

STATE OF VERMONT AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT BRIDGE PROJECT

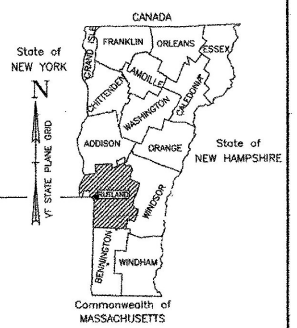
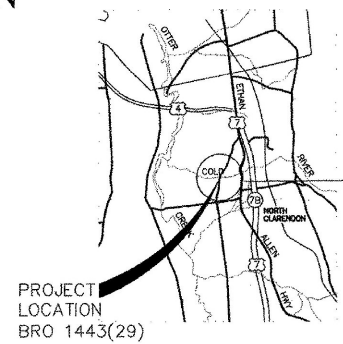
TOWN OF CLARENDON
COUNTY OF RUTLAND

ROUTE NO: TH 1, CLASS 2 BRIDGE NO: 14
FUNCTIONAL CLASSIFICATION: MAJOR COLLECTOR

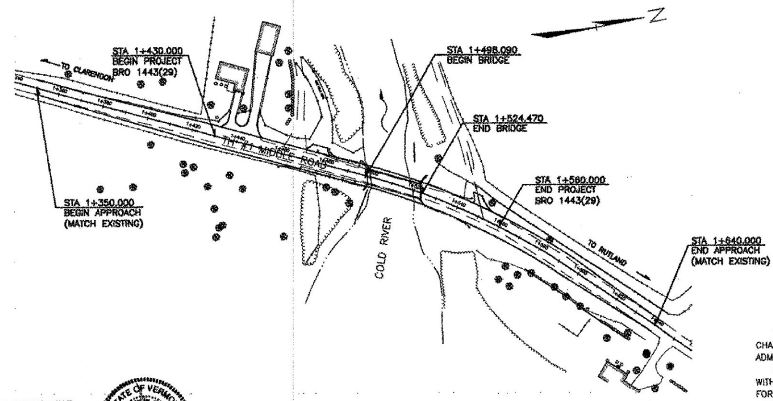
PROJECT LOCATION: BEGINNING AT POINT ON TH #1 (MIDDLE ROAD)
0.35 km SOUTH OF THE JUNCTION OF U.S. ROUTE
7 AND TH #1 AND EXTENDING NORTHERLY ALONG TH #1
FOR 0.13 km.

PROJECT DESCRIPTION: REMOVAL OF THE EXISTING BRIDGE, CONSTRUCTION OF NEW
PRECAST CONCRETE BOX BEAM SUPERSTRUCTURE ON NEW
CAST-IN-PLACE ABUTMENTS WITH RELATED ROADWAY AND
CHANNEL WORK.

LENGTH OF STRUCTURE :	26.380 m	0.0264 km
LENGTH OF ROADWAY :	103.620 m	0.1036 km
LENGTH OF PROJECT :	130.000 m	0.1300 km



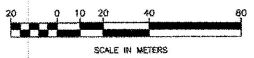
LOCATION MAP
NOT TO SCALE



CONVENTIONAL SIGNS

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

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A



THESE PLANS ARE SUBJECT TO SUCH ENGINEERING
CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY
ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT
CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE
WITH THESE PLANS AND THE STANDARD SPECIFICATIONS
FOR CONSTRUCTION DATED 2001, AS APPROVED BY THE
FEDERAL HIGHWAY ADMINISTRATION ON JANUARY 04, 2001
FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT
REVISIONS AND SUCH REVISED SPECIFICATIONS AND
SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE
PLANS.

RECORD PLANS

CONTRACTOR: F.W. WHITCOMB CONSTRUCTION CORP. - WALPOLE, NH
RESIDENT ENGINEER: MARK MACKINTOSH
CONSTRUCTION BEGAN: SEPTEMBER 16, 2005
CONSTRUCTION COMPLETE: NOVEMBER 30, 2005
RECORD PLANS BY: MARK MACKINTOSH & AMOS KEMPTON
I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY
THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.
BY: *[Signature]* RESIDENT ENGINEER
DATE: Nov. 29, 2011

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.

UNLESS OTHERWISE NOTED, ALL STATIONS ARE IN
KILOMETERS, ALL ELEVATIONS ARE IN METERS,
AND ALL DIMENSIONS ARE IN MILLIMETERS.

APPROVED: *[Signature]* DATE: 7-15-05
DIRECTOR OF PROGRAM DEVELOPMENT

PROJECT CLARENDON
PROJECT NO. AC BRO 1443(29)

SHEET 1 OF 41 SHEETS

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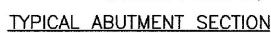
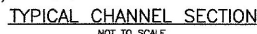
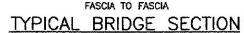
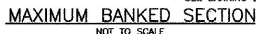
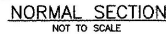
STANDARDS

B-5M	EMBANKMENT ON EARTH SLOPE, EMBANKMENT ON ROCK SLOPE, MUCK EXCAVATION, TYPICAL SLOPE ROUNDING	01-03-00
B-71M	STANDARDS FOR RESIDENTIAL AND COMMERCIAL DRIVES	02-01-04
E-100	CONSTRUCTION APPROACH SIGNS	01-02-04
E-100A	SIDE ROAD CONSTRUCTION APPROACH SIGNS	01-02-04
E-101	CONSTRUCTION SIGN DETAILS	05-30-03
E-102	CONSTRUCTION SIGN DETAILS	06-30-03
E-102A	CONSTRUCTION SIGN DETAILS	05-01-04
E-106	TRAFFIC CONTROL - MISCELLANEOUS DETAILS	03-01-04
E-107	DELINEATION, BARRICADES AND DETOURS FOR CONSTRUCTION AREAS	06-30-03
E-107A	BREAKAWAY BARRICADE DETAILS	08-08-95
E-108	CONSTRUCTION ZONE LONGITUDINAL DROP OFFS	08-18-95
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROADS	08-08-95
E-152	WARNING SIGN DETAILS	05-01-04
E-160	FLANGED CHANNEL STEEL SIGN POST	05-20-99
E-164	SQUARE STEEL SIGN POST	05-20-99
G-1M	STEEL BEAM GUARD RAIL WITH STEEL POSTS STEEL BEAM GUARDRAIL WITH WOOD POSTS	01-03-00
G-1dM	STEEL BEAM GUARDRAIL APPROACH END TERMINAL STEEL BEAM GUARDRAIL TRAILING END TERMINAL ANCHOR FOR STEEL BEAM GUARDRAIL STEEL BEAM MEDIAN BARRIER	01-03-00
G-17aM	MODIFIED ECCENTRIC LOADER TERMINAL WITH WOOD POSTS (MELT)	09-27-02
G-17bM	MODIFIED ECCENTRIC LOADER TERMINAL WITH WOOD POSTS (MELT)	09-27-02
G-18M	PRECAST CONCRETE TEMPORARY TRAFFIC BARRIER	06-13-97
G-18AM	POSITIVE CONNECTION DETAILS BETWEEN TEMPORARY BARRIER RAIL AND EXISTING STEEL BEAM GUARD RAIL	07-10-97
J-3M	MAILBOX SUPPORT DETAIL (SINGLE & MULTIPLE SUPPORT)	06-13-97

PROJECT NAME: CLARENDON
PROJECT NUMBER: BRO 1443(29)

FILE NAME: 931091nd.dgn
PROJECT LEADER: R. WHTCOMB
DESIGNED BY: DUBOIS & KING
931091nd.j

PLOT DATE: 14-JUN-2005
DRAWN BY: L. BULLOCK
CHECKED BY: C. CARLSON
SHEET 2 OF 41



1. COFFERDAM LIMITS TO BE DETERMINED BY THE CONTRACTOR.
2. THE PAY LIMITS OF "COFFERDAM EXCAVATION, EARTH" AND "UNCLASSIFIED COFFERDAM EXCAVATION, ROCK" SHALL BE 800 OUTSIDE THE PERIMETER OF THE FOOTING, UP TO EXISTING GROUND OR BOTTOM OF SUBBASE, WHICHEVER IS LOWER.
3. 300 UNDERCUT AS DETERMINED NECESSARY BY THE RESIDENT ENGINEER.
4. IF A COFFERDAM IS CONSTRUCTED WHICH IS LARGER THAN THE INDICATED COFFERDAM EXCAVATION PAY LIMITS, PAYMENT FOR ALL UNCLASSIFIED CHANNEL EXCAVATION, INCLUDING THAT PORTION WHICH IS INSIDE THE COFFERDAM BUT OUTSIDE THE COFFERDAM EXCAVATION PAY LIMITS, WILL BE MADE AT THE CONTRACT UNIT PRICE FOR UNCLASSIFIED CHANNEL EXCAVATION.

Bridge Sheet No.	SHEET 3A OF 41
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QUANTITY SHEET



SUMMARY OF ESTIMATED QUANTITIES											TOTALS			DESCRIPTORS			DETAILED SUMMARY OF QUANTITIES						
SUPER STRUCTURE	ABUT NO. 1	ABUT NO. 2	APPROACH SLAB	CHANNEL	ROADWAY	EROSION CONTROL	TRAINING	FULL E&C	BRIDGE QUANTITY	FOUND	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS					
					1						1		LS	CLEARING AND GRUBBING (INCL. ND. TREES & STUMPS)	201.10								
					1690						1690		CM	COMMON EXCAVATION	203.15			TEMPORARY EROSION CONTROL ITEMS (INCLUDED IN EROSION CONTROL)					
				200					200		200		CM	UNCLASSIFIED CHANNEL EXCAVATION	203.27	50	CM	TRENCH EXCAVATION OF EARTH					
					1070						1070		CM	SAND BORROW	203.31	20	CM	SUBBASE OF DENSE GRADED CRUSHED STONE					
					200						200		SM	FINE GRADING-SUBGRADE	203.40	1	HR	ALL PURPOSE EXCAVATOR RENTAL TYPE I					
						50					50		CM	TRENCH EXCAVATION OF EARTH	204.20	10	CM	STONE FILL TYPE I					
	460	470							930		930		CM	GRANULAR BACKFILL FOR STRUCTURES	204.50	750	SM	GEOTEXTILE FOR SILT FENCE					
	240	210							450		450		CM	COFFERDAM EXCAVATION, EARTH	208.30	150	SM	GEOTEXTILE FOR FILTER CURTAIN					
	125	125							250		250		CM	COFFERDAM EXCAVATION, ROCK	208.35	25	KG	SEED - WINTER RYE					
	1								1		1		LS	COFFERDAM (STA. 1+501.0)	208.40	100	SM	EROSION MATTING					
		1							1		1		LS	COFFERDAM (STA. 1+520.5)	208.40			FILL = 621 CM FACTOR X (0.15) = 93 CM TOTAL FILL (INCLUDING FACTOR) = 714 CM					
					195						195		SM	COLD PLANING-BIT PAVEMENT	210.10			MATERIALS AVAILABLE FOR FILL:					
					970	20					990		CM	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35			COMMON EXCAVATION (0.75 X 1690) = 1269 CM					
					470						470		KG	EMULSIFIED ASPHALT	404.65			UNCLASSIFIED CHANNEL EXCAVATION (0.60 X 200 CM) = 120 CM					
30					330				30		360		T	BITUMINOUS CONCRETE PAVEMENT (PG 58-34)	406.25			STRUCTURE EXCAVATION (0.60 X 450 CM) = 270 CM					
77									77		77		CM	CONCRETE, HIGH PERFORMANCE CLASS AA	501.32			TOTAL MATERIAL AVAILABLE FOR FILL = 1658 CM LESS FILL REQUIRED = 714 CM					
	136	132	42						310		310		CM	CONCRETE, HIGH PERFORMANCE CLASS B	501.34			EXCESS EXCAVATION = 944 CM					
	12930	12050							24990		24990		KG	REINFORCNG STEEL	507.15								
4759			3066						7845		7845		KG	EPOXY COATED REINFORCNG STEEL	507.17								
156									156		156		M	PRESTRESSED CONCRETE BOX BEAMS (690 X 914)	510.21								
104									104		104		M	PRESTRESSED CONCRETE BOX BEAMS (690 X 1220)	510.21								
234									234		234		M	GROUTING SHEAR KEYS	510.24								
36	33	30							99		99		L	WATER REPELLENT (MOD. - SILANE)	514.10								
12									12		12		M	BRIDGE EXPANSION JOINT (ASPHALTIC PLUG)	516.10								
300									300		300		SM	SHEET MEMBRANE WATERPROOFING (MOD. - TORCH APPLIED)	519.20								
66									66		66		M	BRIDGE RAILING - NETC 2 RAIL	525.33								
					1						1		LS	TWO-WAY TEMPORARY BRIDGE (270 SM - EST. X MOD.)	526.11								
180									160		160		SM	REMOVAL OF BRIDGE PAVEMENT	529.10								
1									1		1		EACH	PARTIAL REMOVAL OF STRUCTURE	529.20								
40									40		40		EACH	BEARING DEVICE ASSEMBLY (ELASTOMERIC)	531.10								
						1					1		HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25								
					100						100		CM	DUST CONTROL WITH WATER	609.10								
						10					10		CM	STONE FILL TYPE I	613.10								
						10					10		CM	STONE FILL TYPE I (MOD. 1 - CHECK DAMS)	613.10								
						10					10		CM	STONE FILL TYPE I (MOD. 2 - STABILIZED CONSTRUCTION ENTRANCE)	613.10								
				200					200		200		CM	STONE FILL TYPE II	613.12								
					1						1		EACH	RELOCATE MAIL BOX, SINGLE SUPPORT	617.10								
					70						70		M	REMOVING AND RESETTING FENCE	620.50								
					65						65		M	SNOW FENCE (MOD. - ARCH)	620.70								
						420					420		M	SNOW FENCE (MOD. - PDF)	620.70								
					25						25		M	HEAVY DUTY STEEL BEAM GUARD RAIL (GALVANIZED)	621.21								
					3						3		EACH	MODIFIED ECCENTRIC LOADER TERMINAL	621.54								
					1						1		EACH	ANCHOR FOR STEEL BEAM RAIL	621.80								
																PROJECT NAME: Clarendon PROJECT NUMBER: BRO 1443(29) FILE NAME: 03/01/09.qxd PROJECT MANAGER: R. Whitcomb DESIGNED BY: Dubois & King, Inc. QUANTITY SHEET #1				PLOT DATE: 06/13/2005 DRAWN BY: L. Bullock CHECKED BY: C. Carlson SHEET 4a OF 41			

QUANTITY SHEET



SUMMARY OF ESTIMATED QUANTITIES										TOTALS			DESCRIPTIONS		DETAILED SUMMARY OF QUANTITIES				
SUPER STRUCTURE	ABUT. NO. 1	ABUT. NO. 2	APPROACH SLAB	CHANNEL	ROADWAY	EROSION CONTROL	TRAINING	FULL ESC	BRIDGE QUANTITY	ROUND	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS	
					4						4		EACH	GUARD RAIL APPR. SECTION/NETC 2 RAIL	621.72				
					80						80		M	TEMPORARY TRAFFIC BARRIER	621.90				
					200						200		HR	UNIFORMED TRAFFIC OFFICERS	630.10				
					600						600		HR	FLAGGERS	630.15				
								1			1		LS	FIELD OFFICE-ENGINEERS	631.10				
								1			1		LS	TESTING EQUIPMENT - CONCRETE	631.16				
								1			1		LS	TESTING EQUIPMENT - BITUMINOUS	631.17				
								1			1		LU	FIELD OFFICE - TELEPHONE (NAB)	631.25			N/A B.I. = NOT A BID ITEM	
							520				520		HR	EMPLOYEE TRAINEESHIP	634.10				
					1						1		LS	MOBILIZATION/DEMOLIZATION	635.11				
					1						1		LS	TRAFFIC CONTROL	641.10				
					600						600		M	100 mm WHITE LINE	646.20				
					600						600		M	100 mm YELLOW LINE	646.21				
				200					200		200		SM	GEOTEXTILE UNDER STONE FILL	649.31				
						750					750		SM	GEOTEXTILE FOR SLT FENCE	649.51				
						150					150		SM	GEOTEXTILE FOR FILTER CURTAIN	649.61				
						25					25		KG	SEED	651.15				
						25					25		KG	SEED-WINTER RYE	651.17				
						120					120		KG	FERTILIZER	651.18				
						1					1		T	AGRICULTURAL LIMESTONE	651.20				
						1					1		T	HAYMULCH	651.25				
						200					200		CM	TOPSOIL	651.35				
				150					150		150		SM	GRUBBING MATERIAL	651.40				
						1					1		LS	EROSION PREVENTION & SEDIMENT CONTROL PLAN	652.10				
						50					50		HR	MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN	652.20				
						1					1		LU	MAINTENANCE OF EROSION PREVENTION & SEDIMENT CONTROL PLAN (N/A B.I.)	652.30				
						100					100		SM	EROSION MATTING	654.10				
					1.12						1		SM	TRAFFIC SIGNS, TYPE A	675.20				
														BEGIN SIGN POST OPTION					
					9.2						9		M	FLANGED CHANNEL SIGN POST	675.301				
					9.2						9		M	SQUARE TUBE SIGN POSTS AND ANCHOR	675.341				
														END SIGN POST OPTION					
					4						4		EACH	REMOVING SIGNS	675.50				
																PROJECT NAME: Clarendon			
																PROJECT NUMBER: BRO 1443(29)			
																FILE NAME: 93019qs.xls			
																PLOT DATE: 8/28/04			
																PROJECT MANAGER: R. Whitcomb			
																DRAWN BY: L. Bullock			
																DESIGNED BY: Dubois & King, Inc.			
																CHECKED BY: C. Carlson			
																QUANTITY SHEET #2			
																SHEET 4b OF 41			



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

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS	REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1A	PINKOWSKI, DANIEL PINKOWSKI, MARTIN J. DAVIS, DEBBIE & PINKOWSKI, JEAN R.	7	1+356.5 LT.	1+421.9 LT.			UTILITY EASE. (P) 184 S.M.±	WDOE	04-18-02	CLARENDON	106	179-183	1,981 S.F.±	1	5, 7	PARCEL NO. 1 PINKOWSKI. ADD CONST. (T) AT STATION 1+356.5 LT. ~ 1+421.9 LT.; 26 SM±; 260 S.F.± PER C.O. 9188.	02-13-01	P. J. H.	R. P. D.
			1+356.5 LT.	1+421.9 LT.			CONST. (T) 26 S.M.±						280 S.F.± INCLUDES EROSION CONTROL						
1B		7	1+430.0 RT.	1+471.6 RT.	33 S.M.±		CONST. (T) 228 S.M.±						395 S.F.±	2	6, 7, 8	PARCEL NO. 4 RUANE. MOVE ACQUISITION FOR 4C DOWN FROM 4B. RE-DEFINE ACQUISITION LINE ALONG CLEAR ZONE WITH RUNNING DISTANCE. PER C.O. 9190.	02-13-01	P. J. H.	R. P. D.
			1+430.0 RT.	1+480.8 RT.			RESET (T)						748 S.F.±						
			1+430.0 RT.	1+479.0 RT.			SLOPE (P)						97 S.F.±						
			1+471.6 RT.	1+480.8 RT.															
1C		8	1+490.0 RT.	1+501.6 RT.	38 S.M.±		SLOPE (P) 9 S.M.±						409 S.F.±	4	5, 7, 8	PARCEL NO. 1 PINKOWSKI. REVISE PARCEL 1B AS FOLLOWS: CHANGE ENDING STA. OF TAKE FROM 1+440.6 RT. TO 1+471.6 RT.; 33 SM±, 355 SF±. CHANGE ENDING STA. OF CONST. (T) FROM 1+440.3 RT. TO 1+480.8 RT.; 228 SM±, 748 SF±. CHANGE ENDING STA. OF RESET (T) FROM 1+440.6 RT. TO 1+478.0 RT. ADD SLOPE (P) FROM STA. 1+471.6 RT. ~ 1+480.8 RT.; 9 SM±, 97 SF±. PER C.O. 9194.	03-19-01	P. J. H.	R. P. D.
			1+490.0 RT.	1+490.0 RT.			CONST. (T) 88 S.M.±						97 S.F.±						
			1+480.8 RT.	1+500.8 RT.															
2	ARNOLD, SANDRA M. & JEFFREY	7	1+438.0 LT.	1+467.5 LT.	26 S.M.±		UTILITY EASE. (P) 163 S.M.±			CLARENDON			260 S.F.±	5	6, 7, 8	PARCEL NO. 3 MURRAY. DELETE PARCEL. COMBINE RIGHTS WITH PARCEL 1B. PER C.O. 9195.	03-19-01	P. J. H.	R. P. D.
			1+421.4 LT.	1+468.2 LT.			INSTALL (T)						1795 S.F.±						
			1+421.8 LT.	1+485.4 LT.			DRIVE (T)						GRAVEL 2.9 M. (10') WIDE						
			1+438.2 LT.				RESET (T)						LIGHT POLE						
			1+439.2 LT.				REMOVE (T)						GRAVEL 4.0 M. (13') WIDE						
			1+444.9 LT.				DETOUR (T) 14 S.M.±						GATE POST						
			1+461.4 LT.	1+465.8 LT.			RESET (T)						151 S.F.±						
			1+461.6 LT.				SLOPE (T) 19 S.M.±						IRON ROD						
			1+467.5 LT.										205 S.F.±						
			1+445.9 LT.	1+467.2 LT.															
3	DELETED															FORMERLY MURRAY			

ACCT: MRYan
\\vso07.sad.vt.gov\pub\inet\8\33309\RightOfWay\j309a.dgn
DATE PLOTTED 07-MAY-2002

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

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

LEGEND
--- C&T (P) --- CLEARING & TRIMMING
--- P&T (P) --- CLEAR ZONE
--- CONST. (T) --- CONSTRUCTION EASEMENT
SR SR SLOPE RIGHTS
P PROPERTY LINE
TOP OF CUT
TOP OF SLOPE

APPROVED: ROGER P. DUMAS DATE: 02-29-00
CHIEF, PLANS & TITLES

R. O. W. PLANS

CLARENDON
BRO 1443(29)
R.O.W. SHEET 5 OF 8
SHEET 5 OF 41

TABLE OF PROJECT PROPERTY ACQUISITION

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

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	9K.	PG.	REMARKS	REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
4A	RUANE, ROBERT T. & MARY M.	8	1+510.8 LT.	1+560.0 LT.	272 S.M.±			WDOE	04-15-02	CLARENDON	106	169-171	2,328 S.F.±						
			1+509.0 LT.	1+535.7 LT.			CONST. (T) 56 S.M.±						603 S.F.±						
			1+509.2 LT.	1+544.4 LT.			DETOUR (T) 165 S.M.±						1,776 S.F.±						
			1+525.1 LT.	1+560.0 LT.			RESET (T)						FENCE						
			1+527.9 LT.	1+543.0 LT.			CLEAR & TRIM (P) 18 S.M.±						194 S.F.±						
			1+535.0 LT.	1+545.4 LT.			INSTALL (T)						SILT FENCE						
			1+552.5 LT.				DRIVE (T)						GRAVEL 3.0 M. (10') WIDE						
			1+560.0 LT.	1+613.4 LT.			CLEAR & TRIM (P) 44 S.M.±						474 S.F.±						
4B		8	1+522.2 RT.	1+548.7 RT.	119 S.M.±		CONST. (T) 66 S.M.±						1,270 S.F.±						
			1+523.4 RT.	1+548.7 RT.									710 S.F.±						
4C		7,8	1+467.2 LT.	1+496.0 LT.	36 S.M.±								388 S.F.±						
			1+495.4 LT.	1+472.8 LT.			CONST. (T) 65 S.M.±						700 S.F.±						
			1+494.0 LT.	1+490.8 LT.			CONST. (T) 73 S.M.±						786 S.F.±						
			1+495.4 LT.	1+493.8 LT.			DETOUR (T) 178 S.M.±						1,915 S.F.±						
			1+485.8 LT.	1+493.8 LT.			UTILITY EASE. (P) 95 S.M.±						1,023 S.F.±						
			1+451.4 LT.	1+467.7 LT.			REMOVE & RESET (T)						GATE POSTS						
			1+475.0 LT.				DRIVE (T)						GRAVEL 3M. (10') WIDE						
5	HERRERA, FRANCISCO A. & LINDA M.	8	1+548.7 RT.	1+560.0 RT.	47 S.M.±					CLARENDON			506 S.F.±						
			1+548.7 RT.	1+627.5 RT.			CONST. (T) 150 S.M.±						1,615 S.F.±						
			1+560.0 RT.	1+610.6 RT.			SLOPE (T) 100 S.M.±						1,076 S.F.±						
6	CENTRAL VERMONT PUBLIC SERVICE CORP.												UTILITY						
7	NEW ENGLAND TELEPHONE												UTILITY						
8	ADOLPHIA CABLE												UTILITY						

ACCT: M0497
\\v001-000d\Filing\cabin\8\93\03\RightOfWay\7\093.dgn
DATE PLOTTED: 07-MAY-2002

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

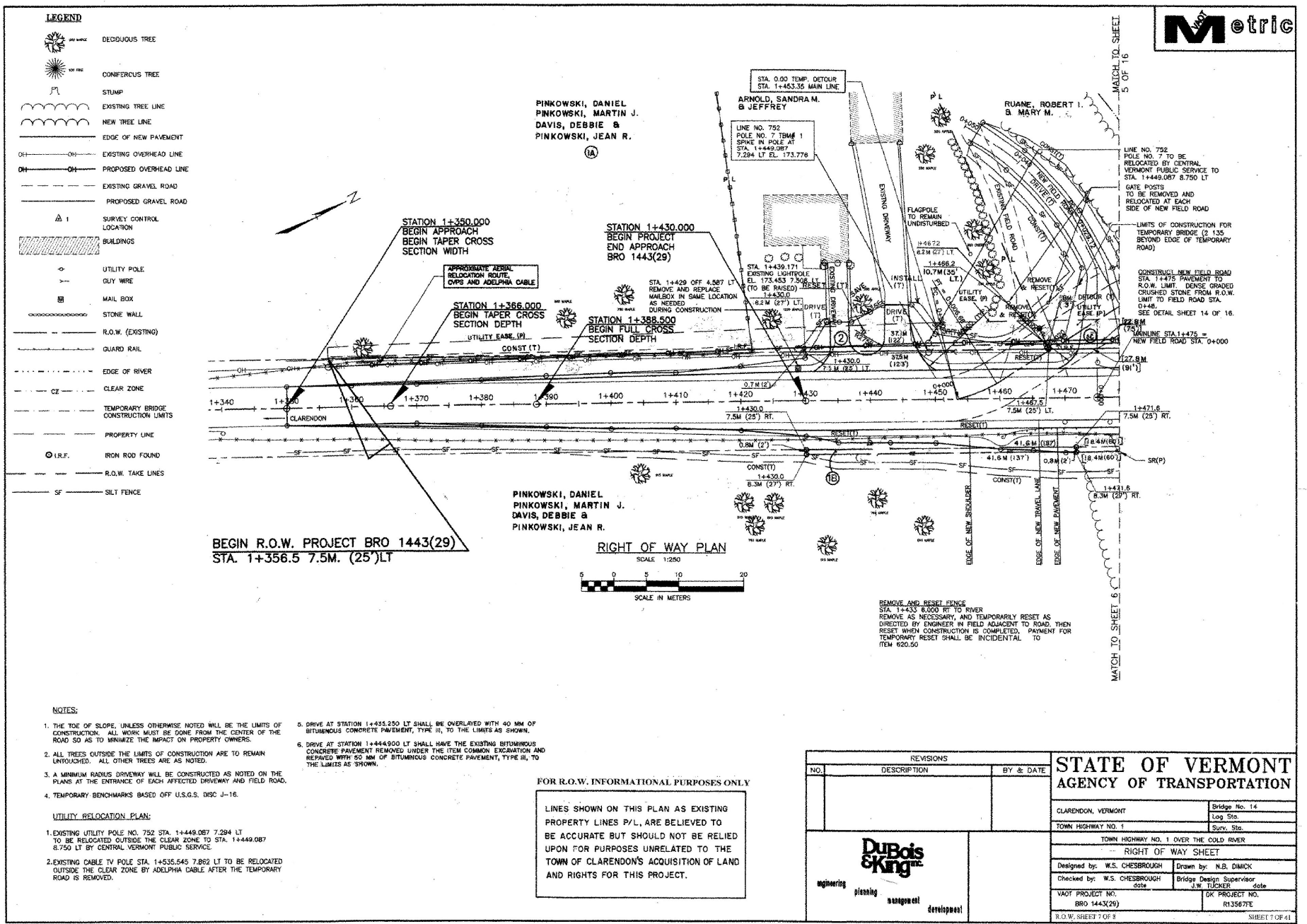
--- -- -- PRESENT R.O.W.
--- -- -- TAKING WITHOUT ACCESS
--- -- -- TAKING WITHOUT ACCESS ALONG PROPERTY LINE
--- -- -- TAKING WITH ACCESS
(P) PERMANENT EASEMENT
(T) TEMPORARY EASEMENT

LEGEND
--- C&T (P) --- CLEARING & TRIMMING
--- C&T (P) --- CLEAR ZONE
--- CONST. (P) --- CONSTRUCTION EASEMENT
--- SR --- SLOPE RIGHTS
--- P --- PROPERTY LINE
--- TOP OF CUT
--- TDE OF SLOPE

APPROVED: ROGER P. DUMAS DATE: 02-29-00
CHIEF, PLANS & TITLES

R. O. W. PLANS

CLARENDON
BRO 1443(29)
R.O.W. SHEET 6 OF 8
SHEET 6 OF 41



LEGEND

- DECIDUOUS TREE
- CONIFEROUS TREE
- STUMP
- EXISTING TREE LINE
- NEW TREE LINE
- EDGE OF NEW PAVEMENT
- EXISTING OVERHEAD LINE
- PROPOSED OVERHEAD LINE
- EXISTING GRAVEL ROAD
- PROPOSED GRAVEL ROAD
- SURVEY CONTROL LOCATION
- UTILITY POLE
- GUY WIRE
- MAIL BOX
- STONE WALL
- R.O.W. (EXISTING)
- EXISTING GUARD RAIL (BY TOWN)
- EDGE OF RIVER
- CLEAR ZONE
- TEMPORARY BRIDGE CONSTRUCTION LIMITS
- EXISTING STONEFILL
- R.O.W. TAKE LINES
- SILT FENCE

RUANE, ROBERT I. & MARY M.

PINKOWSKI, DANIEL
PINKOWSKI, MARTIN J.
DAVIS, REBBIE A.
PINKOWSKI, JEFF R.

REMOVE AND RESET FENCE
STA. 1+525.153 LT TO 1+560.000 LT
REMOVE AS NECESSARY, AND TEMPORARILY RESET AS DIRECTED BY ENGINEER OUTSIDE CONSTRUCTION LIMITS. THEN RESET WHEN CONSTRUCTION IS COMPLETED. PAYMENT FOR TEMPORARY RESET SHALL BE INCIDENTAL TO ITEM 520.50

REMOVE EXISTING STONE WALL
STA. 1+545.440 LT TO 1+560.000 LT
REMOVE THE EXISTING LAID UP STONE WALL. PAYMENT FOR REMOVING THE STONE WALL SHALL BE INCIDENTAL TO ITEM 201.10 (CLEARING AND GRUBBING).

CONSTRUCT NEW FIELD DRIVE
STA. 1+552.542 PAVEMENT TO R.O.W. LIMIT. CRUSHED GRAVEL FROM R.O.W. LIMIT TO FIELD DRIVE STA. 0+025.000 SEE DETAIL SHEET 14 OF 16.

LIMITS OF CONSTRUCTION FOR TEMPORARY BRIDGE (2.135 BEYOND EDGE OF TEMPORARY ROAD)

(TO BE REMOVED)

(TO BE REMOVED)

(TO BE REPLACED AND RELOCATED AT STATION 1+560.909 LT)

RUANE, ROBERT I. & MARY M.

STATION 1+560.000
END PROJECT BRO 1443(29)
BEGIN APPROACH
BEGIN TAPER CROSS SECTION WIDTH

STATION 1+640.000
END APPROACH
MATCH EXISTING

STATION 1+624.000
END TAPER CROSS SECTION DEPTH
MATCH EXISTING DEPTH

APPROXIMATE ANNUAL RELOCATION ROUTE, ADELPHA CABLE

EXISTING BRIDGES PRECEDE BEFORE ROAD (TO REMAIN)

CURVE DATA
Δ = 182°14'4"
R = 300.000
T = 48.486
L = 65.114
T-L = 3.590
T-T-L = 0.832
BANKING = 0.030

APPROXIMATE LIMITS OF EXISTING STONEFILL (TYP.)

CONSTRUCT NEW ABUTMENT AND WINGWALLS (TYP.) TYPE III STONEFILL

STA. 1+539.000 RT TO 1+551.000 RT EXISTING LARGE ROCKS TO BE REMOVED INCIDENTAL TO ITEM 201.10 (CLEARING AND GRUBBING)

NOTE: ALL TREES INCLUDING APPLE TREES, OUTSIDE OF RIGHT OF WAY ARE TO BE LEFT UNTOUCHED EXISTING

HERRERA, FRANCISCO A. & LINDA M.

EXISTING BRIDGE DATA

STRUCTURE TYPE: STEEL PONY TRUSS W/ CONCRETE DECK BRIDGE
CLEAR SPAN: 22.8 m
DISPOSITION OF STRUCTURE: TO BE REMOVED AND DISPOSED OF

REMOVE AND RESET FENCE

STA. 1+430.000 TO STA. 1+477.000 RT
STA. 1+525.153 LT TO STA. 1+560.000 LT
STA. 1+525.153 LT TO STA. 1+560.000 LT

NEW MAILBOX

STA. 1+429.000 LT

CONSTRUCT DRIVES

STA. 1+435.250 LT
STA. 1+444.900 LT
STA. 1+475.000 LT
STA. 1+552.542 LT

ANCHOR FOR GUARDRAIL

STA. 1+481.533 LT

BRIDGE RAILING

STA. 1+484.063 TO STA. 1+525.651 LT
STA. 1+486.345 TO STA. 1+525.101 RT

GUARD RAIL

STA. 1+479.614 TO STA. 1+494.063 LT
STA. 1+525.651 TO STA. 1+544.603 LT
STA. 1+480.084 TO STA. 1+496.345 RT
STA. 1+525.101 TO STA. 1+546.517 RT

CONSTRUCT DITCH

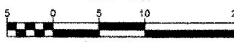
STA. 1+528.000 TO STA. 1+625.000 RT

REMOVE EXISTING STONE WALL

STA. 1+545.440 TO STA. 1+580.000 LT

RIGHT OF WAY PLAN

SCALE 1:250



SCALE IN METERS

FOR R.O.W. INFORMATIONAL PURPOSES ONLY

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

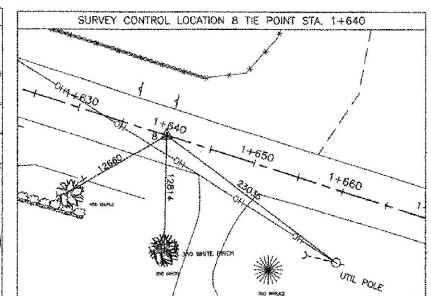
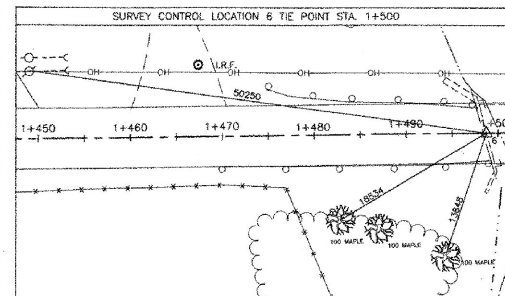
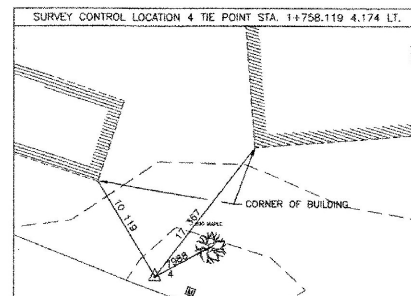
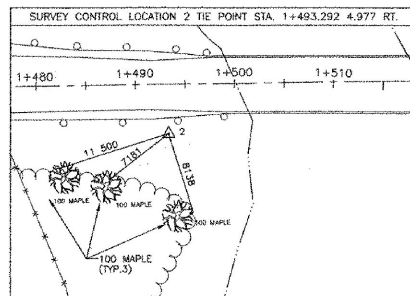
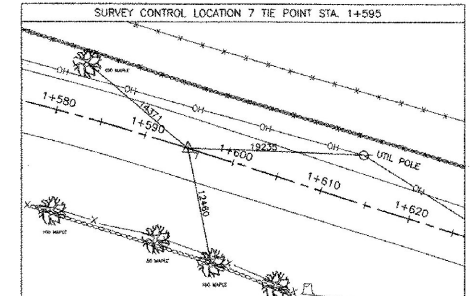
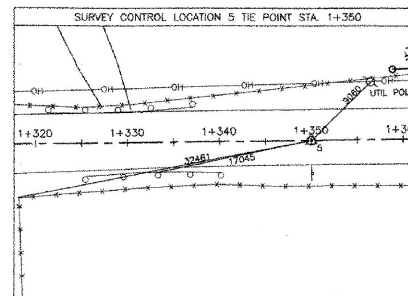
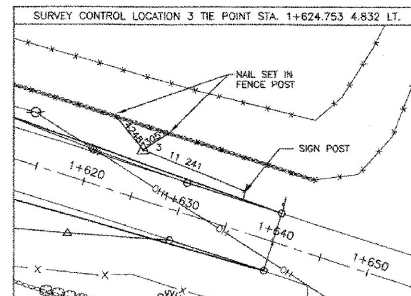
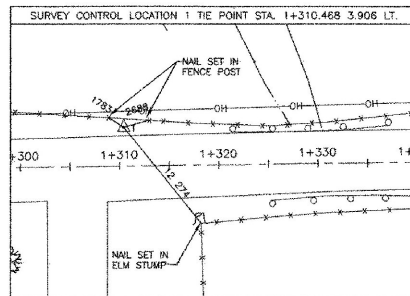
REVISIONS		
NO.	DESCRIPTION	BY & DATE

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DuBois & King
engineering planning management development

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

CLARENDON, VERMONT		Bridge No. 14
TOWN HIGHWAY NO. 1		Log Slo.
		Surv. Sta.
TOWN HIGHWAY NO. 1 OVER THE COLD RIVER		
RIGHT OF WAY SHEET		
Designed by: W.S. CHESBROUGH	Drawn by: N.B. DIMICK	
Checked by: W.S. CHESBROUGH	Bridge Design Supervisor: J.W. TUCKER	
VAGT PROJECT NO. BRO 1443(29)	OK PROJECT NO. R150677E	
R.O.W. SHEET 9 OF 8	SHEET 8 OF 41	

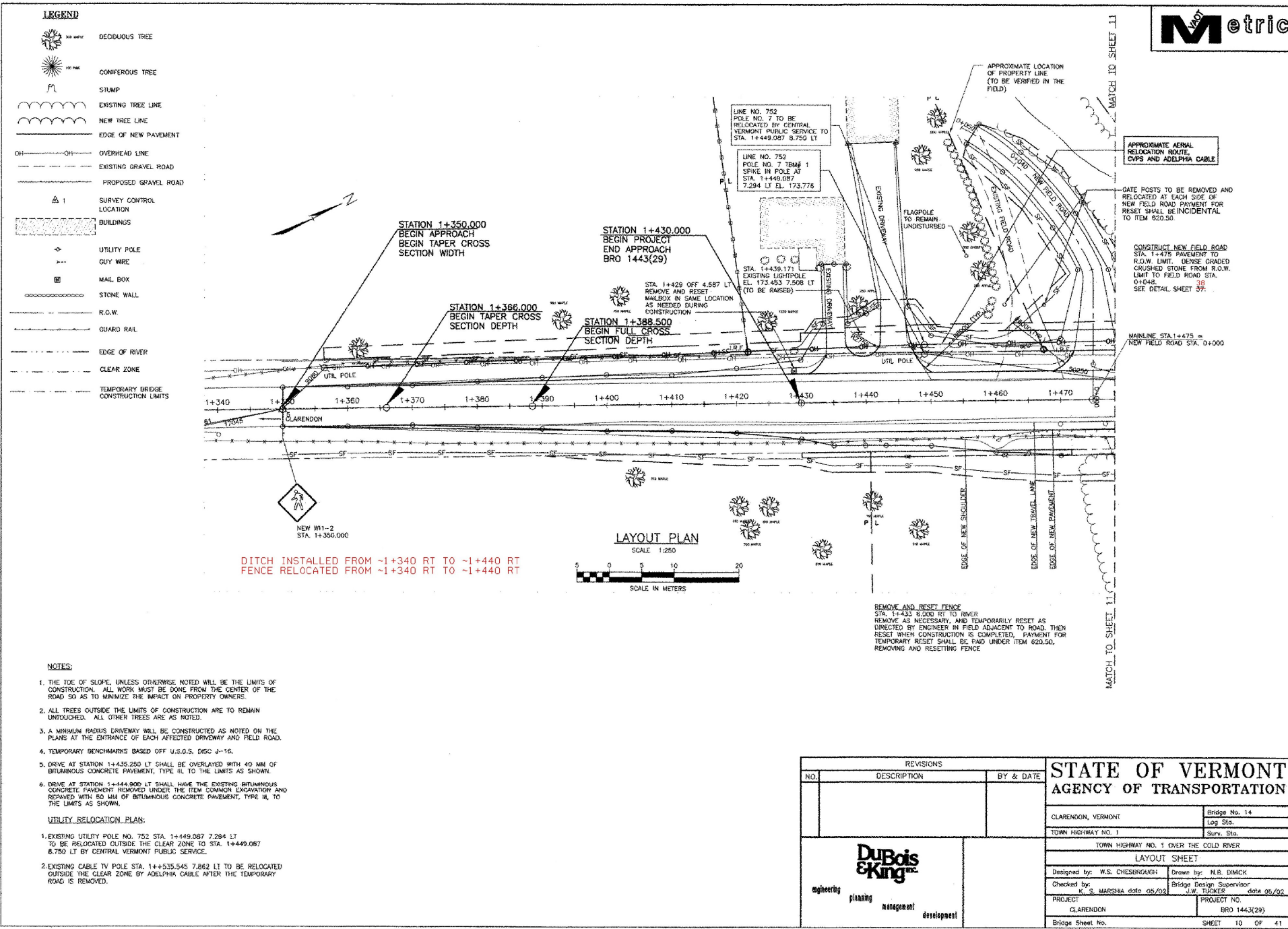


TIE SHEET
SCALE 1:250

NOTE:
THE DISTANCES ARE IN MILLIMETERS

REVISIONS			STATE OF VERMONT AGENCY OF TRANSPORTATION	
NO.	DESCRIPTION	BY & DATE		
			Bridge No. 14 CLARENDON, VERMONT Leg. Sta. TOWN HIGHWAY NO. 1 Surv. Sta. TOWN HIGHWAY NO. 1 OVER THE COLD RIVER TIE SHEET Designed by: W.S. CHESBROUGH Drawn by: N.B. DIMICK Checked by: K.S. MARSHIA date 05/02 Bridge Design Supervisor J.W. TUCKER date 05/02 PROJECT CLARENDON BRO 144X(29) Bridge Sheet No. SHEET 9 OF 41	





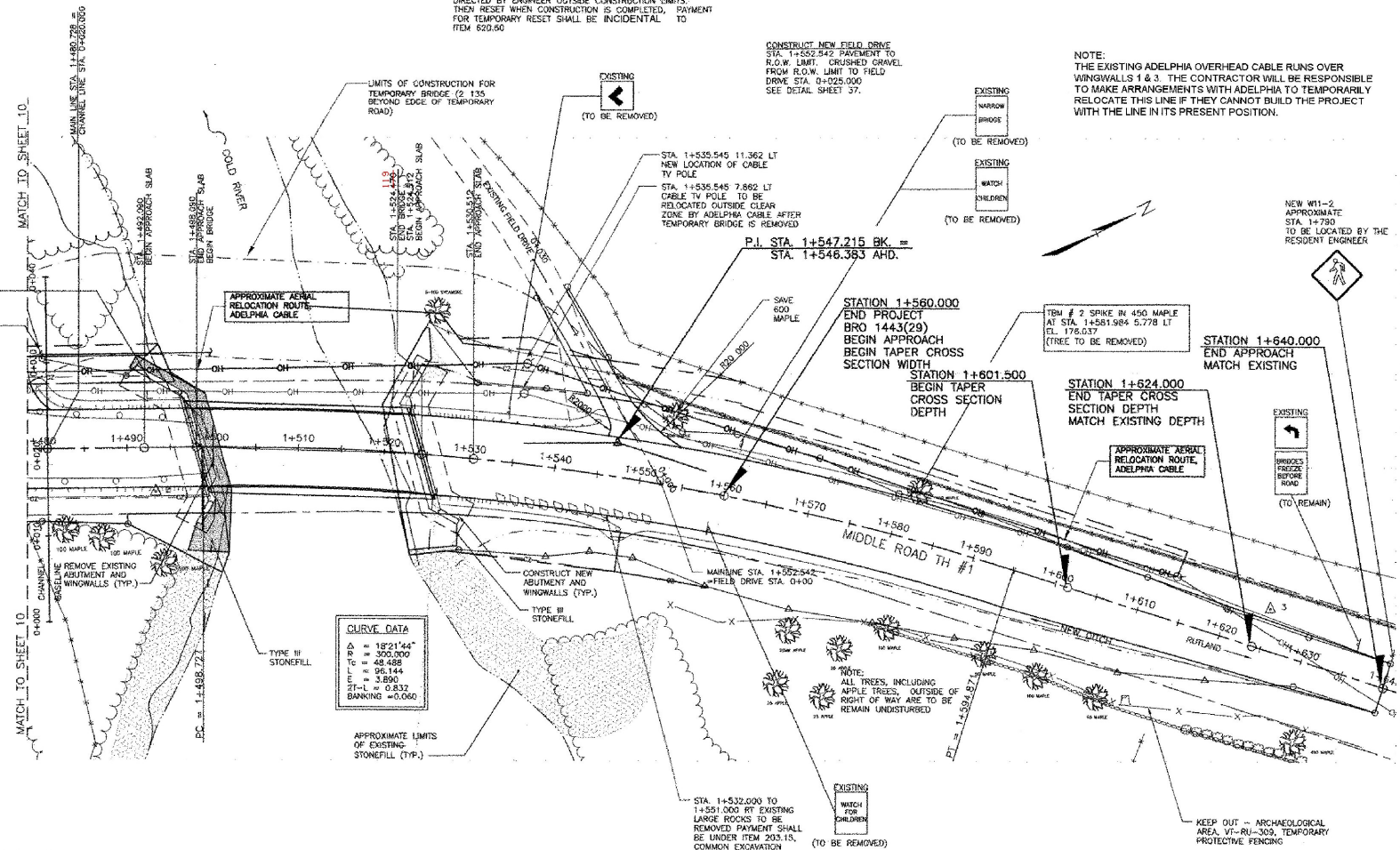
LEGEND

- DECIDUOUS TREE
- CONIFEROUS TREE
- STUMP
- EXISTING TREE LINE
- NEW TREE LINE
- EDGE OF NEW PAVEMENT
- OVERHEAD LINE
- EXISTING GRAVEL ROAD
- PROPOSED GRAVEL ROAD
- SURVEY CONTROL LOCATION
- UTILITY POLE
- GUY WIRE
- MAIL BOX
- STONE WALL
- R.O.W.
- EXISTING GUARD RAIL
- EDGE OF RIVER
- CLEAR ZONE
- TEMPORARY BRIDGE CONSTRUCTION LIMITS
- EXISTING STONEFILL
- TEMPORARY PROTECTIVE FENCING

REMOVE AND RESET FENCE
 STA. 1+525.153 LT TO 1+545.117 LT
 REMOVE AS NECESSARY, AND TEMPORARILY RESET AS - FENCE REMOVED
 DIRECTED BY ENGINEER OUTSIDE CONSTRUCTION LIMITS.
 THEN RESET WHEN CONSTRUCTION IS COMPLETED. PAYMENT
 FOR TEMPORARY RESET SHALL BE INCIDENTAL TO
 ITEM 620.50

CONSTRUCT NEW FIELD DRIVE
 STA. 1+552.542 PAVEMENT TO
 R.O.W. LIMIT. CRUSHED GRAVEL
 FROM R.O.W. LIMIT TO FIELD
 DRIVE STA. 0+025.000
 SEE DETAIL SHEET 37.

