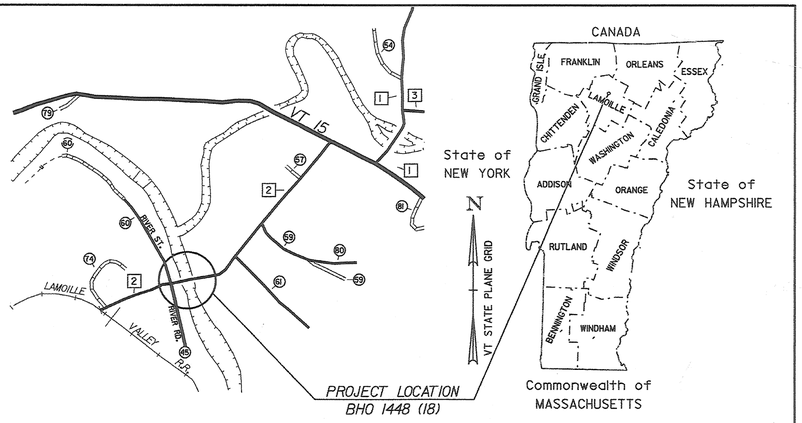
SEE SHEET 2 FOR LIST OF SHEETS AND LIST OF STANDARDS

STATE OF VERMONT
AGENCY OF TRANSPORTATION



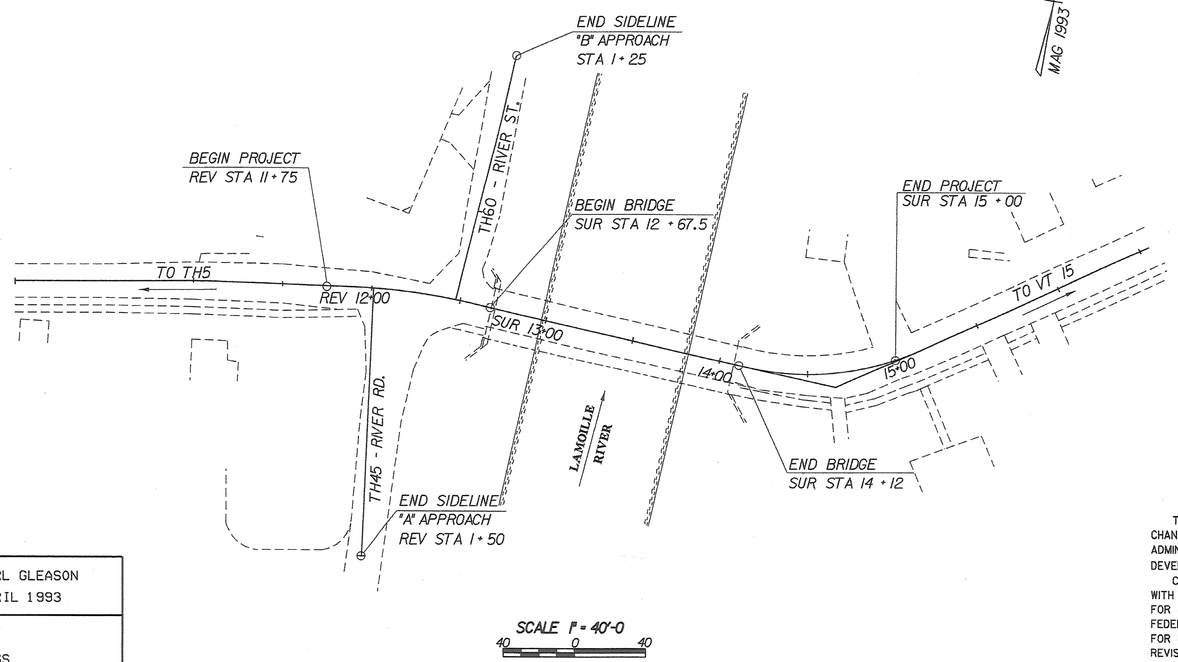
PROPOSED IMPROVEMENT
BRIDGE PROJECT
TOWN OF JOHNSON
COUNTY OF LAMOILLE

ROUTE NO.: TH2 (RAILROAD ST.), CLASS 2, BRIDGE NO.: 6

PROJECT LOCATION : BEGINNING AT THE INTERSECTION OF TH2 AND TH45 AND PROCEEDING EASTERLY APPROXIMATELY 0.06 MILES.

PROJECT DESCRIPTION : REHABILITATION OF EXISTING BRIDGE WITH APPROACH WORK.

LENGTH OF ROADWAY:	180.5 FEET
LENGTH OF STRUCTURE :	144.5 FEET
LENGTH OF PROJECT :	325 FEET



CONVENTIONAL SYMBOLS

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

SURVEYED BY :	CARL GLEASON
SURVEYED DATE :	APRIL 1993

DATUM

VERTICAL	USGS
HORIZONTAL	N/A

RECORD PLANS

CONTRACTOR:	CCS CONSTRUCTORS LLC – MORRISVILLE, VT
RESIDENT ENGINEER:	JEFF COTA
CONSTRUCTION BEGAN:	APRIL 3, 2006
CONSTRUCTION COMPLETE:	MAY 19, 2008
RECORD PLANS BY:	J. COTA & C. PIERCE

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

BY _____ RESIDENT ENGINEER

DATE 1/29/10

NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.

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

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

PLOTTED: 28-JUL-2005
/PW/90J067/sj067bdr.dgn sj067ti.i

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED Richard Tetreault DATE 8-1-05

PROJECT MANAGER : R. WHITCOMB

PROJECT NAME : JOHNSON
PROJECT NUMBER : AC BHO 1448(18) READVERTISED

SHEET 1 OF 73 SHEETS

LIST OF SHEETS

1.	TITLE SHEET
2.	LIST OF SHEETS, STANDARDS AND HYDRAULIC DATA
3.	TYPICAL SECTIONS
4-6.	QUANTITY SHEETS
7.	ROW DETAIL
8.	ROW PLAN
9.	PLAN SHEET
10.	RAILROAD STREET AND SIDELINE PROFILE
11.	TEMPORARY BRIDGE LAYOUT
12.	TRAFFIC CONTROL SHEET
13.	ONE-WAY DETOUR WITH TEMPORARY TRAFFIC SIGNAL
14.	PLAN AND ELEVATION
15.	EROSION CONTROL SHEET
16.	UTILITIES AND DRAINAGE
17.	DRAINAGE DETAIL SHEET
18.	GENERAL NOTES
19.	MISCELLANEOUS DETAILS
20.	DECK DETAILS
21.	SCUPPER DETAILS
22.	FRAMING PLAN
23.	FLOOR BEAM DETAILS
24.	STRINGERS AND CROSS BRACING DETAILS
25.	SUPERSTRUCTURE CONNECTION DETAILS
26.	REPAIR DETAILS FOR VERTICAL MEMBERS
27.	REPAIR DETAILS FOR DIAGONAL MEMBERS
28.	GUSSET PLATE CONNECTIONS
29.	LATTICE DETAILS
30.	BEARING DETAILS (EXPANSION) ABUT #1
31.	BEARING DETAILS (FIXED) ABUT #2
32.	EXPANSION JOINT DETAILS
33.	EXPANSION JOINT PLAN AND ELEVATION
34.	SIDEWALK JOINT DETAILS
35.	DOWNSPOUT DETAILS
36 (a).	SIDEWALK STRINGER DETAILS
36 (b).	SIDEWALK BRACKET DETAILS
37.	SIDEWALK SPINDLES
38.	SIDEWALK RAIL CONNECTIONS
39.	BRIDGE RAILING LAYOUT
40 (a).	RAILING PLAN
40 (b).	METAL HAND RAIL DETAILS
41.	BRIDGE RAILING DETAILS
42.	BRIDGE RAILING CONNECTION DETAILS
43.	ABUTMENT #1
44.	ABUTMENT #2
45.	REPAIR OF SUBSTRUCTURE SURFACE
46.	APPROACH SLAB DETAILS
47.	REINFORCING STEEL SCHEDULE
48.	SIGN LAYOUT AND LINE STRIPING SHEET
49.	SIGN SUMMARY SHEET
50-53.	WATERLINE SHEETS
54-59	MAINLINE CROSS SECTIONS (RAILROAD STREET)
60.	SIDELINE "A" CROSS SECTIONS (RIVER ROAD EAST - TH 45)
61.	SIDELINE "B" CROSS SECTIONS (RIVER ROAD WEST - TH 60)
62.	DRAINAGE PIPE SECTIONS
63-64.	CHANNEL CROSS SECTIONS
65-73.	EXISTING DETAILS - FOR REFERENCE ONLY

LIST OF STANDARDS

C-1	GRANITE SLOPE EDGING, VERTICAL GRANITE CURB, PRECAST REINFORCED CONCRETE CURB, CAST IN PLACE CONCRETE CURB, BITUMINOUS CONCRETE CURB, TREATED TIMBER CURB CEMENT CONCRETE SIDEWALK, CONCRETE CURB	01-03-00
C-2A	PORTLAND CEMENT CONCRETE SIDEWALK	01-03-00
C-3A	SIDEWALK RAMPS TYPES 1-5 AND DETECTABLE WARNING DETAILS	09-01-04
D-2	C.R.M. HEADWALLS, UNDERDRAINS, C.R.M. HEADWALLS AND RETAINING WALLS, RIPRAP LIGHT TYPE, SLOPE HEADWALL, REINFORCED CONCRETE HEADWALL, UNDERDRAIN AND CARRIER PIPE CONSTRUCTION DETAILS	06-01-94
D-4	FLUSHING BASINS, END SECTION, ELBOWS TYPICAL, WATERFALL FOR CULVERTS UP TO & INCLUDING 48" DIA EXTENSION SERVICE BOX & CURB STOP, CORRUGATED PIPE ELBOW, GRANULAR BORROW AT CORRUGATED STEEL PIPE ARCH END SECTION	06-01-94
D-8	REINFORCED CONCRETE DROP INLET WITH PRECAST COVER AND GRATE (BOTTOM SECTION). SEE SHEETS D-9, 10, AND 11 FOR TOP SECTION	01-03-00
D-9	REINFORCED CONCRETE DROP INLET TOPS VERTICAL CURB AND THROAT ADAPTER	06-01-94
D-15	PRECAST REINFORCED CONCRETE MANHOLE GRATES (BICYCLE SAFE), CAST IRON GRATE WITH FRAME, TYPE D, CAST IRON GRATE WITH FRAME, TYPE E	06-01-94
E-100	CONSTRUCTION APPROACH SIGNS	01-02-04
E-100A	SIDE ROAD CONSTRUCTION - APPROACH SIGNS	01-02-04
E-101	CONSTRUCTION SIGN DETAILS	05-30-03
E-102	CONSTRUCTION SIGN DETAILS	06-30-03
E-102A	CONSTRUCTION SIGN DETAILS	05-01-04
E-106	TRAFFIC CONTROL - MISCELLANEOUS DETAILS	03-01-04
E-107	DELINEATION, BARRICADES AND DETOURS FOR CONSTRUCTION AREAS	06-30-03
E-107A	BREAKAWAY BARRICADE DETAILS	08-08-95
E-110	MAJOR MAINTENANCE OPERATION LANE CLOSURE	08-08-95
E-120	STANDARD SIGN PLACEMENT - EXPRESS WAY AND FREEWAY	08-08-95
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD	08-08-95
E-123	GUIDE SIGN PLACEMENT - MISCELLANEOUS DETAILS	03-16-04
E-140	REGULATORY SIGN DETAILS	08-30-96
E-143	REGULATORY SIGN DETAILS	06-15-04
E-146	REGULATORY SIGN DETAILS	09-20-95
E-160	FLANGED CHANNEL STEEL SIGN POST	05-20-99
E-170	TRAFFIC CONTROL SIGNALS PEDESTAL POST MOUNTED	11-04-99
E-171A	TRAFFIC CONTROL SIGNALS GENERAL NOTES AND DETAILS	08-09-95
E-171B	TRAFFIC CONTROL SIGNALS MISCELLANEOUS DETAILS	08-09-95
E-172	VEHICLE DETECTOR LOOP DETAILS	08-09-95
E-175	POWER DROP STANCHIONS	11-17-93
E-191	PAVEMENT MARKING DETAILS	02-01-99
E-193	PAVEMENT MARKING DETAILS	08-18-95
F-7	WOOD SCREENING FENCE	06-01-94
G-1	STEEL BEAM GUARDRAIL (50 MPH AND OVER), HEAVY DUTY STEEL BEAM GUARDRAIL, TWISTED END TERMINAL, ANCHOR FOR STEEL BEAM RAIL	01-03-00
G-1D	STEEL BEAM GUARDRAIL (40 MPH AND LESS), HEAVY DUTY STEEL BEAM GUARDRAIL, STEEL BEAM MEDIAN BARRIER, ANCHOR FOR STEEL BEAM RAIL	01-03-00
G-18	PRECAST CONCRETE TEMPORARY TRAFFIC BARRIER	06-01-94
J-3	MAILBOX SUPPORT DETAILS	08-07-95

FINAL HYDRAULICS REPORT

HYDROLOGIC DATA

DRAINAGE AREA= 311 sq. mi. (805 sq. km)
CHARACTER OF TERRAIN: Hilly to mountainous
CHARACTER & TYPE OF STREAM: Probably incised, sinuous, little or no flood plain at site
NATURE OF STREAMBED: Unknown

Q2.33= 6000 cfs (170 cms) Q50= 15050 cfs (454 cms)
Q10= 10800 cfs (306 cms) Q100=18900 cfs (535 cms)
Q25= 13800 cfs (391 cms) Q500=27200 cfs (770 cms)

DATE OF FLOOD OF RECORD: Nov. 1927
WATER SURFACE ELEV.: 512 +- ESTIMATED DISCHARGE: Unknown
NATURAL STREAM VELOCITY @ Q25 = Not available
ICE CONDITIONS: Moderate DEBRIS: Moderate
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEVATION RAPIDLY? No
IS ORDINARY RISE RAPID? No
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
IF YES, DESCRIBE.

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

EXISTING STRUCTURE

STRUCTURE TYPE: Single span steel truss bridge YEAR BUILT: 1928
CLEAR SPAN (NORMAL TO STREAM): 137 ft (41.8 m)
VERTICAL CLEARANCE ABOVE STREAMBED: 26 ft (7.9 m)
WATERWAY OF FULL OPENING: 3000 sq. ft (279 sq. m)
DISPOSITION OF STRUCTURE: Rehabilitate superstructure

TYPE OF MATERIAL UNDER SUBSTRUCTURE: Unknown at abutment 1 (west), Ledge at abutment 2 (east).
WATER SURFACE ELEV. @ Q2.33= 488.0 VELOCITY= Not available
Q10= 492.0 " = "
Q25= 494.0 " = "
Q50= 495.3 " = "
Q100= 497.0 " = 7.0 fps (2.13 mps)

LONG TERM STREAM BED CHANGES: Unknown

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

UPSTREAM STRUCTURE: TOWN: Johnson DISTANCE: 1.6 mi. (2.6 km)
HIGHWAY NO.: Railroad STRUCTURE NO.: Unknown
STRUCTURE TYPE: Unknown
CLEAR SPAN: Unknown CLEAR HEIGHT: Unknown
YEAR BUILT: FULL WATERWAY:

DOWNSTREAM STRUCTURE: TOWN: Johnson DISTANCE: 2.1 mi. (3.4 km)
HIGHWAY NO.: Vt. 15 STRUCTURE NO.: 33
STRUCTURE TYPE: Two span plate girder
CLEAR SPAN: 220 ft (67.1 m) CLEAR HEIGHT: 20 ft (6.1 m)
YEAR BUILT: 1987 FULL WATERWAY: 4180 sq. ft. (388 sq. m)

PROPOSED STRUCTURE

STRUCTURE TYPE: Rehabilitate existing single span steel truss

CLEAR SPAN (NORMAL TO STREAM): 137 ft (41.8 m)
VERTICAL CLEARANCE ABOVE STREAMBED: 26 ft (7.9 m)
WATERWAY OF FULL OPENING: 3000 sq. ft (279 sq. m)

WATER SURFACE ELEV. @ Q2.33= 488.0 VELOCITY= Not available
Q10= 492.0 " = "
Q25= 494.0 " = "
Q50= 495.3 " = "
Q100= 497.0 " = 7.0 fps (2.13 mps)

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

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 501.0
VERTICAL CLEARANCE @ Q100 = 4.0 ft. (1.22 m)

SCOUR: Not available
REQUIRED CHANNEL PROTECTION: Stone fill, type IV, if needed

PERMIT INFORMATION

AVERAGE DAILY FLOW: 650 cfs (18.4 cms)
ORDINARY LOW WATER: 300 cfs (8.5 cms) DEPTH: 1 ft. (0.3 m)
ORDINARY HIGH WATER: 2600 cfs (73.6 cms) DEPTH: 4 ft. (1.2 m)

TEMPORARY BRIDGE REQUIREMENTS**

STRUCTURE TYPE: Bridge, with up to two slender (2 ft Max. Width) piers (pile bents).

CLEAR SPAN (NORMAL TO STREAM): 140' (42.7 m) total

VERTICAL CLEARANCE ABOVE STREAMBED: Beams above elevation 494.0
WATERWAY OF FULL OPENING: 2100 sq. ft. (195 sq. m)

PILES SHOULD BE DESIGNED TO WITHSTAND 24" OF ICE WITH A DYNAMIC ICE LOAD OF 200 psi APPLIED AT THE Q10 WSE OF 492'. THIS ELEVATION IS 12-15' FROM THE RIVER BOTTOM AT THE LOCATION OF THE PLANNED PIERS SO THE MOMENT ON THE FOUNDATION IS SUBSTANTIAL.

PROVISION SHOULD BE MADE OVER THE COURSE OF THE WINTER TO REMOVE ICE AND/OR DEBRIS SHOULD A BUILDUP OCCUR AT EITHER OF THE PILE BENTS. THE CONTRACTOR SHALL STATION EQUIPMENT ON SITE TO EFFECT THIS REMOVAL IF REQUIRED. THIS WORK SHALL BE INCIDENTAL TO THE ITEM "ONE-WAY TEMPORARY BRIDGE (3360 SF-EST.) (MOD.)".

** SEE SHEET 11 FOR TEMPORARY BRIDGE LAYOUT AND REQUIREMENTS

DESIGN CRITERIA:
1. DESIGN LIVE LOAD AASHTO HS20-44 (POSTED)
2. DESIGN SPAN N/A
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL N/A ON LEDGE N/A
4. ALLOWABLE LOAD FOR PILING N/A TYPE ESTIMATED LENGTH N/A
5. ALLOWABLE STRESS FOR STRUCTURAL STEEL AASHTO NEW M270 GRADE 50 (PAINTED) TENSION 21000 psi
6. ALLOWABLE STRESS FOR REINFORCING STEEL GRADE 60 TENSION 24000 psi
7. ALLOWABLE STRESS FOR CONCRETE HIGH PERFORMANCE, CLASS A f'_c 4000 psi f_c 1600 psi
   CONCRETE HIGH PERFORMANCE, CLASS B f'_c 3500 psi f_c 1400 psi

TRAFFIC MAINTENANCE:
1. IS TRAFFIC TO BE MAINTAINED? YES IF YES, ON EXISTING STRUCTURE OR ON TEMPORARY BRIDGE YES
2. TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY ONE WAY TRAFFIC CONTROL SIGNALS REQUIRED YES
   MINIMUM CLEAR SPAN (NORMAL TO STREAM) 140' MINIMUM CLEAR HEIGHT LOW BEAM ELEV 494.0 MINIMUM WATERWAY AREA 2100 SF
   ARE SIDEWALKS REQUIRED? YES IF SO, ON WHAT SIDE? UPSTREAM
   STRUCTURE TYPE:

X ASSUMED EXISTING ALLOWABLE STRESS FOR STRUCTURAL STEEL GRADE 30 TENSION 16,500 psi

WORKING STRESS LOAD RATING (TONS)

LOADING LEVELS (WORKING STRESS)	TRUCK						
	H	HS	3S2	6 AXLE	3A. STR.	4A. STR.	5A. SEMI
INVENTORY 0.55fy = 27.5 ksi	14	23					
POSTED 0.67fy = 33.5 ksi	23	37	40		36	36	39
OPERATING 0.75fy = 37.5 ksi		43	54	57	44	43	

$RF = \frac{f_{ALL} - f_{DL}}{f_{LL}}$

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
1998	1660	230	53	10	190
2018	2250	315	53	13	320

18 kip ESAL for flexible pavement from 1998 to 2018: 1,681,000
18 kip ESAL for flexible pavement from 2018 to 2038: 4,438,000
Design speed: 25 mph

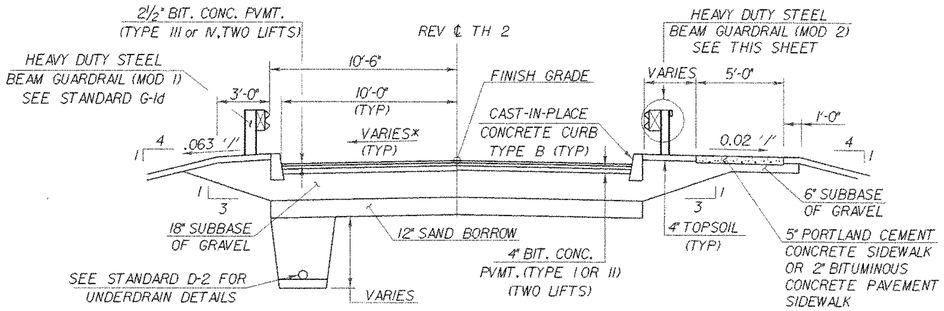
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 6
Highway No. TH 2	Log Sta.
	Surv. Sta. 13+50

RR ST. BRIDGE OVER THE LAMOILLE RIVER
LIST OF SHEETS, STANDARDS AND HYDRAULIC DATA

Designed By C. SCHMELZENBACH	Drawn By S. MAGNAN
Checked By J. P. SPILAK Date 8/94	Bridge Design Supervisor R. WHITCOMB Date 7/94
PROJECT JOHNSON	PROJECT NO. BHO 1448(18)
I.G.C. Info. /str1/90J067/sJ067pl.dgn	sJ067pl.1
Bridge Sheet No.	Sheet 2 of 73

PLOTTED 02-SEP-2005



TYP. W/ GUARDRAIL

REV STA 12+59 LT ~ REV STA 12+67.5 LT
SUR STA 14+12.9 LT ~ SUR STA 14+89 LT

TYP. W/ & W/O GUARDRAIL

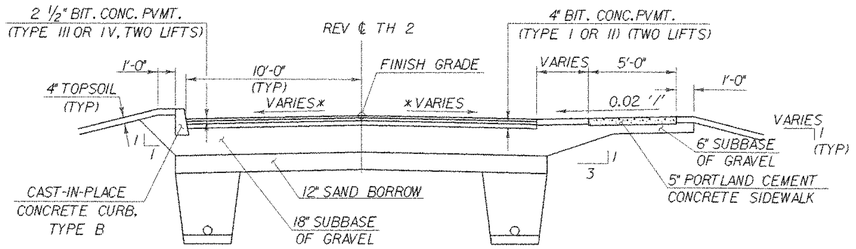
REV STA 12+43 RT ~ REV STA 12+67.5 RT
SUR STA 14+12.9 RT ~ SUR STA 14+58 RT

TYPICAL ROADWAY SECTION

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

* SEE BANKING DIAGRAM ON SHEET 56

REV STA 14+12 ~ REV STA 15+00 LT & RT



TYP. W/O GUARDRAIL

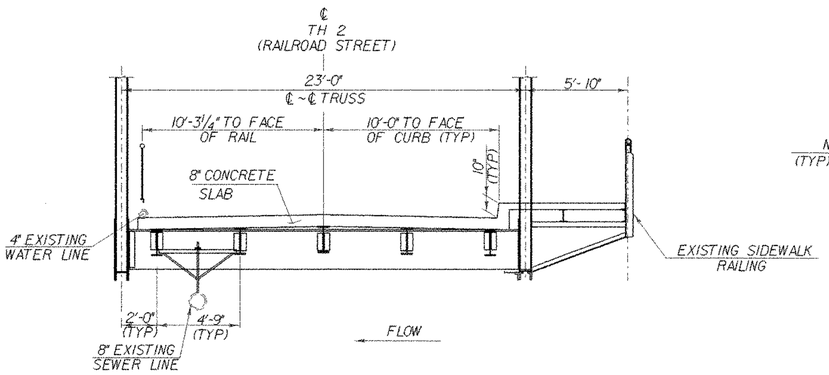
REV STA 11+75 LT ~ REV STA 12+37 LT
SUR STA 15+10 LT ~ SUR STA 16+00 LT

TYP. W/O GUARDRAIL W/ SIDEWALK

REV STA 11+75 RT ~ REV STA 11+84 RT
SUR STA 14+73 RT ~ SUR STA 16+00 RT

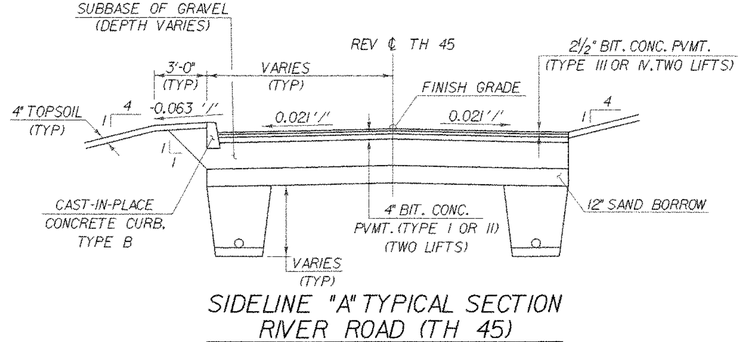
TYPICAL ROADWAY SECTION

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



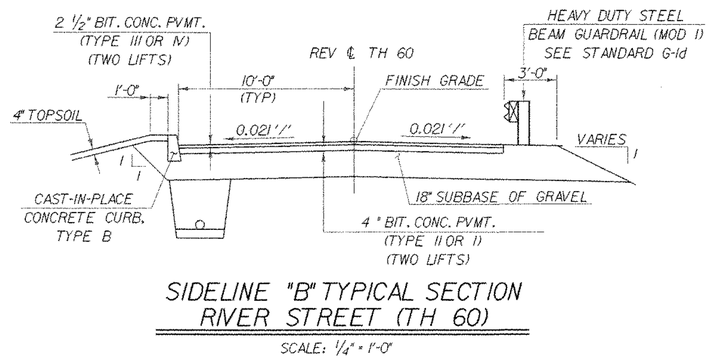
EXISTING TYPICAL BRIDGE SECTION

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



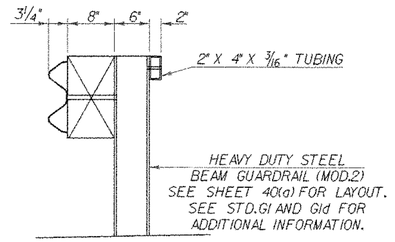
SIDELINE "A" TYPICAL SECTION RIVER ROAD (TH 45)

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



SIDELINE "B" TYPICAL SECTION RIVER STREET (TH 60)

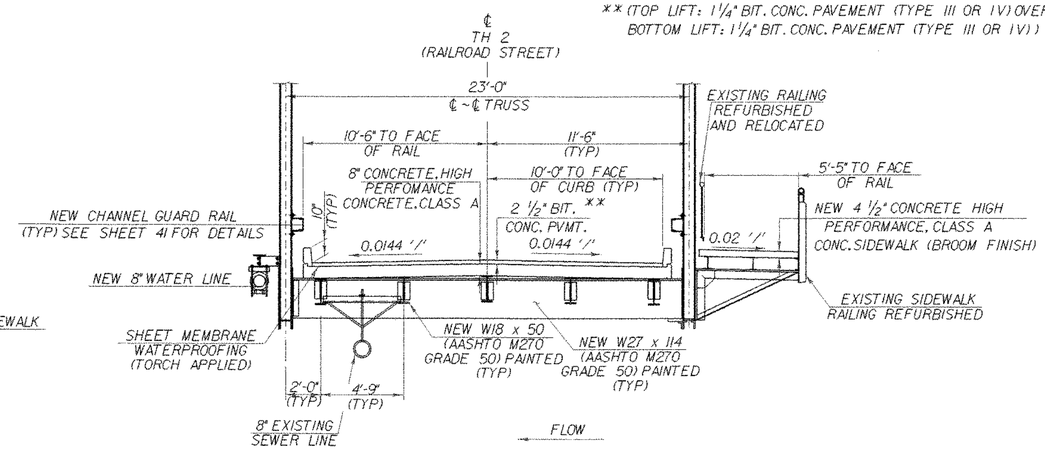
SCALE: 1/4" = 1'-0"



GUARD RAIL DETAIL

SCALE: 1" = 1'-0"

** (TOP LIFT: 1 1/4" BIT. CONC. PAVEMENT (TYPE III OR IV) OVER BOTTOM LIFT: 1 1/4" BIT. CONC. PAVEMENT (TYPE III OR IV))



NEW TYPICAL BRIDGE SECTION

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

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

SHEET NAME: TYPICAL SECTIONS

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)
HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER

FILE NAME: /str1/90j067/sj067pl.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. MEUNIER
BRIDGE SHEET NUMBER:
PLOT DATE: 02-SEP-2005
DRAWN BY: S. MAGNAN
IPARM NAME: sc067typ.i
SHEET 3 OF 73

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

SUMMARY OF ESTIMATED QUANTITIES

SUPER-STRUCTURE	APPROACH SLAB #1	APPROACH SLAB #2	ABUTMENT #1	ABUTMENT #2	ROADWAY	TEMP. BRIDGE/DETOUR	EROSION CONTROL	TRAINING	UTILITIES/ PARTICIPATING	FULL CE ITEMS	BRIDGE QUANTITY	ROUND	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER
					1								1		LS	CLEARING AND GRUBBING (INCL. IND. TREES & STUMPS)	201.10
					1210								1210		CY	COMMON EXCAVATION	203.15
					260								260		CY	SAND BORROW	203.31
					800		10						810		CY	TRENCH EXCAVATION OF EARTH	204.20
					40								40		CY	TRENCH EXCAVATION OF ROCK	204.21
			10	10							20		20		CY	STRUCTURE EXCAVATION	204.25
			10	10	200						20		220		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30
					410								410		SY	COLD PLANING-BIT.PAVEMENT	210.10
					760		10						770		CY	SUBBASE OF GRAVEL	301.15
					45								45		CWT	EMULSIFIED ASPHALT	404.65
45					510						45		555		TON	BITUMINOUS CONCRETE PAVEMENT (PG 58-34)	406.25
					25								25		CY	CONCRETE, CLASS B	501.25
96											96		96		CY	CONCRETE HIGH PERFORMANCE, CLASS A	501.33
	24	21	12	11							68		68		CY	CONCRETE HIGH PERFORMANCE, CLASS B	501.34
1											1		1		LS	SHORING SUPERSTRUCTURE	502.10
4											4		4		EACH	SHORING SUPERSTRUCTURE BEARINGS	502.11
92080											92080		92080		LB	STRUCTURAL STEEL (ROLLED BEAM)	506.50
9200											9200		9200		LB	STRUCTURAL STEEL (PLATE GIRDER)	506.55
5000											5000		5000		LB	STRUCTURAL STEEL	506.60
			2500	2480	1780						4980		6760		LB	REINFORCING STEEL	507.15
			234	216							450		450		LF	DRILLING AND GROUTING DOWELS	507.16
21100	3510	2860									27470		27470		LB	EPOXY COATED REINFORCING STEEL	507.17
1											1		1		LS	SHEAR CONNECTORS (1680 - 7/8" DIA x 4")	508.15
1											1		1		LS	SHEAR CONNECTORS (448 - 7/8" DIA x 5")	508.15
1											1		1		LS	STRUCTURAL PAINTING,SHOP APPLIED (52 TONS)	513.25
1											1		1		LS	STRUCTURAL PAINTING,FIELD APPLIED (52 TONS)	513.30
1											1		1		LS	CONTAINMENT & ENVIRONMENTAL PROTECTION,FIELD	513.36
1											1		1		LS	SURFACE PREPARATION,SHOP (52 TONS)	513.40
1											1		1		LS	SURFACE PREPARATION, FIELD (52 TONS)	513.41
15			5	5							25		25		GAL	WATER REPELLENT (MOD. - SILANE)	514.10
21											21		21		LF	BRIDGE EXPANSION JOINT (VERMONT)	516.10
6											6		6		LF	BRIDGE EXPANSION JOINT (SIDEWALK)	516.10
320											320		320		SY	SHEET MEMBRANE WATERPROOFING (MOD. - TORCH APPLIED)	519.20
286											286		286		LF	REMOVAL OF EXISTING RAILING (HANDRAIL)	525.10
286											286		286		LF	RESETTING RAILING (HANDRAIL)	525.11
					36								36		LF	METAL HAND RAILING (MOD.)	525.15
										1			1		LS	ONE-WAY TEMPORARY BRIDGE (3360 SF- EST.) (MOD.)	528.10
1											1		1		EACH	PARTIAL REMOVAL OF STRUCTURE	529.20
			8	9							17		17		CY	REMOVAL OF CONCRETE OR MASONRY	529.25
2											2		2		EACH	BEARING DEVICE ASSEMBLY (STEEL) (EXPANSION)	531.10

DETAILED SUMMARY OF QUANTITIES

TEMPORARY EROSION CONTROL ITEMS

QUANTITIES	UNIT	ITEMS
10	CY	204.20 TRENCH EXCAVATION OF EARTH
10	CY	301.35 SUBBASE OF GRAVEL
10	CY	613.10 STONE FILL, TYPE I
410	SY	649.51 GEOTEXTILE FOR SILT FENCE
10	LB	651.17 SEED - WINTER RYE
1500	SY	654.10 EROSION MATTING

THERE IS APPROXIMATELY 1100 CY OF EXCESS MATERIAL.

PROJECT NAME: **JOHNSON**
PROJECT NUMBER: **BHO 1448(18)**

FILE NAME: **/str1/90j067/sj067qnt.xls**
PROJECT LEADER: **R. WHITCOMB**
DESIGNED BY: **C. MEUNIER**
QUANTITY #1

PLOT DATE: **07/27/2005**
DRAWN BY: **J. GILMORE**
CHECKED BY: **C. MEUNIER**
SHEET **4** OF **73**

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

SUMMARY OF ESTIMATED QUANTITIES												TOTALS			DESCRIPTIONS			DETAILED SUMMARY OF QUANTITIES		
SUPER-STRUCTURE		APPROACH SLAB #1	APPROACH SLAB #2		ABUTMENT #1	ABUTMENT #2		ROADWAY	TEMP. BRIDGE/DETOUR	EROSION CONTROL	TRAINING		UTILITIES PARTICIPATING	FULL CE ITEMS	BRIDGE QUANTITY	ROUND	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS
2															2		2		EACH	BEARING DEVICE ASSEMBLY (STEEL) (FIXED)	531.10			
					10	10									20		20		SY	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE CLASS II	580.14			
					3	2									5		5		CY	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE CLASS III	580.15			
																				BEGIN PIPE OPTIONS				
								134									134		LF	18" CSP .064 (2-2/3 X 1/2)	601.0315			
								134									134		LF	18" CPEP	601.0915			
								134									134		LF	18" CAAP .060 (2-2/3 X 1/2)	601.0215			
								134									134		LF	18" PCCSP .064 (2-2/3 X 1/2)	601.0415			
								134									134		LF	18" RCP CLASS IV	601.0816			
								134									134		LF	18" CPEP	601.0915			
																				END PIPE OPTIONS				
								6									6		EACH	CAST IRON GRATE WITH FRAME, TYPE E	604.48			
													3				3		EACH	CAST IRON COVER WITH FRAME, SEWER	604.56			
								650									650		LF	6" UNDERDRAIN	605.10			
								8									8		EACH	UNDERDRAIN FLUSHING BASINS	605.95			
								100									100		MGAL	DUST CONTROL WITH WATER	609.10			
								1									1		TON	DUST & ICE CONTROL WITH CALCIUM CHLORIDE	609.15			
								5		10							15		CY	STONE FILL, TYPE I	613.10			
								40									40		CY	STONE FILL, TYPE II	613.11			
								100									100		CY	STONE FILL, TYPE IV	613.13			
								890									890		LF	CAST-N-PLACE CEMENT CONCRETE CURB, TYPE B	616.28			
								1									1		EACH	RELOCATE MAIL BOX, SINGLE SUPPORT	617.10			
								130									130		SY	PORTLAND CEMENT CONC. SIDEWALK, 5 INCH	618.10			
								10									10		TON	BITUMINOUS CONCRETE SIDEWALK	618.15			
								4									4		SY	DETECTABLE WARNING SURFACE	618.30			
								3									~~3~~ 4		EACH	YIELDING MARKER POSTS	619.17			
								20									20		LF	REMOVING AND RESETTING FENCE	620.50			
								60									60		LF	SNOW FENCE (MOD. - ARCH)	620.70			
										1370							1370		LF	SNOW FENCE (MOD. - PDF)	620.70			
									56								56		LF	MISCELLANEOUS FENCE	620.90			
								170									~~170~~ 189.5		LF	HVY DUTY STEEL BEAM GUARD RAIL (MOD 1)	621.21			
								82									~~82~~ 79		LF	HVY DUTY STEEL BEAM GUARD RAIL (MOD 2)	621.21			
								4									4		EACH	TERMINAL CONNECTOR FOR STEEL BEAM GUARD RAIL	621.53			
									2								2		EACH	ENERGY ABSORPTION ATTENUATOR (SAND-FILLED PLASTIC BARREL)	621.56			
								3									3		EACH	ANCHOR FOR STEEL BEAM RAIL	621.60			
								25									25		LF	REMOVAL AND DISPOSAL OF GUARD RAIL	621.60			
									120								120		LF	TEMPORARY TRAFFIC BARRIER	621.90			
													1				1		LS	SEWER MAIN ON BRIDGE	626.60			
													2				2		EACH	ADJUST ELEVATION OF VALVE BOX	629.20			
													1				1		LS	TRANSFER TO NEW SYSTEM-WATER SYSTEM (MOD)	629.42			
													1				1		LS	WATER MAIN ON BRIDGE	629.60			
								50									50		HR	UNIFORMED TRAFFIC OFFICERS	630.10			
								100									100		HR	FLAGGERS	630.15			
														1			1		LS	FIELD OFFICE-ENGINEERS	631.10			

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)

FILE NAME: /str1/90/067/sj067qnt.xls
PROJECT LEADER: R. WHITCOMB
DESIGNED BY: C. MEUNIER
QUANTITY #2

PLOT DATE: 07/27/2005
DRAWN BY: J. GILMORE
CHECKED BY: C. MEUNIER
SHEET 5 OF 73

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

SUMMARY OF ESTIMATED QUANTITIES

SUPER-STRUCTURE		APPROACH SLAB #1	APPROACH SLAB #2		ABUTMENT #1	ABUTMENT #2		ROADWAY	TEMP. GRIDS/DET CIR		EROSION CONTROL	TRAINING		UTILITIES/ PARTICIPATING	FULL CE ITEMS	BRIDGE QUANTITY
															1	
															1	
															1	
															1	
												500				
								1								
								1400								
								40								
								8								
								35								
									500							
									400							
									50							
									85							
									60							
								140								
											410					
											20					
											10					
											90					
											0.50					
											0.50					
											30					
								60								
											1					
											50					
											1					
											1500					
								20								
								2								
								2								
								40								
								130								
								130								
								3								
								3								
									1							
									4							

TOTALS

ROUND	GRAND TOTAL	FINAL
	1	
	1	
	1	
	1	
	500	
	1	
	1400	
	40	
	8	
	35	
	500	
	400	
	50	
	85	
	60	
	140	
	410	
	20	
	10	
	90	
	0.50	
	0.50	
	30	
	60	
	1	
	50	
	1	
	1500	
	20	
	2	
	2	
	~~40~~	26.75
	~~130~~	82
	130	
	3	
	~~3~~	6
	1	
	4	

DESCRIPTIONS

UNIT	ITEMS	ITEM NUMBER
LS	TESTING EQUIPMENT - CONCRETE	631.18
LS	TESTING EQUIPMENT - BITUMINOUS	631.17
LS	TESTING EQUIPMENT - PROTECTIVE COATINGS	631.18
LU	FIELD OFFICE - TELEPHONE (N.A.B.I.)	631.25
HR	EMPLOYEE TRAINEESHIP	634.10
LS	MOBILIZATION/DEMOBILIZATION	635.11
LF	4" YELLOW LINES	646.21
LF	24" STOP BAR	646.28
EACH	LETTER OR SYMBOL	646.30
LF	CROSSWALK MARKING W/DIAGONAL LINE	646.31
LF	TEMPORARY 4" WHITE LINE	646.60
LF	TEMPORARY 4" YELLOW LINE	646.61
LF	TEMPORARY 24" STOP BAR	646.68
LF	TEMPORARY CROSSWALK W/DIAGONAL LINES	646.71
SF	REMOVAL OF EXISTING PAVEMENT MARKINGS	646.85
SY	GEOTEXTILE UNDER STONE FILL	649.31
SY	GEOTEXTILE FOR SILT FENCE	649.51
LB	SEED	651.15
LB	SEED - WINTER RYE	651.17
LB	FERTILIZER	651.18
TON	AGRICULTURAL LIMESTONE	651.20
TON	HAY MULCH	651.25
CY	TOPSOIL	651.35
SY	GRUBBING MATERIAL	651.40
LS	EROSION PREVENTION & SEDIMENT CONTROL PLAN	652.10
HR	MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN	652.20
LU	MAINTENANCE OF EROSION PREVENTION & SEDIMENT CONTROL PLAN (N.A.B.I.)	652.30
SY	EROSION MATTING	654.10
EACH	EVERGREEN TREES (WHITE CEDAR - THUJA OCCIDENTALIS, B & B, 6 FT)	656.20
EACH	DECIDUOUS TREES (SUGAR MAPLE - ACER SACCHARUM, B & B, 4" CAL)	656.30
EACH	TRANSPLANTING SHRUBS	656.50
SF	TRAFFIC SIGNS, TYPE A	675.20
	BEGIN SIGN POST OPTIONS	
LF	FLANGED CHANNEL SIGN POST	675.301
LF	SQUARE TUBE SIGN POSTS AND ANCHOR	675.341
	END SIGN POST OPTIONS	
EACH	REMOVING SIGNS	675.50
EACH	ERECTING SALVAGED SIGNS	675.60
EACH	TEMPORARY TRAFFIC SIGNAL SYSTEM	676.40
EACH	TEMPORARY DETECTOR	676.42

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1449(18)

FILE NAME: str1/80j067/sj067qnt.xls
PROJECT LEADER: R. WHITCOMB
DESIGNED BY: C. MEUNIER
QUANTITY #3

PLOT DATE: 07/27/2005
DRAWN BY: J. GILMORE
CHECKED BY: C. MEUNIER

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

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS			TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
1A	PEATMAN, MARY DUBA	6	REV. 11+25 RT. SL 'A' REV. 0+72 RT.	REV. 11+88 RT. SL 'A' REV. 0+83 RT.	840 S.F.±		TRANSPLANT	(T)		WDOE	06-06-00	JOHNSON	86	231-232	TH 2 & TH 45 FLOWER BED
1B		6	REV. 12+42 RT.	REV. 12+84 RT.	1950 S.F.±										TH 2 & TH 45
2	LEBLANC, ARLENE	6	SL 'B' REV. 0+23 LT. REV. 12+11 LT. REV. 12+11 LT. REV. 12+13 LT. SL 'B' REV. 0+75 LT. SL 'B' REV. 0+95 LT. SL 'B' REV. 0+39 RT. SL 'B' REV. 0+49 RT. SL 'B' REV. 0+70 RT. 12+76 LT.	SL 'B' REV. 0+80 LT. REV. 12+25 LT. REV. 12+25 LT. REV. 12+24.5 LT. SL 'B' REV. 0+78 LT. SL 'B' REV. 0+55 RT. SL 'B' 1+09 RT. 13+41 LT.	98 S.F.±		SLOPE INSTALL DETOUR INSTALL DRIVE SLOPE CONST. DRAINAGE DETOUR	(T) (T) (T) (T) (T) (P) (T) (P) (T)	25 S.F.± 66 S.F.± 13 S.F.± 970 S.F.± 1475 S.F.±	WDOE	08-24-00		87	243-244	TH 60 TEMPORARY GLARE BARRIER 1 LANE DETOUR SILT FENCE PAVED 16' WIDE
3	BOUCHARD, NORMAN J. & ELAINE F.	6	13+40 LT. 13+93 LT. 14+05 LT. 14+11 LT. 14+29 LT. 15+00 LT. 15+13 LT. 15+29 LT. 15+39 LT.	14+89 LT. 15+07 LT. 14+93 LT. 14+93 LT. 14+80 LT. 15+61 LT. 15+65 LT.			DETOUR CONST. SLOPE CUL., DIT. & DR. TRANSPLANT DRIVE REMOVE & RESET INSTALL REMOVE & RESET	(T) (T) (T) (P) (T) (T) (T) (P) (T)	2780 S.F.± 880 S.F.± 890 S.F.±	WDOE	04-04-00	JOHNSON	86	111-112	 CEDAR HEDGE PAVED 17' WIDE RAIL FENCE GUY WIRE CEDAR BUSHES
4	MINGLEDORFF, DALE W. & RHODA M.	6	14+20 RT. 14+56 RT. 14+68 RT.	14+22 RT. 15+48 RT.			INSTALL TRANSPLANT INSTALL	(T) (T) (T)							BARRIER FENCE - ARCHEOLOGICALLY SENSITIVE AREA LILAC BUSH SILT FENCE
5	BELL ATLANTIC - NEW ENGLAND														UTILITY
6	FRONTIER VISION CABLE TELEVISION														UTILITY
7	VILLAGE OF JOHNSON WATER & LIGHT DEPARTMENT														UTILITY

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1	5, 6	PARCEL NO. 3 BOUCHARD. ADD REMOVE & RESET (T) FROM STATION 15+39 LT. ~ 15+65 LT. FOR CEDAR BUSHES. ADD REMOVE & RESET (T) FROM STATION 15+13 LT. ~ 15+61 LT. FOR RAIL FENCE. PER C.O. 9059.	08-24-99	B.A.H.	L.W.B.
2	5	PARCEL NO. 2 LEBLANC. CHANGE REMARK ABOUT 2 LANE DETOUR TO A 1 LANE DETOUR. PER C.O. 9128.	06-23-00	M.J.R.	L.W.B.
		ELECTRONIC FILES TO STRUCTURES 7-25-02			

ACCT, mcassidy
\P_PWP\dms05944\rj067d.dgn
DATE PLOTTED 02-SEP-2005

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

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

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

APPROVED: LAWRENCE W. BLISS DATE: 12-14-98
AGENT D, PLANS & TITLES

R. O. W. PLANS

JOHNSON
BHO 1448(18)
5 6
SHEET 7 OF 73

END SIDELINE "B" APPROACH
SUR ℄ STA 1+50

SL "B" REV. 0+80
25' LT.

LEBLANC, ARLENE
2

INSTALL
(T)

DRIVE
(T)

PAVED

TH 60 REV "B" 1+00
(SIDELINE "B")

CONST. (T)

LEBLANC, ARLENE
2

BOUCHARD, NORMAN J.
& ELAINE F.
3

DR. (P)

2 STORY
WFH

END APPROACH
BEGIN PROJECT
REV STA 11+75

BEGIN APPROACH
REV STA 10+50

DETOUR (T)

SL "B"
REV. 0+23
25.5' LT.
INSTALL (T)
SRI (T)

TBM
BASE PLATE BOLT
OF NW DEVICE
EL. 501.53
DETOUR (T)

℄ TEMPORARY
BRIDGE

REMOVE & RESET

REMOVE & RESET

2 STORY
WFH

INSTALL
(P)

2 STORY
APART-
MENTS

CONST. (T)

SRI (T)

PARKING LOT

WALKWAY

FIRE HYD.

T.H. #2
RAILROAD ST.

TO VT 15
JOHNSON
VILLAGE

12" CSP

REMOVE INLET

24" P
SAVE

8" STUMPS
REMOVE (T)

REMOVE

REMOVE

RAILROAD ST.

10+00

TO TH 5 REV

10+50

T.H. #2

REV 11+00

REV 11+50

REV 12+00

REV 12+50

REV. 12+84
25' RT.

CONCRETE

SIDEWALK

4.00%

3.5%

6.00

DETOUR (T)

CONST. (T)

SRI (T)

CONST. (T)

DRIVE (T)

EXISTING ROW

CUL. DITCH
CEDAR HEDGE

TRANSPLANT
(T)

17.00

16.00

15.50

15.00

14.50

14.00

13.50

13.00

20' M

63'

50'

REV. 11+75
25' RT.

12" M
SAVE

SEE STD. C-1 FOR
CURB END DETAILS

2 STORY
WFH

REV CURVE NO. 1 DATA

△ = 11°-00'-46" RT
D = 15'
R = 381.97
T = 36.82
L = 73.42
E = 1.77

1A

PEATMAN, MARY DUBA

1B

BEGIN BRIDGE
SUR STA 12+67.5
FG = 506.11

EXISTING ROW

END BRIDGE
SUR STA 14+12
FG 505.11

SIDEWALK

50'

37'

SL "A" REV. 0+84
68' LT.

SL "A" REV. 0+78
32' LT.

LAMOILLE RIVER

INSTALL
(T)
12" E

12" SPR
SAVE

6" SPR
SAVE

10" SPR SAVE

INSTALL (T)

TRANSPLANT
(T)

2 STORY
BRICK
HOUSE

30" M
SAVE

INSTALL (T)

END PROJECT
BEGIN APPROACH
SUR STA 15+00

END APPROACH
SUR STA 16+00

SURVEY CURVE NO. 2 DATA

△ = 36°-54'-10"
D = 38°00'00"
R = 150.78'
T = 50.30
L = 97.11
E = 8.17

FENCING FOR ARCHAEOLOGICALLY
SENSITIVE AREA

4

MINGLEDORFF, DALE W. & RHODA M.

END R.O.W PROJECT
BHO 1448(18) STA. 15+48 25' RT.

TRANSPLANT (T)
GRAVEL
DRIVE

BEGIN R.O.W PROJECT
BHO 1448(18)
REV. STA. 11+25 25' RT.

126.5'

128'

TH 45
(SIDELINE "A")

REV 1+00

REV "A" 0+50

REV 1+50

SEE STD. C-1 FOR
CURB END DETAILS

PEATMAN, MARY DUBA

℄ "A" REV STA 1+50
END SIDELINE APPROACH

GRAVEL
PARKING
AREA

SL "A" REV. 1+51
25' RT.

SCALE 1" = 20'-0
20 0 20

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

PLOTTED 02-SEP-2005

FOR R.O.W.
USE ONLY

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 6
Highway No. T. H. 2	Log Sta. / Surv. Sta. 13+50

LAYOUT
R.R. ST. BRIDGE OVER THE LAMOILLE RIVER

Designed By C. MEUNIER	Drawn By S. MAGNAN
Checked By J. P. SPILAK Date 8/94	Bridge Design Supervisor G. S. ROGERS Date 8/94

JOHNSON
BHO 1448(18)
R.O.W. SHEET 6 OF 6 SHEETS SHEET 8 OF 73

HEAVY DUTY STEEL BEAM GUARD RAIL (MOD 1)
REV ℄ "B" STA 0+83 RT ~ SUR STA 12+66.6 LT
SUR STA 14+12.9 LT ~ SUR STA 14+89 LT

HEAVY DUTY STEEL BEAM GUARD RAIL (MOD 2)
REV STA 12+53 RT ~ SUR STA 12+67.5 RT
SUR STA 14+12 RT ~ SUR STA 14+58 RT

CAST-IN-PLACE CURB, CONCRETE CLASS B
REV STA 10+50 LT ~ REV ℄ "B" STA 0+64 LT
REV STA 10+50 RT ~ REV STA 11+72 RT
REV ℄ "A" STA 0+18 RT ~ REV ℄ "A" STA 0+40 RT
REV ℄ "A" STA 1+50 LT ~ REV STA 12+32 RT
REV STA 12+42 RT ~ SUR STA 12+67.5 RT
SUR STA 14+12 RT ~ SUR STA 14+60 RT
SUR STA 14+73 RT ~ SUR STA 16+00 RT
SUR STA 14+11 LT ~ SUR STA 14+91 LT
SUR STA 15+10 LT ~ SUR STA 16+00 LT

ANCHORS FOR STEEL BEAM RAIL
REV ℄ "B" STA 0+76 RT
SUR STA 14+83 LT
SUR STA 14+54 RT

5" PORTLAND CEMENT SIDEWALK
SUR STA 10+50 RT ~ REV STA 11+78 RT
REV STA 12+32 RT ~ SUR STA 12+67.5 RT
SUR STA 14+12 RT ~ SUR STA 14+75 RT

~~BITUMINOUS CONCRETE SIDEWALK~~
~~SUR STA 14+75 RT ~ SUR STA 16+00~~

SIDEWALK RAMP, TYPE 1
REV STA 11+66(-/-) RT ~ REV STA 11+80(-/-) RT
REV STA 11+35 (-/-) RT ~ REV STA 12+50(-/-) RT

~~NOTE: PLANT TWO (2) 4" DIA MAPLES~~
TO BE LOCATED IN THE FIELD
SEE NOTE 44, SHEET 18

RELOCATE MAILBOX - SINGLE SUPPORT
REV ℄ STA "B" 0+71 LT

METAL HAND RAILING (MOD)
REV STA 12+56 RT ~ SUR STA 12+67.5 RT
SUR STA 14+12 RT ~ SUR STA 14+34 RT

CONSTRUCT DRIVE
REV ℄ "B" STA 0+95 LT (PAVED)
SUR STA 14+66 RT (PAVED)
SUR STA 15+00 LT (PAVED)

REMOVAL AND DISPOSAL OF EXISTING GUARDRAIL
REV STA 12+45 RT ~ REV STA 12+68 RT

~~EVERGREEN TREES (White Cedar - Thuja Occidentalis B&B, 6 FT)~~
~~SUR STA 14+25 LT ~ SUR STA 14+80 LT (11 EA.)~~
~~SUR STA 15+40 LT (1 EA.)~~
~~SUR STA 15+50 LT (1 EA.)~~
~~SUR STA 15+63 LT (1 EA.)~~

TRANSPLANTING SHRUBS
~~SUR STA 14+60 RT~~
~~REV ℄ "A" STA 0+80 RT~~

DECIDUOUS TREES (Sugar Maple - Acer Saccharum B&B, 4" cal)
~~REV STA 11+95 LT (1 EA.)~~
~~REV STA 12+05 LT (1 EA.)~~

NEW HEAVY DUTY STEEL BEAM GUARD RAIL TO BE ATTACHED TO NEW CHANNEL RAIL AT ENDS OF BRIDGE
SEE DETAILS ON SHEET 41

N
MAGNETIC 1993

END SIDELINE "B" APPROACH
SUR ℄ STA 1+50

REV STA 12+47.33 =
REV ℄ "B" STA 0+00.00
Δ = 88°-28'-14" LT

SUR STA 12 + 22.76 =
REV PI STA 12 + 22.37 BK
REV STA 12 + 22.14 AH

SUR STA 12 + 16.39 =
℄ "A" STA 0 + 00
Δ = 85°-26'

END APPROACH
BEGIN PROJECT
REV STA 11+75

REV POC STA 12 + 15.89 =
SUR ℄ "A" STA 0 + 02.44

SURVEY PI NO. 1
SUR STA 12 + 04.82
Δ = 12°-53'-10" RT

BEGIN APPROACH
REV STA 10 + 50

SUR POT STA 10 + 00 =
REV STA 10 + 00

STONE FILL, TYPE II
STONE FILL, TYPE IV

REV STA 12 + 50 =
℄ "B" STA 0 + 00

TBM
BASE PLATE BOLT OF NW DEVICE
EL. 501.53

EXISTING 4" WATER LINE INTO GROUND

℄ TEMPORARY BRIDGE

REMOVE CEDAR HEDGES AND BUSHES
SEE GENERAL NOTE 39 ON SHEET 18

TEMPORARY CONSTRUCTION LIMITS

2 STORY APARTMENTS

2 STORY WFH

SUR POT STA 16 + 50

TO VT 15 JOHNSON VILLAGE

SUR PT STA 15+13.49

PARKING LOT

WALKWAY

FIREHYDRANT

DRIVE

PC SUR STA 14 + 16.38

CEDAR HEDGE

EXISTING ROW

END APPROACH
SUR STA 16 + 00

END PROJECT
BEGIN APPROACH
SUR STA 15 + 00

12" CSP
REMOVE INLET

24" D
SAVE

6" STUMP REMOVE

10" A
REMOVE

STUMP REMOVE

10:50 N80-15E 11+00 11+50 12+00

10+00 TO TH 5 REV 10+50 REV 11+00 REV 11+50 REV 12+00 REV 12+50

CONCRETE SIDEWALK

REV PC STA 11 + 85.55

18" M SAVE

R=30'-0"

REV STA 12+01.01 =
REV ℄ "A" STA 0+00.00
Δ = 88°-22'-18" RT

SEE STD. C-1 FOR CURB END DETAILS

~~REMOVE & TRANSPLANT~~
SEE NOTE 42, SHEET 18

2 STORY WFH

REV CURVE NO. 1 DATA
Δ = 11°-00'-46" RT
D = 15°
R = 381.97
T = 36.82
L = 73.42
E = 1.77

BEGIN BRIDGE
SUR STA 12 + 67.5
FG = 506.11

SUR STA 12+63.5 =
CHAN STA 50+00
Δ = 90°

END BRIDGE
SUR STA 14 + 12
FG 505.11

EXISTING 8" PVC PIPE

REV PT STA 12 + 58.97 =
SUR PT STA 12 + 59.58
EQ = 0.61

LAMOILLE RIVER

FENCING FOR ARCHAEOLOGICALLY SENSITIVE AREA

R=16'

12" E

12" SPR SAVE

10" SPR SAVE

REMOVE & RESET
SEE NOTE 43, SHEET 18

12" SPR SAVE

2 STORY BRICK HOUSE

PI SUR STA
14 + 66.68 AH=
14 + 63.19 BK

SURVEY CURVE NO. 2 DATA
Δ = 36°-54'-10"
D = 38°00'00"
R = 150.78'
T = 50.30
L = 97.11
E = 8.17

GRAVEL DRIVE

GRAVEL PARKING AREA

REV 1+50 (SIDELINE "A") REV 14+00

REV STA 1+00

RIVER ROAD

REV 2+50 (SIDELINE "A") REV 0+50

SEE STD. C-1 FOR CURB END DETAILS

℄ "A" REV STA 1 + 50
END SIDELINE APPROACH

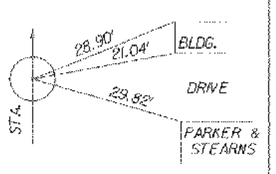
NOTE:
18" MAPLE AT REV ℄ "A" STA 0+30 SHALL BE SAVED AND CARE SHALL BE USED TO LIMIT DAMAGE TO ROOT SYSTEM IN EXCAVATION FOR NEW SUBBASE

SEE SHEET 16 FOR UTILITIES AND DRAINAGE DETAILS

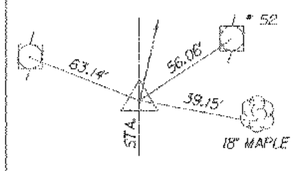
SEE SHEET 11 FOR TEMPORARY BRIDGE/DETOUR LAYOUT DETAILS

SEE SHEET 48 FOR SIGN LAYOUT AND LINE STRIPING DETAILS

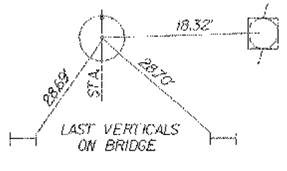
P.O.T. STA. 10 + 00



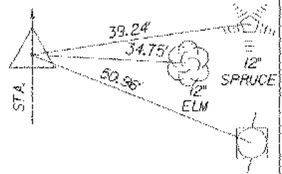
SURVEY P.I. NO. 1, STA. 12 + 04.82



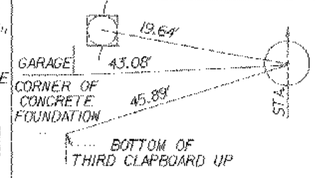
P.C. STA 14 + 16.38



P.I. STA. 14 + 66.68 = 14 + 63.19



P.T. STA. 16 + 50



EXISTING BRIDGE DATA
STEEL TRUSS BRIDGE
WITH CONCRETE DECK
MAXIMUM SPAN = 140'-0"
OVERALL LENGTH = 143'-0"
CURB TO CURB WIDTH = 20'-0"
℄ TRUSS TO ℄ TRUSS = 23'-0"

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

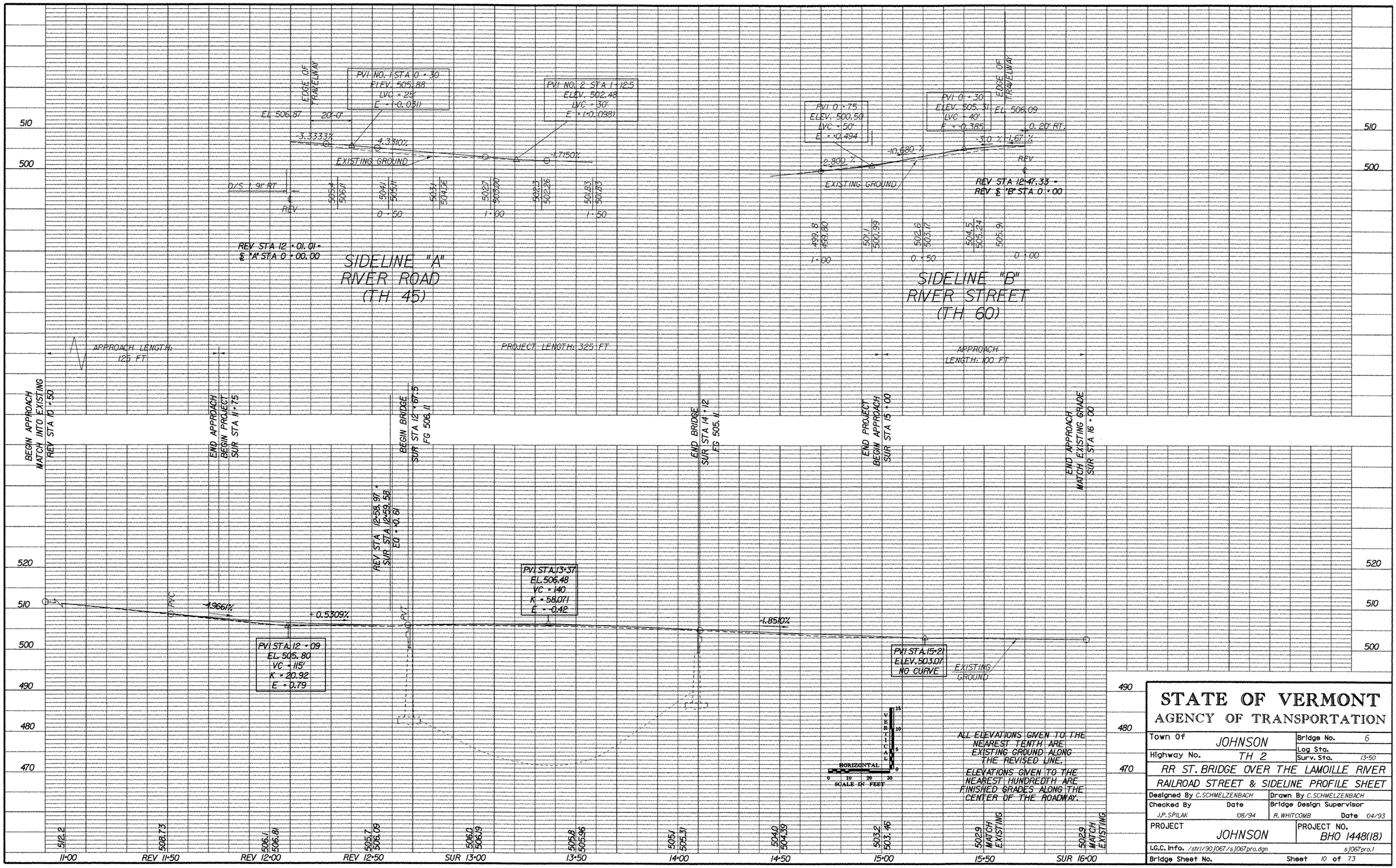
SHEET NAME: PLAN SHEET

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)

HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER

FILE NAME: /PW/90|067/sj067bdr.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. MEUNIER
BRIDGE SHEET NUMBER:

PLOT DATE: 02-SEP-2005
DRAWN BY: S. MAGNAN
IPARM NAME: sc067a1.1
SHEET 9 OF 73



STATE OF VERMONT
AGENCY OF TRANSPORTATION

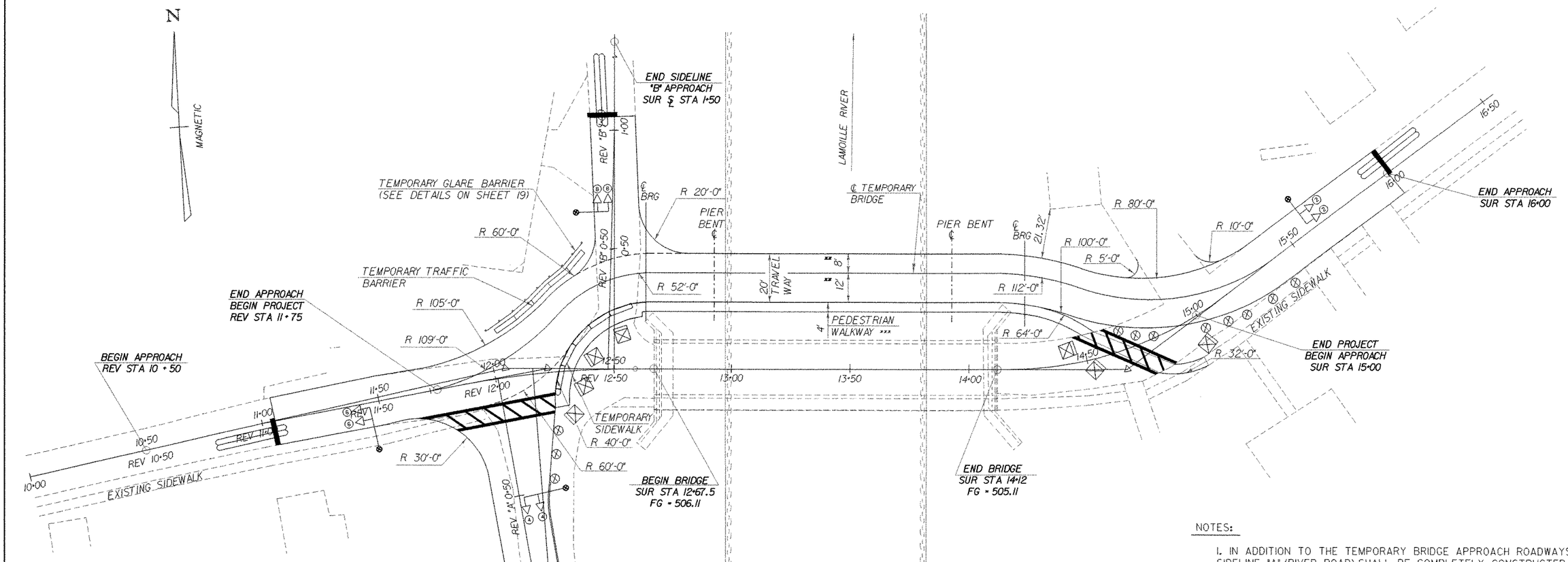
Town Of JOHNSON	Bridge No. 6
Highway No. TH 2	Log Sta. / Surv. Sta. 13+50

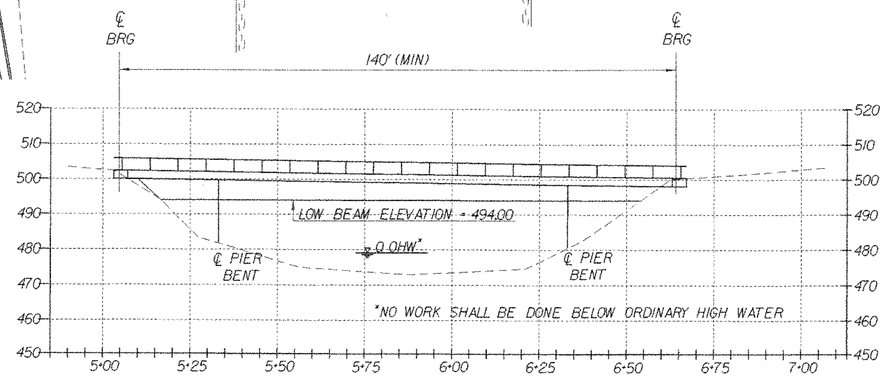
RR ST. BRIDGE OVER THE LAMOILLE RIVER

RAILROAD STREET & SIDELINE PROFILE SHEET

Designed By C.SCHMELZENBACH	Drawn By C.SCHMELZENBACH
Checked By J.P.SPILAK Date 08/94	Bridge Design Supervisor R. WHITCOMB Date 04/93
PROJECT JOHNSON	PROJECT NO. BHO 1448(18)
I.G.C. Info. /str1/90J067/sJ067pro.dgn	sJ067pro.1
Bridge Sheet No.	Sheet 10 of 73

PLOTTED 02-SEP-2005





SCALE 1" = 20'-0
20 0 20

LEGEND

- TYPE III BARRICADE (MOD) (SEE STD. E-107A)
- TEMPORARY WOOD POLE WITH CANTILEVER
- TEMPORARY TRAFFIC BARRIER
- REFLECTORIZED PLASTIC DRUM (SEE STD. E-106)
- PAVEMENT MARKING REMOVAL
- ENERGY ABSORBION ATTENUATOR
- 6' x 30' LOOP

ITEM LOCATIONS ARE APPROXIMATE.
THE CONTRACTOR SHALL BE RESPONSIBLE
TO CONFIRM ANY MEASUREMENTS IN THE FIELD.

NOTES:

1. IN ADDITION TO THE TEMPORARY BRIDGE APPROACH ROADWAYS, SIDELINE "A" (RIVER ROAD) SHALL BE COMPLETELY CONSTRUCTED (INCLUDING DRAINAGE) UP TO AND INCLUDING ITS BASE COURSE PAVEMENT PRIOR TO OPENING THE TEMPORARY BRIDGE TO TRAFFIC.

xx 2. DIMENSIONS SHOWN FROM TEMPORARY ALIGNMENT ARE OFFSET DISTANCES TO FACE OF RAIL. (TEMPORARY BRIDGE IS FOR ONE WAY TRAFFIC ONLY AND THERE WILL BE NO CENTERLINE STRIPING.)

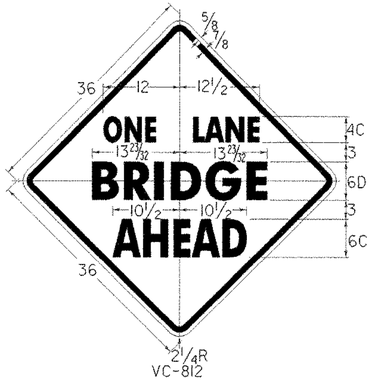
xxx 3. THE WALKWAY SHALL BE RAISED A MINIMUM OF 7 INCHES OR SEPARATED BY A 8" X 8" (MINIMUM) CURB.

4. SEE SHEETS 12 AND 13 FOR ADDITIONAL INFORMATION.

SHEET NAME: TEMPORARY BRIDGE LAYOUT

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)
HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER

FILE NAME: /str1/90J067/sj067tmp.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. MEUNIER
BRIDGE SHEET NUMBER:
PLOT DATE: 02-SEP-2005
DRAWN BY: S. MAGNAN
IPARM NAME: sc067tmp.i
SHEET 11 OF 73

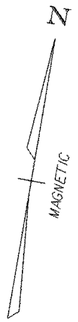


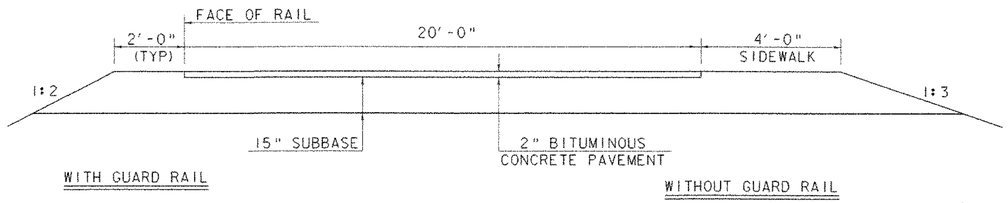
COLORS:
BLACK BORDER AND TEXT NON (REFL.)
ORANGE BACKROUND (REFL.)



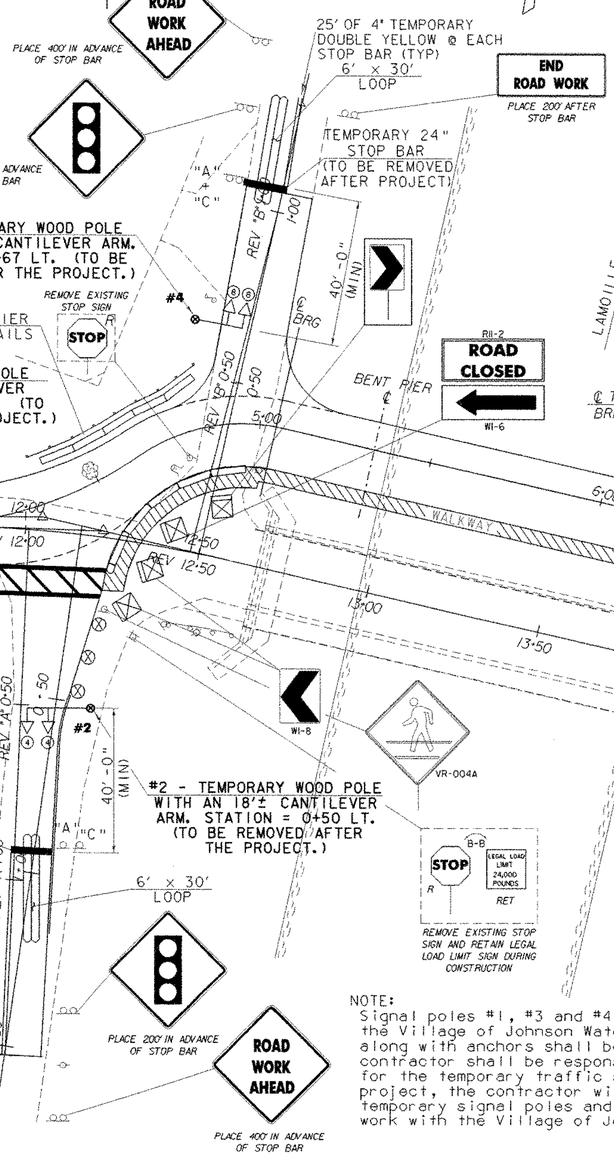








TEMPORARY DETOUR TYPICAL
NTS



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

LEGEND

- TYPE III BARRICADE (MOD) (SEE STD. E-107A)
- TEMPORARY WOOD POLE WITH CANTILEVER
- TEMPORARY TRAFFIC BARRIER
- REFLECTORIZED PLASTIC DRUM (SEE STD. E-106)
- PAVEMENT MARKING REMOVAL
- ENERGY ABSORBION ATTENUATOR
- 6' x 30' LOOP

ITEM LOCATIONS ARE APPROXIMATE.
THE CONTRACTOR SHALL BE RESPONSIBLE TO CONFIRM ANY MEASUREMENTS IN THE FIELD.

NOTE:
Signal poles #1, #3 and #4 along with anchors are to be installed by the Village of Johnson Water and Electric Department. Signal Pole #2 along with anchors shall be installed by the contractor. The contractor shall be responsible for all other installations required for the temporary traffic signal system. Upon completetion of project, the contractor will be responsible for the removal of ALL temporary signal poles and signal apparatus and shall coordinate this work with the Village of Johnson Water and Electric Department.

SHEET NAME: TRAFFIC CONTROL SHEET

PROJECT NAME:	JOHNSON	HIGHWAY NO.:	TH 2
PROJECT NUMBER:	BHO 1448(18)	BRIDGE NO.:	6
		OVER:	LAMOILLE RIVER
FILE NAME: /str1/90j067/sj067tcs.dgn		PLOT DATE:	02-SEP-2005
PROJECT MANAGER: R. WHITCOMB		DRAWN BY:	J.GILMORE
DESIGNED BY:	C. MEUNIER	IPARM NAME:	sj067tcs.i
BRIDGE SHEET NUMBER:		SHEET	12 OF 73



COLORS: BLACK TEXT & BORDER
WHITE REFL. BACKGROUND
MATERIALS: PER STD. E-142

LEGEND

- TRAFFIC SIGNAL POLE WITH LUMINAIRE
- REFLECTORIZED PLASTIC DRUMS (SEE STANDARD E-106). DRUM SPACING (IN FEET) IS EQUAL TO DETOUR SPEED (IN MPH)
- TYPE III BARRICADES SEE STANDARD E-107A
- TYPE III BARRICADES (MOD.) SEE STANDARD E-107A
- PAVEMENT MARKING REMOVAL
- SIGNAL HEAD AND PHASE
- FLASHING BEACON

NOTES:

1. ALL SIGNAL RELATED SIGNS SHALL BE REMOVED OR COVERED WHEN THE SIGNAL IS NOT OPERATING.
2. ITEM LOCATIONS ARE APPROXIMATE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONFIRM ANY MEASUREMENTS IN THE FIELD.

PHASING DIAGRAM AND SPECIAL NOTES FOR EACH LOCATION

PHASE	2			4			6			8		
MINIMUM	8	4	17	7	4	17	8	4	17	7	4	15
EXTENSION	1			1			1			1		
MAXIMUM	12			8			12			8		
HEAD 2	G	Y	R	R	R	R	R	R	R	R	R	R
HEAD 4	R	R	R	G	Y	R	R	R	R	R	R	R
HEAD 6	R	R	R	R	R	R	G	Y	R	R	R	R
HEAD 8	R	R	R	R	R	R	R	R	R	G	Y	R

SPECIAL REQUIREMENTS

APPROACH	TEMPORARY VEHICLE DETECTOR	FLASHING BEACON ON ADVANCED WARNING SIGN
PHASE 2	6 x 30	
PHASE 4	6 x 30	
PHASE 6	6 x 30	
PHASE 8	6 x 30	

ENTER CHECK MARK IN APPROPRIATE BOX WHEN REQUIRED ON THIS PROJECT

TEMPORARY DETOUR NOTES

1. USE SHEET 12 FOR PLACEMENT OF CONSTRUCTION SIGNS, TEMPORARY POLES, LIGHTS, VEHICLE LOOP DETECTORS, ETC.
2. USE SHEET 12 AND 19 FOR LAYOUT OF TEMPORARY BRIDGE APPROACHES, TEMPORARY TRAFFIC BARRIER, GLARE BARRIER AND TEMPORARY PAVEMENT MARKINGS.
3. SIDELINE 'A' SHALL BE CONSTRUCTED AS DETAILED ON SHEET 9 (EXCLUDING CURBWORK). THIS DETOUR WILL ONLY WORK IF THE ROADWAY IS REALIGNED PRIOR TO DETOURING TRAFFIC ONTO THE TEMPORARY BRIDGE.

ATTENUATOR NOTES

AN ENERGY ABSORPTION ATTENUATOR WILL BE PLACED AS SHOWN ON THE TRAFFIC CONTROL PLAN SHEET TO ALLOW THE CONTRACTOR ACCESS TO THE WORK AREA. THE ENERGY ABSORPTION ATTENUATORS FOR THIS PROJECT SHALL BE SUITABLE FOR A NARROW WIDTH APPLICATION AND SHALL BE INSTALLED AS SHOWN ON THE TRAFFIC CONTROL PLAN SHEET. THIS ATTENUATOR WILL BE PAID FOR UNDER ITEM 621.56 "ENERGY ABSORPTION ATTENUATOR (SAND FILLED BARRELS."

THE ATTENUATOR SHALL MEET THE REQUIREMENTS OF THE LATEST VERSION OF THE AASHTO "ROADSIDE DESIGN GUIDE," AND SHALL BE DESIGNED FOR A 4500 LB VECHICLE TRAVELING AT 35 MPH.

IF THE ATTENUATOR IS DAMAGED BY AN ERRANT VECHICLE, ANY COST TO THE CONTRACTOR FOR REPLACEMENT OF ANY PART OR ALL OF THE ATTENUATOR SHALL BE PAID AS "EXTRA WORK" PER SECTION 109.06.

THE CONTRACTOR SHALL PROVIDE A SPARE ATTENUATOR ON THIS PROJECT, FOR THE PURPOSE OF IMMEDIATE REPLACEMENT OF A DAMAGED ATTENUATOR. THE COST OF ON-SITE STORAGE OF AN EXTRA ATTENUATOR SHALL BE PAID AS SPECIFIED IN THE SPECIAL PROVISIONS.

