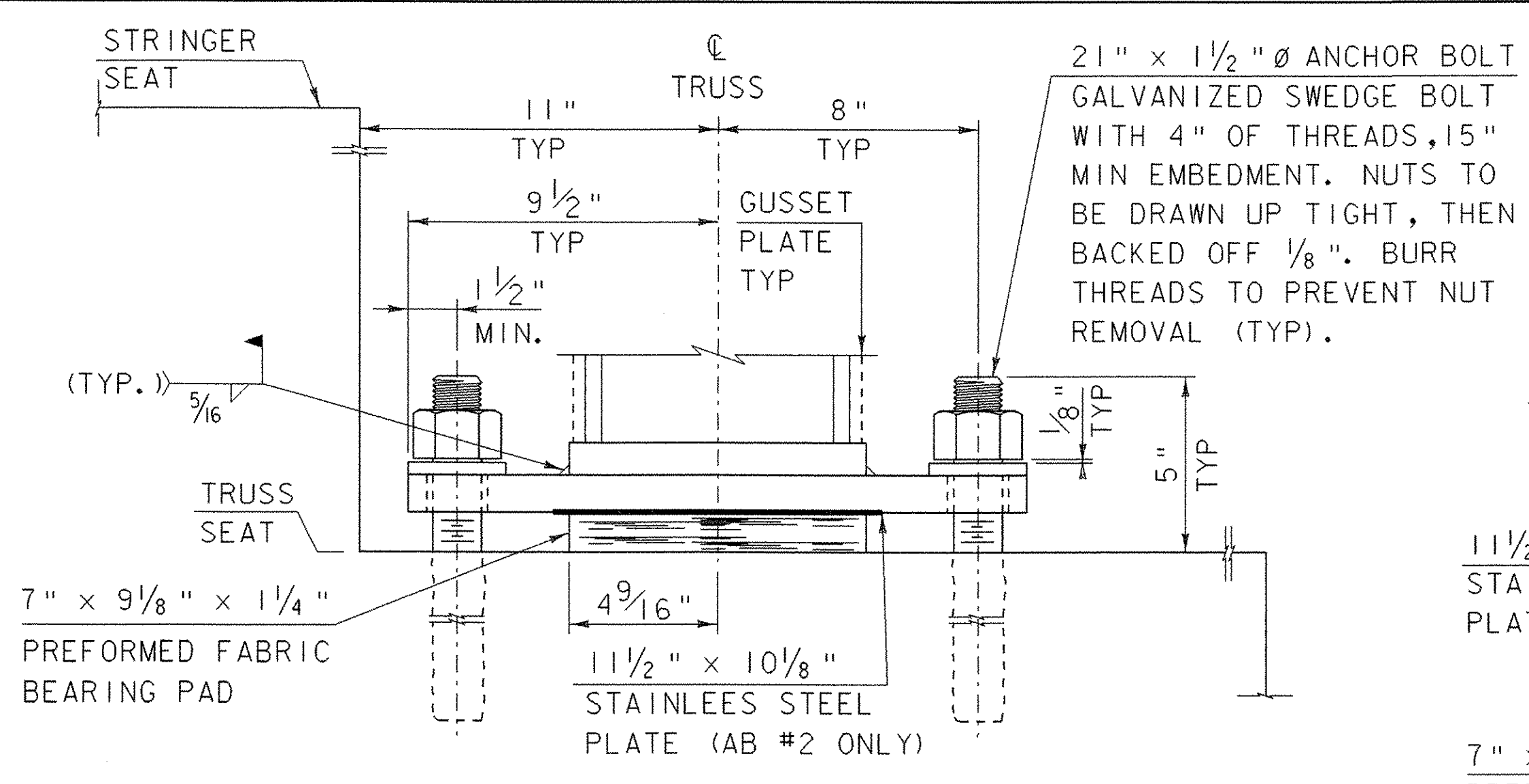


ABUT. #1 - SIDE VIEW
(FIXED BEARING)
SCALE 3" = 1'-0"

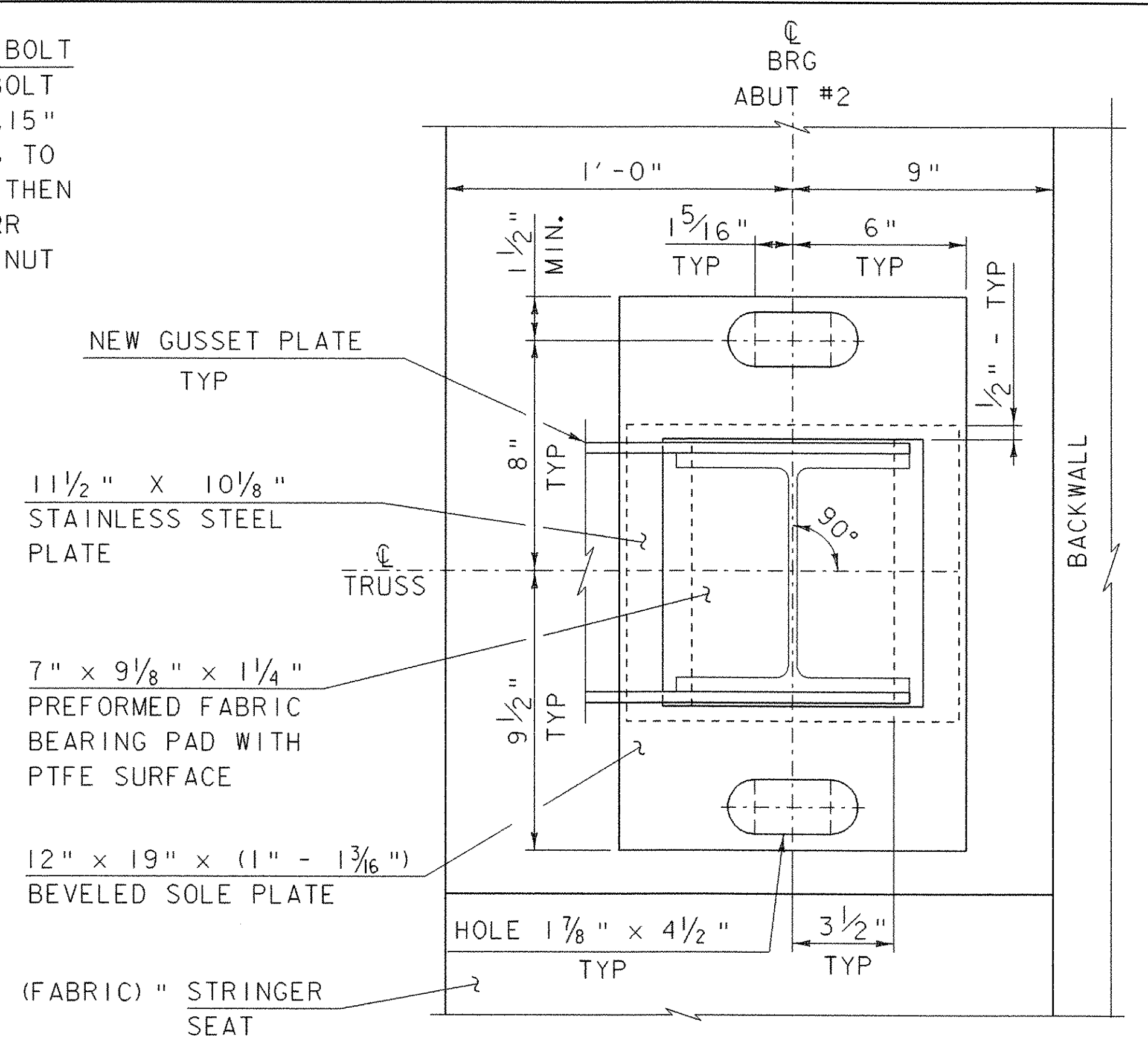


THERMAL EXPANSION

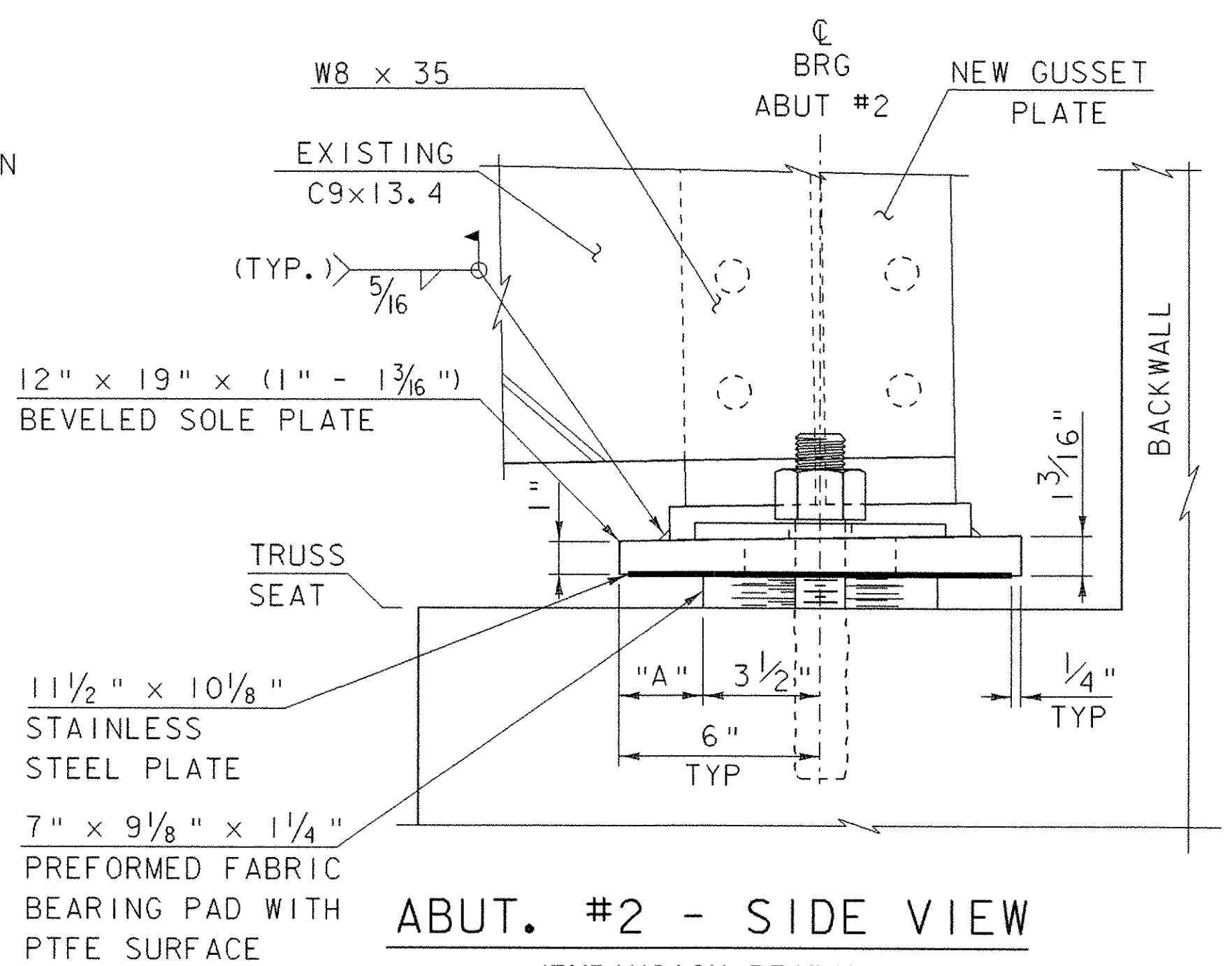
TEMP	"A" DIST
120°F	1 7/8"
105°F	2"
90°F	2 1/8"
75°F	2 1/4"
60°F	2 3/8"
45°F	2 1/2"
30°F	2 5/8"
15°F	2 3/4"
0°F	2 7/8"
-15°F	3"
-30°F	3 1/8"



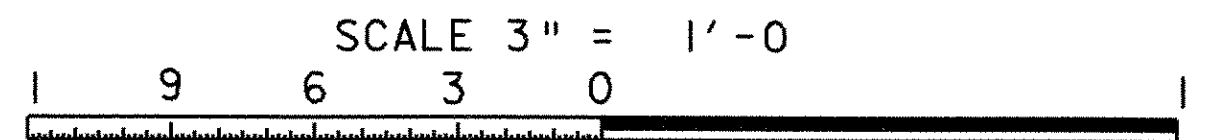
ABUT. #1 AND #2 - FRONT VIEW
SCALE 3" = 1'-0"



ABUT. #2 - PLAN VIEW
(EXPANSION BEARING)
SCALE 3" = 1'-0"



ABUT. #2 - SIDE VIEW
(EXPANSION BEARING)
SCALE 3" = 1'-0"



BEARING NOTES:

- BEARINGS SHALL BE PAID FOR UNDER THE ITEM 531.10 "BEARING DEVICE ASSEMBLY (FABRIC)" STRINGER SEAT AND SHALL CONFORM TO APPLICABLE SUBSECTIONS OF SECTIONS 531 AND 731.
- THE FIELD WELD CONNECTING THE BOTTOM FLANGE WITH THE BEARING DEVICE SHALL BE MADE WITH E7018 RODS. AREAS OF GALVANIZING OR METALIZING DAMAGED BY WELDING AND/OR HANDLING SHALL BE PAINTED WITH A ZINC RICH PAINT, IN ACCORDANCE WITH SECTION 513.
- ALTERNATE CONFIGURATION FOR BEARINGS MAY BE SUBMITTED FOR APPROVAL. ANY ALTERNATE SUBMITTED SHALL BE DESIGNED AND CERTIFIED TO MEET DESIGN LOADS AND CRITERIA SHOWN ON THIS SHEET, AND SHALL MAINTAIN THE ANCHORAGE SYSTEM SHOWN
- TRUSS AND STRINGER SEAT ELEVATIONS MAY BE REVISED TO ACCOMMODATE AN ALTERNATE CONFIGURATION.
- THE "A" DISTANCE IS THE SOLE PLATE ADJUSTMENT TO BE USED.
- DESIGN CRITERIA:
 - A. BASE PLATE TO CONCRETE DESIGN PRESSURE = 1000 PSI MAXIMUM.
 - B. MINIMUM DESIGN ROTATION = 0.015 RADIANS
 - C. HORIZONTAL CAPACITY SHALL BE A MINIMUM 10% OF VERTICAL LOAD
 - D. DESIGN LOAD PER BEARING: TRUSS = 58.10 K, STRINGER = 18.00 K
- TRUSS: DL = 22.40 K, LL + I = 35.70 K; STRINGER: DL = 1.10 K, LL + I = 16.90
- SHOP DRAWINGS CONFORMING TO SUBSECTION 531.03 SHALL BE SUBMITTED AND INCLUDE ANY WELDING OR BONDING PROCEDURES.
- SOLE PLATES, ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED OR METALIZED AS PER SUBSECTION 531.04 (b) AND 506.15. IF THE BEARINGS ARE METALIZED, THEY SHALL BE SEALED WITH AN APPROVED PRIMER AS SPECIFIED IN SUBSECTION 531.04 (b). ALL WASHERS SHALL BE 3/8" PLATE MINIMUM. PAYMENT FOR SOLE PLATES, ANCHOR BOLTS FOR BEARING PADS, NUTS AND WASHERS SHALL BE INCLUDED IN THE UNIT BID PRICE "BEARING DEVICE ASSEMBLY, FABRIC". ANCHOR BOLTS SHALL CONFORM TO SUBSECTION 714.08.

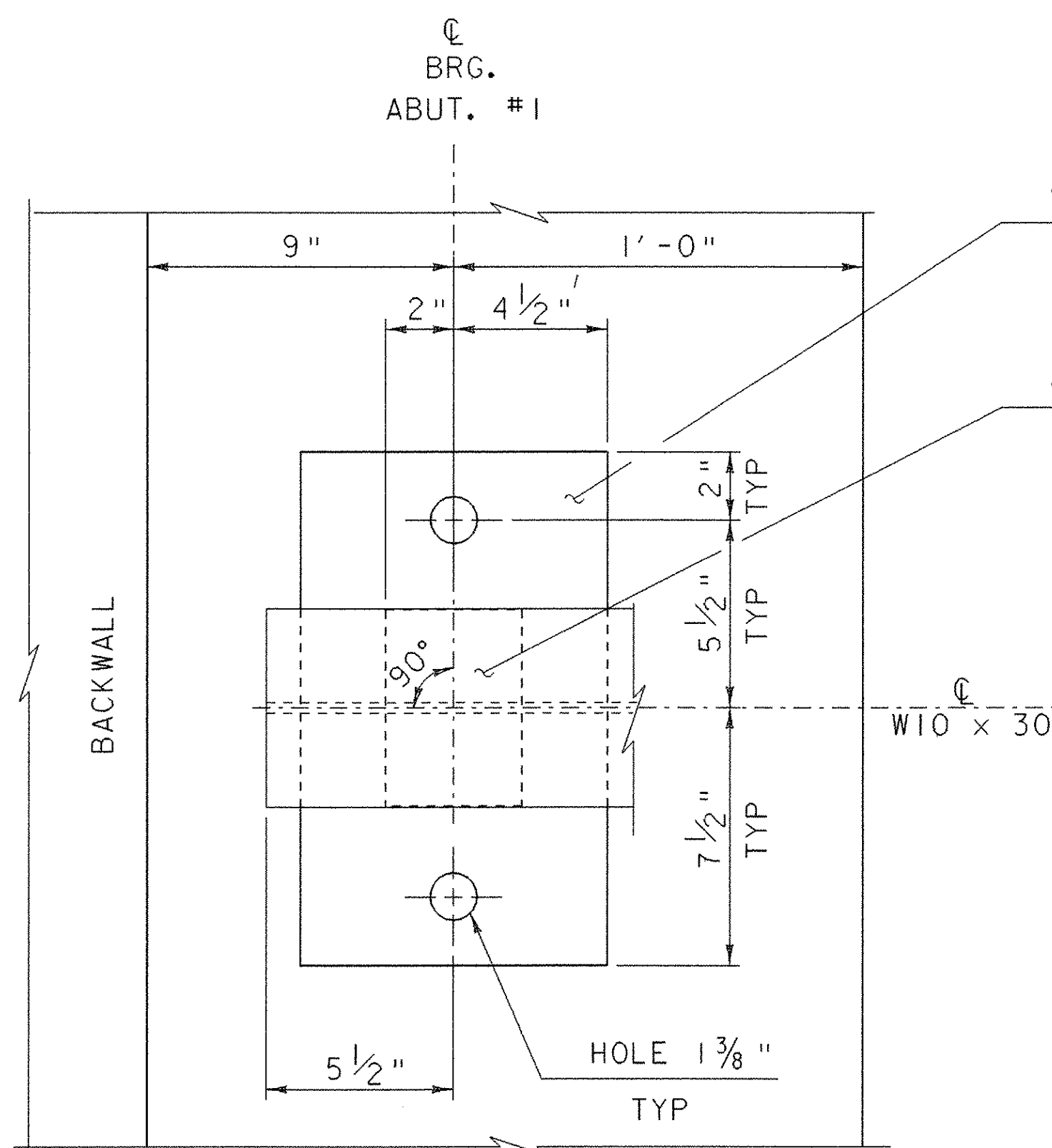
9. ALL STEEL IN BEARING DEVICES (EXCEPT STAINLESS STEEL AND ANCHOR BOLTS) SHALL BE AASHTO M 270M/M 270 GRADE 36.

BEARING DETAILS

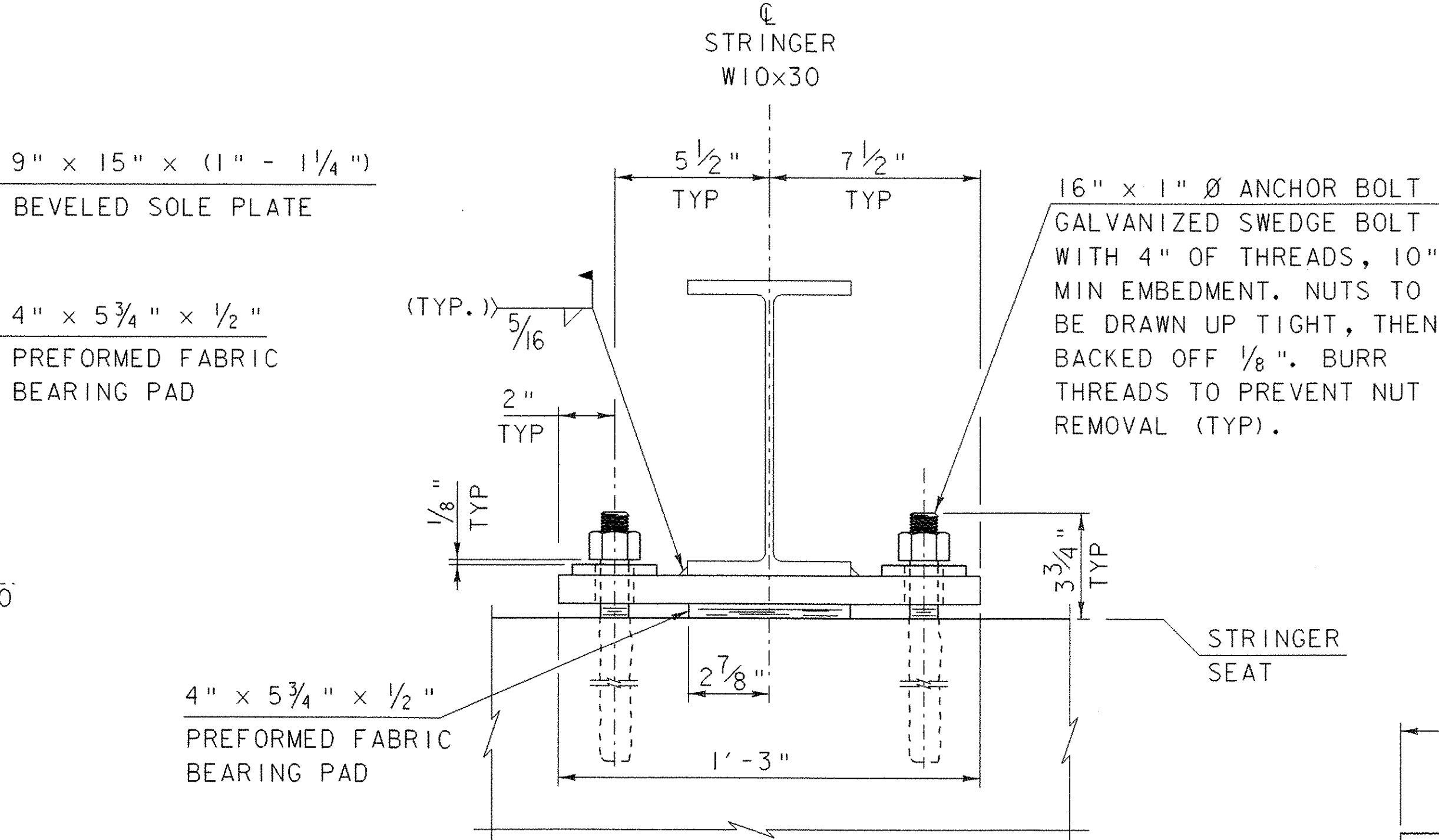
PROJECT NAME: BRADFORD
PROJECT NUMBER: STP 1447(28)

FILE NAME: s96j286brg.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: M.GAGULIC
TRUSS BEARINGS

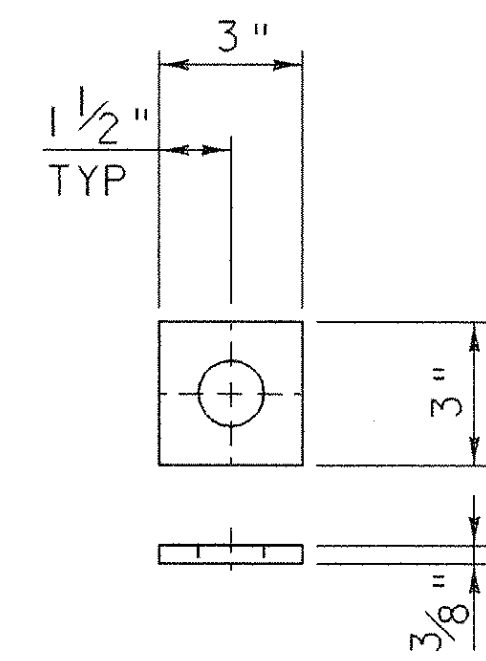
PLOT DATE: 22-NOV-2006
DRAWN BY: D.D.BEARD
CHECKED BY: R.S.YOUNG
SHEET 18 OF 63



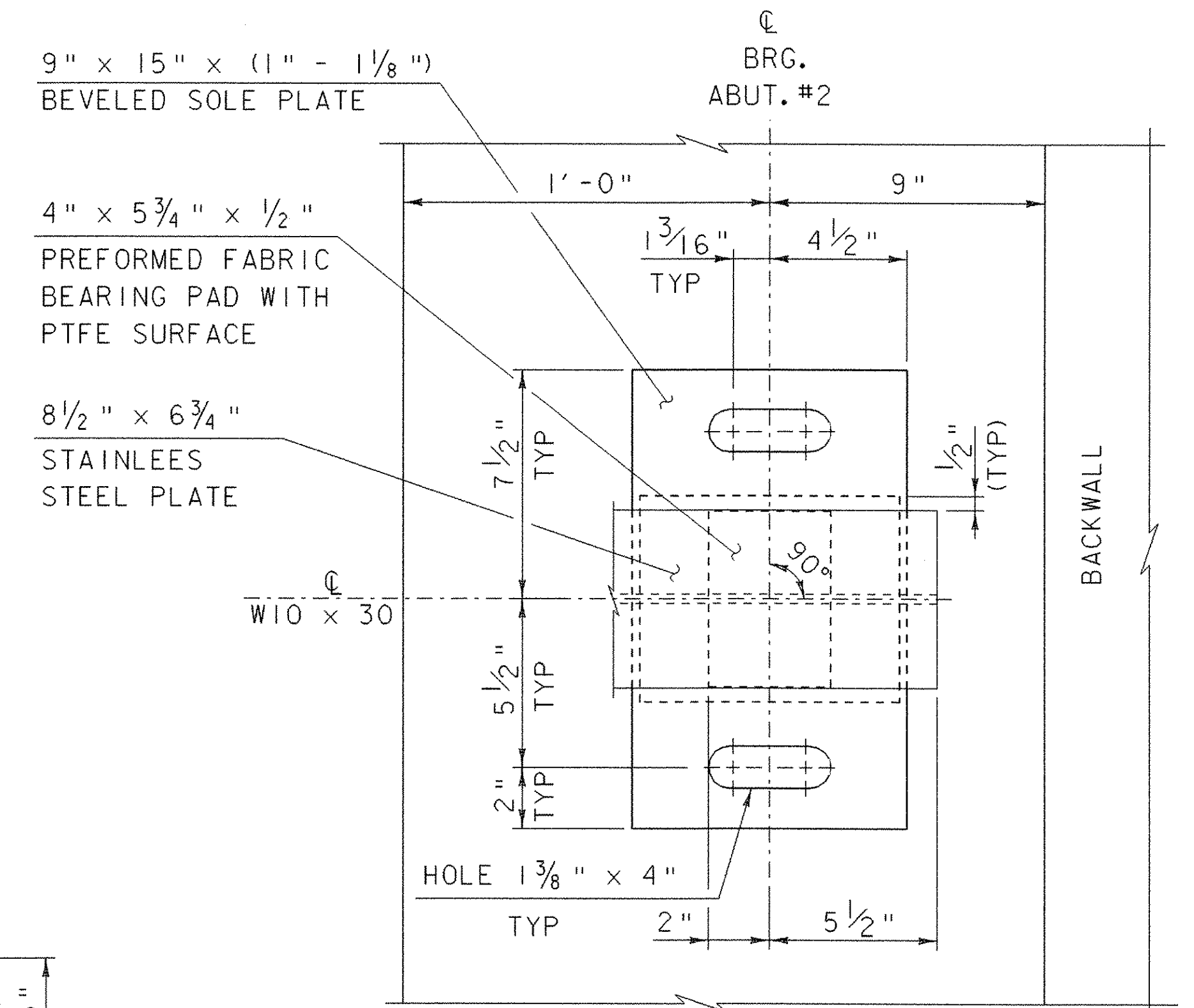
ABUT #1 - PLAN VIEW
STRINGERS: S2A, S3A, AND S4A
(FIXED BEARING)
SCALE 3" = 1'-0"



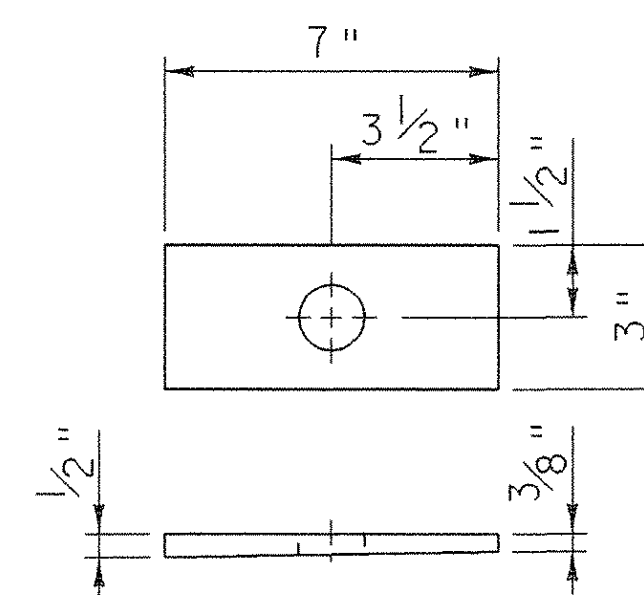
ABUT. #1 - FRONT VIEW
STRINGERS: S2A, S3A, AND S4A
(FIXED BEARING)
SCALE 3" = 1'-0"



ABUT #1 WASHER
SCALE 3" = 1'-0"

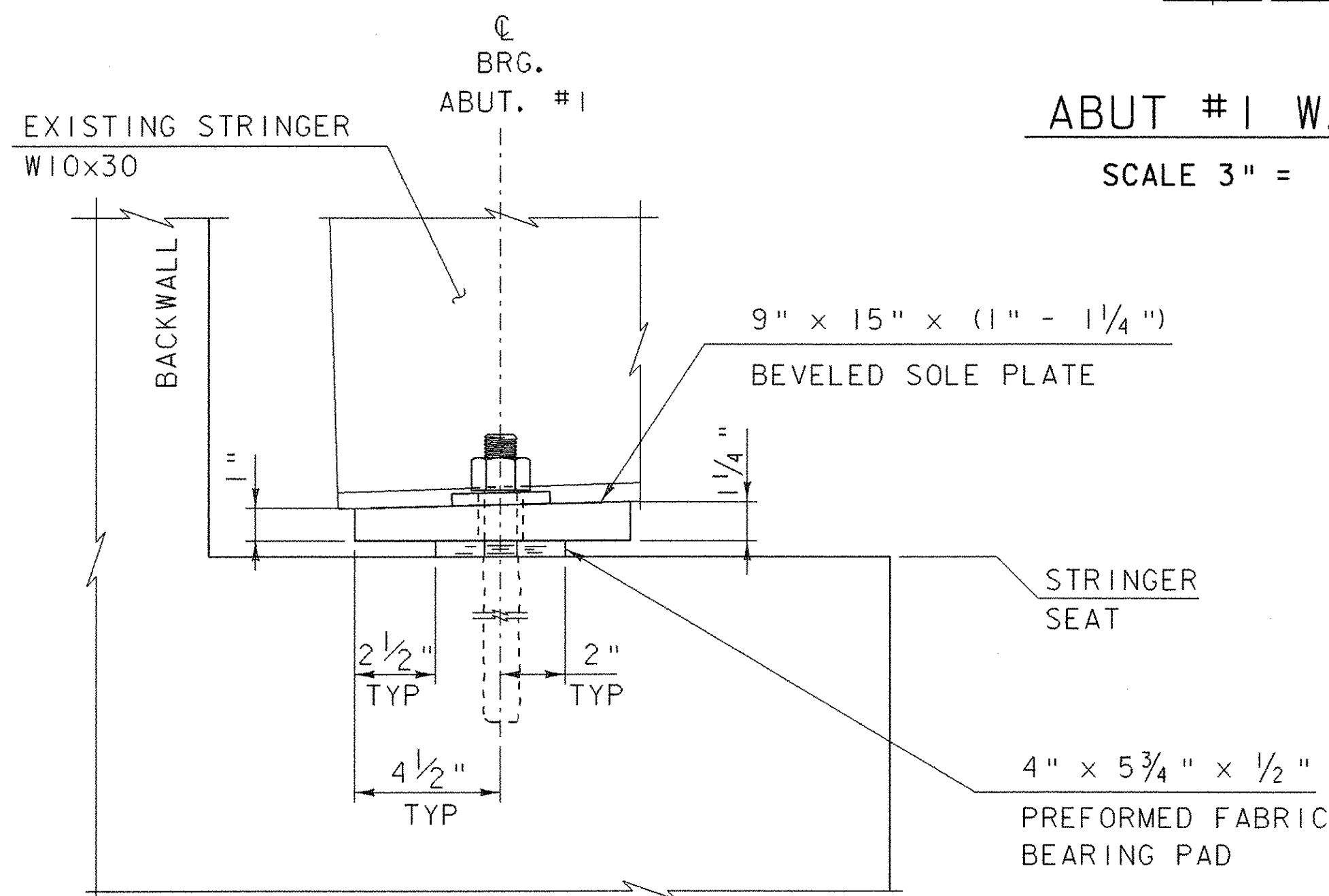


ABUT. #2 - PLAN VIEW
STRINGERS: S2A, S3A, AND S4A
(EXPANSION BEARING)
SCALE 3" = 1'-0"

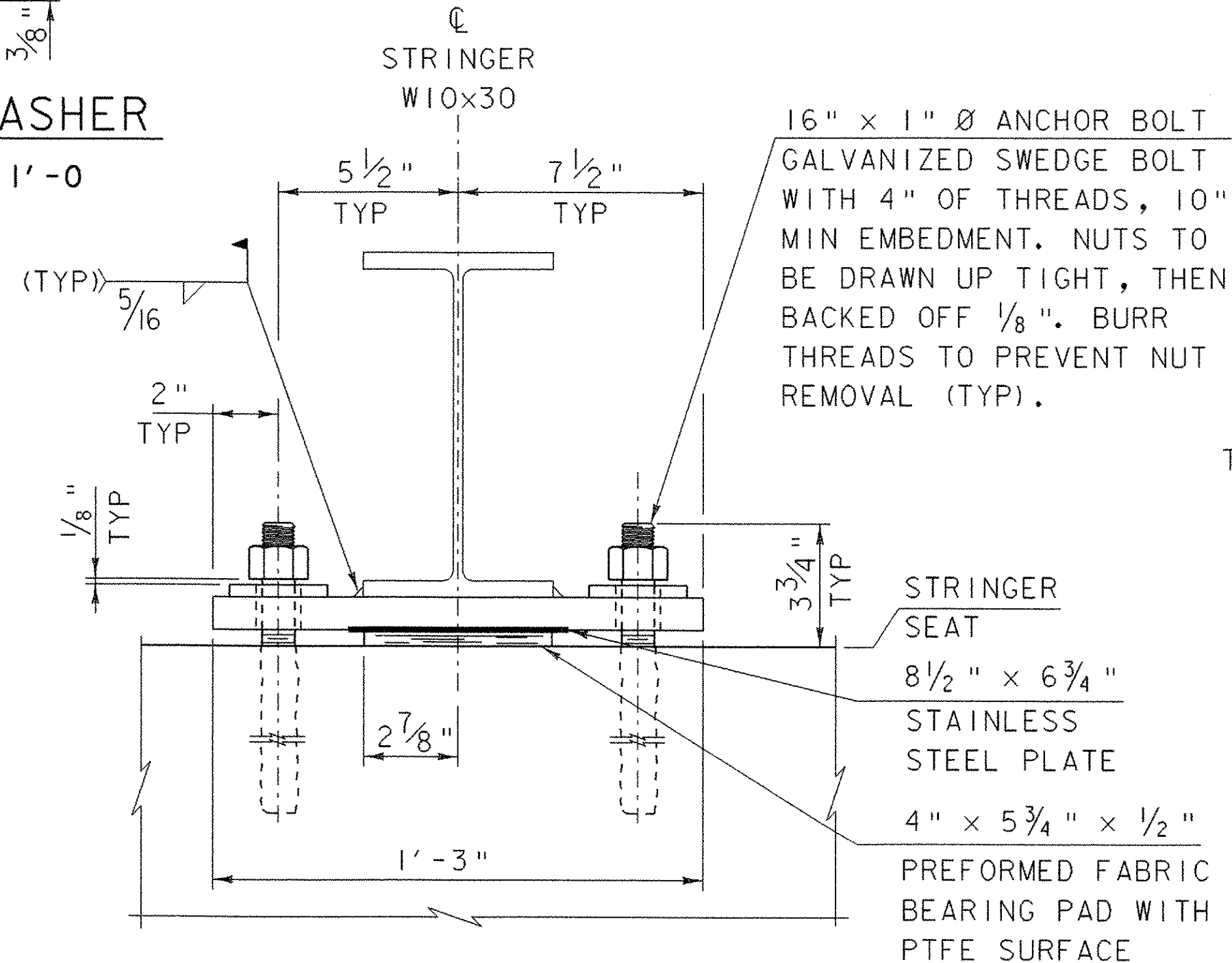


ABUT #2 WASHER
SCALE 3" = 1'-0"

SEE BEARING NOTES
ON SHEET 18



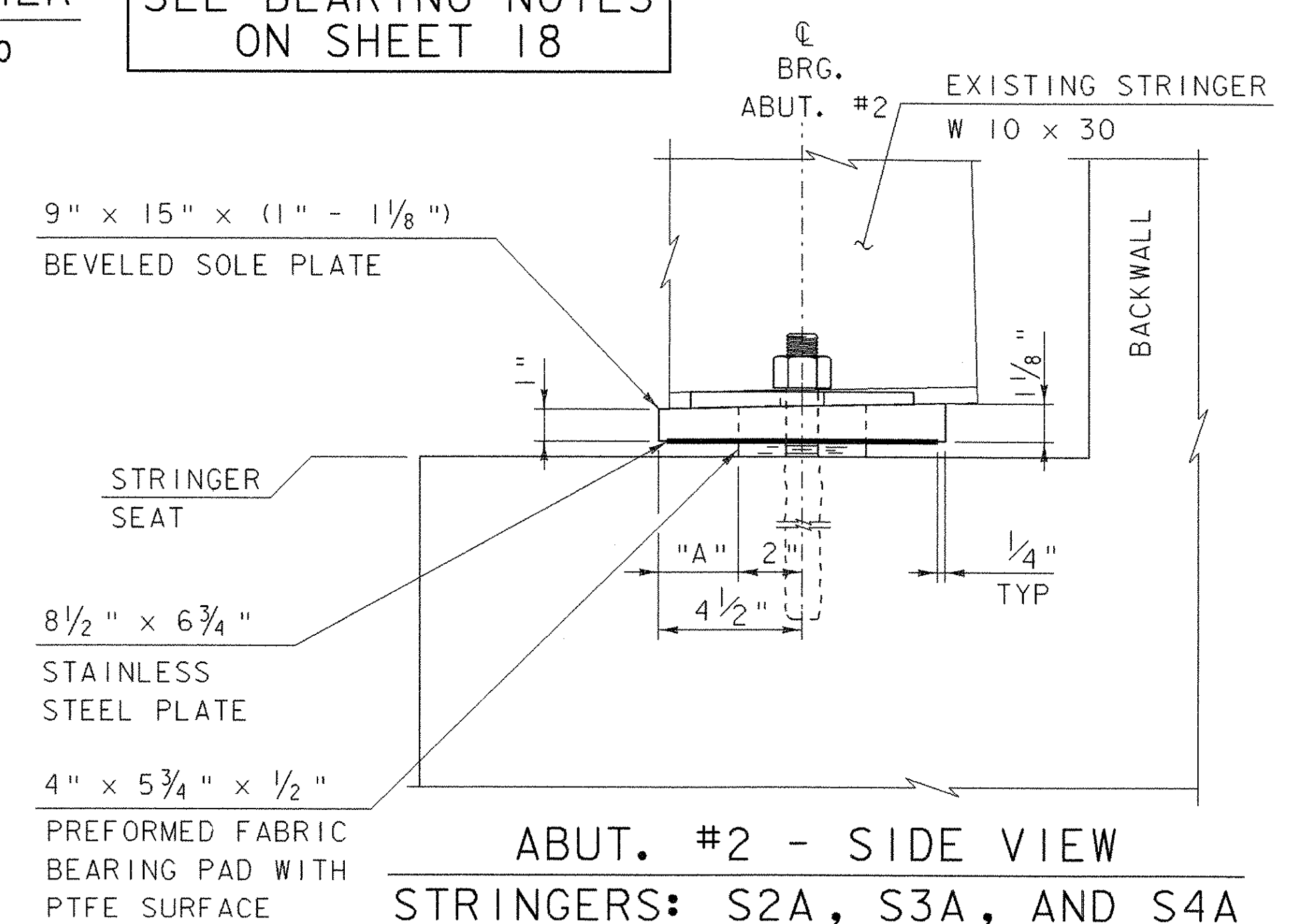
ABUT. #1 - SIDE VIEW
STRINGERS: S2A, S3A, AND S4A
(FIXED BEARING)
SCALE 3" = 1'-0"



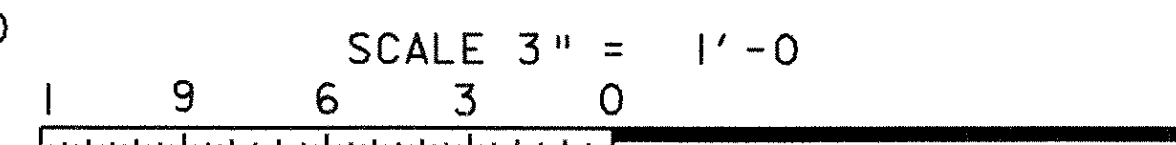
ABUT. #2 - SIDE VIEW
STRINGERS: S2A, S3A, AND S4A
(EXPANSION BEARING)
SCALE 3" = 1'-0"

THERMAL EXPANSION

TEMP	"A" DIST
120°F	1 1/8"
105°F	2"
90°F	2 1/8"
75°F	2 1/4"
60°F	2 3/8"
45°F	2 1/2"
30°F	2 5/8"
15°F	2 3/4"
0°F	2 7/8"
-15°F	3"
-30°F	3 1/8"

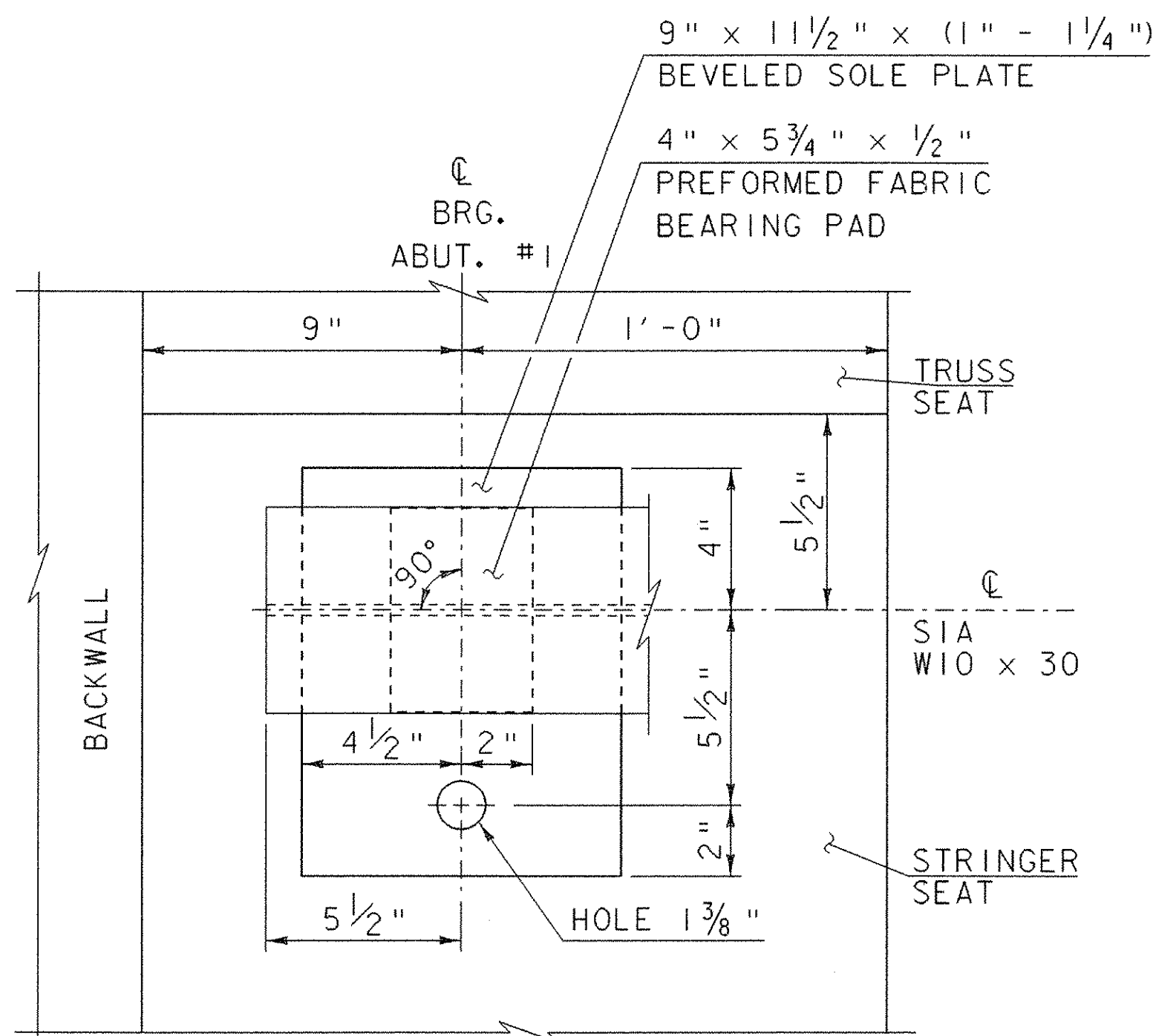


ABUT. #2 - SIDE VIEW
STRINGERS: S2A, S3A, AND S4A
(EXPANSION BEARING)
SCALE 3" = 1'-0"

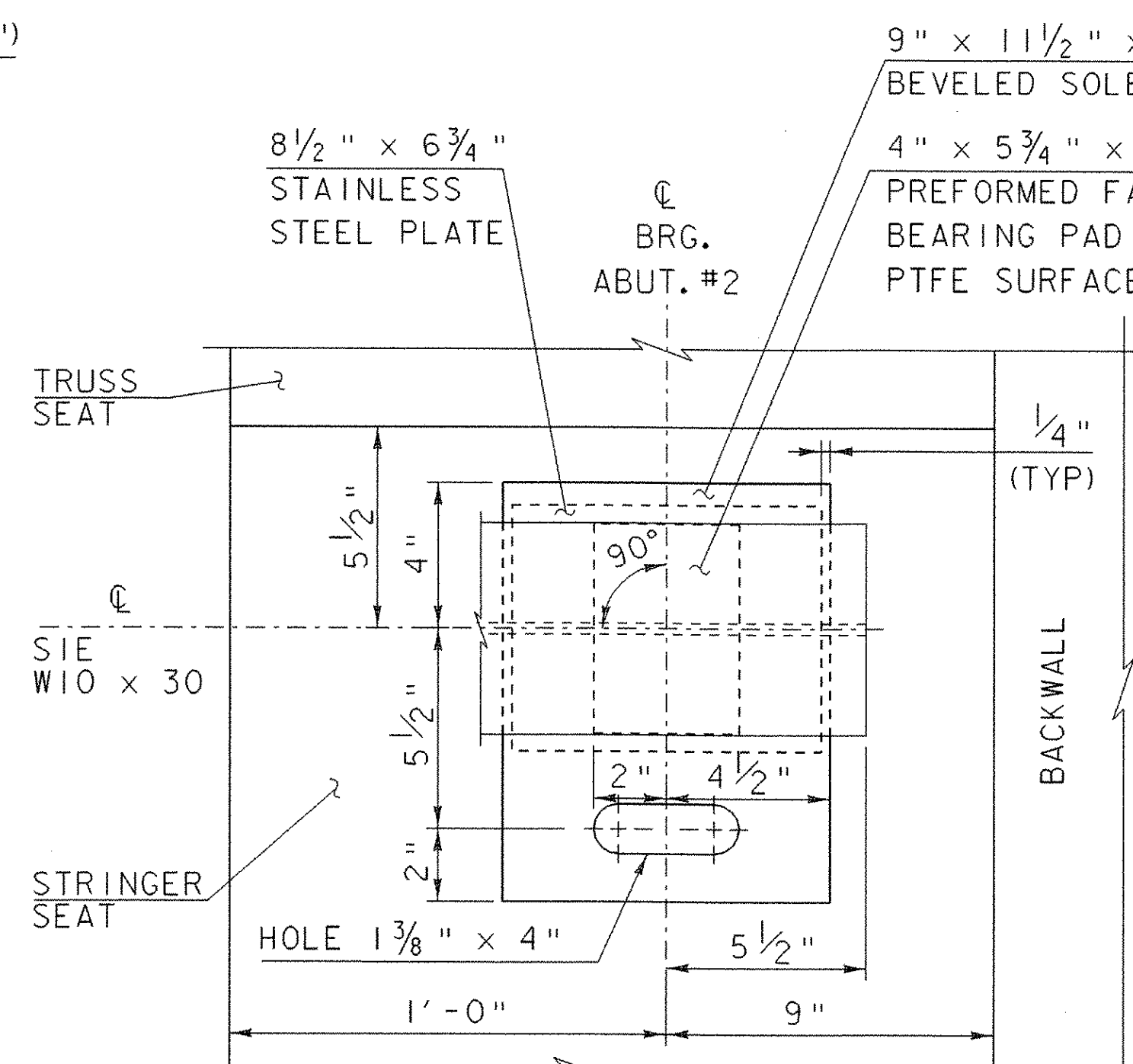


BEARING DETAILS

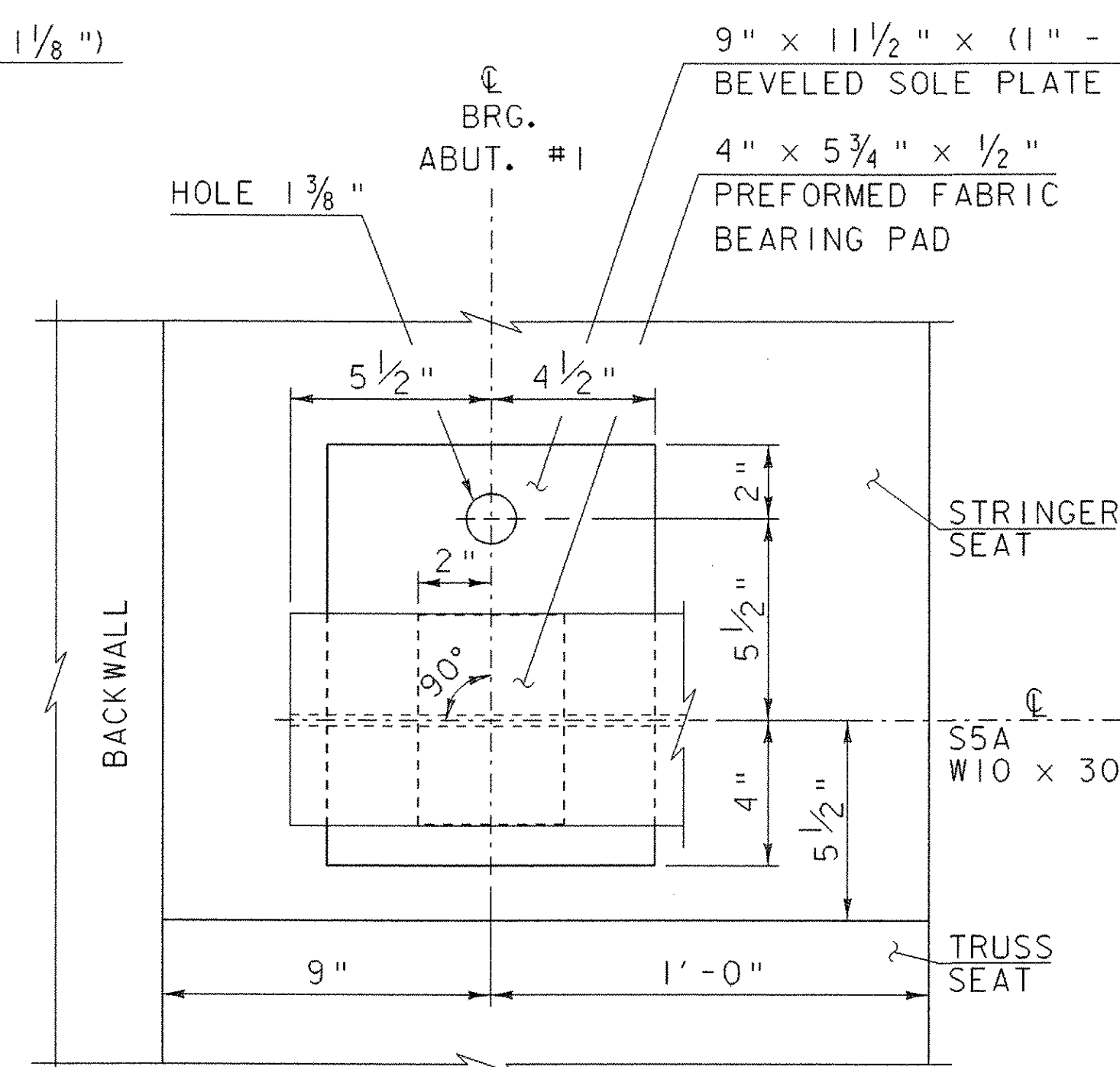
PROJECT NAME: BRADFORD	PLOT DATE: 22-NOV-2006
PROJECT NUMBER: STP 1447(28)	DRAWN BY: D.D. BEARD
FILE NAME: s96j286brg.dgn	CHECKED BY: R.S. YOUNG
PROJECT LEADER: C.P. WILLIAMS	SHEET 19 OF 63
DESIGNED BY: M. GAGULIC	
STRINGERS 2, 3, AND 4 BEARINGS	



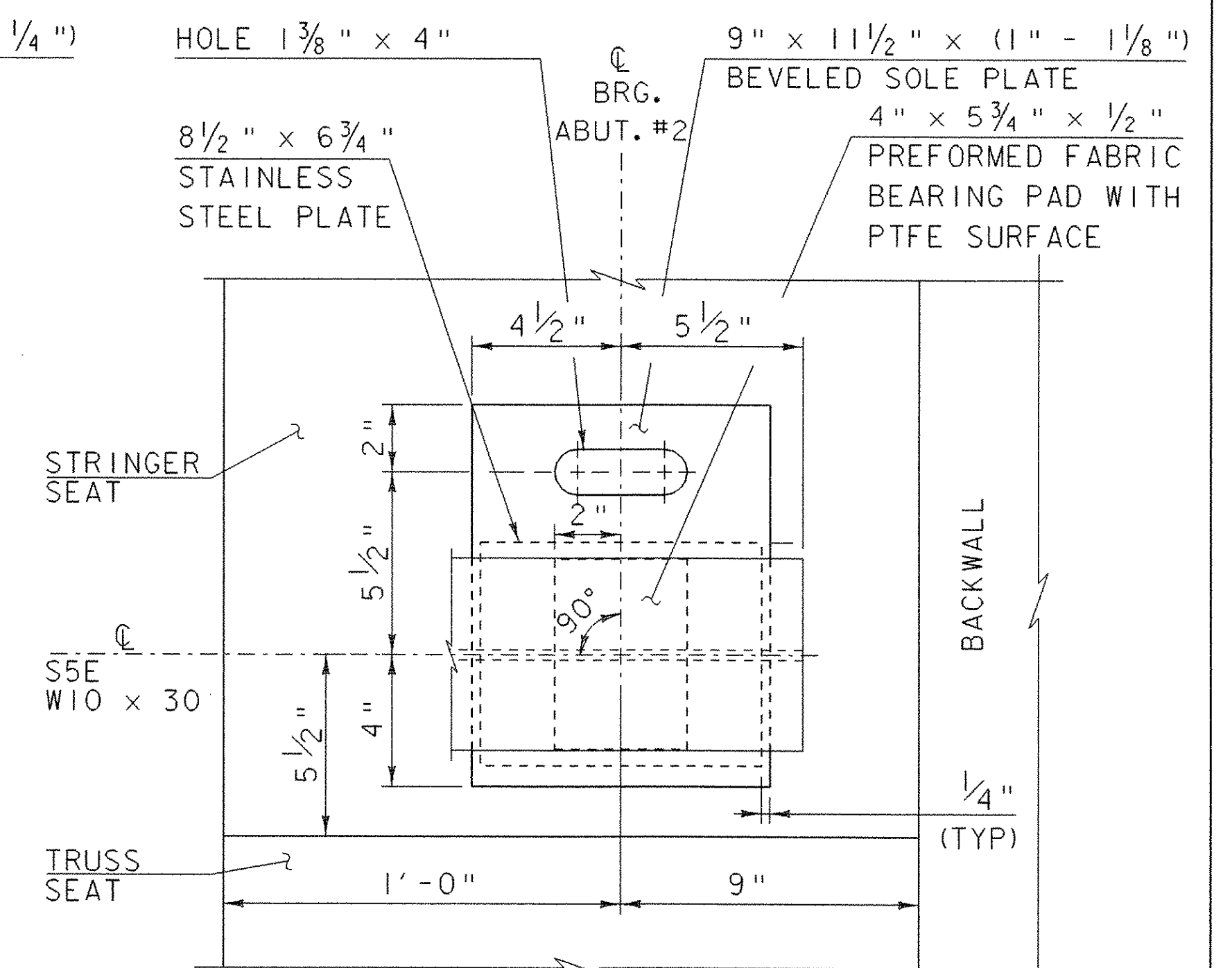
ABUT. #1 - PLAN VIEW
STRINGER - SIA
SCALE 3" = 1'-0



ABUT. #2 - PLAN VIEW
STRINGER - SIE
SCALE 3" = 1'-0

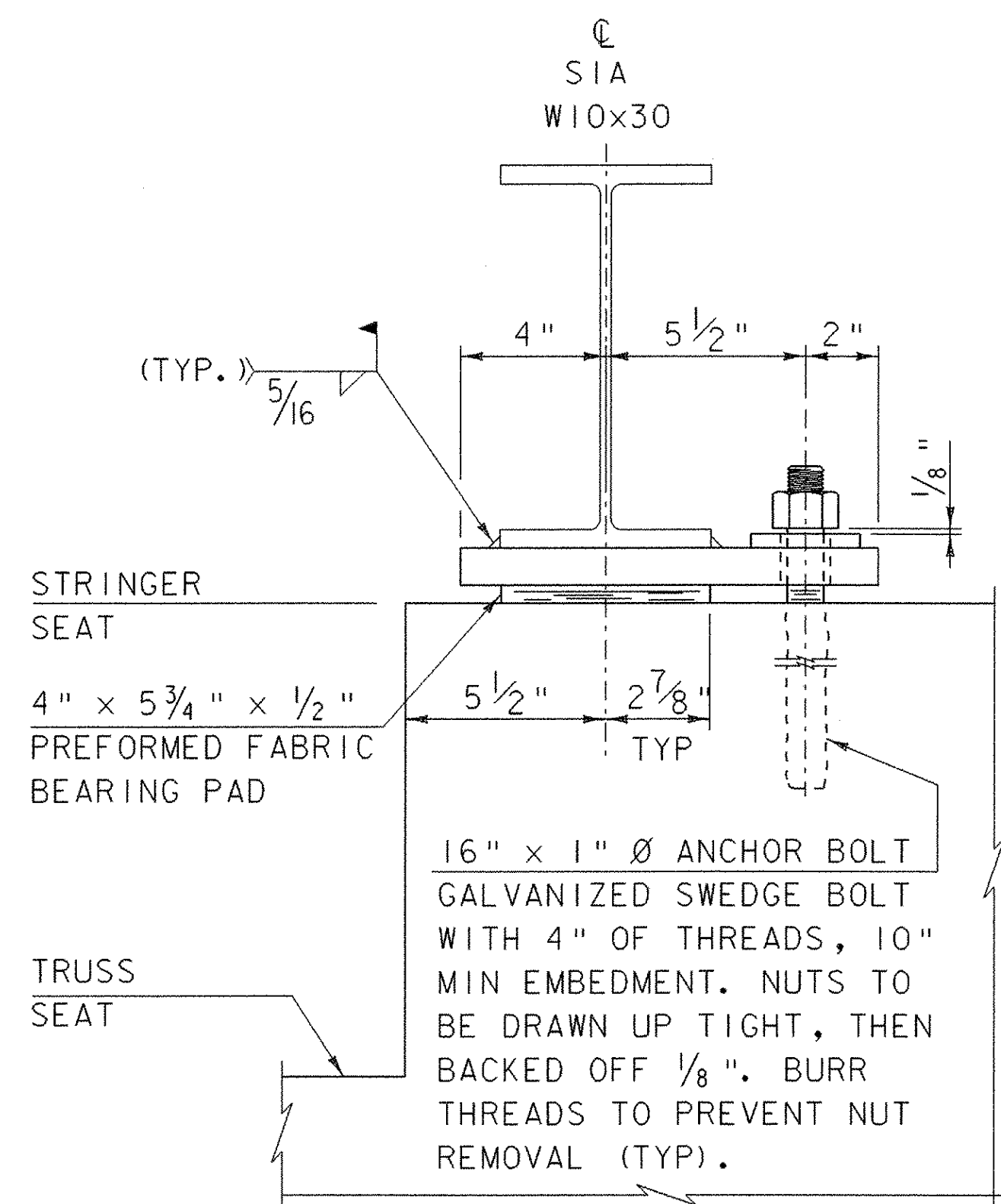


ABUT. #1 - PLAN VIEW
STRINGER - S5A
SCALE 3" = 1'-0

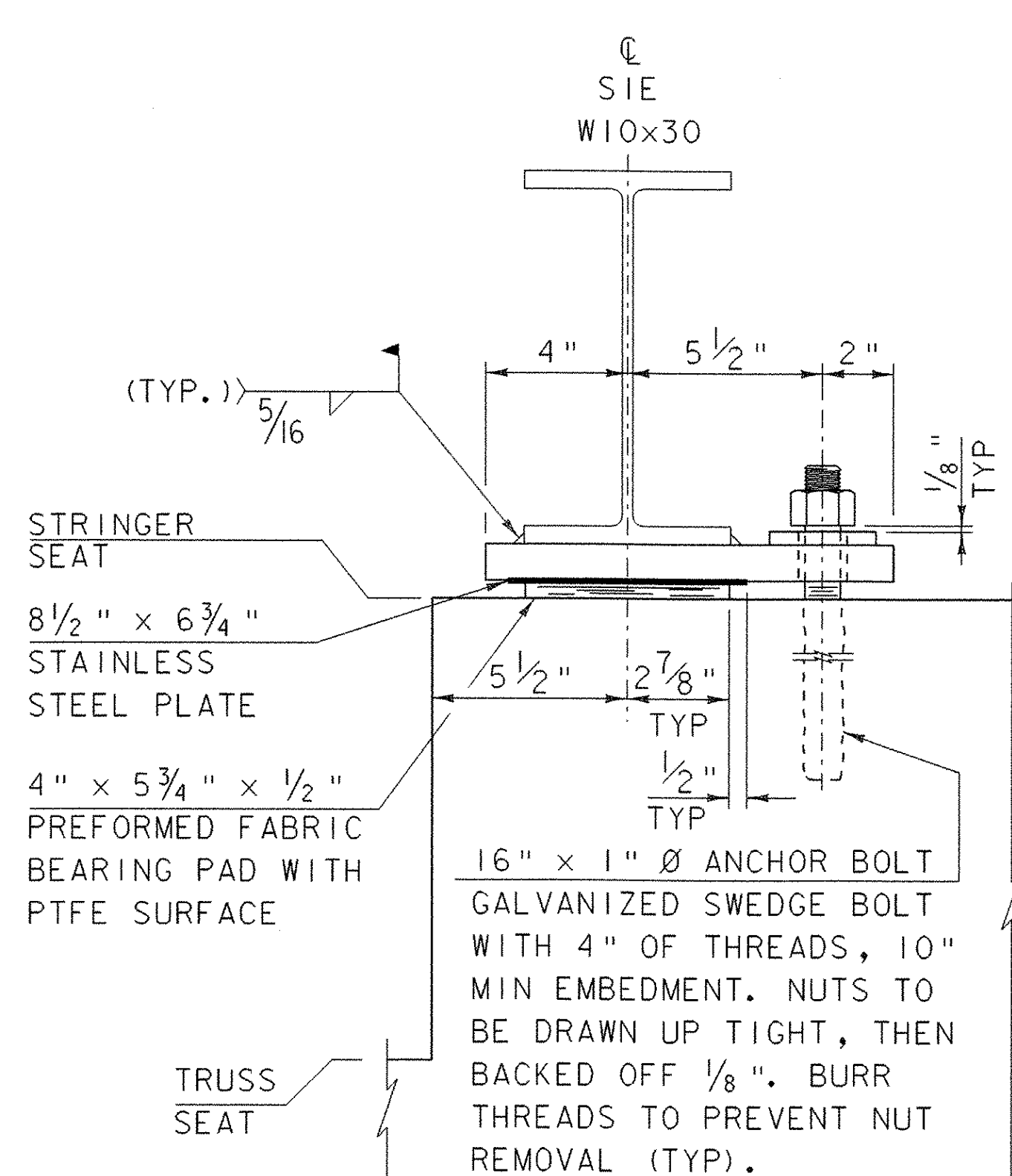


ABUT. #2 - PLAN VIEW
STRINGER - S5E
SCALE 3" = 1'-0

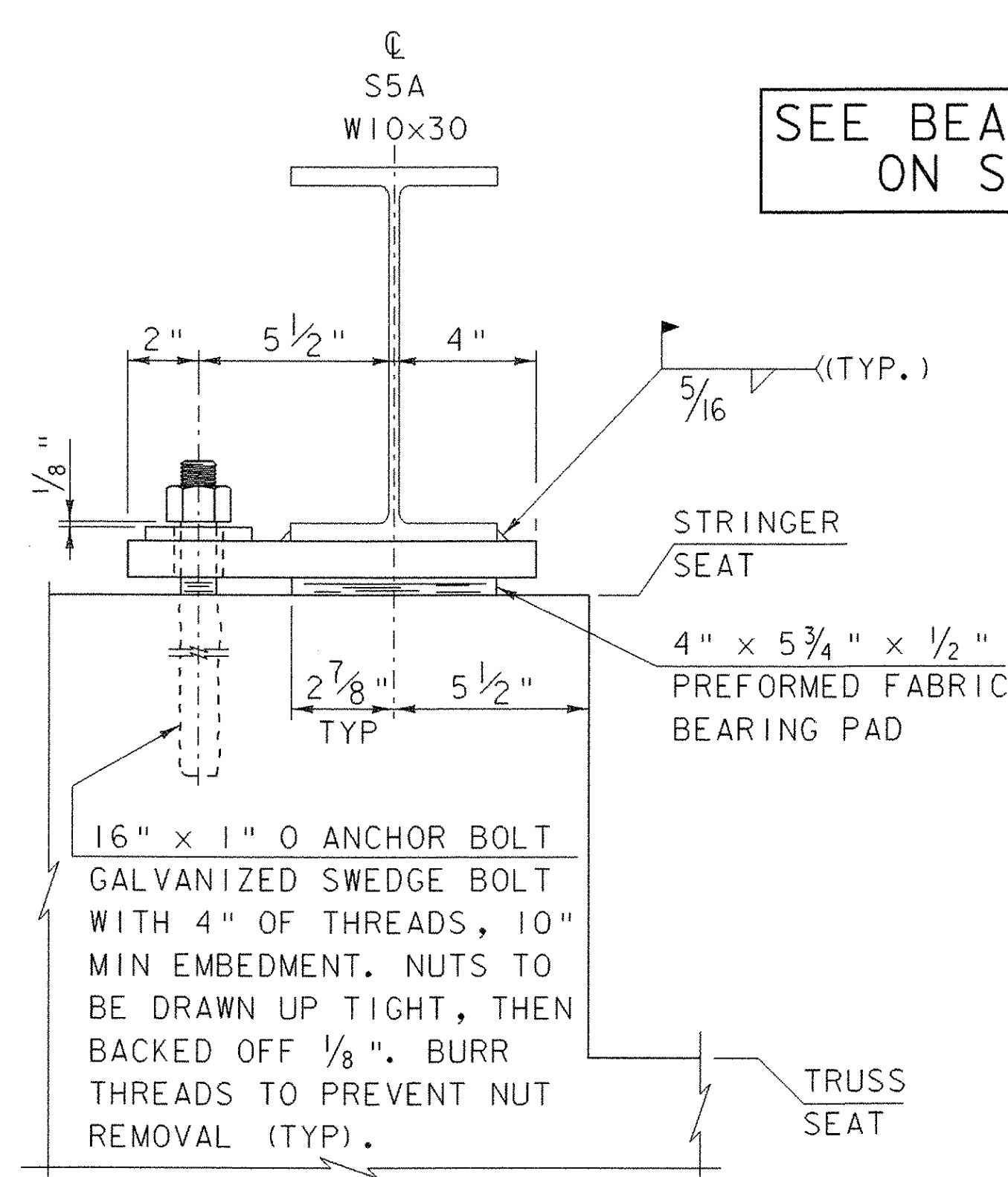
SEE BEARING NOTES
ON SHEET 18



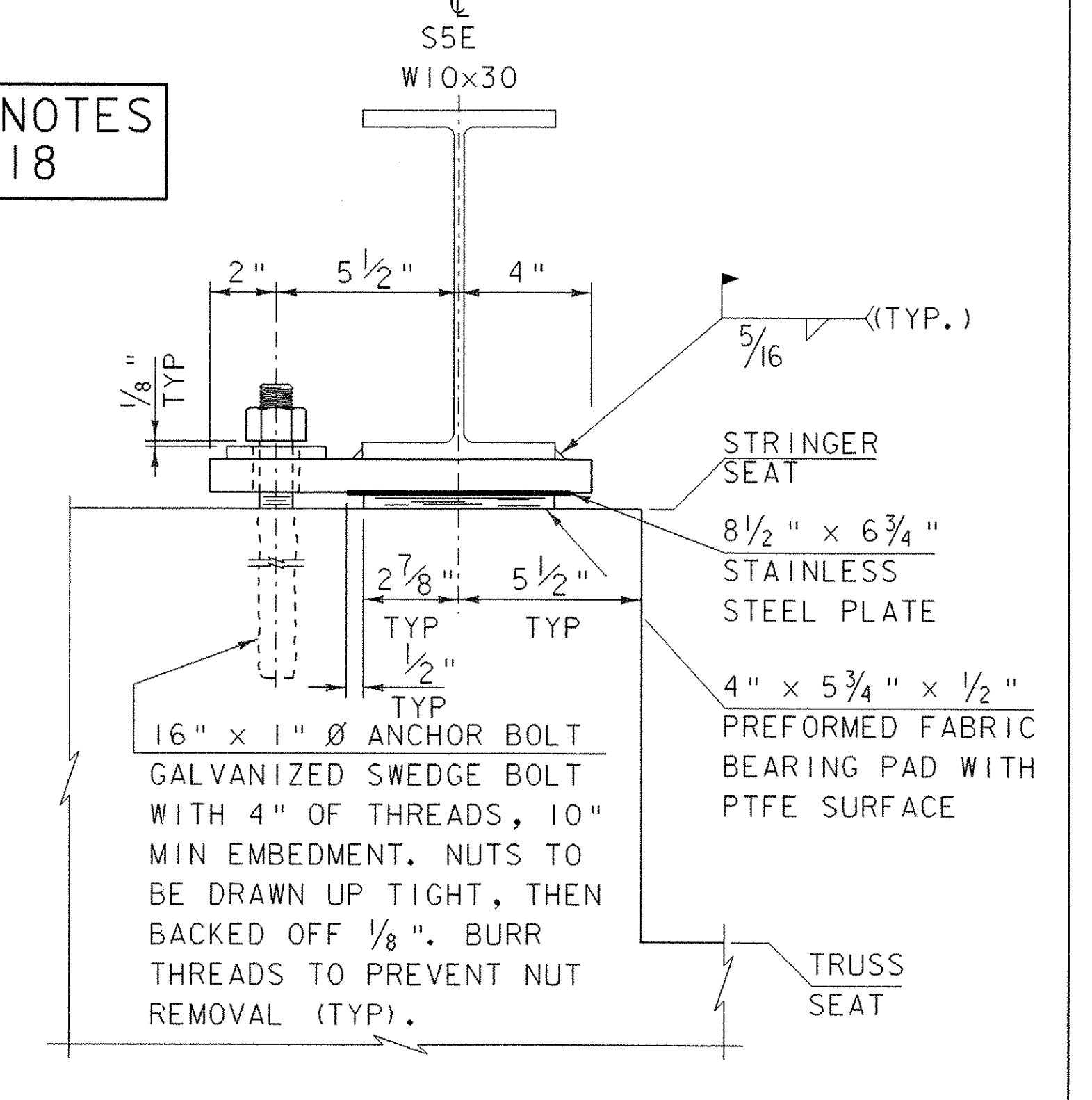
ABUT. #1 - FRONT VIEW
STRINGER - SIA
SCALE 3" = 1'-0



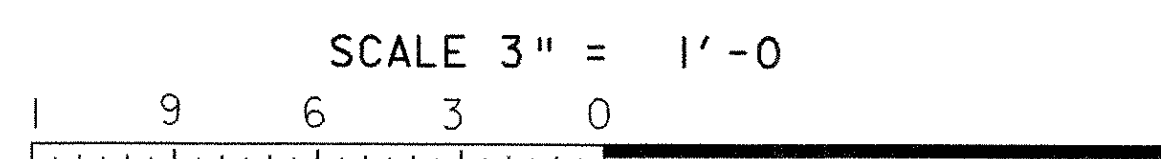
ABUT. #2 - FRONT VIEW
STRINGER - SIE
SCALE 3" = 1'-0



ABUT. #1 - FRONT VIEW
STRINGER - S5A
SCALE 3" = 1'-0

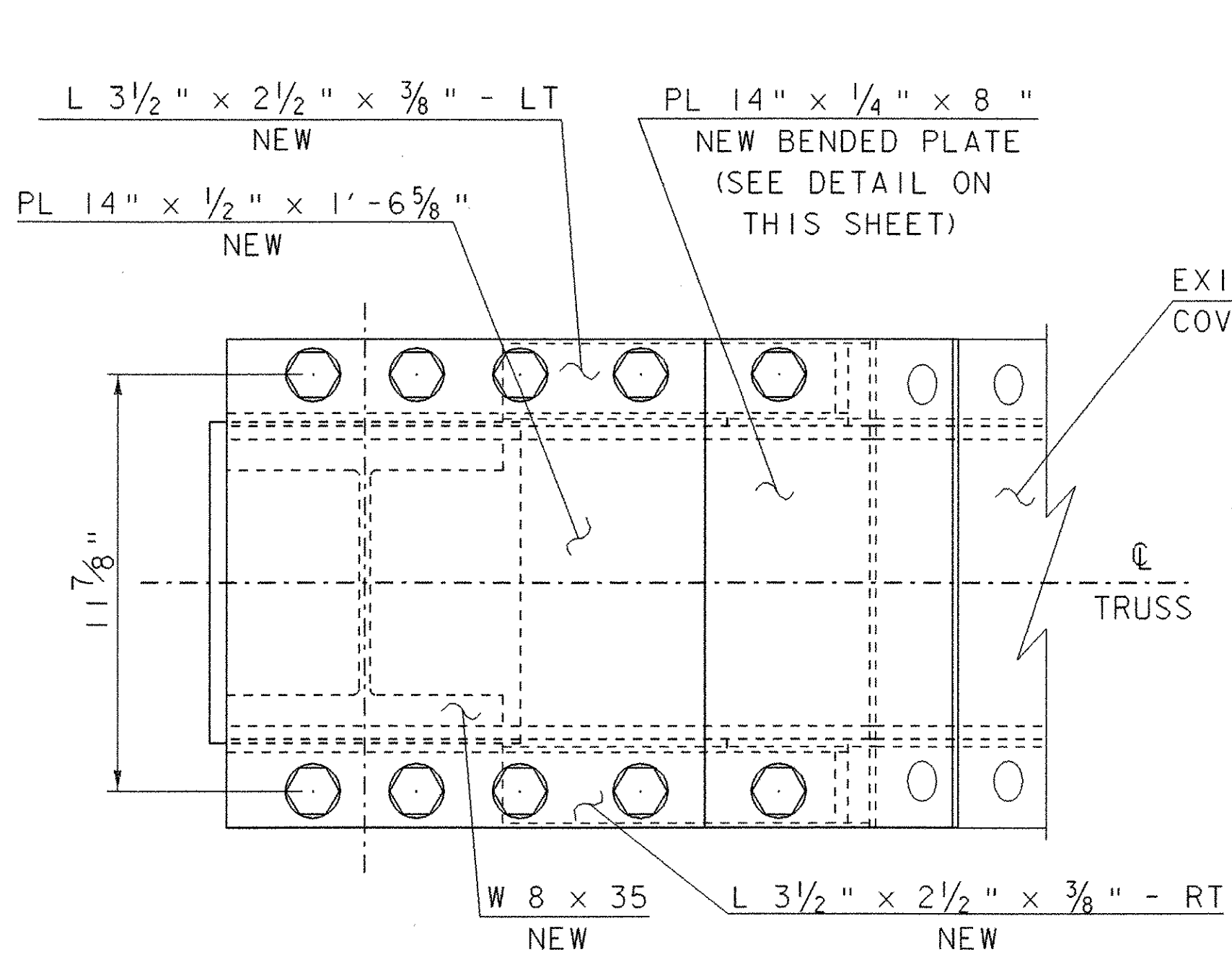


ABUT. #2 - FRONT VIEW
STRINGER - S5E
SCALE 3" = 1'-0



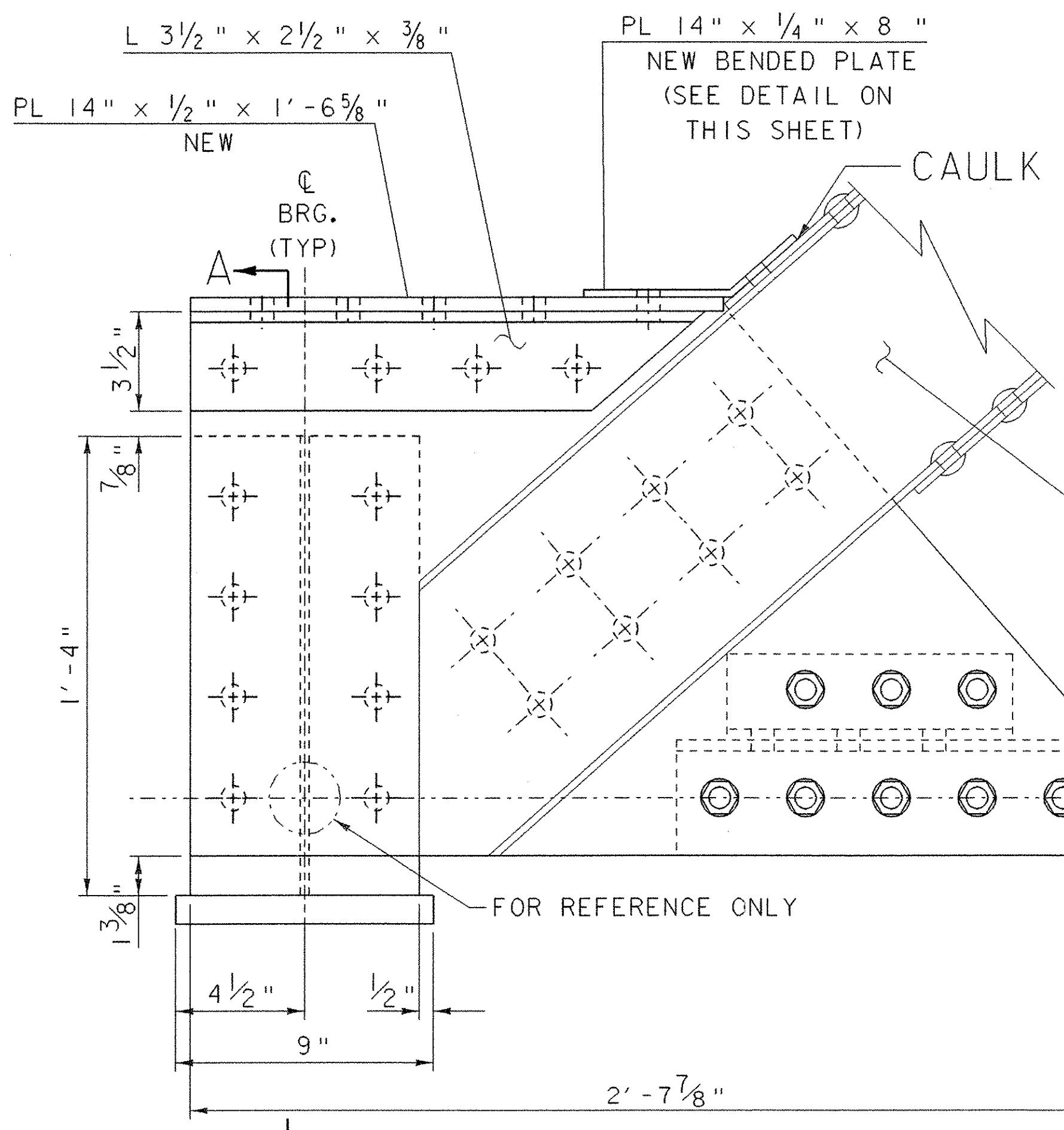
BEARING DETAILS

PROJECT NAME: BRADFORD	PLOT DATE: 22-NOV-2006
PROJECT NUMBER: STP 1447(28)	DRAWN BY: D.D. BEARD
FILE NAME: Structures\s96j286brg.dgn	CHECKED BY: R.S. YOUNG
PROJECT LEADER: C.P. WILLIAMS	SHEET 20 OF 63
DESIGNED BY: M. GAGULIC	
STRINGERS 1 AND 5 BEARINGS	



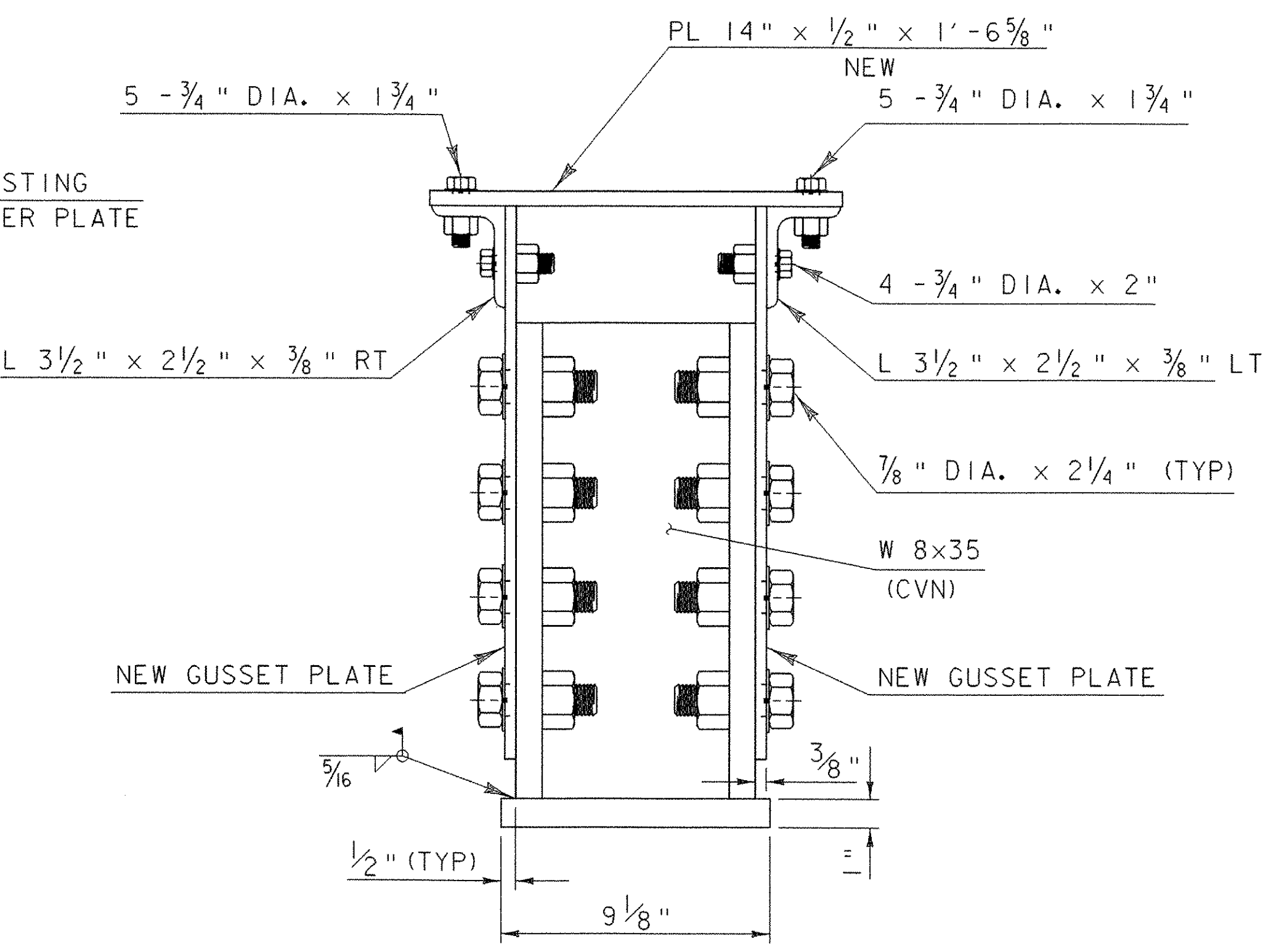
END TRUSS DETAIL-PLAN VIEW

SCALE 3" = 1'-0"



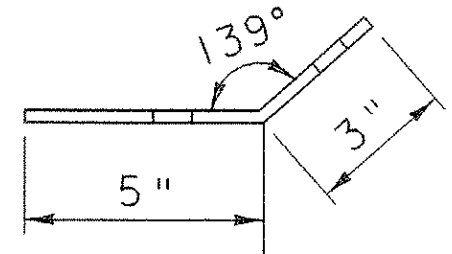
END TRUSS DETAIL-ELEVATION VIEW

SCALE 3" = 1'-0"



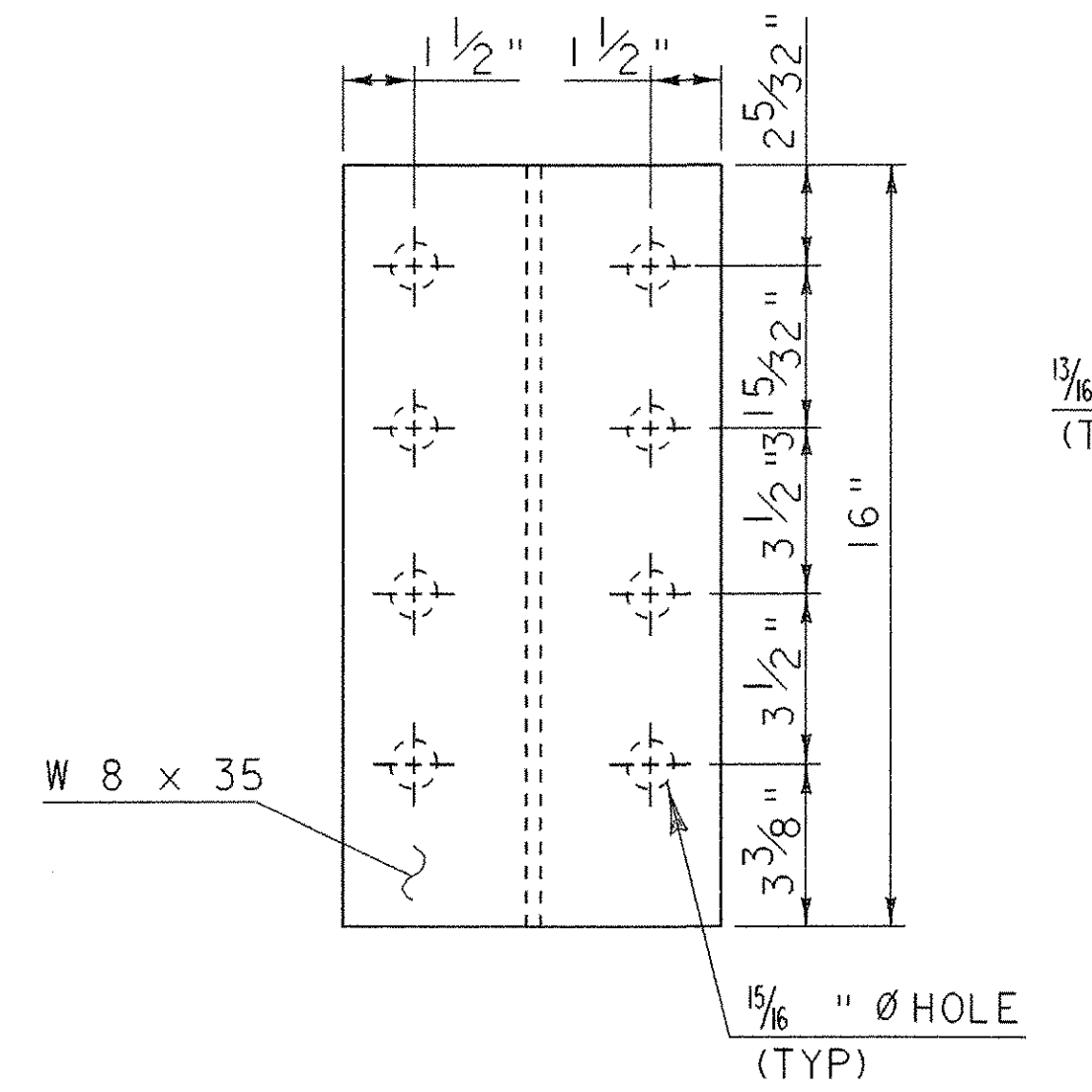
SECTION A-A - HOLE PATTERN

SCALE 3" = 1'-0"



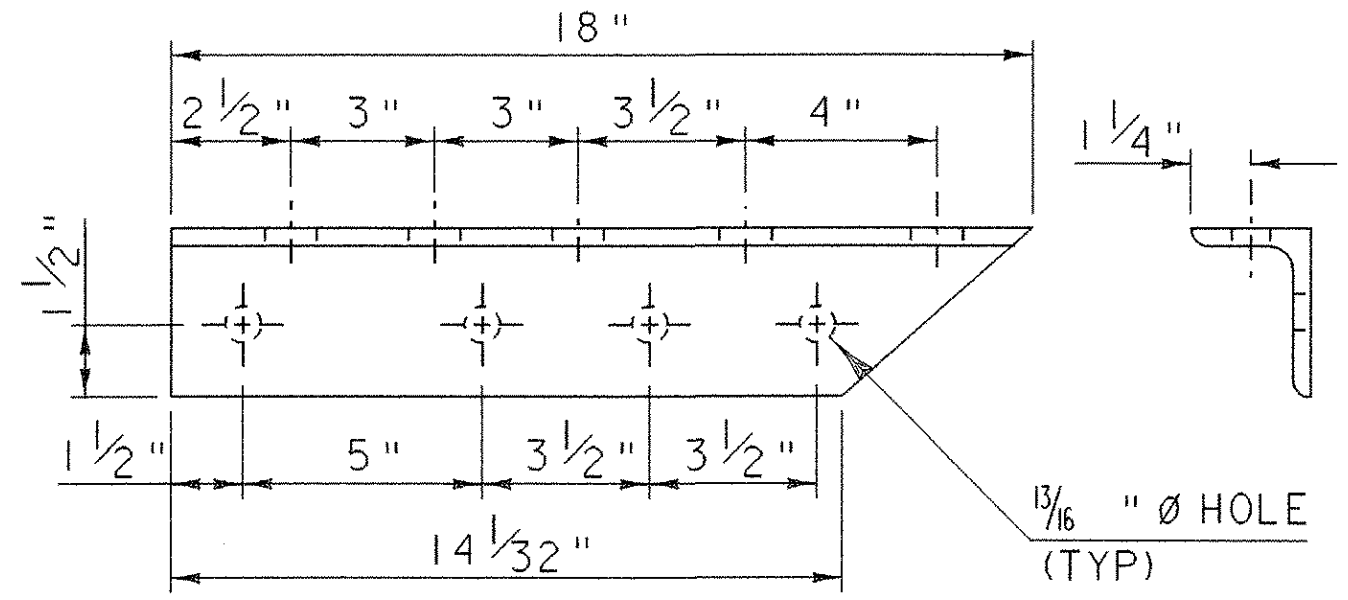
NEW BENDED PLATE

SCALE 3" = 1'-0"