NOTE:
 THE EXISTING ADELPHA OVERHEAD CABLE RUNS OVER
 WINGWALLS 1 & 3. THE CONTRACTOR WILL BE RESPONSIBLE
 TO MAKE ARRANGEMENTS WITH ADELPHA TO TEMPORARILY
 RELOCATE THIS LINE IF THEY CANNOT BUILD THE PROJECT
 WITH THE LINE IN ITS PRESENT POSITION.

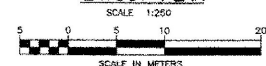


EXISTING BRIDGE DATA

STRUCTURE TYPE: STEEL PONY TRUSS W/ CONCRETE DECK BRIDGE
 CLEAR SPAN: 22.8 m
 DISPOSITION OF STRUCTURE: TO BE REMOVED AND DISPOSED OF

- REMOVE AND RESET FENCE**
 STA. 1+433.000 to STA. 1+477.000 RT
 STA. 1+525.153 to STA. 1+545.117 LT
- RELOCATE MAILBOX SINGLE SUPPORT**
 STA. 1+429.000 LT
- CONSTRUCT DRIVES**
 STA. 1+435.250 LT
 STA. 1+444.900 LT
 STA. 1+475.000 LT
 STA. 1+552.542 LT
- CONSTRUCT DITCH**
 STA. 1+528.000 to STA. 1+625.000 RT
- BRIDGE RAILING**
 STA. 1+494.173 to STA. 1+525.725 LT
 STA. 1+496.457 to STA. 1+529.074 RT
- GUARDRAIL APPROACH SECTION, NETC 2 RAIL**
 STA. 1+486.553 to STA. 1+494.173 LT
 STA. 1+488.637 to STA. 1+496.457 RT
 STA. 1+525.725 to STA. 1+533.345 LT
 STA. 1+529.074 to STA. 1+536.694 RT
- MODIFIED ECCENTRIC LOAD TERMINAL**
 STA. 1+533.345 to STA. 1+544.745 LT
 STA. 1+460.268 to STA. 1+471.668 RT
 STA. 1+536.694 to STA. 1+546.094 RT
- HEAVY DUTY STEEL BEAM GUARDRAIL**
 STA. 1+471.668 to STA. 1+488.637 RT
 STA. 1+479.614 to STA. 1+486.553 LT
- ANCHOR FOR GUARDRAIL**
 STA. 1+490.883 LT

LAYOUT PLAN



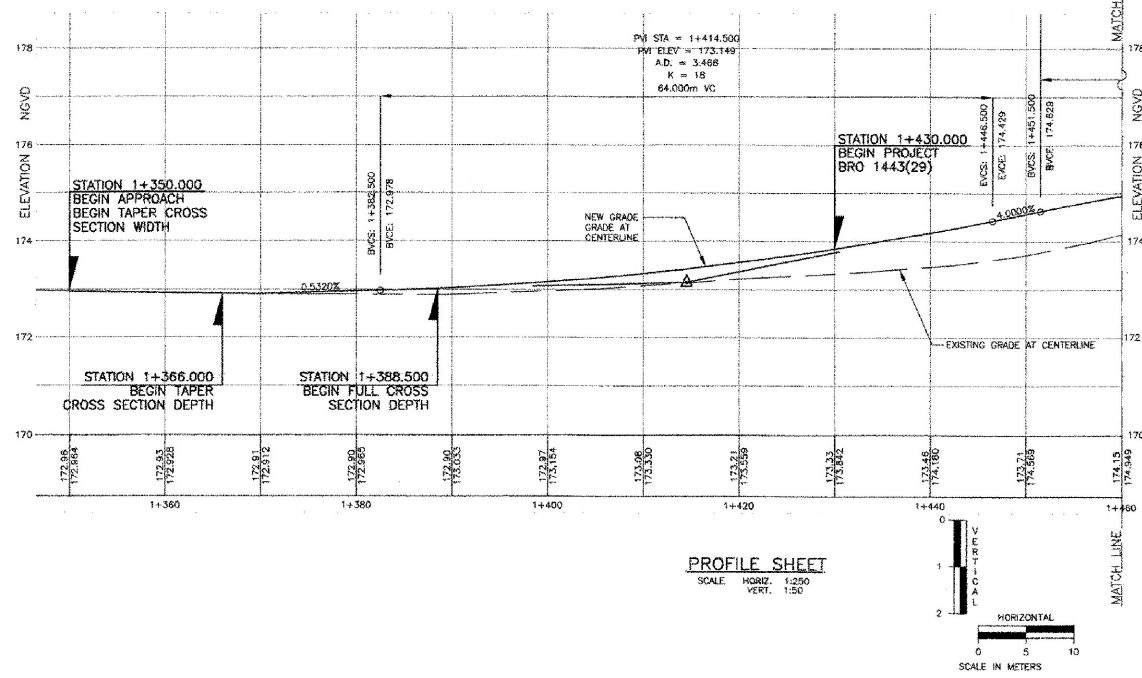
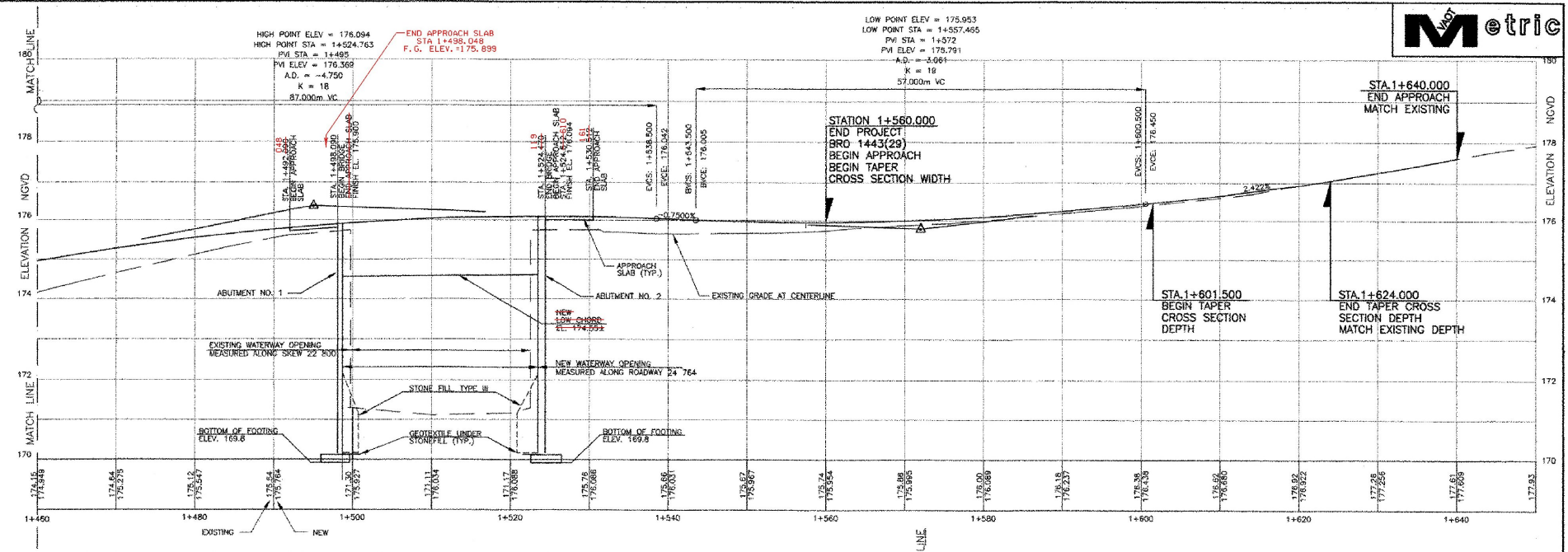
REVISIONS		
NO.	DESCRIPTION	BY & DATE

**STATE OF VERMONT
 AGENCY OF TRANSPORTATION**

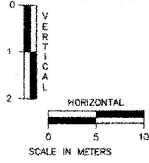
CLARENDON, VERMONT		Bridge No. 14
TOWN HIGHWAY NO. 1		Log Sta.
TOWN HIGHWAY NO. 1 OVER THE COLD RIVER		Surv. Sta.
LAYOUT SHEET		
Designed by: W.S. CHESBROUGH	Drawn by: N.B. DIMICK	
Checked by: E.S. MARSHALL date 05/02	Bridge Design Supervisor: J.W. TUCKER date 05/02	
PROJECT: CLARENDON	PROJECT NO.: BRO 1443(29)	
Bridge Sheet No.	SHEET 11 OF 41	

DuBois & King

engineering planning management development



PROFILE SHEET
SCALE: HORIZ. 1"=250'
VERT. 1"=50'



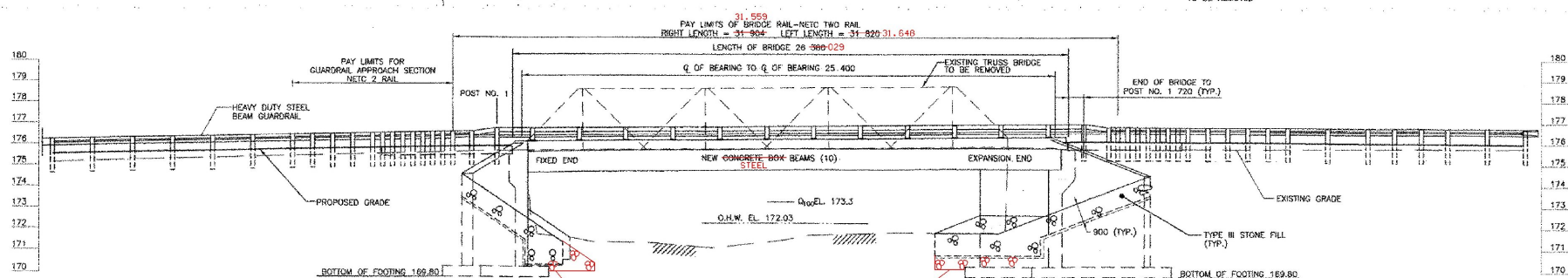
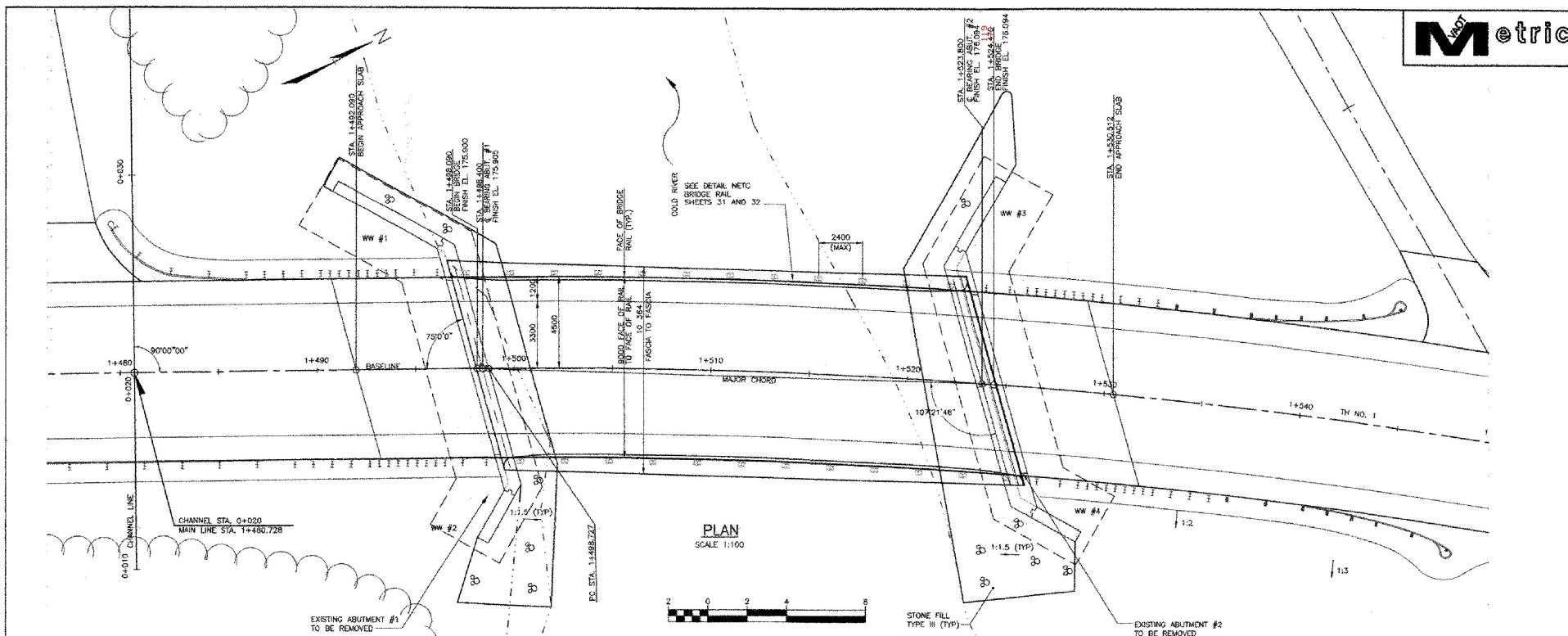
REVISIONS			STATE OF VERMONT AGENCY OF TRANSPORTATION	
NO.	DESCRIPTION	BY	DATE	
		CLARENDON, VERMONT		
		TOWN HIGHWAY NO. 1		
		TOWN HIGHWAY NO. 1 OVER THE COLD RIVER		
		PROFILE SHEET		
		Designed by: W.S. CHESBROUGH		
		Checked by: J.S. MARSHIA date 05/02		
		PROJECT NO. CLARENDON		
		Bridge Sheet No.		
		Drawn by: N.B. DIMICK		
		Bridge Design Supervisor: J.W. TUCKER date 05/02		
		PROJECT NO. BRO 1443(29)		
		SHEET 12 OF 41		

engineering

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development



STONE FILL KEY LOWERED TO MEET
EXISTING CHANNEL ELEVATION

REVISIONS			STATE OF VERMONT AGENCY OF TRANSPORTATION	
NO.	DESCRIPTION	BY & DATE		
			CLARENDON, VERMONT	Bridge No. 14
			TOWN HIGHWAY NO. 1	Log Sta.
				Surv. Sta.
			TOWN HIGHWAY NO. 1 OVER THE COLD RIVER	
			PLAN AND ELEVATION SHEET	
			Designed by: W.S. CHESBROUGH	Drawn by: N.B. DIMICK
			Checked by: K.S. MARSHALL date 05/02	Bridge Design Supervisor J.W. TUCKER date 05/02
			PROJECT NO. CLARENDON	PROJECT NO. BRD 1443(29)
			Bridge Sheet No.	SHEET 15 of 41

DuBois & King

engineering planning management development

EROSION CONTROL NARRATIVE

DESCRIPTION OF PROJECT

This project involves the reconstruction of a bridge in the town of Clarendon. The project is on Middle Road, a paved, Class I town highway, over the Cold river. A new two lane, single span, concrete box beam bridge will be constructed along the existing alignment while traffic is maintained on a temporary bridge during construction. As part of construction of the new bridge, the existing bridge and abutments will be removed. The final grade of the roadway through the bridge will be approximately 300ms higher than the existing roadway. Total roadway approach work, including both approaches and detour, is approximately 313 meters.

No 'Threatened & Endangered Species, wetlands, or Historic Resources' have been identified within the project area.

The site is located, based upon NAD 83 at 426900.00 N, 461974.00 E.

It is anticipated that the duration of this project will include installation of the temporary bridge during the fall months with bridge construction beginning the following construction season. Some work including removal of the existing bridge and approaches may take place during the winter months. Approval of an 'Erosion Prevention and Sediment Control Plan' supplied by the contractor specifically addressing construction during the winter months is a requirement before this type of work can take place.

Total disturbed area (excluding waste, borrow and staging areas):
0.54 ha (1.33 ac.)

SITE INVENTORY & ANALYSIS

OFF SITE DRAINAGE CHARACTERISTICS:

The property surrounding the project site consists of gently to moderately sloping land with brush and small shrubs being the predominate vegetation. Due to the nature of the project site, water running off from the site will be quickly slowed by brush and low shrubs, greatly reducing erosion potential.

DRAINAGE, WAYWAYS, BODIES OF WATER:

Cold River bisects the project site. There are no other water bodies or wetlands within the project area. The river bed is primarily comprised of gravel with many cobbles and small boulders at the bridge site. The contributing drainage area at the bridge crossing is 92.7 sq. km.

TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES:

The topography of the project site is gently rolling mature agricultural land with some residential development. Middle road is a paved 'rural major collector' road with an average daily traffic volume of approximately 2000. Overhead utility service follows along Middle Road on the north side with the relocation of the utility poles slightly to the north.

VEGETATION:

Fields of pasture and agricultural crops are the dominant vegetation near the bridge. Impacts to vegetation will be limited to that which are effected by the construction of the temporary bridge and roadway slopes. Some mature maple and sycamore trees will be removed to accommodate the detour.

SOILS:

The Natural Resources Conservation Service has mapped the soils throughout Rutland County. The soil type identified for this project site is sandy loam Gravelly loamy Fine Sand found at sites generally sloping from 0-8%. The hazard of erosion for this soil type is 'potentially highly erodible'.

The listed Soil Erodibility Coefficient (K-value) for this soil type is 0.29. 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 RESOURCES AREAS:

No 'Threatened & Endangered Species' have been identified within the project limits and there will be no adverse effect to wetlands or archaeological resources.

PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES:

Disturbance of soils near natural or man-made waterways consists of that which is necessary to construct two new concrete bridge abutments and applicable roadway approaches as well as the temporary detour. Stabilization of disturbances to 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 and biodegradable erosion control matting, or an equivalent product, will be utilized on all slopes steeper than 1:3 that are not lined with stone fill. Slopes from stations 1+450 - 1+496 and 1+525 - 1+580 will require this technique. All slopes shall be stabilized within 48 hours of reaching final grade or between 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 stone check dams will be placed in ditches to reduce flow velocities and thus reduce the potential for erosion. Check dams will be placed along the ditches such that the elevation of the top of each check dam corresponds with the elevation of the toe of the preceding upslope check dam. See "Erosion Controls Details" sheet. The check dams may be removed once the vegetation in the ditches is well established and the surrounding area stabilized.

Temporary measures to control sediment transport include:

Silt fence will be installed a distance of 1500 - 3000 (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 30 000 (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.

Stabilized construction entrances to the project site, staging areas, as well as to waste and borrow areas shall be established. The minimum size of a stabilized construction entrance is 3000 x 15 000 (12' x 50'). All surface water flowing to, or diverted towards a construction entrance shall be piped under the stone. Pipes shall be appropriately sized for the contributing area, however, no pipe smaller than 150mm diameter shall be used.

Temporary sediment settling basins will be utilized for dewatering cofferdams and shall be sized based upon the pumping rate and target particle size to be settled out for the project site. The follow sizing criteria is based upon a target particle size of 0.01 mm and is provided as general guidance. (See Sediment Settling Basin Sizing Criteria.)

PERMANENT EROSION CONTROL MEASURES

Several permanent erosion control measures will be utilized:

Roadway ditches will be grass lined to slow runoff velocities helping prevent erosion during storm events.

Stone lining of the stream banks with Stone Fill, Type III will protect stream bank erosion during design storm events.

Grass, or other suitable ground cover will be established outside of the roadway limits where stone fill has not been specified.

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, stormwater 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 and On-site Coordinator. See section 105.23 of the Vermont AOT Standard Specifications for Construction, dated 2001.

Install all erosion and sediment control measures as shown in the Erosion

Control Plan or as directed by the Engineer and On-site Coordinator. Do not modify the type, size or location of any control or practice without approval of the Engineer and On-site Coordinator. 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 promptly once damage is discovered.

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. Permanent 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 off-site runoff around or through the project site using diversion berms, diversion channels, culverts and/or temporary pipes.

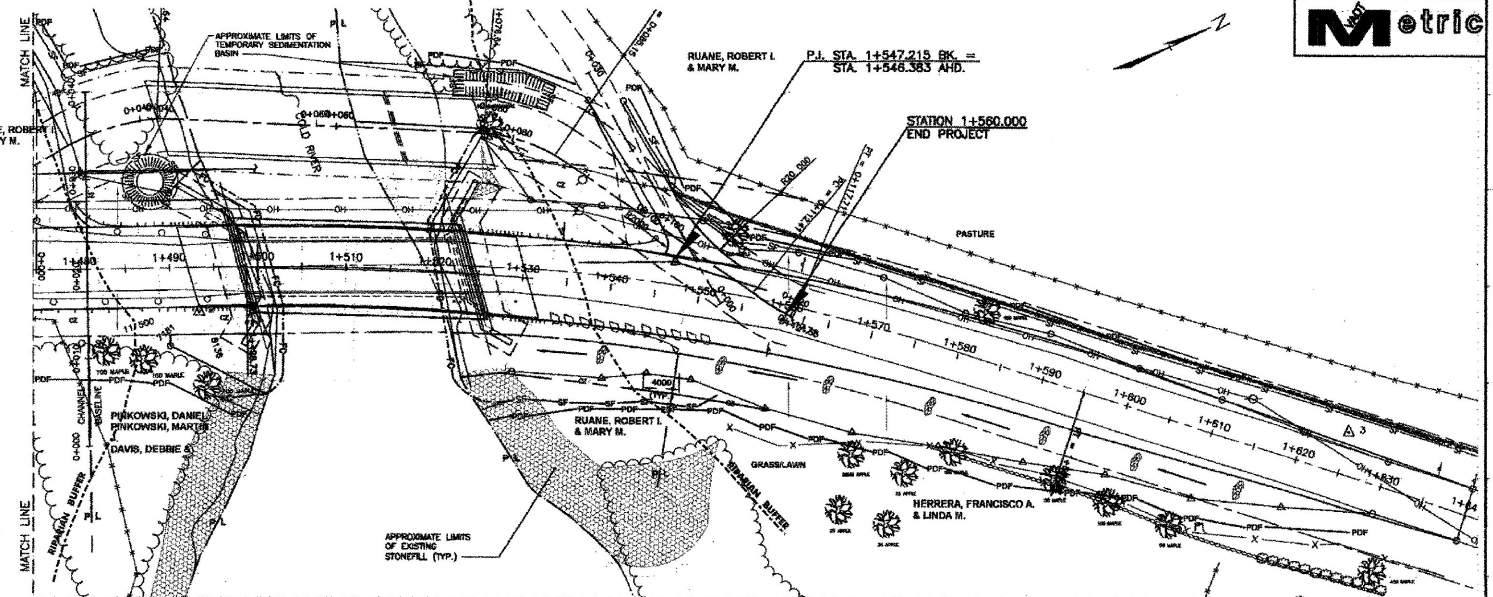
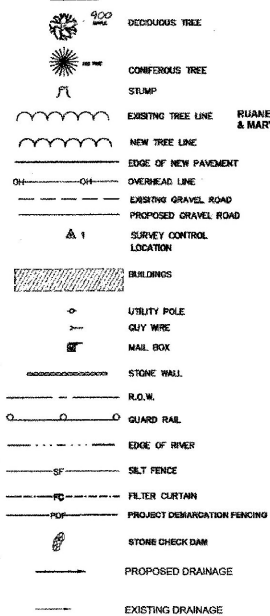
Do not allow construction equipment to operate on the down slope side of perimeter control measures.

SEDIMENT SETTLING BASIN SIZING CRITERIA

PUMP FLOW RATE	REQUIRED SURFACE AREA	LENGTH WIDTH = 2:1			
		Q (gpm)	Q (m ³ /s)	ft (ft)	m (m)
50	0.0032	595	55	35.0	17.0
100	0.0063	1200	111	49.0	24.5
150	0.0095	1776	165	53.0	29.6
200	0.0126	2368	220	68.8	34.4
250	0.0158	2970	276	77.0	38.5
300	0.0189	3560	330	84.4	42.2
350	0.0221	4155	386	91.2	45.6

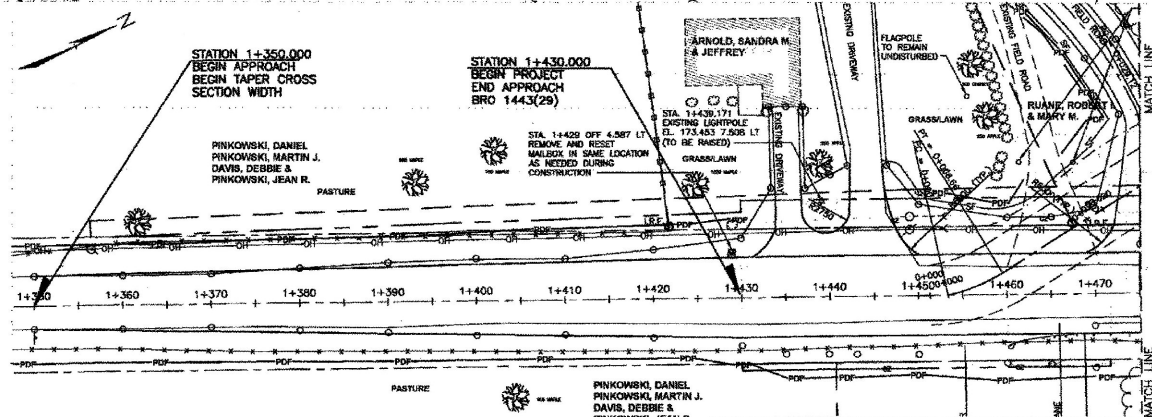
PROJECT NAME:	CLARENDON
PROJECT NUMBER:	BRO 1443(29)
FILE NAME:	PROJECTS\B\019w\019ecnx\
PROJECT LEADER:	R. R. WHITCOMB
DRAWN BY:	D. BONNEAU
DESIGNED BY:	D. BONNEAU
EROSION CONTROL NARRATIVE	CHECKED BY: C. CARLSON
	SHEET 16A OF 50

LEGEND

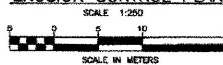


EROSION CONTROL NOTES:

1. 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.
2. AFTER COMPLETION OF THE SUBSTRUCTURE, THE SEDIMENT IN THE TRAP SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED OFF-SITE LOCATION. THE GROUND SHALL BE RESTORED TO ITS ORIGINAL SLOPES OR GRADED AS SHOWN IN THE PLANS.
3. THE CONTRACTOR SHALL DESIGN AND CONSTRUCT THE FILTER CURTAIN IN ACCORDANCE WITH SECTION 649.04. TO BE PAID UNDER ITEM #48.01, FILTER CURTAIN.
4. ALL EARTH AND/OR GRANULAR STOCK PILES SHALL BE PROTECTED BY AN APPROVED METHOD.
5. SEDIMENTATION BASINS AS REQUIRED SHALL BE LOCATED IN AN UPLAND NON-WETLAND LOCATION ABOVE OWN. PAYMENT FOR SEDIMENTATION BASINS SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED SUBSIDIARY TO TEMPORARY EROSION CONTROL ITEMS.
6. FOR CLARITY, AREAS TO RECEIVE EROSION CONTROL MATTING WERE NOT INDICATED ON THE PLANS. ALL AREAS WITH SLOPES STEEPER THAN 1:1 SHALL BE PROTECTED WITH EROSION CONTROL MATTING, SEEDED AND MULCHED. ALL OTHER AREAS DISTURBED DURING CONSTRUCTION SHALL BE SEEDED AND MULCHED.
7. EXISTING CONTOURS WERE UNAVAILABLE FOR THIS PROJECT. PLACEMENT OF EROSION CONTROL MEASURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
8. SEE CROSS SECTION SHEETS FOR GRADE CHANGES AND FINAL CONDITIONS ROADSIDE SLOPES.

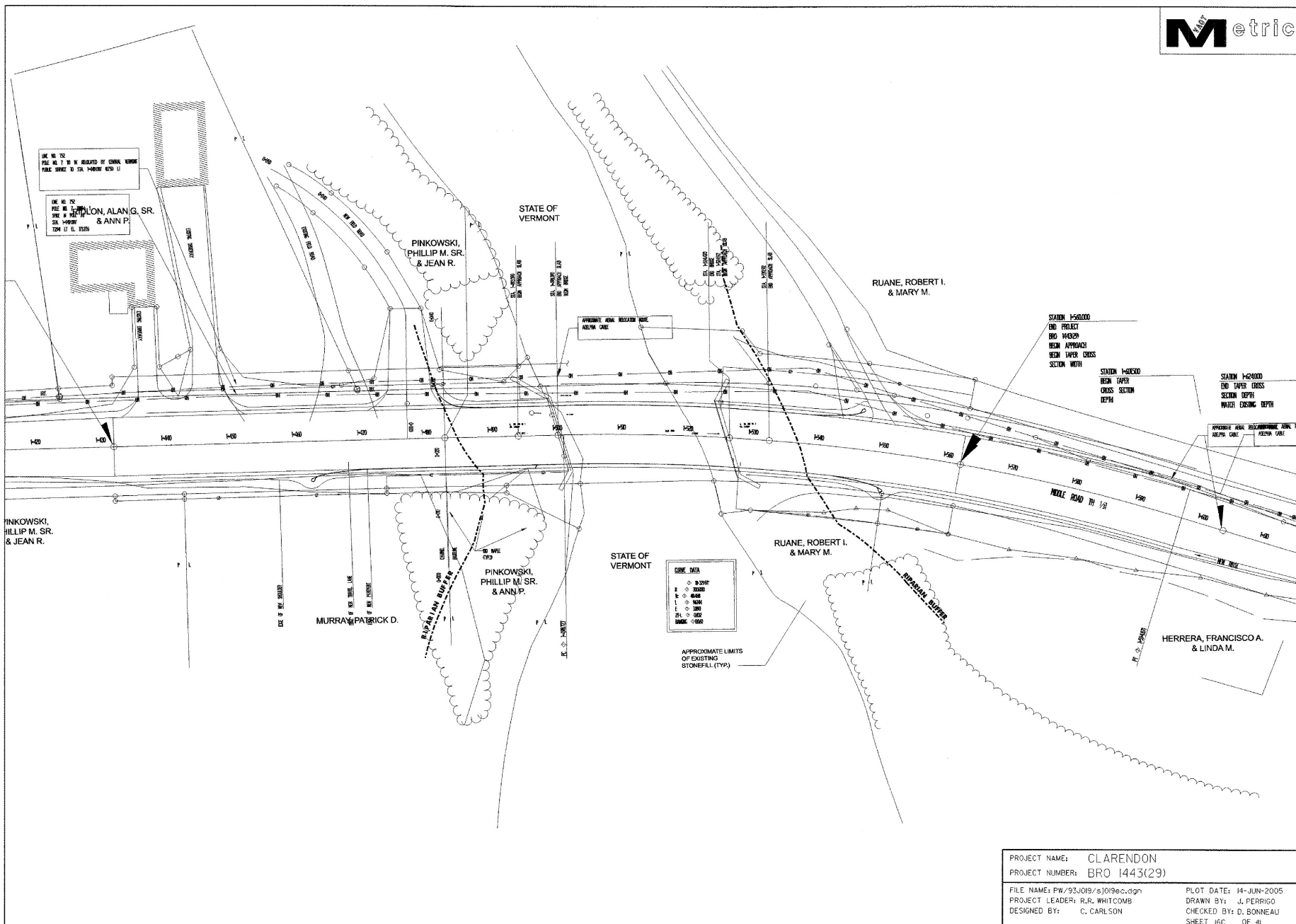


EROSION CONTROL PLAN



REVISIONS		BY & DATE
NO.	DESCRIPTION	

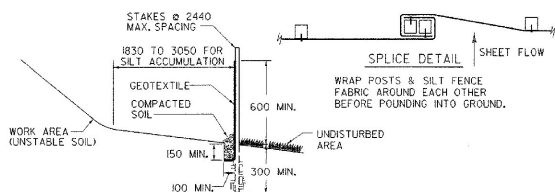
STATE OF VERMONT AGENCY OF TRANSPORTATION	
CLARENDON, VERMONT	Bridge No. 14
TOWN HIGHWAY NO. 1	Loc. Sta.
TOWN HIGHWAY NO. 1 OVER THE COLD RIVER	
EXISTING CONDITIONS / EROSION PREVENTION AND SEDIMENT CONTROL PLAN	
Designed by: W.S. CHESBROUGH	Drawn by: N.B. DIMECK
Checked by: S. S. MARSHALL date 05/02	Bridge Design Supervisor J.W. TUCKER date 05/02
PROJECT CLARENDON	PROJECT NO. BRO 1443(29)
Bridge Sheet No.	SHEET 108 OF 41



FILE NAME: PW/93J019/sj019ec.dgn	PLOT DATE: 14-JUN-2005
PROJECT LEADER: R.R. WHITCOMB	DRAWN BY: J. PERRIGO
DESIGNED BY: C. CARLSON	CHECKED BY: D. BONNEAU
	SHEET 16C OF 41

NOTE: REFER TO THE "VERMONT HANDBOOK FOR SOIL EROSION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" FOR ADDITIONAL EROSION CONTROL MEASURES.

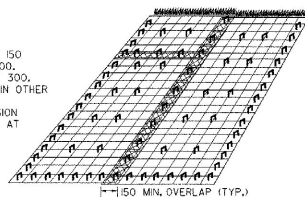
HAY BALES AND SILT FENCE ARE NOT TO BE USED ACROSS AREAS OF CONCENTRATED FLOW.



DETAIL "A"
SILT FENCE

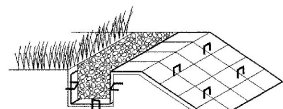
- NOTES:
- DO NOT USE SILT FENCE IN STREAMS, DRAINAGE DITCHES, OR AREAS OF CONCENTRATED FLOW.
 - BACK WITH STAPLED-IN PLACE HAY BALES OR WIRE FENCE IF ADDITIONAL SUPPORT IS NEEDED.
 - MUST BE REMOVED WHEN SOIL IS STABILIZED.

- NOTES:
- ALL FABRIC OVERLAPS SHALL BE 150 MINIMUM WITH STAPLES EVERY 500.
 - STAPLE EDGES OF FABRIC EVERY 500.
 - USE 1000 MAX STAPLE SPACING IN OTHER AREAS.
 - SEE "ANCHOR DETAILS FOR EROSION MATTING" DETAIL FOR ANCHORING AT TOPS OF SLOPES.



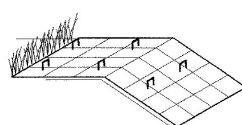
DETAIL "C"

EROSION MATTING FOR SLOPES STEEPER THAN 1:3



ANCHOR DETAIL "E1"

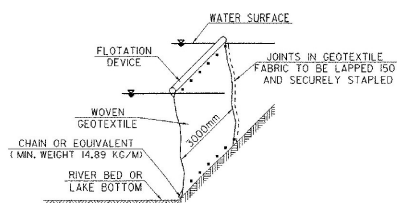
INSERT & STAPLE FABRIC INTO 150 X 150 TRENCH. PRIOR TO BACKFILLING & COMPACTING SOIL. USE 3 STAPLE PATTERN EVERY 500.



ANCHOR DETAIL "E2"

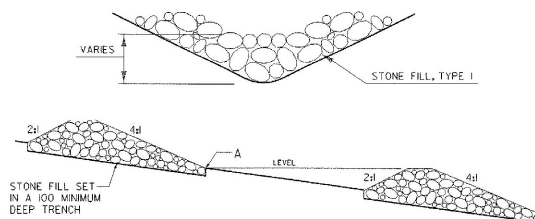
IF THE TOP OF SLOPE IS RELATIVELY FLAT, EXTEND MATERIAL APPROXIMATELY 600 AND STAPLE EVERY 500 MINIMUM.

DETAIL "E"
ANCHOR DETAILS FOR EROSION MATTING



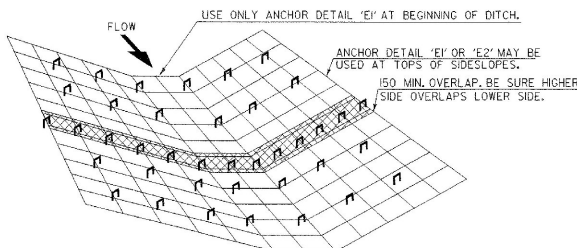
DETAIL "F"
FILTER CURTAIN

- NOTES:
- NOT TO BE USED ACROSS THE FLOW OF WATER
 - HEIGHT SHOULD BE SUFFICIENT TO ALLOW FOR FLUCTUATIONS IN WATER SURFACE ELEVATION
 - ANCHOR FIRMLY IN PLACE AS NEEDED
 - INSTALL PRIOR TO EARTH DISTURBING ACTIVITIES AND/OR INSTALLATION OF COFFERDAM WHERE APPLICABLE
 - LEAVE IN PLACE UNTIL UP-SLOPE AREAS ARE STABLE AND/OR COFFERDAM IS REMOVED
 - USE CARE DURING REMOVAL TO PREVENT THE RELEASE OF CAPTURED SEDIMENT AS MUCH AS POSSIBLE



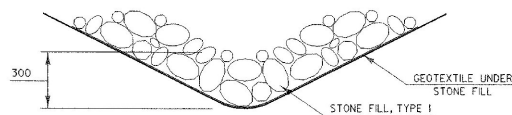
DETAIL "B"
TEMPORARY STONE CHECK DAM

- NOTES:
- CHECK DAMS TO BE USED PRIOR TO COMPLETION OF STONE LINING IN DITCHES
 - LOCATE DOWNSTREAM STRUCTURE SUCH THAT POINT "B" IS APPROXIMATELY LEVEL WITH THE LOWEST GROUND ELEVATION "A" OF THE UPSTREAM STRUCTURE
 - PAYMENT FOR STONE CHECK DAMS WILL BE MADE FOR THE QUANTITY OF STONE FILL USED. REMOVAL OF STONE CHECK DAMS WILL BE INCIDENTAL TO THE STONE FILL ITEM USED.



DETAIL "D"
EROSION MATTING FOR DITCHES

- NOTES:
- TO BE USED WHERE SLOPE OF DITCHLINE RANGES FROM 1X - 2.5X. SLOPES EXCEEDING 2.5X SHALL BE LINED WITH STONE FILL, TYPE I.
 - OVERLAPS SHALL BE 150 MINIMUM IN THE DIRECTION OF FLOW AND STAPLED EVERY 500 MIN. THROUGH BOTH FABRICS.
 - USE 1000 MAX STAPLE SPACING IN OTHER AREAS.



TYPICAL ROADWAY DRAINAGE DITCH

SEEDING FORMULA RURAL AREAS

Metric

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

GENERAL NOTES

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

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

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

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

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

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

EROSION CONTROL DETAILS

PROJECT NAME: CLARENDON
PROJECT NUMBER: BRO 1443 (29)

FILE NAME: 93J09\Structures\ej09ec.dgn PLOT DATE: 14-JUN-2005
PROJECT MANAGER: R. WHITCOMB DRAWN BY: D. BONNEAU
DESIGNED BY: C. CARLSON CHECKED BY: C. CARLSON
SHEET 16d OF 41

NOTE: DETAILS NOT TO SCALE

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2001, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SEVENTEENTH EDITION, AND ITS LATEST REVISIONS.
2. A PRECONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO ANY WORK BEING DONE. AT THAT TIME, THE CONTRACTOR SHALL SUBMIT AN EROSION/SEDIMENT CONTROL PLAN WITH A SCHEDULE OF EVENTS. THIS PLAN SHALL BE SITE SPECIFIC.
3. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL, AND ARE GIVEN AT 20 DEGREES CELSIUS.
4. THE CONTRACTOR SHALL REVIEW AND UNDERSTAND ALL APPLICABLE ENVIRONMENTAL PERMITS AND ENSURE THAT ALL CONSTRUCTION CONDITIONS ARE MET.
5. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 25 BY 25, EXCEPT AS OTHERWISE INDICATED.
6. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS.
7. THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT. ANY UPWARD KEY SHALL BE PLACED INTERNALLY WITH THE CONCRETE BELOW THE JOINT.
8. ALL REINFORCING STEEL SHALL BE DETAILLED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE "CONCRETE REINFORCING STEEL INSTITUTE".
9. MINIMUM COVER FOR REINFORCING STEEL SHALL BE 75 UNLESS OTHERWISE NOTED ON THE PLANS.
10. REINFORCEMENT STEEL PLACEMENT TOLERANCES SHALL BE: SPACINGS - $\pm 1/2$ 25, CLEARANCE - $\pm 1/2$ 6.
11. REINFORCING STEEL SHALL CONFORM TO AASHTO M31/M31.1 GRADE 42C. REINFORCING STEEL IN SUPERSTRUCTURES AND APPROACH SLABS SHALL BE SPOT CORDED. ALL EXPOSED REINFORCING STEEL TO BE CUT IN THE FIELD SHALL BE SAW CUT AND THE EXPOSED ENDS TREATED AS PER SECTION 607.04.
12. AFTER THE SUPERSTRUCTURE HAS BEEN ERECTED, ELEVATIONS SHALL BE TAKEN ALONG THE TOP OF THE PRECAST CONCRETE MEMBERS, AS DIRECTED BY THE RESIDENT ENGINEER FOR USE IN DETERMINING THE FINISHED GRADE. THIS SHOULD NOT BE DONE UNTIL AT LEAST 24 HOURS AFTER THE MEMBERS HAVE BEEN SET.
13. NO CONCRETE IN THE ABUTMENTS OR WINGWALLS SHALL BE PLACED ABOVE THE BRIDGE SEAT ELEVATIONS UNTIL THE PRECAST CONCRETE MEMBERS HAVE BEEN PROVIDED AND THE FINISHED GRADE OF THE DECK HAS BEEN DETERMINED.
14. THE SURFACE OF THE BRIDGE SEAT WILL BE LEVEL FROM FRONT TO BACK AND WILL BE A UNIFORM SLOPE FROM ONE FASCIA TO THE OTHER. THE BRIDGE SEAT SURFACE SHALL BE SMOOTHED WITH A MAGNESIUM FLOOR FINISH.
15. THE PRECAST CONCRETE MEMBERS SHALL BE OVERLAPPED WITH CONCRETE, HIGH PERFORMANCE CLASS AA. THE OVERLAY IS DESIGNED TO BE A MINIMUM OF 12".
16. THE CONCRETE DECK OVERLAY SHALL BE PLACED IN ONE CONTINUOUS POUR, NOT TO EXCEED 9 HOURS. NO COLD JOINTS WILL BE ALLOWED. IF CIRCUMSTANCES BEYOND THE CONTRACTOR'S CONTROL PREVENT THIS FROM BEING ACCOMPLISHED, A CONSTRUCTION JOINT SHALL BE USED. A 96 HOUR DELAY BETWEEN THE COMPLETION OF THE ONE DAY'S POUR AND THE BEGINNING OF ANY OTHER POUR SHALL ALSO BE OBSERVED.
17. THE CONCRETE CURBS AND THE CONCRETE OVERLAY SHALL BE ITEM 501.32, "CONCRETE, HIGH PERFORMANCE CLASS AA AND ALL OTHER CONCRETE SHALL BE ITEM 501.34, "CONCRETE, HIGH PERFORMANCE CLASS 4" UNLESS OTHERWISE NOTED ON THESE PLANS.
18. THE CONTRACTOR, AT THE EXPENSE OF THE CONTRACTOR, SHALL REPAIR ANY DAMAGE TO CONCRETE WALLS RESULTING FROM IMPROPER BACK FILLING.
19. THIS BRIDGE HAS BEEN PHOTO DOCUMENTED AS REQUIRED IN SECTION A-3 OF THE MOD DATED 6-3-97.
20. REMOVAL OF THE EXISTING SUPERSTRUCTURES SHALL BE UNDER ITEM 529.10, "PARTIAL REMOVAL OF STRUCTURE". THIS WORK SHALL INCLUDE REMOVAL AND DISPOSAL OF THE BRIDGE DECK, SUPERSTRUCTURE, BRIDGE AND APPROACH RAILINGS AND BEARINGS. REMOVAL OF THE BRIDGE PAVEMENT SHALL BE UNDER ITEM 529.10, "REMOVAL OF BRIDGE PAVEMENT".
21. REMOVAL OF ABUTMENT NO. 1 & 2 SHALL BE PAID FOR UNDER ITEM 208.35, "CONFERRED EXCAVATION, ROCK". EXCAVATION OF SOILS SURROUNDING THE ABUTMENTS NECESSARY FOR CONSTRUCTION OF THE NEW ABUTMENTS SHALL BE PAID FOR UNDER ITEM 208.30, "CONFERRED EXCAVATION, EARTH". ANY EXCAVATION OF THE ABUTMENTS THAT EXTENDS BEYOND THE LIMITS OF THE CONFERRED SHALL BE REMOVED IN ITS ENTIRETY AND SHALL BE INCIDENTAL TO ITEM 529.10, "PARTIAL REMOVAL OF STRUCTURE".
22. THE EXISTING STRUCTURAL STEEL ON THE PROJECT WAS PAINTED WITH A MATERIAL WHICH MAY CONTAIN LEAD. THE REMOVED STRUCTURAL STEEL IS THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS, AND EMPLOYEES HARMLESS CONCERNING THE CONTRACTOR'S USE OR DISPOSITION OF THE STRUCTURAL STEEL.