GENERAL TEMPORARY TRAFFIC SIGNAL NOTES

1. DESIGN OF THE SIGNAL SUPPORT(S) AND ANY REQUIRED GUYING IS THE RESPONSIBILITY OF THE CONTRACTOR.
2. SIGNAL TIMING/TIMING ADJUSTMENTS REQUESTED BY THE RESIDENT ENGINEER SHALL BE ACCOMPLISHED WITHIN A 48 HOUR PERIOD AND PAYMENT SHALL BE INCIDENTAL TO THE TRAFFIC SIGNAL ITEM. THE ALL-RED CLEARANCE INTERVAL IS BASED ON AN ASSUMED SPEED OF 10-20 MPH. THE RESIDENT ENGINEER SHALL MAKE SEVERAL TRIAL RUNS TO DETERMINE THE PROPER ALL-RED CLEARANCE INTERVAL.
3. SIGNAL FACES SHALL CONSIST OF 12" LENSES. (RED, YELLOW AND GREEN.)
4. THE BOTTOM OF THE HOUSING OF A SIGNAL FACE SUSPENDED OVER A ROADWAY SHALL NOT BE LESS THAN 16.5' NOR MORE THAN 19' ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE OF THE ROADWAY. THE BOTTOM OF A SIGNAL FACE NOT MOUNTED OVER A ROADWAY, SHALL NOT BE LESS THAN 8' NOR MORE THAN 15' ABOVE THE GROUND. CAUTION SHOULD BE USED TO INSURE COMPLIANCE WITH THE HEIGHT REQUIREMENTS IN THE EVENT THE NEW APPROACH GRADES DIFFER SIGNIFICANTLY FROM THE OLD ROAD GRADES.
5. SIGNAL FACES FOR ANY ONE APPROACH SHALL NOT BE LESS THAN 8' APART MEASURED HORIZONTALLY BETWEEN CENTER OF FACES.
6. SIGNAL HEADS MAY BE HUNG ON A SPAN WIRE OR ON A CANTILEVER MAST ARM. AT LEAST ONE SIGNAL HEAD SHALL BE UNMISTAKABLE IN LINE WITH THE CENTER OF APPROACHING TRAFFIC AT ALL TIMES. THE SECOND SIGNAL HEAD MAY BE POST MOUNTED, LOCATED AT A DISTANCE NO GREATER THAN 14.5' FROM THE CENTER OF THE APPROACH LANE WHEN THE STOP BAR IS 40' FROM THE SIGNAL HEAD. CONSULT THE M.U.T.C.D. FOR ADDITIONAL INFORMATION CONCERNING SIGNAL PLACEMENT.
7. SIGNAL HEAD PLACEMENT IS CRITICAL. HEADS SHALL BE ADJUSTED TO REFLECT LANE LOCATION CHANGES.
8. THE SIGNAL SYSTEM SHALL CONSIST OF POLES, SIGNS AND POSTS, WARNING SIGN, LUMINAIRES, FLASHING BEACONS, AND SIGNAL EQUIPMENT TO PROVIDE FOR AN ADEQUATE DESIGN. IT ALSO INCLUDES PERMITS AND COST ASSOCIATED WITH PROVIDING ELECTRICAL POWER.
9. THE CONTRACTOR SHALL PROVIDE AN ACTUATED CONTROLLER. THE APPROACHES NOTED SHALL HAVE A TEMPORARY VEHICLE DETECTOR. THE TYPE OF DETECTION SHALL BE AT THE OPTION OF THE CONTRACTOR. LOOPS ARE SHOWN FOR PLACEMENT PURPOSES ONLY. THE CONTROLLER, DETECTOR AND ALL OTHER SIGNAL EQUIPMENT SHALL MEET OR EXCEED ALL NEMA STANDARDS.
10. WHEN USED, VEHICLE DETECTOR LOOPS SHALL BE 6' X 30' FOR PRESENCE DETECTION AT THE STOP BAR WITH THE NEAR PORTION LOCATED 5' BEYOND THE STOP BAR.
11. ON SEMI-ACTUATED SIGNAL, PARTICULARLY WITH LONG BRIDGES, THE CONTOLLER SHOULD BE LOCATED ON THE SAME SIDE OF THE BRIDGE AS THE DETECTOR.
12. INTERVAL TIMING SHOWN IN SECONDS.
13. INTERCONNECT BETWEEN SIGNAL POLES BY WHATEVER MEANS POSSIBLE OR CONVENIENT TO PROVIDE FOR A SAFE INSTALLATION.
14. PLACE TEMPORARY POLES BEHIND GUARDRAIL WHERE POSSIBLE.
15. POLES SUPPORTING SPAN WIRES AND/OR MAST ARMS SHALL BE ADEQUATELY BRACED OR GUYED AND SHALL NOT BE PLACED SO AS TO CREATE A HAZARD TO THE TRAVELLNG PUBLIC.
16. ALL TEMPORARY SIGNAL EQUIPMENT, SIGNS, ETC., SHALL BELONG TO THE CONTRACTOR AT THE END OF THE PROJECT AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS REMOVAL, INCLUDING ANY TEMPORARY PAVEMENT MARKINGS, UTILITY POLES, WIRES, ETC.
17. A 250 WATT MER/150 WATT HPS LUMINAIRE AND MAST ARM SHALL BE PROVIDED ON A POLE ON EACH APPROACH AT A MOUNTING HEIGHT OF 30' ABOVE ROADWAY CENTERLINE. THE INTENT IS TO LIGHT UP THE AREA AROUND THE SIGNAL HEADS AND STOP BAR FOR INCREASED VISIBILITY. THE RESIDENT ENGINEER SHALL DETERMINE THE ADEQUACY OF THE LIGHTING AND DIRECT CHANGES IF THE LIGHTING IS INSUFFICIENT.
18. STOP BARS SHALL BE LOCATED A MINIMUM OF 40' AND A MAXIMUM OF 120' FROM THE NEAREST SIGNAL HEAD.
19. PAYMENT FOR THE VEHICLE DETECTORS SHALL BE FOR EACH UNIT INSTALLED.
20. SIGNS AND POSTS AS SHOWN ON THIS SHEET (AND SHEET 12) AND NOTED BELOW ARE INCIDENTAL TO THE TRAFFIC CONTROL SIGNAL ITEMS ("STOP HERE ON RED," "SIGNAL AHEAD," "NO PASSING ZONE," AND "TO GET GREEN LIGHT," ETC).
21. SEE STANDARD E-140 FOR "STOP HERE ON RED" SIGN DETAIL AND E-101 FOR "SIGNAL AHEAD" SYMBOL SIGN. SEE STANDARD E-121 FOR SIGN PLACEMENT. SEE STANDARD E-171A AND E-172 FOR ADDITIONAL INFORMATION ON SIGNALS AND DETECTORS.
22. A "SIGNAL AHEAD" SIGN SHALL BE PLACE AT LEAST 750' FROM THE SIGNAL OR AT A POSITION TO BE DETERMINED BY THE ENGINEER.
23. THE "NO PASSING" SIGN SHALL BE USED TO PREVENT PASSING FOR 750' IN ADVANCE OF THE STOP BAR. THE SIGN SHALL BE PER STANDARD E-102.
24. ALL ELECTRICAL WORK SHALL MEET THE REQUIREMENTS OF THE N.E.C. AND STATE INSPECTOR.
25. TRAFFIC CONTROL WARNING SIGNS SHALL BE PROVIDED ON EACH APPROACH PER STANDARD E-107. ADDITIONAL PROJECT CONSTRUCTION SIGNS SHALL BE INSTALLED AS REQUIRED BY THE RESIDENT ENGINEER PER STANDARD E-100, E-101 AND E-102A. PAYMENT FOR THESE SIGNS, THE REFLECTORIZED PLASTIC DRUMS, ETC., SHALL BE PAID AS PART OF THE "ONE-WAY TEMPORARY BRIDGE (MOD.)" ITEM.
26. THE "TO GET GREEN LIGHT" SIGN IS TO BE USED ONLY ON APPROACHES WITH VEHICLE DECTECTORS.
27. PAYMENT FOR TEMPORARY BARRIER USED SHALL BE MADE UNDER THE ITEM 621.90, "TEMPORARY TRAFFIC BARRIER."
28. THE CONTRACTOR SHALL INSURE THAT THE SIGNAL INSTALLATION CONFORMS TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES WITH THE SUPPORTING STRUCTURES AS PER AASHTO'S STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORT FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS. CERTIFICATION SHALL NOT BE NECESSARY FOR TEMPORARY TRAFFIC SIGNAL EQUIPMENT.
29. REMOVE EXISTING CENTERLINE PAVEMENT MARKINGS FROM THE STOP BAR TO THE BRIDGE DECK ON THE APPROACHES. THIS SHALL BE PAID AS "REMOVAL OF EXISTING PAVEMENT MARKINGS." REPLACEMENT OF THE LINE WILL BE PAID UNDER THE "TEMPORARY 4" YELLOW LINE" ITEM.
31. THE PAVEMENT MARKING REMOVALS AND TEMPORARY EDGELINES AS NOTED ABOVE SHALL BE PAID SEPARATELY UNDER THE APPROPRIATE BID ITEMS.
32. WHEN TEMPORARY BARRIER IS USED, BARRIER ENDS FACING ONCOMING TRAFFIC SHALL BE TAPERED BEYOND THE CLEAR ZONE, OR PROTECTED WITH AN APPROVED END TREATMENT DESIGNED FOR THE 85TH PERCENTILE SPEED OR THE POSTED SPEED LIMIT OF THE ROAD.

STANDARDS REQUIRED

E-100	E-121
E-101	E-140
E-102	E-170
E-102A	E-171A
E-106	E-171B
E-107	E-172
E-107A	E-175
E-110	

SHEET NAME: **ONE-WAY DETOUR WITH TEMPORARY TRAFFIC SIGNAL**

PROJECT NAME:	JOHNSON	HIGHWAY NO.:	TH 2
PROJECT NUMBER:	BHO 1448(18)	BRIDGE NO.:	6
		OVER:	LAMOILLE RIVER
FILE NAME:	/str1/90j067/sj067tcs.dgn	PLOT DATE:	02-SEP-2005
PROJECT MANAGER:	R. WHITCOMB	DRAWN BY:	J.GILMORE
DESIGNED BY:	C. MEUNIER	IPARM NAME:	sj067tcl.i
BRIDGE SHEET NUMBER:		SHEET	13 OF 73

REV PT STA 12 + 58.97 =
SUR STA 12 + 59.58
EQ = + 0.61

REV STA 12+47.33
REV ℄ "B" STA 0+00.00
Δ = 88°28'14" RT

REV PC STA 11+85.55

SURVEY PI NO. 1
SUR STA 12 + 04.82
= 12°-53'-10" RT

R=20'

REV ℄ TH 60

RIVER ST.

STONE FILL, TYPE II

R=10'

SUR STA 12+63.5 =
CHAN STA 50+00
Δ = 90°

℄ BRG ABUT #1
STA 12+69.7

BEGIN BRIDGE
SUR STA 12+67.5
FG 506.11

12"× 6" SCUPPERS (TYP)

END BRIDGE
SUR STA 14+12
FG 505.11

℄ BRG ABUT #2
STA 14+09.7

SUR PC STA
14+16.38

R 8'-0"

SUR PT STA
15+13.49

TO JOHNSON VILLAGE (VT 15)

SUR 15+00

3'-0"

11'-6" TO ℄ OF TRUSS (TYP)

10'-6" TO FACE OF RAIL (TYP)

10'-0" TO FACE OF CURB (TYP)

10'-0" TO FACE OF CURB (TYP)

SUR 12+00

SUR 12+50

REV 12+50

SUR 13+00

13+50

SUR 14+00

14+50

TH 2

REV 12+00

TO TH5

SIDEWALK

NEW BIT. CONC. SIDEWALK

R 16'-0"

REV STA 12+01.01 =
REV S "A" STA 0+00
Δ = 86°-22'-18" RT

R=45'

NEW 5'-0" PORTLAND CEMENT CONCRETE SIDEWALK, 5" (TYP)

SUR PI STA 14 + 66.68 AH=
SUR STA 14 + 63.19 BK

TH ℄ 45

RIVER RD.

R=30'

SUR STA 12+22.76=
REV PI STA 12+22.37 BK=
REV STA 12+22.14 AH

R=45'

REV 0+50

LAMOILLE RIVER

REV CURVE NO. 1 DATA
Δ = 11°00'46"
D = 15°00'00"
R = 381.97
T = 36.82
L = 73.42
E = 1.77

SUR CURVE NO. 2 DATA
Δ = 36°54'10"
D = 38°00'00"
R = 150.78
T = 50.30
L = 97.11
E = 8.17

PLAN

SCALE 1" = 10'-0

10 0 10

N

MAGNETIC

530
520
510
500
490
480
470

EXP

BEGIN BRIDGE TO END BRIDGE: 144'-6"

FIXED

℄ TO ℄ BRG ; 140'-0"

HEAVY DUTY STEEL** BEAM GUARDRAIL (TYP)

∇ Q_{100} = 497.00

APPROXIMATE STREAMBED

530
520
510
500
490

** FOR GUARDRAIL AND ATTACHMENT DETAILS SEE SHEETS 39-41

ELEVATION @ UPSTREAM FASCIA OF TRUSS

SCALE 1" = 10'-0

10 0 10

SHEET NAME: PLAN AND ELEVATION

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)

HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER

FILE NAME: /str1/90j067/sj067pe.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. MEUNIER
BRIDGE SHEET NUMBER:

PLOT DATE: 02-SEP-2005
DRAWN BY: S. MAGNAN
IPARM NAME: sc067pe.i
SHEET 14 OF 73

STATE OF VERMONT
AGENCY OF TRANSPORTATION

EROSION CONTROL NARRATIVE

DESCRIPTION OF PROJECT

This project involves the reconstruction of a bridge over the Lamoille River. The project is on TH#2, Railroad Street, a paved town highway, in the Town of Johnson. An existing, single span, steel truss bridge will be rehabilitated on the existing alignment while traffic is maintained on a one-way temporary bridge, downstream, during construction. The existing abutments will remain in place with repairs near the bridge seats. Following completion of the bridge work, the temporary bridge and supports will be removed. In addition, a new sidewalk will be constructed to replace the existing sidewalk on the upstream side of the bridge. Total roadway approach work, including four approaches, is approximately 700 feet.
No ''Threatened & Endangered Species,' Wetlands, or Historic Resources other than the bridge itself have been identified in the project area. An archeologically sensitive area near the southeast corner of abutment #2 has been identified.

It is anticipated that this project will last two construction seasons.

Total disturbed area (excluding waste, borrow and staging areas): 0.62 acres

SITE INVENTORY & ANALYSIS

OFF SITE DRAINAGE CHARACTERISTICS:
The property surrounding the project site consists of well established vegetation, gently to steeply sloping land partially developed residentially and commercially with defined drainage ways. Due to the nature of the surrounding terrain, runoff water entering the project site will be primarily limited to that which is conveyed along roadway ditches and curbing.

DRAINAGE, WATERWAYS, BODIES OF WATER:
The area surrounding the project site is very flat with the exception of river banks. There are no obvious natural drainage ways within the project area except for the Lamiolle River. The Lamoille River bisects the project site. There are no other water bodies or wetlands within the project area. The Lamoille River is classified as incised and sinuous with hilly to mountainous surroundings and containing a streambed of mostly fine sands and silts with some boulders and gravel. The contributing drainage area at the bridge crossing is 311 sq. mi.

TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES:
The topography of the project site is hilly and wooded along the western side of the project and gently to moderately sloping to the east. Development along Railroad Street consists of a mix of commercial and residential zoning with an active wood processing plant and lumber store near the project limits. Overhead utility service as well as underground water, sewer and storm drains run parallel to Railroad Street. A single catch basin will be removed and six new catch basins will be placed within the project site. These improvements will adequately drain each of the approaching streets. All water collected will be drained onto a stone fill pad in order to dissipate water velocity and and prevent any erosion.

VEGETATION:
Vegetation within the project limits consists of brush and small trees along the river bank. One residence near the bridge has a lawn with cedar hedge landscape plantings. No fields or agricultural crops exist near the project. Impacts to vegetation will be limited to that which are effected by the construction of the temporary bridge along a new alignment. Some of the cedar hedge will be removed and replaced following construction.

SOILS:
The Soil Conservation Service has mapped the soils throughout Lamoille County. The soil type identified for this project site is AdB (Adams-loamy fine sand). This soil type is described as '...deep, well drained to excessively drained soils on terraces in valleys. The soils formed in deposits on outwash plains and beaches and deltas. The surface layer consists of dark/reddish brown fine sandy loam about 13 inches thick. The subsoil is friable, yellowish/olive brown fine sand 12 inches thick. The depth from 26-60 inches consists of olive-yellow fine and medium sand; single grain and loose.

The listed Soil Erodibility Coefficient (K-value) for this soil type is 0.17. Generally, K-values indicate the following: 0.0 - 0.23 = low erodibility; 0.24 - 0.36 = moderate erodibility; 0.37 and higher = higher erodibility.

SENSITIVE RESOURCE AREAS:
No 'Threatened & Endangered Species' have been identified within the project limits and there will be no adverse effect to Historic features. An archaeological area has been identified near WW #4. This area will be protected with fencing during construction, so as not to disturb the area. There are no wetlands within the vicinity of the project.

PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES:
The bridge crosses the Lamoille River. No adverse effects are expected to the river during construction and rehabilitation of the bridge.

TEMPORARY EROSION PREVENTION & SEDIMENT CONTROL

Temporary erosion prevention measures to be utilized include:

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

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

Temporary measures to control sediment transport include:

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

Sand bags filled with clean, small diameter stone, or an equivalent barrier, will be utilized around the drop inlets to create a temporary ponding area for particles to settle out as water drains through the barrier. Inlet protection shall be installed as soon as there is the possibility of water flowing to the structure. The height of the barrier shall be limited such that the ponding area does not present a hazard to the traveling public. Alternative inlet control measures shall be approved by the Engineer and On-site coordinator prior to implementation.

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

Stabilized construction entrances to the project site, staging areas, as well as to waste and borrow areas shall be established. The minimum size of a stabilized construction entrance is 12' x 50'. All surface water flowing to or diverted towards a construction entrance shall be piped under the stone. Pipes shall be appropriately sized for the contributing area, however, no pipes smaller than 6" diameter shall be used.

PERMANENT EROSION CONTROL MEASURES

Several permanent erosion control measures will be utilized:

Stone lining of the stream banks with Stone Fill, Type II and IV, as specified by VTrans Hydraulics personnel, will protect from stream bank erosion during design storm events.

Stone Fill, Type I will be utilized at pipe outlets and Abutment #1 wingwalls to dissipate water velocities and reduce erosion potential.

Any area disturbed by construction including the area affected by the removal of the temporary bridge will be seeded and mulched to promote vegetation growth.

GENERAL EROSION & SEDIMENT CONTROL GUIDELINES

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

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

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

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

Maintaining vegetated buffers along stream banks, wetlands or other sensitive areas is a crucial erosion and sediment control measure that should be established wherever possible.

Control only sediment-laden runoff generated by the project site. Collect and route clean offsite runoff around or through the project site using diversion berms, diversion channels, culverts and/or temporary pipes.

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

PROJECT NAME:	JOHNSON		
PROJECT NUMBER:	BHO 1448(18)		
FILE NAME:	/PW/90j067/sj067ecn.xls	PLOT DATE:	5/3/2005
PROJECT LEADER:	R.R. WHITCOMB	DRAWN BY:	J. PERRIGO
DESIGNED BY:	D. BONNEAU	CHECKED BY:	D. BONNEAU
EROSION CONTROL NARRATIVE		SHEET	15A OF 73

N

MAGNETIC

LEBLANC, ARLENE

LEBLANC, ARLENE

BOUCHARD, NORMAN J. & ELAINE F.

BRUSH/TREES

12" CSP INLET

24" P

8" STUMPS

10" A STUMP

PAVED

TH 60 REV 18" 1·00 (SIDELINE "B")

REV 18" 0·50

0·50

50·50

BRUSH

TBM BASE PLATE BOLT OF NW DEVICE EL. 501.53 P L

EXISTING 4" WATER LINE INTO GROUND

EXISTING 4" WATER LINE INTO GROUND

2 STORY WFH

2 STORY APART-MENTS

2 STORY WFH

WALKWAY

PARKING LOT

FIRE⊕PLUG

TO VT 15 JOHNSON VILLAGE

16·50

10·50

11·00

11·50

12·00

12·50

10·00

TO TH 5 REV 10·50

REV 11·00

REV 11·50

REV 12·00

REV 12·50

WSO

CONCRETE SIDEWALK

EXISTING ROW

GRASS/LAWN

CEDAR HEDGE

DRIVE

13·00

13·50

14·00

14·50

15·00

15·50

16·00

18" M

SAVE 18" M

20" M

SIDEWALK

PAVED DRIVE

32" M

30" M

42" M

6" SPR

12" SPR

10" SPR

12" E

2 STORY WFH

REV CURVE NO. 1 DATA

△ = 11°-00'-46" RT
D = 15°
R = 381.97
T = 36.82
L = 73.42
E = 1.77

PEATMAN, MARY DUBA

FLOWERS

REV "A" 0·50

REV "A" 1·00

REV "A" 1·00

TH 45 (SIDELINE "A") REV 7·50

BRUSH

EXISTING 8" PVC PIPE

P L

LAMOILLE RIVER

FENCING FOR ARCHAEOLOGICALLY SENSITIVE AREA

MATURE TREES

2 STORY BRICK HOUSE

GRASS/LAWN

SURVEY CURVE NO. 2 DATA

△ = 36°-54'-10"
D = 38°00'00"
R = 150.78'
T = 50.30
L = 97.11
E = 8.17

MINGLEDORFF, DALE W. & RHODA M.

GRAVEL DRIVE

GRAVEL PARKING AREA

PEATMAN, MARY DUBA

NOTES:

1. A 3D SURVEY DOES NOT EXIST FOR THIS PROJECT, AND THEREFORE EXISTING CONTOURS CANNOT BE DISPLAYED. PROPER PLACEMENT OF SILT FENCING SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.

2. 18" MAPLE AT REV ℄ 'A' STA 0+30 SHALL BE SAVED AND CARE SHALL BE USED TO LIMIT DAMAGE TO THE ROOT SYSTEM IN EXCAVATION FOR NEW SUBBASE.

SCALE 1" = 20'-0

20 0 20

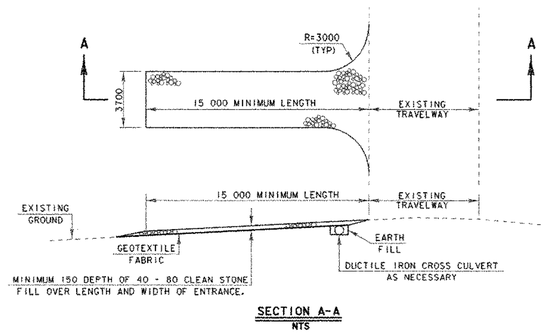
SHEET NAME: EXISTING CONDITIONS SITE PLAN

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)

HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER

FILE NAME: /PW/90j067/sj067ec.dgn
PROJECT MANAGER: R.R. WHITCOMB
DESIGNED BY: C. MEUNIER
BRIDGE SHEET NUMBER:

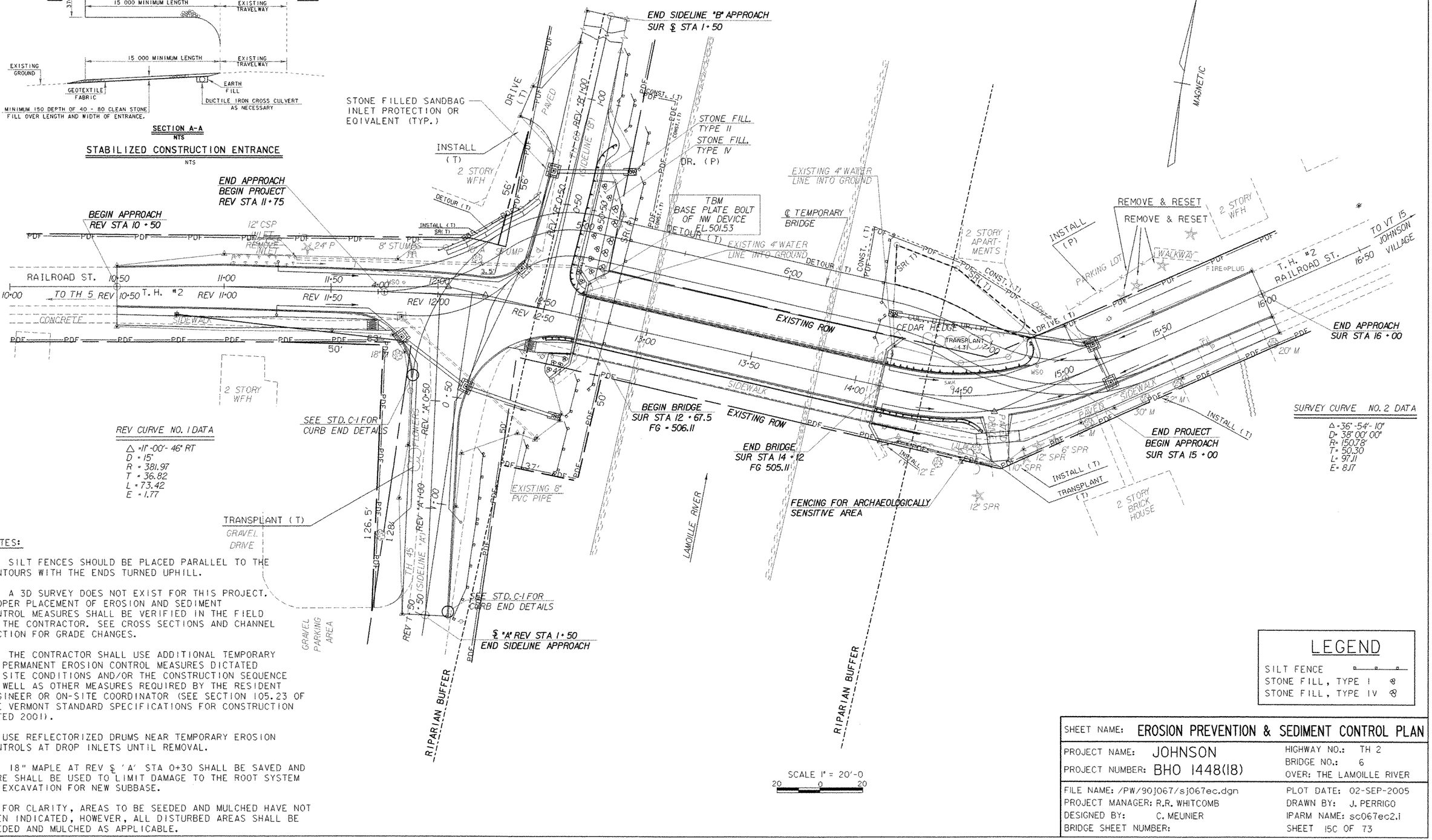
PLOT DATE: 02-SEP-2005
DRAWN BY: J. PERRIGO
IPARM NAME: sc067ecl.i
SHEET 15B OF 73



SECTION A-A
NTS

STABILIZED CONSTRUCTION ENTRANCE

NTS



NOTES:

1. SILT FENCES SHOULD BE PLACED PARALLEL TO THE CONTOURS WITH THE ENDS TURNED UPHILL.

2. A 3D SURVEY DOES NOT EXIST FOR THIS PROJECT. PROPER PLACEMENT OF EROSION AND SEDIMENT CONTROL MEASURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR. SEE CROSS SECTIONS AND CHANNEL SECTION FOR GRADE CHANGES.

3. THE CONTRACTOR SHALL USE ADDITIONAL TEMPORARY OR PERMANENT EROSION CONTROL MEASURES DICTATED BY SITE CONDITIONS AND/OR THE CONSTRUCTION SEQUENCE AS WELL AS OTHER MEASURES REQUIRED BY THE RESIDENT ENGINEER OR ON-SITE COORDINATOR (SEE SECTION 105.23 OF THE VERMONT STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2001).

4. USE REFLECTORIZED DRUMS NEAR TEMPORARY EROSION CONTROLS AT DROP INLETS UNTIL REMOVAL.

5. 18" MAPLE AT REV ℄ 'A' STA 0+30 SHALL BE SAVED AND CARE SHALL BE USED TO LIMIT DAMAGE TO THE ROOT SYSTEM IN EXCAVATION FOR NEW SUBBASE.

6. FOR CLARITY, AREAS TO BE SEEDED AND MULCHED HAVE NOT BEEN INDICATED, HOWEVER, ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED AS APPLICABLE.

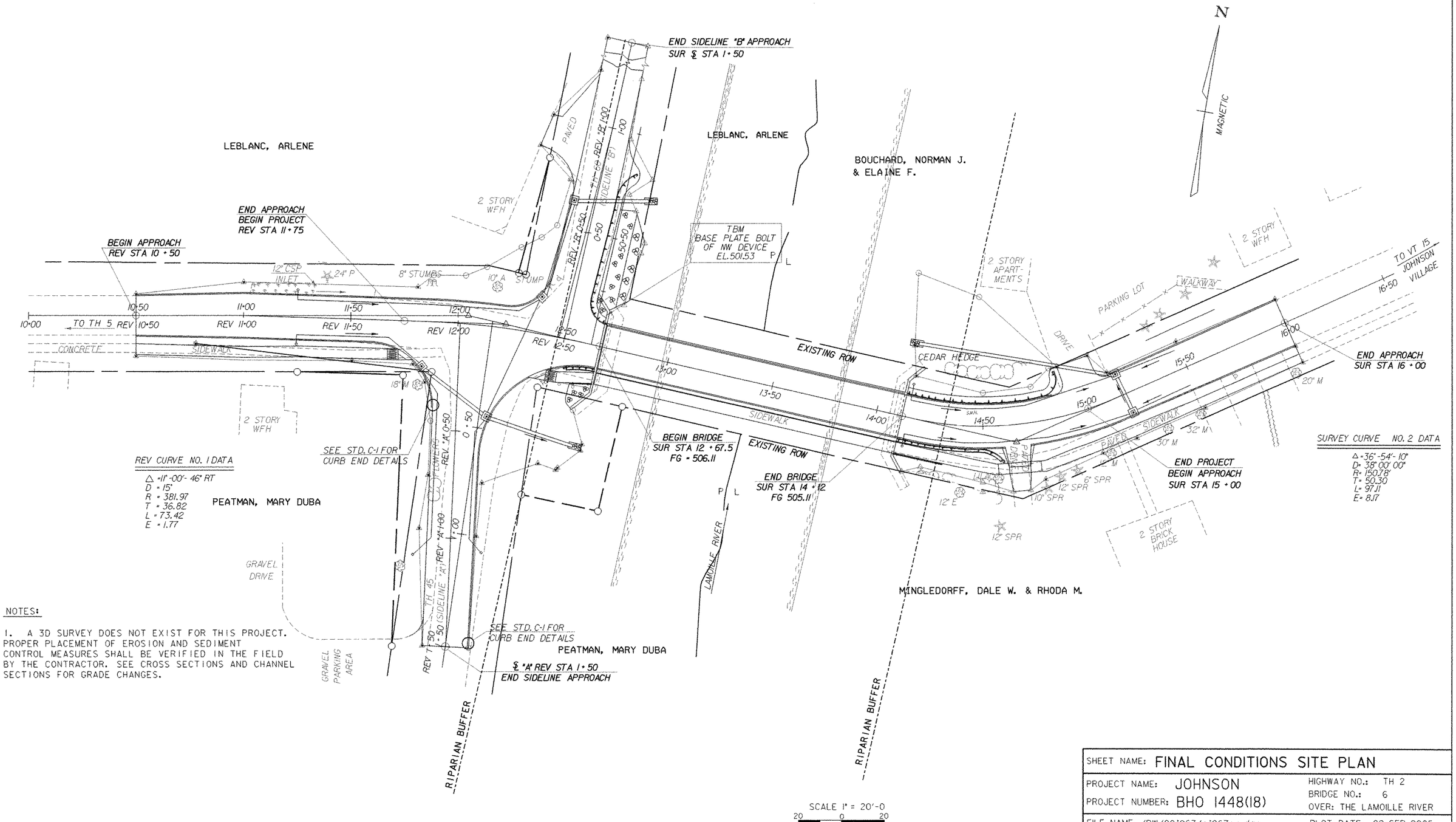
LEGEND

SILT FENCE
STONE FILL, TYPE I
STONE FILL, TYPE IV

SHEET NAME: EROSION PREVENTION & SEDIMENT CONTROL PLAN

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)
HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER

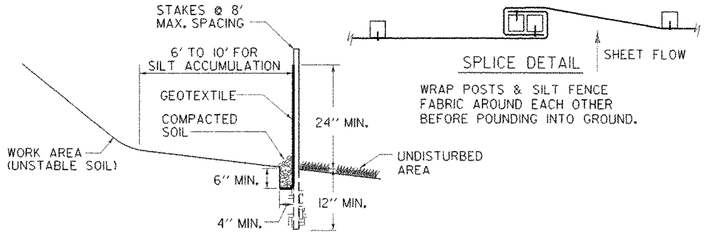
FILE NAME: /PW/90J067/sj067ec.dgn
PROJECT MANAGER: R.R. WHITCOMB
DESIGNED BY: C. MEUNIER
BRIDGE SHEET NUMBER:
PLOT DATE: 02-SEP-2005
DRAWN BY: J. PERRIGO
IPARM NAME: sc067ec2.i
SHEET 15C OF 73



NOTES:

1. A 3D SURVEY DOES NOT EXIST FOR THIS PROJECT. PROPER PLACEMENT OF EROSION AND SEDIMENT CONTROL MEASURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR. SEE CROSS SECTIONS AND CHANNEL SECTIONS FOR GRADE CHANGES.

SHEET NAME: FINAL CONDITIONS SITE PLAN	
PROJECT NAME: JOHNSON	HIGHWAY NO.: TH 2
PROJECT NUMBER: BHO 1448(18)	BRIDGE NO.: 6
	OVER: THE LAMOILLE RIVER
FILE NAME: /PW/90J067/sj067ec.dgn	PLOT DATE: 02-SEP-2005
PROJECT MANAGER: R.R. WHITCOMB	DRAWN BY: J. PERRIGO
DESIGNED BY: C. MEUNIER	IPARM NAME: sc067ec3.i
BRIDGE SHEET NUMBER:	SHEET 15D OF 73

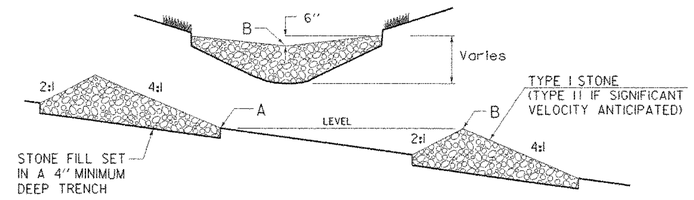


SILT FENCE

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

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

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



TEMPORARY STONE CHECK DAM

NOTES :
1. CHECK DAMS TO BE USED DURING ESTABLISHMENT OF GRASS LINED DRAINAGE DITCHES
2. LOCATE DOWNSTREAM STRUCTURE SUCH THAT POINT "B" IS APPROXIMATELY LEVEL WITH THE LOWEST GROUND ELEVATION "A" OF THE UPSTREAM STRUCTURE.

SEEDING FORMULA
RURAL AREAS

% WT.	LBS./A.	NAME	PUR %	GERM %
37.5	22.5	CREEPING RED FESCUE	98	85
37.5	22.5	TALL FESCUE	95	90
5.0	3.0	RED TOP	95	90
15.0	9.0	BIRDSFOOT TREFOIL	98	85
5.0	3.0	ANNUAL RYEGRASS	95	85
100.0	60.0			

GENERAL NOTES

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

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

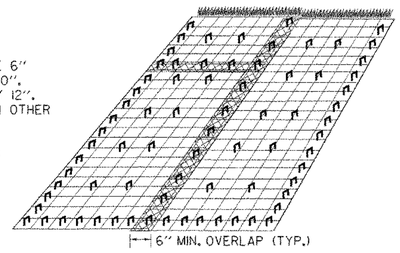
FERTILIZER: FORMULA 10-20-10, TO BE USED WITH SEED, APPLIED AT THE RATE OF 500 LBS./ACRE. (HYDRO SEEDERS MAY USE 19-19-19 FORMULA).

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

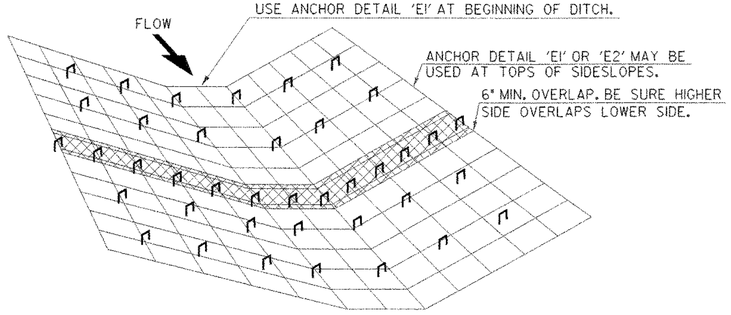
HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

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

NOTES:
1. ALL FABRIC OVERLAPS SHALL BE 6" MINIMUM WITH STAPLES EVERY 20".
2. STAPLE EDGES OF FABRIC EVERY 12".
3. USE 40" MAX. STAPLE SPACING IN OTHER AREAS.
4. SEE "EROSION MATTING FOR DITCHES" DETAIL FOR ANCHORING AT TOPS OF SLOPES.

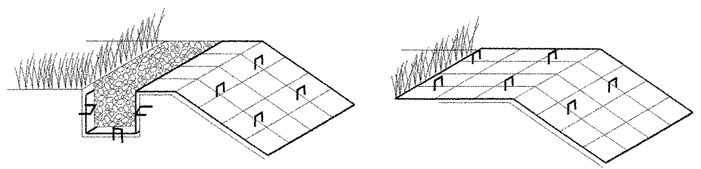


EROSION MATTING FOR SLOPES STEEPER THAN 1:3



EROSION MATTING FOR DITCHES

1. TO BE USED WHERE SLOPE OF DITCHLINE EXCEEDS 5%
2. OVERLAPS SHALL BE 6" MINIMUM IN THE DIRECTION OF FLOW AND STAPLED EVERY 20" MIN. THROUGH BOTH FABRICS.
3. USE 40" MAX STAPLE SPACING IN OTHER AREAS.



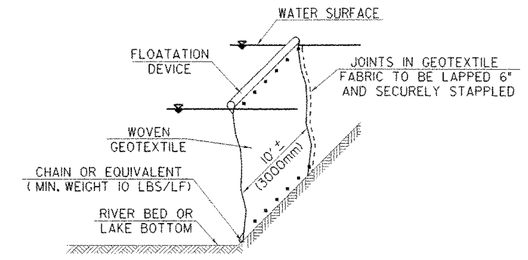
ANCHOR DETAIL 'E1'

INSERT & STAPLE FABRIC INTO 6" X 6" TRENCH PRIOR TO BACKFILLING & COMPACTING SOIL. USE 3 STAPLE PATTERN EVERY 20".

ANCHOR DETAIL 'E2'

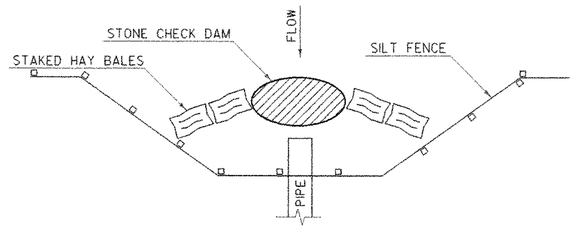
IF THE TOP OF SLOPE IS RELATIVELY FLAT EXTEND MATERIAL APPROXIMATELY 24" AND STAPLE EVERY 20" MINIMUM.

ANCHOR DETAILS FOR EROSION MATTING

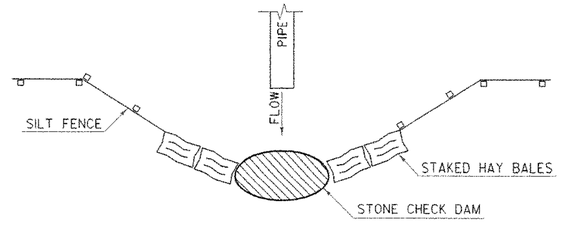


FILTER CURTAIN

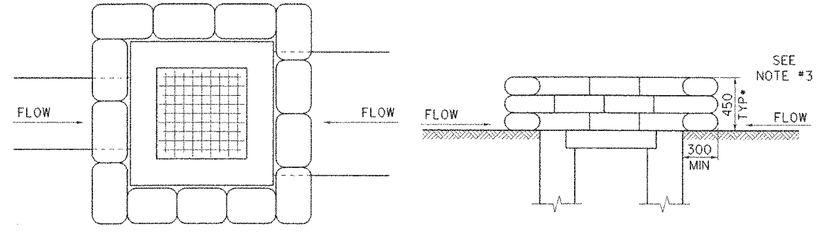
1. NOT TO BE USED ACROSS THE FLOW OF WATER
2. HEIGHT SHOULD BE SUFFICIENT TO ALLOW FOR VARIATIONS IN THE BOTTOM AND RISING WATER
3. ANCHOR FIRMLY IN PLACE AS NEEDED
4. INSTALL PRIOR TO EARTH DISTURBING ACTIVITIES AND/ OR INSTALLATION OF COFFERDAM WHERE APPLICABLE
5. LEAVE IN PLACE UNTIL UP-SLOPE AREAS ARE STABLE AND COFFERDAM IS REMOVED
6. USE CARE DURING REMOVAL TO PREVENT THE RELEASE OF CAPTURED SEDIMENT AS MUCH AS POSSIBLE



EXISTING PIPE INLET CONTROL



EXISTING PIPE OUTLET CONTROL



DETAIL "I"
PROPOSED PIPE INLET CONTROL
GRAVEL BAGS

1. THE PURPOSE OF DRAINAGE STRUCTURE INLET PROTECTION IS TO PREVENT SEDIMENT FROM ENTERING A DRAINAGE SYSTEM. CREATING AND MAINTAINING A SMALL PONDING AREA ALLOWS SEDIMENT TO FALL OUT OF SUSPENSION PRIOR TO ENTERING THE STRUCTURE.
2. GRAVEL BAGS ARE FILLED WITH CLEAN, SMALL DIAMETER STONE ALLOWING WATER TO SLOWLY PERCOLATE THROUGH RATHER THAN SAND WHICH WOULD CREATE A DAM EFFECT.
3. THE TOP OF THE INLET PROTECTION SHALL BE SET AT THE MAXIMUM DESIRED WATER LEVEL BASED ON FIELD LOCATION AND CONDITIONS.

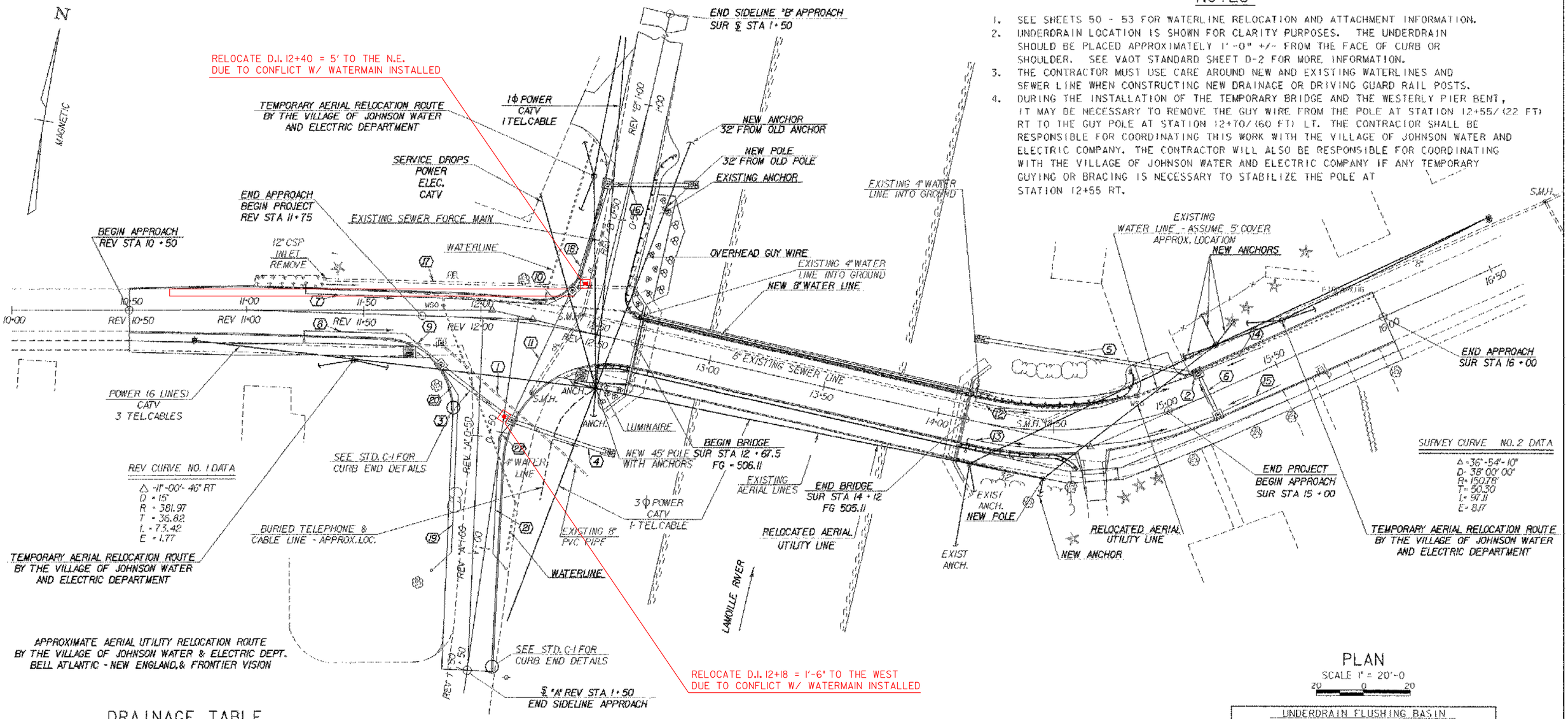
NOTE: ALL DRAWINGS NOT TO SCALE

EROSION & SEDIMENT CONTROL DETAILS

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448 (18)

FILE NAME: /PW/90J067/sj067ero.dgn
PROJECT LEADER: R.R. WHITCOMB
DESIGNED BY: C. CARLSON
BRIDGE SHEET NUMBER:

PLOT DATE: 02-SEP-2005
DRAWN BY: J. PERRIGO
CHECKED BY: D. BONNEAU
SHEET 15E OF 73



NOTES

1. SEE SHEETS 50 - 53 FOR WATERLINE RELOCATION AND ATTACHMENT INFORMATION.
2. UNDERDRAIN LOCATION IS SHOWN FOR CLARITY PURPOSES. THE UNDERDRAIN SHOULD BE PLACED APPROXIMATELY 1'-0" +/- FROM THE FACE OF CURB OR SHOULDER. SEE VAOT STANDARD SHEET D-2 FOR MORE INFORMATION.
3. THE CONTRACTOR MUST USE CARE AROUND NEW AND EXISTING WATERLINES AND SEWER LINE WHEN CONSTRUCTING NEW DRAINAGE OR DRIVING GUARD RAIL POSTS.
4. DURING THE INSTALLATION OF THE TEMPORARY BRIDGE AND THE WESTERLY PIER BENT, IT MAY BE NECESSARY TO REMOVE THE GUY WIRE FROM THE POLE AT STATION 12+55/ (22 FT) RT TO THE GUY POLE AT STATION 12+70/ (60 FT) LT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THIS WORK WITH THE VILLAGE OF JOHNSON WATER AND ELECTRIC COMPANY. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR COORDINATING WITH THE VILLAGE OF JOHNSON WATER AND ELECTRIC COMPANY IF ANY TEMPORARY GUYING OR BRACING IS NECESSARY TO STABILIZE THE POLE AT STATION 12+55 RT.

PLAN

SCALE 1" = 20'-0

20 0 20

UNDERDRAIN FLUSHING BASIN
REV STA 11+25 LEFT AND RIGHT
SUR STA 14+13 LEFT AND RIGHT
SUR STA 15+50 LEFT AND RIGHT
SIDELINE "A" REV STA 1+10 LEFT AND RIGHT

SEWER LINES - EXISTING
MANHOLE AT REV STA 'A' 0+32 LT (INVERT - 498.1)
MANHOLE AT REV STA 12+42 LT (INVERT - 498.0)
MANHOLE AT SUR STA 14+46 LT (INVERT - 497.2)
MANHOLE AT SUR STA 16+84 LT (INVERT - 496.2)

DRAINAGE TABLE

OPTION A - RCP OPTION C - CAAP OPTION E - CSP
OPTION B - PCCSP OPTION D - CPEP

SEE SHEETS 50 - 53 FOR WATERLINE INFORMATION

NO.	STATION	DESCRIPTION
1	REV 11+83 RT ~ SUR 12+60 RT	REMOVE EXISTING 8" X 82' PIPE AND D. I.
2	SUR 15+18 LT	REMOVE EXISTING D. I.
3	REV 11+84 RT ~ REV 12+18 RT	NEW 18" x 36' PIPE (OPTIONS A, B, C, & D) WITH 4' x 4' D. I. WITH TYPE E GRATE AT INLET
4	REV 12+18 RT ~ SUR 12+66 RT	NEW 18" x 42' PIPE (OPTION D & E) WITH 4' x 4' D. I. WITH TYPE E GRATE AT INLET AND ~~6'~~ 10 x ~~3'~~ 20 STONE PAD, TYPE 1AT OUTLET
5	SUR 14+~~12~~ 25 LT ~ SUR 15+17 LT	NEW 18" x ~~92'~~ 76 PIPE (OPTION D & E) WITH 4' x 4' D. I. WITH TYPE E GRATE AT INLET AND 6' x 3' STONE PAD, TYPE 1AT OUTLET
6	SUR 15+17 LT ~ SUR 15+17 RT 11+89	NEW 18" x 18' PIPE (OPTION A, B, C, & D) WITH 4' x 4' D. I. WITH TYPE E GRATE AT INLET
7	REV 11+25 LT ~ REV ~~12+28~~ LT	NEW 6" x ~~104'~~ UNDERDRAIN 56
8	REV 11+25 RT ~ REV 11+68 RT	NEW 6" x ~~44'~~ UNDERDRAIN 42
9	REV 11+68 RT ~ REV 11+84 RT	NEW 6" x 20' UNDERDRAIN
10	~~REV 12+28 LT ~ REV 12+40 LT~~ 10+52 ~ 12+00 LT	~~NEW 6" x 10' UNDERDRAIN~~ NEW 18" x 148 CEP
11	~~REV 12+40 LT ~ REV ℄ "A" 0+42 LT~~	~~NEW 6" x 58' UNDERDRAIN~~
12	SUR 14+13 LT ~ SUR ~~15+16~~ LT 14+89	NEW 6" x ~~96'~~ UNDERDRAIN 76
13	SUR 14+~~13~~ RT30 SUR 15+~~16~~ RT 20	NEW 6" x ~~106'~~ UNDERDRAIN 110
14	SUR 15+18 LT ~ SUR 15+~~50~~ LT 46	NEW 6" x ~~34'~~ UNDERDRAIN 26
15	~~SUR 15+18 RT ~ SUR 15+50 RT~~	~~NEW 6" x 34' UNDERDRAIN~~
16	REV ℄ "B" 0+64 LT~ REV ℄ "B" 0+71RT	NEW 18" x 34' PIPE (OPTIONS A-D) WITH 4' x 4' DI WITH TYPE E GRATE AT INLET AND 6' x 3' STONE PAD, TYPE 1AT OUTLET
17	REV 11+34 LT ~ SUR 12+67 LT	REMOVE EXISTING 12" x 137' PIPE
18	REV 12+40 LT ~ REV ℄ 'B' 0+64 LT	NEW 18" x 46' PIPE (OPTIONS A-D) WITH 4 x 4 DI AT INLET WITH TYPE E GRATE
19	~~REV ℄ 'A' 0+33 RT ~ REV ℄ 'A' 1+10 RT~~	~~NEW 6" x 68' UNDERDRAIN~~
20	~~REV ℄ 'A' 0+22 RT ~ REV ℄ 'A' 0+33 RT~~	~~NEW 6" x 14' UNDERDRAIN~~
21	~~REV ℄ 'A' 0+42 LT ~ REV ℄ 'A' 0+50 LT~~	~~NEW 6" x 8' UNDERDRAIN~~
22	REV ℄ 'A' 0+50 LT ~ REV ℄ 'A' 1+10 LT	NEW 6' x ~~50'~~ UNDERDRAIN 60

SHEET NAME:	UTILITIES AND DRAINAGE SHEET
PROJECT NAME: JOHNSON	HIGHWAY NO.: TH 2
PROJECT NUMBER: BHO 1448(18)	BRIDGE NO.: 6
	OVER: THE LAMOILLE RIVER
FILE NAME: /str1/90j067/sj067ut.dgn	PLOT DATE: 02-SEP-2005
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: S. MAGNAN
DESIGNED BY: C. MEUNIER	IPARM NAME: sc067dr.i
BRIDGE SHEET NUMBER:	SHEET 16 OF 73

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE DETAIL SHEET

STATION	STATION	POS.	ASKEW	INLET/OUTLET TYPE		DITCH		UNDERDRAIN		PIPE		ALLOWABLE OPTIONS				PIPE ELBOW	ES	CB	FRAME & GRATE	DEPTH OF	CONC CLASS B	REINF STEEL	DI GRATE TYPE	CHAN ELEV	CRM	TRENCH EXCAVATION		COMM EXC	UNC CHAN EXC	STRUCT EXCAV	GRAN EXFILL STRUCT	GRAN BORR	EROS MATT	STONE FILL		MARKER POSTS		NUMBER OF PIPE	REMARKS
				INLET	OUTLET	IN	OUT	D	L	D	L	RCP	PCCOP	CMP	CPEP	CSP										EARTH	ROCK									LT	RT		
			NO. DEG.					IN	FT	IN	FT	(A)	(B)	(C)	(D)	(E)	NO. DEG	EA	EA	FT	CY	LBS	TYPE	EA	CY	CY	CY	CY	CY	CY	CY	CY	CY	TYPE	EA	EA		
NEW PIPES																																							
10+52	12+00	LT								18	148															87.7					43.9								
REV 11+84	REV 12+18	RT/RT								18	36 34	X	X	X	X						1.77 3.2					54					39							3	WITH 4' x 4' D.I. AT INLET
REV 12+18	SUR 12+66	RT/RT								18	42 40				X	X				6.5	1.77 3.2	278	E			18.53	27.36				24 35			7.4 1	1			4	WITH 4' x 4' D.I. AT INLET AND 6' x 3' STONE PAD AT OUTLET
SUR 14+12 25	SUR 15+47	LT/LT								18	92 76				X	X				7.0	2.08 3.5	308	E			26.15 115					20.67 72.6			1 96	1 IV			5	WITH 4' x 4' D.I. AT INLET AND 8' x 3' STONE PAD AT OUTLET
SUR 18+17	SUR 16+17	LT/RT								18	18 1 15	X	X	X	X					6.75 7.0	2.08 3.5	303	E			87.01 20					39.61 13.3							8	WITH 4' x 4' D.I. AT INLET
REV 'B' 0+64	REV 'B' 0+74	LT/RT								18	24	X	X	X	X					7.0 6.5	2.47 3.2	347 279	E			19.76 37					10.05 18.3			1 1.5	1 1			16	WITH 4' x 4' D.I. AT INLET AND 6' x 3' STONE PAD AT OUTLET
REV 12+40	REV 'B' 0+64	LT/LT								18	46	X	X	X	X					8.0	2.47 3.9	347	E			50.55 112					17.81 23.3							18	WITH 4' x 4' D.I. AT INLET
15+17	15+31	RT								18	14															58.1 11.8					16.34 6.4								
NEW UNDERDRAINS																																							
	11+81																									12.44												
REV 11+25	REV 12+28	LT/LT						6	104 56																	61											7	
REV 11+25	REV 11+68	RT/RT						8	44 62																	27											8	
REV 11+68	REV 11+84	RT/RT						6	20																	13.76 20											9	
11+92.5	12+35																																						
REV 12+28	REV 12+40	LT/LT						6	10 42.5																	9.5 23											10	
REV 12+40	REV 'A' 0+42	LT/LT						8	52																	61											11	
	14+89																																						
SUR 14+13	SUR 15+16	LT/LT						6	90 76																	16.89 58											12	
	20																																						
SUR 14+13	SUR 15+16	RT/RT						6	106 110																	24.44 64											13	
20	46																																						
SUR 15+16	SUR 15+50	LT/LT						8	34 26																	17.3 34											14	
SUR 15+16	SUR 15+50	RT/RT						6	34																	34											15	
REV 'A' 0+33	REV 'A' 1+10	RT/RT						6	68																	56											19	
REV 'A' 0+22	REV 'A' 0+33	RT/RT						6	14																	12											20	
REV 'A' 0+42	REV 'A' 0+60	LT/LT						6	68 50																	41											21	
REV 'A' 0+60	REV 'A' 1+10	LT/LT						0	3																	15.11 7											22	
EXISTING																																							
REV 11+83	SUR 12+80	RT/RT																								98 20											1	REMOVE EXISTING 8" x 82' PIPE AND D.I.
SUR 15+18		LT																																			2	REMOVE EXISTING D.I.
REV 11+34	SUR 12+67	LT/LT																								185 20											17	REMOVE EXISTING 12" x 137' PIPE
SUBTOTALS								440.5	4110												12.64	1866.0				469.06					178.78			3				
ROUNDING								846 4	268 0												20.50 4.50	1707 3				705 6	40 0				402.4 1.6			2				
TOTALS								440.5 668	LF 4110 298	LF											25 CY	1760	LBS			469.06	CY 40 CY				209	CY		5	CY			

PROJECT NAME:	JOHNSON
PROJECT NUMBER:	BHO 1448(18)
FILE NAME:	/str1/90j067/sj067dm.xls
PROJECT LEADER:	R. WHITCOMB
DESIGNED BY:	C. MEUNIER
DRAINAGE DETAIL SHEET	
PLOT DATE:	1/29/2003
DRAWN BY:	J. GILMORE
CHECKED BY:	C. MEUNIER
SHEET	17 OF

STATE OF VERMONT
AGENCY OF TRANSPORTATION

GENERAL NOTES

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2001, AND ITS LATEST REVISIONS AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DATED 1996 AND ITS LATEST REVISIONS.

2. THE BRIDGE DESIGN MEETS HS-20-44 LIVE LOAD (POSTED RATING).

3. THIS PROJECT HAS BEEN PERMITTED WITH NO PROVISIONS FOR ANY WORK BELOW ORDINARY HIGH WATER. IF THE CONTRACTOR DOES PERFORM ANY WORK BELOW ORDINARY HIGH WATER, THE CONTRACTOR MUST OBTAIN ANY PERMITS REQUIRED.

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

5. (a) EXISTING DIMENSIONS: DIMENSIONS AND ANGLES OF THE EXISTING STRUCTURE SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY. THEY HAVE BEEN TAKEN FROM LIMITED FIELD INVESTIGATION AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL VERIFY THE EXISTING MEASUREMENTS PRIOR TO STARTING THE WORK. THE CONTRACTOR SHALL TAKE ALL FIELD MEASUREMENTS NECESSARY TO ASSURE PROPER FIT OF THE FINISHED WORK AND SHALL ASSUME FULL RESPONSIBILITY FOR THEIR ACCURACY. WHEN SHOP DRAWINGS BASED ON FIELD MEASUREMENTS ARE SUBMITTED FOR APPROVAL, THE FIELD MEASUREMENTS SHALL ALSO BE SUBMITTED FOR REFERENCE BY THE REVIEWER. NO EXTRA PAYMENT WILL BE MADE FOR OBTAINING THE NECESSARY MEASUREMENTS.

   (b) THESE PLANS WERE PREPARED BASED ON INFORMATION OBTAINED FROM REFERENCE PLAN SHEETS 65 - 73. THE RESIDENT ENGINEER MAY BE REQUIRED TO MAKE MINOR CHANGES TO THE DIMENSIONS SHOWN ON THE PLANS TO FIT THE ACTUAL FIELD CONDITIONS.

6. TRAFFIC SHALL BE MAINTAINED ON RAILROAD STREET, RIVER ROAD, AND RIVER STREET DURING THE CONSTRUCTION OF THIS PROJECT UNDER THE ITEM, "ONE WAY TEMPORARY BRIDGE (3360 SF)(MOD.)." THE ITEM 528.10 "ONE WAY TEMPORARY BRIDGE (3360 SF)(MOD.)" IS MODIFIED, BECAUSE THE MINIMUM WIDTH OF THE TEMPORARY BRIDGE IS 20 FEET FACE OF RAIL TO FACE OF WALKWAY INSTEAD OF 14'-9". THE TEMPORARY BRIDGE WIDTH WAS MODIFIED TO ACCOMMODATE TURNING TRUCK TRAFFIC.

7. FULL ACCESS TO THE DRIVES WITHIN THE PROJECT SHALL BE MAINTAINED AT ALL TIMES DURING THE PROJECT. IF THE CONTRACTOR, MUST TEMPORARILY RESTRICT ACCESS TO THE DRIVES, THEY WILL NOTIFY THE PROPERTY OWNERS IN ADVANCE. THIS WORK WILL BE PAID FOR UNDER THE ITEM, "ONE WAY TEMPORARY BRIDGE (3360 SF)(MOD)"

8. ITEM 529.20 "PARTIAL REMOVAL OF STRUCTURES" SHALL INCLUDE REMOVAL AND DISPOSAL OF THE FOLLOWING:
   -CURBS AND CONCRETE BRIDGE DECK
   -EXISTING LATERAL BRACING
   -EXISTING FLOOR BEAMS AND STRINGERS
   -ANY ANGLES, PLATES, OR STRUCTURAL SECTIONS NECESSARY TO MAKE SPECIFIED REPAIRS
   -EXISTING BRIDGE SIDEWALK ELEMENTS (DECK, ANGLES, PLATES, ETC.)
   -VERTICAL AND DIAGONAL TRUSS MEMBERS DETAILED ON SHEETS 26 AND 27

9. THE TERMINAL CONNECTOR SHOWN ON SHEETS 39 TO 41 USED TO CONNECT THE HEAVY DUTY STEEL BEAM GUARD RAIL TO THE BRIDGE RAILING ON THE TRUSS ON THE SIDEWALK SHALL BE PAID FOR UNDER THE ITEM 621.53 "TERMINAL END CONNECTOR FOR BEAM GUARD RAIL." THESE SHALL BE PAINTED BLACK AS PER SUPPLEMENTAL SPECIFICATION 513.

CONCRETE NOTES

10. MINIMUM COVER FOR REINFORCING STEEL SHALL BE AS DETAILED IN THE PROJECT PLANS.

11. ITEM 529.25, "REMOVAL OF CONCRETE OR MASONRY", SHALL INCLUDE THE REMOVAL AND DISPOSAL OF:
   -THE EXISTING CONCRETE AT EACH ABUTMENT TO THE LIMITS SHOWN IN THE PROJECT PLANS.

12. ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE "CONCRETE REINFORCING INSTITUTE."

13. REINFORCING PLACEMENT TOLERANCES SHALL BE:
   SPACING: +/- 1"
   CLEARANCE: +/- 1/4"

14. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" BY 1".

15. WATER REPELLENT (MOD.-SILANE) SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE UNDERSIDE OF THE DECK BETWEEN DRIP NOTCHES.

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

17. THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE CONTINUOUS FOR THE FULL LENGTH OF THE JOINT. ANY UPWARD KEY SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.

18. BRIDGE DECK, BRIDGE SIDEWALK AND BRIDGE CURB CONCRETE SHALL BE "CONCRETE, HIGH PERFORMANCE CLASS A." ALL OTHER CONCRETE SHALL BE "CONCRETE, HIGH PERFORMANCE CLASS B" UNLESS NOTED OTHERWISE.

19. ALL REINFORCING STEEL IN THE CONCRETE DECK, BRIDGE SIDEWALK, BRIDGE CURB AND APPROACH SLABS SHALL BE EPOXY COATED AND PAID UNDER THE ITEM 507.17. WHEN EPOXY COATED REINFORCING STEEL IS CUT, THE DAMAGED ENDS SHALL BE REPAIRED WITH MATERIALS AND PROCEDURES APPROVED BY THE COATING MANUFACTURER. FLAME CUTTING OF EPOXY COATED REINFORCING STEEL WILL NOT BE PERMITTED.

20. THE DECK IS TO BE POURED IN ONE CONTINUOUS POUR WITH A MAXIMUM DURATION OF EIGHT HOURS. IF CIRCUMSTANCES BEYOND THE CONTROL OF THE CONTRACTOR PREVENT THIS FROM BEING ACCOMPLISHED, A CONSTRUCTION JOINT SHALL BE USED. A NINETY-SIX HOUR DELAY BETWEEN THE COMPLETION OF ONE DAYS POUR AND THE BEGINNING OF ANY OTHER POUR SHALL BE OBSERVED.

STRUCTURAL STEEL NOTES

21. ALL STRUCTURAL STEEL PAID FOR UNDER THE ITEM 506.50 "STRUCTURAL STEEL (ROLLED BEAM)", 506.55 "STRUCTURAL STEEL (PLATE GIRDER) AND 506.60 "STRUCTURAL STEEL" SHALL CONFORM TO AASHTO M-270 GRADE 50.

22. ITEM 506.50 "STRUCTURAL STEEL (ROLLED BEAM)," SHALL INCLUDE THE FOLLOWING:
   -REPLACEMENT OF FLOOR BEAMS WITH W27X114 ROLLED BEAMS AS DETAILED ON SHEET 23.
   -REPLACEMENT OF STRINGERS WITH W18X50 ROLLED BEAMS AS DETAILED ON SHEET 24.
   -ALL ANGLES USED FOR CONNECTIONS BETWEEN FLOOR BEAMS AND STRINGERS AND FLOOR BEAMS AND TRUSS MEMBERS AS DETAILED ON SHEET 25.
   -REPLACEMENT OF LATERAL BRACING AS SHOWN ON SHEET 24.
   -SIDEWALK STRINGERS, STRUCTURAL TEES, GUSSET PLATES, CHANNEL AND SUPPORT ANGLES AS DETAILED ON SHEET 36.
   -BRIDGE RAILING (THE ANGLES AND CHANNEL THAT MAKE UP THE BRIDGE RAILING) AS DETAILED ON SHEETS 41 AND 42.
   -W8X31 ROLLED BEAMS USED FOR WATERLINE ATTACHMENT (INCLUDING WT6X13'S,ANGLES, AND SPLICE PLATES AS DETAILED ON SHEET 51.)

23. (a) ITEM 506.55 "STRUCTURAL STEEL (PLATE GIRDER)," SHALL INCLUDE THE FOLLOWING:
   -VERTICAL AND DIAGONAL TRUSS MEMBERS THAT ARE REPLACED AS DETAILED ON SHEETS 26 AND 27.
   (b) AN ADDITIONAL 2000 POUNDS OF STRUCTURAL STEEL (PLATE GIRDER) IS INCLUDED IN THIS PAY ITEM FOR ANY ADDITIONAL DIAGONALS OR VERTICALS THAT REQUIRE REPLACEMENT.

24. (a) ITEM 506.60 "STRUCTURAL STEEL," SHALL INCLUDE ALL NEW STEEL NOT OTHERWISE DESIGNATED, INCLUDING BUT NOT LIMITED TO:
   -DOWNSPOUT AS DETAILED ON SHEET 35.
   -NEW SCUPPERS DETAILED ON SHEET 21.
   -REPAIR AND REPLACEMENT OF PEDESTRIAN HAND RAILING PIECES DETAILED ON SHEETS 35 - 38. (SEE NOTES ON SHEET 38 FOR MORE INFORMATION.)
   -NEW GUSSET PLATES DETAILED ON SHEETS 23 AND 28.
   -NEW LATTICE BARS SHOWN ON SHEET 29.
   -ANCHORAGE PLATES AS DETAILED ON SHEET 41.

   (b) 1500 POUNDS OF ADDITIONAL PAINTED STRUCTURAL STEEL HAVE BEEN INCLUDED FOR ANY UNIDENTIFIED TRUSS REPAIRS. AFTER INITIAL REMOVAL OF TRUSS MEMBERS IDENTIFIED IN THE PLANS FOR REPLACEMENT AND CLEANING OF THE AREAS OF THE REMAINING MEMBERS NOW EXPOSED, CONTACT THE VTRANS STRUCTURES PROJECT MANAGER. AN ENGINEER FROM VTRANS STRUCTURES WILL JOINTLY INSPECT THE TRUSS WITH THE RESIDENT ENGINEER TO DETERMINE IF ADDITIONAL TRUSS REPAIRS OR TRUSS MEMBER REPLACEMENT ARE REQUIRED. PAYMENT OF ANY OF THIS ADDITIONAL 1500 POUNDS QUANTITY WILL ONLY BE MADE FOR REPAIRS DIRECTED BY THE ENGINEER.

25. ALL NEW STRUCTURAL STEEL ELEMENTS SUBJECT TO TENSION SHALL BE CHARPY V-NOTCH TESTED. THESE MEMBERS ARE DESIGNATED BY (CVN) IN THE APPLICABLE DETAILS.

26. EXISTING RIVETS THAT ARE REMOVED FOR REPAIRS NOT DETAILED ON THE PLANS SHALL BE REPLACED WITH 7/8" DIAMETER DOME-HEADED HIGH STRENGTH BOLTS MEETING AASHTO M-164 TYPE I.

27. CONNECTIONS NOT DETAILED SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STRUCTURES ENGINEER FOR APPROVAL.

28. ALL BOLTS SHALL BE COATED IN ACCORDANCE WITH AASHTO M-298 CLASS 50, TYPE I. BOLTS SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO OTHER STRUCTURAL STEEL ITEMS.

29. THE CONTRACTOR SHALL INSTALL THE SIDEWALK BRACKETS AFTER THE EXISTING DECK HAS BEEN REMOVED AND BEFORE THE NEW DECK IS PLACED. THE CONTRACTOR MAY ELECT TO DO THIS WORK AT THE SAME TIME AS INSTALLING THE FLOOR BEAMS PROVIDED THE FLOOR BEAM IS INSTALLED FIRST AND IS FULLY TIGHTENED PRIOR TO ANY REMOVAL OF RIVETS TO INSTALL THE SIDEWALK BRACKET.

30. THE EXISTING STRUCTURAL STEEL ON THIS PROJECT WAS PAINTED WITH A MATERIAL WHICH MAY CONTAIN LEAD. THE REMOVED STRUCTURAL STEEL IS TO 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 STRUCTURAL STEEL.

31. THE EXISTING TRUSSES SHALL BE SHORED DURING THE REPAIR OF THE VERTICAL AND DIAGONAL MEMBERS AS WELL AS GUSSET PLATE REPLACEMENTS. THIS WORK IS PAID FOR UNDER THE ITEM 502.10, "SHORING SUPERSTRUCTURE."

PAINTING NOTES

32. THE SURFACE PREPARATION FOR THE REHABILITATION OF THE EXISTING STEEL SHALL INCLUDE 100% REMOVAL OF THE EXISTING PAINT SYSTEM.

33. THE FAYING SURFACES ON THE TRUSS WHERE THE NEW FLOOR BEAMS AND SIDEWALK BRACKETS CONNECT TO THE EXISTING TRUSS SHALL BE BLAST CLEANED AND PRIMED IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 513, PRIOR TO THE INSTALLATION OF THE NEW STEEL ELEMENTS. THE TRUSS FAYING SURFACE AND ALL OTHER FAYING SURFACES SHALL MEET THE CLASS "B" SLIP COEFFICIENT IN THE "AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES." THIS IS TRUE FOR THOSE LOCATIONS WHERE NEW STEEL IS TO BE ATTACHED TO THE EXISTING TRUSS.

34. THE COLOR OF THE FINAL COAT OF PAINT SHALL BE BLACK, COLOR CHIP #27038.

35. AFTER THE FINAL COAT OF PAINT HAS BEEN APPLIED, AND HAS THOROUGHLY CURED, THE FOLLOWING SHALL BE GREASED PER SUPPLEMENTAL SPECIFICATION 513:
   -ENTIRE FLOOR SYSTEM.
   -ALL TRUSS COMPONENTS BELOW THE TOP OF CURB.
   -NEW SIDEWALK BRACKETS, STRINGERS AND CHANNELS.
   -BEARINGS.
   PAYMENT FOR THE GREASE SHALL BE INCIDENTAL TO THE ITEM 513.30 "STRUCTURAL PAINTING FIELD APPLIED." THE COLOR OF THE GREASE SHALL BE BLACK.

36. ALL NEW STEEL ELEMENTS UNDER THE ITEM 506.50 "STRUCTURAL STEEL (ROLLED BEAM)", 506.55 "STRUCTURAL STEEL (PLATE GIRDER) AND 506.60 "STRUCTURAL STEEL" SHALL BE GIVEN AN APPROVED SHOP APPLIED PAINT SYSTEM PER SUPPLEMENTAL SPECIFICATION 513. (SEE GENERAL NOTE NO. 37)

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

38. METAL HAND RAILING (MOD.) SHALL BE PAINTED BLACK AS PER SUPPLEMENTAL SPECIFICATION 513.

MISCELLANEOUS

39. THE CEDAR HEDGES LOCATED BETWEEN STATIONS 14+25 LT AND 14+80 LT AND CEDAR BUSHES AT STA 15+40 LT, STA 15+50 LT, AND STA 15+63 LT SHALL BE REMOVED PRIOR TO THE INSTALLATION OF THE TEMPORARY BRIDGE AND DETOUR. THE CEDAR HEDGES AND BUSHES SHALL BE REPLACED WITH NEW 6 FOOT CEDAR TREES. THE NEW TREES WILL BE PAID FOR UNDER THE ITEM 656.20, "EVERGREEN TREES." (WHITE CEDAR-THUJA OCCIDENTALIS, B&B, 6 FT.)

40. IF THE PROPERTY OWNER DESIRES IT, THE CEDAR STOCKADE FENCING THAT WILL BE USED AS A GLARE BARRIER DURING THE CONSTRUCTION OF THE PROJECT SHALL BE REMOVED AND RELOCATED TO A LOCATION TO BE DETERMINED BY THE PROPERTY OWNER AND RESIDENT ENGINEER. THIS WORK WILL BE INCIDENTAL TO THE ITEM 620.80, "MISCELLANEOUS FENCE."

41. TEMPORARY FENCING SHALL BE PLACED BETWEEN STATIONS 14+15 RT AND 14+60 RT TO RESTRICT ACCESS TO THE ARCHAEOLOGICAL AREA LOCATED NEAR WINGWALL 4. THIS FENCING AND WORK WILL BE PAID FOR AS ITEM 620.70, "SNOW FENCE(MOD-ARCH)".

42. THE FLOWER BED LOCATED AT STATION 0+80 RT SHALL BE REMOVED AND REPLANTED AS DIRECTED BY THE RESIDENT ENGINEER. THE RESIDENT ENGINEER WILL CONSULT WITH THE PROPERTY OWNER TO DETERMINE THE LOCATION OF THE NEW FLOWER BED. THIS WILL BE PAID FOR AS ITEM 656.50, "TRANSPLANTING SHRUBS". ALL OF THE PLANTS IN THE FLOWER BED WILL BE PAID AS ONE UNIT OF PAYMENT. (I.E., IF THE CONTRACTOR MOVES 10 PLANTS OR 20 PLANTS THEY WILL BE PAID ONLY FOR 1(ONE).)

43. THE LILAC TREE LOCATED AT STATION 14+60 RT WILL BE REMOVED AND RESET AT A LOCATION TO BE DETERMINED BY THE RESIDENT ENGINEER AND PROPERTY OWNER. THIS WILL BE PAID FOR AS ITEM 656.50, "TRANSPLANTING SHRUBS".

44. THERE WILL BE TWO 4 INCH DIAMETER MAPLE TREES PLANTED IN THE FIELD LOCATED BY THE RESIDENT ENGINEER. THE RESIDENT ENGINEER SHALL CONSULT WITH THE PROPERTY OWNER REGARDING THE EXACT LOCATION OF THE TREES. (SEE SHEET 9 FOR APPROXIMATE LOCATION.) THE TREES WILL BE PAID FOR UNDER ITEM 656.30, "DECIDUOUS TREES." (SUGAR MAPLE, ACER SACCHARUM, B&B, 4" CAL.)

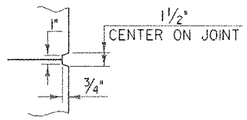
45. ALL HEAVY DUTY STEEL BEAM GUARD RAIL (MOD1) AND THE HEAVY DUTY STEEL BEAM GUARD RAIL (MOD2) SHALL BE PAINTED BLACK. SEE SPECIAL PROVISIONS.

46. IF FIELD CONDITIONS WARRANT EXTENDING THE WATER OR SEWERLINE WORK BEYOND THE LIMITS SHOWN ON SHEET 51, THE WORK SHALL BE PAID FOR AS EXTRA WORK IN ACCORDANCE WITH SECTION 109.06.

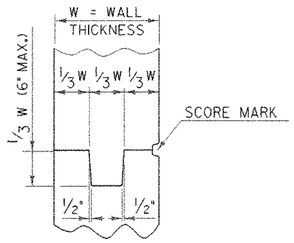
REHABILITATION OF TRUSS BRIDGE

A. REPLACE ALL FLOOR BEAMS WITH NEW BEAMS WITH SHEAR CONNECTORS.
B. REPLACE ALL STRINGERS WITH NEW STRINGERS WITH SHEAR CONNECTORS.
C. REPLACE BOTTOM LATERAL BRACING WITH NEW ANGLES.
D. REPLACE ALL CONNECTIONS BETWEEN STRINGERS AND FLOOR BEAMS AND FLOOR BEAMS TO TRUSS MEMBERS.
E. REPLACE VERTICALS AND DIAGONALS OF UPSTREAM TRUSS AS DETAILED ON SHEETS 26 & 27.
F. REPLACE BEARINGS.
G. REMOVE EXISTING SIDEWALK COMPONENTS AND REPLACE WITH NEW STRUCTURAL MEMBERS AND CONCRETE DECK.
H. EXISTING BRIDGE RAILING ATTACHED TO THE DOWNSTREAM TRUSS SHALL BE REMOVED REPAIRED, CLEANED AND PAINTED. THE RAILING WILL BE REATTACHED TO THE THE UPSTREAM TRUSS AS PART OF THE NEW SIDEWALK.
I. INSTALL NEW CHANNEL GUARD RAIL ON TRUSSES.
J. REPLACE THE CONCRETE DECK WITH HIGH PERFORMANCE CONCRETE, ADD MEMBRANE AND PAVEMENT.
K. CLEAN AND PAINT EXISTING TRUSSES.

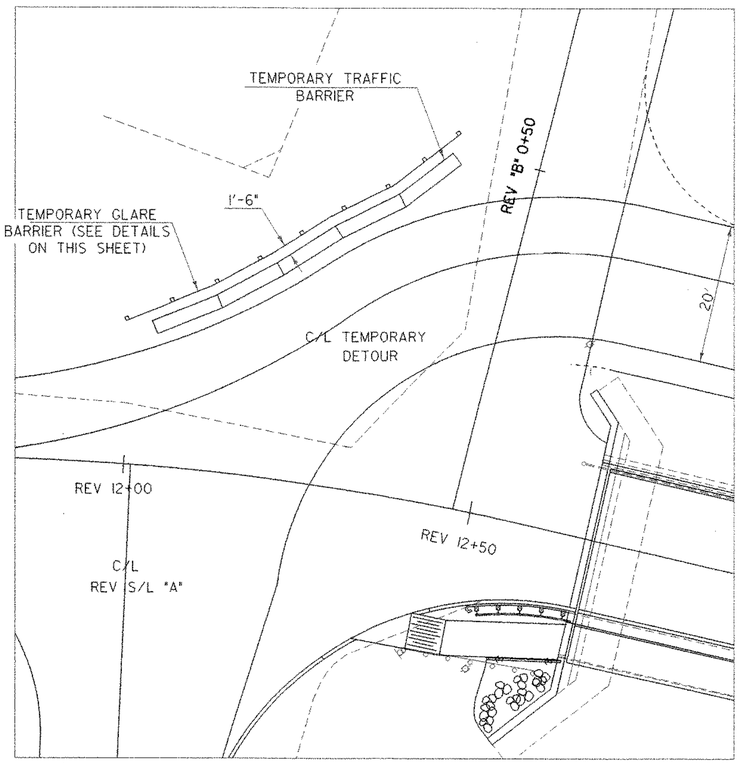
PROJECT NAME: JOHNSON	
PROJECT NUMBER: BHO 1448(18)	
FILE NAME: /str1/90j067/sj067gen.xls	PLOT DATE: 4/18/2005
PROJECT LEADER: R. WHITCOMB	DRAWN BY: J. GILMORE
DESIGNED BY: C. MEUNIER	CHECKED BY C. MEUNIER
GENERAL NOTES	SHEET 18 OF 73

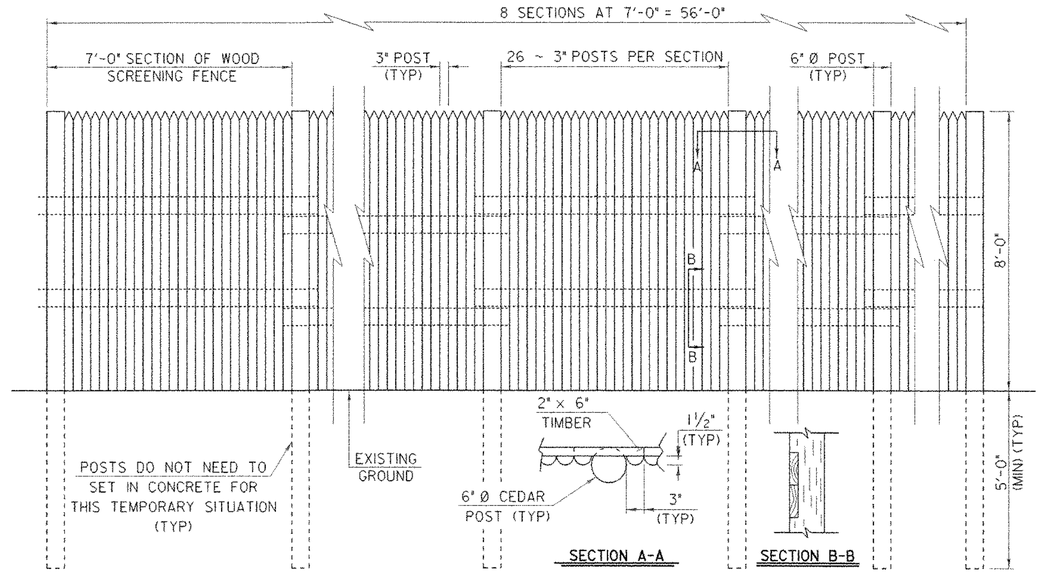


SCORE MARK DETAIL



TYPICAL CONCRETE CONSTRUCTION JOINT



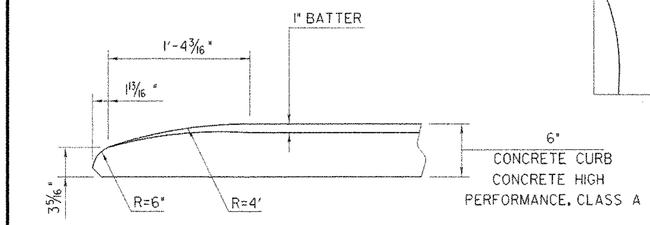


PLACE WOOD SCREENING FENCE (GLARE BARRIER) 1'-6" BEHIND TEMPORARY TRAFFIC BARRIER.

TEMPORARY GLARE BARRIER (FENCING)*

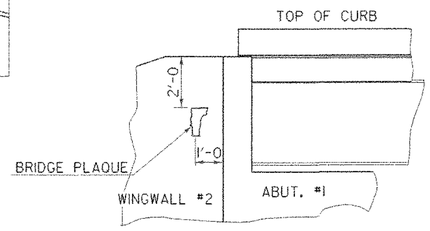
SCALE: 1/2" = 1'-0"

* SEE VAOT STANDARD F7 FOR ADDITIONAL INFORMATION. 1" THICK BOARDS SHOWN ON STANDARD F7 SHALL BE SUBSTITUTED WITH 3" CEDAR POSTS AS SHOWN HERE. FENCING WILL BE PAID FOR AS ITEM 620.80, "MISCELLANEOUS FENCE". CEDAR SHALL BE NORTHERN WHITE CEDAR, COMMERCIAL GRADE.



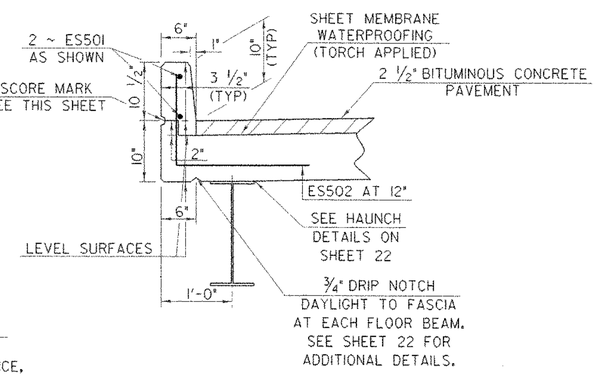
FLARED END DETAIL FOR 6" CURB

CURB REINFORCING STIRRUP BARS SHALL BE TURNED AS REQUIRED TO FIT FLARED ENDS.



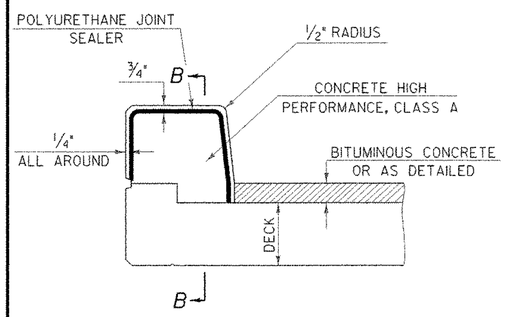
LOCATE BRIDGE PLAQUE

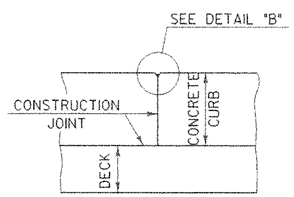
THE BRIDGE PLAQUE WILL BE SUPPLIED BY THE AGENCY OF TRANSPORTATION AND SHALL BE INSTALLED BY THE CONTRACTOR AT ABUTMENT #1 ON THE RIGHT SIDE AS SHOWN OR AS DIRECTED BY THE ENGINEER.



