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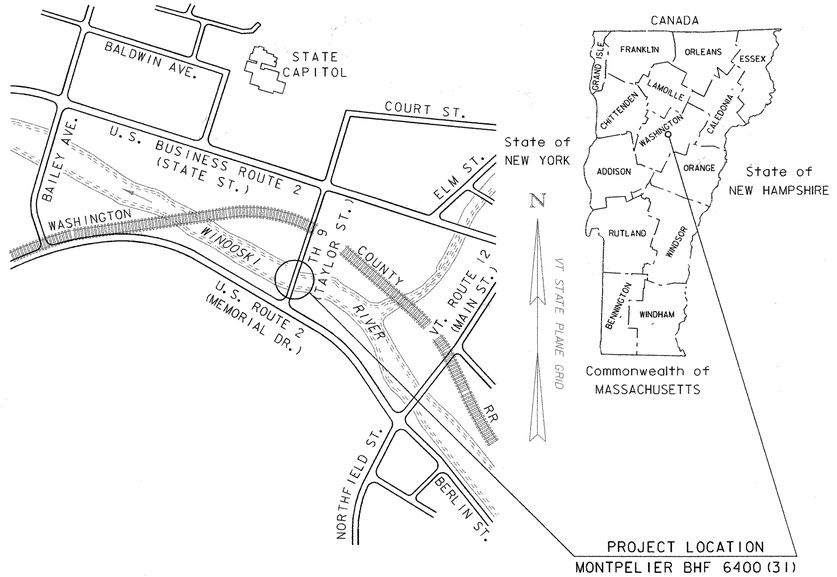
STATE OF VERMONT
AGENCY OF TRANSPORTATION



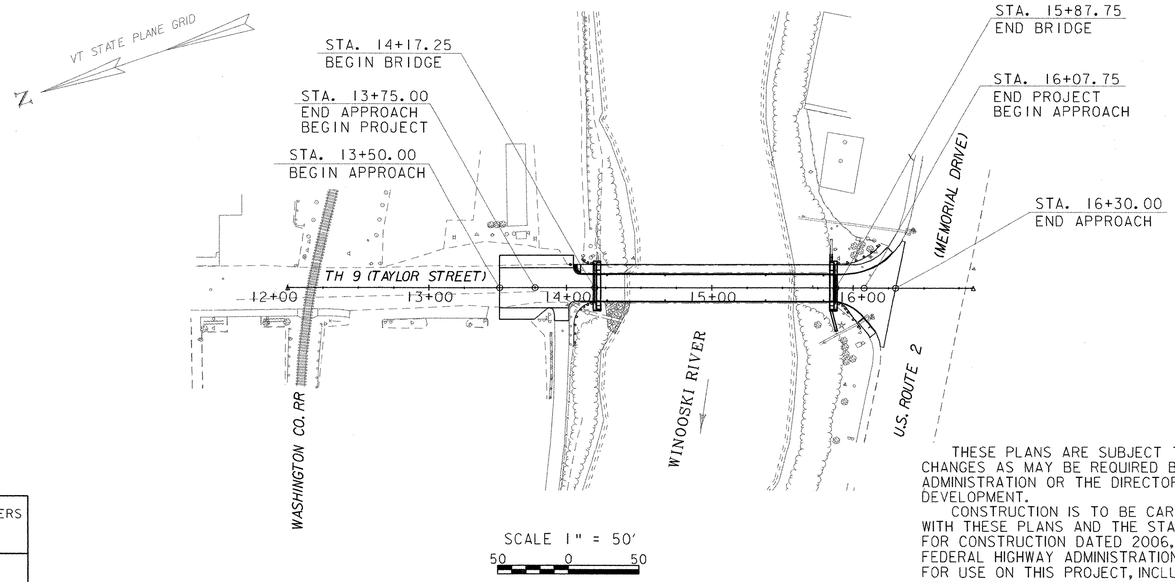
PROPOSED IMPROVEMENT
BRIDGE PROJECT
CITY OF MONTPELIER
COUNTY OF WASHINGTON

ROUTE NO : TH 9 (TAYLOR STREET) BRIDGE NO : 5 (MONTPELIER)

PROJECT LOCATION: LOCATED IN THE COUNTY OF WASHINGTON, CITY OF MONTPELIER, TH 9 (TAYLOR STREET) OVER THE WINOOSKI RIVER, APPROXIMATELY 400+/- FEET SOUTH OF THE JUNCTION OF STATE STREET AND TAYLOR STREET.

PROJECT DESCRIPTION: REHABILITATION OF THE SUPERSTRUCTURE, SUBSTRUCTURE REPAIRS AND RECONSTRUCTION OF THE APPROACHES.

LENGTH OF STRUCTURE :	170.50 FEET
LENGTH OF ROADWAY :	62.25 FEET
LENGTH OF PROJECT :	232.75 FEET



CONVENTIONAL SYMBOLS

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

STATE OF VERMONT
VINCENT N. CAMPISI
No. 9303
PROFESSIONAL ENGINEER

PLANS PREPARED BY
Vincent N. Campisi

CLOUGH HARBOUR & ASSOCIATES LLP

SURVEYED BY : R. GILMAN & P. WINTERS
SURVEYED DATE : JANUARY 20, 2005

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (96)

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

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED Richard Peterson DATE 10/5/09
PROJECT MANAGER : SUSAN SCRIBNER

PROJECT NAME : MONTPELIER
PROJECT NUMBER : BHF 6400(31)

SHEET 1 OF 63 SHEETS

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DATE/TIME =5/4/2007
USER =2552

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET

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LIST OF STANDARDS

A-80	03-31-04
C-10	02-11-08
C-3A	03-10-08
D-9	06-01-94
D-15	06-01-94
E-100	01-02-04
E-100A	01-02-04
E-101	05-30-03
E-102	06-30-03
E-102A	05-01-04
E-106	03-01-04
E-107	06-30-03
E-107A	06-08-09
E-108	06-08-09
E-110	08-08-95
E-111	03-11-97
E-121	08-08-95
E-138	05-30-03
E-164	06-08-09
E-171A	08-09-95
E-172	08-09-95
E-193	08-18-95
G-1	01-03-00
G-1D	01-03-00
G-16	06-01-94

SCOPE OF WORK

1. INSTALLATION OF TEMPORARY TRAFFIC DETOUR AND TEMPORARY SIGNAL. MODIFICATIONS OF EXISTING SIGNAL TIMING AT THE MEMORIAL/BAILEY INTERSECTION. INSTALLATION OF PEDESTRIAN DETOURS. EXISTING WATER MAIN TO BE DISCONNECTED FROM SERVICE.
2. REHABILITATION OF EXISTING ABUTMENT 1 WITHIN THE TAYLOR STREET RIGHT-OF-WAY.
3. REHABILITATION OF EXISTING ABUTMENT 2 AND WINGWALLS WITHIN THE TAYLOR STREET RIGHT-OF-WAY.
4. REHABILITATION OF EXISTING ABUTMENT 1 BEARINGS. REPLACEMENT OF EXISTING ABUTMENT 2 BEARINGS.
5. COMPLETE REPLACEMENT OF EXISTING TRUSS FLOOR SYSTEM, INCLUDING NEW CAST-IN-PLACE CONCRETE DECK AND SIDEWALK, STRINGERS, FLOORBEAMS AND CONNECTIONS.
6. REHABILITATION OF EXISTING TRUSS, INCLUDING PARTIAL REPLACEMENT OF EXISTING VERTICALS AND COMPLETE REPLACEMENT OF EXISTING BRIDGE RAIL, LOWER LATERAL BRACING AND CONNECTIONS.
7. BLAST CLEANING AND PAINTING OF ALL REMAINING EXISTING STEEL.
8. RELATED MINOR APPROACH WORK, INCLUDING NEW CAST-IN-PLACE CONCRETE APPROACH SLABS.
9. REMOVAL OF EXISTING WATER MAIN TIMBER INSULATION BOX AND EXISTING WATER MAIN. INSTALLATION OF NEW PREINSULATED, HANGER SUPPORTED WATER MAIN. CONNECTION OF NEW WATER MAIN TO EXISTING SERVICE.

CLOUGH HARBOUR & ASSOCIATES LLP

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: Sept. 2007

DRAINAGE AREA : 394 sq. mi.
CHARACTER OF TERRAIN : Hilly to mountainous
STREAM CHARACTERISTICS : Straight and stable through the bridge reach.
NATURE OF STREAMBED : Silt/sand on the banks, with cobbles and ledge in the channel.

PEAK FLOW DATA

Q 2.33 =	6,000 cfs	Q 50 =	20,700 cfs
Q 10 =	13,000 cfs	Q 100 =	24,900 cfs
Q 25 =	17,000 cfs	Q 500 =	37,200 cfs

DATE OF FLOOD OF RECORD : November 1927
ESTIMATED DISCHARGE: 57,000 cfs at the Montpelier gaging station
WATER SURFACE ELEV.: Not Available

NATURAL STREAM VELOCITY : @ Q25 = 8.5 fps
ICE CONDITIONS : Heavy
DEBRIS: Moderate
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? No
IS ORDINARY RISE RAPID? No
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
IF YES, DESCRIBE:

WATERSHED STORAGE: 2%
HEADWATERS:
UNIFORM: X
IMMEDIATELY ABOVE SITE:

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Single span steel truss bridge
YEAR BUILT: 1929
CLEAR SPAN(NORMAL TO STREAM): 162.5 ft.
VERTICAL CLEARANCE ABOVE STREAMBED: 20 ft.
WATERWAY OF FULL OPENING: 2568 sq. ft.
DISPOSITION OF STRUCTURE: Rehabilitate
TYPE OF MATERIAL UNDER SUBSTRUCTURE: Abutments founded on ledge.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	512.7 ft.	VELOCITY =	8.4 fps
Q10 =	519.9 ft.	"	7.7 fps
Q25 =	522.1 ft.	"	8.5 fps
Q50 =	524.2 ft.	"	9.0 fps
Q100 =	525.7 ft.	"	9.8 fps

LONG TERM STREAMBED CHANGES: None noted.

IS THE ROADWAY OVERTOPPED BELOW Q100: Yes
FREQUENCY: Below Q50
RELIEF ELEVATION: 523.3 ft.
DISCHARGE OVER ROAD @Q100: 3,325 cfs

UPSTREAM STRUCTURE

TOWN: Montpelier — DISTANCE: 1,000 ft.
HIGHWAY # : T.H. 2 (Main Street) — STRUCTURE #: 2
CLEAR SPAN: 2 spans at 69' each = 138' total — CLEAR HEIGHT: 19 ft.
YEAR BUILT: 1976 — FULL WATERWAY: 2,110 sq. ft.
STRUCTURE TYPE: Two-span steel beam bridge

DOWNSTREAM STRUCTURE

TOWN: Montpelier — DISTANCE: 400 ft.
HIGHWAY # : Bike Path — STRUCTURE #:
CLEAR SPAN: 167' — CLEAR HEIGHT: 21 ft.
YEAR BUILT: 1998 — FULL WATERWAY: N.A.
STRUCTURE TYPE: Single span pedestrian truss bridge

LOAD FACTOR LOAD RATING (TONS)

LOADING LEVELS	TRUCK H	HS	3S2	6 AXLE	3A. STR.	4A. STR.	5A. SEMI
INVENTORY (A=2.17;B=1.00)	21	37					
POSTED (A=1.55;B=1.40)	29	52					
OPERATING (A=1.30;B=1.67)	28	51					

COMMENTS: Strength RF = $\Phi M_N - 1.3\ M_{DL} / A \times M_{LL+I}$

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2007	3300	340	60	1	33
2027	3700	380	60	1	37

20 year ESAL for flexible pavement from N/A to N/A : N/A
40 year ESAL for flexible pavement from N/A to N/A : N/A
Design Speed : 25 mph

PROPOSED STRUCTURE

STRUCTURE TYPE: Rehabilitate existing single span truss bridge

CLEAR SPAN(NORMAL TO STREAM): 162.0 ft.
VERTICAL CLEARANCE ABOVE STREAMBED: 20 ft.
WATERWAY OF FULL OPENING: 2566 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	512.7 ft.	VELOCITY=	8.4 fps
Q10 =	519.9 ft.	"	7.7 fps
Q25 =	522.1 ft.	"	8.5 fps
Q50 =	524.2 ft.	"	9.0 fps
Q100 =	525.7 ft.	"	9.8 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: Yes
FREQUENCY: Below Q50
RELIEF ELEVATION: 523.3 ft.
DISCHARGE OVER ROAD @Q100: 3,330 cfs

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 523.2 ft.
VERTICAL CLEARANCE: @ Q25 = 1.1 ft.

SCOUR: No contraction scour calculated in the main channel up to Q500. Abutments are set back from the channel and founded on ledge. Scour will be limited by ledge.
REQUIRED CHANNEL PROTECTION: Stone Fill, Type II, as needed

PERMIT INFORMATION

AVERAGE DAILY FLOW:	800 cfs	DEPTH OR ELEVATION:
ORDINARY LOW WATER:	350 cfs	Elev. 506.0'
ORDINARY HIGH WATER:	2600 cfs	Elev. 509.0'

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: No temporary bridge required.
CLEAR SPAN (NORMAL TO STREAM):
VERTICAL CLEARANCE ABOVE STREAMBED:
WATERWAY AREA OF FULL OPENING:

ADDITIONAL INFORMATION

The hydrology and hydraulics in this Final Hydraulics Report are based on information in the 1981 Flood Insurance Study for Montpelier.

DESIGN CRITERIA

1. DESIGN LIVE LOAD AASHTO HS -20
2. DESIGN SPAN 165'-0"
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL N/A
   ON LEDGE N/A
4. ALLOWABLE LOAD FOR PILING N/A
   TYPE N/A
   ESTIMATED LENGTH N/A
5. STRUCTURAL STEEL AASHTO M270M/M270 GRADE 50 PAINTED (NEW STEEL)
   F_y=30 KSI (ASSUMED) (EXIST. STEEL TO REMAIN)
6. REINFORCING STEEL GRADE 60
7. CONCRETE, HIGH PERFORMANCE CLASS A f'c: 4000 psi
   CONCRETE, HIGH PERFORMANCE CLASS B f'c: 3500 psi
8. DESIGN SOIL UNIT WEIGHT 140 pcf
9. DESIGN LOAD FOR SPREAD FOOTINGS ON SOIL N/A

TRAFFIC MAINTENANCE

1. IS TRAFFIC TO BE MAINTAINED? NO (OFF-SITE DETOUR)
   IF YES, ON EXISTING STRUCTURE? N/A
   OR ON TEMPORARY BRIDGE? N/A
   ONE OR TWO-WAY TRAVEL? N/A
2. TRAFFIC CONTROL SIGNALS REQUIRED? YES (AT OFF-SITE INTERSECTION)
3. ARE SIDEWALKS REQUIRED? NO
   IF SO, ON WHAT SIDE? N/A

PROJECT NAME: **MONTPELIER**
PROJECT NUMBER: **BHF 6400(31)**

FILE NAME: **14506_PRELIM_INFO.XLS** — PLOT DATE: **6/26/2008**
PROJECT LEADER: **S. SCRIBNER** — DRAWN BY: **D. D'AMATO**
DESIGNED BY: **D. D'AMATO** — CHECKED BY: **P. HALSTEAD**
PRELIMINARY INFORMATION SHEET — SHEET **2** OF **63**

QUANTITY SHEET 1

STATE OF VERMONT
AGENCY OF TRANSPORTATION

SUMMARY OF ESTIMATED QUANTITIES

UTILITY	EMPLOYEE TRAINEESHIP	FULL C.E.	EROSION CONTROL	BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
					285	285	CY	COMMON EXCAVATION	203.15	
					1	1	CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	
				55		55	CY	STRUCTURE EXCAVATION	204.25	
				45		45	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	
					220	220	SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	
					220	220	CY	SUBBASE OF CRUSHED GRAVEL, COARSE GRADED	301.25	
					3	3	CWT	EMULSIFIED ASPHALT	404.65	
					1	1	LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	
				125		125	CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34	
				1		1	LS	SHORING SUPERSTRUCTURE	502.10	
				70,500		70,500	LB	STRUCTURAL STEEL, ROLLED BEAM	506.50	
				23,500		23,500	LB	STRUCTURAL STEEL	506.60	EST
				2,000		2,000	LB	REINFORCING STEEL	507.15	
				300		300	LF	DRILLING AND GROUTING DOWELS	507.16	
				41,000		41,000	LB	EPOXY COATED REINFORCING STEEL	507.17	
				1		1	LS	SHEAR CONNECTORS (850 - 7/8" X 7")	508.15	
				1		1	LS	SHEAR CONNECTORS (200 - 1/2" X 8")	508.15	
				1		1	LS	STRUCTURAL PAINTING, SHOP APPLIED	513.25	
				1		1	LS	STRUCTURAL PAINTING, FIELD APPLIED	513.30	
				1		1	LS	CONTAINMENT & ENVIRONMENTAL PROTECTION, FIELD	513.36	
				1		1	LS	SURFACE PREPARATION, SHOP	513.40	
				1		1	LS	SURFACE PREPARATION, FIELD	513.41	
				30		30	GAL	WATER REPELLENT, SILANE	514.10	
				28		28	LF	BRIDGE EXPANSION JOINT, VERMONT	516.11	
				375		375	SY	SHEET MEMBRANE WATERPROOFING, TORCH APPLIED	519.20	
				60		60	LF	JOINT SEALER, HOT POURED	524.11	
				375		375	SY	REMOVAL OF BRIDGE PAVEMENT	529.10	
				1		1	EA	PARTIAL REMOVAL OF STRUCTURE	529.20	
				50		50	CY	REMOVAL OF CONCRETE OR MASONRY	529.25	
				60		60	SY	REMOVAL OF CONCRETE OR MASONRY	529.26	EST
				2		2	EA	BEARING DEVICE ASSEMBLY, POT	531.12	
					1	1	EA	CHANGING ELEVATION OF DROP INLETS, CATCH BASINS, OR MANHOLES	604.40	

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		SPECIAL PROVISION
		(BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)
66	TON	WEARING COURSE (TYPE IVS)
60	TON	LEVELING COURSE (TYPE IVS)
26	TON	BASE COURSE (TYPE IIS)
16	TON	DRIVES/REC. PATH
2	TON	ROUNDING
170	TON	TOTAL

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		COMMON EXCAVATION
160	CY	NORTH APPROACH
123	CY	SOUTH APPROACH
2	CY	SIDEWALK/CURB REMOVAL (15+93.5 - 16+07.5 RT)
285	CY	TOTAL

QUANTITY SHEET (1)

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD

PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 3 OF 63

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DATE/TIME = 10/12/2009
USER = 2552

QUANTITY SHEET 2

STATE OF VERMONT
AGENCY OF TRANSPORTATION

SUMMARY OF ESTIMATED QUANTITIES

UTILITY	EMPLOYEE TRAINEESHIP	FULL C.E.	EROSION CONTROL	BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
					1	1	EA	REHAB. DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS I	604.412	
				50		50	CY	STONE FILL, TYPE II	613.11	EST
					111	111	LF	CAST-IN-PLACE CONCRETE CURB, TYPE B	616.28	
					49	49	SY	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	618.10	
					15	15	SF	DETECTABLE WARNING SURFACE	618.30	
					124.6	124.6	LF	HD STEEL BEAM GUARDRAIL, GALVANIZED	621.21	
					2	2	EA	TERMINAL CONNECTOR FOR STEEL BEAM GUARDRAIL	621.53	
					4	4	EA	ANCHOR FOR STEEL BEAM RAIL	621.60	
					49	49	LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80	
					250	250	LF	TEMPORARY TRAFFIC BARRIER	621.90	
1						1	EA	GATE VALVE WITH VALVE BOX	629.27	
					400	400	HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST
					600	600	HR	FLAGGERS	630.15	EST
		1				1	LS	FIELD OFFICE, ENGINEERS	631.10	
		1				1	LS	TESTING EQUIPMENT, CONCRETE	631.16	
		1				1	LS	TESTING EQUIPMENT, BITUMINOUS	631.17	
		1				1	LS	TESTING EQUIPMENT, PROTECTIVE COATINGS	631.18	
		1				1	LU	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.25	
	520					520	HR	EMPLOYEE TRAINEESHIP	634.10	
					1	1	LS	MOBILIZATION/DEMOBILIZATION	635.11	
					1	1	LS	TRAFFIC CONTROL	641.10	
					2	2	EA	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	
					230	230	LF	DURABLE 4 INCH WHITE LINE, THERMOPLASTIC	646.402	
					520	520	LF	DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC	646.412	
					5	5	LF	DURABLE 12 INCH WHITE LINE, THERMOPLASTIC	646.462	
					17	17	LF	DURABLE 24 INCH STOP BAR, THERMOPLASTIC	646.482	
					60	60	LF	DURABLE CROSSWALK MARKING, THERMOPLASTIC	646.502	
					150	150	SF	PAVEMENT MARKING MASK	646.86	EST
				125		125	SY	GEOTEXTILE UNDER STONE FILL	649.31	EST
			52			52	SY	GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED	649.515	
			165			165	SY	GEOTEXTILE FOR FILTER CURTAIN	649.61	2
					20	20	LB	SEED	651.15	EST
					125	125	LB	FERTILIZER	651.18	EST
					1	1	TON	AGRICULTURAL LIMESTONE	651.20	EST
					10	10	CY	TOPSOIL	651.35	

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

QUANTITY SHEET (2)

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

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FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD

PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 4 OF 63

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USER =2552

QUANTITY SHEET 3

STATE OF VERMONT
AGENCY OF TRANSPORTATION

SUMMARY OF ESTIMATED QUANTITIES

UTILITY	EMPLOYEE TRAINEESHIP	FULL C.E.	EROSION CONTROL	BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
			1			1	LS	EPSC PLAN	652.10	
			350			350	HR	MONITORING EPSC PLAN	652.20	EST
			1			1	LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30	
			350			350	SY	TEMPORARY EROSION MATTING	653.20	EST
			150			150	CY	VEHICLE TRACKING PAD	653.35	
			185			185	LF	PROJECT DEMARCATION FENCE	653.55	3
					85.5	85.5	SF	TRAFFIC SIGN, TYPE A	675.20	
					176	176	LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341	
					11	11	EA	REMOVING SIGNS	675.50	
					6	6	EA	ERECTING SALVAGED SIGNS	675.60	
					1	1	EA	TEMPORARY TRAFFIC SIGNAL SYSTEM	678.40	
				125		125	CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT)	900.608	
				100		100	EA	SPECIAL PROVISION (THROUGH TRUSS RIVET REPLACEMENT)	900.620	EST
1						1	LS	SPECIAL PROVISION (WATER MAIN ON BRIDGE) (8")	900.645	
					1	1	LU	SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY) (N.A.B.I.)	900.650	
					1	1	LU	SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT) (N.A.B.I.)	900.650	
					170	170	TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680	2

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

QUANTITY SHEET (3)

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD

PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 5 OF 63

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USER =2552

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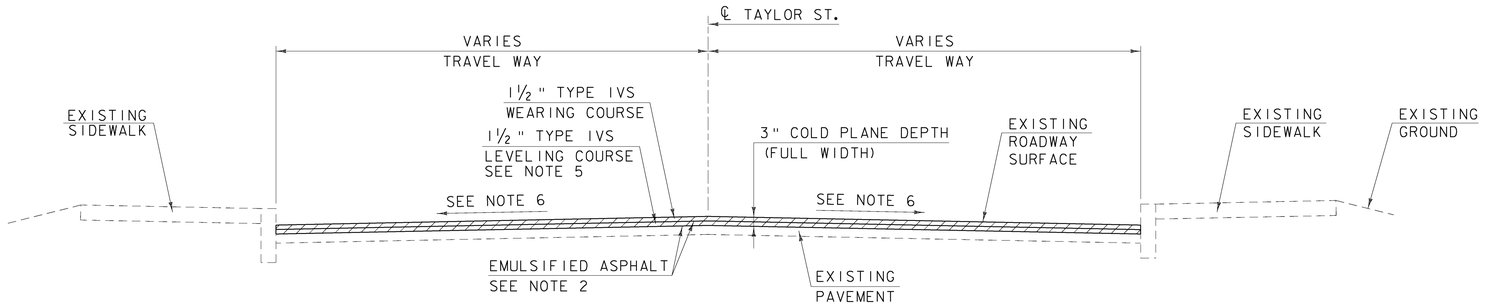
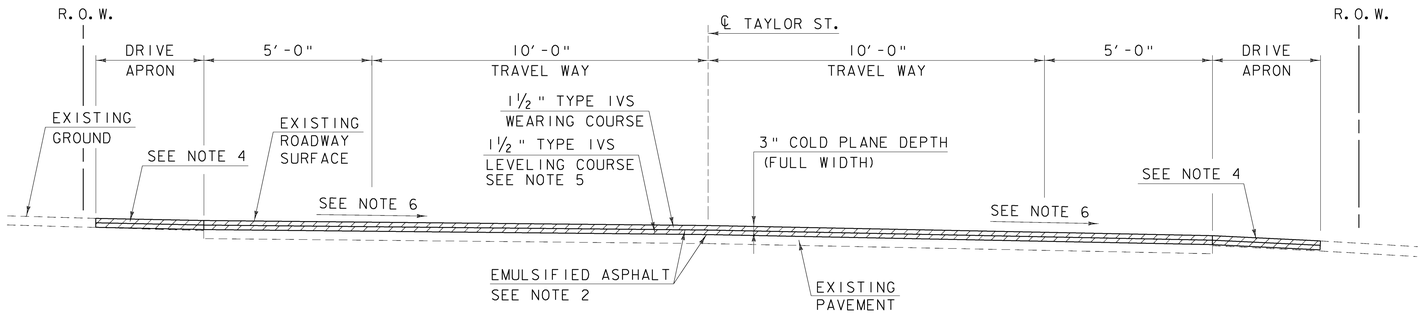


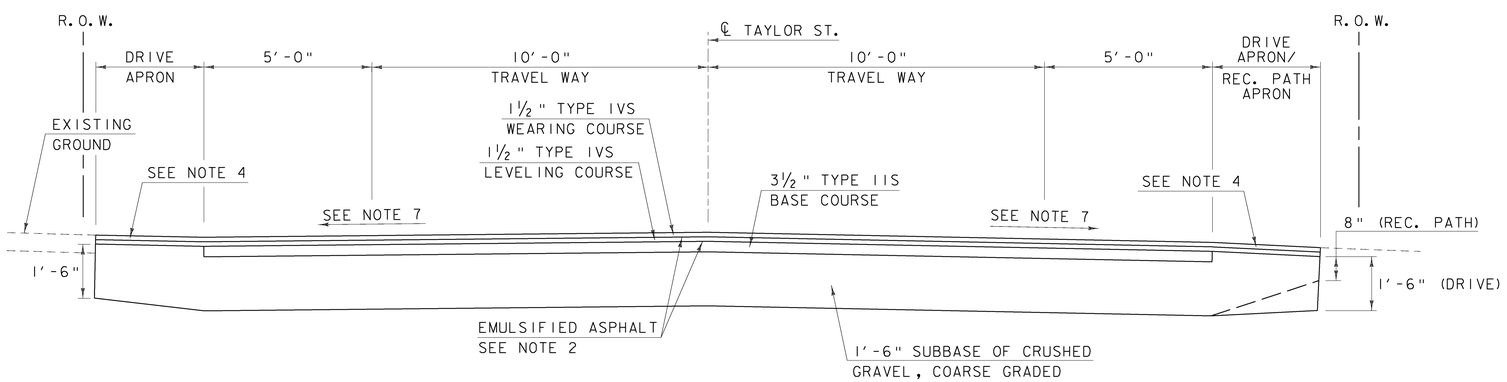
TYPICAL SECTION - SOUTH APPROACH

STA. 16+07.75 TO STA. 16+30.00



TYPICAL SECTION - NORTH APPROACH

STA. 13+50.00 TO STA. 13+75.00



TYPICAL ROADWAY SECTION

STA. 13+75.00 TO STA. 13+97.25

NOTES:

1. THE WEARING COURSE AND LEVELING COURSE SHALL BE TYPE IVS SUPERPAVE BITUMINOUS CONCRETE PAVEMENT. THE BASE COURSE SHALL BE TYPE IIS SUPERPAVE BITUMINOUS CONCRETE PAVEMENT. ASPHALT CEMENT USED IN THE BITUMINOUS CONCRETE PAVEMENT SHALL BE IN ACCORDANCE WITH SECTION 900-BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY OF THE SPECIAL PROVISIONS.
2. EMULSIFIED ASPHALT SHALL BE APPLIED ON ALL EXISTING PAVEMENT SURFACES, BETWEEN ALL COURSES OF PAVEMENT AND ON COLD PLANED SURFACES AT THE RATE OF 0.025 GAL/SY OR AS DIRECTED BY THE RESIDENT ENGINEER.
3. SUPERPAVE BITUMINOUS CONCRETE PAVEMENT TOLERANCE = +/- ¼" (TOTAL PAVEMENT THICKNESS EXCLUDING LEVELING).
4. DRIVE APRONS AND RECREATIONAL PATH APRON THAT ARE WITHIN THE LIMITS OF RECONSTRUCTION SHALL BE RECONSTRUCTED TO THE DIMENSIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER. DRIVE APRONS THAT ARE WITHIN LIMITS OF PROJECT APPROACHES SHALL BE COLD PLANED AND RESURFACED TO THE DIMENSIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER. A NEW 3" BITUMINOUS SURFACE CONSISTING OF TWO LIFTS OF TYPE IVS PAVEMENT SHALL BE PROVIDED FOR ALL APRONS AND WILL BE PAID FOR UNDER ITEM 900.680 SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY).
5. SEE PAVEMENT TERMINATION DETAILS ON SHEET 10 FOR LIMITS OF THE LEVELING COURSE ON THE NORTH AND SOUTH APPROACHES.
6. MODIFY LEVELING COURSE AND/OR COLD PLANE DEPTH AS DIRECTED BY THE RESIDENT ENGINEER TO TRANSITION CROSS SLOPE FROM EXISTING PAVEMENT CROSS SLOPE TO NORMAL CROWN AT BRIDGE. SEE ROADWAY CROSS SECTIONS FOR CROSS SLOPE INFORMATION.
7. SEE ROADWAY CROSS SECTIONS FOR CROSS SLOPE INFORMATION.

SEEDING FORMULA

RATE: DOUBLE IF HYDROSEEDING

% WT	LBS./A.	NAME	PUR. %	GERM. %
38	32	CREEPING RED FESCUE	98	90
29	24	SPARTAN HARD FESCUE	95	85
15	12	AZAY SHEEP'S FESCUE	95	87
15	12	ANNUAL RYE GRASS	95	90
3	--	INERTS	--	--
100.0	80 LB/A			

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

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

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

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

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

NOT TO SCALE

CLOUGH HARBOUR & ASSOCIATES LLP

PROJECT TYPICAL SECTIONS (1)

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

FILE NAME: $FILES$ | PLOT DATE: 10/12/2009
PROJECT MANAGER: SUSAN SCRIBNER | DRAWN BY: D. D'AMATO
DESIGNED BY: D. D'AMATO | CHECKED BY: P. PERKINS
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD | SHEET 8 OF 63

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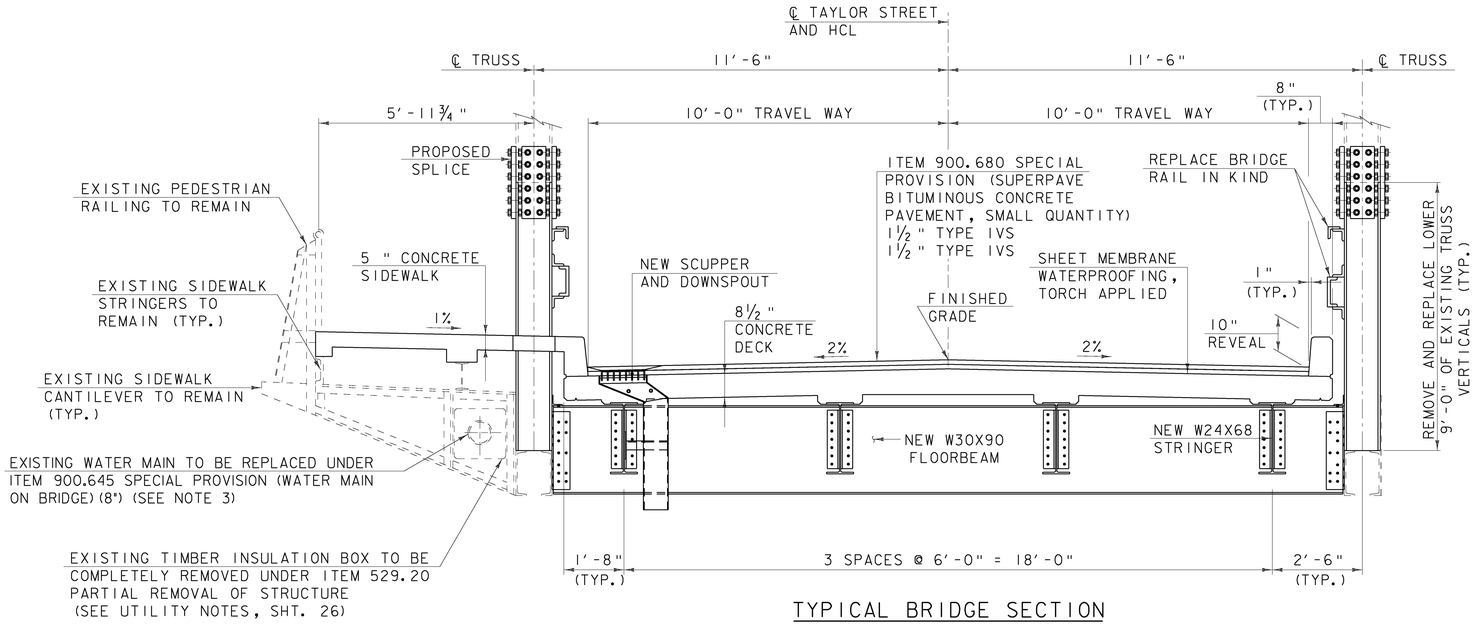


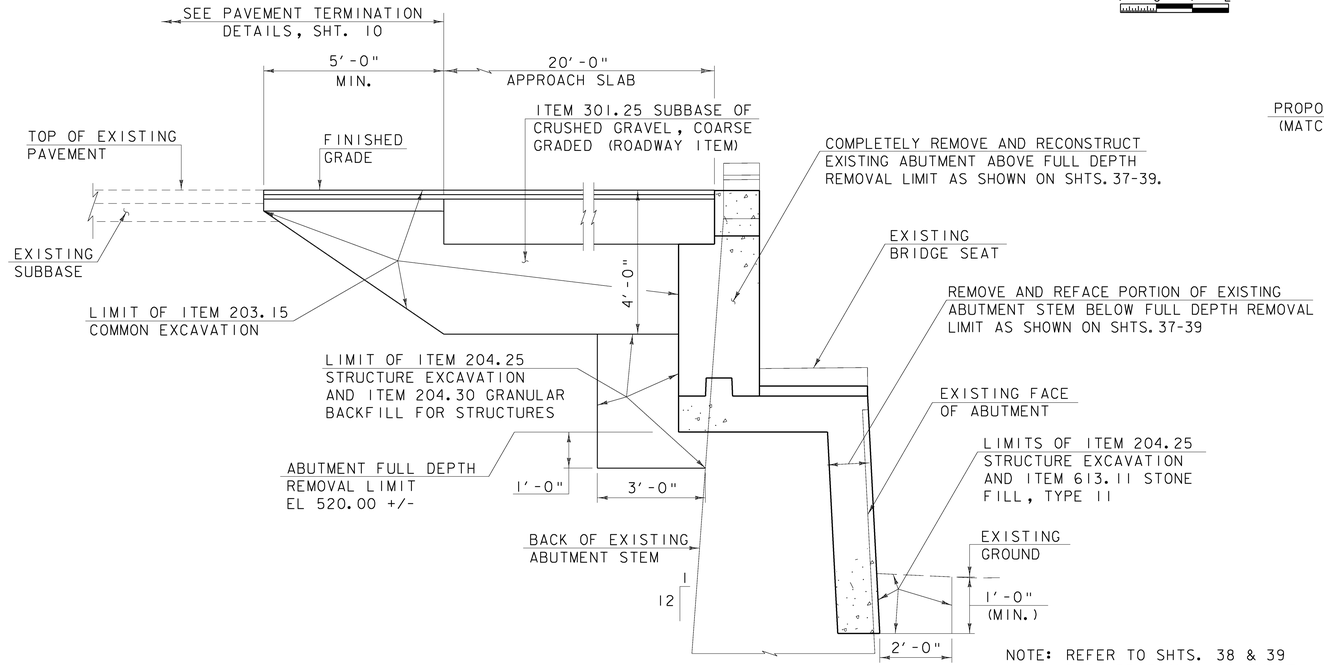
TYPICAL BRIDGE SECTION

SCALE ½" = 1'-0"

0 1 2

NOTES:

1. ALL EXISTING STEEL TO REMAIN SHALL BE CLEANED TO BARE METAL AND PAINTED.
2. REFER TO SHTS. 25 AND SHTS. 29-31 FOR STRUCTURAL STEEL RELATED WORK DESCRIPTIONS AND PAYMENT.
3. FOR REQUIREMENTS RELATED TO WATER MAIN WORK, SEE UTILITY NOTES, SHT. 26.



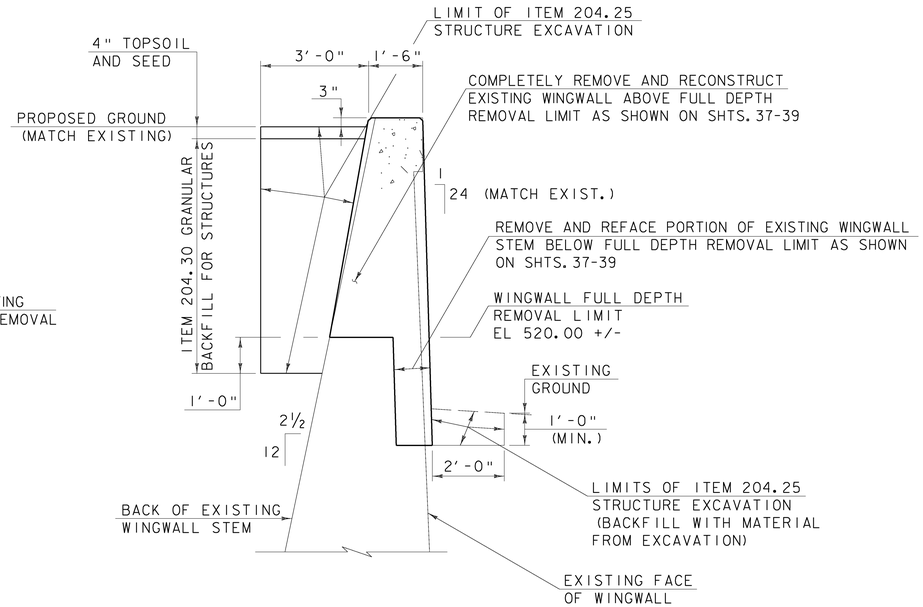
TYPICAL ABUTMENT SECTION

SOUTH ABUTMENT SHOWN
NORTH ABUTMENT SIMILAR

SCALE ½" = 1'-0"

0 1 2

NOTE: REFER TO SHTS. 38 & 39 FOR ADDITIONAL ABUTMENT DETAILS



TYPICAL WINGWALL SECTION

(ABUT. 2 ONLY)

SCALE ½" = 1'-0"

0 1 2

PROJECT TYPICAL SECTIONS (2)

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

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FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD

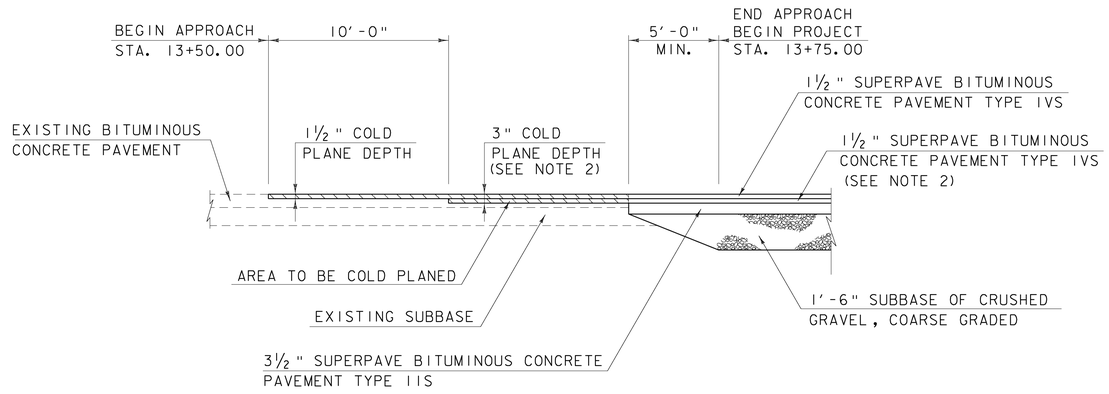
PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 9 OF 63

FILE NAME = k:\14586\mstr\plans\zs14586_typsect-2.dgn
DATE/TIME = 10/12/2009
USER = zs552

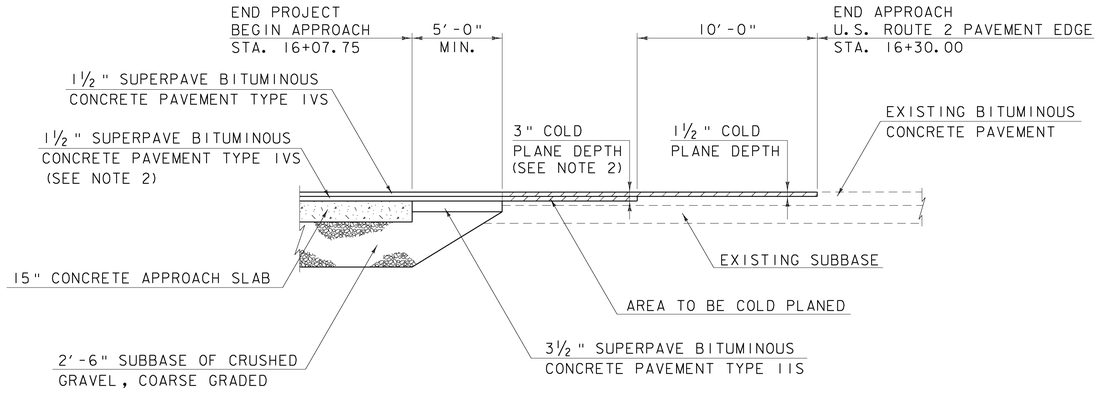
NOTES:

1. NEW CONCRETE CURB SHALL BE SHALL BE CAST-IN-PLACE, TYPE B AND SHALL BE INSTALLED WHERE INDICATED ON THE PLANS. CURB HEIGHT SHALL BE TRANSITIONED AS DIRECTED BY THE RESIDENT ENGINEER TO MATCH PROPOSED BRIDGE CURB AND EXISTING CONCRETE CURB WHERE NECESSARY.

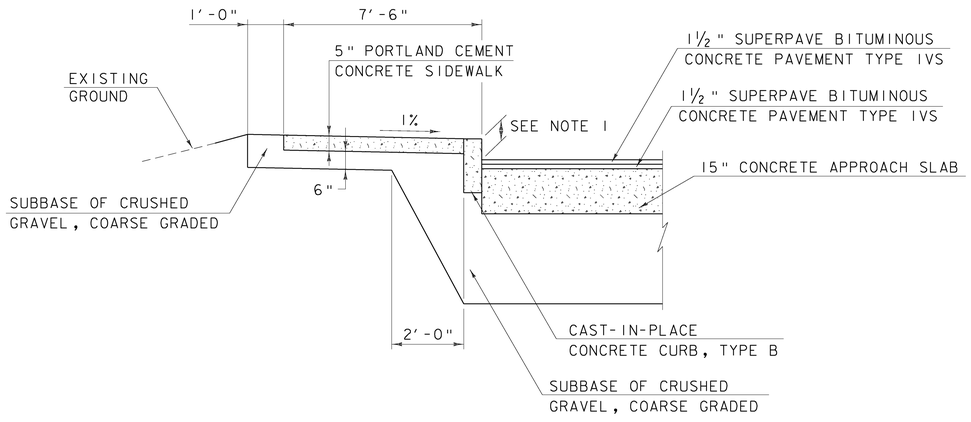
2. MODIFY LEVELING COURSE AND/OR COLD PLANE DEPTH AS DIRECTED BY THE RESIDENT ENGINEER TO TRANSITION CROSS SLOPE FROM EXISTING PAVEMENT CROSS SLOPE TO NORMAL CROWN AT BRIDGE. SEE ROADWAY CROSS SECTIONS FOR ADDITIONAL DETAILS.



PAVEMENT TERMINATION DETAIL
BEGIN PROJECT



PAVEMENT TERMINATION DETAIL
END PROJECT



CONCRETE CURB & SIDEWALK DETAIL

ROADWAY PAVING DETAILS

NOT TO SCALE

CLOUGH HARBOUR & ASSOCIATES LLP

PROJECT NAME: MONTPELIER	
PROJECT NUMBER: BHF 6400(31)	
FILE NAME: $FILES$	PLOT DATE: 10/12/2009
PROJECT MANAGER: SUSAN SCRIBNER	DRAWN BY: D. D'AMATO
DESIGNED BY: D. D'AMATO	CHECKED BY: P. PERKINS
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD	SHEET 10 OF 63

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USER =2552

STATE OF VERMONT
AGENCY OF TRANSPORTATION

ITEM DETAIL SHEET

CURB

BEGIN STATION	END STATION	POSITION LEFT FT	POSITION RIGHT FT	REMARKS
ITEM 616.28 CAST-IN-PLACE CONCRETE CURB, TYPE B				
14+02.3	14+17.3	20		
14+07.3	14+17.3		10	
15+88.8	16+28.0	45		
15+88.8	16+16.3		36	
SUBTOTAL (LT & RT)			111	
ROUNDING			-	
TOTAL			111	

SIDEWALK

BEGIN STATION	END STATION	POSITION LEFT SY	POSITION RIGHT SY	REMARKS
ITEM 618.10 PORTLAND CEMENT CONCRETE SIDEWALK, 5 IN				
14+02.3	14+17.3	12		
15+88.8	16+28.0	28		
16+07.8	16+16.3		9	
SUBTOTAL		49		
ROUNDING		-		
TOTAL		49		

DETECTABLE WARNING SURFACE

BEGIN STATION	END STATION	POSITION LEFT SF	POSITION RIGHT SF	REMARKS
ITEM 618.30 DETECTABLE WARNING SURFACE				
14+02.5		15		
SUBTOTAL		15		
ROUNDING		-		
TOTAL		15		

GUARD RAIL

BEGIN STATION	END STATION	POSITION LEFT FT	POSITION RIGHT FT	END TREATMENT BEGIN EA	END TREATMENT END EA
ITEM 621.21 HD STEEL BEAM GUARDRAIL, GALVANIZED					
14+02.5	14+18.0		44.5*		
14+08.0	14+17.0	12.8*			
END ROUNDED W-BEAM END SECTION FOR GUARDRAIL AT BEGIN OF EXISTING BRIDGE PEDESTRIAN RAILING					
15+88.0	16+05.0		32.0*		
15+88.0	16+19.5	35.3*			
BEGIN ROUNDED W-BEAM END SECTION FOR GUARDRAIL AT END OF EXISTING BRIDGE PEDESTRIAN RAILING					
SUBTOTAL (LT & RT)		124.6			
ROUNDING		-			
TOTAL		124.6			
ITEM 621.53 TERMINAL CONNECTOR FOR STEEL BEAM GUARDRAIL					
14+18.0	14+20.0 RT				1
CONNECT TO BRIDGE RAIL AT STA. 14+20.0. SEE STD. G-16 FOR DETAILS.					
15+86.0	15+88.0 RT			1	
CONNECT TO BRIDGE RAIL AT STA. 15+86.0. SEE STD. G-16 FOR DETAILS.					
SUBTOTAL (BEGIN & END)					2
ROUNDING					-
TOTAL					2
ITEM 621.60 ANCHOR FOR STEEL BEAM RAIL					
14+02.5 RT				1	
15+97.0 LT				1	
16+00.0 RT					1
16+12.0 LT					1
SUBTOTAL (BEGIN & END)					4
ROUNDING					-
TOTAL					4

* PAY LENGTH INCLUDES ROUNDED W-BEAM END SECTION(S) AND PAYMENT FACTORS. SEE STD. G-1 AND G-1D FOR DETAILS.

UNDERDRAIN

BEGIN STATION	END STATION	TYPE	POSITION	DIA. IN	LENGTH FT	TRENCH EARTH CF	TRENCH ROCK CF	GRAN BKFILL CF	FB EA	MKR PST EA

PROJECT NAME: **MONTPELIER**
PROJECT NUMBER: **BHF 6400(31)**

FILE NAME: **14506_ItemDetail.xls**
PROJECT LEADER: **SUSAN SCRIBNER**
DESIGNED BY: **J. PARKER**
ITEM DETAIL SHEET

PLOT DATE: **6/26/2008**
DRAWN BY: **J. PARKER**
CHECKED BY: **D. GOZALKOWSK**
SHEET **11** OF **63**

GPS CONTROL POINTS

HVCTRL #1

DESIGNATION

"A93010 RESET"

N = 641922.2233

E = 1618150.8910

ELEV. = 520.250

GENERAL LOCATION, MONTPELIER, VT. TO REACH FROM THE INTERSECTION OF U.S. ROUTE 2 AND VT ROUTE 12 IN MONTPELIER GO WEST ALONG U.S. ROUTE 2 FOR 0.4 MI (0.6 KM) TO THE INTERSECTION OF BAILEY AVENUE RIGHT. TURN RIGHT AND GO NORTH ALONG BAILEY AVENUE FOR 0.05 MI (0.08 KM) TO THE SOUTH END OF THE BAILEY AVENUE BRIDGE OVER THE WINOOSKI RIVER AND THE MARK ON THE RIGHT IN THE TOP OF THE ABUTMENT AT THE SOUTHEAST CORNER OF THE BRIDGE. THE MARK IS 0.1 M (0.3 FT) NORTH OF THE SOUTH END OF THE ABUTMENT AND 0.1 M (0.3 FT) WEST OF THE EAST EDGE OF THE ABUTMENT.

HVCTRL #5

DESIGNATION

"MAY"

N = 640754.2007

E = 1620031.163

ELEV. = 526.77

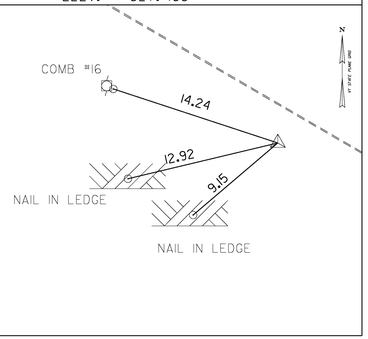
GENERAL LOCATION, MONTPELIER, 9 KM (5.60 MI) NORTHWEST OF BARRE, 13 KM (8.05 MI) NORTH NORTHEAST OF NORTHFIELD.
THE MARK IS IN THE NORTHEAST QUADRANT OF THE INTERSECTION OF US ROUTE 2 AND MAIN STREET IN MONTPELIER, AND SET IN THE SOUTHEAST END OF A MASSIVE RETAINING WALL.
THE STATION IS LOCATED 36.6 FT (11.2 M) (SLOPE) FROM THE SOUTHEAST MOST STEEL GUARDRAIL POST FOR A 3 CABLE STEEL GUARDRAIL, 1.6 FT (0.5 M) SOUTHWEST OF THE SOUTHEAST (RIVER) FACE OF THE RETAINING WALL, AND 1.4 FT (0.4 M) SOUTHEAST OF THE SOUTHWEST FACE OF THE RETAINING WALL.

* DESCRIPTION PROVIDED BY VERMONT AGENCY OF TRANSPORTATION GEODETIC SURVEY UNIT

TRAVERSE TIES

HVCTRL #3

NORTH = 641189.377
EAST = 1619425.749
ELEV. = 527.453



HVCTRL #4

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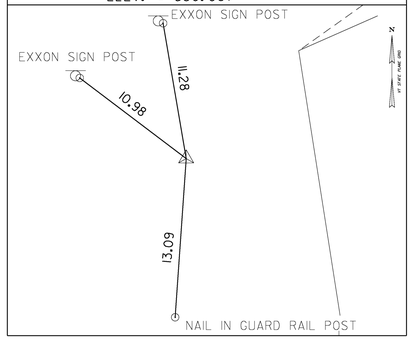
EAST = 1619893.126
ELEV. = 530.867



NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

* MAIN TRAVERSE COMPLETED: JAN 20, 2005 BY R.GILMAN & P.WINTERS

ALIGNMENT TIES

POB STA. 12+00.00

NORTH = 641654.227
EAST = 1619566.287

ALIGNMENT
NOT STAKED

POL STA. 15+00.00

NORTH = 641369.785
EAST = 1619470.932

ALIGNMENT
NOT STAKED

POL STA. 16+54.84

NORTH = 641222.474
EAST = 1619421.717

ALIGNMENT
NOT STAKED

POE STA. 16+85.00

NORTH = 641194.379
EAST = 1619412.131

ALIGNMENT
NOT STAKED

DATUM

VERTICAL NAVD88

HORIZONTAL NAD 83 (96)

ADJUSTMENT Compass

* ALIGNMENT STAKED:

TIE SHEET

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD

PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 12 OF 63

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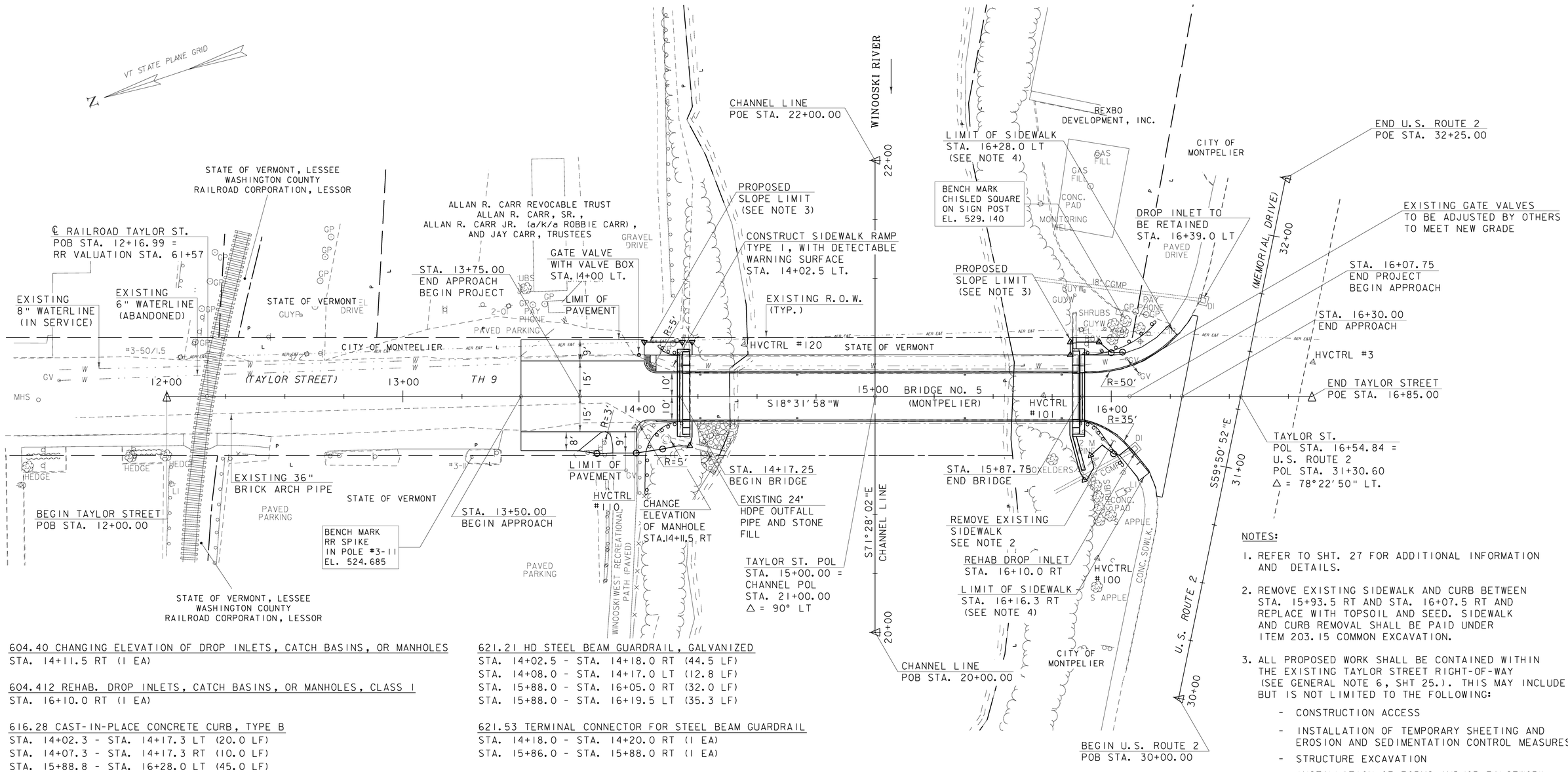

604.40 CHANGING ELEVATION OF DROP INLETS, CATCH BASINS, OR MANHOLES
STA. 14+11.5 RT (1 EA)

604.412 REHAB. DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS I
STA. 16+10.0 RT (1 EA)

616.28 CAST-IN-PLACE CONCRETE CURB, TYPE B
STA. 14+02.3 - STA. 14+17.3 LT (20.0 LF)
STA. 14+07.3 - STA. 14+17.3 RT (10.0 LF)
STA. 15+88.8 - STA. 16+28.0 LT (45.0 LF)
STA. 15+88.8 - STA. 16+16.3 RT (36.0 LF)

618.10 PORTLAND CEMENT CONCRETE SIDEWALK, 5 IN.
STA. 14+02.3 - STA. 14+17.3 LT (12 SY)
STA. 15+88.8 - STA. 16+28.0 LT (28 SY)
STA. 16+07.8 - STA. 16+16.3 RT (9 SY)

618.30 DETECTABLE WARNING SURFACE
STA. 14+02.5 LT (15 SF)

621.21 HD STEEL BEAM GUARDRAIL, GALVANIZED
STA. 14+02.5 - STA. 14+18.0 RT (44.5 LF)
STA. 14+08.0 - STA. 14+17.0 LT (12.8 LF)
STA. 15+88.0 - STA. 16+05.0 RT (32.0 LF)
STA. 15+88.0 - STA. 16+19.5 LT (35.3 LF)

621.53 TERMINAL CONNECTOR FOR STEEL BEAM GUARDRAIL
STA. 14+18.0 - STA. 14+20.0 RT (1 EA)
STA. 15+86.0 - STA. 15+88.0 RT (1 EA)

621.60 ANCHOR FOR STEEL BEAM RAIL
STA. 14+02.5 RT (1EA)
STA. 15+97.0 LT (1EA)
STA. 16+00.0 RT (1EA)
STA. 16+12.0 LT (1EA)

621.80 REMOVAL AND DISPOSAL OF GUARDRAIL
STA. 15+89.0 - STA. 16+01.0 LT (12 LF)
STA. 15+88.0 - STA. 15+98.0 RT (12 LF)
STA. 14+00.0 - STA. 14+16.3 RT (25 LF)

629.27 GATE VALVE WITH VALVE BOX
STA. 14+00.0 LT (1EA)

EXISTING BRIDGE DATA

STEEL PARKER THROUGH TRUSS
CONCRETE ABUTMENTS AND WINGWALLS
OVERALL LENGTH = 170'-3"
TRUSS SPAN ℄ BRG.- ℄ BRG. = 165'-0"
℄ TO ℄ TRUSS WIDTH = 23'-0"
CURB TO CURB WIDTH = 20'-0"
CLEAR SIDEWALK WIDTH = 5'-0"
VERTICAL CLEARANCE = 20'-0"
YEAR BUILT = 1929

NOTES:

1. REFER TO SHT. 27 FOR ADDITIONAL INFORMATION AND DETAILS.
2. REMOVE EXISTING SIDEWALK AND CURB BETWEEN STA. 15+93.5 RT AND STA. 16+07.5 RT AND REPLACE WITH TOPSOIL AND SEED. SIDEWALK AND CURB REMOVAL SHALL BE PAID UNDER ITEM 203.15 COMMON EXCAVATION.
3. ALL PROPOSED WORK SHALL BE CONTAINED WITHIN THE EXISTING TAYLOR STREET RIGHT-OF-WAY (SEE GENERAL NOTE 6, SHT 25.). THIS MAY INCLUDE, BUT IS NOT LIMITED TO THE FOLLOWING:
   - CONSTRUCTION ACCESS
   - INSTALLATION OF TEMPORARY SHEETING AND EROSION AND SEDIMENTATION CONTROL MEASURES
   - STRUCTURE EXCAVATION
   - INSTALLATION OF FORMS AND/OR FALSEWORK
   - PLACEMENT OF REINFORCING STEEL AND CONCRETE
4. END LIMIT OF NEW SIDEWALK SHALL BE ADJUSTED TO MATCH BEGIN LIMIT OF EXISTING SIDEWALK RAMP AS DIRECTED BY THE RESIDENT ENGINEER.

SCALE 1" = 20'
20 0 20

LAYOUT PLAN

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

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FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD
PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 13 OF 63

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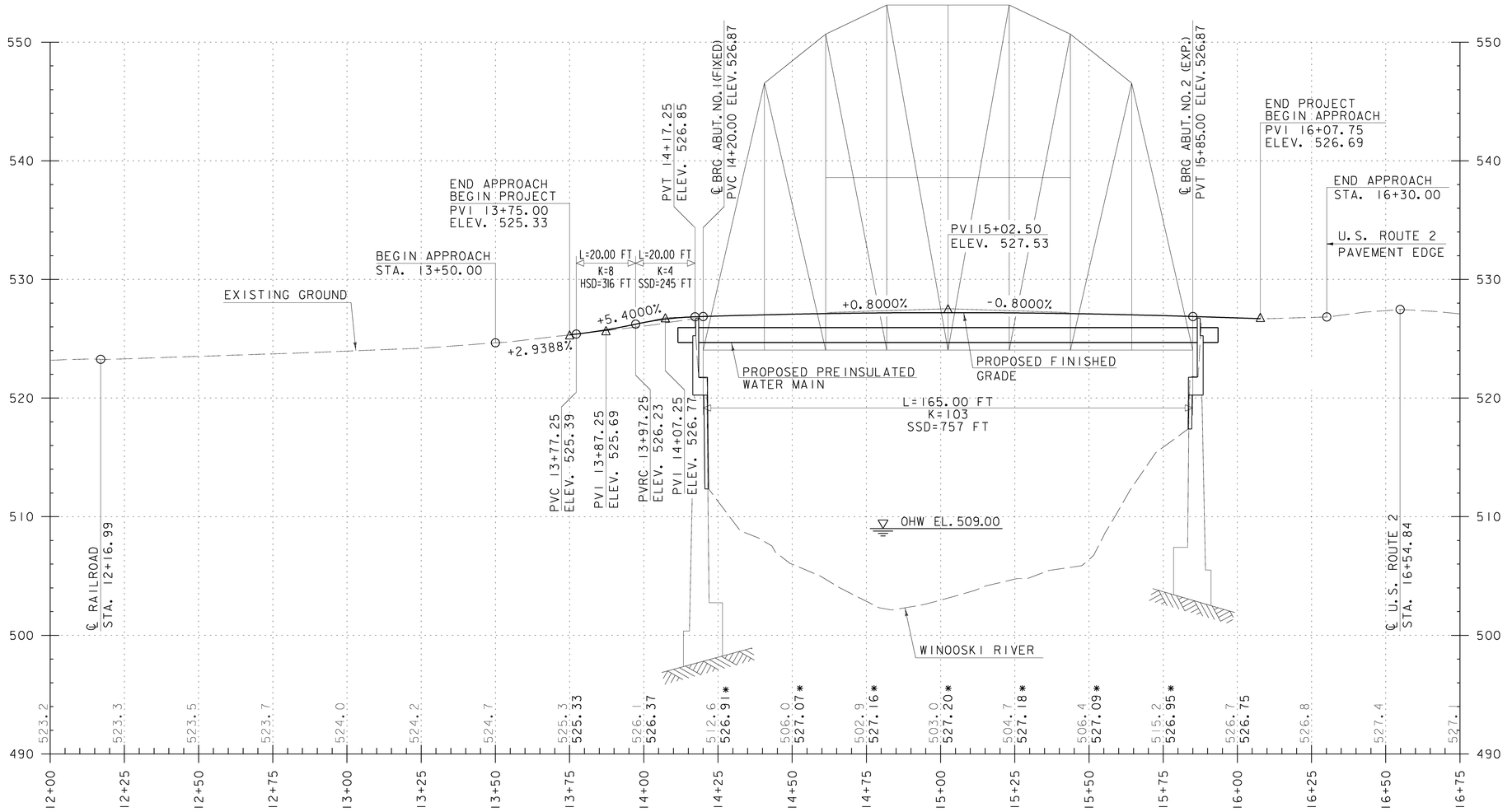

PROFILE
TAYLOR STREET

NOTE:

GRADES SHOWN TO NEAREST TENTH REPRESENT EXISTING GROUND ELEVATIONS ALONG CENTERLINE.

GRADES SHOWN TO NEAREST HUNDREDTH REPRESENT FINISHED GRADE ELEVATIONS ALONG CENTERLINE.

* GRADES BASED ON RESIDUAL CAMBER AFTER ALL DEAD LOADS APPLIED

VERTICAL 0 5 10 15
HORIZONTAL 0 20 40 60
SCALE IN FEET

PROFILE

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

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FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD
PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 14 OF 63

FILE NAME =k:\14586\mstr\plans\zs14586_pro.dgn
DATE/TIME = 10/12/2009
USER = zs552

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
STA. 13+50.00 - STA. 14+07.50 LT & RT (EDGE LINE)
STA. 15+87.75 - STA. 16+20.00 RT (EDGE LINE)
STA. 15+87.75 - STA. 16+41.00 LT (EDGE LINE)

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
STA. 13+50.00 - STA. 16+10.00 RT (DOUBLE SOLID C.L.)

646.462 DURABLE 12 INCH WHITE LINE, THERMOPLASTIC
STA. 13+94.00 - STA. 13+99.00 RT (REC. PATH)

646.482 DURABLE 24 INCH STOP BAR, THERMOPLASTIC
STA. 16+10.00 RT

646.502 DURABLE CROSSWALK MARKING, THERMOPLASTIC
STA. 16+21.00 LT & RT

675.50 REMOVING SIGNS
AS SHOWN - 11

675.60 ERECTING SALVAGED SIGNS
AS SHOWN - 4

℄ RAILROAD TAYLOR ST.
POB STA. 12+16.99 =
RR VALUATION STA. 61+57

STA. 12+43.0, LT
TO REPORT STALLED VEHICLE ON TRACKS OR OTHER EMERGENCY CALL 1-888-265-2735 AND REFER TO CROSSING #837-322D ON TAYLOR STREET
RET RET

STA. 13+75.00
END APPROACH
BEGIN PROJECT

STA. 13+50.00
BEGIN APPROACH

STA. 12+43.0, LT
RAIL ROAD CROSSING
RET RET

GRAVEL DRIVE

PAVED PARKING

WINOOSKI RIVER

STA. 15+89.5, LT
N N N

STA. 15+89.5, LT
R

VT STATE PLANE GRID

STA. 16+12.0, LT
TAYLOR ST R&S
MEMORIAL DR R&S
R

STA. 16+12.0, LT
TAYLOR ST S
MEMORIAL DR S
N

PAVED DRIVE

12+00 TH 9 13+00 (TAYLOR STREET) 14+00 15+00 16+00

10' 10' 10'

R=150'

(MEMORIAL DRIVE)

U. S. ROUTE 2

PEDESTRIAN SIGNAL TO BE RETAINED
STA. 16+16.0, LT

STA. 16+30.00
END APPROACH

STA. 16+07.75
END PROJECT
BEGIN APPROACH

PAVED PARKING

STA. 12+27.4, RT
TO REPORT STALLED VEHICLE ON TRACKS OR OTHER EMERGENCY CALL 1-888-265-2735 AND REFER TO CROSSING #837-322D ON TAYLOR STREET
RET RET

STA. 12+27.4, RT
RAIL ROAD CROSSING
RET RET

STA. 13+85.5, RT
R

STA. 13+85.5, RT
N N

STA. 12+88.0, RT
N N N

STA. 12+88.0, RT
R

STA. 13+80.0, RT
PARKING RESERVED FOR STATE EMPLOYEES
RET RET RET

WINOOSKI RIVER RECREATIONAL PATH (PAVED)

STA. 14+04.0, RT
STOP
BIKE ROUTE END
R

STA. 14+04.0, RT
STOP
BIKE ROUTE END
N N

STA. 13+85.5, RT
NO MOTOR VEHICLES
BIKE ROUTE
RET RET

STA. 13+83.5, RT
R&S PARKING PARKING R&S
R B-B

STA. 13+83.5, RT
S PARKING PARKING S
N B-B

STA. 16+05.0, RT
STOP HERE ON RED
R

CONC. SDWLK.

2'-0" (TYP.) 2'-0" (TYP.)
8'-0"
DURABLE WHITE LINE

CROSSWALK MARKING DETAIL
N.T.S.

DETAIL NOTES:
1. THE PER FOOT COST OF INSTALLED CROSSWALK SHALL BE PAID AS ITEM 646.502 DURABLE CROSSWALK MARKING, THERMOPLASTIC.

SIGN LEGEND
R = REMOVE
S = SALVAGE
N = NEW
RET = RETAIN
B-B = BACK TO BACK
EXISTING = - - - - -
NEW = ————
Ⓘ = RETURN TO THE CITY OF MONTPELIER

NOTE:
1. UNLESS OTHERWISE NOTED, ALL EXISTING SIGNS THAT ARE NOT SHOWN ON THIS PLAN SHALL BE RETAINED.

SCALE 1" = 20'
20 0 20

SIGNING & PAVEMENT MARKING PLAN

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

CLOUGH HARBOUR & ASSOCIATES LLP © 2009

FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD
PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 15 OF 63

FILE NAME =h:\14506\west\plans\s14506_signing.dgn
DATE/TIME =10/12/2009
USER =2552

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 1

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																			REMARKS (SHS=STANDARD HIGHWAY SIGNS BOOK, FHWA, 2004 EDITION)	SIGN DETAIL	
		EA	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. OF POSTS	FLANGED CHANNEL lb/ft			SQUARE STEEL (in) lb/ft			ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft			FOUNDATION	TUBULAR STEEL Ø (in) lb/ft					W-SHAPE STEEL FTG. SIZE		WEIGHT	POST SIZE	SIGN REMAINED	REQUIRED		DETAIL ON DWG. NUMBER	STD. SHEET NUMBER
												1.12	2.0	3.0	1.75	2.0	2.5			3.0	4.0	4.0 MOD		3.0	3.5	4.0	5.0		24"	30"							
															1.88	2.42	3.35			1.3	1.7	1.7		7.6	9.0	10.8	14.6										
12+88.0, RT		1	30	30	6.25						1						X	X																SIGN ID CODE W11-1	SHS	-
		1	30	30	6.25																													SIGN ID CODE W11-2	SHS	-
13+83.5, RT	PARKING PARKING						2				1					X		X																	MOUNT SALVAGED SIGNS ON NEW POST. BACK-TO-BACK.	-	-
13+85.5, RT		1	36	36	9.00						1						X	X																SIGN ID CODE W3-3	SHS	-
14+04.0, RT	STOP	1	18	18	2.25						1					X		X																	SIGN ID CODE R1-1	SHS	-
	BIKE ROUTE	1	24	18	3.00																													SIGN ID CODE D11-1	SHS	-
	END	1	12	4	0.33																													SIGN ID CODE M4-12	SHS	-
15+89.5, LT		1	30	30	6.25						1						X	X																SIGN ID CODE W11-1	SHS	-
		1	30	30	6.25																													SIGN ID CODE W11-2	SHS	-
16+12.0, LT	TAYLOR ST						1				1					X		X																	MOUNT SALVAGED SIGNS ON NEW POST. TOP MOUNTING BRACKET REQUIRED TO INSTALL SALVAGED SIGNS ON NEW POST. COSTS ASSOCIATED WITH BRACKET ARE INCIDENTAL TO THE SIGN POST.	-	-
	MEMORIAL DR						1																												-	-
												LF	LF	LF	LF	LF 42	LF 50		EA.	LB	LB	LB		LB	LB	LB	LB									
TOTALS		SF 39.58	SF	EA. 4	SF							LF			LF 92					LB			EA.	LB				EA.	EA.	LB						

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE VTRANS STANDARD SHEETS AND VTRANS "SIGN POST DESIGN GUIDELINE."

TRAFFIC SIGN SUMMARY SHEET (1)

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 16 OF 63

FILE NAME = h:\14506\ves\plans\zs14506_tss.dgn
DATE/TIME = 10/12/2009
USER = 2552

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET 2

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) lb/ft 1.75 1.88	2.0 2.42	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (in) FOUND-ATION	lb/ft 3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REMAINED	REQUIRED	REMARKS (SHS=STANDARD HIGHWAY SIGNS BOOK, FHWA, 2004 EDITION)	SIGN DETAIL DETAIL ON DWG. NUMBER	STD. SHEET NUMBER
①		1	30	30	6.25						1					X		X																SIGN ID CODE W11-2 SIGN SHALL BE FLUORESCENT YELLOW GREEN	SHS	-
		1	24	12	2.00																													SIGN ID CODE W16-7p SIGN SHALL BE FLUORESCENT YELLOW GREEN	SHS	-
②		1	30	30	6.25						1					X		X																SIGN ID CODE W11-2 SIGN SHALL BE FLUORESCENT YELLOW GREEN	SHS	-
		1	24	12	2.00																													SIGN ID CODE W16-7p SIGN SHALL BE FLUORESCENT YELLOW GREEN	SHS	-
③	STOP 6427 1211 0000	1 1	30 6	30 10	6.25 0.42						1					X		X																SIGN ID CODE R1-1 SIGN ID CODE VD-700 BACK-TO-BACK	SHS -	- E-138
④	TAYLOR ST STATE ST						1 1				1					X		X																MOUNT SALVAGED SIGNS ON NEW POST. TOP MOUNTING BRACKET REQUIRED TO INSTALL SALVAGED SIGNS ON NEW POST. COSTS ASSOCIATED WITH BRACKET ARE INCIDENTAL TO THE SIGN POST.	-	-
	STOP	1	30	30	6.25																														SHS	-
⑤		1	30	30	6.25						1					X		X																SIGN ID CODE W11-2 SIGN SHALL BE FLUORESCENT YELLOW GREEN	SHS	
		1	24	12	2.00																													SIGN ID CODE W16-7p SIGN SHALL BE FLUORESCENT YELLOW GREEN	SHS	
⑥		1	30	30	6.25						1					X		X																SIGN ID CODE W11-2 SIGN SHALL BE FLUORESCENT YELLOW GREEN	SHS	
		1	24	12	2.00																													SIGN ID CODE W16-7p SIGN SHALL BE FLUORESCENT YELLOW GREEN	SHS	
	SUBTOTAL THIS SHEET SHEET 16 SUBTOTAL				45.92 39.58		2 4									84 42		- 50																			
												LF	LF	LF	LF	LF 126	LF 50		EA.	LB	LB	LB		LB	LB	LB	LB									
	TOTALS				SF 85.5	SF	EA. 6	SF				LF			LF 176					LB			EA.	LB				EA.	EA.	LB						

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE VTRANS STANDARD SHEETS AND VTRANS "SIGN POST DESIGN GUIDELINE."

NOTE: SEE SHEET 43 FOR SIGN LAYOUT.