23. NOT USED.
24. THE HEIGHT OF BACKFILL BEHIND THE ABUTMENTS SHALL BE LIMITED TO THE BRIDGE SEAT ELEVATIONS UNTIL THE NEW PRECAST CONCRETE MEMBERS HAVE BEEN SET.
25. NOT USED.
26. DIMENSIONS, ANGLES, BEARINGS, AND ELEVATIONS SHOWN ON THE PLANS HAVE BEEN OBTAINED FROM SURVEY WHEN THE RIVER WAS FULL AND AS SUCH, MAY NOT ACCURATELY REFLECT ACTUAL FIELD CONDITIONS.
27. THE CONTRACTOR SHALL MAKE FIELD MEASUREMENTS OF ALL EXISTING CONDITIONS AFFECTING THE WORK. ANY DISCREPANCIES IN DIMENSIONS, CHARACTER, OR EXTENT OF EXISTING FEATURES SHALL BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER BEFORE ADVANCING THE WORK. SHOP DRAWINGS REQUIRED FOR VARIOUS ITEMS OF THE WORK SHALL INDICATE THE ACTUAL FIELD MEASUREMENTS BY THE CONTRACTOR PRIOR TO SUBMITTAL FOR THE RESIDENT ENGINEER'S REVIEW AND SHALL BE SO NOTED.
28. WATER REPELLENT (MOD. - SILANE) SHALL BE APPLIED TO ALL EXPOSED BRIDGE CONCRETE SURFACES EXCEPT THE UNDERSIDE OF THE PRESTRESSED CONCRETE MEMBERS BETWEEN THE DRIP NOTCHES. NO WATER REPELLENT SHALL BE APPLIED TO THE PRE-STRESSED JOINTS PRIOR TO THE PLACEMENT OF THE OVERLAY AND CURB.

PRECAST CONCRETE MEMBER NOTES

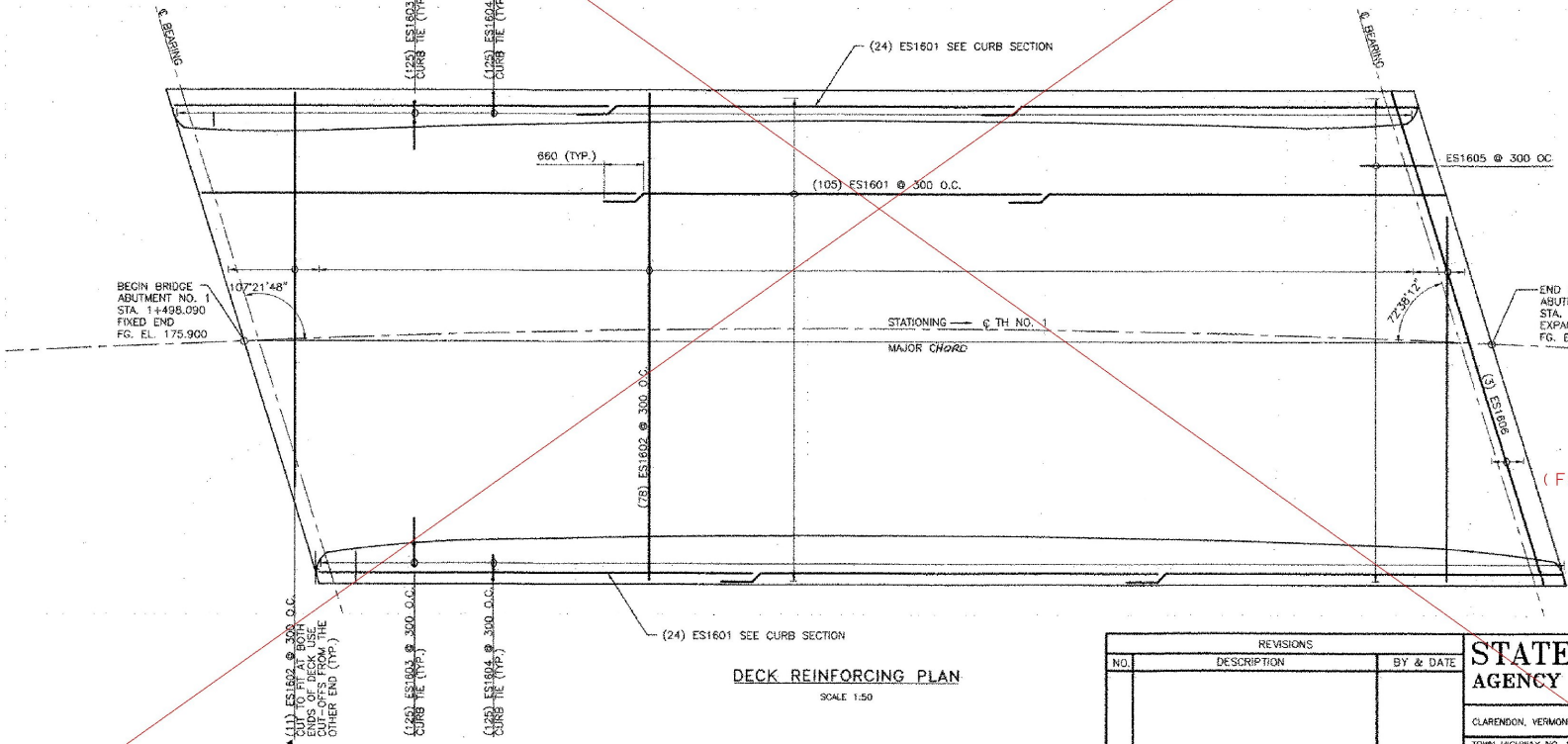
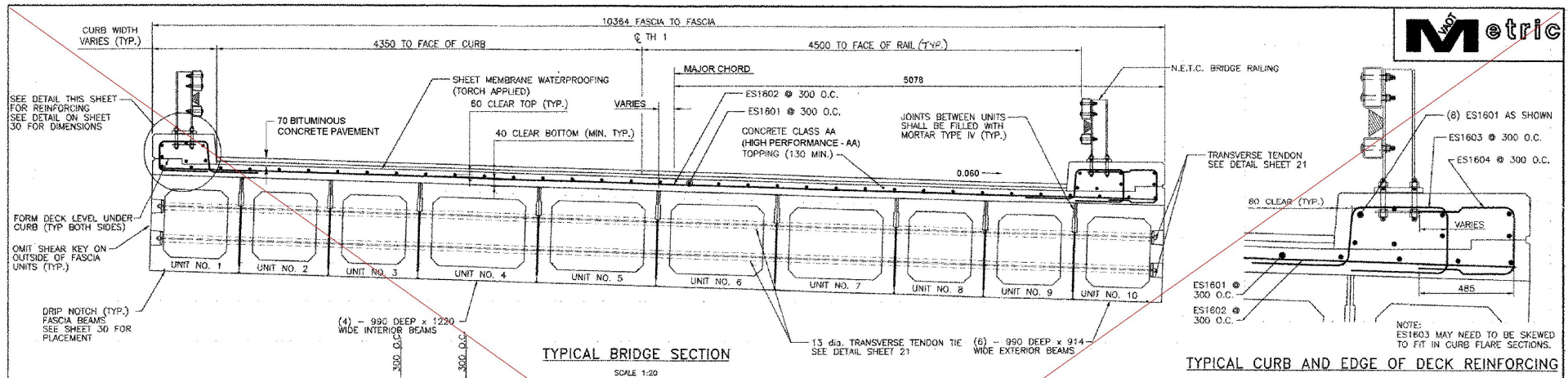
1. THE FABRICATION DRAWINGS SHALL BE SEALED BY A VERMONT LICENSED PROFESSIONAL ENGINEER EXPERIENCED IN THE DESIGN OF PRECAST CONCRETE MEMBERS AND WILL BE SUBMITTED TO THE RESIDENT ENGINEER FOR REVIEW. COMPOSITE ACTION BETWEEN THE 130 OVERLAY AND THE PRECAST CONCRETE MEMBERS WILL BE ALLOWED.
2. THE PRECAST CONCRETE MEMBERS SHALL BE DESIGNED FOR AASHTO MS 22.5 LIVE LOADS. THE PRECAST CONCRETE MEMBERS SHALL ALSO BE DESIGNED FOR APPROPRIATE DEAD LOADS AS SHOWN ON SHEET 20.
3. ALL KNOWN CORNERS OF THE PRECAST CONCRETE MEMBERS SHALL BE CHAMFERED 19.
4. THE JOBS OF THE PRECAST CONCRETE MEMBERS SHALL RECEIVE A SMOOTH FLOAT FINISH.
5. NOT USED.
6. THE PRECAST CONCRETE MEMBERS WILL BE DESIGNED TO MATCH THE OVERALL GEOMETRY AS SHOWN IN THESE PLANS. THE EDGE OF THE STRANDS SHALL BE RECESSED AND GROUDED.
7. VOID DRAINS ARE REQUIRED AT THE LOW POINT IN THE VOID OF EACH PRECAST CONCRETE MEMBER. THE VOID DRAIN SHALL BE 19 DIAMETER AND NON-PERFORATED, AND SHALL BE CLEANED AFTER ERECTION.
8. MATERIAL SPECIFICATION AND CONCRETE MIX DESIGN SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION SECTION 510.05A AND 510.05A.
9. THE PRECAST CONCRETE MEMBERS SHALL BE FABRICATED AT A NOT CERTIFIED AND VDOT APPROVED PLANT.
10. THE VOIDS MUST BE VENTED DURING THE CURING PERIOD. CURING PROCEDURES SHALL BE SUBMITTED TO THE RESIDENT ENGINEER FOR REVIEW.
11. THE CONCRETE DESIGN MIX SHALL HAVE A 28 DAY STRENGTH (f'_c) OF 41.1 MPa. THE MINIMUM CONCRETE STRENGTH AT STEEL TRANSFER SHALL BE 33.2 MPa. REINFORCING STEEL SHALL BE AASHTO M31/M31.1 GRADE 42C, AND SHALL BE SPOT COATED.
12. THE PRECAST CONCRETE MEMBERS SHALL BE DESIGNED TO CONTAIN PRESTRESSING STRANDS. PRESTRESSING STRANDS SHALL CONFORM TO AASHTO M203/M203.1 AND SHALL CONSIST OF 1,560 MPa, 15 DIA. 7 WIRE LOW RELAXATION STEEL STRANDS CONFORMING TO SECTION 113.06, PULVER TO 75% OF THEIR YIELD.
13. THE 20 DIAMETER TRANSVERSE TENDONS SHALL BE POLYSTYRENE OR EQUIVALENT. THE 20 PLATE SHALL CONFORM TO AASHTO M270/M270M, GRADE 250 STEEL. THE 20 PLATE AND CHECKS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M27. ALL WORK COVERED IN THIS NOTE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEMS 510.21 "PRESTRESSED CONCRETE BOX BEAMS (990 X 914)" AND 510.21 "PRESTRESSED CONCRETE BOX BEAMS (990 X 1220)".
14. THE JOINTS BETWEEN THE PRECAST CONCRETE MEMBERS SHALL BE FILLED WITH MORTAR, TYPE IV IN ACCORDANCE WITH SECTION 511.11(A). THIS WORK WILL BE PAID FOR UNDER THE ITEM 510.24, "SMOOTHING KEYS REIN".
15. THE CONTRACTOR MAY SUBMIT A DESIGN TO THE RESIDENT ENGINEER FOR REVIEW WHICH IS DIFFERENT WHEN THE INFORMATION SHOWN IN THESE PLANS TO MEET THE FABRICATOR'S SPECIFIC PLANT OPERATIONS, PROVIDED THAT THE ALTERNATE DESIGN MEETS ALL APPLICABLE DESIGN AND MATERIAL REQUIREMENTS AND DOES NOT AFFECT THE GEOMETRY OF THE REMAINING COMPONENTS OF THE PROJECT.

16. THE COST FOR PERFORMING ALL FIELD WORK WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE CONSIDERED INCIDENTAL TO ITEM NO. 510.21, "PRESTRESSED CONCRETE BOX BEAMS (990 X 914)" AND 510.21, "PRESTRESSED CONCRETE BOX BEAMS (990 X 1220)".
17. ALL COSTS ASSOCIATED WITH FABRICATION, HANDLING, AND DELIVERY TO THE PROJECT SITE AND ERECTION OF EACH MEMBER SHALL BE PAID FOR UNDER ITEM 510.21, "PRESTRESSED CONCRETE BOX BEAM (990 X 914)" AND 510.21, "PRESTRESSED CONCRETE BOX BEAMS (990 X 1220)".
18. ALL COMPONENTS OF EACH MEMBER, INCLUDING (BUT NOT LIMITED TO) THE 13 DIAMETER TRANSVERSE TENDONS, GALVANIZED CHECKS AND 13 PLATE, ALL ANCHOR BOLTS AND THE HOT POURED JOINT SEALER AND ANY OTHER HARDWARE OR FIELD CONNECTION REQUIREMENTS SHALL BE PAID SEPARATELY TO ITEM 510.21, "PRESTRESSED CONCRETE BOX BEAMS (990 X 914)" AND 510.21, "PRESTRESSED CONCRETE BOX BEAMS (990 X 1220)".
19. MATERIALS, LABOR AND EQUIPMENT FOR GROUTING OF DOWELS AT ABUTMENT NO.1 AND NO.2 AND THE COLD POURED JOINT FILLER AT ABUTMENT NO. 2 SHALL BE INCIDENTAL TO ITEM 510.21, "PRESTRESSED CONCRETE BOX BEAMS (990 X 914)" AND 510.21, "PRESTRESSED CONCRETE BOX BEAMS (990 X 1220)". THE GROUT SHALL CONFORM TO MORTAR, TYPE IV.
20. (A) THE ELASTOMERIC BEARING PADS SHALL CONFORM TO SECTION 731.03 AND AASHTO M251 AND SHALL BE PAID FOR UNDER ITEM 531.10, "BEARING DEVICE (ELASTOMERIC)".
(B) THE BOX BEAMS SHALL SET SOLIDLY ON ALL OF THE BEARINGS. OCCASIONALLY, TOLERANCES IN THE CONSTRUCTION OF THE BRIDGE SEAT OR PRECAST BEAMS WILL CAUSE THE BEAMS TO BEAR ON ONLY 3. THE CONTRACTOR SHALL HAVE ON-SITE A QUANTITY OF ACCEPTABLE SHIMS OF VARIOUS THICKNESSES THAT MAY BE USED TO SET THE BEARINGS. THE COST OF THE SHIMS SHALL BE INCIDENTAL TO THE ITEM 531.10.
21. THE CONTRACTOR SHALL GIVE THE VDOT MATERIALS AND RESEARCH SECTION TWO WEEKS NOTICE PRIOR TO THE PRESTRESS FABRICATOR CONSTRUCTING THE BEAMS.

SEQUENCE OF CONSTRUCTION FOR PRESTRESSED VOIDED BOX BEAMS

- (A) LAYOUT WORKING LINES
 - * LAY OUT WORKING LINES FOR THE BRIDGE'S ENTIRE WIDTH ON THE BRIDGE SEAT. MEASURE ALL WORKING LINES FROM A COMMON WORKING POINT.
 - * THE WORKING LINES ARE TO BE BASED ON THE NOMINAL BEAM WIDTHS.
- (B) VERIFY BEAM SEAT ELEVATIONS
 - * TAKE ELEVATIONS AT BEAM SEATS.
 - * IF SEATS ARE HIGH, GRAB TO CORRECT ELEVATIONS.
 - * IF SEATS ARE LOW, AND RUMPS.
 - * LOCATE AND DRILL 75 DIA HOLES FOR ANCHOR BOLTS.
 - * INSTALL BEARINGS.
- (C) ERECT BEAMS
 - * BEAMS SHALL BE PLACED TO FIT WITHIN THE WORKING LINES.
 - * AS WORK PROGRESSES, INSTALL HORIZONTAL WEDGES BETWEEN ADJACENT BEAMS TO MAINTAIN PROPER JOINT OPENING (A MINIMUM OF ONE WEDGE AT EACH LATERAL TIE).
 - * PLACE ANCHOR BOLTS.
 - * GROUT ANCHOR BOLTS IN ABUTMENT.
- (D) INSTALL BACKER ROD
 - * FILLER SHALL BE PLACED BELOW THE KEY'S BOTTOM AS SHOWN ON THE PLANS.
- (E) INSTALL TRANSVERSE TIES
 - * A SEAMLESS POLYETHYLENE SHEATH SHALL COVER TIES (WITH CORROSION INHIBITOR GREASE BETWEEN SHEATH AND STRAND).
 - * FEND TIES THROUGH DUCTS.
 - * VERIFY THAT HORIZONTAL WEDGES ARE IN PLACE AS REQUIRED TO PREVENT BULGING OF BEAMS.
 - * USING CALIBRATED JACK, POST-TENSION TIES TO APPROXIMATELY 22.2 MPa TO REMOVE SAG IN THE TIE AND TO SEAT THE CHECK.
- (F) GROUT BEAM KEYS
 - * CLEAN JOINT WITH AN OIL FREE AIR-BLAST IMMEDIATELY BEFORE GROUT PLACEMENT. THEN VERIFY THAT THE BACKER ROD IS STILL IN PLACE.
 - * ADDITIONAL JOINT PREPARATION AND GROUT PLACEMENT SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.
- (G) POST-TENSION TRANSVERSE TIES
 - * GROUT SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 10.3 MPa, BASED ON THE MANUFACTURER'S RECOMMENDATIONS, PRIOR TO STRESSING.
 - * USING A CALIBRATED JACK OPERATED BY QUALIFIED PERSONNEL, POST-TENSION TIES TO 135.6 MPa.
- (H) END DETAILS
 - * GROUT ANCHOR BOLT ENDS AT THE FIELD ENDS AT BRIDGE SEATS AND PLACE COLD POURED JOINT SEALER AT EXPANSION END.
 - * BEFORE GROUT CURING, PLACE WOODS PLATE AND INSTALL HOLD DOWN BOLTS.
 - FIELD END, NOT TIGHTENED
 - EXPANSION END, PUT HAND TIGHTENED AND LOCKED BY 1/2 TURN.
 - * GROUT OVER HOT AND COLD JOINTS ON FIELD END, PLACE COLD POURED JOINT SEALER OVER HOT AND COLD JOINTS ON EXPANSION END.
- (I) FINISH WORK
 - * REMOVE WEDGES, AND PATCH DECK AND FASCIA BEAMS AT TRANSVERSE TIES.
 - * PLACE AN OVERLAY.

PROJECT NAME: **Clarendon**
PROJECT NUMBER: **BRO 1443(29)**FILE NAME: **83p19gen.xls**
PROJECT LEADER: **R. Whitcomb**
DESIGNED BY: **Dubois & King, Inc.**
GENERAL NOTES SHEETPLOT DATE: **10/19/2004**
DRAWN BY: **L. Bullock**
CHECKED BY: **C. Carlson**
SHEET **17** OF **41**



NOTES:

- NF = NEAR FACE
- FF = FAR FACE
- EF = EACH FACE
- ▲ = CUT TO FIT IN FIELD
- T+B = TOP AND BOTTOM
- OC = ON CENTER
- MINIMUM LAP LENGTH NOT DETAILED SHALL BE 660

NOTES:

1. UNLESS OTHERWISE NOTE ALL STEEL SHALL HAVE A CLEAR OF 80
2. "E" DENOTES EPOXY COATED BARS. ALL NON-PRESTRESSING REINFORCING STEEL SHALL BE EPOXY COATED
3. TRANSVERSE REINFORCING SHALL BE ONE CONTINUOUS BAR NO SPLICING

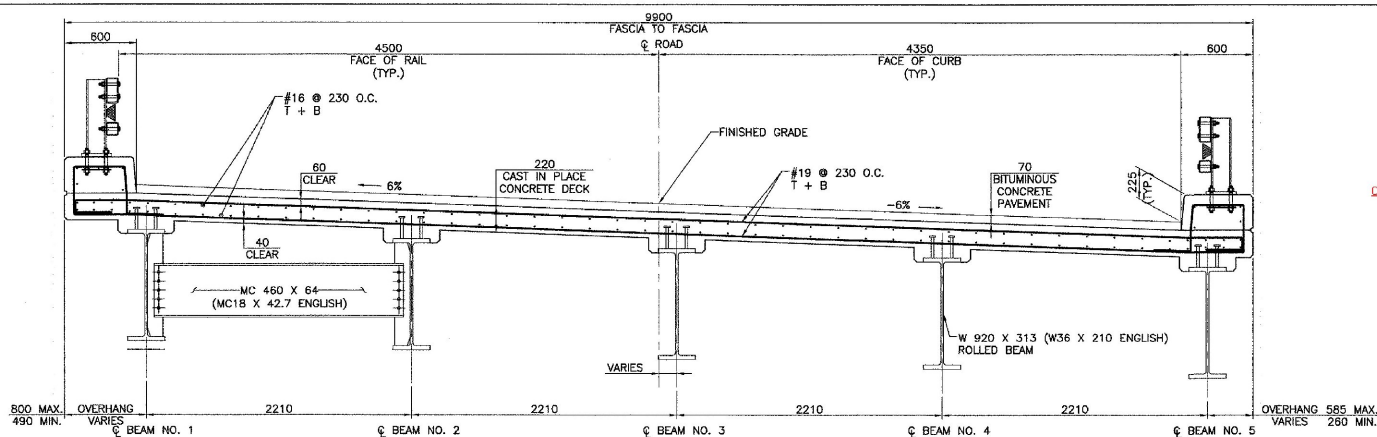
REVISIONS		
NO.	DESCRIPTION	BY & DATE

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INC.

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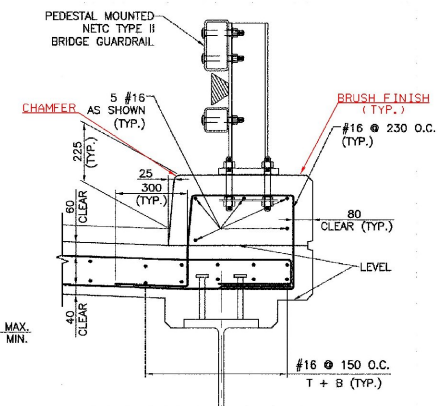
**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

CLARENDON, VERMONT		Bridge No. 14
TOWN HIGHWAY NO. 1		Log Sta.
		Surv. Sta.
TOWN HIGHWAY NO. 1 OVER THE COLD RIVER		
DECK REINFORCING PLAN AND DETAILS		
Designed by: E. C. ALSTON	Drawn by: E. B. SMALL	
Checked by: K. S. MARSHIA	date 05/02	Bridge Design Supervisor J.W. TUCKER date 05/02
PROJECT CLARENDON	PROJECT NO. BRO 1443(29)	
Bridge Sheet No.	SHEET 18 OF 47	



TYPICAL BRIDGE SECTION

SCALE 1:20

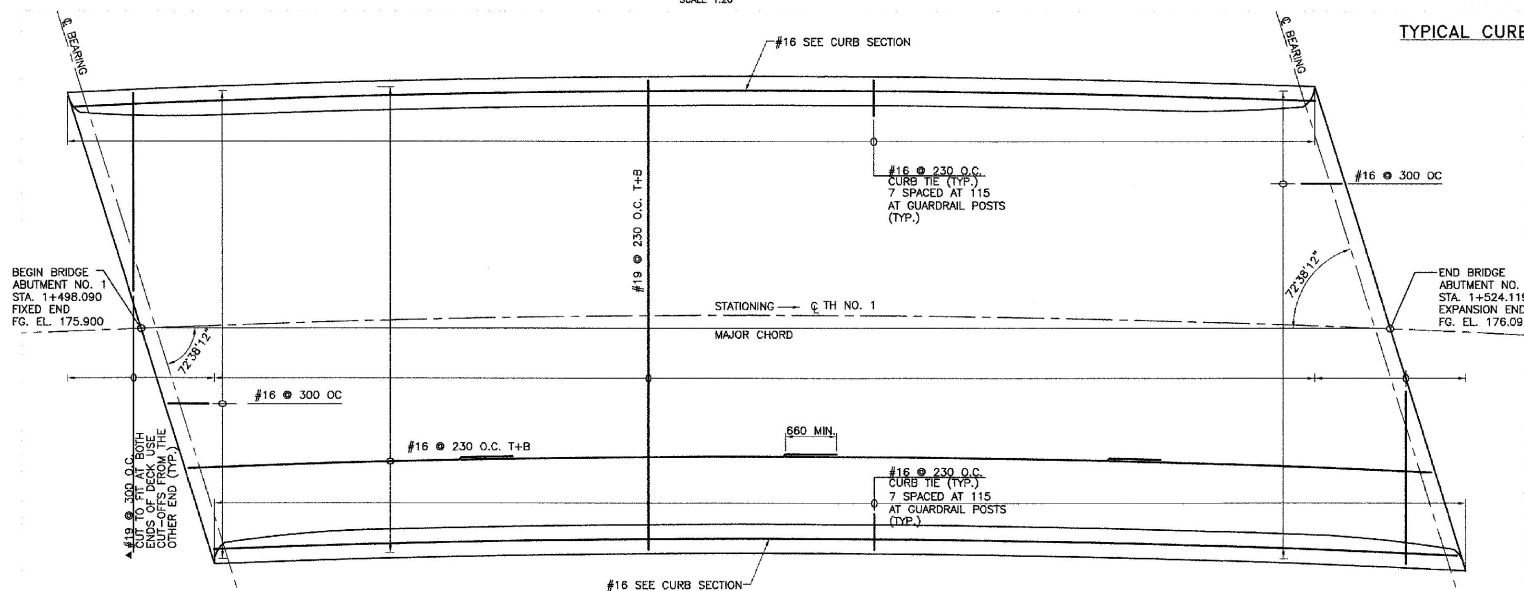


TYPICAL CURB AND EDGE OF DECK REINFORCING

SCALE 1:10

NOTE:

SEE SHEET 20A FOR SHEAR STUD AND HAUNCH DETAILS



DECK REINFORCING PLAN

SCALE 1:50

NOTES:

- NF = NEAR FACE
- TF = FAR FACE
- EF = EACH FACE
- ▲ = CUT TO FIT IN FIELD
- T+B = TOP AND BOTTOM
- OC = ON CENTER
- MINIMUM LAP LENGTH NOT DETAILED SHALL BE 660

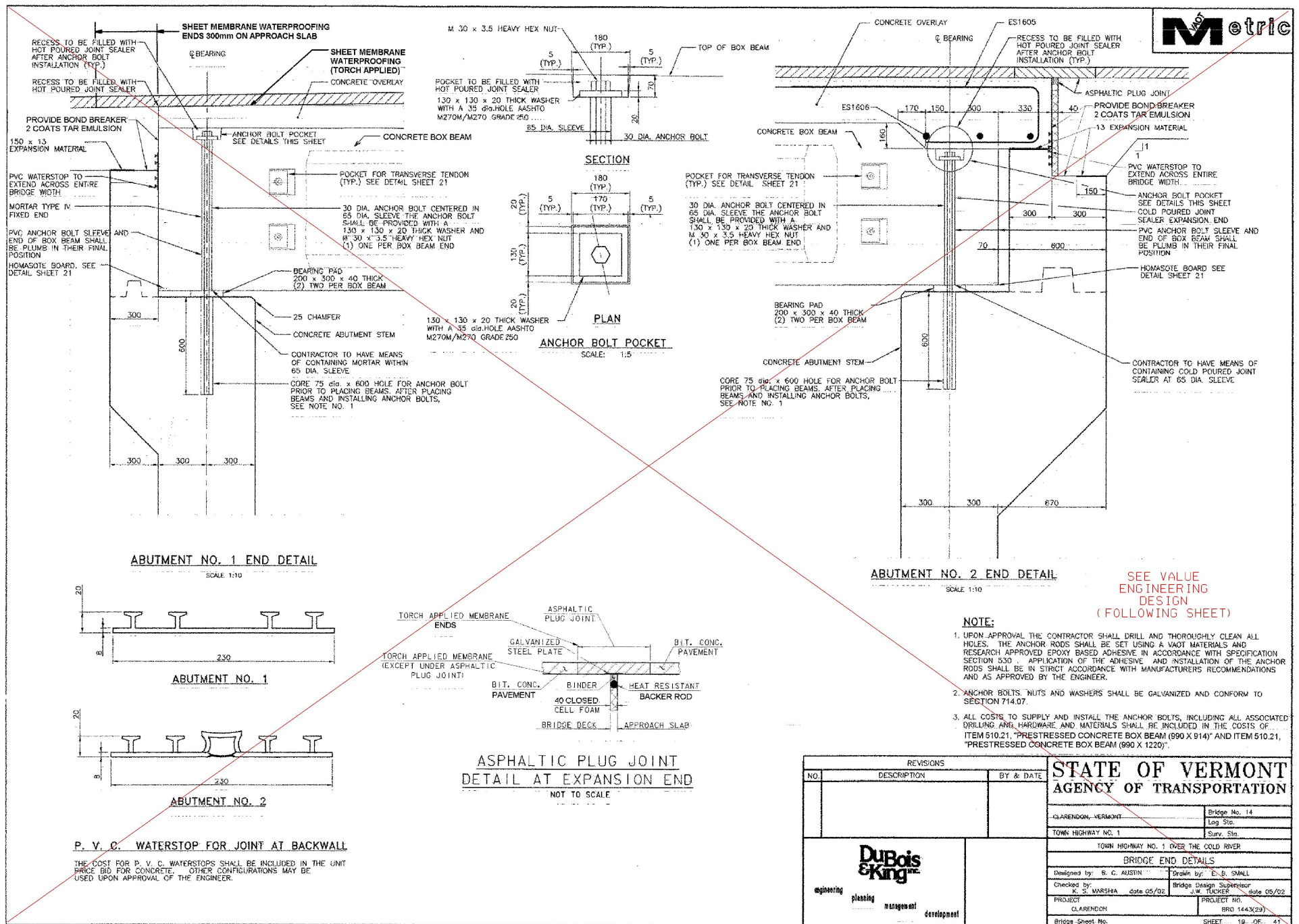
NOTES:

1. ALL REINFORCEMENT IN DECK AND CURTAIN WALLS SHALL BE EPOXY COATED.
2. CONTRACTOR SHALL VERIFY ALL REINFORCING STEEL LENGTHS AND DIMENSIONS PRIOR TO ORDERING REINFORCEMENT. THE CURRENT REINFORCING STEEL SCHEDULE IS NOT ACCURATE AND SHALL NOT BE USED AS THE BASIS FOR ORDERING REINFORCEMENT.

REVISIONS		
NO.	DESCRIPTION	BY & DATE

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

CLARENDON, VERMONT	Bridge No. 14
TOWN HIGHWAY NO. 1	Log Sta.
TOWN HIGHWAY NO. 1 OVER THE COLD RIVER	Surv. Sta.
DECK REINFORCING PLAN AND DETAILS	
Designed by: A.P. GUYETTE	Drawn by: A.P. GUYETTE
Checked by: J.W. TUCKER	Bridge Design Supervisor: J.W. TUCKER
date 1/06	date 1/06
PROJECT: CLARENDON	PROJECT NO. BRO 1443(26)
Bridge Sheet No.	SHEET 18A OF 41



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

ASPHALTIC PLUG JOINT
DETAIL AT EXPANSION END
NOT TO SCALE

1. UPON APPROVAL THE CONTRACTOR SHALL DRILL AND THOROUGHLY CLEAN ALL HOLES. THE ANCHOR RODS SHALL BE SET USING A VAULT MATERIALS AND APPROVED EPOXY BASED ADHESIVE IN ACCORDANCE WITH SPECIFICATION SECTION 530. THE APPLICATION OF THE ADHESIVE AND INSTALLATION OF THE ANCHOR RODS SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND AS APPROVED BY THE ENGINEER.
2. ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AND CONFORM TO SECTION 714.07.
3. ALL COSTS TO SUPPLY AND INSTALL THE ANCHOR BOLTS, INCLUDING ALL ASSOCIATED DRILLING AND HARDWARE AND MATERIALS SHALL BE INCLUDED IN THE COSTS OF ITEM 510.21, "PRESTRESSED CONCRETE BOX BEAM (90 X 914)" AND ITEM 510.21, "PRESTRESSED CONCRETE BOX BEAM (90 X 1220)".

REVISIONS		
NO.	DESCRIPTION	BY & DATE



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STATE OF VERMONT

AGENCY OF TRANSPORTATION

CLARENDON, VERMONT

TOWN HIGHWAY NO. 1

Bridge No. 14

Log Sta.

Surv. Sta.

TOWN HIGHWAY NO. 1 OVER THE COLD RIVER

BRIDGE END DETAILS

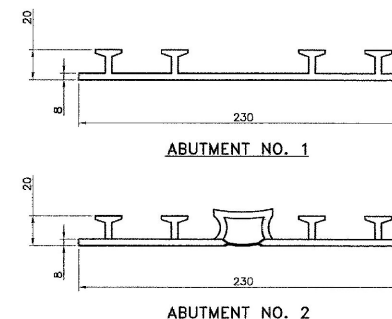
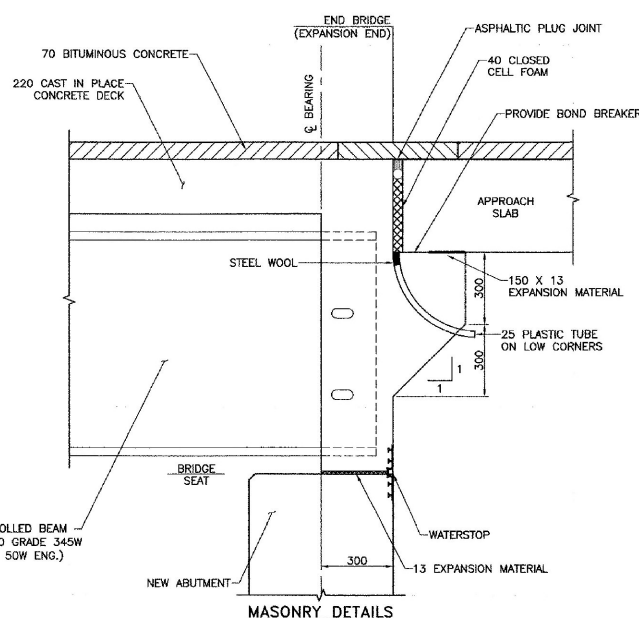
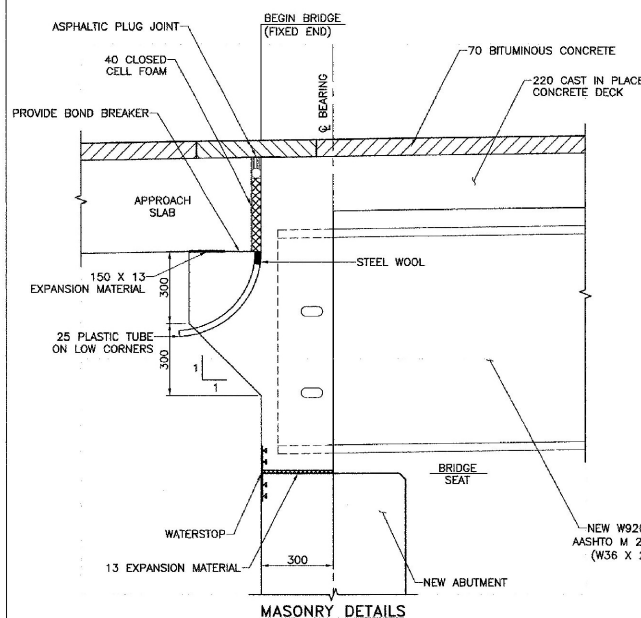
Designed by: S. G. AUSTIN	Drawn by: E. J. SMALL
Checked by: K. S. WINSHEA	Bridge Design Supervisor J.W. FICKER
date 05/05	date 05/02

PROJECT CLARENDON

Bridge Sheet No.

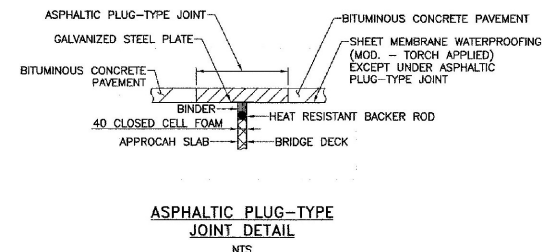
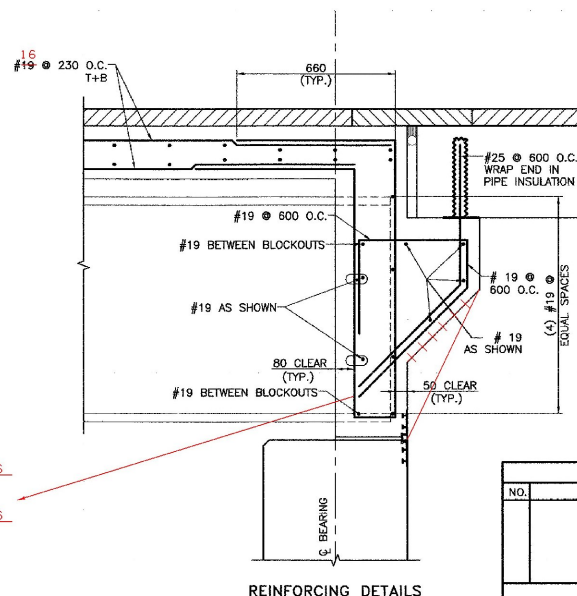
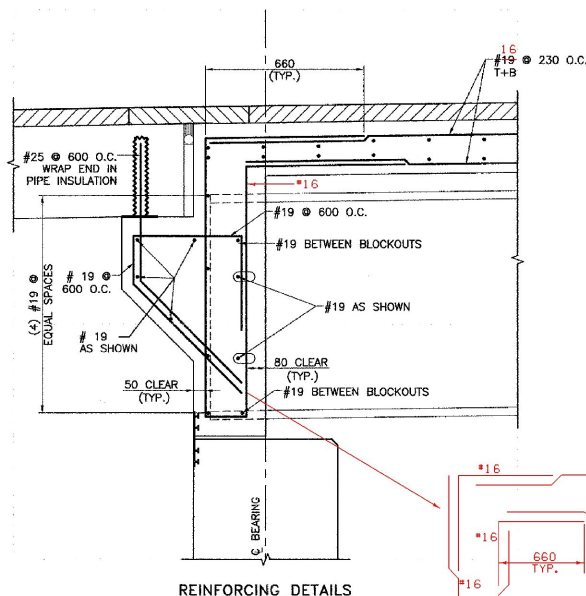
PROJECT NO. BRD 1443(23)

SHEET 18 OF 41



P. V. C. WATERSTOP FOR JOINT AT BACKWALL

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



NOTE:

1. ALL REINFORCEMENT IN DECK AND CURTAIN WALLS SHALL BE EPOXY COATED.
2. CONTRACTOR SHALL VERIFY ALL REINFORCING STEEL LENGTHS AND DIMENSIONS PRIOR TO ORDERING REINFORCEMENT. THE CURRENT REINFORCING STEEL SCHEDULE IS NOT ACCURATE AND SHALL NOT BE USED AS THE BASIS FOR ORDERING REINFORCEMENT.

NOTES:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
T+B = TOP AND BOTTOM
OC = ON CENTER
MINIMUM LAP LENGTH NOT DETAILED SHALL BE 660

ABUTMENT NO. 1 DECK END DETAIL (FIXED END)

SCALE: 1:10

NOTE:

SECTIONS ARE PERPENDICULAR TO FACE OF ABUTMENT.

ABUTMENT NO. 2 DECK END DETAIL (EXPANSION END)

SCALE: 1:10

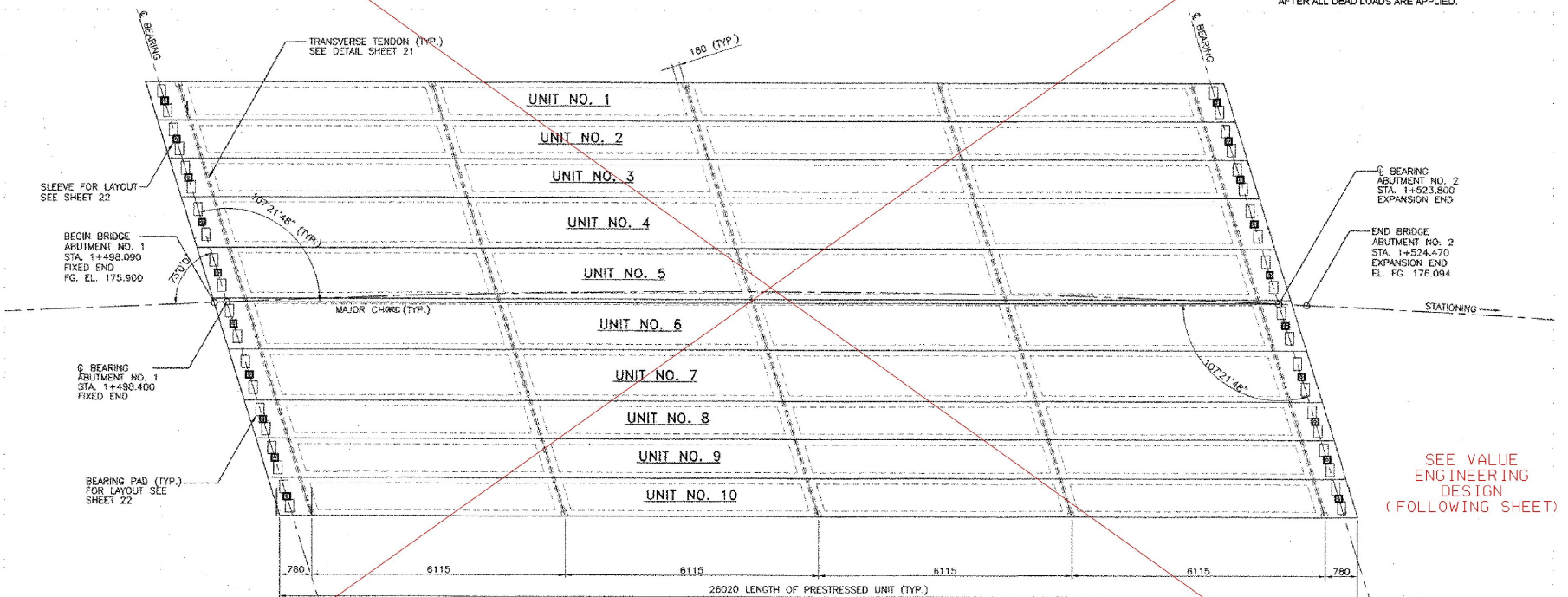
REVISIONS		
NO.	DESCRIPTION	BY & DATE

STATE OF VERMONT AGENCY OF TRANSPORTATION

CLARENDON, VERMONT		Bridge No. 14
TOWN HIGHWAY NO. 1		Log Sta.
TOWN HIGHWAY NO. 1 OVER THE COLD RIVER		Surv. Sta.
BRIDGE END DETAILS		
Designed by: A.P. GUYETTE	Drawn by: A.P. GUYETTE	
Checked by: J.W. TUCKER	Bridge Design Supervisor: J.W. TUCKER	date 1/06
PROJECT: CLARENDON	PROJECT NO. BRO 1443(20)	
Bridge Sheet No.	SHEET 18A OF 41	

SCALE 1:50

1. BOX BEAMS SHALL HAVE POSITIVE CAMBER AFTER ALL DEAD LOADS ARE APPLIED.



SEE VALUE
ENGINEERING
DESIGN
(FOLLOWING SHEET)

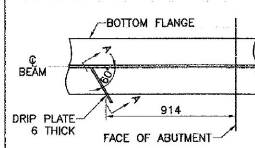
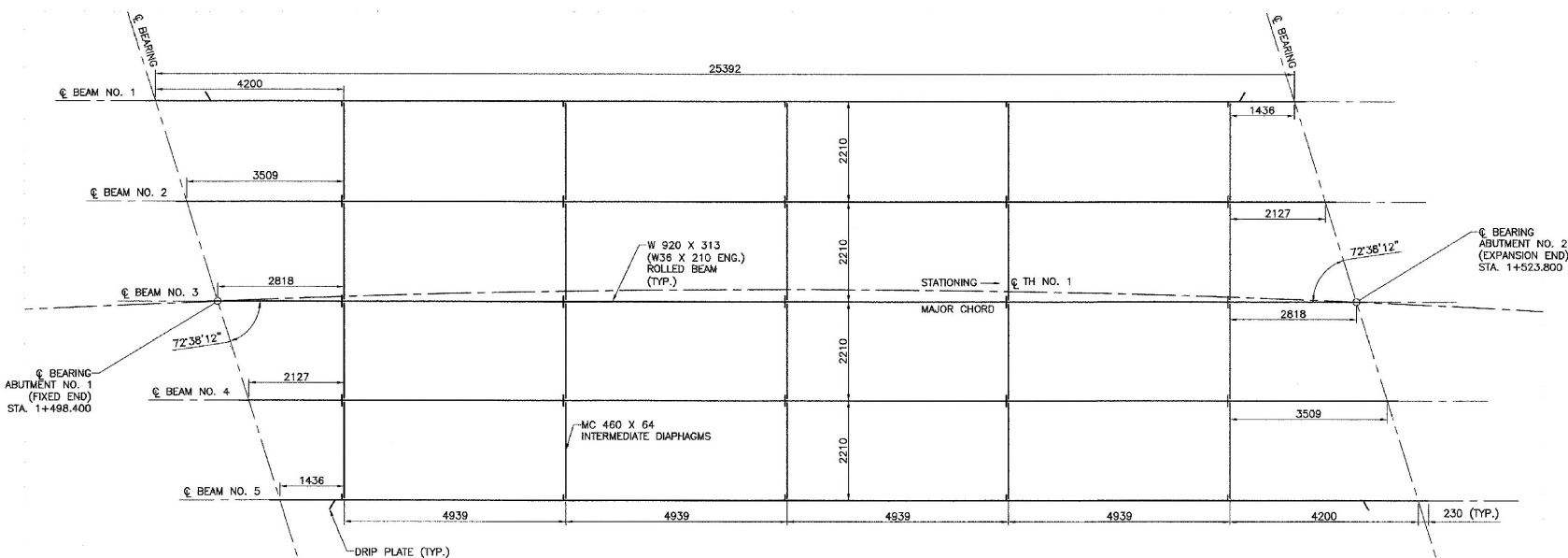
MEMBER MOMENT, kNm	(NON-COMPOSITE)	834	AT MIDSPAN
DECK MOMENT, kNm	(NON-COMPOSITE)	361	AT MIDSPAN
SUPERIMPOSED DEAD LOAD MOMENT, kNm	(COMPOSITE)	197	AT MIDSPAN
LIVE LOAD + IMPACT MOMENT, kNm	(POSITIVE)	748	AT MIDSPAN
DEAD LOAD REACTION, kN	AT ABUTMENTS	231	N/A
LIVE LOAD REACTION, kN	AT ABUTMENTS	129	N/A
TOTAL REACTION, kN	AT ABUTMENTS	360	N/A

MEMBER MOMENT, kNm	(NON-COMPOSITE)	995	AT MIDSPAN
DECK MOMENT, kNm	(NON-COMPOSITE)	470	AT MIDSPAN
SUPERIMPOSED DEAD LOAD MOMENT, kNm	(COMPOSITE)	233	AT MIDSPAN
LIVE LOAD + IMPACT MOMENT, kNm	(POSITIVE)	748	AT MIDSPAN
DEAD LOAD REACTION, kN	AT ABUTMENTS	278	N/A
LIVE LOAD REACTION, kN	AT ABUTMENTS	129	N/A
TOTAL REACTION, kN	AT ABUTMENTS	405	N/A

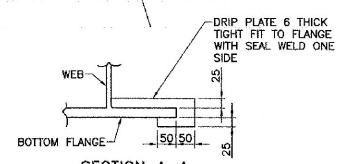
SCALE 1:50

1. UNIT NO. 1, 2, 3, 8, 9, AND 10 ARE 914 WIDE x 990 DEEP
2. UNIT NO. 4, 5, 6 AND 7 ARE 1220 WIDE x 990 DEEP
3. SEE SHEET 18 FOR MORE DETAIL AT ABUTMENTS
4. PROVIDE 20 dia. WEEP HOLE AT BOTH ENDS OF ALL VOIDS

REVISIONS			STATE OF VERMONT AGENCY OF TRANSPORTATION	
NO.	DESCRIPTION	BY & DATE		
			CLARENDON, VERMONT	Bridge No. 14 Log Sta. Surv. Sta.
			TOWN HIGHWAY NO. 1	
 engineering planning management development			TOWN HIGHWAY NO. 1 OVER THE COLD RIVER	
			PRESSRESSED UNIT-DETAILS	
			Designed by: E. C. AUSTIN	Drawn by: E. B. SMALL
			Checked by: K. S. MARSHALL	Bridge Design Supervisor: J. W. FLAHERTY
			date 05/02	date 05/02
			PROJECT CLARENDON	PROJECT NO. BRO 1443(29)
			Bridge Sheet No.	SHEET 20 OF 21

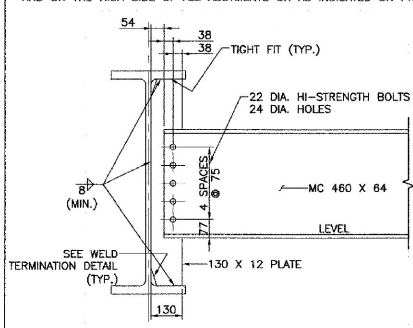


PLAN DRIP PLATE
NTS

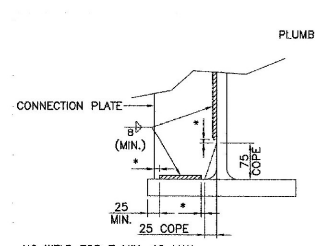


SECTION A-A
NTS

NOTE:
DRIP PLATES SHALL BE PLACED ON OUTSIDE EDGES OF FASCIA CORNERS, AND ON THE HIGH SIDE OF ALL ABUTMENTS OR AS INDICATED ON PROJECT PLANS.

