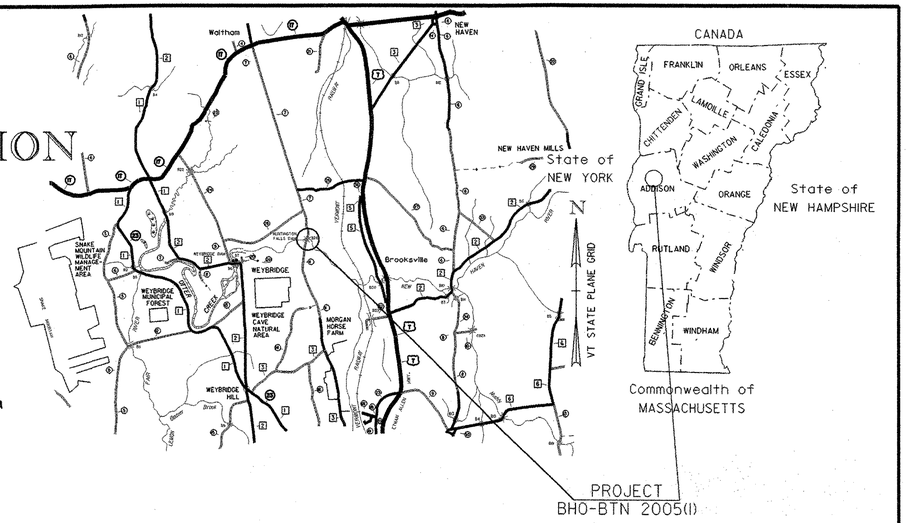
INDEX OF SHEETS

LIST OF STANDARDS

B-5	6/1/94
B-71	7/8/05
E-100	1/2/04
E-101	5/30/03
E-102	6/30/03
E-102A	5/1/04
E-107	6/30/03
E-107A	8/8/95
E-120	8/8/95
E-121	8/8/95
E-124	8/8/95
E-142	9/20/95
E-152	5/1/04
E-155	5/1/04
E-160	5/20/99
E-164	5/20/99
G-1	1/3/2000
G-1d	1/3/2000

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PROPOSED IMPROVEMENT



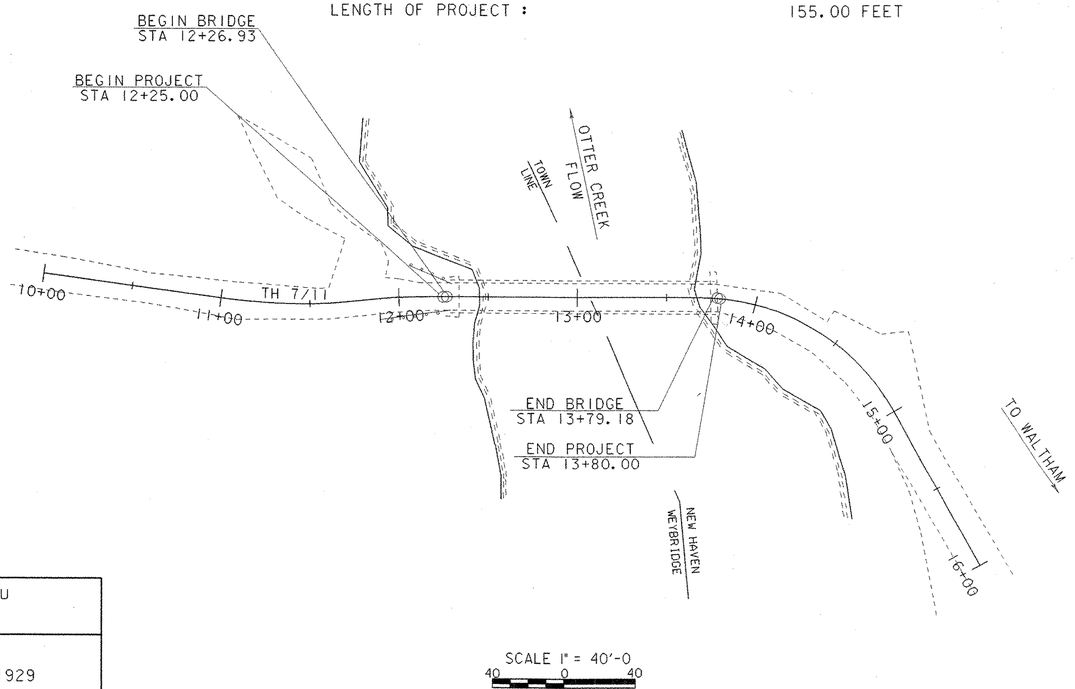
TOWNS OF NEW HAVEN & WEYBRIDGE
COUNTY OF ADDISON

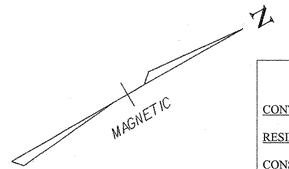
ROUTE NO : TH 7/11, CL 3 BRIDGE NO : 26

PROJECT LOCATION : LOCATED IN THE COUNTY OF ADDISON, TOWN OF NEW HAVEN & WEYBRIDGE, ON TH 7/11, BR 26 OVER THE OTTER CREEK, AT THE NEW HAVEN - WEYBRIDGE TOWN LINE.

PROJECT DESCRIPTION : THE PROJECT CONSISTS OF REHABILITATING THE EXISTING STRUCTURE INCLUDING ONE NEW ABUTMENT WITH RELATED CHANNEL AND APPROACH WORK.

LENGTH OF STRUCTURE :	151.42 FEET
LENGTH OF ROADWAY :	3.58 FEET
LENGTH OF PROJECT :	155.00 FEET





CONVENTIONAL SYMBOLS

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

SURVEYED BY : R. MOREAU
SURVEYED DATE : 7/90

DATUM
VERTICAL NGVD 1929
HORIZONTAL ASSUMED

RECORD PLANS

CONTRACTOR: CCS CONSTRUCTORS LLC – MORRISVILLE, VT

RESIDENT ENGINEER: DALE NORTON

CONSTRUCTION BEGAN: MAY 17, 2007

CONSTRUCTION COMPLETE: SEPTEMBER 18, 2008

RECORD PLANS BY: DALE NORTON & BEN LOGAN

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

BY Dale R. Norton RESIDENT ENGINEER

DATE 6/3/2009

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.

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

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

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED [signature] DATE 1-30-07

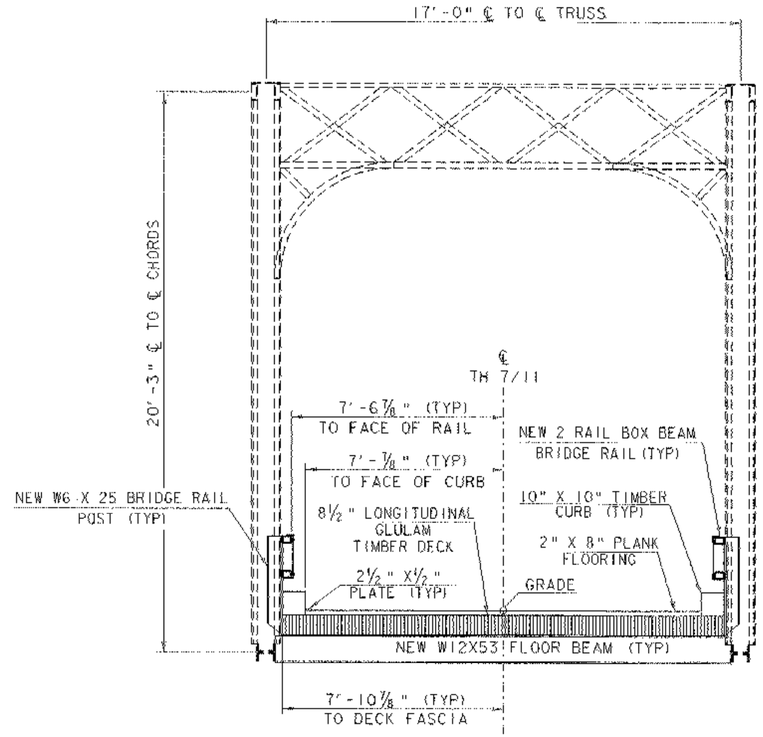
PROJECT MANAGER : C.P. WILLIAMS

PROJECT NAME : NEW HAVEN - WEYBRIDGE
PROJECT NUMBER : BHO-BTN 2005 (1)

SHEET 1 OF 53 SHEETS

M:\Projects\89j081\Structures\sj081bdr.dgn

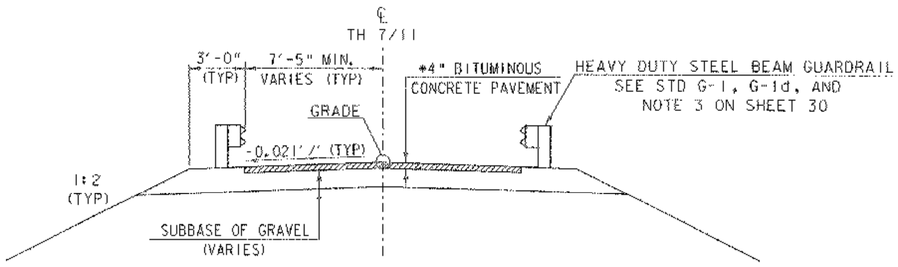
PLOTTED 30-JAN-2007



TYPICAL BRIDGE SECTION

SCALE ⅜" = 1'-0

NOTE: TTHE TRANSVERSE DECFKING WAS INSTALLED AS PER PLAN. SUBSEQUENT TO FINAL INSPECTION AND ACCEPTANCE, THE TRANSVERSE DECKING DETERIORATED TO THE POINT THE TOWNS CLOSED THE BRIDGE. THE AGENCY, USING DISTRICT FORCES, REDECKED THE ENTIRE DECK WITH DOUGLADS FIR 2X8 PLANKING, PLACED LONGITUDINALLY, AND SECURELY LAG BOLTED IN PLACE. THE "REDECKING" WAS DONE IN APRIL 2009.



ROADWAY TYPICAL

SCALE ¼" = 1'-0

*1½" TYPE III OVER 2½" TYPE I

MATERIAL ITEM	TOLERANCE
PAVEMENT	±¼" TOTAL THICKNESS
BASE COURSE	± ½"
SUBBASE	± 1"

FINAL HYDRAULICS REPORT

HYDROLOGIC DATA

DRAINAGE AREA= 749 sq. mi.
CHARACTER OF TERRAIN: Rolling hills
CHARACTER & TYPE OF STREAM: Sinuous, semi-alluvial, probably incised, not braided or anabranched
NATURE OF STREAMBED: Sand, gravel, cobbles, and ledge

Q2.33= 5,000 cfs — Q50= 10,850 cfs
Q10= 8,000 cfs — Q100= 12,200 cfs
Q25= 9,650 cfs — Q500= 15,500 cfs

DATE OF FLOOD OF RECORD: November 1927
WATER SURFACE ELEV. @ 224.5+- ESTIMATED DISCHARGE: 18,800 cfs
NATURAL STREAM VELOCITY @ Q25 = 5.4 fps
ICE CONDITIONS: Moderate DEBRIS: Slight
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEVATION RAPIDLY? No
IS ORDINARY RISE RAPID? No
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? Yes
IF YES, DESCRIBE: Huntington Falls Dam is about 350 ft. downstream.
WATERSHED STORAGE N.A. HEADWATERS UNIFORM THROUGHOUT WATERSHED IMMEDIATELY ABOVE SITE

EXISTING STRUCTURE

STRUCTURE TYPE: Single span steel truss bridge YEAR BUILT: 1908
CLEAR SPAN (NORMAL TO STREAM): 140 ft.
VERTICAL CLEARANCE ABOVE STREAMBED: 22 ft.
WATERWAY OF FULL OPENING: 2,350 sq. ft.
DISPOSITION OF STRUCTURE: Rehabilitate
TYPE OF MATERIAL UNDER SUBSTRUCTURE: Abutment # 1 on ledge, #2 on piles

WATER SURFACE ELEV. @ Q2.33= 218.7 VELOCITY= 3.3 fps
Q10= 219.9 " = 4.8 fps
Q25= 220.7 " = 5.4 fps
Q50= 221.( ) " = 5.9 fps
Q100= 221.7 " = 6.3 fps

LONG TERM STREAM BED CHANGES: None noted. Controlled by the downstream dam.
IS THE ROADWAY OVERTOPPED BELOW THE Q100? No FREQUENCY:
RELIEF ELEVATION: 226.3 DISCHARGE OVER ROAD @ Q100= 0

UPSTREAM STRUCTURE: TOWN: Middlebury-Weybr. DISTANCE: 3.8 miles
HIGHWAY NO.: T.H. 6 & T.H. 3 STRUCTURE NO.: 1
STRUCTURE TYPE: Covered Bridge
CLEAR SPAN: 171 ft. CLEAR HEIGHT: 20 ft.
YEAR BUILT: 1830 FULL WATERWAY: N.A.

DOWNSTREAM STRUCTURE: TOWN: Weybridge DISTANCE: 1.3 miles
HIGHWAY NO.: T.H. 2 STRUCTURE NO.: 6
STRUCTURE TYPE: Two span steel beam bridge
CLEAR SPAN: 118 ft. CLEAR HEIGHT: 22 ft.
YEAR BUILT: 1911 FULL WATERWAY: N.A.

PROPOSED STRUCTURE

STRUCTURE TYPE: Rehabilitate existing single span steel truss bridge.
CLEAR SPAN (NORMAL TO STREAM): 140 ft.
VERTICAL CLEARANCE ABOVE STREAMBED: 23 ft.
WATERWAY OF FULL OPENING: 2,500 sq. ft.

WATER SURFACE ELEV. @ Q2.33= 218.7 VELOCITY= 3.3 fps
Q10= 219.9 " = 4.8 fps
Q25= 220.7 " = 5.4 fps
Q50= 221.( ) " = 5.9 fps
Q100= 221.7 " = 6.3 fps

IS THE ROADWAY OVERTOPPED BELOW THE Q100? No FREQUENCY:
RELIEF ELEVATION: 226.5 DISCHARGE OVER ROAD @ Q100= 0

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 225.5
VERTICAL CLEARANCE @ Q100 = 3.8 ft.

SCOUR: Contraction scour = 8 ft. @ Q100 & 9 ft. @ Q500 *
REQUIRED CHANNEL PROTECTION: Stone Fill, Type III

PERMIT INFORMATION

AVERAGE DAILY FLOW: 1,580 cfs
ORDINARY LOW WATER: 670 cfs ELEV.: 216.0
ORDINARY HIGH WATER: 2,150 cfs ELEV.: 219.0

ADDITIONAL COMMENTS

* The scour depths listed are based on free flow (live bed contraction scour). The operation of the downstream dam could affect scour depths at the bridge. The presence of ledge would limit the scour depth. The existing bridge has been in place since 1908, with no known scour related problems.

DESIGN CRITERIA:
1. DESIGN LIVE LOAD AASHTO H-20
2. DESIGN SPAN 148'-0" ℄-℄ BEARING
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL N/A ON LEDGE 10 ksf
4. ALLOWABLE LOAD FOR PILING TYPE ESTIMATED LENGTH
5. STRUCTURAL STEEL AASHTO GRADE M270 GR. 50
6. REINFORCING STEEL GRADE 60
7. CONCRETE, HIGH PERFORMANCE CLASS A f'_c = 4000 PSI
8. CONCRETE, HIGH PERFORMANCE CLASS B f'_c = 3500 PSI

TRAFFIC MAINTENANCE:
1. IS TRAFFIC TO BE MAINTAINED? NO IF YES, ON EXISTING STRUCTURE N/A OR ON TEMPORARY BRIDGE N/A
2. TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY N/A TRAFFIC CONTROL SIGNALS REQUIRED N/A
MINIMUM CLEAR SPAN (NORMAL TO STREAM): VERTICAL CLEARANCE ABOVE STREAMBED:
WATERWAY OF FULL OPENING:
ARE SIDEWALKS REQUIRED? (IF SO, ON WHAT SIDE?
STRUCTURE TYPE: Not required. The road will be closed.

LOAD FACTOR LOAD RATING (TONS)

LOADING LEVELS (LOAD FACTOR)	TRUCK H	HS	3S2	6 AXLE	3A STR.	4A STR.	5A SEMI
INVENTORY A=2.17 B=1.00	16	23					
POSTED A=1.55 B=1.40	22	32	34		25	27	33
OPERATING A=1.30 B=1.67		38	40	34	30	32	

STRENGTH RF = $\frac{\phi M_n - 1.3\,M_{DL}}{A \times M_{LL+I}}$ SERVICEABILITY RF = B $\frac{.95\,f_y S_{LL+I} - M_{DL}\frac{S_{LL+I}}{S_{DL}} - M_{SDL}\frac{S_{LL+I}}{S_{SDL}}}{1.67\,M_{LL+I}}$

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	% ADTT
1992	200	30	——	<1	——
2012	270	35	57	<1	——

18 Kip ESAL for flexible pavement from 1992 to 2012: <50,000
18 Kip ESAL for flexible pavement from —— to —— : N/A
Design speed 35 mph

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of NEW HAVEN-WEYBRIDGE	Bridge No. 26
Highway No. TH 7/TH 11	Log Sta. / Surv. Sta.
TH 7/TH 11 OVER OTTER CREEK	
PRELIMINARY INFORMATION	
Designed By W.B. SYMONDS	Drawn By W.B. SYMONDS
Checked By P.G. JARVIS Date 4/98	Bridge Design Supervisor C.P. WILLIAMS Date 4/98
PROJECT NEW HAVEN-WEYBRIDGE	PROJECT NO. BHO-BTN 2005 (1)
I.C.C. Info. /str4/89j08i/sj08ipi.dgn	PLOTTED 28-FEB-2007
Bridge Sheet No. sj08ipi.1	Sheet 2 of 53

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS			
SUPERSTR.	ABUT. #1	ABUT. #2				ROADWAY	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND
						1				1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10	
						235				235		CY	COMMON EXCAVATION	203.15	
	220							220		220		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27	
							10			10		CY	TRENCH EXCAVATION OF EARTH	204.20	
	50							50		50		CY	STRUCTURE EXCAVATION	204.25	
	15							15		15		CY	GRANULAR BACKFILL FOR STRUCTURES — THIS ITEM CHANGED TO SUBBASE OF CRUSHED GRAVEL (FINE GRADED) ITEM 301.26	204.30	
						290	20			310		CY	SUBBASE OF GRAVEL — THIS ITEM CHANGED TO ITEM # 301.35, SUBBASE OF DENSE GRADED CRUSHED STONE	301.15	
						2				2		CWT	EMULSIFIED ASPHALT	404.65	
						66				66		TON	BITUMINOUS CONCRETE PAVEMENT (PG58-34) CHANGED TO PG 58-28 BY CO #3	406.25	
	29	11						40		40		CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34	
1								1		1		LS	SHORING SUPERSTRUCTURE	502.10	
14292								14292		14292		LB	STRUCTURAL STEEL, ROLLED BEAM	506.50	
4480								4480		4480		LB	STRUCTURAL STEEL	506.60	
	1492	1089						2581		2581		LB	REINFORCING STEEL	507.15	
	36	32						68		68		LF	DRILLING AND GROUTING DOWELS	507.16	
		1						1		1		LS	SHEAR CONNECTORS (10 - 7/8" X 7")	508.15	
1								1		1		LS	STRUCTURAL PAINTING,SHOP APPLIED (7.7 Tons)	513.25	
1								1		1		LS	STRUCTURAL PAINTING,FIELD APPLIED (19.5 Tons)	513.30	
1								1		1		LS	CONTAINMENT & ENVIRONMENTAL PROTECTION,FIELD (19.5 Tons)	513.36	
1								1		1		LS	SURFACE PREPARATION,SHOP (7.7 Tons)	513.40	
1								1		1		LS	SURFACE PREPARATION, FIELD (19.5 Tons)	513.41	
16								16		16		LF	BRIDGE EXPANSION JOINT, VERMONT	516.11	
4.3								4.3		4.3		MFBM	NONSTRUCTURAL LUMBER, UNTREATED	522.30	
2.5								2.5		2.5		MFBM	NONSTRUCTURAL LUMBER, TREATED	522.35	
1								1		1		LS	STRUCTURAL GLUED LAMINATED TIMBER	522.40	
16								16		16		LF	JOINT SEALER, POLYURETHANE	524.21	
310								310		310		LF	BRIDGE RAILING, GALVANIZED 2 RAIL BOX BEAM	525.31	
1								1		1		EACH	PARTIAL REMOVAL OF STRUCTURE	529.20	
	2	2						4		4		EACH	BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD	531.10	
							10			10		HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25	
						1				1		TON	DUST & ICE CONTROL WITH CALCIUM CHLORIDE	609.15	
							10			10		CY	STONE FILL, TYPE I	613.10	
240								240		240		CY	STONE FILL, TYPE II	613.12	
						180				180		LF	HD STEEL BEAM GUARDRAIL, GALVANIZED ~~W/8 FEET POSTS~~ CHANGED TO 6' POSTS BY CO #4	621.215	
						4				4		EACH	ANCHOR FOR STEEL BEAM RAIL	621.60	
						64				64		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80	
						40				40		LF	TEMPORARY TRAFFIC BARRIER	621.90	
									1	1		LS	FIELD OFFICE-ENGINEERS	631.10	
									1	1		LS	TESTING EQUIPMENT - CONCRETE	631.16	
									1	1		LS	TESTING EQUIPMENT - BITUMINOUS	631.17	

DETAILED SUMMARY OF QUANTITIES		
QUANTITIES	UNIT	ITEMS

PROJECT NAME: New Haven - Weybridge
PROJECT NUMBER: BTN 2005(1)

FILE NAME: sj08tqtysew.xls
PROJECT MANAGER: C. P WILLIAMS
DESIGNED BY: R. S. YOUNG
QUANTITY SHEET #1

PLOT DATE: 02/28/2007
DRAWN BY: R. D. BEARD
CHECKED BY:

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

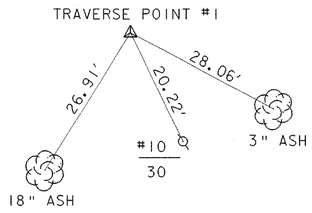
SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
SUPERSTR	ABUT. #1	ABUT. #2					ROADWAY	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
										1	1		LS	TESTING EQUIPMENT - PROTECTIVE COATINGS	631.18				
										1	1		LU	FIELD OFFICE - TELEPHONE (NABI)	631.25				
							1				1		LS	MOBILIZATION/DEMOBILIZATION	635.11				
							1				1		LS	TRAFFIC CONTROL	641.10				
								230			230		SY	GEOTEXTILE UNDER STONE FILL	649.31				
								60			60		SY	GEOTEXTILE FOR SILT FENCE	649.51				
								70			70		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				
								180			180		SY	GRUBBING MATERIAL	651.40				
								1			1		LS	EPSC PLAN	652.10				
								50			50		HR	MONITORING EPSC PLAN	652.20				
								1			1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30				
								200			200		SY	TEMPORARY EROSION MATTING	653.20				
							290				290		LF	BARRIER FENCE	653.50				
								280			280		LF	PROJECT DEMARCATION FENCE	653.55				
							63.13				63.13		SF	TRAFFIC SIGNS, TYPE A	675.20				
														BEGIN OPTION AA					
							148				148		LF	FLANGED CHANNEL SIGN POST	675.301				
							148				148		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341				
														END OPTION AA					
							7				7		EACH	REMOVING SIGNS	675.50				
							2				2		EACH	ERECTING SALVAGED SIGNS	675.60				
	2	3							5		5		GAL	SPECIAL PROVISION (WATER REPELLENT,SILANE)	900.625				
							1				1		LS	SPECIAL PROVISION (FLOATING DOCK)	900.645				
								1			1		TON	SPECIAL PROVISION (STRAW MULCH)	900.680				

PROJECT NAME: New Haven - Weybridge
PROJECT NUMBER: BTN 2005(1)

FILE NAME: sj081qtynew.xls
PROJECT MANAGER: C. P WILLIAMS
DESIGNED BY: R. S. YOUNG
QUANTITY SHEET #2

PLOT DATE: 02/26/2007
DRAWN BY: D. D. BEARD
CHECKED BY:

SURVEY TIES



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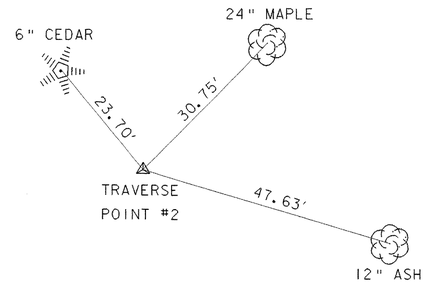

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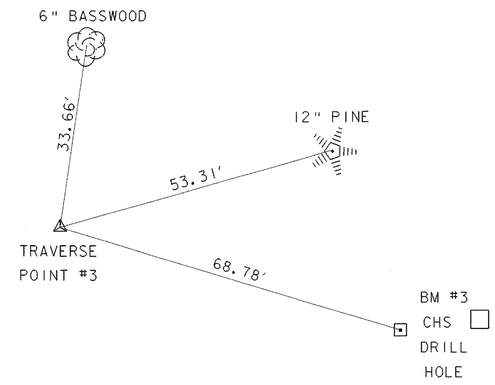

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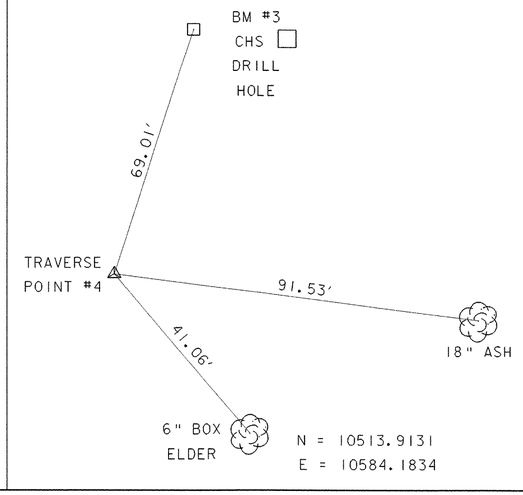

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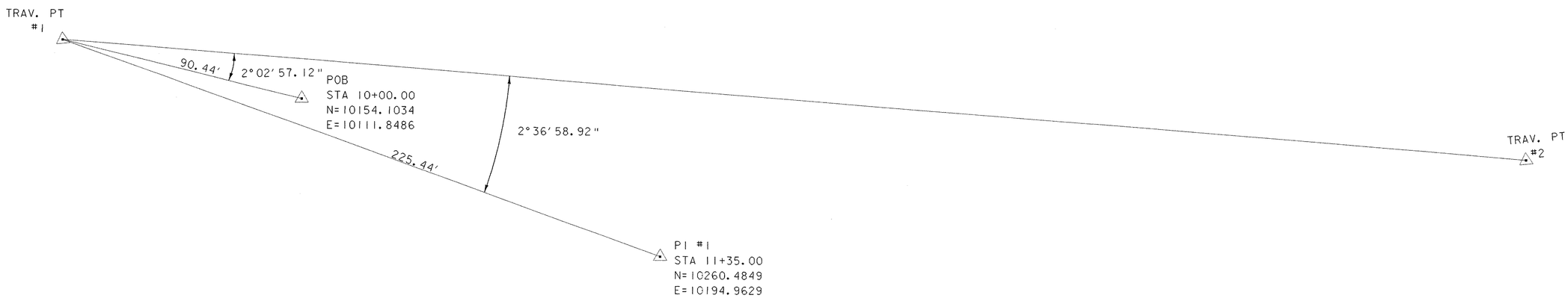
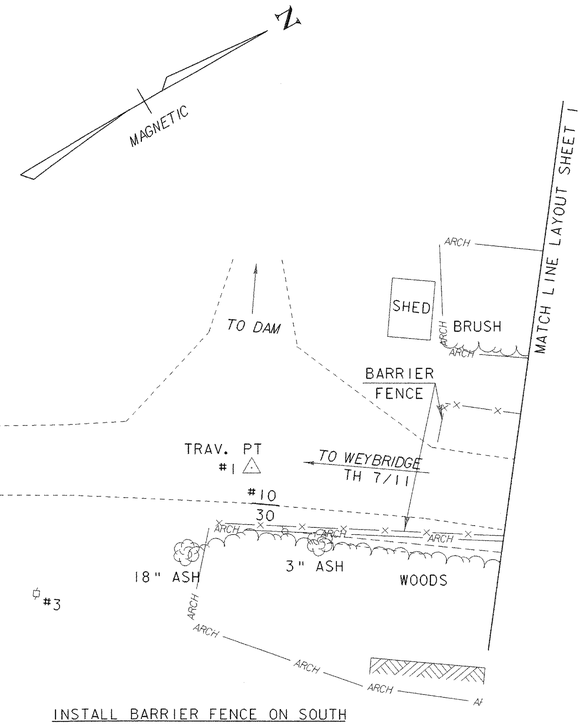
ALIGNMENT TIES



TIES ARE NOT TO SCALE

DATUM
VERTICAL NGVD 1929
HORIZONTAL ASSUMED

PROJECT: NEW HAVEN - WEYBRIDGE	PROJECT NO.: BHO-BTN 2005(1)
DESIGN FILE NAME: /str4/89j081/sj081tie.dgn	
IPARM FILE NAME: sj081tie.i	PLOT DATE: 28-FEB-2007
SURVEYED BY: R. MOREAU	SURVEY DATE: 7/90
SQUAD LEADER: C.P. WILLIAMS	DRAWN BY: P.G. JARVIS
TIE SHEET	SHEET: 5 OF 53



INSTALL BARRIER FENCE ON SOUTH
SIDE OF BRIDGE AS SHOWN

LAYOUT SHEET 1

SCALE 1" = 20'-0
20 0 20

DATUM
VERTICAL NGVD 1929
HORIZONTAL ASSUMED

PROJECT: NEW HAVEN-WEYBRIDGE	PROJECT NO.: BHO-BTN 2005(1)
DESIGN FILE NAME: /usr/str4/89j081/sj08lbdr.dgn	
IPARM FILE NAME: sj08llal.i	PLOT DATE: 28-FEB-2007
SURVEYED BY: R. MOREAU	SURVEY DATE: 7/90
SQUAD LEADER: C.P. WILLIAMS	DRAWN BY: W.B. SYMONDS
LAYOUT SHEET 1	SHEET: 6 OF 53

CURVE 1 DATA
Δ = 12°53'48" LT
D = 19°05'55"
R = 300.00'
T = 33.91'
L = 67.53'
E = 1.91
BANK = NORMAL

BRIDGE RAIL - 2 RAIL BOX BEAM
STA 12+26 - 13+80 LT & RT

HEAVY DUTY STEEL BEAM GUARDRAIL
STA 11+91 - 12+26 LT
STA 11+88 - 12+26 RT
STA 13+80 - 14+14 LT
STA 13+80 - ~~14+20~~ RT 15+45
NOTE: 125 OF THIS RUN WAS PAID FOR BY THE TOWN OF NH DIRECTLY.

ANCHORS FOR STEEL BEAM GUARDRAIL
STA 11+98 LT & RT
STA 14+07 LT
STA ~~14+13~~ RT 15+38

CONSTRUCT DRIVE WITH 8.5' PAVED APRON 1½" TYPE III PAVEMENT
STA 11+87 LT

REMOVAL OF EXISTING GUARDRAIL
STA 12+06 - 12+30 LT
STA 11+90 - 12+29 RT

CONSTRUCT TEMPORARY FLOATING DOCK
STA 12+50 RT

INSTALL BARRIER FENCE
STA 9+00 - 9+85 RT
STA 9+60 - 10+35 LT
STA 10+00 - 11+15 RT

MATCH LINE LAYOUT SHEET 2

ASSUMED 3-ROD R.O.W.

POB Sta 10+00.00

DO NOT DISTURB ARCHAEOLOGICALLY SENSITIVE AREA

GRAVEL PARKING AREA

PC Sta 11+07.03

PT Sta 11+68.62

LEDGE

WOODS

N38°00'00.00"E TO WEYBRIDGE TH 7/11

10+00

11+00

BARRIER FENCE

WOODS

DO NOT DISTURB ARCHAEOLOGICALLY SENSITIVE AREA

PI #1 Sta 11+35.00 BK = Sta 11+34.71 AHD

BEGIN APPROACH STA 11+50.00

BENCHMARK #1
CHISELED SQUARE
IN LEDGE EL. 238.045

NOTE: THE EXISTING ROADWAY WIDTH IS 22', NOT 18' AS SHOWN

BEGIN PROJECT STA 12+25.00

PI #2 Sta 12+04.32 BK = Sta 12+04.30 AHD

20+00

POB Sta 20+00.00

TOWN LINE

OTTER CREEK FLOW

MAGNETIC

TH 7/11 STA 12+25.00 = CHANNEL STA 20+50.00
Δ= 90°0'0"

END BRIDGE
STA 13+79.18
FG = 226.~~64~~ .68

END PROJECT
STA 13+80.00

N30°11'07.83"E

12+00

13+00

14+00

TELEPHONE LINE TO REMAIN IN PLACE DURING CONSTRUCTION

BASSWOOD

℄ OF PATH

BEGIN BRIDGE
STA 12+26.93
FG = 228.~~77~~ .84

POE Sta 21+00.00

LIMITS OF PAVEMENT

PC Sta 11+91.00

PT Sta 12+17.61

TEMPORARY FLOATING DOCK FOR PORTAGE AROUND DAM

12" STUMP

WETLAND

3-6" BUTTERNUTS

2-48" WILLOWS

BENCHMARK #2
CHISELED SQUARE
NE CORNER BRIDGE
CURTAIN WALL EL 226.05

NEW HAVEN WEYBRIDGE

CURVE 2 DATA
Δ = 05°04'56" RT
D = 19°05'55"
R = 300.00'
T = 13.31'
L = 26.61'
E = 0.30
BANK = NORMAL

EXISTING BRIDGE DATA

BUILT IN 1908
152' STEEL THRU-TRUSS
TIMBER PLANK DECK
CONCRETE ABUTMENTS
15.1' ROADWAY WIDTH
15.1' VERTICAL CLEARANCE

PC Sta 13+69.50

LIMITS OF PAVEMENT

PI #3 Sta 14+43.45 BK = Sta 14+29.10 AHD

END APPROACH STA 14+~~50~~.00 52

6" CEDAR

24" MAPLE

TRAV. PT #2

GRAVEL PULL OFF

#32

30" ELM (REMOVE)

12" ASH

12" CGMP

WOODS

15.00

PT Sta 15+03.05

BRUSH

S88°36'00.00"E TO WALTHAM TH 7/11

6" BASSWOOD

12" PINE

TRAV. PT #3

POE Sta 16+00.00

16+00

CURVE 3 DATA
Δ = 61°12'52" RT
D = 45°50'12"
R = 125.00'
T = 73.95'
L = 133.55'
E = 20.23
BANK = NORMAL

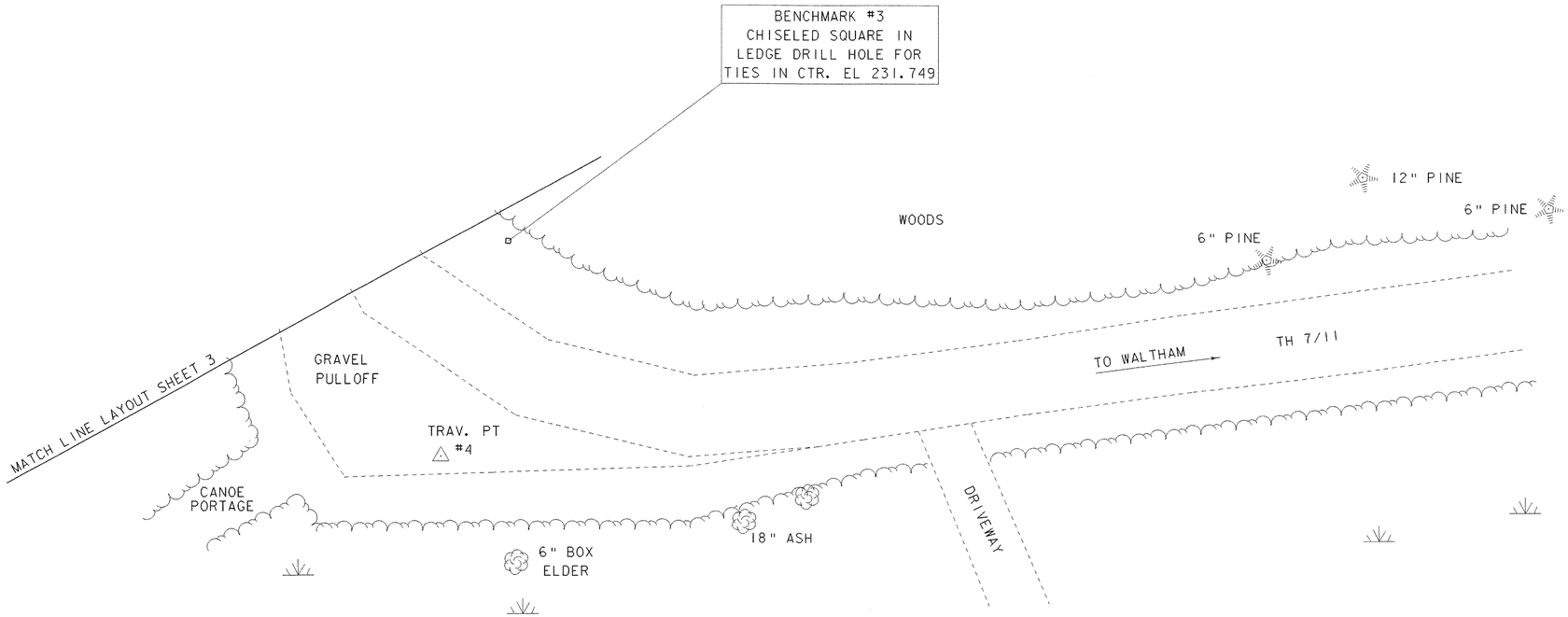
MATCH LINE LAYOUT SHEET 2

LAYOUT SHEET 2

SCALE 1" = 20'-0
20 0 20

DATUM
VERTICAL NGVD 1929
HORIZONTAL ASSUMED

PROJECT: NEW HAVEN-WEYBRIDGE	PROJECT NO.: BHO-BTN 2005(1)
DESIGN FILE NAME: /usr/str4/89j081/sj081bdr.dgn	
IPARM FILE NAME: sj081lo2.i	PLOT DATE: 28-FEB-2007
SURVEYED BY: R. MOREAU	SURVEY DATE: 7/90
SQUAD LEADER: C.P. WILLIAMS	DRAWN BY: W.B. SYMONDS
LAYOUT SHEET 2	SHEET: 7 OF 53



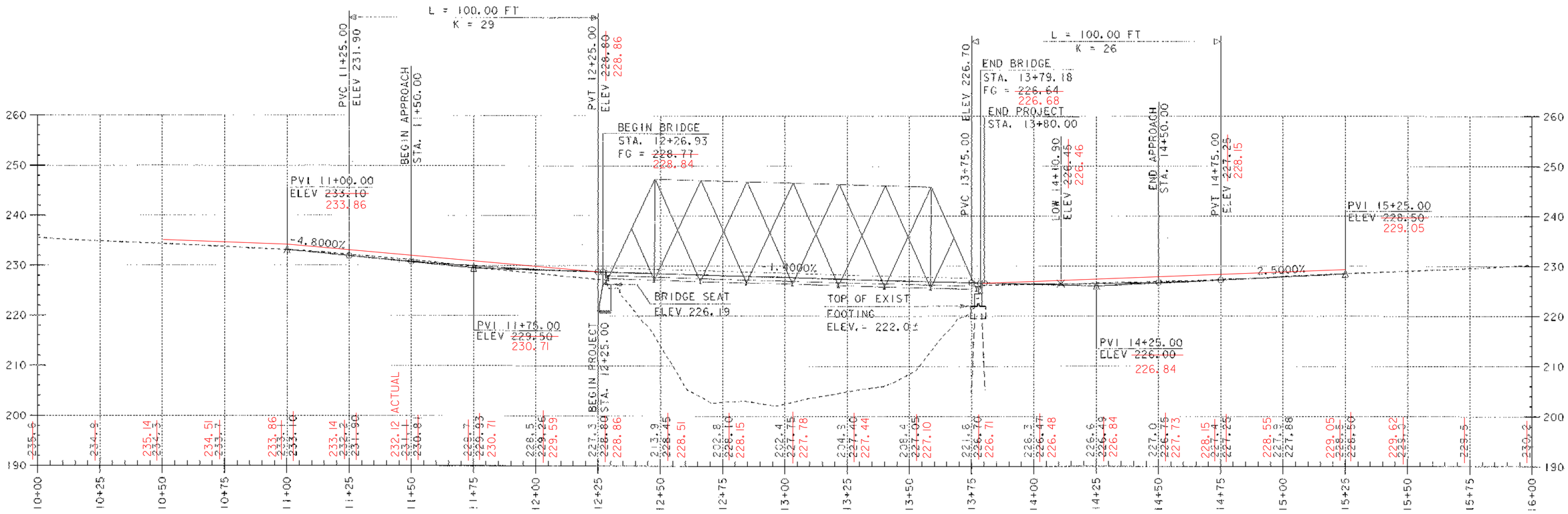
LAYOUT SHEET 3

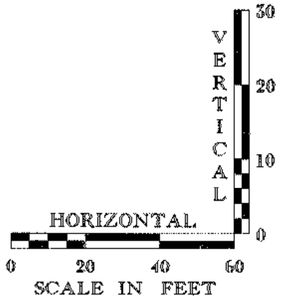
SCALE 1" = 20'-0
20 0 20

DATUM
VERTICAL NGVD 1929
HORIZONTAL ASSUMED

PROJECT: NEW HAVEN-WEYBRIDGE	PROJECT NO.: BHO-BTN 2005(1)
DESIGN FILE NAME: /usr/str4/89J081/sj081bdr.dgn	
IPARM FILE NAME: sj081la3.i	PLOT DATE: 28-FEB-2007
SURVEYED BY: R. MOREAU	SURVEY DATE: 7/90
SQUAD LEADER: C.P. WILLIAMS	DRAWN BY: W.B. SYMONDS
LAYOUT SHEET 3	SHEET: 8 OF 53

Profile





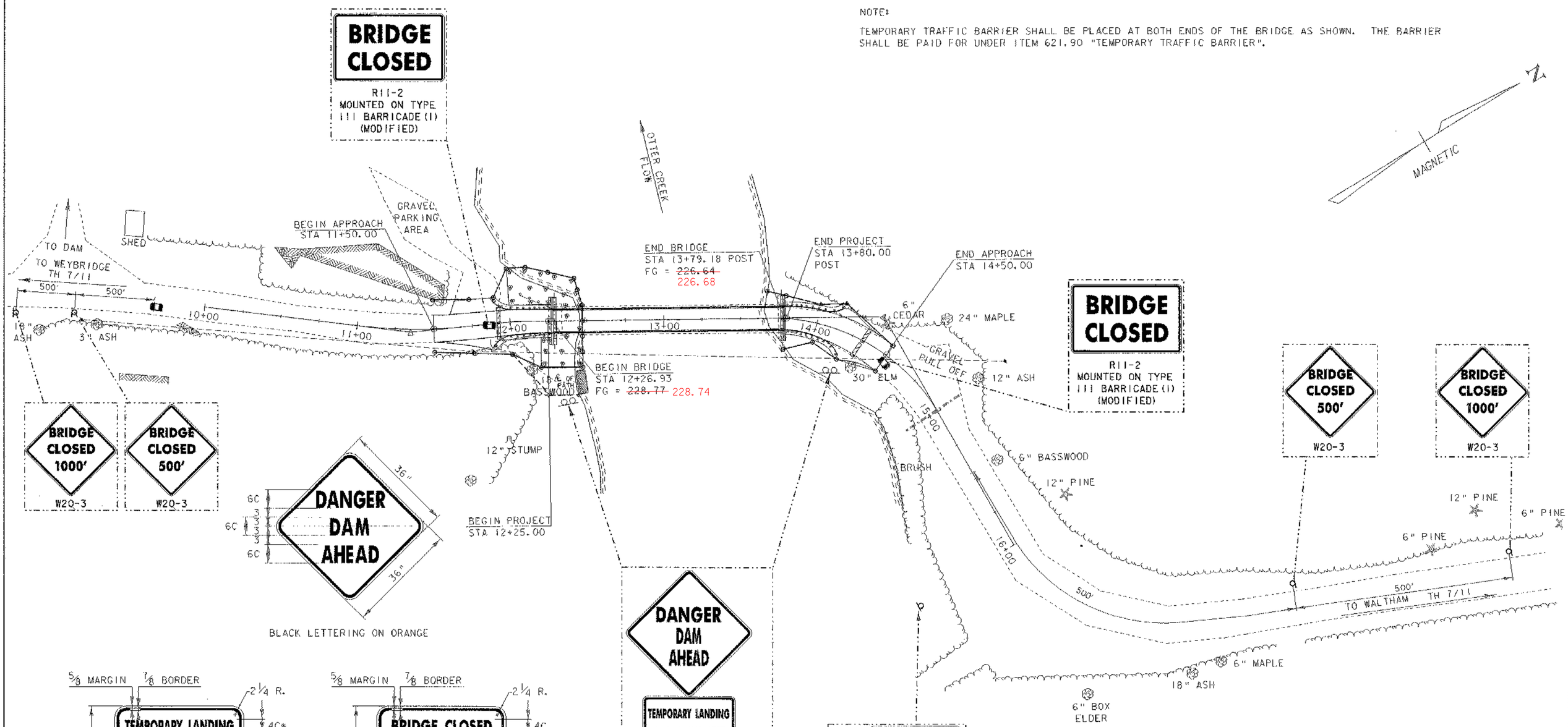
NOTE: EXISTING CENTERLINE ELEVATIONS ARE SHOWN TO THE TENTH.
PROPOSED CENTERLINE ELEVATIONS ARE SHOWN TO THE HUNDREDTH.

DATUM
VERTICAL NGVD 1929
HORIZONTAL ASSUMED

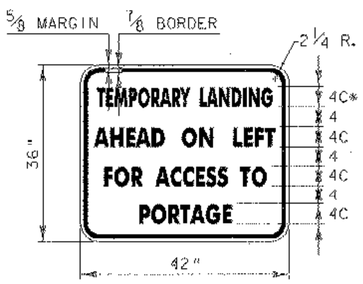
PROJECT: NEW HAVEN-WEYBRIDGE	PROJECT NO.: BHO-BTN 2005(1)
DESIGN FILE NAME: /usr/str4/89j081/sj081prl.dgn	
IPARM FILE NAME: sj081pro.I	PLOT DATE: 28-FEB-2007
SURVEYED BY: R. MOREAU	SURVEY DATE: 7/90
SQUAD LEADER: C.P. WILLIAMS	DRAWN BY: W.B. SYMONDS
PROFILE SHEET	SHEET: 9 OF 53

NOTE:

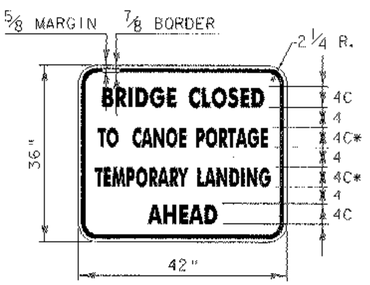
TEMPORARY TRAFFIC BARRIER SHALL BE PLACED AT BOTH ENDS OF THE BRIDGE AS SHOWN. THE BARRIER SHALL BE PAID FOR UNDER ITEM 621.90 "TEMPORARY TRAFFIC BARRIER".



BLACK LETTERING ON ORANGE



BLACK LETTERING ON ORANGE
*REDUCE SPACING BY 76%



BLACK LETTERING ON ORANGE
*REDUCE SPACING BY 76%

THESE SIGNS SHALL BE VISIBLE AT ALL TIMES DURING CONSTRUCTION INCLUDING ALL PAINTING OPERATIONS

TO BE PLACED AT LOCATION OF EXISTING CANOE PORTAGE LANDING.

DATUM
VERTICAL NGVD 1929
HORIZONTAL ASSUMED

TRAFFIC CONTROL SHEET

SCALE 1" = 30'-0
30 0 30

PROJECT: NEW HAVEN-WEYBRIDGE
PROJECT NO.: BHO-BTN 2005 (1)
DESIGN FILE NAME: /str4/89j081/sj081trf.dgn
IPARM FILE NAME: sj081det1
SURVEYED BY: R. MOREAU
SQUAD LEADER: C.P. WILLIAMS
TRAFFIC CONTROL SHEET
PLOT DATE: 28-FEB-2007
SURVEY DATE: 7/90
DRAWN BY: P.G. JARVIS
SHEET: 10 OF 53

BEGIN PROJECT
STA 12+25.00

POB
Sta 20+00.00

PT
Sta 11+68.62

Sta 12+04.32

1'-5" TO ℄ FIRST POST
OFF BRIDGE

TH 7/11 STA 12+25.00 =
CHANNEL STA 20+50.00
△ = 90° 0' 0"

℄ BEARING
STA 12+29.00
FG = ~~228.74~~ 228.81

OTTER CREEK
FLOW

TOWN
LINE

℄ BEARING
STA 13+77.00 POST
FG = ~~226.67~~
226.70

1'-4" TO ℄ FIRST POST
OFF BRIDGE

END BRIDGE
STA 13+79.18
FG = ~~226.64~~ 226.68

END PROJECT
STA 13+80.00

MAGNETIC

PI
Sta 14+43.45

END APPROACH
STA 14+50.00

N30° 13' 07.83"E

12+00

13+00

14+00

90° (TYP)

BEGIN BRIDGE
STA 12+26.93
FG = ~~228.77~~ 228.84

STONE FILL TYPE III

BEGIN APPROACH
STA 11+50.00

PC
Sta 11+91.00

16'-0"R (TYP)

12'-0"R (TYP)

300'-0" R

292'-0"R

S 59° 48' 52.17"E

℄ OF
PATH

POE
Sta 21+00.00

TEMPORARY FLOATING DOCK
FOR PORTAGE AROUND DAM

NEW HAVEN
WEYBRIDGE

PC
Sta 13+69.50

1:2 (TYP)

107'-0"R

102'-0"R

67'-0"R

56'-0"R

PLAN

SCALE 1" = 10'-0

10 0 10

155'-0" PAY LIMITS 2 RAIL BOX BEAM BRIDGE RAIL

℄ BEARING
STA. 12+29.00
(EXPANSION)

℄ BEARING
STA. 13+77.00
(FIXED)

148'-0"

4'-7½" TO FIRST POST ON BRIDGE (TYP)

3'-6" TO FIRST POST OFF BRIDGE (TYP)

9'-3"
(TYP)

PAY LIMITS OF GUARDRAIL
HEAVY DUTY STEEL BEAM (TYP)
SEE STD G-1 AND G-1d

BRIDGE APPROACH RAILING SCHEDULE I
(TYP) SEE SHEET 30

▽ 0100 - 2217

STONE FILL TYPE III

260
250
240
230
220
210
200

ELEVATION

SCALE 1" = 10'-0

10 0 10

DATUM
VERTICAL NGVD 1929
HORIZONTAL ASSUMED

PROJECT: NEW HAVEN - WEYBRIDGE
PROJECT NO.: BHO-BTN 2005(1)

DESIGN FILE NAME: str-4/89j081/sj081pe.dgn
PARM FILE NAME: sj081pe.i
SURVEYED BY: R. MOREAU
SQUAD LEADER: C.P. WILLIAMS
PLAN AND ELEVATION SHEET

PLOT DATE: 28-FEB-2007
SURVEY DATE: 7/90
DRAWN BY: P.G. JARVIS
SHEET: 11 OF 53

GENERAL NOTES

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SEVENTEENTH EDITION. THE GLULAM DECK SHALL CONFORM TO THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION, 1997 EDITION. AND WITH THE STRUCTURAL GLUED LAMINATED TIMBER SUPPLEMENT.

2. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES F, UNLESS OTHERWISE NOTED.

3. DESIGN MEETS H20-44 LIVE LOADING (POSTED RATING).

4. BRIDGE 26 SHALL REMAIN CLOSED TO THROUGH TRAFFIC DURING CONSTRUCTION. ACCESS TO THE GRAVEL PARKING AREA AT STA 11+75 LEFT AND THE GRAVEL PULL OFF AT STA 14+75 LEFT WILL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.

5. ALL PROJECT SIGNS AND BARRICADES ON SITE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND PAID FOR UNDER THE ITEM 641.10 "TRAFFIC CONTROL". ANY DETOUR SIGNS OFF SITE SHALL BE THE RESPONSIBILITY OF THE TOWNS OF NEW HAVEN AND WEYBRIDGE.

6. THE CONTRACTOR SHALL NOTIFY THE TOWNS OF NEW HAVEN AND WEYBRIDGE IN WRITING TWO WEEKS PRIOR TO CLOSING BRIDGE 26 TO TRAFFIC.

7. A TEMPORARY FLOATING DOCK SHALL BE CONSTRUCTED AT STA 12+50 RT. THE DOCK SHALL BE PAID FOR UNDER THE ITEM 900.645 "SPECIAL PROVISIONS (FLOATING DOCK)". SEE SPECIAL PROVISIONS FOR DETAILS.

8. ANY EXISTING SIGNS NOT REUSED SHALL REMAIN THE PROPERTY OF THE TOWN OF NEW HAVEN OR WEYBRIDGE. THE OWNERSHIP SHALL BE DETERMINED BY THE CURRENT LOCATION. THE CONTRACTOR SHALL REMOVE AND STOCKPILE SIGNS TO BE PICKED UP BY PHILIP BUSIER, ROAD FOREMAN, TOWN OF NEW HAVEN (453-3397) /BY ROBERT CYR, ROAD FOREMAN, TOWN OF WEYBRIDGE (545-2265).

9. ITEM 529.20 "PARTIAL REMOVAL OF STRUCTURE" SHALL INCLUDE THE FOLLOWING:

   - REMOVAL OF TRUSS MEMBERS AS DETAILED IN THE CONTRACT PLANS OR AS ORDERED BY THE ENGINEER.
   - REMOVAL OF FLOOR BEAMS, STRINGERS, ANY PLATES OR ANGLES CONNECTING THE FLOOR BEAMS TO THE TRUSS, AND BEARING ASSEMBLIES
   - REMOVAL OF ANY MEMBER WITH MORE THAN 25% SECTION LOSS, AS DETERMINED BY THE ENGINEER.
   - REMOVAL OF LATERAL BRACING BETWEEN FLOOR BEAMS.
   - REMOVAL AND DISPOSAL OF THE EXISTING BRIDGE DECKING.
   - REMOVAL OF LATTICE RAILING, TO BE REHABILITATED AS DETAILED ON SHEET 28, AND REMOVAL OF THE SUPPORTING PLATES AND ANGLES.
   - REMOVAL AND DISPOSAL OF PORTIONS OF ABUTMENT 2 AS DETAILED IN THE CONTRACT PLANS.
   - REMOVAL OF ANY PORTION OF ABUTMENT 1 NOT REMOVED UNDER ITEMS 204.25 "STRUCTURE EXCAVATION" OR 203.27 "UNCLASSIFIED CHANNEL EXCAVATION".

11. THESE PLANS WERE PREPARED BASED ON INFORMATION OBTAINED FROM FIELD MEASUREMENTS. 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 AND/OR OBTAIN ALL DIMENSIONS PRIOR TO FABRICATION.

12. THE ITEM 502.10 "SHORING SUPERSTRUCTURE" SHALL BE PAYMENT FOR SUPPORTING THE SUPERSTRUCTURE WHILE TRUSS COMPONENTS, SUBSTRUCTURES, AND BEARINGS ARE BEING PLACED. THE CONTRACTOR MAY CHOOSE TO MOVE THE TRUSS, SO THAT WORK MAY BE CONDUCTED AT A STAGING AREA. PAYMENT FOR REMOVAL AND REPLACEMENT SHALL BE INCLUDED UNDER ITEM 502.10.

PAINTING NOTES

13. THE SURFACE PREPARATION OF THE EXISTING STEEL SHALL INCLUDE 100% REMOVAL OF THE EXISTING PAINT SYSTEM.

14. THE COLOR OF THE FINAL COAT OF PAINT SHALL BE GREEN AND SHALL CONFORM WITH FEDERAL STANDARD NO. 595, COLOR CHIP #14062.

15. AFTER THE FINAL COAT OF PAINT HAS BEEN APPLIED, AND HAS THOROUGHLY CURED, THE FOLLOWING STRUCTURAL STEEL SHALL BE GREASED PER SPECIFICATION 513:

    -FLOOR BEAMS
    -ALL TRUSS COMPONENTS BELOW THE TOP OF CURB
    -BEARINGS

16. PAYMENT FOR THE GREASE SHALL BE INCIDENTAL TO THE ITEM 513.30 "STRUCTURAL PAINTING FIELD APPLIED". THE COLOR OF THE GREASE SHALL BE GREEN.

17. ALL NEW STEEL ELEMENTS PROVIDED UNDER ITEM 506.50 "STRUCTURAL STEEL (ROLLED BEAM)" SHALL BE GIVEN AN APPROVED SHOP APPLIED PAINT SYSTEM PER SPECIFICATION 513. ALL EXISTING STEEL AND NEW STEEL UNDER THE ITEM 506.60 "STRUCTURAL STEEL", EXCEPT STEEL TO BE GALVANIZED, SHALL BE GIVEN A FIELD APPLIED PAINT SYSTEM PER SPECIFICATION 513.

18. THE PAINT SYSTEM USED IN THE FIELD AND THE SHOP APPLIED PAINT SYSTEMS SHALL BE COMPATIBLE AND PROVIDED FROM THE SAME MANUFACTURER.

19. 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 NEW FLOOR BEAMS CONNECT SHALL BE BLAST CLEANED AND PRIMED IN ACCORDANCE WITH SPECIFICATION 513, PRIOR TO THE INSTALLATION OF THE NEW STEEL ELEMENTS.

CONCRETE NOTES

20. THE MINIMUM COVER FOR REINFORCING STEEL IN THE SUBSTRUCTURES SHALL BE TWO INCHES ALONG WALL FACES AGAINST EARTH, AND THREE INCHES ELSEWHERE UNLESS DETAILED OTHERWISE.

21. REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE AS FOLLOWS:

SPACING	+/- 1"
CLEARANCE	+/- 1/4"

22. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" X 1".

23. WATER REPELLENT SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES.

24. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

25. SURFACES OF BRIDGE SEATS UNDER THE BEARING DEVICES SHALL BE LEVEL. OTHER AREAS OF THE BRIDGE SEAT SHALL BE SLOPED 2.0%. THE ABUTMENT SEATS SHALL BE SLOPED FULL WIDTH TOWARD MIDSPAN. THE ENTIRE BRIDGE SEAT SURFACE SHALL BE GIVEN A MAGNESIUM FLOAT FINISH.

26. CONCRETE PORTIONS OF THE ABUTMENT ABOVE THE ADJACENT BRIDGE SEAT ELEVATIONS SHALL NOT BE PLACED UNTIL THE TRUSS HAS BEEN PLACED AND FINISH GRADE HAS BEEN DETERMINED BY THE RESIDENT ENGINEER.

27. 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.

STEEL NOTES

28. THE NEW FLOORBEAMS, LATERAL BRACING, AND NEW TRUSS MEMBERS SHALL BE PAID FOR UNDER THE ITEM 506.50 "STRUCTURAL STEEL (ROLLED BEAM)". ALL OTHER PLATES, ANGLES, NEW LATTICE RAILING, AND STRUCTURAL TUBING FOR DOWN SPOUT SHALL BE INCLUDED UNDER THE ITEM 506.60 "STRUCTURAL STEEL".

29. ALL STRUCTURAL STEEL PAID FOR UNDER THE ITEM 506.50 "STRUCTURAL STEEL (ROLLED BEAM)" AND ITEM 506.60 "STRUCTURAL STEEL" SHALL CONFORM TO AASHTO M-270 GRADE 50. EXCEPT ALL STRUCTURAL TUBING SHALL CONFORM TO ASTM A-500 GRADE B.

30. ALL NEW STRUCTURAL STEEL ELEMENTS SUBJECT TO TENSION SHALL BE CHARPY V-NOTCH TESTED. THESE MEMBERS ARE DESIGNATED BY (CVN) IN THE APPLICABLE DETAILS. ANY REPAIRS ORDERED BY THE ENGINEER SUBJECT TO TENSION WILL ALSO REQUIRE CHARPY V-NOTCH TESTING.

31. ANY RIVETS THAT ARE REMOVED FOR REPAIRS DETAILED ON THE PLANS OR AS ORDERED BY THE ENGINEER SHALL BE REPLACED WITH 3/4" DIAMETER HIGH STRENGTH BOLTS MEETING AASHTO M-164 TYPE 1. ALL BOLTS SHALL BE FULL DIAMETER BODY ROUND HEAD BOLTS MEETING ANSI/ASME B 18.5 REQUIREMENTS, EXCEPT BOLTS FOR THE NEW LATTICE RAILING SHALL BE 7/16" DIAMETER, AND BOLTS FOR THE NEW COVER PLATE SHALL BE 5/8" DIAMETER, MEETING THE REQUIREMENTS ABOVE.

