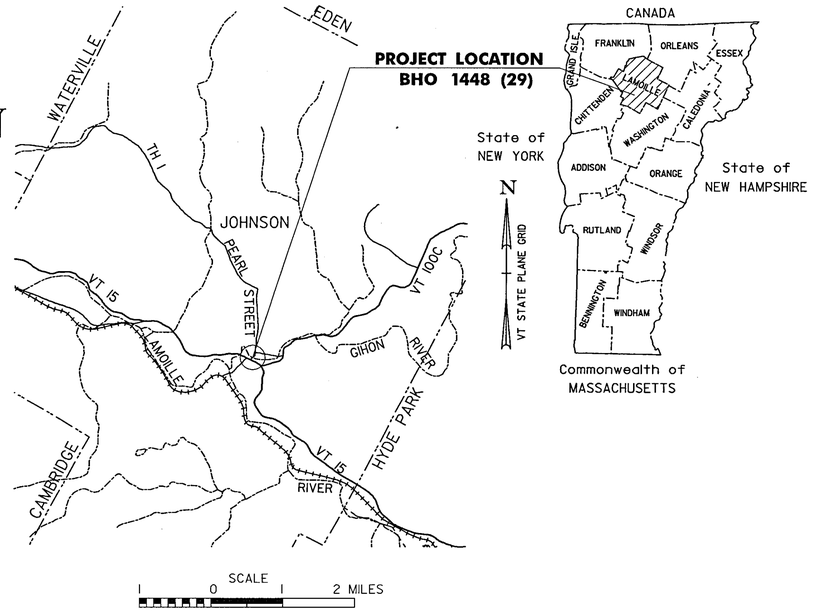
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STATE OF VERMONT
AGENCY OF TRANSPORTATION

PROPOSED IMPROVEMENT
BRIDGE PROJECT
TOWN OF JOHNSON
COUNTY OF LAMOILLE

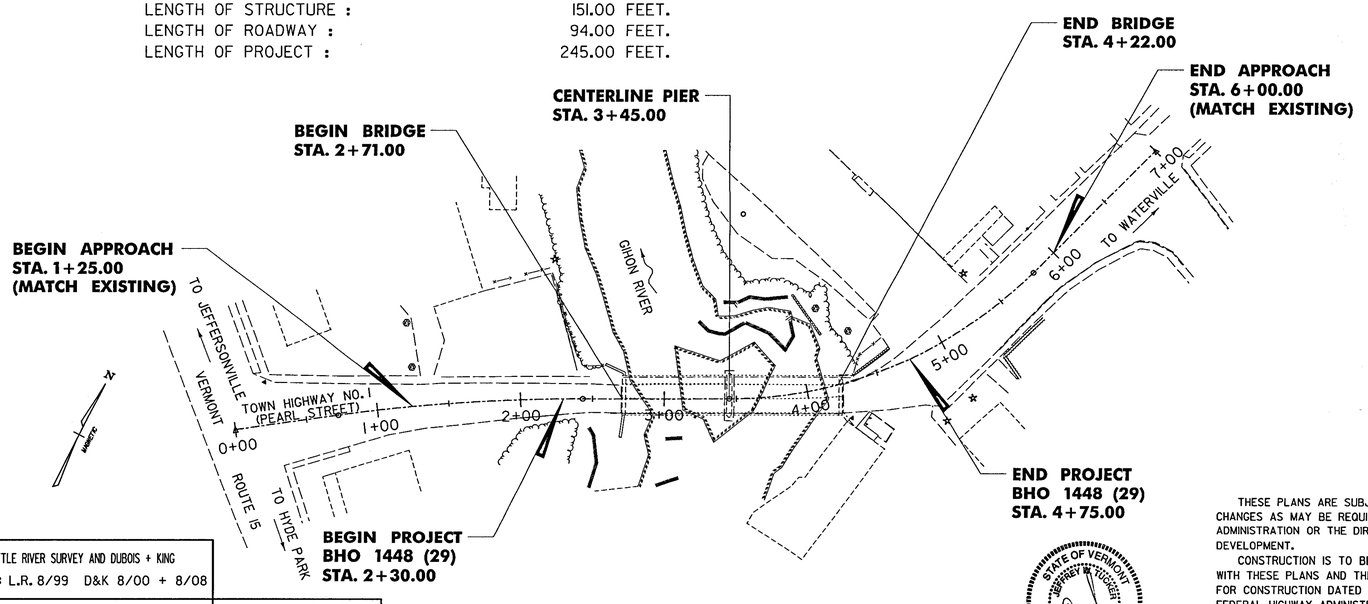


ROUTE NO : TH 1 CLASS 2 BRIDGE NO : 5
FUNCTIONAL CLASSIFICATION: LOCAL ROAD

PROJECT LOCATION : BEGINNING ON TH NO. 1 AT A POINT 230 FEET NORTHEAST OF THE INTERSECTION OF VT ROUTE 15 IN THE TOWN OF JOHNSON AND EXTENDING NORTHEAST 245 FEET ALONG TH NO. 1

PROJECT DESCRIPTION : REMOVAL OF EXISTING SUPERSTRUCTURE AND PARTIAL REMOVAL OF ABUTMENT NO. 2, REHABILITATION OF ABUTMENT NO. 1 AND PIER, CONSTRUCTION OF A NEW COMPOSITE STEEL BEAM AND CONCRETE DECK SUPERSTRUCTURE, CAST-IN-PLACE CONCRETE ABUTMENT NO. 2 AND CAST-IN-PLACE CONCRETE SIDEWALK WITH ASSOCIATED ROADWAY APPROACH IMPROVEMENTS.

LENGTH OF STRUCTURE : 151.00 FEET.
LENGTH OF ROADWAY : 94.00 FEET.
LENGTH OF PROJECT : 245.00 FEET.



CONVENTIONAL SYMBOLS

COUNTY LINE	COUNTY LINE
TOWN LINE	TOWN LINE
LIMITS OF ACCESS	
POINT OF ACCESS	X
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 : LITTLE RIVER SURVEY AND DUBOIS + KING
SURVEYED DATE : L.R. 8/99 D&K 8/00 + 8/08

DATUM
VERTICAL NAVD 88
HORIZONTAL ASSUMED

DuBois & King, Inc. engineering planning management development

RECORD PLANS

CONTRACTOR: S. D. IRELAND CONC. CONST. CORP - BURLINGTON, VT
RESIDENT ENGINEER: CARL GLEASON
CONSTRUCTION BEGAN: JUNE 1, 2009
CONSTRUCTION COMPLETE: OCTOBER 21, 2010
RECORD PLANS BY: CARL GLEASON & MATT BIRCHARD

I HEREBY CERTIFY THAT ALL THE CONSTUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.
BY Carl W. Gleason RESIDENT ENGINEER
DATE 4/26/11

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

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

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

PLOTTED 2/9/2009

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED Richard Spheard DATE 2-11-09

PROJECT MANAGER : KRISTIN M. HIGGINS, P.E.

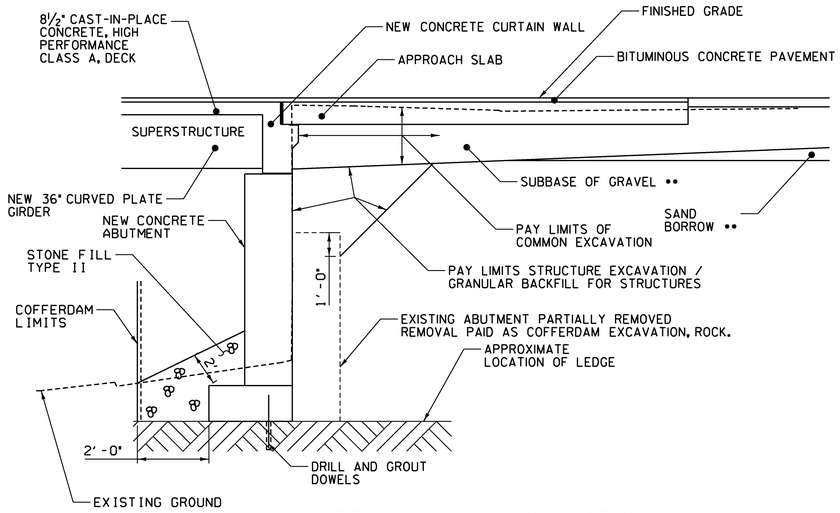
PROJECT NAME : JOHNSON
PROJECT NUMBER : BHO 1448 (29)

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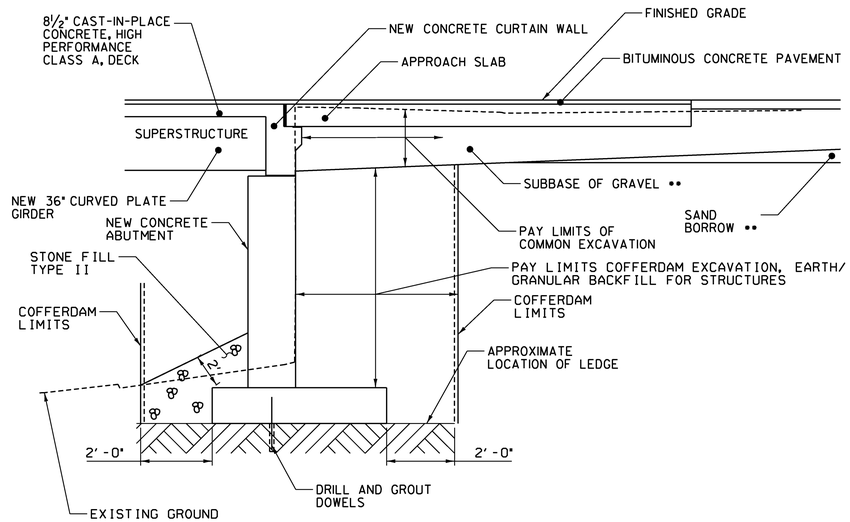


TYPICAL ABUTMENT NO. 2 SECTION AGAINST EXISING ABUTMENT

(NOT TO SCALE)

** DEPTHS VARY SEE SUBBASE TRANSITION DETAIL, SHEET 48

NOTE: IF STONEFILL IS PLACED ON BEDROCK NO GEOTEXTILE SHALL BE USED. IF STONEFILL IS PLACED ON GRANULAR MATERIAL, GEOTEXTILE SHALL BE USED UNDER STONEFILL.



TYPICAL ABUTMENT NO. 2 SECTION

(NOT TO SCALE)

** DEPTHS VARY SEE SUBBASE TRANSITION DETAIL, SHEET 48

NOTE: IF STONEFILL IS PLACED ON BEDROCK NO GEOTEXTILE SHALL BE USED. IF STONEFILL IS PLACED ON GRANULAR MATERIAL, GEOTEXTILE SHALL BE USED UNDER STONEFILL.

PLOTTED 2/18/2009

VTRANS STANDARDS

B-5	EMBANKMENT ON EARTH SLOPE, EMBANKMENT ON ROCK SLOPE, MUCK EXCAVATION, TYPICAL SLOPE ROUNDING	06/01/94
B-71	STANDARDS FOR RESIDENTIAL AND COMMERCIAL DRIVES	07/08/05
C-10	CURBING	02/11/08
C-2A	PORTLAND CEMENT CONCRETE SIDEWALK, DRIVE ENTRANCES WITH SIDEWALK ADJACENT TO CURB	10/14/05
C-3A	SIDEWALK RAMPS	03/10/08
C-3B	SIDEWALK RAMPS AND MEDIAN ISLANDS	03/10/08
D-9	REINFORCED CONCRETE DROP INLET WITH VERTICAL CURB, REINFORCED CONCRETE DROP INLET THROAT ADAPTER	06/01/94
D-15	PRECAST REINF. CONC. CATCH BASIN W/ CAST IRON GRATE PRECAST REINF. CONC. MANHOLE W/ CAST IRON COVER CAST IRON GRATE WITH FRAME, TYPE D CAST IRON GRATE WITH FRAME, TYPE E	06/01/94
D-16	PRECAST REINF. CONC. CURB DROP INLET W/ CAST IRON GRATE CAST IRON GRATE TYPE B CAST IRON GRATE TYPE C UNDERDRAIN RISER REINFORCED CONCRETE PIPE END SECTION ENERGY DISSIPATOR FOR CULVERT	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
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E-107A	BREAKAWAY BARRICADE DETAILS	08/08/95
E-108	CONSTRUCTION ZONE LONGITUDINAL DROP OFFS	12/08/08
E-121	STANDARD SIGN PLACEMENT CONVENTIONAL ROAD	08/08/95
E-146	REGULATORY SIGN DETAILS	09/20/95
E-152	WARNING SIGN DETAILS	05/01/04
E-173	PULL BOXES AND JUNCTION BOXES	08/09/95
E-175	POWER DROP STANCHIONS	11/17/93
E-180B	STREET LIGHTING DETAILS	08/09/95
E-181	TYPICAL BRIDGE MOUNTING DETAILS FOR STREET LIGHT POLE	08/09/95
E-191	PAVEMENT MARKING DETAILS	02/01/99
E-193	PAVEMENT MARKING DETAILS	08/18/95
G-1	STEEL BEAM GUARDRAIL WITH STEEL POSTS STEEL BEAM GUARDRAIL WITH WOOD POSTS	01/03/00
G-18	PRECAST CONCRETE TEMPORARY TRAFFIC BARRIER	06/01/94
SB-R6-82	BRIDGE RAILING - HEAVY DUTY STEEL BEAM	01/06/95

SEEDING FORMULA URBAN AREAS

% WT.	LBS./A.	NAME	PUR %	GERM %
42.5	34.0	CREEPING RED FESCUE	98	85
10.0	8.0	PERENNIAL RYE GRASS	95	90
42.5	34.0	KENTUCKY BLUE GRASS	85	85
5.0	4.0	ANNUAL RYE GRASS	95	85
100.00	80.0			

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.

TACK COAT: EMULSIFIED ASPHALT IS TO BE APPLIED AT THE RATE OF 0.015 GAL/SY BETWEEN SUCCESSIVE COURSES OF PAVEMENT AS DIRECTED BY THE ENGINEER.

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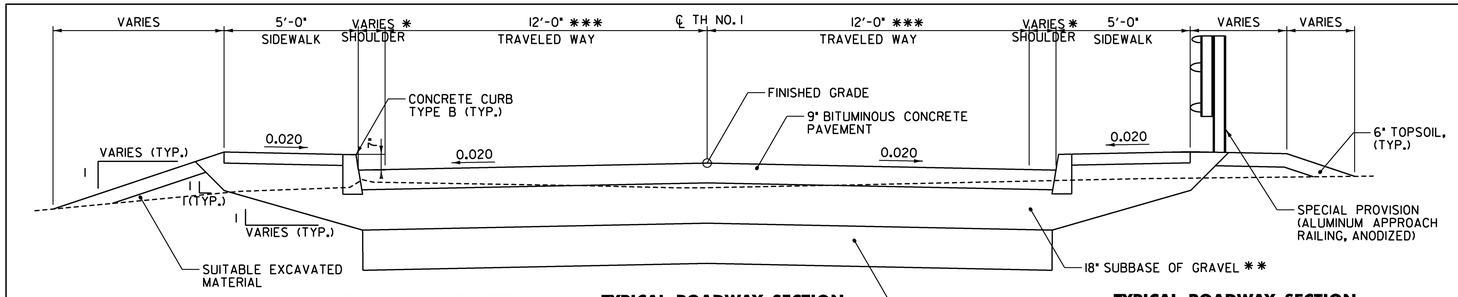
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

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Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date J. W. TUCKER 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
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TYPICAL ROADWAY SECTION
SCALE: 3/8" = 1'-0"

* SHOULDER WIDTH VARIES THROUGH PROJECT. REFER TO ROADWAY CROSS SECTIONS FOR WIDTHS AT SPECIFIC STATIONS.

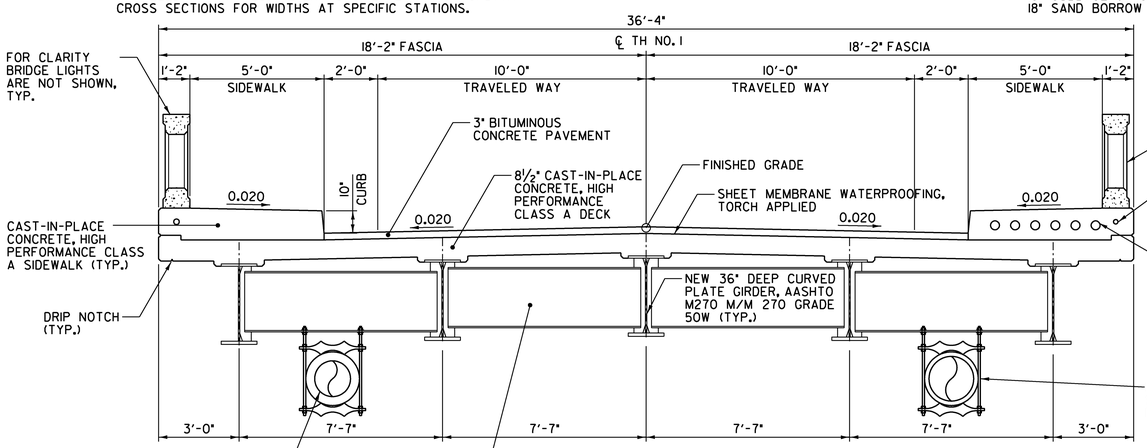
** DEPTH VARIES, SEE SUBBASE TRANSITION DETAIL, SHEET 48.

*** TRAVELED WAY VARIES. REFER TO SITE PLAN AND ROADWAY CROSS SECTIONS FOR WIDTHS AT SPECIFIC STATIONS.

NOTE:
SEE SHEET NO. 48 FOR ADDITIONAL PARTIAL SECTION TYPICALS.

TYPICAL ROADWAY SECTION

1 1/2" BITUMINOUS CONCRETE PAVEMENT (TYPE IV)
1 1/2" BITUMINOUS CONCRETE PAVEMENT (TYPE IV)
3" BITUMINOUS CONCRETE PAVEMENT (TYPE I)
3" BITUMINOUS CONCRETE PAVEMENT (TYPE I)
18" SUBBASE OF GRAVEL
18" SAND BORROW

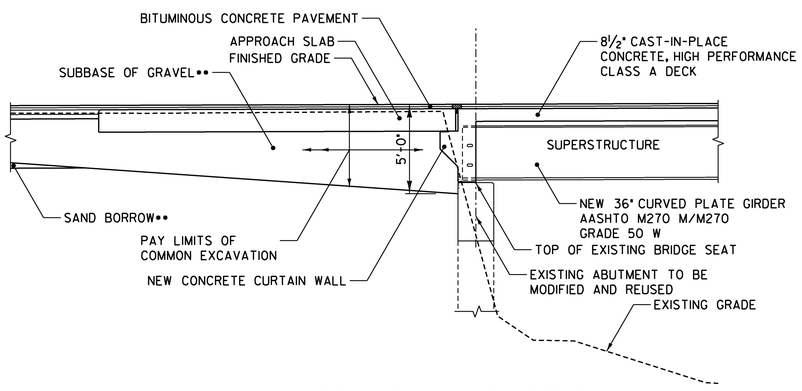


TYPICAL BRIDGE SECTION
SCALE: 3/8" = 1'-0"

FOR PG BINDER GRADE, SEE SECTION 406 OF THE GENERAL SPECIAL PROVISIONS.

TYPICAL BRIDGE SECTION

1 1/2" BITUMINOUS CONCRETE PAVEMENT (TYPE IV) TOP
1 1/2" BITUMINOUS CONCRETE PAVEMENT (TYPE IV) BOTTOM



TYPICAL ABUTMENT NO. 1 SECTION
(NOT TO SCALE)

** DEPTHS VARIES SEE SUBBASE TRANSITION DETAIL, SHEET 48

NOTE:
SEE SHEET NO. 2 FOR TYPICAL ABUTMENT NO. 2 SECTION.

LOAD FACTOR LOAD RATING (TONS)

LOADING LEVELS (LOAD FACTOR)	TRUCK						
	H	HS	3S2	6 AXLE	3A. STR.	4A. STR.	5A. SEMI
INVENTORY A=2.17; B=1.00	30	60					
POSTED A=1.55; B=1.40	43	83	164		127	115	121
OPERATING A=1.30; B=1.67		100	198	256	153	139	

STRENGTH RF = $\frac{\emptyset M_N - 1.3 M_{DL}}{A \times M_{LL+I}}$ SERVICEABILITY RF = $B \left[\frac{.95 F_y S_{LL+I} - M_{DL} \frac{S_{LL+I}}{S_{DL}} - M_{SDL} \frac{S_{LL+I}}{S_{SDL}}}{1.67 M_{LL+I}} \right]$

NOTE:
FOR DESIGN OF THE BRIDGE GIRDERS, THE DEAD LOAD EXPERIENCED FROM THE CONCRETE BRIDGE RAILING AND THE CONCRETE SIDEWALK WAS DISTRIBUTED 60% TO THE EXTERIOR BEAMS AND 40% TO THE FIRST INTERIOR BEAMS.

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2009	2500	280	51	3.4	80
2029	3100	350	51	4.6	140

20 year ESAL for flexible pavement from 2009 to 2029: 324,000
40 year ESAL for flexible pavement from 2009 to 2049: 753,000
Design speed: 25 mph

MATERIAL TOLERANCE TABLE

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

PLOTTED 2/10/2009

FINAL HYDRAULICS REPORT

HYDROLOGIC DATA

DRAINAGE AREA= 63.9 sq. MILES
CHARACTER OF TERRAIN: MIXED USE FROM RURAL TO URBAN, FORESTED AND OPEN, PONDS
CHARACTER & TYPE OF STREAM: SINUOUR, INCISED, SEMI-ALLUVIAL
NATURE OF STREAMBED: LEDGE, GRAVEL, SAND

Q2.33= 2000 cfs Q50= 6500 cfs
Q10= 3725 cfs Q100= 8125 cfs
Q25= 5050 cfs Q500= 13500 cfs

DATE OF FLOOD OF RECORD: 1927
WATER SURFACE ELEV.: UNKNOWN ESTIMATED DISCHARGE: UNKNOWN
NATURAL STREAM VELOCITY: @ Q25 = 13.2 fps
ICE CONDITIONS: MODERATE TO HEAVY DEBRIS: MODERATE
DOES THE STREAM REACH MAXIMUM HIGH WATER ELEVATION RAPIDLY: NO
IS ORDINARY RISE RAPID? NO
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? YES
IF YES, DESCRIBE. BACKWATER FROM LAMOILLE RIVER

WATERSHED STORAGE 1.3% HEADWATERS - UNIFORM THROUGHOUT WATERSHED X
IMMEDIATELY ABOVE SITE -

EXISTING STRUCTURE

STRUCTURE TYPE: TWO SPAN ROLLED STEEL BEAM BRIDGE YEAR BUILT: 1938
CLEAR SPAN (NORMAL TO STREAM): 135 ft.
VERTICAL CLEARANCE ABOVE STREAMBED: 10.5 ft.
WATERWAY OF FULL OPENING: 1535 sqft
DISPOSITION OF STRUCTURE: TO BE REMOVED AND DISPOSED OF BY CONTRACTOR
ABUTMENT NO. 1 AND PIER TO REMAIN
TYPE OF MATERIAL UNDER SUBSTRUCTURE: UNKNOWN

WATER SURFACE ELEV. @ Q2.33: 498.3 VELOCITY= 10.1 fps
Q10= 500.0 ft 12.0 fps
Q25= 501.1 ft 13.2 fps
Q50= 502.1 ft 14.1 fps
Q100= 503.1 ft 15.1 fps

LONG TERM STREAM BED CHANGES: NONE KNOWN

IS THE ROADWAY OVERTOPPED BELOW THE Q100? NO FREQUENCY: NA
RELIEF ELEVATION: 501.6 ft. DISCHARGE OVER ROAD @ Q100: NONE

UPSTREAM STRUCTURE: TOWN: JOHNSON DISTANCE: 2320 ft.
HIGHWAY NO.: TH NO. 3 STRUCTURE NO.: CB 4
NOTE: STRUCTURE TYPE IS A COVERED BRIDGE

DOWNSTREAM STRUCTURE: TOWN: JOHNSON DISTANCE: 2140 ft.
HIGHWAY NO.: VT RT 15 STRUCTURE NO.: BR 37
NOTE: STRUCTURE TYPE IS A PLATE GIRDER

PROPOSED STRUCTURE

STRUCTURE TYPE: TWO SPAN CONTINUOUS CURVED PLATE GIRDER BRIDGE

CLEAR SPAN (NORMAL TO STREAM): 133 ft.
VERTICAL CLEARANCE ABOVE STREAMBED: 10.5 ft.
WATERWAY OF FULL OPENING: 1475 sqft

WATER SURFACE ELEV. @ Q2.33: 498.3 VELOCITY= 10.1 fps
Q10= 500.0 ft = 12.0 fps
Q25= 501.1 ft = 13.2 fps
Q50= 502.1 ft = 14.1 fps
Q100= 503.1 ft = 15.1 fps

IS THE ROADWAY OVERTOPPED BELOW THE Q100? NO FREQUENCY: NA
RELIEF ELEVATION: 501.6 ft. DISCHARGE OVER ROAD @ Q100: NA

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 498.4 ft.
VERTICAL CLEARANCE: @ Q 25 = 3.6 ft.

SCOUR: SCOUR IS NOT AN ISSUE HERE, THERE IS LEDGE IN MANY AREAS.
REQUIRED CHANNEL PROTECTION: STONE FILL, TYPE IV

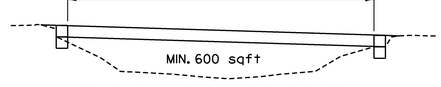
PERMIT INFORMATION

AVERAGE DAILY FLOW: 130 cfs
ORDINARY LOW WATER: 60 cfs DEPTH: 1.5 ft.
ORDINARY HIGH WATER: 860 cfs DEPTH: 2.8 ft.

ADDITIONAL COMMENTS

ELEVATIONS REPORTED ARE THOSE ELEVATIONS 200' UPSTREAM BEFORE THE CONTRACTION SECTION OF THE BRIDGE.
AT THE BRIDGE, Q25 = 494.8' AND Q100 = 498.0'.

TEMPORARY BRIDGE SKETCH
NOT TO SCALE



BEAMS NO LOWER THAN ELEV. Q100=496.3

DESIGN CRITERIA:
1. DESIGN LIVE LOAD AASHTO HS-25-44
2. DESIGN SPAN 149.0 ft (SPAN 1 = 73', SPAN 2 = 76')
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL N/A ON LEDGE 10.0 Kip/sf
4. ALLOWABLE LOAD FOR PILING N/A TYPE N/A ESTIMATED LENGTH N/A
5. STRUCTURAL STEEL AASHTO GRADE AASHTO M270 M / M270 GRADE 50 W
6. REINFORCING STEEL GRADE 60
7. CONCRETE, HIGH PERFORMANCE CLASS A f'_c = 4000 PSI
   CONCRETE, HIGH PERFORMANCE CLASS B f'_c = 3500 PSI

TRAFFIC MAINTENANCE:
1. IS TRAFFIC TO BE MAINTAINED? YES IF YES, ON EXISTING STRUCTURE NO OR ON TEMPORARY BRIDGE YES
2. TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY TWO WAY TRAFFIC CONTROL SIGNALS REQUIRED NO
   MINIMUM CLEAR SPAN (NORMAL TO STREAM): • VERTICAL CLEARANCE ABOVE STREAMBED: •
   WATERWAY OF FULL OPENING:
   ARE SIDEWALKS REQUIRED? YES IF SO, ON WHAT SIDE? LEFT
   STRUCTURE TYPE: NA • SEE TEMPORARY BRIDGE SKETCH ABOVE

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER
PRELIMINARY INFORMATION

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372pi.dgn	D & K DWG NO.
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STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
	ROADWAY	TRAINING	EROSION CONTROL	UTILITIES	UTILITIES - NON PART.	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
	1							1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10				
	900							900		CY	COMMON EXCAVATION	203.15				
						10		10		CY	SOLID ROCK EXCAVATION	203.16				
						10		10		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27				
	15							15		CY	EXCAVATION OF SURFACES AND PAVEMENTS	203.28				
	175							175		CY	SAND BORROW	203.31				
	190			15	135			340		CY	TRENCH EXCAVATION OF EARTH	204.20				
	10							10		CY	TRENCH EXCAVATION OF ROCK	204.21				
				1				1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22				
						245		245		CY	STRUCTURE EXCAVATION	204.25				
	130			15	130	280		555		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30				
						250		250		CY	COFFERDAM EXCAVATION, EARTH	208.30				
						20		20		CY	COFFERDAM EXCAVATION, ROCK	208.35				
						1		1		LS	COFFERDAM (STA. 4+10)	208.40				
	250							250		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10				
	700							700		CY	SUBBASE OF GRAVEL	301.15				
	4				0.5	1		5.5		CWT	EMULSIFIED ASPHALT	404.65				
	525				20	90		635		TON	BITUMINOUS CONCRETE PAVEMENT	406.25				
	1							1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50				
						250		250		CY	CONCRETE, HIGH PERFORMANCE CLASS A	501.33				
						230		230		CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34				
				650	650	28500		29800		LB	STRUCTURAL STEEL, ROLLED BEAM	506.50				
						156500		156500		LB	STRUCTURAL STEEL, CURVED PLATE GIRDER	506.56				
						21800		21800		LB	REINFORCING STEEL	507.15				
						300		300		LF	DRILLING AND GROUTING DOWELS	507.16				
						60500		60500		LB	EPOXY COATED REINFORCING STEEL	507.17				
						1		1		LS	SHEAR CONNECTORS (2240 - 7/8" X 7")	508.15				
						70		70		GAL	WATER REPELLENT, SILANE	514.10				
						55		55		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10				
						410		410		SY	SHEET MEMBRANE WATERPROOFING, TORCH APPLIED	519.20				
	1							1		LS	TWO-WAY TEMPORARY BRIDGE (2760 SF - EST.)	528.11				
						350		350		SY	REMOVAL OF BRIDGE PAVEMENT	529.10				
						1		1		EACH	PARTIAL REMOVAL OF STRUCTURE	529.20				
						15		15		EACH	BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD	531.11				
						21		21		SY	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS I	580.13				
						11		11		SY	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS II	580.14				
						8		8		CY	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS III	580.15				
	204							204		LF	18" CPEP	601.0915				
	2							2		EACH	18" CPEP ELBOW	601.5814				
				2				2		EACH	SANITARY SEWER MANHOLE	604.22				

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(29)

FILE NAME: z98j372qs.dgn
PROJECT LEADER: J.W. TUCKER
DESIGNED BY: A.P. GUYETTE
QUANTITY SHEET #1

PLOT DATE: 02/18/2009
DRAWN BY: A.P. GUYETTE
CHECKED BY: E.P. DETRICK
SHEET 4 OF 68

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES									TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	TRAINING	EROSION CONTROL	UTILITIES	UTILITIES - NON PART.	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
3							3		EACH	PRECAST REINFORCED CONCRETE PIPE DI WITH CAST IRON GRATE	604.25				
2							2		EACH	CHANGING ELEVATION OF DROP INLETS, CATCH BASINS, OR MANHOLES	604.40				
1							1		EACH	REHAB. DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS I	604.412				
3							3		EACH	REHAB. DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS III	604.418				
80							80		HR	POWER BROOM RENTAL, TYPE II	608.31				
100							100		MGAL	DUST CONTROL WITH WATER	609.10				
					30		30		CY	STONE FILL, TYPE I	613.10				
					60		60		CY	STONE FILL, TYPE II	613.11				
500							500		LF	CAST-IN-PLACE CONCRETE CURB, TYPE B	616.28				
325							325		SY	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	618.10				
75							75		SY	PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH	618.11				
50							50		SF	DETECTABLE WARNING SURFACE	618.30				
1							1		EACH	STEEL MARKER POSTS	619.16				
30							30		LF	REMOVAL OF EXISTING FENCE	620.55				
64.5							64.5		LF	HD STEEL BEAM GUARDRAIL, GALVANIZED	621.21				
			55	55			110		LF	SLEEVES FOR UTILITIES (2 X 24")	625.10				
			20				20		LF	PVC SEWER PIPE (10")	628.35				
			1				1		LS	TRANSFER TO NEW SYSTEM, SANITARY SEWER	628.42				
				241			241		LF	PLASTIC WATER PIPE, RIGID (8")	629.33				
				1			1		LS	TRANSFER TO NEW SYSTEM, WATER SYSTEM	629.42				
			10	75			85		TON	CRUSHED STONE BEDDING	629.54				
200							200		HR	UNIFORMED TRAFFIC OFFICERS	630.10				
600							600		HR	FLAGGERS	630.15				
						1	1		LS	FIELD OFFICE, ENGINEERS	631.10				
						1	1		LS	TESTING EQUIPMENT, CONCRETE	631.16				
						1	1		LS	TESTING EQUIPMENT, BITUMINOUS	631.17				
						1	1		LU	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.25				
	520						520		HR	EMPLOYEE TRAINEESHIP	634.10				
1							1		LS	MOBILIZATION/DEMOBILIZATION	635.11				
1							1		LS	TRAFFIC CONTROL	641.10				
1200							1200		LF	4 INCH WHITE LINE	646.20				
1200							1200		LF	4 INCH YELLOW LINE	646.21				
40							40		LF	CROSSWALK MARKING	646.31				
125							125		SF	REMOVAL OF EXISTING PAVEMENT MARKINGS	646.85				
					175		175		SY	GEOTEXTILE UNDER STONE FILL	649.31				
		250					250		SY	GEOTEXTILE FOR SILT FENCE	649.51				
		25					25		LB	SEED	651.15				
		40					40		LB	FERTILIZER	651.18				
		1					1		TON	AGRICULTURAL LIMESTONE	651.20				
		1					1		TON	HAY MULCH	651.25				

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(29)

FILE NAME: z98j372qs.dgn
PROJECT LEADER: J.W. TUCKER
DESIGNED BY: A.P. GUYETTE
QUANTITY SHEET #2

PLOT DATE: 02/18/2009
DRAWN BY: A.P. GUYETTE
CHECKED BY: E.P. DETRICK
SHEET 5 OF 68

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 3

SUMMARY OF ESTIMATED QUANTITIES									TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	TRAINING	EROSION CONTROL	UTILITIES	UTILITIES - NON PART.	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
60							60		CY	TOPSOIL	651.35				
					50		50		SY	GRUBBING MATERIAL	651.40				
		1					1		LS	EPSC PLAN	652.10				
		200					200		HR	MONITORING EPSC PLAN	652.20				
		1					1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30				
		50					50		CY	VEHICLE TRACKING PAD	653.35				
		8					8		EACH	INLET PROTECTION DEVICE, TYPE I	653.40				
		100					100		LF	BARRIER FENCE	653.50				
		600					600		LF	PROJECT DEMARCATION FENCE	653.55				
1							1		LS	TREE PROTECTION	656.85				
16.5							16.5		SF	TRAFFIC SIGNS, TYPE A	675.20				
30							30		LF	FLANGED CHANNEL SIGN POST	675.301				
150							150		LF	ELECTRICAL CONDUIT (2") (PVC)	678.21				
475							475		LF	ELECTRICAL WIRING	678.24				
2							2		EACH	PULL BOX, STANDARD	678.25				
					6		6		EACH	LIGHT POLE BASE	679.21				
					6		6		EACH	LIGHT POLE	679.45				
					6		6		EACH	LUMINAIRE	679.50				
1							1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50				
			2	2			4		CY	SPECIAL PROVISION (CORING CONCRETE)	900.608				
1							1		EACH	SPECIAL PROVISION (POWER DROP STANCHION)	900.620				
88							88 ⚠		LF	SPECIAL PROVISION (ALUMINUM APPROACH RAILING, ANODIZED)	900.640				
					310		310		LF	SPECIAL PROVISION (BRIDGE RAILING, TEXAS)	900.640				
			150				150		LF	SPECIAL PROVISION (UTILITY DUCT BANK)(4 CONDUIT)	900.640				
			0.5	0.5			1		LS	SPECIAL PROVISION (ELECTRIC HEAT TRACE SYSTEM)	900.645				
			1				1		LS	SPECIAL PROVISION (SEWER MAIN ON BRIDGE)(10")	900.645				
				1			1		LS	SPECIAL PROVISION (WATER MAIN ON BRIDGE)(8")	900.645				

KEY	DATE	BY	REVISION
⚠	03/26/2009	VAOT	MODIFIED QUANTITY.

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(29)

FILE NAME: z98j372qs.dgn
PROJECT LEADER: J.W. TUCKER
DESIGNED BY: A.P. GUYETTE
QUANTITY SHEET #3

PLOT DATE: 02/18/2009
DRAWN BY: A.P. GUYETTE
CHECKED BY: E.P. DETRICK
SHEET 6 OF 68

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

BRIDGE QUANTITY SHEET 1

SUMMARY OF BRIDGE QUANTITIES

APPROACH SLAB	SUPER-STRUCTURE	ABUTMENT NO. 1	ABUTMENT NO. 2	PIER	BRIDGE TOTAL	UNIT	ITEMS	ITEM NUMBER
			10		10	CY	SOLID ROCK EXCAVATION	203.16
			10		10	CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27
		45	200		245	CY	STRUCTURE EXCAVATION	204.25
		80	200		280	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30
			250		250	CY	COFFERDAM EXCAVATION, EARTH	208.30
			20		20	CY	COFFERDAM EXCAVATION, ROCK	208.35
			1		1	LS	COFFERDAM (STA. 4+10)	208.40
0.25	0.75				1	CWT	EMULSIFIED ASPHALT	404.65
20	70				90	TON	BITUMINOUS CONCRETE PAVEMENT (PG 58-28)	406.25
	250				250	CY	CONCRETE, HIGH PERFORMANCE CLASS A	501.33
50		15	150	15	230	CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34
	28500				28500	LB	STRUCTURAL STEEL, ROLLED BEAM	506.50
	156500				156500	LB	STRUCTURAL STEEL, CURVED PLATE GIRDER	506.56
		1100	18500	2200	21800	LB	REINFORCING STEEL	507.15
			300		300	LF	DRILLING AND GROUTING DOWELS	507.16
5500	55000				60500	LB	EPOXY COATED REINFORCING STEEL	507.17
	1				1	LS	SHEAR CONNECTORS (2240 - 7/8" X 7")	508.15
	50	6	8	6	70	GAL	WATER REPELLENT, SILANE	514.10
	55				55	LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10
	410				410	SY	SHEET MEMBRANE WATERPROOFING, TORCH APPLIED	519.20
	350				350	SY	REMOVAL OF BRIDGE PAVEMENT	529.10
	1				1	EACH	PARTIAL REMOVAL OF STRUCTURE	529.20
	15				15	EACH	BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD	531.11
		11		10	21	SY	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS I	580.13
		6		5	11	SY	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS II	580.14
		4		4	8	CY	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS III	580.15
			30		30	CY	STONE FILL, TYPE I	613.10
			60		60	CY	STONE FILL, TYPE II	613.11
			175		175	SY	GEOTEXTILE UNDER STONE FILL	649.31
			50		50	SY	GRUBBING MATERIAL	651.40
	6				6	EACH	LIGHT POLE BASE	679.21
	6				6	EACH	LIGHT POLE	679.45
	6				6	EACH	LUMINAIRE	679.50
	310				310	LF	SPECIAL PROVISION (BRIDGE RAILING, TEXAS)	900.640

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

PROJECT NAME: JOHNSON
PROJECT NUMBER: BHO 1448(29)

FILE NAME: z98j372qs.dgn
PROJECT LEADER: J.W. TUCKER
DESIGNED BY: A.P. GUYETTE
BRIDGE QUANTITY SHEET #1

PLOT DATE: 02/11/2009
DRAWN BY: A.P. GUYETTE
CHECKED BY: E.P. DETRICK
SHEET 7 OF 68

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ITEM DETAIL AND DRAINAGE SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE STRUCTURES

STA.	STA.	POSITION	ASKEW	TYPE	DITCH		PIPE ARCH			PIPE		ALLOWABLE OPTIONS						PIPE ELBOW	ES	CB	PRCD	DEPTH	CONC CL B	REIN STEEL	DI GRATE	CHAN ELEV	CRM	TR EXCAV		COMM EXC	UNC CHAN EXC	STRUC EXCAV	GRAN BKF STRUC	GRAN BORR	EROS MATT	STONE FILL		MRKR POSTS		REMARKS
				IN/OUT	IN	OUT	S	R	L	D	L	PCCSP	CAAP	RCP	CSP	CPEP	PCCSP PI					DI						EARTH	ROCK								TYPE	LT	RT	
							IN	IN	FT	IN	FT	TH	TH	CL	TH		TH	NO-DEG	EA				CY	LBS	TYPE		CY	CY	CY	CY	CY	CY	CY	SY	CY				
4+18.10	4+75.22	LT		DI/-		X				18	60					X		1-45										35					30					X		INSTALL NEW PIPE
4+29.78	4+63.50	LT-RT		DI/-		X																						28												REMOVE EXISTING ~~CONCRETE PIPE~~ CGMP
4+63.50	4+75.22	RT-LT		DI/DI						18	85					X		1-45										48					43							INSTALL NEW PIPE
4+75.22	5+07.83	LT		DI/DI						18	31					X												18					16							INSTALL NEW PIPE
4+75.22		LT																			X	6.8			D			9					3							INSTALL NEW DI
4+92.78	5+12.50	RT-LT		DI/DI																								18												REMOVE EXISTING CONCRETE PIPE
5+12.50		LT																											10												REMOVE EXISTING DI
5+03.87		RT																			X	6.0			D			8					3							INSTALL NEW DI
5+03.87	5+07.83	RT-LT		DI/DI						18	28					X												16					14							INSTALL NEW PIPE
5+07.83		LT																			X	6.4			D			9					3							INSTALL NEW DI
TOTALS										18	204							2-45		4					3-D			189	10				128							

GUARD RAIL

STA.	STA.	LT.	RT.	END TREATMENT BEGIN	END TREATMENT END
2+23.15	2+37.86	64.5			
TOTALS		64.50			

UNDERDRAIN

STA.	STA.	TYPE	POS.	D	L	TRENCH E	TRENCH R	GRAN BKF	FB		MKR PST

engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

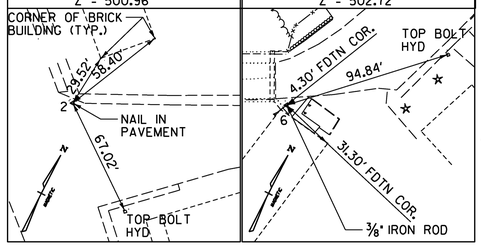
ITEM DETAIL AND DRAINAGE SHEET

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date J. W. TUCKER 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372dra.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 7A of 68

PLOTTED 2/18/2009

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TIES	
HVCRL NO. 2	HVCRL NO. 6
N = 10000.00	N = 10163.28
E = 20000.00	E = 20376.41
Z = 500.96	Z = 502.72



N

MAGNETIC

TO JEFFERSONVILLE

EXISTING BUILDING

EXISTING BUILDING

P.I. STA. 1+58.01 BACK = STA. 1+57.72 AHEAD

PAVED PARKING

HVCRL NO. 2 NAIL IN PAVEMENT

POB STA. 0+00.00

EXISTING SIDEWALK (CONCRETE)

N66° 32' 59"E

39.07'

56.60'

20° 45' 48"

117° 28' 17"

CURVE NO. 1

VERMONT ROUTE 15

TO HYDE PARK

EXISTING HYDRANT

PC Sta 0+72.43

BEGIN APPROACH STA. 1+25.00 (MATCH EXISTING)

BM NO. 3
TOP OF BOLT WITH ARROWHEAD
EL. 504.37

CHANNEL LINE STA. 12+00.00= BASELINE STA. 2+50.00

BEGIN PROJECT BHO 1448 (29) STA. 2+30.00

BEGIN BRIDGE STA. 2+71.00

PT Sta 2+43.29

CHANNEL LINE

12+75

GIHON RIVER

PC Sta 3+45.00

105° 00' 00"

137° 41' 37"

63° 59' 19"

160.53'

87.03'

01° 26' 34"

05° 37' 08"

CENTERLINE PIER STA. 3+45.00

VT. STUDIO CENTER BUILDING

PAVED PARKING

EXISTING BUILDING

EXISTING PORCH

P.I. Sta 5+80.41

POE STA. 7+00.00

CENTER LINE TOWN HIGHWAY NO. 1 (PEARL STREET)

TO WATERVILLE

EXISTING SIDEWALK

EXISTING SIDEWALK

CURVE NO. 2

161.81'

25.53'

END APPROACH STA. 6+00.00 (MATCH EXISTING)

END PROJECT BHO 1448 (29) STA. 4+75.00

GRAVEL DRIVE

EXISTING HYDRANT

EXISTING BUILDING

BM NO. 2
TOP OF BOLT WITH ARROWHEAD
EL. 504.72

P.I. STA. 4+69.14 BACK = STA. 4+56.27 AHEAD

EXISTING LANDSCAPE PLANTINGS

END BRIDGE STA. 4+22.00

HVCRL NO. 6
3/8" IRON ROD

SCALE: 1" = 20'-0"
0 20 40
SCALE IN FEET

NOTE:
SEE SHEET 14 FOR THE LAYOUT OF DETOUR.

LAYOUT COORDINATES			
STA. 0+00.00	POB	N 9961.03	E 19997.26
STA. 0+72.43	PC	N 10002.65	E 20056.54
STA. 1+58.01	PI	N 10051.83	E 20126.57
STA. 2+43.29	PT	N 10090.58	E 20202.87
STA. 2+50.00 STA. 12+00.00	INTERSECTION OF CHANNEL LINE	N 10093.62	E 20208.85
STA. 2+71.00	BEGIN OF BRIDGE	N 10103.12	E 20227.57
STA. 3+45.00	PC	N 10136.63	E 20293.55
STA. 4+22.00	END OF BRIDGE	N 10179.87	E 20357.01
STA. 4+69.14	PI	N 10192.84	E 20404.24
STA. 5+80.41	PT	N 10310.82	E 20442.85
STA. 7+00.00	POE	N 10424.48	E 20480.04

CURVE NO. 1	CURVE NO. 2
△ = 08° 09' 28.45" RT	△ = 44° 57' 36.51" LT
D = 04° 46' 28.73"	D = 19° 05' 54.94"
R = 1200.00	R = 300.00
T = 85.57	T = 124.14
L = 170.86	L = 235.41
E = 3.05	E = 24.67

DATUM
VERTICAL NAVD 88
HORIZONTAL ASSUMED

LEGEND

EXISTING	PROPOSED
EDGE OF PAVEMENT OR GRAVEL	EDGE OF PAVEMENT OR GRAVEL
EDGE OF RIVER	
FENCE	
GUARD RAIL	GUARD RAIL
OVERHEAD LINES. — AER E&T —	
UTILITY POLE	
TREE	
TREE LINE	
HEDGE	
LEDGE	
SIGN	
HYDRANT	
SEWER MANHOLE — S — S	

PLOTTED 2/10/2009

DuBois & King inc.
engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 5
Highway No. I	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

TIE SHEET

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372tie.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 10 of 68

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~~**PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH**~~

~~STA. 1+81.70 LT - STA. 2+05.40 LT~~
~~STA. 4+41.00 RT - STA. 4+76.50 RT~~
~~STA. 4+79.20 LT - STA. 5+04.90 LT~~

CAST-IN-PLACE CONCRETE CURB, TYPE B

STA. 1+25.00 LT - STA. 1+30.60 LT
STA. 1+42.50 LT - STA. 1+80.60 LT
STA. 2+06.30 LT - STA. 2+71.00 LT
STA. 1+25.00 RT - STA. 2+50.95 RT
STA. 2+63.00 RT - STA. 2+70.00 RT
STA. 4+19.00 RT - STA. 4+38.30 RT
STA. 4+25.00 LT - STA. 4+78.00 LT
STA. 4+77.90 RT - STA. 5+12.00 RT
STA. 5+06.10 LT - STA. 6+00.00 LT
STA. 5+24.00 RT - STA. 6+15.90 RT

SIDEWALK RAMP (TYPE 1)

STA. 4+43.00 RT, STA. 4+76.00 RT

SIDEWALK RAMP (TYPE 6)

STA. 4+40.00 LT

CONSTRUCT DRIVE

STA. 1+36.70 LT , STA. 1+93.50 LT
STA. 2+57.00 RT , STA. 4+60.00 RT
STA. 4+92.00 LT , STA. 5+18.00 RT

PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH

STA. 1+25.00 LT - STA. 1+81.70 LT
STA. 2+05.40 LT - STA. 2+70.00 LT
STA. 1+25.00 RT - STA. 2+70.00 RT
STA. 4+17.75 RT - STA. 4+41.00 RT
STA. 4+25.30 LT - STA. 4+79.20 LT
STA. 4+76.50 RT - STA. 6+15.00 RT
STA. 5+04.90 LT - STA. 6+00.00 LT

PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH
STA. 1+32.00 LT - STA. 1+42.00 LT
STA. 2+52.00 RT - STA. 2+62.00 RT
STA. 4+41.00 RT - STA. 4+76.50 RT
STA. 4+58.00 LT - STA. 4+70.00 LT
STA. 5+10.00 RT - STA. 5+32.00 RT

618.30 DETECTABLE WARNING SURFACE
1+78 LT
2+07 LT
4+65 LT
4+40 RT

END APPROACH STA. 6+00.00 (MATCH EXISTING)

STA. 6+00 LT MATCH EXISTING SIDEWALK

FLAG POLE

EXISTING BUILDING

APPROXIMATE LOCATION OF MONITORING WELL NUMBER 2, TO REMAIN UNDISTURBED

PAVED PARKING

APPROXIMATE LOCATION OF LAID UP STONEWALL ALONG EDGE OF PAVED SIDEWALK (TO BE REMOVED BY OTHERS)

STONE FILL, TYPE I BEHIND WINGWALL NO. 3 COVERED WITH GRUBBING MATERIAL

CENTERLINE OF TEMPORARY DETOUR. SEE SHEET 14 FOR DETAILS.

FOUR FOOT CLOSURE POUR REQUIRED BETWEEN STONEWALL AND NEW WINGWALL NO. 3

LIMITS OF NEW PAVEMENT

DO NOT DISTURB (TREE)

EXISTING PORCH

NEW EDGE OF TRAVELED LANE

EXISTING SIDEWALK

TO WATERVILLE

12' DRIVE

EXISTING FENCE TO BE REMOVED

R 10'-0"

R 205'-0"

WII-2 AND WI6-7P

24'-0"

←MOVED

12'-0"

5+25

R 100'-0"

STA. 6+15.00 RT MATCH EXISTING SIDEWALK

6+00

5+00

END PROJECT BHO 1448 (29) STA. 4+75.00

R 315'-9"

EXISTING HYDRANT

GRAVEL DRIVE

R 30'-0"

28'-0"

BM NO. 2
TOP OF BOLT WITH ARROWHEAD
EL. 504.72

EXISTING BUILDING

EXCAVATION OF SURFACES AND PAVEMENTS, INCLUDING EXISTING PAVEMENT AND SIDEWALK OUTSIDE OF NEW ROADWAY LIMITS. TOPSOIL, SEED AND MULCH.

LIMITS OF NEW PAVEMENT

EXISTING LANDSCAPE PLANTINGS, DO NOT DISTURB.

END BRIDGE STA. 4+22.00 F.G. ELEV. 503.08

WII-2 AND WI6-7P

HVCRL NO. 6 3/8" IRON ROD

VT. STUDIO CENTER BUILDING.

EXISTING CONCRETE ABUTMENT TO BE PARTIALLY REMOVED

STONE FILL, TYPE II

EXISTING BUILDING

DO NOT DISTURB (TREE)

LIMITS OF NEW PAVEMENT

FLAG POLE (DO NOT DISTURB)

SIDEWALK RAMP FOR DRIVE ENTRANCE, TYP. REFER TO VTRANS STANDARD C-2A

CHANNEL STATION 12+00 = BASELINE STATION 2+50

CAST-IN-PLACE CONCRETE CURB (TYP.)

IRON PIPE

NEW 5' SIDEWALK (TYP.)

R 5'-0"

24'-0"

REMOVE AND REPLACE EXISTING BACKWALL, REPAIR BRIDGE SEATS, AND MODIFY WINGWALLS TO ACCOMMODATE PLACEMENT OF NEW SUPERSTRUCTURE

EXISTING BRIDGE

STA. 1+25 MATCH EXISTING SIDEWALK LT & RT

HVCRL NO. 2 NAIL IN PAVEMENT

10'-0"

EXISTING SIDEWALK (CONCRETE)

8"

CZ

105° 0' 0"

CENTERLINE TOWN HIGHWAY NO. 1 (PEARL STREET)

VERMONT ROUTE 15

TO JEFFERSONVILLE

TO HYDE PARK

EXISTING BUILDING

EXISTING BUILDING

0+00 1+00 2+00 3+00 4+00

R 5650'-0"

SHOULDER WIDTHS VARY SEE ROADWAY CROSS SECTIONS FOR WIDTHS AT SPECIFIC STATIONS

EXISTING RIGHT-OF-WAY (49.50')

EXISTING SIDEWALK (CONCRETE)

EXISTING HYDRANT

BM NO. 3
TOP OF BOLT WITH ARROWHEAD
EL. 504.37

BEGIN APPROACH STA. 1+25.00 (MATCH EXISTING)

BEGIN PROJECT BHO 1448 (29) STA. 2+30.00

BEGIN BRIDGE STA. 2+71.00 F.G. ELEV. 502.63

SPECIAL PROVISION (BRIDGE RAILING, TEXAS), TYP.

EXISTING PIER TO REMAIN AND BE REPAIRED. PIER CAP TO BE REPLACED

CENTERLINE PIER STA. 3+45.00 F.G. ELEV. 502.85

CHANNEL LINE 12+75

GIHON RIVER

N

MAGNETIC

SITE PLAN

SCALE: 1" = 20'-0"

0 20 40

SCALE IN FEET

NOTES:
1. SEE SHEET 12 FOR ALL OVERHEAD AND BURIED UTITLIES.
2. SEE SHEET 41 AND 42 FOR BRIDGE AND APPROACH RAIL DETAILS.

EXISTING BRIDGE DATA

TWO SPAN STEEL BEAM WITH CONCRETE DECK, SIDEWALK AND GUARDRAILS.
TWO CONCRETE ABUTMENTS WITH CENTER CONCRETE PIER CLEAR WIDTH 20'-0", SIDEWALK WIDTH 5'-0", FACE OF RAIL TO FACE OF RAIL WIDTH 25'-9" AND FASCIA TO FASCIA WIDTH 28'-0"

DATUM
VERTICAL NAVD 88
HORIZONTAL ASSUMED

TRAFFIC SIGNS, TYPE A

STA. 4+28.00 RT (CROSSWALK) (WII-2 & WI6-7pL)
STA. 4+45.00 LT (CROSSWALK) (WII-2 & WI6-7pL)

HD STEEL BEAM GUARDRAIL, GALVANIZED

STA. 2+23.15 LT 90 FT - STA. 2+37.86 LT 27.25 FT

SPECIAL PROVISION (ALUMINUM APPROACH RAILING, ANODIZED)

STA. 2+37.86 LT - STA. 2+72.50 LT
STA. 2+65.96 RT - STA. 2+72.50 RT
STA. 4+16.40 RT - STA. 4+23.04 RT
STA. 4+25.18 LT - STA. 4+51.90 LT

SPECIAL PROVISION (BRIDGE RAILING, TEXAS)

STA. 2+71.00 RT - STA. 4+17.55 RT
STA. 2+71.00 LT - STA. 4+27.00 LT

TREE PROTECTION

STA. 2+24.58 LT 96.77 FT
STA. 5+40.90 LT 31.80 FT

REMOVAL OF EXISTING FENCE

STA. 4+35.00 LT- STA. 4+61.00 LT

STONE FILL, TYPE I

STA. 4+15.00 LT - STA. 4+35.00 LT

STONE FILL, TYPE II

STA. 4+09.00 RT - STA. 4+17.60 LT

CROSSWALK MARKING

STA. 4+40.00

4 INCH YELLOW LINE

STA. 0+50.00 - STA. 6+00.00 (DOUBLE CENTERLINE)

4 INCH WHITE LINE

STA. 0+50.00 RT - STA. 6+00.00 RT
STA. 0+50.00 LT - STA. 6+00.00 LT

LEGEND

EXISTING	PROPOSED
EDGE OF PAVEMENT	EDGE OF PAVEMENT
OR GRAVEL	OR GRAVEL
EDGE OF RIVER	FENCE
FENCE	GUARD RAIL
GUARD RAIL	CLEAR ZONE
STORM DRAIN	TOE OF SLOPE
SEWER	TOP OF CUT
OVERHEAD LINES.	SIGN
UTILITY POLE	
TREE	
TREE LINE	
HEDGE	
LEDGE	
SIGN	
HYDRANT	
SEWER MANHOLE	
DRAINAGE STRUCTURE	

PLOTTED 2/10/2009

DuBois & King inc.
engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

SITE PLAN

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372bdr.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 11 of 68

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	FOUND-ATION	TUBULAR STEEL Ø (in) lb/ft 3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																									
STA. 4+28 RT		1	30	30	6.25						1			X																				W11-2		E-152
		1	24	12	2.00																													W16-7pL		E-152
STA. 4+45 LT		1	30	30	6.25						1			X																				W11-2		E-152
		1	24	12	2.00																													W16-7pL		E-152
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."												FT	FT	FT 30.0	FT	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB								
TOTALS		SF 16.50	SF	EA.	SF							FT 30.0			FT					LB			EA.	LB				EA.	EA.	LB					

DATUM
VERTICAL NAVD 88
HORIZONTAL ASSUMED

PLOTTED 2/18/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 5
Highway No. I	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER
TRAFFIC SIGN SUMMARY SHEET

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372tss.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 11A of 68

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N

MAGNETIC

TO JEFFERSONVILLE

EXISTING BUILDING

EXISTING BUILDING

EXISTING PAVED PARKING.

GIHON RIVER

EXISTING UNDERGROUND UTILITY LINES TO BE PROTECTED BY CONTRACTOR DURING CONSTRUCTION FOR REUSE

20-FT ANCHOR BY OTHERS (TEMP)

TEMPORARY UTILITY POLE, BY OTHERS

EXISTING PAVED PARKING

EXISTING BUILDING

10-FT SIDEWALK ANCHOR BY OTHERS (TEMP)

TEMPORARY TELEPHONE UTILITY RELOCATION

AER E&T

TEMPORARY UTILITY POLE, BY OTHERS

EXISTING MONITORING WELL TO REMAIN UNDISTURBED

GUY WIRE TO BE REMOVED BY OTHERS

VILLAGE OF JOHNSON ELECTRIC DEPT. UTILITY POLE TO BE REMOVED BY OTHERS

OVERHEAD SERVICES TO BE REMOVED BY OTHERS

10-FT SIDEWALK ANCHOR BY OTHERS (TEMP)

TEMPORARY UTILITY POLE, BY OTHERS

EXISTING PORCH

EXISTING SIDEWALK

TO WATERVILLE

END APPROACH
STA. 6+00.00
(MATCH EXISTING)

VILLAGE OF JOHNSON ELECT. DEPT POLE TO REMAIN

EXISTING OVERHEAD ELECTRIC SERVICE TO REMAIN UNDISTURBED

EXISTING OVERHEAD UTILITY SERVICES TO BE REMOVED BY OTHERS

ADJUST ELEVATION OF CATCH BASIN, GRADE NEW PAVEMENT, TO DRAIN

ELEV

NEW PULL BOX PAID UNDER ITEM 678.25

REMOVE EXISTING DI

DOES NOT EXIST

EXISTING PIPE TO BE REMOVED, CUT AND PLUG AT DI. SEE CONSTRUCTION NOTE 6, SHEET 25.

REMOVE

NEW 18" CPEP

NEW LOCATION OF POLE # 417 BY OTHERS. END 2 TELEPHONE CONDUITS.

VILLAGE OF JOHNSON ELECTRIC DEPARTMENT POLE # 417 TO BE RELOCATED BY OTHERS

10-FT SIDEWALK ANCHOR BY OTHERS (TEMP)

NEW LOCATION OF POLE # 418 BY OTHERS. END CATV CONDUIT AND 2 TELEPHONE CONDUITS, BEGIN AERIAL UTILITIES

20-FT ANCHOR BY OTHERS

EXISTING HYDRANT

EXISTING DI TO REMAIN

EXISTING BUILDING

NON-PARTICIPATING UTILITY WORK STA. 0+48.86 TO STA. 1+25.00

EXISTING SIDEWALK (CONCRETE)

REHAB. III

REHAB. I

SMH

CENTERLINE TOWN HIGHWAY NO. 1 (PEARL STREET)

TO VAULT IN MAIN STREET

VERMONT

ROUTE 15

0+00

1+00

2+00

3+00

4+00

5+00

6+00

EXISTING SIDEWALK (CONCRETE)

EXISTING HYDRANT

TO HYDE PARK

SPECIAL PROVISION (UTILITY DUCT BANK) (4 CONDUIT)

VILLAGE OF JOHNSON ELECT. DEPT POLE # 423 TO REMAIN

VILLAGE OF JOHNSON ELECTRIC DEPT. POLE # 426 TO BE REMOVED BY OTHERS.

SPECIAL PROVISION (POWER DROP STANCHION) FOR STREET LIGHTING ON BRIDGE. SEE STANDARD E-175

20-FT ANCHOR BY OTHERS

STREET LIGHT (TYP.)

VILLAGE OF JOHNSON ELECTRIC DEPT. POLE # 422 TO BE REMOVED BY OTHERS.

EXISTING RIGHT-OF-WAY

CONDUIT FOR STREETLIGHT WIRING (2" DIA.)

VT. STUDIO CENTER BUILDING

EXISTING OVERHEAD SERVICES TO BE REMOVED BY OTHERS

EXISTING DI TO REMAIN

EXISTING PIPE TO REMAIN UNDISTURBED

EXISTING PIPE TO BE REMOVED AND CAPPED AT DI. SEE CONSTRUCTION NOTE 6 SHEET 25.

VILLAGE OF JOHNSON ELECTRIC DEPT. POLE # 418 TO BE RELOCATED BY OTHERS

END PROJECT
BHO 1448 (29)
STA. 4+75.00

END BRIDGE
STA. 4+22.00
F.G. ELEV. 503.08

CENTERLINE PIER
STA. 3+45.00
F.G. ELEV. 502.85

BEGIN PROJECT
BHO 1448 (29)
STA. 2+30.00

BEGIN BRIDGE
STA. 2+71.00
F.G. ELEV. 502.63

BEGIN APPROACH
STA. 1+25.00
(MATCH EXISTING)

DRAINAGE AND UTILITY PLAN

SCALE: 1" = 20'-0"

0 20 40

SCALE IN FEET

NOTES:

1. SEE BRIDGE RAIL AND APPROACH RAIL DETAILS FOR FURTHER INFORMATION ON LOCATIONS OF CONDUIT FOR STREET LIGHTING.
2. EXISTING SEWER LINE TO BE REPLACED. SEE UTILITY PLANS FOR INFORMATION REGARDING THE REMOVAL OF EXISTING AND CONSTRUCTION OF NEW SEWER LINE.
3. A NEW WATER LINE IS TO BE CONSTRUCTED ON THE BRIDGE. SEE UTILITY PLANS PLANS FOR INFORMATION REGARDING NEW WATER LINE.

LEGEND

EXISTING	PROPOSED
EDGE OF PAVEMENT OR GRAVEL	EDGE OF PAVEMENT OR GRAVEL
EDGE OF RIVER	
FENCE	FENCE
GUARD RAIL	GUARD RAIL
STORM DRAIN	STORM DRAIN
SEWER	CLEAR ZONE
OVERHEAD LINES. AER E&T	TOE OF SLOPE
UTILITY POLE	TOP OF CUT
TREE	SIGN
TREE LINE	DROP INLET
HEDGE	STREET LIGHT
LEDGE	UTILITY POLE
SIGN	UNDERGROUND LINES
HYDRANT	OVERHEAD LINES
SEWER MANHOLE	WATERLINE
DRAINAGE STRUCTURE	

DATUM
VERTICAL NAVD 88
HORIZONTAL ASSUMED

REMOVE DI (ITEM 204.21)
STA. 5+12.50 LT

REHAB. DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS I
STA. 2+04.70 RT

REHAB. DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS III
STA. 2+03.00 LT , STA. 4+63.50 RT
STA. 4+92.80 RT

18" CPEP
STA. 4+18.10 LT - STA. 4+75.22 LT (60')
STA. 4+63.50 RT - STA. 4+75.22 LT (85')
STA. 4+75.22 LT - STA. 5+07.83 LT (31')
STA. 5+03.87 RT - STA. 5+07.83 LT (28')

SPECIAL PROVISION (UTILITY DUCT BANK)(4 CONDUIT)
STA. 1+23.50, 19.40' RT - STA. 2+71.00, 13.90' RT
STA. 4+18.50, 14.10' RT - STA. 5+47.84, 21.75' RT

CHANGING ELEVATION OF DROP INLETS, CATCH BASINS, OR MANHOLES
STA. 1+35.18 RT, STA. 2+16 LT

PRECAST REINFORCED CONCRETE DROP INLET WITH CAST IRON GRATE
STA. 4+75.22 LT, STA. 5+03.87 RT
STA. 5+07.83 LT

PULL BOX, STANDARD
STA. 2+68 LT, STA. 2+68 RT

SPECIAL PROVISION (POWER DROP STANCHION)
STA. 1+90 RT

STREET LIGHT
STA. 2+76.21 LT , STA. 2+76.21 RT
STA. 3+45.00 LT , STA. 3+45.00 RT
STA. 4+11.63 RT , STA. 4+20.13 LT

24" CPEP(SL)
2+04.70 RT TO 2+70.00 RT

PLOTTED 2/10/2009

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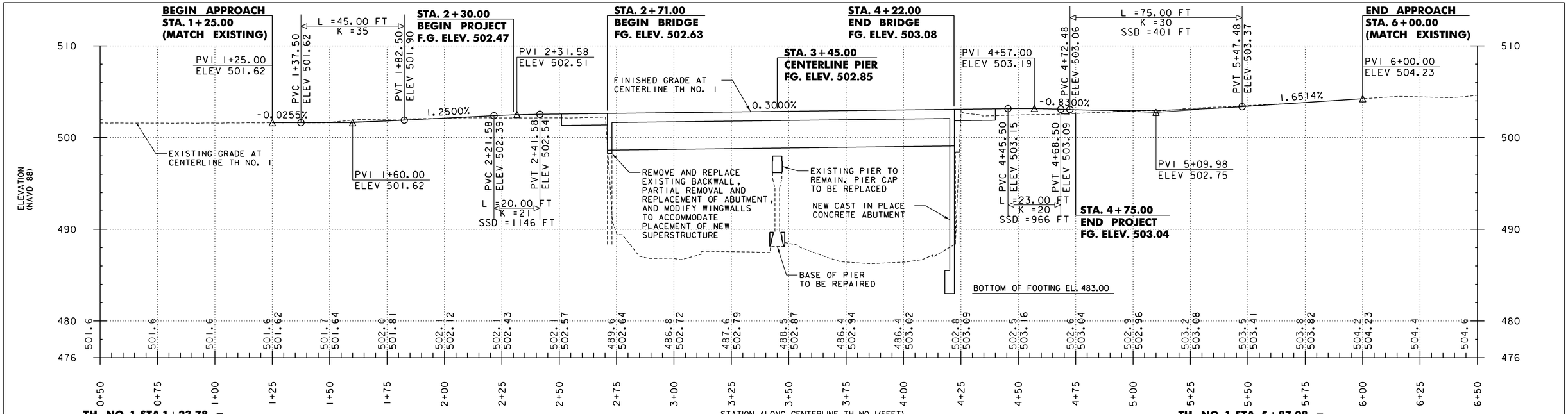
STATE OF VERMONT
AGENCY OF TRANSPORTATION

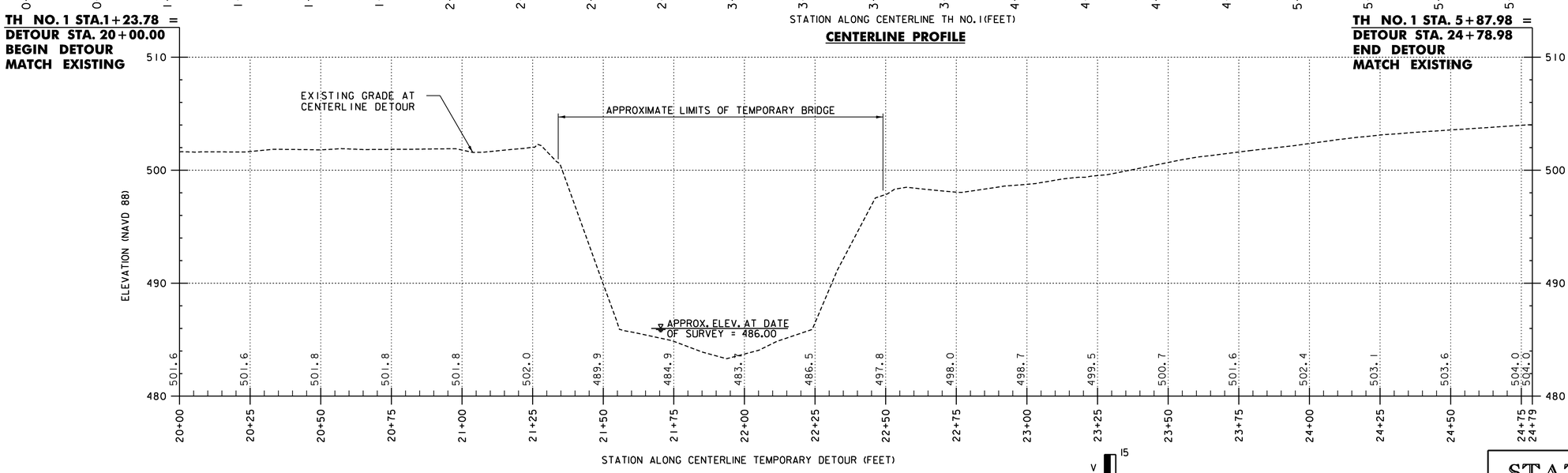
Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER
DRAINAGE AND UTILITY PLAN

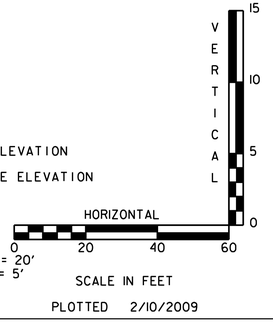
Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date J. W. TUCKER 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372utl.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 12 of 68

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NOTE: GRADES SHOWN TO THE NEAREST TENTH REPRESENT EXISTING GROUND ELEVATION ALONG THE PROPOSED CENTERLINE.
GRADES SHOWN TO THE NEAREST HUNDREDTH REPRESENT FINISHED GRADE ELEVATION ALONG THE PROPOSED CENTERLINE.



SCALE HORIZ. 1" = 20'
SCALE VERT. 1" = 5'

PLOTTED 2/10/2009

DATUM
VERTICAL NAVD 88
HORIZONTAL ASSUMED

DuBois & King inc.
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STATE OF VERMONT
AGENCY OF TRANSPORTATION

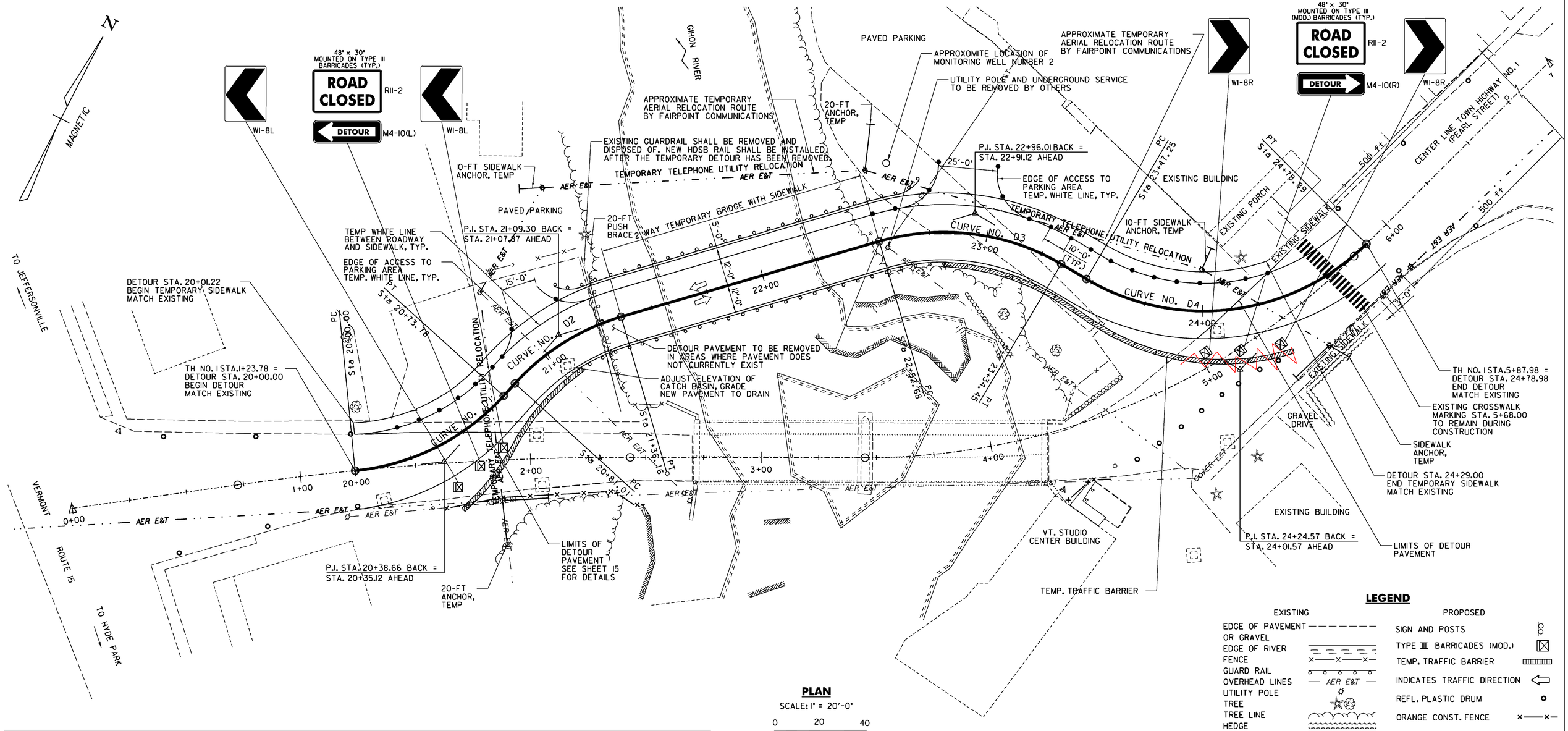
Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

PROFILE

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98J372xs.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 13 of 68

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PLAN

SCALE: 1" = 20'-0"

0 20 40

SCALE IN FEET

LEGEND

EXISTING	PROPOSED
EDGE OF PAVEMENT OR GRAVEL	SIGN AND POSTS
EDGE OF RIVER	TYPE III BARRICADES (MOD.)
FENCE	TEMP. TRAFFIC BARRIER
GUARD RAIL	INDICATES TRAFFIC DIRECTION
OVERHEAD LINES — AER E&T —	REFL. PLASTIC DRUM
UTILITY POLE	ORANGE CONST. FENCE
TREE	FLEXIBLE DELINEATORS
TREE LINE	
HEDGE	
LEDGE	
SIGN	

LAYOUT COORDINATES

STA. 20+00.00	PC	N 10031.25	E 20099.17
STA. 20+38.66	PI	N 10052.10	E 20131.73
STA. 20+73.78	PT	N 10089.43	E 20141.80
STA. 20+81.01	PC	N 10096.41	E 20143.69
STA. 21+09.31	PI	N 10123.72	E 20151.06
STA. 21+36.16	PT	N 10143.13	E 20171.64
STA. 22+52.68	PC	N 10223.05	E 20256.43
STA. 22+96.01	PI	N 10252.78	E 20287.96
STA. 23+34.45	PT	N 10250.10	E 20331.21
STA. 23+47.25	PC	N 10249.31	E 20343.98
STA. 24+24.58	PI	N 10244.53	E 20421.16
STA. 24+78.89	PT	N 10318.02	E 20445.20

CURVE NO. D1	CURVE NO. D2	CURVE NO. D3	CURVE NO. D4
△ = 42°16'28.71" LT	△ = 31°35'35.28" RT	△ = 46°51'10.55" RT	△ = 75°25'30.37" LT
D = 57°17'44.81"	D = 57°17'44.81"	D = 57°17'44.81"	D = 57°17'44.81"
R = 100.00	R = 100.00	R = 100.00	R = 100.00
T = 38.66	T = 28.29	T = 43.33	T = 77.32
L = 73.78	L = 55.14	L = 81.77	L = 131.64
E = 7.21	E = 3.92	E = 8.98	E = 26.41

DATUM

VERTICAL NAVD 88

HORIZONTAL ASSUMED

NOTES:

1. SEE SHEET 15 FOR TRAFFIC CONTROL NOTES.
2. ALL DETAILS NOT SHOWN SHALL BE IN ACCORDANCE WITH PART VI OF MUTCD AND VAOT STANDARDS E-100, E-100A, E-101, E-102, E-102A, E-106, E-107 AND E-107A.
3. FOR CONSTRUCTION APPROACH SIGNING SEE SHEET 15.
4. CURVE NO. D1 IS TANGENT TO THE CURVATURE OF THE MAINLINE CURVE NO. 1.
5. SEE SHEET 15 FOR TYPICAL DETOUR SECTIONS.