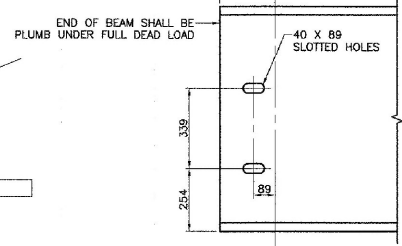


INTERMEDIATE DIAPHRAGMS
SCALE 1:10



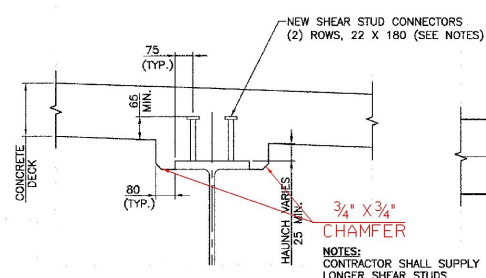
WELD TERMINATION AND COPING DETAILS FOR STEEL BEAMS
SCALE 1:5

* NO WELD FOR 7 MIN. 12 MAX. (EXCEPT MUST MAINTAIN 25 FROM EDGE OF FLANGE)



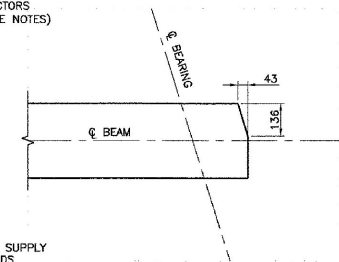
ELEVATION - END OF BEAM
SCALE 1:10

FRAMING PLAN
SCALE 1:50



HAUNCH DETAIL
SCALE 1:10

NOTES:
CONTRACTOR SHALL SUPPLY LONGER SHEAR STUDS WHERE NEEDED TO COMPLY WITH MINIMUM EMBEDMENT OF 65 ABOVE THE BOTTOM OF THE DECK.



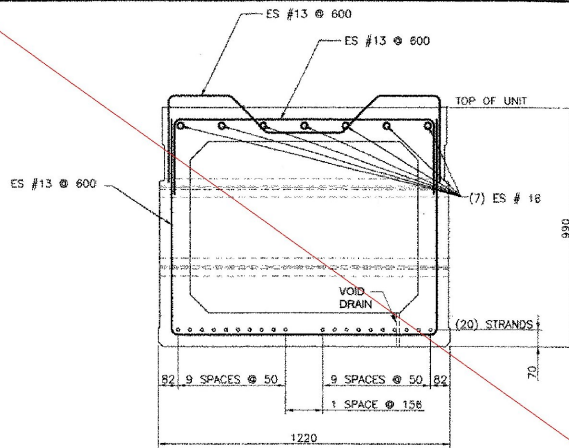
FLANGE CLIP
SCALE 1:10

REVISIONS		
NO.	DESCRIPTION	BY & DATE

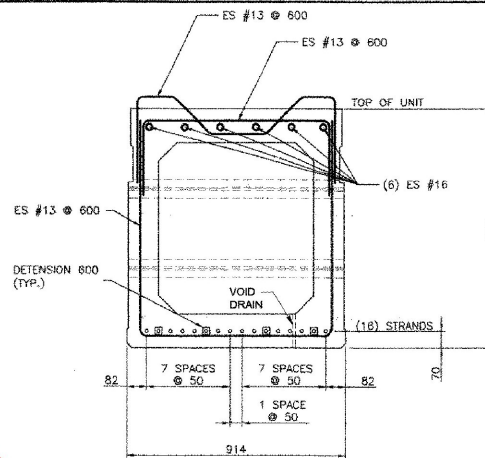
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STATE OF VERMONT
DEPARTMENT OF TRANSPORTATION
PROJECT NO. 1443(20)
CLARENDON

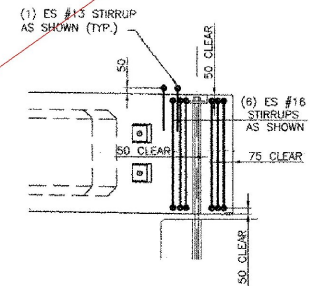
STATE OF VERMONT AGENCY OF TRANSPORTATION	
CLARENDON, VERMONT	Bridge No. 14
TOWN HIGHWAY NO. 1	Log Sta.
TOWN HIGHWAY NO. 1 OVER THE COLD RIVER	
FRAMING PLAN AND STEEL DETAILS	
Designed by: A.P. GUYETTE	Drawn by: A.P. GUYETTE
Checked by: J.W. TUCKER	Bridge Design Supervisor
date 1/06	J.W. TUCKER date 1/06
PROJECT	PROJECT NO.
CLARENDON	BRO 1443(20)
Bridge Sheet No.	SHEET 20A OF 41



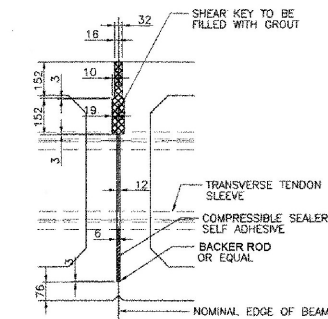
UNIT NO. 4, 5, 6 AND 7 SECTION
SCALE: 1 : 10



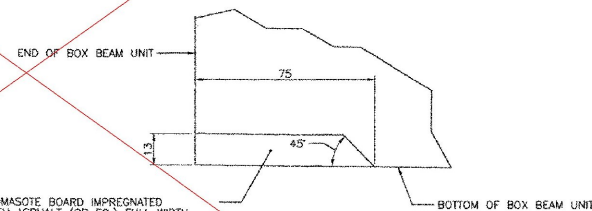
UNIT NO. 1, 2, 3, 8, 9 AND 10 SECTION
SCALE: 1 : 10



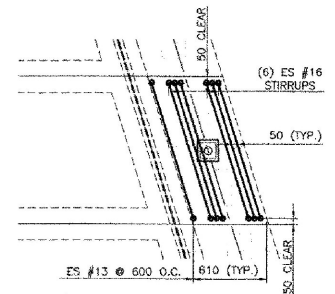
**PRESTRESSED BOX BEAM UNIT
END DETAIL ELEVATION**
SCALE: 1:20



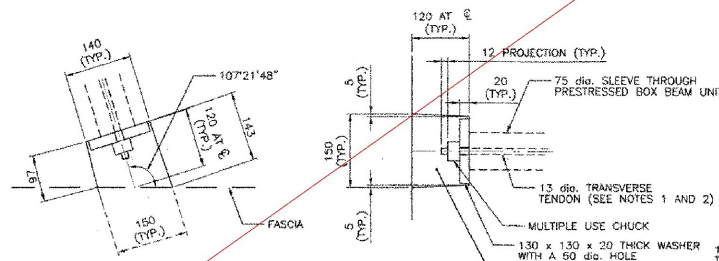
TYPICAL SHEAR KEY DETAIL
SCALE: 1 : 10



HOMASOTE DETAIL
FULL SCALE:

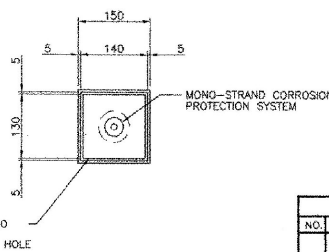


**PRESTRESSED BOX BEAM UNIT
END DETAIL PLAN**
SCALE: 1:20



PLAN OF POCKET

TRANSVERSE TENDON DETAIL
SCALE: 1:5



PLAN

NOTES:

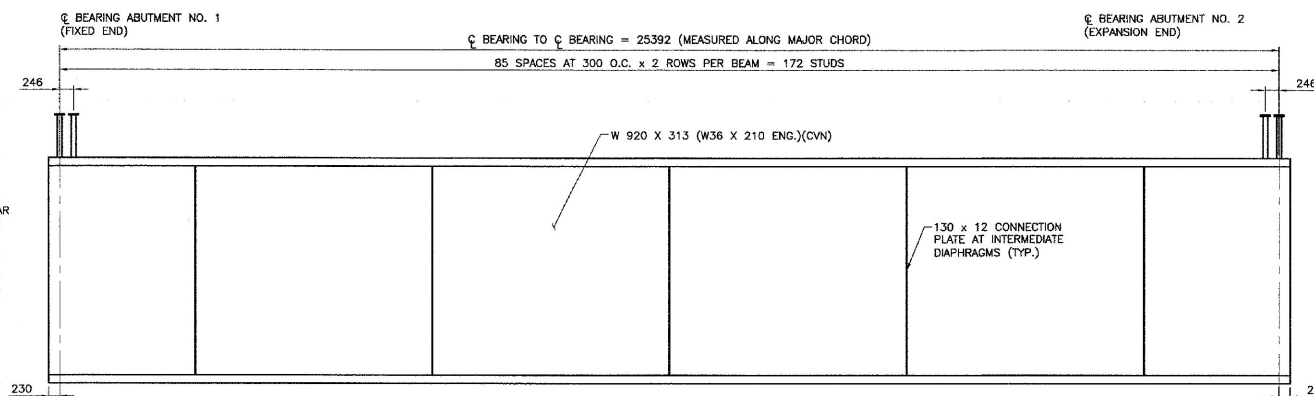
1. TRANSVERSE TIES SHALL BE COVERED BY SEAMLESS POLYPROPYLENE SHEATH (WITH CORROSION INHIBITOR GREASE BETWEEN SHEATH AND STRAND) FOR THE LENGTH OF STRAND, EXCEPT AT ANCHORAGE LOCATIONS, TIES SHALL BE TENSIONED TO 133.5 kN
2. THE 20 THICK BAR SHALL CONFORM TO AASHTO M270/M270M GRADE 250, GALVANIZED AFTER FABRICATION, ACCORDING TO AASHTO M232. THE CHUCK SHALL ALSO BE GALVANIZED PER AASHTO M232.

REVISIONS			STATE OF VERMONT AGENCY OF TRANSPORTATION	
NO.	DESCRIPTION	BY & DATE		
			CLARENDON, VERMONT	
			TOWN HIGHWAY NO. 1	
			BRIDGE NO. 14	
			LOG. STA.	
			SURV. STA.	
			TOWN HIGHWAY NO. 1 OVER THE COLD RIVER	
			PRESTRESS UNIT DETAILS	
			Designed by: B. C. AUSTIN	
			Drawn by: E. B. SMALL	
			Checked by: K. S. MARSHIA	
			date 05/02	
			Bridge Design Supervisor	
			J.W. TUCKER	
			date 05/02	
			PROJECT	
			CLARENDON	
			PROJECT NO.	
			BRD 1443(29)	
			Bridge Sheet No.	
			SHEET 21 OF 41	

SHEET NOT USED

NOTES:

1. CONNECTION PLATES SHALL BE PERPENDICULAR TO THE FLANGES AND THE WEB.
2. ENDS OF THE BEAMS SHALL BE FABRICATED SO THAT THEY WILL BE PLUMB UNDER FULL DEAD LOAD.

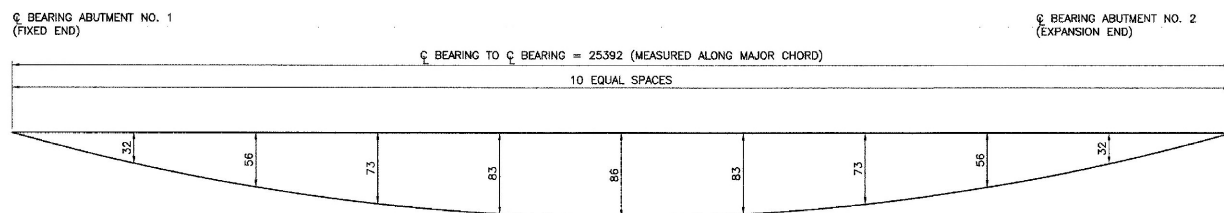


TYPICAL BEAM ELEVATION

SCALE H: 1:50
V: 1:10

NOTES:

1. CONNECTION PLATES AND DIAPHRAGMS TO BE LOCATED AS SHOWN ON FRAMING PLAN.
2. CVN = CHARPY V-NOTCH TEST REQUIRED PER SPECIFICATION.



DEAD LOAD DEFLECTION DIAGRAM

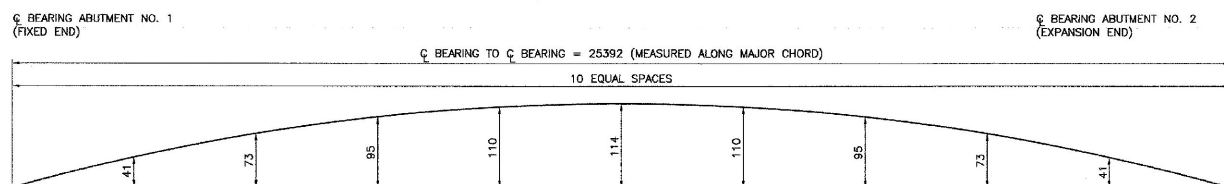
SCALE H: 1:50
V: NTS

NOTES:

1. DEAD LOAD DEFLECTIONS INCLUDE ALL DEAD LOADS AND SUPERIMPOSED DEAD LOADS INCLUDING BEAM SELF WEIGHT AND DIAPHRAGM WEIGHT.

C BEARING TABLE

BEAM	1	2	3	4	5
C BEARING ABUT. NO. 1	1+497.201	1+497.801	1+498.400	1+499.001	1+499.612
C BEARING ABUT. NO. 2	1+522.255	1+523.022	1+523.800	1+524.589	1+525.391



BEAM CAMBER DIAGRAM

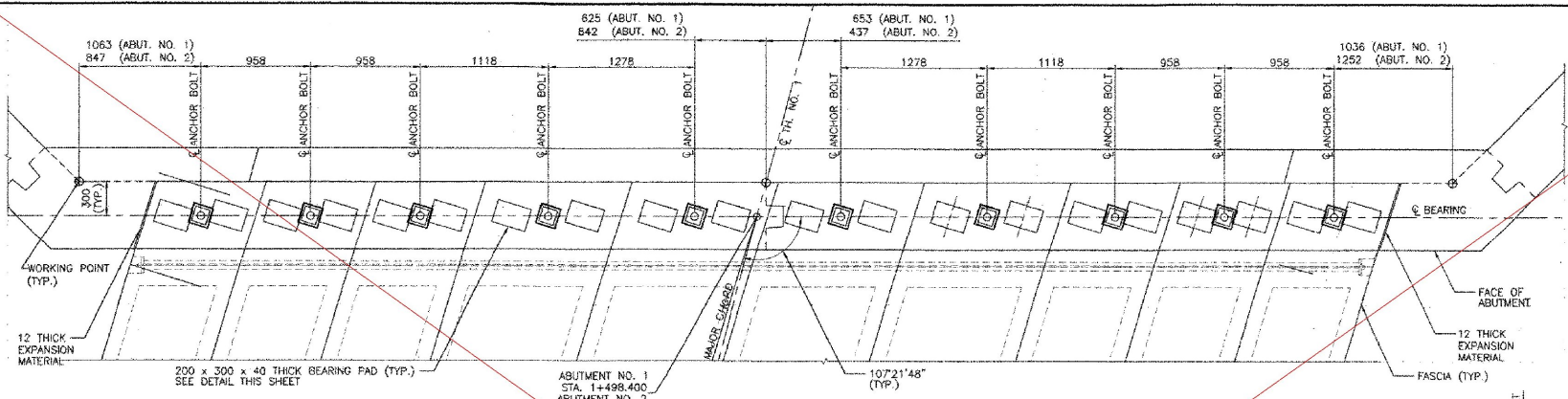
SCALE H: 1:50
V: NTS

REVISIONS		
NO.	DESCRIPTION	BY & DATE

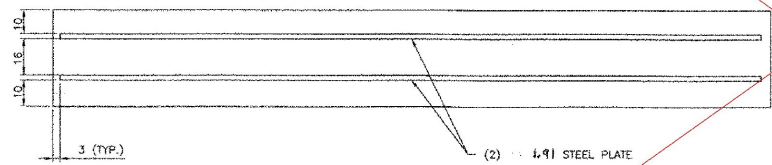
engineering planning management development

STATE OF VERMONT AGENCY OF TRANSPORTATION

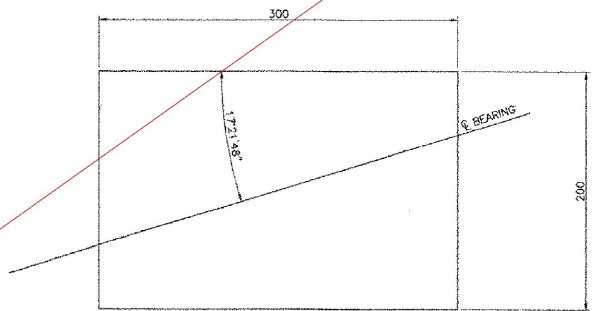
CLARENDON, VERMONT		Bridge No. 14
TOWN HIGHWAY NO. 1		Log Sta.
TOWN HIGHWAY NO. 1 OVER THE COLD RIVER		Surv. Sta.
STRUCTURAL STEEL DETAILS		
Designed by: A.P. GUYETTE	Drawn by: A.P. GUYETTE	
Checked by: J.W. TUCKER	date 1/06	Bridge Design Supervisor J.W. TUCKER date 1/06
PROJECT CLARENDON	PROJECT NO. BRO 1443(29)	
Bridge Sheet No.	SHEET 21A OF 41	



TYPICAL BEARING PAD PLACEMENT PLAN
SCALE 1:20



BEARING PAD DETAIL (CROSS SECTION)
FULL SCALE



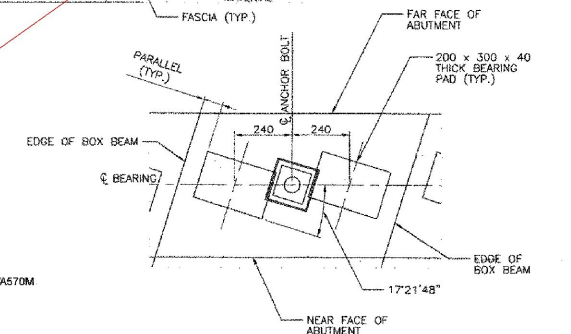
BEARING PAD DETAIL (PLAN)
SCALE: 1:2

BEARING NOTES:

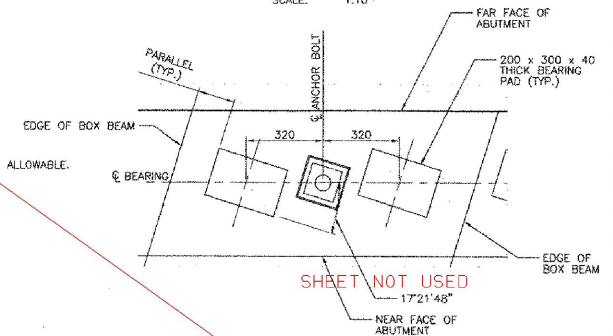
1. BEARING PADS ARE TO BE SET PARALLEL TO THE EDGES OF THE PRESTRESSED UNITS.
2. THERE WILL BE 40 BEARING PADS REQUIRED.
3. A TOTAL OF 20 ANCHOR BOLT ASSEMBLIES WILL BE REQUIRED.
4. ALL REINFORCEMENT BETWEEN LAYERS OF ELASTOMERIC SHALL BE STEEL GRADE 250-ASTM A570/A570M. NO FABRIC REINFORCEMENT WILL BE PERMITTED.
5. ELASTOMERIC BEARINGS REINFORCED WITH STEEL SHALL HAVE A 3 EDGE SEAL OF ELASTOMERIC, INTEGRAL WITH THE BEARING OVER ALL PLATES.
6. ALL MATERIALS AND FABRICATION SHALL BE PER AASHTO DIVISION II SECTION 18.2 AND AASHTO MATERIAL SPECIFICATION M251.
7. DESIGN CRITERIA:
 - A) TEMPERATURE RANGE: 26.95 c
 - B) 60 DUROMETER ELASTOMERIC
 - C) MAXIMUM BEARING STRESS: 6.89 MPa
 - D) DESIGN ROTATION: 0.014 RADIANS
 - D) BEARING SHAPE FACTOR
8. WITH APPROVAL, ALTERNATE CONFIGURATION ARE ALLOWABLE.

NOTE:

ALL WORK AND MATERIALS REQUIRED FOR BEARINGS SHALL BE PAID UNDER PAY ITEM NO. 531.10 "BEARING DEVICE ASSEMBLY (ELASTOMERIC)"



TYPICAL BEARING PAD PLACEMENT UNIT 1, 2, 3, 8, 9 AND 10
SCALE: 1:10



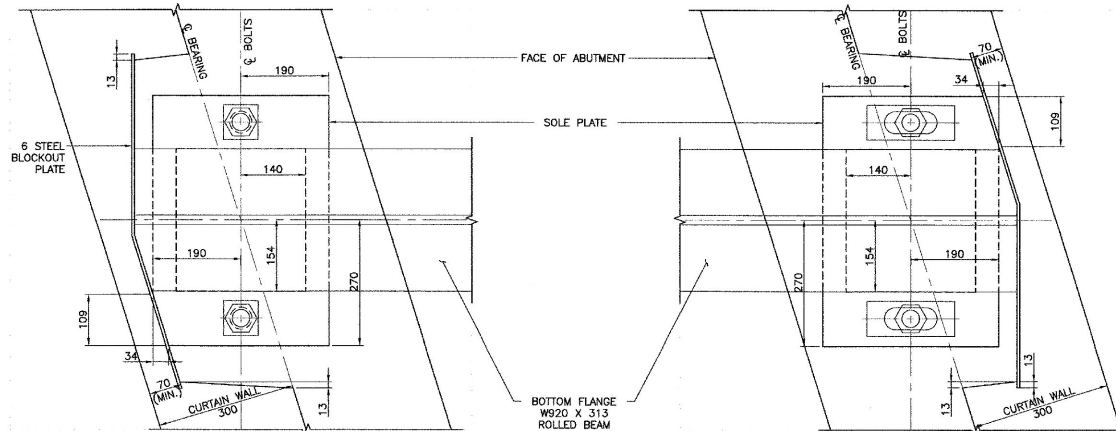
TYPICAL BEARING PAD PLACEMENT UNIT 4, 5, 6 AND 7
SCALE: 1:10

SHEET NOT USED

REVISIONS			STATE OF VERMONT AGENCY OF TRANSPORTATION	
NO.	DESCRIPTION	BY & DATE		
			CLARENDON, VERMONT Bridge No. 14	
			TOWN HIGHWAY NO. 1 Log Sta.	
			Surv. Sta.	
TOWN HIGHWAY NO. 1 OVER THE COLD RIVER				
BEARING DETAILS				
Designed by: B. C. AUSTIN			Drawn by: E. B. SMALL	
Checked by: K. S. MARSHIA date 05/02			Bridge Design Supervisor date 05/02	
PROJECT CLARENDON			PROJECT NO. BRD 1443(28)	
Bridge Sheet No.			SHEET 22 OF 41	

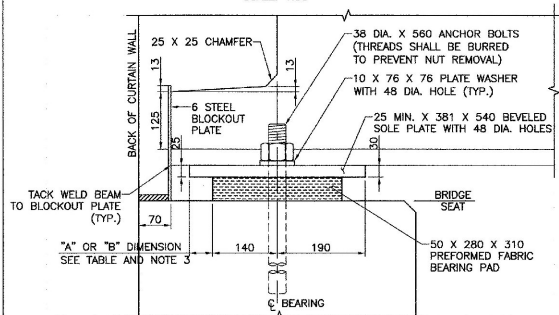
DuBois & King

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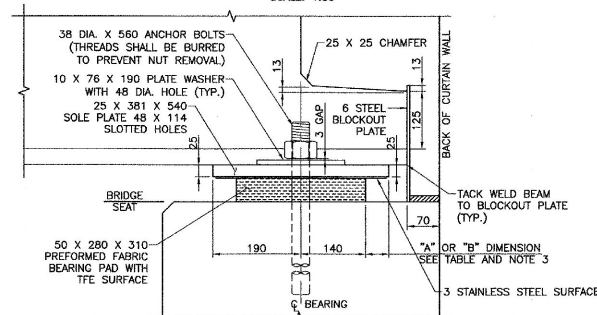


PLAN
SCALE: 1:50

PLAN
SCALE: 1:50

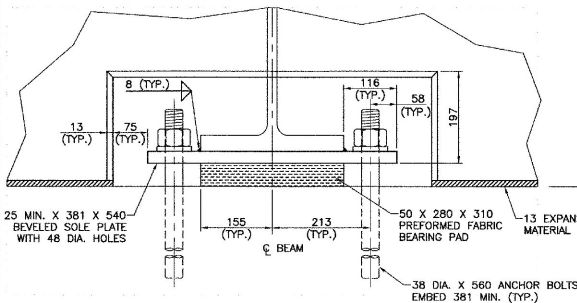


SIDE ELEVATION
SCALE: 1:50



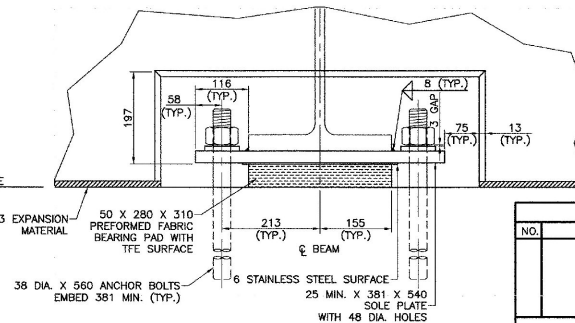
SIDE ELEVATION
SCALE: 1:50

TEMP (F)	"A" DIST. (MM)	"B" DIST. (MM)
120	35	48
105	38	51
90	41	54
75	44	57
60	48	60
45	51	64
30	54	67
15	57	70
0	60	73
-15	64	76
-30	67	79



FRONT ELEVATION
SCALE: 1:50

FIXED BEARING DETAILS AT ABUT. NO. 1



FRONT ELEVATION
SCALE: 1:50

EXPANSION BEARING DETAILS AT ABUT. NO. 2

NOTES:

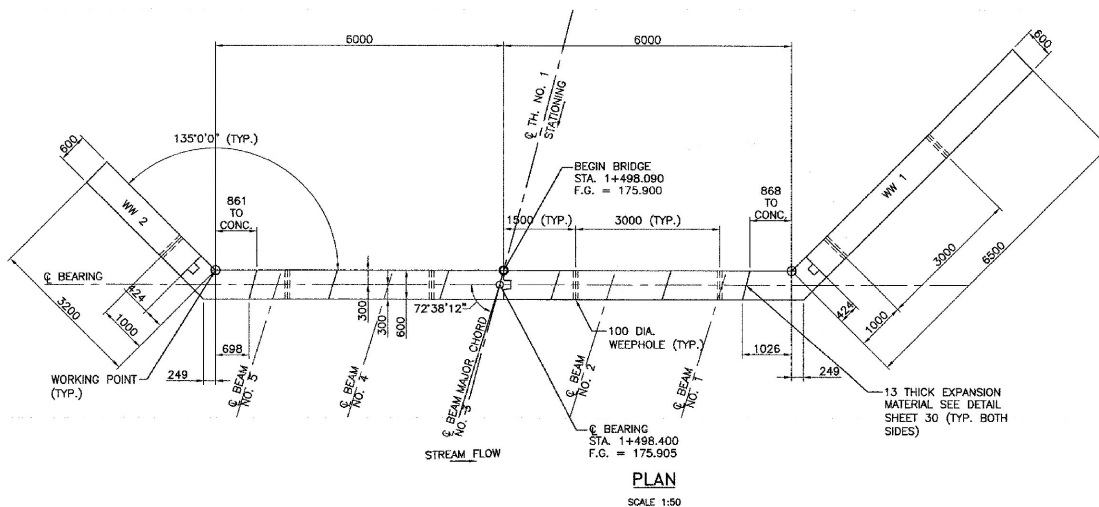
- BEARINGS SHALL CONFORM TO APPLICABLE SUBSECTIONS OF SECTION 531 AND 731.
- SHOP DRAWINGS CONFORMING TO SUBSECTION 531.03 SHALL BE SUBMITTED TO INCLUDE WELDING AND BONDING PROCEDURES.
- THE "A" DISTANCE IS THE SOLE PLATE ADJUSTMENT TO BE USED AFTER THE DECK SYSTEM, CURB, PAVEMENT AND BRIDGE RAIL ARE PLACED. THE "B" DISTANCE IS THE SOLE PLATE ADJUSTMENT TO BE USED BEFORE DEAD LOAD IS ADDED TO THE BEAM SELFWEIGHT. THE FINAL "A" DISTANCE, AS SHOWN IN THE TABLE, MUST BE ATTAINED TO WITHIN 3 MM.
- DESIGN CRITERIA:
 - ALLOWABLE BEARING PRESSURE ON CONCRETE = 7 MPa
 - MINIMUM ALLOWABLE DESIGN ROTATION = 0.015 RADIAN
 - HORIZONTAL CAPACITY SHALL BE 6% OF THE VERTICAL LOAD
 - DESIGN LOAD PER BEARING = 60 Mg (DEAD LOAD + LIVE LOAD)
- ALL STEEL IN BEARING DEVICES (EXCEPT STAINLESS) SHALL BE AASHTO M270, GRADE 250, AND GALVANIZED PER SPECIFICATION.
- ANCHOR BOLTS SHALL HAVE A MINIMUM OF 381 MM EMBEDMENT INTO THE CONCRETE AND SHALL CONFORM TO SUBSECTION 714.08 IN THE "VERMONT SPECIFICATIONS"
- ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. ALL WASHERS SHALL BE 10 MM PLATE (MINIMUM). PAYMENT FOR ANCHOR BOLTS, NUTS AND WASHERS SHALL BE INCIDENTAL TO ITEM 531.10.

REVISIONS		BY & DATE	
NO.	DESCRIPTION		

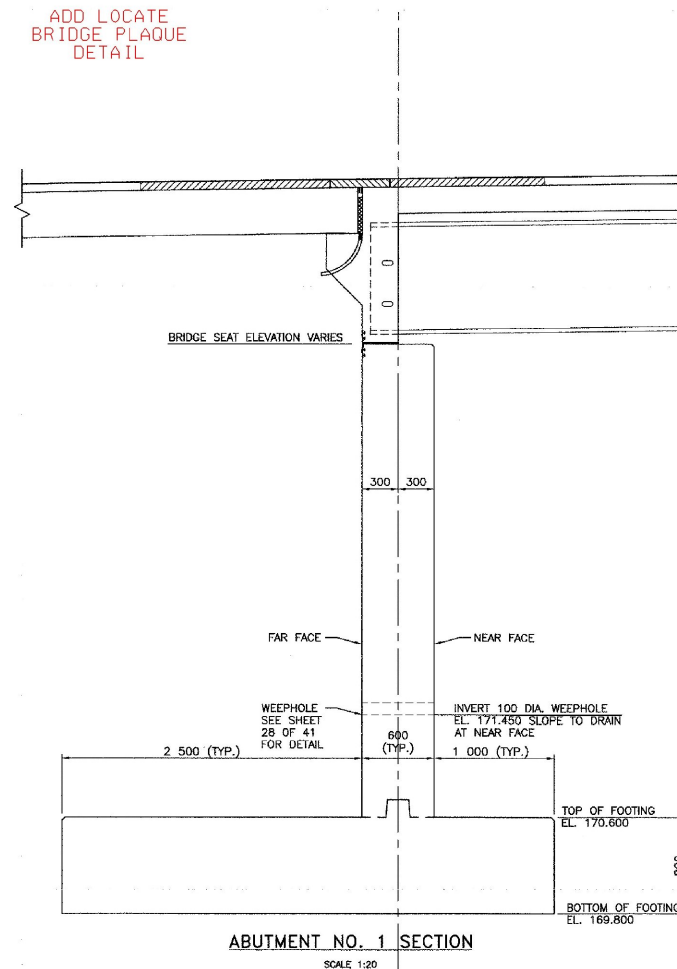
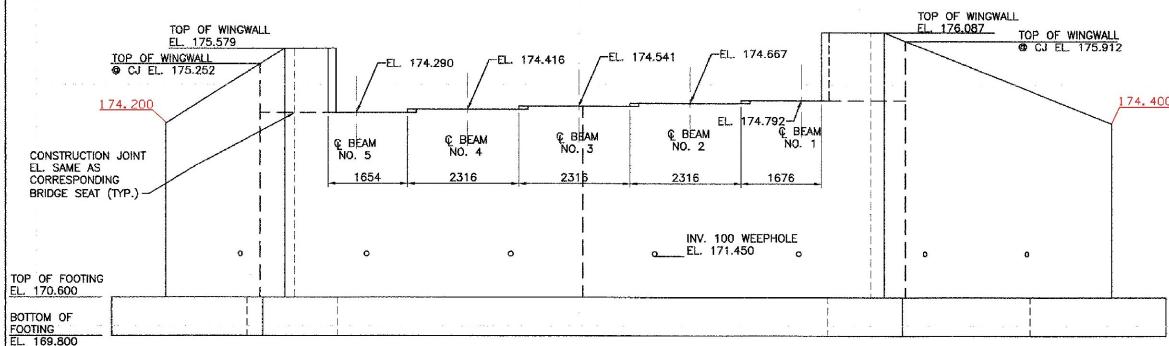
STATE OF VERMONT AGENCY OF TRANSPORTATION	
CLARENDON, VERMONT	Bridge No. 14
TOWN HIGHWAY NO. 1	Log. Sta.
TOWN HIGHWAY NO. 1 OVER THE COLD RIVER	
BEARING DETAILS	
Designed by: A.P. GUYETTE	Drawn by: A.P. GUYETTE
Checked by: J.W. TUCKER	Bridge Design Supervisor: J.W. TUCKER
PROJECT: CLARENDON	PROJECT NO.: BRO 1443(29)
Bridge Sheet No.	SHEET 22A OF 41

engineering planning management development

REVIEWS <table border="1" style="width: 100%;"> <tr> <td style="width: 10%;">NO.</td> <td style="width: 60%;">DESCRIPTION</td> <td style="width: 30%;">BY & DATE</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>			NO.	DESCRIPTION	BY & DATE				STATE OF VERMONT AGENCY OF TRANSPORTATION	
NO.	DESCRIPTION	BY & DATE								
 DuBois & King Inc. engineering planning management development			<table border="1" style="width: 100%;"> <tr> <td style="width: 70%;">CLARENDON, VERMONT</td> <td style="width: 30%;">Bridge No. 14</td> </tr> <tr> <td></td> <td>Log. Sta.</td> </tr> <tr> <td>TOWN HIGHWAY NO. 1</td> <td>Surv. Sta.</td> </tr> </table>		CLARENDON, VERMONT	Bridge No. 14		Log. Sta.	TOWN HIGHWAY NO. 1	Surv. Sta.
			CLARENDON, VERMONT	Bridge No. 14						
				Log. Sta.						
			TOWN HIGHWAY NO. 1	Surv. Sta.						
			TOWN HIGHWAY NO. 1 OVER THE COLD RIVER							
ABUTMENT NO. 1 MASONRY										
<table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">Designed by: B. C. AUSTIN</td> <td style="width: 50%;">Drawn by: E. B. SMALL</td> </tr> <tr> <td> <table border="1" style="width: 100%;"> <tr> <td style="width: 60%;">Checked by: E. S. MARSHALL</td> <td style="width: 40%;">date 05/02</td> </tr> </table> </td> <td> <table border="1" style="width: 100%;"> <tr> <td style="width: 60%;">Bridge Design Supervisor: J.W. TUCKER</td> <td style="width: 40%;">date 05/02</td> </tr> </table> </td> </tr> </table>		Designed by: B. C. AUSTIN	Drawn by: E. B. SMALL	<table border="1" style="width: 100%;"> <tr> <td style="width: 60%;">Checked by: E. S. MARSHALL</td> <td style="width: 40%;">date 05/02</td> </tr> </table>	Checked by: E. S. MARSHALL	date 05/02	<table border="1" style="width: 100%;"> <tr> <td style="width: 60%;">Bridge Design Supervisor: J.W. TUCKER</td> <td style="width: 40%;">date 05/02</td> </tr> </table>	Bridge Design Supervisor: J.W. TUCKER	date 05/02	
Designed by: B. C. AUSTIN	Drawn by: E. B. SMALL									
<table border="1" style="width: 100%;"> <tr> <td style="width: 60%;">Checked by: E. S. MARSHALL</td> <td style="width: 40%;">date 05/02</td> </tr> </table>	Checked by: E. S. MARSHALL	date 05/02	<table border="1" style="width: 100%;"> <tr> <td style="width: 60%;">Bridge Design Supervisor: J.W. TUCKER</td> <td style="width: 40%;">date 05/02</td> </tr> </table>	Bridge Design Supervisor: J.W. TUCKER	date 05/02					
Checked by: E. S. MARSHALL	date 05/02									
Bridge Design Supervisor: J.W. TUCKER	date 05/02									
<table border="1" style="width: 100%;"> <tr> <td style="width: 60%;">PROJECT: CLARENDON</td> <td style="width: 40%;">PROJECT NO. BRG 1443(29)</td> </tr> <tr> <td>Bridge Sheet No.</td> <td>SHEET 23 OF 41</td> </tr> </table>		PROJECT: CLARENDON	PROJECT NO. BRG 1443(29)	Bridge Sheet No.	SHEET 23 OF 41					
PROJECT: CLARENDON	PROJECT NO. BRG 1443(29)									
Bridge Sheet No.	SHEET 23 OF 41									



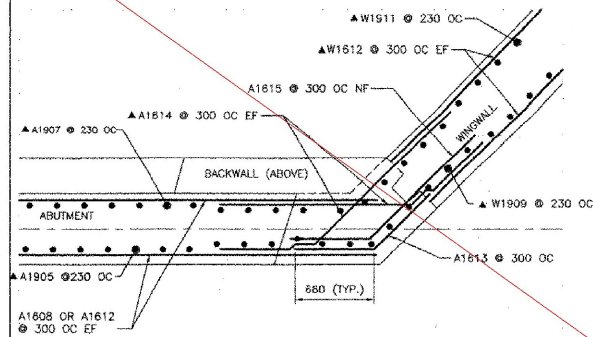
ADD LOCATE
BRIDGE PLAQUE
DETAIL



REVISIONS		
NO.	DESCRIPTION	BY & DATE

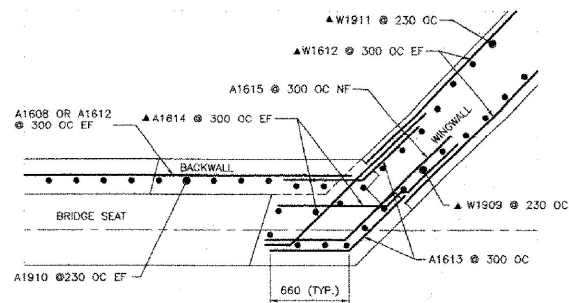
STATE OF VERMONT AGENCY OF TRANSPORTATION	
CLARENDON, VERMONT	Bridge No. 14
TOWN HIGHWAY NO. 1	Log Sta.
	Surv. Sta.
TOWN HIGHWAY NO. 1 OVER THE COLD RIVER	
ABUTMENT NO. 1 MASONRY	
Designed by: A.P. GUYETTE	Drawn by: A.P. GUYETTE
Checked by: J.W. TUCKER date 1/06	Bridge Design Supervisor J.W. TUCKER date 1/06
PROJECT CLARENDON	PROJECT NO. BRO 1443(28)
Bridge Sheet No.	SHEET 23A OF 41

engineering planning management development



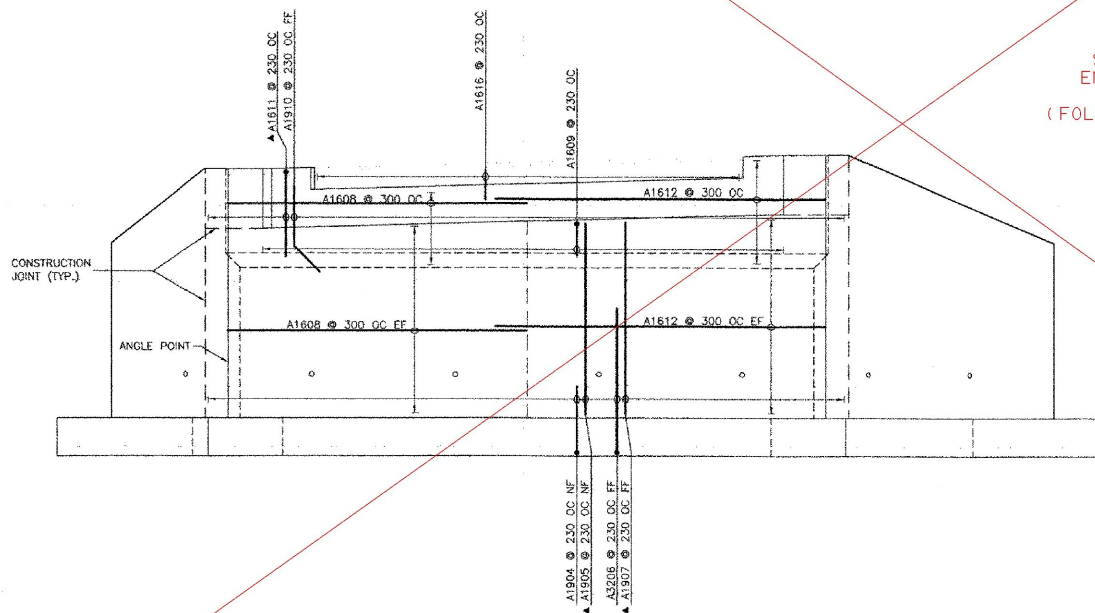
TYPICAL CORNER DETAIL ABUTMENT NO. 1
BELOW HAUNCH

SCALE 1:20



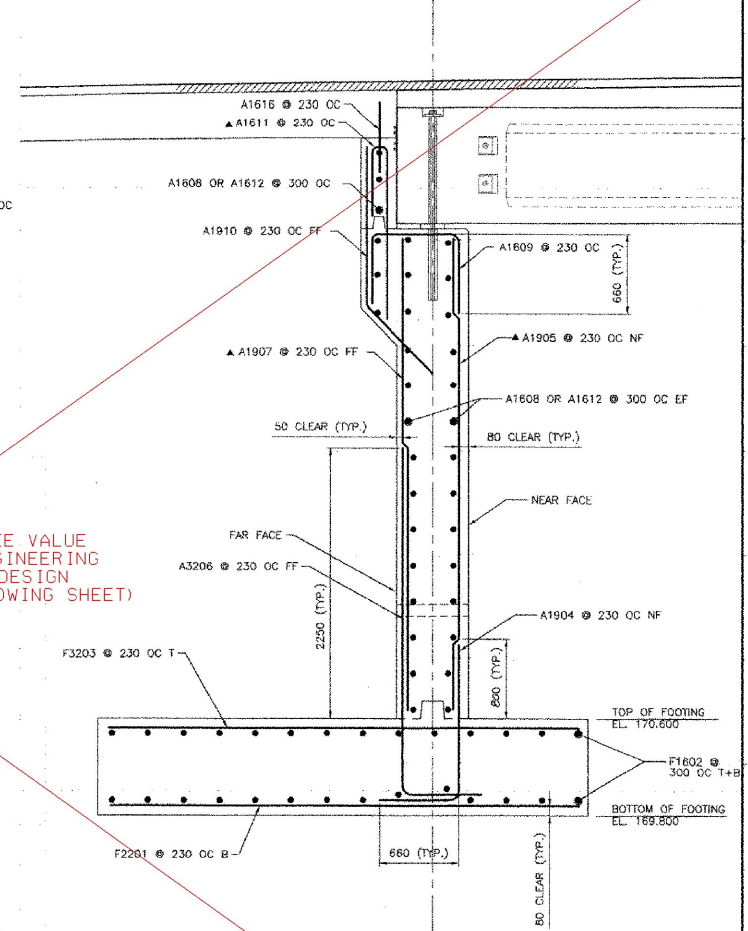
TYPICAL CORNER DETAIL ABUTMENT NO. 1
ABOVE BRIDGE SEAT

SCALE 1:20



ELEVATION

SCALE 1:50



ABUTMENT NO. 1 SECTION

SCALE 1:20

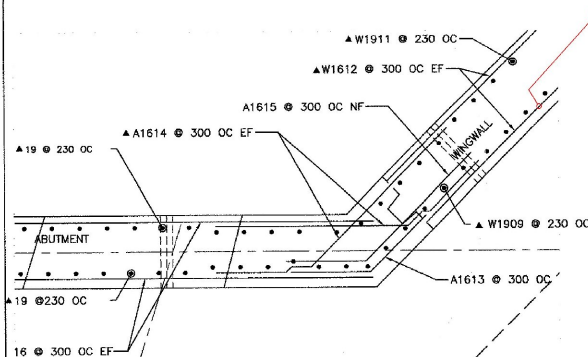
SEE VALUE
ENGINEERING
DESIGN
(FOLLOWING SHEET)