CURB SECTION

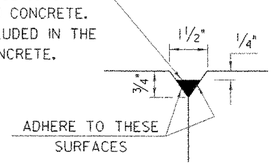
NTS



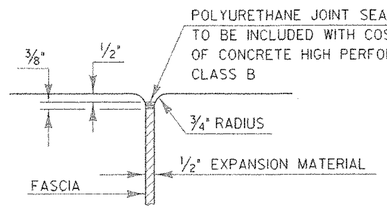


SECTION B - B

POLYURETHANE JOINT SEALER PER SUBSECTION 524.06C COLOR TO MATCH CONCRETE. COST TO BE INCLUDED IN THE UNIT BID FOR CONCRETE.



DETAIL "B"



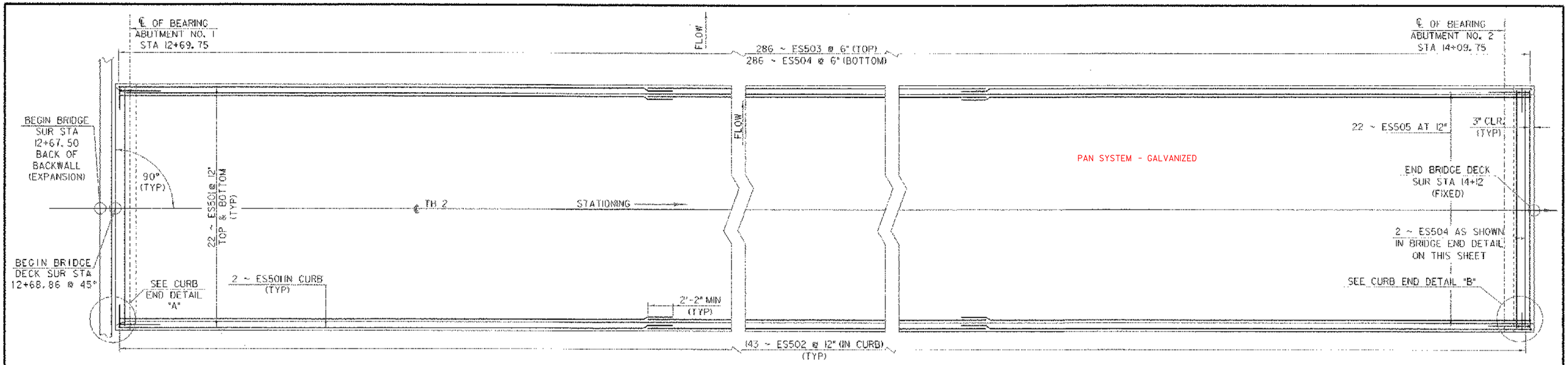
JOINT BETWEEN FASCIA AND WINGWALL

TYPICAL SECTION THROUGH CONCRETE CURB CONSTRUCTION JOINT

NOTES: 1. CONSTRUCTION JOINTS THROUGH CONCRETE CURBS SHALL BE SPACED MAXIMUM 15'-0" CENTER TO CENTER AND SHALL BE 1'-6" MINIMUM FROM THE CENTER OF THE NEAREST BRIDGE RAIL POST. CONCRETE SHALL BE PLACED IN ALTERNATING SECTIONS WITH A MINIMUM OF 48 HOURS DELAY BETWEEN ADJACENT POURS.

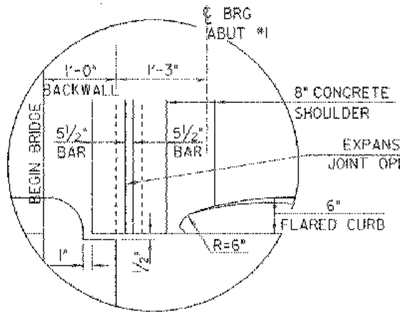
2. LONGITUDINAL REINFORCING SHALL PASS THROUGH CONCRETE CURB CONSTRUCTION JOINTS.

SHEET NAME: MISCELLANEOUS DETAILS	
PROJECT NAME: JOHNSON	HIGHWAY NO.: TH 2
PROJECT NUMBER: BHO 1448(18)	BRIDGE NO.: 6
	OVER: THE LAMOILLE RIVER
FILE NAME: /str1/90j067/sj067sup.dgn	PLOT DATE: 02-SEP-2005
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: STRI
DESIGNED BY: C. MEUNIER	IPARM NAME: sc067mls.i
BRIDGE SHEET NUMBER:	SHEET 19 OF 73



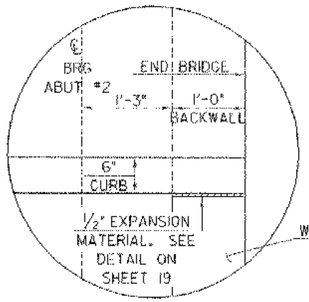
DECK REINFORCING PLAN

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



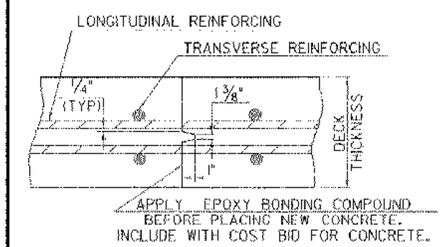
CURB END DETAIL "A" (EXP. END)

SCALE: 1" = 1'-0"

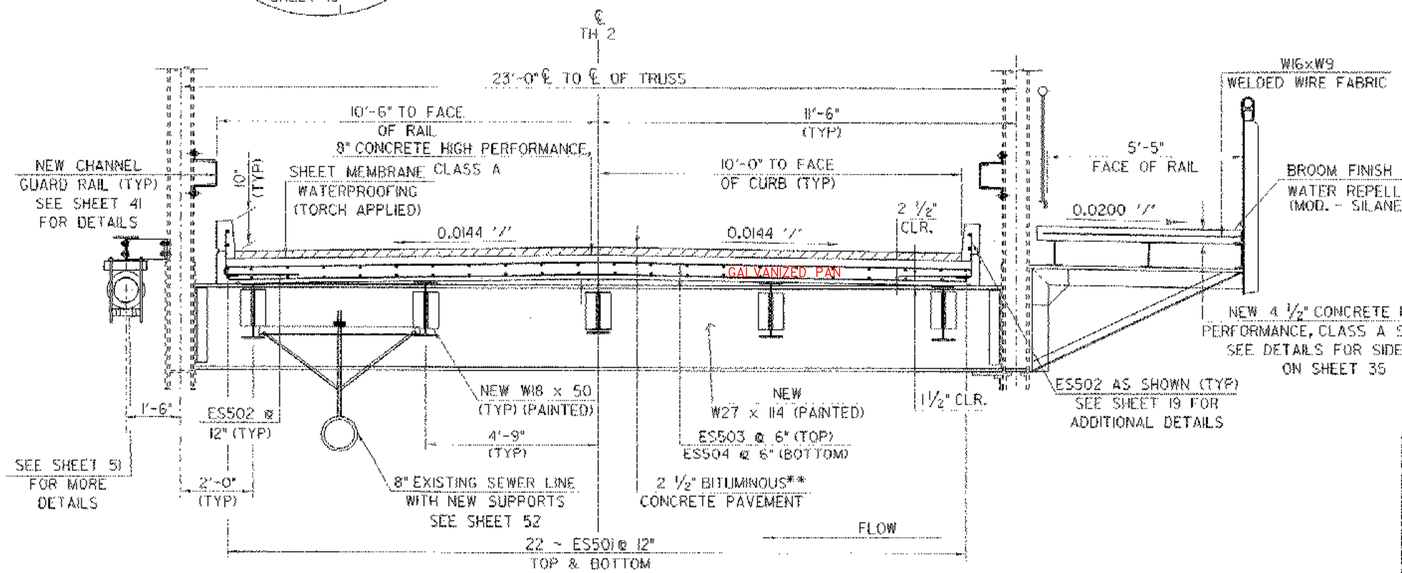


CURB END DETAIL "B" (FIXED END)

SCALE: 1" = 1'-0"



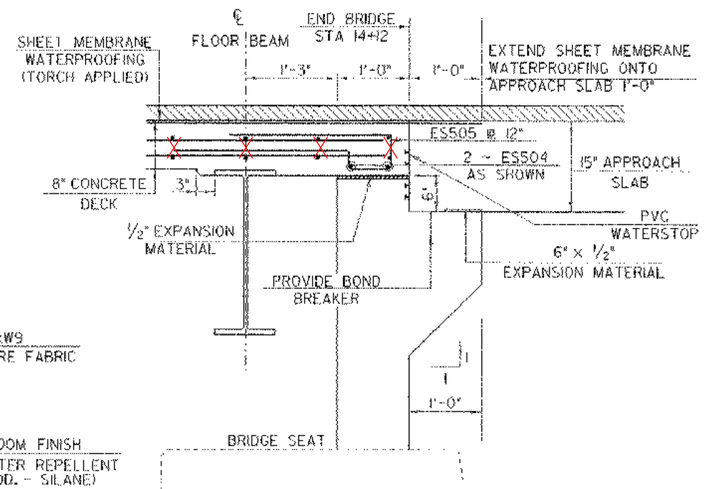
TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINT DETAILS



**TOP LIFT: 1/4" BITUMINOUS CONCRETE PAVEMENT, TYPE III OR IV OVER
BOTTOM LIFT: 1/4" BITUMINOUS CONCRETE PAVEMENT, TYPE III OR IV)

TYPICAL BRIDGE SECTION

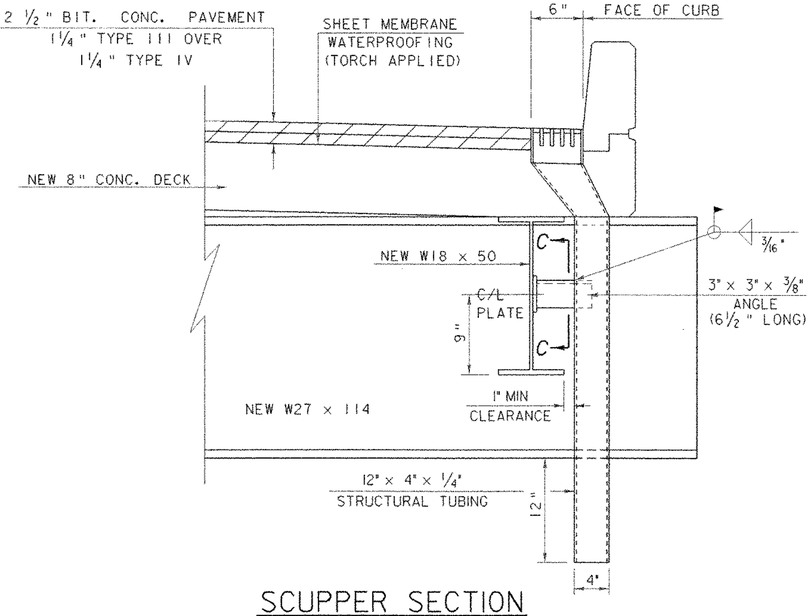
SCALE: ½" = 1'-0"



BRIDGE FIXED END DETAIL

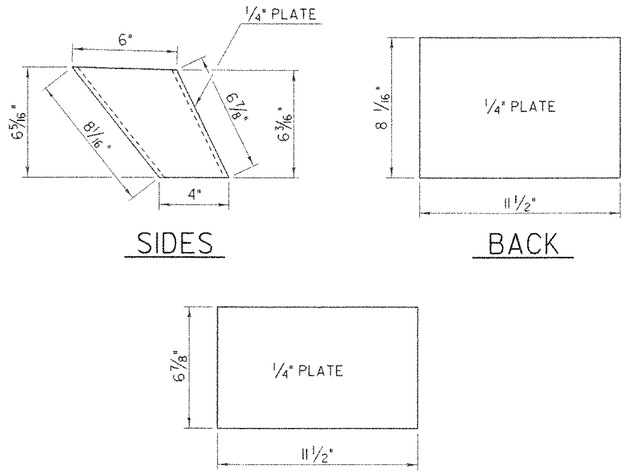
(ABUTMENT NO. 2)
SCALE: 1" = 1'-0"

SHEET NAME: DECK DETAILS			
PROJECT NAME: JOHNSON		HIGHWAY NO.: TH 2	
PROJECT NUMBER: BHO 1448(18)		BRIDGE NO.: 6	
		OVER: THE LAMOILLE RIVER	
FILE NAME: /str1/90j067/sj067sup.dgn		PLOT DATE: 02-SEP-2005	
PROJECT MANAGER: R. WHITCOMB		DRAWN BY: J.GILMORE	
DESIGNED BY: C. MEUNIER		IPARM NAME: sc067dck.i	
BRIDGE SHEET NUMBER:		SHEET 20 OF 73	



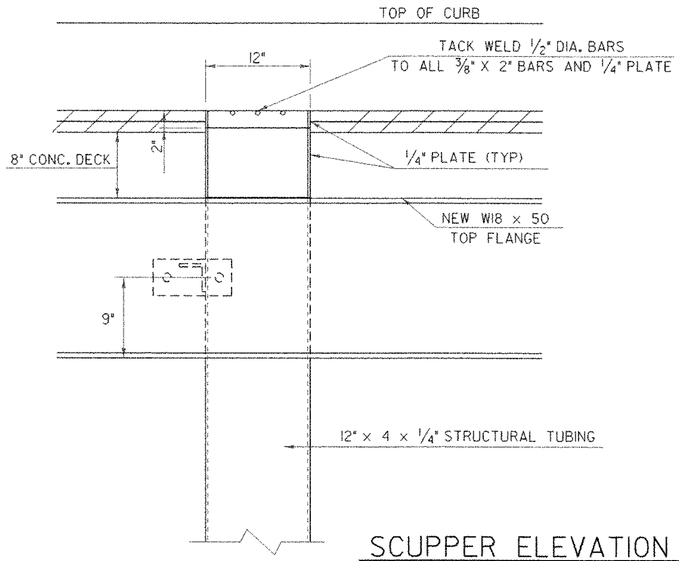
SCUPPER SECTION

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



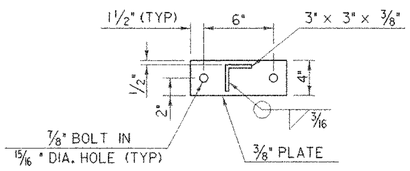
HOPPER PLATE DETAILS

SCALE: 3" = 1'-0"



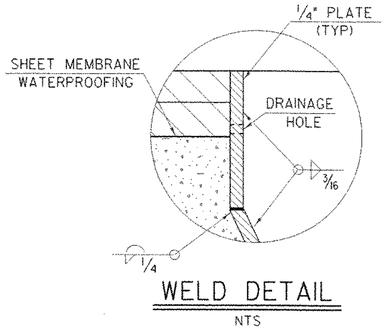
SCUPPER ELEVATION

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



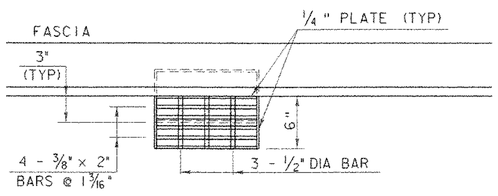
SECTION C-C

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



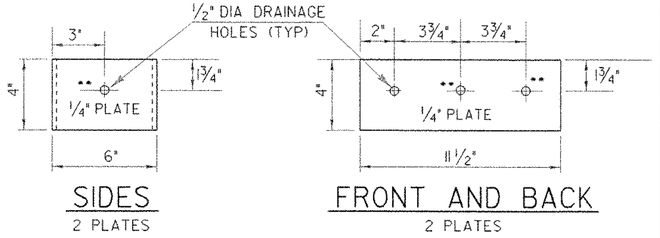
WELD DETAIL

NTS



SCUPPER PLAN

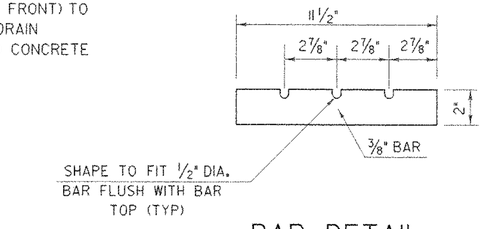
SCALE: 1 1/2" = 1'-0"



SCUPPER PLATE DETAILS

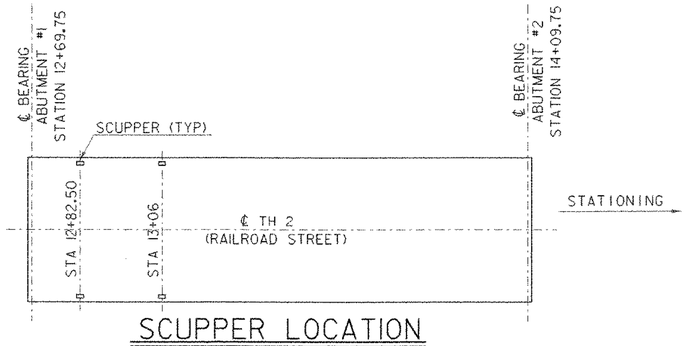
SCALE: 3" = 1'-0"

PUNCH 1/2" DIA HOLES IN SCUPPER PLATES (SIDES AND FRONT) TO ALLOW WATER TO DRAIN OFF MEMBRANE AND CONCRETE



BAR DETAIL

SCALE: 3" - 1'-0"



SCUPPER LOCATION

HORIZONTAL SCALE : 1"=20'-0"
VERTICAL SCALE: 1"=10'-0"

NOTES

1. ALL REQUIRED WELDS FOR THE SCUPPERS SHALL BE DETAILED ON SHOP DRAWINGS WHICH SHALL INCLUDE ALL OF THE APPLICABLE PROCEDURES.

2. AFTER FABRICATION, THE SCUPPERS, ANGLES AND PLATES SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M-111 AND PAINTED IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 513. THE FINAL COLOR SHALL BE BLACK COLOR CHIP #27038. THIS SHOP APPLIED PAINT SHALL BE PAID FOR UNDER THE ITEM 513.25 "STRUCTURE PAINTING-SHOP APPLIED."

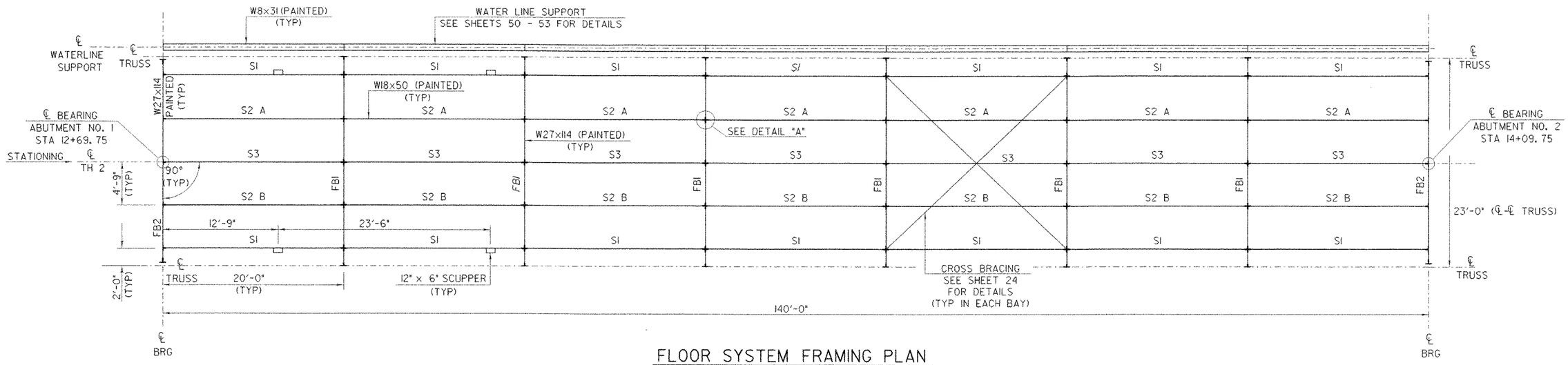
3. THE HOLES IN THE W18X50 MAY BE FIELD DRILLED. ANY DAMAGE CAUSED TO THE STRINGER OR THE PAINT SYSTEM DURING FIELD DRILLING OPERATIONS SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE TO THE ENGINEERS SATISFACTION.

4. THE STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM A500 GR.B. ALL OTHER COMPONENTS OF THE SCUPPER SHALL CONFORM TO AASHTO M-270, GRADE 50. SCUPPERS SHALL BE PAID FOR UNDER THE ITEM 506.60 "STRUCTURAL STEEL".

5. THE TOP SURFACE OF THE SCUPPER SHALL BE SLOPED TO MATCH THE ROADWAY SLOPE AND GRADE.

6. AFTER ALL PAVING OPERATIONS ARE FINISHED THE SCUPPERS SHALL BE CLEANED OF ANY CONTAMINATION FROM CONSTRUCTION.

SHEET NAME:	SCUPPER DETAILS
PROJECT NAME: JOHNSON	HIGHWAY NO.: TH 2
PROJECT NUMBER: BHO 1448(18)	BRIDGE NO.: 6
	OVER: THE LAMOILLE RIVER
FILE NAME: /strl/90j067/sj067sup.dgn	PLOT DATE: 02-SEP-2005
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: C. MEUNIER
DESIGNED BY: C. MEUNIER	IPARM NAME: sc067scp.i
BRIDGE SHEET NUMBER:	SHEET 21 OF 73

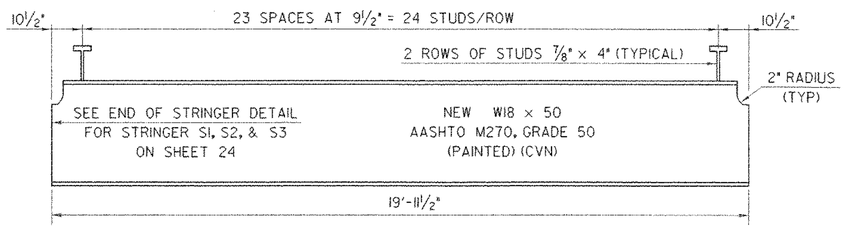


FLOOR SYSTEM FRAMING PLAN

SCALE: 3/16" = 1'-0"

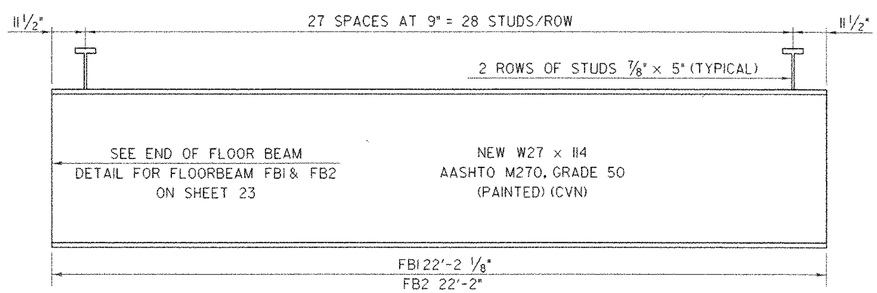
NOTES

1. SEE SHEET 36, FOR SIDEWALK FLOOR SYSTEM INFORMATION.
2. SEE SHEET 25, FOR ADDITIONAL CONNECTION DETAILS.



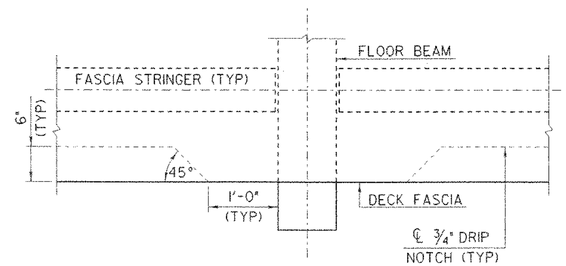
S1, S2A&B, & S3 STRINGER ELEVATION

HORIZONTAL SCALE: ½" = 1'-0"
VERTICAL SCALE: 1" = 1'-0"



FB1 & FB2 FLOOR BEAM ELEVATION

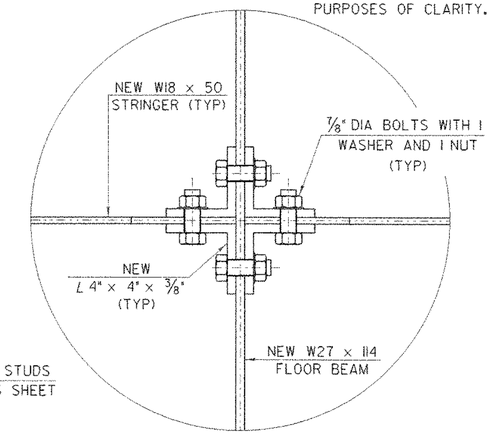
HORIZONTAL SCALE: ½" = 1'-0"
VERTICAL SCALE: 1" = 1'-0"



TYPICAL DRIP NOTCH DETAIL AT FLOOR BEAMS

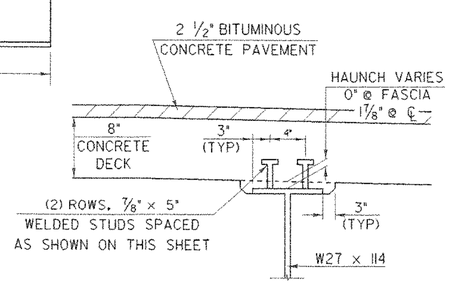
SCALE: 1" = 1'-0"

NOTE: FLANGES OF FLOOR BEAMS AND STRINGERS NOT SHOWN FOR PURPOSES OF CLARITY.



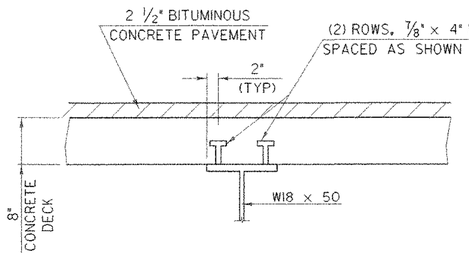
DETAIL "A" SHOWING CONNECTION BETWEEN NEW FLOOR BEAMS AND STRINGERS

SCALE: 3" = 1'-0"



FLOOR BEAM HAUNCH & SHEAR CONNECTOR DETAILS

NTS



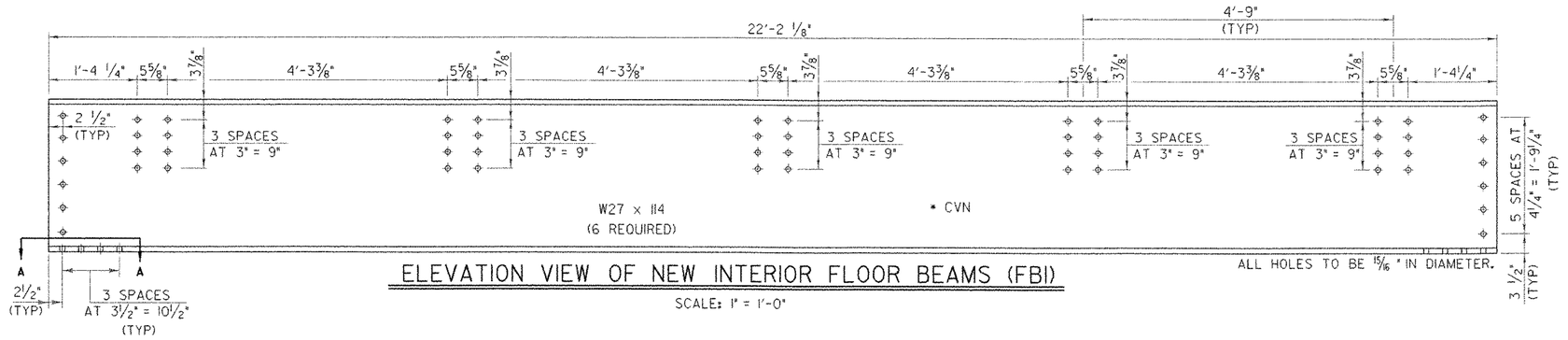
STRINGER SHEAR CONNECTOR DETAILS

NTS

SHEET NAME:	FRAMING PLAN		
PROJECT NAME:	JOHNSON	HIGHWAY NO.:	TH 2
PROJECT NUMBER:	BHO 1448(18)	BRIDGE NO.:	6
		OVER:	THE LAMOILLE RIVER
FILE NAME:	/str1/90j067/sj067sup.dgn	PLOT DATE:	02-SEP-2005
PROJECT MANAGER:	R. WHITCOMB	DRAWN BY:	J.GILMORE
DESIGNED BY:	C. MEUNIER	IPARM NAME:	sc067frm.i
BRIDGE SHEET NUMBER:		SHEET	22 OF 73

NOTES

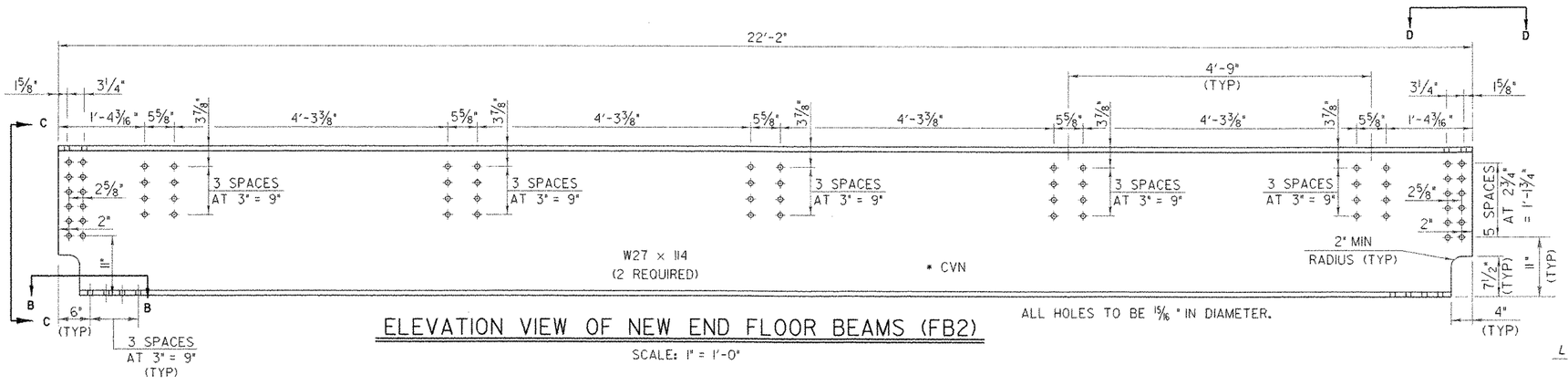
1. ALL OF THE EXISTING INTERMEDIATE FLOOR BEAMS ARE TO BE REPLACED AS WELL AS BOTH END FLOOR BEAMS.
2. * CVN CHARPY V-NOTCH TESTING.
3. THE END FLOOR BEAM CONNECTIONS SHOWN ON THIS SHEET AND CONNECTION PLATES SHOWN IN SECTION B-B WILL BE NEW AASHTO M270 GRADE 50 STRUCTURAL STEEL.



ALL HOLES TO BE 15/16" IN DIAMETER.

ELEVATION VIEW OF NEW INTERIOR FLOOR BEAMS (FBI)

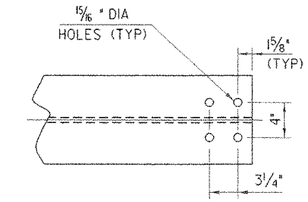
SCALE: 1" = 1'-0"



ALL HOLES TO BE 15/16" IN DIAMETER.

ELEVATION VIEW OF NEW END FLOOR BEAMS (FB2)

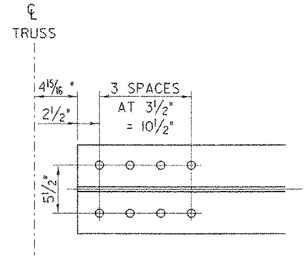
SCALE: 1" = 1'-0"



SECTION D-D

(TYP FOR EACH END OF END FLOOR BEAMS)

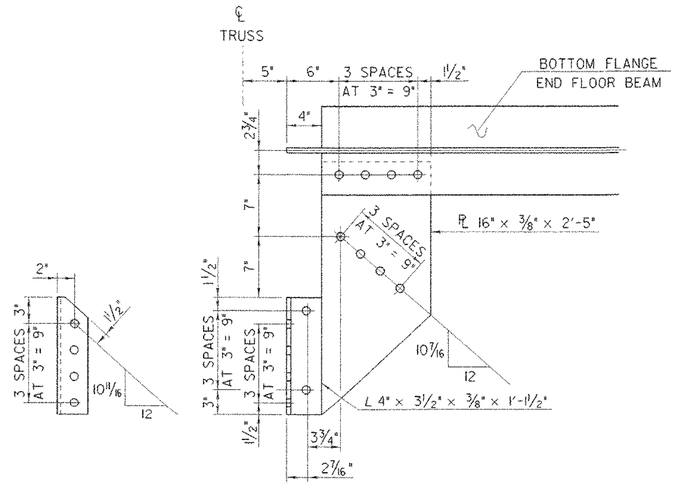
SCALE: 1 1/2" = 1'-0"



SECTION A-A

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

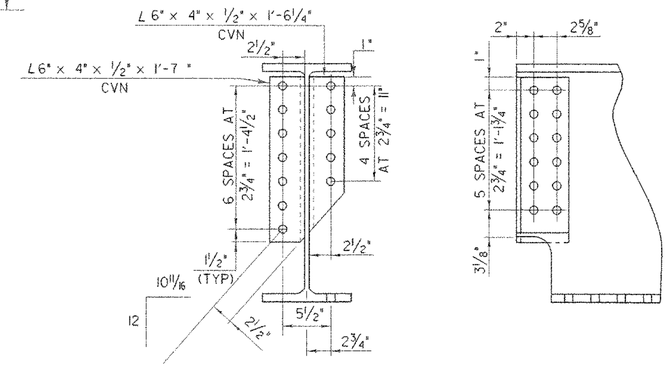
(TYPICAL FOR EACH END OF INTERIOR FLOOR BEAMS)



SECTION B-B

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

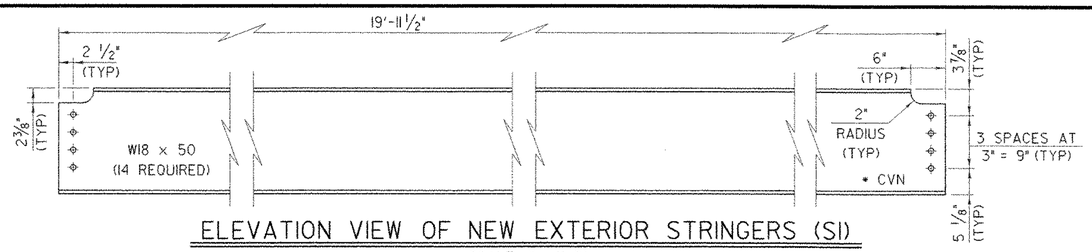
(TYPICAL FOR EACH END OF "END FLOOR BEAMS")



SECTION C-C
END FLOOR BEAM CONNECTIONS

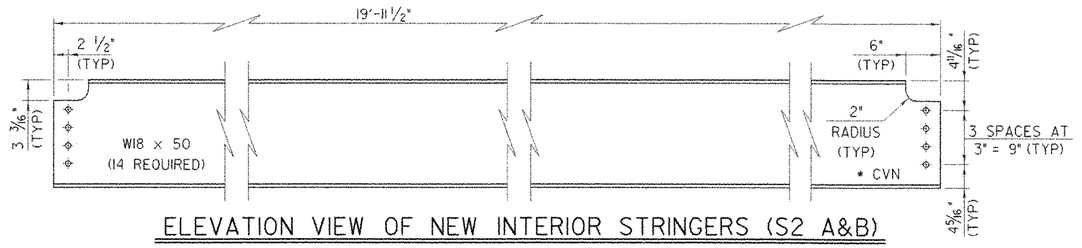
SCALE: 1 1/2" = 1'-0"

SHEET NAME: FLOOR BEAM DETAILS	
PROJECT NAME: JOHNSON	HIGHWAY NO.: TH 2
PROJECT NUMBER: BHO 1448(18)	BRIDGE NO.: 6
	OVER: THE LAMOILLE RIVER
FILE NAME: /str1/90j067/sj067trs.dgn	PLOT DATE: 02-SEP-2005
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J.GILMORE
DESIGNED BY: C. MEUNIER	IPARM NAME: sc067fbs.i
BRIDGE SHEET NUMBER:	SHEET 23 OF 73



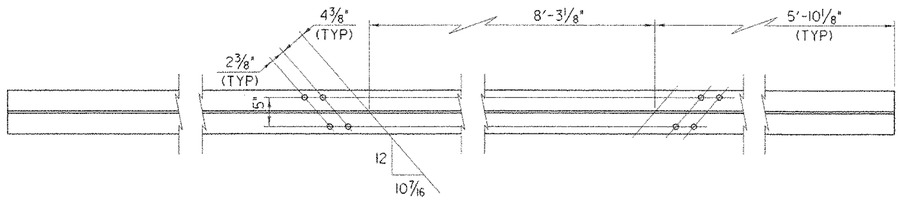
ELEVATION VIEW OF NEW EXTERIOR STRINGERS (S1)

ALL HOLES TO BE 15/16 " IN DIAMETER. SCALE: 1" = 1'-0"



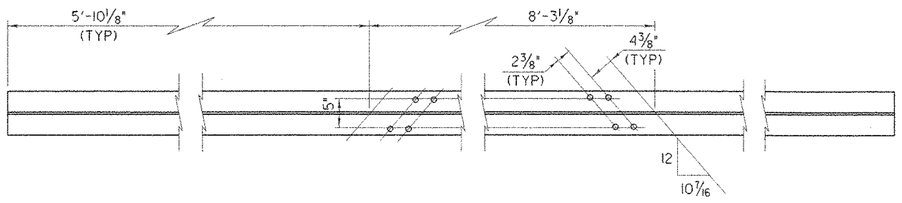
ELEVATION VIEW OF NEW INTERIOR STRINGERS (S2 A&B)

ALL HOLES TO BE 15/16 " IN DIAMETER. SCALE: 1" = 1'-0"



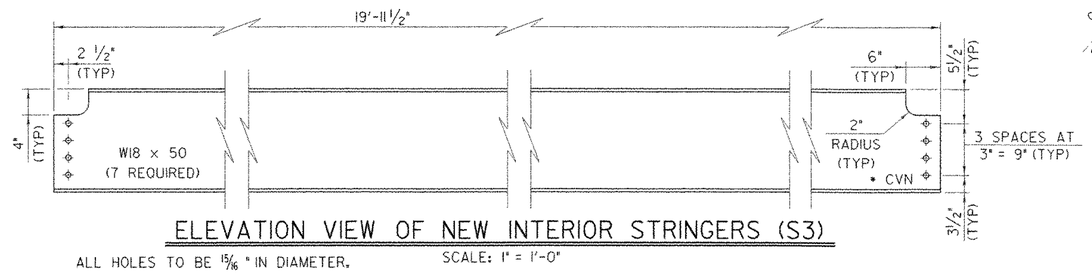
BOTTOM VIEW OF NEW INTERIOR STRINGERS (S2 A)

SCALE: 1" = 1'-0"



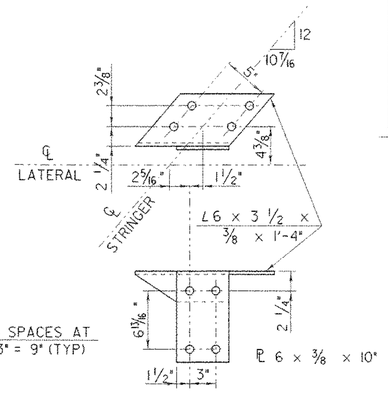
BOTTOM VIEW OF NEW INTERIOR STRINGERS (S2 B)

SCALE: 1" = 1'-0"



ELEVATION VIEW OF NEW INTERIOR STRINGERS (S3)

ALL HOLES TO BE 15/16 " IN DIAMETER. SCALE: 1" = 1'-0"



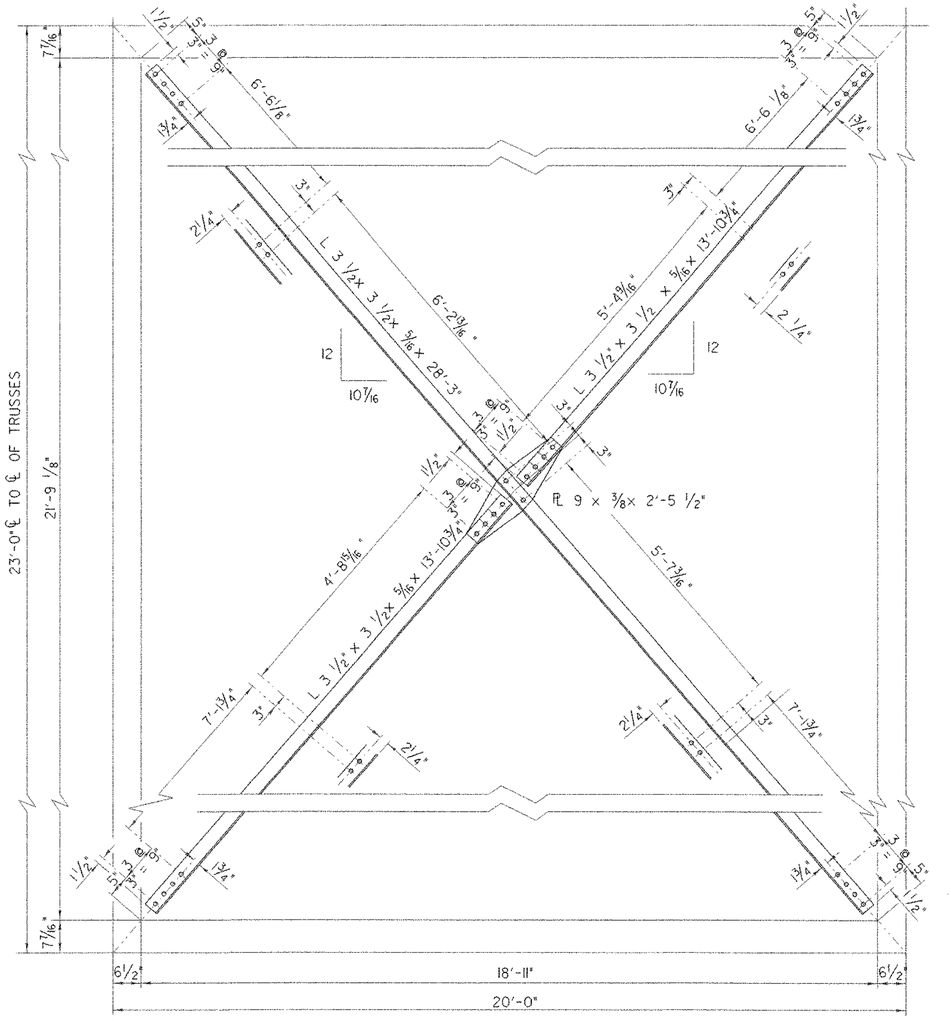
ANGLE DETAIL

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

SEE REF DWG SHT 70 FOR LOCATION.

NOTES

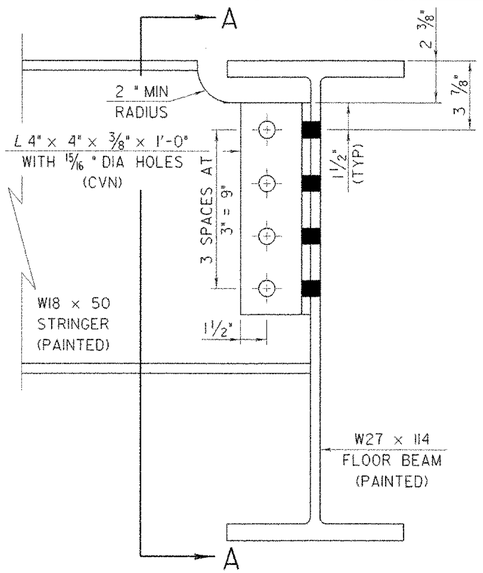
1. ALL OF THE EXISTING STRINGERS AND CROSS BRACING ARE TO BE REPLACED.
2. * CVN CHARPY V-NOTCH TESTING.



LATERAL BRACING DETAIL

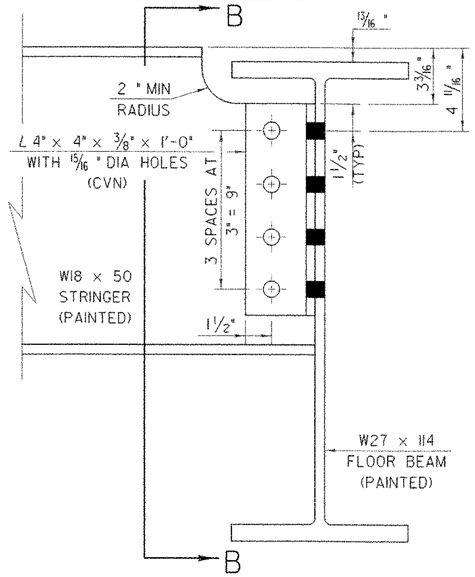
SCALE: 3/4" = 1'-0"

SHEET NAME: STRINGER & LATERAL BRACING DETAILS			
PROJECT NAME: JOHNSON		HIGHWAY NO.: TH 2	
PROJECT NUMBER: BHO 1448(18)		BRIDGE NO.: 6	
		OVER: THE LAMOILLE RIVER	
FILE NAME: /str1/90J067/sj067trs.dgn		PLOT DATE: 02-SEP-2005	
PROJECT MANAGER: R. WHITCOMB		DRAWN BY: J.GILMORE	
DESIGNED BY: C. MEUNIER		IPARM NAME: sc067ste.i	
BRIDGE SHEET NUMBER:		SHEET 24 OF 73	



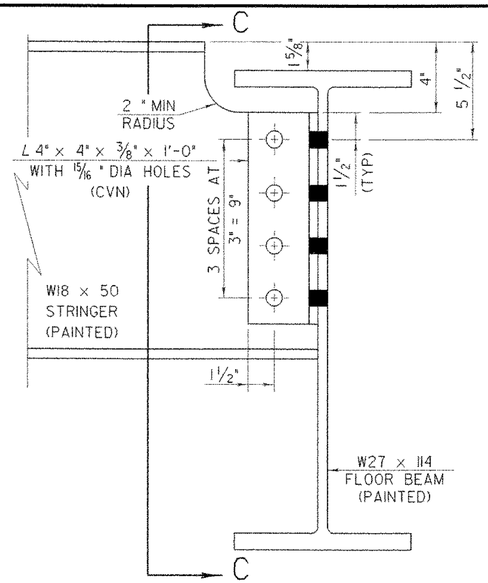
STRINGER (S1) TO
FLOOR BEAM CONNECTION

SCALE: 3" = 1'-0"



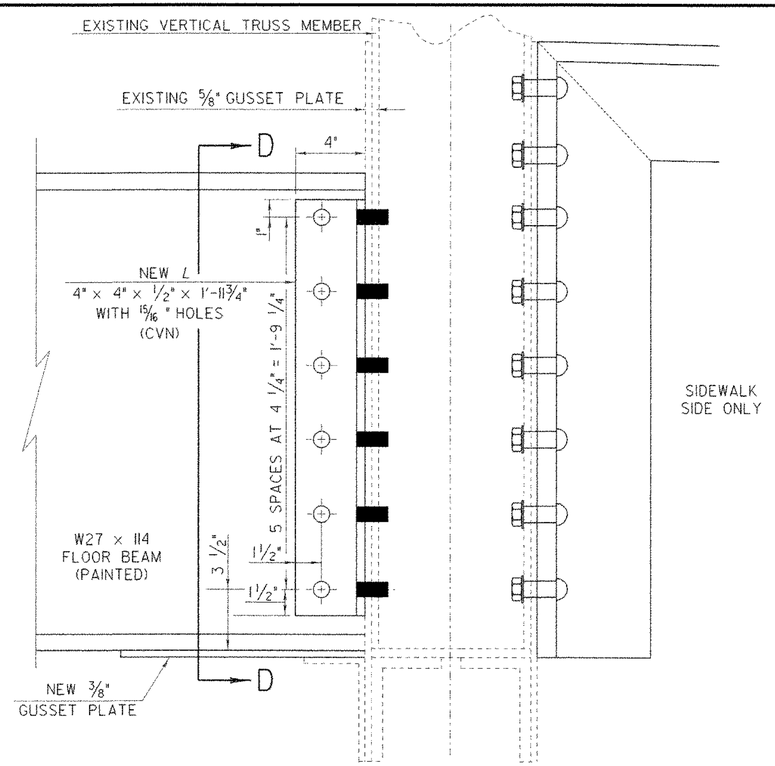
STRINGER (S2 A&B) TO
FLOOR BEAM CONNECTION

SCALE: 3" = 1'-0"



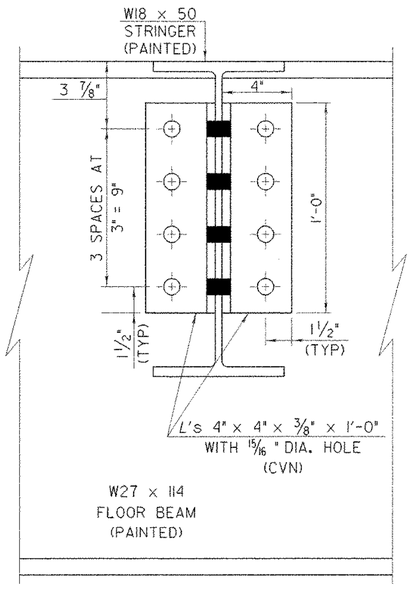
STRINGER (S3) TO
FLOOR BEAM CONNECTION

SCALE: 3" = 1'-0"



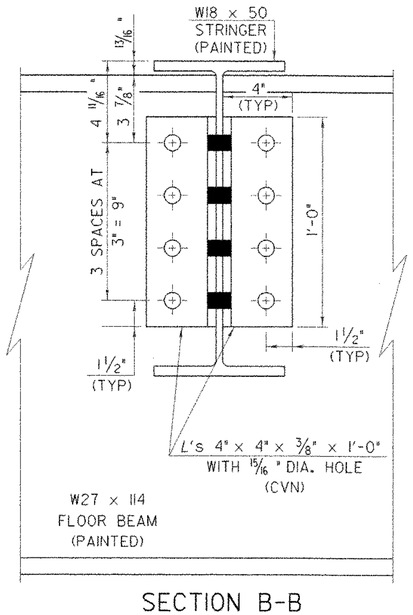
INTERIOR FLOOR BEAM TO TRUSS CONNECTION

SCALE: 3" = 1'-0"



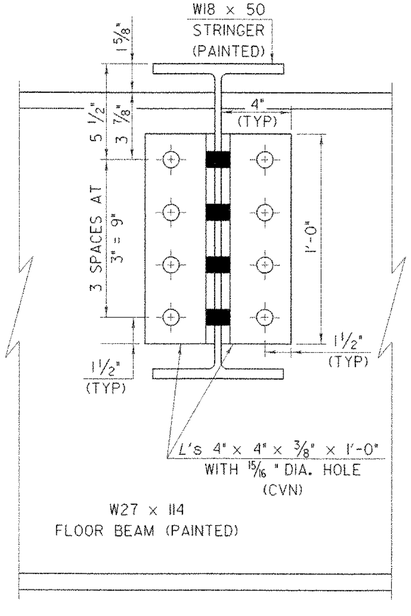
SECTION A-A
EXTERIOR STRINGER (S1)

SCALE: 3" = 1'-0"



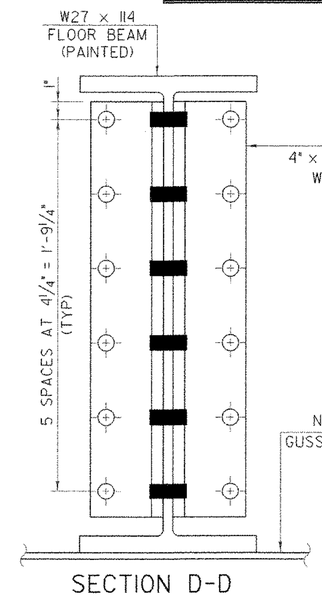
SECTION B-B
INTERIOR STRINGER (S2 A&B)

SCALE: 3" = 1'-0"



SECTION C-C
INTERIOR STRINGER (S3)

SCALE: 3" = 1'-0"



SECTION D-D
INTERIOR FLOOR BEAM

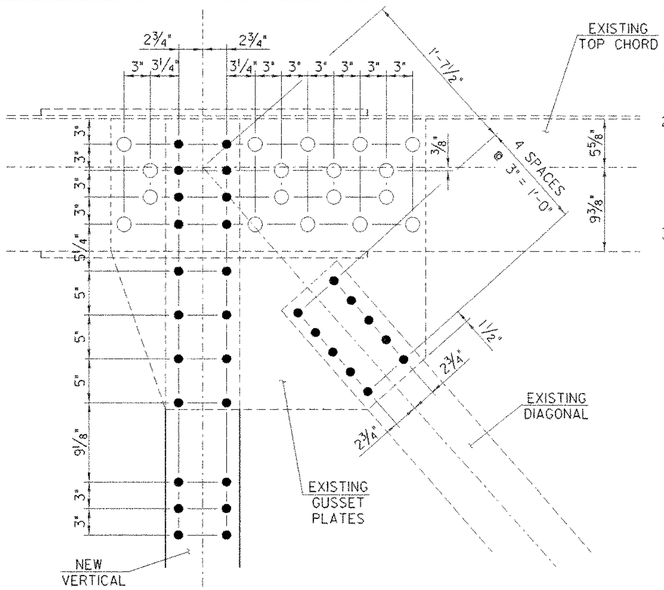
SCALE: 3" = 1'-0"

NOTES:

1. ALL CONNECTION ANGLES FOR CONNECTIONS BETWEEN FLOORBEAMS TO STRINGERS AND FLOORBEAMS TO TRUSS WILL BE AASHTO M270 GRADE 50 PAINTED STRUCTURAL STEEL.
2. CVN - CHARPY V NOTCH TESTING.
3. ALL CONNECTIONS THAT ARE MADE TO EXISTING TRUSS MEMBERS SHALL HAVE BOLT HOLE SPACINGS AND SIZES FIELD VERIFIED PRIOR TO ANY SUBMITTAL OF SHOP DRAWINGS.

SHEET NAME: SUPERSTRUCTURE CONNECTION DETAILS

PROJECT NAME: JOHNSON	HIGHWAY NO.: TH 2
PROJECT NUMBER: BHO 1448(18)	BRIDGE NO.: 6
	OVER: THE LAMOILLE RIVER
FILE NAME: /strl/90j067/sj067trs.dgn	PLOT DATE: 02-SEP-2005
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J.GILMORE
DESIGNED BY: C. MEUNIER	IPARM NAME: sc067scd.i
BRIDGE SHEET NUMBER:	SHEET 25 OF 73

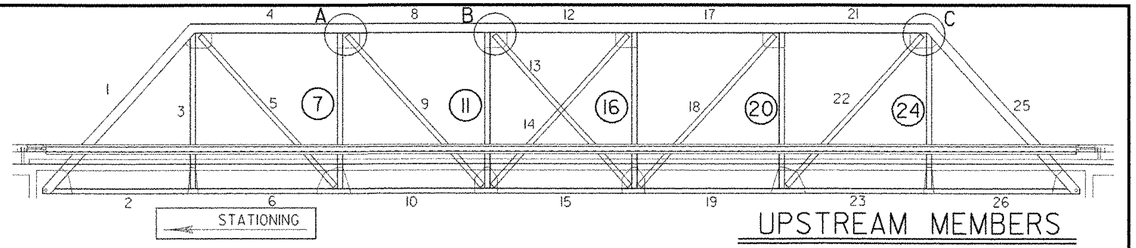


VERTICAL REPLACEMENT @ "A"

SCALE: 1½" = 1'-0"

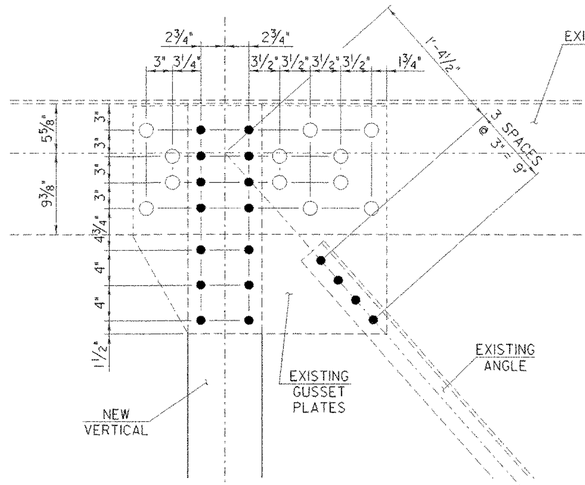
NOTES

1. ALL STRUCTURAL STEEL MEMBERS AND GUSSET PLATES SHALL BE AASHTO M270 GRADE 50 (PAINTED).
2. THE VERTICALS AND DIAGONALS INDICATED ON THIS SHEET AND SHEET 27 SHALL BE REPLACED WITH NEW MEMBERS OF EQUAL DIMENSIONS. SEE SHEET 27 WHICH LISTS THE STRUCTURAL SECTION PROPERTIES AND GEOMETRICS FOR THE MEMBERS BEING REPLACED.
3. THE RESIDENT ENGINEER SHALL EXAMINE ALL OTHER VERTICAL TRUSS MEMBERS (UPSTREAM AND DOWNSTREAM) AND GUSSET PLATES TO DETERMINE IF ANY OTHER MEMBERS OR GUSSET PLATES NEED REPLACEMENT. SEE GENERAL NOTES 23 AND 24 ON SHEET 18.



UPSTREAM MEMBERS

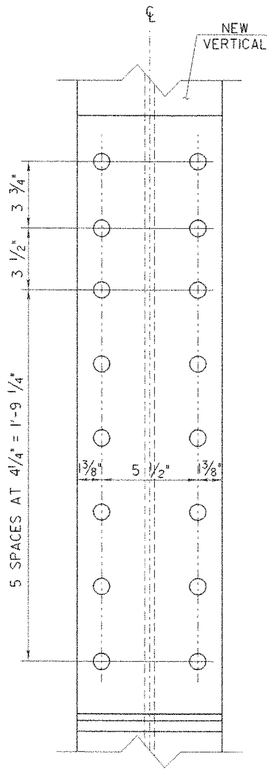
NTS



VERTICAL REPLACEMENT DETAIL @ "B"

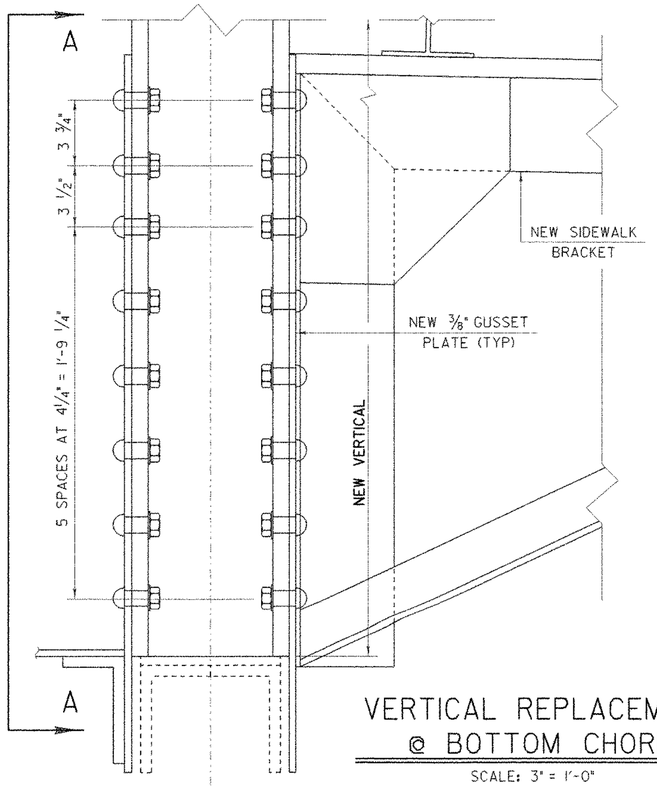
SCALE: 1½" = 1'-0"

MEMBER 11 AND MEMBER 16



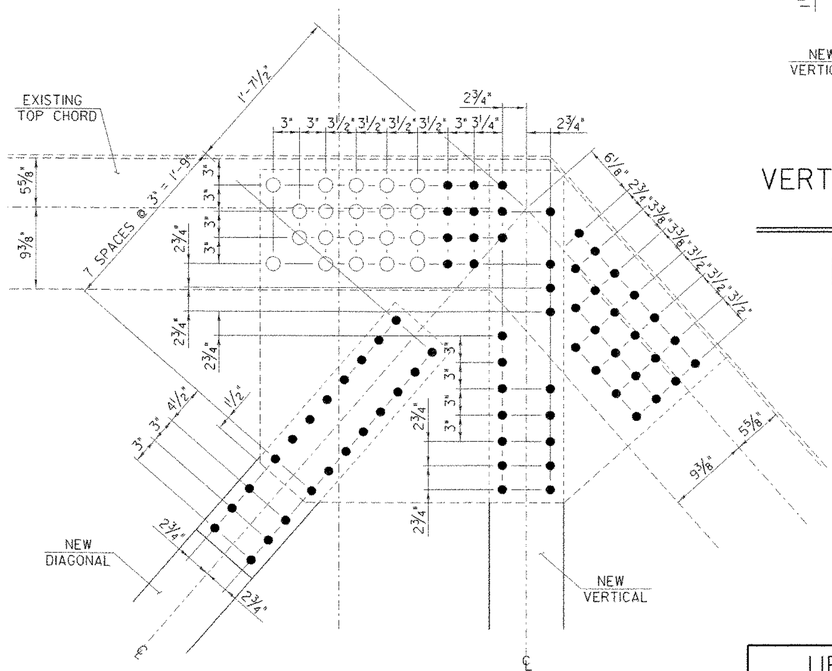
SECTION A-A

SCALE: 3" = 1'-0"



VERTICAL REPLACEMENT @ BOTTOM CHORD

SCALE: 3" = 1'-0"



VERTICAL AND DIAGONAL REPLACEMENT @ "C"

SCALE: 1½" = 1'-0"

MEMBERS 24 (VERTICAL)
22 (DIAGONAL)

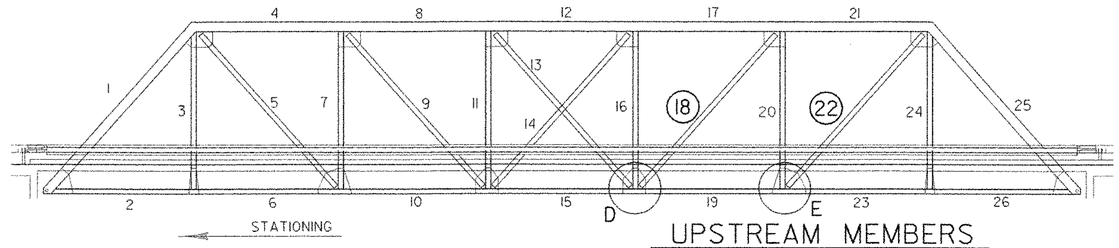
UPSTREAM TRUSS MEMBERS	SHEET NAME: REPLACEMENT DETAILS FOR VERTICAL MEMBERS
VERTICAL MEMBERS TO BE REPLACED: 7, 11, 16, 20 AND 24	PROJECT NAME: JOHNSON PROJECT NUMBER: BHO 1448(18) HIGHWAY NO.: TH 2 BRIDGE NO.: 6 OVER: THE LAMOILLE RIVER
	FILE NAME: /stri/90j067/sj067trs.dgn PROJECT MANAGER: R. WHITCOMB DESIGNED BY: C. MEUNIER BRIDGE SHEET NUMBER: PLOT DATE: 02-SEP-2005 DRAWN BY: J.GILMORE IPARM NAME: sj067rdv.i SHEET 26 OF 73

NOTES

1. ALL STRUCTURAL STEEL MEMBERS AND GUSSET PLATES SHALL BE AASHTO M270 GRADE 50 (PAINTED).

2. THE VERTICALS AND DIAGONALS INDICATED ON THIS SHEET SHALL BE REPLACED WITH NEW MEMBERS OF EQUAL DIMENSIONS. THIS SHEET LISTS THE STRUCTURAL SECTION PROPERTIES AND GEOMETRICS FOR THE MEMBERS BEING REPLACED.

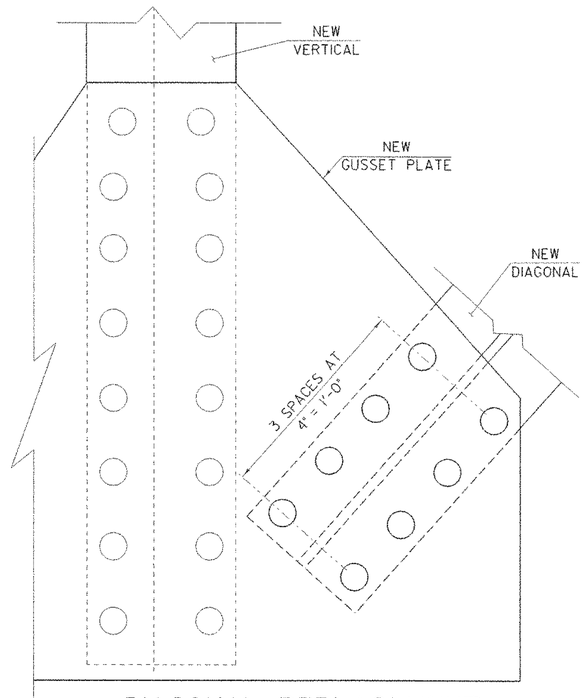
3. THE RESIDENT ENGINEER SHALL EXAMINE ALL OTHER DIAGONAL TRUSS MEMBERS (UPSTREAM AND DOWNSTREAM) AND GUSSET PLATES TO DETERMINE IF THE MEMBERS OR PLATES NEED REPLACEMENT. SEE GENERAL NOTES 23 AND 24 ON SHEET 18.



UPSTREAM MEMBERS

NTS

EXISTING VERTICAL AND DIAGONAL PROPERTIES				
	MEMBER NO.			
	7, 11, 16, 20	18	24	22
AREA ($in.^2$)	12.373	10.66	11.35	14.18
DEPTH (in.)	9.0	8.94	9.0	8.375
FLANGE WIDTH (in.)	8.54	8.48	8.5	8.12
WEB THICKNESS (in.)	0.35	0.29	0.310	0.43
I_x ($in.^4$)	195.4	160.5	171.9	177.7
S_x ($in.^3$)	42.8	35.9	38.2	42.4
r_x (in)	3.92	3.88	3.89	3.54
I_y ($in.^4$)	51.3	41.0	44.4	59.8
S_y ($in.^3$)	12.0	9.67	10.4	14.7
r_y (in)	2.01	1.96	1.98	2.05



DIAGONAL REPLACEMENT
BOLT DETAIL @ "D"

SCALE: 3" = 1'-0"

DETAIL FOR MEMBER 18

DIAGONAL REPLACEMENT
BOLT DETAIL @ "E"

SCALE: 3" = 1'-0"

DETAIL FOR MEMBER 22

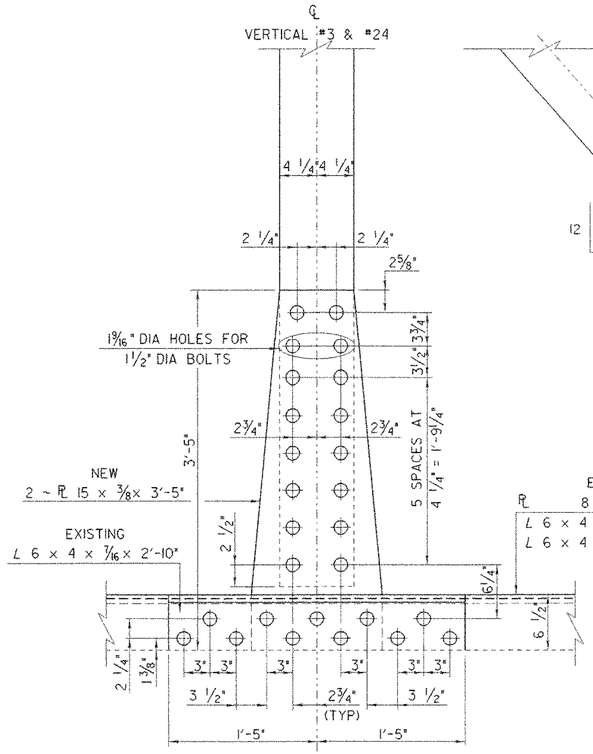
UPSTREAM TRUSS MEMBERS

DIAGONAL MEMBERS TO BE REPLACED: 18 AND 22

SHEET NAME: REPLACEMENT DETAILS FOR DIAGONAL MEMBERS

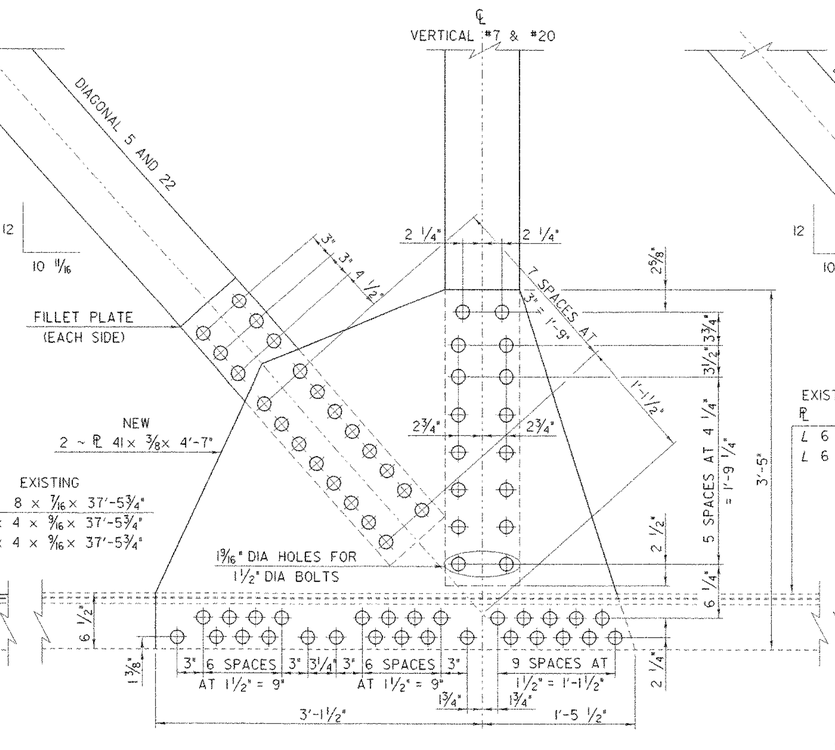
PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)
HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER

FILE NAME: /str1/90j067/sj067trs.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. MEUNIER
BRIDGE SHEET NUMBER:
PLOT DATE: 02-SEP-2005
DRAWN BY: J.GILMORE
IPARM NAME: sj067rdl.i
SHEET 27 OF 73



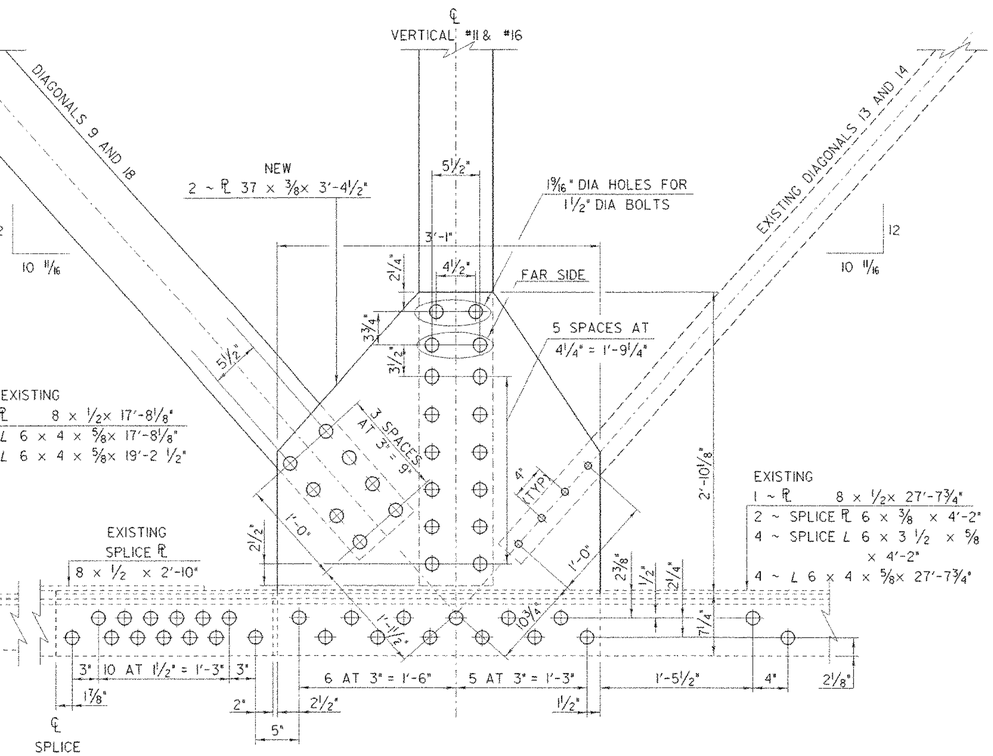
VERTICAL (3 & 24) CONNECTION DETAIL

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



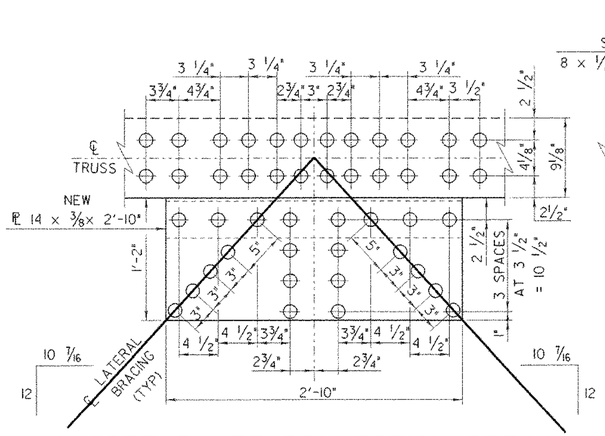
VERTICAL (7 & 20) CONNECTION DETAIL

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



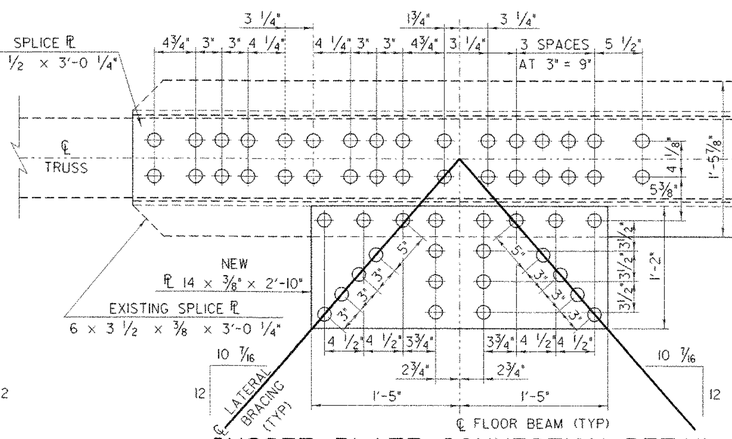
VERTICAL (11 & 16) CONNECTION DETAIL

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



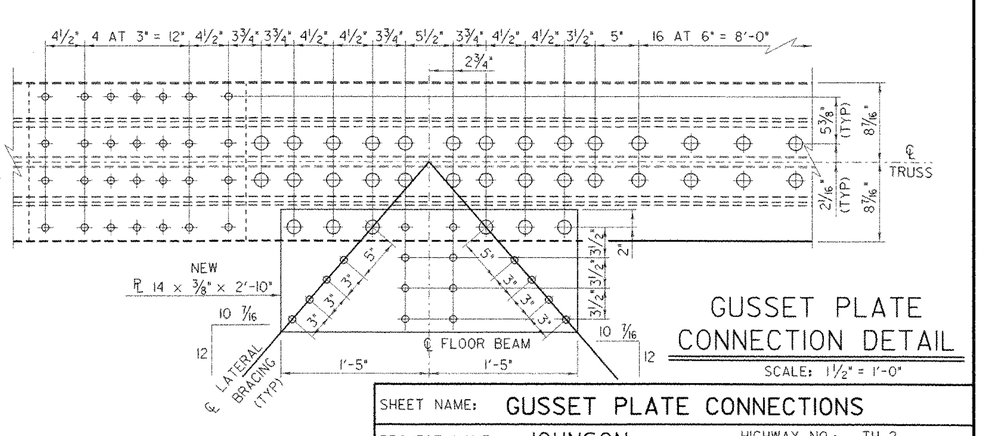
GUSSET PLATE CONNECTION DETAIL

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



GUSSET PLATE CONNECTION DETAIL

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



GUSSET PLATE CONNECTION DETAIL

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

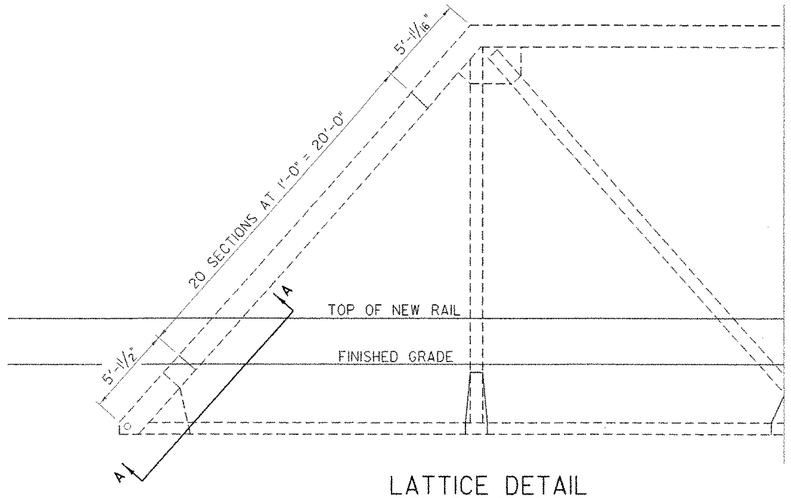
NOTES:

1. SEE SHEETS 26, 27 OR 42 FOR TRUSS MEMBER REFERENCES.
2. ALL GUSSET PLATES USED TO ATTACH FLOOR BEAMS TO THE TRUSS (UPSTREAM AND DOWNSTREAM) SHALL BE REPLACED.

SHEET NAME: GUSSET PLATE CONNECTIONS

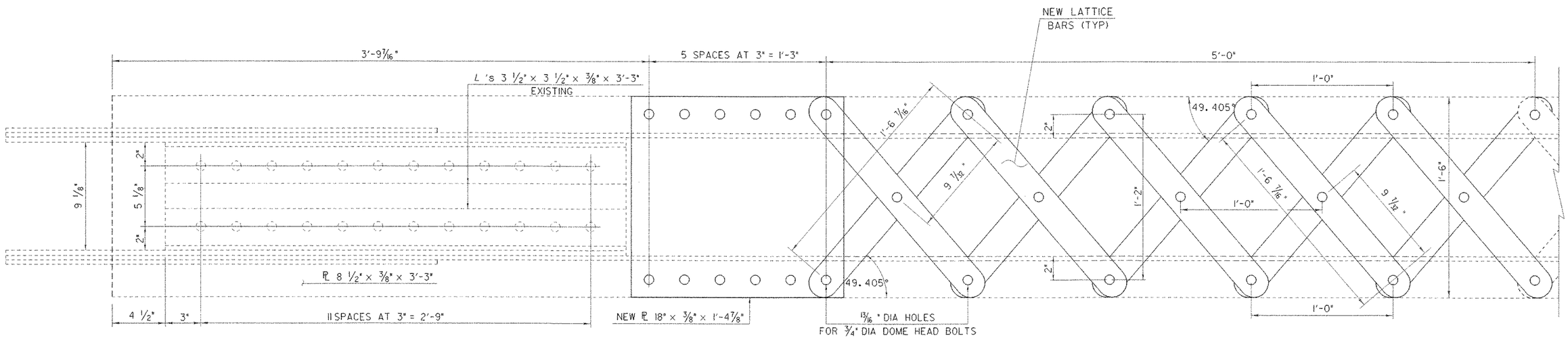
PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)
HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER

FILE NAME: /strl/90j067/sj067trs.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. MEUNIER
BRIDGE SHEET NUMBER:
PLOT DATE: 02-SEP-2005
DRAWN BY: J.GILMORE
IPARM NAME: sc067gpc.i
SHEET 28 OF 73



LATTICE DETAIL
(TYP @ EACH TRUSS END)

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



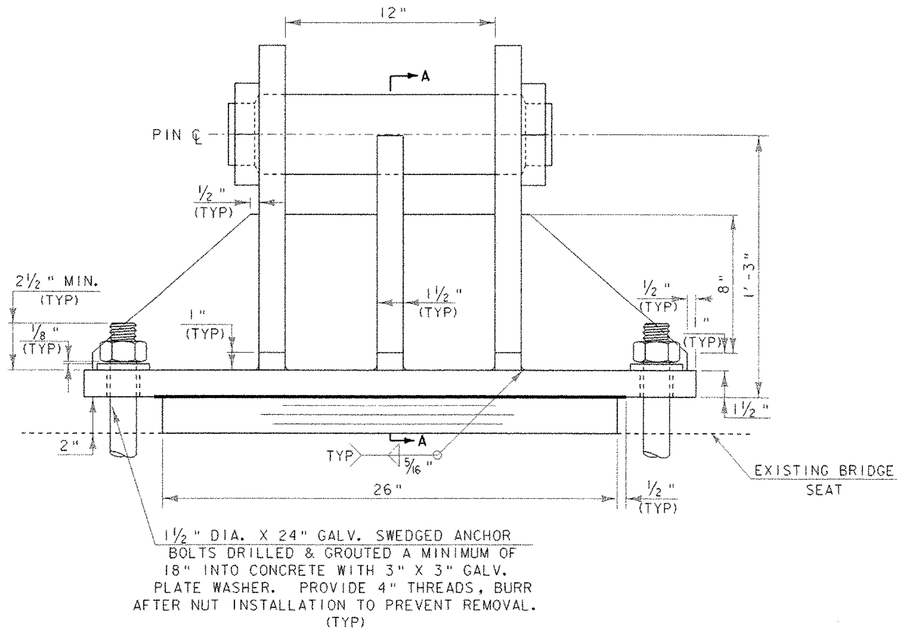
SECTION A-A

SCALE: 3" = 1'-0"

LATTICE NOTES

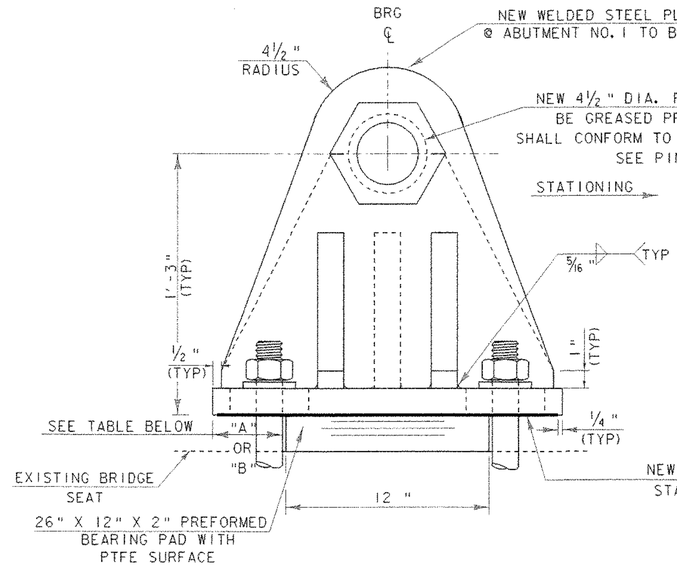
1. THE LATTICE BARS ARE TO BE REPLACED IN MEMBERS 1 AND 25 OF EACH TRUSS FOR A MINIMUM DISTANCE OF 5'-0" ALONG THE BOTTOM OF THE TOP CHORD. (AS SHOWN)
2. THE LATTICE MEMBERS SHALL BE REPLACED IN KIND.
3. THE RESIDENT ENGINEER SHALL DETERMINE IF ANY ADDITIONAL LATTICE MEMBERS NEED REPLACEMENT.