W8 x 35 - SIDE VIEW

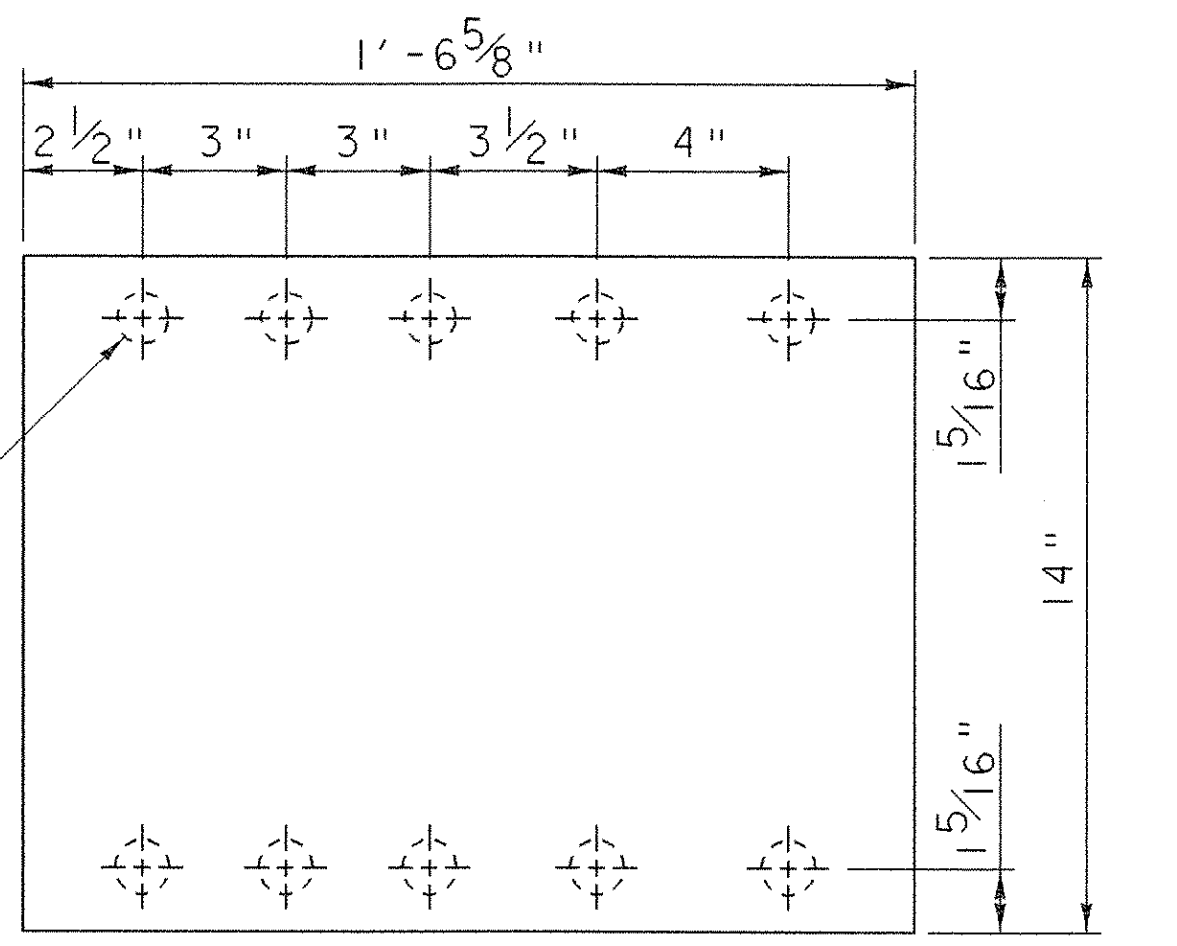
SCALE 3" = 1'-0"



L 3 1/2" x 2 1/2" x 3/8" RT

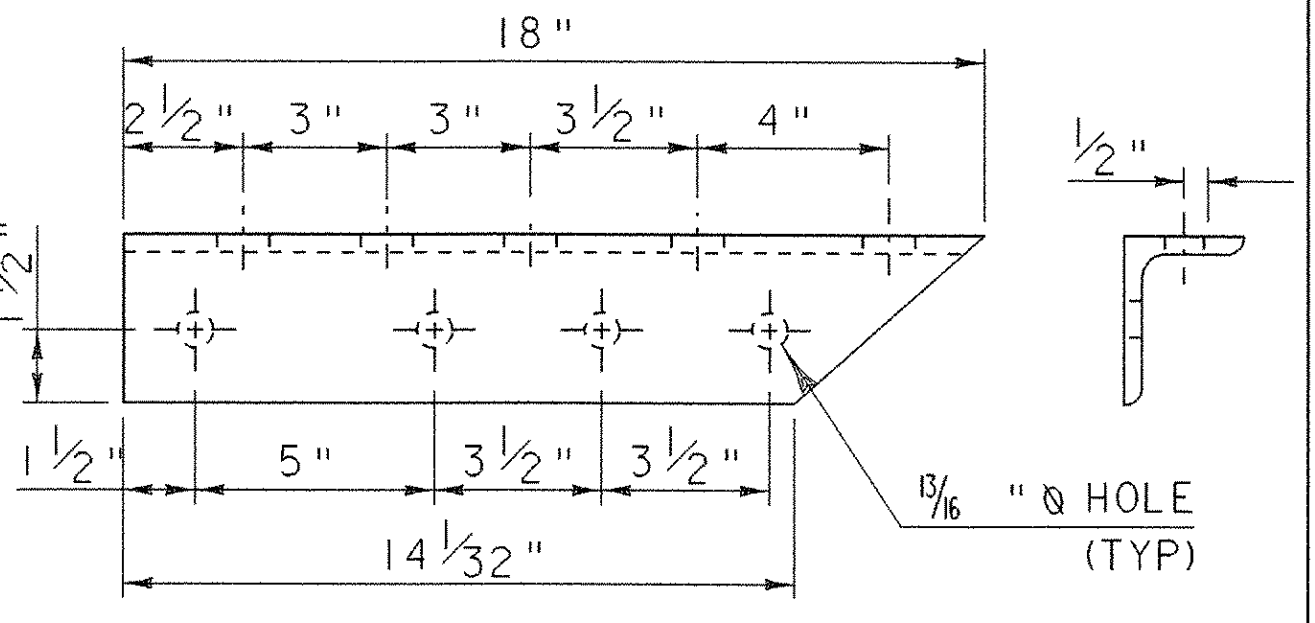
HOLE PATTERN

SCALE 3" = 1'-0"



COVER PLATE - HOLE PATTERN

SCALE 3" = 1'-0"



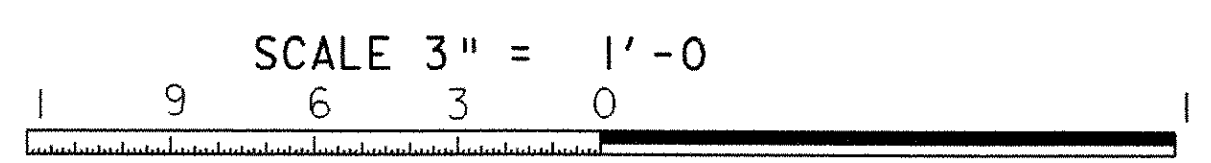
L 3 1/2" x 2 1/2" x 3/8" LT

HOLE PATTERN

SCALE 3" = 1'-0"

NOTE:

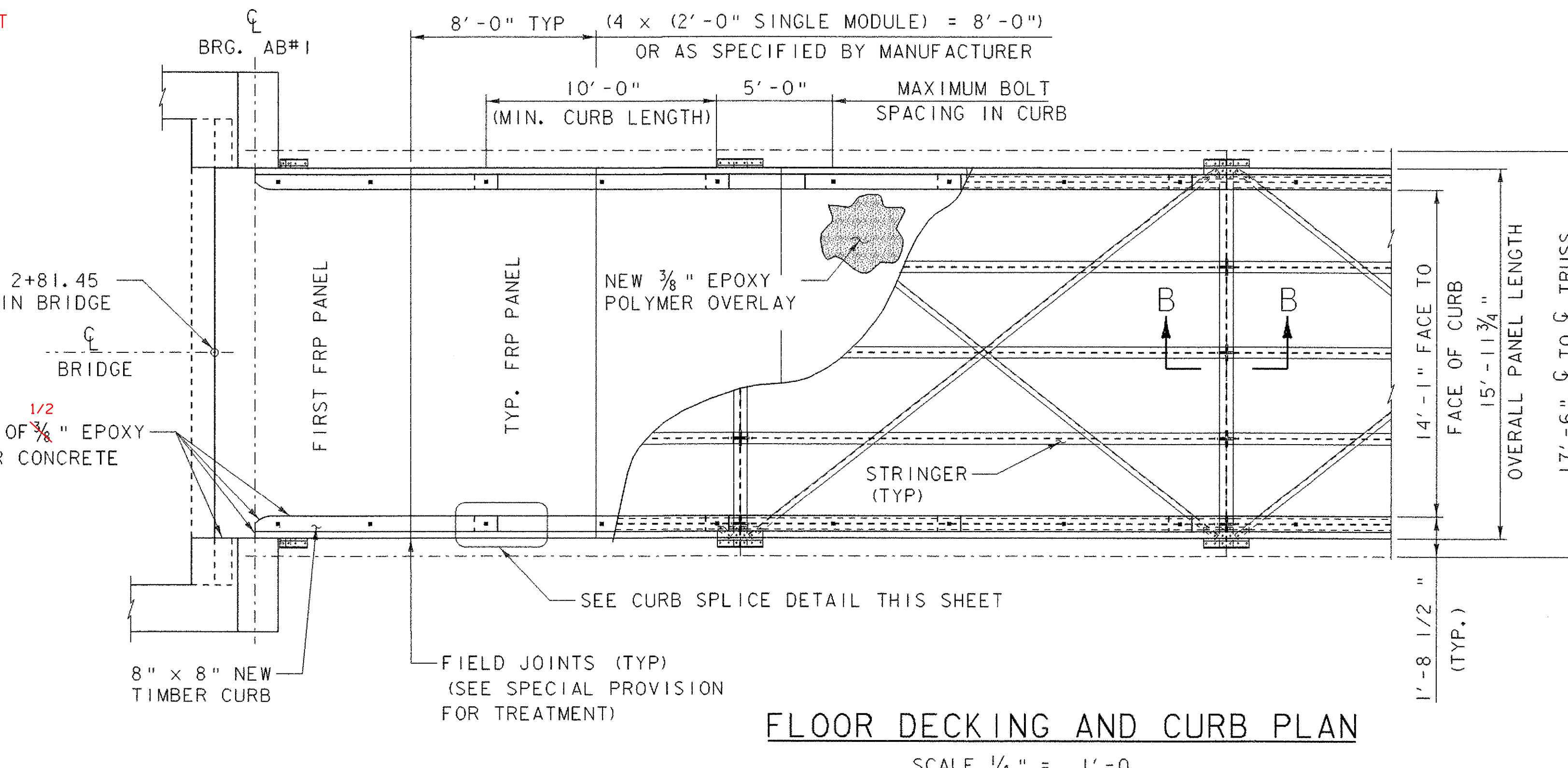
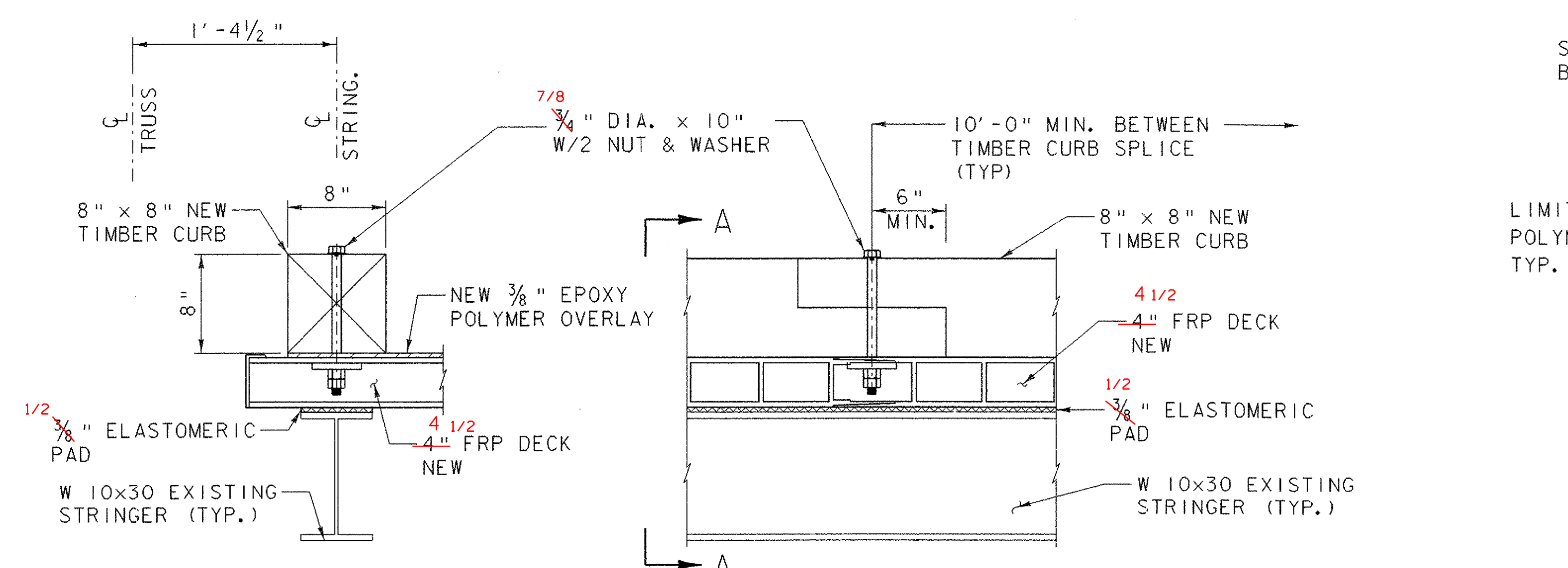
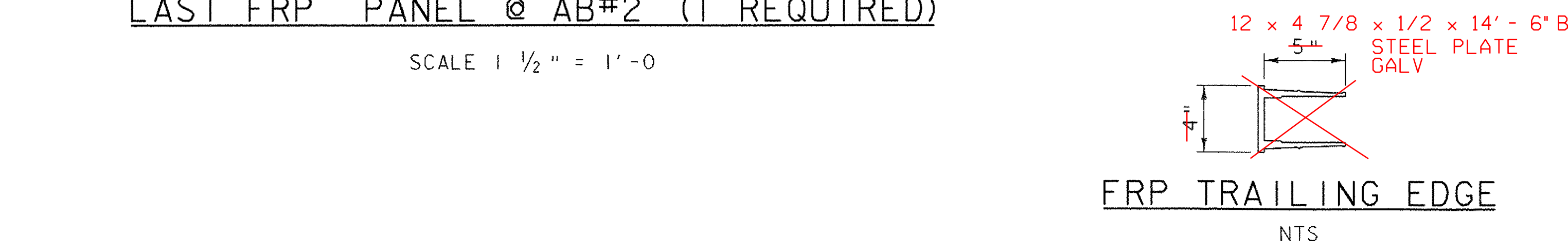
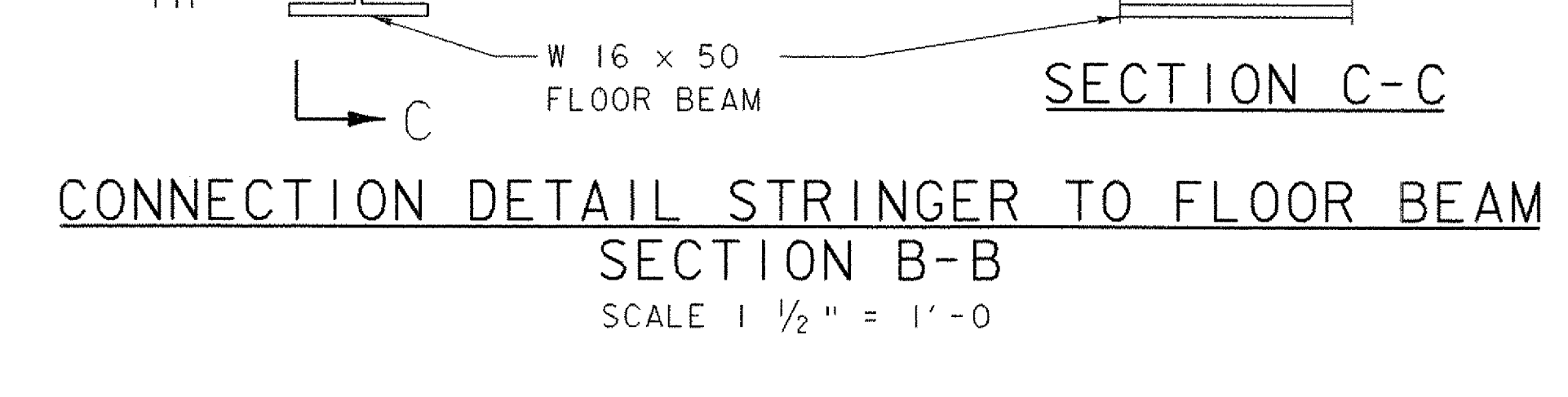
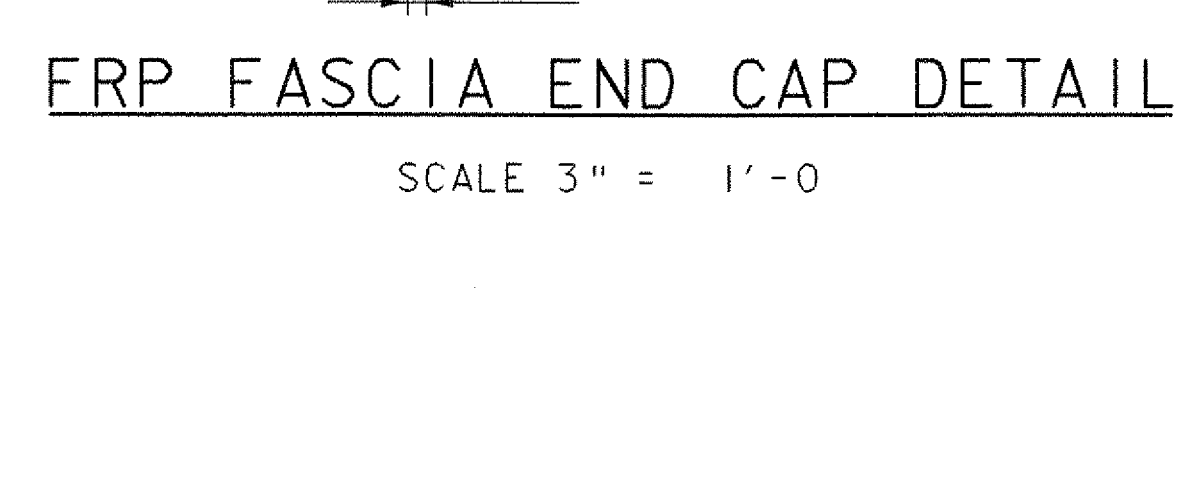
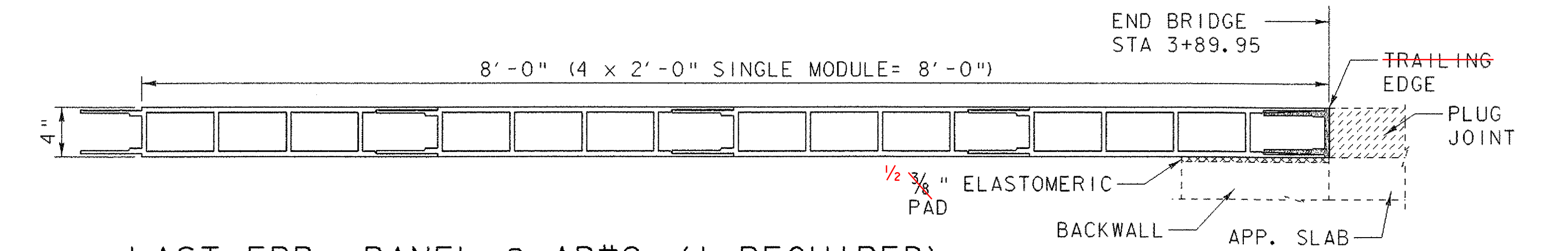
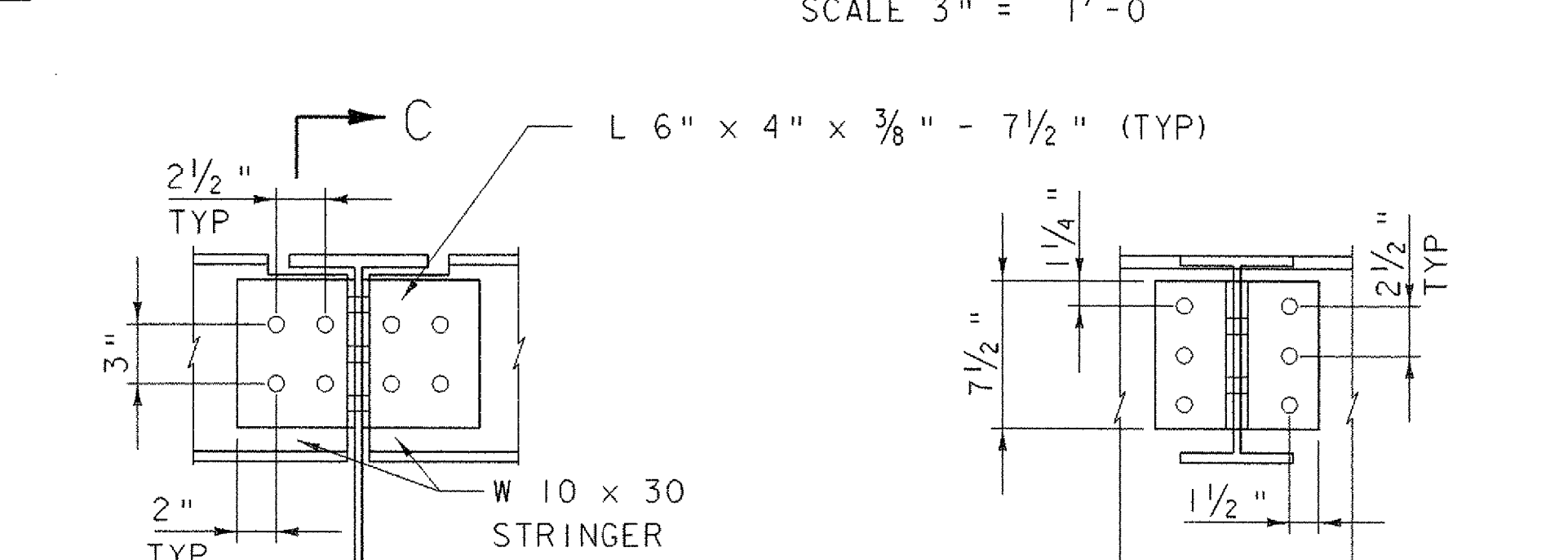
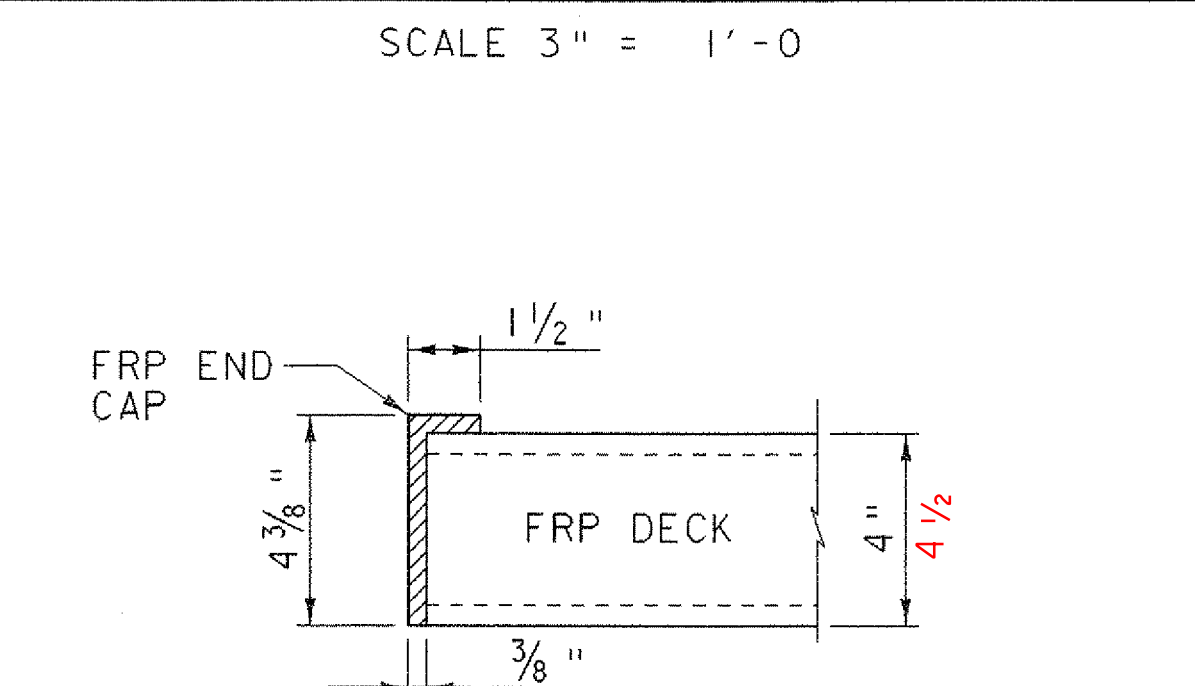
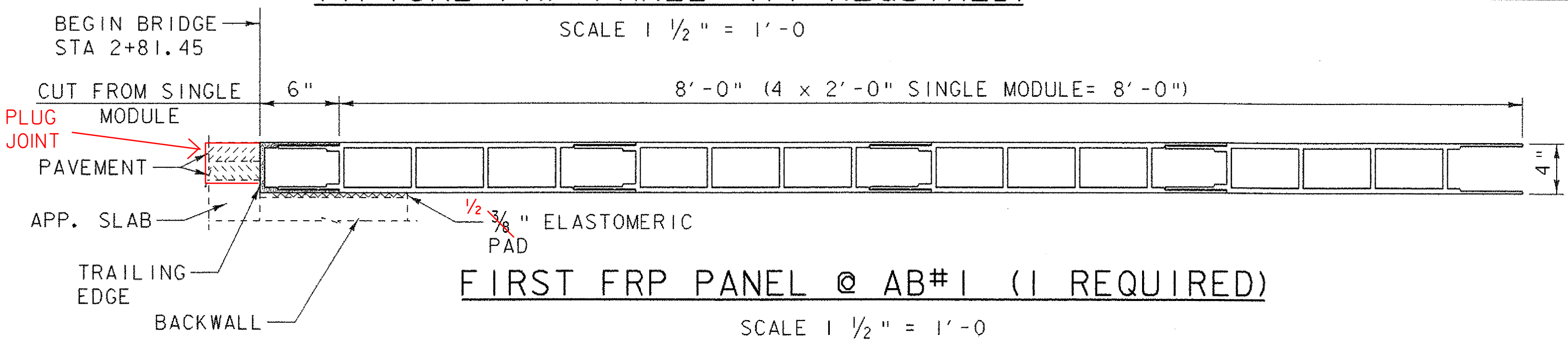
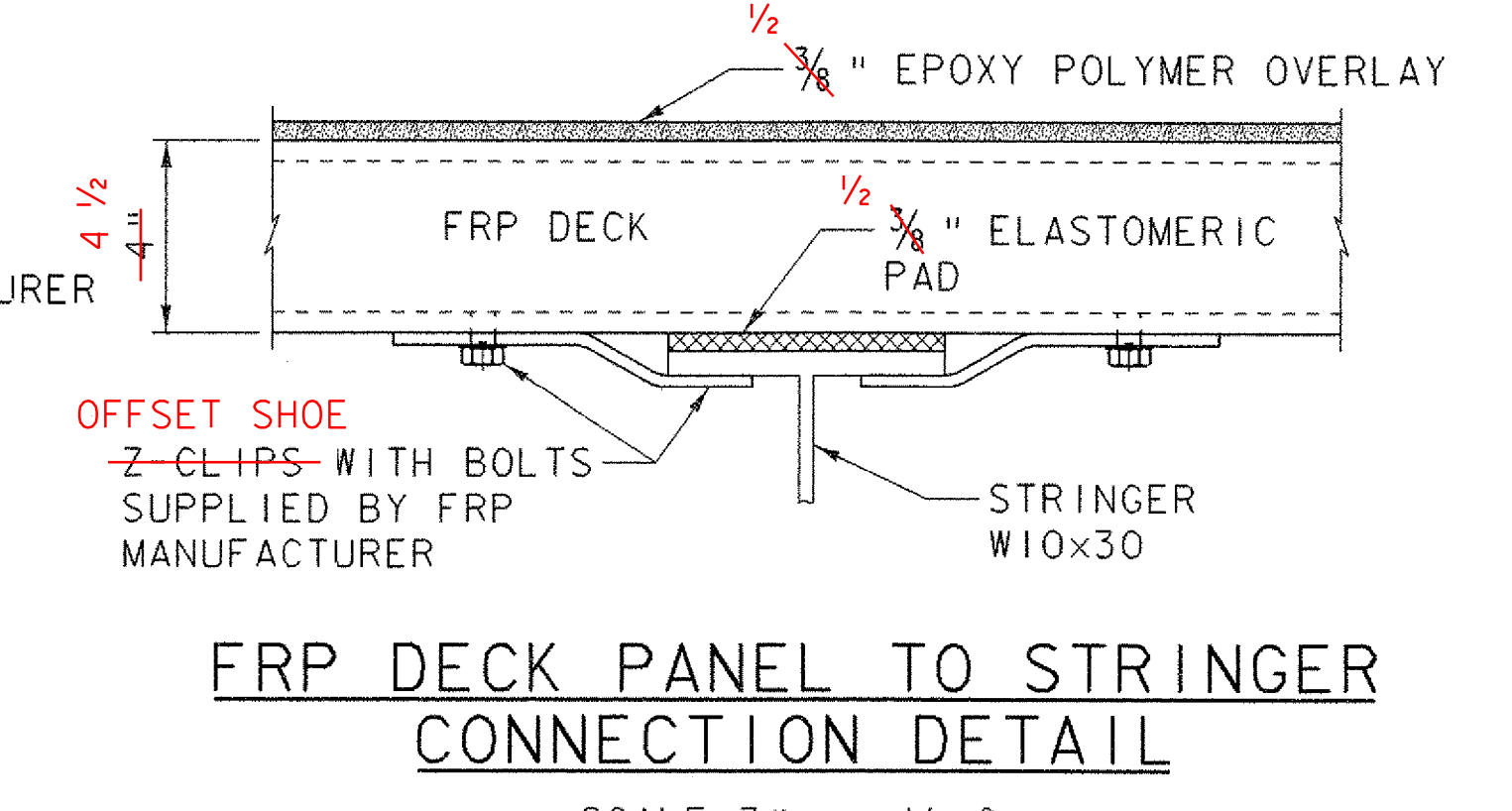
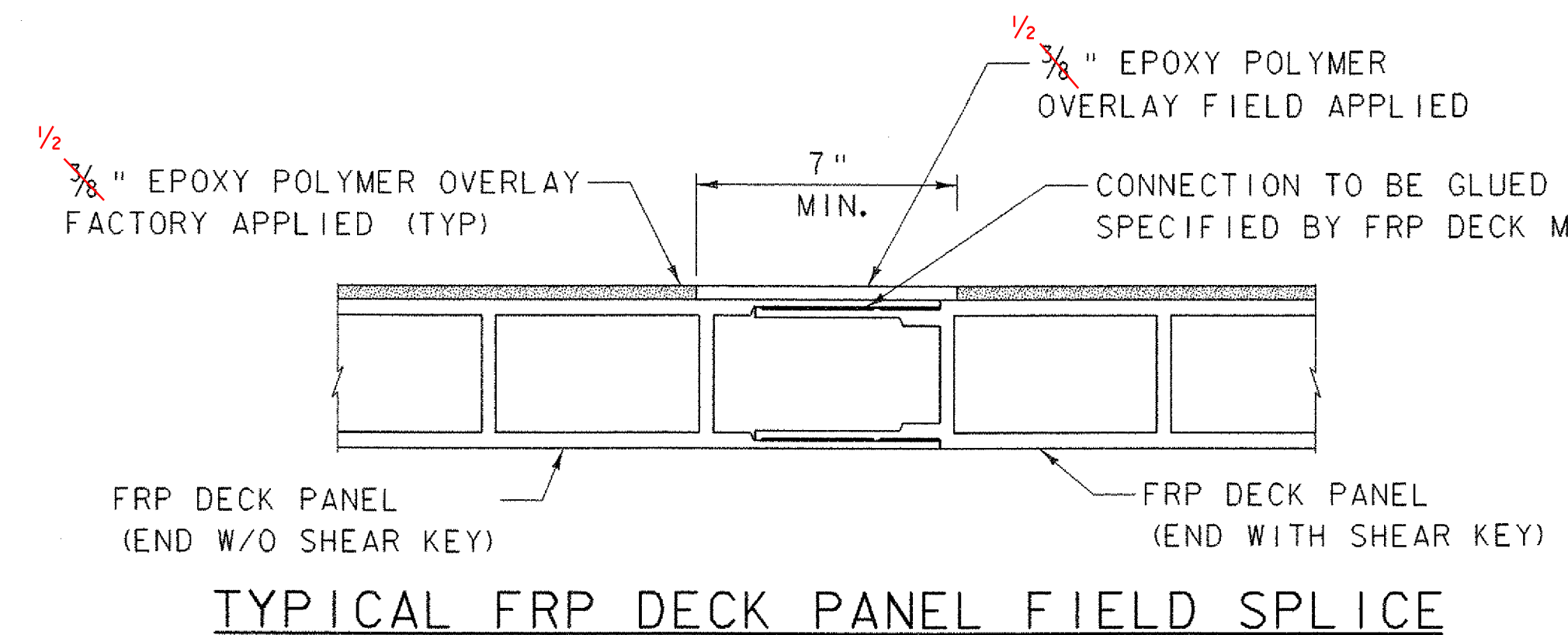
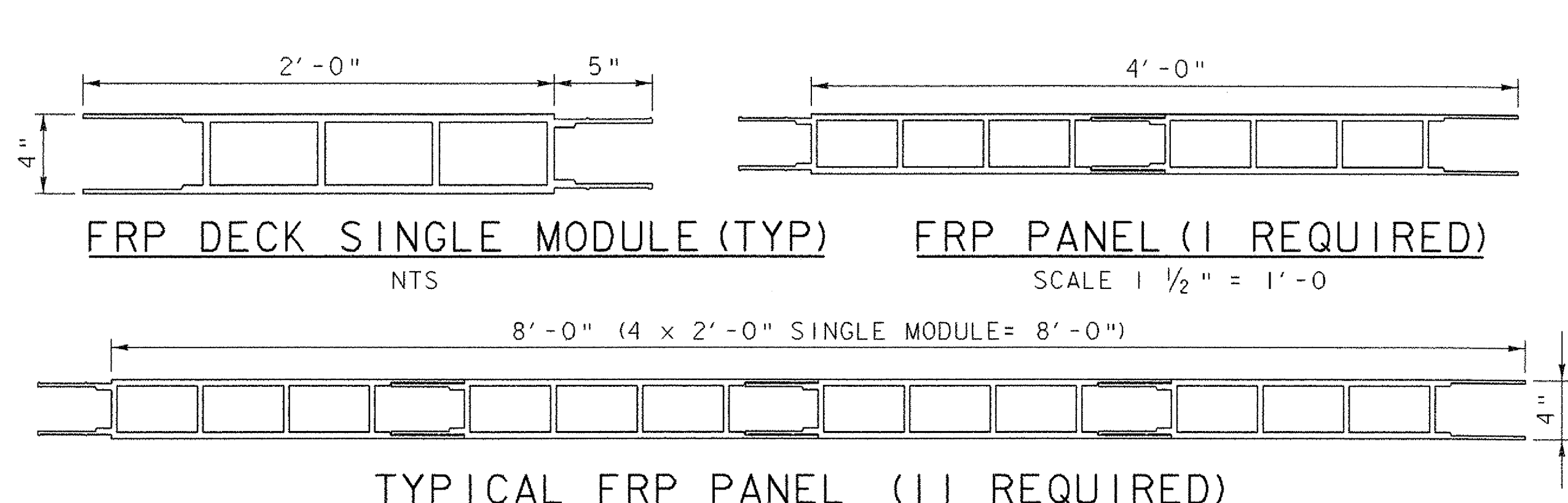
1. PAYMENT FOR THE CLIPPING OF EXISTING C9x13.4 AND TOP PLATE SHALL BE PAID FOR UNDER ITEM 529.20 "PARTIAL REMOVAL OF STRUCTURE".
2. ALL GUSSET PLATES, ANGLES, COVER PLATES, WASHERS AND BOLTS NECESSARY TO CONSTRUCT NEW END OF THE TRUSS SHALL BE PAID FOR UNDER ITEM 506.60 "STRUCTURAL STEEL".
3. NEW W8x35 SHALL BE PAID FOR UNDER 506.50 "STRUCTURAL STEEL" (ROLLED BEAM).
4. ALL BOLTS HSB, M-164 TYPE 1, GALVANIZED COMPLETE WITH 1 NUT AND 1 WASHER ON TURNED SIDE.



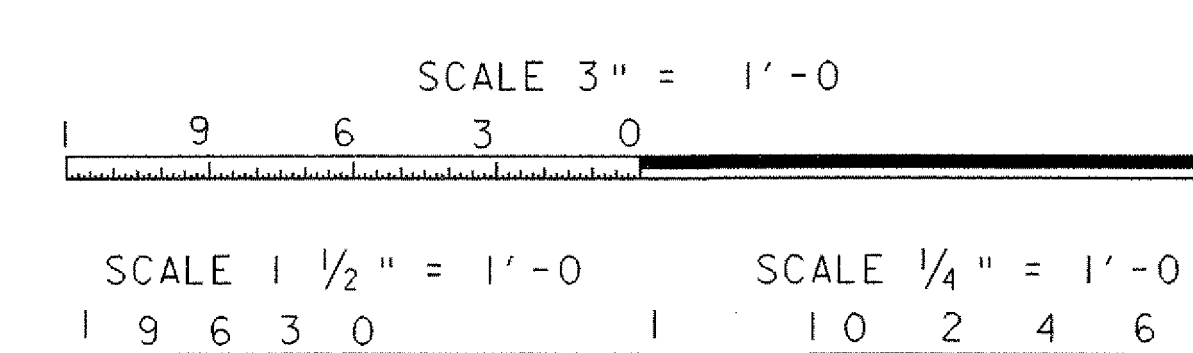
PROJECT NAME:	BRADFORD	FILE NAME:	s96j286endtruss.dgn	PLOT DATE:	22-NOV-2006
PROJECT NUMBER:	STP 1447(28)	PROJECT LEADER:	C.P.WILLIAMS	DRAWN BY:	D.D. BEARD
		DESIGNED BY:	M. GAGULIC	CHECKED BY:	R.S. YOUNG
		TRUSS END DETAILS		SHEET	21 OF 63

NEW GUSSET PLATE (2 REQ. PER EACH CORNER) - HOLE PATTERN

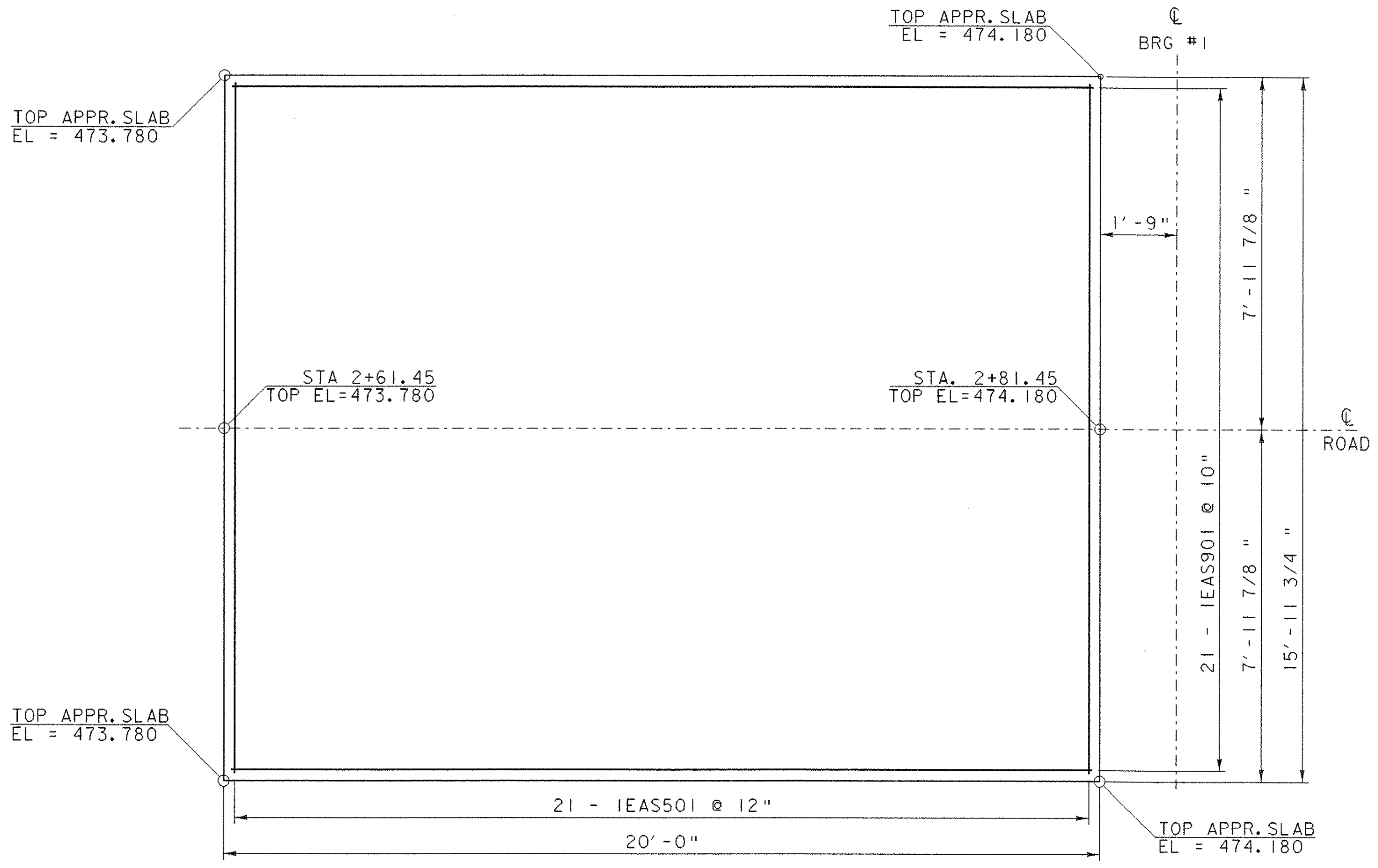
SCALE 3" = 1'-0"



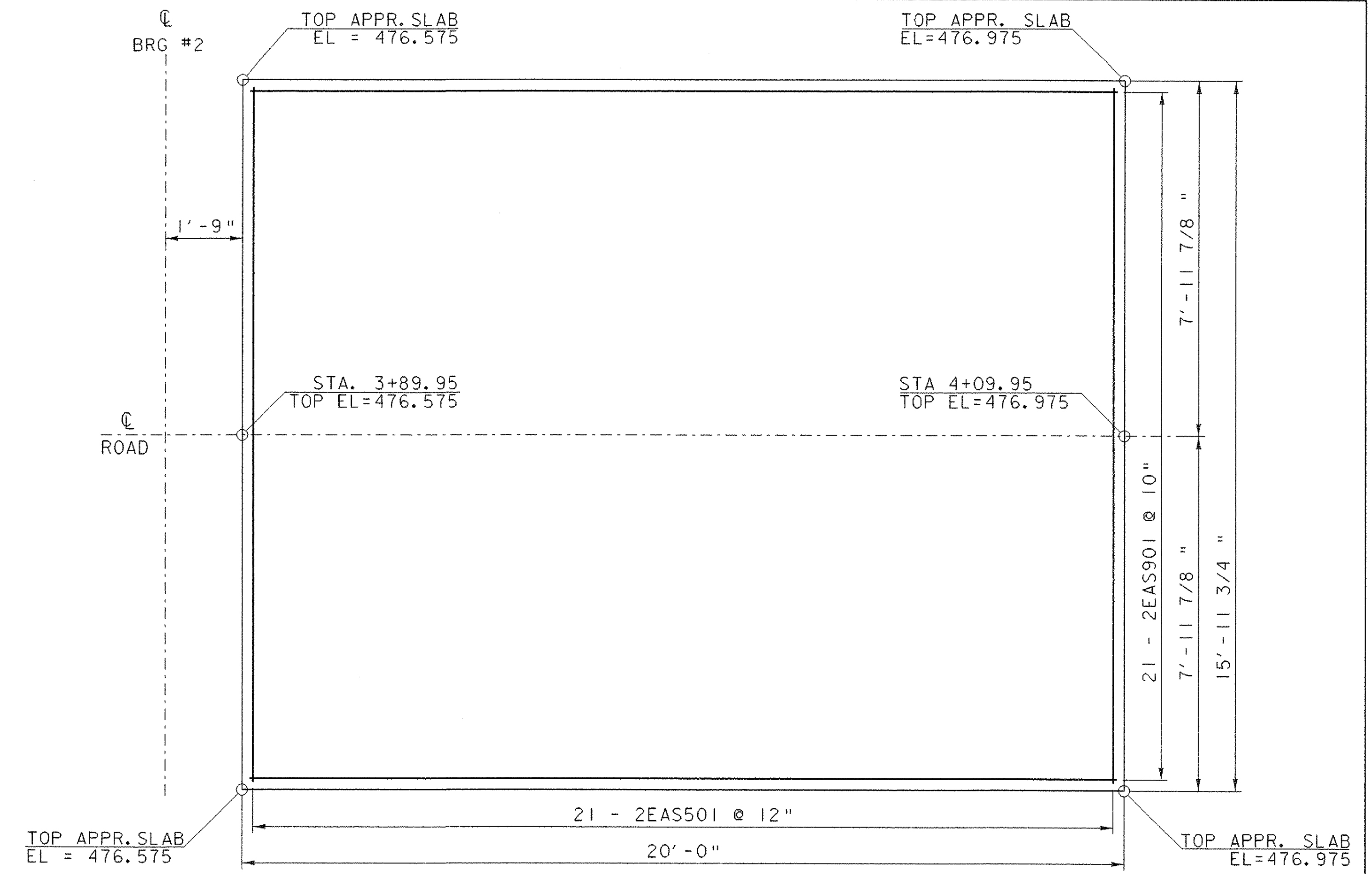
NOTE:
ANGLES THAT CONNECT FLOOR BEAMS AND STRINGERS SHALL BE REPLACED ONLY IF EXISTING PLATES ARE NOT REUSABLE. BOLT HOLES FOR OUTSIDE STRINGERS AND CENTER STRINGERS SHALL BE REUSED. ALL OTHER EXISTING HOLES THAT ARE NOT REUSED SHALL BE PLUGGED IN ACCORDANCE WITH NOTE 23 ON SHEET 15.



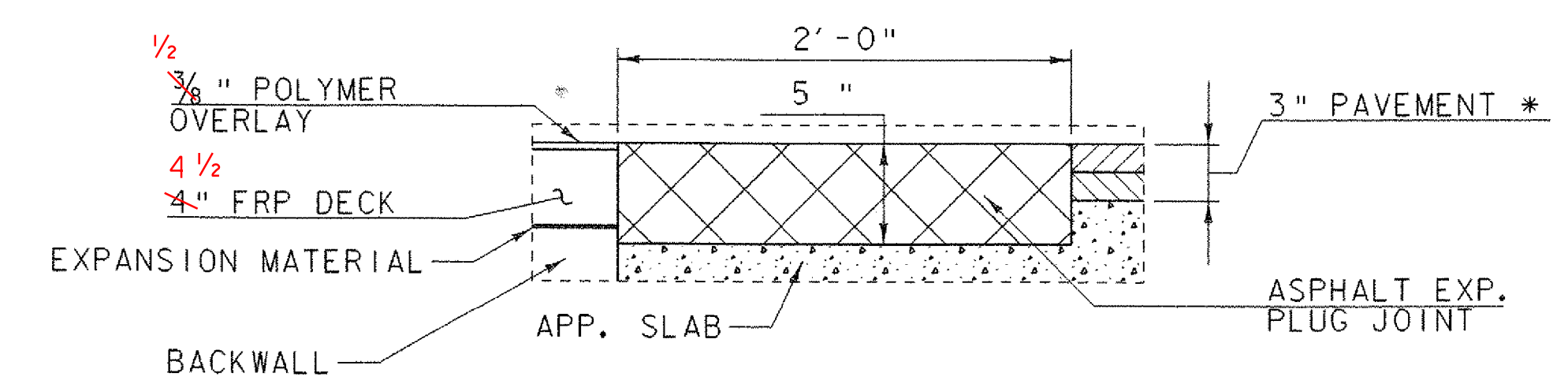
PROJECT NAME:	BRADFORD
PROJECT NUMBER:	STP 1447(28)
FILE NAME:	s96j286\str\s96j286sup.dgn
PROJECT LEADER:	C. P. WILLIAMS
DESIGNED BY:	M. GAGULIC
FRP DECK AND CURB DETAILS	
PLOT DATE:	22-NOV-2006
DRAWN BY:	M. GAGULIC
CHECKED BY:	R.S. YOUNG
SHEET	22 OF 63



APPROACH SLAB #1
PLAN VIEW
SCALE 1/2" = 1'-0"

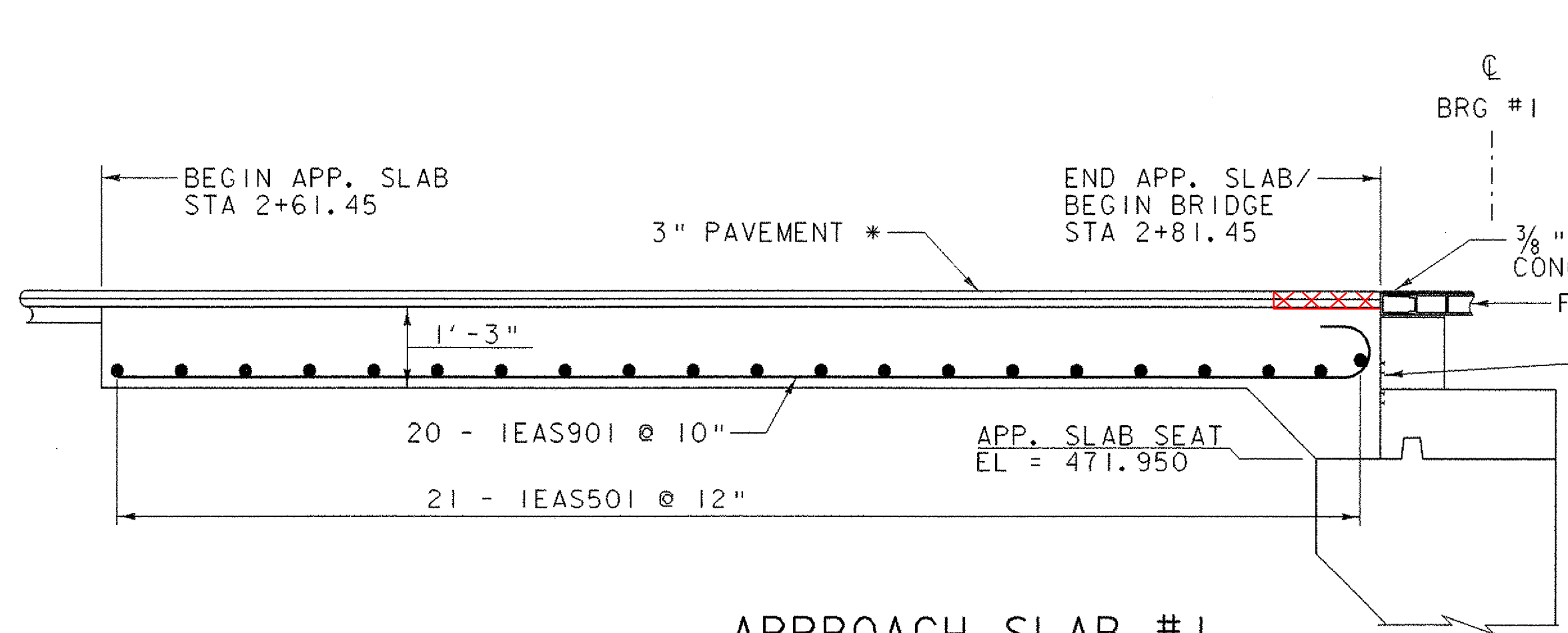


APPROACH SLAB #2
PLAN VIEW
SCALE 1/2" = 1'-0"



DETAIL "A"
N.T.S.

* 1 1/2" TYPE III OR IV OVER
1 1/2" TYPE III OR IV

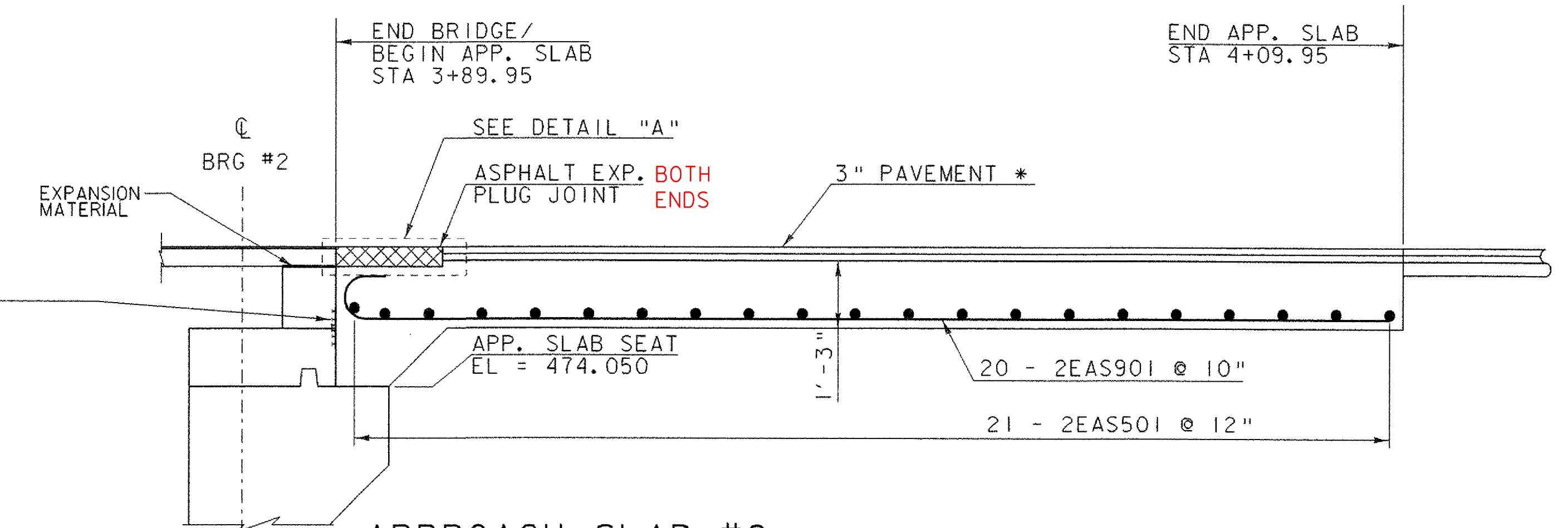


APPROACH SLAB #1
ELEVATION VIEW
SCALE 1/2" = 1'-0"

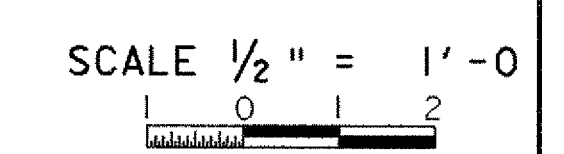
P.V.C. WATERSTOP FOR CONSTRUCTION JOINTS

THE COSTS FOR P.V.C. WATERSTOP SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONTRACT ITEM 501.34. OTHER CONFIGURATIONS MAY BE USED UPON APPROVAL OF THE PROJECT MANAGER.

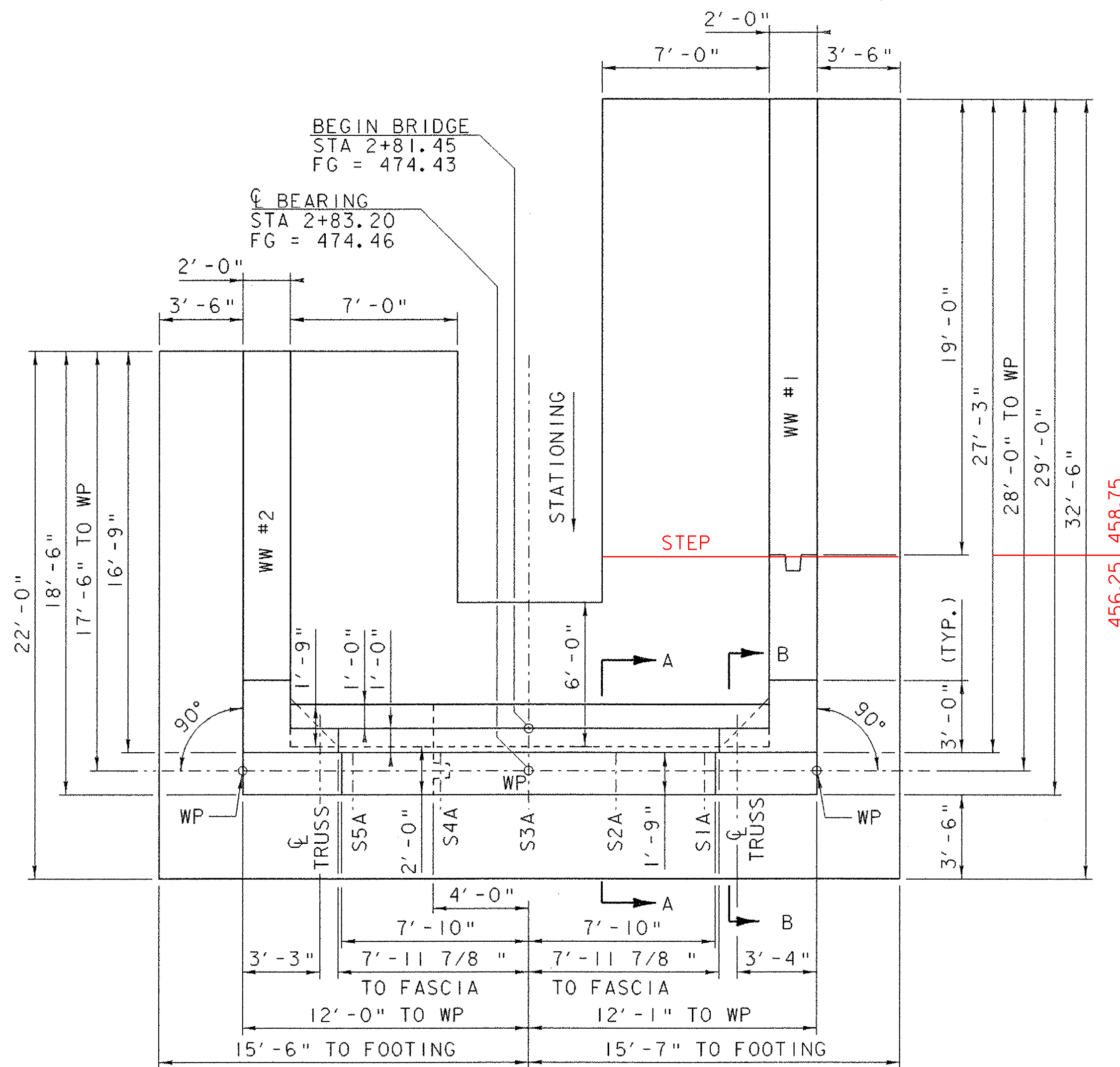
NTS



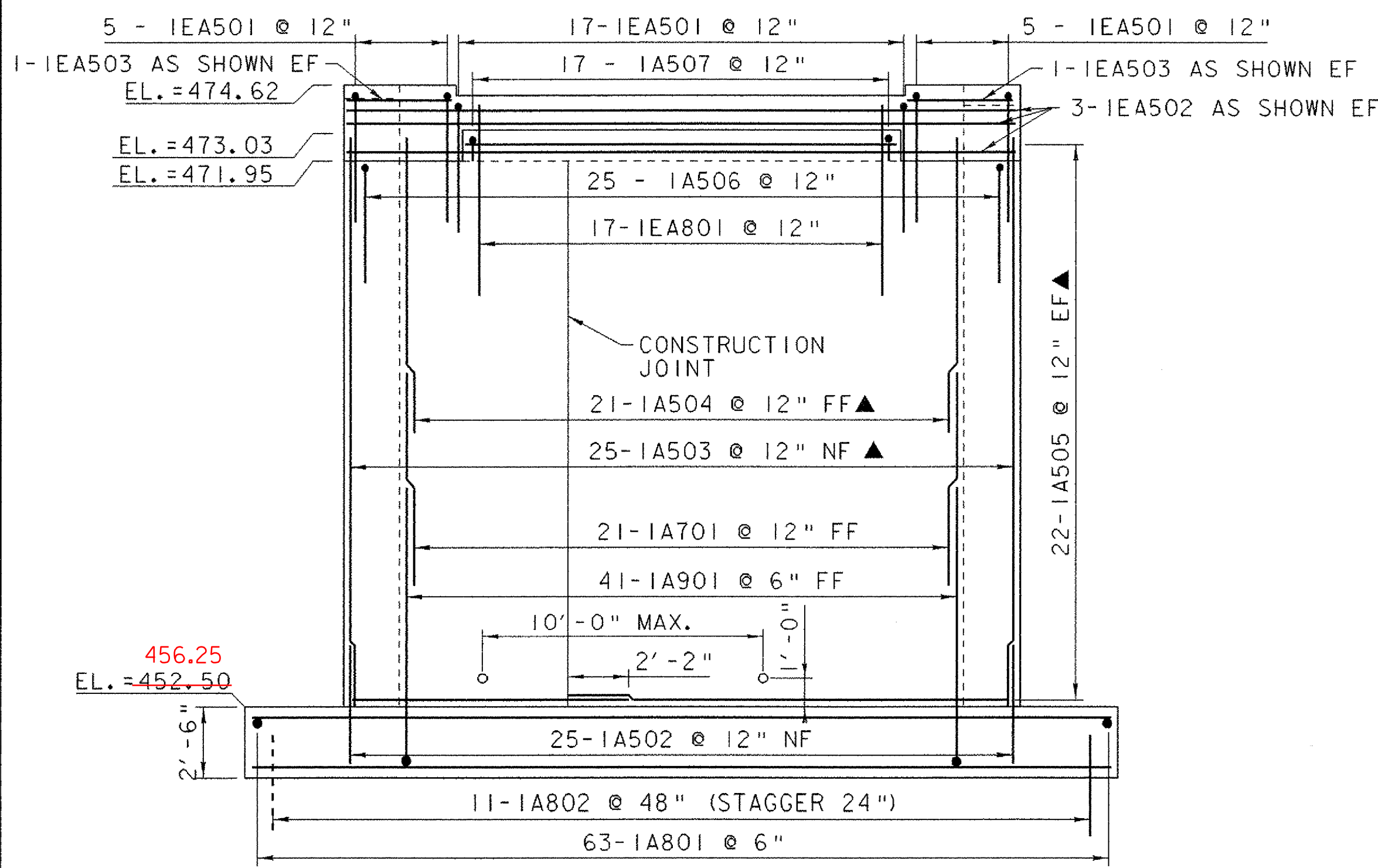
APPROACH SLAB #2
ELEVATION VIEW
SCALE 1/2" = 1'-0"



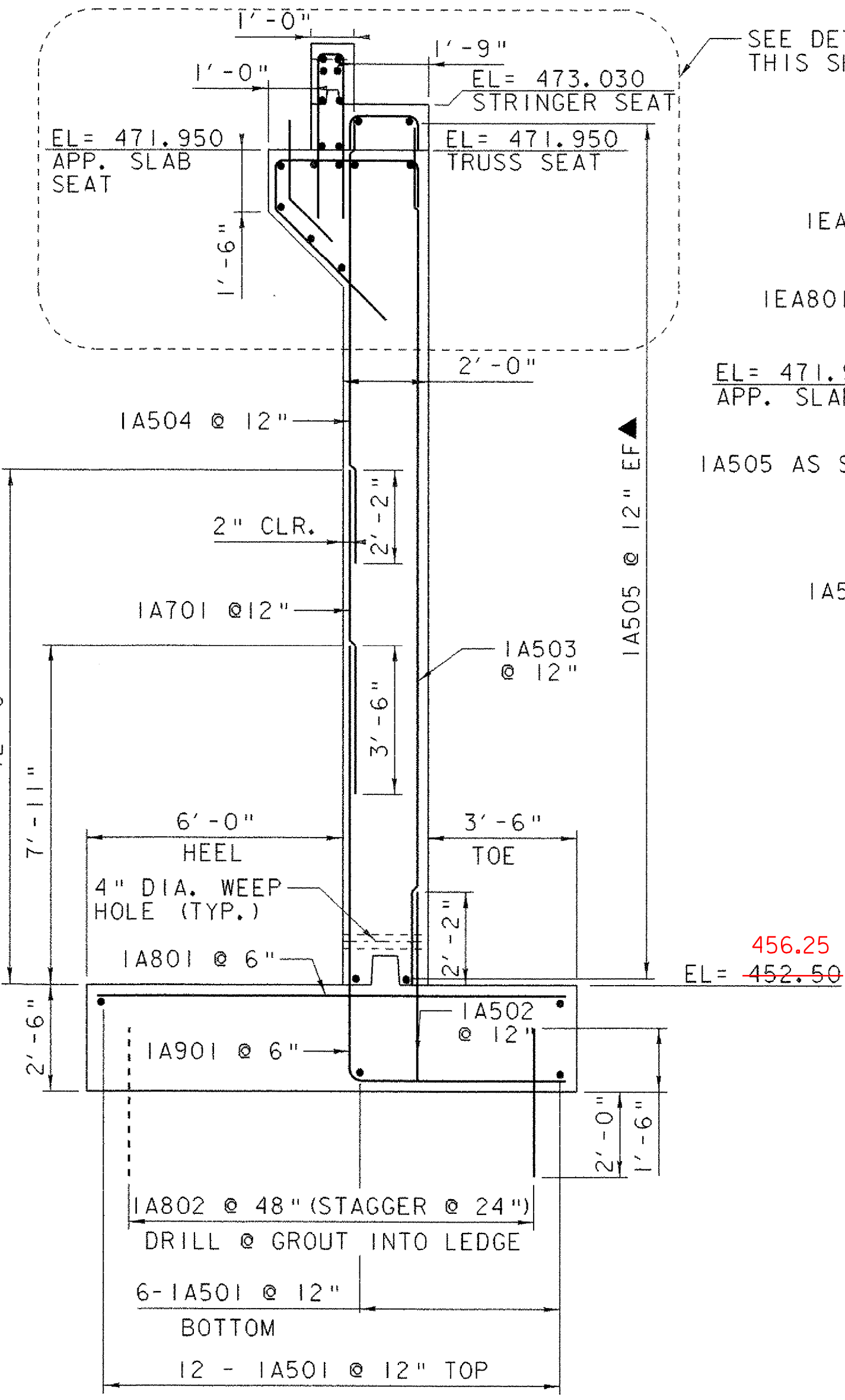
PROJECT NAME:	BRADFORD	FILE NAME:	96j286/str/s96j286sup.dgn	PLOT DATE:	22-NOV-2006
PROJECT NUMBER:	STP 1447(28)	PROJECT LEADER:	C.P.WILLIAMS	DRAWN BY:	D.D.BEARD
		DESIGNED BY:	M.GAGULIC	CHECKED BY:	R.S.YOUNG
		APPROACH SLABS		SHEET	23 OF 63



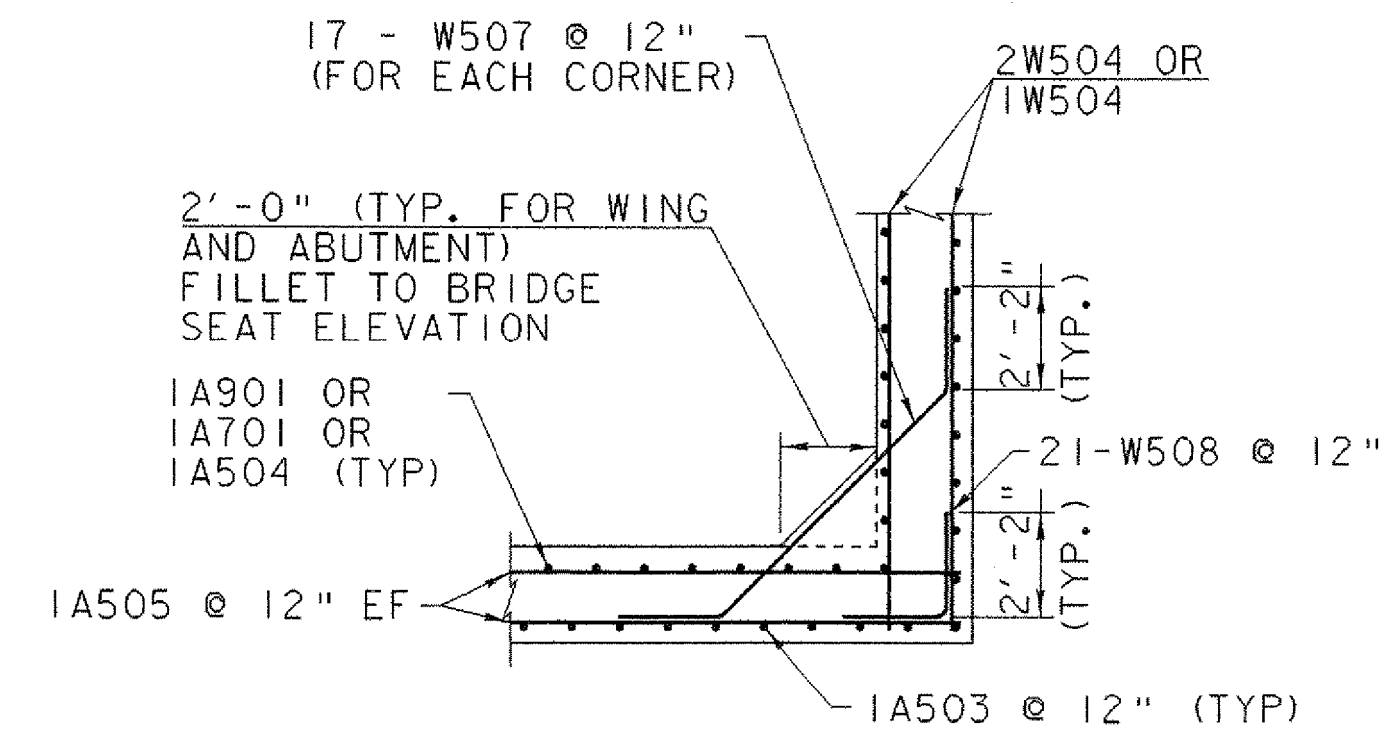
ABUTMENT #1. PLAN
SCALE 1/4" = 1'-0"



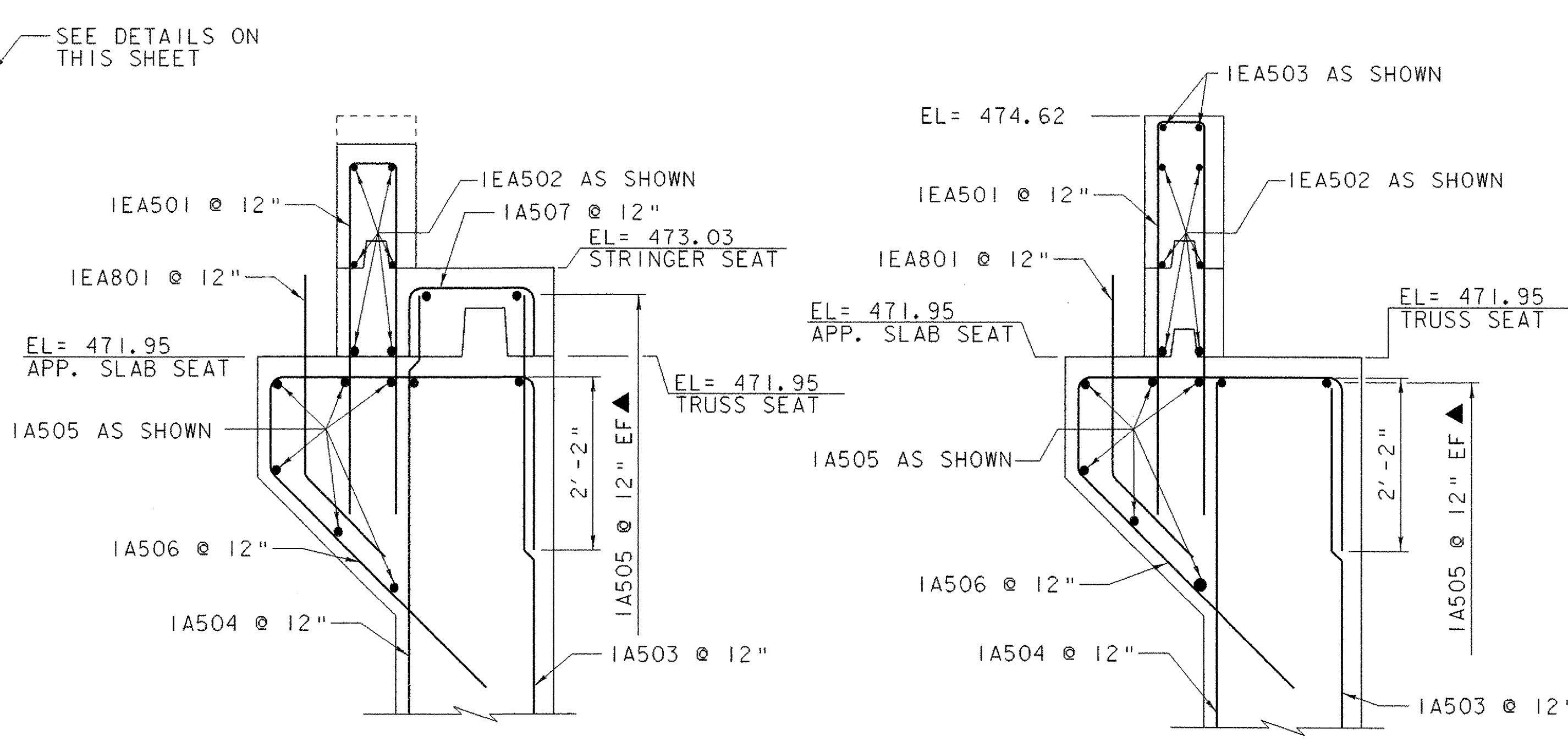
ABUTMENT #1 ELEVATION
SCALE 1/4" = 1'-0"



ABUTMENT #1 TYP. SECTION
SCALE 3/8" = 1'-0"



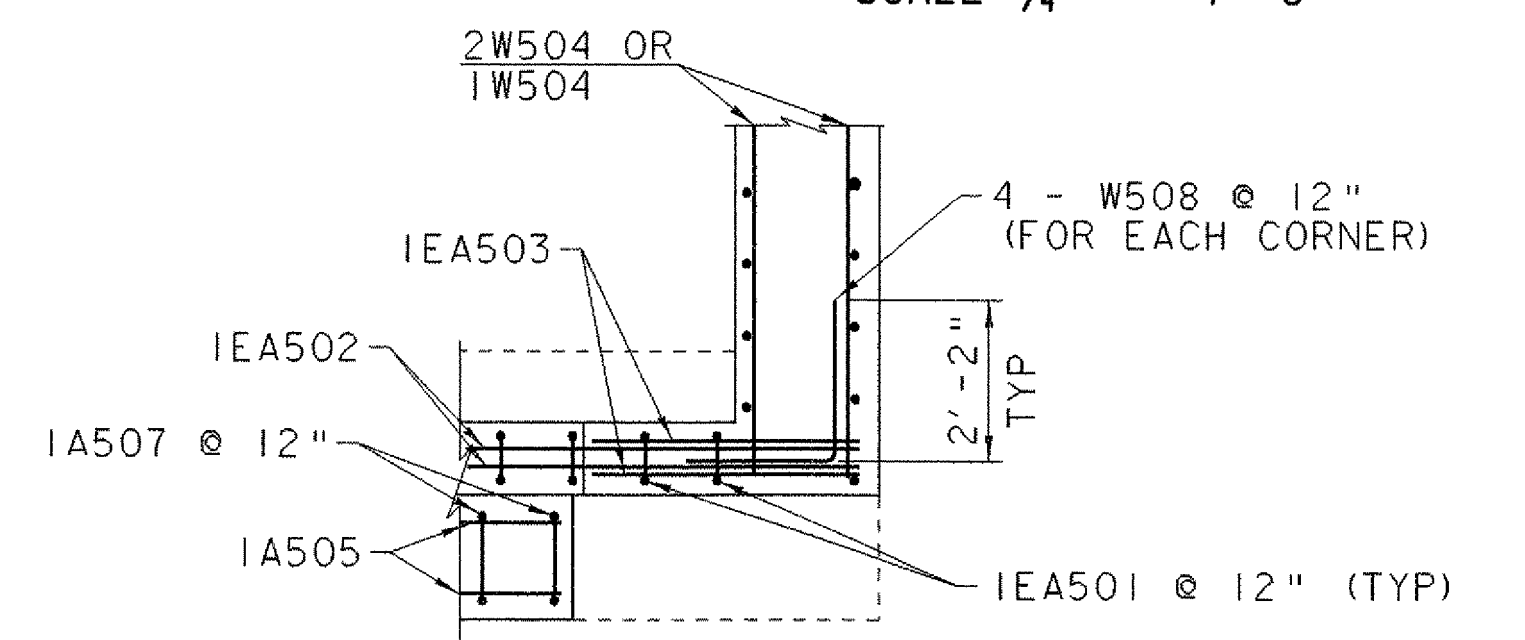
CORNER DETAIL BELOW APPROACH SLAB BRACKET
SCALE 1/4" = 1'-0"



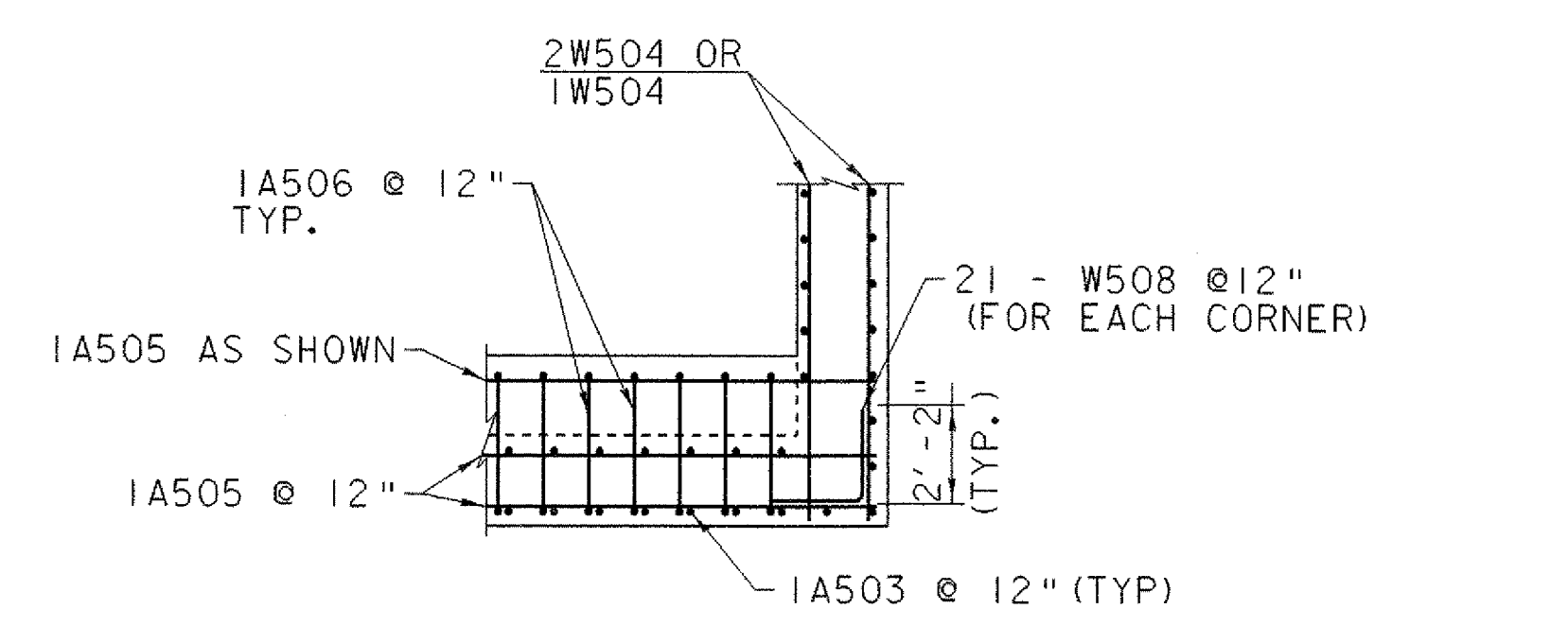
SECTION A-A
SCALE 3/4" = 1'-0"

SECTION B-B
SCALE 3/4" = 1'-0"

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



CORNER DETAIL ABOVE TRUSS SEAT
SCALE 3/8" = 1'-0"



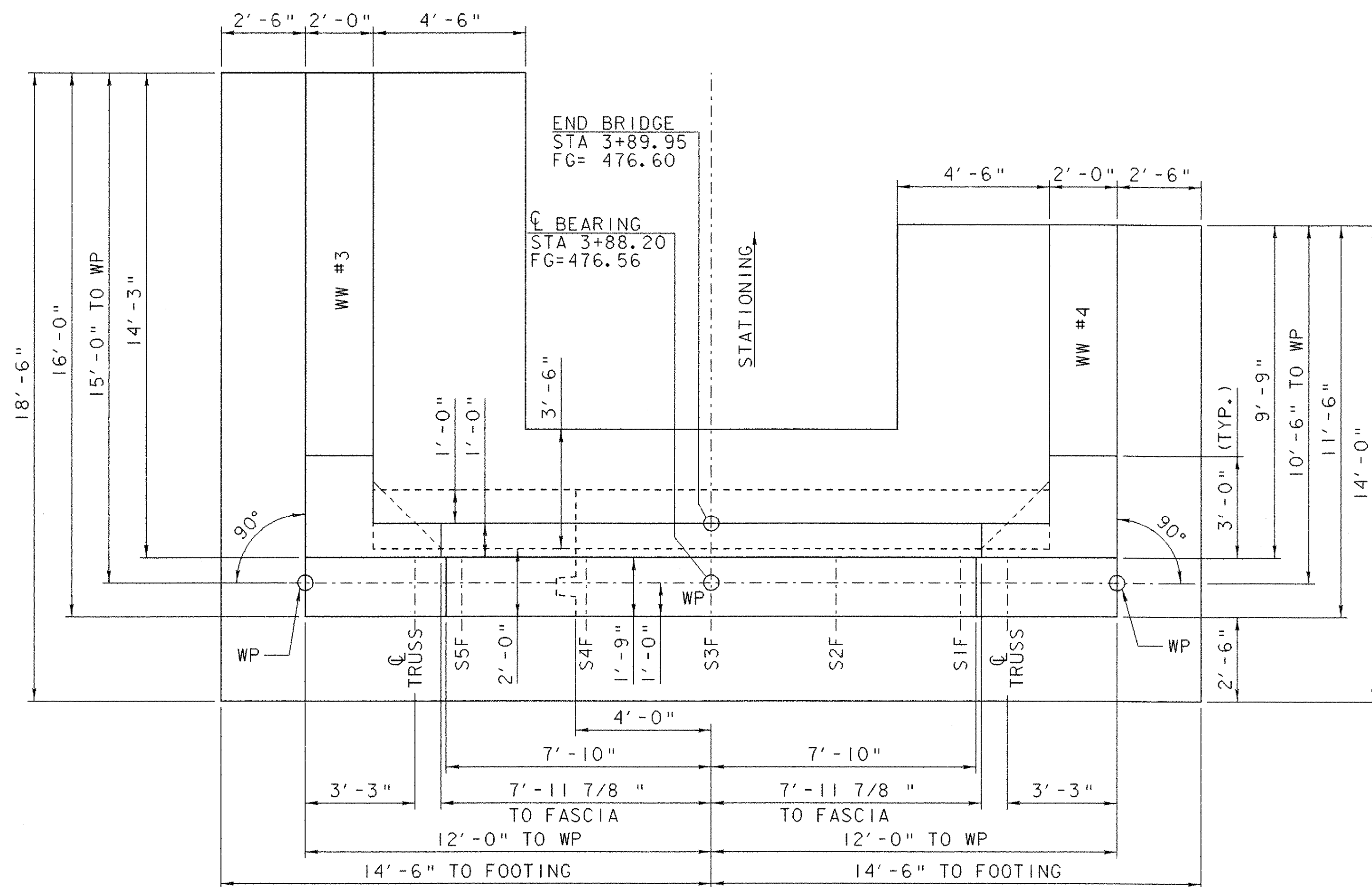
CORNER DETAIL ABOVE APPROACH SLAB BRACKET/ BELOW STRINGER SEAT
SCALE 1/4" = 1'-0"

SCALE 3/4" = 1'-0
1 0 1 2 3 4

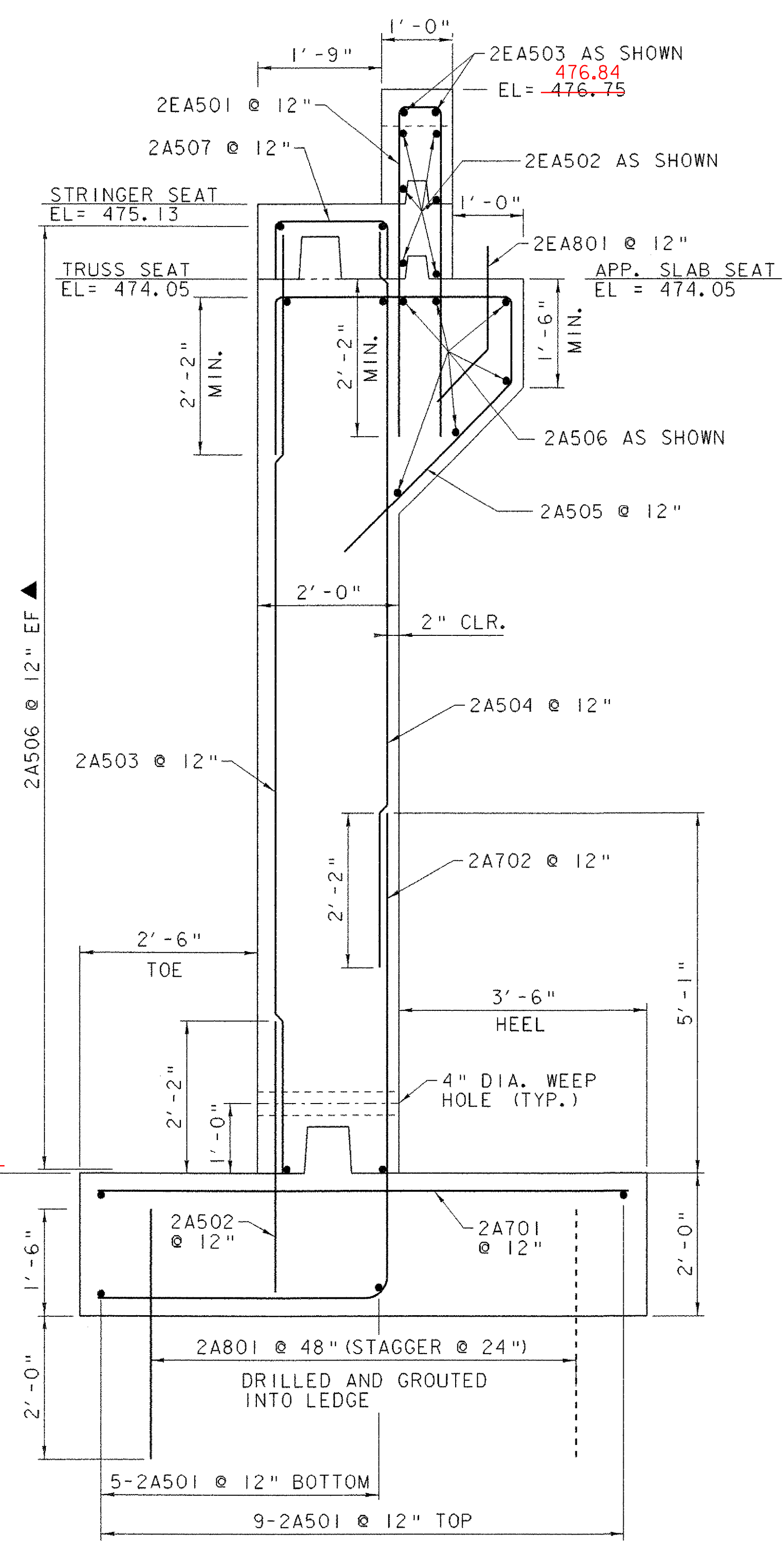
SCALE 3/8" = 1'-0
1 0 1 2 3 4

SCALE 1/4" = 1'-0
1 0 2 4 6

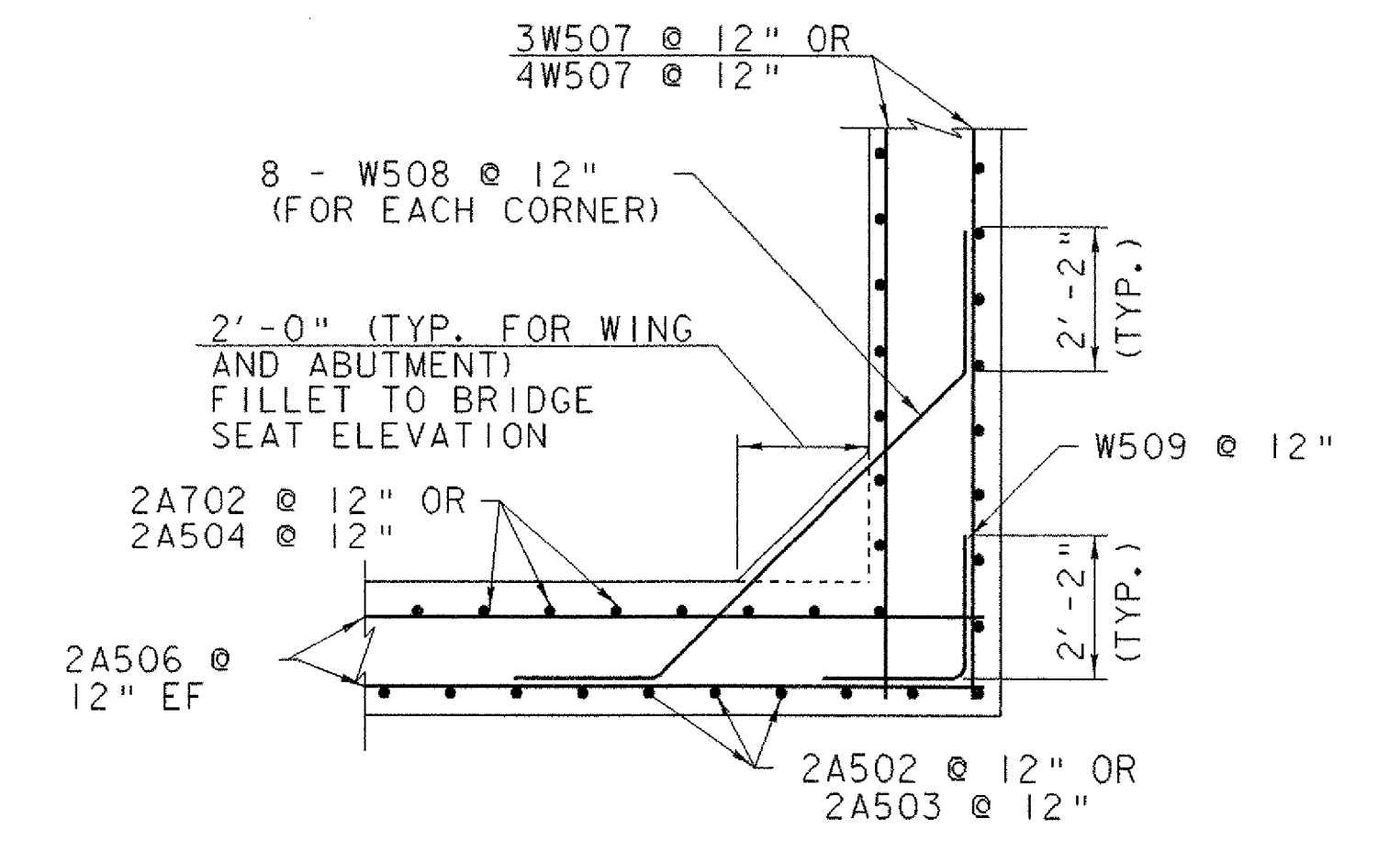
PROJECT NAME:	BRADFORD	FILE NAME:	Structures\96j286sub.dgn	PLOT DATE:	22-NOV-2006
PROJECT NUMBER:	STP I447(28)	PROJECT LEADER:	C.WILLIAMS	DRAWN BY:	D.D.BEARD
		DESIGNED BY:	M.GAGULIC	CHECKED BY:	R.S.YOUNG
		ABUTMENT #1			SHEET 24 OF 63