TRAFFIC SIGN SUMMARY SHEET (2)

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

FILE NAME: $FILES$ | PLOT DATE: 10/12/2009
PROJECT MANAGER: SUSAN SCRIBNER | DRAWN BY: D. D'AMATO
DESIGNED BY: D. D'AMATO | CHECKED BY: P. PERKINS
SHEET 17 OF 63

FILE NAME = h:\14506\vss\plans\zs14506_tss.dgn
DATE/TIME = 10/12/2009
USER = 2552

EROSION CONTROL NARRATIVE

1.1 PROJECT DESCRIPTION

MONTPELIER BHF 6400(31) IS LOCATED ALONG TOWN HIGHWAY (TH) 9 (TAYLOR STREET) IN THE CITY OF MONTPELIER, WASHINGTON COUNTY, VERMONT. THE PROJECT BEGINS AT A POINT APPROXIMATELY 400 FT SOUTH OF THE INTERSECTION OF TH 9 WITH STATE STREET AND CONTINUES SOUTHERLY 210.50 FT TO ITS ENDING POINT JUST NORTH OF THE INTERSECTION WITH U.S. ROUTE 2 (MEMORIAL DRIVE). THE PROJECT INVOLVES REHABILITATION OF BRIDGE NO. 5 OVER THE WINOOSKI RIVER INCLUDING DECK REPLACEMENT, TRUSS REPAIR, SUBSTRUCTURE REPAIR (BRIDGE SEAT RECONSTRUCTION, WINGWALL REFACING, ABUTMENT REFACING), AND RECONSTRUCTION OF THE BRIDGE APPROACHES.

AREAS OF DISTURBANCE ARE LOCATED WITHIN THE EXCAVATION LIMITS FOR THE APPROACH WORK AND SUBSTRUCTURE REPAIR, AND INCLUDE DISTURBANCES RELATED TO TEMPORARY CONSTRUCTION ACCESS.

THE TOTAL AREA OF DISTURBANCE IS APPROXIMATELY 0.10 ACRE EXCLUDING WASTE, BORROW AND STAGING AREAS.

1.2 SITE INVENTORY AND ANALYSIS

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

THE PROJECT AREA IS BORDERED BY U.S. ROUTE 2 ON THE SOUTH. SURFACE RUNOFF FROM U.S. ROUTE 2 AND FROM A DENSELY WOODED UPLAND AREA LOCATED SOUTH OF U.S. ROUTE 2 IS CAPTURED IN A CLOSED STORMWATER DRAINAGE SYSTEM IN THE ROADWAY AND DISCHARGED TO THE WINOOSKI RIVER. A RELATIVELY FLAT AND NARROW AREA COVERED IN GRASS AND SHRUBS WITH SOME COMMERCIAL DEVELOPMENT IS LOCATED BETWEEN U.S. ROUTE 2 AND THE SOUTH BANK OF THE RIVER. RUNOFF FROM THIS AREA CAN BE CHARACTERIZED AS GENERALLY OVERLAND SHEET FLOW THAT DISCHARGES TO THE RIVER.

THE PROJECT AREA IS BORDERED ON THE NORTH BY GENERALLY FLAT, PAVED PARKING AREAS WITH SOME LIMITED GRAVEL PARKING AREAS THAT ARE ASSOCIATED WITH DOWNTOWN DEVELOPMENT. STORMWATER RUNOFF FROM THIS AREA CAN BE CHARACTERIZED AS GENERALLY OVERLAND SHEET FLOW THAT IS GRADUALLY CONVEYED TO THE WINOOSKI RIVER.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER

THE PROJECT AREA AND BRIDGE REHABILITATION WORK SPANS THE WINOOSKI RIVER. RUNOFF FROM THE EXISTING BRIDGE IS CAPTURED BY SCUPPERS LOCATED IN THE BRIDGE DECK AND OUTLETS DIRECTLY TO THE RIVER AND ITS BANKS. SEVERAL DROP INLETS ARE LOCATED IN TH 9 AND U.S. ROUTE 2 NEAR THE SOUTHERN PROJECT APPROACH AND OUTLET DIRECTLY TO THE WINOOSKI RIVER.

AREAS OF DISTURBANCE ARE GENERALLY LOCATED WITHIN THE 50 FT RIPARIAN BUFFER AREA.

1.2.3 TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

TH 9 AND U.S. ROUTE 2 ARE THE ONLY ROADWAYS IN THE PROJECT AREA, BOTH ARE PAVED. IN ADDITION, THERE ARE SOME GENERALLY FLAT, PAVED PARKING AREAS AND SOME LIMITED GRAVEL PARKING AREAS ASSOCIATED WITH DOWNTOWN DEVELOPMENT THAT BORDER TH 9 JUST NORTH OF THE PROJECT AREA. A PAVED RECREATIONAL PATH AND GRAVEL DRIVE ARE LOCATED WITHIN THE NORTHERN PROJECT APPROACH. NO BUILDINGS ARE LOCATED WITHIN THE PROJECT LIMITS.

UNDERGROUND WATER AND OVERHEAD ELECTRIC AND TELEPHONE LINES ARE LOCATED WITHIN THE PROJECT AREA. AN EXISTING WATER MAIN IS CARRIED ACROSS THE BRIDGE AND IS TO BE REPLACED AS PART OF THE PROPOSED CONSTRUCTION.

1.2.4 VEGETATION

VEGETATION IN THE PROJECT AREA IS LIMITED TO SMALL GRASSY AREAS WITH SHRUBS AND TREES ON THE TOPS OF THE RIVER BANKS. THE RIVER BANKS ARE COVERED IN LOW-LYING BRUSH WITH SOME LARGER TREES AND SMALL WOODED AREAS THROUGHOUT. EXISTING VEGETATION IS SPARSE ALONG THE BANK WITHIN THE SHADOW OF THE EXISTING BRIDGE. CLEARING OF BRUSH AND TREES ALONG THE BANK IS ONLY NECESSARY TO PROVIDE CONTRACTOR ACCESS BELOW THE BRIDGE AND IS INTENDED TO BE LIMITED IN AREA FOR THAT PURPOSE. ALL GRASSY AND BRUSH COVERED AREAS THAT ARE DISTURBED DURING CONSTRUCTION ARE TO BE RE-VEGETATED WITH SEED AND COVERED IN TEMPORARY EROSION MATTING AS REQUIRED.

1.2.5 SOILS

SOIL SURVEY DATA FOR THE PROJECT AREA WAS OBTAINED FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE'S NATURAL RESOURCES CONSERVATION SERVICE (NRCS). THE SOIL SURVEY MAP FOR WASHINGTON COUNTY, VERMONT SHOWS THE FOLLOWING MAP UNITS IN THE PROJECT AREA (LOCATIONS ARE SHOWN ON SHT. 22):

TUNBRIDGE-LYMAN COMPLEX (MAP UNIT 72E), 35-60% SLOPES, VERY ROCKY, CLASSIFIED AS 'HIGHLY ERODIBLE' WITH A K-FACTOR = 0.34

URBAN LAND-UDIPSAMMENTS COMPLEX (MAP UNIT 104), OCCASIONALLY FLOODED, CLASSIFIED AS 'NOT HIGHLY ERODIBLE' WITH A K-FACTOR = 0.10

1.2.6 SENSITIVE RESOURCE AREAS

NO KNOWN OCCURRENCES OF CRITICAL HABITATS, THREATENED AND ENDANGERED SPECIES, PRIME AGRICULTURAL LAND, WETLANDS, HISTORICAL OR ARCHAEOLOGICAL SITES EXIST WITHIN THE PROJECT AREA.

THE WINOOSKI RIVER IN THE PROJECT AREA IS LISTED AS AN IMPAIRED SURFACE WATER FOR E. COLI ON THE STATE OF VERMONT 2006 303(d) LIST OF SURFACE WATERS. THERE IS NO STORMWATER OR SEDIMENT IMPAIRMENT IN THE PROJECT AREA.

1.3 RISK EVALUATION

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

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION PREVENTION AND SEDIMENT CONTROL PLANS ARE MEANT TO BE A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT AS REQUIRED BY THE AGENCY'S STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006 AND THE EROSION PREVENTION AND SEDIMENT CONTROL PROTOCOL DATED FEBRUARY 2007. THE WORK OUTLINED IN THIS NARRATIVE CONSISTS OF APPLYING MEASURES THROUGHOUT THE LIFE OF THE PROJECT TO MINIMIZE EROSION AND PREVENT THE SEDIMENTATION OF RECEIVING WATERS. THE MEASURES PRIMARILY CONSIST OF STABILIZATION AND/OR STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER MISCELLANEOUS POLLUTION PREVENTION CONTROLS.

PREVENTING INITIAL SOIL EROSION IS MUCH MORE EFFECTIVE THAN TRYING TO CONTROL ERODED SEDIMENT. MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS, OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION PREVENTION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE EMPLOYED WHEREVER POSSIBLE. THEREFORE, STABILIZE ALL DISTURBED AREAS AS SOON AS PRACTICABLE, BUT NO MORE THAN TWO DAYS AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED.

THE CONTRACTOR SHALL COORDINATE THE INSTALLATION, USE, AND REMOVAL OF EROSION PREVENTION AND SEDIMENT CONTROL MEASURES WITH CONSTRUCTION ACTIVITIES TO ENSURE ECOLOGICAL, EFFECTIVE, AND CONTINUOUS EROSION PREVENTION AND SEDIMENT CONTROL. THE CONTRACTOR SHALL EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES AS CONSTRUCTION PROCEEDS.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

(REFER TO THE VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION'S LOW RISK SITE HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL AND APPROPRIATE DETAIL SHEETS FOR EACH PRACTICE REQUIRED ON THE PROJECT TO INCLUDE BUT NOT LIMITED TO THE FOLLOWING.)

1.4.1 MARK SITE BOUNDARIES

PROJECT DEMARCATION FENCING, DENOTED -PDF- ON THE PLANS, IS USED TO DELINEATE THE LIMITS IN WHICH THE CONTRACTOR CAN ACCESS WITH CONSTRUCTION EQUIPMENT AND PERSONNEL. THIS MEASURE IS INTENDED TO LIMIT THE AREA THAT CAN BE DISTURBED AND EXPOSED TO EROSION. THE CONTRACTOR SHALL INSTALL THE PERIMETER CONTROLS PRIOR TO STARTING ANY WORK WITHIN THE PROJECT AREA.

1.4.2 LIMIT DISTURBANCE AREA

EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES AS CONSTRUCTION PROCEEDS. ADDITIONAL MEASURES MAY BE NEEDED DUE TO THE PHASING OF THE PROJECT AND AS DIRECTED BY THE ON-SITE PLAN COORDINATOR. IN GENERAL, THE CONTRACTOR SHALL PRESERVE EXISTING VEGETATION, TREES AND SHRUBS WHERE POSSIBLE.

1.4.3 STABILIZE CONSTRUCTION ENTRANCE

THE CONTRACTOR SHALL CONSTRUCT STABILIZED CONSTRUCTION ENTRANCES PER THE EROSION CONTROL DETAILS AS NECESSARY TO GAIN ACCESS DOWN THE RIVER BANK AND BELOW THE BRIDGE. STABILIZED CONSTRUCTION ENTRANCES ARE INTENDED TO PREVENT THE TRACKING OF SEDIMENT ONTO PAVED SURFACES.

1.4.4 INSTALL SILT FENCE

SILT FENCE SHALL BE INSTALLED PRIOR TO ANY UPSLOPE WORK AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ON-SITE PLAN COORDINATOR.

1.4.5 DIVERT UPLAND FLOW

THE CONTRACTOR SHALL PROVIDE A TEMPORARY PIPE EXTENSION FOR THE EXISTING 15" OUTLET PIPE LOCATED IN THE SOUTHWEST QUADRANT OF THE PROJECT AREA AS NECESSARY TO MAINTAIN STORMWATER OUTLET FLOW AND TO CONVEY DISCHARGE DOWNSLOPE OF AREAS CONSTRUCTED OR MAINTAINED FOR CONTRACTOR ACCESS. PAYMENT FOR THE TEMPORARY PIPE EXTENSION SHALL BE INCIDENTAL TO ITEM 653.35 VEHICLE TRACKING PAD.

IT IS NOT ANTICIPATED THAT OTHER MEASURES SUCH AS TEMPORARY DRAINAGE SWALES WILL BE REQUIRED TO DIVERT UPLAND RUNOFF AWAY FROM THE PROJECT AREA. HOWEVER, IF SITE CONDITIONS CHANGE, THE CONTRACTOR SHALL CONSTRUCT TEMPORARY DIVERSION DIKES OR SWALES PER THE LOW RISK SITE HANDBOOK AS DIRECTED BY THE ON-SITE PLAN COORDINATOR. REFER TO SUBSECTION 105.29 FOR PAYMENT OF TEMPORARY MEASURES TO DIVERT UPLAND FLOW.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

NO AREAS OF CHANNELIZED RUNOFF ARE ANTICIPATED DURING CONSTRUCTION OR POST-CONSTRUCTION. HOWEVER, IF SITE CONDITIONS CHANGE, THE CONTRACTOR SHALL INSTALL CHECK DAMS PER THE LOW RISK SITE HANDBOOK IN LOCATIONS AS DIRECTED BY THE ON-SITE PLAN COORDINATOR.

1.4.7 CONSTRUCT PERMANENT CONTROLS

THE CONTRACTOR SHALL SEED SLOPES AND PROVIDE TEMPORARY EROSION MATTING IN LOCATIONS INDICATED ON THE EPSC PLANS. AREAS ALONG THE RIVER BANK DISTURBED AS A CONSEQUENCE OF PROVIDING CONTRACTOR ACCESS SHALL BE RESTORED TO ORIGINAL GRADE PRIOR TO FINAL SEEDING.

AREAS OF DISTURBANCE ALONG THE RIVER BANK THAT ARE LOCATED BENEATH THE BRIDGE SUPERSTRUCTURE, INCLUDING A 2 FT WIDE AREA ON EITHER SIDE, SHALL BE LINED WITH STONE FILL, TYPE II, AND RESTORED TO ORIGINAL GRADE. ANY EXCAVATION REQUIRED TO PROVIDE THE STONE FILL SHALL BE DISPOSED OF AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION. UNDER NO CIRCUMSTANCES SHALL THE PLACEMENT OF STONE FILL CREATE MORE AREA OF DISTURBANCE THAN THAT WHICH RESULTED FROM OTHER CONSTRUCTION ACTIVITIES.

EPSC NARRATIVE (1)

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

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FILE NAME: S:\14596\newton\plans\vs14586.ecn.dgn
DATE/TIME: 10/12/2009
USER: zss2

FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD
PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 18 OF 63

EROSION CONTROL NARRATIVE (CONTINUED)

1.4.8 STABILIZE EXPOSED SOILS

THE CONTRACTOR SHALL STABILIZE ALL PERMANENT AND TEMPORARY SLOPES WITH SEED AND TEMPORARY EROSION MATTING AS SHOWN ON THE EPSC PLANS. SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF FORECASTED RAIN. SEEDING AND BIODEGRADABLE EROSION MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3. THESE SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING INTERMITTENT PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL HAVE A HYDROSEEDER AVAILABLE ON THE PROJECT SITE OR AVAILABLE AT NO MORE THAN ONE WEEK'S NOTICE UNTIL PERMANENT SEEDING IS COMPLETED.

1.4.9 WINTER STABILIZATION

IT IS ANTICIPATED THAT THE PROJECT WILL BE SUBSTANTIALLY COMPLETED PRIOR TO THE WINTER CONSTRUCTION SEASON. IF THE PROJECT CANNOT BE SUBSTANTIALLY COMPLETED PRIOR TO THE WINTER CONSTRUCTION SEASON, VARIOUS MEASURES SPECIFIC TO WINTER SHALL BE EMPLOYED PER THE LOW RISK SITE HANDBOOK AS NECESSARY OR AS DIRECTED BY THE ON-SITE PLAN COORDINATOR.

1.4.10 STABILIZE SOIL AT FINAL GRADE

SEEDING AND BIODEGRADABLE EROSION MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3 AS SHOWN ON THE EPSC PLANS. THESE SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

1.4.11 DE-WATERING ACTIVITIES

NO DE-WATERING ACTIVITIES ARE ANTICIPATED AS PART OF THIS PROJECT.

1.4.12 INSPECT YOUR SITE

EROSION PREVENTION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED BASED ON PERMIT AUTHORIZATION OR SPECIAL PROVISION REQUIREMENTS. INSPECTION OF MEASURES SHALL BE COMPLETED ON A DAILY BASIS AND AFTER EVERY STORM GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE. REPAIRS SHALL BE MADE AS NEEDED WHEN DAMAGE TO MEASURES ARE DISCOVERED AND SEDIMENT SHALL BE REMOVED WHEN THE STORAGE CAPACITY OF A SEDIMENT CONTROL MEASURE APPROACHES ONE-HALF OF ITS INTENDED CAPACITY OR AS DIRECTED BY THE ON-SITE PLAN COORDINATOR.

EPSC NARRATIVE (2)

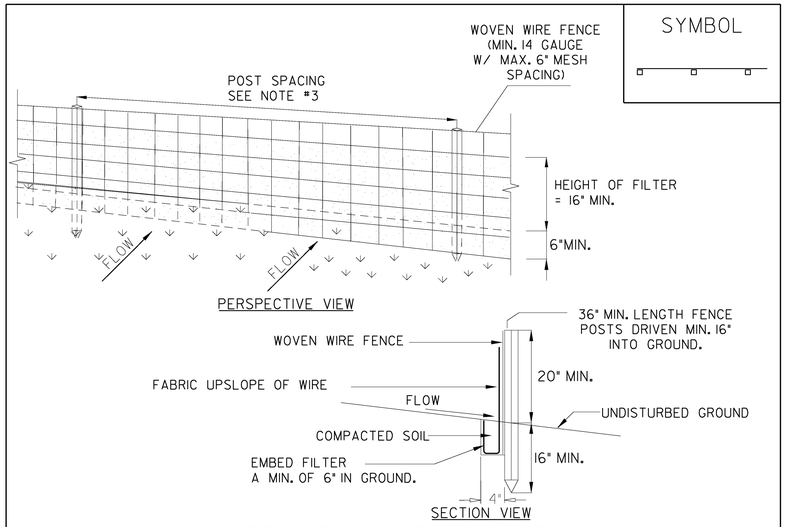
PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

CLOUGH HARBOUR & ASSOCIATES LLP © 2009

FILE NAME: $FILES$ PLOT DATE: 10/12/2009
PROJECT MANAGER: SUSAN SCRIBNER DRAWN BY: D. D'AMATO
DESIGNED BY: D. D'AMATO CHECKED BY: P. PERKINS
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD SHEET 19 OF 63

FILE NAME =h:\14506\vest\plans\zs14506_een.dgn
DATE/TIME =10/12/2009
USER =2552

SYMBOL



CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE REINFORCEMENT IS ONLY REQUIRED WITHIN 100 FT UPSLOPE OF RECEIVING WATERS.

2. WHERE REQUIRED FENCE SHALL BE WOVEN WIRE, MIN. 14 GAUGE WITH A 6" MAXIMUM MESH OPENING. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI100X, STABILINKA T140N OR APPROVED EQUIVALENT.

3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4'. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.

4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.

5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED.

6. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.

7. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

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

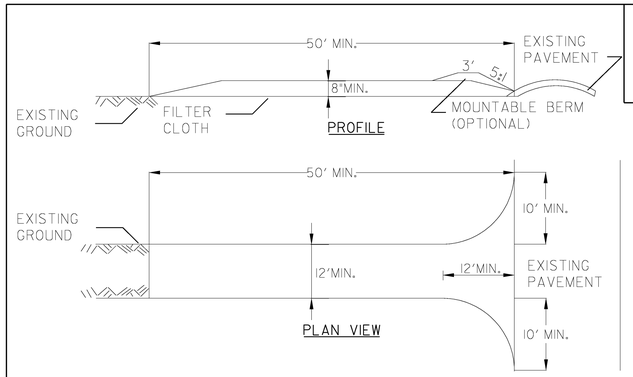
SILT FENCE

NOTES:

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

THIS ITEM SHALL BE PAID FOR UNDER:
ITEM 649.515 GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED

SYMBOL



CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 1-4" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.

2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH APPLIES).

3. THICKNESS - NOT LESS THAN EIGHT (8) INCHES.

4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.

5. GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.

6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.

7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.

8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.

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

STABILIZED CONSTRUCTION ENTRANCE

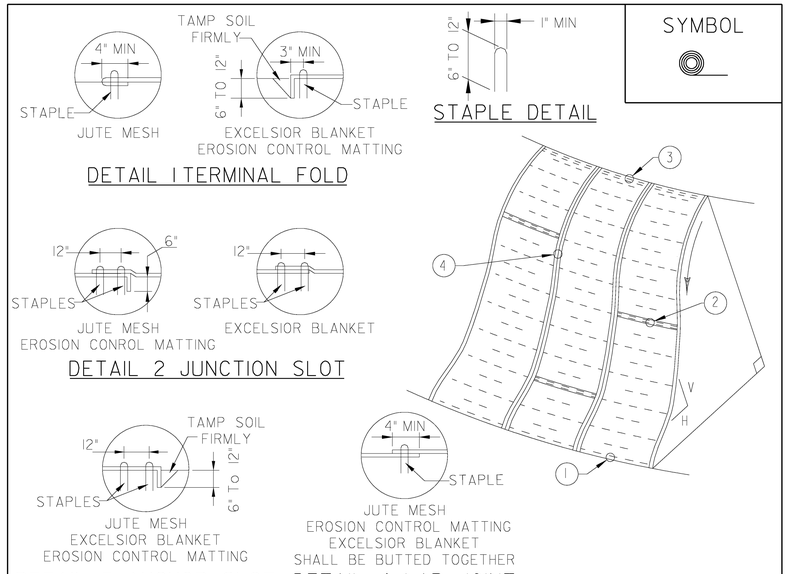
NOTES:

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

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

REVISIONS	
FEBRUARY 9, 2007	WHF
MARCH 8, 2007	JMF

SYMBOL



CONSTRUCTION SPECIFICATIONS

1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.

2. APPLY FERTILIZER, LIME AND SEED PRIOR TO PLACING MATTING.

3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.

4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.

5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

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

ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

NOTES:

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

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

NEW	
APRIL 16, 2007	WHF
REVISIONS	

NOT TO SCALE

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EPSC DETAILS (1)

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD

PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 20 OF 63

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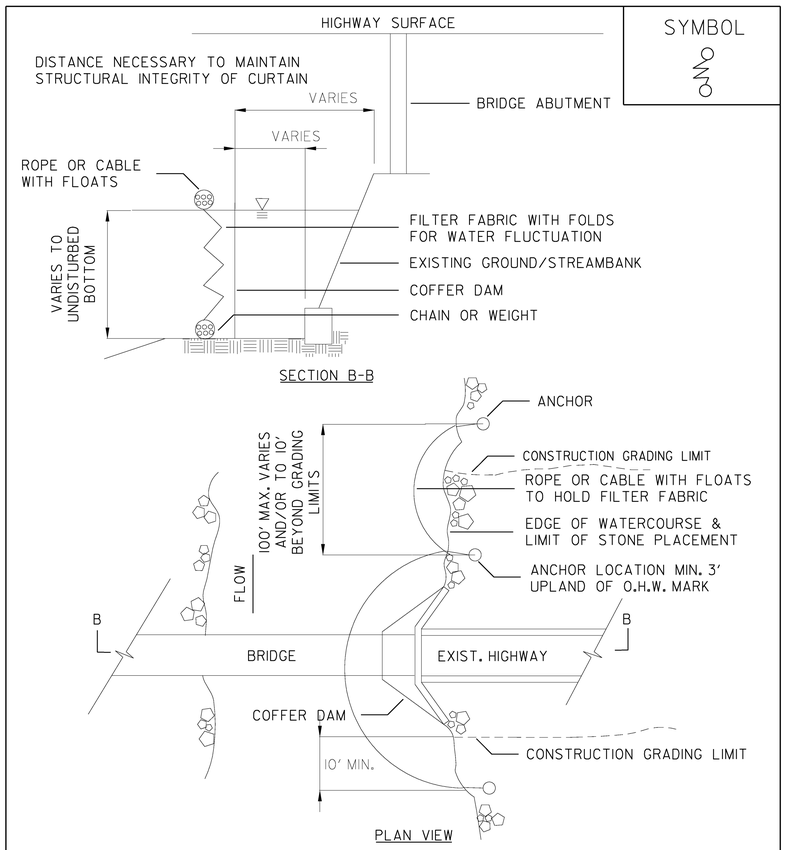
DATE/TIME =10/12/2009
USER =2552



SYMBOL

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

TURBIDITY CURTAIN

NOTES:

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

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

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DATE/TIME =10/12/2009
USER =2552

EPSC DETAILS (2)

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

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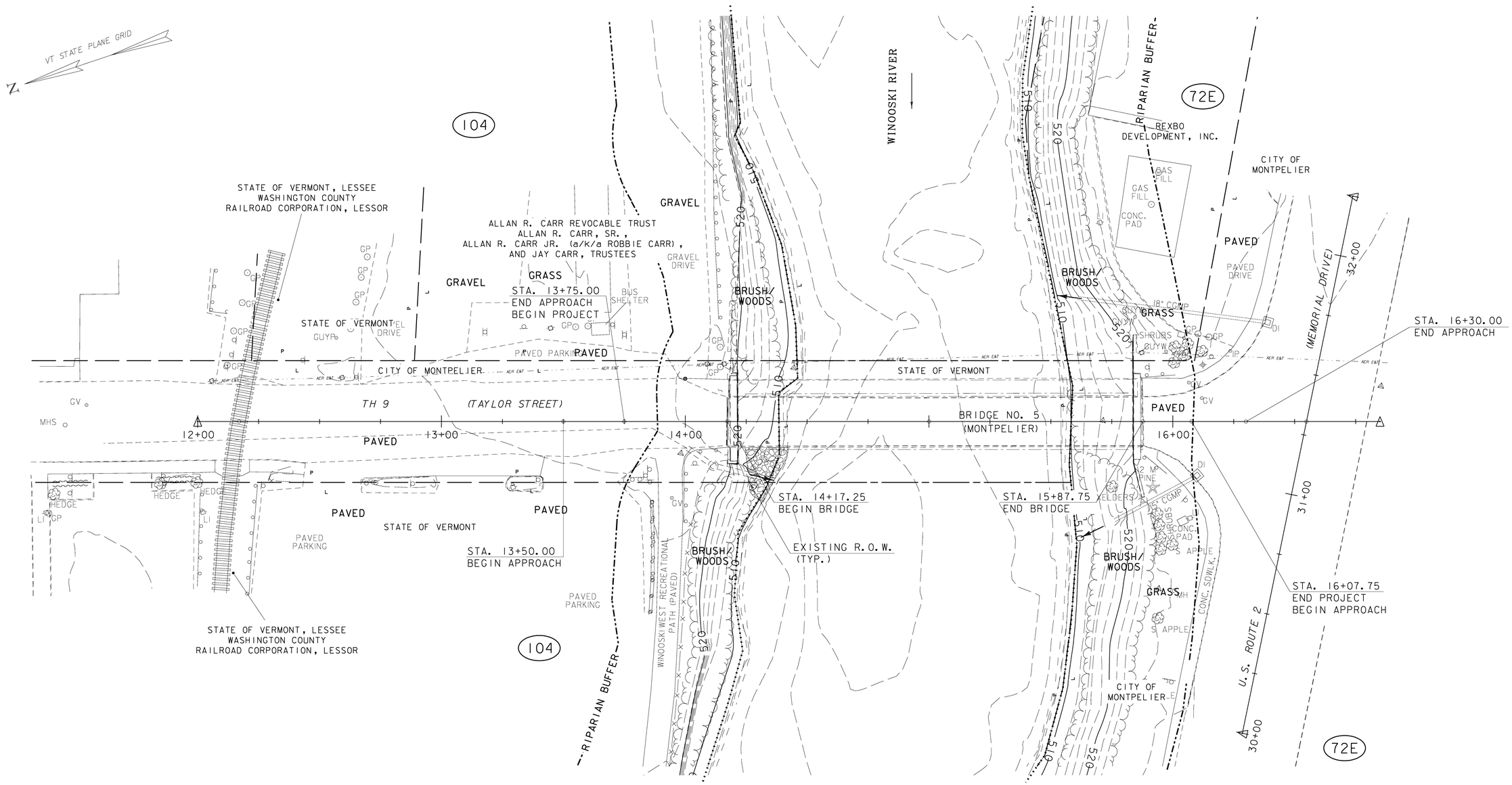
FILE NAME: $FILES$ | PLOT DATE: 10/12/2009
PROJECT MANAGER: SUSAN SCRIBNER | DRAWN BY: D. D'AMATO
DESIGNED BY: D. D'AMATO | CHECKED BY: P. PERKINS
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD | SHEET 21 OF 63



LEGEND

(XXX)	SOIL MAP UNIT TYPE (SEE SHT. 18 FOR DETAIL)
.....	SOIL MAP UNIT BOUNDARY
---·---·---	RIPARIAN BUFFER

SCALE 1" = 20'
20 0 20

EPSC EXISTING CONDITIONS SITE PLAN

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD

PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 22 OF 63

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USER =2552

649.61 GEOTEXTILE FOR FILTER CURTAIN

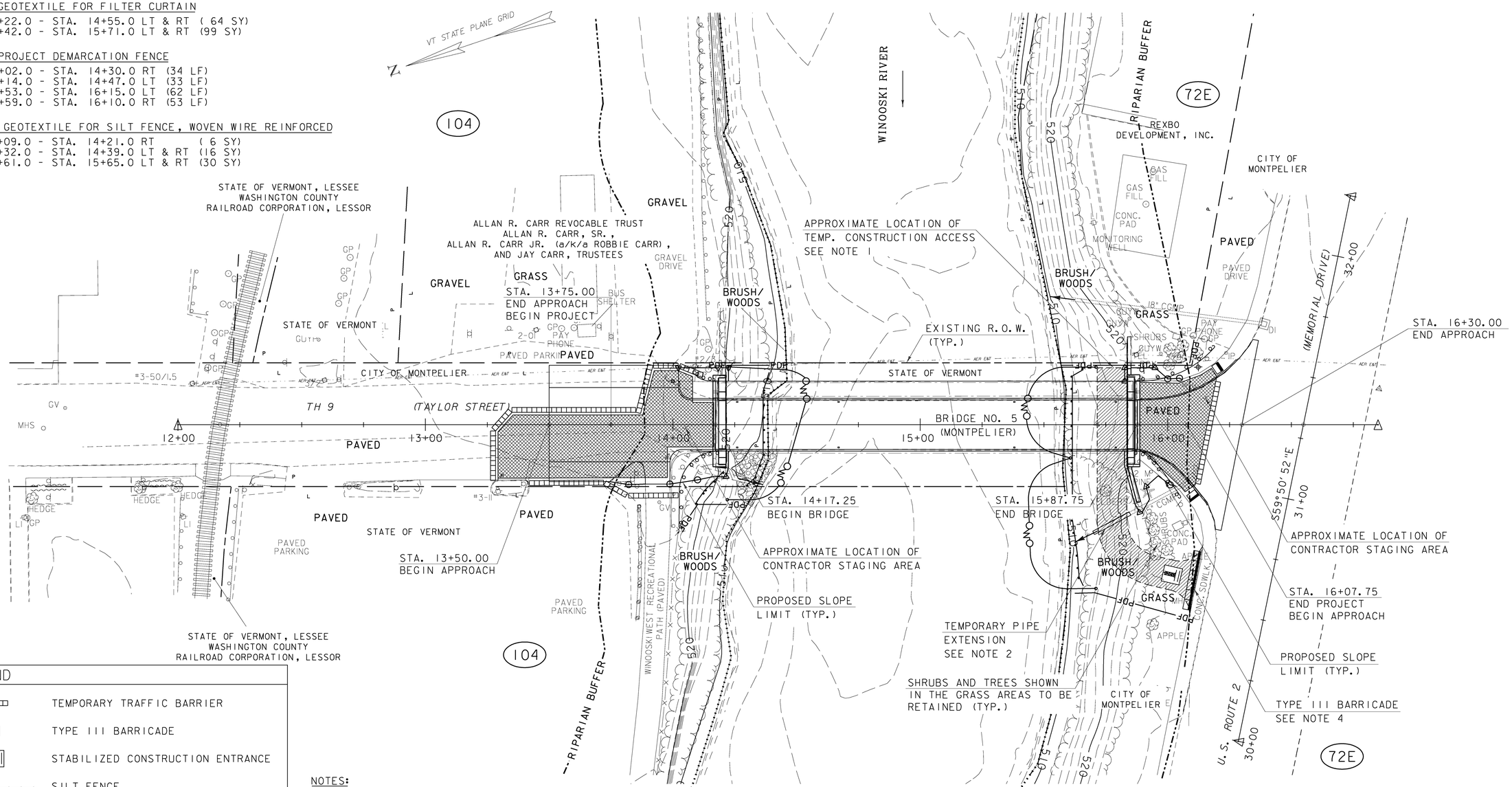
STA. 14+22.0 - STA. 14+55.0 LT & RT (64 SY)
STA. 15+42.0 - STA. 15+71.0 LT & RT (99 SY)

653.55 PROJECT DEMARCATION FENCE

STA. 14+02.0 - STA. 14+30.0 RT (34 LF)
STA. 14+14.0 - STA. 14+47.0 LT (33 LF)
STA. 15+53.0 - STA. 16+15.0 LT (62 LF)
STA. 15+59.0 - STA. 16+10.0 RT (53 LF)

649.515 GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED

STA. 14+09.0 - STA. 14+21.0 RT (6 SY)
STA. 14+32.0 - STA. 14+39.0 LT & RT (16 SY)
STA. 15+61.0 - STA. 15+65.0 LT & RT (30 SY)



LEGEND

- TEMPORARY TRAFFIC BARRIER
- TYPE III BARRICADE
- STABILIZED CONSTRUCTION ENTRANCE
- SILT FENCE
- TURBIDITY CURTAIN
- PDF——PDF PROJECT DEMARCATION FENCE
- STABILIZED CONSTRUCTION ENTRANCE/ TEMPORARY CONSTRUCTION ACCESS
- CONTRACTOR STAGING AREA (APPROX.)
- XXX SOIL MAP UNIT TYPE (SEE SHT. 18 FOR DETAIL)
- SOIL MAP UNIT BOUNDARY
- RIPARIAN BUFFER

NOTES:

1. THE CONTRACTOR SHALL TAKE CARE TO MINIMIZE DISTURBANCE OF THE EXISTING RIVER BANK RESULTING FROM THE BRUSH AND TREE CLEARING, EXCAVATING, AND GRADING THAT IS REQUIRED TO GAIN ACCESS AND STAGE CONSTRUCTION OPERATIONS BELOW THE BRIDGE. COSTS FOR REQUIRED CLEARING AND GRUBBING SHALL BE INCIDENTAL TO ALL OTHER CONTRACT ITEMS. ANY TEMPORARY EARTH SLOPES THAT ARE CONSTRUCTED TO ACCOMMODATE ACCESS SHALL BE STABILIZED WITH SEED AND TEMPORARY EROSION MATTING IN ACCORDANCE WITH THE EROSION CONTROL PLAN AND AS DIRECTED BY THE ON-SITE PLAN COORDINATOR.

2. THE CONTRACTOR SHALL AVOID OR MINIMIZE DISTURBANCE OF THE EXISTING 15" OUTLET PIPE DURING OPERATIONS TO GAIN ACCESS BELOW THE BRIDGE. A TEMPORARY PIPE EXTENSION WITH 2' MINIMUM COVER SHALL BE PROVIDED TO MAINTAIN STORMWATER OUTLET FLOW AS DIRECTED BY THE RESIDENT ENGINEER. PAYMENT FOR THE TEMPORARY PIPE EXTENSION SHALL BE INCIDENTAL TO ITEM 653.35 VEHICLE TRACKING PAD.

3. TEMPORARY TRAFFIC BARRIER SHALL BE INSTALLED AROUND THE PROJECT SITE TO PROVIDE FOR TRAFFIC CONTROL. PAYMENT SHALL BE MADE UNDER ITEM 621.90. REMOVING AND REINSTALLING TEMPORARY TRAFFIC BARRIER AS NECESSARY FOR THE CONTRACTOR TO GAIN ACCESS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCIDENTAL TO ITEM 621.90.

4. TYPE III BARRICADES SHALL BE PLACED ACROSS THE TEMPORARY CONSTRUCTION ACCESS TO DISCOURAGE PEDESTRIAN ACCESS FROM THE SIDEWALK WHEN THE CONSTRUCTION ACCESS IS NOT ACTIVELY BEING UTILIZED BY THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE A FLAGGER AT THIS LOCATION WHEN ACTIVELY MOVING EQUIPMENT INTO AND OUT OF THE CONSTRUCTION ACCESS.

SCALE 1" = 20'
20 0 20

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EPSC CONSTRUCTION SITE PLAN

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD
PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 23 OF 63

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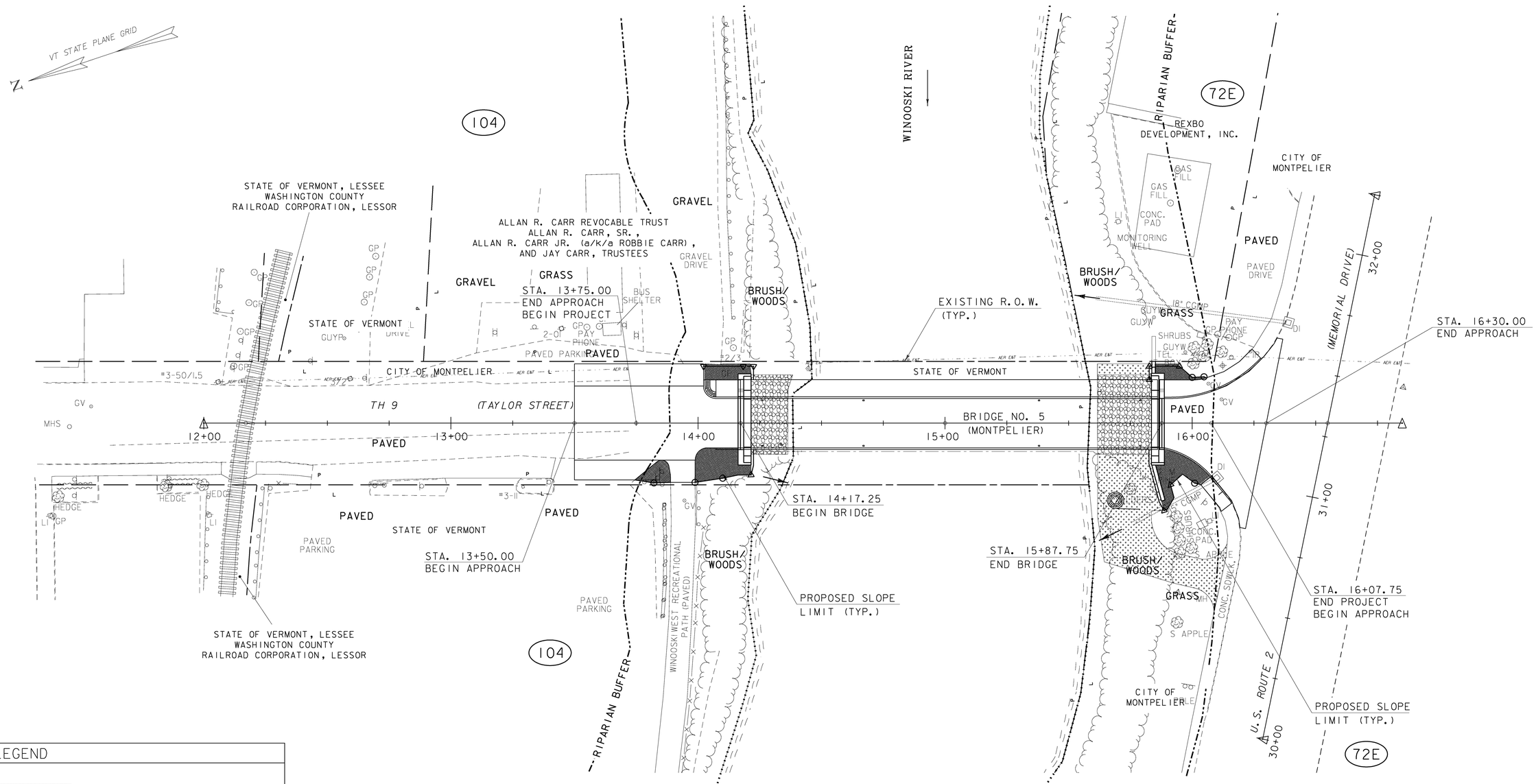

LEGEND

- AREA OF SEED
- AREA OF SEED & EROSION MATTING
- AREA OF STONE FILL, TYPE II (SEE NOTE 3)
- XXX — SOIL MAP UNIT TYPE (SEE SHT. 18 FOR DETAIL)
- SOIL MAP UNIT BOUNDARY
- RIPARIAN BUFFER

NOTES:

1. SEE CROSS SECTIONS FOR FINAL SLOPE GRADING INFORMATION.
2. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL REMOVE THE STABILIZED CONSTRUCTION ENTRANCE AND ANY MATERIAL PLACED ON THE EXISTING BANK FOR THE TEMPORARY CONSTRUCTION ACCESS. RIVER BANKS SHALL BE RESTORED TO ORIGINAL GRADE PRIOR TO IMPLEMENTATION OF PERMANENT EROSION CONTROLS AS DESCRIBED IN THE EPSC PLANS AND NOTES.
3. STONE FILL, TYPE II SHALL ONLY BE PLACED BELOW THE BRIDGE SUPERSTRUCTURE AND 2 FEET TO EITHER SIDE OF THE SUPERSTRUCTURE IN AREAS THAT WERE DISTURBED BY EXCAVATION OR GRADING OF THE EXISTING RIVER BANK MATERIAL AS DIRECTED BY THE ON-SITE PLAN COORDINATOR. UNDER NO CIRCUMSTANCES SHALL THE PLACEMENT OF STONE FILL CREATE MORE AREA OF DISTURBANCE OF THE EXISTING BANK THAN THAT WHICH RESULTED FROM OTHER CONSTRUCTION ACTIVITIES.
4. SILT FENCE AND TURBIDITY CURTAIN SHALL REMAIN IN PLACE UNTIL FINAL SLOPES HAVE BEEN STABILIZED.

SCALE 1" = 20'
20 0 20

EPSC FINAL CONDITIONS SITE PLAN

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

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FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD
PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 24 OF 63

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USER =2552

GENERAL:

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SEVENTEENTH EDITION, AND ITS LATEST REVISIONS.

2. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT SILTATION OR POLLUTION, ESPECIALLY THE DISCHARGE OF RAW CONCRETE, FUEL AND/OR LUBRICANTS, INTO THE WINOOSKI RIVER AS DIRECTED BY THE RESIDENT ENGINEER AND STANDARD SPECIFICATION SECTION 105.

3. REFERENCE SHEETS FROM THE RECORD PLANS AND FABRICATION DRAWINGS FOR THE EXISTING BRIDGE ARE INCLUDED IN THE PLANS FOR THE CONTRACTOR'S USE (SHTS. 52-63). THE CONTRACTOR IS ADVISED TO FIELD VERIFY DIMENSIONS TO ENSURE THE WORK CAN BE CONSTRUCTED AS PROPOSED IN THE PLANS. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MATCH THE FINAL PRODUCT AS DESCRIBED IN THE PLANS WITH THE EXISTING FIELD CONDITION.

4. ALL DIMENSIONS SHOWN IN THE PLANS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68°F, UNLESS SHOWN OTHERWISE.

5. ANY DAMAGE DONE TO EXISTING SUBSTRUCTURE, SUPERSTRUCTURE, UTILITIES, TRAFFIC SIGNALS OR ANY OTHER FACILITIES RELATED TO THIS PROJECT TO BE RETAINED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE STATE OF VERMONT.

6. IT IS ANTICIPATED THAT CONSTRUCTION STAGING AND ACCESS AREAS WILL BE REQUIRED TO COMPLETE THE PROPOSED WORK SHOWN ON THE PLANS. POTENTIAL STAGING AND ACCESS AREAS ARE DETAILED ON SHT. 23, EPSC CONSTRUCTION SITE PLAN, AND ARE SUMMARIZED AS FOLLOWS:

   NORTHERN STAGING AREA

   THE APPROXIMATE LIMITS OF THE PROPOSED STAGING AREA SHALL BE BETWEEN STA. 13+25 AND 14+17.25. THE STAGING AREA SHALL BE CONTAINED WITHIN THE EXISTING TAYLOR STREET RIGHT-OF-WAY. PLACEMENT OF THE REQUIRED TEMPORARY TRAFFIC BARRIER SHALL NOT PRECLUDE A SOUTHBOUND BUS (AASHTO CLASSIFICATION BUS-45) FROM EXECUTING A TURNING MANEUVER TO REVERSE DIRECTION ON TAYLOR STREET. IT IS ASSUMED THAT THE NORTHERN PARKING AREA OF THE EXISTING VTRANS BUS DEPOT AND THE EXISTING TAYLOR STREET NORTHBOUND TRAVELWAY WILL BE UTILIZED FOR THIS MOVEMENT.

   SOUTHERN STAGING AREA AND TEMPORARY CONSTRUCTION ACCESS

   THE APPROXIMATE LOCATION OF THE PROPOSED STAGING AREA SHALL BE BETWEEN STA. 15+87.75 AND STA. 16+25. FOR LAYOUT PURPOSES, THE STAGING AREA HAS BEEN SHOWN CONTAINED WITHIN THE EXISTING SIDEWALK LIMITS ON TAYLOR STREET. TEMPORARY TRAFFIC BARRIER SHALL BE PLACED TO INCORPORATE THE TEMPORARY PEDESTRIAN DETOUR SHOWN ON SHT. 44.

   IT IS ASSUMED THAT TEMPORARY CONSTRUCTION ACCESS MAY BE REQUIRED FOR THE PROPOSED ABUTMENT 2 REHABILITATION WORK. TEMPORARY CONSTRUCTION ACCESS, IF REQUIRED, SHALL BE ACCOMMODATED IN THE SOUTHWEST QUADRANT OF THE PROJECT.

   IT SHOULD BE NOTED THAT THE CITY OF MONTPELIER CURRENTLY OWNS THE PROPERTY IN THE SOUTHWEST QUADRANT OF THE PROJECT. IT IS ASSUMED THAT SHOULD TEMPORARY CONSTRUCTION ACCESS OR ADDITIONAL STAGING AREA BE REQUIRED THE CONTRACTOR SHALL NEGOTIATE TEMPORARY USE OF THIS PROPERTY DIRECTLY WITH THE CITY. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY ENVIRONMENTAL PERMITS FOR ANY STAGING AREA OUTSIDE THE LIMITS OF THE PROJECT AT NO ADDITIONAL COST TO THE STATE OF VERMONT.

SUPERSTRUCTURE REMOVAL NOTES:

1. COMPLETE REMOVAL AND DISPOSAL OF THE EXISTING BITUMINOUS BRIDGE PAVEMENT SHALL BE PAID FOR UNDER ITEM 529.10, REMOVAL OF BRIDGE PAVEMENT.

2. COMPLETE REMOVAL AND DISPOSAL OF ALL MATERIALS NECESSARY TO COMPLETE THE WORK REQUIRED IN THE CONTRACT SHALL BE PAID FOR UNDER ITEM 529.20, PARTIAL REMOVAL OF STRUCTURE.

STRUCTURAL STEEL NOTES:

1. ALL NEW STRUCTURAL STEEL SHALL BE AASHTO M270M/M270 GRADE 50 PAINTED EXCEPT AS SHOWN OTHERWISE. NEW STRUCTURAL STEEL FOR THE TRUSS FLOOR SYSTEM, BOTTOM LATERAL BRACING, STRINGER CONNECTION ANGLES, SCUPPERS AND DOWNSPOUTS SHALL BE PAID FOR UNDER ITEM 506.50, STRUCTURAL STEEL, ROLLED BEAM. ALL NEW STRUCTURAL STEEL WHICH CONNECTS TO EXISTING STRUCTURAL STEEL (FLOORBEAM CONNECTION ANGLES, LATERAL BRACING CONNECTION PLATES, REPLACEMENT VERTICALS, BRIDGE RAIL, SIDEWALK RAIL BALUSTERS AND ANY OTHER STEEL DESIGNATED OR ORDERED BY THE RESIDENT ENGINEER FOR REPLACEMENT IN KIND) SHALL BE PAID FOR UNDER ITEM 506.60, STRUCTURAL STEEL. PAINTING OF ALL NEW STEEL SHALL BE PAID FOR UNDER ITEM 513.25, STRUCTURAL PAINTING, SHOP APPLIED.

2. THE CONTRACTOR AND FABRICATOR SHALL BE RESPONSIBLE FOR DETAILING AND FIT-UP OF ALL NEW STRUCTURAL STEEL. FABRICATION DRAWINGS FOR ALL NEW STRUCTURAL STEEL SHALL BE SUBMITTED TO THE STRUCTURES ENGINEER FOR APPROVAL AS PER SUBSECTION 506.03 OF THE STANDARD SPECIFICATIONS.

3. ALL FIELD CONNECTIONS SHALL BE MADE USING HIGH STRENGTH BOLTS MEETING AASHTO M164, TYPE I GALVANIZED. THE BOLTS SHALL RECEIVE AN INTERMEDIATE COAT OF PAINT, AS WELL AS A FINAL COAT AFTER INSTALLATION. ALL CONNECTIONS SHALL BE 7/8" BOLTS INSTALLED IN 15/16" HOLES UNLESS OTHERWISE NOTED. ANY CONNECTIONS NOT DESIGNATED SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STRUCTURES ENGINEER FOR APPROVAL.

4. MEMBERS DESIGNATED "CVN" SHALL MEET CHARPY V-NOTCH REQUIREMENTS FOR MAIN MEMBERS AS INDICATED IN SECTION 506 OF THE STANDARD SPECIFICATIONS.

5. ALL MEMBERS SHALL BE PLACED WITH MILL CAMBER UP.

6. THE CONTRACTOR IS REMINDED THAT ALL HARDWARE FOR CONNECTIONS IS NOT PAID FOR DIRECTLY BUT IS CONSIDERED INCIDENTAL TO THE STRUCTURAL STEEL ITEMS (INCLUDING ALL RIVET REMOVAL IN ORDER TO CONNECT NEW PLATES OR MEMBERS TO EXISTING PLATES OR MEMBERS WITH NEW HIGH STRENGTH BOLTS). THE CONTRACTOR SHALL MAKE A DETAILED COUNT OF ALL HARDWARE NECESSARY TO COMPLETE THE WORK AS SHOWN ON THE PLANS. BOLT LENGTHS SHALL BE FIELD VERIFIED BY THE CONTRACTOR TO HAVE SUFFICIENT THREAD LENGTH TO TIGHTEN.

TRUSS REHABILITATION NOTES:

1. ANY NECESSARY SHORING OF THE TRUSS, INCLUDING BUT NOT LIMITED TO THAT NECESSARY TO REPLACE OR REHABILITATE EXISTING BEARINGS, SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 502 OF THE STANDARD SPECIFICATIONS AND SHALL BE PAID FOR UNDER ITEM 502.10, SHORING SUPERSTRUCTURE. THE CONTRACTOR SHALL TAKE CARE SUCH THAT THE TRUSS REMAINS STABLE DURING DISMANTLING OF THE EXISTING FLOOR SYSTEM AND DURING REPAIR WORK TO TRUSS MEMBERS, SUBSTRUCTURES AND BEARINGS. THE CONTRACTOR SHALL SUBMIT CONSTRUCTION DRAWINGS FOR DISMANTLING AND SHORING, INCLUDING ASSOCIATED DESIGN CALCULATIONS, TO THE STRUCTURES ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK. CONSTRUCTION DRAWINGS SHALL BE SUBMITTED IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 105. PLANS AND DESIGN CALCULATIONS SHALL BE STAMPED BY A QUALIFIED PROFESSIONAL ENGINEER.

2. ALL EXISTING STEEL RETAINED IN THE REHABILITATED STRUCTURE SHALL BE CLEANED TO BARE METAL AND REPAINTED. WHERE STEEL IS TO BE CONNECTED TO EXISTING STEEL, THE SURFACE OF THE EXISTING STEEL SHALL BE CLEANED TO BARE METAL, REMOVING ALL RUST, AND PRIMED BEFORE ATTACHING NEW STEEL. ALL CLEANING OF EXISTING STEEL SHALL BE PAID FOR UNDER ITEM 513.41, SURFACE PREPARATION, FIELD. PAINTING OF EXISTING STEEL SHALL BE PAID FOR UNDER ITEM 513.30, STRUCTURAL PAINTING, FIELD APPLIED. THE COLOR OF THE FINAL COAT OF PAINT SHALL BE GREEN IN ACCORDANCE WITH SUBSECTION 708.03. THE CONTRACTOR SHALL ENSURE COMPATIBILITY BETWEEN THE SHOP AND FIELD PAINT SYSTEMS.

3. THE EXISTING STRUCTURAL STEEL IS PAINTED WITH A MATERIAL THAT MAY CONTAIN LEAD. THE CONTRACTOR SHALL FOLLOW ALL APPLICABLE REGULATIONS WHEN HANDLING AND WORKING WITH THIS STEEL. THE REMOVED STRUCTURAL STEEL WILL BECOME 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 REMOVED STRUCTURAL STEEL.

4. THE REPAIRS TO THE TRUSS MEMBERS INDICATED ON THE PLANS ARE A MINIMUM REQUIREMENT. THESE MEMBERS SHALL BE REPLACED IN KIND TO THE EXTENT FEASIBLE WITH MEMBERS HAVING SIMILAR GEOMETRY AND STRUCTURAL SECTION PROPERTIES TO THOSE DETAILED ON THE PLANS AND REFERENCE SHEETS. FOR THOSE MEMBERS NOT DESIGNATED FOR REPAIR AND IN THE OPINION OF THE RESIDENT ENGINEER HAVE INCURRED GREATER THAN 15 PERCENT SECTION LOSS, THE RESIDENT ENGINEER SHALL CONTACT THE STRUCTURES ENGINEER FOR FURTHER REPAIR RECOMMENDATIONS. AREAS LIKELY TO REQUIRE THE SPECIAL ATTENTION OF THE RESIDENT ENGINEER INCLUDE, BUT ARE NOT LIMITED TO: INTERIOR GUSSET PLATES AT TRUSS PANEL POINTS, SIDEWALK FRAMING OBSTRUCTED BY THE WATER MAIN ENCLOSURE, MISCELLANEOUS RIVETS AND BOTTOM CHORD SPLICE PLATES. ANY ADDITIONAL WORK REQUIRED SHALL BE PAID AT THE BID PRICE FOR THE APPROPRIATE BID ITEMS.

5. FINISHED GRADES FOR THE TRUSS SPAN PROVIDED IN THE PLANS ARE THEORETICAL AND ARE BASED ON ASSUMPTIONS REGARDING TRUSS DEFLECTION AND CAMBER. THE CONTRACTOR SHALL CONSTRUCT THE FLOOR SYSTEM AS SHOWN IN THE PLANS, INCLUDING CONCRETE HAUNCHES FOR STRINGERS AS SHOWN ON SHT. 28. BEAM PROFILES ARE NOT REQUIRED FOR DETERMINING FINISHED GRADES.

6. ALL CONNECTIONS ON THE TRUSS ARE BELIEVED TO BE 7/8" DIAMETER RIVETS IN 15/16" DIAMETER HOLES. THE CONTRACTOR SHALL VERIFY DIAMETER OF ACTUAL RIVET OR BOLT SIZE BEFORE ORDERING REPLACEMENTS.

7. ALL RIVETS REMOVED FROM THE TRUSS SHALL BE REPLACED WITH EQUIVALENT DIAMETER BOLTS MEETING AASHTO M-164, TYPE I GALVANIZED. HEX HEADS BOLTS SHALL BE USED, EXCEPT WHERE THE RESIDENT ENGINEER ORDERS DOME HEADED BOLTS SO AS NOT TO DETRACT FROM THE HISTORIC VALUE OF THE BRIDGE. THOSE RIVETS THAT ARE DEEMED BY THE RESIDENT ENGINEER TO BE DETERIORATED BEYOND THEIR USEFUL LIFE, BUT ARE NOT OTHERWISE TO BE REMOVED AND REPLACED UNDER THE STRUCTURAL STEEL ITEMS, SHALL BE REMOVED AND REPLACED UNDER ITEM 900.620, SPECIAL PROVISION (THROUGH TRUSS RIVET REPLACEMENT).

PROJECT NOTES (1)

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

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FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD
PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 25 OF 63

FILE NAME =h:\14586\mstr\plans\vs14586_gen-notes_1.dgn
DATE/TIME = 10/12/2009
USER =2552

CONCRETE NOTES:

1. FOR BOTH ABUTMENTS 1 AND 2, CONCRETE PORTIONS OF THE ABUTMENTS AND WINGWALLS ABOVE ADJACENT BRIDGE SEAT ELEVATIONS SHALL NOT BE PLACED UNTIL THE STRUCTURAL STEEL HAS BEEN SET AND FINISHED GRADE DETERMINED BY THE RESIDENT ENGINEER.

2. WHEN CONSTRUCTING THE DECK, THE CONCRETE SHALL BE POURED PARALLEL TO THE CENTERLINE OF BEARING AND SYMMETRICALLY ABOUT THE CENTERLINE OF TAYLOR STREET, TO THE EXTENT PRACTICAL, SO AS TO LOAD THE SUPERSTRUCTURE EQUALLY.

3. IT IS ANTICIPATED THAT THE CONTRACTOR WILL POUR THE ENTIRE DECK IN ONE EIGHT HOUR POUR. IF THIS IS THE CASE, THE POUR SHALL BEGIN AT THE ABUTMENT 1 END AND A RETARDING ADMIXTURE, APPROVED BY THE VERMONT AGENCY OF TRANSPORTATION MATERIALS AND RESEARCH LABORATORY, SHALL BE USED TO PREVENT THE DECK CONCRETE FROM SETTING UP UNTIL THE ENTIRE POUR HAS BEEN COMPLETED. THE RETARDING ADMIXTURE SHALL BE INCIDENTAL TO ITEM 900.608 SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT). IF THIS IS NOT THE CASE, A POUR SEQUENCE SHALL BE SUBMITTED IN WRITING TO THE STRUCTURES ENGINEER FOR APPROVAL.

4. IT IS ANTICIPATED THAT THE CONTRACTOR WILL POUR THE ENTIRE SIDEWALK INDEPENDENTLY OF THE DECK, IN ONE EIGHT HOUR POUR. IF THIS IS THE CASE, THE POUR SHALL BEGIN AT THE ABUTMENT 1 END AND A RETARDING AND SHRINKAGE COMPENSATION ADMIXTURE, BOTH APPROVED BY THE VERMONT AGENCY OF TRANSPORTATION MATERIALS AND RESEARCH LABORATORY, SHALL BE USED. BOTH ADMIXTURES SHALL BE INCIDENTAL TO ITEM 900.608 SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT). IF THIS IS NOT THE CASE, A POUR SEQUENCE SHALL BE SUBMITTED IN WRITING TO THE STRUCTURES ENGINEER FOR APPROVAL.

5. IF REQUIRED, TRANSVERSE BRIDGE DECK OR SIDEWALK CONSTRUCTION JOINTS SHALL BE FORMED BETWEEN ADJACENT POURS AS SHOWN IN THE TYPICAL CONCRETE CONSTRUCTION JOINT DETAIL ON SHT. 40.

6. ITEM 514.10, WATER REPELLENT, SILANE SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE UNDERSIDE OF THE DECK BETWEEN DRIP NOTCHES.

7. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS SHOWN ON SHT. 40, OR AS DIRECTED BY THE RESIDENT ENGINEER.

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

9. THE KEY IN THE CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT. UPWARD KEYS SHALL BE APPROVED BY THE RESIDENT ENGINEER AND PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.

10. ALL SUPERSTRUCTURE REINFORCING STEEL AND ANY SUBSTRUCTURE STEEL SO DESIGNATED ON THE PLANS, SHALL BE EPOXY COATED AND PAID FOR UNDER ITEM 507.17, EPOXY COATED REINFORCING STEEL. WHEN EPOXY COATED REINFORCING STEEL IS TO BE CUT, THE UNCOATED ENDS SHALL BE REPAIRED WITH MATERIALS AND PROCEDURES APPROVED BY THE COATING MANUFACTURER. FLAME CUTTING OF EPOXY COATED REINFORCING STEEL WILL NOT BE PERMITTED.

11. REINFORCING PLACEMENT TOLERANCES SHALL BE:

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

UTILITY NOTES:

1. REQUIRED UTILITY COORDINATION SHALL BE COMPLETED BY THE VERMONT AGENCY OF TRANSPORTATION UNLESS OTHERWISE NOTED. ANTICIPATED UTILITY COORDINATION MAY BE REQUIRED FOR THE FOLLOWING WORK ITEMS SHOWN IN THE PLANS:

   - THE PROPOSED GATE VALVE AT STA. 14+00.0 LT SHALL BE INSTALLED UNDER ITEM 629.27 GATE VALVE WITH VALVE BOX. THE PROPOSED GATE VALVE SHALL BE INSTALLED PRIOR TO DISCONNECTION OF THE EXISTING WATER MAIN FROM SERVICE. ANY EXCAVATION REQUIRED FOR GATE VALVE INSTALLATION SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE INCLUDED UNDER ITEM 629.27.

   - THE PORTION OF THE WATER MAIN CURRENTLY SUPPORTED ON THE EXISTING BRIDGE SHALL BE ISOLATED AND DISCONNECTED FROM SERVICE. THE 8" DIA. WATER MAIN IS CURRENTLY OWNED AND MAINTAINED BY THE CITY OF MONTPELIER. THE CONTRACTOR SHALL COORDINATE DISCONNECTION OF THE EXISTING WATER MAIN WITH THE CITY.

   - THE EXISTING 8" DIA. WATER MAIN AND ASSOCIATED TIMBER INSULATION BOX WILL BE COMPLETELY REMOVED UNDER ITEM 529.20, PARTIAL REMOVAL OF STRUCTURE. THE EXISTING WATER MAIN TIMBER INSULATION BOX (BOX) MAY CONTAIN HAZARDOUS MATERIAL. THE REMOVED BOX IS THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE CITY, STATE, THEIR OFFICERS AND EMPLOYEES HARMLESS CONCERNING THE CONTRACTOR'S USE OR DISPOSITION OF THE BOX. ALL COSTS ASSOCIATED WITH ITS DISPOSAL SHALL BE CONSIDERED INCIDENTAL TO ITEM 529.20.

   - THE EXISTING WATER MAIN SHALL BE REPLACED UNDER ITEM 900.645, SPECIAL PROVISION (WATER MAIN ON BRIDGE) (8").

   - THE EXISTING GATE VALVES AT THE SOUTHEAST APPROACH SHALL BE ADJUSTED IN ELEVATION BY THE CITY OF MONTPELIER DEPARTMENT OF PUBLIC WORKS. THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE THE GATE VALVES DURING CONSTRUCTION.

   - EXISTING LUMINARIES LOCATED AT STA. 14+40.6 LT AND 15+64.4 LT SHALL BE REPLACED BY GREEN MOUNTAIN POWER (GMP). THE CITY OF MONTPELIER WILL COORDINATE WITH GMP ACCORDINGLY.

TRAFFIC CONTROL AND DETOUR NOTES:

1. DURING CONSTRUCTION, VEHICULAR AND PEDESTRIAN TRAFFIC SHALL BE MAINTAINED AS FOLLOWS:

   - TEMPORARY TRAFFIC BARRIERS SHALL BE INSTALLED AT THE PROJECT SITE AS SHOWN ON SHT. 23.

   - THE TEMPORARY TRAFFIC DETOUR (FOR VEHICLES) SHALL BE ESTABLISHED AS SHOWN ON SHT. 42.

   - A TEMPORARY SIGNAL SYSTEM SHALL BE INSTALLED AT THE TAYLOR ST/ U.S. BUSINESS ROUTE 2 (STATE STREET) INTERSECTION AS SHOWN ON SHT. 43.

   - TEMPORARY SIGNAL ADJUSTMENTS SHALL BE MADE AT THE BAILEY AVENUE/ MEMORIAL DRIVE AND TAYLOR STREET/MEMORIAL DRIVE INTERSECTIONS AS SHOWN ON SHT. 43.

   - THE TEMPORARY PEDESTRIAN DETOUR SHALL BE ESTABLISHED AS SHOWN ON SHT. 44.

2. THE CONTRACTOR SHALL NOTIFY THE CITY OF MONTPELIER DEPARTMENT OF PUBLIC WORKS (DIRECTOR TODD LAW 802-223-9508) AND THE STATE OF VERMONT DEPARTMENT OF BUILDINGS AND GENERAL SERVICES (DAVID BURLEY 802-828-5643) A MINIMUM OF TWO (2) WEEKS IN ADVANCE OF DIVERTING ANY VEHICULAR OR PEDESTRIAN TRAFFIC.

3. CONTRACTOR SHALL ERECT AND MAINTAIN ALL EQUIPMENT AND FACILITIES REQUIRED FOR TRAFFIC CONTROL AND DETOURS AS SHOWN IN THE PLANS AND AS DIRECTED BY THE RESIDENT ENGINEER. THE BID PRICE FOR ITEM 641.10, TRAFFIC CONTROL SHALL INCLUDE ALL WORK REQUIRED TO INSTALL, MAINTAIN AND REMOVE TEMPORARY SIGNING, BARRELS, BARRICADES, CONES, FENCE, PAVEMENT MARKINGS AND ADJUSTMENTS TO EXISTING TRAFFIC SIGNALS.

4. ITEM 621.90, TEMPORARY TRAFFIC BARRIER AND ITEM 678.40, TEMPORARY TRAFFIC SIGNAL SYSTEM SHALL EACH BE MEASURED AND PAID FOR UNDER THEIR RESPECTIVE ITEM NUMBERS AND PAYMENT UNITS.

5. AS A MINIMUM, ROLL UP SIGN MATERIAL SHALL HAVE ASTM D 4956-01 TYPE VI FLUORESCENT ORANGE RETROREFLECTIVE SHEETING. ALL POST-MOUNTED SIGNS AND SOLID SUBSTRATE PORTABLE SIGNS SHALL HAVE ASTM D 4956-01 TYPE VII, TYPE VIII OR TYPE IX FLUORESCENT ORANGE RETROREFLECTIVE SHEETING.

PROJECT NOTES (2)

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

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FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD
PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 26 OF 63

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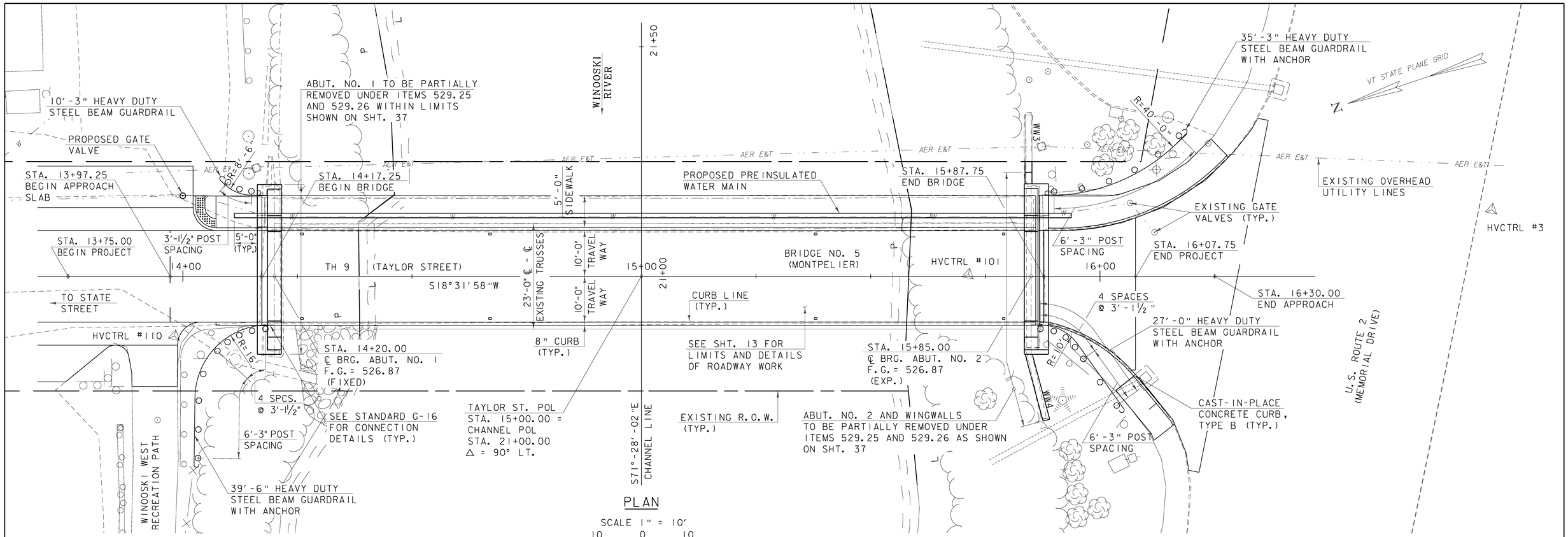
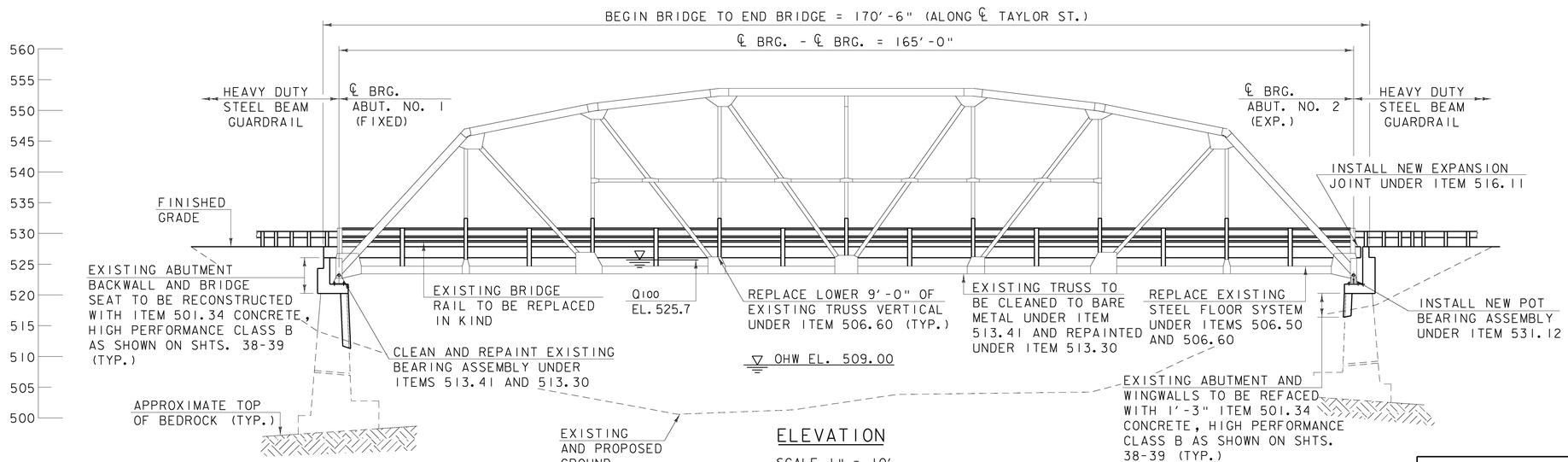
USER =2552



PLAN

SCALE 1" = 10'



ELEVATION

SCALE 1" = 10'

PLAN AND ELEVATION

PROJECT NAME:	MONTPELIER
PROJECT NUMBER:	BHF 6400(31)

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FILE NAME: $FILES$	PLOT DATE: 10/12/2009
PROJECT MANAGER: SUSAN SCRIBNER	DRAWN BY: D. D'AMATO
DESIGNED BY: D. D'AMATO	CHECKED BY: P. PERKINS
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD	SHEET 27 OF 63

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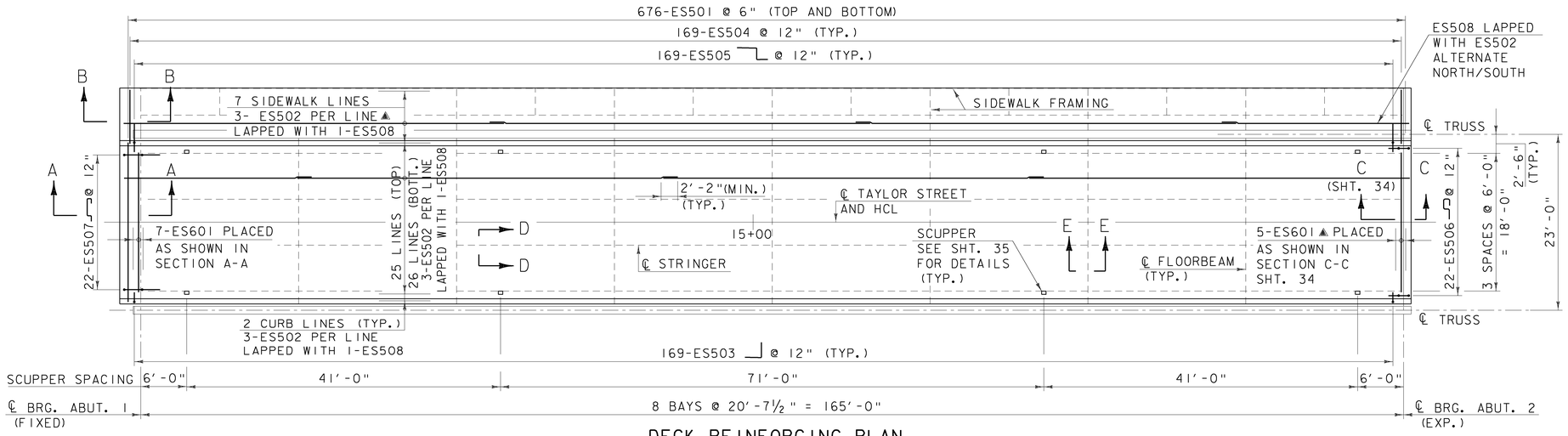
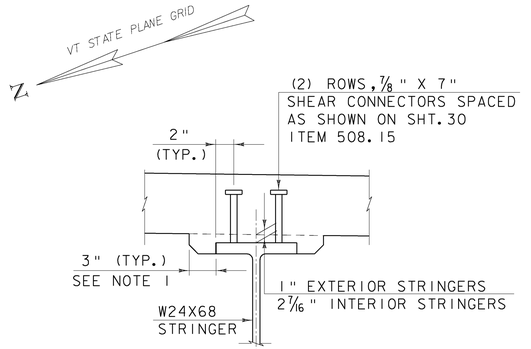


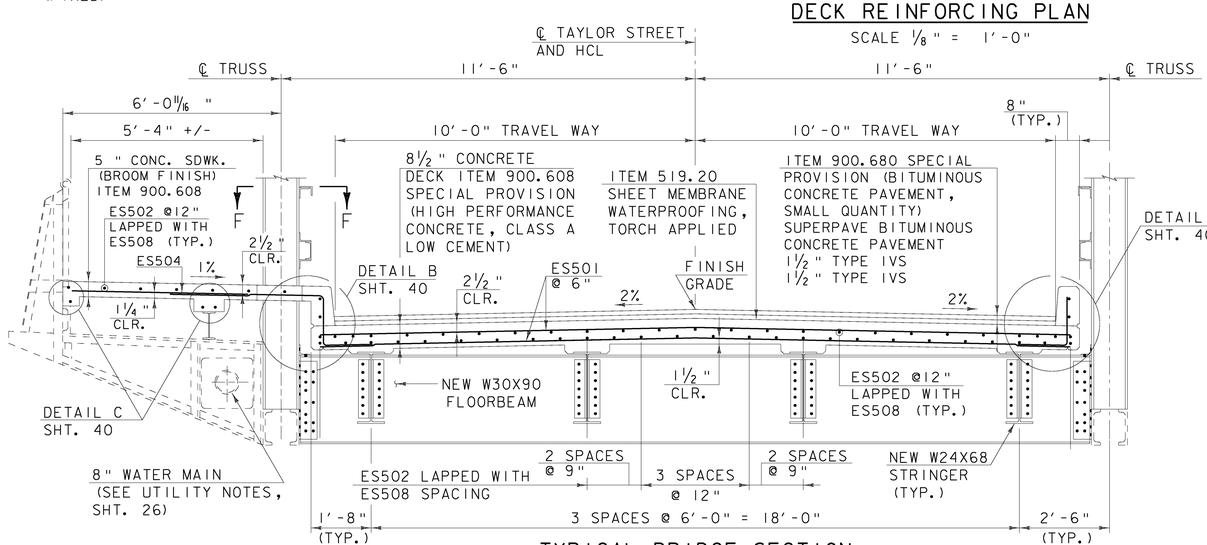
DECK REINFORCING PLAN

SCALE ⅛" = 1'-0"



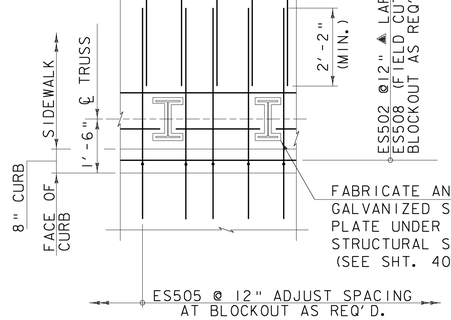
SECTION D-D

SCALE 1½" = 1'-0"



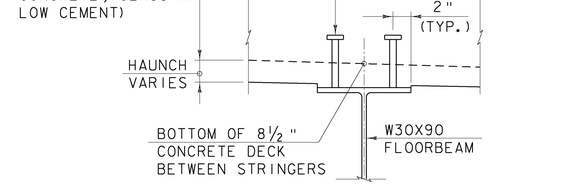
TYPICAL BRIDGE SECTION

SCALE ½" = 1'-0"



SECTION F-F

SCALE ½" = 1'-0"



SECTION E-E

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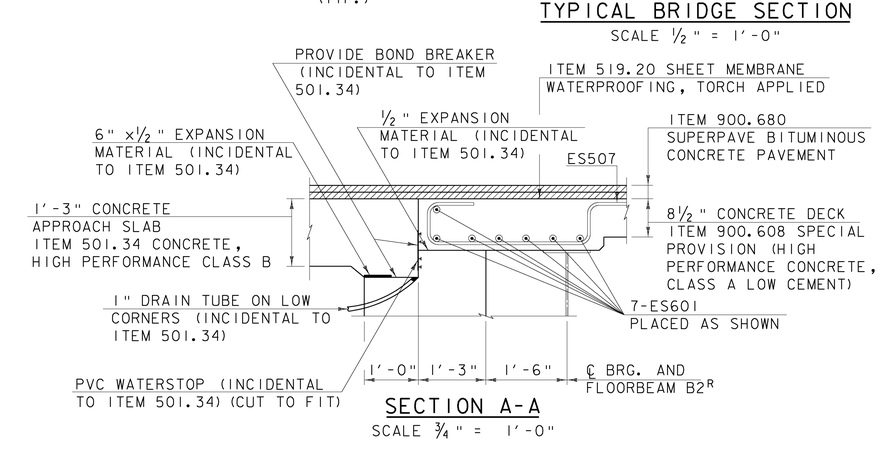
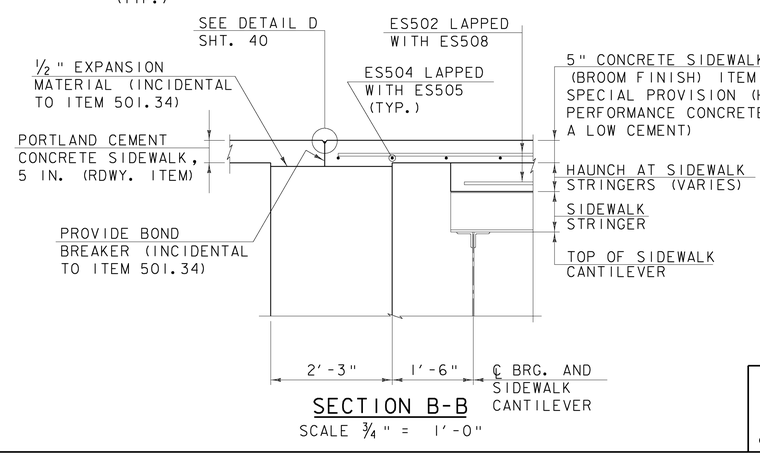


SECTION A-A

SCALE ¾" = 1'-0"



SECTION B-B

SCALE ¾" = 1'-0"

NOTES:

1. THE 3" STRINGER HAUNCH PROJECTION MAY BE ELIMINATED FOR FORMING SYSTEMS DESIGNED FOR THE CONSTRUCTION OF VERTICAL HAUNCHES. SYSTEMS SHALL BE SUBMITTED FOR APPROVAL TO THE STRUCTURES ENGINEER. ALL VOIDS SHALL BE FILLED WITH POLYURETHANE JOINT SEALER OR AN EQUIVALENT PRODUCT APPROVED BY THE VERMONT AGENCY OF TRANSPORTATION MATERIALS AND RESEARCH LABORATORY.
2. FOR END OF DECK DETAILS AT ABUTMENT 2, SEE SHT. 34.