PLOTTED 2/10/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

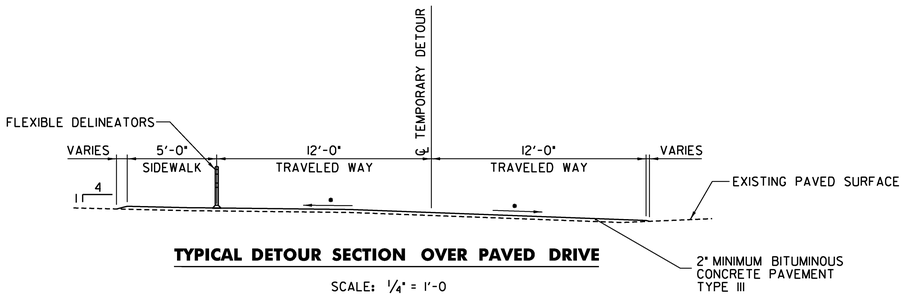
Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

DETOUR SHEET

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372tc1.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 14 of 68

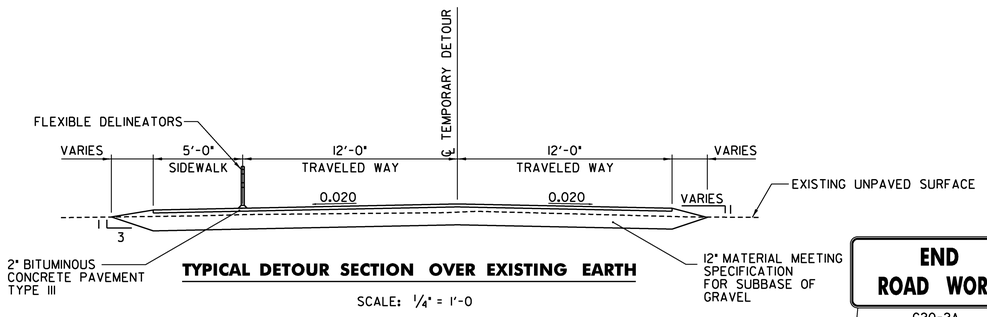
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TYPICAL DETOUR SECTION OVER PAVED DRIVE

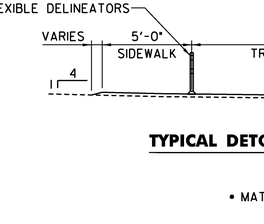
SCALE: 1/4" = 1'-0

• MATCH GRADE OF EXISTING PAVED DRIVEWAY



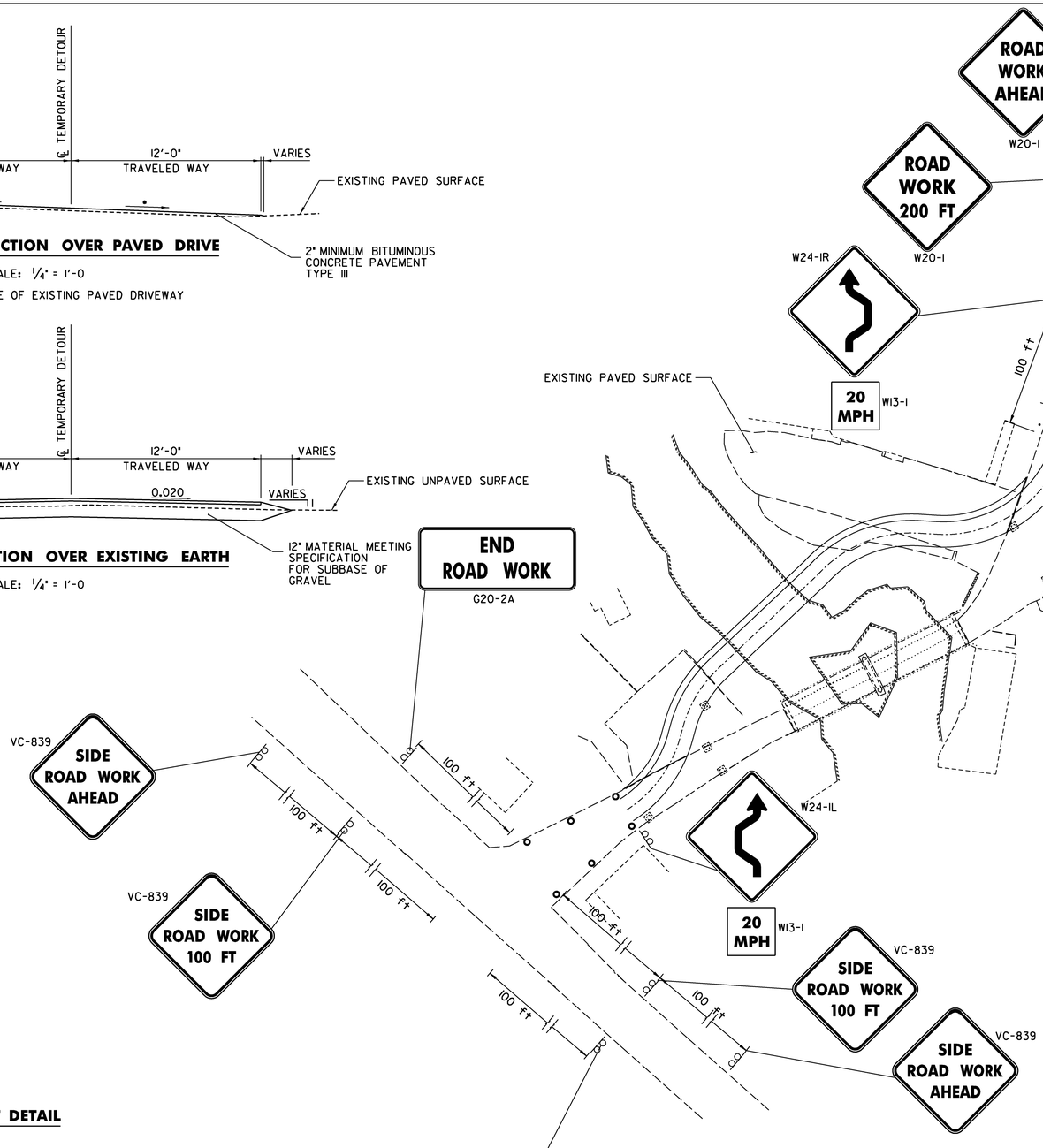
TYPICAL DETOUR SECTION OVER EXISTING EARTH

SCALE: 1/4" = 1'-0



DELINEATOR WITH FLEXIBLE POST DETAIL

SCALE: 1" = 1'-0"



PLAN

NOT TO SCALE

LEGEND

EXISTING	PROPOSED
EDGE OF PAVEMENT OR GRAVEL	SIGN AND POSTS
EDGE OF RIVER	TYPE III BARRICADES (MOD.)
	TEMP. TRAFFIC BARRIER
	INDICATES TRAFFIC DIRECTION
	REFL. PLASTIC DRUM

TRAFFIC CONTROL NOTES

1. THE EXISTING BRIDGE IS TO BE CLOSED TO TRAFFIC DURING CONSTRUCTION. THE CONTRACTOR SHALL INSTALL A TEMPORARY TWO-WAY BRIDGE WITH ONE SIDEWALK AND ASSOCIATED DETOUR DOWNSTREAM OF THE EXISTING BRIDGE WITHIN THE LIMITS SHOWN IN THESE PLANS. THE CONTRACTOR SHALL NOTIFY THE TOWN IN WRITING AT LEAST 2 WEEKS PRIOR TO CLOSURE OF THE EXISTING BRIDGE.
2. TEMPORARY TRAFFIC BARRIER SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 621. FLEXIBLE DELINEATORS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 676.
3. ALL WORK ASSOCIATED WITH THE DESIGN, INSTALLATION, MAINTENANCE AND REMOVAL OF THE TEMPORARY BRIDGE, RAILINGS, APPROACH RAILINGS, BARRICADES, TEMPORARY TRAFFIC BARRIERS FLEXIBLE DELINEATORS, TEMPORARY PAVEMENT MARKINGS, PAVEMENT, SUBBASE MATERIAL, REQUIRED FILL AND ALL OTHER NECESSARY ITEMS SHALL BE PAID UNDER ITEM 528.11, "TWO-WAY TEMPORARY BRIDGE". IN AREAS WHERE REQUIRED, DETOUR PAVEMENT SHALL BE REMOVED UNDER ITEM 203.28 "EXCAVATION OF SURFACES AND PAVEMENTS" AND AREA SHALL BE RESTORED TO ORIGINAL CONDITION.
4. ALL WORK ASSOCIATED WITH THE INSTALLATION, MAINTENANCE AND REMOVAL OF THE APPROACH SIGNING AS SHOWN IN THESE PLANS AND AS SHOWN ON E SERIES STANDARD DRAWINGS SHALL BE PAID FOR UNDER ITEM 641.10 "TRAFFIC CONTROL".
5. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVES DURING CONSTRUCTION. COST SHALL BE PAID UNDER ITEM 641.10, "TRAFFIC CONTROL".
6. EXISTING DI'S SHALL BE MAINTAINED DURING CONSTRUCTION AND THE CONTRACTOR SHALL MAKE PROVISIONS FOR ADEQUATE DRAINAGE DURING CONSTRUCTION.
7. REMOVAL OF THE EXISTING GUARDRAIL AT APPROXIMATE STATION 2+40.00 LT SHALL BE PAID FOR INCIDENTAL TO ITEM 528.11, "TWO-WAY TEMPORARY BRIDGE".
8. THE EXISTING SIDEWALK AT STA. 5+68.00 SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
9. IF FLAGGERS ARE USED ADDITIONAL TEMPORARY TRAFFIC CONTROL SINAGE WILL BE NEEDED.

PLOTTED 2/10/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

TRAFFIC CONTROL

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372tc2.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 15 of 68

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SOIL CLASSIFICATION

AASHTO	
A1	Gravel and Sand
A3	Fine Sand
A2	Silty or Clayey Gravel and Sand
A4	Silty Soil - Low Compressibility
A5	Silty Soil - Highly Compressible
A6	Clayey Soil - Low Compressibility
A7	Clayey Soil - Highly Compressible

ROCK QUALITY DESIGNATION

R.Q.D. (%)	ROCK DESCRIPTION
<25	Very Poor
25 to 50	Poor
51 to 75	Fair
76 to 90	Good
>90	Excellent

SHEAR STRENGTH

UNDRAINED SHEAR STRENGTH IN P.S.F.	CONSISTENCY
<250	Very Soft
250-500	Soft
500-1000	Med. Stiff
1000-2000	Stiff
2000-4000	Very Stiff
>4000	Hard

CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

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

DEFINITIONS (AASHTO)

BEDROCK (LEDGE) - Rock in its native location of indefinite thickness.

BOULDER - A rock fragment with an average dimension > 12 inches.

COBBLE - Rock fragments with an average dimension between 3 and 12 inches.

GRAVEL - Rounded particles of rock < 3" and > 0.0787" (#10 sieve).

SAND - Particles of rock < 0.0787" (#10 sieve) and > 0.0029" (#200 sieve).

SILT - Soil < 0.0029" (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.

CLAY - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.

VARVED - Alternate layers of silt and clay.

HARDPAN - Extremely dense soil, cemented layer, not softened when wet.

MUCK - Soft organic soil (containing > 10% organic material.

MOISTURE CONTENT - Weight of water divided by dry weight of soil.

FLOWING SAND - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.

STRIKE - Angle from magnetic north to line of intersection of bed with a horizontal plane.

DIP - Inclination of bed with a horizontal plane.

COMMONLY USED SYMBOLS

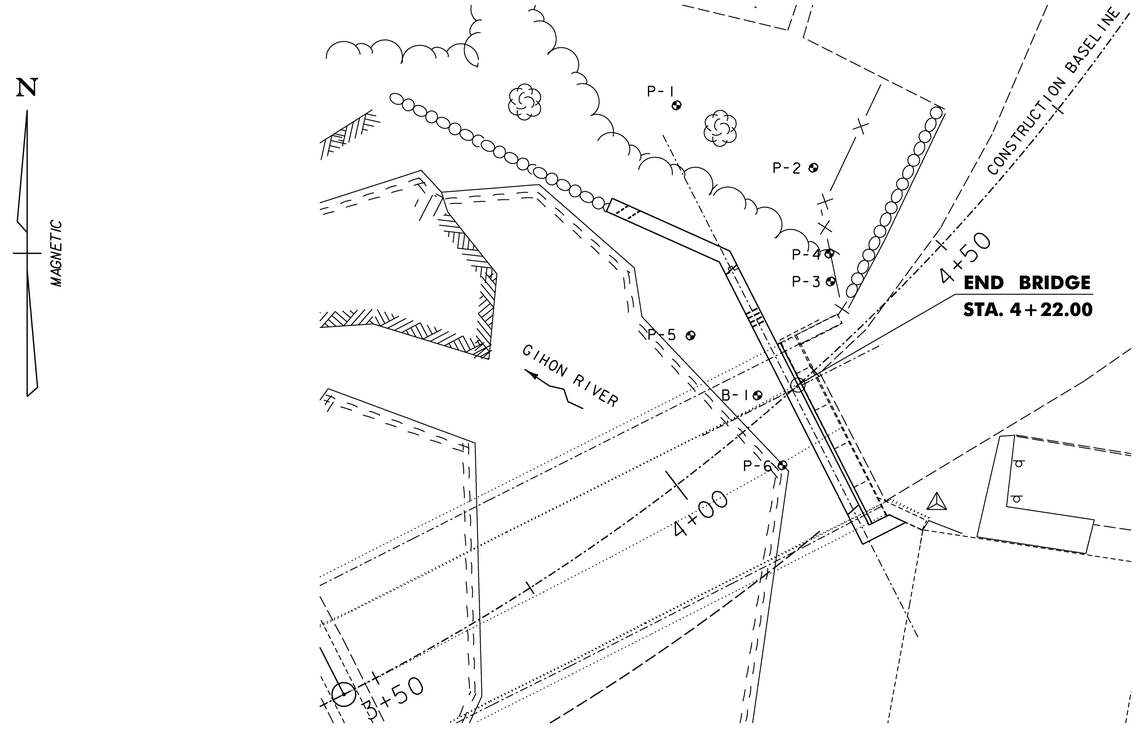
▼	Water Elevation
⊗	Standard Penetration Boring
⊕	Auger Boring
⊙	Rod Sounding
S	Sample
N	Standard Penetration Test Blow Count Per Foot For: 2" O.D. Sampler 1 3/8" I.D. Sampler Hammer Weight Of 140 Lbs. Hammer Fall Of 30"
VS	Field Vane Shear Test
US	Undisturbed Soil Sample
B	Blast
DC	Diamond Core
MD	Mud Drill
WA	Wash Ahead
HSA	Hollow Stem Auger
AX	Core Size 1 1/8"
BX	Core Size 1 5/8"
NX	Core Size 2 1/8"
M	Double Tube Core Barrel Used
LL	Liquid Limit
PL	Plastic Limit
PI	Plasticity Index
NP	Non Plastic
w	Moisture Content (Dry Wgt. Basis)
D	Dry
M	Moist
MTW	Moist To Wet
W	Wet
Sat	Saturated
Bo	Boulder
Gr	Gravel
Sa	Sand
Si	Silt
Cl	Clay
HP	Hardpan
Le	Ledge
NLTD	No Ledge To Depth
CNPF	Can Not Penetrate Further
TLOB	To Ledge Or Boulder
NR	No Recovery
Rec.	Recovery
%Rec.	Percent Recovery
RQD	Rock Quality Designation
CBR	California Bearing Ratio
<	Less Than
>	Greater Than
R	Refusal (N > 100)

COLOR

blk	Black	pnk	Pink
bl	Blue	pu	Purple
brn	Brown	rd	Red
dk	Dark	tn	Tan
gry	Gray	wh	White
gn	Green	yel	Yellow
lt	Light	mltc	Multicolored
or	Orange		

BORING CHART

HOLE NO.	STATION	OFFSET	GROUND ELEV.	ELEV. OF REFUSAL
B-1	4+16.77	2.63 LT	487.52	483.02
P-1	4+37.50	40.15 LT	500.43	485.35
P-2	4+45.40	20.41 LT	502.27	485.10
P-3	4+35.38	7.49 LT	501.95	498.45
P-4	4+38.07	10.40 LT	502.59	481.09
P-5	4+15.03	15.07 LT	487.13	481.88
P-6	4+13.14	7.08 RT	487.13	478.63



BORING PLAN

SCALE 1" = 10'-0

10 0 10

GENERAL NOTES

1. The subsurface explorations shown herein were made between October 17, 2001 and October 19, 2001 by CON-TEC
2. Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
3. Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.
4. Engineering judgement was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgement by the Contractor.
5. Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.
6. Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.

PLOTTED 2/10/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

BORING INFORMATION SHEET

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z9813372bor.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 16 of 68

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CON-TEC, INC. TEST BORING LOG

PROJECT: PEARL STREET OVER GIHON RIVER
LOCATION: JOHNSON, VT

JOB NO.	G25124
HOLE NO.	B-1
SHEET	1 OF 1
START DATE	10/17/01
FINISH DATE	10/17/01
DRILLER	R. Bourassa
HELPER	D. Flatrault
INSPECTOR	-

	CASING	SAMPLE	CORE
TYPE	HW	SS	NW
SIZE ID	4"	1 3/8"	2"
HAMMER WT.		140	
HAMMER FALL		30"	

GROUND WATER		DEPTH TO		
DATE	TIME	WATER	BOTTOM OF CASING	BOTTOM OF HOLE

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMP NO.	SAMPLE DEPTH	SAMPLE BLOWS PER 6 INCHES	RECOV.	SOIL DESCRIPTION
	HW	1	0'-1.5'	5	4"	Brown, wet loose, fine to coarse SAND & fine to coarse GRAVEL, little silt
				4		
				4		1.5'
2.5'	4"	1A	1.5'-1.8'	100/.3		Gray, dry, very dense COBBLE
						2.1'
	ROLLER					SAND, SILT & GRAVEL
	BIT					
						TOP OF ROCK 4.5'
5.0'						Drilled into bedrock with rollerbit
	NX					
	CORE					NX RUN -1 6.0' - 11.0'
7.5'						RECOVERY 5.0' - 100%
						ROD 4.2 - 84%
10.0'						Gray-white banded MICA SCHIST
						11.0'
						NX RUN -2 11.0' - 15.0'
12.5'						RECOVERY 3.5' - 88%
						ROD 2.8 - 70%
						Gray banded MICA SCHIST
15.0'						
						BOTTOM OF BORING 15.0'
20.0'						Note: 1. Coring time in rock augered 5 min./L.F.
						2. Typed Driller's Field Log.

CON-TEC, INC. TEST BORING LOG

PROJECT: PEARL STREET OVER GIHON RIVER
LOCATION: JOHNSON, VT

JOB NO.	G25124
HOLE NO.	P-1
SHEET	1 OF 1
START DATE	10/18/01
FINISH DATE	10/18/01
DRILLER	R. Bourassa
HELPER	D. Flatrault
INSPECTOR	-

	CASING	SAMPLE	CORE
TYPE	AW ROD		
SIZE ID	1 3/4"		
HAMMER WT.			
HAMMER FALL			

GROUND WATER		DEPTH TO		
DATE	TIME	WATER	BOTTOM OF CASING	BOTTOM OF HOLE

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMP NO.	SAMPLE DEPTH	SAMPLE BLOWS PER 6 INCHES	RECOV.	SOIL DESCRIPTION
	6					Note: Drove AW Rod probe with 140 lb hammer - 30" drop.
	13					
	19					
	14					
5.0'	14					
	18					
	20					
	22					
10.0'	12					
	15					
	18					
	22					
	17					
15.0'	48					
	79					
	25.4"					
	100.0"					15'1"
						BOTTOM OF PROBE 15'1"
20.0'						Typed Driller's Field Log

CON-TEC, INC. TEST BORING LOG

PROJECT: PEARL STREET OVER GIHON RIVER
LOCATION: JOHNSON, VT

JOB NO.	G25124
HOLE NO.	P-2
SHEET	1 OF 1
START DATE	10/18/01
FINISH DATE	10/18/01
DRILLER	R. Bourassa
HELPER	D. Flatrault
INSPECTOR	-

	CASING	SAMPLE	CORE
TYPE	AW ROD		
SIZE ID	1 3/4"		
HAMMER WT.			
HAMMER FALL			

GROUND WATER		DEPTH TO		
DATE	TIME	WATER	BOTTOM OF CASING	BOTTOM OF HOLE

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMP NO.	SAMPLE DEPTH	SAMPLE BLOWS PER 6 INCHES	RECOV.	SOIL DESCRIPTION
	13					Note: Drove AW Rod probe with 140 lb hammer - 30" drop.
	29					
	18					
	14					
5.0'	9					
	12					
	15					
	19					
10.0'	19					
	7					
	5					
	12					
	7					
15.0'	12					
	18					
	49					
	46					
	50.6"					
	100.0"					17'2"
						BOTTOM OF PROBE 17'2"
20.0'						Typed Driller's Field Log

CON-TEC, INC. TEST BORING LOG

PROJECT: PEARL STREET OVER GIHON RIVER
LOCATION: JOHNSON, VT

JOB NO.	G25124
HOLE NO.	P-3
SHEET	1 OF 1
START DATE	10/18/01
FINISH DATE	10/18/01
DRILLER	R. Bourassa
HELPER	D. Flatrault
INSPECTOR	-

	CASING	SAMPLE	CORE
TYPE	AW ROD		
SIZE ID	1 3/4"		
HAMMER WT.			
HAMMER FALL			

GROUND WATER		DEPTH TO		
DATE	TIME	WATER	BOTTOM OF CASING	BOTTOM OF HOLE

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMP NO.	SAMPLE DEPTH	SAMPLE BLOWS PER 6 INCHES	RECOV.	SOIL DESCRIPTION
	11					Note: Drove AW Rod probe with 140 lb hammer - 30" drop.
	28					
	77					
	50.6"					3.5'
5.0'	100.0"					BOTTOM OF PROBE 3.5'
						Typed Driller's Field Log
10.0'						
15.0'						
20.0'						
25.0'						
30.0'						

CON-TEC, INC. TEST BORING LOG

PROJECT: PEARL STREET OVER GIHON RIVER
LOCATION: JOHNSON, VT

JOB NO.	G25124
HOLE NO.	P-4
SHEET	1 OF 1
START DATE	10/18/01
FINISH DATE	10/18/01
DRILLER	R. Bourassa
HELPER	D. Flatrault
INSPECTOR	-

	CASING	SAMPLE	CORE
TYPE	AW ROD		
SIZE ID	1 3/4"		
HAMMER WT.			
HAMMER FALL			

GROUND WATER		DEPTH TO		
DATE	TIME	WATER	BOTTOM OF CASING	BOTTOM OF HOLE

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMP NO.	SAMPLE DEPTH	SAMPLE BLOWS PER 6 INCHES	RECOV.	SOIL DESCRIPTION
	7					Note: Drove AW Rod probe with 140 lb hammer - 30" drop.
	47					
	22					
	6					
5.0'	3					
	4					
	8					
	6					
	5					
10.0'	5					
	11					
	10					
	10					
	15					
15.0'	19					
	29					
	36					
	52					
	61					
20.0'	79					
	84					
	75.6"					
	100.0"					21.5'
						BOTTOM OF PROBE 21.5'
25.0'						Typed Driller's Field Log

CON-TEC, INC. TEST BORING LOG

PROJECT: PEARL STREET OVER GIHON RIVER
LOCATION: JOHNSON, VT

JOB NO.	G25124
HOLE NO.	P-5
SHEET	1 OF 1
START DATE	10-19-01
FINISH DATE	10/19/01
DRILLER	R. Bourassa
HELPER	D. Flatrault
INSPECTOR	-

	CASING	SAMPLE	CORE
TYPE	AW ROD		
SIZE ID	1 3/4"		
HAMMER WT.			
HAMMER FALL			

GROUND WATER		DEPTH TO		
DATE	TIME	WATER	BOTTOM OF CASING	BOTTOM OF HOLE

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMP NO.	SAMPLE DEPTH	SAMPLE BLOWS PER 6 INCHES	RECOV.	SOIL DESCRIPTION
	10					Note: Drove AW Rod probe with 140 lb hammer - 30" drop.
	62					
	33					
	56					
5.0'	39					
	15.6"					
	100.0"					5'3"
						BOTTOM OF PROBE 5'3"
10.0'						Typed Driller's Field Log

CON-TEC, INC. TEST BORING LOG

PROJECT: PEARL STREET OVER GIHON RIVER
LOCATION: JOHNSON, VT

JOB NO.	G25124
HOLE NO.	P-6
SHEET	1 OF 1
START DATE	10/19/01
FINISH DATE	10/19/01
DRILLER	R. Bourassa
HELPER	D. Flattrault
INSPECTOR	-

	CASING	SAMPLE	CORE
TYPE	AW ROD		
SIZE ID	1 3/4"		
HAMMER WT.			
HAMMER FALL			

GROUND WATER		DEPTH TO		
DATE	TIME	WATER	BOTTOM OF CASING	BOTTOM OF HOLE

DEPTH IN FEET	CASING BLOWS PER FOOT	SAMP NO.	SAMPLE DEPTH	SAMPLE BLOWS PER 6 INCHES	RECOV.	SOIL DESCRIPTION
	8					Note: Drove AW Rod probe with 140 lb hammer - 30" drop.
	11					
	9					
	34					
5.0'	18					
	22					
	19					
	27					
	20.6"					8.5'
10.0'	100.0"					BOTTOM OF PROBE 8.5'
						Typed Driller's Field Log

BOTTOM OF FOOTING = EL. 483.00

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 5
	Log Sta.
Highway No. 1	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

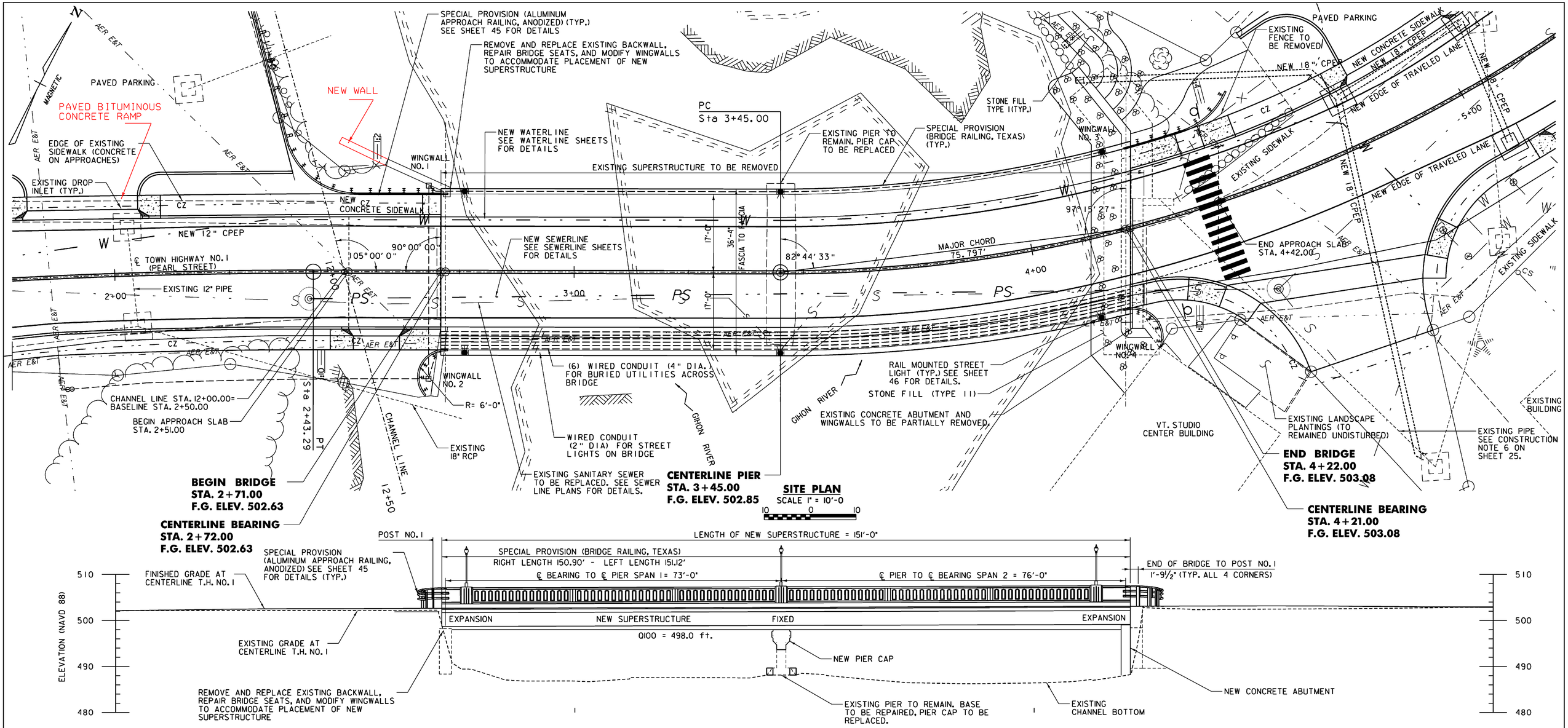
BORING LOG SHEET

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98J372bor.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 17 of 68

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NOTE:
SEE SHEETS 41 AND 42 FOR STREET LIGHTING DETAILS.

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

EXISTING
- EDGE OF PAVEMENT OR GRAVEL
- EDGE OF RIVER
- FENCE
- GUARD RAIL
- STORM DRAIN
- SEWER
- OVERHEAD LINES. — AER E&T —
- UTILITY POLE
- TREE

LEGEND

EXISTING
- TREE LINE
- LEDGE
- SIGN
- HYDRANT
- SEWER MANHOLE
- DRAINAGE STRUCTURE

PROPOSED
- EDGE OF PAVEMENT
- GUARD RAIL
- STORM DRAIN
- CLEAR ZONE — --CZ— --
- TOE OF SLOPE
- TOP OF CUT
- UNDERGROUND ELECTRIC & TELEPHONE LINE — U E&T —
- SIGN
- DRAINAGE STRUCTURE

PLOTTED 2/10/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 5
Highway No. I	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

PLAN AND ELEVATION

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date J. W. TUCKER 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372pe.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 18 of 68

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1.1 PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF REPLACEMENT OF THE EXISTING SUPERSTRUCTURE WITH A NEW CURVED STEEL GIRDER AND CONCRETE DECK SUPERSTRUCTURE TO BE PLACED ON ONE NEW ABUTMENT, ONE REHABILITATED ABUTMENT AND A REHABILITATED PIER. ADDITIONAL WORK INCLUDES THE REALIGNMENT OF THE ROADWAY, ASSOCIATED APPROACH WORK, NEW SIDEWALKS, CULVERTS, DRAINAGE DI'S AND THE REMOVAL AND REPLACEMENT OF THE EXISTING GUARDRAIL AND RECONSTRUCTION OF THE SIDESLOPES ALONG THE IMPACTED ROADWAY.

THE PROJECT IS LOCATED ON PEARL STREET (T.H. NO. 1), APPROXIMATELY 300 FEET EAST OF THE JUNCTION WITH VERMONT ROUTE 15 AND SPANS THE GIHON RIVER. PEARL STREET IS A PAVED CLASS 2 TOWN HIGHWAY IN THE TOWN OF JOHNSON. PRIOR TO CONSTRUCTION, A TEMPORARY DETOUR AND BRIDGE WILL BE INSTALLED DOWNSTREAM OF THE EXISTING BRIDGE AND WILL BE USED TO MAINTAIN VEHICULAR AND PEDESTRIAN TRAFFIC DURING CONSTRUCTION. THE TEMPORARY DETOUR WILL BE A TOTAL LENGTH OF APPROXIMATELY 500 FEET AND WILL BE REMOVED UPON COMPLETION OF CONSTRUCTION. THIS PROJECT IS EXPECTED TO LAST TWO CONSTRUCTION SEASONS.

THE MATERIAL TO BE EXCAVATED FROM THE SITE WILL INCLUDE EXISTING BITUMINOUS CONCRETE SURFACE AND SUBBASE WITHIN THE EXISTING ROADWAY AS WELL AS EXCAVATION FOR THE PLACEMENT OF THE NEW ABUTMENT AND ASSOCIATED STONE FILL AROUND THE ABUTMENTS. ADDITIONAL EXCAVATION WILL BE NEEDED FOR THE TEMPORARY ABUTMENTS USED TO SUPPORT THE TEMPORARY BRIDGE. STOCKPILING OF ANY EXCAVATED MATERIAL TO BE REUSED MAY TAKE PLACE WITHIN THE PROJECT LIMITS. LIKEWISE, STOCKPILING OF ANY NEW MATERIAL TO BE USED IS EXPECTED TO TAKE PLACE WITHIN THE PROJECT LIMITS. THE LIMIT OF CONSTRUCTION AND ASSOCIATED MAXIMUM SOIL DISTURBANCE AREA FOR THE ROADWAY AND BRIDGE CONSTRUCTION IS APPROXIMATELY 0.50 ACRES. ADDITIONALLY THERE WILL BE APPROXIMATELY 0.25 ACRES OF DISTURBED SOIL ASSOCIATED WITH THE CONSTRUCTION, USE AND REMOVAL OF THE TEMPORARY DETOUR. THE TOTAL FOOTPRINT AREA OF DISTURBED SOILS IS CALCULATED TO BE 0.75 ACRES.

THERE ARE TWO EXISTING ENVIRONMENTAL RESOURCE ELEMENTS IN THE VICINITY OF THE PROJECT, THE GIHON RIVER AND A STONE WALL AT ROUGHLY 4+10 LT. THE STONE WALL SHALL REMAIN UNDISTURBED THROUGHOUT CONSTRUCTION. THERE ARE NO OTHER KNOWN SENSITIVE ENVIRONMENTAL AREAS IN CLOSE PROXIMITY TO THIS PROJECT. THERE ARE NO CRITICAL HABITATS, OTHER THAN THE GIHON RIVER, WHICH NEED SPECIAL ATTENTION AND PROTECTION DURING OR AFTER CONSTRUCTION. THE BANKS OF THIS RIVER WITHIN THE PROJECT LIMITS ARE NATURAL SOIL AND ROCK SLOPES EXTENDING FROM THE EXISTING GRADES OR ABUTMENTS TO THE ELEVATION OF THE WATER WITHIN THE RIVER. DISTURBED AREAS ON THE RIVER BANK WILL INCLUDE THE CONSTRUCTION OF THE NEW ABUTMENT AND PLACING STONE FILL AROUND THE SIDES OF THE ABUTMENTS AND DURING THE CONSTRUCTION OF THE TEMPORARY BRIDGE. ALL PROPOSED CONSTRUCTION IS TO TAKE PLACE IN THE DRY.

1.2 SITE INVENTORY

1.2.1 OFFSITE DRAINAGE CHARACTERISTICS
THIS PROJECT SITE IS LOCATED IN AN URBAN, HIGHLY TRAVELED AREA OF THE VILLAGE OF JOHNSON. THE AREA SURROUNDING THE PROJECT IS MODERATELY SLOPED WITH ESTABLISHED VEGETATION, INCLUDING GRASSY LAWNS, TREE LINES, AND PAVED AND GRAVEL PARKING LOTS. MUCH OF THE RUNOFF FROM THE SURROUNDING TERRAIN DRAINS INTO CATCH BASINS LOCATED THROUGHOUT THE PROJECT, OR DIRECTLY INTO THE GIHON RIVER. THE CATCH BASINS ARE SITUATED ALONG THE ROADWAYS OR IN THE PARKING LOTS TYPICALLY AT LOW POINTS OR CURB CUTS. THE CATCH BASINS DRAIN DIRECTLY INTO THE GIHON RIVER.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES
THE GIHON RIVER IS THE ONLY WATERWAY WITHIN THE PROJECT LIMITS. THERE ARE NO OTHER WETLANDS WITHIN THE PROJECT LIMITS, OR SURROUNDING AREA.

1.2.3 TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES
THE TOPOGRAPHY OF THE PROJECT AREA CONSISTS OF MODERATE SLOPES AND ROLLING HILLS. SEVERAL PERMANENT RESIDENTS AND BUSINESSES ARE LOCATED WITHIN THE PROJECT LIMITS AND NEAR THE BRIDGE. OVERHEAD AND UNDERGROUND UTILITIES ARE LOCATED ALONG PEARL STREET WITH THE NECESSARY RELOCATIONS BEING PERFORMED AS PART OF THIS PROJECT.

1.2.4 VEGETATION
THE PROJECT AREA CONSISTS OF GRASSY LAWNS WITH SCATTERED SMALL TREES. IMPACTS TO VEGETATED AREAS WILL BE LIMITED TO THE SIDE SLOPES OF THE ROAD, LOCATION OF NEW SIDEWALK AREAS ADJACENT TO THE BRIDGE AND THE AREA OF THE TEMPORARY DETOUR. SEVERAL SMALL TREES WILL BE REMOVED AS PART OF THE CLEARING FOR THE DETOUR LIMITS. FOLLOWING THE COMPLETION OF CONSTRUCTION, THE TEMPORARY DETOUR AND ASSOCIATED FILL WILL BE REMOVED AND THE VEGETATION WILL BE REESTABLISHED USING STANDARD SEED AND MULCH PRACTICES.

1.2.5 SOILS
THE SOIL CONSERVATION SERVICE HAS MAPPED THE SOILS THROUGHOUT LAMOILE COUNTY. THE SOIL TYPE IDENTIFIED FOR THIS PROJECT SITE IS ADAMS LOAMY FINE SAND 2 TO 8 PERCENT SLOPES, WITH A PARENT GROUP BEING DESCRIBED AS OUTWASH. THIS SITE IS LISTED AS NOT HIGHLY ERODIBLE.

SUBSURFACE INVESTIGATIONS WERE PERFORMED FOR THE PROJECT. ONE BORING AND SIX PROBES WERE PERFORMED. THESE INVESTIGATIONS FOUND SAND, SILT AND GRAVEL AND LEDGE WAS ENCOUNTERED IN EACH.

1.2.6 SENSITIVE RESOURCE AREAS
THE GIHON RIVER AND THE ARCHEOLOGICALLY SENSITIVE STONE WALL BETWEEN STA. 4+00 LT AND 4+18 LT ARE THE ONLY TWO RESOURCE AREAS OF SPECIFIC CONCERN THAT HAVE BEEN IDENTIFIED WITHIN THE PROJECT AREA. THE PROJECT SPANS THE GIHON RIVER WITH MAJOR CONSTRUCTION TAKING PLACE ON BOTH SIDES OF THE RIVER. THE PRIMARY OBJECTIVE FOR THIS EROSION PREVENTION AND SEDIMENT CONTROL PLAN WILL BE TO PREVENT THE MOBILIZATION AND TRANSPORT OF SEDIMENT INTO THE GIHON RIVER. ALL WORK TO BE COMPLETED IN THE RIVER SHALL BE PERFORMED IN THE DRY.

CONTRACTORS SHALL USE ALL MEANS NECESSARY TO AVOID DISTURBANCE OF THE STONE WALL CONSIDERED TO BE ARCHEOLOGICALLY SENSITIVE.

1.3 RISK EVALUATION

SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN ONE OR MORE ACRES OF EARTH DISTURBANCE OR SHOULD THE PROJECT BECOME PART OF A LARGER PLAN OF DEVELOPMENT, THEN THE SELECTED CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL PERMITTING WITH VANR VIA FILING OF THE APPROPRIATE NOTICE OF INTENT UNDER THE CONSTRUCTION GENERAL PERMIT PROCESS.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

TO MINIMIZE THE POTENTIAL FOR STORM WATER RUNOFF TO TRANSPORT SEDIMENT INTO THE RIVER SEVERAL KEY EROSION CONTROL DEVICES AND GENERAL PRACTICES WILL BE USED. DETAILS OF THE DEVICES AND THE LOCATION OF THEIR PLACEMENT CAN BE FOUND IN THE EROSION CONTROL PLANS AND DETAILS. ALL EROSION CONTROL MEASURES SHALL BE PLACED IN ACCORDANCE WITH THE EROSION CONTROL DETAILS IN THESE PLANS.

1.4.1 MARK SITE BOUNDARIES
PROJECT DEMARCATION FENCE SHALL BE INSTALLED TO DELINEATE THE LIMITS THE CONTRACTOR CAN ACCESS WITH CONSTRUCTION EQUIPMENT. THIS MEASURE LIMITS THE AREA THAT CAN BE DISTURBED AND EXPOSED TO EROSION.

1.4.2 LIMIT DISTURBANCE AREA
THE EXISTING MAINLINE WILL BE CLOSED DURING CONSTRUCTION; THEREFORE IT CAN BE USED AS A STAGING AND STOCKPILE AREA. THESE AREAS WILL BE COMPLETELY WITHIN THE PROJECT LIMITS AND WILL UTILIZE THE AFOREMENTIONED TEMPORARY EROSION CONTROL MEASURES. NO ADDITIONAL TEMPORARY EROSION CONTROL MEASURES WILL BE NEEDED.

1.4.3 STABILIZE CONSTRUCTION EXIT
A VEHICLE TRACKING PAD SHALL BE CONSTRUCTED AT ALL ACCESS POINTS BETWEEN CONSTRUCTION ACTIVITIES, INCLUDING STOCKPILE AREAS, AND PUBLIC OR PRIVATE ROADS. VEHICLE TRACKING PADS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STABILIZED CONSTRUCTION ENTRANCE DETAILS CONTAINED IN THESE DRAWINGS.

1.4.4 INSTALL SILT FENCE
THE SILT FENCE WILL BE LOCATED 5 FEET TO 10 FEET DOWN GRADIENT FROM THE TOE OF SLOPE. THE SILT FENCE SHALL BE PLACED PARALLEL TO, OR ALONG, THE CONTOUR, SO THE STORM WATER WILL RUN PERPENDICULAR TO THE SILT FENCE. THE ENDS SHALL BE "J" HOOKED UP GRADIENT TO CREATE A PONDING EFFECT FOR WATER TRYING TO RUN ALONG THE FENCE AND AROUND THE ENDS.

1.4.5 DIVERT UPLAND RUNOFF
EACH DROP INLET OR CATCH BASIN SHALL RECEIVE TEMPORARY ROCK BARRIER PROTECTION IN PAVED AREAS AND TEMPORARY SILT FENCE PROTECTION IN UNPAVED AREAS. THESE TEMPORARY MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS IN THESE PLANS.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF
DUE TO THE NATURE OF THE SITE, CHANNELIZED RUNOFF IS NOT EXPECTED TO OCCUR. IF CHANNELIZED FLOW DEVELOPS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND SHALL AGREE ON A METHOD THAT SHALL BE USED TO SLOW CHANNELIZED RUNOFF.

1.4.7 CONSTRUCT PERMANENT CONTROLS
STONE FILL, TYPE I SHALL BE PLACED ALONG THE TOP OF WINGWALL NO. 3 TO PREVENT EROSION OF THE STEEP SLOPE. STONE FILL TYPE II SHALL BE PLACED ALONG THE FACE OF THE NEW ABUTMENT NO. 2 TO PROTECT THE FOOTING FROM SCOUR.

1.4.8 STABILIZE EXPOSED SOILS
TEMPORARY SOIL STABILIZATION METHODS MAY INCLUDE SEED, MULCH, SOIL BINDER, OR OTHER METHODS AS APPROVED BY THE ENGINEER. TEMPORARY SOIL STABILIZATION METHODS SHALL BE APPLIED TO EXPOSED EARTH WITHIN 48 HOURS OF EARTH DISTURBANCE AND SHALL HAVE ESTABLISHED VEGETATION WITHIN 21 DAYS.

1.4.9 WINTER STABILIZATION
IF VEGETATION IS NOT ESTABLISHED BY OCTOBER 15TH, TEMPORARY STABILIZATION SHALL BE APPLIED FOR THE PURPOSE OF WINTER STABILIZATION. SEED AND MULCH SHALL BE USED FOR ESTABLISHING A TEMPORARY COVER ON DISTURBED SOILS. TEMPORARY STABILIZATION MEASURES SHALL BE IN ACCORDANCE WITH SECTION 653.

1.4.10 STABILIZE SOIL AT FINAL GRADE
ALL DISTURBED AREA OUTSIDE OF THE ROADWAY, SIDEWALK AND PARKING LOT SHALL RECEIVE TOPSOIL, SEED AND MULCH TO REESTABLISH GRASS AND VEGETATION. TOPSOILING, SEEDING AND MULCHING SHALL BE IN ACCORDANCE WITH THE SEEDING FORMULA FOR URBAN AREAS AND ASSOCIATED NOTES AS SHOWN ON SHEET 2 OF THESE PLANS.

1.4.11 DEWATERING ACTIVITIES
NO DEWATERING ACTIVITIES ARE EXPECTED TO BE NEEDED AT THIS SITE. IF IT IS DETERMINED BY THE CONTRACTOR AND ENGINEER THAT DEWATERING OF THE COFFERDAMS IS NEEDED, AN APPROPRIATE DEWATERING PLAN SHALL BE SUBMITTED TO THE ENGINEER AND APPROVED PRIOR TO IMPLEMENTATION.

1.4.12 INSPECT YOUR SITE
THE EROSION CONTROL MEASURES SHALL BE PERIODICALLY INSPECTED AND MAINTAINED ON A REGULAR BASIS. INSPECTION OF THE EROSION CONTROL MEASURES SHALL TAKE PLACE BEFORE AND AFTER MAJOR STORM EVENTS TO INSURE THEY ARE IN GOOD CONDITION AND TO REMOVE EXCESSIVE BUILDUP OF SILT AND DEBRIS AFTER THE STORM EVENTS. A REPORT ON THE EFFECTIVENESS OF THE EROSION CONTROL MEASURES SHALL BE PRESENTED TO THE RESIDENT ENGINEER AND ONSITE COORDINATOR UPON THE COMPLETION OF EACH INSPECTION. MODIFICATIONS OR IMPROVEMENTS TO THE EROSION CONTROL PLAN SHOULD BE COORDINATED WITH THE RESIDENT ENGINEER AND ONSITE COORDINATOR.

PLOTTED 2/18/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

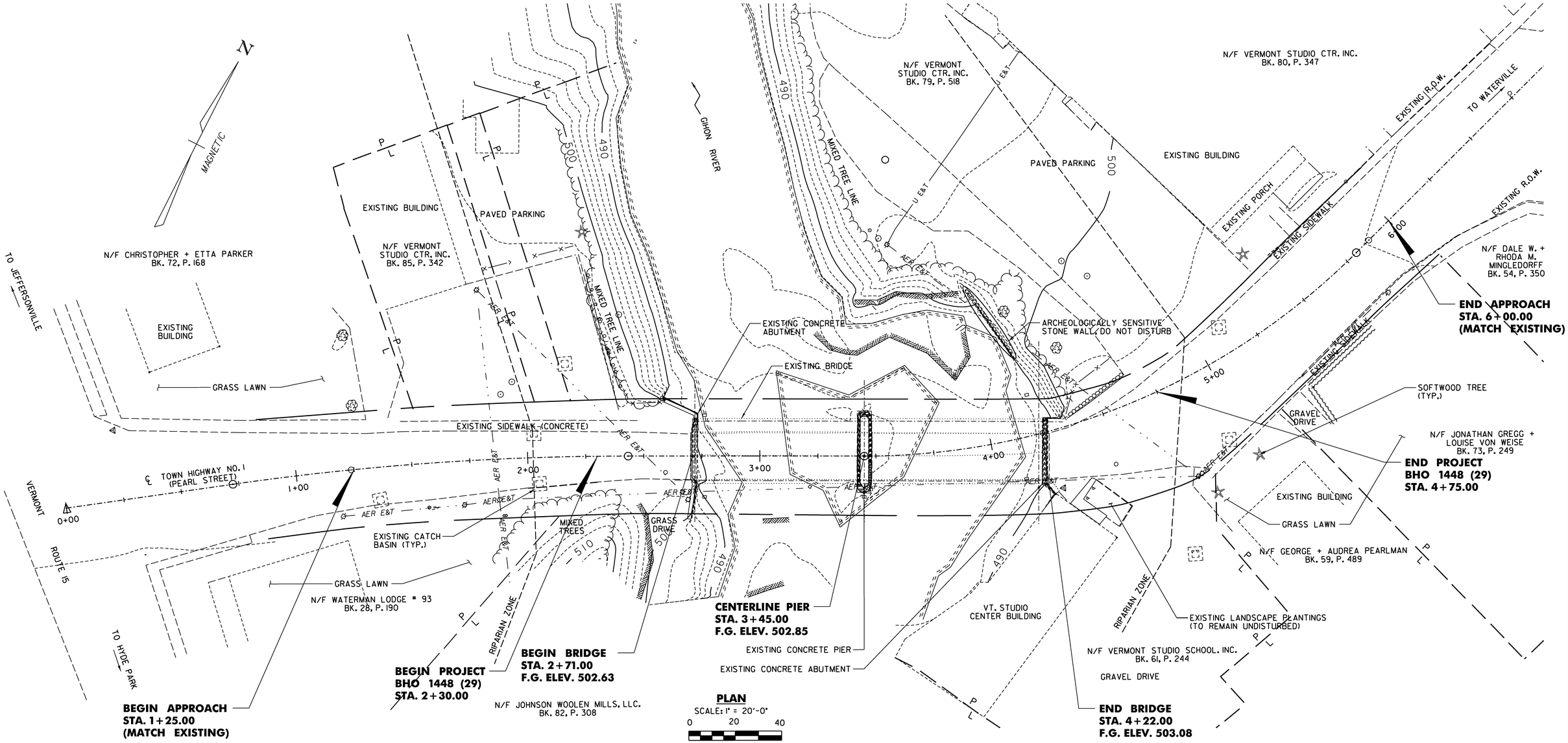
Town Of JOHNSON	Bridge No. 5
	Log Sta.
Highway No. 1	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

EPSC NARRATIVE

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date	Bridge Design Supervisor
J. W. TUCKER 2/09	J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372epscnar.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 19 of 68

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PLAN

SCALE: 1" = 20'-0"

0 20 40

SCALE IN FEET

NOTES:

1. THE GIHON RIVER AND THE ARCHEOLOGICALLY SENSITIVE STONE WALL BETWEEN STA. 4+00 LT AND 4+18 LT ARE THE ONLY TWO RESOURCE AREAS OF SPECIFIEC CONCERN THAT HAVE BEEN IDENTIFIED WITHIN THE PROJECT AREA.

SOILS INFORMATION:

2. THE SOIL CONSERVATION SERVICE HAS MAPPED THE SOILS THROUGHOUT LAMOILE COUNTY. THE SOIL TYPE IDENTIFIED FOR THIS PROJECT SITE IS ADAMS LOAMY FINE SAND 2 TO 8 PERCENT SLOPES, WITH A PARENT GROUP BEING DESCRIBED AS OUTWASH. THIS SITE IS LISTED AS NOT HIGHLY ERODIBLE.

3. SUBSURFACE INVESTIGATIONS WERE PERFORMED FOR THE PROJECT. ONE BORING AND SIX PROBES WERE PERFORMED. THESE INVESTIGATIONS FOUND SAND, SILT AND GRAVEL AND LEDGE WAS ENCOUNTERED IN EACH.

DATUM

VERTICAL NAVD 88

HORIZONTAL ASSUMED

LEGEND

EXISTING

EDGE OF PAVEMENT OR GRAVEL

EDGE OF RIVER

FENCE

TREE

TREE LINE

HEDGE

LEDGE

RIGHT OF WAY

PROPERTY LINE

SIGN

DRAINAGE STRUCTURE

PLOTTED 2/10/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

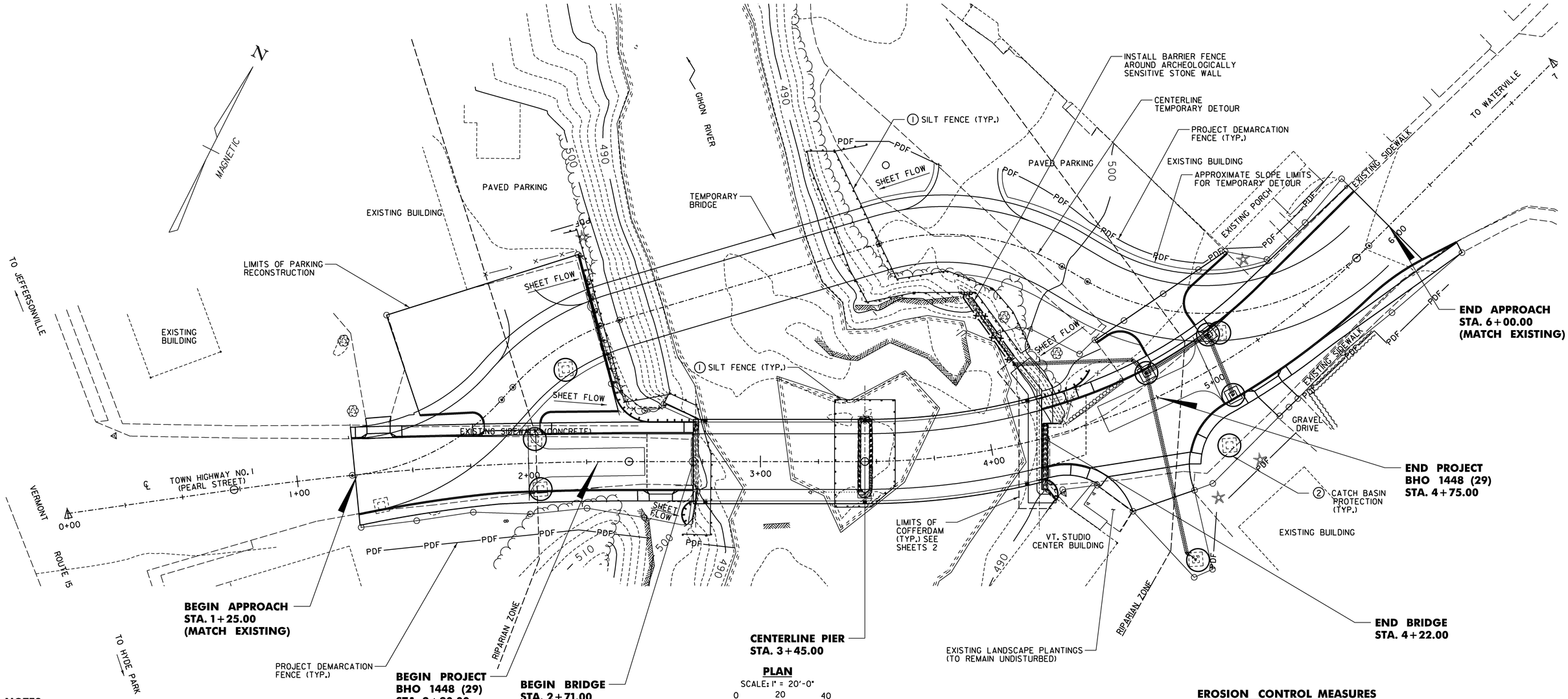
Town Of JOHNSON	Bridge No. 5
Highway No. I	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

EPSC EXISTING CONDITIONS SITE PLAN

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98J372epscic.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 20 of 68

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PLAN

SCALE: 1" = 20'-0"

0 20 40

SCALE IN FEET

NOTES:

1. ALL TEMPORARY EROSION CONTROL MEASURES WILL BE IN PLACE PRIOR TO THE BEGINNING OF CONSTRUCTION, WHERE POSSIBLE.
2. SILT FENCE INSTALLATION MAY REQUIRE PHASING TO MAXIMIZE EFFECTIVENESS. INSTALL AND/OR MOVE SILT FENCE AS CONSTRUCTION PROGRESSES TO OBTAIN THE GREATEST PREVENTION OF SEDIMENT TRANSPORT. ALL SILT FENCE INSTALLATION SHALL BE PROPERLY KEYED INTO THE GROUND AND SUPPORTED AS DETAILED ON THE "EPSC DETAIL SHEET (I)". THE SILT FENCE SHOULD BE INSTALLED ALONG THE CONTOURS TO PREVENT CONCENTRATION OF RUNOFF. THE ENDS OF EACH RUN OF SILT FENCE SHOULD BE TURNED UPHILL TO PROVIDE A SMALL POOL FOR SEDIMENT SHOULD WATER TRY TO RUN AROUND THE END OF THE SILT FENCE.
3. IN AREAS WHERE EXISTING RIP RAP OR LEDGE PREVENTS THE PROPER INSTALLATION OF THE SILT FENCE, AN ALTERNATIVE MEANS OF EROSION CONTROL SHALL BE PRESENTED TO THE ENGINEER AND ON-SITE COORDINATOR FOR APPROVAL TO BE USED IN THOSE AREAS ONLY.
4. THE SIDE SLOPES OF THE TEMPORARY DETOUR SHALL IMMEDIATELY BE SEEDED AND MULCHED UPON COMPLETING THE CONSTRUCTION OF THE TEMPORARY DETOUR.
5. SURFACE ROUGHENING HELPS REDUCE RUNOFF VELOCITIES AND INCREASES INFILTRATION RATES. ROUGHENING MAY BE ACCOMPLISHED BY A NUMBER OF METHODS SUCH AS TRACKING UP AND DOWN THE SLOPE WITH A BULLDOZER. TRACKING ACROSS THE SLOPE WITH A WHEELED VEHICLE OR ANY METHOD OF SCARIFYING THE SLOPE SUCH THAT THE GROOVES CREATED RUN PERPENDICULAR TO THE DIRECTION OF WATER RUNOFF.

DATUM

VERTICAL NAVD 88

HORIZONTAL ASSUMED

LEGEND

EXISTING	PROPOSED
EDGE OF PAVEMENT OR GRAVEL	EDGE OF PAVEMENT OR GRAVEL
EDGE OF RIVER	GUARD RAIL
FENCE	STORM DRAIN
TREE	TOE OF SLOPE
TREE LINE	TOP OF CUT
HEDGE	DRAINAGE STRUCTURE
LEDGE	SILT FENCE
SIGN	PROJECT DEMARCATION FENCE (PDF)
DRAINAGE STRUCTURE	PROJECT BARRIER FENCE
	VEHICLE TRACKING PAD

PLOTTED 2/10/2009

EROSION CONTROL MEASURES

①	INSTALL SILT FENCE
②	INSTALL CATCH BASIN PROTECTION

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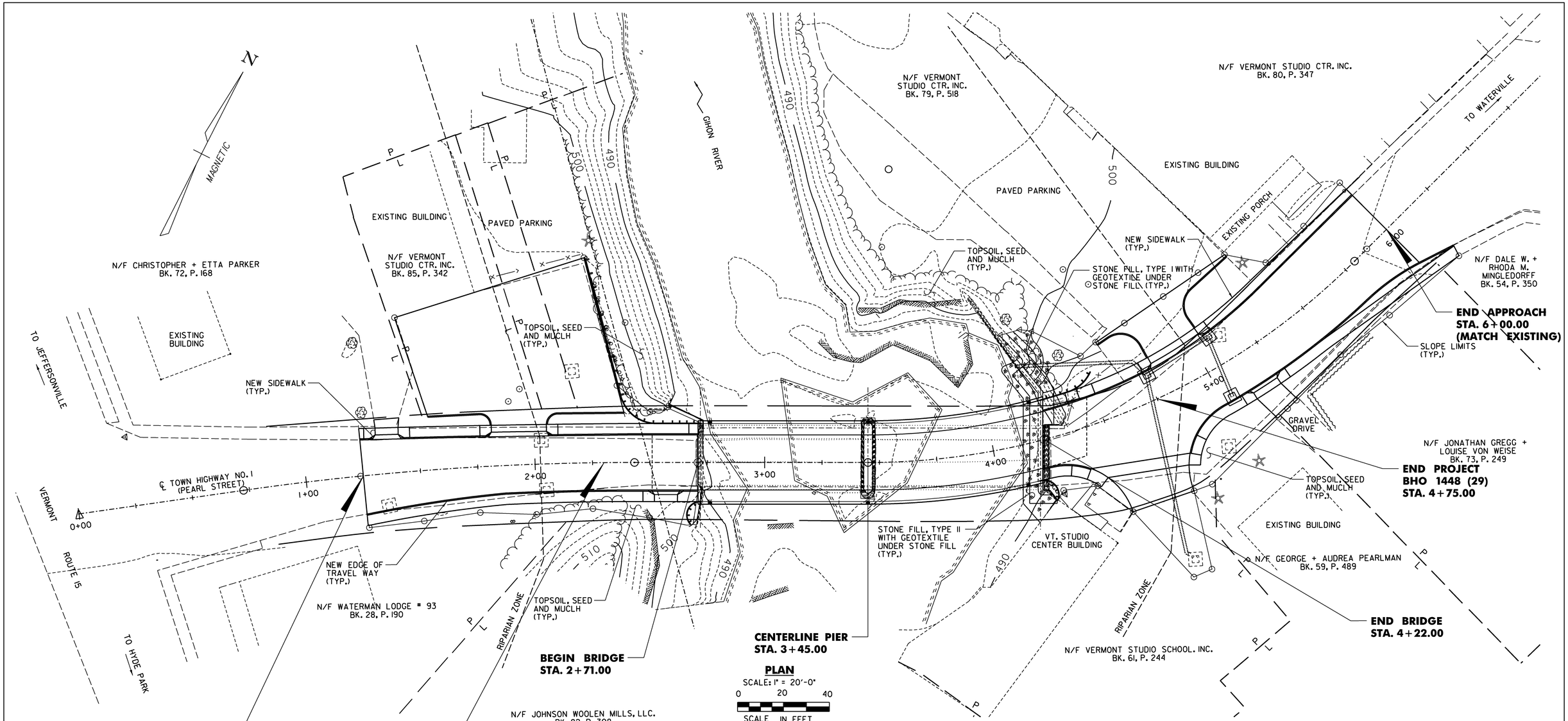
Town Of JOHNSON	Bridge No. 5
Highway No. I	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

EPSC CONSTRUCTION SITE PLAN

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98J372epsc.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 21 of 68

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PLAN

SCALE: 1" = 20'-0"

0 20 40

SCALE IN FEET

LEGEND

EDGE OF RIVER	EDGE OF PAVEMENT OR GRAVEL
FENCE	GUARD RAIL
TREE	STORM DRAIN
TREE LINE	TOE OF SLOPE
HEDGE	TOP OF CUT
LEDGE	DRAINAGE STRUCTURE
SIGN	
DRAINAGE STRUCTURE	

DATUM

VERTICAL NAVD 88

HORIZONTAL ASSUMED

NOTE:

CONTOURS SHOWN INDICATE THE EXISTING SITE. SEE ROADWAY CROSS SECTIONS FOR GRADE CHANGE.

PLOTTED 2/10/2009

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STATE OF VERMONT
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Town Of JOHNSON	Bridge No. 5
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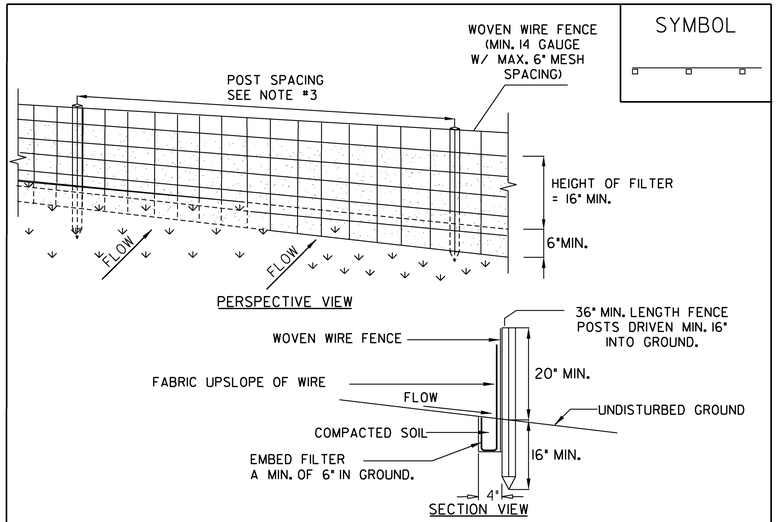
TH NO. 1 OVER THE GIHON RIVER

EPSC FINAL CONDITIONS SITE PLAN

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date J. W. TUCKER 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372epscfc.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 22 of 68

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SYMBOL



CONSTRUCTION SPECIFICATIONS

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

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

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

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

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

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

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

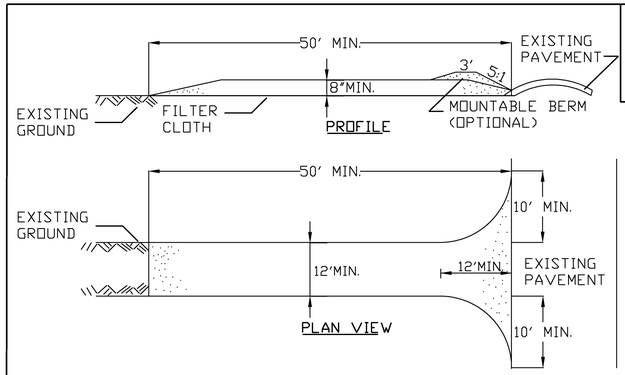
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SILT FENCE

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

THIS ITEM SHALL BE PAID FOR UNDER ITEM
649.51 GEOTEXTILE FOR SILT FENCE OR
~~649.515 GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED~~

SYMBOL



CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 1-4" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH APPLIES).
3. THICKNESS - NOT LESS THAN EIGHT (8) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.

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

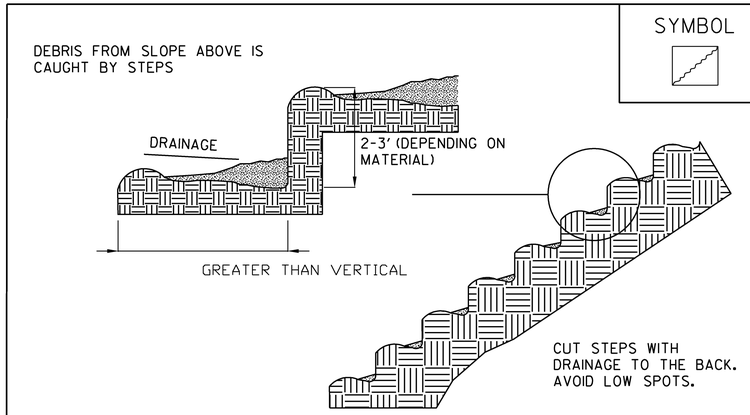
STABILIZED CONSTRUCTION ENTRANCE

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

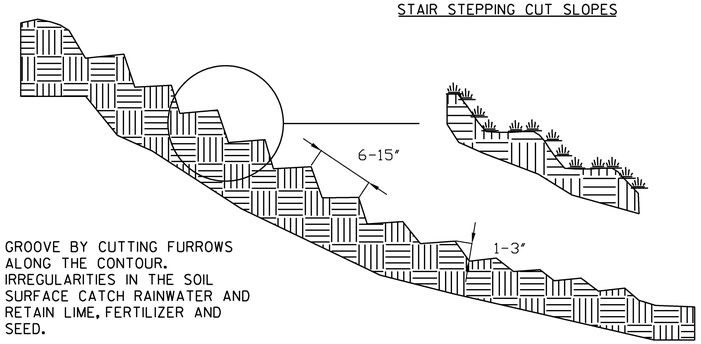
THIS ITEM SHALL BE PAID FOR UNDER ITEM
653.35 VEHICLE TRACKING PAD

REVISIONS	
FEBRUARY 9, 2007	WHF
MARCH 8, 2007	JMF

SYMBOL



STAIR STEPPING CUT SLOPES



GROOVE BY CUTTING FURROWS
ALONG THE CONTOUR.
IRREGULARITIES IN THE SOIL
SURFACE CATCH RAINWATER AND
RETAIN LIME, FERTILIZER AND
SEED.

GROOVING SLOPES

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

SURFACE ROUGHENING DETAILS

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

THIS ITEM SHALL BE CONSIDERED INCIDENTAL TO THE MATERIAL ITEM SPECIFIED

PLOTTED 2/10/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

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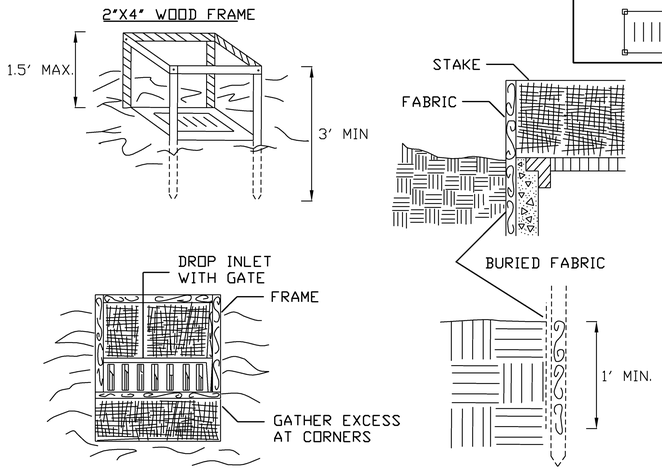
TH NO. 1 OVER THE GIHON RIVER

EPSC DETAIL SHEET (1)

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372epscdet.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 23 of 68

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SYMBOL



CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN EOS OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 3 FEET.
4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 18 INCHES DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.

MAXIMUM DRAINAGE AREA 1 ACRE

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

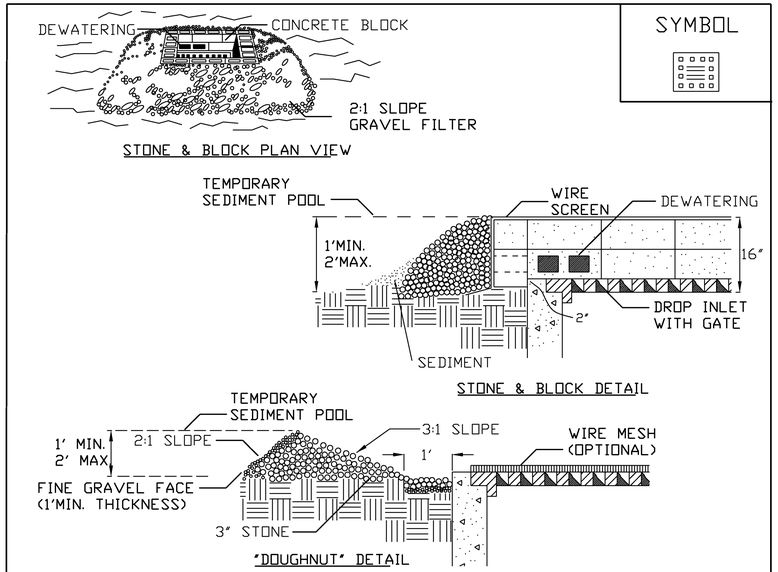
FILTER FABRIC
DROP INLET
PROTECTION

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

THIS ITEM SHALL BE PAID FOR UNDER ITEM
653.40 INLET PROTECTION DEVICE, TYPE I

REVISIONS	
MARCH 8, 2007	JMF

SYMBOL



CONSTRUCTION SPECIFICATIONS

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
2. HARDWARE CLOTH OR ½ " WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
3. USE CLEAN STONE OR GRAVEL ½ - ¾ INCH IN DIAMETER PLACED 2 INCHES BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.
4. FOR STONE STRUCTURES ONLY, A 1 FOOT THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3 INCH STONE AS SHOWN ON THE DRAWINGS.

MAXIMUM DRAINAGE AREA 1 ACRE

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

STONE & BLOCK
DROP INLET
PROTECTION

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

THIS ITEM SHALL BE PAID FOR UNDER ITEM
653.40 INLET PROTECTION DEVICE, TYPE I

PLOTTED 2/10/2009

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engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 5
Highway No. I	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

EPSC DETAIL SHEET (2)

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98J372epscdet.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 24 of 68

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GENERAL NOTES

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, DATED 2002, AND ITS LATEST REVISIONS.

2. DIMENSIONS, ANGLES, BEARINGS, AND ELEVATIONS OF THE EXISTING BRIDGE SHOWN ON THESE PLANS HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND LIMITED FIELD INVESTIGATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING FIELD MEASUREMENTS OF ALL EXISTING STRUCTURE COMPONENTS TO ASSURE CONSISTENCY WITH THE PROPOSED MODIFICATIONS. ANY DISCREPANCIES IN DIMENSIONS, CHARACTER OR EXTENT OF THE EXISTING FEATURES SHALL BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER BEFORE ADVANCING THE WORK. WORKING DRAWINGS REQUIRED FOR VARIOUS ITEMS OF WORK SHALL INDICATE THE ACTUAL FIELD MEASUREMENTS AND SHALL BE SO NOTED.

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

CONSTRUCTION NOTES

1. ALL UTILITY POLES ARE TO REMAIN UNDISTURBED UNLESS OTHERWISE NOTED IN THESE PLANS.

2. NO BACKFILL WILL BE PLACED AGAINST ANY STRUCTURAL ELEMENTS UNTIL THE RESIDENT ENGINEER HAS APPROVED THIS WORK. THE HEIGHT OF BACKFILL BEHIND THE ABUTMENTS SHALL BE LIMITED TO THE BRIDGE SEAT ELEVATIONS UNTIL THE NEW STEEL GIRDERS HAVE BEEN SET.

3. THE CONTRACTOR, AT THE EXPENSE OF THE CONTRACTOR, SHALL REPAIR DAMAGE TO CONCRETE WALLS RESULTING FROM IMPROPER BACKFILLING.

4. FOLLOWING COORDINATION WITH THE VERMONT STUDIO CENTER AND THE ENGINEER, THE EXISTING LANDSCAPED AREA, INCLUDING EXISTING BENCHES, LARGE ROCK AND SIGNING AT STA. 4+50 LT SHALL BE CAREFULLY DISASSEMBLED AND MOVED TO A LOCATION IDENTIFIED BY THE VERMONT STUDIO CENTER. REASSEMBLY OF THE MATERIAL IS NOT THE RESPONSIBILITY OF THE CONTRACTOR. THE COST FOR THIS WORK SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED INCIDENTAL TO ITEM 635.11, "MOBILIZATION / DEMOBILIZATION."

5. THE EXISTING FENCE BORDERING LANDSCAPED AREA FROM STA. 4+35 LT TO STA. 4+61 LT SHALL BE REMOVED UNDER ITEM 620.55, "REMOVAL OF EXISTING FENCE."