32. CONNECTIONS NOT DETAILED SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE PROJECT MANAGER FOR APPROVAL.

33. 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. FASTENERS FOR THE GLULAM DECK SHALL BE GALVANIZED ONLY.

34. EXISTING FLOOR BEAMS, STRINGERS, AND TRUSS MEMEBERS THAT ARE REMOVED SHALL BECOME PROPERTY OF THE CONTRACTOR. THE EXISTING STEEL IS PAINTED WITH A MATERIAL THAT MAY CONTAIN LEAD. THE CONTRACTOR MAY DISPOSE OF IT OR RETAIN IT FOR FUTURE USE. THE CONTRACTOR SHALL INFORM THE RESIDENT ENGINEER OF HIS/HER PLANS FOR DISPOSAL OR RETENTION OF THE STEEL PRIOR TO ITS REMOVAL.

35. 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".

LEDGE NOTES

36. 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 THE LEDGE SHALL BE CONSIDERED INCIDENTAL TO STONE FILL TYPE III.

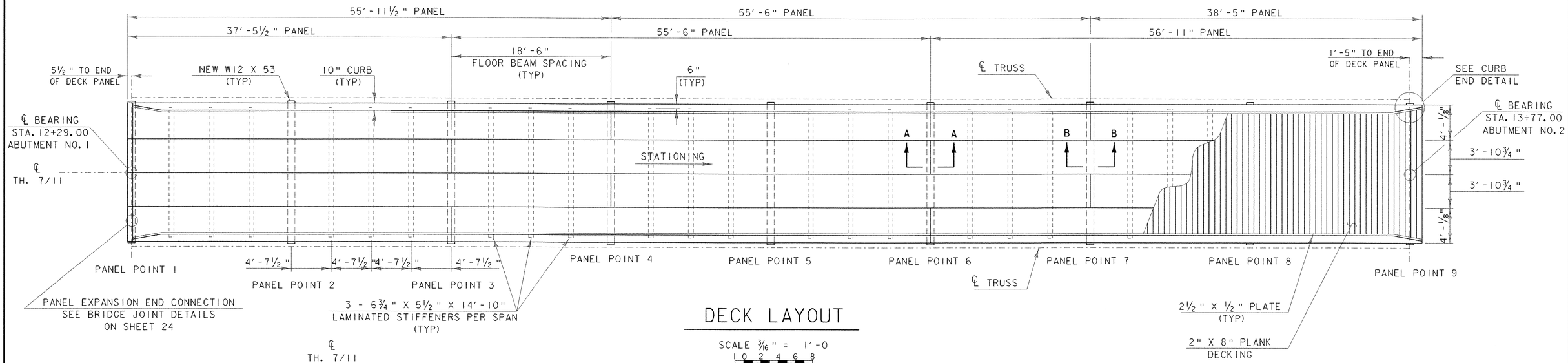
37. ABUTMENT 1 SHALL BE FOUNDED ON LEDGE WHICH HAS BEEN CLEANED OF ALL LOOSE ROCK AND OTHER DEBRIS. THE LEDGE SHALL BE REMOVED AS REQUIRED TO ENSURE PLACEMENT ON COMPETENT ROCK. PAYMENT FOR ANY LEDGE REMOVAL SHALL BE INCLUDED UNDER ITEM 204.25 "STRUCTURE EXCAVATION".

38. DOWELS SHALL BE DRILLED AND GROUTED INTO LEDGE AT ABUTMENT 1 AND INTO EXISTING CONCRETE AT ABUTMENT 2 AS SHOWN ON THE PLANS. THE DOWELS SHALL HAVE A 2'-0" EMBEDMENT LENGTH AND SHALL EXTEND INTO THE NEW CONCRETE A MINIMUM OF 1'-6" UNLESS NOTED OTHERWISE. THE DRILLING AND GROUTING SHALL BE PAID FOR UNDER THE ITEM 507.16 "DRILLING AND GROUTING DOWELS", HOWEVER THE DOWELS SHALL BE PAID FOR UNDER THE ITEM 507.15 "REINFORCING STEEL".

39. 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.

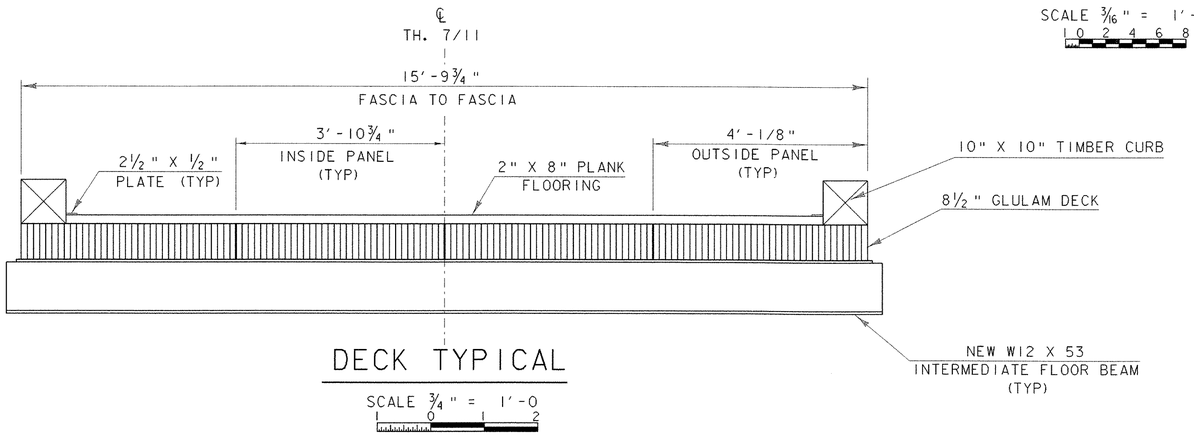
PROJECT:	PROJECT NO.:
NEW HAVEN - WEYBRIDGE	BHO-BTN 2005(1)

DESIGN FILE NAME: 89j081/structures/sj081notes.dgn
IPARM FILE NAME: sj081notes.i — PLOT DATE: 28-FEB-2007
DESIGNED BY: R.S. YOUNG — DRAWN BY: R.S. YOUNG
SQUAD LEADER: C.P. WILLIAMS — CHECKED BY: W.B. SYMONDS
GENERAL NOTES — SHEET: 12 OF 53



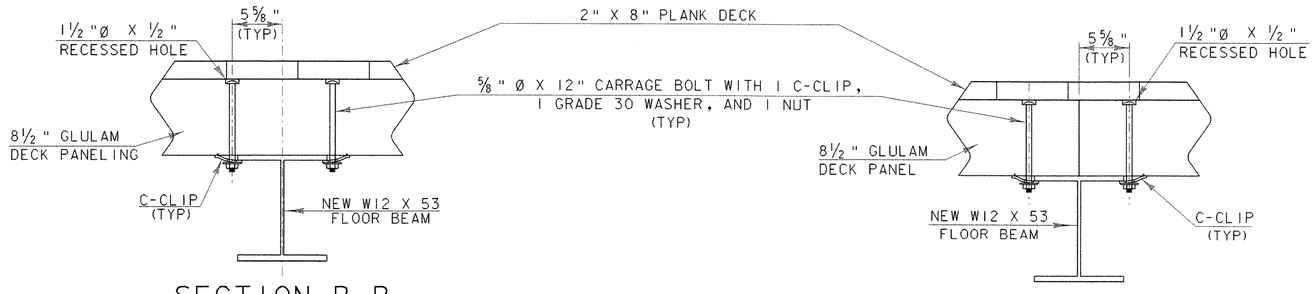
DECK LAYOUT

SCALE 3/16" = 1′-0



DECK TYPICAL

SCALE ¾" = 1′-0

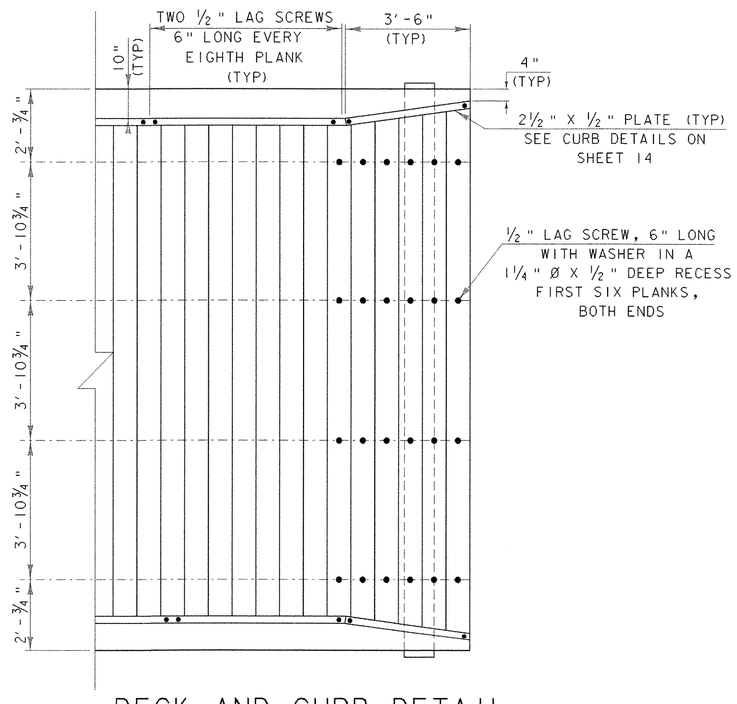


SECTION B-B INTERMEDIATE PANEL CONNECTION

SCALE 1½" = 1′-0

SECTION A-A CONNECTION AT PANEL JOINT

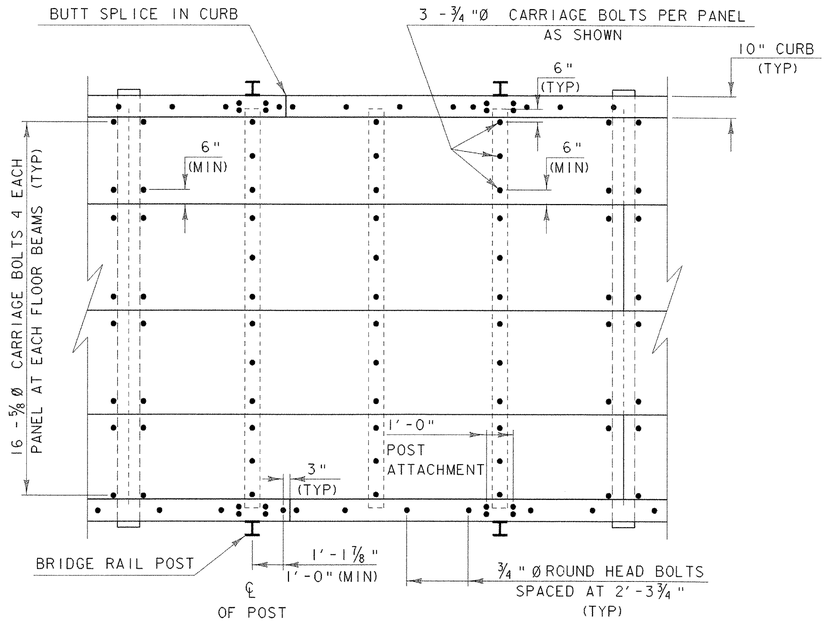
SCALE 1½" = 1′-0



DECK AND CURB DETAIL

SCALE ½" = 1′-0

PROJECT: NEW HAVEN-WEYBRIDGE	PROJECT NO.: BHO-BTN 2005(1)
DESIGN FILE NAME: 89j081/structures/sj081deck.dgn	
IPARM FILE NAME: deckplan.i	PLOT DATE: 28-FEB-2007
DESIGNED BY: R. S. YOUNG	DRAWN BY: D. A. ECKSTEIN
SQUAD LEADER: C. P. WILLIAMS	CHECKED BY: R.S. YOUNG
DECK DETAILS SHEET 1	SHEET: 13 OF 53



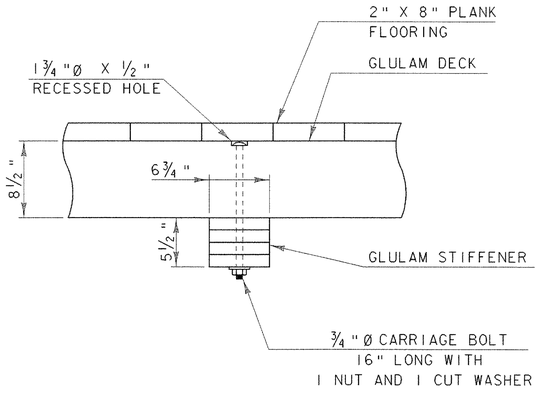
BOLT DETAILS

(PLANK DECKING NOT SHOWN FOR CLARITY)

NOTE: SPLICE LOCATIONS OF CURB SHALL BE A MINIMUM 1'-3" FROM ℄ OF POST

SCALE ⅜" = 1'-0

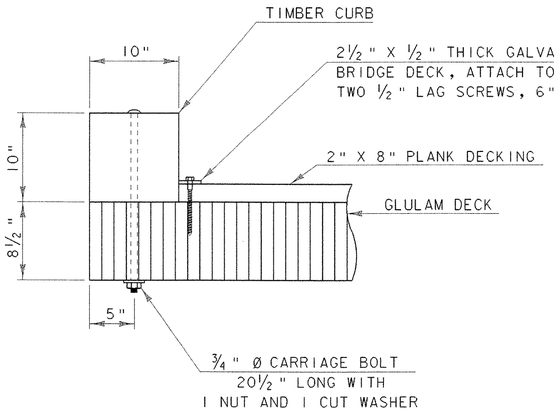
1 0 1 2 3 4



TRANSVERSE STIFFENER DETAIL

SCALE 1 ½" = 1'-0

1 9 6 3 0 1



CURB DETAIL

SCALE 1 ½" = 1'-0

1 9 6 3 0

DECK NOTES:

1. THE GLULAM DECK PANELS AND TRANSVERSE STIFFENERS SHALL BE SOUTHERN PINE, COMBINATION SYMBOL 49 OR BETTER. THE CURB SHALL BE 10" X 10" ROUGH LUMBER, FULL SAWN, SOUTHERN PINE NO. 1 OR BETTER. THE PLANK DECKING SHALL BE 2" X 8", ROUGH LUMBER, FULL SAWN, EASTERN HEMLOCK NO. 1 OR BETTER.

2. THE GLULAM DECK PANELS, TRANSVERSE STIFFENERS, AND THE TIMBER CURB SHALL BE TREATED WITH A TYPE II (PENTACHLOROPHENOL) PRESERVATIVE PER SPECIFICATION 726, INCIDENTAL TO THE PAY ITEM OF THE WOOD TREATED.

3. ALL WOOD SHALL BE CUT, DRILLED, AND COMPLETELY FABRICATED PRIOR TO TREATMENT WITH PRESERVATIVES. WHEN FIELD FABRICATION OF WOOD IS REQUIRED OR IF WOOD IS DAMAGED, ALL CUTS, BORE HOLES, AND DAMAGE SHALL BE IMMEDIATELY TREATED WITH TWO APPLICATIONS OF A COPPER NAPHTHENATE SOLUTION.

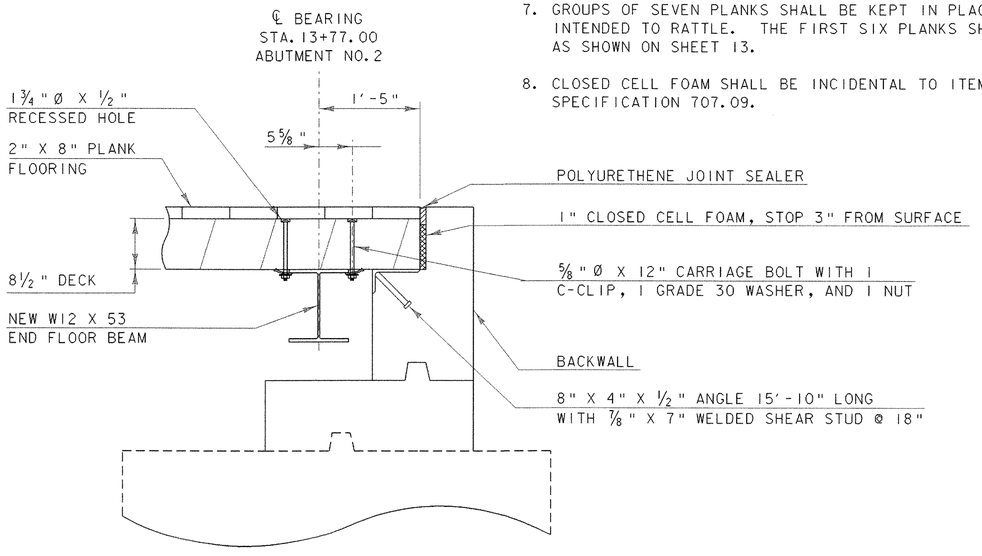
4. THE GLULAM DECK PANELS AND TRANSVERSE STIFFENERS SHALL BE PAID FOR UNDER ITEM 522.40 "STRUCTURAL GLUED LAMINATED TIMBER." THE CURB SHALL BE PAID FOR UNDER 522.35 "NONSTRUCTURAL LUMBER, TREATED." THE PLANK DECKING SHALL BE PAID FOR UNDER ITEM 522.30 "NONSTRUCTURAL LUMBER, UNTREATED."

5. BOLTS SHALL BE ASTM A307. BOLTS, NUTS, WASHERS, AND C-CLIPS SHALL BE INCLUDED UNDER THE ITEM 522.40 "STRUCTURAL GLUED LAMINATED TIMBER." ALL HARDWARE SHALL BE GALVANIZED.

6. THE ANGLE USED AT ABUTMENT #2, AND PLATES USED TO ATTACH PLANK FLOORING, SHALL BE INCLUDED UNDER ITEM 506.60 "STRUCTURAL STEEL", AND SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M111. THE SHEAR STUDS SHALL BE PAID FOR UNDER ITEM 508.15 "SHEAR CONNECTORS".

7. GROUPS OF SEVEN PLANKS SHALL BE KEPT IN PLACE BY THE ½" PLATE ONLY. THEY ARE INTENDED TO RATTLE. THE FIRST SIX PLANKS SHALL BE ATTACHED WITH LAG SCREWS AS SHOWN ON SHEET 13.

8. CLOSED CELL FOAM SHALL BE INCIDENTAL TO ITEM 522.40 AND SHALL CONFORM TO SPECIFICATION 707.09.



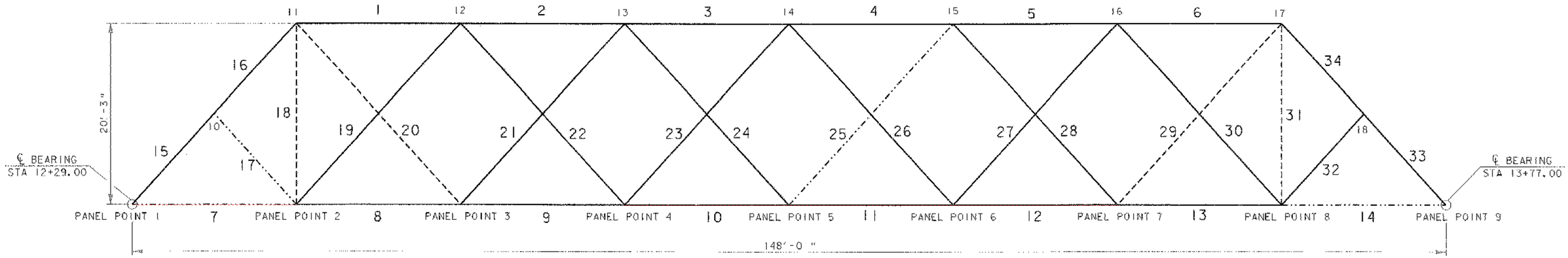
FIXED END BRIDGE DETAIL AT ABUTMENT 2

(SEE SHEETS 23 AND 24 FOR HOLE LOCATIONS AT ABUTMENT 1)

SCALE 1" = 1'-0

1 9 6 3 0 1 2

PROJECT: NEW HAVEN-WEYBRIDGE	PROJECT NO.: BHO-BTN 2005(1)
DESIGN FILE NAME: 89j081/structures/sj081deck.dgn	
IPARM FILE NAME: deckdt1.i	PLOT DATE: 28-FEB-2007
DESIGNED BY: R. S. YOUNG	DRAWN BY: D. A. ECKSTEIN
SQUAD LEADER: C. P. WILLIAMS	CHECKED BY: R. S. YOUNG
DECK DETAILS SHEET 2	SHEET: 14 OF 53



TRUSS ELEVATION (TYP) (LOOKING WEST)

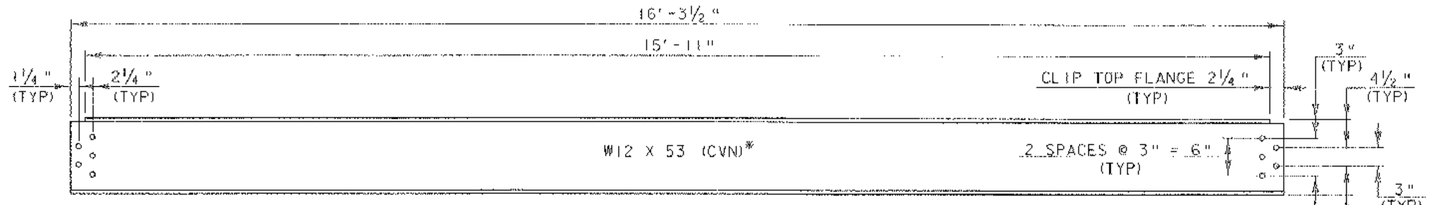
SCALE 3/16" = 1'-0

TRUSS MEMBER REPLACEMENT CHART

----------	MEMBERS TO BE REPLACED IN KIND WITH GRADE 50 STEEL ALL ANGLES SHALL BE CHARPY V-NOTCH TESTED - 18,31 ARE TWO 3" X 2½" X ¼" ANGLES - 20,29 ARE TWO 3" X 2½" X ¼" ANGLES
————	MEMBERS TO BE REPLACED IN KIND WITH GRADE 50 STEEL IF MORE THAN 25% SECTION LOSS
—·—·—·—	MEMBERS TO BE REPLACED IN KIND WITH GRADE 50 STEEL ON THE UPSTREAM SIDE ONLY: ALL ANGLES SHALL BE CHARPY V-NOTCH TESTED - 17 IS TWO 3½" x 2½" x ¼" ANGLES - 7,14 ARE FOUR 3" x 2½" x ¼" ANGLES - 25 IS TWO 2½" x 2½" x¼" ANGLES

10, 11 ARE FOUR 3½" X 3" X ¼" ANGLES
7 IS FOUR 3" X 2 ½" X ¼" ANGLE

12 IS FOUR 3 ½"X3"X ¼" ANGLES
(2 OF 4 REPLACED)



NEW FLOOR BEAM, PANEL POINTS 1 THROUGH 9

SCALE: 1" = 1'-0"

* FLOOR BEAMS SHALL BE CHARPY V-NOTCH TESTED

BOTTOM FLANGE OF FLOOR BEAM

SCALE: 1" = 1'-0"

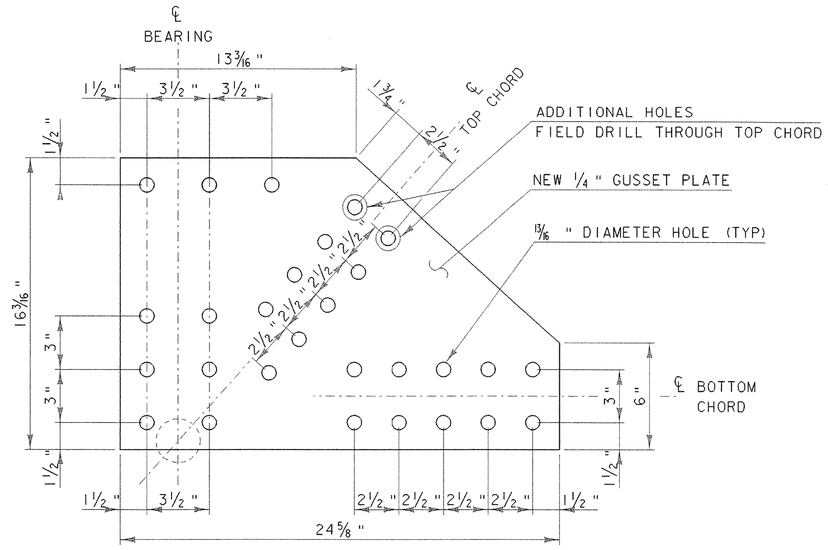
(7 REQUIRED AS SHOWN, 2 REQUIRED WITH HOLES ALONG ONE SIDE OF ℄ OF BEAM ONLY)

TRUSS NOTES

1. TRUSS MEMBERS SHALL BE REPLACED ACCORDING TO THE REPLACEMENT CHART.
2. ALL GUSSET PLATES SHALL BE REPLACED WITH ¼" THICK GRADE 50 STEEL.
3. ANY RIVETS THAT ARE REMOVED FOR REPAIRS DETAILED ON THE PLANS OR AS ORDERED BY THE RESIDENT ENGINEER SHALL BE REPLACED WITH ¾" DIAMETER, M-164, TYPE 1 BOLTS. THE CONTRACTOR SHALL VERIFY HOLE SIZE AND HOLE SPACING AS WELL AS GUSSET DIMENSIONS AT ALL LOCATIONS. HOLES FOR THE GUSSET PLATES MAY BE FIELD DRILLED.
4. HOLES IN THE EXISTING GUSSET PLATES FOR THE EXISTING RAIL SUPPORT SHALL BE OMITTED IN THE NEW GUSSET PLATES. THE EXISTING RAILING SHALL BE ATTACHED TO A NEW BOX BEAM RAIL.
5. WHEN EXISTING STEEL SIZES ARE NOT AVAILABLE, AN EQUIVALENT SIZE MAY BE SUBSTITUTED WITH APPROVAL OF THE PROJECT MANAGER.
6. THE EXISTING FLOORING SYSTEM INCLUDING TIMBER DECKING, STEEL STRINGERS, AND CHANNELS SHALL BE REMOVED AND REPLACED WITH GULAM DECK PANELS. SEE DECK DETAIL SHEETS 13 AND 14.
7. EXISTING FLOOR BEAMS ARE CURRENTLY HANGING BELOW THE TRUSS BOTTOM CHORDS. THE NEW FLOOR BEAMS AND LATERAL BRACING SHALL BE NESTED BETWEEN THE BOTTOM CHORDS. ONE FLOOR BEAM SHALL BE ADDED TO THE EXISTING FRAMING PLAN AT ℄ BEARING AT EACH END OF THE TRUSS. SEE FLOOR BEAM CONNECTION DETAILS ON SHEETS 18 AND 19.
8. THE ROUND HEAD END OF THE BOLTS SHALL BE VISIBLE FROM THE EXTERIOR SIDE OF THE TRUSS.
9. THE CONTRACTOR SHALL INSTALL THE FLOOR BEAMS SO THAT ANY SHOP CAMBER WILL BE POSITIVE.

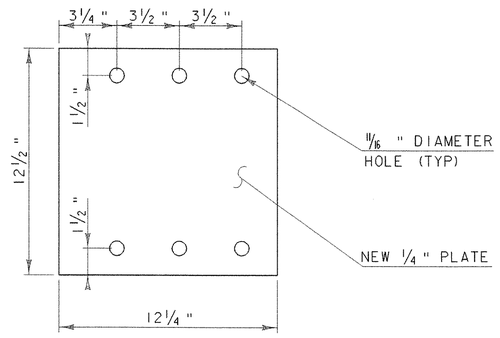
SCALE 1" = 1'-0

PROJECT: NEW HAVEN - WEYBRIDGE	PROJECT NO.: BHO-BTN 2005(1)
DESIGN FILE NAME: 89j081/structures/sj081truss.dgn	
IPARM FILE NAME: sj081trussdtl.i	PLOT DATE: 28-FEB-2007
DESIGNED BY: R.S. YOUNG	DRAWN BY: R.S. YOUNG
SQUAD LEADER: C.P. WILLIAMS	CHECKED BY: R.S. YOUNG
TRUSS DETAILS	SHEET: 15 OF 53



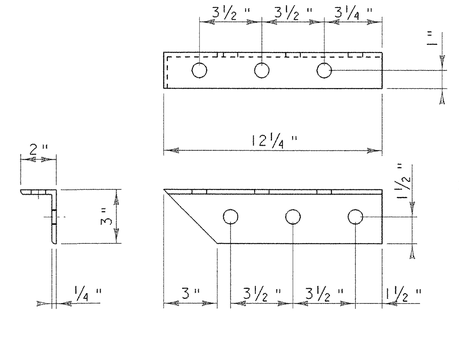
GUSSET PLATE AT PANEL POINTS 1 AND 9

SCALE: 3" = 1'-0" (8 REQUIRED)



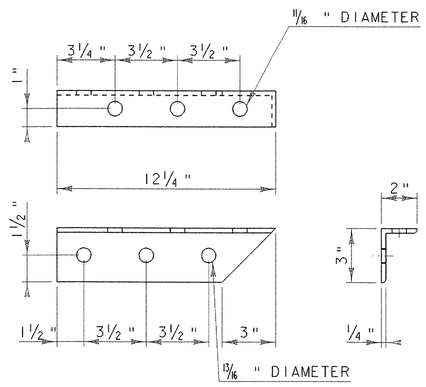
COVER PLATE

SCALE: 3" = 1'-0" (4 REQUIRED)



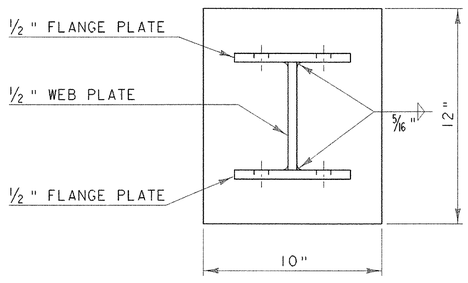
LEFT COVER BRACE
L 3"x2"x1/4"

SCALE: 3" = 1'-0" (4 REQUIRED)



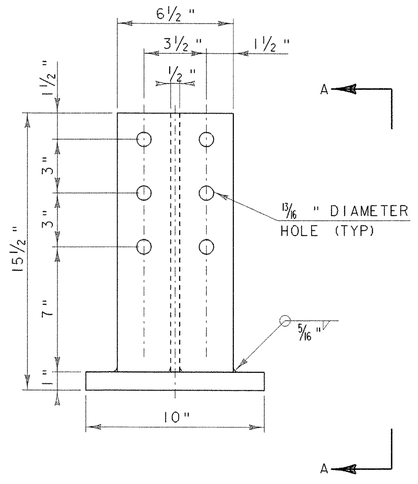
RIGHT COVER BRACE
L 3"x2"x1/4"

SCALE: 3" = 1'-0" (4 REQUIRED)



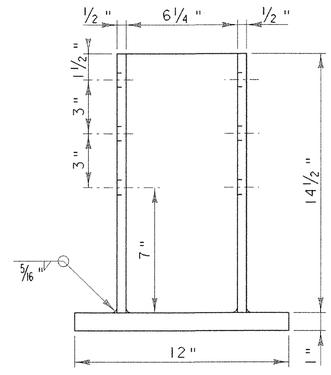
BEARING COLUMN
TOP VIEW

SCALE: 3" = 1'-0"



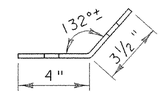
BEARING COLUMN HOLE PATTERN

SCALE: 3" = 1'-0" (4 REQUIRED)



VIEW "A-A"

SCALE: 3" = 1'-0"

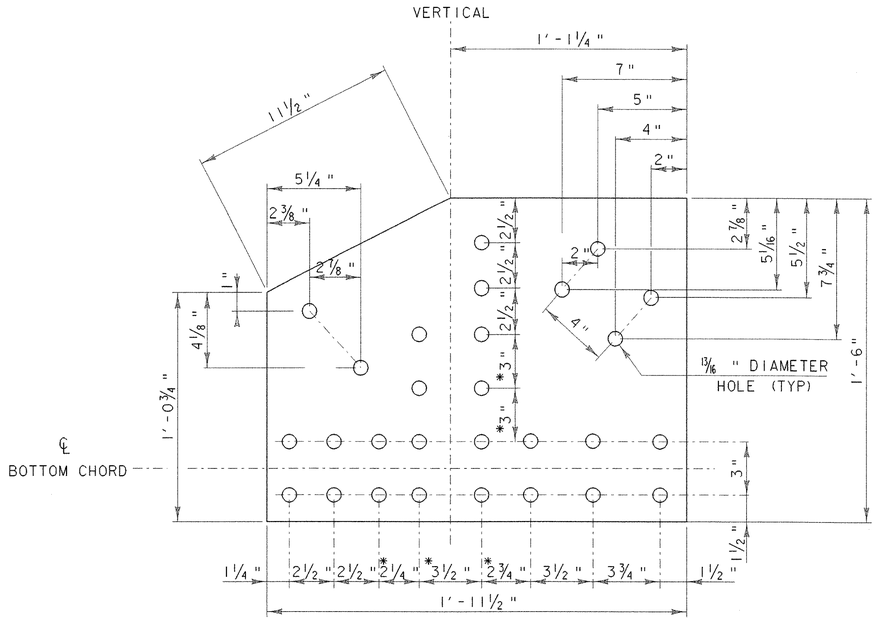


NEW BENT PLATE

PL 12 1/2 " X 1/4 " X 7 1/2 " (4 REQUIRED)
SCALE: 3" = 1'-0"

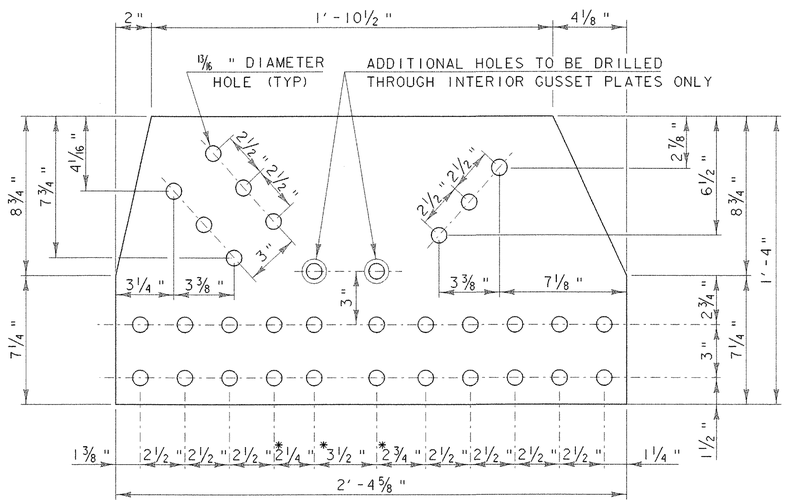
SCALE 3" = 1'-0
1 9 6 3 0 1

PROJECT: NEW HAVEN - WEYBRIDGE	PROJECT NO.: BHO-BTN 2005(1)
DESIGN FILE NAME: 89j081/structures/sj081truss.dgn	
IPARM FILE NAME: sj081platebeam.i	PLOT DATE: 28-FEB-2007
DESIGNED BY: R.S. YOUNG	DRAWN BY: R.S. YOUNG
SQUAD LEADER: C.P. WILLIAMS	CHECKED BY: W.B. SYMONDS
BEARING PLATE AND COLUMN DETAILS	SHEET: 16 OF 53



PANEL POINTS 2 AND 8

SCALE 3" = 1'-0 (8 REQUIRED)

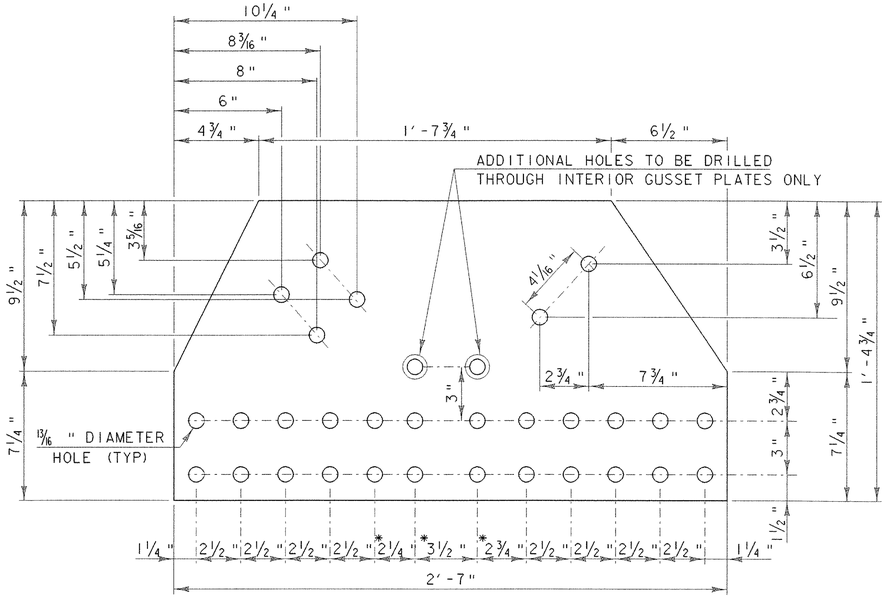


PANEL POINTS 3 AND 7

SCALE 3" = 1'-0 (8 REQUIRED)

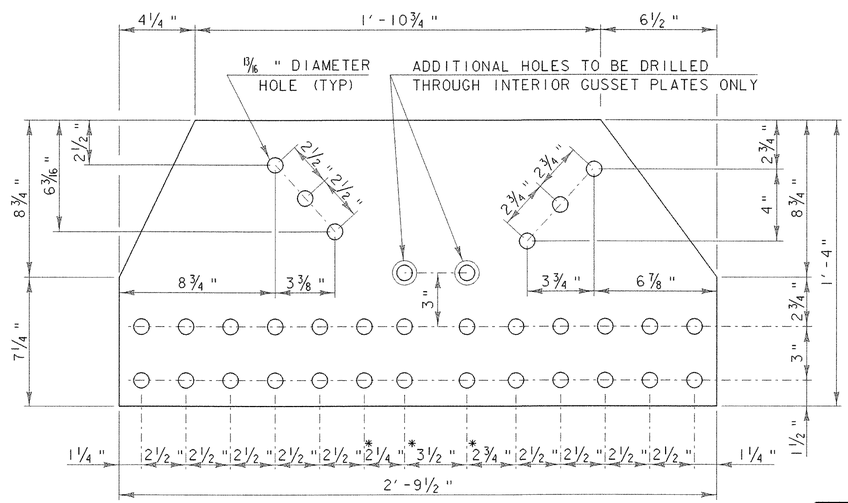
*NOTE- INTERIOR GUSSET PLATES ONLY

THE ORIGINAL SPACING HAS BEEN CHANGED FOR CONNECTION TO THE FLOOR BEAM. HOLES IN THE NEW VERTICAL ANGLES SHALL BE ADJUSTED ACCORDINGLY. HOLES IN THE EXISTING BOTTOM CHORD SHALL BE REAMED ¼" TO FIT THE NEW SPACING. REAMING SHALL BE INCIDENTAL TO ITEM 506.60 "STRUCTURAL STEEL."



PANEL POINTS 4 AND 6

SCALE 3" = 1'-0 (8 REQUIRED)



PANEL POINT 5

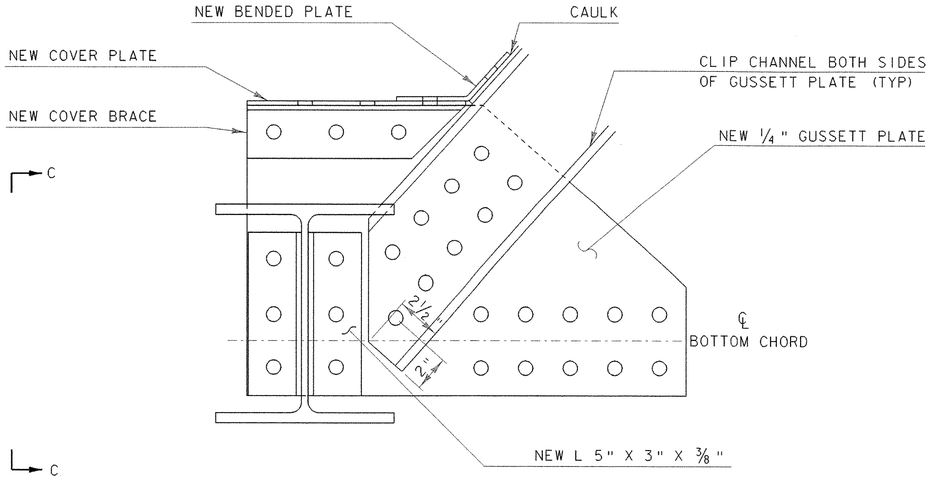
SCALE 3" = 1'-0 (4 REQUIRED)

SCALE 3" = 1'-0

1 9 6 3 0 1

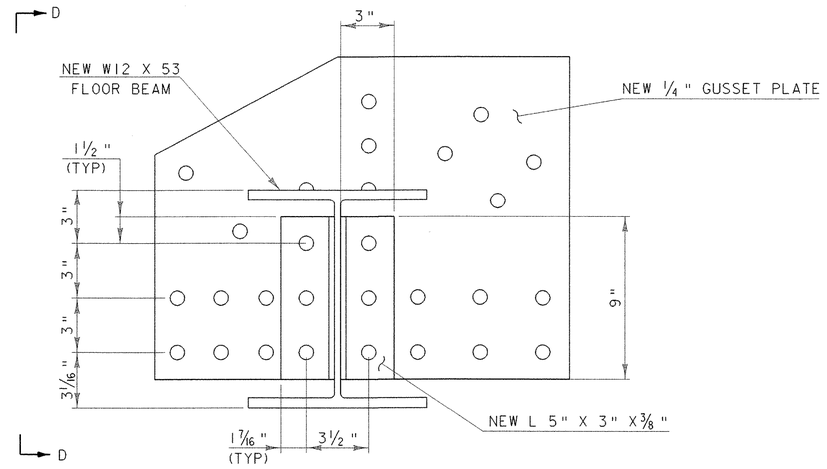
PROJECT:	PROJECT NO.:
NEW HAVEN - WEYBRIDGE	BHO-BTN 2005(1)

DESIGN FILE NAME: 89j081/structures/sj081truss.dgn
IPARM FILE NAME: sj081gusset.i
PLOT DATE: 28-FEB-2007
DESIGNED BY: R.S. YOUNG
DRAWN BY: M.C. LONGSTREET
SQUAD LEADER: C.P. WILLIAMS
CHECKED BY: R.S. YOUNG
GUSSET PLATES
SHEET: 17 OF 53



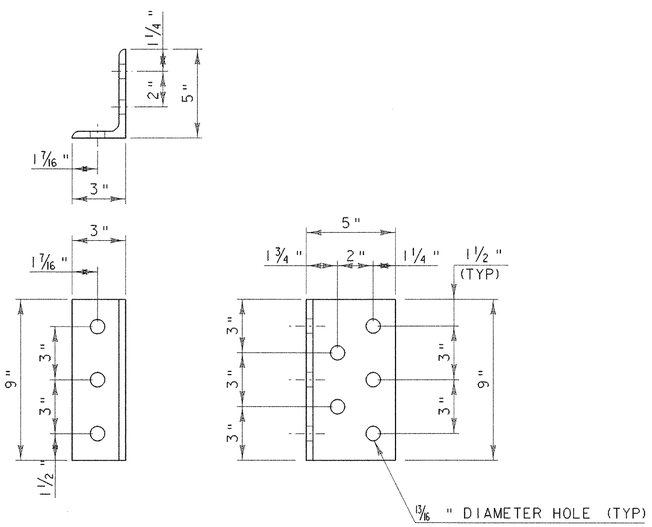
FLOOR BEAM CONNECTION AT PANEL POINTS 1 AND 9

SCALE 3" = 1'-0



FLOOR BEAM CONNECTON AT PANEL POINTS 2 THROUGH 8

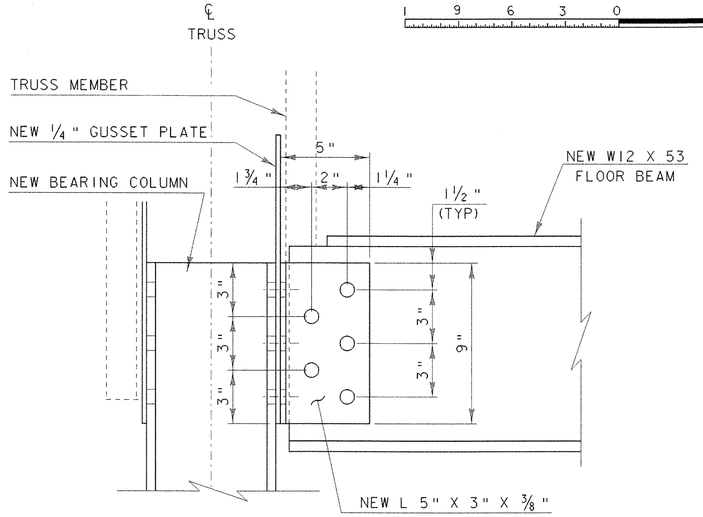
SCALE 3" = 1'-0



ANGELS AT PANEL POINTS 1 THROUGH 9

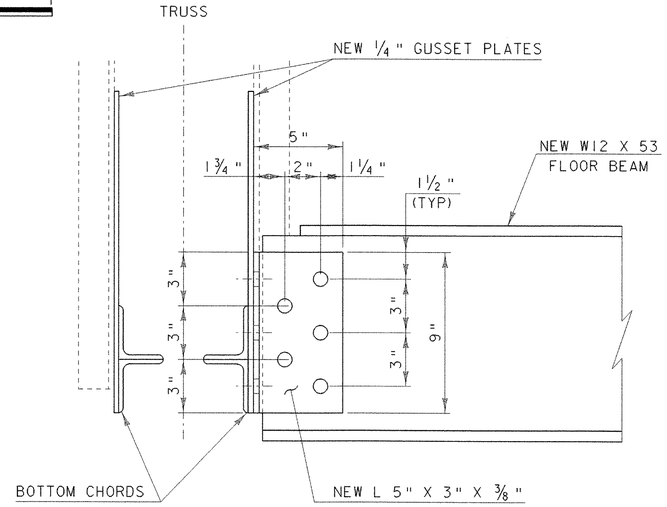
(36 REQUIRED)

SCALE 3" = 1'-0



VIEW C-C

SCALE 3" = 1'-0

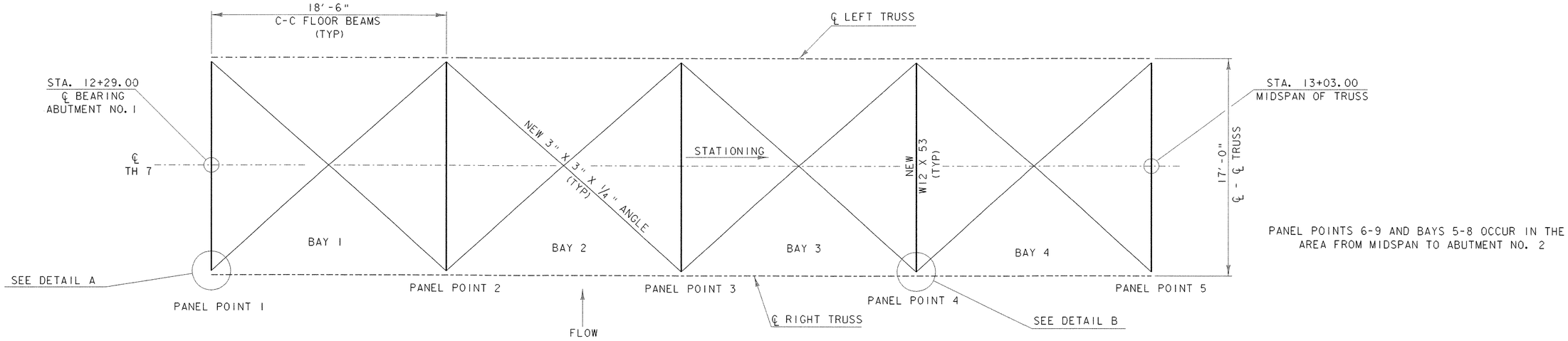


VIEW D-D

SCALE 3" = 1'-0

NOTE: EXISTING ANGLES CONNECTING THE TRUSS TO THE FLOOR BEAMS SHALL BE REPLACED WITH THE ANGLES DETAILED ON THIS SHEET.

PROJECT: NEW HAVEN-WEYBRIDGE	PROJECT NO.: BHO-BTN 2005 (1)
DESIGN FILE NAME: /89j081/structures/sj081frame.dgn	
IPARM FILE NAME: floorbeamconn.i	PLOT DATE: 28-FEB-2007
DESIGNED BY: R.S. YOUNG	DRAWN BY: R.S. YOUNG
SQUAD LEADER: C.P. WILLIAMS	CHECKED BY: R.S. YOUNG
FLOOR BEAM CONNECTION DETAILS	SHEET: 18 OF 53

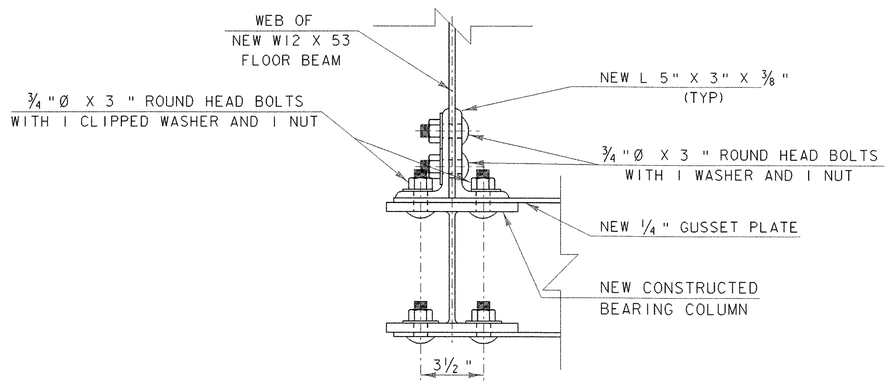


PANEL POINTS 6-9 AND BAYS 5-8 OCCUR IN THE AREA FROM MIDSPAN TO ABUTMENT NO. 2

HALF PLAN OF FLOOR FRAMING PLAN

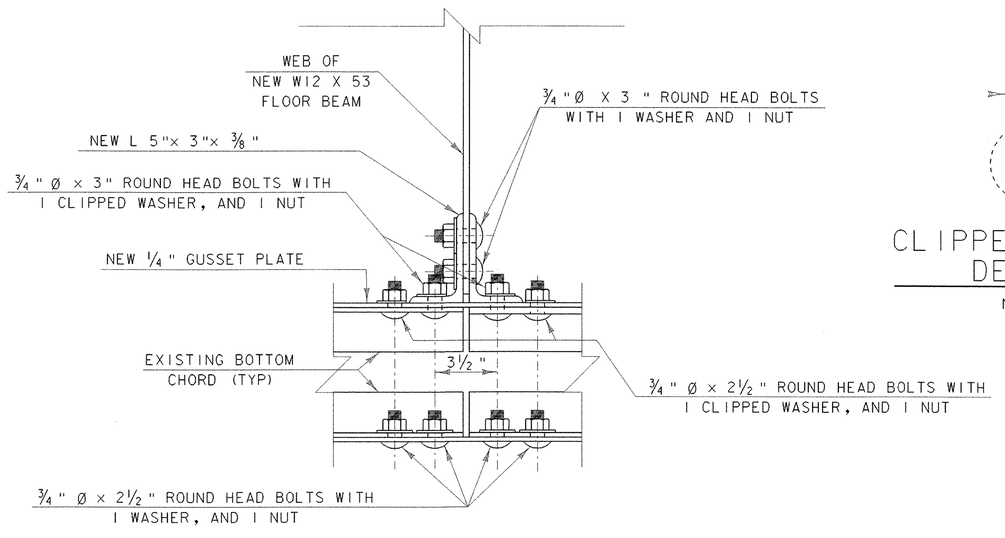
SCALE: 1/4" = 1'-0"

(BRIDGE FRAMING PLAN SYMMETRICAL ABOUT MIDSPAN)



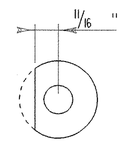
DETAIL A
PLAN OF NEW FLOOR BEAM CONNECTION
PANEL POINTS 1 AND 9

SCALE: 3" = 1'-0"



DETAIL B
PLAN OF NEW FLOOR BEAM CONNECTION
PANEL POINTS 2 THROUGH 8

SCALE: 3" = 1'-0"



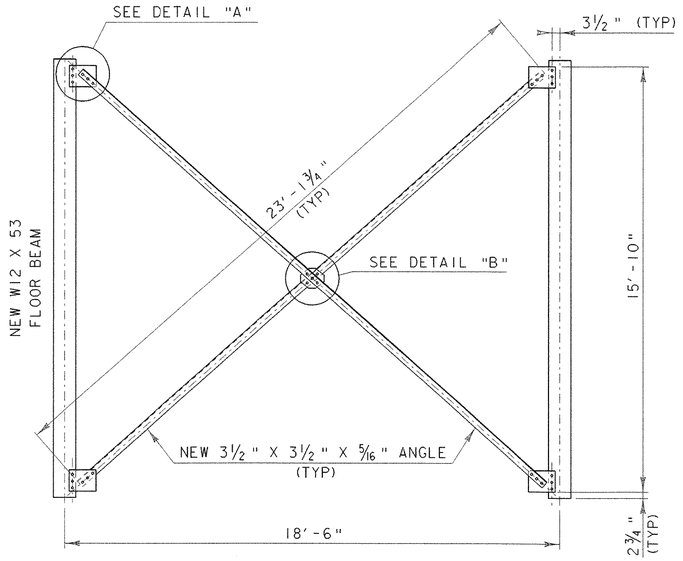
CLIPPED WASHER DETAIL

N.T.S.

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

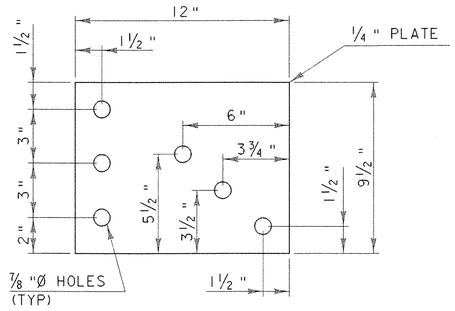
SCALE 3" = 1'-0
1 9 6 3 0

PROJECT: NEW HAVEN-WEYBRIDGE	PROJECT NO.: BHO-BTN 2005(1)
DESIGN FILE NAME: /89j081/structures/sj081frame.dgn	
IPARM FILE NAME: frame.i	PLOT DATE: 28-FEB-2007
DESIGNED BY: R. S. YOUNG	DRAWN BY: D. A. ECKSTEIN
SQUAD LEADER: C. P. WILLIAMS	CHECKED BY: R.S. YOUNG
FRAMING PLAN & CONNECTION DETAILS	SHEET: 19 OF 53



LATERAL BRACING DETAIL

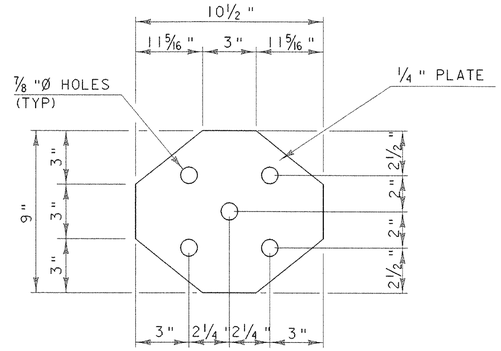
SCALE: ⅜ " = 1'-0"



DETAIL "A"

END CONNECTION PLATE

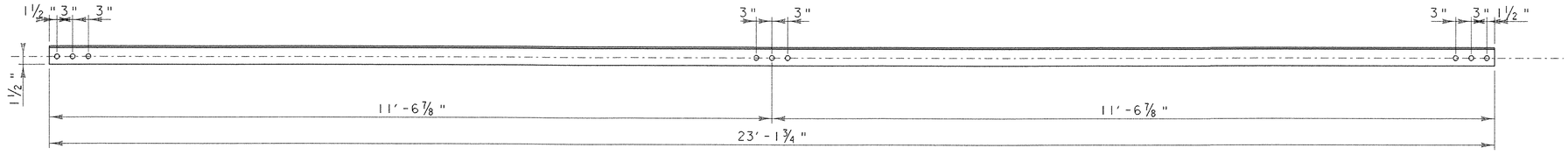
SCALE: 3" = 1'-0"
(32 REQUIRED)



DETAIL "B"

CENTER CONNECTION PLATE

SCALE: 3" = 1'-0"
(8 REQUIRED)



LATERAL BRACING (TYP)
3½ " X 3½ " X 5⁄16 " ANGLE

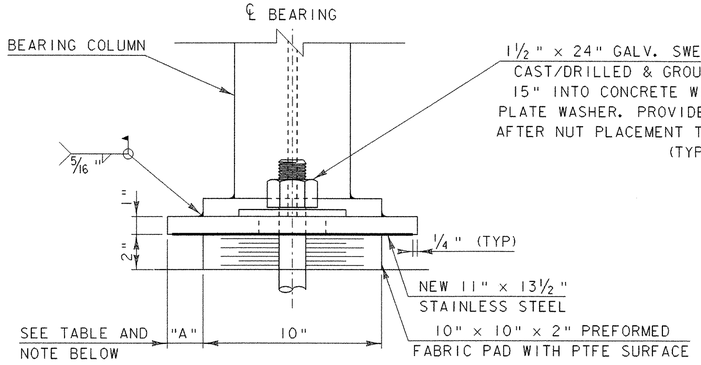
SCALE: 1" = 1'-0"

SCALE ⅜ " = 1'-0
0 1 2

SCALE 1" = 1'-0
1 9 6 3 0 1 2

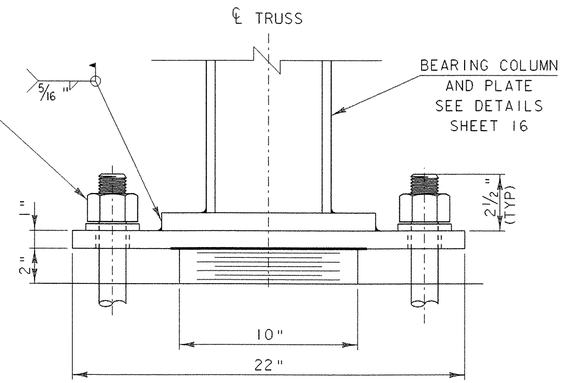
SCALE 3" = 1'-0
1 9 6 3 0

PROJECT: NEW HAVEN-WEYBRIDGE	PROJECT NO.: BHO-BTN 2005(1)
DESIGN FILE NAME: /89j081/structures/sj081frame.dgn	
IPARM FILE NAME: bracing.i	PLOT DATE: 28-FEB-2007
DESIGNED BY: R. S. YOUNG	DRAWN BY: D. A. ECKSTEIN
SQUAD LEADER: C. P. WILLIAMS	CHECKED BY: R. S. YOUNG
LATERAL BRACING DETAILS	SHEET: 20 OF 53



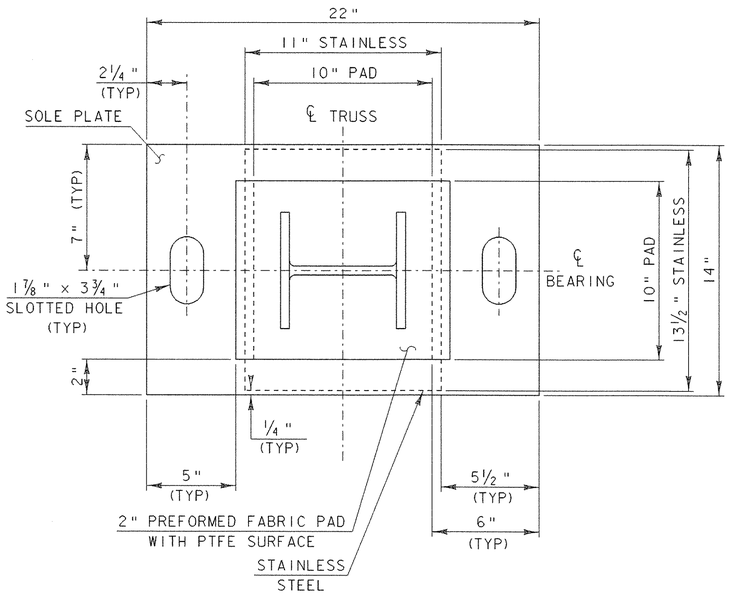
SIDE ELEVATION EXPANSION BEARING

STA 12 + 29.00



FRONT ELEVATION EXPANSION BEARING

STA 12 + 29.00



PLAN VIEW EXPANSION BEARING

STA 12 + 29.00

EXPANSION BEARING

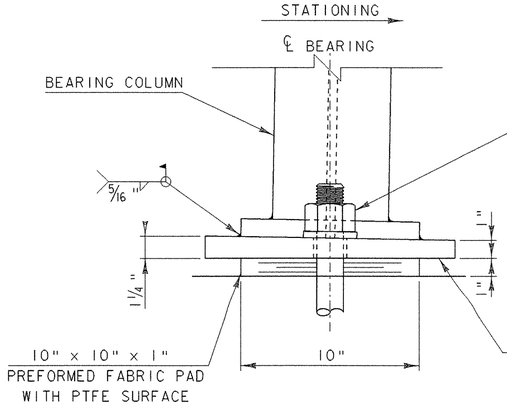
TEMP	"A" DIST
0°F	1½ "
15°F	1 11/16 "
30°F	1 13/16 "
45°F	2 "
60°F	2 3/16 "
75°F	2 3/8 "
90°F	2½ "
105°F	2 11/16 "

"A" DISTANCE IS THE FINAL SETTING FOR THE BEARING PAD WHEN THE DEAD LOAD OF THE NEW DECK IS IN PLACE.