NOTES:

- NF = NEAR FACE
- FF = FAR FACE
- EF = EACH FACE
- ▲ = CUT 70 FT IN FIELD
- T+B = TOP AND BOTTOM
- OC = ON CENTER
- MINIMUM LAP LENGTH NOT DETAILED SHALL BE 660

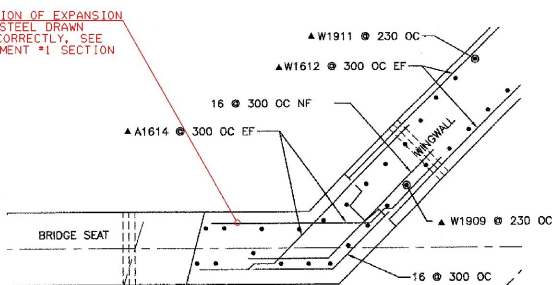
REVISIONS			STATE OF VERMONT AGENCY OF TRANSPORTATION	
NO.	DESCRIPTION	BY & DATE		
			CLARENDON, VERMONT	
			TOWN HIGHWAY NO. 1	
			TOWN HIGHWAY NO. 1 OVER THE COLD RIVER	
			ABUTMENT NO. 1 REINFORCING	
			Designed by: B. C. AUSTIN	
			Checked by: K. S. MARSHIA	
			PROJECT NO. CLARENDON	
			Bridge Sheet No.	
			SHEET 24 OF 41	





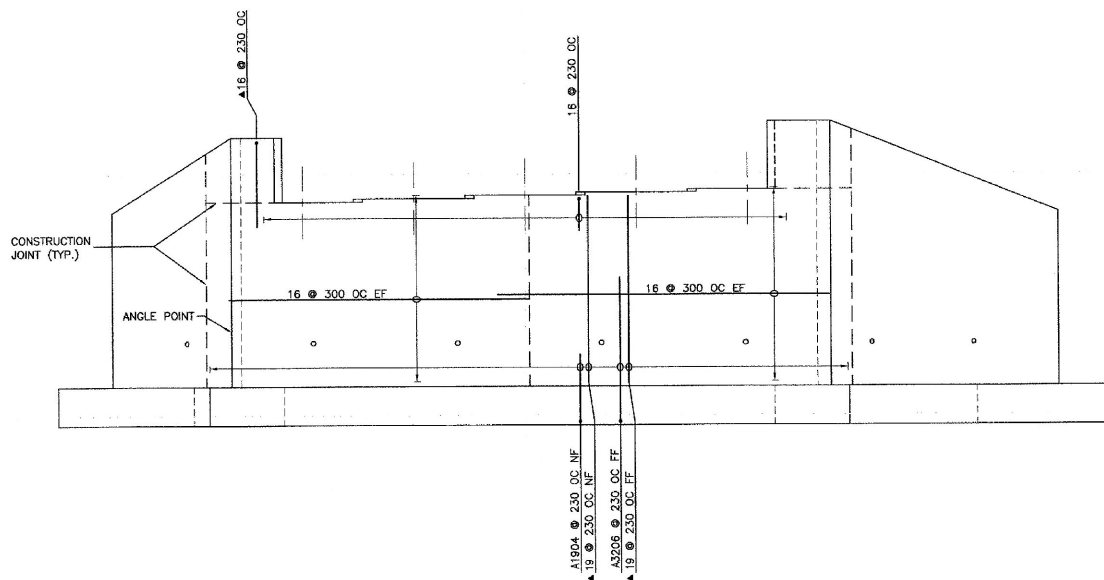
TYPICAL CORNER DETAIL ABUTMENT NO 1
BELOW BRIDGE SEAT

SCALE 1:20



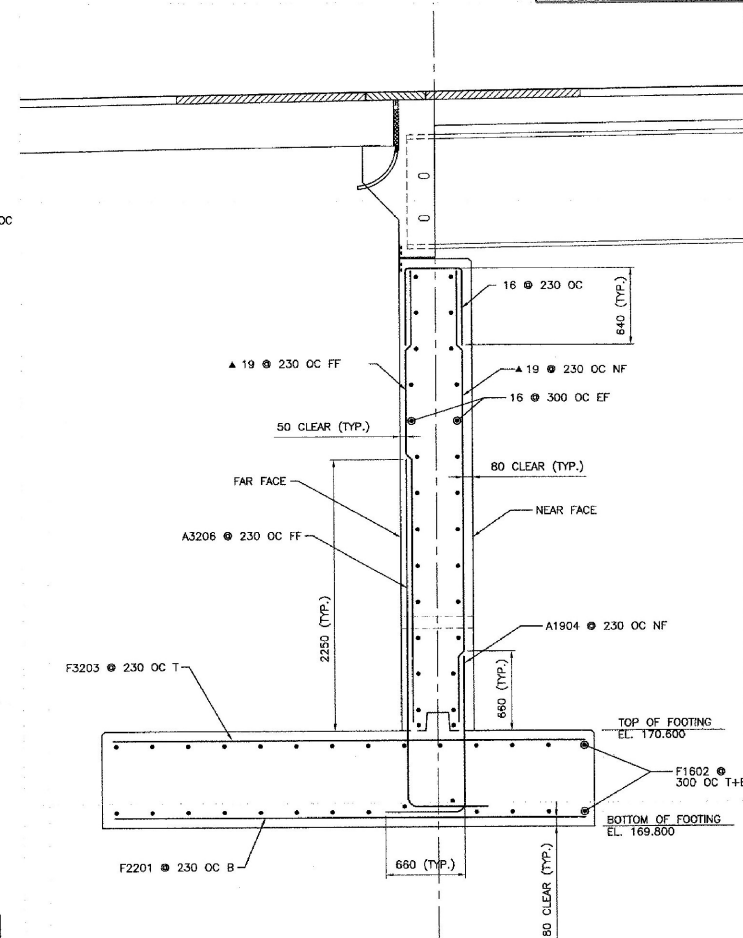
TYPICAL CORNER DETAIL ABUTMENT NO 1
ABOVE BRIDGE SEAT

SCALE 1:20



ELEVATION

SCALE 1:50



ABUTMENT NO. 1 SECTION

SCALE 1:20

NOTES:
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
A = CUT TO FIT IN FIELD
T+B = TOP AND BOTTOM
OC = ON CENTER
MINIMUM LAP LENGTH NOT DETAILED SHALL BE 660

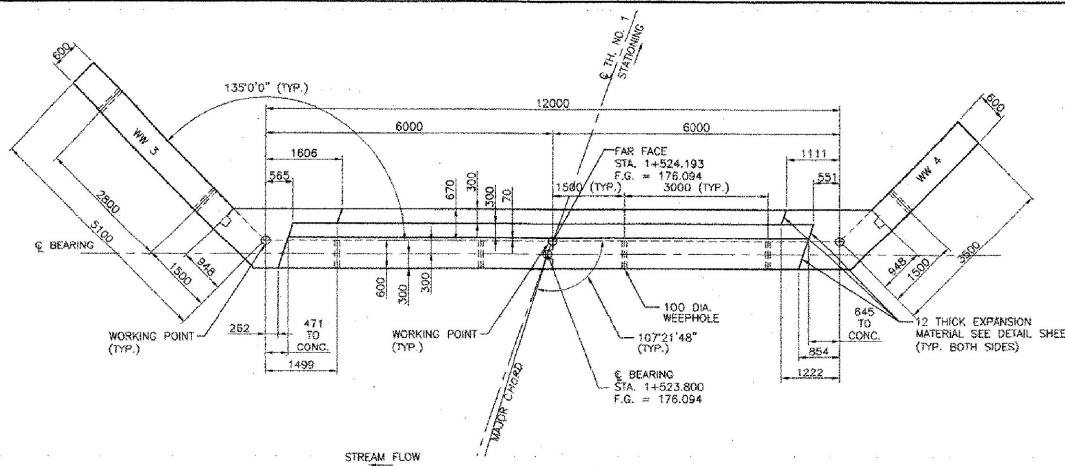
NOTE:
CONTRACTOR SHALL VERIFY ALL REINFORCING STEEL LENGTHS AND DIMENSIONS PRIOR TO ORDERING REINFORCEMENT. THE CURRENT REINFORCING STEEL SCHEDULE IS NOT ACCURATE AND SHALL NOT BE USED AS THE BASIS FOR ORDERING REINFORCEMENT.

REVISIONS		BY & DATE	
NO.	DESCRIPTION		

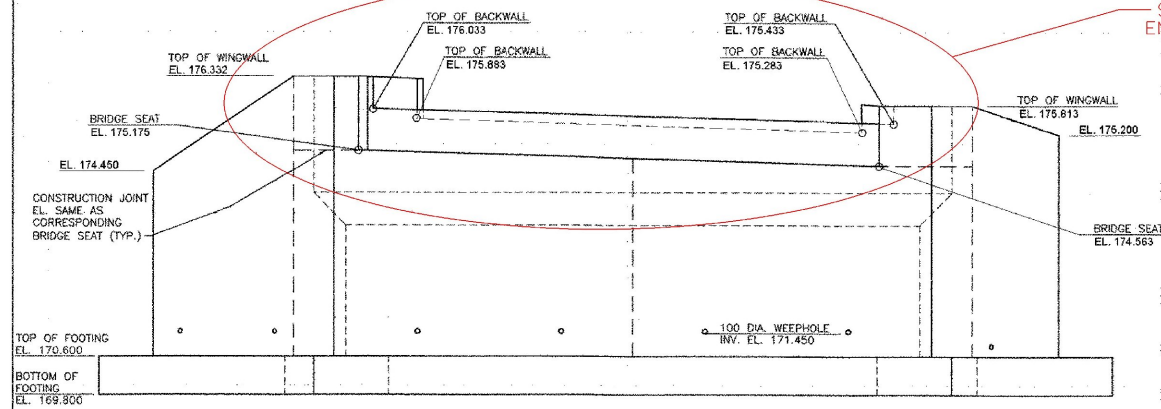
STATE OF VERMONT		AGENCY OF TRANSPORTATION	
CLARENDON, VERMONT		Bridge No. 14	
TOWN HIGHWAY NO. 1		Log Sta.	
		Surv. Sta.	
TOWN HIGHWAY NO. 1 OVER THE COLD RIVER			
ABUTMENT NO. 1 REINFORCING			
Designed by: A.P. GUYETTE		Drawn by: A.P. GUYETTE	
Checked by: J.W. TUCKER		Bridge Design Supervisor	
date 1/06		date 1/06	
PROJECT		PROJECT NO.	
CLARENDON		BRO 1443(29)	
Bridge Sheet No.		SHEET 24A OF 41	

DuBois & King

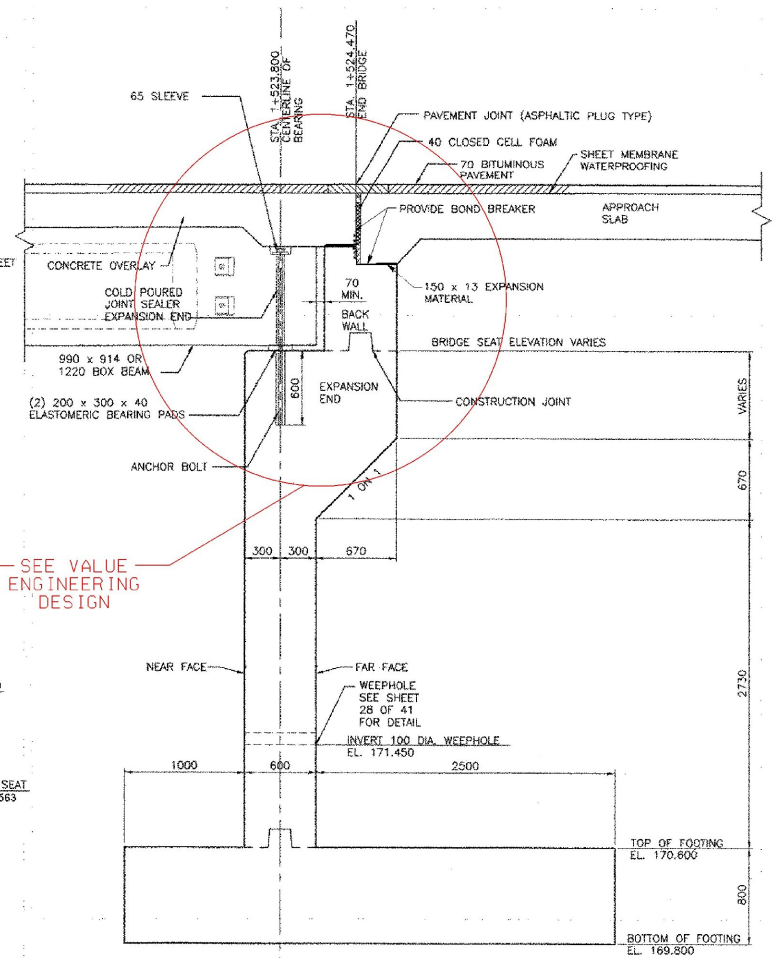
engineering planning management development



PLAN
SCALE 1:50



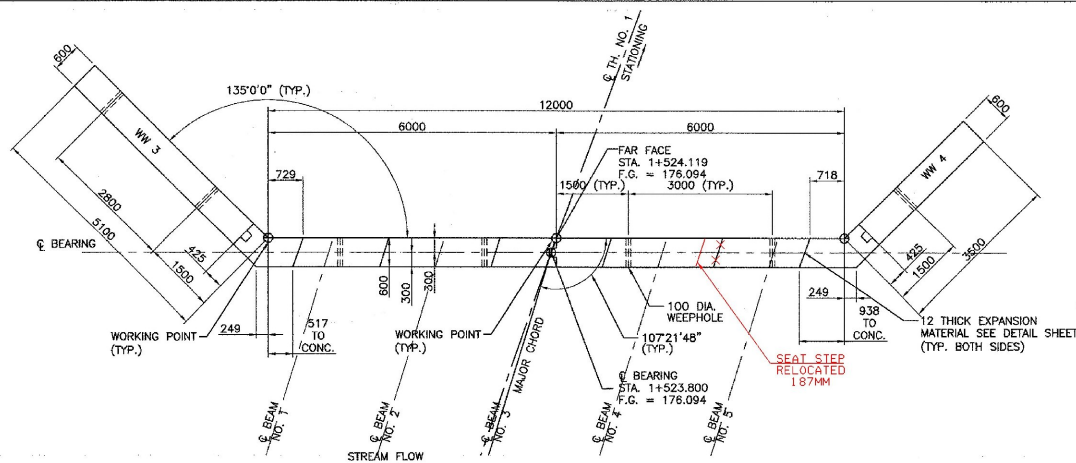
ELEVATION
SCALE 1:50



ABUTMENT NO. 2 SECTION
SCALE 1:20

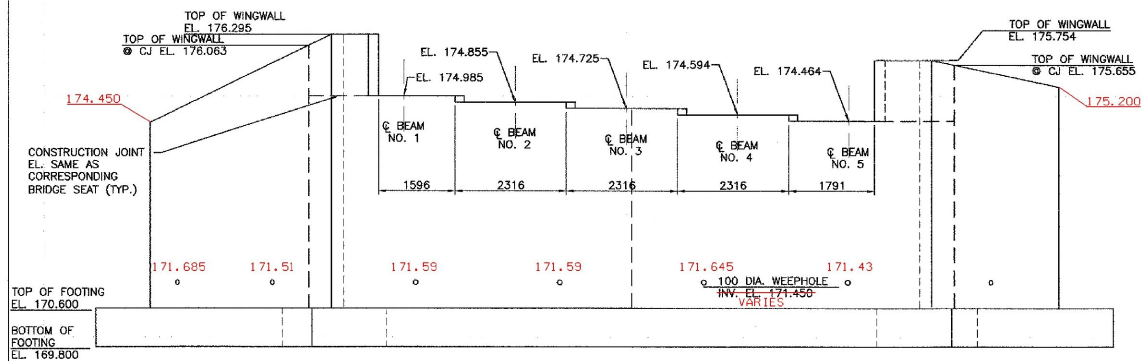
REVISIONS			STATE OF VERMONT AGENCY OF TRANSPORTATION	
NO.	DESCRIPTION	BY & DATE		
			CLARENDON, VERMONT	Bridge No. 14
			TOWN HIGHWAY NO. 1	Log Sta.
				Surv. Sta.
			TOWN HIGHWAY NO. 1 OVER THE COLD RIVER	
			ABUTMENT NO. 2 MASONRY	
			Designed by: B. C. AUSTIN	Drawn by: E. B. SMALL
			Checked by: K. S. MARSHIA date 05/02	Bridge Design Supervisor: J. W. TUCKER date 05/02
			PROJECT NO. CLARENDON	PROJECT NO. BRD 144(29)
			Bridge Sheet No.	SHEET 25 OF 41





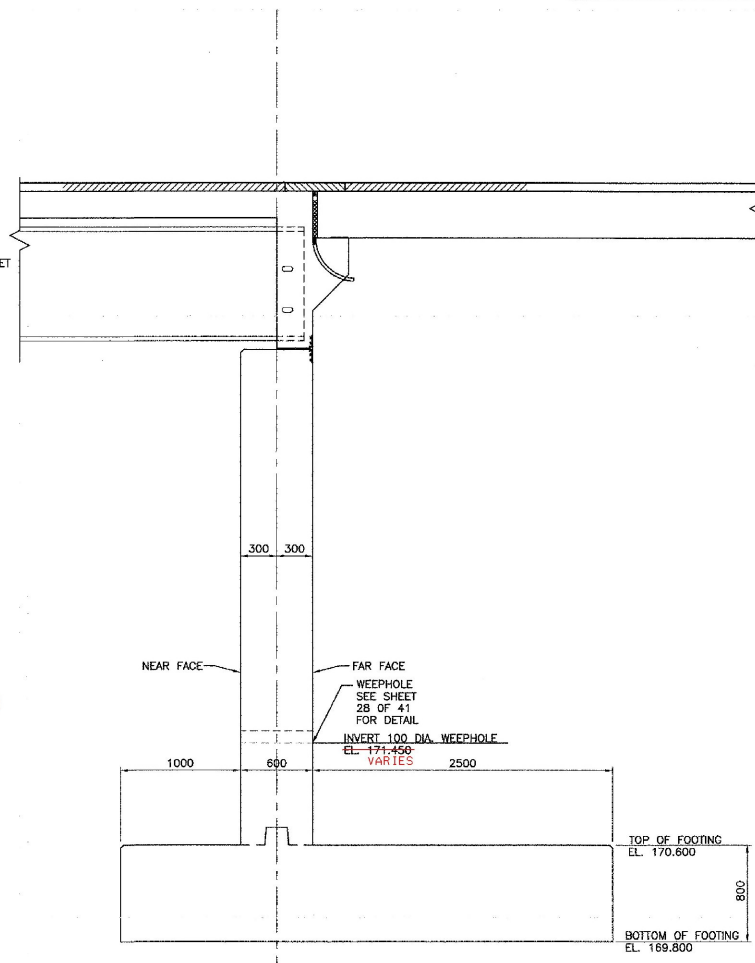
PLAN

SCALE 1:50



ELEVATION

SCALE 1:50

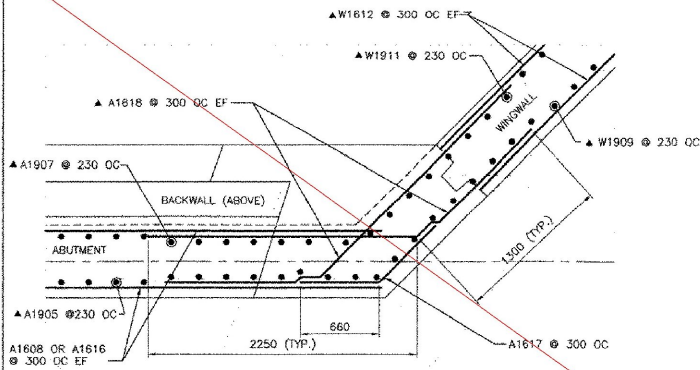


ABUTMENT NO. 2 SECTION

SCALE 1:20

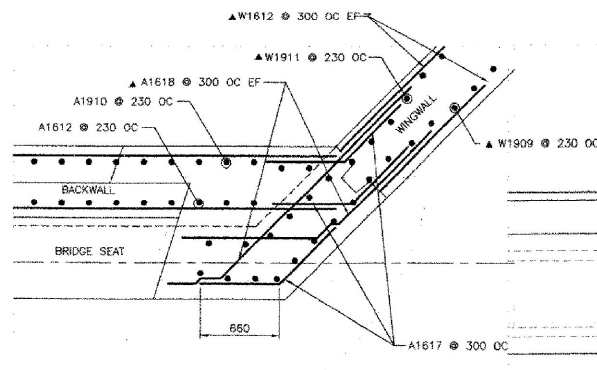
REVISIONS		
NO.	DESCRIPTION	BY & DATE

STATE OF VERMONT	
AGENCY OF TRANSPORTATION	
CLARENDON, VERMONT	Bridge No. 14
TOWN HIGHWAY NO. 1	Log Sta.
	Surv. Sta.
TOWN HIGHWAY NO. 1 OVER THE COLD RIVER	
ABUTMENT NO. 2 MASONRY	
Designed by: A.P. GUYETTE	Drawn by: A.P. GUYETTE
Checked by: J.W. TUCKER date 1/06	Bridge Design Supervisor J.W. TUCKER date 1/06
PROJECT CLARENDON	PROJECT No. BRD 1443(29)
Bridge Sheet No.	SHEET 25A OF 41



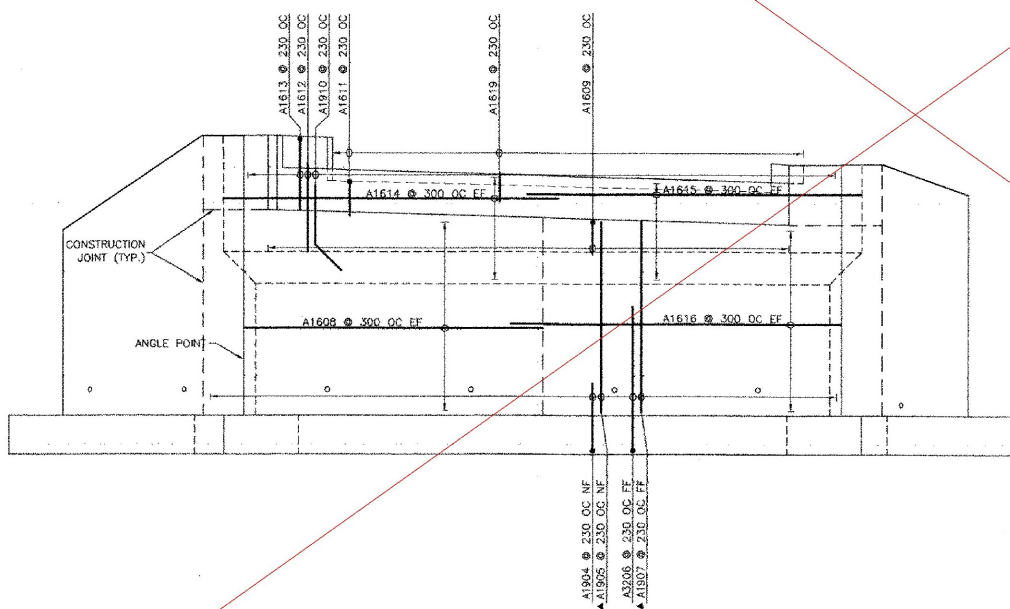
TYPICAL CORNER DETAIL ABUTMENT NO. 2
(BELOW HAUNCH)

SCALE 1:20



TYPICAL CORNER DETAIL ABUTMENT NO. 2
(ABOVE BRIDGE SEAT)

SCALE 1:20



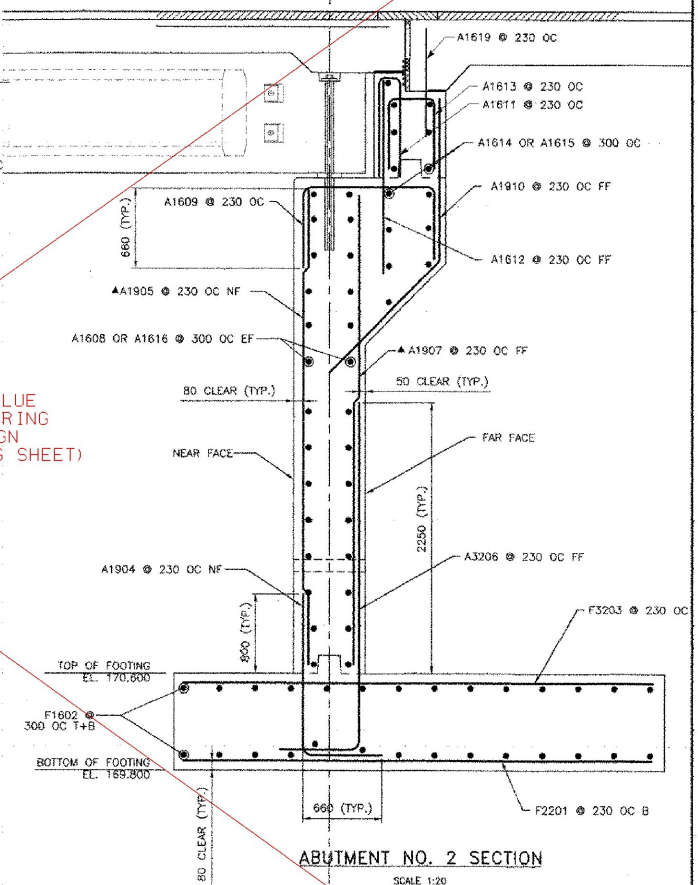
ELEVATION

SCALE 1:50

NOTES:

- NF = NEAR FACE
- FF = FAR FACE
- EF = EACH FACE
- ▲ = CUT-TO-FIT IN FIELD
- T+8 = TOP AND BOTTOM
- OC = ON CENTER
- MINIMUM LAP LENGTH NOT DETAILED SHALL BE 660

SEE VALUE
ENGINEERING
DESIGN
(FOLLOWING SHEET)

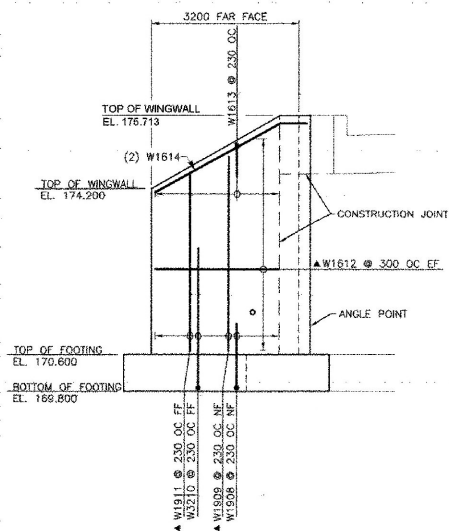


ABUTMENT NO. 2 SECTION

SCALE 1:20

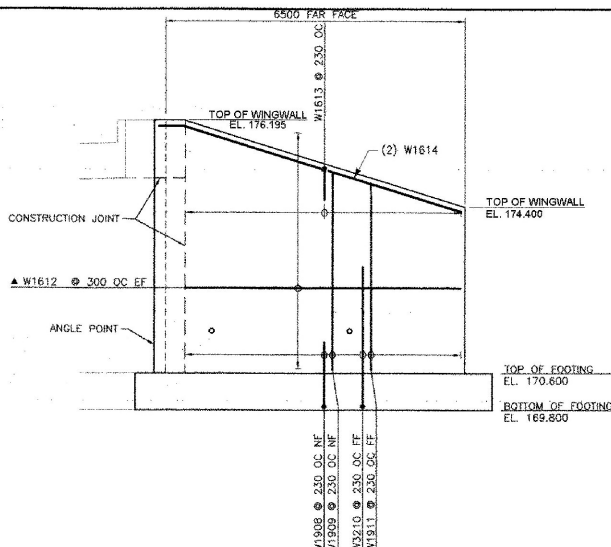
REVISIONS			STATE OF VERMONT AGENCY OF TRANSPORTATION	
NO.	DESCRIPTION	BY	DATE	
		CLARENDON, VERMONT		
		TOWN HIGHWAY NO. 1		
		BRIDGE NO. 14		
		LOG. STA.		
		SURV. STA.		
TOWN HIGHWAY NO. 1 OVER THE COLD RIVER				
ABUTMENT NO. 2 REINFORCING				
Designed by: A. C. AUSTIN		Drawn by: E. B. SMALL		
Checked by: K. S. MARSHIA		Bridge Design Supervisor: J.W. TUCKER		
PROJECT: CLARENDON		PROJECT NO.: BRO 1443(29)		
Bridge Sheet No.		SHEET 26 OF 41		

DuBois & King
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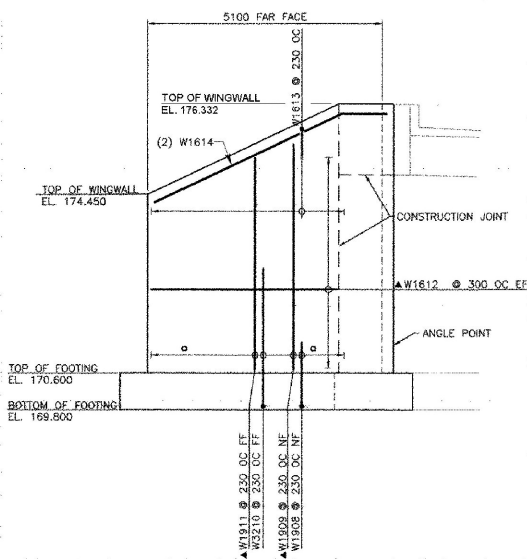
WINGWALL NO. 2 ELEVATION

SCALE 1 : 50



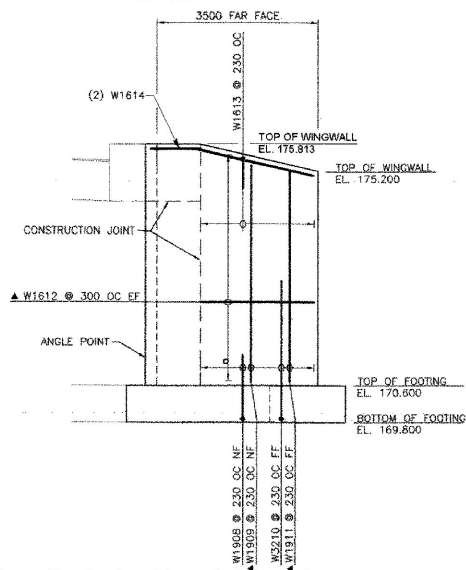
WINGWALL NO. 1 ELEVATION

SCALE 1 : 50



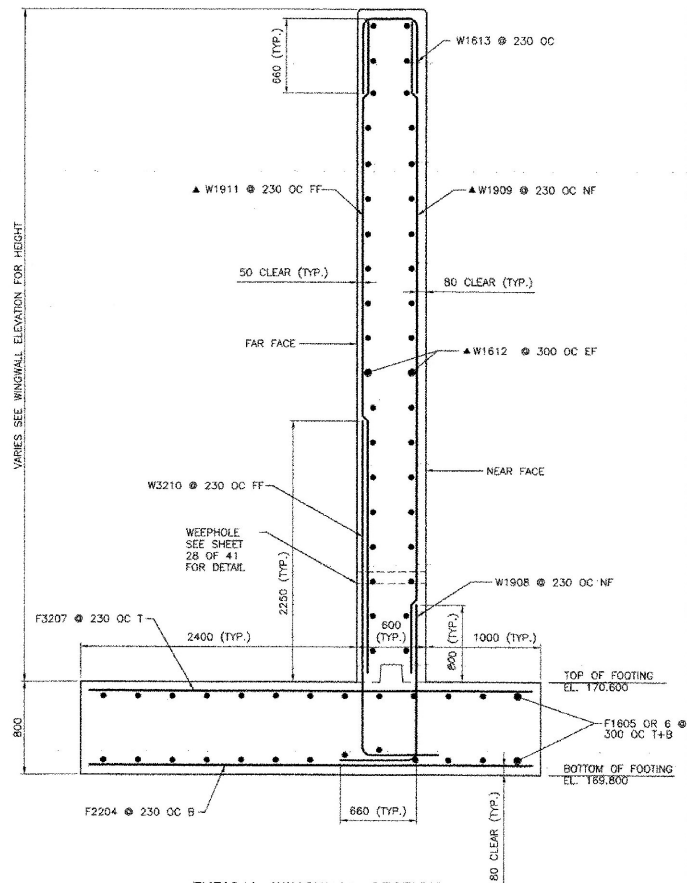
WINGWALL NO. 3 ELEVATION

SCALE 1 : 50



WINGWALL NO. 4 ELEVATION

SCALE 1 : 50



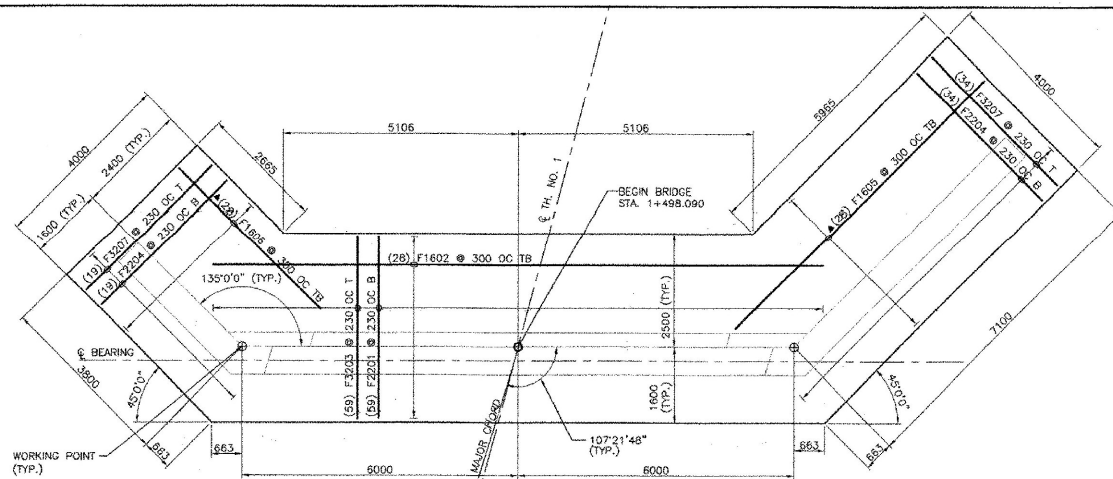
TYPICAL WINGWALL SECTION

SCALE 1:20

NOTES:

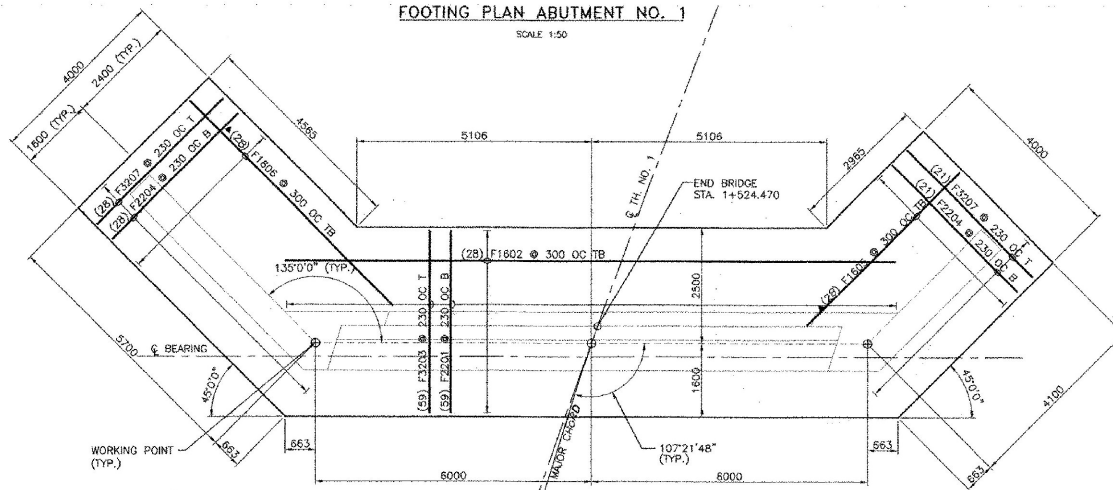
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
T+B = TOP AND BOTTOM
OC = ON CENTER
MINIMUM LAP LENGTH NOT DETAILED SHALL BE 660

REVISIONS		DESCRIPTION	BY & DATE
NO.			
DuBois & King engineering planning management development STATE OF VERMONT AGENCY OF TRANSPORTATION CLARENDON, VERMONT TOWN HIGHWAY NO. 1 TOWN HIGHWAY NO. 1 OVER THE COLD RIVER WINGWALL -- DETAILS Designed by: B. C. AUSTIN Checked by: K. S. MARSHA date 05/02 PROJECT NO. CLARENDON Bridge Sheet No. Bridge No. 14 Loc. Sta. Surv. Sta. Drawn by: E. B. SMALL Bridge Design Supervisor date 05/02 BRO 1443(29) SHEET 27 OF 40			



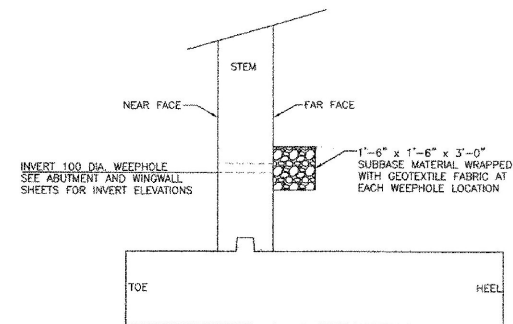
FOOTING PLAN ABUTMENT NO. 1

SCALE 1:50



FOOTING PLAN ABUTMENT NO. 2

SCALE 1:50



TYPICAL WEEPHOLE DETAIL

NOT TO SCALE

NOTES:

NF = NEAR FACE
 FF = FAR FACE
 EF = EACH FACE
 ▲ = CUT TO FIT IN FIELD
 T+B = TOP AND BOTTOM
 OC = ON CENTER
 MINIMUM LAP LENGTH NOT DETAILED SHALL BE 660

REVISIONS			STATE OF VERMONT AGENCY OF TRANSPORTATION	
NO.	DESCRIPTION	BY & DATE		
			CLARENDON, VERMONT	Bridge No. 14
			TOWN HIGHWAY NO. 1	Log. Sta.
				Surv. Sta.
			TOWN HIGHWAY NO. 1 OVER THE COLD RIVER	
			FOOTING DETAILS	
			Designed by: B. C. AUSTIN	Drawn by: E. B. SMALL
			Checked by: K. S. MARSHALL date 05/02	Bridge Design Supervisor: J.W. TUCKER date 05/02
			PROJECT: CLARENDON	PROJECT NO. BRO 1443(29)
			Bridge Sheet No.	SHEET 28 OF 41



STA. 1+490.712
OFFSET LT. 4.350
TOP OF APPROACH SLAB
EL. 175.959

STA. 1+496.924
OFFSET LT. 4.350
TOP OF APPROACH SLAB
EL. 175.074

STA. 1+522.960
OFFSET LT. 4.350
TOP OF APPROACH SLAB
EL. 176.284

STA. 1+528.862
OFFSET LT. 4.350
TOP OF APPROACH SLAB
EL. 176.280

BEGIN APPROACH
SLAB NO. 1
STA. 1+482.090
TOP OF APPROACH SLAB
EL. 175.732

BEGIN BRIDGE
STA. 1+498.090
END APPROACH SLAB NO. 1
TOP OF APPROACH SLAB
EL. 175.830

BEGIN APPROACH
SLAB NO. 2
STA. 1+524.512
TOP OF APPROACH SLAB
EL. 176.024

END APPROACH
SLAB NO. 2
STA. 1+530.512
TOP OF APPROACH SLAB
EL. 176.015

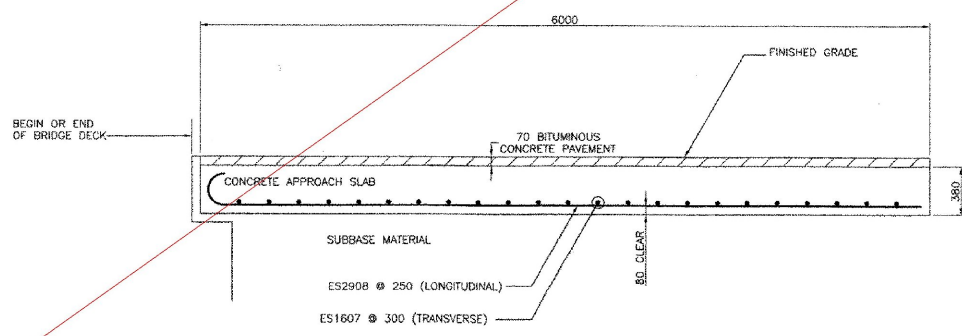
STA. 1+493.255
OFFSET RT. 4.350
TOP OF APPROACH SLAB
EL. 175.492

STA. 1+499.263
OFFSET RT. 4.350
TOP OF APPROACH SLAB
EL. 175.596

STA. 1+526.114
OFFSET RT. 4.350
TOP OF APPROACH SLAB
EL. 175.762

STA. 1+532.215
OFFSET RT. 4.350
TOP OF APPROACH SLAB
EL. 176.748

APPROACH SLAB PLAN VIEW
SCALE 1:50



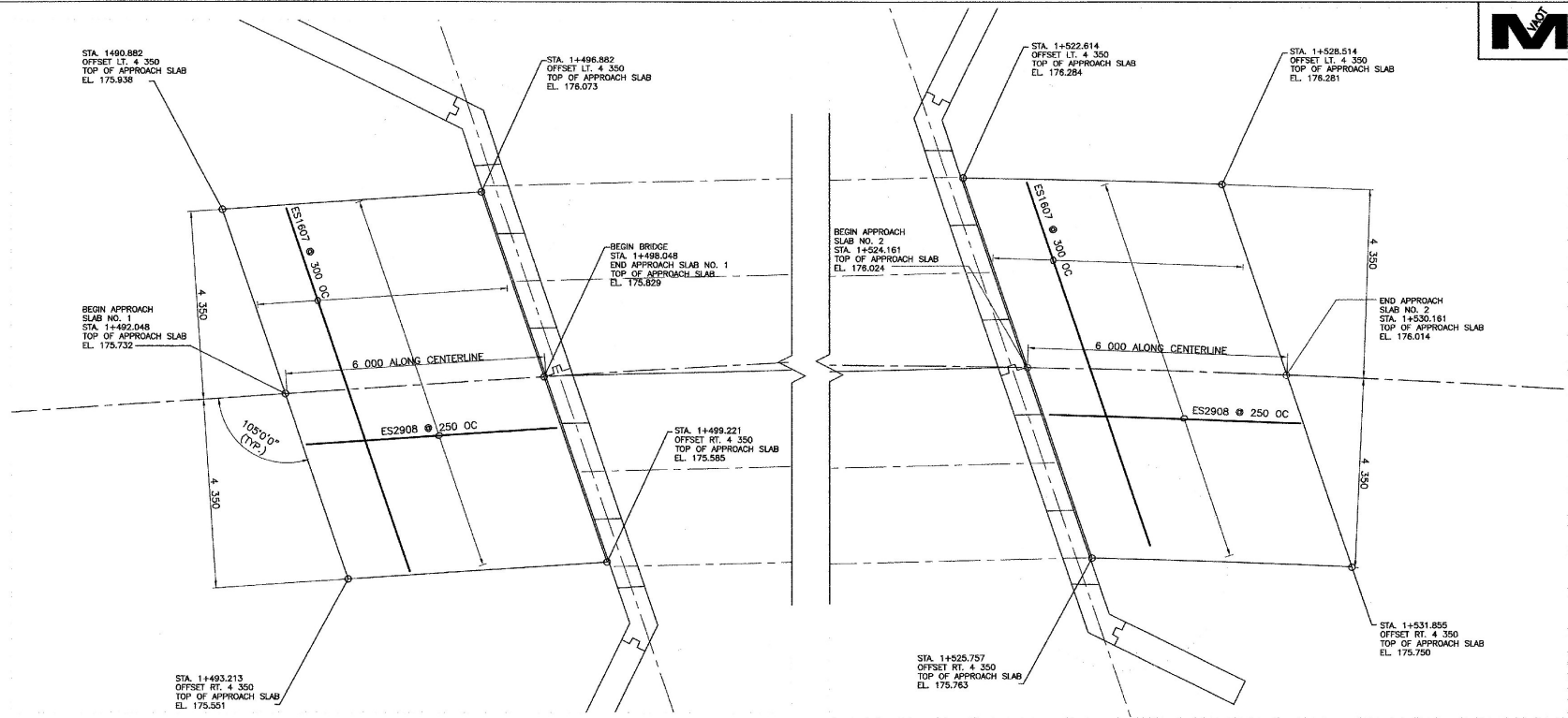
APPROACH SLAB DETAIL
SCALE 1:20

SEE VALUE
ENGINEERING
DESIGN
(FOLLOWING SHEET)