SHEET NAME: LATTICE DETAILS	
PROJECT NAME: JOHNSON	HIGHWAY NO.: TH 2
PROJECT NUMBER: BHO 1448(18)	BRIDGE NO.: 6
	OVER: THE LAMOILLE RIVER
FILE NAME: /strl/90j067/sj067sup.dgn	PLOT DATE: 02-SEP-2005
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J.GILMORE
DESIGNED BY: C. MEUNIER	IPARM NAME: sc067cbr.i
BRIDGE SHEET NUMBER:	SHEET 29 OF 73



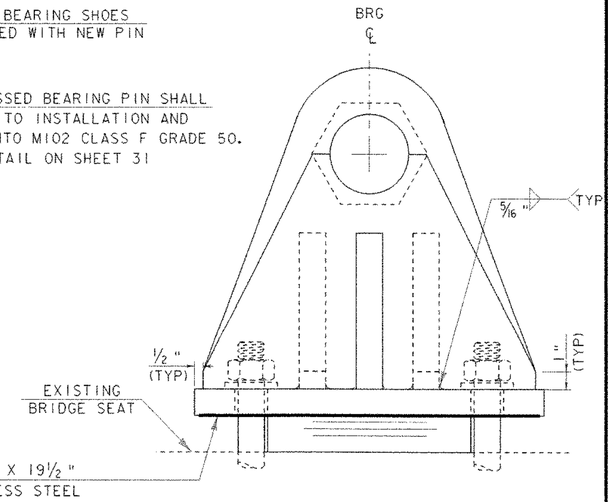
FRONT ELEVATION EXPANSION BEARING

SCALE: 3" = 1'-0"



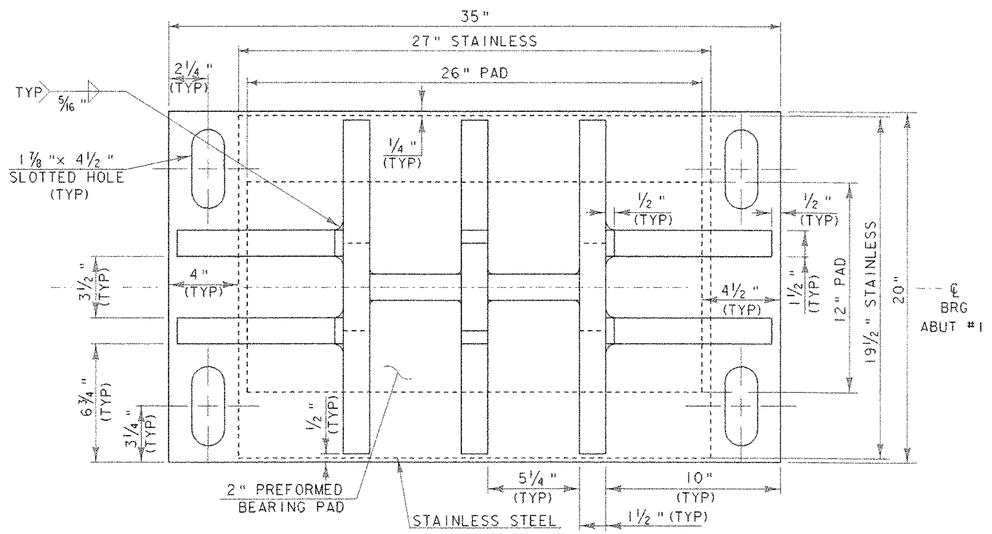
SIDE ELEVATION EXPANSION BEARING

SCALE: 3" = 1'-0"



SECTION A-A

SCALE: 3" = 1'-0"



PLAN VIEW OF NEW BEARING SHOE

SCALE: 3" = 1'-0"

BEARING NOTES

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

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

3) ALL COMPONENTS OF BEARING DEVICES, EXCEPT PINS, PREFORMED PAD AND STAINLESS STEEL, SHALL BE METALIZED IN CONFORMANCE WITH VAOT STANDARD SPECIFICATIONS FOR CONSTRUCTION SECTIONS 531.04(b) AND 506.15. AREAS OF METALIZING DAMAGED BY FIELD WELDING OR HANDLING SHALL BE REPAIRED IN CONFORMANCE WITH SUPPLEMENTAL SPECIFICATION 513 WHICH REFERENCES ASTM A 760.

4) ALL ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED. ALL WASHERS SHALL BE 3/8" PLATE. PAYMENT FOR ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEMS 531.10 "BEARING DEVICE ASSEMBLY (STEEL) (EXPANSION)" AND 531.10 "BEARING DEVICE ASSEMBLY (STEEL) (FIXED)".

5) "B" DISTANCE IS THE FINAL SETTING FOR THE BEARING PAD AFTER THE CONCRETE SLAB, CURB, AND PAVEMENT ARE PLACED. "A" DISTANCE IS LISTED FOR SETTING THE BEARING BEFORE THE CONCRETE DECK AND CURBS HAVE BEEN PLACED. THE FINAL DISTANCE, AS SHOWN IN THE TABLE, MUST BE ATTAINED WITHIN 1/16 OF AN INCH.

6) ANCHOR BOLTS SHALL HAVE A MINIMUM OF 18" EMBEDMENT INTO THE EXISTING CONCRETE AND SHALL CONFORM TO SUBSECTION 714.08 IN THE "VERMONT SPECIFICATIONS." THE ANCHOR BOLTS SHALL BE DRILLED AND GROUTED INTO THE ABUTMENT BRIDGE SEATS. THE DRILLING AND GROUTING OF THE ANCHOR BOLTS WILL BE INCIDENTAL TO THE ITEMS 531.10 "BEARING DEVICE ASSEMBLY (STEEL) (EXPANSION)" AND 531.10 "BEARING DEVICE ASSEMBLY (STEEL) (FIXED)".

7) JACKING AND SHORING WILL BE REQUIRED IN ORDER TO REPLACE THE EXISTING BEARINGS AT THE ABUTMENTS. DETAILS OF JACKING AND SHORING PROPOSALS SHALL BE SUBMITTED TO THE ENGINEER FOR INFORMATIONAL PURPOSES ONLY (TWO WEEKS PRIOR TO COMMENCEMENT OF THIS WORK). IN ADDITION, SUBSTANTIATING DESIGN CALCULATIONS PREFORMED BY A PROFESSIONAL ENGINEER SHALL BE SUBMITTED FOR INFORMATIONAL PURPOSES ONLY TO THE ENGINEER. THIS WORK SHALL BE PAID FOR UNDER THE ITEM 502.11 "SHORING SUPERSTRUCTURE BEARINGS."

BEARING NOTES CONTINUED ON SHEET 31

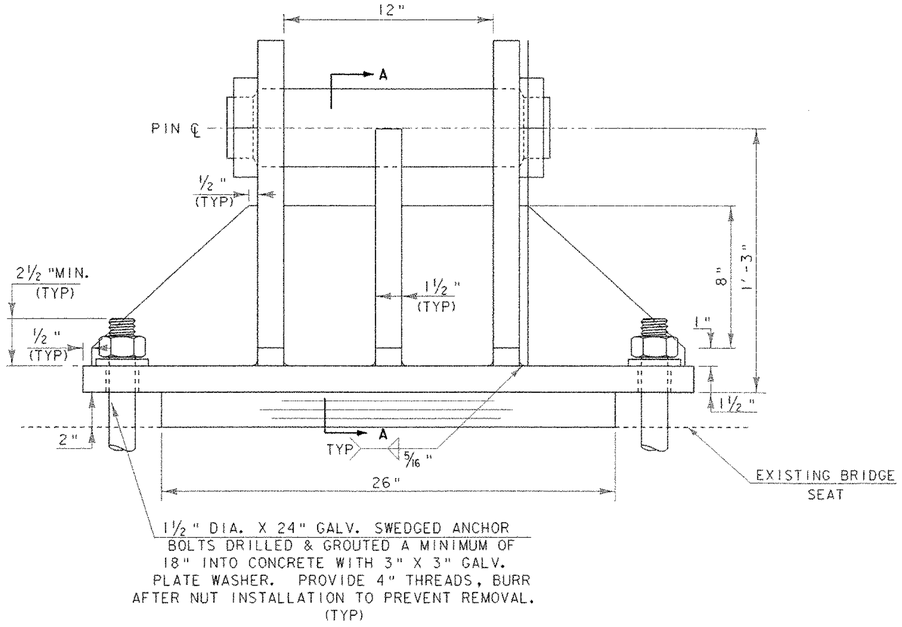
EXPANSION BEARING

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

SHEET NAME: BEARING DETAILS (EXPANSION) ABUT #1

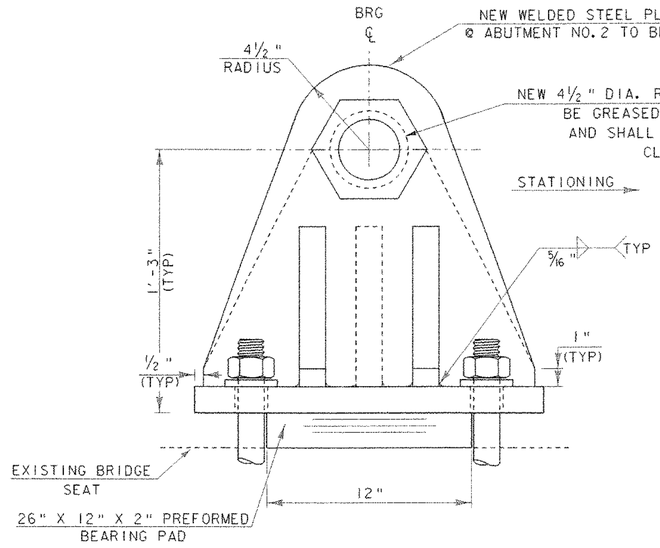
PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)
HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER

FILE NAME: /str1/90j067/sj067sdw.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. MEUNIER
BRIDGE SHEET NUMBER:
PLOT DATE: 02-SEP-2005
DRAWN BY: T. HUSK
IPARM NAME: sc067br1.i
SHEET 30 OF 73



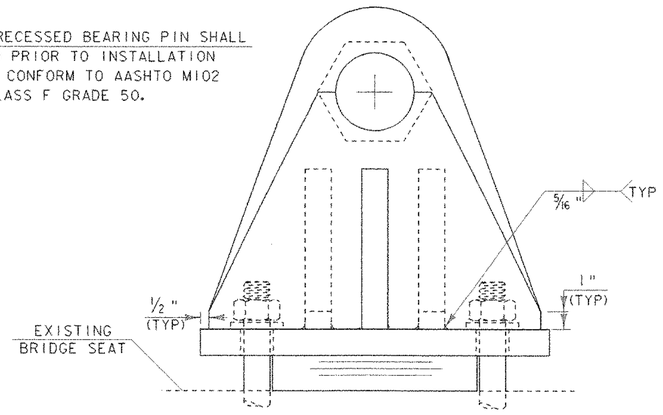
FRONT ELEVATION FIXED END BEARING

SCALE: 3" = 1'-0"



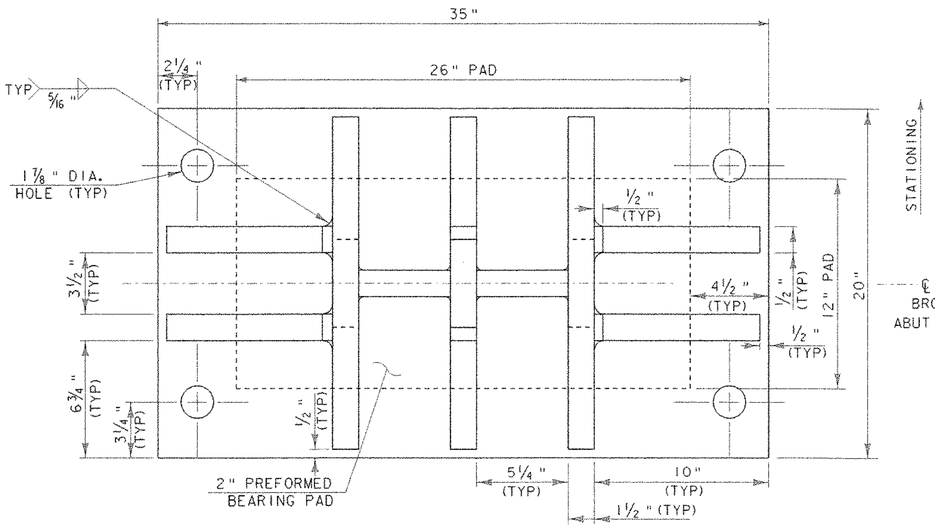
SIDE ELEVATION FIXED END BEARING

SCALE: 3" = 1'-0"



SECTION A-A

SCALE: 3" = 1'-0"



PLAN VIEW OF NEW BEARING SHOE

SCALE: 3" = 1'-0"

BEARING NOTES CONTINUED

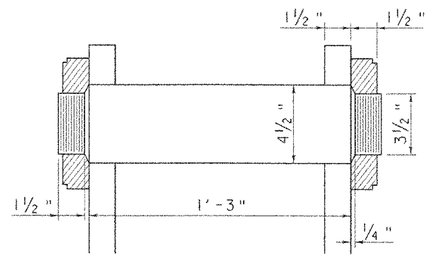
8) EXISTING ANCHOR BOLTS SHALL BE CUT OFF FLUSH WITH BRIDGE SEATS AND REMOVE THEIR UPPER PORTION. THE EXISTING BOLTS MAY BE PULLED OUT IF THIS CAN BE DONE WITHOUT DAMAGE TO EXISTING CONCRETE. THIS WORK WILL BE INCIDENTAL TO THE ITEMS 531.10, "BEARING DEVICE ASSEMBLY (STEEL) (EXPANSION)" AND 531.10 "BEARING DEVICE ASSEMBLY (STEEL) (FIXED)".

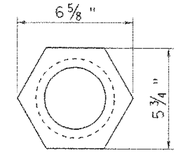
9) REMOVAL OF EXISTING BEARING SHOES, MANUFACTURING OF NEW BEARING SHOES, AS WELL AS BEARING PADS, ANCHOR BOLTS, SOLE PLATES, AND STAINLESS STEEL SHALL BE PAID FOR UNDER ITEMS 531.10, "BEARING DEVICE ASSEMBLY (STEEL) (EXPANSION)" AND 531.10 "BEARING DEVICE ASSEMBLY (STEEL) (FIXED)".

10) DESIGN CRITERIA:
- A: PAD TO CONCRETE DESIGN PRESSURE = 1000 PSI
- B: MINIMUM ALLOWABLE DESIGN ROTATION = 0.015 RADIANS
- C: HORIZONTAL CAPACITY SHALL BE MINIMUM OF 10% VERTICAL CAPACITY.
- D: DESIGN LOAD PER TRUSS BEARING = 300 KIPS
  - RDL = 177 KIPS
  - RLL = 123 KIPS

11) SHOP DRAWINGS CONFORMING TO SUBSECTION 531.03 SHALL BE SUBMITTED TO INCLUDE WELDING AND BONDING PROCEDURES.

12) THE FABRICATOR SHALL METALIZE THE BEARINGS IN ACCORDANCE WITH AASHTO M-111 AFTER FABRICATION AND THEN SHOP APPLY A PAINT SYSTEM MEETING THE SUPPLEMENTAL SPECIFICATION 513 TO THE OUTSIDE OF THE BEARINGS. THE FINAL COLOR BE BLACK COLOR CHIP #27038. THE COST OF ANY METALIZING OR SHOP APPROVED PAINT WILL BE CONSIDERED INCIDENTAL TO ITEMS 531.10, "BEARING DEVICE ASSEMBLY (STEEL) (EXPANSION)" AND 531.10 "BEARING DEVICE ASSEMBLY (STEEL) (FIXED)".

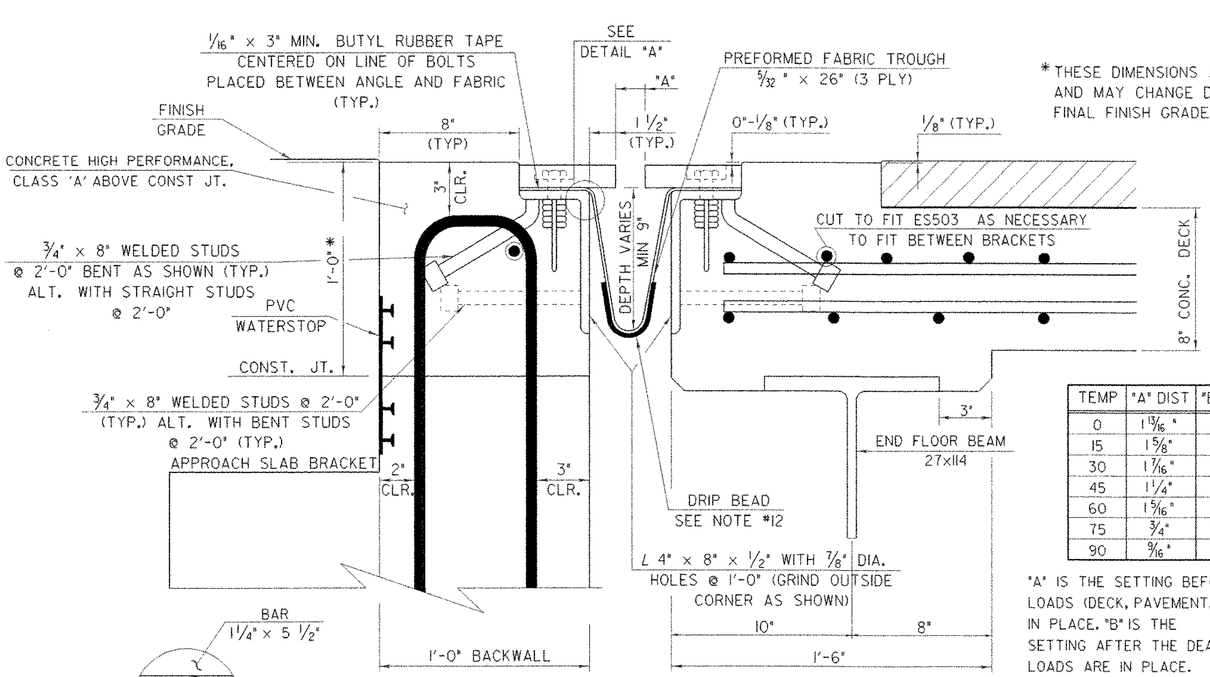




PIN DETAILS

SCALE: 3" = 1'-0"

SHEET NAME:	BEARING DETAILS (FIXED) ABUT #2		
PROJECT NAME:	JOHNSON	HIGHWAY NO.:	TH 2
PROJECT NUMBER:	BHO 1448(18)	BRIDGE NO.:	6
		OVER:	THE LAMOILLE RIVER
FILE NAME:	/str1/90j067/sj067sdw.dgn	PLOT DATE:	02-SEP-2005
PROJECT MANAGER:	R. WHITCOMB	DRAWN BY:	T. HUSK
DESIGNED BY:	C. MEUNIER	IPARM NAME:	sc067br2.i
BRIDGE SHEET NUMBER:		SHEET	31 OF 73



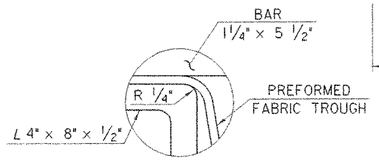
* THESE DIMENSIONS ARE THEORETICAL AND MAY CHANGE DEPENDING UPON THE FINAL FINISH GRADE.

TEMP	"A" DIST	"B" DIST
0	1 13/16"	1 9/16"
15	1 5/8"	1 3/8"
30	1 7/16"	1 3/16"
45	1 1/4"	1"
60	1 5/16"	1 1/16"
75	3/4"	1/2"
90	9/16"	5/16"

"A" IS THE SETTING BEFORE DEAD LOADS (DECK, PAVEMENT, ETC.) ARE IN PLACE. "B" IS THE SETTING AFTER THE DEAD LOADS ARE IN PLACE.

TYPICAL SECTION BETWEEN BRACKETS

SCALE: 3" = 1'- 0" (NORMAL TO ℄ BEARING)

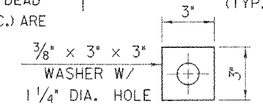


DETAIL "A"

NOT TO SCALE

TYPICAL SECTION AT BRACKETS

SCALE: 3" = 1'- 0" (NORMAL TO ℄ BEARING)



WASHER FOR BRACKET

SCALE: 3" = 1'- 0"



ANCHOR FERRULE DETAIL

SCALE: 3" = 1'- 0"

NOTE:
CLOSED THREADED FERRULE NUTS WITHOUT ANCHOR LOOPS MAY BE USED.

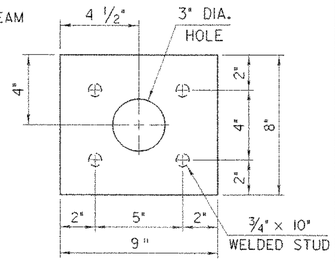
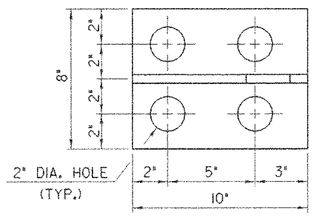


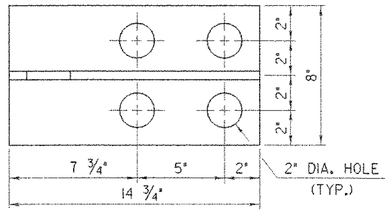
PLATE PLAN

SCALE: 3" = 1'- 0"



BACKWALL BRACKET PLAN

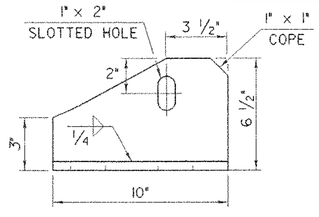
SCALE: 3" = 1'- 0"



DECK BRACKET PLAN

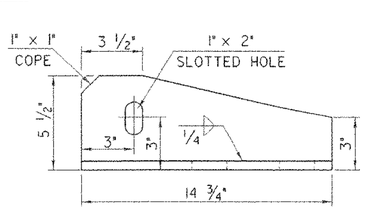
SCALE: 3" = 1'- 0"

ALL PLATES 1/2"



BACKWALL BRACKET ELEVATION

SCALE: 3" = 1'- 0"



DECK BRACKET ELEVATION

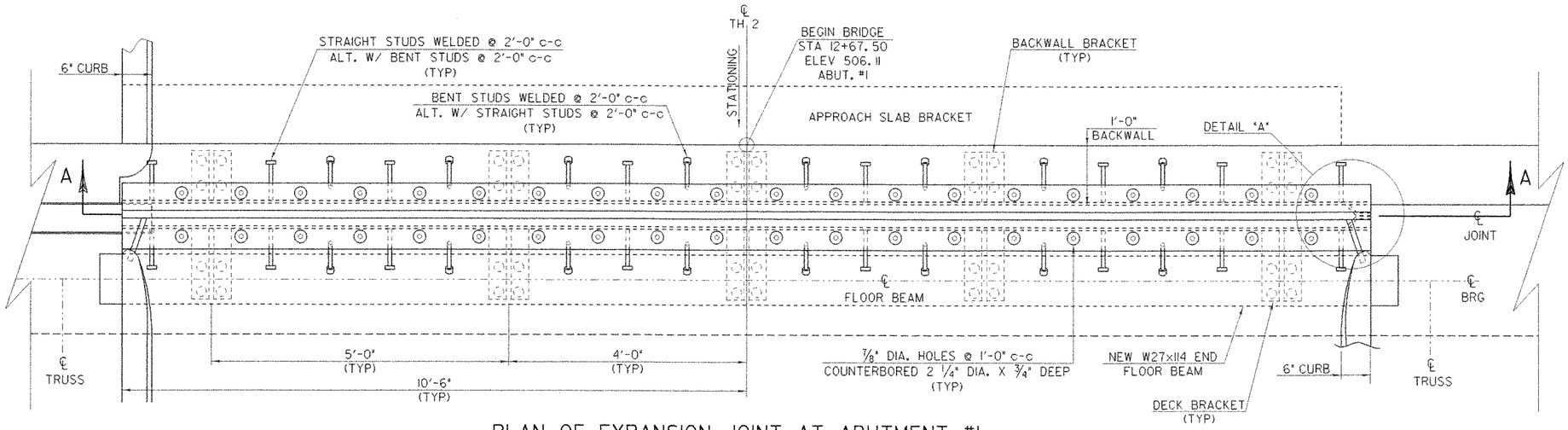
SCALE: 3" = 1'- 0"

1. DETAILS ON THIS SHEET ARE FOR ITEM 516.10 "BRIDGE EXPANSION JOINT (VERMONT)".
2. PREFORMED FABRIC MATERIAL SHALL BE CONTINUOUS AND SHALL CONFORM TO SUBSECTION 707.07.
3. BUTYL RUBBER TAPE SHALL CONFORM TO AASHTO SPECIFICATION M-198, TYPE II.
4. THE FINAL FINISH OF THE EXPANSION DEVICE SHALL BE COVERED DURING THE PLACING OF BRIDGE DECK AND SIDEWALK CONCRETE.
5. ALL STEEL COMPONENTS SHALL BE AASHTO M270 GRADE 36 GALVANIZED OR METALIZED AS PER SUBSECTION 506.15 (a) OR (b) UNLESS OTHERWISE SPECIFIED.
6. THE ITEM "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.
7. THE 4" X 8" X 1/2" ANGLES SHALL BE FURNISHED AS ONE CONTINUOUS PIECE. THE 1 1/4" X 5 1/2" BARS EACH SIDE OF THE JOINT SHALL BE PROVIDED IN TWO EQUAL LENGTHS.
8. COAT CONCRETE CONTACT SURFACES WITH EPOXY BONDING COMPOUND MEETING THE REQUIREMENTS OF SUBSECTION 719.02. PAYMENT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 516.10 "BRIDGE EXPANSION JOINT (VERMONT)".
9. A 1" DIAMETER PLASTIC DRAIN TUBE 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 FLOOR BEAM. THE DRAIN TUBES SHALL BE FASTENED TO THE FLOOR BEAM USING A METHOD APPROVED BY THE ENGINEER.
10. FILL COUNTERBORED HOLES WITH HOT POURED JOINT SEALER AFTER BOLT INSTALLATION. PAYMENT FOR THE WORK SHALL BE INCIDENTAL TO ITEM 516.10.
11. PAYMENT FOR WATERSTOP SHALL BE INCIDENTAL TO THE CONCRETE PAY ITEM.
12. A DRIP BEAD OF 1/4" X 7" 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.
13. FABRIC TROUGH SHALL BE THOROUGHLY CLEANED AND FLUSHED AFTER PAVING OPERATION.
14. THE EXPANSION JOINT SHALL BE SHOP ASSEMBLED AND SHIPPED AS ONE UNIT.
15. ALL BOLTS, STUDS AND RELATED HARDWARE EXCEPT AS NOTED SHALL BE ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 (AASHTO M232).

SHEET NAME: EXPANSION JOINT DETAILS

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)
HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER

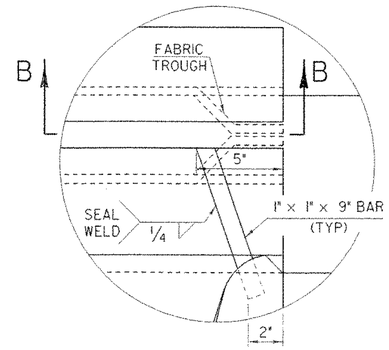
FILE NAME: /str1/90j067/sj067sup.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. MEUNIER
BRIDGE SHEET NUMBER:
PLOT DATE: 02-SEP-2005
DRAWN BY: J. GILMORE
PARM NAME: sc067ex1.i
SHEET 32 OF 73



THE LOCATION OF THE FERRULES MAY NEED TO BE ADJUSTED IN AREAS OF BRACKETS.

PLAN OF EXPANSION JOINT AT ABUTMENT #1

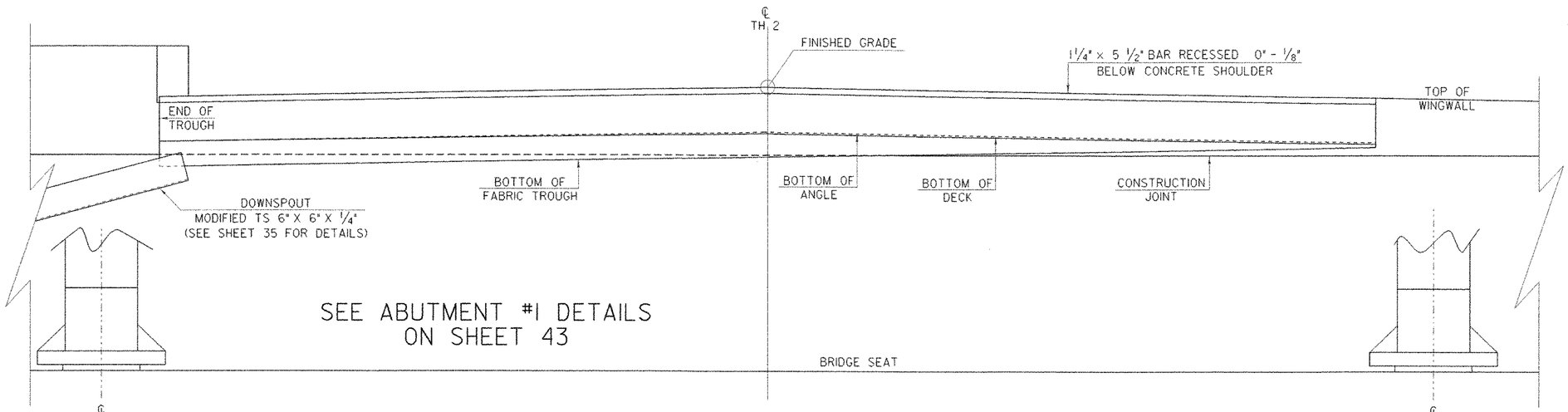
SCALE: 1" = 1'-0"



DETAIL "A"

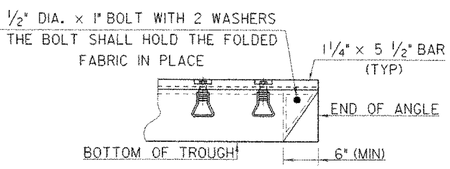
SCALE: 3" = 1'-0"

FLOW



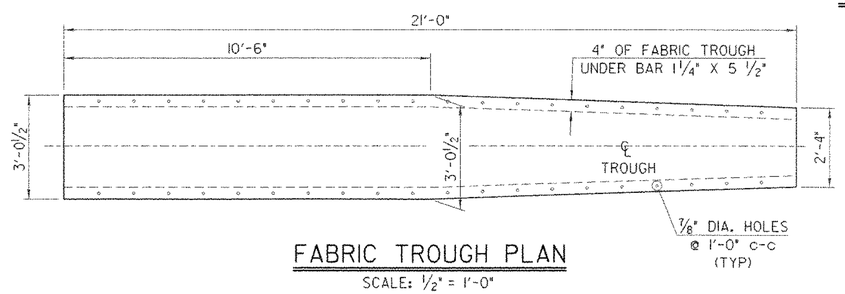
SECTION A-A

SCALE: 1" = 1'-0"



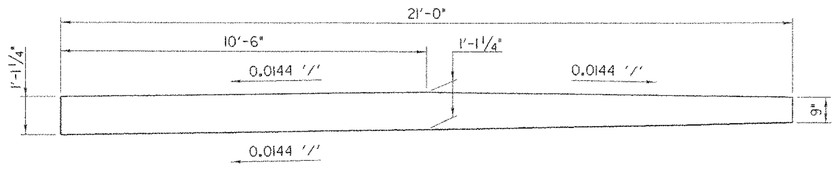
SECTION B-B

SCALE: 1" = 1'- 0"



FABRIC TROUGH PLAN

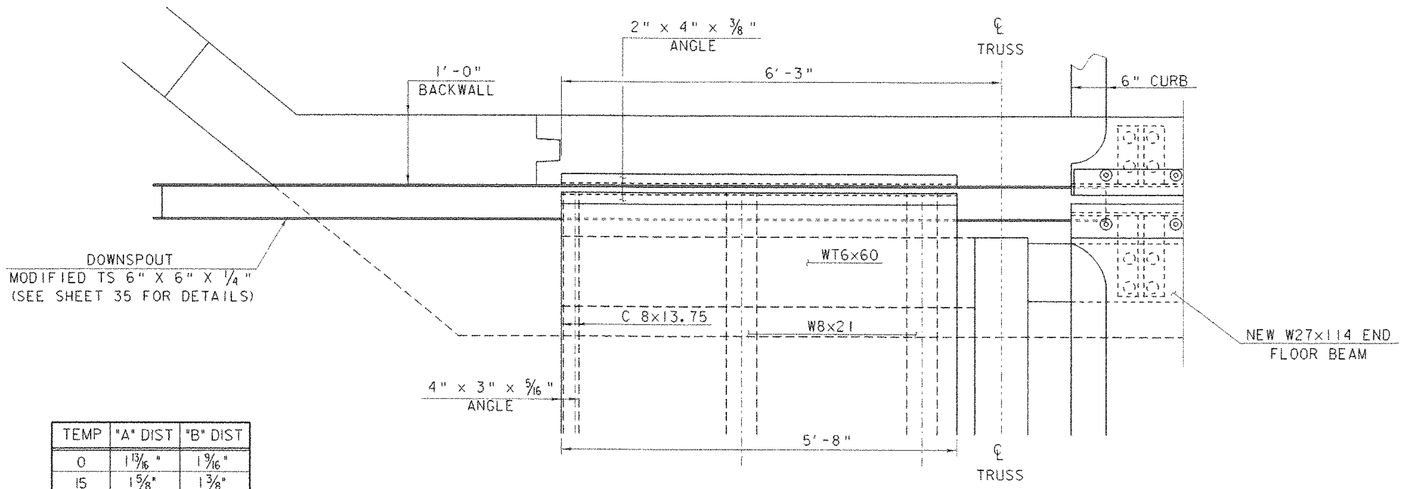
SCALE: 1/2" = 1'-0"



FABRIC TROUGH ELEVATION

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

SHEET NAME:	EXPANSION JOINT PLAN AND ELEVATION		
PROJECT NAME:	JOHNSON	HIGHWAY NO.:	TH 2
PROJECT NUMBER:	BHO 1448(18)	BRIDGE NO.:	6
		OVER:	THE LAMOILLE RIVER
FILE NAME:	/str1/90j067/sj067sup.dgn	PLOT DATE:	02-SEP-2005
PROJECT MANAGER:	R. WHITCOMB	DRAWN BY:	J.GILMORE
DESIGNED BY:	C. MEUNIER	IPARM NAME:	sc067exp.i
BRIDGE SHEET NUMBER:		SHEET	33 OF 73



PLAN OF SIDEWALK JOINT

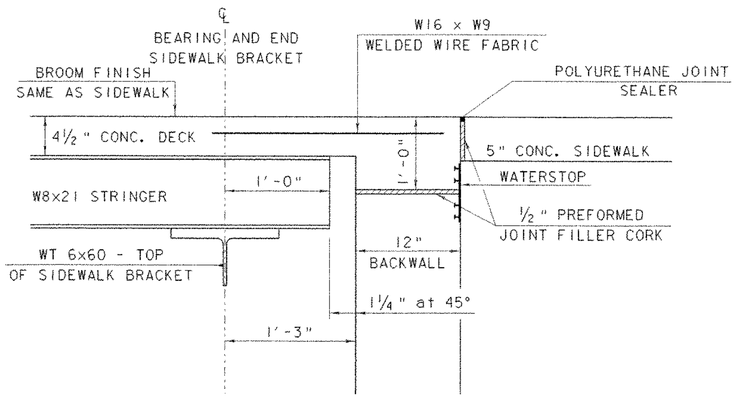
SCALE: 1" = 1'-0"

TEMP	"A" DIST	"B" DIST
0	1 13/16"	1 9/16"
15	1 5/8"	1 3/8"
30	1 7/16"	1 3/16"
45	1 1/4"	1"
60	1 5/16"	1 1/16"
75	3/4"	1/2"
90	3/16"	5/16"

"A" IS THE SETTING BEFORE DEAD LOADS (DECK, PAVEMENT, ETC.) ARE IN PLACE. "B" IS THE SETTING AFTER THE DEAD LOADS ARE IN PLACE.

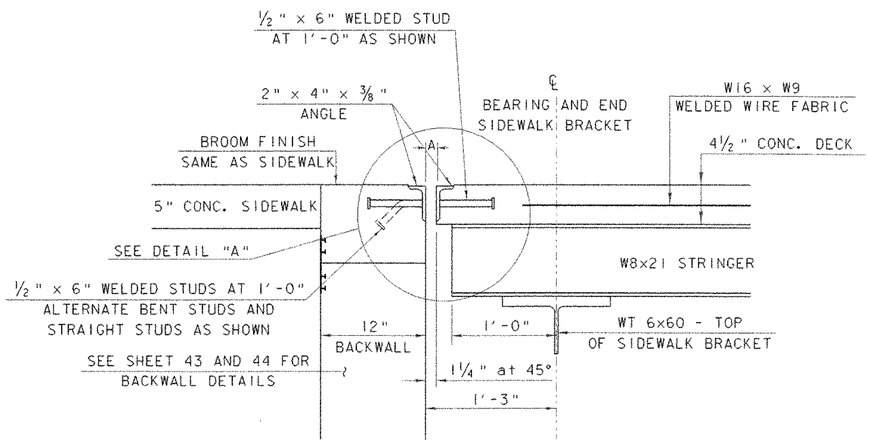
NOTES

1. DETAILS ON THIS SHEET ARE FOR THE ITEM 516.10 "BRIDGE EXPANSION JOINT (SIDEWALK)."
2. THE FINAL FINISH OF THE EXPANSION DEVICE SHALL BE COVERED DURING THE PLACEMENT OF ADJACENT CONCRETE.
3. THE STEEL COMPONENTS SHALL BE AASHTO M-270 GRADE 36 OR GRADE 50, GALVANIZED OR METALIZED AS PER SUBSECTION 506.15 (b) OR (c).
4. THE ITEM 516.10 "BRIDGE EXPANSION JOINT (SIDEWALK)" SHALL INCLUDE THE FABRICATION AND ERECTION OF THE COMPLETE JOINT ASSEMBLY INCLUDING ALL ANGLES, WELDED STUDS OR RODS, AND ANY OTHER MISCELLANEOUS MATERIAL NECESSARY TO INSTALL THE JOINT.
5. COAT CONCRETE CONTACT SURFACES WITH EPOXY BONDING COMPOUND MEETING THE REQUIREMENTS OF SUBSECTION 719.02. PAYMENT SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 516.10 "BRIDGE EXPANSION JOINT (SIDEWALK)."
6. POLYURETHENE JOINT SEALER SHALL BE INCIDENTAL TO THE ITEM "CONCRETE HIGH PERFORMANCE, CLASS B"



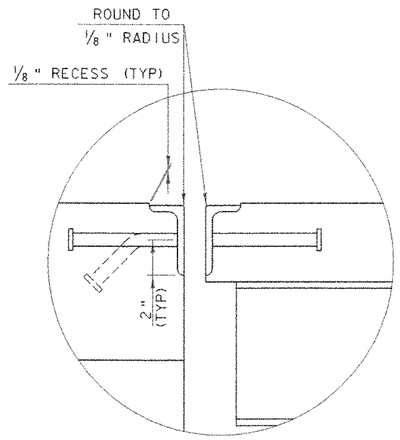
TYPICAL SIDEWALK JOINT SECTION (FIXED)

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



TYPICAL SIDEWALK JOINT SECTION (EXPANSION)

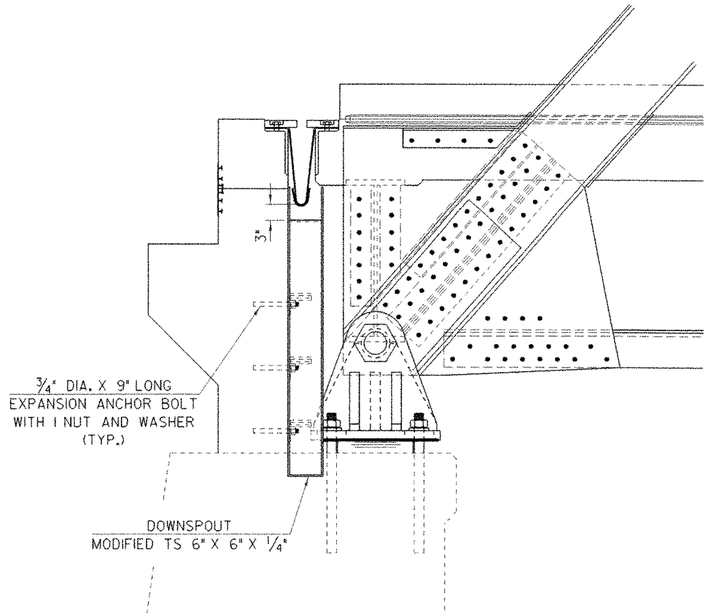
SCALE: 1 1/2" = 1'-0"



DETAIL "A"

SCALE: 3" = 1'-0"

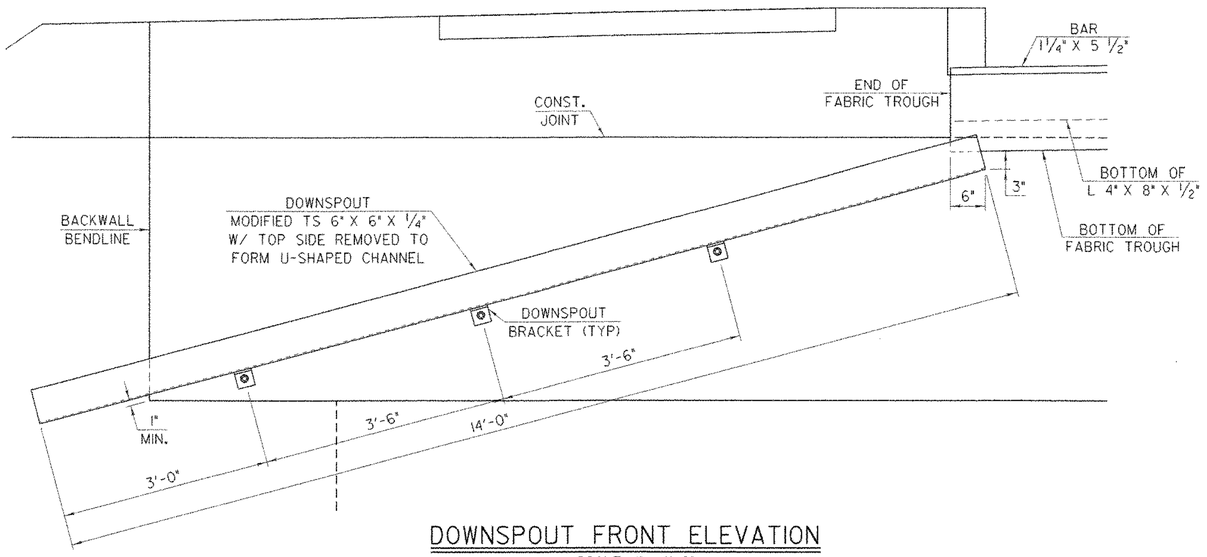
SHEET NAME: SIDEWALK JOINT DETAILS	
PROJECT NAME: JOHNSON	HIGHWAY NO.: TH 2
PROJECT NUMBER: BHO 1448(18)	BRIDGE NO.: 6
	OVER: THE LAMOILLE RIVER
FILE NAME: /str1/90j067/sj067sdw.dgn	PLOT DATE: 02-SEP-2005
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J.GILMORE
DESIGNED BY: C. MEUNIER	IPARM NAME: sc067sjd.i
BRIDGE SHEET NUMBER:	SHEET 34 OF 73



DOWNSPOUT SIDE ELEVATION

SCALE: 1" = 1'-0"

(SIDEWALK BRACING NOT SHOWN FOR CLARITY)



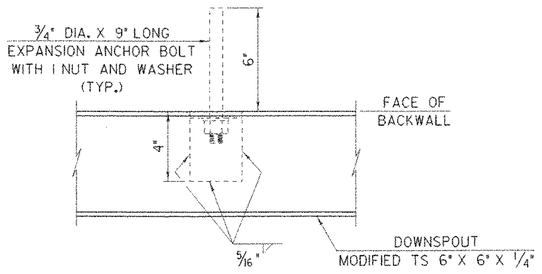
DOWNSPOUT FRONT ELEVATION

SCALE: 1" = 1'-0"

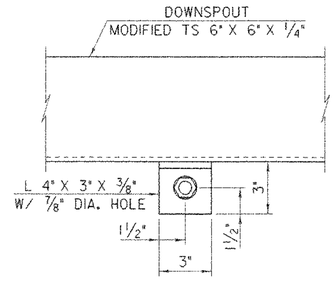
(SIDEWALK BRACING AND BEARING ASSEMBLY NOT SHOWN FOR CLARITY)

NOTES

1. A DOWNSPOUT WILL BE REQUIRED AT THE UPSTREAM END OF THE EXPANSION JOINT.
2. ALL DOWNSPOUT COMPONENTS AND HARDWARE SHALL BE GALVANIZED AND PAINTED BLACK AS PER SUPPLEMENTAL SPECIFICATION 513.
3. STRUCTURAL TUBING SHALL CONFORM TO ASTM A500B AND ALL OTHER COMPONENTS SHALL CONFORM TO AASHTO M270 GRADE 50.
4. THE DOWNSPOUT ASSEMBLY SHALL NOT BE INSTALLED UNTIL AFTER THE BRIDGE EXPANSION JOINT IS IN PLACE.
5. THE DOWNSPOUT, BRACKETS, BOLTS AND RELATED HARDWARE SHALL BE PAID FOR UNDER ITEM 506.60 "STRUCTURAL STEEL."
6. ALL BOLTS AND RELATED HARDWARE SHALL BE AASHTO A-307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-153 (AASHTO M-232).
7. ANY PLACE WHERE THE GALVANIZING HAS BEEN REMOVED FROM THE DOWNSPOUT OR HOPPER, EITHER BY CUTTING, BURNING, WELDING, PLACING OR BY ANY OTHER MEANS, IT SHALL BE REPAIRED BY THOROUGHLY CLEANING THE DAMAGED AREAS WITH A WIRE BRUSH AND REGALVANIZED IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 513 WHICH REFERENCES ASTM A760.



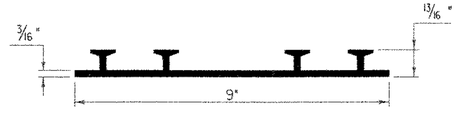
PLAN



ELEVATION

DOWNSPOUT BRACKET DETAILS

SCALE: 3" = 1'-0"

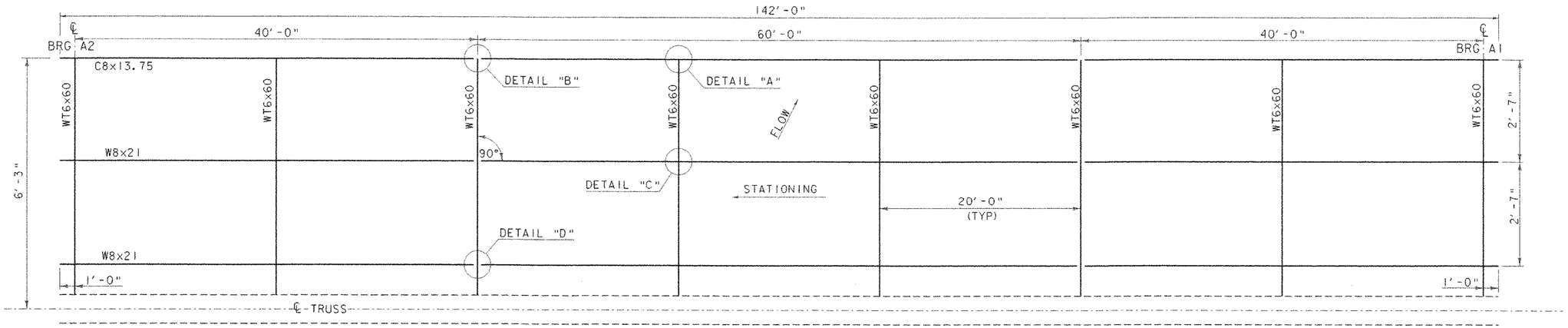


P.V.C. WATERSTOP FOR CONSTRUCTION JOINTS

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

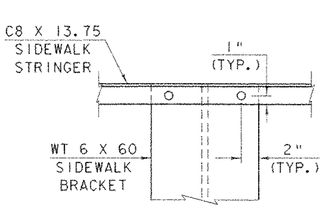
SHEET NAME: DOWNSPOUT DETAILS

PROJECT NAME: JOHNSON	HIGHWAY NO.: TH 2
PROJECT NUMBER: BHO 1448(18)	BRIDGE NO.: 6
	OVER: THE LAMOILLE RIVER
FILE NAME: /str1/90j067/sj067sup.dgn	PLOT DATE: 02-SEP-2005
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J.GILMORE
DESIGNED BY: C. MEUNIER	IPARM NAME: sc067dsd.i
BRIDGE SHEET NUMBER:	SHEET 35 OF 73

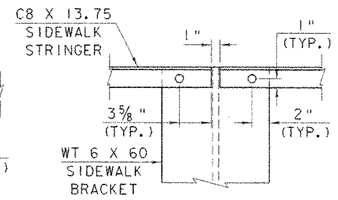


SIDEWALK FRAMING PLAN

HORIZONTAL SCALE: 3/16" = 1'-0"
VERTICAL SCALE: 3/4" = 1'-0"



DETAIL "A"

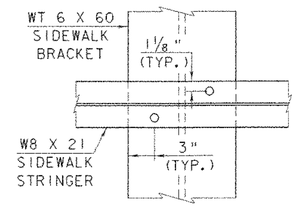


DETAIL "B"

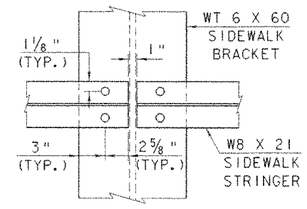
ALL CONNECTIONS BETWEEN THE SIDEWALK BRACKET AND STRINGERS SHALL BE MADE WITH ⅞" DIA. AASHTO M164, TYPE 1 BOLTS IN 15/16" DIA. HOLES.

C8 X 13.75 SIDEWALK STRINGER BOLTING DETAILS

SCALE: 1½" = 1'-0"



DETAIL "C"

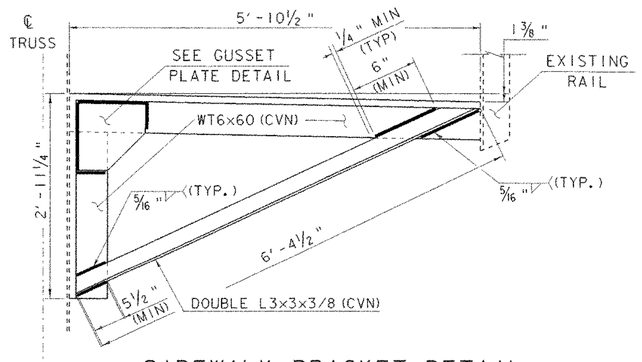


DETAIL "D"

ALL CONNECTIONS BETWEEN THE SIDEWALK BRACKET AND STRINGERS SHALL BE MADE WITH ⅞" DIA. AASHTO M164, TYPE 1 BOLTS IN 15/16" DIA. HOLES.

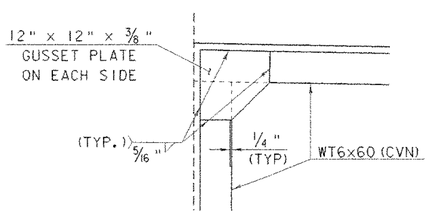
W8 X 21 SIDEWALK STRINGER BOLTING DETAILS

SCALE: 1½" = 1'-0"



SIDEWALK BRACKET DETAIL

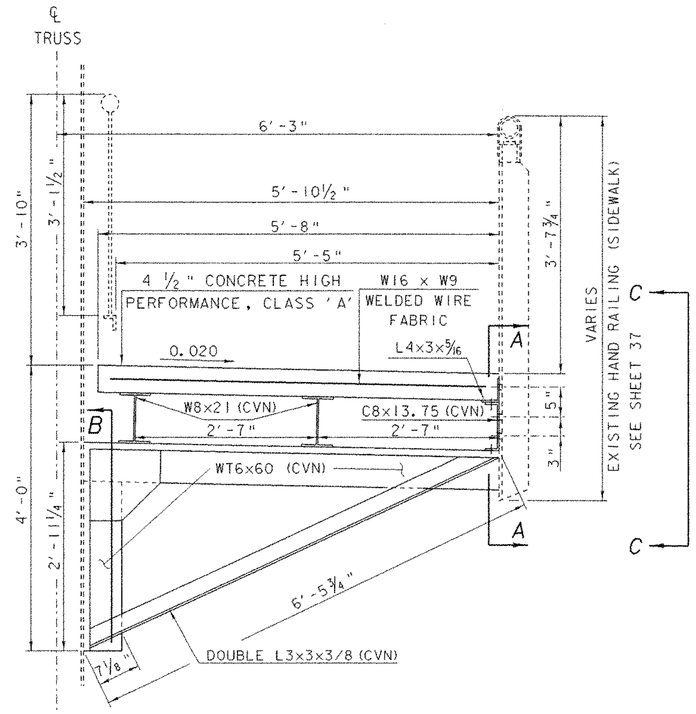
SCALE: 1" = 1'-0"



GUSSET PLATE DETAIL

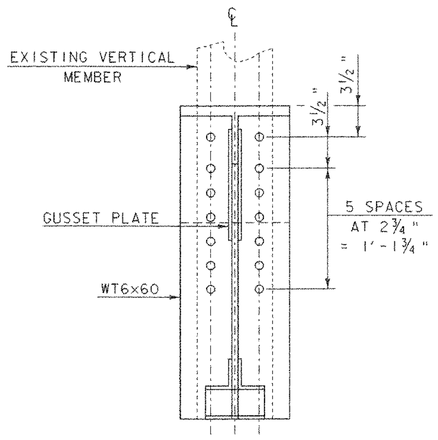
SCALE: 1" = 1'-0"

SHEET NAME:	SIDEWALK STRINGER DETAILS		
PROJECT NAME:	JOHNSON	HIGHWAY NO.:	TH 2
PROJECT NUMBER:	BH0 1448(18)	BRIDGE NO.:	6
		OVER:	THE LAMOILLE RIVER
FILE NAME:	/str1/90J067/sJ067sdw.dgn	PLOT DATE:	02-SEP-2005
PROJECT MANAGER:	R. WHITCOMB	DRAWN BY:	J.GILMORE
DESIGNED BY:	C. MEUNIER	IPARM NAME:	sc067ssd.i
BRIDGE SHEET NUMBER:		SHEET	36(g) OF 73



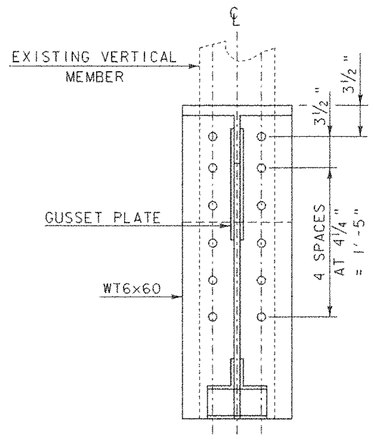
TYPICAL SIDEWALK SECTION

SCALE: 1" = 1'-0"



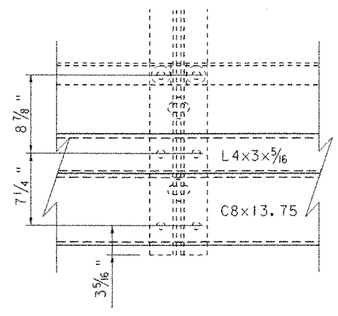
SECTION B-B

(END FLOOR BEAM)
SCALE: 1½" = 1'-0"



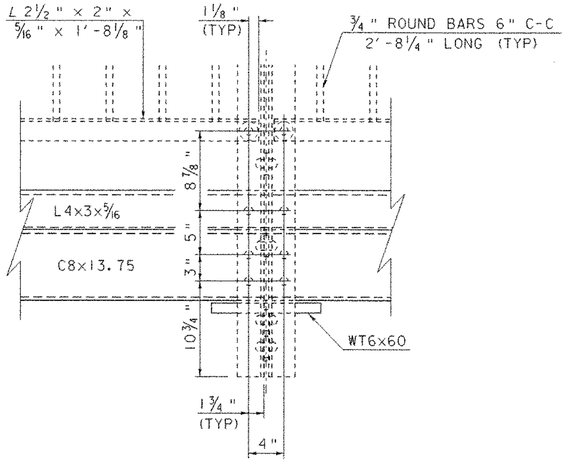
SECTION B-B

(INTERIOR FLOOR BEAM)
SCALE: 1½" = 1'-0"



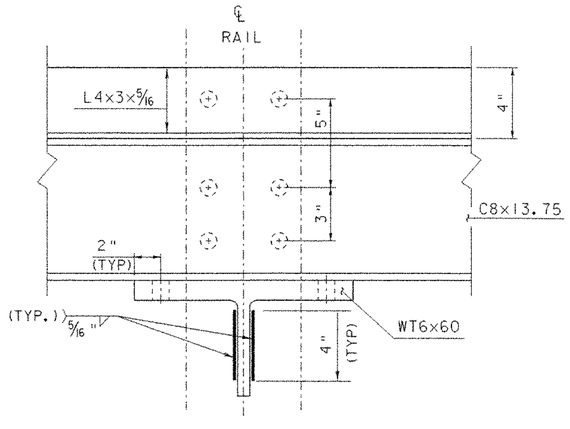
SECTION C-C @ INTERMEDIATE POINT

SCALE: 1½" = 1'-0"



SECTION C-C @ PANEL POINT

SCALE: 1½" = 1'-0"



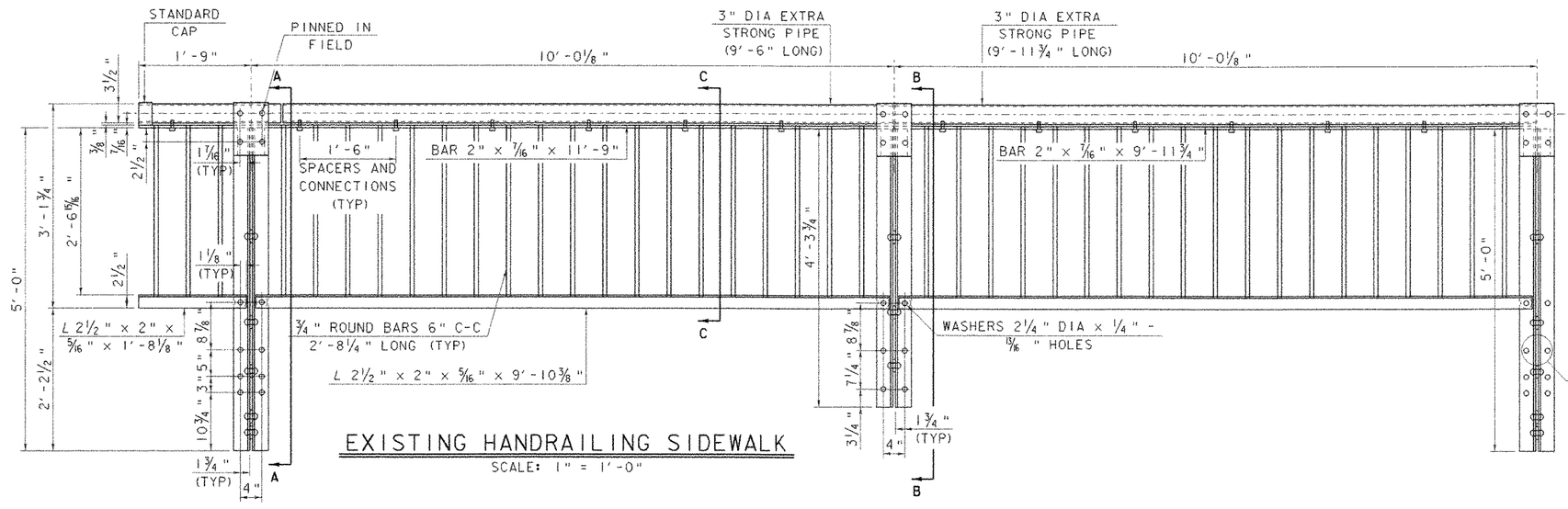
SECTION A-A

SCALE: 3" = 1'-0"

NOTES

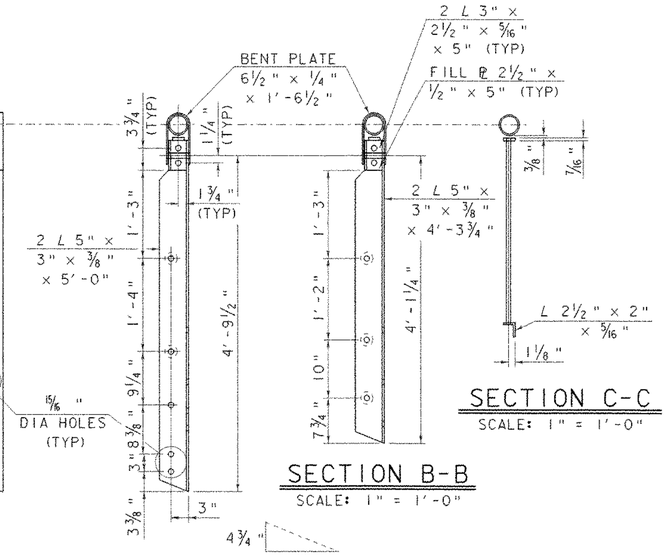
1. ALL STRUCTURAL STEEL IN SIDEWALKS SHALL BE AASHTO M270 GRADE 50 (PAINTED).
2. ALL BOLT HOLE DIMENSIONS FOR CONNECTION TO TRUSSES AND RAILING NEED TO BE FIELD VERIFIED PRIOR TO FABRICATION OF CHANNELS, ANGLES AND WT SECTIONS.
3. THE FABRICATOR SHALL DETAIL CONNECTIONS FOR THE CHANNEL ANGLE TO THE RAILING POSTS.

SHEET NAME:	SIDEWALK BRACKET DETAILS		
PROJECT NAME:	JOHNSON	HIGHWAY NO.:	TH 2
PROJECT NUMBER:	BHO 1448(18)	BRIDGE NO.:	6
		OVER:	THE LAMOILLE RIVER
FILE NAME:	/stri/90j067/sj067sdw.dgn	PLOT DATE:	02-SEP-2005
PROJECT MANAGER:	R. WHITCOMB	DRAWN BY:	J.GILMORE
DESIGNED BY:	C. MEUNIER	IPARM NAME:	sc067rdt.i
BRIDGE SHEET NUMBER:		SHEET	36(b) OF 73



EXISTING HANDRAILING SIDEWALK

SCALE: 1" = 1'-0"



SECTION C-C

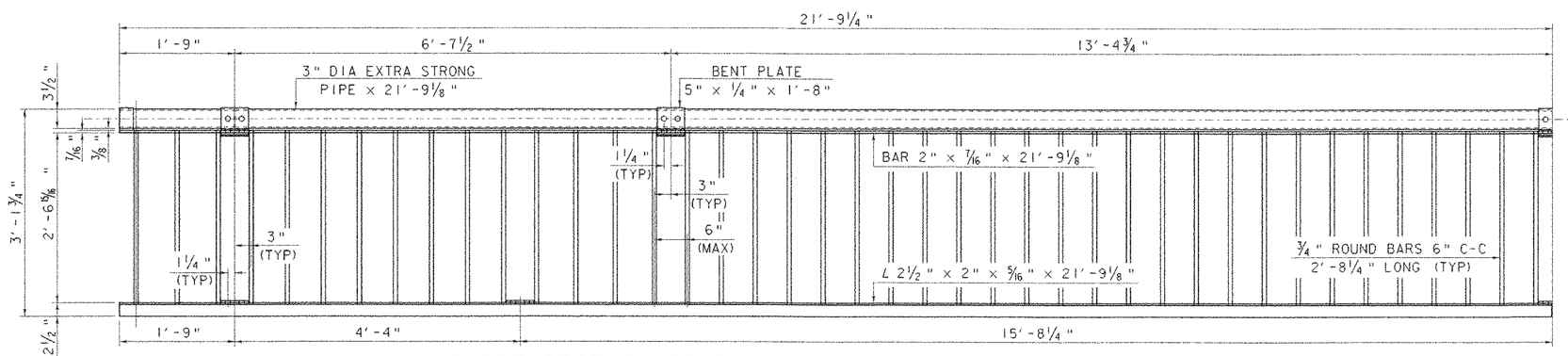
SCALE: 1" = 1'-0"

SECTION B-B

SCALE: 1" = 1'-0"

SECTION A-A

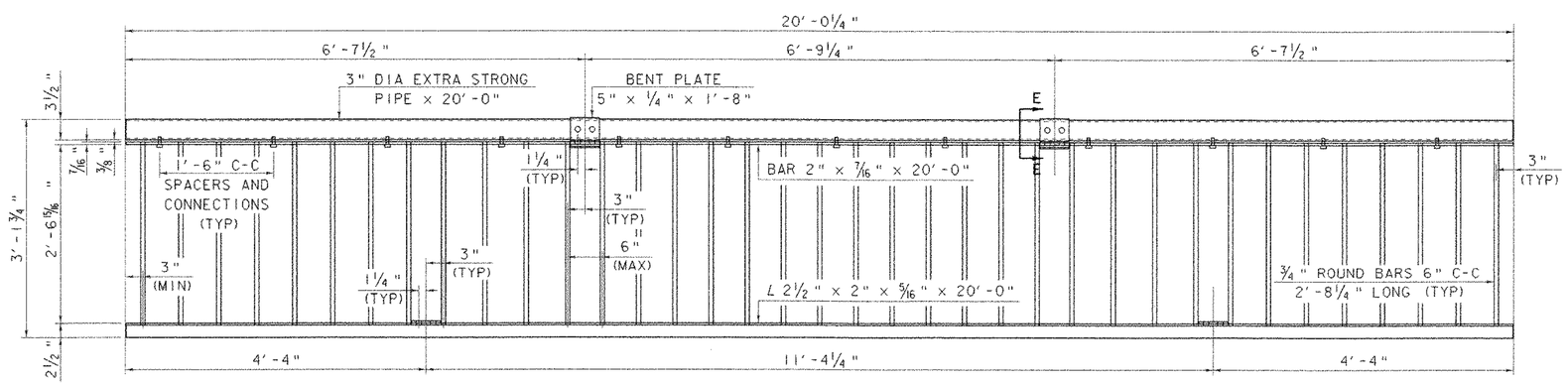
SCALE: 1" = 1'-0"



FIRST SECTION OF EXISTING BRIDGE RAILING

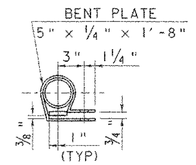
SCALE: 1" = 1'-0"

SEE REFERENCE SHEET 72 FOR ADDITIONAL INFORMATION ON EXISTING RAILING LAYOUT



MIDDLE SECTION OF EXISTING BRIDGE RAILING

SCALE: 1" = 1'-0"



SECTION E-E

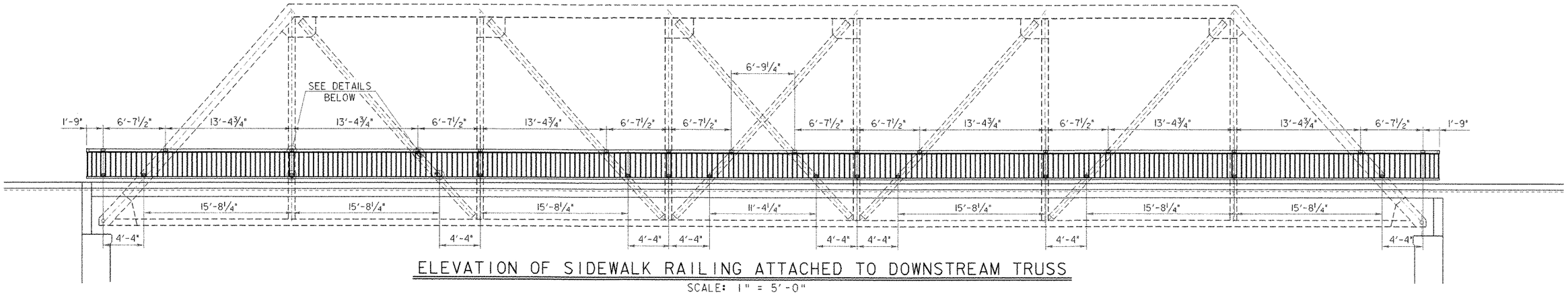
SCALE: 1 1/2" = 1'-0"

NOTE: THE DETAILS ON THIS SHEET ARE SHOWN TO PROVIDE INFORMATION TO THE FABRICATOR FOR ANY MEMBERS IDENTIFIED FOR REPLACEMENT.

SHEET NAME: SIDEWALK SPINDLES

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)
HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER

FILE NAME: /str1/90j067/sj067sdw.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. MEUNIER
BRIDGE SHEET NUMBER:
PLOT DATE: 02-SEP-2005
DRAWN BY: J.GILMORE
IPARM NAME: sc067sws.i
SHEET 37 OF 73



ELEVATION OF SIDEWALK RAILING ATTACHED TO DOWNSTREAM TRUSS

SCALE: 1" = 5'-0"

NOTES

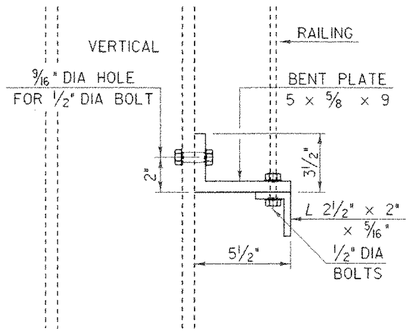
1. THE EXISTING RAIL ATTACHED TO THE DOWNSTREAM TRUSS AND THE EXISTING RAILING (INCLUDING THE ANGLE POSTS) ATTACHED TO THE EXISTING SIDEWALK SHALL BE REMOVED IN THEIR ENTIRETY. CARE MUST BE UTILIZED IN THE REMOVAL OF THE RAILING TO PREVENT DAMAGE TO THE RAILING POSTS AND TRUSS. THIS WORK WILL BE PAID FOR UNDER THE ITEM 525.10 "REMOVAL OF EXISTING RAILING (HANDRAIL)."

2. ALL OF THE EXISTING RAILING IS TO BE CLEANED, PAINTED AND REPAIRED IN A FABRICATION SHOP PER VAOT SPECIFICATION SECTION 506. THE FINAL COAT OF PAINT SHALL BE BLACK. SEE VAOT GENERAL SUPPLEMENTAL SPECIFICATION 513. THIS WORK WILL BE PAID FOR UNDER ITEMS 513.25, "STRUCTURAL PAINTING - SHOP APPLIED" AND 513.40, "SURFACE PREPARATION - SHOP."

3. ANY MISSING OR DAMAGED RAIL PIECES SHALL BE REPLACED IN KIND. AN ESTIMATED QUANTITY OF STRUCTURAL STEEL HAS BEEN INCLUDED IN THE QUANTITIES FOR ITEM 506.60, "STRUCTURAL STEEL" FOR THE REPLACEMENT PIECES. THE RESIDENT ENGINEER SHALL DETERMINE WHICH PIECES OF THE RAILING NEED REPLACEMENT OR REPAIR, PRIOR TO THE SHIPMENT OF THE COMPONENTS TO THE FABRICATION SHOP.

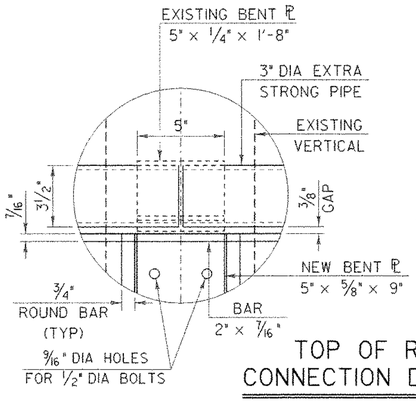
4. THE EXISTING DOWNSTREAM RAILING WILL BE ATTACHED TO THE UPSTREAM EXISTING TRUSS BY FIELD DRILLING AND BOLTING NEW ANGLES TO THE VERTICAL AND DIAGONAL TRUSS MEMBERS AS SHOWN ON THIS SHEET. THIS WORK WILL BE PAID FOR UNDER ITEM 525.11, "RESETTING RAILING (HANDRAIL)." THE NEW ANGLES WILL BE PAID FOR UNDER THE ITEM "506.60, STRUCTURAL STEEL." THE NEW ANGLES SHALL BE PAINTED BLACK. THIS WORK WILL BE PAID FOR UNDER THE ITEM "513.25, STRUCTURAL PAINTING, SHOP APPLIED."

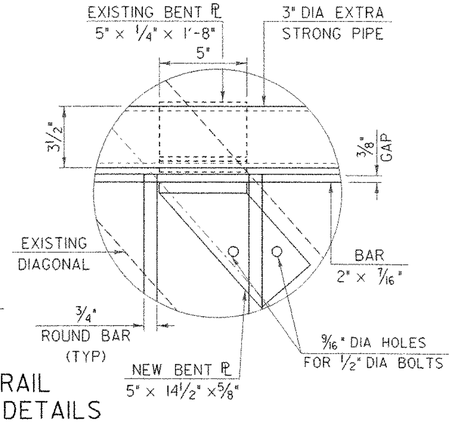
5. THE EXISTING UPSTREAM SIDEWALK RAILING WILL BE ATTACHED TO THE NEW SIDEWALK COMPONENTS AS DETAILED ON SHEET 36(b), SECTION C-C. THIS WORK WILL BE PAID FOR UNDER ITEM 525.11, "RESETTING RAILING (HANDRAIL)."



BOTTOM OF RAIL TO TRUSS ATTACHMENT

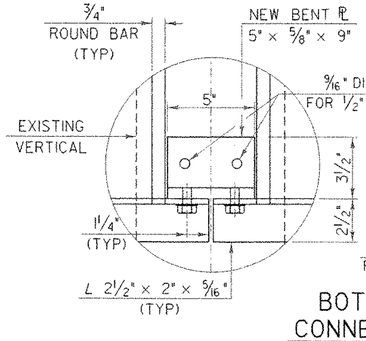
SCALE: 3" = 1'-0"

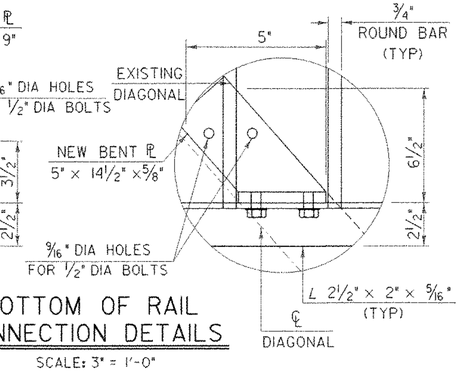




TOP OF RAIL CONNECTION DETAILS

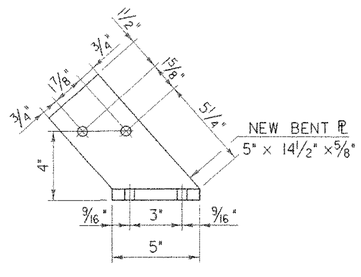
SCALE: 3" = 1'-0"



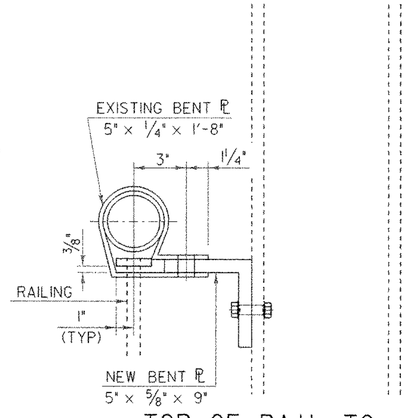


BOTTOM OF RAIL CONNECTION DETAILS

SCALE: 3" = 1'-0"



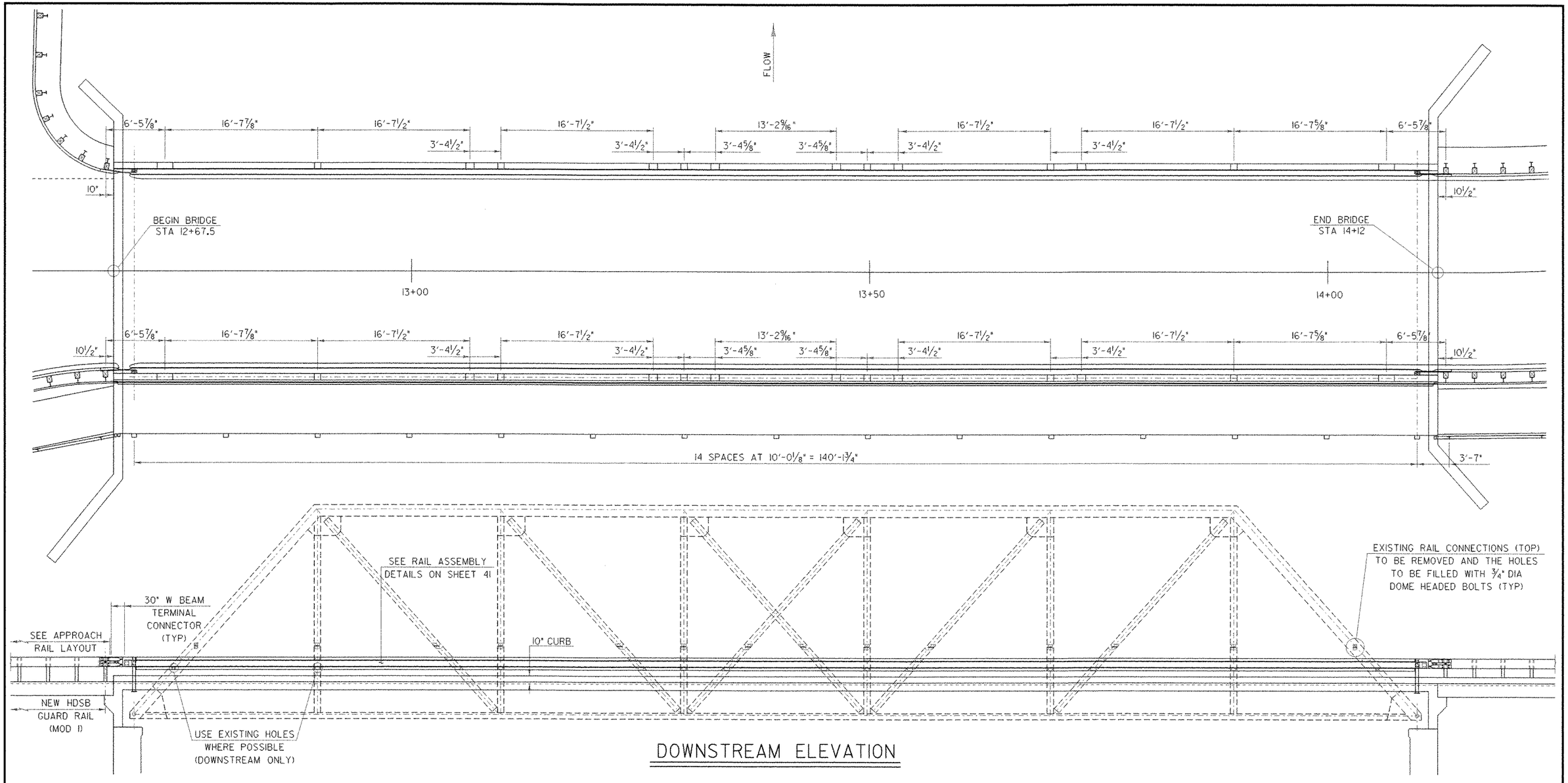
SCALE: 3" = 1'-0"



TOP OF RAIL TO TRUSS ATTACHMENT

SCALE: 3" = 1'-0"

SHEET NAME:	SIDEWALK RAIL CONNECTIONS		
PROJECT NAME:	JOHNSON	HIGHWAY NO.:	TH 2
PROJECT NUMBER:	BHO 1448(18)	BRIDGE NO.:	6
		OVER:	THE LAMOILLE RIVER
FILE NAME:	/strl/90j067/sj067ral.dgn	PLOT DATE:	02-SEP-2005
PROJECT MANAGER:	R. WHITCOMB	DRAWN BY:	J.GILMORE
DESIGNED BY:	C. MEUNIER	IPARM NAME:	sc067src.i
BRIDGE SHEET NUMBER:		SHEET	38 OF 73



DOWNSTREAM ELEVATION

STATIONING

SCALE 1" = 5'-0
5 0 5

SHEET NAME: BRIDGE RAILING LAYOUT	
PROJECT NAME: JOHNSON	HIGHWAY NO.: TH 2
PROJECT NUMBER: BHO 1448(18)	BRIDGE NO.: 6
	OVER: THE LAMOILLE RIVER
FILE NAME: /strl/90j067/sj067ral.dgn	PLOT DATE: 02-SEP-2005
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J.GILMORE
DESIGNED BY: C. MEUNIER	IPARM NAME: sc067vtp.i
BRIDGE SHEET NUMBER:	SHEET 39 OF 73

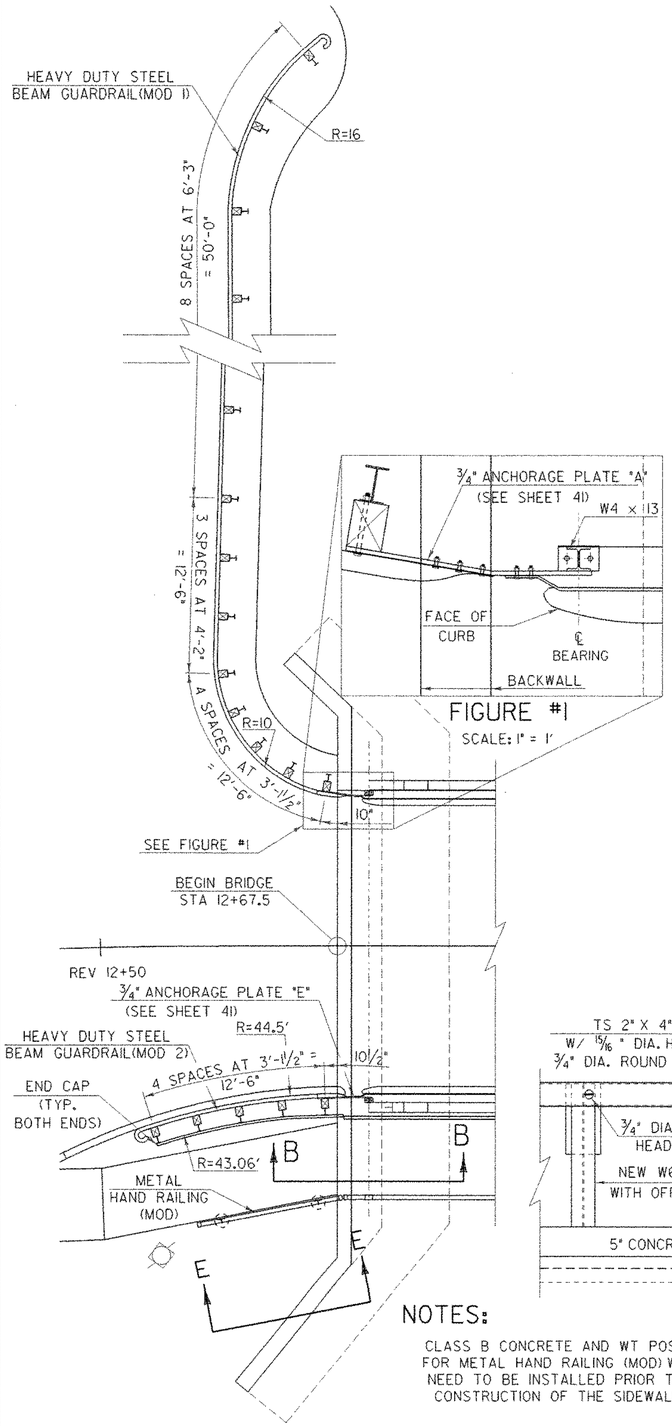
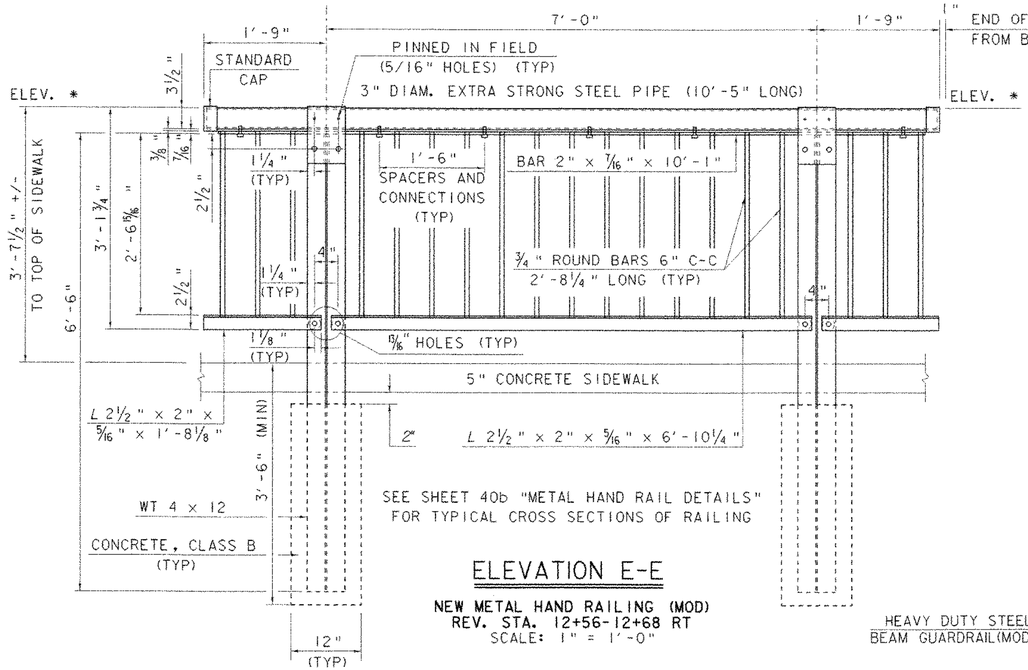


FIGURE #1

SCALE: 1" = 1'

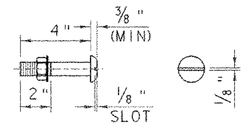


SEE SHEET 40b "METAL HAND RAIL DETAILS"
FOR TYPICAL CROSS SECTIONS OF RAILING

ELEVATION E-E

NEW METAL HAND RAILING (MOD)
REV. STA. 12+56-12+68 RT
SCALE: 1" = 1'-0"

* MATCH ELEVATION OF PEDESTRIAN
RAILING AT BRIDGE END



¾" DIA M164 (TYPE 1) ROUND HEAD BOLT

(WITH WASHER AND PREVAILING
TORQUE TYPE LOCK NUT)
ONLY FULL DIAMETER BODY
BOLTS WILL BE ALLOWED.