6. EXISTING DRAINAGE PIPES RUNNING FROM STA. 4+29.80 LT TO THE DI NEAR STA. 4+63.50 RT AND STA. 4+92.77 RT TO STA. 5+12.54 LT, SHALL BE REMOVED TO THE DI AND CAPPED AT THE DI. THIS WORK SHALL BE PAID FOR UNDER ITEM 204.20, "TRENCH EXCAVATION OF EARTH".

7. THE CONTRACTOR SHALL USE EXTREME CAUTION WHILE CONSTRUCTING THE NEW WINGWALL NO. 4 NEAR THE EXISTING BUILDING FOUNDATION AND AVOID ANY DAMAGE TO THE FOUNDATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE TO THE FOUNDATION, AT THE SOLE COST TO THE CONTRACTOR.

8. PRIOR TO PAVING OPERATIONS A MEETING SHALL TAKE PLACE BETWEEN THE ENGINEER, THE TOWN MANAGER AND THE CONTRACTOR TO DISCUSS TRAFFIC CONTROL AND TO ENSURE MINIMAL TRAFFIC DISRUPTIONS OCCUR ESPECIALLY DURING HIGH VOLUME HOURS. THE CONTRACTOR SHALL HAVE A PLAN FOR CONTROLLING TRAFFIC AND ADHERING TO THE 10 MINUTE MAXIMUM WAIT TIME AS STATED IN SUBSECTION 104.04(b) IN THE STANDARD SPECIFICATIONS.

STRUCTURAL STEEL NOTES:

1. ALL NEW STRUCTURAL STEEL SHALL BE AASHTO M 270M/M 270, GRADE 50 W UNLESS OTHERWISE NOTED.

2. ALL STRUCTURAL STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE "AMERICAN INSTITUTE OF STEEL CONSTRUCTION" (AISC).

3. ALL BOLTED FIELD CONNECTIONS SHALL BE MADE WITH 7/8-IN DIA. HIGH-STRENGTH, TYPE 3 BOLTS, CONFORMING TO AASHTO M 164M IN 15/16-IN DIA. HOLES, UNLESS OTHERWISE NOTED.

4. STRUCTURAL STEEL CONNECTIONS NOT DETAILED ON PLANS SHALL BE DETAILED BY FABRICATOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL.

5. ALL WELDS SHALL HAVE CORROSION RESISTANCE AND WEATHERING APPEARANCE AS SPECIFIED FOR WEATHERING STEEL.

6. ALL WELDING AND DIMENSIONAL TOLERANCES OF WELDED MEMBERS SHALL BE IN ACCORDANCE WITH VTRANS REQUIREMENTS AND SHALL CONFORM TO THE LATEST ANSI/AASHTO/AWS CODES AND THEIR LATEST REVISIONS.

7. SHEAR STUD CONNECTORS SHALL BE FIELD WELDED USING AUTOMATICALLY TIMED STUD WELDING EQUIPMENT AND SHALL BE PAID FOR UNDER ITEM 508.15, SHEAR CONNECTORS.

8. ANY HOLES IN FASCIA BEAMS WEBS NOT OTHERWISE FILLED SHALL BE FILLED WITH BUTTON HEAD OR HEX HEAD BOLTS PER AASHTO M 164M, TYPE 3.

9. AFTER THE SUPERSTRUCTURE STEEL HAS BEEN ERECTED, ELEVATIONS ALONG THE TOP OF GIRDERS SHALL BE TAKEN UNDER DIRECTION OF THE RESIDENT ENGINEER FOR USE IN DETERMINING THE FINAL GRADE AND HAUNCH DEPTHS.

10. THE ENDS OF THE GIRDERS, BEARING STIFFENERS AND CONNECTION PLATES SHALL BE VERTICAL UNDER FULL DEAD LOAD DEFLECTION.

11. CONNECTION PLATES, DIAPHRAGMS AND UTILITY SUPPORT BEAMS SHALL BE PAID FOR UNDER ITEM 506.50, "STRUCTURAL STEEL, ROLLED BEAM".

CONCRETE NOTES

1. CONCRETE PAYMENT AND CLASSIFICATION SHALL BE AS FOLLOWS:

   ITEM 501.33, CONCRETE, HIGH PERFORMANCE CLASS A (DECK, CURTAIN WALLS, BRIDGE SIDEWALKS)
   ITEM 501.34, CONCRETE, HIGH PERFORMANCE CLASS B (APPROACH SLABS, ABUTMENTS, PIER)

2. ITEM 514.10, WATER REPELLENT, SILANE SHALL BE APPLIED TO ALL EXPOSED CONCRETE ON THE BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE, EXCEPT THE BOTTOM OF THE DECK BETWEEN THE DRIP NOTCHES.

3. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1 INCH BY 1 INCH, UNLESS OTHERWISE NOTED. A ONE-HALF INCH RADIUS SHALL BE USED ON THE TOP INSIDE CORNER OF THE CURBS.

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

5. THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT UNLESS OTHERWISE INDICATED. ANY UPWARD KEY SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.

6. THE CONCRETE DECK SHALL BE PLACED IN ACCORDANCE WITH THE POUR SEQUENCE SHOWN IN THE PLANS.

7. A THOROUGH JOINT INSPECTION WITH THE CONTRACTOR AND ENGINEER SHALL BE MADE OF SUBSTRUCTURES THAT ARE TO BE RETAINED. AREAS OF CONCRETE FOUND TO BE SPALLED, DELAMINATED OR OTHERWISE UNSOUND SHALL BE REPAIRED. THE AREAS THAT NEED TO BE REPAIRED SHALL BE PAID FOR UNDER ITEM 580.13, "REPAIR OF CONCRETE SUBSTRUCTURE CLASS I", ITEM 580.14, "REPAIR OF CONCRETE SUBSTRUCTURE CLASS II" AND ITEM 580.15, "REPAIR OF CONCRETE SUBSTRUCTURE CLASS III" IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND DETAILS SHOWN ON SHEET 40.

8. FOOTINGS OR SUBFOOTINGS FOR SUBSTRUCTURES FOUNDED ON BEDROCK SHALL BE PLACED ON CLEAN COMPETENT ROCK. ALL LOOSE ROCK AND DEBRIS SHALL BE REMOVED.

9. UPON COMPLETION OF THE EXCAVATION FOR SUBSTRUCTURES FOUNDED ON BEDROCK AND PRIOR TO PLACING FORMWORK, THE RESIDENT ENGINEER SHALL CONTACT THE VTRANS SOILS AND FOUNDATION ENGINEER TO INSPECT THE BEDROCK. THE STRUCTURES ENGINEER WILL ALSO BE NOTIFIED THAT THE BEDROCK IS READY FOR INSPECTION. THE SOILS AND FOUNDATION ENGINEER WILL DETERMINE IF THE BEDROCK IS COMPETENT TO OBTAIN THE NOMINAL BEARING RESISTANCE AS SHOWN ON THE PLANS. FIVE (5) WORKING DAYS FROM NOTIFICATION SHALL BE ALLOWED TO MAKE THE INSPECTION AND THE DETERMINATION FOR THE COMPETENCY OF THE BEDROCK.

10. IF COMPETENT BEDROCK IS WITHIN 1'-0" BELOW THE DESIGN BOTTOM OF FOOTING FOR THE EXTENT OF THE SUBSTRUCTURE AS SHOWN IN THE CONTRACT PLANS, THE FOOTING MAY BE PLACED INTEGRALLY TO THE TOP OF THE BEDROCK USING THE CONCRETE ITEM SPECIFIED FOR THE FOOTING AT THE CONTRACT UNIT PRICE.

11. WHERE COMPETENT BEDROCK IS BELOW THE DESIGN BOTTOM OF FOOTING BY MORE THAN 1'-0" FOR ANY PORTION OF THE SUBSTRUCTURE AND A SUBFOOTING IS NOT SHOWN IN THE CONTRACT PLANS, THE STRUCTURES ENGINEER SHALL BE CONTACTED TO DETERMINE WHETHER OR NOT THE FOOTING SHALL BE LOWERED OR IF THE CONSTRUCTION OF A SUBFOOTING IS REQUIRED. IF THE DESIGN BOTTOM OF FOOTING ELEVATION IS TO BE LOWERED THE CONTRACTOR SHALL PROVIDE A BEDROCK PROFILE TO THE STRUCTURES ENGINEER. THREE (3) WORKING DAYS FROM RECEIPT OF THE BEDROCK PROFILE SHALL BE ALLOWED TO MAKE THIS DETERMINATION. NO WORK SHALL BE DONE ON THE FOOTINGS UNTIL A REPLY IS RECEIVED.

12. THE LIMITS OF SUBFOOTINGS SHALL BE 1'-0" OUTSIDE OF THE HORIZONTAL LIMITS OF THE FOOTING. IF A SUBFOOTING IS REQUIRED AND NOT SHOWN IN THE CONTRACT IT SHALL BE DONE AS EXTRA WORK. THE TOP SURFACE OF ALL SUBFOOTINGS SHALL BE INTENTIONALLY ROUGHENED TO 1/4" AMPLITUDE.

13. WHERE COMPETENT BEDROCK IS ABOVE THE DESIGN BOTTOM OF FOOTING ELEVATION, IT SHALL BE REMOVED WITH CONTRACT PAY ITEMS OR A BEDROCK PROFILE SHALL BE PROVIDED BY THE CONTRACTOR TO THE STRUCTURES ENGINEER TO DETERMINE WHETHER THE DESIGN BOTTOM OF FOOTING ELEVATION MAY BE RAISED. THREE (3) WORKING DAYS FROM RECEIPT OF THE BEDROCK PROFILE SHALL BE ALLOWED TO MAKE THE DETERMINATION. FOOTING ELEVATIONS SHALL NOT BE ADJUSTED WITHOUT APPROVAL OF THE STRUCTURES ENGINEER.

14. OVERBREAKAGE AND REPLACEMENT WITH THE FOOTING CONCRETE BEYOND THE AVERAGE MAXIMUM ALLOWANCE SPECIFIED IN SUBSECTIONS 204.09(B)(1) AND 208.11(C) WILL BE AT THE CONTRACTOR'S EXPENSE.

15. DOWELS SHALL BE DRILLED AND GROUTED INTO BEDROCK WHEN SHOWN ON THE PLANS OR AS ORDERED BY THE ENGINEER. THE DOWELS SHALL HAVE A 2'-0" MINIMUM EMBEDMENT IN THE BEDROCK AND SHALL EXTEND IN THE FOOTING OR SUBFOOTING A MINIMUM OF 1'-6", UNLESS NOTED OTHERWISE.

REINFORCING STEEL NOTES:

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

2. REINFORCING STEEL IN THE DECK, CURTAIN WALL, SIDEWALK, RAILING, CURB AND APPROACH SLAB SHALL BE EPOXY COATED.

3. MINIMUM CLEAR COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

ALONG BACK FACES OF WALLS AGAINST EARTH:	2-IN
ALONG TOP SURFACE OF DECK SLAB:	2 1/2-IN
ALONG BOTTOM SURFACE OF DECK SLAB:	1 1/2-IN
BRIDGE RAILING:	2-IN
ELSEWHERE UNLESS OTHERWISE INDICATED:	3-IN

4. REINFORCEMENT STEEL PLACEMENT TOLERANCES SHALL BE:
   SPACING = +/- 1-IN
   CLEARANCE = +/- 1/4-IN
   BRIDGE RAIL CLEARANCE = 0-IN

5. DRILLING AND GROUTING DOWELS SHALL BE PAID AS ITEM 507.16, "DRILLING AND GROUTING DOWELS". ALL DRILLED HOLES SHALL HAVE A MINIMUM OF 6-INCH CLEAR COVER.

PLOTTED 2/11/2009

REMOVAL NOTES

1. ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE" SHALL INCLUDE:
   a) REMOVAL AND DISPOSAL OF EXISTING BRIDGE AND APPROACH RAILING AND POSTS, CONCRETE BRIDGE DECK AND CURTAIN WALLS.
   b) PARTIAL REMOVAL OF CONCRETE ABUTMENTS AND PIER.
   c) SAWCUTTING OF CONCRETE.
   d) REMOVAL AND DISPOSAL OF STRUCTURAL STEEL BEAMS AND DIAPHRAGMS.
   e) REMOVAL AND DISPOSAL OF BEARING DEVICES.
   f) ERECTION, MAINTENANCE, AND REMOVAL OF TEMPORARY STRUCTURES TO PREVENT DEBRIS FROM FALLING INTO THE WATERWAY.

2. REMOVAL OF BRIDGE PAVEMENT SHALL BE PAID FOR UNDER ITEM 529.10, "REMOVAL OF BRIDGE PAVEMENT".

3. ELEVATIONS SHOWING THE LIMITS OF ABUTMENT AND WINGWALL REMOVAL ARE APPROXIMATE. THE ENGINEER SHALL ESTABLISH ACTUAL LIMITS AFTER A COOPERATIVE INSPECTION BY THE CONTRACTOR AND THE ENGINEER. EXISTING ELEVATIONS SHALL BE FIELD VERIFIED TO ENSURE THAT THE REMOVAL LIMITS ARE ADEQUATE TO OBTAIN THE REQUIRED DIMENSIONS AND ELEVATIONS OF THE NEW CONSTRUCTION.

4. PRIOR TO PARTIAL REMOVAL OF THE EXISTING PIER, THE CONTRACTOR SHALL MEASURE ALL ELEMENTS OF THE PIER TO ENSURE THAT THE NEW PIER CAP IS CONSTRUCTED TO MATCH THE EXISTING. THE CONTRACTOR SHALL REVIEW ALL MEASUREMENTS WITH THE ENGINEER AND OBTAIN PERMISSION FROM THE ENGINEER PRIOR TO PARTIAL REMOVAL OF THE PIER. THIS WORK SHALL BE INCIDENTAL TO ITEM 592.20 "PARTIAL REMOVAL OF STRUCTURE".

5. REMOVAL OF THE PORTIONS OF THE EXISTING ABUTMENT NO. 1, ABUTMENT NO. 2 AND THE PIER WITHIN THE LIMITS OF A COFFERDAM, SHALL BE PAID FOR UNDER ITEM 208.35, "COFFERDAM EXCAVATION ROCK". PORTIONS OF THE ABUTMENTS OUTSIDE THE COFFERDAM LIMITS SHALL BE PAID FOR UNDER ITEM 529.20 "PARTIAL REMOVAL OF STRUCTURE". EXCAVATION OF SOILS SURROUNDING THE ABUTMENTS WITHIN THE LIMITS OF A COFFERDAM SHALL BE PAID FOR UNDER ITEM 208.30, "COFFERDAM EXCAVATION, EARTH".

6. THE EXISTING STRUCTURAL STEEL ON THIS PROJECT WAS PAINTED WITH A MATERIAL WHICH MAY CONTAIN LEAD. THE REMOVED STRUCTURAL STEEL IS THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE TOWN, STATE, THEIR OFFICERS, AND EMPLOYEES HARMLESS CONCERNING THE CONTRACTOR'S USE OR DISPOSITION OF THE STRUCTURAL STEEL.

7. REMOVAL OF EXISTING DROP INLETS SHALL BE PAID FOR UNDER ITEM 204.21, "TRENCH EXCAVATION OF ROCK."

8. REMOVAL OF THE EXISTING SIDEWALK IN THE PROPOSED ROADWAY / SIDEWALK LIMITS SHALL BE PAID UNDER ITEM 203.15, "COMMON EXCAVATION."

9. REMOVAL OF THE EXISITING SIDEWALK AND PAVEMENT OUTSIDE OF THE PROPOSED ROADWAY / SIDEWALK LIMITS SHALL BE PAID FOR UNDER ITEM 203.28, "EXCAVATION OF SURFACES AND PAVEMENTS".

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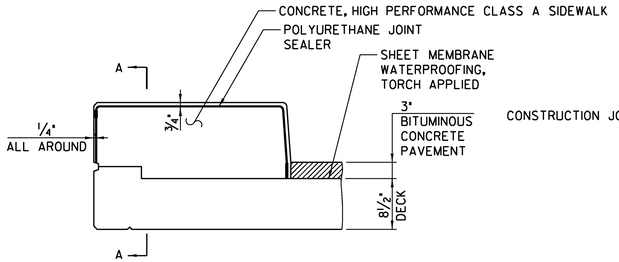
Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

GENERAL NOTES

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date J. W. TUCKER 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372notes.dgn	D & K DWG NO.
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TYPICAL SECTION THROUGH CONCRETE SIDEWALK CONSTRUCTION JOINT

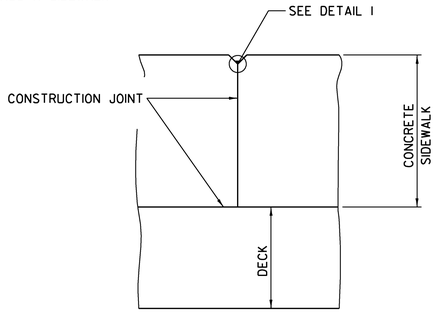
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SIDEWALK CONSTRUCTION JOINT NOTES:

1. CONSTRUCTION JOINTS THROUGH CONCRETE SIDEWALKS SHALL BE SPACED A MAXIMUM OF 15'-0" CENTER TO CENTER. CONCRETE SHALL BE PLACED IN ALTERNATING SECTIONS WITH A MINIMUM OF 48 HOURS DELAY BETWEEN ADJACENT POURS.

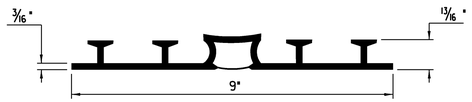
2. CONSTRUCTION JOINTS IN THE SIDEWALK SHALL MATCH THE LOCATION OF CONSTRUCTION JOINTS IN THE RAILING.

3. LONGITUDINAL REINFORCING SHALL PASS THROUGH CONCRETE SIDEWALK CONSTRUCTION JOINTS.



SECTION A-A

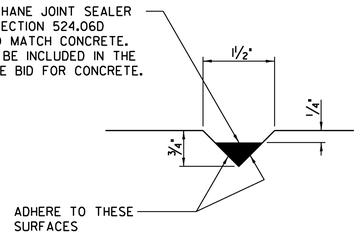
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P. V. C. WATERSTOP FOR EXPANSION JOINT AT ABUTMENTS 1 & 2

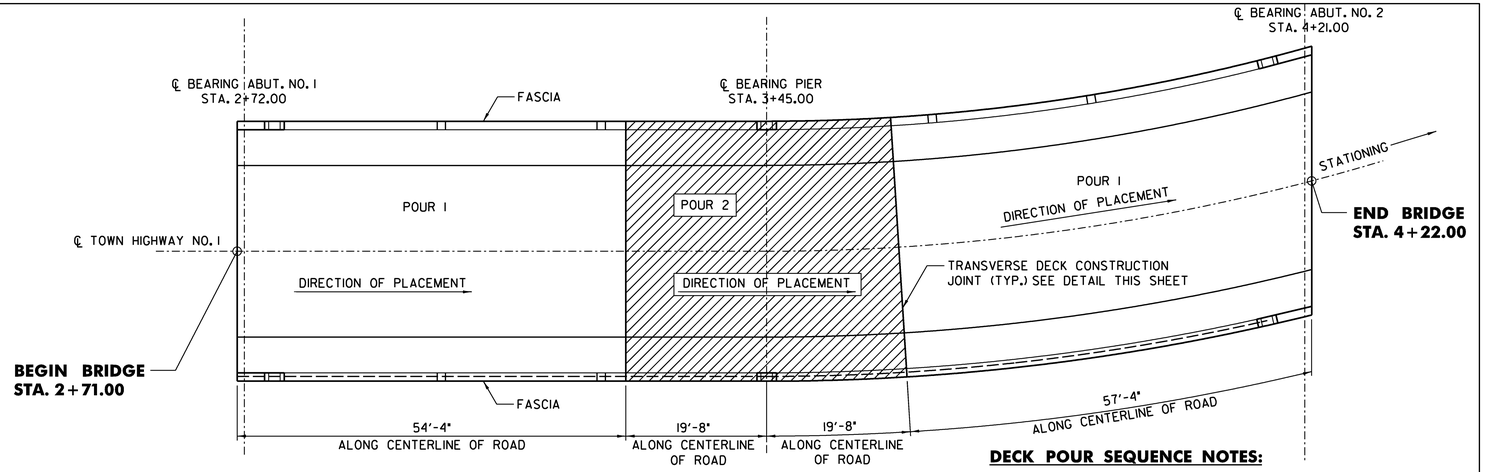
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THE COSTS FOR P. V. C. WATERSTOP SHALL BE INCLUDED IN THE UNIT PRICE BID FOR "CONCRETE, HIGH PERFORMANCE CLASS B". OTHER CONFIGURATIONS MAY BE USED UPON THE APPROVAL OF THE STRUCTURES ENGINEER.



DETAIL 1

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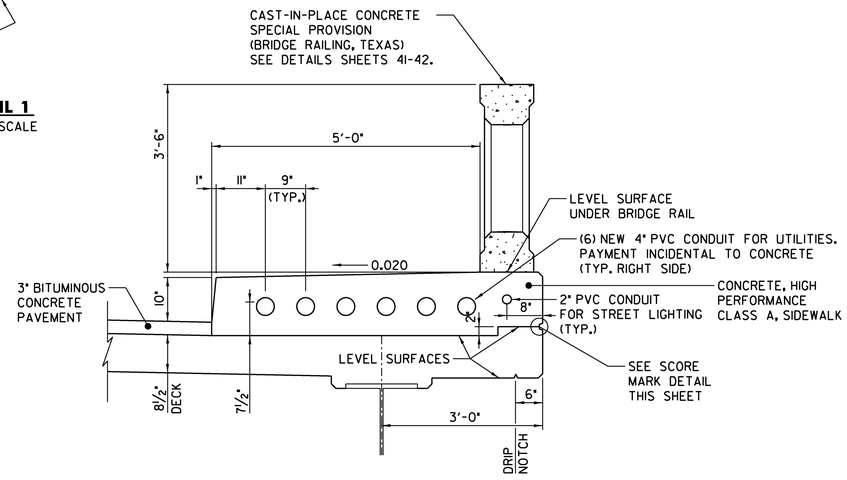


DECK POUR SEQUENCE

SCALE: 1" = 10'-0"

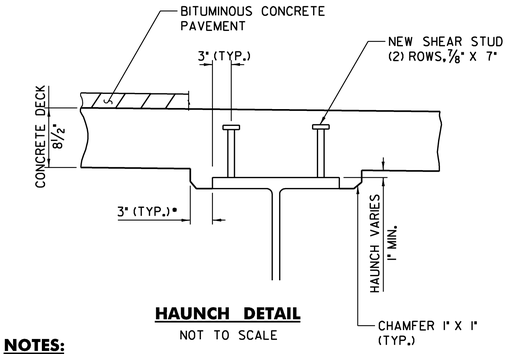
DECK POUR SEQUENCE NOTES:

EACH CONCRETE DECK POUR SHALL BE PLACED CONTINUOUSLY WITHIN ONE EIGHT HOUR WORKING DAY. THE TWO POURS THAT ARE INDENTIFIED AS POUR 1 ARE CONSIDERED AS ONE POUR FOR THE PURPOSES OF THIS NOTE. THERE SHALL BE A MINIMUM DELAY PERIOD OF 96 HOURS AFTER COMPLETION OF EACH POUR, BEFORE BEGINNING ANOTHER POUR. INDIVIDUAL POUR NUMBERS, AS SHOWN, MAY BE COMBINED INTO A SINGLE POUR IF APPROVED BY THE ENGINEER.



TYPICAL SIDEWALK SECTION

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



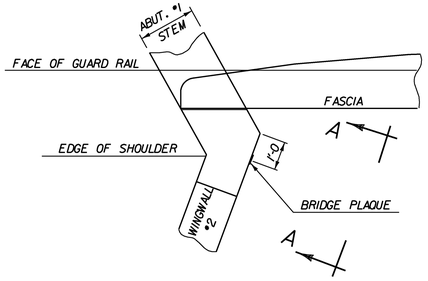
HAUNCH DETAIL

NOT TO SCALE

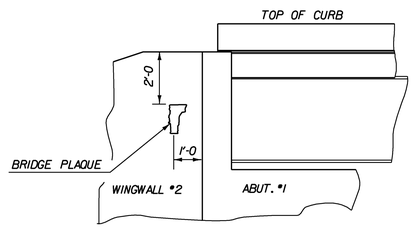
NOTES:

CONTRACTOR SHALL SUPPLY LONGER SHEAR STUDS WHERE NEEDED TO COMPLY WITH MINIMUM EMBEDMENT OF 2 1/2 " INCHES ABOVE THE BOTTOM OF THE DECK.

• - THE 3" HORIZONTAL SECTION MAY BE ELIMINATED FOR FORM SYSTEMS DESIGNED FOR THE CONSTRUCTION OF VERTICAL HAUNCHES IF APPROVED BY THE STRUCTURES ENGINEER. ALL HOLES RESULTING FROM THIS FORMING SYSTEM SHALL BE FILLED WITH MORTAR, TYPE IV. COST OF MORTAR TO BE INCIDENTAL TO ITEM 501.33, "CONCRETE, HIGH PERFORMANCE CLASS A".



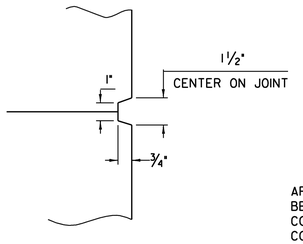
PLAN



VIEW "A - A"

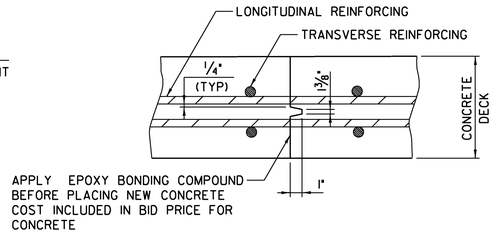
LOCATE BRIDGE PLAQUE

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. PAYMENT FOR THIS WORK SHALL BE INCIDENTAL TO THE ADJACENT CONCRETE.



SCORE MARK DETAIL

NOT TO SCALE



TRANSVERE DECK CONSTRUCTION JOINT DETAIL

NOT TO SCALE

PLOTTED 2/10/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

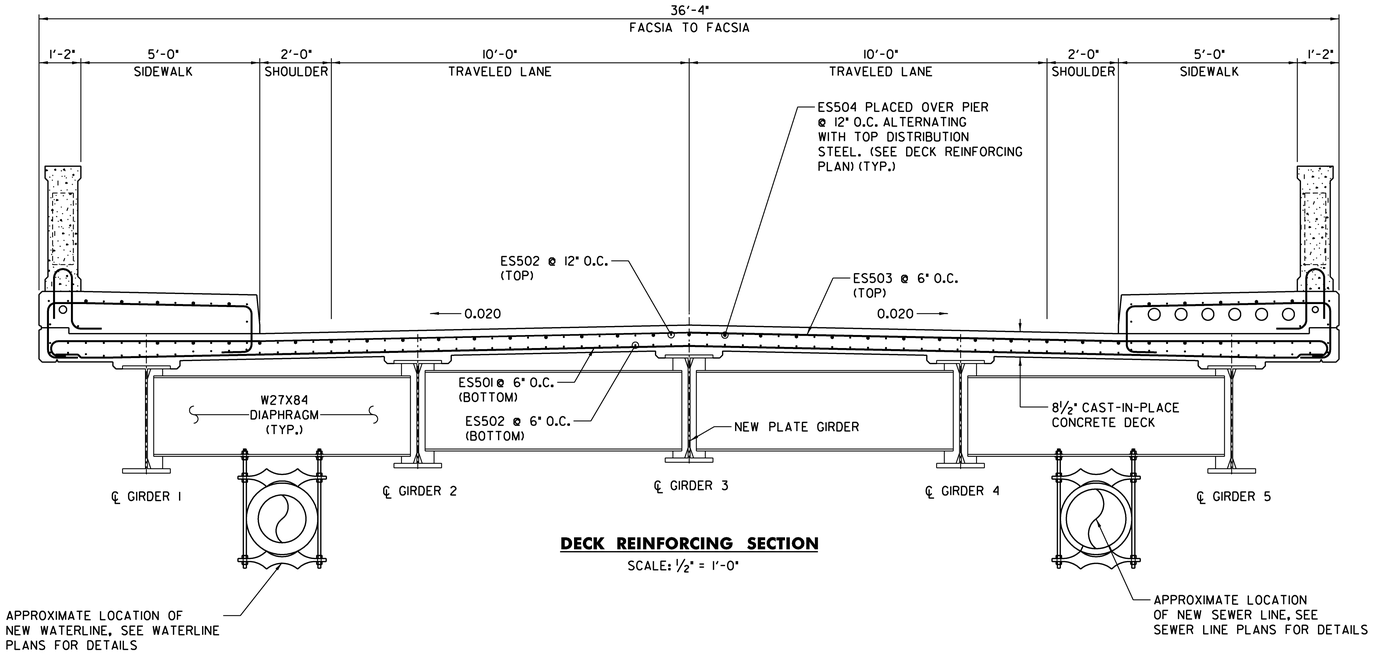
Town Of JOHNSON	Bridge No. 5
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TH NO. 1 OVER THE GIHON RIVER

DECK DETAILS

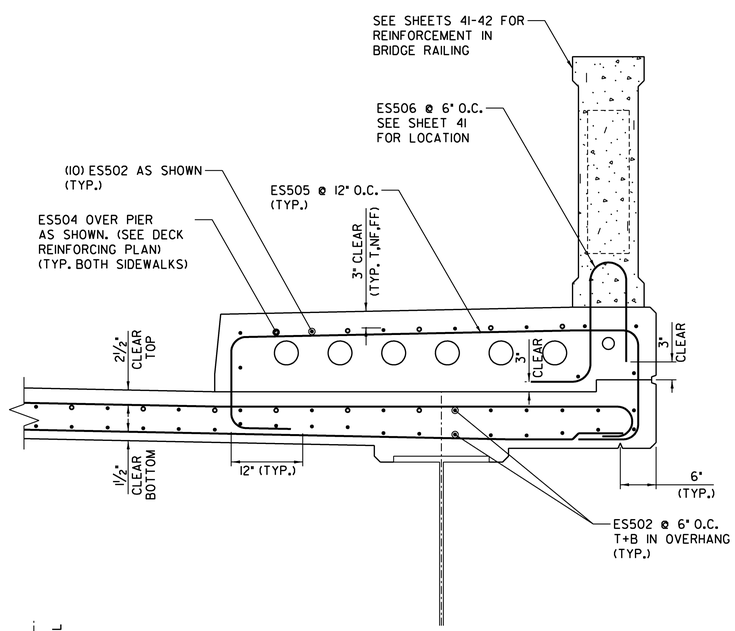
Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
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I.G.C. Info. z98j372dd.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 26 of 68

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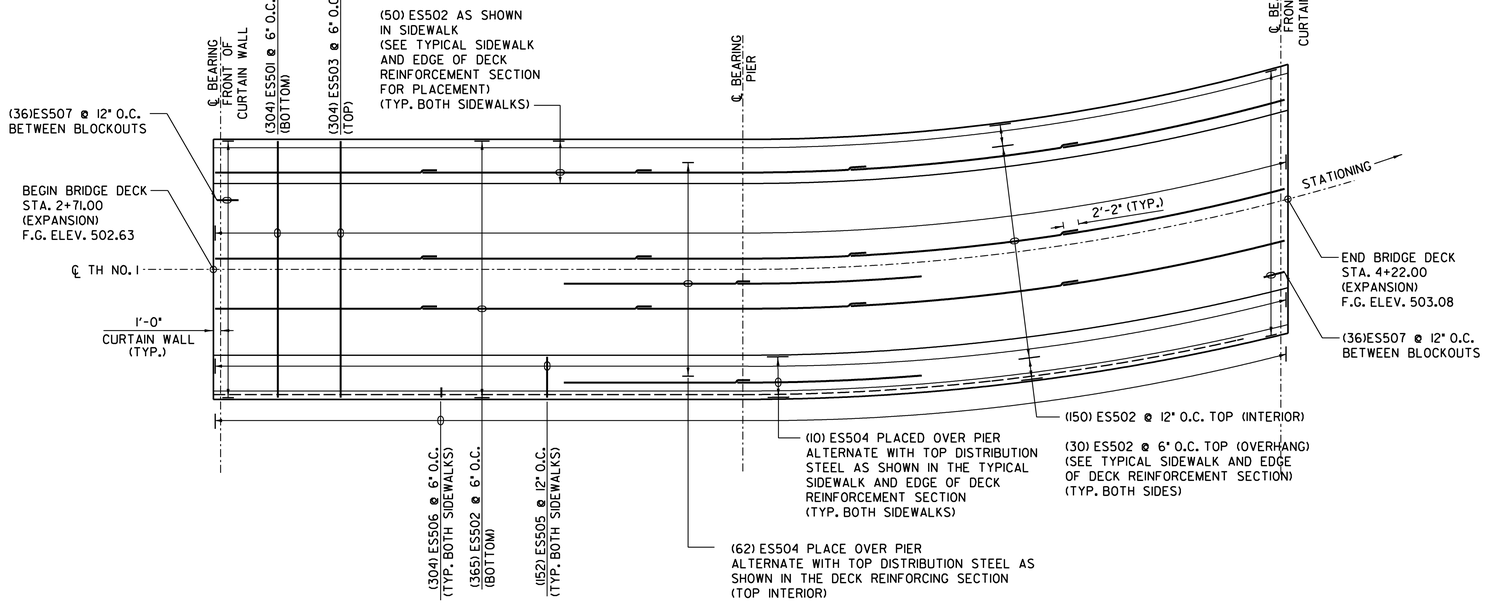
DECK REINFORCING SECTION

SCALE: ½" = 1'-0"



TYPICAL SIDEWALK AND EDGE OF DECK REINFORCEMENT SECTION

SCALE: 1" = 1'-0"



DECK REINFORCING PLAN

SCALE: 1" = 10'-0"

NOTES

1. ALL REINGFORCING STEEL IN DECK, SIDEWALKS, AND CURTAIN WALLS SHALL BE EPOXY COATED.
2. EPOXY COATED STEEL IS TO BE SAW CUT WITH EXPOSED ENDS TREATED AS PER SUBSECTION 507.04.
3. NO SPLICES FOR DECK TRANSVERSE REINFORCING STEEL (TOP AND BOTTOM) SHALL BE ALLOWED.
4. NF = NEAR FACE
   FF = FAR FACE
   EF = EACH FACE
   ▲ = CUT TO FIT IN FIELD
   T+B = TOP AND BOTTOM
   O.C. = ON CENTER
   MINIMUM LAP LENGTH NOT DETAIL SHALL BE 2'-2"

PLOTTED 2/10/2009

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engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

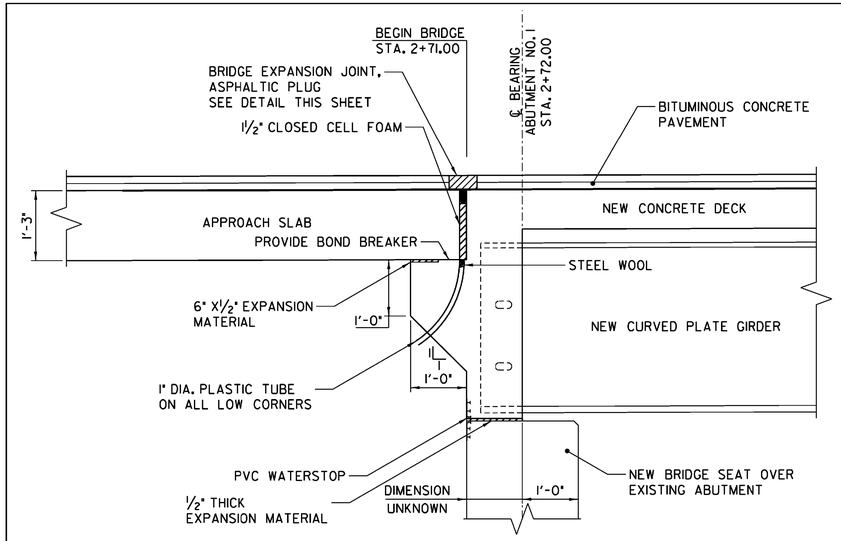
Town Of JOHNSON	Bridge No. 5
Highway No. I	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

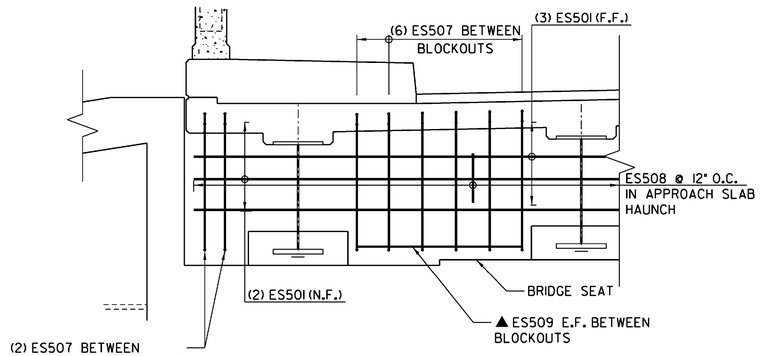
DECK REINFORCING DETAILS

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372drd.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 27 of 68

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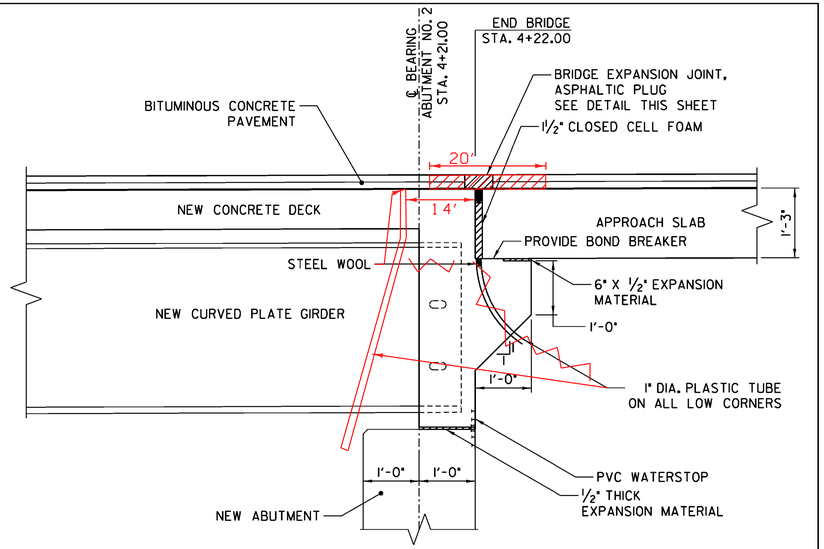


CONCRETE



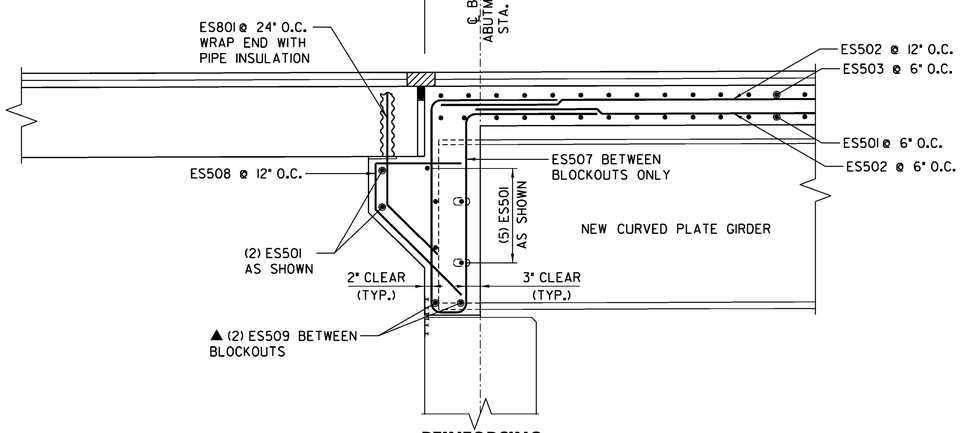
CURTAIN WALL REINFORCING DETAIL

SCALE: ½" = 1'-0"



CONCRETE

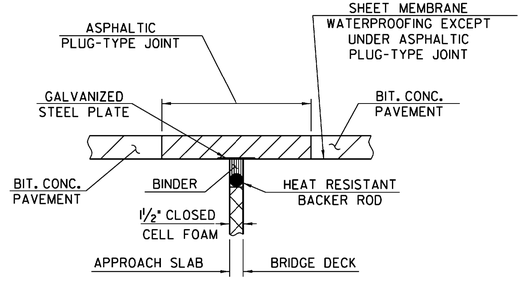
NOTE:
PAYMENT FOR EXPANSION MATERIAL, PLASTIC TUBES, WATERSTOPS, AND PIPE INSULATION WILL BE MADE INCIDENTAL TO THE PAYMENT FOR ADJACENT CONCRETE.



REINFORCING

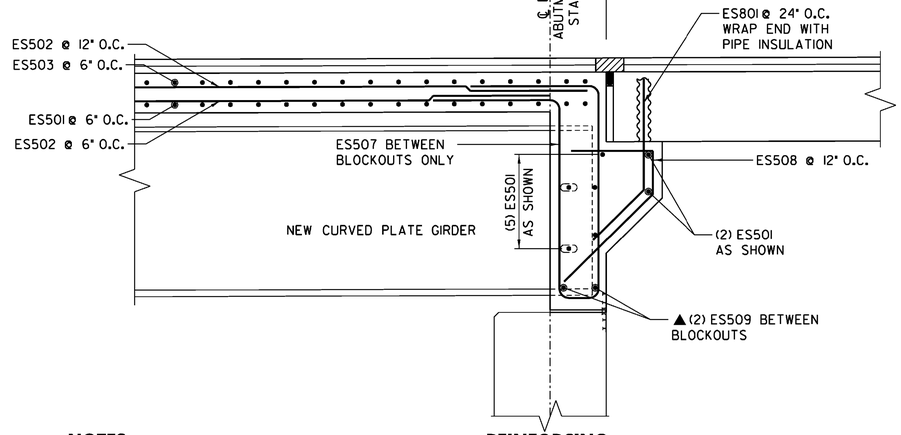
ABUTMENT NO. 1 DECK END DETAIL (EXPANSION END)

SCALE: ¾" = 1'-0"



ASPHALTIC PLUG-TYPE JOINT DETAIL

NTS



REINFORCING

ABUTMENT NO. 2 DECK END DETAIL (EXPANSION END)

SCALE: ¾" = 1'-0"

ASPHALTIC PLUG JOINT NOTES

INSTALLATION

1. LOCATE THE JOINT CENTRALLY OVER THE DECK OVERLAY EXPANSION GAP OR FIXED JOINT MARKED OUT TO THE MANUFACTURER'S RECOMMENDED WIDTH.
2. EXCAVATE THE JOINT AS SHOWN ON THE PLANS WITH SAWS AND PNEUMATIC HAMMER OR A HAMMER AND CHISEL.
3. BLAST CLEAN THE JOINT AREA OF DEBRIS AND ASPHALT. THOROUGHLY DRY THE JOINT AREA WITH HOT COMPRESSED AIR PRIOR TO APPLYING BINDER MATERIAL.
4. REPAIR SPALLED AND DEFECTIVE CONCRETE WITH AN APPROVED MATERIAL AS AGREED UPON BY THE ENGINEER.
5. PLACE PROPERLY SIZED HEAT RESISTANT BACKER ROD IN THE MOVEMENT GAP ALLOWING FOR 1" +/- OF BINDER ABOVE THE ROD.
6. HEAT AND PLACE THE BINDER MATERIAL AS RECOMMENDED BY THE MANUFACTURER.
7. PLACE ¼" THICK BY 8" WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE THE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRESTAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER. THE STEEL PLATES MAY BE OMITTED WHERE THE APPROACH SLAB IS COVERED WITH A STONE BASE OR BITUMINOUS PAVEMENT AND VERTICAL MOVEMENT OF THE PLATES MIGHT OCCUR.
8. HEAT AND MIX THE BINDER MATERIAL AND AGGREGATE AS RECOMMENDED BY THE MANUFACTURER.
9. INSTALLATION OF MATERIAL, COMPACTION, AND TOP COATING SHALL BE AS RECOMMENDED BY THE MANUFACTURER.
10. IMMEDIATELY AFTER TOP COATING, CAST AN ANTI-SKID MATERIAL OVER THE JOINT TO REDUCE THE RISK OF TRACKING.
11. PROTECTED JOINT FROM TRAFFIC UNTIL THE MATERIAL HAS COOLED TO 51DEG C (125 DEG F) +/-.

WEATHER LIMITATIONS, (APPLY BINDER MATERIAL ONLY WHEN THE FOLLOWING CONDITIONS PREVAIL):

1. THE AMBIENT AIR TEMPERATURE IS AT LEAST 10 DEG C (50 DEG F) AND RISING.
2. THE ROAD SURFACE IS SUFFICIENTLY DRY.
3. WEATHER CONDITIONS OR OTHER CONDITIONS ARE FAVORABLE AND ARE EXPECTED TO REMAIN SO FOR THE PERFORMANCE OF SATISFACTORY WORK.

PLOTTED 2/10/2009

NOTES

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
T+B = TOP AND BOTTOM
O.C. = ON CENTER
MINIMUM LAP LENGTH NOT DETAIL SHALL BE 2'-2"

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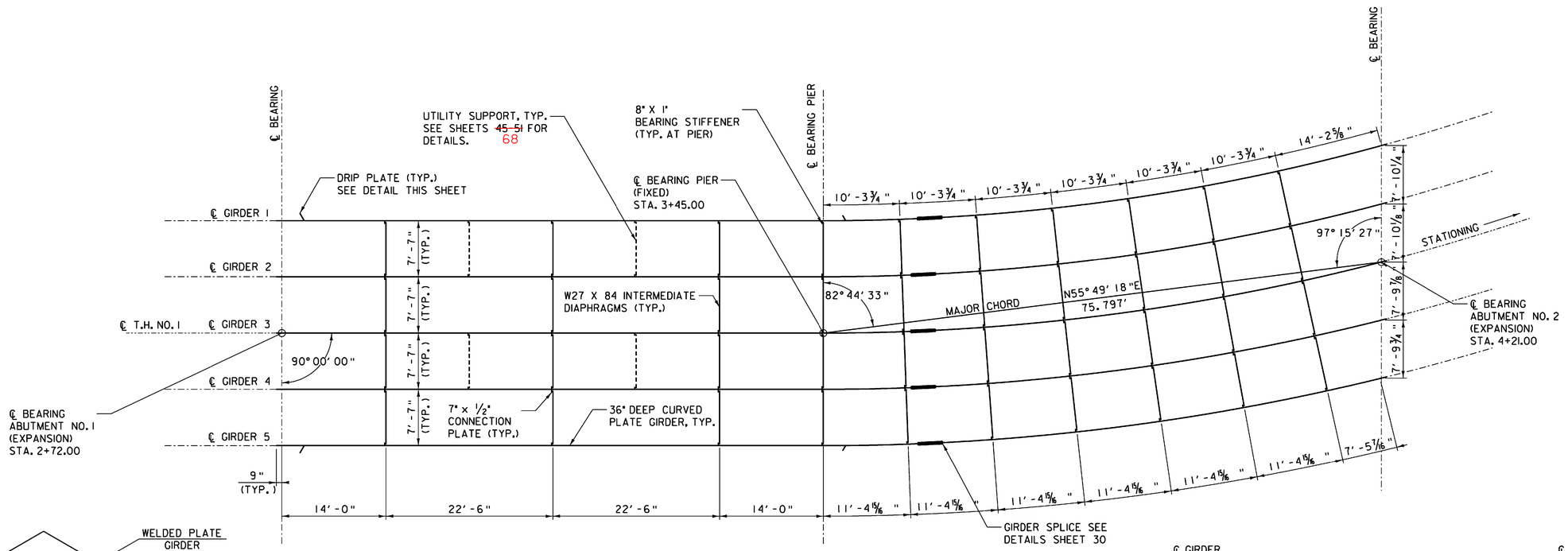
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta. / Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

DECK END DETAILS

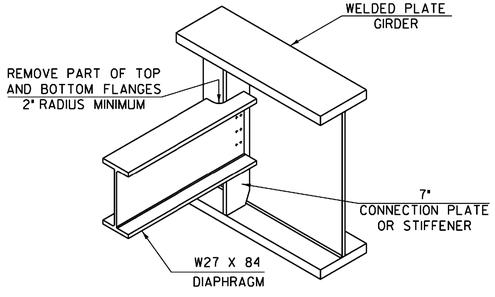
Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date	Bridge Design Supervisor
J. W. TUCKER 2/09	J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98J372ded.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 28 of 68



FRAMING PLAN

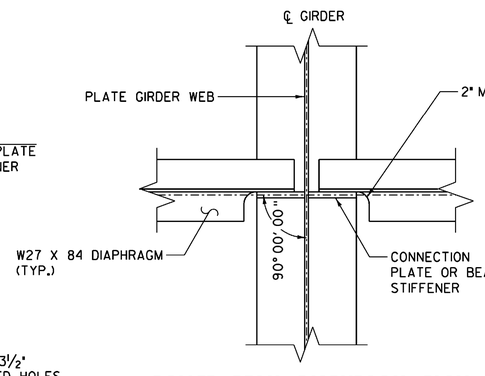
SCALE: ⅛" = 1'-0"

NOTE: FOR RADII AND LENGTHS OF SPAN 2 GIRDERS, SEE "SPAN 2 GIRDER DIMENSIONS TABLE", SHEET 30



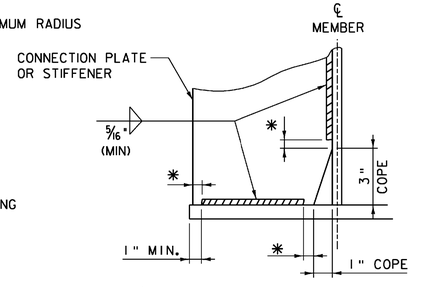
END OF ROLLED BEAM DIAPHRAGM

NOT TO SCALE



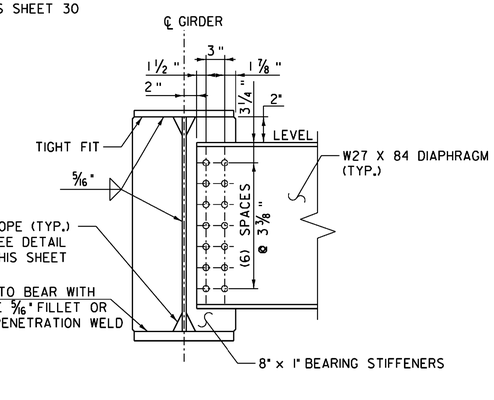
ROLLED BEAM DIAPHRAGM PLAN

NOT TO SCALE



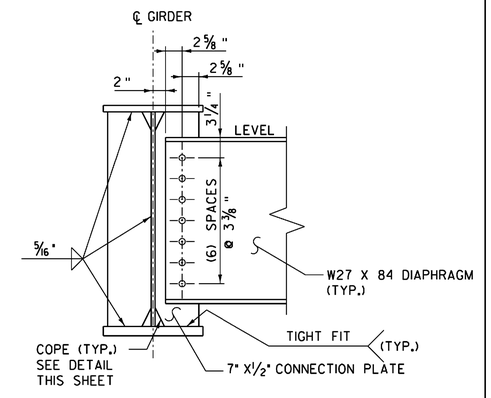
WELD TERMINATION AND COPING DETAILS FOR PLATE GIRDER CONNECTION PLATES AND STIFFENERS

NOT TO SCALE



PIER BEARING DIAPHRAGMS

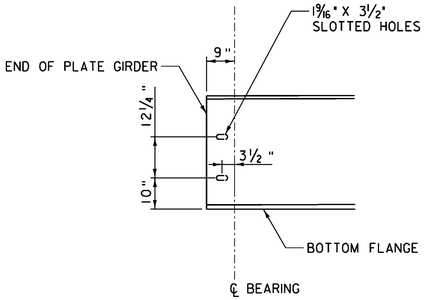
NOT TO SCALE



INTERMEDIATE DIAPHRAGMS

NOT TO SCALE

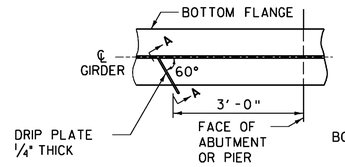
NOTE: DIAPHRAGMS SHALL BE LEVEL UNDER FULL DEAD LOAD.



ELEVATION - END OF GIRDER

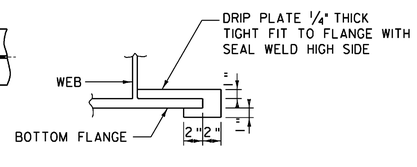
NOT TO SCALE

SLOTTED HOLES ARE FOR HORIZONTAL REINFORCING BARS IN FRONT FACE OF CURTAIN WALL



PLAN DRIP PLATE

NOT TO SCALE



SECTION A - A

NOT TO SCALE

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

PLOTTED 2/10/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

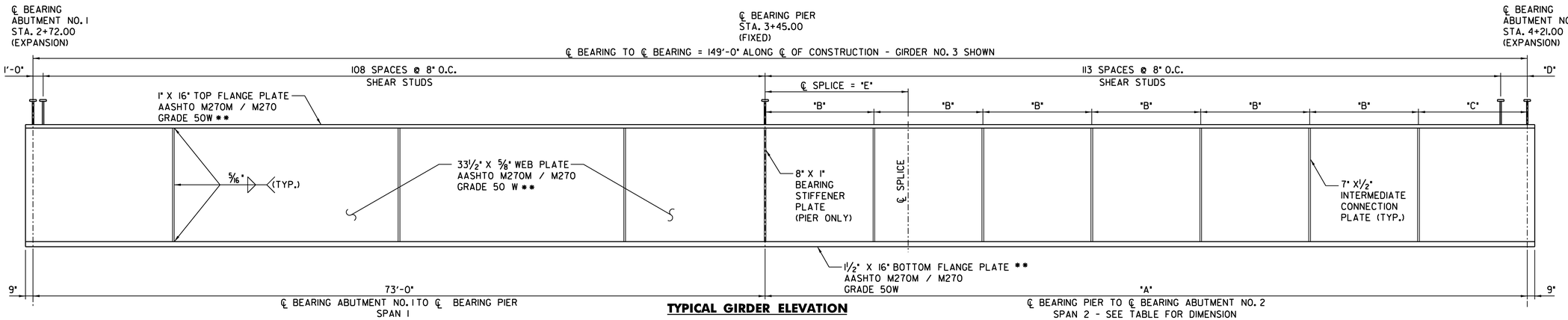
Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

FRAMING PLAN AND DETAILS

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date	Bridge Design Supervisor
R. H. DURFEE 2/09	J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372fd.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 29 of 68

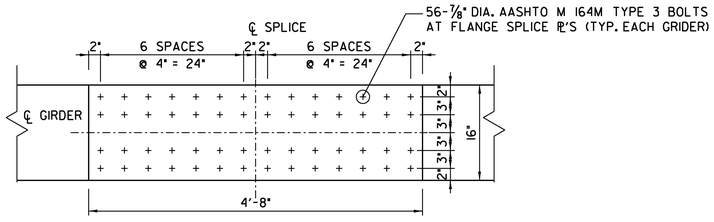
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TYPICAL GIRDER ELEVATION

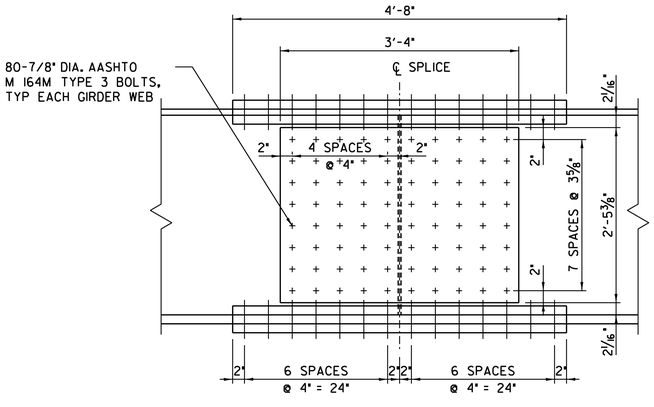
SCALE : H 3/16" = 1'-0"
V 3/4" = 1'-0"

** CHARPY V-NOTCH (CVN) TEST REQUIRED



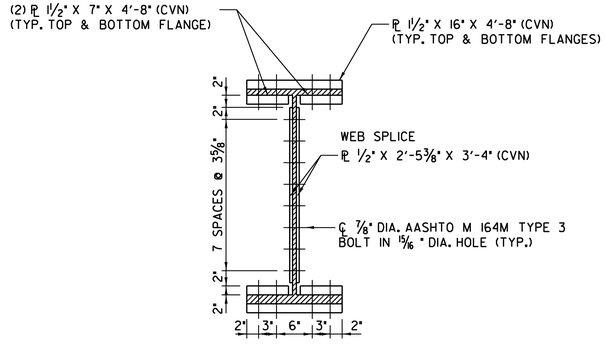
PLAN SPLICE DETAILS

SCALE: 1" = 1'-0"



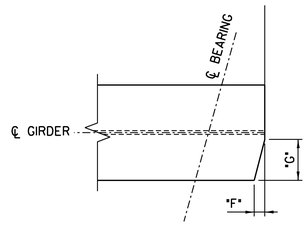
ELEVATION SPLICE DETAILS

SCALE: 1" = 1'-0"



SECTION SPLICE DETAILS

SCALE: 1" = 1'-0"



GIRDER NO.	"F"	"G"
1	1 7/8"	6 13/16"
2	1 13/16"	6 13/16"
3	1 3/4"	6 7/8"
4	1 3/4"	6 7/8"
5	1 11/16"	6 15/16"

ABUTMENT NO. 2 FLANGE CLIP

NOT TO SCALE

GIRDER NO.	"A"	RADIUS	"B"	"C"	"D"	"E"
1	76'-1 1/8"	284'-10"	10'-3 3/4"	14'-2 5/8"	9 1/16"	18'-1 1/2"
2	76'-1/2"	292'-5"	10'-7"	12'-6 1/2"	8 1/2"	18'-3/4"
3	76'-0"	300'-0"	10'-10 3/8"	10'-9 3/4"	8"	18'-3 7/8"
4	75'-11 1/2"	307'-7"	11'-1 5/8"	9'-1 3/4"	7 1/2"	18'-7 7/8"
5	75'-11 11/16"	315'-2"	11'-4 15/16"	7'-5 7/16"	7 1/16"	18'-11 5/8"

SPAN 2 GIRDER DIMENSION TABLE

PLOTTED 2/10/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

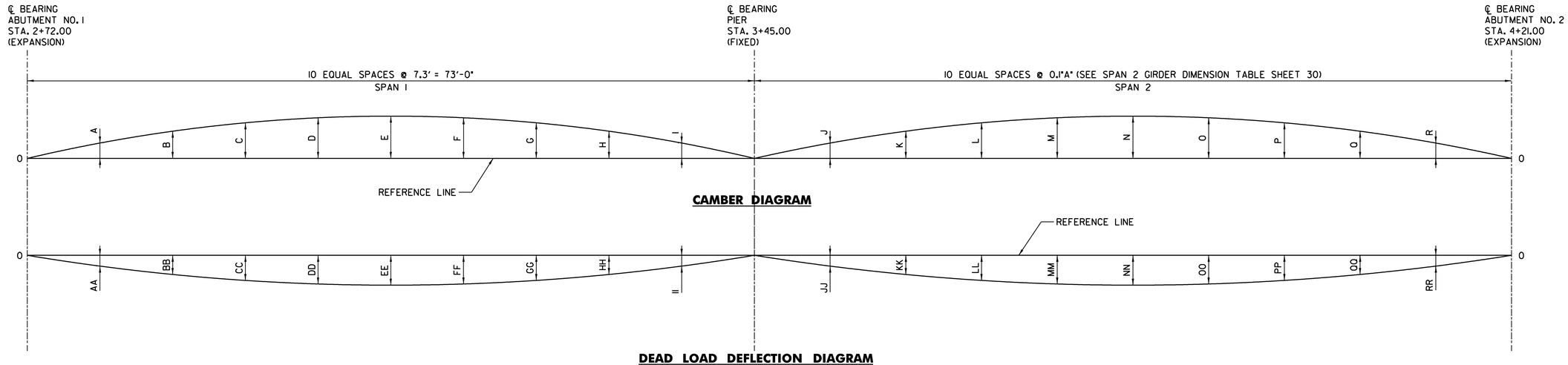
Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

GIRDER ELEVATION AND DETAILS

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By R. H. DURFEE Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98J372gd.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 30 of 68

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CAMBER DIAGRAM

DEAD LOAD DEFLECTION DIAGRAM

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

GIRDER NO.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
GIRDER 1	0.5912	1.1235	1.5542	1.8595	2.0330	1.6872	1.2530	0.7732	0.3119	0.3148	0.7725	1.0625	1.7059	2.0579	1.8873	1.5808	1.1449	0.6043
GIRDER 2	0.5597	1.0640	1.4728	1.7644	1.9333	1.5922	1.1718	0.7145	0.2907	0.3359	0.8115	1.3179	1.7748	2.1331	1.9594	1.6420	1.1894	0.6266
GIRDER 3	0.5405	1.0275	1.4220	1.7044	1.8696	1.5284	1.1142	0.6705	0.2667	0.3608	0.8604	1.3876	1.8612	2.2271	2.0503	1.7206	1.2459	0.6557
GIRDER 4	0.5461	1.0370	1.4333	1.7137	1.8741	1.5283	1.1088	0.6596	0.2553	0.3914	0.9294	1.4905	1.9919	2.3714	2.1944	1.8477	1.3393	0.7047
GIRDER 5	0.5636	1.0690	1.4743	1.7574	1.9141	1.5592	1.1273	0.6645	0.2506	0.4212	1.0053	1.6132	2.1559	2.5600	2.3890	2.0251	1.4757	0.7787

CAMBER TABLE

ALL DIMENSIONS ARE IN INCHES

GIRDER NO.	AA	BB	CC	DD	EE	FF	GG	HH	II	JJ	KK	LL	MM	NN	OO	PP	QQ	RR
GIRDER 1	0.3912	0.7235	0.9542	1.0595	1.0330	0.8872	0.6530	0.3732	0.1199	0.1148	0.3725	0.6625	0.9059	1.0579	1.0873	0.9808	0.7449	0.4043
GIRDER 2	0.3597	0.6640	0.8728	0.9644	0.9333	0.7922	0.5718	0.3145	0.0907	0.1359	0.4115	0.7179	0.9748	1.1331	1.1594	1.0420	0.7894	0.4266
GIRDER 3	0.3405	0.6275	0.8220	0.9044	0.8696	0.7284	0.5142	0.2705	0.0667	0.1608	0.4604	0.7876	1.0612	1.2271	1.2503	1.1206	0.8459	0.4557
GIRDER 4	0.3461	0.6370	0.8333	0.9137	0.8741	0.7283	0.5088	0.2596	0.0553	0.1914	0.5294	0.8905	1.1919	1.3714	1.3944	1.2477	0.9393	0.5047
GIRDER 5	0.3636	0.6690	0.8743	0.9574	0.9141	0.7592	0.5273	0.2645	0.0506	0.6053	0.6053	1.0132	1.3559	1.5600	1.5890	1.4251	1.0757	0.5787

DEAD LOAD DEFLECTION TABLE

ALL DIMENSIONS ARE IN INCHES

NOTES:

1. THE DEAD LOAD DEFLECTIONS INCLUDE ALL DEAD LOADS AND SUPERIMPOSED DEAD LOADS INCLUDING GIRDER SELF WEIGHTS.
2. THE REFERENCE LINE IS A THEORETICAL STRAIGHT LINE FROM ABUTMENT NO. 1 TO ABUTMENT NO. 2 CONNECTING POINTS LOCATED ALONG THE CENTERLINE OF GIRDER AT THE CENTERLINE OF BEARINGS.

PLOTTED 2/10/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

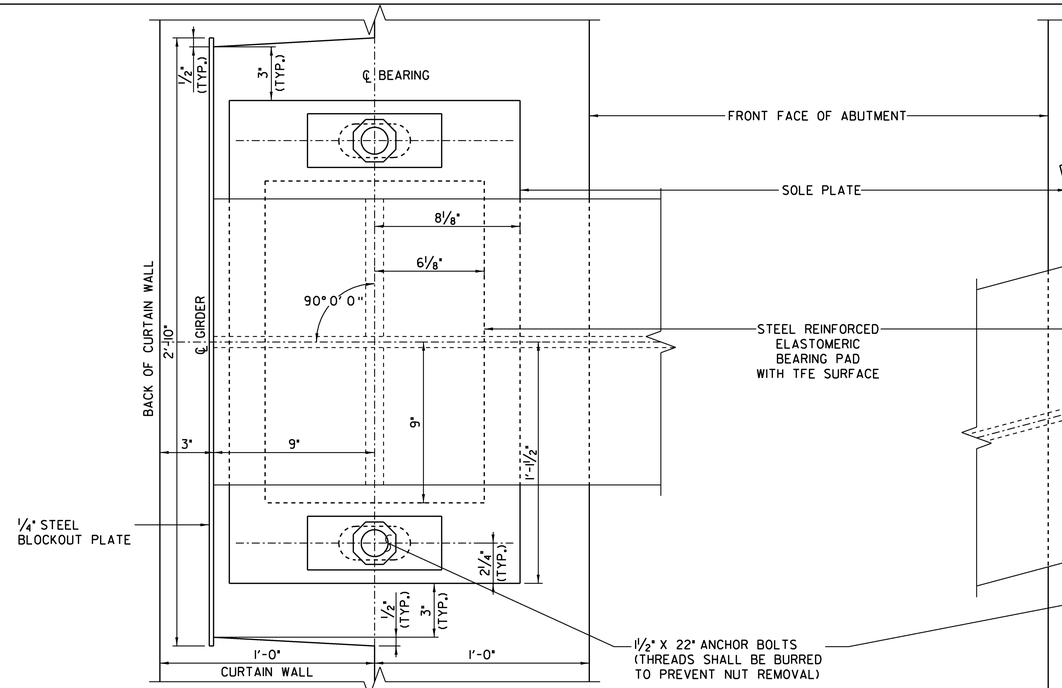
Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

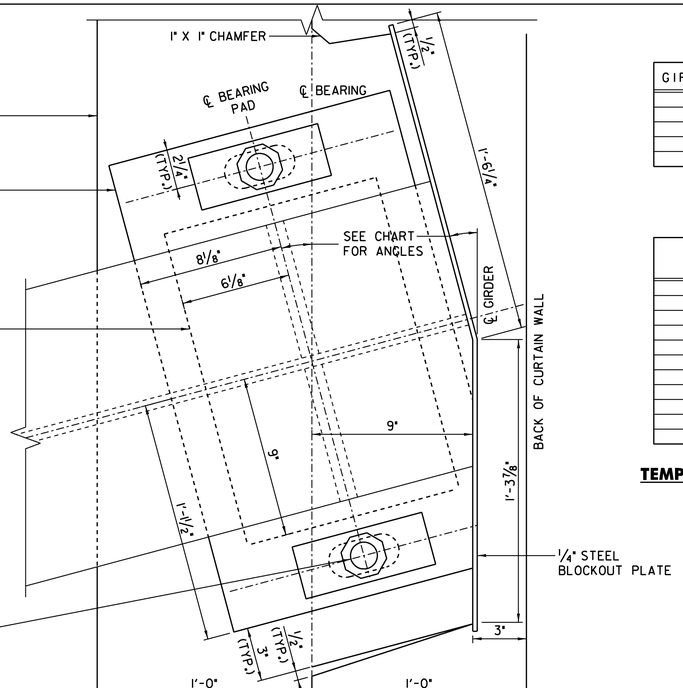
TH NO. 1 OVER THE GIHON RIVER

CAMBER AND DEFLECTION DETAILS

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date	Bridge Design Supervisor
R. H. DURFEE 2/09	J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372gd.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 31 of 68

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GIRDER NUMBER	ANGLE
1	15° 17' 58"
2	14° 53' 36"
3	14° 30' 31"
4	14° 08' 36"
5	13° 47' 46"

BEARING ANGLE ABUTMENT NO. 2

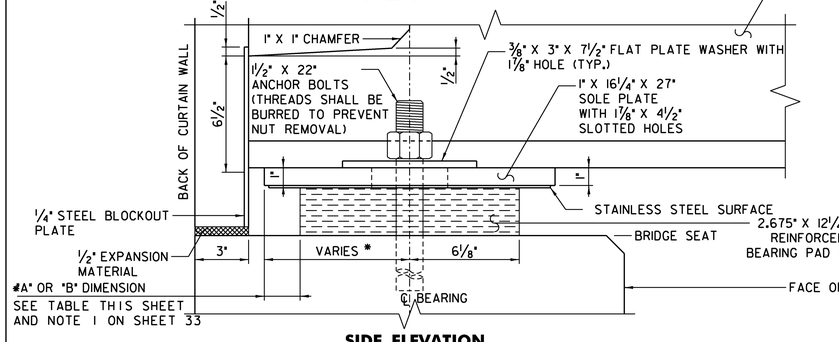
NOTE:
SEE SHEET 33 FOR BEARING NOTES.