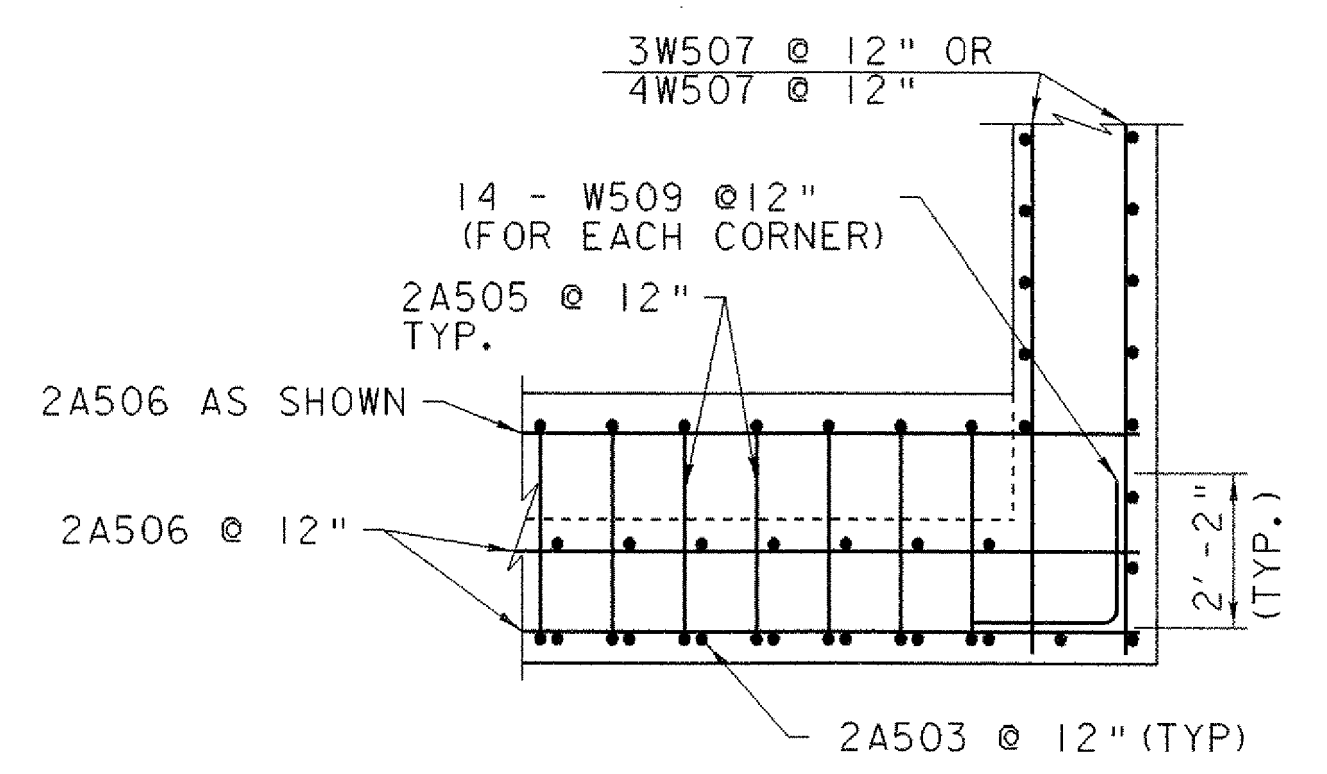
ABUTMENT #2 PLAN
SCALE 3/8" = 1'-0



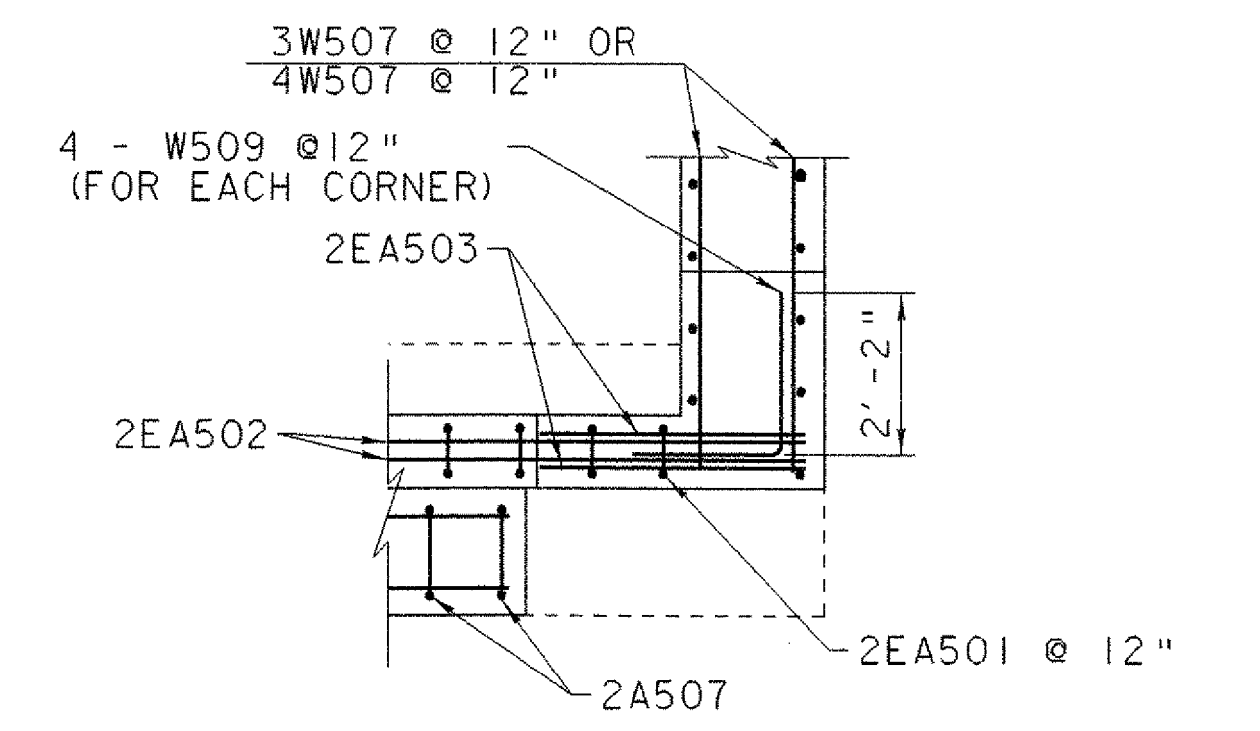
ABUTMENT #2 TYP SECTION
SCALE 3/4" = 1'-0



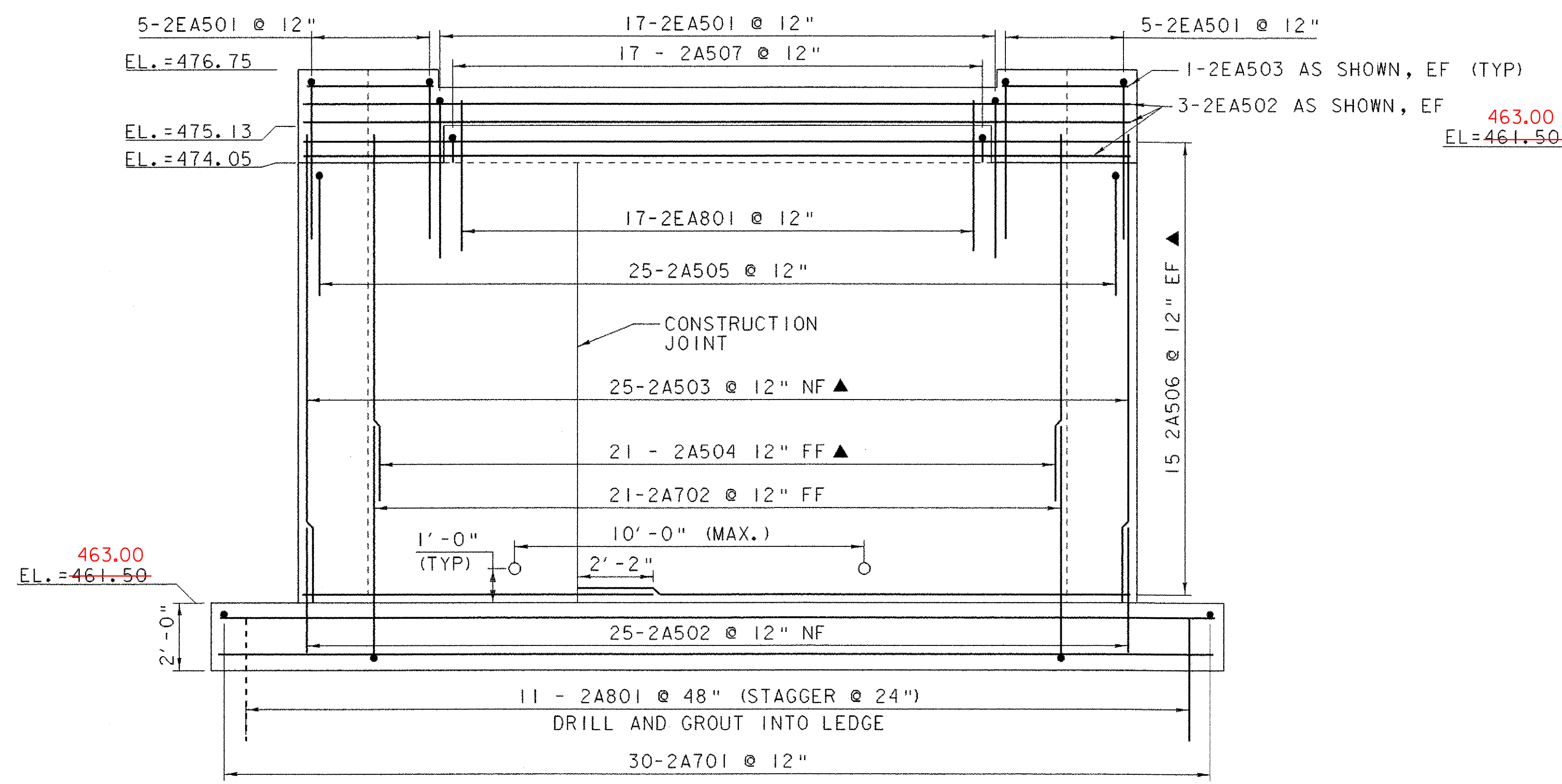
CORNER DETAIL BELOW APPROACH SLAB BRACKET
SCALE 3/8" = 1'-0



CORNER DETAIL ABOVE APPROACH SLAB BRACKET/ BELOW TRUSS SEAT
SCALE 3/8" = 1'-0

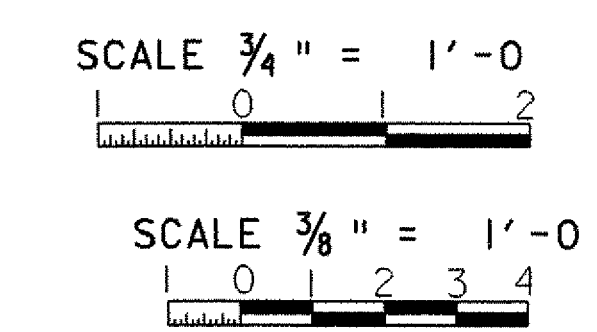


CORNER DETAIL ABOVE TRUSS SEAT
SCALE 3/8" = 1'-0



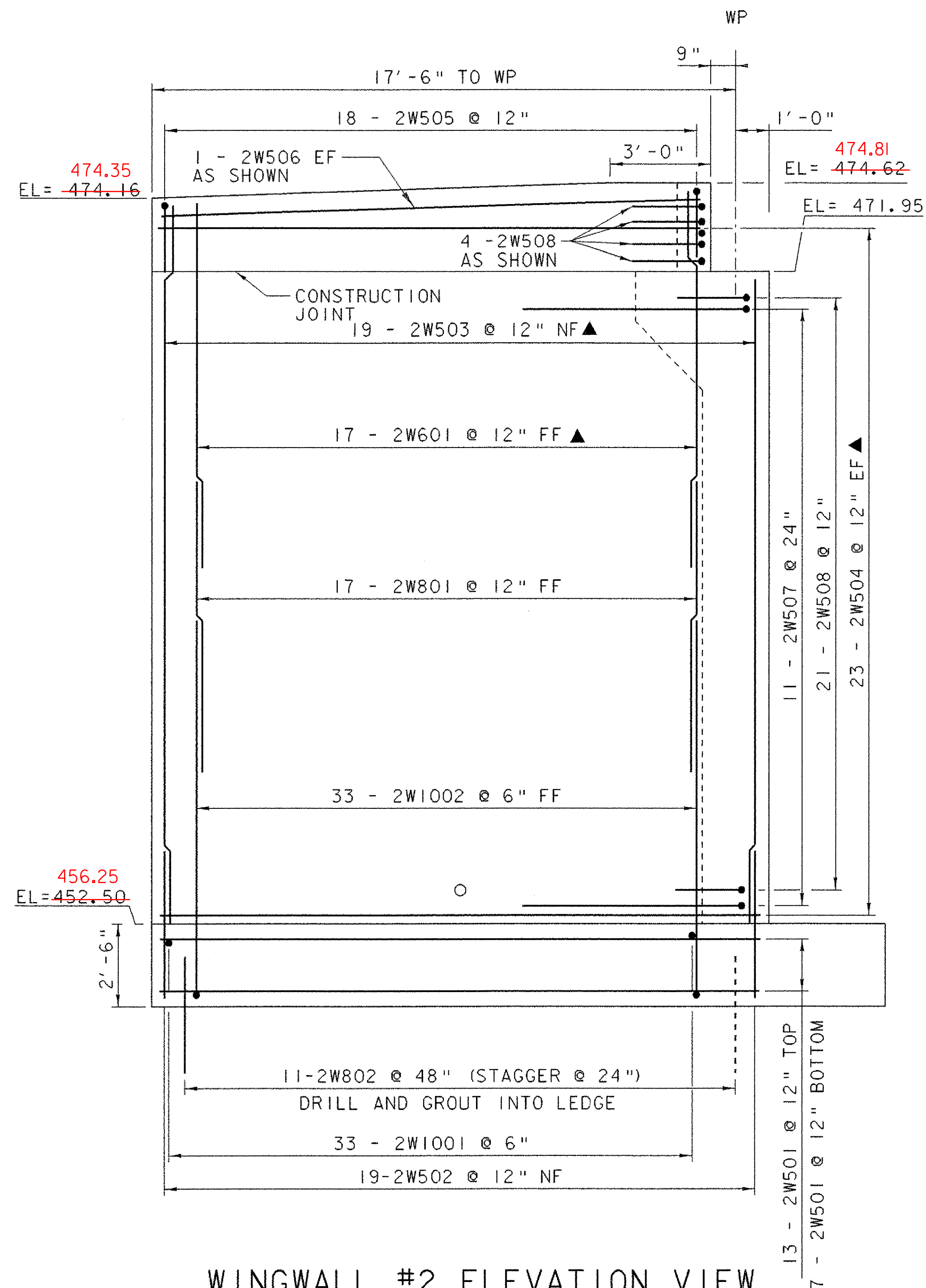
ABUTMENT #2 ELEVATION
SCALE 3/8" = 1'-0

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

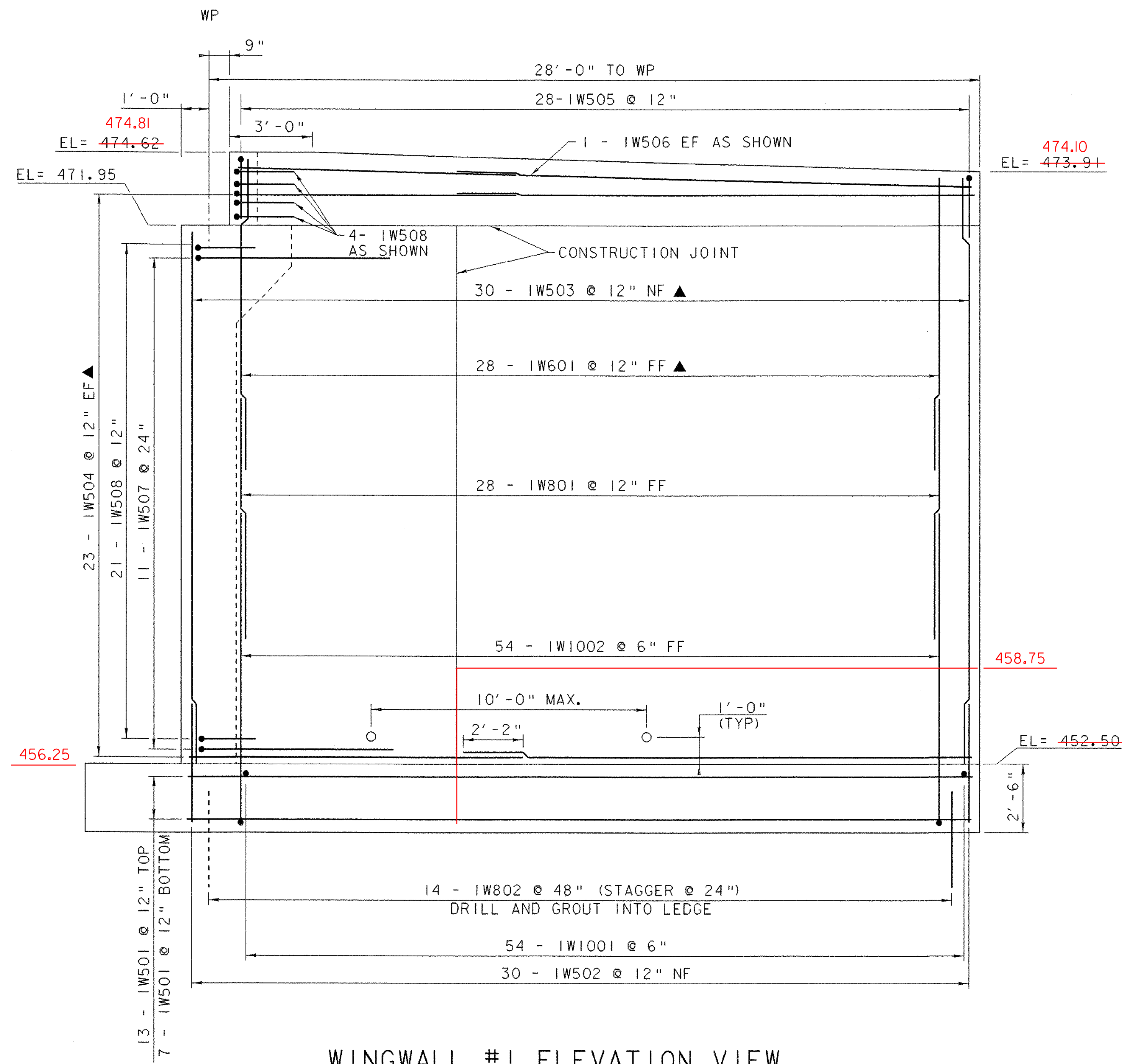


PROJECT NAME: BRADFORD	FILE NAME: \Structures\s96j286sub.dgn	PLOT DATE: 22-NOV-2006
PROJECT NUMBER: STP 1447(28)	PROJECT LEADER: C. WILLIAMS	DRAWN BY: D.D.BEARD
	DESIGNED BY: M.GAGULIC	CHECKED BY: R.S.YOUNG
	ABUTMENT #2	SHEET 25 OF 63

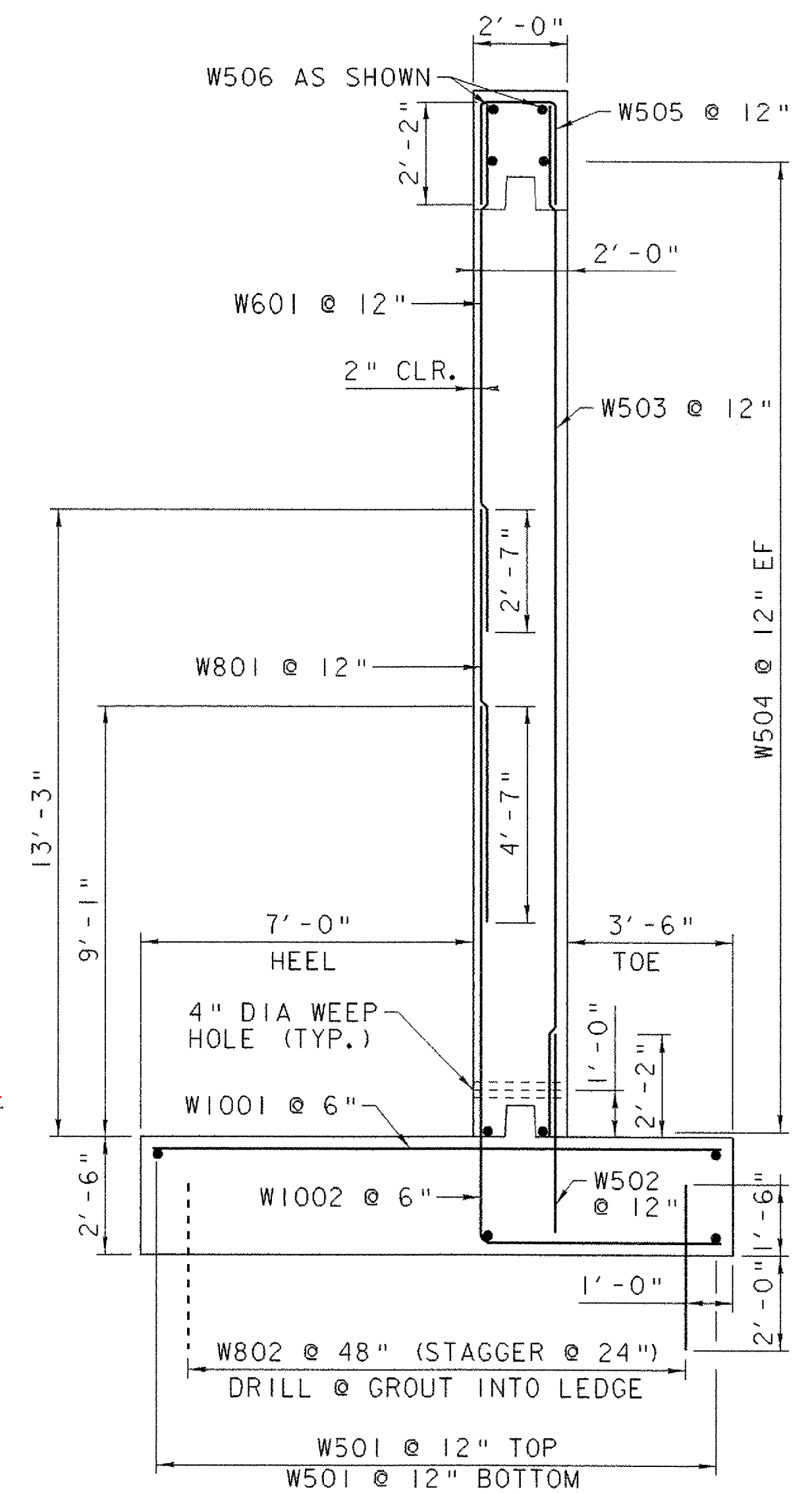
NOTE:
SEE WATER MAIN SHEETS
FOR PIPE SUPPORT DETAILS
ON WW#2



WINGWALL #2 ELEVATION VIEW
SCALE 3/8" = 1'-0"



WINGWALL #1 ELEVATION VIEW
SCALE 3/8" = 1'-0"



TYPICAL SECTION
WINGWALLS #1 & #2
SCALE 3/8" = 1'-0"

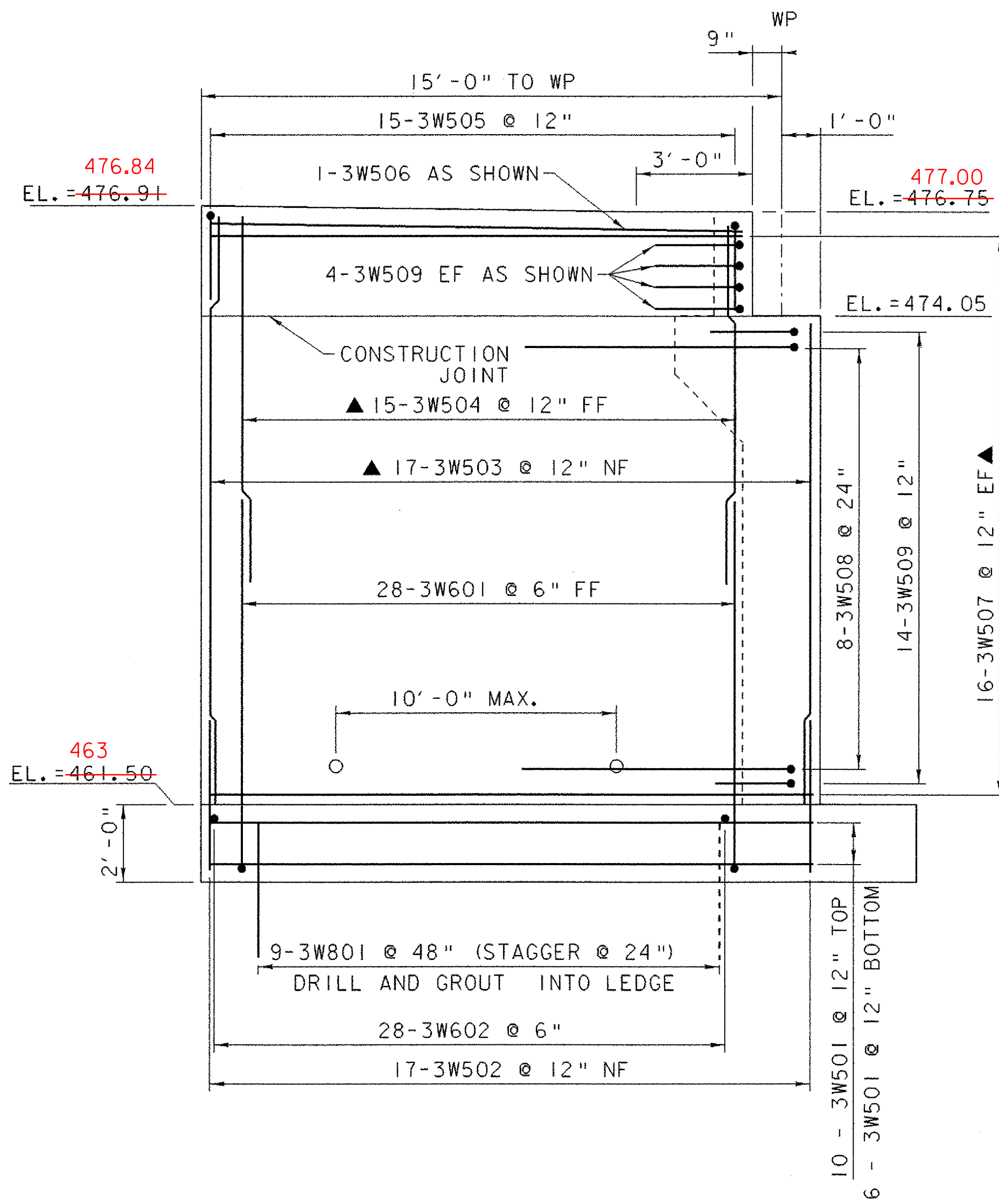
NOTE:

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

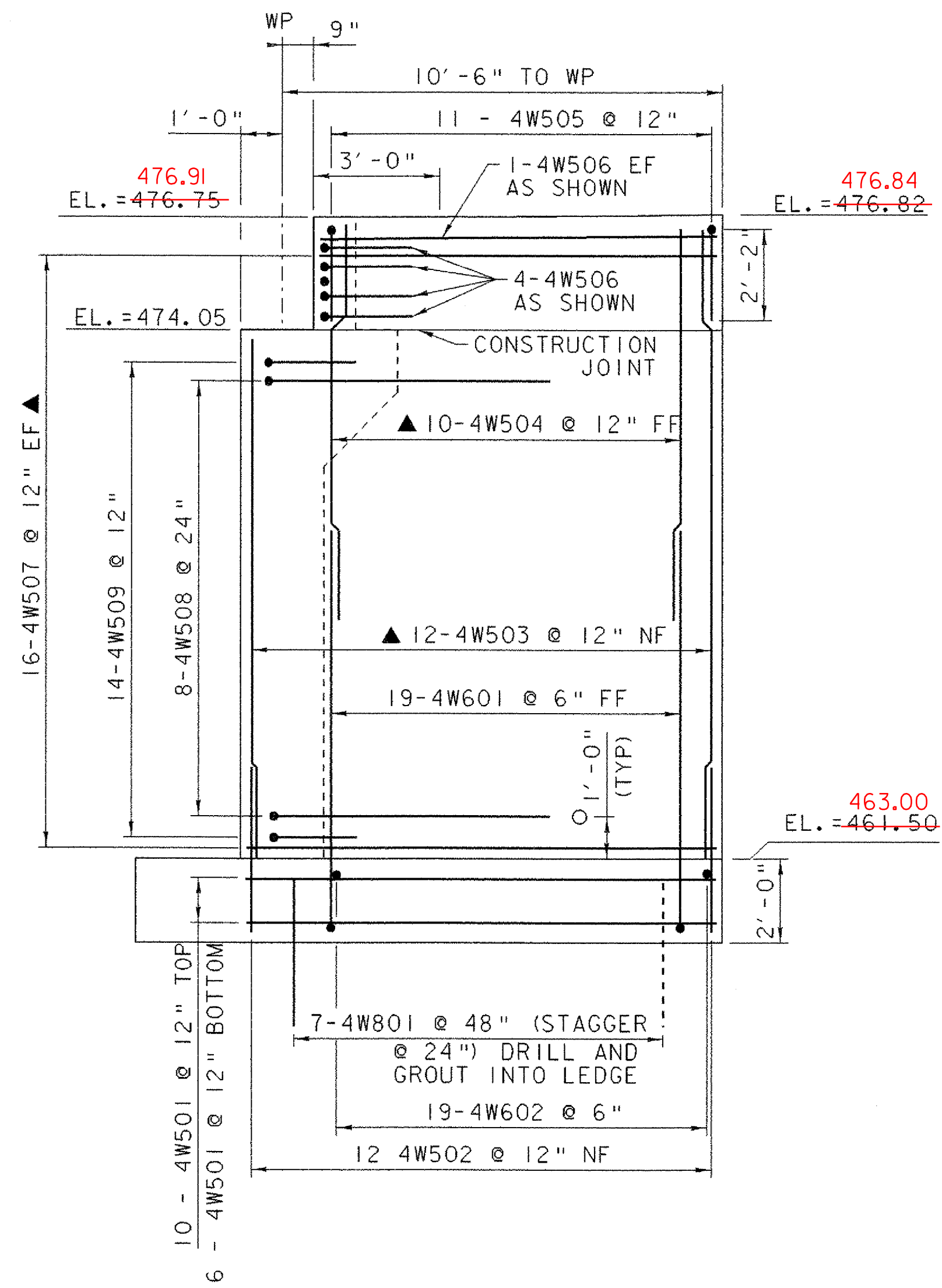
SCALE 3/8" = 1'-0"
1 0 1 2 3 4

PROJECT NAME: BRADFORD	PLOT DATE: 22-NOV-2006
PROJECT NUMBER: STP I447(28)	DRAWN BY: D.D.BEARD
FILE NAME: \Structures\s96j286sub.dgn	CHECKED BY: R.S.YOUNG
PROJECT LEADER: C.WILLIAMS	SHEET 26 OF 63
DESIGNED BY: M.GAGULIC	
WW#1 AND WW#2	

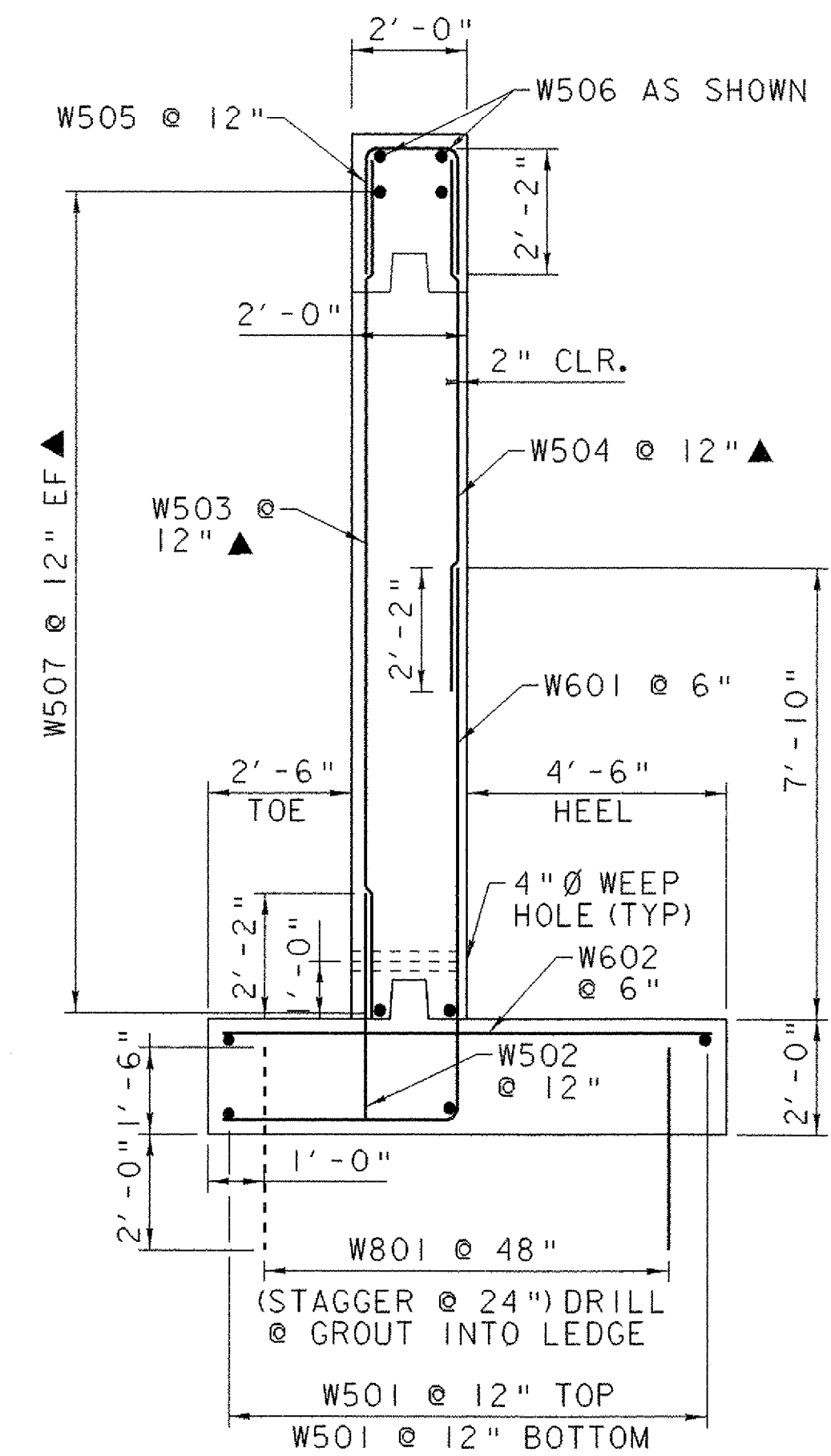
WINGWALL DETAILS



WINGWALL #3 ELEVATION VIEW
SCALE 3/8" = 1'-0"



WINGWALL #4 ELEVATION VIEW
SCALE 3/8" = 1'-0"



TYPICAL SECTION
WINGWALLS #3 & #4
SCALE 3/8" = 1'-0"

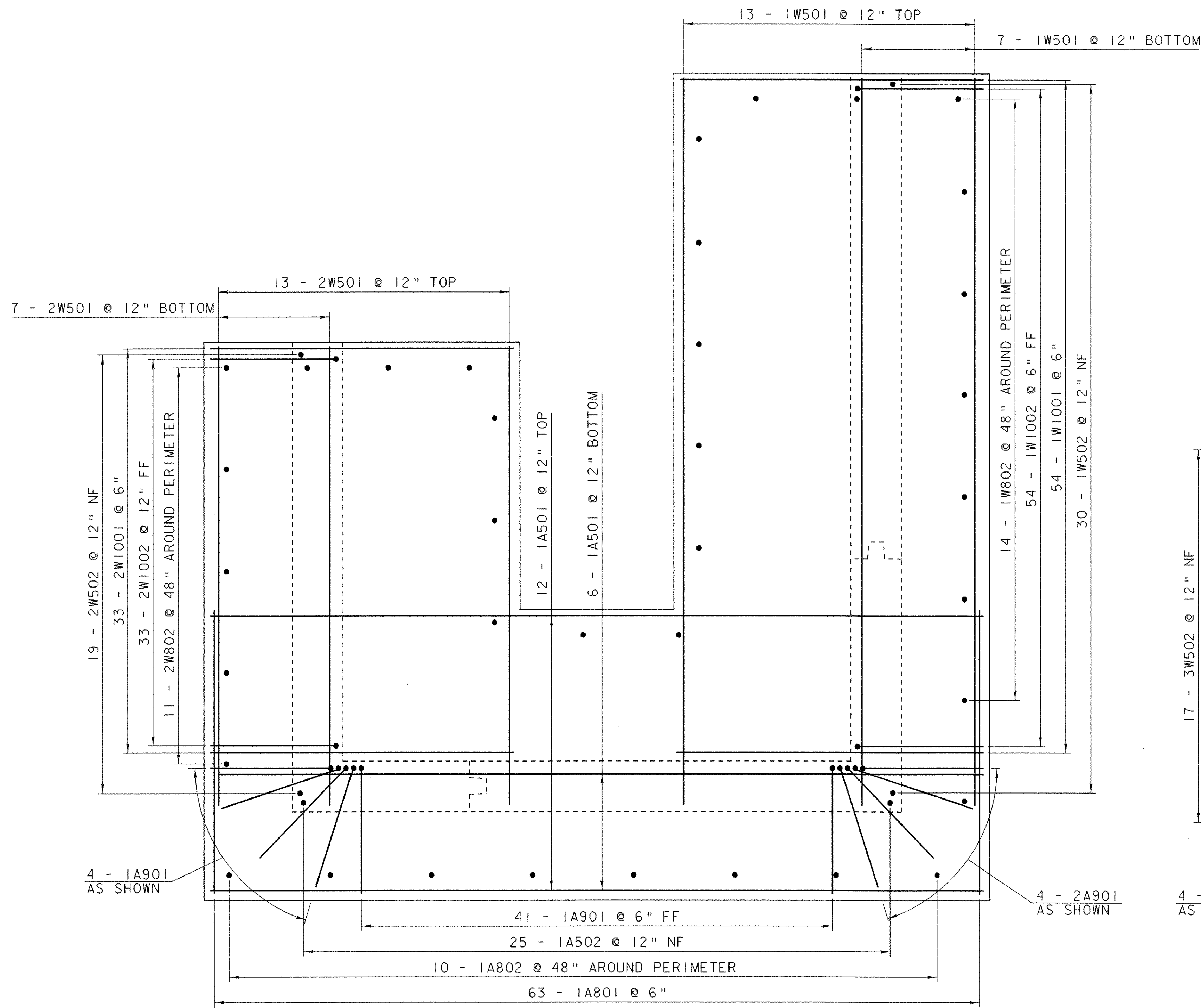
NOTE:

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

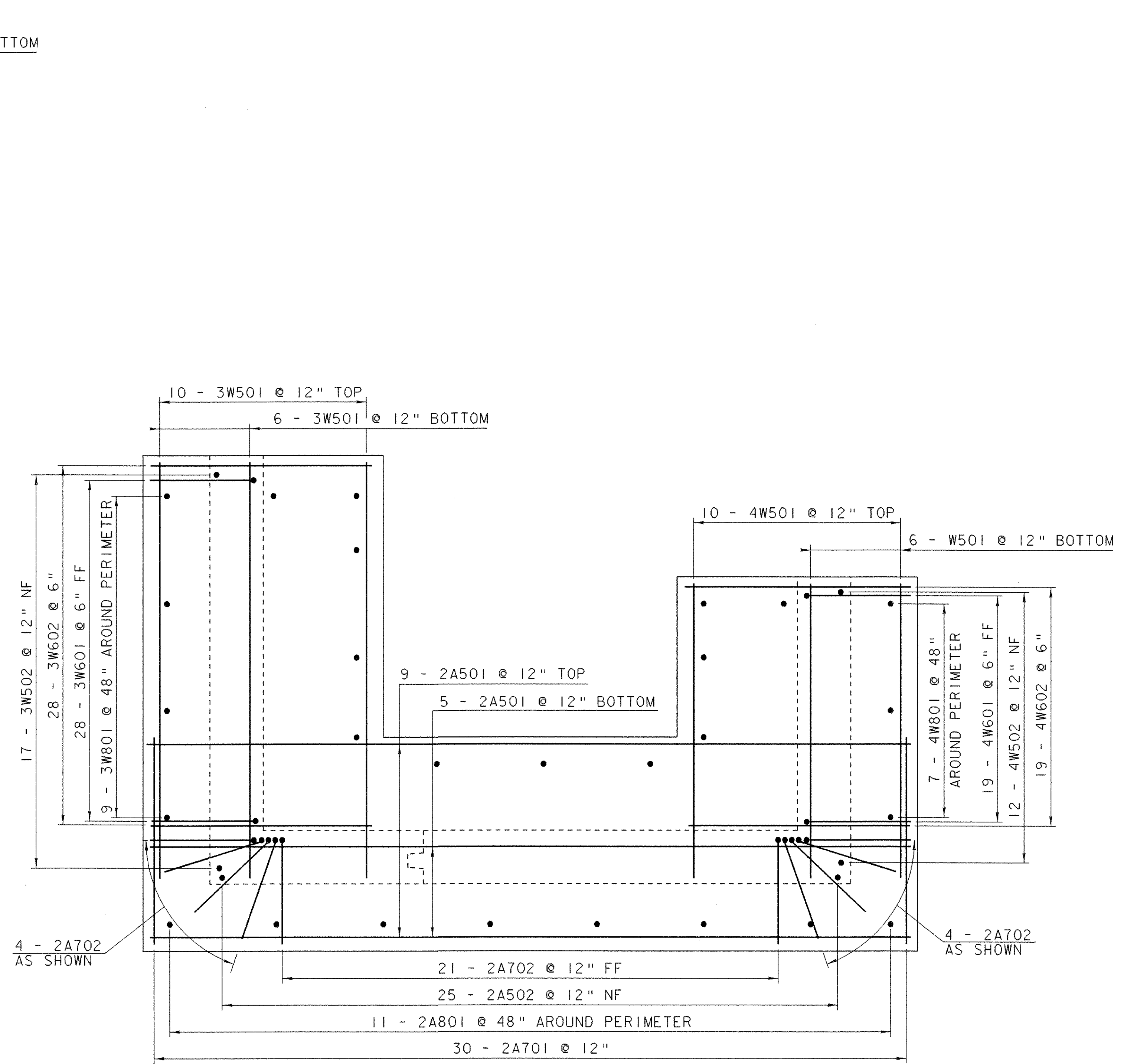
SCALE 3/8" = 1'-0"
1 0 1 2 3 4

WINGWALL DETAILS

PROJECT NAME: BRADFORD	FILE NAME: \Structures\s96j286sub.dgn	PLOT DATE: 22-NOV-2006
PROJECT NUMBER: STP 1447(28)	PROJECT LEADER: C. WILLIAMS	DRAWN BY: D.D.BEARD
	DESIGNED BY: M.GAGULIC	CHECKED BY: R.S.YOUNG
	WW #3 AND WW #4	SHEET 27 OF 63



ABUTMENT #1 PLAN
SCALE 3/8" = 1'-0



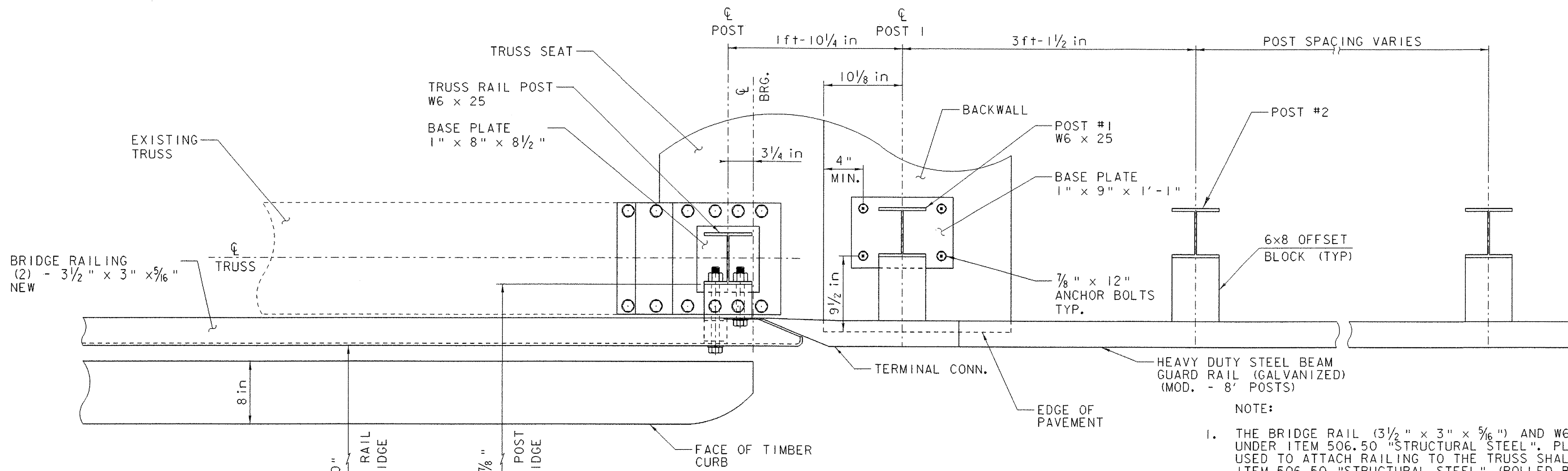
ABUTMENT #2 PLAN
SCALE 3/8" = 1'-0

NOTE:

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

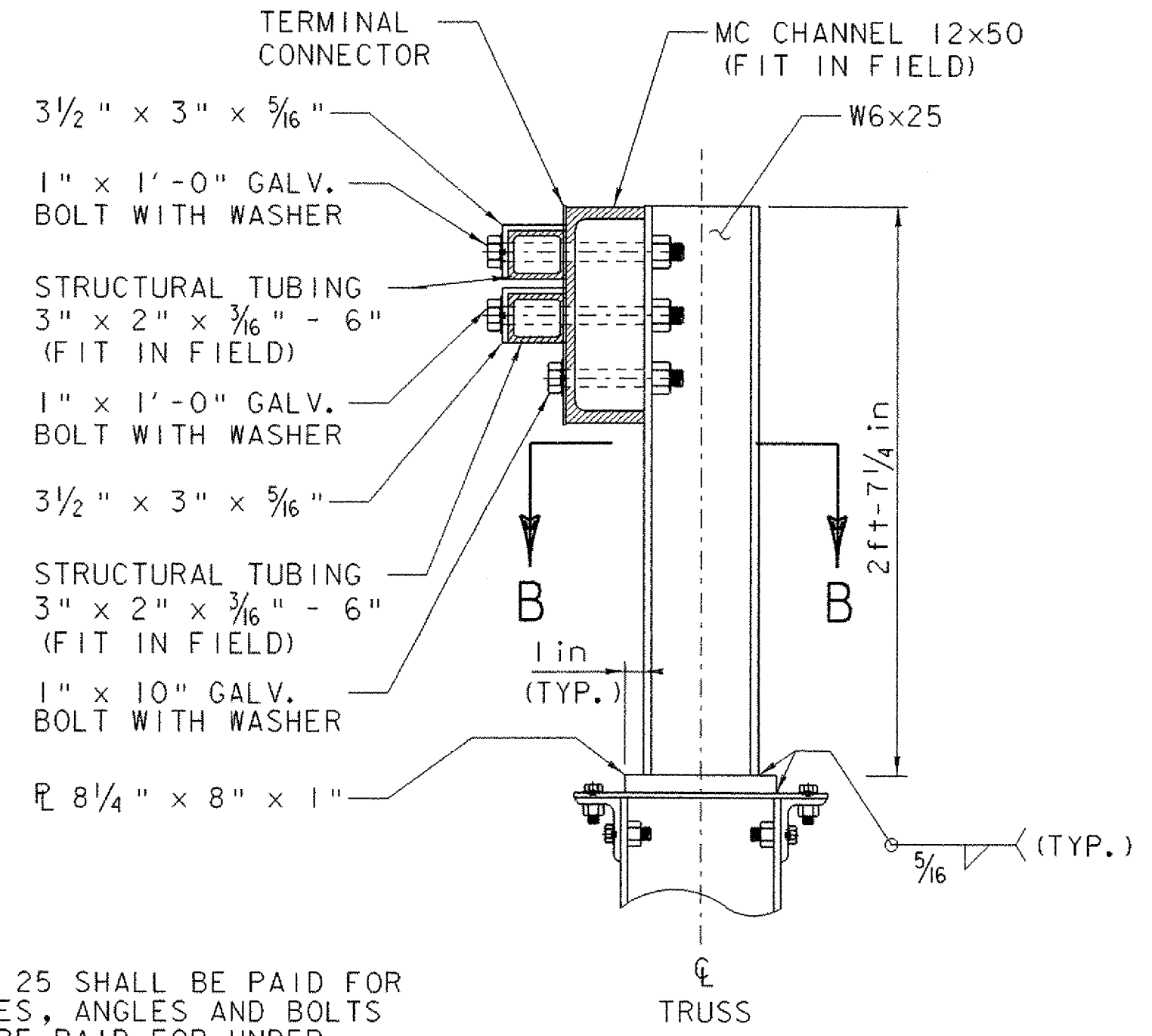
SCALE 3/8" = 1'-0
 1 0 1 2 3 4

PROJECT NAME: BRADFORD	FILE NAME: \Structures\s96j286sub.dgn	PLOT DATE: 22-NOV-2006
PROJECT NUMBER: STP 1447(28)	PROJECT LEADER: C. WILLIAMS	DRAWN BY: D.D.BEARD
	DESIGNED BY: M.GAGULIC	CHECKED BY: R.S.YOUNG
	FOOTINGS PLAN SHEET	SHEET 28 OF 63



PLAN

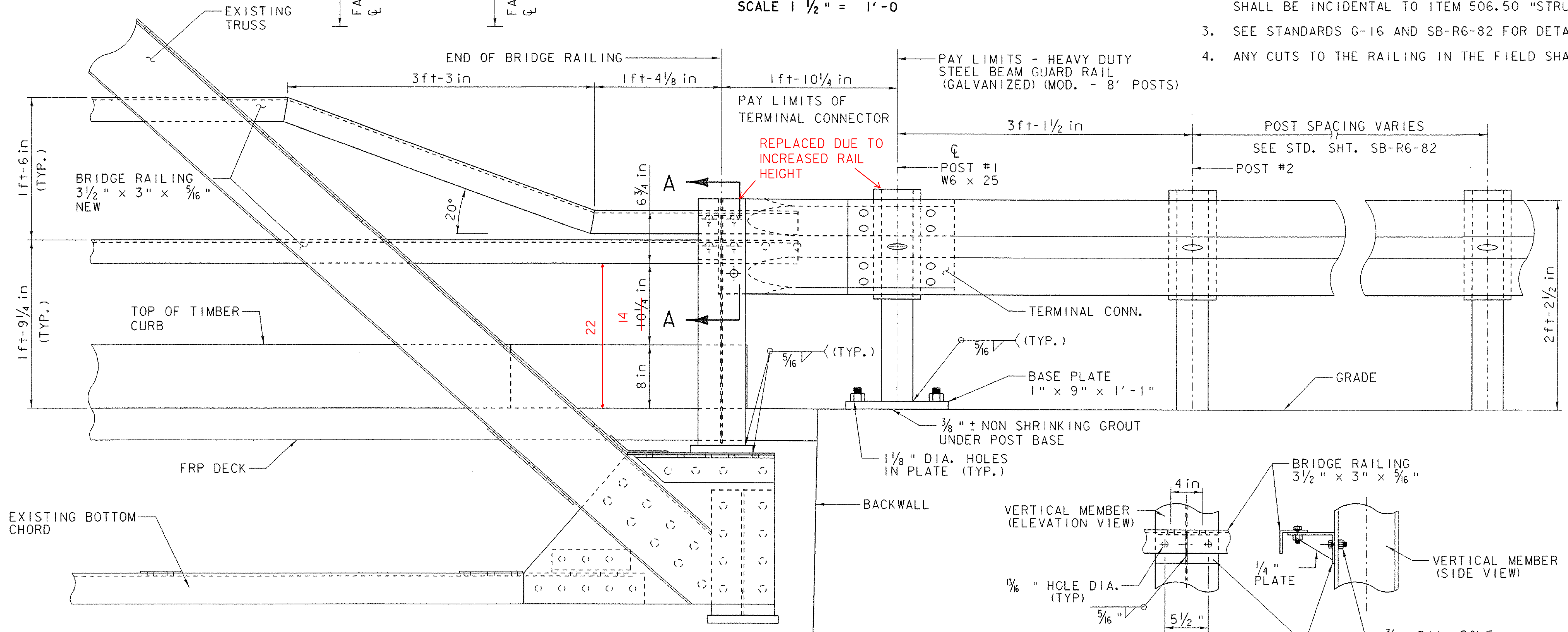
SCALE 1/2" = 1'-0"



SECTION A-A

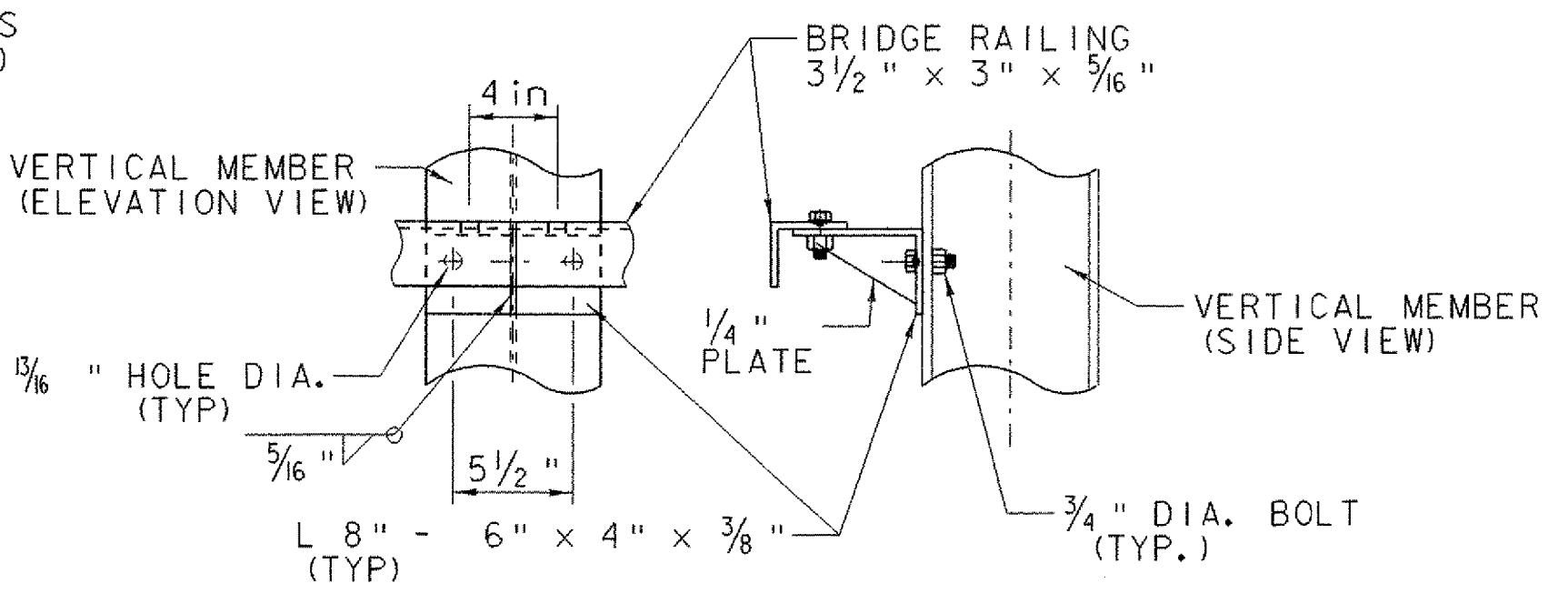
SCALE 1/2" = 1'-0"

- NOTE:
1. THE BRIDGE RAIL (3 1/2" x 3" x 5/16") AND W6 X 25 SHALL BE PAID FOR UNDER ITEM 506.50 "STRUCTURAL STEEL". PLATES, ANGLES AND BOLTS USED TO ATTACH RAILING TO THE TRUSS SHALL BE PAID FOR UNDER ITEM 506.50 "STRUCTURAL STEEL" (ROLLED BEAM).
 2. PAYMENT FOR WELD PREPARATION AND WELDING OF THE RAILING POST ON THE BRIDGE TO THE COVER PLATE AND BASE PLATE SHALL BE INCIDENTAL TO ITEM 506.50 "STRUCTURAL STEEL" (ROLLED BEAM).
 3. SEE STANDARDS G-16 AND SB-R6-82 FOR DETAILS NOT SHOWN ON THIS SHEET.
 4. ANY CUTS TO THE RAILING IN THE FIELD SHALL BE GROUNDED TO 1/16" RADIUS.



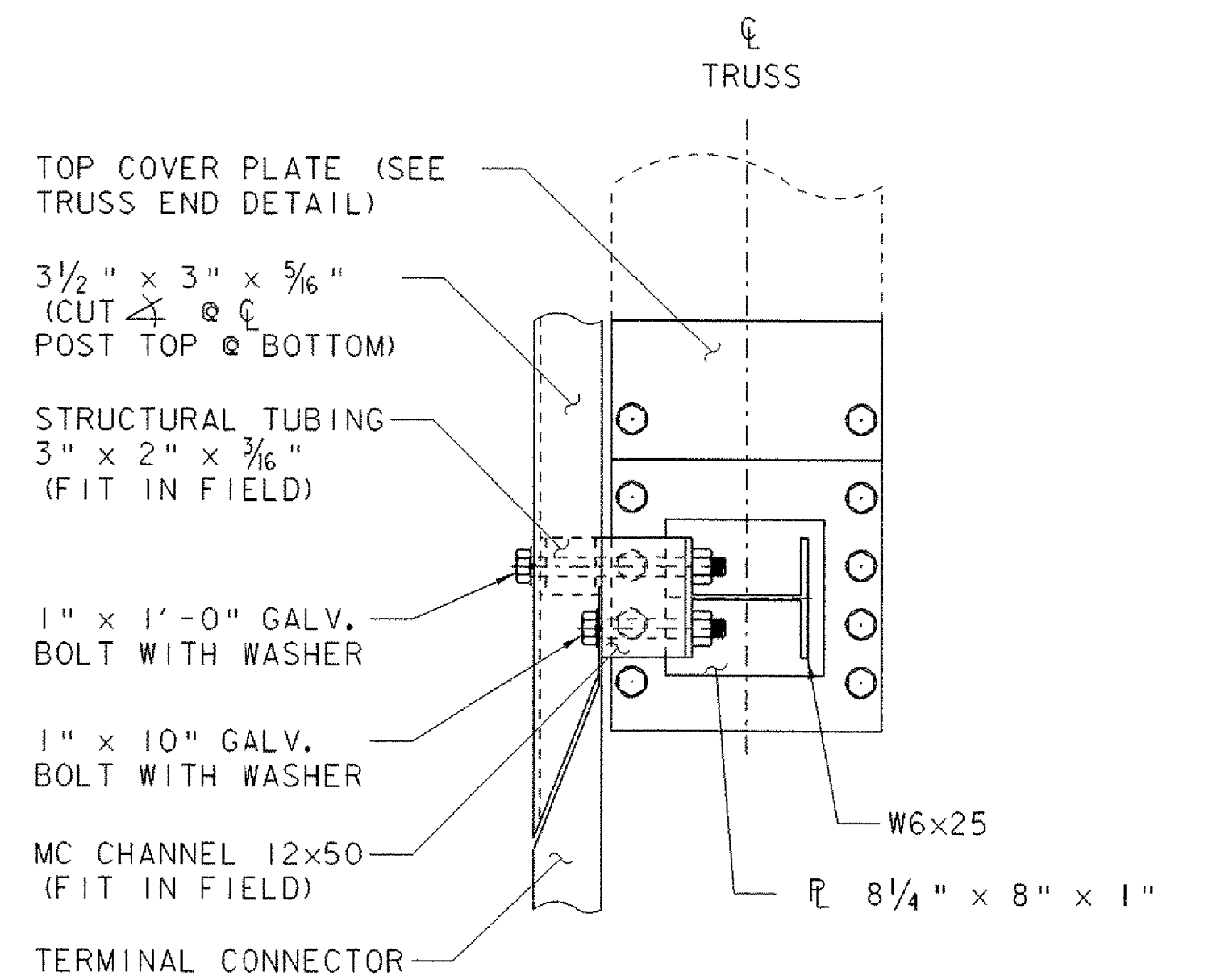
ELEVATION

SCALE 1/2" = 1'-0"



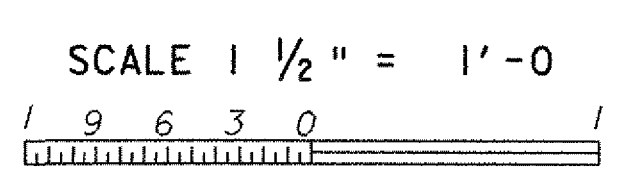
RAILING ATTACHMENT TYP

SCALE 1/2" = 1'-0"



SECTION B-B

SCALE 1/2" = 1'-0"



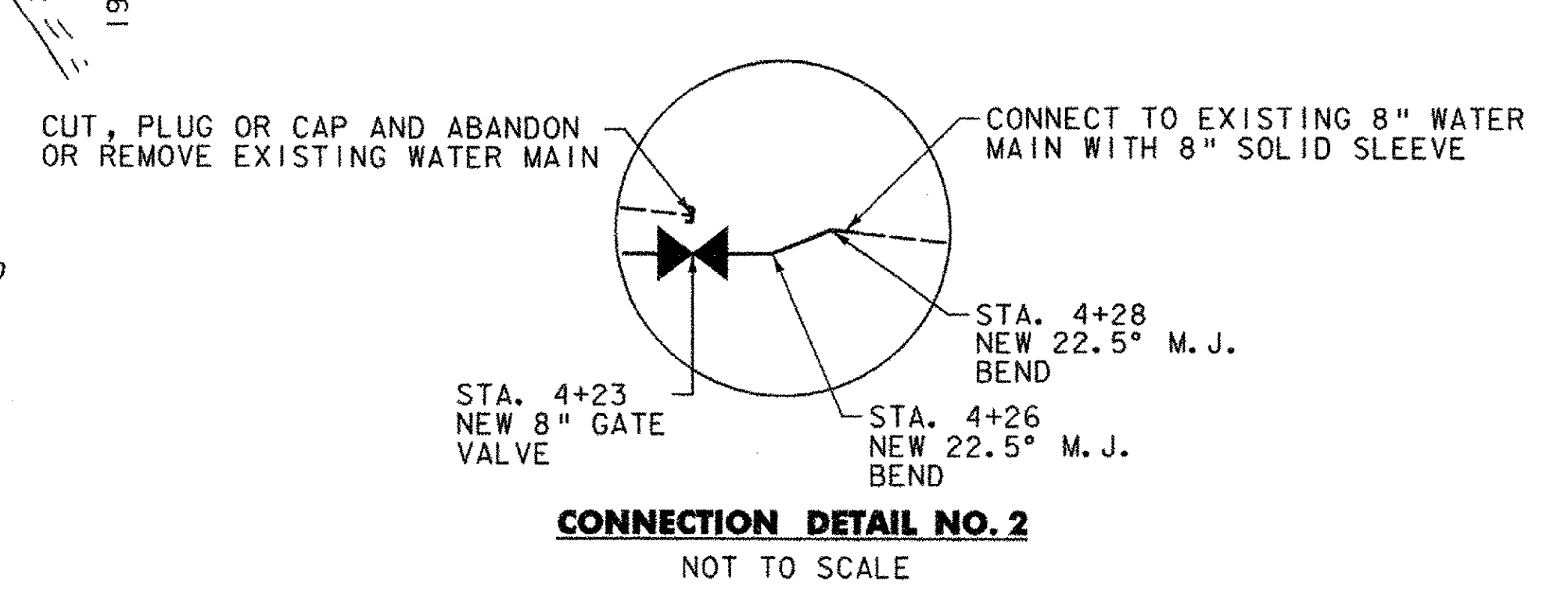
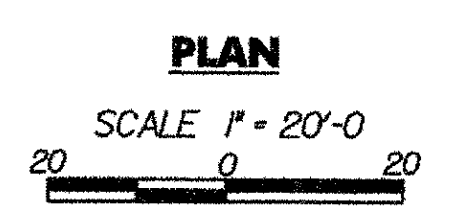
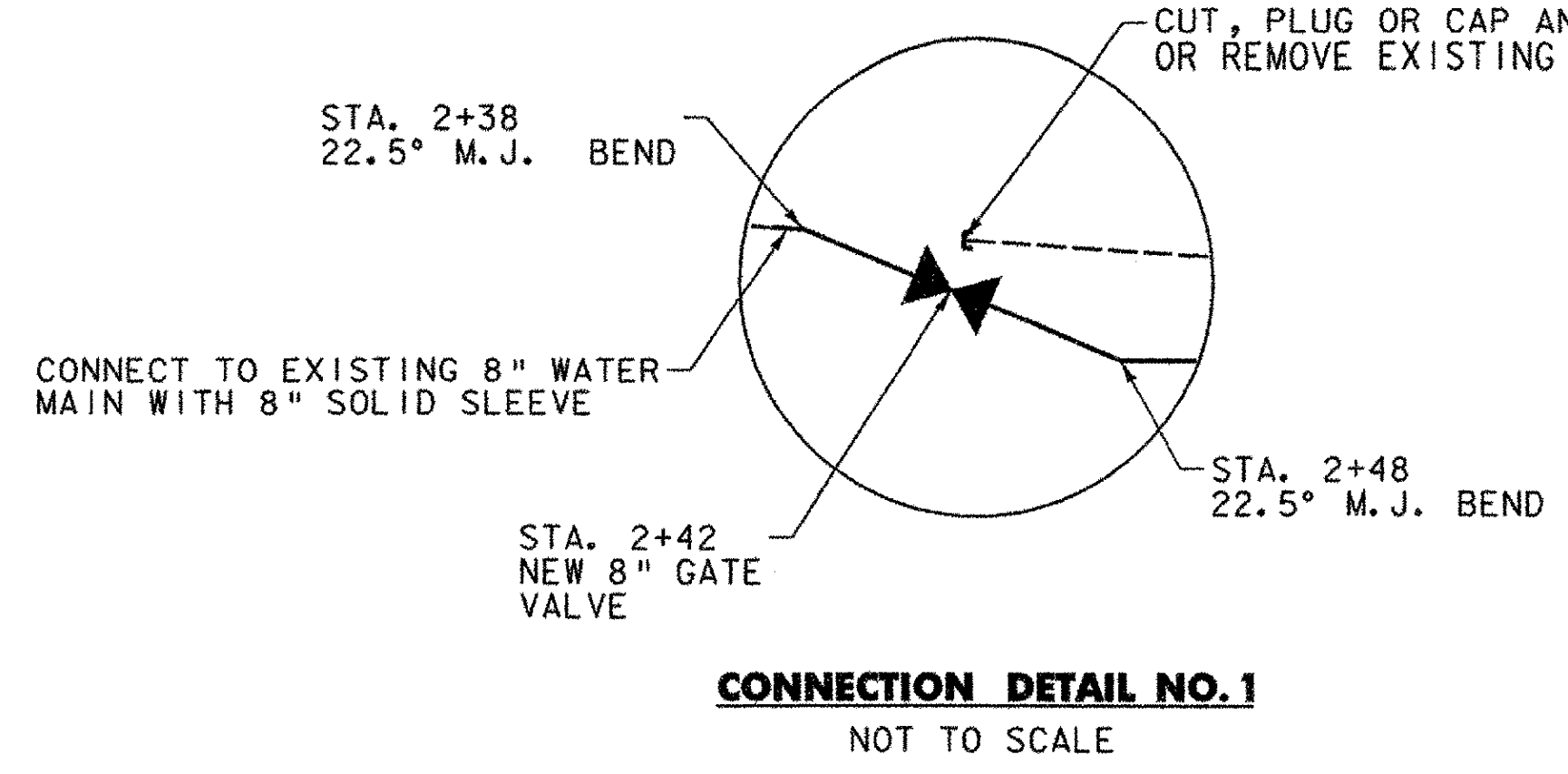
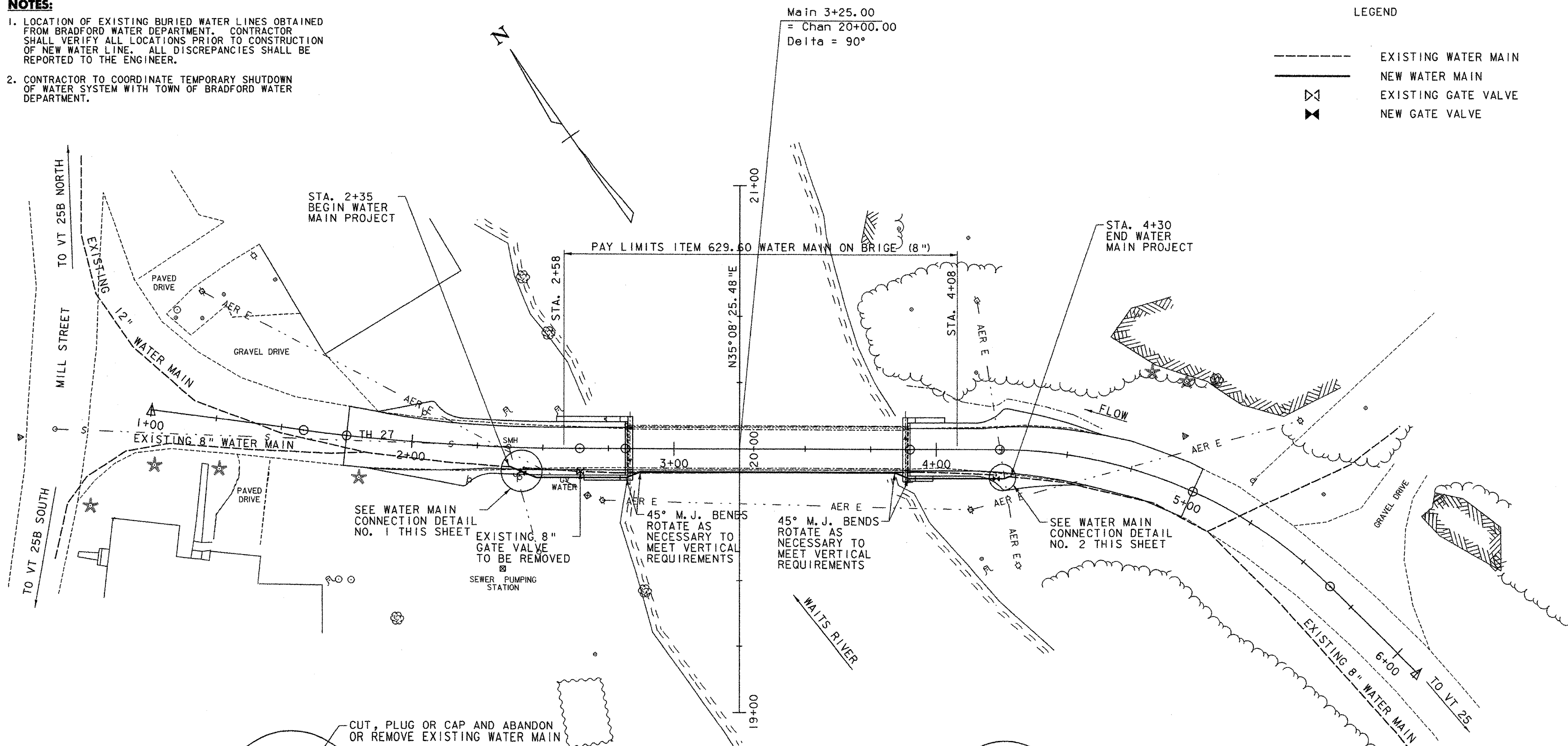
PROJECT NAME: BRADFORD	PLOT DATE: 22-NOV-2006
PROJECT NUMBER: STP 1447(28)	DRAWN BY: M. GAGULIC
FILE NAME: 96j286/Str/s96j286rail.dgn	CHECKED BY: R.S. YOUNG
PROJECT LEADER: C. P. WILLIAMS	SHEET 29 OF 63
DESIGNED BY: M. GAGULIC	
BRIDGE RAIL DETAIL	

NOTES:

1. LOCATION OF EXISTING BURIED WATER LINES OBTAINED FROM BRADFORD WATER DEPARTMENT. CONTRACTOR SHALL VERIFY ALL LOCATIONS PRIOR TO CONSTRUCTION OF NEW WATER LINE. ALL DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER.
2. CONTRACTOR TO COORDINATE TEMPORARY SHUTDOWN OF WATER SYSTEM WITH TOWN OF BRADFORD WATER DEPARTMENT.

LEGEND

- EXISTING WATER MAIN
- NEW WATER MAIN
- ⊠ EXISTING GATE VALVE
- ⊠ NEW GATE VALVE



NOTE:
INFORMATION ON THIS SHEET FOR WATER MAIN AND DETAILS ONLY. REFER TO OTHER DRAWINGS FOR BRIDGE AND ROADWAY DETAILS.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of	BRADFORD	Bridge No.	22
Highway No.	27	Log Sta.	
		Surv. Sta.	
CREAMERY ROAD OVER WAITS RIVER			

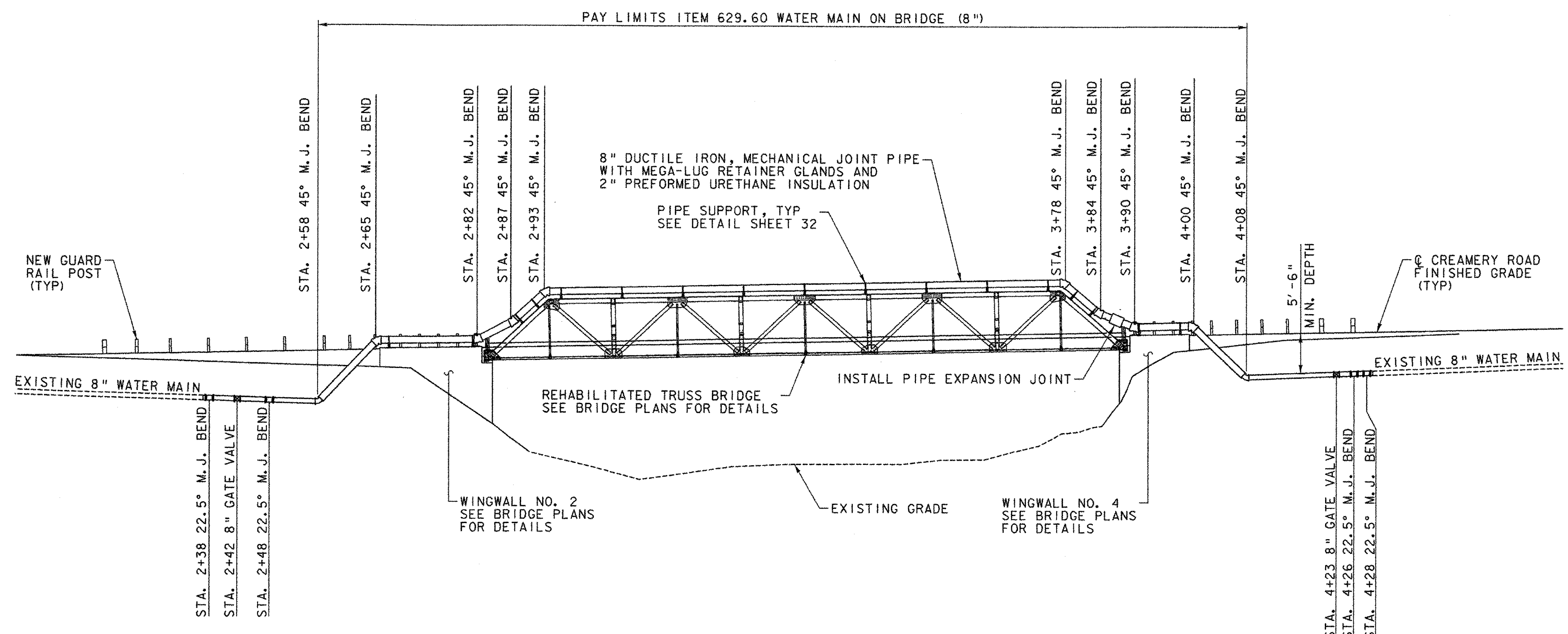
NO.	DATE	REVISIONS	BY	CK'D

DuBois & King INC.
engineering planning management development

TOWN OF BRADFORD, VERMONT
CREAMERY ROAD BRIDGE REPLACEMENT
WATER MAIN REPLACEMENT PLAN

DRAWN BY	APG	DATE	OCT. 2006
CHECKED BY	CKG	PROJ. NO.	219248L
PROJ. ENG.	APG	DRAW. NO.	---
SHEET 30 OF 63			

PLOTTED 11/01/2006



PAY LIMITS ITEM 629.60 WATER MAIN ON BRIDGE (8")

8" DUCTILE IRON, MECHANICAL JOINT PIPE WITH MEGA-LUG RETAINER GLANDS AND 2" PREFORMED URETHANE INSULATION

PIPE SUPPORT, TYP SEE DETAIL SHEET 32

REHABILITATED TRUSS BRIDGE SEE BRIDGE PLANS FOR DETAILS

INSTALL PIPE EXPANSION JOINT

EXISTING GRADE

CREAMERY ROAD FINISHED GRADE (TYP)

5'-6" MIN. DEPTH

EXISTING 8" WATER MAIN

STA. 2+38 22.5° M. J. BEND
 STA. 2+42 8" GATE VALVE
 STA. 2+48 22.5° M. J. BEND

STA. 2+58 45° M. J. BEND

STA. 2+65 45° M. J. BEND

STA. 2+82 45° M. J. BEND

STA. 2+87 45° M. J. BEND

STA. 2+93 45° M. J. BEND

STA. 3+78 45° M. J. BEND

STA. 3+84 45° M. J. BEND

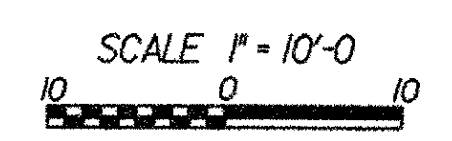
STA. 3+90 45° M. J. BEND

STA. 4+00 45° M. J. BEND

STA. 4+08 45° M. J. BEND

STA. 4+23 8" GATE VALVE
 STA. 4+26 22.5° M. J. BEND
 STA. 4+28 22.5° M. J. BEND

PROFILE



NOTE:
 PIPE SUPPORT LOCATIONS SHALL BE IDENTIFIED IN THE FIELD IN ACCORDANCE WITH PIPE MANUFACTURER'S RECOMMENDATION AND SHALL BE APPROVED BY THE ENGINEER. SUPPORT LOCATIONS SHALL NOT CONFLICT WITH TRUSS VERTICAL MEMBERS.

NOTE:
 INFORMATION ON THIS SHEET FOR WATER MAIN AND DETAILS ONLY. REFER TO OTHER DRAWINGS FOR BRIDGE AND ROADWAY DETAILS.

STATE OF VERMONT AGENCY OF TRANSPORTATION	
Town Of BRADFORD	Bridge No. 22
Highway No. 27	Log Sta. Surv. Sta.
CREAMERY ROAD OVER WAITS RIVER	

NO.	DATE	REVISIONS	BY	CK'D

DuBois & King
 inc.

engineering planning management development

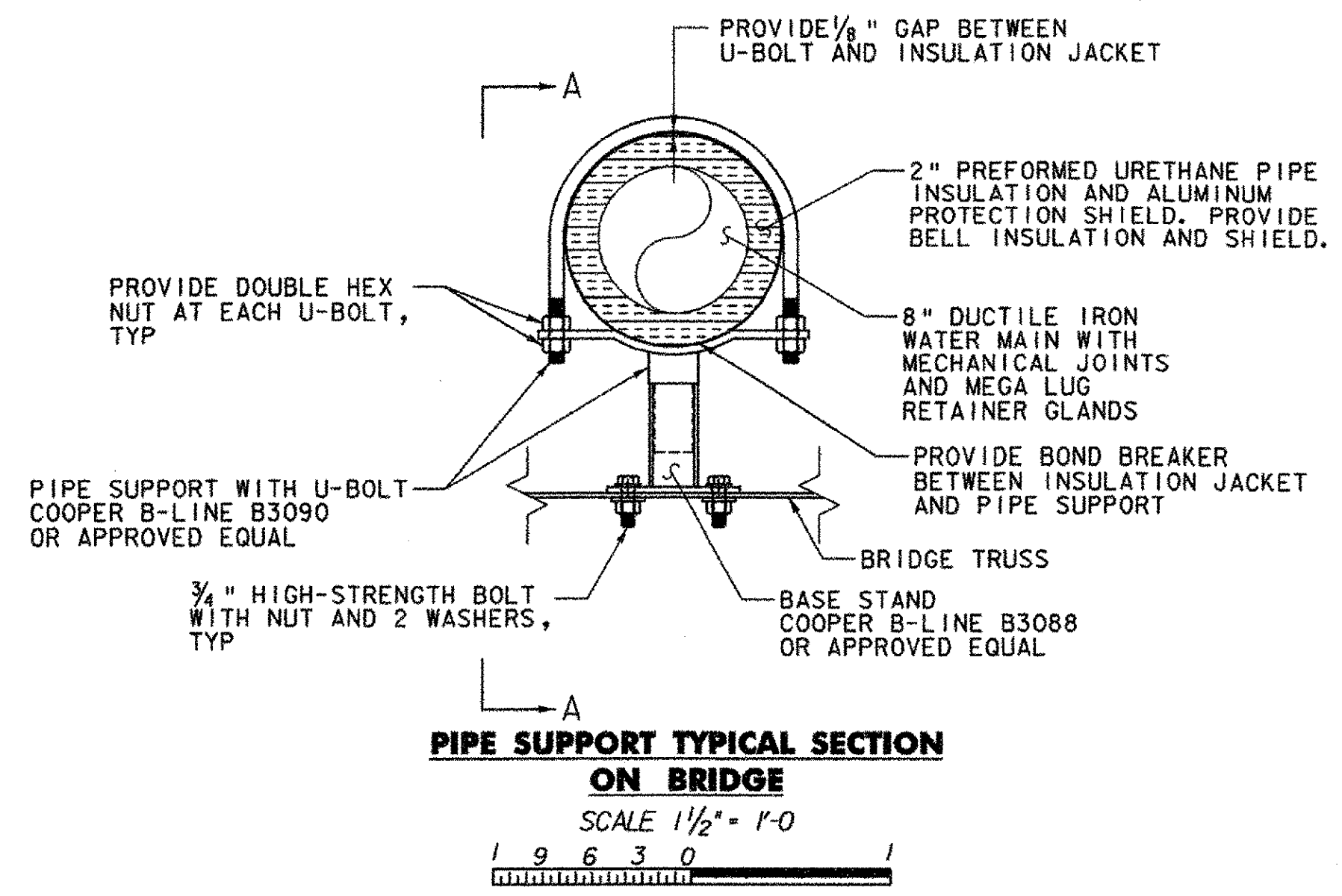
TOWN OF BRADFORD,
VERMONT

-
CREAMERY ROAD
BRIDGE REPLACEMENT
WATER MAIN REPLACEMENT PROFILE

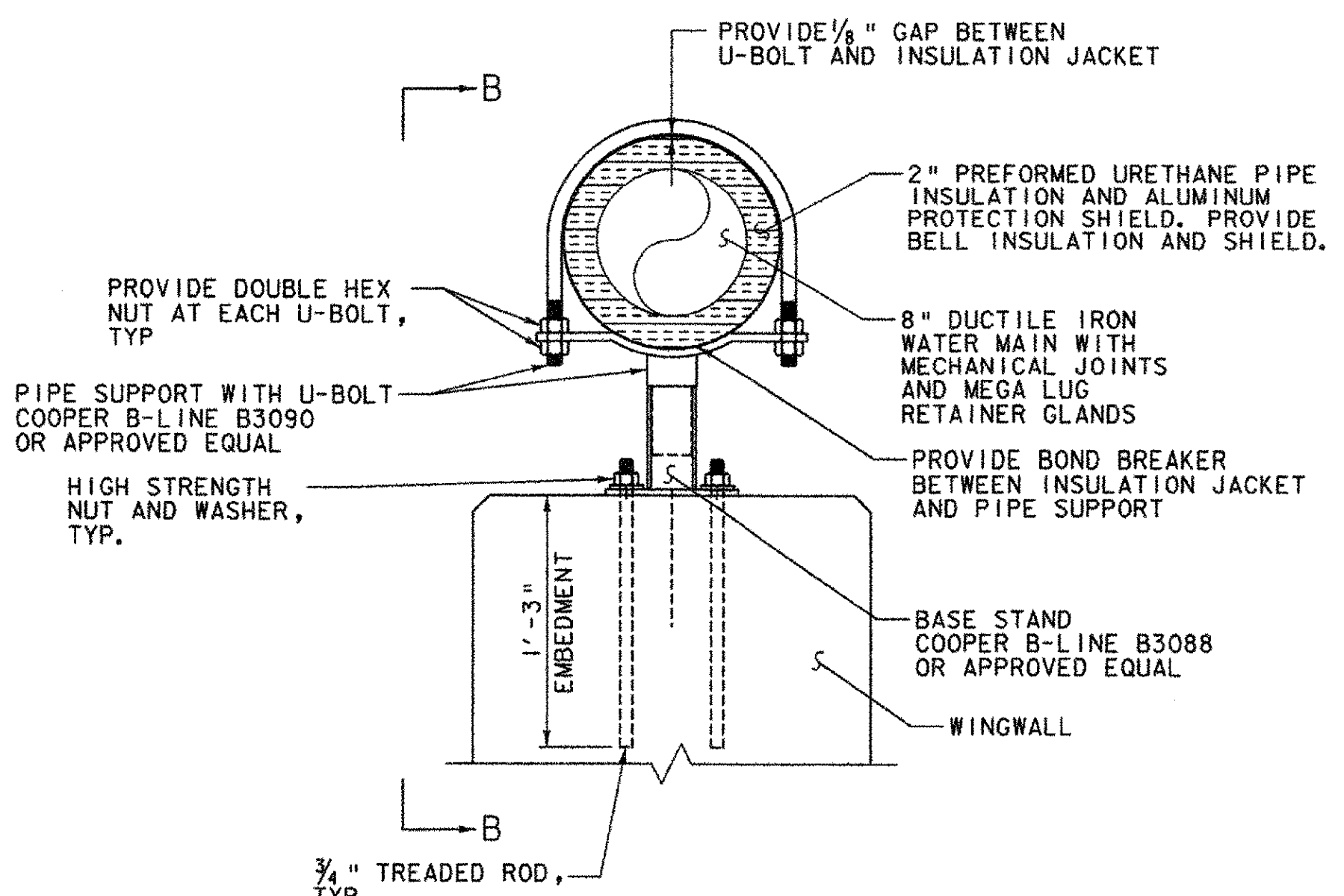
DRAWN BY APG	DATE OCT. 2006
CHECKED BY CKG	PROJ. NO. 219248L
PROJ. ENG. APG	DRAW. NO. ---
SHEET 31 OF 63	

PLOTTED 11/01/2006

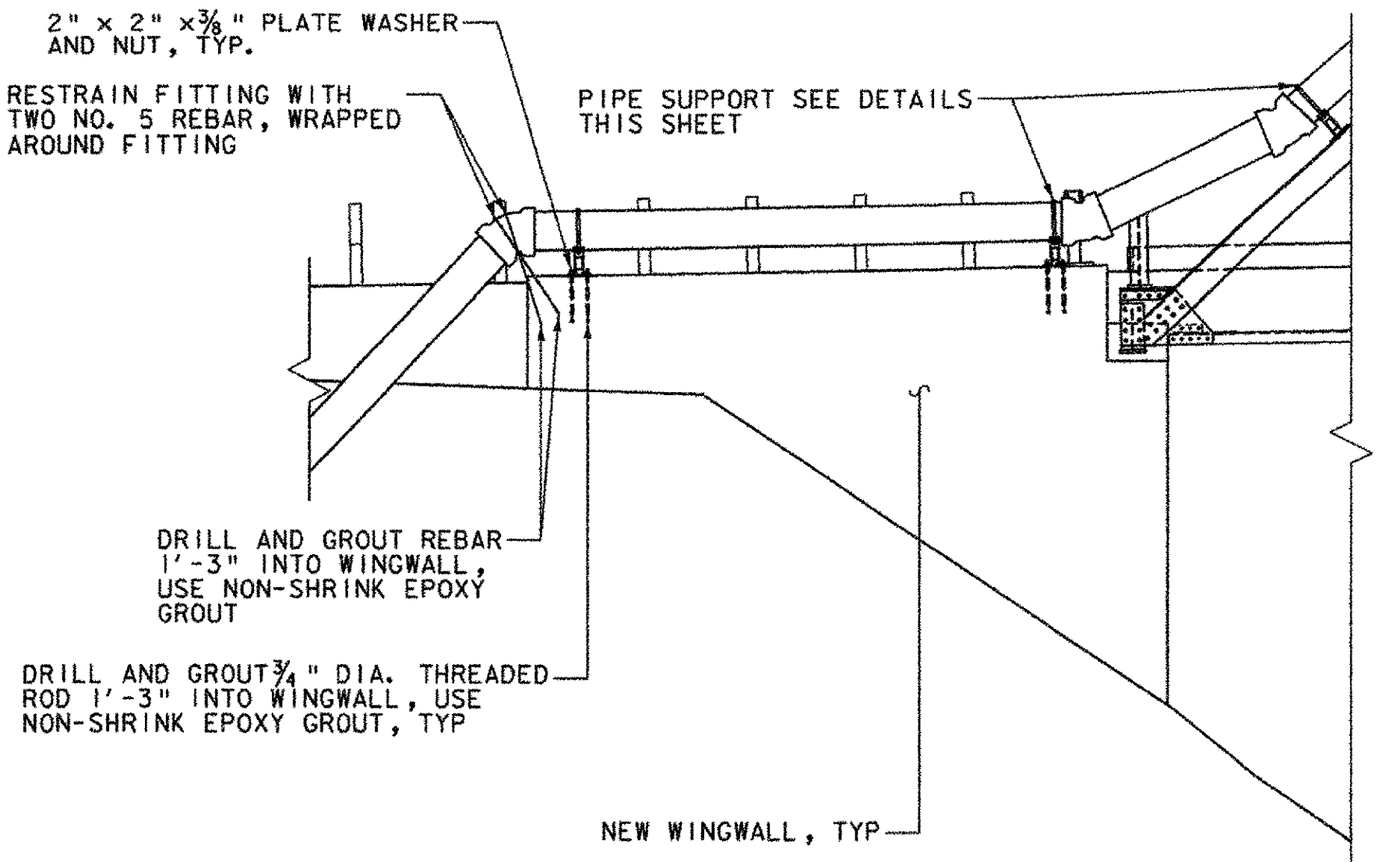
11/01/2006 01:33:25 PM



PIPE SUPPORT TYPICAL SECTION ON BRIDGE
SCALE 1 1/2" = 1'-0"
1 9 6 3 0



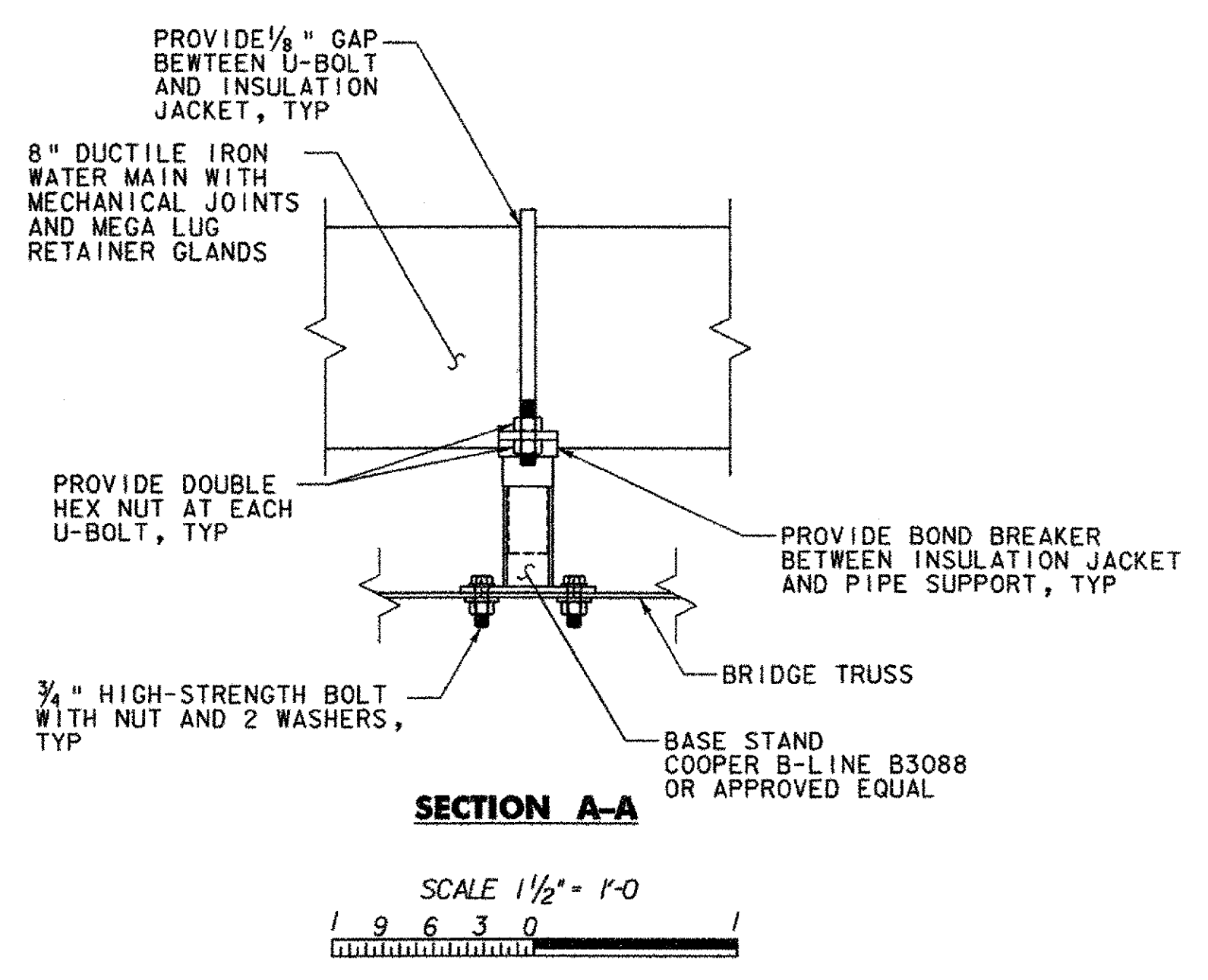
PIPE SUPPORT TYPICAL SECTION ON WINGWALL
SCALE 1 1/2" = 1'-0"
1 9 6 3 0



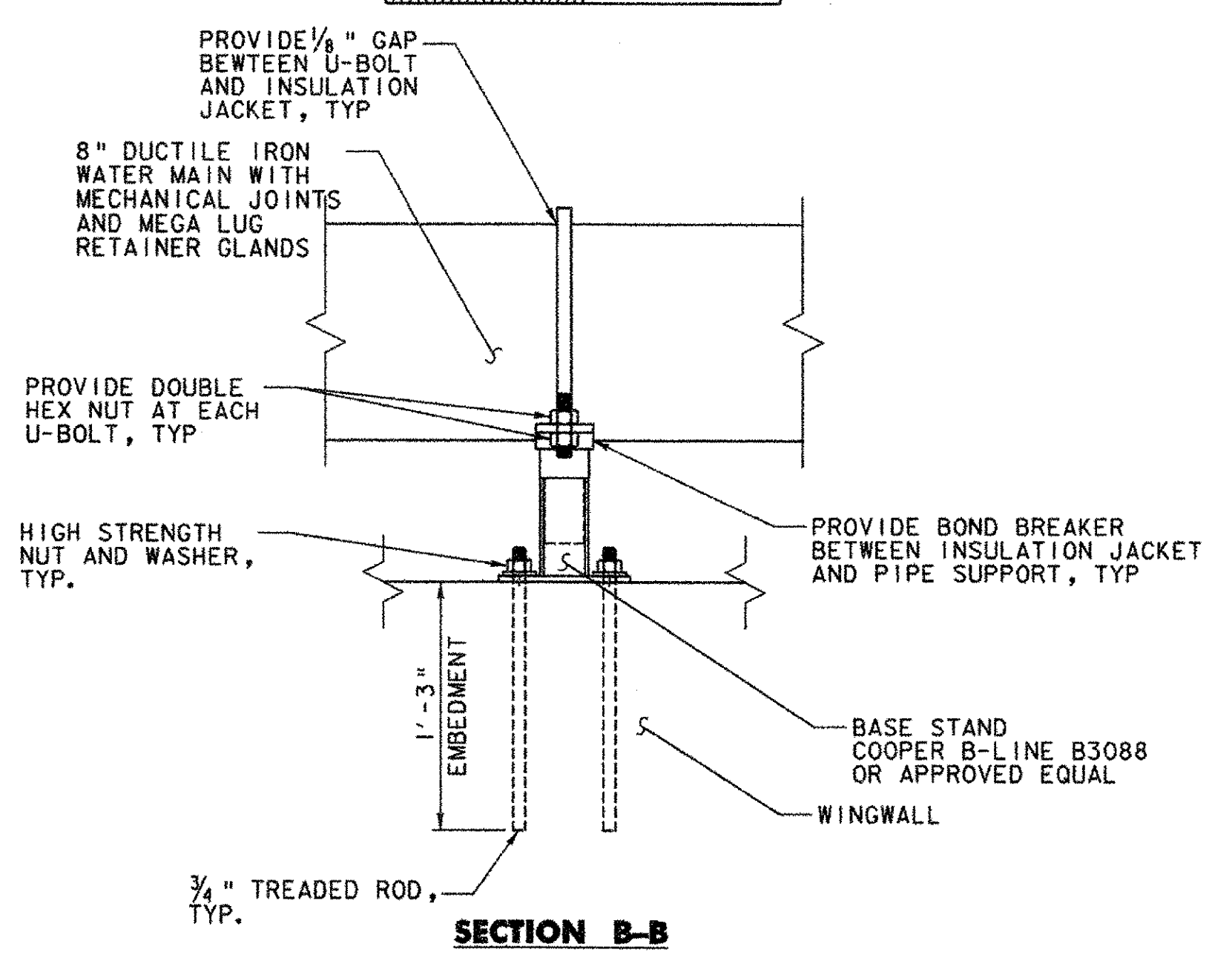
PIPE CONNECTION TO WINGWALL AND TRUSS DETAIL

SCALE 1/4" = 1'-0"
1 0 2 4 6

NOTE:
DRILLING AND GROUTING OF REBAR SHALL BE PAID FOR UNDER ITEM 507.16, "DRILLING AND GROUTING DOWELS."