LEGEND:
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT IN FIELD

SCALE ⅛" = 1'-0" 1 0 2 4 6 8
SCALE ½" = 1'-0" 1 0 1 2
SCALE ¾" = 1'-0" 1 0 2
SCALE 1 ½" = 1'-0" 1 9 6 3 0

DECK PLAN AND DETAILS

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

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FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD
PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 28 OF 63

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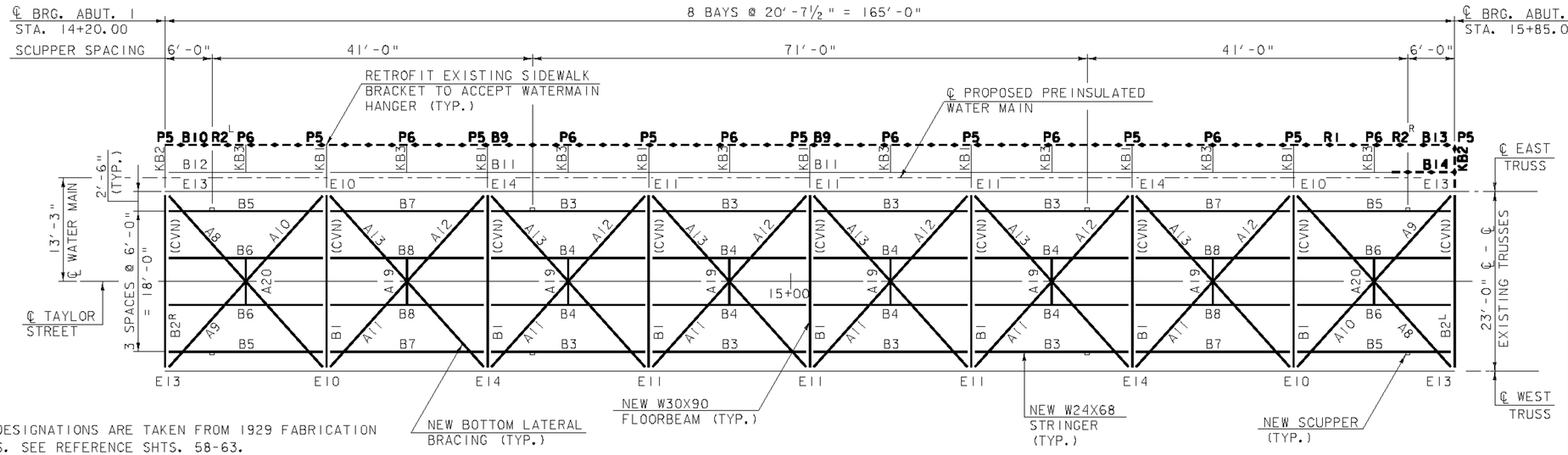
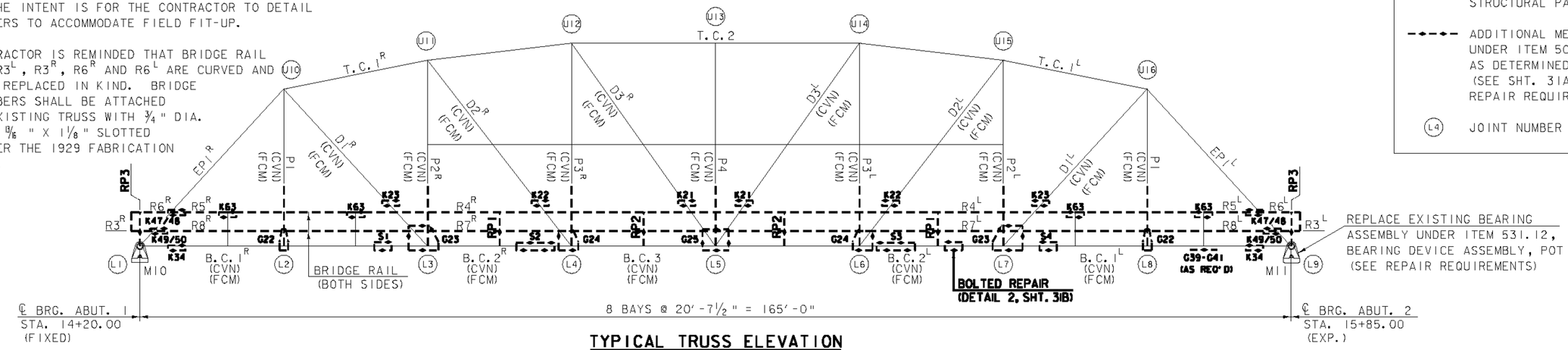


FLOOR FRAMING PLAN

SCALE ⅛" = 1'-0"

1 0 2 4 6 8



TYPICAL TRUSS ELEVATION

(EAST TRUSS SHOWN, WEST TRUSS SIMILAR)

SCALE ⅛" = 1'-0"

1 0 2 4 6 8

LEGEND

- EXISTING MEMBER TO BE REPLACED UNDER ITEM 506.50, STRUCTURAL STEEL, ROLLED BEAM
- EXISTING MEMBER TO BE REPLACED UNDER ITEM 506.60, STRUCTURAL STEEL
- EXISTING MEMBER TO REMAIN (CLEAN TO BARE METAL UNDER ITEM 513.41, SURFACE PREPARATION, FIELD AND REPAINT UNDER ITEM 513.30, STRUCTURAL PAINTING, FIELD APPLIED)
- ADDITIONAL MEMBER TO BE REPLACED UNDER ITEM 506.60, STRUCTURAL STEEL AS DETERMINED DURING CONSTRUCTION (SEE SHT. 31A-31C FOR ADDITIONAL REPAIR REQUIREMENTS
- (L4) JOINT NUMBER

NOTES:

1. MEMBER DESIGNATIONS ARE TAKEN FROM 1929 FABRICATION DRAWINGS. SEE REFERENCE SHTS. 58-63.
2. SEE SHT. 25, FOR ADDITIONAL INFORMATION REGARDING PAYMENT AND REQUIRED SUBMITTALS.
3. WHERE NEW STRUCTURAL STEEL IS NOT FULLY DETAILED IN THE PLANS, THE INTENT IS FOR THE CONTRACTOR TO DETAIL THE MEMBERS TO ACCOMMODATE FIELD FIT-UP.
4. THE CONTRACTOR IS REMINDED THAT BRIDGE RAIL MEMBERS R3L, R3R, R6R AND R6L ARE CURVED AND SHALL BE REPLACED IN KIND. BRIDGE RAIL MEMBERS SHALL BE ATTACHED TO THE EXISTING TRUSS WITH ¾" DIA. BOLTS IN 13/16" X 1⅛" SLOTTED HOLES, PER THE 1929 FABRICATION DRAWINGS.

REPAIR REQUIREMENTS (TYPICAL EACH TRUSS)
FOR ANY MEMBERS NOT SHOWN ABOVE, REFER TO SHTS. 58-63 FOR 1929 FABRICATION DRAWINGS:

FLOORBEAMS - MEMBER B1, B2R AND B2L: REPLACE EXISTING CB30X115 WITH W30X90 (SEE SHT. 30)

STRINGERS - MEMBER B3, B4, B5, B6, B7 AND B8: REPLACE EXISTING CB24X76 WITH W24X68 (SEE SHT. 30)

VERTICALS - MEMBER P1, P2R, P2L, P3R, P3L, P4: REPLACE LOWER 9'-0" OF EXISTING CB12X36 WITH W12X35

BRIDGE RAIL - MEMBER R4R, R5R AND R6R: REPLACE L4X3X5/16 ANGLE (FULL LENGTH)
BRIDGE RAIL - MEMBER R4L, R5L AND R6L: REPLACE L4X3X5/16 ANGLE (FULL LENGTH)
BRIDGE RAIL - MEMBER R3R, R7R AND R8R: REPLACE BUILT UP RAIL SECTION 1-C6X8.2 CHANNEL AND 2-L4X3X5/16 ANGLES (FULL LENGTH)
BRIDGE RAIL - MEMBER R3L, R7L AND R8L: REPLACE BUILT UP RAIL SECTION 1-C6X8.2 CHANNEL AND 2-L4X3X5/16 ANGLES (FULL LENGTH)

SIDEWALK RAIL - MEMBER R1, R2R, R2L: REPLACE ¾" SQUARE X 2'-6 3/16" RAILING BALUSTERS AS DIRECTED BY THE RESIDENT ENGINEER. ANY BALUSTERS (AND/OR SECTION OF 2"x7/16" TOP HORIZONTAL BALUSTER SUPPORT BAR) THAT ARE EITHER STRAIGHTENED OR REPLACED SHALL BE PAID UNDER ITEM 506.60, STRUCTURAL STEEL, AT THE PER POUND PRICE FOR THE WEIGHT OF EACH PIECE.

LATERAL BRACING - MEMBER A8, A9 AND A10: REPLACE 2-L5X3X5/16 ANGLES (FULL LENGTH)
LATERAL BRACING - MEMBER A11, A12 AND A13: REPLACE L4X3½X5/16 ANGLE (FULL LENGTH)

HANGERS - MEMBER A19 AND A20: REPLACE BUILT UP HANGER SECTION 1-L4X3X5/16, 1-L6X3½X⅜, 1-L3½X3½X5/16 AND 4-L6X4X⅜

CONNECTION PL - MEMBER E10: REPLACE PL ⅜" X 15½" X 2'-9"
CONNECTION PL - MEMBER E11: REPLACE PL ⅜" X 15½" X 2'-8"
CONNECTION PL - MEMBER E13: REPLACE PL ⅜" X 14" X 2'-9"
CONNECTION PL - MEMBER E14: REPLACE PL ⅜" X 15" X 2'-8"
CONNECTION PL - MEMBER G8: REPLACE PL ⅜" X 11½" X 2'-4½"
CONNECTION PL - MEMBER G9: REPLACE PL ⅜" X 15" X 2'-9"

FIXED BEARING - MEMBER M10: REMOVE EXISTING PIN, CLEAN TO BARE METAL AND REPAINT EXISTING ASSEMBLY, GREASE AND REPLACE PIN (SEE SHT. 25, TRUSS REHABILITATION NOTE 2)

EXPANSION BEARING - MEMBER M11: REPLACE EXISTING ASSEMBLY (SHT. 32 FOR DETAILS).

SIDEWALK BRACKETS - MEMBERS KB1, KB2, KB3: RETROFIT TO ACCEPT WATER MAIN HANGER (SHT. 30 FOR DETAILS)

TRUSS REHABILITATION

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

CLOUGH HARBOUR & ASSOCIATES LLP

FILE NAME: $FILES$ | PLOT DATE: 7/8/2010
PROJECT MANAGER: SUSAN SCRIBNER | DRAWN BY: D. D'AMATO
DESIGNED BY: D. D'AMATO | CHECKED BY: P. PERKINS
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD | SHEET 29 OF 63

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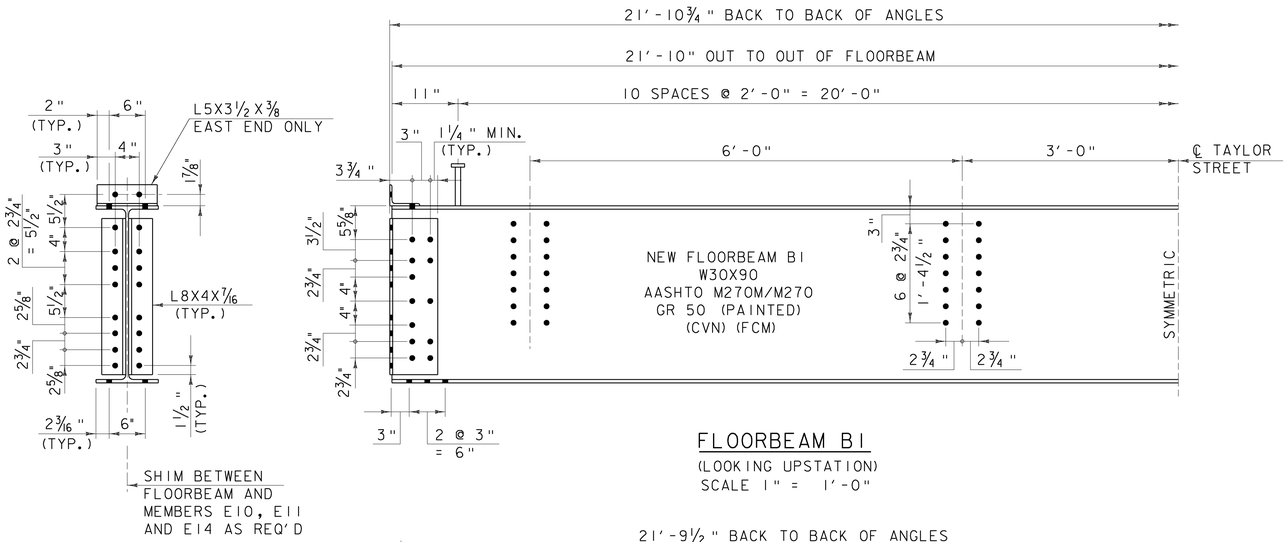
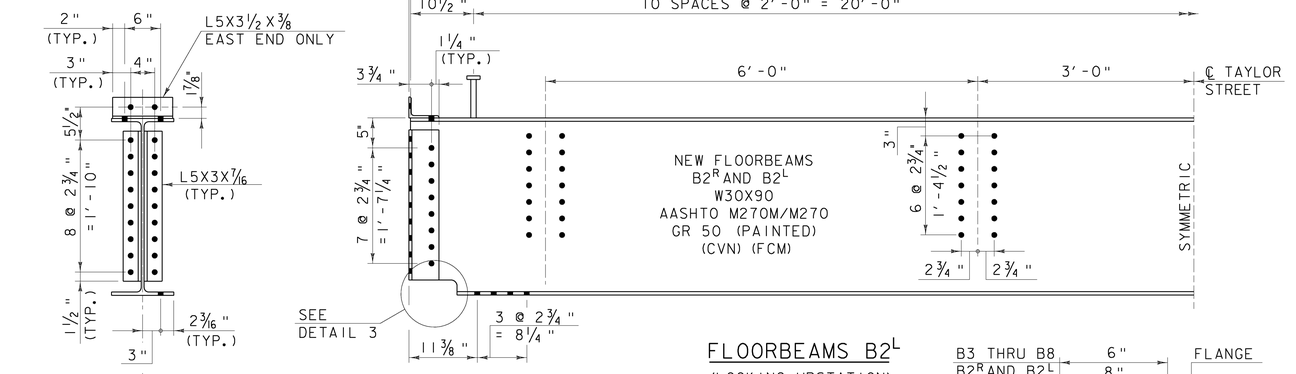


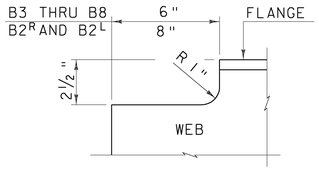
FLOORBEAM B1

(LOOKING UPSTATION)
SCALE 1" = 1'-0"



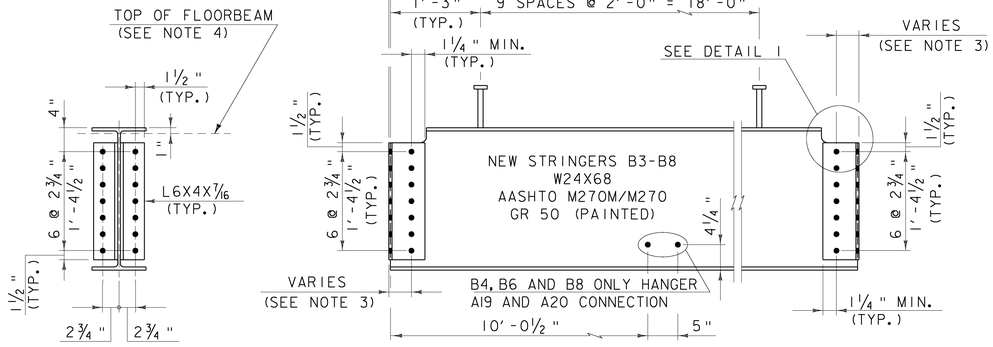
FLOORBEAMS B2L

(LOOKING UPSTATION)
(FLOORBEAM B2R SIMILAR)
SCALE 1" = 1'-0"



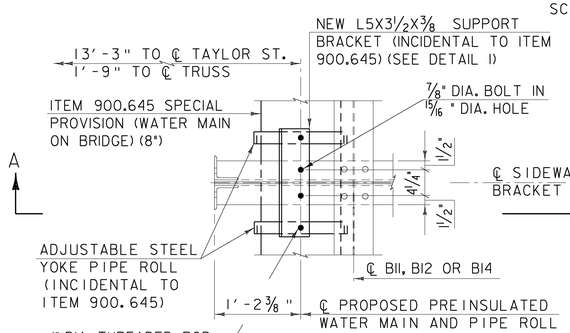
DETAIL 3

NOT TO SCALE



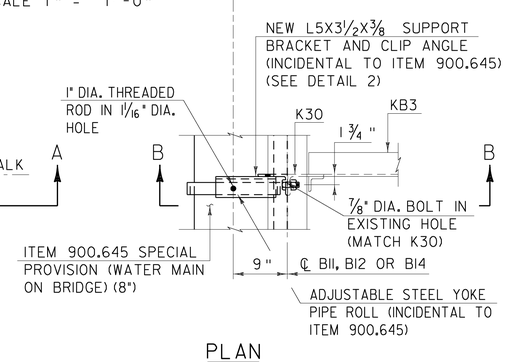
STRINGERS B3-B8

SCALE 1" = 1'-0"



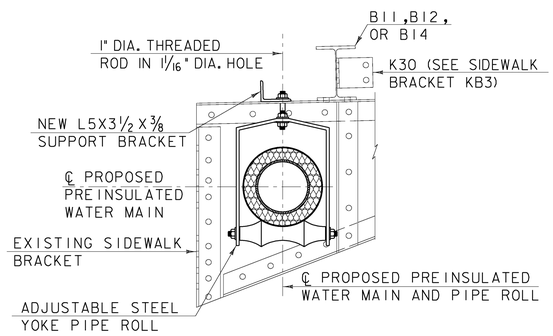
PLAN

(WATERMAIN HANGER CONNECTION AT KB1)



PLAN

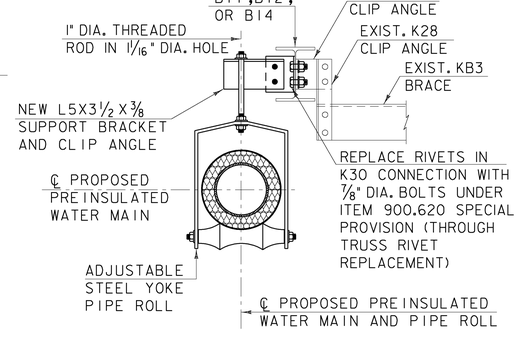
(WATERMAIN HANGER CONNECTION AT KB3)



SECTION A-A

SIDEWALK BRACKET KB1

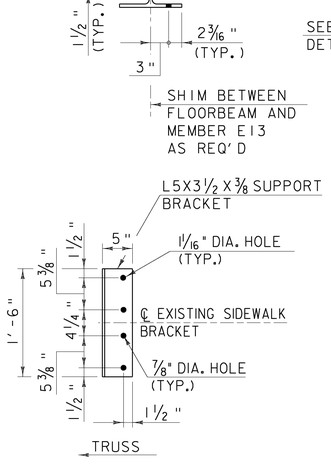
(BRACKET KB2 SIMILAR)
SCALE 1" = 1'-0"



SECTION B-B

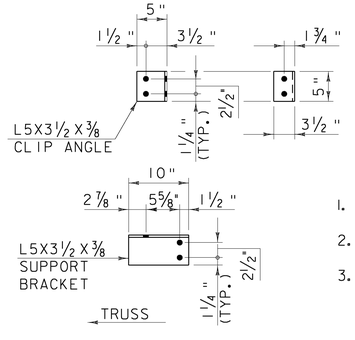
SIDEWALK BRACKET KB3

SCALE 1" = 1'-0"



DETAIL 1

SCALE 1" = 1'-0"



DETAIL 2

SCALE 1" = 1'-0"

1. SEE REFERENCE SHTS. 58-63 FOR 1929 FABRICATION DRAWINGS.
2. SEE SHT. 25 FOR ADDITIONAL INFORMATION REGARDING PAYMENT AND REQUIRED SUBMITTALS.
3. THE CONTRACTOR IS ADVISED THAT THE EXISTING TRUSS IS CAMBERED TO PRODUCE THE VERTICAL CURVATURE OF TAYLOR STREET. AS A RESULT, STRINGER TO FLOORBEAM CONNECTION ANGLES MAY NOT BE PLUMB. THE CONTRACTOR IS CAUTIONED TO ENSURE THE BOLT PATTERN IN THE STRINGER WEB FACILITATES FIELD FIT-UP THROUGH UNDERSTANDING OF REFERENCE SHTS. 58-63 AND BY OBTAINING ALL NECESSARY FIELD MEASUREMENTS. FIELD DRILLING MAY BE DETAILED AT THE CONTRACTOR'S OPTION, PROVIDED REQUIRED EDGE DISTANCES ARE MAINTAINED.
4. THE CONTRACTOR IS CAUTIONED THAT THE TOP OF THE NEW STRINGERS ARE DETAILED 1" HIGHER THAN THE TOP OF THE FLOORBEAMS. THIS IS A CHANGE FROM THE DETAILING SHOWN IN THE 1929 FABRICATION DRAWINGS.

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

STRUCTURAL STEEL DETAILS (1)

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

CLOUGH HARBOUR & ASSOCIATES LLP © 2009

FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD
PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 30 OF 63

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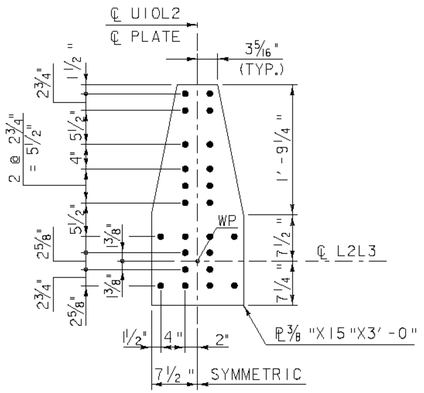
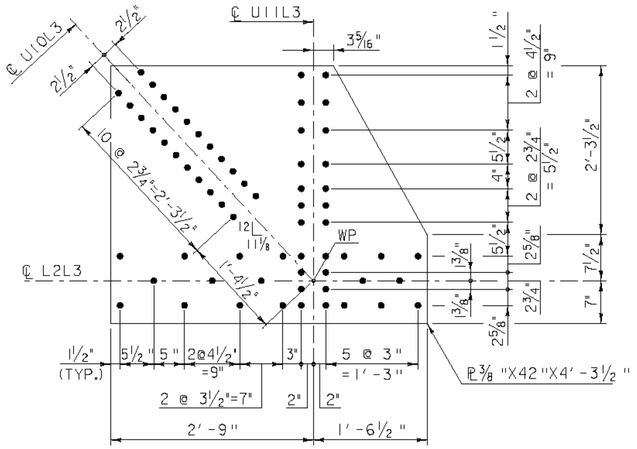
DATE/TIME = 10/12/2009
USER = 2552



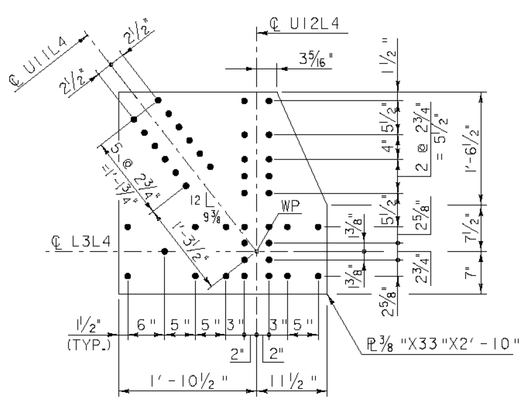
GUSSET PLATE G22

(L2 SHOWN, L8 SIMILAR)
SCALE 1" = 1'-0"



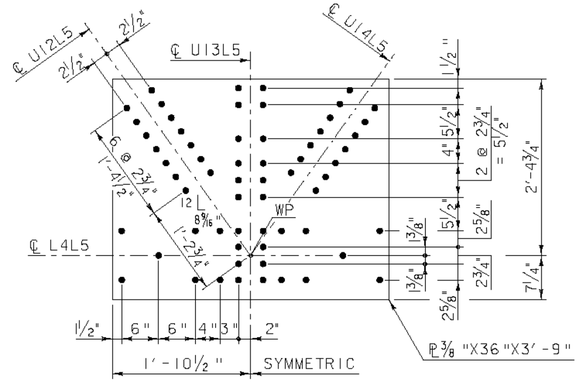
GUSSET PLATE G23

(L3 SHOWN, L7 OPPOSITE HAND)
SCALE 1" = 1'-0"



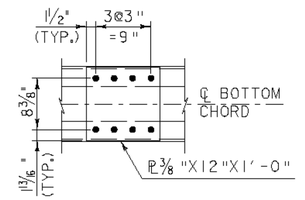
GUSSET PLATE G24

(L4 SHOWN, L6 OPPOSITE HAND)
SCALE 1" = 1'-0"



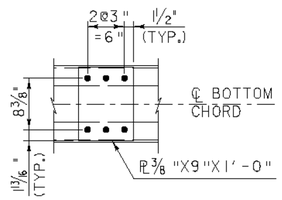
GUSSET PLATE G25

SCALE 1" = 1'-0"



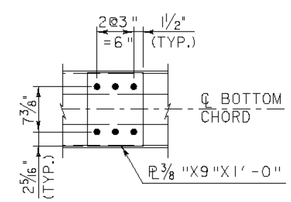
PLAN - BATTEN PLATE G39

SCALE 1" = 1'-0"



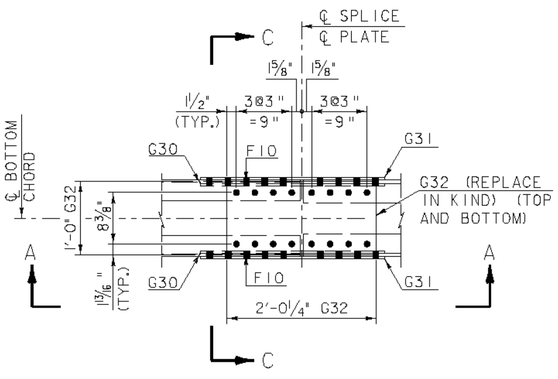
PLAN - BATTEN PLATE G40

SCALE 1" = 1'-0"



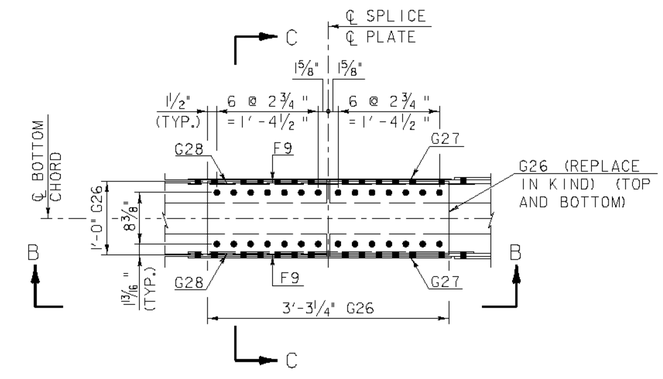
PLAN - BATTEN PLATE G41

SCALE 1" = 1'-0"



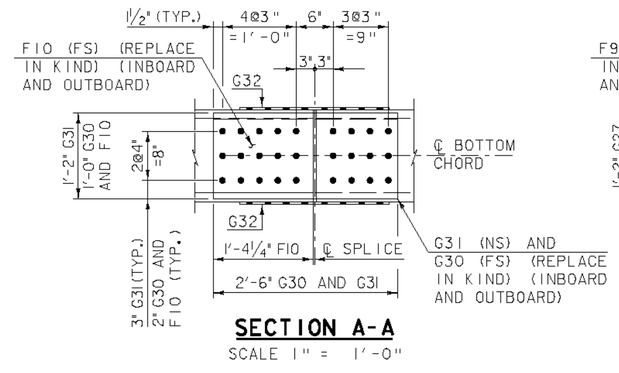
PLAN - SPLICE S1 AND S4

SCALE 1" = 1'-0"



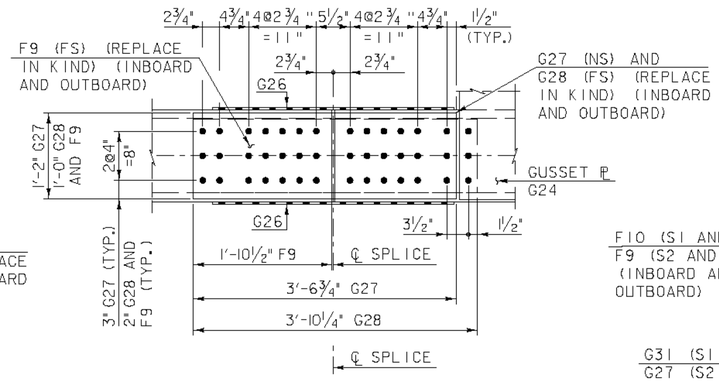
PLAN - SPLICE S2 AND S3

SCALE 1" = 1'-0"



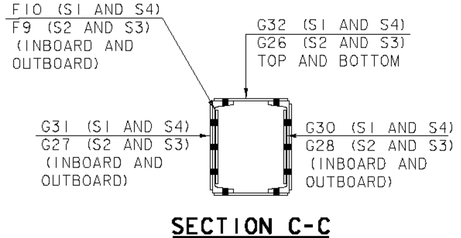
SECTION A-A

SCALE 1" = 1'-0"



SECTION B-B

SCALE 1" = 1'-0"



SECTION C-C

SCALE 1" = 1'-0"

ADDITIONAL REPAIR REQUIREMENTS (WEST TRUSS):

GUSSET PLATE - MEMBER G22: REPLACE INBOARD AT L8, 1-P 3/8" X 15" X 3'-0"
SPLICE PLATE - MEMBER G32: REPLACE BOTTOM AT S1, 1-P 3/8" X 12" X 2'-0 1/4"
SPLICE PLATE - MEMBER G26: REPLACE BOTTOM AT S3, 1-P 3/8" X 12" X 3'-3 1/4"
SPLICE PLATE - MEMBER G32: REPLACE BOTTOM AT S4, 1-P 3/8" X 12" X 2'-0 1/4"

ADDITIONAL REPAIR REQUIREMENTS (EAST TRUSS):

GUSSET PLATE - MEMBER G22: REPLACE INBOARD AND OUTBOARD AT L2 AND L8, 4-P 3/8" X 15" X 3'-0"
GUSSET PLATE - MEMBER G23: REPLACE INBOARD AND OUTBOARD AT L3 AND L7, 4-P 3/8" X 42" X 4'-3 1/2"
GUSSET PLATE - MEMBER G24: REPLACE INBOARD AND OUTBOARD AT L4 AND L6, 4-P 3/8" X 33" X 2'-10"
GUSSET PLATE - MEMBER G25: REPLACE INBOARD AND OUTBOARD AT L5, 2-P 3/8" X 36" X 3'-9"

SPLICE PLATE - MEMBER G30: REPLACE INBOARD AND OUTBOARD AT S1 AND S4, 4-P 3/8" X 12" X 2'-6"
SPLICE PLATE - MEMBER G31: REPLACE INBOARD AND OUTBOARD AT S1 AND S4, 4-P 3/8" X 14" X 2'-6"
FILL PLATE - MEMBER F10: REPLACE INBOARD AND OUTBOARD AT S1 AND S4, 4-P 3/16" X 12" X 1'-4 1/4"
SPLICE PLATE - MEMBER G32: REPLACE TOP AND BOTTOM AT S1 AND S4, 4-P 3/8" X 12" X 2'-0 1/4"

SPLICE PLATE - MEMBER G26: REPLACE TOP AND BOTTOM AT S2 AND S3, 4-P 3/8" X 12" X 3'-3 1/4"
SPLICE PLATE - MEMBER G27: REPLACE INBOARD AND OUTBOARD AT S2 AND S3, 4-P 3/16" X 14" X 3'-6 3/4"
FILL PLATE - MEMBER F9: REPLACE INBOARD AND OUTBOARD AT S2 AND S3, 4-P 1/8" X 12" X 1'-10 1/2"
SPLICE PLATE - MEMBER G28: REPLACE INBOARD AND OUTBOARD AT S2 AND S3, 4-P 3/16" X 12" X 3'-10 1/4"

BATTEN PLATE - MEMBER G39: REPLACE TOP AND BOTTOM AS REQUIRED, 7-P 3/8" X 12" X 1'-0"
BATTEN PLATE - MEMBER G40: REPLACE TOP AND BOTTOM AS REQUIRED, 41-P 3/8" X 9" X 1'-0"
BATTEN PLATE - MEMBER G41: REPLACE TOP AND BOTTOM AS REQUIRED, 17-P 3/8" X 12" X 1'-0"

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

STRUCTURAL STEEL DETAILS (3)

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD
PLOT DATE: 7/14/2010
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 31A OF 63

CLOUGH HARBOUR & ASSOCIATES LLP

FILE NAME =K:\14506\Mesh\plans\sal4506_additional_steel_1.dgn
DATE/TIME =7/14/2010
USER =2652

CLOUGH HARBOUR & ASSOCIATES LLP

Memorandum

To: Wayne Symonds (VTrans)

CC: Peter Perkins (CHA), Dale Gozalkowski (CHA)

From: David D'Amato (CHA)

Date: 4/26/2010

Re: Montpelier Taylor Street Bridge Rehabilitation, BHF 6400(31) Construction Inspection Findings

The following is a listing of additional steel repairs to the Taylor Street Bridge corresponding to Contract Plan Sht. 31A. Repair recommendations are the result of an April 23, 2010 field visit and construction inspection findings compiled by the Resident Engineer. All additional steel required for the listed repairs shall be paid under Item 506.60 Structural Steel (LB).

Gusset and Splice Plates - East Truss

1. Node L2, Inboard/Outboard: Local section loss to 100%. **Recommend replacement.**

    - **2-PL⅜"x15"x3'-0", approximate weight = 120 LB (Mark G22) (FCM)**

2. S1: Heavy scaling and local section loss to approximately 40%. **Recommend replacement.**

    - **2-PL⅜"x12"x2'-0 ¼", approximate weight = 65 LB (Mark G32) (FCM)**
    - **2-PL⅜"x14"x2'-6", approximate weight = 90 LB (Mark G31) (FCM)**
    - **2-PL⅜"x12"x2'-6", approximate weight = 80 LB (Mark G30) (FCM)**
    - **2-PL3/16"x12"x1'-4¼", approximate weight = 21 LB (Mark F10)**

3. Node L3, Inboard: Heavy scaling and local section loss to approximately 40%. Local knife edging and perforation adjacent to Member U11L3. **Recommend replacement.**

    - **1-PL⅜"x42"x4'-3 ½", approximate weight = 230 LB (Mark G23) (FCM)**

4. Node L3, Outboard: Heavy scaling. **Recommend replacement.**

    - **1-PL⅜"x42"x4'-3 ½", approximate weight = 230 LB (Mark G23) (FCM)**

5. S2: Heavy scaling. **Recommend replacement.**

   - **2-PL⅜"x12"x3'-3 ¼", approximate weight = 100 LB (Mark G26) (FCM)**
   - **2-PL3/16"x14"x3'-6 ¾", approximate weight = 65 LB (Mark G27) (FCM)**
   - **2-PL3/16"x12"x3'-10 ¼", approximate weight = 60 LB (Mark G28) (FCM)**
   - **2-PL⅛"x12"x1'-10½" , approximate weight = 20 LB (Mark F9)**

6. Node L4, Inboard/Outboard: Heavy scaling and local section loss to approximately 30%. **Recommend replacement.**

   - **2-PL⅜"x33"x2'-10", approximate weight = 240 LB (Mark G24) (FCM)**

7. Node L5, Inboard/Outboard: Heavy scaling and local section loss to approximately 30%. **Recommend replacement.**

   - **2-PL⅜"x36"x3'-9", approximate weight = 350 LB (Mark G25) (FCM)**

8. Node L6, Inboard/Outboard: Heavy scaling and local section loss to approximately 30%. **Recommend replacement.**

   - **2-PL⅜"x33"x2'-10", approximate weight = 240 LB (Mark G24) (FCM)**

9. S3: Heavy scaling. **Recommend replacement.**

   - **2-PL⅜"x12"x3'-3 ¼", approximate weight = 100 LB (Mark G26) (FCM)**
   - **2-PL3/16"x14"x3'-6 ¾", approximate weight = 65 LB (Mark G27) (FCM)**
   - **2-PL3/16"x12"x3'-10 ¼", approximate weight = 60 LB (Mark G28) (FCM)**
   - **2-PL⅛"x12"x1'-10½", approximate weight = 20 LB (Mark F9)**

10. Node L7, Inboard/Outboard: 2"x6" perforation adjacent to Member U16L7. Heavy scaling and local section loss to approximately 50%. **Recommend replacement.**

    - **2-PL⅜"x42"x4'-3 ½", approximate weight = 460 LB (Mark G23) (FCM)**

11. S4: Local section loss to approximately 40%. **Recommend replacement.**

    - **2-PL⅜"x12"x2'-0 ¼", approximate weight = 65 LB (Mark G32) (FCM)**
    - **2-PL⅜"x14"x2'-6", approximate weight = 90 LB (Mark G31) (FCM)**
    - **2-PL⅜"x12"x2'-6", approximate weight = 80 LB (Mark G30) (FCM)**
    - **2-PL3/16"x12"x1'-4¼", approximate weight = 21 LB (Mark F10)**

12. Node L8, Inboard/Outboard: **Recommend replacement.**

    - **2-PL⅜"x15"x3'-0", approximate weight = 120 LB (Mark G22) (FCM)**

Batten Plates – East Truss

1. Stockpile batten plates for replacement, as required:

    - **7-PL⅜”x12”x1’-0”, approximate weight = 110 LB (Mark G39)**
    - **41-PL⅜”x9”x1’-0”, approximate weight = 475 LB (Mark G40)**
    - **17-PL⅜”x12”x1’-0”, approximate weight = 260 LB (Mark G41)**

Gusset and Splice Plates - West Truss

1. S1: **Recommend partial replacement.**

    - **1-PL⅜”x12”x2’-0¼”, approximate weight = 31 LB (Mark G32) (FCM)**

2. S3: **Recommend partial replacement.**

    - **1-PL⅜”x12”x3’-3¼”, approximate weight = 50 LB (Mark G26) (FCM)**

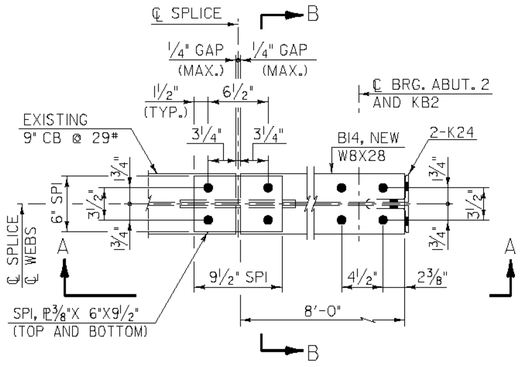
3. S4: **Recommend partial replacement.**

    - **1-PL⅜”x12”x2’-0¼”, approximate weight = 31 LB (Mark G32) (FCM)**

4. Node L8, Inboard: **Recommend partial replacement.**

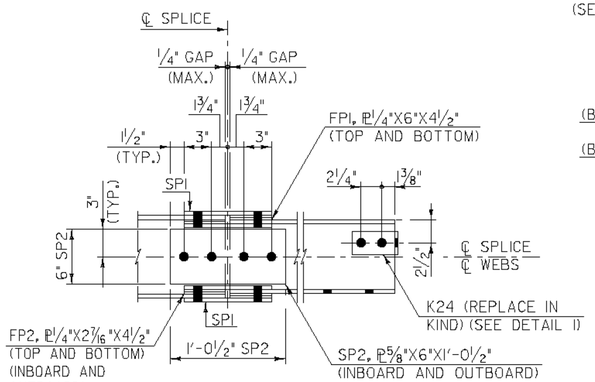
    - **1-PL⅜”x15”x3’-0”, approximate weight = 60 LB (Mark G22) (FCM)**

Total Additional Item 506.60 Structural Steel (LB), this memorandum = 4009 LB



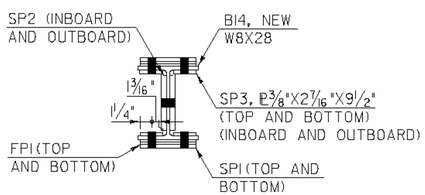
SIDEWALK STRINGER B14 SPLICE PLAN

SCALE: 1 1/2" = 1'-0"



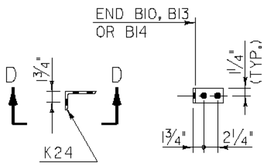
SECTION A-A

SCALE: 1 1/2" = 1'-0"



SECTION B-B

SCALE: 1 1/2" = 1'-0"

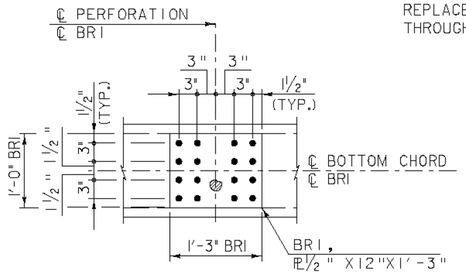


PLAN

SECTION D-D

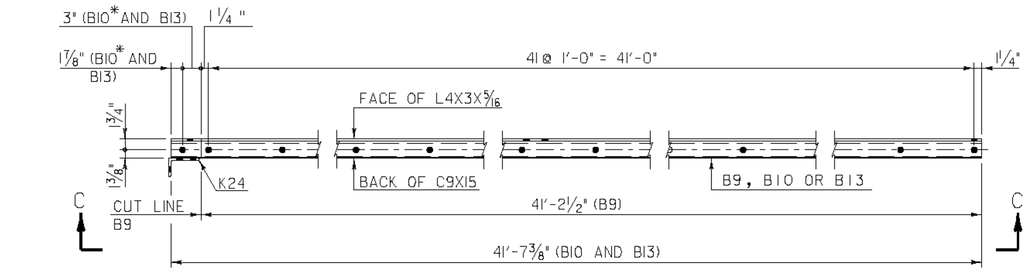
DETAIL 1

SCALE: 1" = 1'-0"



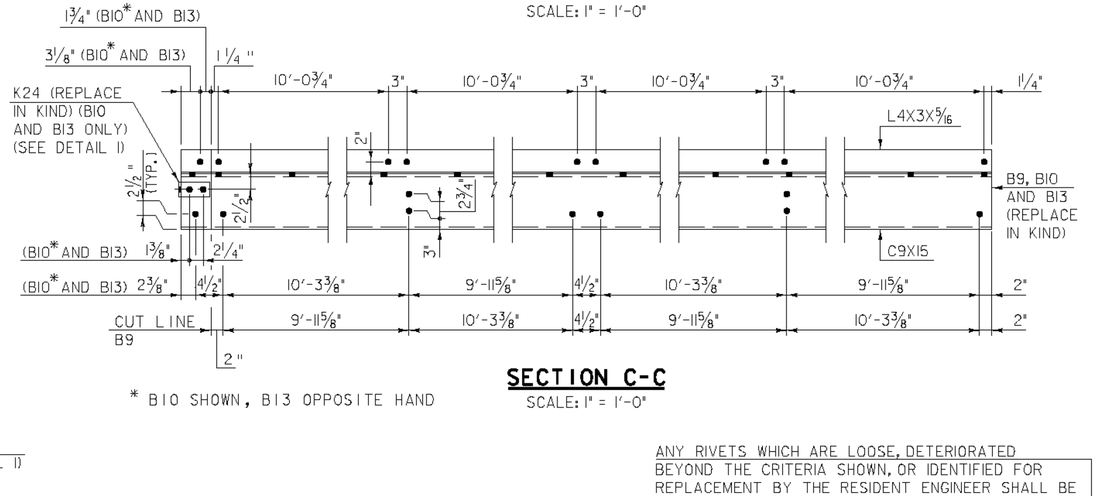
DETAIL 2

SCALE: 1" = 1'-0"



SIDEWALK STRINGER B9, B10 AND B13 PLAN

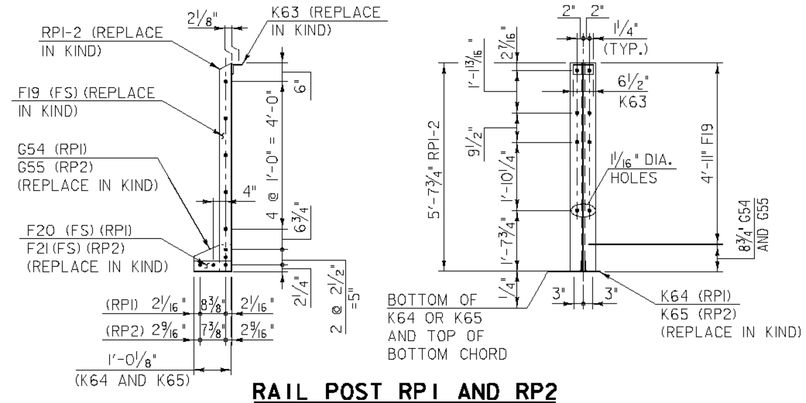
SCALE: 1" = 1'-0"



* B10 SHOWN, B13 OPPOSITE HAND

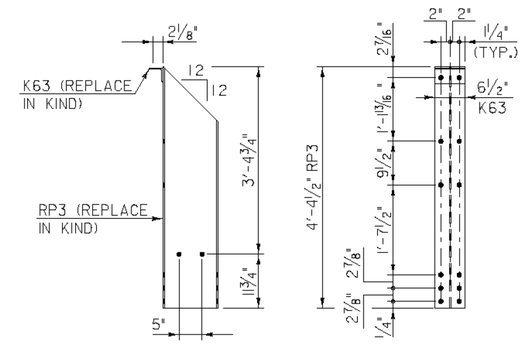
SECTION C-C

SCALE: 1" = 1'-0"



RAIL POST RP1 AND RP2

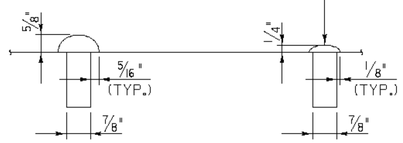
SCALE: 1/2" = 1'-0"



RAIL POST RP3

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

ANY RIVETS WHICH ARE LOOSE, DETERIORATED BEYOND THE CRITERIA SHOWN, OR IDENTIFIED FOR REPLACEMENT BY THE RESIDENT ENGINEER SHALL BE REPLACED UNDER ITEM 900.620 (SPECIAL PROVISION THROUGH TRUSS RIVET REPLACEMENT)



NEW 7/8" RIVET

MINIMUM REMAINING RIVET HEAD

RIVET REPLACEMENT CRITERIA

N.T.S.

ADDITIONAL REPAIR REQUIREMENTS (EAST TRUSS):

SIDEWALK STRINGER - MEMBER B9: REPLACE BUILT UP STRINGER 2-C9X15 AND 2-L4X3X5/16 ANGLE (FULL LENGTH)

SIDEWALK STRINGER - MEMBER B10: REPLACE BUILT UP STRINGER 1-C9X15 AND 1-L4X3X5/16 ANGLE (FULL LENGTH)
MEMBER K24: REPLACE 1-L5X3X3/8 CLIP ANGLE

SIDEWALK STRINGER - MEMBER B13: REPLACE BUILT UP STRINGER 1-C9X15 AND 1-L4X3X5/16 ANGLE (FULL LENGTH)
MEMBER K24: REPLACE 1-L5X3X3/8 CLIP ANGLE

SIDEWALK STRINGER - MEMBER B14: REPLACE 8'-0" OF EXISTING CB9X29 WITH PROPOSED W8X28
MEMBER SP1: INSTALL NEW SPLICE PLATE 2-PL 3/8"X6"X9 1/2"
MEMBER SP2: INSTALL NEW SPLICE PLATE 2-PL 5/8"X6"X1'-0 1/2"
MEMBER SP3: INSTALL NEW SPICE PLATE 4-PL 3/8"X2 7/16"X9 1/2"
MEMBER FP1: INSTALL NEW FILL PLATE 4-PL 1/4"X6"X4 1/2"
MEMBER FP2: INSTALL NEW FILL PLATE 8-PL 1/4"X2 7/16"X4 1/2"
MEMBER K24: REPLACE 2-L5X3X3/8 CLIP ANGLES (FULL LENGTH)

RAIL POST - MEMBER RP3: REPLACE END BRIDGE RAIL POSTS
MEMBER RP3: 2-W12X30 (FULL LENGTH)
MEMBER K63: 2-L3 1/2 X3 1/2 X5/16 (FULL LENGTH)

ADDITIONAL REPAIR REQUIREMENTS (WEST TRUSS):

RAIL POST - MEMBER RP1: REPLACE BUILT UP BRIDGE RAIL POSTS
MEMBER RP1-2: 4-L4X4X5/16 (FULL LENGTH)
MEMBER F19: 2-PL 5/16"X4"X4'-11"
MEMBER G54: 2-PL 5/16"X8 3/4"X1'-0 1/2"
MEMBER K63: 2-L3 1/2 X3 1/2 X5/16 (FULL LENGTH)
MEMBER K64: 4-L5X3 1/2 X5/16 (FULL LENGTH)
MEMBER F20: 4-PL 5/16"X3 1/2"X8 3/4"

RAIL POST - MEMBER RP2: REPLACE BUILT UP BRIDGE RAIL POSTS
MEMBER RP1-2: 4-L4X4X5/16 (FULL LENGTH)
MEMBER F19: 2-PL 5/16"X4"X4'-11"
MEMBER G55: 2-PL 5/16"X8 3/4"X1'-0 1/2"
MEMBER K63: 2-L3 1/2 X3 1/2 X5/16 (FULL LENGTH)
MEMBER K65: 4-L5X3 1/2 X5/16 (FULL LENGTH)
MEMBER F21: 4-PL 5/16"X3 1/2"X8 3/4"

RAIL POST - MEMBER RP3: REPLACE END BRIDGE RAIL POSTS
MEMBER RP3: 2-W12X30 (FULL LENGTH)
MEMBER K63: 2-L3 1/2 X3 1/2 X5/16 (FULL LENGTH)

BOLTED REPAIR - REPAIR BOTTOM CHORD MEMBER BETWEEN (L6) AND (L7)
MEMBER BR1: 1-PL 1/2" X12"X1'-3"

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

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

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

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

CLOUGH HARBOUR & ASSOCIATES LLP

STRUCTURAL STEEL DETAILS (4)

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD
PLOT DATE: 7/8/2010
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 31B OF 63

FILE NAME =K:\14506\Mas\plans\sn14506_additional_steel_2.dgn
DATE/TIME = 7/8/2010
USER = 2562

CLOUGH HARBOUR & ASSOCIATES LLP

Memorandum

To: Wayne Symonds (VTrans)

CC: Peter Perkins (CHA), Dale Gozalkowski (CHA)

From: David D'Amato (CHA)

Date: 6/10/2010

Re: Montpelier Taylor Street Bridge Rehabilitation, BHF 6400(31) Construction Inspection Findings

The following is a listing of additional steel repairs to the Taylor Street Bridge corresponding to Contract Plan Sht. 31B. Repair recommendations are the result of an April 23, 2010 field visit and construction inspection findings compiled by the Resident Engineer. All additional steel required for the listed repairs shall be paid under Item 506.60 Structural Steel (LB).

Sidewalk and Rail Components - East Truss

1. B9: **Recommend replacement.**
   - **2-C9x15x41'-2½", approximate weight = 1,240 LB (Mark B9)**
   - **2-L4x3x$^{5}/_{16}$x41'-2½", approximate weight = 595 LB (Mark B9)**
2. B10: **Recommend replacement.**
   - **1-C9x15x41'-7⅜", approximate weight = 625 LB (Mark B10)**
   - **1-L4x3x$^{5}/_{16}$x41'-7⅜", approximate weight = 300 LB (Mark B10)**
   - **1-L5x3x⅜x2½", approximate weight = 2 LB (Mark K24)**
3. B13: **Recommend replacement.**
   - **1-C9x15x41'-7⅜", approximate weight = 625 LB (Mark B13)**
   - **1-L4x3x$^{5}/_{16}$x41'-7⅜", approximate weight = 300 LB (Mark B13)**
   - **1-L5x3x⅜x2½", approximate weight = 2 LB (Mark K24)**
4. B14: **Recommend partial replacement.**
   - **1-W8x28x8'-0", approximate weight = 224 LB (Mark B14)**
   - **2-PL⅜"x6"x9½", approximate weight = 13 LB (Mark SP1)**
   - **2-PL⅜"x6"x1'-0½", approximate weight = 27 LB (Mark SP2)**
   - **4-PL⅜"x2 $^{1}/_{16}$"x9½", approximate weight = 10 LB (Mark SP3)**

- **4-PL¼"x6"x4½", approximate weight = 8 LB (Mark FP1)**
- **8-PL¼"x2 7/16"x4½", approximate weight = 7 LB (Mark FP2)**
- **2-L5x3x⅜x2½", approximate weight = 4 LB (Mark K24)**

5. RP3: **Recommend replacement.**

    - **2-W12x30x4'-4½", approximate weight = 263 LB (Mark RP3)**
    - **2-L3½x3½x5/16x6½", approximate weight = 8 LB (Mark K63)**

Sidewalk and Rail Components – West Truss

1. RP1: **Recommend replacement.**

    - **4-L4x4x5/16x5'-7¾", approximate weight = 185 LB (Mark RP1-2)**
    - **2-PL5/16"x4"x4'-11", approximate weight = 42 LB (Mark F19)**
    - **2-PL5/16"x8¾"x1'-0½", approximate weight = 20 LB (Mark G54)**
    - **2-L3½x3½x5/16x6½", approximate weight = 8 LB (Mark K63)**
    - **4-L5x3½x5/16x1'-0⅛", approximate weight = 36 LB (Mark K64)**
    - **4-PL5/16"x3½"x8¾", approximate weight = 11 LB (Mark F20)**

2. RP2: **Recommend replacement.**

    - **4-L4x4x5/16x5'-7¾", approximate weight = 185 LB (Mark RP1-2)**
    - **2-PL5/16"x4"x4'-11", approximate weight = 42 LB (Mark F19)**
    - **2-PL5/16"x8¾"x1'-0½", approximate weight = 20 LB (Mark G55)**
    - **2-L3½x3½x5/16x6½", approximate weight = 8 LB (Mark K63)**
    - **4-L5x3½x5/16x1'-0⅛", approximate weight = 36 LB (Mark K65)**
    - **4-PL5/16"x3½"x8¾", approximate weight = 11 LB (Mark F21)**

3. RP3: **Recommend replacement.**

    - **2-W12x30x4'-4½", approximate weight = 263 LB (Mark RP3)**
    - **2-L3½x3½x5/16x6½", approximate weight = 8 LB (Mark K63)**

Miscellaneous Repairs – West Truss

1. Nodes L6 and L7: **Bolted repair of bottom chord between nodes.**

    - **1-PL½"x12"x1'-3", approximate weight = 26 LB (Mark BR1)**

Total Additional Item 506.60 Structural Steel (LB), this memorandum = 5154 LB

CLOUGH HARBOUR & ASSOCIATES LLP

Memorandum

To: Wayne Symonds (VTrans)

CC: Peter Perkins (CHA), Dale Gozalkowski (CHA)

From: David D'Amato (CHA)

Date: 6/10/2010

Re: Montpelier Taylor Street Bridge Rehabilitation, BHF 6400(31) Construction Inspection Findings

The following is a listing of additional steel repairs to the Taylor Street Bridge corresponding to Contract Plan Sht. 31C. Repair recommendations are the result of an April 23, 2010 field visit and construction inspection findings compiled by the Resident Engineer. All additional steel required for the listed repairs shall be paid under Item 506.60 Structural Steel (LB).

Sidewalk and Rail Components - East Truss

1. KB2: **Recommend replacement.**

   - **1-PL$\frac{5}{16}$"x31½"x6'-9½", approximate weight = 230 LB (Mark KB2)**
   - **1-L3½x3½x$\frac{5}{16}$x6'-9⅛", approximate weight = 50 LB (Mark K8)**
   - **1-L3½x3½x$\frac{5}{16}$x5'-5¼ ", approximate weight = 40 LB (Mark K9)**
   - **2-L3½x3½x$\frac{5}{16}$x2'-0 $\frac{5}{16}$", approximate weight = 30 LB (Mark K12)**
   - **1-L2½x2½x¼x9¼", approximate weight = 4 LB (Mark K14)**
   - **1-L3½x3½x$\frac{5}{16}$x7¼", approximate weight = 5 LB (Mark K15)**
   - **1-L3½x3½x$\frac{5}{16}$x6'-10", approximate weight = 50 LB (Mark K42)**
   - **1-L3½x3½x$\frac{5}{16}$x5'-4⅛", approximate weight = 40 LB (Mark K43)**
   - **2-L4x3x⅜x2'-3½", approximate weight = 39 LB (Mark K44)**
   - **2-PL$\frac{5}{16}$"x3½"x1'-4¾", approximate weight = 11 LB (Mark F11)**

2. K21: **Recommend replacement.**

   - **2-L3½x3½x$\frac{5}{16}$x9½", approximate weight = 12 LB (Mark K21)**

3. K22: **Recommend replacement.**

   - **2-L3½x3½x$\frac{5}{16}$x9½", approximate weight = 12 LB (Mark K22)**

4. K23: **Recommend replacement.**

   - **2-L3½x3½x$\frac{5}{16}$x9½", approximate weight = 12 LB (Mark K23)**

5. RP1 and RP2: **Recommend partial replacement.**

    - **8-L3½x3½x$^{5}/_{16}$x6½", approximate weight = 32 LB (Mark K63)**

6. P5 and P6: **Recommend partial replacement.**

    - **9-L2½x2½x¼x5'-1 $^{3}/_{16}$", approximate weight = 190 LB (Mark P5)**
    - **8-L2½x2½x¼x4'-10 $^{15}/_{16}$", approximate weight = 162 LB (Mark P6)**
    - **17-L2½x2½x¼x4'-4⅞", approximate weight = 310 LB (Mark K25)**
    - **17-L2x2x¼x5¼", approximate weight = 25 LB (Mark K27)**

7. Terminal Bridge Rail: **Recommend replacement.**

    - **2-L3x3x$^{5}/_{16}$x2'-0¼", approximate weight = 30 LB (Mark K47)**
    - **2-L3x3x$^{5}/_{16}$x1'-1⅞", approximate weight = 15 LB (Mark K48)**
    - **4-L3¼x3x$^{5}/_{16}$x1'-1⅞", approximate weight = 30 LB (Mark K49)**
    - **2-C6x8.2x2'-3 $^{1}/_{16}$", approximate weight = 37 LB (Mark K50)**

8. R1: **Recommend replacement.**

    - **1-3" Dia.x10'-1¼" Sch. 80 Pipe, approximate weight = 105 LB**
    - **1-PL$^{7}/_{16}$"x2"x9'-9", approximate weight = 30 LB (Mark G37)**
    - **23-BAR¾"x¾"x2'-7", approximate weight = 120 LB**
    - **1-L3x2x$^{5}/_{16}$x10'-3¼", approximate weight = 55 LB**

9. R2^{L} and R2^{R}: **Recommend replacement.**

    - **2-3" Dia.x10'-8⅛"Sch. 80 Pipe, approximate weight = 220 LB**
    - **2-PL$^{7}/_{16}$"x2"x9'-9", approximate weight = 60 LB (Mark G37)**
    - **46-BAR¾"x¾"x2'-7", approximate weight = 240 LB**
    - **2-L3x2x$^{5}/_{16}$x10'-6⅜", approximate weight = 105 LB**

10. K34: **Recommend replacement.**

    - **2-L3x3½x⅜x13½", approximate weight = 18 LB (Mark K34)**

<u>Sidewalk and Rail Components – West Truss</u>

1. K21: **Recommend replacement.**

    - **2-L3½x3½x$^{5}/_{16}$x9½", approximate weight = 12 LB (Mark K21)**

2. K22: **Recommend replacement.**

    - **2-L3½x3½x$^{5}/_{16}$x9½", approximate weight = 12 LB (Mark K22)**

3. K23: **Recommend replacement.**

    - **2-L3½x3½x$^{5}/_{16}$x9½", approximate weight = 12 LB (Mark K23)**

4. RP1 and RP2: **Recommend partial replacement.**

    - **4-L3½x3½x$^{5}/_{16}$x6½", approximate weight = 16 LB (Mark K63)**

5. Terminal Bridge Rail: **Recommend replacement.**

   - **2-L3x3x$^{5}/_{16}$x2'-0¼", approximate weight = 30 LB (Mark K47)**
   - **2-L3x3x$^{5}/_{16}$x1'-1⅞", approximate weight = 15 LB (Mark K48)**
   - **4-L3¼x3x$^{5}/_{16}$x1'-1⅞", approximate weight = 30 LB (Mark K49)**
   - **2-C6x8.2x2'-3 $^{1}/_{16}$", approximate weight = 37 LB (Mark K50)**

6. K34: **Recommend replacement.**

   - **2-L3x3½x⅜x13½", approximate weight = 18 LB (Mark K34)**

Total Additional Item 506.60 Structural Steel (LB), this memorandum = 2501 LB

CLOUGH HARBOUR & ASSOCIATES LLP

Memorandum

To: Wayne Symonds (VTrans)

CC: Peter Perkins (CHA), Dale Gozalkowski (CHA)

From: David D'Amato (CHA)

Date: 6/10/2010

Re: Montpelier Taylor Street Bridge Rehabilitation, BHF 6400(31) Construction Inspection Findings

The following is a listing of additional steel repairs to the Taylor Street Bridge corresponding to Contract Plan Sht. 31D. Repair recommendations are the result of an April 23, 2010 field visit and construction inspection findings compiled by the Resident Engineer. All additional steel required for the listed repairs shall be paid under Item 506.60 Structural Steel (LB).

Sidewalk and Rail Components - East Truss

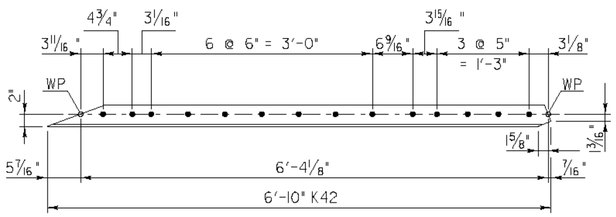
1. RPA1: **Recommend replacement.**

   - **8-PL$^{3}/_{8}$"x4"x1'-0", approximate weight = 45 LB (Mark RPA1)**

Sidewalk and Rail Components – West Truss

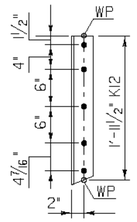
- **8-PL$^{3}/_{8}$"x4"x1'-0", approximate weight = 45 LB (Mark RPA1)**

Total Additional Item 506.60 Structural Steel (LB), this memorandum = 90 LB



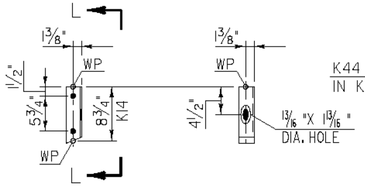
K42 DETAIL

SCALE: 1" = 1'-0"



K12 DETAIL

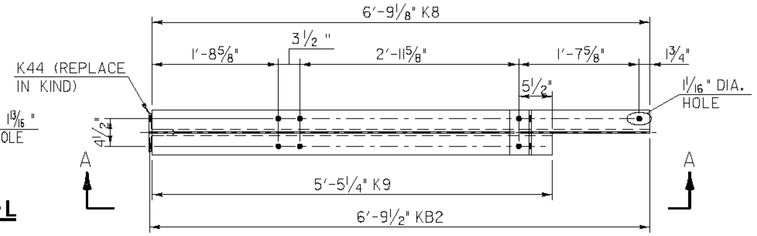
SCALE: 1" = 1'-0"



ELEVATION SECTION L-L

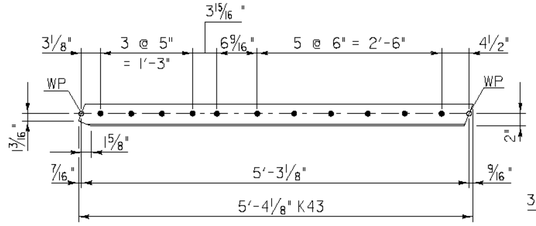
K14 DETAIL

SCALE: 1" = 1'-0"



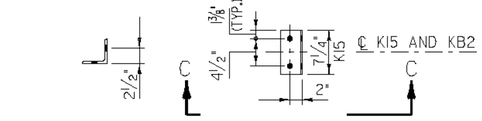
SIDEWALK FRAME KB2 - PLAN

SCALE: 1" = 1'-0"



K43 DETAIL

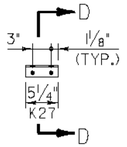
SCALE: 1" = 1'-0"



SECTION C-C PLAN

K15 DETAIL

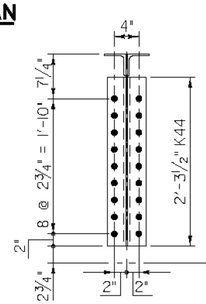
SCALE: 1" = 1'-0"



ELEVATION SECTION D-D

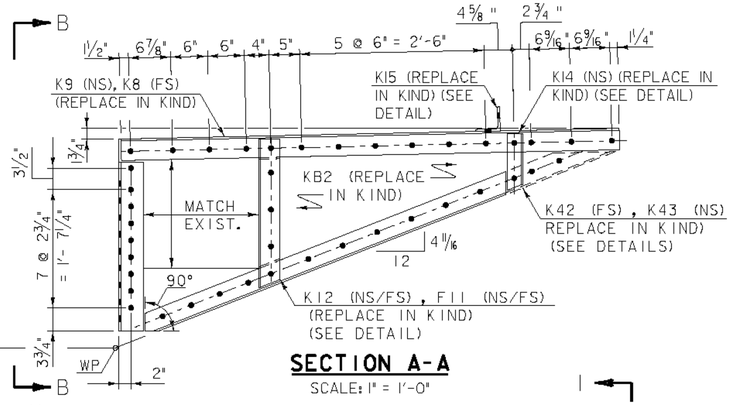
K27 DETAIL

SCALE: 1" = 1'-0"



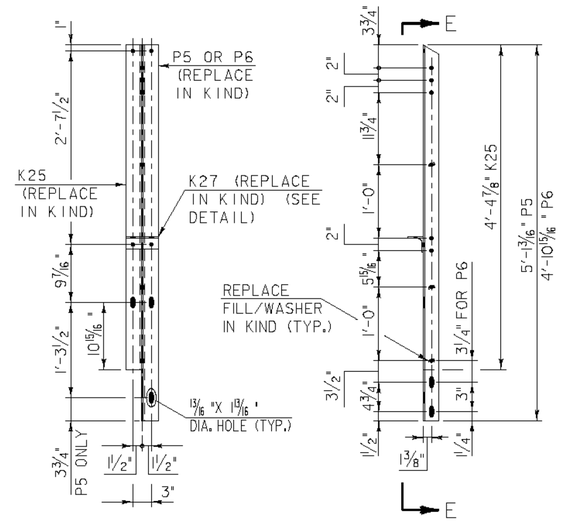
SECTION B-B

SCALE: 1" = 1'-0"



SECTION A-A

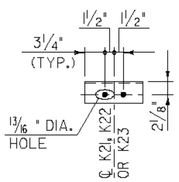
SCALE: 1" = 1'-0"

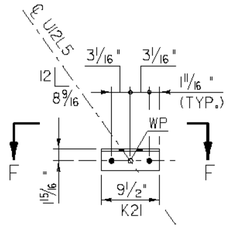


SECTION E-E ELEVATION

PEDESTRIAN RAIL P5 AND P6

SCALE: 1" = 1'-0"

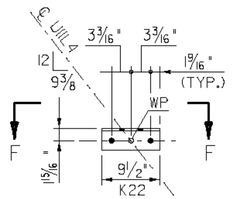


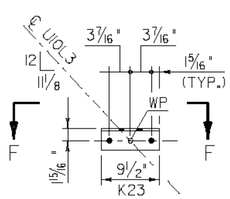


SECTION F-F ELEVATION

K21 DETAIL

SCALE: 1" = 1'-0"





ELEVATION ELEVATION

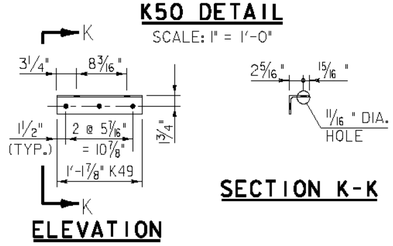
K22 DETAIL K23 DETAIL

SCALE: 1" = 1'-0"

ELEVATION SECTION G-G

K50 DETAIL

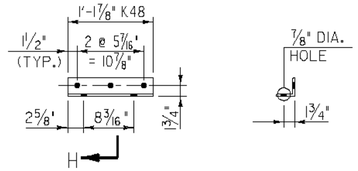
SCALE: 1" = 1'-0"



ELEVATION SECTION K-K

K49 DETAIL

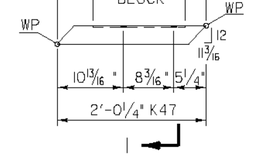
SCALE: 1" = 1'-0"



ELEVATION SECTION H-H

K48 DETAIL

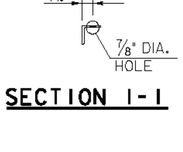
SCALE: 1" = 1'-0"



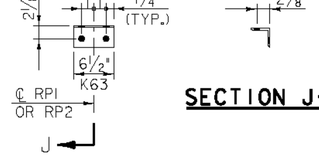
ELEVATION

K47 DETAIL

SCALE: 1" = 1'-0"



SECTION I-I



SECTION J-J

ELEVATION

K63 DETAIL

SCALE: 1" = 1'-0"

ADDITIONAL REPAIR REQUIREMENTS (EAST TRUSS):

SIDEWALK BRACKET - MEMBER KB2: REPLACE BUILT UP BRACKET
MEMBER KB2: 1-PL 5/16" X 3 1/2" X 6'-9 1/2"
MEMBER K8: 1-L3 1/2 X 3 1/2 X 5/16 (FULL LENGTH)
MEMBER K9: 1-L3 1/2 X 3 1/2 X 5/16 (FULL LENGTH)
MEMBER KI2: 2-L3 1/2 X 3 1/2 X 5/16 (FULL LENGTH)
MEMBER KI4: 1-L2 1/2 X 2 1/2 X 1/4 (FULL LENGTH)
MEMBER KI5: 1-L3 1/2 X 3 1/2 X 5/16 (FULL LENGTH)
MEMBER K42: 1-L3 1/2 X 3 1/2 X 5/16 (FULL LENGTH)
MEMBER K43: 1-L3 1/2 X 3 1/2 X 5/16 (FULL LENGTH)
MEMBER K44: 2-L4X3X3/8 (FULL LENGTH)
MEMBER F11: 2-PL 5/16 X 3 1/2 X 1'-4 3/4"

BRIDGE RAIL ATTACHMENT - REPLACE BRIDGE RAIL ATTACHMENT ANGLE AT TRUSS DIAGONALS
MEMBER K21: 2-L3 1/2 X 3 1/2 X 5/16 (FULL LENGTH)
MEMBER K22: 2-L3 1/2 X 3 1/2 X 5/16 (FULL LENGTH)
MEMBER K23: 2-L3 1/2 X 3 1/2 X 5/16 (FULL LENGTH)

BRIDGE RAIL ATTACHMENT - REPLACE BRIDGE RAIL ATTACHMENT ANGLE AT RP1 AND RP2
MEMBER K63: 8-L3 1/2 X 3 1/2 X 5/16 (FULL LENGTH)

PEDESTRIAN RAIL POSTS P5 AND P6 - REPLACE PORTION OF BUILT UP PEDESTRIAN RAIL POSTS
MEMBER P5: 9-L2 1/2 X 2 1/2 X 1/4 (FULL LENGTH)
MEMBER P6: 8-L2 1/2 X 2 1/2 X 1/4 (FULL LENGTH)
MEMBER K25: 17-L2 1/2 X 2 1/2 X 1/4 (FULL LENGTH)
MEMBER K27: 17-L2X2X1/4 (FULL LENGTH)

ADDITIONAL REPAIR REQUIREMENTS (WEST TRUSS):

BRIDGE RAIL ATTACHMENT - REPLACE BRIDGE RAIL ATTACHMENT ANGLE AT TRUSS DIAGONALS
MEMBER K21: 2-L3 1/2 X 3 1/2 X 5/16 (FULL LENGTH)
MEMBER K22: 2-L3 1/2 X 3 1/2 X 5/16 (FULL LENGTH)
MEMBER K23: 2-L3 1/2 X 3 1/2 X 5/16 (FULL LENGTH)

BRIDGE RAIL ATTACHMENT - REPLACE BRIDGE RAIL ATTACHMENT ANGLE AT RP1 AND RP2
MEMBER K63: 4-L3 1/2 X 3 1/2 X 5/16 (FULL LENGTH)

LATERAL BRACING - REPLACE ANGLE SUPPORTS IN END BAYS
MEMBER K34: 2-L3X3 1/2 X 3/8 (FULL LENGTH)

BRIDGE RAIL - REPLACE TERMINAL BRIDGE RAIL AT END POSTS
MEMBER K47: 2-L3X3X5/16 (FULL LENGTH)
MEMBER K48: 2-L3X3X5/16 (FULL LENGTH)
MEMBER K49: 4-L3 1/4 X 3 X 5/16 (FULL LENGTH)
MEMBER K50: 2-C6X8.2 CHANNEL (FULL LENGTH)

BRIDGE RAIL - REPLACE TERMINAL BRIDGE RAIL AT END POSTS
MEMBER K47: 2-L3X3X5/16 (FULL LENGTH)
MEMBER K48: 2-L3X3X5/16 (FULL LENGTH)
MEMBER K49: 4-L3 1/4 X 3 X 5/16 (FULL LENGTH)
MEMBER K50: 2-C6X8.2 CHANNEL (FULL LENGTH)

LATERAL BRACING - REPLACE ANGLE SUPPORTS IN END BAYS
MEMBER K34: 2-L3X3 1/2 X 3/8 (FULL LENGTH)

PEDESTRIAN RAIL - REPLACE R1, R2R AND R2L
MEMBER PIPE: 3-3" DIA., SCH. 80 (FULL LENGTH)
MEMBER G37: 3-PL 7/16" X 2" (FULL LENGTH)
MEMBER BALUSTER: 69-BAR 3/4" X 3/4" (FULL LENGTH)
MEMBER BOT. ANGLE: 3-L3X2X5/16 (FULL LENGTH)

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

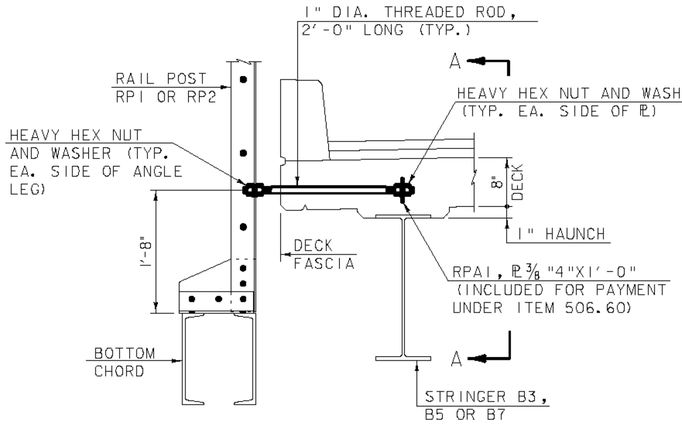
CLOUGH HARBOUR & ASSOCIATES LLP

STRUCTURAL STEEL DETAILS (5)

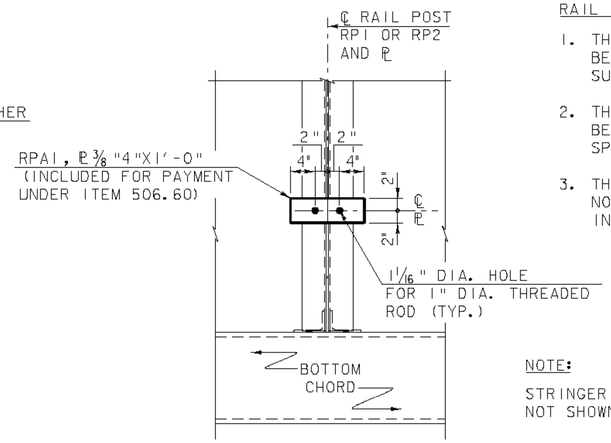
PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD
PLOT DATE: 7/8/2010
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 31C OF 63

FILE NAME =K:\14586\Mast\plans\sa14586_addstunnel_steel_3.dgn
DATE/TIME =7/8/2010
USER =2662



ELEVATION



SECTION A-A

RAIL POST ANCHORAGE NOTES:

1. THREADED ROD, HEAVY HEX NUTS AND WASHERS SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION SUBSECTION 714.07.
2. THREADED ROD, HEAVY HEX NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH STANDARD SPECIFICATON SUBSECTION 506.15.
3. THREADED ROD, HEAVY HEX NUTS AND WASHERS SHALL NOT BE PAID FOR DIRECTLY BUT ARE CONSIDERED INCIDENTAL TO ITEM 506.60.