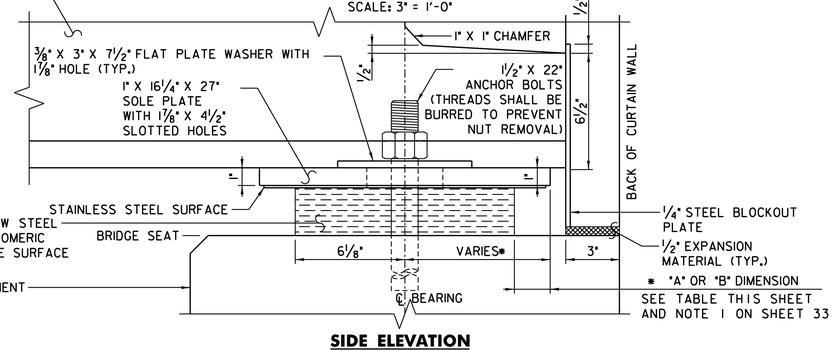
TEMP (°F)	"A" DIST (INCHES)	"B" DIST (INCHES)
120	1 1/16	1 15/16
105	1 3/16	1 7/8
90	1 5/16	1 13/16
75	1 7/8	2
60	1 15/16	2 1/16
45	2	2 1/8
30	2 1/16	2 3/16
15	2 1/8	2 1/4
0	2 3/16	2 5/16
-15	2 1/4	2 3/8
-30	2 5/16	2 7/16

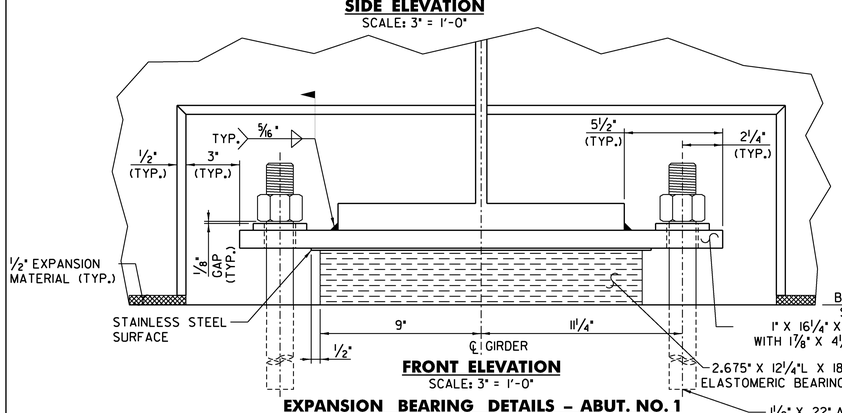
TEMPERATURE ADJUSTMENT TABLE ABUTMENT NO. 1

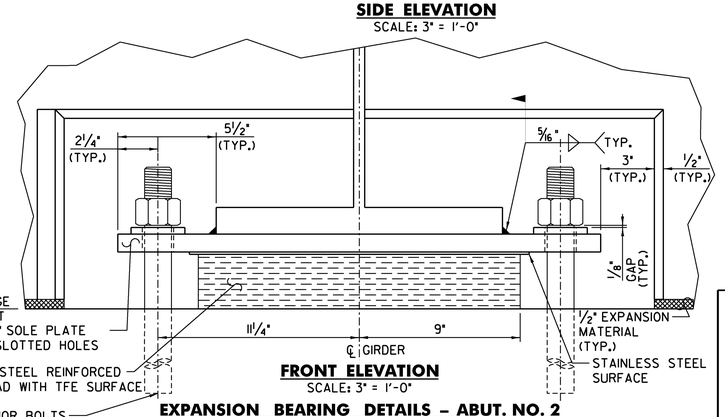
TEMP (°F)	"A" DIST (INCHES)	"B" DIST (INCHES)
120	1 1/16	1 7/8
105	1 3/16	1 15/16
90	1 5/16	2
75	1 7/8	2 1/16
60	1 15/16	2 1/8
45	2	2 3/16
30	2 1/16	2 1/4
15	2 1/8	2 5/16
0	2 3/16	2 3/8
-15	2 1/4	2 1/16
-30	2 5/16	2 1/2

TEMPERATURE ADJUSTMENT TABLE ABUTMENT NO. 2

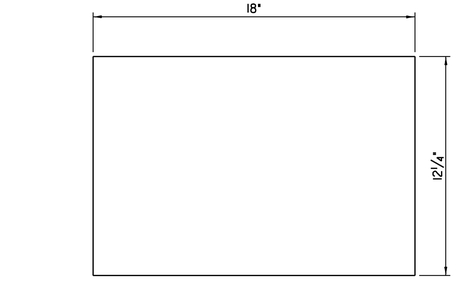


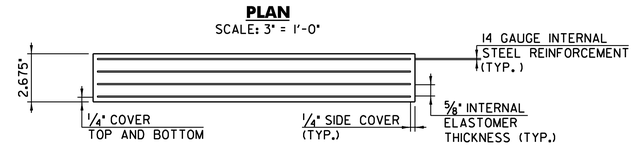






PLOTTED 2/10/2009





TYPICAL SECTION
SCALE: 3" = 1'-0"
STEEL REINFORCED ELASTOMERIC BEARING PAD – ABUTMENTS

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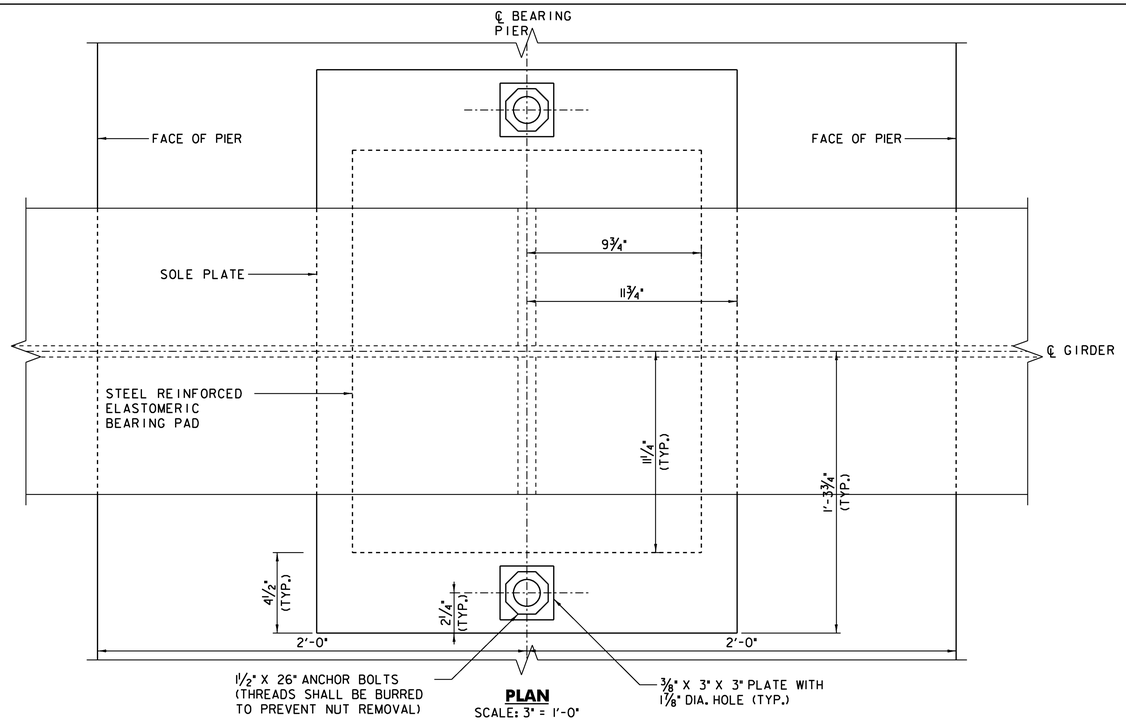
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

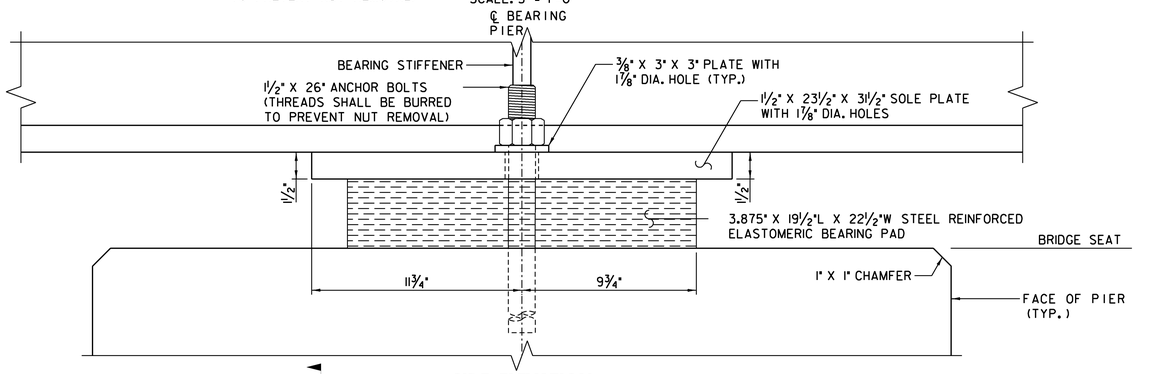
TH NO. 1 OVER THE GIHON RIVER
BEARING DETAILS – ABUTMENTS

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372bear.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 32 of 68

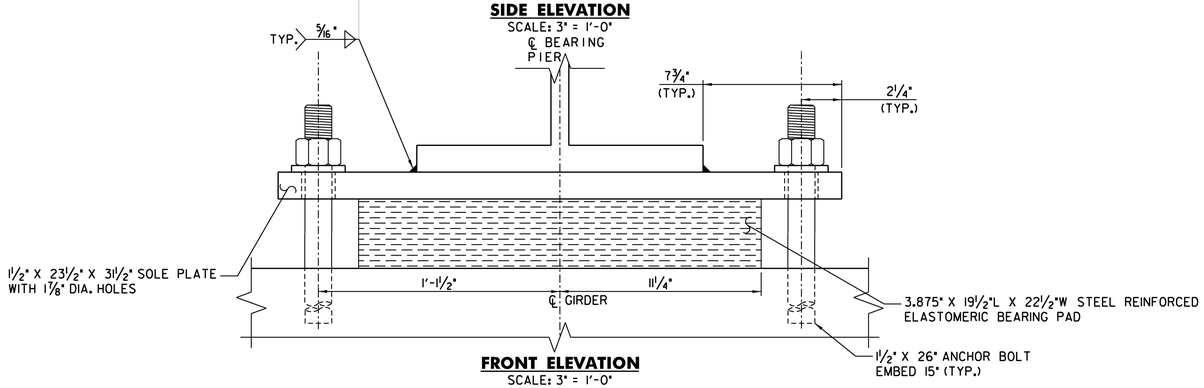
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PLAN
SCALE: 3" = 1'-0"



SIDE ELEVATION
SCALE: 3" = 1'-0"



FRONT ELEVATION
SCALE: 3" = 1'-0"

FIXED BEARING DETAILS – PIER

BEARING NOTES

1. BEARINGS SHALL CONFORM TO APPLICABLE SUBSECTIONS OF SECTIONS 531 AND 731.
2. FABRICATION DRAWINGS CONFORMING TO SUBSECTION 531.03 SHALL INCLUDE WELDING AND BONDING PROCEDURES.
3. FOR ABUTMENT BEARINGS: THE "A" DISTANCE IS THE SOLE PLATE ADJUSTMENT TO BE USED AFTER THE DECK SYSTEM, SIDEWALKS AND BRIDGE RAIL ARE PLACED. THE "B" DISTANCE IS THE SOLE PLATE ADJUSTMENT TO BE USED BEFORE DEAD LOAD IS ADDED TO THE GIRDER SELFWEIGHT. THE FINAL "A" DISTANCE, S SHOWN IN THE TABLE, MUST BE ATTAINED WITHIN 1/8 INCH.
4. ALL STEEL FOR BEARING DEVICES (EXCEPT STAINLESS) SHALL BE AASHTO M270M/M270, GRADE 36, BOLTS AND NUTS SHALL BE PER ASTM A 449. ALL HARDWARE SHALL BE GALVANIZED PER SUBSECTION 531.04(b).
5. PAYMENT FOR SUPPLYING AND PLACEMENT OF THE STEEL REINFORCED ELASTOMERIC BEARING PADS, SOLE PLATES, STAINLESS STEEL SURFCE, ANCHOR BOLTS, NUTS AND WASHERS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 531.11, "BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD".
6. THE CONCRETE SURFACE UNDER THE BEARING DEVICE SHALL BE LEVEL.
7. DRILL AND SET ANCHOR BOLTS WITH A MINIMUM OF 15-IN EMBEDDED INTO CONCRETE. HOLES FOR ANCHOR BOLTS SHALL BE 3-IN IN DIAMETER. ANCHOR BOLTS ARE TO BE GROUTED WITH MORTAR, TYPE IV IN ACCORDANCE WITH SECTION 531. ALL COSTS SHALL BE INCLUDED IN ITEM 531.11, "BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD".
8. ANCHOR BOLTS SHALL BE SWEDGED WITH 4-IN OF THREAD. EXPANSION BEARING NUTS SHALL BE DRAWN UP FINGER TIGHT AND THEN BACKED OFF 1/8-IN. THREADS SHALL BE BURRED ABOVE THE NUT TO PREVENT NUT REMOVAL.
9. EXISTING ANCHOR BOLTS THAT ARE NOT COVERED WITH A NEW BRIDGE SEAT CAP SHALL BE CUT ONE INCH MINIMUM BELOW EXISTING SUBSTRUCTURE SEATS, BLAST CLEANED AND FILLED WITH MORTAR TYPE IV. COSTS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 531.11, "BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD".
10. ALL REINFORCEMENT BETWEEN LAYERS OF ELASTOMER SHALL BE STEEL GRADE 36. NO FABRIC REINFORCEMENT WILL BE PERMITTED.
11. ELASTOMERIC BEARING REINFORCED WITH STEEL SHALL HAVE 1/4" EDGE SEAL OF ELASTOMERIC INTEGRAL WITH THE BEARING OVER ALL PLATES.
12. ALL MATERIAL AND FABRICATION SHALL BE PER AASHTO DIVISION II SECTION 18.2 AND AASHTO MATERIAL SPECIFICATIONS M251.
13. DESIGN CRITERIA:

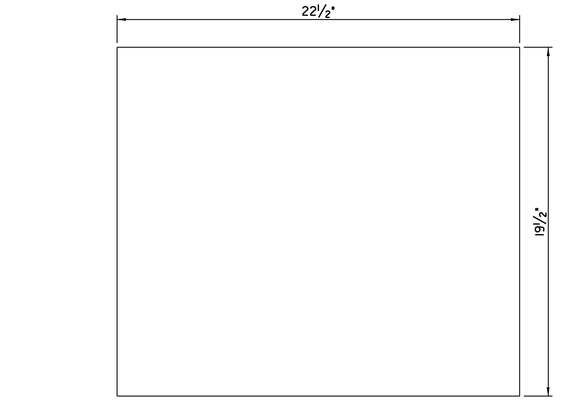
    A) TEMPERATURE ZONE: C

    B) HARDNESS: 60 (SHORE A SCALE)

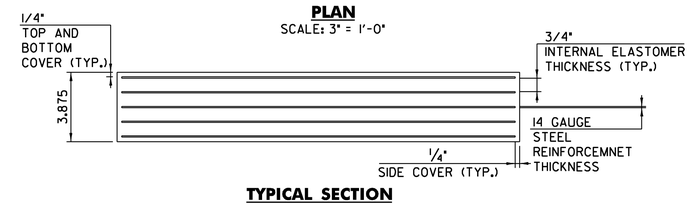
    C) MAXIMUM BEARING STRESS: ABUTMENT 979 psi
    PIER 989 psi

    D) DESIGN ROTATION: ABUTMENT 0.0065 RADIANS
    PIER 0.004 RADIANS

    E) BEARING SHAPE FACTOR: ABUTMENTS 5.83
    PIER 6.96



PLAN
SCALE: 3" = 1'-0"



TYPICAL SECTION
SCALE: 3" = 1'-0"

STEEL REINFORCED ELASTOMERIC BEARING PAD – PIER

PLOTTED 2/10/2009

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engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

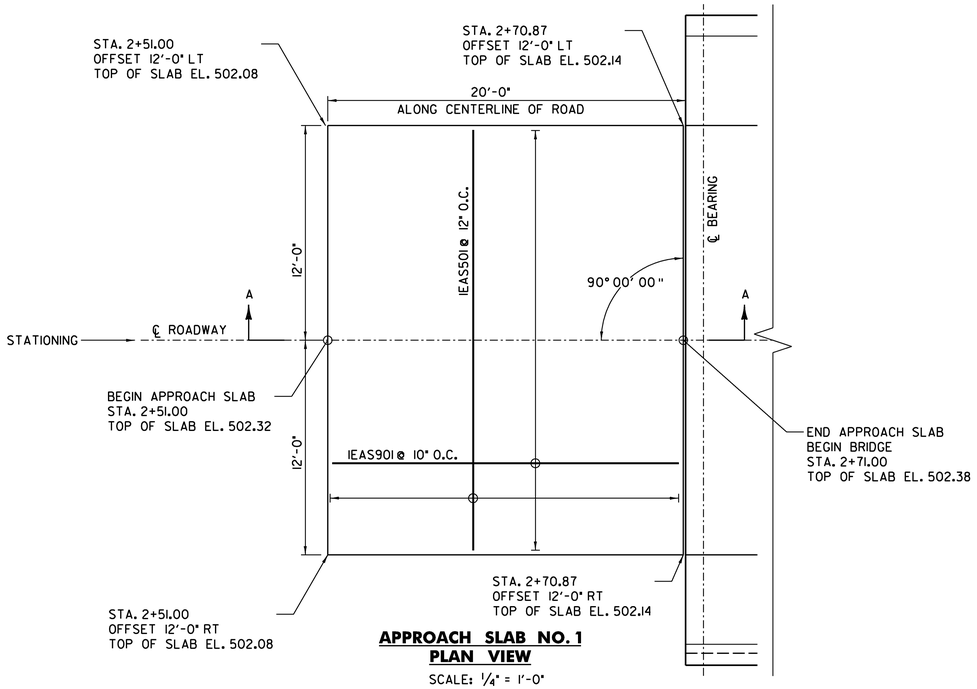
Town Of JOHNSON	Bridge No. 5
Highway No. I	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

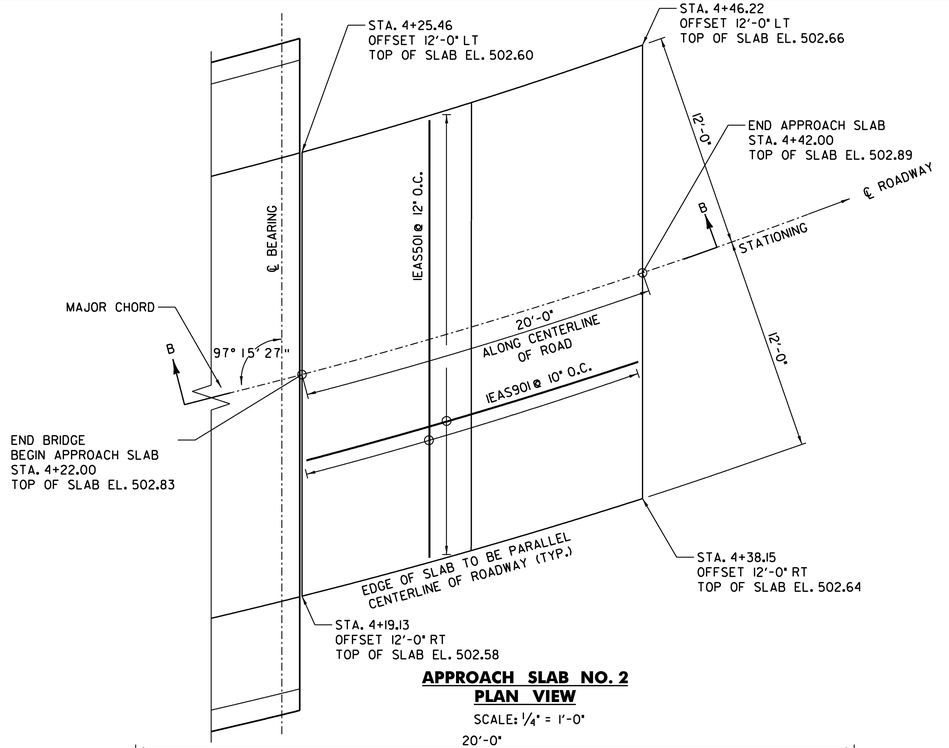
BEARING DETAILS – PIER

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98J372bear.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 33 of 68

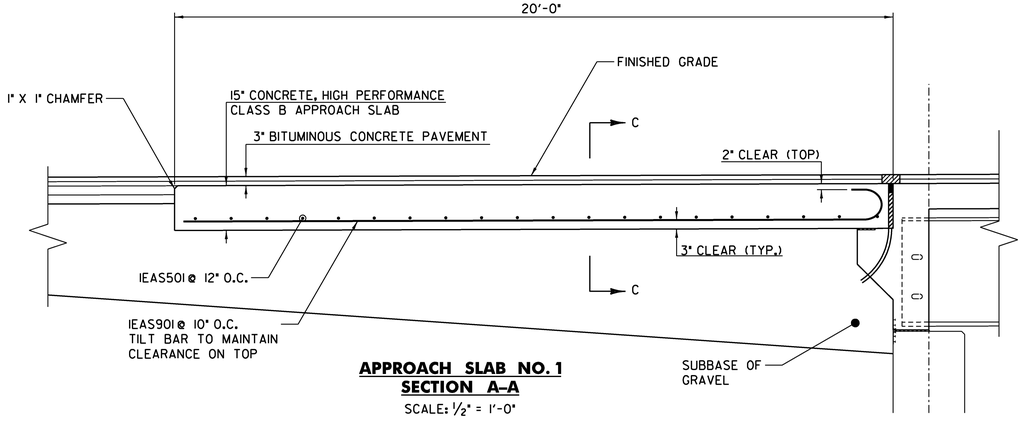
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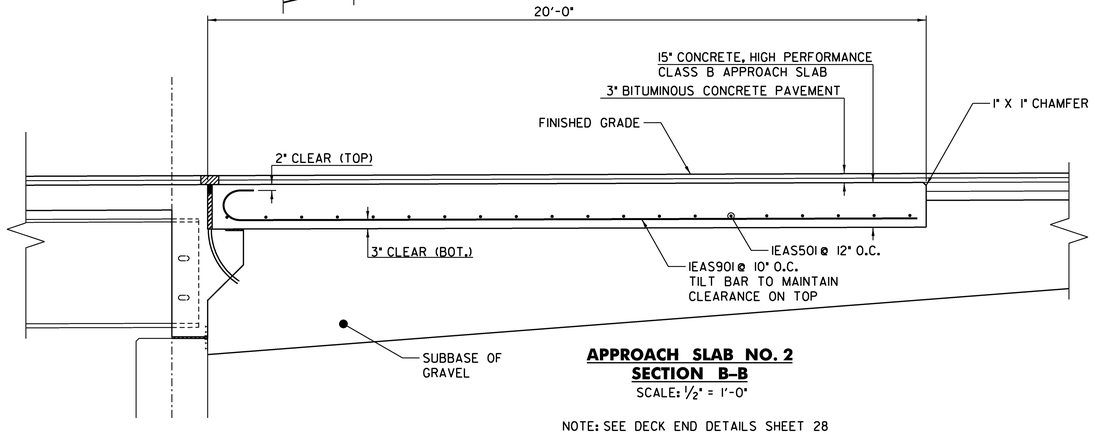
APPROACH SLAB NO. 1
PLAN VIEW
SCALE: 1/4" = 1'-0"



APPROACH SLAB NO. 2
PLAN VIEW
SCALE: 1/4" = 1'-0"

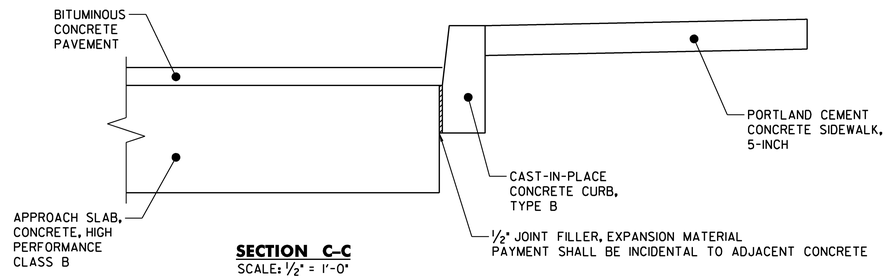


APPROACH SLAB NO. 1
SECTION A-A
SCALE: 1/2" = 1'-0"



APPROACH SLAB NO. 2
SECTION B-B
SCALE: 1/2" = 1'-0"

NOTE: SEE DECK END DETAILS SHEET 28



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

NOTE: SEE DECK END DETAILS SHEET 28

PLOTTED 2/18/2009

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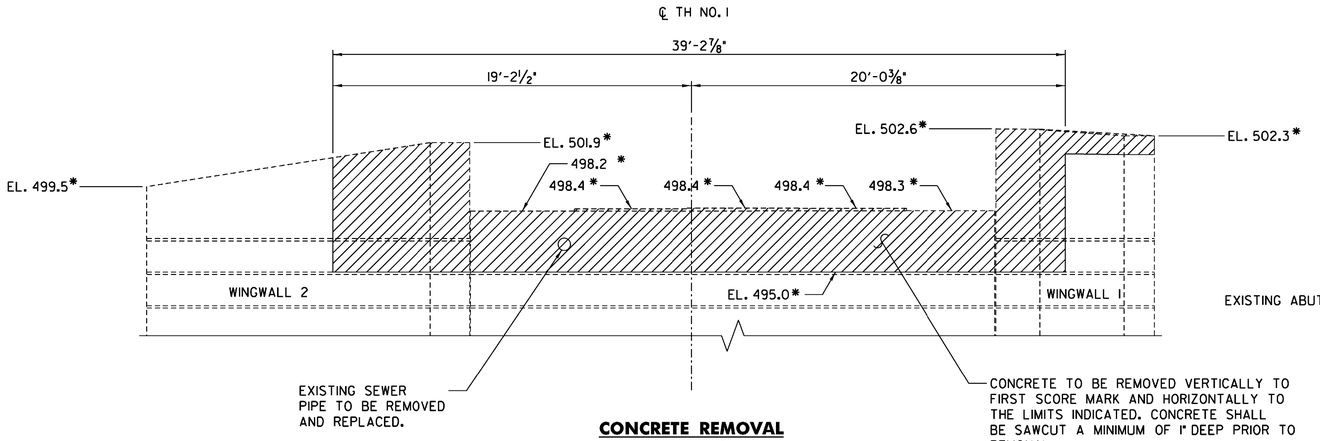
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 5
Highway No. I	Log Sta.
	Surv. Sta.

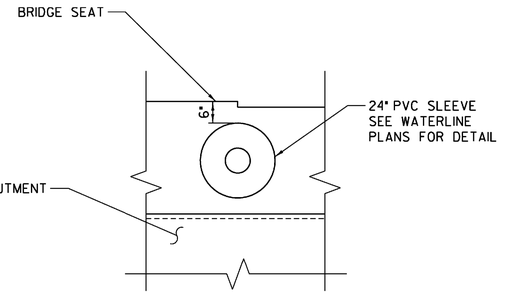
TH NO. 1 OVER THE GIHON RIVER
APPROACH SLAB DETAILS

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98J372as.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 34 of 68

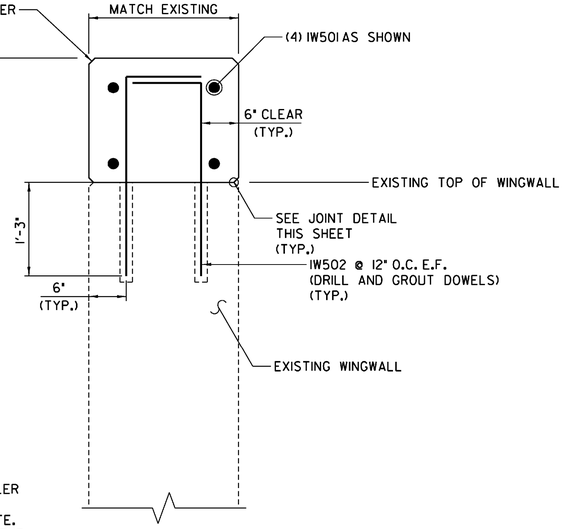
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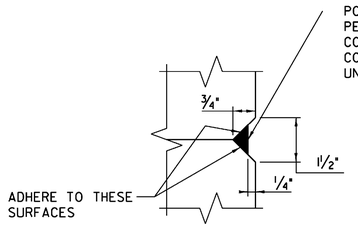
CONCRETE REMOVAL ELEVATION
SCALE: ¼" = 1'-0"



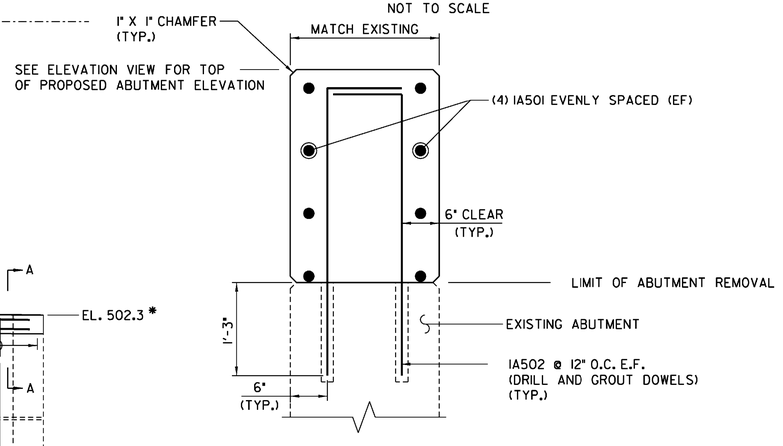
WATERLINE PLACEMENT DETAIL
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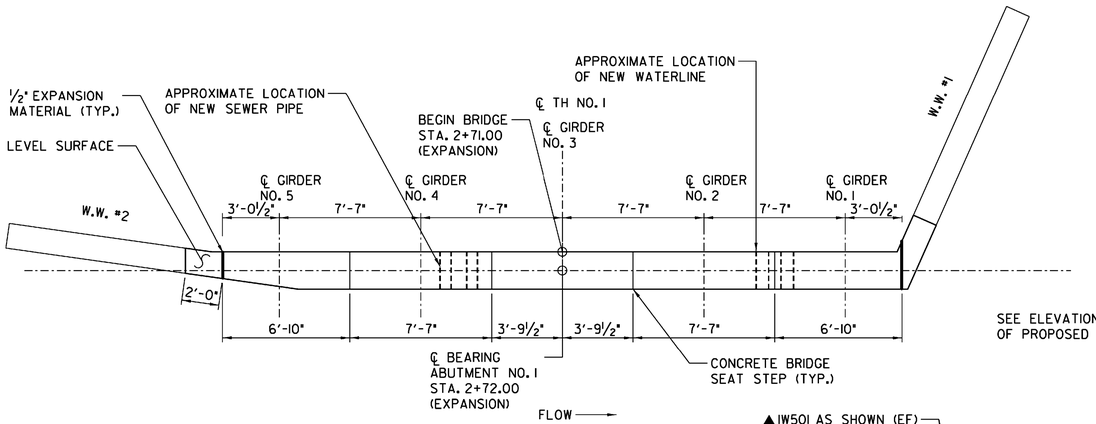
SECTION A – A
SCALE: 1" = 1'-0"



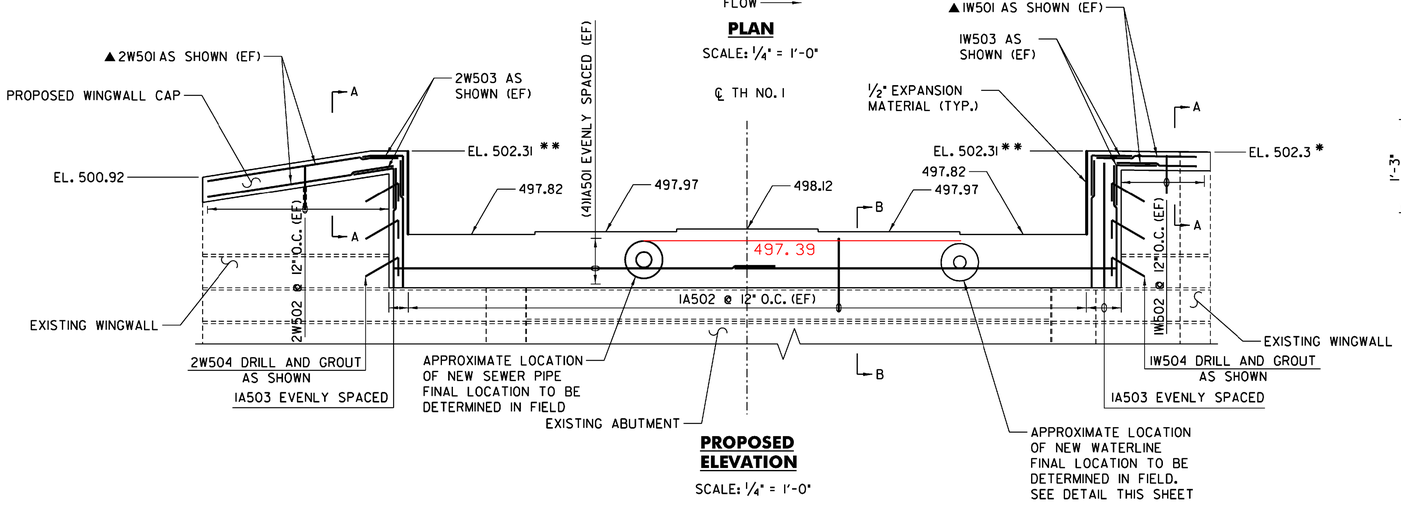
JOINT DETAIL
NOT TO SCALE



SECTION B – B
SCALE: 1" = 1'-0"



PLAN
SCALE: ¼" = 1'-0"



PROPOSED ELEVATION
SCALE: ¼" = 1'-0"

ABUTMENT NO. 1 MODIFICATIONS

NOTES:

1. FOLLOWING THE REMOVAL OF THE SUPERSTRUCTURE, THE EXISTING WINGWALLS AND ABUTMENT SHALL BE SAWCUT A MINIMUM OF 1" DEEP ALONG THE REMOVAL LINE AND REMOVED TO THE LIMITS SHOWN.
2. CONCRETE SURFACES SHALL THEN BE INSPECTED, CLEANED AND REPAIRED AS DESCRIBED IN THE GENERAL NOTES.
3. THE NEW WINGWALL CAP SHALL NOT BE PLACED UNTIL THE PROPOSED SUPERSTRUCTURE HAS BEEN CONSTRUCTED.
4. * APPROXIMATE EXISTING ELEVATIONS

   ** PROPOSED TOP OF WINGWALL ELEVATION TO BE AT THE DECK JOINT (SCORE MARK) AND VERIFIED IN THE FIELD.
5. NF = NEAR FACE
   FF = FAR FACE
   EF = EACH FACE
   ▲ = CUT TO FIT IN FIELD
   T+B = TOP AND BOTTOM
   O.C. = ON CENTER
   MINIMUM LAP LENGTH NOT DETAILED SHALL BE 2'-2"

PLOTTED 2/18/2009

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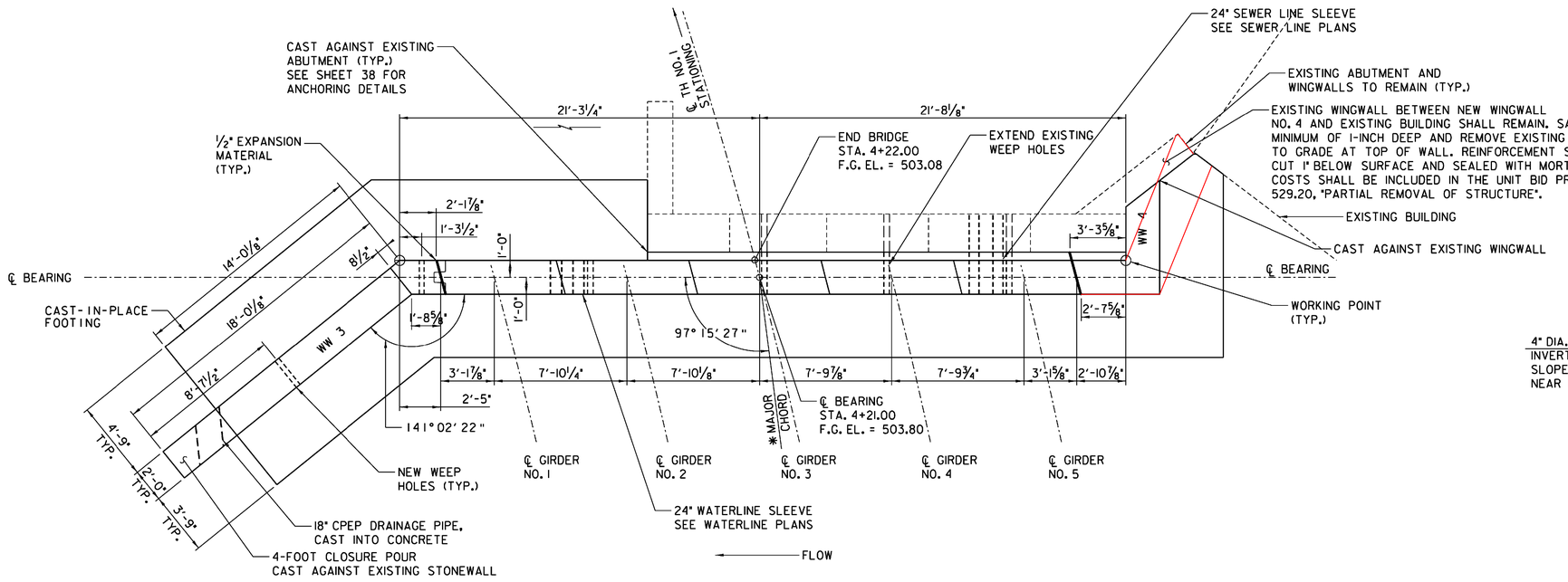
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER
ABUTMENT NO. 1 MODIFICATIONS

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372ab1.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 35 of 68

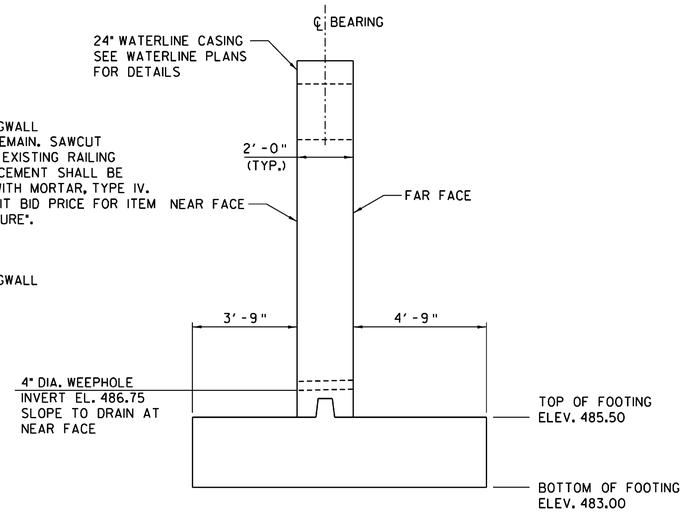
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ABUTMENT NO. 2 – PLAN

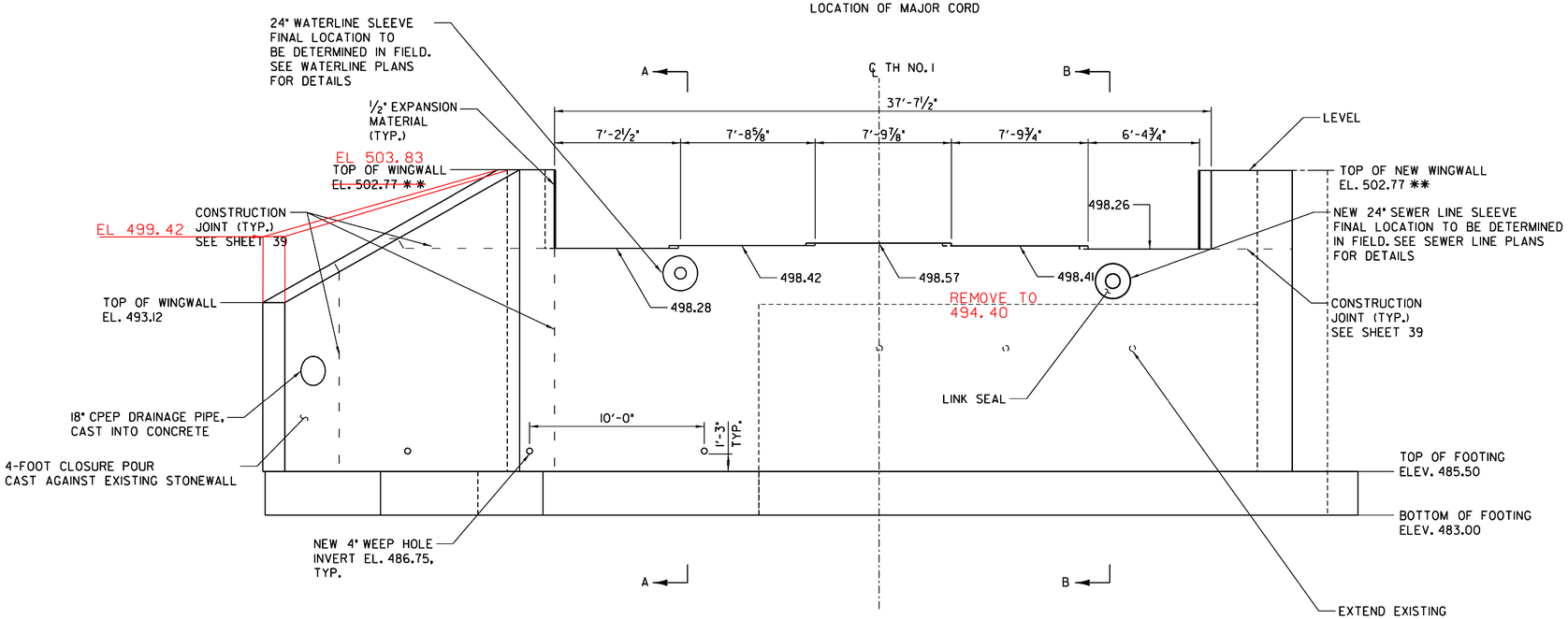
SCALE: ¼" = 1'-0"

✱ SEE FRAMING PLAN FOR LOCATION OF MAJOR CORD



SECTION A–A

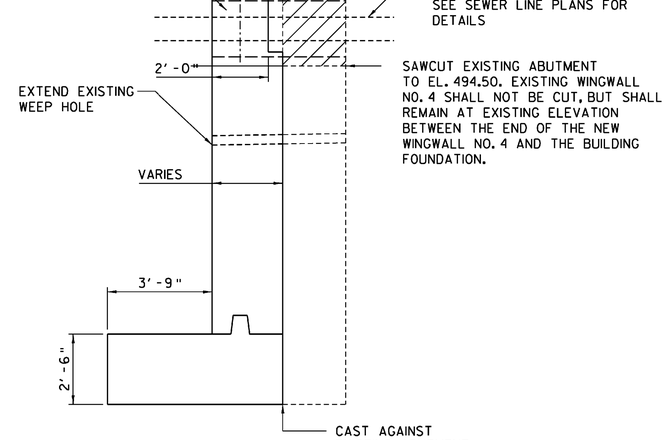
SCALE: ⅜" = 1'-0"



ABUTMENT NO. 2 – ELEVATION

SCALE: ¼" = 1'-0"

✱✱ PROPOSED TOP OF WINGWALL ELEVATION TO BE AT THE DECK JOINT (SCORE MARK) AND VERIFIED IN THE FIELD



SECTION B–B

SCALE: ⅜" = 1'-0"

PLOTTED 2/18/2009

DuBois & King inc.
engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

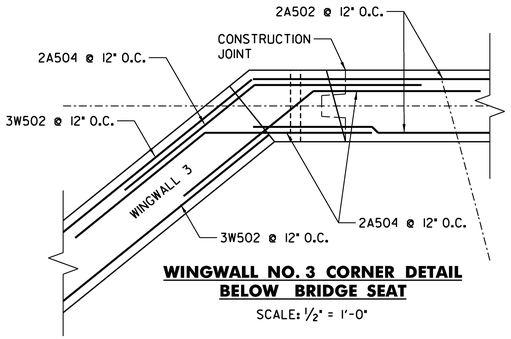
Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

ABUTMENT NO. 2 MASONRY

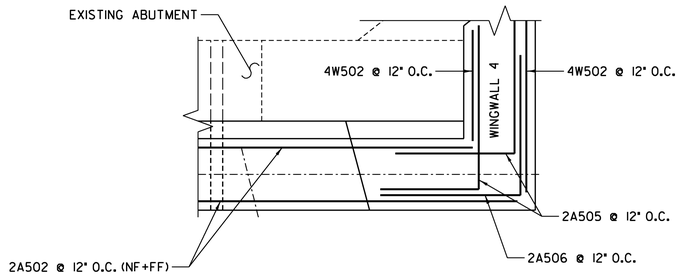
Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98J372ab2.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 36 of 68

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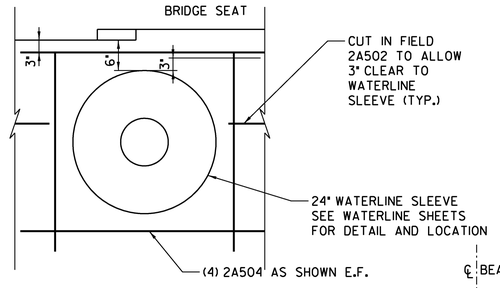
WINGWALL NO. 3 CORNER DETAIL BELOW BRIDGE SEAT

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



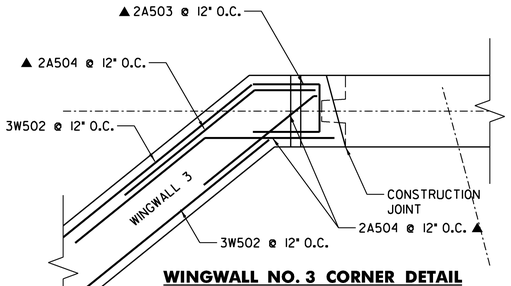
WINGWALL NO. 4 CORNER DETAIL BELOW BRIDGE SEAT

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



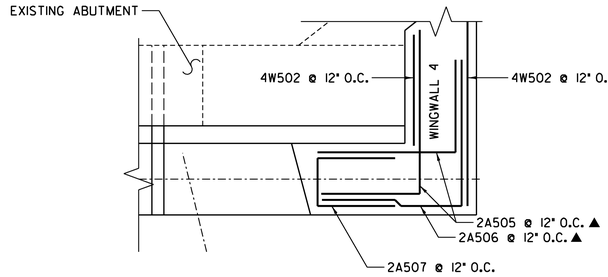
REINFORCING DETAIL FOR WATERLINE

SCALE: 1" = 1'-0"



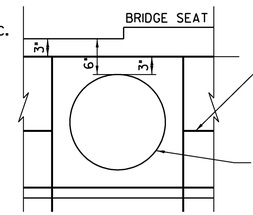
WINGWALL NO. 3 CORNER DETAIL ABOVE BRIDGE SEAT

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



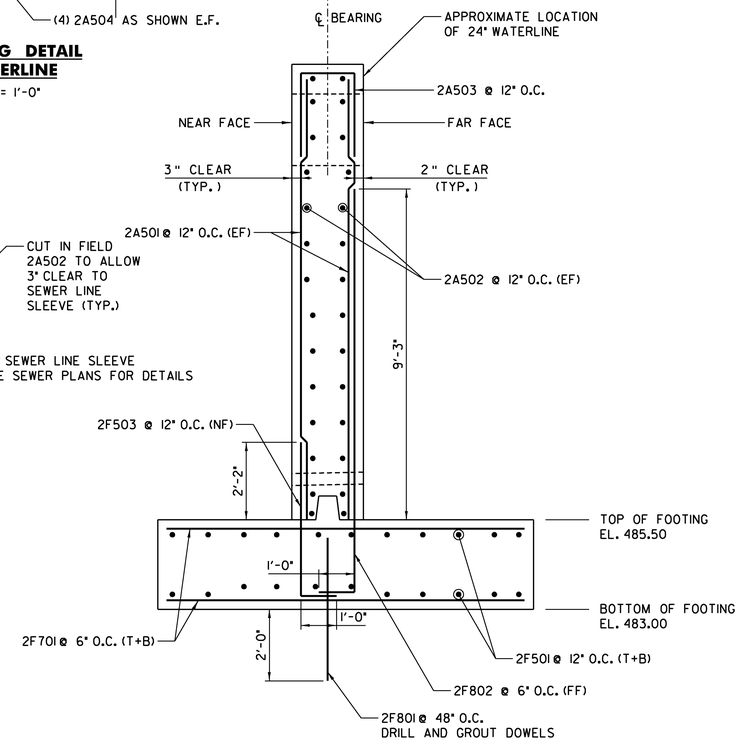
WINGWALL NO. 4 CORNER DETAIL ABOVE BRIDGE SEAT

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



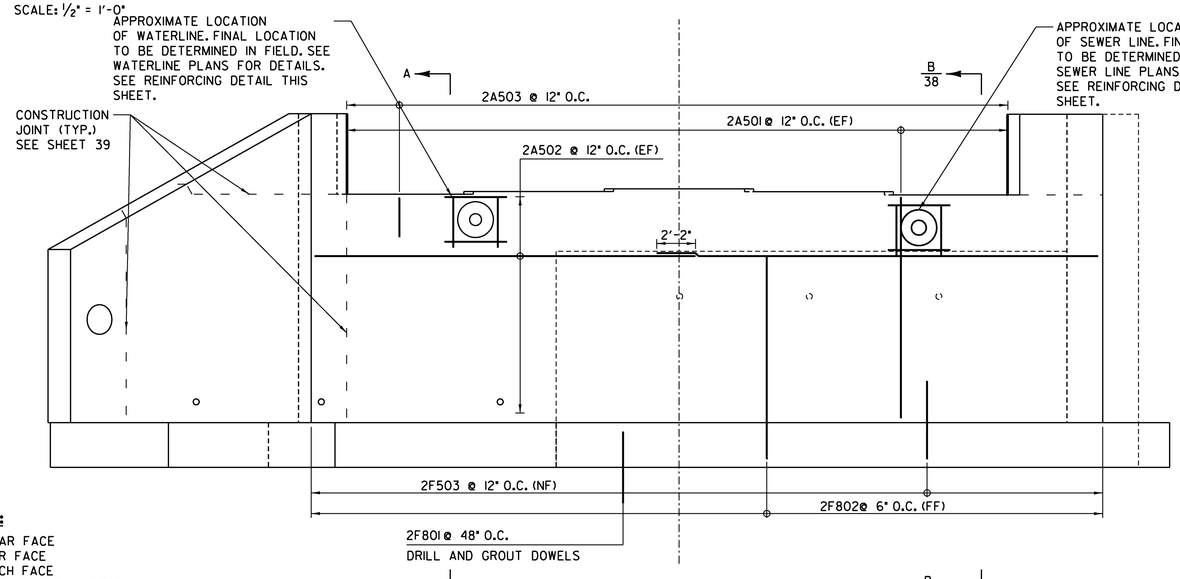
REINFORCING DETAIL FOR SEWER LINE

SCALE: 1" = 1'-0"



SECTION A - A

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



ABUTMENT NO. 2 ELEVATION

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

NOTES:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
T+B = TOP AND BOTTOM
O.C. = ON CENTER
MINIMUM LAP LENGTH NOT DETAILED SHALL BE 2'-2"

PLOTTED 2/10/2009

DuBois & King inc.
engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

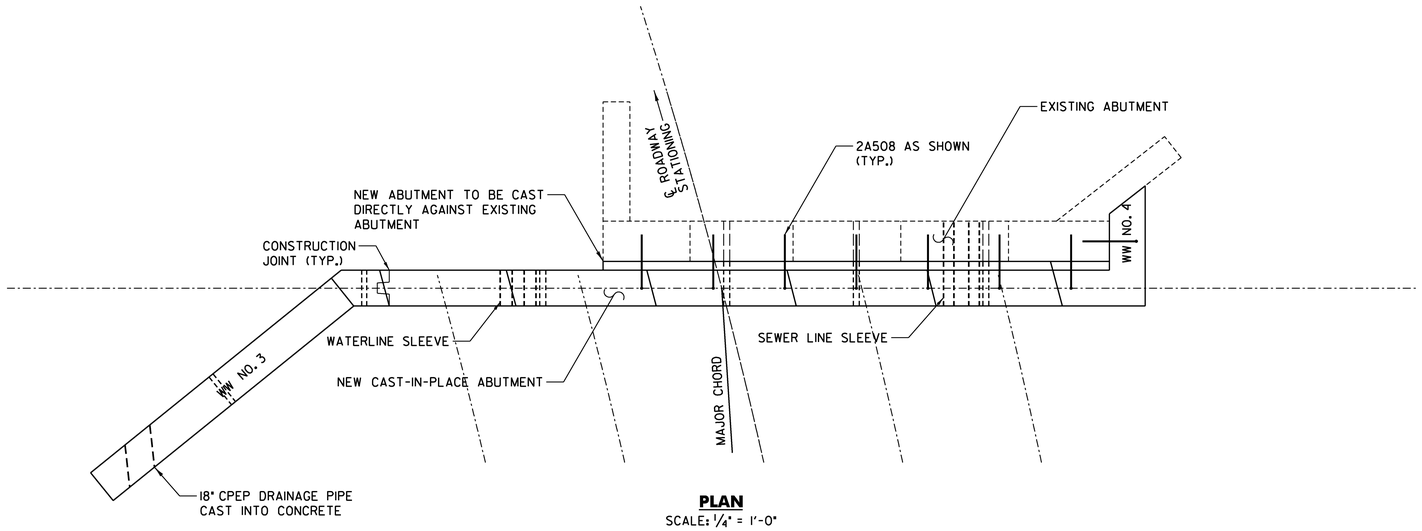
Town Of JOHNSON	Bridge No. 5
Highway No. I	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

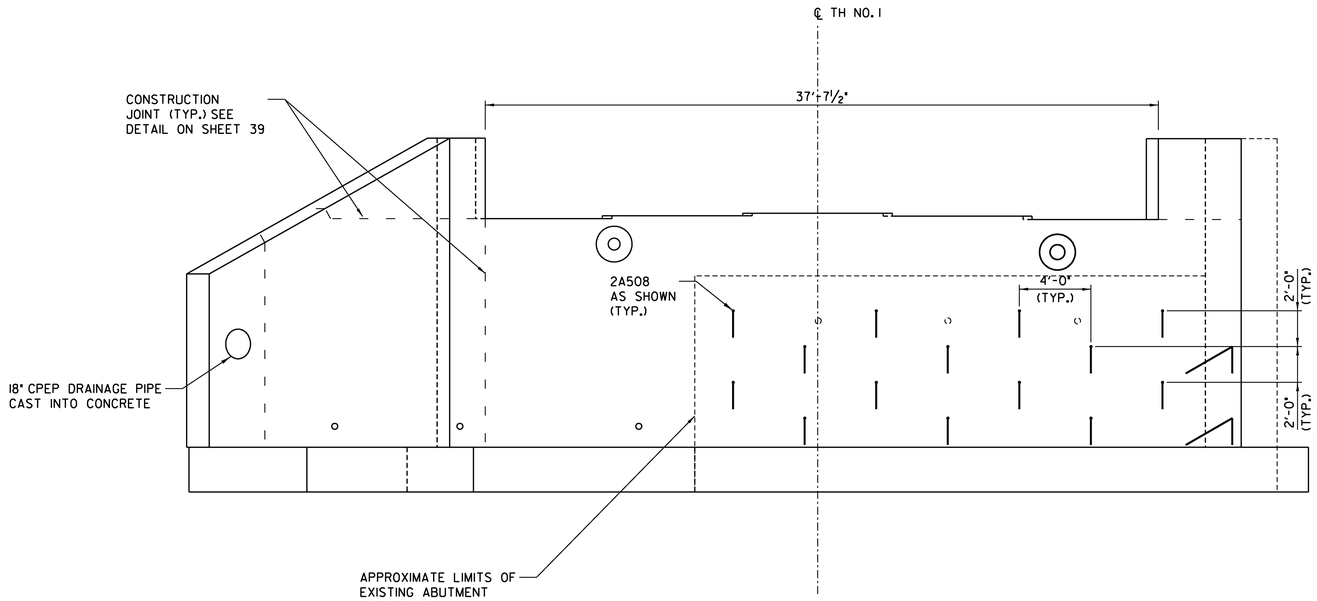
ABUTMENT NO. 2 REINFORCEMENT

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98J372ab2.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 37 of 68

I:\R16214\dgn\z98j372ab2.dgn 2/10/2009 9:25:53 AM

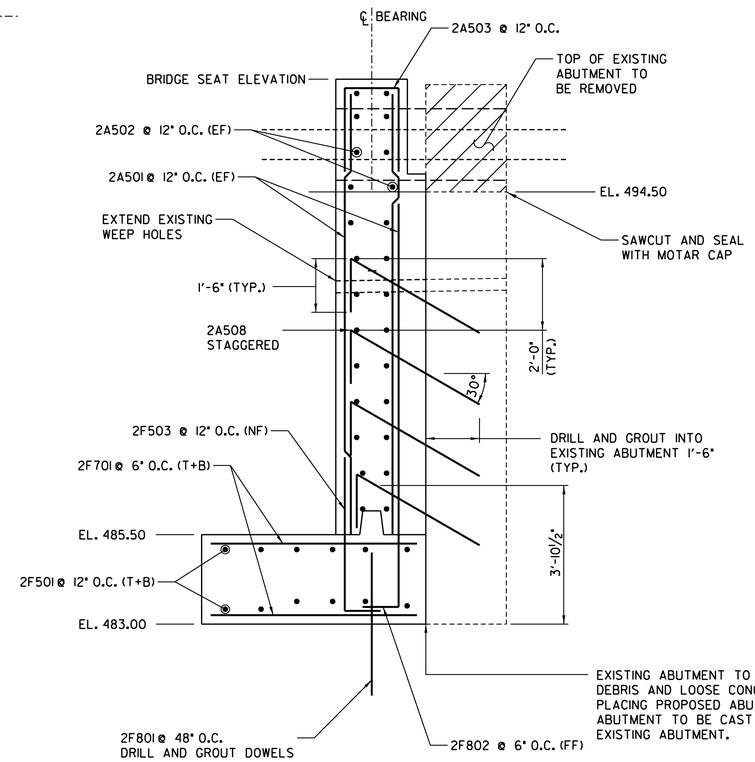


PLAN
SCALE: 1/4" = 1'-0"



ELEVATION

ABUTMENT NO. 2 – ANCHOR DETAIL
SCALE: 1/4" = 1'-0"



SECTION B – B
SCALE: 1/2" = 1'-0"

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PLOTTED 2/10/2009

STATE OF VERMONT
AGENCY OF TRANSPORTATION

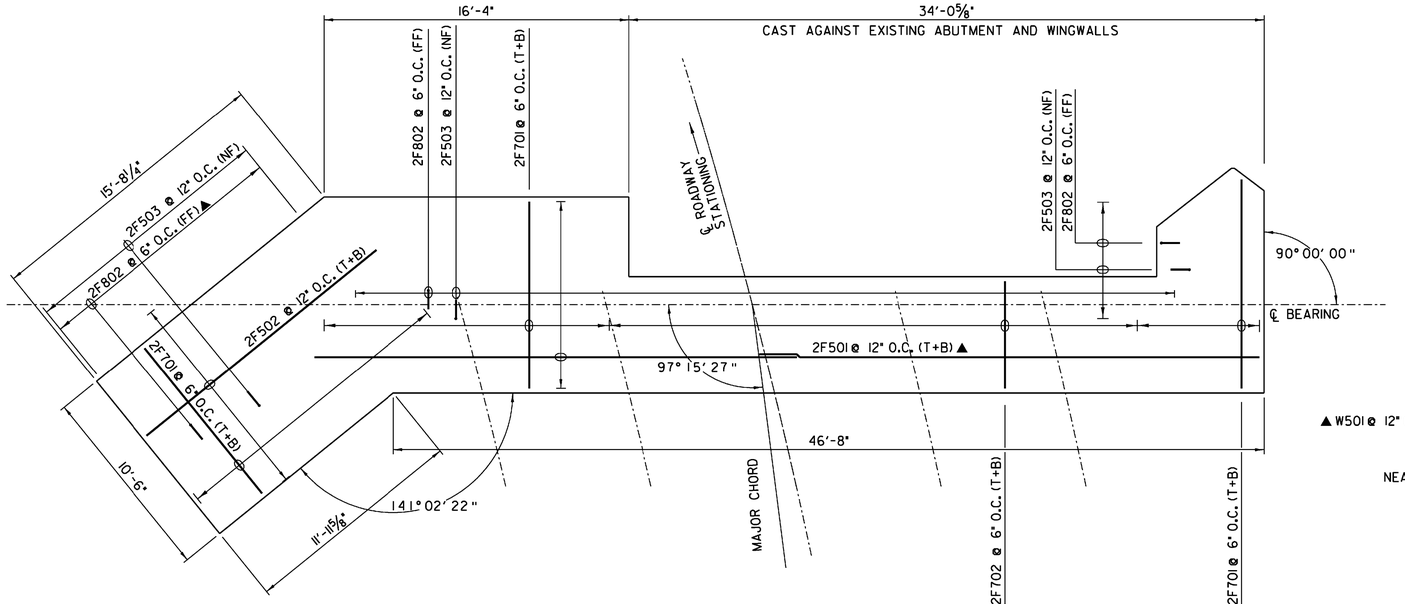
Town Of JOHNSON	Bridge No. 5
Highway No. I	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

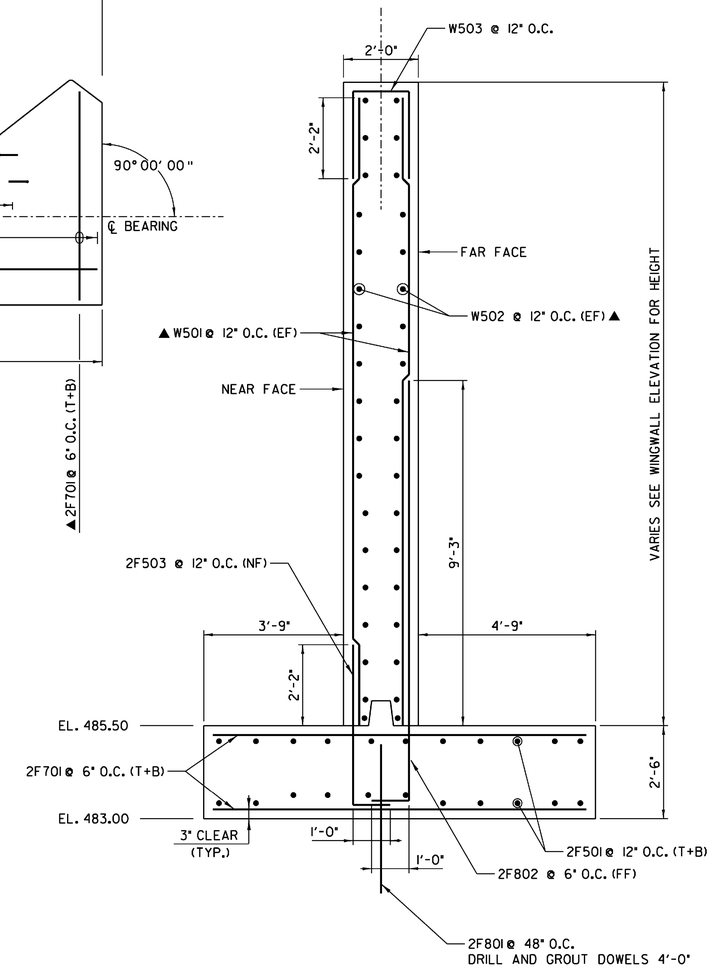
ABUTMENT NO. 2 DETAILS

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date J. W. TUCKER 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98J372fwd.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 38 of 68

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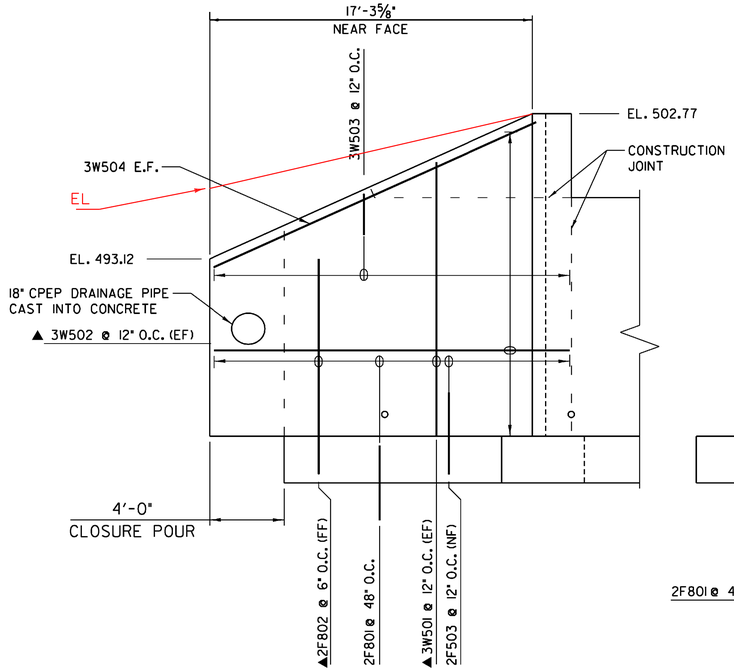
FOOTING PLAN
SCALE: 1/4" = 1'-0"



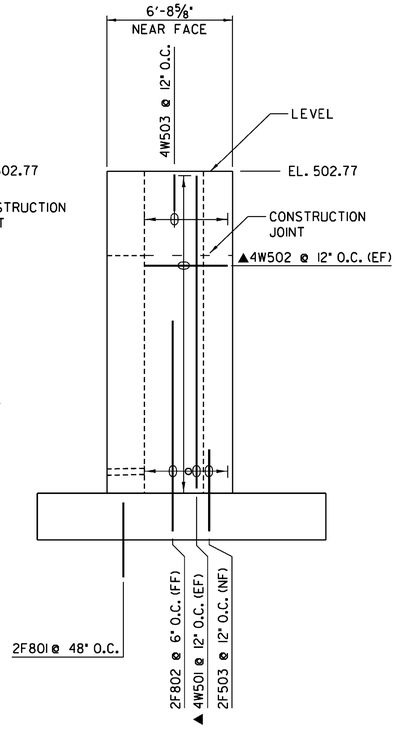
TYPICAL WINGWALL SECTION
SCALE: 1/2" = 1'-0"

NOTES:

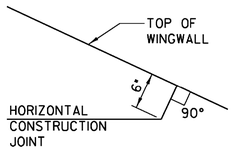
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
T+B = TOP AND BOTTOM
O.C. = ON CENTER
MINIMUM LAP LENGTH NOT DETAILED SHALL BE 2'-2"



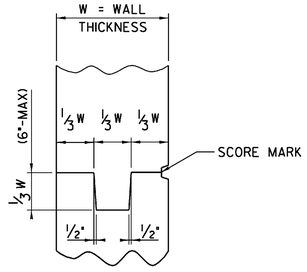
WINGWALL NO. 3 ELEVATION
SCALE: 1/4" = 1'-0"



WINGWALL NO. 4 ELEVATION
SCALE: 1/4" = 1'-0"



WINGWALL HORIZONTAL CONSTRUCTION JOINT
NOT TO SCALE



TYPICAL CONCRETE CONSTRUCTION JOINT
NOT TO SCALE

PLOTTED 2/10/2009

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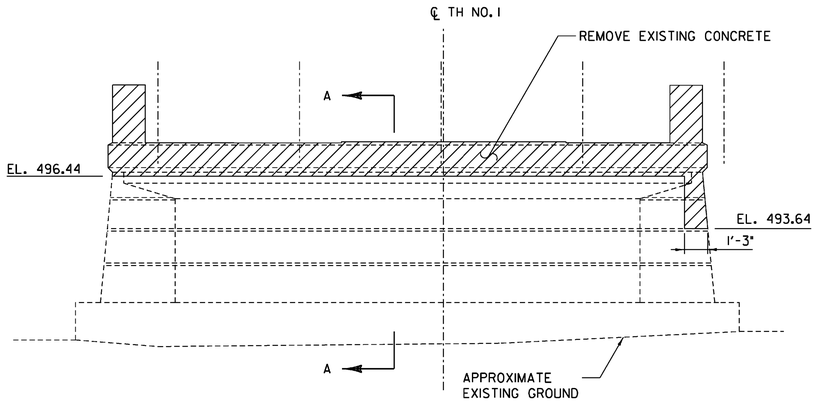
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 5
Highway No. I	Log Sta. / Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER
FOOTING AND WINGWALL DETAILS

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98J372fwd.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 39 of 68

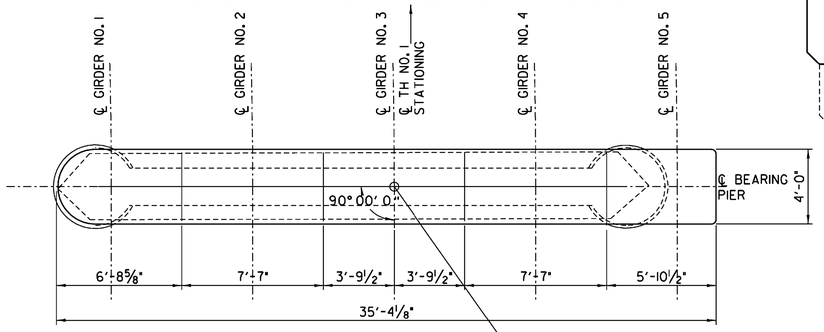
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ELEVATION – REMOVAL

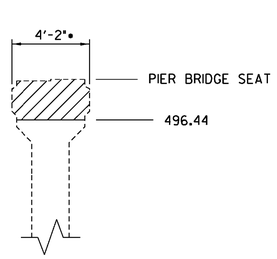
SCALE: 1/4" = 1'-0"

SAWCUT EXISTING CONCRETE 1" MINIMUM AT REMOVAL LIMITS
CONTRACTOR SHALL RETAIN EXISTING VERTICAL STEEL EXTENDING ABOVE CUT LINE



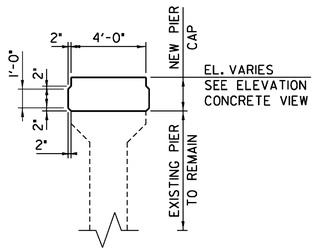
PLAN – CONCRETE

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



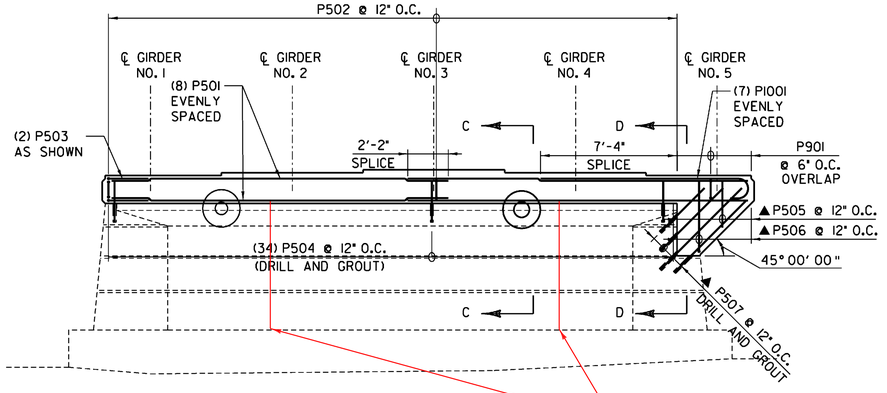
SECTION A – A

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



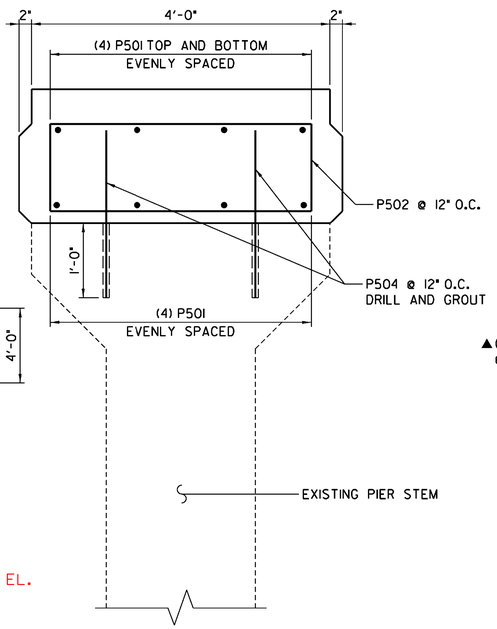
SECTION B – B

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



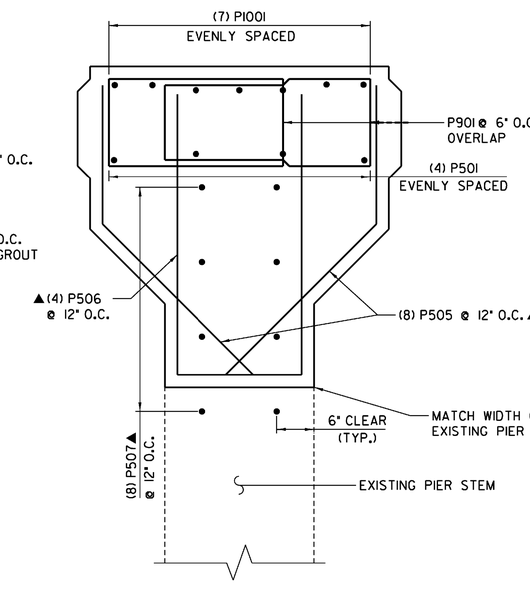
ELEVATION – REINFORCMENT

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



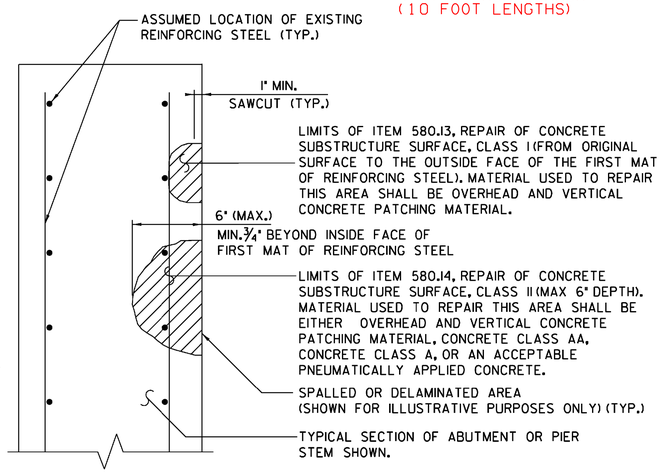
SECTION C – C

SCALE: 1" = 1'-0"



SECTION D – D

SCALE: 1" = 1'-0"

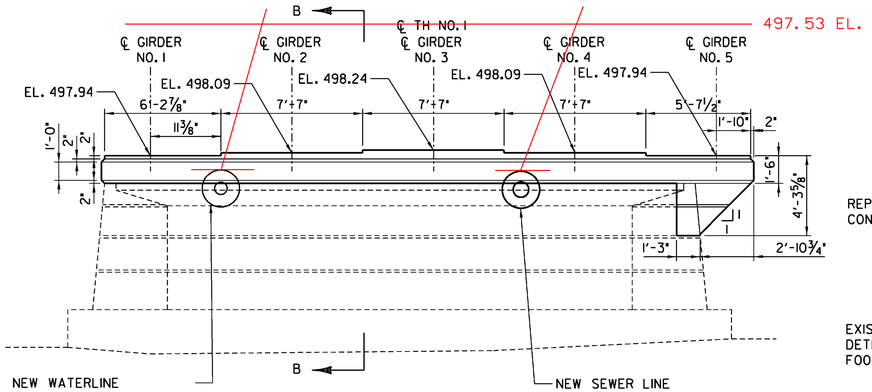


REPAIR OF CONCRETE SUBSTRUCTURE SURFACE CLASS I OR CLASS II

N.T.S.

DENOTES LIMITS OF REMOVAL

NOTE:
REMOVAL OF EXISTING CONCRETE TO A DEPTH GREATER THAN SPECIFIED FOR ITEM 580.14 SHALL BE PAID UNDER THE ITEM 580.15, REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS III.

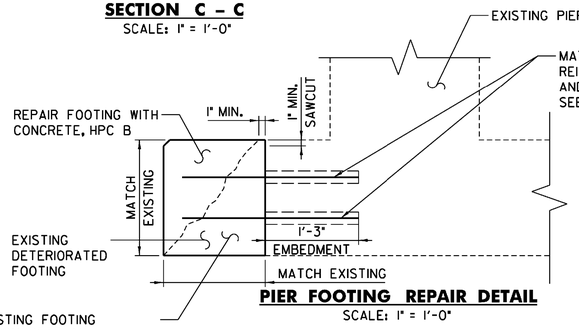


ELEVATION – CONCRETE

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

NEW WATERLINE
DETERMINE FINAL
LOCATION IN FIELD.
CONCRETE TO BE CORED.
PAYMENT UNDER 900.608,
"SPECIAL PROVISION
(CORING CONCRETE)"

NEW SEWER LINE
DETERMINE FINAL
LOCATION IN FIELD.
CONCRETE TO BE CORED
PAYMENT UNDER 900.608,
"SPECIAL PROVISION
(CORING CONCRETE)"



PIER FOOTING REPAIR DETAIL

SCALE: 1" = 1'-0"

REMOVE EXISTING FOOTING TO SOUND CONCRETE AS DETERMINED BY THE ENGINEER, PAYMENT INCIDENTAL TO 529.20, "PARTIAL REMOVAL OF STRUCTURE"

NOTE:
UPON REMOVING DAMAGE AND DETERIORATED CONCRETE, EXISTING REINFORCEMENT SHALL REMAIN. EXISTING REINFORCEMENT SHALL BE CLEANED AND INSPECTED. IF REINFORCEMENT IS DETERIORATED, NEW REINFORCEMENT MATCHING THE EXISTING SHALL BE DRILLED AND GROUTED AS DIRECTED BY THE ENGINEER.

NOTE:
CORING FOR THE PIPES THROUGH THE CONCETE PIER SHALL BE 4 INCHES GREATER DIAMETER THAN THE OUTSIDE OF THE PIPE JACKET. FOLLOWING THE CORING, A 1 INCH THICK LAYER OF MORTAR, TYPE IV SHALL BE PLACED TO SEAL THE EXPOSED REINFORCEMENT. THE MORTAR AND ITS PLACEMENT SHALL BE INCIDENTAL TO THE CORING ITEM. A 1 INCH CLEAR SPACE SHALL REMAIN BETWEEN THE PIPE JACKET AND THE MOTAR SURFACE.

PLOTTED 2/10/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

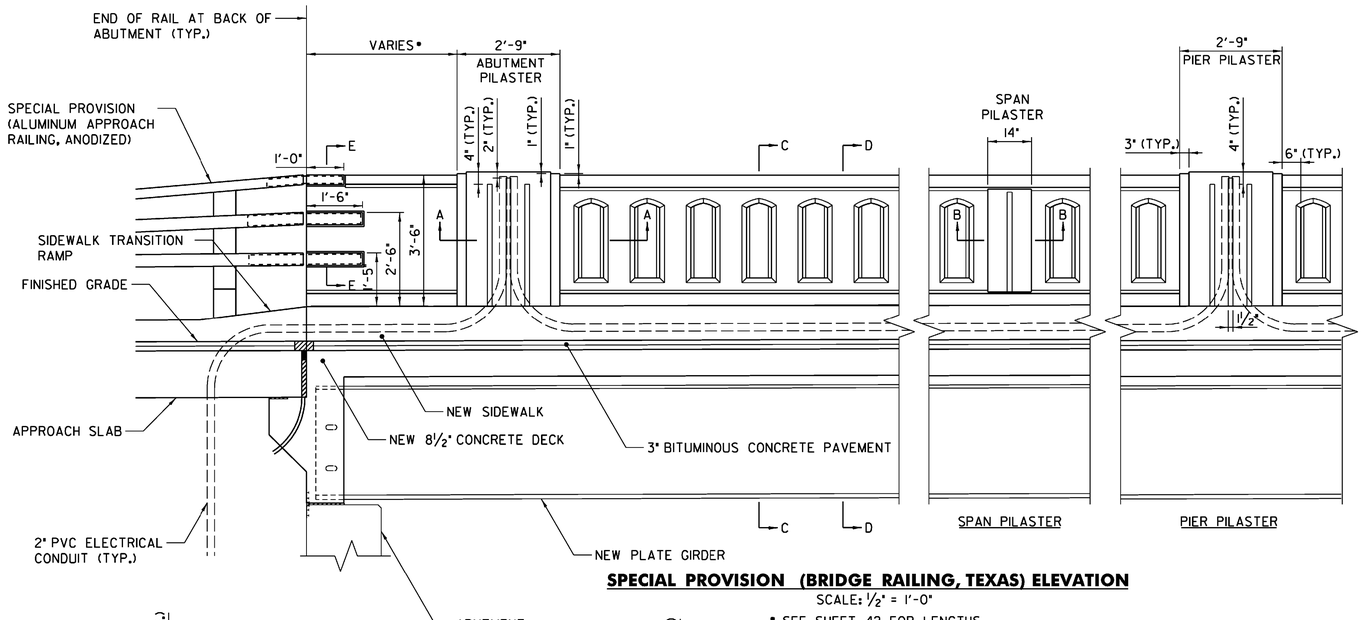
Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

PIER DETAILS

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date	Bridge Design Supervisor
J. W. TUCKER 2/09	J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.C.C. Info. z98J372pd.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 40 of 68

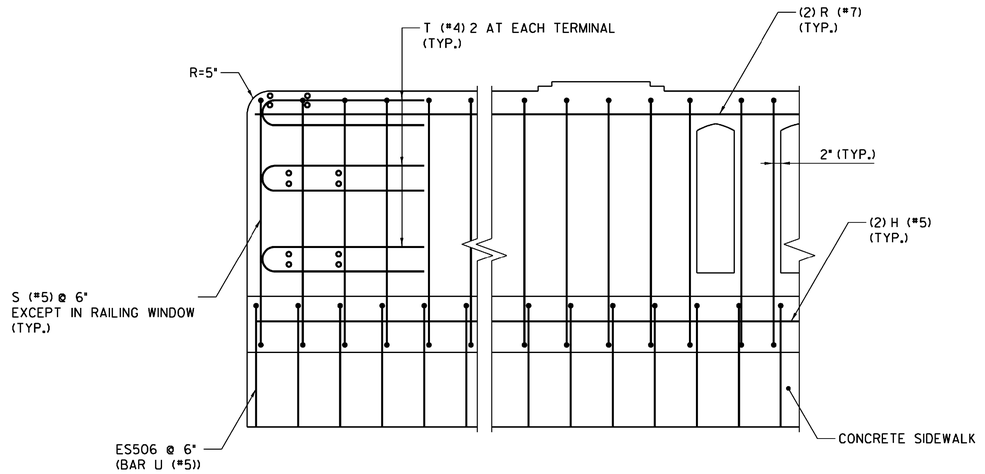
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SPECIAL PROVISION (BRIDGE RAILING, TEXAS) ELEVATION

SCALE: ½" = 1'-0"

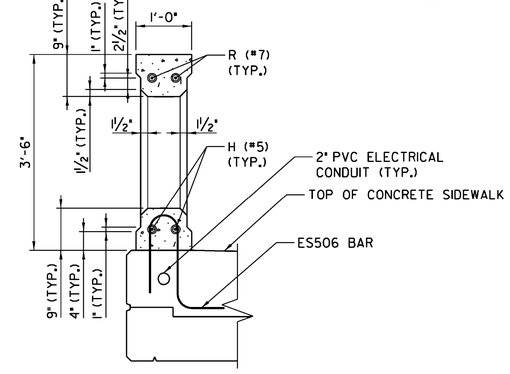
* SEE SHEET 42 FOR LENGTHS



TYPICAL REINFORCING PLACEMENT

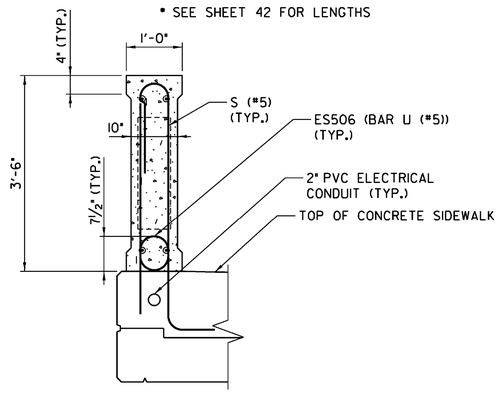
SCALE: 1" = 1'-0"

NOTE:
ADJUST REINFORCEMENT SPACING AT THE BRIDGE RAIL WINDOWS IN ORDER TO MEET THE REQUIRED COVER DIMENSION.