SECTION A-A
SCALE 1 1/2" = 1'-0"
1 9 6 3 0



SECTION B-B
SCALE 1 1/2" = 1'-0"
1 9 6 3 0

NOTE:
INFORMATION ON THIS SHEET FOR WATER MAIN AND DETAILS ONLY. REFER TO OTHER DRAWINGS FOR BRIDGE AND ROADWAY DETAILS.

PLOTTED 11/01/2006

NO.	DATE	REVISIONS	BY	CK'D

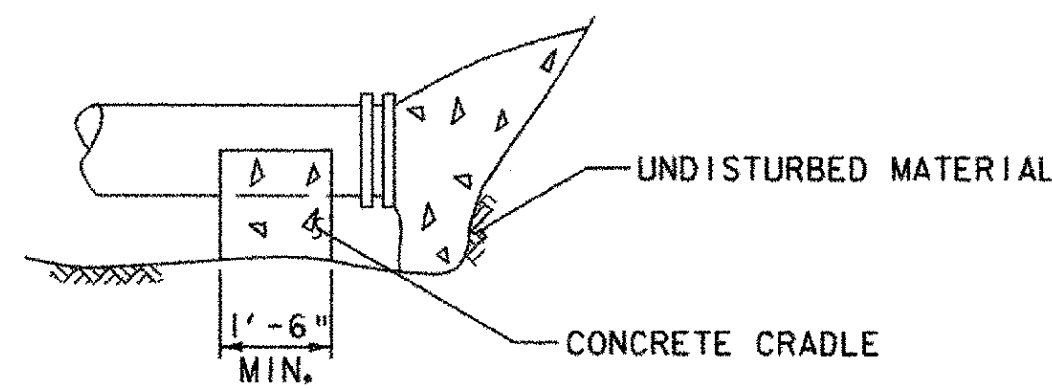
DuBois & King
INC.
engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

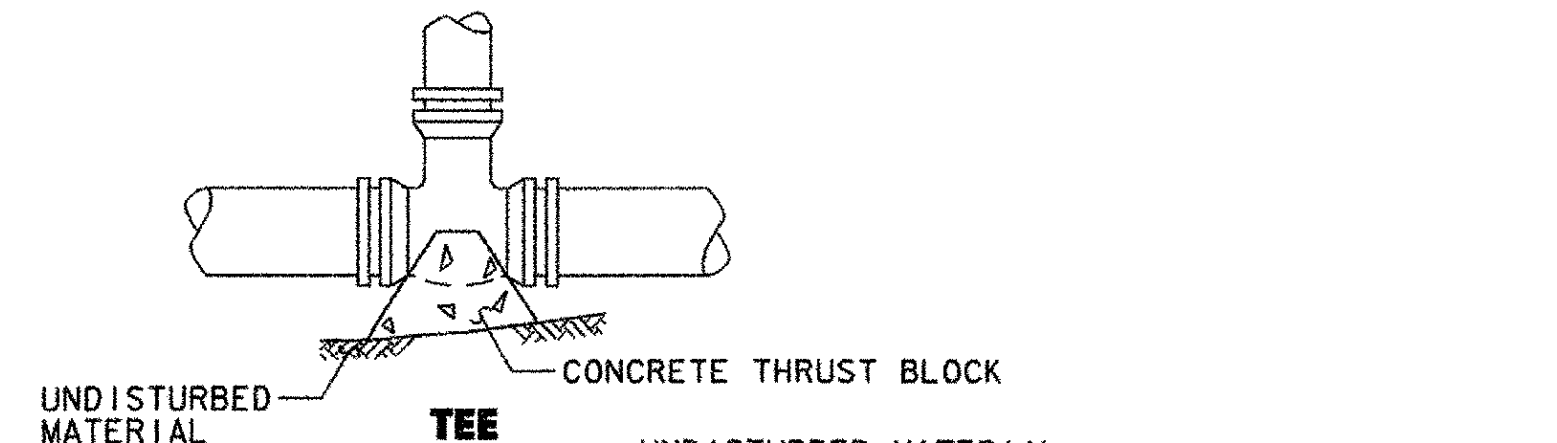
Town Of	BRADFORD	Bridge No.	22
Highway No.	27	Log Sta.	
		Surv. Sta.	
CREAMERY ROAD OVER WAITS RIVER			

TOWN OF BRADFORD, VERMONT
CREAMERY ROAD BRIDGE REPLACEMENT
DETAIL SHEET I

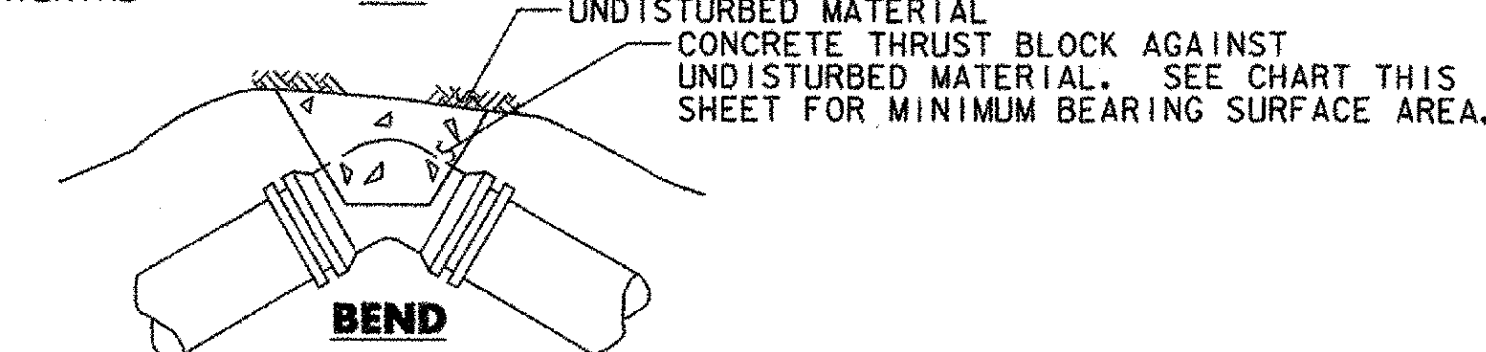
DRAWN BY	APG	DATE	OCT. 2006
CHECKED BY	CKG	PROJ. NO.	219248L
PROJ. ENG.	APG	DRAW. NO.	---
			SHEET 32 OF 63



DEAD END



TEE



BEND

CONCRETE THRUST BLOCK DETAILS
NOT TO SCALE

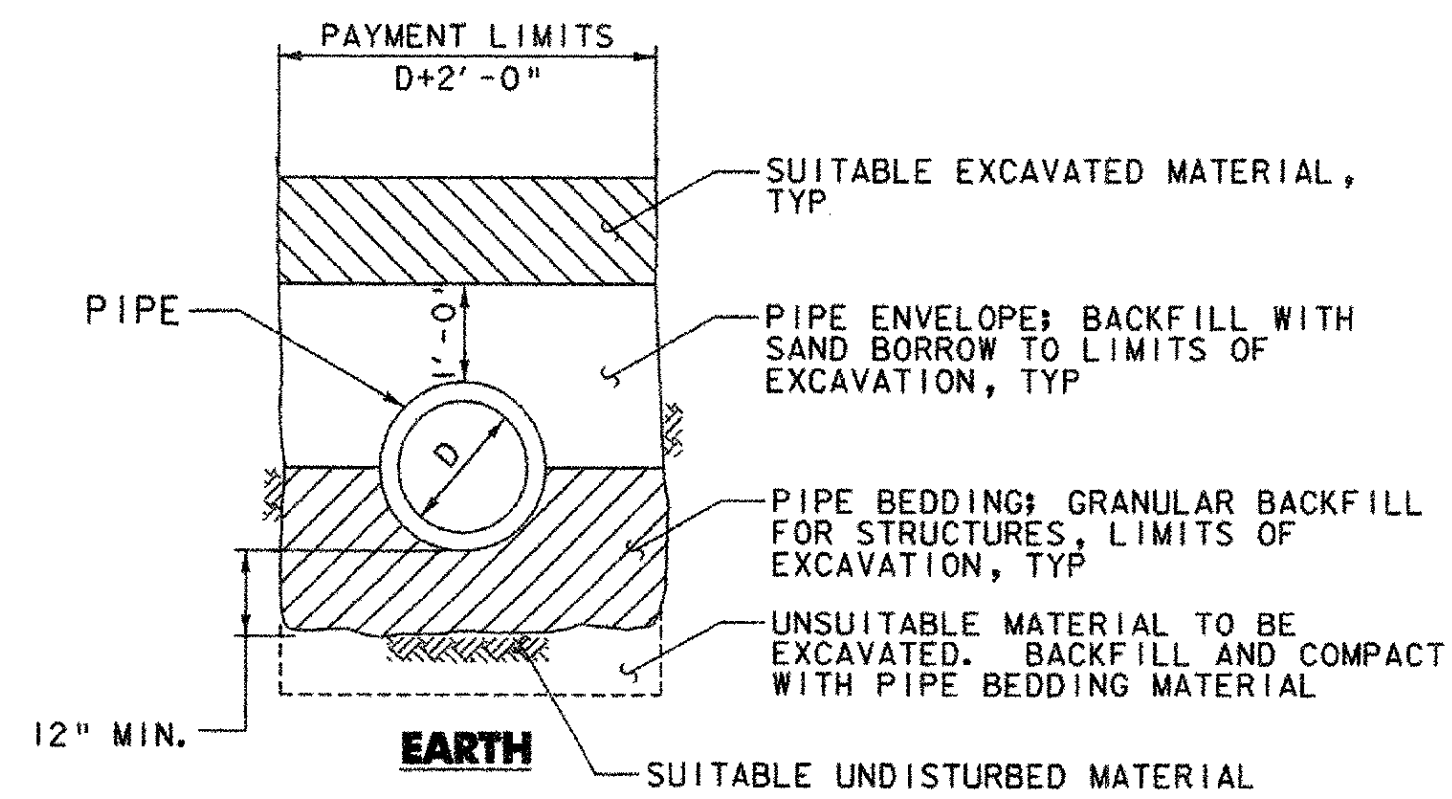
AREA OF BEARING FACE OF CONCRETE THRUST BLOCKS IN SQUARE FEET

PIPE SIZE (IN)	SOFT WET CLAY, SAND OR SILT	DRY SAND	COMPACT COARSE SAND OR GRAVEL HARDPAN
DEAD END OR TEE			
8 OR LESS	15	5	4
8 OR LESS	21	7	5
8 OR LESS	12	4	3
8 OR LESS	6	2	2
SOIL BEARING CAPACITIES (APPROXIMATE)			
	1250 lbs/ft ²	4000 lbs/ft ²	6000 lbs/ft ²

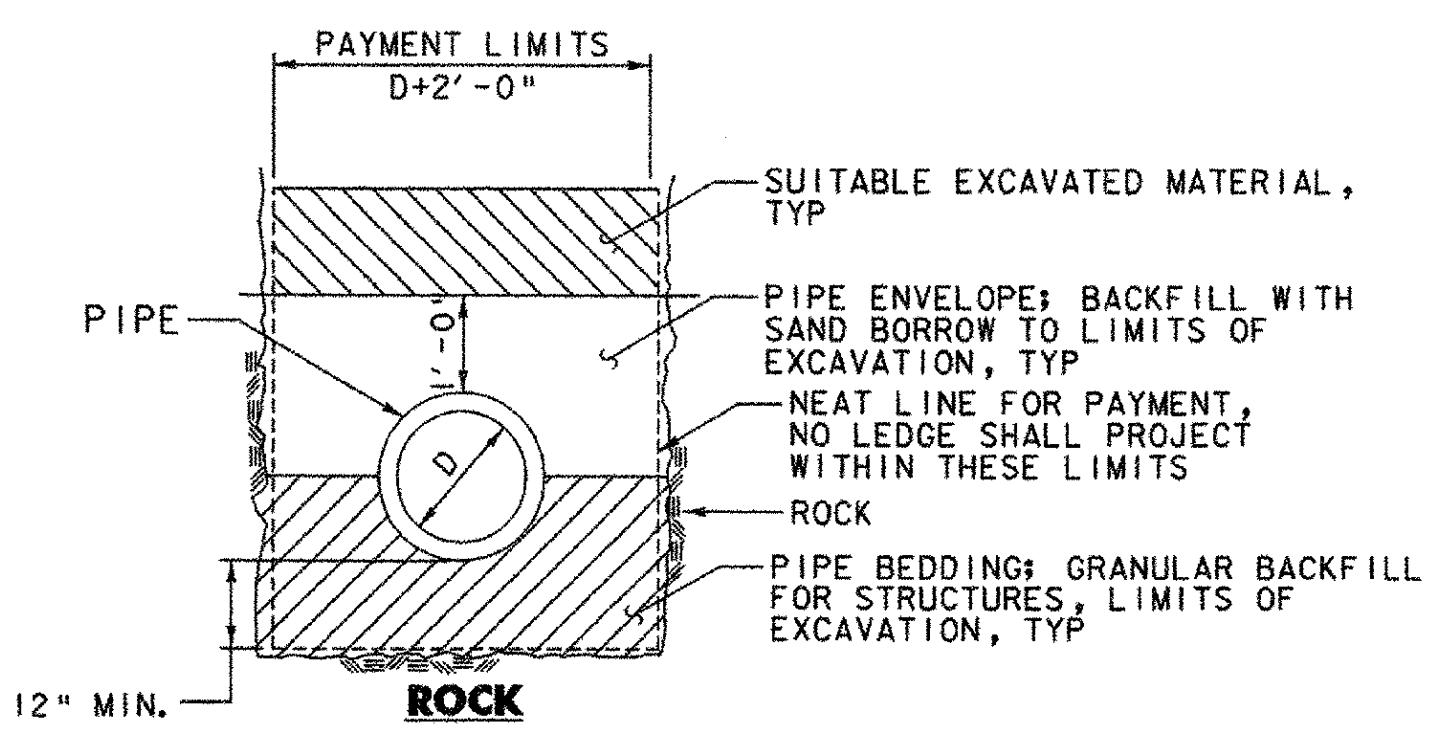
THRUST BLOCK TABLE NOTES

- PAYMENT FOR THRUST BLOCKS SHALL BE CONSIDERED INCIDENTAL TO ITEM 629.24, "DUCTILE IRON WATER MAIN, CEMENT LINED (8-INCH)."
- FIGURES BASED ON 300 PSI.
- FOR PIPE SIZES NOT LISTED USE NEXT LARGER PIPE SIZE.
- WHEN MORE THAN ONE SOIL TYPE IS ENCOUNTERED, THE ONE WITH LEAST BEARING CAPACITY SHALL BE USED.
- RETAINING RODS OR RESTRAINED JOINT PIPE, AS APPROVED BY THE ENGINEER, SHALL BE USED IN PLACE OF THRUST BLOCKS WHEN MUCK IS ENCOUNTERED.

NOTE:
INFORMATION ON THIS SHEET FOR WATER MAIN AND DETAILS ONLY. REFER TO OTHER DRAWINGS FOR BRIDGE AND ROADWAY DETAILS.

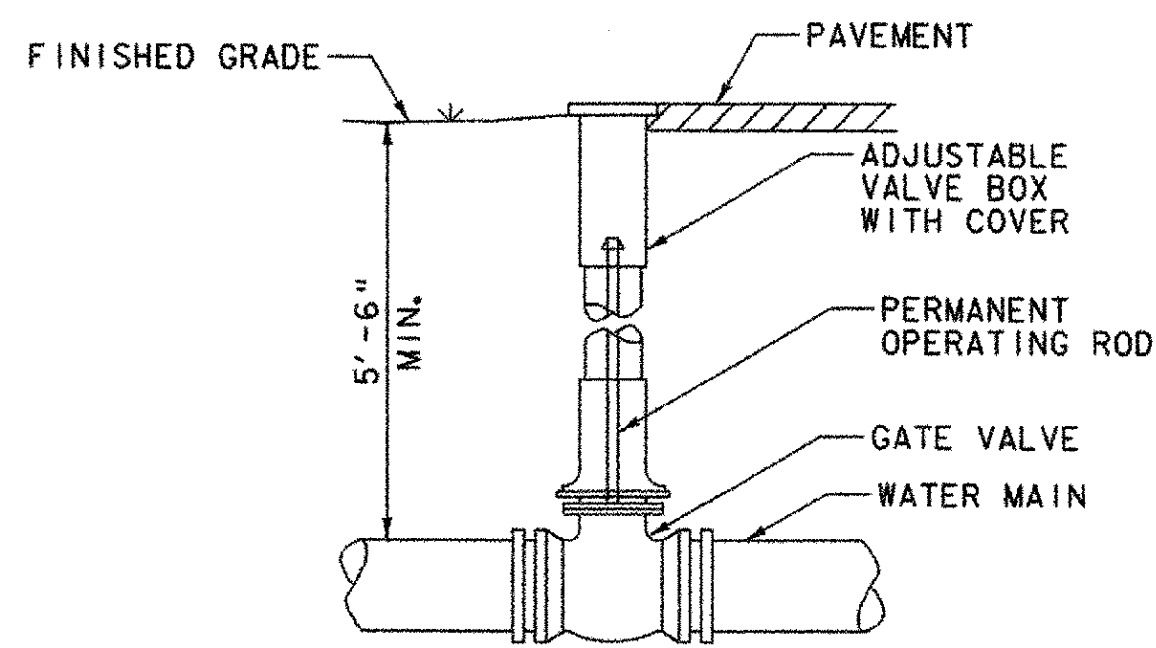


EARTH



ROCK

TRENCH SECTIONS
NOT TO SCALE



NOTE: UNLESS OTHERWISE INDICATED ALL GATE VALVES SHALL HAVE PERMANENTLY INSTALLED OPERATING RODS TERMINATING AT LEAST 2'-0" AND NOT MORE THAN 3'-0" BELOW THE TOP OF THE VALVE BOX.

BURIED GATE VALVE DETAIL
NOT TO SCALE

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of	BRADFORD	Bridge No.	22
Highway No.	27	Log Sta.	
		Surv. Sta.	
CREAMERY ROAD OVER WAITS RIVER			

NO.	DATE	REVISIONS	BY	CHK'D

DuBois & King
INC.

engineering planning management development

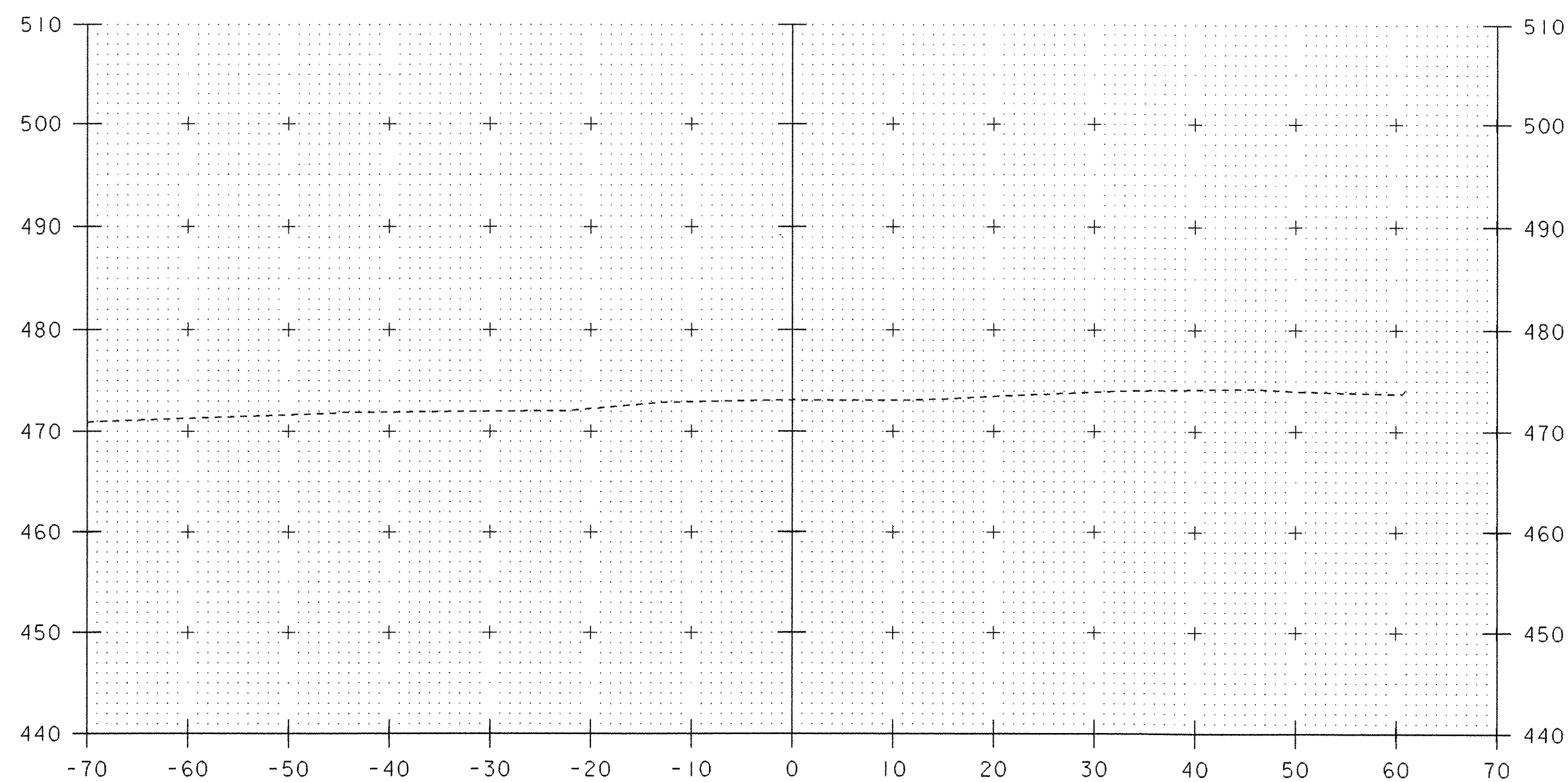
TOWN OF BRADFORD,
VERMONT

CREAMERY ROAD
BRIDGE REPLACEMENT
DETAIL SHEET 2

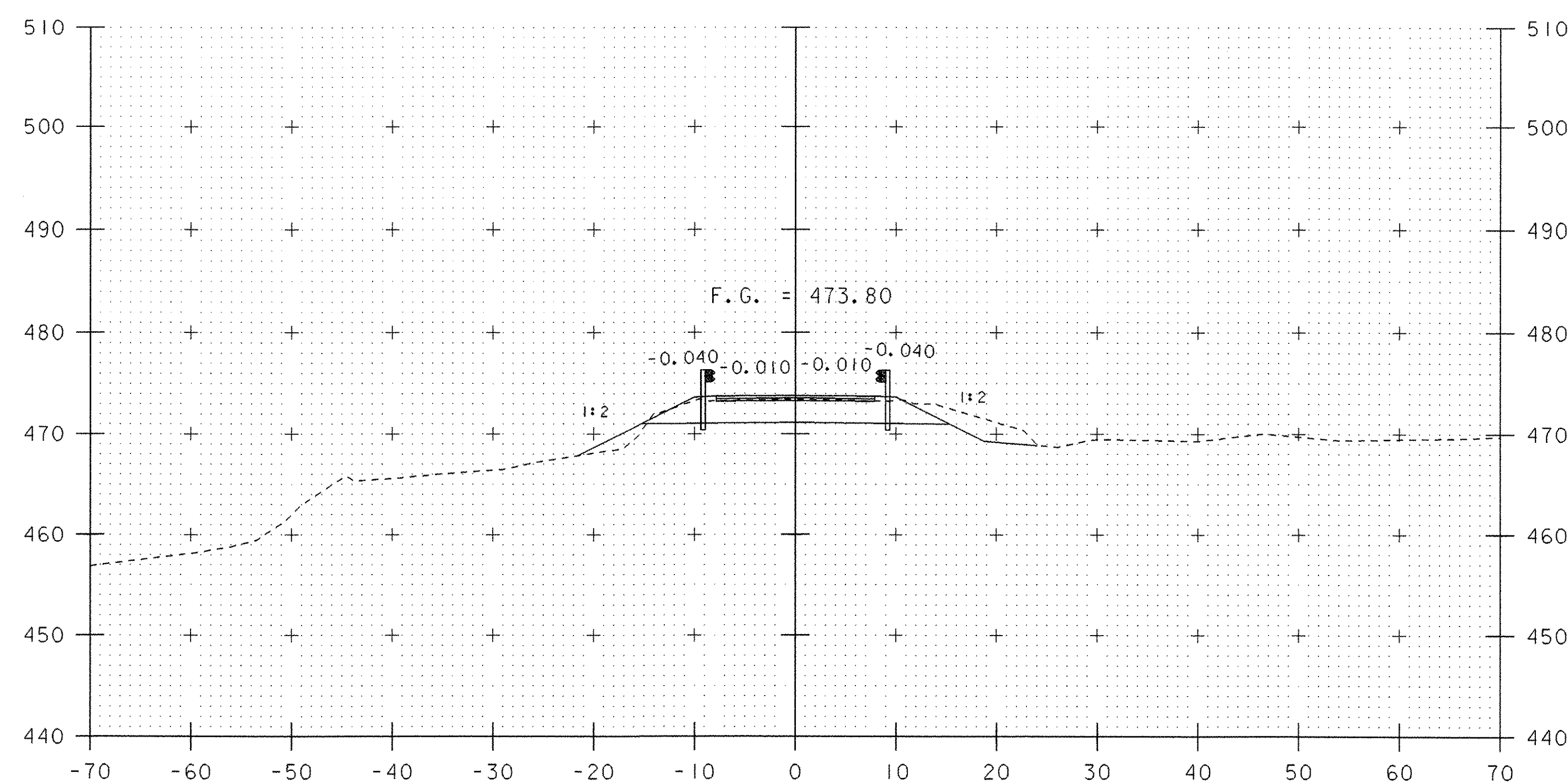
DRAWN BY	APG	DATE	OCT. 2006
CHECKED BY	CKG	PROJ. NO.	219248L
PROJ. ENG.	APG	DRAW. NO.	---
SHEET 33 OF 63			

PLOTTED 11/01/2006

11/01/2006 01:22:06

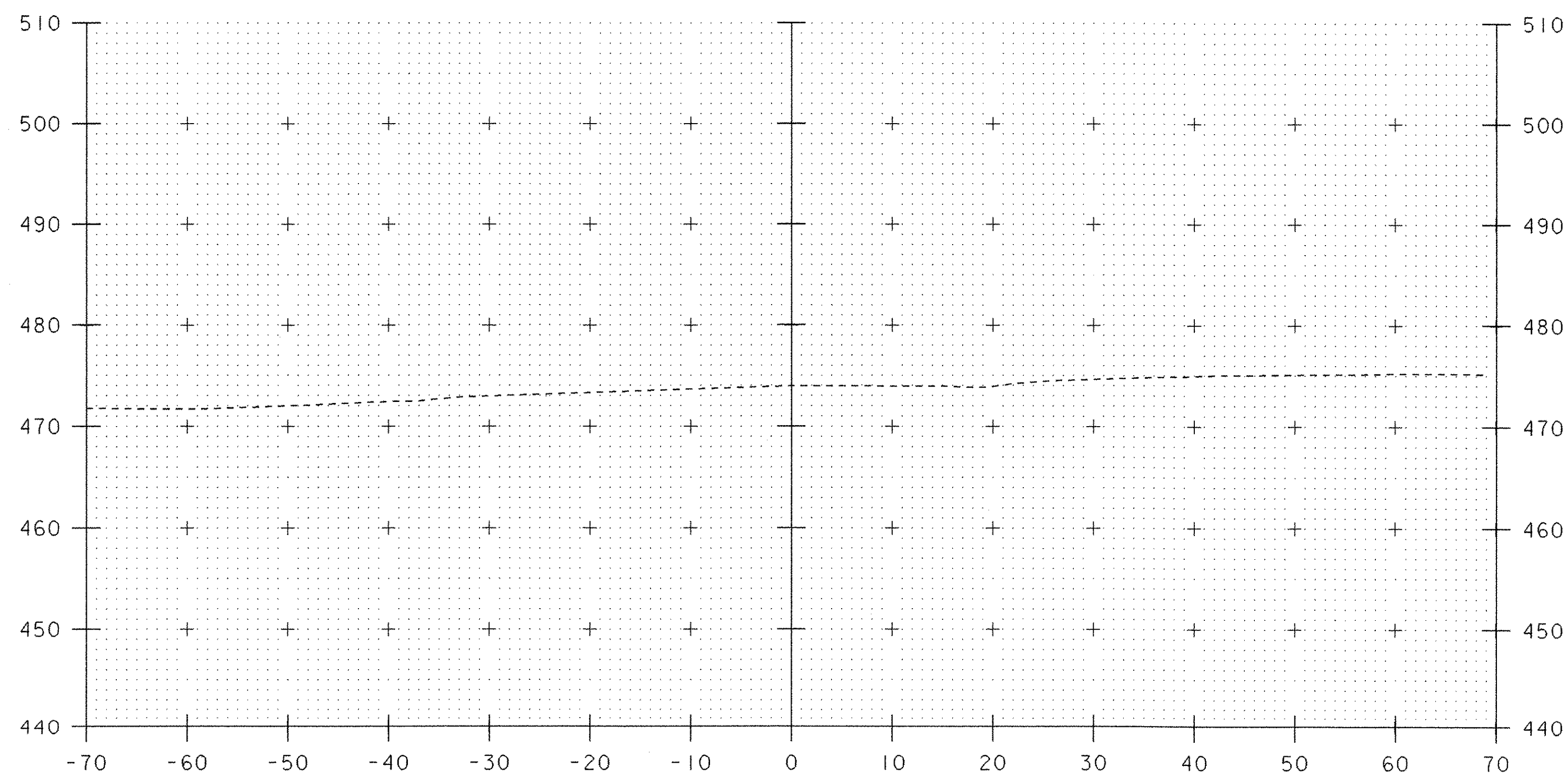


1+50

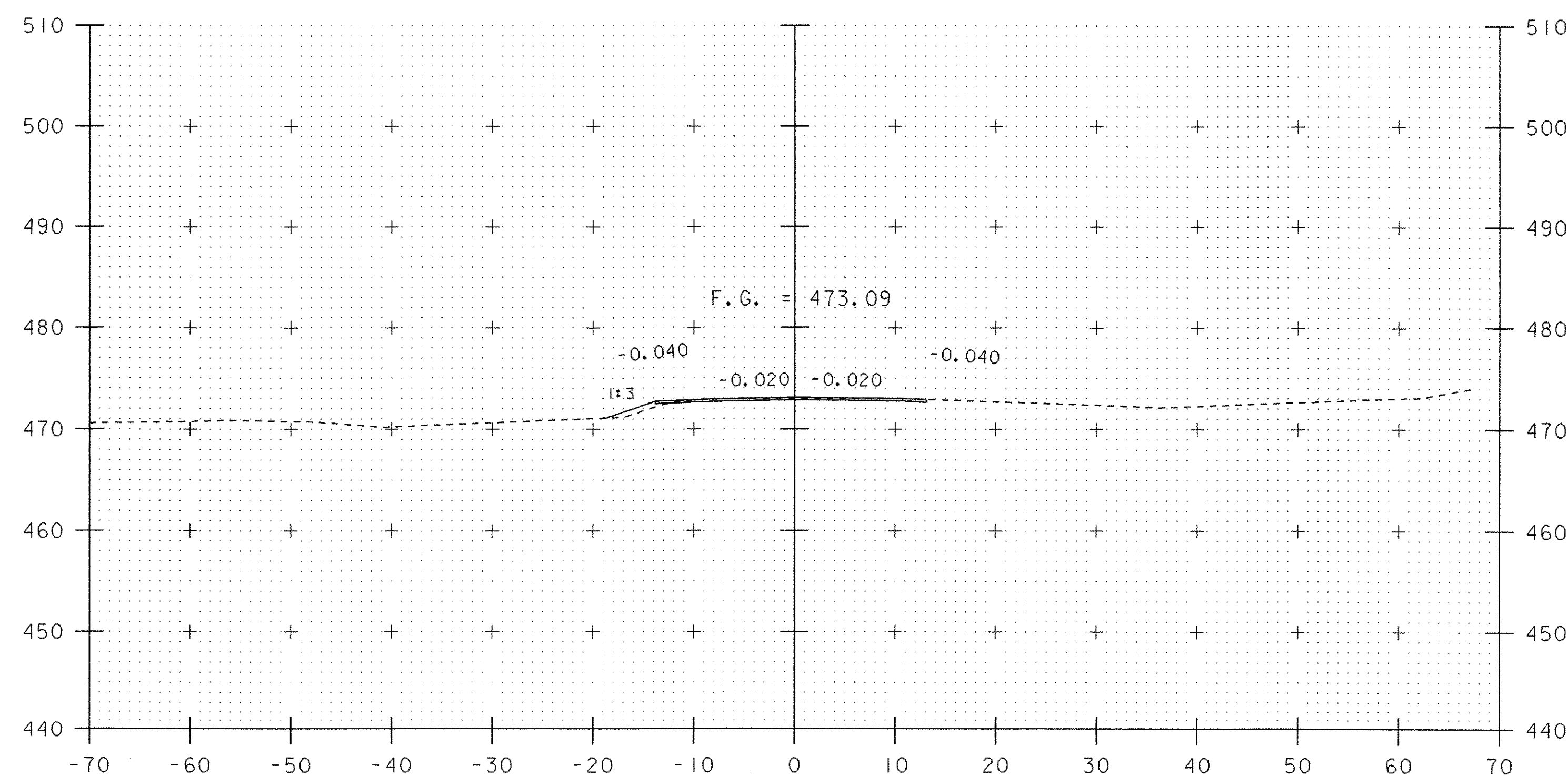


STA 2+35.00 BEGIN PROJECT

2+50



1+00



STA 1+75.00 BEGIN APPROACH

2+00

SHEET NAME: MAINLINE SECTIONS STA. 1+00 TO STA. 2+50

PROJECT NAME: BRADFORD

PROJECT NUMBER: STP 1447 (28)

PROJECT LEADER: C.P.WILLIAMS

DRAWN BY: J.WHITE

DESIGNED BY: M.GAGULIC

CHECKED BY: R.S.YOUNG

FILE NAME: 96j286/Str/s96j286.xsl.dgn

PLOT DATE: 22-NOV-2006

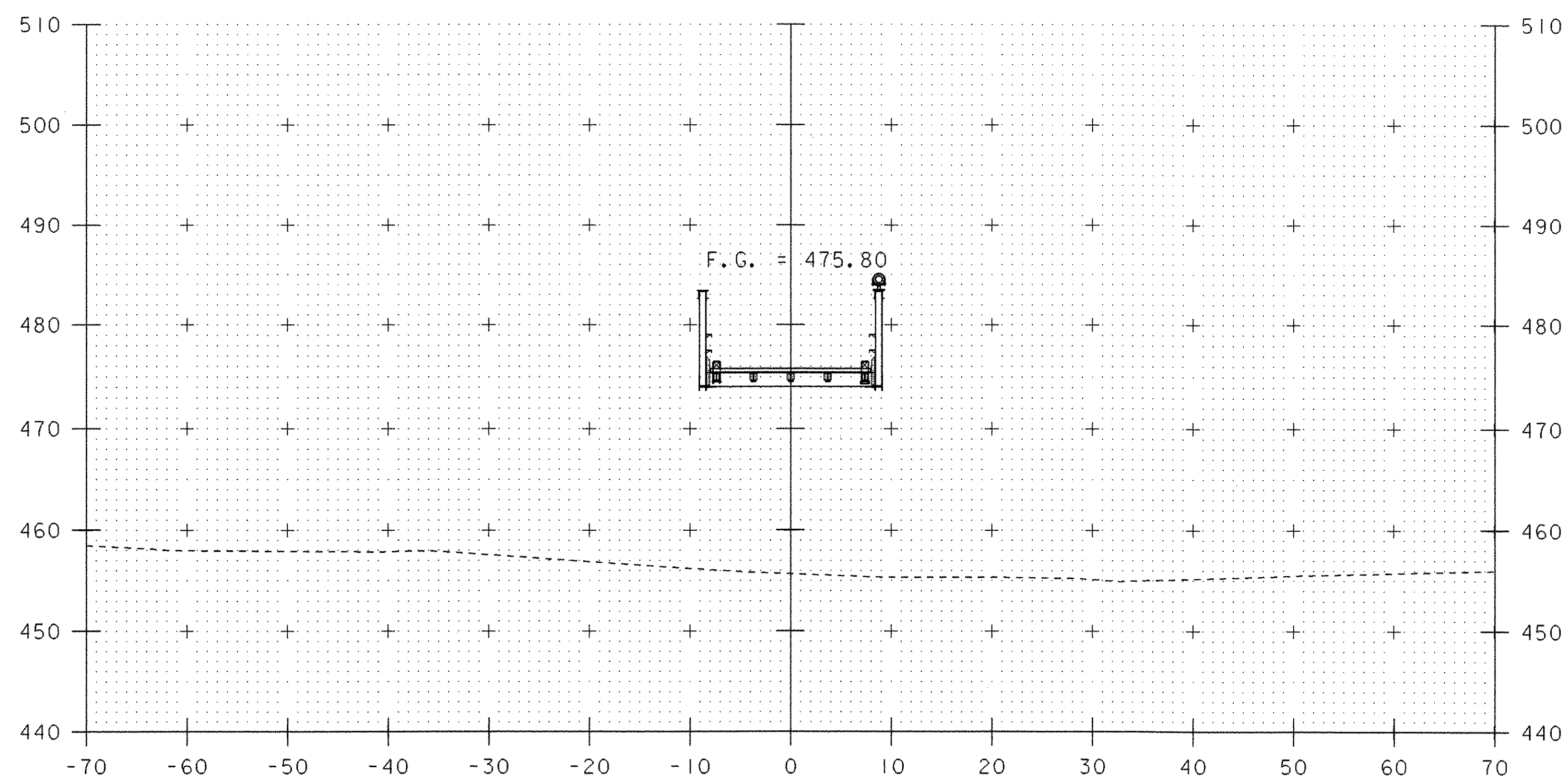
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SHEET 35 OF 63

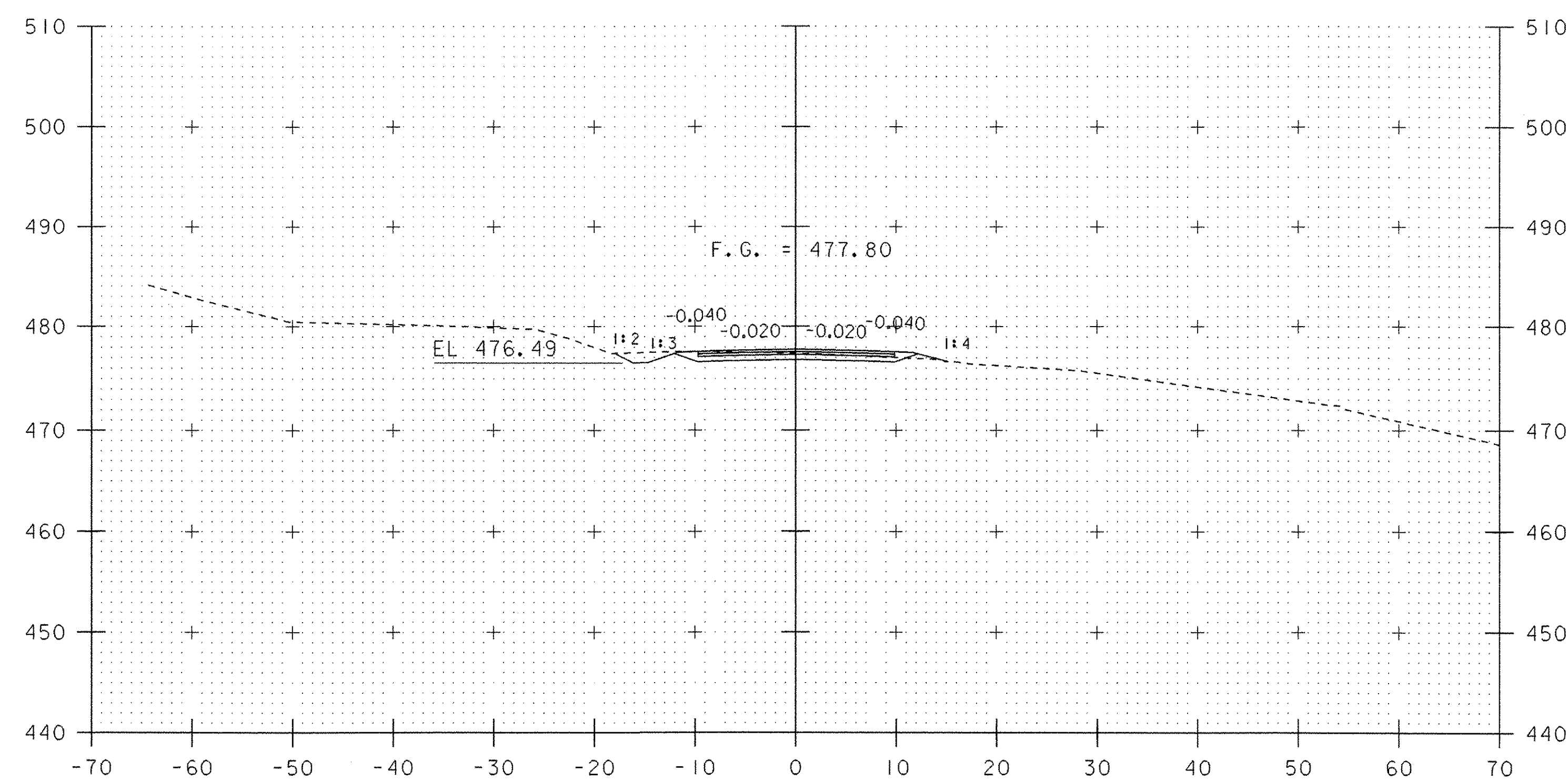
SCALE 1" = 10'-0"



STA. 1+00 TO STA. 2+50

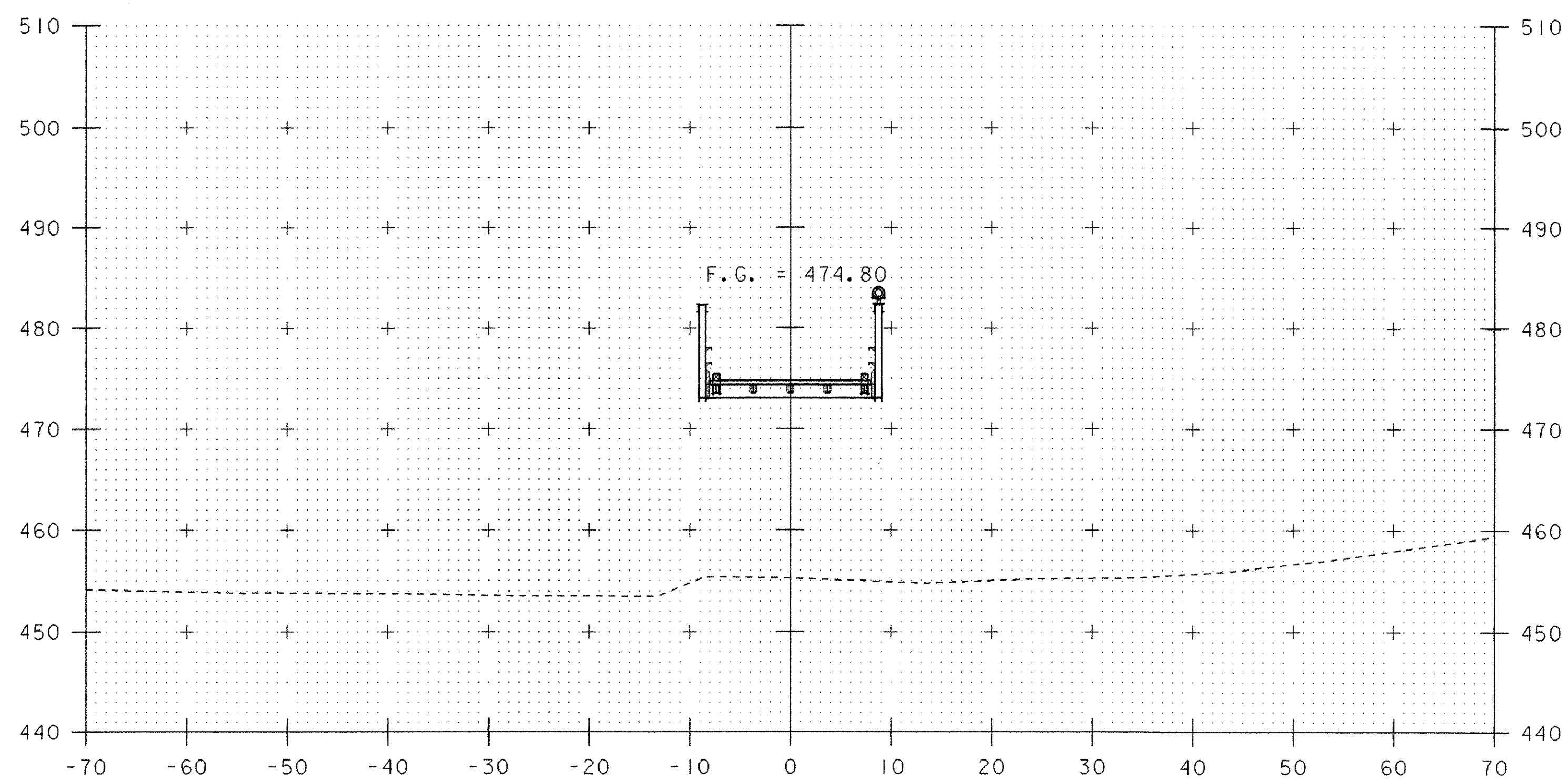


3+50



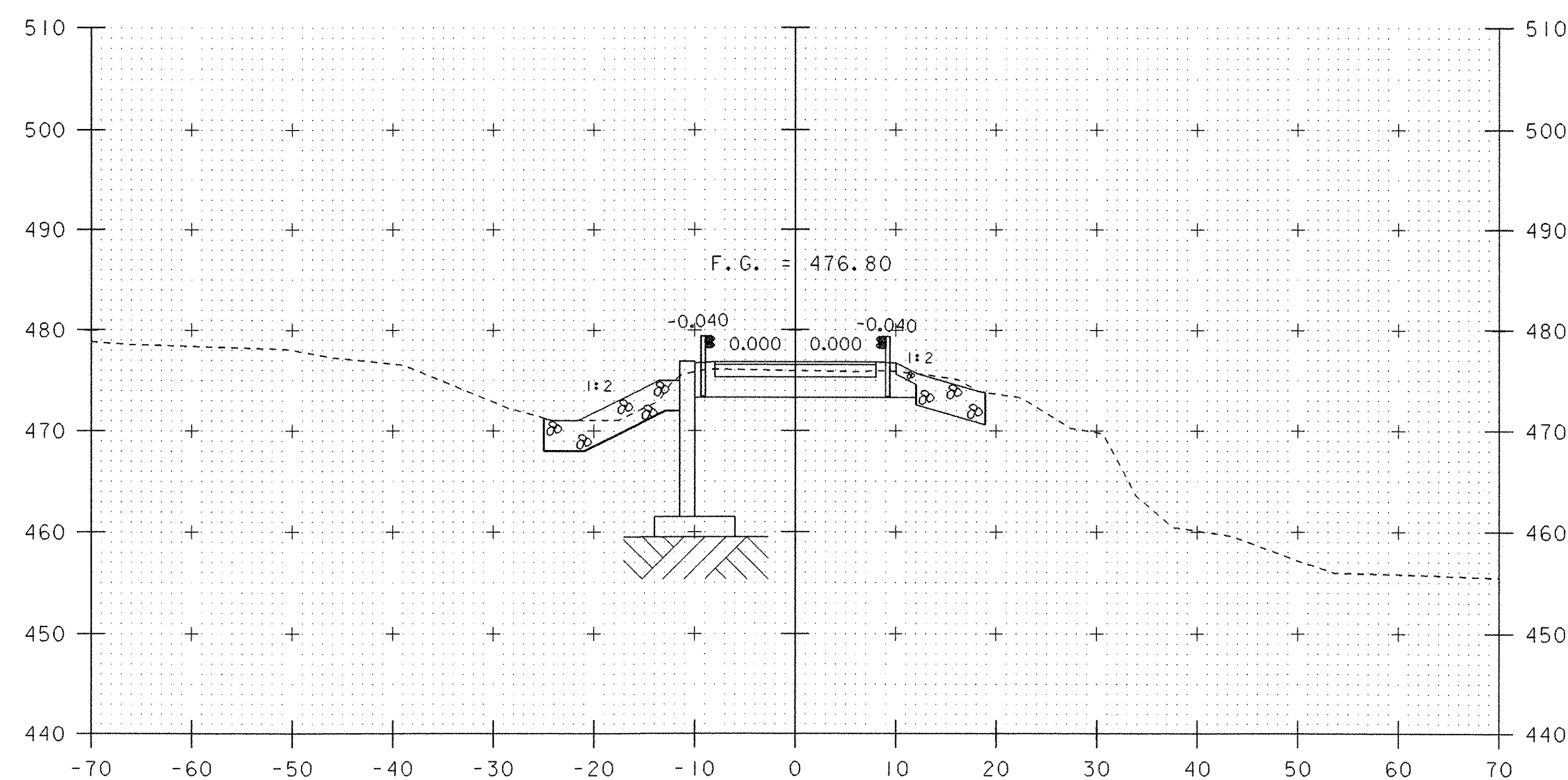
STA 4+25.00 END PROJECT

4+50



STA 2+81.45 BEGIN BRIDGE

3+00



STA 3+89.95 END BRIDGE

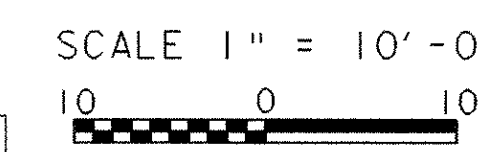
4+00

SHEET NAME: MAINLINE SECTIONS STA. 3+00 TO STA. 4+50

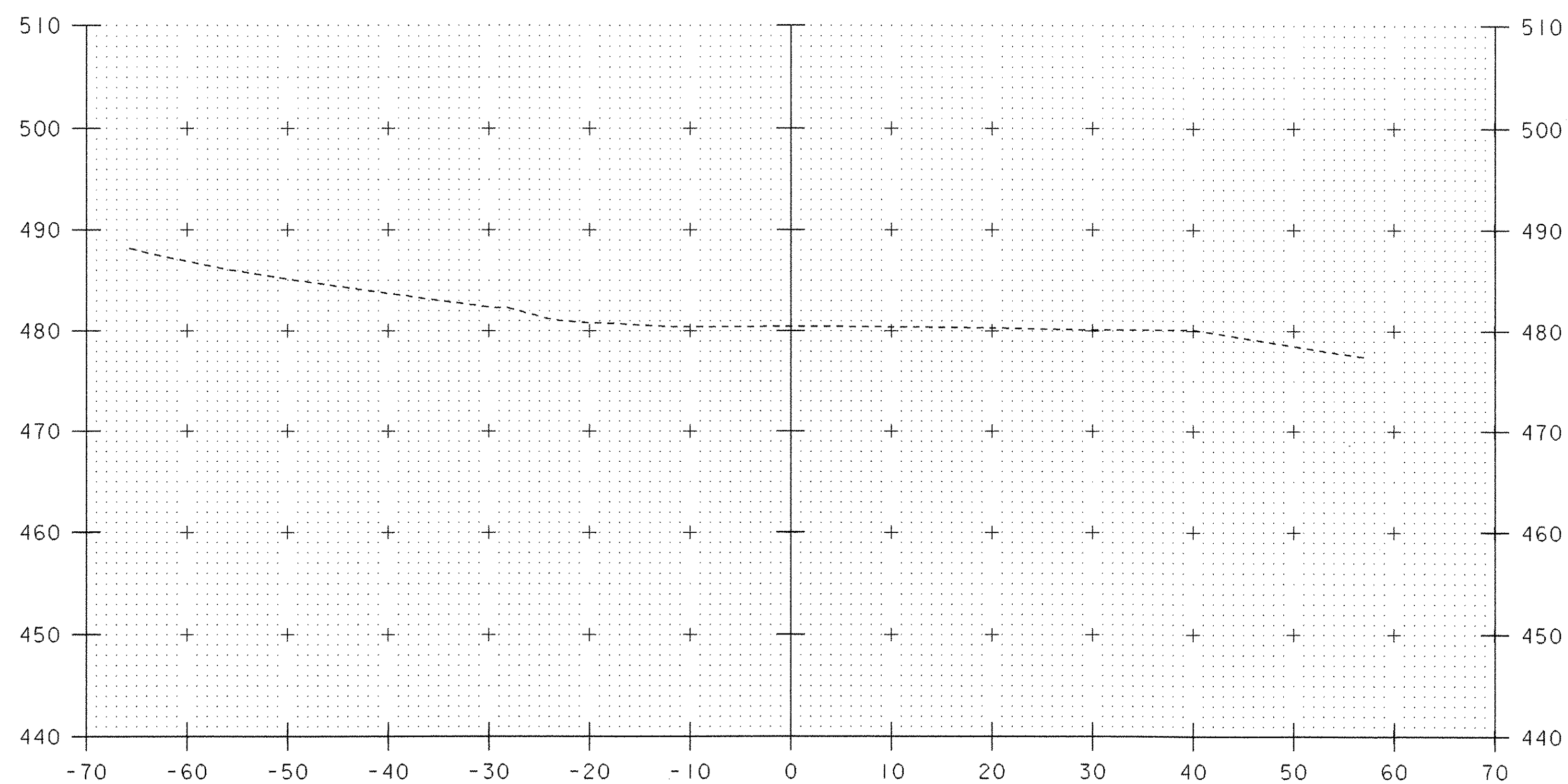
PROJECT NAME: BRADFORD
PROJECT NUMBER: STP 1447 (28)

PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: M.GAGULIC
FILE NAME: 96j286/Str/s96j286.xsl.dgn
IPARM FILE NAME: s96j286m.x2.i

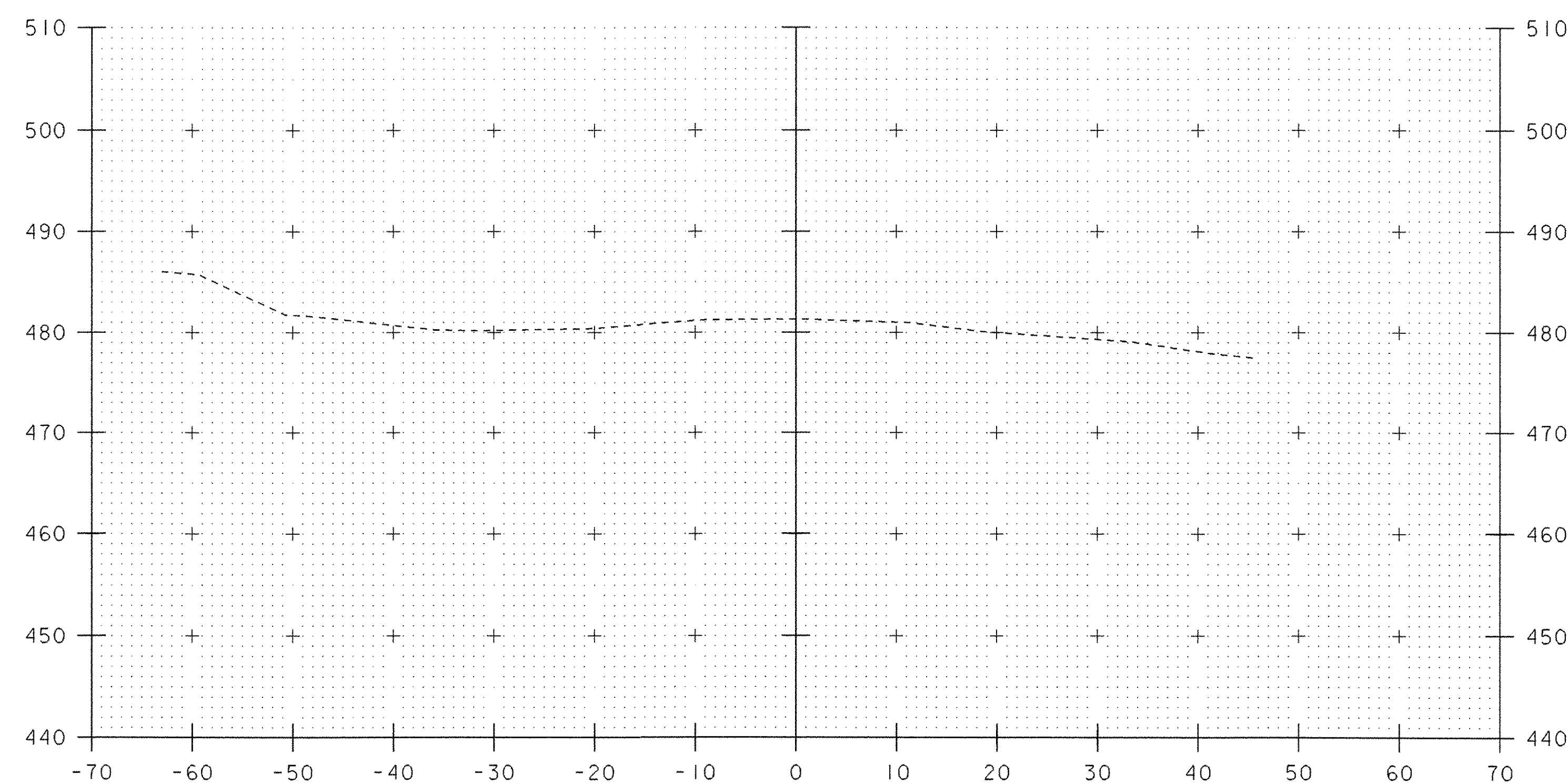
DRAWN BY: J.WHITE
CHECKED BY: R.S.YOUNG
PLOT DATE: 22-NOV-2006
SHEET 36 OF 63



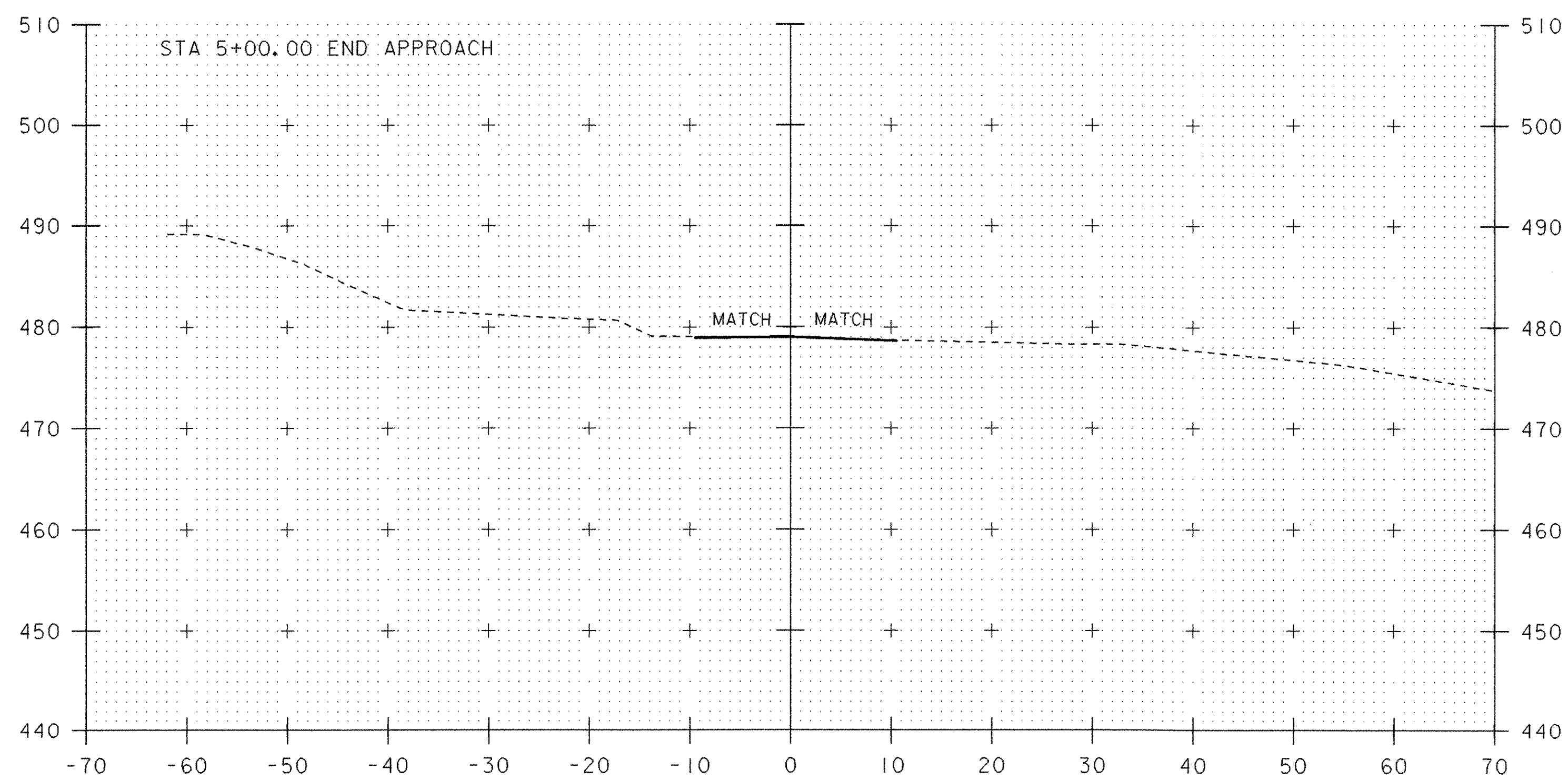
STA. 3+00 TO STA. 4+50



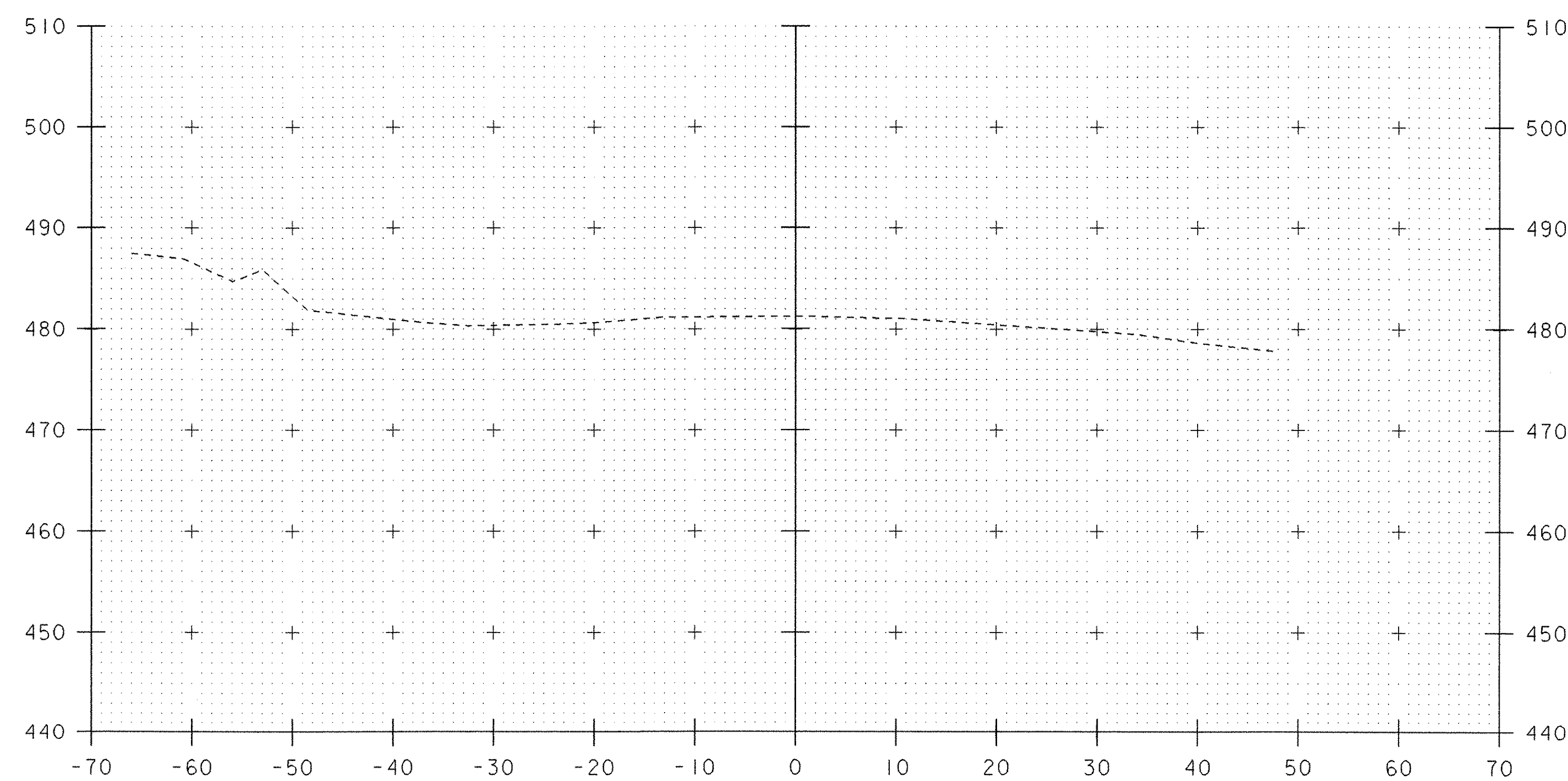
5+50



6+11



5+00

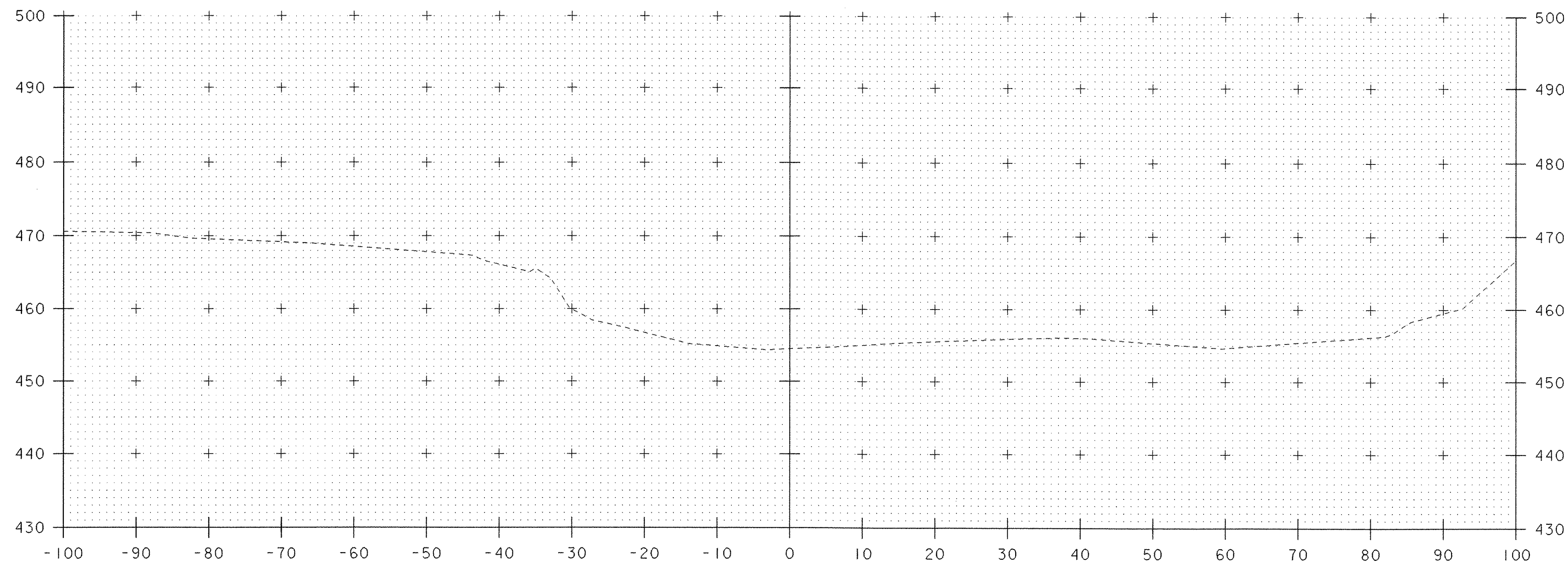


6+00

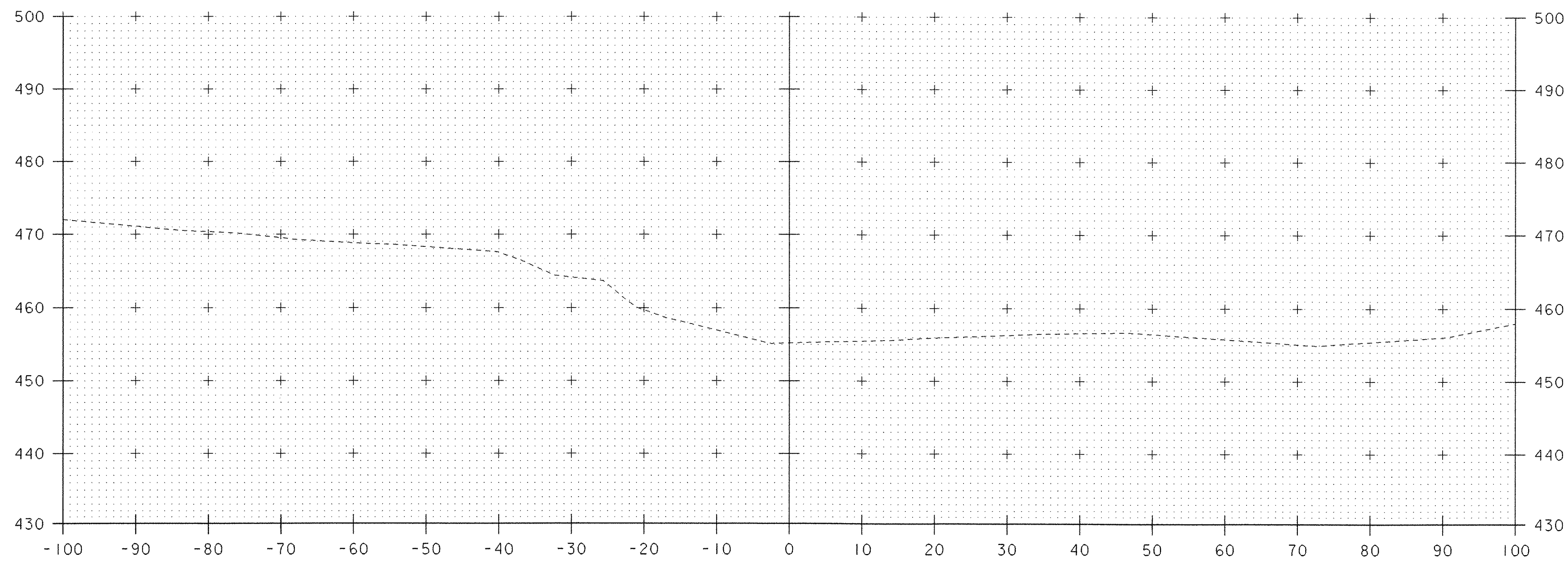
SHEET NAME: MAINLINE SECTIONS STA. 5+00 TO STA. 6+11	
PROJECT NAME: BRADFORD	
PROJECT NUMBER: STP 1447 (28)	
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: J.WHITE
DESIGNED BY: M.GAGULIC	CHECKED BY: R.S.YOUNG
FILE NAME: 96J286/Str/s96J286xsl.dgn	PLOT DATE: 22-NOV-2006
IPARM FILE NAME: s96J286mx3.i	SHEET 37 OF 63

SCALE 1" = 10' - 0

STA. 5+00 TO STA. 6+11



19+40



19+20

SHEET NAME: CHANNEL SECTIONS STA. 19+20 TO STA. 19+40

PROJECT NAME: BRADFORD
 PROJECT NUMBER: STP 1447 (28)

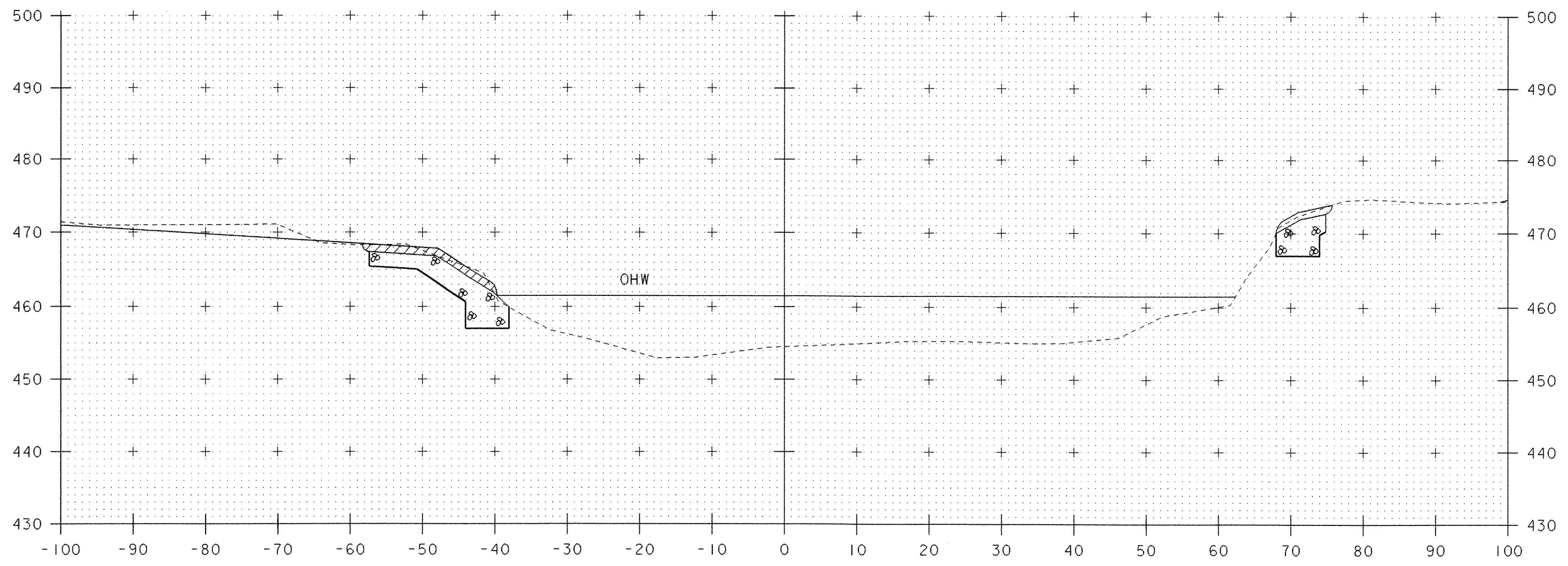
PROJECT LEADER: C.P.WILLIAMS
 DESIGNED BY: M. GAGULIC
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 IPARM FILE NAME: s96j286chxli

DRAWN BY: J. WHITE
 CHECKED BY: R.S.YOUNG
 PLOT DATE: 22-NOV-2006
 SHEET 38 OF 63

SCALE 1" = 10' - 0



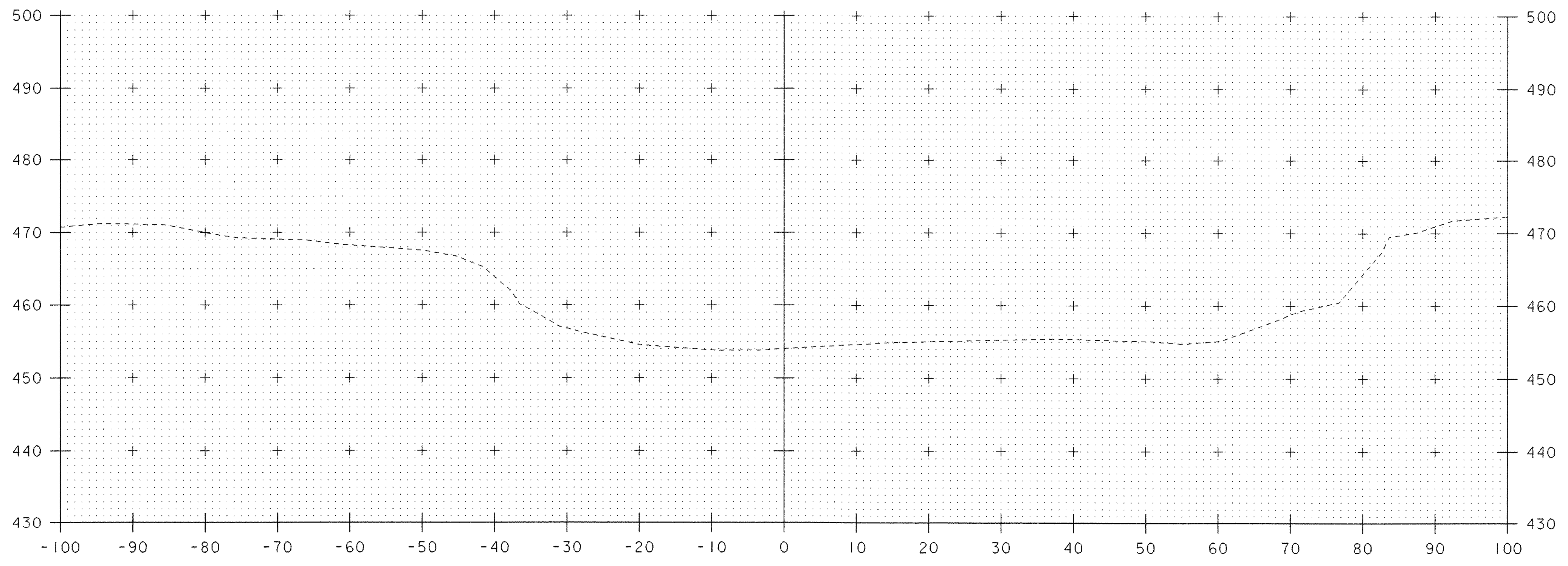
STA. 19+20 TO STA. 19+40



STA 19+76.30 LT (ABUTMENT 1)
 BEGIN STONE FILL TYPE III
 BEGIN GEOTEXTILE UNDER STONE FILL
 BEGIN GRUBBING MATERIAL
 BEGIN UNCLASSIFIED CHANNEL EXCAVATION

STA 19+78.50 RT (ABUTMENT 2)
 BEGIN STONE FILL TYPE III
 BEGIN GRUBBING MATERIAL
 BEGIN GEOTEXTILE UNDER STONE FILL
 BEGIN UNCLASSIFIED CHANNEL EXCAVATION

19+80

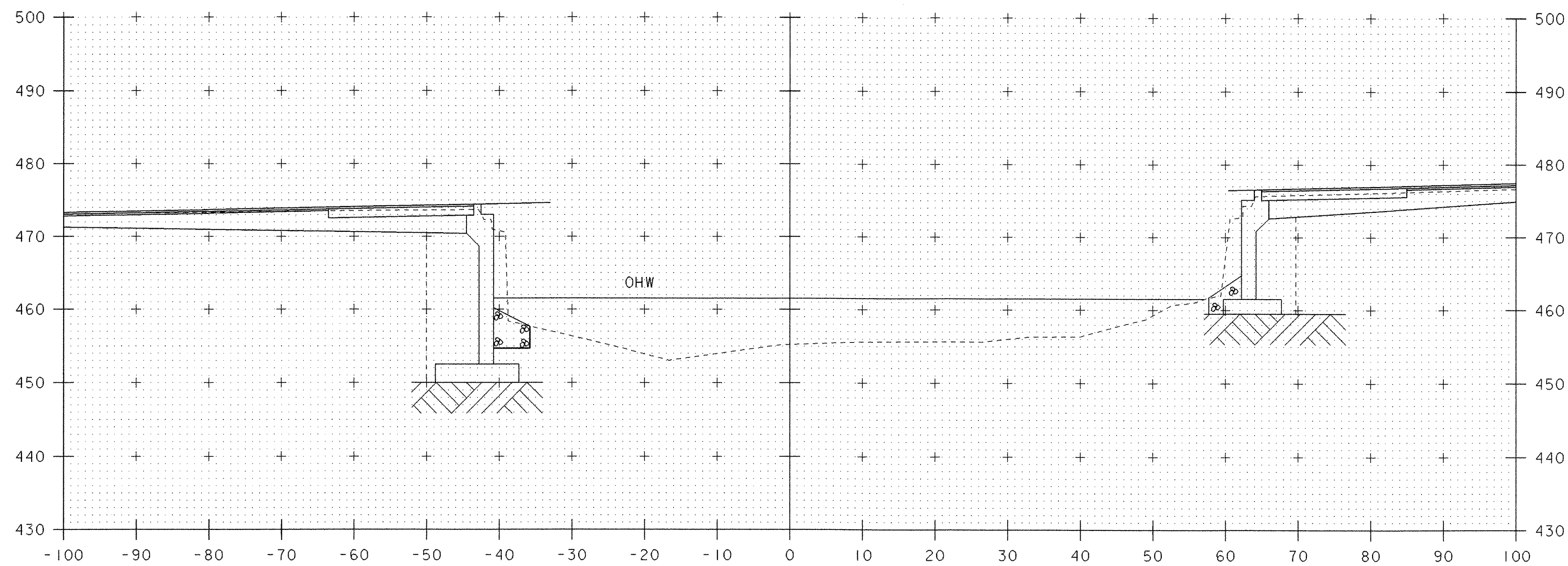


19+60

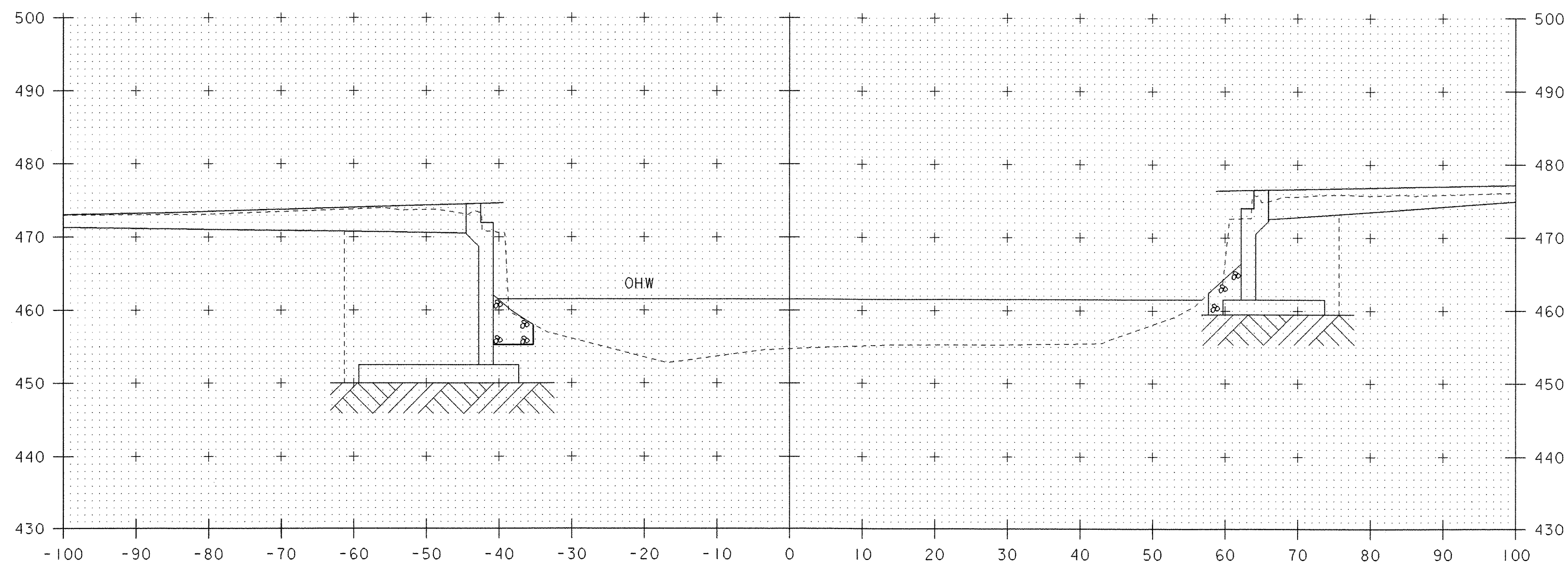
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PROJECT NAME: BRADFORD	
PROJECT NUMBER: STP 1447 (28)	
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: J. WHITE
DESIGNED BY: M. GAGULIC	CHECKED BY: R.S.YOUNG
FILE NAME: 96j286/Str/s96j286xsl.dgn	PLOT DATE: 22-NOV-2006
IPARM FILE NAME: s96j286chx3.i	SHEET 39 OF 63

SCALE 1" = 10'-0"
 10 0 10

STA. 19+60 TO STA. 19+80



20+00



19+90

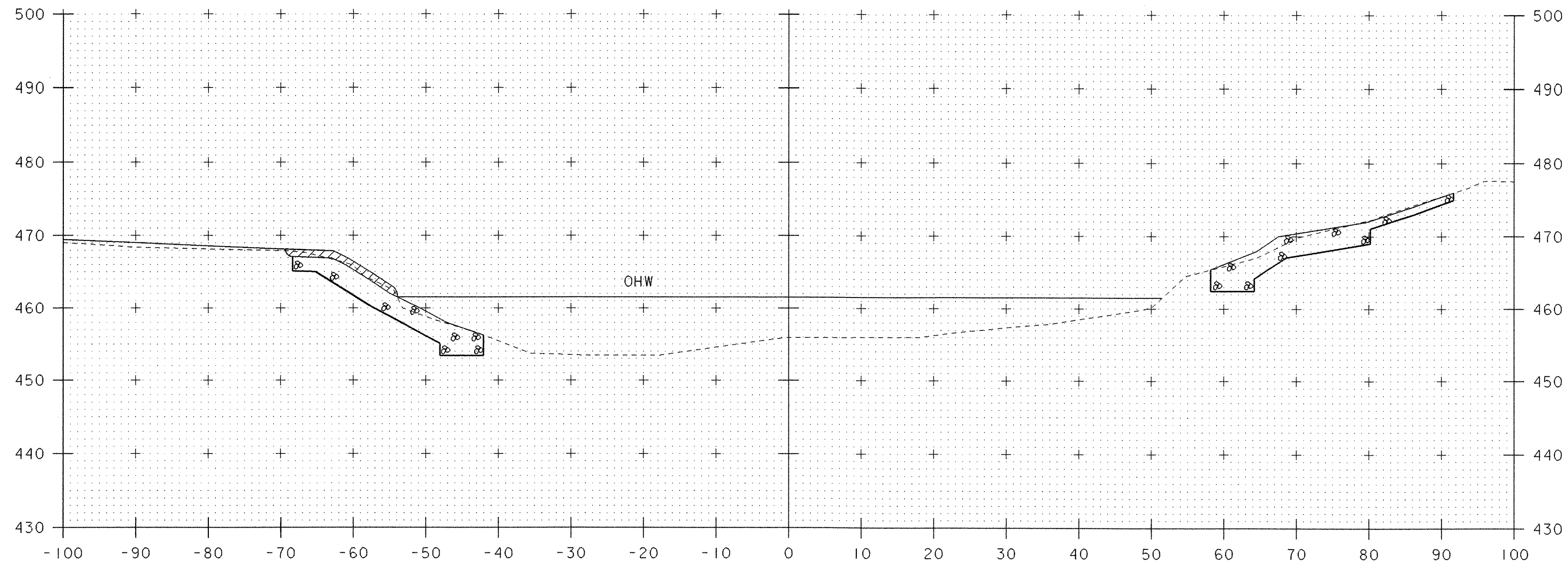
SHEET NAME: CHANNEL SECTIONS STA. 19+90 TO STA. 20+00	
PROJECT NAME: BRADFORD	
PROJECT NUMBER: STP 1447 (28)	
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: J. WHITE
DESIGNED BY: M. GAGULIC	CHECKED BY: R.S.YOUNG
FILE NAME: 96j286/Str/s96j286xsl.dgn	PLOT DATE: 22-NOV-2006
IPARM FILE NAME: s96j286chx3.i	SHEET 40 OF 63

SCALE 1" = 10'-0"

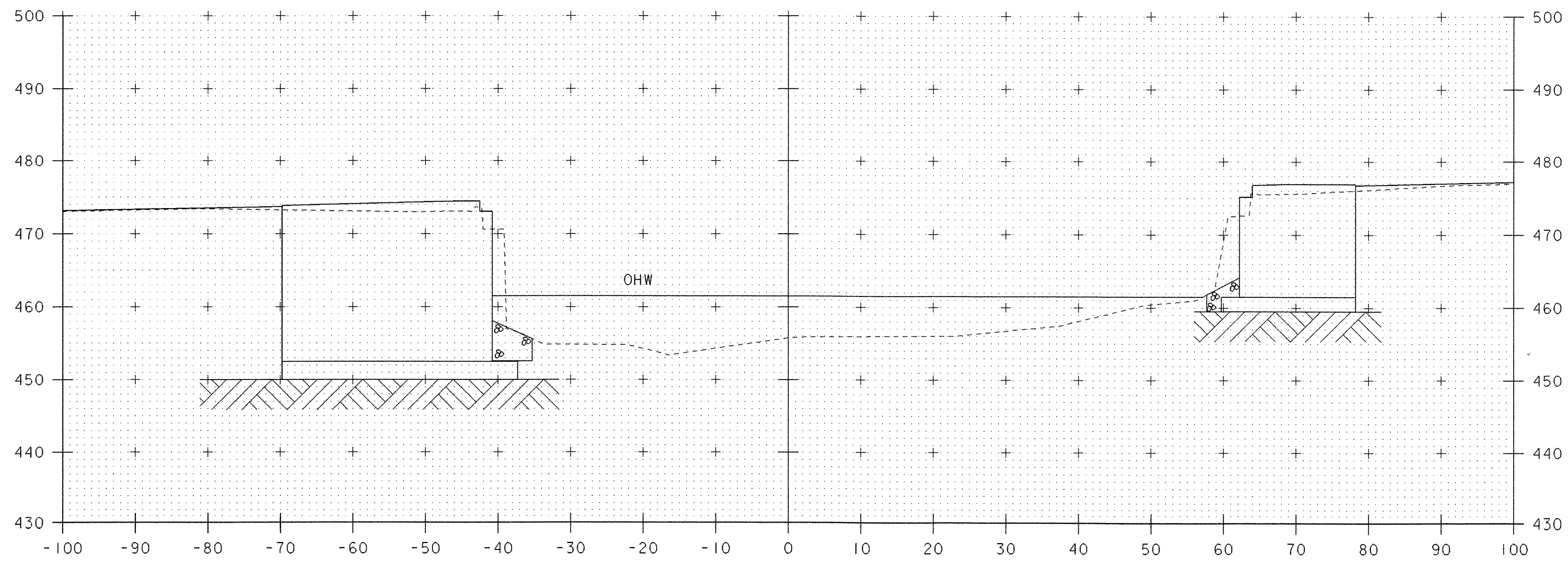
STA. 19+90 TO STA. 20+00

STA 20+24.00 LT (ABUTMENT 1)
 END STONE FILL TYPE III
 END GEOTEXTILE UNDER STONE FILL
 END GRUBBING MATERIAL
 END UNCLASSIFIED CHANNEL EXCAVATION

STA 20+24.90 RT (ABUTMENT 2)
 END STONE FILL TYPE III
 END GEOTEXTILE UNDER STONE FILL
 END UNCLASSIFIED CHANNEL EXCAVATION



20+20



20+10

STA. 20+10 TO STA. 20+20

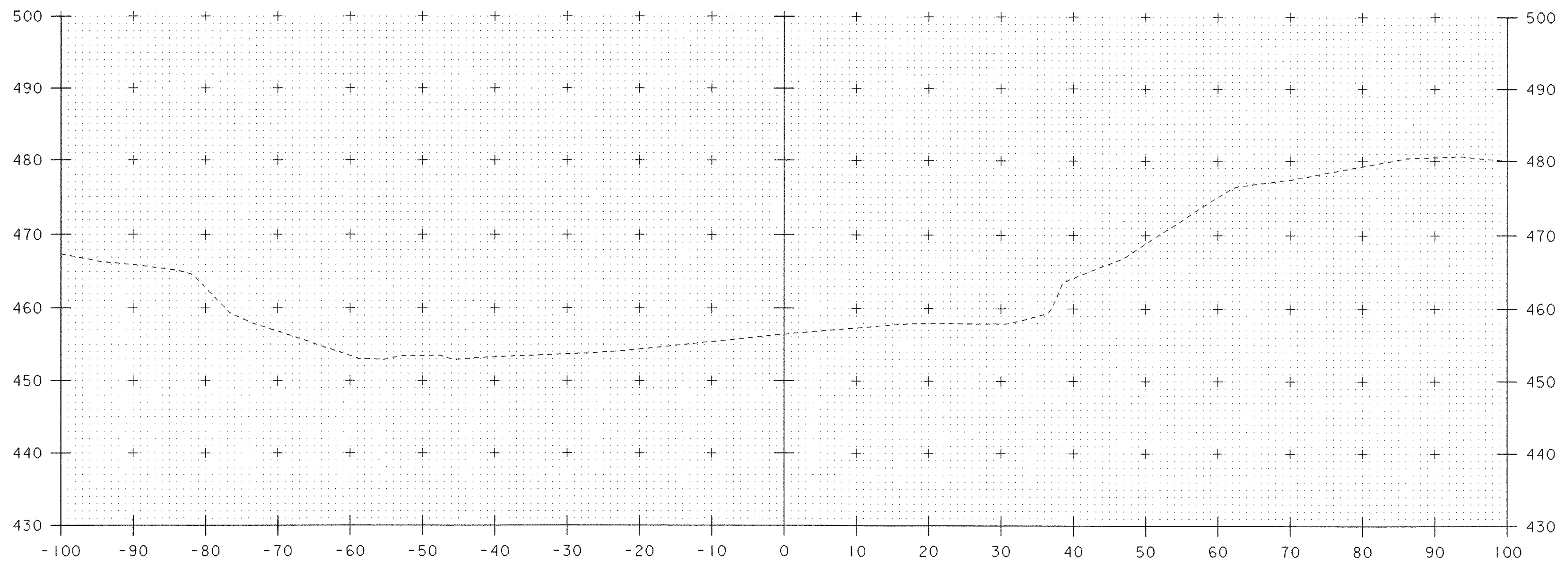


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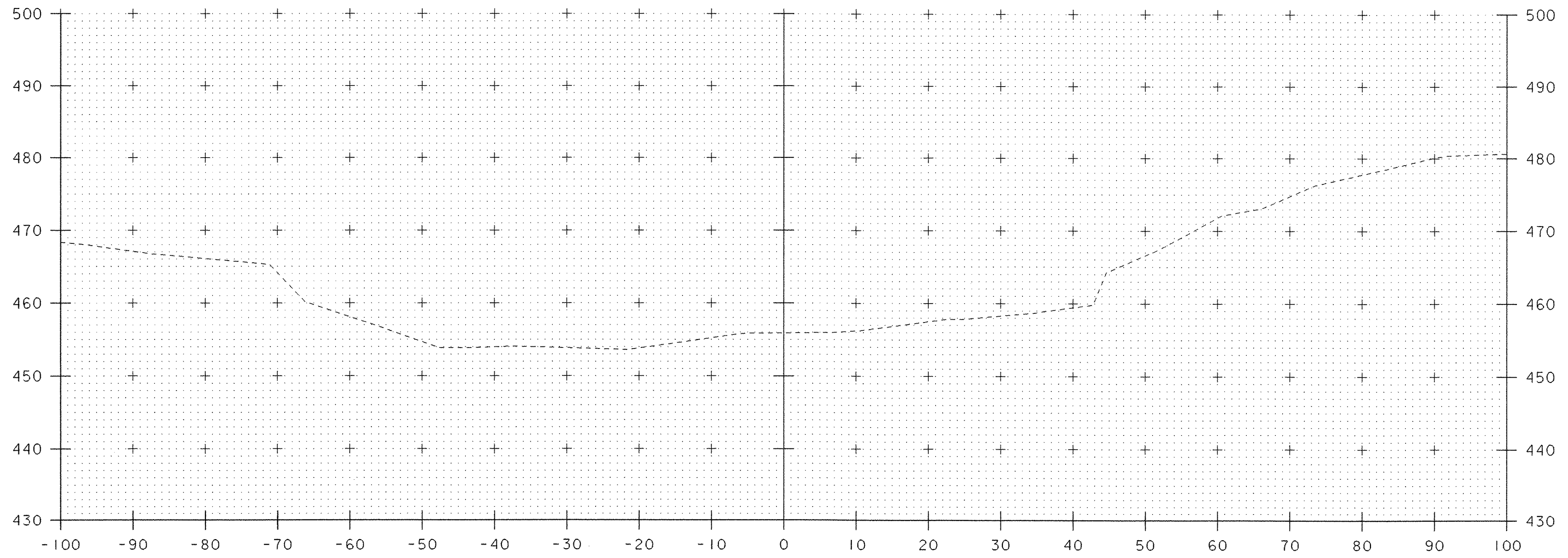
PROJECT NAME: BRADFORD
 PROJECT NUMBER: STP 1447 (28)

PROJECT LEADER: C.P.WILLIAMS
 DESIGNED BY: M. GAGULIC
 FILE NAME: 96j286/Str/s96j286xsl.dgn
 IPARM FILE NAME: s96j286chx4.i

DRAWN BY: J. WHITE
 CHECKED BY: R.S.YOUNG
 PLOT DATE: 22-NOV-2006
 SHEET 41 OF 63

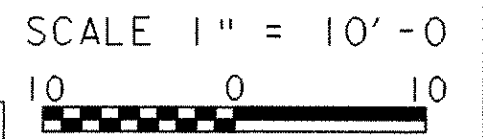


20+60



20+40

STA. 20+40 TO STA. 20+60



SHEET NAME: CHANNEL SECTIONS STA. 20+40 TO STA. 20+60	
PROJECT NAME: BRADFORD	
PROJECT NUMBER: STP 1447 (28)	
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: J. WHITE
DESIGNED BY: M. GAGULIC	CHECKED BY: R.S.YOUNG
FILE NAME: 96j286/Str/s96j286xsl.dgn	PLOT DATE: 22-NOV-2006
IPARM FILE NAME: s96j286chx5.i	SHEET 42 OF 63

EROSION PREVENTION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION

This project is located on Town Highway (TH) 27, Bridge No. 22 in the County of Orange, Town of Bradford, Vermont. Construction will consist of the rehabilitation of the Creamery Road Bridge over the Waits River. This will include replacement of the abutments, portions of the superstructure and installation of a Fiber Reinforced Polymer (FRP) bridge deck.