ALL DETAILS SCALE 3: 1

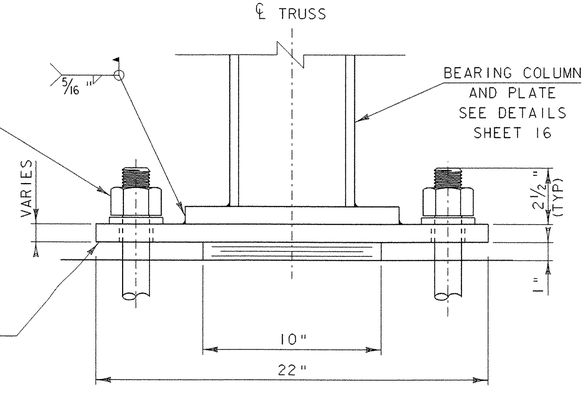
SCALE 3" = 1'-0

1 9 6 3 0 1



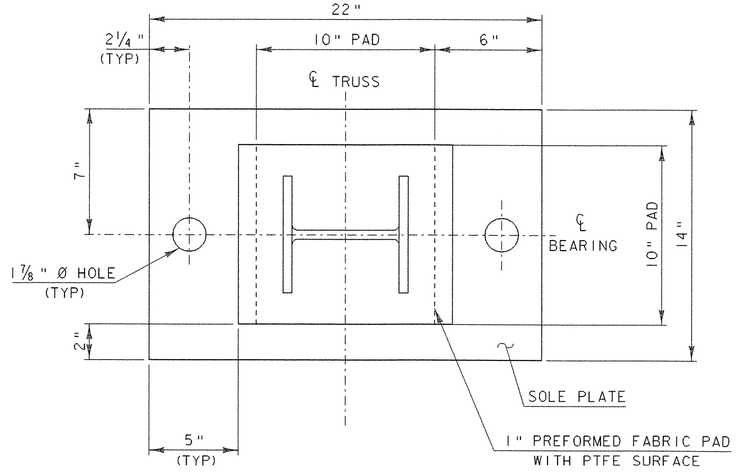
SIDE ELEVATION FIXED BEARING

STA 13 + 77.00



FRONT ELEVATION FIXED BEARING

STA 13 + 77.00



PLAN VIEW OF FIXED BEARING

STA 13 + 77.00

PROJECT:	PROJECT NO.:
NEW HAVEN - WEYBRIDGE	BHO-BTN 2005 (1)

DESIGN FILE NAME: 89j081/structures/sj081bearing.dgn
IPARM FILE NAME: sj081bearing2.I — PLOT DATE: 28-FEB-2007
DESIGNED BY: R.S. YOUNG — DRAWN BY: D. D. BEARD
SQUAD LEADER: C.P. WILLIAMS — CHECKED BY: R.S. YOUNG
BEARING DETAILS — SHEET: 21 OF 53

BEARING NOTES

1) BEARINGS SHALL CONFORM TO VAOT STANDARD SPECIFICATIONS FOR CONSTRUCTION SECTIONS 531 AND 731.

2) ALL COMPONENTS OF BEARINGS, EXCEPT STAINLESS STEEL, SHALL BE AASHTO M-270 GRADE 50 STEEL.

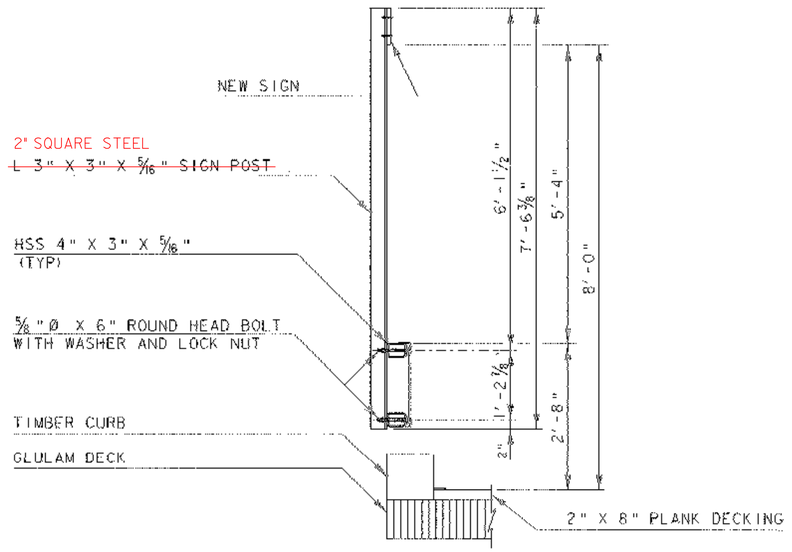
3) ALL COMPONENTS OF BEARING DEVICES SHALL BE METALIZED IN CONFORMANCE WITH VAOT STANDARD SPECIFICATIONS FOR CONSTRUCTION SECTIONS 533.04 AND 506.15. AREAS OF METALIZING DAMAGED BY FIELD WELDING OR HANDLING SHALL BE REPAIRED IN CONFORMANCE WITH ASTM A 760/A 760M.

4) ALL ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED. ALL WASHERS SHALL BE ⅜" PLATE. PAYMENT FOR ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 531.10 "BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD". ANCHOR BOLTS SHALL CONFORM TO VAOT STANDARD SPECIFICATIONS FOR CONSTRUCTION SECTION 714.08.

5) MANUFACTURING OF THE SOLE PLATE, BEARING PADS, ANCHOR BOLTS,AND STAINLESS STEEL SHALL BE PAID FOR UNDER THE BID ITEM 531.10 "BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD" PAYMENT FOR THE BEARING COLUMN AND PLATE SHALL BE INCLUDED UNDER THE ITEM 506.60 "STRUCTURAL STEEL."

6) DESIGN CRITERIA:
- A: PAD TO CONCRETE DESIGN PRESSURE = 1000 PSI
- B: MINIMUM ALLOWABLE DESIGN ROTATION = 0.015 RADIANS
- C: HORIZONTAL CAPACITY SHALL BE MINIMUM OF 10% VERTICAL CAPACITY.
- D: DESIGN LOAD PER TRUSS BEARING = 82 KIPS
  - RDL = 38 KIPS
  - RLL = 44 KIPS

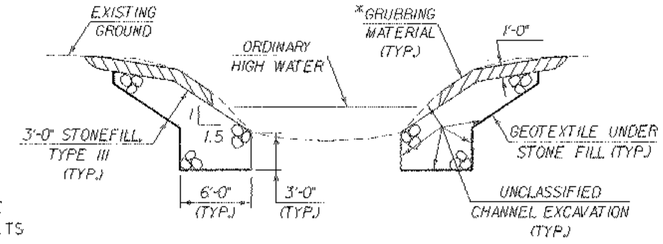
7) ANCHOR BOLTS SHALL BE CAST/DRILLED AND GROUTED PRIOR TO CONNECTING THE END FLOOR BEAMS



TOWN LINE SIGN POST DETAIL

(STA 13+03.00) RT

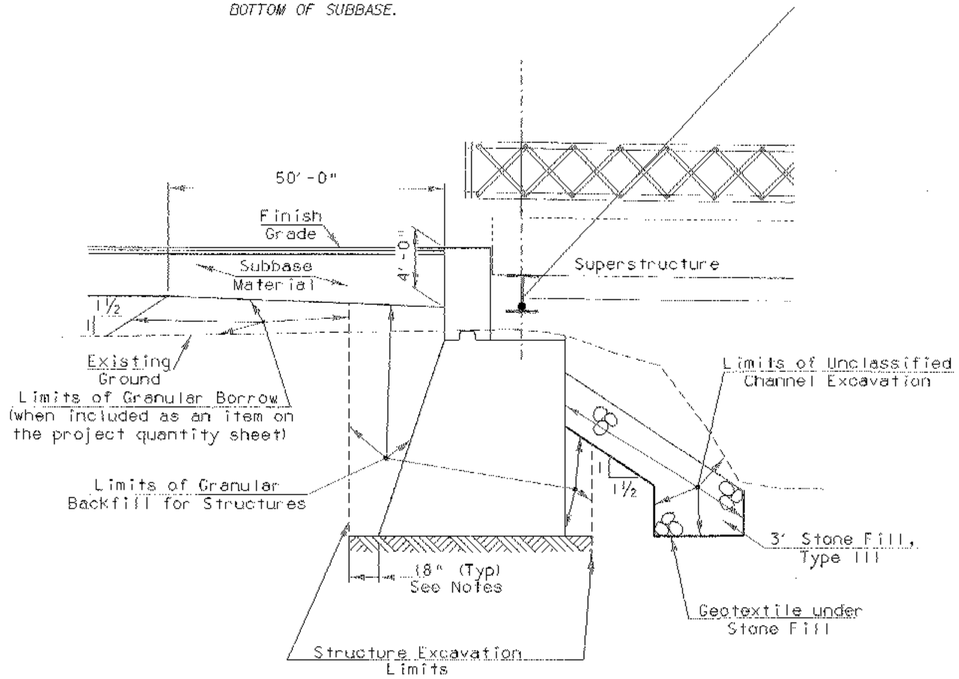
SCALE ¾" = 1'-0



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.



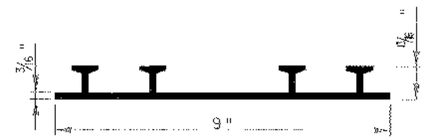
ABUTMENT #1 TYPICAL SECTION

(NOT TO SCALE)

NOTES

1. FOR PURPOSES OF ESTIMATING EARTHWORK QUANTITIES, THE LIMITS OF STRUCTURE EXCAVATION HAVE BEEN ASSUMED TO BE 18" OUTSIDE THE PERIMETER OF THE FOOTING.

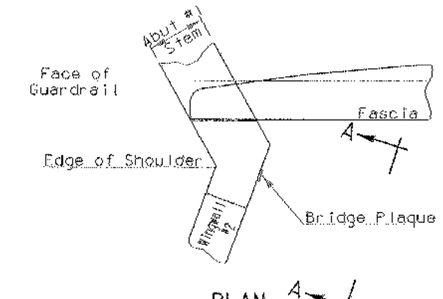
2. THE ACTUAL EXCAVATION LIMITS TO BE DETERMINED BY THE CONTRACTOR. NO PAYMENT WILL BE MADE FOR WORK OUTSIDE THE STRUCTURE EXCAVATION LIMITS SHOWN ABOVE



P.V.C. WATERSTOP FOR CONSTRUCTION JOINTS

NTS

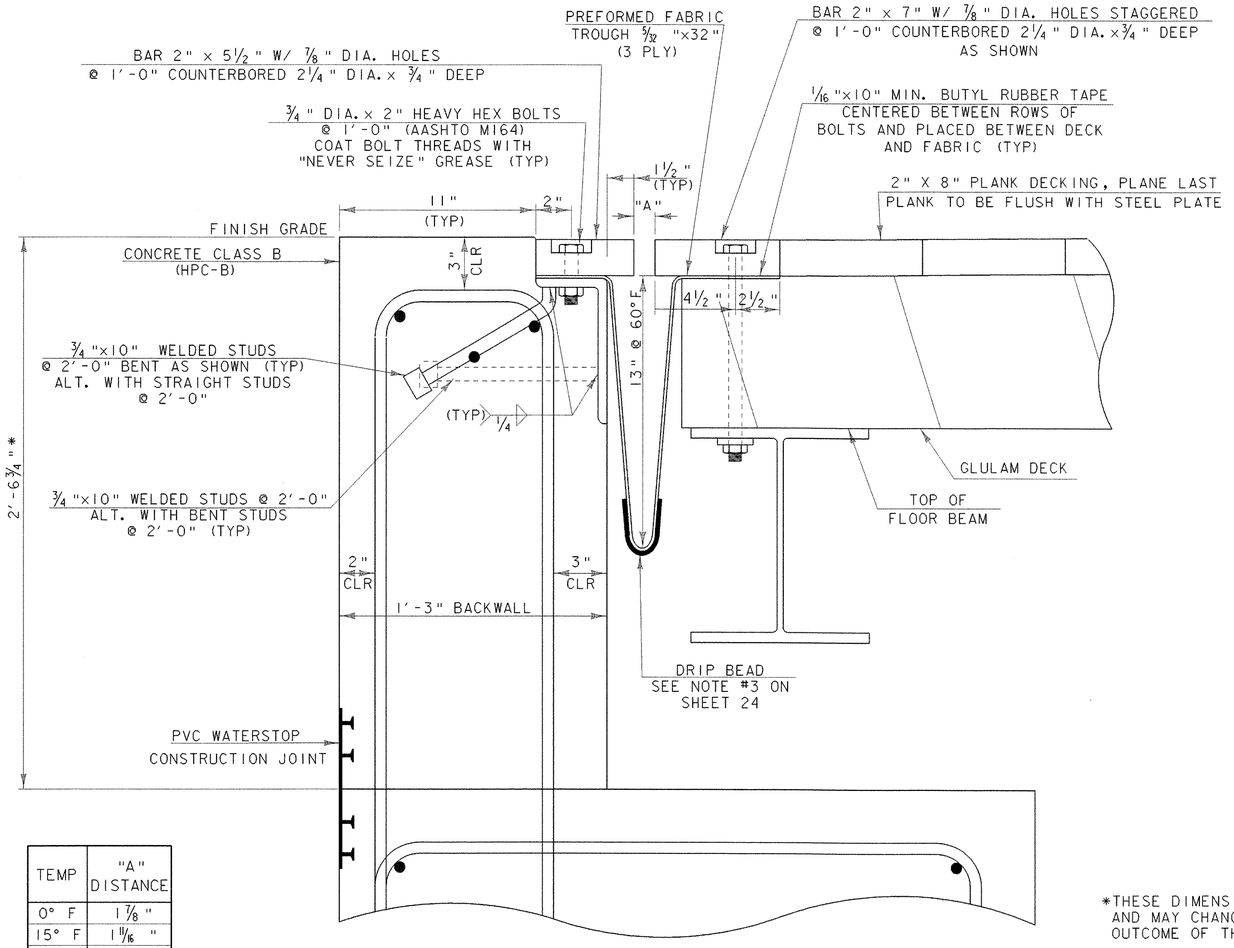
THE COSTS FOR P.V.C. WATERSTOP SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONCRETE. OTHER CONFIGURATIONS MAY BE USED UPON APPROVAL OF THE STRUCTURES ENGINEER.



LOCATE BRIDGE PLAQUE

THE BRIDGE PLAQUE WILL BE SUPPLIED BY THE AGENCY OF TRANSPORTATION AND SHALL BE INSTALLED BY THE CONTRACTOR AT ABUTMENT #1 ON THE RIGHT SIDE AS SHOWN OR AS DIRECTED BY THE ENGINEER.

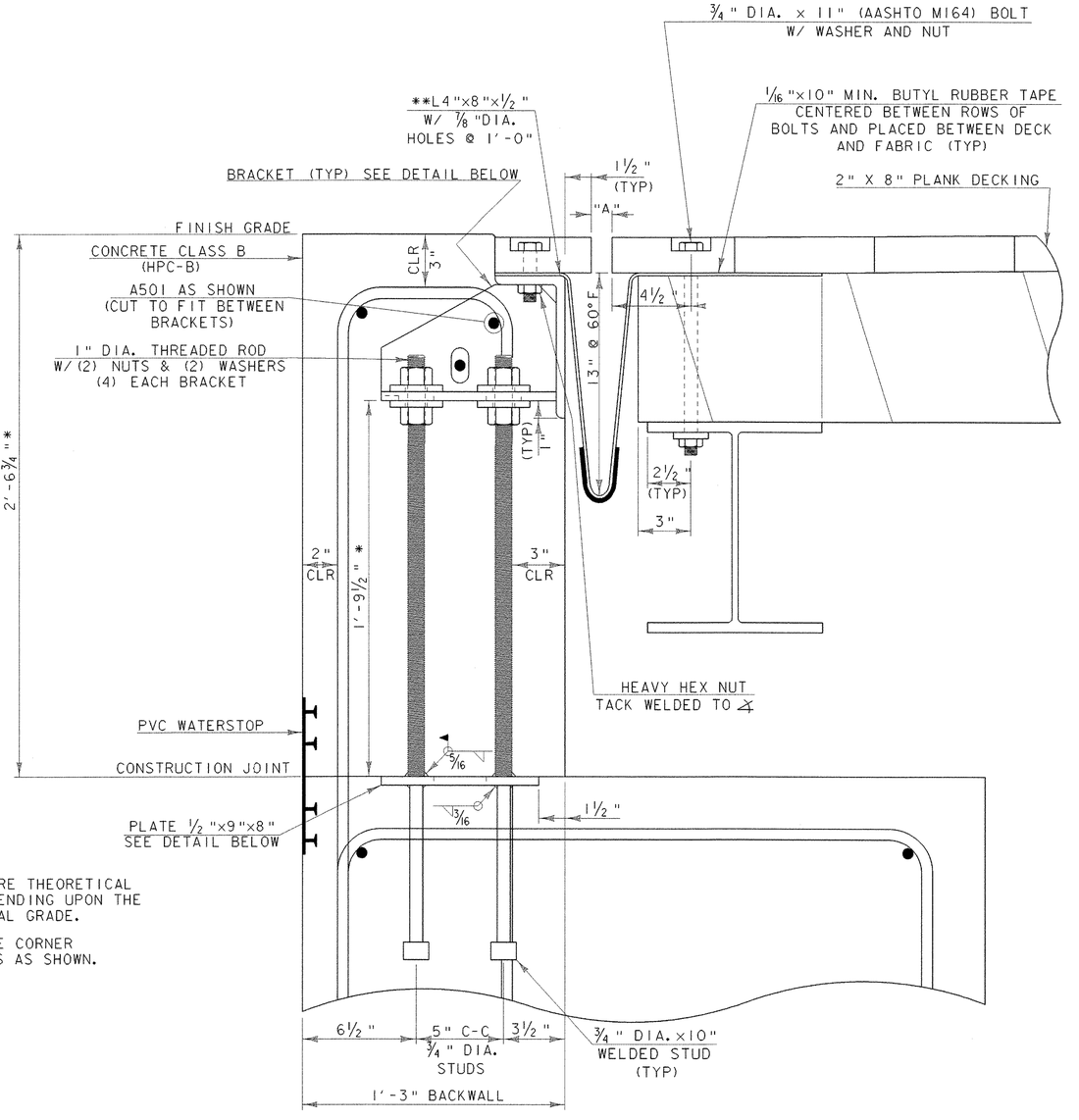
PROJECT: NEW HAVEN - WEYBRIDGE	PROJECT NO.: BHO-BTN 2005(1)
DESIGN FILE NAME: 89\081\structures\sj081bearing.dgn	
IPARM FILE NAME: sj081bgnotesmisc.i	PLOT DATE: 28-FEB-2007
DESIGNED BY: R.S. YOUNG	DRAWN BY: M. LONGSTREET
SQUAD LEADER: C.P. WILLIAMS	CHECKED BY: R.S. YOUNG
BEARING NOTES/MISC DETAILS	SHEET: 22 OF 53



TEMP	"A" DISTANCE
0° F	1⅞"
15° F	1 11/16"
30° F	1 9/16"
45° F	1⅜"
60° F	1 3/16"
75° F	1"
90° F	⅞"
105° F	11/16"

TYPICAL SECTION BETWEEN BRACKETS

SCALE 3" = 1'-0



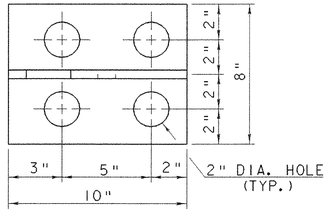
*THESE DIMENSIONS ARE THEORETICAL AND MAY CHANGE DEPENDING UPON THE OUTCOME OF THE FINAL GRADE.

**GRIND OUTSIDE CORNER TO ¼" RADIUS AS SHOWN.

TYPICAL SECTION AT BRACKET

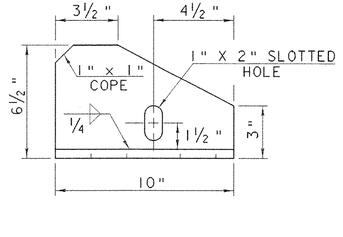
SCALE 3" = 1'-0

ALL PLATES ½"



BRACKET PLAN

SCALE 3" = 1'-0



BRACKET ELEVATION

SCALE 3" = 1'-0

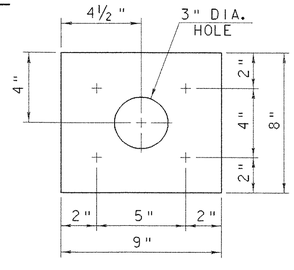
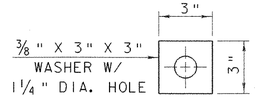


PLATE PLAN

SCALE 3" = 1'-0



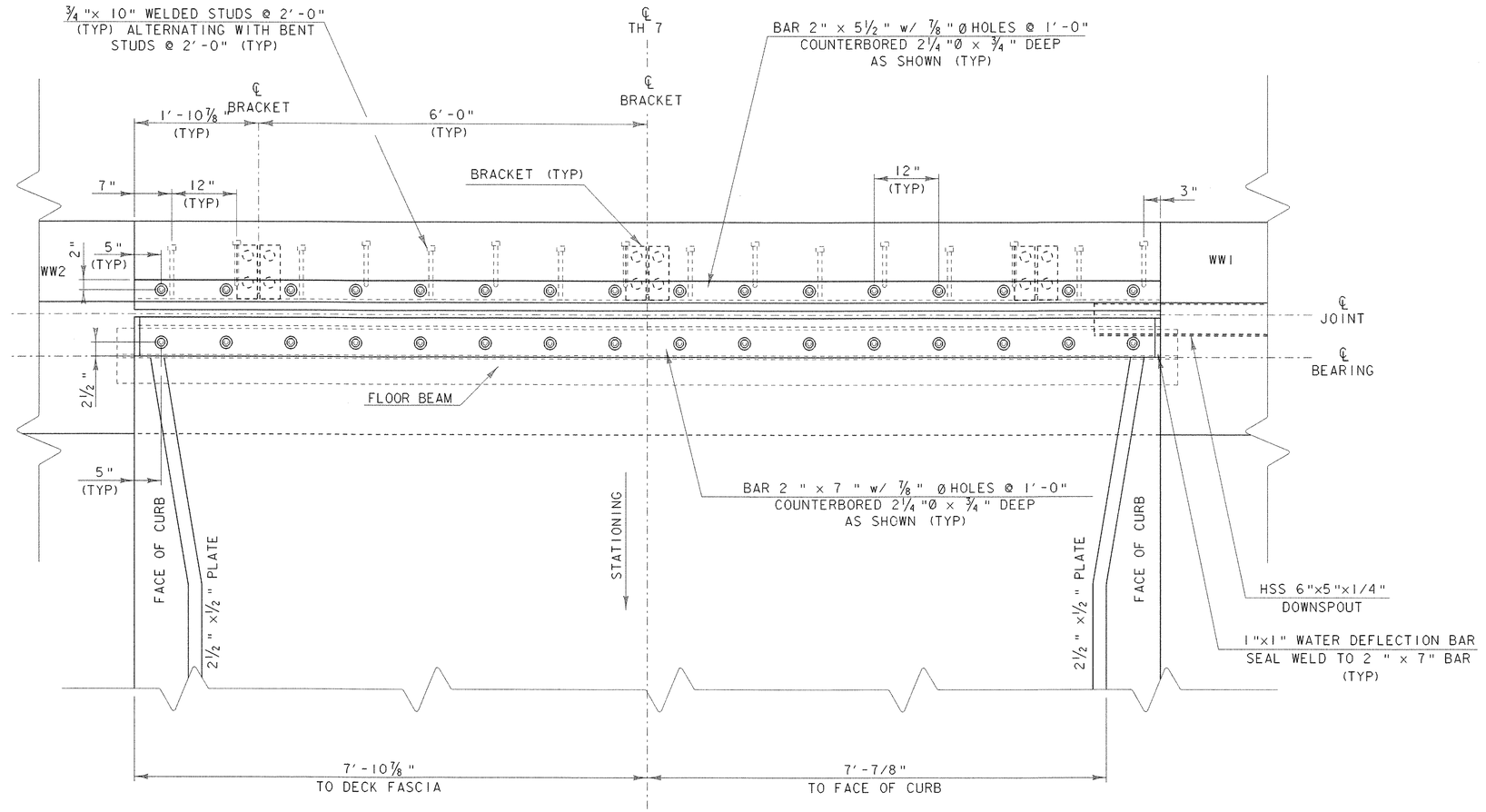
WASHER FOR BRACKET

SCALE 3" = 1'-0

SCALE 3" = 1'-0

PROJECT:	PROJECT NO.:
NEW HAVEN - WEYBRIDGE	BHO-BTN 2005(1)

DESIGN FILE NAME: 89j081/structures/sj081joint.dgn
IPARM FILE NAME: sj081joint.i
PLOT DATE: 28-FEB-2007
DESIGNED BY: R.S. YOUNG
DRAWN BY: R.S. YOUNG
SQUAD LEADER: C.P. WILLIAMS
CHECKED BY: W.B. SYMONDS
EXPANSION JOINT DETAILS
SHEET: 23 OF 53



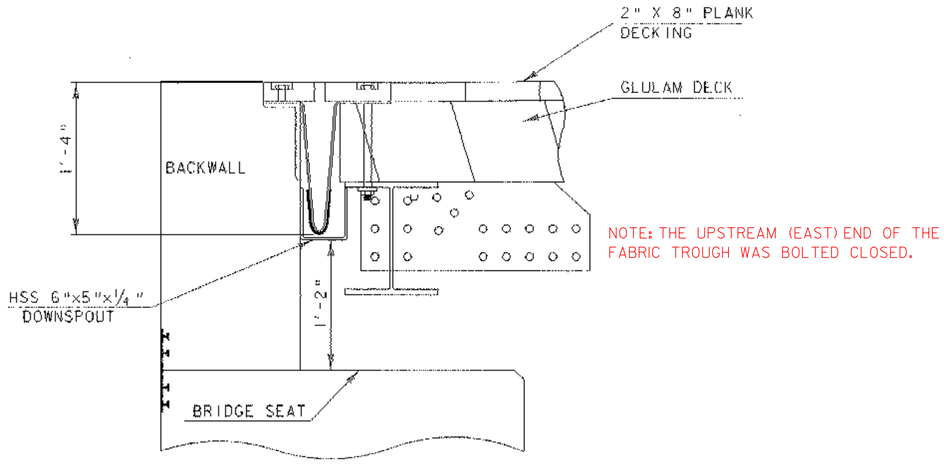
EXPANSION JOINT PLAN

SCALE 1" = 1'-0

EXPANSOIN JOINT NOTES:

1. DETAILS ON SHEET 23 AND THIS SHEET ARE FOR ITEM 516.11 "BRIDGE EXPANSION JOINT, VERMONT".
2. PREFORMED FABRIC MATERIAL SHALL BE CONTINUOUS AND SHALL CONFORM TO SUBSECTION 707.07.
3. BUTYL RUBBER TAPE SHALL CONFORM TO AASHTO SPECIFICATION M-198, TYPE II.
4. ALL STEEL COMPONENTS SHALL BE AASHTO M270 GRADE 36 GALVANIZED OR METALIZED AS PER SUBSECTION 516.04. THREADED RODS SHALL CONFORM TO ASTM A307, GRADE C. THE NUTS FOR THE THREADED RODS SHALL BE ASTM A 563.
5. THE ITEM "BRIDGE EXPANSION JOINT, VERMONT" SHALL INCLUDE THE FABRICATION AND ERECTION OF THE COMPLETE JOINT ASSEMBLY INCLUDING ALL STEEL PLATES, BOLTS, BRACKETS, ANGLES, WELDED STUDS OR RODS, PREFORMED FABRIC DRAIN TROUGH MATERIAL, BUTYL RUBBER TAPE AND ANY OTHER MISCELLANEOUS MATERIAL NECESSARY TO INSTALL JOINT.
6. PAYMENT FOR DRILLING HOLES IN THE GLULAM DECK AND FLOOR BEAM SHALL BE INCIDENTAL TO 522.40 "STRUCTURAL GLUED LAMINATED TIMBER", AND 506.60 "STRUCTURAL STEEL"
7. COAT CONCRETE CONTACT SURFACES WITH EPOXY BONDING COMPOUND MEETING THE REQUIREMENTS OF SUBSECTION 516.05. PAYMENT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 516.11 "BRIDGE EXPANSION JOINT, VERMONT".
8. FILL COUNTERBORED HOLES WITH HOT POURED JOINT SEALER (STD. SPEC. 707.04) AFTER BOLT INSTALLATION. PAYMENT FOR THE WORK SHALL BE INCIDENTAL TO ITEM 516.11.
9. PAYMENT FOR WATERSTOP SHALL BE INCIDENTAL TO THE CONCRETE PAY ITEM.
10. A DRIP BEAD OF ¼"x7" STRIP OF PREFORMED MATERIAL SHALL BE CEMENTED TO THE BOTTOM OF THE FABRIC TROUGH USING AN ADHESIVE APPROVED BY THE MANUFACTURER. THE DRIP BEAD SHALL BE APPLIED 1" FROM THE DOWNSPOUT END OF THE TROUGH.
11. FABRIC TROUGH SHALL BE THOROUGHLY CLEANED AND FLUSHED AFTER PAVING OPERATION.

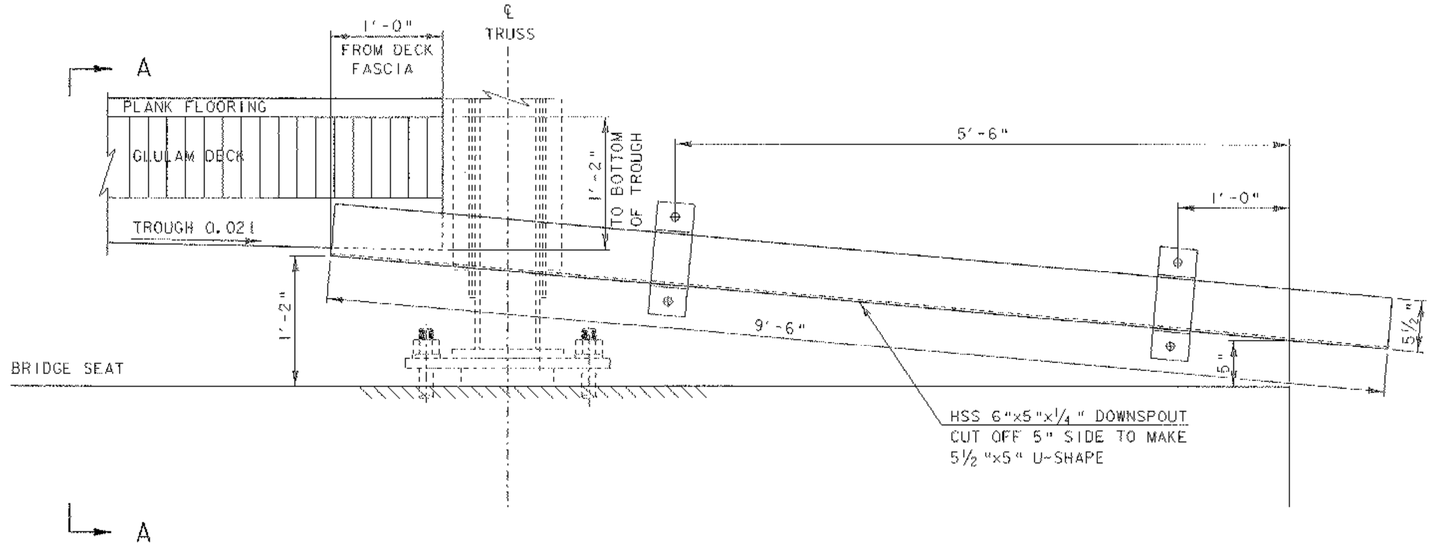
PROJECT: NEW HAVEN - WEYBRIDGE	PROJECT NO.: BHO-BTN 2005(1)
DESIGN FILE NAME: 89j081/structures/sj081joint.dgn	
IPARM FILE NAME: sj081jointplan.i	PLOT DATE: 28-FEB-2007
DESIGNED BY: R.S. YOUNG	DRAWN BY: R.S. YOUNG
SQUAD LEADER: C.P. WILLIAMS	CHECKED BY: W.B. SYMONDS
EXPANSION JOINT PLAN/WATERSTOP	SHEET: 24 OF 53



NOTE: THE UPSTREAM (EAST) END OF THE FABRIC TROUGH WAS BOLTED CLOSED.

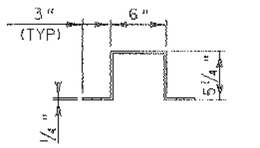
VIEW A - A

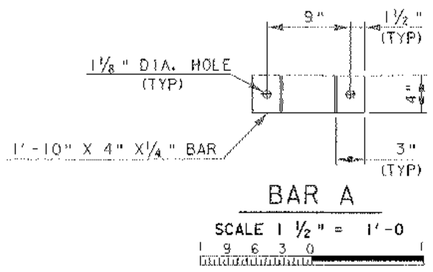
SCALE 1 ½" = 1'-0



DOWNSPOUT ELEVATION

SCALE 1 ½" = 1'-0

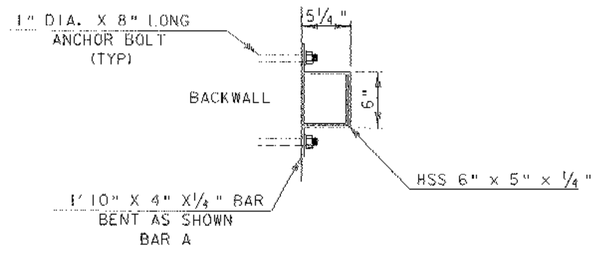




BAR A

SCALE 1 ½" = 1'-0

(2 REQUIRED)



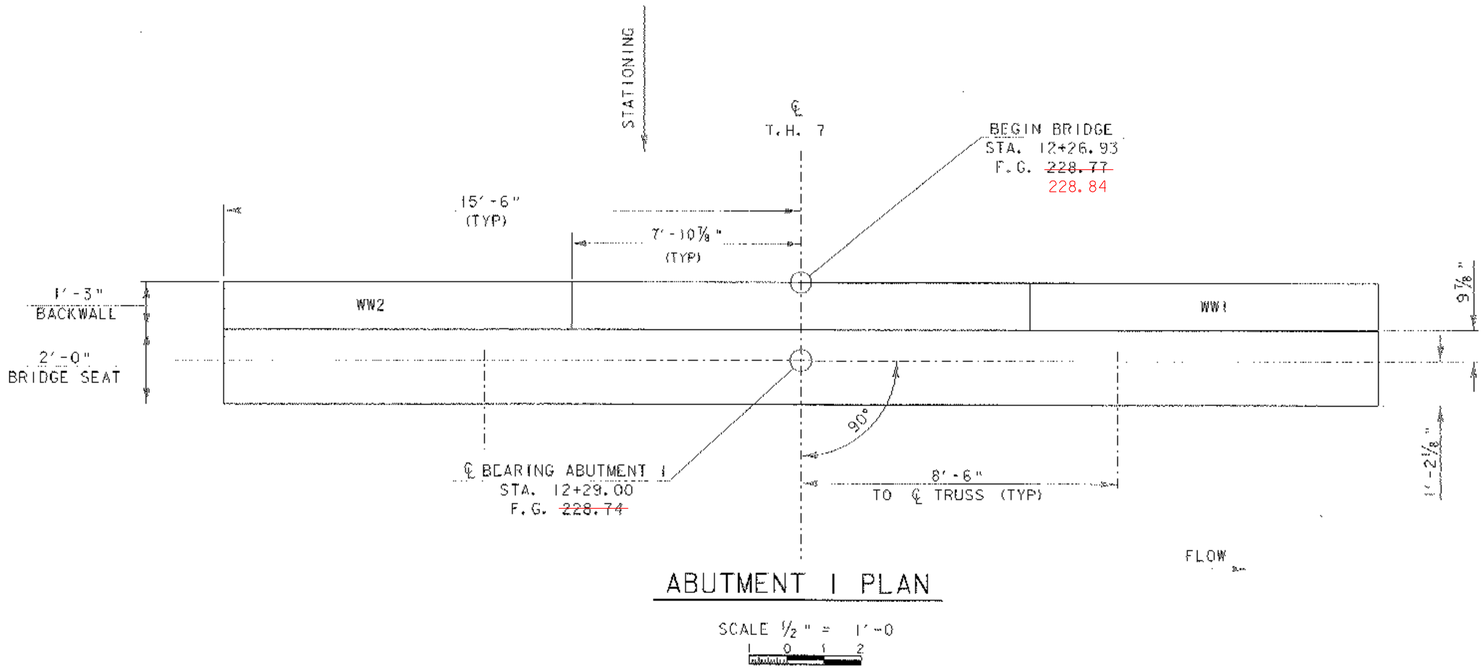
CROSS SECTION OF DOWNSPOUT AT BAR LOCATION

SCALE 1 ½" = 1'-0

DOWNSPOUT NOTES

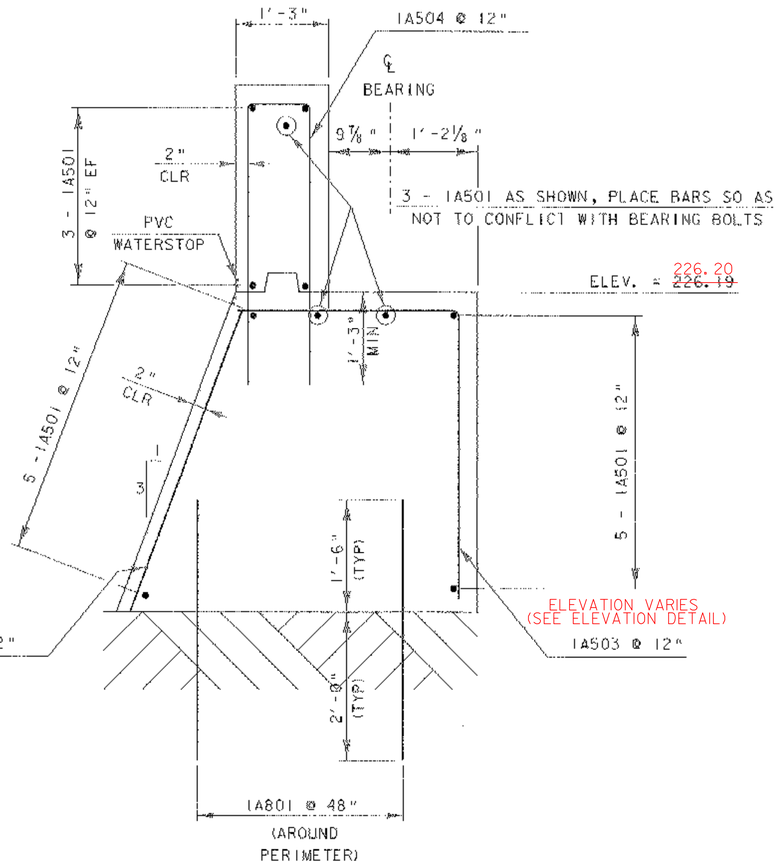
1. STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM A-500 GRADE B.
2. ALL PLATES, BARS, AND ANGLES SHALL CONFORM TO AASHTO M270 GRADE 50.
3. DOWNSPOUT SHALL BE GALVANIZED IN ACCORDANCE WITH VAOT STANDARD SPECIFICATIONS FOR CONSTRUCTION SECTION 506.15.
4. ALL BOLTS AND RELATED HARDWARE SHALL BE ASTM A-307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 232M/M 232.
5. ANY PLACE WHERE THE GALVANIZING HAS BEEN REMOVED FROM THE DOWNSPOUT EITHER BY CUTTING, BURNING, WELDING, PLACING, OR ANY OTHER MEANS, SHALL BE REPAIRED BY THOROUGHLY CLEANING THE DAMAGED AREAS WITH A WIRE BRUSH AND PAINTING THE DAMAGED AREAS WITH AN APPROVED SEALANT, PAYMENT SHALL BE INCIDENTAL TO ITEM 506.60 "STRUCTURAL STEEL".
6. PLATES, BARS, AND ANGLES SHALL BE PAID FOR UNDER THE ITEM 506.60 "STRUCTURAL STEEL".
7. GRIND ALL CORNERS TO A 1/16" RADIUS PRIOR TO GALVANIZING.

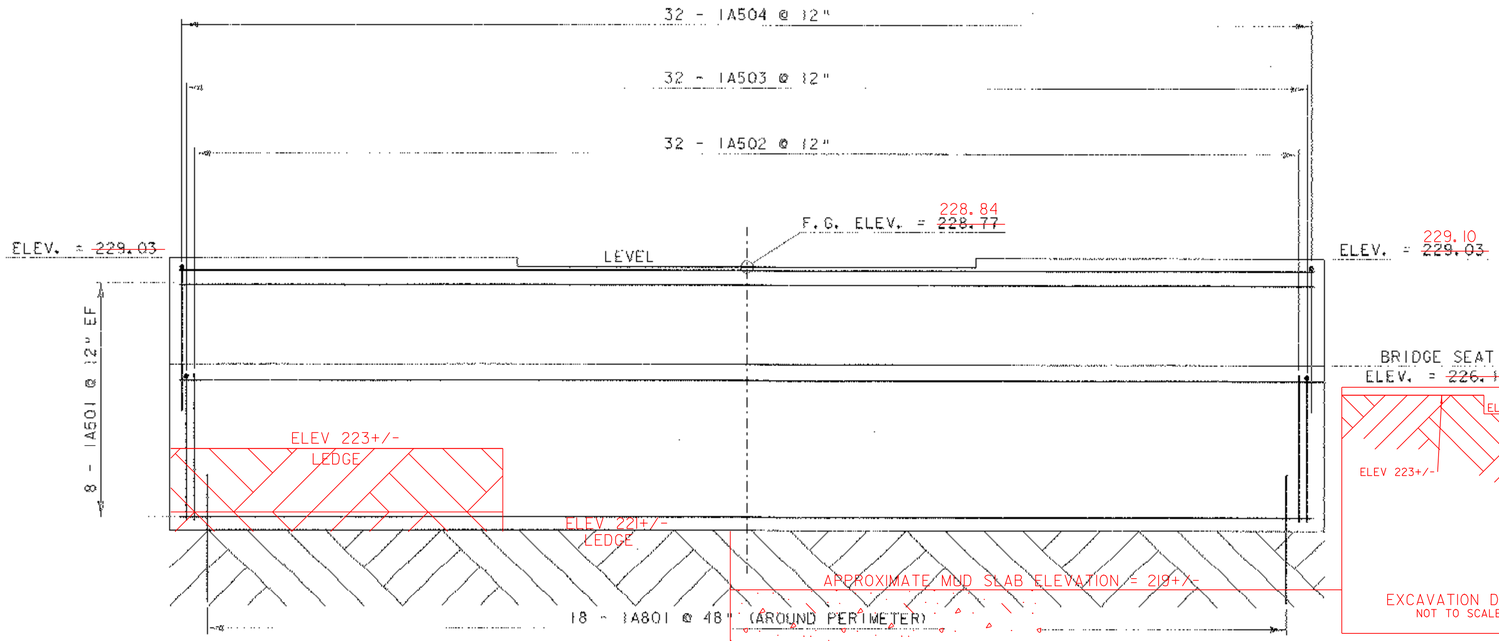
PROJECT: NEW HAVEN - WEYBRIDGE	PROJECT NO.: BHO-BTN 2005(1)
DESIGN FILE NAME: 89\081\structures\sj081downspt.dgn	
IPARM FILE NAME: sj0812downspt2.i	PLOT DATE: 28-FEB-2007
DESIGNED BY: R.S. YOUNG	DRAWN BY: R.S. YOUNG
SQUAD LEADER: C.P. WILLIAMS	CHECKED BY: R. S. YOUNG
DOWN SPOUT DETAILS	SHEET: 25 OF 53



ABUTMENT 1 PLAN

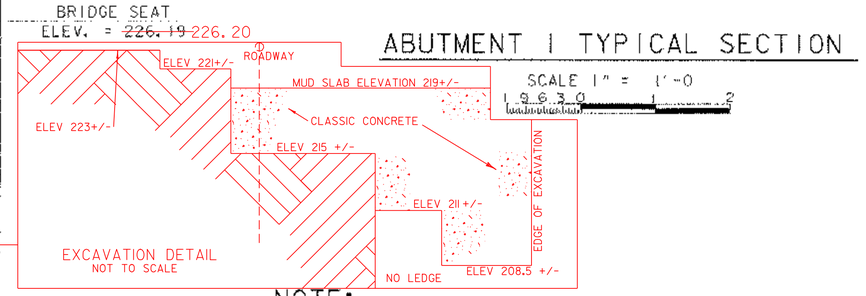
SCALE ½" = 1'-0





ABUTMENT 1 ELEVATION

SCALE ½" = 1'-0



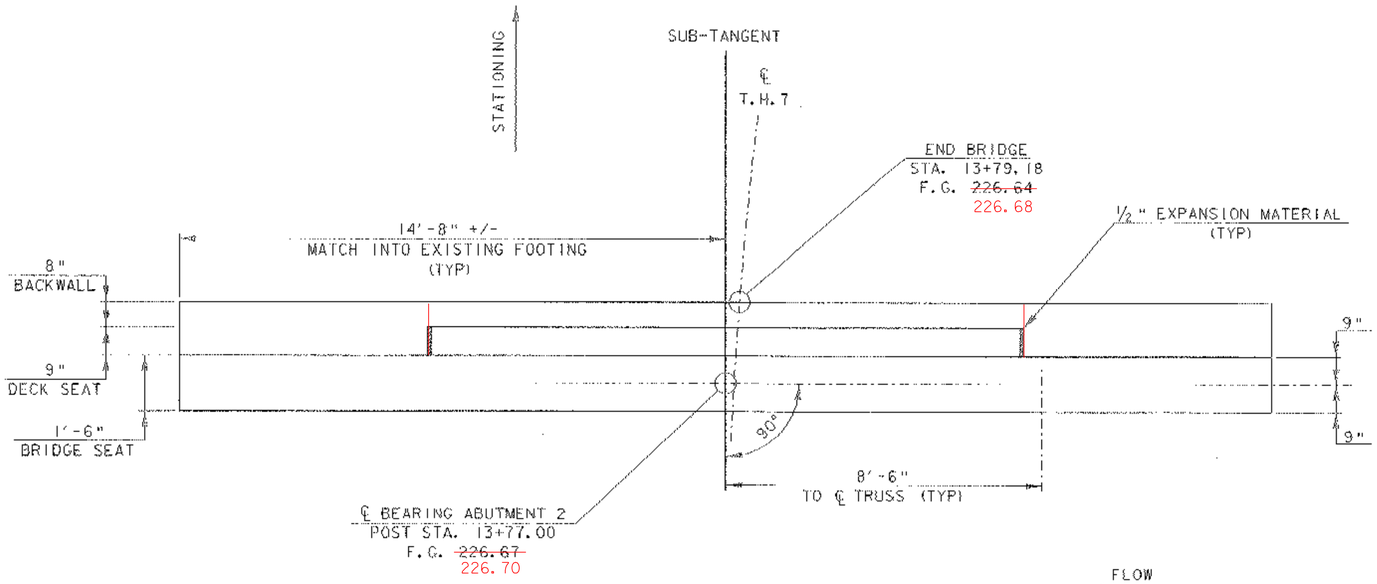
ABUTMENT 1 TYPICAL SECTION

SCALE 1" = 1'-0

NOTE:

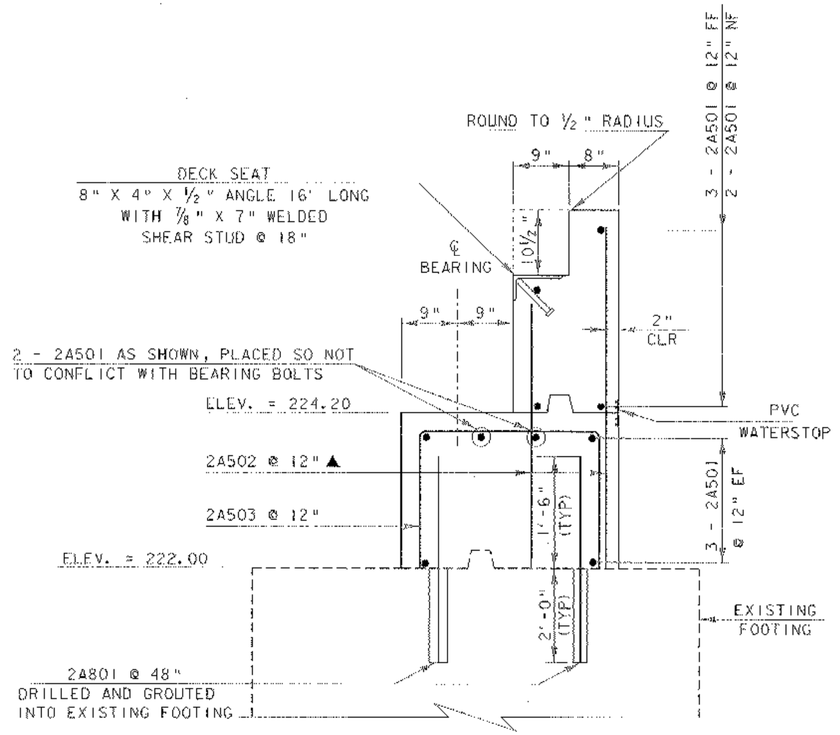
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

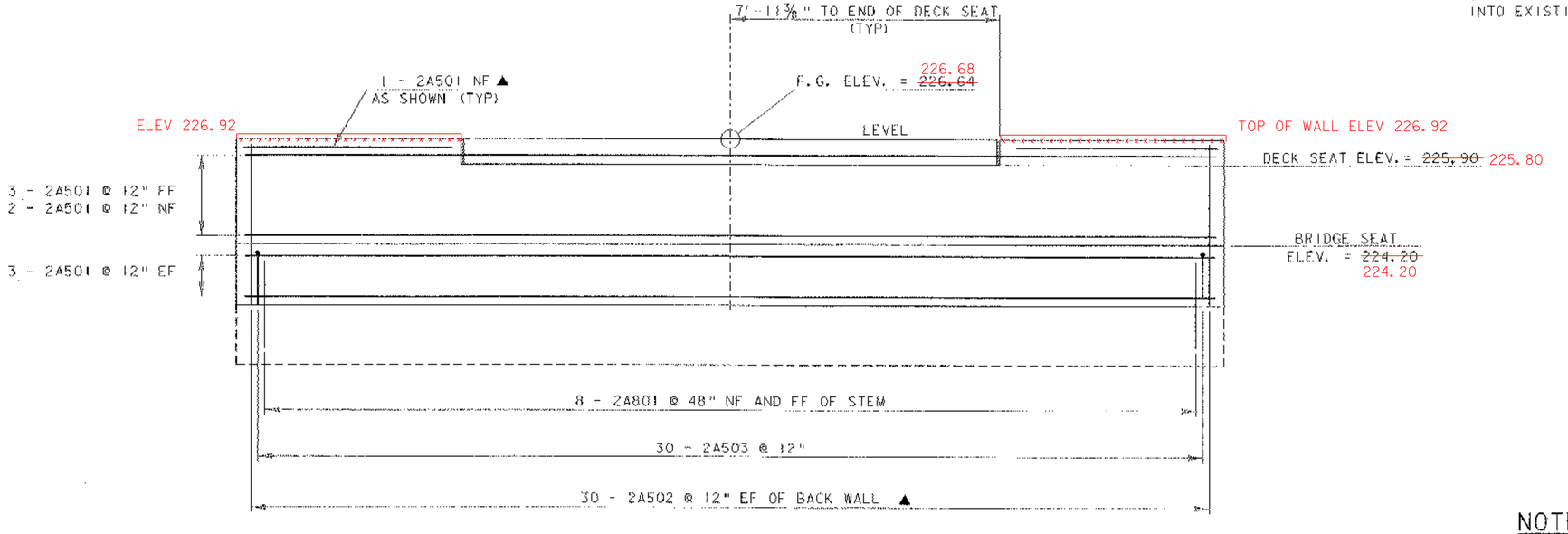
PROJECT: NEW HAVEN-WEYBRIDGE	PROJECT NO.: BHO-BTN 2005(1)
DESIGN FILE NAME: 89j081/structures/sj081sub.dgn	
IPARM FILE NAME: sj081ab1.i	PLOT DATE: 28-FEB-2007
DESIGNED BY: R. S. YOUNG	DRAWN BY: R.S. YOUNG
SQUAD LEADER: C. P. WILLIAMS	CHECKED BY: R.S. YOUNG
ABUTMENT 1 DETAILS	SHEET: 26 OF 53



ABUTMENT 2 PLAN

SCALE ½" = 1'-0





ABUTMENT 2 ELEVATION

SCALE ½" = 1'-0

ABUTMENT 2 TYPICAL SECTION

SCALE 1" = 1'-0

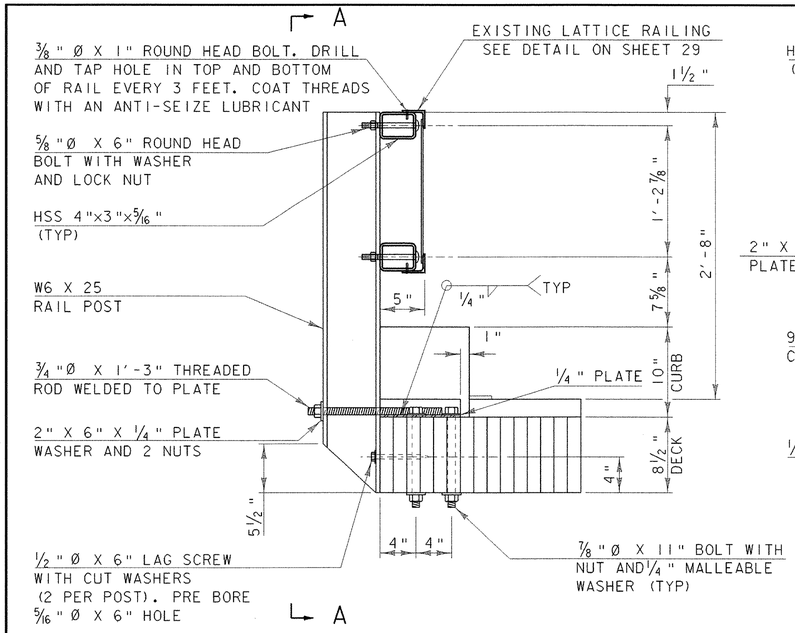
NOTES:

1. TRUSS SHALL BE PLACED ON NEW BEARINGS IN ITS FINAL POSITION BEFORE BACKWALL IS POURED.
2. REMOVE EXISTING ABUTMENT DOWN TO TOP OF THE EXISTING FOOTING AS SHOWN.

NOTE:

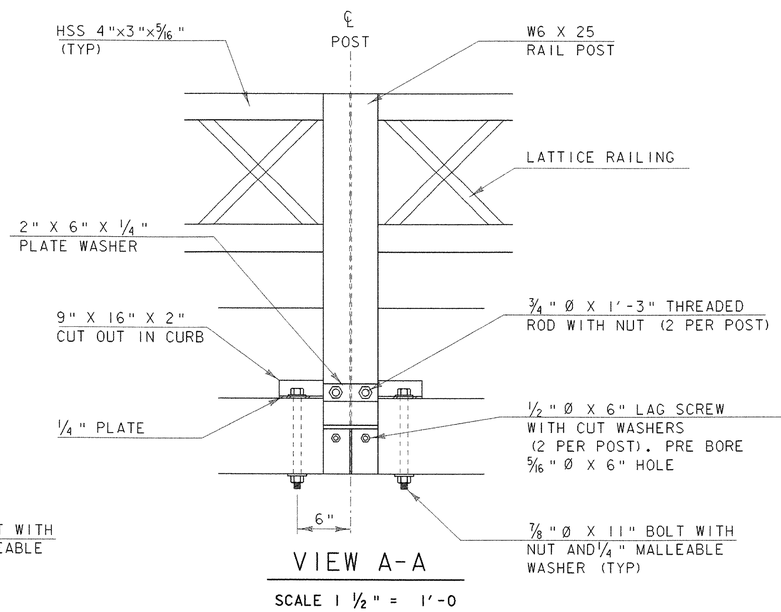
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT: NEW HAVEN-WEYBRIDGE	PROJECT NO.: BHO-BTN 2005 (1)
DESIGN FILE NAME: 89J081/structures/sj081sub.dgn	
IPARM FILE NAME: sj081ab2.i	PLOT DATE: 28-FEB-2007
DESIGNED BY: R. S. YOUNG	DRAWN BY: R.S. YOUNG
SQUAD LEADER: C. P. WILLIAMS	CHECKED BY: R.S. YOUNG
ABUTMENT 2 DETAILS	SHEET: 27 OF 53



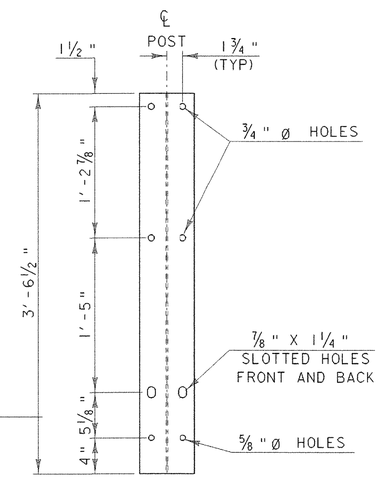
RAILING TYPICAL SECTION

SCALE 1 ½" = 1'-0



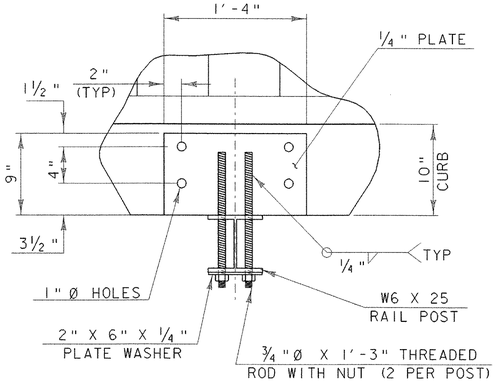
VIEW A-A

SCALE 1 ½" = 1'-0



FRONT VIEW OF POST

SCALE 1 ½" = 1'-0

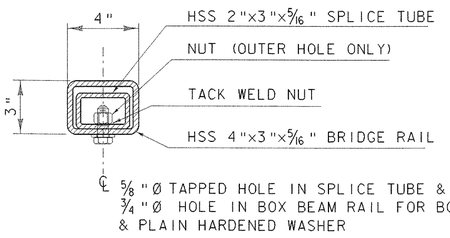


TOP VIEW OF POST CONNECTION

SCALE 1 ½" = 1'-0

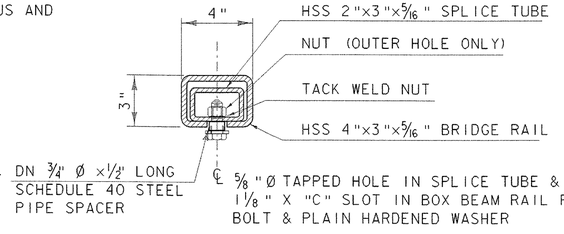
RAILING NOTES :

1. STEEL PLATES AND POSTS SHALL COMPLY WITH THE REQUIREMENTS OF ASTM A709, GRADE 50 STEEL. BOX BEAM RAIL SHALL BE ASTM A 500, GRADE B.
2. BOLTS AND LAG SCREWS SHALL COMPLY WITH THE REQUIREMENTS OF ASTM A307, EXCEPT FOR ROUND HEADED BOLTS IN RAILING SHALL BE 5/8 "Ø ASTM A325. THREADED RODS SHALL BE ASTM A572, GRADE 50.
3. ALL HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M232. BOX BEAM RAILING AND POSTS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M111.
4. HOLES IN RAILING MAY BE FIELD DRILLED.
5. NUTS FOR ASTM A307 AND A325 BOLTS SHALL COMPLY WITH ASTM A563.
6. BOX BEAM RAIL MAY ALTERNATIVELY BE ATTACHED USING 5/8 " Ø AASHTO M164 (TYPE 1) OR 3/4 " Ø ASTM F568, CLASS 4.6 ROUND HEAD BOLTS INSERTED THROUGH THE FACE OF THE RAIL. HOLES IN POSTS SHALL BE 1/16 " LARGER THAN THE BOLT SIZE.
7. ALL EXPOSED CUT OR SHEARED EDGES SHALL BE ROUNDED TO A 1/16 " RADIUS AND BE FREE OF BURRS.
8. RAIL POSTS SHALL BE NORMAL TO GRADE
9. BOX BEAM RAIL EXPANSION JOINTS SHALL BE PROVIDED OVER THE SUPERSTRUCTURE EXPANSION JOINT.
10. THE HOLLOW STRUCTURAL STEEL, POSTS, PLATES, RODS, LAG SCREWS, AND BOLTS, SHALL BE INCLUDED UNDER ITEM 525.31 "BRIDGE RAILING - GALVANIZED 2 RAIL BOX BEAM."
11. DRILLING AND TAPPING HOLES FOR LATTICE RAILING ATTACHMENT SHALL BE INCLUDED UNDER ITEM 525.31 "BRIDGE RAILING, GALVANIZED 2 RAIL BOX BEAM".
12. RAIL SPACING SHALL BE AS SHOWN ON SHEET 11



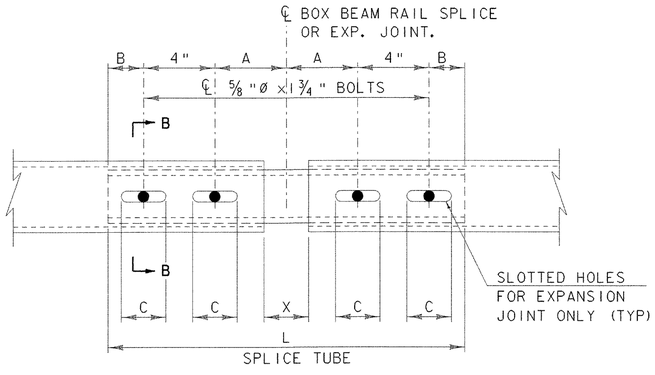
RAIL SECTION B-B (SPLICE)

SCALE 3" = 1'-0



RAIL SECTION B-B (EXPANSION JOINT)

SCALE 3" = 1'-0

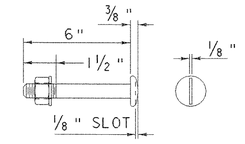


BOX BEAM RAIL SPLICE JOINT DETAIL

SCALE 3" = 1'-0

SPLICE & EXPANSION JOINT TABLE					
T	A	T	C	L	X
SPLICE	4"	2"	--	20"	3/4 "
≤	4"	2"	2 1/2 "	20"	2 1/2 "

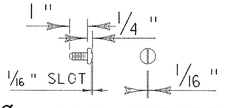
T = TOTAL REQUIRED MOVEMENT



5/8 "Ø M164 (TYPE 1) ROUND HEAD BOLT

SCALE 3" = 1'-0

[WITH WASHER & LOCK NUT]
[SEE NOTE NO. 6]
NOTE: 3/4 "Ø BOLT DETAIL SIMILAR TO 5/8 "Ø BOLT.