ELEVATION B-B

SCALE: 1" = 1'-0"

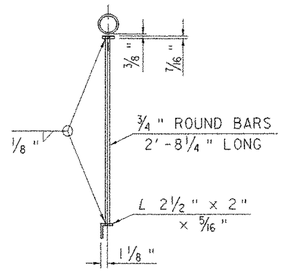
NOTES:

CLASS B CONCRETE AND WT POSTS FOR METAL HAND RAILING (MOD) WILL NEED TO BE INSTALLED PRIOR TO CONSTRUCTION OF THE SIDEWALK.



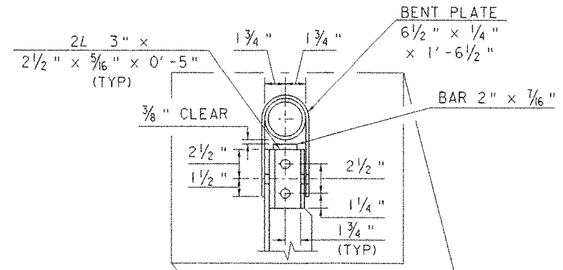
SCALE 1" = 5'-0
5 0 5

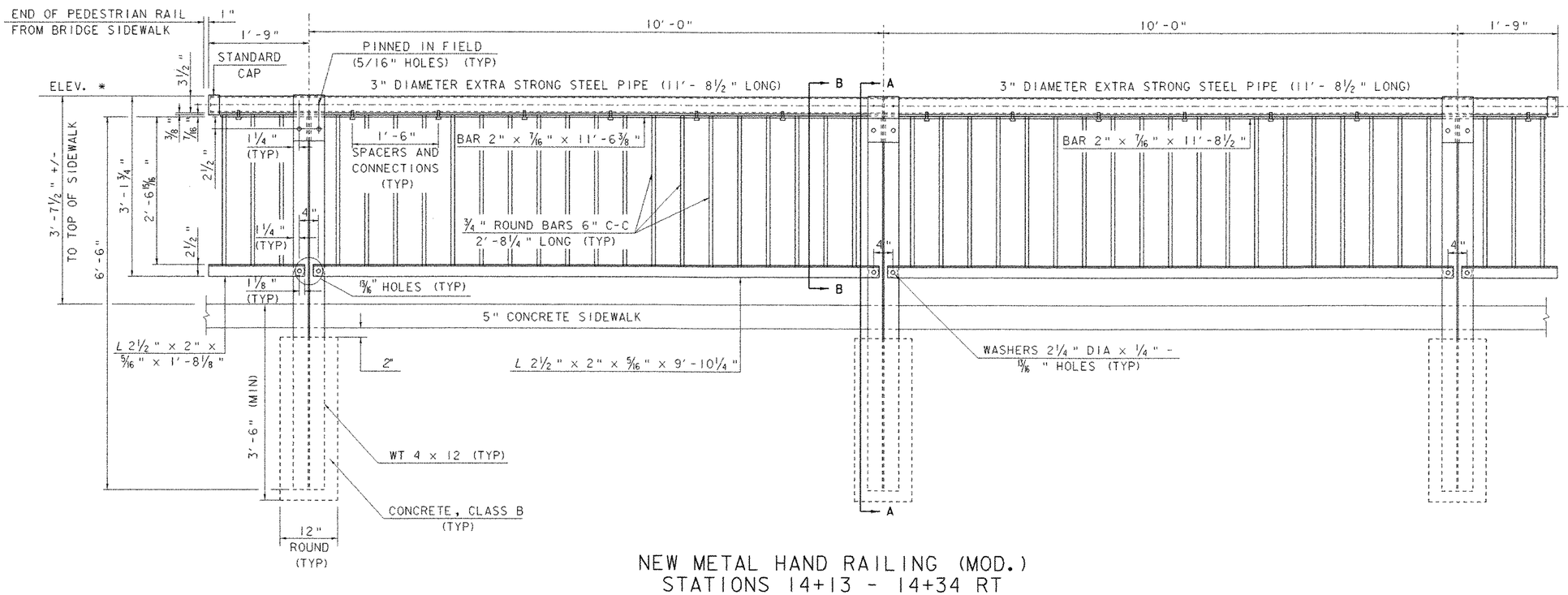
SHEET NAME: RAILING PLAN	
PROJECT NAME: JOHNSON	HIGHWAY NO.: TH 2
PROJECT NUMBER: BHO 1448(18)	BRIDGE NO.: 6
	OVER: THE LAMOILLE RIVER
FILE NAME: /str1/90j067/sj067ral.dgn	PLOT DATE: 02-SEP-2005
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J.GILMORE
DESIGNED BY: C. CARLSON	IPARM NAME: sc067rlp.i
BRIDGE SHEET NUMBER:	SHEET 40(a) OF 73



SECTION B-B

SCALE: 1" = 1'-0"





NEW METAL HAND RAILING (MOD.)
STATIONS 14+13 - 14+34 RT

SCALE: 1" = 1'-0"

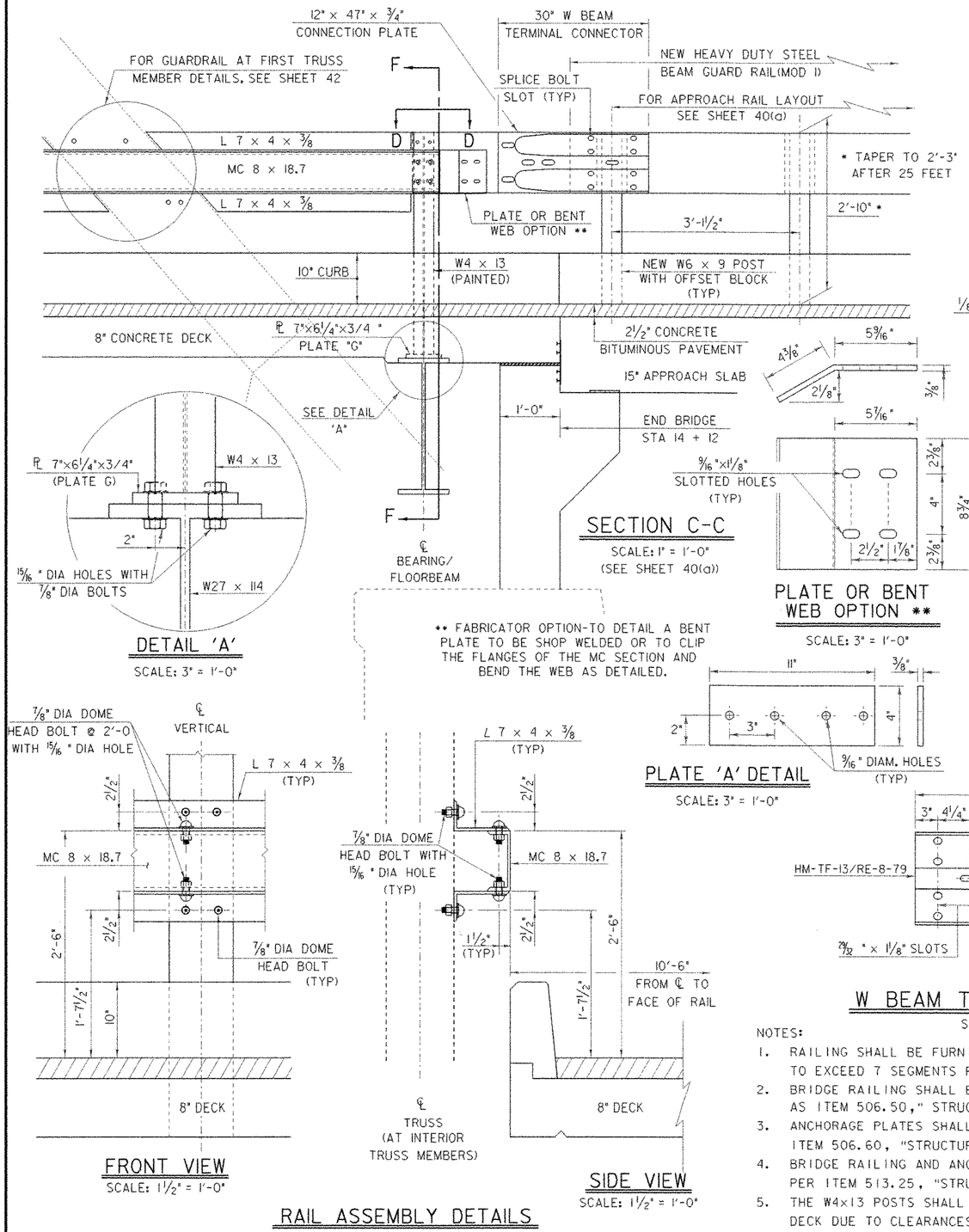
STATIONING →

SECTION A-A

SCALE: 1" = 1'-0"

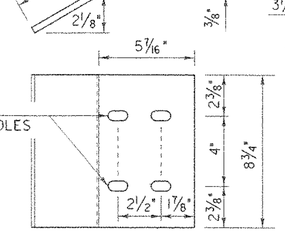
* MATCH ELEVATION OF PEDESTRIAN RAILING AT BRIDGE END

SHEET NAME: METAL HAND RAIL DETAILS	
PROJECT NAME: JOHNSON	HIGHWAY NO.: TH 2
PROJECT NUMBER: BHO 1448(18)	BRIDGE NO.: 6
	OVER: THE LAMOILLE RIVER
FILE NAME: /strl/90j067/sj067rail.dgn	PLOT DATE: 02-SEP-2005
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J.GILMORE
DESIGNED BY: C. CARLSON	IPARM NAME: sc067ped.i
BRIDGE SHEET NUMBER:	SHEET 40(b) OF 73



DETAIL 'A'

SCALE: 3" = 1'-0"



SECTION C-C

SCALE: 1" = 1'-0"
(SEE SHEET 40(a))

PLATE OR BENT WEB OPTION **

SCALE: 3" = 1'-0"

** FABRICATOR OPTION-TO DETAIL A BENT PLATE TO BE SHOP WELDED OR TO CLIP THE FLANGES OF THE MC SECTION AND BEND THE WEB AS DETAILED.

PLATE 'A' DETAIL

SCALE: 3" = 1'-0"

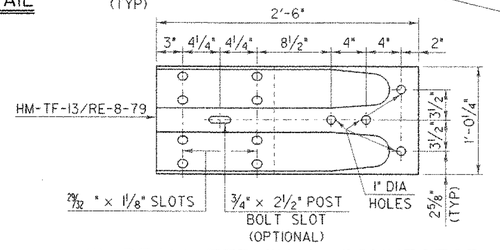
FRONT VIEW

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

SIDE VIEW

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

RAIL ASSEMBLY DETAILS

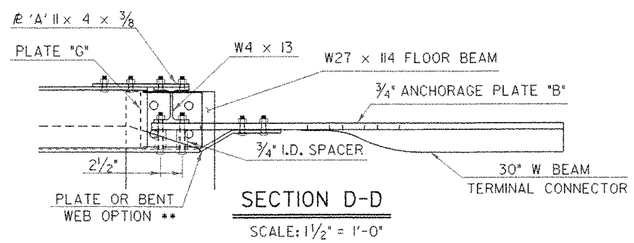


W BEAM TERMINAL CONNECTOR

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

NOTES:

1. RAILING SHALL BE FURNISHED IN EQUAL LENGTH SEGMENTS NOT TO EXCEED 7 SEGMENTS PER TRUSS LINE.
2. BRIDGE RAILING SHALL BE PAID FOR AS ITEM 506.50," STRUCTURAL STEEL (ROLLED BEAM)."
3. ANCHORAGE PLATES SHALL BE PAID FOR AS ITEM 506.60, "STRUCTURAL STEEL".
4. BRIDGE RAILING AND ANCHORAGE PLATES SHALL BE PAINTED BLACK PER ITEM 513.25, "STRUCTURAL STEEL PAINTING (SHOP APPLIED)."
5. THE W4x13 POSTS SHALL BE INSTALLED PRIOR TO FORMING OF THE DECK DUE TO CLEARANCES BETWEEN THE TRUSS AND BRIDGE DECK.



SECTION D-D

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

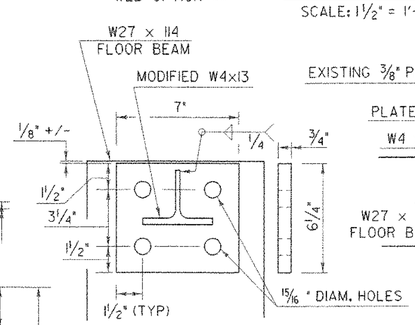
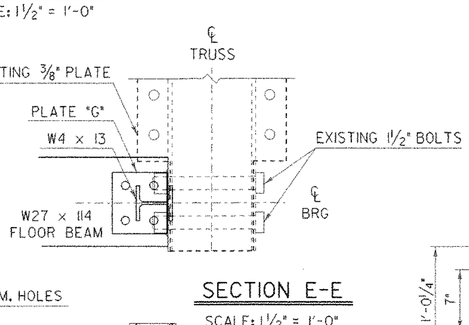


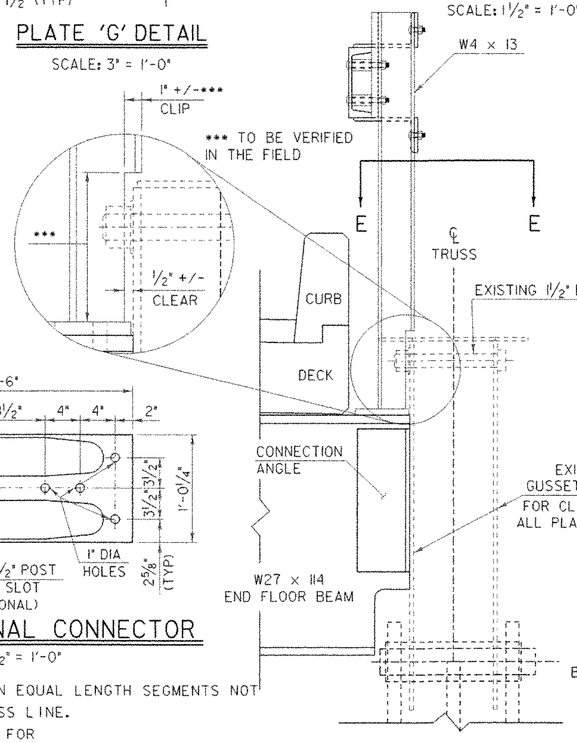
PLATE 'G' DETAIL

SCALE: 3" = 1'-0"



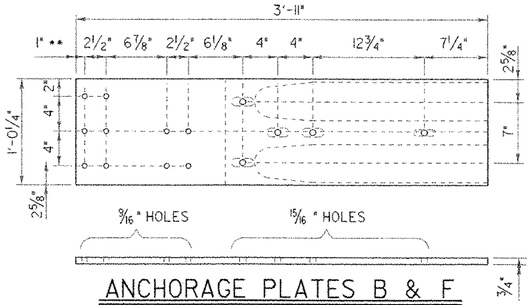
SECTION E-E

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



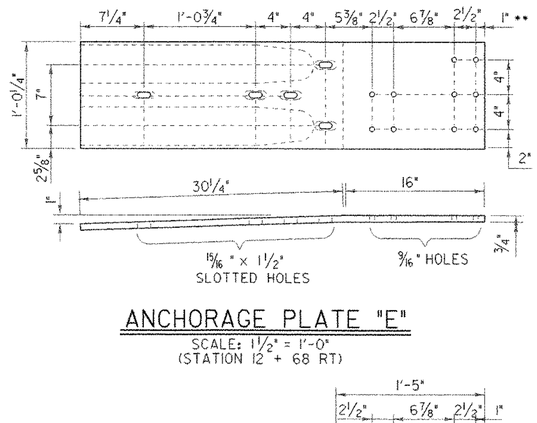
SECTION F-F

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



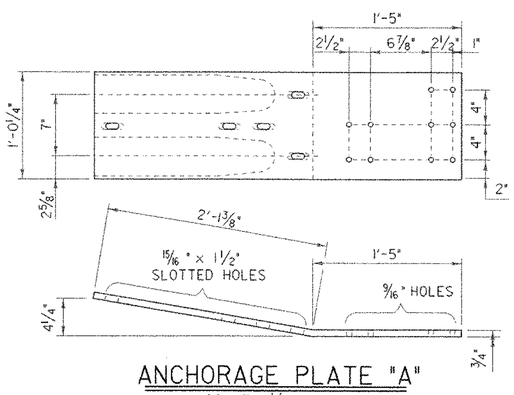
ANCHORAGE PLATES B & F

SCALE: 1 1/2" = 1'-0"
(STATION 14 + 12 LT&RT @ END BRIDGE)



ANCHORAGE PLATE "E"

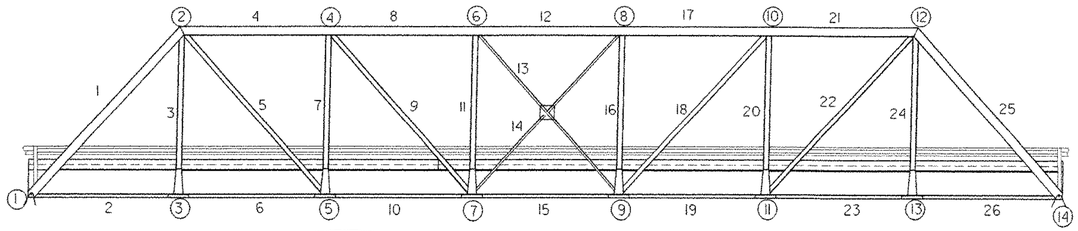
SCALE: 1 1/2" = 1'-0"
(STATION 12 + 68 RT)



ANCHORAGE PLATE "A"

SCALE: 1 1/2" = 1'-0"
(STATION 12 + 68 LT)

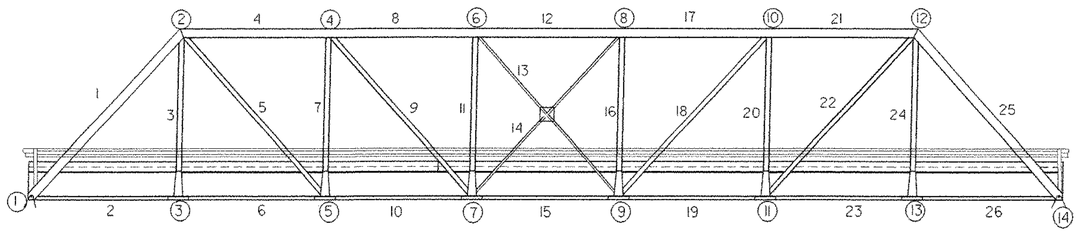
SHEET NAME: BRIDGE RAILING DETAILS			
PROJECT NAME: JOHNSON		HIGHWAY NO.: TH 2	
PROJECT NUMBER: BHO 1448(18)		BRIDGE NO.: 6	
		OVER: THE LAMOILLE RIVER	
FILE NAME: /str1/90j067/sj067ral.dgn		PLOT DATE: 02-SEP-2005	
PROJECT MANAGER: R. WHITCOMB		DRAWN BY: J.GILMORE	
DESIGNED BY: C. MEUNIER		IPARM NAME: sc067rld.i	
BRIDGE SHEET NUMBER:		SHEET 41 OF 73	



STATIONING

UPSTREAM MEMBERS

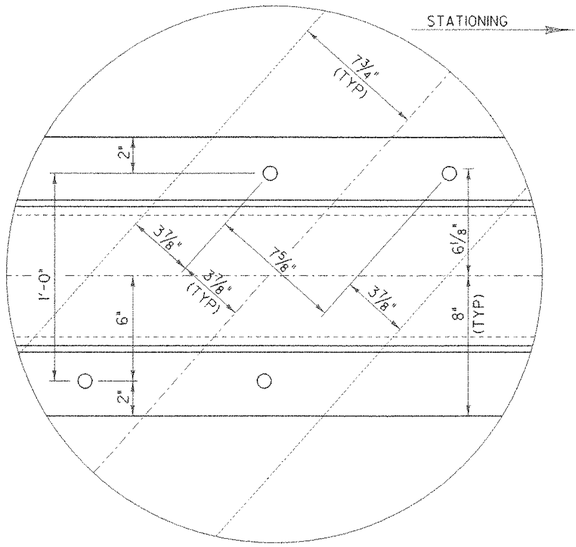
NTS



STATIONING

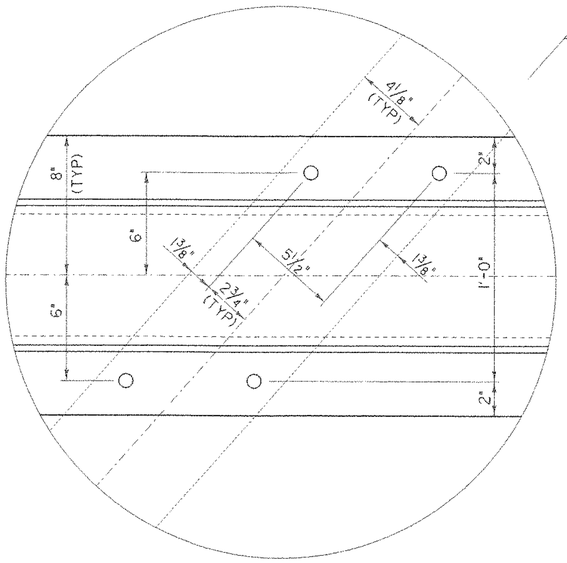
DOWNSTREAM MEMBERS

NTS



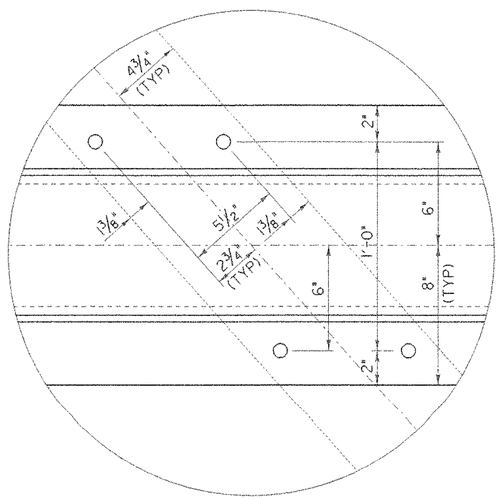
UPSTREAM MEMBER 1

SCALE: 3" = 1'-0"



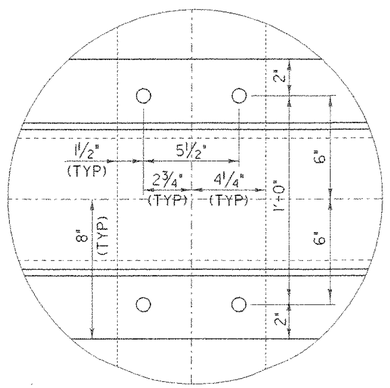
MEMBERS 14, 18 AND 22

SCALE: 3" = 1'-0"



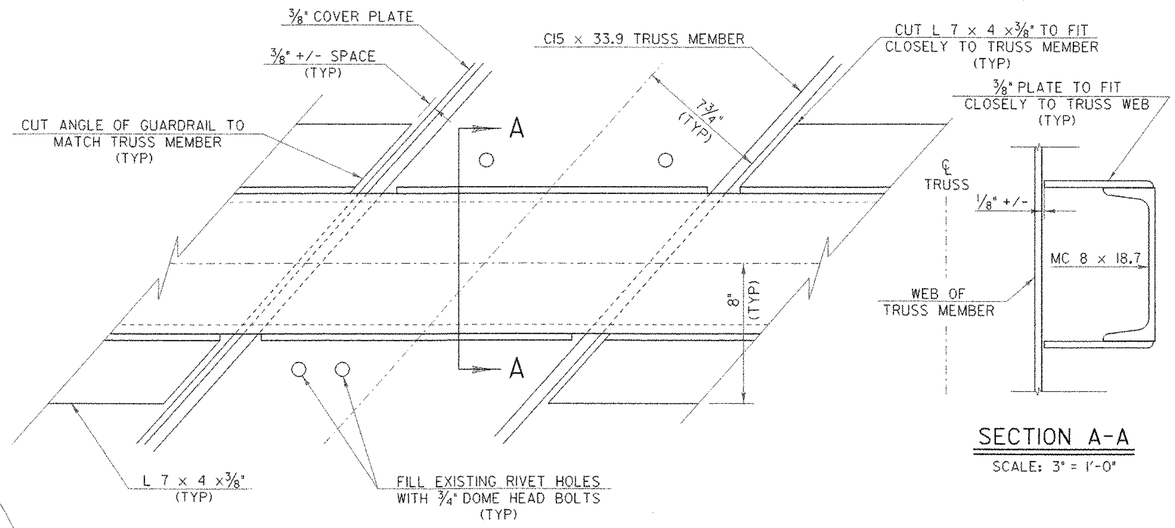
MEMBERS 5, 9 AND 13

SCALE: 3" = 1'-0"



MEMBERS 3, 7, 11, 16, 20 AND 24

SCALE: 3" = 1'-0"



SECTION A-A

SCALE: 3" = 1'-0"

DOWNSTREAM MEMBER 1 & UPSTREAM MEMBER 25

GUARDRAIL CONNECTION

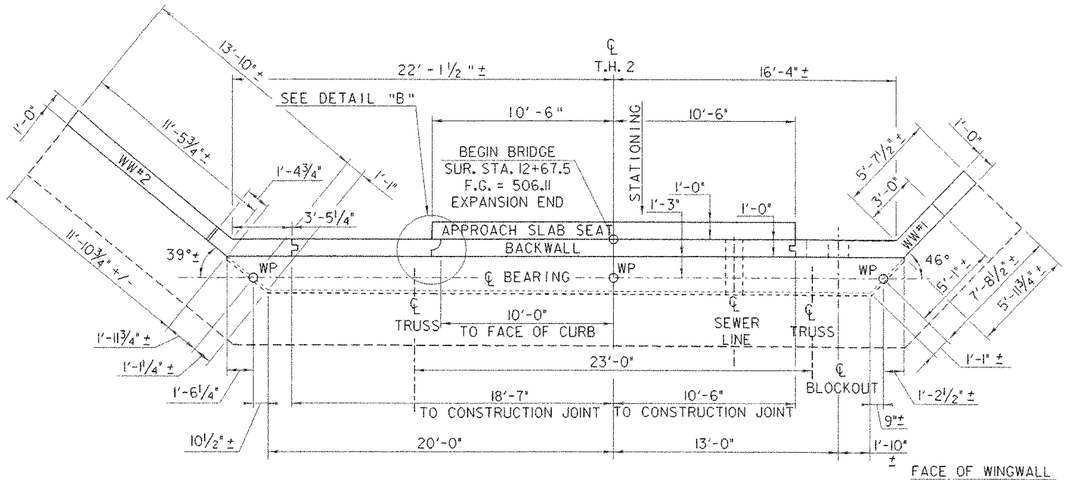
UPSTREAM MEMBER 1 & DOWNSTREAM MEMBER 25
SAME BUT OPPOSITE HAND
SCALE: 3" = 1'-0"

NOTES:

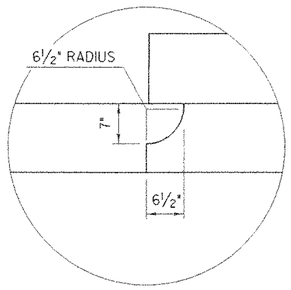
1. USE THE EXISTING BOTTOM RAIL HOLES (IF POSSIBLE) IN THE MEMBERS ON THE DOWNSTREAM SIDE TO CONNECT THE RAIL TO THE TRUSS.
2. SEE THIS SHEET FOR MEMBER LOCATIONS.
3. THE CONNECTION OF THE NEW CHANNEL GUARD RAIL TO THE TRUSS SHALL BE MADE WITH ¾" DIA DOME HEADED BOLTS.

SHEET NAME: BRIDGE RAILING CONNECTION DETAILS

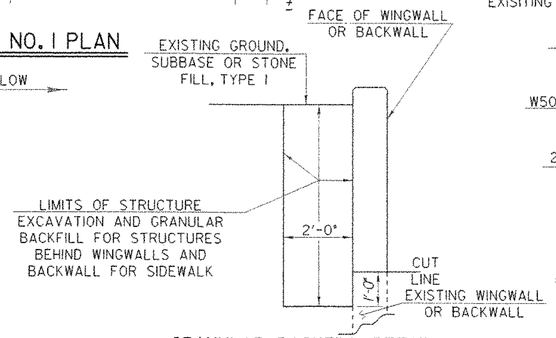
PROJECT NAME: JOHNSON	HIGHWAY NO.: TH 2
PROJECT NUMBER: BHO 1448(18)	BRIDGE NO.: 6
	OVER: THE LAMOILLE RIVER
FILE NAME: /strl/90j067/sj067ral.dgn	PLOT DATE: 02-SEP-2005
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J.GILMORE
DESIGNED BY: C. MEUNIER	IPARM NAME: sc067ard.i
BRIDGE SHEET NUMBER:	SHEET 42 OF 73



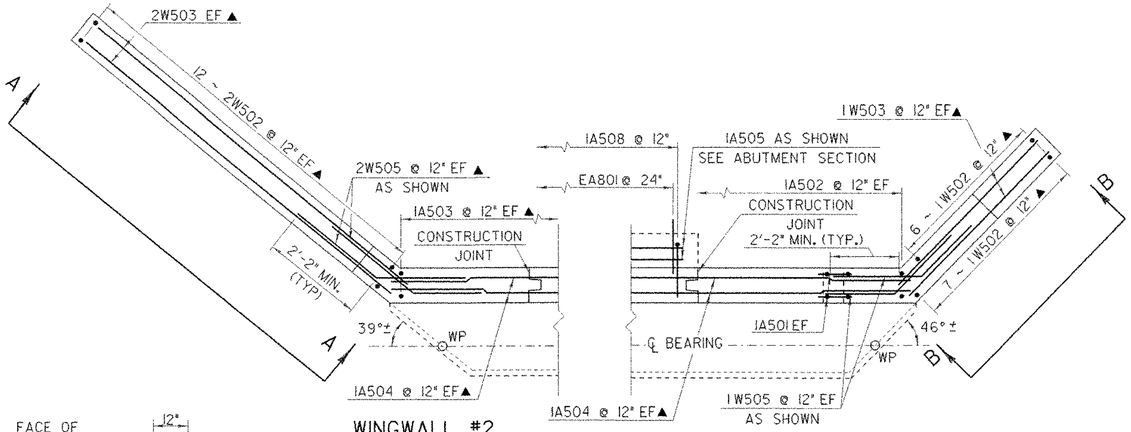
ABUTMENT NO. 1 PLAN



DETAIL "B"
SCALE: ½" = 1'-0"

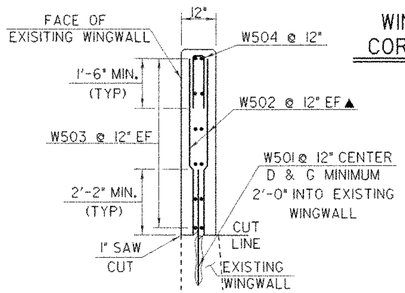


GRANULAR BACKFILL DETAIL
SCALE: ½" = 1'-0"

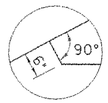


WINGWALL #2 CORNER DETAIL

WINGWALL #1 CORNER DETAIL
SCALE: ½" = 1'-0"

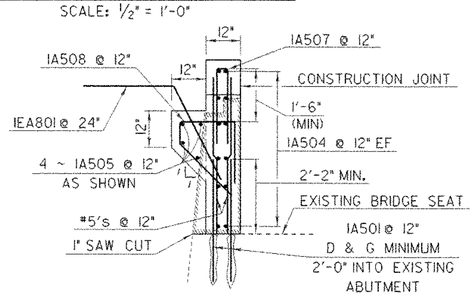


TYPICAL WINGWALL SECTION
SCALE: ½" = 1'-0"

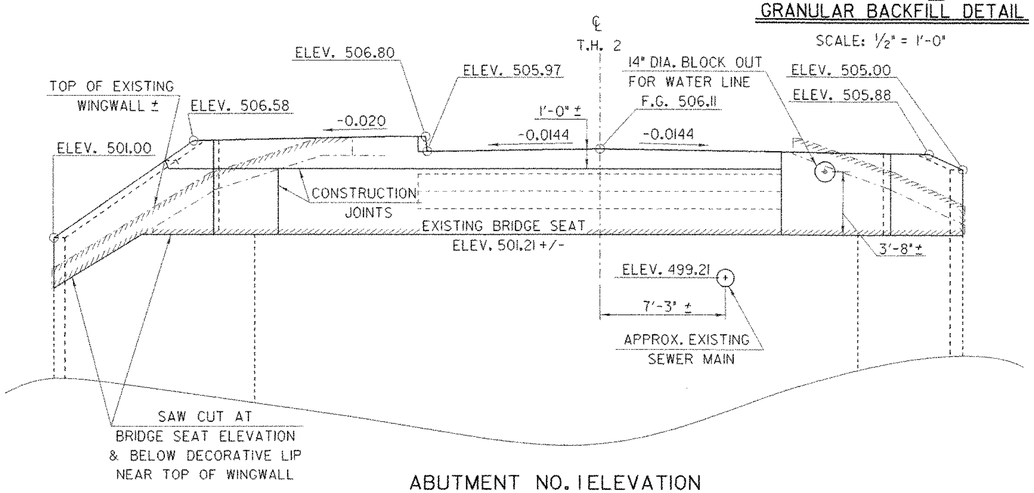


DETAIL "A"
NTS

STREAM FLOW

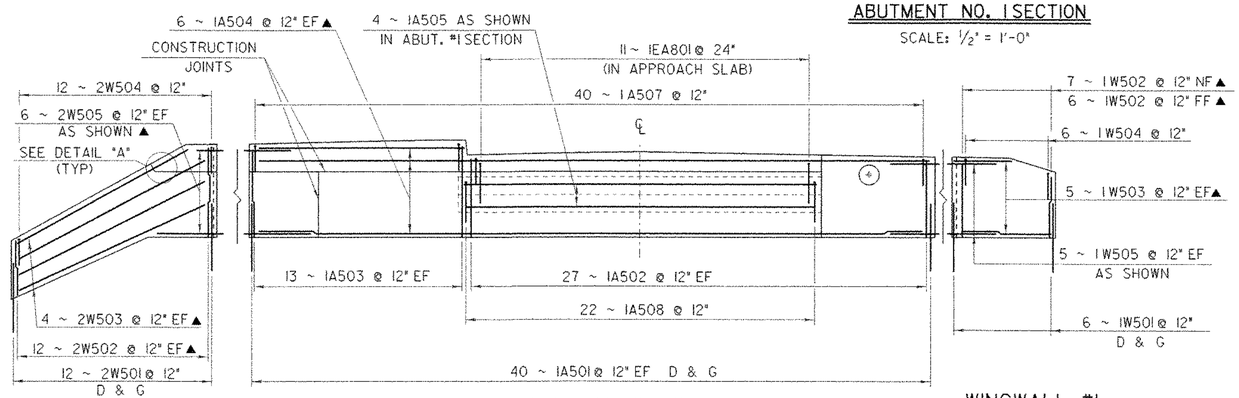


ABUTMENT NO. 1 SECTION
SCALE: ½" = 1'-0"



ABUTMENT NO. 1 ELEVATION

SCALE ¼" = 1'-0
1 0 2 4 6



WINGWALL #2 SECTION A-A

ABUTMENT NO. 1 ELEVATION

WINGWALL #1 SECTION B-B

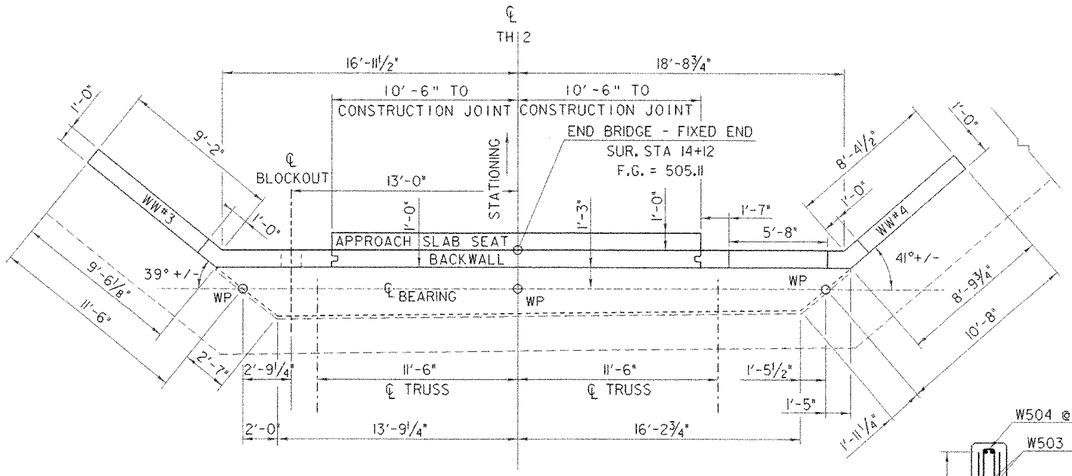
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
D & G = DRILL AND GROUT
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.
EXISTING CONCRETE TO BE REMOVED

SHEET NAME: ABUTMENT #1

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)
HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER

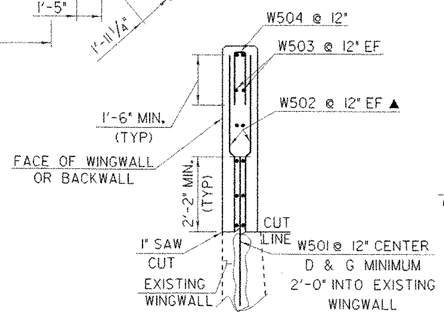
FILE NAME: /str1/90j067/sj067sub.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. MEUNIER
BRIDGE SHEET NUMBER:
PLOT DATE: 02-SEP-2005
DRAWN BY: D. BONNEAU
IPARM NAME: sc067abi.i
SHEET 43 OF 73



STREAM FLOW

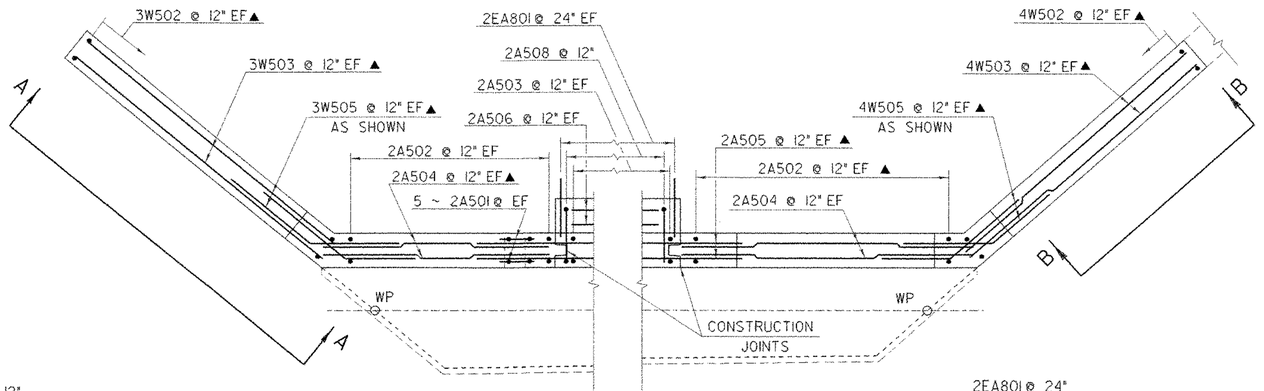
ABUTMENT NO. 2 PLAN

SCALE: ¼" = 1'-0"



TYPICAL WINGWALL SECTION

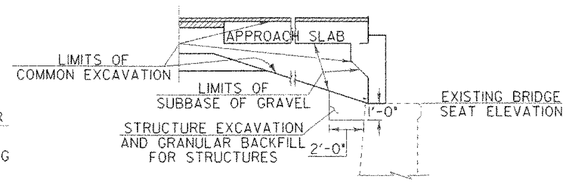
SCALE: ½" = 1'-0"



WINGWALL #3 CORNER DETAIL

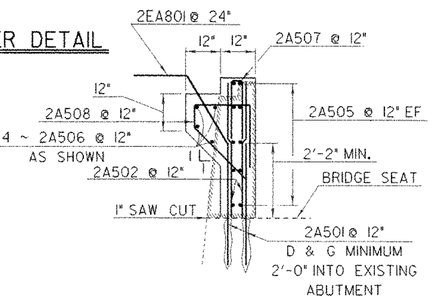
WINGWALL #4 CORNER DETAIL

SCALE ½" = 1'-0



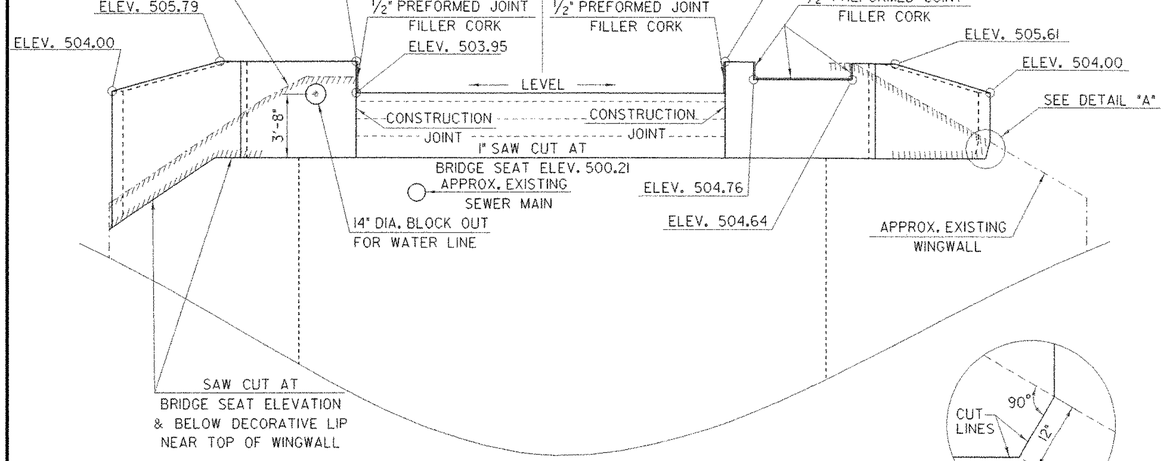
ABUTMENT EXCAVATION DETAILS

(TYPICAL OF BOTH ABUTMENTS) (NTS)



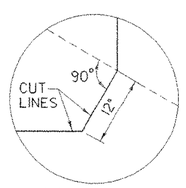
ABUTMENT NO. 2 SECTION

SCALE: ½" = 1'-0"

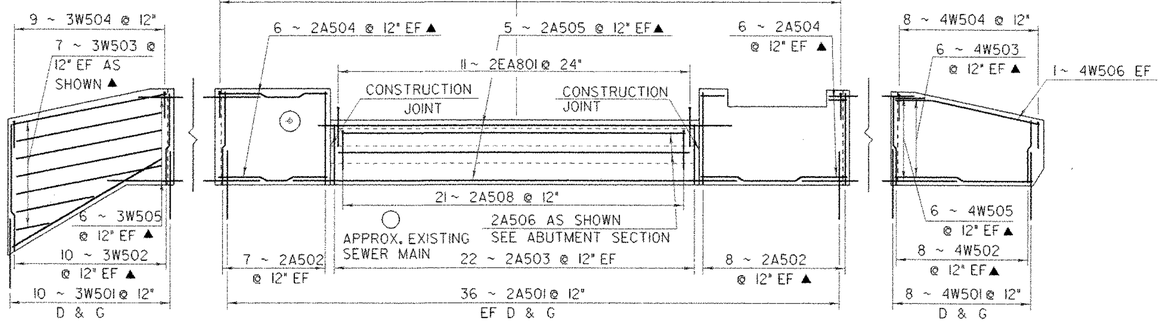


ABUTMENT NO. 2 ELEVATION

SCALE: ¼" = 1'-0"



DETAIL "A"



SECTION A-A

SCALE: ¼" = 1'-0"

ABUTMENT NO. 2 ELEVATION

SCALE: ¼" = 1'-0"

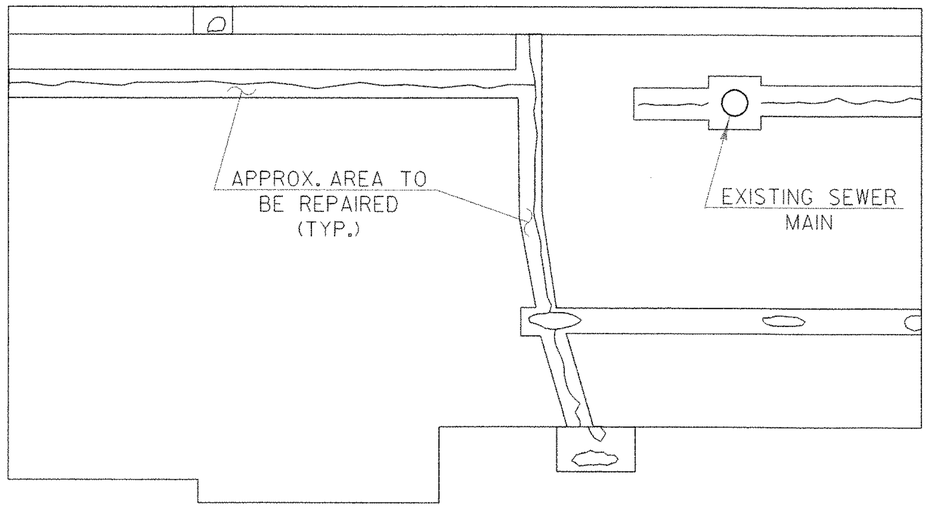
SECTION B-B

SCALE: ¼" = 1'-0"

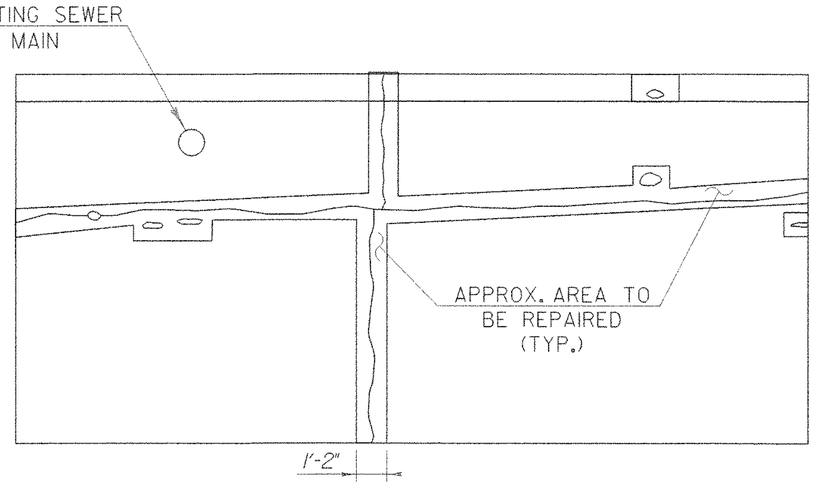
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
D & G = DRILL AND GROUT
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.
= EXISTING CONCRETE TO BE REMOVED

SHEET NAME:	ABUTMENT #2		
PROJECT NAME:	JOHNSON	HIGHWAY NO.:	TH 2
PROJECT NUMBER:	BHO 1448(18)	BRIDGE NO.:	6
		OVER:	THE LAMOILLE RIVER
FILE NAME:	/str1/90j067/sj067sub.dgn	PLOT DATE:	02-SEP-2005
PROJECT MANAGER:	R. WHITCOMB	DRAWN BY:	D.BONNEAU
DESIGNED BY:	C. MEUNIER	IPARM NAME:	sc067ab2.i
BRIDGE SHEET NUMBER:		SHEET	44 OF 73

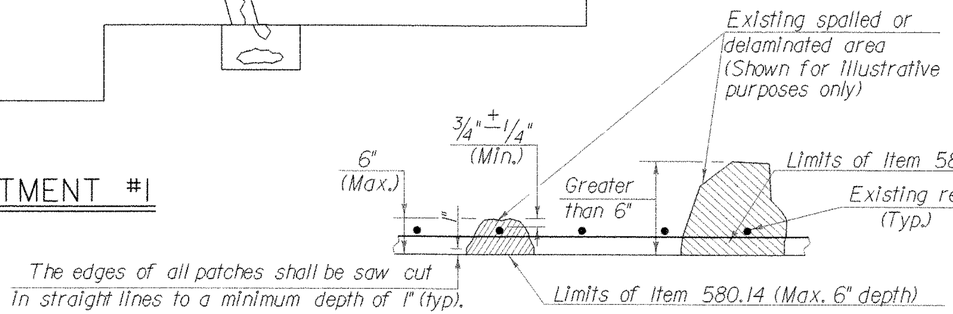


ABUTMENT #1



ABUTMENT #2

-------- CUT LINES



DETAIL SHOWING LIMITS OF ITEMS 580.14 AND 580.15
REPAIR OF CONCRETE SUBSTRUCTURE SURFACE CLASS II OR CLASS III

N.T.S.

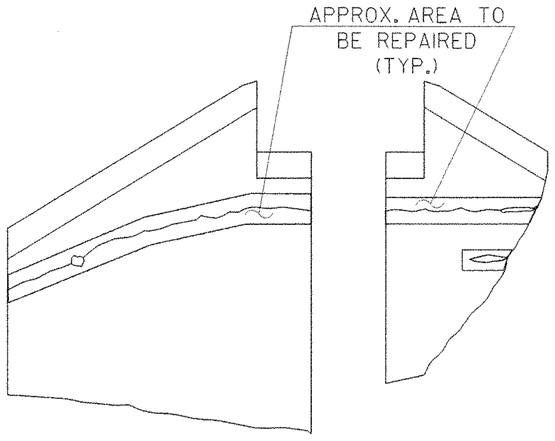
SUBSTRUCTURE REPAIR NOTES FOR ABUTMENTS

1. This work shall include removal of unsound and delaminated concrete as directed by the engineer. The prepared surfaces shall be thoroughly sandblasted to remove all loose material and any contaminants or efflorescence. The reinforcing steel (if exposed) shall be sandblasted. The material used to fill a patch shall be placed and finished or formed so that the final surface will have the same score marks and exterior face appearance as the original being repaired. The surface shall be thoroughly wetted prior to placement of patching material or new concrete. Immediately prior to placement, the surface shall be coated with neat cement paste, mixed to the consistency of thick latex paint (thoroughly brushed into the surface). When "Overhead and Vertical Concrete Repair Material" conforming with subsection 780.02 is used, the bonding agent (if any required) and its application procedure shall comply with the requirements of the patching material manufacturer. Payment for bonding agent will be subsidiary to Item 580.14 or 580.15.

   A. The limits for removal of concrete under Item 580.14 "Repair of Concrete Substructure Surface, Class II" shall be from the existing concrete surface to a minimum depth of (¾") +/- ¼" inside the inside face of reinforcing steel and to a maximum depth of 6" from the existing concrete surface, all work and materials necessary for repairing a patch and filling it shall be included in the unit price bid Item 580.14, "Repair of Concrete Substructure Surface, Class II." The filling material will be "Concrete High Performance, Class A," or an acceptable pneumatically applied concrete (See Special Provisions). The edges of all patches shall be saw cut in straight lines to a minimum depth of one inch.

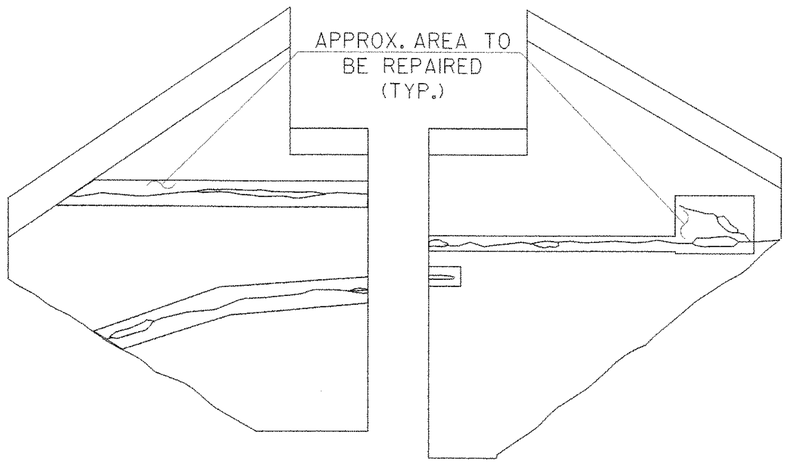
   B. The limits for removal of concrete under Item 580.15 "Repair of Concrete Substructure Surface, Class III" shall be from the existing concrete surface to a depth of greater than 6". All work and materials necessary for repairing and filling patches shall be included in the unit price for Item 580.15 "Repair of Concrete Substructure Surface, Class III." The filling material may be either Concrete High Performance , Class A, Concrete High Performance, Class B, or an acceptable pneumatically applied concrete (See Special Provisions). The edges of all patches shall be saw cut in straight lines to a minimum depth of one inch.

   C. If pneumatically applied concrete is selected for "Repair of Concrete Substructure Surface, Class II or Class III," then this type of concrete shall be confined only to vertical and overhead surfaces of the substructure. Also, the bridge bearings, stringers and truss members should be completely protected from rebound material during the shotcrete application procedure.



WINGWALL #2

WINGWALL #1



WINGWALL #3

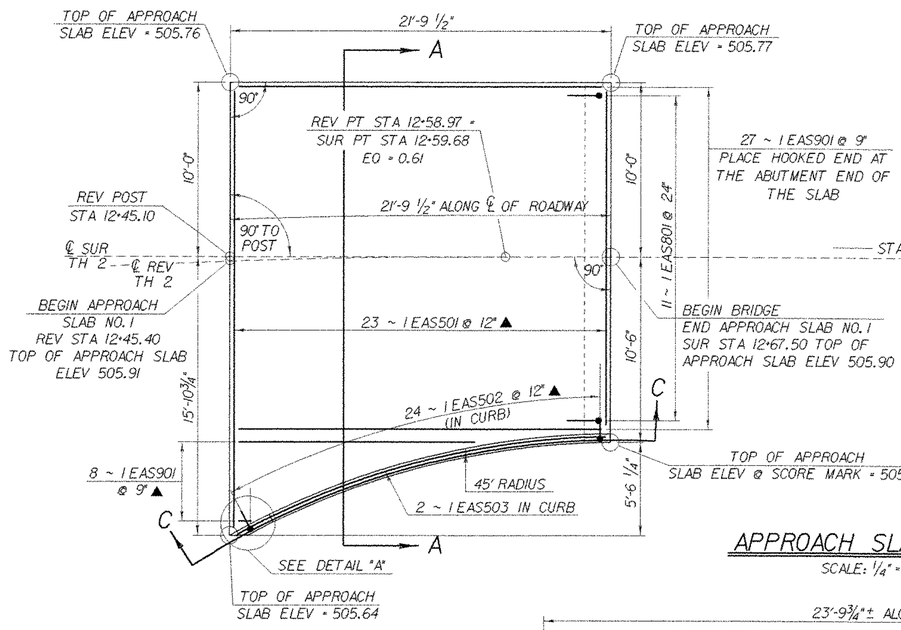
WINGWALL #4

----- CUT LINES

** The defective areas shown on these elevation views are only estimates, the exact area will be determined by the Resident Engineer in the field.

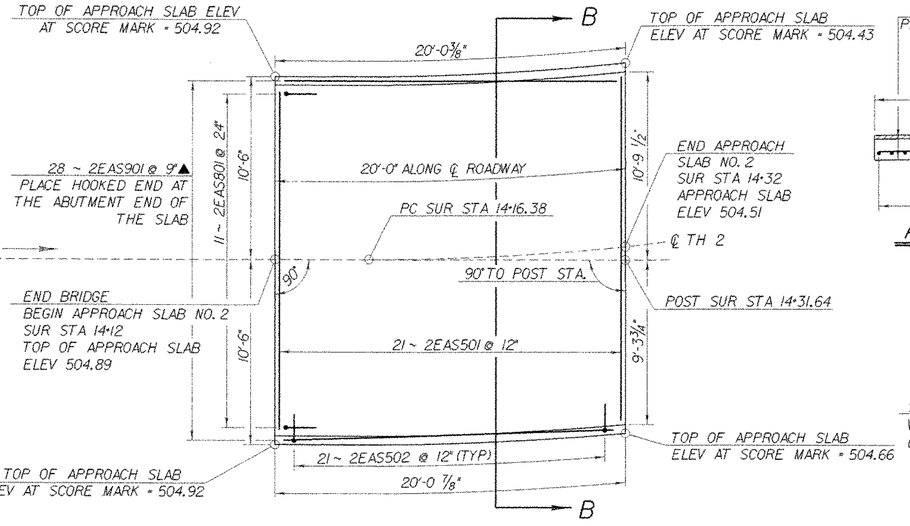
SCALE: 3/8" = 1'-0"

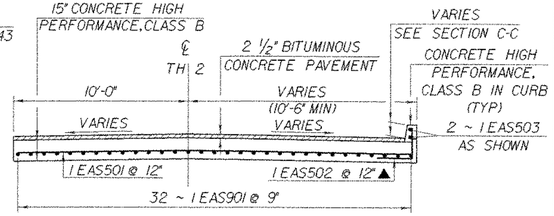
SHEET NAME: REPAIR OF SUBSTRUCTURE SURFACE	
PROJECT NAME: JOHNSON	HIGHWAY NO.: TH 2
PROJECT NUMBER: BHO 1448(18)	BRIDGE NO.: 6
	OVER: THE LAMOILLE RIVER
FILE NAME: /strl/90j067/sj067rep.dgn	PLOT DATE: 02-SEP-2005
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: D. BONNEAU
DESIGNED BY: C. MEUNIER	IPARM NAME: sc067rep.i
BRIDGE SHEET NUMBER:	SHEET 45 OF 73



APPROACH SLAB PLANS

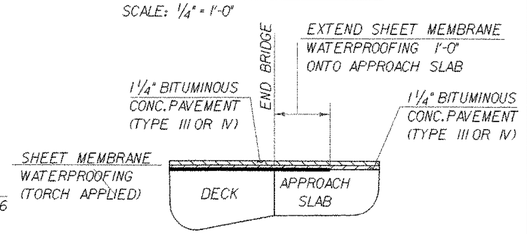
SCALE: 1/4" = 1'-0"





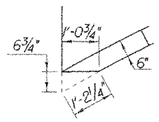
APPROACH SLAB SECTION A-A

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



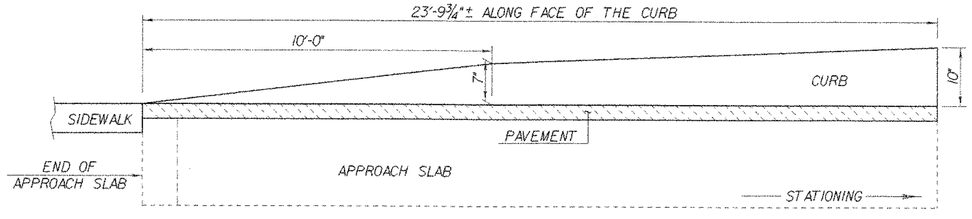
DETAIL FOR SHEET MEMBRANE AT ABUTMENT NO.2

N.T.S.



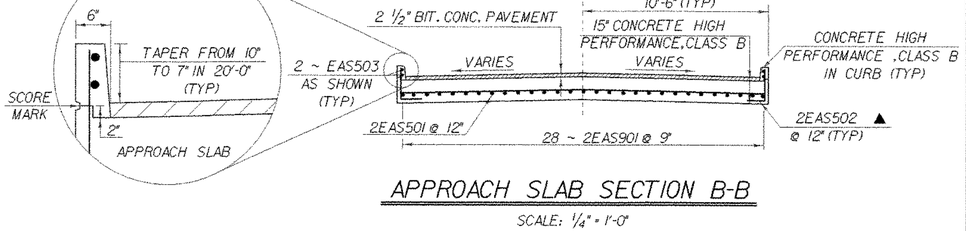
DETAIL "A"

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



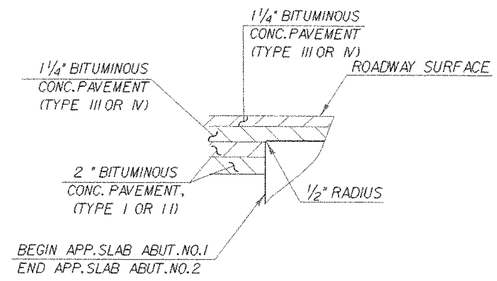
CURB HEIGHT TRANSITION ALONG CURVE SECTION C-C

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



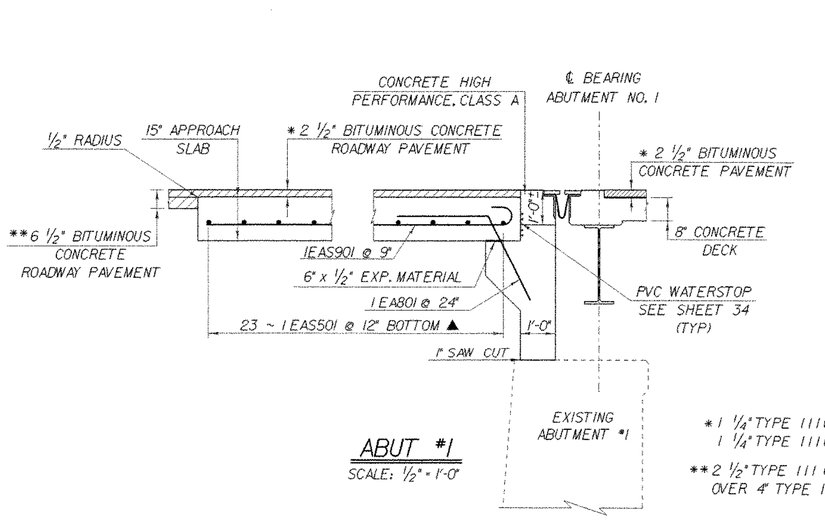
APPROACH SLAB SECTION B-B

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



DETAIL AT APPROACH SLAB END

N.T.S.

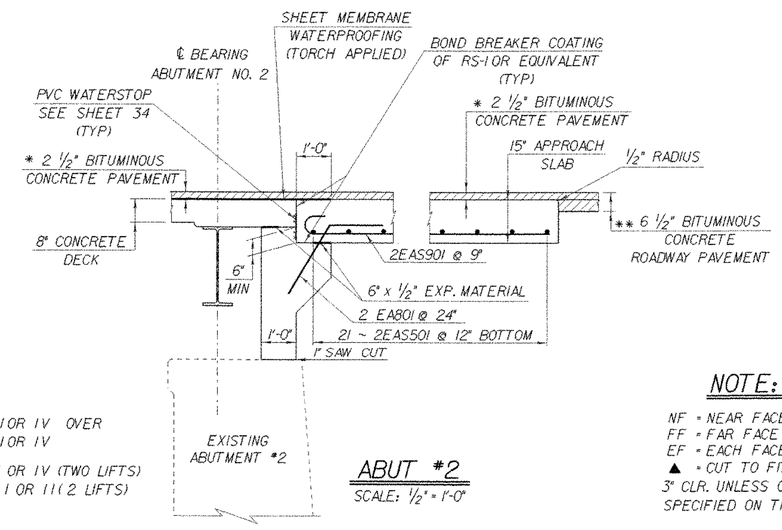


ABUT #1

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

* 1 1/4" TYPE III OR IV OVER 1 1/4" TYPE III OR IV

** 2 1/2" TYPE III OR IV (TWO LIFTS) OVER 4" TYPE I OR II (2 LIFTS)



ABUT #2

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

NOTE:

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

SHEET NAME: APPROACH SLAB DETAILS

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)
HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER

FILE NAME: /str1/90j067/sj067sup.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. MEUNIER
BRIDGE SHEET NUMBER:
PLOT DATE: 02-SEP-2005
DRAWN BY: J.GILMORE
IPARM NAME: sc067asd.i
SHEET 46 OF 73

STATE OF VERMONT
AGENCY OF TRANSPORTATION

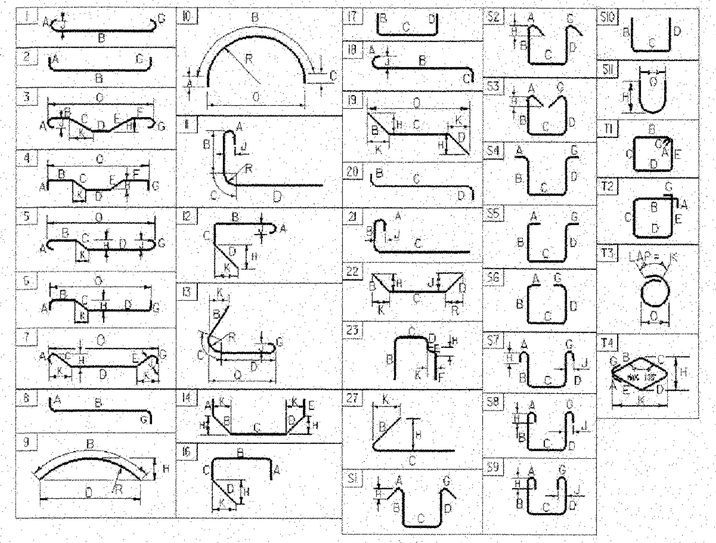
REINFORCING STEEL SCHEDULE

	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
DECK																	
	192	5	37'- 3"	ES501	STR												
*	289	5	20'- 6"	ES504	STR												
	286	5	21'- 1"	ES503	1	0'- 7"	20'- 6"					---		0'- 4"			
	286	5	3'- 6"	ES502	17		1'- 4"	2'- 2"	---								
	22	5	5'- 6"	ES505	S5	2'- 2"	0'- 2"	0'- 7"	0'- 5"			2'- 2"					
ABUTMENT #1																	
	80	5	4'- 2"	1A501	STR												
	54	5	4'- 5"	1A502	STR												
	26	5	5'- 1"	1A503	STR												
▲	12	5	39'- 1"	1A504	STR												
	4	5	20'- 6"	1A505	STR												
				1A506		NOT USED											
	40	5	4'- 0"	1A507	S10		1'- 9"	0'- 6"	1'- 9"								
	22	5	5'- 7"	1A508	16	1'- 6"	1'- 6"	0'- 7"	2'- 0"								
*	12	8	5'- 2"	1EA801	19		2'- 2"	3'- 0"					1'- 11"		1'- 0"		4'- 0"
WINGWALL #1																	
	14	5	4'- 2"	1W501	STR												
▲	13	5	4'- 5"	1W502	STR												
* ▲	11	5	5'- 8"	1W503	STR												
	6	5	3'- 6"	1W504	S10		1'- 6"	0'- 6"	1'- 6"								
	10	5	5'- 2"	1W505	19		2'- 2"	3'- 0"					1'- 7"		1'- 6"		
WINGWALL #2																	
	24	5	4'- 2"	2W501	STR												
▲	24	5	5'- 1"	2W502	STR												
▲	8	5	12'- 9"	2W503	STR												
	12	5	3'- 6"	2W504	S10		1'- 6"	0'- 6"	1'- 6"								
▲	12	5	5'- 2"	2W505	19		2'- 2"	3'- 0"					1'- 5"		1'- 8"		
ABUTMENT #2																	
	72	5	4'- 2"	2A501	STR												
* ▲	31	5	5'- 4"	2A502	STR												
	44	5	3'- 6"	2A503	STR												
▲	24	5	8'- 4"	2A504	STR												
▲	10	5	25'- 6"	2A505	STR												
	4	5	20'- 6"	2A506	STR												
	37	5	3'- 6"	2A507	S10		1'- 6"	0'- 6"	1'- 6"								
	21	5	5'- 7"	2A508	16	1'- 6"	1'- 6"	0'- 7"	2'- 0"								
	11	8	5'- 2"	2EA801	19		2'- 2"	3'- 0"					1'- 11"		1'- 0"		4'- 0"
WINGWALL #3																	
	20	5	4'- 2"	3W501	STR												
▲	20	5	7'- 5"	3W502	STR												
▲	14	5	9'- 1"	3W503	STR												
	9	5	3'- 6"	3W504	S10		1'- 6"	0'- 6"	1'- 6"				1'- 3"		1'- 6"		
▲	12	5	5'- 2"	3W505	19		2'- 2"	3'- 0"					1'- 5"		1'- 8"		
(NOT USED)				3W506													
WINGWALL #4																	
	16	5	4'- 2"	4W501	STR												
▲	16	5	5'- 1"	4W502	STR												
▲	12	5	8'- 6"	4W503	STR												
	8	5	3'- 6"	4W504	S10		1'- 6"	0'- 6"	1'- 6"								
▲	12	5	5'- 2"	4W505	19		2'- 2"	3'- 0"					1'- 5"		1'- 7"		
	2	5	8'- 5"	4W506	19		1'- 2"	7'- 3"					0'- 3"		1'- 1"		

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
APPROACH SLAB NO. 1																	
	23	5	25'- 4"	1EAS501													
	24	5	3'- 9"	1EAS502	17		1'- 7"	2'- 2"	---								
	2	5	22'- 0"	1EAS503	9		22'- 0"						1'- 4"			45'- 0"	21'- 10"
*	36	9	22'- 6"	1EAS901	1	1'- 3"	21'- 3"					---					
APPROACH SLAB NO.2																	
*	22	5	20'- 6"	2EAS501													
	4	5	19'- 6"	2EAS503													
	42	5	3'- 9"	2EAS502	17		1'- 7"	2'- 2"	---								
	28	9	22'- 6"	2EAS901	1	1'- 3"	21'- 3"										
TRUSS SIDEWALK																	
	W16 x W9 WELDED WIRE FABRIC																
	SIDEWALK LENGTH: 144'-6"																
	FABRIC WIDTH: 5'-2"																
	FABRIC AREA: 747 SQ. FT																

~ NOTES ~

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



ASTM STANDARD REINFORCING BARS

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

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)

FILE NAME: /str1/90j067/sj067rss.xls
PROJECT LEADER: R. WHITCOMB
DESIGNED BY: C. MEUNIER
REINFORCING STEEL SCHEDULE

PLOT DATE: 1/22/2003
DRAWN BY: J. GILMORE
CHECKED BY: C. MEUNIER
SHEET 47 OF 73

4" YELLOW LINE (DOUBLE LINE)
SUR ℄ STA 10+50 - REV ℄ STA 11+85
SUR ℄ STA 12+62 - SUR ℄ STA 16+00
REV ℄ "A" STA 0+26 - REV ℄ "A" STA 1+50
REV ℄ "B" STA 0+22 - REV ℄ "B" STA 1+50

24" STOP BAR
REV ℄ "A" STA 0+26
REV ℄ "B" STA 0+22

LETTERS
(STOP) REV ℄ "A" STA 0+35
(STOP) REV ℄ "B" STA 0+30

END SIDELINE "B" APPROACH
SUR ℄ STA 1+50

REMOVING SIGNS
(STOP) REV ℄ "A" STA 0+24
(STOP) REV ℄ "B" STA 0+26

STOP SIGNS
REV ℄ "A" STA 0+32 LT
REV ℄ "B" STA 0+25 LT

CROSSWALK WITH DIAGONAL LINES
REV ℳ STA 11+72 RT - REV ℳ STA 12+42 RT

N
MAGNETIC 1993

REV STA 12+29
RIVER STREET
REV "B" STA 0+25

STONE FILL, TYPE II
STONE FILL, TYPE IV

STA 12+64
STA 12+64
EXISTING 4" WATER LINE INTO GROUND
EXISTING 4" WATER LINE INTO GROUND

STA 14+14

STA 16+00
NARROW BRIDGE

END APPROACH
BEGIN PROJECT
REV STA 11+75

BEGIN APPROACH
REV STA 10+50

REV STA 10+50

REV CURVE NO. 1 DATA
△ = 11°-00'-46" RT
D = 15°
R = 381.97
T = 36.82
L = 73.42
E = 1.77

SEE STD. C-1 FOR CURB END DETAILS

BEGIN BRIDGE
SUR STA 12+67.5
FG = 506.11

END BRIDGE
SUR STA 14+12
FG 505.11

END APPROACH
SUR STA 16+00

NO PARKING THIS SIDE OF STREET
STA 15+69

SURVEY CURVE NO. 2 DATA
△ = 36°-54'-10"
D = 38°00'00"
R = 150.78'
T = 50.30
L = 97.11
E = 8.17

END PROJECT
BEGIN APPROACH
SUR STA 15+00

RAILROAD STREET
RIVER ROAD
REV "A" STA 0+26

REV "A"
STA 0+32

STA 14+14

SEE STD. C-1 FOR CURB END DETAILS

℄ "A" REV STA 1+50
END SIDELINE APPROACH

SIGN LEGEND

[ ]	EXISTING
R	REMOVE
[ ]	NEW
N	NEW
RS	REMOVE AND SALVAGE

SCALE 1" = 20'-0
20 0 20

SHEET NAME: SIGN LAYOUT AND LINE STRIPING	
PROJECT NAME: JOHNSON	HIGHWAY NO.: TH 2
PROJECT NUMBER: BHO 1448(18)	BRIDGE NO.: 6
	OVER: THE LAMOILLE RIVER
FILE NAME: /str1/90j067/sj067sgn.dgn	PLOT DATE: 02-SEP-2005
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J.GILMORE
DESIGNED BY: C. MEUNIER	IPARM NAME: sc067sls.i
BRIDGE SHEET NUMBER:	SHEET 48 OF 73

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																						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			TUBULAR STEEL Ø (in)					W-SHAPE STEEL				SIGN REQUIRED	REMARKS	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
																							FOUND-ATION	lb/ft				FTG. SIZE		WEIGHT	POST SIZE				
												1.12	2.0	3.0	1.88	2.16	3.35			1.3	1.7	1.7		7.6	9.0	10.8	14.6	24"	30"						
												OPTION ITEMS																							
REV "A" STA 0+32 LT	STOP	1	30	30	6.25						1			X			X	X															RI-1		E-143
REV "B" STA 0+25 LT	STOP	1	30	30	6.25						1			X			X	X															RI-1		E-143
TH 2 REV STA 12+29 LT	RIVER STREET	1	36	9	2.25						1			X			X	X																	E-123
REV "A" STA 0+26 LT	RAILROAD STREET	1	36	9			2.25				1			X			X	X																	E-123
REV "A" STA 0+26 LT	RIVER ROAD	1	36	9			2.25																												E-123
TH 2 STA 15+69 RT	NO PARKING THIS SIDE OF STREET	1	24	30			5.00				1			X			X	X																	
TH 2 REV STA 10+50 RT	NARROW BRIDGE	1	30	30	6.25						1			X			X	X															W5-2		E-154
TH 2 STA 12+64 LT		1	12	36	3.00						1			X			X	X															OM-3R		E-120
TH 2 STA 12+64 RT		1	12	36	3.00						1			X			X	X															OM-3L		E-120
TH 2 STA 14+14 RT		1	12	36	3.00						1			X			X	X															OM-3R		E-120
TH 2 STA 14+14 LT		1	12	36	3.00						1			X			X	X															OM-3L		E-120
TH 2 STA 16+00 LT	NARROW BRIDGE	1	30	30	6.25						1			X			X	X															W5-2		E-154

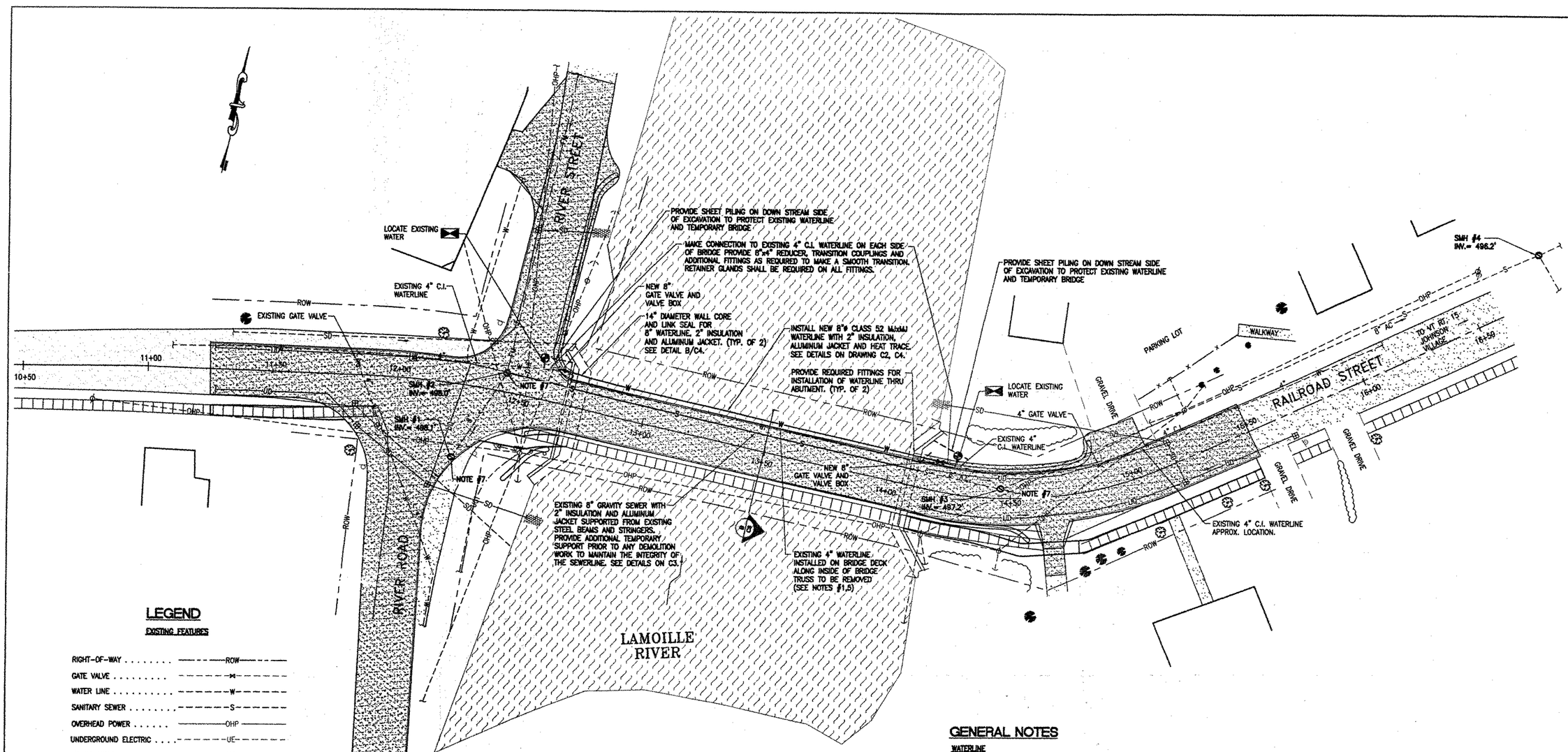
FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

	SF	EA.	FT	FT	FT	FT	FT	FT	EA	LB	LB	LB	LB	LB	LB	LB	EA.	EA.	LB
					130			130											
SUB-TOTAL	39.25	3	130			130													
ROUNDING	0.75	0	0			0													
TOTALS	40.00	3	130			130													

SHEET NAME: SIGN SUMMARY SHEET

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)
HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER

FILE NAME: /strl/90j067/sj067sgn.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. MEUNIER
BRIDGE SHEET NUMBER:
PLOT DATE: 02-SEP-2005
DRAWN BY: J.GILMORE
IPARM NAME: sc067sgn.i
SHEET 49 OF 73



LEGEND

EXISTING FEATURES

- RIGHT-OF-WAY . . . . . ROW
- GATE VALVE . . . . . M
- WATER LINE . . . . . W
- SANITARY SEWER . . . . . S
- OVERHEAD POWER . . . . . OHP
- UNDERGROUND ELECTRIC . . . . UE
- STORM DRAIN . . . . . SD
- HYDRANT . . . . . ⋇
- POWER POLE . . . . . ϕ
- SANITARY MANHOLE . . . . . Ⓢ
- CATCH BASIN . . . . . ⊞

PROPOSED FEATURES

- CATCH BASIN. . . . . ⊞
- MANHOLE. . . . . ●
- GATE VALVE . . . . . ⋈
- STORM DRAIN . . . . . SD
- UNDER DRAIN . . . . . UD
- WATER . . . . . W
- SEWER . . . . . S

PLAN
SCALE: 1"=20'

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)

GENERAL NOTES

WATERLINE

1. FLOWS THROUGH THE EXISTING 4" WATERLINE INSTALLED ALONG BRIDGE MUST BE MAINTAINED THROUGHOUT DURATION OF PROJECT OR UNTIL NEW 8" WATERLINE IS FULLY OPERATIONAL. CONTRACTOR SHALL MAINTAIN EXISTING WATERLINE OR SHALL INSTALL A TEMPORARY 4" WATERLINE AND MAINTAIN THAT SERVICE UNTIL THE NEW 8" WATERLINE IS INSTALLED AND OPERATIONAL. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING FLOWS AND PROTECTING WATERLINE FROM FREEZING DURING WINTER MONTHS.

2. NEW WATERLINE SHALL BE FLUSHED AND DISINFECTED PRIOR TO ENERGIZING ACCORDING TO AWWA C651-92 (LATEST REVISION). THE CONTRACTOR SHALL PROVIDE FOR AND TAKE SAMPLES FOR BACTERIOLOGICAL TESTING AS REQUIRED BY THIS SPECIFICATION AND REFERENCE STANDARDS INCLUDED THEREIN. SAMPLES SHALL BE SUBMITTED TO THE STATE OF VERMONT, DEPARTMENT OF HEALTH LABORATORIES. COPIES OF ALL RESULTS SHALL BE FURNISHED IMMEDIATELY UPON RECEIPT TO THE ENGINEER.