Area of disturbance is 0.20 acres.

It is anticipated that this project will last one construction season.

SITE INVENTORY AND ANALYSIS

OFF SITE DRAINAGE CHARACTERISTICS

The property surrounding the project site consists of well established vegetation with moderate slopes at the project site and very steep slopes at the outer edges of the project location. The property surrounding the project site is mostly grass land with woods in the distance. Due to the nature of the surrounding terrain the project site could receive runoff water from a few nearby slopes. If this is the case it should be minimal.

DRAINAGE, WATERWAYS, BODIES OF WATER:

The Waits River is the only water source on or near the project location. The river is classified as sinuous, wide flood plain with a streambed made up of sand and gravel, with some silt closer to the dam. The tributary area at the bridge crossing is 153 square miles.

TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES:

The topography of the project site is mostly open fields with patches of wooded areas. The land at the project site is mostly flat but the land in the distance is very steep in spots. The North side of the site has several homes in the area, along with a factory building. The South side of the site has no buildings near the project. There are overhead utilities which will be moved prior to the start of the project. The embankment slopes within the project site range from 1:1.5 to 1:4.

VEGETATION:

The vegetation in the project area is made up of grass and brush. The impact to vegetation will be limited to that which is affected by rehabilitation of the existing bridge and the removal and replacement of the abutments. After the project is finished the slopes will be stabilized with stone fill and vegetation will be reestablished with standard seed and mulch practices.

SOILS:

All soil data came from the U.S. Department of Agriculture Soil Conservation Service for the county of Orange, Vermont. Soils on the West side of the bridge are Agawam Fine Sandy Loam, 0-3% slopes, "k - factor" = 0.28, considered not highly erodible. Soils on the East side of the bridge are Windsor Loamy Fine Sand, 25-50% slopes, "k - factor" = 0.17, considered highly erodible due to significant slopes.

Note: Generally, K-values indicate the following: 0.0 – 0.23 = low erodibility; 0.24 – 0.36 = moderate erodibility; 0.37 and higher = higher erodibility.

SENSITIVE RESOURCE AREAS:

There are no 'Threatened & Endangered Species' living on or near the project site. Bridge No. 22 is listed as historic. The Waits River and its 50 foot Riparian Buffer are Sensitive Resources requiring protection. There are no archeological or archeologically sensitive areas on or near the project site.

PROXIMITY TO NATURAL OR MAN-MADE FEATURES:

Disturbance of soils near natural or man-made waters consists of that which is necessary for the rehabilitation of the existing bridge superstructure, removal and replacement of bridge abutments, and some minor approach work. Stabilization of disturbance to the stream banks will be accomplished with Stone Fill, under laid with geotextile fabric.

TEMPORARY EROSION PREVENTION & SEDIMENT CONTROL

TEMPORARY EROSION PREVENTION MEASURES TO BE UTILIZED INCLUDE:

"Project Demarcation Fencing," denoted -PDF- on the plans, to delineate the limits the contractor can access with construction equipment. This measure limits the area that can be disturbed and exposed to erosion.

Seeding, mulching, and biodegradable erosion control matting or equivalent product shall be utilized on slopes steeper than 1:3 that are not lined with stone fill. All slopes shall be stabilized within 48 hours of reaching final grade or during intermittent phases of construction activity.

Tracking of all exposed slopes, combined with temporary mulching, will also be utilized on a regular basis. Any slopes to be exposed for 48 hours prior to final grading shall be tracked and mulched. The forecast of rainfall events shall also trigger protection of exposed slopes.

Temporary stone check dams will be placed in ditches to reduce flow velocities and thus reduce the potential for erosion. Check dams will be placed along the ditches such that the elevation of the top of each check dam corresponds with the elevation of the toe of the preceding upslope check dam. See "Erosion Control Details" sheet. The check dams may be removed once the stone lining of the ditch is complete and the surrounding area stabilized.

TEMPORARY MEASURES TO CONTROL SEDIMENT TRANSPORT INCLUDE:

Silt fence will be installed at a distance of 5' to 10' from the toe of slopes (if possible, while remaining inside the ROW limits) to prevent sediment transport to down gradient areas. Each line of silt fence will be placed along the contour with ends turned slightly uphill to create a ponding effect should water try to run along the fencing and around the ends. The maximum slope length between separate runs of silt fence is 100'. Silt fence shall be installed prior to any upslope earthwork.

Measures such as temporary stone check dams, silt fence, and turbidity curtains shall be checked regularly for accumulation of sediment. Sediment build-up shall be removed when the level of sediment reaches one-half the height of the control measure. Sediments shall be disposed of in an area such that they will not be subject to erosion.

Stabilized construction entrances to the project site, staging areas, and waste and borrow areas shall be established. The minimum size of a stabilized construction entrance is 12' x 50'. All surface water flowing to or diverted toward a construction entrance shall be piped under the stone. Pipes shall be appropriately sized for the contributing area, however no pipe smaller than 6" diameter shall be used. When constructing a stabilized entrance, utilize the materials and construction method shown on the "Erosion Prevention & Sediment Control" detail sheet (EPSC4).

Temporary sediment settling basins may or may not be utilized on this project. If a sediment settling basin is to be used for dewatering a cofferdam, it should be sized based upon the following criteria: (See Sediment Settling Basin Sizing Criteria.)

PERMANENT EROSION CONTROL MEASURES

SEVERAL PERMANENT EROSION CONTROL MEASURES WILL BE UTILIZED:

Stream banks shall be lined with Stone Fill, Type III as specified by VTrans Hydraulics personnel. This stone will protect the stream bank from erosion during design storm events. Stone Fill, Type I will be utilized as indicated in the Plans. Disturbed soil must be seeded and mulched within 48 hours after final grade has been established.

GENERAL EROSION & SEDIMENT CONTROL GUIDELINES

The Erosion Control Plans are meant as a guideline for preventing erosion and controlling sediment transportation. The work outlined in this narrative consists of applying measures throughout the life of the project to control erosion and minimize the sediment to receiving waters. The measures include stabilization and structural practices, storm water controls and other pollution prevention controls.

Coordinate the installation, use, and removal of erosion and sediment control measures with construction activities to ensure economical, effective and continuous erosion and sediment control. Employ temporary stabilization practices in incremental stages as construction proceeds. The contractor will use additional erosion control measures as necessitated by the sequence of construction and as directed by the engineer. See subsection 105.23 of the Vermont AOT Standard Specifications for Construction, dated 2001.

Install erosion and sediment control measures as shown in the Erosion Control Plan as needed or as directed by the engineer. Do not modify the type, size or location of any control or practice without approval of the engineer. Any changes shall be noted on the plans, in the weekly inspection report, and reported to the appropriate authority in a timely manner. Inspect all control measures weekly and after each rainfall event. Repair measures shall be taken as needed.

Preventing initial soil erosion is much more effective than treating eroded sediment. Therefore, stabilize all disturbed areas within 48 hours after construction activity has temporarily or permanently ceased. Temporary vegetation shall be established if the area is to be without construction activity for a period of 14 days. Perimeter control measures shall be installed following clearing, but prior to the start of any grubbing or grading activity, install other temporary controls in incremental stages as construction proceeds.

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.

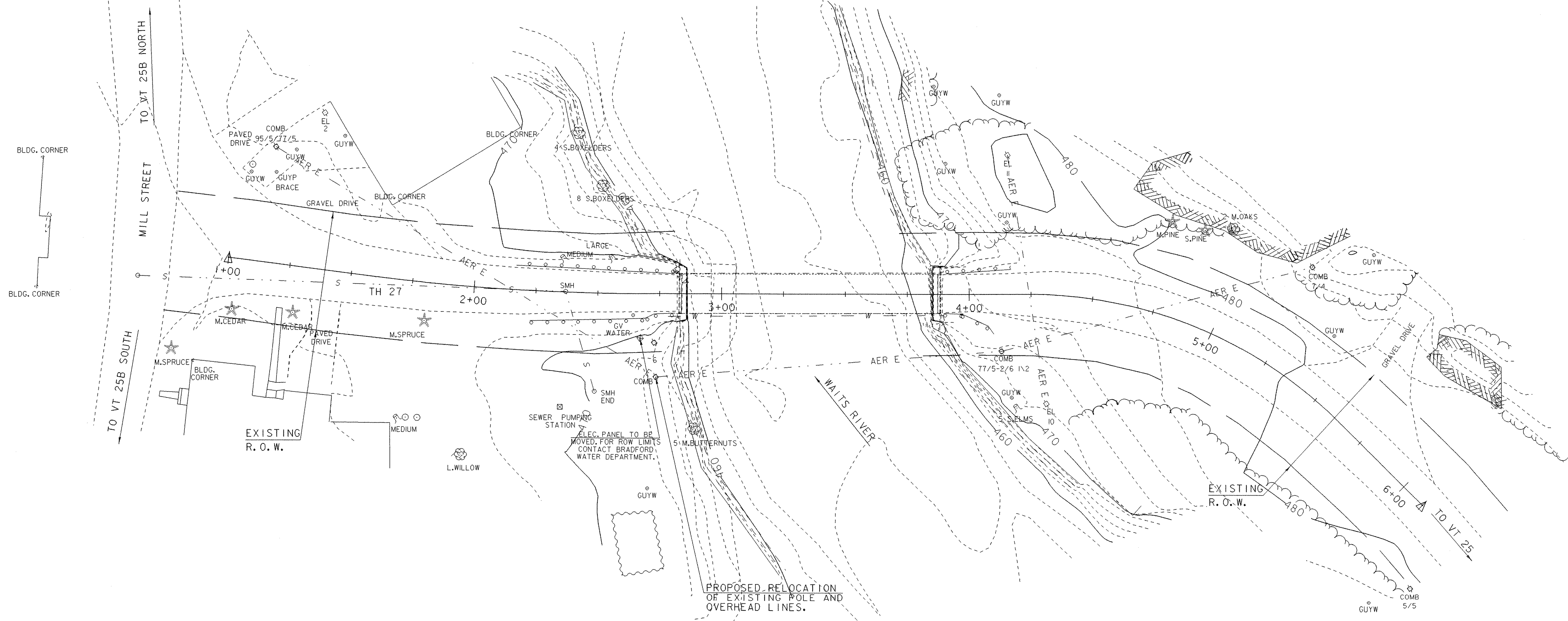
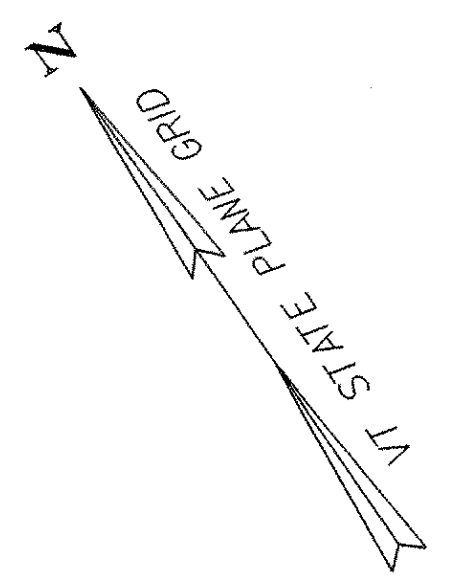
Control only sediment-laden runoff generated by the project site using diversion berms, diversion channels, culverts and/or temporary pipes.

Do not allow construction equipment to operate on the down slope side of perimeter control measures.

SEDIMENT SETTLING BASIN SIZING CRITERIA

PUMP FLOW RATE		REQUIRED SURFACE AREA		LENGTH = 2:1 WIDTH			
Q (gpm)	Q (m ³ /s)	Q (ft ² /s)	Q (m ² /s)	L (ft)	W (ft)	L (m)	W (m)
50	0.0032	595	55	35.0	17.0	10.6	5.3
100	0.0063	1200	111	49.0	24.5	15.0	7.5
150	0.0095	1776	165	59.6	29.8	18.2	9.1
200	0.0126	2368	220	68.8	34.4	21.0	10.5
250	0.0158	2970	276	77.0	38.5	23.4	11.7
300	0.0189	3560	330	84.4	42.2	25.8	12.9
350	0.0221	4155	386	91.2	45.6	27.8	13.9

PROJECT: BRADFORD	PROJECT NO.: STP 1447 (28)
DESIGN FILE NAME: 96j286/Structures/s96j286x1s.dgn	
IPARM FILE NAME: s96j286ecnarr.i	PLOT DATE: 22-NOV-2006
DESIGNED BY: M. GAGULIC	DRAWN BY: M. FESSEL
SQUAD LEADER: C. P. WILLIAMS	CHECKED BY: M. GAGULIC
EROSION CONTROL NARRATIVE	SHEET: 43 OF 63



EXISTING CONDITIONS SITE PLAN

SCALE 1" = 20'-0"
 20 0 20

EXISTING BRIDGE DATA
 STEEL WARREN PONY TRUSS
 105'-0" SINGLE SPAN
 16'-0" ROADWAY
 18'-8" OUTSIDE TO OUTSIDE OF TRUSS
 ONE LANE OF TRAFFIC
 BUILT IN 1934 BY THE
 AMERICAN BRIDGE COMPANY

DATUM
 VERTICAL NAVD 88
 HORIZONTAL NAD 83/96

PROJECT: BRADFORD	PROJECT NO.: STP 1447 (28)
DESIGN FILE NAME: 96j286/Structures/s96j286bdr.dgn	PLOT DATE: 22-NOV-2006
IPARM FILE NAME: s96j286excon.i	SURVEY DATE: 11/00
SURVEYED BY: R. GILMAN	DRAWN BY: M. FESSEL
SQUAD LEADER: C. P. WILLIAMS	SHEET: 44 OF 63
EROSION CONTROL	

NOTES

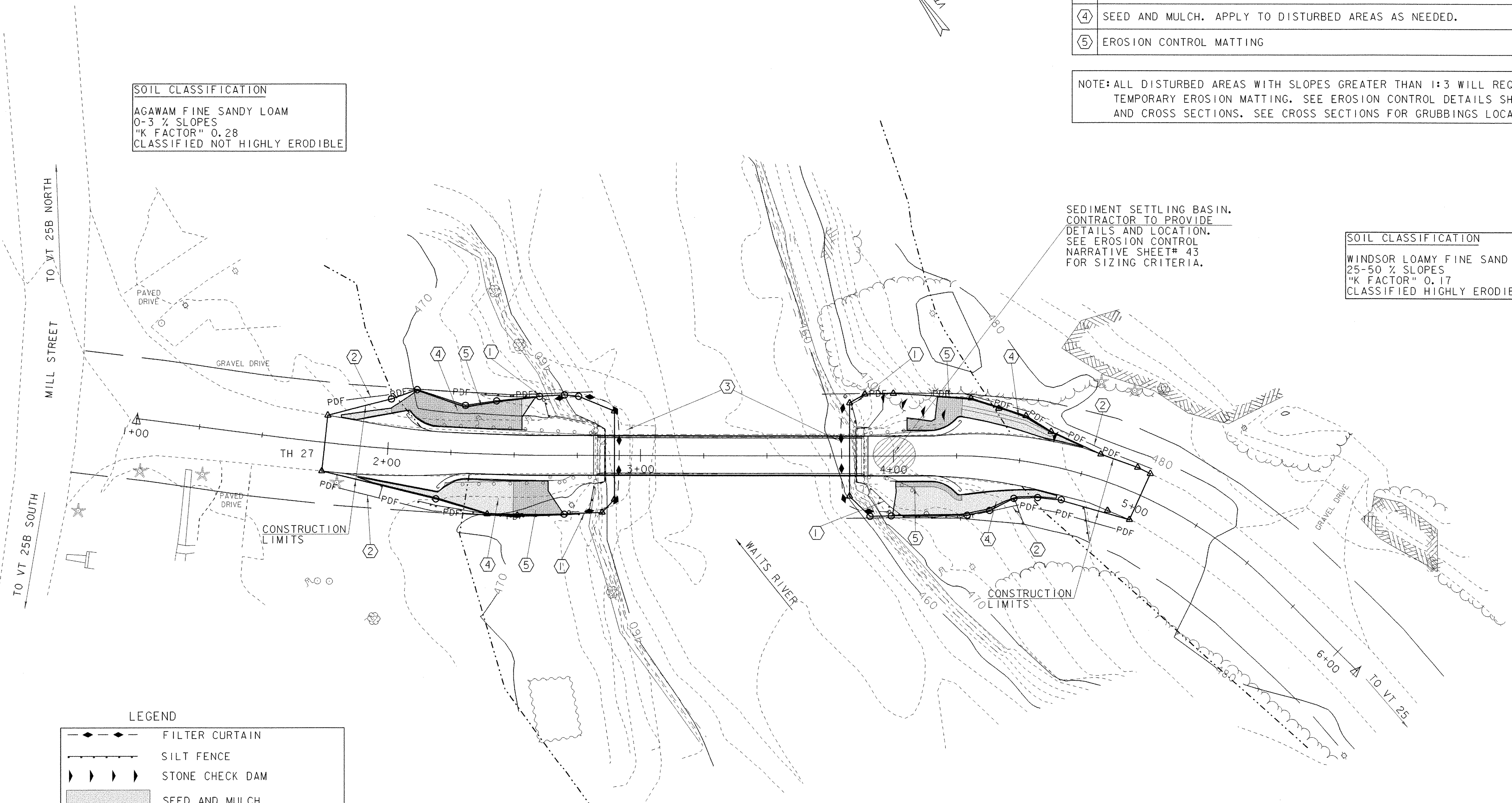
1. INSTALL SILT FENCE TO CONTROL SEDIMENT FROM DISTURBED SOILS. INSTALL WHEN NEEDED.
2. SEED AND MULCH DISTURBED AREAS AS REQUIRED. SEE EROSION CONTROL NARRATIVE ON SHEET #43.
3. INSTALL EROSION CONTROL MATTING ON DISTURBED SLOPES GREATER THAN 1:3.

EROSION AND SEDIMENT CONTROL INDEX	
NO.	DESCRIPTION
①	INSTALL SILT FENCE TO CONTAIN SEDIMENT AS REQUIRED
②	PROJECT LIMITS DEMARCATION FENCE (SNOW FENCE (MOD.-PDF))
③	TURBIDITY CURTAIN
④	SEED AND MULCH. APPLY TO DISTURBED AREAS AS NEEDED.
⑤	EROSION CONTROL MATTING

NOTE: ALL DISTURBED AREAS WITH SLOPES GREATER THAN 1:3 WILL REQUIRE TEMPORARY EROSION MATTING. SEE EROSION CONTROL DETAILS SHEET AND CROSS SECTIONS. SEE CROSS SECTIONS FOR GRUBBINGS LOCATION.

SOIL CLASSIFICATION
 AGAWAM FINE SANDY LOAM
 0-3 % SLOPES
 "K FACTOR" 0.28
 CLASSIFIED NOT HIGHLY ERODIBLE

SOIL CLASSIFICATION
 WINDSOR LOAMY FINE SAND
 25-50 % SLOPES
 "K FACTOR" 0.17
 CLASSIFIED HIGHLY ERODIBLE



SEDIMENT SETTLING BASIN. CONTRACTOR TO PROVIDE DETAILS AND LOCATION. SEE EROSION CONTROL NARRATIVE SHEET# 43 FOR SIZING CRITERIA.

LEGEND

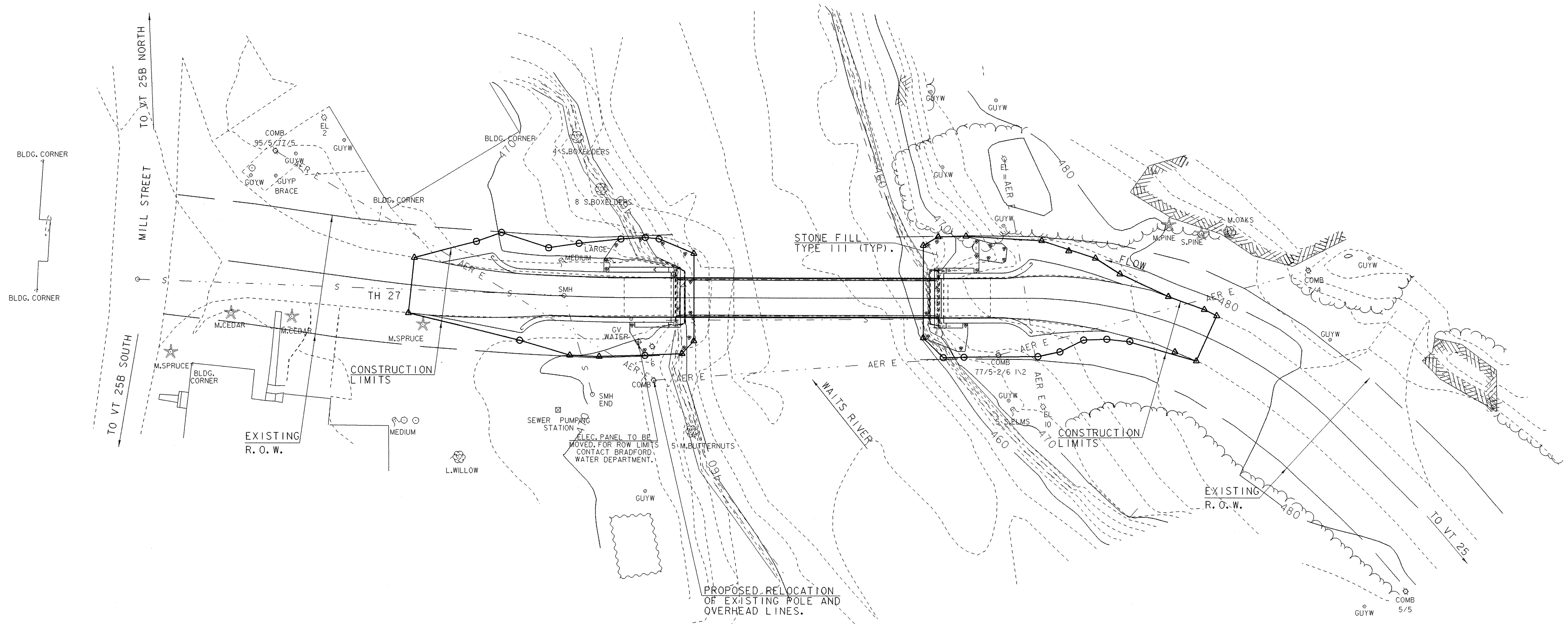
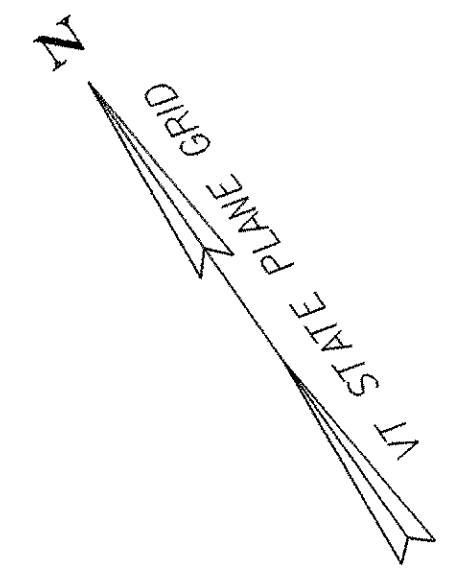
	FILTER CURTAIN
	SILT FENCE
	STONE CHECK DAM
	SEED AND MULCH
	EROSION MATTING
	PROJECT DEMARCATION FENCE
	RIPARIAN BUFFER ZONE
	CENTERLINE OF DITCH

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

SCALE 1" = 20'-0"
 20 0 20

DATUM
 VERTICAL NAVD 88
 HORIZONTAL NAD 83/96

PROJECT: BRADFORD	PROJECT NO.: STP 1447 (28)
DESIGN FILE NAME: 96j286/Structures/s96j286bdr.dgn	PLOT DATE: 22-NOV-2006
IPARM FILE NAME: s96j286ero.i	SURVEY DATE: 11/00
SURVEYED BY: R.GILMAN	DRAWN BY: M.FESSEL
SQUAD LEADER: C.P.WILLIAMS	SHEET: 45 OF 63
EROSION CONTROL	



FINAL CONDITIONS SITE PLAN

SCALE 1" = 20'-0"
 20 0 20

DATUM
 VERTICAL NAVD 88
 HORIZONTAL NAD 83/96

PROJECT: BRADFORD	PROJECT NO.: STP 1447 (28)
DESIGN FILE NAME: 96j286/Structures/s96j286bdr.dgn	PLOT DATE: 22-NOV-2006
IPARM FILE NAME: s96j286fincon.i	SURVEY DATE: 11/00
SURVEYED BY: R. GILMAN	DRAWN BY: M. FESSEL
SQUAD LEADER: C.P. WILLIAMS	SHEET: 46 OF 63
EROSION CONTROL	

EROSION AND SEDIMENT CONTROL NOTES:

1. THE AREA OF DISTURBANCE IS 0.20 ACRES.
2. AN UPGRADED TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL PLAN SHALL BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BY THE AGENCY OF TRANSPORTATION.
3. TIME ALL GRADING TO MINIMIZE SOIL EXPOSURE.
4. AT THE END OF EACH DAY'S GRADING OPERATIONS, SHAPE EARTHWORK TO MINIMIZE THE EROSION FROM STORM RUNOFF.
5. PREPARE TEMPORARY DRAINAGE WAYS TO HANDLE CONCENTRATED FLOW UNTIL PERMANENT DRAINAGE IS CONSTRUCTED AND STABILIZED.
6. 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 TRAPS WITHIN THE RIGHT-OF-WAY IF REQUIRED OR CONTROL THE RATE OF DRAW-DOWN. ADDITIONAL SEDIMENT TRAPS MUST BE APPROVED BY THE RESIDENT ENGINEER.
7. AFTER COMPLETION OF THE SUBSTRUCTURE, THE SEDIMENT IN THE TRAPS SHALL BE REMOVED AND THE GROUND RESTORED TO ITS ORIGINAL SLOPES OR GRADED AS SHOWN THE CONSTRUCTION DRAWINGS.
8. SEE SHEETS 48-52 FOR EROSION PREVENTION AND SEDIMENT CONTROL DETAILS
9. 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 DEMARCATe SENSITIVE AREAS TO AVOID DISTURBING USING SNOW FENCE (MOD. - PDF).
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, TURBIDITY 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 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**

<u>% WT.</u>	<u>LBS. /A.</u>	<u>NAME</u>	<u>PUR %</u>	<u>GERM %</u>
37.5	22.5	CREEPING RED FESCUE	98	85
37.5	22.5	TALL FESCUE	95	90
5.0	3.0	RED TOP	95	90
15.0	9.0	BIRDSFOOT TREFOLI	98	85
5.0	3.0	ANNUAL RYE GRASS	95	85
100.0	60.0			

SEEDING 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.

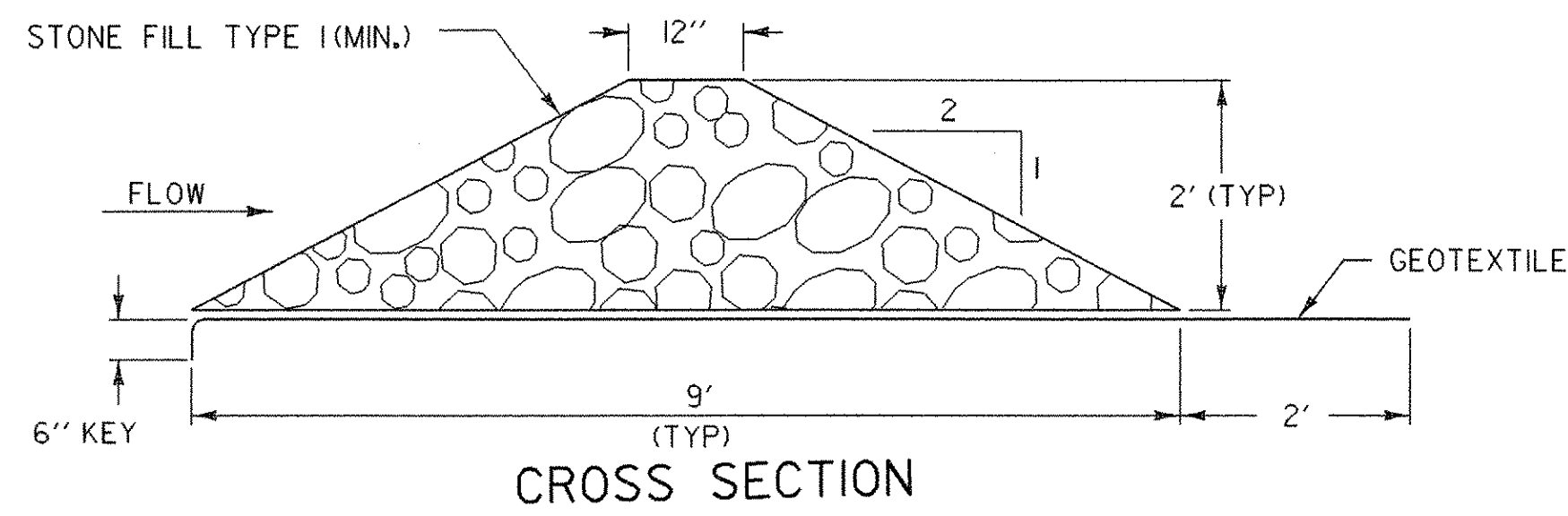
FERTILIZER: FORMULA 10-20-10, TO BE USED WITH SEED, APPLIED AT THE RATE OF 500 LBS/ACRE. (HYDRO SEEDERS MAY USE 19-19-19 FORMULA).

AGRICULTURAL LIMESTONE: TO BE APPLIED AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

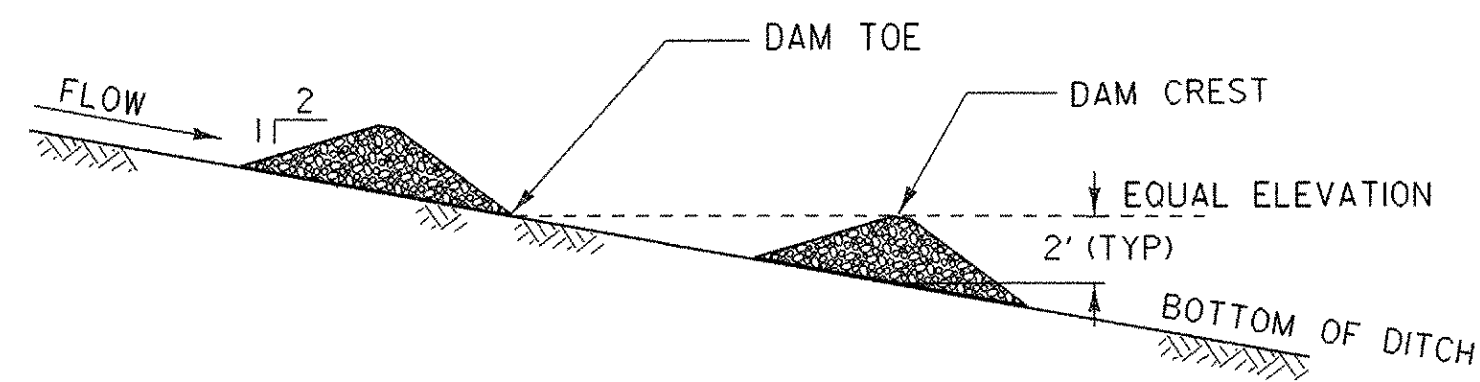
HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

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

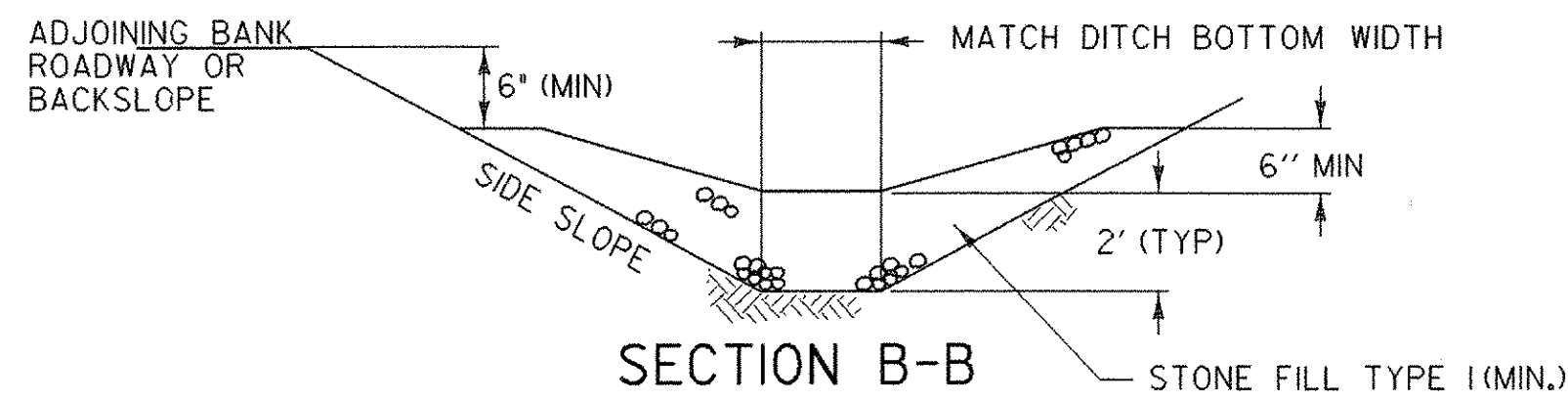
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DESIGN FILE NAME: 96j286/Structures/s96j286ecnotes.dgn	PLOT DATE: 22-NOV-2006
IPARM FILE NAME: s96j286ecnotes.i	DESIGNED BY: M.FESSEL
SQUAD LEADER: C.P. WILLIAMS	DRAWN BY: M.FESSEL
EROSION CONTROL NOTES	CHECKED BY: M.GAGULIC
	SHEET: 47 OF 63



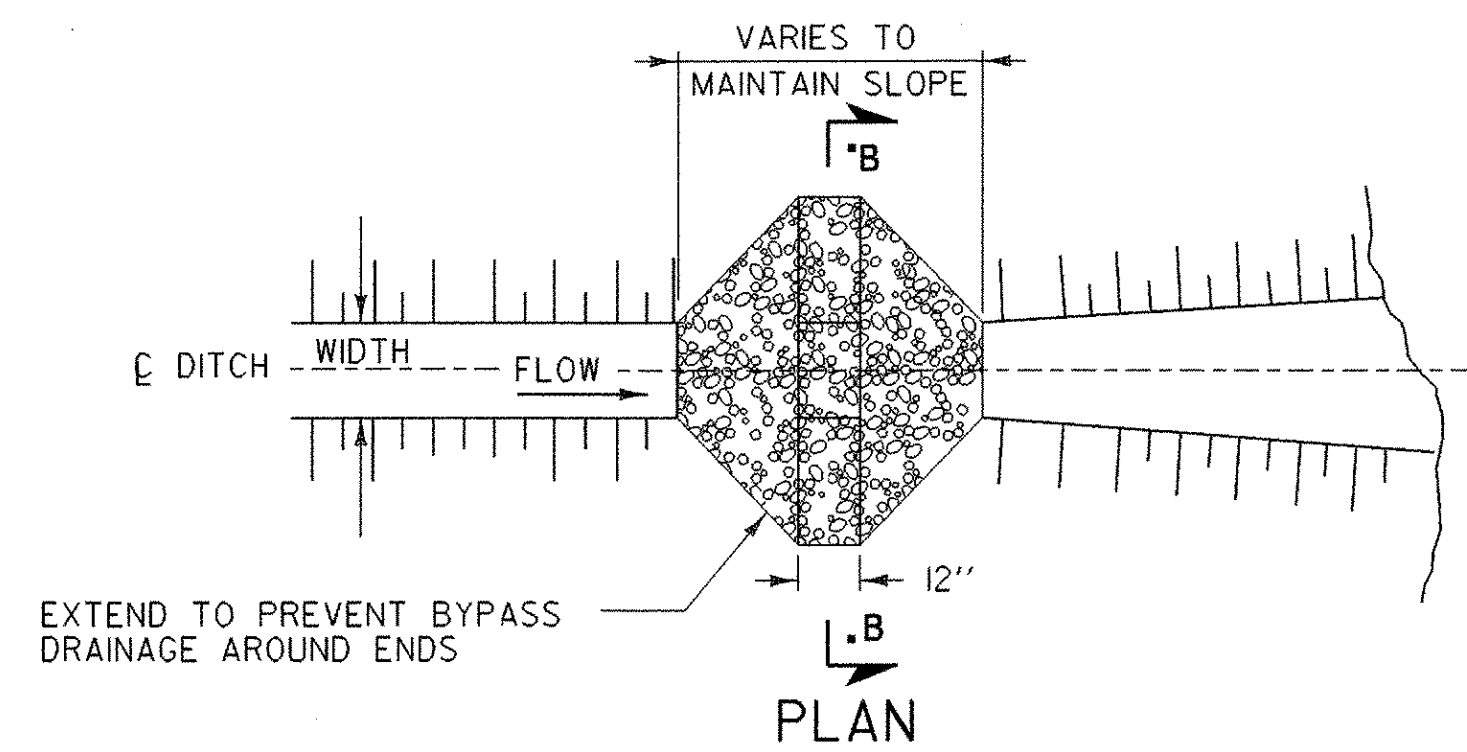
CROSS SECTION



PROFILE



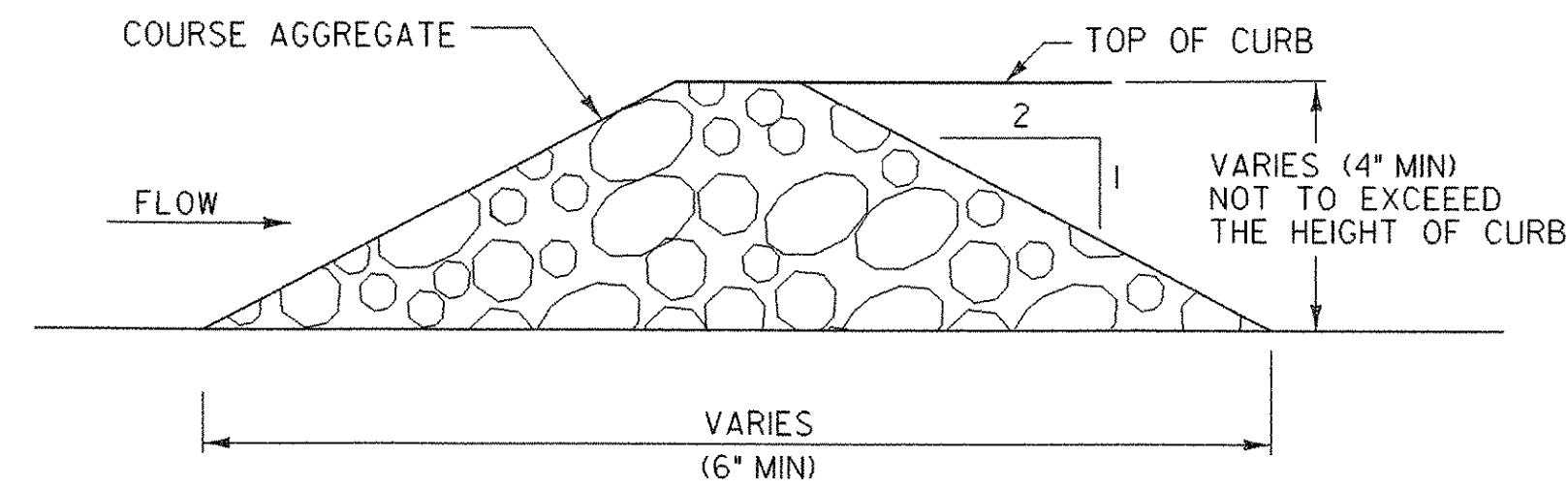
SECTION B-B



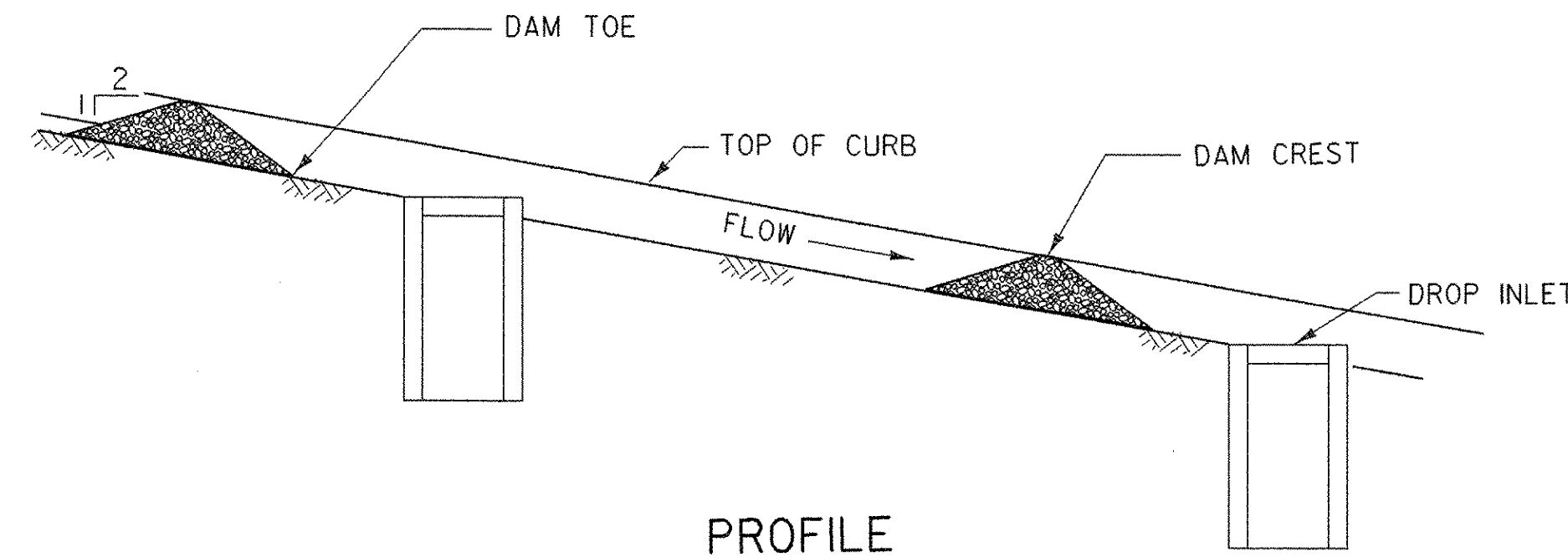
PLAN

TEMPORARY STONE CHECK DAM
TYPE I

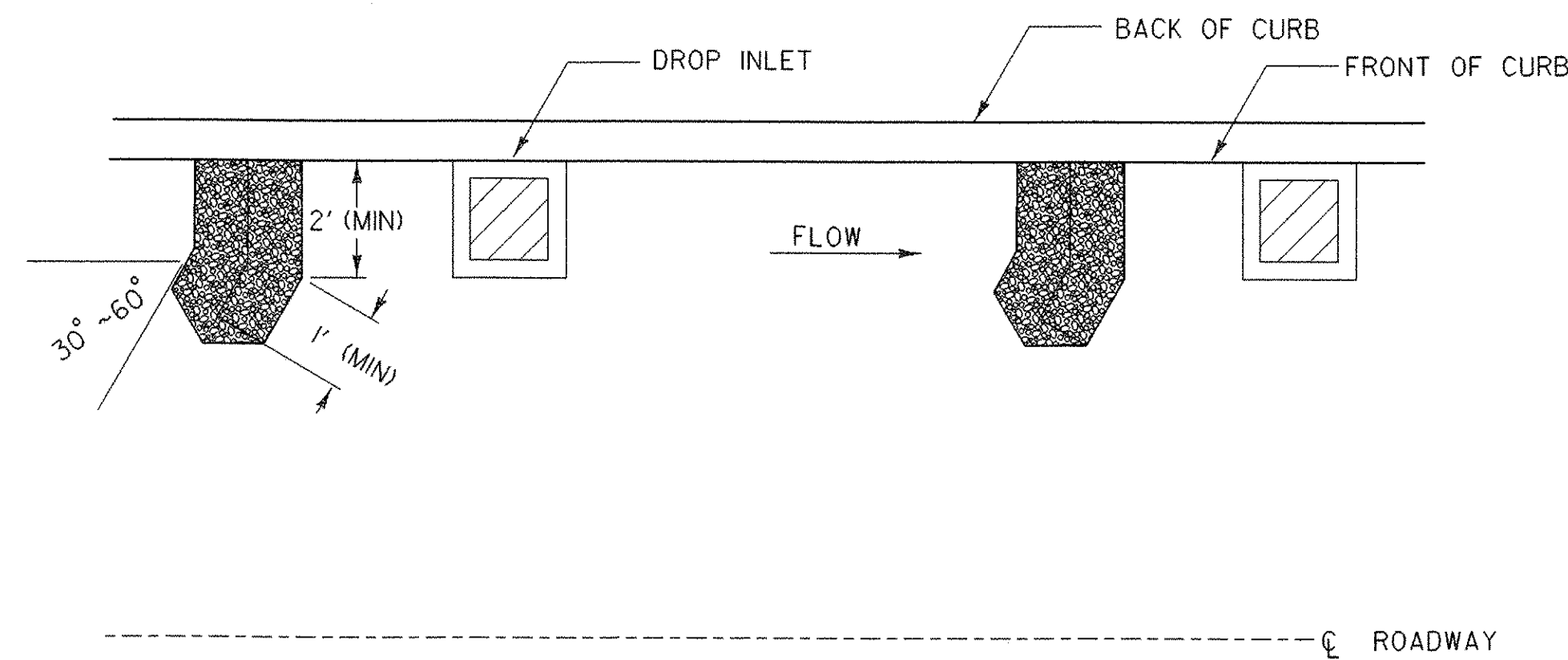
NOT TO SCALE



CROSS SECTION



PROFILE



PLAN

TEMPORARY STONE CHECK DAM
TYPE II

NOT TO SCALE

TEMPORARY CHECK DAMS

APPLICATION NOTES:

- TEMPORARY CHECK DAM TYPE I IS USED FOR CHANNEL FLOW, CHECK DAM TYPE II IS USED FOR FLOW ALONG A CURB.
- THE PRIMARY PURPOSE OF A TEMPORARY STONE CHECK DAM (TYPE I) IS TO REDUCE EROSION IN A CHANNEL BY REDUCING FLOW VELOCITY.
- THE PRIMARY PURPOSE OF A TEMPORARY STONE CHECK DAM (TYPE II) IS TO LIMIT THE AMOUNT OF SEDIMENT ENTERING A CLOSED DRAINAGE SYSTEM WITH STORMWATER RUNOFF.
- TEMPORARY CHECK DAMS WILL CAPTURE SEDIMENT THAT FALLS OUT OF SUSPENSION BEHIND THE CHECK DAMS DUE TO DECREASED VELOCITY. CHECK DAMS ARE NOT INTENDED TO FILTER SEDIMENT FROM STORMWATER.
- DETAILS SHOWN SHALL BE USED FOR TEMPORARY INSTALLATION ONLY.
- USE OF PREFABRICATED TEMPORARY CHECK DAMS SHALL BE AS APPROVED IN THE EPSCP.

GENERAL NOTES:

- GEOTEXTILE SHALL BE INSTALLED UNDER TEMPORARY STONE CHECK DAMS TYPE I. IT SHALL BE KEYED IN ON THE UPHILL END AND SHALL EXTEND 2 FEET BEYOND THE STONE ON THE DOWNHILL END.
- STONE FOR TEMPORARY STONE CHECK DAMS SHALL MEET THE GRADATION REQUIREMENTS SPECIFIED IN THE CONTRACT DOCUMENTS.
- PREFABRICATED TEMPORARY CHECK DAMS SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS.
- TEMPORARY CHECK DAMS SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
- TEMPORARY CHECK DAMS SHALL BE CLEANED AND REPAIRED AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACHES ONE-HALF OF THE HEIGHT OR AS RECOMMENDED BY THE MANUFACTURER. SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED WASTE SITE.
- AT TIME OF REMOVAL OF THE TEMPORARY CHECK DAM, THE DISTURBED AREA SHALL BE REPAIRED AND STABILIZED.

STONE CHECK DAM PLACEMENT INTERVAL	
DITCH SLOPE	PLACEMENT INTERVAL **
1 %	200 FT
2 %	100 FT
3 %	65 FT
4 %	50 FT
5 %	40 FT
6 %	30 FT
8 %	25 FT
10 %	20 FT

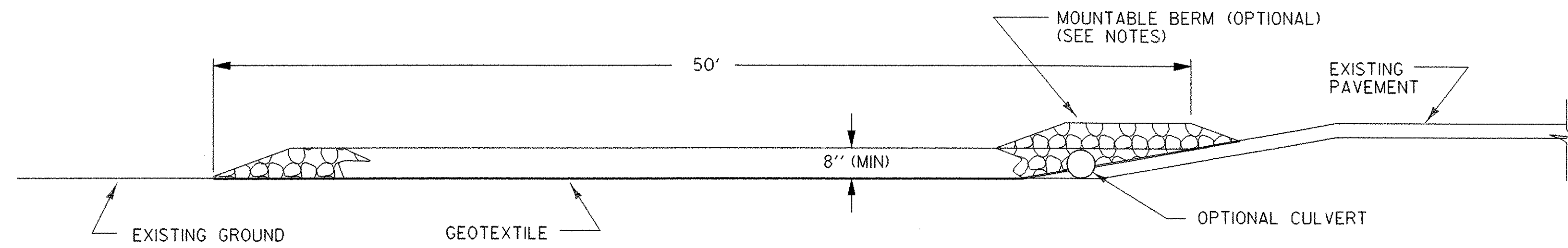
** BASED ON 2' TYPICAL HEIGHT

EROSION PREVENTION & SEDIMENT CONTROL DETAILS TEMPORARY CHECK DAMS

EPSC-2

PROJECT: BRADFORD	PROJECT NO.: STP 1447 (28)
DESIGN FILE NAME: 96j286\structures\96j286erodet.dgn	PLOT DATE: 22-NOV-2006
IPARM FILE NAME: 96j286epsc2.i	DRAWN BY: CONST. ENV. SECTION
DESIGNED BY: CONST. ENV. SECTION	CHECKED BY: A. CABRAL
SQUAD LEADER: C.P. WILLIAMS	SHEET: 49 OF 63
TEMPORARY CHECK DAMS	

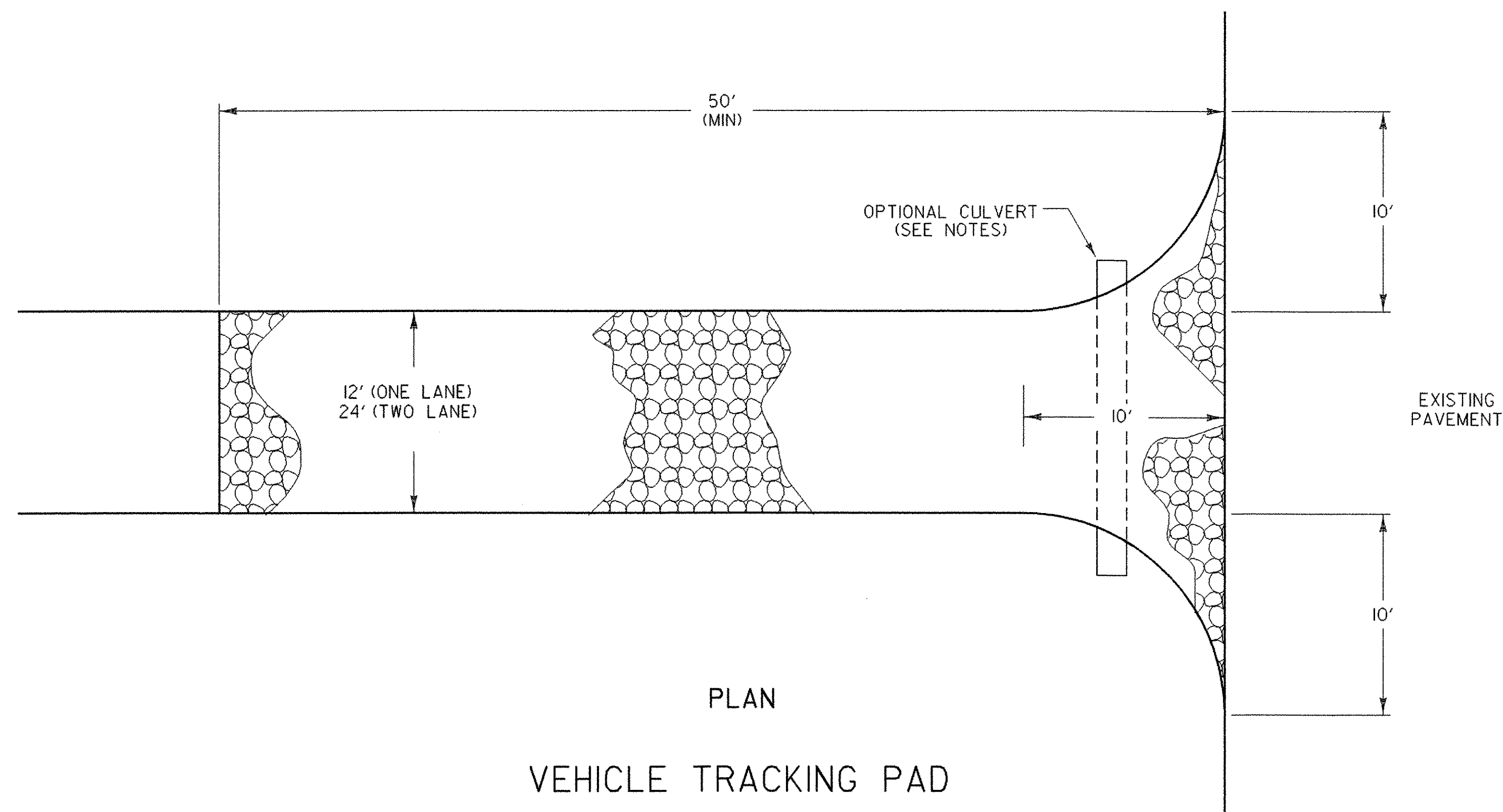
VEHICLE TRACKING PAD



PROFILE

VEHICLE TRACKING PAD

NOT TO SCALE



PLAN

VEHICLE TRACKING PAD

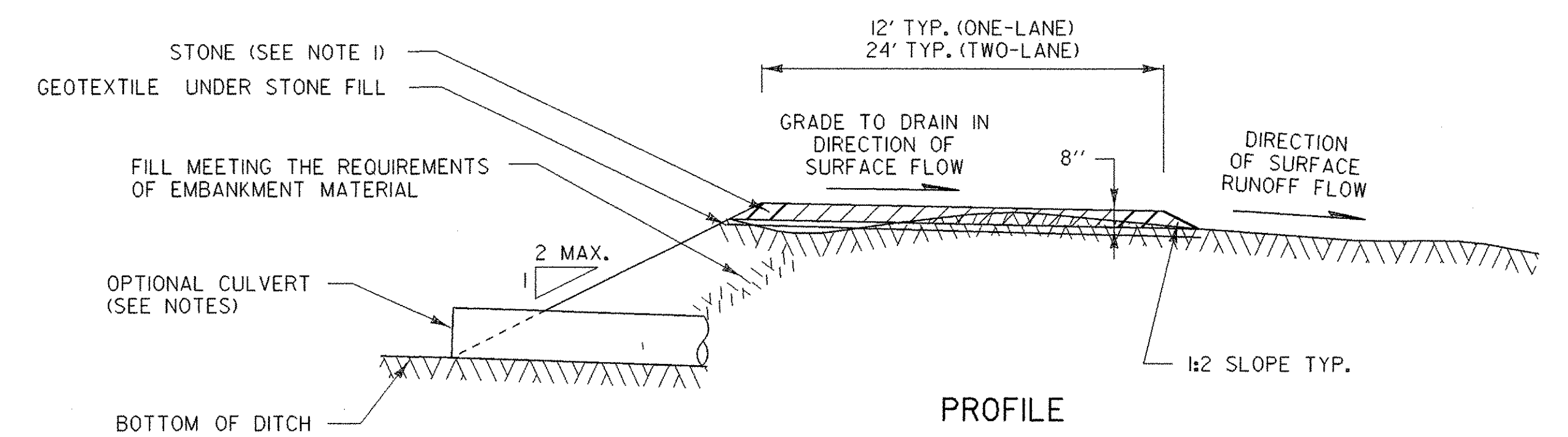
NOT TO SCALE

APPLICATION NOTES:

- A. THE PURPOSE OF A VEHICLE TRACKING PAD IS TO REDUCE OR ELIMINATE THE TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY OR STREETS.

GENERAL NOTES:

1. STONE SIZE - USE CLEAN STONE THAT MEETS THE GRADATION REQUIREMENTS SPECIFIED IN THE CONTRACT DOCUMENTS.
2. LENGTH - 50 FEET (MIN.)
3. THICKNESS - 8 INCHES (MIN)
4. WIDTH - 12 FEET (MIN)
5. GEOTEXTILE UNDER STONE SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE AS DIRECTED BY THE ENGINEER. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. PROPOSED DRAINAGE PIPES SHALL BE SIZED WITH SUFFICIENT CAPACITY TO CARRY DITCH FLOWS. ALTERNATIVE WAYS OF TRANSPORTING DITCH DRAINAGE ACROSS CONSTRUCTION ENTRANCES MAY BE PROPOSED BY THE CONTRACTOR FOR APPROVAL BY THE ENGINEER.
8. WHEN A VEHICLE TRACKING PAD ALONE IS NOT CAPABLE OF PREVENTING TRACKING OF SEDIMENT ONTO THE ROAD SURFACE THE CONTRACTOR SHALL TAKE ADDITIONAL STEPS BEFORE VEHICLES LEAVE THE CONSTRUCTION AREA.
9. VEHICLE TRACKING PAD SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
10. VEHICLE TRACKING PAD SHALL BE MAINTAINED WHEN THE AGGREGATE BECOMES CLOGGED AND NO LONGER PREVENTS TRACKING OF SEDIMENT ONTO THE PUBLIC RIGHT-OF-WAY. ADDITIONAL AGGREGATE MAY BE ADDED ON TOP OF EXISTING AGGREGATE ONLY TO A POINT WHICH ALLOWS A SMOOTH TRANSITION BETWEEN THE ROAD SURFACE AND CONSTRUCTION AREA.
11. AT THE TIME OF REMOVAL OF THE VEHICLE TRACKING PAD, THE DISTURBED AREA SHALL BE REPAIRED AND STABILIZED.



PROFILE

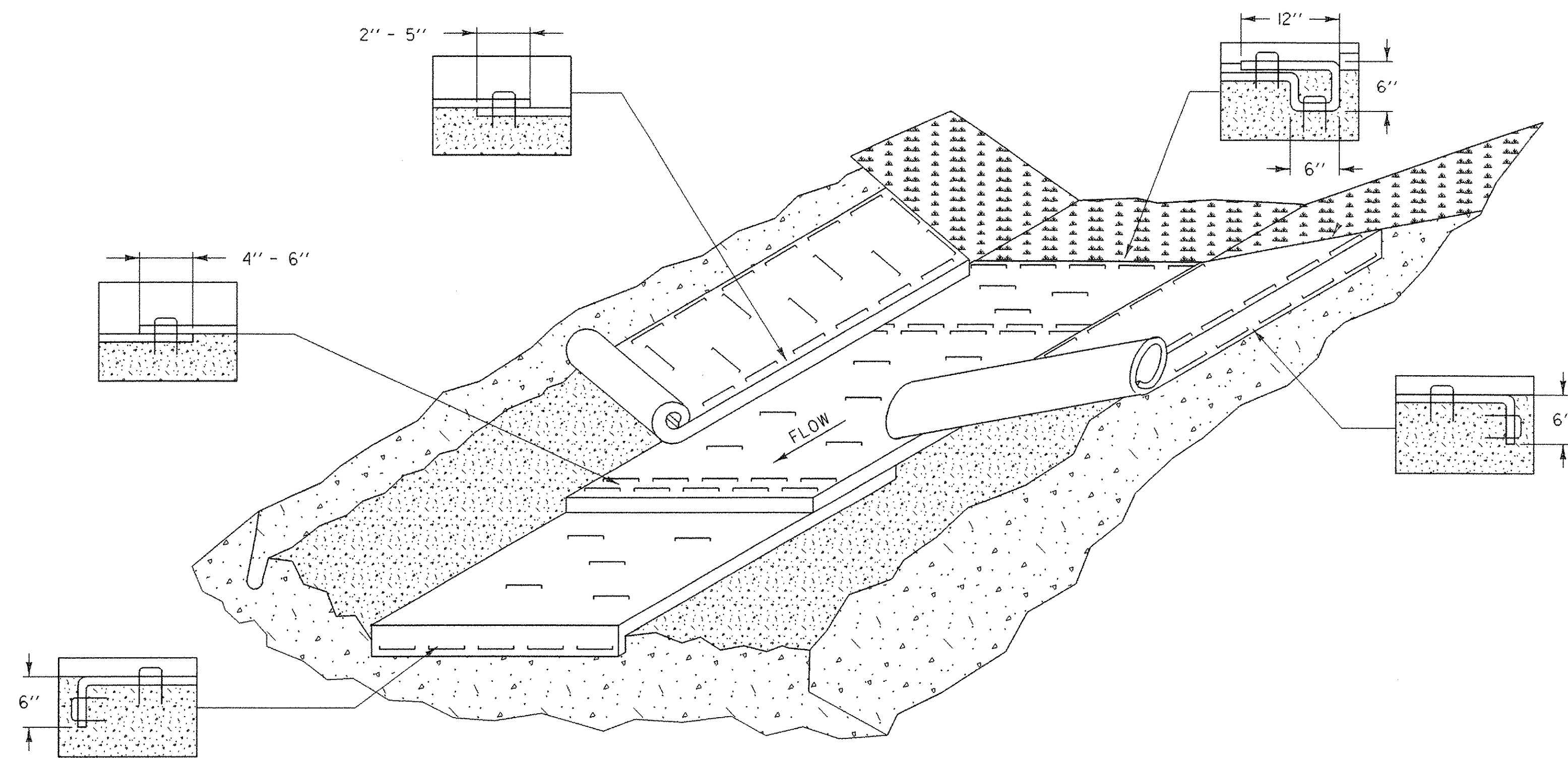
VEHICLE TRACKING PAD

NOT TO SCALE

EROSION PREVENTION & SEDIMENT CONTROL DETAILS VEHICLE TRACKING PAD

EPSC-4

PROJECT: BRADFORD	PROJECT NO.: STP 1447 (28)
DESIGN FILE NAME: 96j286\structures\96j286erodet.dgn	PLOT DATE: 22-NOV-2006
IPARM FILE NAME: 96j286epsc4.i	DRAWN BY: CONST. ENV. SECTION
DESIGNED BY: CONST. ENV. SECTION	CHECKED BY: A. CABRAL
SQUAD LEADER: C.P. WILLIAMS	SHEET: 50 OF 63
VEHICLE TRACKING PAD	



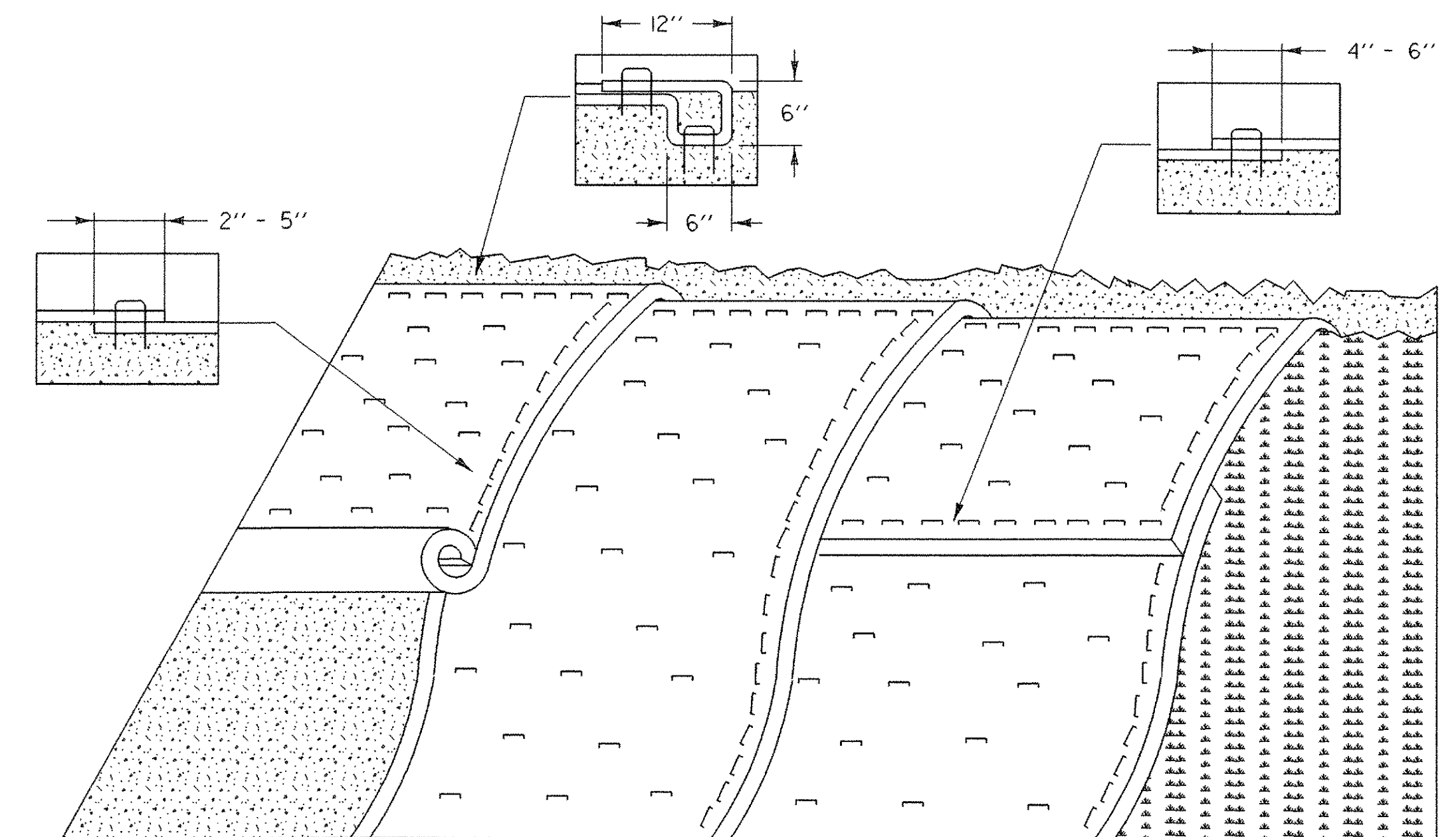
EROSION MATTING FOR DITCHES

APPLICATION NOTES:

- A. THE PURPOSE OF LINING THE DITCH WITH EROSION MATTING IS TO REDUCE EROSION AND AID THE ESTABLISHMENT OF VEGETATION AT LOW VELOCITIES.
- B. TYPE OF EROSION MATTING TO BE USED SHOULD BE BASED ON FACTORS SPECIFIC TO EACH APPLICATION. SEE SPECIFICATIONS AND PRODUCT RECOMMENDATIONS FOR SUITABILITY.

GENERAL NOTES:

1. WATER MAY NEED TO BE DIVERTED TO ALLOW PROPER MATTING INSTALLATION.
2. GRADE AND SMOOTH CHANNEL TO PROVIDE GOOD MATTING TO SOIL SURFACE CONTACT.
3. APPLY FERTILIZER, LIME, AND SEED PRIOR TO PLACING MATTING.
4. INSTALL MATTING IN THE CENTER OF THE CHANNEL, IN THE DIRECTION OF THE WATER FLOW.
5. INSTALL MATTING ON THE SIDE SLOPES OF THE CHANNEL, OVERLAPPING THE CENTER MAT.
6. ANCHOR MATTING AS SHOWN, UTILIZING ANCHOR STAPLES. STAPLE PLACEMENT SHALL BE DETERMINED BY THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
7. EROSION MATTING SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
8. EROSION MATTING SHALL BE REPAIRED AND RESTAPLED AS NECESSARY TO ENSURE PROPER FUNCTION.



EROSION MATTING FOR SLOPES

APPLICATION NOTES:

- A. THE PURPOSE OF EROSION MATTING ON SLOPES IS TO REDUCE EROSION AND AID THE ESTABLISHMENT OF VEGETATION
- B. EROSION CONTROL MATTING SHALL BE USED FOR THE FOLLOWING REASONS:
 - SLOPES > 3H:1V
 - AREAS WHERE SEED AND MULCH WILL NOT STAY IN PLACE ALONE
 - WHERE SEEDING IS OUTSIDE THE GROWING SEASON.

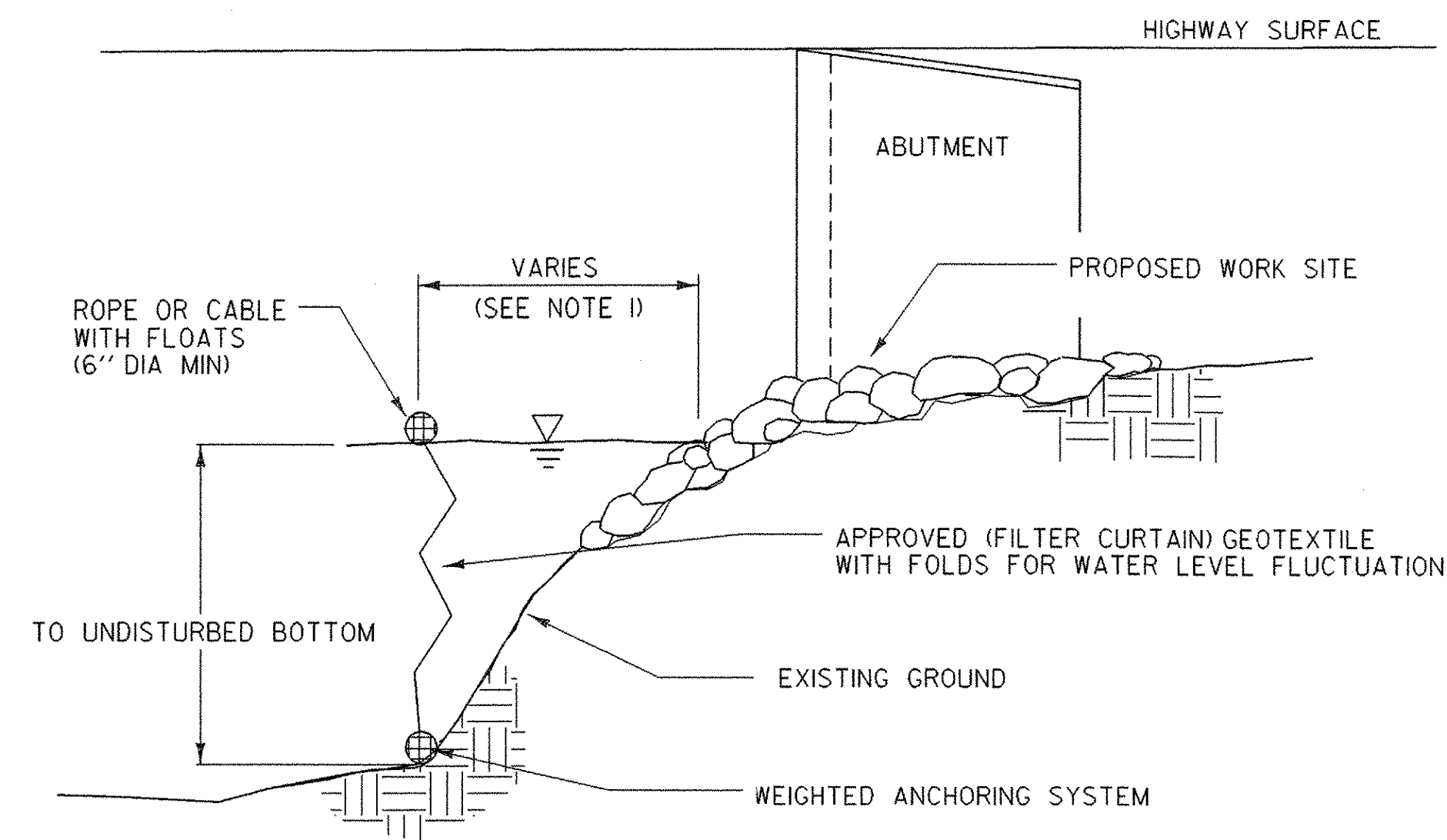
GENERAL NOTES:

1. GRADE AND SMOOTH THE SLOPE TO PROVIDE GOOD MATTING TO SOIL SURFACE CONTACT.
2. APPLY FERTILIZER, LIME, AND SEED PRIOR TO PLACING MATTING.
3. ANCHOR MATTING AS SHOWN, UTILIZING ANCHOR STAPLES. STAPLE PLACEMENT SHALL BE DETERMINED BY THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
4. UNROLL EROSION MATTING VERTICALLY DOWN SLOPE IN THE DIRECTION OF WATER FLOW.
5. OVERLAP UPPER MATTING OVER LOWER MATTING AS SHOWN.
6. OVERLAP ADJACENT MATTING AS SHOWN.
7. CUT EXCESS MATTING AT END OF SLOPE AND ANCHOR THE END.
8. EROSION MATTING SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
9. EROSION MATTING SHALL BE REPAIRED AND RESTAPLED AS NECESSARY TO ENSURE PROPER FUNCTION.

EROSION PREVENTION & SEDIMENT CONTROL DETAILS EROSION MATTING FOR DITCHES & SLOPES

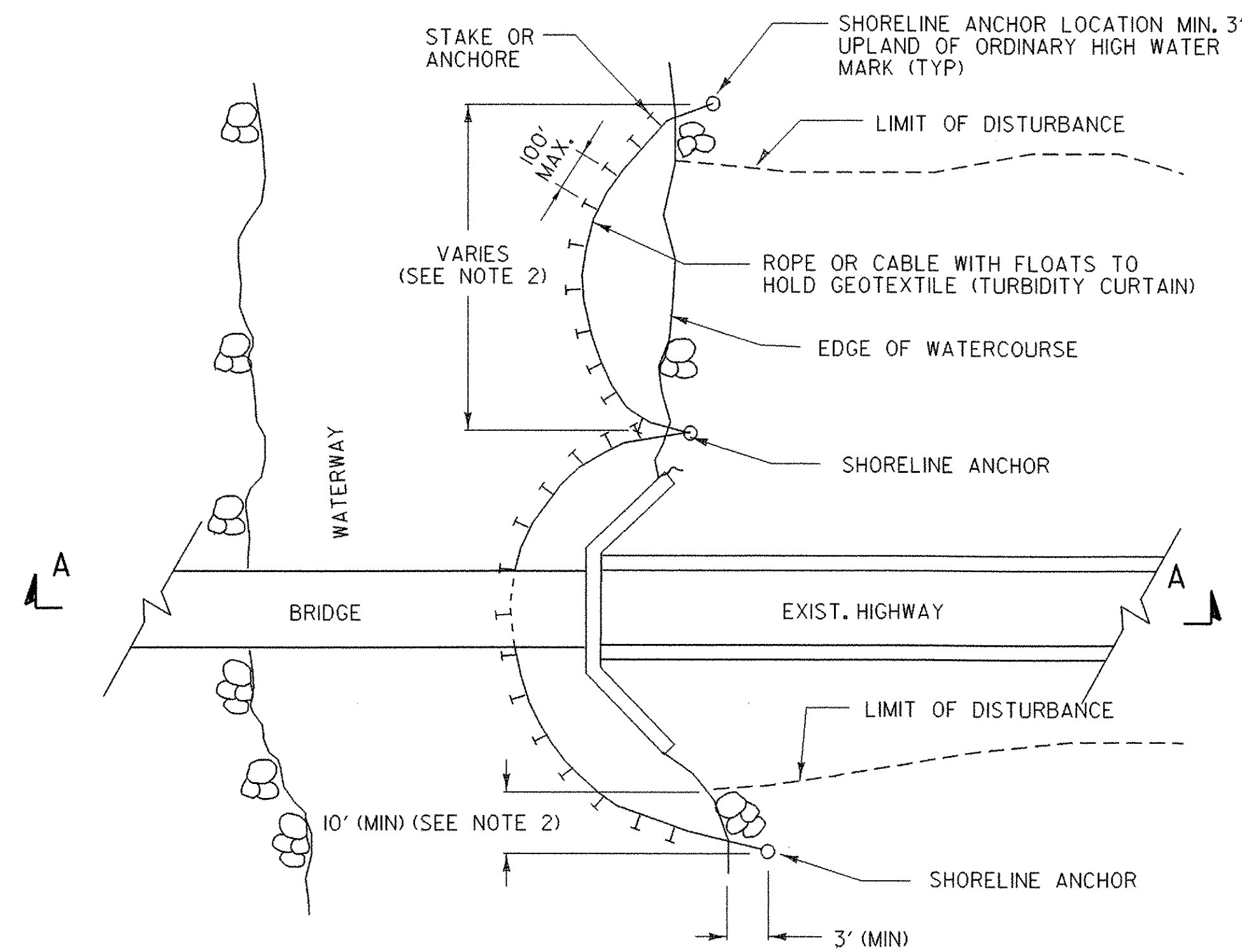
EPSC-5

PROJECT: BRADFORD	PROJECT NO.: STP 1447 (28)
DESIGN FILE NAME: 96j286\structures\s96j286erodet.dgn	PLOT DATE: 22-NOV-2006
IPARM FILE NAME: 96j286eps5.i	DRAWN BY: CONST. ENV. SECTION
DESIGNED BY: CONST. ENV. SECTION	CHECKED BY: A. CABRAL
SQUAD LEADER: C. P. WILLIAMS	EROSION MATTING FOR DITCHES & SLOPES SHEET: 51 OF 63



SECTION A-A

NOT TO SCALE



PLAN

FILTER CURTAIN

NOT TO SCALE

FILTER CURTAIN

APPLICATION NOTES:

- A. THE PRIMARY PURPOSE OF A FILTER CURTAIN IS TO PROVIDE SEDIMENTATION PROTECTION FOR A WATERCOURSE FROM UP-SLOPE LAND DISTURBANCE OR FROM DREDGING OR FILLING WITHIN WATERCOURSE.
- B. FILTER CURTAINS SHALL NOT BE PLACED ACROSS A FLOWING WATERWAY, OR IN A WATERWAY WITH VELOCITIES GREATER THAN MANUFACTURER'S RECOMMENDATIONS.
- C. FILTER CURTAINS SHOULD NOT BE PLACED AT THE OUTLET OF A CULVERT OR DITCH UNLESS THE VELOCITY DOES NOT EXCEED 1.5 FT/SEC.
- D. DETAILS DEPICT WORK AT A BRIDGE LOCATION, BUT FILTER CURTAINS MAY BE APPLIED AT OTHER LOCATIONS.

GENERAL NOTES:

1. FILTER CURTAINS SHALL BE PLACED AS CLOSE TO THE WORK AS POSSIBLE WITHOUT INTERFERING WITH CONSTRUCTION OPERATIONS.
2. FILTER CURTAINS SHALL BE A MAXIMUM OF 100 FEET LONG BETWEEN SHORELINE ANCHORS. LAST SECTION SHALL TERMINATE A MINIMUM OF 10 FEET BEYOND THE LIMIT OF DISTURBANCE.
3. THE CONTRACTOR SHALL MONITOR THE FILTER CURTAIN, TAKING INTO ACCOUNT WEATHER PATTERNS AND PREVAILING WIND DIRECTIONS THAT MAY AFFECT WATER LEVELS, VELOCITY AND MOVEMENT OF THE TURBIDITY CURTAIN.
4. SEAMS IN THE FILTER CURTAIN FABRIC SHALL BE EITHER VULCANIZED WELDED OR SEWN, AND SHALL DEVELOP THE FULL STRENGTH OF THE FABRIC.
5. SOIL PARTICLES TRAPPED BY THE FILTER CURTAIN SHOULD ONLY BE REMOVED IF THERE HAS BEEN A SIGNIFICANT CHANGE IN THE ORIGINAL CONTOURS OF THE AFFECTED AREA IN THE WATERCOURSE.
6. SOIL PARTICLES SHALL BE ALLOWED 6-12 HOURS TO SETTLE PRIOR TO THEIR REMOVAL OR THE REMOVAL OF THE FILTER CURTAIN.
7. FILTER CURTAINS SHALL BE REMOVED BY SLOWLY PULLING TOWARDS THE SHORE TO MINIMIZE ESCAPE OF SEDIMENTS INTO THE WATERWAY.

EROSION PREVENTION & SEDIMENT CONTROL DETAILS FILTER CURTAIN

EPSC-7

PROJECT: BRADFORD	PROJECT NO.: STP 1447 (28)
DESIGN FILE NAME: 96j286\structures\s96j286erodet.dgn	PLOT DATE: 22-NOV-2006
IPARM FILE NAME: 96j286epsc7.i	DRAWN BY: CONST. ENV. SECTION
DESIGNED BY: CONST. ENV. SECTION	CHECKED BY: A. CABRAL
SQUAD LEADER: C.P. WILLIAMS	SHEET: 52 OF 63
FILTER CURTAIN	

INDEX OF SHEETS

- 1. TITLE SHEET
- 2. QUANTITY SHEET
- 3. SUPERSTRUCTURE DETAILS
- STANDARD SHEETS
- 4. E-6 APR. 1, 1980 R
- 5. E-7A APR. 8, 1982 R
- 6. G-1d DEC. 16, 1980 R
- 7. SCB-DI-75 SEPT. 14, 1981 R

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**



**PROPOSED IMPROVEMENT
BRIDGE PROJECT**

TOWN OF BRADFORD
COUNTY OF ORANGE

ROUTE NO: TH 27 BRIDGE NO: 22

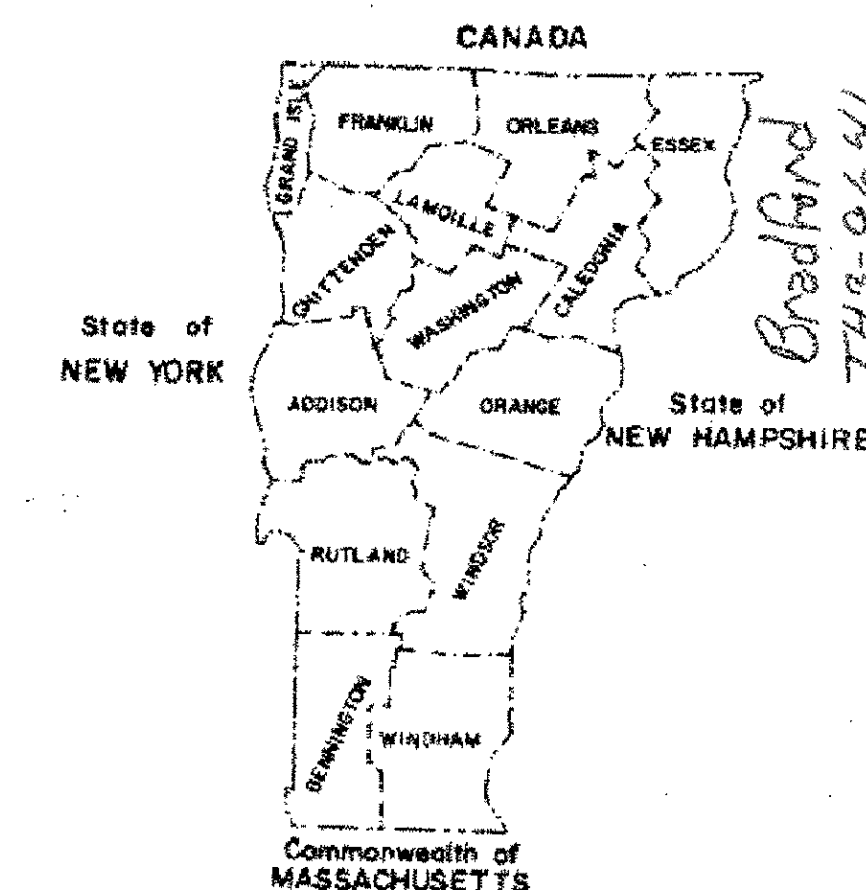
PROJECT LOCATION: APPROXIMATELY 0.20 MILES NORTH OF THE INTERSECTION OF VT. RTE. 25 AND T.H. 27; BRIDGE No. 22 OVER THE WAITS RIVER.

PROJECT DESCRIPTION: REPLACEMENT OF DETERIORATED MEMBERS IN FLOOR SYSTEM AND INSTALLATION OF NEW GALVANIZED CORRUGATED STEEL BRIDGE FLOORING WITH BITUMINOUS CONCRETE PAVEMENT RIDING SURFACE.