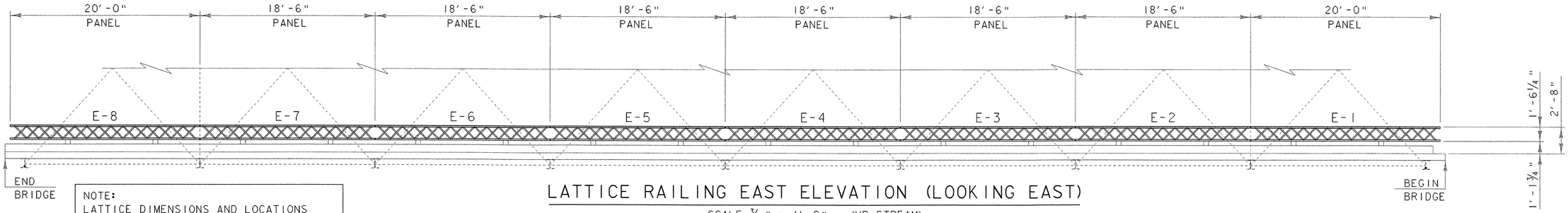
3/8 " Ø A307 (GRADE A) ROUND HEAD BOLT

SCALE 3" = 1'-0

SCALE 1 ½" = 1'-0"
1 9 6 3 0

SCALE 3" = 1'-0
9 6 3 0

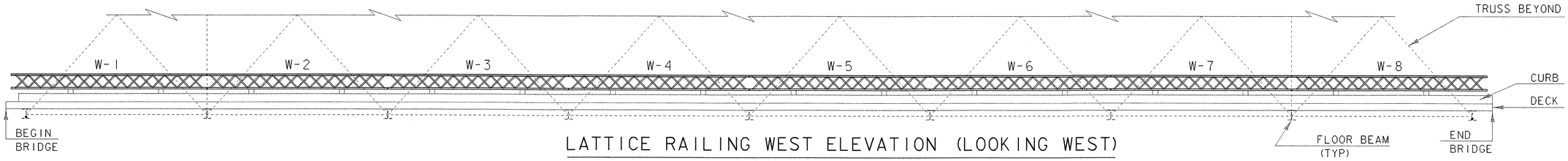
PROJECT: NEW HAVEN - WEYBRIDGE	PROJECT NO.: BHO-BTN 2005 (1)
DESIGN FILE NAME: 89j081/structures/sj081rail.dgn	
IPARM FILE NAME: sj081rail.i	PLOT DATE: 28-FEB-2007
DESIGNED BY: R.S. YOUNG	DRAWN BY: R.S. YOUNG
SQUAD LEADER: C.P. WILLIAMS	CHECKED BY: R.S. YOUNG
BRIDGE RAIL DETAILS	SHEET: 28 OF 53



NOTE:
LATTICE DIMENSIONS AND LOCATIONS ARE TYPICAL FOR BOTH SIDES OF BRIDGE

LATTICE RAILING EAST ELEVATION (LOOKING EAST)

SCALE 3/16" = 1'-0" (UP STREAM)



LATTICE RAILING WEST ELEVATION (LOOKING WEST)

SCALE 3/16" = 1'-0" (DOWN STREAM)

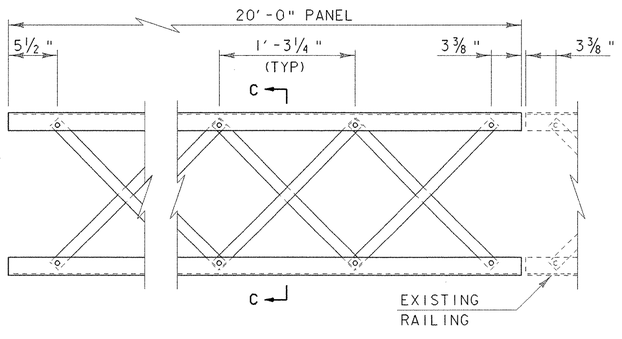
LATTICE RAILING NOTES:

1. THE EXISTING LATTICE RAILING SHALL BE REMOVED FROM THE TRUSS, AND EITHER REPLACED IN KIND OR STRAIGHTENED ACCORDING TO THE LATTICE RAILING SCHEDULE. THE NEW PANELS SHALL BE ASSEMBLED WITH 3/8" DIA. GALVANIZED ROUND HEAD BOLTS. STRAIGHTENING SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION 506.21.

2. FABRICATION OF REPLACEMENT PANELS, STRAIGHTENING OF EXISTING PANELS, AND ATTACHMENT TO THE 2 RAIL GALVANIZED BOX BEAM SHALL BE PAID FOR UNDER THE ITEM 506.60 "STRUCTURAL STEEL". SEE ATTACHMENT DETAILS ON SHEET 28.

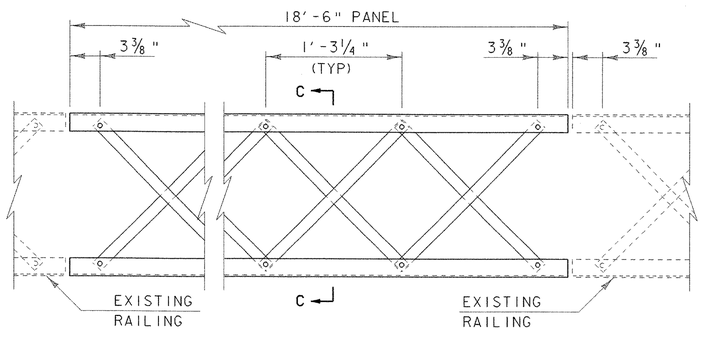
3. EXISTING POSTS SHALL NOT BE REPLACED.

LATTICE RAILING SCHEDULE	
PANEL #	ACTION REQUIRED
E-1	STRAIGHTEN/REUSE
E-2	STRAIGHTEN/REUSE
E-3	STRAIGHTEN/REUSE
E-4	STRAIGHTEN/REUSE
E-5	REPLACE IN KIND
E-6	REPLACE IN KIND
E-7	STRAIGHTEN/REUSE
E-8	REPLACE IN KIND
W-1	STRAIGHTEN/REUSE
W-2	STRAIGHTEN/REUSE
W-3	STRAIGHTEN/REUSE
W-4	STRAIGHTEN/REUSE
W-5	STRAIGHTEN/REUSE
W-6	STRAIGHTEN/REUSE
W-7	STRAIGHTEN/REUSE
W-8	REPLACE IN KIND



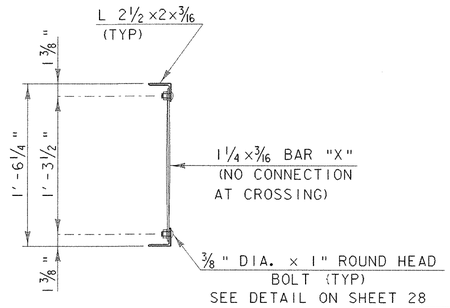
20'-0" LATTICE RAILING

SCALE 1½" = 1'-0



18'-6" LATTICE RAILING

SCALE 1½" = 1'-0



VIEW C-C (TYP)

SCALE 1½" = 1'-0

SCALE 3/16" = 1'-0"
1 0 2 4 6 8

SCALE 1½" = 1'-0"
1 9 6 3 0 1

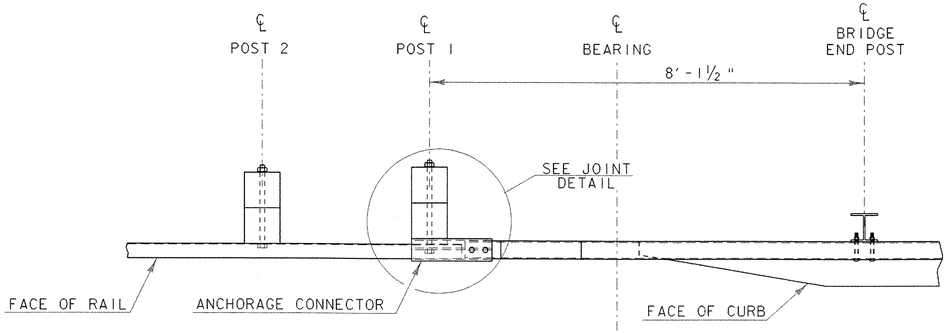
PROJECT:	PROJECT NO.:
NEW HAVEN - WEYBRIDGE	BHO-BTN 2005(1)
DESIGN FILE NAME: 89j081/structures/sj081rail.dgn	
IPARM FILE NAME: sj081raillat.i	PLOT DATE: 28-FEB-2007
DESIGNED BY: R.S. YOUNG	DRAWN BY: R.S. YOUNG
SQUAD LEADER: C.P. WILLIAMS	CHECKED BY: R.S. YOUNG
LATTICE RAIL DETAILS	SHEET: 29 OF 53

APPROACH RAIL NOTES:

1. SEE STANDARD DRAWING G-1 & G-1d FOR ADDITIONAL DETAILS OF STEEL BEAM GUARDRAIL.
2. POSTS AND OFFSET BLOCKS SHALL BE WOOD AND MEET THE REQUIREMENTS OF VAOT STANDARD SPECIFICATIONS FOR CONSTRUCTION 728.01.
3. POSTS SHALL BE TWO FEET LONGER THAN SPECIFIED IN STANDARDS G-1 & G-1d.
4. SPLICES SHALL LAP IN DIRECTION OF TRAFFIC FLOW.
5. SEE STANDARD SHEET G-1 FOR DELINEATOR DETAILS AND PLACEMENT.
6. ERECT DELINEATOR ON EVERY FIFTH POST OR APPROXIMATELY 30 FEET APART. PAYMENT SHALL BE INCIDENTAL TO OTHER ITEMS.
7. ANCHORAGE CONNECTOR AND ANCHORAGE PLATE SHALL BE ASTM A 36 STEEL GALVANIZED TO ASTM A 123 AFTER FABRICATION, AND PAID FOR UNDER ITEM 525.31 "BRIDGE RAILING - GALVANIZED 2 RAIL BOX BEAM".
8. ALLOWABLE DIMENSIONAL TOLERANCE FOR BENT SECTIONS IS +/- 1/16".

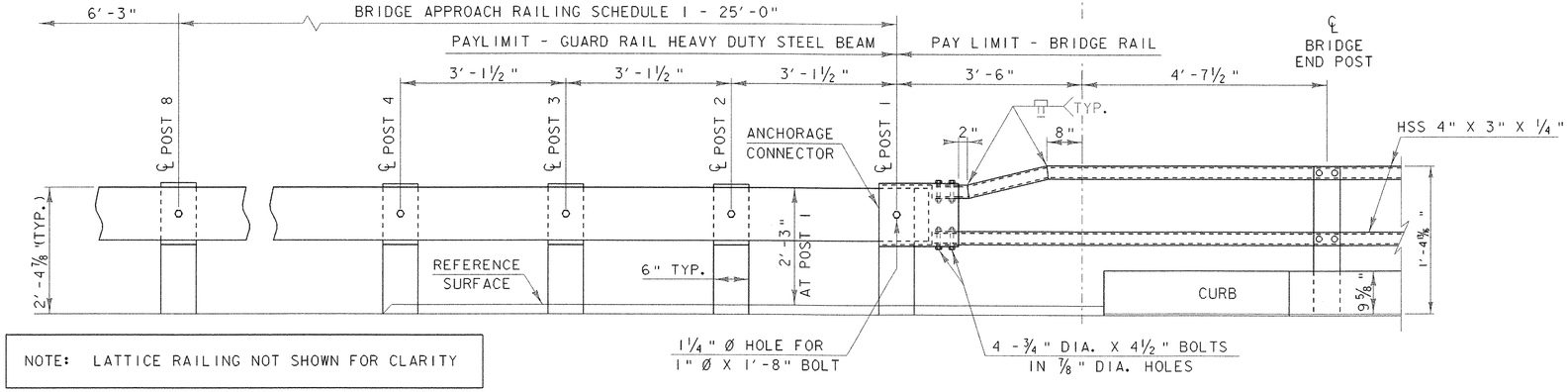
BRIDGE APPROACH RAILING

SCHEDULE 1		
POST NO.	SPACING	PAYMENT FACTOR
1	3'-1½"	1.4 X 12'-6"
2	3'-1½"	
3	3'-1½"	
4	3'-1½"	
5	4'-2"	1.2 X 12'-6"
6	4'-2"	
7	4'-2"	
8	6'-3" (TYP.)	1.0 (TYP.)
9		



BRIDGE APPROACH PLAN

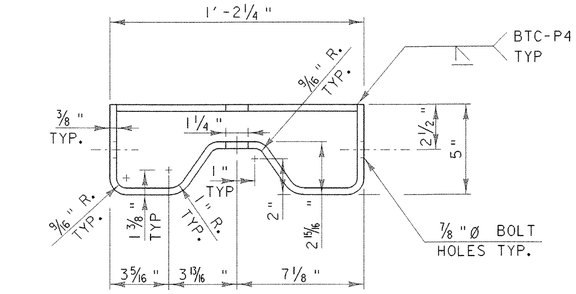
SCALE ¾" = 1'-0



NOTE: LATTICE RAILING NOT SHOWN FOR CLARITY

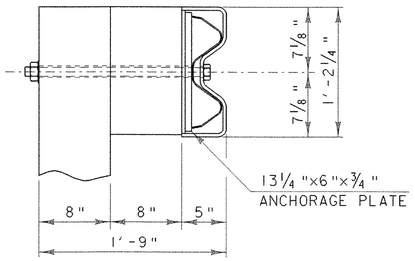
BRIDGE APPROACH ELEVATION

SCALE ¾" = 1'-0



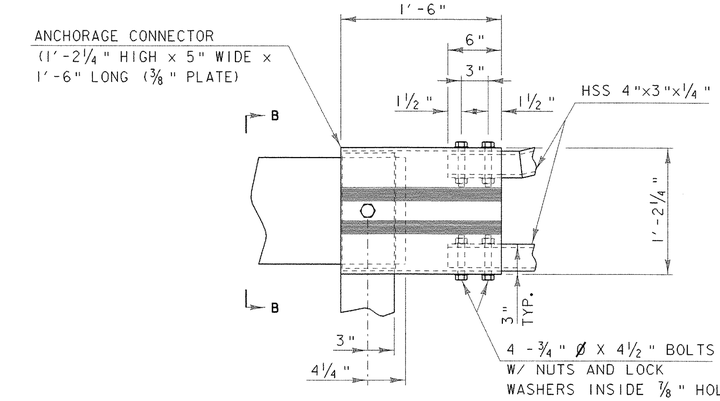
ANCHORAGE CONNECTOR DETAIL

SCALE 3" = 1'-0



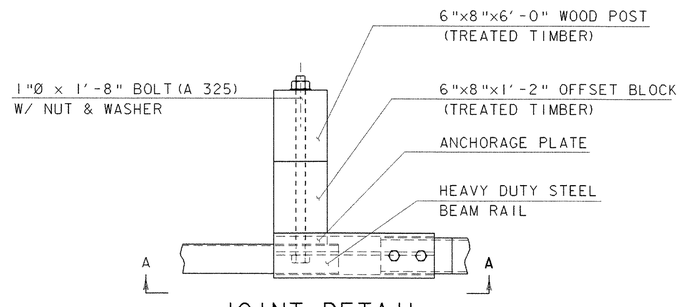
VIEW B - B

SCALE 1 ½" = 1'-0



VIEW A - A

SCALE 1 ½" = 1'-0



JOINT DETAIL

SCALE 1 ½" = 1'-0

SCALE ¾" = 1'-0

SCALE 1 ½" = 1'-0

SCALE 3" = 1'-0

PROJECT: NEW HAVEN-WEYBRIDGE	PROJECT NO.: BHO-BTN 2005 (1)
DESIGN FILE NAME: 89i081/structures/sj081rail.dgn	
IPARM FILE NAME: sj081apprail.i	PLOT DATE: 28-FEB-2007
DESIGNED BY: R. S. YOUNG	DRAWN BY: R.S. YOUNG
SQUAD LEADER: C. P. WILLIAMS	CHECKED BY: R.S. YOUNG
APPROACH RAIL DETAILS	SHEET: 30 OF 53

*SEE TOWN LINE SIGN POST DETAIL ON SHEET 22.

NEW HAVEN | WEYBRIDGE N

NEW HAVEN | WEYBRIDGE R

SLOW CHILDREN AT PLAY

SPEED LIMIT 35 N

SPEED LIMIT 35 R

R BRIDGE LOAD LIMIT 7000 POUNDS

OTTER CREEK FLOW

S

R&S

NO SIGN TO REMOVE AND SALVAGE DMY 5/1/07

REMOVE SIGNS
STA 10+60 LT
STA 11+34 RT
STA 12+30 RT
STA 13+75 LT
STA 18+19 RT
STA 13+03 RT
STA 12+98 RT
STA 16+90 RT

REMOVE AND SALVAGE SIGNS
~~STA 12+98 RT~~
~~STA 14+37 LT~~
STA 15+25 RT

MAGNETIC N

TO DAM
TO WEYBRIDGE TH 7/11
SHED
ASSUMED 3-RDD R.O.W.
GRAVEL PARKING AREA
BEGIN APPROACH STA 11+50.00
END BRIDGE STA 13+79.18 POST FG = 226.64
END PROJECT STA 13+80.00 POST
END APPROACH STA 14+50.00
18" ASH
3" ASH
10+00
11+00
12+00
13+00
14+00
15+00
16+00
6" CEDAR
24" MAPLE
30" ELM
12" ASH
GRAVEL PULL OFF
BEGIN BRIDGE STA 12+26.93 FG = ~~228.77~~
18" BASSWOOD
PATH
12" STUMP
WETLAND
BRUSH
6" BASSWOOD
12" PINE
6" PINE
12" PINE
6" PINE
6" MAPLE
18" ASH
6" BOX ELDER
TO WALTHAM TH 7/11
BEGIN PROJECT STA 12+25.00

DANGER DAM BUILT AHEAD
R&S
DANGER DAM BUILT AHEAD
SN

*350'+/- NORTH OF W5-3

ONE LANE BRIDGE N

20 M.P.H. N

NOTE:
W5-3 SHALL BE 300 FT FROM W1-6 AND W1-3R/W13-1 SHALL BE 300 FT FROM W5-3.

ONE LANE BRIDGE N

*320' NORTH OF W1-3R/W13-1

20 M.P.H. N

NOTE:
W1-3R/W13-1 SHALL BE 300 FT FROM CORNER AND W5-3 SHALL BE 300 FT FROM W1-3R/W13-1.

LEGAL LOAD LIMIT 7,000 POUNDS R

MAXIMUM BRIDGE CAPACITY 3 TONS R

SPEED LIMIT 40
R&S

N N N

R

LEGEND

ALL SIGNS AND POSTS WILL BE NEW UNLESS OTHERWISE NOTED:

R - REMOVE
R&S - REMOVE & SALVAGE
S - SALVAGE
RET - RETAIN

TRAFFIC SIGNS, TYPE A

220' ~~100'~~ SOUTHERLY OF STA 10+00 RT
STA 10+35 LT
STA ~~11+07~~ RT 11+00
STA 12+27 RT,LT
STA 13+03 RT
STA 13+78 RT,LT
30' NORTHERLY OF STA 16+00 RT
300' ~~140'~~ NORTHERLY OF STA 16+00 LT
650' ~~350'~~ NORTHERLY OF STA 16+00 LT
STA 12+98 RT (ON BRIDGE)

ERECT SALVAGED SIGNS
~~12+98 RT (ON BRIDGE)~~
~~14+37 LT~~
15+25 RT

TRAFFIC SIGN SHEET

SCALE 1" = 30'-0
30 0 30

DATUM
VERTICAL NGVD 1929
HORIZONTAL ASSUMED

PROJECT: NEW HAVEN-WEYBRIDGE
PROJECT NO.: BHO-BTN 2005(1)

DESIGN FILE NAME: /str4/89j081/sj081trf.dgn
IPARM FILE NAME: sj081trf.i
SURVEYED BY: R. MOREAU
SQUAD LEADER: C. P. WILLIAMS
TRAFFIC SIGN SHEET
PLOT DATE: 28-FEB-2007
SURVEY DATE: 7/90
DRAWN BY: P. G. JARVIS
SHEET: 31 OF 53

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) 1.75 lb/ft 1.88	2.0 lb/ft 2.16	2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) 3.0 lb/ft 1.3	4.0 lb/ft 1.7	4.0 MOD. lb/ft 1.7	TUBULAR STEEL Ø (in) FOUNDATION	3.0 lb/ft 7.6	3.5 lb/ft 9.0	4.0 lb/ft 10.8	5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
														OPTION ITEMS																								
	ONE LANE BRIDGE	1	36	36	9						1			X 14′		X			X															W5-3	39	
STA 10+40	SPEED LIMIT 35	1	24	30	5						1			X 12′		X			X															R2-1		E-142
STA ~~11+05~~ 11+00		1	30	30	6.25						2			X 16′			X		X															W1-3R		E-101
STA ~~11+05~~ 11+00	20 M.P.H.	1	18	18	2.25																													W13-1		E-155
STA 12+25		1	12	36	3						1		X 12′			X			X															OM-3R	39	
STA 12+25		1	12	36	3						1		X 10′			X			X															OM-3L	39	
STA 13+03	NEW HAVEN WEYBRIDGE	1	60	7.5	3.13						1			*8′		X		*NOTE: USED SQUARE STEEL POST BUT PAID AS FLANGED CHANNEL POST.																E-124		E-124
STA 13+80		1	12	36	3						1		X 12′			X			X															OM-3R	39	
STA 13+80		1	12	36	3						1		X 10′			X			X															OM-3L	39	
35 FT PAST STA 16+00		1	48	24	8						2			X 16′X2		X			X															W1-6		E-152
STA 13+10 (ON BRIDGE)	CAUTION DAM AHEAD	1	36	18	4.5						0																							ATTACHED TO BRIDGE		
	ONE LANE BRIDGE	1	36	36	9						1			X 14′		X			X															W5-3	39	
15+25	SPEED LIMIT 40	1					X																													
		1	30	30	6.25						2			X 16′			X		X															W1-3R		
	20 M.P.H.	1	18	18	2.25																													W13-1		E-155
												FT	FT ~~40~~ 44	FT ~~108~~ 112	FT	FT 100	FT 48		EA 13	LB	LB	LB		LB	LB	LB	LB								
TOTALS					SF ~~63.13~~ 67.63	SF	EA.	SF					FT ~~148~~ 156			FT 148				LB			EA.		LB			EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

PROJECT: NEW HAVEN-WEYBRIDGE
PROJECT NO.: BHO-BTN 2005(1)
DESIGN FILE NAME: /str4/89j081/sj081trf.dgn
PARM FILE NAME: sj081tss.i
SURVEYED BY: R. MOREAU
SQUAD LEADER: C. P. WILLIAMS
TRAFFIC SIGN SUMMARY SHEET
PLOT DATE: 28-FEB-2007
SURVEY DATE: 7/90
DRAWN BY: P. C. JARVIS
SHEET: 32 OF 53

LIMIT 35
CURVE
Δ =
D = 19°05'55"
R = 300.00'
T = 33.91'
L = 67.53'
E = 1.91
BANK = NORMAL
MATCH LINE LAYOUT SHEET 2
OMYA, INC.
DO NOT DISTURB ARCHAEOLOGICALLY SENSITIVE AREA
ASSUMED 3-ROD R.O.W.
POB Sta 10+00.00
GRAVEL PARKING AREA
LEDGE
WOODS
PC Sta 11+01.09
PT Sta 11+68.62
CONST (T)
BEGIN PROJECT STA 12+25.00
PI #2 Sta 12+04.32 BK= Sta 12+04.30 AHD
S59°48'52.17"E
POB Sta 20+00.00
TH 7/11 STA 12+25.00 = CHANNEL STA 20+50.00 Δ= 90°0'0"
MAGNETIC
N
TOWN LINE
OTTER CREEK FLOW
N38°00'00.00"E
TO WEYBRIDGE TH 7/11
10+00
11+00
12+00
13+00
14+00
N30°11'07.83"E
END BRIDGE STA 13+79.18 FG = 226.64 226.68
END PROJECT STA 13+80.00
TELEPHONE LINE TO REMAIN IN PLACE DURING CONSTRUCTION
BARRIER FENCE
WOODS
DO NOT DISTURB ARCHAEOLOGICALLY SENSITIVE AREA
PI #1 Sta 11+35.00 BK = Sta 11+34.71 AHD
LIMITS OF PAVEMENT
PC Sta 11+91.00
BASSWOOD
CH (P)
℄ OF PATH
SR (T)
CONST (T)
BEGIN BRIDGE STA 12+26.93 FG = 228.77 228.84
POE Sta 21+00.00
TEMPORARY FLOATING DOCK FOR PORTAGE AROUND DAM
PT Sta 12+17.61
12" STUMP
LEGAL LOAD LIMIT 7,000 POUNDS
BEGIN APPROACH STA 11+50.00
3-6" BUTTERNUTS
WETLAND
2-48" WILLOWS
BENCHMARK #1 CHISELED SQUARE IN LEDGE EL. 238.045
CURVE 2 DATA
Δ = 05°04'56" RT
D = 19°05'55"
R = 300.00'
T = 13.31'
L = 26.61'
E = 0.30
BANK = NORMAL
END R.O.W. PROJECT
BHO-BTN 2005 (1) STA. 12+49 58.00 RT.
BEGIN R.O.W. PROJECT
BHO-BTN 2005 (1) STA. 11+50 24.75' RT.
BENCHMARK #2 CHISELED SQUARE NE CORNER BRIDGE CURTAIN WALL EL 226.05
PC Sta 13+69.50
NEW HAVEN
WEYBRIDGE
EXISTING BRIDGE DATA
BUILT IN 1908
152' STEEL THRU-TRUSS
TIMBER PLANK DECK
CONCRETE ABUTMENTS
15.1' ROADWAY WIDTH
15.1' VERTICAL CLEARANCE
OMYA, INC.
PI #3 Sta 14+43.45 BK= Sta 14+29.10 AHD
END APPROACH STA 14+50.00
6" CEDAR
24" MAPLE
TRAV. PT #2
GRAVEL FUEL OFF
#32
30" ELM (REMOVE)
12" ASH
12" CGMP
OMYA, INC.
LIMITS OF PAVEMENT
WOODS
RED LINE INDICATES TOWN OF NEW HAVEN INSTALLED GUARDRAIL THE "14+13" ANCHOR WAS INSTALLED AT 15+45
PT Sta 15+03.05
S88°36'00.00"E TO WALTHAM TH 7/11
6" BASSWOOD
BRUSH
12" PINE
CURVE 3 DATA
Δ = 61°12'52" RT
D = 45°50'12"
R = 125.00'
T = 73.95'
L = 133.55'
E = 20.23
BANK = NORMAL
TRAV. PT #3
16+00
POE Sta 16+00.00
MATCH LINE LAYOUT SHEET 2
BRIDGE RAIL - 2 RAIL BOX BEAM
STA 12+26 - 13+80 LT & RT
HEAVY DUTY STEEL BEAM GUARDRAIL
STA 11+91 - 12+26 LT
STA 11+88 - 12+26 RT
STA 13+80 - 14+14 LT
STA 13+80 - 14+20 RT 15+45
ANCHORS FOR STEEL BEAM GUARDRAIL
STA 11+98 LT & RT
STA 14+07 LT
STA 14+13 RT 15+45 RT
CONSTRUCT DRIVE WITH 8.5' PAVED APRON
1½" TYPE III PAVEMENT
STA 11+87 LT
REMOVAL OF EXISTING GUARDRAIL
STA 12+06 - 12+30 LT
STA 11+90 - 12+29 RT
CONSTRUCT TEMPORARY FLOATING DOCK
STA 12+50 RT
INSTALL BARRIER FENCE
STA 9+00 - 9+85 RT
STA 9+60 - 10+35 LT
STA 10+00 - 11+15 RT
LAYOUT SHEET 2
SCALE 1" = 20'-0
20 0 20
DATUM
VERTICAL NGVD 1929
HORIZONTAL ASSUMED
PROJECT: NEW HAVEN-WEYBRIDGE
PROJECT NO.: BHO-BTN 2005(1)
DESIGN FILE NAME: /usr/str4/89j081/sj08lbdr.dgn
IPARM FILE NAME: sj08lla2.i
PLOT DATE: 28-FEB-2007
SURVEYED BY: R. MOREAU
SURVEY DATE: 7/90
SQUAD LEADER: C.P. WILLIAMS
DRAWN BY: W.R. SYMONDS
R. O. W. SHEET 7 OF 7 SHEETS
SHEET 33 OF 53

Metric

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

TABLE OF PROJECT PROPERTY ACQUISITION

ALL STATIONS ARE FROM THE REVISED ℄

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
1	OMYA, INC.	7	11+50 RT.	12+49 RT.			CONST. (T)	WDOE	12-01-01	WEYBRIDGE	39	405-406	719 SF±
			11+50 LT	12+01 LT.			CONST. (T)						602 SF±
			11+95 LT.	12+17 LT.			CH. (P)						113 SF±
			12+03 RT.	12+45 RT.			SLOPE (T)						505 SF±
			12+08 RT.	12+41 RT.			CH. (P)						141 SF±
			12+50 RT.				INSTALL (T)						OPTIONAL FLOATING CANOE LANDING

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
		ELECTRONIC REPRODUCIBLES TO STRUCTURES	04-23-03		

ACCT.rdrown
M:\Projects\89J08I\RightOfWay\rJ08id.dgn
DATE PLOTTED 28-FEB-2007

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

PRESENT R.O.W.
TAKING WITHOUT ACCESS
TAKING WITHOUT ACCESS ALONG PROPERTY LINE
TAKING WITH ACCESS
PERMANENT EASEMENT (P)
TEMPORARY EASEMENT (T)

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

APPROVED: ROGER P. DUMAS DATE: 3-31-00
AGENT D. PLANS & TITLES

R. O. W. PLANS
NEW HAVEN-WEYBRIDGE
BHO-BTN. 2005(1)
SHEET 34 OF 53

STATE OF VERMONT
AGENCY OF TRANSPORTATION

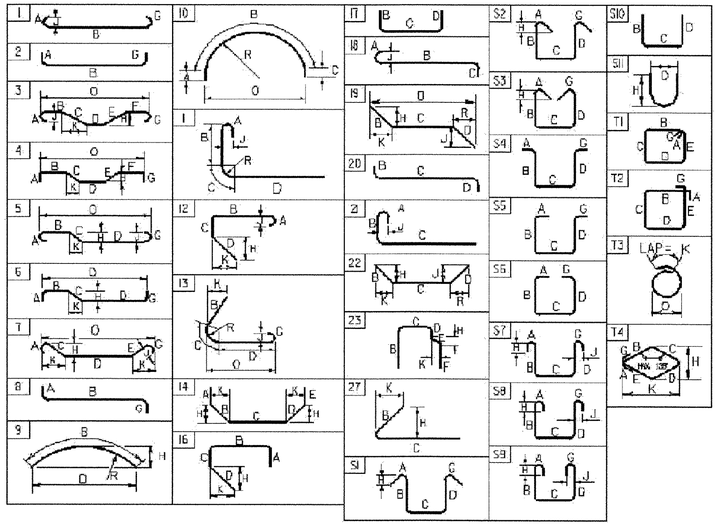
REINFORCING STEEL SCHEDULE

	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	ABUTMENT #1																
△	21	5	30'- 6"	1A501	STR												
	32	5	4'- 3"	1A502	STR												
△	20	8	3'- 6"	1A801	STR												
	32	5	6'- 10"	1A503	17		- -	2'- 10"	4'- 0"								
	32	5	8'- 0"	1A504	17		3'- 7"	0'- 10"	3'- 7"								
	ABUTMENT #2																
△	15	5	28'- 10"	2A501	STR												
▲	60	5	4'- 4"	2A502	STR												
△	18	8	3'- 6"	2A801	STR												
	30	5	6'- 4"	2A503	17		1'- 11"	2'- 6"	1'- 11"								

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O

~ NOTES ~

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-SI). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
5. "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
8. ▲ DENOTES BARS TO BE CUT IN FIELD.
9. + DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
10. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
11. "E" IN PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



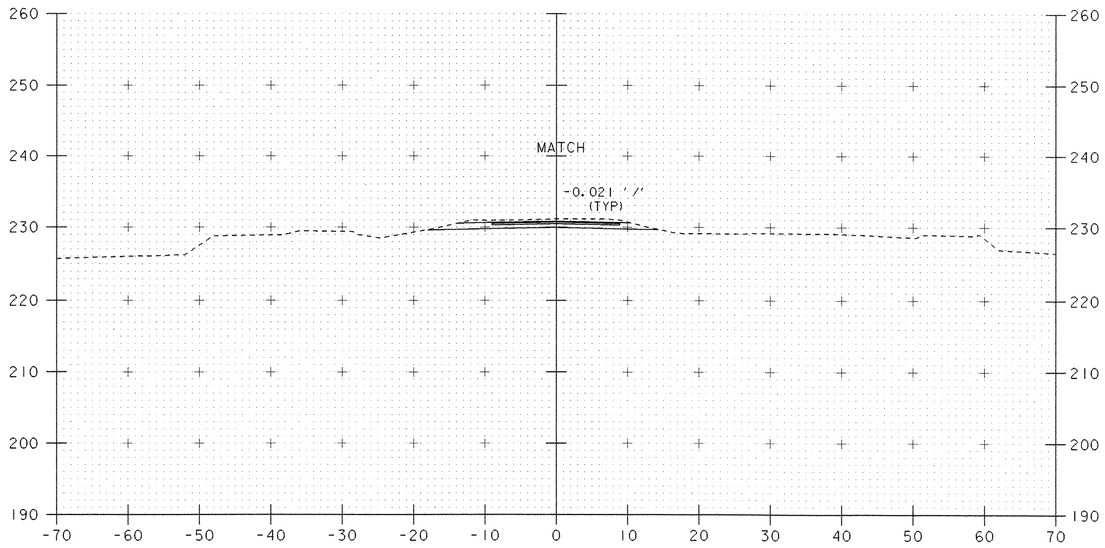
ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION		
		DIAMETER INCHES	AREA INCHES ^{2}	PERIMETER INCHES
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.044	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.142
#9	3.400	1.128	1.00	3.544
#10	4.303	1.270	1.27	3.990
#11	5.313	1.410	1.56	4.430
#14	7.65	1.693	2.25	5.32
#18	13.60	2.257	4.00	7.09

PROJECT NAME: NEW HAVEN - WEYBRIDGE
PROJECT NUMBER: BHO - BTN 2005 (1)

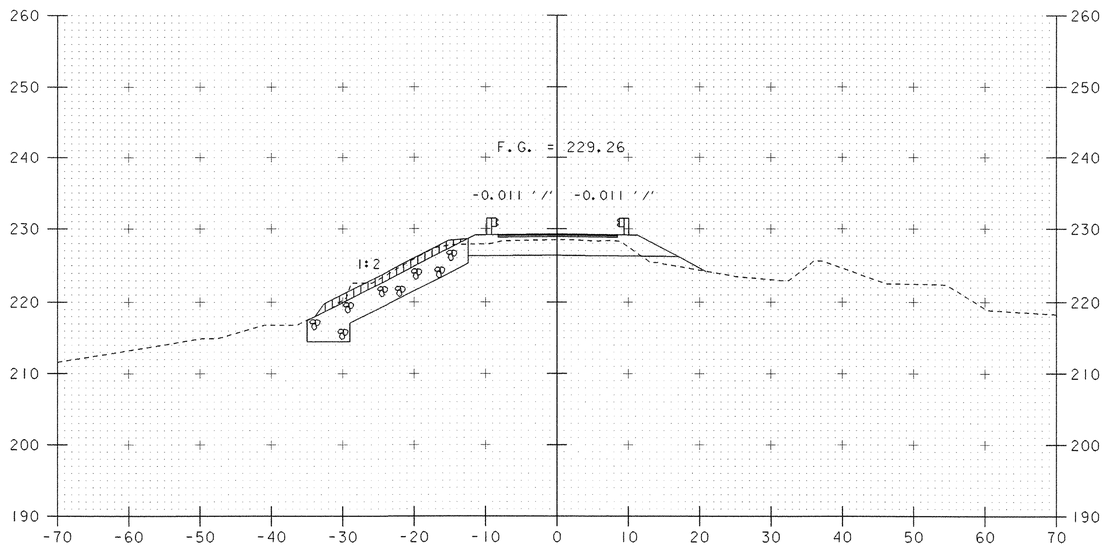
FILE NAME: sj081reinf.xls
PROJECT LEADER: C. P. WILLIAMS
DESIGNED BY: R. S. YOUNG
REINFORCING STEEL SCHEDULE SHEET #1

PLOT DATE: 3/17/2003
DRAWN BY: R. S. YOUNG
CHECKED BY: J. L. SCHULTZ
SHEET 35 OF 53

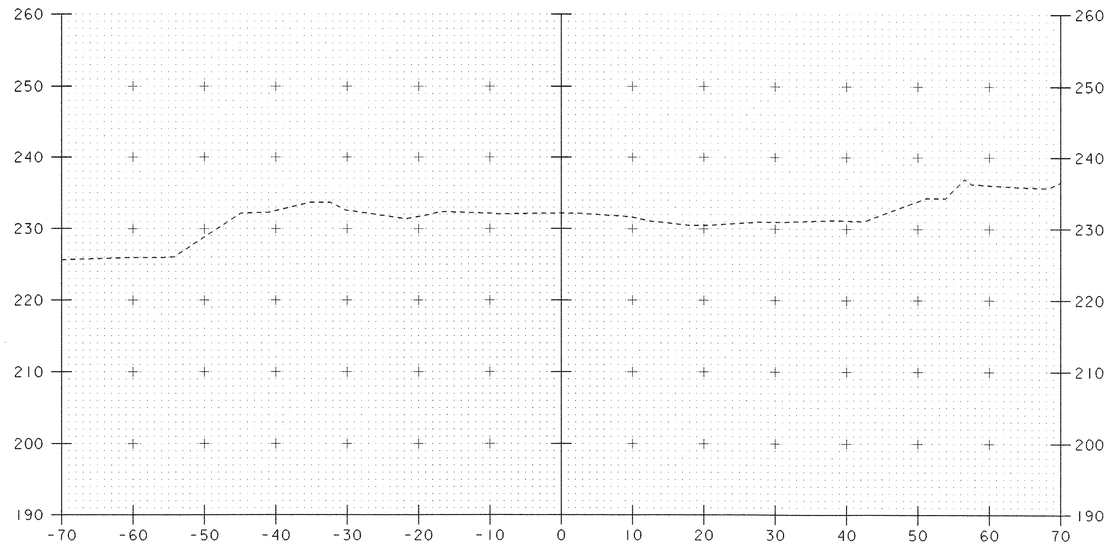


11+50

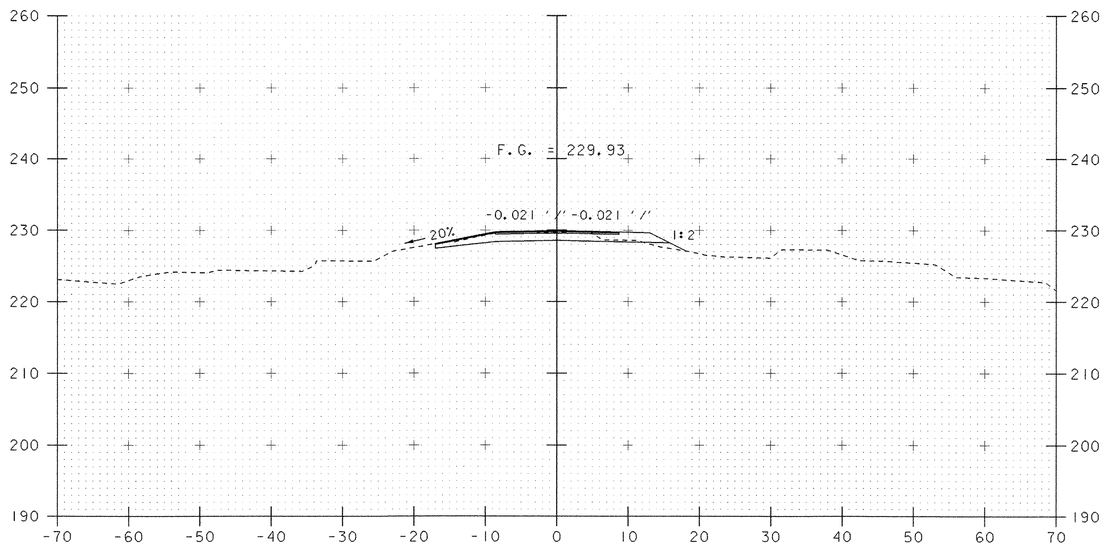
BEGIN APPROACH
STA 11+50.00



12+00



11+25

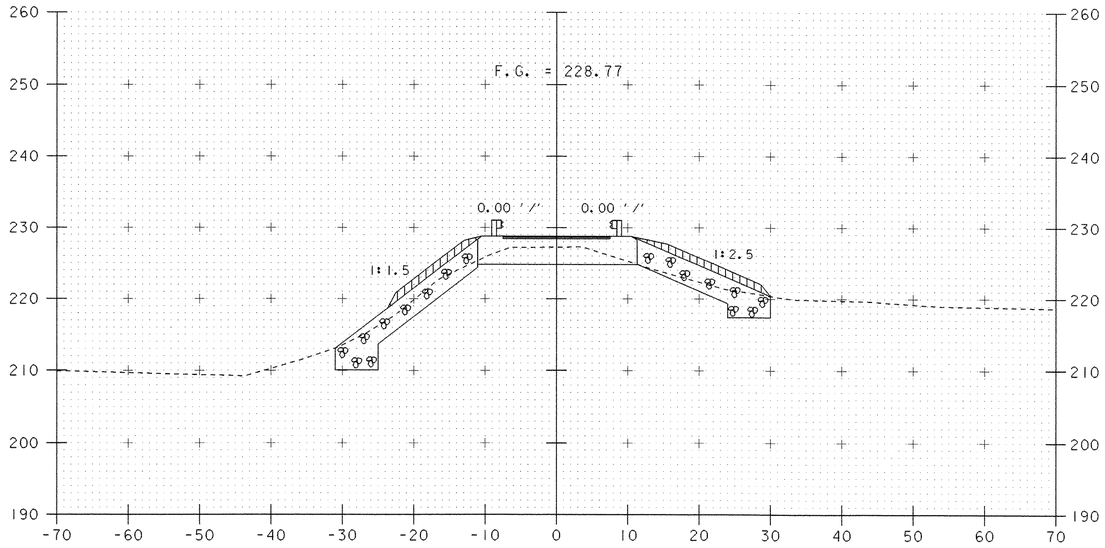


11+75

DATUM
VERTICAL NGVD
HORIZONTAL ASSUMED

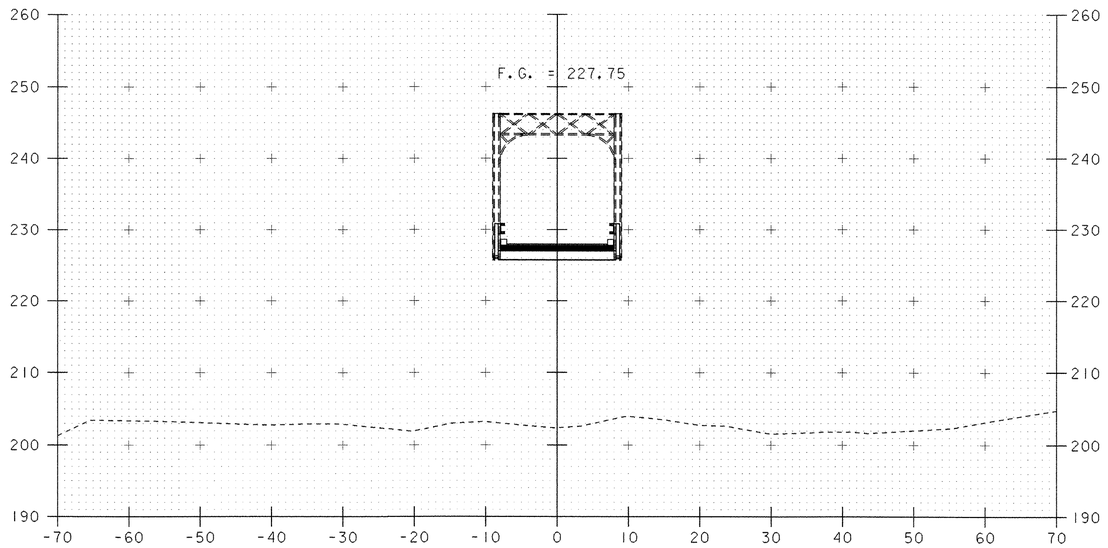
SCALE 1" = 10'-0
10 0 10

PROJECT: NEW HAVEN - WEYBRIDGE
PROJECT NO.: BHO-BTN 2005 (1)
DESIGN FILE NAME: /str4/89j081/sj081xs1.dgn
IPARM FILE NAME: sj081m11.i
PLOT DATE: 28-FEB-2007
SURVEYED BY: R. MOREAU
SURVEY DATE: 7/90
SQUAD LEADER: C.P. WILLIAMS
DRAWN BY: P.G. JARVIS
MAINLINE SECTIONS STA. 11+25 - STA. 12+00
SHEET: 36 OF 53

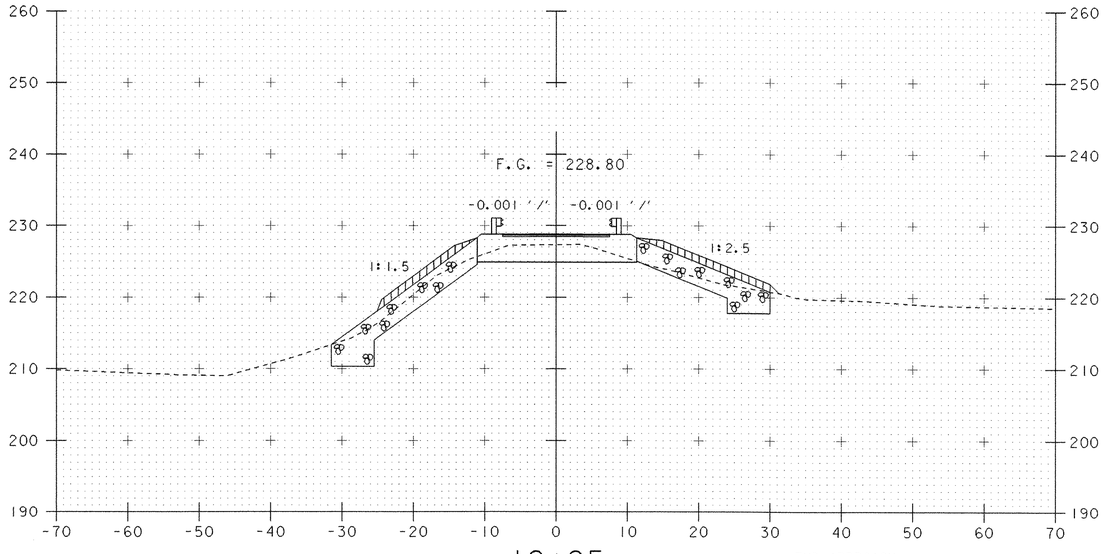


12+26.75

BEGIN BRIDGE
STA 12+26.75

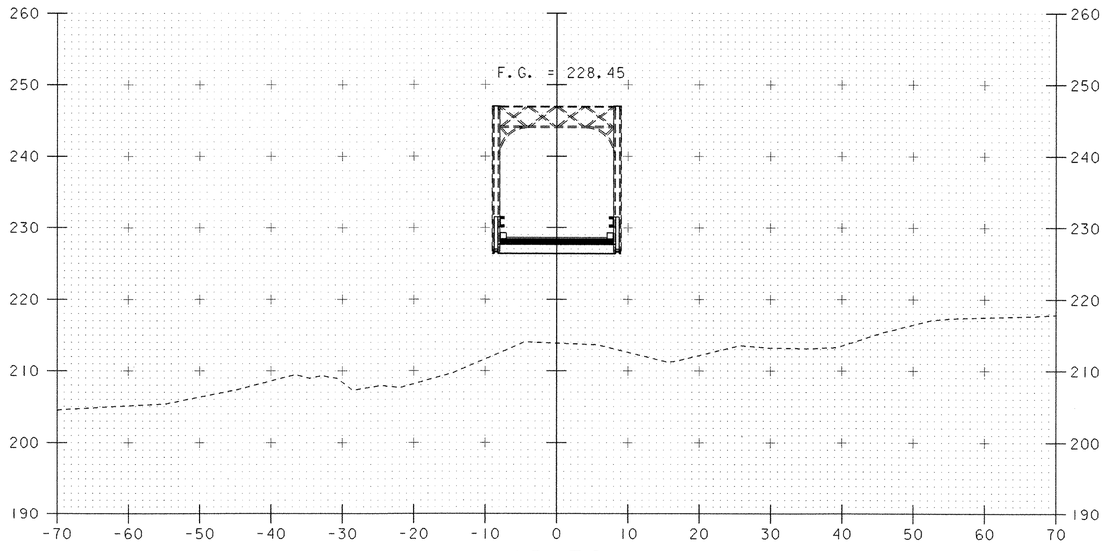


13+00



12+25

END APPROACH
BEGIN PROJECT
STA 12+25.00



12+50

DATUM

VERTICAL NGVD

HORIZONTAL ASSUMED

SCALE 1" = 10'-0

10 0 10

PROJECT: NEW HAVEN - WEYBRIDGE

PROJECT NO.: BHO-BTN 2005 (1)

DESIGN FILE NAME: /str4/89j081/sj081xsl.dgn

IPARM FILE NAME: sj081m12.i

SURVEYED BY: R. MOREAU

SQUAD LEADER: C.P. WILLIAMS

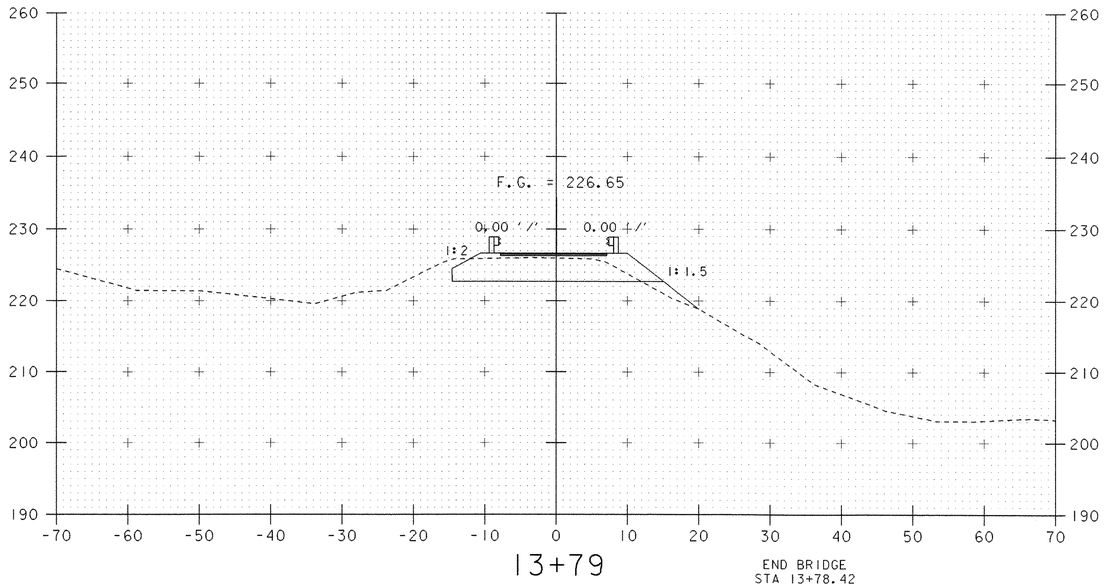
MAINLINE SECTIONS STA. 12+25 - STA. 13+00

PLOT DATE: 28-FEB-2007

SURVEY DATE: 7/90

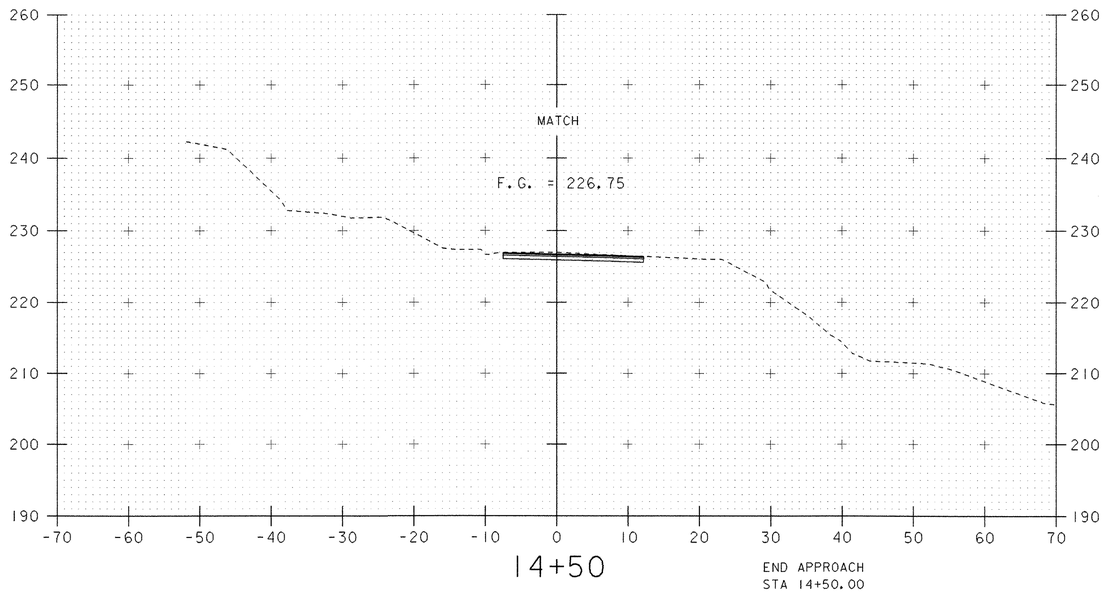
DRAWN BY: P.G. JARVIS

SHEET: 37 OF 53



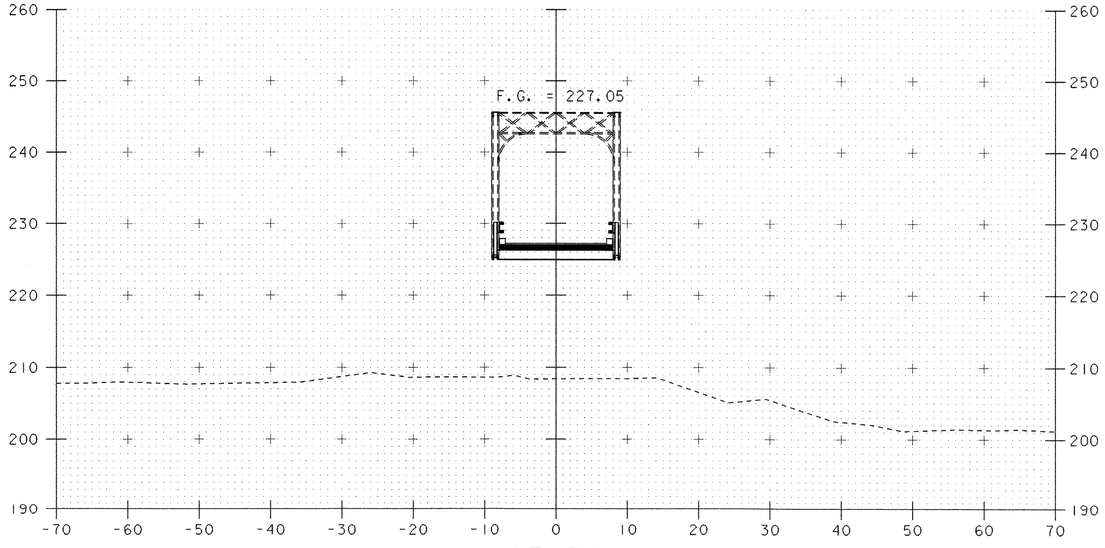
13+79

END BRIDGE
STA 13+78.42

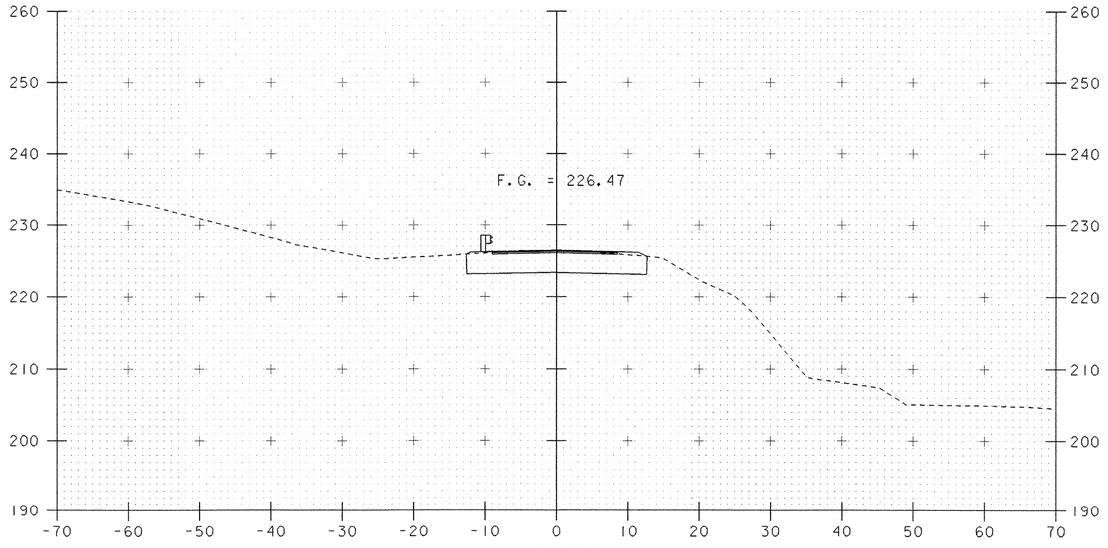


14+50

END APPROACH
STA 14+50.00



13+50



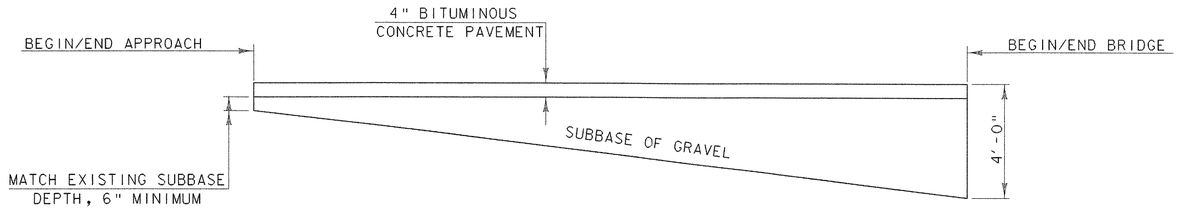
END PROJECT
BEGIN APPROACH
STA 13+80.00

14+00

DATUM
VERTICAL NGVD
HORIZONTAL ASSUMED

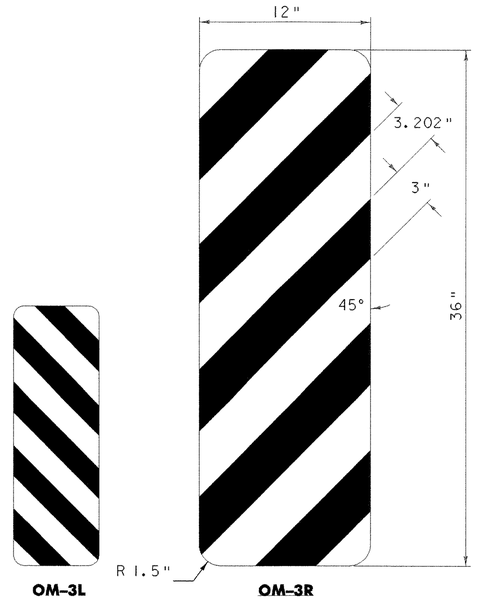
SCALE 1" = 10'-0
10 0 10

PROJECT: NEW HAVEN - WEYBRIDGE	PROJECT NO.: BHO-BTN 2005 (1)
DESIGN FILE NAME: /str4/89j081/sj081xs1.dgn	
IPARM FILE NAME: sj081m13.i	PLOT DATE: 28-FEB-2007
SURVEYED BY: R. MOREAU	SURVEY DATE: 7/90
SQUAD LEADER: C.P. WILLIAMS	DRAWN BY: P.G. JARVIS
MAINLINE SECTIONS STA. 13+50 - STA. 14+50	SHEET: 38 OF 53