REVISIONS		
NO.	DESCRIPTION	BY & DATE

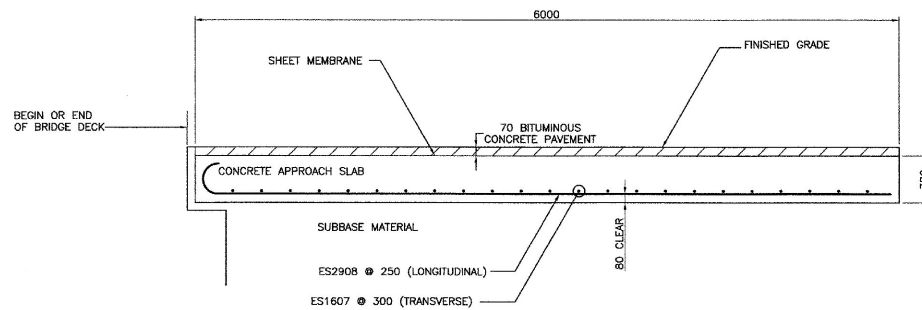
DuBois & King
engineering planning management development

STATE OF VERMONT	
AGENCY OF TRANSPORTATION	
CLARENDON, VERMONT	Bridge No. 14
TOWN HIGHWAY NO. 1	Leg. Sta.
Surv. Sta.	
TOWN HIGHWAY NO. 1 OVER THE COLD RIVER	
APPROACH SLAB DETAILS	
Designed by: B. C. JUSTIN	Drawn by: E. B. SMALL
Checked by: K. S. MARSHALL date 05/02	Bridge Design Supervisor: J. W. TUCKER date 05/02
PROJECT: CLARENDON	PROJECT NO. BRO 1443(29)
Bridge Sheet No.	SHEET 29 OF 41



APPROACH SLAB PLAN VIEW

SCALE 1:50

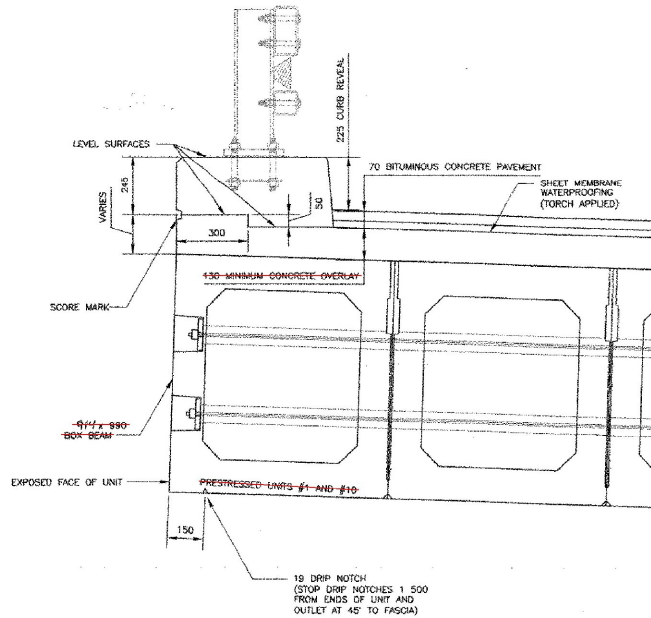


APPROACH SLAB DETAIL

SCALE 1:20

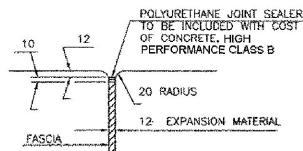
REVISIONS			STATE OF VERMONT AGENCY OF TRANSPORTATION	
NO.	DESCRIPTION	BY & DATE		
			CLARENDON, VERMONT	
			TOWN HIGHWAY NO. 1	
			TOWN HIGHWAY NO. 1 OVER THE COLD RIVER	
			APPROACH SLAB DETAILS	
			Designed by: A.P. GUYETTE	
			Checked by: J.W. TUCKER	
			PROJECT: CLARENDON	
			Bridge Sheet No.	
			SHEET 29A OF 41	



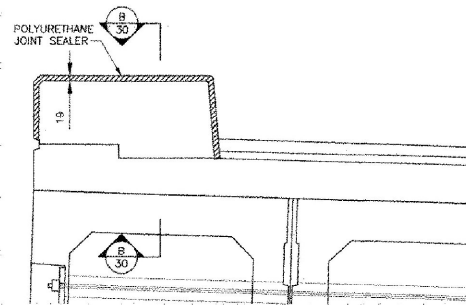


TYPICAL CURB SECTION

SCALE 1:10

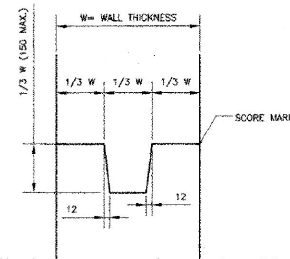


JOINT BETWEEN FASCIA AND WINGWALL

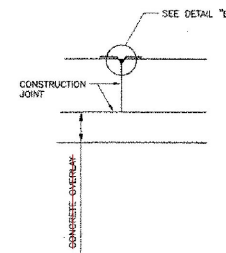


TYPICAL SECTION THROUGH CONCRETE CONSTRUCTION JOINT

SCALE 1:10

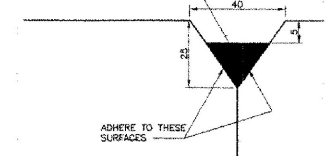


TYPICAL CONCRETE CONSTRUCTION JOINT

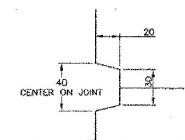


SECTION B-30

POLYURETHANE JOINT SEALER PER SUBSECTION 524.06(c) COLOR TO MATCH CONCRETE, COST TO BE INCLUDED IN THE UNIT PRICE BID FOR CONCRETE



DETAIL "B"



SCORE MARK DETAIL

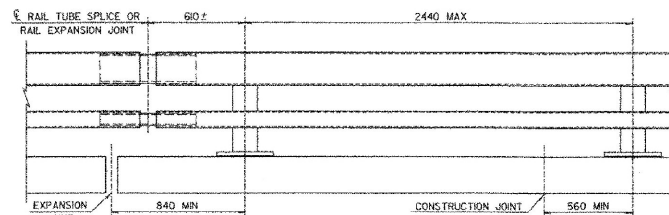
NOT TO SCALE

NOTES:

- POLYURETHANE MEMBRANE AND BLAST CLEANING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR SHEET MEMBRANE WATERPROOFING (TORCH APPLIED).
- SHEET MEMBRANE WATERPROOFING (TORCH APPLIED) SHALL EXTEND TO FACE OF CURB.
- "E" DENOTES EPOXY COATED BARS.
- CONSTRUCTION JOINTS IN THE CURBS SHALL BE PROVIDED AS SHOWN ABOVE. JOINTS SHALL BE SPACED MAXIMUM OF 4500 CENTER TO CENTER AND SHALL BE 450 MINIMUM FROM THE CENTER OF THE NEAREST BRIDGE RAIL POST. CONCRETE SHALL BE PLACED IN ALTERNATING SECTIONS WITH A MINIMUM OF 45 HOURS DELAY BETWEEN ADJACENT POURS.
- LONGITUDINAL REINFORCING SHALL PASS THROUGH CONCRETE CONSTRUCTION JOINTS.
- ALL EPOXY COATED STEEL THAT NEEDS TO BE CUT IN THE FIELD IS TO BE SAW CUT AND THE EXPOSED END IS TO BE TREATED AS PER SECTION 507.04.

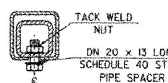
REVISIONS		STATE OF VERMONT AGENCY OF TRANSPORTATION	
DESCRIPTION	BY & DATE		
		CLARENDON, VERMONT	
		TOWN HIGHWAY NO. 1	
		TOWN HIGHWAY NO. 1 OVER THE COLD RIVER	
		CURB DETAILS	
		Designed by: B. C. AUSTIN	Drawn by: E. B. SMALL
		Checked by: R. S. MARSHIA	Bridge Design Supervisor: J.W. LOCKER
		PROJECT NO. CLARENDON	PROJECT NO. BRO 1443(29)
		Bridge Sheet No.	SHEET 30 OF 40

DuBois & King
engineering planning management development



Technical drawing of a spacer plate. The plate is rectangular with overall dimensions of 330 (width) by 238 (height). It features a central circular hole with a diameter of 127. There are four smaller circular holes, each with a diameter of 26, located at the corners. The dimensions for the hole locations are as follows: the horizontal distance from the left edge to the center of the left holes is 165 (TYP), and from the right edge to the center of the right holes is 38 (TYP). The vertical distance from the top edge to the center of the top holes is 119 (TYP), and from the bottom edge to the center of the bottom holes is 38 (TYP). The overall width of the plate is 330, and the overall height is 238. The text 'SPACER PLATE' is centered below the drawing.

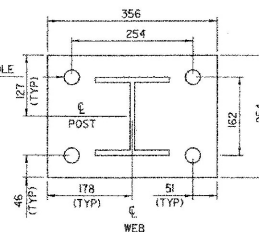
SPACER PLATE



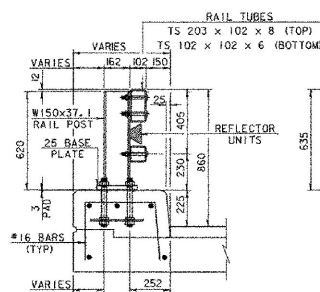
16 DIA TAPPED HOLE IN SPLICE TUBE AND
29 x 'C' SLOT IN RAIL TUBE FOR
BOLT AND PLAIN HARDENED WASHER

EXPANSION JOINT SECTION

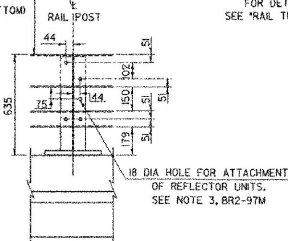
FOR DETAILS NOT SHOWN
SEE "RAIL TUBE SPLICE SECTION"



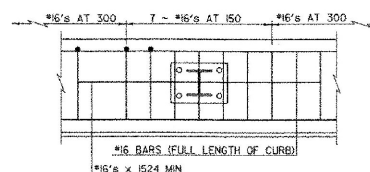
POST AND BASE PLATE



TYPICAL SECTION



ELEVATION

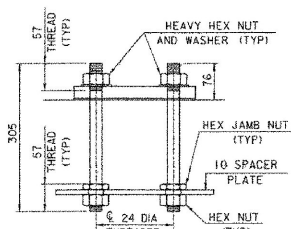


CURB REINFORCING PLAN

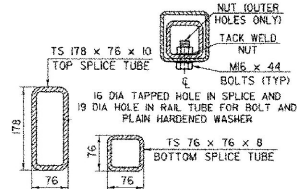


M20 DIA M164 (TYPE 1)
ROUND HEAD BOLT

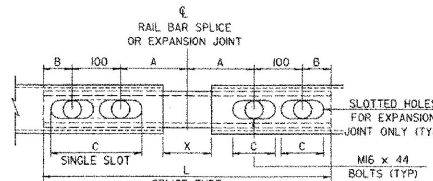
ROUND HEAD BOLT
(WITH WASHER AND PREVAILING TORQUE TYPE LOCK NUT
(SEE NOTE #9)
ONLY FULL DIAMETER BODY BOLTS WILL BE ALLOWED.



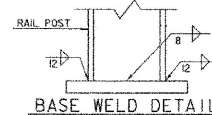
RAIL POST ANCHORAGE



RAIL TUBE SPLICE SECTION



RAIL TUBE SPLICE AND RAIL
EXPANSION JOINT DETAIL
(BOTTOM VIEW)



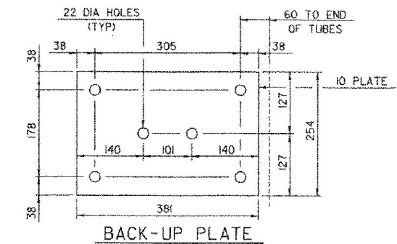
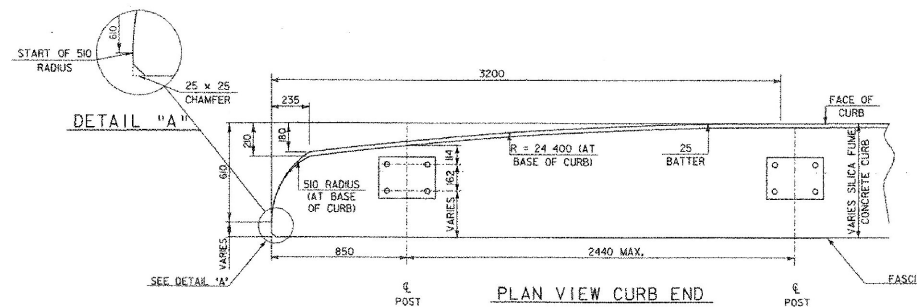
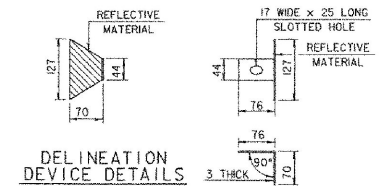
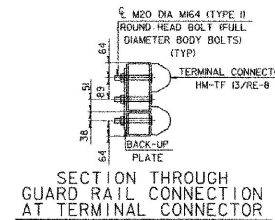
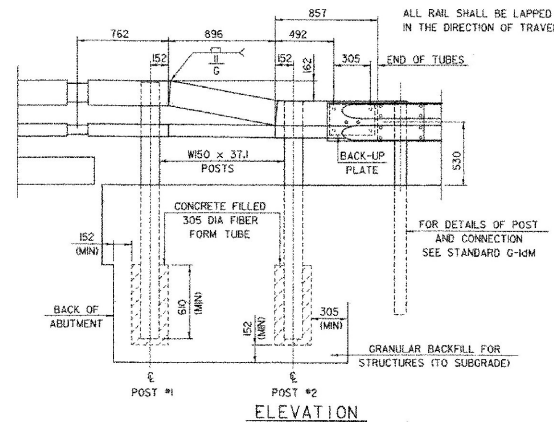
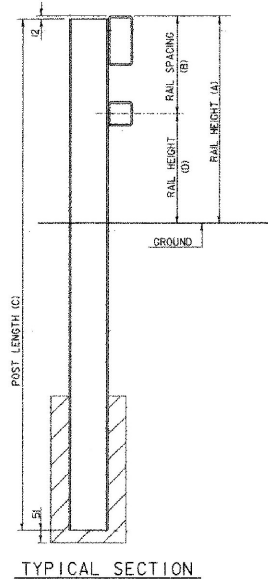
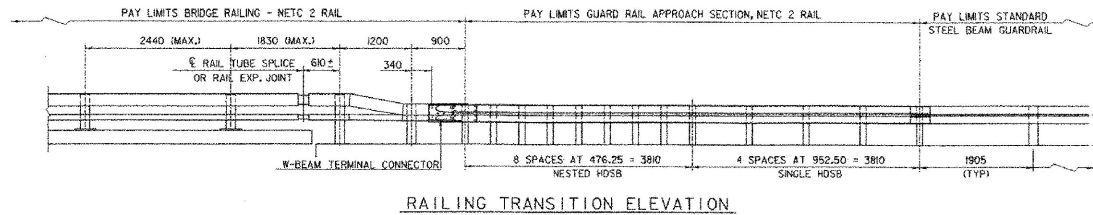
BASE WELD DETAIL

SPLICE TABLE					
T	A	B	C	L	X
NA	100	50	--	510	20

EXPANSION JOINT TABLE					
<100	100	50	65	510	65
>100 <165	140	60	90	605	105
>165 <230	165	85	230*	705	130
>230 <330	215	110	280*	860	180

T = TOTAL MOVEMENT BETWEEN BRIDGE
EXPANSION JOINTS. SEE NOTE 6
* = SINGLE SLOT

REVISIONS			STATE OF VERMONT AGENCY OF TRANSPORTATION	
NO.	DESCRIPTION		BY & DATE	
			CLARENDON, VERMONT	Bridge No. 14
			TOWN HIGHWAY NO. 1	Log Sta. Surv. Sta.
TOWN HIGHWAY NO. 1 OVER THE COLD RIVER				
N.E.T.C. BRIDGE AND APPROACH RAIL DETAILS				
			Designed By	B. C. AUGSTIN
			Drawn By	E. B. SMALL
			Checked By	Date
ENGINEERING			A. S. MARSHIA	05/02 J.W. TUCKER Date 05/02
PLANNING IN MANAGEMENT DEVELOPMENT			PROJECT CLARENDON	PROJECT NO. BRO 1443 (29)
			D A X DWG. NO.	Sheet 9 of 9



POST NUMBER	RAIL HEIGHT (A)	RAIL SPACING (B)	POST LENGTH (C)	RAIL HEIGHT (D)
1	860	405	2134	455
2	702	254	1956	448

REVISIONS		BY & DATE	
NO.	DESCRIPTION		

STATE OF VERMONT AGENCY OF TRANSPORTATION			
CLARENDON, VERMONT		Bridge No. 14	
TOWN HIGHWAY NO. 1		Log Sta. Surv. Sta.	
TOWN HIGHWAY NO. 10 OVER THE COLD RIVER			
N.E.T.C. BRIDGE AND APPROACH RAIL DETAIL			
Designed By	B. C. AUSTIN	Drawn By	E. B. SMALL
Checked By	Date	Bridge Design Supervisor	
K. S. MARSH	05/02	J.W. TUCKER	Date 05/02
PROJECT CLARENDON		PROJECT NO. BRO 1443 (29)	
D & K DWG. NO.		Sheet 32 of 41	

DuBois & King

ENGINEERING PLANNING MANAGEMENT DEVELOPMENT

TRAFFIC SIGN SUMMARY SHEET

[illegible]

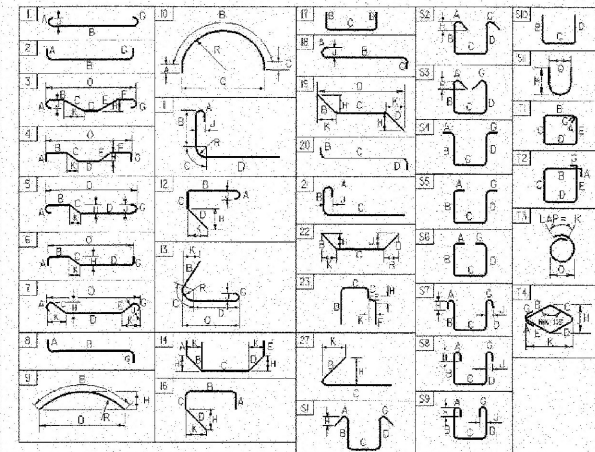
REINFORCING STEEL SCHEDULE

ITEM	BEAM	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
DECK																				
WINGWALL NO. 3																				
153	16	9120	ES1601	STR																
* 90	16	10200	ES1602	STR																
175	16	1000	ES1603	STR	300	300	400	900				300								
175	16	1530	ES1604	STR		840	300	840												
35	16	2340	ES1605	STR		1530	190	620												
3	16	10700	ES1606	STR																
FOOTING NO. 1																				
59	22	3640	F2201	STR																
29	16	13260	F1602	STR																
59	32	3640	F3203	STR																
53	22	3640	F2204	STR																
▲ 28	16	7650	F1605	STR																
▲ 28	16	4350	F1606	STR																
53	32	3640	F3207	STR																
FOOTING NO. 2																				
59	22	3640	F2201	STR																
29	16	13260	F1602	STR																
59	32	3640	F3203	STR																
49	22	3640	F2204	STR																
▲ 28	16	4670	F1605	STR																
▲ 28	16	8250	F1606	STR																
49	32	3640	F3207	STR																
ABUTMENT NO. 1																				
56	19	2190	A1904	STR		690	1520													
* 57	19	4290	A1905	STR																
* 56	32	3630	A3206	STR		690	2970													
▲ 56	19	4290	A1907	STR																
* 40	16	6170	A1608	STR																
56	16	1635	A1609	STR		690	740	435												
56	19	1950	A1910	STR		800	1150													
56	16	2100	A1611	STR		690	140	1310												
39	16	6910	A1612	STR																
34	16	1320	A1613	STR		690	660													
▲ 78	16	2300	A1614	STR		790	1800													
35	16	1990	A1615	STR		690	1320													
40	16	610	A1616	STR																
ABUTMENT NO. 2																				
56	19	2040	A1904	STR		690	1380													
* 60	16	4490	A1605	STR																
* 58	32	3630	A3206	STR		690	2970													
▲ 57	19	4490	A1907	STR																
* 31	16	6170	A1608	STR																
48	16	2390	A1609	STR		690	1110	620												
67	19	2520	A1910	STR		1220	1300													
41	16	1340	A1611	STR		600	140	600												
65	16	1590	A1612	STR																
59	16	1920	A1613	STR		740	440	740												
14	16	6820	A1614	STR																
14	16	7390	A1615	STR																
30	16	6910	A1616	STR																
58	16	1320	A1617	STR		690	660					465		465						
▲ 60	16	3550	A1618	STR		2250	1300					2890		1635						
41	16	610	A1619	STR																
WINGWALL NO. 1																				
33	19	2190	W1908	STR		690	1520													
▲ 33	19	6510	W1909	STR																
32	32	3630	W3210	STR		690	2970													
▲ 32	16	3510	W1611	STR																
▲ 36	16	5695	W1612	STR																
29	16	1790	W1613	STR		880	470	660												
2	16	6800	W1614	STR																
WINGWALL NO. 2																				
18	19	2190	W1908	STR		690	1520													
▲ 18	19	6530	W1909	STR																
16	32	3630	W3210	STR		690	2970													
▲ 16	19	6530	W1911	STR																
▲ 34	16	2695	W1612	STR																
16	16	1790	W1613	STR		690	470	660												
2	16	3600	W1614	STR																

SEE BAKER STEEL
ABUTMENTS & DECK
REINFORCEMENT FOR
FOR ADDITIONAL BARS

~ NOTES ~

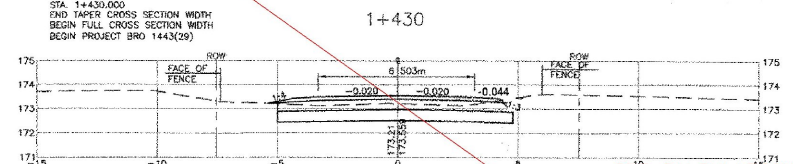
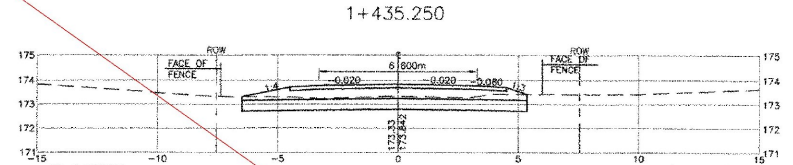
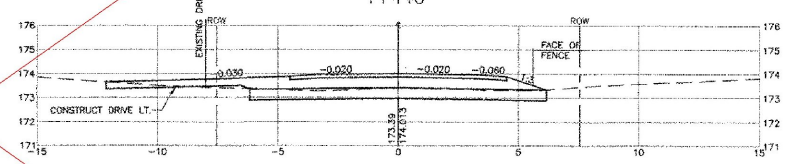
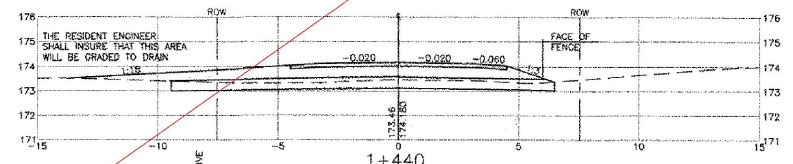
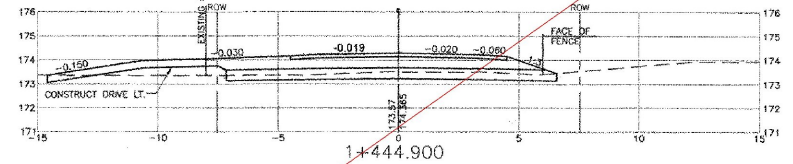
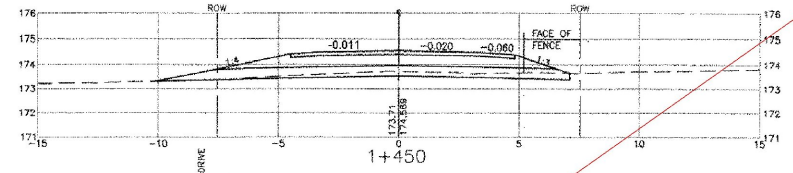
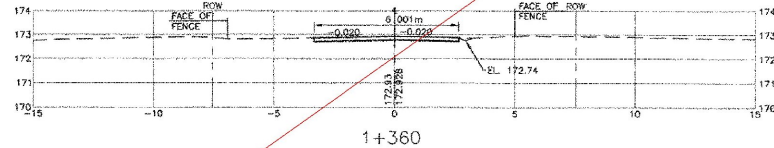
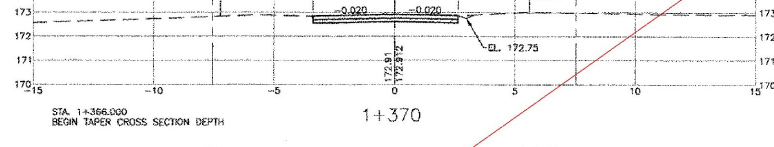
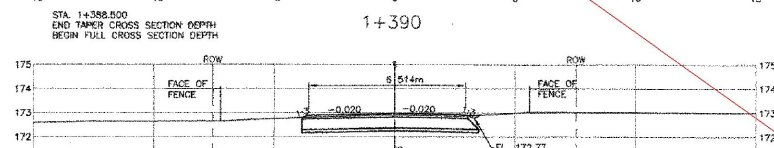
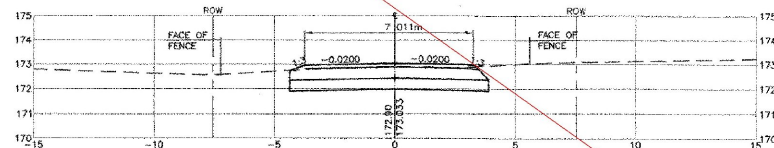
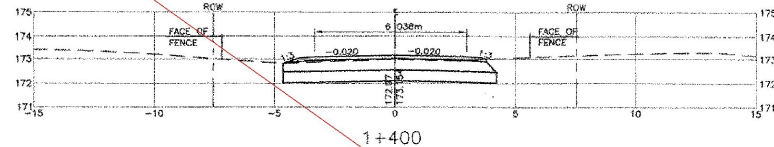
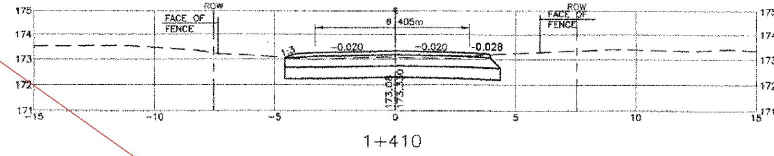
- UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING 55M SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT" AASHTO M318M (ASTM A616M). ALL BARS SHALL BE GRADE 420, UNLESS OTHERWISE DESIGNATED.
- FOR TYPICAL BENDING DETAILS, RECOMMENDED RADIUS OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
- BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
- ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
- "D" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE STANDARD HOOKS ARE TO BE USED.
- "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
- WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "1" AND "2" MUST BE SHOWN.
- ▲ DENOTES BARS TO BE CUT IN FIELD.
- * DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
- △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
- E IN BAR MARK PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS

BAR SIZE	NOMINAL AREA (in ²)	DIAMETER (in)	MINIMUM TENSILE STRENGTH (ksi)	MINIMUM YIELD STRENGTH (ksi)
*10	0.560	9.5	71	29.84
*13	0.994	12.7	129	39.90
*16	1.562	15.9	199	49.95
*19	2.235	19.1	284	60.00
*22	3.042	22.2	387	69.74
*25	3.973	25.4	510	79.80
*29	5.060	28.7	645	90.16
*32	6.404	32.3	819	101.47
*36	7.907	35.8	1006	112.47
*43	11.380	43.0	1452	135.09
*57	20.240	57.3	2581	180.01

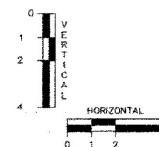
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PROJECT NUMBER: BRO 1443(29)FILE NAME: 83019rss.xls
PROJECT MANAGER: R. Whitcomb
DESIGNED BY: Dubois & King
REINFORCING STEEL SCHEDULE SHEET #1
PLOT DATE: 5/28/2005
DRAWN BY: L. Bullock
CHECKED BY: C. Carlson
SHEET 34 OF 41



SEE CALCULATIONS FILE
IN ONBASE FOR FINAL
CROSS SECTIONS

ROADWAY CROSS SECTIONS

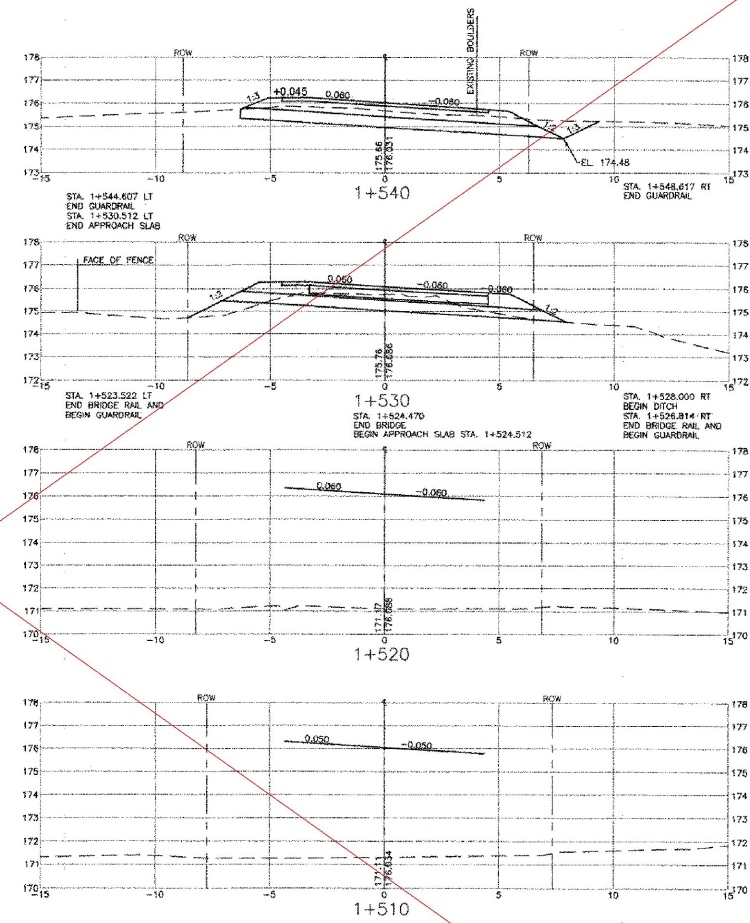
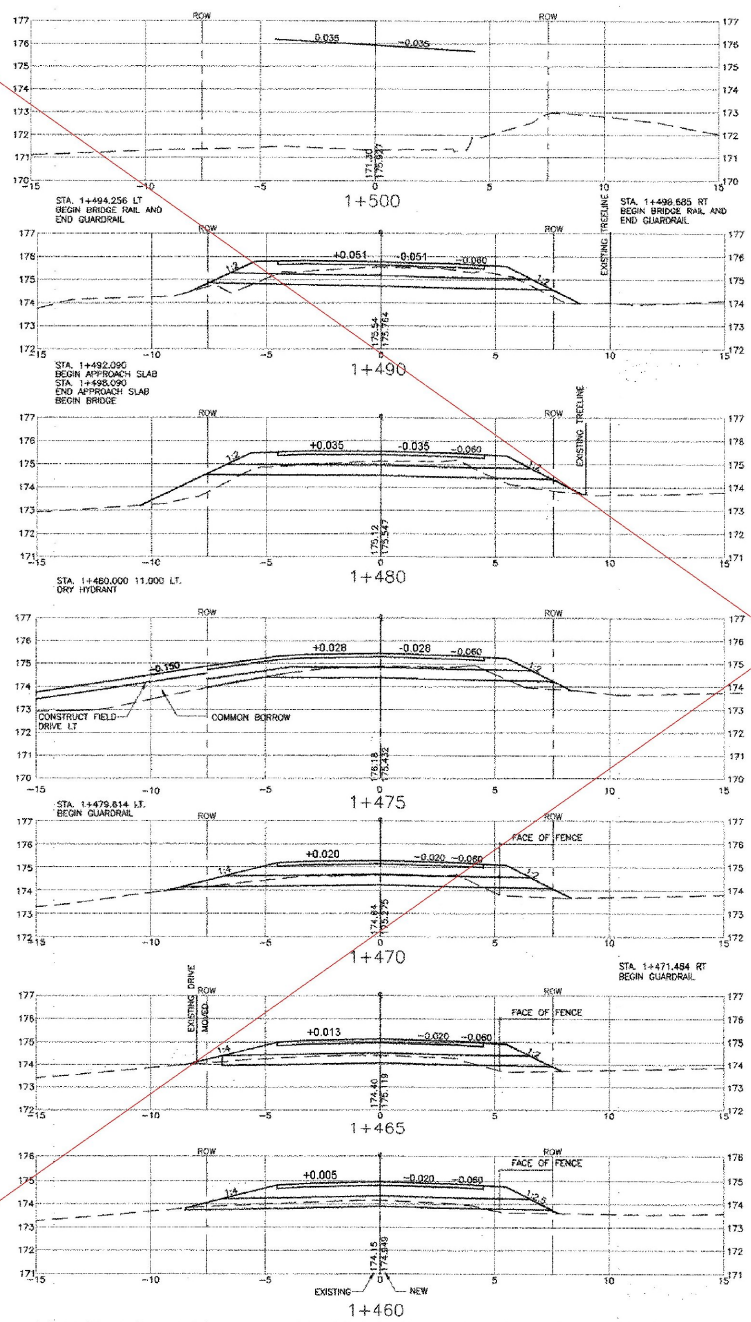
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VERT. 1"=100



REVISIONS		
NO.	DESCRIPTION	BY & DATE

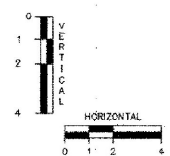
STATE OF VERMONT	
AGENCY OF TRANSPORTATION	
CLARENDON, VERMONT	Bridge No. 14
TOWN HIGHWAY NO. 1	Log Sta.
TOWN HIGHWAY NO. 1 OVER THE COLD RIVER	
ROADWAY CROSS SECTIONS	
Designed by: W.S. CHESBROUGH	Drawn by: N.B. DIMICK
Checked by: K. S. MARSHALL	Bridge Design Supervisor: J.W. TUCKER
PROJECT: CLARENDON	PROJECT NO. BRO 1443(29)
Bridge Sheet No.	SHEET 35 OF 41

DuBois & King
engineering planning management development



ROADWAY CROSS SECTIONS

SCALE: HORIZ. 1"=100
VERT. 1"=100

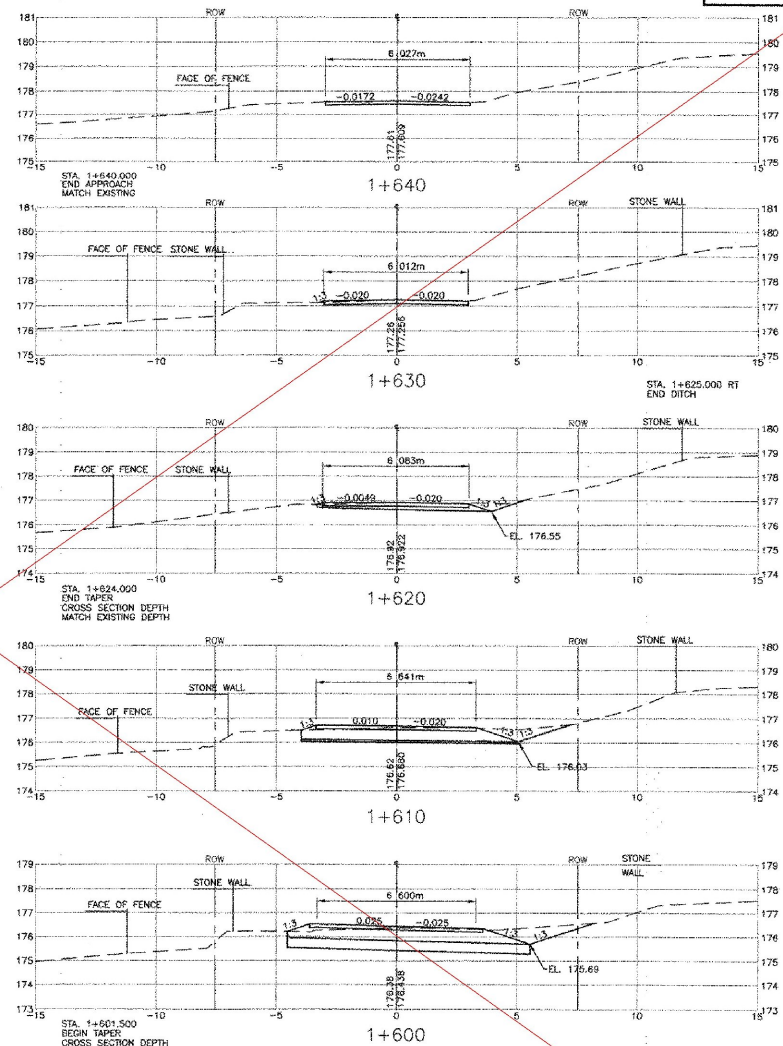
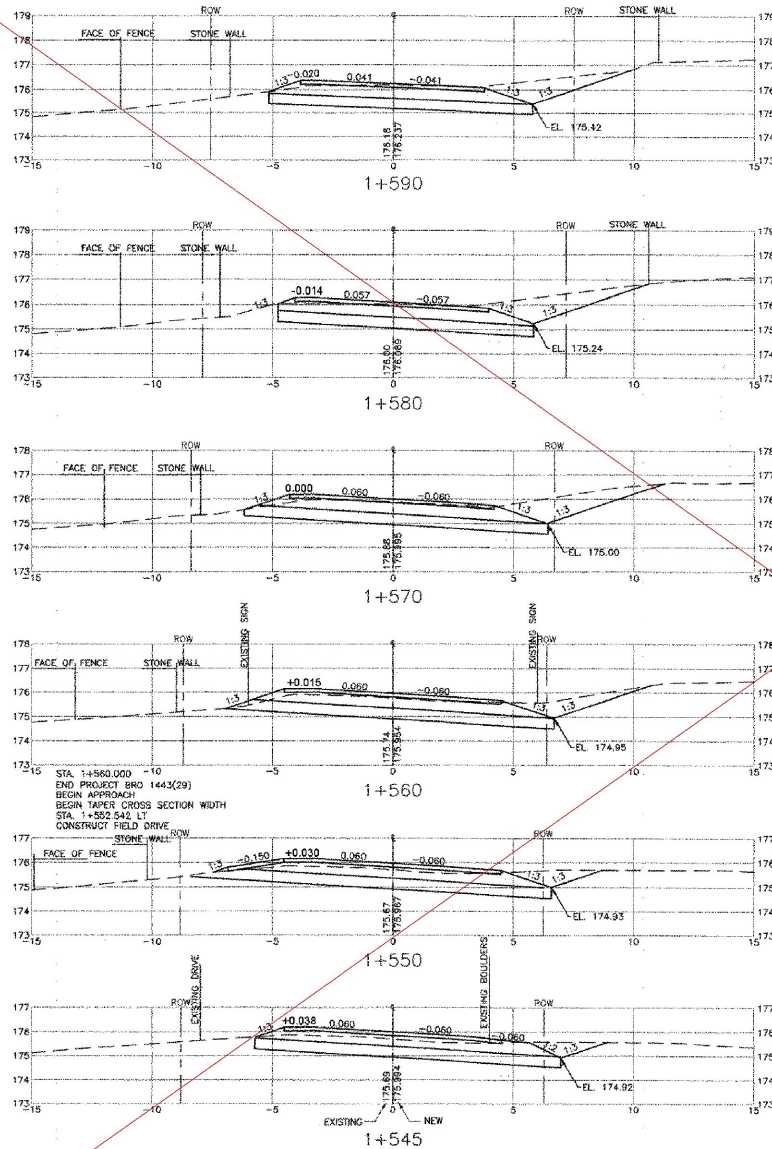


REVISIONS		
NO.	DESCRIPTION	BY & DATE

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

CLARENDON, VERMONT	Bridge No. 14
TOWN HIGHWAY NO. 1	Log Sta.
	Surv. Sta.
TOWN HIGHWAY NO. 1 OVER THE COLD RIVER	
ROADWAY CROSS SECTIONS	
Designed by: W.S. CHESBROUGH	Drawn by: N.B. OMICK
Checked by: K.S. MARSHA date 05/02	Bridge Design Supervisor: J.W. TUCKER date 05/02
PROJECT: CLARENDON	PROJECT NO. BRD 1443(29)
Bridge Sheet No.	SHEET 36 OF 41

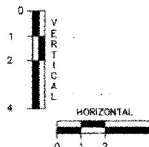
SEE CALCULATIONS FILE
IN ONBASE FOR FINAL
CROSS SECTIONS



SEE CALCULATIONS FILE
IN ONBASE FOR FINAL
CROSS SECTIONS

ROADWAY CROSS SECTIONS

SCALE: HORIZ. 1:100
VERT. 1:100

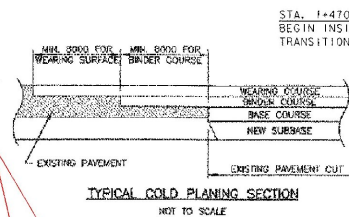
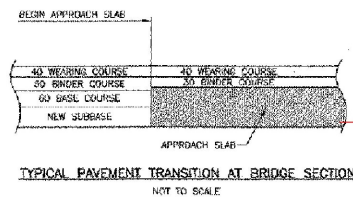
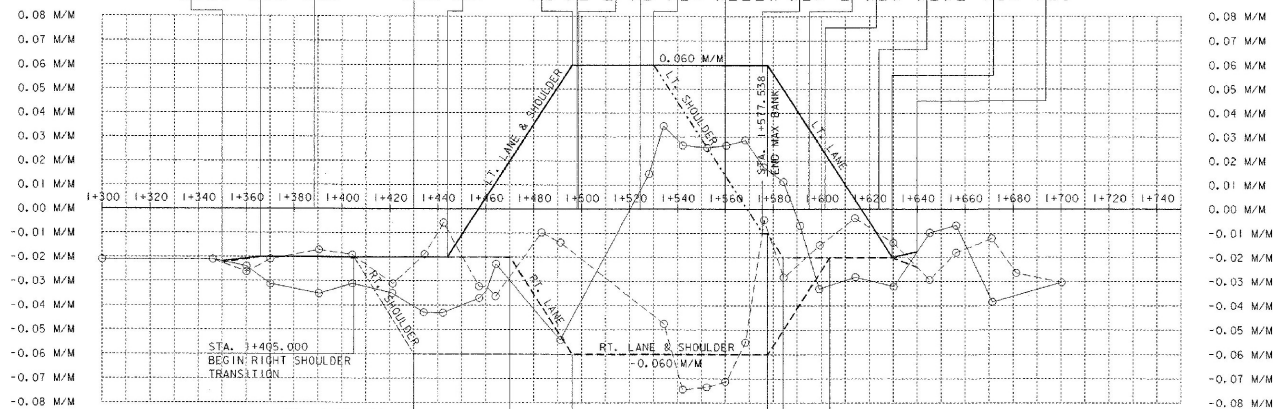


REVISIONS			STATE OF VERMONT AGENCY OF TRANSPORTATION	
NO.	DESCRIPTION	BY	DATE	
		CLARENDON, VERMONT		
		TOWN HIGHWAY NO. 1		
		ROADWAY CROSS SECTIONS		
		Designed by: W.S. CHESBROUGH		
		Checked by: J.C. MARSHIA date 05/02		
		PROJECT: CLARENDON		
		Bridge Sheet No.		
		Drawn by: N.B. DMICK		
		Bridge Design Supervisor: J.W. TUCKER date 05/02		
		PROJECT NO. BRO 1443(29)		
		SHEET 37 OF 41		

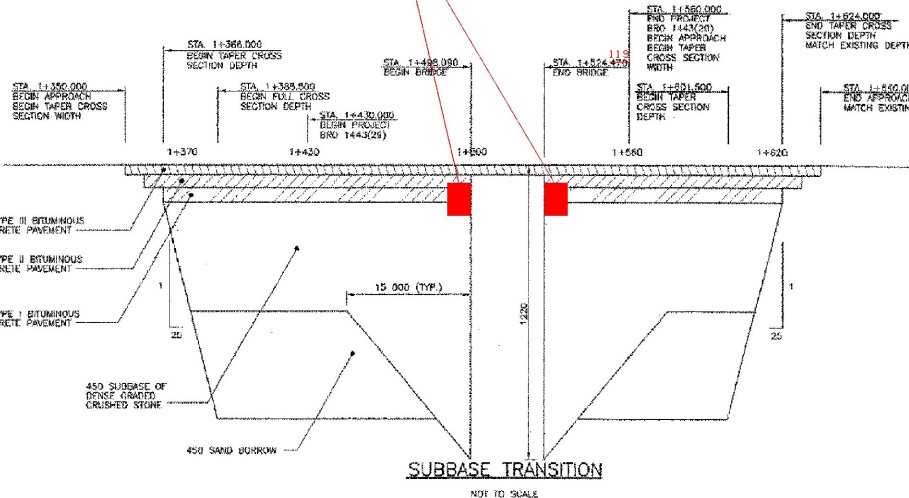
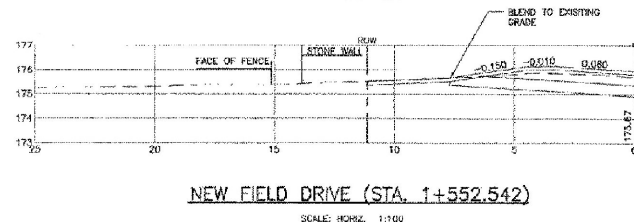
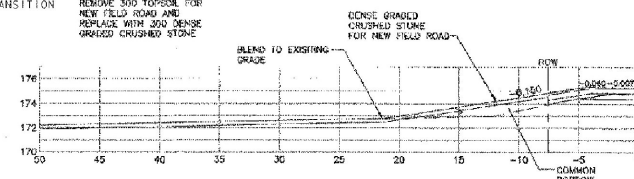
DuBois & King