LENGTH OF STRUCTURE:	106.	FEET
LENGTH OF PARTICIPATION ROADWAY:		FEET
LENGTH OF NON-PARTICIPATION ROADWAY:		FEET
LENGTH OF PROJECT:		FEET

M

SEE BELOW
LOCATION MAP
(TRACED FROM COUNTY MAP)



GENERAL NOTES

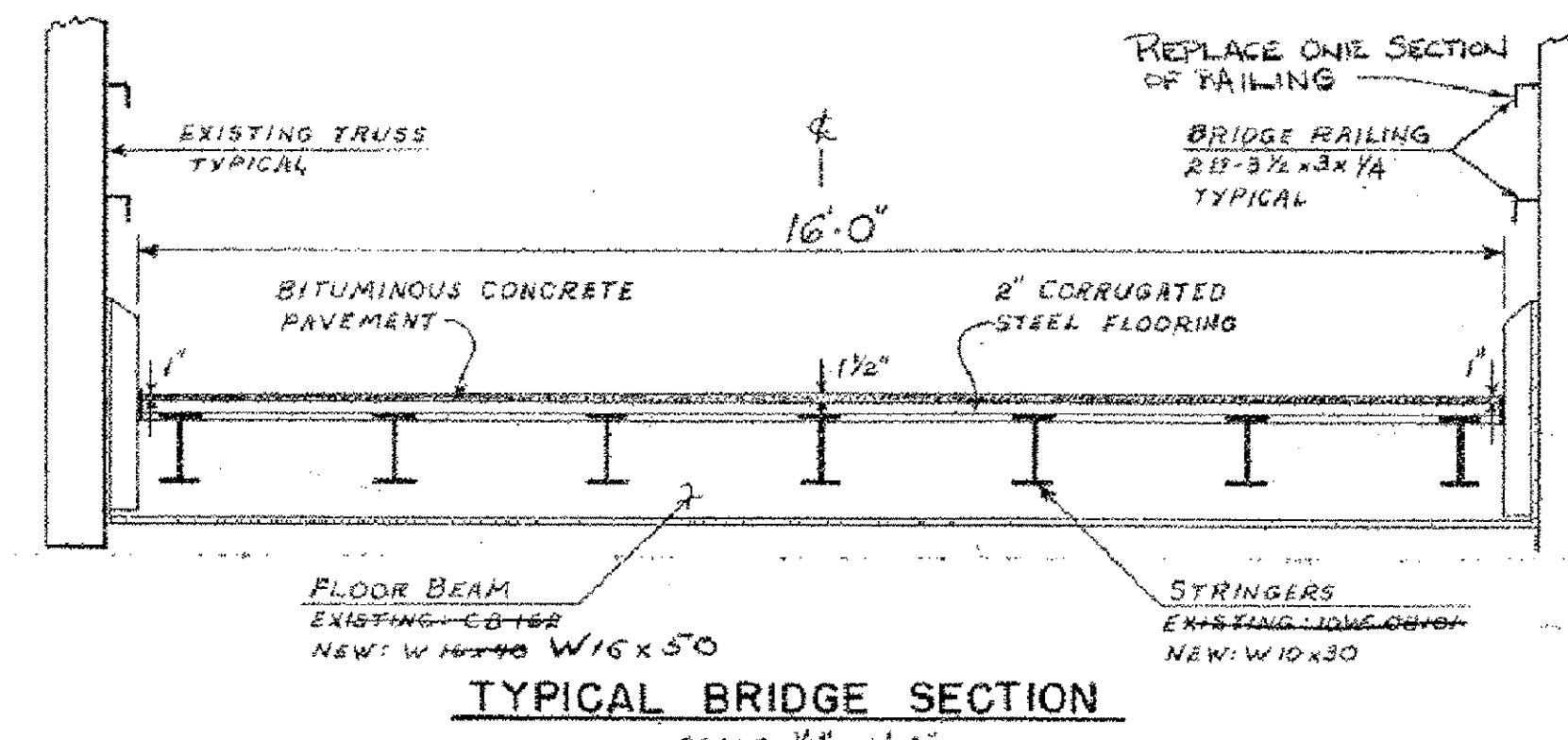
SEE SHEET 3 AND STD. SHT. SCB-DI-75 FOR NOTES.

RECORD PLANS

CONTRACT DATED - FEB 1, 1984
CONSTRUCTION BEGAN - APRIL 16, 1984
CONSTRUCTION COMPLETED - AUG. 3, 1984
ACCEPTED - AUG. 3, 1984
CONTRACTOR - MILLER CONST. INC., WINDSOR, VT.
RESIDENT ENGINEER - G.H. COLBY
RECORD PLANS - D.F. MAHONEY

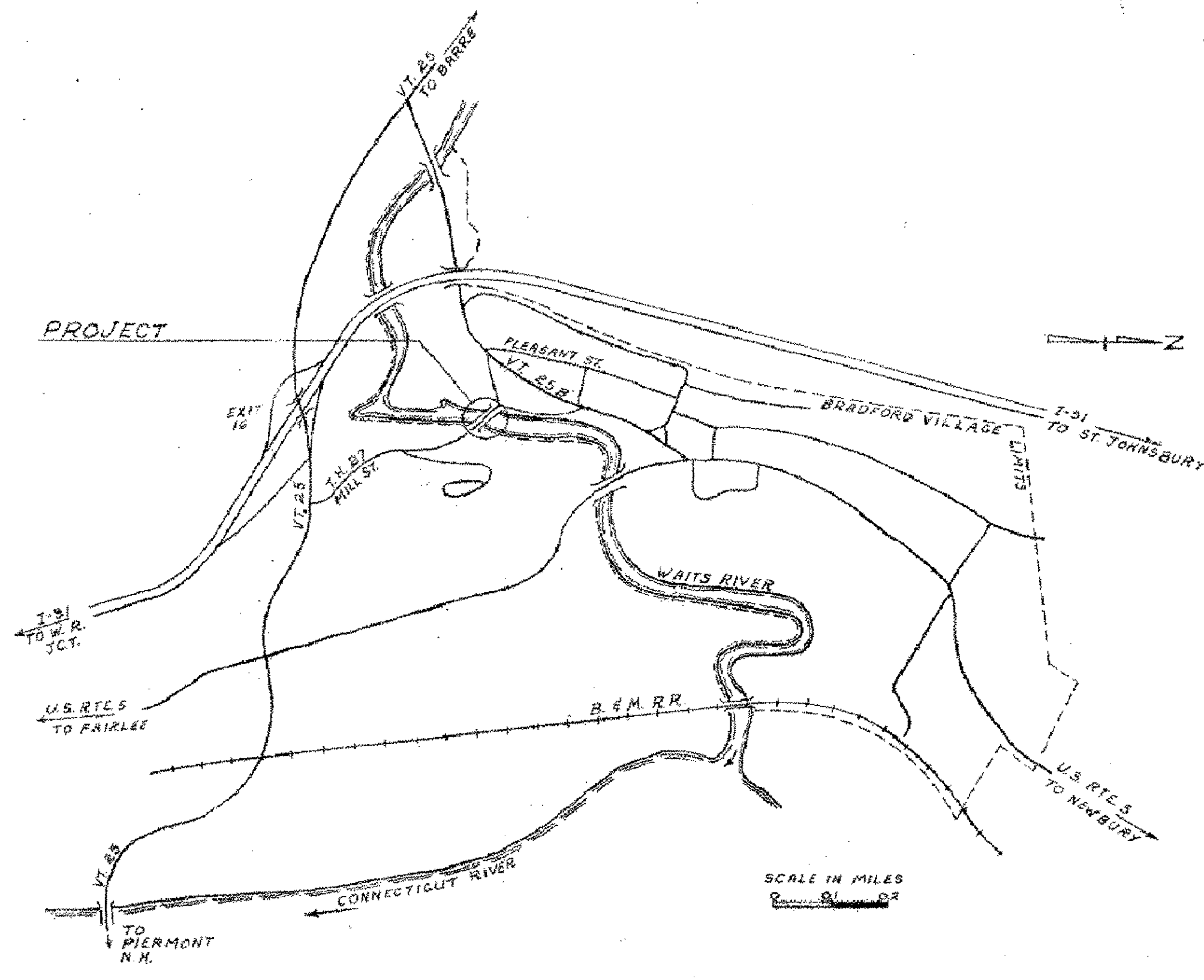
MATERIALS & SUPPLIERS

BITUMINOUS CONC. PAV'T. - PIKE INDUSTRIES INC, W. LEBANON, N.H.
STRUCTURAL STEEL - HARTFORD ENGINEERING & WELDING, HARTFORD, VT.
CORRUGATED STEEL FLOORING - BETHLEHEM STEEL CORP., BETHLEHEM, PA.
GUARD RAIL - LAFAYETTE & SHELDON INC., ESSEX JCT. VT.



TYPICAL BRIDGE SECTION
SCALE: 1/2" = 1'-0"

TYPICAL ROADWAY SECTION



These plans are subject to such engineering changes as may be required by the Federal Highway Administration or the Director of Engineering and Construction.
Construction is to be carried on in accordance with these plans and the Standard Specifications for Highway and Bridge Construction dated March, 1976, as approved by the Federal Highway Administration on October 27, 1976 for use on this project, including all subsequent revisions and such revised specifications and special provisions as are incorporated in these plans.

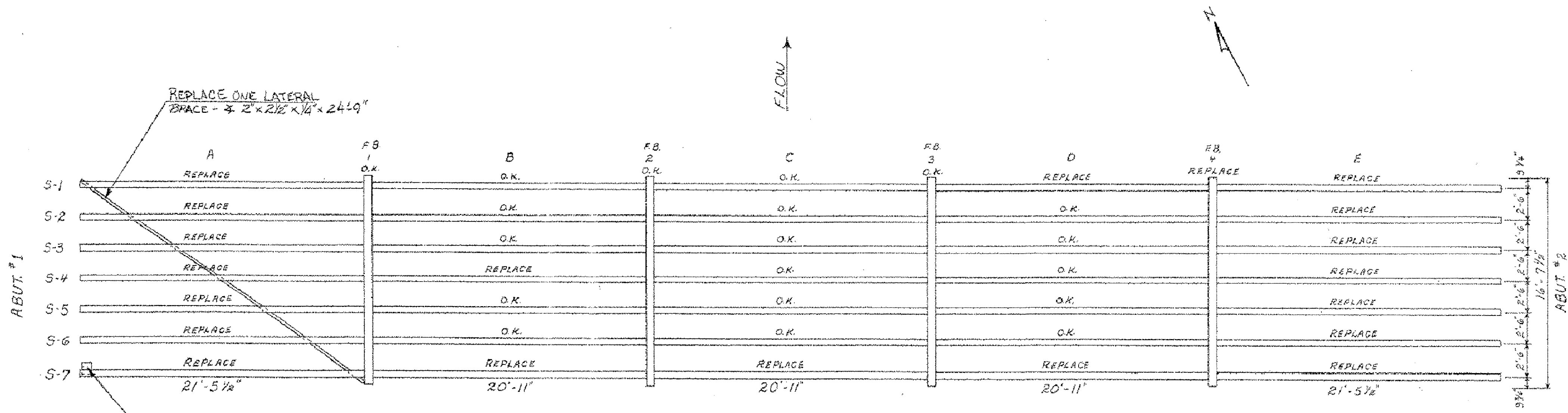
SUBMITTED BY ORDER OF THE STATE TRANSPORTATION BOARD	
APPROVED: <i>S.W. O'Connell</i>	DATE: 11/11/87
DIRECTOR OF ENGINEERING AND CONSTRUCTION	
PROJECT: BRADFORD	PROJECT NO: TH 3330
SHEET 1 OF 7 SHEETS	

CONVENTIONAL SIGNS

- 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
- TDE OF SLOPE

DATUM	VERTICAL	_____
	HORIZONTAL	_____

PROJECT: BRADFORD	PROJECT NO.: STP 1447 (28)
DESIGN FILE NAME: 96j286/structures/s96j286ref.dgn	PLOT DATE: 22-NOV-2006
IPARM FILE NAME: s96j286ref1.i	DRAWN BY: J. WHITE
DESIGNED BY:	CHECKED BY: M. FESSEL
SQUAD LEADER: C.P. WILLIAMS	SHEET: 53 OF 63
REFERENCE SHEET	

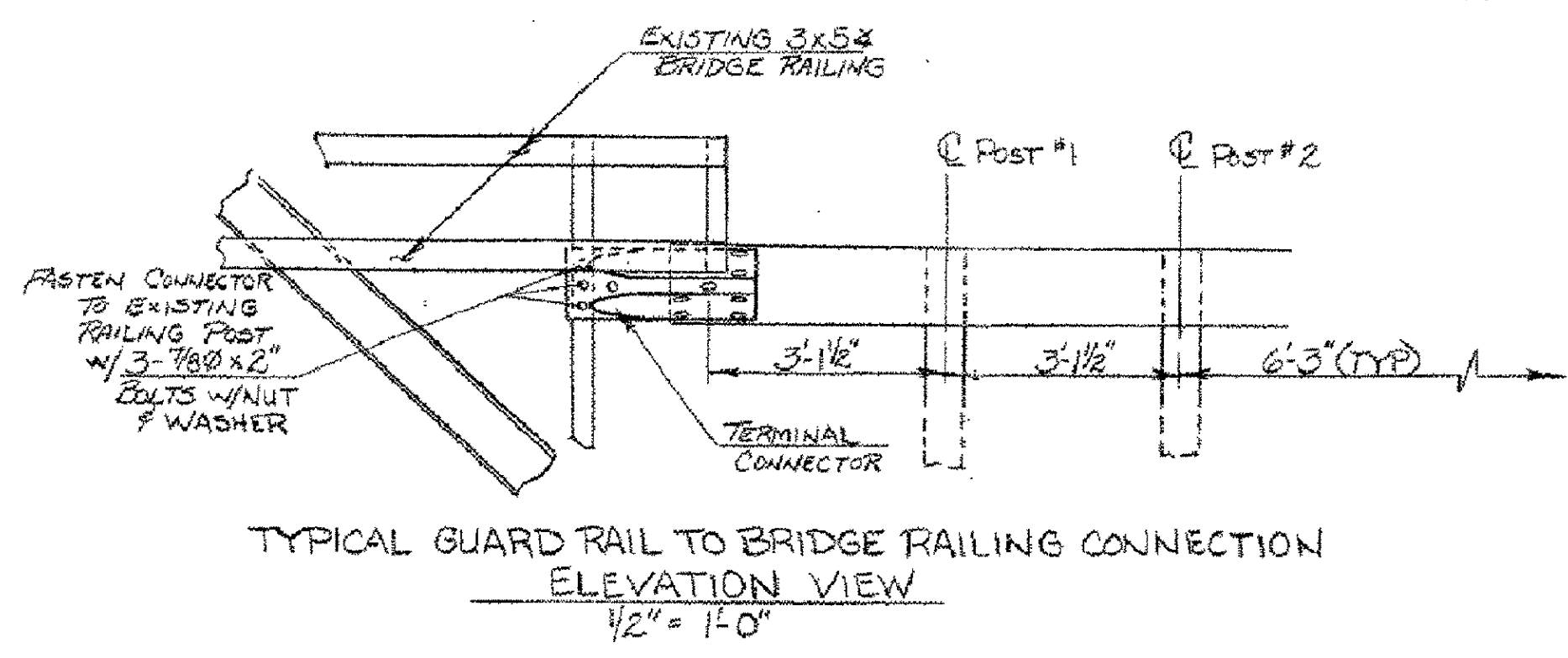


PLAN VIEW
SCALE: 1" = 5'-0"

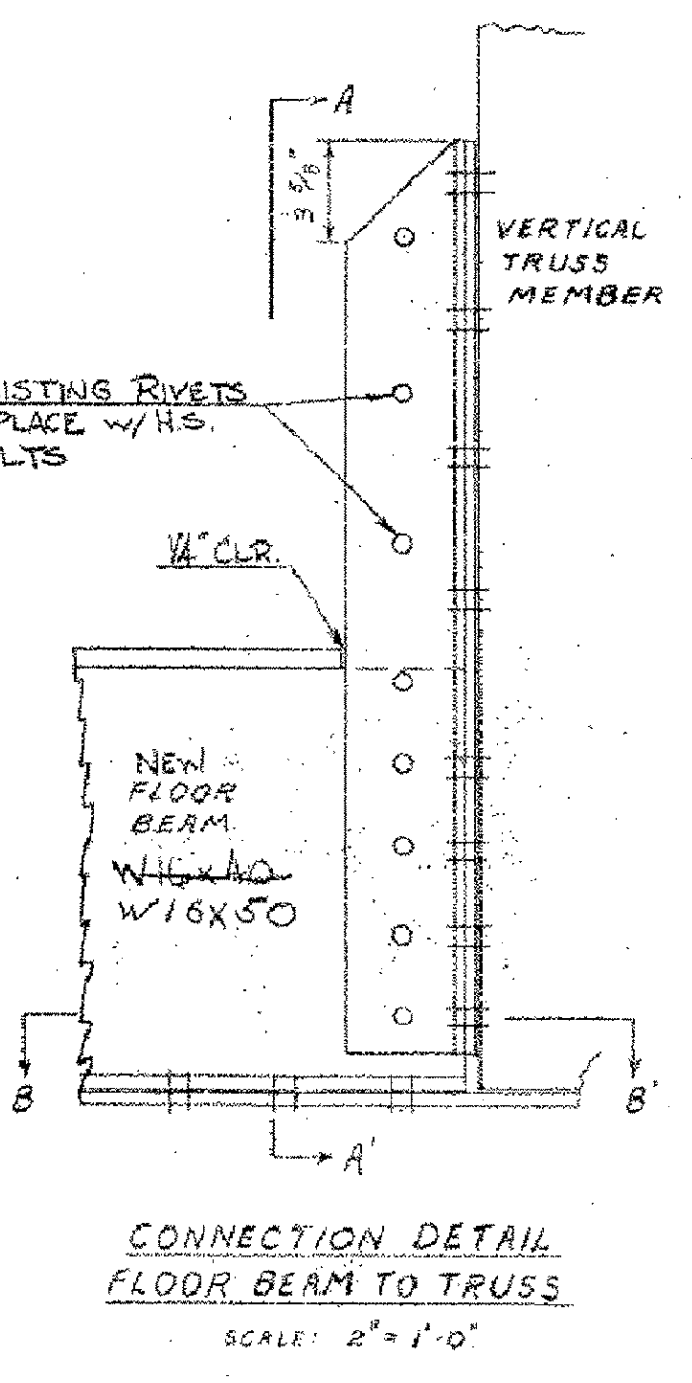
NOTE: REPLACED ALL STRINGERS AND FLOOR BEAMS

NOTES

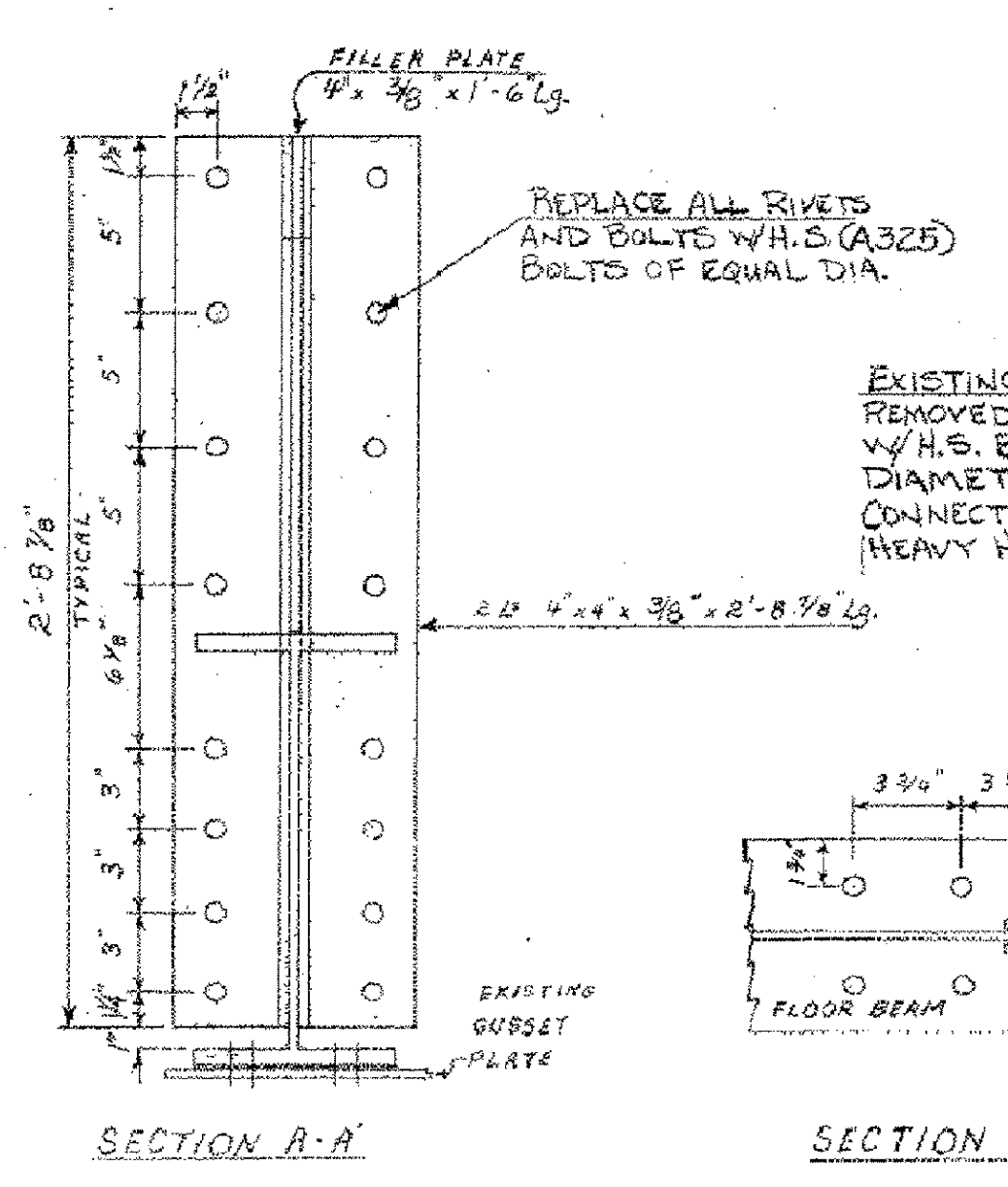
- All dimensions and sizes are to be field checked before ordering materials.
- Bridge seat areas shall be thoroughly cleaned of dirt and debris. Costs of this work shall be subsidiary to other contract items.
- Unsound concrete under bearing areas shall be replaced with concrete. C.I.A. Bridge shall be supported in place and not jacked while this work is being performed. Cost of this work shall be subsidiary to other contract items.
- All steel members and components to be retained shall be blast cleaned and painted in accordance with Section 513. Any members not already noted for replacement which are found to be deteriorated shall be replaced or repaired as directed by the Engineer. Payment for repair work shall be handled by extra work supplementary agreement. Payment for replacement work shall be by contract unit bid prices. The weight of two additional stringers not noted in Plan View above has been included in contract quantities in case more deteriorated members are found.
- When removing deteriorated stringers and floor beams care shall be taken not to damage existing connection plates. If in the Engineer's opinion any plates are damaged beyond use by Contractor's negligence, they shall be replaced at Contractor's expense.
- Tops of existing stringers and floor beams to be retained shall have any existing weld residue or other projections ground off flush. Costs of this work shall be subsidiary to other contract items.
- Bridge plank design is based on a 6"x2"-7 gage corrugated steel bridge plank conforming to ASTM A510 with a section modulus not less than 0.139 in³. All planks shall be galvanized to ASTM A123. All planks must have factory-punched weld-holes to fit the stringer spacing of the bridge and shall be provided without drain holes. Decking shall be welded to each stringer with 2" x 1/8" x 1/8" fillet welds at each connection. The tapered edges of adjoining planks shall be welded with a 3/16" bead midway between stringers. Each plank shall be damped solidly to the stringers before welding. Use 5/32" dia. AWS-ASTM E-7018 or E-7028 low hydrogen electrodes. All welding shall be by certified welders. Details of the plank and method of installation shall be submitted for approval of the Structures Division.
- 25' of guard rail (Heavy Duty St. Bm. w/wood Posts, Type II) with terminal end sections is to be installed at each end on downstream side of bridge using detail shown on this sheet for bridge connection. Upstream side shall have guard rail placed only on towns request. If town desires this installation, they shall have a representative present to aid in location of water line and new guard rail posts.
- If new bridge plank is field cut, all cut edges are to be painted with a zinc rich paint.
- Bridge shall remain closed during construction. All necessary barricades and signs shall be provided and placed by the Contractor as directed by the Engineer. Cost for this work shall be subsidiary to other contract items.
- Prior to paving, the deck shall be cleaned of debris and primed with a light coat of asphaltic primer in accordance with Section 406 of the specifications. The Bituminous Concrete Pavement shall be Type IV mix placed in two courses.
- Rivets and existing bolts in replacement member connections are to be replaced with bolts manufactured to ASTM A325 with suitable nuts and hardened washers. Bolts shall be the same size as the connector being replaced.



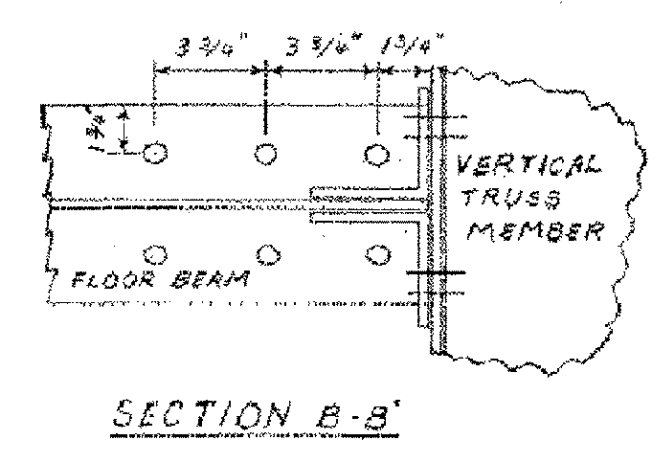
TYPICAL GUARD RAIL TO BRIDGE RAILING CONNECTION
ELEVATION VIEW
SCALE: 1/2" = 1'-0"



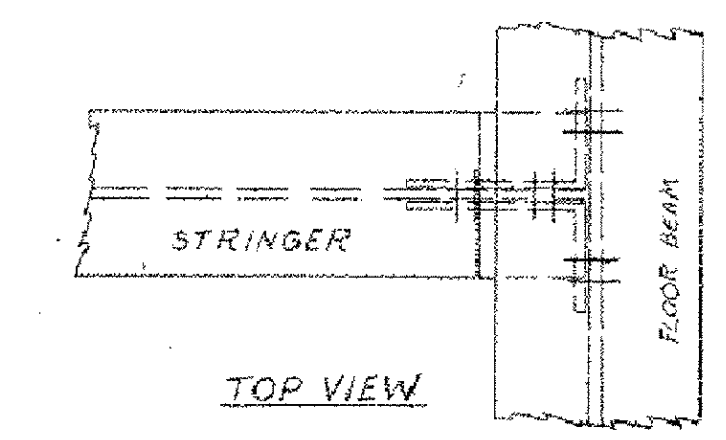
CONNECTION DETAIL
FLOOR BEAM TO TRUSS
SCALE: 2" = 1'-0"



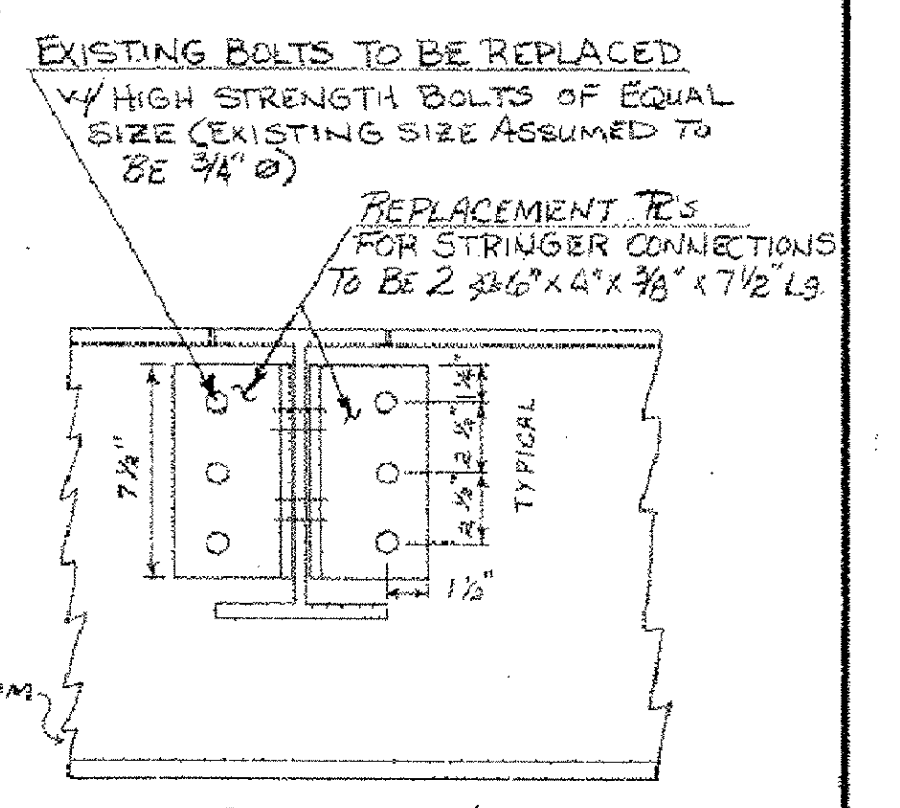
SECTION A-A



SECTION B-B



TOP VIEW

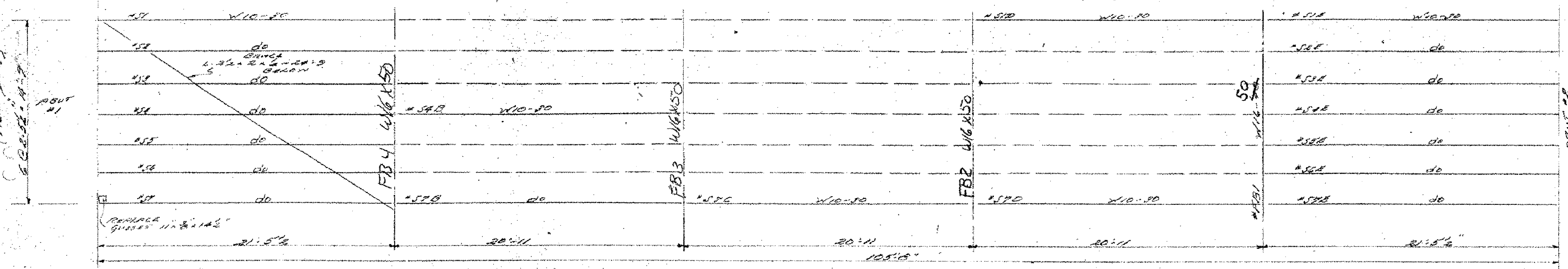


NOTE: PLATES SHOWN IN THESE DETAILS ARE TO BE USED ONLY WHEN EXISTING PLATES ARE NOT REUSEABLE. EDGE DISTANCES VARY SLIGHTLY FROM EXISTING PLATES.

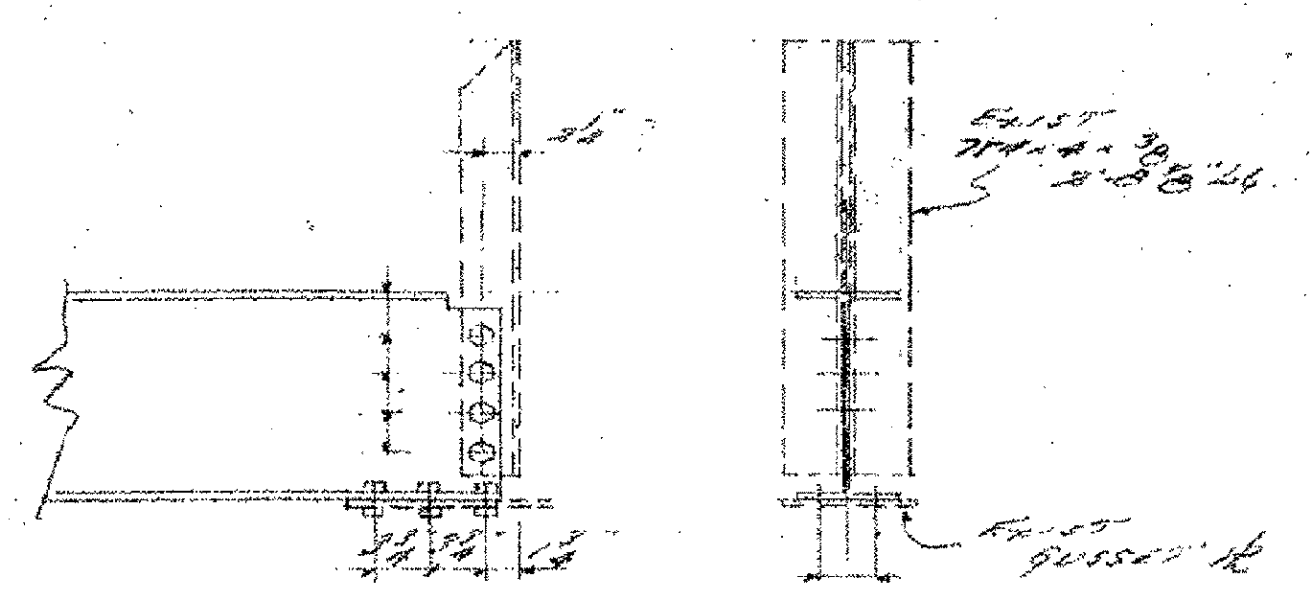
STATE OF VERMONT AGENCY OF TRANSPORTATION	
TOWN OF BRADFORD	Bridge No. 22
HIGHWAY NO. T.H. 27	Log Sta.
	Surv. Sta.
SUPERSTRUCTURE DETAILS	
TOWN HIGHWAY 27 OVER THE WAITS RIVER	
Designed by R. Whitcomb	Drawn by D.E. Gilman
Checked by D.E. LATHROP date 8-83	Bridge Design Supervisor D.E. Lathrop date 8-83
PROJECT BRADFORD	PROJECT NO. TH 3330
Bridge Sheet No.	Sheet 3 of 7

PROJECT: BRADFORD	PROJECT NO.: STP 1447 (28)
DESIGN FILE NAME: s96j286/structures/s96j286ref.dgn	PLOT DATE: 22-NOV-2006
IPARM FILE NAME: s96j286ref2.i	DESIGNED BY: J. WHITE
SQUAD LEADER: C.P. WILLIAMS	CHECKED BY: M.FESSEL
REFERENCE SHEET	SHEET: 54 OF 63

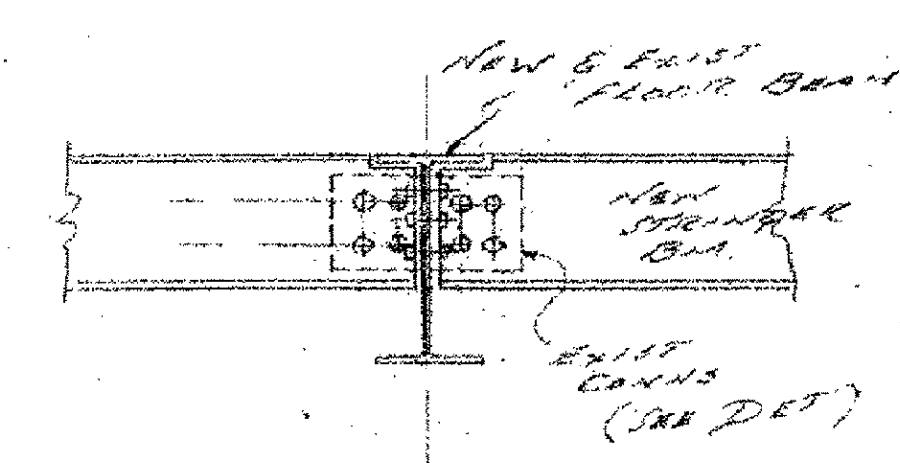
NO.	DESCRIPTION	QTY	UNIT	REMARKS
1	250-50 x 2 1/2 x 1/8 Heavy Wt. 250 Heavy Channels	20	ft	To Be Field Checked



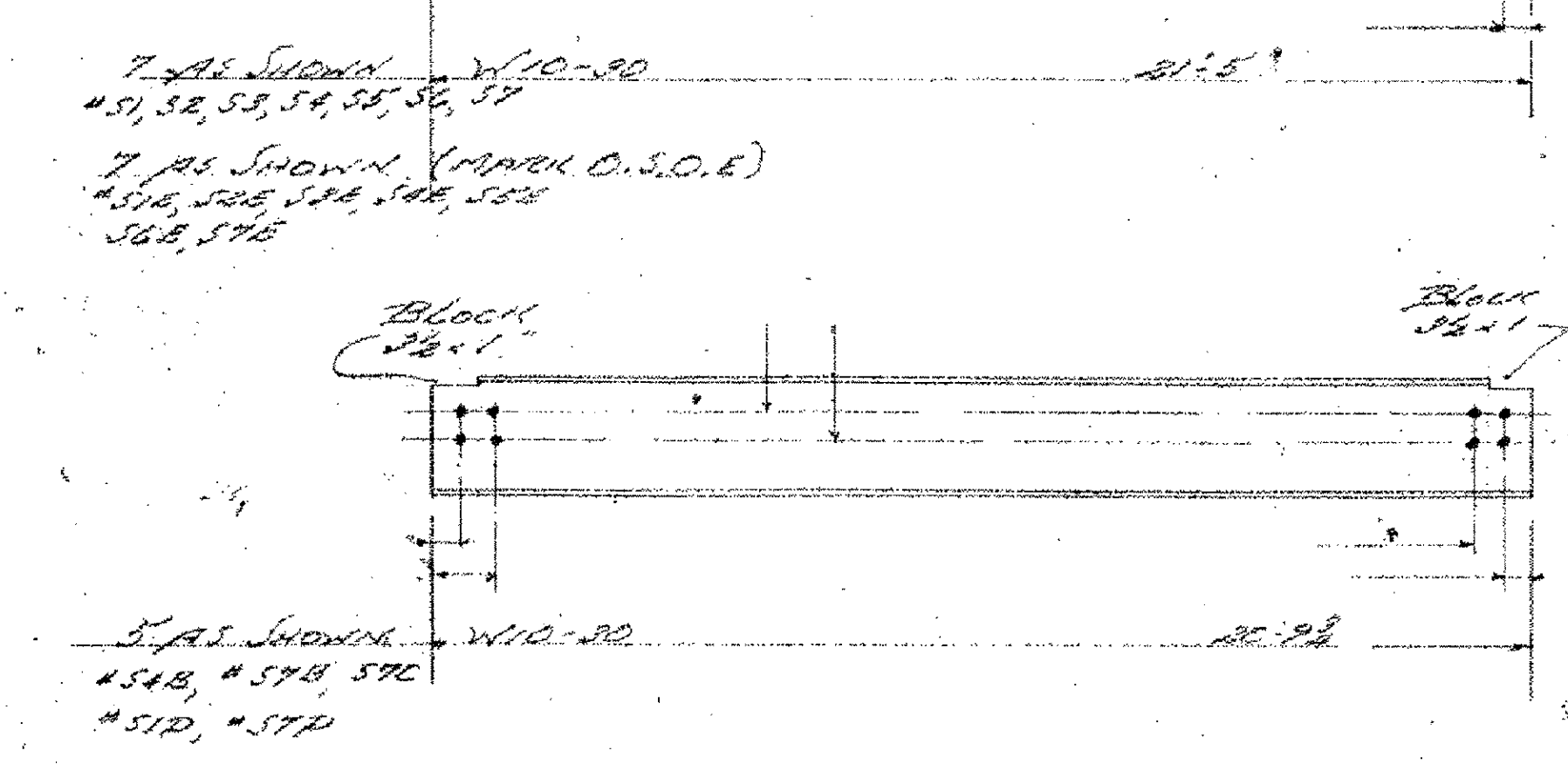
PLAN
 Note: ALL MEMBERS SHOWN (---) EXIST
 DASH TO REMOVE ALL MEMBERS
 SHOWN (---) NEW STEEL TO BE ADDED
 EXISTING



TYPICAL END #51
 (BOTH ENDS)



Detail End Conn #51

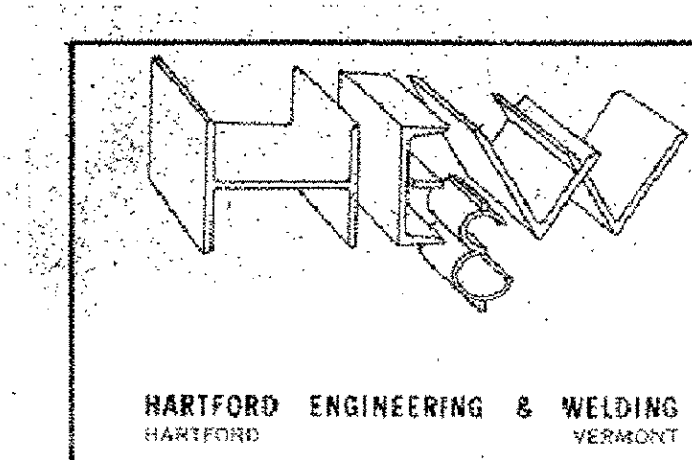


M

Field Beams #50
 250-50 x 2 1/2 x 1/8 Heavy Wt.
 250 Heavy Channels

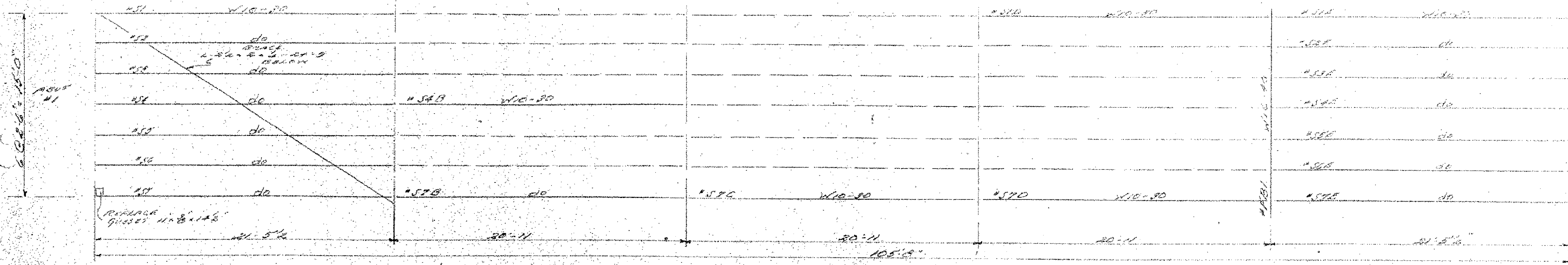
Notes:
 1/2\"/>

RECEIVED MAR 28 1968
 CK'D BY RW CK'D BY AS
 RESUBMIT APPROVED AS Noted
 BY WET DATE 4-3-68



Ret. J. White
 Repair Bridge #22
 Town Highway 201 (near 3 River)
 Bradford, Vt. 05830
 State of Vermont DOT
 Chester Conner Co.

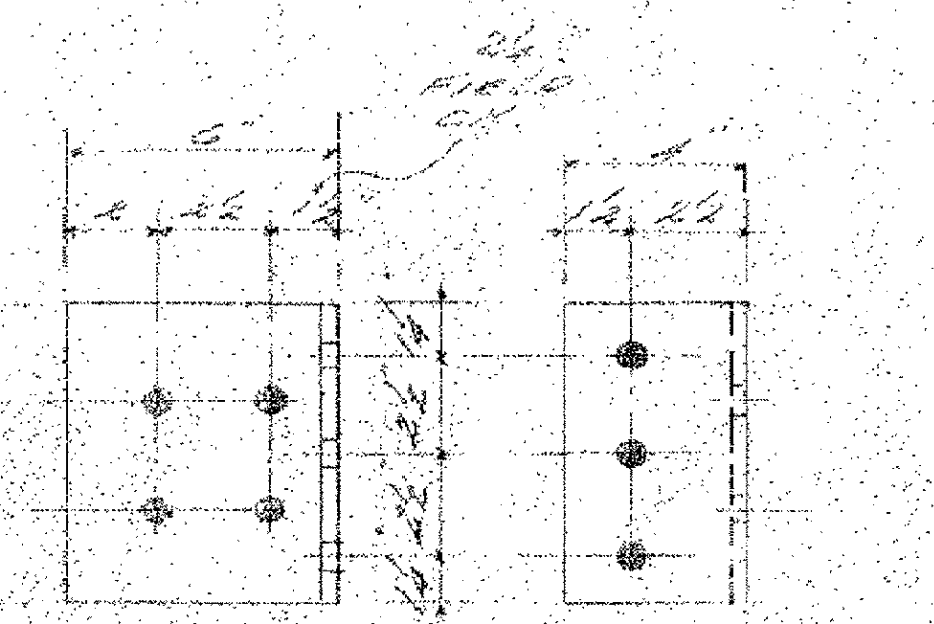
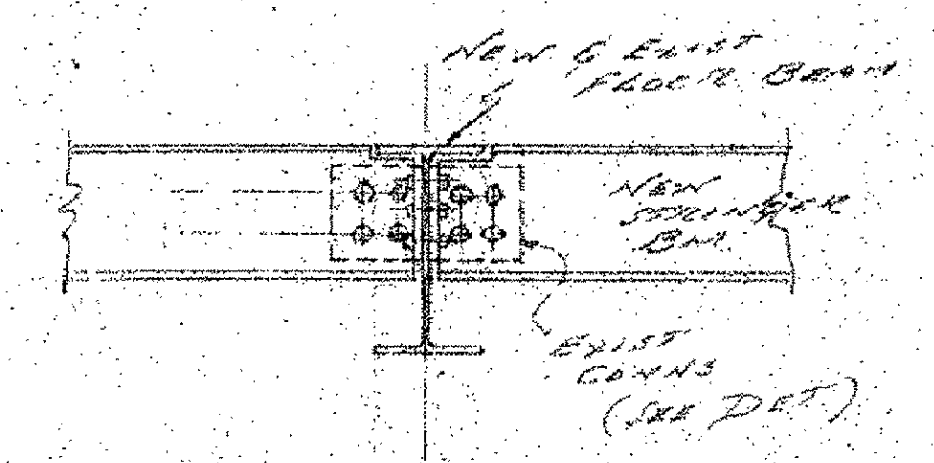
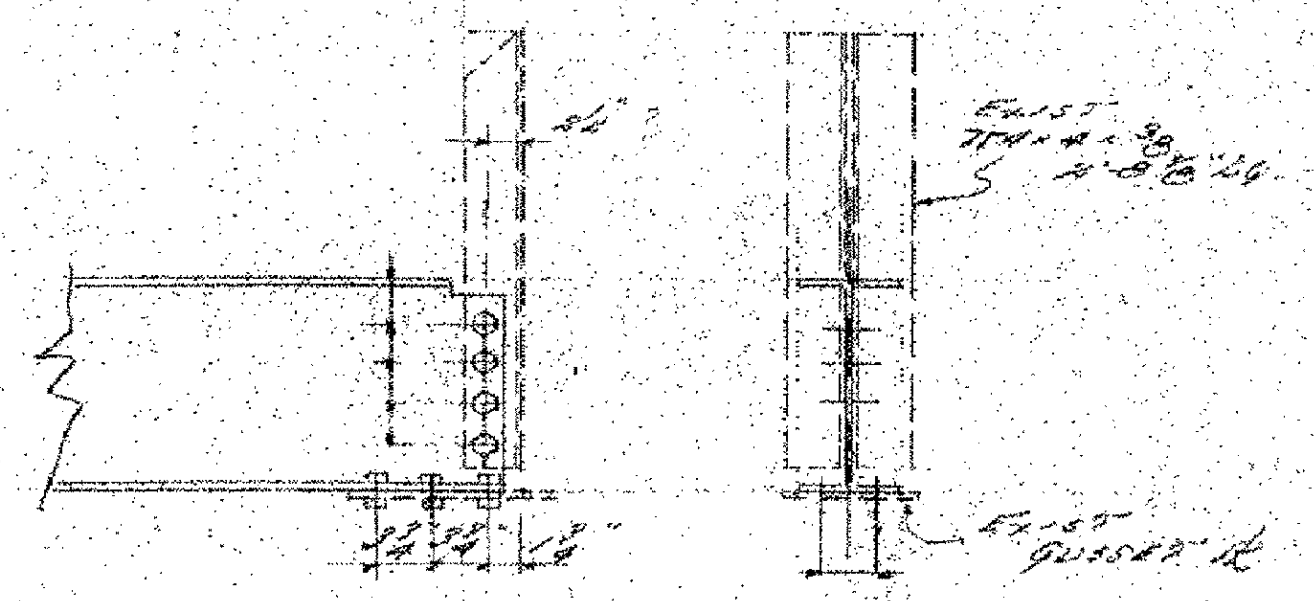
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 DESIGN FILE NAME: 96j286/structures/s96j286ref.dgn
 IPARM FILE NAME: s96j286ref3.i PLOT DATE: 22-NOV-2006
 DESIGNED BY: SQUAD LEADER: C. P. WILLIAMS DRAWN BY: J. WHITE
 CHECKED BY: M. FESSEL
 REFERENCE SHEET SHEET: 55 OF 63



one section of bridge rail ∇ 3 1/2" x 3" x 1/4"

PLAN

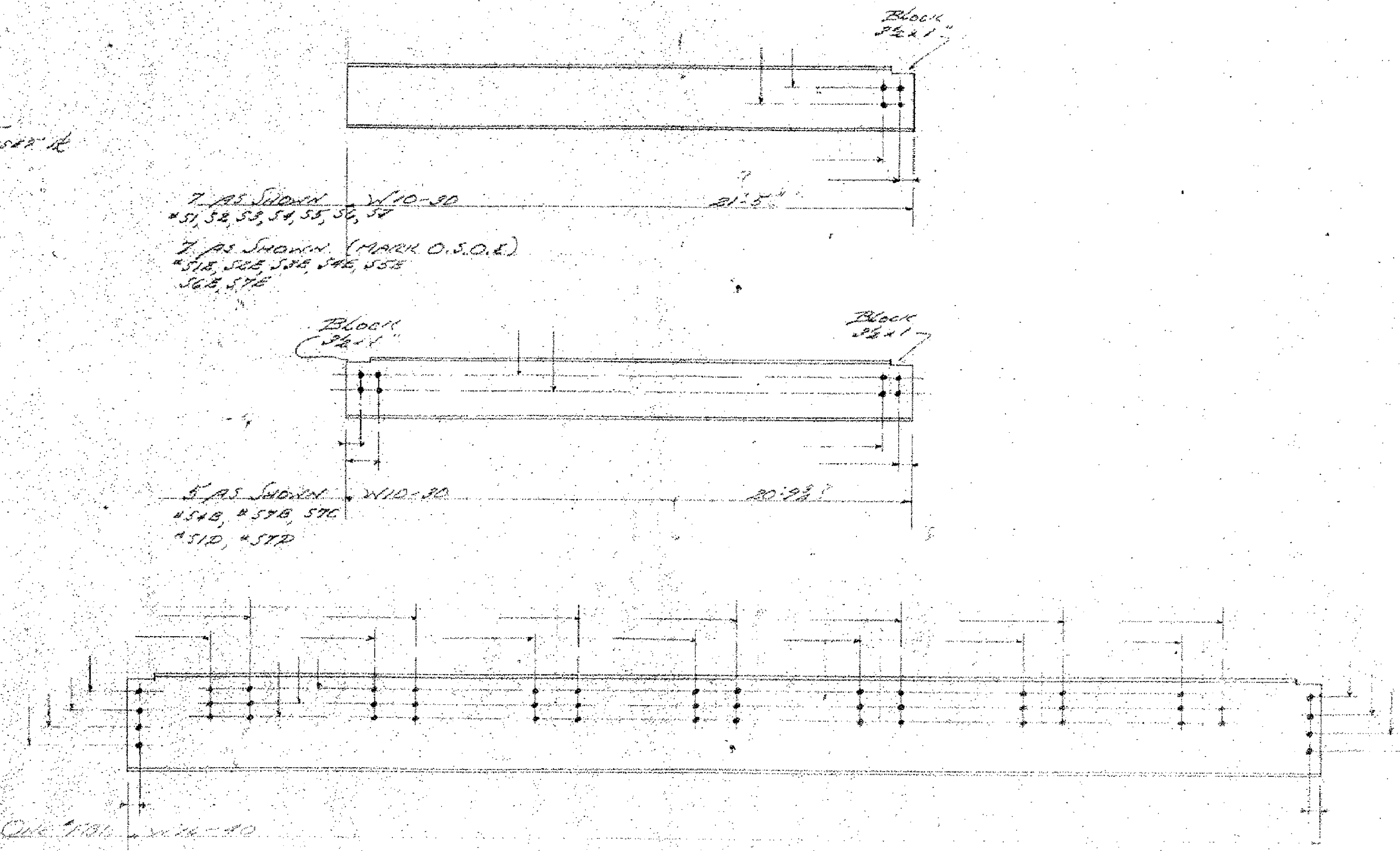
NOTE: ALL DIMENSIONS SHOWN --- EXIST
 DIMS TO REMAIN FOR DIMENSIONS
 SHOWN (---) NEW DIMS TO REMAIN
 EXISTING



7 AS SHOWN W10-30
 #51, #52, #53, #54, #55, #56, #57

7 AS SHOWN (MARK O.S.O.S.)
 #518, #519, #520, #521, #522, #523, #524, #525, #526, #527

5 AS SHOWN W10-30
 #518, #519, #520, #521, #522, #523, #524, #525, #526, #527



All dimensions are to be field checked by and are the responsibility of the Contractor

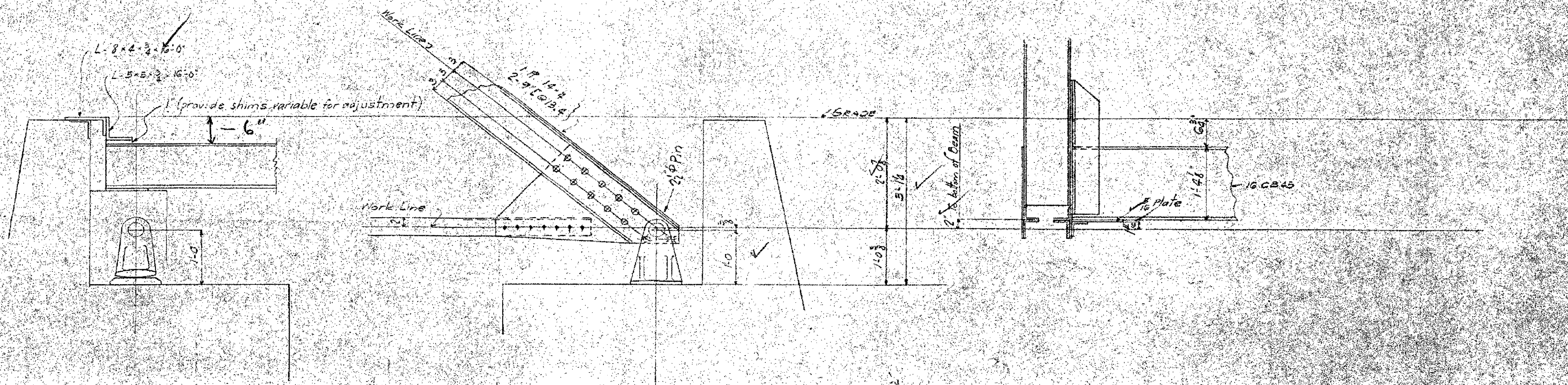
See note #3 on Contract plans
 # Stan. Spec. Sect. 513.07

How
 in
 to be
 to be

RECEIVED FEB 27 1984
 CK'D BY EW OK'D BY
 RESUBMIT APPROVED
 BY DATE 2-28-84
 Alvin G. Gandy

713330
 2/11/84

PROJECT: BRADFORD	PROJECT NO.: STP 1447 (28)
DESIGN FILE NAME: 96j286/structures/s96j286ref.dgn	PLOT DATE: 22-NOV-2006
IPARM FILE NAME: s96j286ref4.i	DRAWN BY: J. WHITE
DESIGNED BY:	CHECKED BY: M. FESSEL
SQUAD LEADER: C. P. WILLIAMS	SHEET: 56 OF 63
REFERENCE SHEET	



NO.	DESCRIPTION	RIVET	HOLES
1		5 1/2"	19 1/4"
2		4"	7"

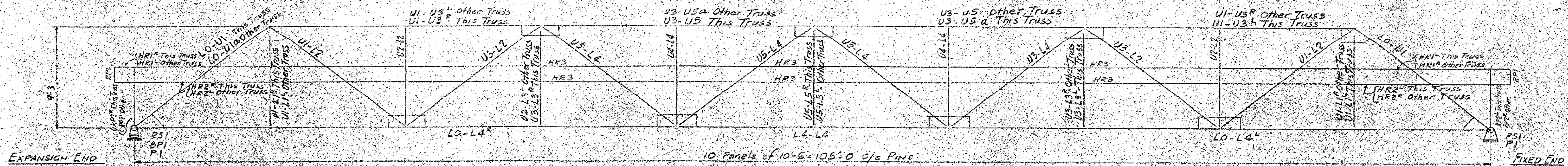
CONTENTS OF SHEET

NAME OF STRUCTURE
 CREAMERY BRIDGE BRADFORD, VT

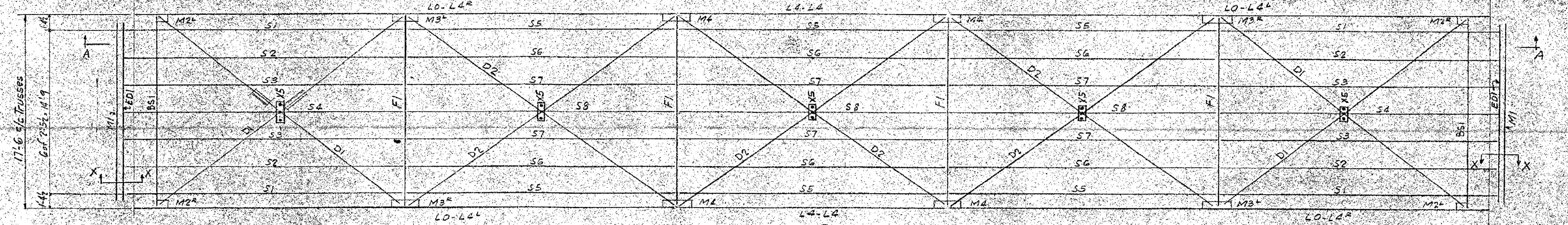
DATE
 11/16/06

AMERICAN BRIDGE COMPANY
 BRADFORD, VT PLANT
 ORDER No. SHEET No.

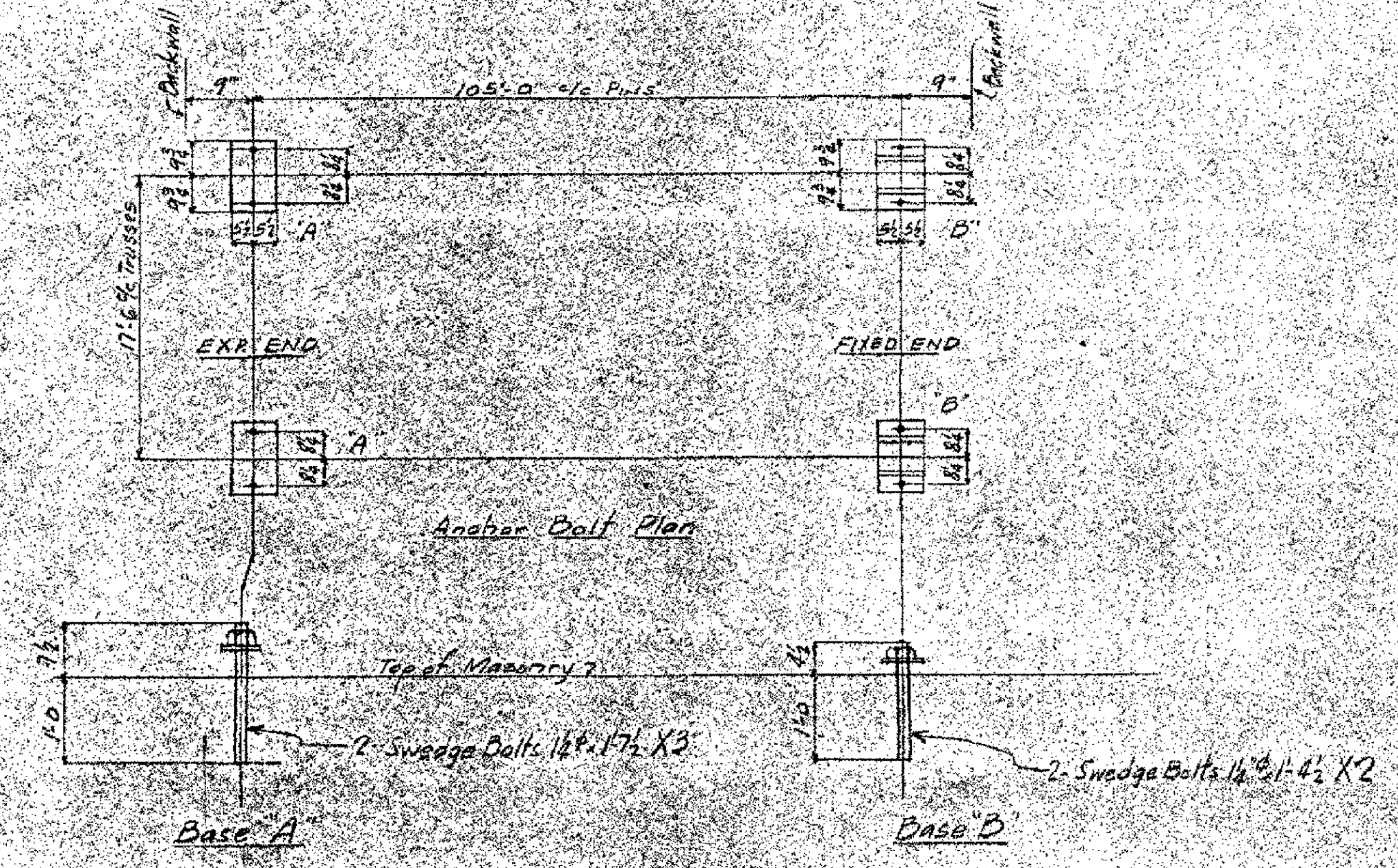
PROJECT: BRADFORD PROJECT NO.: STP 1447 (28)
 DESIGN FILE NAME: 96j286/structures/s96j286ref.dgn
 IPARM FILE NAME: s96j286ref5.i PLOT DATE: 22-NOV-2006
 DESIGNED BY: DRAWN BY: J. WHITE
 SQUAD LEADER: C. P. WILLIAMS CHECKED BY: M. FESSEL
 REFERENCE SHEET SHEET: 57 OF 63



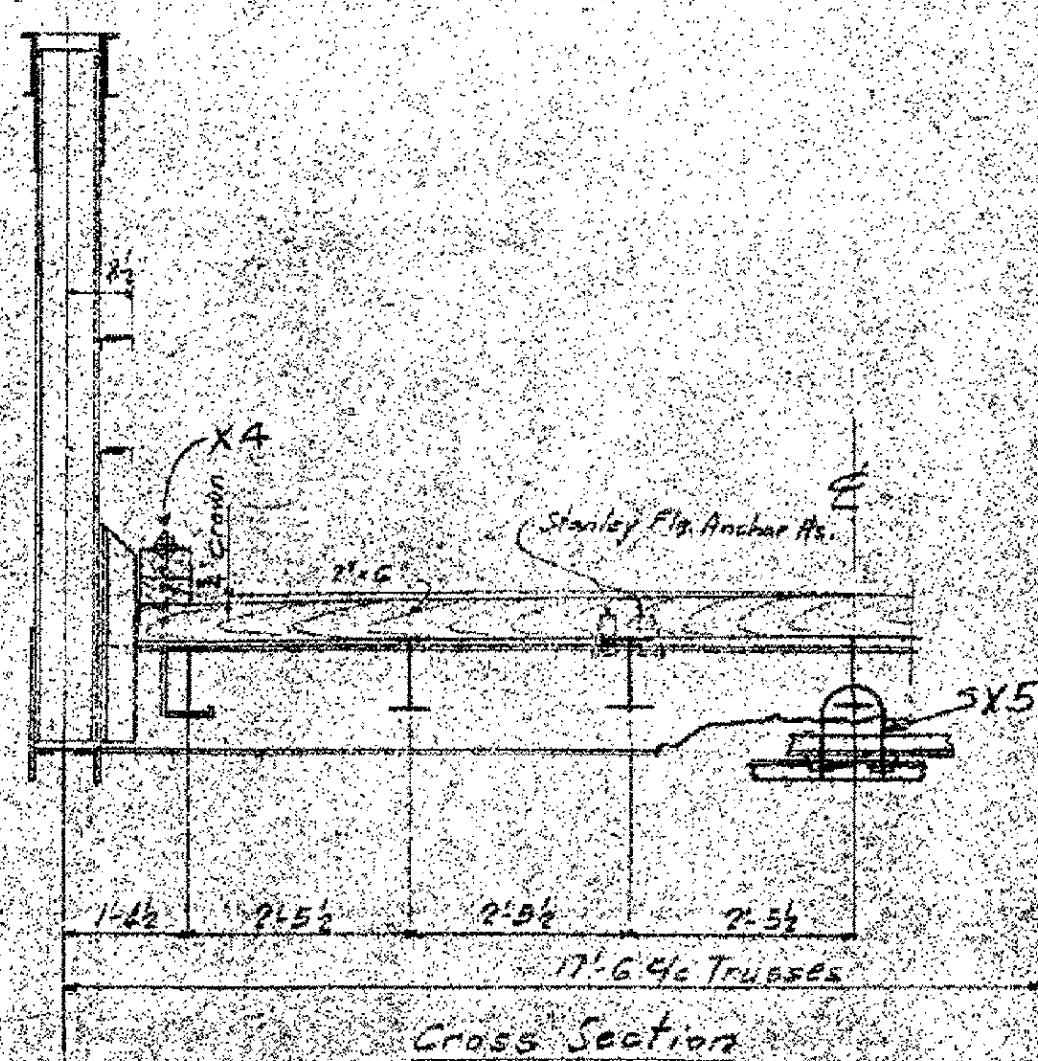
SECTION AA



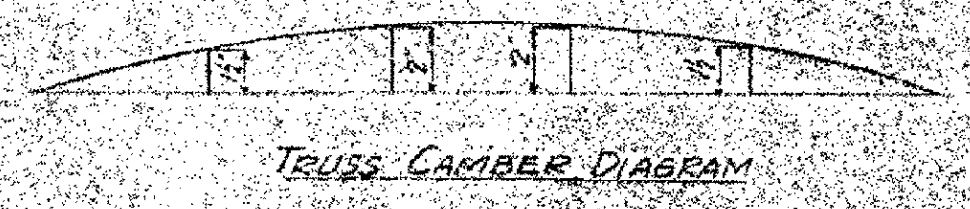
FLOOR PLAN



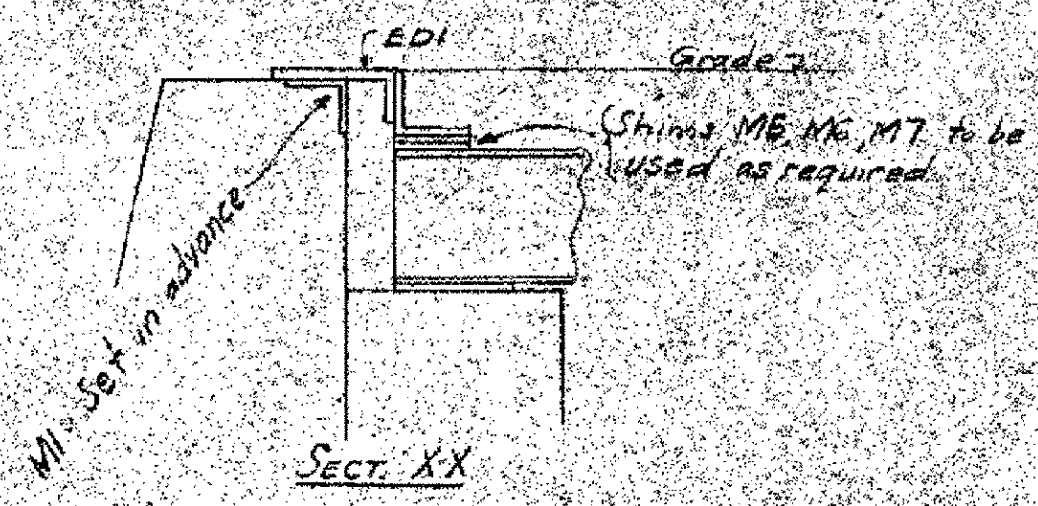
Anchor Bolt Plan



Cross Section



TRUSS CAMBER DIAGRAM



SECT. XX

*Nov-1-14
A. O. S. Subp*

Anchor Bolts furnished by A.B. Co. and set by Others.
Shims M5, M6, M7 to be used under End Darns as required to bring IT to proper elevation. See Section XX.

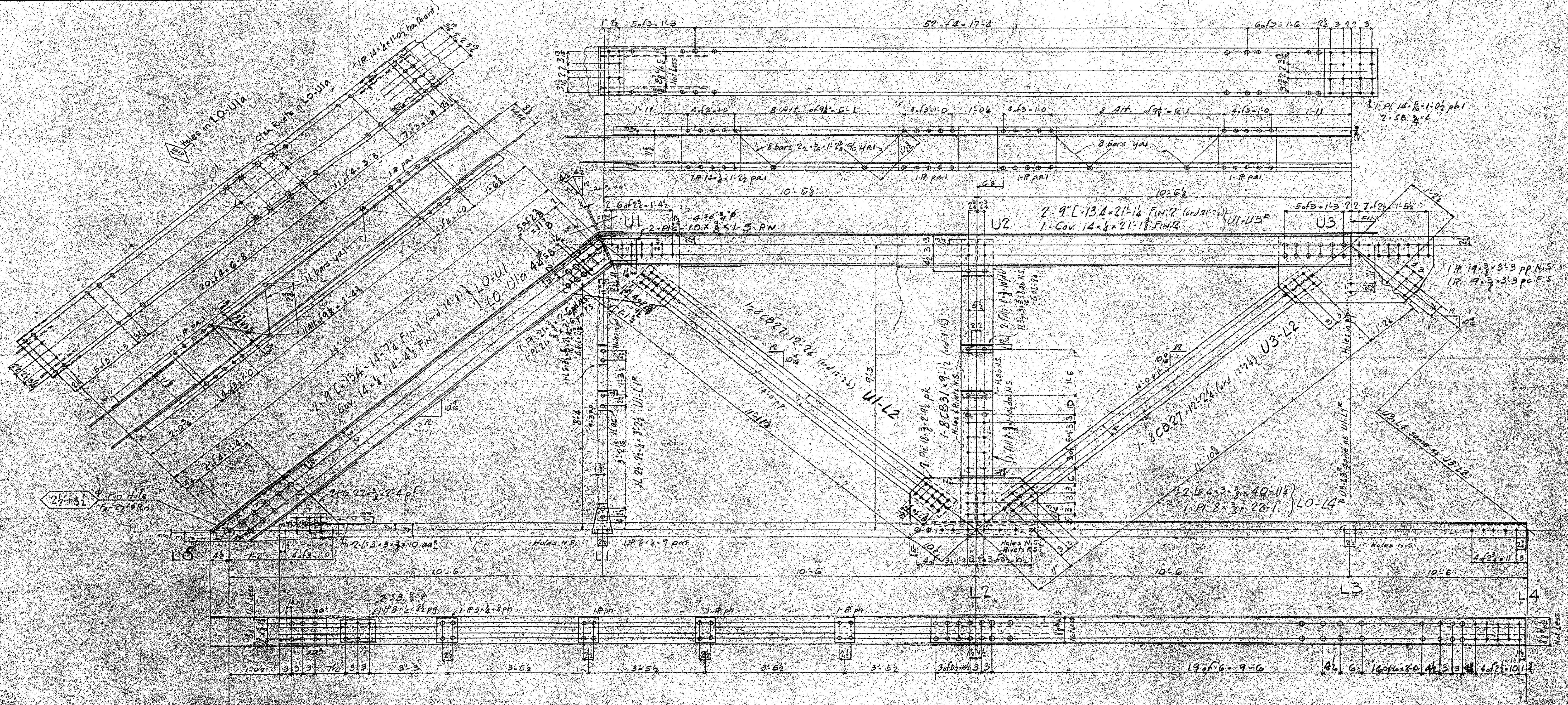
ERECTION DIAGRAM AND ANCHOR BOLT PLAN
CREAMERY BRIDGE
BRADFORD, VT.

AMERICAN BRIDGE COMPANY
DRAWINGS MADE AT _____ PLANT
WORK FABRICATED AT _____ PLANT
IN CHARGE OF _____
DRAWN BY SWS DATE 10-14-54
DRAWN CHECKED BY J.H.S. DATE 10/14/54
ORDER No. G5579 SHEET No. E1

SHOP PAINT: One coat red lead paint
FIELD PAINT: One coat red lead paint
One coat approved aluminum paint (Not furnished by American Bridge Co.)

BRADFORD

PROJECT: BRADFORD	PROJECT NO. : STP 1447 (28)
DESIGN FILE NAME: s96j286/structures/s96j286ref.dgn	PLOT DATE: 22-NOV-2006
IPARM FILE NAME: s96j286ref6.i	DRAWN BY: J. WHITE
DESIGNED BY:	CHECKED BY: M. FESSEL
SQUAD LEADER: C. P. WILLIAMS	SHEET: 58 OF 63
REFERENCE SHEET	

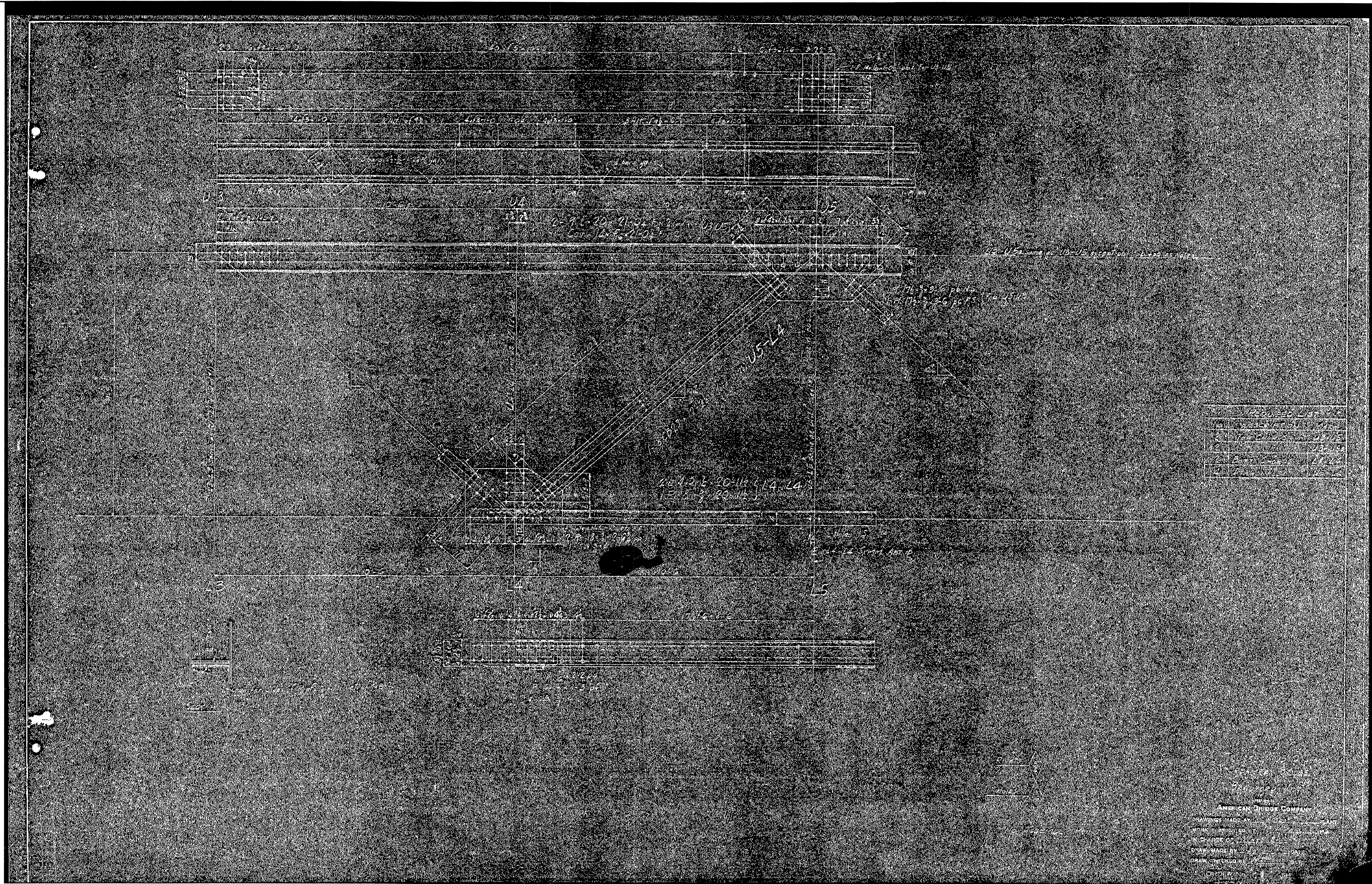


REQUIRED LIST		
NO.	DESCRIPTION	MARK
3	END POSTS	LO-U1
1	"	LO-U2
2	TOP CHORDS	U1-U3 ^R
2	TOP CHORDS	U1-U3 ^L
4	VERTICALS	U2-L2
4	"	U3-L2
2	"	U1-L1
2	"	U3-L3 ^R
1	"	U5-L3 ^R
2	"	U1-L1
2	"	U3-L3 ^L
1	"	U5-L5
2	CUT CHORDS	LO-L3 ^R
2	"	LO-L3 ^L
2	DIAGONALS	U1-L2
2	"	U3-L2
2	"	U2-L2

ALIKE
ALIKE
ALIKE

Rivets
Holes
No ASSEMBLY PAINT

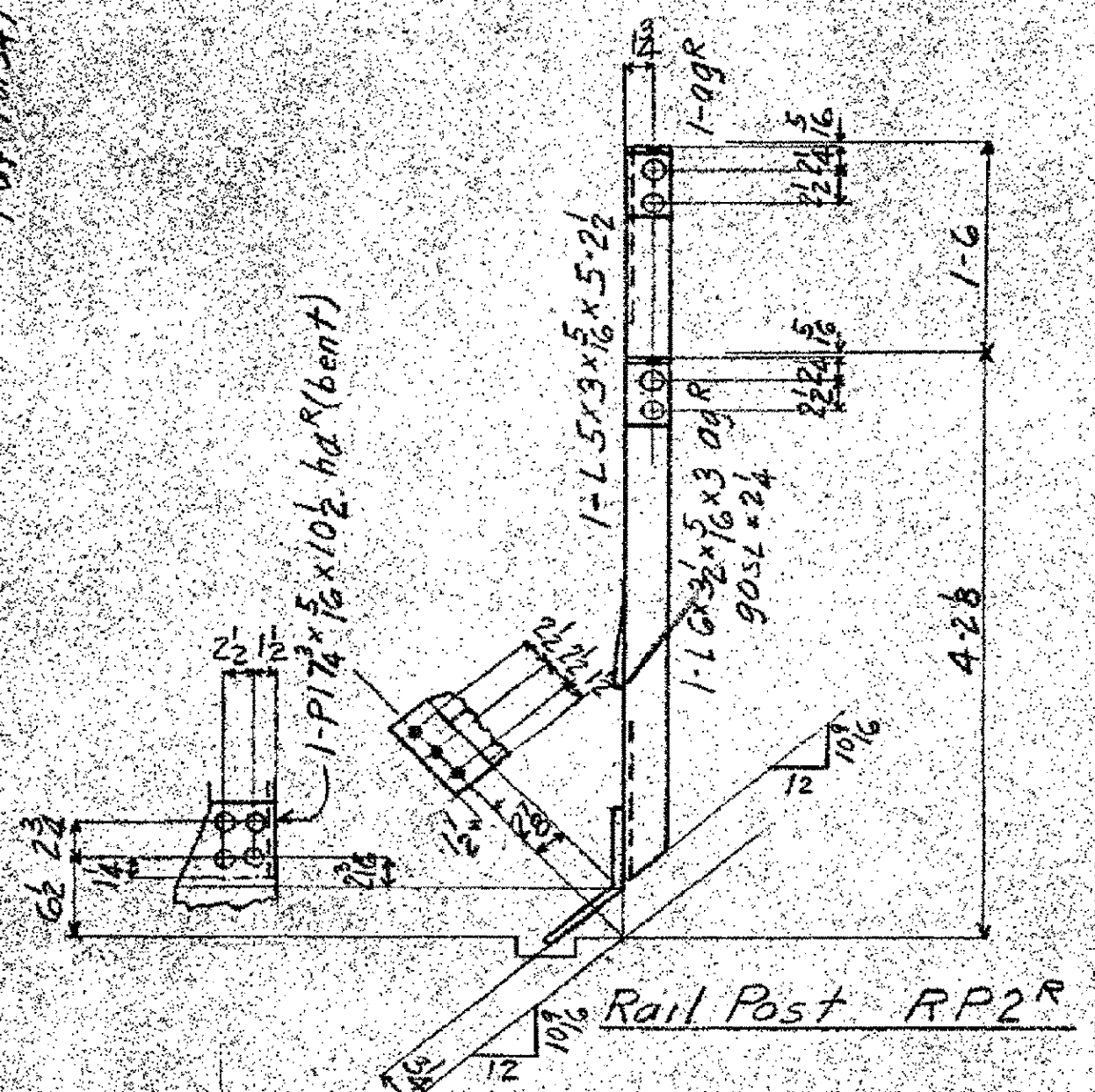
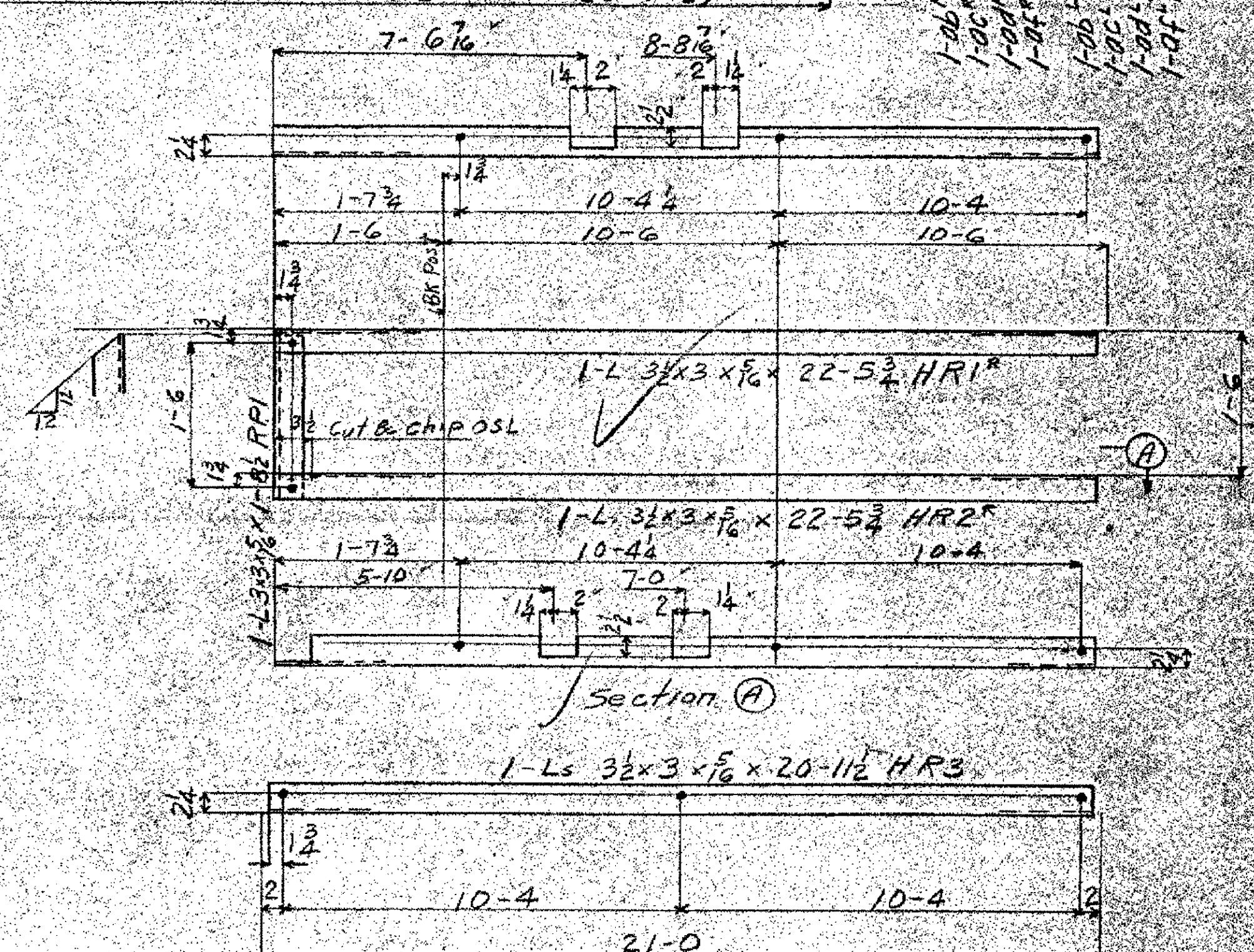
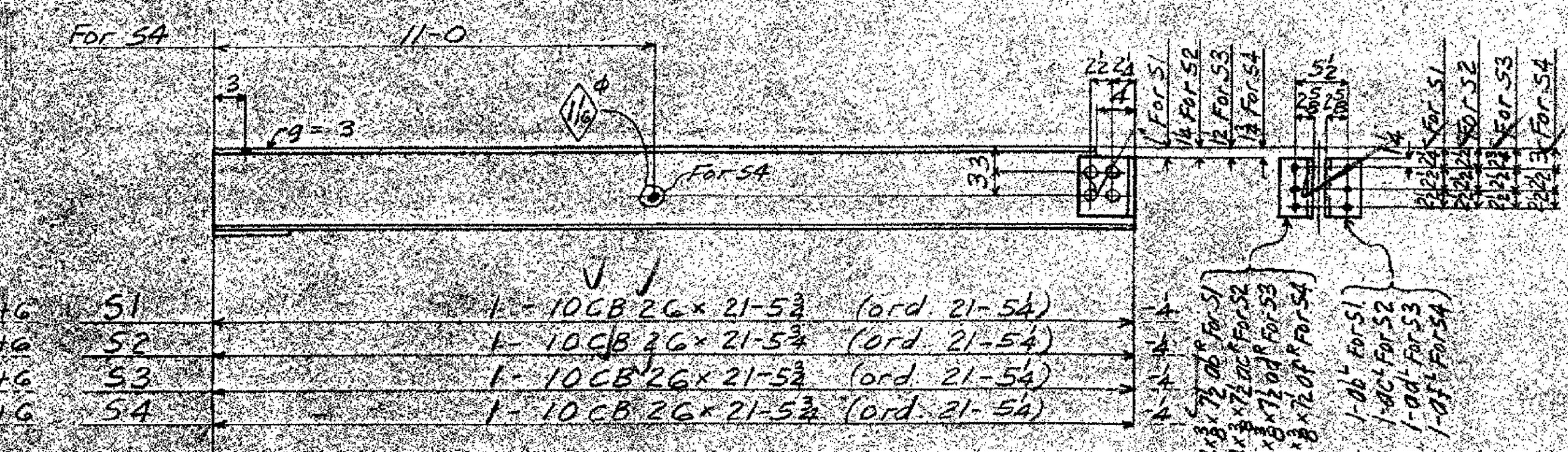
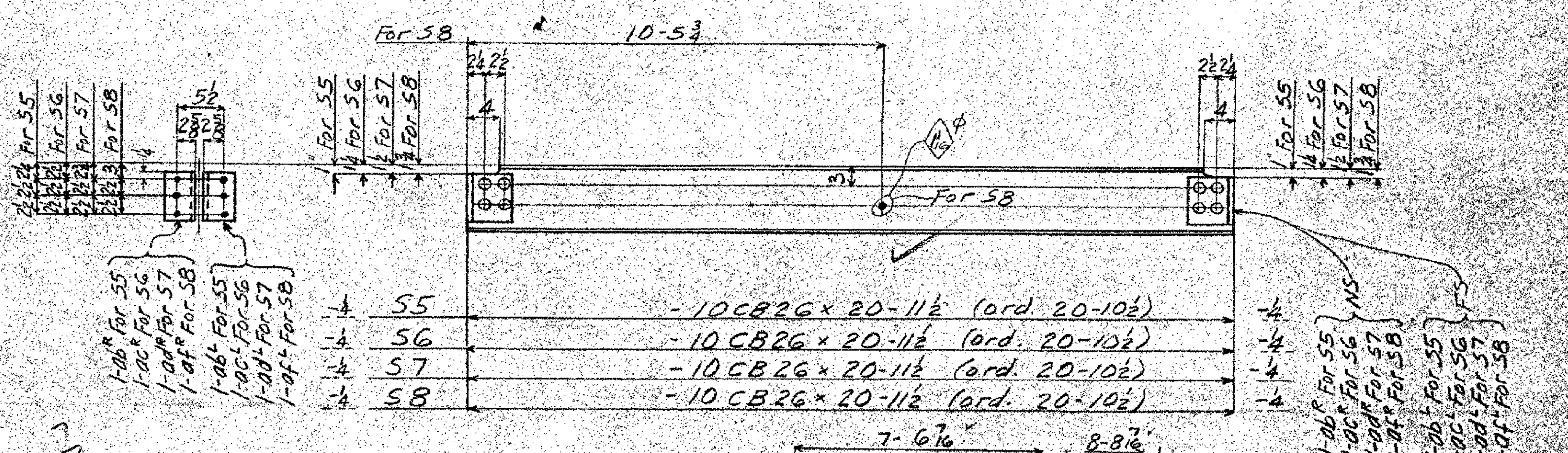
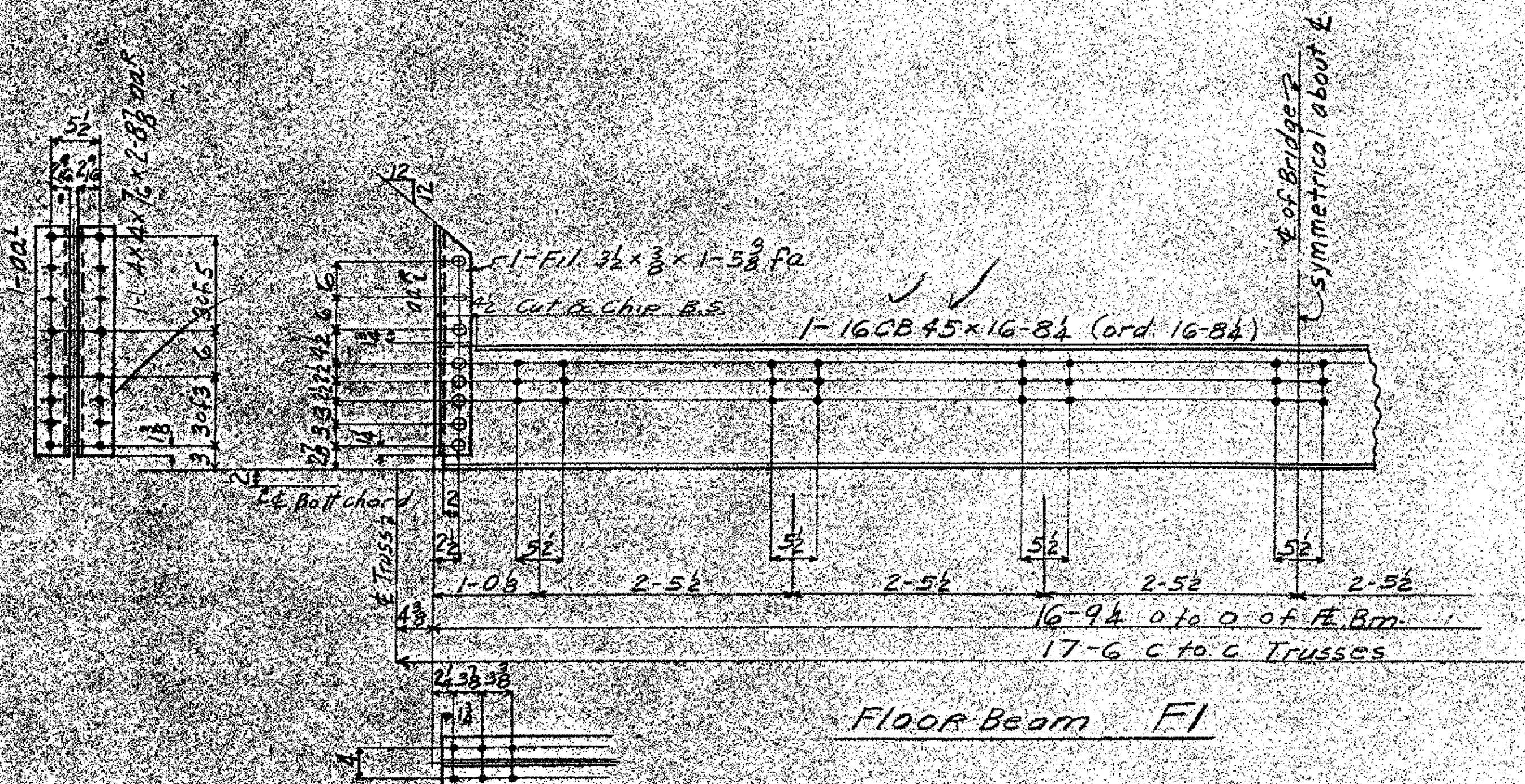
TRUSSES 105'-0" SPAN
CREAMERY BRIDGE
BRADFORD, VT.
AMERICAN BRIDGE COMPANY
DRAWINGS MADE AT BRADFORD PLANT
WORK FABRICATED AT BRADFORD PLANT
IN CHARGE OF WHEELER
DRAW. MADE BY S.M.S. DATE 10-6-24
DRAW. CHECKED BY H.W.S. DATE 10-10-24
ORDER No. 65579 SHEET No. 1



1	10/10/06
2	10/10/06
3	10/10/06
4	10/10/06
5	10/10/06
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98	10/10/06
99	10/10/06
100	10/10/06

AMERICAN BRIDGE COMPANY
 DRAWING MADE BY: J. WHITE
 CHECKED BY: M. FESSEL
 PROJECT NO. STP 1447 (28)

PROJECT: BRADFORD	PROJECT NO.: STP 1447 (28)
DESIGN FILE NAME: 96j286/structures/s96j286ref.dgn	PLOT DATE: 22-NOV-2006
IPARM FILE NAME: s96j286ref8.i	DRAWN BY: J. WHITE
DESIGNED BY:	CHECKED BY: M. FESSEL
SQUAD LEADER: C. P. WILLIAMS	SHEET: 60 OF 63
REFERENCE SHEET	



REQUIRED LIST

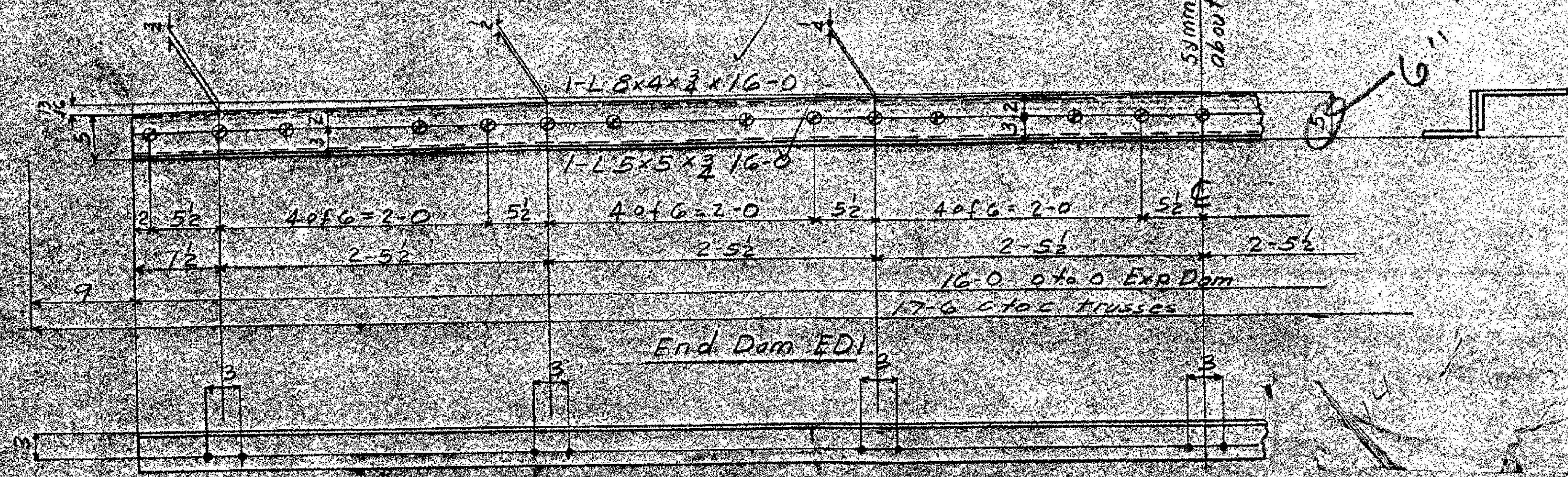
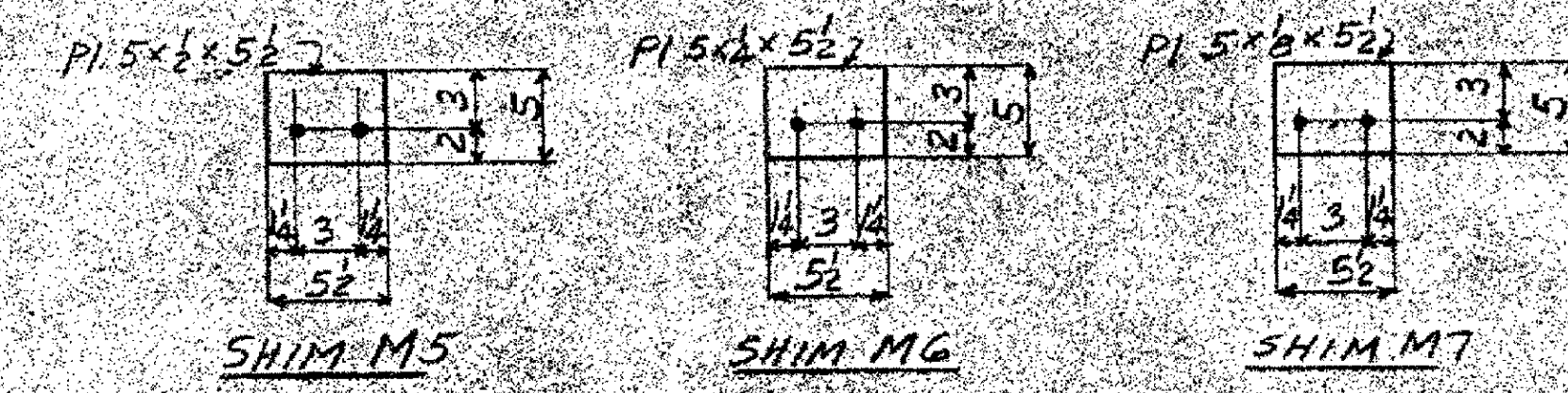
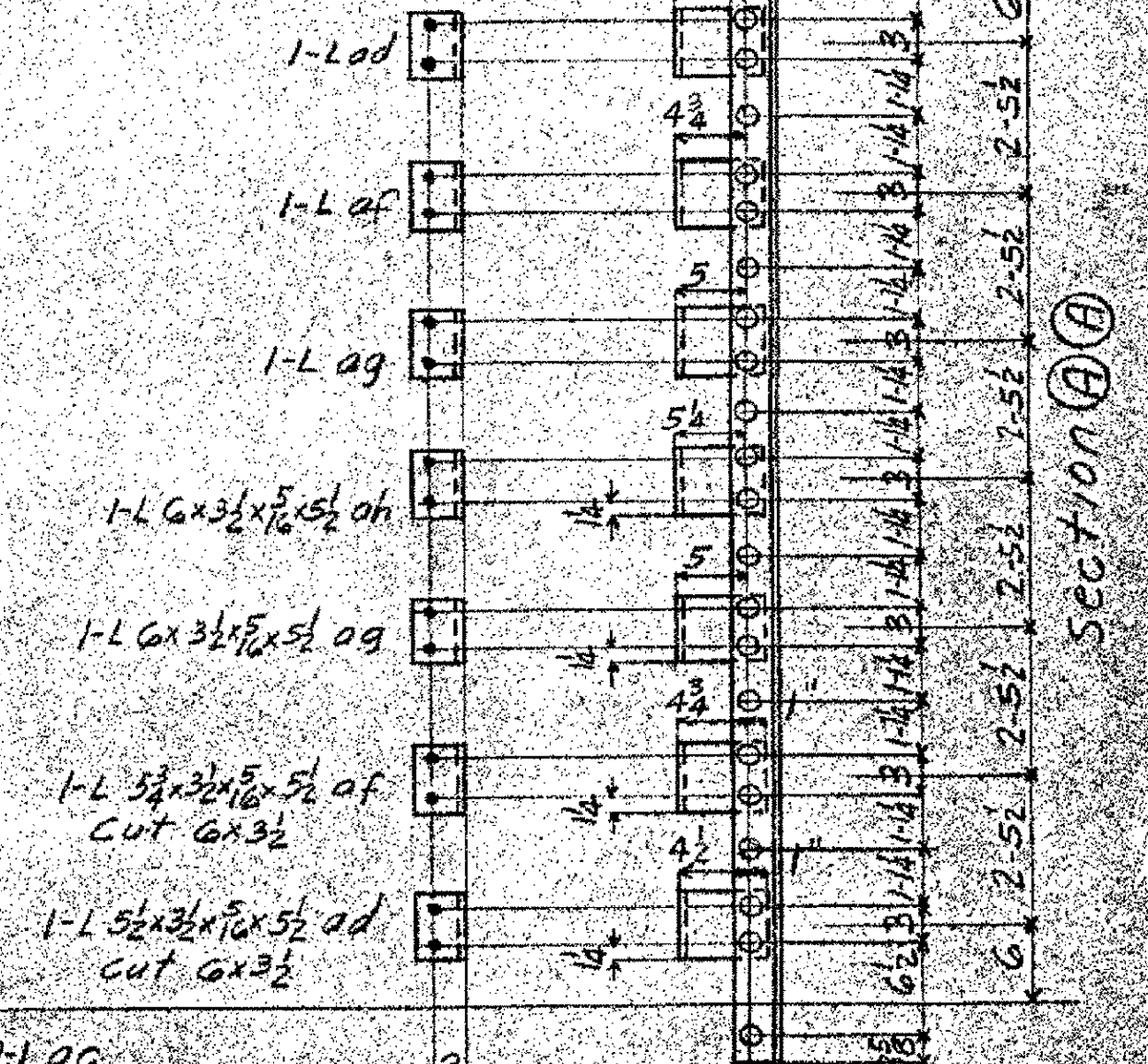
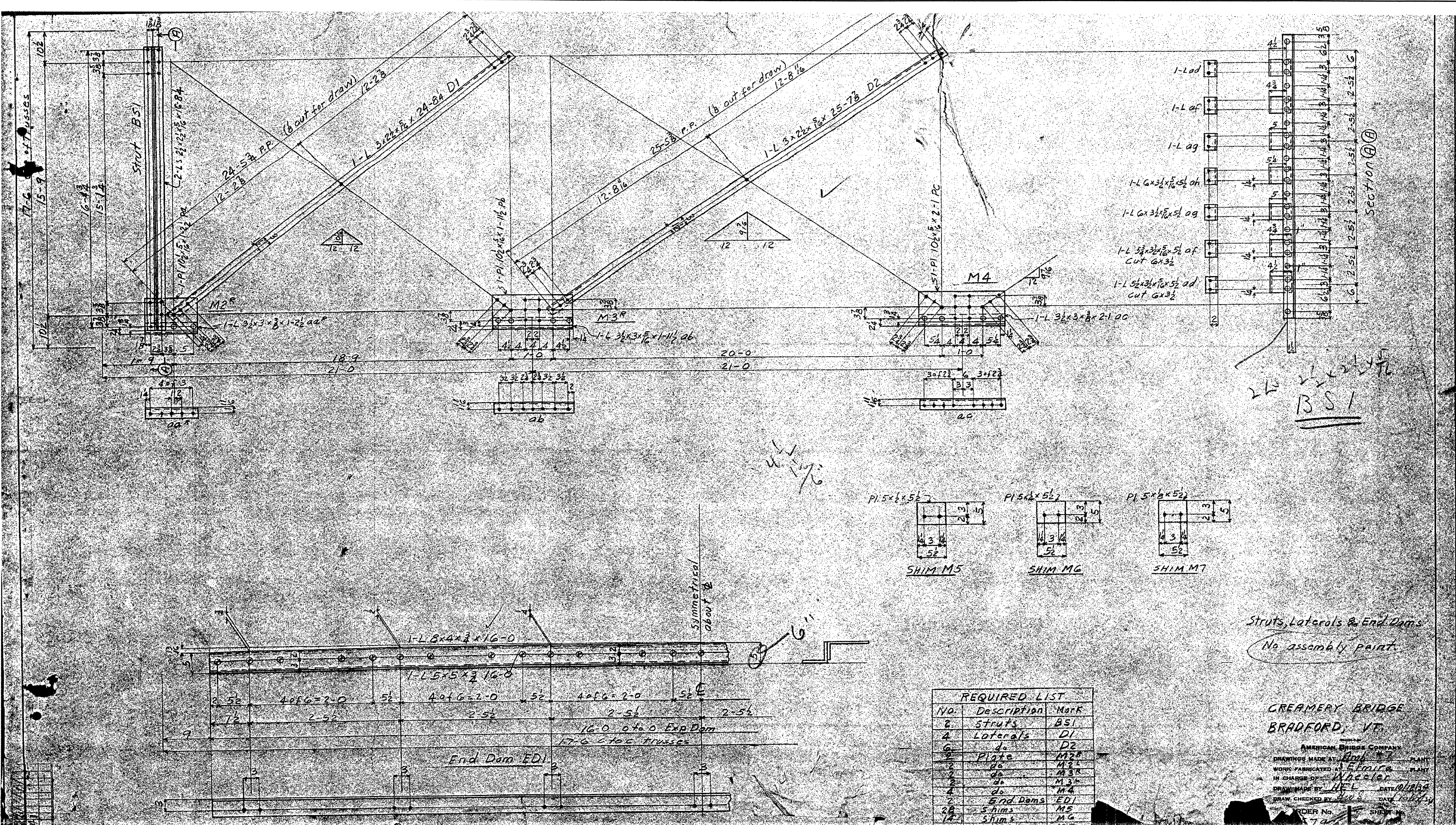
No	Description	Mark
4	Floorbeams	F1
4	Stringers	S1
4	do	S2
4	do	S3
2	do	S4
2	do	S5
2	do	S6
2	do	S7
3	do	S8
2	Handrail	HRI*
2	do	HRI*
2	do	HRI*
2	do	HRI*
2	do	HRI*
4	Rail Post	RP1
2	do	RP2
2	do	RP2*

No assembly paint
Floorbeams, Stringers & Railing

CREAMERY BRIDGE
BRADFORD, VT.