NOTE:

STRINGER, DECK AND CURB NOT SHOWN FOR CLARITY

RAIL POST ANCHORAGE

(TYPICAL ALL RP1 AND RP2 LOCATIONS)

SCALE: 1" = 1'-0"

ADDITIONAL REPAIR REQUIREMENTS (EAST TRUSS):

RAIL POST ANCHORAGE - MEMBER RPA1: INSTALL NEW ANCHORAGE ℄ 8-℄3/8"X4"X1'-0"

ADDITIONAL REPAIR REQUIREMENTS (WEST TRUSS):

RAIL POST ANCHORAGE - MEMBER RPA1: INSTALL NEW ANCHORAGE ℄ 8-℄3/8"X4"X1'-0"

SCALE 1" = 1'-0"

0 1 2 3 4 5 6 7 8 9 10 11 12

CLOUGH HARBOUR & ASSOCIATES LLP

STRUCTURAL STEEL DETAILS (6)

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

FILE NAME: $FILES$ | PLOT DATE: 7/8/2010
PROJECT MANAGER: SUSAN SCRIBNER | DRAWN BY: D. D'AMATO
DESIGNED BY: D. D'AMATO | CHECKED BY: P. PERKINS
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD | SHEET 31D OF 63

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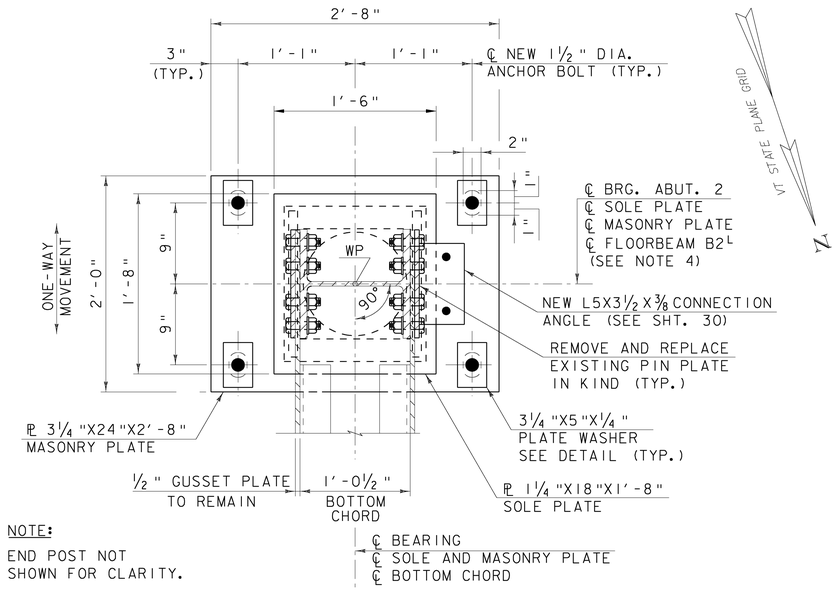
USER =2662

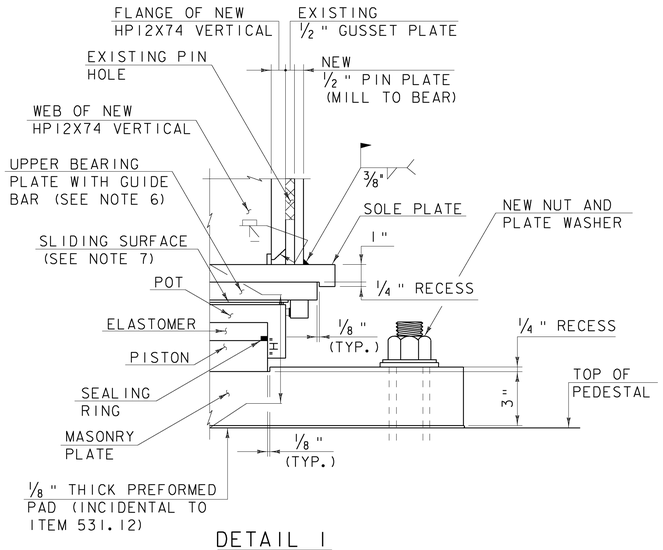


NOTE:

END POST NOT SHOWN FOR CLARITY.

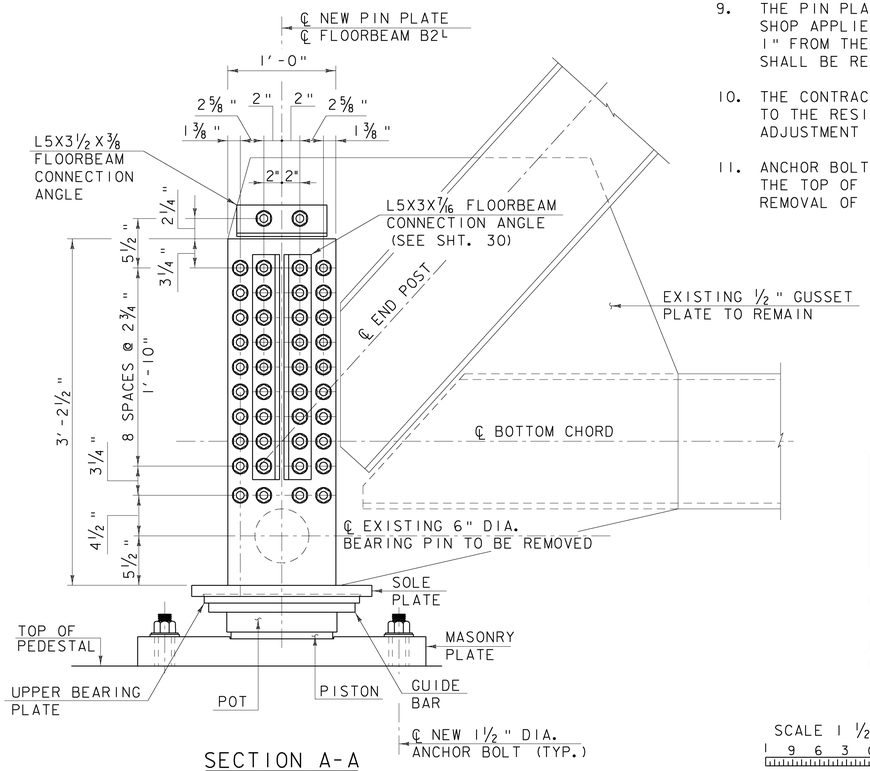
PLAN

SCALE: 1½" = 1'-0"



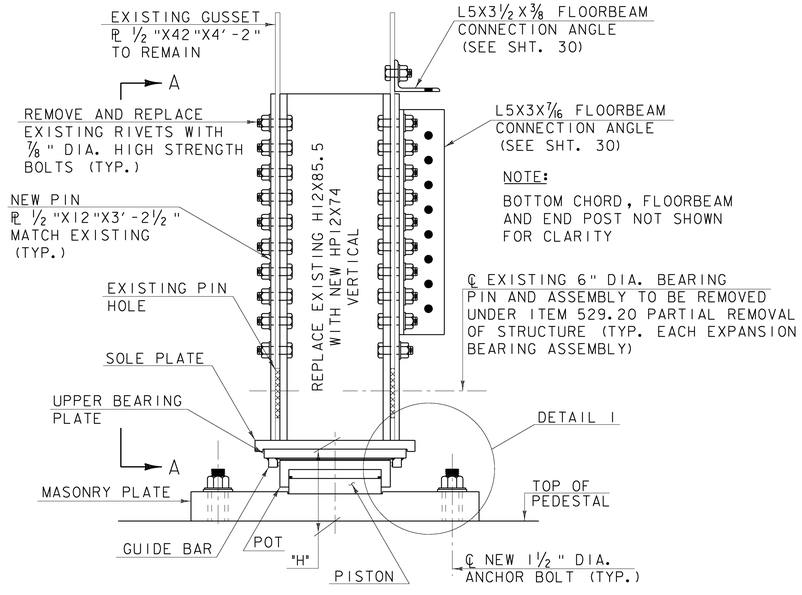
DETAIL 1

SCALE: 1½" = 1'-0"



SECTION A-A

SCALE: 1½" = 1'-0"



ELEVATION

SCALE: 1½" = 1'-0"

(EAST BEARING SHOWN WEST BEARING SIMILAR)

BEARING NOTES:

1. POT BEARING ASSEMBLIES SHALL BE PAID FOR UNDER ITEM 531.12 BEARING DEVICE ASSEMBLY, POT. SOLE PLATES, MASONRY PLATES, ANCHOR BOLTS AND PLATE WASHERS SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE INCLUDED UNDER ITEM 531.12. ALL NEW STEEL ABOVE THE TOP OF THE SOLE PLATES SHALL BE PAID FOR AS ITEM 506.60 STRUCTURAL STEEL. FABRICATION DRAWINGS SHALL BE SUBMITTED IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 105. PLANS AND DESIGN CALCULATIONS SHALL BE STAMPED BY A QUALIFIED PROFESSIONAL ENGINEER.
2. PEDESTAL ELEVATIONS ARE BASED UPON THE POT BEARING ASSEMBLIES HAVING THE THICKNESS OF "H". IF THE THICKNESS OF THE NEW BEARING IS DIFFERENT THAN SHOWN, NEW PEDESTAL ELEVATIONS SHALL BE COMPUTED AND SUBMITTED BY THE CONTRACTOR TO THE RESIDENT ENGINEER FOR APPROVAL PRIOR TO PLACING CONCRETE. ANY ADDITIONAL COST DUE TO MODIFICATIONS BY THE CONTRACTOR SHALL BE AT THE CONTRACTOR'S EXPENSE.
3. THE MASONRY PLATE SHALL BE ONE PLATE.
4. THE CENTERLINE OF ALL BEARING COMPONENTS SHALL BE IN LINE AT 45° F.
5. GUIDED EXPANSION BEARINGS SHALL BE SELF ALIGNING.
6. GUIDE BARS SHALL BE ATTACHED TO THE UPPER BEARING PLATE BY THE MANUFACTURER.
7. ALL EXPANSION BEARINGS SHALL HAVE A MAXIMUM COEFFICIENT OF FRICTION OF 4%. THE TEMPERATURE OF THE STEEL ADJACENT TO THE ELASTOMER SHALL NOT EXCEED 200° F. TEMPERATURE SHALL BE CONTROLLED BY WELDING PROCEDURES AND TEMPERATURE INDICATING CRAYONS OR OTHER DEVICES APPROVED BY THE RESIDENT ENGINEER.
8. MASONRY PLATES, SOLE PLATES, HP12X74 VERTICAL, NUTS AND PLATE WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH STANDARD SPECIFICATION SUBSECTION 506.15. THE SOLE PLATE AND HP12X74 VERTICAL SHALL BE GALVANIZED AS A SINGLE UNIT.
9. THE PIN PLATES SHALL BE SHOP PAINTED UNDER ITEM 513.25 STRUCTURAL PAINTING, SHOP APPLIED AND SHALL BE FIELD WELDED TO THE SOLE PLATE. TERMINATE ALL WELDS 1" FROM THE END OF THE PLATE. ANY GALVANIZED SURFACE DAMAGED DURING ERECTION SHALL BE REPAIRED IN ACCORDANCE WITH STANDARD SPECIFICATION SUBSECTION 513.06.
10. THE CONTRACTOR SHALL SUBMIT THE NEW BEARING INSTALLATION PROCEDURE TO THE RESIDENT ENGINEER FOR REVIEW. PROCEDURE SHALL INCLUDE BEARING ADJUSTMENT SETTINGS DEPENDING UPON TEMPERATURE AT TIME OF ERECTION.
11. ANCHOR BOLTS WILL HAVE AN ⅛" GAP BETWEEN THE BOTTOM OF THE NUT AND THE TOP OF THE WASHER. BURR THE THREADS ON ALL ANCHOR BOLTS TO PREVENT REMOVAL OF THE NUTS.

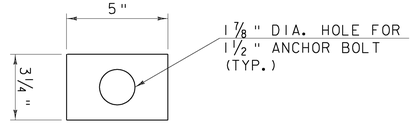


PLATE WASHER DETAIL

NOT TO SCALE

EXPANSION BEARING TABLE

DESIGN LOADS			LIVE LOAD ROTATION (RAD)	ONE-WAY MOVEMENT (IN)	H (IN)
TOTAL DL (KIPS)	TOTAL LL+I (KIPS)	HORIZONTAL (KIPS)			
150	115	14	.015	1.00	8.05

NOTE:

THE ONE WAY MOVEMENT SHOWN ON THE BEARING TABLE IS THE MAXIMUM MOVEMENT (EXPANSION OR CONTRACTION) OF THE SUPERSTRUCTURE WHEN BEARINGS AND SUPERSTRUCTURE ARE SET AT 45° F.

SCALE 1½" = 1'-0"

1 9 6 3 0 1

EXPANSION BEARING DETAILS

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

CLOUGH HARBOUR & ASSOCIATES LLP © 2009

FILE NAME: $FILES$ | PLOT DATE: 10/12/2009
PROJECT MANAGER: SUSAN SCRIBNER | DRAWN BY: D.D'AMATO
DESIGNED BY: D.D'AMATO | CHECKED BY: P.PERKINS
BRIDGE DESIGN SUPERVISOR: P.HALSTEAD | SHEET 32 OF 63

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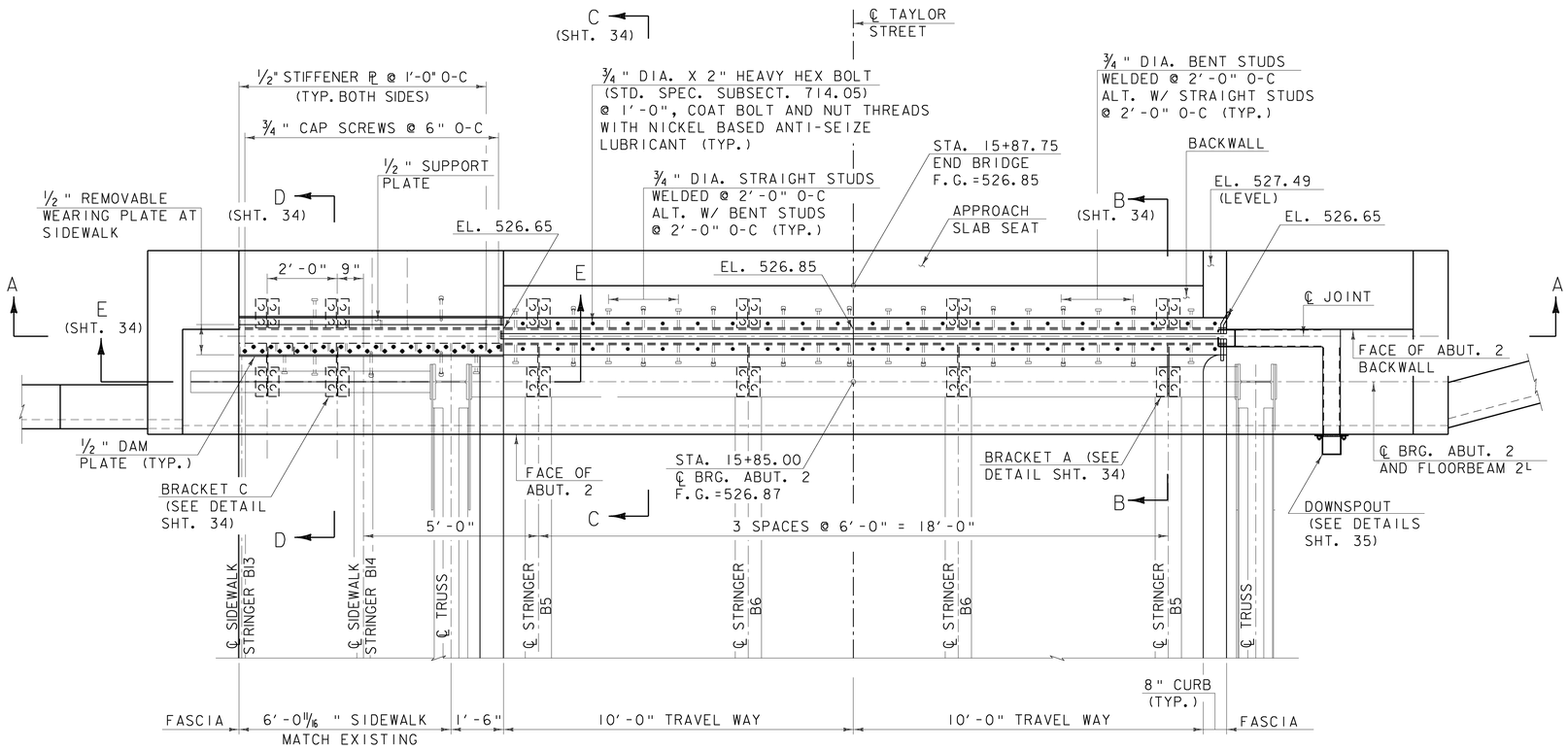
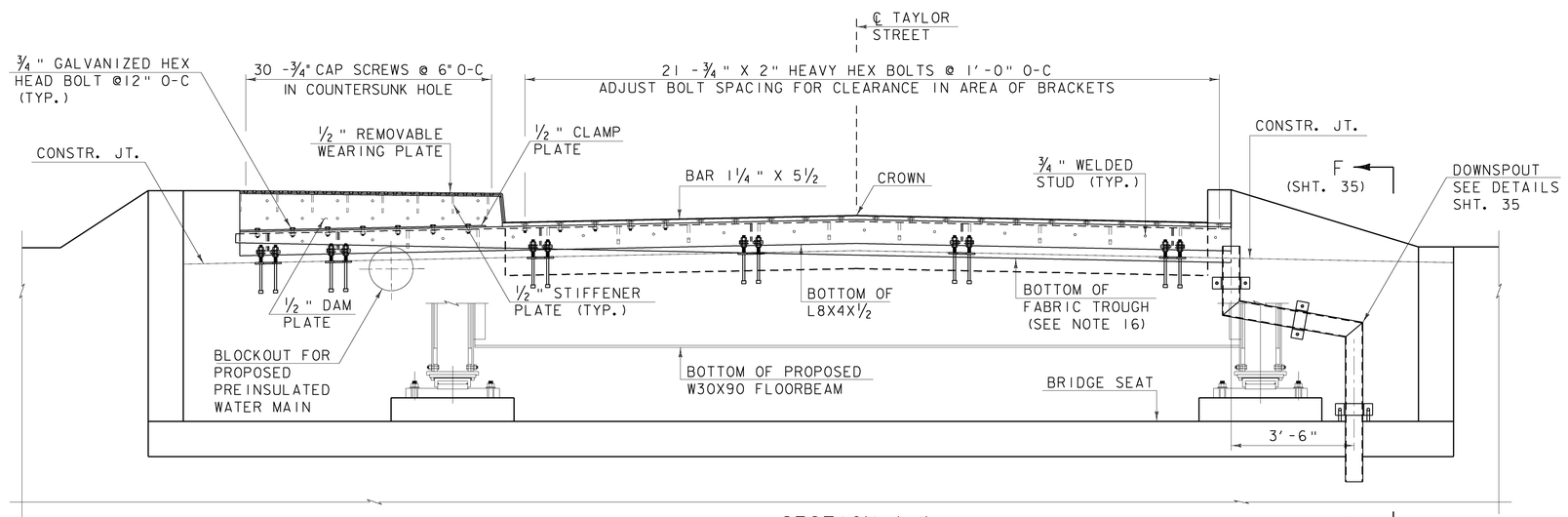


EXPANSION JOINT PLAN AT ABUTMENT 2

SCALE ½" = 1'-0"

0 1 2



SECTION A-A

SCALE ½" = 1'-0"

0 1 2

EXPANSION JOINT NOTES:

1. DETAILS ON SHTS. 33 AND 34 ARE FOR ITEM 516.11 BRIDGE EXPANSION JOINT, VERMONT.
2. PREFORMED FABRIC MATERIAL SHALL BE CONTINUOUS FOR THE FULL LENGTH OF THE JOINT.
3. THE FINAL FINISH OF THE EXPANSION DEVICE SHALL BE COVERED DURING THE PLACING OF BRIDGE DECK CONCRETE.
4. ALL STEEL COMPONENTS SHALL BE GALVANIZED OR METALIZED AND MEET THE REQUIREMENTS OF SUBSECTION 516.02. THREADED RODS SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 714.04. THE ½"X9"X8" ANCHOR PLATE AND WELDED STUD ASSEMBLY MAY BE SUPPLIED WITHOUT GALVANIZING OR METALIZING.
5. ITEM 516.11 BRIDGE EXPANSION JOINT, VERMONT SHALL INCLUDE THE FABRICATION AND ERECTION OF THE COMPLETE JOINT ASSEMBLY INCLUDING ALL STEEL PLATES, BRACKETS, ANGLES, WELDED STUDS OR RODS, PREFORMED FABRIC DRAIN TROUGH MATERIAL AND PLASTIC DRAIN TUBES, BUTYL RUBBER TAPE AND ANY OTHER MISCELLANEOUS MATERIAL NECESSARY TO INSTALL JOINT.
6. THE L4X8X½ ANGLES SHALL BE FURNISHED AS ONE CONTINUOUS PIECE. THE 1¼"X5½" BARS EACH SIDE OF THE JOINT SHALL BE PROVIDED IN CONTINUOUS LENGTHS AS SHOWN ON THE PLANS.
7. FILL COUNTERBORED HOLES WITH HOT POURED JOINT SEALER (STANDARD SPECIFICATION SUBSECTION 707.04) AFTER BOLT INSTALLATION. PAYMENT FOR THE WORK SHALL BE INCIDENTAL TO ITEM 516.11 BRIDGE EXPANSION JOINT, VERMONT.
8. A 1" DIAMETER PLASTIC DRAIN TUBE (PER STANDARD SPECIFICATION SUBSECTION 740.01) SHALL BE INSTALLED AS SHOWN AT THE FACE OF CURB. THE UPPER END IS TO BE PLUGGED WITH STEEL WOOL AND THE LOWER END IS TO EXTEND BELOW THE BOTTOM OF THE TRUSS BOTTOM CHORD. THE DRAIN TUBES SHALL BE FASTENED TO THE BOTTOM CHORD USING A METHOD APPROVED BY THE RESIDENT ENGINEER. PAYMENT INCIDENTAL TO ITEM 501.34.
9. THE EXPANSION JOINT SHALL BE SHOP ASSEMBLED AND SHIPPED AS ONE UNIT.
10. THE COST FOR P.V.C. WATERSTOP SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 501.34, CONCRETE, HIGH PERFORMANCE CLASS B. OTHER CONFIGURATIONS MAY BE USED UPON APPROVAL BY THE STRUCTURES ENGINEER.
11. A DRIP BEAD OF ¼"X7" STRIP OF PREFORMED MATERIAL SHALL BE CEMENTED TO THE BOTTOM OF THE FABRIC TROUGH USING AN ADHESIVE APPROVED BY THE MANUFACTURER. THE DRIP BEAD SHALL BE APPLIED 1" FROM THE DOWNSPOUT END OF THE TROUGH.
12. FABRIC TROUGH SHALL BE THOROUGHLY CLEANED AND FLUSHED AFTER PAVING OPERATION.
13. PRIOR TO GALVANIZING OR METALIZING, ALL CORNERS AND EDGES OF STEEL PLATES, SHAPES, ETC., SHALL BE GROUND TO A 1/16" RADIUS.
14. TEMPORARY SHIPPING ATTACHMENTS SHALL BE ATTACHED BY BOLTING. WELDING WILL NOT BE PERMITTED.
15. PROJECTING THREADS OF THE ¾" BOLTS IN THE JOINT SHALL BE GREASED BY THE CONTRACTOR PRIOR TO PLACING ADJACENT CONCRETE. THIS WILL FACILITATE BOLT REMOVAL IF REQUIRED IN THE FUTURE.
16. SLOPE FABRIC DRAIN TROUGH 2% MIN. ALONG TROUGH TOWARDS DOWNSPOUT CONTINUOUSLY FROM THE BACK OF THE SIDEWALK. THE CONTRACTOR SHALL INCLUDE A FABRIC TROUGH PLAN IN THE FABRICATION DRAWINGS FOR SUBMITTAL TO THE STRUCTURES ENGINEER.
17. AN EPOXY BONDING COMPOUND, APPROVED BY THE VERMONT AGENCY OF TRANSPORATION MATERIALS AND RESEARCH LABORATORY, SHALL BE PLACED BETWEEN THE DECK CONCRETE AND THE JOINT HARDWARE.

EXPANSION JOINT PLAN

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

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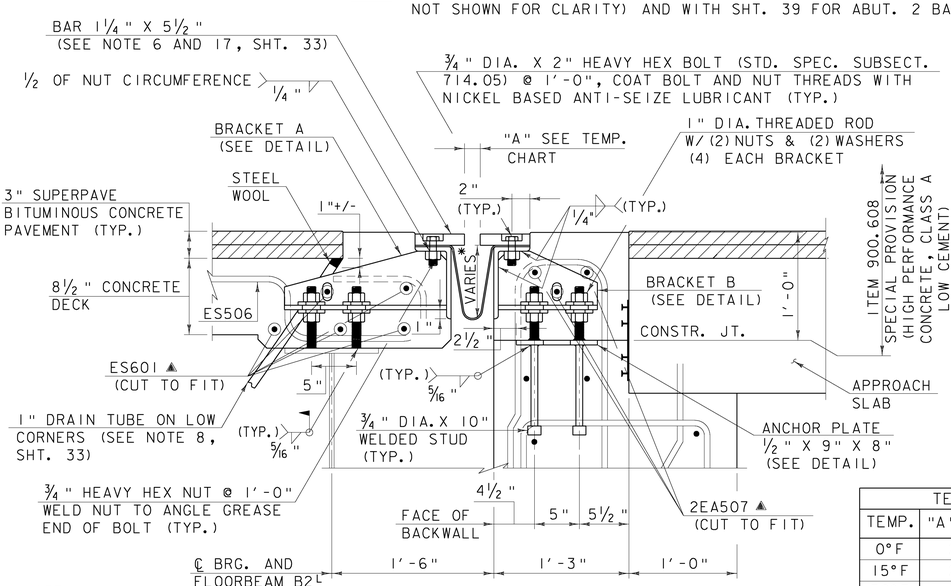
FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD
PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 33 OF 63

FILE NAME =h:\14586\mstr\plans\xs14586_expjt_plan.dgn
DATE/TIME =10/12/2009
USER =2552

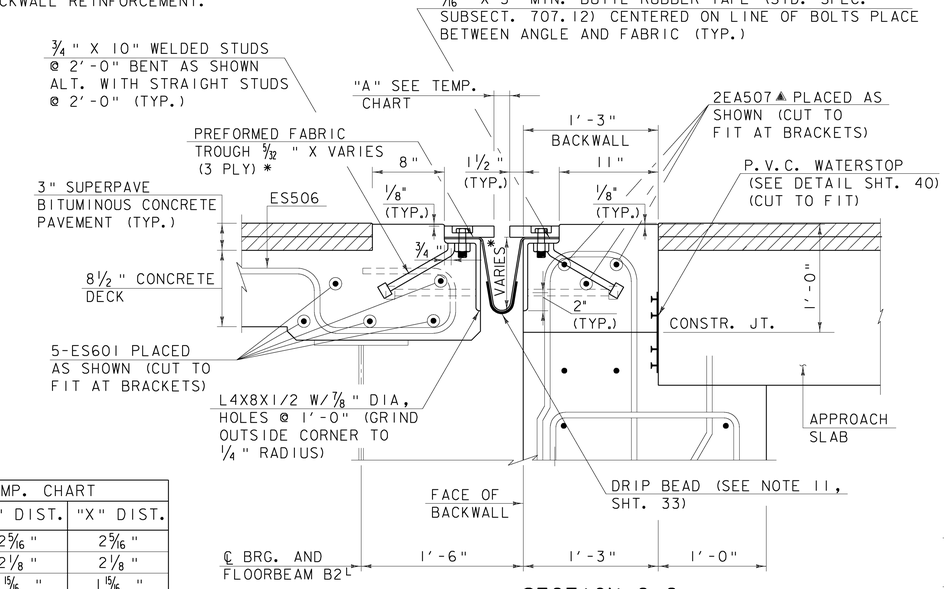
NOTE: WORK THIS SHT. WITH SHT. 28 FOR END OF DECK REINFORCEMENT AT ABUT. 2 (ES501, ES502 AND ES508 NOT SHOWN FOR CLARITY) AND WITH SHT. 39 FOR ABUT. 2 BACKWALL REINFORCEMENT.



NOTE:
WORK SECTION B-B AND SECTION C-C TOGETHER

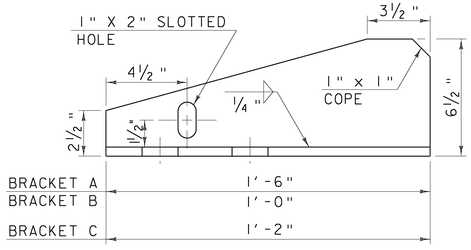
SECTION B-B
(TYPICAL SECTION AT BRACKETS)
SCALE 1 ½" = 1'-0"

TEMP. CHART		
TEMP.	"A" DIST.	"X" DIST.
0°F	2 5/16"	2 5/16"
15°F	2 1/8"	2 1/8"
30°F	1 15/16"	1 15/16"
45°F	1 ¾"	1 ¾"
60°F	1 9/16"	1 9/16"
75°F	1 3/8"	1 3/8"
90°F	1 3/16"	1 3/16"
105°F	1"	1"

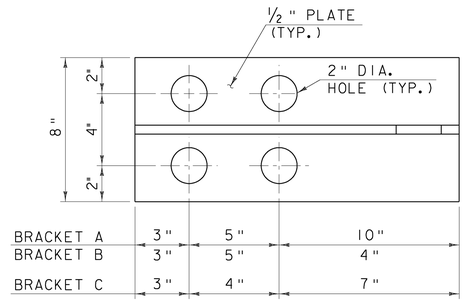


SECTION C-C
(TYPICAL SECTION BETWEEN BRACKETS)
SCALE 1 ½" = 1'-0"

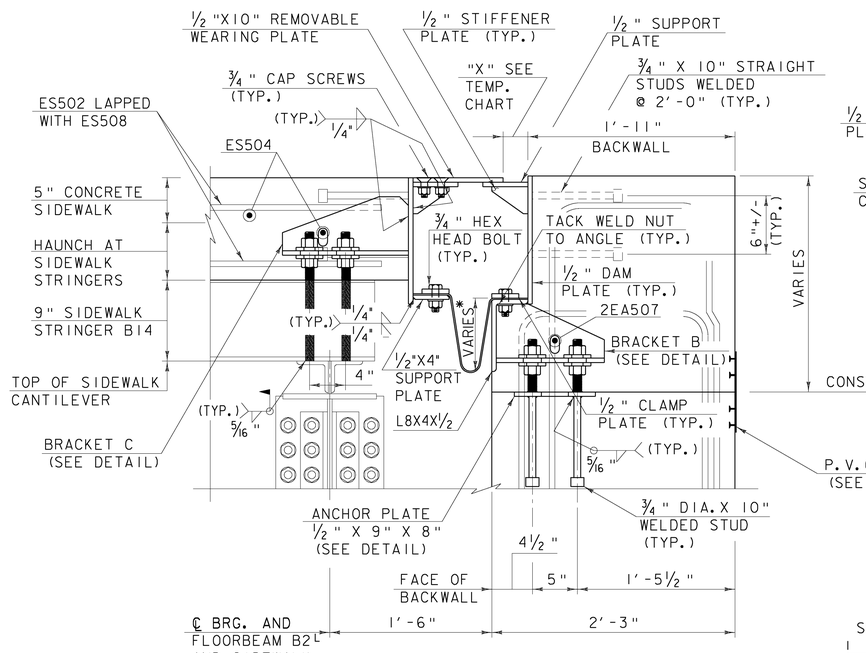
*SET AT 3" AT HIGH SIDE OF TROUGH (AT BACK OF SIDEWALK) @ 45° F (SEE NOTE 16, SHT. 33)



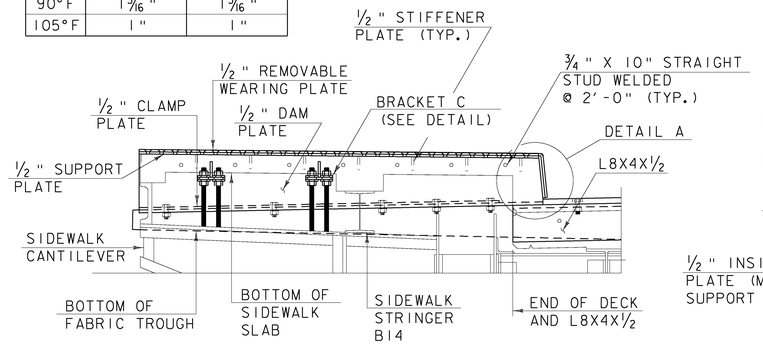
BRACKET ELEVATION
SCALE 3" = 1'-0"



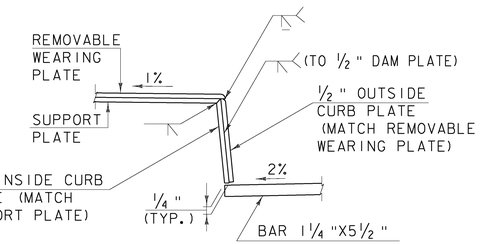
BRACKET PLAN
SCALE 3" = 1'-0"



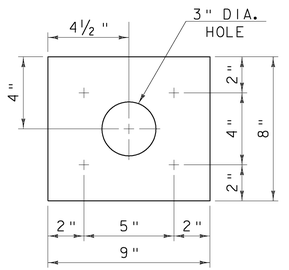
SECTION D-D
(TYPICAL SECTION AT SIDEWALK)
SCALE 1 ½" = 1'-0"



SECTION E-E
SCALE ¾" = 1'-0"



DETAIL A
SCALE 1½" = 1'-0"



ANCHOR PLATE PLAN
SCALE 3" = 1'-0"
(GALVANIZING OR METALIZING NOT REQUIRED)

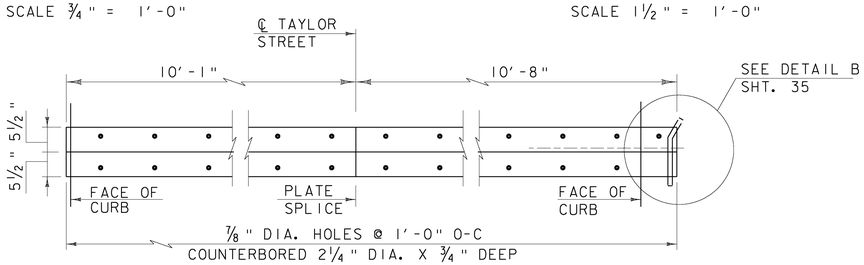
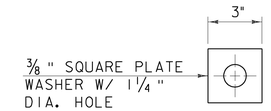


PLATE DETAIL
SCALE ¾" = 1'-0"



WASHER FOR BRACKET
SCALE 3" = 1'-0"

SCALE 1 ½" = 1'-0"
9 6 3 0

SCALE ¾" = 1'-0"
0 2

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

EXPANSION JOINT DETAILS

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

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FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD
PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 34 OF 63

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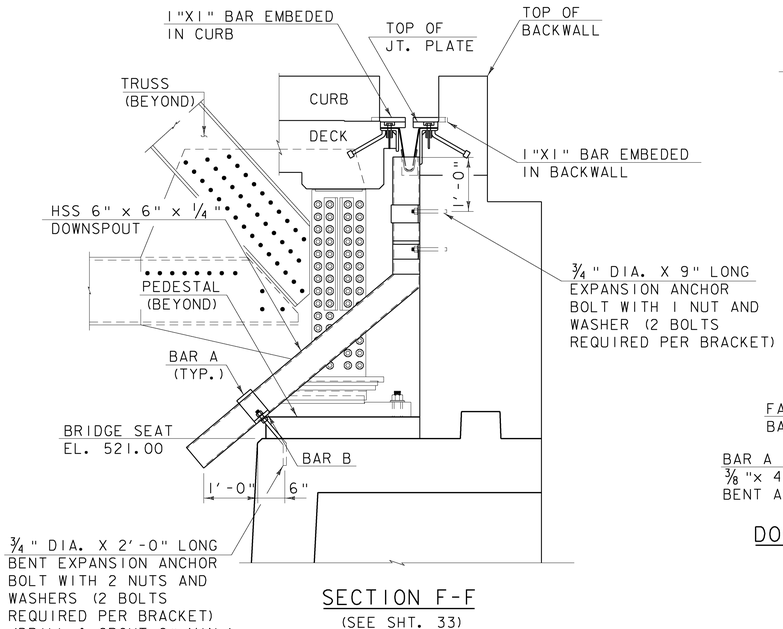
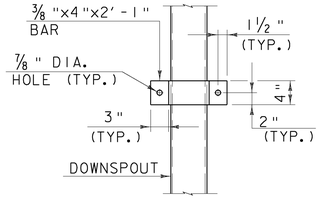


SECTION F-F

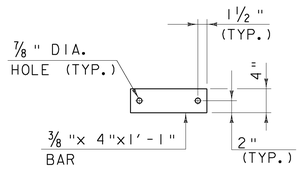
(SEE SHT. 33)

SCALE 3/4" = 1'-0"



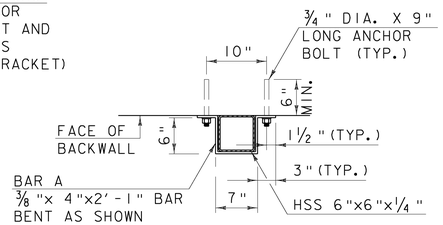
BAR A DETAIL

SCALE 1" = 1'-0"



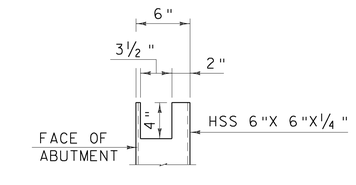
BAR B DETAIL

SCALE 1" = 1'-0"



DOWNSPOUT ATTACHMENT DETAIL

SCALE 1" = 1'-0"

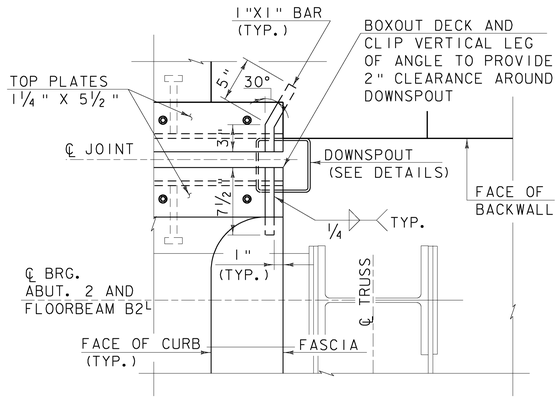


DOWNSPOUT CUTOUT DETAIL

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

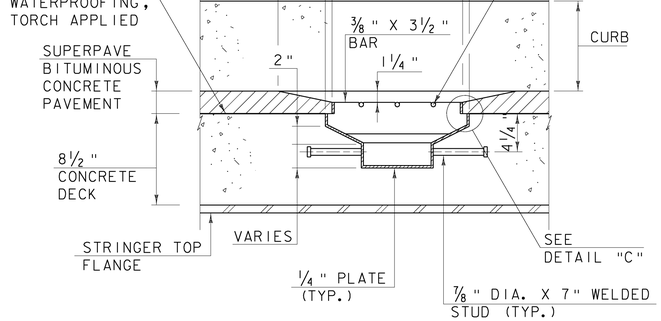
SCUPPER AND DOWNSPOUT NOTES:

1. HOLLOW STRUCTURAL STEEL TUBING SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 714.11.
2. ALL PLATES, BARS, AND ANGLES SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 714.02.
3. DOWNSPOUTS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123 AFTER FABRICATION.
4. ALL BOLTS AND RELATED HARDWARE SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 714.04 AND SHALL BE GALVANIZED IN ACCORDANCE WITH SUBSECTION 506.15.
5. IN AREAS WHERE THE GALVANIZING HAS BEEN REMOVED FROM THE SCUPPERS AND DOWNSPOUTS EITHER BY CUTTING, BURNING, WELDING, PLACING, OR ANY OTHER MEANS, IT SHALL BE REPAIRED BY THOROUGHLY CLEANING THE DAMAGED AREAS WITH A WIRE BRUSH AND PAINTING THE DAMAGED AREAS WITH TWO COATS OF A SEALANT APPROVED BY THE VERMONT AGENCY OF TRANSPORTATION MATERIALS AND RESEARCH LABORATORY.
6. AN EPOXY BONDING COMPOUND, APPROVED BY THE VERMONT AGENCY OF TRANSPORTATION MATERIALS AND RESEARCH LABORATORY, SHALL BE PLACED BETWEEN DECK CONCRETE AND SCUPPER/DOWNSPOUT HARDWARE.
7. THE SCUPPER BAR AND GRATE MAY BE PREFABRICATED PROVIDING THE GEOMETRY AND SECTION PROPERTIES ARE EQUIVALENT TO THE DETAILS SHOWN.
8. ALL REQUIRED WELDS FOR SCUPPERS AND DOWNSPOUTS SHALL BE DETAILED ON FABRICATION DRAWINGS WHICH SHALL ALSO INCLUDE ALL APPLICABLE WELDING PROCEDURES.
9. THE TOP SURFACE OF THE SCUPPER SHALL BE ADJUSTED TO MATCH THE ROADWAY SLOPE AND GRADE.
10. AFTER ALL PAVING AND CONCRETING OPERATIONS THE SCUPPERS AND DOWNSPOUTS SHALL BE CLEANED OF ALL CONTAMINATION BY FLUSHING.
11. ALL MATERIALS AND INSTALLATION COSTS FOR THE SCUPPERS AND DOWNSPOUTS, INCLUDING STEEL TUBING, RELATED HARDWARE, AND ANCHOR BOLTS SHALL BE PAID FOR UNDER ITEM 506.50 STRUCTURAL STEEL, ROLLED BEAM.



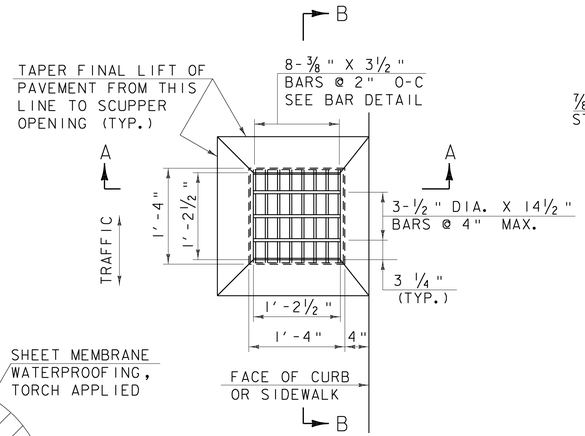
DETAIL B

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



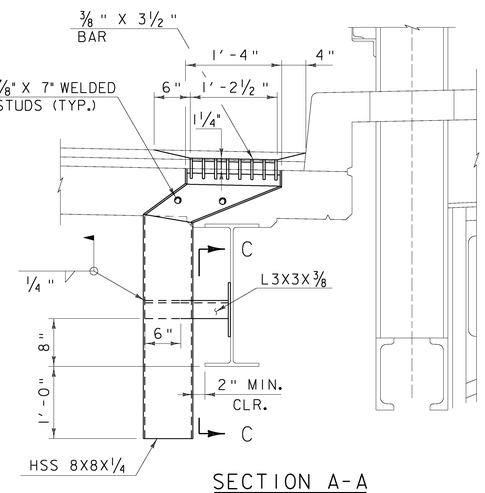
SECTION B-B

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



SCUPPER PLAN

SCALE 1" = 1'-0"



SECTION A-A

SCALE 1" = 1'-0"

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

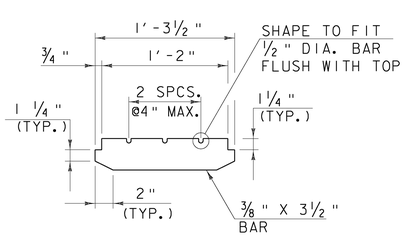
1 9 6 3 0 1

SCALE 3/4" = 1'-0"

1 0 1 2

SCALE 1" = 1'-0"

1 9 6 3 0 1 2



BAR DETAIL FOR GRATE

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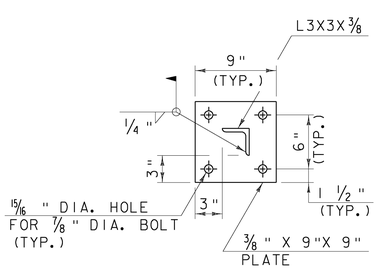
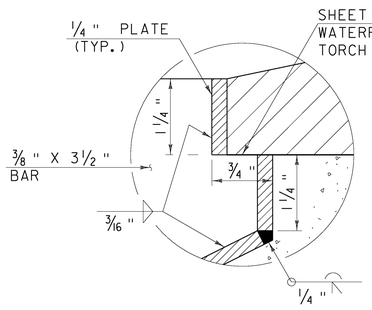


SECTION C-C

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



DETAIL C

NOT TO SCALE

SCUPPER AND DOWNSPOUT DETAILS

PROJECT NAME:	MONTPELIER
PROJECT NUMBER:	BHF 6400(31)
FILE NAME: $FILES$	PLOT DATE: 10/12/2009
PROJECT MANAGER: SUSAN SCRIBNER	DRAWN BY: D. D'AMATO
DESIGNED BY: D. D'AMATO	CHECKED BY: P. PERKINS
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD	SHEET 35 OF 63

CHA © 2009
CLOUGH HARBOUR & ASSOCIATES LLP

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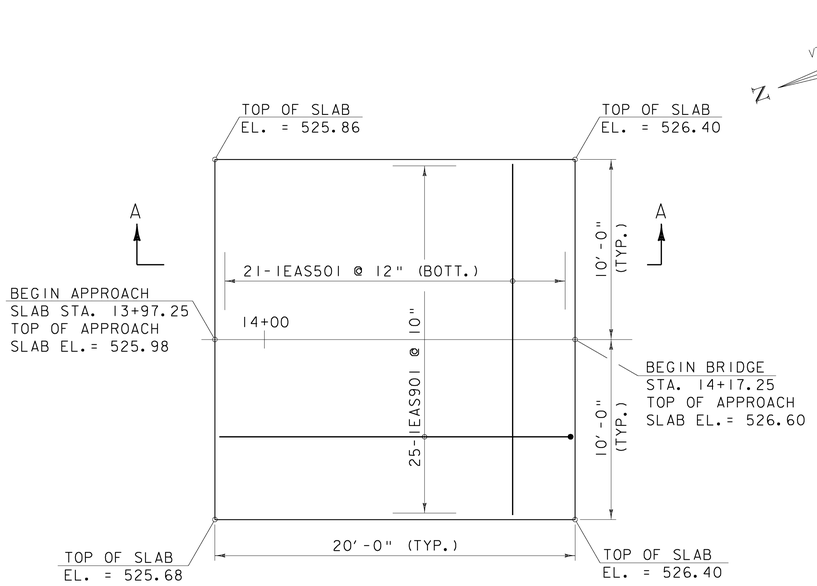
DATE/TIME = 10/12/2009
USER = 2552



APPROACH SLAB PLAN

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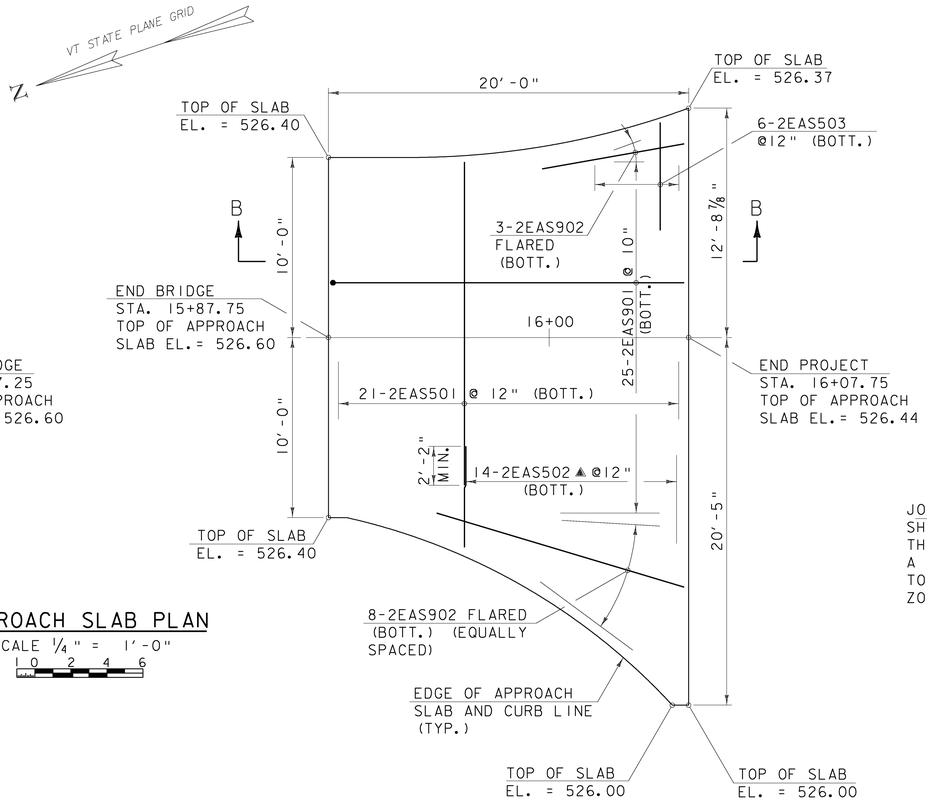
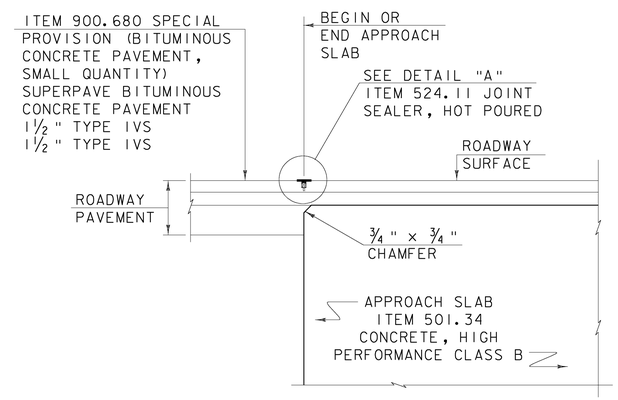
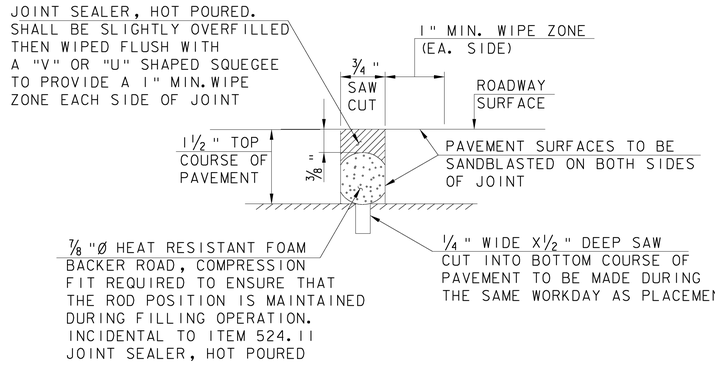




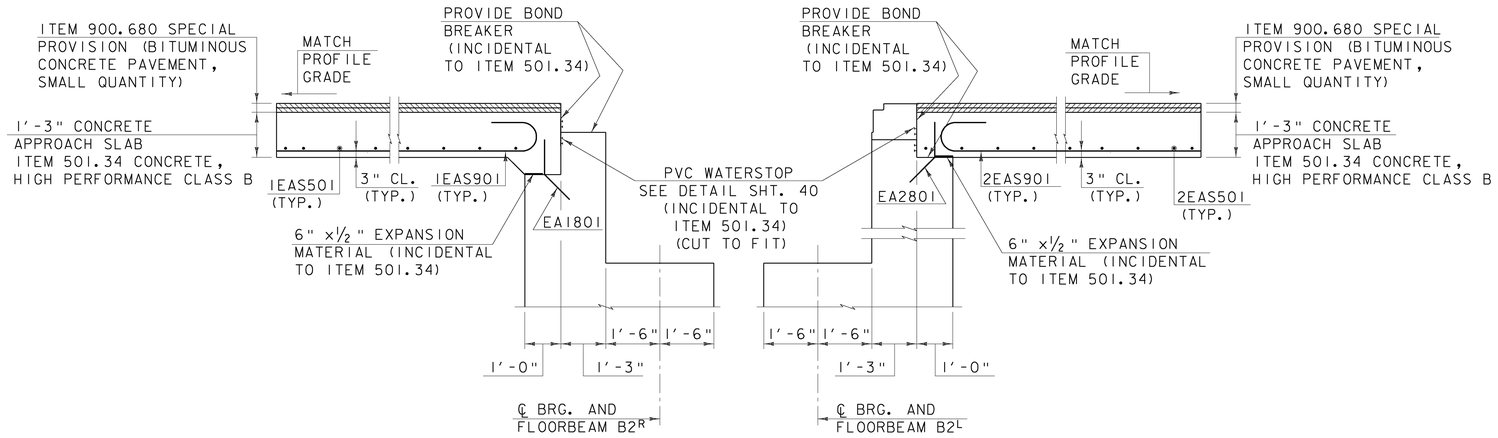
DETAIL FOR JOINT IN PAVEMENT AT END OF APPROACH SLAB

NOT TO SCALE



DETAIL A

NOT TO SCALE



SECTION A-A

SCALE 1/2" = 1'-0"

SECTION B-B

SCALE 1/2" = 1'-0"

LEGEND:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT IN FIELD

APPROACH SLAB DETAILS

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD
PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 36 OF 63

CLOUGH HARBOUR & ASSOCIATES LLP

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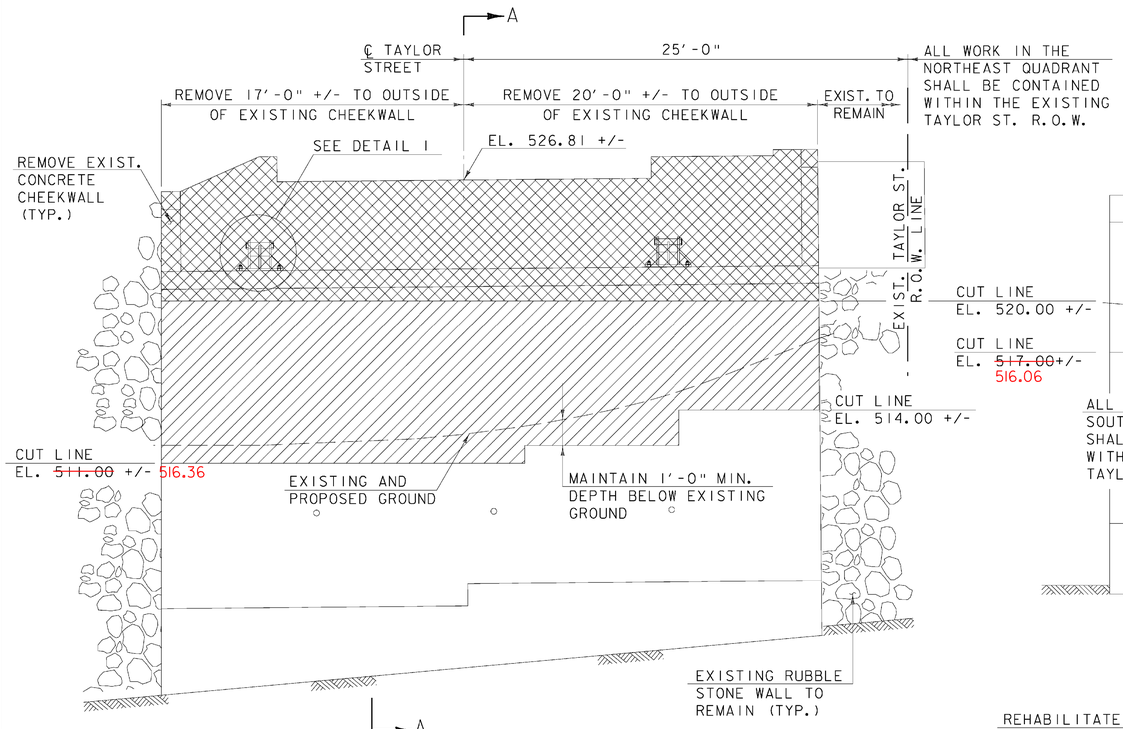
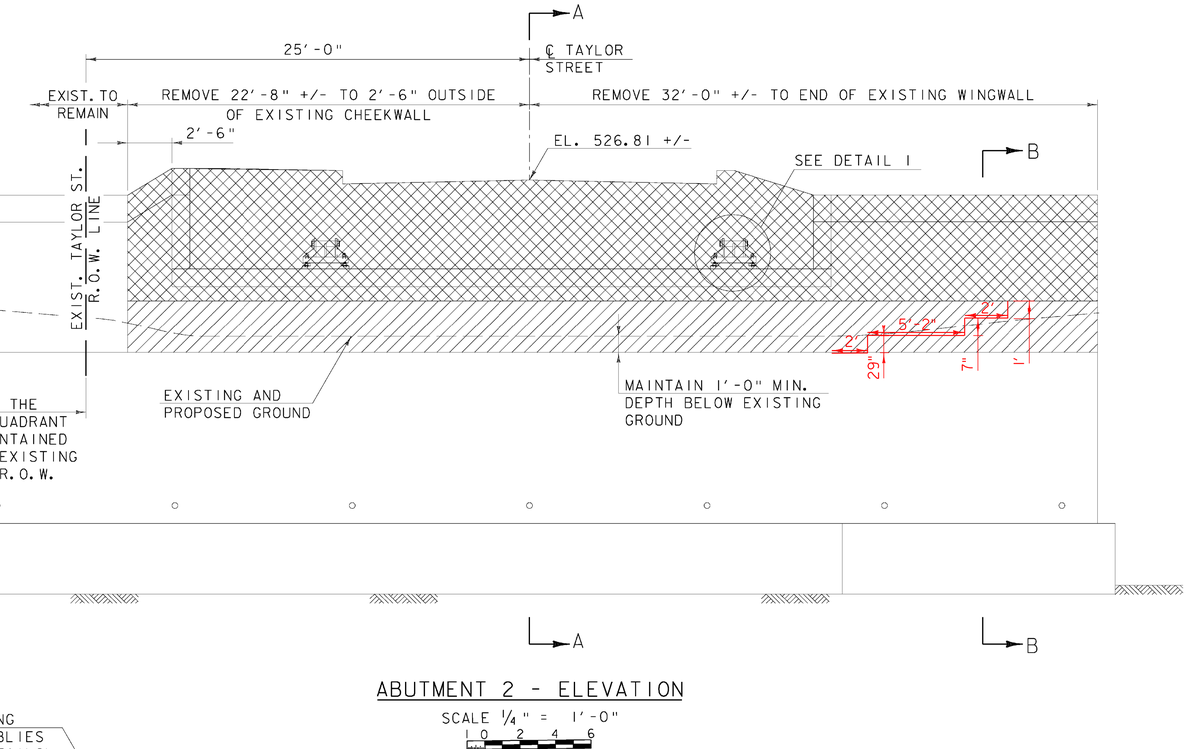
USER =2552



ABUTMENT 1 - ELEVATION

SCALE 1/4" = 1'-0"



ABUTMENT 2 - ELEVATION

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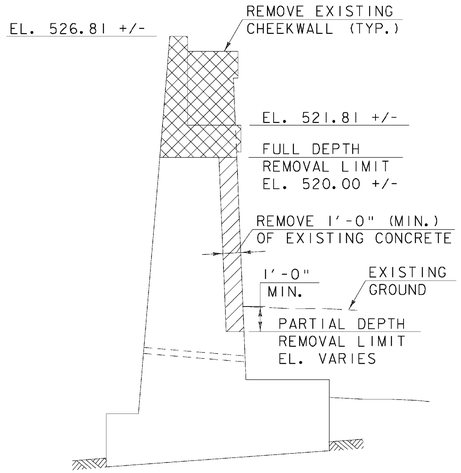
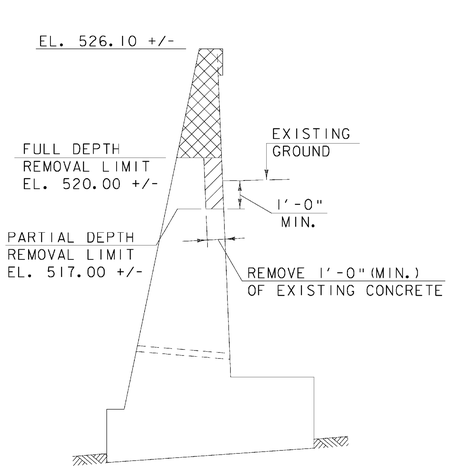


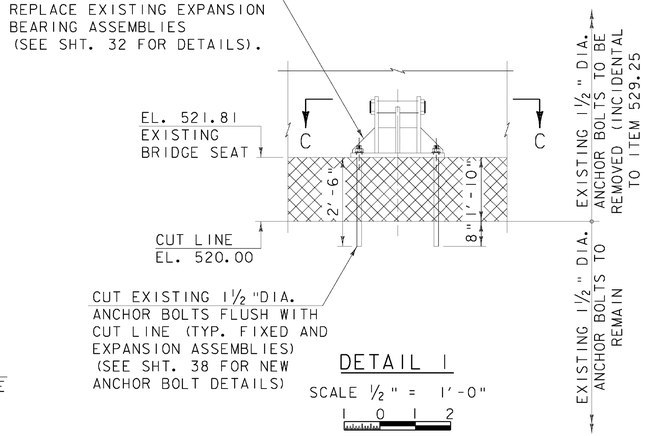
SECTION A-A

SCALE 1/4" = 1'-0"



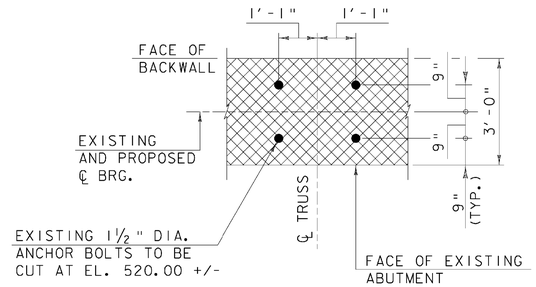
SECTION B-B

SCALE 1/4" = 1'-0"



DETAIL I

SCALE 1/2" = 1'-0"



SECTION C-C

SCALE 1/2" = 1'-0"

LEGEND

EXISTING CONCRETE TO BE COMPLETELY REMOVED UNDER ITEM 529.25, REMOVAL OF EXISTING CONCRETE OR MASONRY (CY) AND REPLACED WITH NEW CONCRETE AS SHOWN IN THE PLANS.

EXISTING CONCRETE TO BE PARTIALLY REMOVED UNDER ITEM 529.26, REMOVAL OF EXISTING CONCRETE OR MASONRY (SY) AND REMAINING CONCRETE TO BE FACED WITH ITEM 501.34 HIGH PERFORMANCE CONCRETE, CLASS B.

NOTE:

1. SAW CUT EXISTING SUBSTRUCTURE 3" DEEP ALONG CUT LINES PRIOR TO BEGINNING CONCRETE REMOVAL OPERATIONS.

SUBSTRUCTURE REMOVAL DETAILS

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

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FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD

PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 37 OF 63

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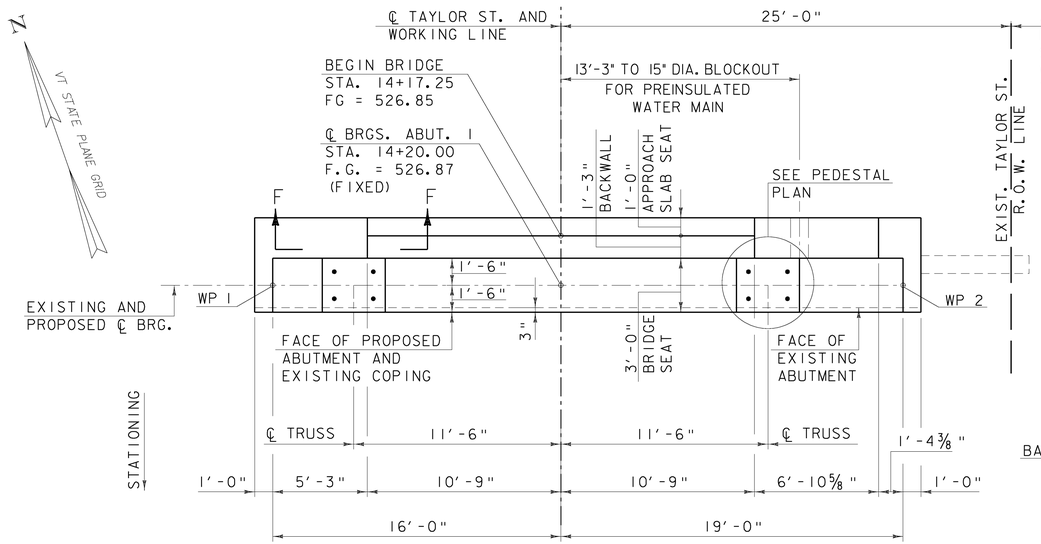
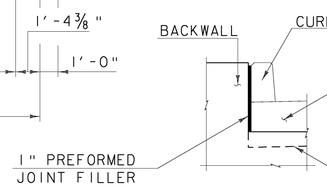


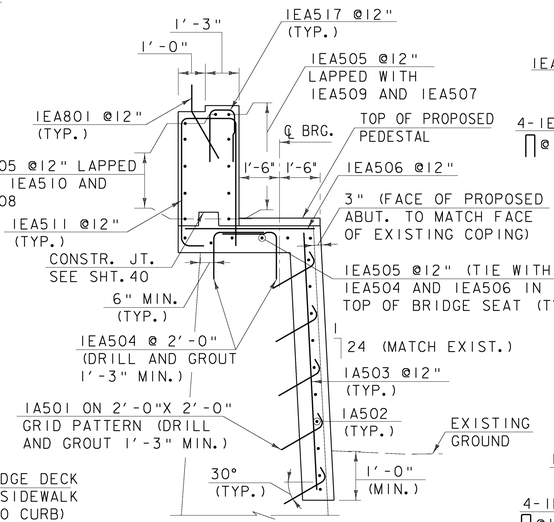
PLAN

SCALE 1/4" = 1'-0"



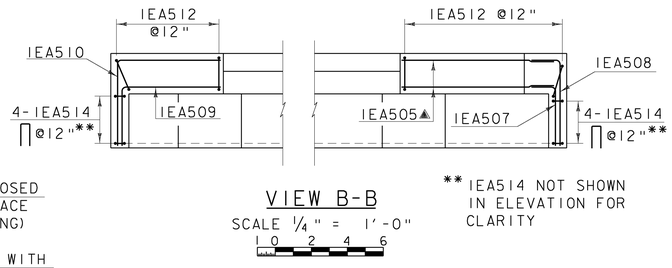
SECTION F-F

SCALE 1/2" = 1'-0"



SECTION A-A

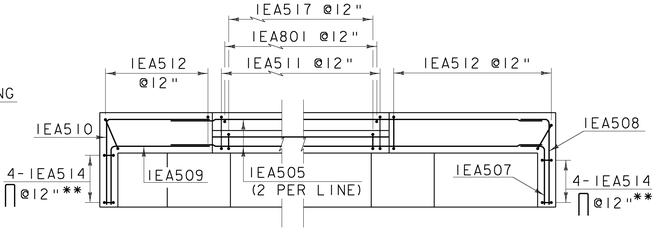
SCALE 3/8" = 1'-0"



VIEW B-B

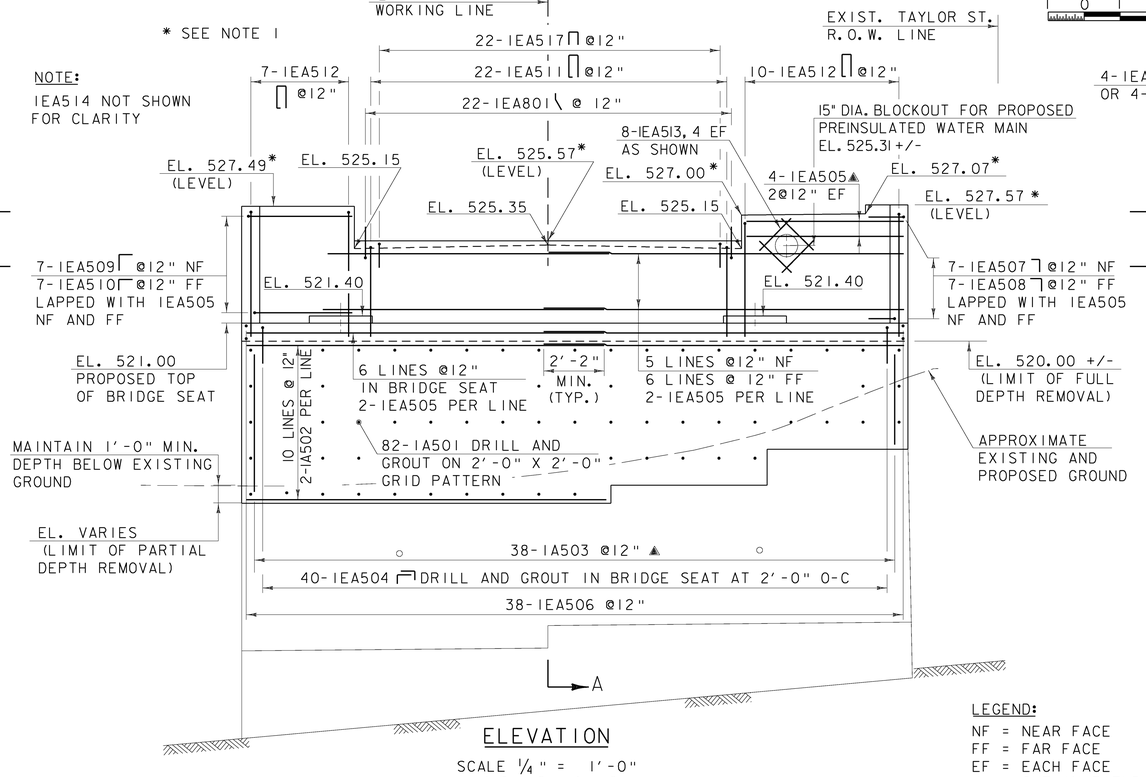
SCALE 1/4" = 1'-0"

** IEA514 NOT SHOWN IN ELEVATION FOR CLARITY



SECTION C-C

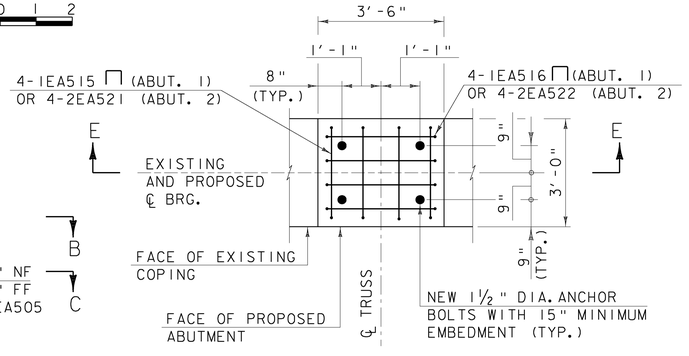
SCALE 1/4" = 1'-0"



ELEVATION

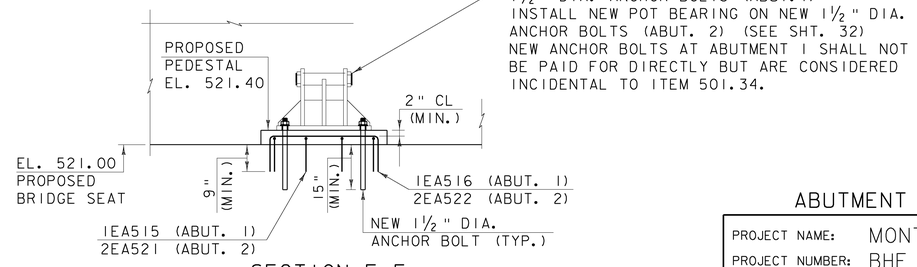
SCALE 1/4" = 1'-0"

LEGEND:
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT IN FIELD



TYPICAL PEDESTAL PLAN

SCALE 1/2" = 1'-0"



SECTION E-E

SCALE 1/2" = 1'-0"

NOTES:

1. ELEVATIONS APPLY AT FRONT FACE OF BACKWALL.
2. ALL SUBSTRUCTURE CONCRETE SHALL BE HIGH PERFORMANCE CLASS B AND SHALL BE PAID FOR UNDER ITEM 501.34 CONCRETE, HIGH PERFORMANCE CLASS B.
3. 3" CLR. UNLESS OTHERWISE SPECIFIED ON PLANS.