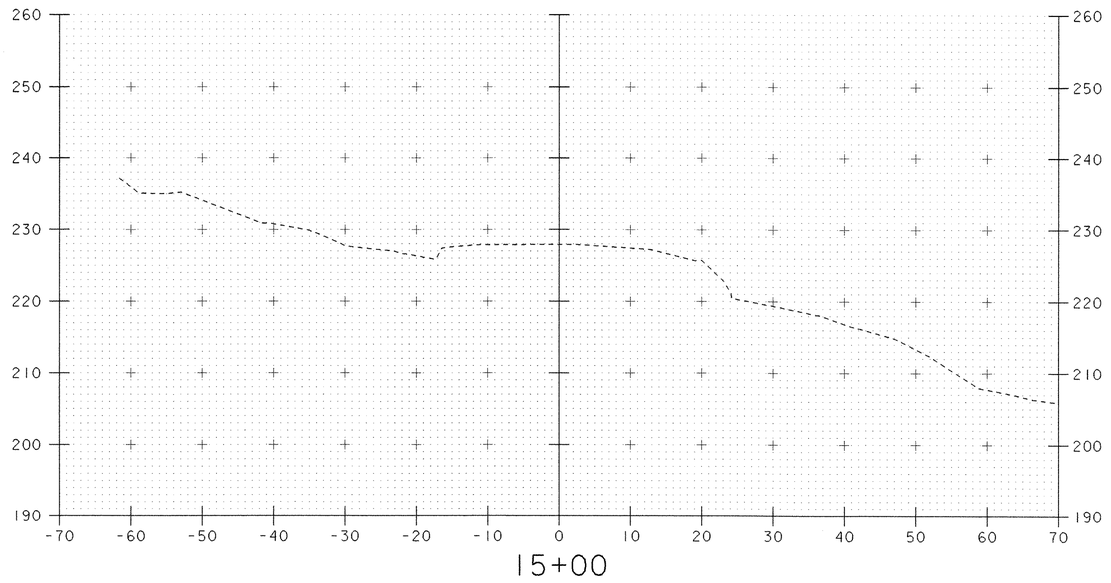
TAPER SUBBASE DETAIL

NTS

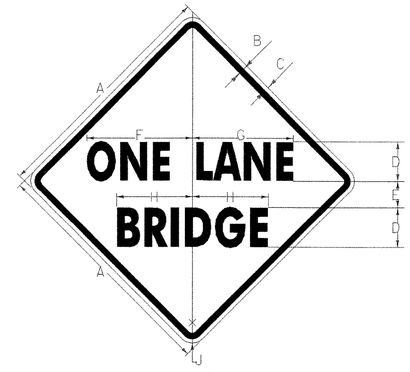


OM-3L **OM-3R**

COLORS
STRIPES-BLACK (NON - REFL)
BACKROUND - YELLOW (RETROREFLECTIVE)



15+00



W5-3

SIGN	DIMENSIONS(INCHES)								
	A	B	C	D	E	F	G	H	J
MIN.	30	1/2	3/4	5C	3 1/4	13 5/16	12 11/16	9 1/8	1 7/8
STD.	36	5/8	7/8	6C	4	16	15 1/4	11 1/2	2 1/4
SPECIAL	48	3/4	1 1/4	8C	5	21 1/4	20 1/4	15 3/8	3

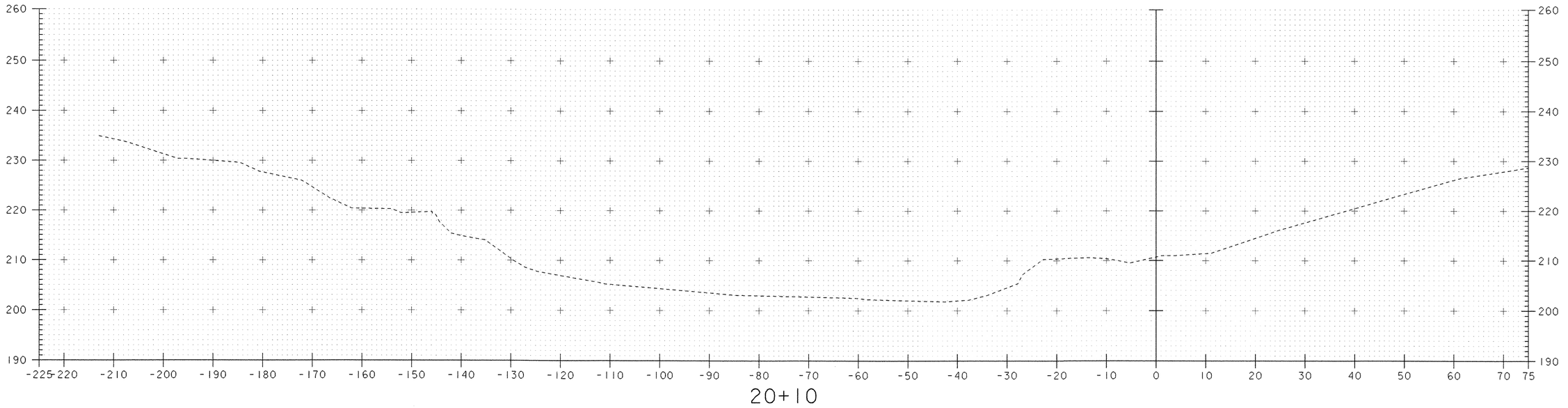
COLORS
LEGEND- BLACK (NON - REFL)
BACKROUND - YELLOW (RETROREFLECTIVE)

DATUM
VERTICAL NGVD
HORIZONTAL ASSUMED

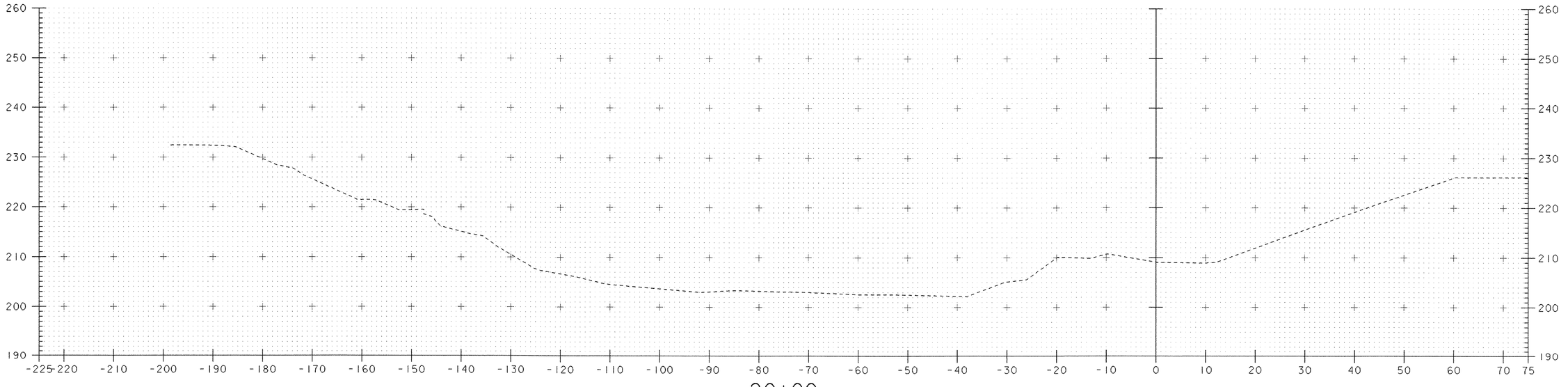
SCALE 1" = 10'-0
10 0 10

PROJECT:	PROJECT NO.:
NEW HAVEN - WEYBRIDGE	BHO-BTN 2005 (1)

DESIGN FILE NAME: /str4/89j081/sj081xs1.dgn
IPARM FILE NAME: sj081m14.i
SURVEYED BY: R. MOREAU
SQUAD LEADER: C.P. WILLIAMS
MAINLINE SECTION STA. 15+00
PLOT DATE: 28-FEB-2007
SURVEY DATE: 7/90
DRAWN BY: P.G. JARVIS
SHEET: 39 OF 53



20+10

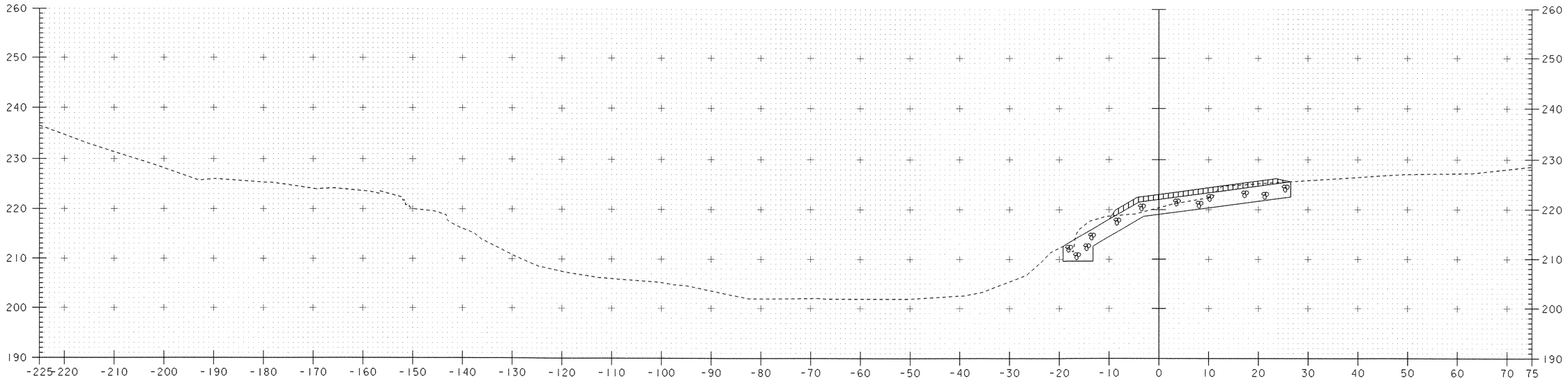


20+00

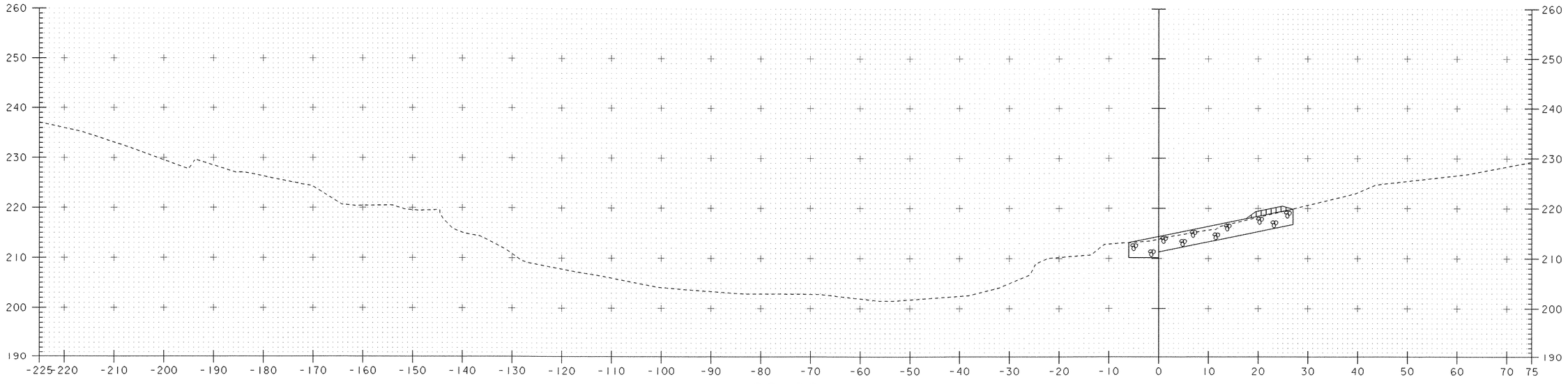
DATUM
VERTICAL NGVD
HORIZONTAL ASSUMED

SCALE 1" = 10'-0
10 0 10

PROJECT: NEW HAVEN - WEYBRIDGE	PROJECT NO.: BHO-BTN 2005 (1)
DESIGN FILE NAME: /str4/89j081/sj081xs1.dgn	
IPARM FILE NAME: sj081c11.i	PLOT DATE: 28-FEB-2007
SURVEYED BY: R. MOREAU	SURVEY DATE: 7/90
SQUAD LEADER: C.P. WILLIAMS	DRAWN BY: P.G. JARVIS
CHANNEL SECTIONS STA. 20+00 - STA. 20+10	SHEET: 40 OF 53



20+30



20+20

STA 20+15
(ABUTMENT No. 1)

BEGIN STONE FILL TYPE III
BEGIN GEOTEXTILE UNDER STONE FILL
BEGIN GRUBBING MATERIAL
BEGIN UNCLASSIFIED CHANNEL EXCAVATION

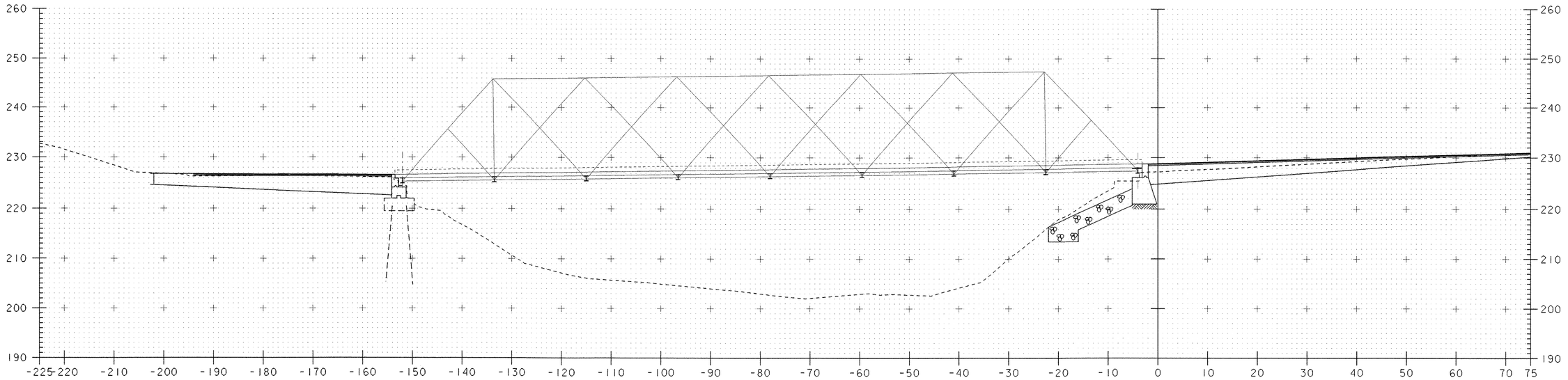
SCALE 1" = 10'-0

10 0 10

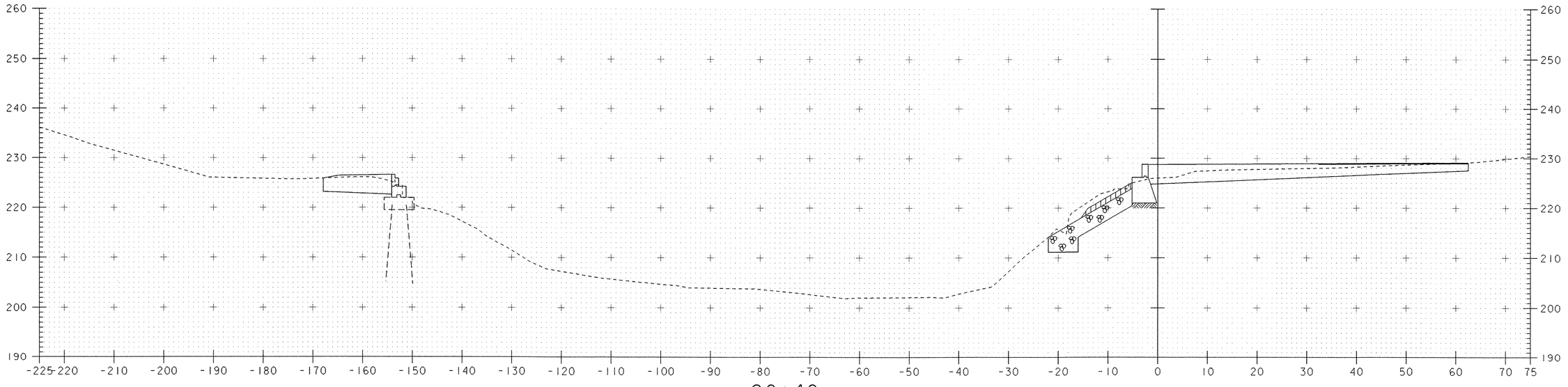
DATUM

VERTICAL NGVD
HORIZONTAL ASSUMED

PROJECT: NEW HAVEN - WEYBRIDGE	PROJECT NO.: BHO-BTN 2005 (1)
DESIGN FILE NAME: /str4/89j081/sj081xs1.dgn	
IPARM FILE NAME: sj081c12.i	PLOT DATE: 28-FEB-2007
SURVEYED BY: R. MOREAU	SURVEY DATE: 7/90
SQUAD LEADER: C.P. WILLIAMS	DRAWN BY: P.G. JARVIS
CHANNEL SECTIONS STA. 20+20 - STA. 20+30	SHEET: 41 OF 53



20+50

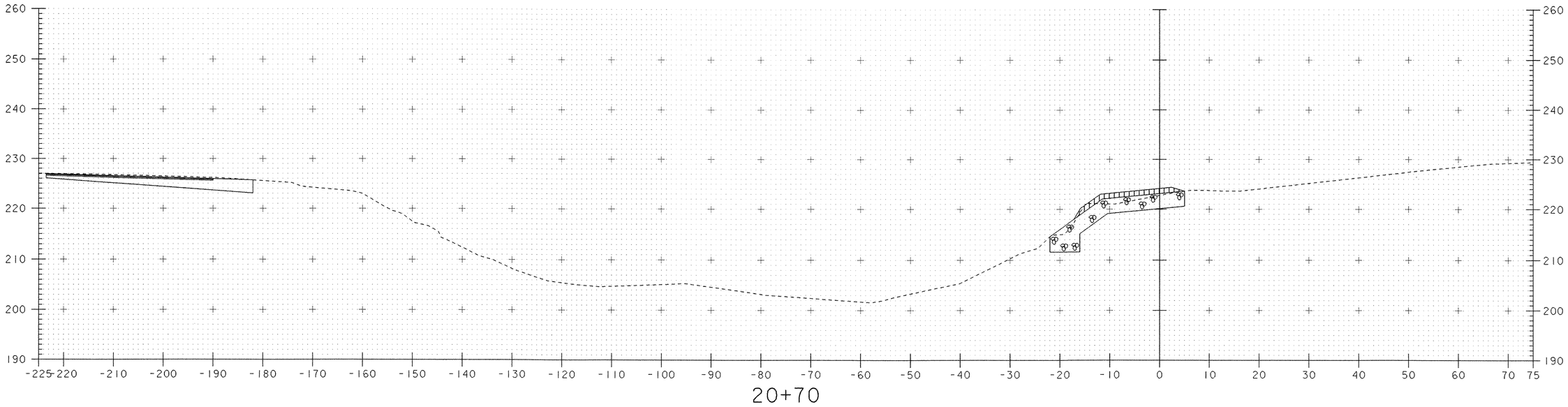


20+40

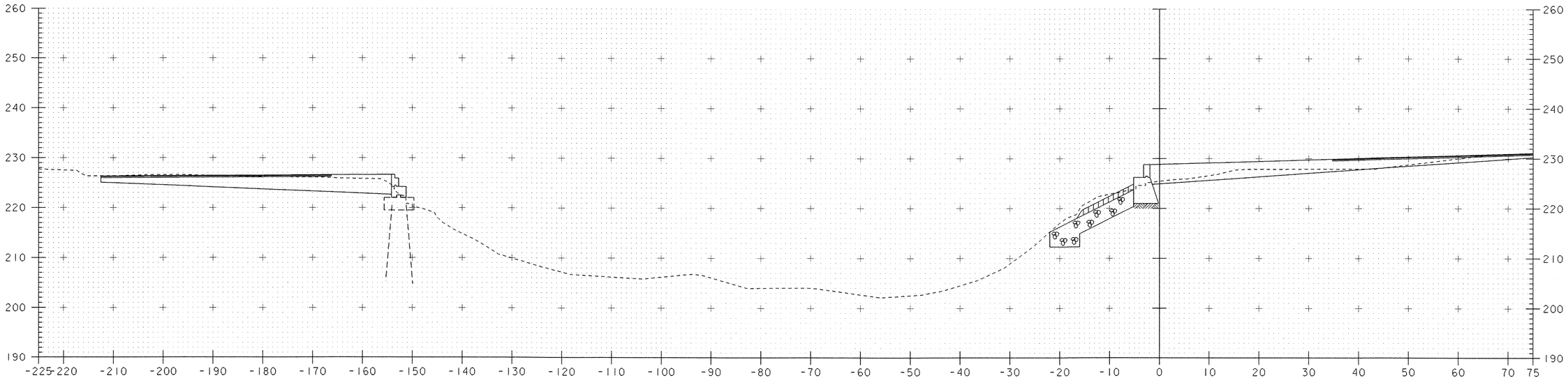
DATUM
VERTICAL NGVD
HORIZONTAL ASSUMED

SCALE 1" = 10'-0
10 0 10

PROJECT: NEW HAVEN - WEYBRIDGE	PROJECT NO.: BHO-BTN 2005 (1)
DESIGN FILE NAME: /str4/89j081/sj081xs1.dgn	
IPARM FILE NAME: sj081c13.i	PLOT DATE: 28-FEB-2007
SURVEYED BY: R. MOREAU	SURVEY DATE: 7/90
SQUAD LEADER: C.P. WILLIAMS	DRAWN BY: P.G. JARVIS
CHANNEL SECTIONS STA. 20+40 - STA. 20+50	SHEET: 42 OF 53



20+70

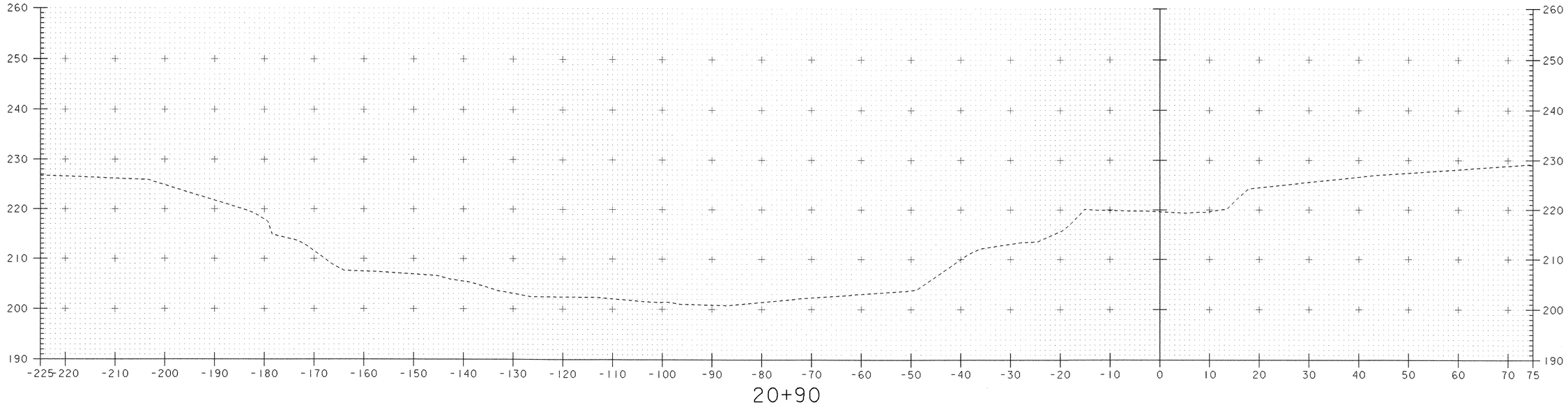


20+60

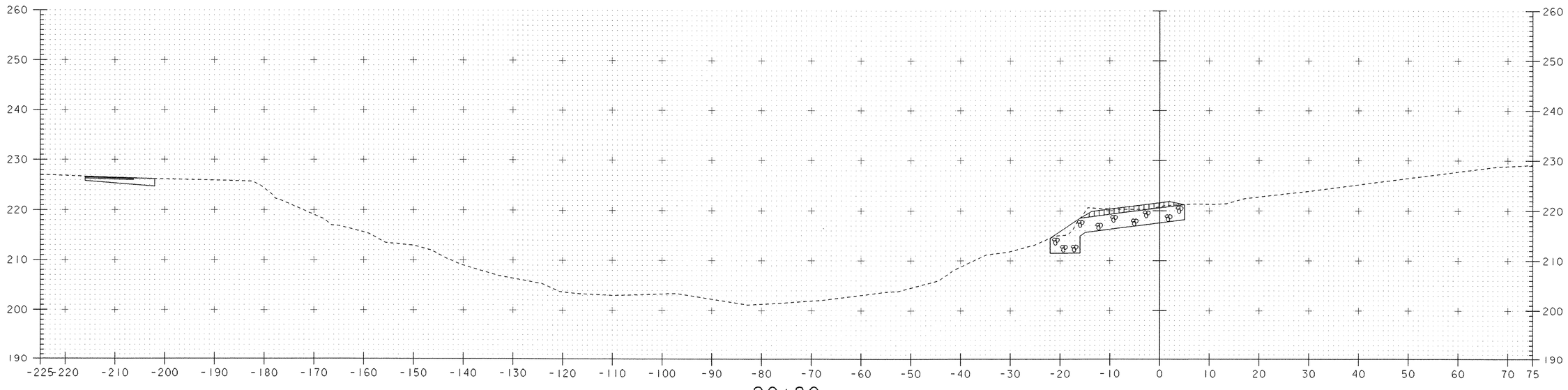
DATUM
VERTICAL NGVD
HORIZONTAL ASSUMED

SCALE 1" = 10'-0
10 0 10

PROJECT: NEW HAVEN - WEYBRIDGE	PROJECT NO.: BHO-BTN 2005 (1)
DESIGN FILE NAME: /str4/89j081/sj081xs1.dgn	
IPARM FILE NAME: sj081c14.i	PLOT DATE: 28-FEB-2007
SURVEYED BY: R. MOREAU	SURVEY DATE: 7/90
SQUAD LEADER: C.P. WILLIAMS	DRAWN BY: P.G. JARVIS
CHANNEL SECTIONS STA. 20+60 - STA. 20+70	SHEET: 43 OF 53



20+90



20+80

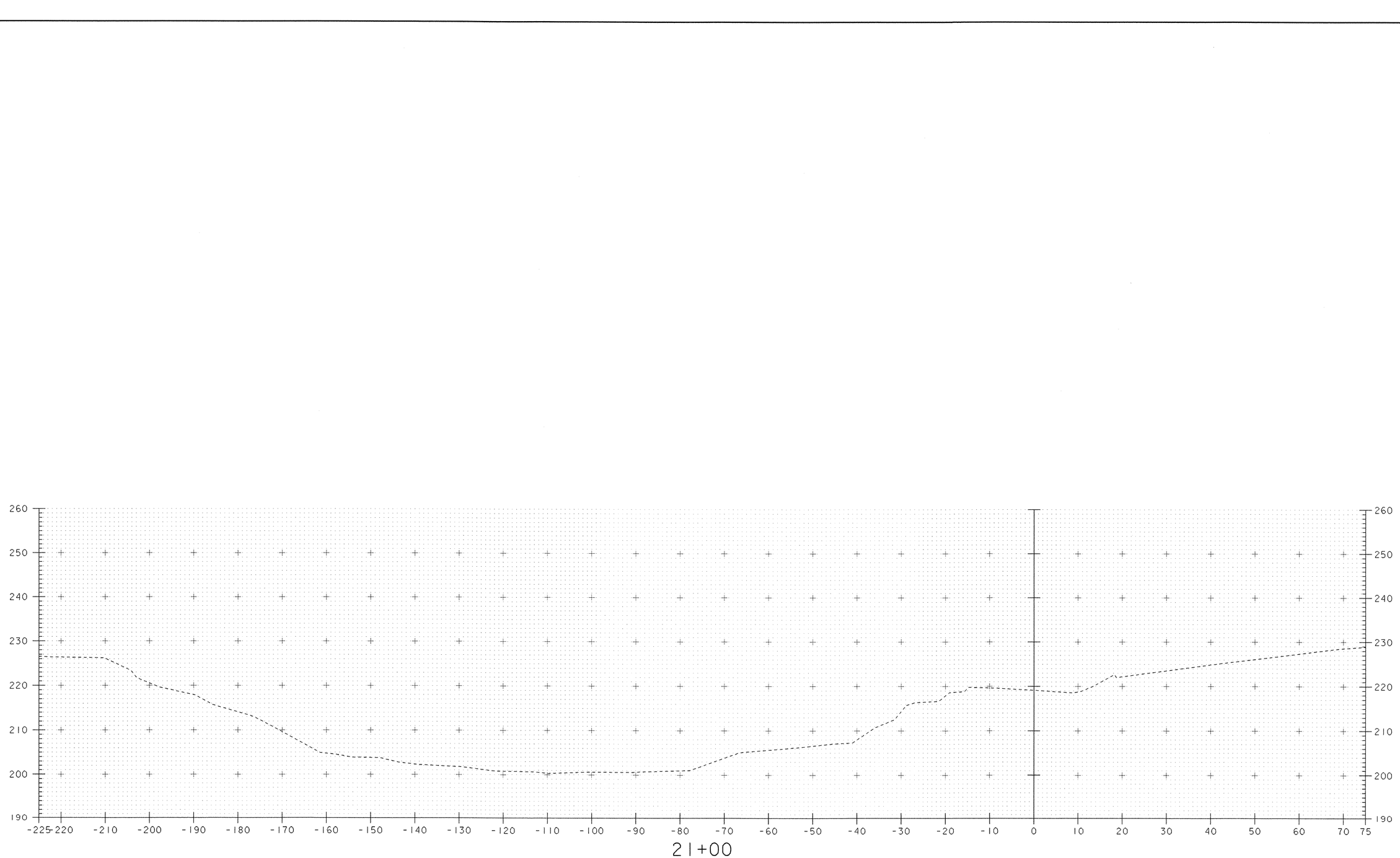
STA 20+80
(ABUTMENT No. 1)

END STONE FILL TYPE III
END GEOTEXTILE UNDER STONE FILL
END GRUBBING MATERIAL
END UNCLASSIFIED CHANNEL EXCAVATION

SCALE 1" = 10'-0
10 0 10

DATUM
VERTICAL NGVD
HORIZONTAL ASSUMED

PROJECT: NEW HAVEN - WEYBRIDGE	PROJECT NO.: BHO-BTN 2005 (1)
DESIGN FILE NAME: /str4/89j081/sj081xs1.dgn	
IPARM FILE NAME: sj081c15.i	PLOT DATE: 28-FEB-2007
SURVEYED BY: R. MOREAU	SURVEY DATE: 7/90
SQUAD LEADER: C.P. WILLIAMS	DRAWN BY: P.G. JARVIS
CHANNEL SECTIONS STA. 20+80 - STA. 20+90	SHEET: 44 OF 53



21+00

DATUM
VERTICAL NGVD
HORIZONTAL ASSUMED

SCALE 1" = 10'-0
10 0 10

PROJECT: NEW HAVEN - WEYBRIDGE
PROJECT NO.: BHO-BTN 2005 (1)

DESIGN FILE NAME: /str4/89j081/sj081xs1.dgn
IPARM FILE NAME: sj081c16.i
SURVEYED BY: R. MOREAU
SQUAD LEADER: C.P. WILLIAMS
CHANNEL SECTION STA. 21+00
PLOT DATE: 28-FEB-2007
SURVEY DATE: 7/90
DRAWN BY: P.G. JARVIS
SHEET: 45 OF 53

STATE OF VERMONT
AGENCY OF TRANSPORTATION

EROSION CONTROL NARRATIVE

DESCRIPTION OF PROJECT

This project involves the removal and replacement of both abutments and the rehabilitation of bridge number 26. Bridge 26 is a steel thru truss bridge spanning the Otter Creek from New Haven to Weybridge for a distance of 140 feet. The bridge is a single span, single lane bridge located in a rural area on TH 7/11. Because the project is a rehabilitation it will be located on the same alignment and require only minor approach work. Traffic will be maintained by using one of the two alternate routes that make it possible to bypass the bridge while it is closed for the rehabilitation project. The only utility is an overhead phone line that is remaining in place. The limits of construction do not approach any building or structure but there is a dam located 350 feet downstream of the bridge. A temporary floating canoe dock will be built for portage around the dam during construction. There are no 'Threatened & Endangered Species', or Historic Resources on site but there are two archeologically sensitive areas located on the Weybridge side of the project area near stations 10+00 - 11+40.

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

The area of disturbance is .1719 Acres = 832 square yards

SITE INVENTORY & ANALYSIS

OFF SITE DRAINAGE CHARACTERISTICS:
The property surrounding the project site consists of well established vegetation, mostly flat with slopes at the rivers edge ranging from moderate to steep. The surrounding properties are made up of fields and wooded areas. Due to the nature of the surrounding terrain, runoff water entering the project site will be primarily limited to that which is conveyed along roadway ditches.

DRAINAGE, WATERWAYS, BODIES OF WATER:
Otter Creek is the main water source in the area and a dam downstream has created a small pond. The river is classified as sinuous, semi-alluvial, probably incised, and not braided or anabranched. The river bed is sand, gravel, cobbles, and ledge. The contributing drainage area at the bridge crossing is about 749 sq. miles.

TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES:
The topography of the project site is moderate rolling wooded slopes with a steeply sloped wooded area in the northwest corner of the project area. Development along TH 7/11 consists of a few residents and a dam. There is also an overhead utility running along side of the bridge.

VEGETATION:
The vegetation in the area is open with some wooded areas and patches of brush. The impact to vegetation in the area will be limited to that which is effected by construction of the new abutments. After the project is completed the slopes will be stabilized with stone fill and vegetation will be reestablished with standard seed & mulch practices.

SOILS:
All soil data came from the U.S. Department of Agriculture Soil Conservation of Addison County. There are two types of soils found at the project site. On the northeast corner and the south end of the project site the soil is classified as Vergennes Clay with slopes of 12-25% and a K-value of 0.49. In the northwest part of the project area the soil is classified as Farmington soil. This is an extremely rocky silty loam with slopes ranging from 20-50% and a K-value of 0.32.

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:
No 'Threatened & Endangered Species' have been identified within the project limits and there will be no adverse effect to Historic or Archeological features. However; Otter Creek, the dam, and two archeologically sensitive sites area all located in the general project area.

PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES:
Disturbance of soils near natural or made-made waterways consists of that which is necessary to the removal and replacement of the abutments and minor work to the roadway approaches. Stabilization of disturbance to the stream banks will be accomplished with Stone Fill, Type III.

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 an equivalent product shall be utilized on all slopes greater than 1:3 that are not lined with stone fill. These 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 several days prior to final grading shall be tracked and mulched. The forecast of rainfall events shall also trigger protection of exposed slopes.

Temporary measures to control sediment transport include:

Silt fence will be installed a distance of 5'-10' from the toe of slopes 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 sand bags 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 approved area such that they will not be subject to erosion.

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:

Stone lining of the stream banks with Stone Fill, Type III as specified by VTrans Hydraulics personnel is specified. This stone will protect from stream bank erosion during design storm events.

Stone Fill, Type I will be utilized at culvert outlets to dissipate water velocities and reduce erosion potential.

Grass or other suitable ground cover will be established outside of the roadway limits where stone lining has not been specified. Slopes greater then 1 on 3 shall be seeded and mulched promptly upon achieving final grade.

GENERAL EROSION & SEDIMENT CONTROL GUIDELINES

The Erosion Control Plans are meant as a guideline for preventing erosion and controlling sediment transport. The work outlined in this narrative consists of applying measures throughout the life of the project to control erosion and minimize the sedimentation of 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 section 105.23 of the Vermont AOT Standard Specifications for Construction, dated 2006.

Install all erosion and sediment control measures as shown in the Erosion Control Plan 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 promptly 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. Collect and route clean offsite runoff around or through 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 / WIDTH = 2:1			
Q(gpm)	Q(m^3/s)	(ft^2)	(m^2)	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 NAME:	New Haven-Weybridge		
PROJECT NUMBER:	89j081		
FILE NAME:	89j081/Str/s89j081ecnotes.dgn	PLOT DATE:	1/23/2007
PROJECT LEADER:	C.P. WILLIAMS	DRAWN BY:	H.I. SALLS
DESIGNED BY:	H.I. SALLS	CHECKED BY:	R.S. YOUNG
EROSION NARRATIVE		SHEET	46 OF 53

EROSION AND SEDIMENT CONTROL NOTES:

1) THE AREA OF DISTURBANCE IS 0.171 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) ANY CHANGES MADE TO THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN DURING CONSTRUCTION SHALL BE APPROVED BY THE RESIDENT ENGINEER AND DOCUMENTED.

4) TIME ALL GRADING TO MINIMIZE SOIL EXPOSURE.

5) RETAIN EXISTING VEGETATION WHENEVER FEASIBLE.

6) AT THE END OF EACH DAY'S GRADING OPERATIONS, SHAPE EARTHWORK TO MINIMIZE THE EROSION FROM STORM RUNOFF.

7) TEMPORARILY MULCH AND SURFACE ROUGHEN ALL DISTURBED AREAS WHICH WILL NOT RECEIVE FURTHER DISTURBANCE FOR A PERIOD OF 7 DAYS OR MORE.

8) TEMPORARILY SEED AND MULCH ALL DISTURBED AREAS WHICH WILL NOT RECEIVE FURTHER DISTURBANCE FOR A PERIOD OF 30 DAYS OR MORE.

9) FINAL SEED AND COVER SHALL BE APPLIED WITHIN 48 HOURS OF FINAL GRADING.

10) ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RETURNED TO THEIR ORIGINAL CONDITION INCLUDING SEEDING AND MULCHING.

11) KEEP RUNOFF VELOCITIES LOW. CONSTRUCT CHECK DAMS AS REQUIRED.

12) PREPARE TEMPORARY DRAINAGE WAYS TO HANDLE CONCENTRATED FLOW UNTIL PERMANENT DRAINAGE IS CONSTRUCTED AND STABILIZED.

13) ALL DISTURBED AREAS WITH SLOPES GREATER THAN 1:3 WILL REQUIRE EROSION MATTING (SEE EROSION AND SEDIMENT CONTROL DETAIL SHEET 52).

14) 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.

15) CLEAN SEDIMENT CONTROL MEASURES (SEDIMENT TRAPS, SILT FENCE, ETC.) WHEN HALF FULL OF SEDIMENT.

16) 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 ON THE CONSTRUCTION DRAWINGS.

17) THE CONTRACTOR WILL USE OTHER TEMPORARY OR PERMANENT EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION AND AS DIRECTED BY THE RESIDENT ENGINEER. SEE SECTION 105.23 OF THE VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006.

18) MONITOR AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES DAILY AND AFTER EACH RAIN STORM.

19) SEE SHEETS 48 - 53 FOR EROSION AND SEDIMENT CONTROL DETAILS.

20) ASK FOR ASSISTANCE AND RECOMMENDATIONS 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 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.

PERIMETER CONTROL NOTES:

1) IDENTIFY SENSITIVE AREAS AND AREAS PRONE TO EROSION BASED ON SITE EVALUATION.

2) CLEARLY DEMARCATE SENSITIVE AREAS TO AVOID DISTURBANCE USING BRIGHTLY COLORED SNOW FENCE, MIN 8" WIDE FLAGGING OR SIMILAR.

3) PROTECT ALL SENSITIVE AREAS AND WATER FEATURES FROM SEDIMENT.

4) DIVERT OR OTHERWISE KEEP ALL CONCENTRATED OFF-SITE "RUN-ON" FROM AREAS TO BE DISTURBED.

5) PERIMETER CONTROLS (SILT FENCE, FILTER CURTAIN, ETC.) TO BE INSTALLED PRIOR TO SOIL DISTURBANCE AND MAINTAINED UNTIL SITE IS PERMANENTLY STABILIZED TO THE SATISFACTION OF THE ENGINEER AND ON-SITE COORDINATOR.

6) SEED AND MULCH SHALL BE APPLIED IMMEDIATELY TO ALL LAWNS DISTURBED BEYOND THE WORK AREA DELINEATED ON THESE PLANS.

7) PREVENT SEDIMENT FROM LEAVING THE SITE BY MAINTAINING AND MODIFYING PERIMETER CONTROLS AS NEEDED.

SEEDING FORMULA
RURAL AREAS

% WT.	LBS./A.	NAME	PUR %	GERM %
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 TREFOIL	98	85
5.0	3.0	ANNUAL RYEGRASS	95	85
100.0	60.0			

GENERAL NOTES

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

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

FERTILIZER: FORMULA 10-20-10, TO BE USED WITH SEED, APPLIED AT THE RATE OF 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.

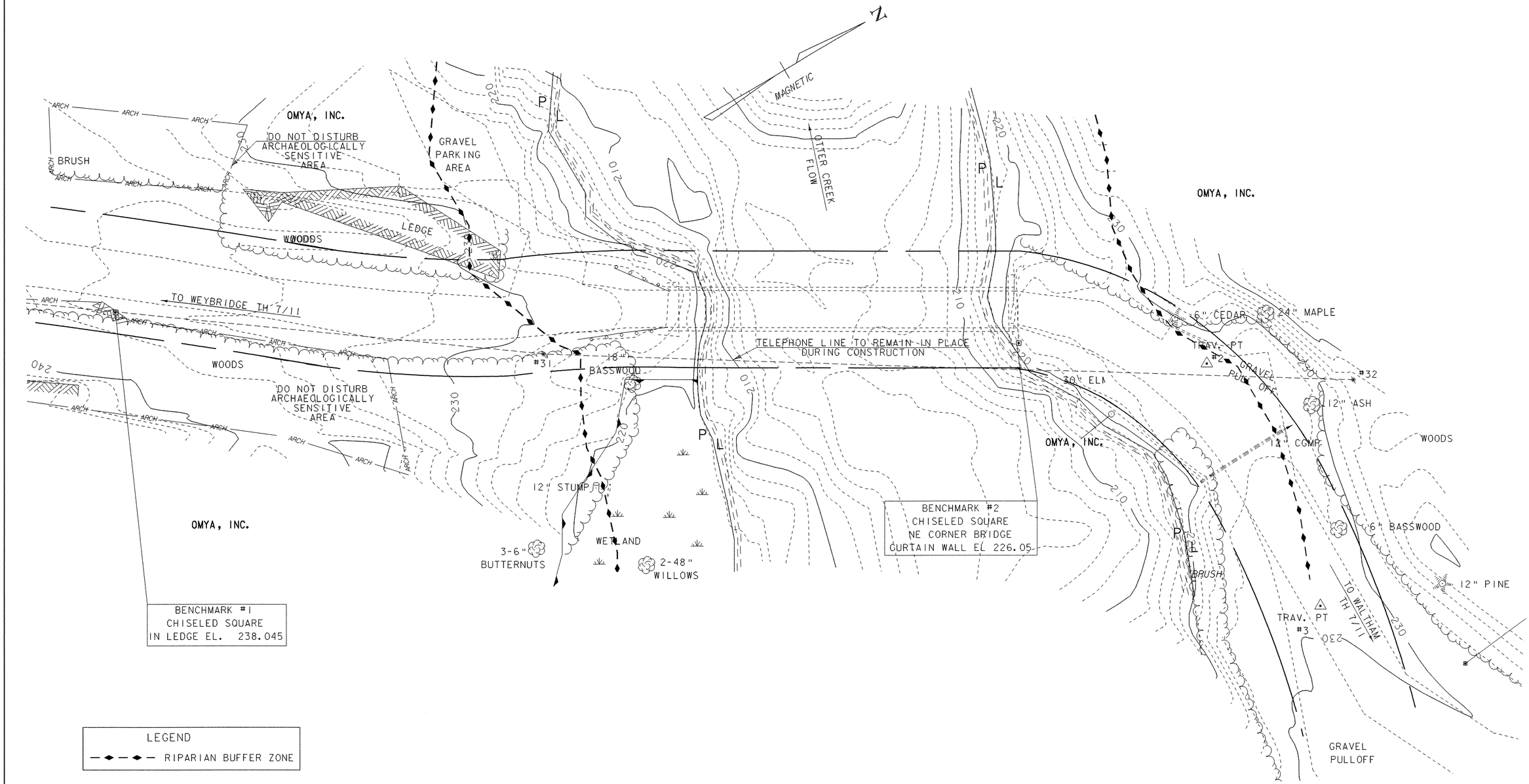
HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

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

DATUM
VERTICAL NGVD 1929
HORIZONTAL ASSUMED

PROJECT: NEW HAVEN-WEYBRIDGE
PROJECT NO.: BHO-BTN2005 (1)

DESIGN FILE NAME: pw89j081/s89j081ecnotes.dgn
IPARM FILE NAME: sj081ecnotes.i
PLOT DATE: 28-FEB-2007
SURVEYED BY: R. MOREAU
SURVEY DATE: 7/90
SQUAD LEADER: C.P. WILLIAMS
DRAWN BY: J. WHITE
EROSION CONTROL NOTE SHEET
SHEET: 47 OF 53



EXISTING CONDITIONS

SCALE 1" = 20'-0
20 0 20

DATUM
VERTICAL NGVD 1929
HORIZONTAL ASSUMED

PROJECT: NEW HAVEN-WEYBRIDGE	PROJECT NO.: BHO-BTN 2005(I)
DESIGN FILE NAME: /usr/str4/89j081/sj081bdr.dgn	
IPARM FILE NAME: sj081excond.i	PLOT DATE: 28-FEB-2007
SURVEYED BY: R. MOREAU	SURVEY DATE: 7/90
SQUAD LEADER: C.P. WILLIAMS	DRAWN BY: M.FESSEL
EXISTING CONDITIONS	SHEET: 48 OF 53

SOIL CLASSIFICATION

SOIL TYPE - FARMINGTON EXTREMELY ROCKY SILT LOAM
SLOPES - 20-50 %
"K FACTOR" 0.32
CLASSIFIED - HIGHLY ERODIBLE

SOIL CLASSIFICATION

SOIL TYPE - VERGENNES CLAY
SLOPES - 12-25 %
"K FACTOR" 0.49
CLASSIFIED - HIGHLY ERODIBLE

SOIL CLASSIFICATION

SOIL TYPE - VERGENNES CLAY
SLOPES - 12-25 %
"K FACTOR" 0.49
CLASSIFIED - HIGHLY ERODIBLE

BENCHMARK #1
CHISELED SQUARE
IN LEDGE EL. 238.045

BENCHMARK #2
CHISELED SQUARE
NE CORNER BRIDGE
CURTAIN WALL EL 226.05

IF NECESSARY - APPROXIMATE LOCATION TO CONSTRUCT SEDIMENT BASIN TO TRAP SEDIMENT PUMPED FROM STRUCTURE EXCAVATION.

NOTES:

1. THESE PLANS SHOW A CONCEPTUAL EROSION CONTROL PLAN, THE CONTRACTOR MUST SUBMIT A TEMPORARY EROSION CONTROL PLAN FOR APPROVAL.
2. TEMPORARY EROSION CONTROL MEASURES ARE CONCEPTUALLY SHOWN. THE CONTRACTOR MAY RELOCATE TEMPORARY MEASURES TO IMPROVE EROSION CONTROL WITH APPROVAL OF THE RESIDENT ENGINEER AND ON SITE COORDINATOR. SILT FENCE SHALL NOT BE INSTALLED ACROSS CONTOURS.
3. THE CONTRACTOR SHALL USE OTHER TEMPORARY EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION OR AS DIRECTED BY THE RESIDENT ENGINEER AND ON SITE COORDINATOR.
4. REFER TO TEMPORARY EROSION CONTROL DETAIL SHEETS FOR ADDITIONAL DETAILS.

SEE CROSS SECTIONS FOR PROPOSED CONTOURS.

LEGEND

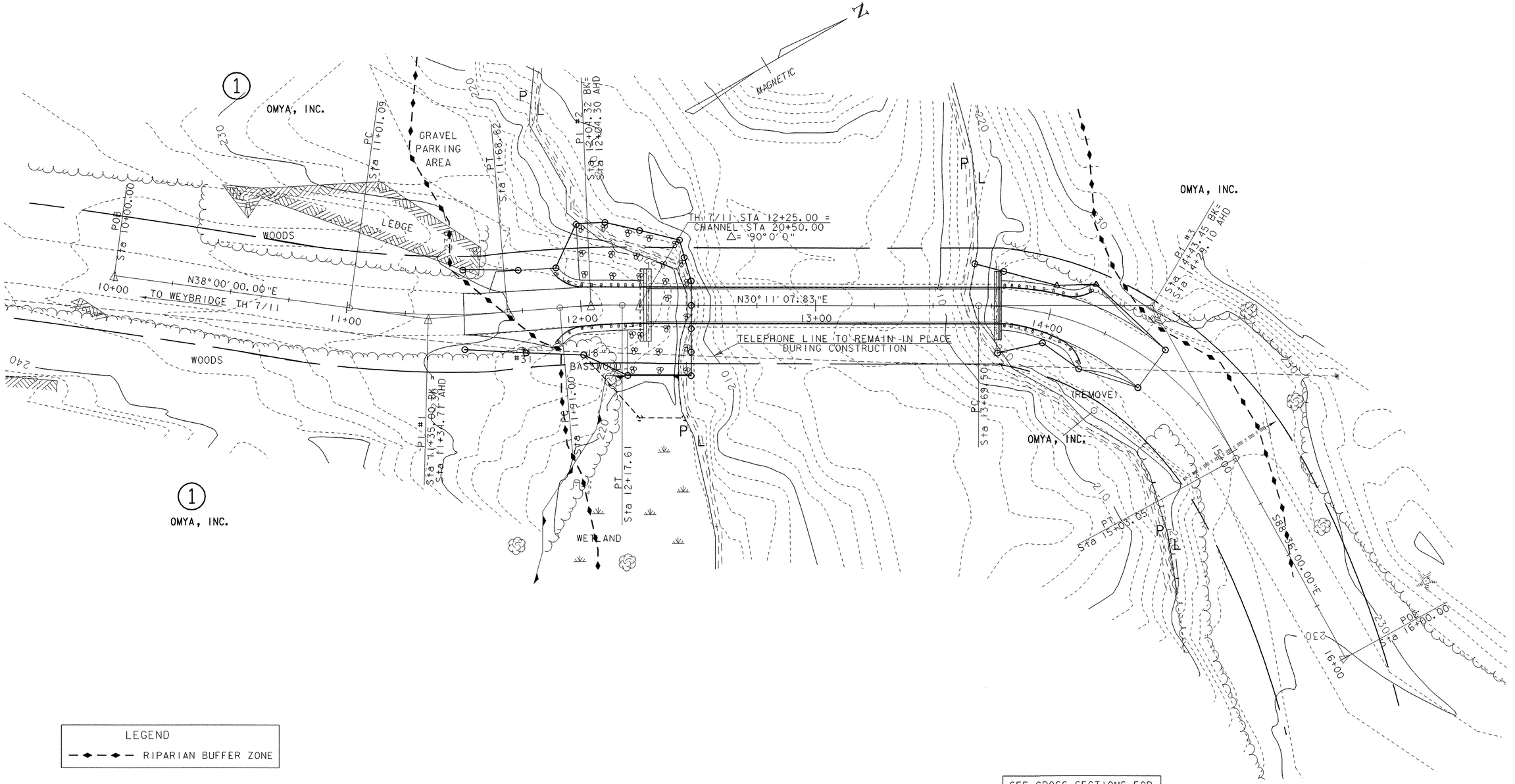
- BARRIER FENCE
- FILTER CURTAIN
- SILT FENCE
- PDF PROJECT DEMARCATION FENCE
- RIPARIAN BUFFER ZONE
- EROSION MATTING
- SEED AND STRAW MULCH

DATUM
VERTICAL NGVD 1929
HORIZONTAL ASSUMED

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

20 0 20
SCALE 1" = 20'-0

PROJECT: NEW HAVEN-WEYBRIDGE	PROJECT NO.: BHO-BTN 2005(I)
DESIGN FILE NAME: /usr/str4/89j081/sj081bdr.dgn	
IPARM FILE NAME: sj081leropian.i	PLOT DATE: 28-FEB-2007
SURVEYED BY: R. MOREAU	SURVEY DATE: 7/90
SQUAD LEADER: C.P. WILLIAMS	DRAWN BY: M.FESSEL
EROSION PREVENTION AND SEDIMENT CONTROL PLANS	SHEET: 49 OF 53



LEGEND

— ◆ — ◆ — RIPARIAN BUFFER ZONE

SEE CROSS SECTIONS FOR PROPOSED CONTOURS.

FINAL CONDITIONS

SCALE 1" = 20'-0

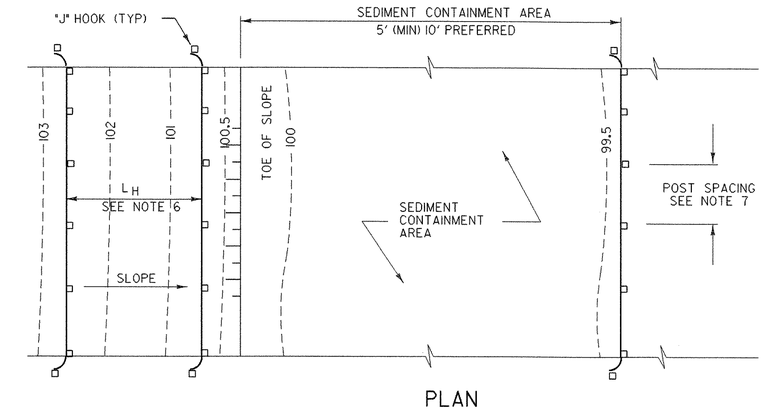
20 0 20

DATUM

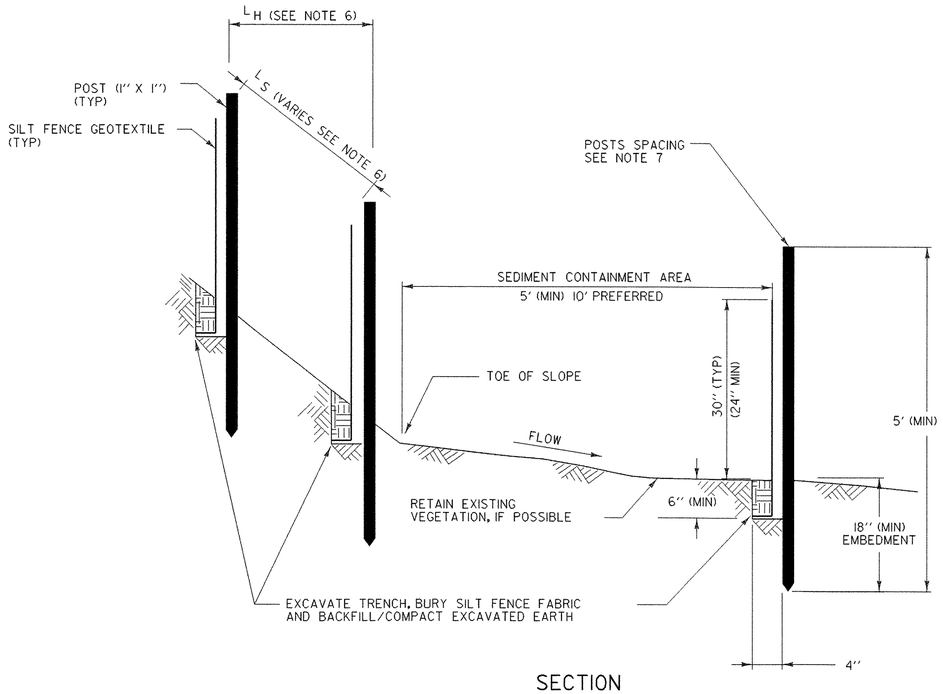
VERTICAL NGVD 1929

HORIZONTAL ASSUMED

PROJECT: NEW HAVEN-WEYBRIDGE		PROJECT NO.: BHO-BTN 2005(1)	
DESIGN FILE NAME:	/usr/str4/89j08l/sj08lbdr.dgn		
IPARM FILE NAME:	sj08lfincond.i	PLOT DATE:	28-FEB-2007
SURVEYED BY:	R. MOREAU	SURVEY DATE:	7/90
SQUAD LEADER:	C.P. WILLIAMS	DRAWN BY:	H.I. SALLS
FINAL CONDITIONS		SHEET:	50 OF 53



PLAN



SECTION
SILT FENCE - TEMPORARY
NOT TO SCALE

SILT FENCE

APPLICATION NOTES:

A. THE PRIMARY PURPOSE OF SILT FENCE IS TO REDUCE RUNOFF VELOCITY AND TRAP SEDIMENT. VELOCITY IS REDUCED, WATER IS IMPOUNDED BEHIND THE MEASURE, AND SEDIMENT FALLS OUT OF SUSPENSION.

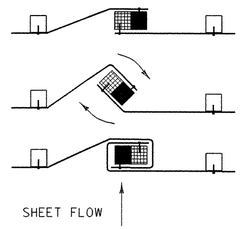
B. SILT FENCE SHALL NOT BE USED ACROSS CONCENTRATED FLOW.