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- LEGEND**
- RIGHT EDGE OF EXISTING ROAD
 - LEFT EDGE OF EXISTING ROAD
 - RIGHT EDGE OF PROPOSED TRAVEL LANE
 - LEFT EDGE OF PROPOSED TRAVEL LANE
 - RIGHT EDGE OF PROPOSED SHOULDER
 - LEFT EDGE OF PROPOSED SHOULDER

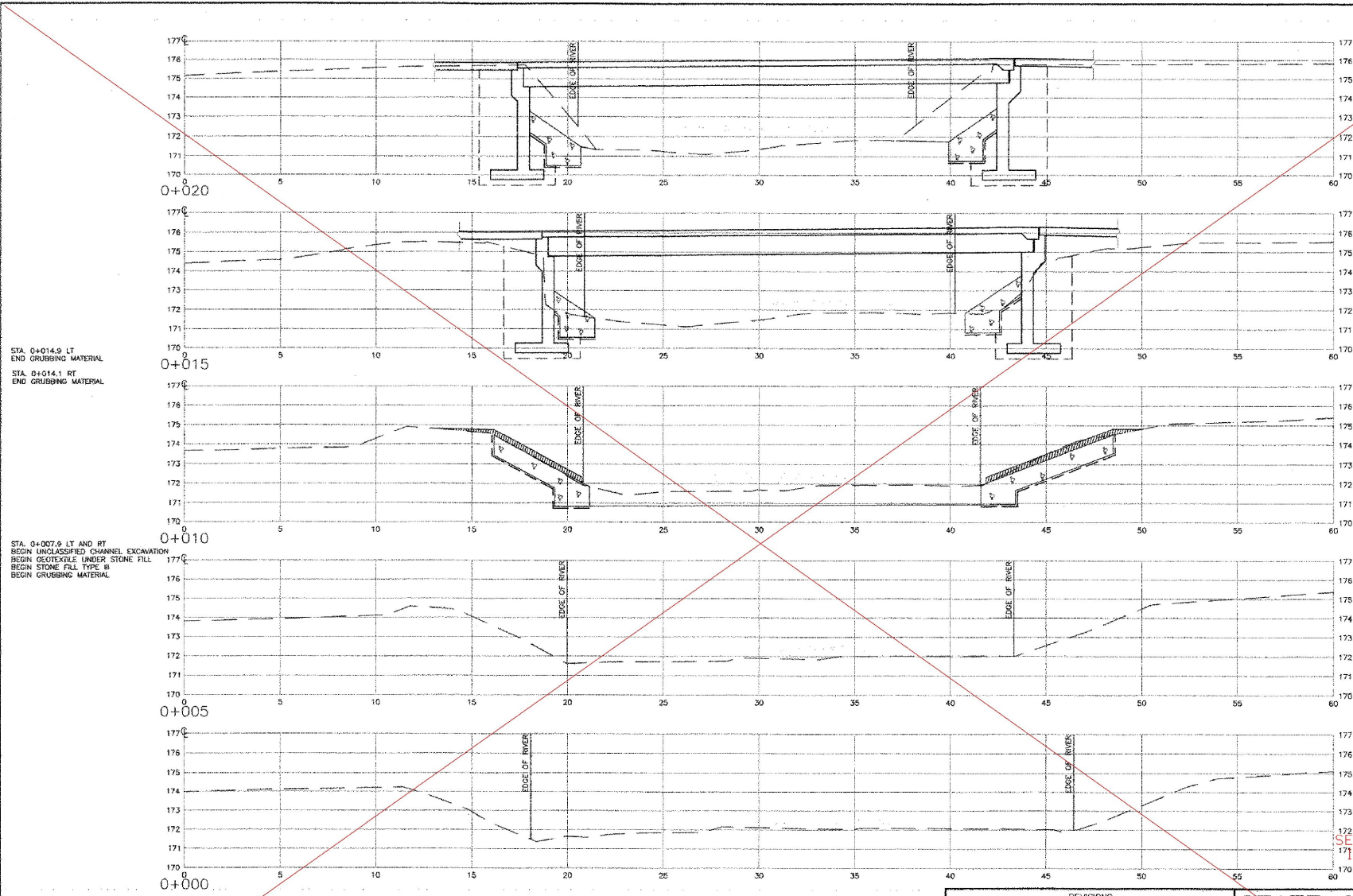


BANKING DIAGRAM
SCALE: HORIZ. 1:100
VERT. 0.01 M/M



REVISIONS			STATE OF VERMONT AGENCY OF TRANSPORTATION	
NO.	DESCRIPTION	BY & DATE		
			CLARENDON, VERMONT	Bridge No. 14
			TOWN HIGHWAY NO. 1	Log Sta.
				Stake Sta.
			TOWN HIGHWAY NO. 1 OVER THE COLD RIVER	
			BANKING DIAGRAM AND PAVEMENT TRANSITION	
			Designed by: W.S. CHESBROUGH	Drawn by: E.J. SMALL
			Checked by: J.P. GOSWAMI	Bridge Design Supervisor
			PROJECT NO. CLARENDON	BRO 1443(29)
			Bridge Sheet No.	SHEET 38 OF 41

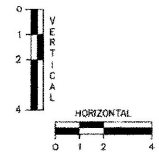
DuBois & King
engineering planning management development



STA. 0+014.9 LT
END GRUBBING MATERIAL
STA. 0+014.1 RT
END GRUBBING MATERIAL

STA. 0+007.9 LT AND RT
BEGIN UNCLASSIFIED CHANNEL EXCAVATION
BEGIN OBSERVABLE UNDER STONE FILL
BEGIN STONE FILL TYPE B
BEGIN GRUBBING MATERIAL

CHANNEL CROSS SECTIONS
SCALE: HORIZ. 1:100
VERT. 1:100

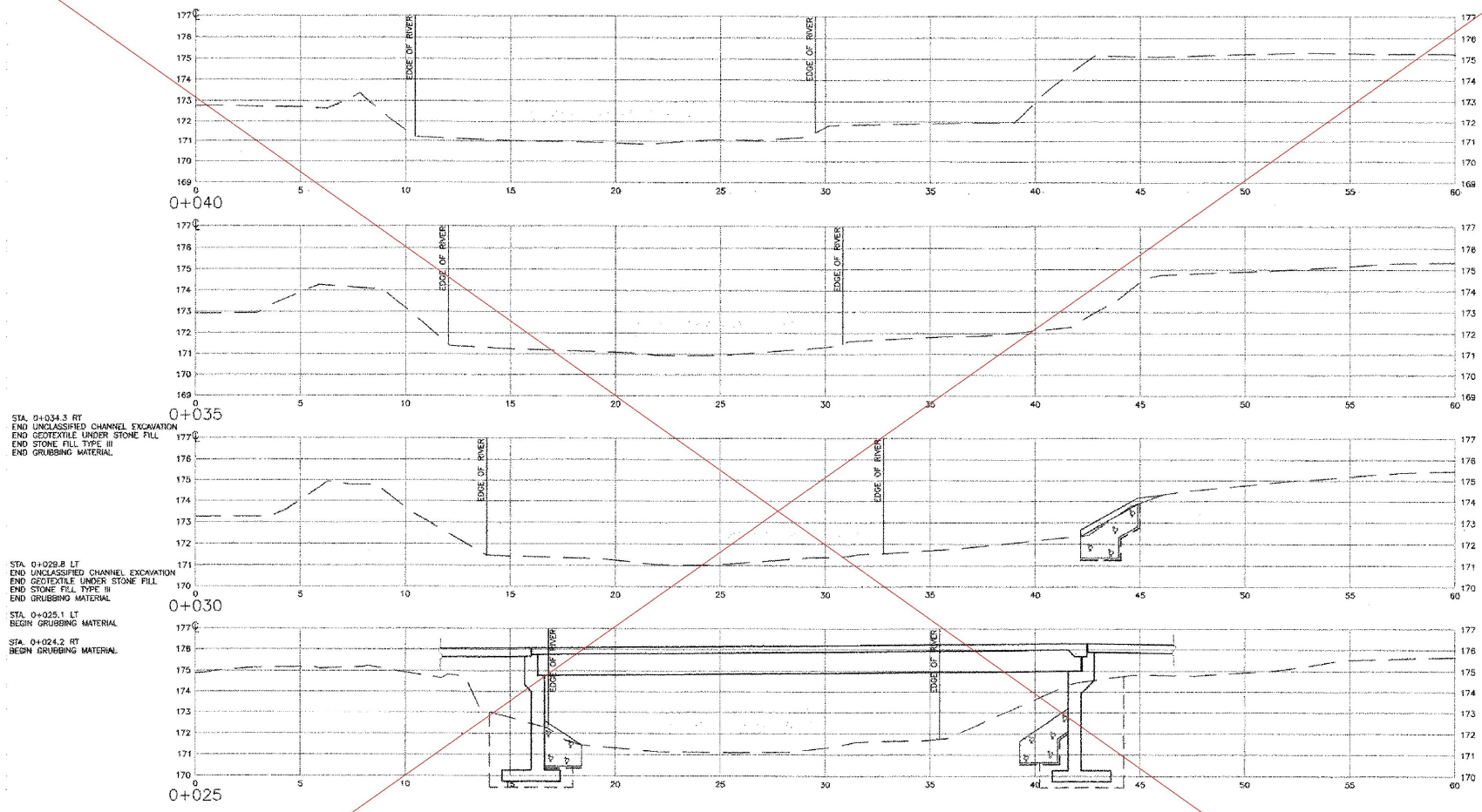


SEE CALCULATIONS FILE
IN ONBASE FOR FINAL
CROSS SECTIONS

REVISIONS		BY & DATE	
NO.	DESCRIPTION		

STATE OF VERMONT AGENCY OF TRANSPORTATION	
CLARENDON, VERMONT	Bridge No. 14
TOWN HIGHWAY NO. 1	Log. Sta.
	Surv. Sta.
TOWN HIGHWAY NO. 1 OVER THE COLD RIVER	
CHANNEL CROSS SECTIONS	
Designed by: W.S. CHESBROUGH	Drawn by: N.B. DMICK
Checked by: K.S. MARSHALL	Bridge Design Supervisor
PROJECT: CLARENDON	J.W. TUCKER date 05/02
Bridge Sheet No.	PROJECT NO. BRO 1443(25)
	SHEET 40 of 41

DuBois & King
engineering planning management development



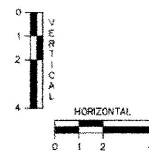
STA. 0+034.3 RT
END UNCLASSIFIED CHANNEL EXCAVATION
END GEOTEXTILE UNDER STONE FILL
END STONE FILL TYPE III
END GRUBBING MATERIAL

STA. 0+029.8 LT
END UNCLASSIFIED CHANNEL EXCAVATION
END GEOTEXTILE UNDER STONE FILL
END STONE FILL TYPE III
END GRUBBING MATERIAL

STA. 0+025.1 LT
BEGIN GRUBBING MATERIAL
STA. 0+024.2 RT
BEGIN GRUBBING MATERIAL

CHANNEL CROSS SECTIONS

SCALE: HORIZ. 1:100
VERT. 1:100



SEE CALCULATIONS FILE
IN ONBASE FOR FINAL
CROSS SECTIONS

REVISIONS			STATE OF VERMONT AGENCY OF TRANSPORTATION	
NO.	DESCRIPTION	BY	DATE	
		Bridge No. 14 CLARENDON, VERMONT Log Sta. TOWN HIGHWAY NO. 1 Surv. Sta.		
TOWN HIGHWAY NO. 1 OVER THE COLD RIVER				
CHANNEL CROSS SECTIONS				
Designed by: W.S. CHESBROUGH		Drawn by: N.D. DMICK		
Checked by: K. S. MARSH		Bridge Design Supervisor: J.W. TUCKER		
PROJECT: CLARENDON		PROJECT NO. BRO 1443(29)		
Bridge Sheet No.		SHEET 41 of 41		

V-7 A.O.T.
PROJ. No. BRB 1443(29)
CLARENDON COUNTY

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

EMS-QC-110
VTRANS
RECEIVED
CK'D BY _____ CK'D BY JWC
MAR 9 2 2006
RESUBMIT _____ APPROVED ✓
BY RRW DATE 3/9/06

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 1/2 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.

VT A.O.T.
PROJ. No. BRO 1443(29)
CLARENDON COUNTY

COSMEC INC.

WELDING PROCEDURE SPECIFICATION

SPECIFICATIONS AND CODE: D1.6 (D1.3)

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

FLOW RATE 45 CFH

SHIELDING GAS-----ARGON

SINGLE OR MULTIPLE PASS 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 INPUT MIN.-----MAX.-----

WELDING PROCEDURE

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

PREHEAT TEMPS.

***PREHEAT UNTIL NO MOSITURE PRESENT

THICKNESS	TEMP.
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

CW#:01100651

REVISION NO. 1

DATE:--- 2/1/2005

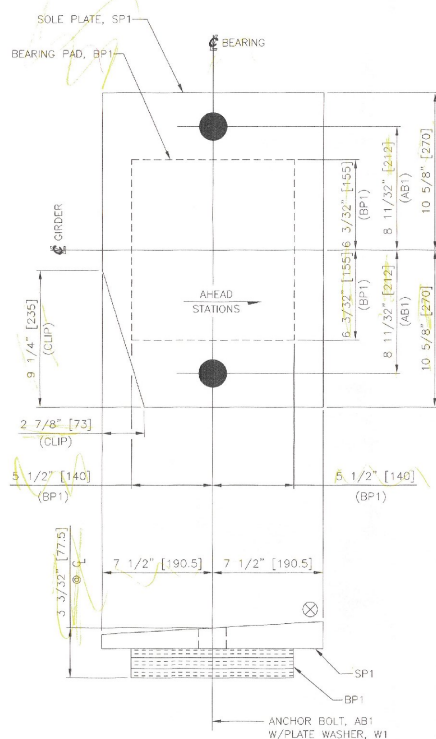


VTRANS
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JWC
MAR 9 2005
✓
RWC 3/2/06

MARK	QTY	DESCRIPTION	IN	16ths	PAD ASTM	WELL WEL	WEIGHT
FBA-1	5	FIXED BEARING ASSEMBLIES					
SP1	5	PL 1 3/16" (30) x 15" (381)	21 (540)	4		DALY AASHTO 18.4.9.1	537
BP1	5	PREF. PAD 2" (50) x 11" (280)	12 (310)	3			69

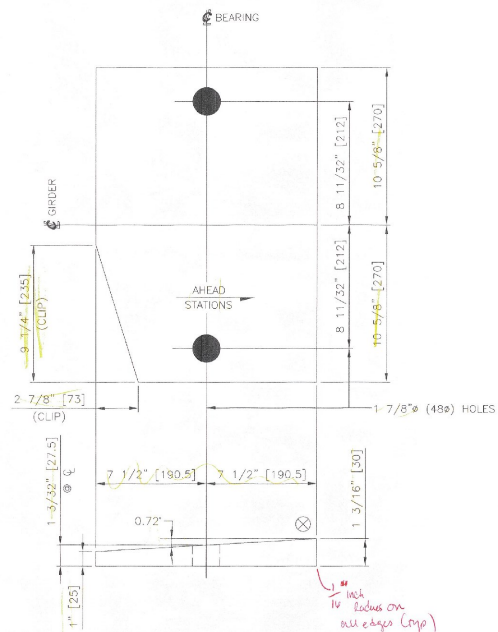
TOTAL = 606

ENGLISH EQUIVALENT MATERIAL FURNISHED.
METRIC EQUIVALENT IN PARENTHESIS.

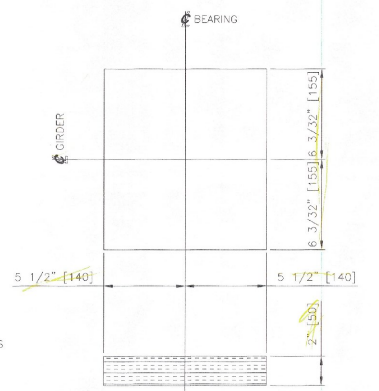


5 FIXED BEARING ASSEMBLIES, FBA-1

LOCATE AT
ABUTMENT 1
GIRDERS 1 THRU 5



5 FIXED SOLE PLATES, SP1
PL 1 3/16" (30) X 15" (381) X 21 1/4" (540)
(GALV.)
USE WITH
FIXED BEARING ASSEMBLY, FBA-1



5 BEARING PADS, BP1
PREFORMED FABRIC PAD 2" (50) X 11" (280) X 12 3/16" (310)
FABRICATED IN ACCORDANCE WITH AASHTO 18.4.9.1
USE WITH
FIXED BEARING ASSEMBLY, FBA-1

SHOP NOTES:

- SOLE PLATES: AASHTO-M270, GR. 250, GALVANIZED.
- PREFORMED FABRIC PADS SHALL BE IN ACCORDANCE WITH AASHTO 18.4.9.1.
- STAINLESS STEEL: ASTM 240, TYPE 304, #8 MIRROR FINISH.
- PTFE: ASTM D1457, VIRGIN, UNFILLED.
- ANCHOR BOLTS: F1554, GR. 55, GALVANIZED.
- NUTS: HWY HEX, ASTM A563-DH1, GALVANIZED.
- BEARINGS SHALL CONFORM TO THE APPLICABLE SUBSECTIONS OF 531 AND 731 OF THE "VERMONT SPECIFICATIONS".
- ANCHOR BOLTS SHALL BE IN ACCORDANCE WITH SUBSECTION 714.08 OF THE "VERMONT SPECIFICATIONS".
- MATERIAL NOTED AS M270, GR. 250 MAY BE AASHTO M270, GR. 250, ASTM A709, GR. 50 OR ASTM A572 GR. 50.
- MATERIAL NOTED AS GALVANIZED SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M111 (ASTM A123) OR AASHTO M232 (ASTM A153) AS APPLICABLE.
- ALL SURFACES OF PLATES SHALL BE STRAIGHT AND SMOOTH.
- SHOP TO MARK HIGH SIDE OF PLATE.
- COSMEC, INC. REPRESENTATIVE: MR. MATT McANDREWS, (508) 666-6600

Structural
Copy

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TOWN HIGHWAY NO. 1
OVER THE COLD RIVER
CLARENDON, VERMONT
PROJECT NO. BRO 1443(29)
BRIDGE NO. 14

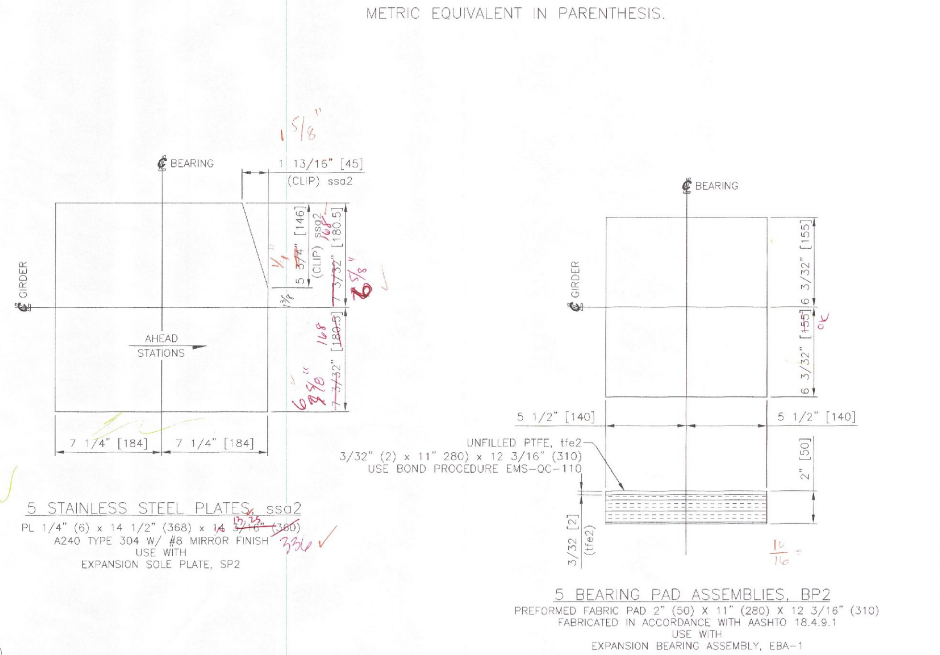
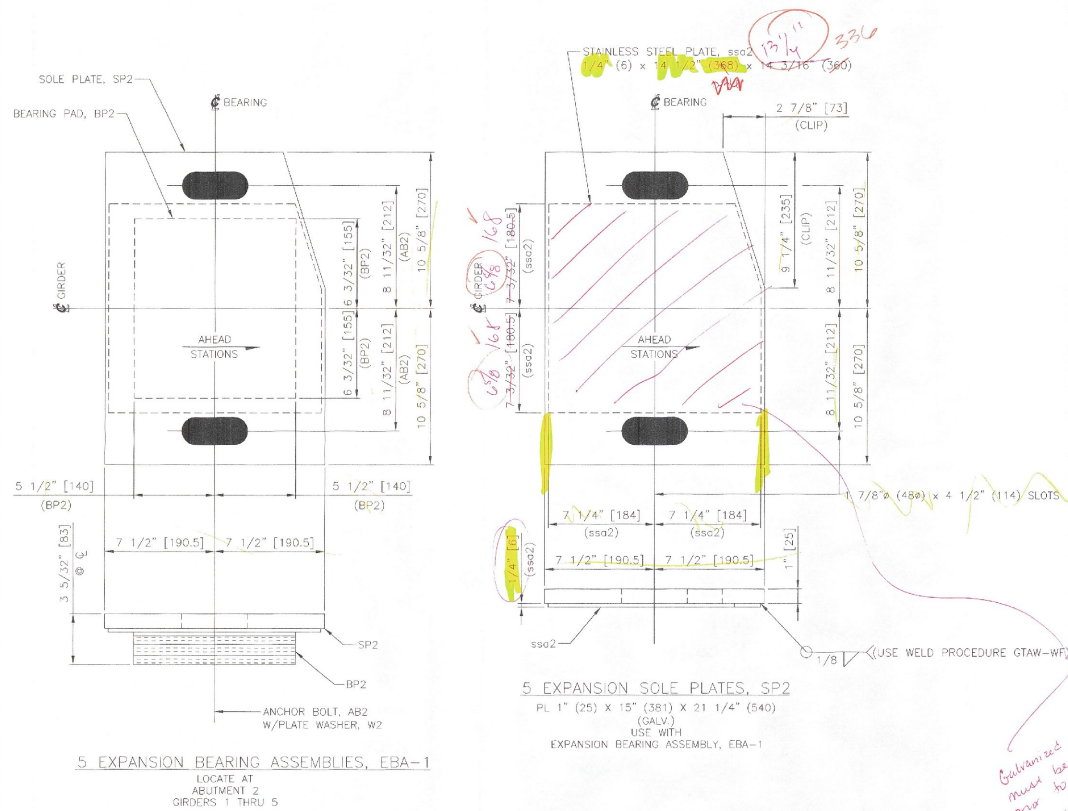
COSMEC, INC.

70 SOUTH STREET
WALPOLE, MA 02081

SCALE: 1/4"=1'-0"
SHEET 1 OF 3
DATE: 02/06

COSMEC BEARING

CUSTOMER: FRANK W. WHITCOMB
CONSTRUCTION CORPORATION
S.D. NUMBER: 60518
DRAWING NUMBER: 4671
NO. 0



MARK	QTY	DESCRIPTION	IN	16ths	PAD MARK	MIL MARK	WEIGHT
EBA-1	5	EXPANSION BEARING ASSEMBLIES	21 (540)	4			447
SP2	5	PL 1" (30) x 15" (381)	14 (360)	3	ss02	A240 TYPE 304	124
BP2	5	PREF. PAD 2" (50) x 11 (280)	12 (310)	3	162	AASHTO 18.4.9.1	138
	5	UNFILLED PTFE 3/32" (2) x 11" (280)	12 (310)	3		31457	10
TOTAL =							749

ENGLISH EQUIVALENT MATERIAL FURNISHED.
METRIC EQUIVALENT IN PARENTHESES.

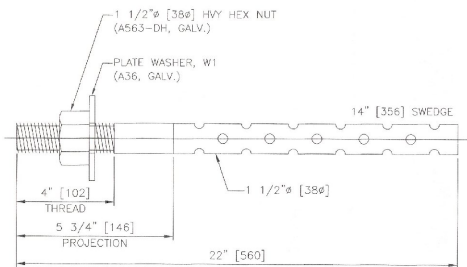
SEE SHEET 1 FOR SHOP NOTES.

STATE OF VERMONT
AGENCY OF TRANSPORTATION
TOWN HIGHWAY NO. 1
OVER THE COLD RIVER
CLARENDON, VERMONT
PROJECT NO. BRO 1443(29)
BRIDGE NO. 14

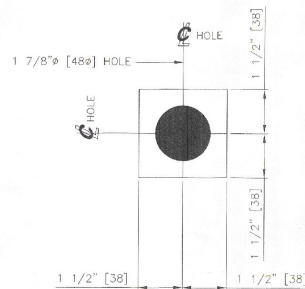
COSMEC, INC. 70 SOUTH STREET
WALPOLE, MA 02081
SCALE: 1/4" = 1" DRAWN BY: JEP CHECKED BY: P.J.M.
SHEET 2 OF 3 DATE: 02/06
COSMEC BEARING
CUSTOMER: FRANK W. WHITCOMB CONSTRUCTION CORPORATION S.S. NUMBER: 60518 DRAWING NUMBER: 4673 NO: 0

RECEIVED
OCTOBER 1, 2006
MAR 8 2 2008
RESUBMIT
BY: [Signature]

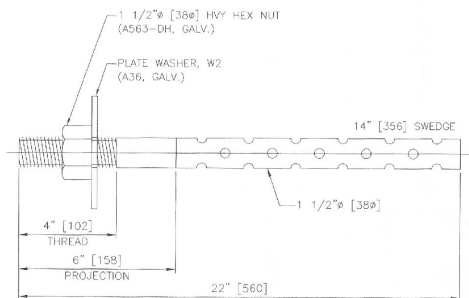
*Galvanized surface
must be removed
prior to welding of
stainless steel plate
in area shown*



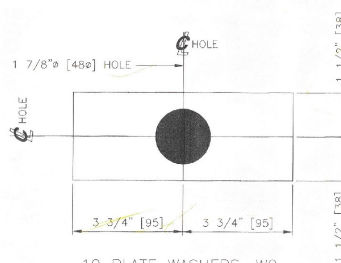
10 ANCHOR BOLTS, AB1
RD 1 1/2" (38) x 22" (560)
F1554 GR. 55 (GALV.)
MIN EMBED: 15" (381)
LOCATE AT
ABUTMENT 1



10 PLATE WASHERS, W1
PL 3/8" (10) x 3" (76) x 3" (76)
(GALV.)
USE WITH
ANCHOR BOLT, AB1



10 ANCHOR BOLTS, AB2
RD 1 1/2" (38) x 22" (560)
F1554 GR. 55 (GALV.)
MIN EMBED: 15" (381)
LOCATE AT
ABUTMENT 2



10 PLATE WASHERS, W2
PL 3/8" (10) x 3" (76) x 7 1/2" (190)
(GALV.)
USE WITH
ANCHOR BOLT, AB2

MARK	QTY	DESCRIPTION	IN	10ths	28 MARK	WEL MARK	WEIGHT
AB1	10	RD 1 1/2" (38)	22 (560)	0	GALV.	F1554 GR. 55	110
W1	10	PL 3/8" (10) x 3" (76)	3 (76)	0	-	GALV.	110
AB2	10	RD 1 1/2" (38)	22 (560)	0	GALV.	F1554 GR. 55	110
W2	10	PL 3/8" (10) x 3" (76)	7 (190)	8	-	GALV.	24
-	20	1 1/2" (38) Hvy Hex Nuts	-	-	GALV.	A563-DH	19

TOTAL WEIGHT IN LBS = 273

ENGLISH EQUIVALENT MATERIAL FURNISHED.
METRIC EQUIVALENT IN PARENTHESIS.

SEE SHEET 1 FOR SHOP NOTES.

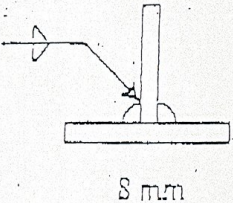
STATE OF VERMONT
AGENCY OF TRANSPORTATION
TOWN HIGHWAY NO. 1
OVER THE COLD RIVER
CLARENDON, VERMONT
PROJECT NO. BRO 1443(29)
BRIDGE NO. 14

COSMEC, INC.
70 SOUTH STREET
WALPOLE, MA 02081
SCALE: 1/4"=1'-0"
SHEET 3 OF 3
DATE: 02/06
CHECKED BY: PJM
DATE: 02/06
CUSTOMER: FRANK W. WHITCOMB
CONSTRUCTION CORPORATION
SHEET NUMBER: 60518
DRAWING NUMBER: 4672
REV: 0

RECEIVED
CITY OF BURLINGTON
MAR 02 2006
BY: [Signature]
APPROVED: [Signature]
DATE: 02/06

EASTERN BRIDGE, LLC
WELDING PROCEDURE SPECIFICATION

WPS NUMBER: 2005-3-2				ISSUE DATE: 3/1/06	
PROJECT: VT AOT BRO 1443 (29)				EB JOB NO.: 6055	
BASE METAL: ASTM A709 GR 345W					
WELDING PROCESS: SUBMERGED ARC WELDING					
FILLER METAL SPEC.: AWS A5.23 LINCOLN LA75					
FLUX / SHIELDING GAS: LINCOLN 960					
CURRENT AND POLARITY: DCEP				ELEC STICKOUT: 1" +/- 1/4"	
WELDING POSITION: 2F				WPS QUALIFICATION: AWS D1.5 / 5.13	
PREHEAT AND INTERPASS TEMP.: AWS D1.5 TABLE 4.4					
HEAT INPUT: 50.68 - 73.92 KILJOULES					
				SUPPORTING PQR#: 2005-3	

ELECTRODE SIZE	WELDING AMPS	CURRENT VOLTS	TRAVEL SPEED	8mm FILLET
3/32"	396 - 440	28.8 - 31.5	11.25 - 13.5	

NOTES:
 FOR WELDING
 GR 345W TO 345W

VTRANS RECEIVED

CK'D BY _____ OK'D BY JWC

MAR 02 2006

RESUBMIT _____ APPROVED ✓

BY RRW DATE 3/10/06

MIMUM PREHEAT AND INTERPASS TEMPERATURES SHALL BE AS FOLLOWS:
 MAXIMUM INTERPASS TEMPERATURE SHALL BE 450F

THICKNESS OF THICKEST PART AT POINT OF WELDING	TEMPERATURE, F ASTM A709 GR 345W STEEL
UP TO 3/4"	50F
3/4" TO 1 1/2"	125F
1 1/2" TO 2 1/2"	175F
OVER 2 1/2"	225F

THIS PROCEDURE MAY VARY DUE TO FABRICATION SEQUENCE, FIT UP, PASS SIZE, ETC. WITHIN THE LIMITS PROVIDED IN THE CONTRACT DOCUMENTS AND THE AWS D1.5 BRIDGE WELDING CODE

EASTERN BRIDGE, LLC

WELDING PROCEDURE SPECIFICATION

ISSUE DATE:3/1/06

EB JOB NO.:6055

BASE METAL:A709 GR 345W

WELDING PROCESS: SMAW

FILLER METAL SPEC.: A5.5, LINCOLN E8018 C3

FLUX / SHIELDING GAS:N/A

CURRENT AND POLARITY: DCEP

ELEC STICKOUT:N/A

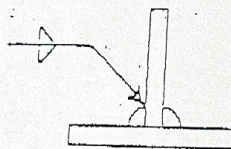
WELDING POSITION: 2F

PREHEAT AND INTERPASS TEMP.:AWS D1.5 TABLE 4.4

WPS QUALIFICATION:PREQUALIFIED

HEAT INPUT:29.04 - 137.7 KILOJOULES

SUPPORTING PQR#:N/A

[illegible]

8 מת

NOTES:

FOR WELDING

GR 345W TO GR 345W

VTRANS
RECEIVED

OK'D BY _____ OK'D BY **Two**

MAR 02 2006

RESUBMIT APPROVED

BY RLW DATE 3/10/06

MINIMUM PREHEAT AND INTERPASS TEMPERATURES SHALL BE AS FOLLOWS:

MAXIMUM INTERPASS TEMPERATURE SHALL BE 450F

THICKNESS OF THICKEST PART AT POINT OF WELDING	TEMPERATURE, F ASTM A709 GR 345W STEEL
UP TO 3/4"	50F
3/4" TO 1 1/2"	125F
1 1/2" TO 2 1/2"	175F
OVER 2 1/2"	225F

THIS PROCEDURE MAY VARY DUE TO FABRICATION SEQUENCE, FIT UP, PASS SIZE, ETC. WITHIN THE LIMITS PROVIDED IN THE CONTRACT DOCUMENTS AND THE AWS D1.5 BRIDGE WELDING CODE

EASTERN BRIDGE, LLC

RR 2, BOX 302

CLAREMONT, NH 03743

PHONE (603) 542-5202

FAX (603) 542-5317

HEAT CURVING AND SWEEP CORRECTION PROCEDURE
STRIP HEAT METHOD

1. Support girder, with web in horizontal position, at girder ends and at intermediate points as necessary to produce a uniform curvature in the member.
2. Intermediate safety catch blocks shall be maintained at mid distance between supports of the member and not more than 2" below the flanges at all times.
3. Heating shall be performed using large (1") rosebud style MAPP gas heating torches. Heating shall be confined to areas described in Step 4 and shall be performed so as to bring the steel in these areas to a temperature between 1,000 F and 1,150 F as rapidly as possible without overheating the steel.
4. Heat shall be applied to those edges of the girder flanges, which shall be on the concave side after completion.
5. Heating shall be done beginning at the center of the girder and working out to either end. Care shall be taken to heat both top and bottom flange edges at the same time.
6. If heating torches are mounted on an automatic Bug-O type carriage; the torch head proximity and travel speed shall be set to achieve 1,000 F as measured on the flange edge at a distance of 6" behind the torch head. The steel temperature shall be checked frequently to see that the temperature achieves 1,000 F and does not exceed 1,150 F.
7. If heating is done manually, care shall be taken to ensure that the heating is done in a consistent manner to achieve predictable results. The torch operators shall monitor the steel temperature frequently to see that the temperature reaches 1000 F and does not exceed 1,150 F. The rate of progression along the flange edge shall likewise be carefully controlled.
8. Edge heats may be done continuously or intermittently, depending on the amount of final horizontal curvature required. If heats are done intermittently, the individual heats shall be allowed to cool below 200F before beginning the next heating cycle.
9. The heated areas shall be allowed to cool to below 600 F in ambient conditions. After which time, the areas may be cooled in an accelerated manner using dry, compressed air.
10. The intermediate safety catch blocks under the girder shall be monitored to maintain a space of no more than 2" during the heating process. It will be necessary to substitute different thickness catch blocks to maintain this space as the girder begins to contract and move.
11. The member being heated shall not be moved until the steel has reached ambient temperature.
12. The QA representative for the state shall be notified prior to implementation of this procedure.

VT TRANS
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CK'D BY _____ OK'D BY JWC

MAR 02 2006

RESUBMIT _____ APPROVED ✓

BY PRW DATE 3/10/06

VT TRANS
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CK'D BY _____ OK'D BY JWC

MAY 13 2005

RESUBMIT _____ APPROVED ✓

BY _____ DATE 5-23-05

EASTERN BRIDGE, LLC

RR 2, BOX 302

CLAREMONT, NH 03743

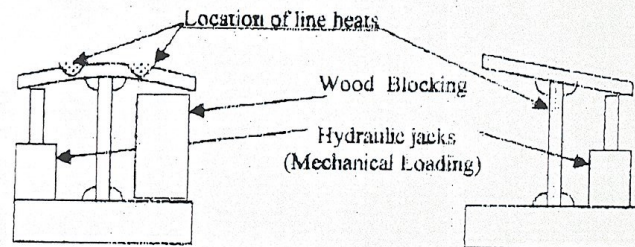
PHONE (603) 542-5202

FAX (603) 542-5317

Warpage and Tilt of Flange Correction Procedure, Rev. 1 NYS

SCOPE: This procedure is to be used to correct unacceptable amounts of warpage, (deviation from flatness) or flange tilt, (deviation of flanges from a line normal to the centerline of the web) in fabricated girders or rolled beams. Correction shall be achieved through the use of line heating on the girder web, or flanges, or both, in combination with the use of moderate mechanical loading if needed.

1. The area to be heated shall be determined by the correction required, see sketch below. Warpage shall be corrected through the use of line heats on the flanges. Flange tilt shall be corrected through the use of line heats on the appropriate surface of the web.



Warpage Correction

Tilt Correction

2. Heating shall be performed using appropriate sized rosebud style heating torches. Heating shall be confined to areas described in step 3 and shall be performed so as to bring the steel in those areas to a temperature between 1,000 F and 1,100 F as rapidly as possible without overheating the steel.
3. Heating patterns shall be marked on the steel prior to heating. Line heats shall be marked so as to avoid the areas of high restraint directly opposite fillet welds. The line heat length shall be determined by the amount of flange tilt or flange warpage requiring correction.
4. Heating shall begin at one end of the line and not proceed to the other end until the initial area is brought up to a temperature between 1,000 F and 1,100 F. The torch operator shall have 1,000 F, 1,100 F, & 1,150 F temperature indicating crayons. The steel surface temperature shall be monitored frequently during the heating process, and the temperature shall be controlled so as to achieve 1,100 F and not to exceed 1,150 F.
5. Apply mechanical loading until the bottom flange moves, but no more than 1/4". The force applied shall be a minimum to maintain and support position during the heating process. Mechanical loading shall be achieved using hydraulic jacks in the locations shown for the two types of correction being performed.
6. The QA representative for the state shall be notified prior to implementation of this procedure.

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OK'D BY _____ OK'D BY JWC

MAR 02 2006

RESUBMIT _____ APPROVED ✓

BY Blue DATE 3/10/06

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MAY 19 2005

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BY _____ DATE 5-23-05

EASTERN BRIDGE, LLC

RR 2, BOX 302

CLAREMONT, NH 03743

PHONE (603) 542-5202

FAX (603) 542-5317

**HEAT CAMBERING AND
CORRECTIVE HEAT CAMBERING PROCEDURE**

1. Support girder, with web in vertical position, at girder ends and at intermediate points as necessary to produce a uniform curvature in the member.
2. Intermediate safety catch blocks shall be maintained at mid distance between supports of the member and not more than 2" below the flanges at all times.
3. The beam being cambered shall be supported or braced to prevent deflection laterally and overturning during the heating process.
4. Heating shall be performed using a properly sized rosebud style heating tip. Heating shall be confined to areas described in Step 5 and shall be performed so as to bring the steel in these areas to a temperature not exceeding 1,150F as rapidly as possible without overheating the steel.
5. Heating patterns shall be marked on the girders prior to heating. Heat patterns will be located at even distances in a quantity sufficient to produce the desired camber. Whenever possible heating patterns shall be centered on stiffener locations. Additional blank stiffeners may be required at panel midpoints to provide sufficient heating sites in an effort to prevent or reduce web distortion. Patterns shall be truncated triangles with the base of the triangle being that flange which shall be concave in the finished girder. The apex of the triangle shall be located in the web at a point not less than 75% of the depth of the beam from the base of the triangle. The total included angle of the triangle shall not exceed 20 degrees and the base of the triangle shall not exceed 10".
6. Heating shall begin at the apex of the triangle and not proceed toward the base until the truncated area is brought up to a temperature not exceeding 1,150F. Once heating begins to progress towards the base of the triangle it shall not return to the apex. The torch operator shall have 1,000 F, 1,100 F, and 1,150 F temperature indicating crayons. The steel surface temperature shall be monitored frequently during the heating process.
7. No weight shall be applied without prior approval of the state.
8. After application of heating patterns the member being cambered shall stay in the vertical position until the heated areas cool to below 200F, to check and record results.
9. The heated areas shall be allowed to cool to below 600F in ambient conditions. After which time, the areas may be cooled in an accelerated manner using dry, compressed air.
10. The QA representative for the state shall be notified prior to implementation of this procedure.

**VTRANS
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CK'D BY _____ OK'D BY JWC

MAR 02 2006

RESUBMIT _____ APPROVED ✓

BY RLW DATE 3/10/06

**VTRANS
RECEIVED**

CK'D BY _____ OK'D BY JWC

MAY 19 2005

RESUBMIT _____ APPROVED ✓

BY _____ DATE 5-23-05

GENERAL SHOP NOTES

SPECIFICATIONS

1. MATERIAL AND WORKMANSHIP TO BE IN ACCORDANCE WITH THE STATE OF VERMONT, AGENCY OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2001, GENERAL SPECIAL PROVISIONS, AND THE LATEST EDITION OF AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.

Design Specifications
1. American Assoc of State HW and Trans. Officials (AASHTO) Standard Spec. for Highway Bridges, 2002 Edition with latest revisions.

MATERIAL

1. MATERIAL SHALL CONFORM TO AASHTO M270M, GRADE 345W (UN).
2. MATERIAL NOTED (M270M-345WT2) ON DETAIL DRAWINGS SHALL REQUIRE CHARPY V-NOTCH TESTING (ZONE 2).
3. HIGH STRENGTH BOLTS SHALL CONFORM TO AASHTO M164 TYPE 3 WITH ONE AASHTO M291 HVY. HEX NUT & ONE AASHTO M293 TYPE 3 WASHER.

FABRICATION & WORKMANSHIP

1. "BEARING AREA" AS NOTED ON STRINGER DETAILS, INDICATES AREA THAT MUST BE FLAT AND TRUE TO RECEIVE SOLE PLATE.
2. RE-ENTRANT CUTS TO HAVE A 25 MILLIMETER MIN. RADIUS (50mm ON MAIN MEMBERS).

SHOP WELDING AND TESTING NOTES:

1. WELDING AND NON-DESTRUCTIVE TESTING SHALL BE IN ACCORDANCE WITH ANSI/AASHTO/AWS BRIDGE WELDING CODE, D1.5.
2. FOR WELDING CONNECTION PLATES TO BEAMS SEE "TYP. WELD TERMINATION DETAIL".

DRAWING REFERENCE:

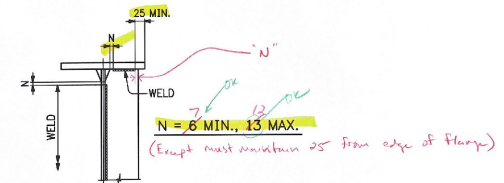
GIRDER JOB STANDARDS - PREFIXED "X"

SHOP CLEANING NOTES:

1. BLAST CLEAN ALL STEEL TO SSPC-SP10 (NEAR WHITE) AFTER FABRICATION.

SHOP PAINTING NOTES:

1. NO PAINT



TYP. WELD TERMINATION DETAIL

RECEIVED
MAR - 1 2008
FRANK W. WHITCOMB
CONSTRUCTION

REV.	DATE	DESCRIPTION	QTY.	DATE	ISSUED TO	FOR
1	2/21/08	FRANK W. WHITCOMB	1	2/21/08	FRANK W. WHITCOMB	Approval

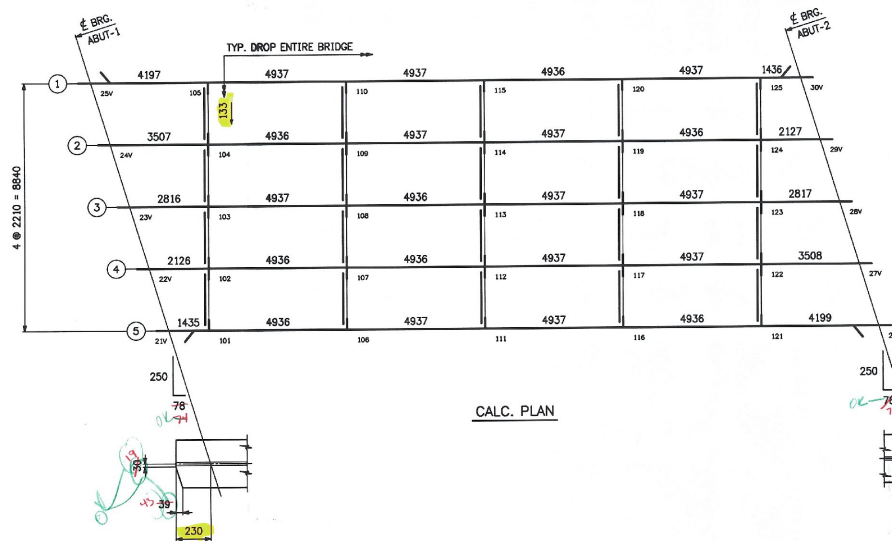
PROJECT:	TH. NO. 1 OVER COLD RIVER	(BRIDGE NO. 14)
LOCATION:	PROJ. NO. BRO 1443 (29)	CLARENDON, VERMONT
ENGINEER:	DUBOIS & KING, INC.	
CUSTOMER:	FRANK W. WHITCOMB CONST.	