AMERICAN BRIDGE COMPANY
DRAWINGS MADE AT Amk #5 PLANT
WORK FABRICATED AT Elmira PLANT
IN CHARGE OF Wheeler
DRAWN BY HEL DATE 10/17/34
DRAW CHECKED BY HHS DATE 10/17/34

ORDER No. 1-5579 SHEET No. 2



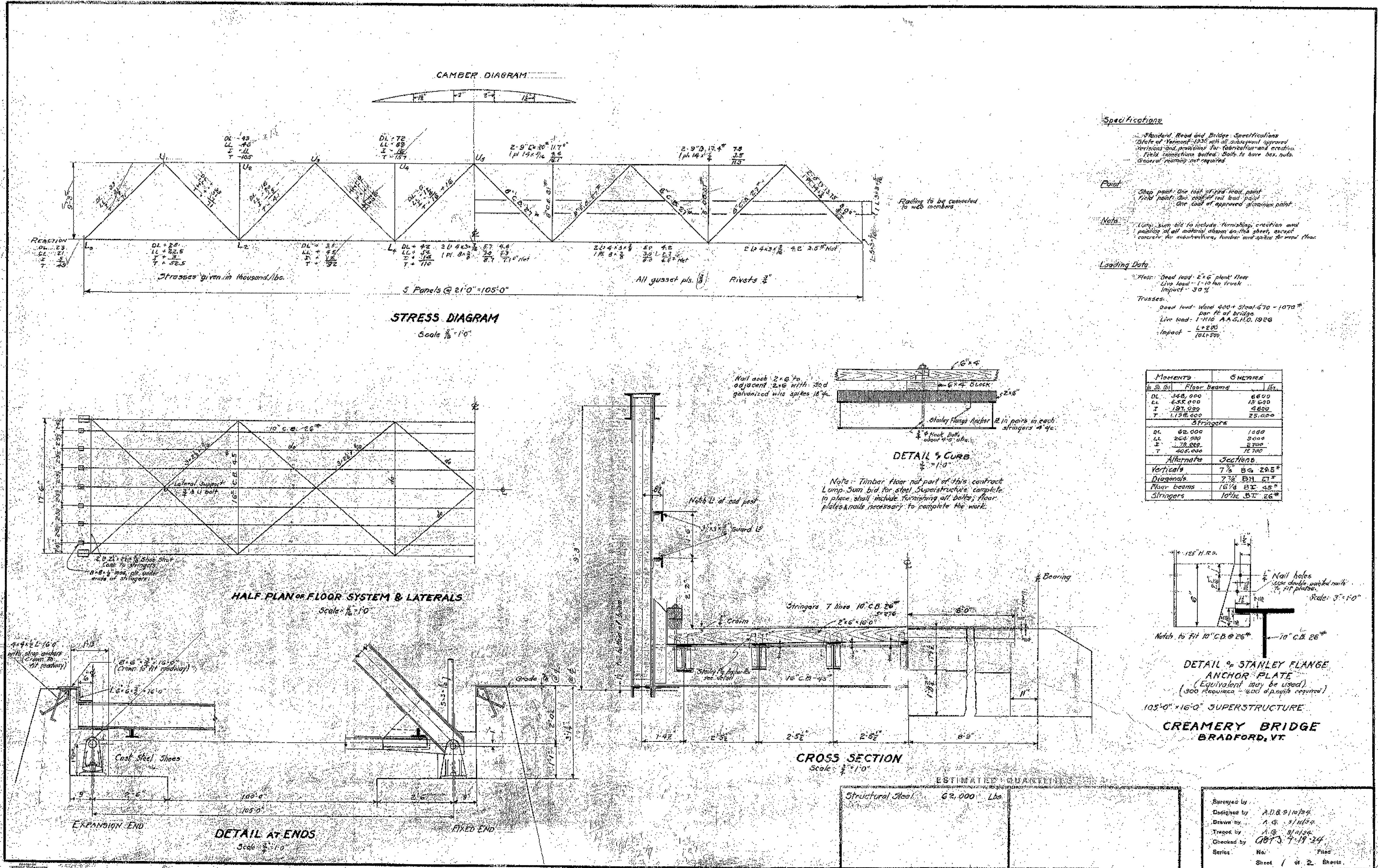
REQUIRED LIST		
NO.	DESCRIPTION	MARK
2	Struts	BS1
4	Laterals	D1
6	do	D2
2	Plate	M2P
2	do	M3P
2	do	M3R
2	do	M3L
4	do	M4
2	End Dams	ED1
28	Shims	M5
14	Shims	M6
14	Shims	M7

Struts, Laterals & End Dams
 No assembly paint.

CREAMERY BRIDGE
 BRADFORD, VT

AMERICAN BRIDGE COMPANY
 DRAWINGS MADE AT Elmira PLANT
 WORK FABRICATED AT Elmira PLANT
 IN CHARGE OF Wheeler
 DRAWN BY WEL DATE 10/15/10
 DRAW CHECKED BY WEL DATE 10/15/10

PROJECT: BRADFORD	PROJECT NO.: STP 1447 (28)
DESIGN FILE NAME: 96j286/structures/s96j286ref.dgn	PLOT DATE: 22-NOV-2006
IPARM FILE NAME: s96j286ref10.i	DRAWN BY: J. WHITE
DESIGNED BY:	CHECKED BY: M.FESSEL
SQUAD LEADER: C.P. WILLIAMS	SHEET: 62 OF 63
REFERENCE SHEET	



Specifications

Standard Road and Bridge Specifications
 Grade of Vermont-1926 with all subsequent changes
 Vertical and provisions for lateral forces and erosion
 Field connections bolted; bolts to have hex nuts
 General painting not required

Paint

Shop paint: One coat of red lead paint
 Field paint: One coat of red lead paint
 One coat of approved aluminum paint

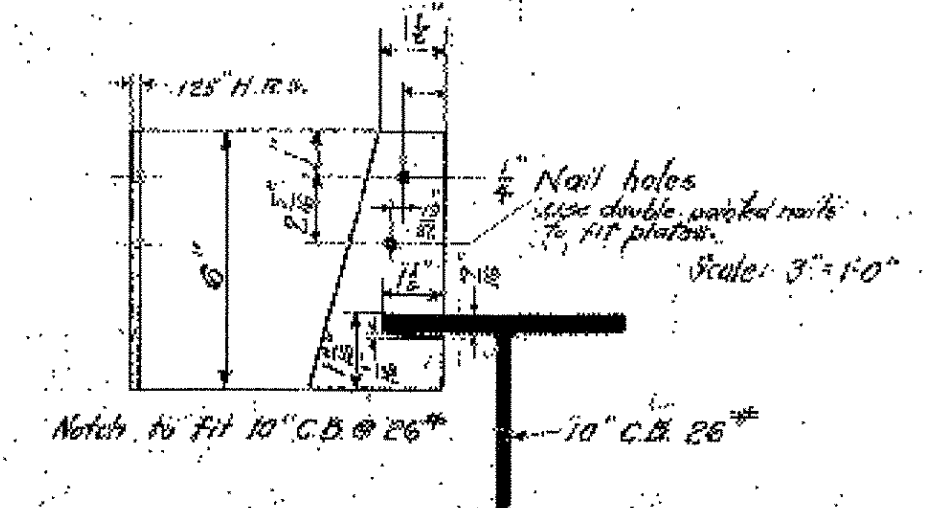
Notes

Large sum bid to include furnishing, erection and painting of all material shown on this sheet, except concrete for substructure, timber and spalls for road floor

Loading Data

Floor: Dead load - 2" x 6" plank floor
 Live load - 1-10 ton truck
 Impact - 30%
 Trusses: Dead load - Wood 400 + Steel 570 - 1070 per ft of bridge
 Live load - 1-110 A.A.S.H.O. 1926
 Impact - 101-500

Moments		Shears	
At	Max. Min.	At	Max. Min.
Floor Beams			
DL	148,000		6600
LL	433,000		18,000
T	197,000		4850
T	1,138,000		25,000
Stringers			
DL	62,000		1800
LL	204,000		8000
T	78,000		2700
T	408,000		12,700
Alternate Sections		Sections	
Verticals	7 1/2" B.C. 2A5"		
Diagonals	7 1/2" B.H. 21"		
Floor beams	16 1/2" B.C. 45"		
Stringers	10 1/2" B.T. 26"		



DETAIL OF STANLEY FLANGE ANCHOR PLATE
 (Equivalent may be used)
 (See Specification - 2000 for details required)
 105'-0" x 16'-0" SUPERSTRUCTURE
CREAMERY BRIDGE
 BRADFORD, VT.

ESTIMATED QUANTITIES

Structural Steel	62,000 Lbs.
------------------	-------------

Surveyed by
 Designed by A.D.B. 9/10/24
 Drawn by A.G. 9/10/24
 Traced by A.G. 9/10/24
 Checked by G.B.S. 7-19-24
 Series No. _____ Filed _____
 Sheet 1 of 2 Sheets

STATE OF VERMONT
 DEPT. OF TRANSPORTATION
 WIND BRADFORD ORANGE COUNTY
 OBJECT NO. STP 144728 ITEM 531.10
 EDGE NO. 13
 STIN CONSTRUCTION, INC.

COSMEC INC.

WELDING PROCEDURE SPECIFICATION

SPECIFICATIONS AND CODE: D1.5
 MATERIAL SPECIFICATION: ASTM A240 TYPE 304 TO ASTM A709 GR 50W
 WELDING PROCESS: GTAW
 MANUAL OR MACHINE: MANUAL
 POSITION OF WELDING: 1F & 2F
 FILLER METAL SPECIFICATION: ER308L
 MANUFACTURER: HARRIS WELCO
 FLUX: INTERNAL
 SHIELDING GAS: ARCON
 SINGLE OR MULTIPLE PASSES: SINGLE
 SINGLE OR MULTIPLE ARC: SINGLE
 WELDING CURRENT: DC
 POLARITY: REVERSE (EN)
 WELDING PROGRESSION: CLEANED & PREPARED BRIGHT METAL
 ROOT TREATMENT: SEE BELOW
 PREHEAT AND INTERPASS TEMPERATURE: SEE BELOW
 POSTHEAT TEMPERATURE: N/A
 HEAT INPUT: MIN. MAX.

CLASSIFICATION: A5.9
 TRADENAME:
 FLOW RATE: 45 CFH
 RESUBMIT: APPROVED
 BY: DATE: 3-22-07

RECEIVED
 MAR 12 2007

WELDING PROCEDURE

PASS NO.	ELECTRODE SIZE	WELDING CURRENT AMPERES	VOLTS	TRAVEL SPEED	JOINT DETAIL
ALL	3/32"	130-155	14-17	8.75-0.5	LAP JOINT

PREHEAT TEMPS.
 THICKNESS
 UP TO 3/4" 100 DEG.
 OVER 3/4" TO 1 1/2" 100 DEG.
 OVER 1 1/2" TO 2 1/2" 100 DEG.
 OVER 2 1/2" 100 DEG.

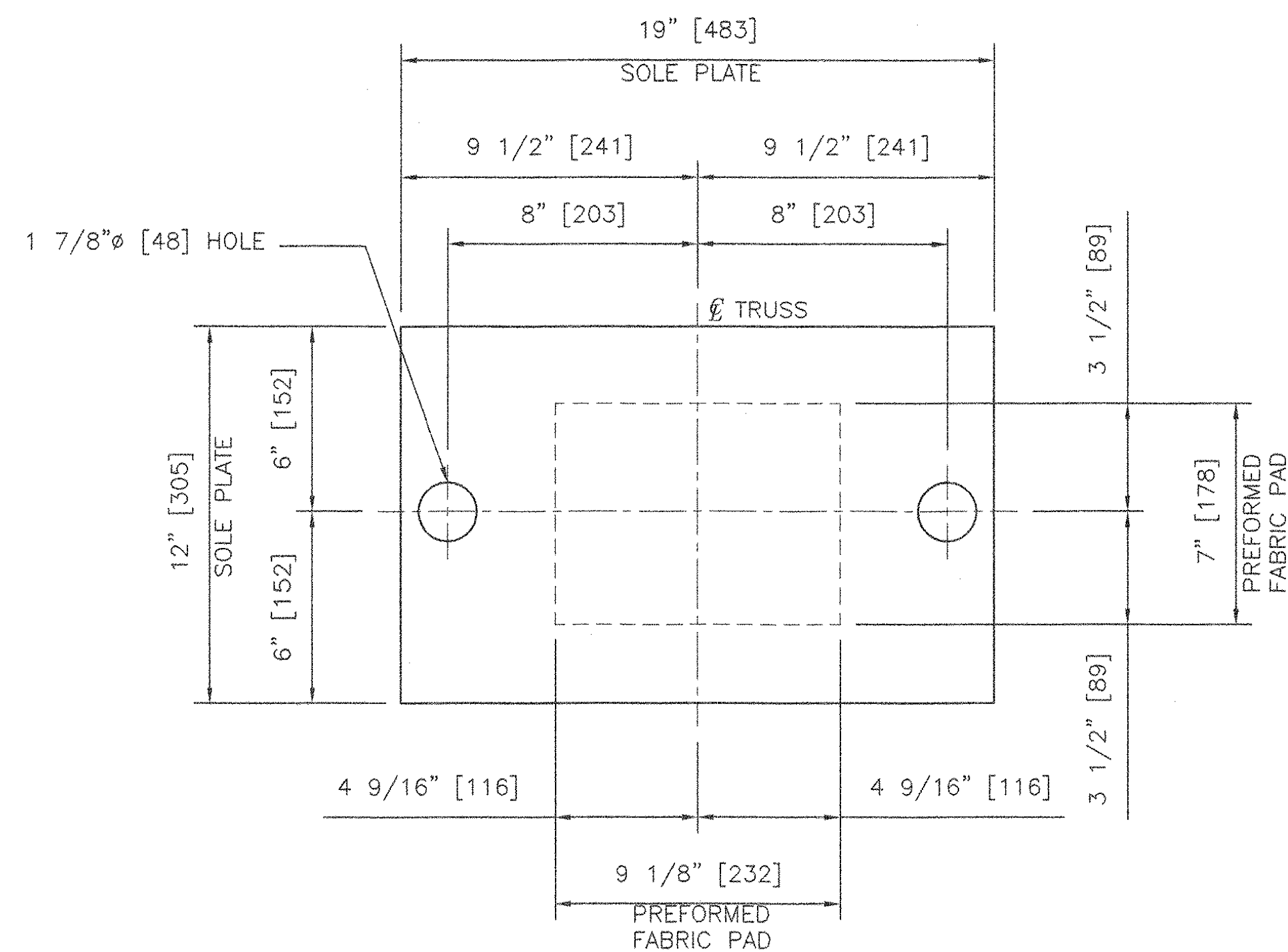
THIS PROCEDURE MAY VARY DUE TO FABRICATION SEQUENCE, FIT-UP, PASS SIZE, ETC.
 WITHIN THE LIMITATION OF VARIABLES GIVEN IN SECTION 5.
 SUPPORTING FOR: GTAW-WF-06
 PROCEDURE NO. GTAW-WF
 REVISION NO. 1

CONTRACTOR: COSMEC INC.
 AUTHORIZED BY: DONALD VOSE
 CW#01100851

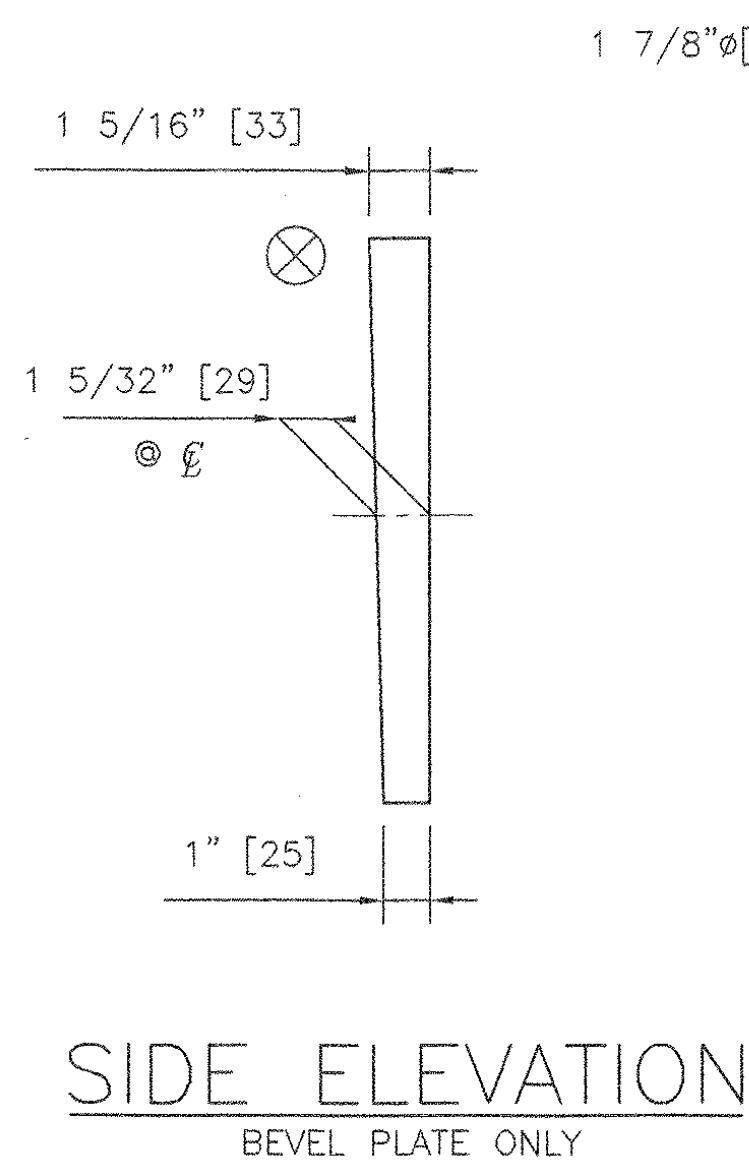
DATE: 2/12/2005



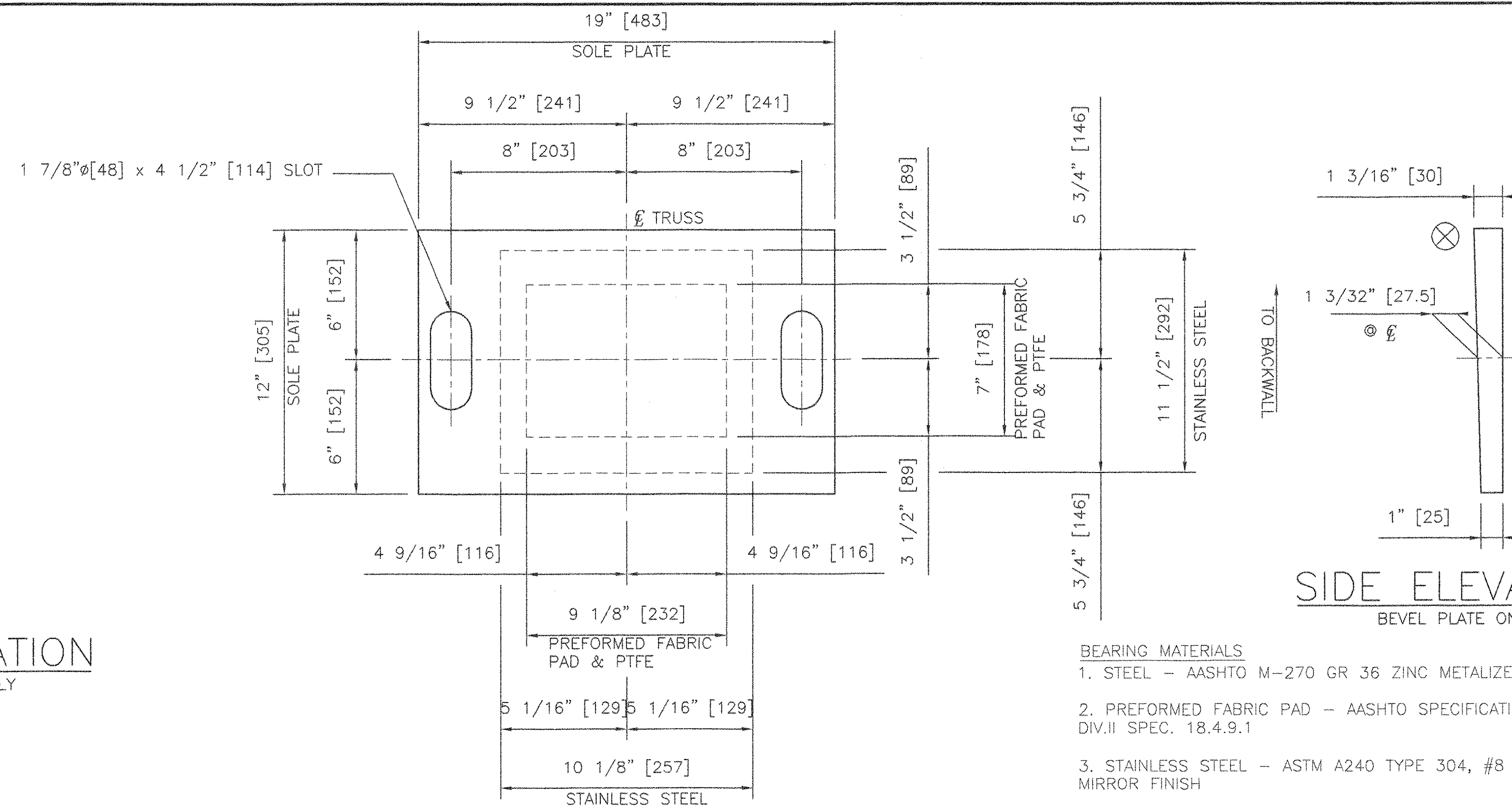
BRG 1



PLAN



SIDE ELEVATION
BEVEL PLATE ONLY



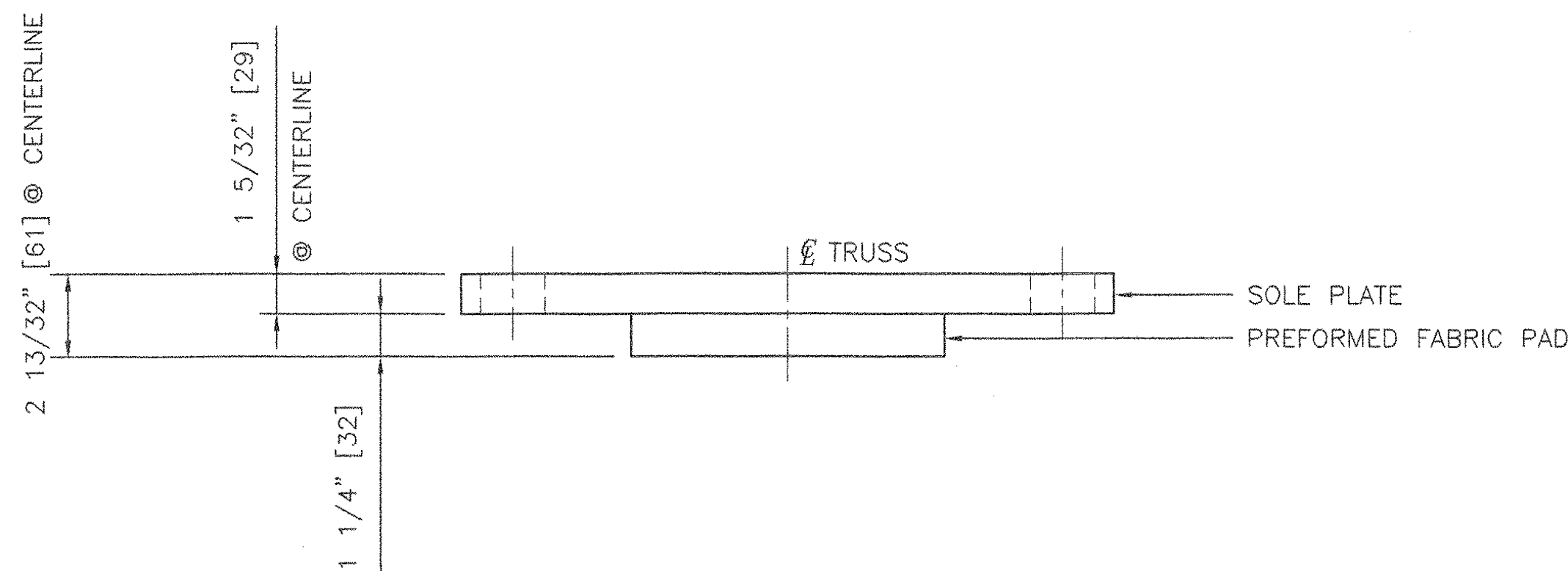
PLAN

SIDE ELEVATION
BEVEL PLATE ONLY

- BEARING MATERIALS**
1. STEEL - AASHTO M-270 GR 36 ZINC METALIZED
 2. PREFORMED FABRIC PAD - AASHTO SPECIFICATION DIV.II SPEC. 18.4.9.1
 3. STAINLESS STEEL - ASTM A240 TYPE 304, #8 MIRROR FINISH
 4. PTFE - ASTM D4894 VIRGIN UNFILLED
 5. ANCHOR BOLTS - SEE DETAIL
- BEARING NOTES:**

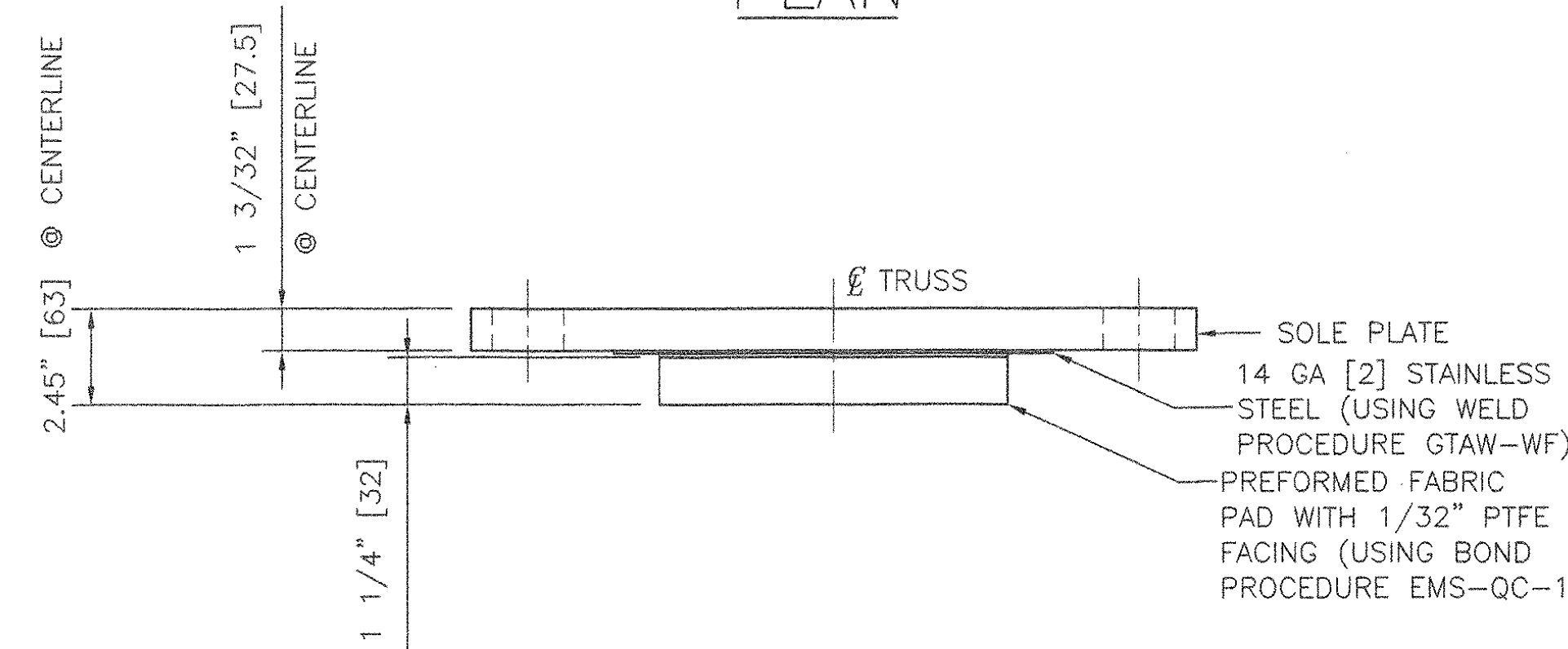
1. LOCATION OF FABRICATION - 70 SOUTH STREET WALPOLE, MA 02081
2. COSMEC, INC. REPRESENTATIVE: MR. MATT McANDREWS (508-668-6600)
3. UNITS= INCHES [MM]
4. ALL BEARING DEVICES SHALL BE ZINC METALIZED AS PER SUBSECTIONS 531.04(b) AND 506.15(c) OR (b). BEARINGS SHALL BE SEALED WITH AN APPROVED SEALER AS SPECIFIED IN STANDARD SPEC. SUBSECTION 506.15(b). AREAS OF METALIZING DAMAGED BY FIELD WELDING OR HANDLING SHALL BE PAINTED WITH AN APPROVED SEALANT, IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 513.06(f). Δ
5. MAXIMUM ALLOWABLE BEARING PRESSURE ON CONCRETE= 1000 PSI
MINIMUM ALLOWABLE DESIGN ROTATION= 0.015 RADIAN
HORIZONTAL CAPACITY SHALL BE A MINIMUM OF 10% VERTICAL LOAD
DESIGN LOAD PER BEARING: 258 kN [58.10 KIPS] TRUSS
80 kN [18.00 KIPS] STRINGER

6. \otimes MARKS HIGH END OF BEVELED



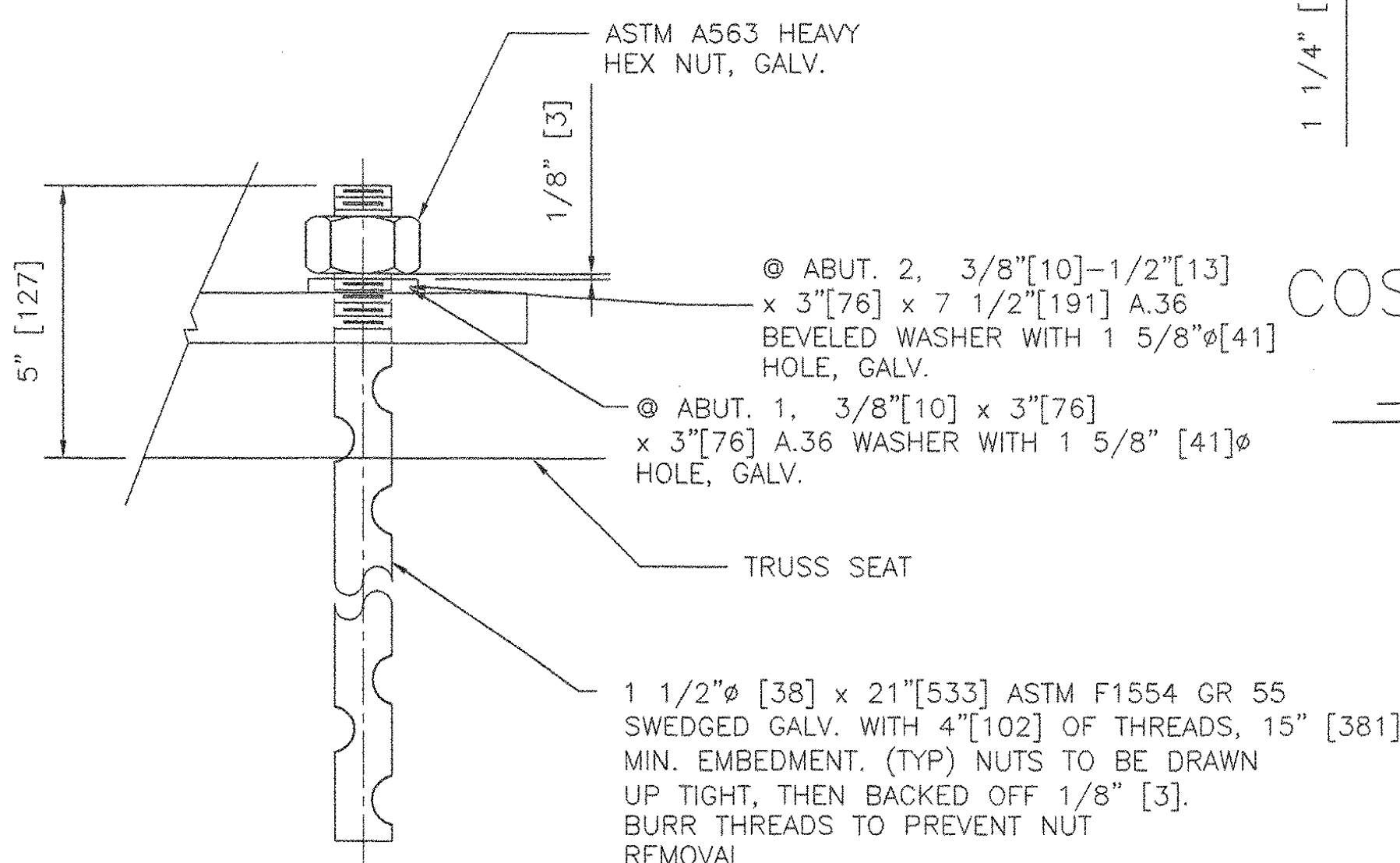
FRONT ELEVATION
COSMEC FIXED PREFORMED
FABRIC PAD BEARING

QTY.-2
LOCATION- ABUT. 1



FRONT ELEVATION
COSMEC EXPANSION PREFORMED
FABRIC PAD BEARING

QTY.-2
LOCATION- ABUT. 2



ANCHOR BOLT DETAIL

STRUCTURES
COPY

RECEIVED
JUN 11 2007
BY: *Opw* DATE: 6/12/07

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TOWN OF BRADFORD
ORANGE COUNTY
PROJECT NO. STP 1447(28)
ITEM 531.10
BRIDGE NO.22

COSMEC, INC. 70 SOUTH STREET
WALPOLE, MA. 02081

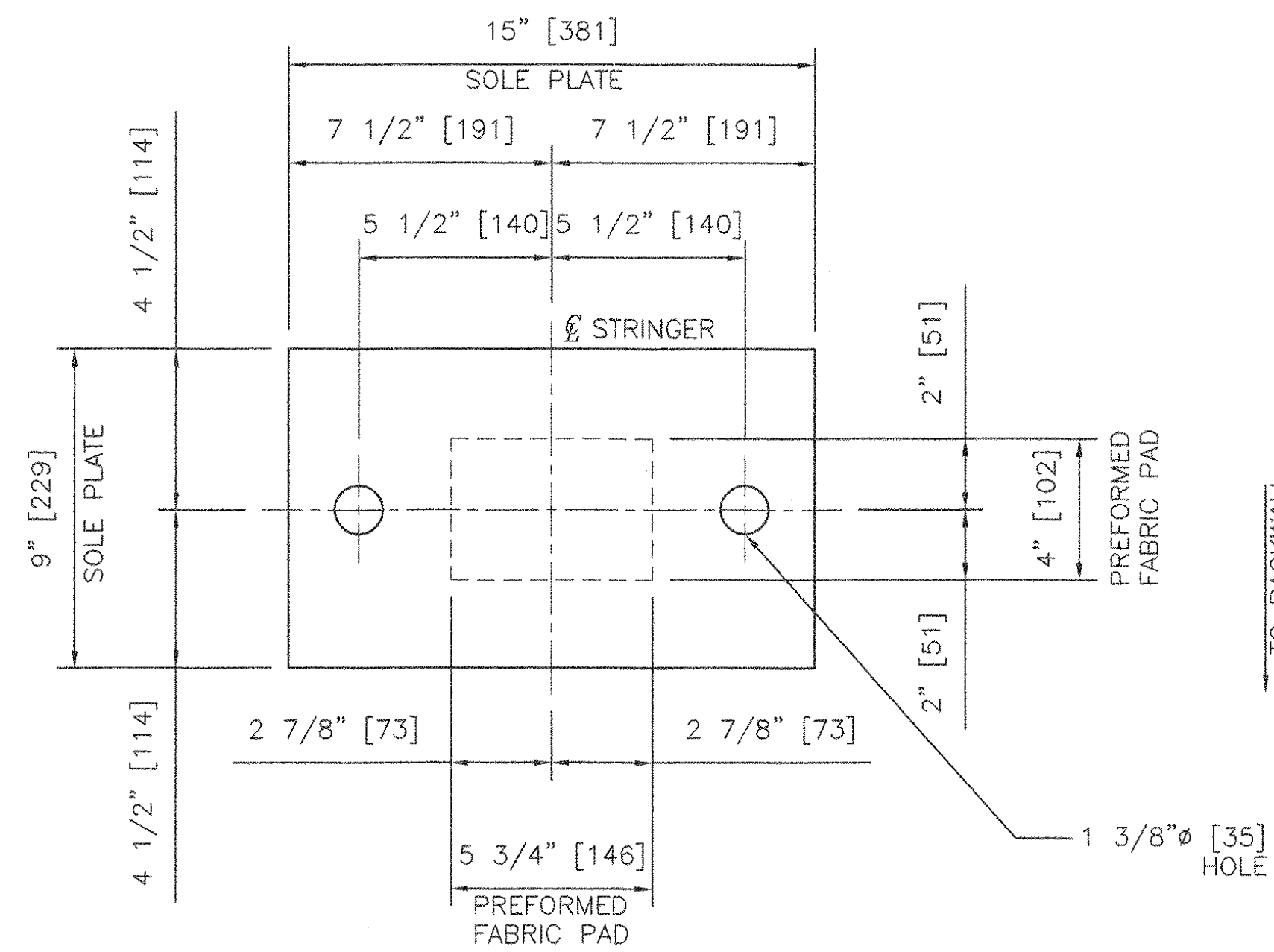
SCALE: 1/4" = 1" DRAWN BY: MAE CHECKED BY: MRR
DATE: 2/13/07 DATE: 3/5/07

COSMEC BEARINGS

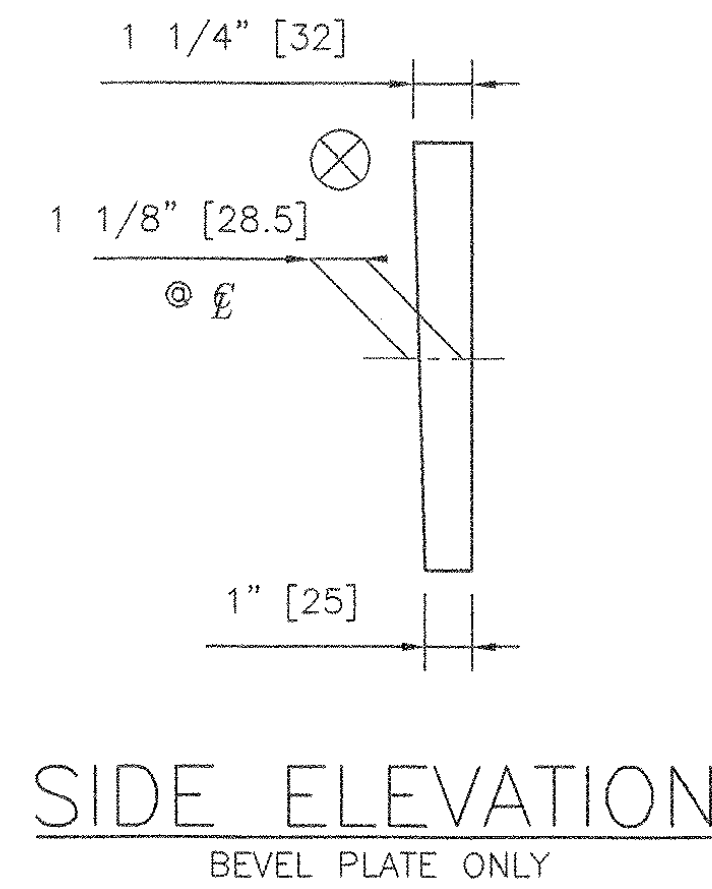
CUSTOMER: AUSTIN CONSTRUCTION, INC. S.O. NUMBER: 60712 DRAWING NUMBER: 5193 REV: 1

REV. REVISD AS NOTED PER APPROVED AS NOTED DRAWINGS

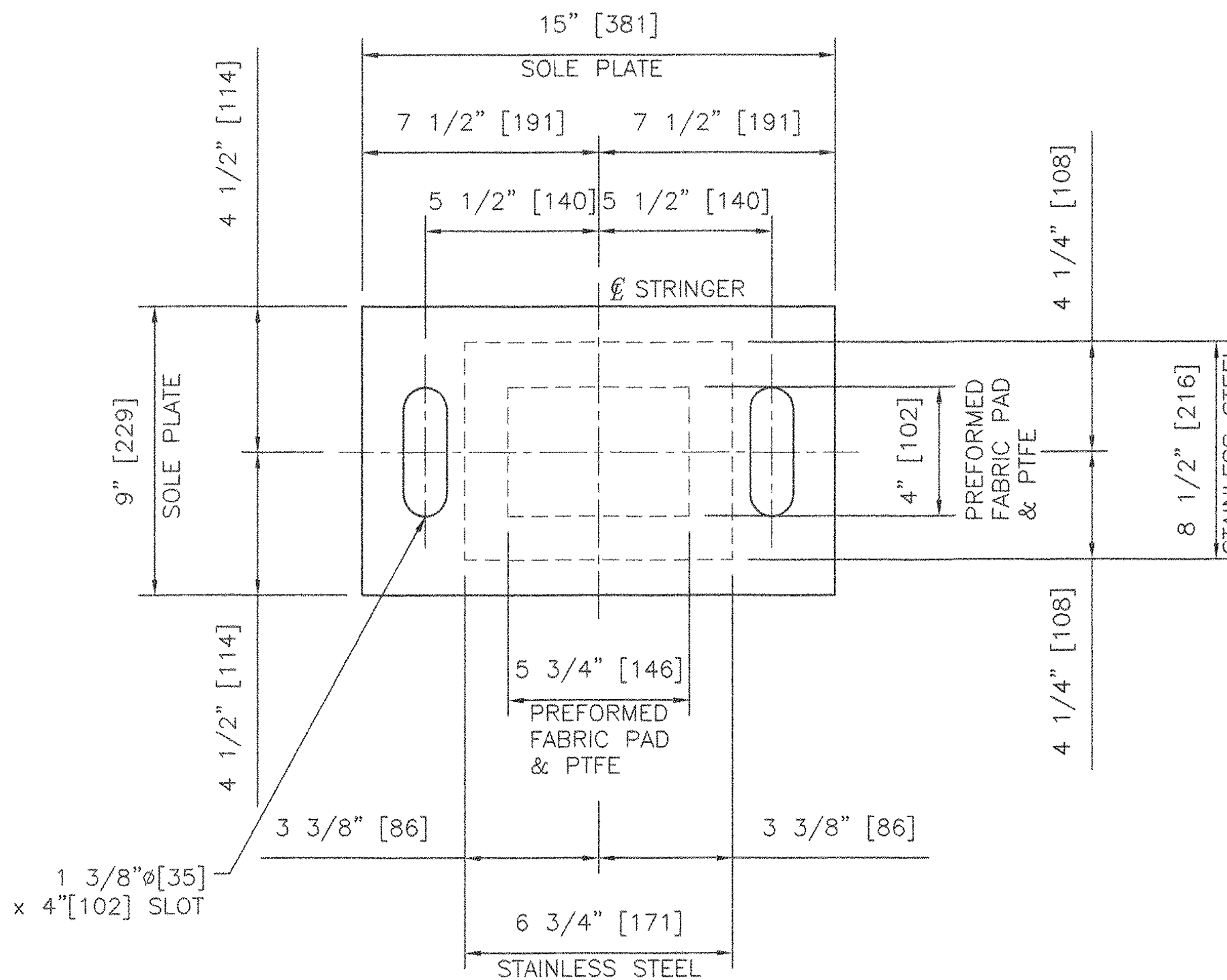
BY: MM DATE: 4/07 CK'D BY: MCM DATE: 4/07



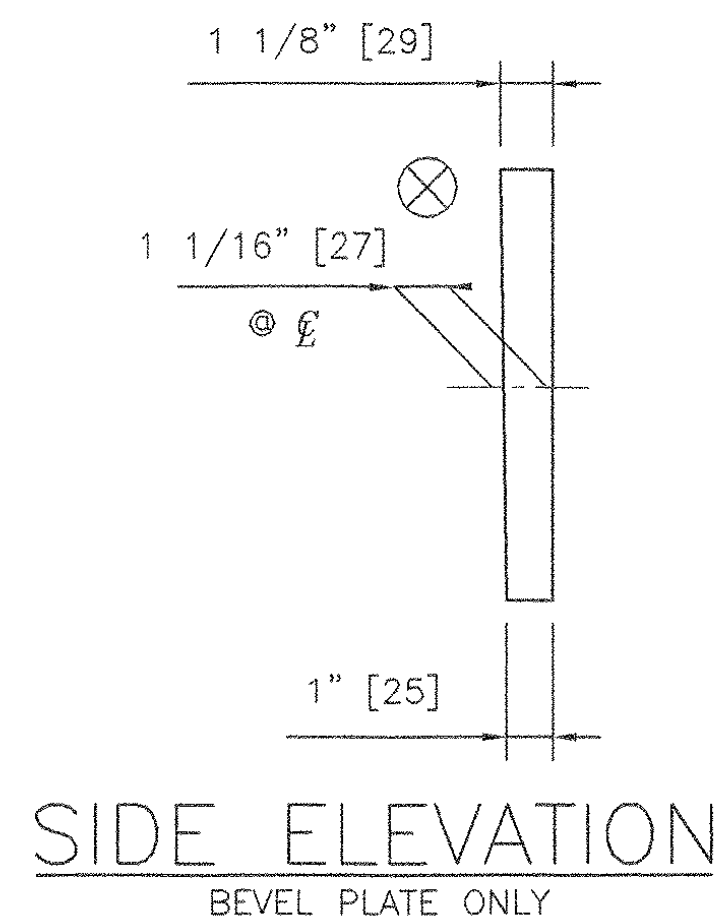
PLAN



SIDE ELEVATION
BEVEL PLATE ONLY



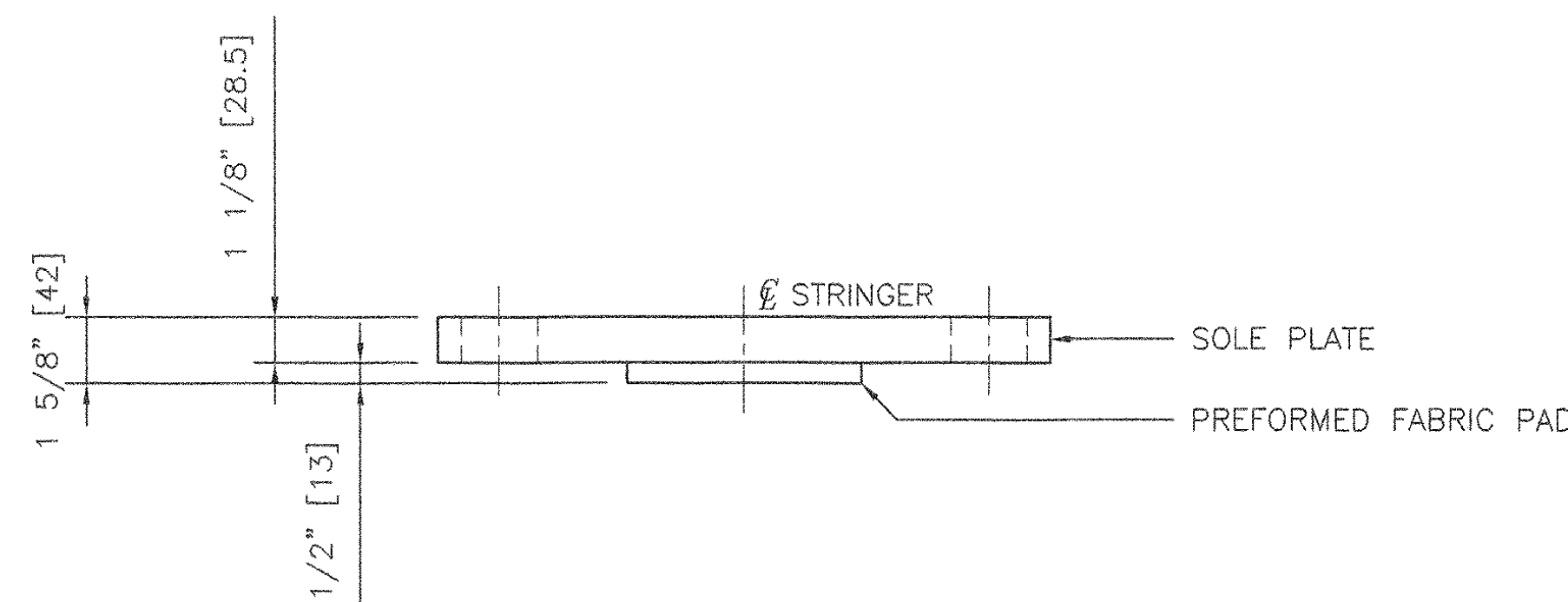
PLAN



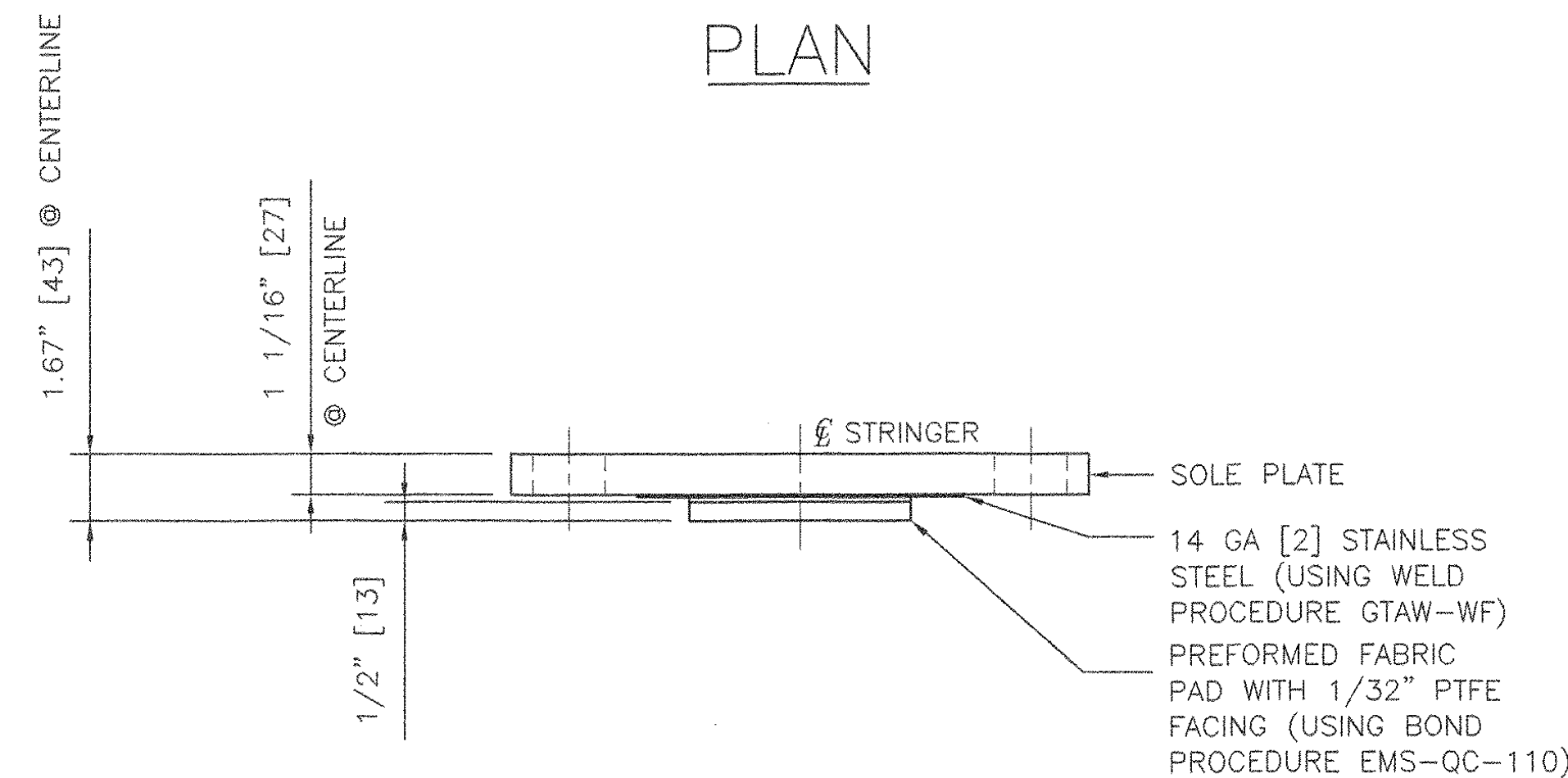
SIDE ELEVATION
BEVEL PLATE ONLY

- BEARING MATERIALS**
1. STEEL - AASHTO M-270 GR 36 ZINC METALIZED
 2. PREFORMED FABRIC PAD - AASHTO SPECIFICATION DIV.II SPEC. 18.4.9.1
 3. STAINLESS STEEL - ASTM A240 TYPE 304, #8 MIRROR FINISH
 4. PTFE - ASTM D.4894 VIRGIN UNFILLED
 5. ANCHOR BOLTS - SEE DETAIL

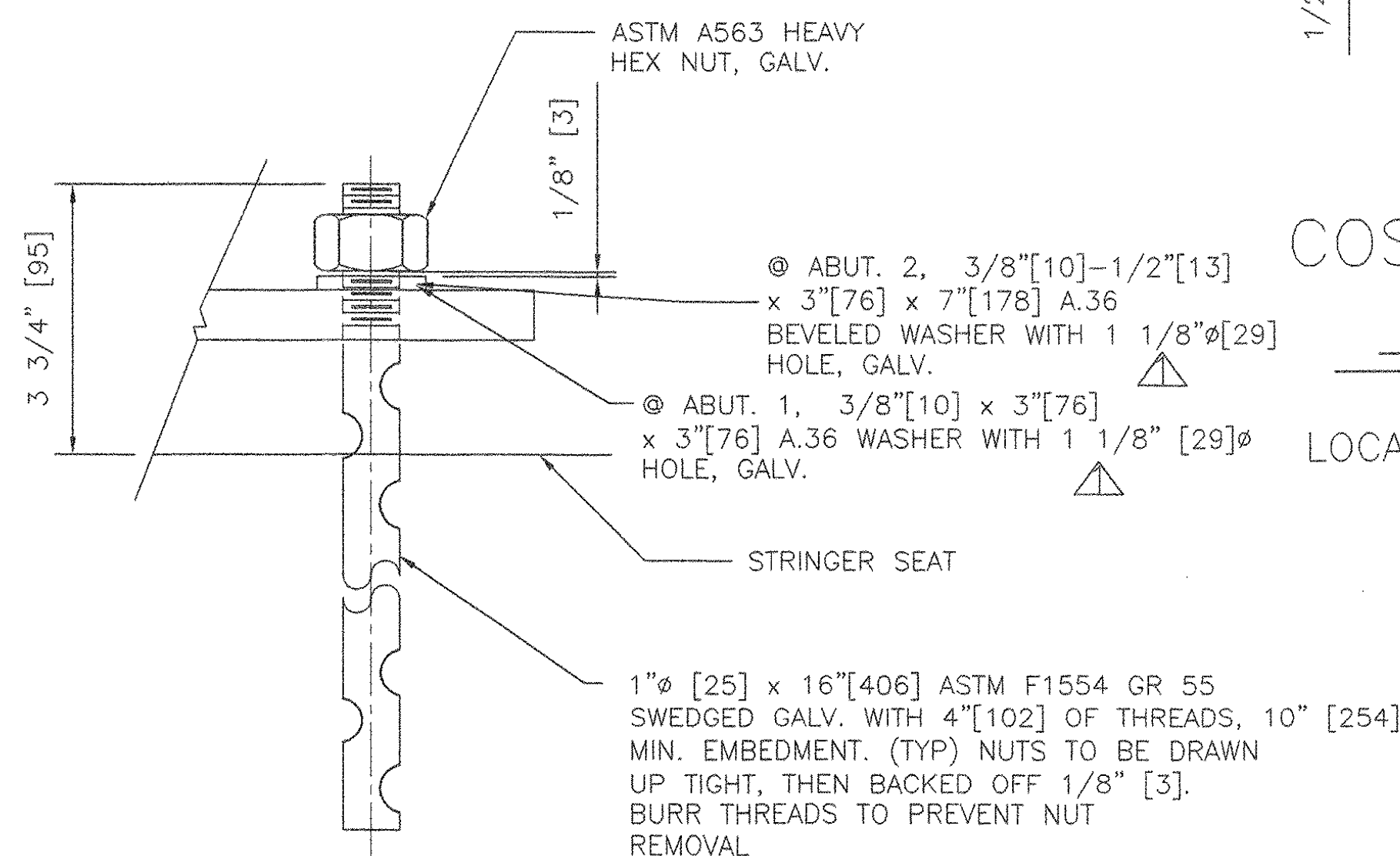
- BEARING NOTES:**
1. LOCATION OF FABRICATION - 70 SOUTH STREET WALPOLE, MA 02081
 2. COSMEC, INC. REPRESENTATIVE: MR. MATT McANDREWS (508-668-6600)
 3. UNITS= INCHES [MM]
 4. ALL BEARING DEVICES SHALL BE ZINC METALIZED AS PER SUBSECTIONS 531.04(b) AND 506.15(c) OR (b). BEARINGS SHALL BE SEALED WITH AN APPROVED SEALER AS SPECIFIED IN STANDARD SPEC. SUBSECTION 506.15(b). AREAS OF METALIZING DAMAGED BY FIELD WELDING OR HANDLING SHALL BE PAINTED WITH AN APPROVED SEALANT, IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 513.03(f).
 5. MAXIMUM ALLOWABLE BEARING PRESSURE ON CONCRETE= 1000 PSI
MINIMUM ALLOWABLE DESIGN ROTATION= 0.015 RADIAN
HORIZONTAL CAPACITY SHALL BE A MINIMUM OF 10% VERTICAL LOAD
DESIGN LOAD PER BEARING: 258 kN [58.10 KIPS] TRUSS
80 kN [18.00 KIPS] STRINGER
 6. ⊗ MARKS HIGH END OF BEVELED



FRONT ELEVATION
COSMEC FIXED PREFORMED
FABRIC PAD BEARING
QTY.- 3
LOCATION- ABUT. 1 STRINGERS S2A, S3A, S4A



FRONT ELEVATION
COSMEC EXPANSION PREFORMED
FABRIC PAD BEARING
QTY.- 3
LOCATION- ABUT. 2 STRINGERS S2A, S3A, S4A



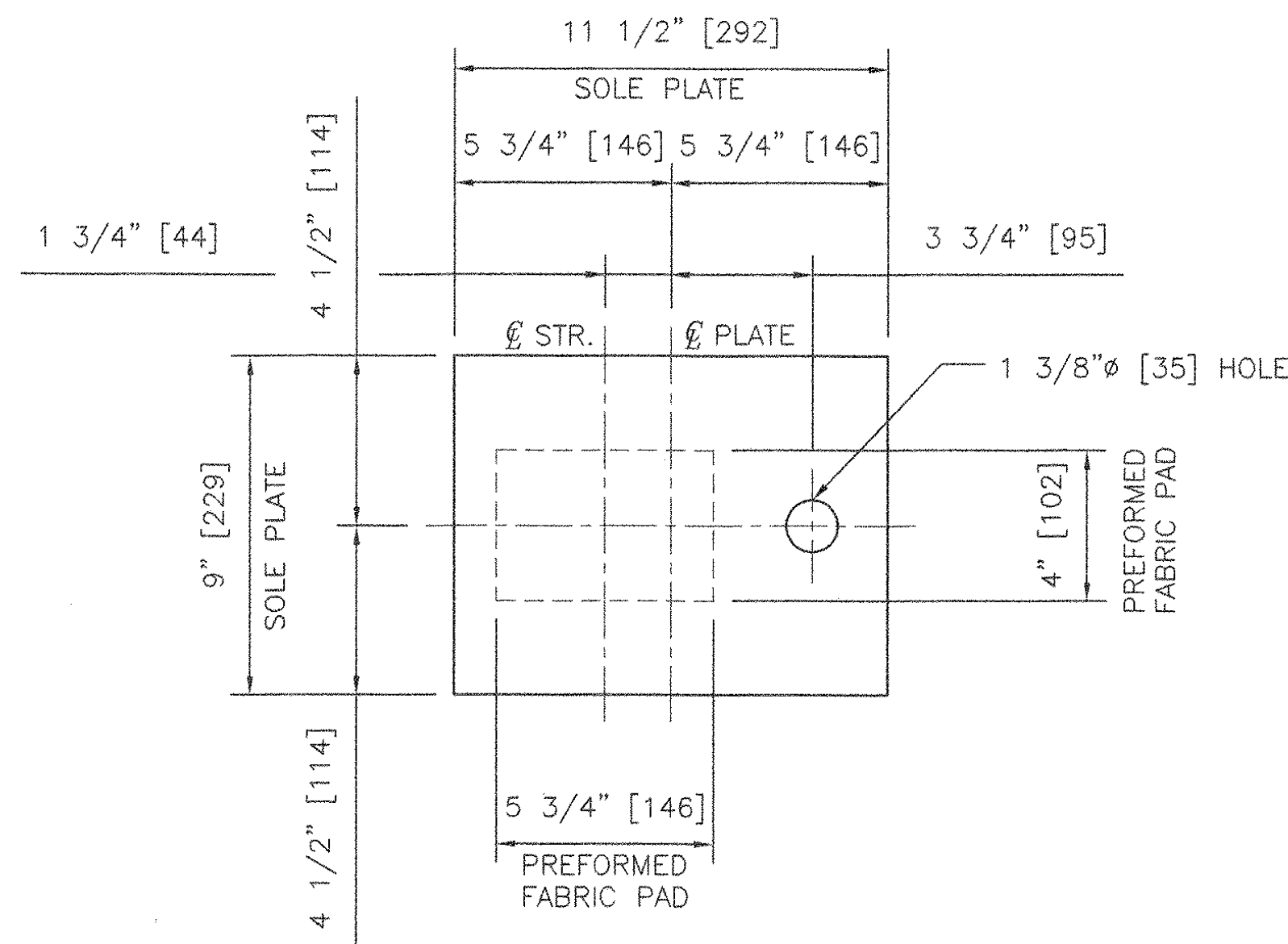
ANCHOR BOLT DETAIL

RECEIVED
JUN 11 2007
BY: *apw* DATE: 6/12/07

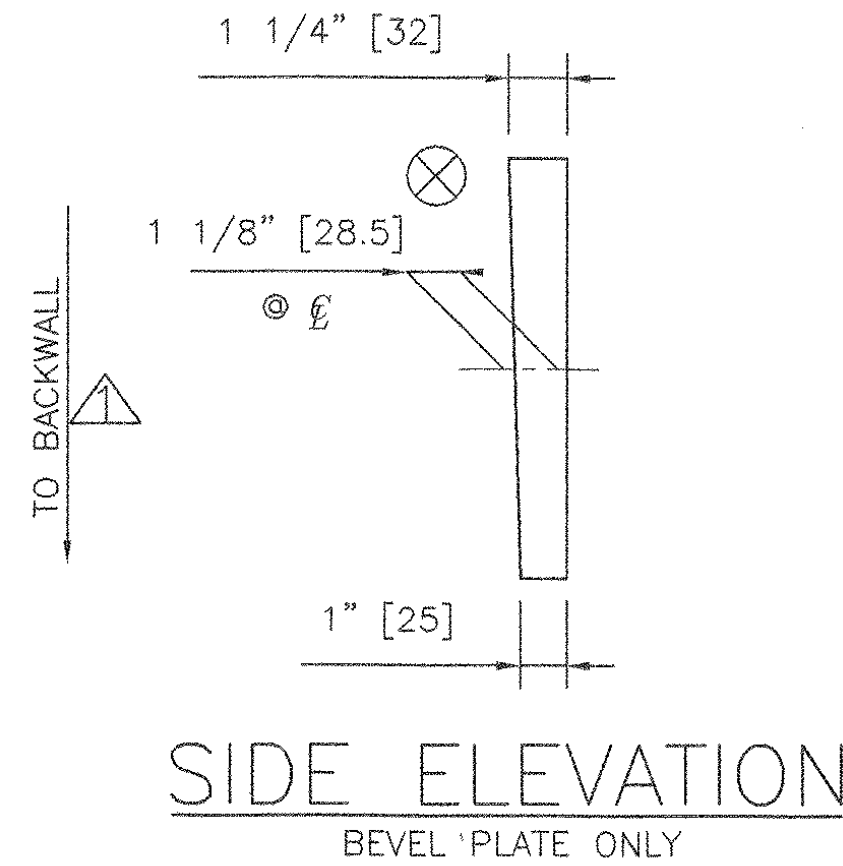
REV. 1	REVISED AS NOTED PER APPROVED AS NOTED DRAWINGS	BY: MM	DATE: 4/07	CHK'D BY: MCM	DATE: 4/07	CUSTOMER: AUSTIN CONSTRUCTION, INC.	S.O. NUMBER: 60712	DRAWING NUMBER: 5194	REV. 1
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STATE OF VERMONT
AGENCY OF TRANSPORTATION
TOWN OF BRADFORD
ORANGE COUNTY
PROJECT NO. STP 1447(28)
ITEM 531.10
BRIDGE NO.22

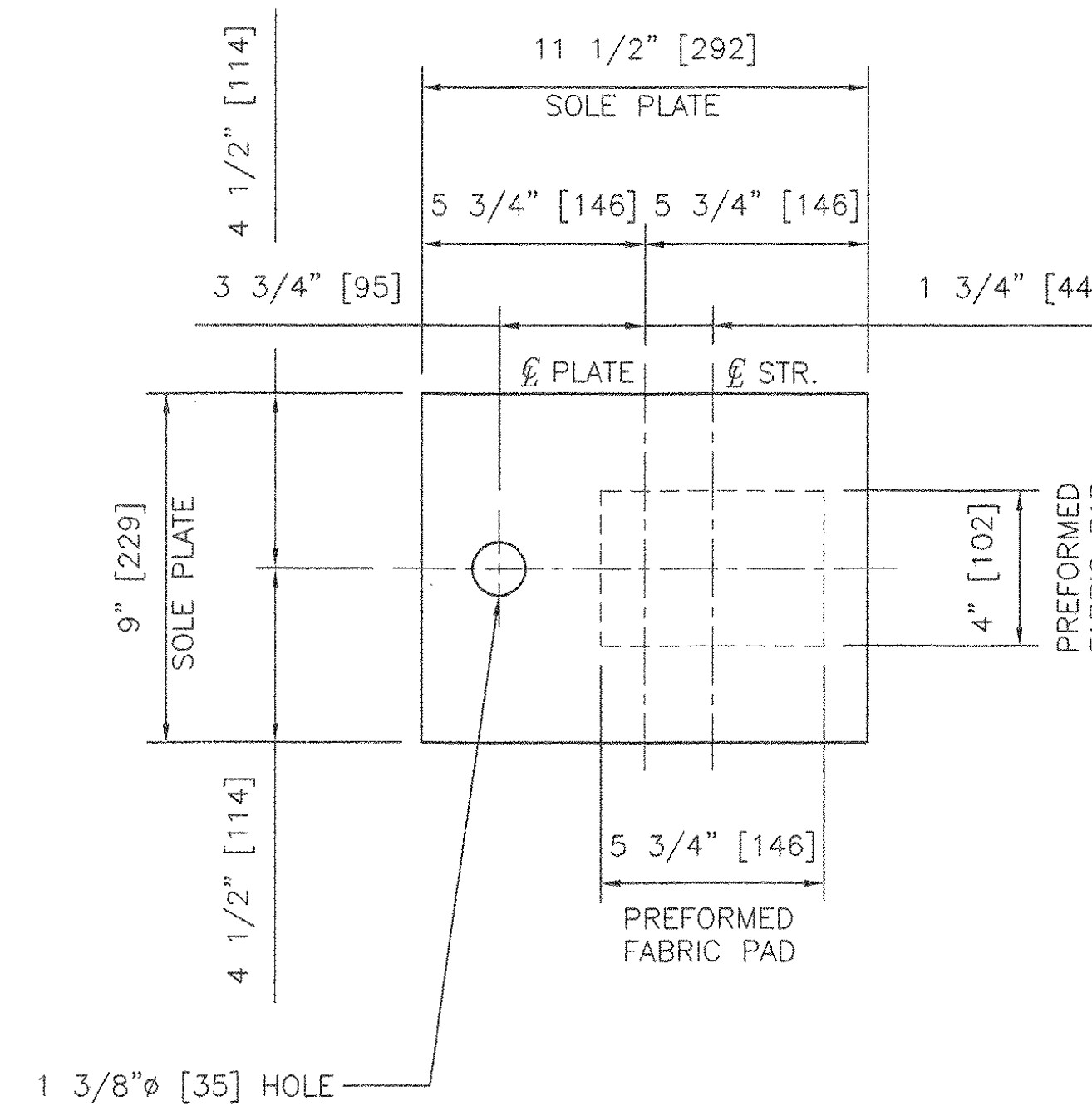
COSMEC, INC. 70 SOUTH STREET WALPOLE, MA. 02081
SCALE: 1/4"=1" DRAWN BY: MAE CHECKED BY: MRR
DATE: 2/13/07 DATE: 3/5/07
COSMEC BEARINGS



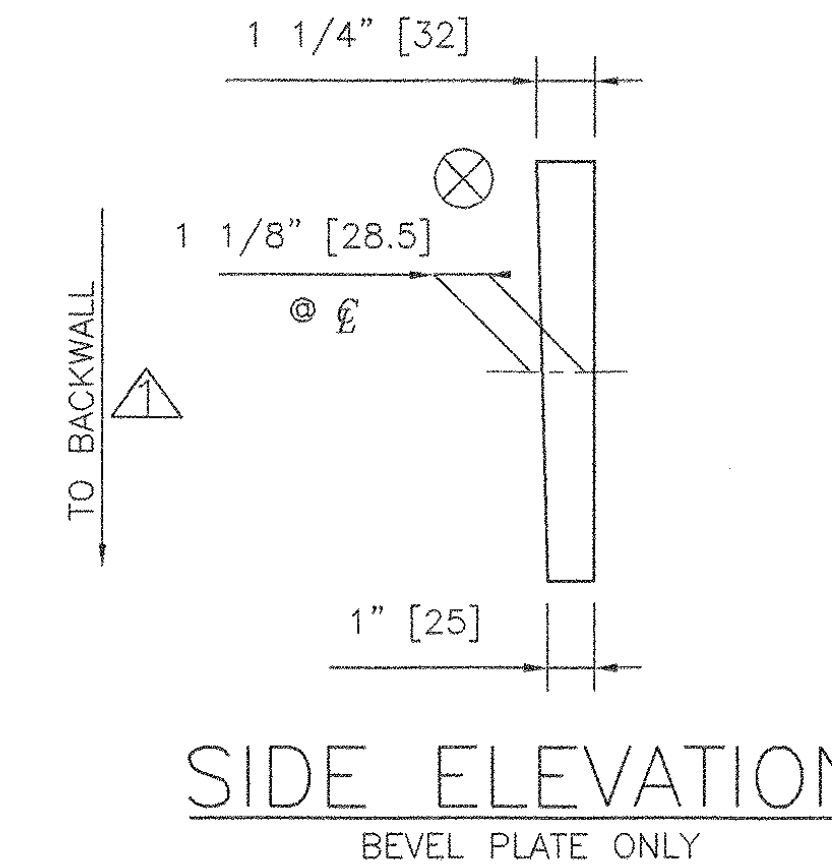
PLAN



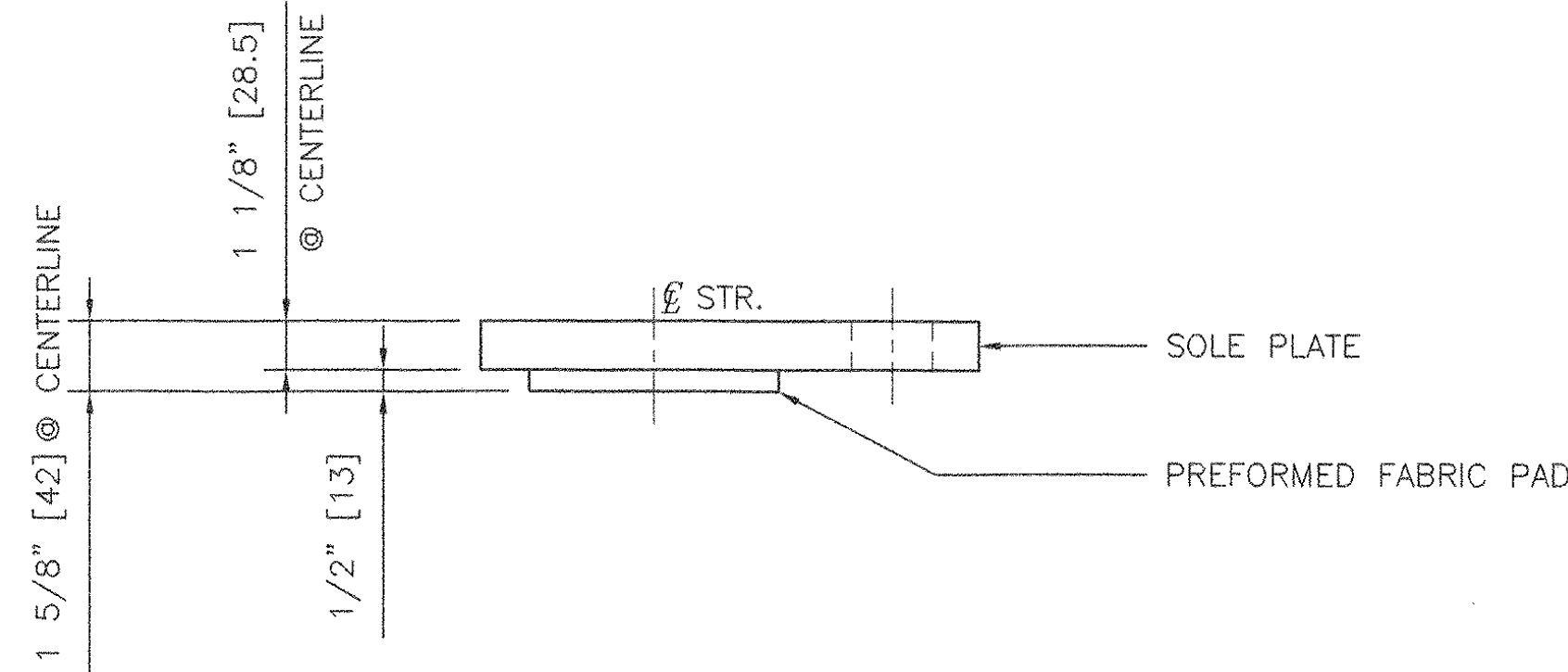
SIDE ELEVATION
BEVEL PLATE ONLY



PLAN

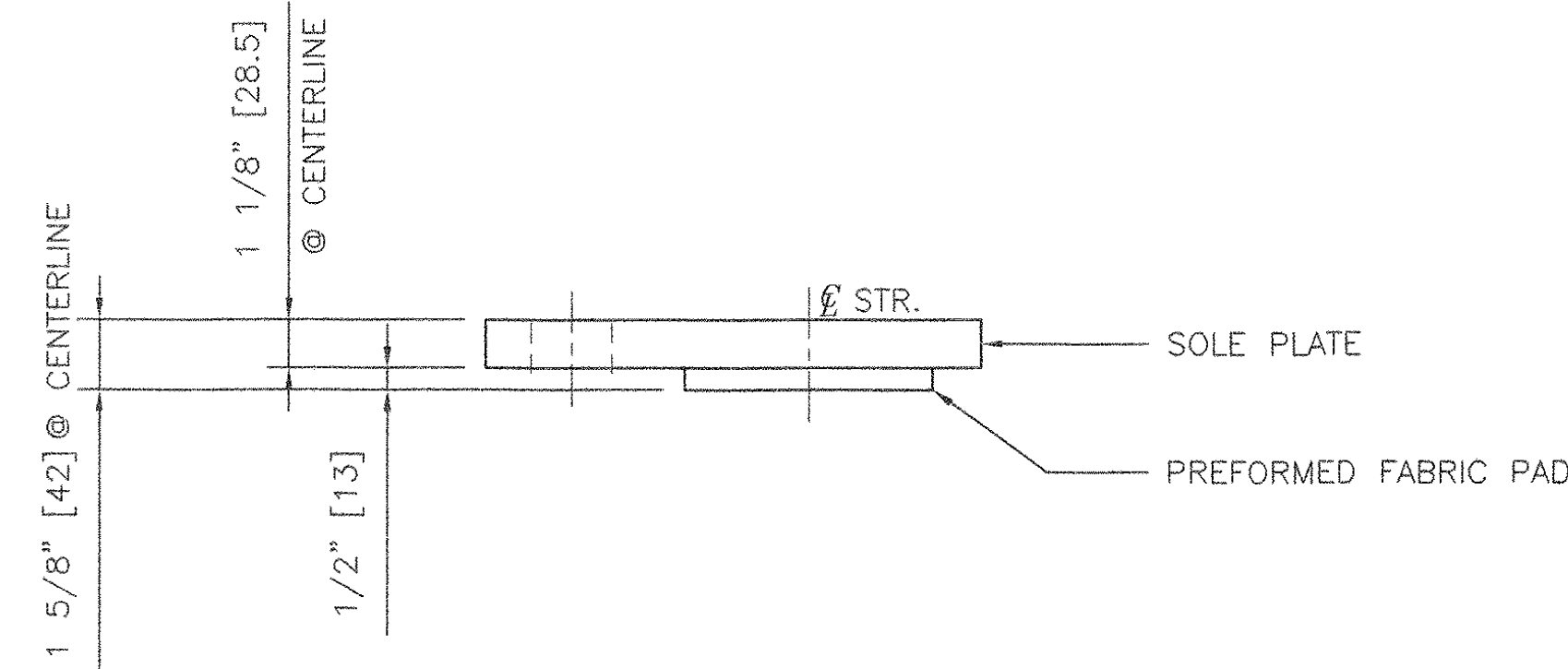


SIDE ELEVATION
BEVEL PLATE ONLY



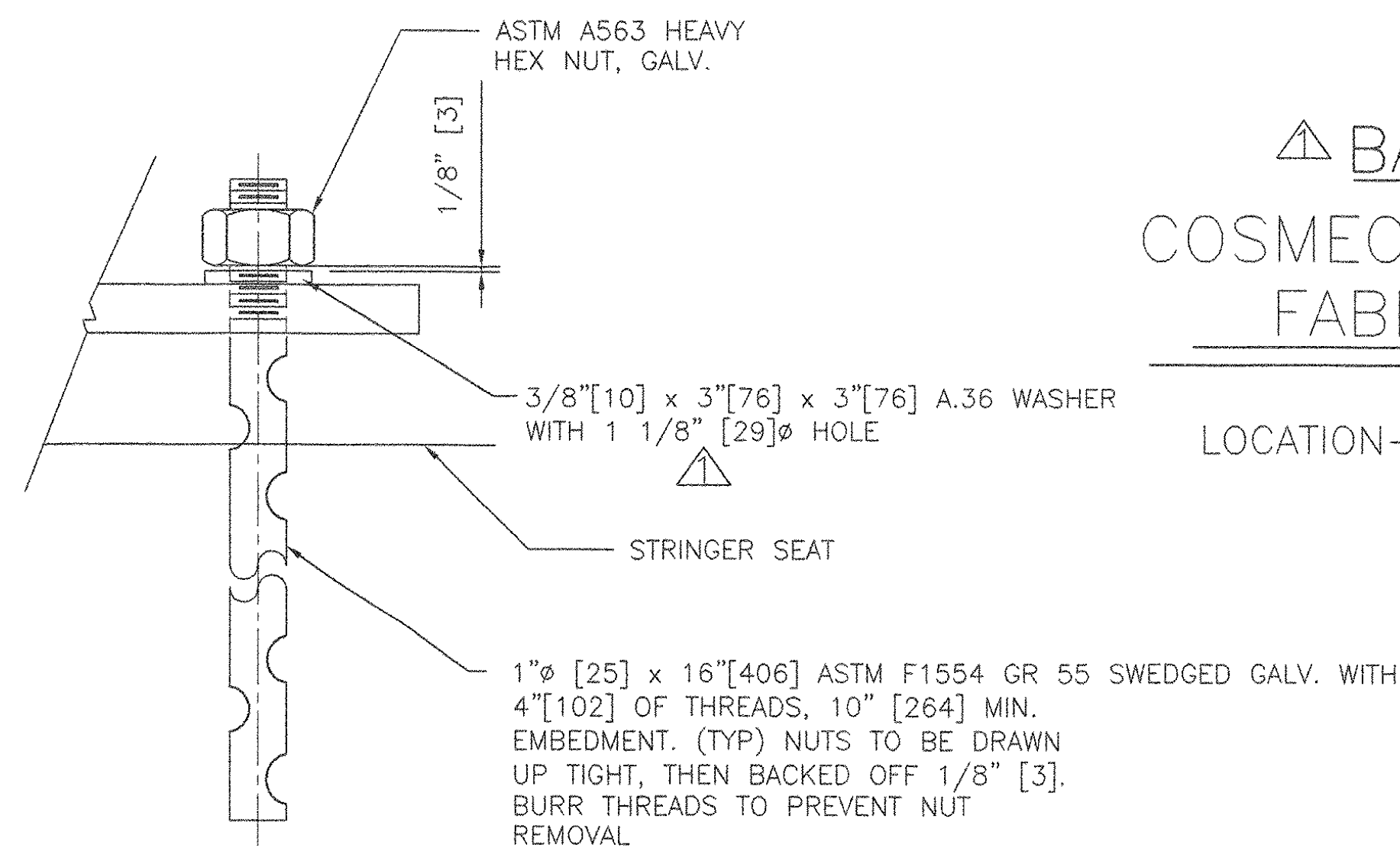
BACK ELEVATION
COSMEC FIXED PREFORMED
FABRIC PAD BEARING

QTY.- 1
LOCATION- ABUT. 1 STRINGER S1A



BACK ELEVATION
COSMEC FIXED PREFORMED
FABRIC PAD BEARING

QTY.- 1
LOCATION- ABUT. 1 STRINGER S5A



ANCHOR BOLT DETAIL

BEARING MATERIALS

1. STEEL - AASHTO M-270 GR 36 ZINC METALIZED
2. PREFORMED FABRIC PAD - AASHTO SPECIFICATION DIV.II SPEC. 18.4.9.1
3. ANCHOR BOLTS - SEE DETAIL