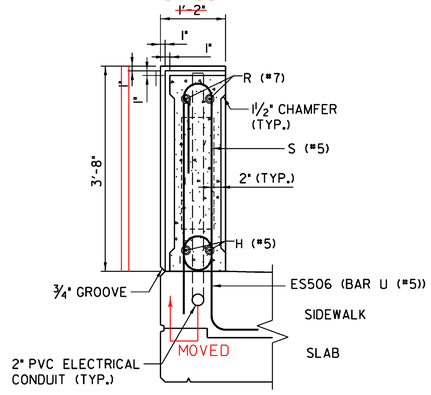
SECTION C–C

SCALE: ¾" = 1'-0"



SECTION D–D

SCALE: ¾" = 1'-0"

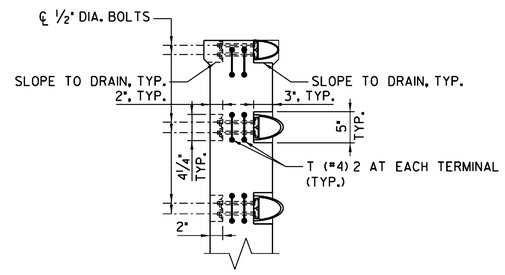


SECTION THRU POST ON BRIDGE SLAB

(SHOWING PILASTER)

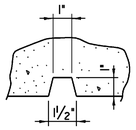
~~SCALE: ½" = 1'-0"~~

¾" = 1'-0"



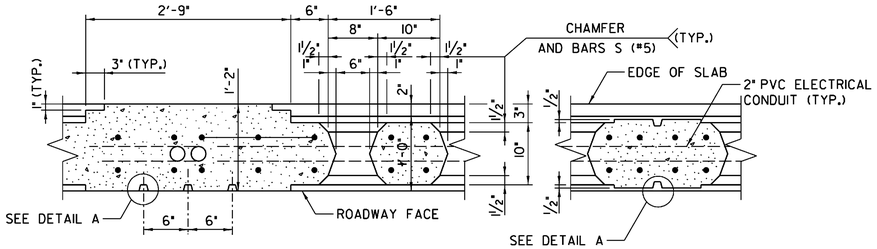
SECTION E–E

NOT TO SCALE



DETAIL A

SCALE: 3" = 1'-0"



SECTION A–A ABUTMENT / PIER PILASTER

SCALE: 1" = 1'-0"

SECTION B–B SPAN PILASTER

SCALE: 1" = 1'-0"

PLOTTED 2/10/2009

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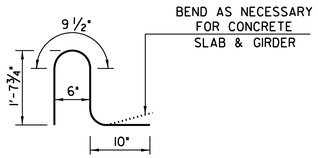
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 5
Highway No. I	Log Sta.
	Surv. Sta.

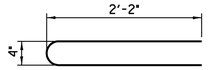
TH NO. 1 OVER THE GIHON RIVER

BRIDGE RAIL AND APPROACH RAIL DETAILS (1)

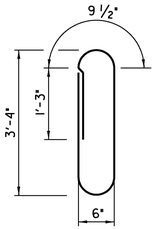
Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98J372rail.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 41 of 68



ES506
(BAR U (#5))



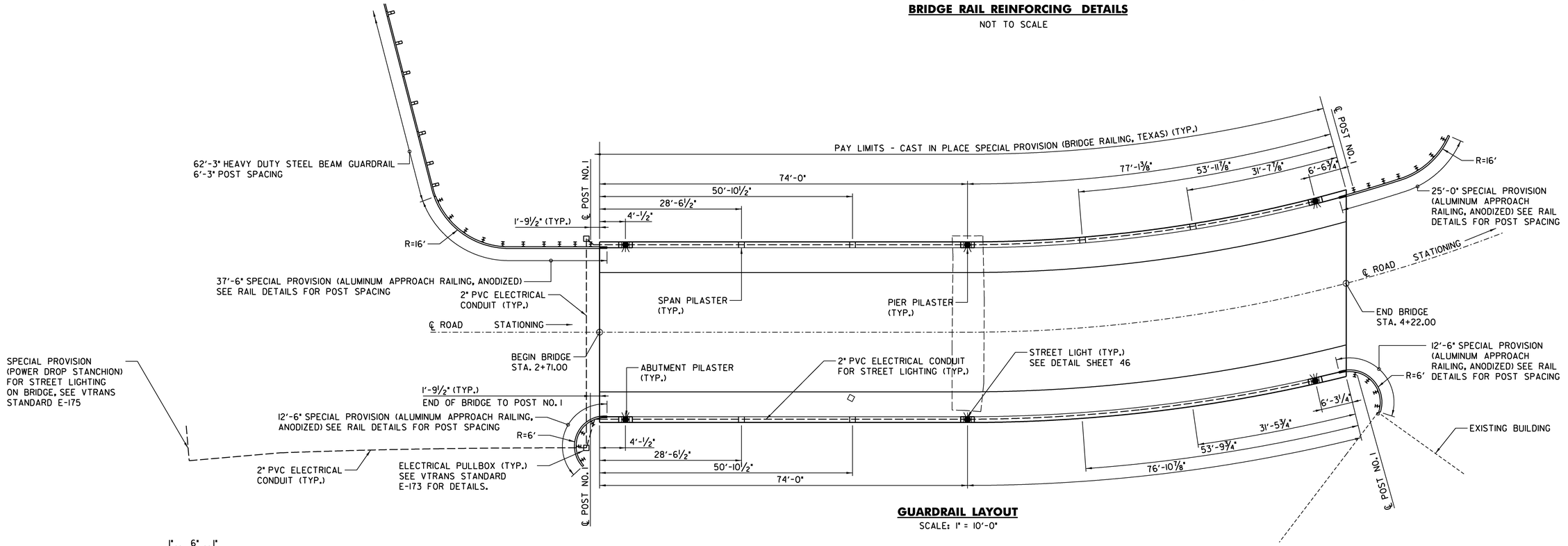
T (#4)
(2 AT EACH TERMINAL)



S (#5)

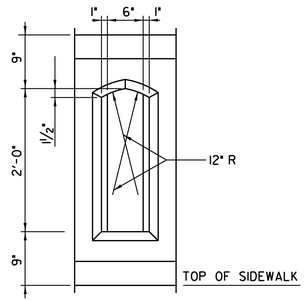
BRIDGE RAIL REINFORCING DETAILS

NOT TO SCALE



GUARDRAIL LAYOUT

SCALE: 1" = 10'-0"



BRIDGE RAILING WINDOW TYPE A

SCALE: 1" = 1'-0"

1. HOLES AND RECESSES MUST BE FORMED, PERCUSSION DRILLING IS NOT PERMITTED.
2. ALL CONCRETE FOR BRIDGE RAILING SHALL BE SELF-CONSOLIDATING CONCRETE.
3. ALL REINFORCING STEEL FOR THE CAST IN PLACE SPECIAL PROVISION (BRIDGE RAILING, TEXAS) SHALL BE EPOXY COATED. ALL REINFORCING STEEL FOR SPECIAL PROVISION (BRIDGE RAILING, TEXAS) EXCEPT FOR ES506 (U BAR) SHALL BE INCLUDED IN TEH UNIT PRICE FOR ITEM 900.640, "SPECIAL PROVISION (BRIDGE RAILING, TEXAS)".
4. VERTICAL CONSTRUCTION JOINTS IN THE BRIDGE RAIL SHALL MATCH THE LOCATION OF CONSTRUCTION JOINTS IN THE SIDEWALK.
5. ALL WORK ASSOCIATED WITH BRIDGE RAILING SHALL BE PAID FOR UNDER ITEM 900.640, "SPECIAL PROVISION (BRIDGE RAILING, TEXAS)".
6. LAP ALL REINFORCING SPLICES NOT DETAILED, AS INDICATED BELOW:
   #5 - 2'-2"
   #7 - 3'-0"

PLOTTED 2/18/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

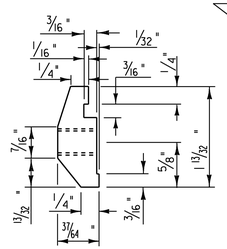
Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

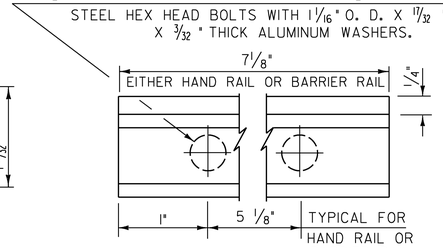
BRIDGE RAIL AND APPROACH RAIL DETAILS (2)

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372rail.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 42 of 68

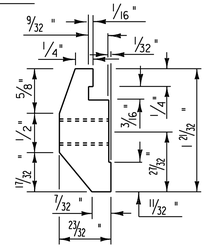
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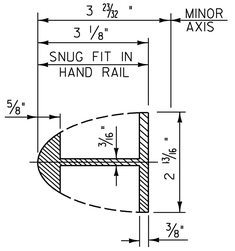
POST CONNECTION HAND RAIL SECTION



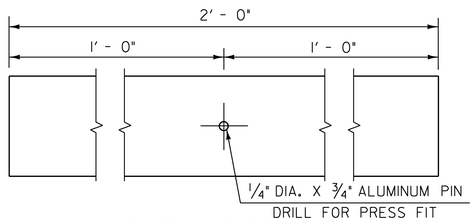
POST CONNECTION ELEVATION



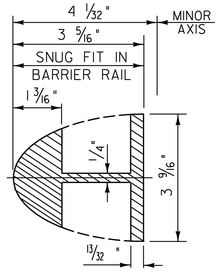
POST CONNECTION BARRIER RAIL SECTION



HAND RAIL SPLICE SECTION

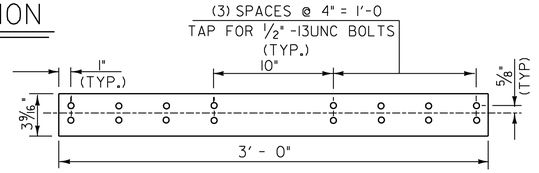


ELEVATION OF HAND RAIL SPLICE BAR



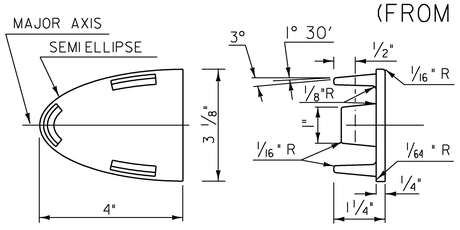
BARRIER RAIL SPLICE SECTION

(SEE SHEET 45 FOR ELEVATION OF BARRIER RAIL SPLICE BAR)

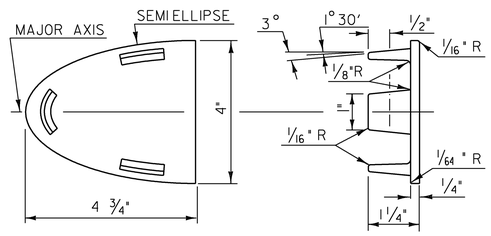


ELEVATION OF STD. BARRIER RAIL SPLICE BAR

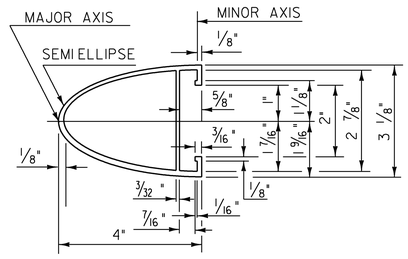
(FROM BACK)



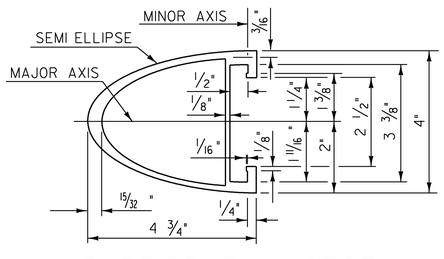
HAND RAIL END CAP



BARRIER RAIL END CAP

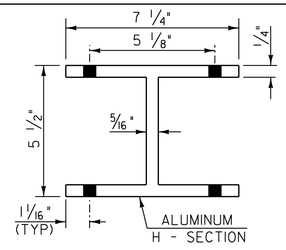


HAND RAIL SECTION



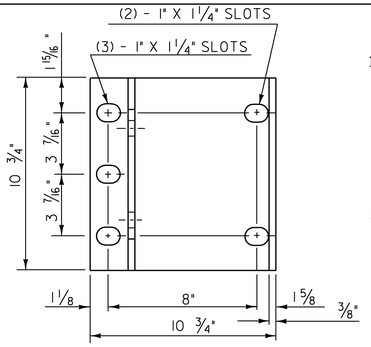
BARRIER RAIL SECTION

(SEE SHEET 45 FOR ELEVATION OF BARRIER RAIL)

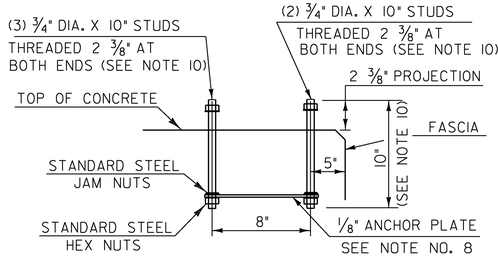


PLAN VIEW OF OFFSET BLOCK

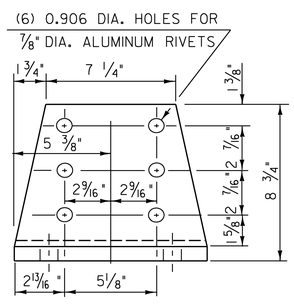
(TO BE USED ON SUPERSTRUCTURE ON CURB SIDE)



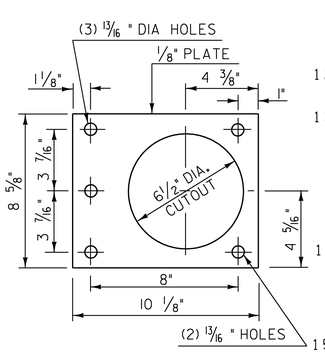
POST BASE PLAN



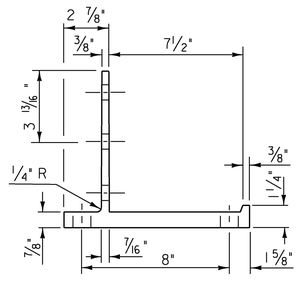
POST ANCHOR ASSEMBLY



POST BASE FRONT ELEVATION



ANCHOR PLATE



POST BASE SECTION

NOTES

1. ANCHOR BOLTS, WASHERS AND HEAVY HEX NUTS MAY BE ANY OF THE FOLLOWING:
   - A. ASTM A449 GALVANIZED, OR
   - B. AASHTO M164 (ASTM A325) GALVANIZED
   - C. BOLTS AND WASHERS OF STAINLESS STEEL ASTM A276, TYPE 304 (MINIMUM ULTIMATE STRENGTH OF 100,000 PSI) WITH STAINLESS STEEL NUTS OF ASTM A194, GRADE 8NA.
2. ALUMINUM POSTS, POST BASES, SPLICE BARS, CONNECTION BARS, RAILS AND BALUSTER FRAMES SHALL CONFORM TO ASTM B221 ALLOY 6061-T6 OR ALLOY 6351-T5. MINIMUM ALLOWABLE STRESS F_y = 35,000 PSI.
3. ALUMINUM BALUSTER TUBES SHALL CONFORM TO ASTM B210 ALLOY 6061-T5 OR 6063-T5.
4. ALUMINUM RAIL END CAPS SHALL CONFORM TO ASTM B26 ALLOY 356-T6.
5. THE POST, RAIL, AND OFFSET BLOCK CONNECTION BOLTS SHALL BE EITHER ASTM A193 OR ASTM A320. EITHER ONE SHALL BE CLASS 1, B8 GRADE AISI 304 WITH AN ULTIMATE TENSILE STRENGTH OF 75,000 PSI. NUTS FOR EITHER OF THE ABOVE BOLTS SHALL BE ASTM A194, GRADE 8, STAINLESS STEEL WITH AN ULTIMATE TENSILE STRENGTH OF 75,000 PSI.
6. SET SCREWS FOR ATTACHING BALUSTERS TO RAILING SHALL BE ASTM F880, TYPE 303 MATERIAL.
7. RIVETS SHALL BE COLD DRIVEN HIGH BUTTON HEAD "CONE POINT", CONFORMING TO ASTM B316 ALLOY 6061-T6.
8. THE ANCHOR PLATE FOR THE POST ANCHOR ASSEMBLY SHALL BE ASTM A36 STRUCTURAL STEEL.
9. WELDING SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 506.10 USING THE GMAW-INERT GAS PROCESS AND AWS ER 5356 ELECTRODE WIRE.
10. UNLESS OTHERWISE SPECIFIED, ANCHOR BOLTS SHALL BE CAST INTO THE CONCRETE AS DETAILED.
11. WHENEVER FEASIBLE BARRIER RAIL AND HAND RAIL SECTIONS, SHALL BE FULL LENGTH SECTIONS (40' ±) AND WHEN POSSIBLE SHALL BE ATTACHED TO THREE POSTS. RAILS SHALL BE SPLICED AT EACH DECK JOINT AND INTERMITTENTLY AS REQUIRED. SPLICES SHALL OCCUR WITHIN THE SAME PANEL.
12. ENDS OF RAILS SHALL BE CUT SQUARE AND GROUND FREE OF BURRS OR RAGGED EDGES. EXPOSED ENDS SHALL BE CAPPED.
13. THE CONCRETE CONTACT SURFACE AT THE POST BASE SHALL BE BUSH HAMMERED AND/OR SHIMMED AS REQUIRED FOR PROPER POST ALIGNMENT. POST HEIGHT ADJUSTMENTS LESS THAN 1/4" SHALL BE WITH 1/16" AND 1/8" SHIMS. CORRECTIONS EXCEEDING 1/4" SHALL BE WITH MORTAR, TYPE IV CONFORMING WITH SECTION 525. FABRIC BEARING PADS AND ANY REQUIRED SHIMS OR MORTAR, TYPE IV. ARE INCIDENTAL TO THE UNIT PRICE BID FOR THE RAILING.
14. SHIMS AND 1/8" FABRIC BEARING PADS SHALL BE 10 3/4" SQUARE WITH SLOTTED HOLES SIZED AND LOCATED THE SAME AS THE POST BASE DETAIL. FABRIC BEARING PADS SHALL CONFORM TO SUBSECTION 731.01 OR 731.02, SHIM MATERIAL SHALL BE ASTM B 209 ALLOY 1100-0.
15. EXTRUDED SECTIONS ARE DETAILED TO COMPLY WITH CURRENT AASHTO-AGC-ARTBA STANDARDS. MINOR VARIATIONS OF THE DETAILS SHOWN MAY BE CONSIDERED PROVIDING THEY DO NOT REDUCE THE STRENGTH CAPACITY OF THE RAIL SYSTEM.
16. ALUMINUM WASHERS SHALL BE ASTM B209 ALLOY ACLAD 2024-T4.

PLOTTED 2/10/2009

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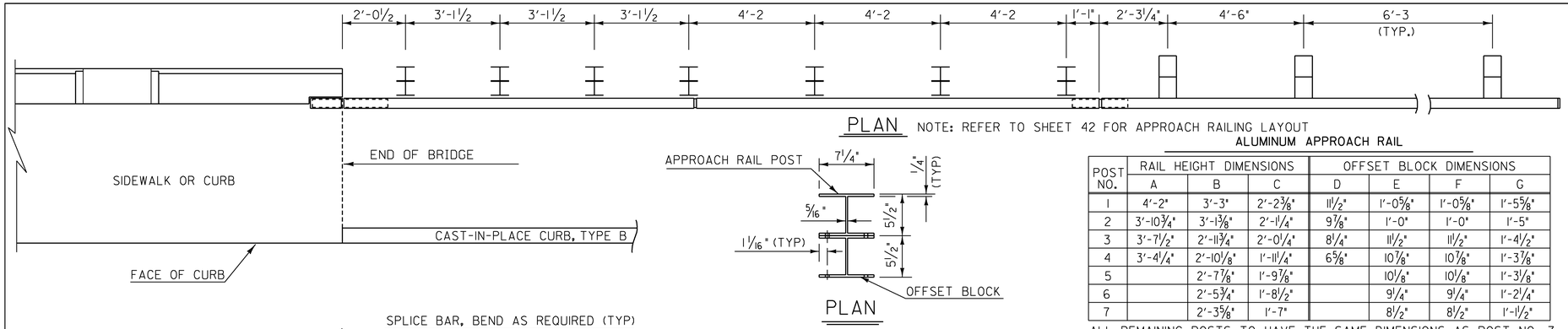
Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

ALUMINUM APPROACH RAILING DETAILS (1)

Designed By A. P. GUYETTE	Drawn By A.P. GUYETTE
Checked By E. P. DETRICK Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info.	
Bridge Sheet No.	Sheet 44 of 68

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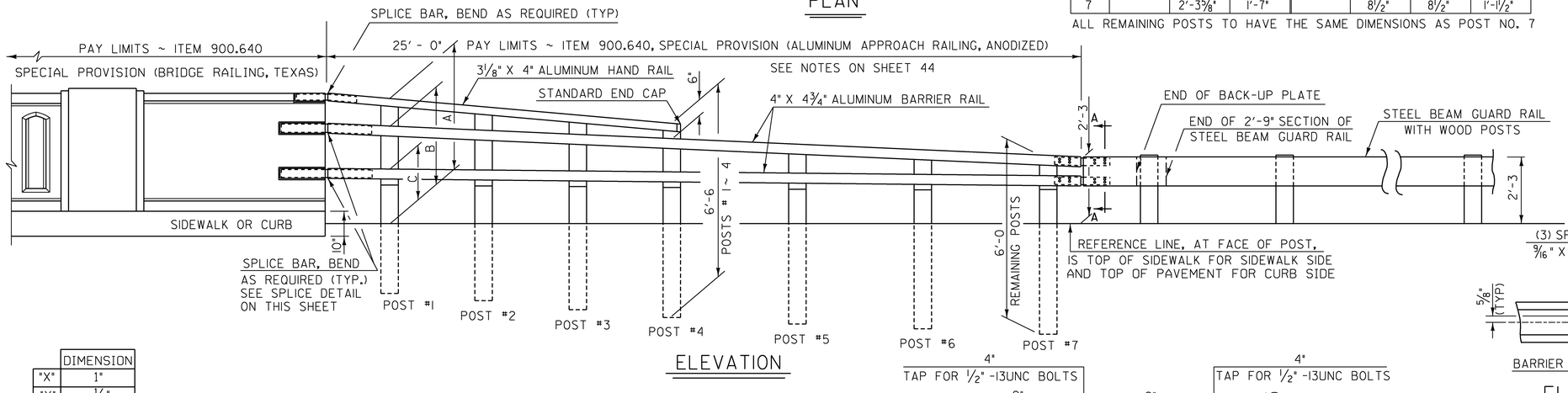
ALUMINUM APPROACH RAIL

POST NO.	RAIL HEIGHT DIMENSIONS			OFFSET BLOCK DIMENSIONS			
	A	B	C	D	E	F	G
1	4'-2"	3'-3"	2'-2⅜"	11½"	1'-0⅝"	1'-0⅝"	1'-5⅝"
2	3'-10¾"	3'-1⅜"	2'-1¼"	9⅞"	1'-0"	1'-0"	1'-5"
3	3'-7½"	2'-11¾"	2'-0¼"	8¼"	11½"	11½"	1'-4½"
4	3'-4¼"	2'-10⅛"	1'-11¼"	6⅝"	10⅞"	10⅞"	1'-3⅞"
5		2'-7⅞"	1'-9⅞"		10⅛"	10⅛"	1'-3⅛"
6		2'-5¾"	1'-8½"		9¼"	9¼"	1'-2¼"
7		2'-3⅝"	1'-7"		8½"	8½"	1'-1½"

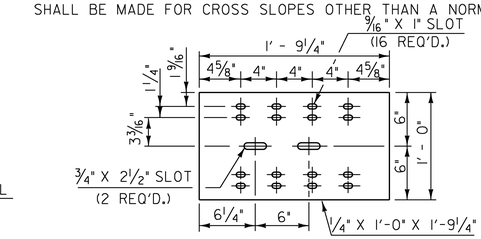
ALL REMAINING POSTS TO HAVE THE SAME DIMENSIONS AS POST NO. 7

NOTES

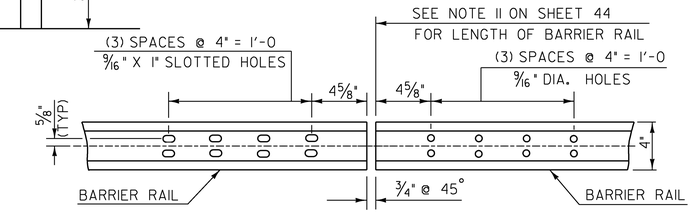
1. POST 1 THROUGH 7 SHALL BE EXTRUDED ALUMINUM.
2. ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 36 GALVANIZED AFTER FABRICATION.
3. ALL ITEMS NOT OTHERWISE INDICATED SHALL MEET THE SPECIFICATION REQUIREMENTS OF THE STANDARD SHEETS ON WHICH THEY ARE DETAILED.
4. SEE STANDARD G-1 FOR STEEL BEAM GUARD RAIL DETAILS. SEE SHEET 44 FOR ADDITIONAL ALUMINUM APPROACH RAILING DETAILS.
5. THE COST OF ALL MATERIALS AND LABOR FOR THE SPLICE BETWEEN THE ALUMINUM APPROACH RAILING AND THE STEEL BEAM GUARD RAIL SHALL BE INCIDENTAL TO ITEM 900.640, "SPECIAL PROVISION (ALUMINUM APPROACH RAILING, ANODIZED").
6. DETAILS ARE SHOWN FOR TRANSITION TO A 3 RAIL ALUMINUM BRIDGE RAILING.
7. DIMENSIONS SHOWN ARE FROM A REFERENCE LINE AT THE FACE OF POST FOR A NORMAL CROWNED SECTION. APPROPRIATE CORRECTIONS SHALL BE MADE FOR CROSS SLOPES OTHER THAN A NORMAL SECTION.



ELEVATION

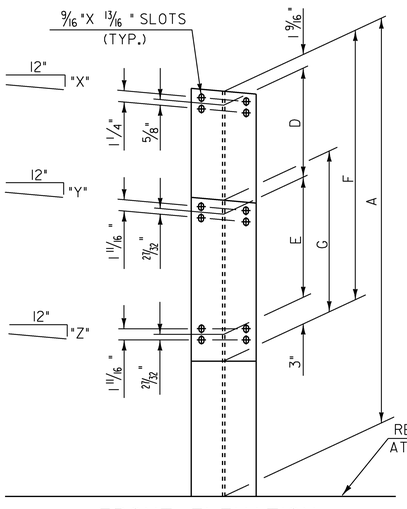


BACK-UP PLATE DETAILS

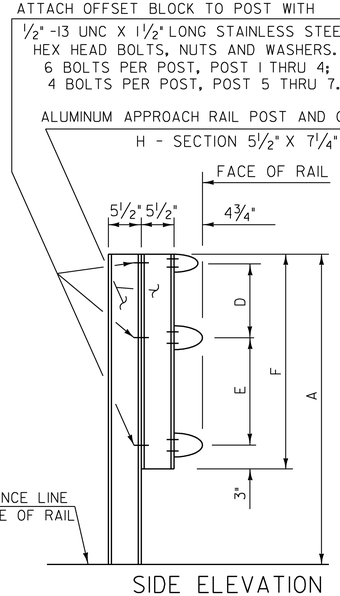


ELEVATION OF BARRIER RAIL (FROM BACK) AT ALL INTERMEDIATE RAIL SPLICES

	DIMENSION
"X"	1"
"Y"	½"
"Z"	⅞"

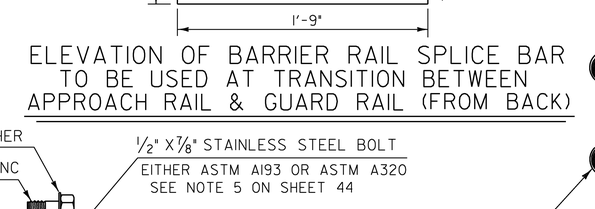


FRONT ELEVATION

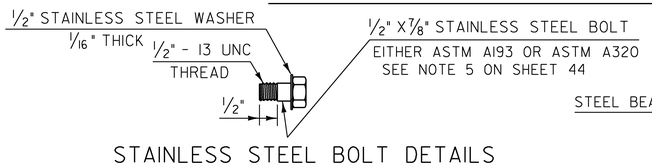


SIDE ELEVATION

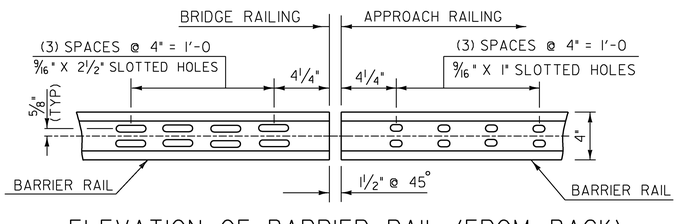
APPROACH RAIL DETAILS



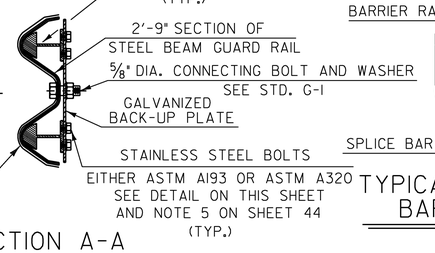
ELEVATION OF BARRIER RAIL SPLICE BAR TO BE USED AT TRANSITION BETWEEN APPROACH RAIL & GUARD RAIL (FROM BACK)



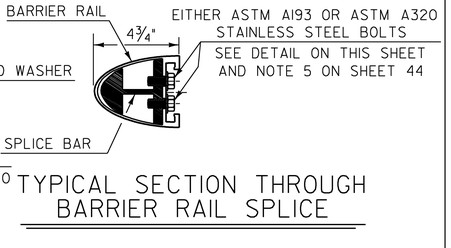
STAINLESS STEEL BOLT DETAILS



ELEVATION OF BARRIER RAIL (FROM BACK)



SECTION A-A



TYPICAL SECTION THROUGH BARRIER RAIL SPLICE

PLOTTED 2/18/2009

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STATE OF VERMONT
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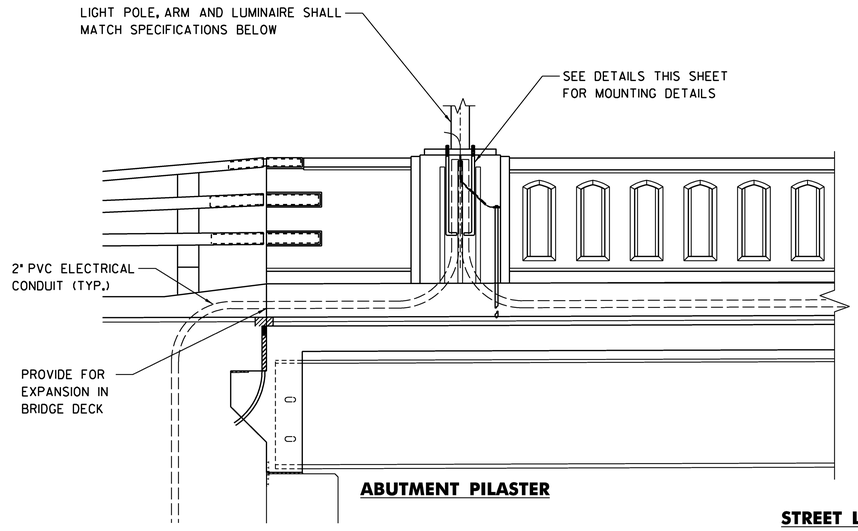
Town Of JOHNSON	Bridge No. 5
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TH NO. 1 OVER THE GIHON RIVER

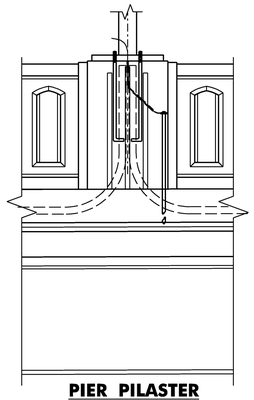
ALUMINUM APPROACH RAILING DETAILS (2)

Designed By A. P. GUYETTE	Drawn By A.P. GUYETTE
Checked By E. P. DETRICK Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info.	
Bridge Sheet No.	Sheet 45 of 68

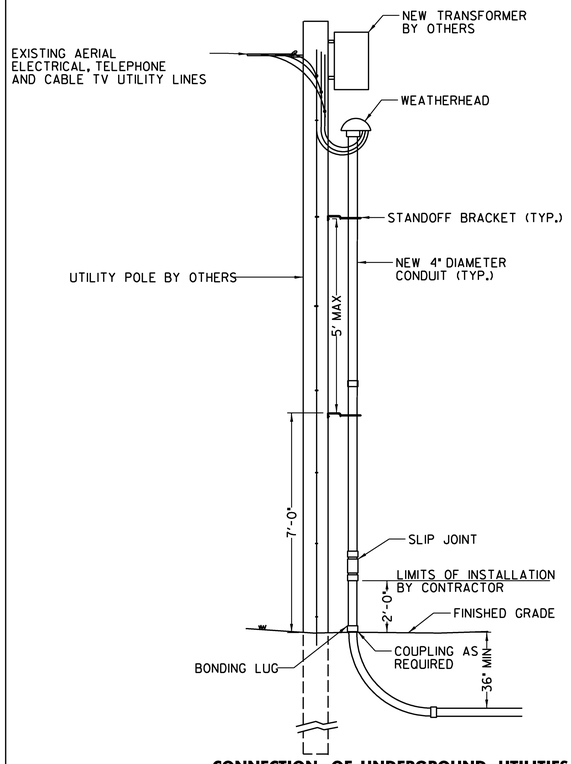
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ABUTMENT PILASTER



PIER PILASTER



CONNECTION OF UNDERGROUND UTILITIES

NOT TO SCALE

CONNECTION OF UNDERGROUND UTILITIES NOTES:

1. CONTRACTOR SHALL SUPPLY ALL CONDUIT NECESSARY TO INSTALL UNDERGROUND UTILITIES AS SHOWN IN THE PLANS. THIS SHALL INCLUDE ALL CONDUIT, WEATHERHEAD, STANDOFF BRACKETS, SLIP JOINTS AND COUPLINGS. THIS WORK SHALL BE PAID FOR INCIDENTAL TO ITEM 678.21, "ELECTRICAL CONDUIT (2" DIA.)".
2. THE LIMITS OF INSTALLATION BY THE CONTRACTOR SHALL EXTEND TO THE LOCATION OF THE SLIP JOINT AT 2'-0" ABOVE GRADE. INSTALLATION ABOVE THE SLIP JOINT SHALL BE COMPLETED BY THE UTILITY COMPANY.

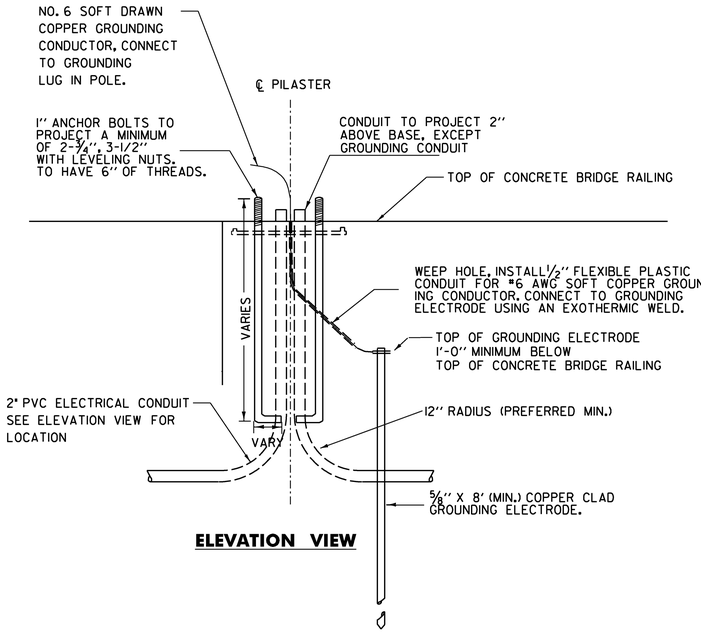
STREET LIGHT LOCATIONS

SCALE: ½" = 1'-0"

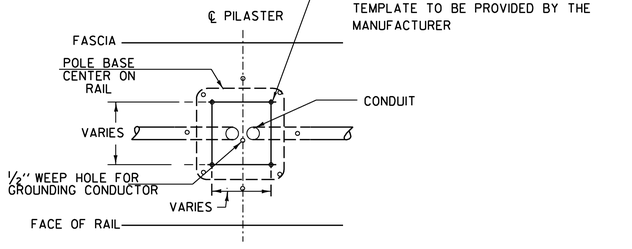
STREET LIGHT NOTES:

1. THE SCOPE OF WORK IS TO PROVIDE ALL LABOR, MATERIALS, SERVICES, SUPPLIES, TOOLS, EQUIPMENT, TRANSPORTATION, AND FACILITIES NECESSARY TO FURNISH AND INSTALL COMPLETE ELECTRICAL WORK AS CALLED FOR ON THE DRAWINGS, SPECIFIED, OR AS MAY REASONABLY BE IMPLIED AS BEING INCIDENTAL TO THIS WORK.
2. ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, AND ALL CODES, REGULATIONS AND REQUIREMENTS OF ALL MUNICIPAL, STATE, FEDERAL, UTILITY, AND OTHER PUBLIC OR PRIVATE AUTHORITIES WHICH HAVE JURISDICTION. IN EACH CASE, CODES ARE MINIMUM REQUIREMENTS.
3. FABRICATION DRAWINGS: SUBMIT COMPLETE CATALOG INFORMATION FOR ALL MATERIALS AND EQUIPMENT TO BE PURCHASED AND USED ON THIS PROJECT, AS SPECIFIED ON THE DRAWINGS AND AS REQUIRED BY SUBSECTION 679.02. DO NOT INSTALL MATERIALS OR EQUIPMENT WITHOUT APPROVAL BY THE ENGINEER. UNAPPROVED MATERIAL ALREADY INSTALLED SHALL BE SUBJECT TO REMOVAL AND REPLACEMENT WITH APPROVED MATERIALS AT THE CONTRACTOR'S EXPENSE.
4. MATERIALS AND EQUIPMENT SHALL BE LISTED BY UNDERWRITERS' LABORATORIES AND SHALL BE INSTALLED IN ACCORDANCE WITH SUCH LISTINGS.
5. INSTALLATION SHALL BE MADE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
6. CONTRACTOR TO CONTACT VILLAGE OF JOHNSON ELECTRIC DEPARTMENT FOR COORDINATION OF NEW ELECTRICAL SERVICE.
7. METER/DISCONNECT STANCHIONS SHALL INCLUDE MAIN SERVICE DISCONNECT (2 POLE, 80A, 240V, 1 PHASE) AND (6) SIX BRANCH CIRCUIT BREAKERS (1 POLE, 20A, 120V). ALL SERVICE ENTRANCE EQUIPMENT SHALL BE RATED 22 KAIC (MIN.).
8. MAXIMUM OF 270 DEGREES IN TOTAL BEND SHALL BE PERMITTED IN SINGLE RUN OF CONDUIT.
9. LIGHTS SHALL BE FUSED AT BASE WITH Y-TYPE FUSE KIT (EQUIVALENT OF HOMAC/FLOOD SEAL: FYC-6 AND 10 AMP FUSE.
10. UTILIZE DUAL-RATED PARALLEL TAP CONNECTORS AT POLE BASE EQUIVALENT TO ILSCO GTA SERIES WITH INSULATED COVERS.
11. THE LIGHTING SHALL BE FROM KING LUMINAIRE AND SHALL BE AS FOLLOWS:

POLE:	KMI9FE-14' "THE CLEVELAND POLE" PAINT: FEDERAL GREEN
ARM:	KA30-T-1-4' SCROLL ARM W/ DECORATIVE SCROLL PAINT: FEDERAL GREEN
LEVELING DEVICE:	KPL-20 PLUMBIZER PAINT: FEDERAL GREEN
LUMINAIRE:	K2II-EGS-III-100(MED)-MH-120(MT)-KPL20 PAINT: FEDERAL GREEN



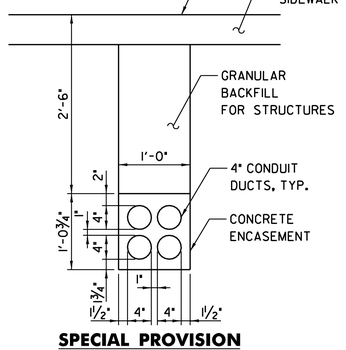
ELEVATION VIEW



PLAN VIEW

STREET LIGHT MOUNTING DETAILS

NOT TO SCALE



SPECIAL PROVISION
(UTILITY DUCT BANK)(4 CONDUIT)
TRENCH DETAIL

SCALE: 1" = 1'-0"

STA. 1+25.00 TO STA. 2+71.00
STA. 4+18.50 TO STA. 5+47.84

PLOTTED 2/10/2009

DuBois & King inc.
engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER
STREET LIGHT AND UTILITY DETAILS

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98J372light.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 46 of 68

I:\R16214\dgn\z98j372light.dgn 2/10/2009 9:35:18 AM

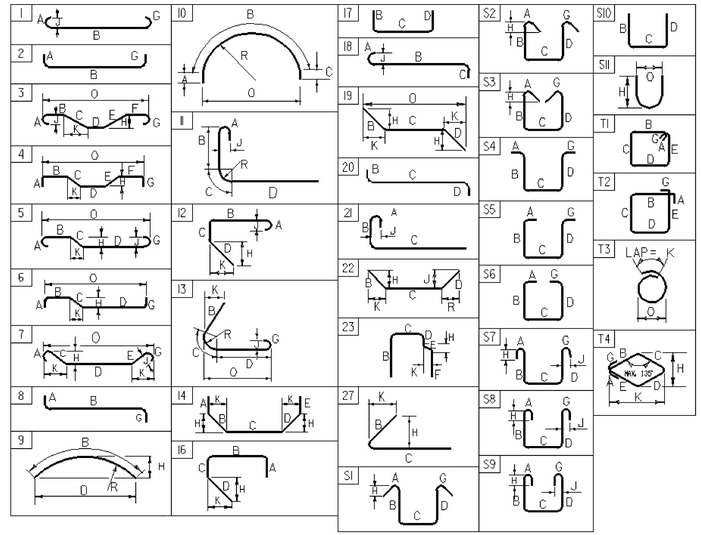
STATE OF VERMONT
AGENCY OF TRANSPORTATION

REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	SUPERSTRUCTURE																
	316	5	35'- 10"	ES501	STR												
✳	651	5	31'- 11"	ES502	STR												
	84	5	22'- 1"	ES504	STR												
✳ ▲	25	5	4'- 6"	ES509	STR												
	302	5	37'- 0"	ES503	1	0'- 7"	35'- 10"					0'- 7"					
	304	5	10'- 1"	ES505	S6	0'- 10"	1'- 4"	5'- 8"	1'- 5"			0'- 10"					
	604	5	4'- 4"	ES506	S7	1'- 10"	1'- 8"	0'- 10"	---			---	1'- 6"	0'- 6"			
	60	5	12'- 2"	ES507	S5	2'- 2"	3'- 9"	0'- 7"	3'- 6"			2'- 2"					
	74	5	4'- 4"	ES508	16	---	1'- 6"	0'- 8"	2'- 2"				1'- 6"		1'- 6"		
✳	39	8	3'- 2"	ES801	16	---	---	1'- 9"	1'- 5"				1'- 0"		1'- 0"		
	APPROACH SLAB NO. 1																
✳	22	5	23'- 6"	1EAS501	STR												
✳	31	9	20'- 7"	1EAS901	1	1'- 3"	19'- 4"					---					
	APPROACH SLAB NO. 2																
✳	22	5	23'- 6"	2EAS501	STR												
✳	31	9	20'- 7"	2EAS901	1	1'- 3"	19'- 4"					---					
	ABUTMENT NO. 1																
	16	5	20'- 9"	1A501	STR												
✳	11	5	8'- 10"	1A503	STR												
✳	41	5	5'- 0"	1A502	17		1'- 0"	4'- 0"	---								
	ABUTMENT NO. 2																
✳	89	5	12'- 6"	2A501	STR												
	60	5	23'- 6"	2A502	STR												
▲	58	5	5'- 10"	2A503	17		2'- 2"	1'- 6"	2'- 2"								
✳ ▲	58	5	9'- 4"	2A504	22		4'- 8"	4'- 8"	---				2'- 11"	---	3'- 7"	---	
▲	38	5	8'- 10"	2A505	17		4'- 10"	4'- 0"	---								
▲	19	5	8'- 0"	2A506	17		4'- 0"	4'- 0"	---								
	19	5	5'- 10"	2A507	17		2'- 2"	1'- 6"	2'- 2"								
	16	5	5'- 9"	2A508	27		1'- 6"	4'- 3"					1'- 4"		0'- 9"		
	WINGWALL NO. 1																
✳ ▲	5	5	15'- 6"	1W501	STR												
	34	5	2'- 9"	1W502	17		0'- 9"	2'- 0"	---								
✳	5	5	4'- 4"	1W503	17		2'- 2"	2'- 2"	---								
	3	5	3'- 0"	1W504	27		1'- 0"	2'- 0"					0'- 10"		0'- 6"		
	WINGWALL NO. 2																
✳ ▲	5	5	15'- 4"	2W501	STR												
	34	5	2'- 9"	2W502	17		0'- 9"	2'- 0"	---				0'- 3"				
✳	5	5	4'- 4"	2W503	17		2'- 2"	2'- 2"	---								
	3	5	3'- 0"	2W504	27		1'- 0"	2'- 0"					0'- 10"		0'- 6"		
	WINGWALL NO. 3																
✳ ▲	39	5	17'- 0"	3W501	STR												
▲	36	5	17'- 0"	3W502	STR												
✳	3	5	18'- 8"	3W504	STR												
	19	5	5'- 10"	3W503	17		2'- 2"	1'- 6"	2'- 2"								
	WINGWALL NO. 4																
✳ ▲	17	5	17'- 0"	4W501	STR												
✳ ▲	37	5	6'- 2"	4W502	STR												
	8	5	5'- 10"	4W503	17		2'- 2"	1'- 6"	2'- 2"								
	FOOTING NO. 2																
▲	44	5	26'- 2"	2F501	STR												
✳	23	5	15'- 2"	2F502	STR												
✳ ▲	173	7	10'- 0"	2F701	STR												
✳	117	7	5'- 9"	2F702	STR												
	20	8	4'- 0"	2F801	STR												
✳	67	5	5'- 5"	2F503	17		1'- 0"	4'- 5"									
✳ ▲	141	8	12'- 6"	2F802	17		1'- 0"	11'- 6"									
	PIER																
	16	5	18'- 6"	P501	STR												
	64	5	2'- 6"	P504	STR												
✳ ▲	9	5	6'- 2"	P507	STR												
	36	5	11'- 0"	P502	T1	1'- 0"	3'- 6"	1'- 0"	3'- 6"	1'- 0"		1'- 0"					
	2	5	7'- 10"	P503	17		2'- 2"	3'- 6"	2'- 2"								
▲	10	5	3'- 10"	P505	22		2'- 10"	1'- 0"	---				2'- 0"	---	2'- 0"	---	
✳ ▲	6	5	9'- 6"	P506	S10		4'- 0"	1'- 6"	4'- 0"								
✳	21	9	9'- 6"	P901	T1	1'- 0"	2'- 9"	1'- 0"	2'- 9"	1'- 0"		1'- 0"					
✳	8	10	12'- 8"	P1001	1	1'- 5"	11'- 3"										

~ 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 BAR MARK PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS

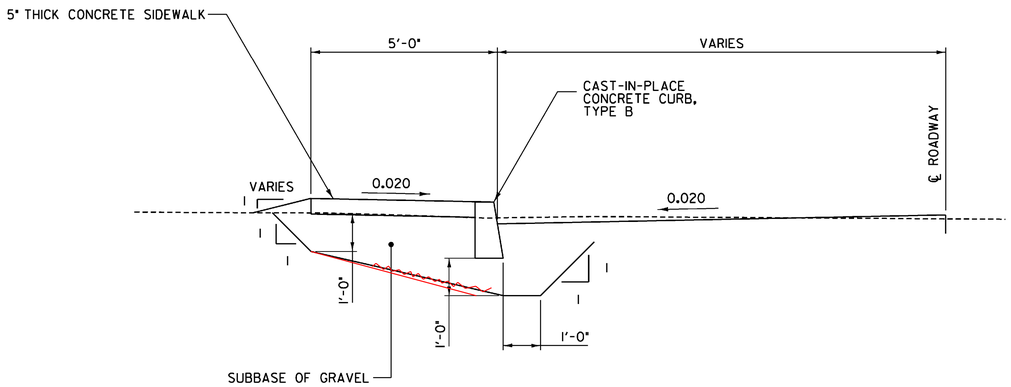
BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION		
		DIAMETER INCHES	AREA INCHES ^{2}	PERIMETER INCHES
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.044	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.142
#9	3.400	1.128	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(29)**

FILE NAME: **z98j372rss.xls**
PROJECT MANAGER: **J. W. TUCKER**
DESIGNED BY: **A. P. GUYETTE**
REINFORCING STEEL SCHEDULE

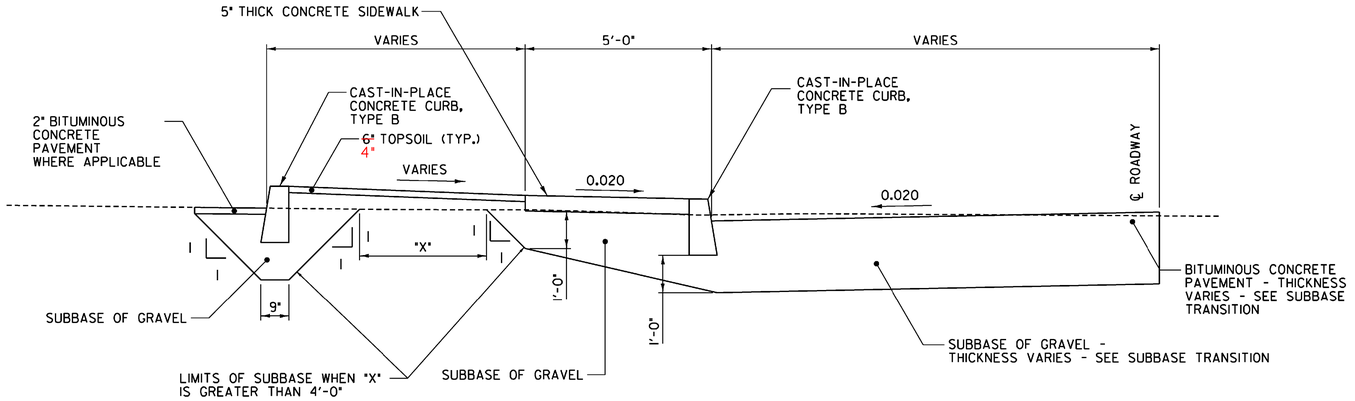
PLOT DATE: **2/10/2009**
DRAWN BY: **A. P. GUYETTE**
CHECKED BY: **J. W. TUCKER**
SHEET **47** OF **68**

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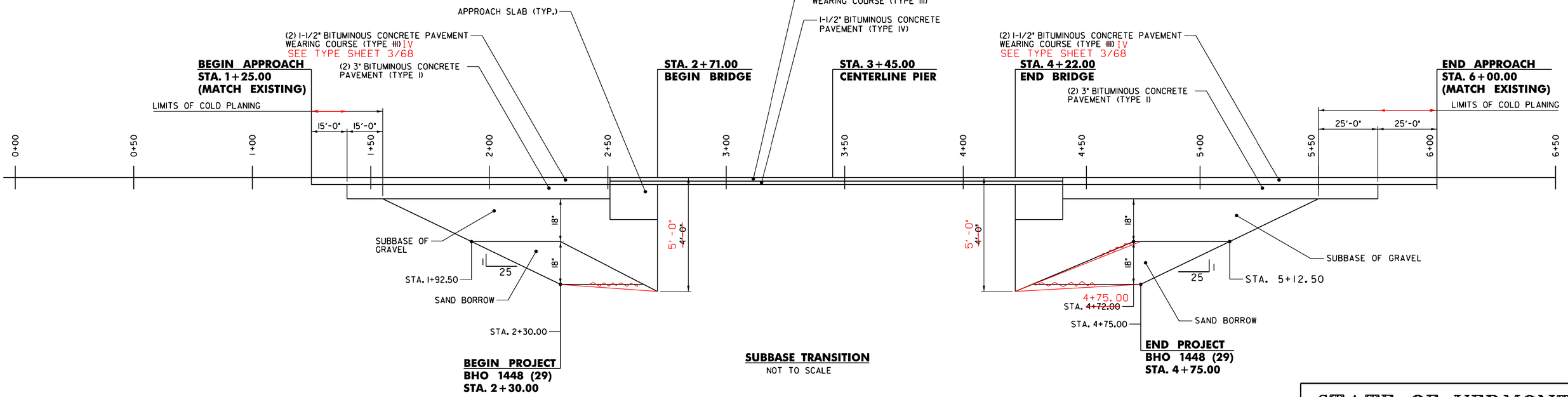
TYPICAL CURB SECTION W/OUT SUBBASE UNDER ROADWAY

SCALE: 1/2" = 1'



TYPICAL CURB SECTION W/ TREE LAWN

SCALE: 1/2" = 1'



SUBBASE TRANSITION

NOT TO SCALE

DATUM
VERTICAL NAVD 88
HORIZONTAL ASSUMED

PLOTTED 2/10/2009

DuBois & King inc.
engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

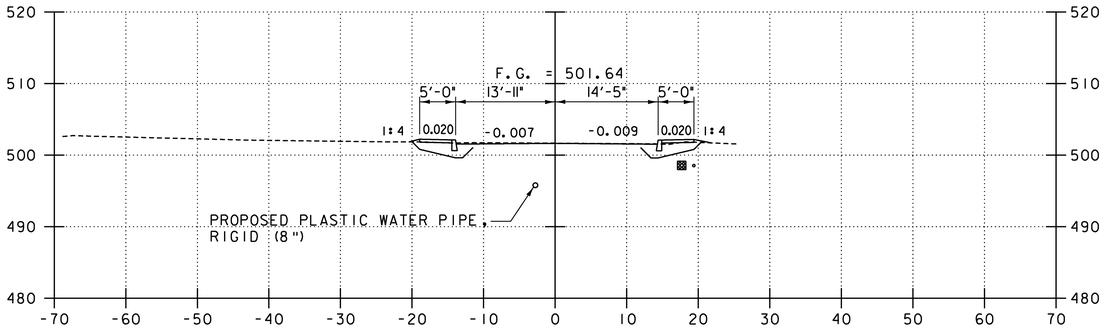
Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

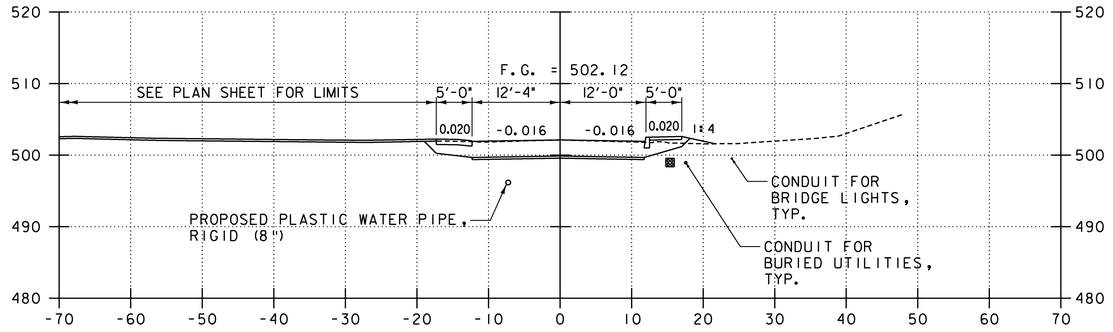
SUBBASE TRANSITION AND TYP. CURB SECTION

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.C.C. Info. z98j372xs.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 48 of 68

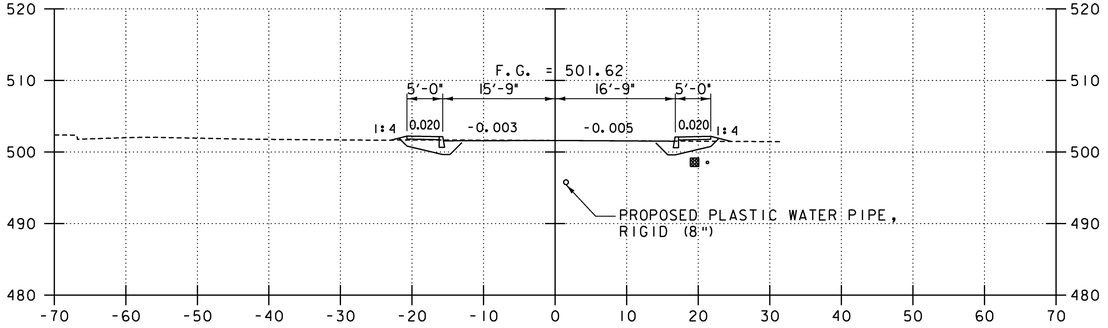
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1+50

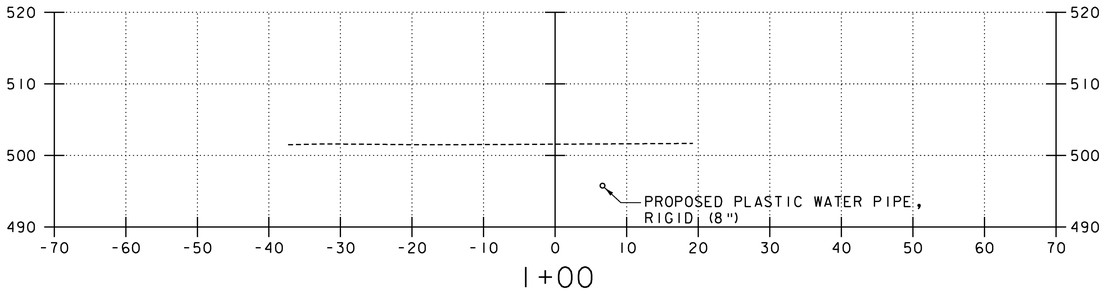


2+00

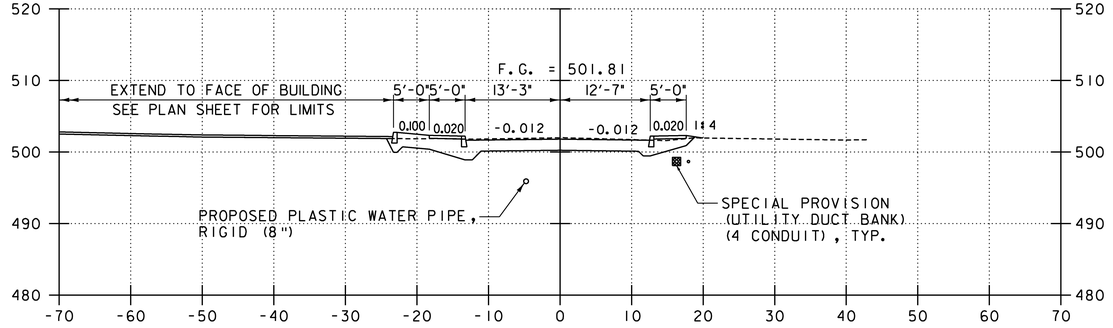


1+25

BEGIN APPROACH
STA. 1+25.00
MATCH EXISTING



1+00



1+75

DATUM
VERTICAL NAVD 88
HORIZONTAL ASSUMED

SCALE 1" = 10'-0
10 0 10

PLOTTED 2/11/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

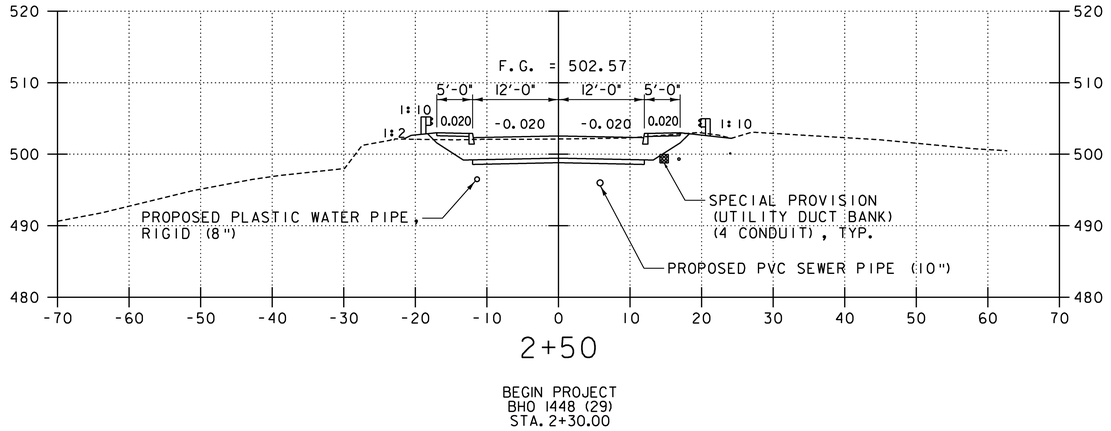
Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

ROADWAY CROSS SECTIONS (1)

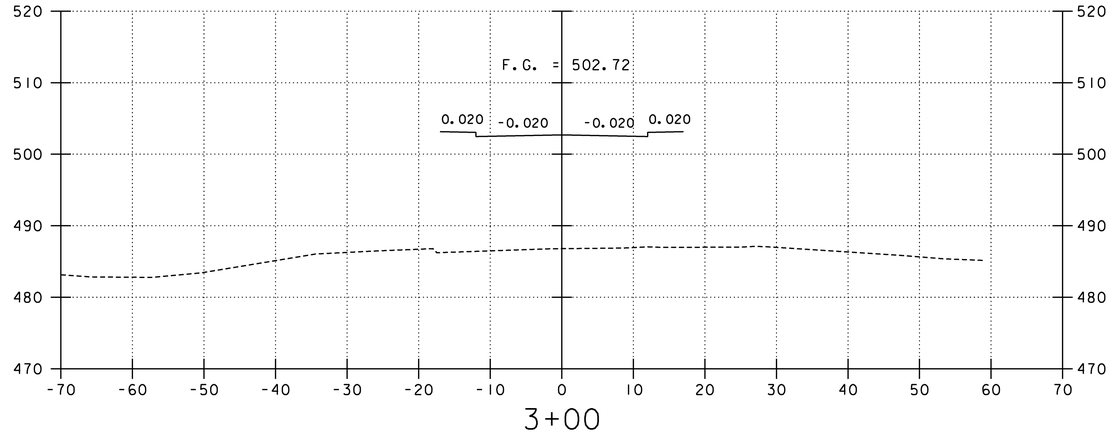
Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98J372xs.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 49 of 68

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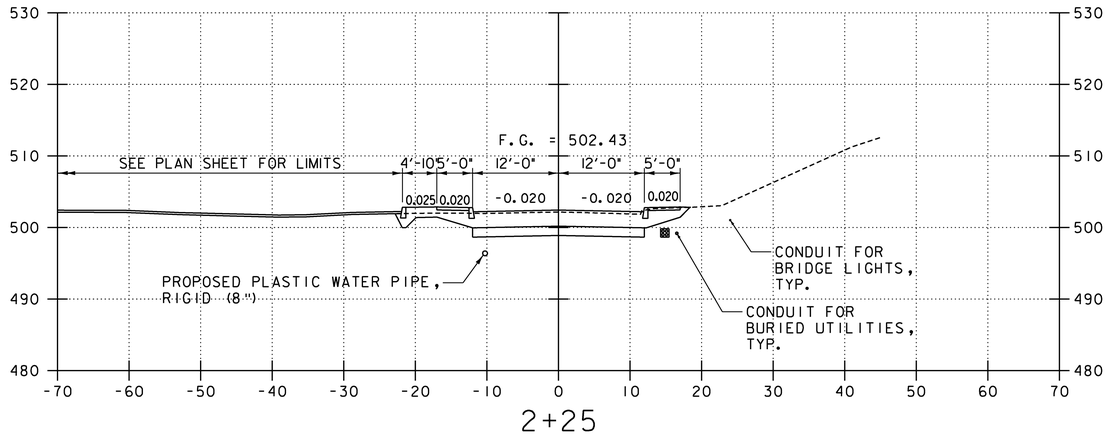


2+50

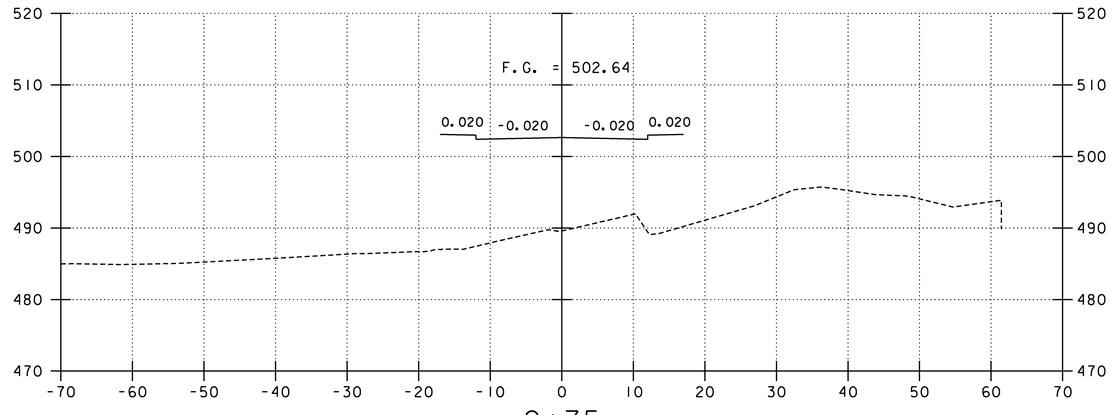
BEGIN PROJECT
BHO 1448 (29)
STA. 2+30.00



3+00



2+25



2+75

BEGIN BRIDGE
STA. 2+71.00

DATUM
VERTICAL NAVD 88
HORIZONTAL ASSUMED

SCALE 1" = 10'-0
10 0 10

PLOTTED 2/11/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

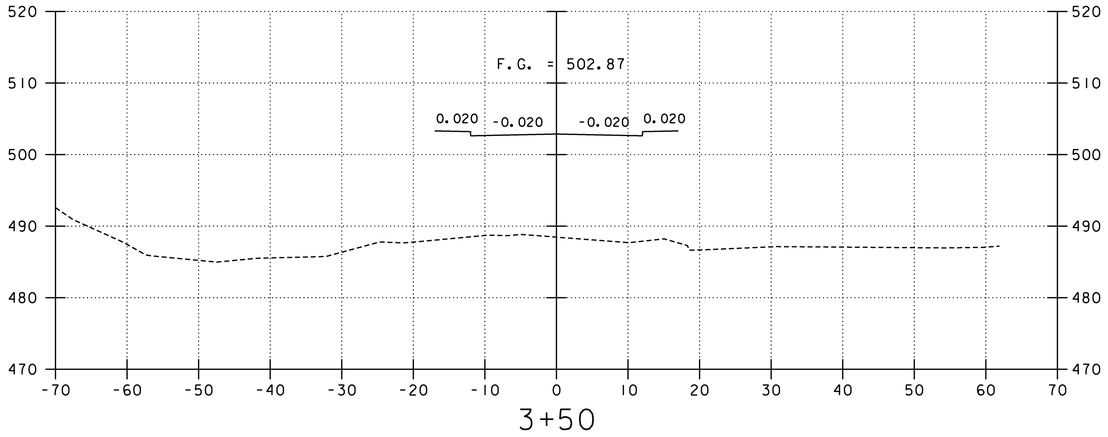
Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

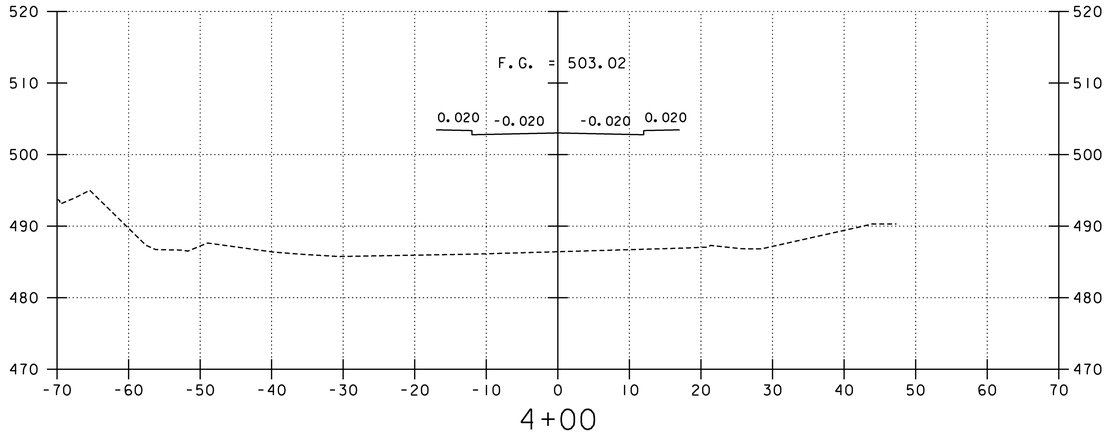
ROADWAY CROSS SECTIONS (2)

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date	Bridge Design Supervisor
J. W. TUCKER 2/09	J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372xs.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 50 of 68

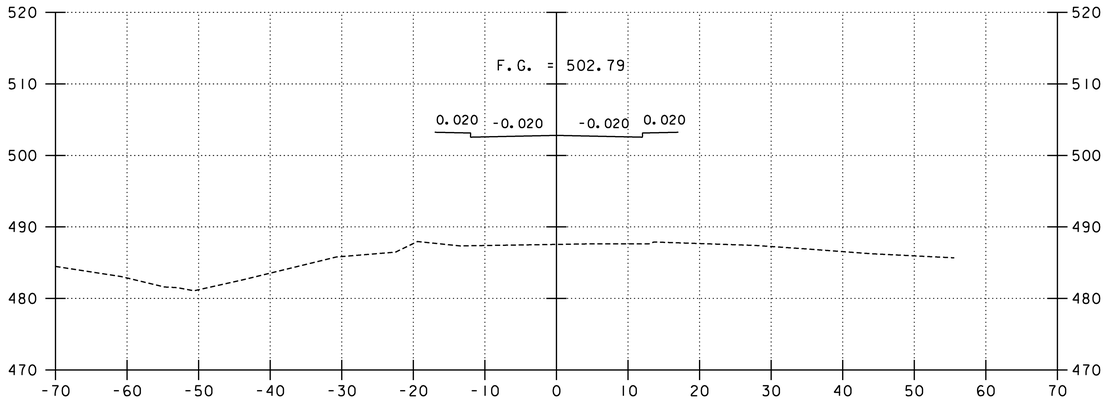
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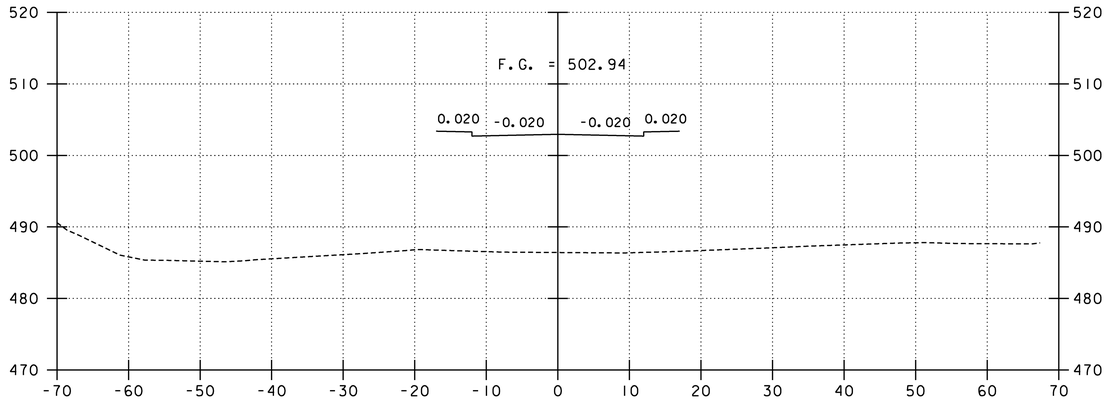
3+50