ABUTMENT 1 REPAIR DETAILS

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

CLOUGH HARBOUR & ASSOCIATES LLP © 2009

FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD

PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS

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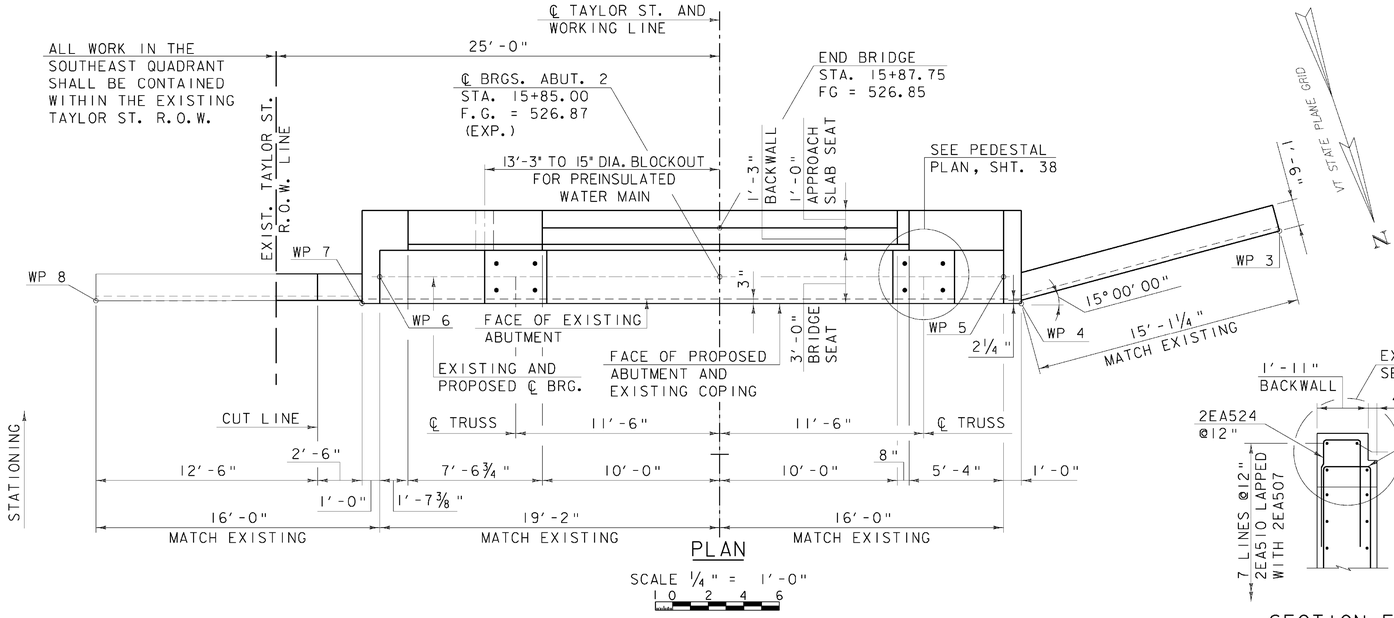
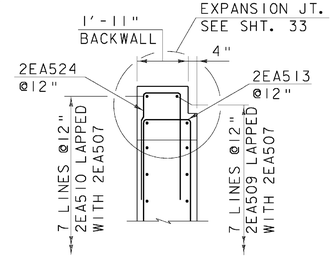


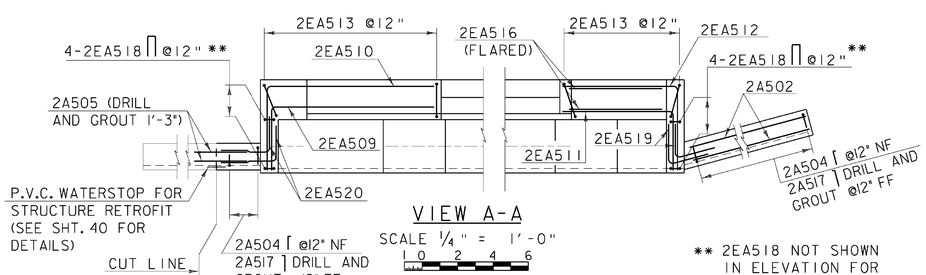
PLAN

SCALE ¼" = 1'-0"



SECTION E-E

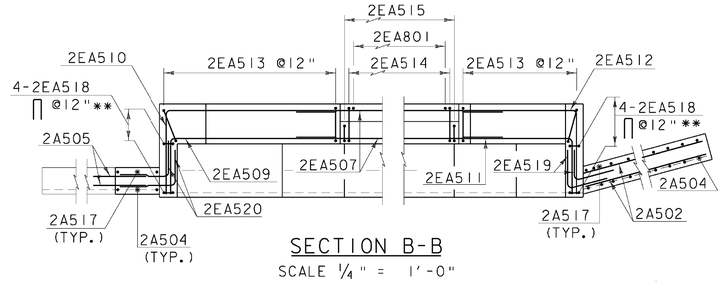
SCALE ⅜" = 1'-0"



VIEW A-A

SCALE ¼" = 1'-0"

** 2EA518 NOT SHOWN IN ELEVATION FOR CLARITY



SECTION B-B

SCALE ¼" = 1'-0"

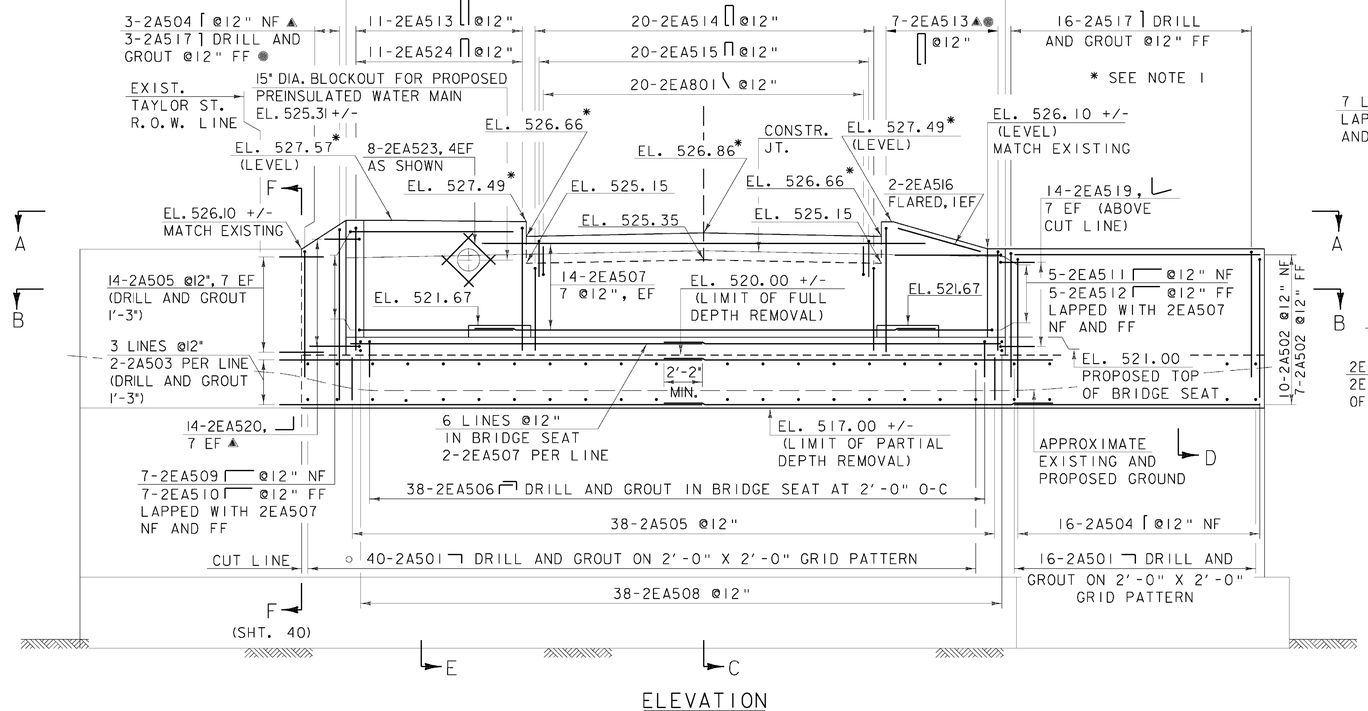
NOTE:

2EA518 NOT SHOWN FOR CLARITY

OPTIONAL CONSTR. JT.

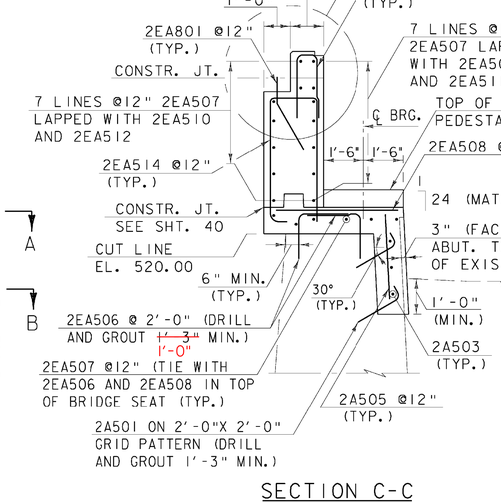
℄ TAYLOR ST. AND WORKING LINE

OPTIONAL CONSTR. JT.



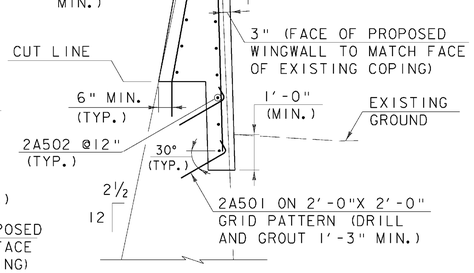
ELEVATION

SCALE ¼" = 1'-0"



SECTION C-C

SCALE ⅜" = 1'-0"



SECTION D-D

SCALE ⅜" = 1'-0"

NOTES:

1. ELEVATIONS APPLY AT FRONT FACE OF BACKWALL.
2. ALL SUBSTRUCTURE CONCRETE SHALL BE HIGH PERFORMANCE CLASS B AND SHALL BE PAID FOR UNDER ITEM 501.34 CONCRETE, HIGH PERFORMANCE CLASS B.
3. 3" CLR. UNLESS OTHERWISE SPECIFIED ON PLANS.

LEGEND:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT IN FIELD
● = BEND IN FIELD

ABUTMENT 2 REPAIR DETAILS

PROJECT NAME:	MONTPELIER
PROJECT NUMBER:	BHF 6400(31)

FILE NAME: $FILES$	PLOT DATE: 10/12/2009
PROJECT MANAGER: SUSAN SCRIBNER	DRAWN BY: D. D'AMATO
DESIGNED BY: D. D'AMATO	CHECKED BY: P. PERKINS
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD	SHEET 39 OF 63

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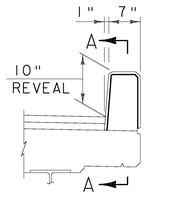
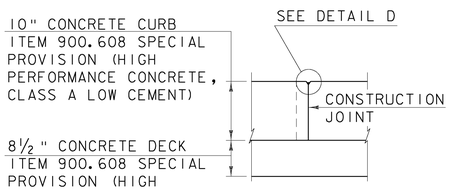
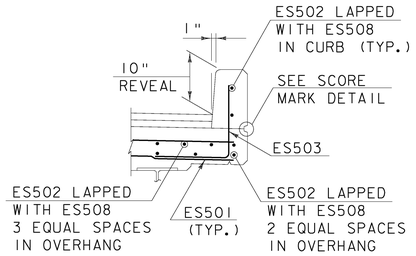
DATE/TIME =10/12/2009
USER =2552



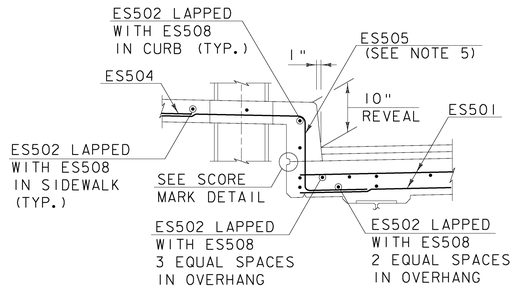
BRIDGE CURB DETAIL
(AT CONSTRUCTION JOINT)
SCALE ¾" = 1'-0"



SECTION A-A
SCALE ¾" = 1'-0"

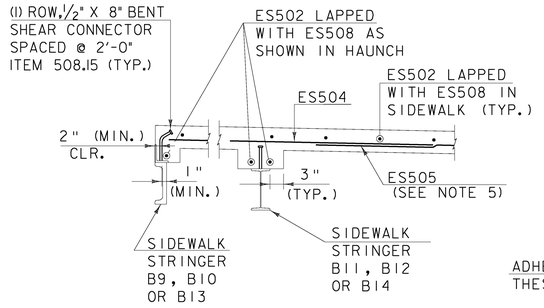


DETAIL A
SCALE ¾" = 1'-0"

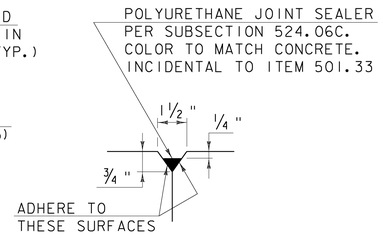


DETAIL B
SCALE ¾" = 1'-0"

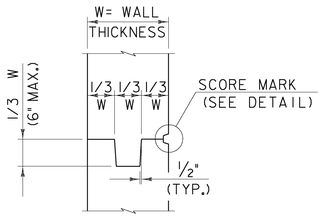
P.V.C. WATERSTOP FOR CONSTRUCTION JOINTS
NOT TO SCALE



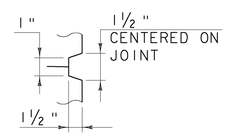
DETAIL C
SCALE ¾" = 1'-0"



DETAIL D
NOT TO SCALE



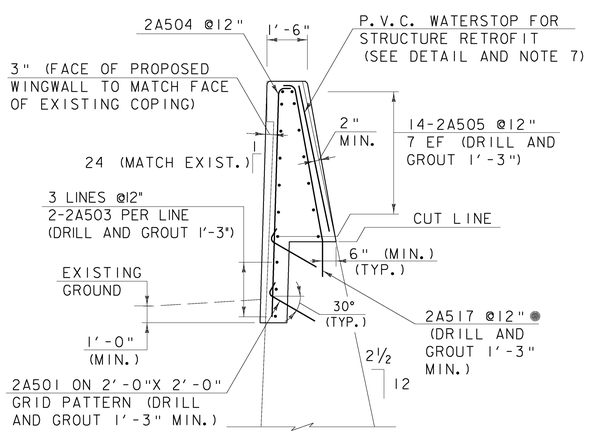
TYPICAL CONCRETE CONSTRUCTION JOINT



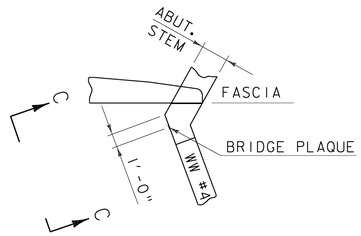
SCORE MARK DETAIL
NOT TO SCALE

NOTES:

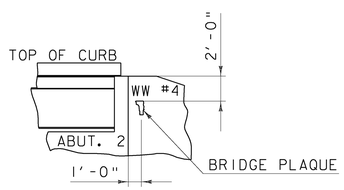
1. CONSTRUCTION JOINTS THROUGH CONCRETE CURBS SHALL BE SPACED MAXIMUM 15'-0" CENTER TO CENTER. CONCRETE SHALL BE PLACED IN ALTERNATING SECTIONS WITH A MINIMUM OF 48 HOURS DELAY BETWEEN ADJACENT POURS. THE CONTRACTOR HAS THE OPTION TO ELIMINATE THE CURB JOINTS AND MAKE EACH CURB IN ONE PLACEMENT USING AN APPROVED SHRINKAGE ADMIXTURE AS NOTED IN THE SPECIAL PROVISIONS. THE COST OF ANY SUCH ADMIXTURE SHALL BE INCIDENTAL TO THE CONCRETE ITEM.
2. LONGITUDINAL REINFORCING SHALL PASS THROUGH CONCRETE CURB CONSTRUCTION JOINTS.
3. CONSTRUCTION JOINTS THROUGH SIDEWALKS SHALL BE SIMILAR TO CONCRETE CURB CONSTRUCTION JOINTS.
4. SEE SHT. 28 FOR LOCATIONS OF DETAILS A, B AND C. SEE SHEET 39 FOR LOCATION OF SECTION F.
5. ES504 AND ES505 TO BE PLACED IN THE SAME HORIZONTAL PLANE. ES502 AND ES508 TO BE PLACED ON TOP.
6. WATERSTOP MATERIAL SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION SUBSECTION 707.10. WATERSTOP SYSTEM SHALL BE APPROVED BY THE VERMONT AGENCY OF TRANSPORTATION MATERIALS AND RESEARCH LABORATORY. THE COSTS FOR P.V.C. WATERSTOP SHALL BE INCLUDED IN THE UNIT BID PRICE FOR CONCRETE. OTHER CONFIGURATIONS MAY BE USED UPON APPROVAL OF THE STRUCTURES ENGINEER.
7. SAWCUT VERTICAL SLOT IN EXISTING WINGWALL. SLOT SHALL BEGIN 2" ABOVE CUT LINE AND END 2" BELOW THE TOP OF THE EXISTING WINGWALL. INSERT WATERSTOP IN SLOT AND PACK SLOT WITH ADHESIVE APPROVED BY WATERSTOP MANUFACTURER.
8. THE BRIDGE PLAQUE WILL BE SUPPLIED BY THE AGENCY OF TRANSPORTATION AND SHALL BE INSTALLED BY THE CONTRACTOR AT ABUTMENT #2 ON WINGWALL #4 AS SHOWN OR AS DIRECTED BY THE ENGINEER.
9. PAYMENT FOR INSTALLATION OF THE BRIDGE PLAQUE SHALL BE INCIDENTAL TO THE ADJACENT CONCRETE.



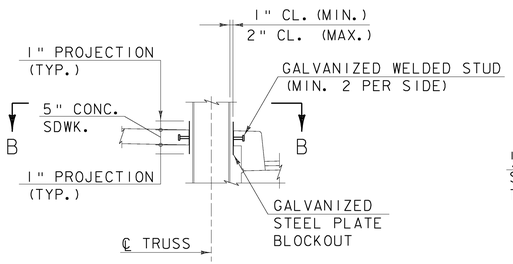
SECTION F-F
SCALE ¾" = 1'-0"



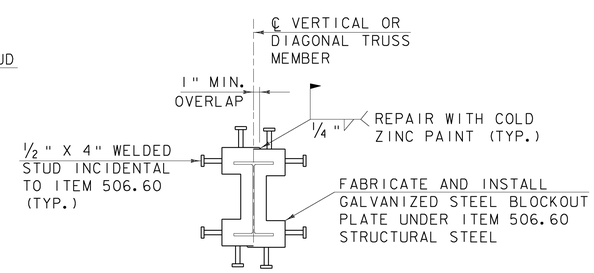
BRIDGE PLAQUE
NOT TO SCALE



SECTION C-C
NOT TO SCALE



SIDEWALK BLOCKOUT DETAIL AT TRUSS MEMBERS
SCALE ½" = 1'-0"



SECTION B-B
SCALE 1" = 1'-0"

MISCELLANEOUS DETAILS

PROJECT NAME:	MONTPELIER
PROJECT NUMBER:	BHF 6400(31)

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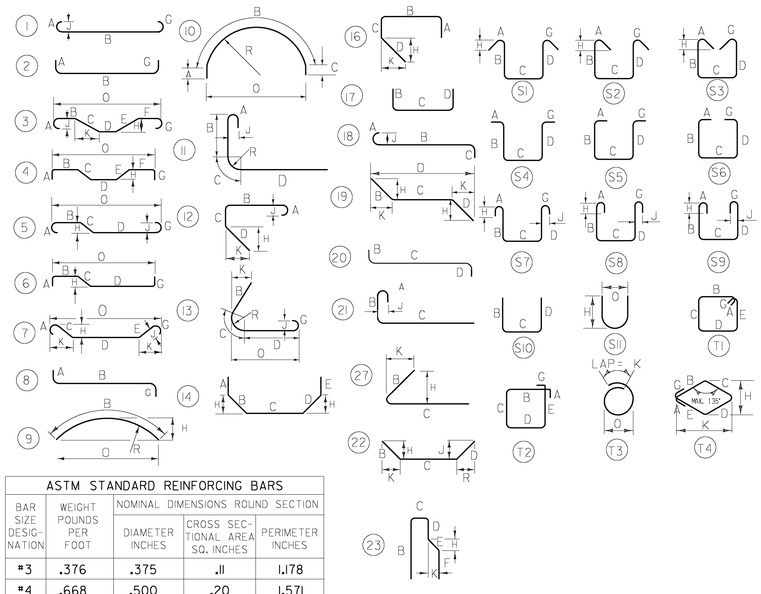
FILE NAME: $FILES$	PLOT DATE: 10/12/2009
PROJECT MANAGER: SUSAN SCRIBNER	DRAWN BY: D. D'AMATO
DESIGNED BY: D. D'AMATO	CHECKED BY: P. PERKINS
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD	SHEET 40 OF 63

FILE NAME =k:\14580\west\plans\zs14586_curbdetails.dgn
DATE/TIME =10/12/2009
USER =2552

ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
1	DECK																
2																	
3 ✳	677	5	20'-10"	ES501	STR												
4 ▲	195	5	50'-0"	ES502	STR												
5	169	5	3'-6"	ES503	17		2'-2"	1'-4"	0"								
6	169	5	4'-9"	ES504	STR												
7	169	5	8'-0"	ES505	20		4'-6"	1'-4"	2'-2"								
8	22	5	4'-7"	ES506	S5	10"	5"	9"	5"			2'-2"					
9	22	5	6'-4"	ES507	S5	10"	5"	2'-6"	5"			2'-2"					
10 ▲	65	5	30'-0"	ES508	STR												
11 ✳	13	6	20'-10"	ES601	STR												
12																	
13	APPROACH SLAB 1																
14																	
15 ✳	26	9	20'-9"	1EAS901	1	1'-3"	19'-6"							11¾"			
16	21	5	19'-6"	1EAS501	STR												
17																	
18	APPROACH SLAB 2																
19																	
20	25	9	20'-9"	2EAS901	1	1'-3"	19'-6"							11¾"			
21	11	9	19'-6"	2EAS902	STR												
22	21	5	19'-6"	2EAS501	STR												
23 ▲	14	5	14'-0"	2EAS502	STR												
24	6	5	6'-0"	2EAS503	STR												
25																	
26	ABUTMENT 1																
27																	
28	82	5	2'-3"	1A501	17		1'-9"	6"	0"								
29	20	5	19'-6"	1A502	STR												
30 ▲	38	5	9'-6"	1A503	STR												
31	40	5	3'-6"	1EA504	17		1'-9"	1'-9"	0"								
32 ▲	38	5	19'-6"	1EA505	STR												
33	38	5	4'-9"	1EA506	STR												
34	7	5	5'-0"	1EA507	17		3'-7"	1'-5"	0"								
35	7	5	6'-4"	1EA508	17		4'-6"	1'-10"	0"								
36	7	5	8'-10"	1EA509	17		3'-7"	5'-3"	0"								
37	7	5	10'-2"	1EA510	17		4'-6"	5'-6"	0"								
38	22	5	12'-7"	1EA511	S5	10"	5'-0"	1'-9"	5'-0"			0"					
39	17	5	16'-7"	1EA512	S5	10"	7'-0"	1'-9"	7'-0"			0"					
40	8	5	2'-6"	1EA513	STR												
41	8	5	14'-6"	1EA514	S10		7'-0"	6"	7'-0"								
42	8	5	4'-6"	1EA515	S10		1'-0"	2'-6"	1'-0"								
43	8	5	5'-0"	1EA516	S10		1'-0"	3'-0"	1'-0"								
44	22	5	2'-9"	1EA517	S10		1'-0"	9"	1'-0"								
45 ✳	23	8	3'-6"	1EA801	27		2'-0"	1'-6"					1'-0"		1'-8¾"		
46																	
47	ABUTMENT 2																
48																	
49	56	5	2'-3"	2A501	17		1'-9"	6"	0"								
50	17	5	14'-6"	2A502	STR												
51	6	5	24'-0"	2A503	STR												
52 ▲	19	5	8'-9"	2A504	27		6"	8'-3"					1/4"		6"		
53	52	5	2'-6"	2A505	STR												
54	38	5	3'-6"	2EA506	17		1'-9"	1'-9"	0"								
55 ▲	27	5	24'-6"	2EA507	STR												
56	38	5	4'-9"	2EA508	STR												
57	7	5	12'-10"	2EA509	17		3'-7"	9'-3"	0"								
58	7	5	14'-0"	2EA510	17		4'-6"	9'-6"	0"								
59	5	5	9'-10"	2EA511	17		3'-7"	6'-3"	0"								
60	5	5	11'-0"	2EA512	17		4'-6"	6'-6"	0"								
61 ▲●	18	5	14'-7"	2EA513	S5	10"	6'-0"	1'-9"	6'-0"			0"					
62	20	5	11'-7"	2EA514	S5	10"	4'-6"	1'-9"	4'-6"			0"					
63	20	5	5'-9"	2EA515	S10		2'-6"	9"	2'-6"								
64	2	5	4'-9"	2EA516	STR												
65 ●	19	5	7'-6"	2A517	27		6"	7'-0"					1 1/8"		5⅞"		
66	8	5	11'-6"	2EA518	S10		5'-6"	6"	5'-6"								
67	14	5	6'-0"	2EA519	27		3'-0"	3'-0"					2'-10¾"		9⅜"		
68 ▲	14	5	6'-0"	2EA520	17		3'-0"	3'-0"	0"								
69	8	5	4'-6"	2EA521	S10		1'-0"	2'-6"	1'-0"								
70	8	5	5'-0"	2EA522	S10		1'-0"	3'-0"	1'-0"								
71	8	5	2'-6"	2EA523	STR												
72	11	5	9'-5"	2EA524	S10		4'-0"	1'-5"	4'-0"								
73	20	8	3'-6"	2EA801	27		2'-0"	1'-6"					1'-0"		1'-8¾"		
74																	

NOTES:

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-S1). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
5. "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
8. ▲ DENOTES BARS TO BE CUT IN FIELD.
9. ● DENOTES BARS TO BE BENT IN FIELD.
10. ✳ DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
11. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
12. "E" IN PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS				
BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION		
		DIAMETER INCHES	CROSS SECTIONAL AREA SQ. INCHES	PERIMETER INCHES
#3	.376	.375	.11	1.178
#4	.668	.500	.20	1.571
#5	1.043	.625	.31	1.963
#6	1.502	.750	.44	2.356
#7	2.044	.875	.60	2.749
#8	2.670	1.000	.79	3.142
#9	3.400	1.128	1.00	3.544
#10	4.303	1.270	1.27	3.990
#11	5.313	1.410	1.56	4.430
#14	7.65	1.693	2.25	5.32
#18	13.60	2.257	4.00	7.09

REINFORCING STEEL SCHEDULE

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

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FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD

PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 41 OF 63

FILE NAME =h:\14505\str\plans\zs14506_rebar.dgn
DATE/TIME =10/12/2009
USER =2552

N

VT STATE PLANE GRID

D1-1c
30" x 9"
TAYLOR ST
DETOUR
M4-9L
30" x 24"

BALDWIN STREET

GOV. AIKEN AVENUE

R11-4
60" x 30"
ROAD CLOSED TO THRU TRAFFIC

DETOUR
M4-10R
48" x 30"

D1-1c
30" x 9"
TAYLOR ST
END DETOUR
M4-8a
24" x 18"

TEMPORARY TRAFFIC SIGNAL
SEE NOTE 1

GOV. DAVIS AVENUE

COURT STREET

D1-1c
30" x 9"
TAYLOR ST
END DETOUR
M4-8a
24" x 18"

ELM STREET

D1-1c
30" x 9"
TAYLOR ST
DETOUR
M4-9L
30" x 24"

R11-2
48" x 30"

U.S. BUSINESS ROUTE 2 (STATE STREET)

U.S. ROUTE 2 (STATE STREET)

D1-1c
30" x 9"
TAYLOR ST
DETOUR
M4-9L
30" x 24"

U.S. ROUTE 2 (BAILEY AVENUE)

D1-1c
30" x 9"
TAYLOR ST
DETOUR
M4-9R
30" x 24"

R11-2
48" x 30"
ROAD CLOSED

SEE SHEET 44 FOR PEDESTRIAN DETOUR DETAILS AND ADDITIONAL SIGN PLACEMENT ON THE CONSTRUCTION AREA APPROACHES

BRIDGE CLOSED

APPROXIMATE CONSTRUCTION AREA

R11-2
48" x 30"
BRIDGE CLOSED

RAILROAD

WINOOSKI RIVER

WASHINGTON CO.

U.S. ROUTE 2

SEE NOTE 7

SEE NOTE 8

I-6

M7-1

EXISTING SIGNS MOUNTED ON UTILITY POLE

EXISTING SIGNAL ADJUSTMENT REQUIRED
SEE SHT. 43 FOR DETAILS

SEE NOTE 2

EXISTING SIGNAL ADJUSTMENT REQUIRED
SEE NOTE 1

SEE NOTE 7

VR-923
30" x 30"

SEE NOTE 2

VT. ROUTE 12 (MAIN STREET)

D1-1c
30" x 9"
TAYLOR ST
DETOUR
M4-9R
30" x 24"

(MEMORIAL DRIVE)

R3-1
24" x 24"
O/H
SEE NOTE 6

D1-1c
30" x 9"
TAYLOR ST
END DETOUR
M4-8a
24" x 18"

R3-2
24" x 24"
O/H
SEE NOTE 5

D1-1c
30" x 9"
TAYLOR ST
DETOUR
M4-9
30" x 24"

LEFT TURN YIELD ON GREEN
O/H
SEE NOTE 5

R10-12
24" x 30"

HIGH SCHOOL DRIVE

30"
9"
TAYLOR ST
6"B
1½"
R=1"

BLACK TEXT ON FLUORESCENT ORANCE BACKROUND

SIGN DETAILS

TEMPORARY TRAFFIC DETOUR PLAN

NOT TO SCALE

DETOUR NOTES:

1. SEE SHT. 43 FOR TEMPORARY TRAFFIC SIGNAL PLAN AT STATE STREET AND TAYLOR STREET AND FOR DETAILS FOR EXISTING SIGNAL ADJUSTMENTS THAT ARE REQUIRED DURING CONSTRUCTION.
2. ANY EXISTING SIGNS THAT DIRECTLY CONFLICT WITH THE TRAFFIC PATTERNS ESTABLISHED BY THE DETOUR SHALL BE COVERED FOR THE DURATION OF THE DETOUR. SIGNS SHALL BE COVERED WITH DURABLE MATERIAL AS DIRECTED BY THE RESIDENT ENGINEER, AND THE COST SHALL BE INCIDENTAL TO ITEM 641.10 TRAFFIC CONTROL.
3. ALL SIGN STANDS AND POST INSTALLATIONS SHALL BE NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM REPORT (NCHRP) COMPLIANT.
4. SEE TRAFFIC CONTROL AND DETOUR NOTES ON SHT. 26 FOR ADDITIONAL INFORMATION.
5. THE CONTRACTOR SHALL REMOVE THE EXISTING "LEFT TURN YIELD ON GREEN" (R10-12) SIGN LOCATED ON THE EXISTING SPAN WIRE AND REPLACE IT WITH THE "NO LEFT TURN SIGN" (R3-2) PRIOR TO CLOSING TAYLOR STREET. THE CONTRACTOR SHALL REINSTALL THE "LEFT TURN YIELD ON GREEN" (R10-12) SIGN PRIOR TO OPENING TAYLOR STREET TO TRAFFIC.
6. THE CONTRACTOR SHALL INSTALL A NO RIGHT TURN SIGN (R3-1) ON THE EXISTING SPAN WIRE PRIOR TO CLOSING TAYLOR STREET. THE CONTRACTOR SHALL REMOVE THIS SIGN PRIOR TO OPENING TAYLOR STREET TO TRAFFIC.
7. THE CONTRACTOR SHALL OBSCURE THE EXISTING LANE USE ARROWS THAT CORRESPOND TO MOVEMENTS THAT ARE NOT ALLOWED WHEN TAYLOR STREET IS CLOSED. PAYMENT SHALL BE MADE UNDER ITEM 646.86.
8. THE CONTRACTOR SHALL REMOVE THE EXISTING BUS STATION (I-6) AND ITS SUPPLEMENTAL ARROW (M7-1) SIGN AND INSTALL THEM ON A NEW POST LOCATED AT A POINT WEST OF THE MEMORIAL DRIVE INTERSECTION WITH BAILEY AVENUE PRIOR TO CLOSING TAYLOR STREET TO TRAFFIC. THE CONTRACTOR SHALL REINSTALL THE BUS STATION (I-6) AND ARROW (M7-1) SIGNS TO A LOCATION WEST OF THE MEMORIAL DRIVE INTERSECTION WITH TAYLOR STREET PRIOR TO OPENING TAYLOR STREET TO TRAFFIC. PAYMENT SHALL BE INCIDENTAL TO ITEM 641.10 TRAFFIC CONTROL.

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PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD
PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 42 OF 63

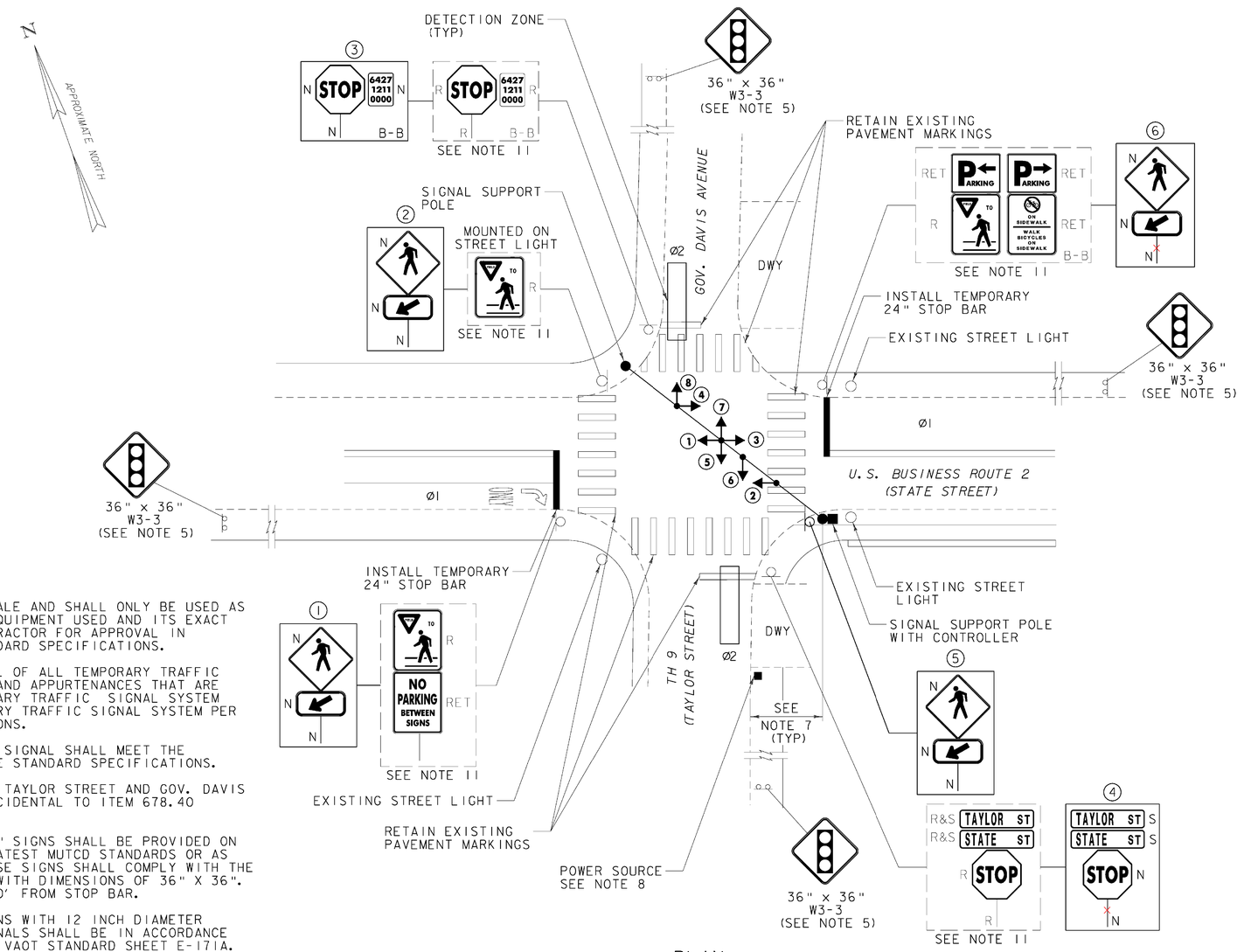
FILE NAME =h:\14506\ws\r\plans\zs14506_detour.dgn
DATE/TIME =10/12/2009
USER =2552

675.50 REMOVING SIGNS

AS SHOWN -8

675.60 ERECTING SALVAGED SIGNS

AS SHOWN - 2



PLAN

TEMPORARY TRAFFIC SIGNAL NOTES:

1. THIS TEMPORARY SIGNAL PLAN IS NOT TO SCALE AND SHALL ONLY BE USED AS A GUIDE. A PLAN SHOWING THE SPECIFIC EQUIPMENT USED AND ITS EXACT LOCATION SHALL BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL IN ACCORDANCE WITH SECTION 678 OF THE STANDARD SPECIFICATIONS.

2. PAYMENT FOR THE INSTALLATION AND REMOVAL OF ALL TEMPORARY TRAFFIC SIGNAL EQUIPMENT, STRUCTURAL SUPPORTS, AND APPURTENANCES THAT ARE REQUIRED FOR A FULLY OPERATIONAL TEMPORARY TRAFFIC SIGNAL SYSTEM SHALL BE MADE UNDER ITEM 678.40 TEMPORARY TRAFFIC SIGNAL SYSTEM PER SECTION 678 OF THE STANDARD SPECIFICATIONS.

3. ALL EQUIPMENT FOR THE TEMPORARY TRAFFIC SIGNAL SHALL MEET THE REQUIREMENTS OF SUBSECTION 678.12 OF THE STANDARD SPECIFICATIONS.

4. VEHICLE DETECTION SHALL BE PROVIDED FOR TAYLOR STREET AND GOV. DAVIS AVENUE APPROACHES. PAYMENT SHALL BE INCIDENTAL TO ITEM 678.40 TEMPORARY TRAFFIC SIGNAL SYSTEM.

5. TEMPORARY ADVANCE WARNING "SIGNAL AHEAD" SIGNS SHALL BE PROVIDED ON ALL APPROACHES IN ACCORDANCE WITH THE LATEST MUTCD STANDARDS OR AS DIRECTED BY THE RESIDENT ENGINEER. THESE SIGNS SHALL COMPLY WITH THE LATEST MUTCD STANDARDS FOR A W3-3 SIGN WITH DIMENSIONS OF 36" X 36". SIGNS SHALL BE SET BACK A MINIMUM OF 100' FROM STOP BAR.

6. EACH APPROACH SHALL HAVE DUAL INDICATIONS WITH 12 INCH DIAMETER LENSES. HEIGHT AND DISTANCE BETWEEN SIGNALS SHALL BE IN ACCORDANCE WITH CHAPTER 4 OF THE LATEST MUTCD, AND VAOT STANDARD SHEET E-171A.

7. ALL POLES SHALL BE LOCATED A MINIMUM OF 2 FEET OFF THE FACE OF CURB OR AS DIRECTED BY THE RESIDENT ENGINEER.

8. EXACT LOCATION OF POWER SOURCE CONNECTION SHALL BE DETERMINED IN THE FIELD THROUGH COORDINATION WITH THE UTILITY COMPANY SUPPLYING POWER.

9. THERE ARE EXISTING UNDERGROUND UTILITIES LOCATED AT THE TAYLOR STREET AND STATE STREET INTERSECTION. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING "DIG SAFE" AT 1-888-344-7233 AND THE CITY OF MONTPELIER AT 802-223-9508 TO DETERMINE THE LOCATIONS OF THESE UTILITIES PRIOR TO PERFORMING ANY SUBSURFACE OPERATIONS.

10. REFER TO TRAFFIC CONTROL AND DETOUR NOTES ON SHT. 26 FOR ADDITIONAL INFORMATION.

11. EXISTING SIGNS AT LOCATIONS ①, ②, ③, ④, ⑤ AND ⑥ SHALL BE REMOVED UPON ACTIVATION OF THE PROPOSED TEMPORARY TRAFFIC SIGNAL. PROPOSED SIGNS AT LOCATIONS ①, ②, ③, ④, ⑤ AND ⑥ SHALL BE INSTALLED AND COMPLETELY COVERED PRIOR TO THE DEACTIVATION OF THE TEMPORARY TRAFFIC SIGNAL. PROPOSED SIGNS AT LOCATIONS ①, ②, ③, ④, ⑤ AND ⑥ SHALL BE UNCOVERED UPON REMOVAL OF THE TEMPORARY TRAFFIC SIGNAL. ALL EXISTING SIGNS THAT ARE NOT SHOWN ON THE PLAN SHALL BE RETAINED UNLESS DIRECTED OTHERWISE BY THE RESIDENT ENGINEER.

EXISTING TRAFFIC SIGNAL TEMPORARY ADJUSTMENTS

1. MODIFY SIGNAL TIMINGS AT THE MEMORIAL DRIVE AND BAILEY AVENUE SIGNAL AS FOLLOWS DURING CONSTRUCTION:

   EB TH/LT (Ø1): MAX II = 10 SEC.
   EB/WB (Ø2): MAX II = 22 SEC.
   SB TH (Ø3): MAX II = 10 SEC.

2. EXISTING TRAFFIC SIGNAL PHASING AT THE INTERSECTION OF TAYLOR STREET AND U.S. ROUTE 2 (MEMORIAL DRIVE) SHALL BE MODIFIED DURING THE TAYLOR STREET CLOSURE TO BE FLASHING YELLOW ON THE U.S. ROUTE 2 (MEMORIAL DRIVE) APPROACHES AND FLASHING RED ON TAYLOR STREET.

TABLE OF OPERATIONS

LOCAL PROGRAMMING	PHASE 1	2	3	4	5	6	7	8	9
MINIMUM GREEN	-	14							
EXTENSION	-	2							
YELLOW CLEARANCE	4	4							
ALL RED CLEARANCE	2	2							
MAX. GREEN I	32	20							
MAX. GREEN II	32	20							
WALK	-	-							
FLASHING DON'T WALK	-	-							
RECALL	MAX	MIN							
MEMORY	NL	L							

FACE	PHASE 1 R/W	PHASE 1 CLEAR TO 2		PHASE 2 R/W	PHASE 2 CLEAR TO 1		FLASHING ** OPERATION
1, 2, 3, 4	G	Y	R	R	R	R	FY
5, 6, 7, 8	R	R	R	G	Y	R	FR

** 12:00 AM - 6:00 AM

SIGN LEGEND

R = REMOVE
S = SALVAGE
N = NEW
RET = RETAIN
B-B = BACK TO BACK
EXISTING = - - - - -
NEW = ———

R
Y
G

HEADS 1 THRU 8
ALL 12 INCH DIA. FACES
(SEE NOTE 6)

NOT TO SCALE

CLOUGH HARBOUR & ASSOCIATES LLP

TEMPORARY TRAFFIC SIGNAL PLAN

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: S. POWMAN
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD
PLOT DATE: 10/12/2009
DRAWN BY: K. RAPELLO
CHECKED BY: P. PERKINS
SHEET 43 OF 63

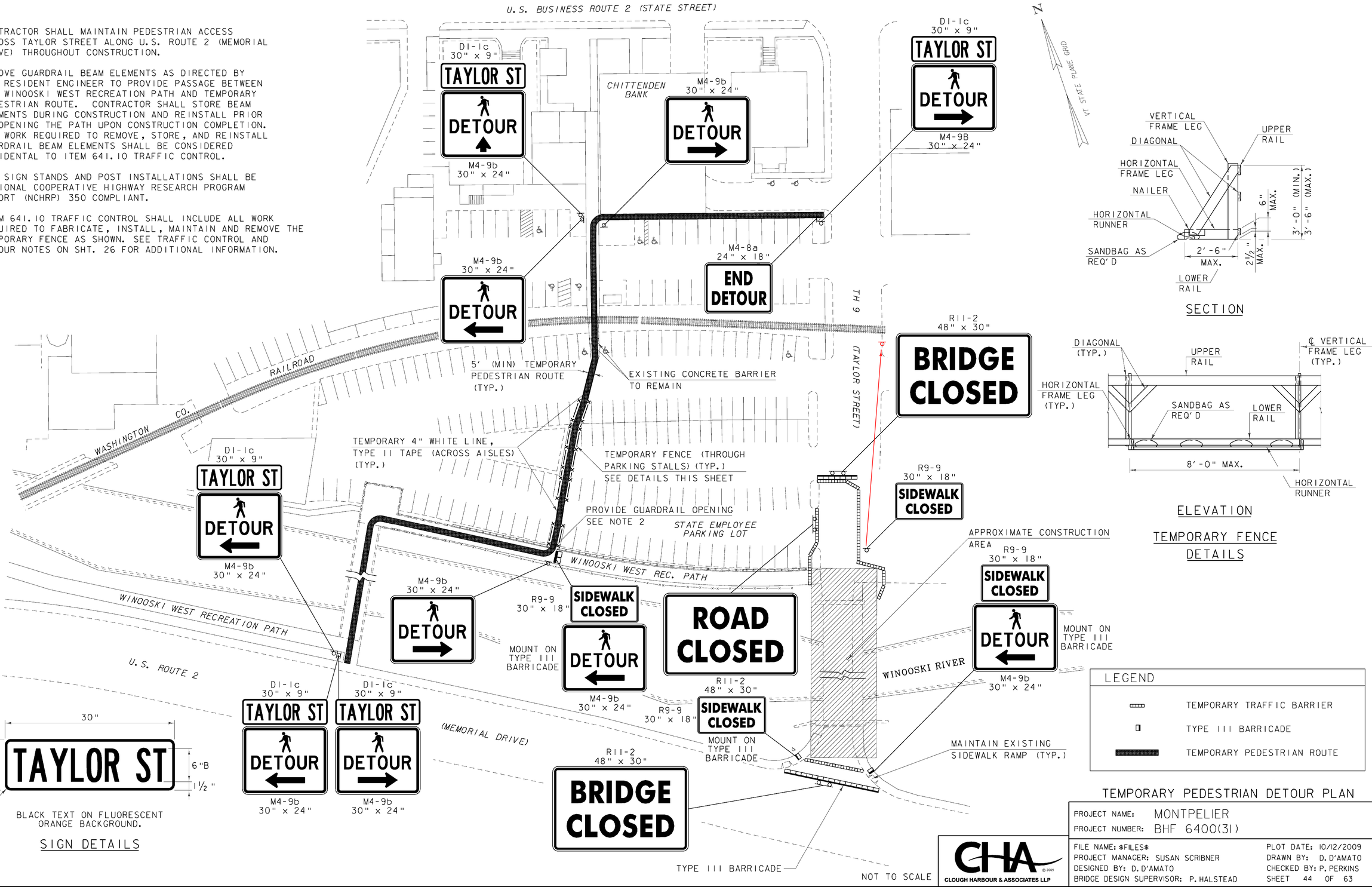
FILE NAME =\\14586\mstr\plans\ts14586_mpt2.dgn
DATE/TIME = 10/12/2009
USER = 2552

1. CONTRACTOR SHALL MAINTAIN PEDESTRIAN ACCESS ACROSS TAYLOR STREET ALONG U.S. ROUTE 2 (MEMORIAL DRIVE) THROUGHOUT CONSTRUCTION.

2. REMOVE GUARDRAIL BEAM ELEMENTS AS DIRECTED BY THE RESIDENT ENGINEER TO PROVIDE PASSAGE BETWEEN THE WINOOSKI WEST RECREATION PATH AND TEMPORARY PEDESTRIAN ROUTE. CONTRACTOR SHALL STORE BEAM ELEMENTS DURING CONSTRUCTION AND REINSTALL PRIOR TO OPENING THE PATH UPON CONSTRUCTION COMPLETION. ALL WORK REQUIRED TO REMOVE, STORE, AND REINSTALL GUARDRAIL BEAM ELEMENTS SHALL BE CONSIDERED INCIDENTAL TO ITEM 641.10 TRAFFIC CONTROL.

3. ALL SIGN STANDS AND POST INSTALLATIONS SHALL BE NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM REPORT (NCHRP) 350 COMPLIANT.

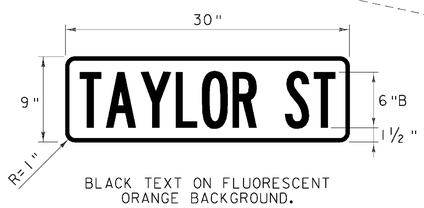
4. ITEM 641.10 TRAFFIC CONTROL SHALL INCLUDE ALL WORK REQUIRED TO FABRICATE, INSTALL, MAINTAIN AND REMOVE THE TEMPORARY FENCE AS SHOWN. SEE TRAFFIC CONTROL AND DETOUR NOTES ON SHT. 26 FOR ADDITIONAL INFORMATION.



SECTION

ELEVATION

TEMPORARY FENCE DETAILS



BLACK TEXT ON FLUORESCENT ORANGE BACKGROUND.

SIGN DETAILS

LEGEND

- TEMPORARY TRAFFIC BARRIER
- TYPE III BARRICADE
- TEMPORARY PEDESTRIAN ROUTE

TEMPORARY PEDESTRIAN DETOUR PLAN

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD

PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 44 OF 63

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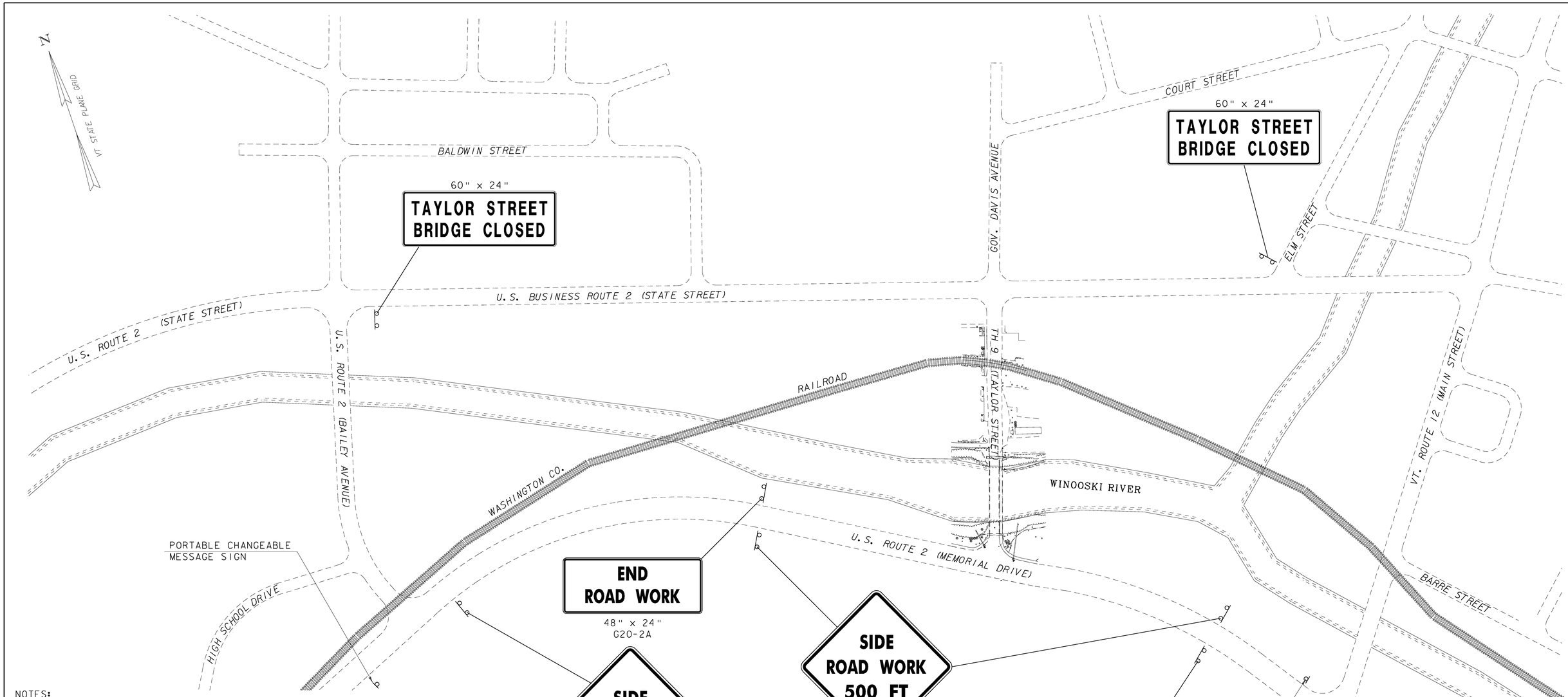
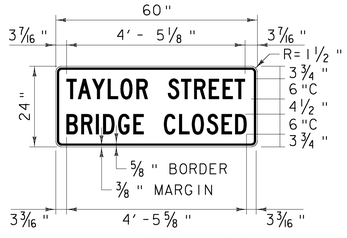
USER = ZSS2



CONSTRUCTION APPROACH SIGNING

NOTES:

1. SEE STANDARDS E-100 AND E-100A FOR ADDITIONAL SIGN PLACEMENT DETAILS.
2. CONSTRUCTION ZONE SIGN LAYOUT SHALL BE IN ACCORDANCE WITH PART 6 OF THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
3. CONSTRUCTION SIGNS SHALL BE IN NEW OR LIKE-NEW CONDITION PER VAOT STANDARDS.
4. CONSTRUCTION SIGNS SHALL BE OF THE SIZES SHOWN ON THE PLAN WITH BLACK LEGENDS ON FLUORESCENT ORANGE BACKGROUNDS.
5. AS A MINIMUM, ROLL UP SIGN MATERIAL SHALL HAVE ASTM D 4956-01 TYPE VI FLUORESCENT ORANGE RETROREFLECTIVE SHEETING. ALL POST-MOUNTED SIGNS AND SOLID SUBSTRATE PORTABLE SIGNS SHALL HAVE ASTM D 4956-01 TYPE VII, TYPE VIII OR TYPE IX FLUORESCENT ORANGE RETROREFLECTIVE SHEETING.
6. ALL SIGN STANDS AND POST INSTALLATIONS SHALL BE NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM REPORT (NCHRP) 350 COMPLIANT.
7. PORTABLE CHANGEABLE MESSAGE SIGNS ARE TO BE USED AS DIRECTED BY THE RESIDENT ENGINEER.
8. PAYMENT FOR THE INSTALLATION, MAINTENANCE, AND REMOVAL OF ALL CONSTRUCTION SIGNS SHALL BE MADE UNDER ITEM 641.10 TRAFFIC CONTROL.



COLOR & MATERIALS PER VAOT STD. E-100

SIGN DETAILS

NOT TO SCALE

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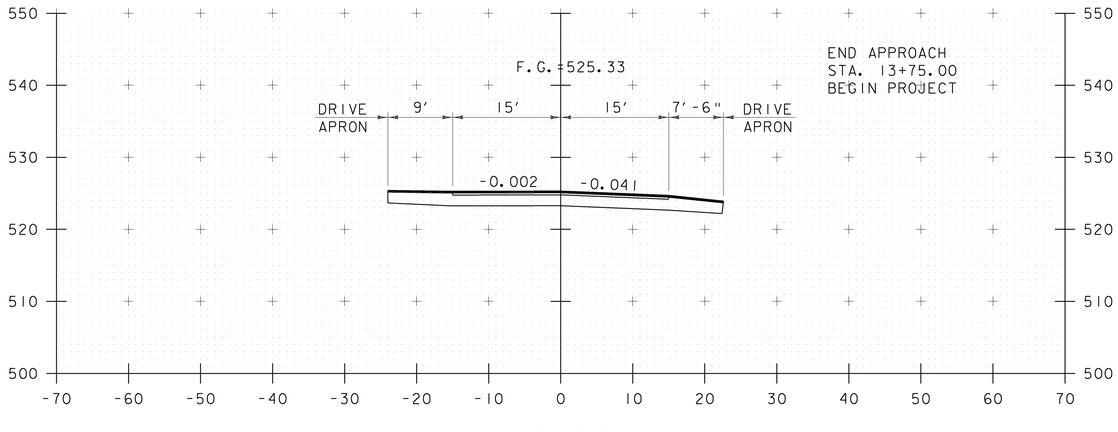
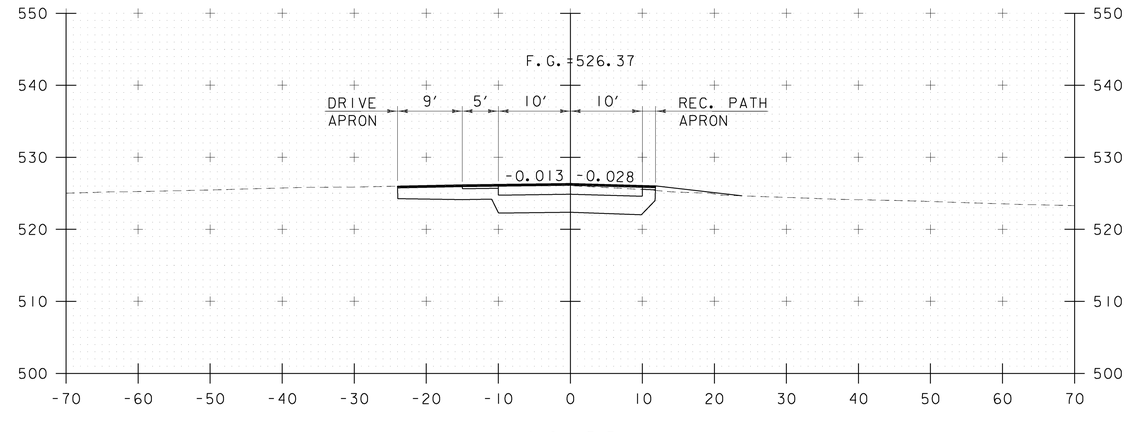
PROJECT NAME: MONTPELIER	
PROJECT NUMBER: BHF 6400(31)	
FILE NAME: $FILES$	PLOT DATE: 10/12/2009
PROJECT MANAGER: SUSAN SCRIBNER	DRAWN BY: D. D'AMATO
DESIGNED BY: D. D'AMATO	CHECKED BY: P. PERKINS
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD	SHEET 45 OF 63

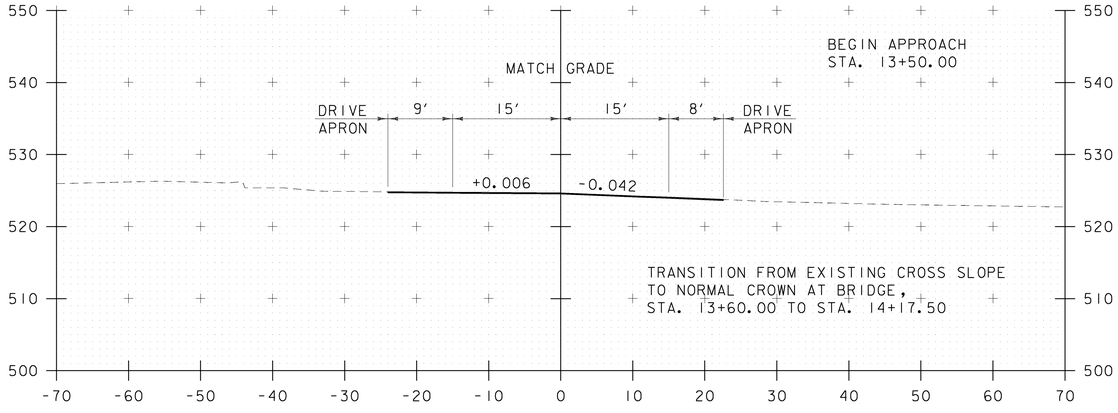
FILE NAME =h:\14506\mstr\plans\zsi4506.cas.dgn
DATE/TIME =10/12/2009
USER =2552



13+75



14+00



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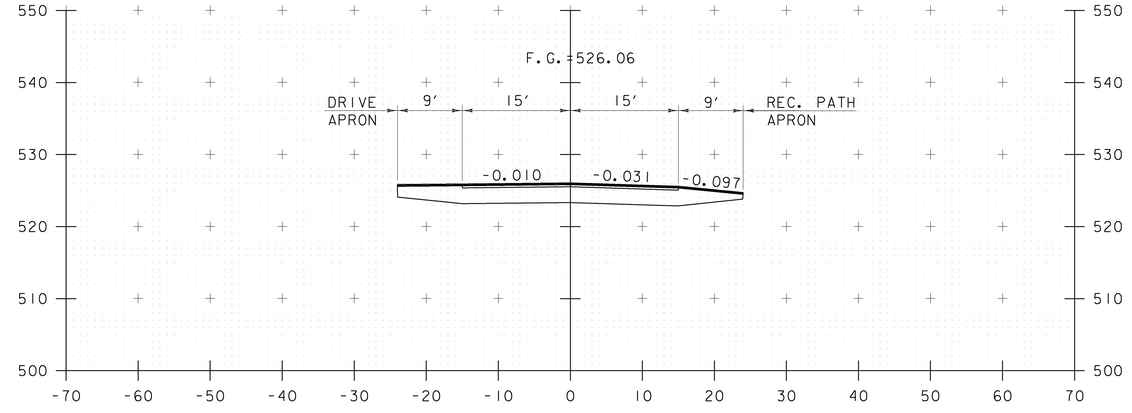

13+94

SCALE 1" = 10'
10 0 10

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CROSS SECTIONS (1)

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD

PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 46 OF 63

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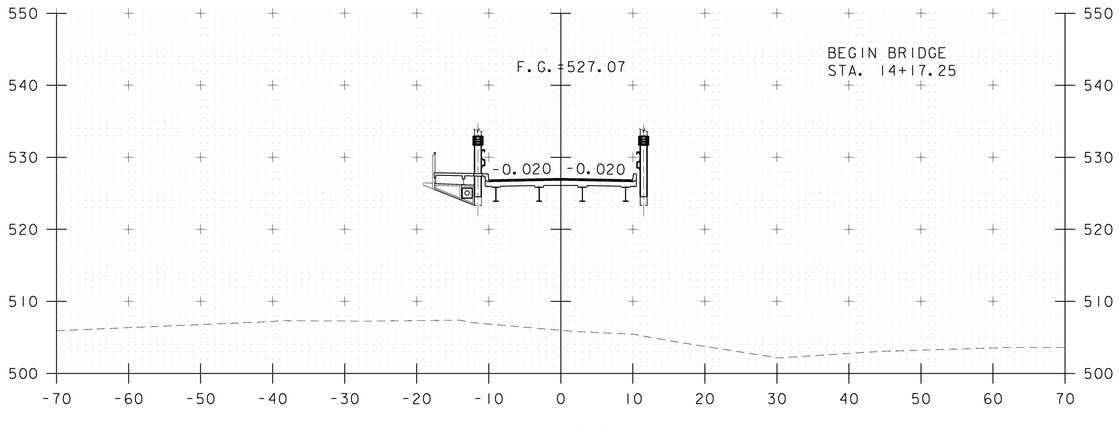
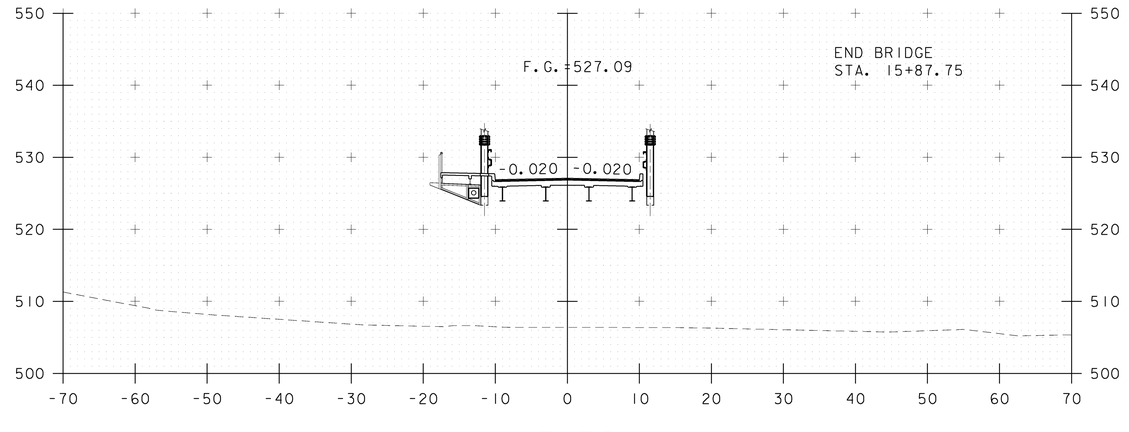
DATE/TIME =10/12/2009
USER =2552



14+50



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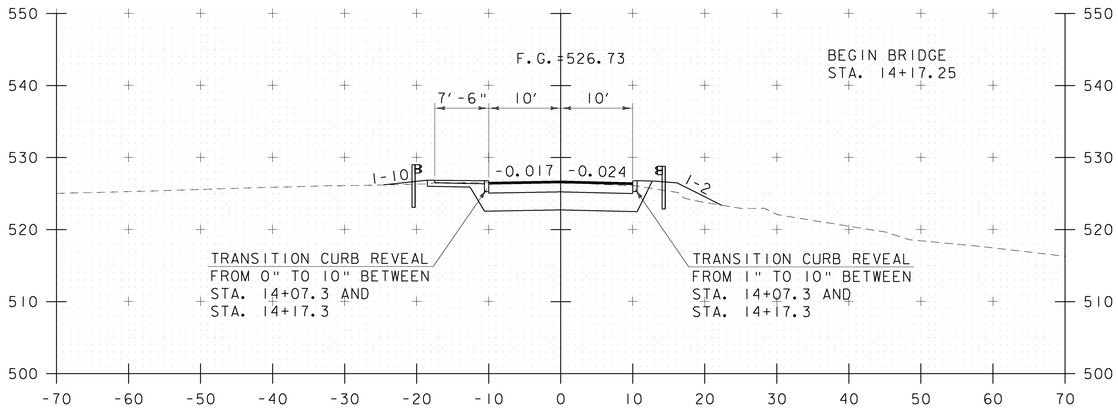
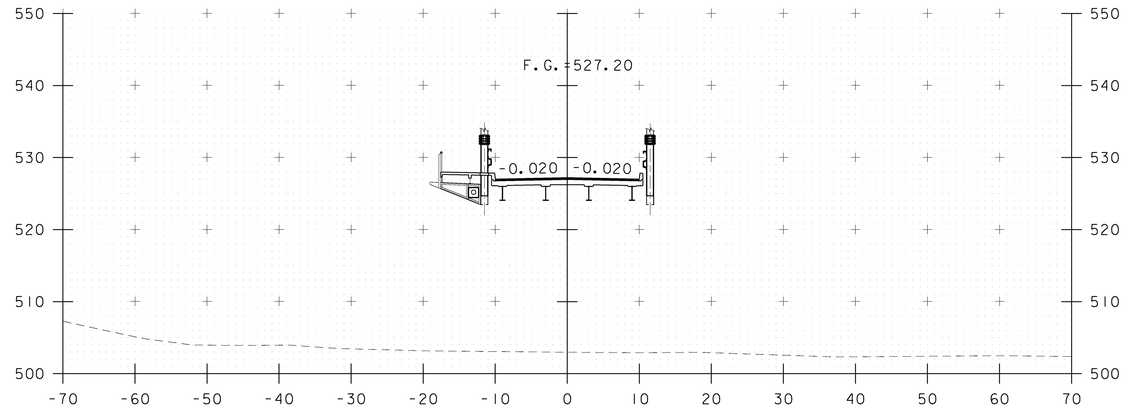


14+10



15+00

SCALE 1" = 10'
10 0 10

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CROSS SECTIONS (2)

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD

PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 47 OF 63

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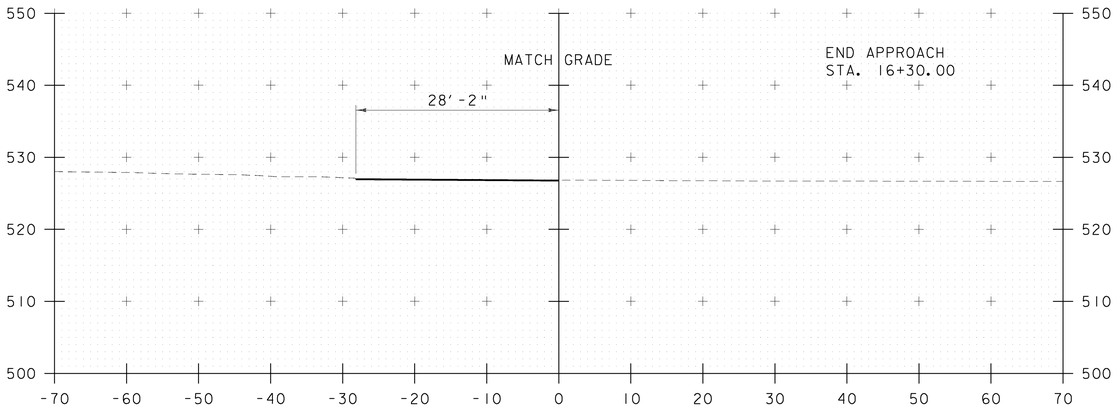
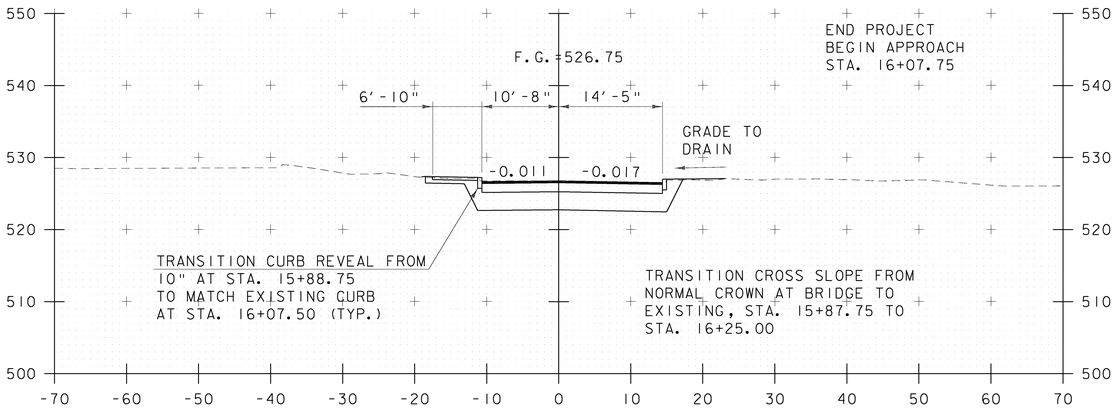


16+30



16+00

SCALE 1" = 10'
10 0 10

CLOUGH HARBOUR & ASSOCIATES LLP

CROSS SECTIONS (3)

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD

PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 48 OF 63

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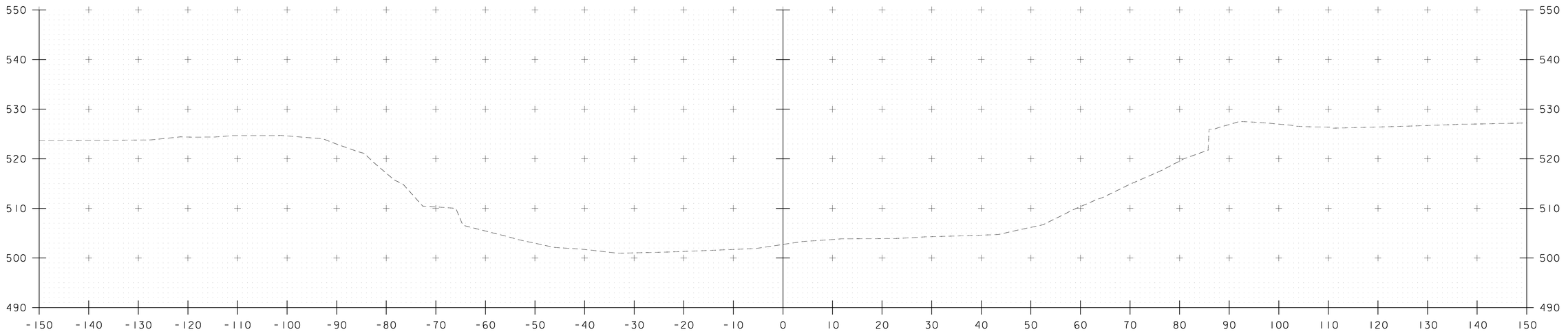
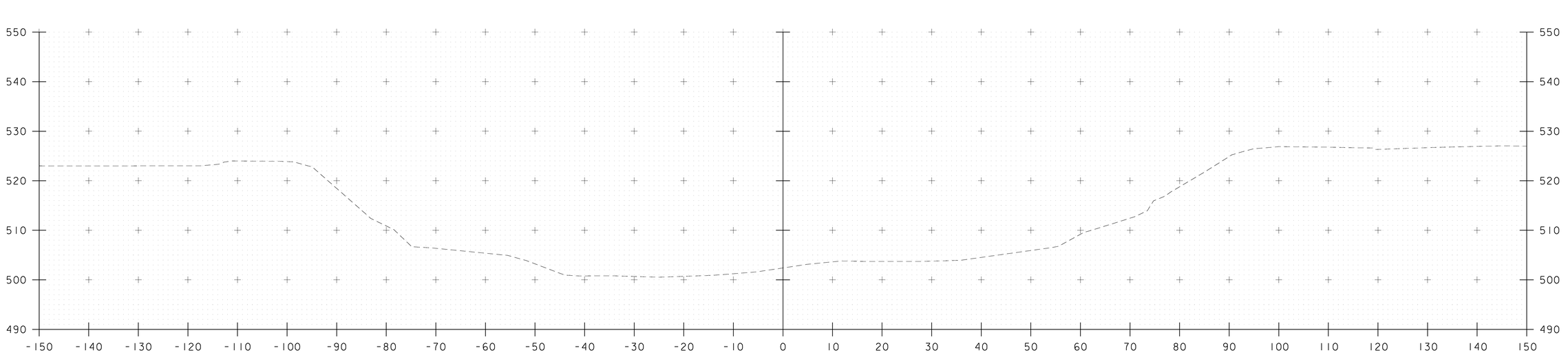
USER =2552



20+75



20+50

CHANNEL CROSS SECTIONS (1)

SCALE 1" = 10'
10 0 10

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PROJECT NAME: MONTPELIER	
PROJECT NUMBER: BHF 6400(31)	
FILE NAME: $FILES$	PLOT DATE: 10/12/2009
PROJECT MANAGER: SUSAN SCRIBNER	DRAWN BY: D. D'AMATO
DESIGNED BY: D. D'AMATO	CHECKED BY: P. PERKINS
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD	SHEET 49 OF 63

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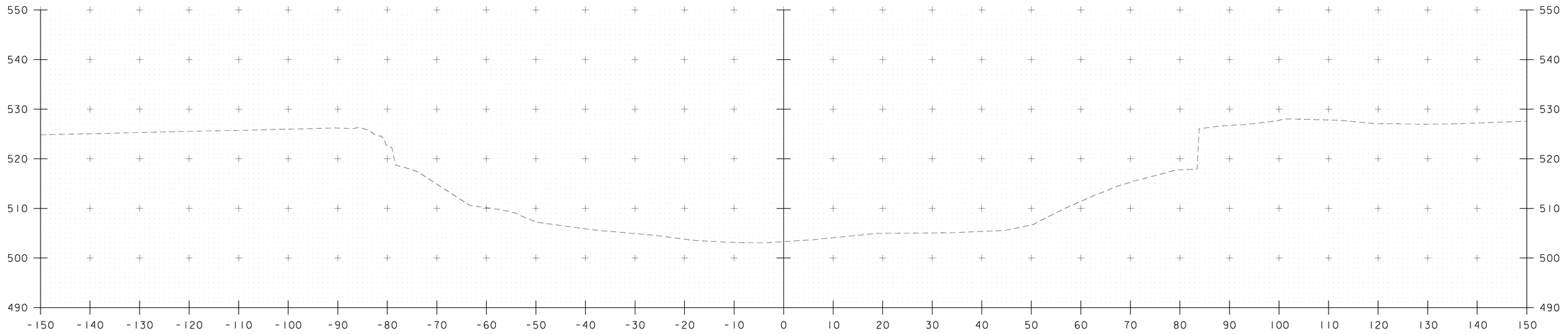
USER =2552



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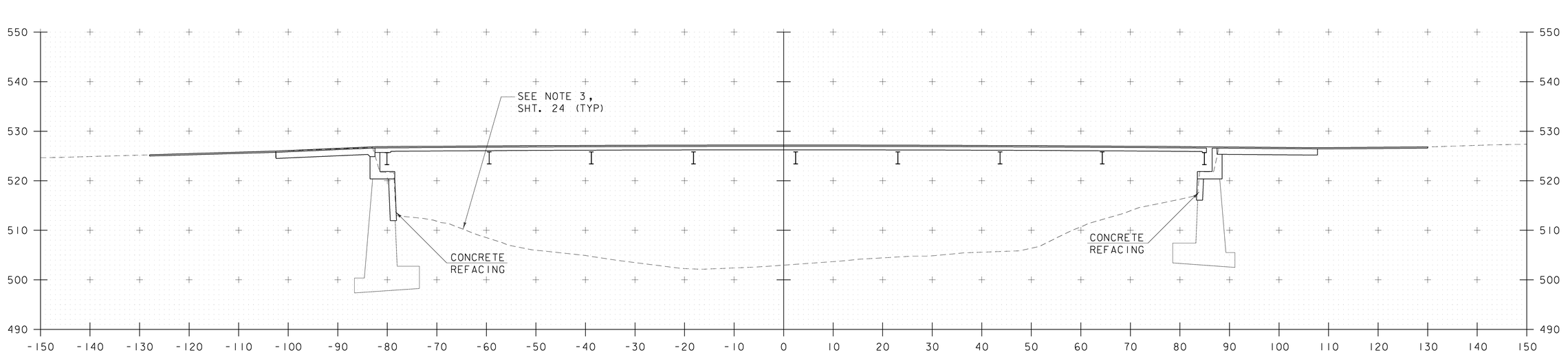

21+00

CHANNEL CROSS SECTIONS (2)

SCALE 1" = 10'
10 0 10

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PROJECT NAME:	MONTPELIER
PROJECT NUMBER:	BHF 6400(31)

FILE NAME: $FILES$	PLOT DATE: 10/12/2009
PROJECT MANAGER: SUSAN SCRIBNER	DRAWN BY: D. D'AMATO
DESIGNED BY: D. D'AMATO	CHECKED BY: P. PERKINS
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD	SHEET 50 OF 63

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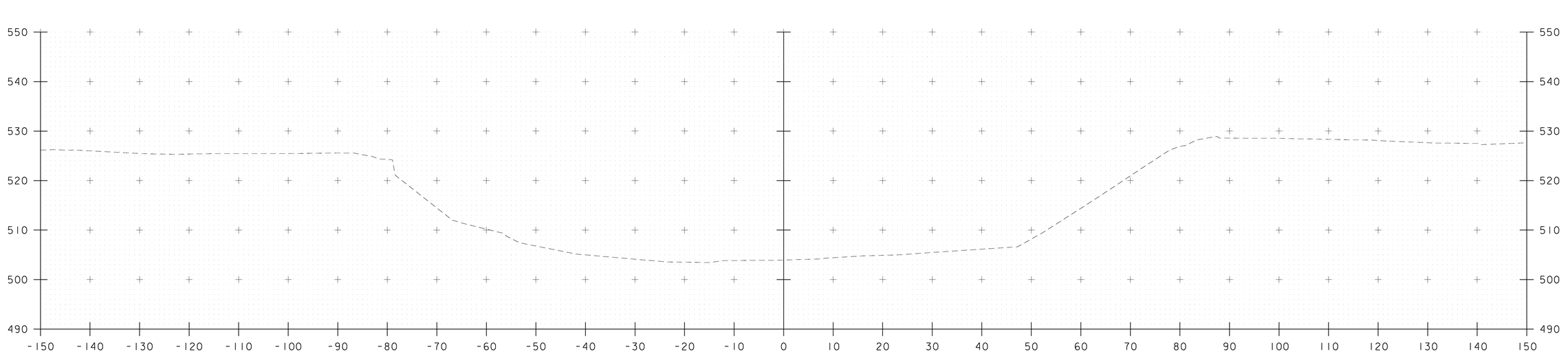
DATE/TIME = 10/12/2009
USER =2552



21+50

SCALE 1" = 10'
10 0 10

CHANNEL CROSS SECTIONS (3)

PROJECT NAME: MONTPELIER
PROJECT NUMBER: BHF 6400(31)

FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD

PLOT DATE: 10/12/2009
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 51 OF 63

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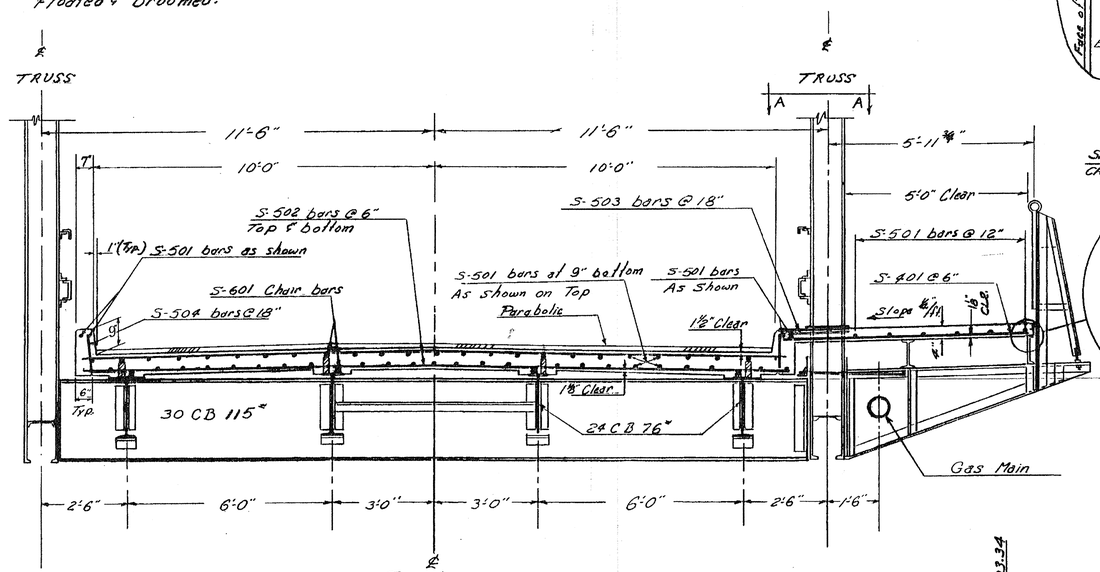
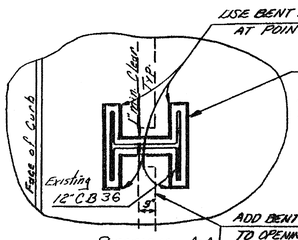
FILE NAME =h:\14506\vest\plans\zs14506_asc.dgn
DATE/TIME =10/12/2009
USER =2552

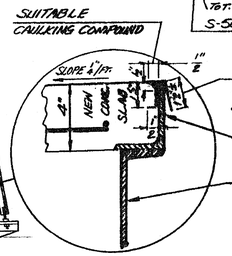
Bridge Floor & Walk to be Concrete CLASS AA 7½" Thick, dapped as shown at beam haunch. Surface to be Screeded, Floated & broomed.