3. PERFORM HYDROSTATIC AND LEAKAGE TESTS CONFORMING TO ALL PROVISIONS OF AWWA C600 (LATEST REVISION). PERFORMANCE CRITERIA:
   a. HYDROSTATIC AND LEAKAGE TESTS SHALL BE CONDUCTED CONCURRENTLY.
   b. THE SPECIFIED TEST PRESSURE SHALL BE APPLIED BY MEANS OF A PUMP CONNECTION TO THE PIPE IN A MANNER SATISFACTORY TO THE ENGINEER.
      1. THE SPECIFIED TEST PRESSURE SHALL NOT BE LESS THAN 1.5 TIME THE NORMAL WORKING PRESSURE OR 150 psi, WHICHEVER IS GREATER, AS MEASURED AT THE ELEVATION OF THE LOWEST POINT OF THE PIPELINE OR SECTION UNDER TEST, AND CORRECTED TO THE ELEVATION OF THE TEST GAUGE.
      2. PRESSURE DURING TEST SHALL NOT VARY BY MORE THAN 5± psi.
   c. DURATION OF TEST SHALL BE A MINIMUM OF 2 HOURS.
   d. LEAKAGE TO BE MEASURED IN MANNER SATISFACTORY TO THE ENGINEER.
      1. LEAKAGE IS DEFINED AS THE QUANTITY OF WATER THAT MUST BE SUPPLIED INTO THE NEWLY LAID PIPE, OR ANY VALVED SECTION THEREOF, TO MAINTAIN THE PRESSURE WITHIN 5± psi OF THE SPECIFIED TEST PRESSURE FOR THE REQUIRED TEST DURATION.
   e. ALLOWABLE LEAKAGE
      1. FOR MECHANICAL OR PUSH-ON JOINTS:
         a. NO PIPELINE INSTALLATION, OR VALVED SECTION THEREOF WILL BE ACCEPTED IF THE LEAKAGE IS GREATER THAN THAT DETERMINED BY THE FOLLOWING FORMULA:

$$L = \frac{S\,D\,(P)^{1/2}}{133{,}200}$$

L= ALLOWABLE LEAKAGE IN GALLONS PER HOUR
S= LENGTH OF SECTION BEING TESTED IN FEET
D= NOMINAL PIPE DIAMETER IN INCHES
P= AVERAGE TEST PRESSURE IN psi

         b. THE CONTRACTOR AND THE ENGINEER SHALL COMPUTE THE ALLOWABLE LEAKAGE FOR EACH SECTION TO BE TESTED AND AGREE ON THE ALLOWABLE AMOUNT PRIOR TO PERFORMING ANY TESTS.

4. ALL PERMANENT WATERLINE FITTINGS SHALL BE RESTRAINED BY RETAINER GLANDS (MEGA-LUG OR EQUAL).

5. AFTER NEW WATERLINE IS PLACED INTO SERVICE, COMPLETELY REMOVE EXISTING 4" C.I. WATERLINE BETWEEN STATIONS 12+50 AND 14+35.

SEWERLINE

6. THE EXISTING 8" GRAVITY SEWER IS INSTALLED AT MINIMUM SLOPE (0.40%) FROM SMH #2 TO SMH #3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE SLOPE AND INTEGRITY OF THE SEWERLINE WITH ADDITIONAL BRACING AND SUPPORTS AS REQUIRED. THE FINAL BRACING AND SUPPORTS SHALL BE VERIFIED TO MAINTAIN A SLOPE OF (0.40%) FROM ABUTMENT TO ABUTMENT.

7. REMOVE EXISTING FRAME AND COVER AND INSTALL NEW FRAME AND SOLID COVER ON SMH #1, 2, & 3 (LEBARON NO. LC327 OR EQUAL.) COVER SHALL HAVE "SEWER" CAST INTO COVER. ADJUST MANHOLES ACCORDINGLY TO MATCH FINISH GRADE. ALL COSTS ASSOCIATED WITH ADJUSTING THE ELEVATIONS OF MANHOLE FRAMES AND COVERS WILL BE INCIDENTAL TO ITEM 604.56.

Forcier Aldrich & Associates
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6 Market Place, Suite 2
Essex Junction, VT 05452
(802) 879-7733
(802) 879-1742 (Fax)

STATE OF VERMONT — No. 0254 — REGISTERED PROFESSIONAL ENGINEER

VILLAGE OF JOHNSON
JOHNSON, VERMONT

RAILROAD STREET BRIDGE AND UTILITY IMPROVEMENTS

NO.	DATE	REVISION DESCRIPTION	CHECKED

PROPOSED PLAN-
WATERLINE AND SEWERLINE
IMPROVEMENTS

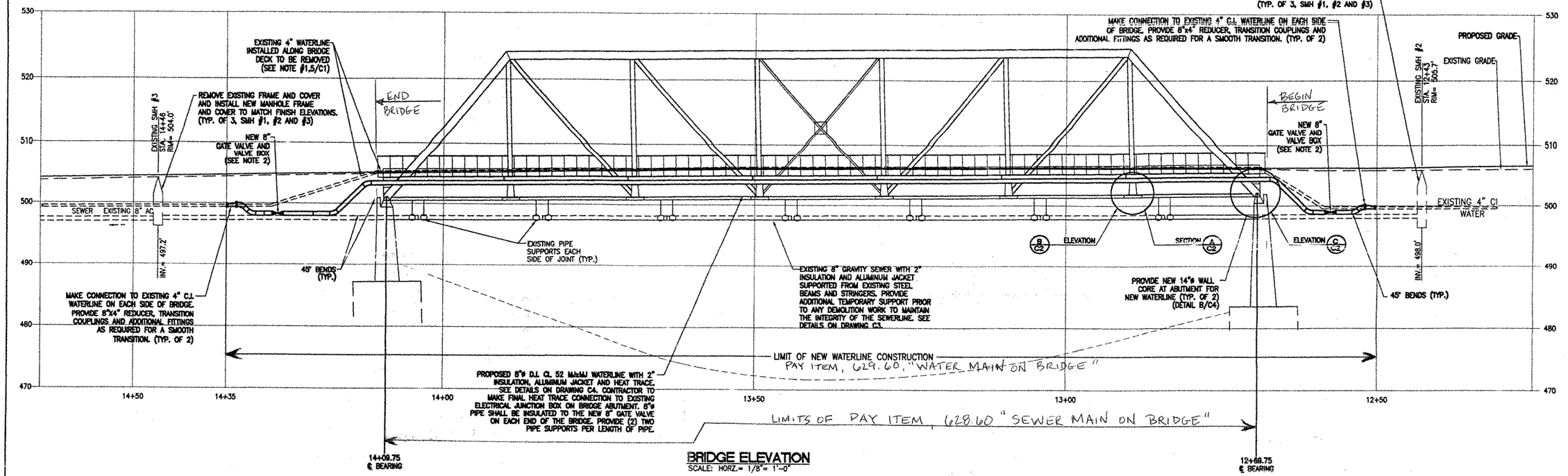
PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)

HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER

SHEET 50 OF 73

DESIGNED	CGM
DRAWN	JRB
CHECKED	BFA
DATE	APR. 2002
PROJECT NO.	98013
DRAWING NO.	C1
SHEET	1 OF 4

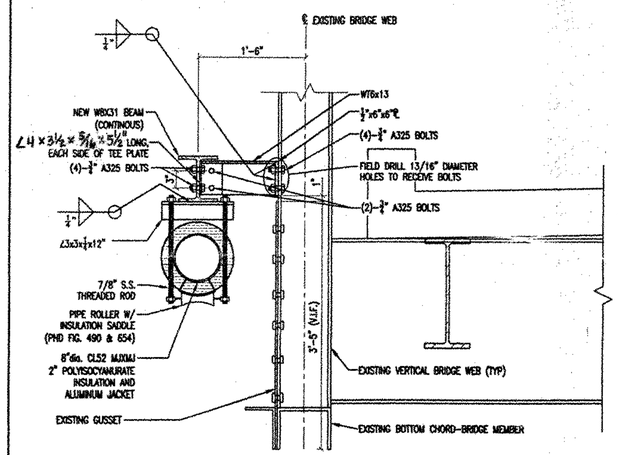
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BRIDGE ELEVATION
SCALE: HORZ.= 1/8"= 1'-0"

NOTES:

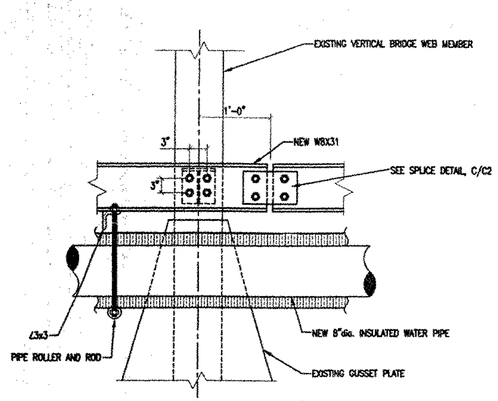
1. TEMPORARY SEWERLINE SUPPORT NOT SHOWN FOR CLARITY.
2. GATE VALVE AND VALVE BOX SHALL BE AMERICAN FLOW CONTROL, CLOW OR EQUAL.



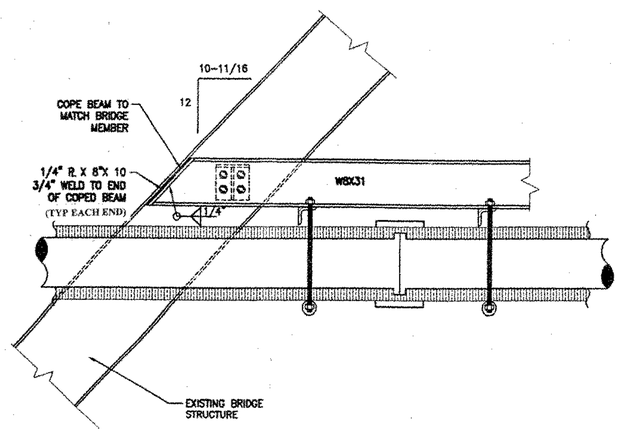
NOTES:

1. PAINT W8x31 BEAM, STEEL SUPPORT BRACKETS AND BOLTS PER PAINT SPECIFICATIONS FOR BRIDGE MEMBERS.
2. BOLTS AT STANDARD 3" C-C GAGE
3. DETAIL TYPICAL OF (8) EIGHT LOCATIONS.
4. PHD REFERS TO PIPE HANGERS & DEVICES CATALOGUE NO.493

A/C2 PIPE SUPPORT SECTION
SCALE: 1"=1'-0"



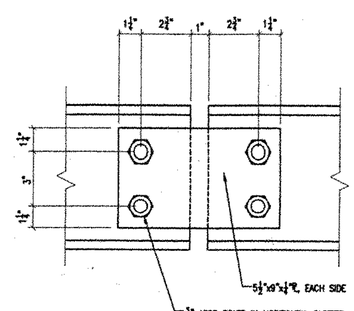
B/C2 PIPE SUPPORT ELEVATION
SCALE: 1"=1'-0"



C/C2 PIPE SUPPORT ELEVATION
SCALE: 1"=1'-0"

NOTES:

1. LOCATE PIPE JOINT JUST BEYOND PIPE HANGER AS SHOWN. SUPPORT OTHER END OF PIPE AT CORE THROUGH BRIDGE ABUTMENT.



¾" A325 BOLTS IN HORIZONTAL SLOTTED HOLES (SHORT SLOT-¹³⁄₁₆"x1") IN PLATES, AT CONSTRUCTION, POSITION PLATE SO THAT BOLT IS CENTERED IN SLOT.

D/C2 SPLICE DETAIL
SCALE: 3"=1'-0"

PROJECT NAME:	JOHNSON
PROJECT NUMBER:	BHO 1448(18)
HIGHWAY NO.:	TH 2
BRIDGE NO.:	6
OVER:	THE LAMOILLE RIVER
SHEET	51 OF 73

FA&A
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(802) 879-1742
(802) 879-1742 (Fax)

STATE OF VERMONT — JOHN C. ALDRICH — No. 5254 — REGISTERED PROFESSIONAL ENGINEER

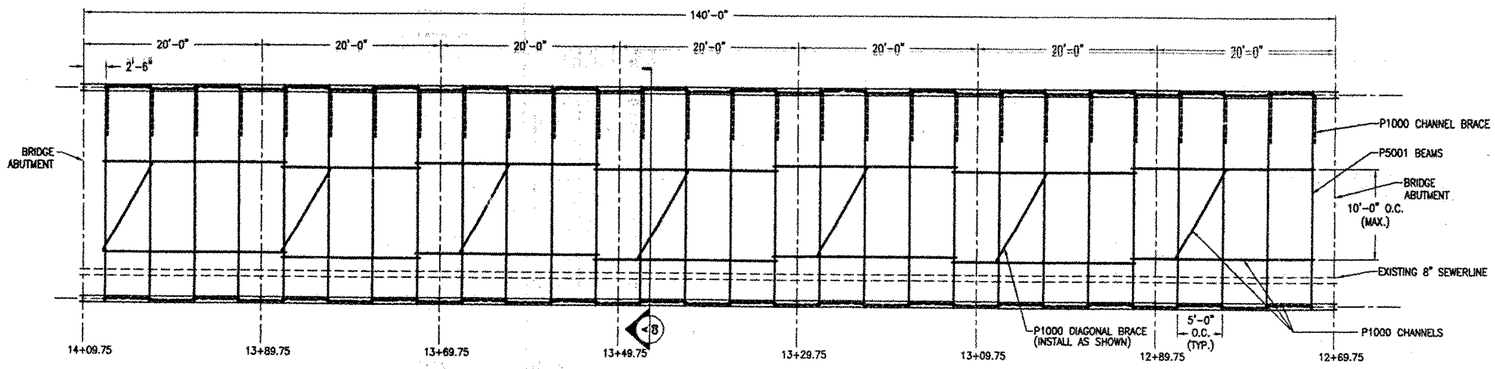
VILLAGE OF JOHNSON
JOHNSON, VERMONT

RAILROAD STREET BRIDGE AND UTILITY IMPROVEMENTS

PROFILE- PROPOSED WATERLINE IMPROVEMENTS

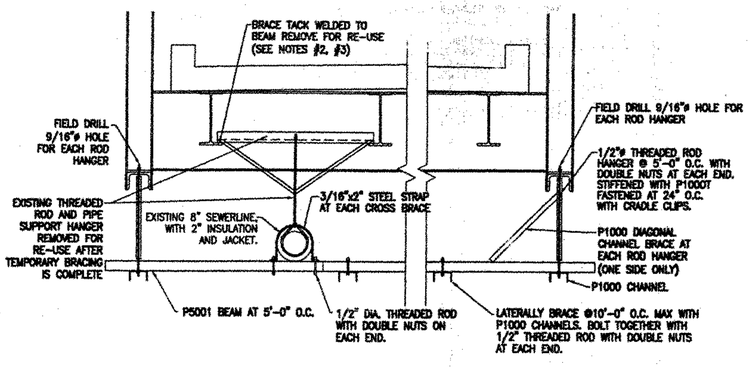
NO.	DATE	REVISION DESCRIPTION	CHECKED

DESIGNED	CGM
DRAWN	JRB
CHECKED	BFA
DATE	APR. 2002
PROJECT NO.	98013
DRAWING NO.	C2
SHEET	2 OF 4



TEMPORARY SEWERLINE SUPPORT PLAN

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

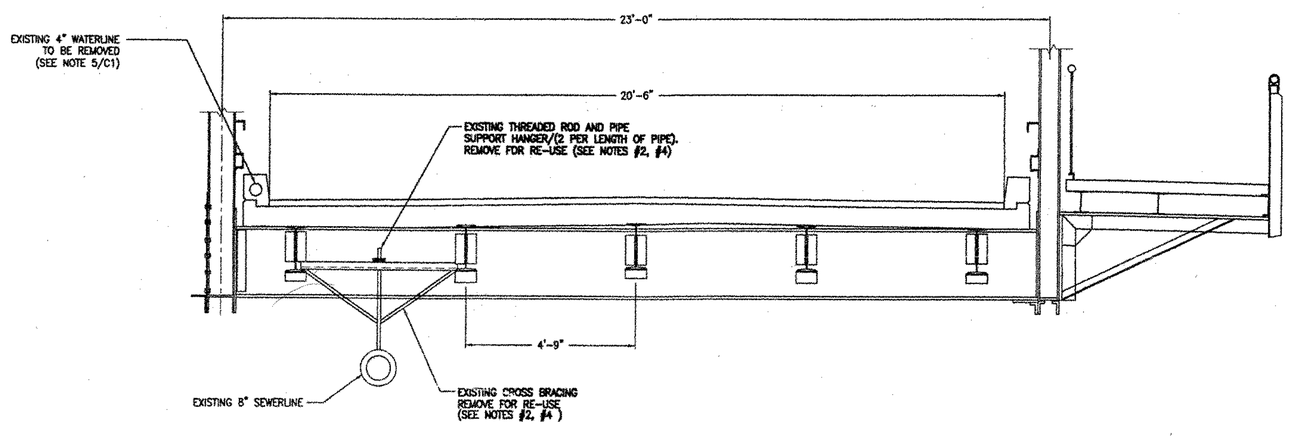


NOTES:

1. TEMPORARY SUPPORT BEAMS, CHANNELS AND BRACES P1000, P1000T AND P5001 REFER TO UNISTRUT MODEL NUMBERS.

A / C3 TEMPORARY SEWERLINE SUPPORT SECTION AT 5'-0" O.C.

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



B / C3 EXISTING SEWER AND WATER SUPPORT SECTION

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

SEWERLINE SUPPORT SEQUENCING NOTES:

1. INSTALL TEMPORARY SEWER LINE SUPPORT BRACING, AS SHOWN ON DRAWING C3. TEMPORARY BRACING SHALL BE INSPECTED BY ENGINEER BEFORE EXISTING BRACING IS REMOVED. MAINTAIN SEWERLINE SLOPE PER NOTE #6/C1.
2. REMOVE EXISTING BRACING FOR RE-USE AT CONTRACTOR'S OPTION, NEW SUPPORT MEMBERS MAY BE USED. MATCH EXISTING. THE CONTRACTOR SHALL SUBMIT A PLAN TO THE VAOT STRUCTURES ENGINEER FOR THE REATTACHMENT OF THE SEWER LINE SUPPORTS TO THE STRINGERS.
3. AFTER BRIDGE DECK REPLACEMENT HAS BEEN COMPLETED, RE-INSTALL EXISTING SEWER LINE SUPPORTS. PAINT ALL STEEL MEMBERS AFTER INSTALLATION PER PAINT SPECIFICATIONS FOR BRIDGE MEMBERS (VAOT SUPPLEMENTAL SPECIFACTION 513).
4. AFTER PERMANENT BRACING HAS BEEN INSPECTED BY THE ENGINEER, REMOVE AND DISPOSE OF ALL TEMPORARY BRACING.

Forcier Aldrich & Associates
Consulting Engineers
8 Market Place, Suite 2
Essex Junction, VT 05452
(802) 879-7733
(802) 879-1742 (Fax)

STATE OF VERMONT * REGISTERED * BRADLEY A. FORCIER * No. 9254 * PROFESSIONAL ENGINEER

VILLAGE OF JOHNSON
JOHNSON, VERMONT

RAILROAD STREET BRIDGE AND UTILITY IMPROVEMENTS

NO.	DATE	REVISION DESCRIPTION	CHECKED

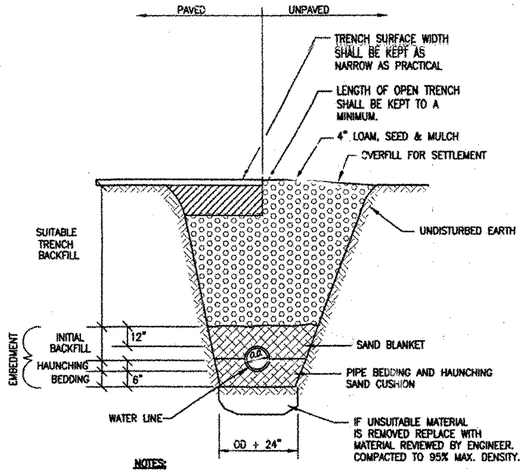
SEWERLINE SUPPORT DETAILS

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)
HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER
SHEET 52 OF 73

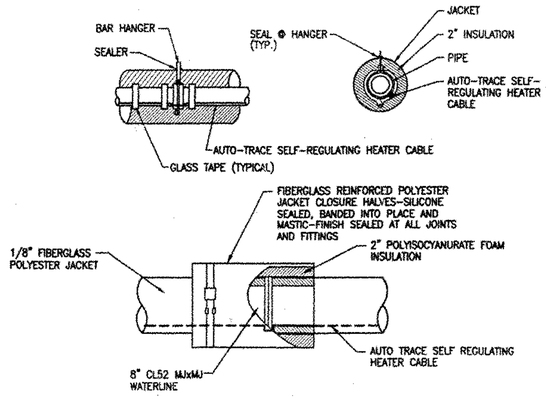
DESIGNED CGM
DRAWN JRB
CHECKED BFA
DATE APR. 2002

PROJECT NO. 98013
DRAWING NO. C3
SHEET 3 OF 4

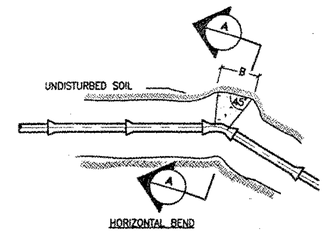
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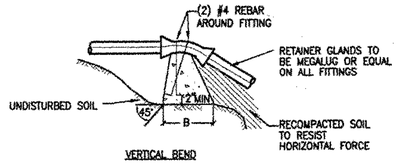


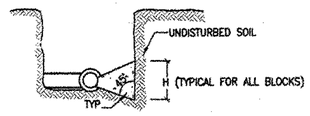
A C4 TYPICAL WATERLINE TRENCH DETAIL
SCALE: NONE



C C4 WATERLINE INSULATION DETAIL AT PIPE JOINTS
SCALE: NONE







NOTES:

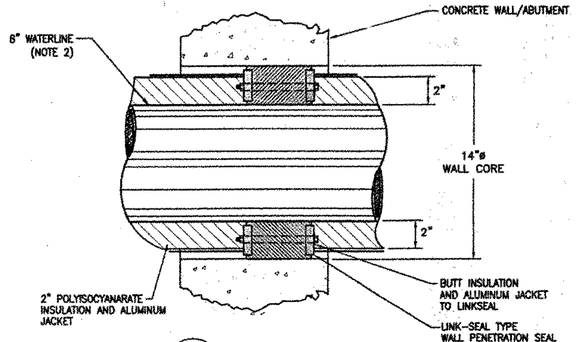
1. ALL THRUST BLOCKS SHALL BE "CONCRETE HIGH PERFORMANCE, CLASS B".
2. CONCRETE SHALL BE PLACED SO AS TO AS NOT TO HAMPER THE FUTURE REMOVAL OF A FITTING.
3. ALL FITTINGS ARE TO BE WRAPPED WITH POLYETHYLENE.

MINIMUM BEARING FACE "HEIGHTS AND WIDTHS" FOR CONCRETE THRUST BLOCKS (TEST PRESSURE = 150 PSI)

PIPELINE SIZE	HEIGHT (H) AND WIDTH (B) OF BEARING FACE FOR FITTING TO BE RESTRAINED											
	11 1/4° BEND H	11 1/4° BEND B	22 1/2° BEND H	22 1/2° BEND B	45° BEND H	45° BEND B	90° BEND H	90° BEND B	TEES & PLUGS H	TEES & PLUGS B	WYES H	WYES B
8"	1.0	1.0	1.0	1.75	1.5	2.25	1.75	3.5	1.5	3.0	1.5	2.25

1. HYDROSTATIC AND LEAKAGE TEST PRESSURE PER SPECIFICATIONS.
2. UNDISTURBED EARTH. SIDE OF TRENCH OR OTHER EXCAVATION.
3. SEE DIAGRAM FOR H AND B LOCATION REFERENCE. H AND B IN FEET.
4. PLACE 4 MIL POLYETHYLENE BETWEEN FITTINGS AND THRUST BLOCKS.
5. MINIMUM BEARING FACE IS BASED ON A SOIL TYPE WITH AASHTO CLASSIFICATION OF GROUP A-1 AND A-2 FOR GRANULAR MATERIALS. OTHER SOIL TYPES MAY REQUIRE AN INCREASE IN THE BEARING FACES, AS IDENTIFIED DURING CONSTRUCTION.

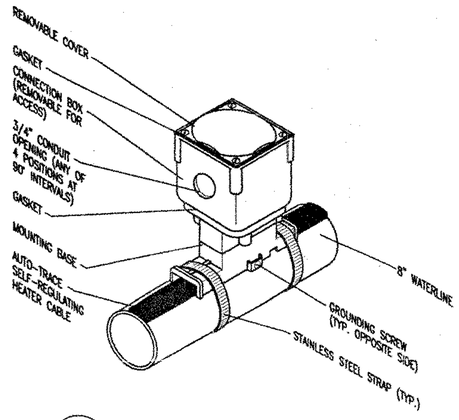
E C4 THRUST BLOCK DETAILS
SCALE: NONE



B C4 LINK-SEAL DETAIL
SCALE: NONE

NOTES:

1. DEMONSTRATE TO ENGINEER THAT LINKSEAL HAS BEEN PROPERLY INSTALLED AND TIGHTENED BEFORE INSTALLING INSULATION ALUMINUM JACKET.
2. EXTEND THE WATERLINE 2'-0" MINIMUM BEYOND BRIDGE ABUTMENT BEFORE INSTALLING ELBOW TO TRANSITION ELEVATION OF WATERLINE TO LOWER DEPTH. TYPICAL AT BOTH ENDS OF BRIDGE.



D C4 HEAT TRACE DETAIL
SCALE: NONE

NOTES:

1. HEAT TRACE CABLE SHALL BE RAYCHEM SELF REGULATING HEATING CABLE (#5BTV-1-CE) AND RAYCHEM ACCESSORIES OR APPROVED EQUAL.

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)
HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER
SHEET 53 OF 73

DESIGNED CGM
DRAWN JRB
CHECKED BFA
DATE APR. 2002

PROJECT NO. 98013
DRAWING NO. C4
SHEET 4 OF 4

NO. | DATE | REVISION DESCRIPTION | CHECKED

MISCELLANEOUS DETAILS

VILLAGE OF JOHNSON
JOHNSON, VERMONT

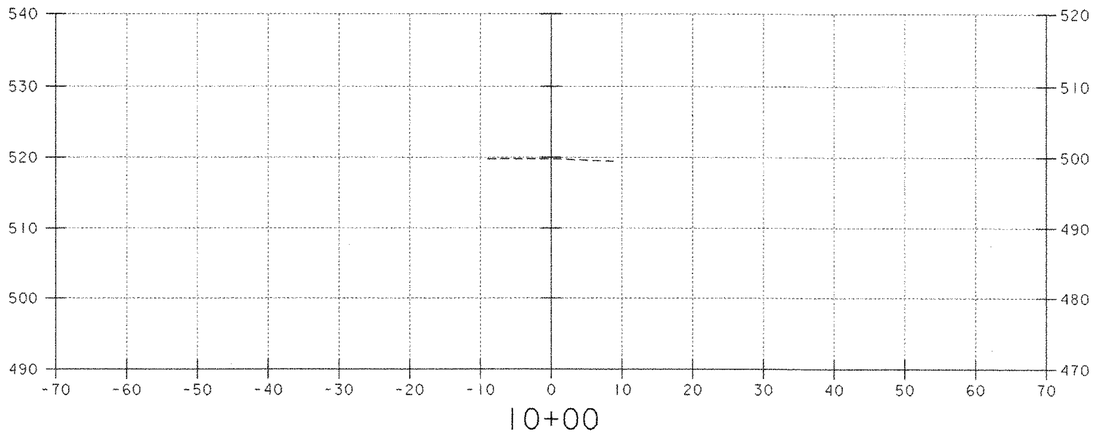
RAILROAD STREET BRIDGE AND UTILITY IMPROVEMENTS

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Consulting Engineers
6 Market Place, Suite 2
Essex Junction, VT 05452
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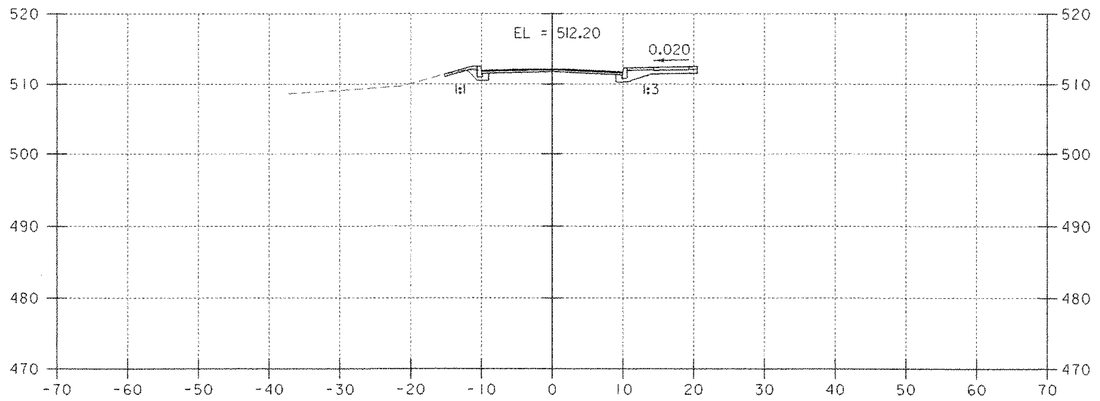
STATE OF VERMONT * FORCIER-ALDRICH * No. 8264 * REGISTERED ENGINEER * PROFESSIONAL

FA&A

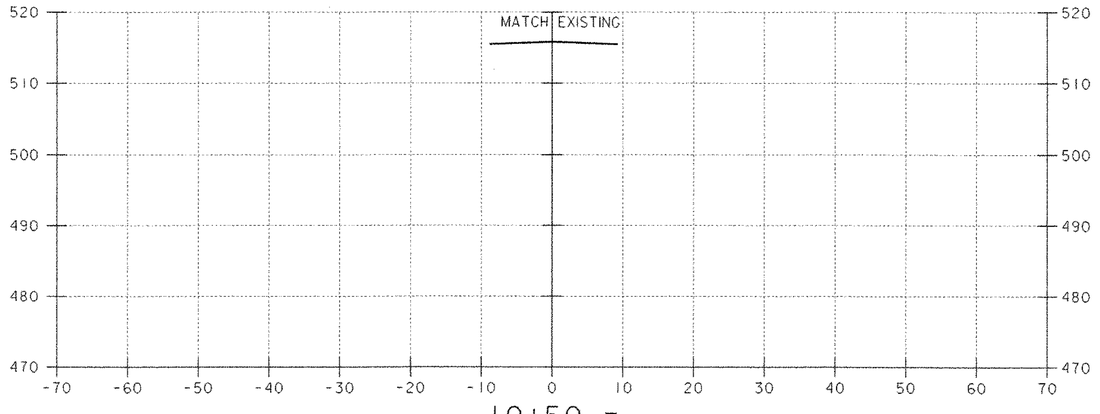
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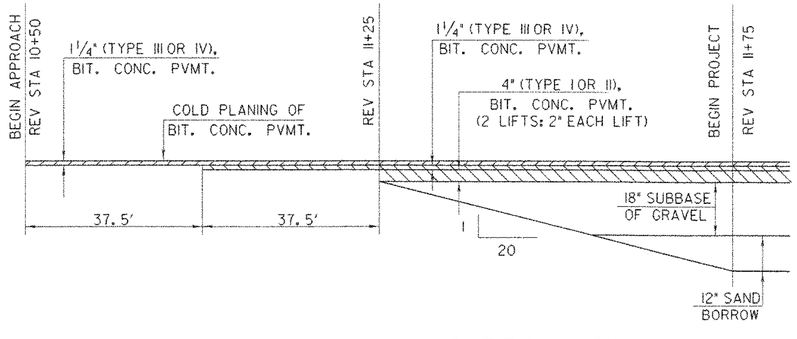


11+00 =
REV STA 11+00



10+50 =
REV STA 10+50
BEGIN APPROACH

SCALE 1" = 10'-0
10 0 10

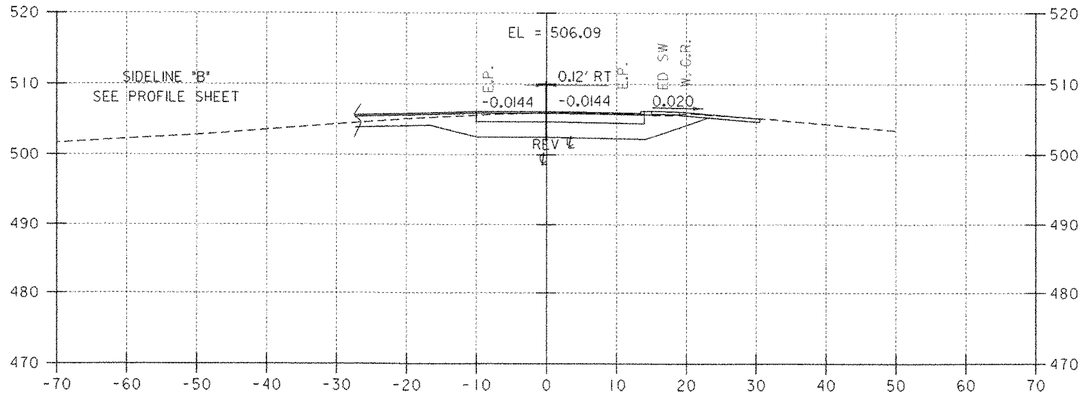


SUBBASE TRANSITION

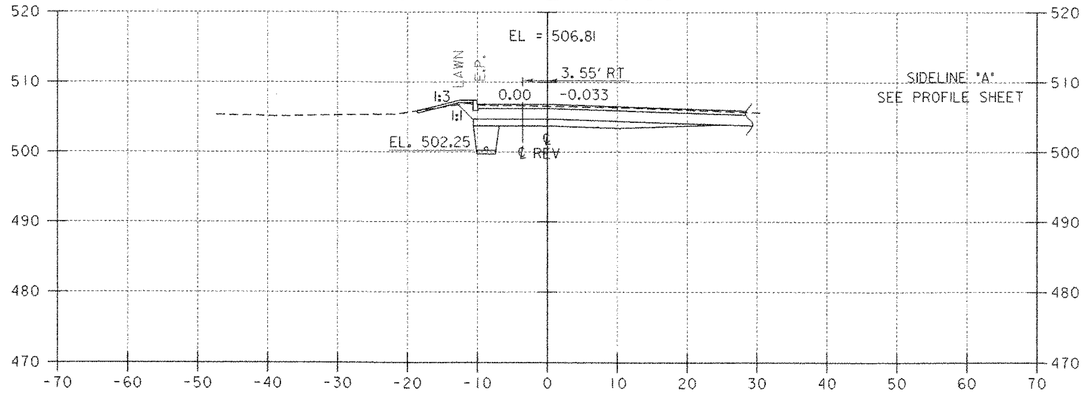
NTS

RAILROAD STREET

SHEET NAME: MAINLINE CROSS SECTIONS	
PROJECT NAME: JOHNSON	HIGHWAY NO.: TH 2
PROJECT NUMBER: BHO 1448(18)	BRIDGE NO.: 6
	OVER: THE LAMOILLE RIVER
FILE NAME: /str1/90j067/sj067xs.dgn	PLOT DATE: 02-SEP-2005
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: S. MAGNAN
DESIGNED BY: C. MEUNIER	IPARM NAME: sc067x01.i
BRIDGE SHEET NUMBER:	SHEET 54 OF 73



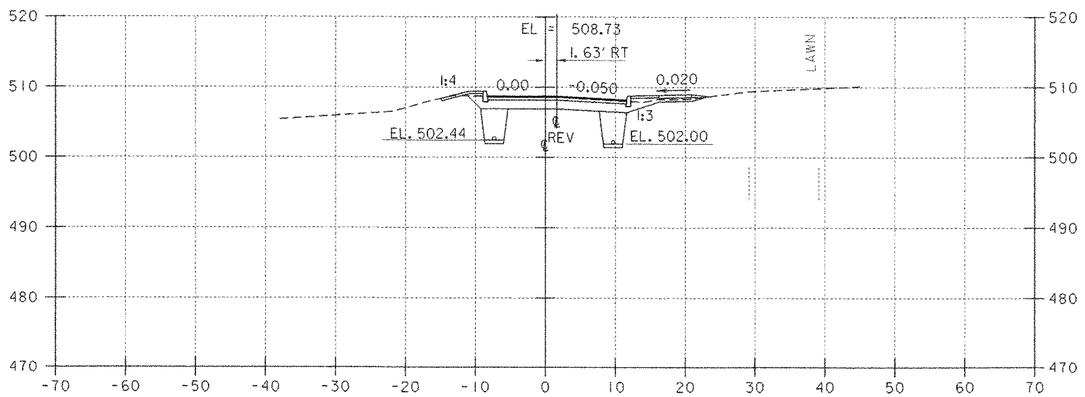
12+50 =
REV STA 12+49.39



12+00
REV STA 12+00.07

REV STA 11+75
END APPROACH
BEGIN PROJECT

PIPE AT REV STA 11+86
FOR SECTION
SEE SHEET 62

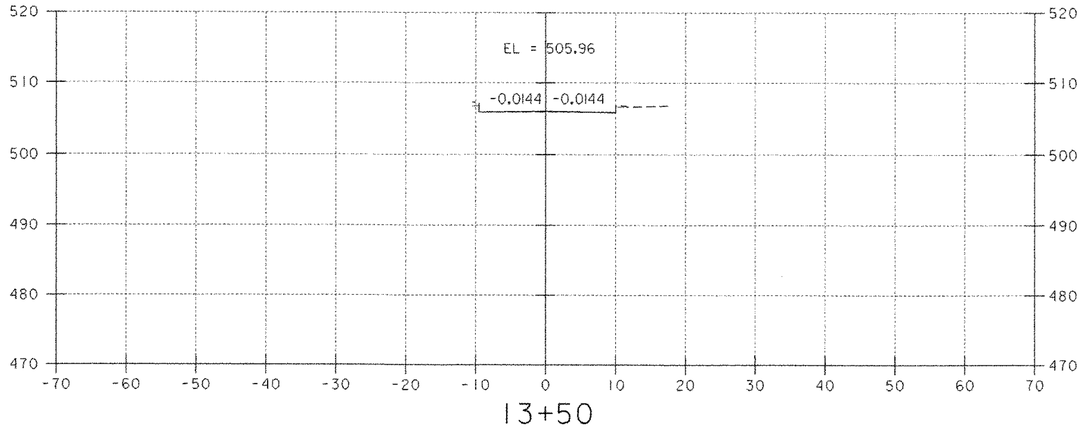


11+50 =
REV STA 11+50.03

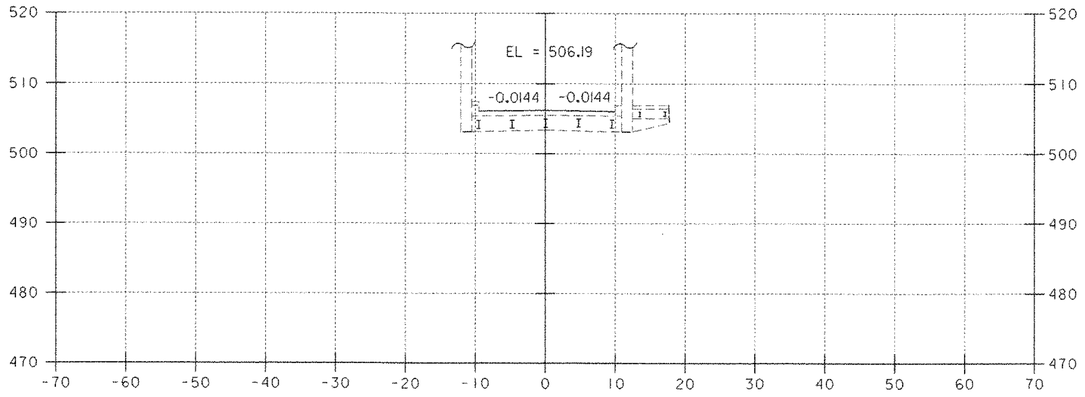
SCALE 1" = 10'-0
10 0 10

RAILROAD STREET

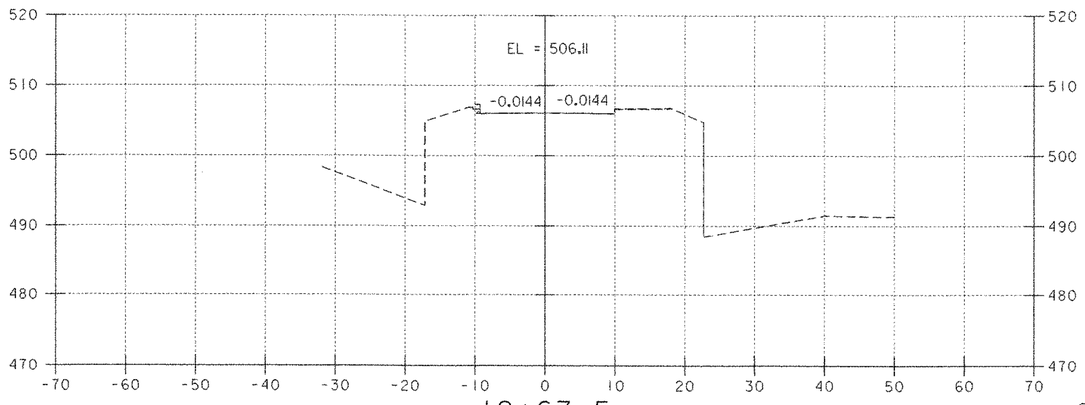
SHEET NAME:	MAINLINE CROSS SECTIONS		
PROJECT NAME:	JOHNSON	HIGHWAY NO.:	TH 2
PROJECT NUMBER:	BHO 1448(18)	BRIDGE NO.:	6
		OVER:	THE LAMOILLE RIVER
FILE NAME:	/strl/90j067/sj067xs.dgn	PLOT DATE:	02-SEP-2005
PROJECT MANAGER:	R. WHITCOMB	DRAWN BY:	S. MAGNAN
DESIGNED BY:	C. MEUNIER	IPARM NAME:	sc067x02.I
BRIDGE SHEET NUMBER:		SHEET	55 OF 73



13+50

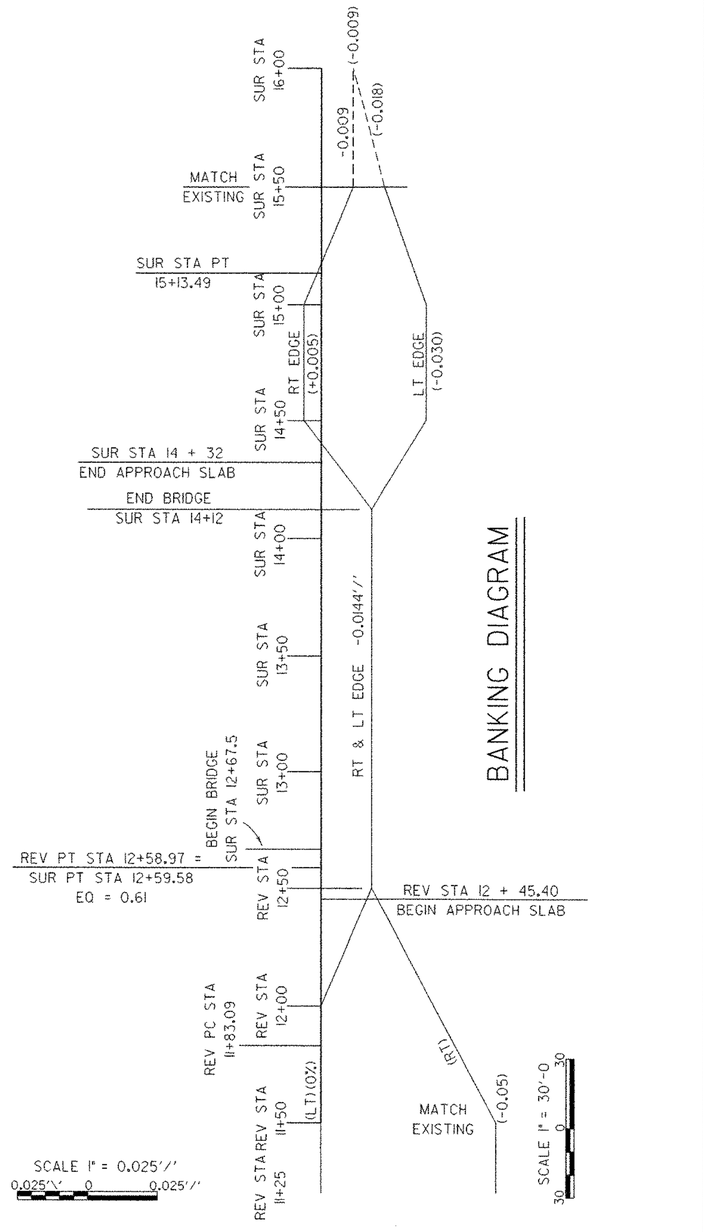


13+00



12+67.5
BEGIN BRIDGE

SCALE I" = 10'-0
10 0 10



BANKING DIAGRAM

RAILROAD STREET

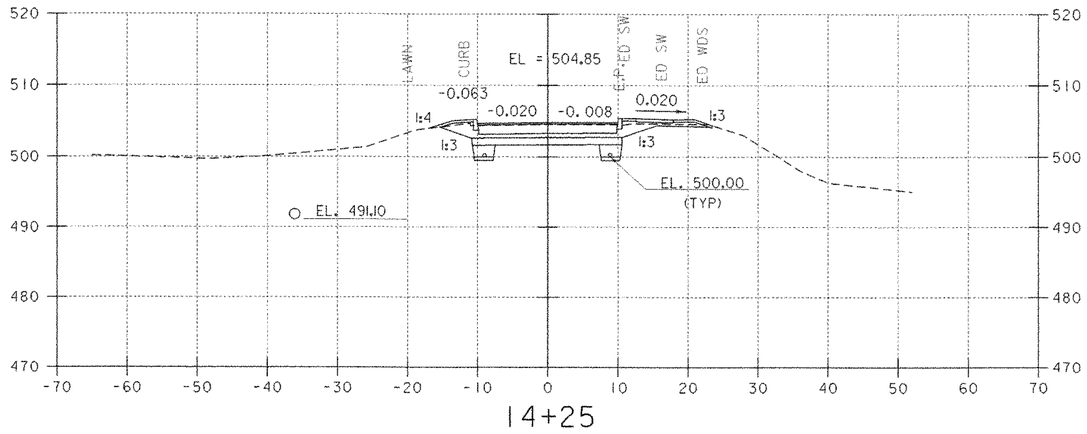
SHEET NAME: MAINLINE CROSS SECTIONS

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)

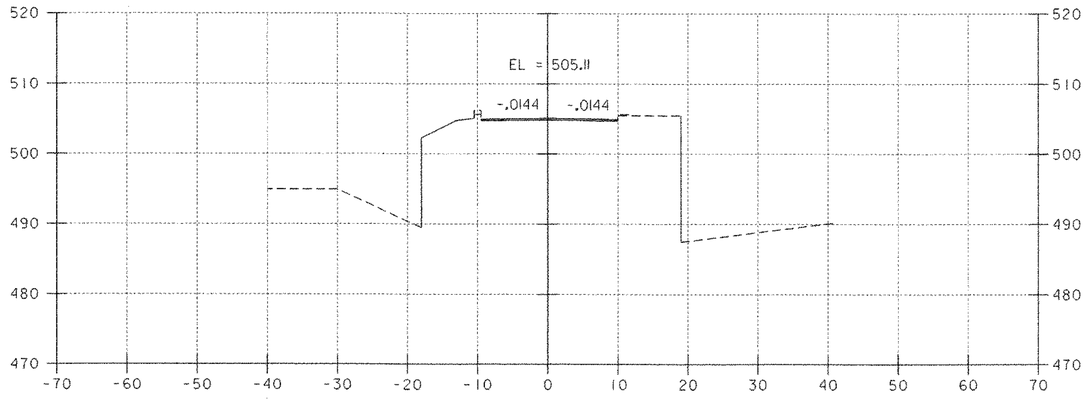
HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER

FILE NAME: /strl/90j067/sj067xs.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. MEUNIER
BRIDGE SHEET NUMBER:

PLOT DATE: 02-SEP-2005
DRAWN BY: S. MAGNAN
IPARM NAME: sc067x03.i
SHEET 56 OF 73

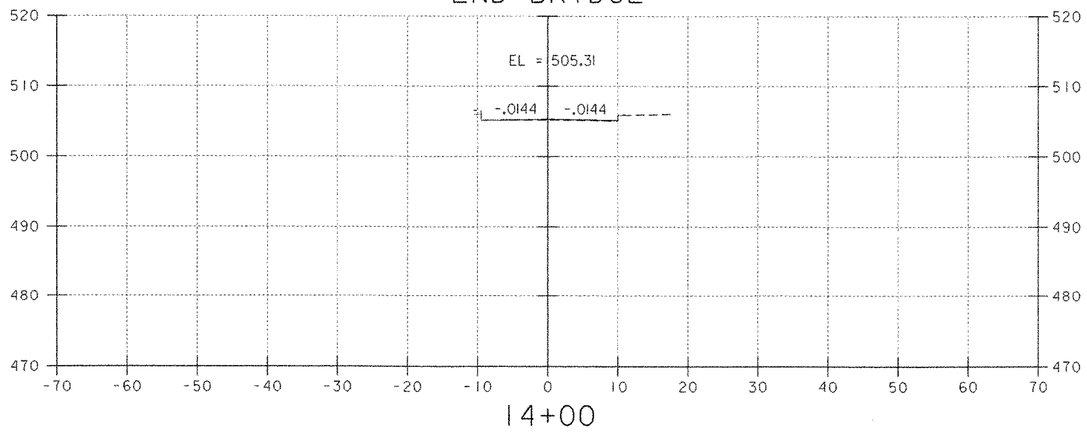


14+25

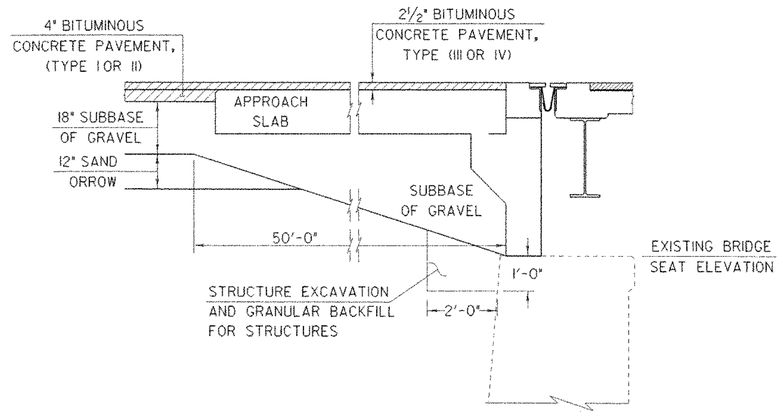


14+12

END BRIDGE



14+00



ABUTMENT MATERIAL TRANSITION

(TYPICAL OF BOTH ABUTMENTS)

SCALE 1" = 10'-0

RAILROAD STREET

SHEET NAME: MAINLINE CROSS SECTIONS

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)

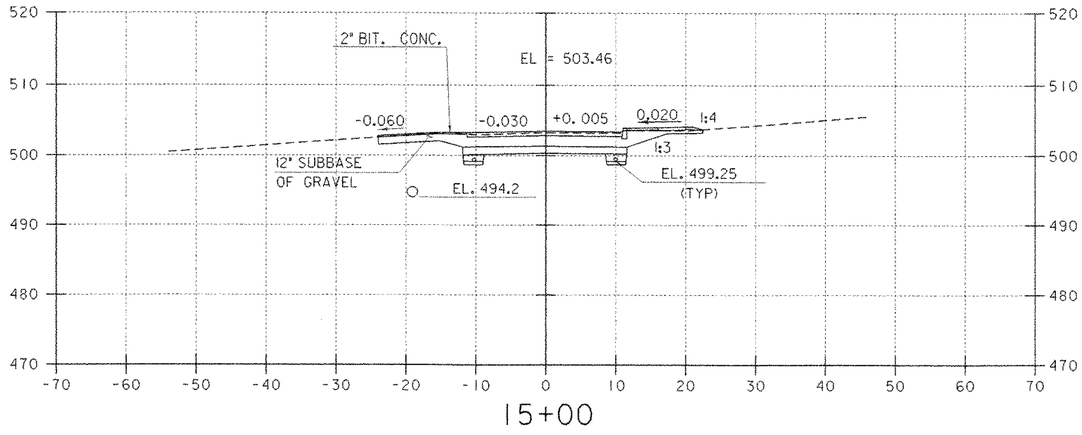
HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER

FILE NAME: /str1/90j067/sj067xs.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. MEUNIER
BRIDGE SHEET NUMBER:

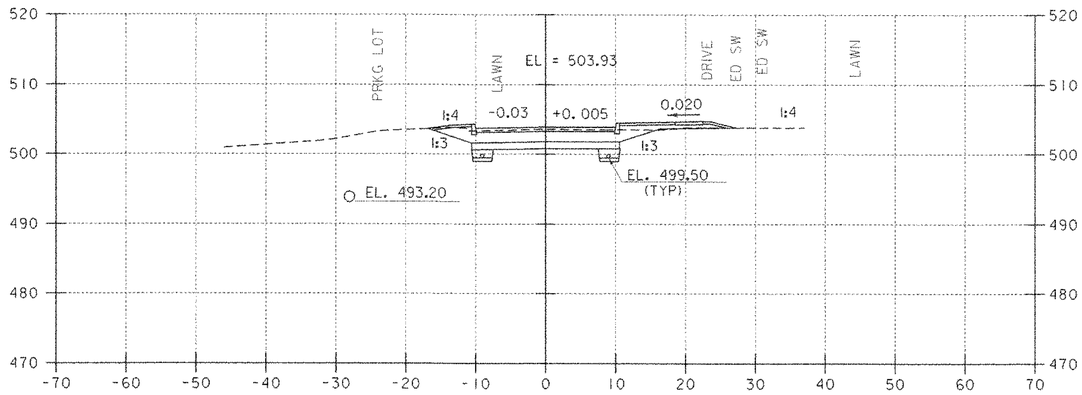
PLOT DATE: 02-SEP-2005
DRAWN BY: S. MAGNAN
IPARM NAME: sc067x04.i
SHEET 57 OF 73

PIPE AT SUR STA 15+18
FOR SECTION
SEE SHEET 62

STA 15 + 00 LT
CONSTRUCT DRIVE

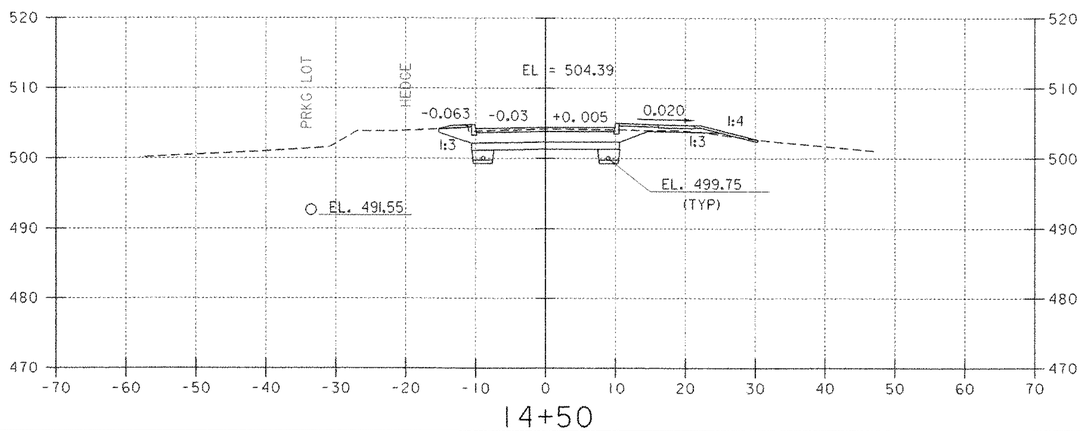


15+00

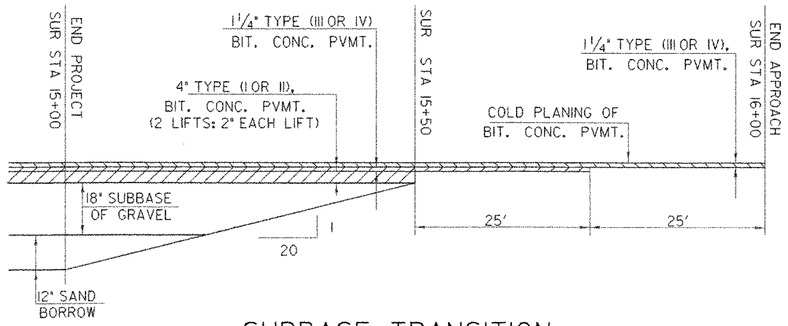


14+75

STA 14+66 RT
CONSTRUCT DRIVE



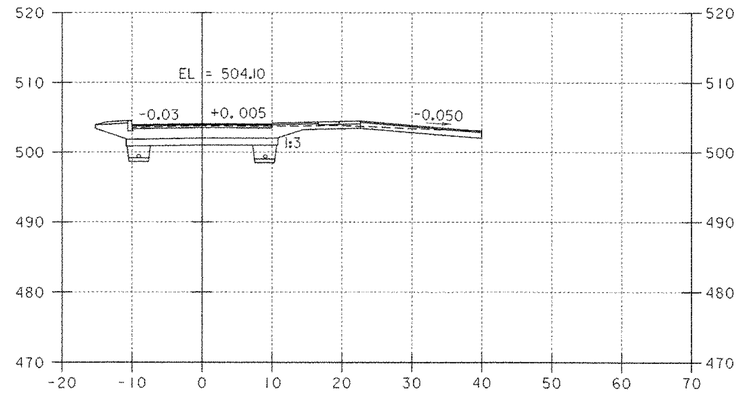
14+50



SUBBASE TRANSITION

NTS

STA 15 + 00
END PROJECT
BEGIN APPROACH



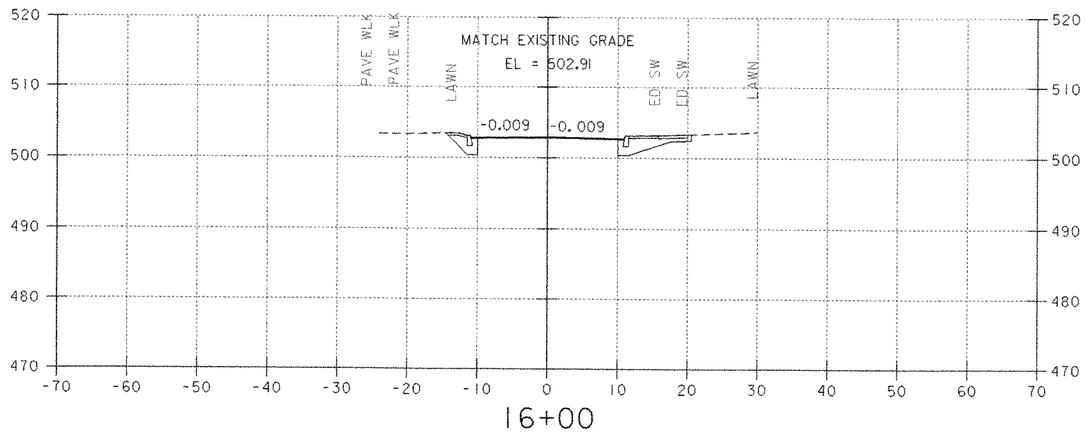
14+66
CONSTRUCT DRIVE

SCALE 1" = 10'-0
10 0 10

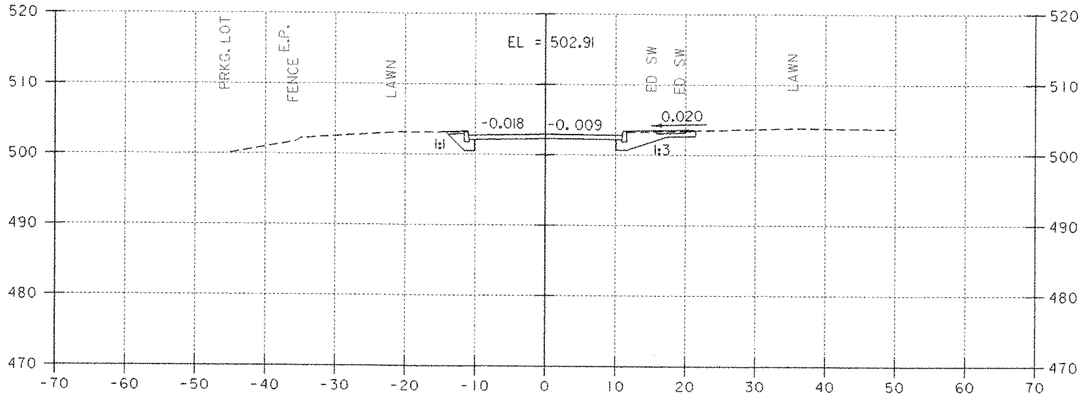
RAILROAD STREET

SHEET NAME: MAINLINE CROSS SECTIONS	
PROJECT NAME: JOHNSON	HIGHWAY NO.: TH 2
PROJECT NUMBER: BHO 1448(18)	BRIDGE NO.: 6
	OVER: THE LAMOILLE RIVER
FILE NAME: /str1/90j067/sj067xs.dgn	PLOT DATE: 02-SEP-2005
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: S. MAGNAN
DESIGNED BY: C. MEUNIER	IPARM NAME: sc067x05.i
BRIDGE SHEET NUMBER:	SHEET 58 OF 73

STA 16 + 00
END APPROACH



16+00

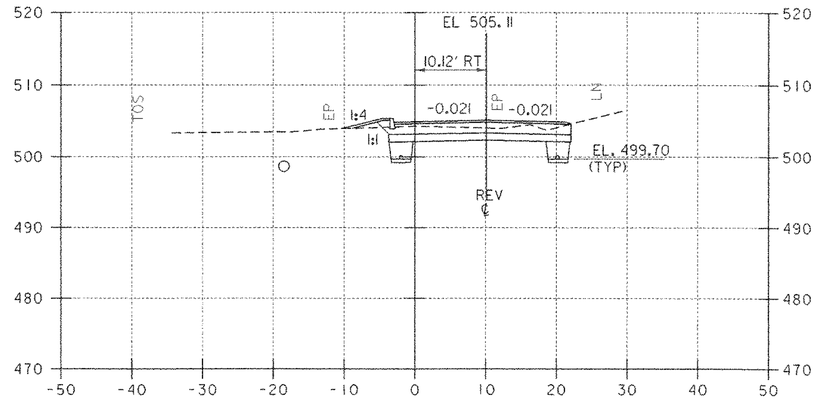


15+50

SCALE 1" = 10'-0
10 0 10

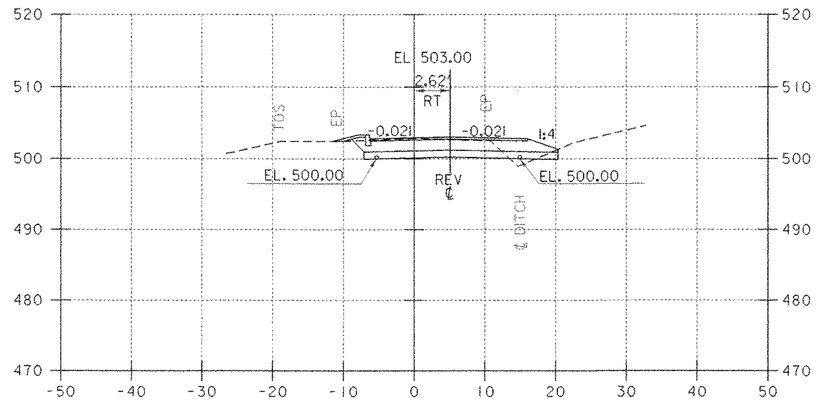
RAILROAD STREET

SHEET NAME: MAINLINE CROSS SECTIONS	
PROJECT NAME: JOHNSON	HIGHWAY NO.: TH 2
PROJECT NUMBER: BHO 1448(18)	BRIDGE NO.: 6
	OVER: THE LAMOILLE RIVER
FILE NAME: /str1/90j067/sj067xs.dgn	PLOT DATE: 02-SEP-2005
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: S. MAGNAN
DESIGNED BY: C. MEUNIER	IPARM NAME: sc067x06.1
BRIDGE SHEET NUMBER:	SHEET 59 OF 73

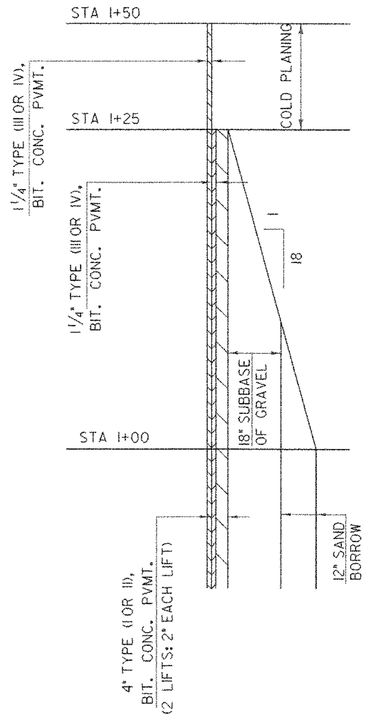


SURV STA 0+50 =
REV STA 0+47.02

℄ STA 1+ 50
END SIDELINE APPROACH

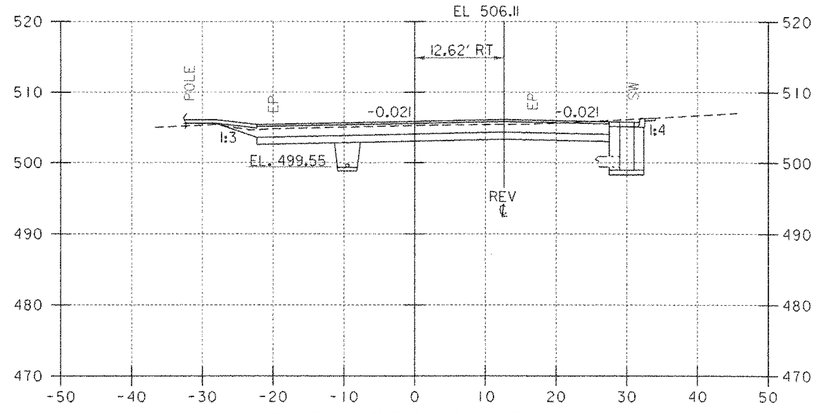


SURV STA 1+00 =
REV STA 0+97.27

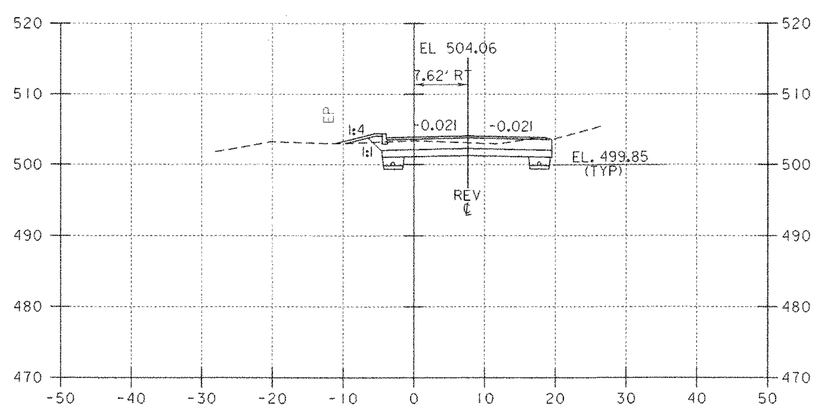


SUBBASE TRANSITION

NTS



SURV STA 0+25 =
REV STA 0+21.89



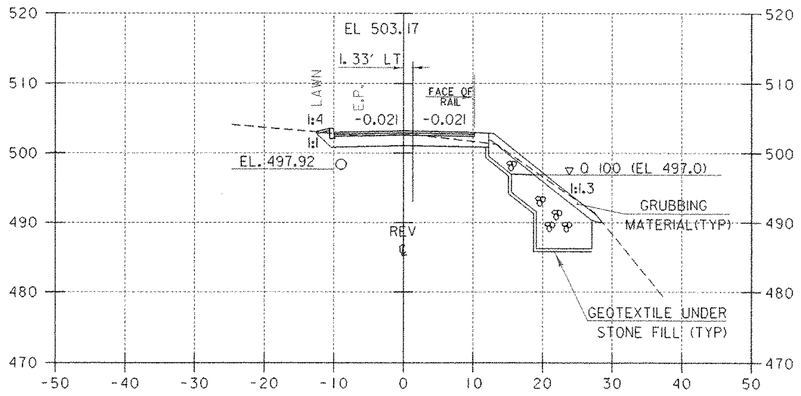
SURV STA 0+75 =
REV STA 0+72.15

SCALE 1" = 10'-0
10 0 10

RIVER ROAD EAST (TH 45)

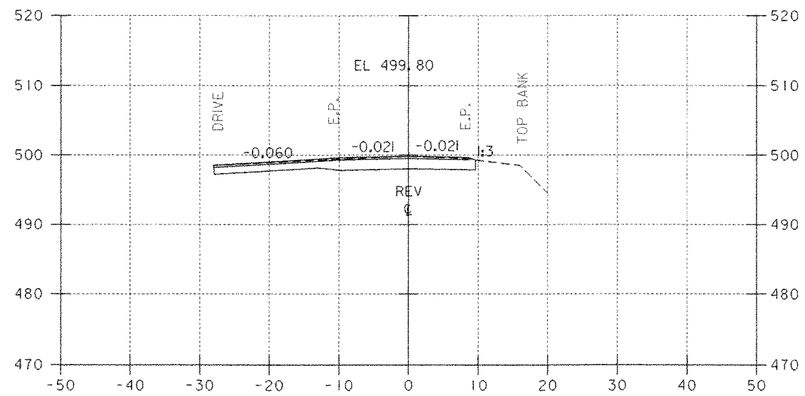
SHEET NAME: SIDELINE "A" CROSS SECTIONS	
PROJECT NAME: JOHNSON	HIGHWAY NO.: TH 2
PROJECT NUMBER: BHO 1448(18)	BRIDGE NO.: 6
	OVER: THE LAMOILLE RIVER
FILE NAME: /str1/90j067/sj067xs.dgn	PLOT DATE: 02-SEP-2005
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: S. MAGNAN
DESIGNED BY: C. MEUNIER	IPARM NAME: sc067sa.i
BRIDGE SHEET NUMBER:	SHEET 60 OF 73

END STONE FILL, TYPE II, STONE FILL, TYPE IV,
GRUBBING MATERIAL AND GEOTEXTILE UNDER STONE FILL.
REV ℄ STA 0+68 RT



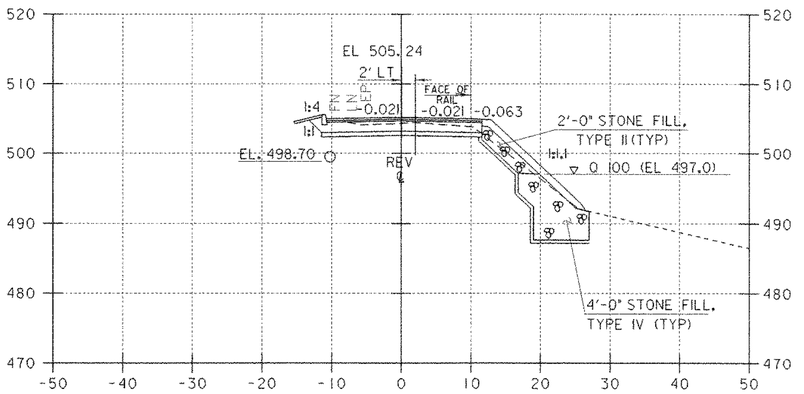
REV STA 0+47.02 =
SURV STA 0+50

SUR STA 1+50
END SIDELINE APPROACH
MATCH EXISTING GRADE

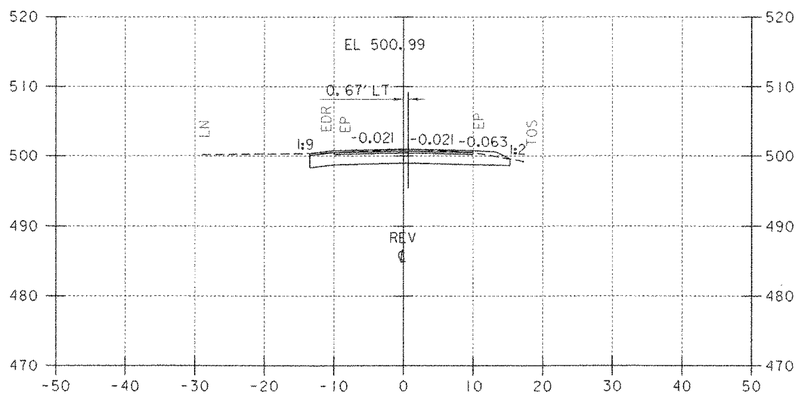


REV STA 0+97.27 =
SURV STA 1+00

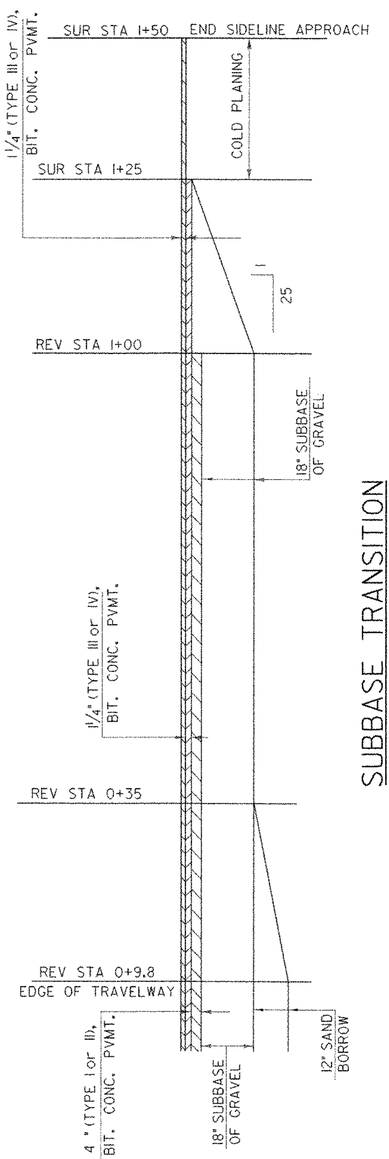
CONSTRUCT DRIVE REV
STA 0 + 95 LT (PAVED)



REV STA 0+21.89 =
SURV STA 0+25



REV STA 0+72.15 =
SURV STA 0+75



SUBBASE TRANSITION
NTS

RIVER STREET (TH 60)

BEGIN STONE FILL, TYPE II, STONE FILL, TYPE IV,
GRUBBING MATERIAL AND GEOTEXTILE UNDER STONE FILL
REV ℄ STA 0+20 RT

PIPE AT REV STA 0+64
FOR SECTION
SEE SHEET 62

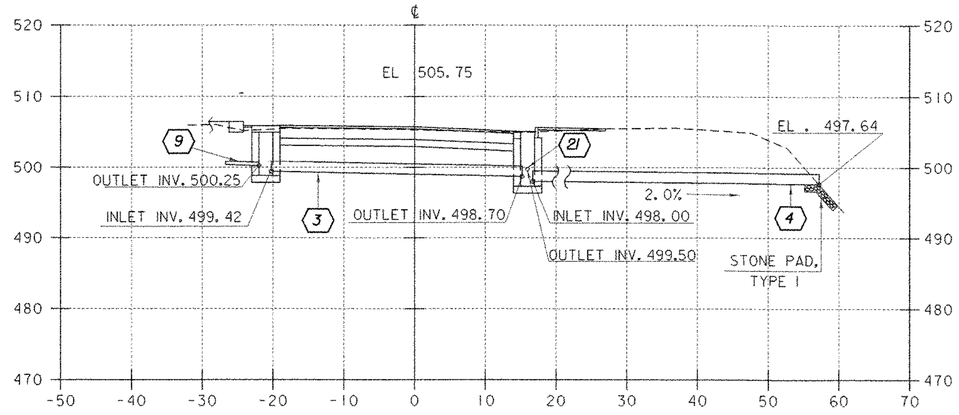
NOTE: EXCAVATION REQUIRED FOR PLACEMENT OF STONE FILL, TYPE II, STONE FILL, TYPE IV AND GRUBBING MATERIAL ALONG SIDELINE "B" WILL BE PAID AS THE ITEM 203.15 "COMMON EXCAVATION".