GENERAL NOTES:

1. SILT FENCE SHALL GENERALLY BE PLACED A MINIMUM OF 5 FEET BEYOND TOE OF SLOPE, 10 FEET PREFERRED, TO PROVIDE ADEQUATE AREA FOR SEDIMENT STORAGE AND FACILITATE MAINTENANCE OF SEDIMENT CONTAINMENT AREA.
2. SILT FENCE SHALL BE INSTALLED ON A LINE OF EQUAL ELEVATION (CONTOUR). IT MAY BE INSTALLED AT INTERMEDIATE POINTS UP SLOPES AS WELL AS AT THE BOTTOM, AS SHOWN IN THE DETAIL.
3. ALL ENDS SHALL BE "J" HOOKED TO TRAP SEDIMENT.
4. IN AREAS WITH TWO SLOPES, SILT FENCE SHALL BE USED TO ERECT A DAM AND TRAP SEDIMENT AT THE BASE OF THE STEEPER SLOPE.
5. THE BOTTOM EDGE OF SILT FENCE SHALL BE BURIED A MINIMUM OF 6 INCHES BELOW GROUND, AND KEYED IN 4 INCHES. THE FENCE SHALL BE INSTALLED WITH THE POSTS ON THE DOWNSTREAM SIDE OF THE FABRIC.
6. MAXIMUM DRAINAGE AREA TRIBUTARY TO 100 FEET OF SILT FENCE SHALL BE 0.25 ACRES.
7. THE FOLLOWING ARE MAXIMUM LENGTHS FOR SILT FENCE INSTALATIONS:

CONSTRUCTED SLOPE	SLOPE LENGTH (LS) FT	HORIZONTAL LENGTH (LH) FT
3H : 1V	80	75
4H : 1V	130	125
5H : 1V	200	200
> 5H : 1V	250	250

8. WHERE ELONGATION IS >50%, POST SPACING SHALL NOT EXCERED 4 FEET. WHERE ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6 FEET.
9. SILT FENCE 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. SILT FENCE SHALL BE CLEANED AND REPAIRED AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACHES ONE-HALF OF THE MEASURE HEIGHT. SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED WASTE SITE.
11. SILT FENCE SHALL BE REMOVED WHEN THE AREA HAS BEEN STABILIZED. AT TIME OF REMOVAL OF THE SILT FENCE, THE DISTURBED AREA SHALL BE REPAIRED AND STABILIZED.

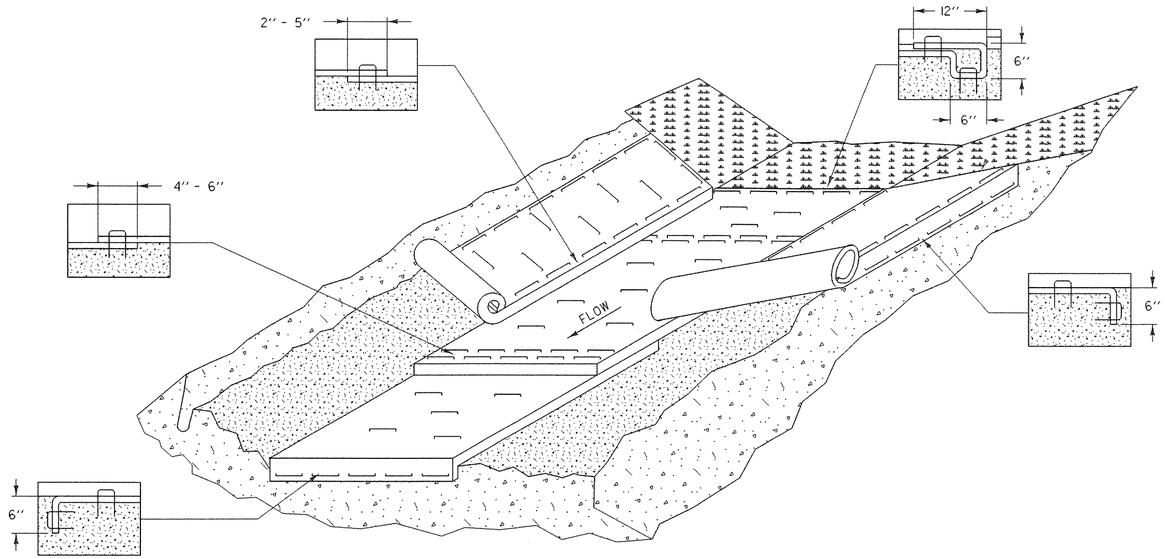


1. PLACE THE END POST OF ONE FENCE INSIDE THE END POST OF THE OTHER FENCE.
2. ROTATE BOTH POSTS AT LEAST 180 DEGREES IN A CLOCKWISE DIRECTION TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL
3. DRIVE BOTH POSTS 18 INCHES INTO THE GROUND AND BURY THE FLAP IN THE TRENCH.

SPLICING DETAIL
NOT TO SCALE

EROSION PREVENTION & SEDIMENT CONTROL DETAILS
SILT FENCE

PROJECT: NEW-HAVEN WEYBRIDGE	PROJECT NO.: BHO BTN2005 (1)
DESIGN FILE NAME: 89j081\structures\sJ081erodet.dgn	
IPARM FILE NAME: sj081epscl.i	PLOT DATE: 28-FEB-2007
DESIGNED BY: CONST. ENV. SECTION	DRAWN BY: CONST. ENV. SECTION
SQUAD LEADER: C.P. WILLIAMS	CHECKED BY: A. CABRAL
SILT FENCE	SHEET: 51 OF 53



EROSION MATTING FOR DITCHES

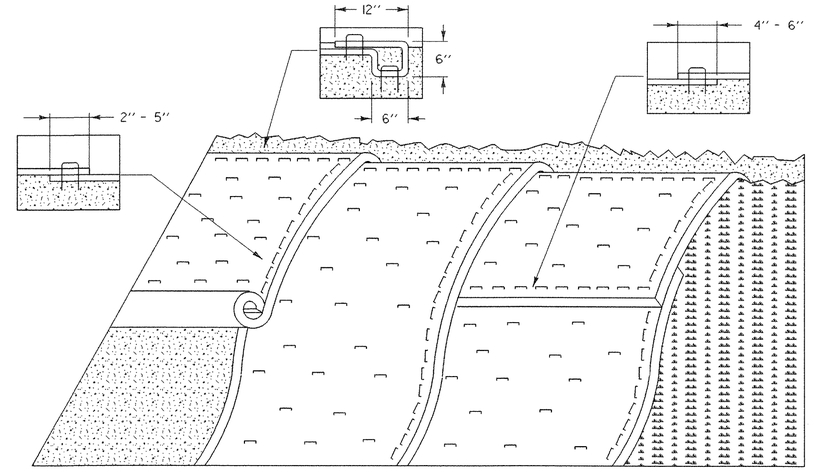
APPLICATION NOTES:

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 INTALLATION 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.

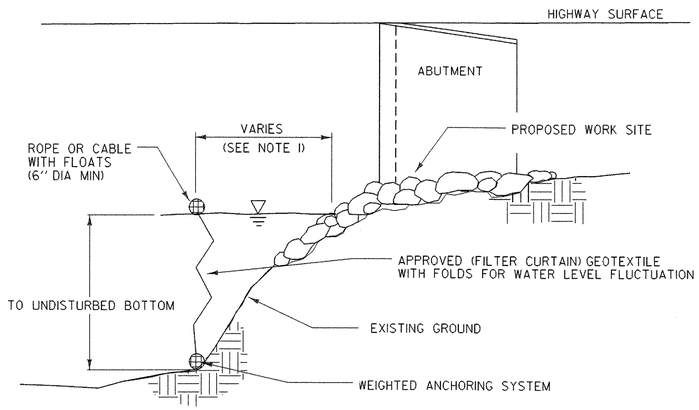
GENERAL NOTES:

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 INTALLATION 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

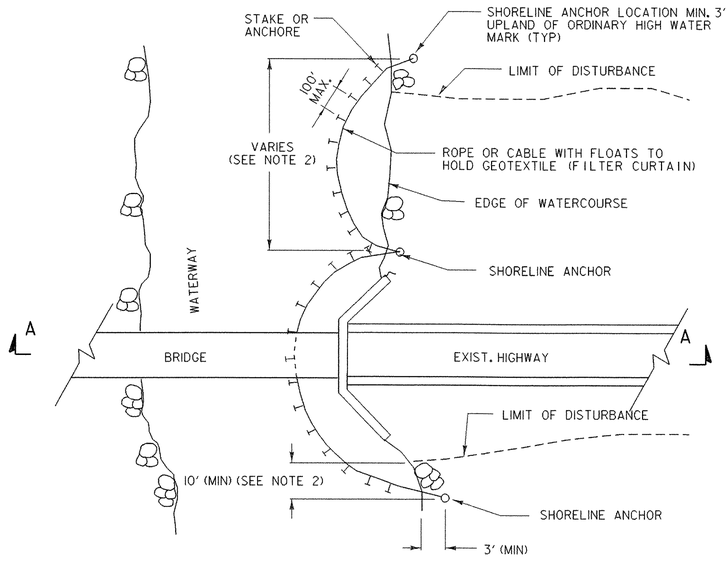
EROSION MATTING FOR DITCHES & SLOPES

PROJECT: NEW-HAVEN WEYBRIDGE	PROJECT NO.: BHO BTN2005(1)
DESIGN FILE NAME: 89j081\structures\sJ081erodet.dgn	
IPARM FILE NAME: sj081epsc5.i	PLOT DATE: 28-FEB-2007
DESIGNED BY: CONST. ENV. SECTION	DRAWN BY: CONST. ENV. SECTION
SQUAD LEADER: C.P. WILLIAMS	CHECKED BY: A. CABRAL
EROSION MATTING FOR DITCHES & SLOPES	SHEET: 52 OF 53



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 FILTER 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

PROJECT: NEW-HAVEN WEYBRIDGE	PROJECT NO.: BHO BTN2005(1)
DESIGN FILE NAME: 89j081\structures\sJ081erodet.dgn	
IPARM FILE NAME: sj081epsc7.i	PLOT DATE: 28-FEB-2007
DESIGNED BY: CONST. ENV. SECTION	DRAWN BY: CONST. ENV. SECTION
SQUAD LEADER: C.P. WILLIAMS	CHECKED BY: A. CABRAL
FILTER CURTAIN	SHEET: 53 OF 53

STATE OF VERMONT
AGENCY OF TRANSPORTATION
PROJ. NO. BHS-BTN 2005(1)
TE. NO. TH7/11, CL3 BRIDGE NO.26
ELM HAVEN & WEYBRIDGE
ADDISON COUNTY

CCS Constructors LLC
138 Munson Avenue
Morrisville, VT 05661
Ph: 802-888-7701 f: 802-888-4746

COSMEC INC.

WELDING PROCEDURE SPECIFICATION

SPECIFICATIONS AND CODE: D1.6
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 ER309L CLASSIFICATION: A5.9
MANUFACTURER: HARRIS WELCO TRADENAME:
FLUX-------- INTERNAL
SHIELDING GAS---------- ARGON FLOW RATE 45 CFH
SINGLE OR MULTIPLE PAS S SINGLE
SINGLE OR MULTIPLE ARC SINGLE
WELDING CURRENT---------- DC
POLARITY : REVERSE (EN)
WELDING PROGRESSION----------
ROOT TREATMENT---------- CLEANED & PREPARED BRIGHT METAL
PREHEAT AND INTERPASS TEMPERATURE---------- SEE BELOW
POSTHEAT TEMPERATURE N/A
HEAT IMPUT MIN.---------- MAX.----

WELDING PROCEDURE

PASS NO.	ELECTRODE SIZE	WELDING CURRENT AMPERES	VOLTS	TRAVEL SPEED	JOINT DETAIL
ALL	3/32"	130--155 16 GA THRU 10 GA BM THICKNESS	14-17	6.75--8.5	LAP JOINT

PREHEAT TEMPS. ***PREHEAT UNTIL NO MOSITURE PRESENT

THICKNESS	TTEMP.
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 PROCEURE MAY VARY DUE TO FABRICATION SEQUENCE, FIT-UP, PASS SIZE, ETC.
WITHIN THE LIMITATION OF VARIABLES GIVEN IN SECTION 5.
SUPPORTING PQR: GTAW-WF-05
PROCEDURE NO. GTAW-WF CONTRACTOR: COSMEC INC.
AUTHORIZED BY: DONALD VOSE
REVISION NO. 1 CWI#:01100651 Donald Vose
DATE:--- 2/1/2005

AWS QC 1 DONALD E VOSE 01100651 CWI

054-BBWP

STATE OF VERMONT
AGENCY OF TRANSPORTATION
PROJ. NO. BH0-BTW 2005(1)
TE. NO. TH7/11, RTE 3 BRIDGE NO. 26
ISH HAVEN & WEYBRIDGE
ADDISON COUNTY

VTRANS
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OK'D BY_____ OK'D BY JWK
APR 2 5 2007
RESUBMIT_____ APPROVED_____
BY DATE 5-3-07

EMS-QC-110

COSMEC, INC.
70 SOUTH STREET
WALPOLE, MA 02081
PH# 508-668-6600
FAX# 508-660-1022

CCS Constructors LLC
138 Munson Avenue
Morrisville, VT 05661
Ph: 802-888-7701 f: 802-888-4746

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APR 24 2007
CONSTRUCTION CRANE SERV. INC.
MORRISVILLE, VT

ENGINEERING AND MANUFACTURING STANDARD
PTFE FACING AND STEEL
OR PREFORMED FABRIC SUBSTRATE
SURFACE PREPARATION AND ADHESIVE PROCEDURE

The PTFE facing shall be prepared for bonding to a substrate material by chemically etching the face to be bonded using the sodium ammonia process.

The mating surface of the substrate shall be prepared for bonding using a three-step process as follows:

1. preliminary degrease using methyl ethyl ketone.
2. mechanically roughen to approx. 125 RMS and thoroughly brush and clean for final degreasing.
3. final degrease using methyl ethyl ketone

The PTFE and substrate mating surfaces shall be clean and dry with final degreasing performed within 30 minutes of bonding. Adhesive shall consist of a two-part epoxy adhesive system conforming to Military Specification MMM-A-134

The adhesive shall be applied to the full area of the contact surface in an even manner so as to establish a glue line not less than .002 inch nor more than .010 inch thick. Surfaces being bonded are to be assembled immediately with open assembly time not to exceed 20 minutes.

The PTFE material shall be greater in width and length than the substrate material by at least ½ inch when bonded. The PTFE shall be applied with contact starting at one edge and with contact progressing across entire bonded surface to eliminate air entrapment. The PTFE is to be in full contact with the steel or preformed fabric substrate. Curing of the bond shall be done under pressure of approx. 2-100 psi for 10-12 hours at approx. 70°F or other schedules as established by the manufacturer of the adhesive.

The PTFE shall be carefully trimmed to the same size as the substrate after bond curing and all bonds shall be visually inspected for bond retention.

055-BBWP

State of Vermont
Agency of Transportation
National Life Building
Drawer 33
Montpelier, VT
05633-5001

VTrans Working to Get You There

May 3, 2007

Cosmec, Inc.
70 South Street
Walpole, MA 02081

Re: New Haven – Weybridge BRO BTN 2005(1) – TH 7/11, Bridge 26

The following Bearing details [Item #531.10, Bearing Device Assembly] and weld procedures and bonding procedures for the above project (Vendor's Job #60734) that were received in this office on April 25, have been reviewed and are being returned herewith.

All sheets are approved as noted. Please see comments on attached sheets. Weld procedures and bonding procedures are approved.

You must provide written notice to this office as to the date fabrication represented by these drawings will begin. That notice must be received at least seven days prior to that date, as per Specification 506.03. Any material fabricated prior to the notification date is subject to rejection without further cause.

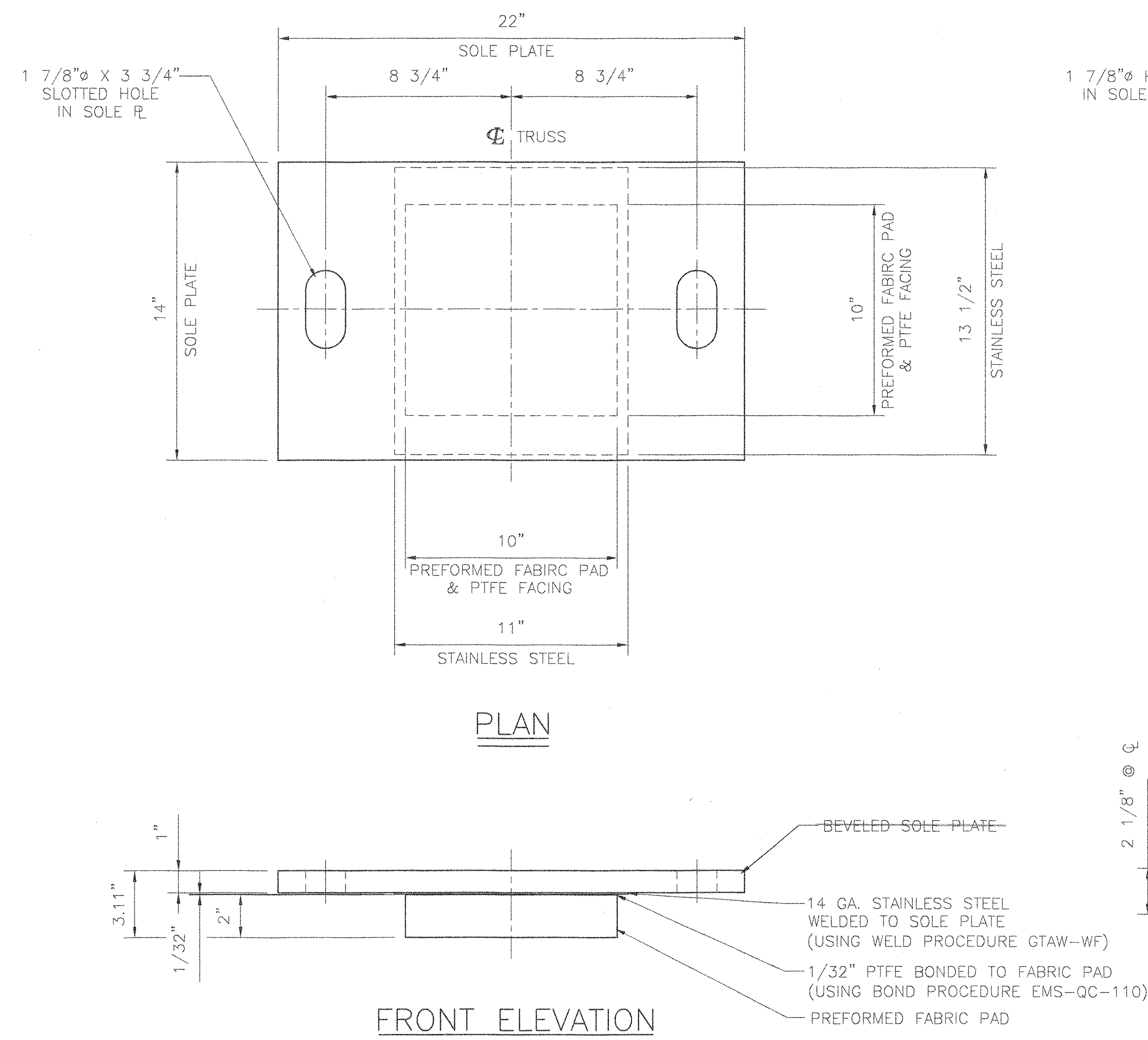
Sincerely,

Christopher P. Williams, P.E.
Structures Project Manager

Attachments

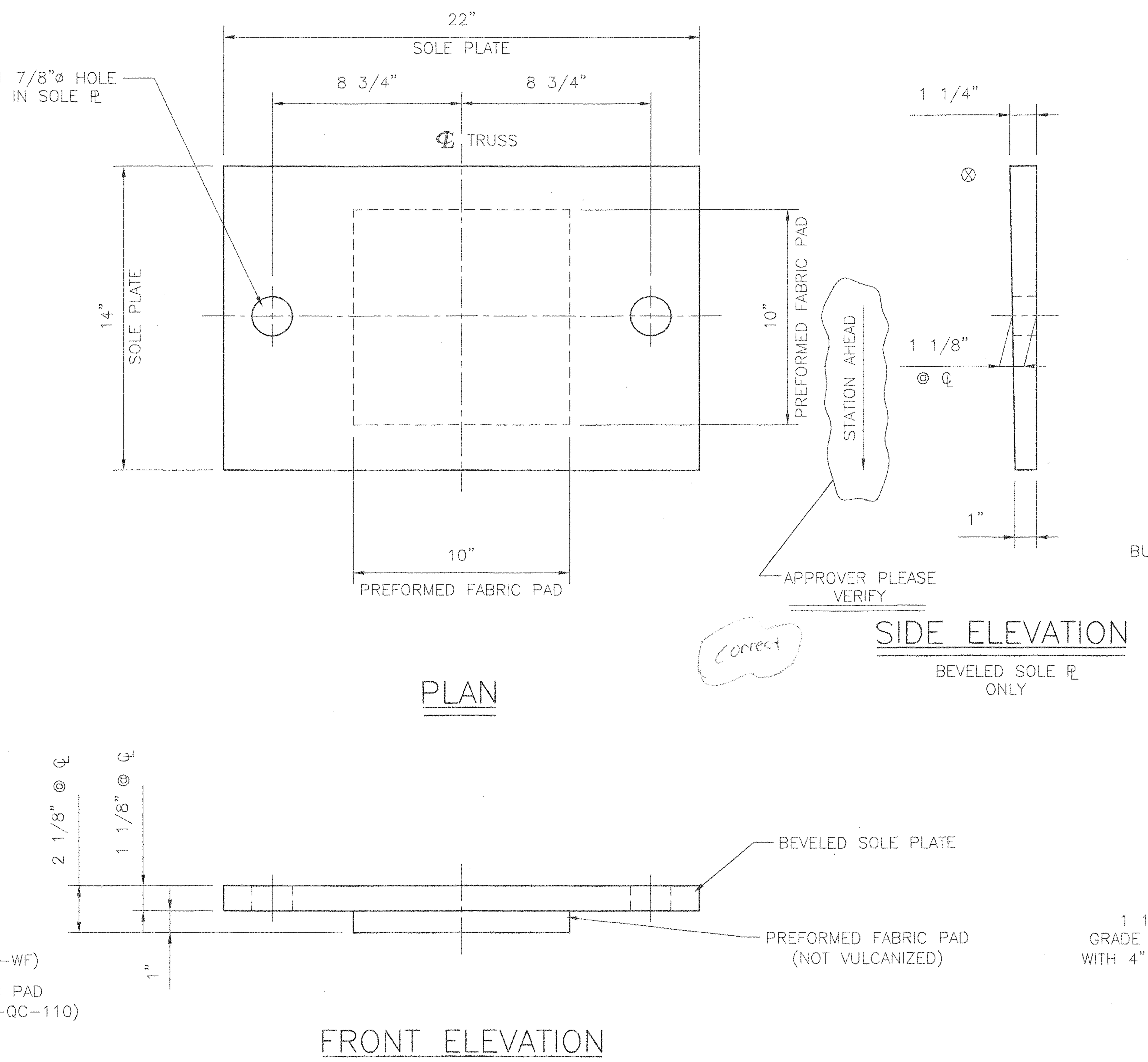
cc: [X] – Resident Engineer
[X] CCS Constructors - Contractor
[X] Steel Inspector – Jeff Clark
[X] Construction Section - letter only
[X] Materials & Research (C&IA Unit) - letter only
[X] Project Files

056-BB WP



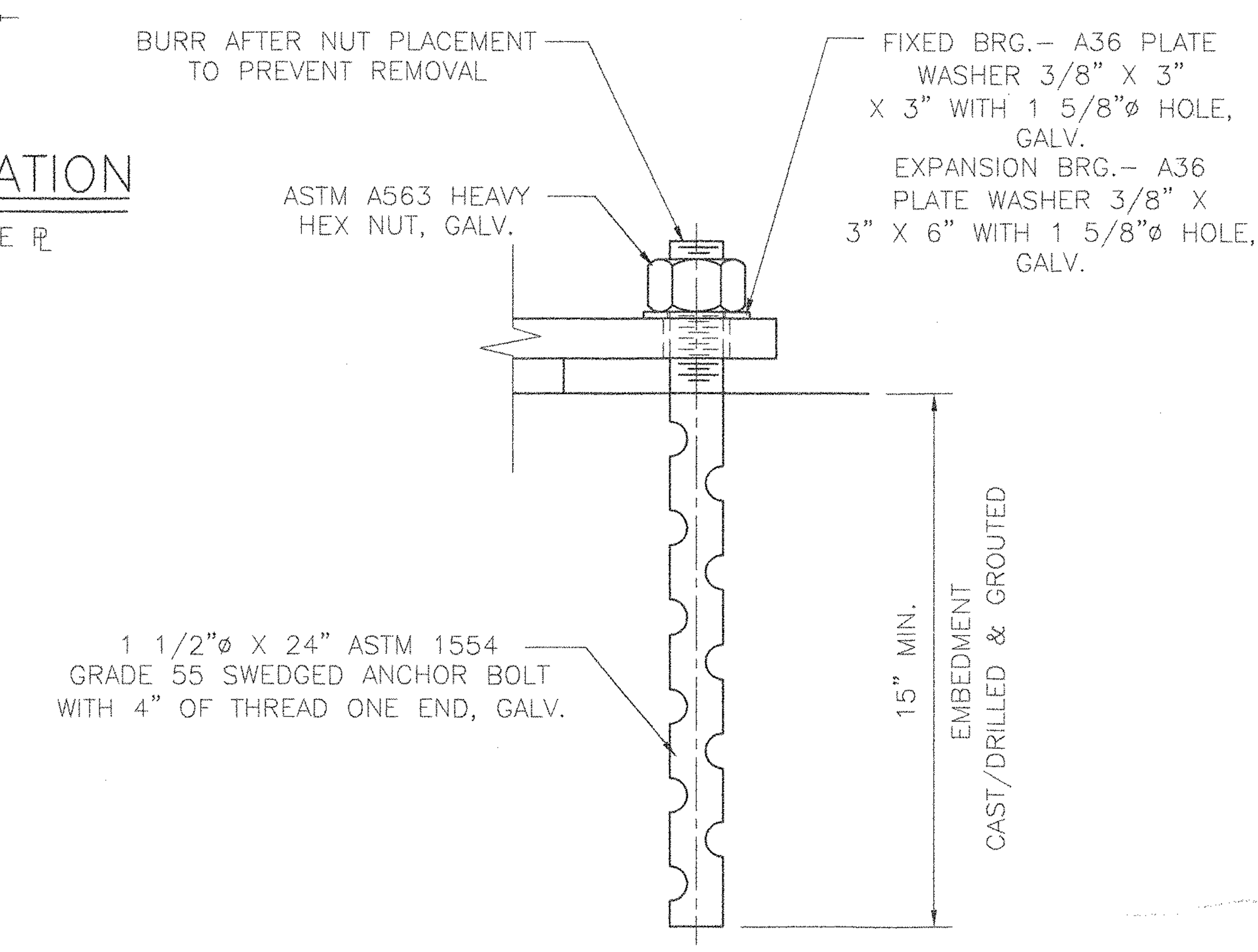
EXPANSION PREFORMED FABRIC PAD BEARING

LOCATION: ABUTMENT 1
QUANTITY: 2



FIXED PREFORMED FABRIC PAD BEARING

LOCATION: ABUTMENT 2
QUANTITY: 2



ANCHOR BOLT DETAIL

RECEIVED
CK'D BY ___ OK'D BY ___
APR 2 5 2007
RESUBMIT ___ APPROVED As Noted
BY GPW DATE 5/3/07

BEARING NOTES

1. ALL MATERIALS USED IN THE FABRICATION OF THESE BEARINGS SHALL BE MADE IN THE U.S.A.
2. BEARINGS ARE TO BE SHIPPED AS COMPLETE UNITS, STEEL BANDED, AND SHALL BE WRAPPED TO PROTECT FROM MOISTURE AND DIRT DURING TRANSIT AND STORAGE.
3. LOCATION OF FABRICATION PLANT – 70 SOUTH STREET WALPOLE, MA 02081
4. COSMEC, INC. REPRESENTATIVE – MR. MATT McANDREWS (508) 668-6600
5. BEARINGS SHALL BE STORED IN A CLEAN, DRY, LEVEL UPRIGHT POSITION.
6. ALL EDGES OF STEEL PLATES SHALL HAVE 1/16" MINIMUM RADIUS.
7. ⊗ MARKS THE THICK END OF BEVELED PLATE.
8. A. ALLOWABLE BEARING PRESSURE ON CONCRETE = 1,000 P.S.I.
   B. MINIMUM ALLOWABLE DESIGN ROTATION = 0.015 RADIANS.
   C. HORIZONTAL CAPACITY SHALL BE A MINIMUM OF 10% OF THE VERTICAL LOAD.
   D. DESIGN LOAD PER BEARING = 82 KIPS (DEAD LOAD + LIVE LOAD).

MATERIALS

STEEL – ASTM A709 GR. 50 ZINC METALLIZED AND SEALED.

STAINLESS STEEL – ASTM A.240 TYPE 304, WITH 10 RMS FINISH OR LESS ON SLIDING SURFACE

PREFORMED FABRIC PAD – AASHTO DIV. II SPEC. 18.4.9.1

PTFE – ASTM D4894 VIRGIN UNFILLED

ANCHOR BOLTS, NUTS & WASHERS – SEE DETAIL

ALL BEARINGS DEVICES SHALL BE METALIZED AS PER SUBSECTIONS 531.04(b) AND 506.15(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 STANDARD SPEC. SUBSECTION ~~708.02(d)~~ 5??.06 (F)

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APR 2 4 ...
CONTRACTORS ...

CCS Constructors LLC
138 Munson Avenue
Morrisville, VT 05661
Ph: 802-888-7701 f: 802-888-4746

REV.		BY:	DATE	CK'D BY:	DATE

STATE OF VERMONT
AGENCY OF TRANSPORTATION
PROJECT NO. BHO-BTN 2005 (1)
RTE. NO. TH 7/11, CL 3 BRIDGE NO. 26

TOWNS OF NEW HAVEN & WEYBRIDGE
ADDISON COUNTY

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

SCALE: 1/4"=1"	DRAWN BY: MRR	CHECKED BY: MCM
	DATE: 4/19/07	DATE 4/20/07

COSMEC FABRIC PAD BEARINGS

CUSTOMER	S.O. NUMBER	DRAWING NUMBER	REV.
CCS CONSTRUCTORS	60734	5234	

057-BB

State of Vermont
Agency of Transportation
National Life Building
Drawer 33
Montpelier, VT
05633-5001

VTrans Working to Get You There

July 11, 2007

Casco Bay Steel Structures
75 Spring Hill road
Saco, Maine 04072

Re: New Haven – Weybridge BHO BTN 2005(1) – TH 7, Bridge 26

The following Structural Steel details (Sheet S1) [Item #506.50/60, Structural Steel] for the above project (Vendor's Job #329) that were received in this office on July 9, have been reviewed and are being returned herewith. The expansion joint details (Sheet J1) [Item 516.11 Bridge Expansion Joint, Vermont] that were received on June 11 have also been reviewed and are being returned.

Sheet S1 and J1 are both approved as noted. Please see comments in red on the attached sheet. Weld procedures are also approved.

You must provide written notice to this office as to the date fabrication represented by these drawings will begin. That notice must be received at least seven days prior to that date, as per Specification 506.03. Any material fabricated prior to the notification date is subject to rejection without further cause.

Sincerely,

Christopher P. Williams, P.E.
Structures Project Manager

Attachments

cc: [X] Dale Norton – Resident Engineer
[X] CCS Constructors - Contractor
[X] Steel Inspector – Jeff Clark
[X] Construction Section - letter only
[X] Materials & Research (C&IA Unit) - letter only
[X] Project Files

058-SSWP

Casco Bay Steel Structures, Inc.

5 Industry Road
South Portland, Maine 04106

hone: (207) 772-2533 Fax: (207) 772-0580

WELDING PROCEDURE SPECIFICATION

Material specification ASTM 709-Gr 36-50-50W (250-345-345W.)
Welding process Shielded Metal Arc welding (SMAW)
Manual or machine manual
Position of welding Flat (1F), Horizontal (2F)
Filler metal specification ANSI/AWS A5.1 - A5.5
Filler metal classification E7018 - 8018 C1/C3 - 7028
Flux NA
Shielding gas NA Flow rate NA
Single or multiple pass Single and multiple
Single or multiple arc Single
Welding current AC / DC
Polarity Straight / Reverse
Welding progression
Root treatment Meet AWS specification
Preheat and interpass temperature To 3/4 (19) 50°(10°) 3/4 (19) To 1 1/2 (38) 70°(20°) 1 1/2 (38) To 2 1/2 (63.5) 150°(65°) over 2 1/2 (63.5) 225°(110°)
Postheat temperature NA
Heat input Min NA Max NA

VTRANS
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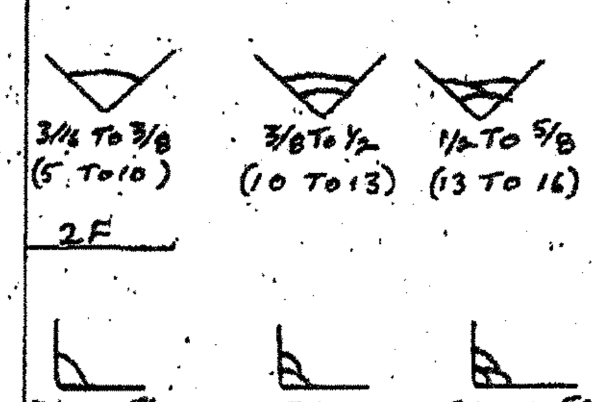
CK'D BY ____ OK'D BY JWC
JUN 11 2007
RESUBMIT ____ APPROVED ✓
BY ____ DATE 6/26/07

New Haven & Weybridge VT.
Proj. No. BHO-BTN-2005(1)
CBSS No 329

WELDING PROCEDURE

(metric)

Pass no.	Electrode size	Welding current Amperes	Welding current Volts	Travel speed	Joint detail AWS D1.5 Fillet
AS REQ.	7018			AS REQ	1F
	1/8 (3.2)	70-120	22-26		3/16 To 3/8 (5 To 10); 3/8 To 1/2 (10 To 13); 1/2 To 5/8 (13 To 16)
	5/32 (3.9)	120-225	22-26		
	3/16 (4.8)	170-300	24-27		
	8018				2F
	1/8 (3.2)	90-160	22-26		3/16 To 5/16 (5 To 8); 3/8 (10); 7/16 To 5/8 (11 To 16)
	5/32 (3.9)	120-225	22-26		
	3/16 (4.8)	180-290	24-27		
	7028				
	5/32 (3.9)	170-270	22-26		
	3/16 (4.8)	210-330	24-27		



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

Procedure no. 401
Revision no.
Form III-2

Contractor Casco Bay Steel
Authorized By Paul E. Hoodale
Date 3/2/00

059 SSWP

Casco Bay Steel Structures, Inc.
75 Spring Hill Road
Saco, Maine 04072
hone: (207) 282-7360 Fax: (207) 282-1179

WELDING PROCEDURE SPECIFICATION

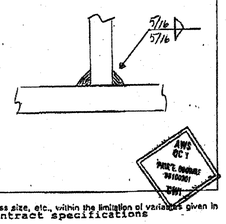
Material specification ASTM-709-Gr36-50-50W/ A709M Gr 250-345-345W (PCMW)
Welding process Flux Cored Arc welding
Manual or machine Semi AUTO
Position of welding Flat - Horizontal
Filler metal specification AWS A5-29
Filler metal classification E81T1-Ni1-H4 ESAB
Flux NA
Shielding gas 75% AR - 25% CO2 Flow rate 35 CFH +or- 4
Single or multiple pass Single / Multiple Elec Ex 5/64" IN
Single-or multiple arc Single
Welding current DC
Polarity DCEP
Welding progression See detail
Root treatment wire brush - area To be Free of Loose Scale, Slag, Rust & Moisture
Preheat and Interpass temperature Te 20 mm (3/4) 10(50), 20 (3/4) TO 40 (1 1/2) 20(70), 40 (1 1/2) To 60 (2 1/2) 65 C (150 over 60 (2 1/2) 110 (225)
Postheat temperature NA
Heat Input Min 29.7 KJ/in Max 43.6 KJ/in PQR FCM # 8 39.6 KJ/in

New Haven Weybridge VT.
Proj No, BHO-BTN-2005(4)

WELDING PROCEDURE

AWS 5-13 CBSS NO 329
AWS D1-5 Joint detail Fillet

Pass no.	Electrode Size	Welding current Amperes	Welding current Volts	Travel speed
		287	29	13
	1/16	258 TO .315	26.8 TO 31	11.4 TO 14



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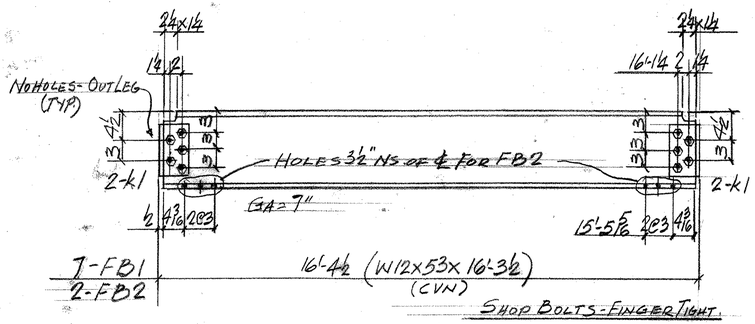
CK'D BY ____ CK'D BY ____
RESUBMIT ____ APPROVED ✓
BY ____ DATE 6/11/07

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

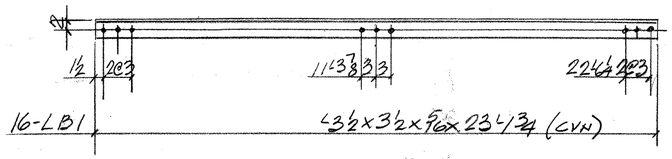
Procedure no. 101
Revision no. ____
Form III-2

Contractor Casco Bay Steel
Authorized By Paul E. Goodell
Date 12-6-06

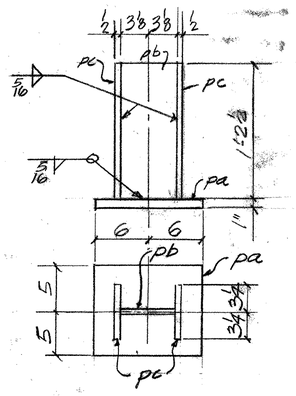
060-SSWP



FLOOR BEAMS.



LATERAL BRACING



BC1 - 4 REQ'D.

BEARING COLUMN

2-L25	L2½x2½x¼x26'-6 (CVN)
4-L29	L3x2½x¼x26'-6
2-L17	L3½x2½x¼x13'-6
4-L18	L3x2½x¼x19'-10
4-L31	L3x2½x¼x19'-10
8-L7	L2½x2½x¼x18'-6
4-L14	L2½x2½x¼x18'-6 (CVN)
4-L20	L3x2½x¼x26'-6
8-L10	L3½x3½x5/16x18'-6
8-L11	DO x18'-6
4-L12	DO x18'-6 (CVN)

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JUL - 5 2007
CONTRACTORS CRANE SERV., INC.
MORRISVILLE, VT

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OK'D BY HSC OK'D BY RSY
JUL 09 2007
RESUBMIT ____ APPROVED As Noted
BY CPW DATE 7/11/07

CCS Constructors LLC
138 Munson Avenue
Morrisville, VT 05661
Ph: 802-888-7701 f: 802-888-4746

SHOP BILL

JOB NO. 329 DRG. NO. S1

ABM INFO PAGE	LINE	NO.	DESCRIPTION	FT	IN	ASSEM. MARK	SHIPPING MARK	REMARKS	WEIGHT
		7	W12x53	16	3½		FB1	(CVN)	
		2	DO	16	3½		FB2	DO	
		36	L-5x3x⅜		9	k1			
		90	¾" Ø BOLTS ROUND HEADS A325-GALV.		2½	SHOP		W/N=W	
		16	L3½x3½x5/16	23	1¾		LB1	(CVN)	
		4	ASS'Y	1	3½		BC1		—
		4	PL 1"x10	1	0	pa		506.60 (EXTRA)	
		4	PL ½x6¼	1	2½	pb			
		8	PL ½x6½	1	2½	pc			
		2	L2½x2½x¼	26	6		L25	(CVN)	
		4	L3x2½x¼	26	6		L29	(CVN)	
		2	L3½x2½x¼	13	6		L17	(CVN)	
		4	L3x2½x¼	19	10		L18	(CVN)	
		4	DO	19	10		L31	↓	
		8	L2½x2½x¼	18	6		L7	↓	
		4	DO	18	6		L14	↓	
		4	L3x2½x¼	26	6		L20	(CVN)	
		8	L3½x3½x5/16	18	6		L10	↓	
		8	DO	18	6		L11	↓	
		4	DO	18	6		L12		

PAY ITEM 506.50 - L.N.

OUT FOR APPROVAL	6-707
OUT FOR APPROVAL	final 7-3-07
ISSUED TO SHOP	
FIELD & OFFICE	

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.

NO.	DIA.	LGT	TYPE	WASHER

PROJECT NO. BHO-BTN-2008(1) STATE PROJECT NO.

MATERIAL AASHTO M270-GR50 ELECTRODES: SEE PROC. HOLES: 13/16"Ø SHOP BOLTS: ¾"Ø

SURFACE PREP. & PAINT: A325-GALV.

PRIMER ONLY

DESCRIPTION: STRUCTURAL DETAILS

JOB: BRIDGE IMPROVEMENTS NEW HAVEN & WEYBRIDGE, VT.

CUSTOMER: CCS

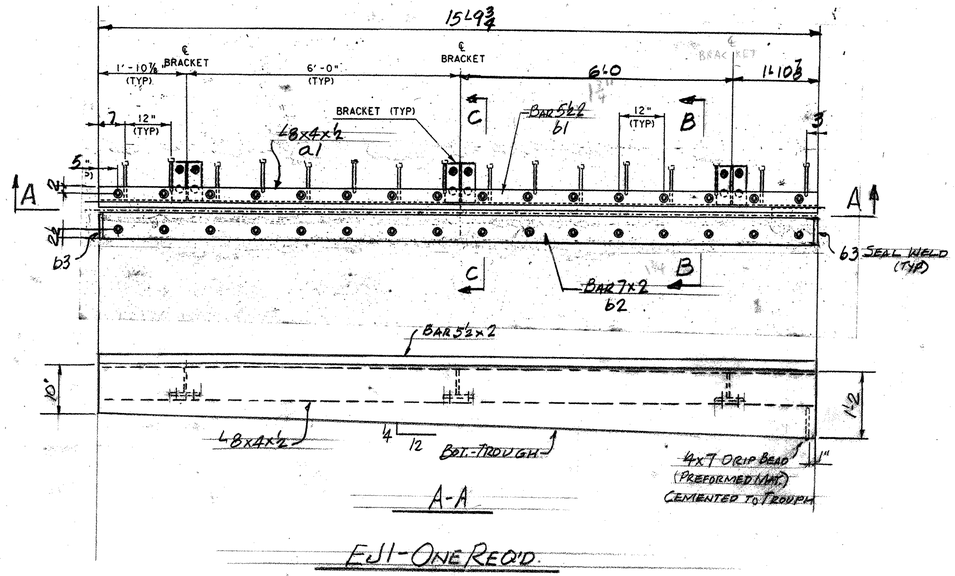
DRAWN BY	DATE
JPF	6-07
CHKD BY	
EJ	
APPROV BY	
Q.A.	

CASCO BAY STEEL STRUCTURES, INC.
75 SPRING HILL ROAD · SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179

JOB NO. 329 DRG. NO. S1 REV.

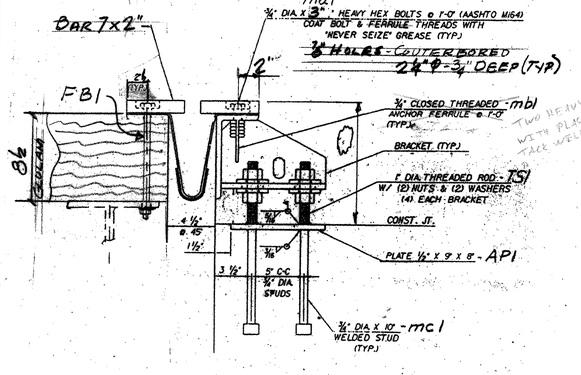
1" = 1'-0

061-55

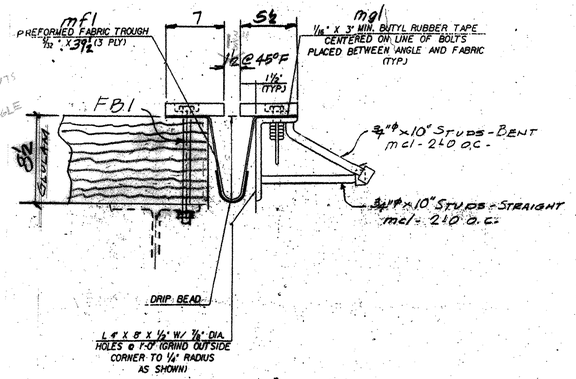


A-A

FJ1-ONE REQ'D.



TYPICAL SECTION AT BEAMS C-C



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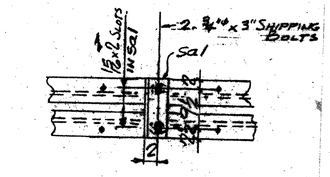
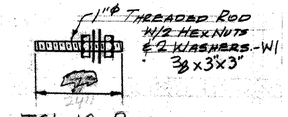


SHIPPING DEVICE SPACED 5'-0" O.C. MAX.



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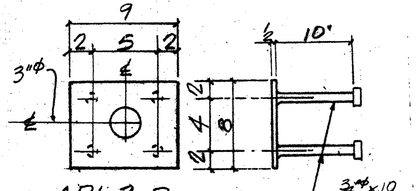

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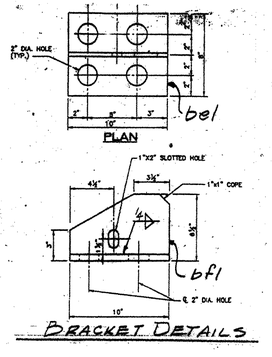


BRACKET DETAILS

RECEIVED
OK'D BY MJT OK'D BY RSY
JUN 1 1 2007
RESUBMIT ____ APPROVED AS Noted
BY CPW DATE 7/11/07

RECEIVED
JUN 8 2007
CONTRACTORS CRANE SERV, INC.
MORRISVILLE, VT

CCS Constructors LLC
138 Munson Avenue
Morrisville, VT 05661
Ph: 802-888-7701 f: 802-888-4746

ABM INFO PAGE	LINE	NO.	DESCRIPTION	FT	IN	ASSEM. MARK	SHIPPING MARK	REMARKS	WEIGHT
		1	EXP. JOINT	15	10±		EJ1		—
			L8x4x1/2	15	9 3/4	a1			
		1	BAR 5 1/2 x 2	15	9 3/4	b1			
		1	BAR 7 x 2	15	9 3/4	b2			
		2	BAR 1 x 1		7	b3			
		3	PL 1/2 x 8		10	bc1			
		3	PL 2 x 6		10	bf1			
		16	3/4"Ø HEX BOLTS		3	ma1			
		16	3/4"Ø CLOSED THREAD ANC. FERRULES			mb1			
	16	15	3/4"Ø ANC STUDS		10	mc1			
		16	3/4"Ø HEX BOLTS	1	0		FB1	W/ NUW	
		1	PREFORMED FABR. 3/32 x 3 1/2	16	0±	mf1		3 PLY PER SPEC. SECT. 07207	
		2	BUTYL RUBBER TAPE 1/16 x 3	16	0±			MSHTO NAME-TYPE ETC.	
		12	1"Ø THREADED RODS				TS1		
		24	1"Ø HEX NUTS				FIELD		
		24	PL 3/8 x 3		3		W1	RE WASH.	
		3	PL 1/2 x 8		9		AP1		
		12	3/4"Ø ANC STUDS		10	mc1			
		3	L 4 x 4 x 1/2	1	2	sa1			
		3	3/4"Ø BOLTS		3 1/2				
		3	DO		3			W/ NE W.	

PAY ITEM 516.11

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	OUT FOR APPROVAL	6/07									
	OUT FOR APPROVAL	7/07									
	ISSUED TO SHOP										
	FIELD & OFFICE										

PROJECT NO. BHO-BTN-2006(1) STATE PROJECT NO.

MATERIAL: AASHTO M270 Gr 36 ELECTRODES: SEE PROC. HOLES: AS NOTED SHOP BOLTS: 3/4"Ø

SURFACE PREP. & PAINT: A325 GALV.

GALV. AFTER FAB - (ASTM-A123)

DESCRIPTION: EXPANSION JOINT

JOB: BRIDGE IMPROVEMENTS NEW HAVEN & WEYBRIDGE, VT.

CUSTOMER: CCS

	DRAWN BY	DATE
	JPF	6-07
CHKD BY	EJ	
APPROV BY		
Q.A.		

CASCO BAY STEEL STRUCTURES, INC.

75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179

JOB NO.	DRG. NO.
329	J1
	REV. △

Structures Copy

062-BJ

State of Vermont
Agency of Transportation
National Life Building
Drawer 33
Montpelier, VT
05633-5001

VTrans Working to Get You There

July 12, 2007

Casco Bay Steel Structures
75 Spring Hill road
Saco, Maine 04072

Re: New Haven – Weybridge BHO BTN 2005(1) – TH 7, Bridge 26

The following Downspout details (Sheet D1) [Item #506.60, Structural Steel] for the above project (Vendor's Job #329) that were received in this office on June 26, have been reviewed and are being returned herewith.

Sheet D1 is approved.

You must provide written notice to this office as to the date fabrication represented by these drawings will begin. That notice must be received at least seven days prior to that date, as per Specification 506.03. Any material fabricated prior to the notification date is subject to rejection without further cause.

Sincerely,

Christopher P. Williams, P.E.
Structures Project Manager

Attachments

cc: [X] Dale Norton – Resident Engineer
[X] CCS Constructors - Contractor
[X] Steel Inspector – Jeff Clark
[X] Construction Section - letter only
[X] Materials & Research (C&IA Unit) - letter only
[X] Project Files

SHOP BILL

ABM INFO								JOB NO. 329	DRG. NO. D1
PAGE	LINE	NO.	DESCRIPTION	FT	IN	ASSEM. MARK	SHIPPING MARK	REMARKS	WEIGHT
		1	TS6×5×¼	9	6		DS1	ASTM A500-B	
		2	BAR 4×¼	1	10±		BK	BEND.	
		4	1"φ EXP. BOLTS		8		FIELD		
		PAY ITEM 506.60							

DOWNSPOUT ELEVATION

STRUCTURES COPY

RECEIVED
JUN 21 2007
CONTRACTORS CRANE SERV. INC.
MORRISVILLE, VT

CCS Constructors LLC
138 Munson Avenue
Morrisville, VT 05661
Ph: 802-888-7701 f: 802-888-4746

BK-2-REQ'D.

ONE-DS1

RECEIVED
CK'D BY ________ OK'D BY RSY
JUN 26 2007
RESUBMIT ________ APPROVED ✓
BY JPW DATE 7/12/07

OUT FOR APPROVAL		6-20-07								
OUT FOR APPROVAL										
ISSUED TO SHOP										
FIELD & OFFICE										
REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER

PROJECT NO. BHO-BTN-2005(1) STATE PROJECT NO.

MATERIAL: AASHTO M270-GR50 ELECTRODES: — HOLES: — SHOP BOLTS: —

SURFACE PREP. & PAINT: GALV. AFTER FAB (ASTM-A123)

DESCRIPTION: DOWNSPOUT	DRAWN BY	DATE
JOB: BRIDGE IMPROVEMENTS NEW HAVEN & WEYBRIDGE VT.	JPF	6-07
	CHKD BY	
	EJ.	
	APPROV BY	
	Q.A.	
CUSTOMER: CCS		
CASCO BAY STEEL STRUCTURES, INC.	JOB NO.	DRG. NO.
75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179	329	D1
		REV. △

1" = 1'-0

064-DS

State of Vermont
Agency of Transportation
National Life Building
Drawer 33
Montpelier, VT
05633-5001

VTrans Working to Get You There

August 1, 2007

Laminated Concepts, Inc.
P.O. Box 369
3310 State Rte. 352
Big Flats, NY 14814

Re: New Haven – Weybridge BHO BTN 2005(1) – TH 7, Bridge 26

The following Glulam Deck details [Item #522.40, Structural Glued Laminated Timber] for the above project (Vendor's Job #2107-150-LT) that were received in this office on July 27, have been reviewed and are being returned herewith.

Please note that these plans reflect field-verified dimensions provided by the contractor. These plans supersede the previous plans that were approved and distributed in my letter of July 20.

All sheets are approved.

There shall be no fabrication done until all drawings and welding procedures are approved. You must provide written notice to this office as to the date fabrication represented by these drawings will begin. That notice must be received at least seven days prior to that date. Any material fabricated prior to the notification date is subject to rejection without further cause.

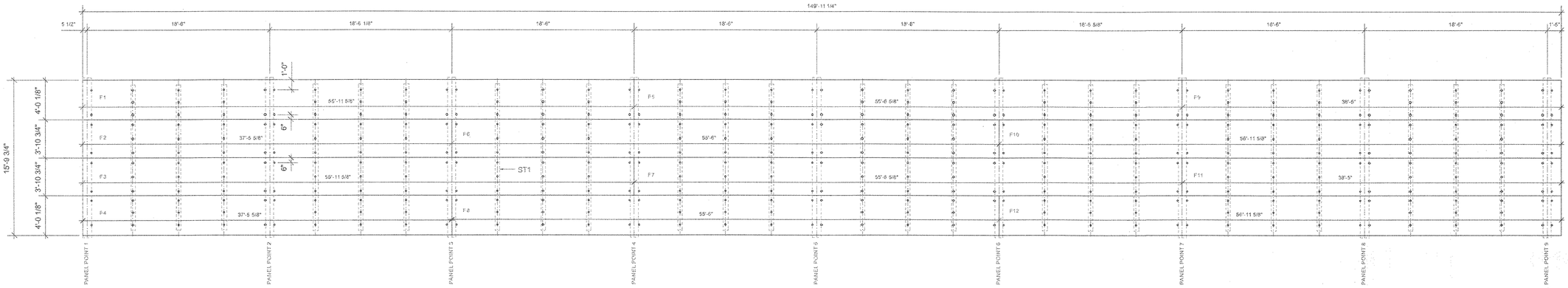
Sincerely,

Christopher P. Williams, P.E.
Structures Project Manager

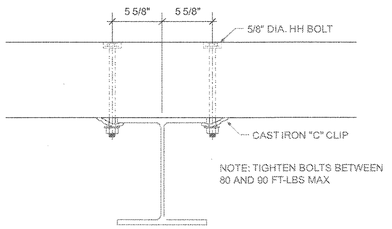
Attachments

cc: [X] Dale Norton – Resident Engineer
[X] CCS Constructors - Contractor
[X] Construction Section - letter only
[X] Materials & Research (C&IA Unit) - letter only
[X] Project Files

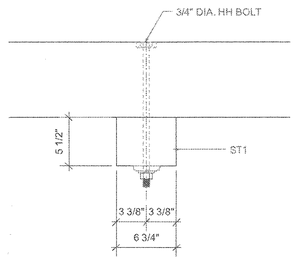
P65-GD



DECKING PLAN



DECK TO STEEL DETAIL



TYPICAL DECK TO STIFFENER DETAIL

LAMINATED CONCEPTS INC. LIST OF HARDWARE MATERIALS

21 07 150 LT VT AOT

	description	qty	dia.	lgt	wh	wn	n	type
bolts	Deck to steel	136	5/8"	10"	F	F	1	Hex Head Bolts
	Deck to stiffener	288	3/4"	16"	F	T	1	Hex Head Bolts
		280	5/8"					Flat Washers
		290	3/4"					Flat Washers
		290	3/4"					Timber Washers
		140	5/8"					Hex Nuts
		290	3/4"					Hex Nuts

NOTE:wh = washer type at bolt head, wn = washer type at nut, n = nuts ;washer type (T =Timber / F =Flat / P=Plate / D=Dock)

	description	qty	thk	width	length	type
steel						

	qty	type
attachments	136	CAST IRON "C" CLIPS

	qty	thk	width	length
neo.				

LAMINATED CONCEPTS INC. LIST OF LAMINATED TIMBER MATERIALS

21 07 150 LT VT AOT

qty	mk#	width	depth	length ft	length in	grade	species	remarks	bf tot
1	F1	8.5	48.125	55	11.625	COMB. 50	SYP	FAB. REQ'D	1907.89
1	F2	8.5	46.75	37	5.625	COMB. 50	SYP	FAB. REQ'D	1240.76
1	F3	8.5	46.75	55	11.625	COMB. 50	SYP	FAB. REQ'D	1853.38
1	F4	8.5	48.125	37	5.625	COMB. 50	SYP	FAB. REQ'D	1277.26
1	F5	8.5	48.125	55	6.625	COMB. 50	SYP	FAB. REQ'D	1893.69
1	F6	8.5	46.75	55	6	COMB. 50	SYP	FAB. REQ'D	1837.86
1	F7	8.5	46.75	55	6.625	COMB. 50	SYP	FAB. REQ'D	1839.58
1	F8	8.5	48.125	55	6	COMB. 50	SYP	FAB. REQ'D	1891.91
1	F9	8.5	48.125	38	5	COMB. 50	SYP	FAB. REQ'D	1309.57
1	F10	8.5	46.75	56	11.625	COMB. 50	SYP	FAB. REQ'D	1886.50
1	F11	8.5	46.75	38	5	COMB. 50	SYP	FAB. REQ'D	1272.15
1	F12	8.5	48.125	56	11.625	COMB. 50	SYP	FAB. REQ'D	1941.98
24	ST1	6.75	5.5	14	9.75	COMB. 50	SYP	FAB. REQ'D	1099.83

. SCOPE

This standard is intended to augment, or support, design requirements that may be issued by the owner.

2. DEFINITIONS AND ABBREVIATIONS

AITC American Institute of Timber Construction; **APA/EWS** American Wood Systems members, a related Corp. of the American Plywood Association; **AWPA** American Wood Preservers Association, **NDS** National Design Specifications. **TTE** tag this end **UNO** unless noted otherwise **DAC** Dimensions are cumulative **NIC** not in contract

3. CODES AND STANDARDS

In addition to complying with all pertinent codes and regulations, materials shall comply with the following:

3.1 American Association of State Highway and Transportation Officials (AASHTO)

3.2 American National Standard for Wood Products-Structural Glued Laminated Timber ANSI A190. 1-1992

3.3 Proof-loading system for laminated finger joints to be in accordance with ANSI A190.1

4. CERTIFICATIONS

4.1 Certifications required by the laminator:

4.1.1 The AITC or APA/EWS Certificate of Conformance with ANSI A190.1-1992

4.2 Preservative treatment certification required (if applicable)

4.2.1 Certificate of treatment furnished by a certified AWPA treating facility

5. STRUCTURAL DESIGN

The structure shall be designed to carry the following loads:

5.1 Dead Load

5.2 Live Load H-20

6. MATERIALS

6.1 Lumber-intended for structural use with design stress shall be graded in conformance with accepted standards for allowable unit stresses (See AASHTO Section 13)

6.2 Grade-Industrial Appearance Grade as per AITC 110.

6.3 All lumber to be Incised Southern Yellow Pine. Glulam as per AITC 117-98.

6.4 Adhesive: all members bonded with exterior "wet-use" conforming to ASTM D 2559

7. PRESERVATIVE TREATMENT

7.1 All GLU-lam material to be treated with the preservative Pentachlorophenol in Type A oil conforming to AWPA Standard C-28,C-14, P-8 and P-9. Retention level shall be 0.60 PCF. Final steaming and vacuuming shall be performed.

8. HARDWARE

8.1 All bolts and nuts shall galvanized (A-153) steel ASTM A307 , unless noted otherwise,

8.2 Timber Washers to be galvanized cast iron or malleable iron.

8.3 "C" Clips shall be galvanized cast iron Grade 30

9. MISC

9.1 LCI is not responsible for materials or manufacturing not shown on these drawings.

9.2 Contractor is responsible for verification of all sizes, quantities and dimensions shown on shop drawings

9.3 For wearing surface information, refer to the USDA Forest Service manual "Timber bridges -Design, Construction, Inspection and Maintenance" Chapter 11, for types and applications.