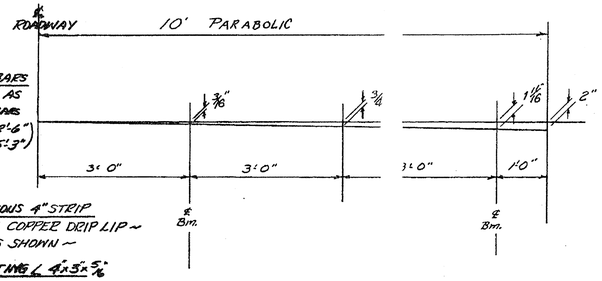
TYPICAL CROSS SECTION OF BRIDGE
SCALE ½" = 1'-0"



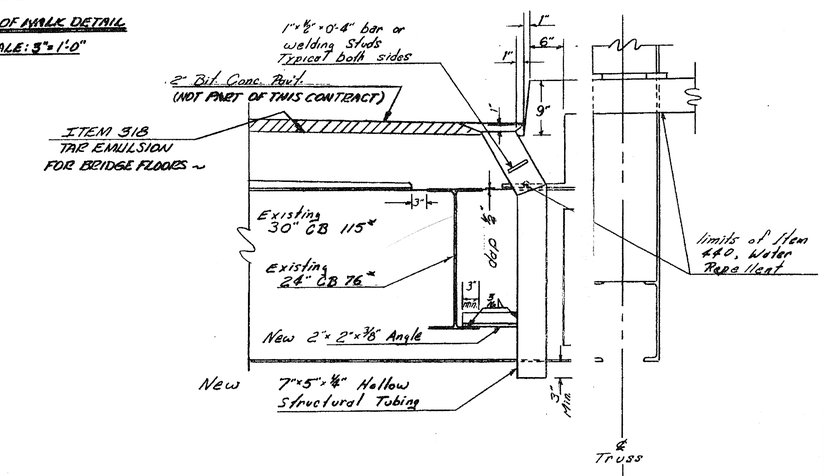
SECTION A-A
Scale: 1"=1'



EDGE OF WALK DETAIL
SCALE: 3"=1'-0"



Detail of Parabolic Crown of Slab
Scale: ¾" = 1'

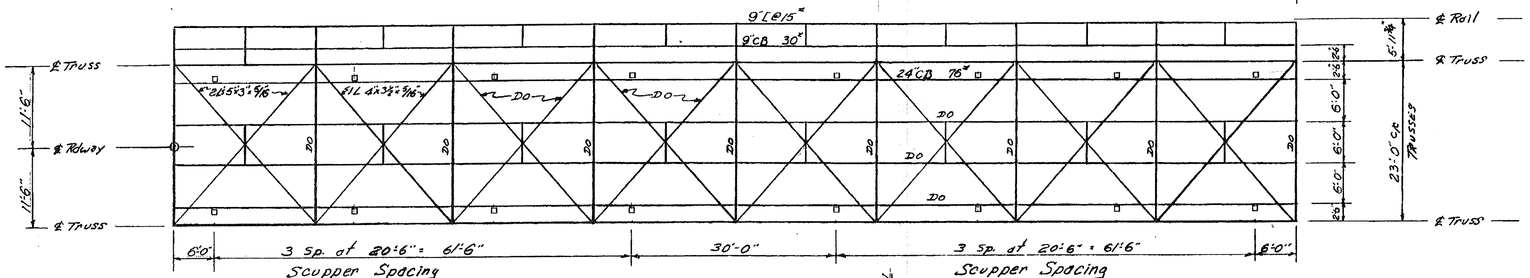


Scupper Details
For scupper details not shown see SCB-DB-1 Detail A
Scale 1"=1'

Sta 4+20 ℄ Bg. Concrete EL=103.34
Abut. 1 - FIXED

Sta 5+25 ℄ Bg. Concrete EL=103.34
Abut. 2 Exp

8 Panels at 20'-7⅛" = 165'-0" c/c Bearing



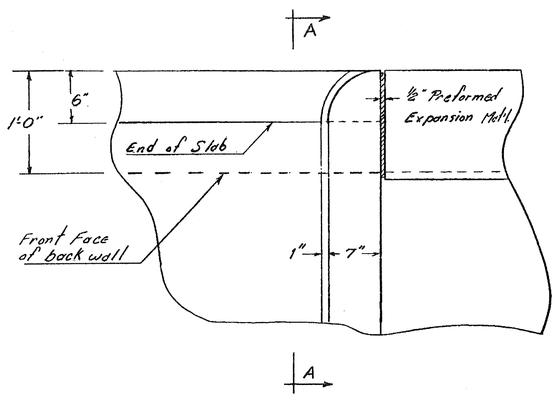
FLOOR PLAN
Scale: 1"=10'

FLOW

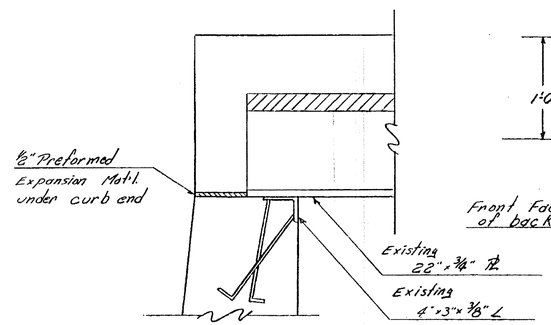
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF MONTPELIER
TYPICAL SECTION & SCUPPER DETAILS
TAYLOR STREET BRIDGE
OVER WINOOSKI RIVER
DATE As Shown
IN CHARGE R.H. Watson
DRAWN BY L. Mayo CHECKED BY D. Walker 3-67
PROJECT NO. SAB 6612
SHEET 3 OF 8

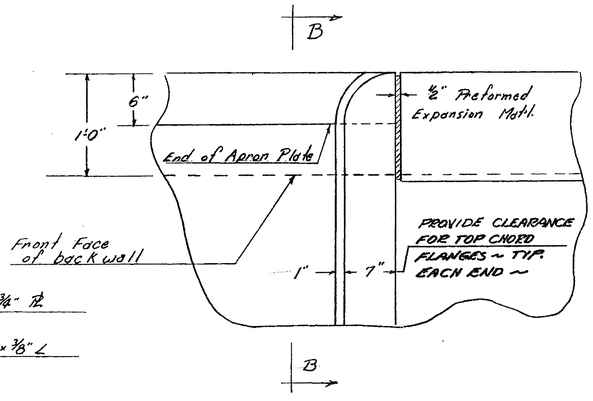
BR-R



Abutment No. 1 Curb Detail
Scale: 1½" = 1'



SECTION A-A
Scale: 1½" = 1'



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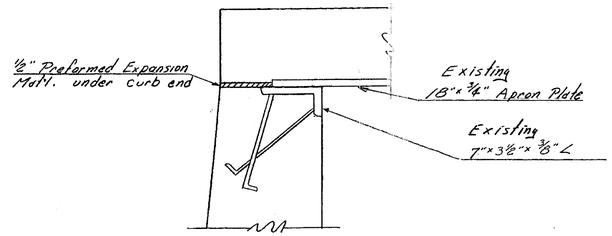
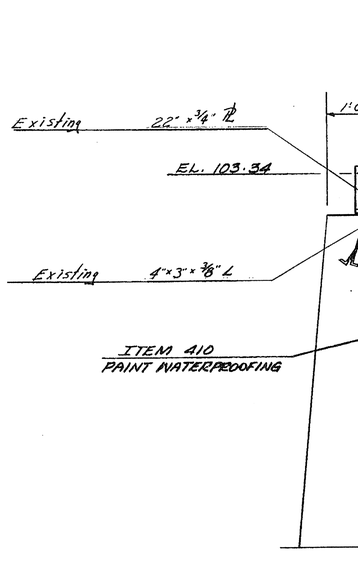
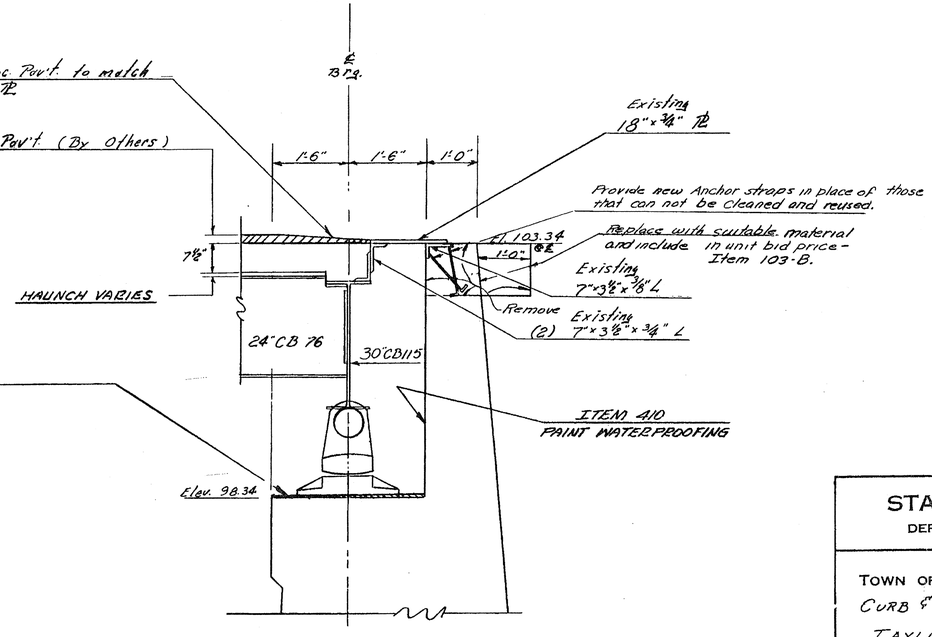


SECTION B-B
Scale: 1½" = 1'



ABUTMENT No. 1
FIXED
Scale: ¾" = 1'

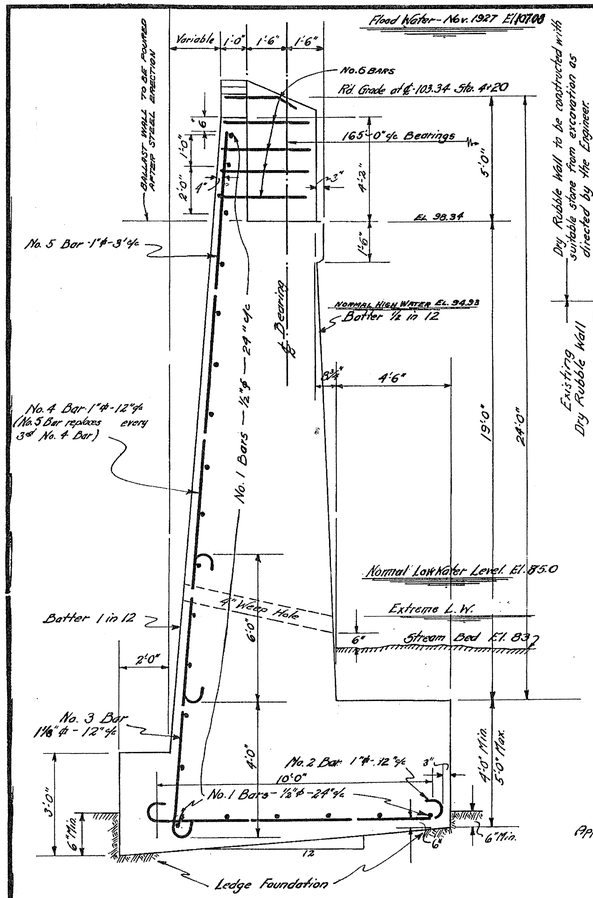


ABUTMENT #2
Expansion
Scale: ¾" = 1'

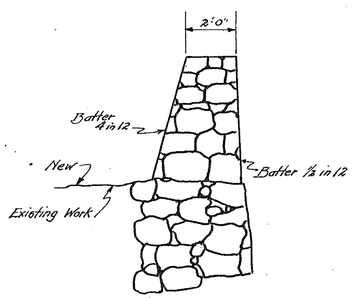
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF MONTPELIER
CURB & BEARING DETAILS
TAYLOR ST. BRIDGE
Over WINOOSKI River
SCALE AS Noted
IN CHARGE R.H. Watson
DRAWN BY D. Mayo CHECKED BY D.WALKER 3-67
PROJECT No. SAB 6612
SHEET 4 OF 8

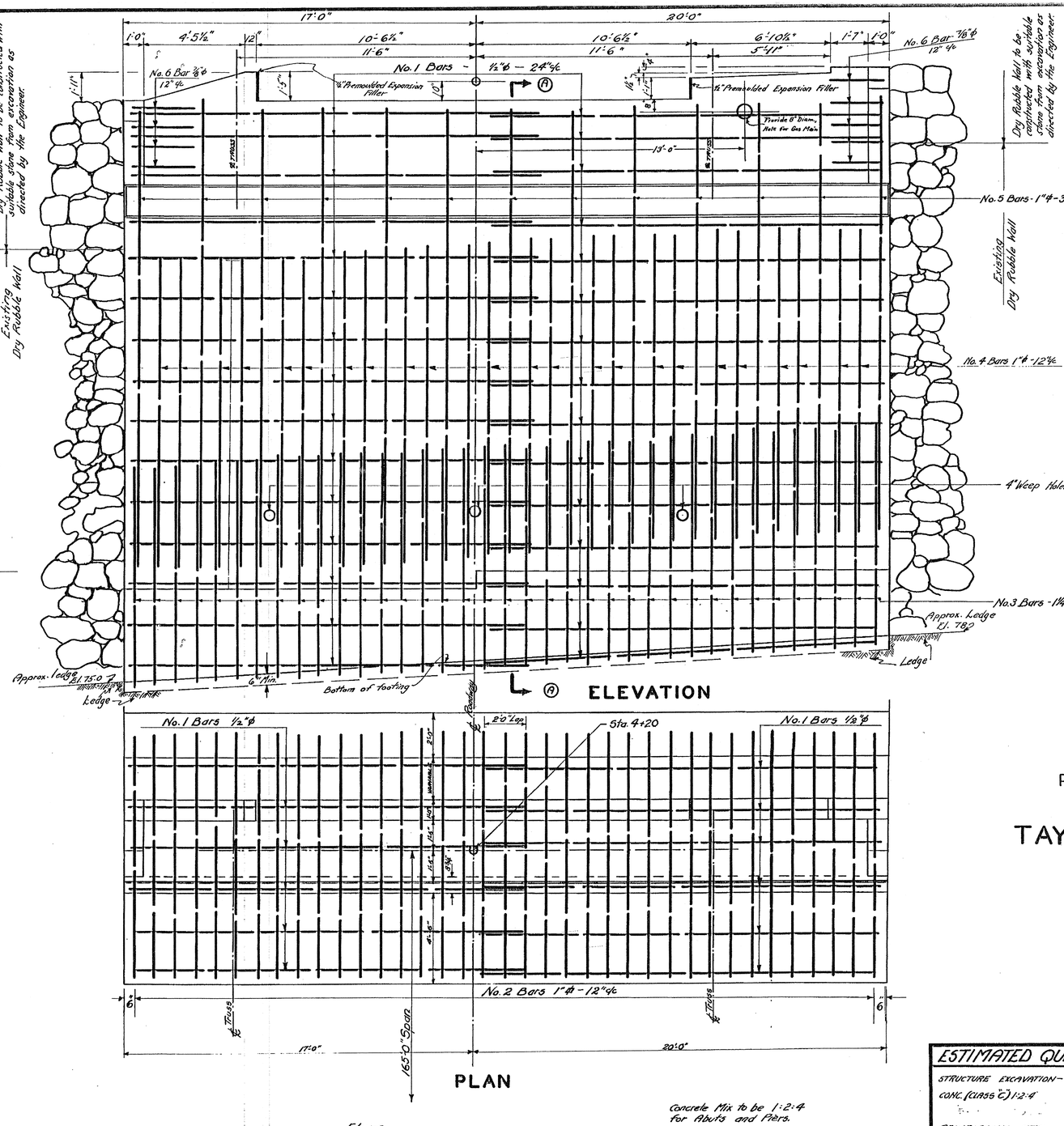
BR-8



SECTION A-A



DRY RUBBLE WALL



ELEVATION

PLAN

Concrete Mix to be 1:2:4 for Abuts and Piers.

Flow

PLAN OF ABUT. NO. 1
STA. 4+20

TAYLOR ST. BRIDGE

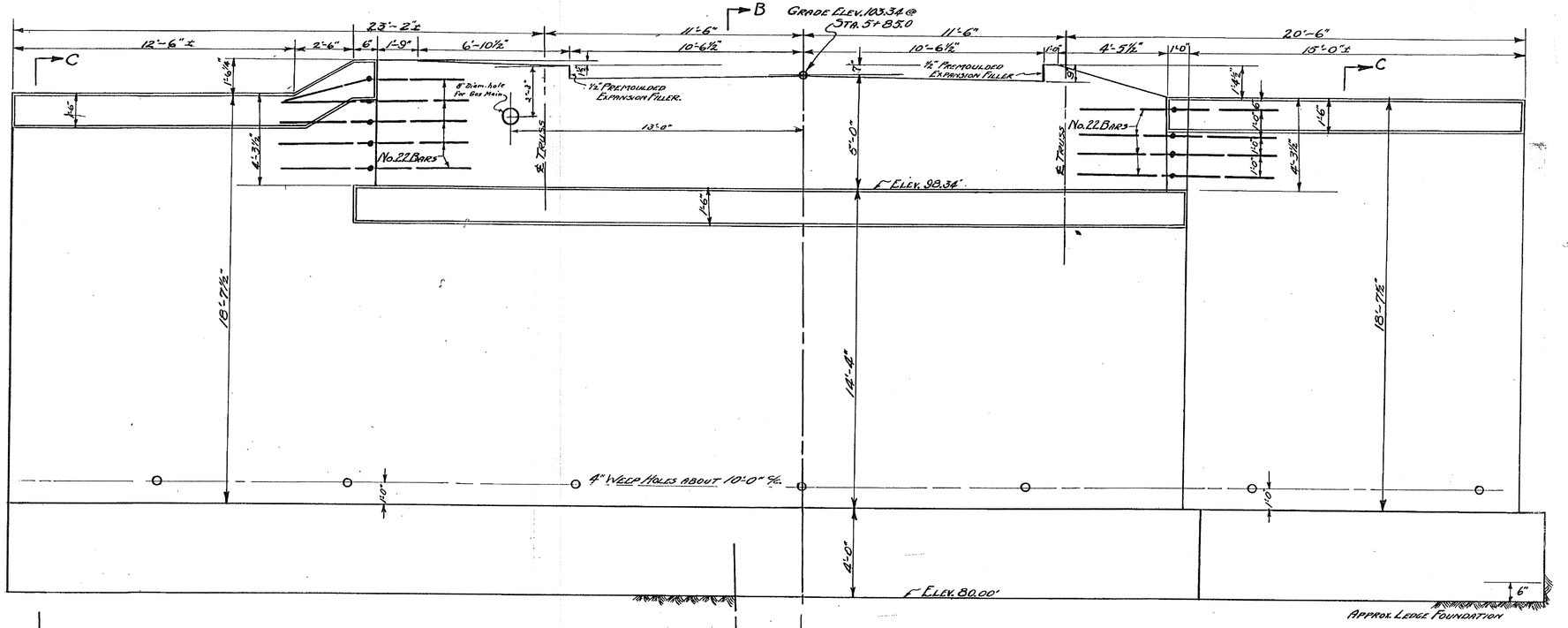
MONTPELIER, VT.

SCALE: 3/8" = 1'-0"

ESTIMATED QUANTITIES	
STRUCTURE EXCAVATION -	350 C.Y.
CONC. (CLASS C) 1:2:4	244 C.Y.
REINFORCING STEEL -	6383 #
DRY RUBBLE MASONRY	17 CU YDS

Surveyed by Walker
Designed by A.D.B.
Drawn by A.D.B.
Traced by A.G. 11/14/28
Checked by H.H. Hodgson 11/18/28
Series No. Filed
Sheet 2 of 5 Sheets

1929 DESIGN PLANS 1 OF 4
SHEET 54 OF 63



PLAN ABUT. No. 2
STA. 5+85.0
TAYLOR ST. BRIDGE
MONTPELIER, VT.

SCALE 3/16"=1'-0"

— ABUT. 2 —

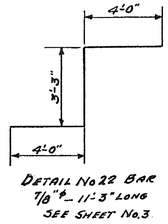
ESTIMATED QUANTITIES	
STRUCTURE EXCAVATION	560 CU. YDS.
CONC. CLASS C (1-2-4) —	314 CU. YDS.
REINFORCING STEEL	7842 LBS.

Surveyed by WALKER
Designed by A.D.B.
Drawn by A.D.B.
Traced by R.G.M.
Checked by H.P. Gadegaard 1/27/29
Series No. Filed
Sheet 3 of 8 Sheets

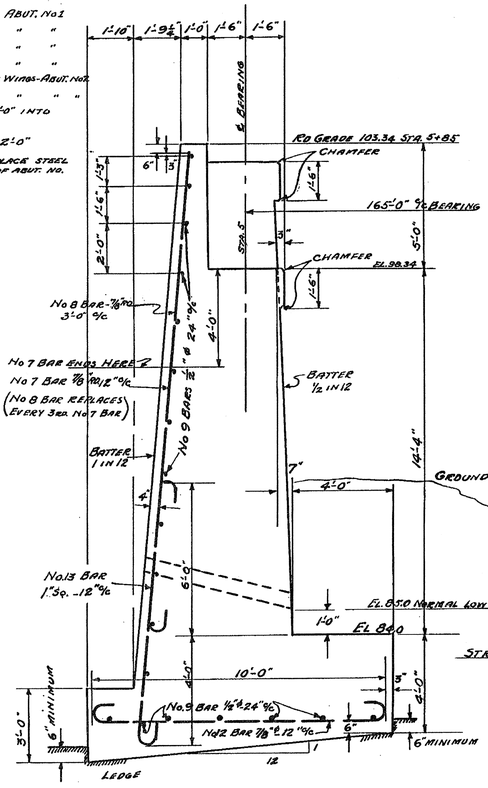
ABUT. No 2.

No. 7 BARS REPLACE No. 4 BARS ABUT. No 1
No. 8 " " No. 5 " " "
No. 9 " " No. 1 " " "
No. 22 " " No. 6 " " "
No. 10 " " No. 8 " ON WINGS-ABUT. No 2.
No. 11 " " No. 9 " " " "
CARRY No 11 BARS AT LEAST 4'-0" INTO MAIN ABUT.
HOP SPLICE No 1, 9 & 11 BARS - 2'-0"

THIS CHART IS GIVEN AS A GUIDE TO PLACE STEEL IN ABUT. No. 2 USING ELEVATION OF ABUT. No. 1 AS A GUIDE.



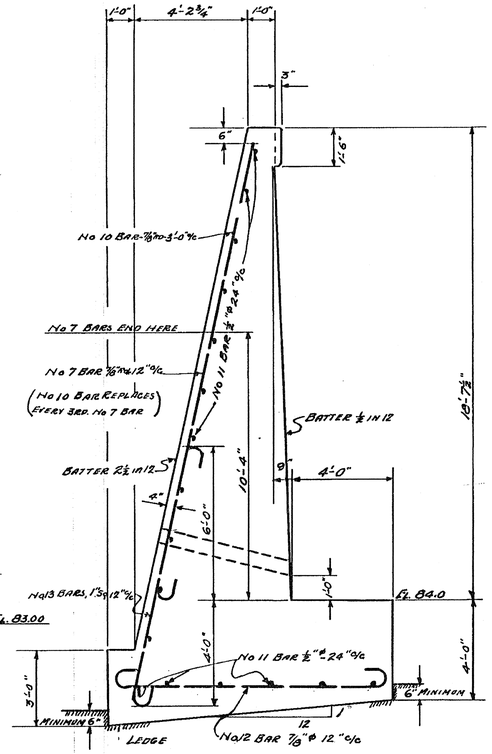
DETAIL No 22 BAR
7/8" ϕ - 11'-3" LONG
SEE SHEET No. 3



SECTION B-B

FOR ARRANGEMENT OF STEEL SEE SHEET No. 2

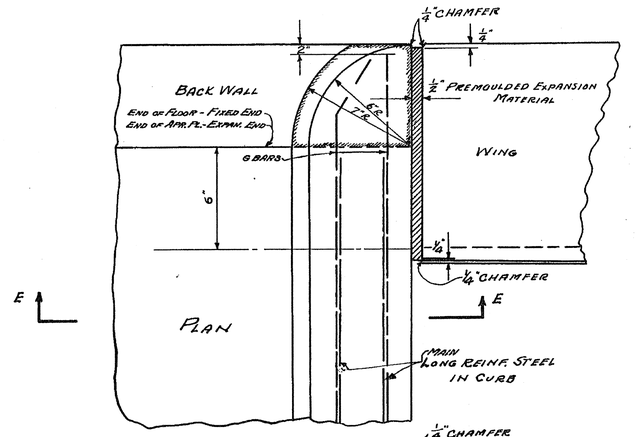
FOR SCORE MARKS AND CONSTRUCTION JOINTS SEE SHEET 5B No 2.

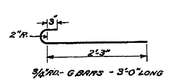


SECTION C-C

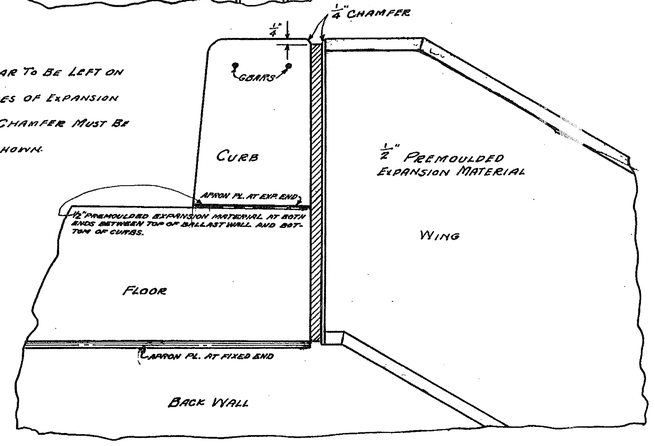
FOR ARRANGEMENT OF STEEL SEE SHEET No 2.

SCALE 3/16" = 1'-0"





NO MORTAR TO BE LEFT ON TOP OR EDGES OF EXPANSION MATERIAL. CHAMFER MUST BE MADE AS SHOWN.



SECTION E-E

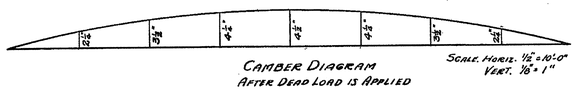
DETAIL OF CURB AND EXPANSION MATERIAL AT EDGE OF SLAB AND WING.

SCALE 3" = 1'-0"

FLOOR DETAILS & ABUTMENT DETAILS-ABUTMENT NO.2 TAYLOR ST. BRIDGE MONTPELIER-VT.

Surveyed by W
Designed by A.D.B.
Drawn by A.D.B.
Traced by A.W.B.
Checked by [illegible]
Series No. Filed
Sheet 4 of 8 Sheets

1929 DESIGN PLANS 3 OF 4
SHEET 56 OF 63



NOTES:

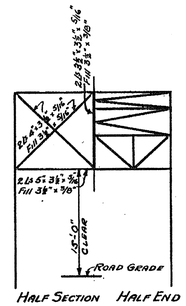
REFERANCES:
FOR THIS BRIDGE USE SHEET SB-1, STANDARD DETAILS, Nos. 52, 53, 55, 5[illegible] 59, 510, 512, 513, 514, 518, 521, 515 Modified.

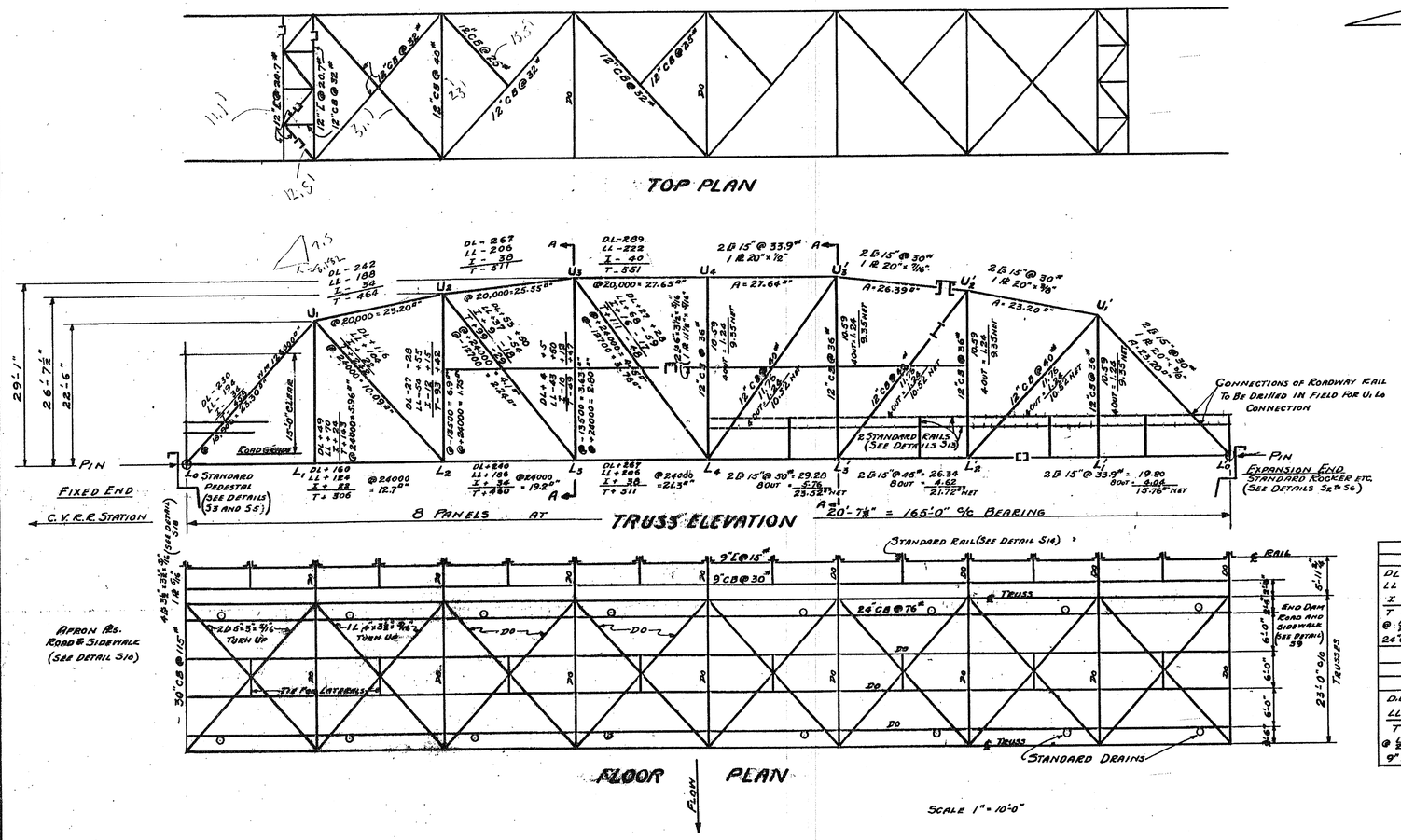
SPECIFICATIONS (DESIGN)
DESIGN AREA 1927 REVISED
DL-STRESSES 16000#, LL (DOUBLED) 24000#, I = $\frac{L}{1+125}$

FLOOR DESIGN FOR 2-15 TON TRUCKS 85% REAR
13'-0" c/c AXLES, 6' c/c WHEELS MEETING OR PASSING
SIDEWALK 86# PER SQ. FT. NO IMPACT

TRUSS DESIGN FOR 115 LOADING
CONCENTRATED LOAD {18000 FOR MOMENTS / 19200 FOR SHEAR
UNIFORM LOAD 480 LBS. PER FOOT OF LANE
PLUS 52#×5'×260' = MINIMUM LOAD FROM SIDEWALK PLUS
DEAD LOAD +25% IMPACT ALLOWANCE.

SPECIFICATIONS FOR FABRICATION AND ERECTION
VERMONT STANDARD ROAD AND BRIDGE SPECIFICATIONS 1926
RIVETS 7/8", EXCEPT 1" 7/8" EXCEPT AT L0 HERE 7/16"
BOTTOM CHORD [illegible]GES SHALL BE DETAILED
OUTSIDE OF GUSSET [illegible]TE AND AS CLOSE THERE TO AS PRACTICABLE.

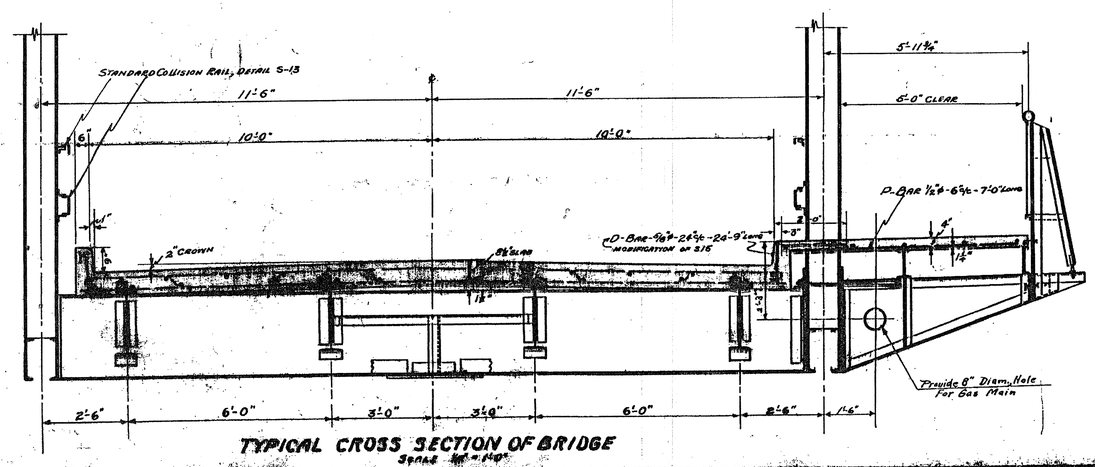




ROADWAY	
STRINGERS	FLOOR BEAMS
DL 39 ft#	DL 181 ft#
LL 238 ft#	LL 354 ft#
I 77 ft#	I 118 ft#
T 354 ft#	T 653 ft#
@ 18/22 = 178 in³	@ 18/20 = 327 in³
24"CB @ 76", S = 182.0 in³	30"CB @ 115#, S = 332.4 in³

SIDEWALK STRINGERS	
OUTSIDE	INSIDE
DL 7.1	DL 10.5
LL 14.4	LL 34.8
T 21.5	T 45.3
@ 18/24 = 10.75 in³	@ 18/20 = 22.65 in³
9" I @ 15#, S = 11.27 in³	9"CB 30#, S = 22.53 in³

STRESSES IN KIPS.



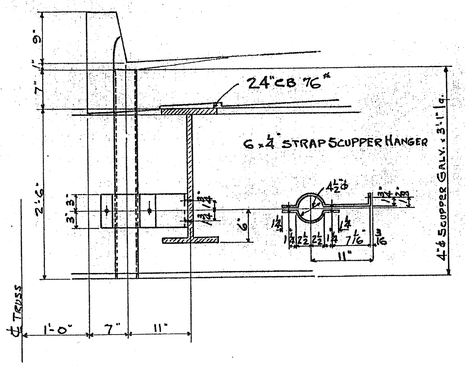
$\frac{170}{165} \times 277{,}000 \times \frac{24^2}{20^2} = 415{,}200$

STEEL SUPERSTRUCTURE
165'-0" c/c BEARINGS-20' ROADWAY
2 [illegible]-15
FOR
TAYLOR ST. BRIDGE
MONTPELIER - VT.

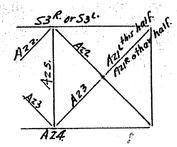
CORRECT:
A. D. Bishop
BRIDGE ENGINEER

ESTIMATED QUANTITIES	
STRUCTURAL STEEL	277,000 LBS.
REINFORCING STEEL	18620 LBS.
CONCRETE CLASS A	108 CU.YDS.

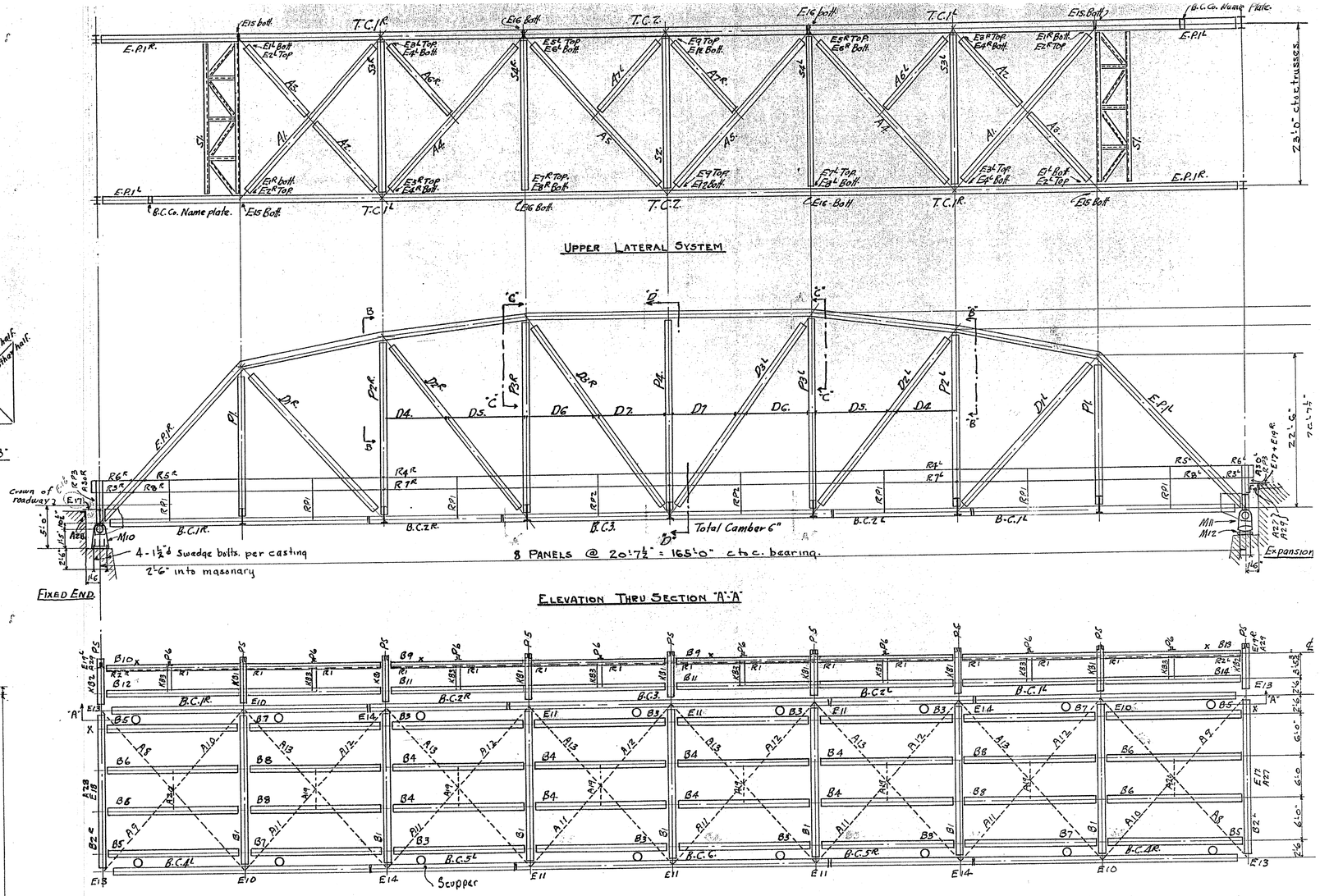
Surveyed by WALKER
Designed by BISHOP
Drawn by BISHOP
Traced by D.M.R.
Checked by
Series No. Filed

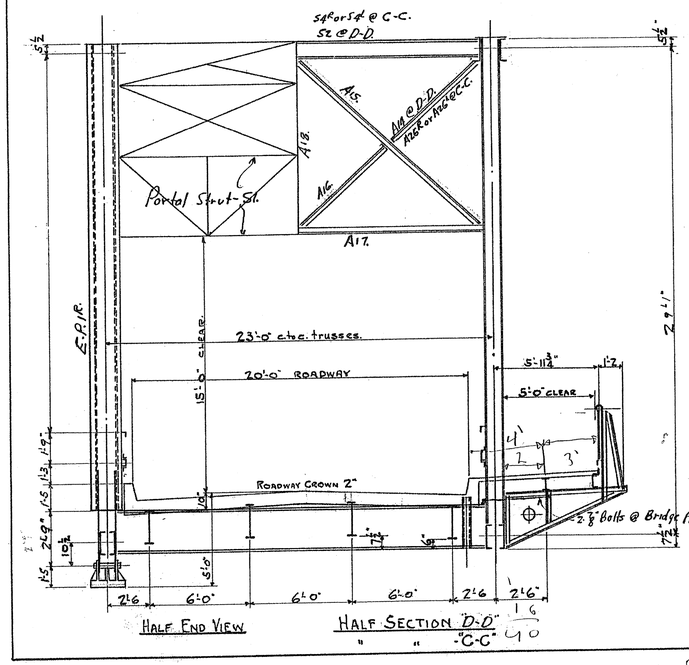


SCUPPER DETAIL 16-READ.
SCALE 1" = 1'-0"



HALF SEC. B-B

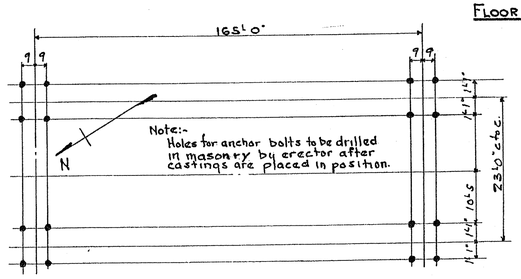




HALF END VIEW

HALF SECTION "D-D"
" " "C-C"

FLOOR AND LOWER LATERAL SYSTEM



ANCHOR BOLT LOCATION DIAGRAM.

ERECTION NOTES:-
Under each casting 3 layers of duck are required to be laid exactly per specifications attached. Duck to be furnished by erector not B.C. Co.
All beams marked thus-"X" must be erected with X in position shown or steelwork will not fit.

TAYLOR STREET BRIDGE
MONTPELIER VERMONT

RIVETS	THE BERLIN CONSTRUCTION CO
HOLES	
FIELD CONNECTIONS: Main Connections Riveted	DRAWN BY Porter DATE
Railing etc.- Bolted	CHECKED BY PATE
SHOP PAINT:- 1 Coat Red Lead & Oil as per specifications	SCALE ¾"-1" = 1'-0"
Field Paint- By others	CONTRACT No. 815
	SHEET NO. 1 OF 6

TO BE INSPECTED.

1. Revised 4/29/29 marks
2. " 5/4/29 per checking & approval.

LIST of MEMBERS.

2	Top Chords	T.C.1 R
2	"	T.C.1 L
2	"	T.C.2
1	Bott. Chord.	B.C.1 R
1	"	B.C.1 L
1	"	B.C.2 R
1	"	B.C.2 L
1	"	B.C.3
1	"	B.C.4 R
1	"	B.C.4 L
1	"	B.C.5 R
1	"	B.C.5 L
1	"	B.C.6
4	Posts	P.1
2	"	P.2 R
2	"	P.2 L
2	"	P.3 R
2	"	P.3 L
2	"	P.4
2	Diagonals	D.1 R
2	"	D.1 L
2	"	D.2 R
2	"	D.2 L
2	"	D.3 R
2	"	D.3 L
4	Braces	D.4
4	"	D.5
4	"	D.6
4	"	D.7

open holes in Bf only

Gussets GA5

Bott. web of F.36.

6⅝" Bored Hole Must be concentric and in perfect alignment.

11-⅞"Ø Holes-Not More

SECTION-B-B

Block 3½"

Blocks 33 to 41

4 Rivets @ 2⅝" = 10½" G38 bolt to ship

Ground of roadway.

6⅝" Diam. Bored Hole

Camber = 2½"

Camber = 4½"

Camber = 5½"

Camber = 6"

HALF TOP VIEW

HALF BOTTOM VIEW

HALF Top VIEW

HALF Bottom VIEW

SECTIONS A-A

Work THIS SHEET WITH SHEET No. 3.

TAYLOR ST. BRIDGE
MONTPELIER VERMONT

Rev. 5/6/29 checking & approval To BE INSPECTED

Rivets ⅞ ϕ Unless noted.
Holes 1⅛ ϕ " "
Field Connections.

Shop Paint 1 Coat Red Lead and Oil as per specifications.

THE BERLIN CONSTRUCTION COMP
DRAWN BY WERD DATE A
CHECKED BY BRM. (Field) DATE 5
SCALE 3/16" = 1'-0"
CONTRACT No. 8150
SHEET No. 2 of

30'-7 7/16" W. Pls.

7/16" Holes for attaching Name Plate on E. P. I.

1 bent R-7-7/8 x 8 1/2"-K46.

30 @ 6" = 180"

FACE

See Sheet No. 2
For Remainder of Truss.

Z-15"C. 33.9" x 30.5" abt } Face 1-and.
1-ZO x 7/8 R. x 27-7 1/4" abt }

Block Filling-K39

Drill in Field

Block-K44

Block Filling-K38

Drill in Field.

11-3 x 3 x 7/16 x Z 6 1/2"-K47
11-3 x 3 x 7/16 x 14 1/2"-K48

Z L-3 1/2 x 3 x 5/16 x 14 1/2"-K49
1 C-6"@8Z" x Z 13"-K50

11-K45.

Block Filling-K39

Drill in Field.

1 bent R-K46

K45

11@11.5" = 154.7"

22 facing bars-3 x 3/8 x Z 6 1/2"-C. to C. Vt.

Fieldena see letter from Gordon & Sutton Aug. 1, 1929

1-END POSTS-E.P.I.R.
1- " " -E.P.I.L

12"C.B-40# x Z 14.3"-S2.

12"CB@40# x Z 14.3 - S3.

12"@40# x Z 14.3"-S4

Note:- Stitch Rivets Not over 10" C. to C.

Note:- Stitch Rivets Not over No" C. to C.

1-STRUT-S2R.
2-BRACES-A14
1- " -A15
1- " -A16
1- " -A17
1- " -A18

1-STRUT-S3R.
1- " -S3L
2-BRACES-A21R
2- " -A21L
4-BRACES-A22
4- " -A23
2-BRACES-A25
2- " -A25L

1-STRUT-S4R.
1- " -S4L
2-BRACES-A26R
2- " -A26L

TAYLOR STREET BRIDGE - MONTPELIER VERMONT.

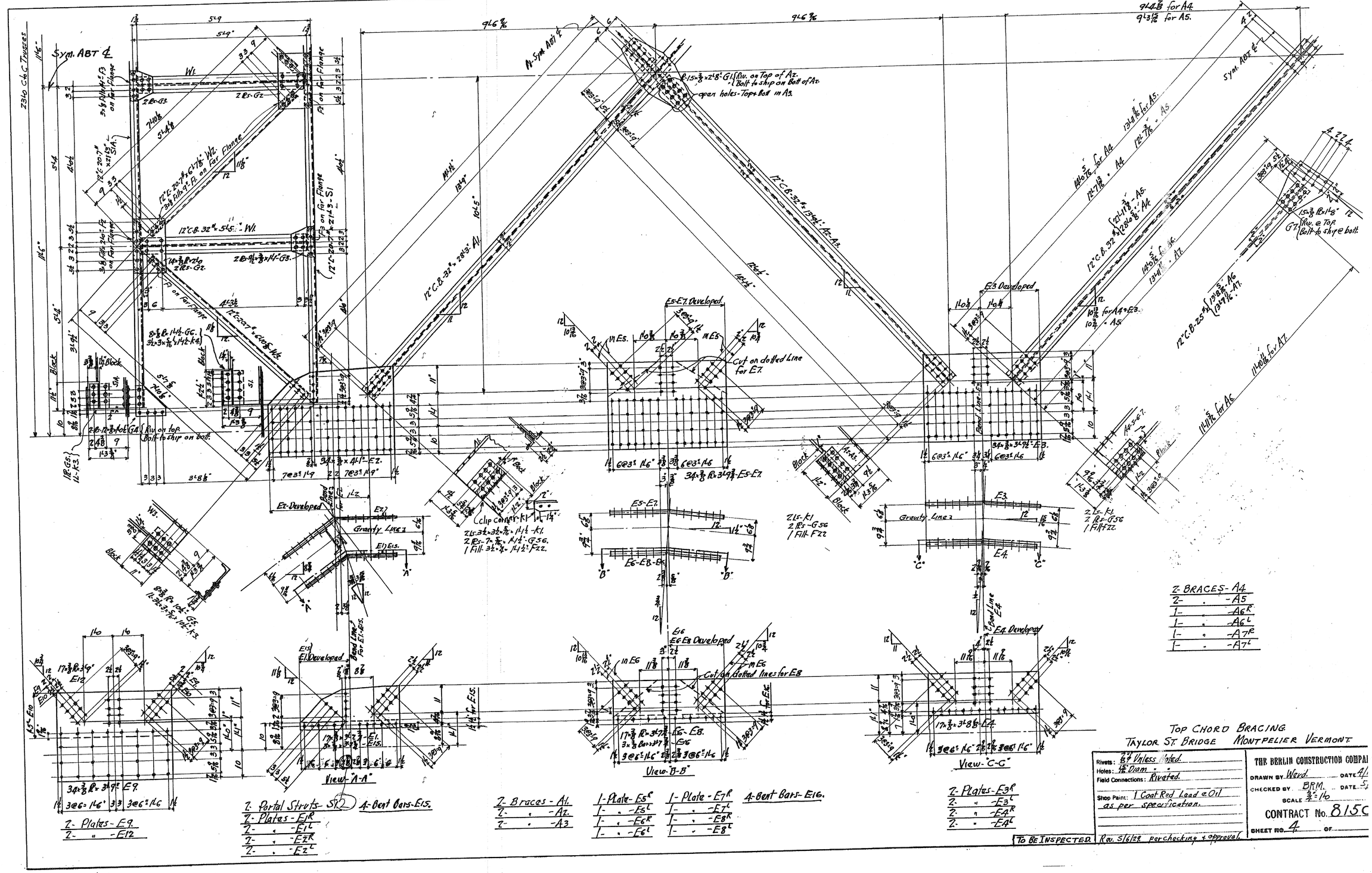
WORK THIS SHEET WITH SHEET No. 2.

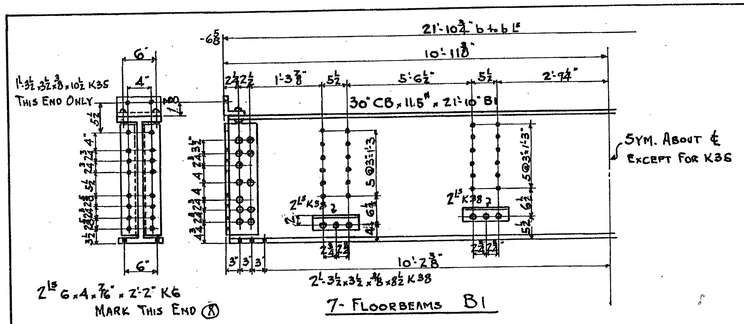
TO BE INSPECTED

Rivets: 7/8 Unless Noted.
Holes: 1/16 Diam.
Field Connections:
Shop Paint: - 1 Coat Red Lead & Oil per specifications.

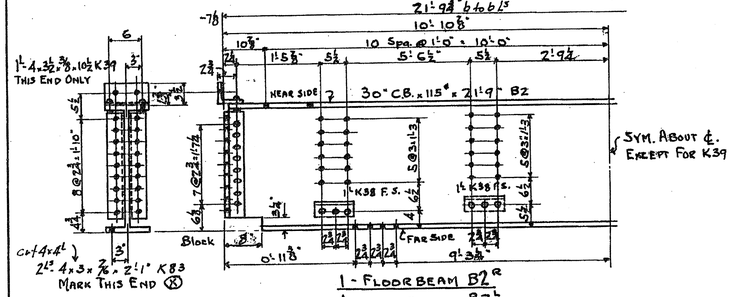
Revised - 5/16/29 checking & approval

THE BERLIN CONSTRUCTION CO.
DRAWN BY Ward DAT
CHECKED BY P.R.M. DAT
SCALE - 3/4" = 1'-0
CONTRACT No. 81
SHEET NO. 3 OF

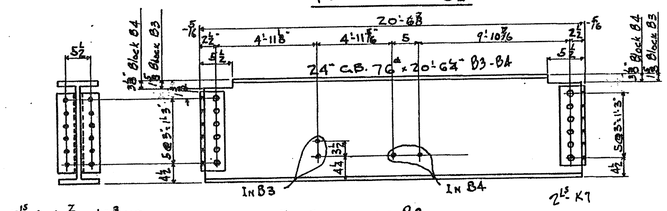

Z Braces - A1.
2- " -A2.
2- " -A3
1-Plate - E5R
1- " -E5L
1- " -E6R
1- " -E6L
1-Plate - E7R
1- " -E7L
1- " -E8R
1- " -E8L
4-Bent Bars-E16.
2-Plates-E3R
2- " -E3L
2- " -E4R
2- " -E4L
2-Plates-E9
2- " -E12
2-Portal Struts-ST2
2-Plates-E1R
2- " -E1L
2- " -E2R
2- " -E2L
4-Bent Bars-E15.
Z BRACES- A4
2- " -A5
1- " -A6R
1- " -A6L
1- " -A7R
1- " -A7L
TOP CHORD BRACING
TAYLOR ST. BRIDGE MONTPELIER VERMONT
Rivets: 7/8" Unless Noted.
Holes: 15/16" Diam.
Field Connections: Riveted.
Shop Paint: 1 Coat Red Lead in Oil as per specification.
THE BERLIN CONSTRUCTION COMPANY
DRAWN BY Ward. DATE 4/
CHECKED BY BRM. DATE 5/
SCALE 3/4"=1'0
CONTRACT No. 815C
SHEET NO. 4 OF
TO BE INSPECTED
Rev. 5/6/29 per checking + approval.



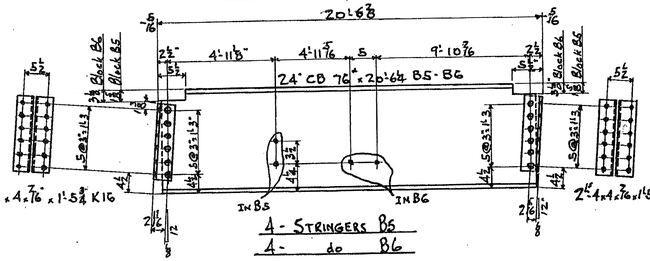
7- FLOORBEAMS B1



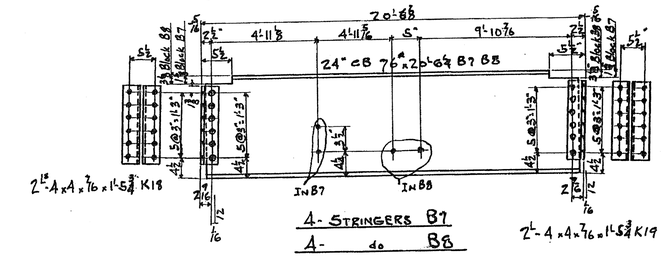
1- FLOORBEAM B2 R
1- " B2 L



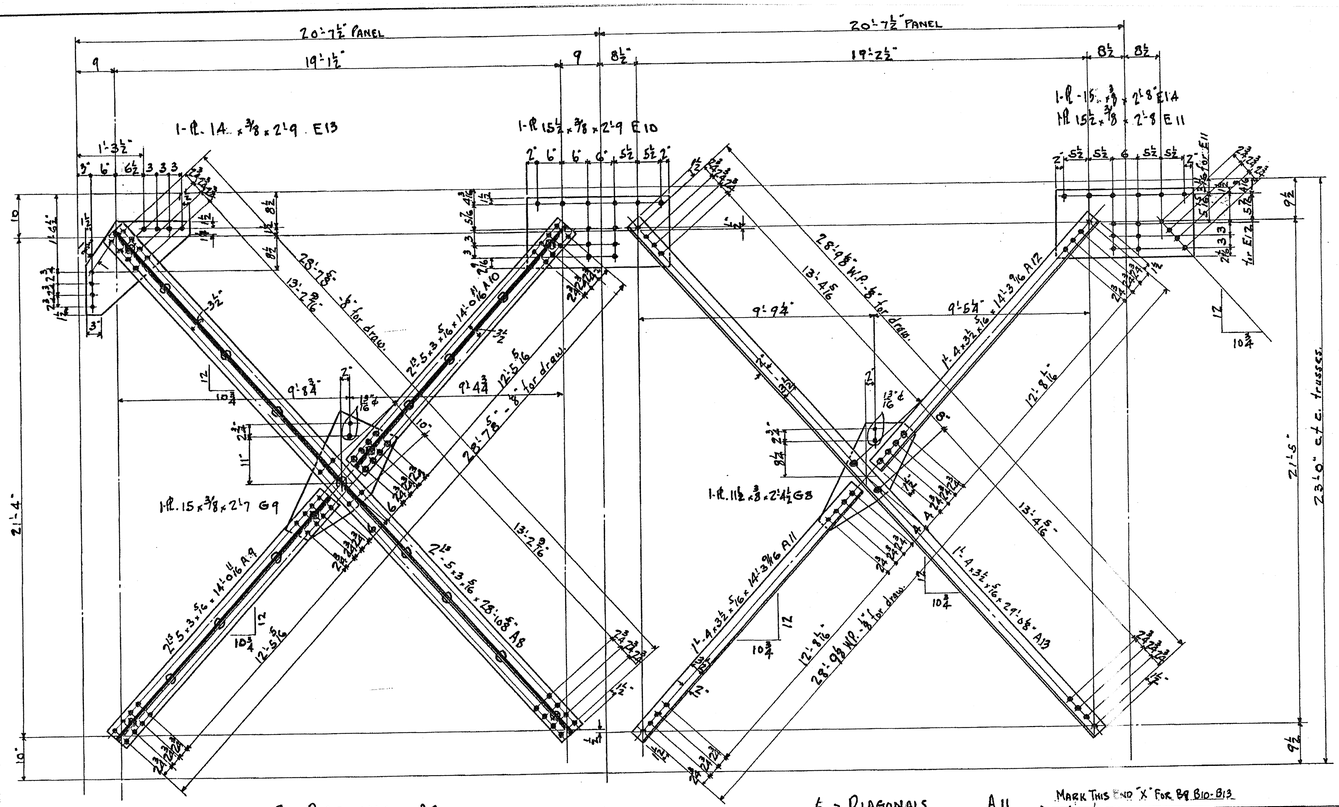
8- STRINGERS B3
8- do B4



4- STRINGERS B5
4- do B6



4- STRINGERS B7
4- do B8



2 - DIAGONALS	A8
2 - "	A9
2 - "	A10
4 - PLATES	E13

6 - DIAGONALS	A11
6 - "	A12
6 - "	A13
4 - PLATES	E10
6 - "	E11
4 - "	E14

7 BRACKETS KB1 ⅞" d Riv
2 do KB2 13/16" Holes unless Noted

REMAINDER SAME AS KB1

Material For One Bracket KB2

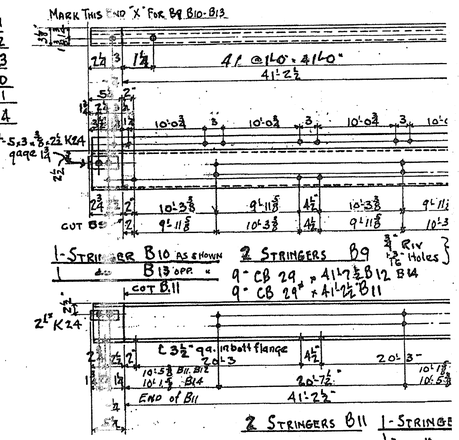
1-PL	3½ x ⅜	x 6'-9½"	KB2
1-L	K8		
1-L	K9		
1-L	5½ x 3½ x ⅜		
1 L	do		
2L	K12 fitted		
2L	4 x 3½ x ⅜	x 2'-4	K44
1 L	K14 fitted.		
1 L	K15		
2 Fills	F11		

6'-1⅜" abt K42
5'-2¾ abt K43

Material For One Bracket KB1

1-PL	34½ x ⅜	x 6'-10"	KB1
1 L	3½ x 3½ x 5/16	x 6'-7⅞	K8
1 L	do	x 5'-5¾	K9
1 L	do	x 6'-10½ abt	K10
1 L	do	x 5'-2½ abt	K11
2L	do	x 1'-11⅜ fitted	K12
2L	4 x 4 x ⅜	x 2'-6⅜	K15
1 L	2½ x 2½ x ¼	x 9" fitted	K14
1 L	3½ x 3½ x 5/16	x 7½	K15
2 Fills	3½ x 5/16	x 1'-4½	F11

TO BE INSPECTED

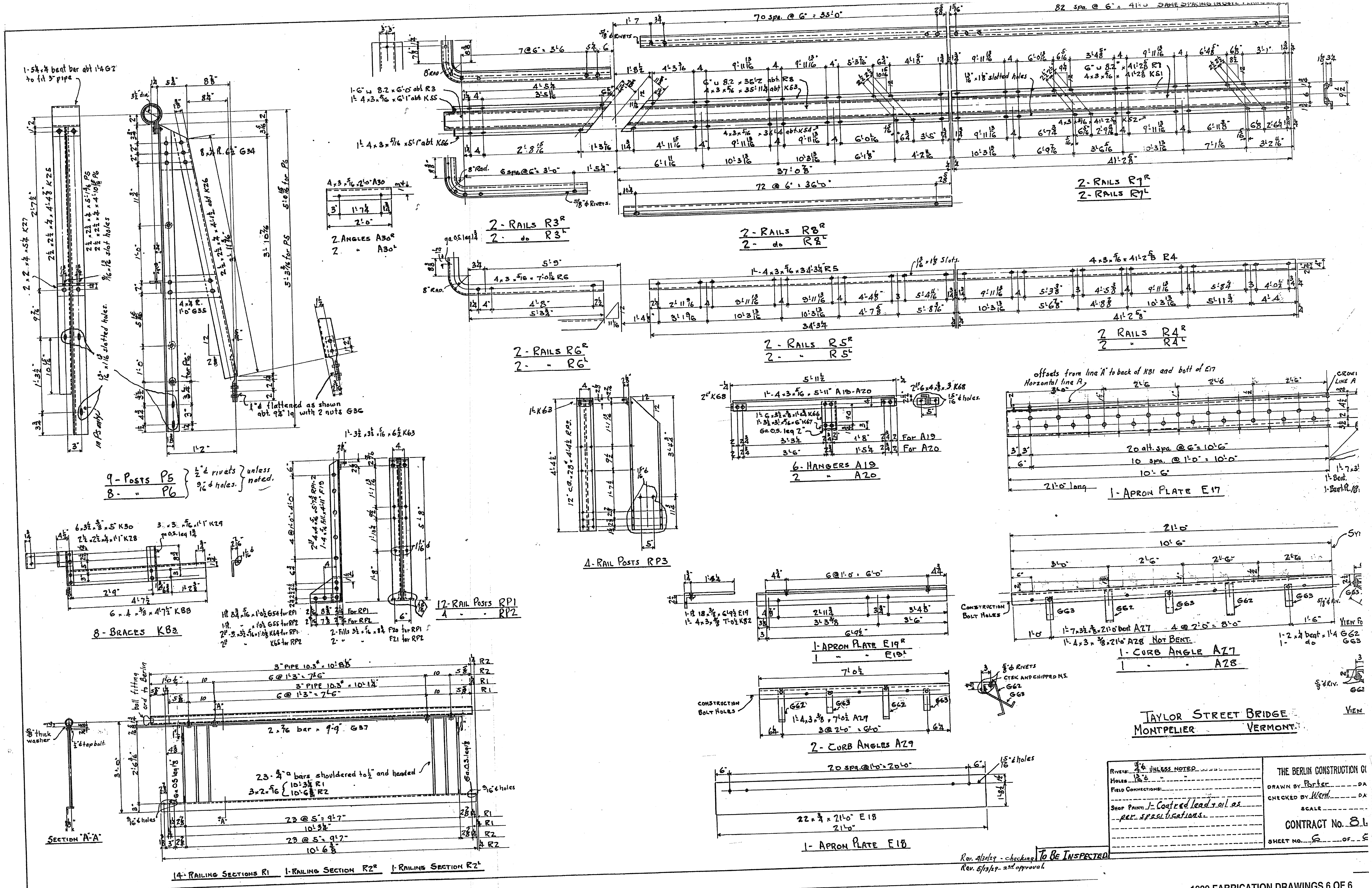


1-9" u 15# x 41'-2⅝
1-4 x 3 x 7/16 x 41'-2½
1-9" u 15# x 41'-0"
1-4 x 3 x 7/16 x 41'-0"

TAYLOR STREET BRIDGE
MONTPELIER VERMONT

Rivets: ⅞" d unless noted
Holes: 15/16" "
Field Connections:
Shop Paint: 1-Coat red lead & oil as per specifications.
Rev. 5/6/29 for checking & approval

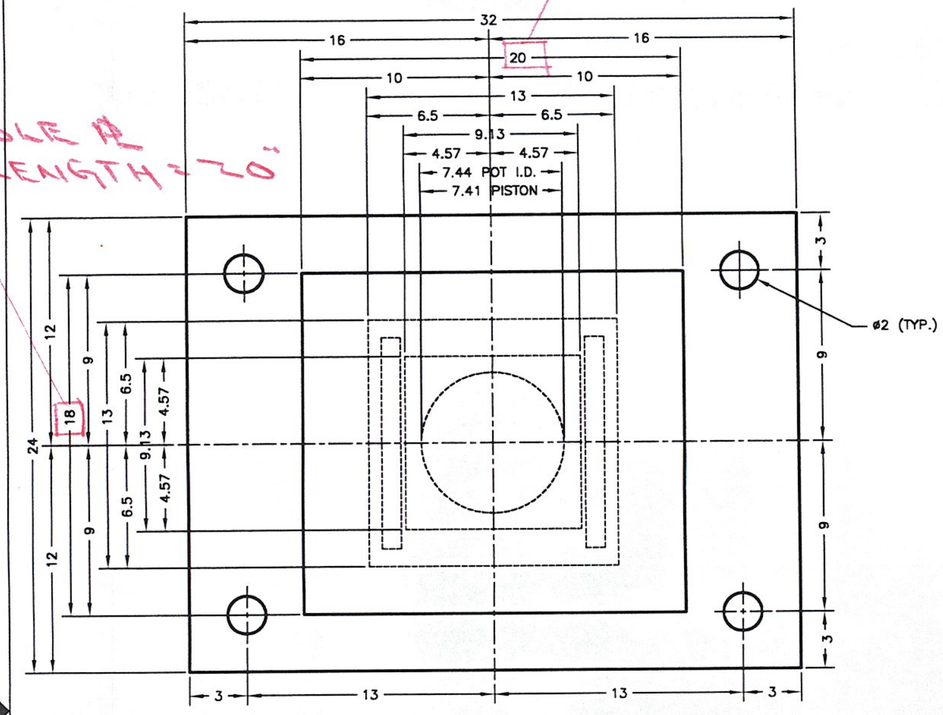
THE BERLIN CONSTRUCTION CO
DRAWN BY PORTER DATE
CHECKED BY Werd DATE
SCALE
CONTRACT No. 815
SHEET No. 5 OF 6



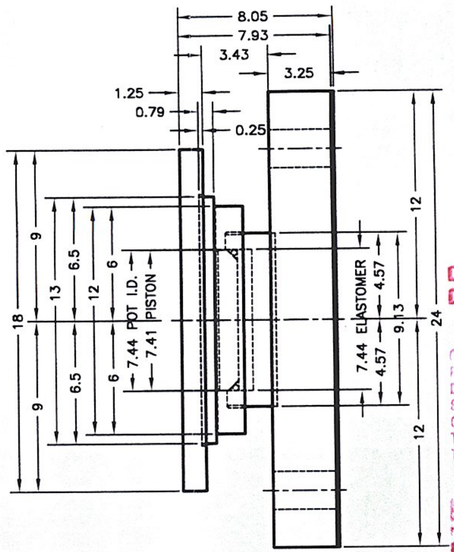
1929 FABRICATION DRAWINGS 6 OF 6

SOLE PL WIDTH = 18"

SOLE PL LENGTH = 20"

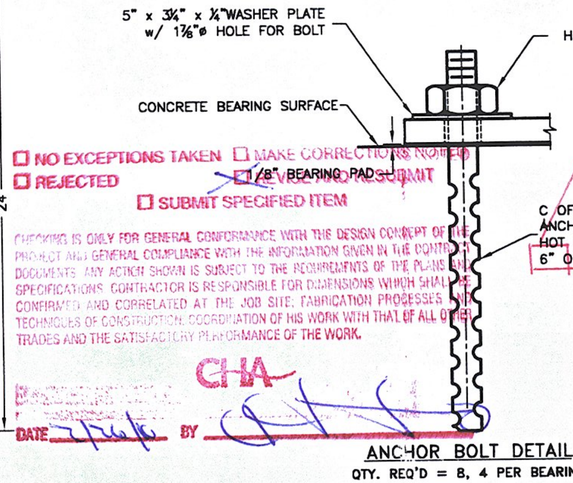


PLAN VIEW



SIDE VIEW

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



PROVIDE EMB. LENGTH + PROJECTION TO ENSURE ADEQUATE GRIP.