SCALE 1" = 10'-0
10 0 10

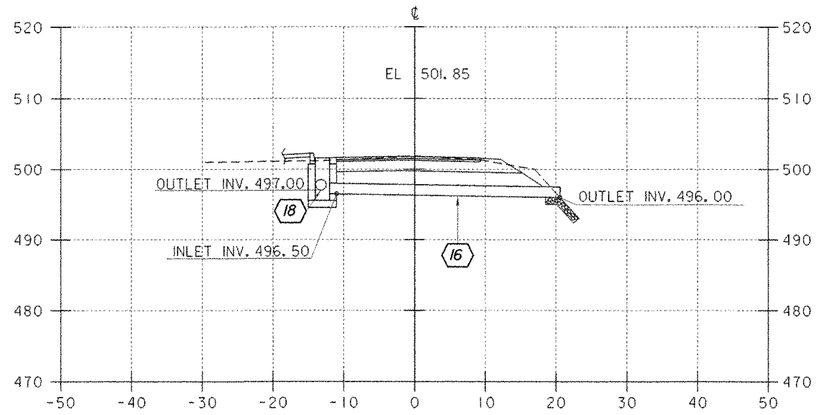
SHEET NAME: SIDELINE "B" CROSS SECTIONS

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)
HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER

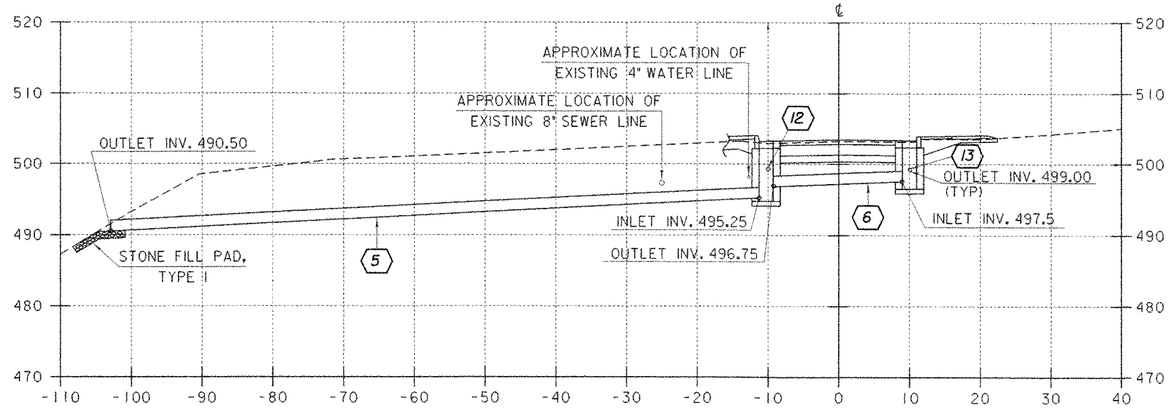
FILE NAME: /str1/90j067/sj067xs.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. MEUNIER
BRIDGE SHEET NUMBER:
PLOT DATE: 02-SEP-2005
DRAWN BY: S. MAGNAN
IPARM NAME: sc067sb.i
SHEET 61 OF 73



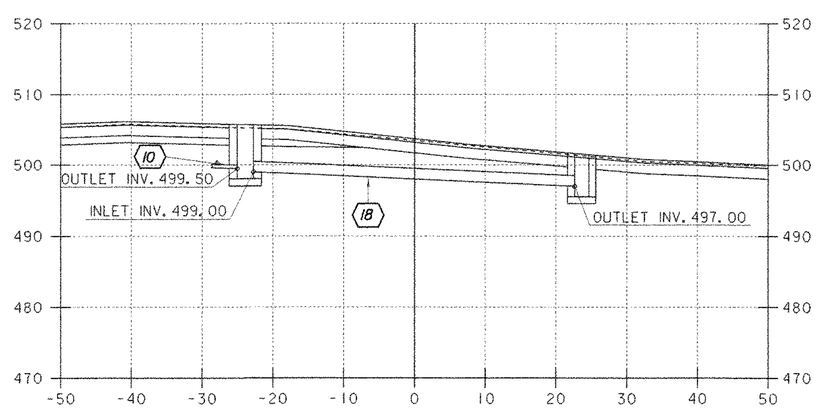
REV STA 11+84 RT - REV STA 12+18 RT
SIDELINE "A" (RIVER ROAD)
PIPES 3 AND 4
PIPE SKEWED 54°



REV STA 0+64 LT - REV STA 0+71 RT
SIDELINE "B" RIVER STREET
PIPE 16 SKEWED 16°



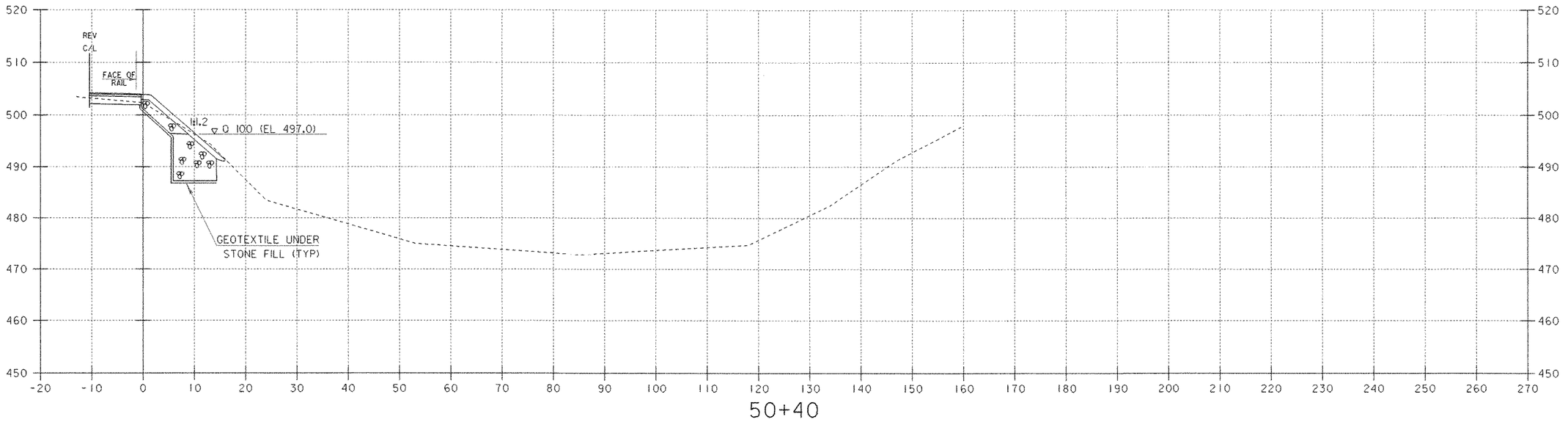
SECTION ALONG ℄ OF PIPES 5 AND 6



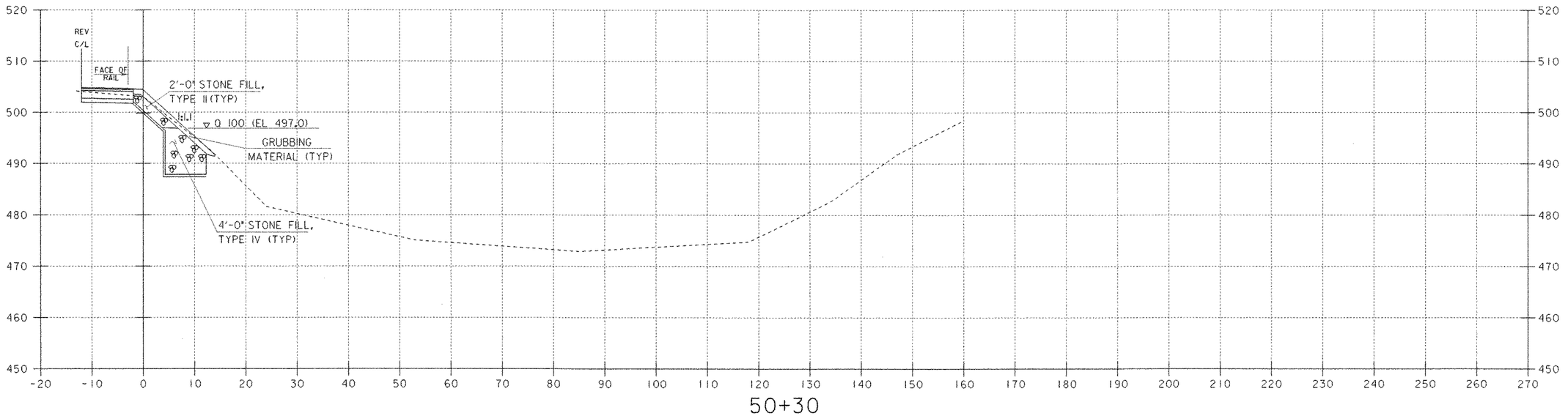
REV STA 12+40 LT - REV ℄ 'B' (RIVER ROAD) STA 0+64 LT
PIPE 18 SKEWED 87°

SCALE 1" = 10'-0
10 0 10

SHEET NAME: DRAINAGE PIPE SECTIONS	
PROJECT NAME: JOHNSON PROJECT NUMBER: BHO 1448(18)	HIGHWAY NO.: TH 2 BRIDGE NO.: 6 OVER: THE LAMOILLE RIVER
FILE NAME: /str1/90j067/sj067xs.dgn PROJECT MANAGER: R. WHITCOMB DESIGNED BY: C. MEUNIER BRIDGE SHEET NUMBER:	PLOT DATE: 02-SEP-2005 DRAWN BY: D.BONNEAU IPARM NAME: sc067pip.i SHEET 62 OF 73



50+40



50+30

STATION 50+17
BEGIN STONE FILL, TYPE II & IV, GRUBBING MATERIAL AND GEOTEXTILE UNDER STONE FILL

SCALE 1" = 10'-0
10 0 10

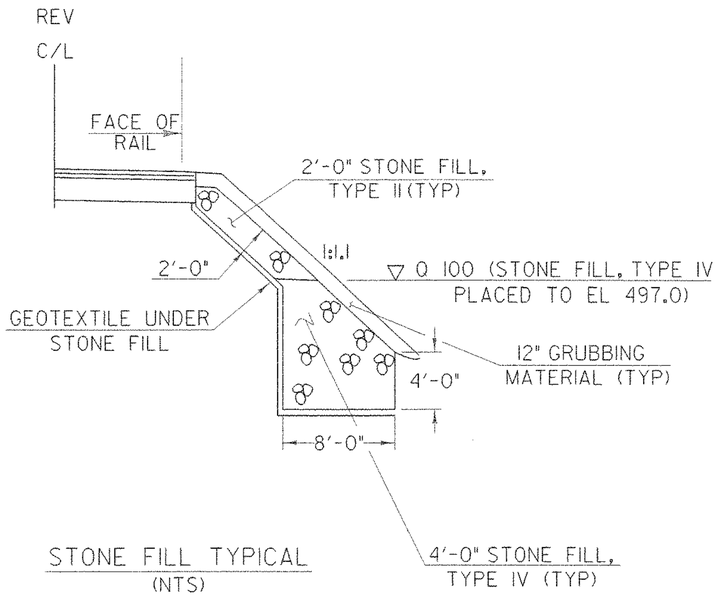
SEE SHEET 64 FOR STONE FILL TYPICAL

DATUM
VERTICAL USGS
HORIZONTAL N/A

SHEET NAME: CHANNEL CROSS SECTIONS

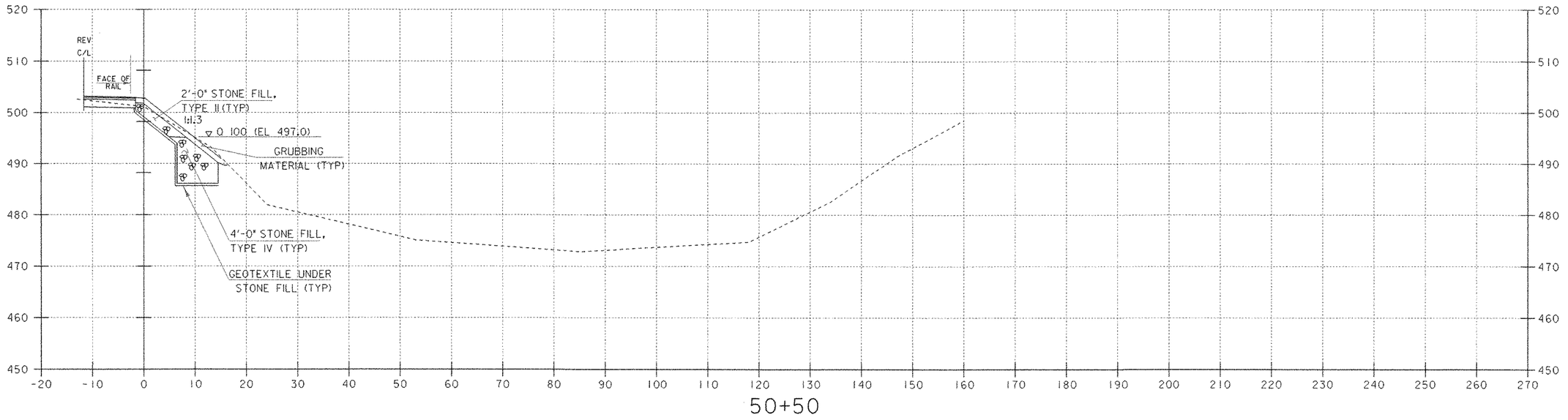
PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)
HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER

FILE NAME: /str1/90J067/sj067xs.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. MEUNIER
BRIDGE SHEET NUMBER:
PLOT DATE: 02-SEP-2005
DRAWN BY: S. MAGNAN
IPARM NAME: sc067cxl.i
SHEET 63 OF 73



STONE FILL TYPICAL
(NTS)

STATION 50+75
END STONE FILL, TYPE II & IV, GRUBBING MATERIAL
AND GEOTEXTILE UNDER STONE FILL



50+50

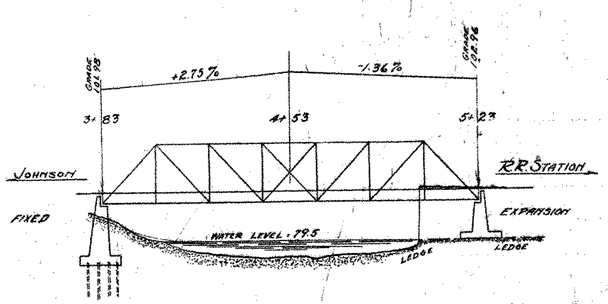
SCALE 1" = 10'-0
10 0 10

DATUM
VERTICAL USGS
HORIZONTAL N/A

SHEET NAME: CHANNEL CROSS SECTIONS

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)
HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER

FILE NAME: /str1/90j067/sj067xs.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. MEUNIER
BRIDGE SHEET NUMBER:
PLOT DATE: 02-SEP-2005
DRAWN BY: S. MAGNAN
IPARM NAME: sc067cx2.i
SHEET 64 OF 73



Drain Pipes in Floor of Bridge Shall be Included in Lump Sum Bid for Structural Steel

Lump Sum to include all work and material shown on Sheets No 2 AND 3 except Concrete and Reinforcing Steel in Bridge Floor and Sidewalk

CAMBER DIAGRAM

THIS CAMBER SHALL BE OBTAINED AFTER TOTAL DEAD LOAD IS APPLIED.

PAINT

SHOP PAINT - ONE COAT OF APPROVED RED LEAD AND OIL
FIELD PAINT - TWO COATS
ONE COAT OF APPROVED RED LEAD AND OIL
ONE COAT OF APPROVED GRAPHITE PAINT
NO PAINT TO BE USED UNTIL APPROVED BY THE ENGINEER

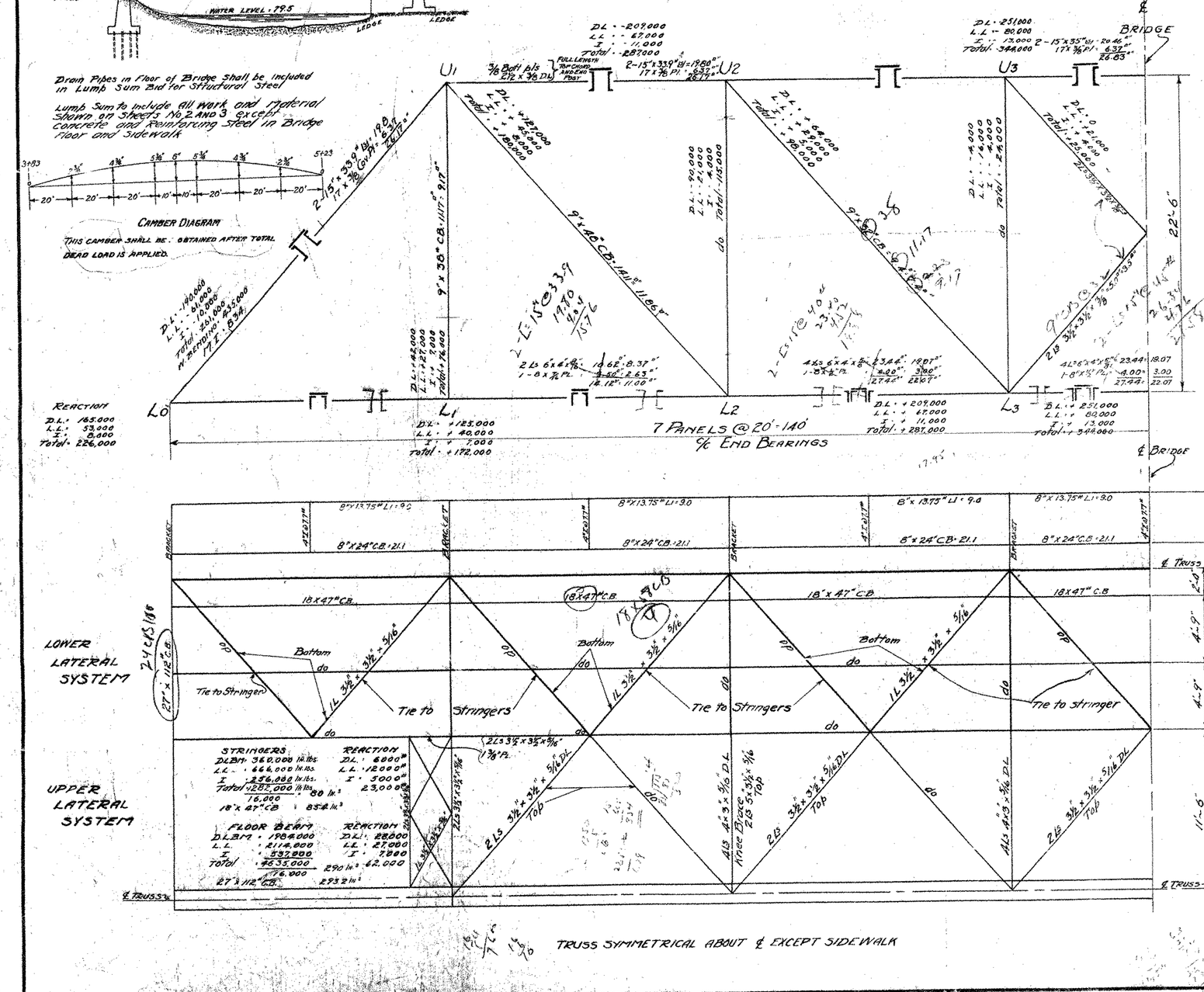
ALTERNATE SECTIONS OF EQUAL STRENGTH TO THOSE BILLED ON THIS SHEET MAY BE USED AT THE OPTION OF THE CONTRACTOR, IF APPROVED IN WRITING BY THE ENGINEER.

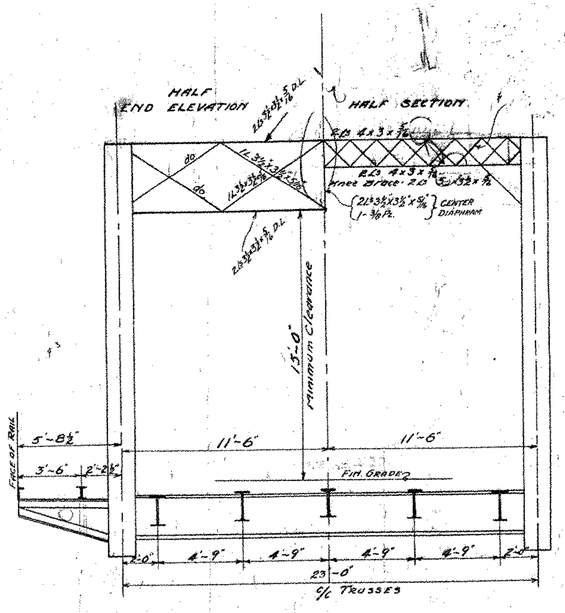
FLOOR DESIGNED FOR

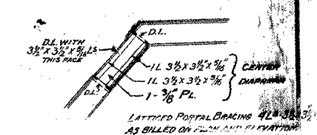
DEAD LOAD
ROADWAY: 8" CONCRETE SLAB + 25" PAVING ALLOWANCE + WEIGHT OF STEEL
SIDEWALK: 50 #/sq. ft + WEIGHT OF STEEL
LIVE LOAD
ROADWAY: 2-15 TON TRUCKS 15'-0" WHEELS 6'-0" AXLES 85% OF LOAD ON REAR AXLES
SIDEWALK: 80" PER sq. ft
IMPACT
STRINGERS: 38.5%
FLOORBEAMS: 25.4%

TRUSS DESIGNED FOR

DEAD LOAD
CONCRETE FLOOR PAVING 1300" + STEEL 650" + SIDEWALK (CONCRETE SLAB) 400" = 2350" PER LIN FT
LIVE LOAD
TWO LANES - H 15
IMPACT
$I = \frac{L+250}{10L+500}$
RIVETS: 7/8"







LATTICED PORTAL BRACING AS BILLED ON PLAN AND ELEVATION

CROSS SECTION OF PORTAL BRACING
SCALE 1½"=1'

ROADWAY SLAB - 8" CONCRETE
SIDEWALK SLAB - 4½" CONCRETE
FLOOR AND SIDEWALK TO BE SCREED AND FLOATED
ADD CONCRETE ½" OVER ROADWAY STRINGERS
½" OVER SIDEWALK STRINGERS
VARY ELEVATION OF ROADWAY STRINGERS TO GIVE CROWN OF 2" TO CONCRETE SLAB
TOP OF FLANGE OF OUTSIDE STRINGER TO BE LEVEL WITH TOP OF FLANGE OF FLOORBEAM

LOWER LATERAL SYSTEM
24 CRS 180
22" x 112" C.B.

UPPER LATERAL SYSTEM

SIDEWALK STRINGERS
D.L. 120.0#
L.L. 180.000
Total 300.000 18.8
16.000
1-8" x 24" CB 21.1
1-8" x 13.75 9.0

PROVIDE APRON PLATES 21" x ⅜" x 21" FOR ROADWAY
21" x ½" x 6-8½" FOR SIDEWALK
BOLT ROADWAY PLATE TO END FLOORBEAM, SIDEWALK PLATES TO SIDEWALK STRINGERS
SUPPORT SIDEWALK APRON PLATE AT ROADWAY END

ANCHOR BOLTS
4-1⅛" ø SWEDGE BOLTS WITH WEDGES AT EACH SHOE EXTENDING INTO CONCRETE BRIDGE SEAT AS DETAILED.

SPECIFICATIONS
STANDARD SPECIFICATIONS FOR STEEL HIGHWAY BRIDGES U.S. DEPT OF AGRICULTURE - DEPT BULLETIN No 1249 SHALL APPLY TO ALL STRUCTURAL STEEL.

IF DESIRED BEFORE DETAILING STEEL, ABUTMENT PLANS WILL BE FURNISHED.

SHEETS No. 1, 2, AND 3 OF 12 GO WITH SUPERSTRUCTURE.

CORRECT
A. D. Bishop
BRIDGE ENGINEER

APPROVED JAN. 27 1928
H. E. Sargent
CHIEF ENGINEER

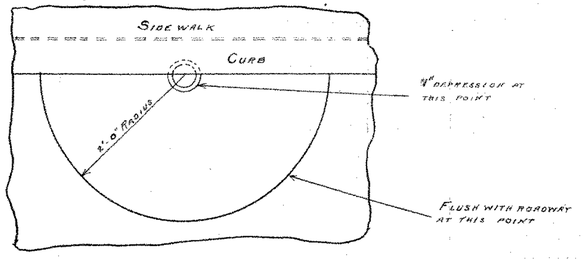
PLAN OF SUPERSTRUCTURE RAILROAD ST. BRIDGE OVER LAMOILLE RIVER JOHNSON, VT.

BRIDGE No 38
DISTRICT No 8

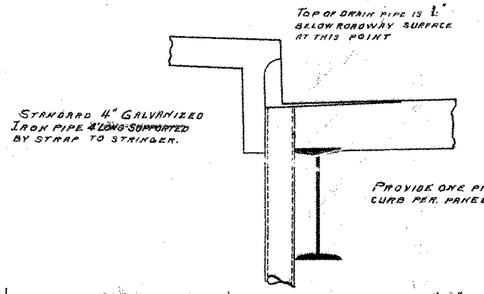
PROJECT NAME:	JOHNSON
PROJECT NUMBER:	BHO 1448(18)
HIGHWAY NO.:	TH 2
BRIDGE NO.:	6
OVER:	THE LAMOILLE RIVER
FOR INFORMATIONAL PURPOSES ONLY	
SHEET 65A OF 73	

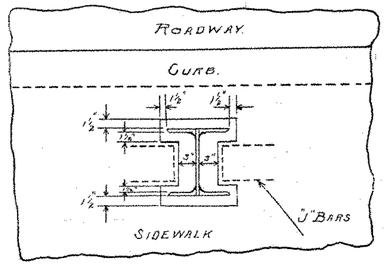
Surveyed by Snow.
Designed by Shoemaker Perkins
Drawn by
Traced by Whitcomb & LARSEN
Checked by Harold W. Manley
Series B No. 38-101. Filed
Sheet 2 of 12 Sheets

PRINTED ON "VANDYKE" TRACING CLOTH K & E CO., N.Y.



DRAINAGE DETAILS





DETAILS OF SIDEWALK AROUND MEMBERS OF TRUSS.

ALL CONCRETE POURED IN COLD WEATHER SHALL CONFORM TO SPECIAL PROVISIONS IN THE PROPOSAL ENTITLED, "CONCRETING IN COLD WEATHER."

REINFORCING STEEL SCHEDULE

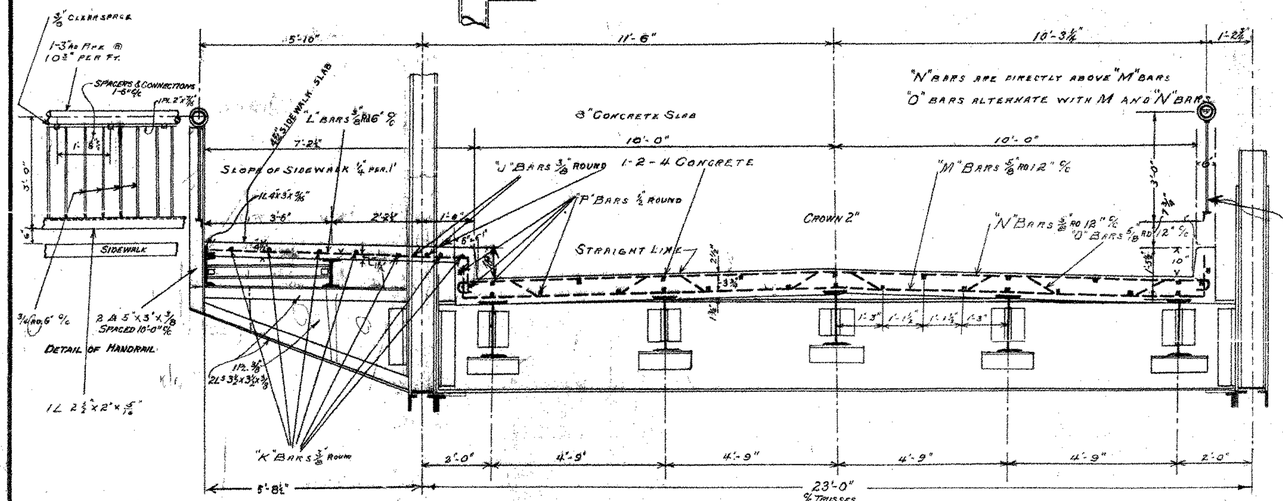
"J" BARS	2'-6"	⅝" ROUND	TOTAL LENGTH 5'-3" REQUIRED 29
"K" BARS	21'-10"	⅜" ROUND	REQUIRED 49
"L" BARS	5'-11"	⅜" ROUND	TOTAL LENGTH 7'-8" REQUIRED 287
"M" BARS	TOTAL LENGTH 23'-0" / 20'-6"	⅝" ROUND	REQUIRED 193
"N" BARS	TOTAL LENGTH 21'-8" / 20'-1"	⅝" ROUND	REQUIRED 140
"O" BARS	20'-6"	⅝" ROUND	TOTAL LENGTH 22'-3" REQUIRED 144
"P" BARS	21'-10"	½" ROUND	REQUIRED 182

ALL STEEL WILL BE DEFORMED BARS EXCEPT AS NOTED.

REINFORCING STEEL SHALL CONFORM TO STANDARD SPECIFICATIONS FOR BILLETT STEEL CONCRETE REINFORCING BARS OF THE AMERICAN SOCIETY FOR TESTING MATERIALS. SERIAL DESIGNATION A15-14.

THE CORRECTNESS OF THIS STEEL SCHEDULE IS NOT GUARANTEED AND NO CLAIM WILL BE ALLOWED ON ACCOUNT OF ANY INACCURACY THEREIN.

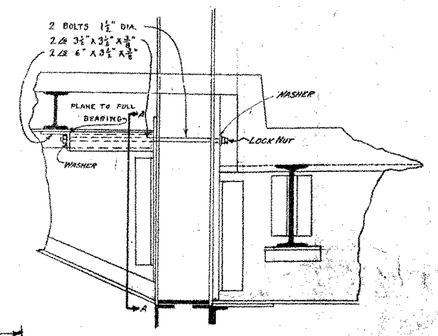
REINFORCING BARS SHALL BE OF STRUCTURAL OR INTERMEDIATE GRADE STEEL.



VARY ELEVATION OF STRINGERS TO GIVE ROADWAY A CROWN OF 2". TOP OF OUTSIDE STRINGER TO BE LEVEL WITH TOP OF FLOOR BEAM.

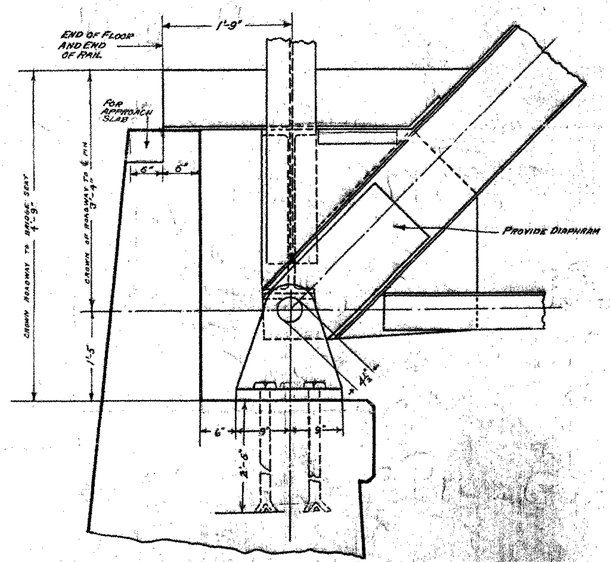
DAP ROADWAY AND SIDEWALK SLABS:-
½" OVER STRINGER FLANGES - ROADWAY.
¼" OVER STRINGER FLANGES - SIDEWALK.

ATTACH RAIL TO EACH TRUSS MEMBER



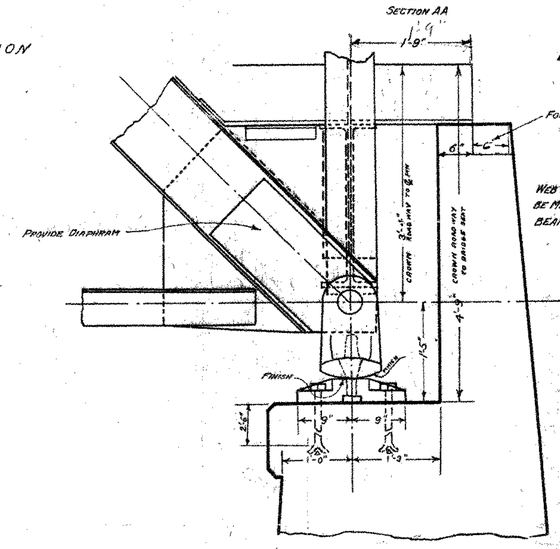
DETAIL OF SIDEWALK BRACKET CONNECTION.

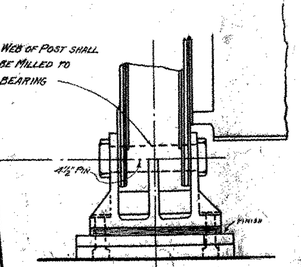
TYPICAL SECTION
SCALE:- 1" = 2'



DETAIL AT FIXED END
1"=1'-0"

SECTION AA





DETAIL AT EXPANSION END
1"=1'-0"

PLAN OF
SUPERSTRUCTURE DETAILS
RAILROAD ST. BRIDGE
OVER
LAMOILLE RIVER
DISTRICT 8
BRIDGE 38
JOHNSON, VT.

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)

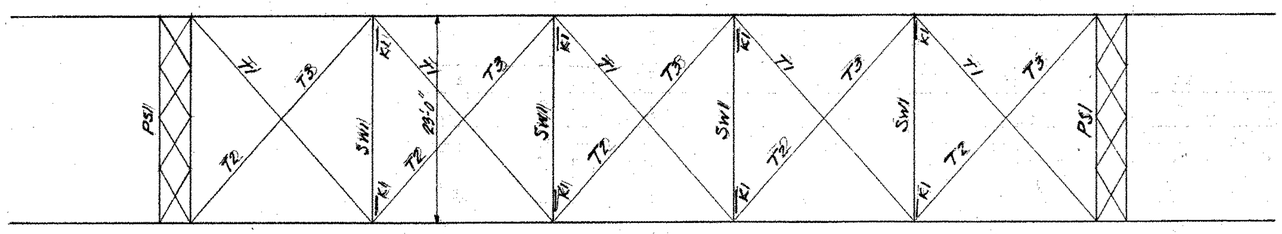
HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER

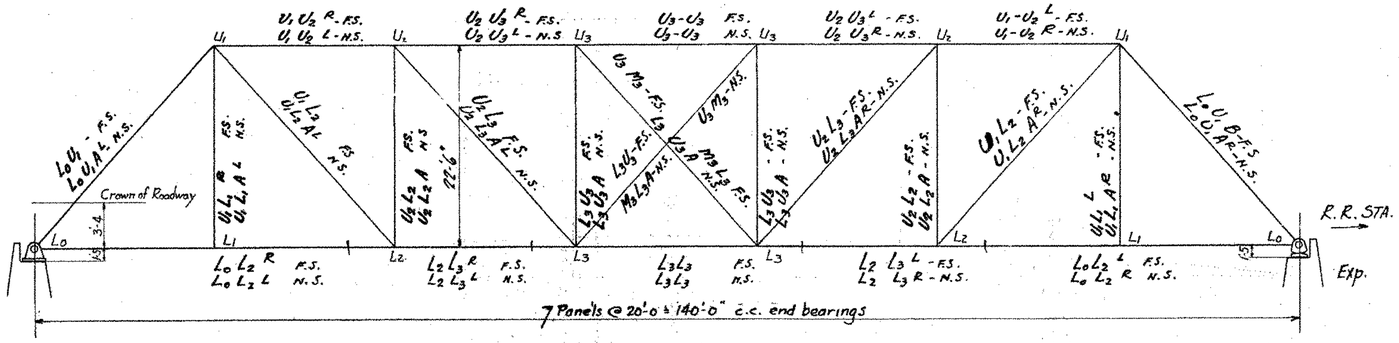
FOR INFORMATIONAL PURPOSES ONLY

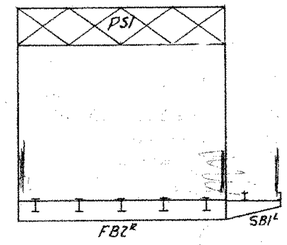
SHEET 658 OF 73

1-2-4 CONCRETE	82	CU. YDS.
REINFORCING STEEL	12935	LBS.
STRUCTURAL STEEL	28,800	LBS.

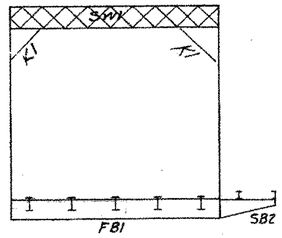
Surveyed by Snow
Designed by Shoemaker
Drawn by C.D.L. 1/
Traced by N.M.J. 1/
Checked by H.W. Haney 1/27
Series 8 No. 39-151 Filed
Sheet 3 of 12 Sheets



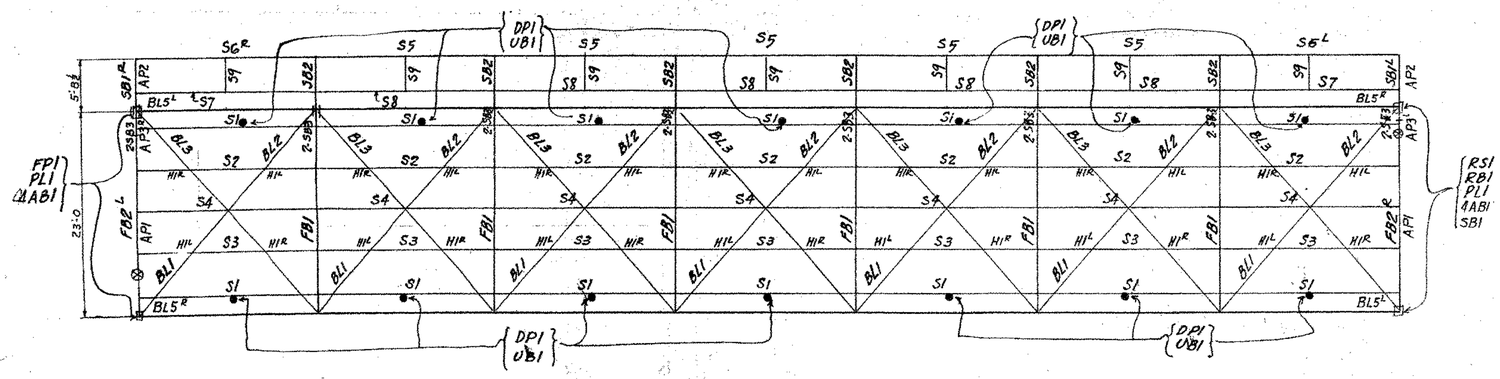


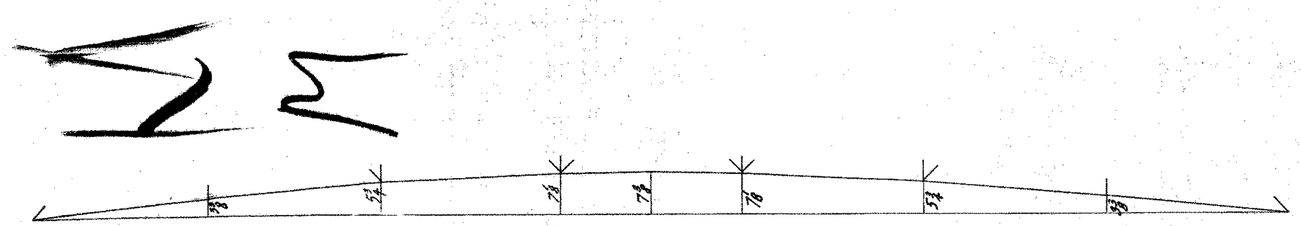


End View



Typical Section





— CAMBER DIAGRAM —

List of Drawings

E1- Erection Diagram
1 - Cast Shoes & Rockers
2 - Truss Members
3 - " "
4 - Floor System
5 - Portal & Top Laterals
6 - Handrailing
7 - Sidewalk System.

FOR RAILING DIAGRAM SEE DWG. 6

Notes—
Field Paint- Two Coats.
One coat of approved Red Lead and Oil.
One coat of approved Graphite Paint.
Field Paint to be furnished by the Bethlehem Steel Co. and applied by others.

BETHLEHEM STEEL COMPANY
Fabrication and Erection Dept. BETHLEHEM, PA.

DETAIL OF Erection Diagram
STRUCTURE Railroad Str. Bridge over Lamoille River Johnson, Vt.
CUSTOMER Ring Construction Co.

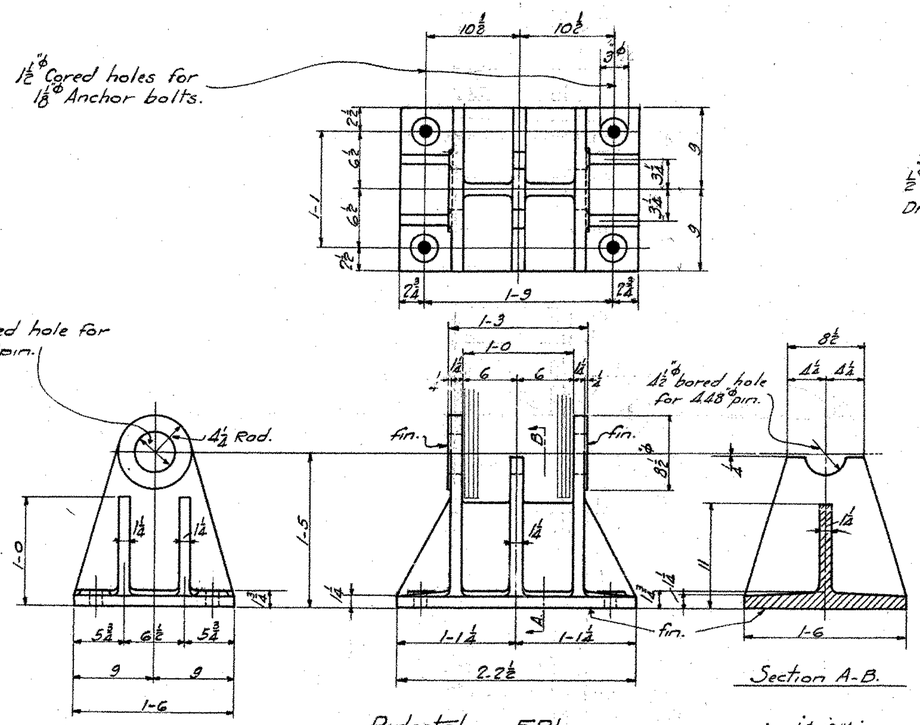
SHOP PAINT —
RIVETS — OPEN HOLES — UNLESS NOTED

DRAWN BY	DATE	CHECKED BY	DATE	SQUAD
W.E	3/6/28	GAR	3-15-28	Croll

REVISIONS	No.	DATE	BY	DESCRIPTION

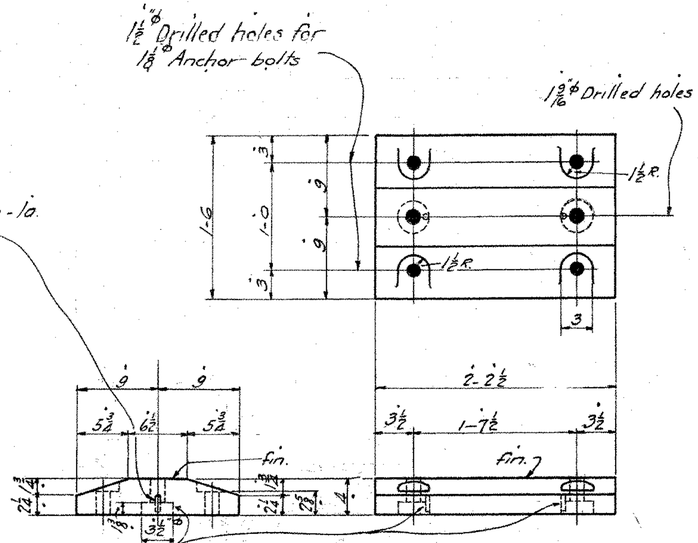
PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)
HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER
FOR INFORMATIONAL PURPOSES ONLY
SHEET 66 OF 73

FILE F7297 CONT. EE2884 DWG. E1



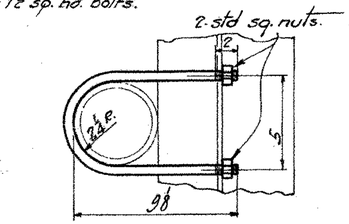
Pedestal - FPI.

Cast steel - patt. No. L-80



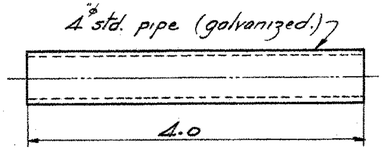
Rocker Base - RBI.

18 × 4 × 2-2½ steel slab.
(plane from 18 × 4½).

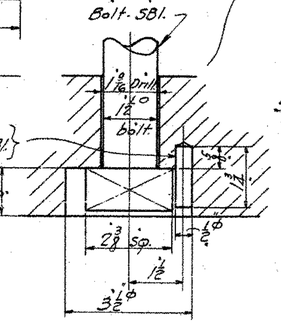


U-Bolt - UBI.

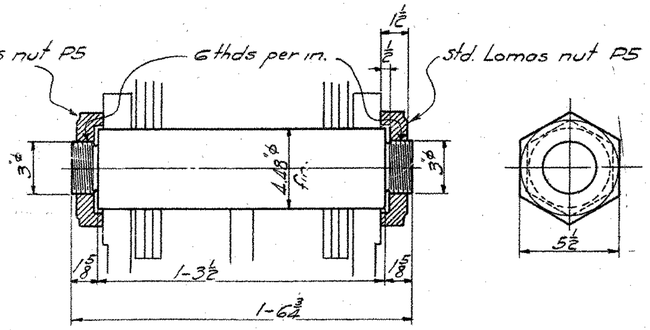
½"ϕ rod × 1-9½ long. steel.



Drain Pipe - DPI.



pin - ½"ϕ × 1¾" long, driving fit in RBI. } ship with RBI.

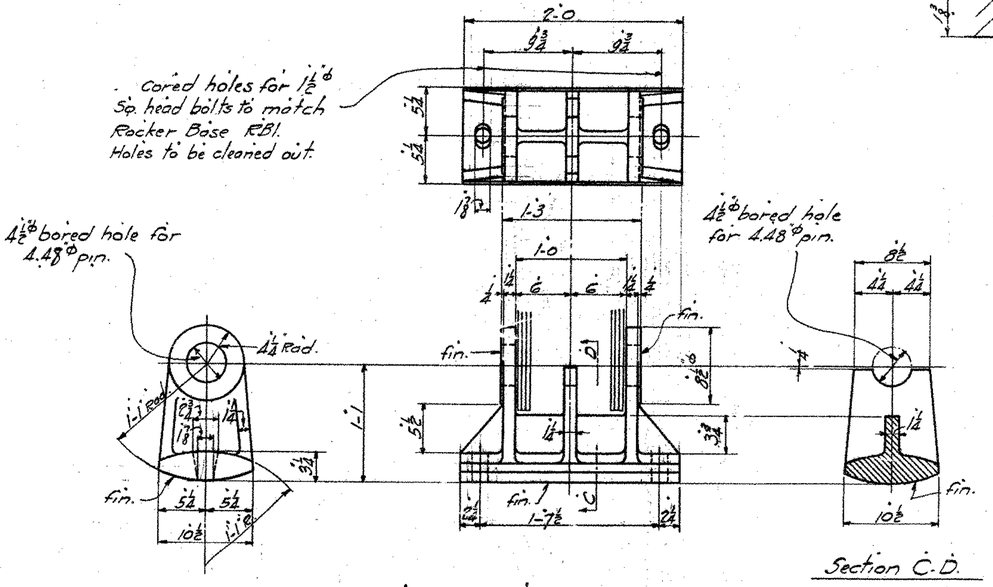


Pin - PLI - with 2 std. Lomas nuts P5.

(pin 4.48"ϕ × 1-6½) fin all over.

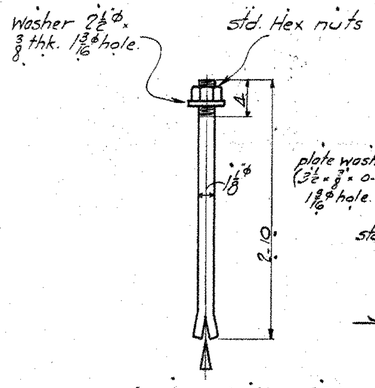
Required List.

2 - Pedestals	FPI
2 - Rockers	RSI
2 - Rocker Bases	RBI
4 - Pins	PLI
8 - Std. Lomas nuts P5 - (ship with PLI.)	
16 - Anchor bolts	ABI (with hex nuts & Washers)
28 - U-Bolts	UBI. (with sq nuts.)
14 - Drain Pipes	DPI (4" std pipe galv.)
4 - Pin ½"ϕ × 1¾ lg - 1a.	(ship with RBI.)
4 - Sq. hd. bolt	SBI. (with hex nut & Washer)



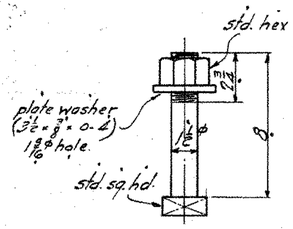
Rocker - RSI

Cast steel - patt. No. L-81



Anchor bolts - ABI.

(18"ϕ × 2'-10)



Sq. Hd. Bolt - SBI.

(1½"ϕ × 0-8)

All steel castings to be annealed
Shop Paint:- One coat of approved red lead and oil.
Machined surfaces coated with white lead and tallow.

BETHLEHEM STEEL COMPANY
Fabrication and Erection Dept. BETHLEHEM, PA.

DETAIL OF Pedestal, Rocker, Base & Pin etc.
STRUCTURE Railroad St. Bridge No. 2 over Lamoille River, Johnson, Vt.
CUSTOMER Ring Construction Co.

SHOP PAINT
RIVETS OPEN HOLES UNLESS NOTED

DRAWN BY	DATE	CHECKED BY	DATE	
E.G.F.	2-29-28	[illegible]	3/14/28	[illegible]

REVISIONS	NO	DATE	BY	DESCRIPTION

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)
HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER
FOR INFORMATIONAL PURPOSES ONLY
SHEET 67 OF 73

FILE F 7297 CONT. EE 2884 DWG. #1

CAMBER DIAGRAM.

NOTE

Specification - Std. Spec. for Steel Highway Bridges U.S. Dept. of Agriculture Dept Bulletin #1249

Rivets - 7/8

Open holes in material 3/4 in. or less in thickness may be punched full size.

Holes in material more than 3/4" thick shall be subpunched and reamed or drilled from the solid.

Truss members shall be assembled in the shop and holes for field connections shall be reamed or drilled while so assembled and the members match - marked.

Floor beams and stringers connections to be subpunched and reamed to a metal templet not less than 1" thick or reamed while assembled

Field connections for laterals and sway bracing punched full size.

Shop Paint - One coat of Dutch Boy Red Lead.

REQUIRED LIST.

ONE	END POST	L_0U_1 L - AS SHOWN
ONE	" "	L_0U_1 R - OPP. SHOWN
ONE	" "	L_0U_1AR
ONE	" "	L_0U_1AL
ONE	POST	U_1L_1R
ONE	"	U_1L_1L
ONE	POST	U_1L_1AR
ONE	"	U_1L_1AL
ONE	DIAGONAL	U_1L_2AR
ONE	"	U_1L_2AL
2	POST	U_2L_2
2	"	U_2L_2A
2	TOP CHORD	U_1U_2R
2	" "	U_1U_2L
2	" "	U_2U_3R
2	" "	U_2U_3L
2	BOTT. CHORD	L_0L_2R
2	" "	L_0L_2L
2	" "	L_2L_3R
2	" "	L_2L_3L
2	DIAGONAL	U_1L_2

ONE - Std. Name Pl. - Part 2 Nc

2 - 3/4" Bolts x 2" U.H. - 1 1/2 Thread - Sq Hd & Nut

BETHLEHEM STEEL COMPANY

Fabrication and Erection Dept. BETHLEHEM, PA.

DETAIL OF TRUSS SPAN RIVER

STRUCTURE RAILROAD ST. BRIDGE OVER LAMOILLE Johnson, Vt.

CUSTOMER RING CONSTRUCTION Co.

SHOP PAINT SEE NOTE

RIVETS — OPEN HOLES — UNLESS NOTED

DRAWN BY	DATE	CHECKED BY	DATE	ISSUED
A. Jon	3/6/28	Eaa	3-12-28	Craft

PROJECT NAME: JOHNSON

PROJECT NUMBER: BHO 1448(18)

HIGHWAY NO.: TH 2

BRIDGE NO.: 6

OVER: THE LAMOILLE RIVER

DESCRIPTION

FOR INFORMATIONAL PURPOSES ONLY

SHEET 68 OF 73

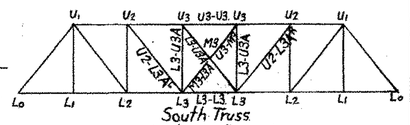
884 DWG. 2

Advance Bill # 178+ 179

Camber Diagram.

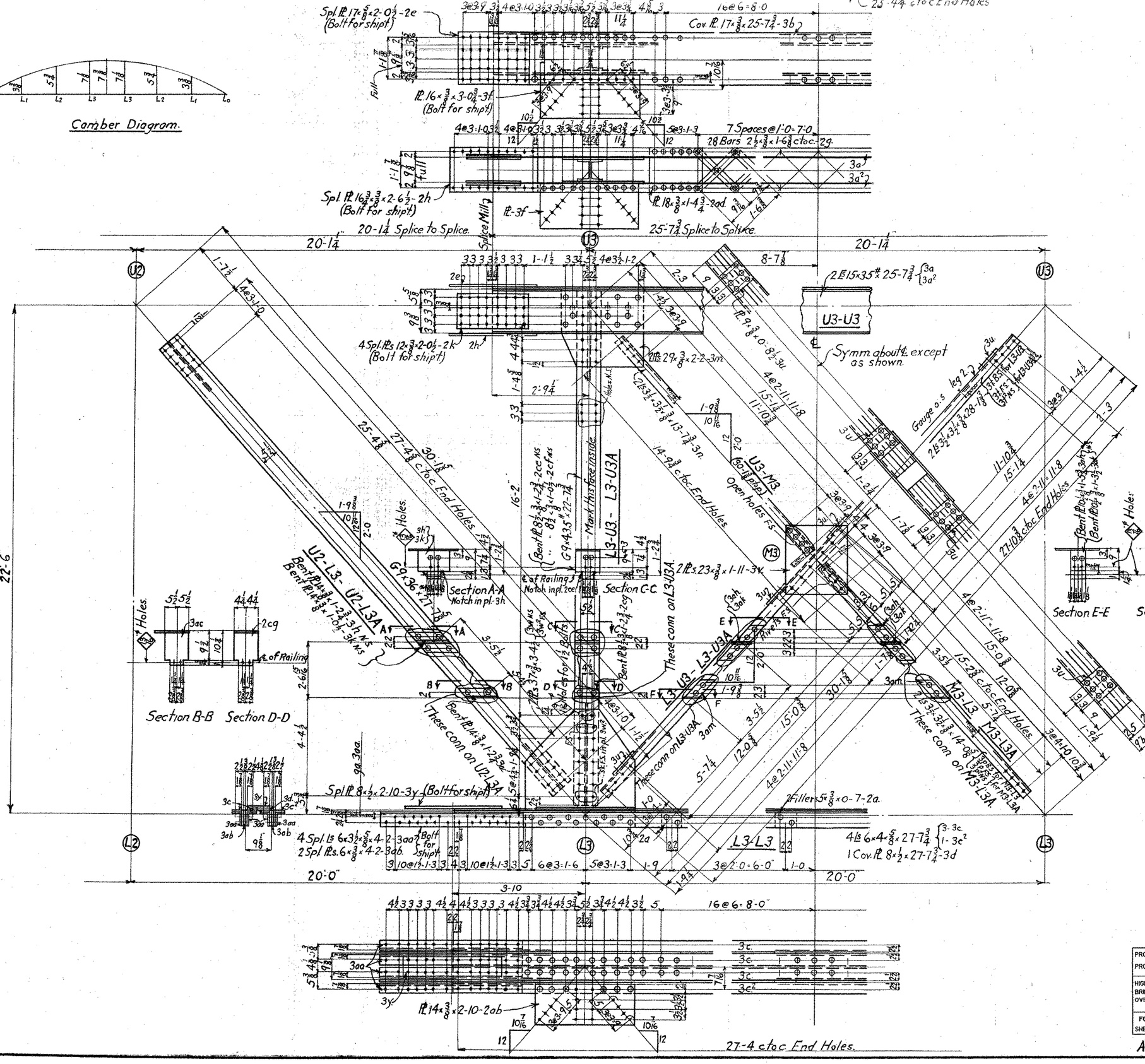


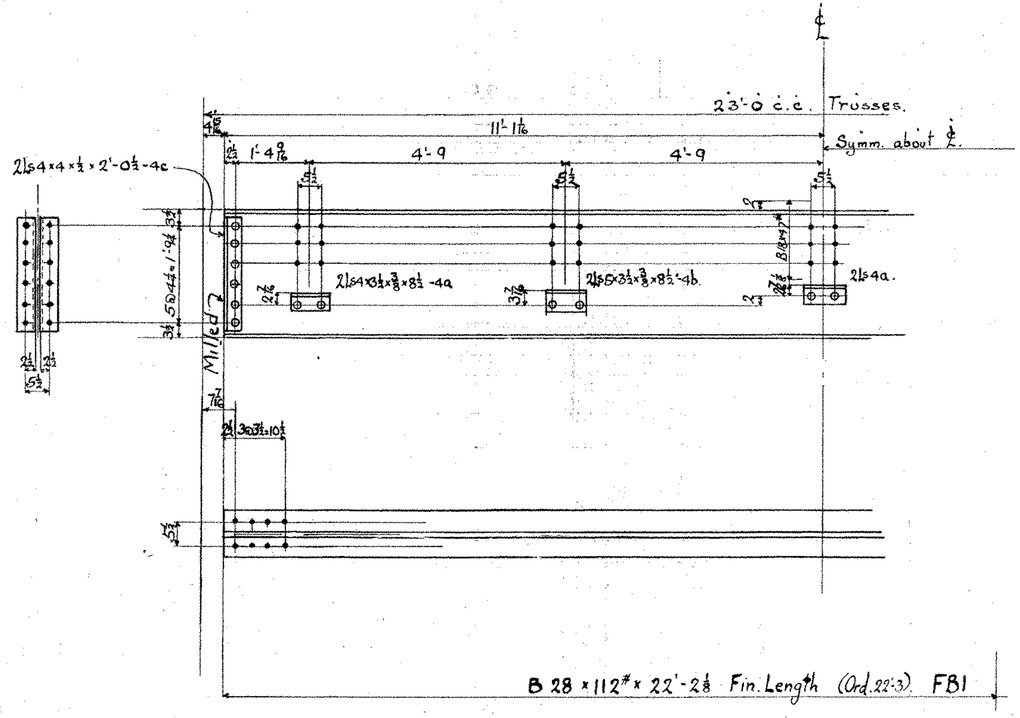
North Truss

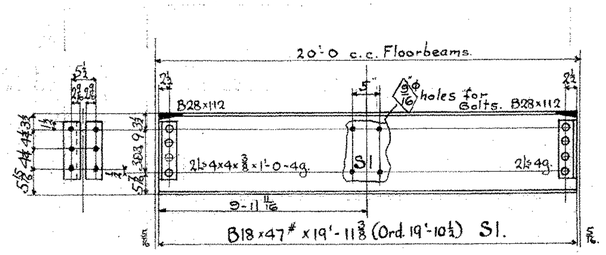


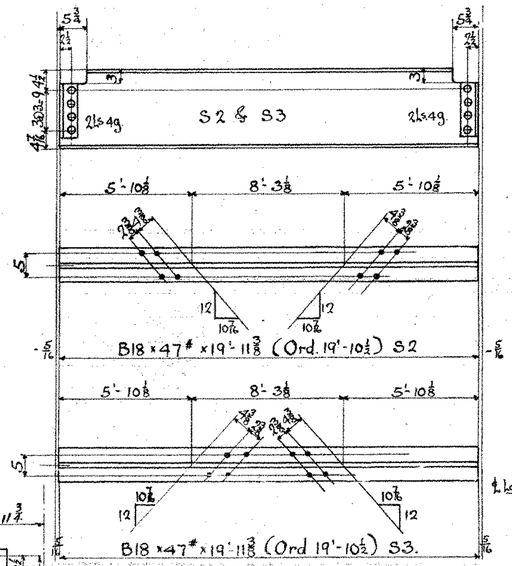
South Truss.

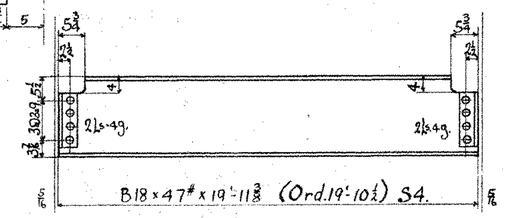
Marking Diagram.


Spl. Pl. 17×5/8×2-0 1/2-2e (Bolt for shipt)
Cov. Pl. 17×3/8×25-7 3/4-3b
Pl. 16×3/4×3-0 3/4-3f (Bolt for shipt)
Spl. Pl. 16 3/4×3/8×2-6 1/2-2h (Bolt for shipt)
Pl. 18×3/8×1-4 3/4-3ad.
7 Spaces @ 1'-0"-7-0
28 Bars 2 1/2×3/8×1-6 3/8 c to c-2g.
Pl.-3f
Splice Mill
20-1 1/4" Splice to Splice.
25-7 3/4" Splice to Splice.
20-1 1/4"
U2
U3
45 Spl. Pls 12×3/8×2-0 1/2-2k (Bolt for shipt)
2 Pls 27×3/8×2-2-3m
2 L 5×3 1/2×5/16 × 13-7 3/4-3n
2 L 5×3 1/2×5/16 × 28-7 3/8-3p
2 L 5×3 1/2×3/8 × 28-7 3/8-3q
2 L 5×3 1/2×3/8 × 14-0 3/8-3r
2 L 5×3 1/2×3/8 × 14-0 3/8-3s
2 L 5×3 1/2×3/8 × 14-0 3/8-3t
2 L 5×3 1/2×3/8 × 14-0 3/8-3u
2 L 5×3 1/2×3/8 × 14-0 3/8-3v
2 L 5×3 1/2×3/8 × 14-0 3/8-3w
2 L 5×3 1/2×3/8 × 14-0 3/8-3x
2 L 5×3 1/2×3/8 × 14-0 3/8-3y
2 L 5×3 1/2×3/8 × 14-0 3/8-3z
2 L 5×3 1/2×3/8 × 14-0 3/8-3aa
2 L 5×3 1/2×3/8 × 14-0 3/8-3ab
2 L 5×3 1/2×3/8 × 14-0 3/8-3ac
2 L 5×3 1/2×3/8 × 14-0 3/8-3ad
2 L 5×3 1/2×3/8 × 14-0 3/8-3ae
2 L 5×3 1/2×3/8 × 14-0 3/8-3af
2 L 5×3 1/2×3/8 × 14-0 3/8-3ag
2 L 5×3 1/2×3/8 × 14-0 3/8-3ah
2 L 5×3 1/2×3/8 × 14-0 3/8-3ai
2 L 5×3 1/2×3/8 × 14-0 3/8-3aj
2 L 5×3 1/2×3/8 × 14-0 3/8-3ak
2 L 5×3 1/2×3/8 × 14-0 3/8-3al
2 L 5×3 1/2×3/8 × 14-0 3/8-3am
2 L 5×3 1/2×3/8 × 14-0 3/8-3an
2 L 5×3 1/2×3/8 × 14-0 3/8-3ao
2 L 5×3 1/2×3/8 × 14-0 3/8-3ap
2 L 5×3 1/2×3/8 × 14-0 3/8-3aq
2 L 5×3 1/2×3/8 × 14-0 3/8-3ar
2 L 5×3 1/2×3/8 × 14-0 3/8-3as
2 L 5×3 1/2×3/8 × 14-0 3/8-3at
2 L 5×3 1/2×3/8 × 14-0 3/8-3au
2 L 5×3 1/2×3/8 × 14-0 3/8-3av
2 L 5×3 1/2×3/8 × 14-0 3/8-3aw
2 L 5×3 1/2×3/8 × 14-0 3/8-3ax
2 L 5×3 1/2×3/8 × 14-0 3/8-3ay
2 L 5×3 1/2×3/8 × 14-0 3/8-3az
2 L 5×3 1/2×3/8 × 14-0 3/8-3ba
2 L 5×3 1/2×3/8 × 14-0 3/8-3bb
2 L 5×3 1/2×3/8 × 14-0 3/8-3bc
2 L 5×3 1/2×3/8 × 14-0 3/8-3bd
2 L 5×3 1/2×3/8 × 14-0 3/8-3be
2 L 5×3 1/2×3/8 × 14-0 3/8-3bf
2 L 5×3 1/2×3/8 × 14-0 3/8-3bg
2 L 5×3 1/2×3/8 × 14-0 3/8-3bh
2 L 5×3 1/2×3/8 × 14-0 3/8-3bi
2 L 5×3 1/2×3/8 × 14-0 3/8-3bj
2 L 5×3 1/2×3/8 × 14-0 3/8-3bk
2 L 5×3 1/2×3/8 × 14-0 3/8-3bl
2 L 5×3 1/2×3/8 × 14-0 3/8-3bm
2 L 5×3 1/2×3/8 × 14-0 3/8-3bn
2 L 5×3 1/2×3/8 × 14-0 3/8-3bo
2 L 5×3 1/2×3/8 × 14-0 3/8-3bp
2 L 5×3 1/2×3/8 × 14-0 3/8-3bq
2 L 5×3 1/2×3/8 × 14-0 3/8-3br
2 L 5×3 1/2×3/8 × 14-0 3/8-3bs
2 L 5×3 1/2×3/8 × 14-0 3/8-3bt
2 L 5×3 1/2×3/8 × 14-0 3/8-3bu
2 L 5×3 1/2×3/8 × 14-0 3/8-3bv
2 L 5×3 1/2×3/8 × 14-0 3/8-3bw
2 L 5×3 1/2×3/8 × 14-0 3/8-3bx
2 L 5×3 1/2×3/8 × 14-0 3/8-3by
2 L 5×3 1/2×3/8 × 14-0 3/8-3bz
2 L 5×3 1/2×3/8 × 14-0 3/8-3ca
2 L 5×3 1/2×3/8 × 14-0 3/8-3cb
2 L 5×3 1/2×3/8 × 14-0 3/8-3cc
2 L 5×3 1/2×3/8 × 14-0 3/8-3cd
2 L 5×3 1/2×3/8 × 14-0 3/8-3ce
2 L 5×3 1/2×3/8 × 14-0 3/8-3cf
2 L 5×3 1/2×3/8 × 14-0 3/8-3cg
2 L 5×3 1/2×3/8 × 14-0 3/8-3ch
2 L 5×3 1/2×3/8 × 14-0 3/8-3ci
2 L 5×3 1/2×3/8 × 14-0 3/8-3cj
2 L 5×3 1/2×3/8 × 14-0 3/8-3ck
2 L 5×3 1/2×3/8 × 14-0 3/8-3cl
2 L 5×3 1/2×3/8 × 14-0 3/8-3cm
2 L 5×3 1/2×3/8 × 14-0 3/8-3cn
2 L 5×3 1/2×3/8 × 14-0 3/8-3co
2 L 5×3 1/2×3/8 × 14-0 3/8-3cp
2 L 5×3 1/2×3/8 × 14-0 3/8-3cq
2 L 5×3 1/2×3/8 × 14-0 3/8-3cr
2 L 5×3 1/2×3/8 × 14-0 3/8-3cs
2 L 5×3 1/2×3/8 × 14-0 3/8-3ct
2 L 5×3 1/2×3/8 × 14-0 3/8-3cu
2 L 5×3 1/2×3/8 × 14-0 3/8-3cv
2 L 5×3 1/2×3/8 × 14-0 3/8-3cw
2 L 5×3 1/2×3/8 × 14-0 3/8-3cx
2 L 5×3 1/2×3/8 × 14-0 3/8-3cy
2 L 5×3 1/2×3/8 × 14-0 3/8-3cz
2 L 5×3 1/2×3/8 × 14-0 3/8-3da
2 L 5×3 1/2×3/8 × 14-0 3/8-3db
2 L 5×3 1/2×3/8 × 14-0 3/8-3dc
2 L 5×3 1/2×3/8 × 14-0 3/8-3dd
2 L 5×3 1/2×3/8 × 14-0 3/8-3de
2 L 5×3 1/2×3/8 × 14-0 3/8-3df
2 L 5×3 1/2×3/8 × 14-0 3/8-3dg
2 L 5×3 1/2×3/8 × 14-0 3/8-3dh
2 L 5×3 1/2×3/8 × 14-0 3/8-3di
2 L 5×3 1/2×3/8 × 14-0 3/8-3dj
2 L 5×3 1/2×3/8 × 14-0 3/8-3dk
2 L 5×3 1/2×3/8 × 14-0 3/8-3dl
2 L 5×3 1/2×3/8 × 14-0 3/8-3dm
2 L 5×3 1/2×3/8 × 14-0 3/8-3dn
2 L 5×3 1/2×3/8 × 14-0 3/8-3do
2 L 5×3 1/2×3/8 × 14-0 3/8-3dp
2 L 5×3 1/2×3/8 × 14-0 3/8-3dq
2 L 5×3 1/2×3/8 × 14-0 3/8-3dr
2 L 5×3 1/2×3/8 × 14-0 3/8-3ds
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2 L 5×3 1/2×3/8 × 14-0 3/8-3dv
2 L 5×3 1/2×3/8 × 14-0 3/8-3dw
2 L 5×3 1/2×3/8 × 14-0 3/8-3dx
2 L 5×3 1/2×3/8 × 14-0 3/8-3dy
2 L 5×3 1/2×3/8 × 14-0 3/8-3dz
2 L 5×3 1/2×3/8 × 14-0 3/8-3ea
2 L 5×3 1/2×3/8 × 14-0 3/8-3eb
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2 L 5×3 1/2×3/8 × 14-0 3/8-3ed
2 L 5×3 1/2×3/8 × 14-0 3/8-3ee
2 L 5×3 1/2×3/8 × 14-0 3/8-3ef
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2 L 5×3 1/2×3/8 × 14-0 3/8-3ei
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2 L 5×3 1/2×3/8 × 14-0 3/8-3ep
2 L 5×3 1/2×3/8 × 14-0 3/8-3eq
2 L 5×3 1/2×3/8 × 14-0 3/8-3er
2 L 5×3 1/2×3/8 × 14-0 3/8-3es
2 L 5×3 1/2×3/8 × 14-0 3/8-3et
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2 L 5×3 1/2×3/8 × 14-0 3/8-3fc
2 L 5×3 1/2×3/8 × 14-0 3/8-3fd
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2 L 5×3 1/2×3/8 × 14-0 3/8-3gn
2 L 5×3 1/2×3/8 × 14-0 3/8-3go
2 L 5×3 1/2×3/8 × 14-0 3/8-3gp
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2 L 5×3 1/2×3/8 × 14-0 3/8-3gr
2 L 5×3 1/2×3/8 × 14-0 3/8-3gs
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2 L 5×3 1/2×3/8 × 14-0 3/8-3gu
2 L 5×3 1/2×3/8 × 14-0 3/8-3gv
2 L 5×3 1/2×3/8 × 14-0 3/8-3gw
2 L 5×3 1/2×3/8 × 14-0 3/8-3gx
2 L 5×3 1/2×3/8 × 14-0 3/8-3gy
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2 L 5×3 1/2×3/8 × 14-0 3/8-3jg
2 L 5×3 1/2×3/8 × 14-0 3/8-3jh
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2 L 5×3 1/2×3/8 × 14-0 3/8-3jm
2 L 5×3 1/2×3/8 × 14-0 3/8-3jn
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2 L 5×3 1/2×3/8 × 14-0 3/8-3jt
2 L 5×3 1/2×3/8 × 14-0 3/8-3ju
2 L 5×3 1/2×3/8 × 14-0 3/8-3jv
2 L 5×3 1/2×3/8 × 14-0 3/8-3jw
2 L 5×3 1/2×3/8 × 14-0 3/8-3jx
2 L 5×3 1/2×3/8 × 14-0 3/8-3jy
2 L 5×3 1/2×3/8 × 14-0 3/8-3jz
2 L 5×3 1/2×3/8 × 14-0 3/8-3ka
2 L 5×3 1/2×3/8 × 14-0 3/8-3kb
2 L 5×3 1/2×3/8 × 14-0 3/8-3kc
2 L 5×3 1/2×3/8 × 14-0 3/8-3kd
2 L 5×3 1/2×3/8 × 14-0 3/8-3ke
2 L 5×3 1/2×3/8 × 14-0 3/8-3kf
2 L 5×3 1/2×3/8 × 14-0 3/8-3kg
2 L 5×3 1/2×3/8 × 14-0 3/8-3kh
2 L 5×3 1/2×3/8 × 14-0 3/8-3ki
2 L 5×3 1/2×3/8 × 14-0 3/8-3kj
2 L 5×3 1/2×3/8 × 14-0 3/8-3kk
2 L 5×3 1/2×3/8 × 14-0 3/8-3kl
2 L 5×3 1/2×3/8 × 14-0 3/8-3km
2 L 5×3 1/2×3/8 × 14-0 3/8-3kn
2 L 5×3 1/2×3/8 × 14-0 3/8-3ko
2 L 5×3 1/2×3/8 × 14-0 3/8-3kp
2 L 5×3 1/2×3/8 × 14-0 3/8-3kq
2 L 5×3 1/2×3/8 × 14-0 3/8-3kr
2 L 5×3 1/2×3/8 × 14-0 3/8-3ks
2 L 5×3 1/2×3/8 × 14-0 3/8-3kt
2 L 5×3 1/2×3/8 × 14-0 3/8-3ku
2 L 5×3 1/2×3/8 × 14-0 3/8-3kv
2 L 5×3 1/2×3/8 × 14-0 3/8-3kw
2 L 5×3 1/2×3/8 × 14-0 3/8-3kx
2 L 5×3 1/2×3/8 × 14-0 3/8-3ky
2 L 5×3 1/2×3/8 × 14-0 3/8-3kz
2 L 5×3 1/2×3/8 × 14-0 3/8-3la
2 L 5×3 1/2×3/8 × 14-0 3/8-3lb
2 L 5×3 1/2×3/8 × 14-0 3/8-3lc
2 L 5×3 1/2×3/8 × 14-0 3/8-3ld
2 L 5×3 1/2×3/8 × 14-0 3/8-3le
2 L 5×3 1/2×3/8 × 14-0 3/8-3lf
2 L 5×3 1/2×3/8 × 14-0 3/8-3lg
2 L 5×3 1/2×3/8 × 14-0 3/8-3lh
2 L 5×3 1/2×3/8 × 14-0 3/8-3li
2 L 5×3 1/2×3/8 × 14-0 3/8-3lj
2 L 5×3 1/2×3/8 × 14-0 3/8-3lk
2 L 5×3 1/2×3/8 × 14-0 3/8-3ll
2 L 5×3 1/2×3/8 × 14-0 3/8-3lm
2 L 5×3 1/2×3/8 × 14-0 3/8-3ln
2 L 5×3 1/2×3/8 × 14-0 3/8-3lo
2 L 5×3 1/2×3/8 × 14-0 3/8-3lp
2 L 5×3 1/2×3/8 × 14-0 3/8-3lq
2 L 5×3 1/2×3/8 × 14-0 3/8-3lr
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2

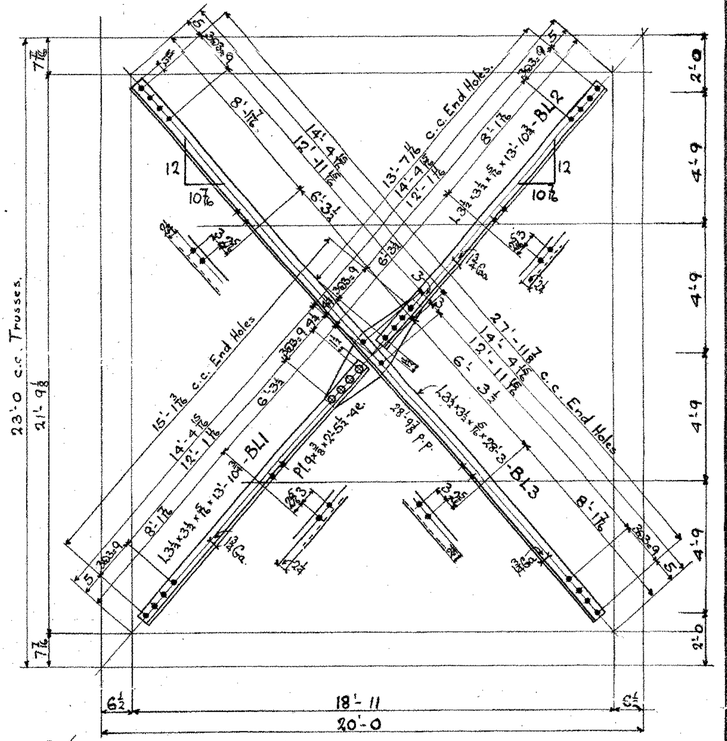


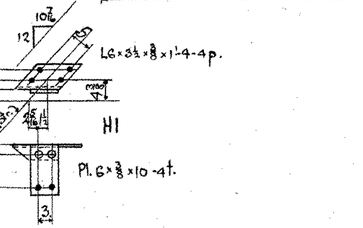






Note:-
Re entrant cuts to be filleted by drilling



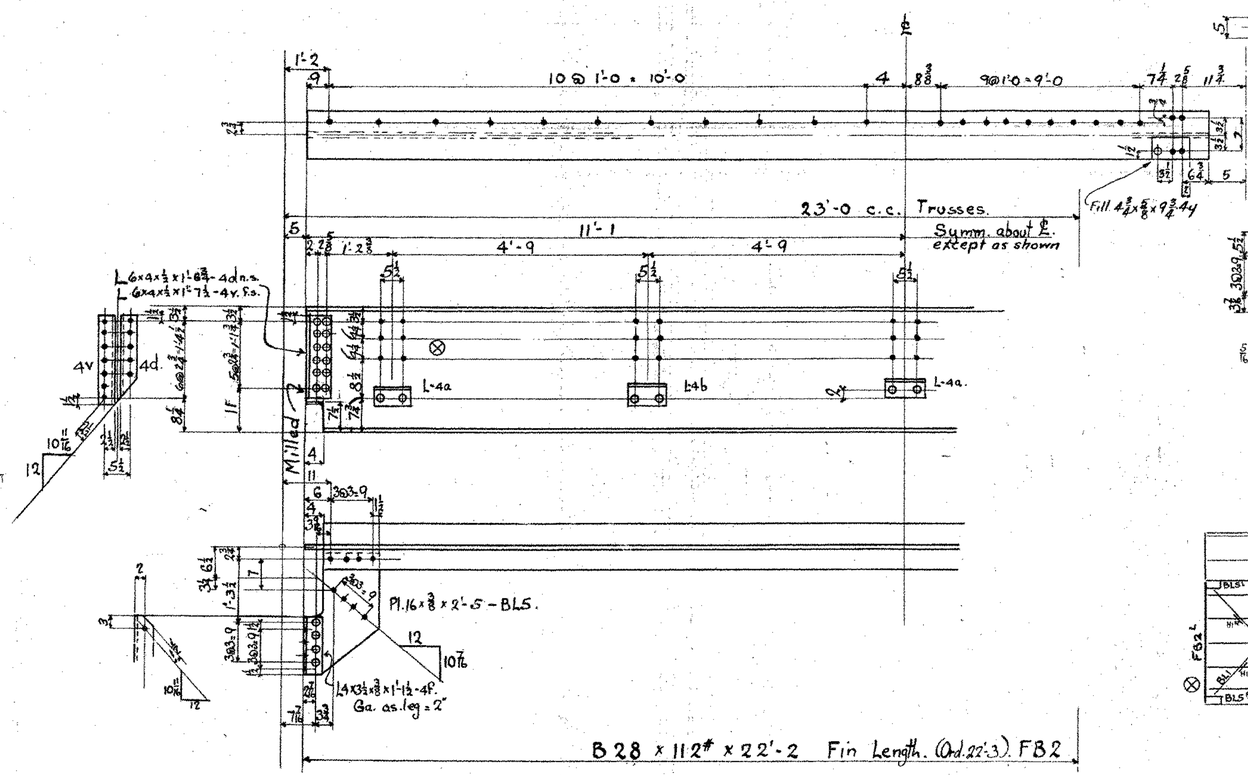


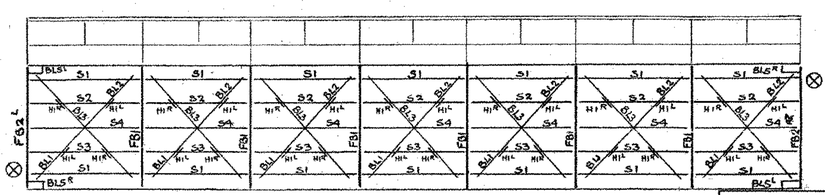
Required List

6 Floorbeams	FB1
One "	FB2R
14 Stringers	S1
1 "	S2
1 "	S3
1 "	S4
1 Bottom Laterals	BL1
1 " "	BL2
1 " "	BL3
2 " " "	BL5R
2 " " "	BL5L
14 Hangers	H1R
14 "	H1L
One Floorbeam	FB2L

Notes:-
Specifications. Std. Spec. for Steel Highway Bridges.
U.S. Dept. of Agriculture Dept. Bulletin #1269
Rivets 7/8 ϕ
Open Holes 15/16 ϕ except as noted.
Holes in material 3/4 inch or less in thickness may be punched full size
Holes in material more than 3/4 thick shall be subpunched & reamed, or drilled from the solid.
Truss members shall be assembled in shop & holes for field connections shall be reamed or drilled while so assembled & the members match-marked.
Floorbeam & stringer connections to be subpunched & reamed to a metal templet not less than 1" thick or reamed while assembled.
Field connections for laterals & sway bracing punched full size.

Shop Paint:- One coat of Dutch Boy Red Lead.





Marking Diagram.

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)
HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER
FOR INFORMATIONAL PURPOSES ONLY
SHEET 70 OF 73

Adv. Bill # 4

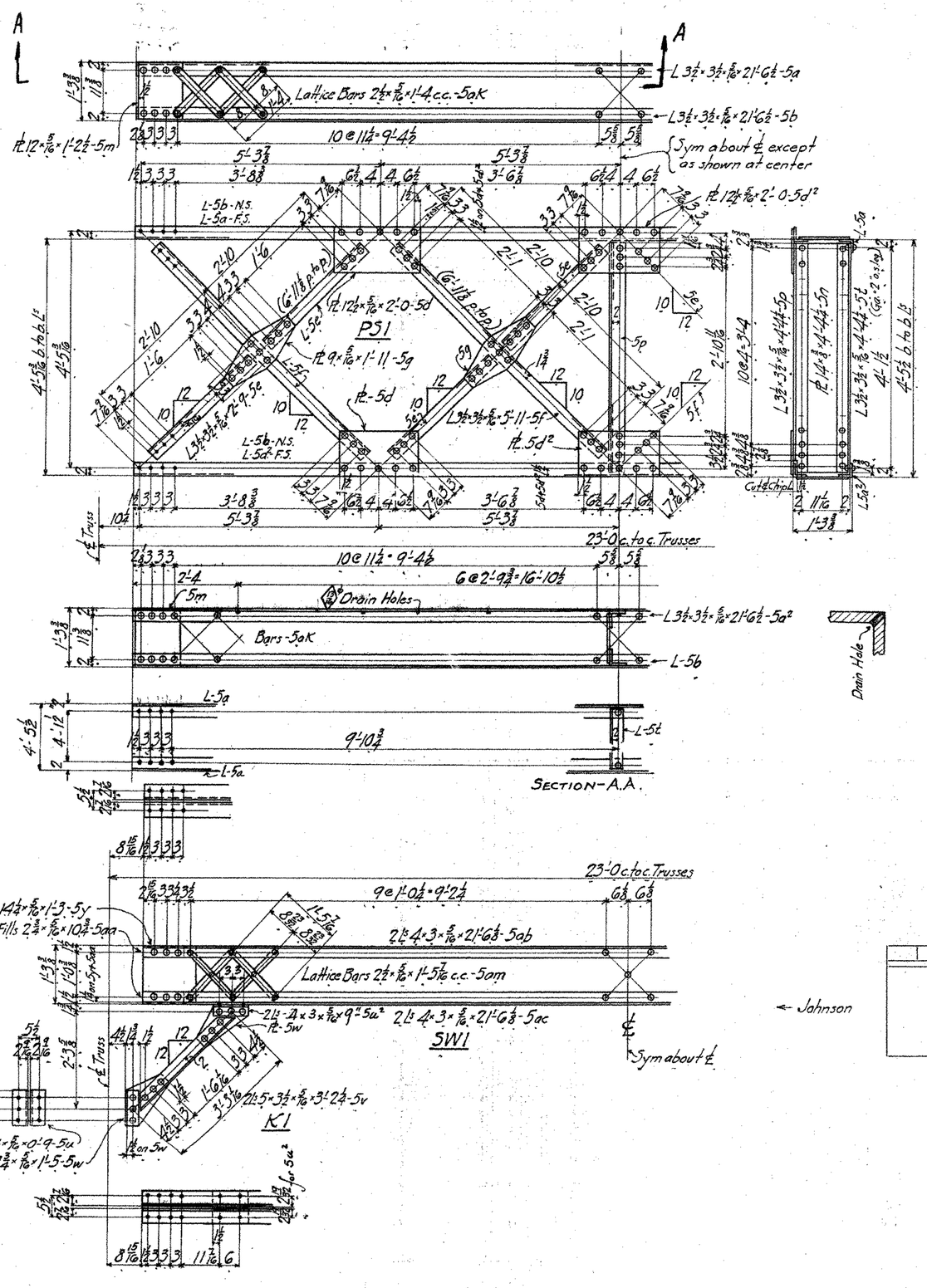
BETHLEHEM STEEL COMPANY
Fabrication and Erection Dept. BETHLEHEM, PA.

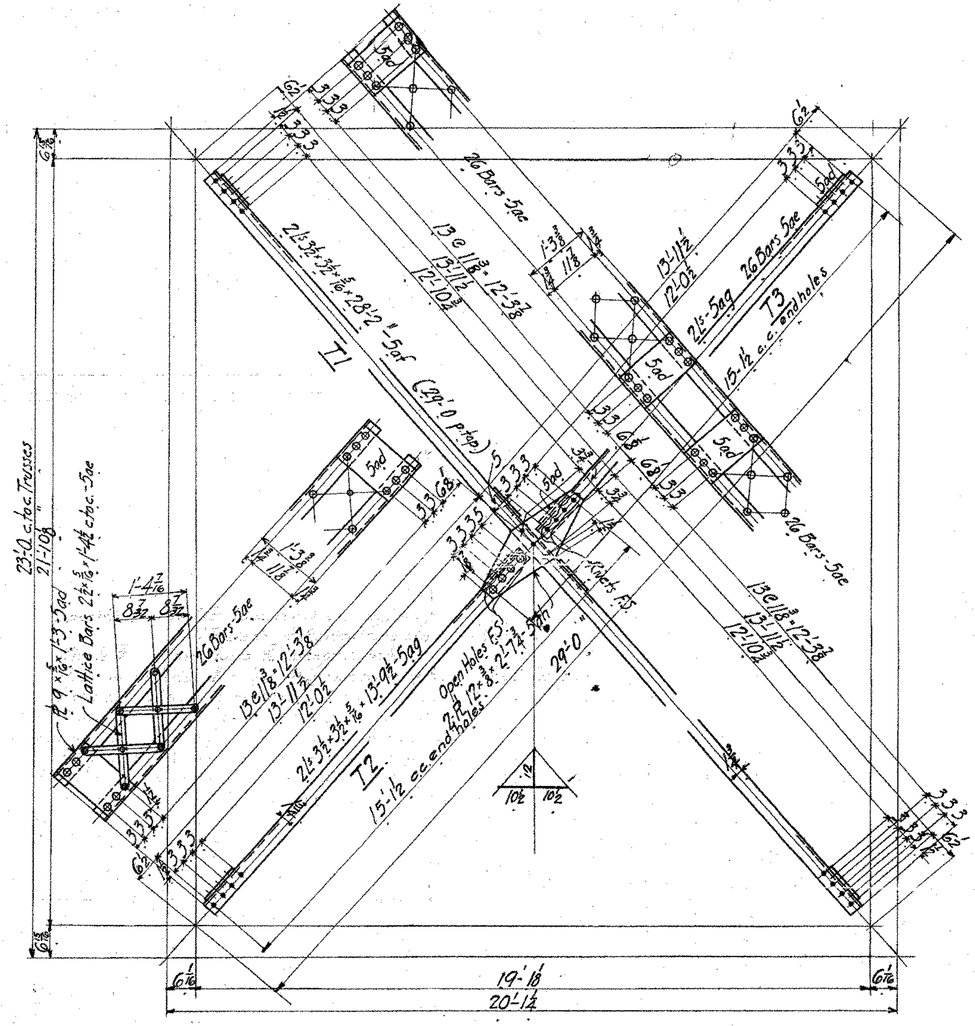
DETAIL OF Floorbeams, Stringers & Bottom Laterals.
STRUCTURE Railroad St. Bridge over Lamoille River. Bridge #3
CUSTOMER Ring Const. Co.
SHOP PAINT See Note.
RIVETS OPEN HOLES UNLESS NOTED

DRAWN BY	DATE	CHECKED BY	DATE	SQUAD
R. MacL.	2/29/28	C.A.C.	3-12-28	Croll

REVISIONS No.	DATE	BY	DESCRIPTION
1	3-22-28	J.F.T.	Cut on L4f

FILE F 7297 CONT. EE 2884 DWG. # 4





Required List

2. Portals. PS1.
4. Sway Braces SW1.
8. Knee Braces. K1.
5. Top Laterals, T1.
5. " " T2.
5. " " T3.

Specifications - Std Spec. for Steel Highway Bridges.
U.S. Dept of Agriculture Dep't Bulletin #1259
Rivets ⅞ ϕ Open Holes 15/16 ϕ except as noted
Holes in material ¾" or less in thickness may be punched full size.
Holes in material more than ¾" thick shall be subpunched ⅝ reamed, or drilled from the solid.
Truss members shall be assembled in the shop ⅝ holes for field connections shall be reamed or drilled while so assembled ⅝ the members matchmarked.
Floor beam ⅝ stringer connections to be subpunched ⅝ reamed to a metal templet not less than 1" thick or reamed while assembled.
Field connections for laterals ⅝ sway bracing punched full size.