BEARING NOTES:

1. LOCATION OF FABRICATION - 70 SOUTH STREET WALPOLE, MA 02081
2. COSMEC, INC. REPRESENTATIVE: MR. MATT McANDREWS (508-668-6600)
3. UNITS= INCHES [MM]
4. ALL BEARING DEVICES SHALL BE ZINC METALIZED AS PER SUBSECTIONS 531.04(b) AND 506.15(c) OR (b). BEARINGS SHALL BE SEALED WITH AN APPROVED SEALER AS SPECIFIED IN STANDARD SPEC. SUBSECTION 506.15(b). AREAS OF METALIZING DAMAGED BY FIELD WELDING OR HANDLING SHALL BE PAINTED WITH AN APPROVED SEALANT, IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 513.06(f).
5. MAXIMUM ALLOWABLE BEARING PRESSURE ON CONCRETE= 1000 PSI
MINIMUM ALLOWABLE DESIGN ROTATION= 0.015 RADIAN
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DESIGN LOAD PER BEARING: 258 kN [58.10 KIPS] TRUSS
80 kN [18.00 KIPS] STRINGER
6. ⊗ MARKS HIGH END OF BEVELED

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TOWN OF BRADFORD
ORANGE COUNTY
PROJECT NO. STP 1447(28)
ITEM 531.10
BRIDGE NO.22

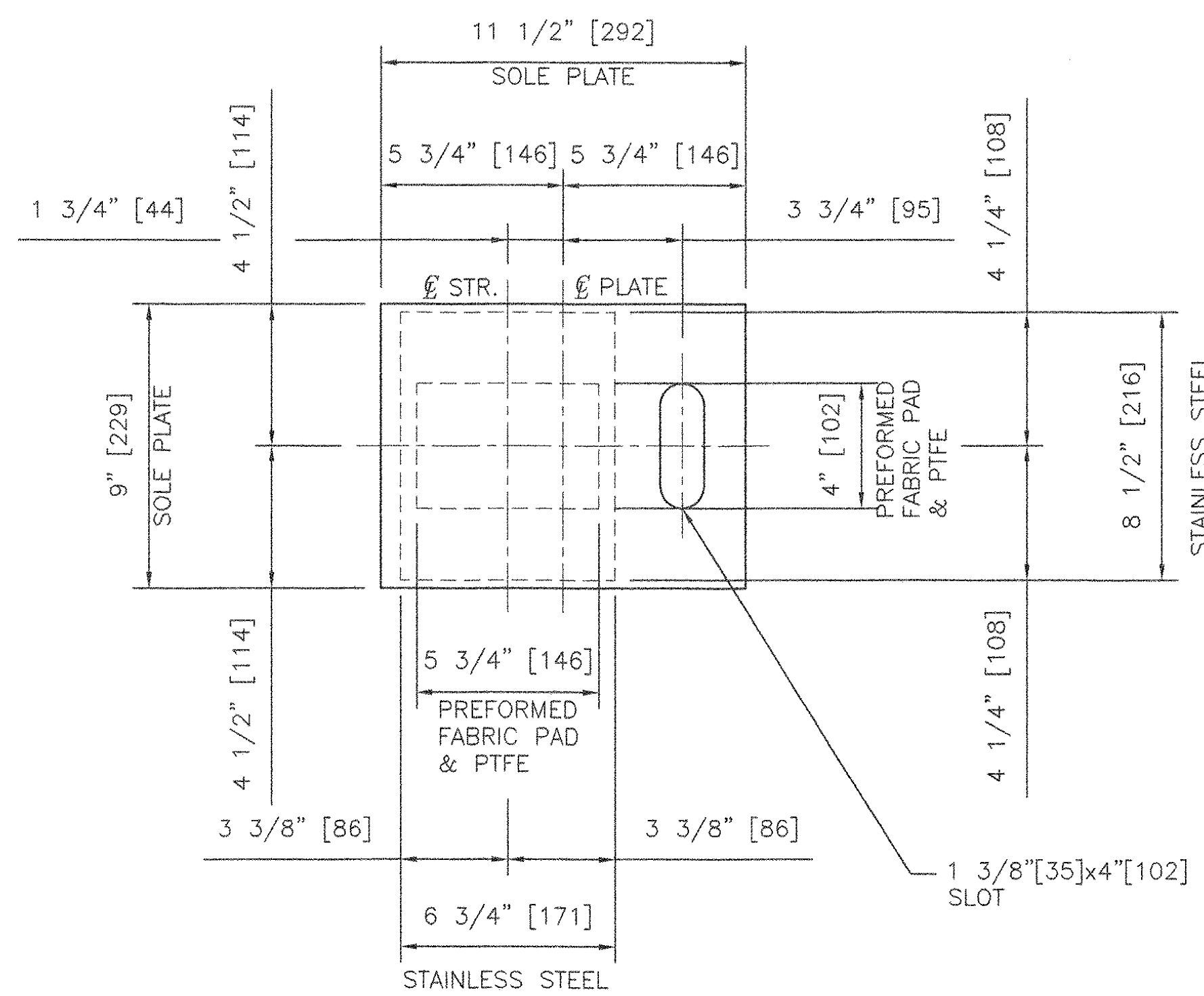
COSMEC, INC. 70 SOUTH STREET
WALPOLE, MA. 02081

SCALE: 1/4" = 1" DRAWN BY: MAE CHECKED BY: MRR
DATE: 2/13/07 DATE: 3/5/07

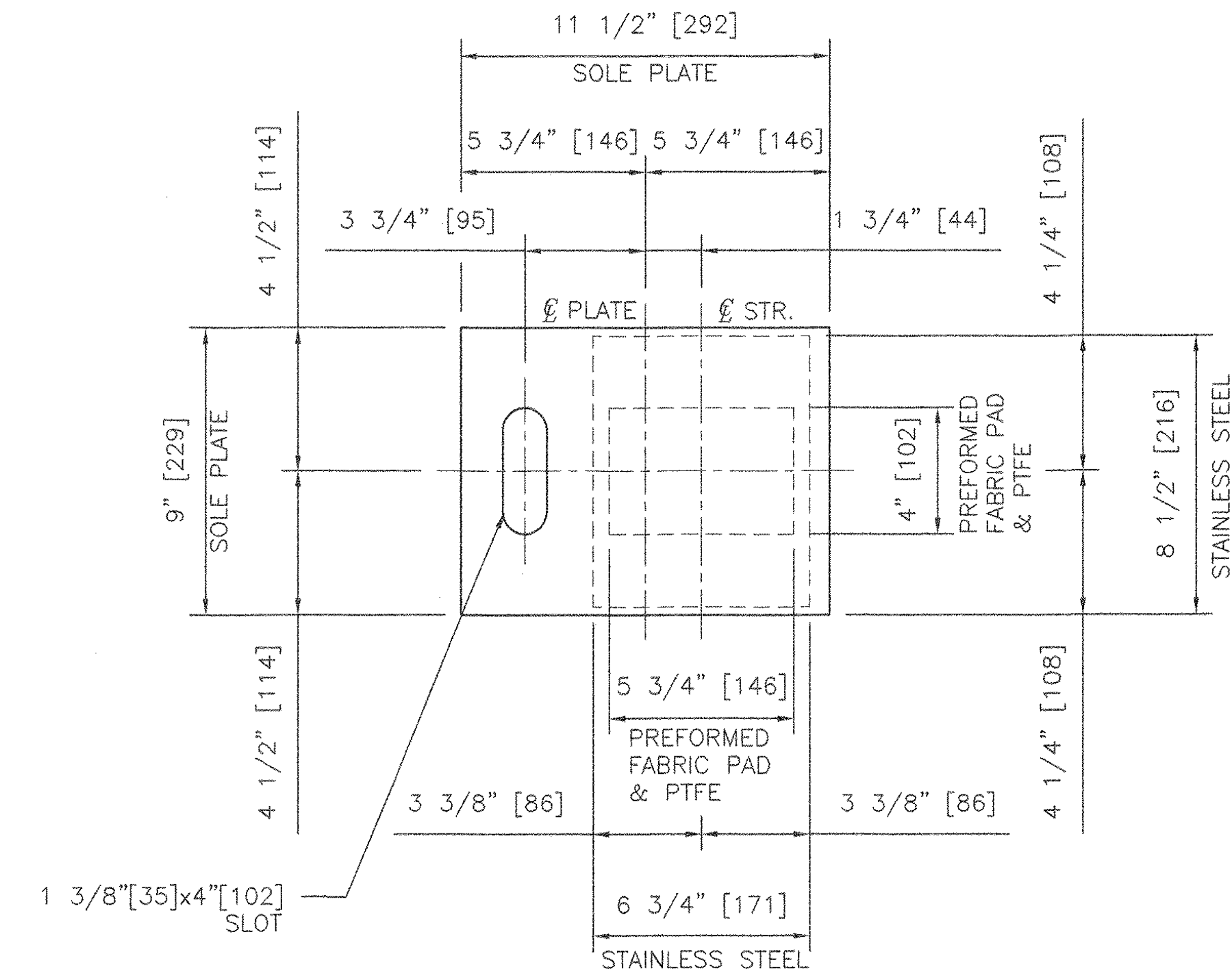
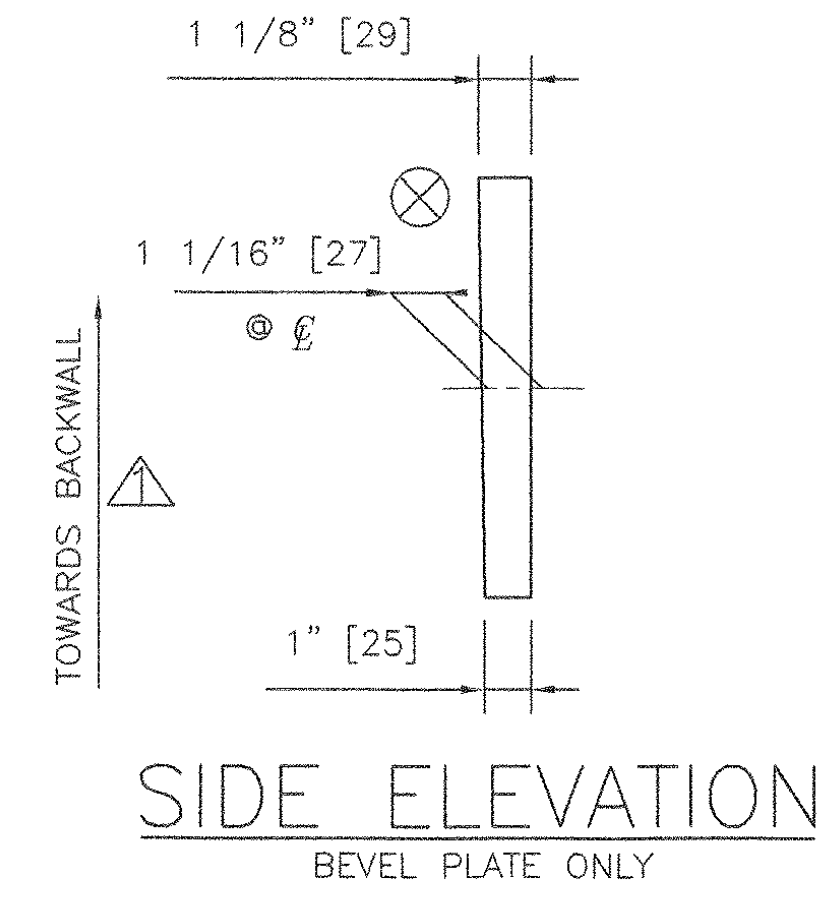
COSMEC BEARINGS

RECEIVED
OK'D BY: _____ OK'D BY: *MS*
JUN 11 2007
RESUBMIT _____ APPROVED _____
BY: *CPW* DATE: *6/12/07*

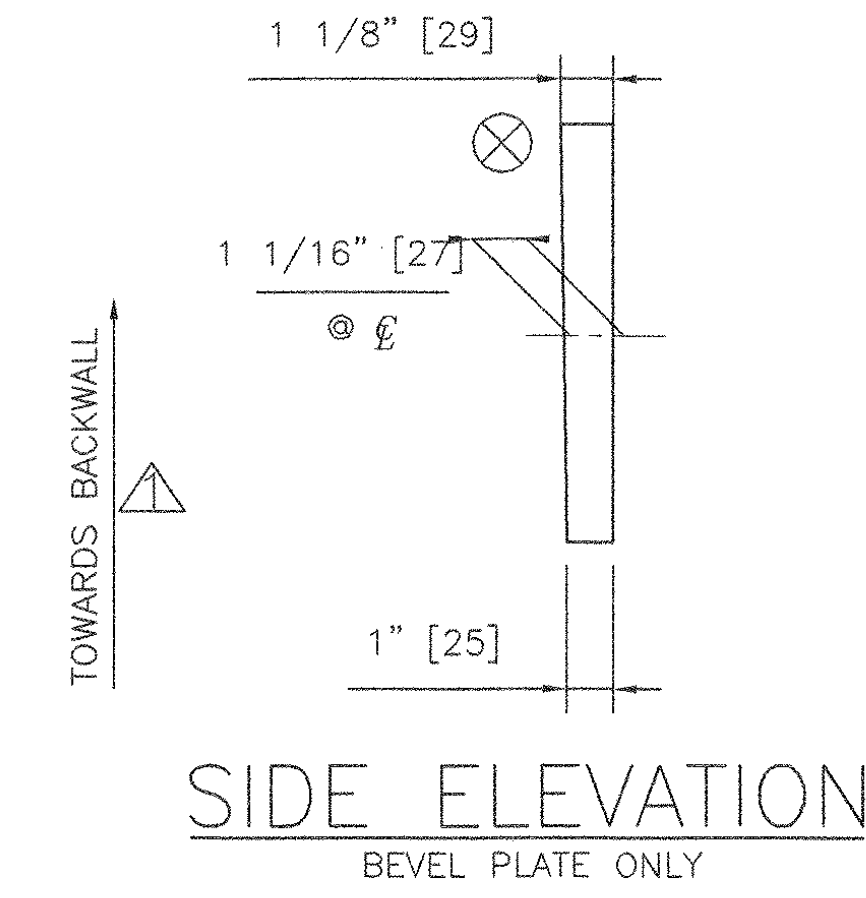
REV. APPROVED AS NOTED PER DRAWINGS	BY: MM	DATE: 4/07	OK'D BY: MCM	DATE: 4/07	CUSTOMER: AUSTIN CONSTRUCTION, INC.	S.O. NUMBER: 60712	DRAWING NUMBER: 5195	REV. 1
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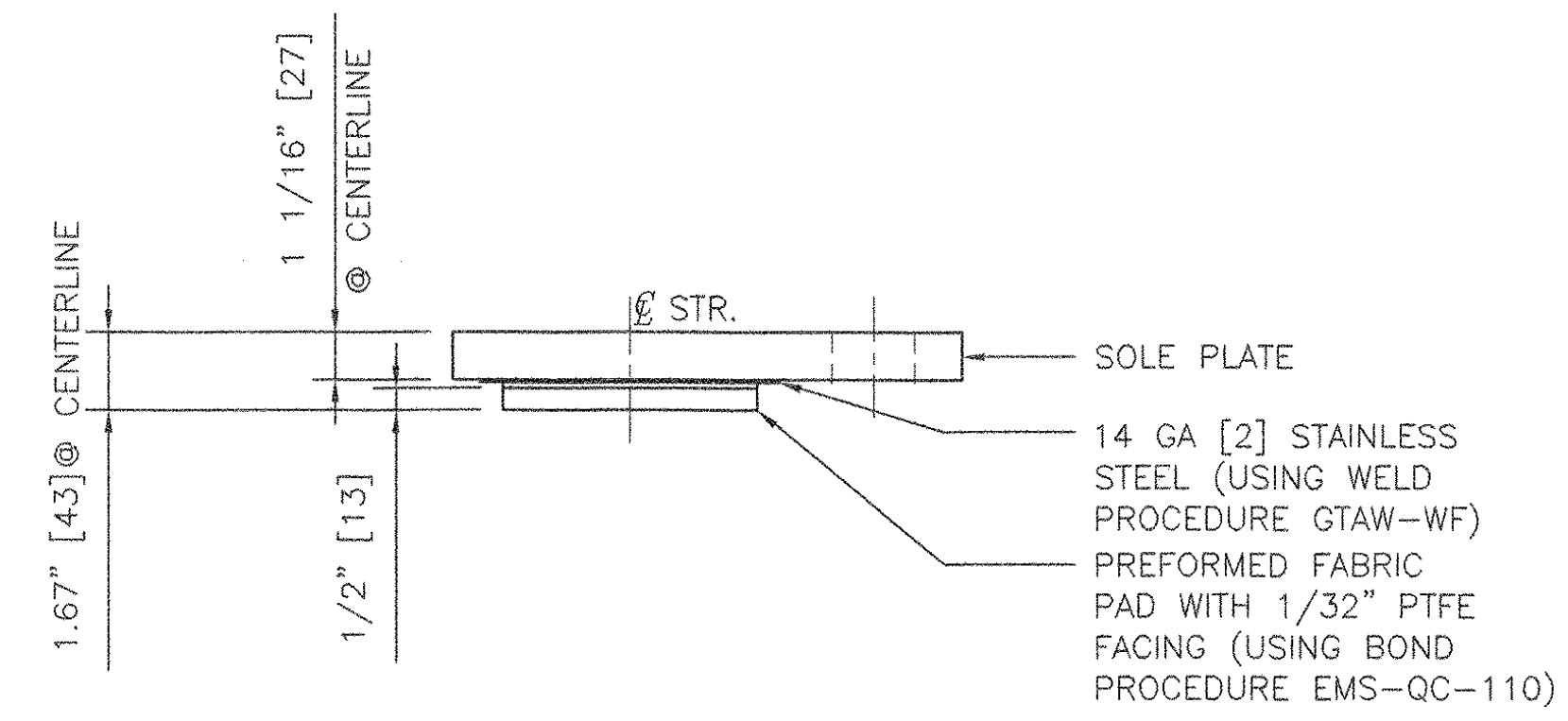
PLAN



PLAN

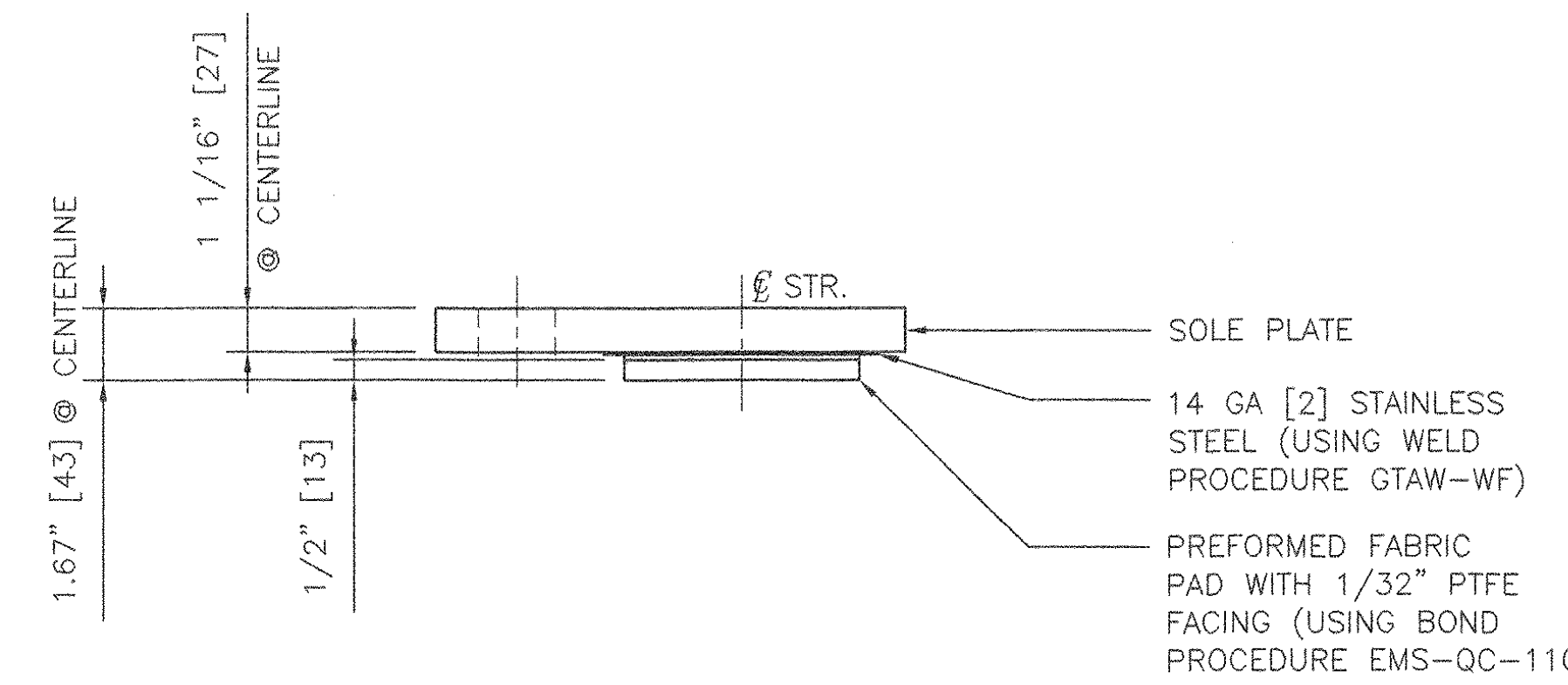


- BEARING MATERIALS**
1. STEEL - AASHTO M-270 GR 36 ZINC METALIZED
 2. PREFORMED FABRIC PAD - AASHTO SPECIFICATION DIV.II SPEC. 18.4.9.1
 3. STAINLESS STEEL - ASTM A240 TYPE 304, #8 MIRROR FINISH
 4. PTFE - ASTM D.4894 VIRGIN UNFILLED
 5. ANCHOR BOLTS - SEE DETAIL
- BEARING NOTES:**
1. LOCATION OF FABRICATION - 70 SOUTH STREET WALPOLE, MA 02081
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DESIGN LOAD PER BEARING: 258 kN [58.10 KIPS] TRUSS
80 kN [18.00 KIPS] STRINGER
 6. \otimes MARKS HIGH END OF BEVELED



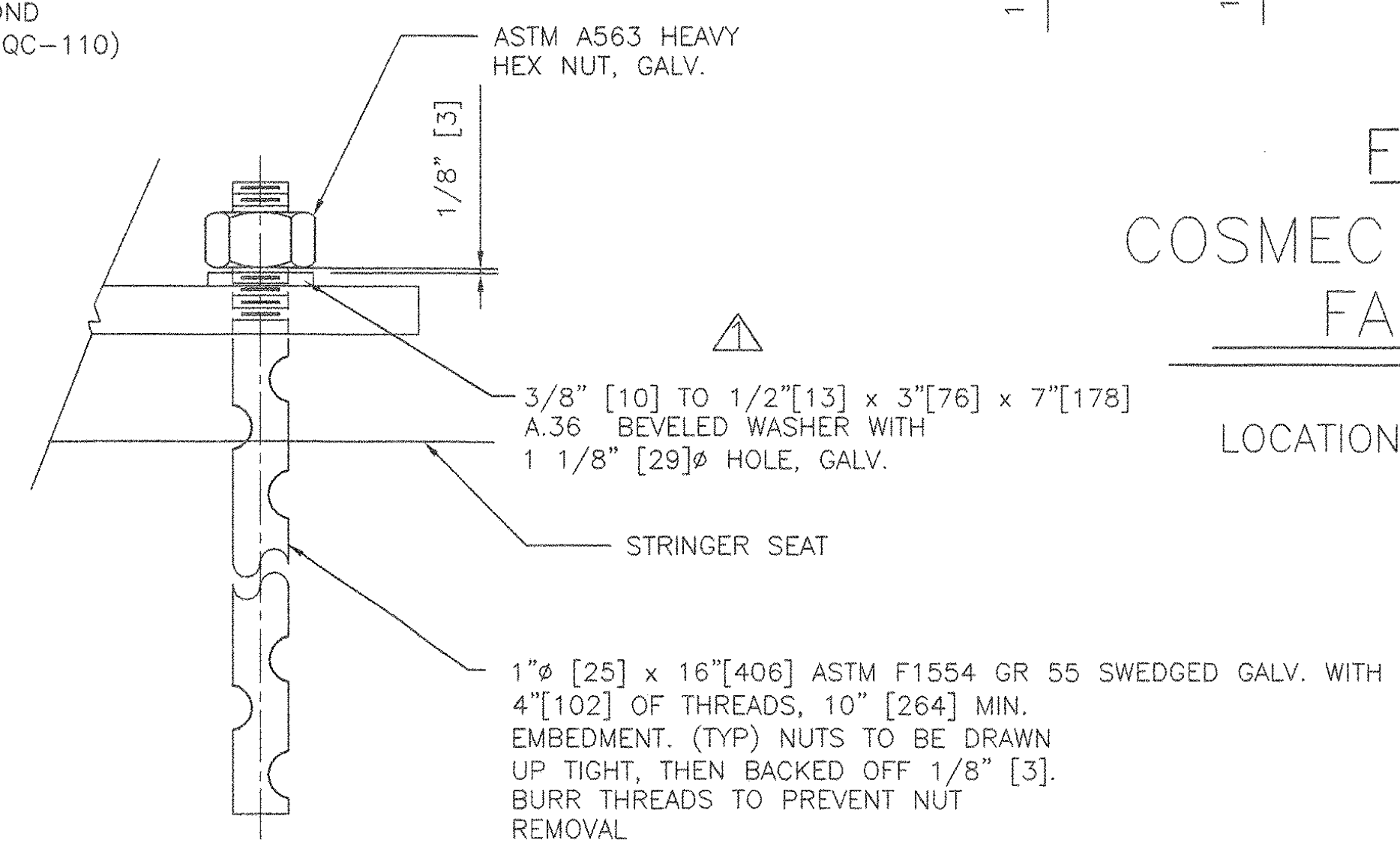
FRONT ELEVATION
COSMEC EXPANSION PREFORMED FABRIC PAD BEARING

QTY.- 1
LOCATION- ABUT. 2 STRINGER S1E



FRONT ELEVATION
COSMEC EXPANSION PREFORMED FABRIC PAD BEARING

QTY.- 1
LOCATION- ABUT. 2 STRINGER S5E



ANCHOR BOLT DETAIL

RECEIVED
OK'D BY _____ OK'D BY _____
JUN 11 2007
RESUBMIT _____ APPROVED _____
BY *apw* DATE *6/12/07*

STATE OF VERMONT
AGENCY OF TRANSPORTATION
TOWN OF BRADFORD
ORANGE COUNTY
PROJECT NO. STP 1447(28)
ITEM 531.10
BRIDGE NO.22

COSMEC, INC. 70 SOUTH STREET WALPOLE, MA. 02081
SCALE: 1/4" = 1" DRAWN BY: MAE CHECKED BY: MRR
DATE: 2/13/07 DATE: 3/5/07

REV. Δ	REVISED AS NOTED PER APPROVED AS NOTED DRAWINGS	BY: MM	DATE: 4/07	OK'D BY: MCM	DATE: 4/07	CUSTOMER: AUSTIN CONSTRUCTION, INC.	S.O. NUMBER: 60712	DRAWING NUMBER: 5196	REV: 1
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RECEIVED
 OK'D BY _____ OK'D BY JK
 APR 09 2007
 RESUBMIT _____ APPROVED
 DATE 4-13-07

Casco Bay Steel Structures, Inc.
 75 Spring Hill Road
 Saco, Maine 04072

Phone: (207) 282-7360 Fax: (207) 282-1170

WELDING PROCEDURE SPECIFICATION

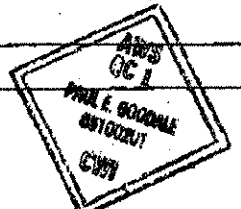
Material specification ASTM A99/A99M - Grade 36 (A50 50 (45) 50w (345w)
 Welding process Flux Cored Arc welding (FCAW)
 Manual or machine Semi Auto
 Position of welding Flat (1F) Horizontal (2F)
 Filler metal specification AWS A5.20
 Filler metal classification E71T-1
 Flux NA
 Shielding gas 75% Ar 25% CO2 Flow rate 40 CFH ± 5
 Single or multiple pass Single and Multiple - Electrode Extension 3/8" (507-636)
 Single or multiple arc Single
 Welding current DC
 Polarity Reverse
 Welding progression _____
 Root treatment To meet AWS specification
 Preheat and interpass temperature To 1/2 (10) 3/4 (10) To 1/2 (10) 3/4 (10) To 1/2 (10) 3/4 (10)
 Postheat temperature NA
 Heat input Min NA Max NA
Bradford VT
Proj = STB14788
C853 = 314

(METRIC)

Pass no.	Electrode size	Welding current		Travel speed	Joint detail
		Amperes	Volts		
1/16	1/16	205	28.8	11.6	1F To 1/2 (12.7)
		247.5	26.8	10.4	
		302.5	30.8	12.8	
1/8	1/8	205	28.8	294.6	2F To 3/8 (9.5)
		247.5	26.8	264.2	
		302.5	30.8	325.12	

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in applicable A.W.S. codes or contract specifications

Procedure no. 101 Contractor Casco Bay Steel
 Revision no. _____ Authorized By Phil C. Scudlo
 Form II-2 Date 3/23/07



Casco Bay Steel Structures, Inc.

5 Industry Road
South Portland, Maine 04106

Phone: (207) 772-2533

Fax: (207) 772-0580

WELDING PROCEDURE SPECIFICATION

Material specification A56-A572-A588 (ASTM 709 C+36-50-50W)
 Welding process Flux Cored Arc Welding (FCAW)
 Manual or machine semi-AUTO
 Position of welding Flat
 Filler metal specification AWS E70T-1
 Filler metal classification E70T-1
 Flux NA
 Shielding gas 75% AR 25% CO₂ Flow rate 40 F³
 Single or multiple pass single Electrode stick out 3/4" EV
 Single or multiple arc single
 Welding current Direct Current
 Polarity Reverse Electrode Positive
 Welding progression as detail
 Postheat temperature NA
 Heat input NA

WELDING PROCEDURE

Pass no.	Electrode size	Welding current		Travel speed	Notes
		Amps	Volts		
1/16	2/80	25	17	19 IPM ± 1.7	Filler Square groove joint detail BUTT
1.6	2/80	25	17	432 ± 43.2	

OK'D BY: [Signature] DATE: APR 09 2007
 RESUBMIT: [Signature] DATE: 4/12/07

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in applicable A.W.S. codes or contract specifications

Procedure no. 105 Contractor Casco Bay Steel
 Revision no. AWS-CW1 Authorized By Paul E. Goodale
 Form W-2 Paul E. Goodale Date 2/2/99
 C.W.I.

RECEIVED
 OK'D BY _____ OK'D BY JWC

Casco Bay Steel Structures, Inc.
 5 Industry Road
 South Portland, Maine 04106
 Phone: (207) 772-2533
 Fax: (207) 772-0580

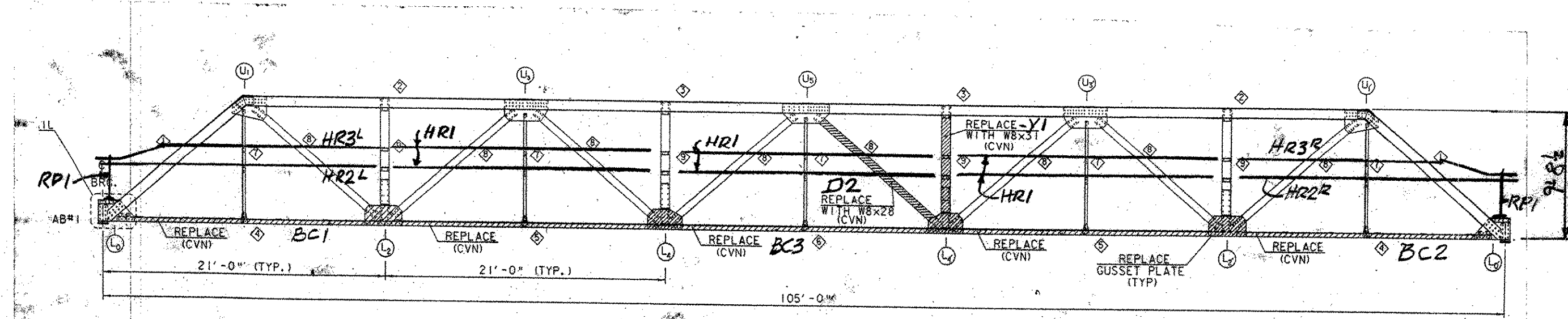
APR 09 2007
 SUBMITTED _____ APPROVED _____
 BY _____ DATE 4/13/07

WELDING PROCEDURE SPECIFICATION

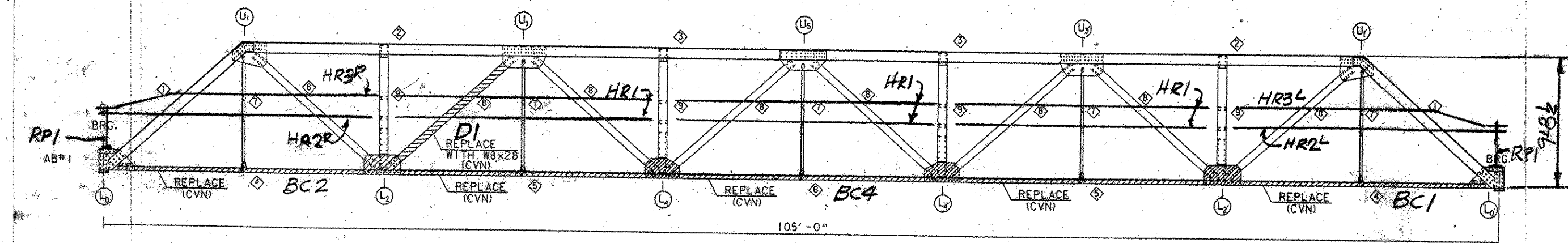
Welding specification ASTM A109 Gr 50-50-50 (250-345-345W)
 Welding process Shielded Metal Arc welding (SMAW)
 Manual or machine Manual
 Position of welding Flat (PF), Horizontal (HF)
 Filler metal specification AWS A51-A55
 Filler metal classification E 7018- R218 5/16 - 7/8
 Flux NA
 Shielding gas NA Flow rate NA
 Single or multiple pass Single and multiple
 Single or multiple arc Single
 Welding current AC 100
 Polarity Straight / Reverse
 Welding progression _____
 Root treatment Meet AWS specification
 Preheat and interpass temperature 70 (160) 50 (100) 3/16 (1.6) 1/8 (2.0) 5/16 (2.4) 3/8 (2.9) 1/2 (3.2) 5/8 (3.8) 3/4 (4.8) 7/8 (5.0) 1 (5.0) 1 1/8 (6.3) 1 1/4 (7.6) 1 1/2 (9.5) 1 3/4 (11.9) 2 (12.7) 2 1/4 (15.9) 2 3/4 (19.0) 3 (20.3) 3 1/2 (25.4) 4 (31.8) 4 1/2 (38.1) 5 (44.4) 5 1/2 (50.8) 6 (57.2) 6 1/2 (63.5) 7 (76.2) 7 1/2 (82.5) 8 (95.2) 8 1/2 (101.6) 9 (114.3) 9 1/2 (121.6) 10 (127.0) 10 1/2 (139.7) 11 (127.0) 11 1/2 (146.1) 12 (139.7) 12 1/2 (157.5) 13 (127.0) 13 1/2 (171.5) 14 (127.0) 14 1/2 (188.0) 15 (127.0) 15 1/2 (203.2) 16 (127.0) 16 1/2 (218.5) 17 (127.0) 17 1/2 (233.8) 18 (127.0) 18 1/2 (249.1) 19 (127.0) 19 1/2 (264.4) 20 (127.0) 20 1/2 (279.7) 21 (127.0) 21 1/2 (295.0) 22 (127.0) 22 1/2 (310.3) 23 (127.0) 23 1/2 (325.6) 24 (127.0) 24 1/2 (340.9) 25 (127.0) 25 1/2 (356.2) 26 (127.0) 26 1/2 (371.5) 27 (127.0) 27 1/2 (386.8) 28 (127.0) 28 1/2 (402.1) 29 (127.0) 29 1/2 (417.4) 30 (127.0) 30 1/2 (432.7) 31 (127.0) 31 1/2 (448.0) 32 (127.0) 32 1/2 (463.3) 33 (127.0) 33 1/2 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TRUSS MEMBER DESCRIPTIONS

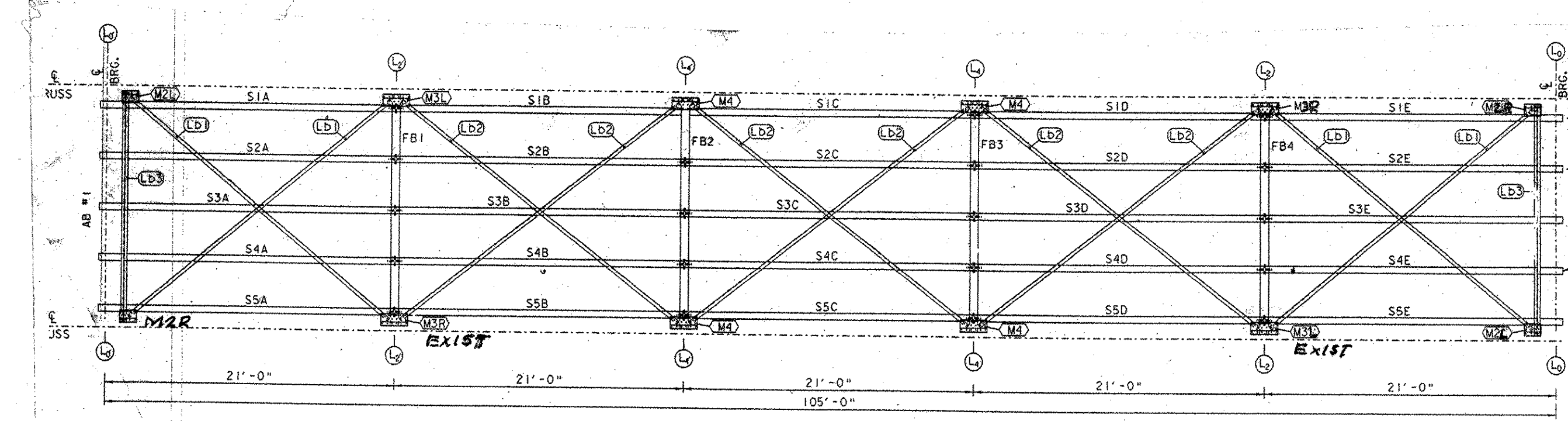
TRUSS MEMBER NUMBER	TRUSS MEMBER	MEMBER DESCRIPTION
◇	UPPER CHORD DIAGONAL	TWO (2) C 9 x 13.4 CHANNELS ONE (1) 14" x 1/4" COVER PLATE
◇	UPPER CHORD MEMBER	TWO (2) C 9 x 13.4 CHANNELS ONE (1) 14" x 1/4" COVER PLATE
◇	UPPER CHORD MEMBER	TWO (2) C 9 x 20 CHANNELS ONE (1) 14" x 1/4" COVER PLATE
◇	LOWER CHORD MEMBER	TWO (2) L 4 x 3 x 3/8 ANGLES
◇	LOWER CHORD MEMBER	TWO (2) L 4 x 3 x 3/8 ANGLES ONE (1) 8" x 3/4" COVER PLATE
◇	LOWER CHORD MEMBER	TWO (2) L 4 x 3 x 3/8 ANGLES ONE (1) 8" x 3/4" COVER PLATE
◇	VERTICAL WEB MEMBER	ONE (1) L 2 1/2 x 2 1/2 x 1/4 ANGLE
◇	DIAGONAL WEB MEMBER	ONE (1) 8 CB 21 ROLLED I-BEAM
◇	VERTICAL WEB MEMBER	ONE (1) 8 CB 31 ROLLED I-BEAM



NORTH TRUSS ELEVATION
LOOKING NORTH
SCALE 1/4" = 1'-0"



SOUTH TRUSS ELEVATION
LOOKING NORTH
SCALE 1/4" = 1'-0"



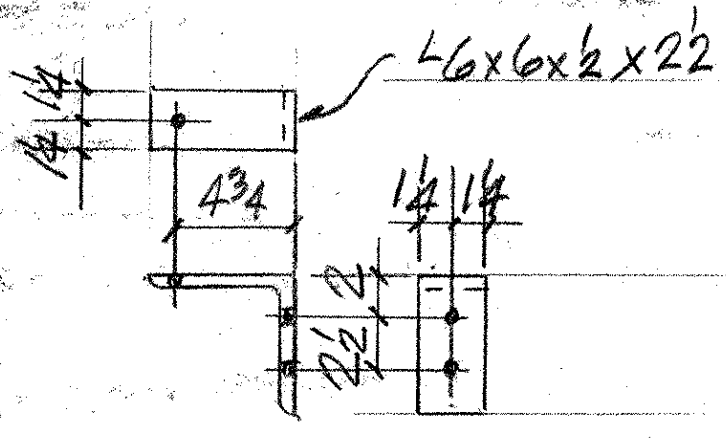
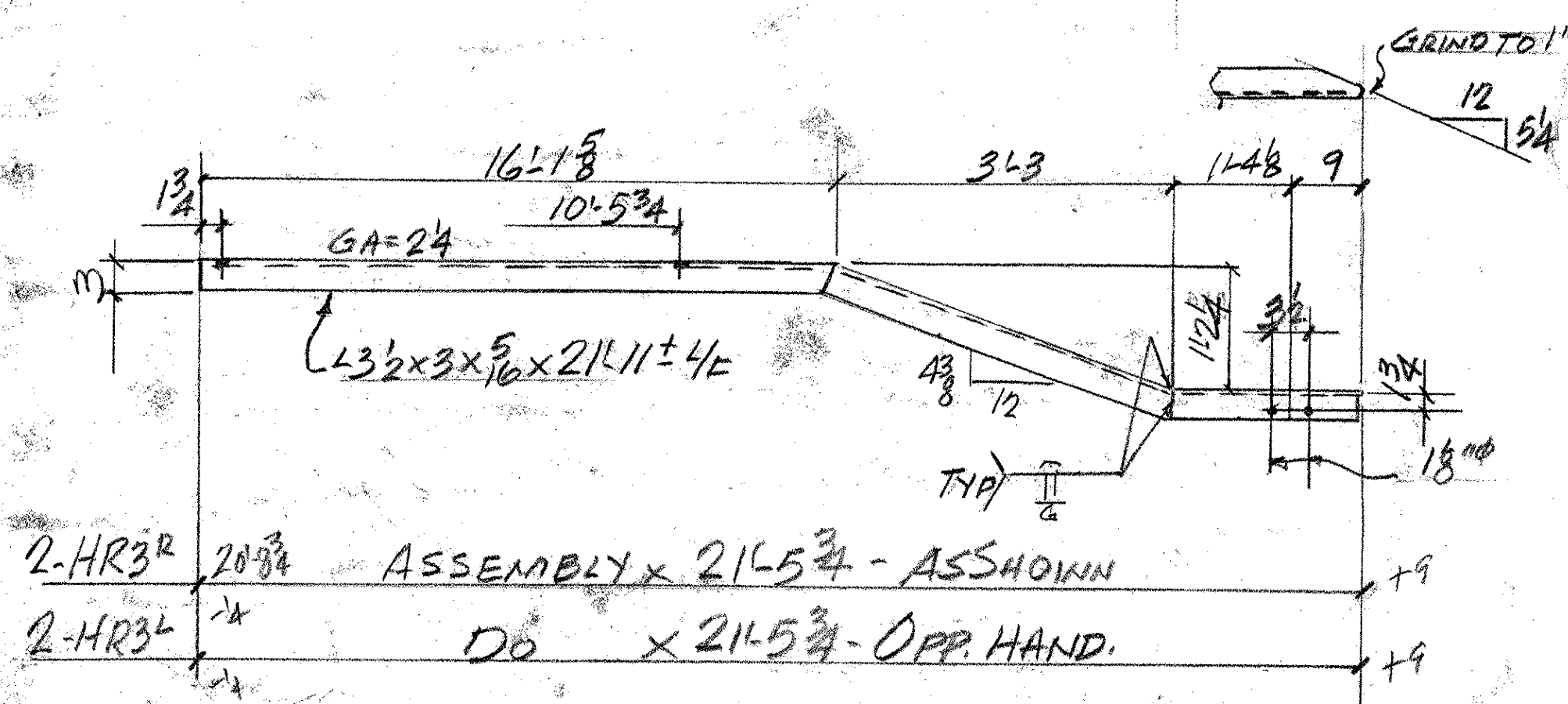
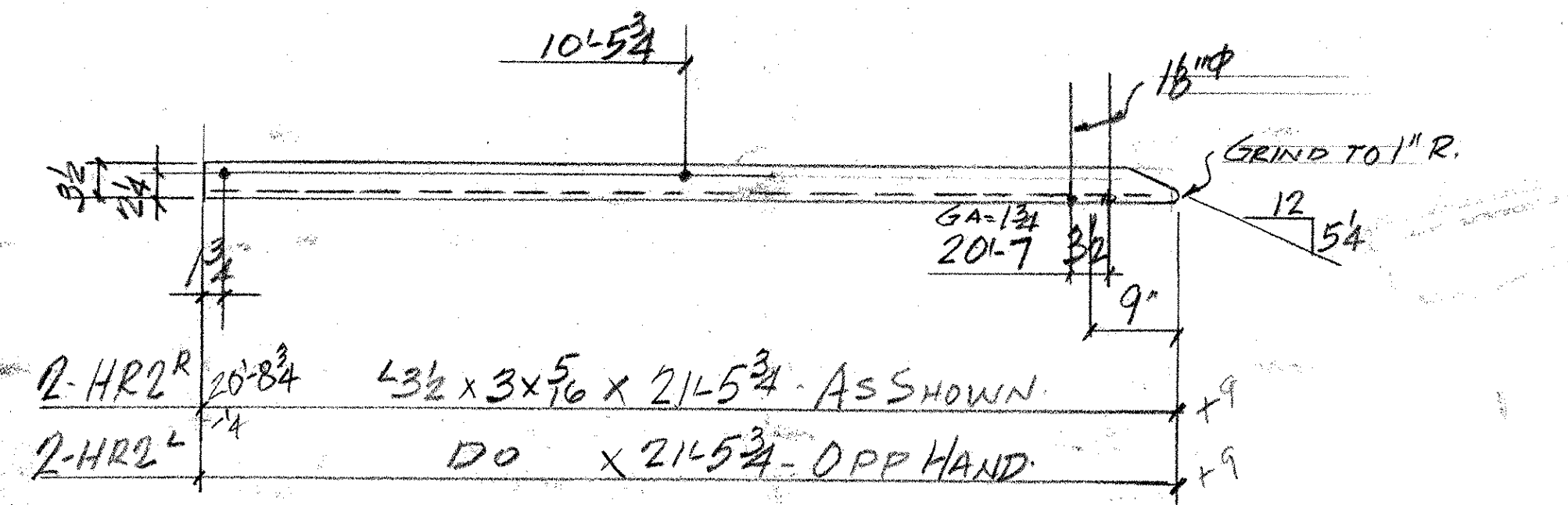
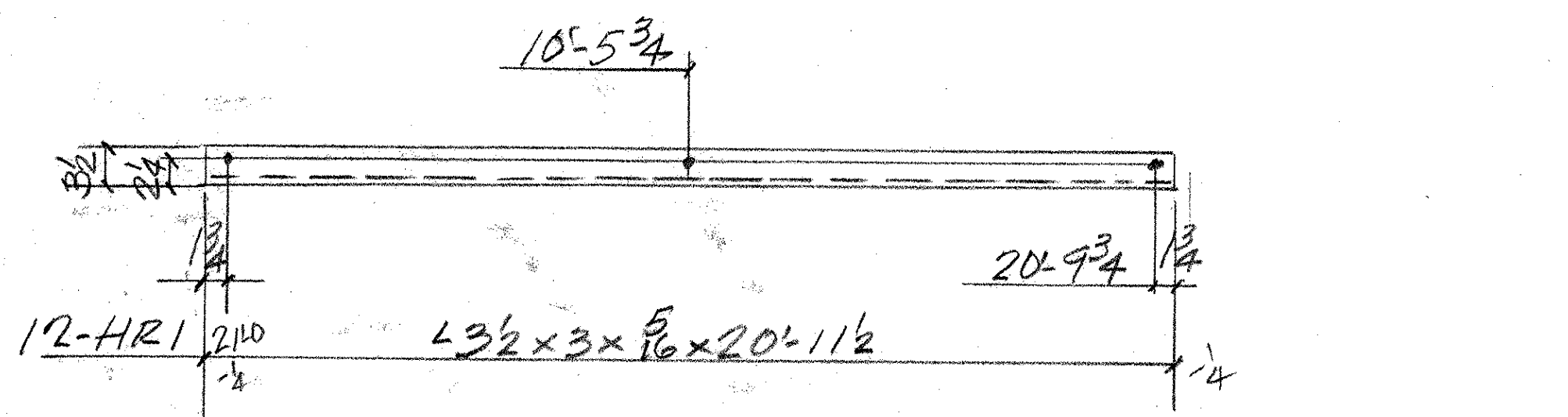
PROPOSED FLOOR PLAN

FLOOR MEMBER DESCRIPTIONS

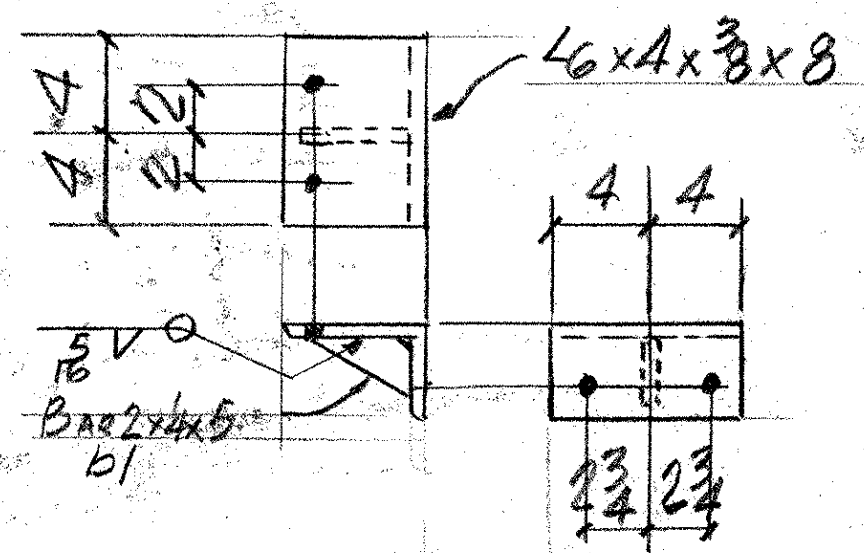
FLOOR MEMBER	SYMBOL	DESCRIPTION
STRINGER BEAM	S1A-S5A AND S1E-S5E	ONE (1) W10 x 30 x 21'-5"
STRINGER BEAM	S1B-S5B, S1C-S5C, S1D-S5D	ONE (1) W10 x 30 x 20'-9 3/4"
FLOOR BEAM	FB1 - FB4	ONE (1) W16 x 50 x 16'-8 1/4"
LATERAL BRACING	LB1	ONE (1) L3 x 2 1/2 x 3/8 x 24'-8 1/4"
LATERAL BRACING	LB2	ONE (1) L3 x 2 1/2 x 3/8 x 25'-7 3/8"
LATERAL BRACING	LB3	TWO (2) L2 1/2 x 2 1/2 x 3/8 x 16'-8 1/4"
GUSSET PLATE-HORIZONTAL	M2L	ONE (1) 10 1/2" x 3/8" x 1'-2 1/2" PLATE
GUSSET PLATE-HORIZONTAL	M2R	ONE (1) 10 1/2" x 3/8" x 1'-2 1/2" PLATE
GUSSET PLATE-HORIZONTAL	M3L	ONE (1) 10 1/2" x 3/8" x 1'-1 1/2" PLATE
GUSSET PLATE-HORIZONTAL	M3R	ONE (1) 10 1/2" x 3/8" x 1'-1 1/2" PLATE
GUSSET PLATE-HORIZONTAL	M4	ONE (1) 10 1/2" x 3/8" x 2'-1" PLATE

OUT FOR APPROVAL	3-27-07										
OUT FOR APPROVAL	4-24-07	53102									
ISSUED TO SHOP											
FIELD & OFFICE											
REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	PROJECT NO. STP 1447(2B)										
	MATERIAL:	ELECTRODES:	HOLES:							SHOP BOLTS:	
	SURFACE PREP. & PAINT: BLAST CLEAN-SP10 SHERWIN WILLIAMS - 2 COAT SYSTEM PRIMER-COROTHENE I GALVAPAC SECOND COAT-FASTCLAD VATHANE										
	DESCRIPTION: FRAMING PLAN	DRAWN BY	DATE								
	JOB:	JPF	3-07								
	IMPROVEMENTS	CHKD BY	F.J.								
	CREAMERY BRIDGE	APPROV BY	[Signature]								
	BRADFORD, VT.	Q.A.									
	CUSTOMER: AUSTIN CONSTR.										
	CASCO BAY STEEL STRUCTURES, INC.	JOB NO.	DRG. NO.								
	75 SPRING HILL ROAD SACO, MAINE 04072	314	E1								
	PHONE (207) 282-7360 FAX. (207) 282-1179	REV.	[Signature]								

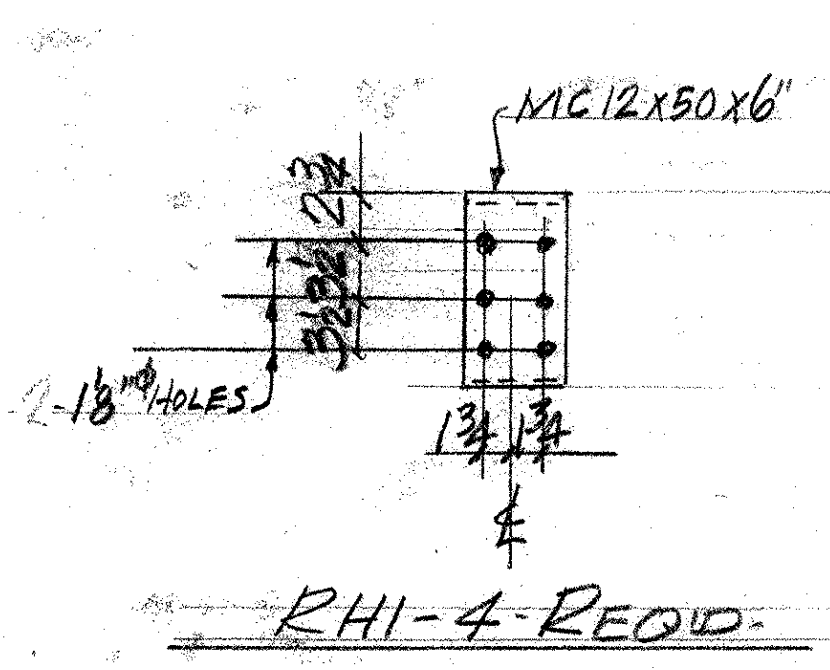
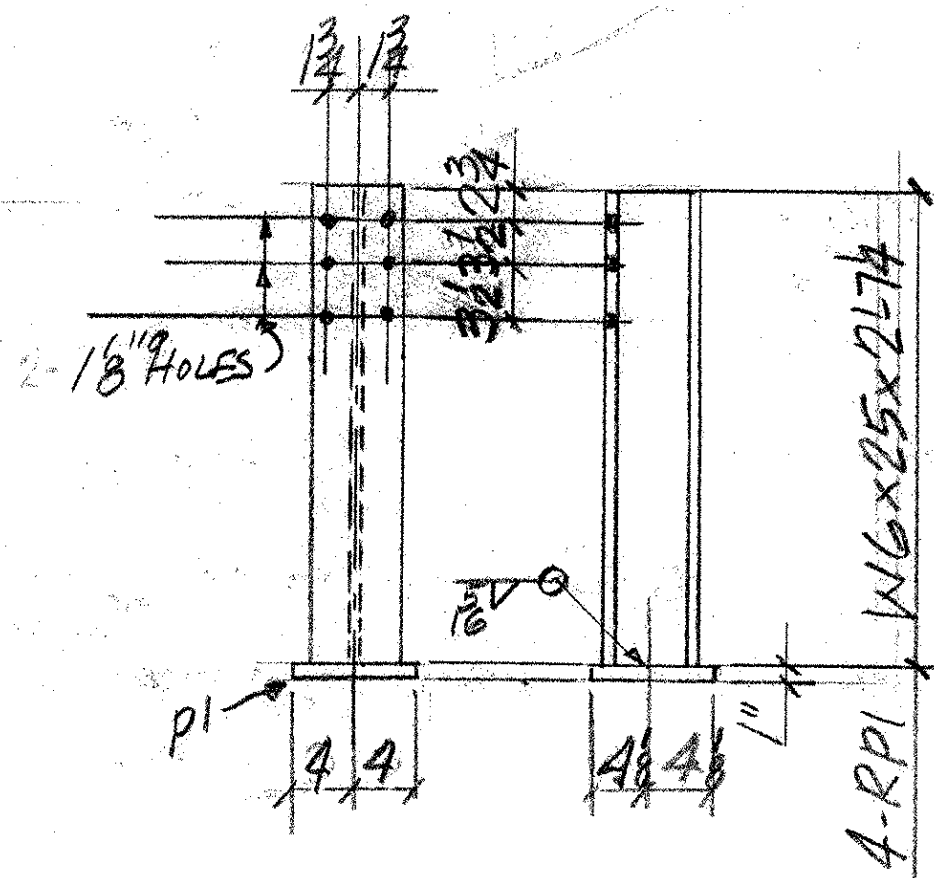
RECEIVED
 JUN 4 2007
 BY OPW DATE 6/6/07



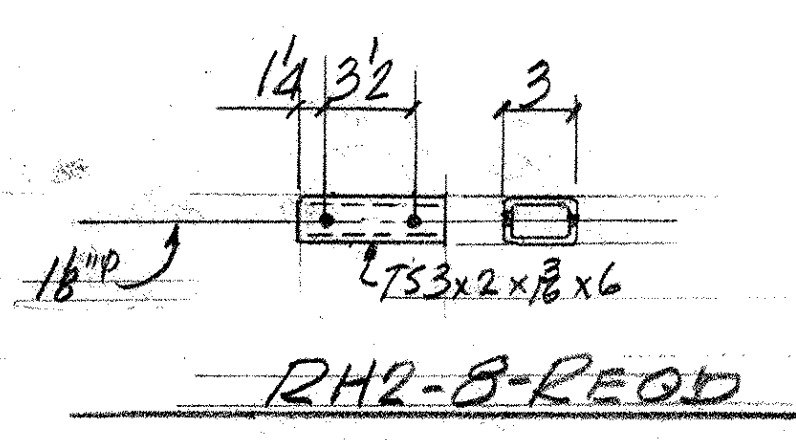
RK1-20-REQ'D.



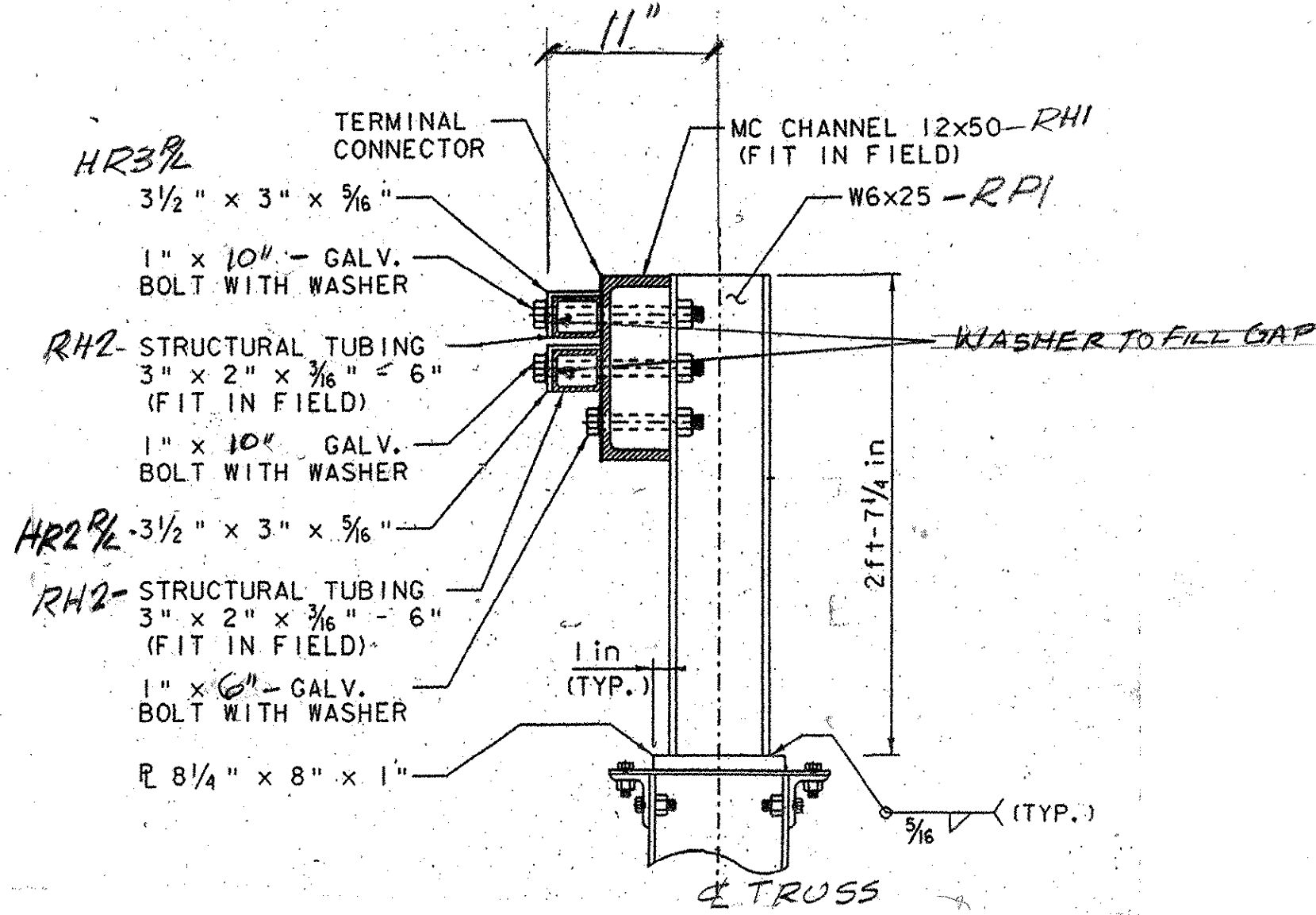
RK2-16-REQ'D.



RH1-4-REQ'D.



RH2-8-REQ'D.



END POST-FIELD ASSEMBLY

ABM INFO		SHOP BILL				JOB NO. 314	DRG. NO. 54		
PAGE	LINE	NO.	DESCRIPTION	FT	IN	ASSEM. MARK	SHIPPING MARK	REMARKS	WEIGHT
	12		L3 1/2 x 3 x 5/16	20	11 1/2		HR1	506.50	
	2		DO	21	5 3/4		HR2R		
	2		DO	21	5 3/4		HR2L		
	2		DO	21	11 1/2		HR3R		
	2		DO	21	11 1/2		HR3L		
	20		L6 x 6 x 2	22			RK1	506.60	
	16		L6 x 4 x 3/8	8			RK2	506.60	
	16		BAR2 x 4	5	61		DO		
	4		W6 x 25	2	7 1/2		RPI	506.50	
	4		RPI x 8	3 1/2			DO	506.60	
	4		MC12 x 50	6			RH1	506.60	
	8		L53 x 2 x 1/8	6			RH2	506.60	
FIELD BOLTS									
	124		3/4\"/>						

PAY ITEM - AS NOTED.

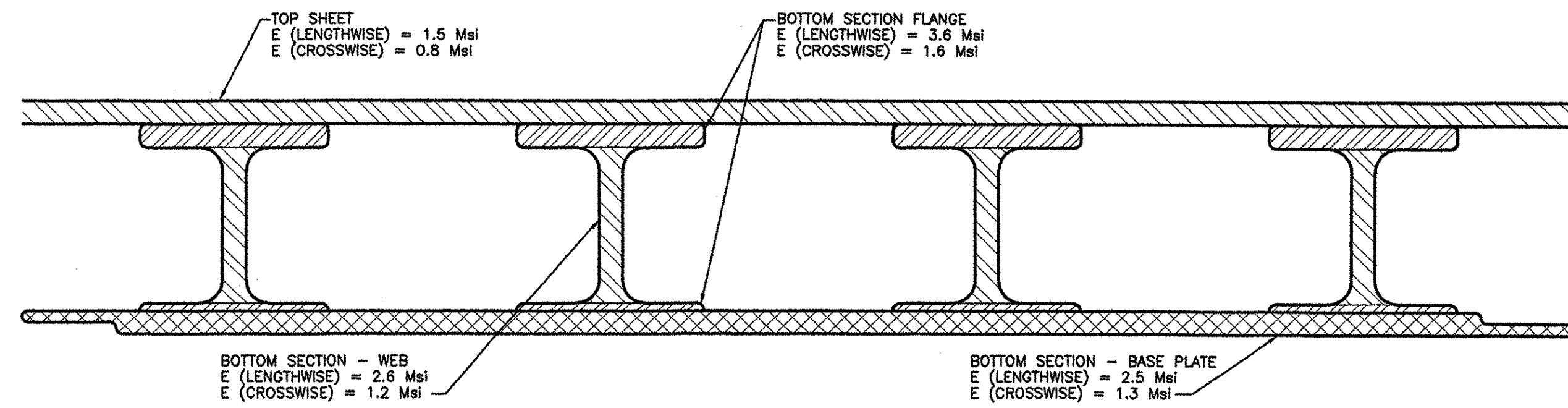
OUT FOR APPROVAL	3-27-07								
OUT FOR APPROVAL	4-23-07			5-31-07					
ISSUED TO SHOP									
FIELD & OFFICE									

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	PROJECT NO. STP. 1447 (28)										
	STATE PROJECT NO.										
	MATERIAL: A572-50										
	ELECTRODES: SEE PROC										
	HOLES: 1/8\"/>										

DESCRIPTION: BRIDGE RAIL	DRAWN BY	DATE
JOB: IMPROVEMENTS	JPF	3-07
CREAMERY BRIDGE	CHKD BY	EJ
BRADFORD, VT.	APPROV BY	
	Q.A.	

CUSTOMER: AUSTIN CONSTR.	JOB NO. 314	DRG. NO. 54
CASCO BAY STEEL STRUCTURES, INC.	75 SPRING HILL ROAD	SACO, MAINE 04072
PHONE (207) 282-7360	FAX (207) 282-1179	REV. A

RECEIVED
 OK'D BY _____
 JUN 04 2007
 RESUBMIT APPROVED _____
 BY CPW DATE 6/6/07

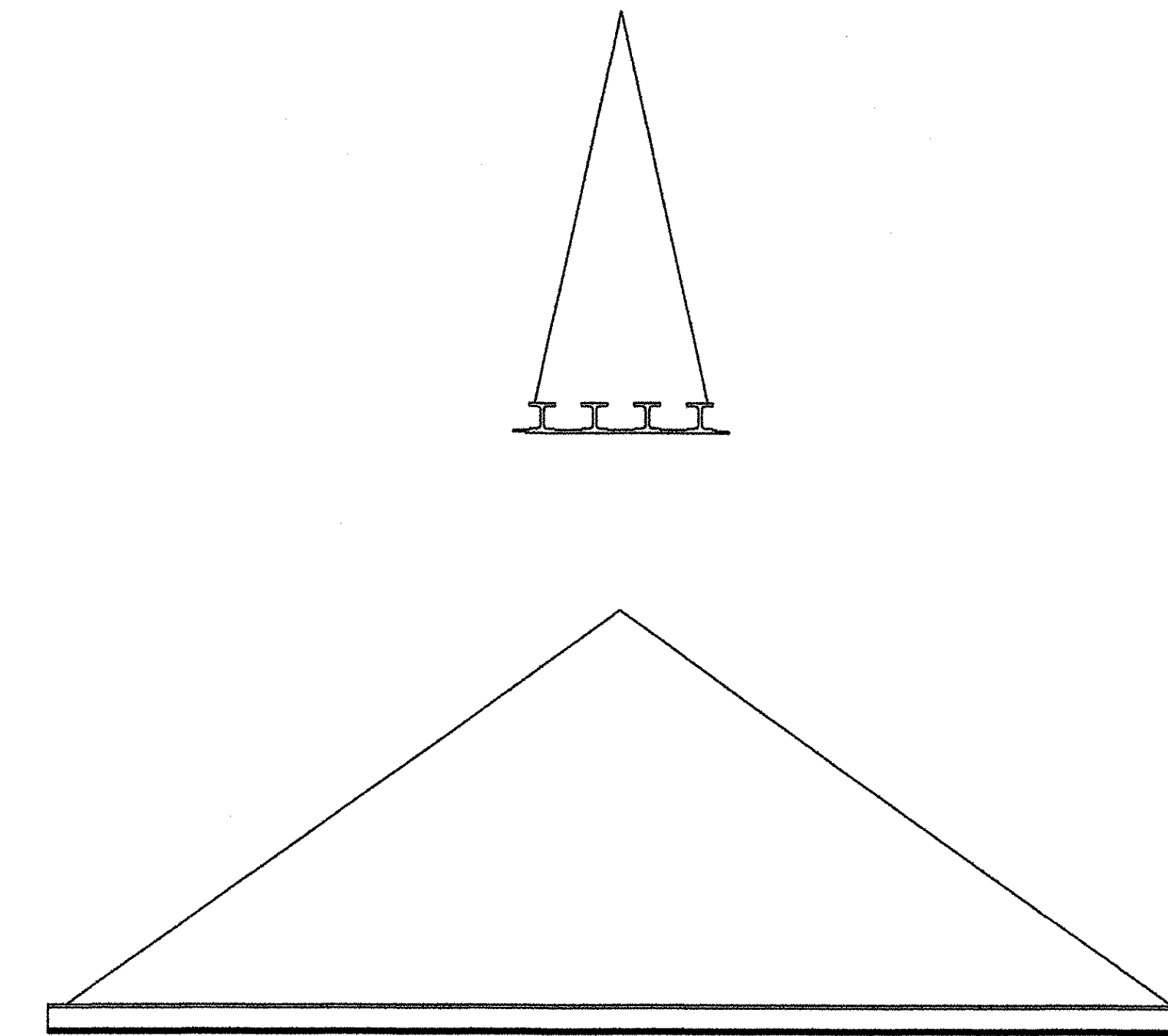
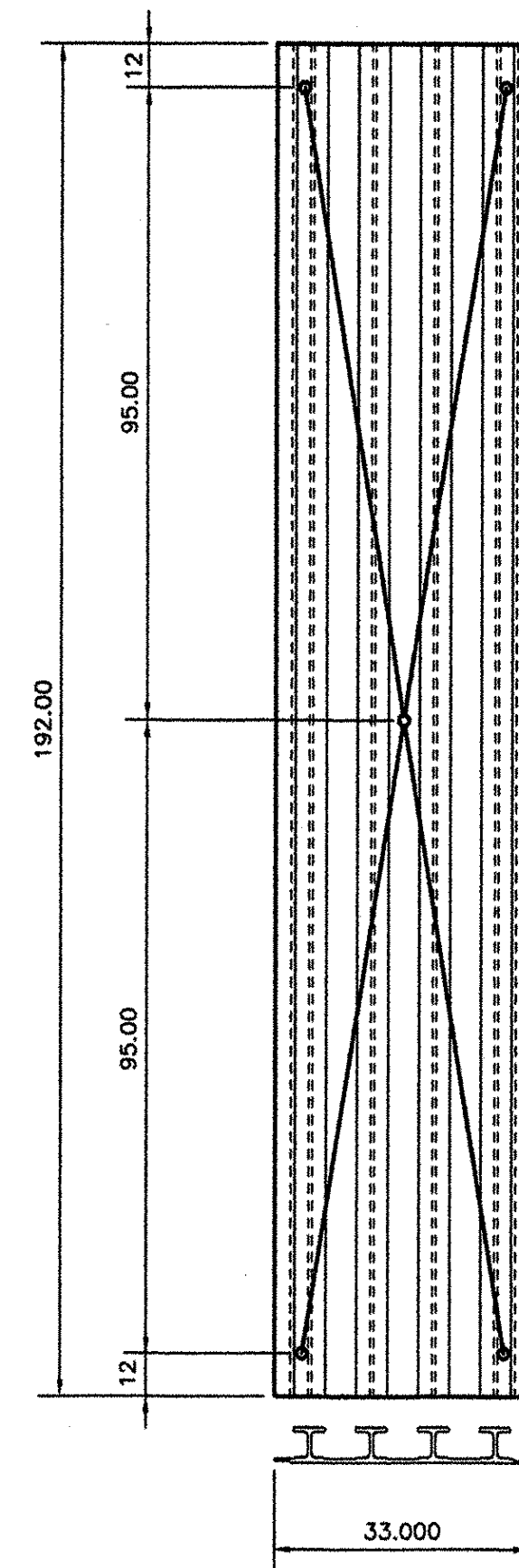


1 MODULUS MAP - ZELLCOMP DECKING CROSS SECTION VIEW

SD-2 NO SCALE

NOTES:

1. E (LENGTHWISE) = MODULUS IN MACHINE DIRECTION (NORMAL TO PLANE OF PAGE AND CROSS-SECTION OF LAMINATE).
2. E (CROSSWISE) = TRANSVERSE MODULUS (IN PLANE OF PAGE AND LAMINATE FACE).
3. MODULUS INDICATED AS REPRESENTATIVE VALUES WITHIN DIFFERENTLY CONSTRUCTED AREAS OF THE DECK.



3 DECK LIFTING DIAGRAM

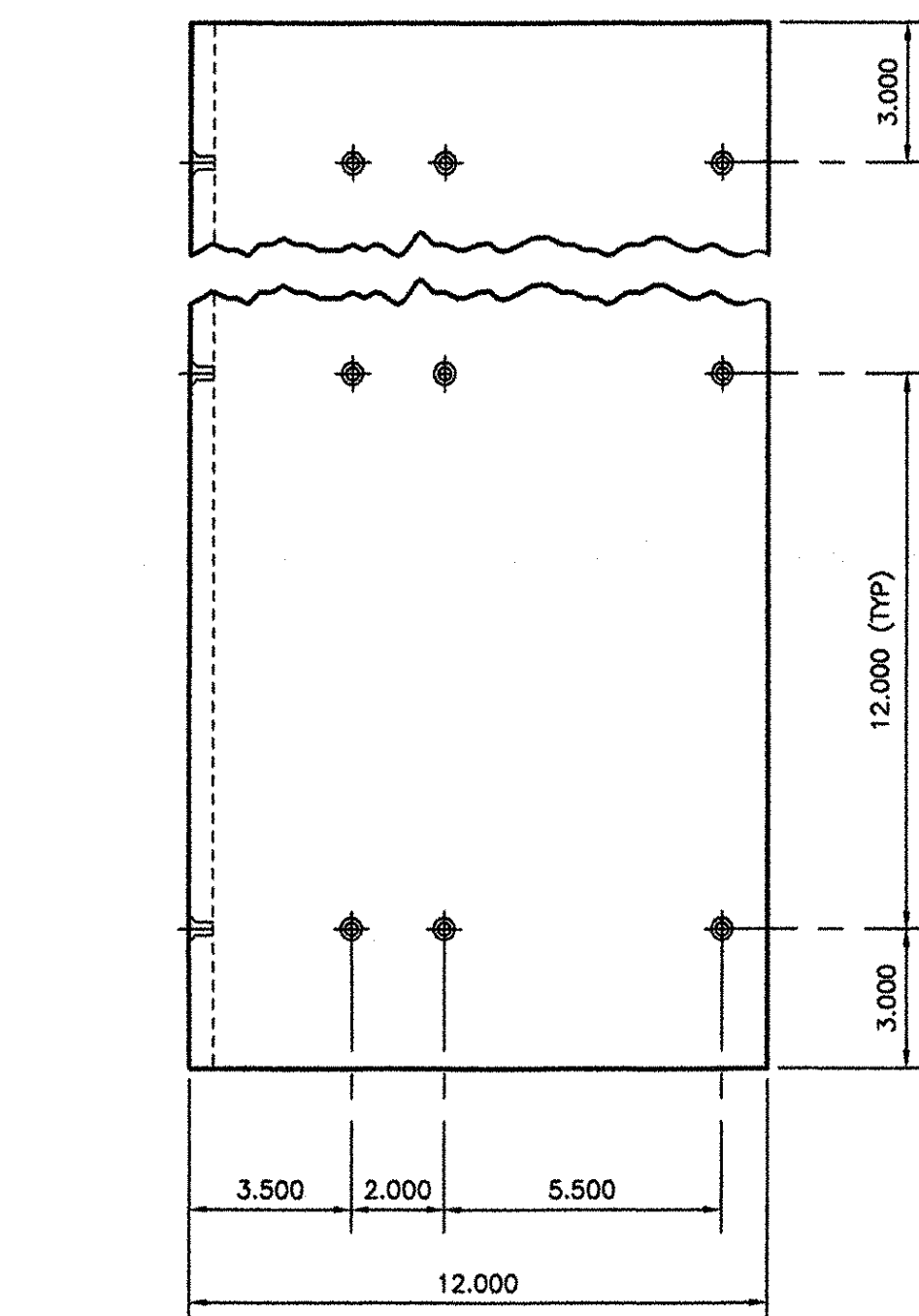
SD-2 NO SCALE

NOTES:

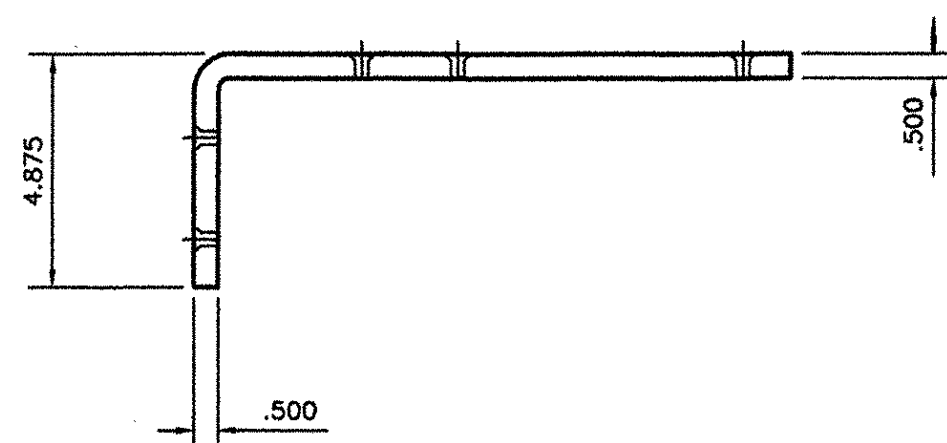
1. LIFT ANCHOR TYPE & SIZE TO BE SPECIFIED BY ON-SITE ZELLCOMP ENGINEER.
2. ANCHOR ATTACHMENT METHOD TO BE SPECIFIED BY ON-SITE ZELLCOMP ENGINEER.
3. LIFT CABLE/STRAP & SIZE TO BE SPECIFIED BY ON-SITE ZELLCOMP ENGINEER.
4. LIFT ANCHOR POINTS (LOCATIONS) MAY BE ALTERED BY ON-SITE ZELLCOMP ENGINEER.
5. STRAP ANGLES TO BE SPECIFIED BY ON-SITE ZELLCOMP ENGINEER.
6. FLAT SHEETS WILL BE LIFTED BY STRAPS PER THE ON-SITE ZELLCOMP ENGINEER.

DECK ASSEMBLY NOTES:

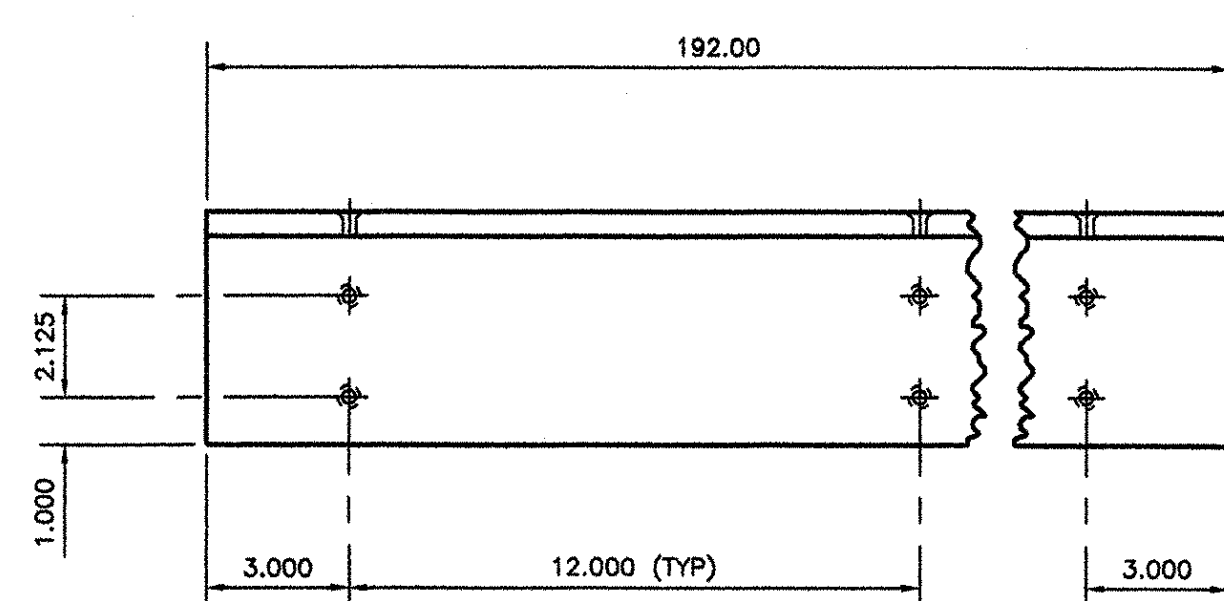
1. STARTING FROM ABUTMENT 1, PLACE BOTTOM SECTION AS SHOWN IN DECK PLAN VIEW ONTO STRINGERS.
2. DRILL HOLES FOR CONNECTING BOTTOM SECTION TO STRINGERS WITH SPECIALTY LUGS AS SHOWN IN SECTION D-D, ASSEMBLE CONNECTION COMPONENTS.
3. PLACE WHOLE BOTTOM SECTIONS, DRILLING AND ASSEMBLING STRINGER CONNECTIONS FOR EACH BOTTOM SECTION AFTER POSITIONING IN SEQUENCE FROM WEST TO EAST UP TO ABUTMENT 2.
4. COMPLETE BOTTOM SECTION PLACEMENT TO ABUTMENT 2 AND CONNECTION ACCORDING TO PLAN VIEW OF DECK PANELS.
5. STARTING FROM ABUTMENT 1, PLACE 1/2" THICK FRP TOP SHEETS AS SHOWN IN PLAN VIEW AND FASTEN WITH SCREWS.
6. ATTACH BENT STEEL PLATES AT ABUTMENTS 1 AND 2 AS SHOWN IN SECTION E-E.
7. ATTACH 3/16" FRP COMPOSITE CLOSE-OUT PANEL TO OPEN ENDS OF BOTTOM SECTIONS ON NORTH AND SOUTH EDGES OF DECK, SPECIFIED BY ON-SITE ZELLCOMP ENGINEER.
8. ZELLCOMP, INC. WILL PROVIDE A 4" ACCESS OPENING IN THE 3/16" FRP COMPOSITE CLOSE-OUT PANELS AT EACH CURB BOLT LOCATION FOR HAND TIGHTENING OF CURB BOLTS.



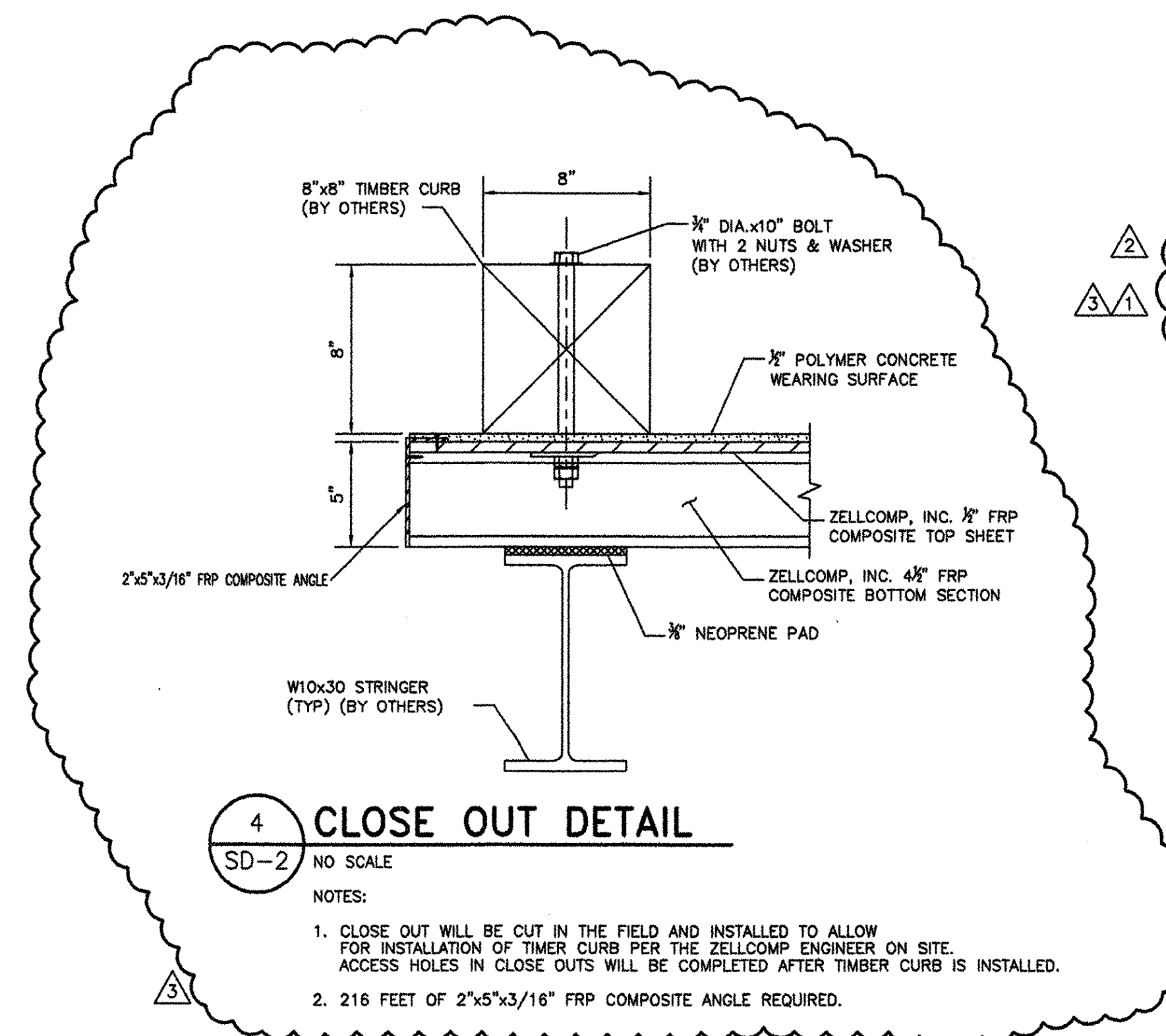
TOP VIEW



END VIEW



FRONT VIEW



4 CLOSE OUT DETAIL

SD-2 NO SCALE

NOTES:

1. CLOSE OUT WILL BE CUT IN THE FIELD AND INSTALLED TO ALLOW FOR INSTALLATION OF TIMBER CURB PER THE ZELLCOMP ENGINEER ON SITE. ACCESS HOLES IN CLOSE OUTS WILL BE COMPLETED AFTER TIMBER CURB IS INSTALLED.
2. 216 FEET OF 2"x5"x3/16" FRP COMPOSITE ANGLE REQUIRED.

2 BENT STEEL PLATE DETAILS

SD-2 NO SCALE

NOTES:

1. STEEL SHALL BE GALVANIZED AND BE A MINIMUM OF A709 GR 36.
2. HOLES TO BE DRILLED, CSK AND SFACE ZELLCOMP TO PROVIDE SCREWS FOR FIT.
3. 2 REQUIRED.

- REVISIONS:
1. REVIEW COMMENTS 7-27-07
 2. REVIEW COMMENTS 8-17-07
 3. REVIEW COMMENTS 8-24-07

ZELLCOMP
 3020 PICKETT ROAD
 SUITE 327
 DURHAM, NC 27705
 (919) 401-4000

PROJECT FOR:
ZELLCOMP SHOP DRAWINGS FOR: A BRIDGE DESCRIBED AS BRADFORD STP 1447(28) BEGINNING AT A POINT APPROXIMATELY 0.03 MILES FROM THE JUNCTION OF MILL STREET AND TH 27 AND EXTENDING SOUTHEASTERLY ALONG TH 27 FOR 160 FEET. BRADFORD, VT

DRAWN BY	CJC
CHECKED BY	DR
APPROVED BY	
BUILDING NO.	
FILE NO.	
SET NO.	
DATE	07-14-07

DRAWING TITLE
SHOP DRAWINGS

SHEET NO
SD-2
 OF 2

RECEIVED
 OK'D BY _____ OK'D BY *RSK*
 SEP 11 2007
 RESUBMIT _____ APPROVED _____
 BY *CPW* DATE *9/11/07*

3100 2007 WILCO FAX 2075521179

2/01

Casco Bay Steel Structures, Inc.		FAX (207) 282-1179					
TELEPHONE (207) 282-7360	75 Spring Hill Road Saco, Maine 04072						
CUSTOMER: <u>AUSTIN CONSTRUCTION</u>	A/E:						
PROJECT:	DATE: <u>8-2-07</u>	SKETCH NO.:					
<u>CREAMERY BRIDGE</u>	JOB NO.: <u>314</u>	S.O. NO.:					
<u>BRADFORD VT</u>	DRAWN BY: <u>BT</u>	WANTED:					
<u>STP 1447 (28)</u>	PAINT: <u>GALVANIZED</u>						
DELIVERY ARRANGEMENTS:							
<p style="text-align: center;">RECEIVED CK'D BY <u>ELR</u> OK'D BY <u>RST</u> AUG 13 2007 RESUBMIT APPROVED <u>As Noted</u> BY <u>CPW</u> DATE <u>8/17/07</u></p> <p style="text-align: center;">4 - RAIL POST</p>							
UNLESS NOTED OTHERWISE ALL MATERIAL MUST BE ASTM-A36 OR BETTER HOLES: Ø DIA. U.N.O.							
SHP	MK	QTY	MARK	DESCRIPTION	LENGTH	WT	REMARKS
		4	bm	1/6x25	2	18	
		4	be	2 1/2x9	1	1	

STRUCTURES
COPY

BR 1

Casco Bay Steel Structures, Inc.

75 Spring Hill Road
Saco, Maine 04072

Phone: (207) 282-7360

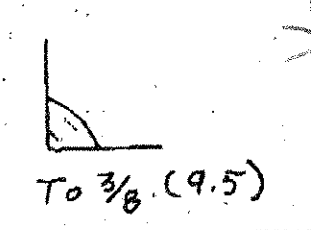
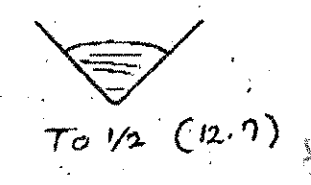
Fax: (207) 282-1170

WELDING PROCEDURE SPECIFICATION

Material specification ASTM A99/A99M - Grade 36(50) 50(45) 50W(346W)
 Welding process Flux Cored Arc Welding (FCAW)
 Manual or machine SEMI AUTO
 Position of welding Flat (1F) Horizontal (6F)
 Filler metal specification AWS A5.20
 Filler metal classification E71T-1
 Flux NA
 Shielding gas 75% AR 25% CO2 Flow rate 40 CFH ES
 Single or multiple pass Single and multiple - Electrode Extension 8" ± 4" (50" ± 6.35)
 Single or multiple arc Single
 Welding current DC
 Polarity Reverse
 Welding progression To meet AWS specification
 Preheat and interpass temperature To 30 (10) 30 (10) To 150 (60) 150 (65)
 Postheat temperature NA
 Heat Input Min NA Max NA

WELDING PROCEDURE

Pass no.	Electrode size	Welding current		Travel speed	AWS D1.5	Joint detail
		Amps	Volts			
1/16	2.05	28.8	11.6	1F	AWS D1.5	Joint detail Fillet
	24.5	26.8	10.4			
	30.5	30.8	12.8			
(METRIC)						
1.6	2.05	28.8	294.6	2F	AWS D1.5	Joint detail Fillet
	24.5	26.8	264.2			
	30.5	30.8	325.12			



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 AUG 14 2007
 BY: [Signature]
 DATE: 8-15-07

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in applicable A.W.S. codes or contract specifications

Procedure no. 101
 Revision no. 01
 Form 31-2

Contractor Casco Bay Steel
 Authorized By Paul E. Goodale
 Date 5/23/00