4+00



3+25



3+75

DATUM
VERTICAL NAVD 88
HORIZONTAL ASSUMED

SCALE 1" = 10'-0
10 0 10

PLOTTED 2/11/2009

DuBois & King inc.
engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

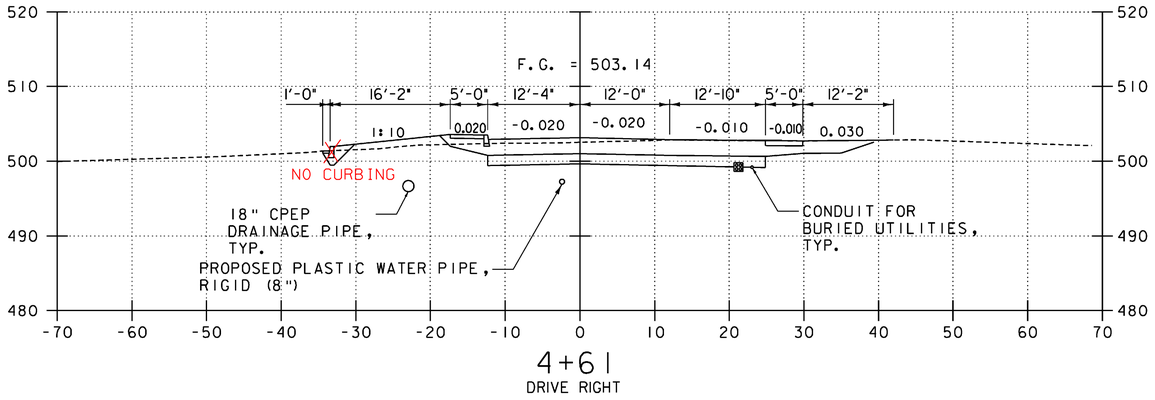
Town Of JOHNSON	Bridge No. 5
Highway No. I	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

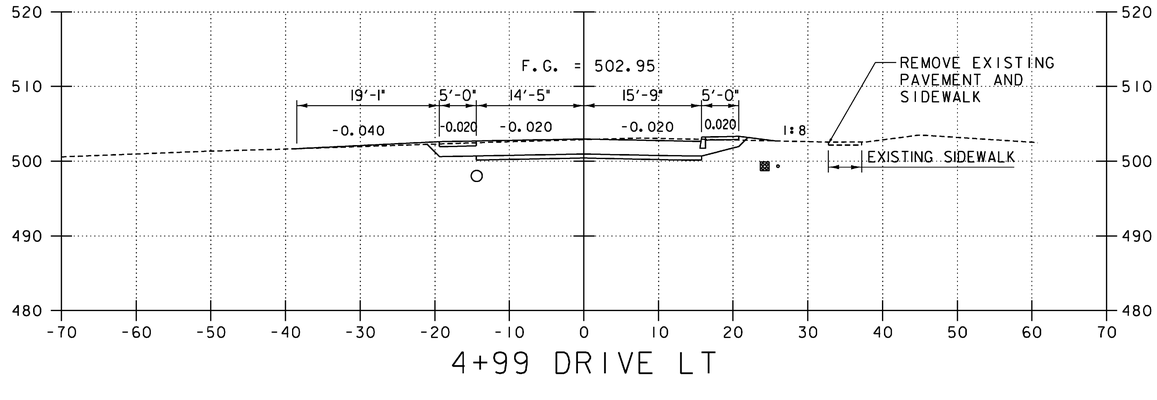
ROADWAY CROSS SECTIONS (3)

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date	Bridge Design Supervisor
J. W. TUCKER 2/09	J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372xs.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 51 of 68

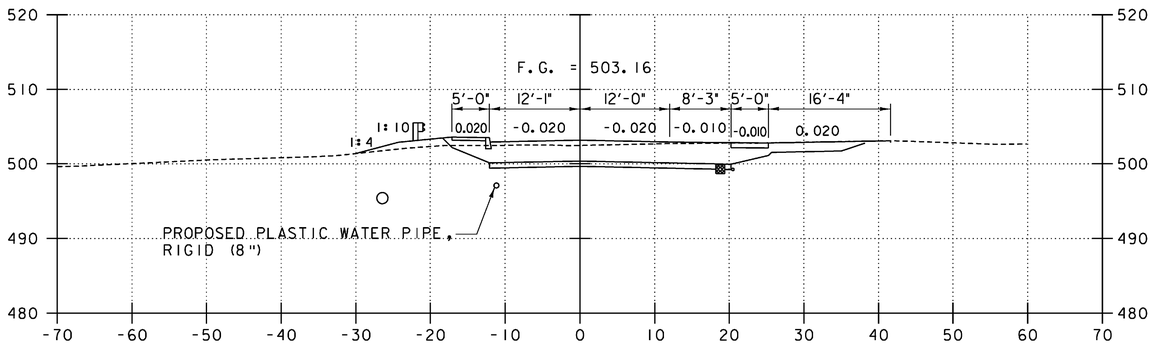
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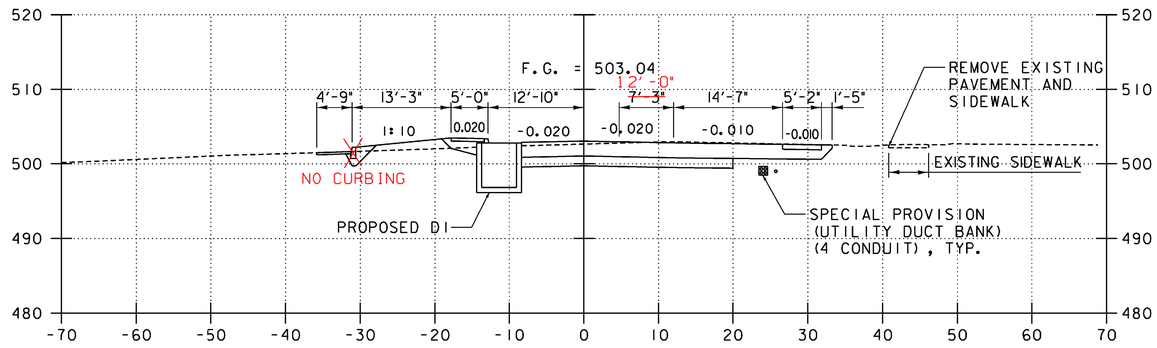
4+61
DRIVE RIGHT



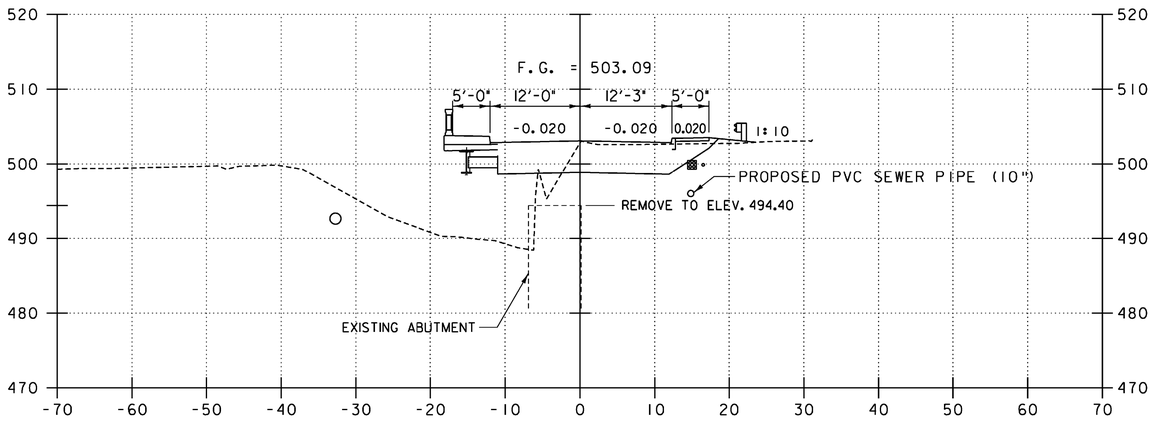
4+99 DRIVE LT



4+50



4+75
END PROJECT
BHO 1448 (29)
STA. 4+75.00



4+25
END BRIDGE
STA. 4+22.00

DATUM
VERTICAL NAVD 88
HORIZONTAL ASSUMED

SCALE 1" = 10'-0
10 0 10

PLOTTED 2/11/2009

DuBois & King inc.
engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

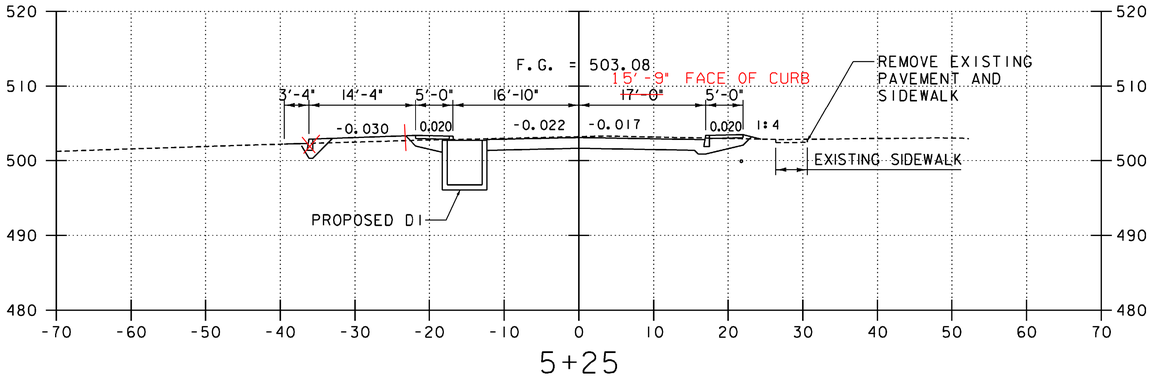
Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

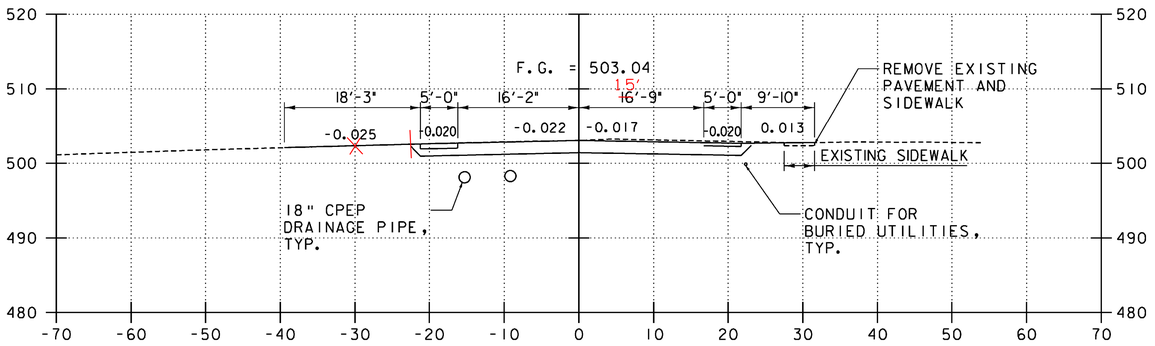
ROADWAY CROSS SECTIONS (4)

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372xs.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 52 of 68

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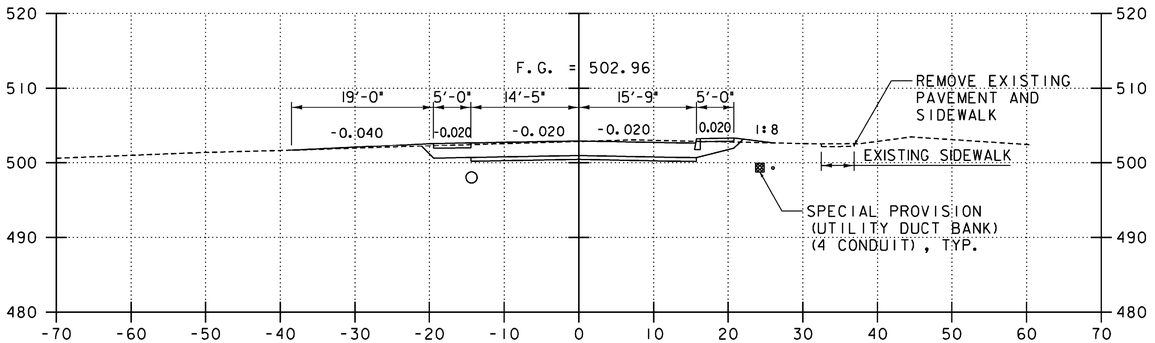


5+25

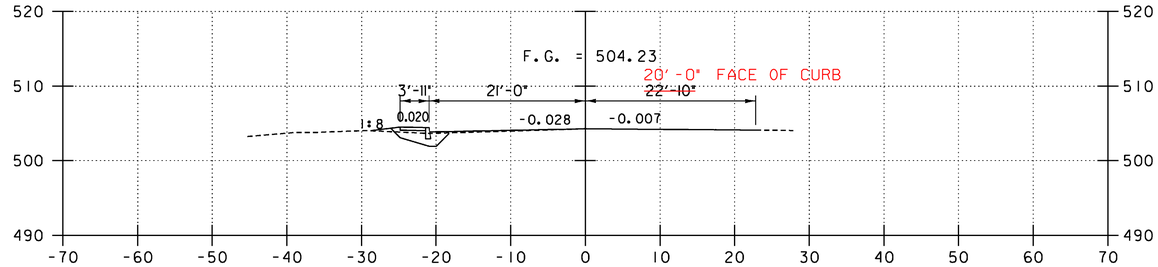


5+20

DRIVE LEFT

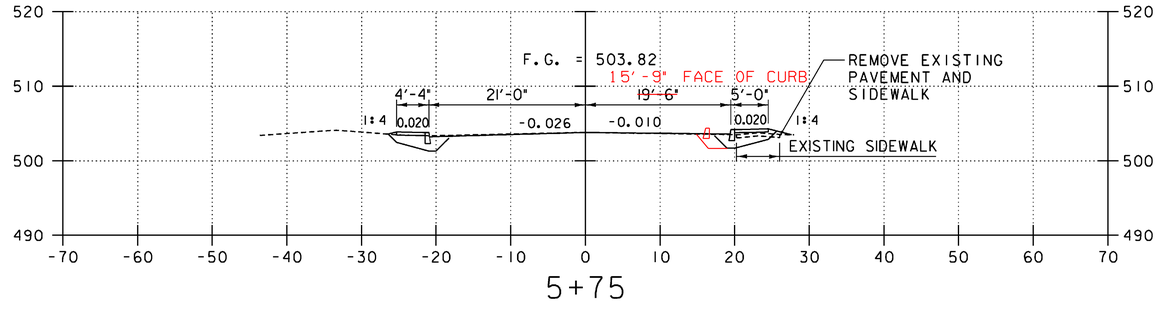


5+00

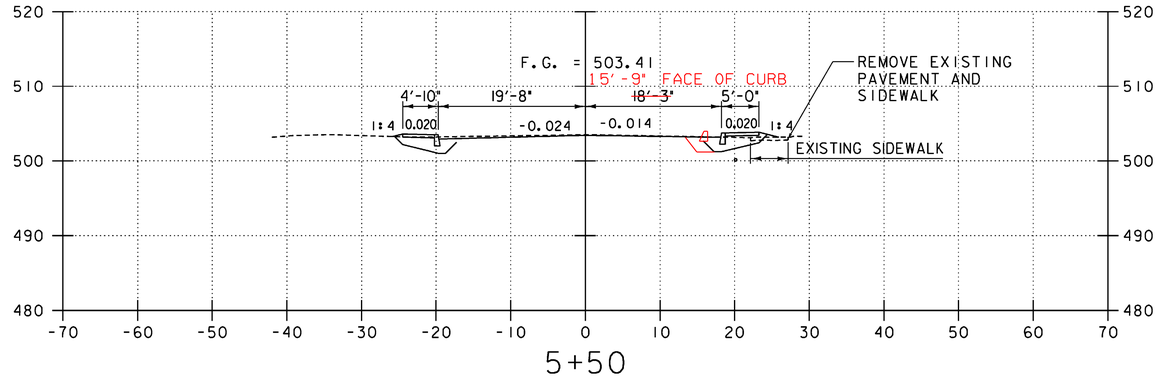


6+00

END APPROACH
STA. 6+00.00
MATCH EXISTING



5+75



5+50

DATUM
VERTICAL NAVD 88
HORIZONTAL ASSUMED

SCALE 1" = 10'-0
10 0 10

PLOTTED 2/11/2009

DuBois & King inc.
engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

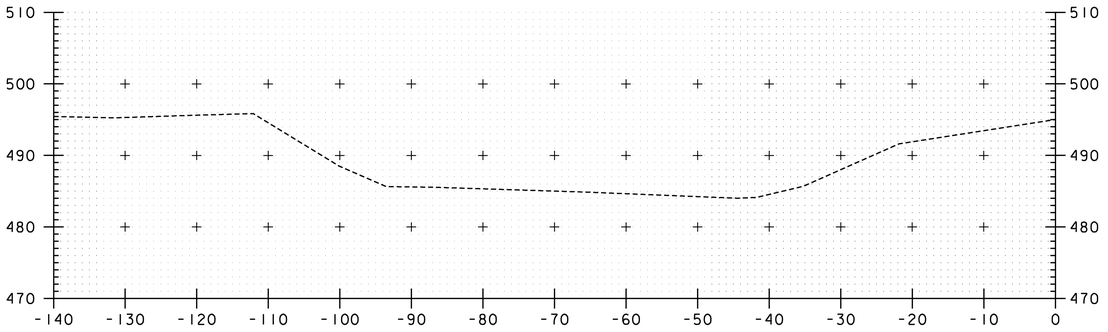
Town Of JOHNSON	Bridge No. 5
Highway No. I	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

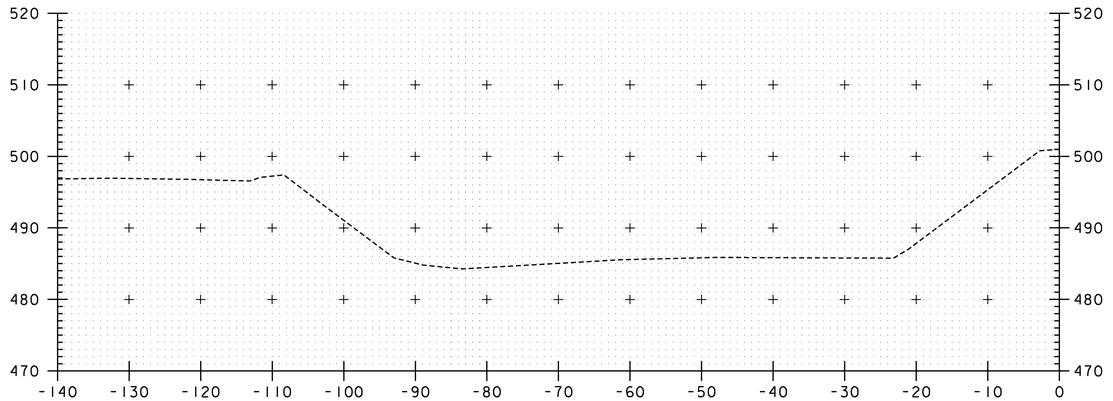
ROADWAY CROSS SECTIONS (5)

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.C.C. Info. z98j372xs.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 53 of 68

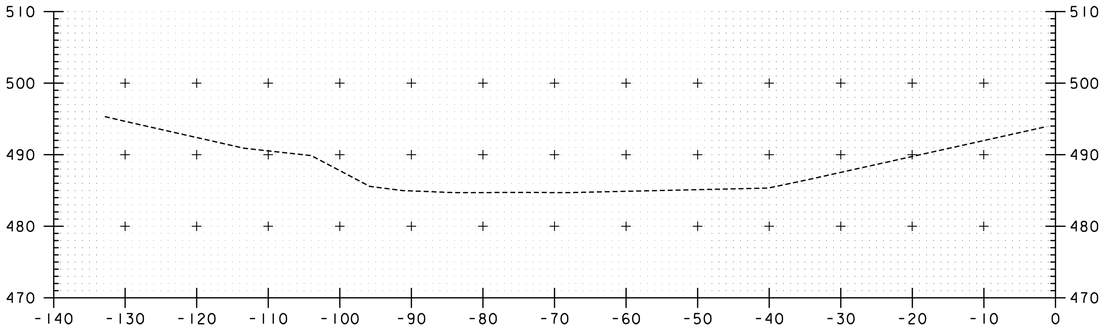
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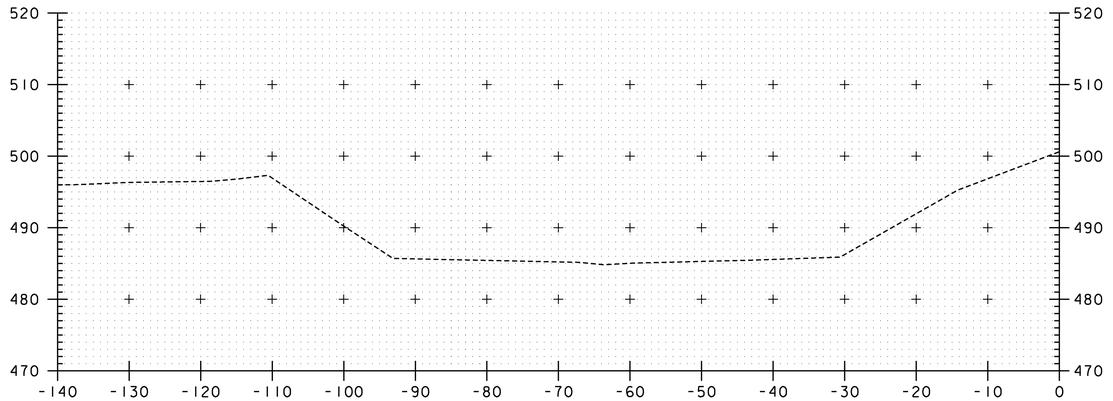
10+25



10+75



10+00



10+50

DATUM
VERTICAL NAVD 88
HORIZONTAL ASSUMED

SCALE 1" = 10'-0
10 0 10

PLOTTED 11/26/2008

DuBois & King inc.
engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

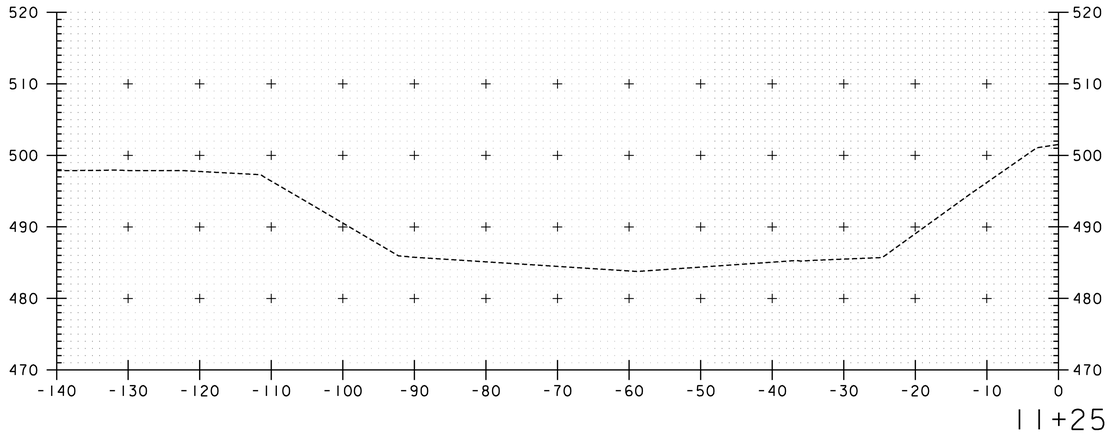
Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

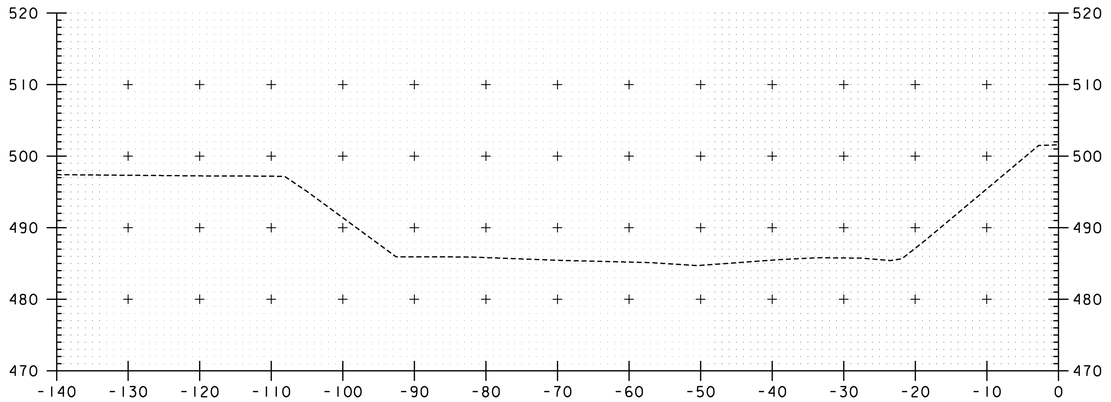
CHANNEL CROSS SECTIONS (1)

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 10/08	Bridge Design Supervisor J. W. TUCKER Date 10/08
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98J372xs.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 54 of 68

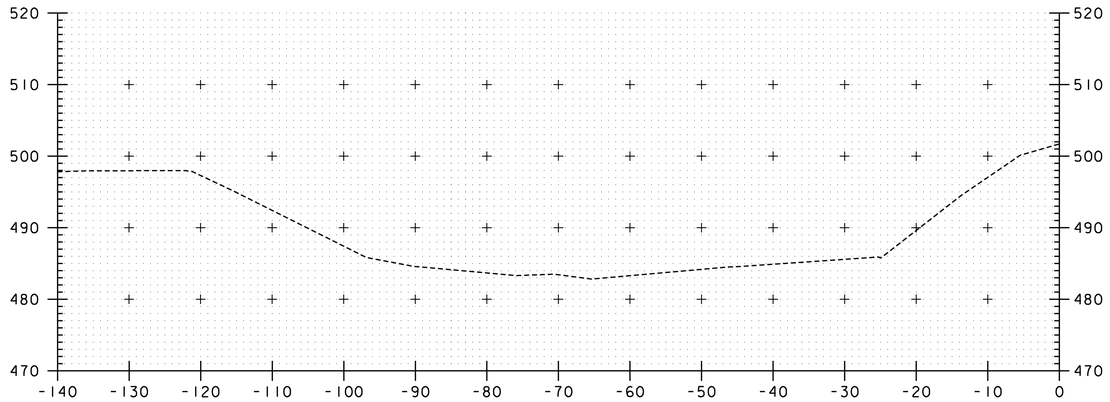
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11+25



11+00



11+50

DATUM
VERTICAL NAVD 88
HORIZONTAL ASSUMED

SCALE 1" = 10'-0
10 0 10

PLOTTED 2/10/2009

DuBois & King inc.
engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

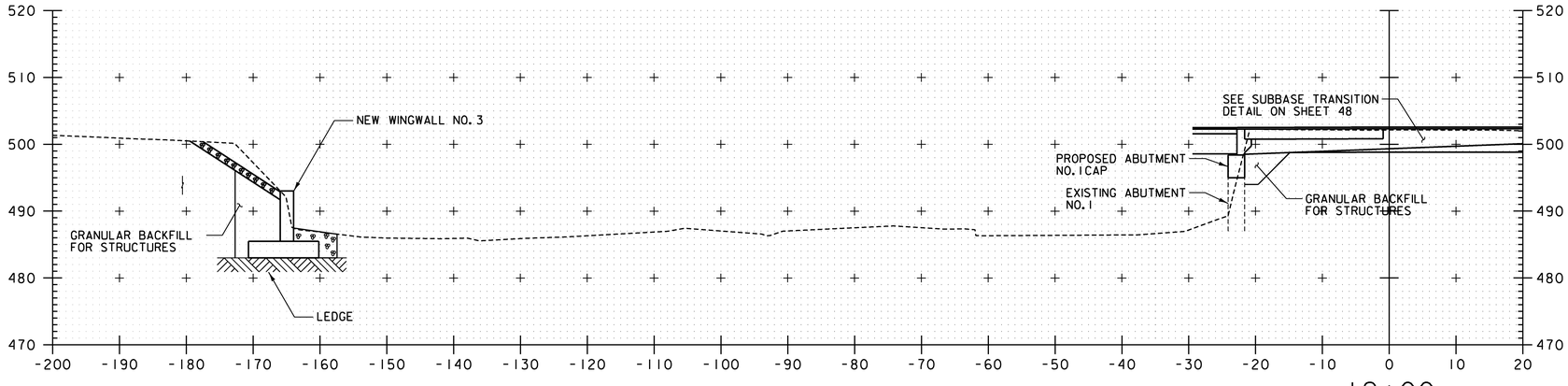
Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

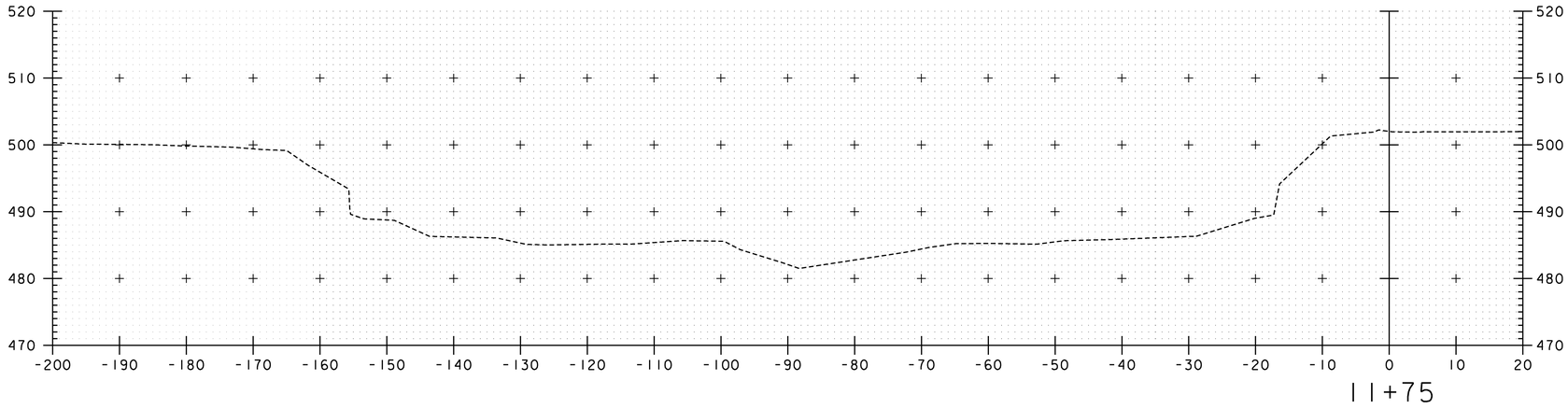
CHANNEL CROSS SECTIONS (2)

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date J. W. TUCKER 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372xs.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 55 of 68

I:\R16214\dgn\z98j372xs.dgn 2/10/2009 9:41:35 AM



STA. 11+86.00 FAR LT.
BEGIN STONE FILL, TYPE II



DATUM
VERTICAL NAVD 88
HORIZONTAL ASSUMED

SCALE 1" = 10'-0
10 0 10

PLOTTED 2/10/2009

DuBois & King inc.
engineering planning management development

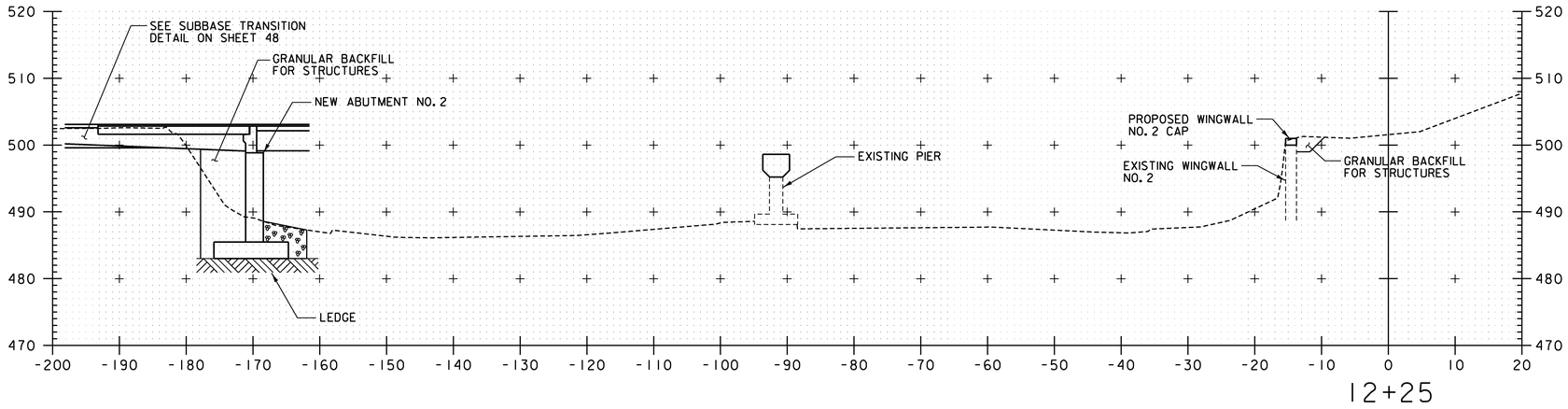
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

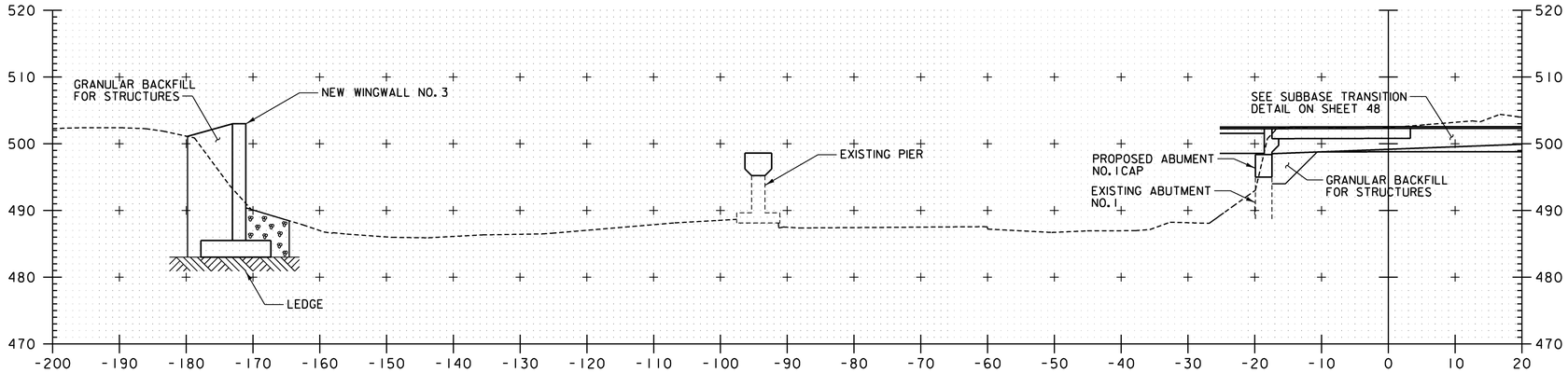
TH NO. 1 OVER THE GIHON RIVER
CHANNEL CROSS SECTIONS (3)

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372xs.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 56 of 68

I:\R16214\dgn\z98j372xs.dgn 2/10/2009 9:41:46 AM



12+25



12+15

DATUM
VERTICAL NAVD 88
HORIZONTAL ASSUMED

SCALE 1" = 10'-0
10 0 10

PLOTTED 2/10/2009

DuBois & King inc.
engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

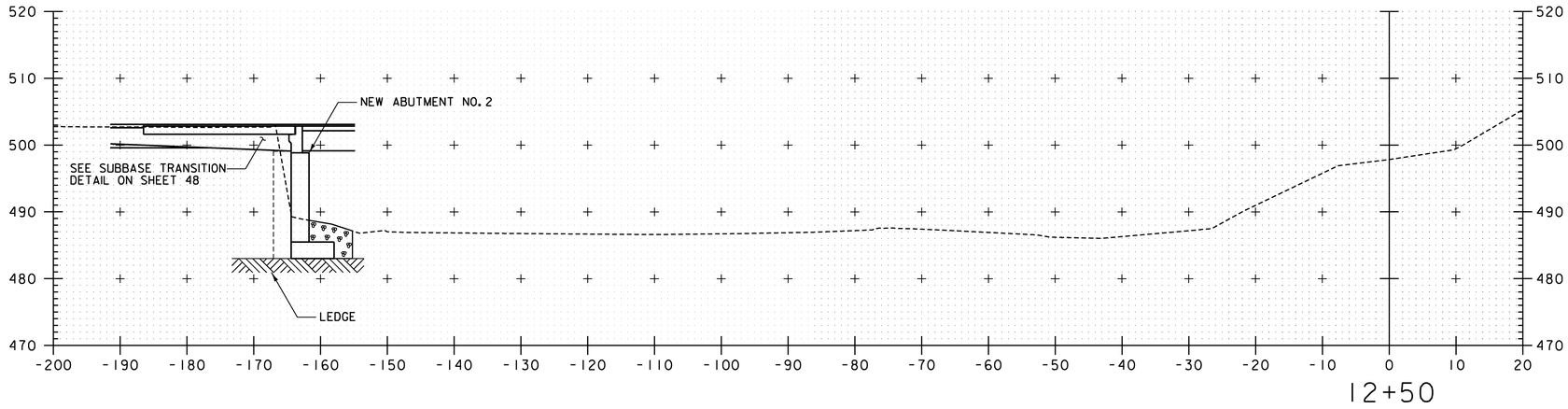
Town Of JOHNSON	Bridge No. 5
	Log Sta.
Highway No. 1	Surv. Sta.

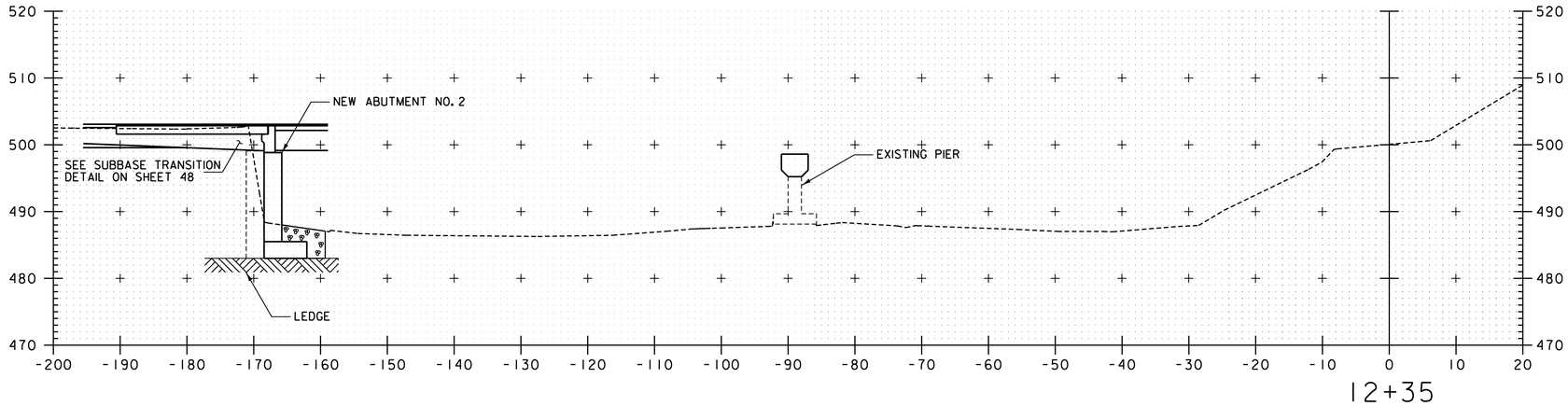
TH NO. 1 OVER THE GIHON RIVER

CHANNEL CROSS SECTIONS (4)

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date	Bridge Design Supervisor
J. W. TUCKER 2/09	J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372xs.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 57 of 68

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DATUM
VERTICAL NAVD 88
HORIZONTAL ASSUMED

SCALE 1" = 10'-0
10 0 10

PLOTTED 2/10/2009

DuBois & King inc.
engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

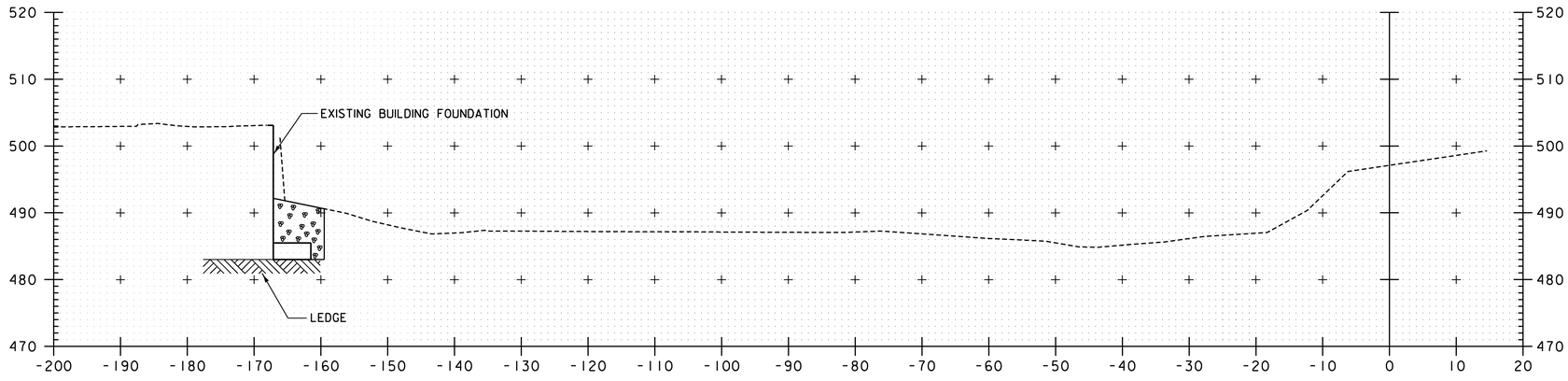
Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

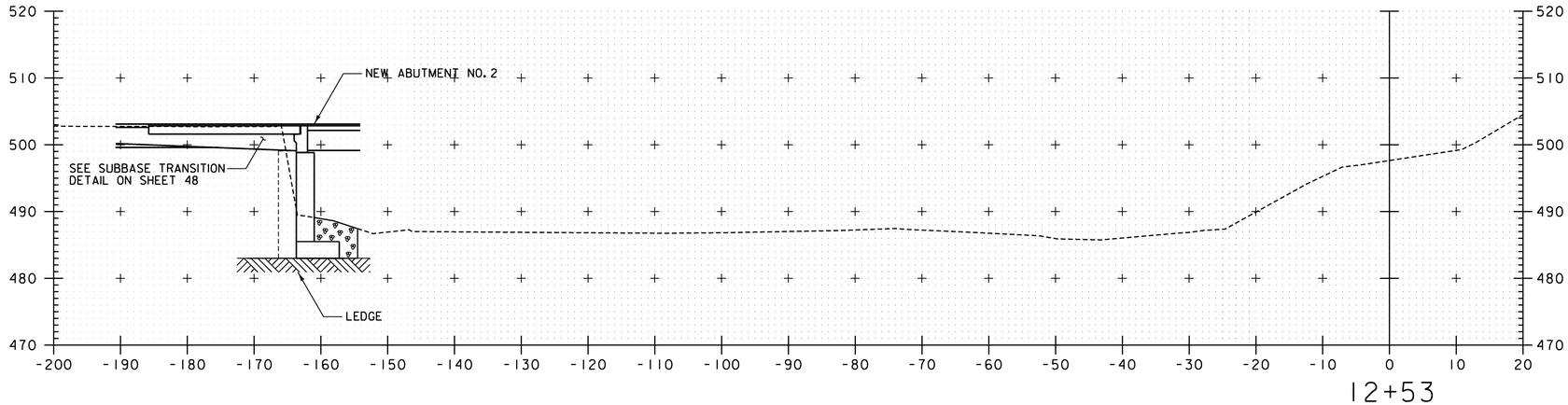
CHANNEL CROSS SECTIONS (5)

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372xs.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 58 of 68

I:\R16214\dgn\z98j372xs.dgn 2/10/2009 9:42:04 AM



STA. 12+70.00 FAR LT.
END STONE FILL, TYPE II



DATUM
VERTICAL NAVD 88
HORIZONTAL ASSUMED

SCALE 1" = 10'-0
10 0 10

PLOTTED 2/10/2009

DuBois & King inc.
engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

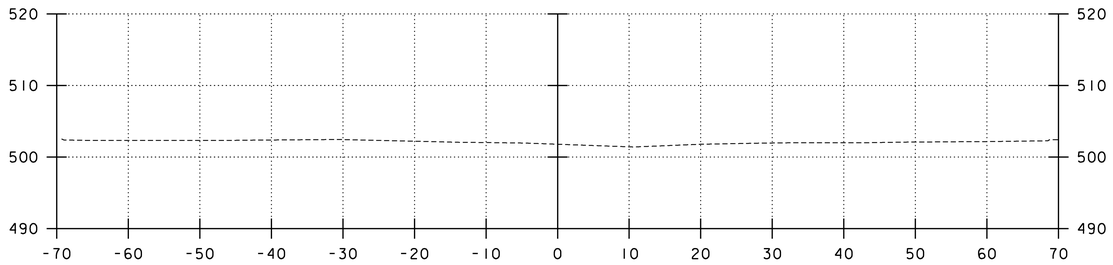
Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

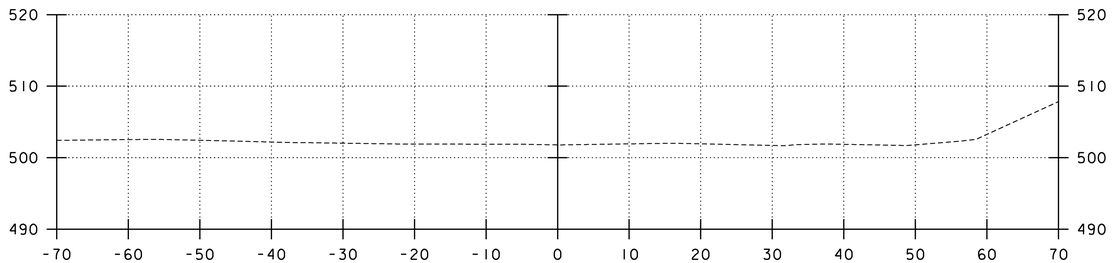
CHANNEL CROSS SECTIONS (6)

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By J. W. TUCKER Date 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372xs.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 59 of 68

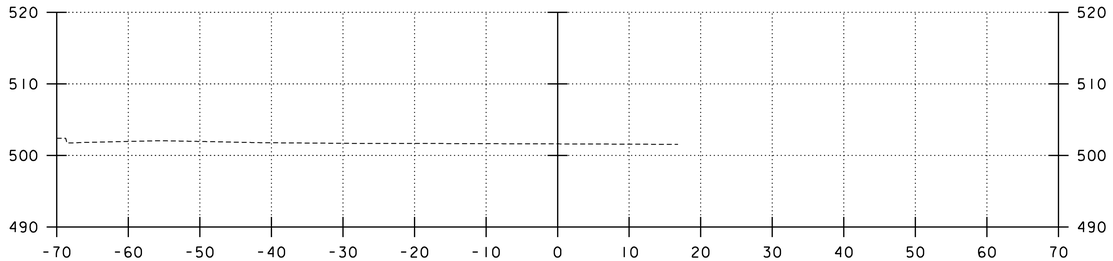
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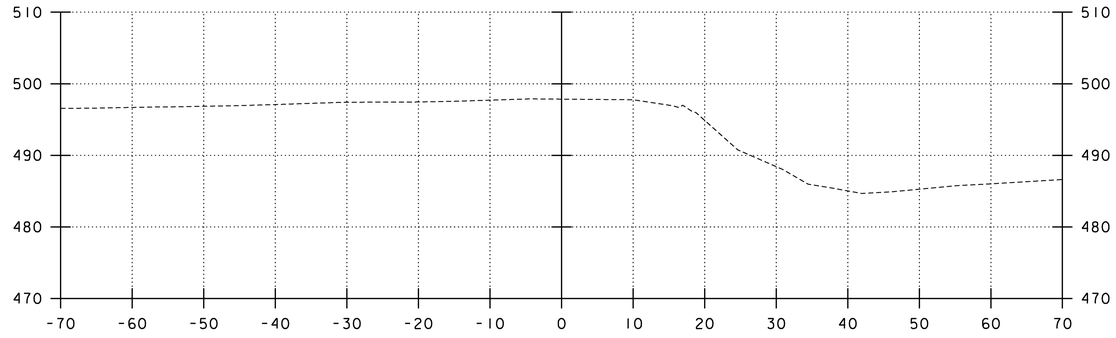
21+00



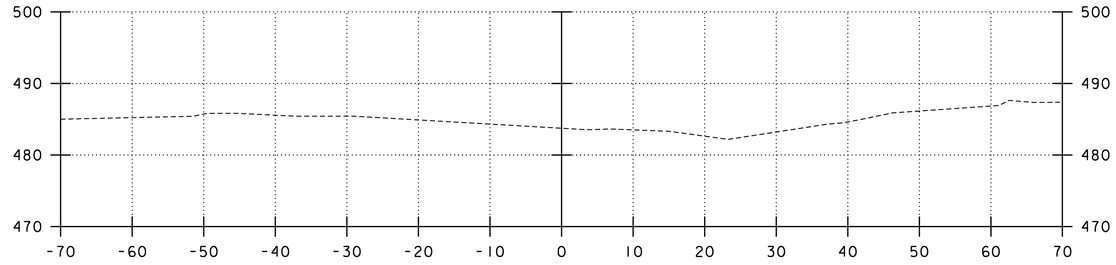
20+50



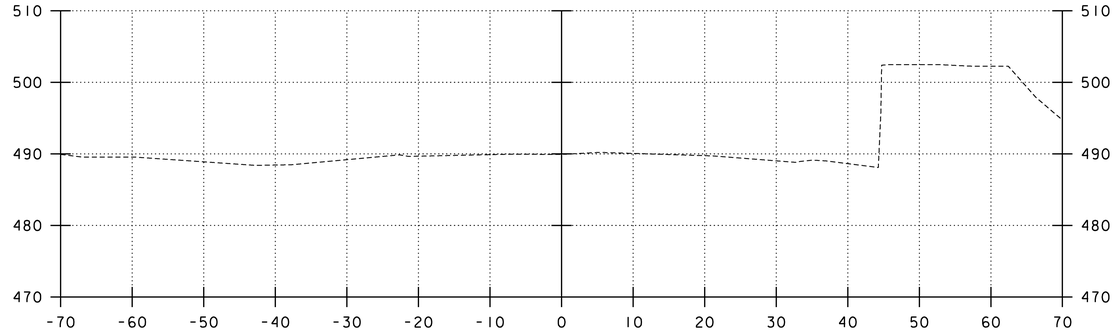
20+00



22+50



22+00



21+50

DATUM
VERTICAL NAVD 88
HORIZONTAL ASSUMED

SCALE 1" = 10'-0
10 0 10

PLOTTED 2/10/2009

DuBois & King inc.
engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

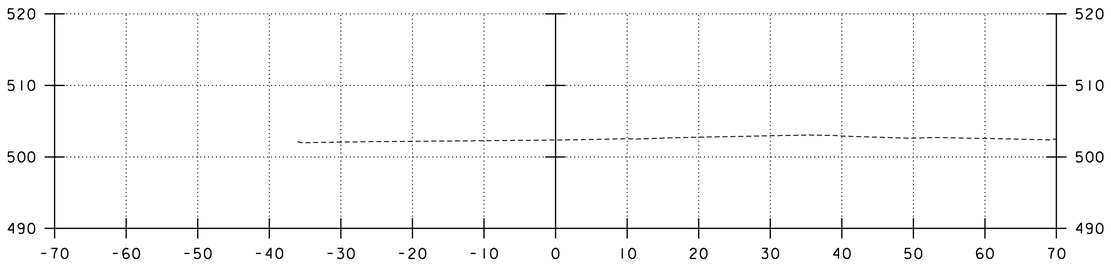
Town Of JOHNSON	Bridge No. 5
Highway No. I	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

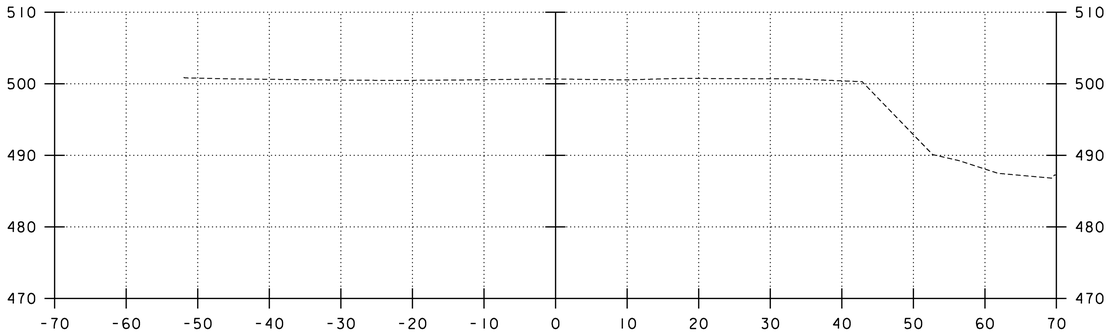
DETOUR CROSS SECTIONS (1)

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date J. W. TUCKER 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98J372xs.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 60 of 68

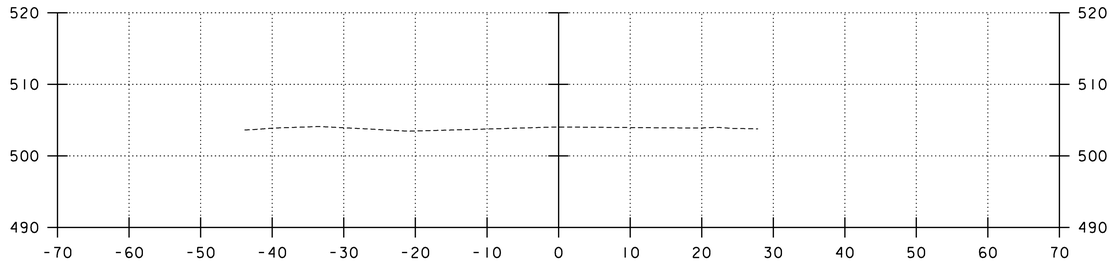
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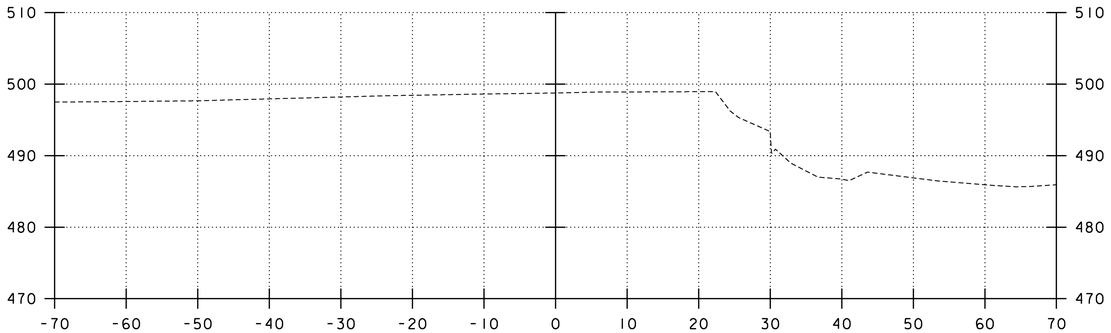
24+00



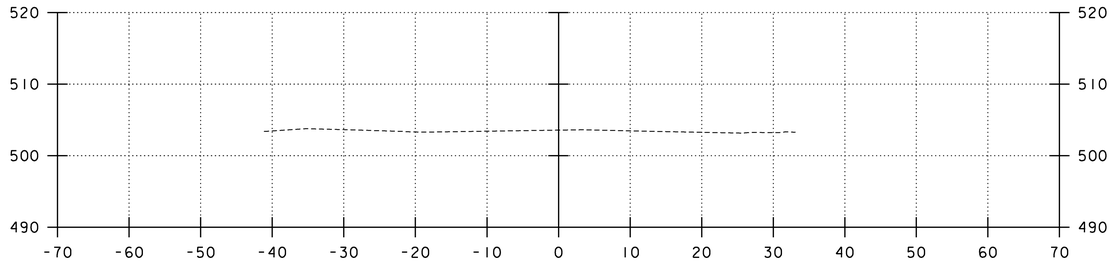
23+50



24+79



23+00



24+50

DATUM
VERTICAL NAVD 88
HORIZONTAL ASSUMED

SCALE 1" = 10'-0
10 0 10

PLOTTED 2/10/2009

DuBois & King inc.
engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

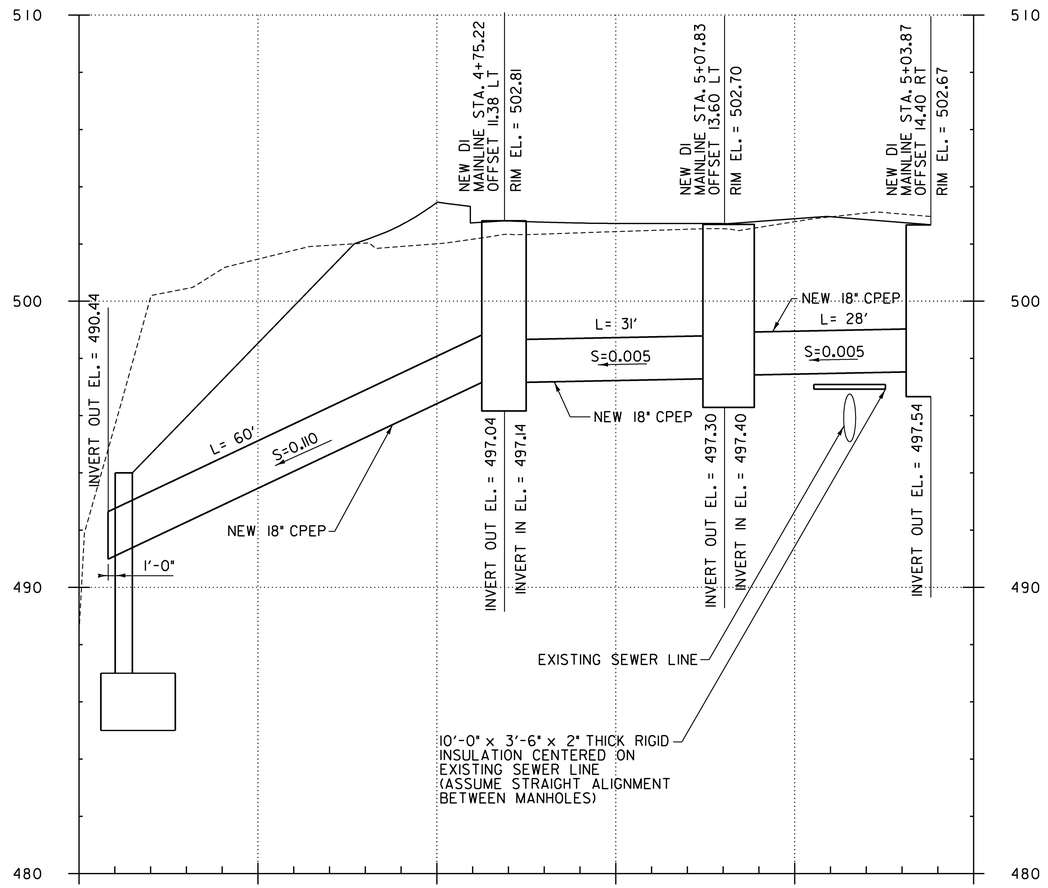
Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

DETOUR CROSS SECTIONS (2)

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date	Bridge Design Supervisor
J. W. TUCKER 2/09	J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372xs.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 61 of 68

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NOTE:

THE RIGID INSULATION BOARD SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 204.20, "TRENCH EXCAVATION EARTH".

VERTICAL 0 2 4 6 8 10

HORIZONTAL 0 10 20 30

SCALE IN FEET

PLOTTED 2/10/2009

DATUM

VERTICAL NAVD 88

HORIZONTAL ASSUMED

DuBois & King inc.

engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

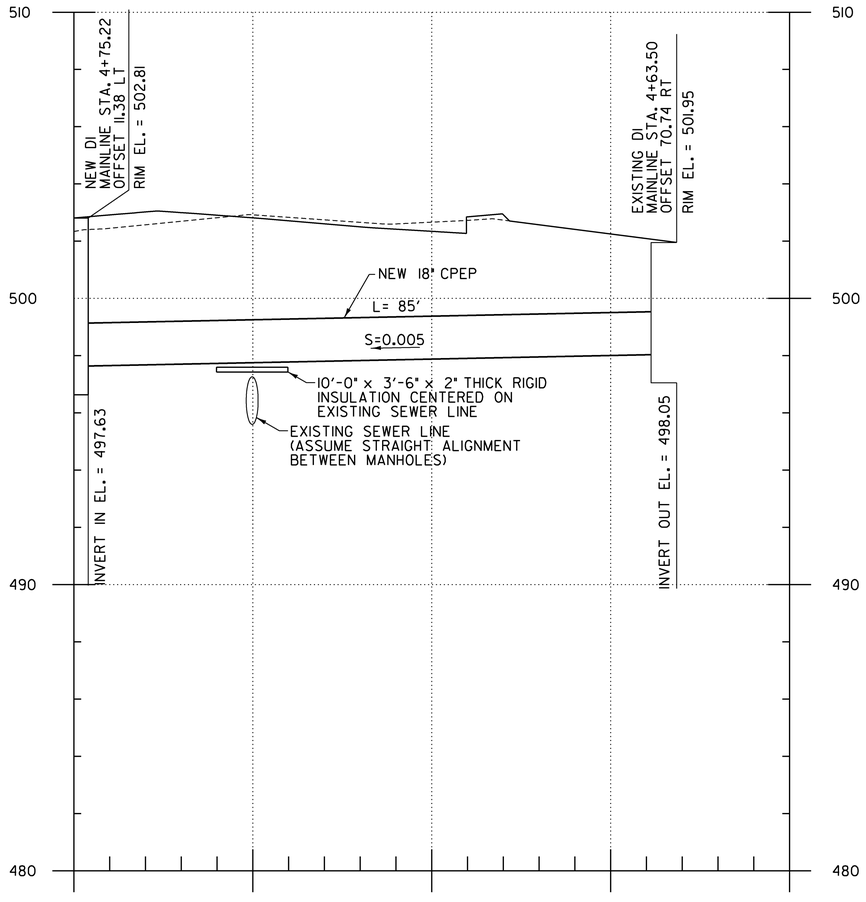
Town Of JOHNSON	Bridge No. 5
Highway No. I	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

DRAINAGE PROFILES (1)

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date	Bridge Design Supervisor
J. W. TUCKER 2/09	J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98J372xs.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 62 of 68

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DATUM
VERTICAL NAVD 88
HORIZONTAL ASSUMED

VERTICAL 0 2 4 6 8 10
HORIZONTAL 0 10 20 30
SCALE IN FEET
PLOTTED 2/10/2009

DuBois & King inc.
engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

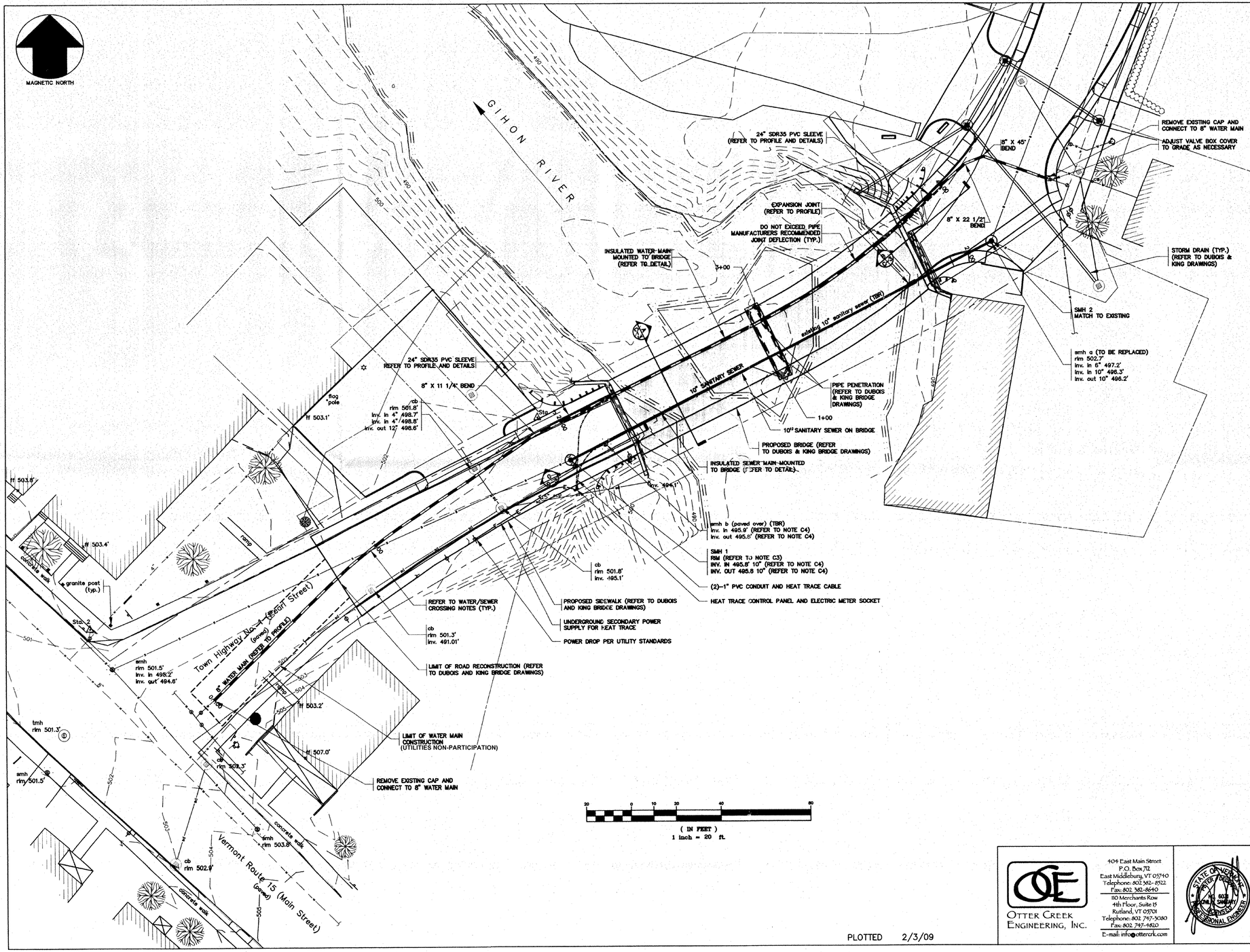
Town Of JOHNSON	Bridge No. 5
Highway No. I	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

DRAINAGE PROFILES (2)

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date J. W. TUCKER 2/09	Bridge Design Supervisor J. W. TUCKER Date 2/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info. z98j372xs.dgn	D & K DWG NO.
Bridge Sheet No.	Sheet 63 of 68

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GENERAL NOTES

1. A PORTION OF THESE PLANS ARE BASED ON A TOPOGRAPHIC SURVEY CONDUCTED WITH A 4 SECOND TOTAL STATION ON 12/18/02 BY OTTER CREEK ENGINEERING, INC. SURVEY WAS COMPLETED WITH APPROXIMATELY 8" OF SNOW AND ICE ON GROUND. ACTUAL SURFACE MAY VARY.

2. IN THE PREPARATION OF THESE PLANS, DATA FROM THE FOLLOWING SOURCES WAS INCORPORATED:
A. "PLAN TITLED "TH NO. 1 OVER THE GIHON RIVER", PROJECT NO. BHO 1448(29), SHEET 15 OF 32, PREPARED FOR THE STATE OF VERMONT AGENCY OF TRANSPORTATION, BY DUBOIS & KING, INC., DATED 8/15/02.
B. PLAN TITLED "WATER POLLUTION CONTROL FACILITIES", JOHNSON, VERMONT, PEARL ST.--MAIN ST TO STA. 7+90, PREPARED BY JAMES S. MINGES & ASSOCIATES ENGINEERS, FARMINGTON, CONNECTICUT, DATED JUNE 1, 1969 AS BUILT CONDITIONS.

3. ELEVATION IS BASED ON NAVD 88.

4. COORDINATE SYSTEM IS BASED ON AN ASSUMED 5000N,5000E BASE POINT AND MAGNETIC NORTH AT TIME OF SURVEY.

5. FOR CLARITY, TEXT DENOTING EXISTING ITEMS IS SHOWN IN LOWER CASE, AND TEXT DENOTING PROPOSED ITEMS IS UPPERCASE AND BOLD.

6. REFER TO LEGEND LOCATED ON THIS SHEET FOR SYMBOL DESIGNATIONS.

7. ALL UNDERGROUND UTILITIES ARE SHOWN AS APPROXIMATE LOCATIONS.

CONSTRUCTION NOTES

1. REFER TO DUBOIS AND KING DRAWINGS FOR ALL WORK ASSOCIATED WITH THE BRIDGE, ROADWAY, SIDEWALK AND STORM SEWER.

2. CONTRACTOR SHALL CONTACT THE VILLAGE OF JOHNSON WATER AND LIGHT DEPARTMENT TO LOCATE UTILITIES AND TO COORDINATE ALL INTERCONNECTIONS OF WATER AND SEWER MAINS PRIOR TO ANY CONSTRUCTION.

3. COORDINATE SEWER MANHOLE RIM ELEVATIONS WITH PROPOSED BRIDGE ROADWAY APPROACHES BY DUBOIS & KING, INC.

4. SEWER INVERT INFORMATION FOR smh b AND SMH 1 AREA BASED ON RECORD INFORMATION AND HAVE NOT BEEN FIELD VERIFIED. CONTRACTOR TO CONFIRM INVERT OF EXISTING SEWER AND REPORT TO ENGINEER PRIOR TO THE START OF WORK.

5. REFER TO SPECIFICATIONS FOR TEMPORARY SANITARY SEWER BYPASS REQUIREMENTS.

LEGEND

- boundary line/r.o.w.
- road/parking (w/ surface label)
- drive (w/ surface label)
- 1 foot contour
- 100 5 foot contour
- ue underground electric
- o/h overhead utility
- ut underground telephone
- sd storm drain
- w water main
- s sanitary sewer
- signs
- light pole
- utility pole
- guy
- gate valve
- hydrant
- catch basin
- sewer manhole
- deciduous tree
- coniferous tree
- 1 traverse station
- TBM 1 temporary bench mark
- WATER MAIN
- CATCH BASIN (BY OTHERS)
- SEWER MANHOLE
- SANITARY SEWER
- E UNDERGROUND ELECTRIC
- HEAT TRACE CABLE/CONDUIT

PLOTTED 2/3/09

OTTER CREEK ENGINEERING, INC.
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Telephone: 802 747-3080
Fax: 802 747-4620
E-mail: info@ottercrk.com

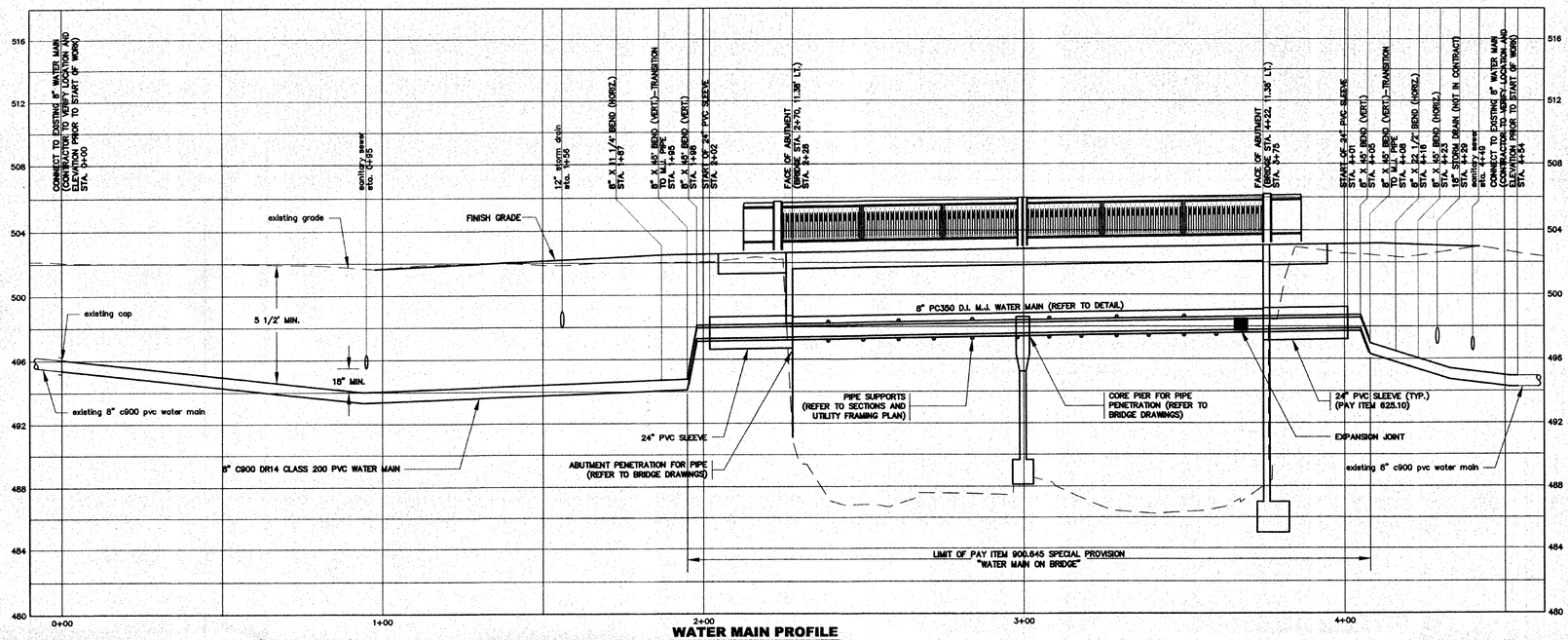
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

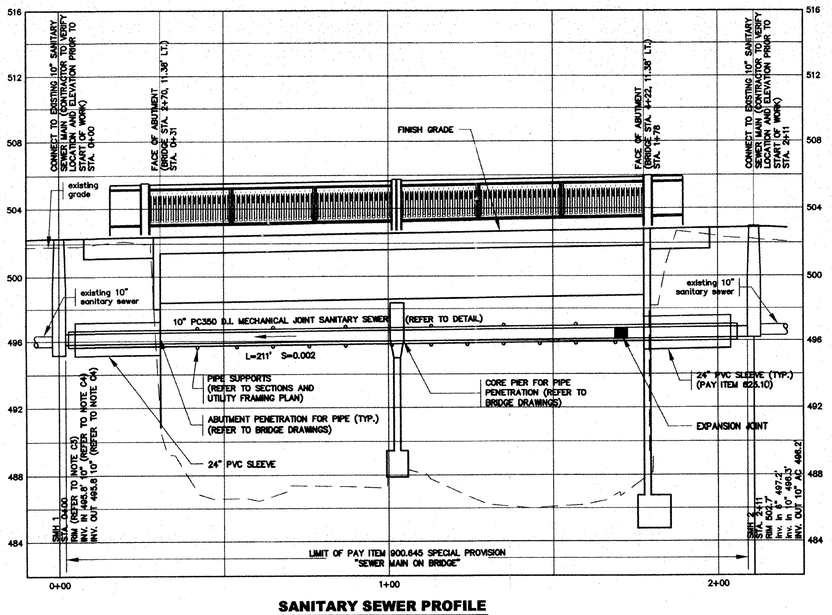
SITE PLAN

Designed By P.D.	Drawn By J.L./H.B.
Checked By C.C. Date 1/09	Bridge Design Supervisor Date 1/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
	OCE DWG NO. C-1
Bridge Sheet No.	Sheet 64 of 68



WATER MAIN PROFILE

SCALE: 1"=20' HORIZONTAL
1"= 4' VERTICAL



SANITARY SEWER PROFILE

SCALE: 1"=20' HORIZONTAL
1"= 4' VERTICAL

PLOTTED 2/3/09

WATER MAIN NOTES:

1. DUCTILE IRON FITTINGS SHALL BE CLASS 350 COMPACT STYLE WITH RESTRAINED MECHANICAL JOINTS WITH TEE BOLTS AS RECOMMENDED BY THE MANUFACTURER.
2. ALL MECHANICAL JOINT FITTINGS FOR DI AND PVC PIPE SHALL HAVE "MEGA-LUG" MECHANICAL JOINT RESTRAINTS AS MANUFACTURED BY EBAA IRON SALES, INC., OR "UNI-FLANGE MEDGE ACTION" MECHANICAL JOINT RESTRAINTS AS MANUFACTURED BY FORD METER BOX CO., OF THE PROPER STYLE FOR THE PIPE TYPE BEING RESTRAINED.
3. ALL COUPLINGS SHALL BE RESTRAINED MECHANICAL JOINT SOLID SLEEVES WITH DUCTILE IRON LONG BODY AND DUCTILE IRON GLANDS.