Shop Paint - One Coat of Dutch Bay Red Lead.

Adv. Bill #2

BETHLEHEM STEEL COMPANY
Fabrication and Erection Dept. BETHLEHEM, PA.

DETAIL OF Portals, Laterals, Sway Braces
STRUCTURE Railroad St. Br. ℄ Lamoille R. Br. ℄ Johnson, Vt.
CUSTOMER Ring Construction Co.

SHOP PAINT See Note
RIVETS ∿ OPEN HOLES ∿ UNLESS NOTED

DRAWN BY	DATE	CHECKED BY	DATE	SQUAD
CBK	3/5/28	a.gm	3/8/28	Covell

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)
DESCRIPTION holes as shown

HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER

FOR INFORMATIONAL PURPOSES ONLY
SHEET 71 OF 73

884 DWG. 5

Handrailing H.R.1. Right

RP1

Handrailing HR2

RP2

RP1

Section A-A

Section B-B

Section C-C

Material in RP1

2 Ls 5 x 3 x 3/8 x 5'-0" - 6a
2 Ls 3 x 2 1/2 x 5/16 x 0'-5" - 6b
1 Fill 2 1/2 x 1/2 x 0'-5" - 6d

Material in RP2

2 Ls 5 x 3 x 3/8 x 4'-3 1/2" - 6c
2 Ls 6b
1 Fill 6d

All Washers 2 1/2" ϕ x 1 1/2" - 13/16" ϕ holes except as noted

Required List

8	Railing Posts RP1
7	" " RP2
2	" " RP3
1	Panel of Handrailing HR1 Right
1	" " HR1 Left
12	" " HR2
1	" " HR3 Right
1	" " HR3 Left
2	" " HR4 Right
2	" " HR4 Left
1	" " HR5

Handrailing HR3 Right

Handrailing HR4 Right

Handrailing HR5

HR1 Right — HR2 — HR2 — HR2 — HR2 — HR2 — HR1 Left

HR3 Right — HR4 Right — HR4 Right — HR5 — HR4 Left — HR4 Left — HR3 Left

Section E-E

Section F-F

Section G-G

Section D-D

RP3

Material in RP3

2 Ls 4 x 3 x 3/8 x 4'-10" - 6e
1 L 6 x 6 x 5/8 x 0'-10" - 6f
1 L 6 x 3 1/2 x 3/8 x 0'-6" - 6g
1 L 6 x 6 x 3/8 x 0'-6" - 6h

217 Tap Bolts 1" ϕ x 1 1/4" UH - Sq Head
217 Washers 2" ϕ x 3/8 - 13/16" ϕ Hole
62 Pins 4" ϕ x 5" long
} Total amount required for all railing.

Advance Bill #9

Pins & Tap Bolts not ordered.

BETHLEHEM STEEL COMPANY
Fabrication and Erection Dept. BETHLEHEM, PA.

DETAIL OF Handrailing
STRUCTURE Railroad St. Bridge over Lamoille River
CUSTOMER Ring Construction Co

SHOP PAINT One Coat of Dutch Boy Red Lead
RIVETS 3/4" ϕ OPEN HOLES 13/16" ϕ UNLESS NOTED

DRAWN BY	DATE	CHECKED BY	DATE	SQUAD
WJD	3-6-28	GAD	3-15-28	Croll

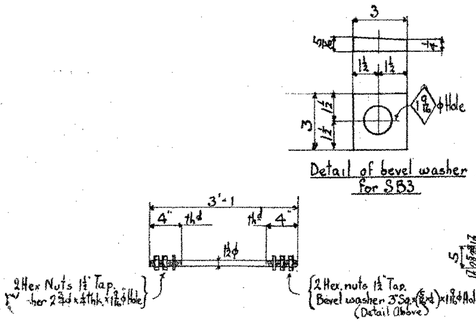
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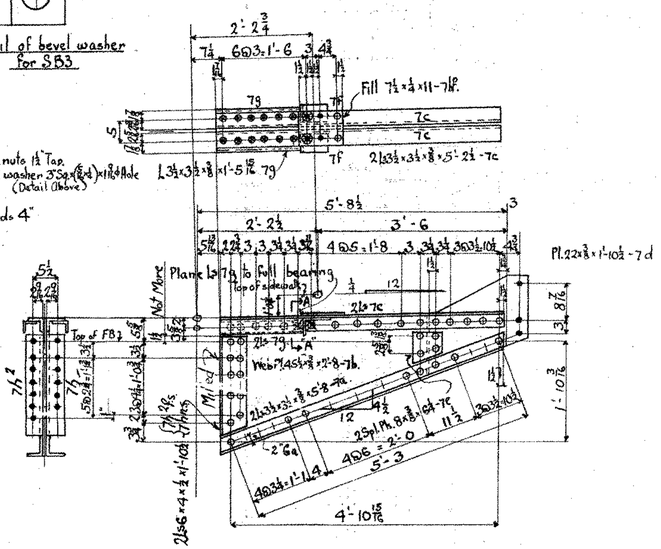
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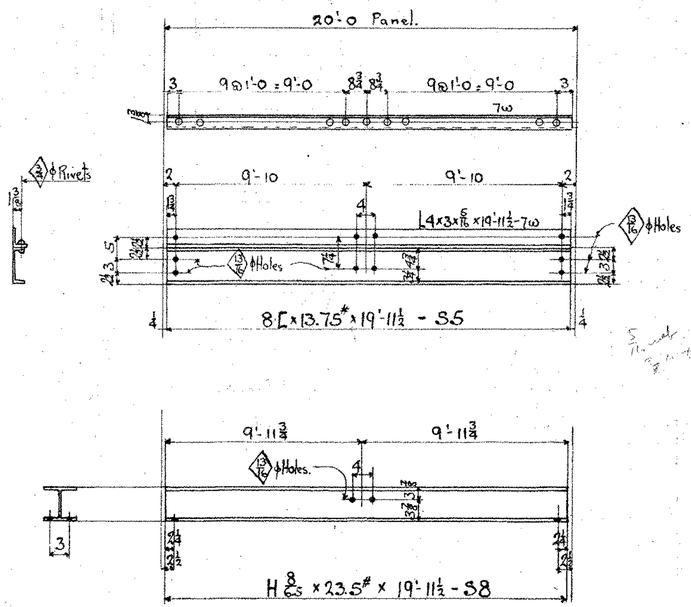
PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)
HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER

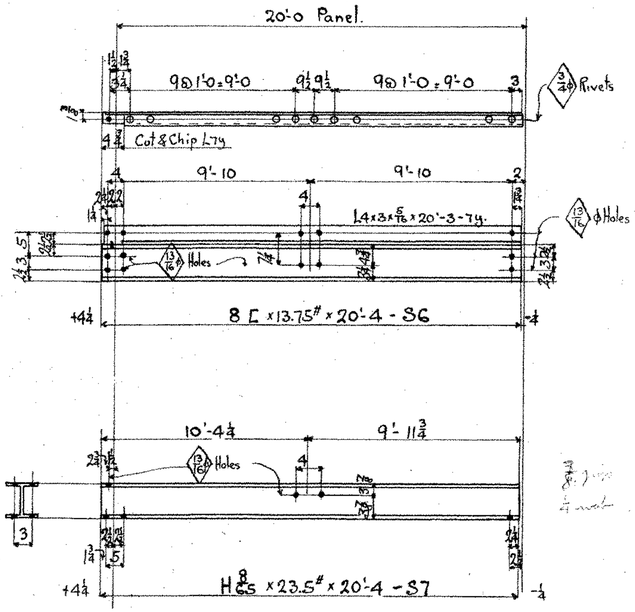
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SHEET 72 OF 73

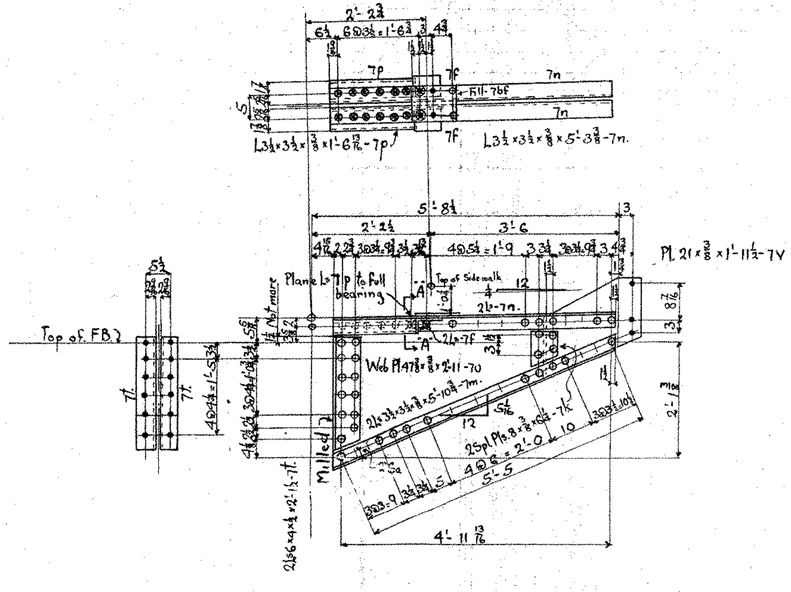
FILE F7297 CONT. EE 2884 DWG. 6

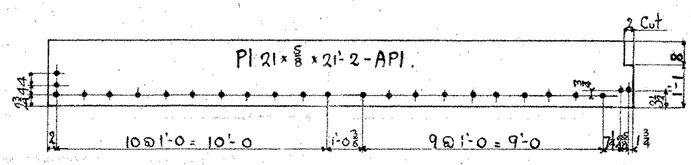


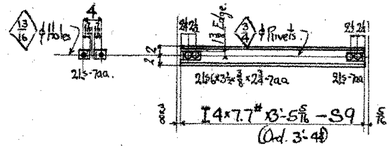


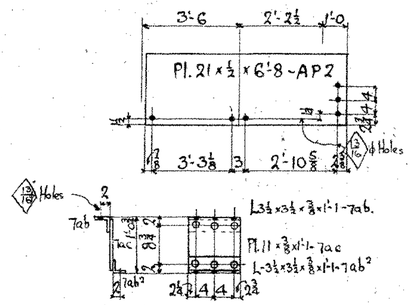










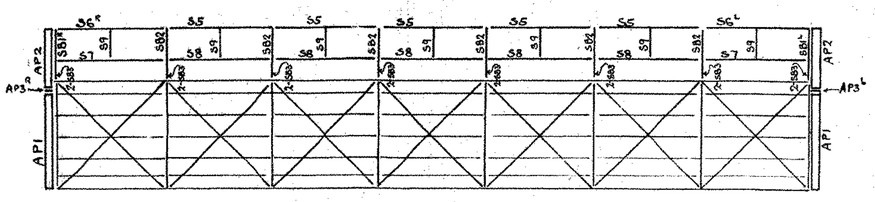


Notes:-
Specifications Std. Spec. for Steel Highway Bridges
U.S. Dept. of Agriculture Dept. Bulletin #1259
Rivets ⅞ϕ except as noted
Open Holes 13/16ϕ except as noted.
Holes in material ¾ inch or less in thickness may be punched full size
Holes in material more than ¾ thick shall be subpunched & reamed or drilled from the solid
Truss members shall be assembled in shop & holes for field connections shall be reamed or drilled while so assembled & the members match-marked.
Floor beam & Stringer connections to be subpunched & reamed to a metal templet not less than 1" thick or reamed while assembled.
Field connections for laterals & sway bracing punched full size.

Shop Paint:- One coat of Dutch Boy Red Lead.

Required List

One	Sidewalk Bracket	SB1R
One	" "	SB1L
6	" "	SB2
5	Stringers	S5
One	"	S6R
One	"	S6L
2	"	S7
5	"	S8
7	Struts	S9
2	Apron Plates	AP1
2	" "	AP2
One	" "	AP3R
16	Sidewalk Bracket Bolts	SB3
One	Apron Plate	AP3L



Marking Diagram.

BETHLEHEM STEEL COMPANY
Fabrication and Erection Dept. BETHLEHEM, PA.

DETAIL OF Sidewalk Brackets, stringers, Apron Plates
STRUCTURE: Railroad St. Bridge over Lamoille River. Bridge #18
CUSTOMER Ring Const. Co.
SHOP PAINT See Note
RIVETS OPEN HOLES UNLESS NOTED

DRAWN BY	DATE	CHECKED BY	DATE	SCALE
R.MacL.	3/7/28	Cass	3-12-28	Cmull

REVISIONS

NO.	DATE	BY	DESCRIPTION

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(18)
HIGHWAY NO.: TH 2
BRIDGE NO.: 6
OVER: THE LAMOILLE RIVER
FOR INFORMATIONAL PURPOSES ONLY
SHEET 73 OF 73

Adv. Bill # 5 x 7

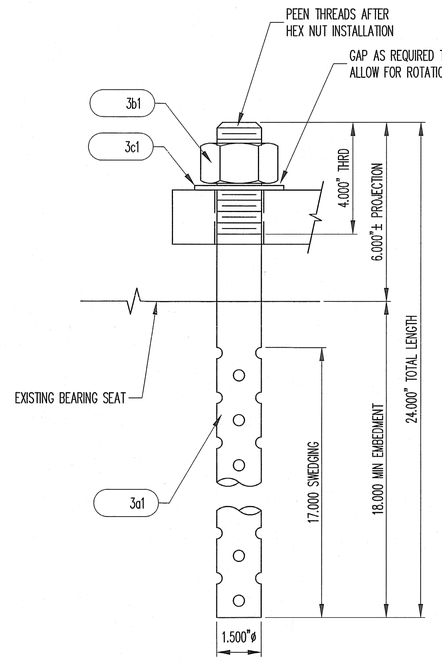
FILE F 7297 CONT.-EE2884 DWG. # 7.

MK	QTY.	DESCRIPTION	MATERIAL	LENGTH	REMARKS	PART NO.
3A	16	SWEDGE ANCHOR ROD				
3a1	16	1.500"ø X 24.000"	A307 GR C		17" SWEDGE, 4" THRD; A153-HDG	
3B	16	HEAVY HEX NUT				
3b1	16	1.500"ø	A563-DH OR A194-2H		DRY LUBE; A153-HDG	
3C	16	PLATE WASHER				
3c1	16	0.375" X 3.000"	A36	3.000"	1.625" DIAMETER HOLE CTR; A123-HDG	

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

BRIDGE #6 ANCHOR BOLT SCHEDULE

DSB SHEET REF.	BRG MARK	LOCATION	QTY
16225-1121-01	1A	ABUT #1	8
16225-1121-02	2A	ABUT #2	8



ANCHOR ASSEMBLY DETAIL

SEE SHEET GN1 FOR GENERAL NOTES

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CK'D BY MH CK'D BY
MAR 15 2006
RESUBMIT APPROVED
BY DATE 3/16/06

REV.	DESCRIPTION	DATE	DET.	CKD.
1	REVISE TITLE BLOCK	3/3/06	SP	PMG

D.S. BROWN
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3561
FAX: 419.257.0332
4201 NOREX DRIVE
CHASKA, MINNESOTA 55318
952.368.3000
FAX: 952.448.7000
DSBROWN.COM

LOCATION — RAILROAD ST (TH 2) OVER LAMOILLE RIVER
BRIDGE — 6
1 PROJECT — AC BHO 1448(18) PROJECT NAME: JOHNSON
F.A.P. NO. — –
P.O. NO. — 996
DESIGNER — VAOT
CUSTOMER — CONTRACTORS CRANE SERVICE

ITEM	QUANTITY
–	–
–	–
–	–
–	–
–	–
–	–
–	–
–	–
–	–

DESCRIPTION:
ANCHOR BOLT ASSEMBLY
LAMOILLE CO., VT

SCALE:	DRAWN BY:	CHECKED BY:	DATE:	
N.T.S.	SP	PMG	1/06	–
PROJECT NUMBER		PRODUCT CODE	RELEASE	SHEET
16225		1121	1	03

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FEB - 2 2006

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

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952.368.3000
Fax: 952.448.7000

International Division
57 Pioneer Road
Singapore 628508
65.862.6266
Fax: +65.862.6255
e-mail:
dsbrown@mbox2.singnet.com.sg

Bonding Procedure

The bonding process for laminating PTFE to the fabric pad is as follows:

The fabric pad surface to be bonded is prepared for lamination. A two-part structural grade epoxy is then applied per the manufacture's instructions. The PTFE is cut slightly oversize to account for the possible drift. The PTFE is then applied to the fabric pad and put into a vacuum press at the appropriate pressure for the necessary time period.

Once the fabric pad PTFE is removed from the press, the PTFE is trimmed to plan size and the pads are submitted for quality control review.

CCS CONSTRUCTORS LLC
138 MUNSON AVENUE
MORRISVILLE, VT 05661

Johnson AC BH01448(18)

VAOT.
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FEB 09 2006
RESUBMIT_____ APPROVED ✓
BY _____ DATE 2/20/06

Structures Copy

Equal Opportunity Employer

DSBROWN

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

Procedure No: A-GTF-01 Date Issued: 1-9-04 Revision No: 0 Rev. Date: _____

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

1. Non-Fracture Critical [X] Fracture Critical [ ] WPS Expiration Date: _____
2. Qualified in accordance with: AWS D1.5- 2002 , AWS D1.6-99
   Referenced PQR No(s). PQR-GTAW-01-(03) ___ , ___ , ___
   Referenced FWST No(s). PQR-GTAW-01(03) , _____ , ___ , ___
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W, 304SS, 316SS
4. Material Thickness (es) Unlimited
5. Welding process GTAW
6. Manual [X] , machine [ ] , or semiautomatic [ ]
7. Position(s) of welding 1F, 2F
8. Filler metal specification AWS A5.9
9. Filler metal class and brand name ER309L (Murrex)
10. Flux class & brand N/A , Type N/A
11. Shielding gas 100% Argon Flow rate 20 CFH
12. Single pass [X] Or multiple pass [ ]
13. Single arc [X] Or multiple arc [ ]
14. Welding Current DCEN
15. Polarity Straight
16. Welding progression stringers
17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)
18. Postheat treatment N/A
19. Calculated Heat Input (KJ/In) Min 10.9 KJ Max 20.4 KJ
20. Electrode extension (electrical stickout) N/A

For DOT Approval

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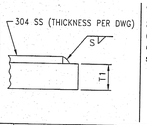
CK'D BY _____ OK'D BY JWK

RESUBMIT _____ APPROVED ✓

BY _____ DATE 2/22/06

Weld size (in)	Pass No(s).	Electrode Size (In)	Welding Process Variables AMPS/WFS*	VOLTS	Travel Speed (IPM)
20 ga.	1	1/8"	170-200	15-17	10-14
16 ga.	1	1/8"	170-200	15-17	10-14
14 ga.	1	1/8"	170-200	15-17	10-14
12 ga.	1	1/8"	170-200	15-17	10-14
11 ga.	1	1/8"	170-200	15-17	10-14
10 ga.	1	1/8"	170-200	15-17	10-14
8 ga.	1	1/8"	170-200	15-17	10-14
3/16"	1	1/8"	170-200	15-17	10-14

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



T_1 = Varies
S = Fillet Weld Size (Fillet weld must not exceed thickness of stainless steel)

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

Prepared By: James R. Connor DSB QA Manager

Project: _____

DSB Job: 16225-1121-VT

Preheat and Interpass Temperature Chart

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

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

DSBROWN

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

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

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

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

For DOT Approval

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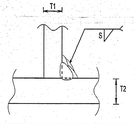
CK'D BY _____ CK'D BY JWC

RESUBMIT _____ APPROVED ✓

BY RLW DATE 2/20/06

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

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



T1 = Varies
T2 = Varies
S = Weld Size

**** T1 & T2 equal to or less than 3/4" for 1/4" welds.**

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

Prepared By: James R Connor DSB QA Manager

Project: _____

DSB Job: 16225-1121-VT

Preheat and Interpass Temperature Chart

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

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

DSBROWN

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

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

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

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

For DOT Approval

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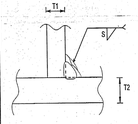
OK'D BY _____ OK'D BY JWC

RESUBMIT _____ APPROVED ✓

BY _____ DATE 2/20/06

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

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



T1 = Varies
T2 = Varies
S = Weld Size

**** T1 & T2 equal to or less than 3/4" for 1/4" welds.**

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

Prepared By: James R. Connor DSB QA Manager

Project: _____

DSB Job: 16225-1121-VT

Preheat and Interpass Temperature Chart

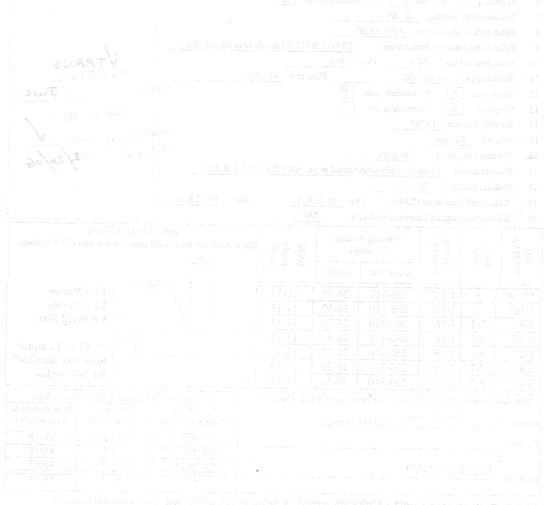
Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450 °F
>3/4" to ≤1.5"	70°F	450 °F
>1.5" to ≤2.5"	150°F	450 °F
>2.5"	225°F	450 °F

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

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138 MUNSON AVENUE
MORRISVILLE, VT 05661

Johnson AC BHO 1448(18)



GENERAL NOTES:

1. MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE VERMONT AGENCY OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2001 EDITION" SECTIONS 531 AND 731, SPECIAL PROVISIONS, SUPPLEMENTAL SPECIFICATIONS AND THE CONTRACT PLANS. GENERAL SHOP PRACTICES, STRUCTURAL FABRICATION, WELDING AND ASSEMBLY SHALL BE GOVERNED BY ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE.

2. THESE SHOP DRAWINGS WERE PREPARED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. THE D.S. BROWN COMPANY DOES NOT ACCEPT LIABILITY FOR THE DESIGN OF THE PRODUCTS DETAILED IN THESE SHOP DRAWINGS.

3. THE D.S. BROWN COMPANY TO SUPPLY ONLY THE PARTS SHOWN ON THIS DRAWING.

4. ALL STEEL SHALL BE PRODUCED IN THE UNITED STATES OF AMERICA.

5. PTFE (TEFLON) SHALL BE VIRGIN, UNFILLED POLYTETRAFLUOROETHYLENE SATISFYING THE REQUIREMENTS OF ASTM D4894.

6. PTFE IS TO BE PURCHASED ETCHED ON ONE SIDE FOR BONDING. THE BONDING PROCESS FOR LAMINATING PTFE TO THE FABRIC PAD IS AS FOLLOWS: THE FABRIC PAD SURFACE TO BE BONDED IS PREPARED FOR LAMINATION. A TWO-PART STRUCTURAL GRADE EPOXY IS THEN APPLIED PER THE MANUFACTURE'S INSTRUCTIONS. THE PTFE IS CUT SLIGHTLY OVERSIZE TO ACCOUNT FOR POSSIBLE DRIFT. THE PTFE IS THEN APPLIED TO THE FABRIC PAD AND PUT INTO A VACUUM PRESS AT THE APPROPRIATE PRESSURE FOR THE NECESSARY TIME PERIOD. ONCE THE FABRIC PAD AND PTFE IS REMOVED FROM THE PRESS, THE PTFE IS TRIMMED TO PLAN SIZE AND THE PADS ARE SUBMITTED FOR QUALITY CONTROL REVIEW.

7. STAINLESS STEEL SHALL CONFORM TO ASTM A240 – TYPE 304 AND SHALL BE 14 GA. (0.078"). STAINLESS STEEL SLIDING SURFACES IN CONTACT WITH PTFE SHALL HAVE A NO. 8 MIRROR FINISH AND ALL OTHERS SHALL HAVE A 2B FINISH.

8. WELDING SHALL CONFORM TO AWS D1.5 BRIDGE WELDING CODE AS WELL AS ANY STATE STANDARD OR PROJECT SPECIAL PROVISION.

9. PRIOR TO INSTALLATION – THE PIN SHAFT, PIN THREADS, STEEL PLATE BORE, STEEL PLATE CRADLE AND MACHINED NUT SHALL BE LUBRICATED.

10. UNLESS SPECIFIED OTHERWISE, THE DIMENSIONAL TOLERANCES AND SURFACES FINISHES OF THE BEARING SHALL SATISFY THE REQUIREMENTS OF AASHTO STANDARD SPECIFICATIONS, DIVISION II, TABLE 18.5.1.5-1.

11. PINS SHALL CONFORM TO AASHTO STANDARD SPECIFICATION, DIVISION II, ARTICLE 11.4.9.1. BORING PIN HOLES SHALL CONFORM TO AASHTO STANDARD SPECIFICATION, DIVISION II, ARTICLE 11.4.9.2. THREADS FOR PINS SHALL CONFORM TO AASHTO STANDARD SPECIFICATION, DIVISION II, ARTICLE 11.4.9.3.

12. RADIUS ALL STEEL PLATE EDGES 1/16".

△ 13. SEAL WELD ALL CONNECTIONS WHEN POSSIBLE.

TOLERANCE TABLE	
DESCRIPTION	TOLERANCE
SOLE PL. PLAN DIMENSIONS	+0.063", -0.063"
SOLE PL. THICKNESS	+0.063", -0.063"
HOLE LOCATION	+0.063", -0.063"
STEEL STIFFENER PLATE PLAN DIMENSIONS	+0.063", -0.063"
STEEL STIFFENER PLATES WELDED LOCATIONS	+0.063", -0.063"
STEEL STIFFENER PLATE THICKNESS	+0.063", -0.063"

BEARING SURFACES SHALL BE FLAT WITH A MAXIMUM PERMISSIBLE VARIATION OF 0.01" FROM A PLANE DETERMINED BY ANY THREE CORNERS OF THE PLATE.

FOR STAINLESS STEEL MATING TO PTFE BONDED TO FABRIC BEARING PAD MATERIAL THE TOLERANCE SHALL BE 0.01" FROM A PLANE DETERMINED BY ANY THREE CORNERS OF THE PLATE.

PROTECTIVE COATING NOTES:

△ 1. PRIOR TO METALIZING, SURFACES SHALL BE ABRASIVE BLAST CLEANED TO A NEAR WHITE FINISH (SSPC-SP10) USING BLASTING MEDIA AND MESH / SIZE RANGE AS RECOMMENDED IN ANSI/AWS C2.18-93, SECTION 5.2 AND TABLE 6.

2. APPLICABLE SURFACES SHALL BE ZINC METALIZED IN ACCORDANCE WITH ANSI/AWS C2.18-93 TO A MINIMUM DFT OF 6 MILS. THE COATING SHALL BE PURE ZINC (99.9% PURITY MIN.). THE FIRST COATING SHALL BE APPLIED WITHIN ONE HOUR OF BLASTING AND THE SURFACE MUST BE COMPLETELY COATED WITHIN TWO HOURS OF BLASTING.

△ 3. SURFACES TO BE PAINTED SHALL BE COATED WITH A WASSER HIGH TECH COATINGS, TWO-COAT SYSTEM:

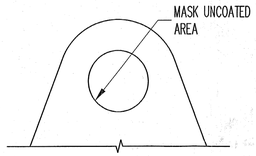
SEAL COAT: MC-FERROX B URETHANE, DFT 3.0-6.0 mils
TOP COAT: MC-FERROX A ALIPHATIC URETHANE, DFT 3.0-10.0 mils
APPROVED DFT PER VAOT QPL 2004
AFTER METALIZATION DS BROWN SHALL APPLY THE ABOVE SYSTEM.

(NOTE: WASSER PROTECTIVE COATINGS RECOMMENDATIONS;
SEAL COAT: MC-FERROX B URETHANE, DFT 3.0-5.0 mils
TOP COAT: MC-FERROX A ALIPHATIC URETHANE, DFT 2.0-4.0 mils)

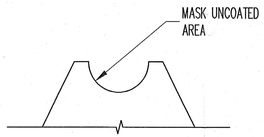
THE SEAL COAT SHALL BE APPLIED WITHIN 8 HOURS OF METALIZING. THE TOP COAT SHALL BE APPLIED AFTER THE SEAL COAT HAS CURED. BOTH COATS SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. COLOR FOR THE TOP COAT SHALL BE FEDERAL STANDARD 595, #27038 (BLACK).

4. ALL SURFACES DAMAGED BY FIELD WELDING OR HANDLING SHALL BE REPAIRED IN CONFORMANCE WITH SUPPLEMENTAL SPECIFICATION VAOT 513 (ASTM A760).

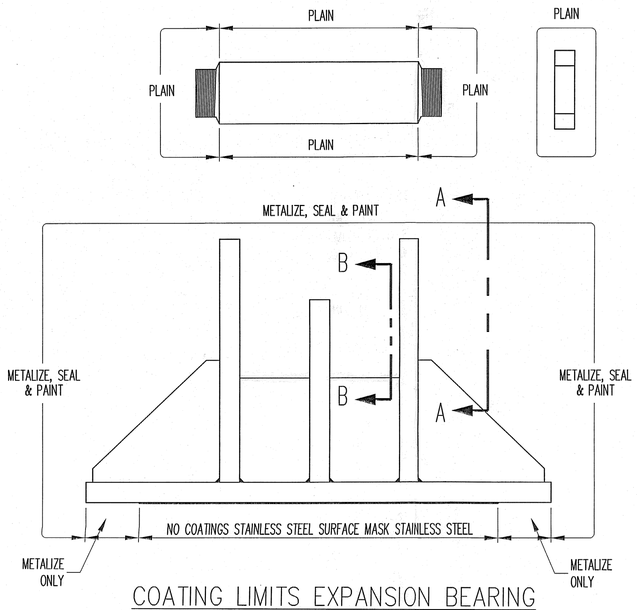
5. SUBSEQUENT PROTECTIVE COATING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.



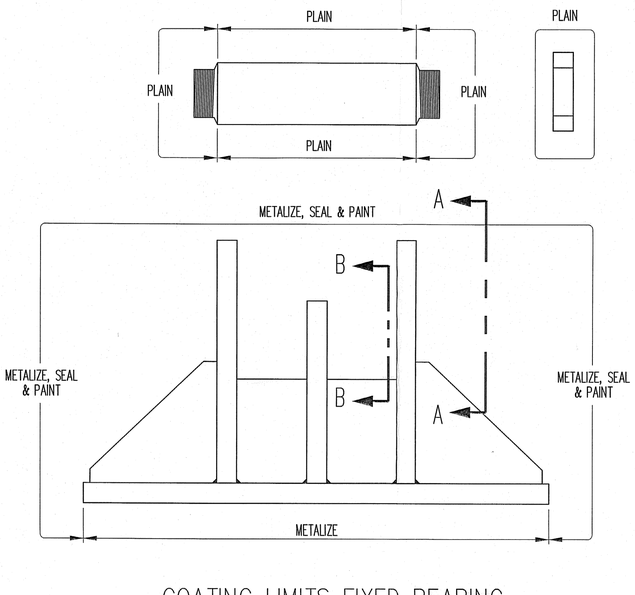
VIEW 'A-A'



VIEW 'B-B'



COATING LIMITS EXPANSION BEARING



COATING LIMITS FIXED BEARING

RECEIVED
MAR 8 2006

CCS CONSTRUCTORS LLC
138 MUNSON AVENUE
MORRISVILLE, VT 05661

RECEIVED
CK'D BY MF CK'D BY CMC
MAR 15 2006
RESUBMIT APPROVED
BY DATE 3/14/06

REV.	DESCRIPTION	DATE	DET.	CKD.
△	REVISE GENERAL NOTES, PROTECTIVE COATINGS, BRG STIFFENERS, TITLE BLOCK	3/3/06	SP	PMG

D.S. BROWN

300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3561
FAX: 419.257.0332

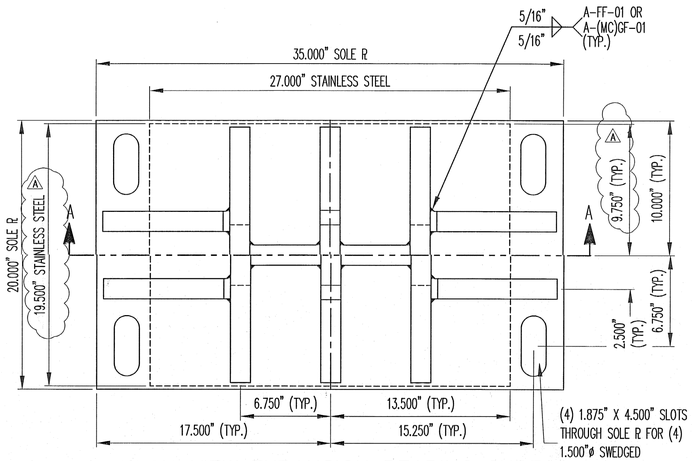
4201 NOREX DRIVE
CHASKA, MINNESOTA 55318
952.368.3000
FAX: 952.448.7000

DSBROWN.COM

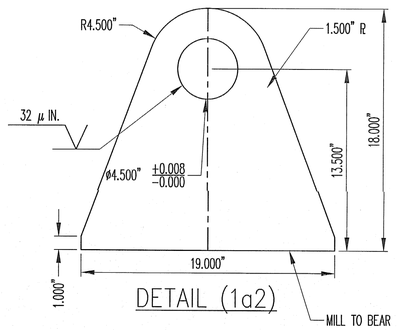
	ITEM	QUANTITY
LOCATION — RAILROAD ST (TH 2) OVER LAMOILLE RIVER	–	–
BRIDGE — 6	–	–
△ PROJECT — AC BHO 1448(18) PROJECT NAME: JOHNSON	–	–
F.A.P. NO. — –	–	–
P.O. NO. — 996	–	–
DESIGNER — VAOT	–	–
CUSTOMER — CONTRACTORS CRANE SERVICE	–	–

DESCRIPTION: GENERAL NOTES AND COATING LIMITS LAMOILLE CO., VT

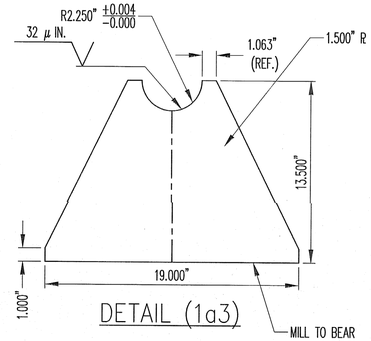
SCALE:	DRAWN BY:	CHECKED BY:	DATE:	
N.T.S.	SP	PMG	1/06	–
PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET	
16225	1121	1	GN1	



PLAN VIEW EXPANSION BEARING SHOE



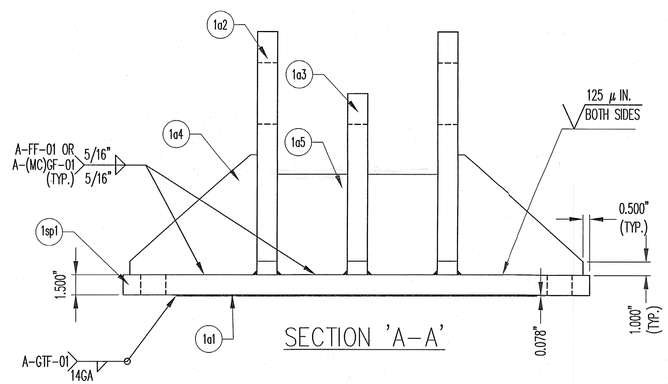
DETAIL (1a2)



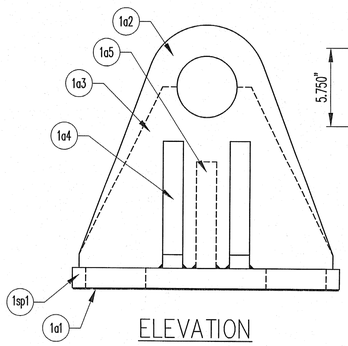
DETAIL (1a3)

	MK	QTY.	DESCRIPTION	MATERIAL	LENGTH	REMARKS	PART NO.
	1A	2	EXPANSION STEEL BEARING				
⚠	1a1	2	14 GA. X 27.000"	A240, T304, #8 & 2B	19.500"	PLAIN	
	1a2	4	1.500" X 19.000"	A709 GR 50	18.000"	SHAPE CUT; METALIZE, SEAL, PAINT	
	1a3	2	1.500" X 19.000"	A709 GR 50	13.500"	SHAPE CUT; METALIZE, SEAL, PAINT	
	1a4	8	1.500" X 9.500"	A709 GR 50	9.000"	SHAPE CUT; METALIZE, SEAL, PAINT	
⚠	1a5	4	1.500" X 5.250"	A709 GR 50	7.500"	SHAPE CUT; METALIZE, SEAL, PAINT	
	1a6	2	4.500"ø	A668 CL F GR 50	18.500"	MACH/ THRD EA. END; PLAIN	
	1a7	4	1.500" X 7.000"	A709 GR 50	7.000"	SHAPE CUT / MACH; PLAIN	
	1sp1	2	1.500" X 35.000"	A709 GR 50	20.000"	METALIZE, SEAL, PAINT	
	1B	2	FABRIC PAD				
	1b1	2	2.000" X 26.000"	VAOT 731.01	12.000"	AASHTO 18.4.10.1	
	1b2	2	0.063" X 26.000"	PTFE	12.000"	PURE VIRGIN UNFILLED; EPOXY BOND TO PAD	

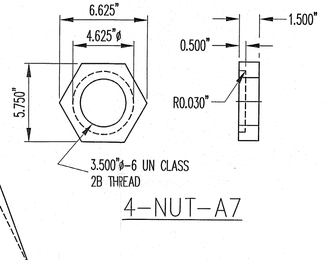
NOTE: ALL MATERIAL SPECIFICATION DESCRIPTIONS ARE ASTM, UNLESS OTHERWISE NOTED.



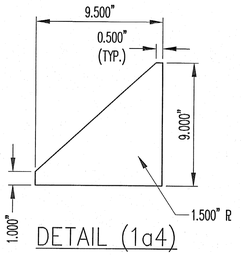
SECTION 'A-A'



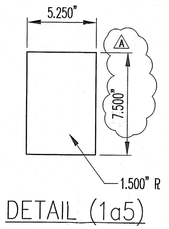
ELEVATION



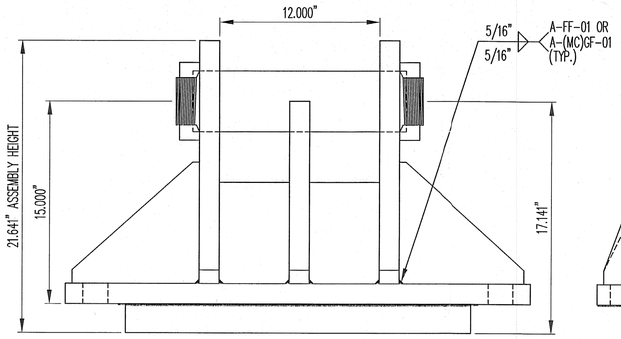
4-NUT-A7



DETAIL (1a4)

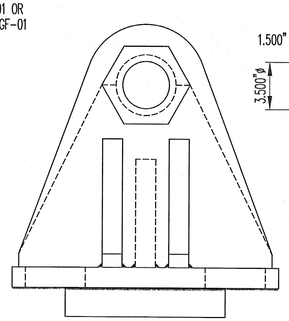


DETAIL (1a5)

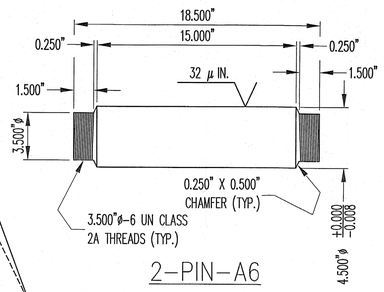


ASSEMBLY VIEW

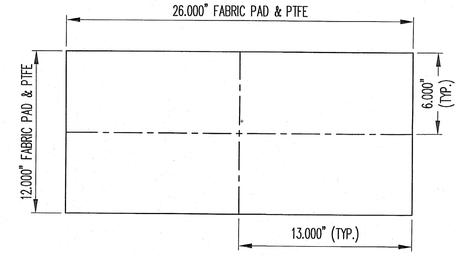
(2) REQ'D @ ABUTMENT NO. 1



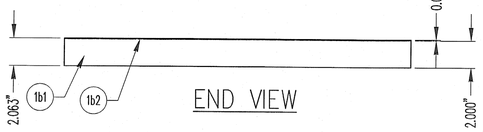
ASSEMBLY ELEVATION



2-PIN-A6



2-FABRIC PAD & PTFE-1B



END VIEW

RECEIVED
OK'D BY MH OK'D BY
MAR 15 2006
RESUBMIT APPROVED
BY DATE 3/16/06

SEE SHEET GN1 FOR GENERAL NOTES AND COATING LIMITS
SEE SHEET 03 FOR ANCHOR BOLT ASSSEMBLY

REV.	DESCRIPTION	DATE	DET.	CKD.
⚠	REVISE S.S., STIFFENER, BOM	3/3/06	SP	PMG

D.S. BROWN
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3561
FAX: 419.257.0332
4201 NOREX DRIVE
CHASKA, MINNESOTA 55318
952.368.3000
FAX: 952.448.7000
DSBROWN.COM

LOCATION — RAILROAD ST (TH 2) OVER LAMOILLE RIVER
BRIDGE — 6
PROJECT — AC BHO 1448(18) PROJECT NAME: JOHNSON
F.A.P. NO. — –
P.O. NO. — 996
DESIGNER — VAOT
CUSTOMER — CONTRACTORS CRANE SERVICE

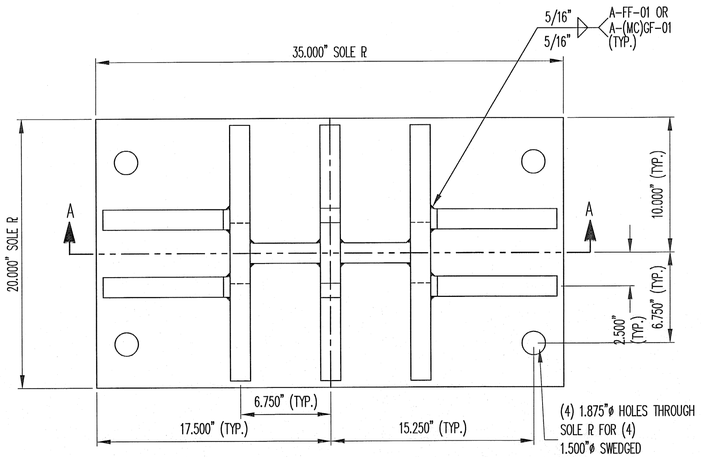
ITEM	QUANTITY
16225–1121–1	2 OF 4
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DESCRIPTION:
EXPANSION STEEL BEARING
LAMOILLE CO., VT

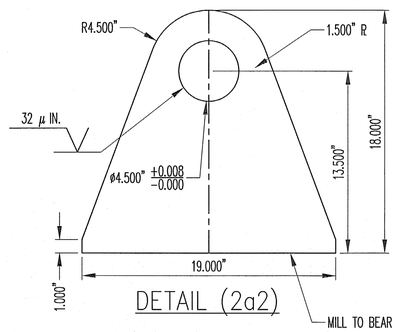
SCALE:	DRAWN BY:	CHECKED BY:	DATE:	
N.T.S.	SP	PMG	1/06	–
PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET	
16225	1121	1	01	

MK	QTY.	DESCRIPTION	MATERIAL	LENGTH	REMARKS	PART NO.
2A	2	FIXED STEEL BEARING				
2a2	4	1.500" X 19.000"	A709 GR 50	18.000"	SHAPE CUT; METALIZE, SEAL, PAINT	
2a3	2	1.500" X 19.000"	A709 GR 50	13.500"	SHAPE CUT; METALIZE, SEAL, PAINT	
2a4	8	1.500" X 9.500"	A709 GR 50	9.000"	SHAPE CUT; METALIZE, SEAL, PAINT	
2a5	4	1.500" X 5.250"	A709 GR 50	7.500"	SHAPE CUT; METALIZE, SEAL, PAINT	
2a6	2	4.500"ø	A668 CL F GR 50	18.500"	MACH/ THRD EA. END; PLAIN	
2a7	4	1.500" X 7.000"	A709 GR 50	7.000"	SHAPE CUT / MACH; PLAIN	
2sp1	2	1.500" X 35.000"	A709 GR 50	20.000"	METALIZE, SEAL, PAINT	
2B	2	FABRIC PAD				
2b1	2	2.000" X 26.000"	VAOT 731.01	12.000"	AASHTO 18.4.10.1	

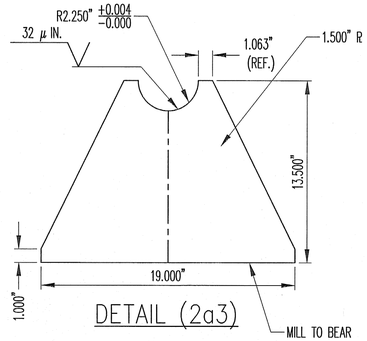
NOTE: ALL MATERIAL SPECIFICATION DESCRIPTIONS ARE ASTM, UNLESS OTHERWISE NOTED.



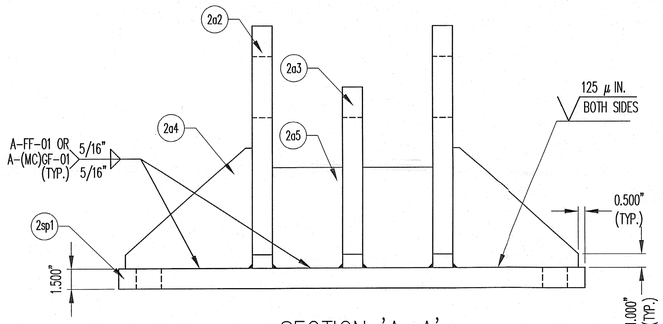
PLAN VIEW FIXED BEARING SHOE



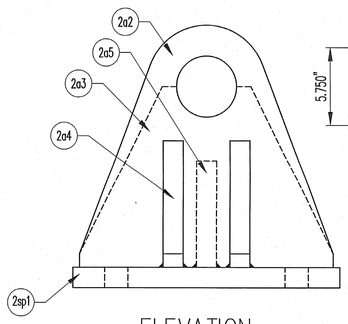
DETAIL (2a2)



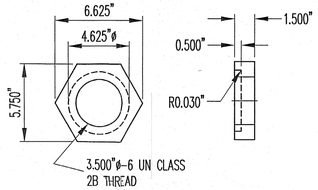
DETAIL (2a3)



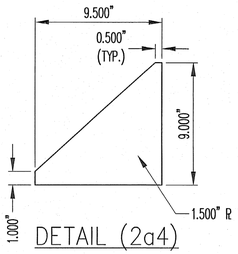
SECTION 'A-A'



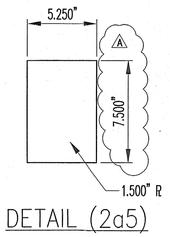
ELEVATION



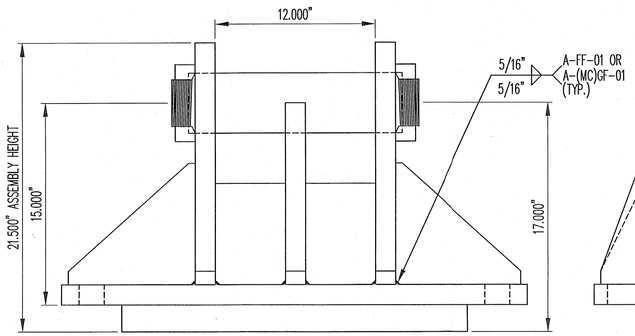
4-NUT-A7



DETAIL (2a4)

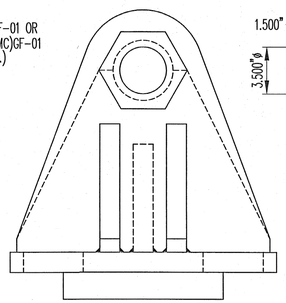


DETAIL (2a5)

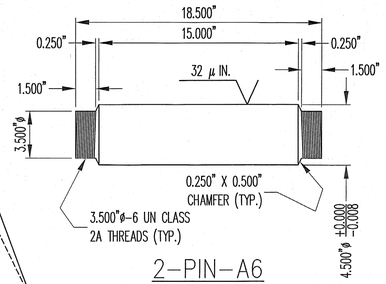


ASSEMBLY VIEW

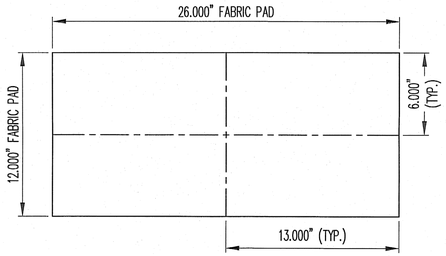
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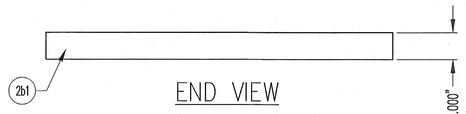
ASSEMBLY ELEVATION



2-PIN-A6



2-FABRIC PAD-2B



END VIEW

SEE SHEET GN1 FOR GENERAL NOTES AND COATING LIMITS
SEE SHEET 03 FOR ANCHOR BOLT ASSSEMBLY

RECEIVED
CK'D BY MH CK'D BY CWS
MAR 15 2006
RESUBMIT APPROVED
BY [illegible] DATE 3/16/06

REV.	DESCRIPTION	DATE	DET.	CKD.
A	REVISE STIFFENER, BOM, TITLE BLOCK	3/3/06	SP	PMG

D.S. BROWN
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3561
FAX: 419.257.0332

4201 NOREX DRIVE
CHASKA, MINNESOTA 55318
952.368.3000
FAX: 952.448.7000

DSBROWN.COM

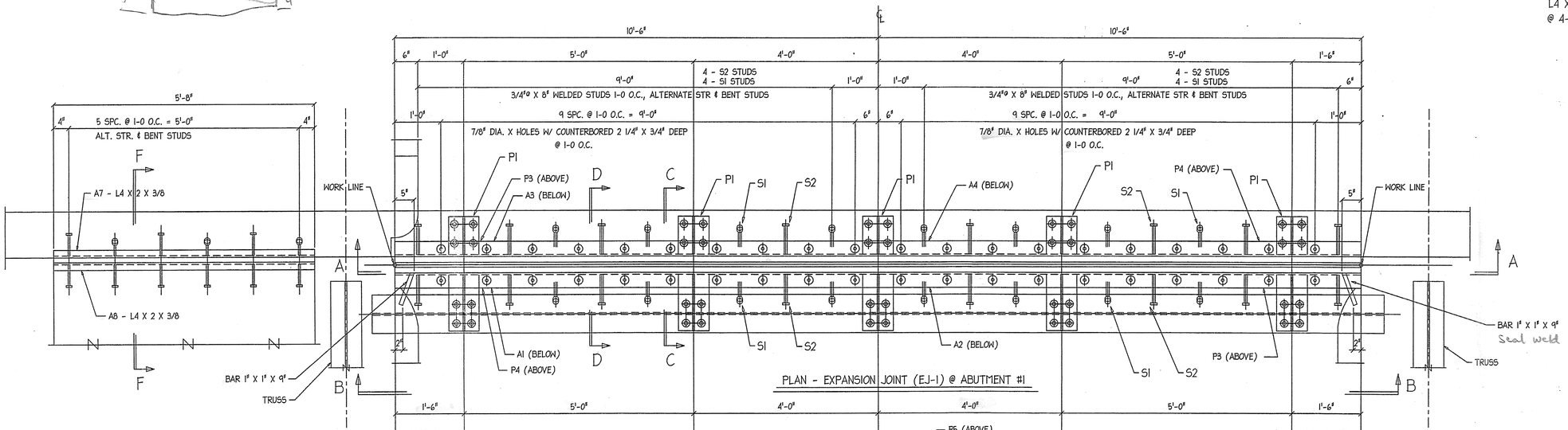
LOCATION — RAILROAD ST (TH 2) OVER LAMOILLE RIVER
BRIDGE — 6
A PROJECT — AC BHO 1448(18) PROJECT NAME: JOHNSON
F.A.P. NO. — –
P.O. NO. — 996
DESIGNER — VAOT
CUSTOMER — CONTRACTORS CRANE SERVICE

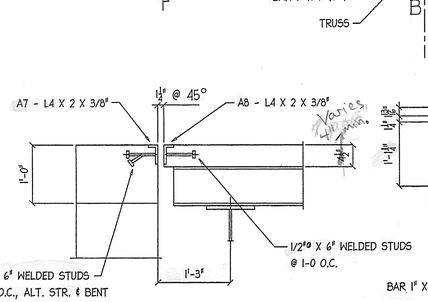
ITEM	QUANTITY
16225-1121-1	2 OF 4
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DESCRIPTION:
FIXED STEEL BEARING
LAMOILLE CO., VT

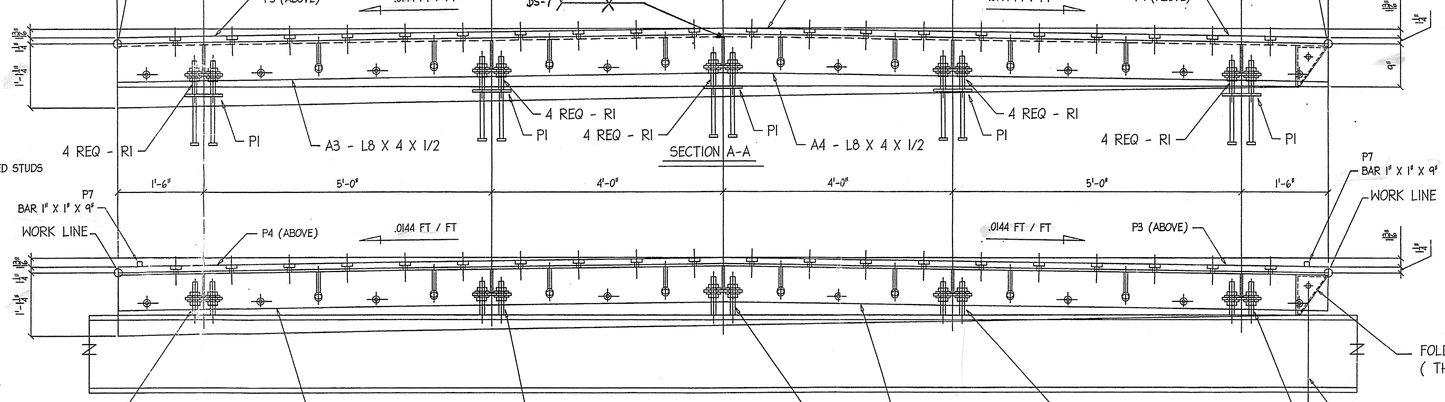
SCALE:	DRAWN BY:	CHECKED BY:	DATE:	
N.T.S.	SP	PMG	1/06	–
PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET	
16225	1121	1	02	

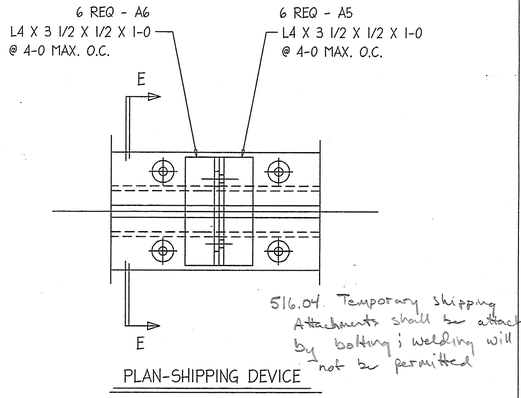




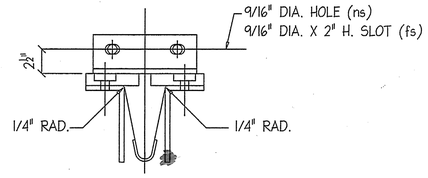


SECTION F-F



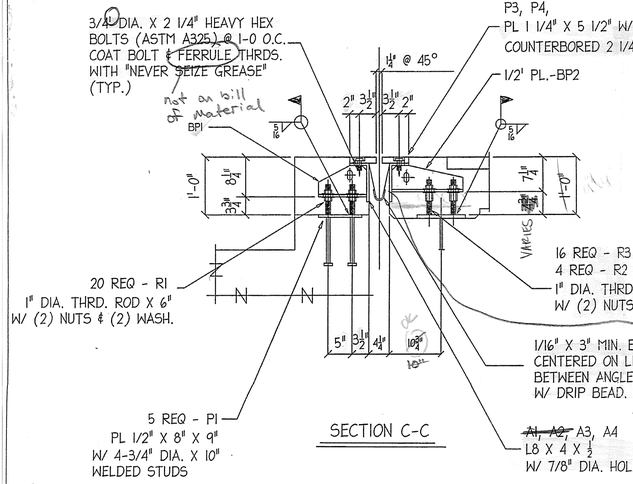


PLAN-SHIPPING DEVICE

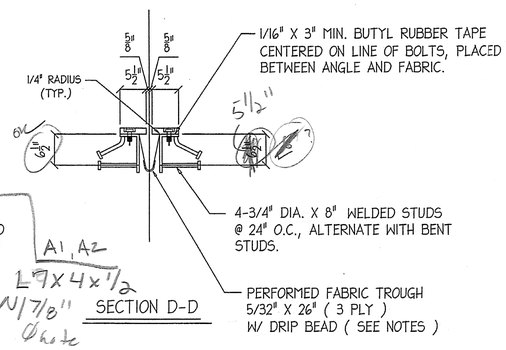


SECTION E-E

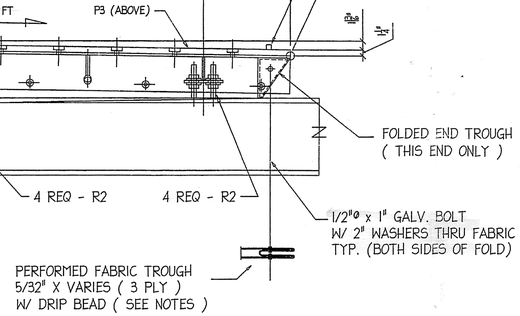
TEMP	"A" DISTANCE	"B" DISTANCE
0°F	1 13/16"	1 9/16"
15°F	1 5/8"	1 3/8"
30°F	1 7/16"	1 3/16"
45°F	1 1/4"	1"
60°F	1 5/16"	1 1/16"
75°F	3/4"	1/2"
90°F	9/16"	5/16"



SECTION C-C



SECTION D-D



NOTES:

1.) PREFORMED FABRIC MATERIAL SHALL BE CONTINUOUS AND SHALL CONFORM TO SUBSECTION 707.07.
2.) BUTYL RUBBER TAPE SHALL CONFORM TO AASHTO SPEC. M-198, TYPE II.
3.) ALL STEEL COMPONENTS SHALL BE AASHTO M270, GRADE 36, GALVANIZED OR METALIZED AS PER SUBSECTION 506.15 (a) OR (b) UNLESS OTHERWISE NOTED.
4.) THE L8 X 4 X 1/2 ANGLES SHALL BE FURNISHED AS ONE CONTINUOUS PIECE. THE 1 1/4" X 5 1/2" BARS EACH SIDE OF THE JOINT SHALLBE PROVIDED IN TWO EQUAL LENGTHS.
5.) A DRIP BEAD OF 1/4" X 7" 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.
6.) THE EXPANSION JOINT SHALL BE SHOP ASSEMBLED AND SHIPPED AS ONE UNIT.
7.) ALL BOLTS, STUDS, AND RELATEDHARDWARE EXCEPT AS NOTED SHALL BE ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 (AASHTO M232).
8.) Prior to galvanizing, all corners and edges of steel plates, shapes, etc., shall be ground to a 1.6mm (1/16") radius

REV. NO.	DATE	DESCRIPTION
HOLES:	13/16"ø (U.N.O.)	DATE: 1-24-06
PAINT:	GALVANIZED	

RECEIVED
OK'D BY JMP OK'D BY
FEB 06 2006
RESUBMIT APPROVED AS NOTED
BY DATE 4.1.06

RECEIVED
FEB - 7 2006

CCS CONSTRUCTORS LLC
138 MUNSON AVENUE
MORRISVILLE, VT 05661

PROJECT NO. = JOHNSON, VT. BHO 1448 (18)

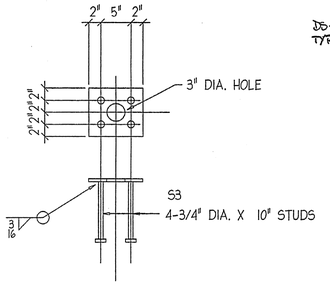
EXPANSION JOINT (EJ-1) @ ABUTMENT #1

DATE SUB.	PROJECT	JOHNSON, VT. BRIDGE
	LOCATION	JOHNSON, VT.
	ARCHITECT	
DATE APP.	ENGINEER	
DATE DIST.	CUSTOMER	C.C.S.

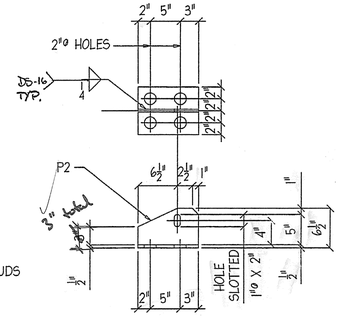
MERRIMACK
MISCELLANEOUS IRON STRUCTURAL STEEL FABRICATORS

MERRIMACK SHEET METAL
119 HALL ST.
CONCORD, N.H., 03301
TEL. (603) 224-7766
FAX. (603) 224-7925

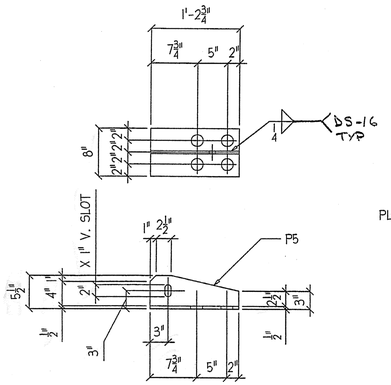
DR BY	KJM
REV BY	
JOB NO.	0567
DWG NO.	E1



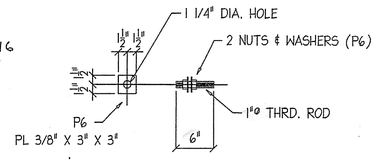
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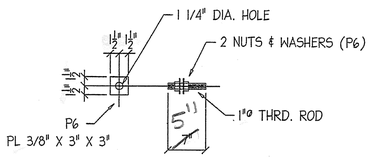
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5 REQ - BP2

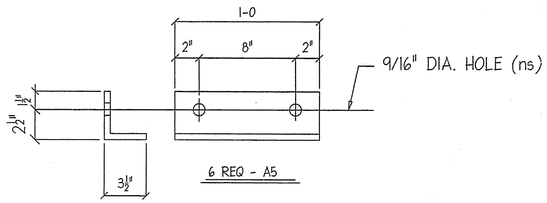


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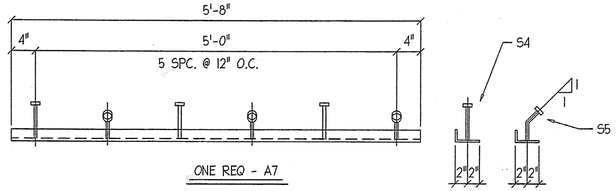


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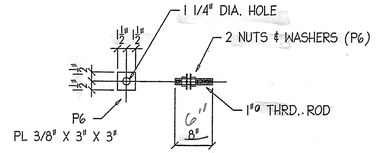
LONG POINT TO LONG POINT
@ WORK LINE TO WORK LINE



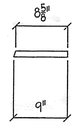
6 REQ - A5



ONE REQ - A7

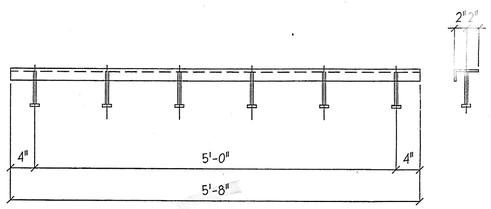


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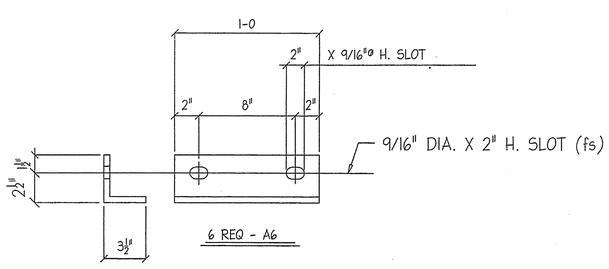


2 REQ - P7

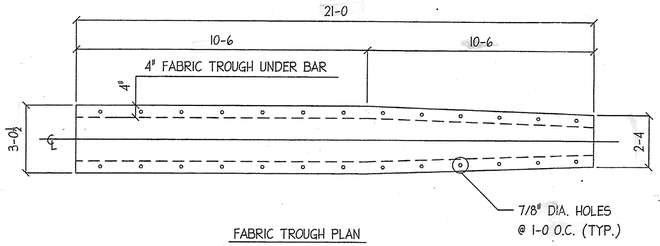
BAR 1" X 1" X 9"



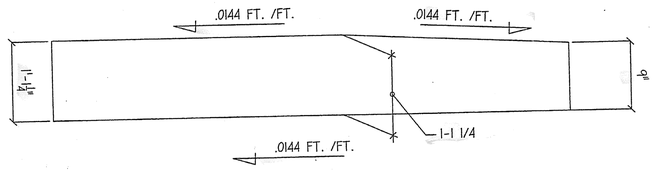
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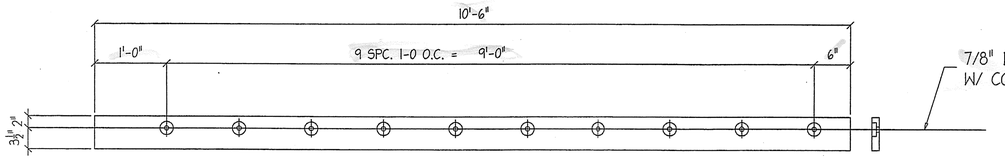


6 REQ - A6

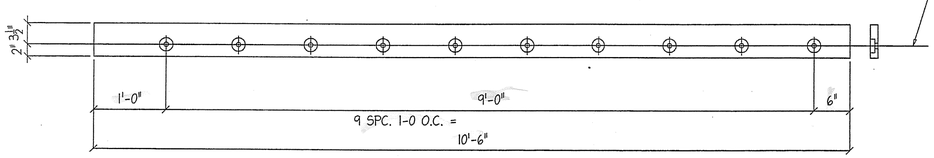


FABRIC TROUGH PLAN





2 REQ - P3



2 REQ - P4

BILL OF MATERIAL

QTY	MARK	SHAPE	LENGTH		REMARKS
1	A1	L 7 x 4 x 1/2	10	6	
1	A2	L 8 X 4 X 1/2	10	6	
1	A3	L 8 X 4 X 1/2	10	6	
1	A4	L 8 X 4 X 1/2	10	6	
6	A5	L 4 X 3 1/2 X 1/2	1	0	
6	A6	L 4 X 3 1/2 X 1/2	1	0	
1	A7	L 4 X 2 X 3/8	1	0	
3	S4	1/2"ø STUD	0	6	STR.
3	S5	1/2"ø STUD	0	6	BENT
1	A8	L 4 X 2 X 3/8	1	0	
5	S4	1/2"ø STUD	0	6	STR.
5	P1	PL 1/2" X 8"	0	9	
20	S3	3/4"ø STUDS	0	10	
5	BP1	PL 1/2" X 8"	0	10	
5	P2	PL 1/2" X 6"	0	10	
5	BP2	PL 1/2" X 8"	1	2 3/4	
5	P5	PL 1/2" X 5"	1	2 3/4	
2	P3	PL 1 1/4" X 5 1/2"	10	6	
2	P4	PL 1 1/4" X 5 1/2"	10	6	
2	P7	BAR 1" X 1"	0	9	
20	R1	1"ø THRD. ROD	0	6	2 NUTS
40	P6	PL 3/8" X 3"	0	3	WASHER
16	R2	1"ø THRD. ROD	0	7	2 NUTS
32	P6	PL 3/8" X 3"	0	3	WASHER
4	R3	1"ø THRD. ROD	0	8	2 NUTS
8	P6	PL 3/8" X 3"	0	3	WASHER
1		FABRIC TROUGH			SEE PLAN
		FIELD BOLTS			
12 - 3/4" DIA. X 2 1/4" A325 BOLTS (@ SHIPPING DEVICE)					
40 - 3/4" DIA. X 2 1/4" A325 BOLTS (@ JOINT)					

RECEIVED
FEB - 7 2006

CCS CONSTRUCTORS LLC
138 MUNSON AVENUE
MORRISVILLE, VT 05661

PROJECT NO. = JOHNSON, VT.
BHO 1448 (18)

RECEIVED
CK'D BY JMP CK'D BY CWC
FEB 09 2006
RESUBMIT BY CWC APPROVED As noted 4/11/06

REV. NO.	DATE	DESCRIPTION
HOLES:	13/16"ø (U.N.O.)	DATE: 1-24-06
PAINT:	GALVANIZED	

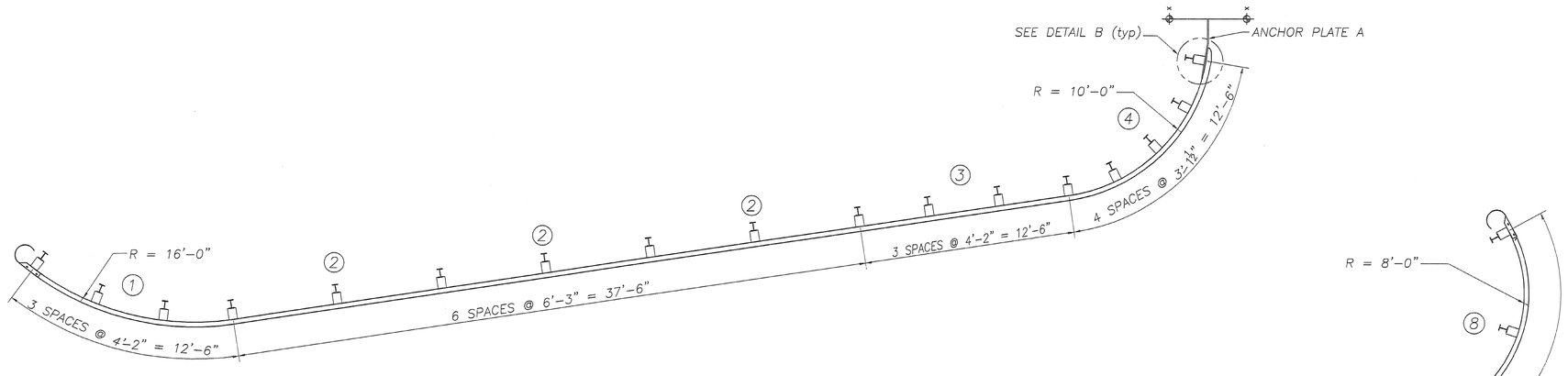
EXPANSION JOINT (EJ-1) @ ABUTMENT #1

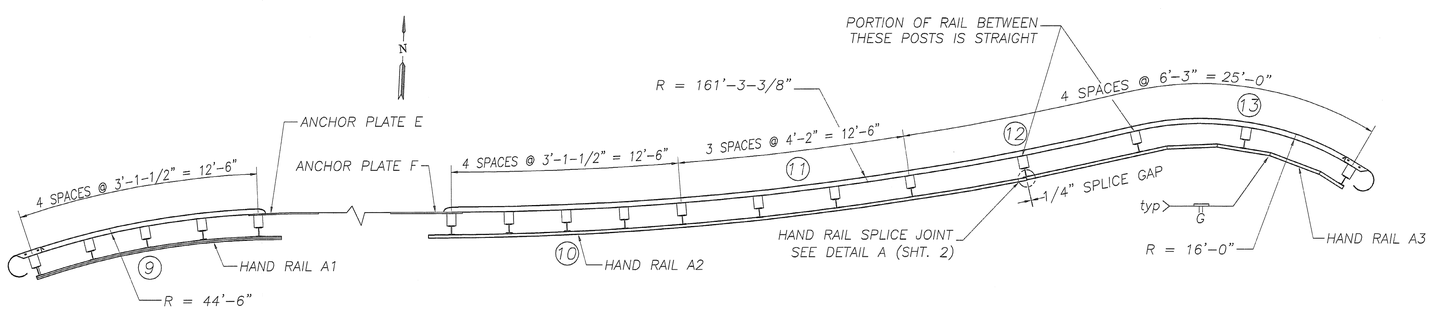
DATE SUB.	PROJECT	JOHNSON, VT. BRIDGE
	LOCATION	JOHNSON, VT.
	ARCHITECT	
DATE APP.	ENGINEER	
DATE DIST.	CUSTOMER	C.C.S.

MERRIMACK
MISCELLANEOUS IRON
STRUCTURAL STEEL
FABRICATORS

MERRIMACK SHEET METAL
119 HALL ST.
CONCORD, N.H., 03301
TEL. (603) 224-7766
FAX. (603) 224-7925

DR BY	KJM
REV BY	
JOB NO.	0567
DWG NO.	F1





BILL OF MATERIAL					
	Qty.	Description	Size/Shape	Length	Grade
	33	driven post w/ holes in front face for W beam	W6 x 8.5	6'-0"	A36
	17	driven post w/holes for W beam and hand rail	W6 x 8.5	6'-0"	A36
	50	wood blockout	6" x 8"	14"	TIMBER
1	2	w beam R – 16' convex	4'-2"	12'-6"	M180 A2
2	6	w beam	6'-3"	12'-6"	M180 A2
3	2	w beam	4'-2"	12'-6"	M180 A2
4	2	w beam R – 10' convex	3' 1-1/2"	12'-6"	M180 A2
5	2	w beam R – 140' convex	3' 1-1/2"	12'-6"	M180 A2
6	2	w beam R – 140' convex	4'-2"	12'-6"	M180 A2
7	6	w beam R – 140' convex	6'-3"	12'-6"	M180 A2
8	2	w beam R – 8' convex	6'-3"	12'-6"	M180 A2
9	2	w beam R – 44'-6" convex	3' 1-1/2"	12'-6"	M180 A2
10	2	w beam R – 161' 3-3/8" concave	3' 1-1/2"	12'-6"	M180 A2
11	2	w beam R – 161' 3-3/8" concave	4'-2"	12'-6"	M180 A2
12	2	w beam R – 161' 3-3/8" concave	6'-3"	12'-6"	M180 A2
13	2	w beam R–16' convex	6'-3"	12'-6"	M180 A2
	50	post bolt w/ DR nut washer and rec washer	5/8"	10"	A325
	152	splice bolt w/ DR nut	5/8"	1-1/4"	A325
	16	round head bolt w/ nut and washer	3/4"	2"	A307
	4	w beam terminal connector			M180 A2
	4	w beam single buffer			M180 A2
	1	hand rail A1 R – 42' 10– 3/4"	TS 4x2x1/4	13' 6–11/16"	A500 gr B
	1	hand rail A2 R – 162' 10–5/8"	TS 4x2x1/4	32' 8–13/16"	A500 gr B
	1	hand rail A3 mitre & weld partial R – 14' 4–3/4"	TS 4x2x1/4	17' 9–3/16"	A500 gr B
	4	end cap (welded to hand rail)	pl 1/4x1–3/4"	3–3/4"	A36
	18	round head bolt w/ hex nut and washer	3/4"	4"	A307

ITEMS PROVIDED BY OTHERS				
1	connection plate A	3/4" x 1' 0-1/4"	3' 6–3/8"	A36
1	connection plate B	3/4" x 1' 0-1/4"	3'–11"	A36
1	connection plate E	3/4" x 1' 0-1/4"	3' 10–1/4"	A36
1	connection plate F	3/4" x 1' 0-1/4"	3'–11"	A36

NOTES:

1. STEEL RAILING AND ANCHORAGE PLATES SHALL BE GALVANIZED & PAINTED BLACK (COLOR CHIP 27038) PER SECTION 513 OF VAOT STANDARD SPECIFICATIONS

2. HEAVY DUTY STEEL BEAM GUARD RAIL WILL INCLUDE THE 2" x 4" HAND RAIL TUBING AND WILL BE GALVANIZED AND PAINTED BLACK AS SPECIFIED ABOVE.

1 3. RADIUS ALL SHARP EDGES AND GRIND SMOOTH PRIOR TO GALVANIZING

REVISIONS		
No.	Remarks	Date
0	submitted for customer approval	4/13/06
1	final copy with a.a.n. corrections	4/13/06

VTrans - PDD
JUL 0 5 2006
Structures Design Section
RECORD PLANS

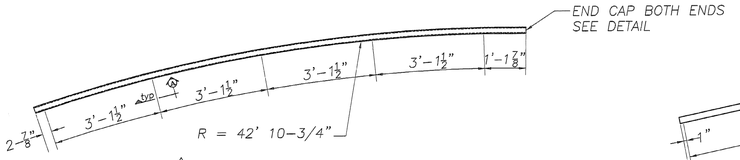
HIGHWAY SAFETY CORP.
GLASTONBURY, CT

HEAVY DUTY STEEL BEAM GUARDRAIL
MOD 1 w/o HAND RAIL & MOD 2 w/ HAND RAIL
TOWN OF JOHNSON
COUNTY OF LAMOILLE
ROUTE: TH2, BRIDGE NO. 6

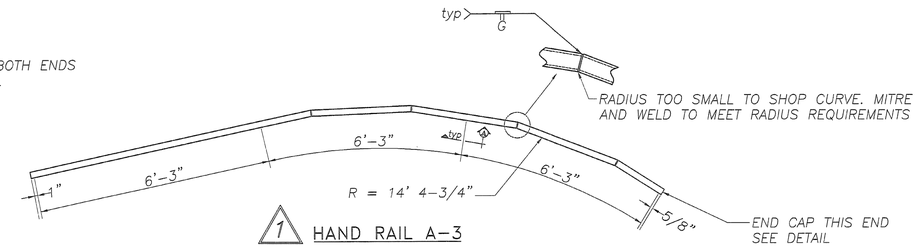
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CHECKED
DATE 03/20/06
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HSC REFERENCE NO. 1536
SIZE D REVISION 1
SHEET NO. 1 of 1

GENERAL CONTRACTOR
SUB CONTRACTOR FR LAFAYETTE

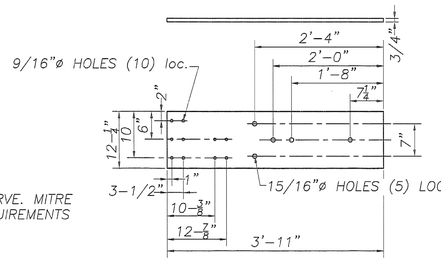
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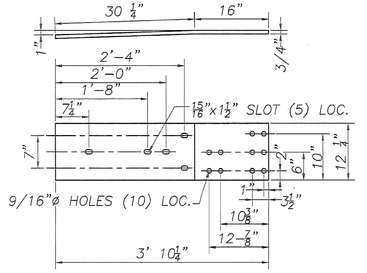
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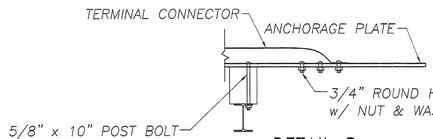
1 HAND RAIL A-3



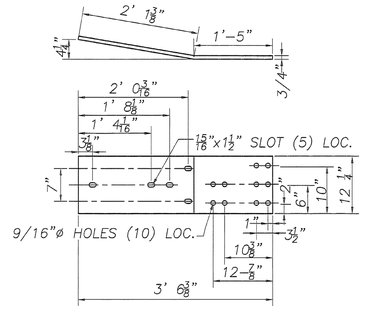
ANCHORAGE PLATE B & F
PROVIDED BY OTHERS 1



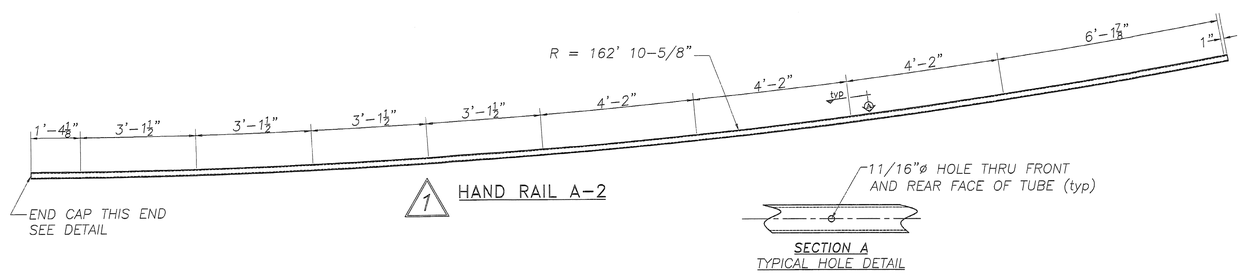
ANCHORAGE PLATE E
PROVIDED BY OTHERS 1



DETAIL B
TYPICAL ANCHORAGE
PLATE CONNECTION

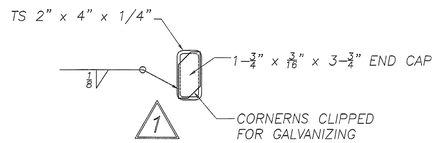


ANCHORAGE PLATE A
PROVIDED BY OTHERS 1

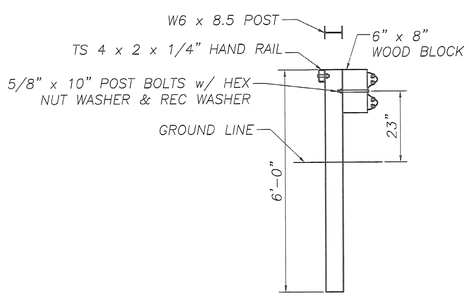


1 HAND RAIL A-2

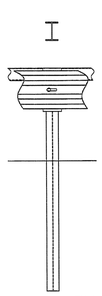
SECTION A
TYPICAL HOLE DETAIL



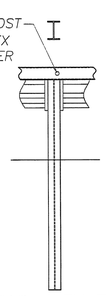
1 END CAP DETAIL



POST ASSEMBLY DETAIL

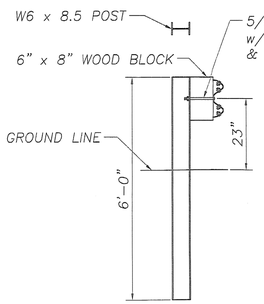


FRONT ELEVATION

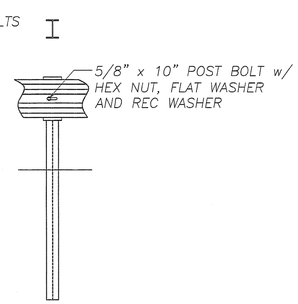


REAR ELEVATION

SOUTH SIDE

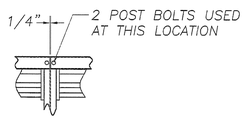


POST ASSEMBLY DETAIL



FRONT ELEVATION

NORTH SIDE



DETAIL A
TYPICAL HAND RAIL SPLICE JOINT

1

REVISIONS		
No.	Remarks	Date
0	submitted for customer approval	4/13/06
1	final copy with a.a.n. corrections	6/16/06

VTrans - PDD
JUL 0 5 2006
Structures Design Section
RECORD PLANS

HIGHWAY SAFETY CORP.
GLASTONBURY, CT

HEAVY DUTY STEEL BEAM GUARDRAIL
MOD 1 w/o HAND RAIL & MOD 2 w/ HAND RAIL
TOWN OF JOHNSON
COUNTY OF LAMOILLE
ROUTE: TH2, BRIDGE NO. 6

GENERAL CONTRACTOR

SUB CONTRACTOR
FR LAFAYETTE

DRAWN	C CRAMER
CHECKED	
DATE	03/20/06
SCALE	NTS
HSC REFERENCE NO.	1536
SIZE	D
REVISION	1
SHEET NO.	1 of 1