NO EXCEPTIONS TAKEN ☐ MAKE CORRECTIONS NOTED
☐ REJECTED ☐ REVISE AND RESUBMIT
☐ SUBMIT SPECIFIED ITEM

CHECKING IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE; FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES AND THE SATISFACTORY PERFORMANCE OF THE WORK.

CHA

DATE 2/1/10 BY

ANCHOR BOLT DETAIL
QTY. REQ'D = 8, 4 PER BEARING

RECEIVED

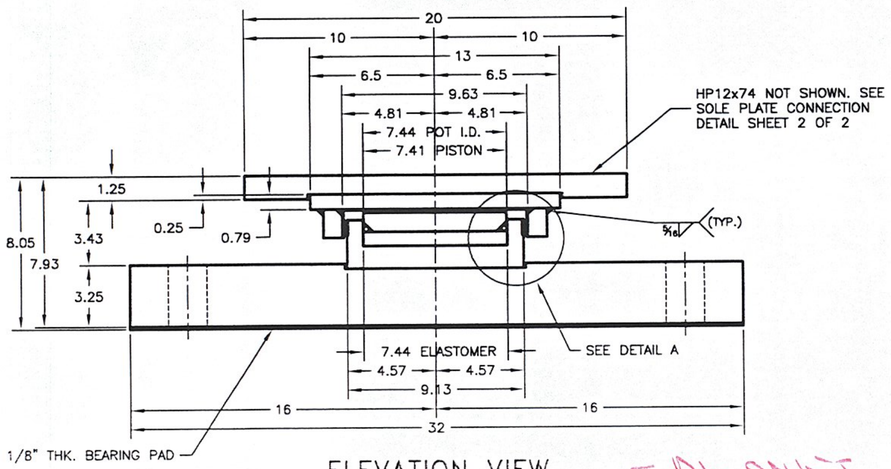
CK'D BY _____ OK'D BY _____

FINISH IN ACCORDANCE WITH 731.05

FEB 0 1 2010

RESUBMIT _____ APPROVED _____

BY DATE

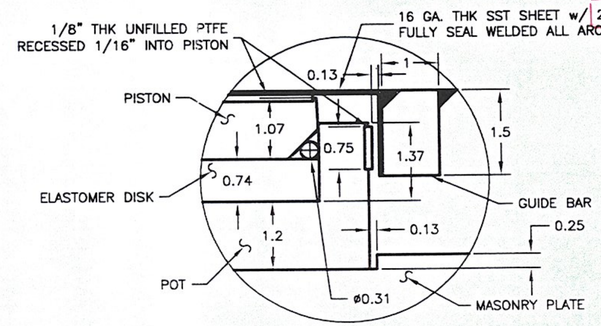


ELEVATION VIEW

GUIDED TYPE @ ABUTMENT 2
QTY. REQ'D = 2
ITEM NO. 531.1200
VERTICAL CAPACITY = 150 KIPS
HORIZONTAL CAPACITY = 72 KIPS

DL ONLY
TOTAL LOAD = 269K

OR 10% OF VERTICAL LOAD
IN ACCORDANCE W/ 531.04(h)



DETAIL –A–

VERMONT AGENCY OF TRANSPORTATION
CITY OF MONTPELIER
PROJECT NO. BHF 6400(31)

GUIDED EXPANSION POT BEARING DETAIL

AMSCOT

STRUCTURAL PRODUCTS CORP.
DOVER, NJ JOB # 3371

SCALE: N.T.S.	CHECKED:	DRAWN BY: C.A.M.
DATE: 1/25/10	B.F.	REVISION: 0

FOR: WINTERSET INC.

DWG NO. AM1041FC SHEET NO. 1 OF 2

PROVIDE CONSISTENT WITH SHT. 1 OF 2

☐ NO EXCEPTIONS TAKEN ☐ MAKE CORRECTIONS NOTED
☐ REJECTED ☒ REVISE AND RESUBMIT
☐ SUBMIT SPECIFIED ITEM

CHECKING IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE, FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES AND THE SATISFACTORY PERFORMANCE OF THE WORK.

CHA
DATE 2/26/10 BY

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

1. ELASTOMERIC DISC
(A)–ELASTOMERIC DISCS SHALL HAVE THE MINIMUM THICKNESS PER AASHTO 14.6.4.3.

(B)–AREAS OF ELASTOMERIC DISCS SHALL BE DESIGNED FOR A MAXIMUM AVERAGE STRESS OF 3500 PSI AT THE TOTAL DEAD AND LIVE LOADS OF THE STRUCTURE PER AASHTO 14.6.4.4

(C)–ELASTOMERIC DISC TO BE OF 50 SHORE "A" DUROMETER HARDNESS PER AASHTO 14.6.4.2..

2. POT
(A)–ALL STEEL USED IN POT BEARING TO BE AASHTO M270, GR. 345 AND SHALL BE GALVANIZED.

(B)–DEPTH OF THE POT CAVITY SHALL BE EQUAL TO OR GREATER THAN: (POT ID/2) X DESIGN ROTATION (03 RADIANS) +.1 + THE THICKNESS OF THE ELASTOMERIC DISC. + THE PISTON FACE WIDTH.

(C)–INSIDE DIAMETERS SHALL BE THE SAME AS THE ELASTOMERIC DISC.

3. PISTON
(A)–PISTONS SHALL BE DESIGNED AS FOLLOWS FOR THICKNESS AND CLEARANCE PER AASHTO 14.6.4.7.

(B)–PISTON FOR ROUND CROSS SECTION SEALING RINGS SHALL HAVE THE LOWER OUTSIDE EDGE BEVELED TO ACCEPT AND RETAIN THE RING AND PERMIT FULL DESIGN ROTATION.

4. ELASTOMERIC SEAL RINGS
(A)–ROUND CROSS SECTION BRASS SEALING RINGS SHALL MEET THE FOLLOWING DESIGN REQUIREMENTS PER AASHTO 14.6.4.5
(1) RINGS SHALL FIT THE POT ID SNUGLY 5/16"ø MIN. (0" TO 1/64" LESS THAN POT ID).

(2) RINGS SHALL BE ROLLED INTO A CIRCLE AND BRAZED. (TO BE MADE FROM ONE PIECE).

5. PTFE SLIDING SURFACE
(A)–THE AREA OF THE PTFE SHALL BE DESIGNED FOR A WORKING STRESS AS PER AASHTO SECTION 14.6.2, AT THE FULL DEAD AND LIVE LOAD OF THE STRUCTURE.

(B)–UNFILLED PTFE SHALL MEET THE FOLLOWING REQUIREMENTS:
(1) BONDED TO THE PISTON IT SHALL HAVE A MINIMUM THICKNESS OF 1/8" AND SHALL BE RECESSED ONE–HALF OF ITS THICKNESS INTO STEEL PISTON. TO CONFORM TO AASHTO SECTION 14.6.2.6.1.

6. STAINLESS STEEL SLIDING SURFACE
(A)–THE STAINLESS STEEL SLIDING SURFACE SHALL COVER THE PTFE SURFACE IN ALL OPERATING POSITIONS PLUS ONE ADDITIONAL INCH IN EVERY DIRECTION OF MOVEMENT.

(B)–STAINLESS STEEL SHALL BE 16ga. (AASHTO 14.6.2.3.2) THICKNESS AND SHALL BE CONNECTED TO THE TOP PLATE BY MEANS OF AN EPOXY BOND & SEAL WELDED AROUND THE ENTIRE PERIMETER (AS PER AASHTO SECTION 14, 2002)

(C)–WELDING PROCEDURES SHALL BE CHOSEN SUCH THAT THE STAINLESS STEEL IN SERVICE IS IN CONTACT WITH THE TOP PLATE AND THE SURFACE IS SMOOTH AND FLAT.

(D)–STAINLESS STEEL SLIDING SURFACES SHALL BE PREFERABLY FACE DOWN.

7. GUIDE BARS
(A)–GUIDE BARS AND THEIR CONNECTIONS TO THE TOP PLATE SHALL BE DESIGNED FOR THE HORIZONTAL FORCES ON THE BEARING AND NOT LESS THAN 19% OF THE TOTAL VERTICAL LOAD CAPACITY OF THE BEARING.

(B)–UNLESS THE GUIDE BAR CLEAR. IS SPECIFIED IT SHALL BE A TOTAL OF 1/8" (MAX.).

(C)–GUIDING ARRANGEMENTS SHALL BE DESIGNED SO THAT GUIDING MEMBER IS ALWAYS WITHIN THE GUIDES AT ALL POINTS OF TRANSLATION OF THE BEARING.

(D)–GUIDE BAR MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GR. 345 AND SHALL BE PAINTED. SEE NOTE 9 (I).

8. MATERIALS
(A)–STRUCTURE STEEL SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M270 GR. 345 AND SHALL BE GALVANIZED.

(B)–ELASTOMERS SHALL CONFORM TO AASHTO SECT. 14, 2002, AND MODIFIED BY STANDARD SPEC. 2002 WITH MODIFICATIONS AS NOTED IN TABLE 7.6–07–1

(C)–ELASTOMER SEALS MAY ONLY BE MADE OF METAL AS FOLLOWS:
(1)–ROUND CROSS SECTION BRASS RINGS, ASTM B–36 (HALF HARD), SHALL CONFORM TO FEDERAL SPECIFICATION QQB626, COMPOSITION 2.

(D)–PTFE SLIDING SURFACES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SECTION 14, 2002, AND AS MODIFIED BY STAND. SPEC. 716–07

(E)–STAINLESS STEEL SLIDING SURFACES SHALL CONFORM TO ASTM A–240 TYPE 304 WITH A SURFACE FINISH OF #8 MIRROR (AASHTO 14.6.2.2)

9. MANUFACTURING REQUIREMENTS
(A)–POTS AND PISTONS SHALL BE MACHINED FROM A SOLID PIECE OF STEEL AS PER AASHTO SECTION 18.5.1.5–1 POT BEARINGS.

(B)–ELASTOMERIC DISC TOLERANCES SHALL BE PER AASHTO TABLE 18.5.1.5–1 ELASTOMERIC DISC.

(C)–PTFE SLIDING SURFACE TOLERANCES SHALL BE PER AASHTO TABLE 18.5.1.5–1 PTFE.

(D)–STAINLESS STEEL SLIDING SURFACES SHALL BE EPOXY BONDED & SEAL WELDED. CONFORMING TO THE AMERICAN WELDING SOCIETY REQUIREMENTS FOR STAINLESS STEEL, AROUND IT'S PERIMETER USING TECHNIQUES WHICH WILL ENSURE IT REMAINS IN CONTACT WITH THE BACKING PLATE. FINISH SHALL BE #8 MIRROR. FLATNESS SHALL CONFORM TO CLASS "A" OR BETTER.

(E)–SOLE PLATE TOLERANCES SHALL CONFORM TO TABLE 18.5.1.5–1 REQUIREMENTS.

(F)–GUIDE BAR TOLERANCES SHALL CONFORM TO TABLE 18.5.1.5–1.

(G)–OVERALL HEIGHT OF BEARING SHALL NOT EXCEED THE NOMINAL HEIGHT BY MORE THAN 3/16".

(H)–THE EDGES OF ALL PARTS SHALL BE BROKEN BY GRINDING SO THAT THERE ARE NO SHARP EDGES.

(I)–EXTERNAL STEEL PLATE SURFACES TO BE HOT DIP GALVANIZED AS PER SPECIFICATIONS.

10. TOLERANCES FOR FLATNESS
(A)–FLATNESS OF BEARING SURFACES SHALL BE DETERMINED BY THE FOLLOWING METHOD:
(1)–A PRECISION STRAIGHT EDGE LONGER THAN THE NOMINAL DIMENSION TO BE MEASURED SHALL BE PLACED IN CONTACT WITH THE SURFACE TO BE MEASURED AS PARALLEL TO IT AS POSSIBLE.

(2)–SELECT A FEELER GAUGE HAVING AN ACCURACY OF ±.001" EQUAL TO THE TOLERANCE ALLOWED AND ATTEMPT TO INSERT IT UNDER THE STRAIGHT EDGE.

(3)–PLATES ARE "ACCEPTABLE" IF THE FEELER GAUGE DOES NOT PASS UNDER THE STRAIGHT EDGE.

(B)–FLATNESS TOLERANCES SHALL BE AS FOLLOWS:
(1)–CLASS "A" 0.001 X NOMINAL DIMENSION PER AASHTO TABLE 18.5.15–1.

(C)–"NOMINAL DIMENSIONS" SHALL BE INTERPRETED AS THE ACTUAL DIMENSION OF THE PLATE, IN METRIC UNITS, UNDER THE STRAIGHT EDGE WHERE THE STRAIGHT EDGE IS NOT PARALLEL TO ANY PLAN DIMENSION OF THE PLATE BEING MEASURED.

(D)–IN DETERMINING THE FLATNESS THE STRAIGHT EDGE MAY BE LOCATED IN ANY POSITION ON THE SURFACE BEING MEASURED.

11. REFERENCE
(A)–AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH. EDITION 2002 WITH CURRENT INTERIMS, AS MODIFIED BY THE NYSDOT STANDARD SPECIFICATIONS DATED JAN. 2, 2002 AND AS MODIFIED BY THE CONTRACT DOCUMENTS.

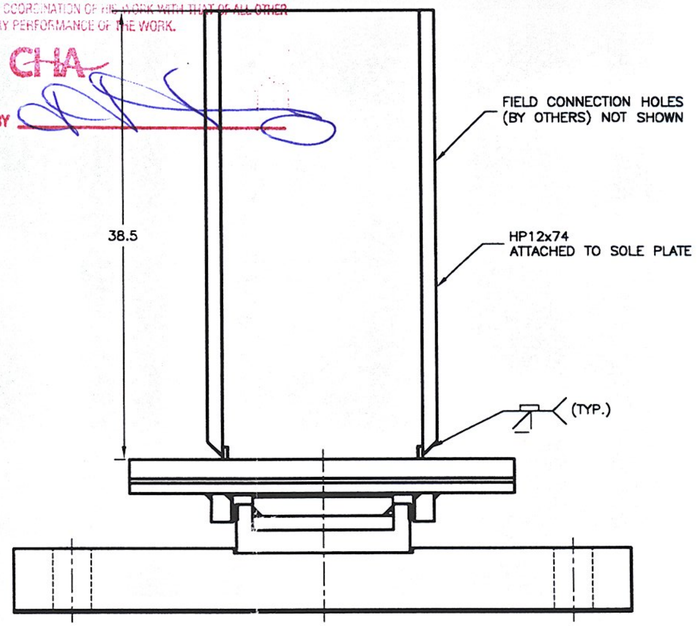
12. ADDITIONAL COMMENTS
(A)–BEARINGS SHALL HAVE A MAXIMUM FRICTION COEFFICIENT OF 3%.

(B)–ALL BEARINGS SHALL BE PLACED ON A 1/8" THK. BEARING PAD SAME SIZE AS MASONRY PLATE, AND CONFORM TO STAND. SPEC. 728–02 OR 728–03

(C) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

(D) SCALE = N.T.S.

(E) MANUFACTURING LOCATION:
AMSCOT STRUCTURAL PRODUCTS CORP. INC.
241 EAST BLACKWELL STREET
DOVER, NJ 07801
PH: (973) 989–8800
FX: (973) 989–5651
CONTACT: PETER SOMOGYI



SOLE PLATE CONNECTION DETAIL

USE 2006 VTRANS STANDARD SPECIFICATION FOR CONSTRUCTION

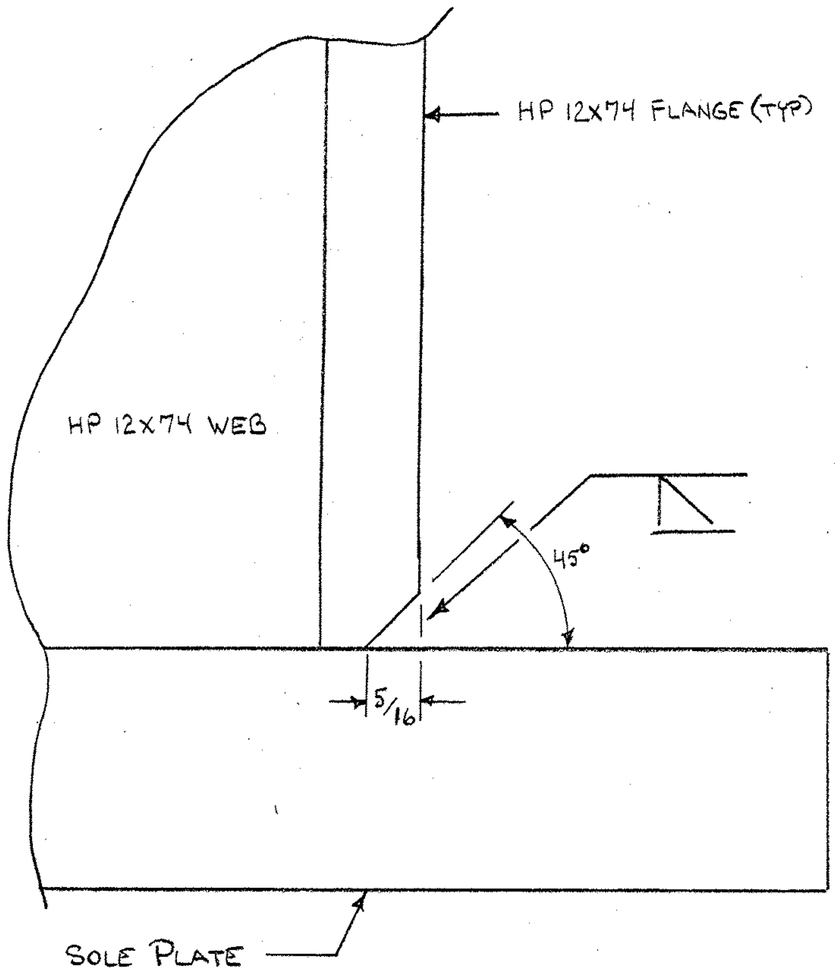
RECEIVED
CK'D BY _____ OK'D BY _____
FEB 01 2010
RESUBMIT _____ APPROVED _____
BY DATE

VERMONT AGENCY OF TRANSPORTATION
CITY OF MONTPELIER
PROJECT NO. BHF 6400(31)

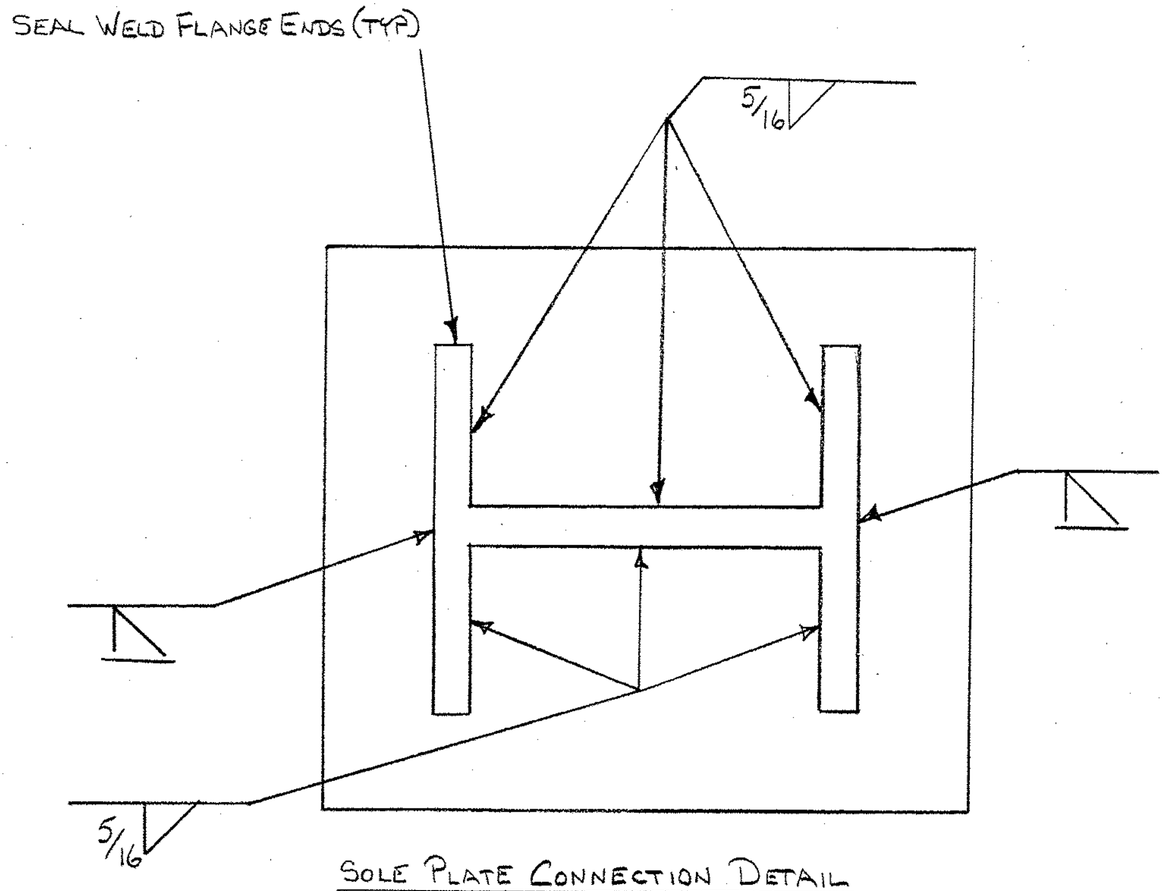
GUIDED EXPANSION POT BEARING NOTES

AMSCOT
STRUCTURAL PRODUCTS CORP.
DOVER, NJ JOB # 9371

SCALE N.T.S.	CHECKED B.F.	DRAWN BY: C.A.M.	
DATE 1/25/10		REVISION: 0	
FOR: WINTERSET, INC.			
DWG NO. 9371A1P3		SHEET NO. 2 OF 2	



DETAIL "A"
N.T.S.



SOLE PLATE CONNECTION DETAIL
N.T.S.

TELEPHONE
(207) 282-7360

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

FAX
(207) 282-1179

CUSTOMER: WINTERSET, INC.
PROJECT: TH9 - TAYLOR STREET BRIDGE NO 5 MONTPELIER, VERMONT
DELIVERY ARRANGEMENTS: LAND AIR

A/E: CHA
DATE: 5-11-10 SKETCH NO.: 511
JOB NO.: 434 S.O. NO.:
DRAWN BY: JSS. WANTED:
PAINT: SSPC-SP10 AND CARBOLINE 859 3-5 MILS DFT

SHOP BILL

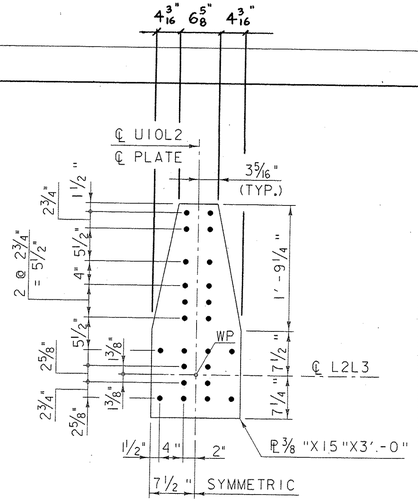
JOB NO. DRG. NO.

ABM INFO PAGE	ABM INFO LINE	NO.		DESCRIPTION	FT	IN	ASSEM. MARK	SHIPPING MARK	REMARKS	WEIGHT
		5	*	PL 3/8 x 15	3	0		G22	SHAPE	
		4	*	PL 3/8 x 42	4	3 1/2		G23	SHAPE	
		4	*	PL 3/8 x 33	2	10		G24	SHAPE	
		2	*	PL 3/8 x 36	3	9		G25	SHAPE	
		4	*	PL 3/8 x 12	2	6		G30		
		4	*	PL 3/8 x 14	2	6		G31		
		5	*	PL 3/8 x 12	2	0 1/4		G32		
		(5)	*	PL 3/8 x 12	3	3 1/4		G26		
		4	*	PL 3/8 x 12	1	0		G39		
		15	*	PL 3/8 x 9	1	0		G40		
		10	*	PL 3/8 x 12	1	0		G41		
		4		PL 3/16 x 12	1	4 1/4		F10		A709-50
		4		PL 3/16 x 14	3	6 3/4		G27		
		4		PL 3/16 x 12	3	10 1/4		G28		
		4		PL 1/8 x 12	1	10 1/2		F9		A709-50W
* ABOVE MATERIAL A709-50F2 FRACTURE CRITICAL MATERIAL										

MATERIAL IS DETAILED ON SKETCH # 512

3/8"	PL	PO#	434-7
3/16"	PL	PO#	434-9
1/8"	PL	PO#	434-10

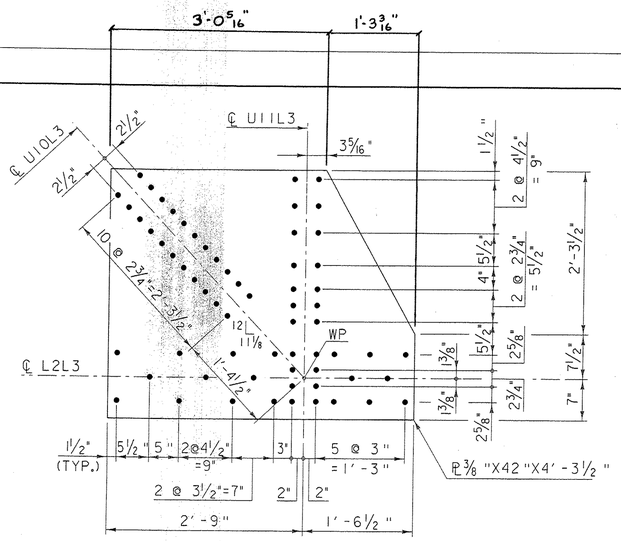
Shop 5-18-10
Shop 5-24-10 (1)



GUSSET PLATE G22

(L2 SHOWN, L8 SIMILAR)

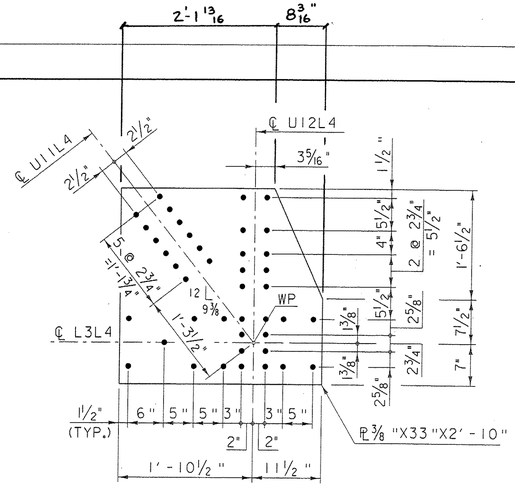
SCALE 1" = 1'-0"



GUSSET PLATE G23

(L3 SHOWN, L7 OPPOSITE HAND)

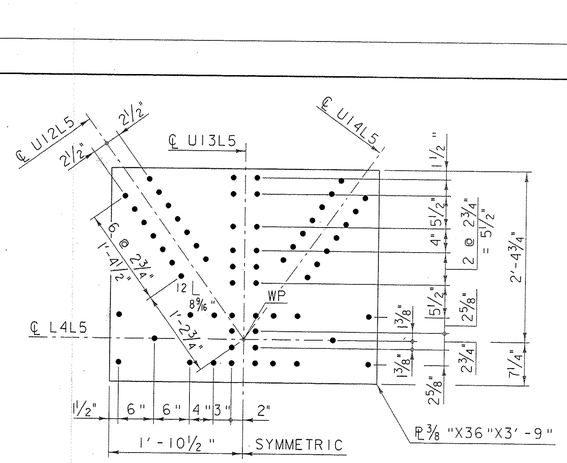
SCALE 1" = 1'-0"



GUSSET PLATE G24

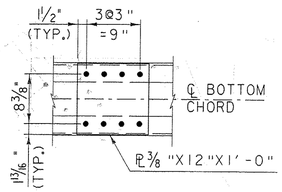
(L4 SHOWN, L6 OPPOSITE HAND)

SCALE 1" = 1'-0"



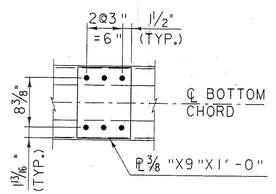
GUSSET PLATE G25

SCALE 1" = 1'-0"



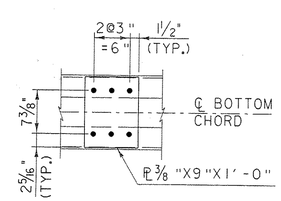
PLAN - BATTEN PLATE G39

SCALE 1" = 1'-0"



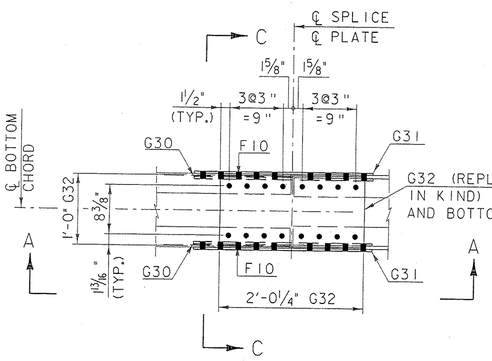
PLAN - BATTEN PLATE G40

SCALE 1" = 1'-0"



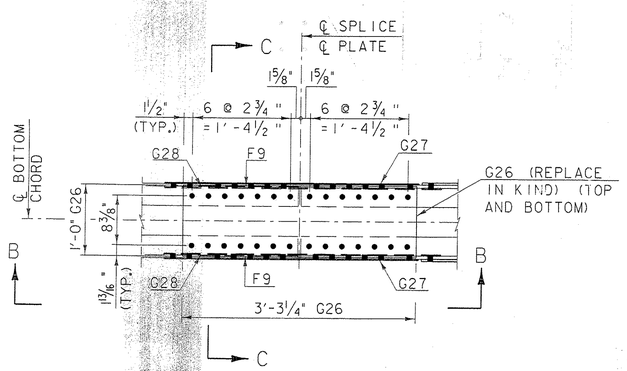
PLAN - BATTEN PLATE G41

SCALE 1" = 1'-0"



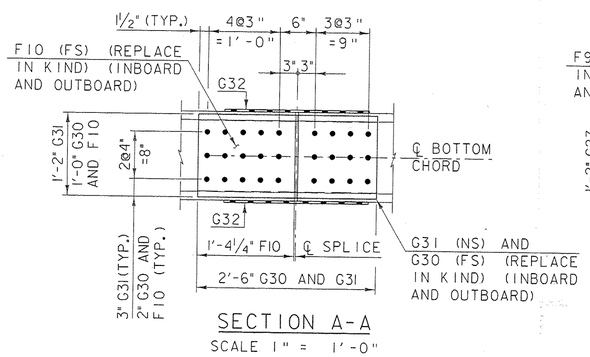
PLAN - SPLICE S1 AND S4

SCALE 1" = 1'-0"



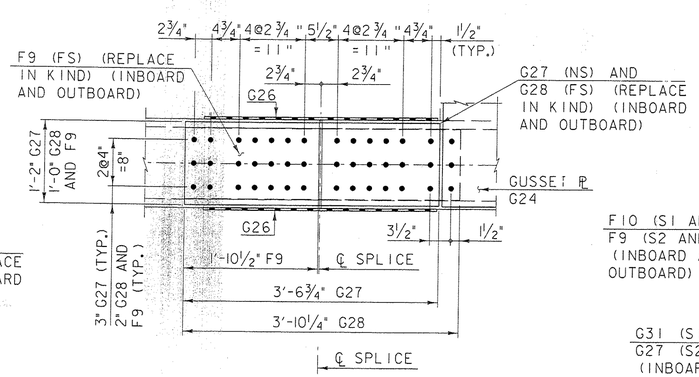
PLAN - SPLICE S2 AND S3

SCALE 1" = 1'-0"



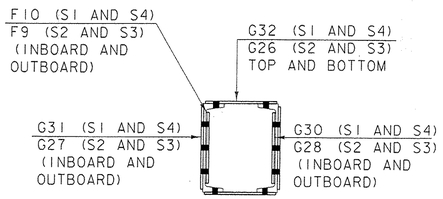
SECTION A-A

SCALE 1" = 1'-0"



SECTION B-B

SCALE 1" = 1'-0"



SECTION C-C

SCALE 1" = 1'-0"

ADDITIONAL REPAIR REQUIREMENTS (WEST TRUSS):

GUSSET PLATE - MEMBER G22: REPLACE INBOARD AT L8, 1-PL 3/8" X 15" X 3'-0"

HOLES = 15 ϕ 16

ADDITIONAL REPAIR REQUIREMENTS (EAST TRUSS):

GUSSET PLATE - MEMBER G22: REPLACE INBOARD AND OUTBOARD AT L2 AND L8, 4-PL 3/8" X 15" X 3'-0"
GUSSET PLATE - MEMBER G23: REPLACE INBOARD AND OUTBOARD AT L3 AND L7, 4-PL 3/8" X 42" X 4'-3 1/2"
GUSSET PLATE - MEMBER G24: REPLACE INBOARD AND OUTBOARD AT L4 AND L6, 4-PL 3/8" X 33" X 2'-10"
GUSSET PLATE - MEMBER G25: REPLACE INBOARD AND OUTBOARD AT L5, 2-PL 3/8" X 36" X 3'-9"

SPLICE PLATE - MEMBER G30: REPLACE INBOARD AND OUTBOARD AT S1 AND S4, 4-PL 3/8" X 12" X 2'-6"
SPLICE PLATE - MEMBER G31: REPLACE INBOARD AND OUTBOARD AT S1 AND S4, 4-PL 3/8" X 14" X 2'-6"
FILL PLATE - MEMBER F10: REPLACE INBOARD AND OUTBOARD AT S1 AND S4, 4-PL 3/16" X 12" X 1'-4 1/4"
SPLICE PLATE - MEMBER G32: REPLACE TOP AND BOTTOM AT S1 AND S4, 5-PL 3/8" X 12" X 2'-0 1/4"

SPLICE PLATE - MEMBER G26: REPLACE TOP AND BOTTOM AT S2 AND S3, 5-PL 3/8" X 12" X 3'-3 1/4"
SPLICE PLATE - MEMBER G27: REPLACE INBOARD AND OUTBOARD AT S2 AND S3, 4-PL 3/16" X 14" X 3'-6 3/4"
FILL PLATE - MEMBER F9: REPLACE INBOARD AND OUTBOARD AT S2 AND S3, 4-PL 1/8" X 12" X 1'-10 1/2"
SPLICE PLATE - MEMBER G28: REPLACE INBOARD AND OUTBOARD AT S2 AND S3, 4-PL 3/16" X 12" X 3'-10 1/4"

BATTEN PLATE - MEMBER G39: REPLACE TOP AND BOTTOM AS REQUIRED, 4-PL 3/8" X 12" X 1'-0"
BATTEN PLATE - MEMBER G40: REPLACE TOP AND BOTTOM AS REQUIRED, 15-PL 3/8" X 9" X 1'-0"
BATTEN PLATE - MEMBER G41: REPLACE TOP AND BOTTOM AS REQUIRED, 10-PL 3/8" X 12" X 1'-0"

1

Shop: 5-18-10
Shop: 5-24-10 1

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

CUSTOMER: WINTERSET, INC.	A/E: CHA	
PROJECT: TH2 - TAYLOR STREET BRIDGE NO 5 MONTPELIER, VERMONT	DATE: 5-11-10	SKETCH NO.: 512
	JOB NO.: 434	S.O. NO.:
	DRAWN BY: J.S.S.	WANTED:
	PAINT: SSPC-SP10 AND CARBOLINE 859 3-5 MILS DFT	

CHA © 2009 CLOUGH HARBOUR & ASSOCIATES LLP

FILE NAME: $FILES$
PROJECT MANAGER: SUSAN SCRIBNER
DESIGNED BY: D. D'AMATO
BRIDGE DESIGN SUPERVISOR: P. HALSTEAD
PLOT DATE: 5/10/2010
DRAWN BY: D. D'AMATO
CHECKED BY: P. PERKINS
SHEET 31A OF 63 1

FILE NAME =K:\14506\Mstr\plans\zs14506_additional_steel_1.dgn
DATE/TIME = 5/10/2010
USER = ZSS2

Casco Bay Steel Structures, Inc.

TELEPHONE (207) 282-7360 — 75 Spring Hill Road, Saco, Maine 04072 — *FAX* (207) 282-1179

CUSTOMER: WINTERSET, INC.

A/E: CHA

PROJECT: TH-9 TAYLOR STREET BRIDGE NO.5 MONTPELIER, VERMONT

DATE: 6-28-10 — SKETCH NO.: 628F

JOB NO.: 434 — S.O. NO.:

DRAWN BY: J.S.S. — WANTED:

PAINT: SSPC-SP10 AND CARBOLINE 859 3-5 MILS DFT

DELIVERY ARRANGEMENTS:

SHOP BILL

JOB NO. — DRG. NO.

ABM INFO PAGE	LINE	NO.	DESCRIPTION	FT	IN	ASSEM. MARK	SHIPPING MARK	REMARKS	WEIGHT
			WRITTEN ORDER # 3 SIDEWALK PEDESTRIAN RAIL SECTIONS						
		1	RAILING				R1		
		1	L 3"x2"x 5/16	10	3 1/2				
		23	PL 3/4"x3/4"	2	7"				
		1	PL 7/16"x2"	9	9				
		9	PL 5/8"x						
		1	3" STD. PIPE	10	1 1/4				
		9	1/2" BOLT						
		1	RAILING				R2R		
		1	L 3"x2"x 5/16	10	6 3/8				
		23	PL 3/4"x3/4"	2	7"				
		1	PL 7/16"x2"	9	9				
		9	PL 5/8"x						
		1	3" STD. PIPE	10	8 1/8				
		9	1/2" BOLT						
		1	BALL END CAP						
		1	RAILING				R2L		
		1	L 3"x2"x 5/16	10	6 3/8				
		23	PL 3/4"x3/4"	2	7"				
		1	PL 7/16"x2"	9	9				
		9	PL 5/8"x						
		1	3" STD. PIPE	10	8 1/8				
		9	1/2" BOLT						
		1	BALL END CAP						

FROM '31C' WEST TRUSS

Casco Bay Steel Structures, Inc.

TELEPHONE (207) 282-7360 — 75 Spring Hill Road, Saco, Maine 04072 — FAX (207) 282-1179

CUSTOMER: WINTERSET, INC.
A/E: CHA
PROJECT: TH9 - TAYLOR STREET BRIDGE NO.5 MONTPELIER, VERMONT
DATE: 6-28-10 — SKETCH NO.: 628E
JOB NO.: 434 — S.O. NO.:
DRAWN BY: JGS. — WANTED:
PAINT: SSPC-SP10 AND CARBOLINE 859 3-5 MILS D.F.T.
DELIVERY ARRANGEMENTS:

SHOP BILL

JOB NO. — DRG. NO.

ABM INFO PAGE	ABM INFO LINE	NO.	DESCRIPTION	FT	IN	ASSEM. MARK	SHIPPING MARK	REMARKS	WEIGHT
		2	L3½×3½×5/16	0	9½		K21		
		2	L3½×3½×5/16	0	9½		K22		
		2	L3½×3½×5/16	0	9½		K23		
		4	L3½×3½×5/16	0	6½		K63		
		2	L3×3×5/16	2	0'4		K47	B.C.2.E.	
		2	L3×3×5/16	1	1'8		K48		
		4	L3½×3×5/16	1	1'8		K49	CUT 3½ LEG TO 3¼	
		2	C6×8.2	2	3'16		K50	B.C.2.E.	

From '31C' East Truss

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

CUSTOMER: Winterset, Inc.
A/E: CHA
PROJECT: TH-9 Taylor Street Bridge No. 5 Montpelier, Vermont
DATE: 6-28-10 SKETCH NO.: 628D
JOB NO.: 434 S.O. NO.:
DRAWN BY: J.S.S. WANTED:
PAINT: SSPC-SP10 And Carboline 859 3-5 Mils DFT
DELIVERY ARRANGEMENTS:

SHOP BILL

JOB NO. DRG. NO.

ABM INFO PAGE	LINE	NO.	DESCRIPTION	FT	IN	ASSEM. MARK	SHIPPING MARK	REMARKS	WEIGHT
			PEDESTRIAN RAIL POSTS						
		9	L 2½ x 2½ x ¼	5	13/16		P5		
		9	L 2½ x 2½ x ¼	4	4 7/8	K25			
		9	L 2½ x 2½ x ¼	0	5¼	K27			
		8	L 2½ x 2½ x ¼	4	10 5/16		P6		
		8	L 2½ x 2½ x ¼	4	4 7/8	K25			
		8	L 2½ x 2½ x ¼	0	5¼	K27			
			FROM WRITTEN ORDER # 3						
		2	L 5 x 3 x ⅜	1	1½		K34R		
		2	L 5 x 3 x ⅜	1	1½		K34L		
		1	PL ⅜ x 12	2	0¼		G32		

From '31C' East Truss

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

TELEPHONE (207) 282-7360
FAX (207) 282-1179

CUSTOMER: WINTERSET, INC.
PROJECT: TH-9 TAYLOR STREET BRIDGE NO 5 MONTPELIER, VERMONT
A/E: CHA
DATE: 6-28-10 | SKETCH NO.: 628C
JOB NO.: 434 | S.O. NO.:
DRAWN BY: J.S.S. | WANTED:
PAINT: SSPC-SP10 AND CARBOLINE 859 3-5 MILS DFT
DELIVERY ARRANGEMENTS:

SHOP BILL

JOB NO. | DRG. NO.

ABM INFO PAGE	LINE	NO.	DESCRIPTION	FT	IN	ASSEM. MARK	SHIPPING MARK	REMARKS	WEIGHT
		1	BUILT UP BRACKET				KB2		
		1	PL 5/16 x 31 1/2	6	9 1/2	KB2X			
		1	L 3 1/2 x 3 1/2 x 5/16	6	9 1/8	K8			
		1	L 3 1/2 x 3 1/2 x 5/16	5	5 1/4	K9			
		2	L 3 1/2 x 3 1/2 x 5/16	2	9 5/16	K12			
		1	L 2 1/2 x 2 1/2 x 1/4	0	9 3/16	K14			
		1	L 3 1/2 x 3 1/2 x 5/16	0	7 1/4	K15			
		1	L 3 1/2 x 3 1/2 x 5/16	6	10	K42			
		1	L 3 1/2 x 3 1/2 x 5/16	5	4 1/8	K43			
		2	L 4 x 3 x 3/8	2	3 1/2	K44			
		2	PL 5/16 x 3 1/2	1	4 3/4	F11			
		2	L 3 1/2 x 3 1/2 x 5/16	0	9 1/2		K21		
		2	L 3 1/2 x 3 1/2 x 5/16	0	9 1/2		K22		
		2	L 3 1/2 x 3 1/2 x 5/16	0	9 1/2		K23		
		8	L 3 1/2 x 3 1/2 x 5/16	0	6 1/2		K63		
		2	L 3 x 3 x 5/16	2	0 1/4		K47	B.C.2.E.	
		2	L 3 x 3 x 5/16	1	1 7/8		K48		
		4	L 3 1/2 x 3 x 5/16	1	1 7/8		K49	CUT 3 1/2 LEG TO 3 1/4	
		2	C 6 x 8.2	2	3/16		K50	B.C.2.E.	

From '31B' West Truss

Casco Bay Steel Structures, Inc.

TELEPHONE (207) 282-7360 | 75 Spring Hill Road, Saco, Maine 04072 | FAX (207) 282-1179

CUSTOMER: Winterset, Inc.

PROJECT: TH-9 Taylor Street Bridge No. 5 Montpelier, Vermont

A/E: CHA

DATE: 6-28-10 | SKETCH NO.: 628B

JOB NO.: 434 | S.O. NO.:

DRAWN BY: J.S.S. | WANTED:

PAINT: SSPC-SP10 And Carboline 859 3-5 mils D.F.T.

DELIVERY ARRANGEMENTS:

SHOP BILL

JOB NO. | DRG. NO.

ABM INFO PAGE	LINE	NO.	DESCRIPTION	FT	IN	ASSEM. MARK	SHIPPING MARK	REMARKS	WEIGHT
		2	Rail Post				RP1		
		4	L 4x4x 5/16	5	7 3/4	RP1X			
		2	PL 5/16 x 4	4	11	F19			
		2	PL 5/16 x 8 3/4	1	0 1/2	G54			
		2	L 3 1/2 x 3 1/2 x 5/16	0	6 1/2	K63			
		4	L 5 x 3 1/2 x 5/16	1	0 1/8	K64			
		4	PL 5/16 x 3 1/2	0	8 3/4	F20			
		2	Rail Post				RP2		
		4	L 4x4x 5/16	5	7 3/4	RP2X			
		2	PL 5/16 x 4	4	11	F19			
		2	PL 5/16 x 8 3/4	1	0 1/2	G55			
		2	L 3 1/2 x 3 1/2 x 5/16	0	6 1/2	K63			
		4	L 5 x 3 1/2 x 5/16	1	0 1/8	K65			
		4	PL 5/16 x 3 1/2	0	8 3/4	F21			
		2	Rail Post				RP3		
		2	W 12 x 30	4	4 1/2	RP3X			
		2	L 3 1/2 x 3 1/2 x 5/16	0	6 1/2	K63			
		1	PL 1/2 x 12	1	3		BR1		

From '318' East Truss

Casco Bay Steel Structures, Inc.

TELEPHONE (207) 282-7360

75 Spring Hill Road
Saco, Maine 04072

FAX (207) 282-1179

CUSTOMER: Winterset, Inc.

A/E: CHA

PROJECT: TH-9 Taylor Street Bridge No. 5 Montpelier, Vermont

DATE: 6-28-10 | SKETCH NO.: 628A

JOB NO.: 434 | S.O. NO.:

DRAWN BY: J.S.S. | WANTED:

PAINT: SSPC-SP10 And Carboline 859 3-5 Mils DFT

DELIVERY ARRANGEMENTS:

SHOP BILL

JOB NO. | DRG. NO.

ABM INFO PAGE	LINE	NO.	DESCRIPTION	FT	IN	ASSEM. MARK	SHIPPING MARK	REMARKS	WEIGHT
		2	Sidewalk Stringer				B9		
		2	C 9 x 15	41	2 1/2	B9X			
		2	L 4 x 3 x 5/16	41	2 1/2	KB9			
		1	Sidewalk Stringer				B10		
		1	C 9 x 15	41	7 3/8	B10X			
		1	L 4 x 3 x 5/16	41	7 3/8	KB10			
		1	L 5 x 3 x 3/8	0	2 1/2	K24			
		1	Sidewalk Stringer				B13		
		1	C 9 x 15	41	7 3/8	B13X			
		1	L 4 x 3 x 5/16	41	7 3/8	KB13			
		1	L 5 x 3 x 3/8	0	2 1/2	K24			
		1	Sidewalk Stringer				B14		
		1	W 8 x 28	8	0	B14X			
		2	PL 3/8 x 6	0	9 1/2	SP1			
		2	PL 5/8 x 6	1	0 1/2	SP2			
		4	PL 3/8 x 2 7/16	0	9 1/2	SP3			
		4	PL 1/4 x 6	0	4 1/2	FP1			
		8	PL 1/4 x 2 7/16	0	4 1/2	FP2			
		2	L 5 x 3 x 3/8	0	2 1/2	K24			
		2	Rail Post				RP3		
		2	W 12 x 30	4	4 1/2	RP3X			
		2	L 3 1/2 x 3 1/2 x 5/16	0	6 1/2	K63			

Casco Bay Steel Structures, Inc.

5 Industry Road
South Portland, Maine 04106

Phone: (207) 772-2533

Fax: (207) 772-0580

WELDING PROCEDURE SPECIFICATION

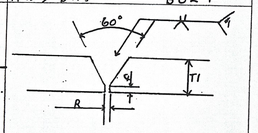
Material specification A36-A572-A588 (ASTM 709 Gr 36-50-50W
Welding process Flux Cored Arc welding (FCAW)
Manual or machine Semi-AUTO
Position of welding Flat - 1G
Filler metal specification AWS A5.20
Filler metal classification E71T-1
Flux NA
Shielding gas 75% AR 25% CO^2 Flow rate 40 ±5
Single or multiple pass Both Electrode stick out 3/4 ±1/4
Single or multiple arc Single
Welding current Direct current
Polarity Reverse Electrode positive
Welding progression see DETAIL
Root treatment weld side #1, backgouge side #2 - grind - then weld
Preheat and interpass temperature To 3/4-60° (18-10°) + 3/4 To 1 1/2-70° (+19 To 38-20°)
Postheat temperature NA
Heat Input Min NA Max NA

BRIDGE No. 5
MONTPELIER, VT.
CBSS JOB # 434

WELDING PROCEDURE

Pass no.	Electrode size	Welding current Amperes	Welding current Volts	Travel speed
	1/16	280 ±28	25 ±1.7	11 ±1.1
	1.6	280 ±28	25 ±1.7	280 ±28

AWS D1.5 Joint detail BU2-F



T1 - UNLIMITED
R - 0 To 1/8 / 0 To 3.2mm
R - 0 To 1/8 / 0 To 3.2mm

1 - Grind as required

RECEIVED
APR 22 2010
BY DATE 05/04/10
CK'D BY JMC OK'D BY
RESUBMIT APPROVED

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

Procedure no. 104
Revision no.
Form III-2

AWS - QC1
Paul E. Goodale
83102201
C.W.I.

Contractor Casco Bay Steel
Authorized By Paul E. Goodale
Date 2/2/99

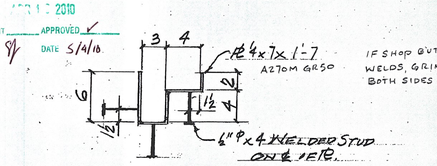
Casco Bay Steel Structures, Inc.
75 Spring Hill Road
Saco, Maine 04072
TELEPHONE (207) 282-7360
FAX (207) 282-1179

CUSTOMER: WINTERSET	A/E:	
PROJECT: TH-9 TAYLOR STREET BRIDGE #5 MONTPELIER, VERMONT	DATE: 4-5-10	SKETCH NO.: MI-A
	JOB NO.: 434	S.O. NO.:
	DRAWN BY: J.P.F.	WANTED:
	PAINT:	

DELIVERY ARRANGEMENTS:

From Approval Comment On Shop Dwg. # M1

RECEIVED
CKT BY CHA ORDER
APR 13 2010
RESUBMIT ____ APPROVED ✓
BY WR DATE 5/4/10



IF SHOP BUTT WELDS, GRIND BOTH SIDES

CP1-16-REQ'D.
(@ INTERMEDIATE RAIL POSTS)

GALVANIZE AFTER FAB.

UNLESS NOTED OTHERWISE ALL MATERIAL MUST BE ASTM-A36 OR BETTER — HOLES: Ø DIA. U.N.O.

SHIP MK	QTY	MARK	DESCRIPTION	LENGTH		WT.	REMARKS
CP1	16		PL ¼ x 7	1	7		BEND
	48	WS	½" WELDED STUD	0	4		

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

WELDING PROCEDURE SPECIFICATION

Material specification A36 - A572 - A588 (ASTM 709 Gr 36-50-50W
Welding process Flux Cored Arc welding (FCAW)
Manuel or machine Semi - Auto
Position of welding Flat
Filler metal specification AWS 5.20
Filler metal classification E71T-1
Flux n/a
Shielding gas 75% AR 25% CO2 Flow rate 40 ES
Single or multiple pass Single Electrode stick out 3/4 ±1/4
Single or multiple arc Single
Welding current Direct current
Polarity Reverse Electrode Positive
Welding progression see Detail
Root treatment weld AWS. weld from one side only
Preheat and interpass temperature 60 To 3/4-50° (18-10°) To 1/4 To 1/2-70° (19 To 38-20°)
Postheat temperature n/a
Heat Input Min n/a Max n/a

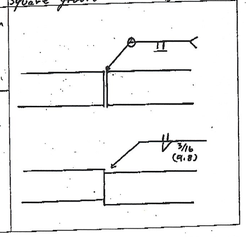
VT-AOT, BRNO-5
PO: NO. BHE 6400631
Tyler ST. Rc, CBS429

WELDING PROCEDURE

AWS D1-5

Pass no.	Electrode size	Welding current Amperes	Welding current Volts	Travel speed
	1/16	280 ±28	25 ±1.7	191 ipm ± 1.7
	1.6	280 ±28	25 ±1.7	432 ± 43.2

Fillet
Square groove joint detail Butt



VTRANS RECEIVED
JAN 27 2010
RESUBMIT APPROVED
DATE 01/12/10

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

Procedure no. 105
Revision no.
Form III-2

AWS - CWI
Paul E. Gould
83100201
C.W.I.

Contractor Casco BAY Steel
Authorized By Paul E. Gould
Date 2/2/99

02/05/2010 12:59 FAX 2072821179 CASCO BAY STEEL 008

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

WELDING PROCEDURE SPECIFICATION

Material specification ASTM-709-Gr36-50-50W / A709M Gr 250-345-345W
Welding process Flux Cored Arc welding (FCAW)
Manual or machine Semi AUTO
Position of welding Flat - Horizonal
Filler metal specification AWS A5-29
Filler metal classification E81T1-Ni1-H4 ESAB
Flux NA
Shielding gas 75%AR-25%CO2 Flow rate 35 CFH +8-4
Single or multiple pass Single / Multiple Elec Ex 5/64 = 1/4
Single-or multiple arc Single
Welding current DC P
Polarity DCEP
Welding progression See detail
Root treatment w/ re brush-area To be Free of Flense Scale, Slag, Rust, Moisture
Preheat and interpass temperature To 20°(34) 10(50), 80°(34) TO 90(1/2) 200, 90TO(1/2) T260(2/2) 65°C150 over 66(212) 110(225)
Posheat temperature NA
Heat Input Min 29.7 KJ/in Max 43.6 KJ/in PQR FCM = 8 39.6 KJ/in

VT-AOT, BY NO-5
Proj NO. RHF 640c(3)
Taylor St. Br, CBS424

WELDING PROCEDURE

AWS 5-13
AWS D1-5 Joint detail Fillet

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

VTRANS RECEIVED JAN 27 2010

CK'D BY ____ DATE BY JWC
RESUBMIT ____ APPROVED ✓
BY ____ DATE 02/12/10

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

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

Contractor Casco Bay Steel
Authorized By Paul L. Goodale
Date 12-6-06

Casco Bay Steel Structures, Inc.

75 Spring Hill Road
Saco, Maine 04072

Phone: (207) 282-7360 Fax: (207) 282-1179

WELDING PROCEDURE SPECIFICATION

Material specification ASTM 709-Gr36-50-50W (250-345-345W)
Welding process Shielded Metal Arc welding (SMAW)
Manual or machine Manual
Position of welding Flat (1G) - Horizontal (2G)
Filler metal specification AWS/ASME SFA-5.1 - A5-5
Filler metal classification E7018 - E8018-C3 - F6A2-EM12K
Flux n/a
Shielding gas n/a Flow rate n/a
Single or multiple pass Single and multiple
Single or multiple arc Single
Welding current AC, DC
Polarity Straight / Reverse
Welding progression
Root treatment To AWS specification
Preheat and interpass temperature To 300°(150) 50°(10C) ; 300°(150) TO 1½ (38) 700°F (20C)
Postheat temperature n/a
Heat Input Min n/a Max n/a

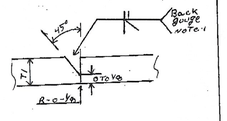
VT-AOT, BRNO-5
Proj. No. BHE 6400(31)
Taylor St. Br., CASS 439

(METRIC)

WELDING PROCEDURE

Pass no.	Electrode size	Welding current: Amperes	Welding current: Volts	Travel speed
	7018			
	1/8 (3.2)	70-170	22-26	
	5/32 (3.9)	120 TO 225	22-26	
AS	8018			AS
REQ	1/8 (3.2)	90-160	22-26	REQ
	5/32 (3.9)	120-225	22-26	
	7028			
	5/32 (3.9)	190-290	22-26	

Joint detail B-U4b
AWS D1.5



T1 = UNLIMITED, NOTE: Grind Flush as REQ.

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

Procedure no. 402
Revision no.
Form III-2

Contractor Casco Bay Steel
Authorized By Philip Goodale
Date 10-16-01

AWS QC 1 PHILIP E. GOODALE 431 SOUTH SCH

02/05/2010 12:59 FAX 2072821179 CASCO BAY STEEL 007

Casco Bay Steel Structures, Inc.

75 Spring Hill Road
Saco, Maine 04072

Phone: (207) 282-7360 Fax: (207) 282-1179

WELDING PROCEDURE SPECIFICATION

Material specification ASTM-A709/A709M - Gr36-50-50w (250-345-345W) (S.W.)
Welding process Stud Welder
Manual or machine Machine
Position of welding Flat
Filler metal specification N/A
Filler metal classification N/A
Flux N/A Flow rate N/A
Shielding gas N/A
Single or multiple pass Single
Single or multiple arc Single
Welding current DC
Polarity DC EN
Welding progression N/A
Root treatment Clean Surface To be welded
Preheat and interpass temperature To 3/4"-50° > 3/4" To 1 1/2"-70° 1 1/2" To 2 1/2"-150° over 2 1/2"-225°F
Postheat temperature N/A
Heat input Min N/A Max N/A

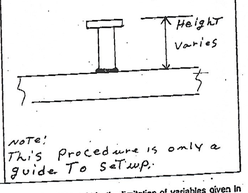
VT KANG
DR DATE Jec
JAN 27 2010
RESUBMIT APPROVED
BY DATE 01/14/10

WELDING PROCEDURE

VT-AOT, BRNO-5
Proj No. BHF 6400(31)
Taylor St. Br., CBS 43.4

Pass no.	Electrode size	Welding current: Amperes	Welding current: Volts	Travel speed
	Stud size		Weld Time	
	1/2	350 650	.35±	N/A
	5/8	350 650	.35±	
	3/4	550 750	.40±	
	7/8	650 850	.10±	

AWS D1-1 Joint detail AWS D1-5



note!
This procedure is only a guide To Setup.

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

Procedure no. # 1 S.W.
Revision no.
Form III-2

Contractor Casco Bay Steel
Authorized By
Date May 3-1990

02/02/2010 13:00 FAX 2072821178 CASCO BAY STEEL 009

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

WELDING PROCEDURE SPECIFICATION

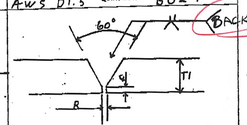
Material specification A36-A572-A588 (ASTM 709 Gr 36-50-50W
Welding process Flux Cored Arc welding (FCAW)
Manual or machine Semi-AUTO
Position of welding Flat-1G
Filler metal specification AWS A5.20
Filler metal classification E71T-1
Flux NA
Shielding gas 75%AR 25%CO2 Flow rate 40 ±5
Single or multiple pass Both Electrode Stick out 3/4 ± 1/4
Single or multiple arc Single
Welding current Direct current
Polarity Reverse Electrode positive
Welding progression See detail
Root treatment weld side #1, backgouge side #2 + grind - then weld
Preheat and interpass temperature To 3/4-60° (14-10°) 3/4 To 1 1/2-70° (+10 To 38-20°)
Postheat temperature NA
Heat Input Min NA Max NA

VT-AOT, BRNO-5
PT: NO. RHF 6400(81)
Taylor St. Br, CBS434

WELDING PROCEDURE

Pass no.	Electrode size	Welding current Amperes	Welding current Volts	Travel speed
	1/16	280 ±28	25 ±1.7	11 ±1.1
	1.6	280 ±28	25 ±1.7	280 ±28

AWS D1.5 Joint detail BU2-F



T1 - UNLIMITED
R - 0 TO 1/8 / 0 TO 3.2mm
R - 0 TO 1/8 / 0 TO 3.2mm

1-Grind as required

TRANS RECEIVED JAN 27 2010 CK'D DATE JWC
RESUBMIT APPROVED AS NOTED
PY DATE 01/14/10

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

Procedure no. 104
Revision no.
Form III-2

AWS - QC1
Paul E. Goodale
83102201
C.W.I.

Contractor Casco Bay Steel
Authorized By Paul E. Goodale
Date 2/2/99

02/02/2010 12:59 FAX 2072821179 CASCO BAY STEEL 008

Casco Bay Steel Structures, Inc.

75 Spring Hill Road
Saco, Maine 04072

Phone: (207) 282-7360 Fax: (207) 282-1179

WELDING PROCEDURE SPECIFICATION

Material specification ASTM 709-Gr.36-50-50W (250-345-345W)
Welding process Shielded Metal Arc welding (SMAW)
Manual or machine Manual
Position of welding Vertical up (3F)
Filler metal specification AWS / AWS A5.1 - A5.5
Filler metal classification E7018 - R018 C1/3
Flux NA
Shielding gas NA Flow rate NA
Single or multiple pass Single - multiple
Single or multiple arc Single
Welding current DC
Polarity positive
Welding progression See Detail
Root treatment Area Tobe Free of lous & Scale Slag, Rust or Moisture
Preheat and interpass temperature To 3/4(19) 50°(10°), 3/4(19) To 1 1/2(38) 70°(20°) 1 1/2(38) To 2 1/2(63) 150°(65°)
Postheat temperature NA
Heat Input Min NA Max NA

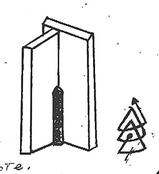
VT-AOT, Brno-5
Proj No. BHF 6400(81)
Taylor St Br, CBS 439

(Metric)

WELDING PROCEDURE

Pass no.	Electrode size	Welding current: Amperes	Welding current: Volts	Travel speed
	7018			
	1/8 (3.2)	120-170	22-26	
	5/32 (3.9)	120-190	22-26	
	8018			
	1/8 (3.2)	90-160	22-26	
	5/32 (3.9)	130-200	22-26	

Joint detail AWS D1-5 Fillet



Note:
For Tacking and repair welding TO Code -3-27-06

AWS QC 1 PAUL E. GOODALE 02/14/2001 CWI

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

Procedure no. 403
Revision no.
Form III-2

Contractor Casco Bay Steel
Authorized By Paul E. Goodale
Date 4-24-03

02/05/2010 12:59 FAX 2072821179 CASCO BAY STEEL 005

Casco Bay Steel Structures, Inc.

75 Spring Hill Road
Saco, Maine 04072

Phone: (207) 282-7360 Fax: (207) 282-1179

WELDING PROCEDURE SPECIFICATION

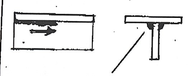
Material specification ASTM 709-Gr 36-50-50W (250-345-345W
Welding process Shielded Metal Arc welding (SMAW)
Manual or machine Manual
Position of welding Overhead (4F)
Filler metal specification ANST/AWS A5.1 - A5.5
Filler metal classification E 7018 - 8018 C1/C3
Flux NA
Shielding gas NA Flow rate NA
Single or multiple pass Single - multiple
Single-or multiple arc Single
Welding current DC
Polarity Positive
Welding progression See Detail
Root treatment Area To be Free of Loose Scale - Slag - Rust or Moisture
Preheat and interpass temperature 3/16(4.8) 50°F (10°) 3/4"(19) To 1 1/2(38) 70°F(20°) 1 1/2(38) To 2 1/2(63) -150°F (65°C)
Postheat temperature NA
Heat Input Min NA Max NA

VT-AOT, BRNO-5
Proj NO. RHF 6400(61)
Taylor ST. Br, CBSS434

(metric) WELDING PROCEDURE

Pass no.	Electrode size	Welding current Amperes	Welding current Volts	Travel speed
	7018			
	1/8 (3.2)	95-160	22-26	
	5/32 (3.9)	120-190	22-26	
	8018			
	1/8 (3.2)	110-150	22-26	
	5/32 (3.9)	130-190	22-26	

AWS D1.5 Joint detail Fillet



NOTE:
For Tacking and repair
Welding To Code 3-27-06

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

Procedure no. 404
Revision no.
Form fit-2

Contractor Casco Bay Steel
Authorized By Paul E. [illegible]
Date 6-3-04

AWS QC 1 PAUL E. [illegible] APPROVED

RAMS
RESUBMIT APPROVED
DATE 6/14/10

02/02/2010 12:59 FAX 2072821179 CASCO BAY STEEL 004

Casco Bay Steel Structures, Inc.

5 Industry Road
South Portland, Maine 04106

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

WELDING PROCEDURE SPECIFICATION

Material specification ASTM 709-Gr 36-50-50W (250-345-345W)
Welding process Shielded Metal Arc Welding (SMAW)
Manual or machine Manual
Position of welding Flat (1F), Horizontal (2F)
Filler metal specification ANSI/AWS A5.1 - A5.5
Filler metal classification E7018 - E8018 C3/G3 - 7028
Flux NA
Shielding gas NA Flow rate NA
Single or multiple pass Single and multiple
Single or multiple arc Single
Welding current AC / DC
Polarity Straight / Reverse
Welding progression
Root treatment meet AWS specification
Preheat and interpass temperature To 3/4(19) 50°(10°) 3/4(19) To 1 1/4(38) 70°(20°) 1 1/4(38) To 2 1/2(63.5) 150°(65°) over 2 1/2(63.5) 225°(110°)
Postheat temperature NA
Heat Input Min NA Max NA

VT-AOT, BY NO-5
Proj NO. BHF 6400(81)
Taylor ST. Br., CBS439

(metric) WELDING PROCEDURE

Pass no.	Electrode size	Welding current Amperes	Welding current Volts	Travel speed	AWS D1.5 Joint detail Fillet
	7018				1F
	1/8 (3.2)	70-170	22-26		
AS	5/32 (3.97)	120-225	22-26	AS	
REQ.	3/16 (4.8)	170-300	24-27	REQ.	3/16 To 3/8 (5 To 10) / 3/8 To 1/2 (10 To 13) / 1/2 To 5/8 (13 To 16)
	8018				
	1/8 (3.2)	90-160	22-26		2F
	5/32 (3.97)	120-225	22-26		
	3/16 (4.8)	180-290	24-27		
	7028				3/16 To 5/16 (5 To 8) / 3/8 (10) / 7/16 To 5/8 (11 To 16)
	5/32 (3.97)	190-290	22-26		
	3/16 (4.8)	210-330	24-27		

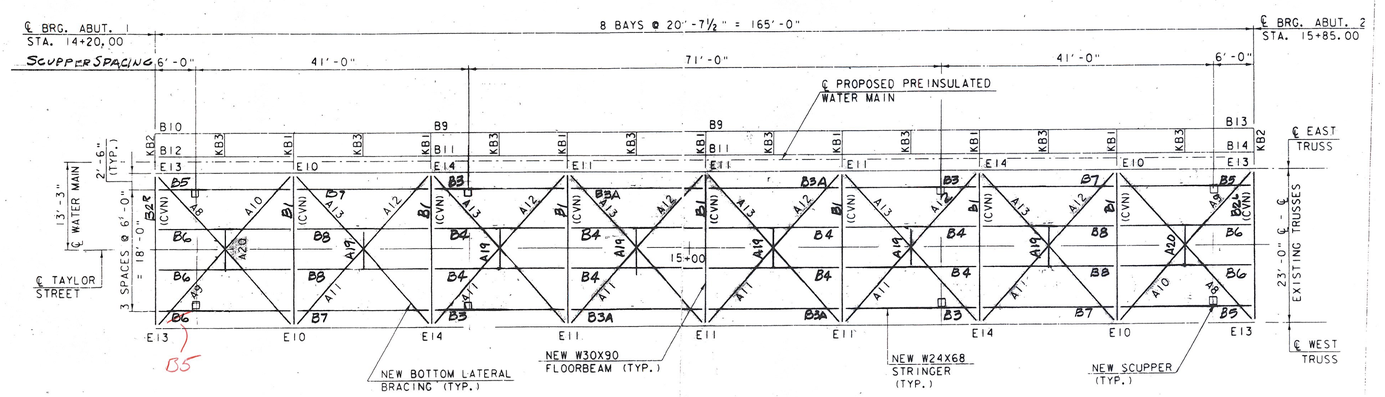
This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in applicable AWS codes or contract specifications

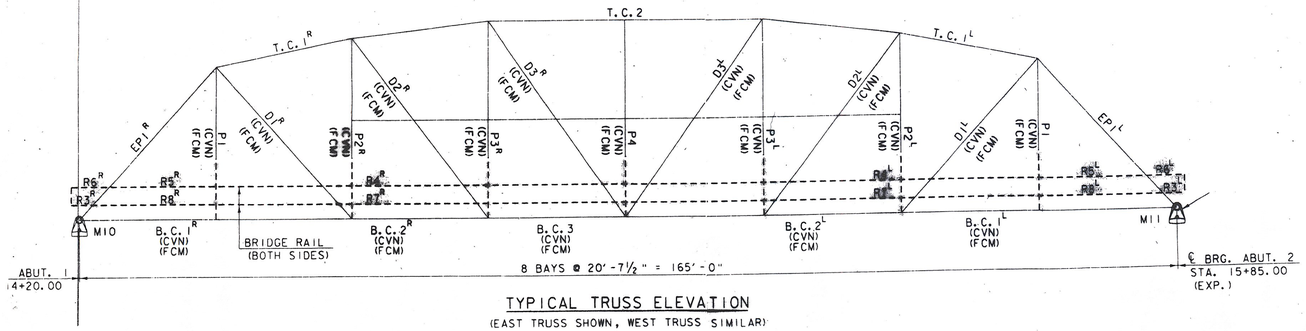
Procedure no. 401
Revision no.
Form III-2

Contractor Casco Bay Steel
Authorized By Paul F. Hodsdale
Date 3/2/00

02/05/2010 12:59 FAX 2072921179 CASCO BAY STEEL 003

JOB NO. 434 | DRG. NO. E1





TYPICAL TRUSS ELEVATION
(EAST TRUSS SHOWN, WEST TRUSS SIMILAR)

LEGEND

——— EXISTING MEMBER TO BE REPLACED UNDER ITEM 506.50, STRUCTURAL STEEL, ROLLED BEAM

- - - - EXISTING MEMBER TO BE REPLACED UNDER ITEM 506.60, STRUCTURAL STEEL

——— EXISTING MEMBER TO REMAIN (CLEAN TO BARE METAL UNDER ITEM 513.41, SURFACE PREPARATION, FIELD AND REPAINT UNDER ITEM 513.30, STRUCTURAL PAINTING, FIELD APPLIED)

RECEIVED
CHA
JAN 27 2010
RESUBMIT APPROVED As Noted
BY DATE 2/23/10

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.
	OUT FOR APPROVAL	1/29/10				
	OUT FOR APPROVAL					
	ISSUED TO SHOP					
	FIELD & OFFICE					

NO.	DIA.	LGT	TYPE	WASHER

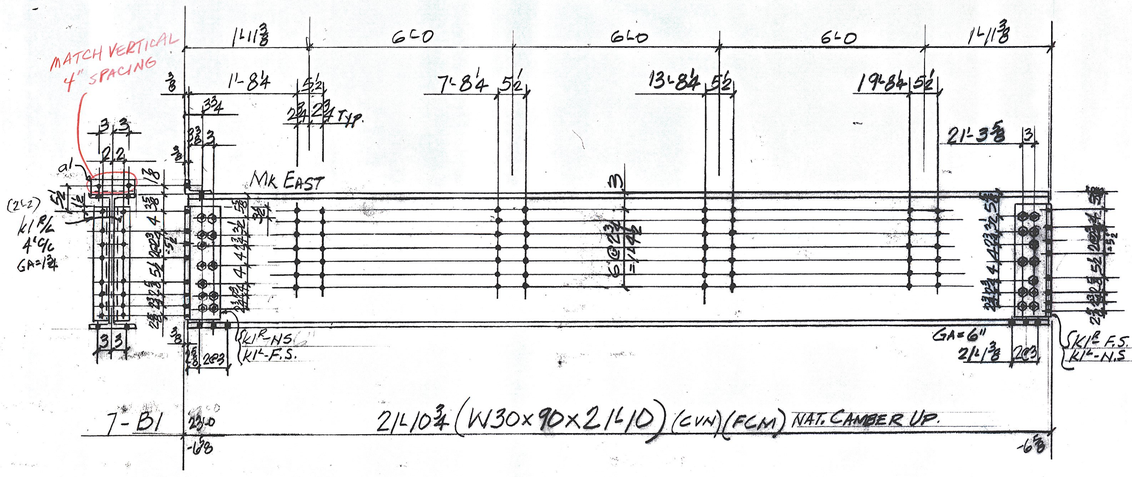
PROJECT NO. BHF-6400 (31) STATE PROJECT NO. BRIDGE NO. 5
MATERIAL A270 Gr.50W-Gr.50D ELECTRODES: — HOLES: AS NOTED SHOP BOLTS:
SURFACE PREP. & PAINT:

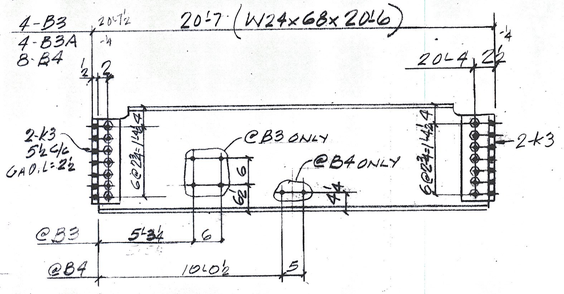
DESCRIPTION: FRAMING PLAN
JOB: FH9-TAYLOR ST.-BRIDGE NO. 5 MONTPELIER, VERMONT.
CUSTOMER: WINTERSET

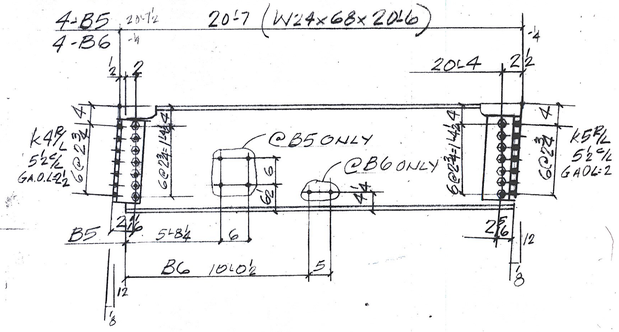
	DRAWN BY	DATE
	JDF	12-09
CHKD BY		
APPROV BY		
Q.A.		