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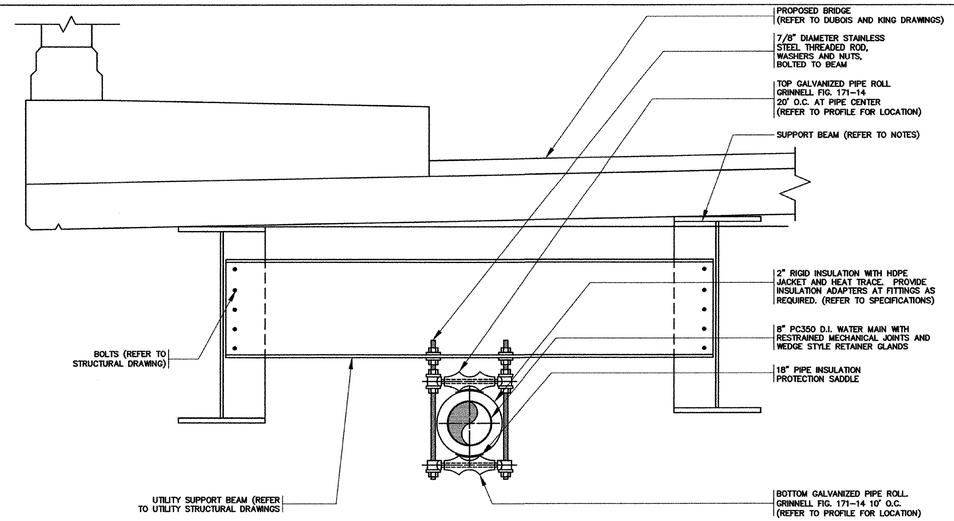
STATE OF VERMONT
AGENCY OF TRANSPORTATION

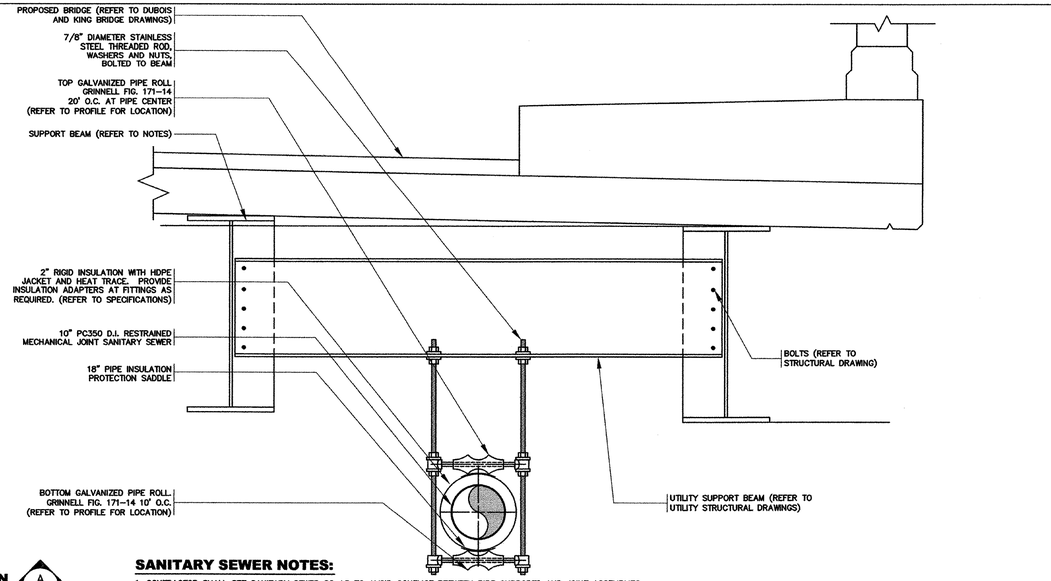
Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

UTILITY PROFILES

Designed By P.D.	Drawn By J.L./H.B.
Checked By C.C. Date 1/09	Bridge Design Supervisor Date 1/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
	OCE DWG NO. C-2
Bridge Sheet No.	Sheet 65 of 68





WATER MAIN NOTES:

1. CONTRACTOR SHALL SET WATER MAIN SO AS TO AVOID CONFLICT BETWEEN PIPE SUPPORTS AND JOINT ASSEMBLIES.

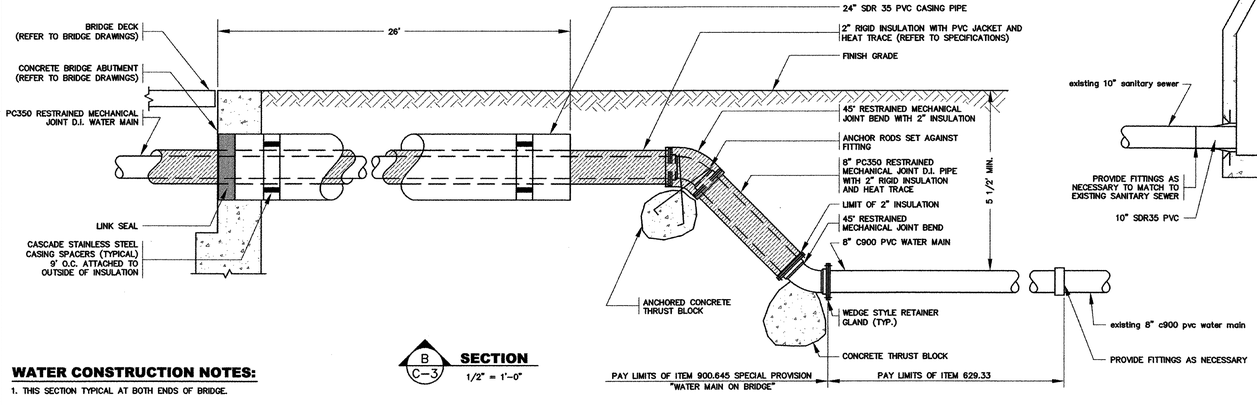
2. REFER TO UTILITY STRUCTURAL FRAMING PLAN AND BRIDGE FRAMING PLAN FOR SUPPORT BEAM PLACEMENT.

SECTION A C-3
1" = 1'-0"

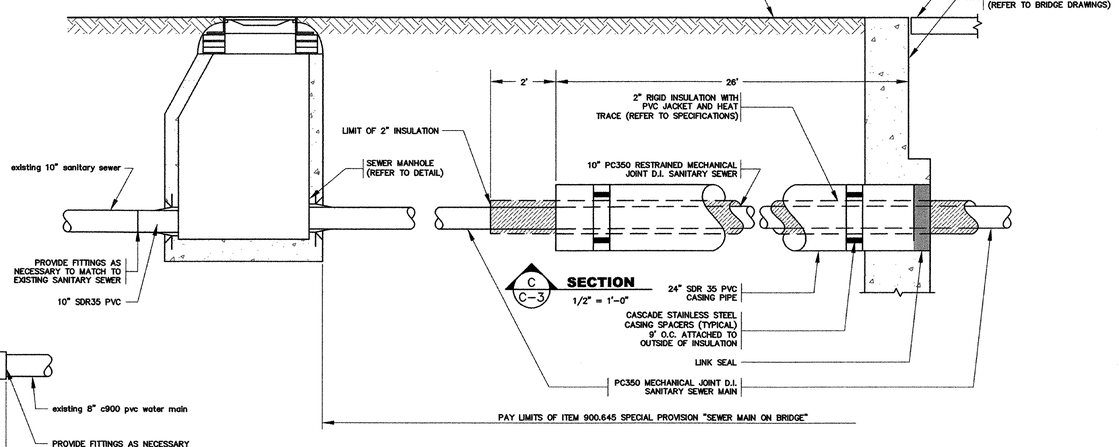
SANITARY SEWER NOTES:

1. CONTRACTOR SHALL SET SANITARY SEWER SO AS TO AVOID CONFLICT BETWEEN PIPE SUPPORTS AND JOINT ASSEMBLIES.

2. REFER TO UTILITY STRUCTURAL FRAMING PLAN AND BRIDGE FRAMING PLAN FOR SUPPORT BEAM PLACEMENT.



B C-3 SECTION
1/2" = 1'-0"



C C-3 SECTION
1/2" = 1'-0"

WATER CONSTRUCTION NOTES:

1. THIS SECTION TYPICAL AT BOTH ENDS OF BRIDGE.

2. END OF PIPE CASING SHALL BE SEALED WITH CASCADE MODEL CCES END SEALS WITH STAINLESS STEEL BAND CLAMPS (OR EQUAL).

3. INSULATION JACKETING MATERIAL TO BE HDPE.

4. REFER TO SPECIFICATIONS FOR HEAT TRACE CABLE AND APPURTENANCES.

5. CONTRACTOR SHALL CONTACT DIG-SAFE AND THE JOHNSON WATER AND LIGHT DEPARTMENT TO LOCATE UTILITIES AND TO COORDINATE ALL INTERCONNECTIONS OF WATER MAINS PRIOR TO THE START OF CONSTRUCTION.

6. INSTALL A 2" SCH40 PVC CONDUIT FROM THE HEAT TRACE JUNCTION BOX ON THE WATER MAIN TO THE HEAT TRACE CONTROL PANEL AS SHOWN. INSTALL THE HEAT TRACE CABLE IN THE 2" SCH40 PVC CONDUIT AND ALONG THE WATER MAIN PER THE MANUFACTURER. NO SPLICING SHALL BE ALLOWED ON THE CABLE FROM THE JUNCTION BOX TO THE CONTROL PANEL AND FROM THE JUNCTION BOX TO THE WATER MAIN. CONTRACTOR SHALL COORDINATE REQUIRED LENGTHS OF CABLE WITH THE MANUFACTURER. ALL ELECTRICAL CONNECTIONS AND OTHER WIRING TO PROVIDE A FUNCTIONAL HEAT TRACE SYSTEM SHALL BE PROVIDED BY THE CONTRACTOR. ALL MATERIAL AND LABOR COSTS TO COMPLETE THIS WORK SHALL BE INCLUDED UNDER PAY ITEM 900.645 SPECIAL PROVISION "ELECTRICAL HEAT TRACE SYSTEM".

7. PROVIDE RESTRAINED JOINTS AND CONCRETE THRUST BLOCKS AT ALL BENDS IN THE WATER MAIN. REFER TO DETAIL FOR THRUST BLOCK REQUIREMENTS. THRUST BLOCKS SHALL BE CONSIDERED INCIDENTAL TO PAY ITEM 900.645 SPECIAL PROVISION "WATER MAIN ON BRIDGE".

8. PROVIDE A 3/4" CORPORATION STOP AT THE TOP OF PIPE AT WESTERN BRIDGE ABUTMENT. PIPE TO BE THE EDGE OF THE BRIDGE DECK AND TERMINATE WITH A LOCKABLE BALL VALVE, FOR USE BY THE VILLAGE OF JOHNSON TO BLEED AIR OUT OF THE WATER MAIN. ALL MATERIAL AND LABOR COSTS TO COMPLETE THIS WORK SHALL BE INCLUDED UNDER PAY ITEM 900.645 SPECIAL PROVISION "WATER MAIN ON BRIDGE".

9. ALL WORK ASSOCIATED WITH THE WATER MAIN NOT SPECIFICALLY INCLUDED IN OTHER PAY ITEMS SHALL BE CONSIDERED MAINTENANCE OF EXISTING WATER SYSTEM AND PAID UNDER CONTRACT ITEM 629.42 TRANSFER TO NEW SYSTEM, WATER SYSTEM.

SEWER CONSTRUCTION NOTES:

1. THIS SECTION TYPICAL AT BOTH ENDS OF BRIDGE.

2. END OF PIPE CASING SHALL BE SEALED WITH CASCADE MODEL CCES END SEALS WITH STAINLESS STEEL BAND CLAMPS (OR EQUAL).

3. INSULATION JACKETING MATERIAL TO BE HDPE.

4. REFER TO SPECIFICATIONS FOR HEAT TRACE CABLE AND APPURTENANCES.

5. INSTALL A 2" SCH40 PVC CONDUIT FROM THE HEAT TRACE JUNCTION BOX ON THE SANITARY SEWER TO THE HEAT TRACE CONTROL PANEL AS SHOWN. INSTALL THE HEAT TRACE CABLE IN THE 2" SCH40 PVC CONDUIT AND ALONG THE SANITARY SEWER PER THE MANUFACTURER. NO SPLICING SHALL BE ALLOWED ON THE CABLE FROM THE JUNCTION BOX TO THE CONTROL PANEL AND FROM THE JUNCTION BOX TO THE SANITARY SEWER. CONTRACTOR SHALL COORDINATE REQUIRED LENGTHS OF CABLE WITH THE MANUFACTURER. ALL ELECTRICAL CONNECTIONS AND OTHER WIRING TO PROVIDE A FUNCTIONAL HEAT TRACE SYSTEM SHALL BE PROVIDED BY THE CONTRACTOR. ALL MATERIAL AND LABOR COSTS TO COMPLETE THIS WORK SHALL BE INCLUDED UNDER PAY ITEM 900.645 SPECIAL PROVISION "ELECTRICAL HEAT TRACE SYSTEM".

6. ALL WORK ASSOCIATED WITH THE SANITARY SEWER NOT SPECIFICALLY INCLUDED UNDER OTHER PAY ITEMS SHALL BE CONSIDERED MAINTENANCE OF EXISTING SEWER SYSTEM AND SHALL BE PAID UNDER CONTRACT ITEM 628.42 TRANSFER TO NEW SYSTEM, SANITARY SEWER

PLOTTED 2/3/09

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STATE OF VERMONT AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER

UTILITY SECTIONS

Designed By P.D.	Drawn By J.L./H.B.
Checked By C.C. Date 1/09	Bridge Design Supervisor Date 1/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
	OCE DWG NO. C-3
Bridge Sheet No.	Sheet 66 of 68

WATER / SEWER CROSSING NOTES

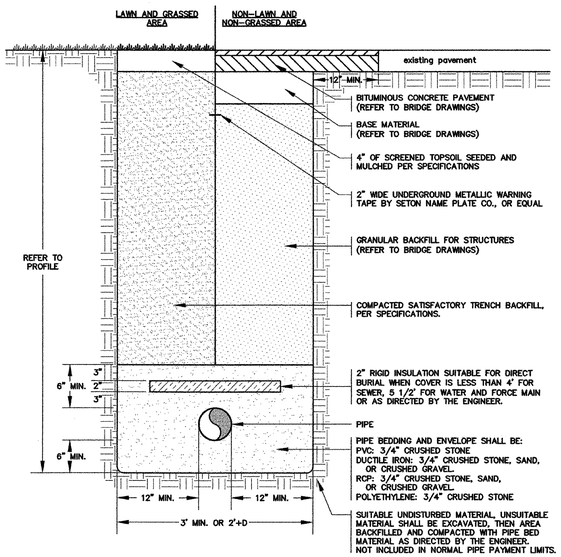
1. WATER MAINS AND SEWERS WHICH CROSS SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 18 INCHES.

2. WATER AND SEWER PIPE JOINTS SHALL BE LOCATED AS FAR APART AS POSSIBLE.

3. PROVIDE STRUCTURAL SUPPORT FOR EXPOSED WATER AND SEWER PIPES.

4. FOR PARALLEL INSTALLATION, THERE SHALL BE A HORIZONTAL SEPARATION OF 10 FEET BETWEEN WATER MAINS AND SANITARY SEWER, AND A SEPARATION OF 5 FT BETWEEN WATER MAINS AND STORM SEWERS.

5. IN THE EVENT 18 INCHES OF VERTICAL CLEARANCE OR 10' OF HORIZONTAL SEPARATION CANNOT BE ACHIEVED, THE SANITARY SEWER PIPE MUST BE CONSTRUCTED TO WATER MAIN STANDARDS FOR A MINIMUM OF THREE PIPE LENGTHS CENTERED ON THE WATER LINE.



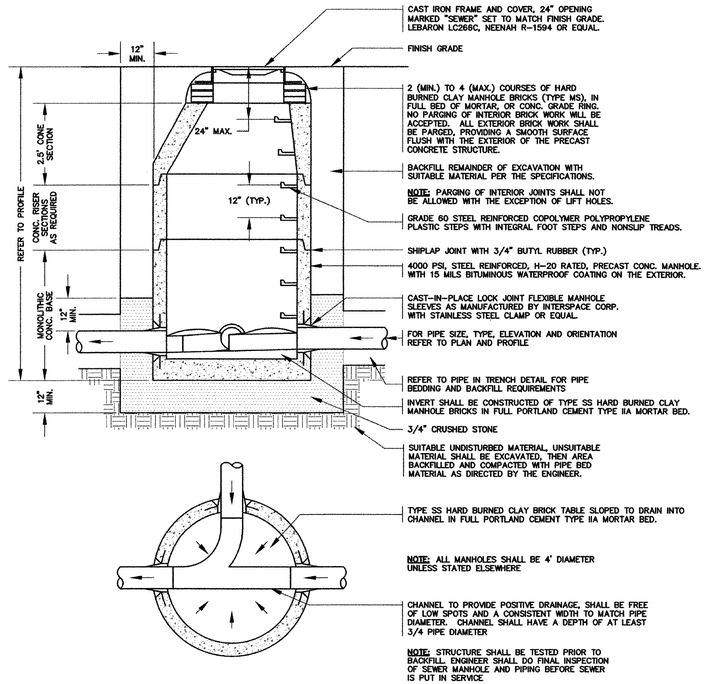
PIPE IN TRENCH DETAIL

NOT TO SCALE

NOTES:

1. REFER TO WATER MAIN ON BRIDGE AND SEWER MAIN ON BRIDGE SPECIAL PROVISIONS FOR TESTING REQUIREMENTS FOR WATER MAIN AND SEWER MAIN RESPECTIVELY.

2. REFER TO WATER MAIN ON BRIDGE SPECIAL PROVISIONS FOR WATER MAIN FLUSHING AND DISINFECTION REQUIREMENTS.



SEWER MANHOLE DETAIL

NOT TO SCALE

WASTEWATER MANHOLE VACUUM TESTING NOTES:

1. ENGINEER SHALL WITNESS ALL TESTING.

2. MANHOLES SHALL BE VACUUM TESTED BEFORE BACKFILLING.

3. ALL PIPE OUTLETS SHALL BE PLUGGED WITH TEST PLUGS. BRACE ALL PLUGS SECURELY.

4. PLACE THE TEST DEVICE OVER THE ACCESS OPENING AND INFLATE THE RUBBER RING TO SEAL BETWEEN THE TEST DEVICE AND THE MANHOLE CONE.

5. SLOWLY PUMP AIR OUT OF THE MANHOLE UNTIL A VACUUM IS CREATED INSIDE OF THE MANHOLE EQUAL TO TEN INCHES (10") OF MERCURY ON A CALIBRATED VACUUM GAUGE. THE REMOVAL OF AIR SHALL THEN BE STOPPED AND THE TEST BEGUN.

6. THE VACUUM MUST NOT DROP TO BELOW NINE INCHES (9") OF MERCURY WITHIN A TWO MINUTE TEST PERIOD.

7. IF MORE THAN ONE INCH (1") DROP IN VACUUM OCCURS WITHIN THE TWO MINUTE TEST PERIOD, THE MANHOLE HAS FAILED THE TEST AND SHALL BE REPAIRED OR RECONSTRUCTED AND RETESTED.

8. THE CONTRACTOR SHALL MAKE ALL REPAIRS OR REPLACEMENTS NECESSARY TO OBTAIN PASSING TEST RESULTS, AT NO ADDITIONAL EXPENSE TO THE OWNER.

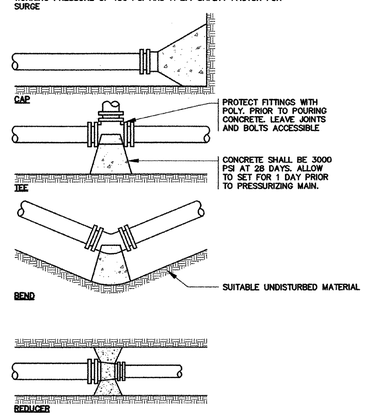
9. DO NOT REMOVE PLUGS UNTIL INTERNAL VACUUM IS COMPLETELY RELEASED.

.

AREA OF BEARING FACE OF CONCRETE THRUST BLOCKS
(IN SQUARE FEET)

PIPE SIZE (INCHES)	SOFT WET CLAY, SAND OR SILT (1000 PSF)	DRY SAND (3000 PSF)	COMPACT SAND, COARSE GRAVEL OR HARDPAN (9000 PSF)
CAP OR TEE			
8 OR LESS	20 SF	7 SF	4 SF
10	29	10	6
12	41	14	8
90° BEND			
8 OR LESS	27 SF	9 SF	6 SF
10	41	14	8
12	58	19	12
45° BEND			
8 OR LESS	15 SF	5 SF	3 SF
10	22	7	5
12	31	11	6
22 1/2° BEND OR LESS			
8 OR LESS	8	3	2
10	11	4	2
12	16	5	3
REDUCER			
8 OR LESS	8 SF	7 SF	3 SF
10	11	7	5
12	16	11	6

NOTE: BEARING SURFACE AREAS CALCULATED ASSUMING A MAXIMUM WORKING PRESSURE OF 150 PSI AND A 2:1 SAFETY FACTOR FOR SURGE



THRUST BLOCK DETAIL

NOT TO SCALE

PLOTTED 2/3/09

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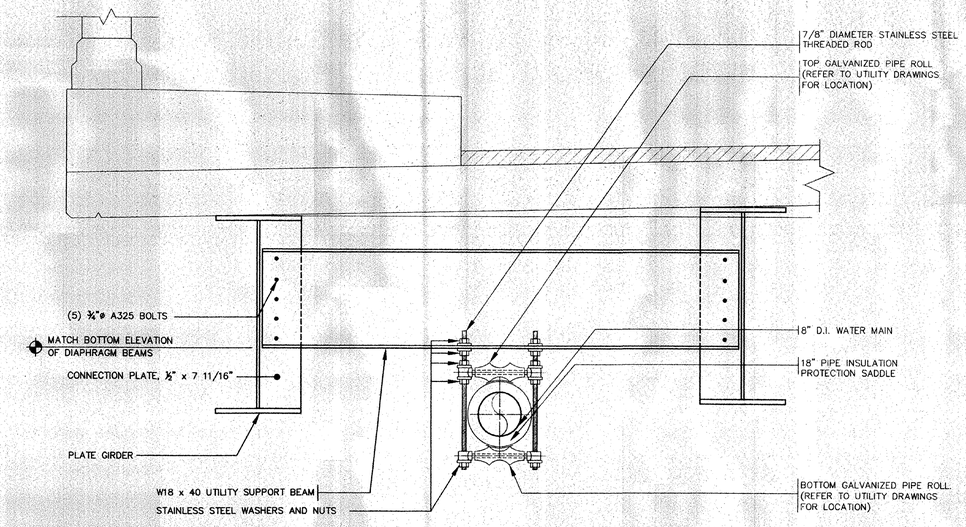
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 5
	Log Sta.
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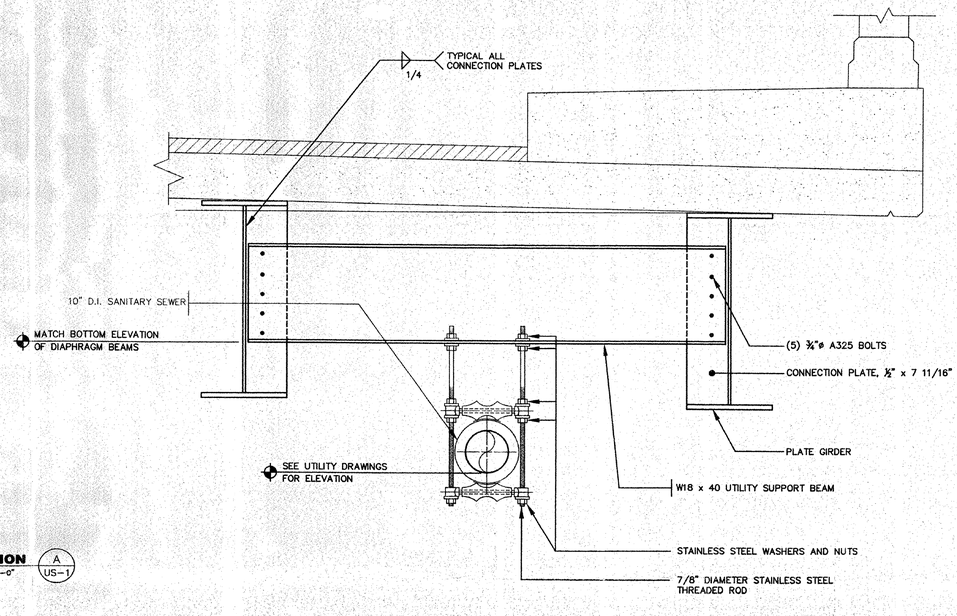
TH NO. 1 OVER THE GIHON RIVER

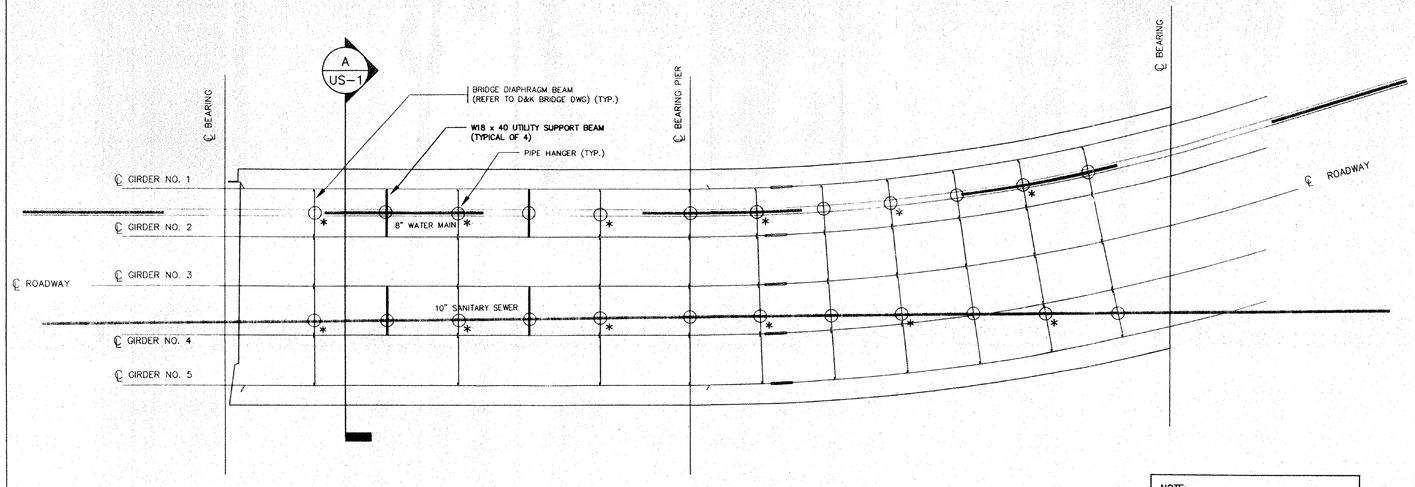
NOTES AND DETAILS

Designed By P.D.	Drawn By J.L./H.B.
Checked By C.C. Date 1/09	Bridge Design Supervisor Date 1/09
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
	OCE DWG NO. C-4
Bridge Sheet No.	Sheet 67 of 68



SECTION (A / US-1)
1" = 1'-0"





UTILITY FRAMING PLAN
SCALE: 1"=10'

* INDICATES PIPE HANGER WITH TOP ROLLER IN ADDITION TO BOTTOM ROLLER.

NOTE:
STRUCTURAL STEEL, BOLTS, WELDS, AND FINISH SYSTEM FOR UTILITY STRUCTURAL COMPONENTS SHALL MATCH THOSE FOR BRIDGE STRUCTURAL COMPONENTS.

REVISIONS		
NO.	DESCRIPTION	BY & DATE

RICHARD M. DOHERTY, P.E.
STRUCTURAL ENGINEERING
595 DORSET STREET - #6
SOUTH BURLINGTON, VT 05403
802-660-9212
FAX 802-660-8403

STATE OF VERMONT
RICHARD M. DOHERTY
NO. 3561
REGISTERED PROFESSIONAL ENGINEER

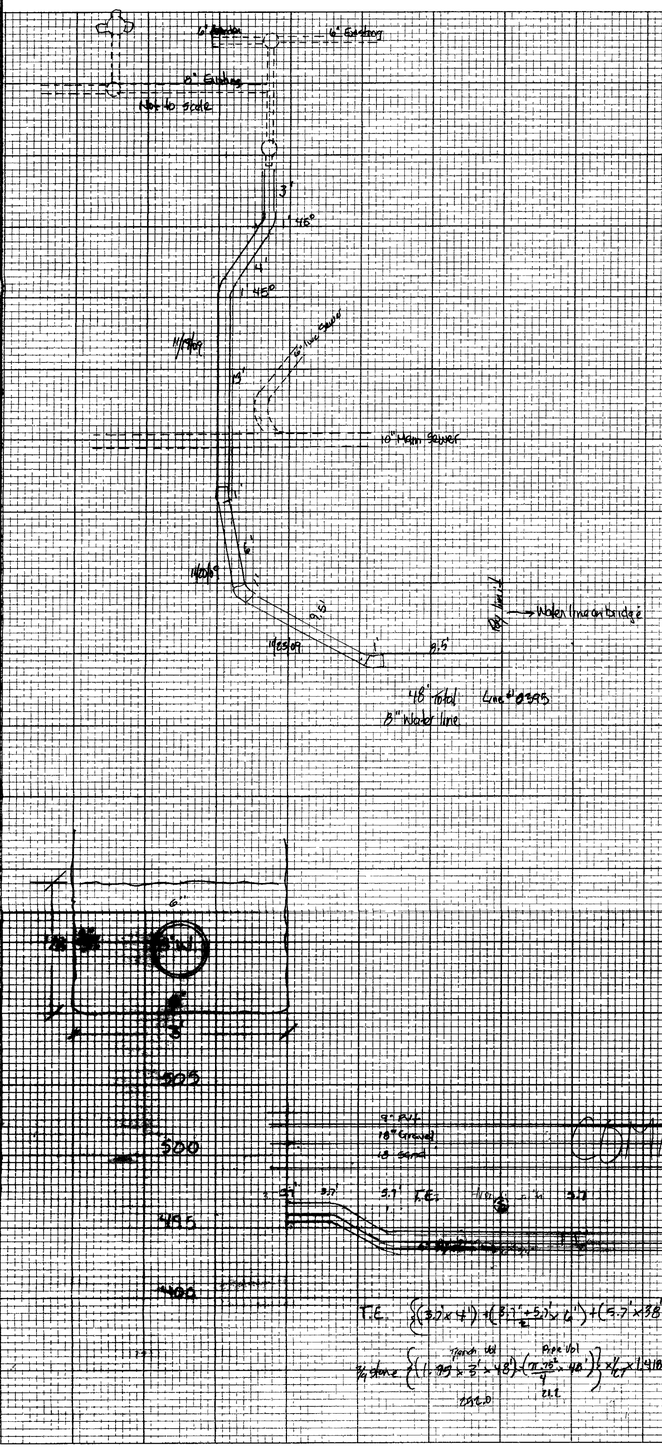
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of JOHNSON	Bridge No. 5
Highway No. 1	Log Sta.
	Surv. Sta.

TH NO. 1 OVER THE GIHON RIVER
UTILITY STRUCTURAL PLAN

Designed By RMD	Drawn By KKE
Checked By RMD Date 01/09	Bridge Design Supervisor Date
PROJECT JOHNSON	PROJECT NO. BHO 1448 (29)
I.G.C. Info.	OCE DWG NO. US-1
Bridge Sheet No.	Sheet 68 of 68


existing connection
4" Pipe
Bay limit Sewer Main on Bridge
SM#2
10' pipe
18'
Gravity Main
Subbase
Granular Backfill Structures
1.0'
Trench Earth Hide
3.0'
1.9'
0°
10° Spread
60°
Approach Slab
Trench Earth 204.20 Line 0900
25'x3.0'x3.0'x1/27 = 8.3 cy 10/ello
Granular Backfill for Structures 204.30 Line 0890
25'x3.0'x1.0'x1/27 = 2.8 cy 10/ello
Crushed Stone bedding 629.54 Line 0540
See bk 18, page 37 7.6 ton cuts
4+50
Bay limits Water Main on Bridge
24'
500
498.76
2.77
5.21
497.85
498.02
4+22
500.08
497.85
3.03
499.02
500.14
498.83
3.04
5.21
499.19
497.14
3.46
499.08
0
0+7.83
503.14
498.60
MH
4+47±
Trench Earth Sewer
Sta Area Dist Vol
4+22 14.43
25' 14.00 cy
4+47 15.83
π 7.83² / 4 x 7.83 = 15.07 cy
27.0 11/19/09 OK CMG
Trench Earth Water
Sta Area Dist Vol
4+22± 16°
33' 25.83 cy
4+55± 23°
11/09/09 OK CMG
Trench Earth 204.20 Line 0
14'x3.0'x3.0'x1/27 = 4.70 cy 10/
Granular Backfill for Structures
14'x1.0'x3.0'x1/27 = 1.6 cy 10/
Crushed Stone bedding 629.54
See bk 18 pg 37 4.2 ton
Bay limit Sewer Main on Bridge
Approach Slab
SM#1
100' pipe
24" pipe
2+71
2+50
2+45
2+32
2+25
Bay limits Water Main on Bridge
Trench Earth - (Sewer)
Sta Area Dist Vol
2+71 14.59
26' 15.90 cy
2+45 18.44
MH 2+46 8.59 cy
500.63
Subbase
497.48
0.52
5.21
497.61
497.71
2.65
5.21
499.11
2+71
Trench Earth - (Water)
Sta Area Dist Vol
2+71 13.08
24' 18.04 cy
2+45 23.51
502.56
498.06
5.28
498.78
498.17
3.54
5.21
499.08
2+45 (and Stubbs)
502.42
498.17
4.04'
499.13
0±7.83'
499.13



T.E. $\left\{\left[(3.7'\times 4')+\left(\left(8.7'+5.7'\right)\times 6'\right)+(5.7'\times 38')\right]\times 3'\times\frac{1}{27}\right\}$ = 89.8 cy Line# 0395

Trench Vol − Pipe Vol = net vol × 1.41 swell = Tons

$\frac{3}{4}$" Stone $\left\{\left(1.99'\times 3'\times 48'\right)-\left(\pi\frac{.75^2}{4}\times 48'\right)\right\}\times 1.41 = 18.1$ Tons Line# 0405

Dr. 13, Pg 183

Granular Backfill for Structure

See TE $=(3.7'+1.76')$

$\left\{(11.46'\times 4')+\left(\frac{1.83'+3.95'}{2}\times 6'\right)+(3.95'\times 38')\right\}\times 3'\times\frac{1}{27}$ =

7.80 sf + 11.70 sf = 160.10 sf

$\times 3'\times\frac{1}{27}$ = 19.5 cy Line# 0970

14"/10' cover

Project sheet 2/6

Johnson Blvd 1448 LPH

New 8" Water Line by Built

Utilities Non Perf.

T.E.

¾" Stone

Granular Bk-fill Structure

CHARLES BRUNING COMPANY
CROSS SECTION 10 x 10
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EXISTING VALVE COVER

RUNWAY STA 1+26

STA 0+85 = RUNWAY STA 1+26

505

500

495

490

ORIGINAL GROUND

WATER LINE STATION 0+00 (LOW)

0+25 0+50 0+75 1+00 1+25 1+50 1+75 2+00 2+10

W STA 0+00 = Ⓜ STA 0+19
FG ± INV = 503.20

AREAS
TRENCH EXC = (502.70 - 498.0) x 2 = 20.17 SF
CRUSHED STONE = 4.91 SF
GRAN BACKFILL = (502.0 - 498.0) x 2 = 18.72 SF
TRENCH EXC BELOW 5" = (498.16 - 498.0) x 2 = 1.11 SF

W STA 0+48 ± = Ⓜ STA 0+67
FG ± INV = 501.90

AREAS
TRENCH EXC = (501.90 - 498.0) x 3.5 = 25.48 SF
CRUSHED STONE = 4.91 SF
GRAN BACKFILL = (501.0 - 498.0) x 3.5 = 20.79 SF
TRENCH EXC BELOW 5" = (498.16 - 498.0) x 3.5 = 1.11 SF

W STA 0+69 = Ⓜ STA 1+06
FG ± INV = 501.40

AREAS
TRENCH EXC = (501.40 - 498.0) x 3.5 = 27.79 SF
CRUSHED STONE = 4.91 SF
GRAN BACKFILL = (501.0 - 498.0) x 3.5 = 20.79 SF
TRENCH EXC BELOW 5" = (498.16 - 498.0) x 3.5 = 1.11 SF

W STA 1+06 = Ⓜ STA 1+35
FG ± INV = 501.00

AREAS
TRENCH EXC = (501.00 - 498.0) x 3.5 = 24.48 SF
CRUSHED STONE = 4.91 SF
GRAN BACKFILL = (500.0 - 498.0) x 3.5 = 14.58 SF
TRENCH EXC BELOW 5" = (498.16 - 498.0) x 3.5 = 1.11 SF

W STA 1+35 = Ⓜ STA 1+52
FG ± INV = 501.00 - 0.01 x 17 = 500.83

AREAS
TRENCH EXC = (500.83 - 498.0) x 3.5 = 24.48 SF
CRUSHED STONE = 4.91 SF
GRAN BACKFILL = (500.0 - 498.0) x 3.5 = 14.58 SF
TRENCH EXC BELOW 5" = (498.16 - 498.0) x 3.5 = 1.11 SF

W STA 1+52 = Ⓜ STA 1+70
FG ± INV = 500.83 - 0.01 x 18 = 500.65

AREAS
TRENCH EXC = (500.65 - 498.0) x 3.5 = 23.13 SF
CRUSHED STONE = 4.91 SF
GRAN BACKFILL = (500.0 - 498.0) x 3.5 = 14.58 SF
TRENCH EXC BELOW 5" = (498.16 - 498.0) x 3.5 = 1.11 SF

W STA 1+70 = Ⓜ STA 1+84.21
FG ± INV = 500.65 - 0.01 x 14.21 = 500.51

AREAS
TRENCH EXC = (500.51 - 498.0) x 3.5 = 21.94 SF
CRUSHED STONE = 4.91 SF
GRAN BACKFILL = (500.0 - 498.0) x 3.5 = 14.58 SF
TRENCH EXC BELOW 5" = (498.16 - 498.0) x 3.5 = 1.11 SF

W STA 1+84.21 = Ⓜ STA 1+85
FG ± INV = 500.51 - 0.01 x 0.79 = 500.50

AREAS
TRENCH EXC = (500.50 - 498.0) x 3.5 = 21.88 SF
CRUSHED STONE = 4.91 SF
GRAN BACKFILL = (500.0 - 498.0) x 3.5 = 14.58 SF
TRENCH EXC BELOW 5" = (498.16 - 498.0) x 3.5 = 1.11 SF

W STA 1+85 = Ⓜ STA 2+05
FG ± INV = 500.50 - 0.01 x 20 = 500.30

AREAS
TRENCH EXC = (500.30 - 498.0) x 3.5 = 20.17 SF
CRUSHED STONE = 4.91 SF
GRAN BACKFILL = (500.0 - 498.0) x 3.5 = 14.58 SF
TRENCH EXC BELOW 5" = (498.16 - 498.0) x 3.5 = 1.11 SF

W STA 2+05 = Ⓜ STA 2+48
FG ± INV = 500.30 - 0.01 x 43 = 499.87

AREAS
TRENCH EXC = (499.87 - 498.0) x 3.5 = 13.13 SF
CRUSHED STONE = (498.85 - 498.16) x 3.5 = 5.05 SF
GRAN BACKFILL = (498.0 - 495.85) x 3 = 7.05 SF

TRENCHES: DOUBLE FACING = DSG

PROJECT GOAL %

EXIST. WATER LINE

W STA 0+00 = Ⓜ STA 0+19
FG ± INV = 503.20

W STA 0+48 ± = Ⓜ STA 0+67
FG ± INV = 501.90

W STA 0+69 = Ⓜ STA 1+06
FG ± INV = 501.40

W STA 1+06 = Ⓜ STA 1+35
FG ± INV = 501.00

W STA 1+35 = Ⓜ STA 1+52
FG ± INV = 501.00 - 0.01 x 17 = 500.83

W STA 1+52 = Ⓜ STA 1+70
FG ± INV = 500.83 - 0.01 x 18 = 500.65

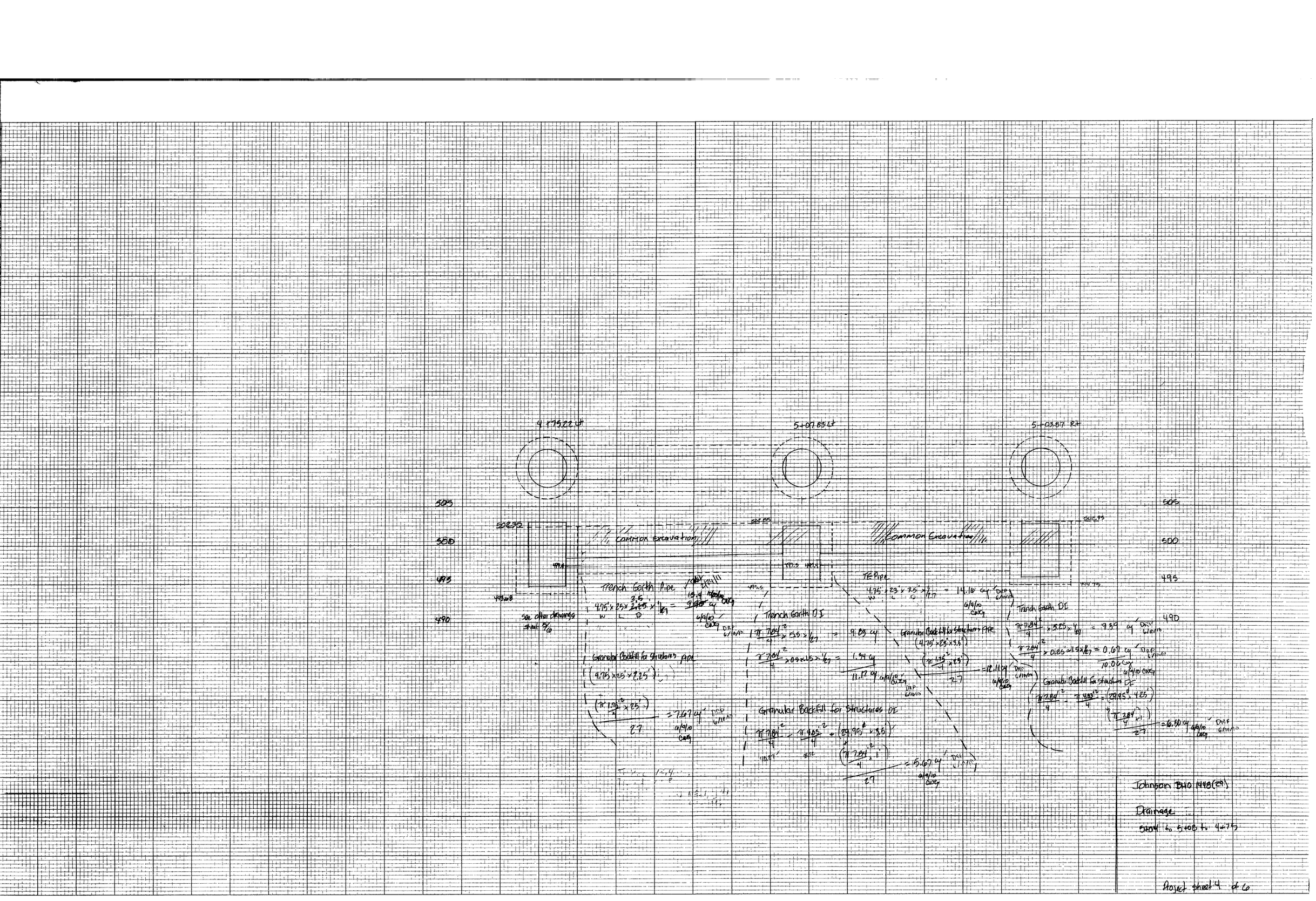
W STA 1+70 = Ⓜ STA 1+84.21
FG ± INV = 500.65 - 0.01 x 14.21 = 500.51

W STA 1+84.21 = Ⓜ STA 1+85
FG ± INV = 500.51 - 0.01 x 0.79 = 500.50

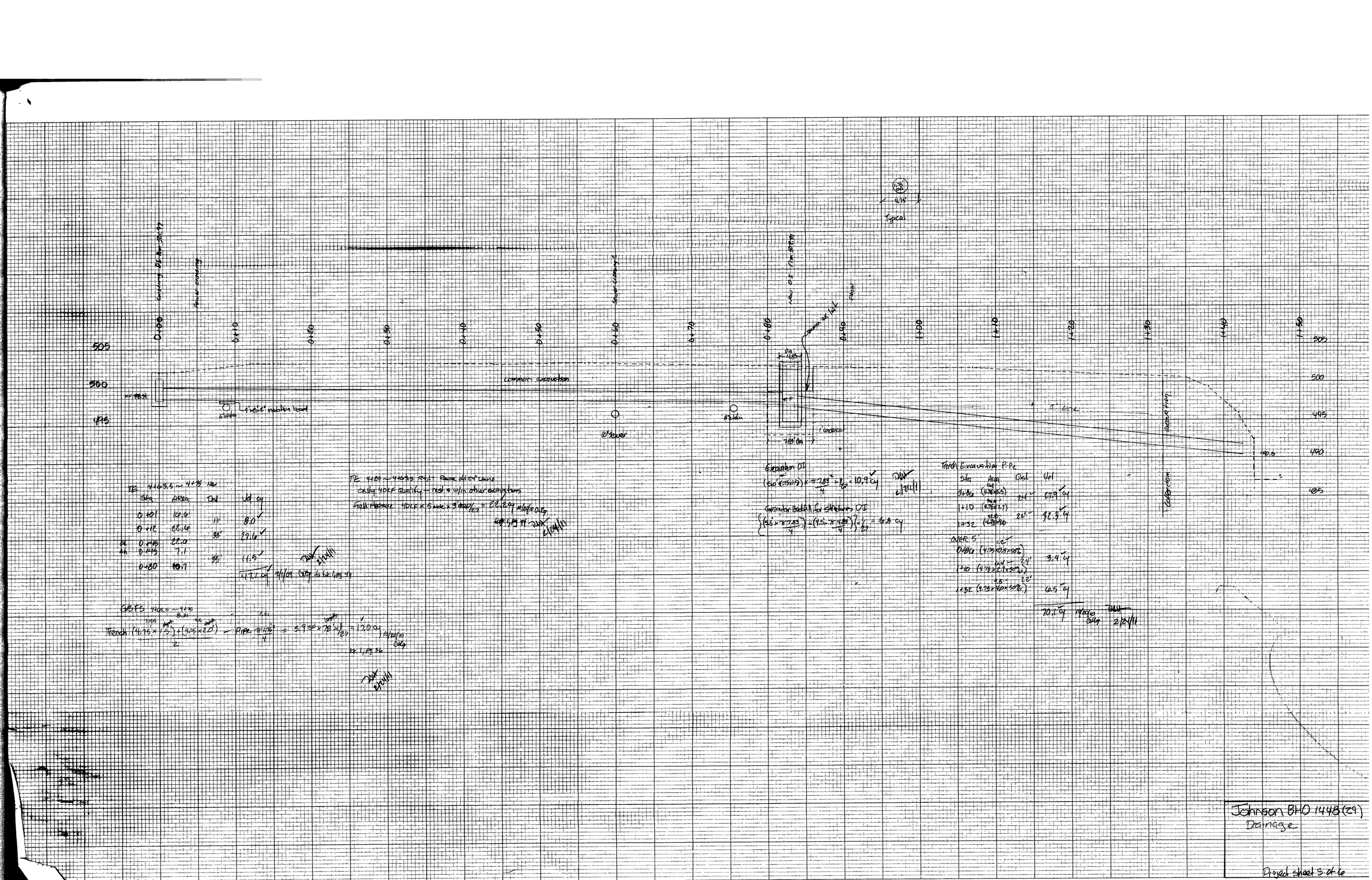
W STA 1+85 = Ⓜ STA 2+05
FG ± INV = 500.50 - 0.01 x 20 = 500.30

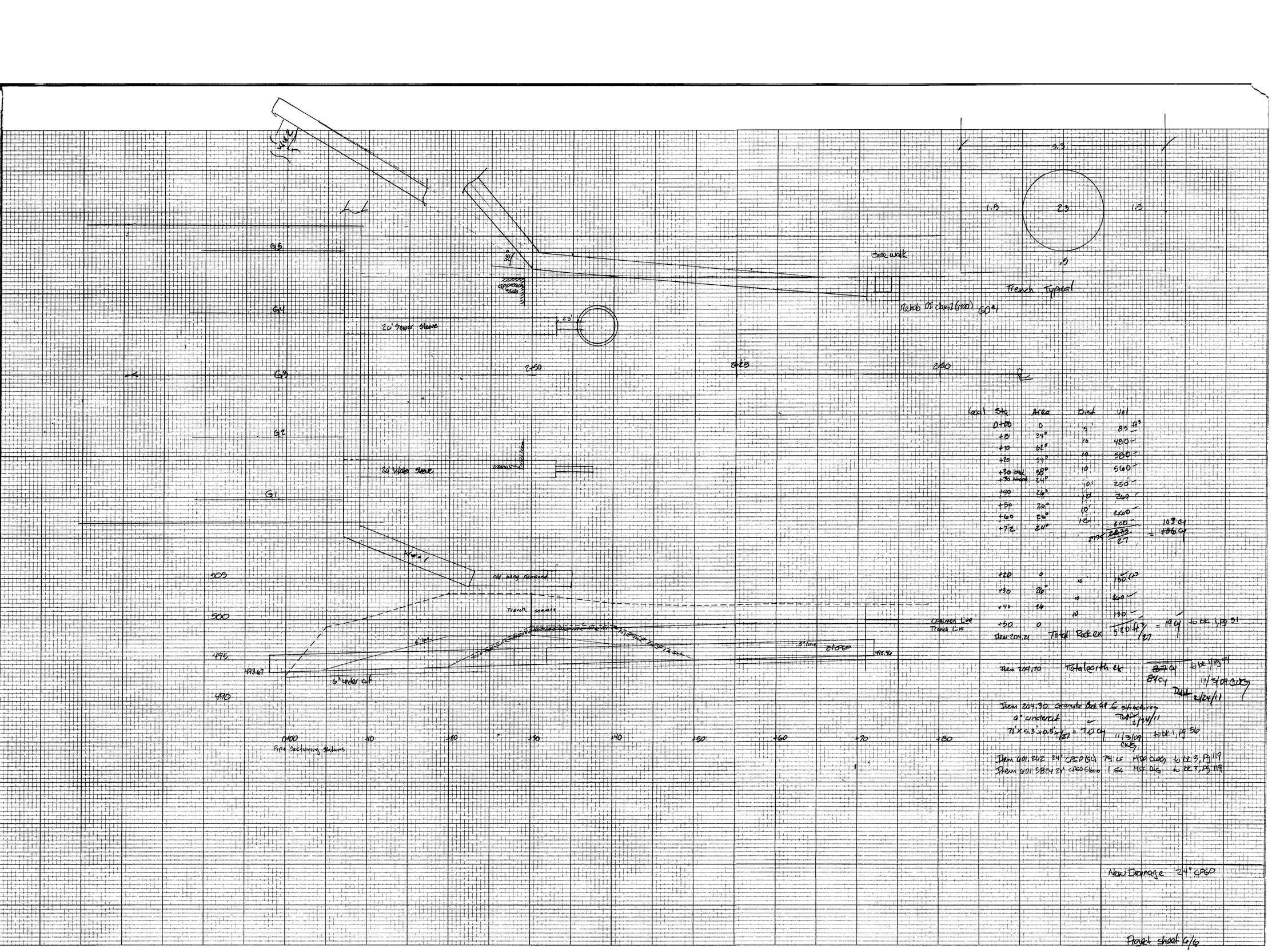
W STA 2+05 = Ⓜ STA 2+48
FG ± INV = 500.30 - 0.01 x 43 = 499.87

TRENCH EXC = (499.87 - 499.10) x 3.5' = 12.13 SF
CRUSHED STONE = (498.85 - 498.16) x 3.5' = 5.05 SF
GRAN BACKFILL = (498.0 - 495.85) x 3'



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CROSS SECTION 10 x 10
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0+00
0+10
0+20
0+30
0+40
0+50
0+60
0+70
0+85
0+98
1+00
1+10
1+20
1+30
1+40
1+50
505
500
495
490
485
existing 8" sewer
new 8" sewer
common excavation
6" subdrain
4'x2'6" mailbox board
8" sewer
8" DIP
1' undercut
7.88' DIA
4.75'
Typical
Trench Excavation P.P.
Sta Area Dist Vol
0+00 (4.75x5.5) 22' 27.9 cy
1+10 (4.75x7.7) 22' 39.3 cy
1+32 (4.75x10) 22' 50.8 cy
OVER 5'
0+86 (4.75x10.5x50%) 24' 3.4 cy
1+10 (4.75x2.7x50%) 22' 6.5 cy
70.1 cy 10/20/10 DWW 2/24/11
Excavation OT
(5'0"x7.75'x1') x 7.85' / 27 = 10.9 cy
DWW 2/24/11
Granular Backfill for Structures OT
((9.5'x7.85')/2) x ((9.5'x4.85')/2) x 1' / 27 = 6.8 cy
TE 4489 – 4463.5 R+L Pavers add'l 4" concr
CMSW 40CF Quality – test 3 w/in other excavations
Fluid Measure 40CF x 5 wide x 3' deep / 12.7 = 22.8 cy
DWW 2/24/11
TE 4463.5 – 4458 Rev
Sta Area Dist Vol cy
0+01 10.6 11' 8.0
0+12 22.16 33' 29.6
DL 0.415 22.16
LL 0.415 7.1 55' 11.0
0+80 10.7
41.7 cy 9/1/09 DWW to 62 Lbs 44
DWW 2/24/11
SHEET 4463.5 – 4458
Trench (4.75x10.5)/2 + (4.75x2.0)/2 – Pipe π(1.75)²/4 = 5.95'x7.8'x1'/27 = 17.0 cy
10/20/10 DWW
12 Lbs 36
DWW 2/24/11
Johnson BHO 1448(29)
Drainage
Project sheet 5 of 6
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CROSS SECTION 10 x 10
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CHARLES BRUNING COMPANY
CROSS SECTION 10 x 10
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Loc	Sta	Area	Dist	Vol
	0+00	0	5'	85 ft³
	+5	34⁰	10	480 ~
	+10	68⁰	10	500 ~
	+20	54⁰	10	560 ~
	+30 bend	58⁰	10	560 ~
	+30 ahead	24⁰	10'	250 ~
	+40	26⁰	10	260 ~
	+50	26⁰	10'	260 ~
	+60	26⁰	10'	260 ~
	+70	24⁰	10	240 ~
			2199 / 27	3800 ~ = 103 CY = 786 CY
	+20	0	10	150 ft³
	+30	26⁰	10	260 ~
	+40	14	10	130 ~
	+50	0	10	520 ft³ / 27 = 19 CY

Item 204.21 Total Rock Ex

Item 203.20 Total earth Ex 84 CY = 109 CUCY

Item 209.30: Granular Bed Of Structures
6" undercut
71' x 5.3' x 0.5' / 27 = 7.0 CY = 11 3/09 CUCY

Item 601.212 24" CPEP (SL) 74 LF MSE CURV
Item 601.5804 24" CPEP Elbow 1 EA MSE CURV

to DK 1, Pg 51
to DK 1, Pg 44
Date 2/24/11
to DK 1, Pg 56
to DK 3, Pg 119
to DK 3, Pg 119

Project sheet 6/16

GENERAL NOTES:

1. PAD AND MATERIALS SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, DATED 2006 AND THE LATEST REVISIONS, INCLUDING SUPPLEMENTARY SPECIFICATIONS, CONTRACT PLANS, AND THE SPECIAL PROVISIONS. GENERAL SHOP PRACTICES, STRUCTURAL FABRICATION, WELDING AND ASSEMBLY SHALL BE GOVERNED BY ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE.

2 THESE SHOP DRAWINGS ARE 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 THESE DRAWINGS.

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

5. ALL CORNERS AND EDGES OF STEEL PLATES SHALL BE GROUND TO A 1 6 RADIUS.

6. PTFE (TEFLON) SHALL BE VIRGIN, UNFILLED POLYTETRAFLUOROETHYLENE. PTFE IS PURCHASED ETCHED ON ONE SIDE FOR BONDING. SEE VULCANIZE BONDING PROCEDURE ELSEWHERE ON THIS SHEET.

7. STAINLESS STEEL SHALL CONFORM TO ASTM A240–TYPE 304 AND SHALL BE 11GA. STAINLESS STEEL SLIDING SURFACES IN CONTACT WITH PTFE SHALL HAVE A NO. 8 MIRROR FINISH AND ALL OTHERS SHALL HAVE A 2B FINISH

8. ALL STRUCTURAL STEEL SURFACES TO BE GALVANIZED SHALL BE CLEANED IN ACCORDANCE WITH SSPC–SP10.

9 ALL SPECIFIED STEEL TO BE GALVANIZED SHALL BE IN ACCORDANCE WITH ASTM A123 SPECIFICATIONS. REPAIR OF DAMAGED HOT DIPPED GALVANIZING PER ASTM A780, ANNEX A1.

10. WELDING PROCEDURES SHALL BE ESTABLISHED BY THE CONTRACTOR TO RESTRICT THE TEMPERATURE TO A MAXIMUM OF 93°C (200°F) FOR SURFACES IN CONTACT WITH THE ELASTOMER AND 149°C (300°F) FOR SURFACES IN CONTACT WITH PTFE. TEMPERATURES SHALL BE DETERMINED BY TEMPERATURE INDICATING WAX PENCILS OR OTHER SUITABLE MEANS

11 THE EXPANSION BEARINGS WILL BE SHIPPED CENTERED, AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OFFSET THE SLIDE PLATES IN THE FIELD DURING INSTALLATION. REFER TO THE CONTRACT DRAWINGS SHEET 32 OF 68 FOR INITIAL OFFSETS

12. PARTICULAR CARE SHOULD BE EXERCISED TO MASK AND PROTECT THE PTFE AND POLISHED STAINLESS STEEL SURFACES FROM BLAST ABRASIVES, WELD SPLATTER, AND CONCRETE RUN–OFF DURING CONSTRUCTION.

13 THE BEARINGS SHALL BE SUBJECTED TO RANDOM IN–HOUSE ELASTOMER TESTING AND IN–HOUSE PROOF LOAD TESTING IN ACCORDANCE WITH AASHTO DIVISION I, SECTION 14 (METHOD "A") AND AASHTO DIVISION II, SECTION 18.

14 BLAST AREA OF STEEL TO BE BONDED TO ELASTOMER TO REMOVE GALVANIZATION PRIOR TO VULCANIZE BONDING OF PAD TO STEEL.

PROCEDURE FOR VULCANIZE BONDING PTFE TO STAINLESS STEEL

1) WIPE OFF GREASE AND EXCESS DIRT ON STAINLESS STEEL (S.S.) & PTFE SURFACES USING A SOLVENT.

2) BLAST S.S. SURFACE TO A WHITE METAL FINISH AND RE–WIPE WITH A SOLVENT.

3) DIP S.S. INTO A PRIMER COAT OF "CHEMLOK 205 METAL–TO–RUBBER ADHESIVE PRIMER" (LORD) ON BLASTED AREA. DRY–FILM THICKNESS OF PRIMER COAST SHOULD BE BETWEEN 0.2 TO 0 4 MILS PER PRODUCT DATA SHEETS.

4) LET DRY FOR A MINIMUM OF 30 MINUTES.

5) DIP S.S. INTO A FINAL COAT OF "CHEMLOK 220 ONE–COAT ADHESIVE" (LORD) OVER PRIMER. DRY–FILM THICKNESS OF FINAL COAT SHOULD BE BETWEEN 0.4 AND 0.7 MILS PER THE PRODUCT DATA SHEETS.

6) TOTAL THICKNESS SHOULD BE 0.6 TO 1.1 MILS

7) LET DRY FOR APPROXIMATELY 1 HOUR

8) MOLD RUBBER OR NEOPRENE TO PREPPED S.S. UNDER HEAT AND PRESSURE. MOLD TIME, HEAT, AND PRESSURE SHALL VARY DUE TO SIZE AND THICKNESS OF BEARINGS S.S SHOULD REACH A TEMPERATURE OF 260 DEGREES (F) DURING THE MOLDING PROCESS FOR BONDING.

PROCEDURE FOR PREPARING PTFE

1) WIPE OFF GREASE AND EXCESS DIRT ON ETCHED SIDE OF PTFE.

2) FOLLOW STEPS #3–#7 FROM ABOVE FOR PREPPING PTFE.

3) WHEN MOLDING PTFE, PLACE A 0 030" THICK PIECE OF RUBBER BETWEEN S S & PTFE AND FOLLOW STEP #8 FROM ABOVE FOR MOLDING

TOLERANCE TABLE	
DESCRIPTION (ELASTOMER)	TOLERANCE
ELASTOMERIC BEARING DESIGN THICKNESS > 1. 250"	+ 1/4", -0
ELASTOMERIC BEARING PLAN ≤ 36"	+ 1/4", -0
ELASTOMERIC BEARING PLAN > 36"	+ 1/2", -0
ELASTOMERIC COVER TOP & BOTTOM	+ 1/8", -0
ELASTOMERIC COVER SIDES	+ 1/8", -0
ELASTOMERIC DISC SHORE DUROMETER	60 ± 5
THICKNESS OF INDIVIDUAL LAYERS OF ELASTOMER (LAMINATED BEARINGS	
ONLY) AT ANY POINT WITHIN THE BEARING	± 1/8"
VARIATION FROM A PLANE PARALLEL TO THE THEORETICAL SURFACE	
(AS DETERMINED BY MEASUREMENTS AT THE EDGE OF THE BEARINGS)	
TOP	± 0. 005 rad
SIDES	± 1/4"
POSITION OF EXPOSED CONNECTION MEMBERS	± 1/8"
EDGE COVER OF EMBEDDED LAMINATES OF CONNECTION MEMBERS	+ 1/8", -0
SIZE OF HOLES, SLOTS, OR INSERTS	± 1/16"
POSITION OF HOLES, SLOTS, OR INSERTS	± 1/16"
SOLE PL. PLAN DIMENSIONS	± 1/16"
SOLE PL. THICKNESS	± 1/16"
HOLE LOCATION	± 1/16"
SOLE PL. UNDERSIDE SURFACE FLATNESS	CLASS A
PTFE THICKNESS	+1/16, -1/32"
PTFE PLAN DIMENSION, TOTAL DESIGN AREA	± 1/16"
SLIDING STAINLESS STEEL FINISH	~~≤20μ"~~ RMS #8 MIRROR <10μ"

FLATNESS TOLERANCE	
CLASS	X NOM. DIM.
A	0. 001
B	0. 002
C	0. 003

Accepted
Accepted as Noted ✓
Accepted Noted Resubmit
Rejected. Revise Resubmit
Rejected - Unacceptable

Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents The Engineer assumes no liability for errors or omissions that may be contained herein The Contractor by approving and submitting these documents, verifies their accuracy as stipulated on the Contractor's Shop Drawing Stamp

DuBOIS AND KING

6/8/09 By

KMH 6/12/09

VTrans - PDD

MAY 2 2 2009

Structures Design Section

REV	DESCRIPTION	DATE	DET	CKD

D.S. BROWN

THE D S BROWN COMPANY
300 E CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419 257 3561
FAX 419 257 0332
WWW DSBROWN COM

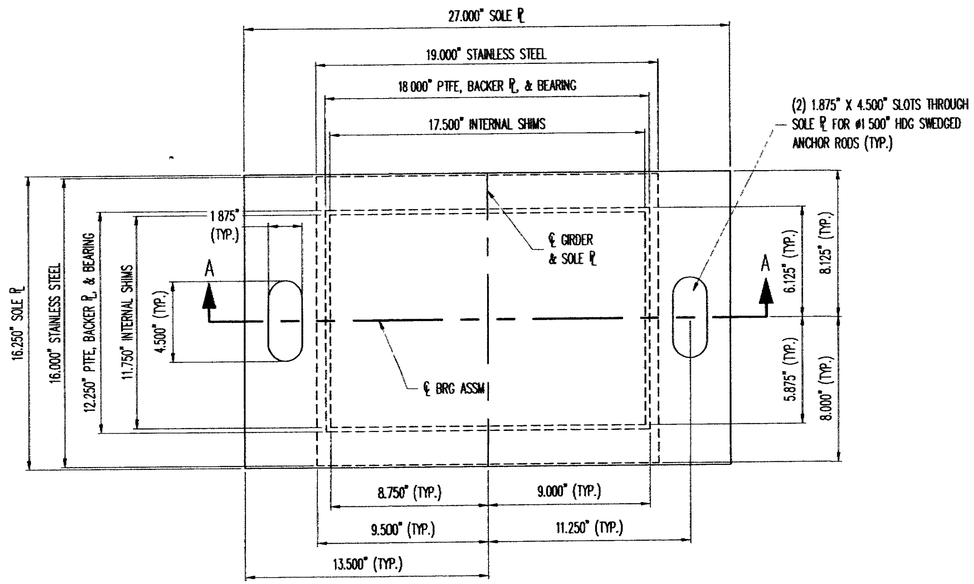
LOCATION — TH NO. 1 OVER THE GIHON RIVER
BRIDGE — 5
PROJECT — BHO 1448 (29)
—
P.O. NO. — 6045
DESIGNER — DuBOIS & KING, INC.
CUSTOMER — SD IRELAND CONSTRUCTION

ITEM	QUANTITY
–	–
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–	–
–	–
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–	–
–	–
–	–

DESCRIPTION: GENERAL NOTES
LAMOILLE CO., VT

SCALE	DRAWN BY	CHECKED BY	DATE	
N T.S.	SP	EK	5/09	–
PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET	
26274	1104	1	GN1	

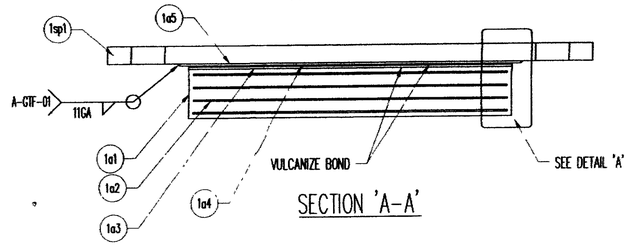
MK	QTY	DESCRIPTION	MATERIAL	LENGTH	REMARKS	REV
1A	5	ELASTOMERIC BEARING				-
1a1	5	2.675" X 18.000"	NEOPRENE	12.250"	60+/-5 DURO GR.3	-
1a2	20	14 GA. X 17.500"	A1011 GR 36	11.750"	PLAIN	-
1a3	5	11 GA. X 18.000"	A240 T304, 2B	12.250"	PLAIN	-
1a4	5	0.125" X 18.000"	PTFE	12.250"	PURE VIRGIN UNFILLED	-
1a5	5	11 GA. X 19.000"	A240 T304, #8 & 2B	16.000"	PLAIN	-
1sp1	5	1.000" X 27.000"	A709 GR 36 OR 50	16.250"	A123-HDG	-
					5/14/2009 11:03:05 AM	



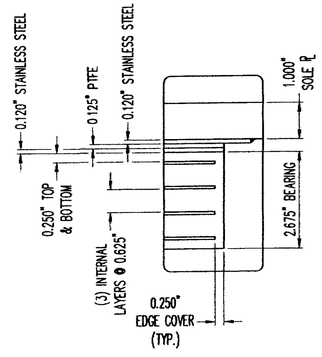
PLAN VIEW

EXPANSION BEARING

(5) REQ'D @ ABUTMENT NO. 1



SECTION 'A-A'



DETAIL 'A'

LOAD DATA	
MAXIMUM BEARING STRESS (psi)	979.0

VTrans - PDD

MAY 2 2 2009

Structures Design Section

SEE SHEET GN1 FOR GENERAL NOTES
SEE SHEET 4 FOR ANCHOR ROD ASSEMBLY

Accepted
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable

Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents, verifies their accuracy as stipulated on the Contractors Shop Drawing Stamp

DuBOIS AND KING

Date 6/8/09 By Erin Dubois

KMH 6/12/09

REV	DESCRIPTION	DATE	DET	CKD

D.S. BROWN

THE D.S. BROWN COMPANY
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419 257 3561
FAX 419 257 0332
WWW.DSBROWN.COM

LOCATION — TH NO 1 OVER THE GIHON RIVER
BRIDGE — 5
PROJECT — BHO 1448 (29)
—
P.O. NO. — 6045
DESIGNER — DuBOIS & KING, INC.
CUSTOMER — SD IRELAND CONSTRUCTION

ITEM	QUANTITY
26274-1104-1	5 OF 10
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-	-
-	-
-	-
-	-
-	-
-	-
-	-

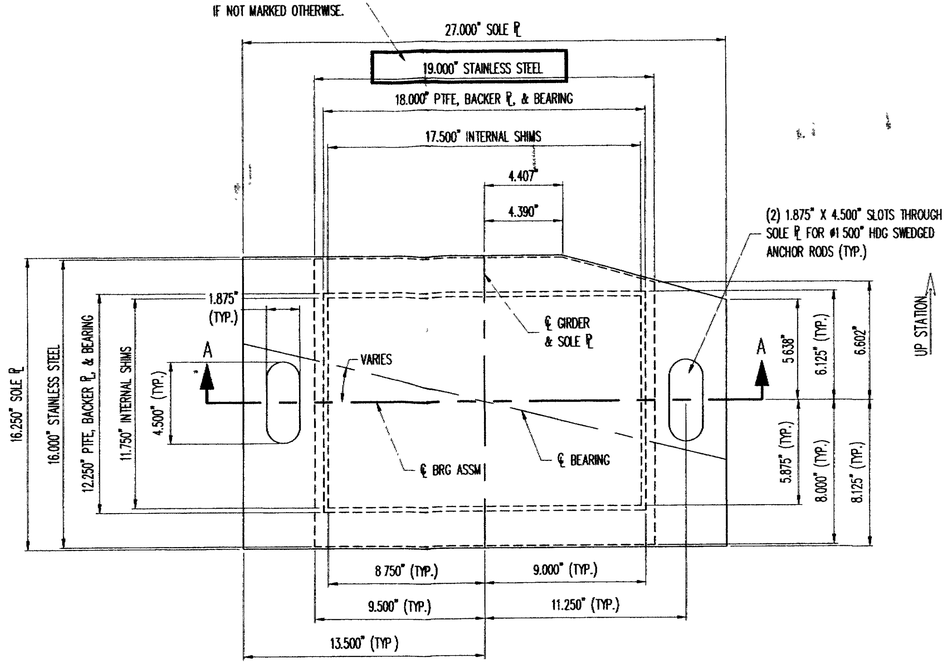
DESCRIPTION: VERSIFLEX ELASTOMERIC BEARING
LAMOILLE CO., VT

SCALE	DRAWN BY	CHECKED BY	DATE	
N.T.S.	SP	EK	5/09	-
PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET	
26274	1104	1	1	

MK	QTY	DESCRIPTION	MATERIAL	LENGTH	REMARKS	REV
2A	5	ELASTOMERIC BEARING				-
2a1	5	2.675" X 18.000"	NEOPRENE	12.250"	60+/-5 DURO GR.3	-
2a2	20	14 GA. X 17.500"	A1011 GR 36	11.750"	PLAIN	-
2a3	5	11 GA. X 18.000"	A240 T304, 2B	12.250"	PLAIN	-
2a4	5	0.125" X 18.000"	PTFE	12.250"	PURE VIRGIN UNFILLED	-
2a5	5	11 GA. X 19.000"	A240 T304, #8 & 2B	16.000"	CHAMFER; PLAIN	-
2sp1	5	1.000" X 27.000"	A709 GR 36 OR 50	16.250"	CHAMFER, A123-HDG	-
					5/14/2009 11:03:05 AM	

PLEASE VERIFY DS BROWN TO FABRICATE AS DETAILED IF NOT MARKED OTHERWISE.