STRUCTURES COPY

RECEIVED
CK'D BY EJC OK'D BY RSY
JUL 2 7 2007
RESUBMIT ____ APPROVED ✓
BY CPW DATE 7/31/07

LAMINATED CONCEPTS INC.
P.O. BOX 369
3310 STATE RTE 352
BIG FLATS, NEW YORK 14814
PHONE: 607.562.8110
FAX. 607.562.8105

DRAWN	DATE
MSS	6/4/07
CHK'D	DATE
APP'D	DATE
SCALE	

REVISIONS

NO.	DATE	BY	REVISIONS
1	7/17/07	ss	revise panels
2	7/24/07	ss	revise panels

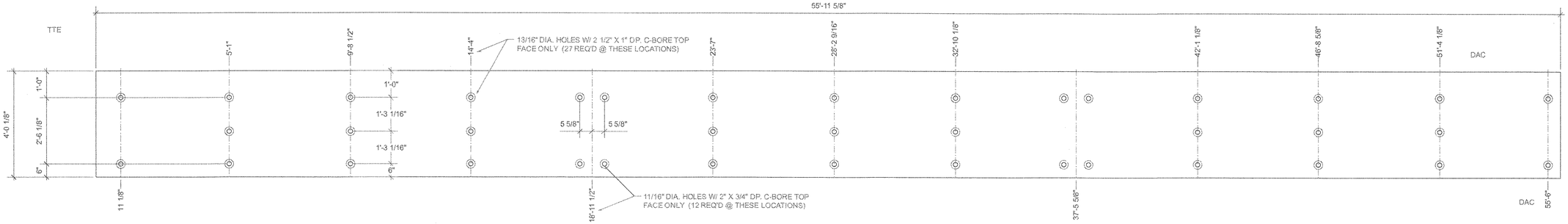
PROJECT NAME
BHO-BTN 2005 (1) BRIDGE NO. 26
TOWNS OF NEW HAVEN AMD WEYBRIDGE
COUNTY OF ADDISON, VERMONT

PROJECT JOB NO.
2107-150-LT

PREPARED FOR
CCS CONSTRUCTORS, LLC
MORRISVILLE, VT

SHEET NO.
1 OF 4

066-6D



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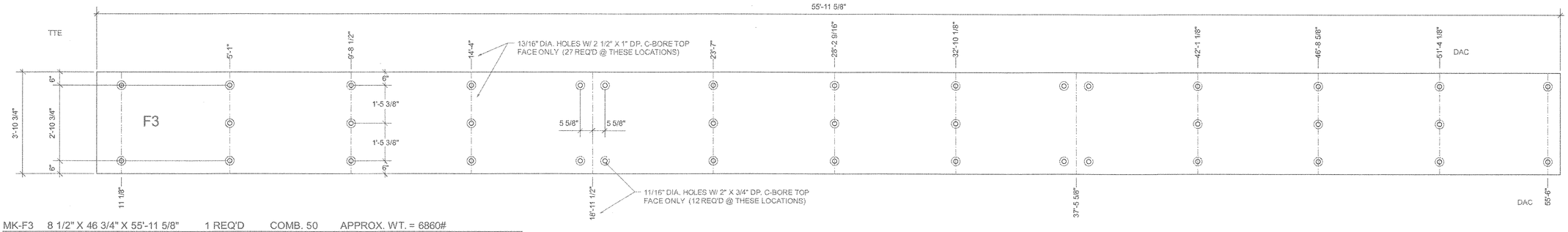

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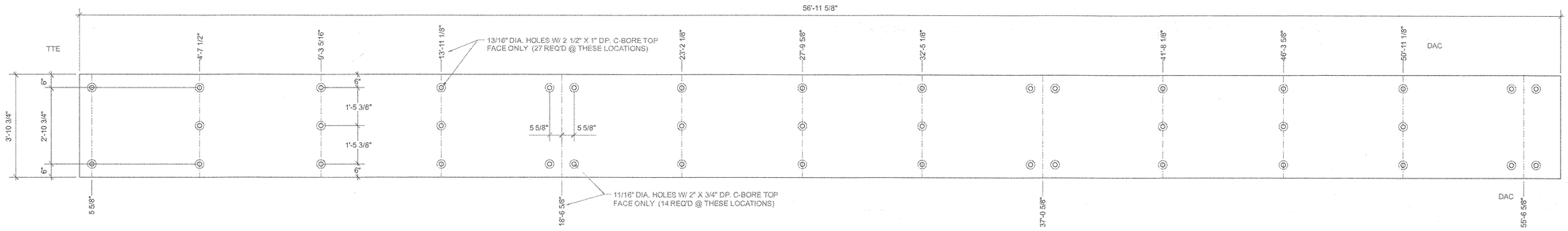

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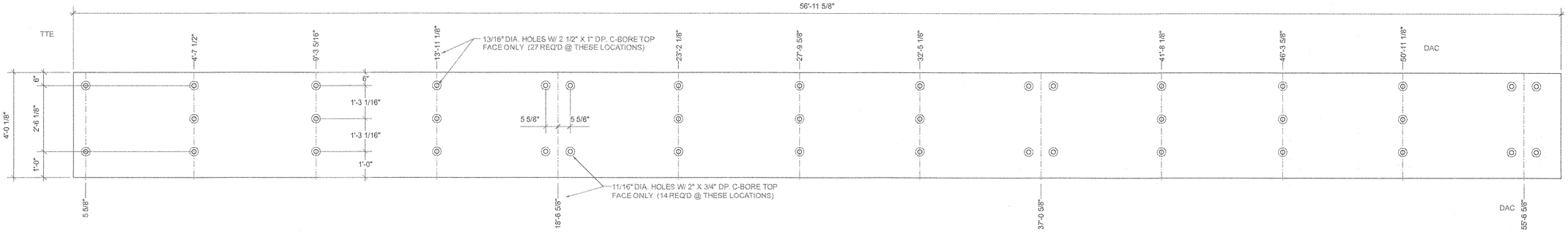

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RECEIVED
CK'D BY BK CK'D BY JRS
JUL 2 7 2007
RESUBMIT APPROVED
BY CPW DATE 7/31/07

LAMINATED CONCEPTS INC.
P.O. BOX 369
3310 STATE RTE 352
BIG FLATS, NEW YORK 14814
PHONE: 607.562.8110
FAX. 607.562.8105

DRAWN	DATE
MSS	6/4/07
CHK'D	DATE
APP'D	DATE
SCALE	

REVISIONS

NO.	DATE	BY	REVISIONS
1	7/17/07	ss	revise panels
2	7/24/07	ss	revise panels

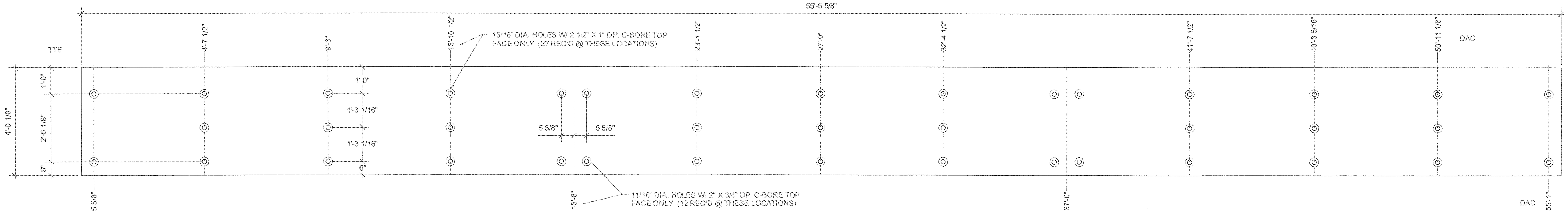
PROJECT NAME
BHO-BTN 2005 (1) BRIDGE NO. 26
TOWNS OF NEW HAVEN AMD WEYBRIDGE
COUNTY OF ADDISON, VERMONT

PROJECT JOB NO.
2107-150-LT

PREPARED FOR
CCS CONSTRUCTORS, LLC
MORRISVILLE, VT

SHEET NO.
2 OF 4

067-GD



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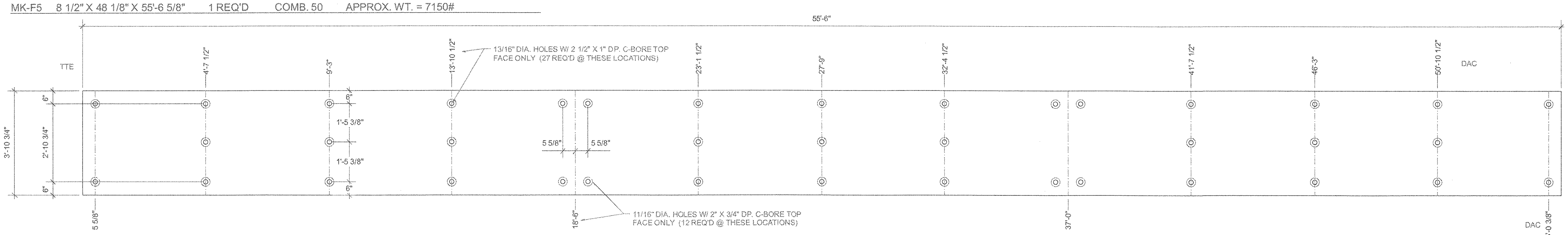

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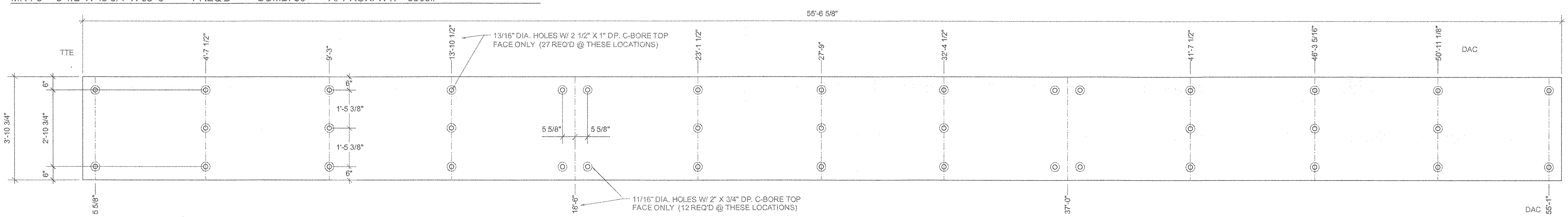

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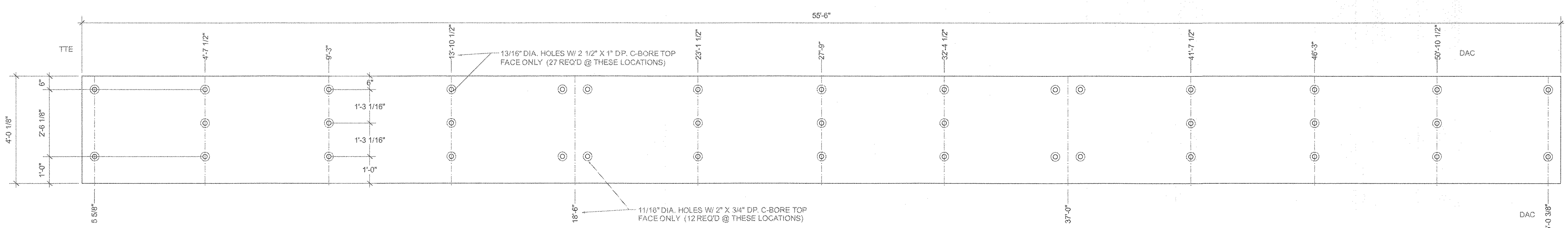


MK-F8 8 1/2" X 48 1/8" X 55'-6" 1 REQ'D COMB. 50 APPROX. WT. = 7150#

RECEIVED
CK'D BY EK OK'D BY
JUL 27 2007
RESUBMIT ___ APPROVED ✓
BY GPW DATE 7/31/07

LCI
LAMINATED CONCEPTS INC.

P.O. BOX 369
3310 STATE RTE 352
BIG FLATS, NEW YORK 14814
PHONE: 607.562.8110
FAX: 607.562.8105

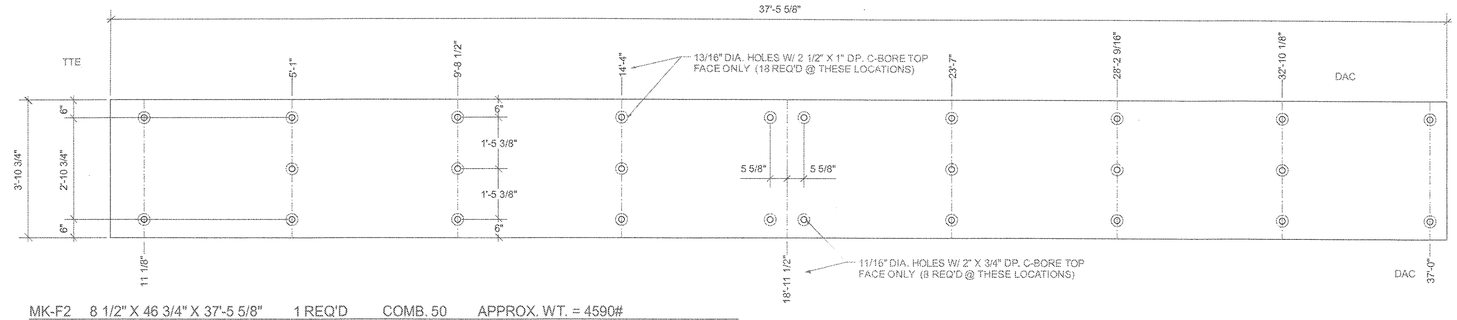
DRAWN	DATE
MSS	6/4/07
CHK'D	DATE
APP'D	DATE
SCALE	

REVISIONS

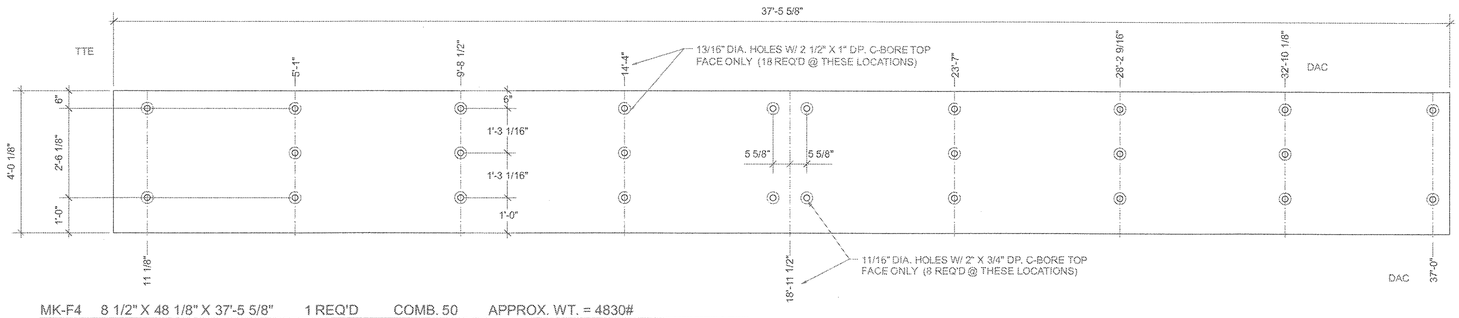
NO.	DATE	BY	REVISIONS
1	7/17/07	ss	revise panels
2	7/24/07	ss	revise panels

PROJECT NAME	PROJECT JOB NO.
BHO-BTN 2005 (1) BRIDGE NO. 26 TOWNS OF NEW HAVEN AMD WEYBRIDGE COUNTY OF ADDISON, VERMONT	2107-150-LT
PREPARED FOR	SHEET NO.
CCS CONSTRUCTORS, LLC MORRISVILLE, VT	3 OF 4

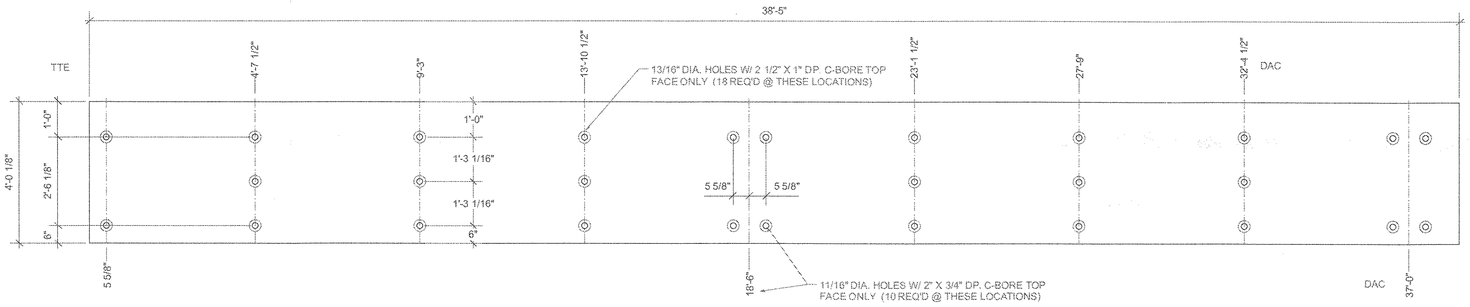
068-GD



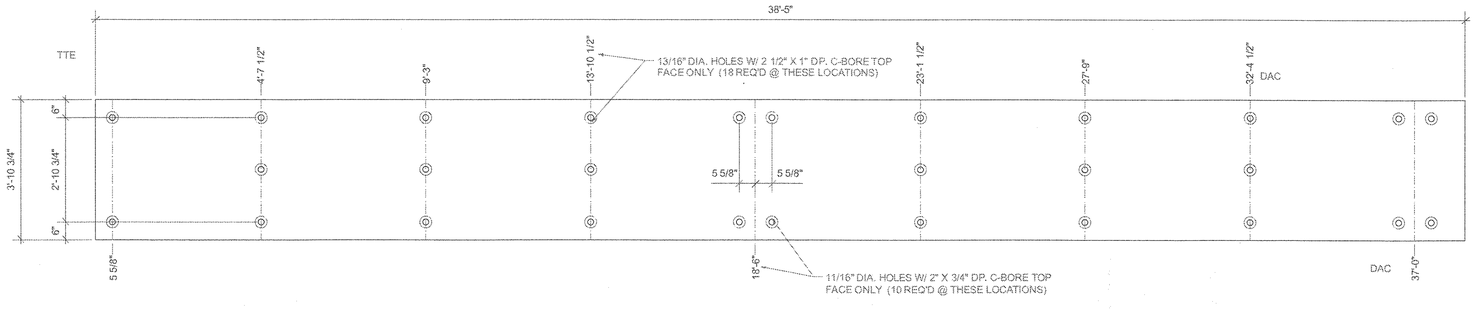
MK-F2 8 1/2" X 46 3/4" X 37'-5 5/8" 1 REQ'D COMB. 50 APPROX. WT. = 4590#



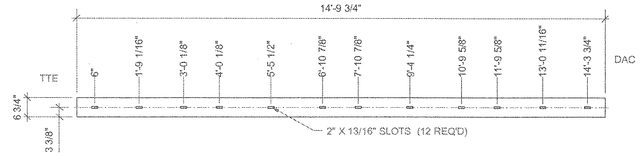
MK-F4 8 1/2" X 48 1/8" X 37'-5 5/8" 1 REQ'D COMB. 50 APPROX. WT. = 4830#



MK-F9 8 1/2" X 49 1/8" X 38'-5" 1 REQ'D COMB. 50 APPROX. WT. = 4830#



MK-F11 8 1/2" X 46 3/4" X 38'-5" 1 REQ'D COMB. 50 APPROX. WT. = 4600#



MK-ST1 6 3/4" X 5 1/2" X 14'-9 3/4" 24 REQ'D COMB. 50 APPROX. WT. = 172#

RECEIVED
CK'D BY EW OK'D BY KSY
JUL 2 7 2007
RESUBMIT ____ APPROVED ____
BY CPW DATE 7/31/07

LAMINATED CONCEPTS INC.
P.O. BOX 369
3310 STATE RTE 352
BIG FLATS, NEW YORK 14814
PHONE: 607.562.8110
FAX. 607.562.8105

DRAWN	DATE
MSS	6/4/07
CHK'D	DATE
APP'D	DATE
SCALE	

REVISIONS

NO.	DATE	BY	REVISIONS
1	7/17/07	ss	revise panels
2	7/24/07	ss	revise panels

PROJECT NAME
BHO-BTN 2005 (1) BRIDGE NO. 26
TOWNS OF NEW HAVEN AMD WEYBRIDGE
COUNTY OF ADDISON, VERMONT

PROJECT JOB NO.
2107-150-LT

PREPARED FOR
CCS CONSTRUCTORS, LLC
MORRISVILLE, VT

SHEET NO.
4 OF 4

069-GD

D.S. BROWN
The D.S. Brown Company • 300 East Cherry Street • North Baltimore, Ohio 45872-0158
Phone: (419) 257-3561 • General Fax: (419) 257-2200 • Engineering Fax: (419) 257-0332

RFI

DATE: 10/19/07
RFI #: NCR-04

The D.S. Brown Company
300 E. Cherry Street
North Baltimore, Ohio 45872
419.257.3561
Fax: 419.257.2200
Engineering Fax: 419.257.0332
E-mail: dsb@dsbrown.com
www.dsbrown.com

Chaska Operations
4201 Norex Drive
Chaska, Minnesota 55318
952.368.3000
Fax: 952.448.7000

International Division
7 Temasek Boulevard
#16-03 Suntec Tower One
Singapore 038987
+65.333.0911
Fax: +65.333.0922
E-mail:
dsbrown@mbox2.singnet.com.sg

FROM: John Bettin
DS Brown Co
300 East Cherry Street
North Baltimore, Ohio 45872
jbettin@dsbrown.com

TO: Andy White
CCS Constructors
138 Munson Ave
Morrisville, VT 05661
awhite@contractorscraneservc.com

Direct Dial: 952-693-1099
FAX: 419-257-0332

PHONE:
FAX:

REFERENCE: New Haven-Weybridge
Non-Conformance to Post Base Plate

DSB JOB #: 20388-1206

INFORMATION REQUESTED:
Ref. Attached sketch SK-NC04-01 & DSB shop drawing sheet 01
A mistake was made to the length of the ¼" thick anchor plates 1a1 on assembly 1B shown on DSB shop drawing sheet 01. The length of these plates were inadvertently changed in BOM after the initial approval and we fabricated them to 1'-3" in lieu of the 1'-4" shown on the detail. Since the rods and holes were dimensionally worked off the center of the plate, unfortunately this error was not discovered until after they were fabricated and set to ship. Since the timing of this project has become critical we are asking for acceptance of the anchors as shown on attached sketch SK-NC04-01.

Please call if you have any questions.

- Thank You

REPLY: _____

FROM: _____

Approved
CPW
10/19/07

070-BR

32 – ANCHORS – 1B

SHEET: SK–NC04–01

071-BR

GENERAL NOTES:

1.) MATERIALS AND WORKMANSHIP SHALL IN ACCORDANCE WITH THE STATE OF VERMONT AGENCY OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006" AS AMMENDED BY THE LATEST REVISIONS, THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, SEVENTEENTH EDITION.

2.) FABRICATION SHALL BE PERFORMED IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, ANSI/AASHTO/AWS D1.5 AND THE CURRENT INTERIM SPECIFICATIONS AS MODIFIED BY VTRANS SPEC. 506.03.

3.) RAILING MATERIALS SHALL BE ASTM A709 GR 50, UNLESS NOTED OTHERWISE. PER VTRANS SPECIFICATION 732.03(a), (W6 X 25 POSTS SHALL BE CVN TESTED PER 25 FT. LBS. @ 40°F). △A

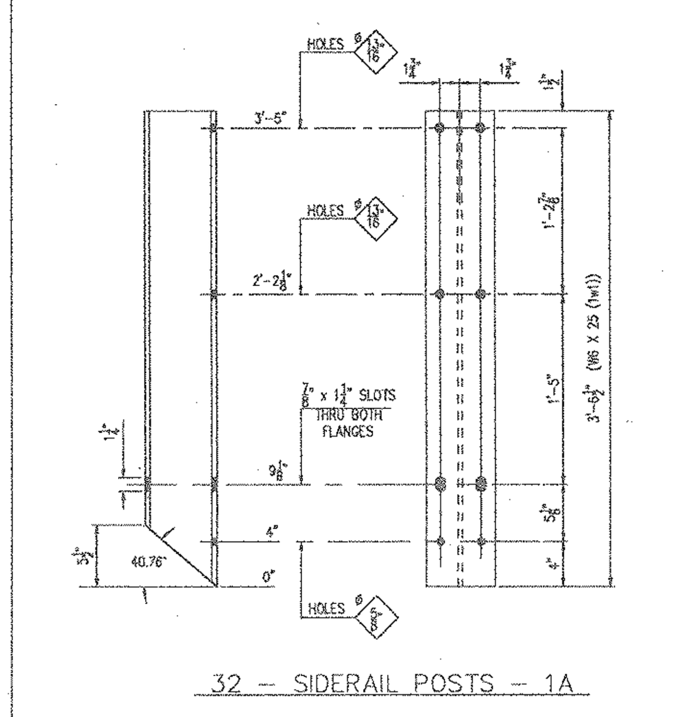
- HOLLOW STRUCTURAL SHAPES TO CONFORM WITH ASTM A500, GRADE B IN ACCORDANCE WITH VTRANS SPECIFICATION 732.03(a), (HSS SHALL BE CVN TESTED PER 15 FT. LBS. @ 40°F). △A
- PIPE SHALL BE ASTM A53, GRADE B.
- HARDWARE TO BE IN ACCORDANCE WITH ASTM F568M, CLASS 4.6 (ASTM A307), U.N.O.
- HIGH STRENGTH HARDWARE SHALL BE IN ACCORDANCE WITH AASHTO M164 TYPE 1 (ASTM A325) OR (ASTM 449) AND SHALL BE SUPPLIED IN ACCORDANCE TO VTRANS SPEC. 714.05. WHICH INCLUDES ROCAP, PROOF AND WEDGE TESTING.
- THREADED ROD FOR POST ANCHORAGE SHALL SHALL CONFORM TO ASTM F 1554 GRADE 55 "WELDABLE STEEL".

4.) ALL HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M-232 (ASTM A-153).

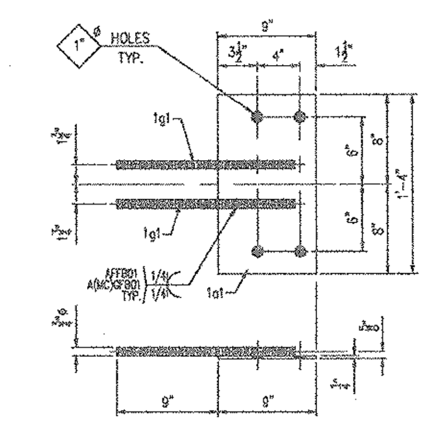
5.) RAILING COMPONENTS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M-111 (ASTM A123), UNLESS NOTED OTHERWISE. RADIUS ALL EDGES 1/16" AND BLAST CLEAN PER SSPC-SP 8 PRIOR TO GALVANIZING AND REPAIR GALVANIZING PER ASTM A780.

6.) FABRICATION SHALL TAKE PLACE IN A FACILITY WITH A MINIMUM AISC CATEGORY III CERTIFICATION OR BE APPROVED BY VTRANS. NON-CERTIFIED FACILITIES MUST SATISFY THE REQUIREMENTS OF VTRANS SPEC. 506.03

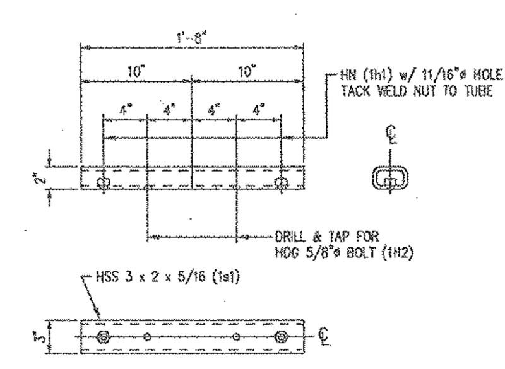
THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO FABRICATION TO ENSURE ACCURACY OF DESIGN PLANS. STAMPED APPROVED DRAWINGS ASSUME DIMENSIONS HAVE BEEN VERIFIED BY CONTRACTOR.



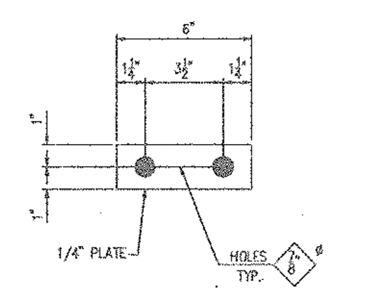
32 – SIDERAIL POSTS – 1A



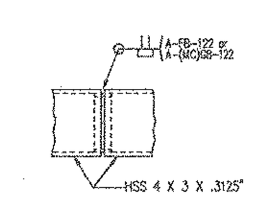
32 – ANCHORS – 1B



36 – INSERTS – 1H



32 – PLATE WASHERS – 1C



OPTIONAL TUBE SHOP SPLICE

	MK	QTY.	DESCRIPTION	MATERIAL	LENGTH	REMARKS	PART NO.
△A	1A	32	SIDERAIL POSTS			3'-6 1/2"	
	1w1	32	W6X25	A709 GR 50 OR A992	3'-6 1/2	SHAPE CUT; A123-HDG; CVN	
	1B	32	ANCHORS				
	1a1	32	1/4 X 9	A709 GR 50	1'-3	A123-HDG	
	1g1	64	3/4⌀ X 16 THREADED ROD	F1554 GR 55		WELDABLE STEEL; A153-HDG	
	1C	32	PLATE WASHERS			0'-6"	
	1c1	32	1/4 X 2	A709 GR 50	0'-6	A123-HDG	
	1H	36	INSERTS			1'-8"	
	1h1	72	5/8⌀ HEX NUT	A563 GR A		TAPPED OVERSIZED; PLAIN; NONE	
	1s1	36	HSS 3 X 2 X 5/16	A500 GR B	1'-8	SEE GENERAL NOTES FOR [illegible]; A123-HDG	
	1B1	136	HEX NUTS				
	1b1	136	3/4⌀ HEX NUT	A563 GR A		(128); FOR POST ANCHORAGE; A153-HDG	
	1B2	70	FLAT WASHERS				
	1b2	70	3/4⌀ FLAT WASHER	F844		(64); FOR POST ANCHORAGE; A153-HDG	
	1F1	140	HEX BOLTS				
	1f1	140	7/8⌀ X [illegible] HEX HEAD CAP SCREW	A325 OR A449		(128) 2.5" THREAD [illegible]; A153-HDG; ROCAP	
	1F2	140	FLAT WASHERS				
	1f2	140	7/8⌀ FLAT WASHER	F436		(128); A153-HDG; ROCAP	
	1F3	140	MALLEABLE IRON WASHERS				
	1f3	140	7/16 X 7/8⌀ WASHER PLATE	--		[illegible]	
	1F4	140	HEX NUTS				
	1f4	140	7/8⌀ HEX NUT	A563 DH		(128); A153-HDG; ROCAP	
	1H2	80	HEX BOLTS				
	1h2	80	5/8⌀ X 1 1/4 HEX HEAD CAP SCREW	A307 GR A		(72) INSERT HARDWARE; A153-HDG	
	1H3	80	HEX BOLTS				
	1h3	80	5/8⌀ X 1 3/4 HEX HEAD CAP SCREW	A307 GR A		(72) INSERT HARDWARE; A153-HDG	
	1H4	150	FLAT WASHERS				
	1h4	150	5/8⌀ FLAT WASHER	F844		(142) INSERT HARDWARE; A153-HDG	
△A	1H5	35	PIPE SPACERS				
	1h5	35	P 3/4	A53 SCH 40	0'-0 1/2	(32) INSERT HARDWARE; A123-HDG	
	1M1	140	RAIL BOLTS				
	1m1	140	[illegible]	A307 GR A		(128) 1 3/4" THREAD; A153-HDG; NONE	
	1M2	140	FLAT WASHERS				
	1m2	140	3/4⌀ FLAT WASHER	F844		(128); A153-HDG; NONE	
	1M3	140	LOCK NUT				
	1m3	140	3/4⌀ HEX NUT	A563-A LOCK NUT		(128) LOCK NUT; A153-HDG; NONE	
	1P1	70	LAG SCREWS				
	1p1	70	1/2⌀ X 6 HEX HEAD CAP SCREW	A307 GR A		[illegible]	
	1P2	70	LOCK WASHERS				
	1p2	70	1/2⌀ LOCK WASHER	F844		[illegible]	
△A	1T1	235	LATTICE BOLTS				
	1t1	235	[illegible] BOLT	A307 GR A		(224) FULL THREAD; A153-HDG; NONE	
△A	1T2	235	FLAT WASHERS				
	1t2	235	3/8⌀ FLAT WASHER	F844		(224); A153-HDG	

NOTE: ALL MATERIAL SPECIFICATION DESCRIPTIONS ARE ASTM, UNLESS OTHERWISE NOTED.

REV.	DESCRIPTION	DATE	DET.	CKD.
△A	PER APPROVAL	7/20/07	JEB	TSF

D.S. BROWN

THE D.S. BROWN COMPANY
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3561
FAX: 419.257.0332
WWW.DSBROWN.COM

LOCATION -- TOWNS OF NEW HAVEN & WEYBRIDGE
BRIDGE -- 26
PROJECT -- ROUTE NO. TH7/T1, CL3
F.A.P. NO -- BHO-BTN 2005(1)
P.O. NO -- --
DESIGNER -- VERMONT DEPARTMENT OF TRANSPORTATION
CUSTOMER -- CONTRACTORS CRANE SERVICE, LLC

ITEM	QUANTITY
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POST DETAILS & GENERAL NOTES
ADDISON COUNTY, VT

SCALE	DRAWN BY	CHECKED BY	DATE	
N.T.S.	JEB	TSF	6/15/07	--
PROJECT NUMBER	PRODUCT CODE	REVISION	SHEET	
20388	1206	1	01	

Released for Fabrication - Tue, 21 Aug 2007 - 9:19

072-BR

VERMONT

State of Vermont
PDD/Structures Design Section
One National Life Drive
Montpelier, VT 05633-5001
www.aot.state.vt.us

Agency of Transportation

[phone] 802-828-2621
[fax] 802-828-3566
[tnd] 800-253-0191

August 17, 2007

D. S. Brown Co.
300 E. Cherry Street
North Baltimore, OH 45872

Re: New Haven – Weybridge BHO BTN 2005(1) – TH 7, Bridge 26

The following Railing details (2 Tube and Lattice Railing) [Item #525.31, Bridge Railing, Galvanized 2 Rail Box Beam] for the above project (Vendor's Job #20388) that were received in this office on August 7, have been reviewed and are being returned herewith.

Sheets 2 and 3 for the 2 Tube Railing are approved as noted. Please see comments in red on these sheets. All other sheets and the weld procedures are approved.

There shall be no fabrication done until all drawings and welding procedures are approved. You must provide written notice to this office as to the date fabrication represented by these drawings will begin. That notice must be received at least seven days prior to that date, as per Specification 506.03. Any material fabricated prior to the notification date is subject to rejection without further cause.

Sincerely,

Christopher P. Williams, P.E.
Structures Project Manager

Attachments

cc: [X] Dale Norton – Resident Engineer
[X] CCS Constructors - Contractor
[X] Steel Inspector – Jeff Clark
[X] Construction Section - letter only
[X] Materials & Research (C&IA Unit) - letter only
[X] Project Files

073-BR

VTrans Working to Get You There
Vermont Agency of Transportation

DSBROWN

Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: A-(MC)GB--122 Date Issued: 11-30-04 Revision No: 0 Rev. Date: ____

Contractor (Fabricator) D. S. Brown Company Prepared by: James R. Connor, Quality Assurance Manager

2. Qualified in accordance with: AWS D1.5- 2002 (5.12.1)
   Referenced PQR No(s). PQR-(MC)GMAW-01(04) __ , __ , ____
   Referenced FWST No(s). N/A , N/A , __ , __
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W, A500B Tube
4. Material Thickness (es) Unlimited
5. Welding process GMAW
6. Manual [ ] , machine [ ] , or semiautomatic [X]
7. Position(s) of welding 1G
8. Filler metal specification AWS A5.18
9. Filler metal class and brand name E70C-6M Corex Metal-Core Maxim
10. Flux class & brand N/A , Type N/A
11. Shielding gas 75% Ar / 25% CO2 Flow rate 45 CFH
12. Single pass [X] Or multiple pass [X]
13. Single arc [X] Or multiple arc [ ]
14. Welding Current DCEP
15. Polarity Reverse
16. Welding progression stringers
17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)
18. Postheat treatment N/A
19. Calculated Heat Input (KJ/In) Min 30.6 Kj/in Max 51.1 Kj/in
20. Electrode extension (electrical stickout) 3/4"

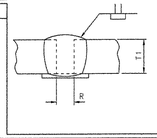
For DOT Approval

VTRANS RECEIVED
JUN 2 1 2007

OK'D BY ____ OK'D BY JWC
RESUBMIT ____ APPROVED ✓
BY ____ DATE 7-23-07

Weld size (In)	Pass No(s).	Electrode Size (In)	Welding Process Variables AMPS/WFS*	VOLTS	Travel Speed (IPM)
CJP	ALL	.052"	265-320	31-34.5	13-16

Joint Detail (Groove)
Show all dimensions, weld sizes, passes, and AWS symbols



Notes:
T_1 = 3/8"(10mm) MAX
R = 1/8" (3mm) MIN T1 MAX

DO NOT REMOVE BACKING FROM TUBE SPLICES

CCS Constructors LLC
138 Munson Avenue
Morrisville, VT 05661
Ph: 802-888-7701 f: 802-888-4746

* Wire feed speed may be used along with amperage (include chart)

Prepared By: James R. Connor DSB QA Manager

Project: Route No. TH 7/11, CL3

DSB Job: 20388-1206

Preheat and Interpass Temperature Chart		
Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450°F
>3/4" to ≤1.5"	70°F	450°F
>1.5" to ≤2.5"	150°F	450°F
>2.5"	225°F	450°F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.

074-BRWP

DSBROWN

Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: **A-(MC)GFB-01** Date Issued: 8-14-06 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D. S. Brown Company Prepared by: James R. Connor, Quality Assurance Manager

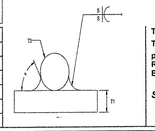
1. Non-Fracture Critical [X] Fracture Critical [ ] WPS Expiration Date: _____
2. Qualified in accordance with: AWS D1.5- 2002 (5.12.1)
   Referenced PQR No(s). PQR-(MC)GMAW-01(04) __ , __ , ____
   Referenced FWST No(s). PQR-(MC)GMAW-FWST-01A(04) , PQR-(MC)GMAW-FWST-01B(04) , __ , __
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W, CF1018, CF1040, A615
4. Material Thickness (es) Unlimited
5. Welding process GMAW
6. Manual [ ] , machine [ ] , or semiautomatic [X]
7. Position(s) of welding 1G, 2G
8. Filler metal specification AWS A5.18
9. Filler metal class and brand name E70C-6M Corex Metal-Core Maxim
10. Flux class & brand N/A , Type N/A
11. Shielding gas 75% Ar / 25% CO2 Flow rate 45 CFH
12. Single pass [X] Or multiple pass [X]
13. Single arc [X] Or multiple arc [ ]
14. Welding Current DCEP
15. Polarity Reverse
16. Welding progression stringers
17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)
18. Postheat treatment N/A
19. Calculated Heat Input (KJ/In) Min 30.6 Kj/in Max 51.1 Kj/in
20. Electrode extension (electrical stickout) 3/4"

For DOT Approval

VTRANS
RECEIVED
CK'D BY _____ OK'D BY JWH
JUN 2 1 2007
RESUBMIT _____ APPROVED V
BY _____ DATE 7-23-07

Weld Size (in)	Pass No(s).	Electrode Size (in)	Welding Process Variables AMPS/WFS*	VOLTS	Travel Speed (IPM)
**1/4"	1	.052"	265-320	31-34.5	13-16
5/16"	1	.052"	265-320	31-34.5	13-16
3/8"	1-3	.052"	265-320	31-34.5	13-16
7/16"	2-4	.052"	265-320	31-34.5	13-16
1/2"	4-6	.052"	265-320	31-34.5	13-16
5/8"	5-7	.052"	265-320	31-34.5	13-16
3/4"	6-8	.052"	265-320	31-34.5	13-16

Joint Detail (Flare Bevel)
Show all dimensions, weld sizes, passes, and AWS symbols



T_1 = UNLIMITED
T_2 = RB (Type and Dia. per dwg.)
R = 0
Bevel = NATURAL

S = WELD SIZE

* Wire feed speed may be used along with amperage (include chart)

Prepared By: James R Connor DSB QA Manager

Project: Route No. TH 7/11, CL3

DSB Job: 20388-1206

Preheat and Interpass Temperature Chart

Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450°F
>3/4" to ≤1.5"	70°F	450°F
>1.5" to ≤2.5"	150°F	450°F
>2.5"	225°F	450°F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.

075-BRWP

DSBROWN

Production Joint Welding Procedure Specification (D1.1-04)

Procedure No: **A-(MC)GSB-11(AK)** Date Issued: 12-7-04 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D. S. Brown Company Prepared by: James R. Connor, Quality Assurance Manager

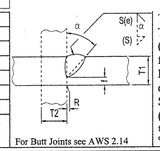
1. Non-Fracture Critical [X] Fracture Critical [ ] WPS Expiration Date: _____
2. Qualified in accordance with: AWS D1.1- 2004
   Referenced PQR No(s). PQR-(MC)GMAW-01(04) __ , __ , ____
   Referenced FWST No(s). PQR-(MC)GMAW-FWST-01A(04) , PQR-(MC)GMAW-FWST-01B(04) , __ , __
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W, ASTM A500B,A53 pipe
4. Material Thickness (es) Unlimited
5. Welding process GMAW
6. Manual [ ] , machine [ ] , or semiautomatic [X]
7. Position(s) of welding 1G, 2G, 1F, 2F
8. Filler metal specification AWS A5.18
9. Filler metal class and brand name E70C-6M Corex Metal-Core Maxim
10. Flux class & brand N/A , Type N/A
11. Shielding gas 75% Ar / 25% CO2 Flow rate 45 CFH
12. Single pass [X] Or multiple pass [X]
13. Single arc [X] Or multiple arc [ ]
14. Welding Current DCEP
15. Polarity Reverse
16. Welding progression stringers
17. Root treatment Clean to bright sound metal or per AWS D1.1
18. Postheat treatment N/A
19. Calculated Heat Input (KJ/In) Min 30.6 Kj/in Max 51.1 Kj/in
20. Electrode extension (electrical stickout) 3/4"

For DOT Approval

VTRANS
RECEIVED
CK'D BY _____ CK'D BY _____
JUN 2 1 2007
RESUBMIT _____ APPROVED
BY DATE 7-23-07

Weld size (In) (S)	Pass No(s).	Electrod e Size (In)	Welding Process Variables AMPS/WFS*	VOLTS	Travel Speed (IPM)
1/4"	1	.052"	265-320	31-34.5	13-16
5/16"	1	.052"	265-320	31-34.5	13-16
3/8"	1-2	.052"	265-320	31-34.5	13-16
1/2"	3-4	.052"	265-320	31-34.5	13-16
5/8"	4-6	.052"	265-320	31-34.5	13-16
3/4"	5-7	.052"	265-320	31-34.5	13-16
7/8"	6-9	.052"	265-320	31-34.5	13-16
1"	7-10	.052"	265-320	31-34.5	13-16

Joint Detail (TC-P4-GF)
Show all dimensions, weld sizes, passes, and AWS symbols



T1 = ¼" min.
T2 = Varies
(E) = S-1/8"
f = 1/8" min.
R = 0
α = 45°
S = size groove
(S) = size of reinforcing fillet(if required) not to exceed ¼" in corner & T jts.

For Butt Joints see AWS 2.14

* Wire feed speed may be used along with amperage (include chart)

Prepared By: James R. Connor DSB QA Manager

Project: Route No. TH 7/11, CL3

DSB Job: 20388-1206

Preheat and Interpass Temperature Chart

Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450°F
>3/4" to ≤1.5"	70°F	450°F
>1.5" to ≤2.5"	150°F	450°F
>2.5"	225°F	450°F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.

076-BRWP

DSBROWN

Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: **A-FB-122** Date Issued: 11-24-03 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D. S. Brown Company Prepared by: James R. Connor, Quality Assurance Manager

1. Non-Fracture Critical [X] Fracture Critical [ ] WPS Expiration Date: _____
2. Qualified in accordance with: AWS D1.5- 2002 (5.12.1)
   Referenced PQR No(s). PQR-FCAW-01-03 __ , __ , _____
   Referenced FWST No(s). N/A , N/A , __ , _____
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W, 500 B Tube
4. Material Thickness (es) Unlimited
5. Welding process FCAW
6. Manual [ ] , machine [ ] , or semiautomatic [X]
7. Position(s) of welding 1G
8. Filler metal specification AWS A5.20
9. Filler metal class and brand name E71T-1, Lincoln Outershield Elite)
10. Flux class & brand N/A , Type N/A
11. Shielding gas 100% CO2 Flow rate 45 CFH
12. Single pass [X] Or multiple pass [ ]
13. Single arc [X] Or multiple arc [ ]
14. Welding Current DCEP
15. Polarity Reverse
16. Welding progression Stringers
17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)
18. Postheat treatment N/A
19. Calculated Heat Input (KJ/In) Min 31.20 Kj/in Max 50.72 Kj/in
20. Electrode extension (electrical stickout) 3/4"

For DOT Approval

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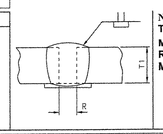
CK'D BY _____ OK'D BY JW
JUN 2 1 2007
RESUBMIT _____ APPROVED ✓
BY _____ DATE 7-23-07

Weld size (in)	Pass No(s).	Electrode Size (in)	Welding Process Variables: AMPS/WFS*	Welding Process Variables: VOLTS	Travel Speed (IPM)
CJP	All	1/16"	260-310	26-30	11-13

Joint Detail (B-L1a-GF)

Show all dimensions, weld sizes, passes, and AWS symbols

DO NOT REMOVE BACKING FROM TUBE SPLICES



Notes:
T_1 = 3/8"(10mm) MAX
R = 1/8" (3mm) MIN T1 MAX

* Wire feed speed may be used along with amperage (include chart)

Prepared By: James R Connor DSB QA Manager

Project: Route No. TH 7/11, CL3

DSB Job: 20388-1206

Preheat and Interpass Temperature Chart

Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450 °F
>3/4" to ≤1.5"	70°F	450 °F
>1.5" to ≤2.5"	150°F	450 °F
>2.5"	225°F	450 °F

DSB BRWP

DSBROWN

Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: **A-FFB-01** Date Issued: 8-14-06 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D.S. Brown Company Prepared by: James R. Connor, Quality Assurance Manager

1. Non-Fracture Critical [X] Fracture Critical [ ] WPS Expiration Date: _____
2. Qualified in accordance with: AWS D1.5- 2002 (5.12.1)
   Referenced PQR No(s). PQR-FCAW-01-03 __ , __ , ____
   Referenced FWST No(s). PQR-FCAW-FWST-01(03) , PQR-FCAW-FWST-01A(03) , __ , ____
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W, A500b to CF1018, CF1040, A615 (Rebar)
4. Material Thickness (es) Unlimited
5. Welding process FCAW
6. Manual [ ] , machine [ ] , or semiautomatic [X]
7. Position(s) of welding 1G,2G,1F, 2F
8. Filler metal specification AWS A5.20
9. Filler metal class and brand name E71T-1 Lincoln Outershield Elite)
10. Flux class & brand N/A , Type N/A
11. Shielding gas 100% CO2 Flow rate 45 CFH
12. Single pass [X] Or multiple pass [X]
13. Single arc [X] Or multiple arc [ ]
14. Welding Current DCEP
15. Polarity Reverse
16. Welding progression stringers
17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)
18. Postheat treatment N/A
19. Calculated Heat Input (KJ/In) Min 31.20 Kj/in Max 50.72 Kj/in
20. Electrode extension (electrical stickout) 3/4"

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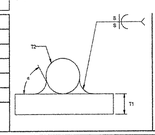
BY DATE 7-23-07

Weld size (In)	Pass No(s).	Electrode Size (In)	Welding Process Variables AMPS/WFS*	Welding Process Variables VOLTS	Travel Speed (IPM)
**1/4"	1	1/16"	260-310	26-30	11-13
5/16"	1	1/16"	260-310	26-30	11-13
3/8"	2-3	1/16"	260-310	26-30	11-13
7/16"	3-5	1/16"	260-310	26-30	11-13
1/2"	4-6	1/16"	260-310	26-30	11-13
5/8"	5-7	1/16"	260-310	26-30	11-13
3/4"	6-8	1/16"	260-310	26-30	11-13

Joint Detail (Flare Bevel)
Show all dimensions, weld sizes, passes, and AWS symbols



T_1 = UNLIMITED
T_2 = RB (Type and Dia. per dwg.)
R = 0 = NATURAL
S = WELD SIZE

* Wire feed speed may be used along with amperage (include chart)

Prepared By: James R. Connor DSB QA Manager

Project: Route No. TH 7/11, CL3

DSB Job: 20388-1206

Preheat and Interpass Temperature Chart

Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450 °F
>3/4" to ≤1.5"	70°F	450 °F
>1.5" to ≤2.5"	150°F	450 °F
>2.5"	225°F	450 °F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.

078-BRWP

DSBROWN

Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: **A-FSB-13** Date Issued: 12-11-03 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D. S. Brown Company Prepared by: James R. Connor, Quality Assurance Manager

1. Non-Fracture Critical [X] Fracture Critical [ ] WPS Expiration Date: _____
2. Qualified in accordance with: AWS D1.5- 2002 (5.12.1)
   Referenced PQR No(s). PQR-FCAW-01-03 __ , __ , ____
   Referenced FWST No(s). PQR-FCAW-FWST-01(03) , PQR-FCAW-FWST-01A(03) , __ , __
3. Material specification(s) Gr. 36, 50, 50W, ASTM A500B
4. Material Thickness (es) Unlimited
5. Welding process FCAW
6. Manual [ ] , machine [ ] , or semiautomatic [X]
7. Position(s) of welding 1G, 2G,(1F,2F)
8. Filler metal specification AWS A5.20
9. Filler metal class and brand name E71T-1 (Lincoln Outershield Elite)
10. Flux class & brand N/A , Type N/A
11. Shielding gas 100% CO2 Flow rate 45 CFH
12. Single pass [X] Or multiple pass [X]
13. Single arc [X] Or multiple arc [ ]
14. Welding Current DCEP
15. Polarity Reverse
16. Welding progression Stringers
17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)
18. Postheat treatment N/A
19. Calculated Heat Input (KJ/In) Min 31.20 Kj/in Max 50.72 Kj/in
20. Electrode extension (electrical stickout) 3/4"

For DOT Approval

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GK'D BY _____ CK'D BY _____

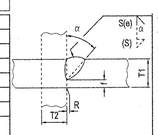
RESUBMIT _____ APPROVED ✓

BY _____ DATE 7-23-07

Weld size (D) (Effective) (S)	Pass No(s).	Electrode Size (In)	Welding Process Variables AMPS/WFS*	VOLTS	Travel Speed (IPM)
1/4"	1	1/16"	260-310	26-30	11-13
5/16"	1	1/16"	260-310	26-30	11-13
3/8"	2-3	1/16"	260-310	26-30	11-13
1/2"	3-4	1/16"	260-310	26-30	11-13
5/8"	4-6	1/16"	260-310	26-30	11-13
3/4"	5-7	1/16"	260-310	26-30	11-13
7/8"	6-8	1/16"	260-310	26-30	11-13
1"	7-9	1/16"	260-310	26-30	11-13

Joint Detail (TC-P4-GF)

Show all dimensions, weld sizes, passes, and AWS symbols



T1 = ¼" min.
T2 = Varies
(E) = S-1/8"
f = 1/8" min.
R = 0
α = 45°
S = size groove
(S) = size of reinforcing fillet(if required) not to exceed ¼" in corner & T jts.

For Butt Joints see AWS 2.14

* Wire feed speed may be used along with amperage (include chart)

Prepared By: James R. Connor DSB QA Manager

Project: Route No. TH 7/11, CL3

DSB Job: 20388-1206

Preheat and Interpass Temperature Chart

Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450 °F
>3/4" to ≤1.5"	70°F	450 °F
>1.5" to ≤2.5"	150°F	450 °F
>2.5"	225°F	450 °F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.

079-BRWP

DSBROWN

Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: A-(MC)GSB-01 Date Issued: 9-28-04 Revision No: 0 Rev. Date: ______

Contractor (Fabricator) D. S. Brown Company Prepared by: James R. Connor, Quality Assurance Manager

1. Non-Fracture Critical [X] Fracture Critical [ ] WPS Expiration Date: ______
2. Qualified in accordance with: AWS D1.5- 2002 (5.12.1)
   Referenced PQR No(s). PQR-(MC)GMAW-01(04) __ , __ , __
   Referenced FWST No(s). PQR-(MC)GMAW-FWST-01A(04) , PQR-(MC)GMAW-FWST-01B(04) , __ , __
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W
4. Material Thickness (es) Unlimited
5. Welding process GMAW
6. Manual [ ] , machine [ ] , or semiautomatic [X]
7. Position(s) of welding 1G, 2G, 1F, 2F
8. Filler metal specification AWS A5.18
9. Filler metal class and brand name E70C-6M Corex Metal-Core Maxim
10. Flux class & brand N/A , Type N/A
11. Shielding gas 75% Ar / 25% CO2 Flow rate 45 CFH
12. Single pass [X] Or multiple pass [X]
13. Single arc [X] Or multiple arc [ ]
14. Welding Current DCEP
15. Polarity Reverse
16. Welding progression stringers
17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)
18. Postheat treatment N/A
19. Calculated Heat Input (KJ/In) Min 30.6 Kj/in Max 51.1 Kj/in
20. Electrode extension (electrical stickout) 3/4"

For DOT Approval

VTRANS RECEIVED

CK'D BY ______ OK'D BY JWC

AUG 1 4 2007

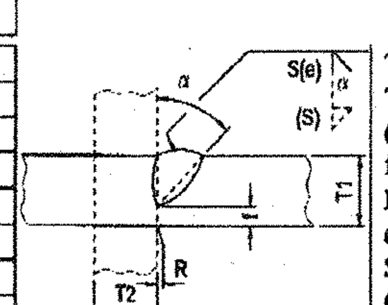
RESUBMIT ______ APPROVED ✓

BY DATE 8-15-07

Weld size (In) (E)&(S)	Pass No(s).	Electrode Size (In)	Welding Process Variables AMPS/WFS*	VOLTS	Travel Speed (IPM)
1/4"	1	.052"	265-320	31-34.5	13-16
5/16"	1	.052"	265-320	31-34.5	13-16
3/8"	1-2	.052"	265-320	31-34.5	13-16
1/2"	3-4	.052"	265-320	31-34.5	13-16
5/8"	4-6	.052"	265-320	31-34.5	13-16
3/4"	5-7	.052"	265-320	31-34.5	13-16
7/8"	6-9	.052"	265-320	31-34.5	13-16
1"	7-10	.052"	265-320	31-34.5	13-16

Joint Detail (TC-P4-GF)

Show all dimensions, weld sizes, passes, and AWS symbols



T1 = ¼" min.
T2 = Varies
(E) = S-1/8"
f = 1/8" min.
R = 0
α = 45°
S = size groove
(S) = size of reinforcing fillet(if required) not to exceed ¼" in corner & T jts.

For Butt Joints see AWS 2.14

* Wire feed speed may be used along with amperage (include chart)

Prepared By: *James R. Connor* DSB QA Manager

Project: ______

DSB Job: 20388-1206

Preheat and Interpass Temperature Chart

Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450°F
>3/4" to ≤1.5"	70°F	450°F
>1.5" to ≤2.5"	150°F	450°F
>2.5"	225°F	450°F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.

080-BRWP

DSBROWN

Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: **A-FSB-01** Date Issued: 8-12-03 Revision No: 0 Rev. Date: ____

Contractor (Fabricator) D. S. Brown Company Prepared by: James R. Connor, Quality Assurance Manager

1. Non-Fracture Critical [X] Fracture Critical [ ] WPS Expiration Date: ____
2. Qualified in accordance with: AWS D1.5- 2002 (5.12.1)
   Referenced PQR No(s). PQR-FCAW-01-03 , __ , __
   Referenced FWST No(s). PQR-FCAW-FWST-01(03) , PQR-FCAW-FWST-01A(03) , __ , __
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W
4. Material Thickness (es) Unlimited
5. Welding process FCAW
6. Manual [ ] , machine [ ] , or semiautomatic [X]
7. Position(s) of welding 1G, 2G,(1F,2F)
8. Filler metal specification AWS A5.20
9. Filler metal class and brand name E71T-1, E71T-9 Lincoln Outershield Elite)
10. Flux class & brand N/A , Type N/A
11. Shielding gas 100% CO2 Flow rate 45 CFH
12. Single pass [X] Or multiple pass [X]
13. Single arc [X] Or multiple arc [ ]
14. Welding Current DCEP
15. Polarity Reverse
16. Welding progression Stringers
17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)
18. Postheat treatment N/A
19. Calculated Heat Input (KJ/In) Min 31.20 Kj/in Max 50.72 Kj/in
20. Electrode extension (electrical stickout) 3/4"

For DOT Approval

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AUG 14 2007
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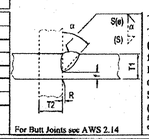
BY ____ DATE 8-15-07

Weld Size (in) (S)(a)	Pass (No)	Electrode Size (in)	Welding Process Variables AMPS/WFS*	VOLTS	Travel Speed (IPM)
1/4"	1	1/16"	260-310	26-30	11-13
5/16"	1	1/16"	260-310	26-30	11-13
3/8"	2-3	1/16"	260-310	26-30	11-13
1/2"	3-4	1/16"	260-310	26-30	11-13
5/8"	4-6	1/16"	260-310	26-30	11-13
3/4"	5-7	1/16"	260-310	26-30	11-13
7/8"	6-8	1/16"	260-310	26-30	11-13
1"	7-9	1/16"	260-310	26-30	11-13

Joint Detail (TC-P4-GF)
Show all dimensions, weld sizes, passes, and AWS symbols



T1 = ¼" min.
T2 = Varies
(E) = S-1/8"
f = 1/8" min.
R = 0
α = 45°
S = size groove
(S) = size of reinforcing fillet(if required) not to exceed ¼" in corner & T jts.

For Butt Joints see AWS 2.14

* Wire feed speed may be used along with amperage (include chart)

Prepared By: James R Connor DSB QA Manager

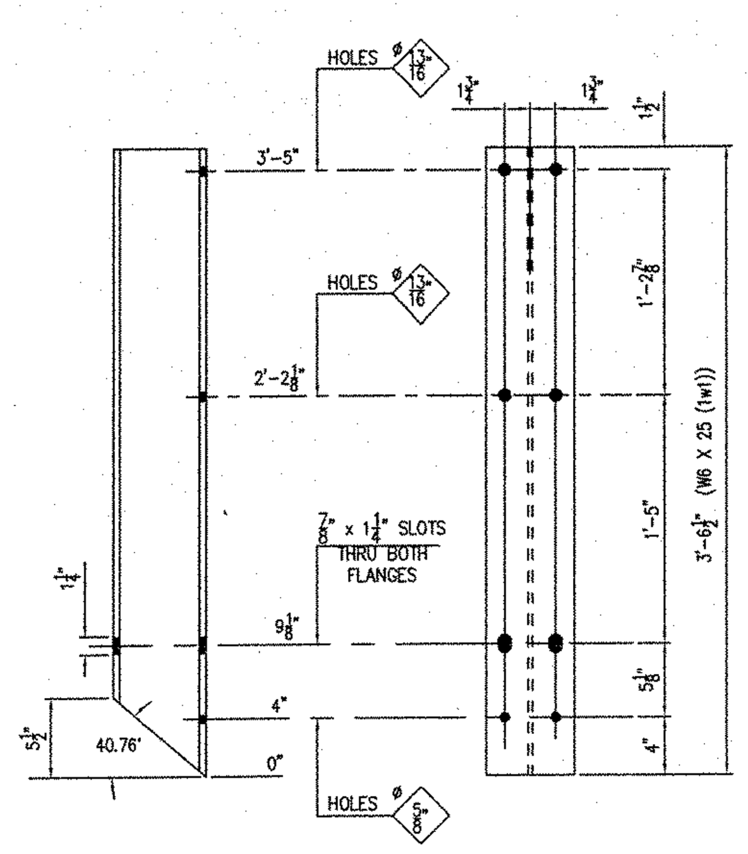
Project: ____

DSB Job: 20388-1206

Preheat and Interpass Temperature Chart		
Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450°F
>3/4" to ≤1.5"	70°F	450°F
>1.5" to ≤2.5"	150°F	450°F
>2.5"	225°F	450°F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.