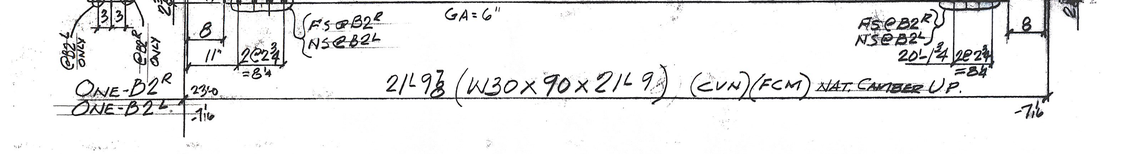
CASCO BAY STEEL STRUCTURES, INC.
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179

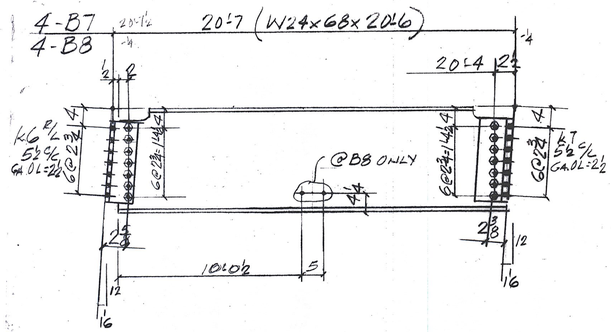
JOB NO. 434 | DRG. NO. E1 | REV. △

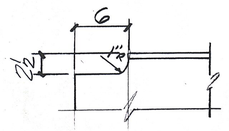












TYP. COPES. B3 THRU B8

RECEIVED CKD CHA COMP
JAN 27 2010
RESUBMIT APPROVED As Noted
BY DATE 2/22/10
W/R 9

ABM INFO PAGE	LINE	NO.	DESCRIPTION	FT	IN	ASSEM. MARK	SHIPPING MARK	REMARKS	WEIGHT
		7	W30x90	21	10		B1	(CVN)(FCM)	
		14	L 8x4x7/16	2	2	K1R			
		14	Do	2	2	K1L			
		7	L 5x3 1/2x3/8		8	a1			
		168	7/8" ø A325 - GALV.		2 3/4	SHOP		W/N & W.	
		14	Do		2 3/4	Do			
		1	W30x90	21	9		B2R	(CVN)(FCM)	
		1	Do	21	9		B2L	(CVN)(FCM)	
		8	L 5x3x7/16	2	1	K2			
		2	L 5x3 1/2x3/8		8	a1			
		32	7/8" ø A325 - GALV		2 3/4	SHOP			
		4	Do		2 3/4	Do			
		4	W24x68	20	6		B3		
		4	Do	20	6		B3A		
		8	Do	20	6		B4		
		64	L 6x4x7/16	1	7 1/2	K3			
		224	7/8" ø A325 - GALV.		2 3/4	SHOP		W/N & W.	
		4	L 6x4x7/16	2	2	K4			
		4	W24x68	20	6	B6	B5		
		4	Do	20	6		B6		
		16	L 6x4x7/16	1	7 1/2	K4R			
		16	Do	1	9 1/2	K5R		W/N & W	
		112	7/8" ø A325 - GALV.		2 3/4	SHOP		W/N & W.	
		4	W24x68	20	6		B7		
		4	Do	20	6		B8		
		16	L 6x4x7/16	1	7 1/2	K6R			
		16	Do	1	7 1/2	K7R			
		112	7/8" ø A325 - GALV.		2 3/4	SHOP		W/N & W.	
FIELD BOLTS							FIEL		
		76	7/8" ø A325 - GALV		3 1/2		FIELD	B2R-TO-B2L POST	
		126	7/8" ø A325 - GALV.		2 3/4		FIELD	B1 TO TRUSS (TOP)	
		112	Do		3		Do	B1 TO TRUSS (BOT.)	
		112	Do		2 3/4		Do	B5-K TO B2R/L	
		392	Do		2 3/4		Do	B3-B3A-B4 B7-B8 TO B1	

PAY ITEM - 506.50

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	OUT FOR APPROVAL	1/29/10									
	OUT FOR APPROVAL										
	ISSUED TO SHOP										
	FIELD & OFFICE										

PROJECT NO. BHF-6400(21) STATE PROJECT NO. BRIDGE NO. 5

MATERIAL: A270 GRADE 36 MODIFIED | ELECTRODES: — | HOLES: 1 1/16" ø U.N. | SHOP BOLTS: 7/8" ø A325 GALV

SURFACE PREP. & PAINT:
BLAST CLEAN - SP10
CARBOLINE #859 - ORGANIC ZINC PRIMER
3 TO 5 DFT.

DESCRIPTION: FLOORBEAMS & STRINGERS | DRAWN BY: JPF | DATE: 12-09

JOB: TH9 - TAYLOR ST. - BRIDGE NO. 5
MONTPELIER, VERMONT

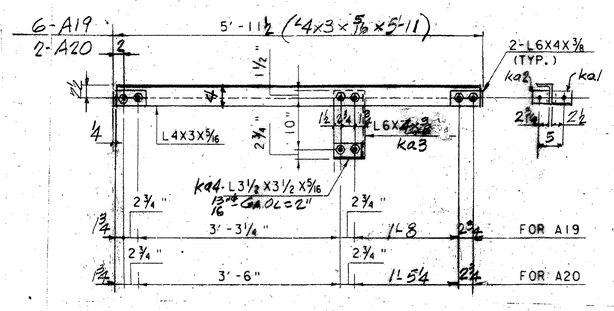
CHKD BY: CR
APPROV BY:
Q.A.

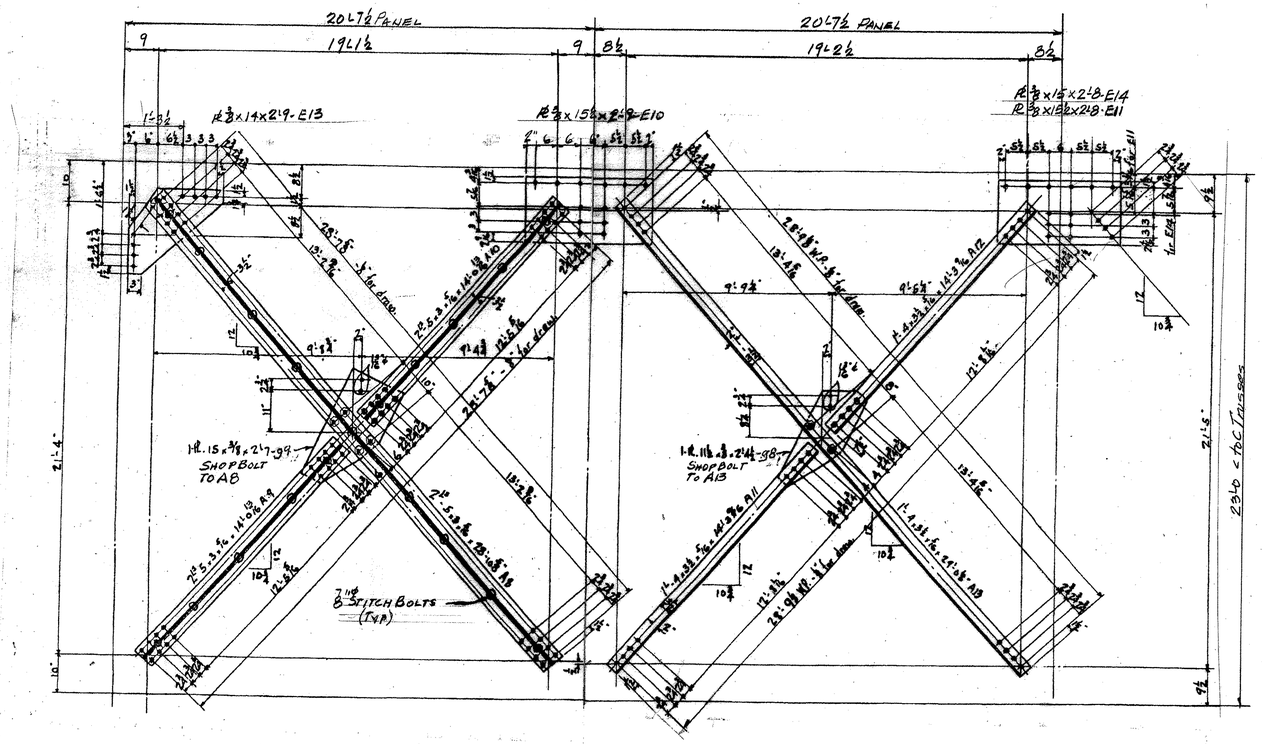
CUSTOMER: WINTERSET

CASCO BAY STEEL STRUCTURES, INC.
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7380 FAX. (207) 282-1179

JOB NO. 434 | DRG. NO. S1 | REV.

1" = 1'-0





2-DIAGONALS - A8
2- DO - A9
2- DO - A10
4- PLATES - E13

6-DIAGONALS - A11
6- DO - A12
6- DO - A13
4- PLATES - E10
6- DO - E11
4- DO - E14

BRACING TO GUSSETS
A19&A20 TO STRINGERS & GUSSETS TO W30 FLR BMS
GUSSETS TO TRUSSES

SHOP BILL

JOB NO. 434 DRG. NO. S2

ABM INFO PAGE	LINE	NO.	DESCRIPTION	FT	IN	ASSEM. MARK	SHIPPING MARK	REMARKS	WEIGHT
		2	L 5x3x5/16	28	10⅓		A8		
		2	DO	14	0⅛		A9		
		2	DO	14	08		A10		
		32	7/8" A325-GALV		2	SHOP		W/NEW	
		2	PL 3/8x15	2	9	99	E4		
		4	PL 3/8x14	2	9		E13		
		6	L 4x3½x5/16	29	0⅓		A11		
		6	DO	14	3 9/16		A12		
		6	DO	14	3 9/16		A13		
		4	PL 3/8x15½	2	9		E10		
		6	DO	2	8		E11		
		4	PL 3/8x15	2	8		E14		
		6	6	PL 3/8x11½	2	4½	98	G8	
		12	7/8" A325-GALV.		2	SHOP		W/NEW	
		6	L 4x3x5/16	5	11		A19		
		2	DO	5	11		A20		
		16	L 6x4x3/8		3	ka1			
		16	DO		3	ka2			
		8	DO	1	1	ka3			
		8	L 5½x3½x5/16		5¾	ka4			
		32	7/8" A325-GALV		2¼	SHOP		W/NEW	
		32	DO		2	DO		DO	
	FIELD BOLTS								
		240	7/8" A325-GALV.		2			W/NEW	
		132	DO		24			DO	
		100	DO		22			W/HARD. WASH.	

PAY ITEM 506.30

OUT FOR APPROVAL	1/20/10									
OUT FOR APPROVAL										
ISSUED TO SHOP										
FIELD & OFFICE										

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER

PROJECT NO. BHF-6400(31) STATE PROJECT NO. BRIDGE NO. 5

MATERIAL: A270 M A270M-Gr250 ELECTRODES: — HOLES: 13/16 Ø U.N. SHOP BOLTS: 7/8 Ø A325-GALV

SURFACE PREP. & PAINT:

BLAST CLEAN - SP10

CARBOLINE #859 - ORGANIC ZINC PRIMER 3.0 - DFT

RECEIVED JAN 27 2010 CHKD

RESUBMIT ____ APPROVED ✓

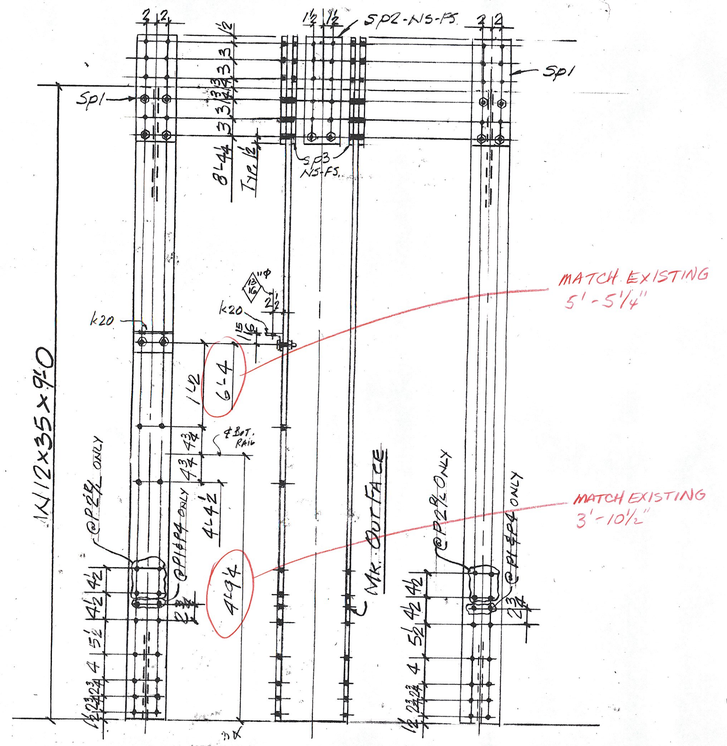
BY W/ B. SJ DATE 2/23/10

DESCRIPTION: BRACING	DRAWN BY	DATE
JOB: TH9 - TAYLOR ST. - BRIDGE #5 MONTPELIER, VERMONT	JPF	12-09
	CHKD BY	
	CR	
	APPROV BY	
	Q.A.	
CUSTOMER: WINTERSET		

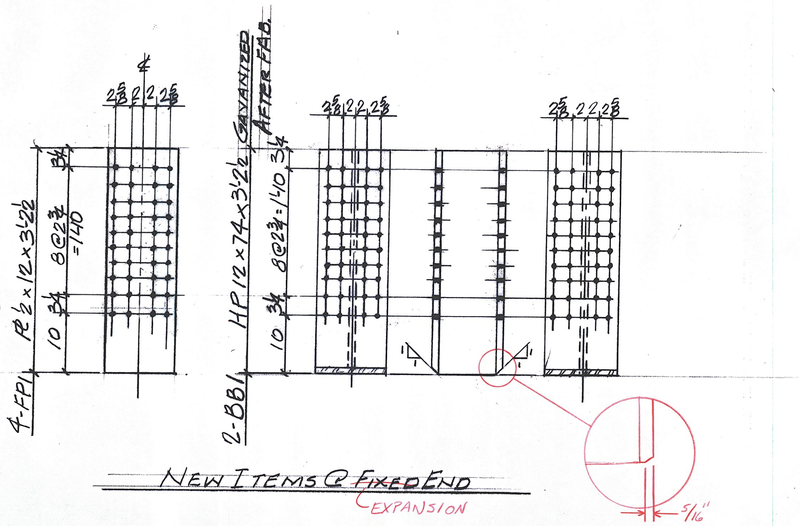
CASCO BAY STEEL STRUCTURES, INC.
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179

JOB NO. 434 DRG. NO. S2 REV. △

1" = 1'-0"



P1-4-REQ'D. AS NOTED.
P2R-2-REQ'D.-AS NOTED
P2L-2-REQ'D-AS NOTED.
P3R-2-REQ'D-
P3L-2-REQ'D.
P4-2-REQ'D-AS NOTED.



NEW ITEMS @ FIXED END EXPANSION

IC BOLTS

SHOP BILL

JOB NO. 434 DRG. NO. 53

PAGE	LINE	NO.	DESCRIPTION	FT	IN	ASSEM. MARK	SHIPPING MARK	REMARKS	WEIGHT
		4	W12x35	9	0		P1	(CVN)	(FCM)
		2		9	0		P2R	(CVN)	(FCM)
		2		9	0		P2L	(CVN)	(FCM)
		2		9	0		P3R	(CVN)	(FCM)
		2		9	0		P3L	(CVN)	(FCM)
		2	W12x35	9	0		P4	(CVN)	(FCM)
		28	PL ½ x 6½	1	6½	SP1		(CVN)	
		28	PL ½ x 6	1	6½	SP2		(CVN)	
		56	PL ½ x 2½	1	6½	SP3		(CVN)	
		14	L-3½x3½x5/16		6½	K20			
		28	⅞"ΦA325-GALV. W/HHW.		2¾	SHOP			
		112	DO		3	DO		@FLG	
		18	DO		2¾	DO		@WEB.	
		144	⅞"ΦA325-GALV		3		FIELD	@FLG	
		190	DO		2¾		DO	@WEB	
		4	PL ½ x 12	3	2½		FP1		
		2	HP12x74	3	2½		BB1	GALV.	
		124	⅞"ΦA325-GALV.		3		FIELD	W/HHW.	

PAY ITEM 506.60

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.
	OUT FOR APPROVAL	1/24/10				
	OUT FOR APPROVAL					
	ISSUED TO SHOP					
	FIELD & OFFICE					

NO.	DIA.	LGT	TYPE	WASHER

PROJECT NO. BHF-6400(31) STATE PROJECT NO. BRIDGE NO. 5

MATERIAL: A270 M270 GR 250 ELECTRODES: — HOLES: 15/16 ΦU.N SHOP BOLTS: ⅞"ΦA325-TC (GALV)

SURFACE PREP. & PAINT:
BLAST CLEAN - SP10
CARBOLINE #859 ORGANIC ZINK PRIMER 3 to 5 DFT.
UNLESS NOTED - GALV -

RECEIVED JAN 27 2010 RESUBMIT ____ APPROVED As Noted BY [illegible] DATE 2/23/10

DESCRIPTION: NEW TRUSS VERTICALS
JOB: TH9 - TAYLOR ST. - BRIDGE NO. 5 MONTPELIER, VERMONT.
CUSTOMER: WINTERSET

DRAWN BY: JPF DATE: 12-09
CHKD BY: CR
APPROV BY:
Q.A.

CASCO BAY STEEL STRUCTURES, INC.
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7380 FAX. (207) 282-1179

JOB NO. 434 DRG. NO. 53 REV. Δ

1" = 1'-0

VERMONT

State of Vermont
PDD/Structures Design Section
National Life Building – Drawer 33
Montpelier, VT 05633-5001
www.aot.state.vt.us

Agency of Transportation

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

May 4, 2010

Casco Bay Steel Structures, Inc.
75 Spring Hill Rd
Saco, Me 04072

Project Name: Montpelier **Project #: BHF 6400(31)**

Structure Identification: Bridge 5 over the Winooski River

The following Miscellaneous Structural Steel Drawings for the above project (Vendor's Job #434) transmitted with your letter dated 4/19/2010 have been reviewed and are being returned herewith.

The sheets are approved or approved as noted (note comments in red).

Please make appropriate changes as indicated on these "as noted" or "approved" drawings and submit white prints for our use in the record plans for this project. Also, please submit extended weights for our approval. **Partial payment for this item will be withheld until extended weights are received and approved.**

You must provide notice to our fabrication inspector, Jeff Clark, as to the date fabrication represented by these drawings will begin. Jeff must receive and acknowledge your notice at least seven days prior to that date, as per Specification 506.03. You may contact Jeff by phone at (802)828-0044 or email at jeff.clark@state.vt.us. Any material fabricated prior to the notification date is subject to rejection without further cause.

Sincerely,

Wayne Symonds
Project Manager

Attachments

cc: [x] Resident Engineer, Bob Suckert
[x] Shop Inspector
[x] Contractor, Winterset
[x] Design Consultant, CHA
[x] Files

VTrans Working to Get You There

CHA

April 27, 2010

Mr. Wayne Symonds, P.E.
Structures Project Manager
State of Vermont
Structures Design Section
One National Life Drive
Montpelier, VT 05633-5001

Re: Retainer Contract #0284599; BHF 6400(31); Montpelier Taylor Street Bridge Rehabilitation Phase B; CHA Project No: 14506

Dear Mr. Symonds:

CHA has reviewed the Miscellaneous Steel Fabrication Drawings for the above mentioned project and is recommending the submittal be 'Approved as Noted'.

Attached please find the following:

- One copy of the Miscellaneous Steel Fabrication Drawings

Please do not hesitate to contact me directly at (860) 257-4557 if you have any questions or require additional information.

Sincerely,

David M. D'Amato, P.E.
Associate

K:\14506\Corr\Letters\Ltr 021.docx

2139 Silas Deane Highway, Suite 212, Rocky Hill, CT 06067-2336
T 860.257.4557 ⊙ F 860.257.7514 ⊙ www.chacompanies.com

CASCO BAY STEEL STRUCTURES, INC.
75 Spring Hill Rd.
SACO, MAINE 04072

(207) 282-7360 FAX (207) 282-1179

LETTER OF TRANSMITTAL

DATE	JOB NO.
4-6-10	434
ATTENTION: CALEN	
RE: MONTPELIER BHF 6400 (31) TAYLOR STREET BRIDGE No. 5 MONTPELIER, VT.	

TO VHB/INTERSET

WE ARE SENDING YOU ☑ Attached ☐ Under separate cover via _____ the following items:

☑ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change order ☐ _____

COPIES	DATE	NO.	DESCRIPTION
7			BRIDGE RAIL #S4 RESUBMITTING ⚠1
7			SKETCH M1-A ADDED POST POWER STOP

THESE ARE TRANSMITTED as checked below:

☑ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval
☐ For your use ☐ Approved as noted ☐ Submit _____ copies for distribution
☐ As requested ☐ Returned for corrections ☐ Return _____ corrected prints
☐ For review and comment ☐ _____
☐ FOR BIDS DUE _____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS _____

RECEIVED
APR 19 2010

CK'D BY _____ ORD BY _____

For Approval ~ 7 Copies

RESUBMIT _____ APPROVED _____
BY _____ DATE _____

COPY TO _____

SIGNED: _____

CASCO BAY STEEL STRUCTURES, INC.
75 Spring Hill Rd.
SACO, MAINE 04072

(207) 282-7360 FAX (207) 282-1179

LETTER OF TRANSMITTAL

DATE 4-19-10	JOB NO. 434
ATTENTION Glen	
RE: Montpelier BHF 6400 (31) Taylor Street Bridge No. 5 Montpelier, VT.	

TO Wintergreen

WE ARE SENDING YOU ☑ Attached ☐ Under separate cover via _____ the following items:

☑ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications

☐ Copy of letter ☐ Change order ☐ _____

COPIES	DATE	NO.	DESCRIPTION
7			S4 ~ Updated Slot Sizes
7			S4A ~ Revised R3L + R6L Due To Tight Radius.
1			Weld Procedure

THESE ARE TRANSMITTED as checked below:

☑ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval

☐ For your use ☐ Approved as noted ☐ Submit _____ copies for distribution

☐ As requested ☐ Returned for corrections ☐ Return _____ corrected prints

☐ For review and comment ☐ _____

☐ FOR BIDS DUE _____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS _____

For Approval ~ 7 Copies

RECEIVED
APR 22 2010
BY

RESUBMIT _____ AS noted
BY _____ DATE

TO _____

SIGNED: _____

WINTERSET INCORPORATED
P.O BOX 968
LYNDONVILLE, VERMONT 05851

(802) 626-9330 FAX (802) 626-8933

LETTER OF TRANSMITTAL

DATE 4-20-10 | JOB NO. 6402 (31)
ATTENTION WAYNE SYMONDS
RE: MANCHESTER, VT
TAYLOR STREET
BRIDGE #5

TO √TRANS

WE ARE SENDING YOU ☑ Attached ☐ Under separate cover via _____ the following items:

☑ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change order ☐ _____

COPIES	DATE	NO.	DESCRIPTION
1			CASCO BAY TRANSMITAL
16			S4 - UPDATED SLOT SIZES
16			S4A REVISED R3L & R6L DUE TO TIGHT RADIUS
1			WELD PROCEDURE

THESE ARE TRANSMITTED as checked below:

☑ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval
☐ For your use ☐ Approved as noted ☐ Submit _____ copies for distribution
☐ As requested ☐ Returned for corrections ☐ Return _____ corrected prints
☐ For review and comment ☐ _____
☐ FOR BIDS DUE _____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS _____

RECEIVED
CK'D BY _____ OK'D BY _____
APR 2 2 2010
RESUBMIT _____ APPROVED _____
BY _____ DATE _____

COPY TO FILE

SIGNED: ALEX THOMPSON

If enclosures are not as noted, kindly notify us at once.

Casco Bay Steel Structures, Inc.

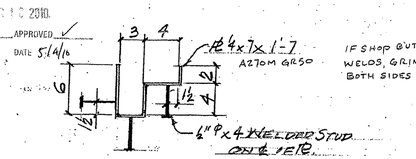
TELEPHONE (207) 282-7360 | 75 Spring Hill Road, Saco, Maine 04072 | FAX (207) 282-1179

CUSTOMER: WINTERSET	A/E:	
PROJECT: TH-9 TAYLOR STREET BRIDGE #5 MONTPELIER, VERMONT	DATE: 4-5-10	SKETCH NO.: M1-A
	JOB NO.: 434	S.O. NO.:
	DRAWN BY: J.P.F.	WANTED:
	PAINT:	

DELIVERY ARRANGEMENTS:

FROM APPROVAL COMMENT ON SHOP DWG. # M1

RECEIVED
CHK'D BY CHA
APR 16 2010
RESUBMIT ____ APPROVED ✓
BY WJ
DATE 5/14/10



☒ NO EXCEPTIONS TAKEN ☐ MAKE CORRECTIONS NOTED
☐ REJECTED ☐ PRESS & RESUBMIT ☐ SUBMIT SPECIFIED ITEMS

CHECKING IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE CONTRACT DOCUMENTS; ANY ITEMS SPECIFICALLY NOTED AND CORRECTED SHALL BE SUBJECT TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE. FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES, AND THE SATISFACTORY PERFORMANCE OF HIS WORK.

R.E.O'D. @ INTERSECTING STATE RAIL POSTS
GALVANIZE AFTER FAB.

CLOUGH HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS
LANDSCAPE ARCHITECTS

DATE 5/17/10 BY

UNLESS NOTED OTHERWISE ALL MATERIAL MUST BE ASTM-A36 OR BETTER — HOLES: Ø DIA. U.N.O.

SHIP MK	QTY	MARK	DESCRIPTION	LENGTH		WT	REMARKS
CP1	16		PL ¼ x 7	1	7		BEND
	48	WS	¼" WELDED STUD	0	4		

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

WELDING PROCEDURE SPECIFICATION

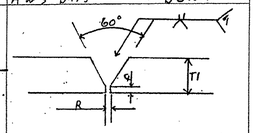
Material specification A36-A572-A588 (ASTM 709 Gr 36-50-50W
Welding process Flux Cored Arc welding (FCAW)
Manual or machine Semi-Auto
Position of welding Flat + H
Filler metal specification AWS A5-20
Filler metal classification E71T-1
Flux NA
Shielding gas 75% AR 25% CO_2 Flow rate 40 ±5
Single or multiple pass Both Electrode stick out 3/4 ± 1/4
Single or multiple arc Single
Welding current Direct Current
Polarity Reverse Electrode positive
Welding progression See Detail
Root treatment weld side #1, backgouge side #2 + grind - then weld
Preheat and interpass temperature To 3/4-50° F (10-10°) + 3/4 To 1 1/2-70° F (+19 To 38-20°)
Postheat temperature NA
Heat Input Min NA Max NA

BRIDGE No. 5
MONTPELIER, VT.
CBSS Job # 434

WELDING PROCEDURE

Pass no.	Electrode size	Welding current Amperes	Welding current Volts	Travel speed
	1/16	280 ±28	25 ±1.7	11 ±1.1
	1.6	280 ±28	25 ±1.7	280 ±28

AWS D1.5 Joint detail B U2-F



T1 - UNLIMITED
F - 0 To 1/8 / 0 To 3.2mm
R - 0 To 1/8 / 0 To 3.2mm

1-Grind as required

VTRANS RECEIVED APR 22 2003

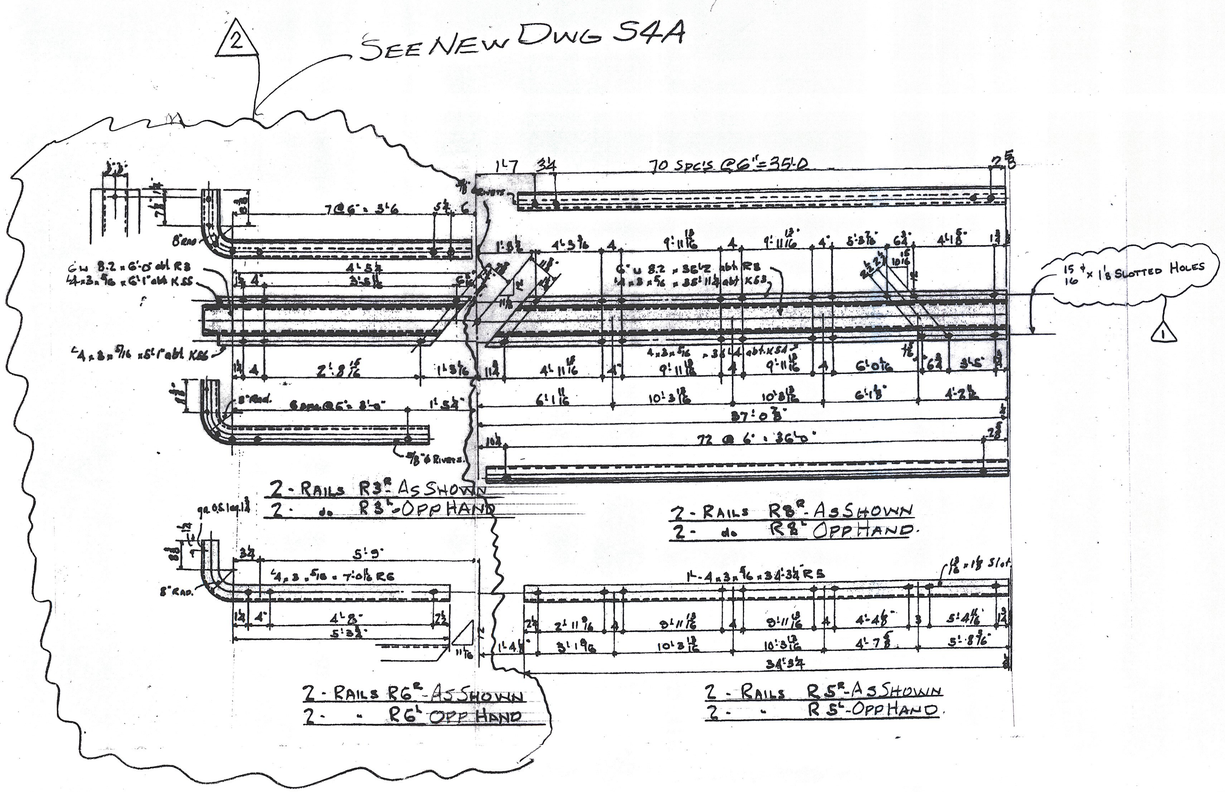
CK'D BY DIED BY JEVC
RESUBMIT APPROVED
BY DATE 04/24/03

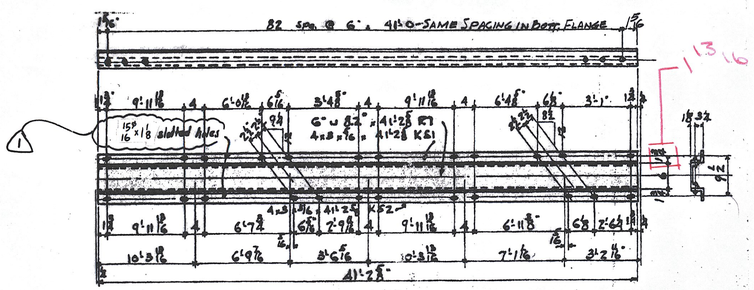
This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in applicable A.W.S. codes or contract specifications

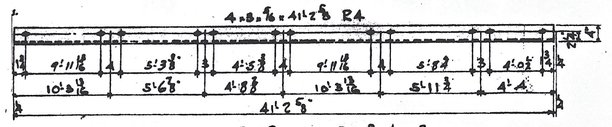
Procedure no. 104
Revision no.
Form III-2

AWS - QC1
Paul E. Goodale
83102201
C.W.I.

Contractor Casco Bay Steel
Authorized By Paul E. Goodale
Date 2/2/99







13/16 PER RFI #001

NO EXCEPTIONS TAKEN ☒ MAKE CORRECTIONS NOTED
☐ REJECTED ☐ REVISE & RESUBMIT
☐ SUBMIT SPECIFIED ITEM

CHECKING IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE. FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES AND THE SATISFACTORY PERFORMANCE OF HIS WORK.

CLOUGH HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS

DATE 4/29/10 BY

RECEIVED
CK'D BY CHN DIV BY
APR 30 2010
RESUBMIT APPROVED As Noted
BY WPB DATE 5/4/10

SHOP BILL

JOB NO. 434 DRG. NO. S4

ABM INFO PAGE	LINE	NO.	DESCRIPTION	FT	IN	ASSEM. MARK	SHIPPING MARK	REMARKS	WEIGHT
		2	L 4 x 3 x 5/16	41	2 3/8		R4R		
		2	Do	41	2 3/8		R4L		
		2	Do	34	3 4		R5R		
		2	Do	34	3 4		R5L		
		2	[illegible]	41	2 3/8		R6R	R6-L	
		2	[illegible]	41	2 3/8		R6L	R6-R	
		2	C6 x 8.2	41	2 3/8		R7R		
		2	Do	41	2 3/8		R7L		
		4	L 4 x 3 x 5/16	41	2 3/8	KS1 1/2			
		4	Do	41	2 3/8	KS2 1/2			
		2	4 C6 x 8.2	36	2 1/2		R8R		
		2	4 Do	36	2 1/2		R8L		
		4	L 4 x 3 x 5/16	35	11 4 1/2	KS3 1/2			
		4	Do	36	4 1/2	KS4			
		2	4 C6 x 8.2	6	0 1/2		R9R	R9-L	
		2	4 Do	6	0 1/2		R9L	R9-R	
		4	L 4 x 3 x 5/16	6	1 1/2	KS5		R9	
		4	Do	6	1 1/2	KS6		R9	
		1332	3/4" A325 TC BOLTS (GALV)	2		SHOP		W/WASHER, BEVEL WASHER	
			FIELD BOLTS						
R3-R7-R8 TO TRUSS		200	3/4" A325 TC BOLTS (GALV)	2	2 1/2		FIELD	W/2 HDN WASH	1
R4-R5-R6 TO TRUSS		100	Do	1	8 1/2		Do	Do	

PAY ITEM 506.60

APPROVED: 2-23-10

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.
	OUT FOR APPROVAL	1/21/10				
	OUT FOR APPROVAL	4/19/10				
	ISSUED TO SHOP					
	FIELD & OFFICE					
2	REMOVED LT END SEE DWG S4A	4-17-10				
1	SLOT SIDE & LENGTH	4/26/10				

NO.	DIA.	LGT	TYPE	WASHER

PROJECT NO. BHF 6400(31) STATE PROJECT NO.

MATERIAL: AASHTO M270 GR 50 (ASTM A709) ELECTRODES: — HOLES: AS NOTED SHOP BOLTS: 3/4" A325-TC GALV.

SURFACE PREP. & PAINT:
BLAST CLEAN - SP10
CARBOLINE #859 ORGANIC ZINC PRIMER 3 TO 5 DFT.

DESCRIPTION: BRIDGE RAIL — DRAWN BY JFF — DATE 12-09

JOB: TH9 - TAYLOR ST. BRIDGE #5, MONTPELIER, VERMONT — CHK'D BY CR — APPROV BY — Q.A. —

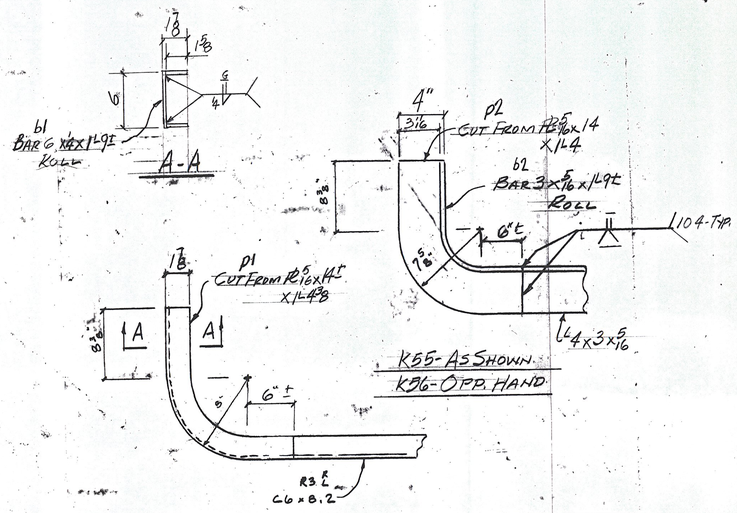
CUSTOMER: WINTERSET

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

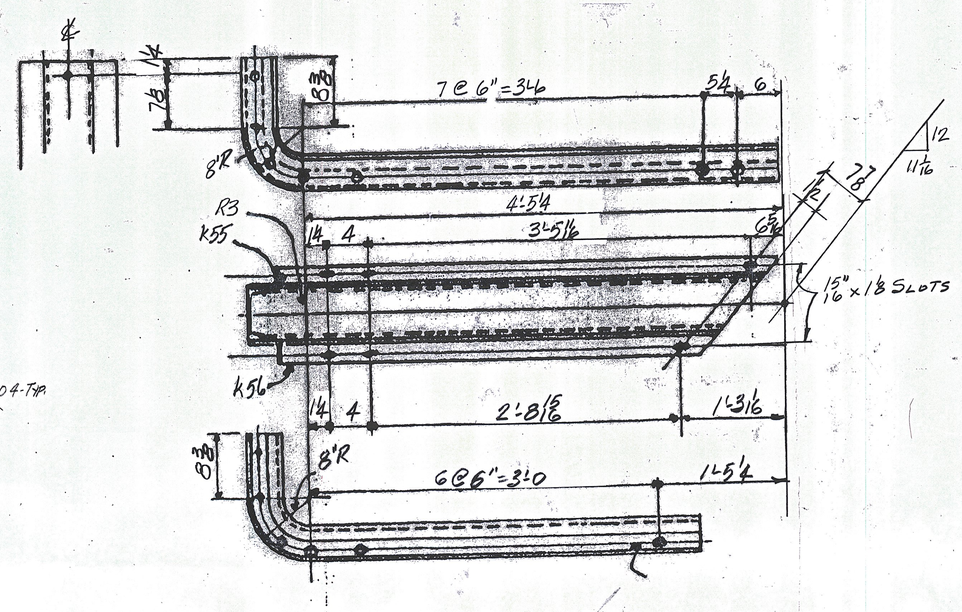
JOB NO. 434 DRG. NO. S4 REV. 1

1" = 1'-0

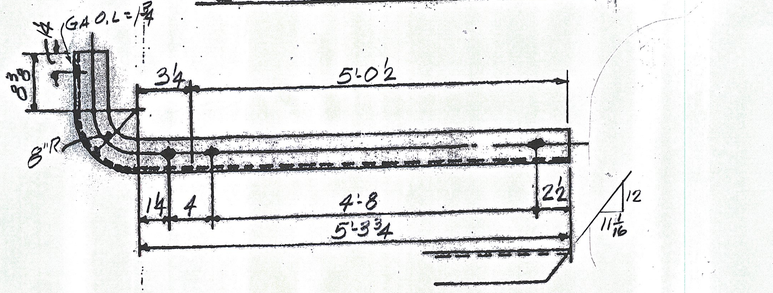
© 23 27 28



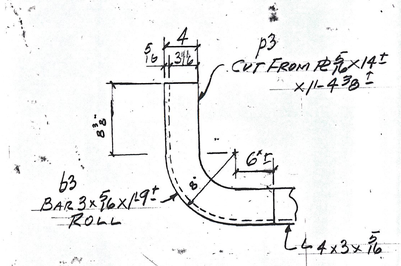
K55 - AS SHOWN
K56 - OPP. HAND



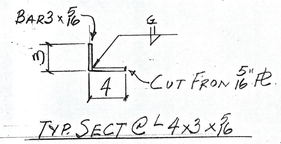
2 - RAILS R3R AS SHOWN
2 " R3L - OPP HAND



2 - RAILS R6R - AS SHOWN
2 " R6L OPP HAND



R6R - AS SHOWN
R6L - OPP. HAND



TYP. SECT @ L 4 X 3 X ⅝

ABM INFO		SHOP BILL					JOB NO. 434	DRG. NO. S4A
PAGE	LINE	NO.	DESCRIPTION	FT	IN	ASSEM. MARK	SHIPPING MARK	REMARKS	WEIGHT
		2	C6 x 8.2	4	0±		K3R		
		2	DO	4	0±		K3L		
		4	BAR 6 x ⅜	1	9±	b1			
		8	PL ⅝ x 14±	1	4⅜	p1			
		4	L 4 x 3 x ⅝	4	0±	K55⅝			
		4	DO	3	0±	K56⅝			
		8	BAR 3 x ⅝	1	9±	b2			
		8	PL ⅝ x 14	1	4	p2			
		2	L 4 x 3 x ⅝	4	10±		R6R		
		2	DO	4	10±		R6L		
		4	BAR 3 x ⅝	1	9±	b3			
		4	PL ⅝ x 14±	1	4⅜±	p3			

FOR SHOP & FIELD BOLTS SEE DWG S4

PAY ITEM 506.60

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	OUT FOR APPROVAL	4/19/10									
	OUT FOR APPROVAL										
	ISSUED TO SHOP										
	FIELD & OFFICE										

PROJECT NO. BHF G400(31) STATE PROJECT NO.

MATERIAL: A270 GRADE 50W-50S50 ELECTRODES: HOLES: AS NOTED. SHOP BOLTS: ⅞" ø A325-TC GALV.

SURFACE PREP. & PAINT:
BLAST CLEAN - SP10
CARBOLINE #859 ORGANIC ZINC PRIMER 3 TO 5 DFT

DESCRIPTION: BRIDGE RAIL

JOB: TH9 - TAYLOR ST. BRIDGE #5 MONTPELIER, VERMONT

CUSTOMER: WINTERSET

DRAWN BY	DATE
JPF	4-10
CHKD BY	
APPROV BY	
Q.A.	

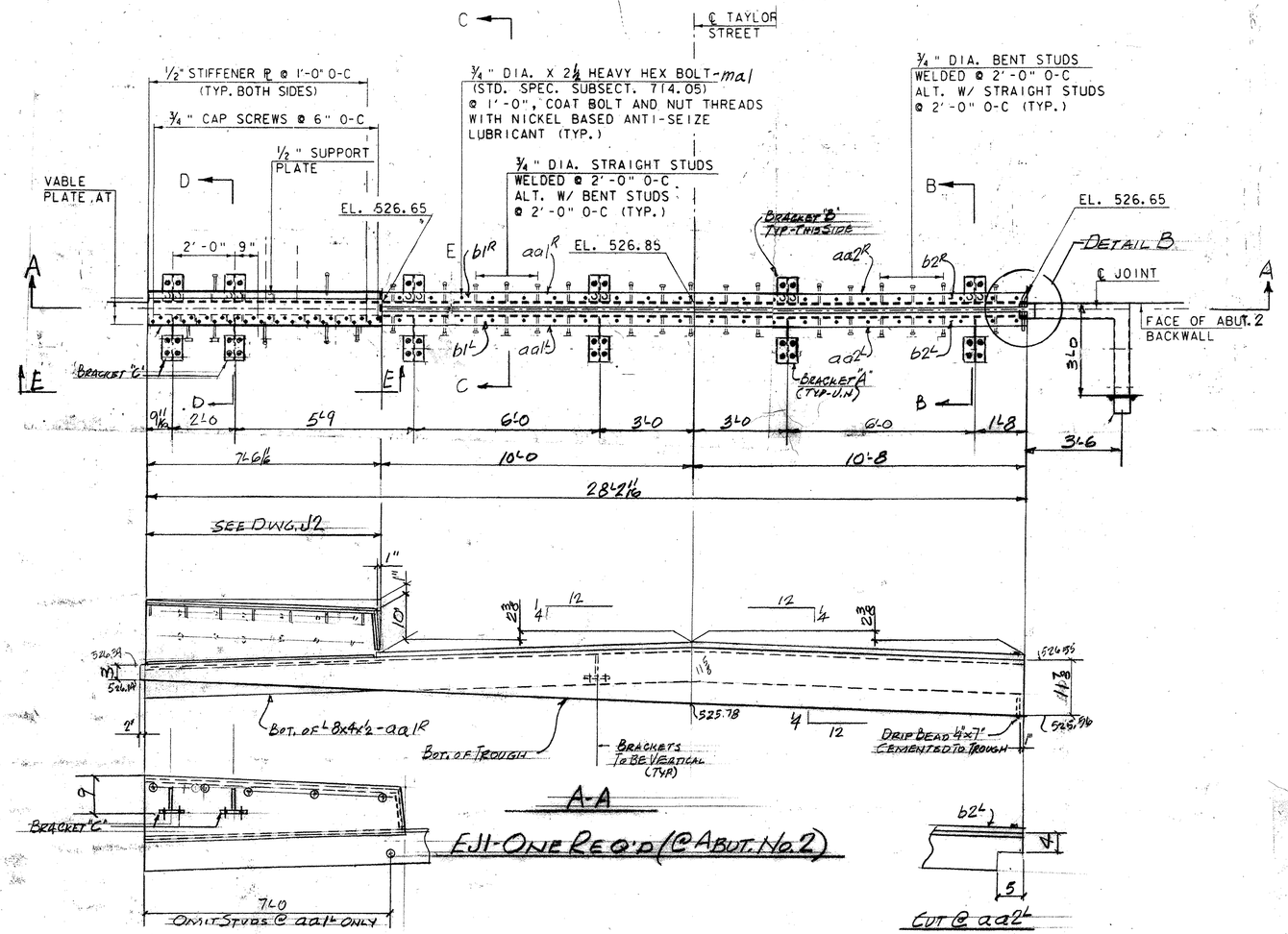
JOB NO.	DRG. NO.
434	S4A
	REV. △

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

1" = 1'-0

☒ NO EXCEPTIONS TAKEN ☐ MAKE CORRECTIONS NOTED
☐ REJECTED ☐ REVISE & RESUBMIT
☐ SUBMIT SPECIFIED ITEM
CHECKING IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE. FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES AND THE SATISFACTORY PERFORMANCE OF HIS WORK.
CLOUGH HARBOUR & ASSOCIATES LLP ENGINEERS, SURVEYORS, PLANNERS, LANDSCAPE ARCHITECTS
DATE 4/21/10 BY

RECEIVED
CK'D BY CHA CHK'D BY
APR 22 2010
RESUBMIT APPROVED ✓
BY WYB DATE 5/4/10



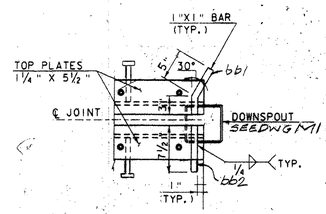
A-A

EJ1-ONE REQ'D (@ ABUT. No. 2)

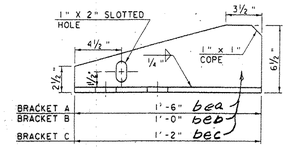
E-E

WORK THIS DWG. WITH DWG. J2

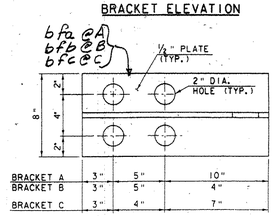
PRIOR TO GALV. GRIND ALL EDGES & CORNERS TO 1/16 RADIUS.



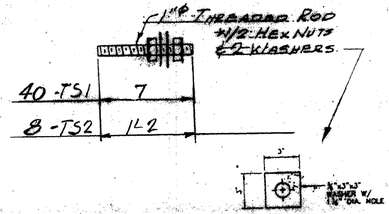
DET. B



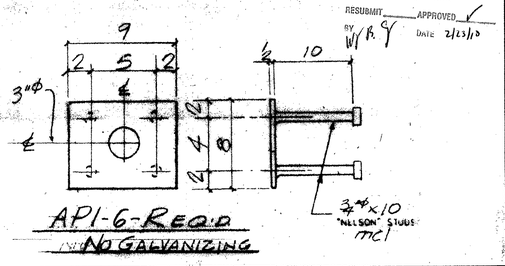
BRACKET ELEVATION



BRACKET PLAN

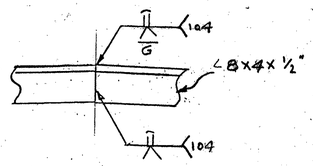


WASHER FOR BRACKET W1

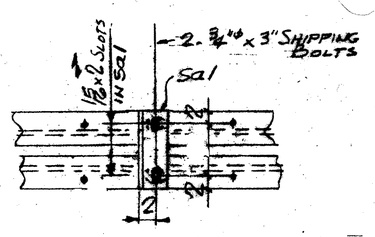


API-6-REQ'D

NO GALVANIZING



WELDING DETAIL



SHIPPING DEVICE SPACED 5'0" OC. MAX.

ABM INFO PAGE	LINE	NO.	DESCRIPTION	FT	IN	ASSEM. MARK	SHIPPING MARK	REMARKS	WEIGHT
		1	EXP. JOINT	28	3±		EJ1		—
		1	L 8x4x1/2	17	6 1/16	aa1R			
		1	Do	17	6 1/16	aa1L			
		1	Do	10	8	aa2R			
		1	Do	10	8	aa2L			
		2	BAR 5 1/2 x 1/4	10	1	b1R			
		2	Do	10	8	b2R			
		4	PL 1/2 x 6	1	6	bea			
		6	Do	1	0	beb			
		2	Do	1	2	bec			
		4	PL 1/2 x 8	1	6	bfa			
		6	Do	1	0	bfb			
		2	Do	1	2	bfc			
		42	3/4"ϕ HEX BOLTS		2 1/2	ma1		ST'D SPEC SUBSECT 714.05	
		40	3/4"ϕ ANC STUDS		10	mc1			
		1	BAR 1x1		8	bb1		BEND	
		1	Do		7 1/2	bb2			
		1	PREFORMED FABRIC 3/32" x 3 3/4"	30	0±	mf1		ST'D SPEC SUBSECT 707.07	
		2	BUTYL RUBBER 1/16 x 3	30	0±	mg1		SUBSECT 707.12	
	TS1	40	1"ϕ THREADED ROD		7		TS1	SUBSECT 714.06	
	TS2	8	Do	1	2		TS2	Do	
		96	1"ϕ HEX NUTS				FIELD		
		96	PL 3/8 x 3		3	W	W1	PL WASH	
		6	PL 1/2 x 8		9		API	NO GALV.	
		24	3/4"ϕ ANC STUDS		10	mc1			
		6	L 4x4x1/2	1	0 3/4	SA1			
		12	3/4"ϕ BOLTS		3	SHOP			
			SIDEWALK ITEMS - SEE DWG J2						
		1	PL 1/2 x 11	7	5 1/2	SP1			
		1	PL 1/4 X 94		11	SP1a			
		2	PL 1/2 x 5	7	5 1/2	SP2			
		2	Do		8 3/4	SP2a			
		2	PL 1/2 x 14 5/8	7	6 1/16	SP3			
		8	PL 1/2 x 3		4	SP10		MARK 1/16	
		2	BAR 3 x 1/2	7	3	CP1			
		12	3/4"ϕ ANC STUDS		10	mc1			
		15	3/4"ϕ CAP SCREWS		1 1/2	mb1		STAINLESS STEEL W/ NEW.	
		16	3/4"ϕ A325		2 1/2	SHOP			
			PAY ITEM: 516.11						

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	OUT FOR APPROVAL	1/20/10									
	OUT FOR APPROVAL										
	ISSUED TO SHOP										
	FIELD & OFFICE										

PROJECT NO. BHF-C400(31) STATE PROJECT NO. BRIDGE NO. 5

MATERIAL: ASTM A270M-GR50 ELECTRODES: SEE 7200 HOLES: AS NOTED SHOP BOLTS: 3/4"ϕ A325-GALV.

SURFACE PREP. & PAINT: GALVANIZE AFTER FAB.

DESCRIPTION: EXPANSION JOINT - ABUT. 2

JOB: TH9 - TAYLOR ST. BRIDGE NO. 5 MONTPELIER, VERMONT

CUSTOMER: WINTERSET

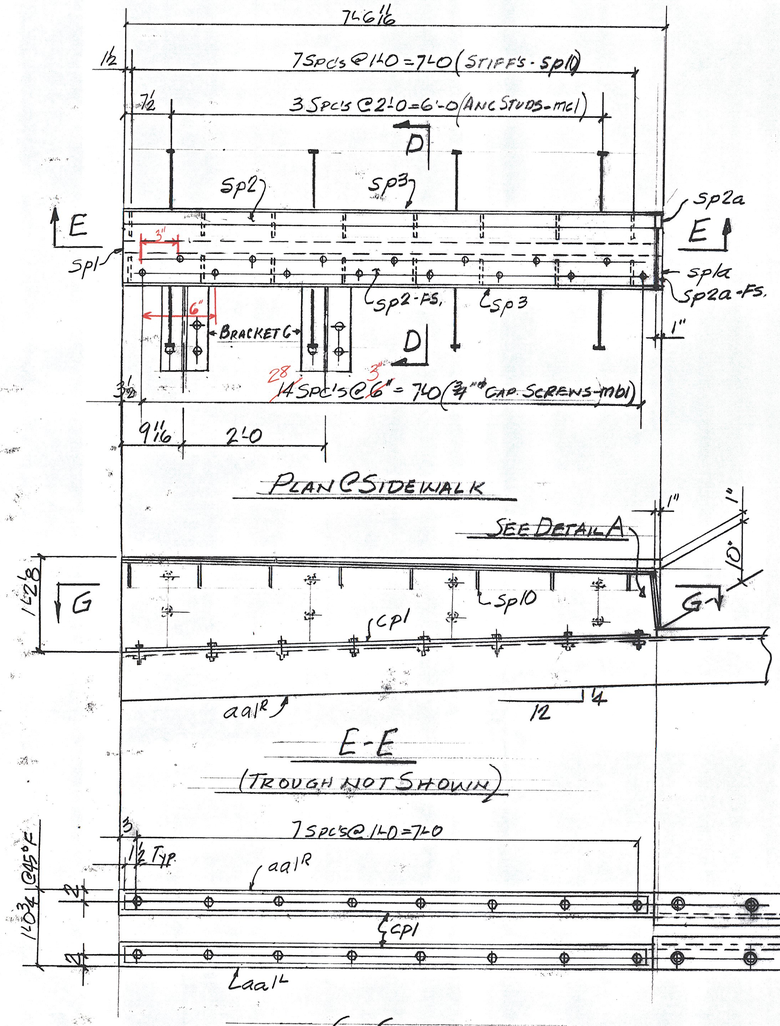
DRAWN BY	DATE
JPF	1-10
CHKD BY	
C R	
APPROV BY	
Q.A.	

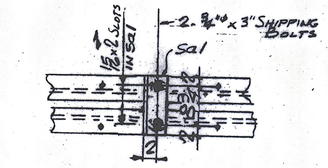
CASCO BAY STEEL STRUCTURES, INC.
75 SPRING HILL ROAD SACO, MAINE 04072
PHONE (207) 282-7360 FAX. (207) 282-1179

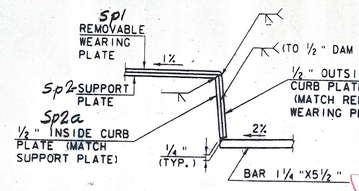
JOB NO. 434 DRG. NO. J1 REV. △

RECEIVED JAN 27 2010 RESUBMIT APPROVED BY W/ R. G DATE 2/23/10

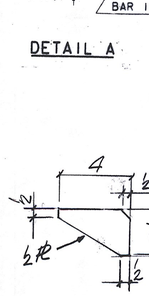
JOB NO. 434 | DRG. NO. J2

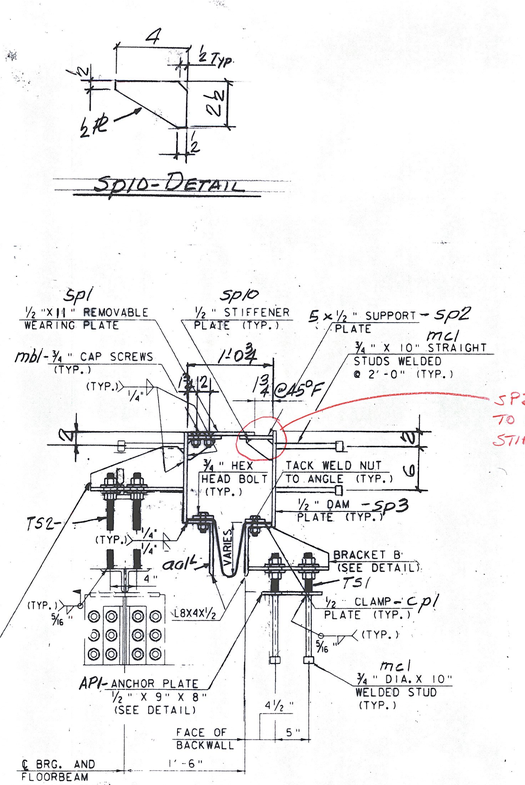




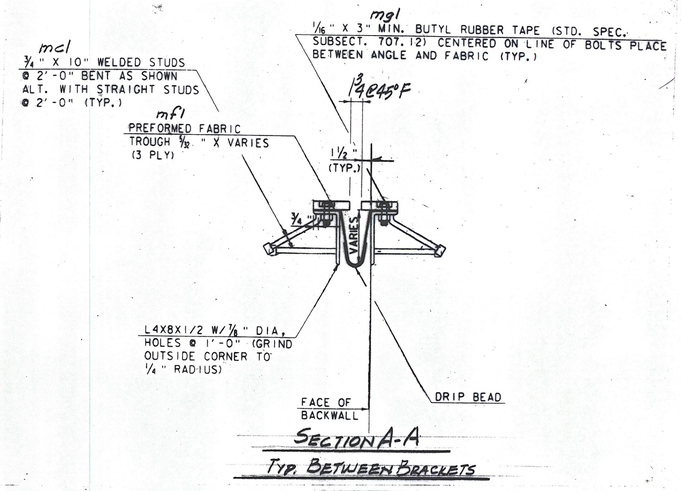


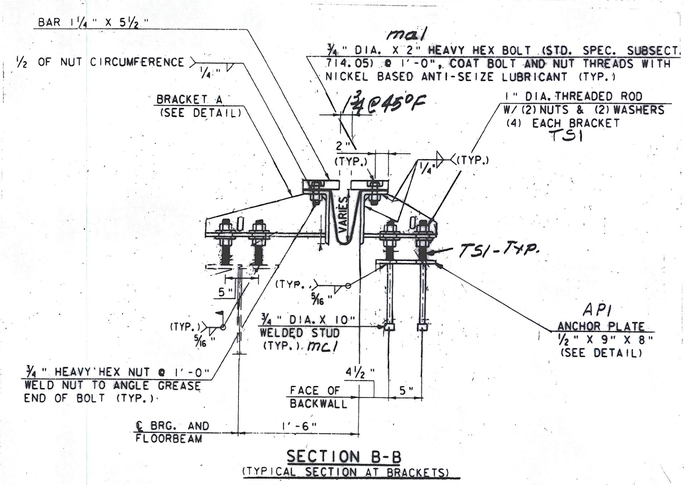
SEAL WELD ALL WELDED CONNECTIONS WHERE POSSIBLE PRIOR TO GALVANIZING





SP2 SUPPORT PLATES WELDED TO SP3 DAM PLATES AND SP10 STIFFENER PLATES ?





RECEIVED
CHW
JAN 27 2010
RESUBMIT ____ APPROVED As Noted
BY [signature] DATE 2/23/10

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.
	OUT FOR APPROVAL	1/11/10				
	OUT FOR APPROVAL					
	ISSUED TO SHOP					
	FIELD & OFFICE					

NO.	DIA.	LGT	TYPE	WASHER

PROJECT NO. BHF 6400 (31) STATE PROJECT NO. BRIDGE No.5

MATERIAL: A270 A270A-GRADE | ELECTRODES: SEE PROC | HOLES: AS NOTED | SHOP BOLTS: 3/4"ø

SURFACE PREP. & PAINT: A325-GALV-

GALVANIZE AFTER FAB.

DESCRIPTION: EXP. JOINT ABUT. 2 - SECT'S & DET'S.

JOB: TH9 - TAYLOR ST. BRIDGE No.5 MONTPELIER, VERMONT

CUSTOMER: WINTERSET

	DRAWN BY	DATE
	JPF	1-10
CHKD BY	CR	
APPROV BY		
Q.A.		

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

JOB NO. 434 | DRG. NO. J2 | REV. △

WORK THIS DWG. WITH DWG. J1

VERMONT

State of Vermont
PDD/Structures Design Section
National Life Building – Drawer 33
Montpelier, VT 05633-5001
www.aot.state.vt.us

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

Agency of Transportation

March 4, 2010

Casco Bay Steel Structures, Inc.
75 Spring Hill Rd
Saco, Me 04072

Project Name: Montpelier **Project #: BHF 6400(31)**

Structure Identification: Bridge 5 over the Winooski River

The following Structural Steel Drawings for the above project (Vendor's Job #434) transmitted with your letter dated 2/11/2010 have been reviewed and are being returned herewith.

Sheet M1 is approved as noted (note comments in red).

Please make appropriate changes as indicated on these "as noted" drawings and submit white prints for our use in the record plans for this project. Also, please submit extended weights for our approval.
Partial payment for this item will be withheld until extended weights are received and approved.

Although not detailed in the Contract Plan set, sidewalk block out plates should be fabricated for the intermediate rail posts which protrude through the concrete deck. These existing members are marked RP1 and RP2 on Sht. S8 of the Contract Plan set. In total there are 8 of these pieces (see attached photo). Please forward fabrication drawings for these plates.

You must provide notice to our fabrication inspector, Jeff Clark, as to the date fabrication represented by these drawings will begin. Jeff must receive and acknowledge your notice at least seven days prior to that date, as per Specification 506.03. You may contact Jeff by phone at (802)828-0044 or email at jeff.clark@state.vt.us. Any material fabricated prior to the notification date is subject to rejection without further cause.

Sincerely,

Wayne Symonds
Project Manager

Attachments

cc: [x] Resident Engineer, Bob Suckert
[x] Shop Inspector
[x] Contractor, Winterset
[x] Design Consultant, CHA
[x] Files

VTrans Working to Get You There!

6.17.2005

WINTERSET INCORPORATED
P.O BOX 968
LYNDONVILLE, VERMONT 05851

(802) 626-9330 FAX (802) 626-8933

LETTER OF TRANSMITTAL

DATE	JOB NO.
2-15-10	BALF 6400 (21)

ATTENTION: WAYNE SYMONDS

RE: MONTPELIER, VT
TAYLOR ST. GARAGE

STRUCTURAL STEEL

TO 1 TRANS

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via _____ the following items:

☒ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change order ☐ _____

COPIES	DATE	NO.	DESCRIPTION
1			Copy CASCO Bay TRANSM. TTAL
6			Copy M-1 - MISC. ITEMS

THESE ARE TRANSMITTED as checked below:

☒ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval
☐ For your use ☐ Approved as noted ☐ Submit _____ copies for distribution
☐ As requested ☐ Returned for corrections ☐ Return _____ corrected prints
☐ For review and comment ☐ _____
☐ FOR BIDS DUE _____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS _____

COPY TO FILE

SIGNED: ALEX Thompson

If enclosures are not as noted, kindly notify us at once.

~~CASCO BAY STEEL STRUCTURES, INC.~~
75 Spring Hill Rd.
SACO, MAINE 04072

(207) 282-7360 FAX (207) 282-1179

LETTER OF TRANSMITTAL

TO Wintersel

DATE: 2-11-10	JOB NO. 434
ATTENTION Glen	
RE: Montpelier BHF 6400 (31) Taylor Street Bridge No. 5 Montpelier, VT.	

WE ARE SENDING YOU ☑ Attached ☐ Under separate cover via _____ the following items:

☑ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change order ☐ _____

COPIES	DATE	NO.	DESCRIPTION
7			M1 ~ Misc. Items

THESE ARE TRANSMITTED as checked below:

☑ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval
☐ For your use ☐ Approved as noted ☐ Submit _____ copies for distribution
☐ As requested ☐ Returned for corrections ☐ Return _____ corrected prints
☐ For review and comment ☐ _____
☐ FOR BIDS DUE _____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS

For Approval ~ 7 Copies

COPY TO _____

SIGNED: Jeff Hjelm

If enclosures are not as noted, kindly notify us at once.

D'Amato Jr., Dave

From: D'Amato Jr., Dave
Sent: Tuesday, February 23, 2010 3:17 PM
To: 'Symonds, Wayne'
Cc: Gozalkowski, Dale
Subject: Taylor Street Bridge - Scupper and Downspout Shops
Attachments: DCP_9755.JPG

Wayne-

We have reviewed this submittal and offer the following comments:

- The weld shown in the Section B-B expanded detail is not 'all around', but should be deposited on each side of mark b1, as shown in Detail C, on Sht. 35 of the Contract Plan set.

- Although not detailed in the Contract Plan set, sidewalk blockout plates should be fabricated for the intermediate rail posts which protrude through the concrete deck. These existing members are marked RP1 and RP2 on Sht. 58 of the Contract Plan set. In total there are 8 of these pieces (see attached photo).

We will be returning the submittal in tonight's mail, with a recommendation to 'Approve as Noted'.

Please let me know if you require further explanation.

Thanks,

Dave

David D'Amato, PE
Associate
CHA ~ *Imagine What We Can Do For You!*
860.257.6955 x249
ddamato@chacompanies.com
www.chacompanies.com

CHA

March 1, 2010

Mr. Wayne Symonds, P.E.
Structures Project Manager
State of Vermont
Structures Design Section
One National Life Drive
Montpelier, VT 05633-5001

Re: Retainer Contract #0284599; BHF 6400(31); Montpelier Taylor Street Bridge Rehabilitation Phase B; CHA Project No: 14506

Dear Mr. Symonds:

CHA has reviewed the Proposed Steel Truss Temporary Support System documentation for the above mentioned project and is recommending the submittal be 'Approved'.

Attached please find the following:

- One copy of the Proposed Steel Truss Temporary Support System documentation, revised February 26, 2010.

Please do not hesitate to contact me directly at (860) 257-4557 if you have any questions or require additional information.

Sincerely,

David M. D'Amato, P.E.
Associate

K:\14506\Corr\Letters\Ltr 019.docx

"Satisfying Our Clients with Dedicated People Committed to Total Quality" | 2139 Silas Deane Highway, Suite 212, Rocky Hill, CT 06067-2336
T 860.257.4557 ● F 860.257.7514 ● www.chacompanies.com

CHA

February 23, 2010

Mr. Wayne Symonds
Structures Project Manager
State of Vermont
Structures Design Section
One National Life Drive
Montpelier, VT 05633-5001

Re: Retainer Contract #0284599; BHF 6400(31); Montpelier Taylor Street Bridge Rehabilitation Phase B; CHA Project No: 14506

Dear Mr. Symonds:

CHA has reviewed the Miscellaneous Steel Fabrication Drawings for the above mentioned project and is recommending the submittal be 'Approved as Noted'.

Attached please find the following:

- One set of marked Shop Drawings, with abbreviated comments.
- One copy of the email transmitted to your office on February 23, 2010, with a detailed explanation of comments.

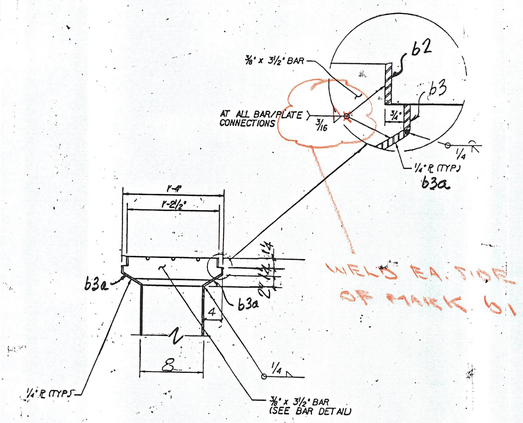
Please do not hesitate to contact me directly at (860) 257-4557 if you have any questions or require additional information.

Sincerely,

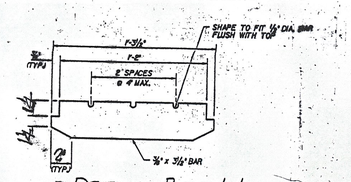
David M. D'Amato, P.E.
Associate

K:\14506\Corr\Letters\Ltr-018.docx

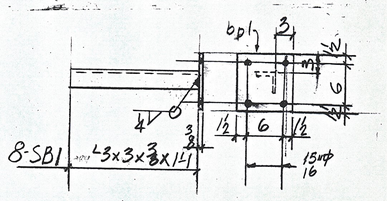
2139 Silas Deane Highway, Suite 212, Rocky Hill, CT 06067-2336
T 860.257.4557 • F 860.257.7514 • www.chacompanies.com

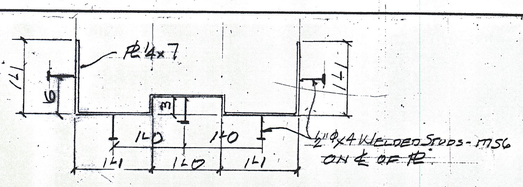


SECTION B–B



DETAIL-BAR b1

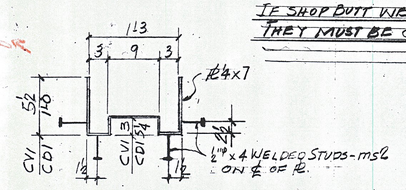




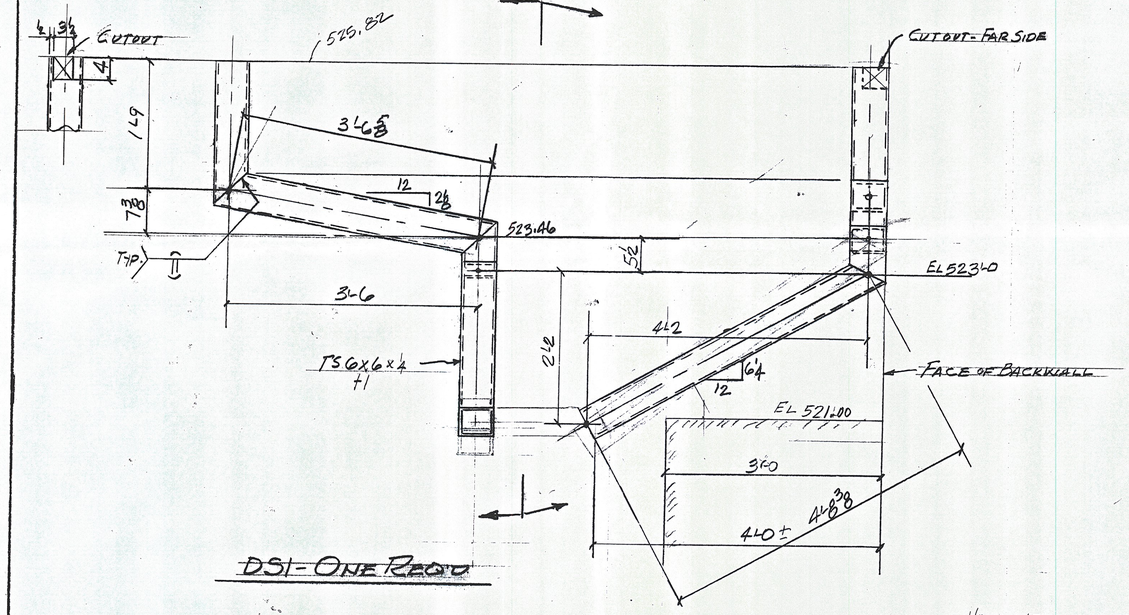
CE1 - 4 REQ'D (@ END DIAG. MEMB.)

* INCLUDE BLOCKOUTS FOR BRIDGE RAIL POSTS RP1 AND RP2 (SEE SHT. S6 OF CONTRACT PLAN SET)

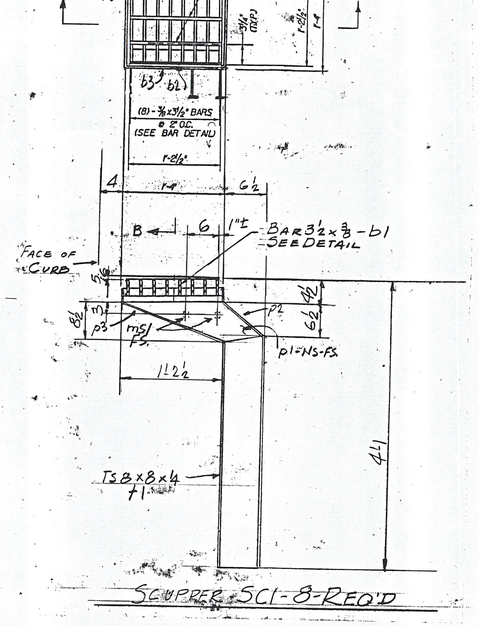
IF SHOP BUTT WELDS ARE USED THEY MUST BE GROUND BOTH SIDES.



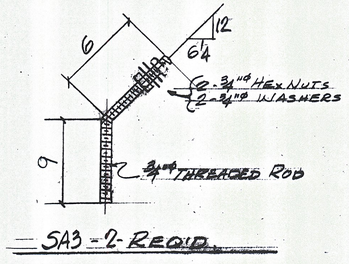
CV1 - 14 - REQ'D (@ VERT. TRUSS MEMB.)
CD1 - 12 - REQ'D (@ DIAG. TRUSS MEMB.)
SIDEWALK BLOCKOUT PL'S.



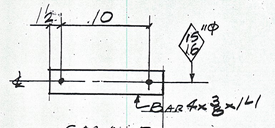
DS1 - ONE REQ'D



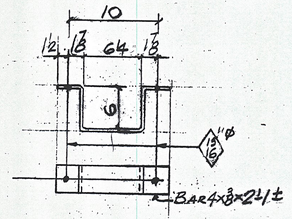
SCUPPER - SC1 - 8 REQ'D



SA3 - 2 - REQ'D



SA2 - ONE REQ'D



SA1 - 3 - REQ'D

☐ NO EXCEPTIONS TAKEN ☒ MAKE CORRECTIONS NOTED
☐ REJECTED ☐ REVISE & RESUBMIT
☐ SUBMIT SPECIFIED ITEM

CHECKING IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR QUANTITIES AND DIMENSIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE. FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES AND THE SATISFACTORY PERFORMANCE OF HIS WORK.

CLOUGH HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS
& LANDSCAPE ARCHITECTS

DATE 3/4/10 BY

RECEIVED
CK'D BY CHA OK'D BY
FEB 18 2010
RESUBMIT APPROVED
DATE 3/4/10
BY

ABM INFO PAGE	LINE	NO.	DESCRIPTION	FT	IN	ASSEM. MARK	SHIPPING MARK	REMARKS	WEIGHT
		8	SCUPPERS	4	1±		SC1		—
		8	TS 8x8x1/4	3	2	±1			
		64	BAR 3 1/2 x 3/8	1	3 1/2		b1		
		16	BAR 1/4 x 4	1	2 1/2		b2		
		16	DO	1	4		b3		
		16	BAR 4 1/2 x 4	1	4		b3a		
		16	BAR 3/4 x 4	1	3 1/2		b4		
		24	1/2" ø BAR	1	2 1/2		r1		
		16	PL 4 x 9 3/8	1	10 1/2		p1		
		8	PL 4x 9	1	3 1/2		p2		
		8	PL 4 x 15/16	1	4 3/4		p3		
		32	3/4" ø ANC. STUDS		7		ms1		
		8	L 3 x 3 x 3/8	1	1		SB1		
		8	PL 3/8 x 9		9		bp1		
		32	3/4" ø A325 TC BOLTS W/ 2 GALV		2 1/2			FIELD W/ NEW	
		1	DOWNSPOUT	8	0±		DS1		—
		1	TS 6 x 6 x 1/4	12	0 ±1				
		3	BAR 4 x 3/8	2	1±		SA1	BEND	
		1	DO	1	1		SA2		
		2	3/4" ø THREADED ROD	1	3		SA3	BEND	
		4	3/4" ø HEX NUTS			SHOP			
		4	3/4" ø WASHERS			DO			
		4	3/4" ø EXP. BOLTS		9			FIELD W/ NUT & WASH.	
SIDEWALK BLOCKOUTS (PAY ITEM 506.60)									
4	4		PL 4 x 7	5	10 1/2		CE1	BEND	
14	14		DO	2	8±		CV1	DO	
12	12		DO	5	3±		CD1	DO	
	12	124	1/2" ø CONC. STUDS		4	SHOP			

PAY ITEM 506.50 (UNLESS NOTED)

REV.	REMARKS	DATE	DWN	CHK	APP	Q.A.	NO.	DIA.	LGT	TYPE	WASHER
	OUT FOR APPROVAL	2/11/10									
	OUT FOR APPROVAL										
	ISSUED TO SHOP										
	FIELD & OFFICE										

PROJECT NO. BHF-6400(31) STATE PROJECT NO. BRIDGE NO. 5
MATERIAL: SUBSECTION 714.02 ELECTRODES: PER PROC HOLES: AS NOTED SHOP BOLTS: —
SURFACE PREP. & PAINT:
GALVANIZE AFTER FAB - ASTM - A123

DESCRIPTION: SCUPPERS - DOWNSPOUTS - CURBS
JOB: TH9 - TAYLOR ST. BRIDGE NO. 5, MONTPELIER, VERMONT
CUSTOMER: WINTERSET

	DRAWN BY	DATE
	JPF	1-10
CHKD BY	CR	
APPROV BY		
Q.A.		

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

JOB NO.	DRG. NO.
434	M1
	REV. △

1" = 1'-0"