DRAWING TITLE:	GENERAL NOTES	SHEET NUMBER:
DRAWN BY: WCG	2-21-08	6055
CHECKED BY: J	2-23-08	GN1

RECEIVED
MAR 02 2008
MAR 02 2008
MAR 02 2008
MAR 02 2008

EB LLC

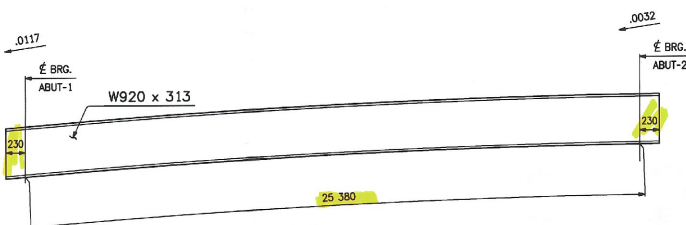
EASTERN BRIDGE LLC
RURAL RTE 2, BOX 350
CLARENDON, NH 03743
603-542-5022



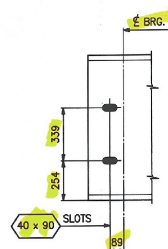
CALC. PLAN

TOP & BOT. FLG. CLIP DETAIL

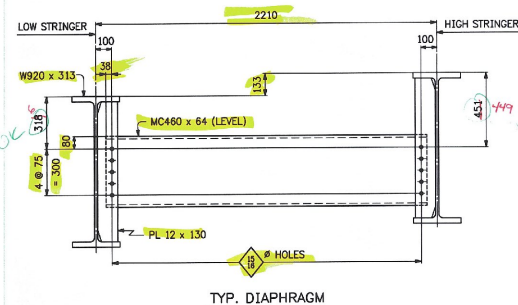
TOP & BOT. FLG. CLIP DETAIL



TYP. ELEVATION



GIRDER END DETAIL
(ABUT-1, SHOWN)
(ABUT-2, OPP. HAND)



TYP. DIAPHRAGM

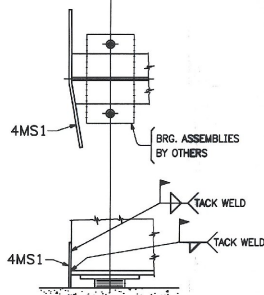
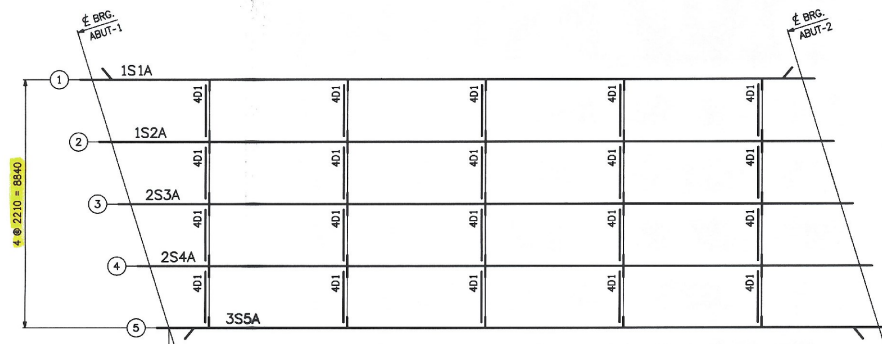
NOTES:

1. LONGITUDINAL DIMS. ARE SLOPING ALONG BOTTOM OF STRINGER IN CAMBERED POSITION.
2. TRANSVERSE DIMS. ARE HORIZONTAL.
3. → DENOTES DROP (FINAL). ARROW POINTS TO LOW END.
4. ENDS OF GIRDERS ARE VERTICAL IN FINAL POSITION.
5. INT. CONN. PLATES ARE NORMAL TO BOTTOM FLANGE.

RECEIVED
MAR 02 2006
APPROVED BY: [Signature]
DATE: 3/11/06

THIS IS A WORK DRAWING. ITS FUNCTION IS TO PROVIDE BASIC DIMENSIONS AND CONCEPTS FOR USE IN THE PREPARATION OF THE SHOP DETAILS. IT IS NOT INTENDED TO BE USED FOR ERECTION OR FABRICATION.

EB LLC
EASTERN BRIDGE LLC
RURAL RTE 2, BOX 302
CLARENDON, NH 03743
603-548-5202



ERECTION PLAN

FIELD BOLT SUMMARY				2% ADDED, MIN 2 EXTRA	
LINE	NO. OF BOLTS	BOLT DIA.	TYPE	ACTUAL COUNT	REMARKS
1	204	7/8	ASHTO M164-3	200	w/1 M291-3 GR. C3 Hvy. HEX NUT
2					
3					
4	204		HARD, FLAT WASHERS FOR 7/8" BOLT		M293-3
5					
6					
7					
8					
9					
10					

FIELD BOLT LIST								M164 TYPE 3 BOLTS	
LINE	ACTUAL NO. REQ'D	BOLT DIA.	BOLT LENGTH	BOLTS / CORNERS	# OF CORNERS	GRIP	THICKNESS OF PCS CONNECTED	WASHER CODE	PIECES CONNECTED AND REMARKS
1									
2									
3	200	7/8	24	10	20	18	11.4 12	1	DIAPHRAGMS TO STRINGERS
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
WASHER CODES									
1: 1 HARD FLAT WASHER									

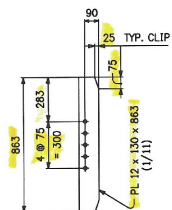
REV.	DATE	DESCRIPTION
1	2/28/06	F.W. Whitcomb
2	3/16/06	Approved

PROJECT:	TH. NO. 1 OVER COLD RIVER	(BRIDGE NO. 14)
LOCATION:	PROJ. NO. BRO 1443 (29)	CLARENDON, VERMONT
ENGINEER:	DUBOIS & KING, INC.	
CUSTOMER:	FRANK W. WHITCOMB CONST.	

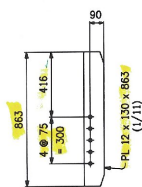
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DRAWN BY:	WCG
CHECKED BY:	2-23-06
JOB NUMBER:	6055
SHEET NUMBER:	E1

RECEIVED
MAR 02 2006
EASTERN BRIDGE LLC

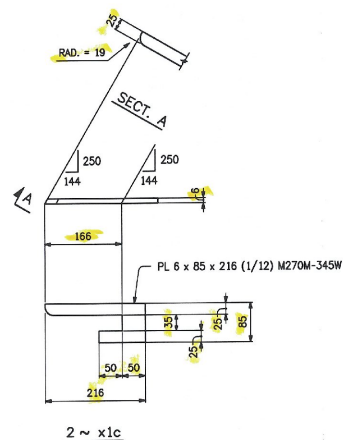
EB LLC
EASTERN BRIDGE LLC
RURAL RTE 2, BOX 302
CLARENDON, NH 03743
803-542-5202



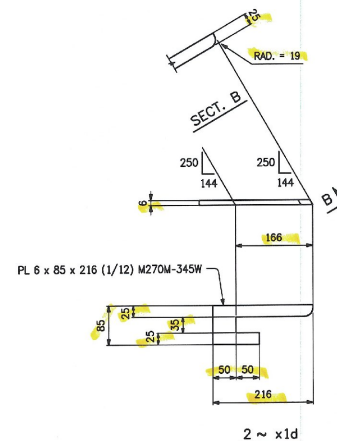
20 ~ x1a
(INT. LOW)



20 ~ x1b
(INT. HIGH)



2 ~ x1c



2 ~ x1d

NOTES:

HOLES: 18#
BOLTS: NONE
MATT: M270M-345W
PAINT: NONE

REV.	DATE	DESCRIPTION
1	2/26/06	FW: Whitcomb

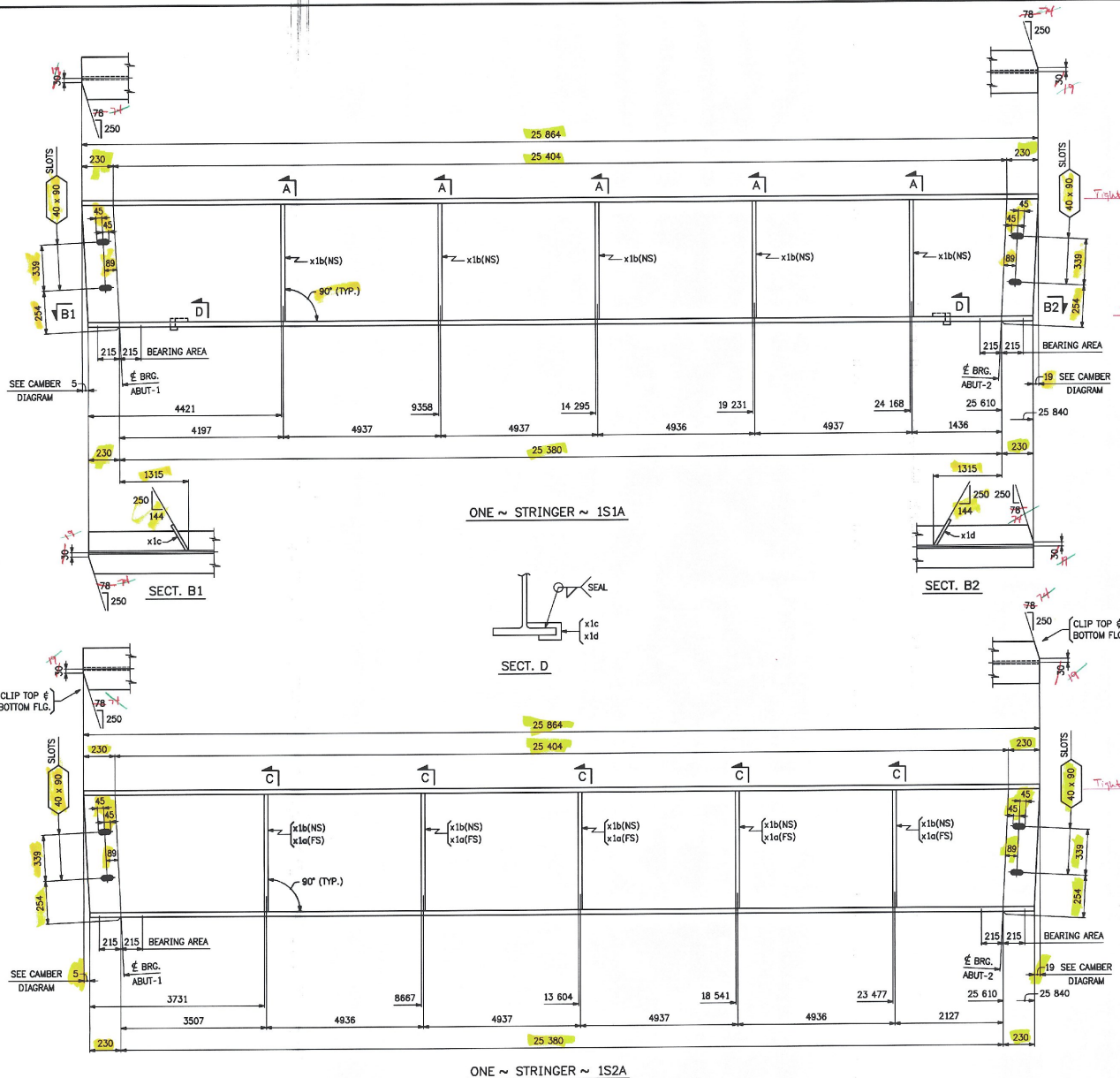
QTY.	DATE	ISSUED TO	FOR
1	2/26/06	FW: Whitcomb	Approval

RECEIVED
OCT 20 2006
MAR 02 2006
RESUBMIT APPROVED
BY: [Signature] DATE: 3/16/06



EASTERN BRIDGE LLC
RURAL RTE 2, BOX 302
CLARENDON, NH 03743
603-542-5202

PROJECT:	TH. NO. 1 OVER COLD RIVER (BRIDGE NO. 14)
LOCATION:	PROJ. NO. BRO 1443 (29) CLARENDON, VERMONT
ENGINEER:	DUBOIS & KING, INC.
CUSTOMER:	FRANK W. WHITCOMB CONST.
DRAWING TITLE:	STRINGER STANDARDS
DRAWN BY:	WCG 2-20-06
CHECKED BY:	2-22-06
JOB NUMBER:	6055
SHEET NUMBER:	X1



NOTES:
 HOLES: 1/8" (UN).
 BOLTS: NONE
 MAT'L: M270M-345W (UN).
 PAINT: NONE
 FOR STRINGER STANDARD DETAILS SEE SHT. X1
 FOR GENERAL NOTES & TYPICAL DETAILS SEE SHT. GN1

AEM INFO		SHIP		BILL OF MATERIAL				JOB No.		REV.
PAGE		LINE		MARK	QTY	MARK	MATERIAL	LENGTH	WEIGHT	PROCUREMENT
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1	12			x1b			PL 12 x 130	216		
1	13			x1c			PL 6 x 85	216		
1	14			x1d			PL 6 x 85	216		
									8202 kg	
1	10	1S2A	ONE				STRINGER	25 864	M270M-345W2	
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1	12			x1a			PL 12 x 130	216		
1	13			x1b			PL 12 x 130	863		

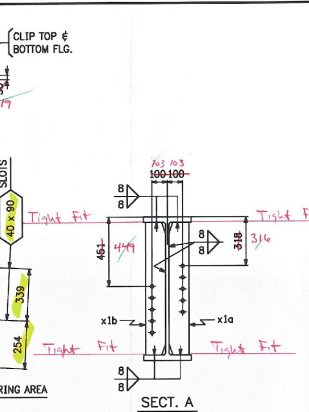
RECEIVED
 OK'D BY: [Signature] OK'D BY: [Signature]
 MAR 02 2006
 APPROVED: [Signature]
 BY: [Signature] DATE: 3/4/06

EB LLC
 EASTERN BRIDGE LLC
 RURAL RTE 2, BOX 302
 CLARENDON, NH 03743
 603-342-5302

PROJECT: TH. NO. 1 OVER COLD RIVER (BRIDGE NO. 14)
LOCATION: PROJ. NO. BRO 1443 (29) CLARENDON, VERMONT
ENGINEER: DUBOIS & KING, INC.
CUSTOMER: FRANK W. WHITCOMB CONST.
DRAWING TITLE: STRINGERS ~ 1S1A & 1S2A
DRAWN BY: WCG 2-20-06
CHECKED BY: [Signature] 2-22-06

QTY. 8
DATE 2/15/06
ISSUED TO F.W. Whitcomb
FOR Approval

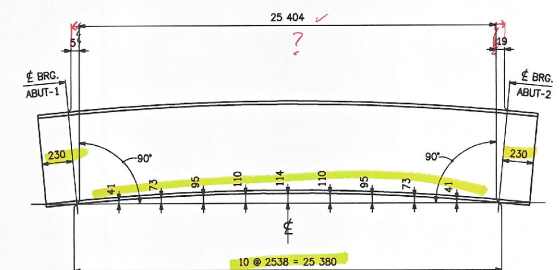
JOB NUMBER: 6055
SHEET NUMBER: 1



NOTES:

HOLES: $\frac{13}{16}$ " $\varnothing$ (UN.).
BOLTS: NONE
MAT'L: M270M-345W (UN.).
PAINT: NONE

FOR STRINGER STANDARD DETAILS SEE SHT. X1
FOR GENERAL NOTES & TYPICAL DETAILS SEE SHT. GN1



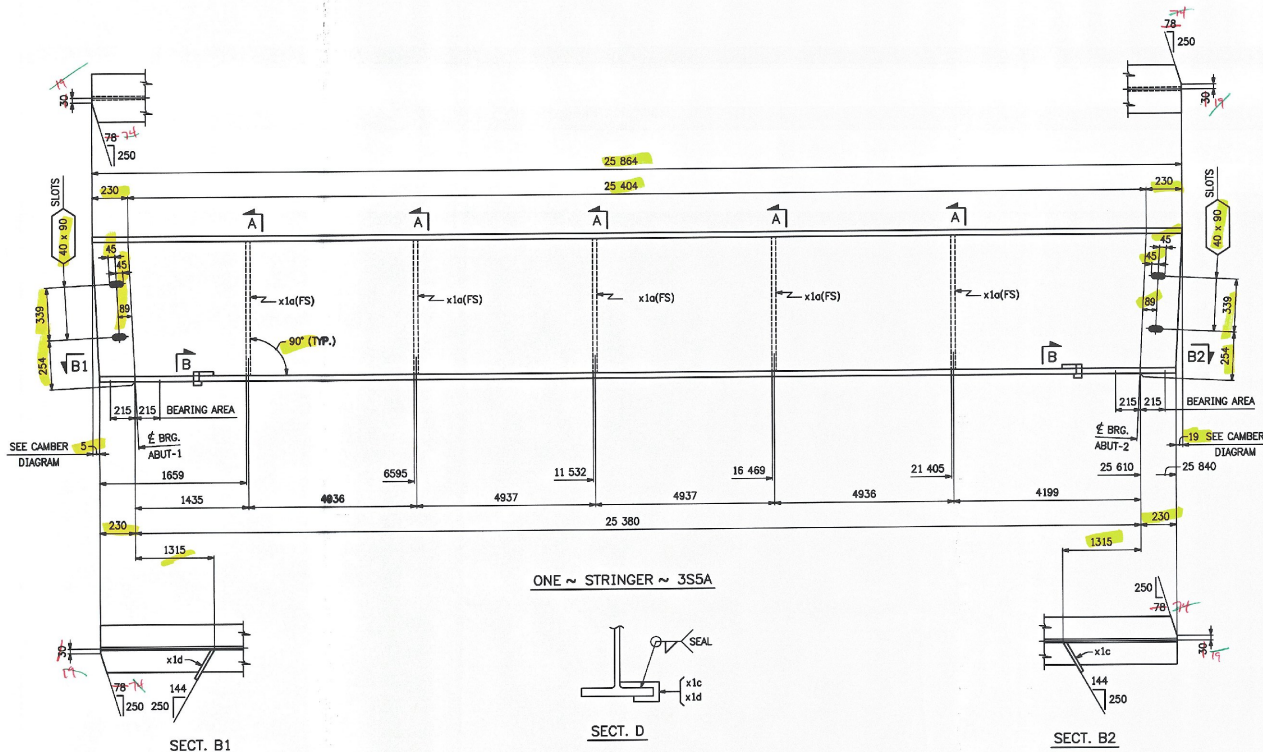
		
REV.	DATE	DESCRIPTION

8	2/25/06	F.W. Whitcomb	Approval
QTY.	DATE	ISSUED TO	FOR

RECEIVED
CK'D BY smg CK'D BY ave
MAR 02 2006
RESUBMIT _____ APPROVED AS NOTED
BY PORW DATE 3/16/06

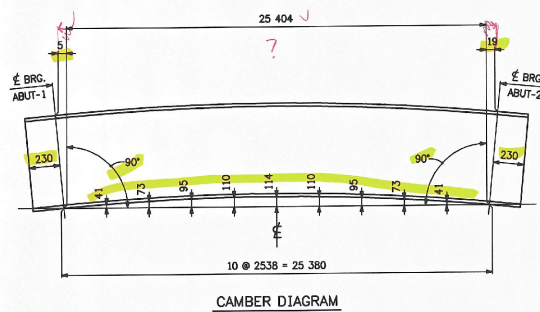
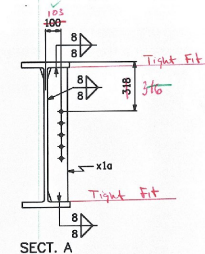
EB LLC
EASTERN BRIDGE LLC
RURAL RTE 2, BOX 302
CLAREMONT, NH 03743
603-542-5202

PROJECT: TH. NO. 1 OVER COLD RIVER (BRIDGE NO. 14)			
LOCATION: PROJ. NO. BRO 1443 (29) CLARENDON, VERMONT			
ENGINEER: DUBOIS & KING, INC.			
CUSTOMER: FRANK W. WHITCOMB CONST.			
DRAWING TITLE: STRINGERS ~ 2S3A & 2S4A			
DRAWN BY: WCG	2-20-08	JOB NUMBER: 6055	SHEET NUMBER: 2
CHECKED BY: <i>jc</i>	2-23-08		



NOTES:
 HOLES: $\frac{1}{8}$ " (UN).
 BOLTS: NONE
 MAT'L: M270M-345W (UN).
 PAINT: NONE
 FOR STRINGER STANDARD DETAILS SEE SHT. X1
 FOR GENERAL NOTES & TYPICAL DETAILS SEE SHT. G01

ABM INFO		SHIP		BILL OF MATERIAL				JOB No.	REV.
								6055	
PAGE	LINE	MARK	QTY.	MARK	MATERIAL	LENGTH FEET	REMARKS	WEIGHT	PROCUREMENT NOTES
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1	12		1	x1c	PL 6 x 85	216			
1	12		1	x1d	PL 6 x 85	216			



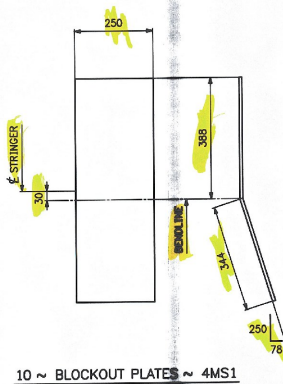
REV.	DATE	DESCRIPTION	QTY.	DATE	ISSUED TO	FOR
			8	2/28/06	F. W. Whitcomb	Approval

PROJECT: TH. NO. 1 OVER COLD RIVER (BRIDGE NO. 14)
 LOCATION: PROJ. NO. BRO 1443 (29) CLARENDON, VERMONT
 ENGINEER: DUBOIS & KING, INC.
 CUSTOMER: FRANK W. WHITCOMB CONST.

DRAWING TITLE: STRINGER ~ 3S5A
 DRAWN BY: WCG 2-21-06 JOB NUMBER: 6055 SHEET NUMBER: 3
 CHECKED BY: 2-23-06



EASTERN BRIDGE LLC
 RURAL RTE 2, BOX 302
 CLARENDON, VT 05745
 802-242-5202



HOLES: $\frac{15}{16}$ Ø
BOLTS: NONE
MAT'L: M270M-345W.
PAINT: NONE
FOR GENERAL NOTES & TYPICAL DETAILS SEE SHT. GN1

[illegible][illegible]

Highway Safety Corporation

Glastonbury, CT

Welding Procedure Specification

Material specification ASTM A500 Gr B

Welding process Shielded Metal Arc Welding (SMAW)

Manual, semi-automatic, or automatic Manual

Position of welding Flat (1G)

Filler metal specification AWS A5.1

Filler metal classification ER7018

Electrode and manufacturer Lincoln Electric Jet LH 78 MR

Flux and manufacturer N/A

Shielding gas N/A Flow rate N/A

Single or multiple pass Multiple

Single or multiple arc Single

Welding current AC

Polarity N/A

Welding progression Stringers

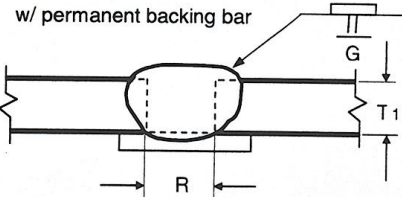
Root treatment clean base metal

Preheat and interpass temperature 50°F (min)

Postheat treatment None

Electrode extension N/A

WELDING PROCEDURE

Weld size	Pass no.	Electrode size	Welding parameters		Travel speed	Joint detail
			Amperes	Volts		
	ALL	5/32"	150 A to 220 A		VARIES	B-L1a full penetration weld joint w/ permanent backing bar  $T_1 = 1/4"$ (max) $R = T_1$

TRANS RECEIVED
CK'D BY JWC
JUN 21 2006
RESUBMIT APPROVED
BY Paul Radice DATE 6-29-06

This procedure may vary due to fabrication sequence, fit-up, pass size, etc. within the limitation of variables given in section 5 of latest edition AWS D1.1

WPS no. W-1552b

Revision no. 0

Supporting PQR no. Pre-Qualified

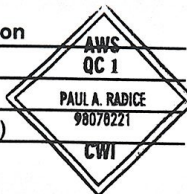
Project Name Clarendon, VT

Fabricator Highway Safety Corporation

Authorized by Paul Radice

Date 6/14/06

Project Number AC BRO 1443 (29)



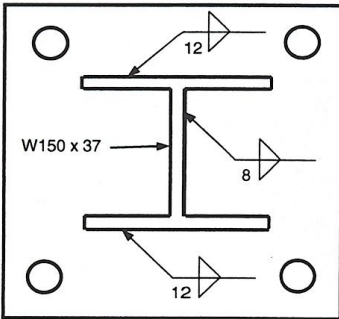
Highway Safety Corporation

Glastonbury, CT

Welding Procedure Specification

Material specification A572 gr 50, A709 Gr 50
Welding process Gas Metal Arc Welding (GMAW)
Manual, semi-automatic, or automatic Semi-Automatic
Position of welding Flat (1F) or Horizontal (2F)
Filler metal specification AWS A5.18
Filler metal classification ER70S-3
Electrode and manufacturer Lincoln Electric Lincoln Weld L-50
Flux and manufacturer N/A
Shielding gas 85% Argon / 15% CO2 Flow rate 19-27 L / min
Single or multiple pass Single or Multiple
Single or multiple arc Single or Multiple
Welding current DCEP
Polarity Reverse - electrode positive
Welding progression Stringers
Root treatment clean base metal
Preheat and interpass temperature base metal up to 3/4" (50°F) ; over 3/4 thru 1-1/2" (150°F) : over 1-1/2" thru 2-1/2" (225°F)
Postheat treatment None
Electrode extension 3/4" ± 1/4"

WELDING PROCEDURE

Weld size	Pass no.	Electrode size	Welding parameters		Travel speed	<u>Joint detail</u> 
			Amperes	Volts		
8mm	1	2 mm	275 A ± 25	25 V ± 2	200-250 mm / min	
5/16"	1	0.062"	↓	↓	8-10 ipm	
12 mm	1 & 2	2 mm			200-250 mm / min	
7/16"	1 & 2	0.062"	↓	↓	8-10 ipm	

TRANS RECEIVED

CK'D BY _____ CK'D BY JWC

JUN 2 2006

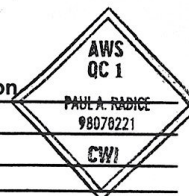
RESUBMIT _____ APPROVED ✓

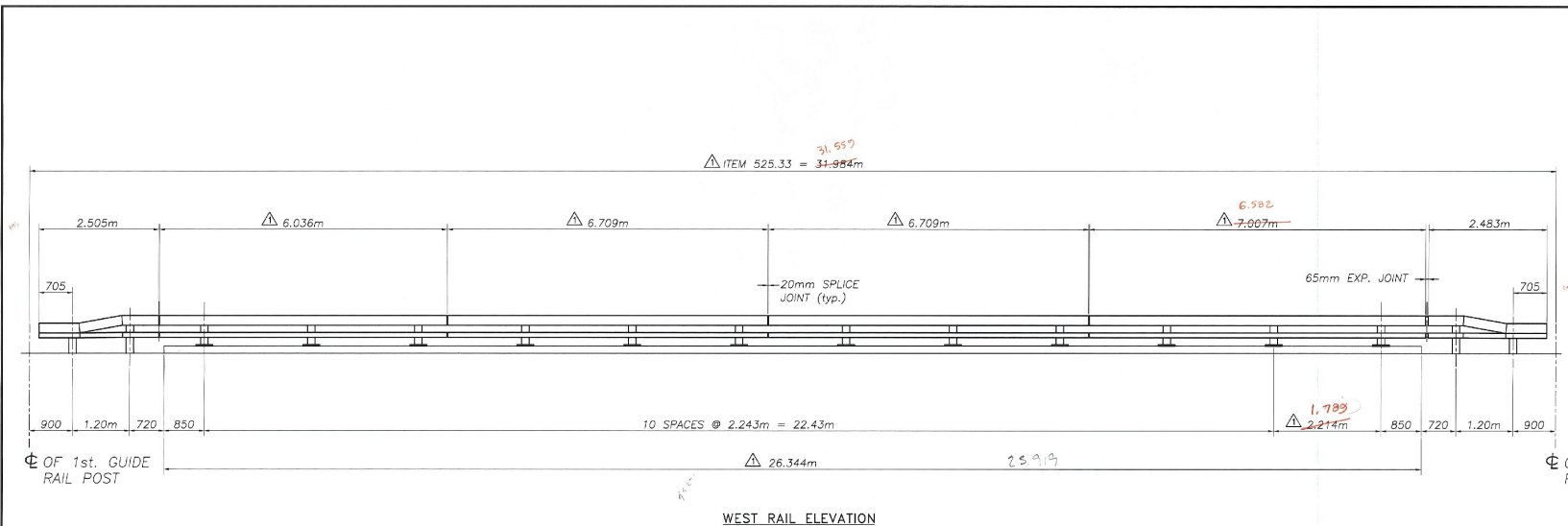
BY RLC DATE 6-29-06

This procedure may vary due to fabrication sequence, fit-up, pass size, etc. within the limitation of variables given in section 5 of latest edition AWS D1.5

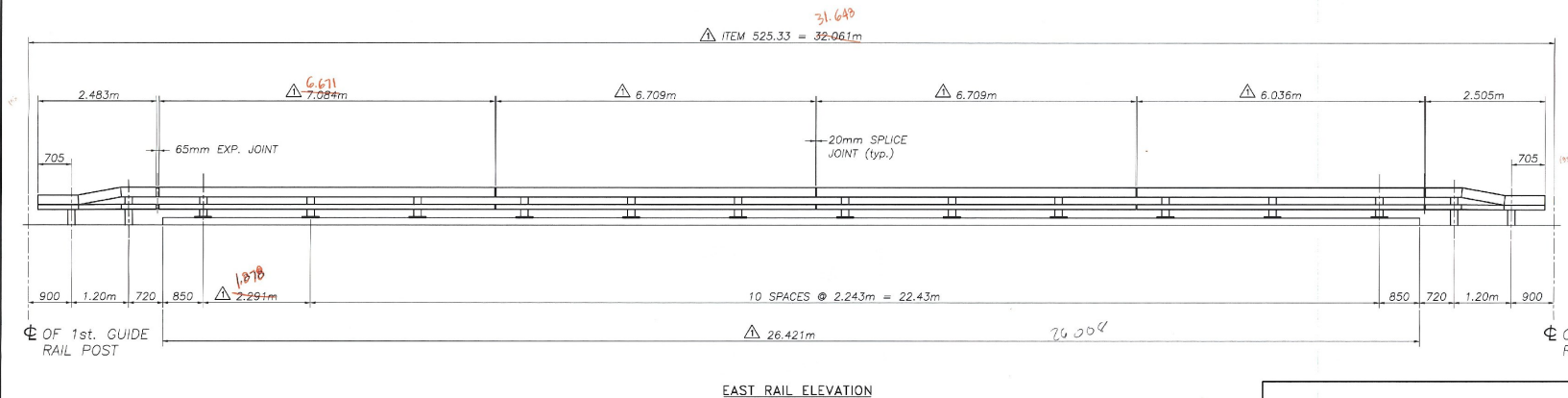
WPS no. W-1552a
Revision no. 0
Supporting PQR no. Pre-Qualified
Project Name Clarendon, VT

Fabricator Highway Safety Corporation
Authorized by Paul Radice
Date 6/14/06
Project Number AC BRO 1443 (29)





WEST RAIL ELEVATION



EAST RAIL ELEVATION

BILL OF MATERIAL (BOTH SIDES OF BRIDGE)		
Qty.	Description	Material
24	W150x37.1 POST W/BASISPLATE (620mm) OAL	A709M Gr. 345
4	W150x37.1 DRIVEN POST (2.134m) OAL	A709M Gr. 345
4	W150x37.1 DRIVEN POST (1.956m) OAL	A709M Gr. 345
2	TS 203 x 102 x 8 (6.036m) OAL	A500 Gr. B
2	TS 102 x 102 x 5 (6.036m) OAL	A500 Gr. B
4	TS 203 x 102 x 8 (6.709m) OAL	A500 Gr. B
4	TS 102 x 102 x 5 (6.709m) OAL	A500 Gr. B
1	TS 203 x 102 x 8 (9.007m) OAL	A500 Gr. B
1	TS 102 x 102 x 5 (7.007m) OAL	A500 Gr. B
1	TS 203 x 102 x 8 (7.084m) OAL	A500 Gr. B
1	TS 102 x 102 x 5 (7.084m) OAL	A500 Gr. B
2	TS 203 x 102 x 8 (2.483) UPPER DROP END TUBE	A500 Gr. B
2	TS 203 x 102 x 8 (2.505) UPPER DROP END TUBE	A500 Gr. B
2	TS 102 x 102 x 5 (2.483) LOWER DROP END TUBE	A500 Gr. B
2	TS 102 x 102 x 5 (2.505) LOWER DROP END TUBE	A500 Gr. B
10	TS 176 x 75 x 10 SPLICE TUBE 510 LONG	A500 Gr. B
10	TS 76 x 76 x 8 SPLICE TUBE 510 LONG	A500 Gr. B
24	3mm BEARING PAD	NEOPRENE
4	BACK UP PLATE	A709M Gr. 250
4	TERMINAL CONNECTOR	#189 SZ
152	M20 ROUND HEAD BOLT, 152 LONG	A325M
152	M20 HEX NUT	A563 CH
152	M20 WASHER	F436M
80	M16 SPLICE BOLT, 44 LONG	A307
80	M16 PLAIN HARDENED WASHER	F436M
80	M16 NUT WELDED TO SPLICE TUBE	A307
16	M20 x 13 SCH. 40 PIPE SPACER	A53 Gr. B
96	M24 ANCHOR STUD, 305 LONG	F508W D. 6.0
96	M24 WASHER	F436M
96	M24 JAMB NUT	A563 DH
192	M24 HEX NUT	A563 DH
24	SPACER PLATE	A709M Gr. 250

NOTES:
1. ITEMS MARKED "*" ARE NOT SUPPLIED BY HIGHWAY SAFETY CORPORATION, AND THEY ARE SHOWN ONLY FOR REFERENCE.

FINAL APPROVED PLANS
AFTER CHANGES HAD BEEN
COMPLETED

VTrans - PDD

JUL 17 2006
Structures Design
Section



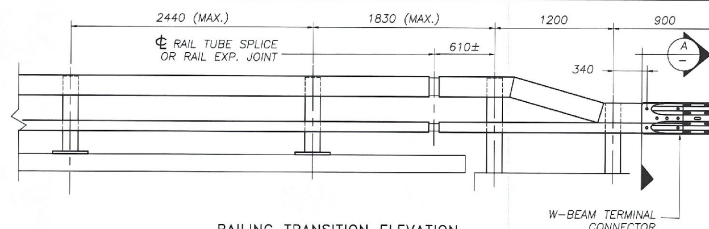
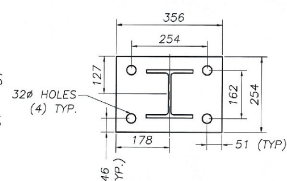
HIGHWAY SAFETY CORP.
GLASTONBURY, CT

ITEM 525.33 - BRIDGE RAILING-NETC 2 RAIL
PROJECT No. AC BRO 1443(29)
TOWN OF CLARENDON Br. No. 14
RUTLAND COUNTY, ROUTE No. TH 1, CLASS 2

DRAWN: MHM
CHECKED:
DATE: 6-10-06
SCALE: NONE
HSC REFERENCE NO.: 1555

SUB CONTRACTOR: F.R. LAFAYETTE, INC.
SHEET NO.: 1 of 2

REVISIONS		
No.	Remarks	Date
0	Initial submittal	6/15/06
1	As Built Revisions	7/11/06

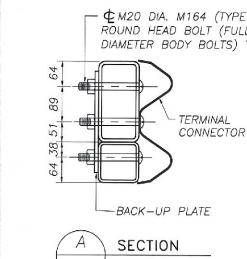
RAILING TRANSITION ELEVATION
(BOTH ENDS OF BRIDGE)

Technical drawing of a bridge end connection. The drawing shows a vertical post with a 57mm threaded section. A heavy hex nut and washer (typical) are shown at the top. Below this, a hex jamb nut (typical) is shown. A 10mm spacer plate is shown below the hex jamb nut. A hex nut (typical) is shown at the bottom. The entire assembly is secured with M24 threaded studs. The drawing is labeled with dimensions and component names.

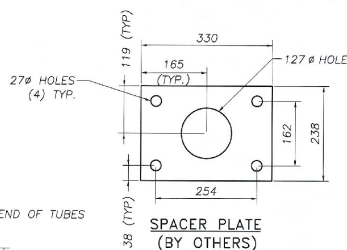
Labels and dimensions:

- 57 THREAD (TYP)
- HEAVY HEX NUT AND WASHER (TYP)
- 76
- 57 THREAD (TYP)
- HEX JAMB NUT (TYP)
- 10 SPACER PLATE
- HEX NUT (TYP)
- Φ M24
- THREADED STUDS

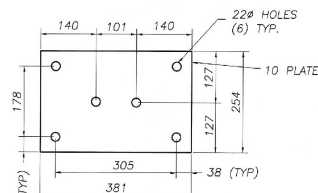
RAIL POST ANCHORAGE
(BY OTHERS)



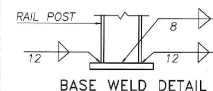
SECTION



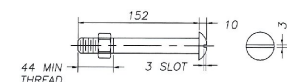
38 (Type) SPACER PLATE
(BY OTHERS)



BACK-UP PLATE



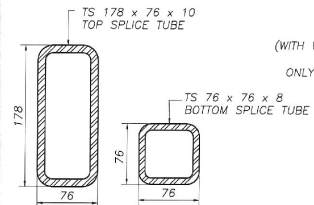
BASE WELD DETAIL



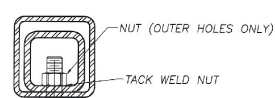
M20 DIA. M164M (TYPE 1)
ROUND HEAD BOLT

(WITH WASHER AND PREVAILING TORQUE TYPE LOCK NUT,
(SEE NOTE #9)
ONLY FULL DIAMETER BODY BOLTS WILL BE ALLOWED.

ONLY FULL DIAMETER BODY BOLTS WILL BE ALLOWED



RAIL TUBE SPLICE SECTION



16Ø TAPPED HOLE IN SPLICE TUBE &
19Ø HOLE IN RAIL TUBE FOR M16
BOLT & PLAIN HARDENED WASHER



SPlice TABLE					
T	A	B	C	L	X
N/A	100	50	—	510	20
EXPANsION JOINT TABLE					
<100	100	50	65	510	65

T = TOTAL MOVEMENT BETWEEN BRIDGE
EXPANSION JOINTS. SEE NOTE 6

* = SINGLE SLOT

16ø TAPPED HOLE IN SPLICE TUBE
AND 29 x 'C' SLOT IN RAIL TUBE FOR
M16 BOLT AND PLAIN HARDENED WASHER
EXPANSION JOINT SECTION

FOR DETAILS NOT SHOWN,
SEE "RAIL TUBE SPLICE SECTION."

REVISIONS		
No.	Remarks	Date
0	Initial submittal	6/15/0
1	As built Revisions	7/11/0

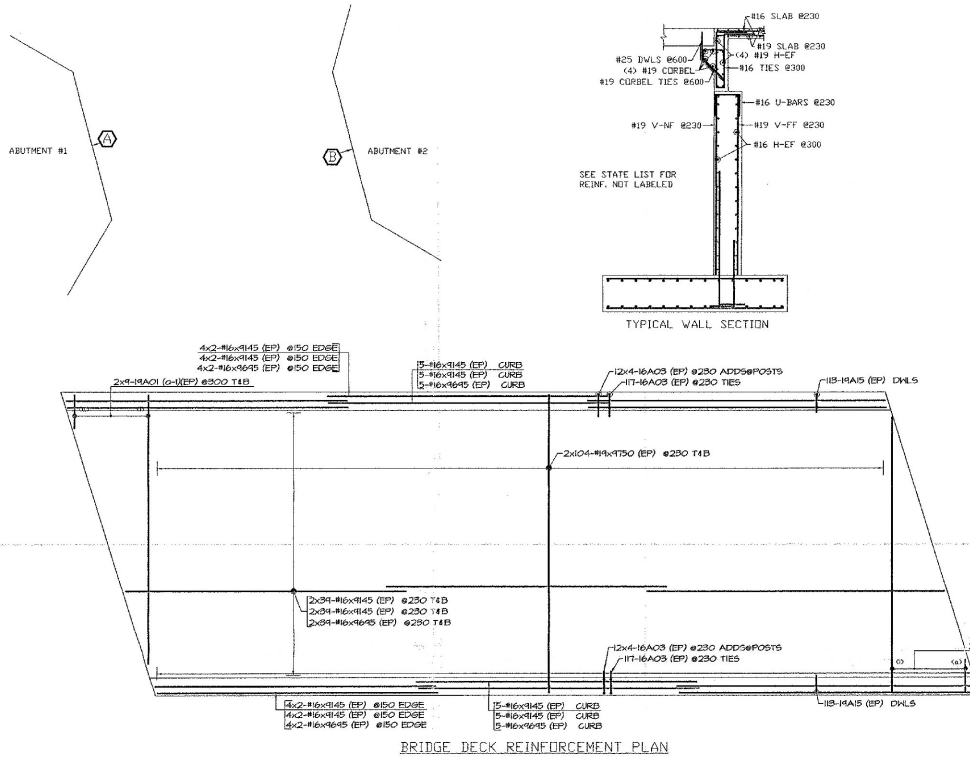


HIGHWAY SAFETY CORP.
GLASTONBURY, CT

ITEM 525.33 - BRIDGE RAILING-NETC 2 RAIL
PROJECT No. AC BRO 1443(29)
TOWN OF CLARENDON Br. No. 14
RUTLAND COUNTY, ROUTE NO: TH 1, CLASS 2

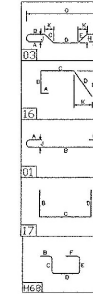
GENERAL CONTRACTOR	
SUB CONTRACTOR	F.R. LAFAYETTE, INC.

DRAIN	MHM	
CHECKED	<i>[Signature]</i>	
DATE	6-10-06	
SCALE	NONE	
MSC REFERENCE NO.	1555	
SIZE	D	REVISION 
SHEET NO.	2 of 2	

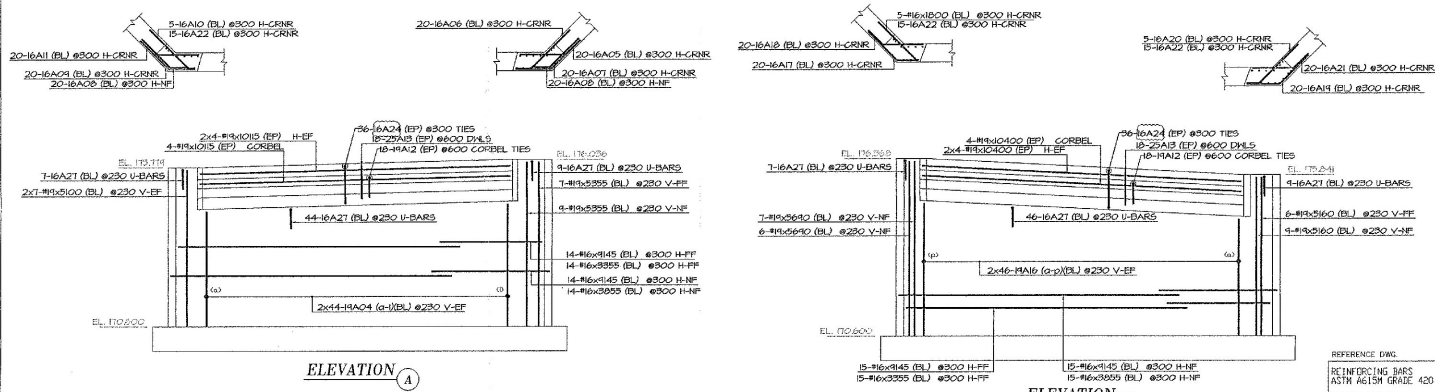


NOTE: ALL REINF ON THIS DWG IS
BLACK UNCOATED REBAR (BL)
"EXCEPT"
REINF NOTED (EP) IS
(EPOXY COATED REBAR)

PLEASE VERIFY
CIRCLED DATA



Release Code: ABUTMENTS AND DECK		BENDING DETAILS															
Rebar	Size	Length	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
16A	16	200															
16B	16	200															
16C	16	200															
16D	16	200															
16E	16	200															
16F	16	200															
16G	16	200															
16H	16	200															
16I	16	200															
16J	16	200															
16K	16	200															
16L	16	200															
16M	16	200															
16N	16	200															
16O	16	200															
16P	16	200															
16Q	16	200															
16R	16	200															
16S	16	200															
16T	16	200															
16U	16	200															
16V	16	200															
16W	16	200															
16X	16	200															
16Y	16	200															
16Z	16	200															
17A	17	200															
17B	17	200															
17C	17	200															
17D	17	200															
17E	17	200															
17F	17	200															
17G	17	200															
17H	17	200															
17I	17	200															
17J	17	200															
17K	17	200															
17L	17	200															
17M	17	200															
17N	17	200															
17O	17	200															
17P	17	200															
17Q	17	200															
17R	17	200															
17S	17	200															
17T	17	200															
17U	17	200															
17V	17	200															
17W	17	200															
17X	17	200															
17Y	17	200															
17Z	17	200															
18A	18	200															
18B	18	200															
18C	18	200															
18D	18	200															
18E	18	200															
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18P	18	200															
18Q	18	200															
18R	18	200															
18S	18	200															
18T	18	200															
18U	18	200															
18V	18	200															
18W	18	200															
18X	18	200															
18Y	18	200															
18Z	18	200															



REFERENCE DWG:
REINFORCING BARS
ASTM A615M GRADE 420 420
UNLESS NOTED
LAP ALL CONTIGUOUS BARS
#10s #11s #29s
#13s #22s #32s
#16s #60s #25s #36s
Legend:
V Vertical
H Horizontal
IF Inside Face
OF Outside Face
NF Near Face
IF Far Face
EP Each Face
SB Support Bars

NOTICE
Storages, improper fabrication or claims for any other reason must be reported to this company within a period of 15 days of delivery. This company reserves the right to field inspect prior to replacement or reconditioning of nonconforming material, and will not honor charges for work done in the field without specific authorization from this company.
REINFORCING STEEL PLACING DRAWINGS ONLY USE IN CONJUNCTION WITH CONTRACT DRAWINGS & SPECIFICATIONS. ELEVATIONS & DIMENSIONS SHOWN IN THIS DRAWING ARE FOR DETAILING PURPOSES ONLY AND SHOULD NOT BE USED FOR CONSTRUCTION UNLESS VERIFIED BY ENGINEER OR CONTRACTOR.

DATE	REV	DESCRIPTION	1/2/00	APPROVAL
BARKER STEEL CO., INC.				
PROJECT: CLARENDON BRIDGE				
LOCATION: TH-MIDDLE RD				
RUTLAND VT 05754				
ARCHITECT: DEBOS AND KING				
ENGINEER: FRANK WHITCOMB CORP.				
CUSTOMER: DEBOS AND KING				
Drawing No: 1001209				
REINFORCEMENT: RO1				