OSM-BRWP



32 – SIDERAIL POSTS – 1A

GENERAL NOTES:

1.) MATERIALS AND WORKMANSHIP SHALL IN ACCORDANCE WITH THE STATE OF VERMONT AGENCY OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006" AS AMMENDED BY THE LATEST REVISIONS, THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, SEVENTEENTH EDITION.

2.) FABRICATION SHALL BE PERFORMED IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, ANSI/AASHTO/AWS D1.5 AND THE CURRENT INTERIM SPECIFICATIONS AS MODIFIED BY VTRANS SPEC. 506.03.

3.) RAILING MATERIALS SHALL BE ASTM A709 GR 50, UNLESS NOTED OTHERWISE. PER VTRANS SPECIFICATION 732.03(a), (W6 X 25 POSTS SHALL BE CVN TESTED PER 25 FT. LBS. @ 40°F). △A

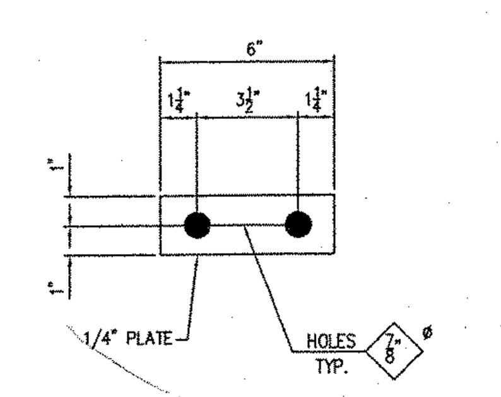
- HOLLOW STRUCTURAL SHAPES TO CONFORM WITH ASTM A500, GRADE B IN ACCORDANCE WITH VTRANS SPECIFICATION 732.03(a), (HSS SHALL BE CVN TESTED PER 15 FT. LBS. @ 40°F). △A
- PIPE SHALL BE ASTM A53, GRADE B.
- HARDWARE TO BE IN ACCORDANCE WITH ASTM F568M, CLASS 4.6 (ASTM A307), U.N.O.
- HIGH STRENGTH HARDWARE SHALL BE IN ACCORDANCE WITH AASHTO M164 TYPE 1 (ASTM A325) OR (ASTM 449) AND SHALL BE SUPPLIED IN ACCORDANCE TO VTRANS SPEC. 714.05. WHICH INCLUDES ROCAP, PROOF AND WEDGE TESTING.
- THREADED ROD FOR POST ANCHORAGE SHALL SHALL CONFORM TO ASTM F 1554 GRADE 55 "WELDABLE STEEL".

4.) ALL HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M–232 (ASTM A–153)..

5.) RAILING COMPONENTS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M–111 (ASTM A123), UNLESS NOTED OTHERWISE. RADIUS ALL EDGES 1/16" AND BLAST CLEAN PER SSPC–SP 8 PRIOR TO GALVANIZING AND REPAIR GALVANIZING PER ASTM A780.

6.) FABRICATION SHALL TAKE PLACE IN A FACILITY WITH A MINIMUM AISC CATEGORY III CERTIFICATION OR BE APPROVED BY VTRANS. NON–CERTIFIED FACILITIES MUST SATISFY THE REQUIREMENTS OF VTRANS SPEC. 506.03

THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO FABRICATION TO ENSURE ACCURACY OF DESIGN PLANS. STAMPED APPROVED DRAWINGS ASSUME DIMENSIONS HAVE BEEN VERIFIED BY CONTRACTOR.



32 – PLATE WASHERS – 1C

	MK	QTY.	DESCRIPTION	MATERIAL	LENGTH	REMARKS	PART NO.
△A	1A	32	SIDERAIL POSTS			3'–6 1/2"	
	1w1	32	W6X25	A709 GR 50 OR A992	3'–6 1/2	SHAPE CUT; A123–HDG; CVN	
	1B	32	ANCHORS				
	1a1	32	1/4 X 9	A709 GR 50	1'–3	A123–HDG	
	1g1	64	3/4ø X 16 THREADED ROD	F1554 GR 55		WELDABLE STEEL; A153–HDG	
	1C	32	PLATE WASHERS			0'–6"	
	1c1	32	1/4 X 2	A709 GR 50	0'–6	A123–HDG	
	1H	36	INSERTS			1'–8"	
	1h1	72	5/8ø HEX NUT	A563 GR A		TAPPED OVERSIZED; PLAIN; NONE	
	1s1	36	HSS 3 X 2 X 5/16	A500 GR B	1'–8	SEE GENERAL NOTES FOR TUBE REQ; A123–HDG	
	1B1	135	HEX NUTS				
	1b1	135	3/4ø HEX NUT	A563 GR A		(128); FOR POST ANCHORAGE; A153–HDG	
	1B2	70	FLAT WASHERS				
	1b2	70	3/4ø FLAT WASHER	F844		(64); FOR POST ANCHORAGE; A153–HDG	
	1F1	140	HEX BOLTS				
	1f1	140	7/8ø X 11 HEX HEAD CAP SCREW	A325 OR A449		(128) 2.5" THREAD MIN.; A153–HDG; ROCAP	
	1F2	140	FLAT WASHERS				
	1f2	140	7/8ø FLAT WASHER	F436		(128); A153–HDG; ROCAP	
	1F3	140	MALLEABLE IRON WASHERS				
	1f3	140	7/16 X 7/8ø WASHER PLATE	–		[illegible]	
	1F4	140	HEX NUTS				
	1f4	140	7/8ø HEX NUT	A563 DH		(128); A153–HDG; ROCAP	
	1H2	80	HEX BOLTS				
	1h2	80	5/8ø X 1 1/4 HEX HEAD CAP SCREW	A307 GR A		(72) INSERT HARDWARE; A153–HDG	
	1H3	80	HEX BOLTS				
	1h3	80	5/8ø X 1 3/4 HEX HEAD CAP SCREW	A307 GR A		(72) INSERT HARDWARE; A153–HDG	
	1H4	150	FLAT WASHERS				
	1h4	150	5/8ø FLAT WASHER	F844		(142) INSERT HARDWARE; A153–HDG	
△A	1H5	35	PIPE SPACERS				
	1h5	35	P 3/4	A53 SCH 40	0'–0 1/2	(32) INSERT HARDWARE; A123–HDG	
	1M1	140	RAIL BOLTS				
	1m1	140	3/4ø X 6 SLOTTED ROUND HEAD BOLT	A307 GR A		(128) 1 3/4" THREAD; A153–HDG; NONE	
	1M2	140	FLAT WASHERS				
	1m2	140	3/4ø FLAT WASHER	F844		(128); A153–HDG; NONE	
	1M3	140	LOCK NUT				
	1m3	140	3/4ø HEX NUT	A563–A LOCK NUT		(128) LOCK NUT; A153–HDG; NONE	
	1P1	70	LAG SCREWS				
	1p1	70	1/2ø X 6 HEX HEAD CAP SCREW	A307 GR A		[illegible]	
	1P2	70	LOCK WASHERS				
	1p2	70	1/2ø LOCK WASHER	F844		[illegible]	
△A	1T1	235	LATTICE BOLTS				
	1t1	235	3/8ø X 7/8 SLOTTED ROUND HEAD BOLT	A307 GR A		(224) FULL THREAD; A153–HDG; NONE	
△A	1T2	235	FLAT WASHERS				
	1t2	235	3/8ø FLAT WASHER	F844		(224); A153–HDG	

NOTE: ALL MATERIAL SPECIFICATION DESCRIPTIONS ARE ASTM, UNLESS OTHERWISE NOTED.

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CK'D BY ELR OK'D BY RSY
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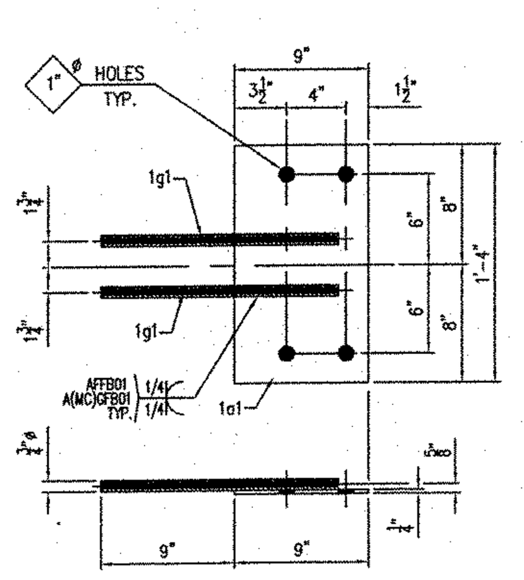
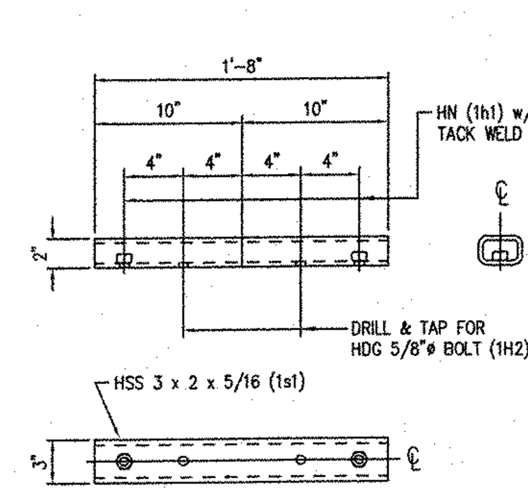
RESUBMIT ____ APPROVED ✓
BY CPW DATE 8/17/07

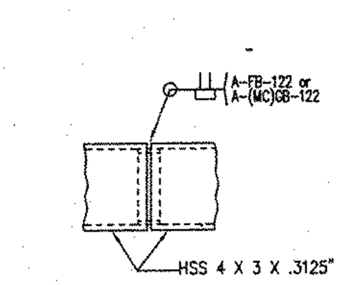
STRUCTURES COPY



32 – ANCHORS – 1B



36 – INSERTS – 1H



OPTIONAL TUBE SHOP SPLICE

REV.	DESCRIPTION	DATE	DET.	CKD.
△A	PER APPROVAL	7/20/07	JEB	TSF

D.S. BROWN

THE D.S. BROWN COMPANY
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3561
FAX: 419.257.0332
WWW.DSBROWN.COM

LOCATION — TOWNS OF NEW HAVEN & WEYBRIDGE
BRIDGE — 26
PROJECT — ROUTE NO. TH7/11, CL3
F.A.P. NO. — BHO–BTN 2005(1)
P.O. NO. — –
DESIGNER — VERMONT DEPARTMENT OF TRANSPORTATION
CUSTOMER — CONTRACTORS CRANE SERVICE, LLC

ITEM	QUANTITY
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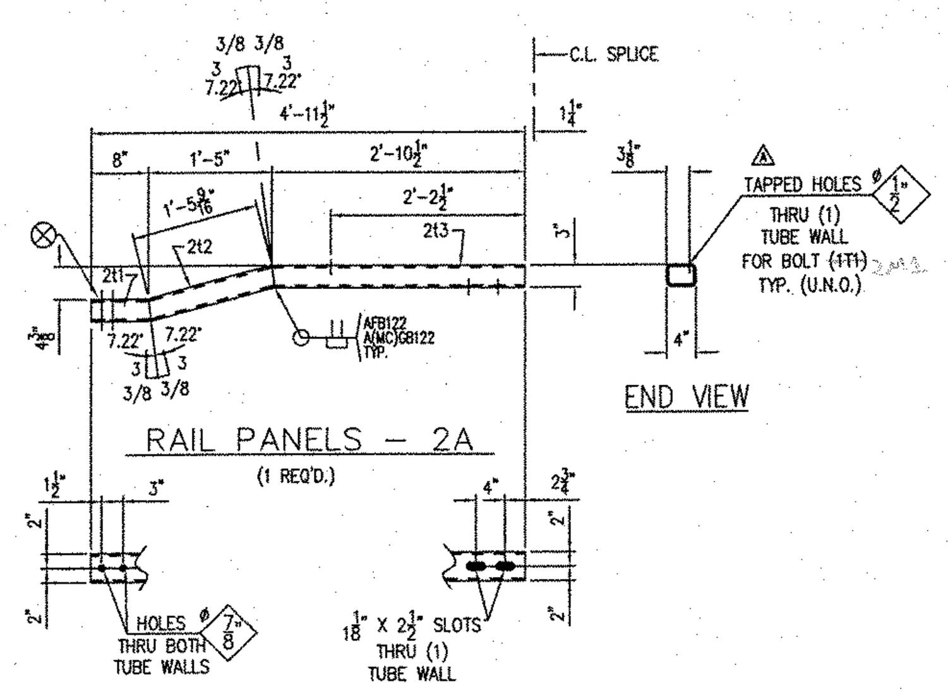
DESCRIPTION: POST DETAILS & GENERAL NOTES
ADDISON COUNTY, VT

SCALE	DRAWN BY	CHECKED BY	DATE	
N.T.S.	JEB	TSF	6/15/07	–

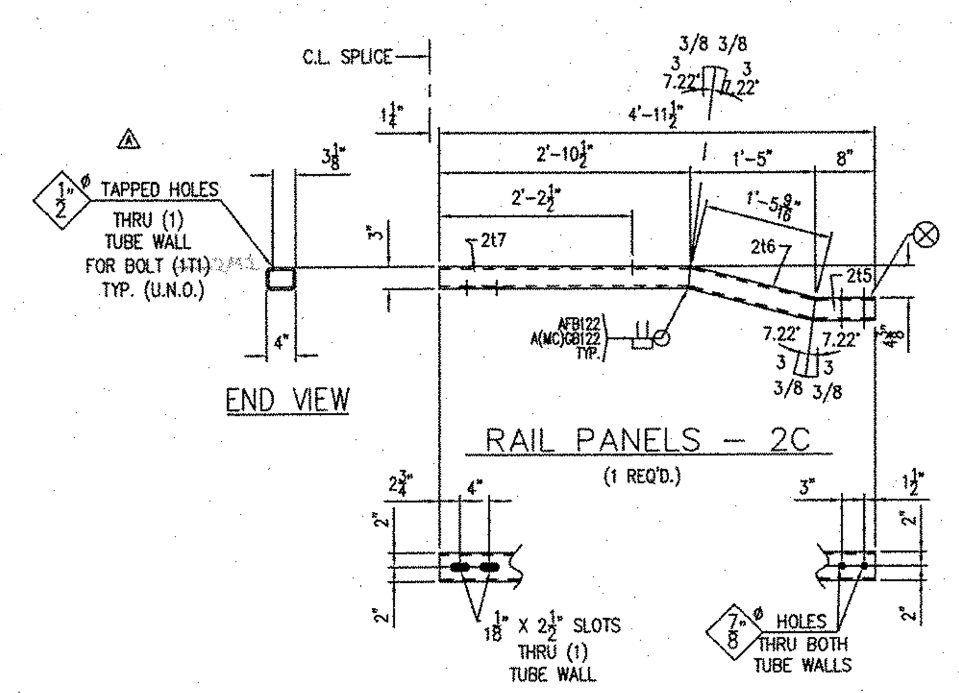
PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET
20388	1206	1	01

082-BR



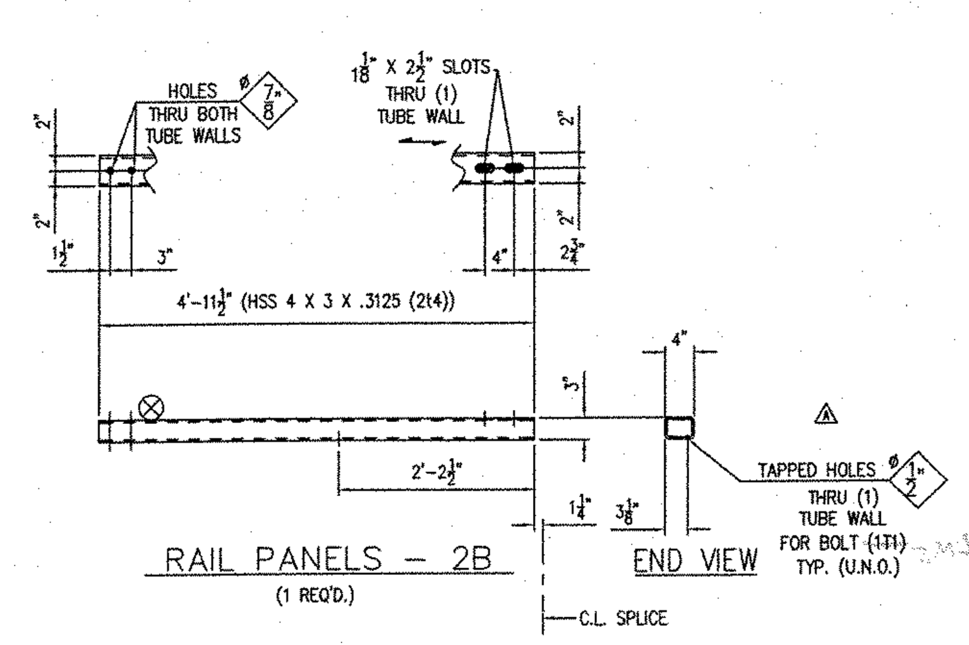
RAIL PANELS – 2A

(1 REQ'D.)



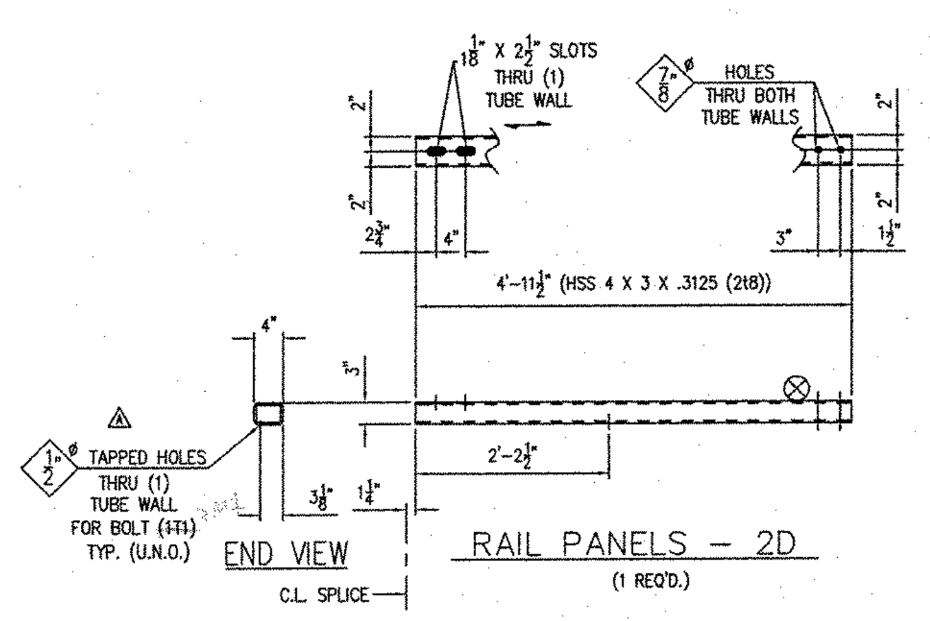
RAIL PANELS – 2C

(1 REQ'D.)



RAIL PANELS – 2B

(1 REQ'D.)

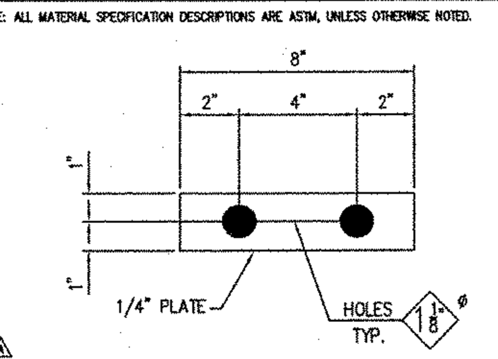


RAIL PANELS – 2D

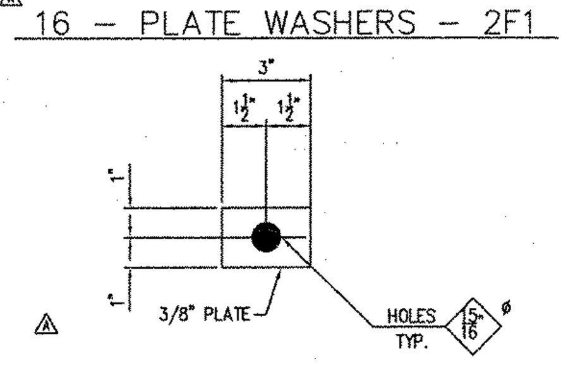
(1 REQ'D.)

MK	QTY.	DESCRIPTION	MATERIAL	LENGTH	REMARKS	PART NO.
2A	1	RAIL PANEL			4'-11 1/2"	
2t1	1	HSS 4 X 3 X 5/16	A500 GR B	0'-8 3/8	SHAPE CUT; A123-HDG; CVN	
2t2	1	HSS 4 X 3 X 5/16	A500 GR B	1'-5 15/16	SHAPE CUT; A123-HDG; CVN	
2t3	1	HSS 4 X 3 X 5/16	A500 GR B	2'-10 1/2	SHAPE CUT; A123-HDG; CVN	
2B	1	RAIL PANEL			4'-11 1/2"	
2t4	1	HSS 4 X 3 X 5/16	A500 GR B	4'-11 1/2	A123-HDG; CVN	
2C	1	RAIL PANEL			4'-11 1/2"	
2t5	1	HSS 4 X 3 X 5/16	A500 GR B	0'-8 3/8	SHAPE CUT; A123-HDG; CVN	
2t6	1	HSS 4 X 3 X 5/16	A500 GR B	1'-5 15/16	SHAPE CUT; A123-HDG; CVN	
2t7	1	HSS 4 X 3 X 5/16	A500 GR B	2'-10 1/2	SHAPE CUT; A123-HDG; CVN	
2D	1	RAIL PANEL			4'-11 1/2"	
2t8	1	HSS 4 X 3 X 5/16	A500 GR B	4'-11 1/2	A123-HDG; CVN	
(A) 2F1	16	PLATE WASHERS			0'-8"	
2f1	16	1/4 X 2	A709 GR 50	0'-8	A123-HDG	
(A) 2G1	8	PLATE WASHERS			0'3"	
2g1	8	3/8 X 2	A709 GR 50	0'-3	A123-HDG	
2M1	10	FIELD BOLT				
2M1	10	1/2ø X 1 3/4 SLOTTED ROUND HEAD BOLT	A307 GR A		(8); A153-HDG	
2N1	10	FIELD BOLT				
2N1	10	1/2ø FLAT WASHER	F844		(8); A153-HDG	
2R1	10	FIELD BOLT				
2R1	10	1/2ø	A53 GR B SCH 40	0'-0 1/2	(8); A123-HDG	

NOTE: ALL MATERIAL SPECIFICATION DESCRIPTIONS ARE ASTM, UNLESS OTHERWISE NOTED.



16 – PLATE WASHERS – 2F1



8 – PLATE WASHERS – 2G1

– SEE SHEET NO. 1 FOR GENERAL NOTES

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AUG 07 2007

RESUBMIT ____ APPROVED

BY GPW DATE 8/17/07

SHOP NOTE:
⊗ – INDICATES LOCATION OF SHIPPING PIECE MARK

REV.	DESCRIPTION	DATE	DET.	CKD.
(A)	PER APPROVAL	7/20/07	JEB	TSF

THE D.S. BROWN COMPANY
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3561
FAX: 419.257.0332
WWW.DSBROWN.COM

LOCATION — TOWNS OF NEW HAVEN & WEYBRIDGE
BRIDGE — 26
PROJECT — ROUTE NO. TH7/11, CL3
F.A.P. NO. — BHO-BTN 2005(1)
P.O. NO. — –
DESIGNER — VERMONT DEPARTMENT OF TRANSPORTATION
CUSTOMER — CONTRACTORS CRANE SERVICE, LLC

ITEM	QUANTITY
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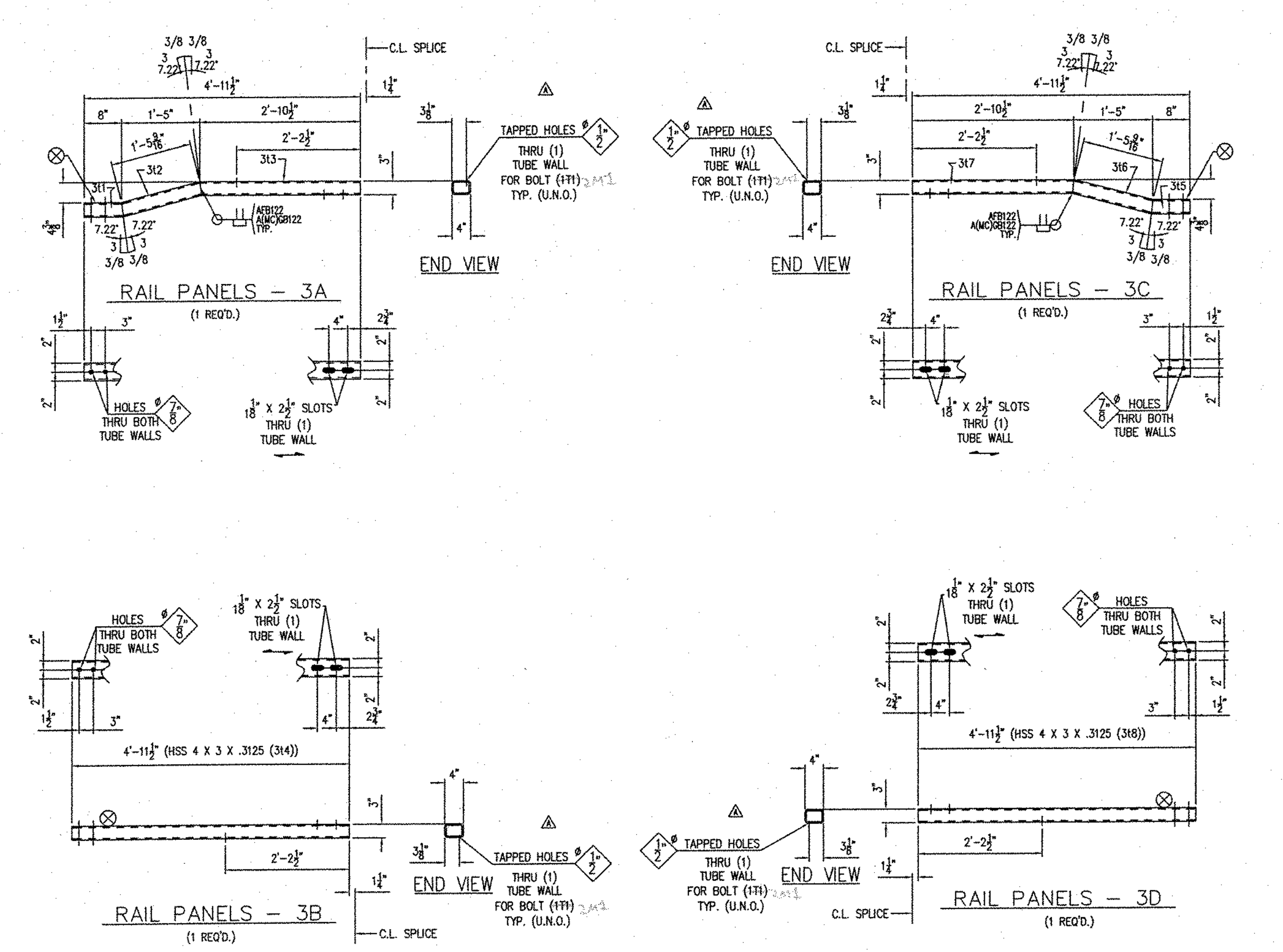
DESCRIPTION: RAIL PANEL DETAILS
ADDISON COUNTY, VT

SCALE	DRAWN BY	CHECKED BY	DATE	
N.T.S.	JEB	TSF	6/15/07	–
PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET	
20388	1206	1	02	

083-BR



SHOP NOTE :
⊗ – INDICATES LOCATION OF SHIPPING PIECE MARK

MK	QTY.	DESCRIPTION	MATERIAL	LENGTH	REMARKS	PART NO.
3A	1	RAIL PANEL			4'-11 1/2"	
3t1	1	HSS 4 X 3 X 5/16	A500 GR B	0'-8 3/8	SHAPE CUT; A123-HDG; CVN	
3t2	1	HSS 4 X 3 X 5/16	A500 GR B	1'-5 15/16	SHAPE CUT; A123-HDG; CVN	
3t3	1	HSS 4 X 3 X 5/16	A500 GR B	2'-10 1/2	SHAPE CUT; A123-HDG; CVN	
3B	1	RAIL PANEL			4'-11 1/2"	
3t4	1	HSS 4 X 3 X 5/16	A500 GR B	4'-11 1/2	A123-HDG; CVN	
3C	1	RAIL PANEL			4'-11 1/2"	
3t5	1	HSS 4 X 3 X 5/16	A500 GR B	0'-8 3/8	SHAPE CUT; A123-HDG; CVN	
3t6	1	HSS 4 X 3 X 5/16	A500 GR B	1'-5 15/16	SHAPE CUT; A123-HDG; CVN	
3t7	1	HSS 4 X 3 X 5/16	A500 GR B	2'-10 1/2	SHAPE CUT; A123-HDG; CVN	
3D	1	RAIL PANEL			4'-11 1/2"	
3t8	1	HSS 4 X 3 X 5/16	A500 GR B	4'-11 1/2	A123-HDG; CVN	

NOTE: ALL MATERIAL SPECIFICATION DESCRIPTIONS ARE ASTM, UNLESS OTHERWISE NOTED.

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CK'D BY EJK OK'D BY RSY
AUG 07 2007
RESUBMIT ______ APPROVED ✓ AS NOTED
BY GPW DATE 8/17/07

– SEE SHEET NO. 1 FOR GENERAL NOTES

REV.	DESCRIPTION	DATE	DET.	CKD.
A	PER APPROVAL	7/20/07	JEB	TSF

D.S. BROWN

THE D.S. BROWN COMPANY
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3561
FAX: 419.257.0332
WWW.DSBROWN.COM

LOCATION — TOWNS OF NEW HAVEN & WEYBRIDGE
BRIDGE — 26
PROJECT — ROUTE NO. TH7/11, CL3
F.A.P. NO. — BHO-BTN 2005(1)
P.O. NO. — –
DESIGNER — VERMONT DEPARTMENT OF TRANSPORTATION
CUSTOMER — CONTRACTORS CRANE SERVICE, LLC

ITEM	QUANTITY
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DESCRIPTION: RAIL PANEL DETAILS
ADDISON COUNTY, VT

SCALE:	DRAWN BY:	CHECKED BY:	DATE:	
N.T.S.	JEB	TSF	6/15/07	–

PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET
20388	1206	1	03

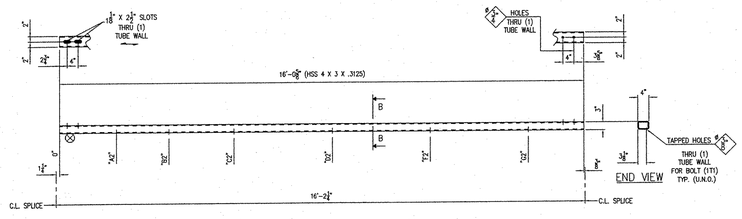
084-BR

MK.	QTY.	DESCRIPTION	MATERIAL	LENGTH	REMARKS	PART NO.
⚠ 4A	2	RAIL PANEL			16'-0 5/8"	
4A1	2	HSS 4 X 3 X 5/16	A500 GR B	16-0 5/8	A123-HDG, CVN	
⚠ 4B	2	RAIL PANEL			16'-0 5/8"	
4B1	2	HSS 4 X 3 X 5/16	A500 GR B	16-0 5/8	A123-HDG, CVN	

NOTE: ALL MATERIAL SPECIFICATION DESIGNATIONS ARE ASTM, UNLESS OTHERWISE NOTED.

QTY. – RAIL PANELS – MK.

QTY.	MK.	"A1"	"B1"	"C1"	"D1"	"F1"	"G1"
⚠ 2	4A	1'-9 5/8"	3'-9 5/8"	6'-9 5/8"	9'-9 5/8"	12'-9 5/8"	14'-9 5/8"



QTY. – RAIL PANELS – MK.

QTY.	MK.	"A2"	"B2"	"C2"	"D2"	"F2"	"G2"
⚠ 2	4B	1'-9 5/8"	3'-9 5/8"	6'-9 5/8"	9'-9 5/8"	12'-9 5/8"	14'-9 5/8"

SHOP NOTE –
⊗ – INDICATES LOCATION
OF SHIPPING PIECE MARK

RECEIVED
CK'D BY ELR OK'D BY RW
AUG 07 2007
RESUBMIT _____ APPROVED ✓
BY CPW DATE 8/17/07

– SEE SHEET NO. 1 FOR GENERAL NOTES

REV.	DESCRIPTION	DATE	DET.	CKD.
⚠	PER APPROVAL	7/20/07	JEB	TSF

D.S. BROWN
THE D.S. BROWN COMPANY
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3564
FAX: 419.257.3232
WWW.DSBROWN.COM

	ITEM	QUANTITY
LOCATION — TOWNS OF NEW HAVEN & MIDDLEBURY	–	–
BRIDGE — 26	–	–
PROJECT — ROUTE NO. TH7/11, CL3	–	–
F.A.P. NO. — BHG-BTN 2005(1)	–	–
P.O. NO. — –	–	–
DESIGNER — VERMONT DEPARTMENT OF TRANSPORTATION	–	–
CUSTOMER — CONTRACTORS CRANE SERVICE, LLC	–	–
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RAIL PANEL DETAILS
ADDISON COUNTY, VT

SCALE	DRAWN BY	DESIGNED BY	DATE	
N.T.S.	JEB	TSF	6/15/07	–
PROJECT NUMBER	PROJECT ITEM	SHEETS	SHEET	
20388	1206	1	1	04

085-BR

MK.	QTY.	DESCRIPTION	MATERIAL	LENGTH	REMARKS	PART NO.
⚠ 5A	2	RAIL PANEL			16'-0 5/8"	
5A1	2	HSS 4 X 3 X 5/16	A500 GR B	16'-0 5/8	A123-HDG, CVN	
⚠ 5B	2	RAIL PANEL			16'-0 5/8"	
5B1	2	HSS 4 X 3 X 5/16	A500 GR B	16'-0 5/8	A123-HDG, CVN	

NOTE: ALL MATERIAL SPECIFICATION DESIGNATIONS ARE ASTM, UNLESS OTHERWISE NOTED.

QTY. – RAIL PANELS – MK.

⚠ QTY.	MK.	"A1"	"B1"	"C1"	"D1"	"F1"	"G1"
2	5A	1'-3"	3'-3"	6'-3"	9'-3"	12'-3"	14'-3"

QTY. – RAIL PANELS – MK.

⚠ QTY.	MK.	"A2"	"B2"	"C2"	"D2"	"F2"	"G2"
2	5B	1'-3"	3'-3"	6'-3"	9'-3"	12'-3"	14'-3"

SHOP NOTE :
⊗ – INDICATES LOCATION
OF SHIPPING PIECE MARK

RECEIVED
CK'D BY FLC OK'D BY RKY
AUG 07,2007
RESUBMIT ____ APPROVED ✓
BY GPW DATE 8/17/07

– SEE SHEET NO. 1 FOR GENERAL NOTES

REV	DESCRIPTION	DATE	DET.	CKD.
⚠	PER APPROVAL	7/20/07	JEB	TSF

THE D.S. BROWN COMPANY
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3561
FAX: 419.257.3332
WWW.DSBROWN.COM

LOCATION – TOWNS OF NEW HAVEN & WEYBRIDGE
BRIDGE – 26
PROJECT – ROUTE NO. 7A1/11, CL3
F.A.P. NO. – BHO-BTN 2005(1)
P.O. NO. – –
DESIGNER – VERMONT DEPARTMENT OF TRANSPORTATION
CUSTOMER – CONTRACTORS CRANE SERVICE, LLC

ITEM	QUANTITY
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DESCRIPTION: RAIL PANEL DETAILS
ADDISON COUNTY, VT

SCALE	DRAWN BY	CHECKED BY	DATE	–
N.T.S.	JEB	TSF	6/15/07	
PROJECT NUMBER	PROJECT DWG.	REVISE	SHEET	
20388	1206	1	05	

D86-BR

MK	QTY.	DESCRIPTION	MATERIAL	LENGTH	REMARKS	PART NO.
6A	12	RAIL PANEL			18'-5 1/4"	
6A1	12	HSS 4 X 3 X 5/16	A500 GR B	18'-5 1/4	A123-HDG, CVN	
6B	12	RAIL PANEL			18'-5 1/4"	
6B1	12	HSS 4 X 3 X 5/16	A500 GR B	18'-5 1/4	A123-HDG, CVN	

QTY. – RAIL PANELS – MK.

QTY.	MK.	"A1"	"B1"	"C1"	"D1"	"F1"	"G1"	"H1"
12	6A	1'-2 5/8"	3'-2 5/8"	6'-2 5/8"	9'-2 5/8"	12'-2 5/8"	15'-2 5/8"	17'-2 5/8"

QTY. – RAIL PANELS – MK.

QTY.	MK.	"A2"	"B2"	"C2"	"D2"	"F2"	"G2"	"H2"
12	6B	1'-2 5/8"	3'-2 5/8"	6'-2 5/8"	9'-2 5/8"	12'-2 5/8"	15'-2 5/8"	17'-2 5/8"

SHOP NOTE –
⊗ – INDICATES LOCATION OF SHIPPING PIECE MARK

RECEIVED
OK'D BY EK OK'D BY RM
AUG 07 2007
RESUBMIT ____ APPROVED ✓
BY CPW DATE 8/17/07

– SEE SHEET NO. 1 FOR GENERAL NOTES

REV	DESCRIPTION	DATE	DET	CHD.
A	PER APPROVAL	7/20/07	JEB	TSF

	ITEM	QUANTITY
LOCATION – TOWNS OF NEW HAVEN & WEYBRIDGE	–	–
BRIDGE – 26	–	–
PROJECT – ROUTE NO. 7A7/11, CL3	–	–
F.A.P. NO. – BHO-BTN 2000(1)	–	–
P.O. NO. – –	–	–
DESIGNER – VERMONT DEPARTMENT OF TRANSPORTATION	–	–
CUSTOMER – CONTRACTORS CRANE SERVICE, LLC	–	–
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D.S. BROWN
THE D.S. BROWN COMPANY
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
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FAX 419.257.3352
www.dsbrown.com

RAIL PANEL DETAILS
ADDISON COUNTY, VT

DESIGNED	N.T.S.	DRAWN BY JEB	CHECKED BY TSF	DATE 6/15/07	–
PROJECT NUMBER 20388	DRAWING NUMBER 1206	SHEET NO. 1	OF SHEETS	SHEET 06	

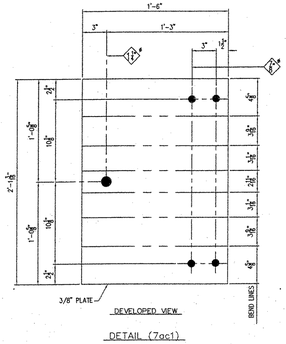
087-RA

MK	QTY.	DESCRIPTION	MATERIAL	LENGTH	REMARKS	PART NO.
7A	4	ANCHORAGE CONNECTOR PLATES				
7ac1	4	3/8 X 18	A36	2'-1 3/16	BEND; A123-HDG	
7ac2	4	3/8 X 13 1/2	A36	1'-6	A123-HDG	
7B	4	ANCHORAGE PLATES				
7b1	4	3/4 X 6	A36	1'-1 1/4	A123-HDG	
7N	25	FIELD BOLTS				
7N1	25	3/4# HEX HEAD CAP SCREW	A325		(1S); A153-HDG, RDCAP	
7N	25	FIELD BOLTS				
7N1	25	3/4# HEX NUT	A563-DH OR A194-2H		(1S); A153-HDG, RDCAP	
7P	25	FIELD BOLTS				
7P1	25	3/4# FLAT WASHER	F436		(1S); A153-HDG, RDCAP	
7R	25	FIELD BOLTS				
7R1	25	13/4# LOCK WASHER	F844		(1S); ASME B18.21.1; A153-HDG, RDW	

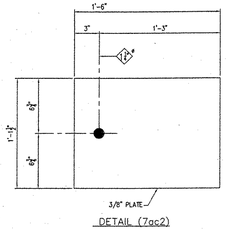
NOTE: ALL MATERIAL SPECIFICATION DESCRIPTIONS ARE ASTM, UNLESS OTHERWISE NOTED.

ANCHORAGE CONNECTOR PLATES – 7A
(4 REQ'D)

ANCHORAGE PLATES – 7B
(4 REQ'D)



DETAIL (7ac1)



DETAIL (7ac2)

RECEIVED
OK'D BY: ELR OK'D BY: RCY
AUG 07 2007
RESUBMIT ____ APPROVED ✓
BY GPW DATE 8/17/07

– SEE SHEET NO. 1 FOR GENERAL NOTES

REV	DESCRIPTION	DATE	DET.	CKD.
A	PER APPROVAL	7/20/07	JCB	TSF

THE D.S. BROWN COMPANY
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3361
FAX: 419.257.3332
WWW.DSBROWN.COM

LOCATION – TOWNS OF NEW HAVEN & WEYBRIDGE
BRIDGE – 26
PROJECT – ROUTE NO. 17(7/11, CL3
F.A.P. NO. – BHO-BTH 2005(1)
P.D. NO. – –
DESIGNER – VERMONT DEPARTMENT OF TRANSPORTATION
CUSTOMER – CONTRACTORS CRANE SERVICE, LLC

ITEM	QUANTITY
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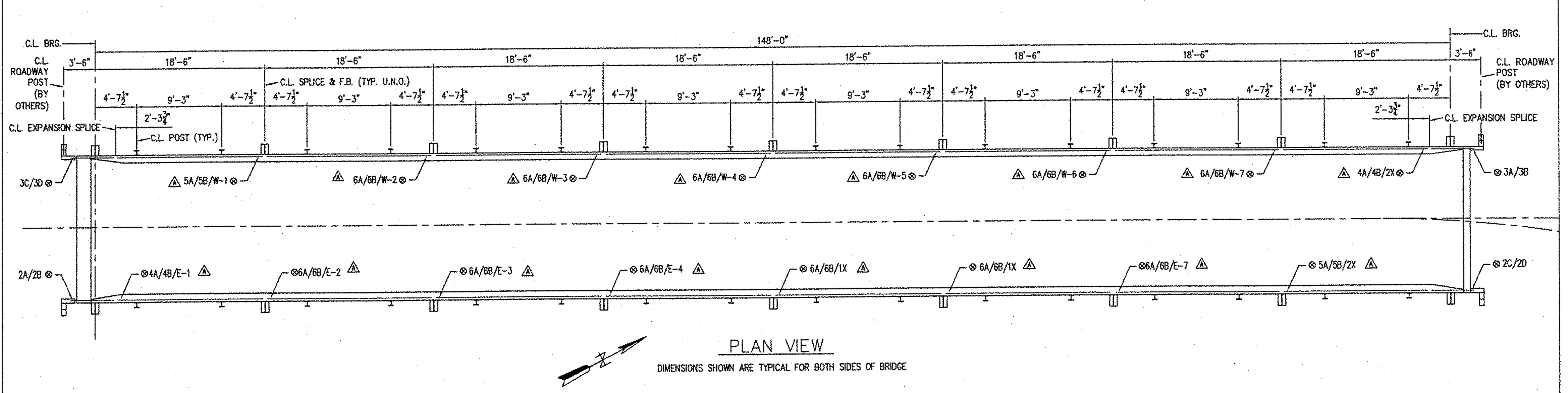
DESCRIPTION: RAIL PANEL DETAILS
ADDISON COUNTY, VT

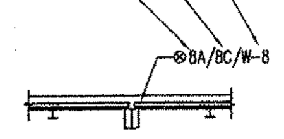
SCALE	DRAWN BY	CHECKED BY	DATE	–
N.T.S.	JCB	TSF	6/15/07	
PROJECT NUMBER		SHEET NO.	REVISION	SHEET
20388		1206	1	07

088-BR



PLAN VIEW

DIMENSIONS SHOWN ARE TYPICAL FOR BOTH SIDES OF BRIDGE



RAIL PANEL PIECE MARK KEY

REFER TO CONTRACT DRAWING 29 OF 53 FOR MORE INFORMATION ON EXISTING LATTICE

RECEIVED
CK'D BY ____ CK'D BY ____
AUG 07 2007
RESUBMIT ____ APPROVED ✓
BY GPW DATE 8/17/07

– SEE SHEET NO. E2 FOR TYPICAL DETAILS & SECTIONS

SHOP NOTE:
⊗ – INDICATES LOCATION OF SHIPPING PIECE MARK

REV.	DESCRIPTION	DATE	DET.	CKD.
⚠A	PER APPROVAL	7/20/07	JEB	TSF

D.S. BROWN

THE D.S. BROWN COMPANY
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3561
FAX: 419.257.0332
WWW.DSBROWN.COM

LOCATION — TOWNS OF NEW HAVEN & WEYBRIDGE
BRIDGE — 26
PROJECT — ROUTE NO. TH7/11, CL3
F.A.P. NO. — BHO-BTN 2005(1)
P.O. NO. — –
DESIGNER — VERMONT DEPARTMENT OF TRANSPORTATION
CUSTOMER — CONTRACTORS CRANE SERVICE, LLC

ITEM	QUANTITY
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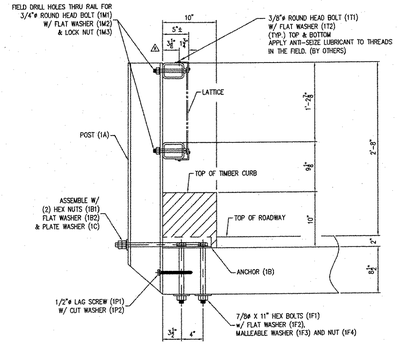
DESCRIPTION: ERECTION DETAILS
ADDISON COUNTY, VT

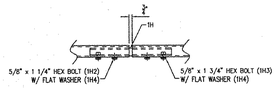
SCALE	DRAWN BY	CHECKED BY	DATE	
N.T.S.	JEB	TSF	6/15/07	–

PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET
20388	1206	1	E1

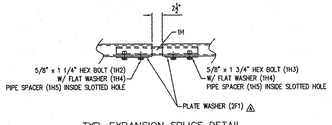
089-BR



TYP. SECTION @ RAIL POST



TYP. SPLICE DETAIL



TYP. EXPANSION SPLICE DETAIL

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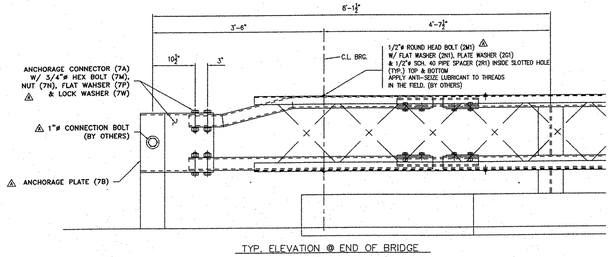
OK'D BY ELR OK'D BY RSY
AUG 07 2007
RESUBMIT _____ APPROVED ✓
BY CPW DATE 8/17/07

RECEIVED
AUG - 6 2007
CONTRACTORS CRANE SERV, INC.
MORRISVILLE, VT

CCS Constructors LLC
138 Munson Avenue
Morrisville, VT 05661
Ph: 802-888-7701 f: 802-888-4746



TYP. ELEVATION @ END OF BRIDGE

REV	DESCRIPTION	DATE	DET.	CKD.
2	PER APPROVAL	7/20/07	JEB	TSP

THE D.S. BROWN COMPANY
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419.257.3351
FAX 419.257.3355
www.dsbrown.com

LOCATION — TOWNS OF NEW HAVEN & WEYBRIDGE
BRIDGE — 26
PROJECT — ROUTE NO. TH7/11, CL3
F.A.P. NO. — BHO-BTN 2005(1)
P.O. NO. — —
DESIGNER — VERMONT DEPARTMENT OF TRANSPORTATION
CUSTOMER — CONTRACTORS CRANE SERVICE, LLC

ITEM	QUANTITY
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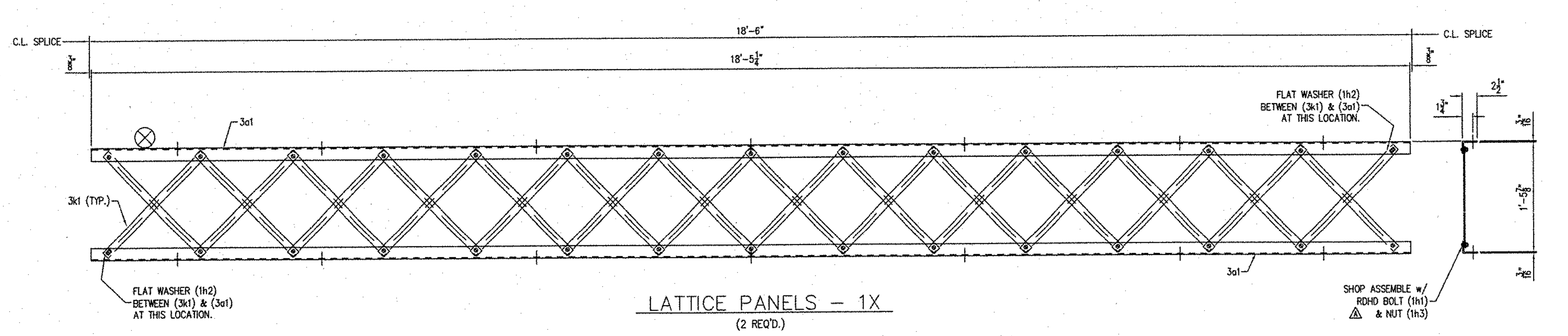
DRAWING: ERECTION DETAILS
ADDISON COUNTY, VT

SCALE	DRAWN BY	CHKD. BY	DATE
N.T.S.	JEB	TSP	6/15/07

PROJECT NUMBER	PROJECT SIZE	PAGES	SHEET
20388	1206	1	E2

090-BR



LATTICE PANELS – 1X

(2 REQ'D.)

GENERAL NOTES:

1.) MATERIALS AND WORKMANSHIP SHALL IN ACCORDANCE WITH THE STATE OF VERMONT AGENCY OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006" AS AMMENDED BY THE LATEST REVISIONS, THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, SEVENTEENTH EDITION.

2.) FABRICATION SHALL BE PERFORMED IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, ANSI/AASHTO/AWS D1.5 AND THE CURRENT INTERIM SPECIFICATIONS AS MODIFIED BY VTRANS SPEC. 506.03.

3.) RAILING MATERIALS SHALL BE ASTM A709 GR 50, UNLESS NOTED OTHERWISE. PER VTRANS SPECIFICATION 732.03(a), (W6 X 25 POSTS SHALL BE CVN TESTED PER 25 FT. LBS. @ 40°F). ⚠A

- HOLLOW STRUCTURAL SHAPES TO CONFORM WITH ASTM A500, GRADE B IN ACCORDANCE WITH VTRANS SPECIFICATION 732.03(a), (HSS SHALL BE CVN TESTED PER 15 FT. LBS. @ 40°F). ⚠A
- PIPE SHALL BE ASTM A53, GRADE B.
- HARDWARE TO BE IN ACCORDANCE WITH ASTM F568M, CLASS 4.6 (ASTM A307), U.N.O.
- HIGH STRENGTH HARDWARE SHALL BE IN ACCORDANCE WITH AASHTO M164 TYPE 1 (ASTM A325) OR (ASTM 449) AND SHALL BE SUPPLIED IN ACCORDANCE TO VTRANS SPEC. 714.05. WHICH INCLUDES ROCAP, PROOF AND WEDGE TESTING.
- THREADED ROD FOR POST ANCHORAGE SHALL SHALL CONFORM TO ASTM F 1554 GRADE 55 "WELDABLE STEEL".

4.) ALL HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M-232 (ASTM A-153)..

5.) RAILING COMPONENTS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M-111 (ASTM A123), UNLESS NOTED OTHERWISE. RADIUS ALL EDGES 1/16" AND BLAST CLEAN PER SSPC-SP 8 PRIOR TO GALVANIZING AND REPAIR GALVANIZING PER ASTM A780.

6.) FABRICATION SHALL TAKE PLACE IN A FACILITY WITH A MINIMUM AISC CATEGORY III CERTIFICATION OR BE APPROVED BY VTRANS. NON-CERTIFIED FACILITIES MUST SATISFY THE REQUIREMENTS OF VTRANS SPEC. 506.03

THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO FABRICATION TO ENSURE ACCURACY OF DESIGN PLANS. STAMPED APPROVED DRAWINGS ASSUME DIMENSIONS HAVE BEEN VERIFIED BY CONTRACTOR.

MK	QTY.	DESCRIPTION	MATERIAL	LENGTH	REMARKS	PART NO.
1X	2	LATTICE PANELS			18'-5 1/4"	
1h1	65	3/8Ø X 7/8 SLOTTED ROUND HEAD BOLT	A307 GR A		(60); A153-HDG; NONE	
1h2	10	3/8Ø FLAT WASHER	F844		(4); A153-HDG	
1h3	65	3/8Ø HEX NUT	A563 GR A		(60); A153-HDG	
3a1	4	L2 1/2 X 2 X 3/16	A709 GR 50 OR A992	18'-5 1/4	A123-HDG; NONE	
3k1	56	3/16 X 2	A709 GR 50	1'-11 5/16	[illegible] MAY BE SUBSTITUTED; A123-HDG	

NOTE: ALL MATERIAL SPECIFICATION DESCRIPTIONS ARE ASTM, UNLESS OTHERWISE NOTED.

RECEIVED
CK'D BY E.L.R. OK'D BY RSY
AUG 07 2007
RESUBMIT ____ APPROVED ✓
BY CPW DATE 8/17/07

- SEE SHEET 3 FOR PIECE DETAILS.
- SEE DS BROWN PROJECT 20388-1206 SHEET E1 & E2 FOR FIELD LOCATION AND DETAILS

REV.	DESCRIPTION	DATE	DET.	CKD.
A	PER APPROVAL	7/20/07	JEB	TSF

D.S. BROWN

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419.257.3561
FAX: 419.257.0332
WWW.DSBROWN.COM

LOCATION — TOWNS OF NEW HAVEN & WEYBRIDGE
BRIDGE — 26
PROJECT — ROUTE NO. TH7/11, CL3
F.A.P. NO. — BHO-BTN 2005(1)
P.O. NO. — –
DESIGNER — VERMONT DEPARTMENT OF TRANSPORTATION
CUSTOMER — CONTRACTORS CRANE SERVICE, LLC

ITEM	QUANTITY
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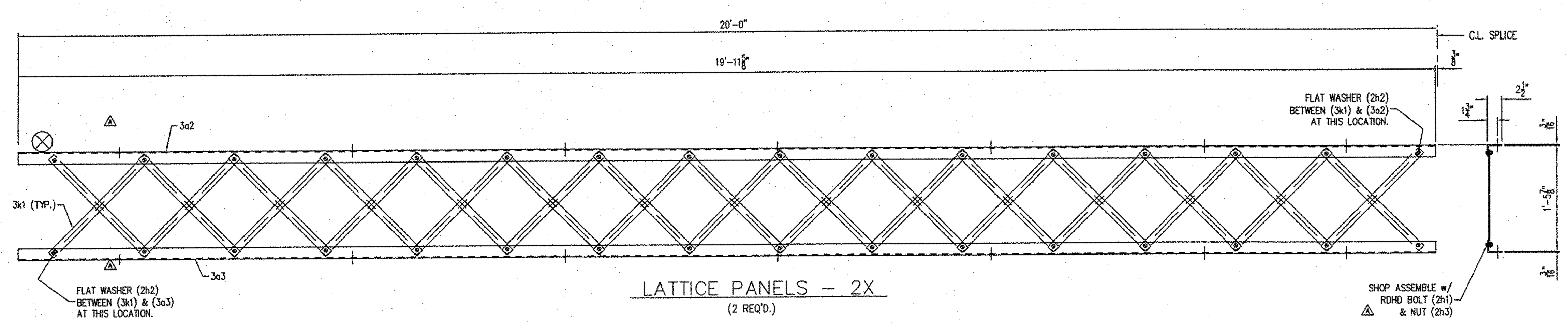
DESCRIPTION: LATTICE DETAILS ADDISON COUNTY, VT

SCALE	DRAWN BY	CHECKED BY	DATE	
N.T.S.	JEB	TSF	6/15/07	–
PROJECT NUMBER 20388	PRODUCT CODE 1209	RELEASE 1	SHEET 01	

SHOP NOTE :
⊗ – INDICATES LOCATION OF SHIPPING PIECE MARK

091-BR



LATTICE PANELS – 2X

(2 REQ'D.)

MK	QTY.	DESCRIPTION	MATERIAL	LENGTH	REMARKS	PART NO.
2X	2	LATTICE PANELS			19'-11 5/8"	
2h1	70	3/8Ø X 7/8 SLOTTED ROUND HEAD BOLT	A307 GR A		(64); A153-HDG; NONE	
2h2	10	3/8Ø FLAT WASHER	F844		(4); A153-HDG	
2h3	70	3/8Ø HEX NUT	A563 GR A		(64); A153-HDG	
3a2	2	L2 1/2 X 2 X 3/16	A709 GR 50 OR A992	19'-11 5/8	A123-HDG; NONE	
3a3	2	L2 1/2 X 2 X 3/16	A709 GR 50 OR A992	19'-11 5/8	A123-HDG; NONE	
3k1	60	3/16 X 2	A572 GR 50	1'-11 5/16	ASTM A606 TYPE 4 TCA MAY BE SUBSTITUTED; A123-HDG	

NOTE: ALL MATERIAL SPECIFICATION DESCRIPTIONS ARE ASTM, UNLESS OTHERWISE NOTED.

RECEIVED
CK'D BY EWK OK'D BY RSS
AUG 07 2007
RESUBMIT ______ APPROVED ✓
BY CPW DATE 8/17/07

– SEE SHEET 3 FOR PIECE DETAILS.

– SEE DS BROWN PROJECT 20388–1206
SHEET E1 & E2 FOR FIELD LOCATION AND DETAILS

REV.	DESCRIPTION	DATE	DET.	CKD.
A	PER APPROVAL	7/20/07	JEB	TSF

SHOP NOTE:
⊗ – INDICATES LOCATION OF SHIPPING PIECE MARK

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LOCATION — TOWNS OF NEW HAVEN & WEYBRIDGE
BRIDGE — 26
PROJECT — ROUTE NO. TH7/11, CL3
F.A.P. NO. — BHO-BTN 2005(1)
P.O. NO. — –
DESIGNER — VERMONT DEPARTMENT OF TRANSPORTATION
CUSTOMER — CONTRACTORS CRANE SERVICE, LLC

ITEM	QUANTITY
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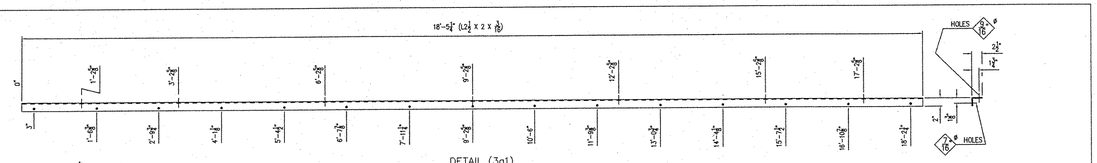
DESCRIPTION: LATTICE DETAILS
ADDISON COUNTY, VT

SCALE	DRAWN BY	CHECKED BY	DATE	
N.T.S.	JEB	TSF	6/15/07	–

PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET
20388	1209	1	02

092-BR



RECEIVED
AUG 07 2007

CK'D BY EK CK'D BY RSH

RESUBMIT ____ APPROVED ✓

BY CPW DATE 8/17/07

SHOP NOTE:
⊗ – INDICATES LOCATION OF SHIPPING PIECE MARK

REV.	DESCRIPTION	DATE	DET.	CKD.
A	PER APPROVAL	7/26/07	JEB	TSF

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LOCATION — TOWNS OF NEW HAVEN & WEYBRIDGE	
BRIDGE — 26	
PROJECT — ROUTE NO. 7A7/11, CL3	
F.A.P. NO. — BHO-BTN 2005(1)	
P.O. NO. — –	
DESIGNER — VERMONT DEPARTMENT OF TRANSPORTATION	
CUSTOMER — CONTRACTORS CRANE SERVICE, LLC	

ITEM	QUANTITY
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DESCRIPTION: LATTICE DETAILS
ADDISON COUNTY, VT

SCALE	DRAWN BY	CHKD BY	DATE	–
N.T.S.	JEB	TSF	8/15/07	
PROJECT NUMBER	PROJECT NO.	REVISION	SHEET	
20388	1209	1	03	

093-BR