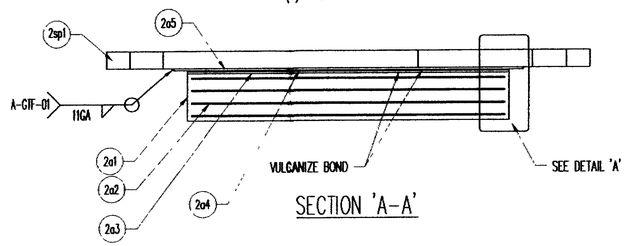
O.K. AS SHOWN



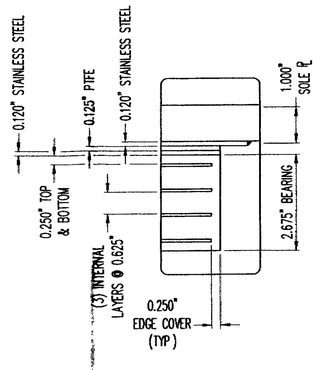
PLAN VIEW

EXPANSION BEARING

(5) REQ'D @ ABUTMENT NO 2



SECTION 'A-A'



DETAIL 'A'

NOTE: THE DS BROWN COMPANY HAS CLIPPED THE BEARING USING THE GREATEST ANGLE INSTALLATION AND FABRICATION WILL BE SIMPLIFIED IF ALL BEARINGS ARE THE SAME. PLEASE VERIFY. THE DS BROWN COMPANY WILL FABRICATE AS DETAILED UNLESS MARKED OTHERWISE

O.K. AS SHOWN

LOAD DATA	
MAXIMUM BEARING STRESS (psi)	979.0

VTrans - PDD

MAY 2 2 2009

Structures Design Section

SEE SHEET GN1 FOR GENERAL NOTES

SEE SHEET 4 FOR ANCHOR ROD ASSEMBLY

Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable
Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor by approving and submitting these documents, verifies their accuracy as stipulated on the Contractor's Shop Drawing Stamp
DuBOIS AND KING
Date 6/8/09 By KMH 6/12/09

REV	DESCRIPTION	DATE	DET	CHD

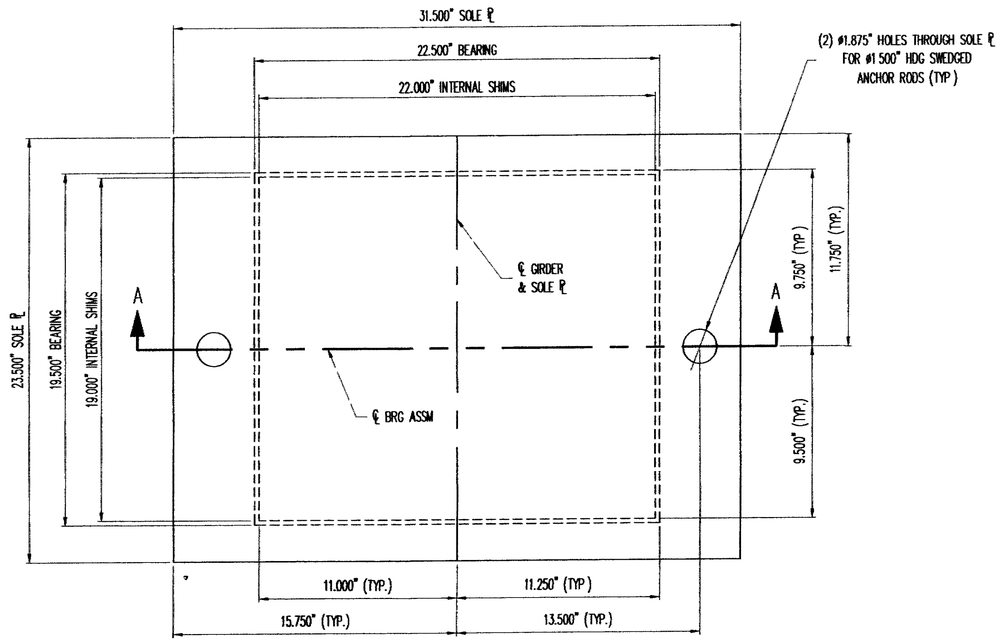
D.S. BROWN

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

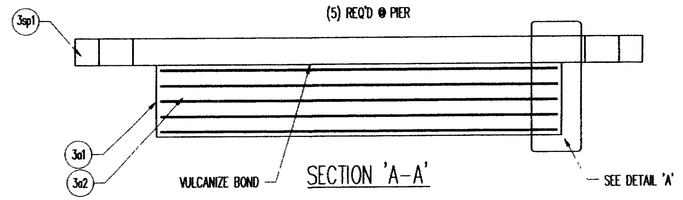
	ITEM	QUANTITY
LOCATION — TH NO. 1 OVER THE GIHON RIVER	26274-1104-1	5 OF 10
BRIDGE — 5	-	-
PROJECT — BHO 1448 (29)	-	-
—	-	-
P.O. NO. — 6045	-	-
DESIGNER — DuBOIS & KING, INC	-	-
CUSTOMER — SD IRELAND CONSTRUCTION	-	-
	-	-

DESCRIPTION	SCALE	DRAWN BY	CHECKED BY	DATE	
VERSIFLEX ELASTOMERIC BEARING LAMOILLE CO., VT	N.T.S.	SP	EK	5/09	-
	PROJECT NUMBER 26274	PRODUCT CODE 1104	RELEASE 1	SHEET 2	

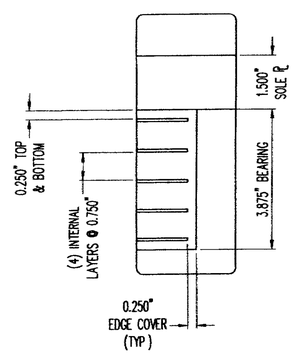
MK	QTY	DESCRIPTION	MATERIAL	LENGTH	REMARKS	REV
3A	5	ELASTOMERIC BEARING				-
3a1	5	3.875" X 22.500"	NEOPRENE	19.500"	60+/-5 DURO GR.3	-
3a2	25	14 GA. X 22.000"	A1011 GR 36	19.000"	PLAIN	-
3sp1	5	1.500" X 31.500"	A709 GR 36 OR 50	23.500"	A123-HDG	-
					5/13/2009 2:43:01 PM	



PLAN VIEW
FIXED BEARING
(5) REQ'D @ PIER



SECTION 'A-A'



DETAIL 'A'

LOAD DATA	
MAXIMUM BEARING STRESS (psi)	989.0

VTrans - PDD

MAY 2 2 2009

Structures Design Section

SEE SHEET GN1 FOR GENERAL NOTES
SEE SHEET 4 FOR ANCHOR ROD ASSEMBLY

Resubmit
Unacceptable
only for conformance with the design concept of the compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor by accepting and submitting these documents verifies their accuracy as stipulated on the Contractor's Shop Drawing Stamp.
DuBOIS AND KING
Date 6/8/09 By

KMH 6/12/09

REV	DESCRIPTION	DATE	DET	CKD

D.S. BROWN

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

LOCATION — TH NO. 1 OVER THE GIHON RIVER
BRIDGE — 5
PROJECT — BHO 1448 (29)
—
P.O. NO. — 6045
DESIGNER — DuBOIS & KING, INC.
CUSTOMER — SD IRELAND CONSTRUCTION

ITEM	QUANTITY
26274-1104-1	5 OF 10
–	–
–	–
–	–
–	–
–	–
–	–
–	–
–	–

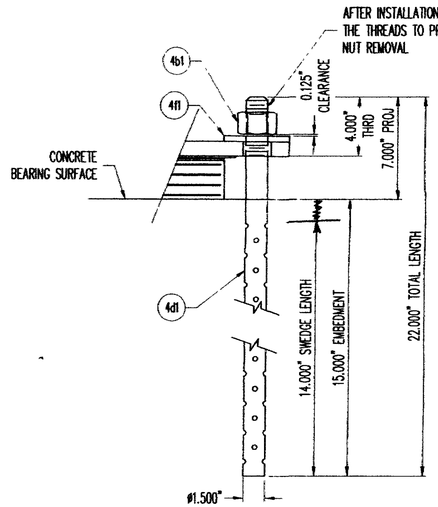
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LAMOILLE CO., VT

SCALE	DRAWN BY	CHECKED BY	DATE	
N.T.S.	SP	EK	5/09	–
PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET	
26274	1104	1	3	

MK	QTY	DESCRIPTION	MATERIAL	LENGTH	REMARKS	REV
4A	10	SWEDGED ROD				–
4a1	10	Ø1.500" X 26.000" SWEDGED ROD	A449		1 4" SWEDGE, 7" THRD, A153-HDG	–
4B	30	HEAVY HEX NUT				–
4b1	30	Ø1.500" HEX NUT	A563-DH OR A194-2H		DRY LUBE, DYE, A153-HDG	–
4C	10	WASHER PLATE				–
4c1	10	0.375" X 3.000"	A36	3.000"	1 7/8"ø HOLE CENTERED; A123-HDG	–
4D	20	SWEDGED ROD				–
4d1	20	Ø1.500" X 22.000" SWEDGED ROD	A449		1 4" SWEDGE, 4" THRD; A153-HDG	–
4F	20	WASHER PLATE				–
4f1	20	0.375" X 3.000"	A36	7.500"	~~1 7/8"ø~~ HOLE CENTERED, A123-HDG	–
					5/13/2009 2.55.51 PM	

1 7/8" x [illegible] HOLE

↑ Not true See Email 6/15



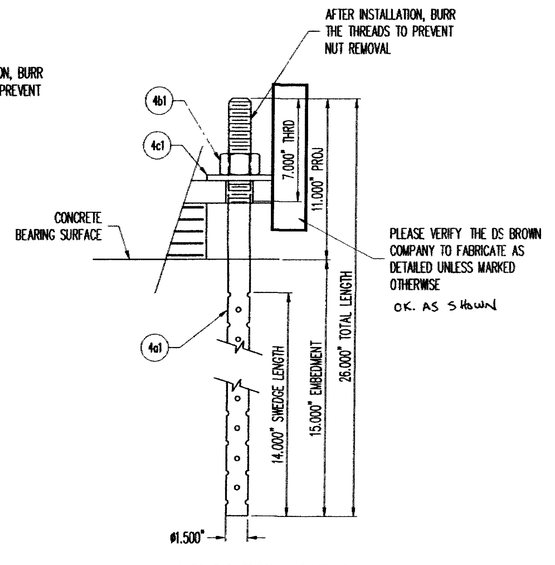
ANCHOR ROD ASSEMBLY

EXPANSION BEARING

(10) REQ'D @ ABUT. 1

(10) REQ'D @ ABUT. 2

(20) REQ'D TOTAL



ANCHOR ROD ASSEMBLY

FIXED BEARING

(10) REQ'D @ PIER

VTrans - PDD

MAY 2 2 2009

Structures Design Section

SEE SHEET GN1 FOR GENERAL NOTES

Accepted
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable
Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor by approving and submitting these documents, verifies their accuracy as stipulated on the Contractor's Shop Drawing Stamp
Date 6/8/09 DuBOIS AND KING By [signature]

KMH 6/12/09

REV	DESCRIPTION	DATE	DET	CKD

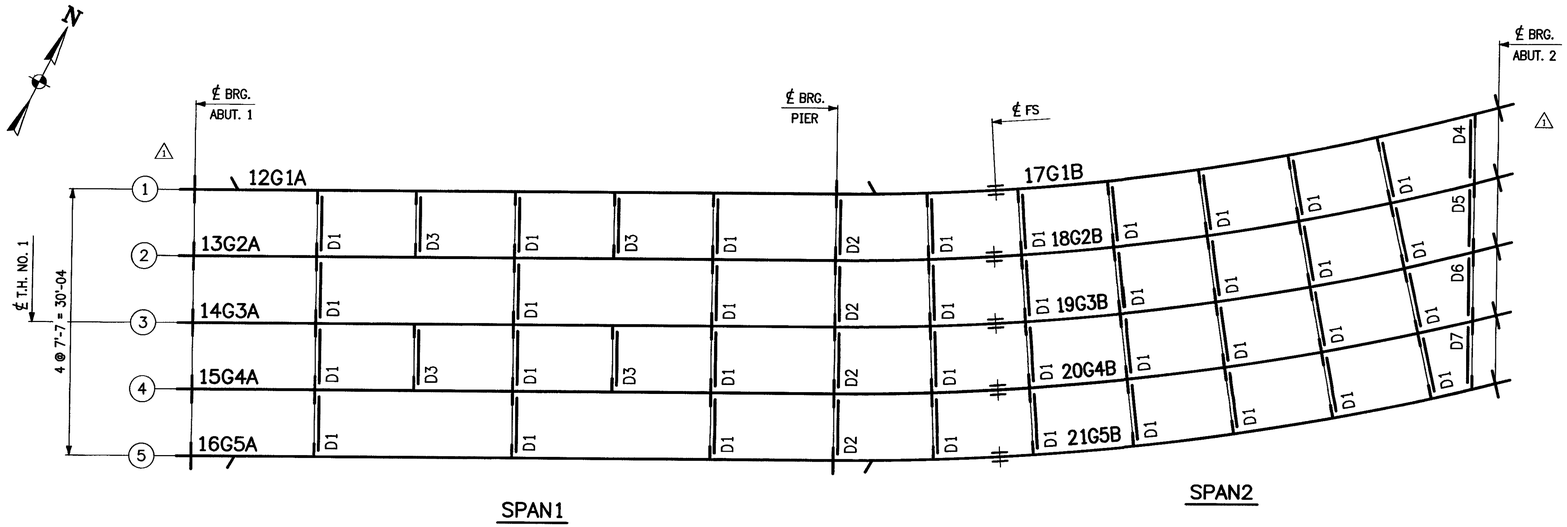
D.S. BROWN

THE D S BROWN COMPANY
300 E CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419 257 3561
FAX 419 257 0332
WWW DSBROWN COM

	ITEM	QUANTITY
LOCATION — TH NO. 1 OVER THE GIHON RIVER	–	–
BRIDGE — 5	–	–
PROJECT — BHO 1448 (29)	–	–
—	–	–
P O NO — 6045	–	–
DESIGNER — DuBOIS & KING, INC.	–	–
CUSTOMER — SD IRELAND CONSTRUCTION	–	–
	–	–

DESCRIPTION: ANCHOR ROD ASSEMBLY
LAMOILLE CO., VT

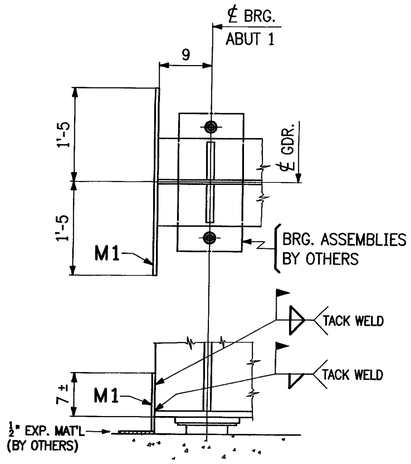
SCALE	DRAWN BY	CHECKED BY	DATE	
N.T.S.	SP	EK	5/09	–
PROJECT NUMBER		PRODUCT CODE	RELEASE	SHEET
26274		1104	1	4



SPAN1

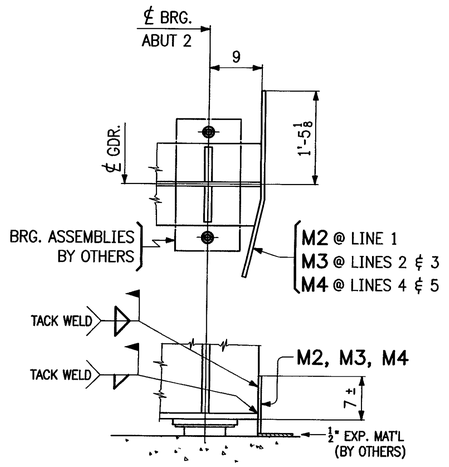
SPAN2

ERECTION PLAN



BLOCKOUT PL. LOCATION

(ABUT. 1)



BLOCKOUT PL. LOCATION

(ABUT. 2)

FIELD BOLT CONNECTION LIST

QTY.	DIAM.	LENGTH	GRIP	THICKNESS OF PIECES CONNECTED				CONNECTION
400	⅞	0'-3	1⅝	½	⅝	½		FIELD SPLICE @ WEB
280	⅞	0'-5½	4	1½	1	1½		FIELD SPLICE @ TOP FLANGE
280	⅞	0'-6	4½	1½	1½	1½		FIELD SPLICE @ BOTT. FLANGE
560	⅞	0'-2¼	15/16	7/16	½			INTERMEDIATE DIAPHRAGM TO STIFF.
112	⅞	0'-2¾	1 7/16	7/16	1			PIER DIAPHRAGMS TO BRG. STIFF.
40	¾	0'-2	13/16	5/16	½			UTILITY SUPPORT TO STIFF.

RECEIVED
CK'D BY JL L OK'D BY KmH
JUL 23 2009
R SUBMIT ___ APPROVED ✓
BY KmH DATE 7/31/09

REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			7-15	5p	Appr.
1	7-14-09	ADDED BRG STIFFENERS, DIAPHRAGMS ℄ REV BOLT QUANTITY			

MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT	HOLES U N	WELD U N	Q C REVIEW

PROJECT: TH NO.1 OVER THE GIHON RIVER
PROJECT NO. BHO 1448 (29) BRIDGE NO. 5
TOWN OF JOHNSON, VERMONT

DATE: 6-8-09
DRAWN BY: JJ
DESCRIPTION: ERECTION PLAN
CHK'D BY: GDC
ARCH: N/A
ENGR: VERMONT AGENCY OF TRANSPORTATION
JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.
SHT NO: E1

Sheet E1 - Plotted 07/16/2009 @ 08:29 (HEATHER)

GENERAL SHOP NOTES

SPECIFICATIONS

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT AGENCY OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, DATED 2002, AND ITS LATEST REVISIONS.

MATERIAL

1. MATERIAL SHALL CONFORM TO AASHTO M270, GRADE 50W.
2. MATERIAL NOTED (CVN) ON DETAIL DRAWINGS SHALL REQUIRE CHARPY V-NOTCH TESTING IN ACCORDANCE WITH AASHTO T 243.
3. HIGH STRENGTH BOLTS SHALL CONFORM TO AASHTO M164 TYPE 3 WITH ONE AASHTO M291 HVY. HEX NUT & ONE AASHTO M293 TYPE 3 WASHER.

FABRICATION & WORKMANSHIP

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

SHOP WELDING AND TESTING NOTES:

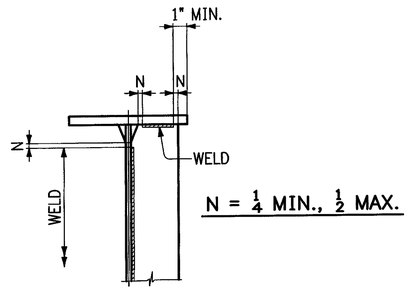
1. WELDING AND NON-DESTRUCTIVE TESTING SHALL BE IN ACCORDANCE WITH ANSI/AASHTO/AWS BRIDGE WELDING CODE, D1.5 (2008). ⚠
2. FOR WELDING CONNECTION PLATES TO GIRDERS SEE "TYP. WELD TERMINATION DETAIL".

SHOP CLEANING NOTES:

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

SHOP PAINTING NOTES:

1. NO PAINT



TYP. WELD TERMINATION DETAIL

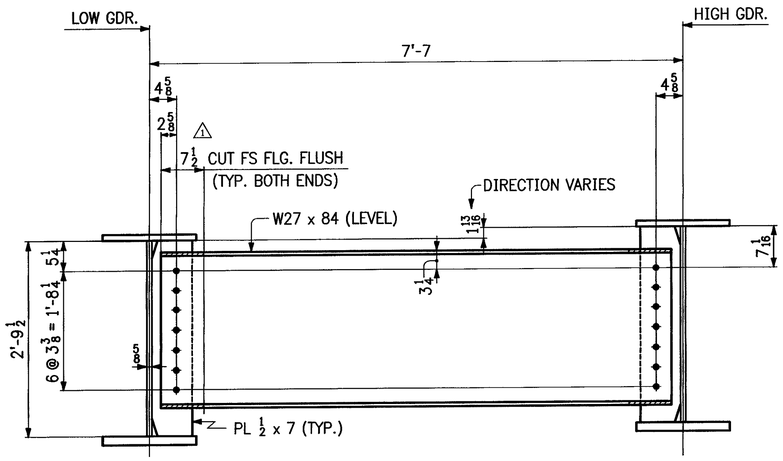
RECEIVED
CK'D BY TL OK'D BY KMH
JUL 29 2009
BY CLIENT ___ APPROVED ✓
BY KMH DATE 7/31/09

REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			7-16	5P	Appr.
⚠	7-14-09	ADDED DATE OF BRIDGE WELDING CODE.			

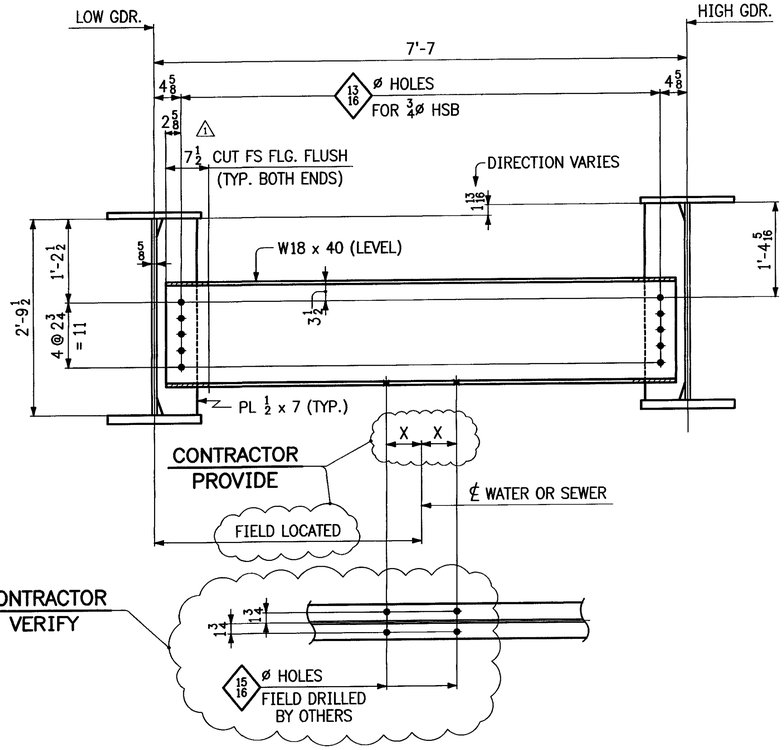
MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT	HOLES U N	WELD U N	Q C REVIEW
PROJECT: TH NO.1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT			DATE: 6-8-09 DRAWN BY: CPM
DESCRIPTION: GENERAL NOTES			CHK'D BY: WCG
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT NO: GN1

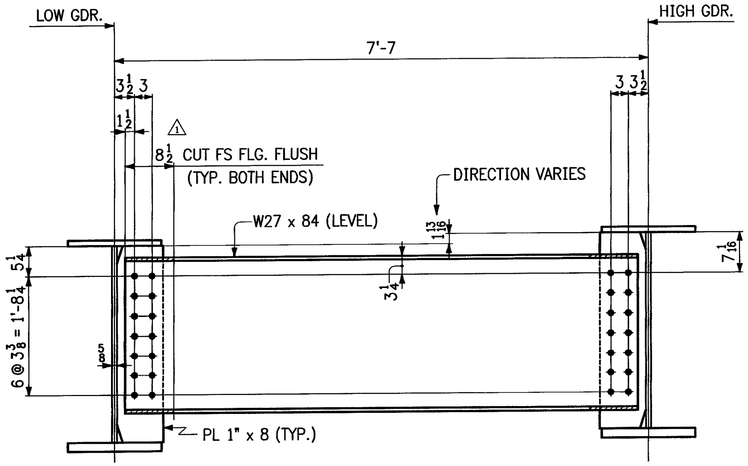
Sheet GN1 - Plotted 07/16/2009 @ 09:29 (HEATHER)



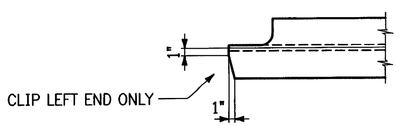
TYP. INTERMEDIATE DIAPHRAGM
(LOOKING WEST)



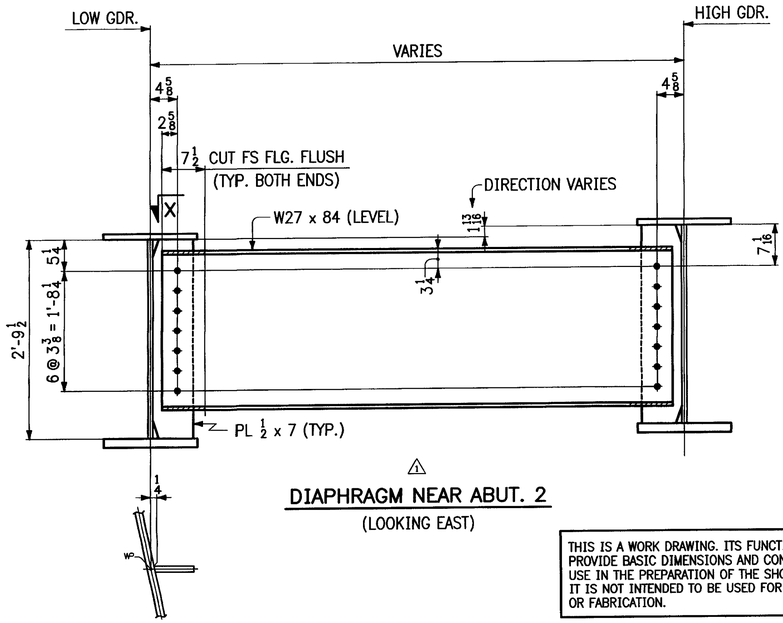
TYP. UTILITY SUPPORT
(LOOKING WEST)



TYP. PIER DIAPHRAGM
(LOOKING WEST)



SECT. X



DIAPHRAGM NEAR ABUT. 2
(LOOKING EAST)

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

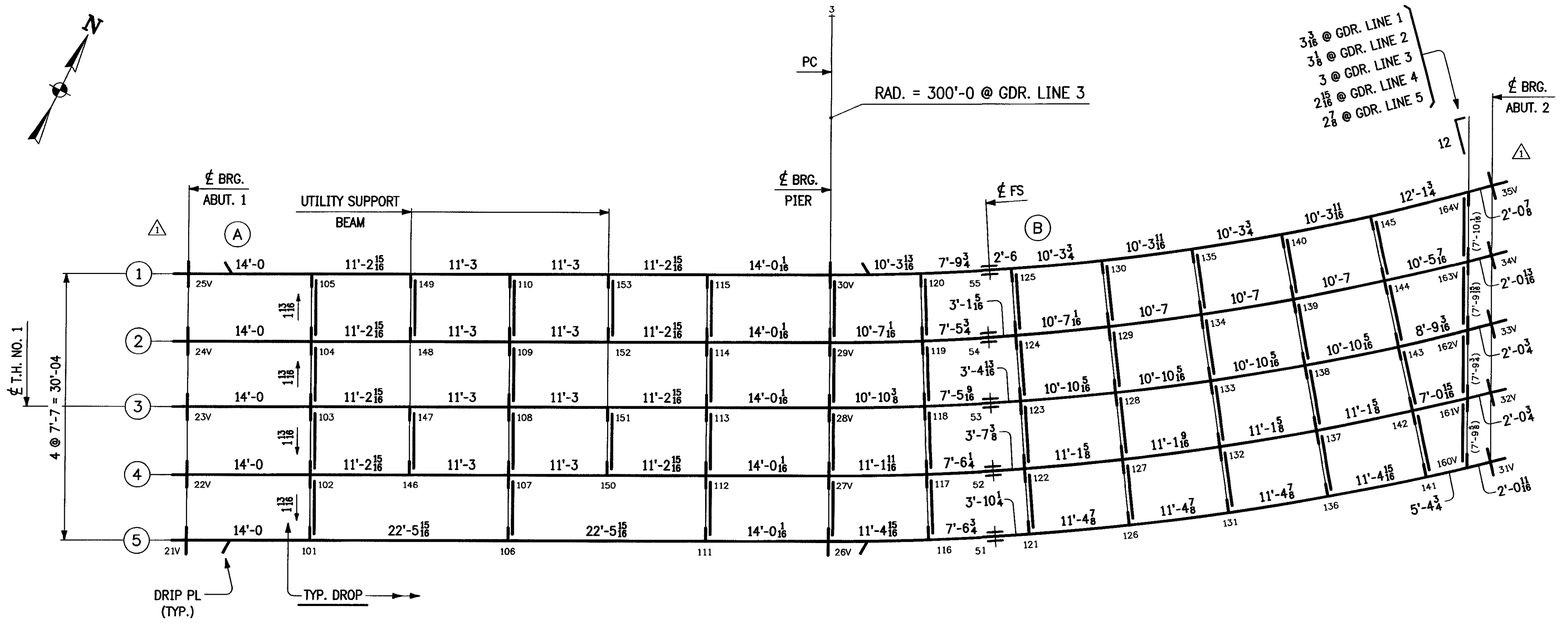
RECEIVED
CK'D BY _____ OK'D BY KmH
JUL 20 2009
RESUBMIT _____ APPROVED ✓
BY KmH DATE 7/21/09

REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			7-16	5P	Appr.
1	7-14-09	REV. "CUT FS FLG. FLUSH" DIM. & ADDED DIAPHRAGM NEAR ABUT. 2.			

MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

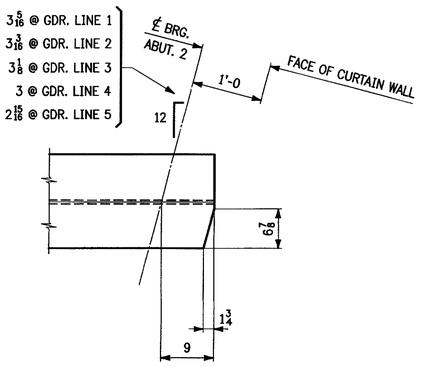
PAINT	HOLES U N 15/16Ø	WELD U N	Q C REVIEW
PROJECT: TH NO.1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT			DATE: 7-14-09
			DRAWN BY: WCG
DESCRIPTION: LAYOUTS			CHK'D BY: CT
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT NO: TD1

Sheet TD1 - Plotted: 07/16/2009 @ 09:29 (HEATHER)

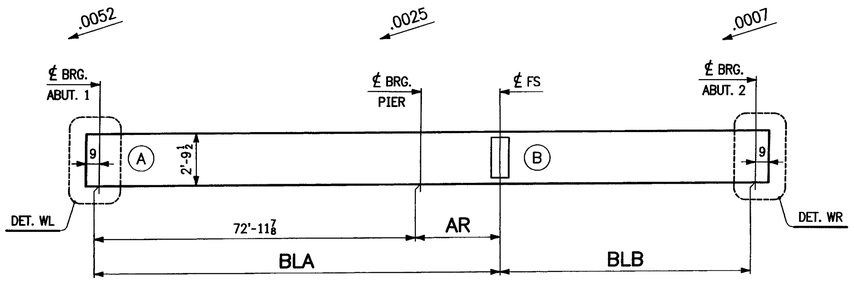


SPAN 1

SPAN 2

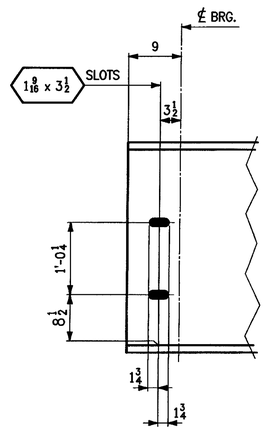


TOP ℄ BOTT. FLG. CLIP @ ABUT. 2



TYP. ELEVATION

LINE	BLA	AR	BLB
1	91'-1 7/16	18'-1 9/16	57'-11 7/16
2	91'-0 3/4	18'-0 7/8	57'-11 9/16
3	91'-3 7/8	18'-4	57'-7 15/16
4	91'-7 7/8	18'-8	57'-3 7/16
5	91'-11 5/8	18'-11 11/16	56'-11 3/16



DET. WL (SHOWN)

DET. RL (OPP. HAND)

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

NOTES:

1. LONGITUDINAL DIMS. ARE SLOPING ALONG BOTTOM OF GIRDER IN CAMBERED POSITION.
2. TRANSVERSE DIMS. ARE HORIZONTAL.
3. ⟶ DENOTES DROP (FINAL). ARROW POINTS TO LOW END.
4. ENDS OF GIRDERS ℄ BRG. STIFFENERS ARE VERTICAL IN FINAL POSITION.
5. INT. CONN. PLATES ARE NORMAL TO BOTTOM FLANGE.
6. FOR LAYOUTS SEE DWG. TD1.

RECEIVED
CK'D BY JFL CK'D BY kmH
JUL 22 20[illegible]
R Cudlit APPROVED ✓
BY kmH DATE 7/21/09

REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			7-16	5P	Appn.
1	7-14-09	ADDED BRG. STIFFENERS ℄ DIAPHRAGMS.			

MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT	HOLES U N	WELD U N	Q C REVIEW

PROJECT: TH NO.1 OVER THE GIHON RIVER
PROJECT NO. BHO 1448 (29) BRIDGE NO. 5
TOWN OF JOHNSON, VERMONT

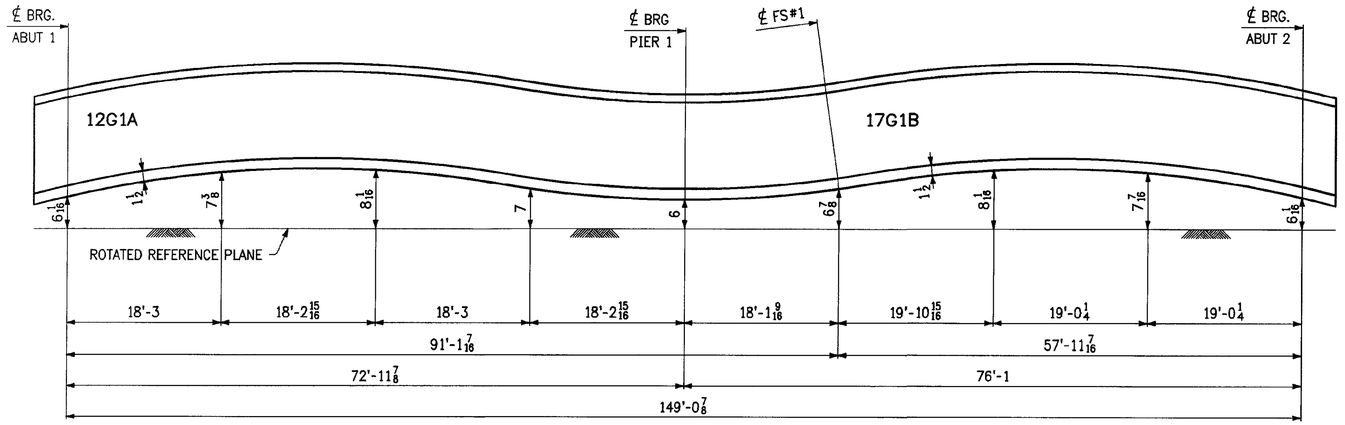
DATE: 7-14-09
DRAWN BY: WCG
CHK'D BY: ℄

DESCRIPTION: CALC. PLAN

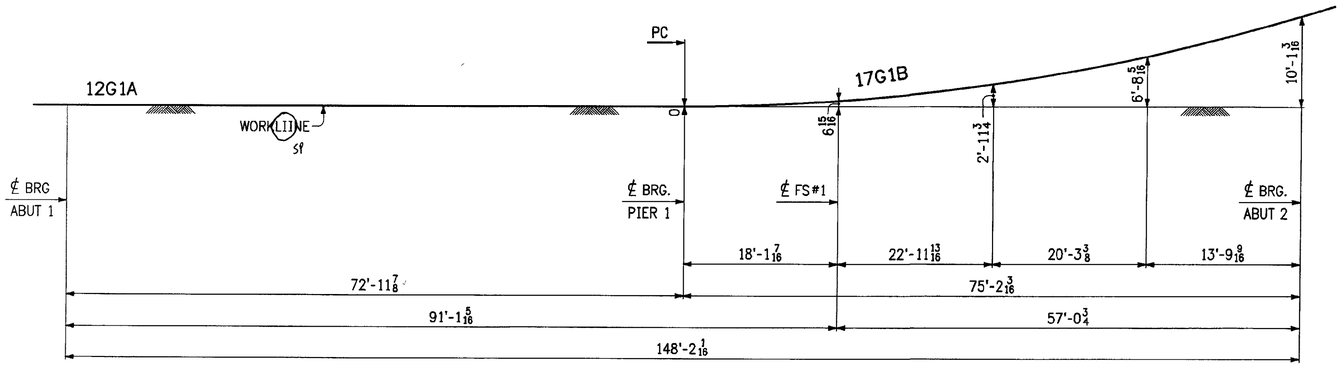
ARCH: N/A
ENGR: VERMONT AGENCY OF TRANSPORTATION
JOB NO: J-81

CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.
SHT NO: WS1

Sheet WS1 - Plotted 07/16/2009 @ 09:29 (HEATHER)



BLOCKING DIAGRAM ~ LINE 1



HORIZONTAL SWEEP DIAGRAM ~ LINE 1

Accepted	
Accepted as Noted	✓
Accepted Noted Resubmit	
Rejected, Revise Resubmit	
Rejected - Unacceptable	

Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents The Engineer assumes no liability for errors or omissions that may be contained herein The Contractor, by approving and submitting these documents verifies their accuracy as stipulated on the Contractor's Shop Drawing Stamp

DuBOIS AND KING
Date 7/7/09 By

NOTES:

1. LONGITUDINAL DIMS FOR BLOCKING DIAGRAMS ARE ALONG ℄ GDR AT BOTTOM OF BOTTOM FLG.
2. BLOCKING DIMS. ARE GIVEN TO THE BOTTOM OF THE THICKER FLG. AT FIELD SPLICES
3. FIELD SPLICE PLATES SHALL BE MATCH-MARKED AFTER REAMING AND PRIOR TO DISASSEMBLY.
4. FOR GENERAL NOTES, SEE DWG. GN1

RECEIVED
CK'D BY JFL CK'D BY KMH
JUN 1 0 20
APPROVED ✓
BY KMH DATE 7/13/09

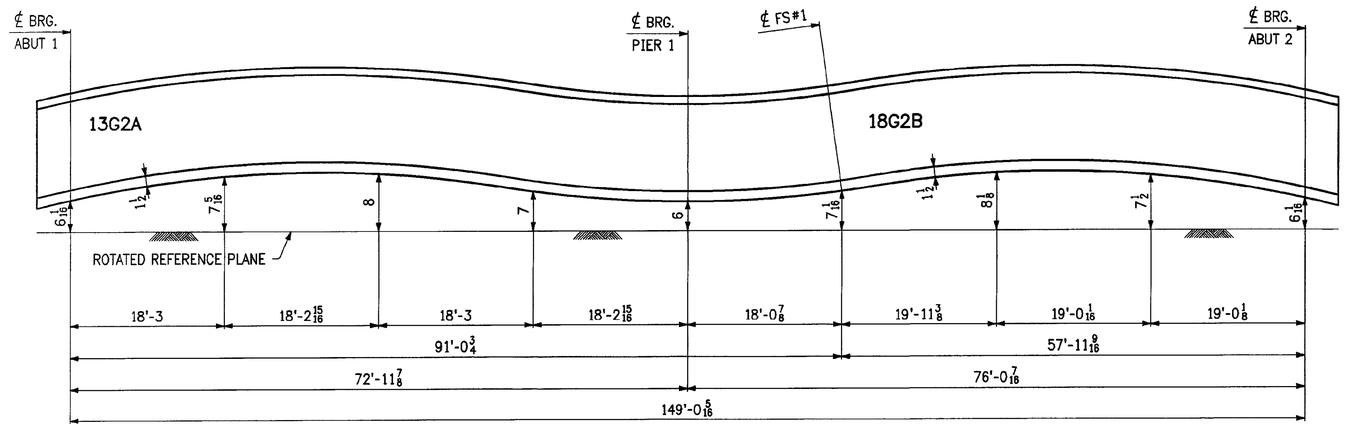
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NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			6-15	E	Appr.

MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

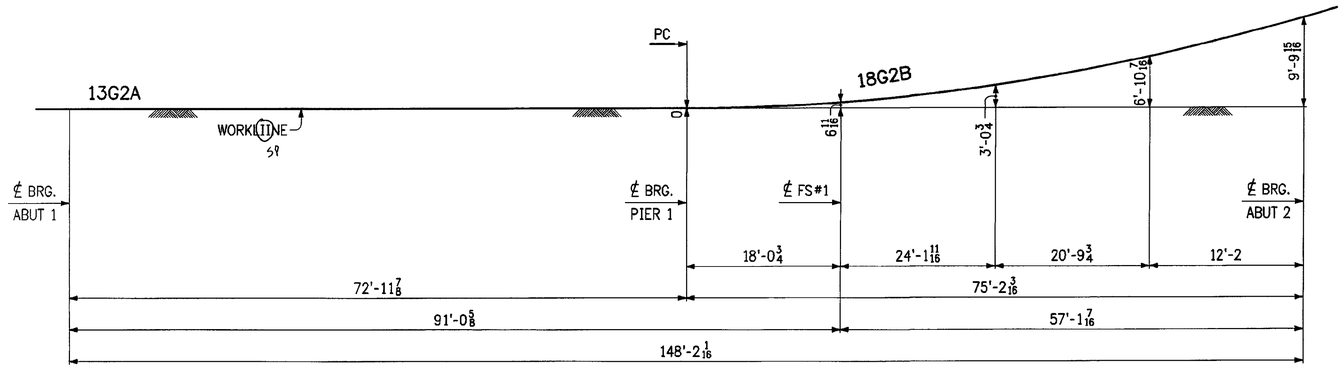
PAINT	HOLES U N	WELD U N	Q C REVIEW
PROJECT: TH NO.1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT			DATE 6-8-09
			DRAWN BY 5-22-09
DESCRIPTION: BLOCKING DIAGRAMS ~ LINE 1			CHK D BY
ARCH N/A	ENGR VERMONT AGENCY OF TRANSPORTATION		JOB NO J-81
CUSTOMER S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT NO BD1

998-5 BLK998A

Sheet (80) Plotted: 06/09/2009 @ 11:4" (HIATHEB)



BLOCKING DIAGRAM ~ LINE 2



HORIZONTAL SWEEP DIAGRAM ~ LINE 2

Applied
Accepted as Noted ✓
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable

Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents, verifies their accuracy as stipulated on the Contractor's Shop Drawing Stamp

DuBOIS AND KING
Date 7/7/09 By

NOTES:

1. LONGITUDINAL DIMS FOR BLOCKING DIAGRAMS ARE ALONG ℄ GDR. AT BOTTOM OF BOTTOM FLG
2. BLOCKING DIMS. ARE GIVEN TO THE BOTTOM OF THE THICKER FLG. AT FIELD SPLICES.
3. FIELD SPLICE PLATES SHALL BE MATCH-MARKED AFTER REAMING AND PRIOR TO DISASSEMBLY.
4. FOR GENERAL NOTES, SEE DWG. GN1

RECEIVED
CK'D BY JFL OK'D BY KmH
JUN 15 23
APPROVED ✓
BY KmH DATE 7/13/09

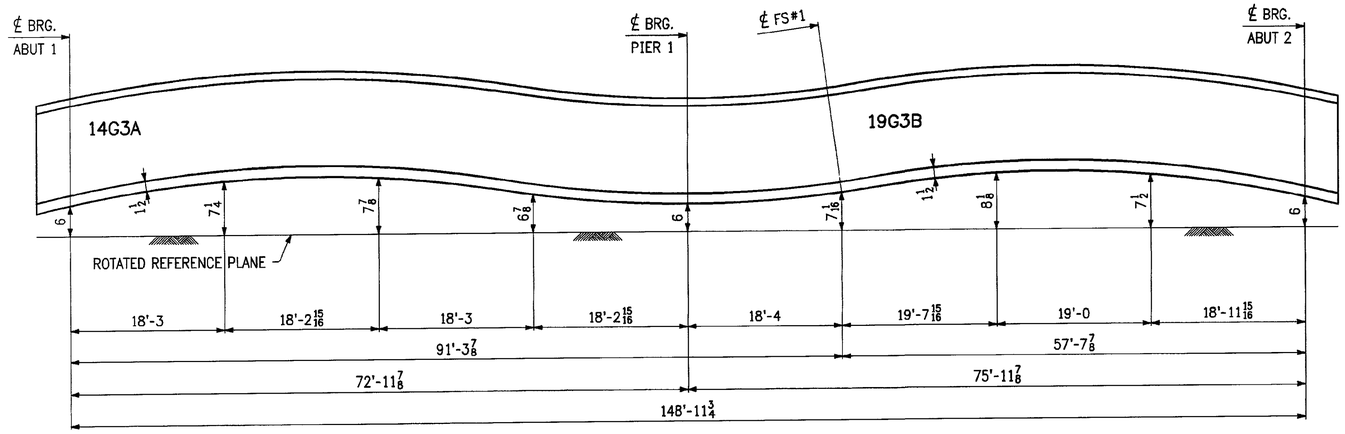
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NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
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MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

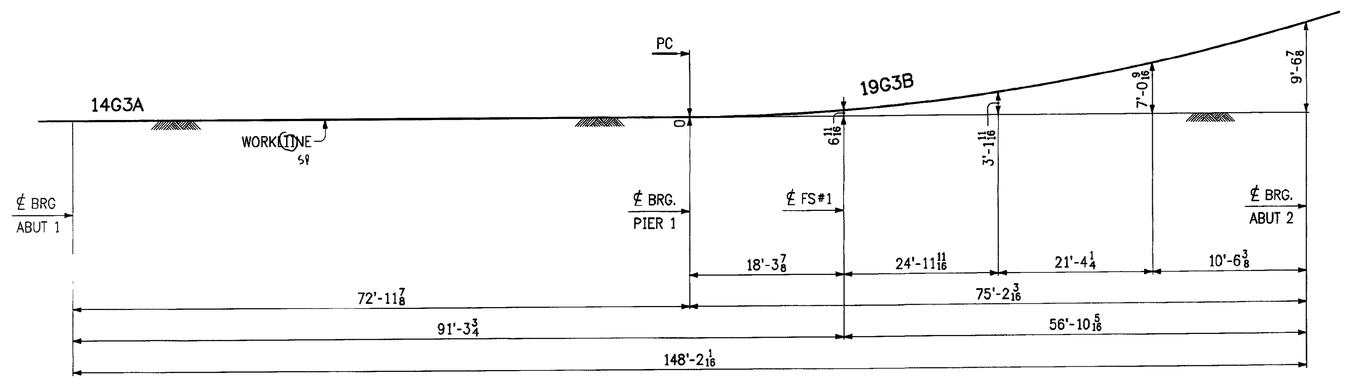
PAINT	HOLES U N	WELD U N	Q C REVIEW
PROJECT: TH NO.1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT			DATE: 6-8-09 DRAWN BY: 5-22-09
DESCRIPTION: BLOCKING DIAGRAMS ~ LINE 2			CHK'D BY: GDC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT NO: BD2

998-5 BLK998B

Sheet Last Plotted: 06/09/2009 @ 13:45 (HEATHER)



BLOCKING DIAGRAM ~ LINE 3



HORIZONTAL SWEEP DIAGRAM ~ LINE 3

Accepted
Accepted as Noted ✓
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable

Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents, verifies their accuracy as stipulated on the Contractors Shop Drawing Stamp.

Date 7/7/09 By DuBOIS AND KING

NOTES:

1. LONGITUDINAL DIMS FOR BLOCKING DIAGRAMS ARE ALONG ℄ GDR AT BOTTOM OF BOTTOM FLG.
2. BLOCKING DIMS. ARE GIVEN TO THE BOTTOM OF THE THICKER FLG. AT FIELD SPLICES.
3. FIELD SPLICE PLATES SHALL BE MATCH-MARKED AFTER REAMING AND PRIOR TO DISASSEMBLY
4. FOR GENERAL NOTES, SEE DWG. GN1

RECEIVED
CK'D BY JFL CK'D BY kmH
JUN 18 20
APPROVED ✓
BY kmH DATE 7/15/09

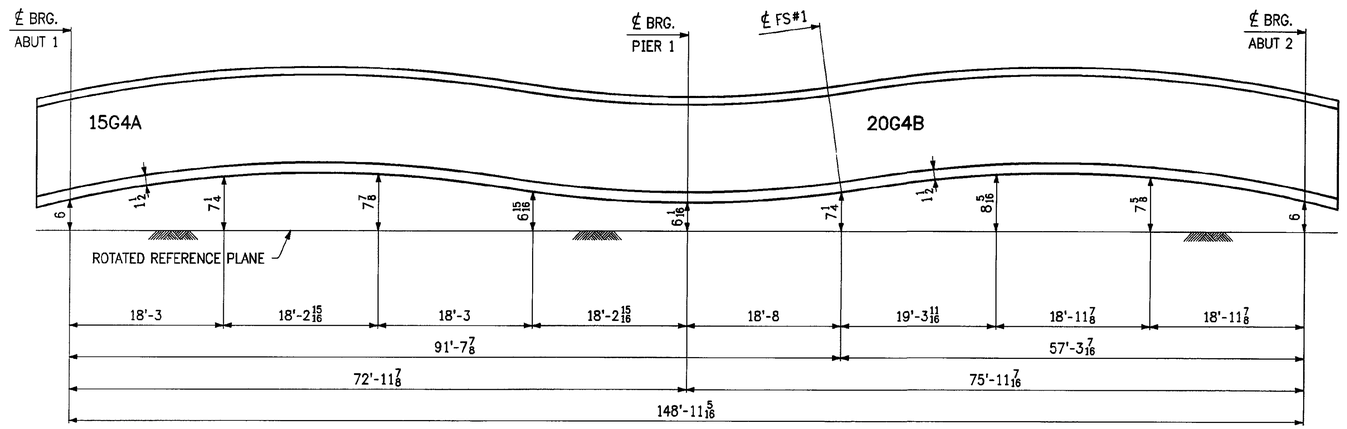
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NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
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MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

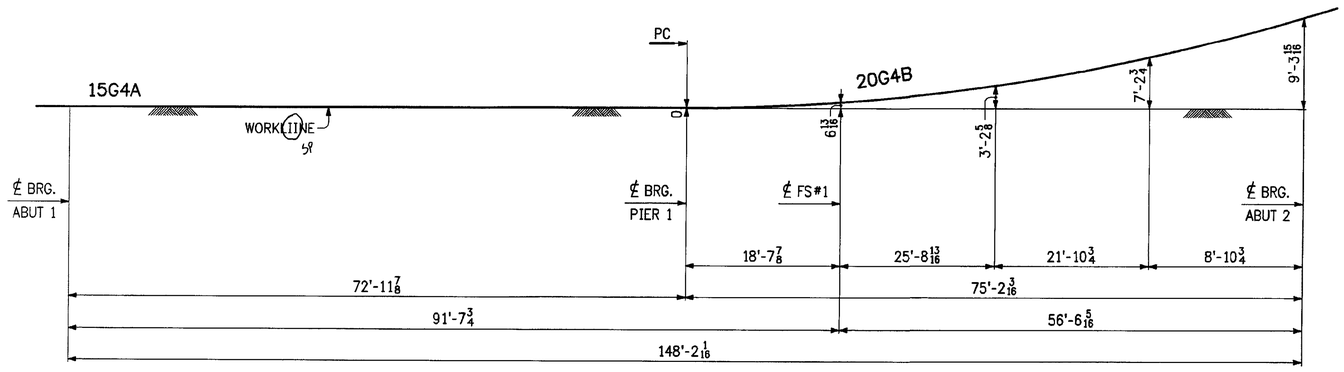
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PROJECT: TH NO.1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO 5 TOWN OF JOHNSON, VERMONT			DATE: 6-8-09 DRAWN BY: 5-22-09
DESCRIPTION: BLOCKING DIAGRAMS ~ LINE 3			CHK'D BY: CC
ARCH. N/A	ENGR VERMONT AGENCY OF TRANSPORTATION		JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP			SHT NO: BD3

998-5 BLK998C

Sheet 003 Plotted: 06/09/2009 @ 13:45 (HEATHER)



BLOCKING DIAGRAM ~ LINE 4



HORIZONTAL SWEEP DIAGRAM ~ LINE 4

Accepted
Accepted as Noted ✓
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable
Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents The Engineer assumes no liability for errors or omissions that may be contained herein The Contractor, by approving and submitting these documents verifies their accuracy as stipulated on the Contractors Shop Drawing Stamp
Date 7/7/09 DuBOIS AND KING By [signature]

NOTES:

1. LONGITUDINAL DIMS FOR BLOCKING DIAGRAMS ARE ALONG ℄ GDR AT BOTTOM OF BOTTOM FLG.
2. BLOCKING DIMS. ARE GIVEN TO THE BOTTOM OF THE THICKER FLG. AT FIELD SPLICES.
3. FIELD SPLICE PLATES SHALL BE MATCH-MARKED AFTER REAMING AND PRIOR TO DISASSEMBLY.
4. FOR GENERAL NOTES, SEE DWG. GN1.

RECEIVED
CK'D BY JFL OK'D BY KMH
JUN 16 2009
APPROVED ✓
BY KMH DATE 7/13/09

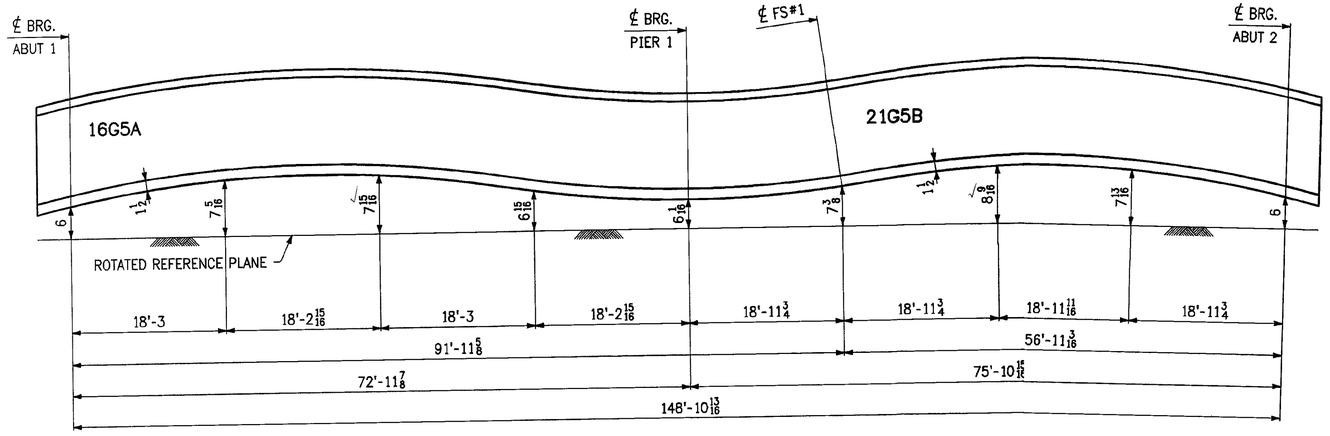
REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			6-15	E	Appr

MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

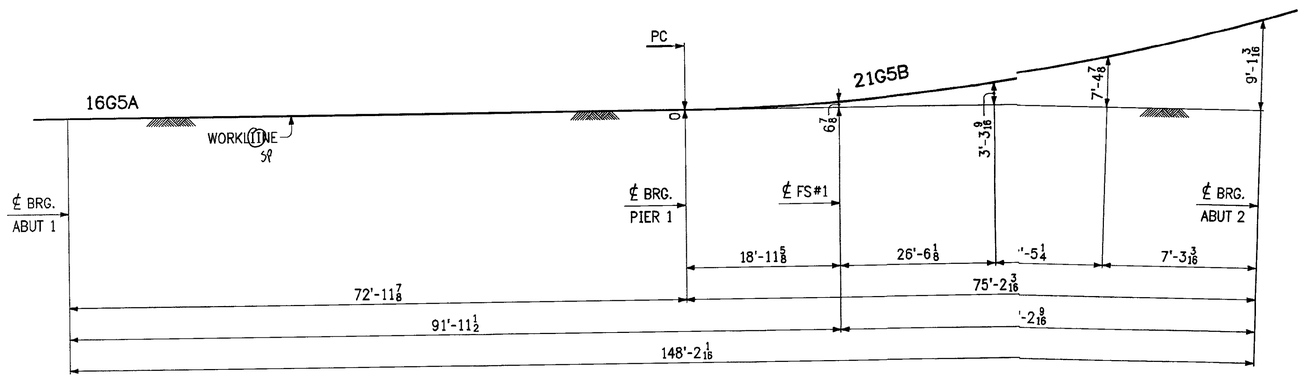
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PROJECT: TH NO 1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT			DATE 6-8-09
			DRAWN BY [signature] 5-22-09
DESCRIPTION: BLOCKING DIAGRAMS ~ LINE 4			CHK'D BY [signature]
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP			SHT NO BD4

998-5 BLK998D

Sheet: BD4 Plotted: 30/09/2009 @ 13:45 (EDITED)



BLOCKING DIAGRAM ~ LINE 5



HORIZONTAL SWEEP DIAGRAM ~ LINE 5

Sheet BD5 Plotted: 06/09/2009 @ 13:48 (HEATHER)

NOTES:

1. LONGITUDINAL DIMS FOR BLOCKING DIAGRAMS ARE ALONG ℄ GDR AT BOTTOM OF BOTTOM FLG.
2. BLOCKING DIMS. ARE GIVEN TO THE BOTTOM OF THE THICKER FLG. AT FIELD SPLICES.
3. FIELD SPLICE PLATES SHALL BE MATCH-MARKED AFTER REAMING AND PRIOR TO DISASSEMBLY.
4. FOR GENERAL NOTES, SEE DWG. GN1.

Accepted
Accepted as Noted ✓
Accepted Noted Resubmit
Rejected Revise Resubmit
Rejected - Unacceptable

Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents verifies their accuracy as stipulated on the Contractors Shop Drawing Stamp

DuBOIS AND KING
7/7/09 By

RECEIVED
CK'D BY JEL OK'D BY KmH
JUN 18 20
APPROVED ✓
BY KmH DATE 7/13/09

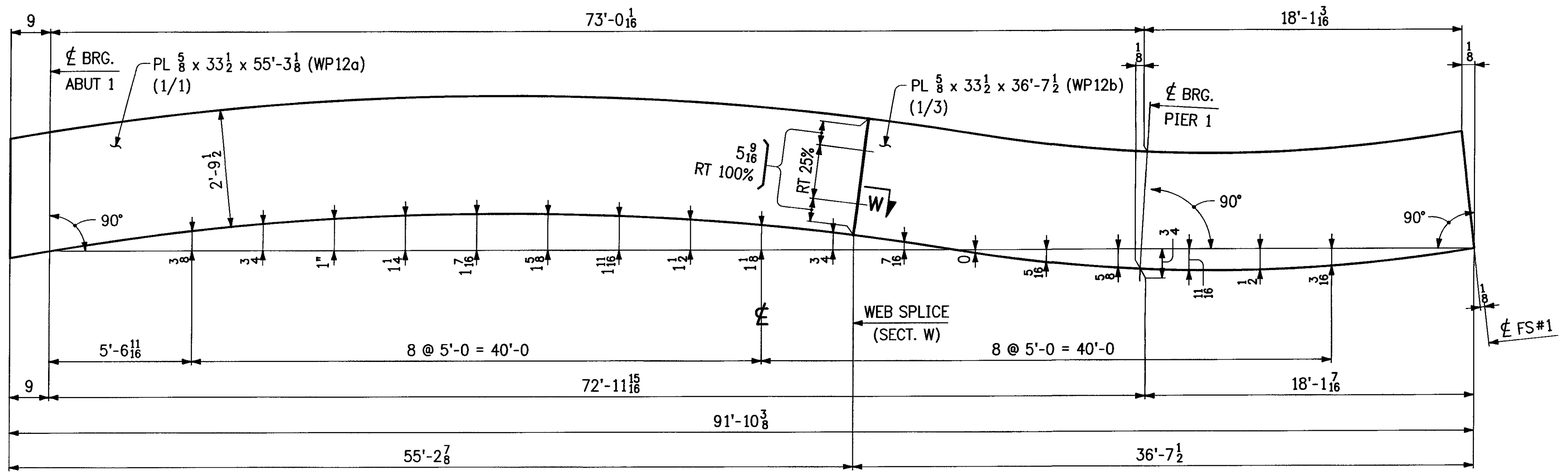
REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			6-15	E	Appr.

MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

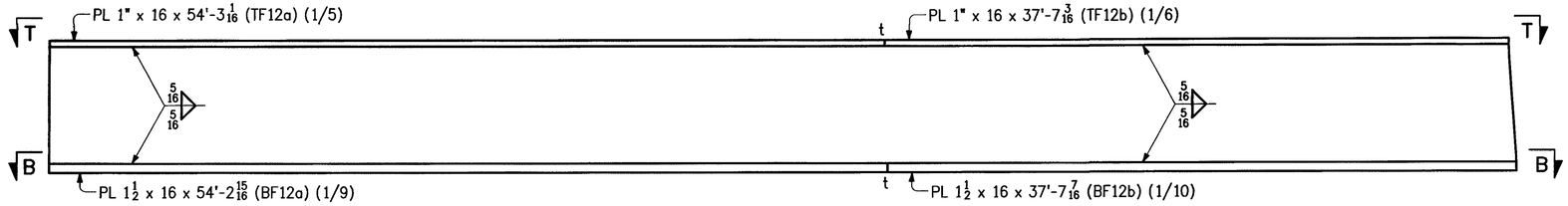
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DESCRIPTION: BLOCKING DIAGRAMS ~ LINE 5			DRAWN BY 5-22-09
ARCH N/A	ENGR VERMONT AGENCY OF TRANSPORTATION		CHK'D BY
CUSTOMER S.D. IRELAND CONCRETE CONSTRUCTION CORP			JOB NO J-81
			SHT NO BD5

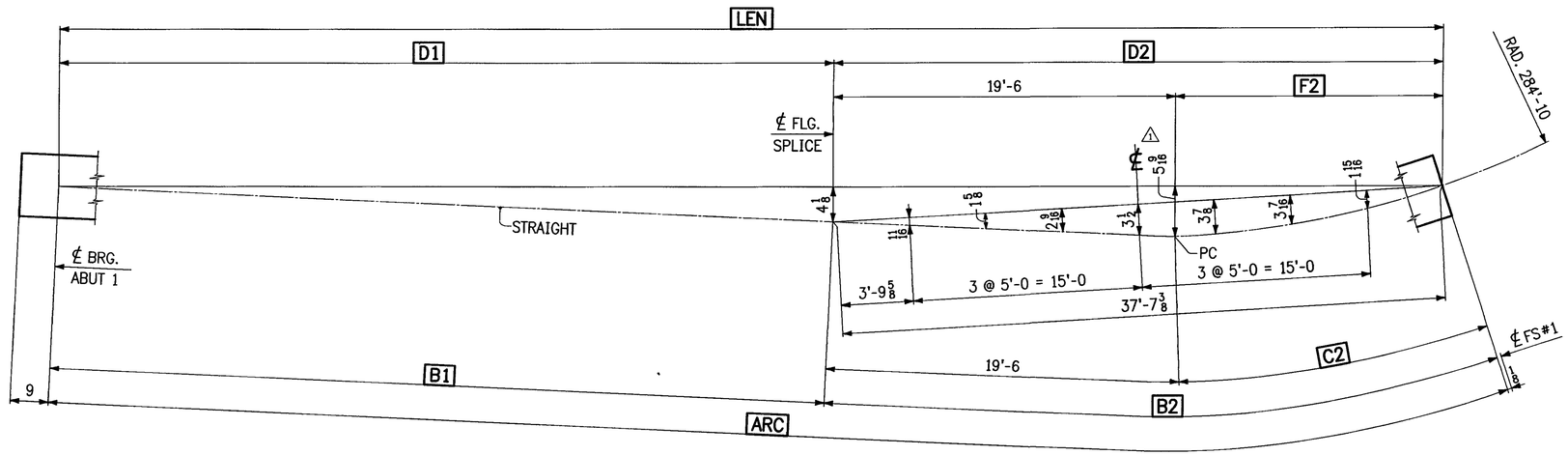
998-5

BLK998E

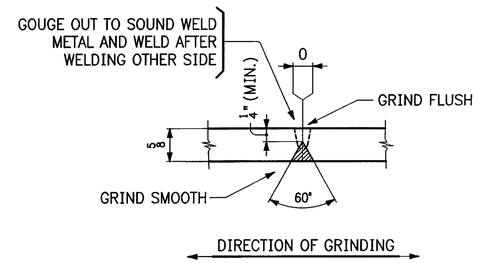


WEB CUTTING DIAGRAM FOR 12G1A

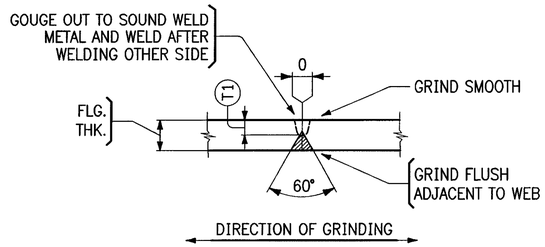




LOCATION	ARC	LEN	B1	B2	C2	D1	D2	F2
VIEW T-T	91'-1 1/4	91'-1 1/8	53'-6 1/16	37'-7 3/16	18'-1 3/16	53'-6	37'-7 1/8	18'-1 1/8
SECT. B-B	91'-1 3/8	91'-1 1/4	53'-5 15/16	37'-7 7/16	18'-1 7/16	53'-5 7/8	37'-7 3/8	18'-1 3/8



SECT. W
(B-L2c-S)



TYPICAL FLANGE PLATE SPLICE
(B-L2c-S)

FLG. THK.	(T1)
1"	5/16
1 1/2	1/2

RECEIVED
CK'D BY JEL OK'D BY KMH
JUL 22 2009
RECEIVED APPROVED
BY KMH DATE 7/21/09

NOTES:

1. FOR GENERAL NOTES, SEE DWG. GN1.
2. THE LETTER "t" AT FLANGE SPLICES INDICATES SPLICES IN TENSION.
3. ALL MATERIAL SHALL BE M270-50W (CVN).
4. ALL FLANGE SPLICES ARE TO BE RADIOGRAPHICALLY TESTED 100%.

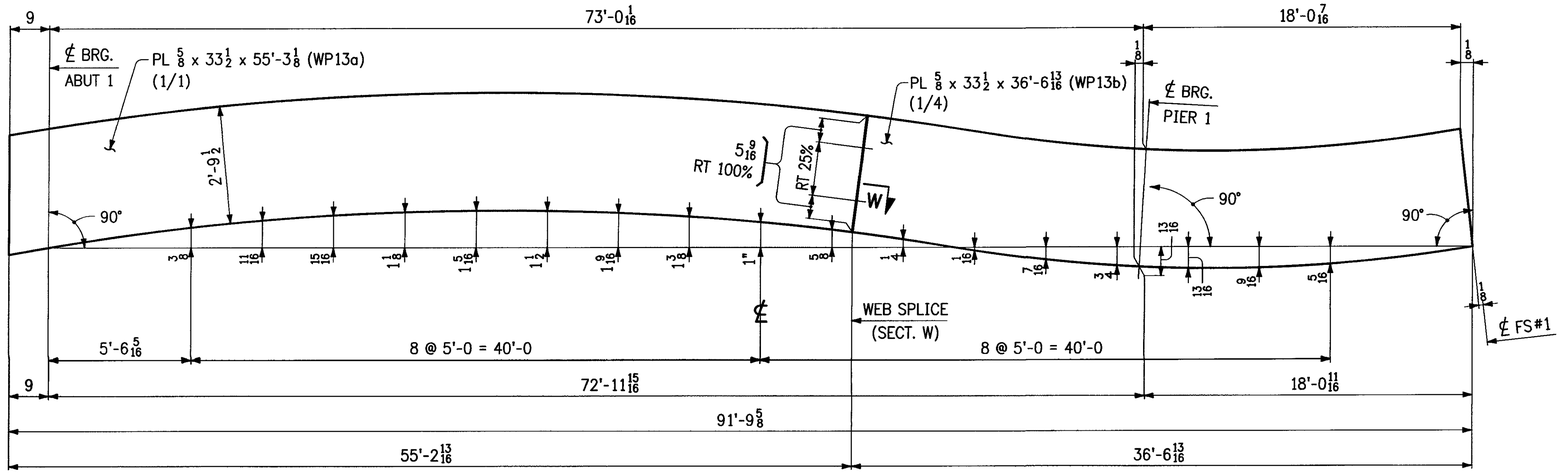
REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			7-16	SP	APPR.
1	7-14-09	REVISED HORIZONTAL CURVING DIAGRAM.			

MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

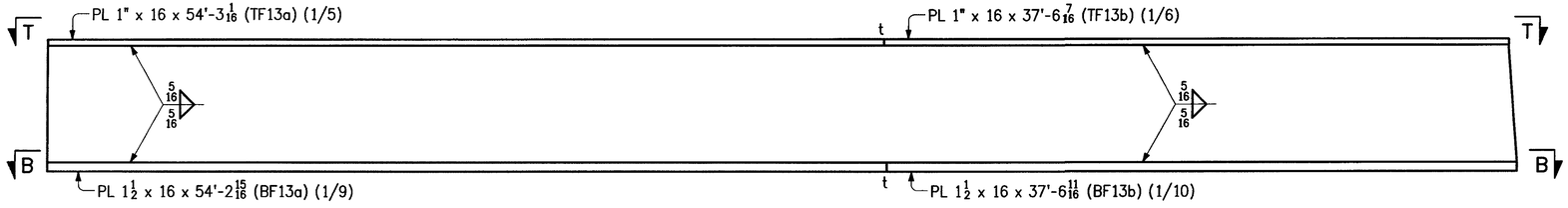
PAINT	HOLES U N	WELD U N	Q C REVIEW

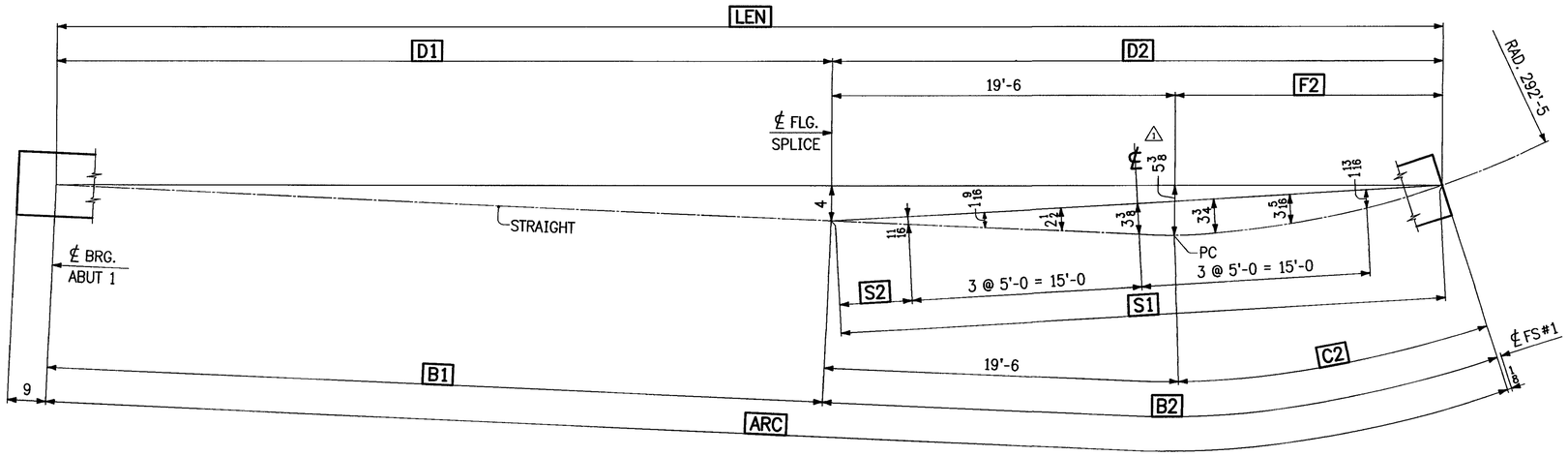
PROJECT: TH NO.1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT	DATE: 6-4-09
	DRAWN BY: TLK 5-21-09
DESCRIPTION: CAMBER DIAGRAMS	CHK'D BY: GDC
ARCH: N/A / ENGR: VERMONT AGENCY OF TRANSPORTATION	JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.	SHT NO: 1

Sheet 1 - Plotted 07/16/2009 @ 09:30 (HEATHER)

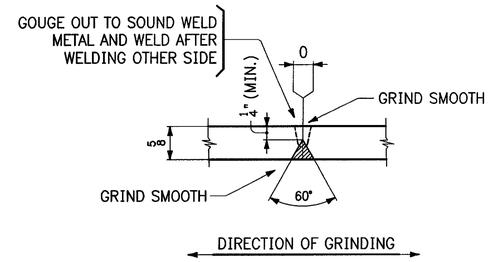


WEB CUTTING DIAGRAM FOR 13G2A



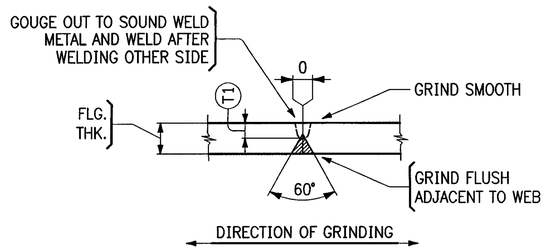


LOCATION	ARC	LEN	B1	B2	C2	D1	D2	F2	S1	S2
VIEW T-T	91'-0 1/2	91'-0 3/8	53'-6 1/16	37'-6 7/16	18'-0 7/16	53'-6	37'-6 3/8	18'-0 3/8	37'-6 3/8	3'-9 3/16
SECT. B-B	91'-0 5/8	91'-0 1/2	53'-5 15/16	37'-6 11/16	18'-0 11/16	53'-5 7/8	37'-6 5/8	18'-0 5/8	37'-6 9/16	3'-9 5/16



SECT. W

(B-L2c-S)



TYPICAL FLANGE PLATE SPLICE

(B-L2c-S)

FLG. THK.	(T1)
1"	5/16
1 1/2	1/2

NOTES:

1. FOR GENERAL NOTES, SEE DWG. GN1.
2. THE LETTER "t" AT FLANGE SPLICES INDICATES SPLICES IN TENSION.
3. ALL MATERIAL SHALL BE M270-50W (CVN).
4. ALL FLANGE SPLICES ARE TO BE RADIOGRAPHICALLY TESTED 100%.

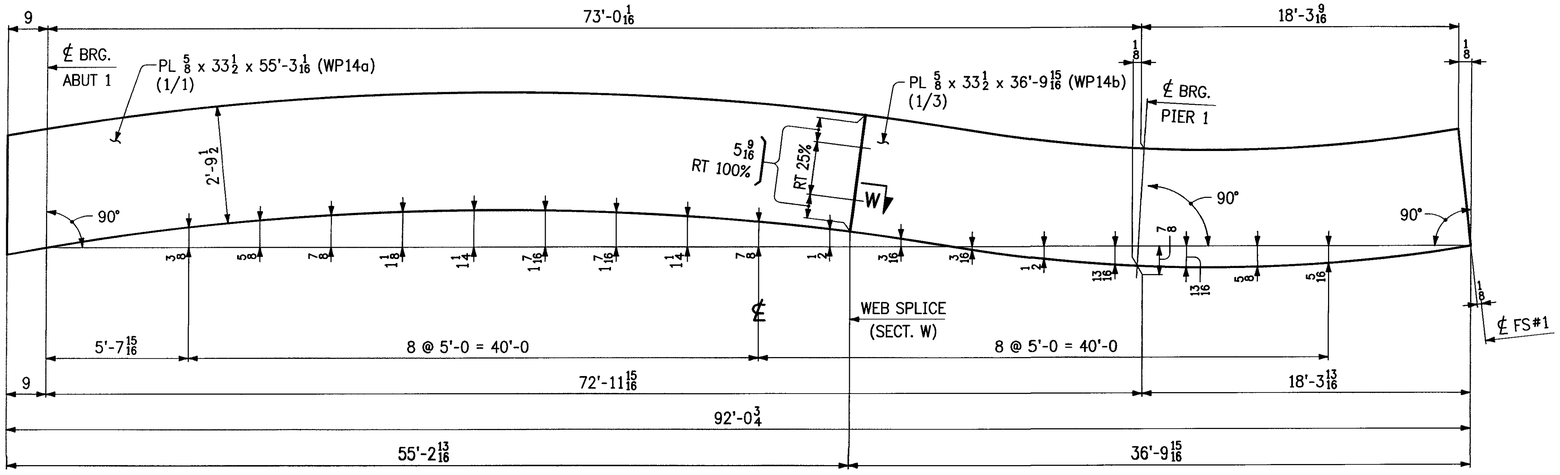
RECEIVED
CK'D BY JFL CK'D BY KMH
JUL 23 20[illegible]
R SUBMIT ___ APPROVED ✓
BY KMH DATE 7/21/09

REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			7-16	SP	APPR.
⚠	7-14-09	REVISED HORIZONTAL CURVING DIAGRAM.			

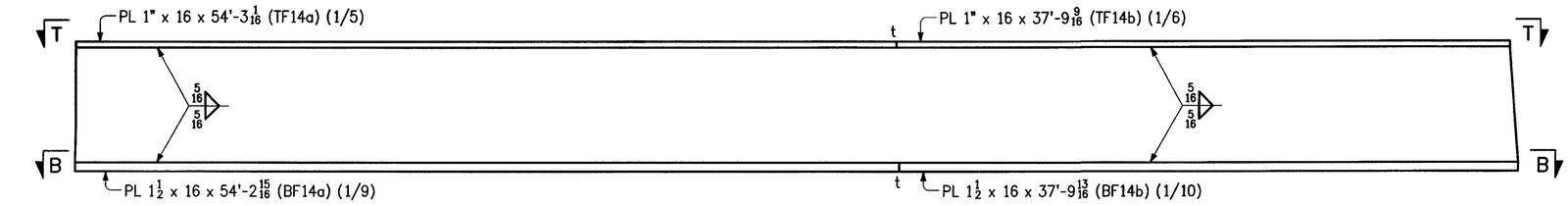
MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

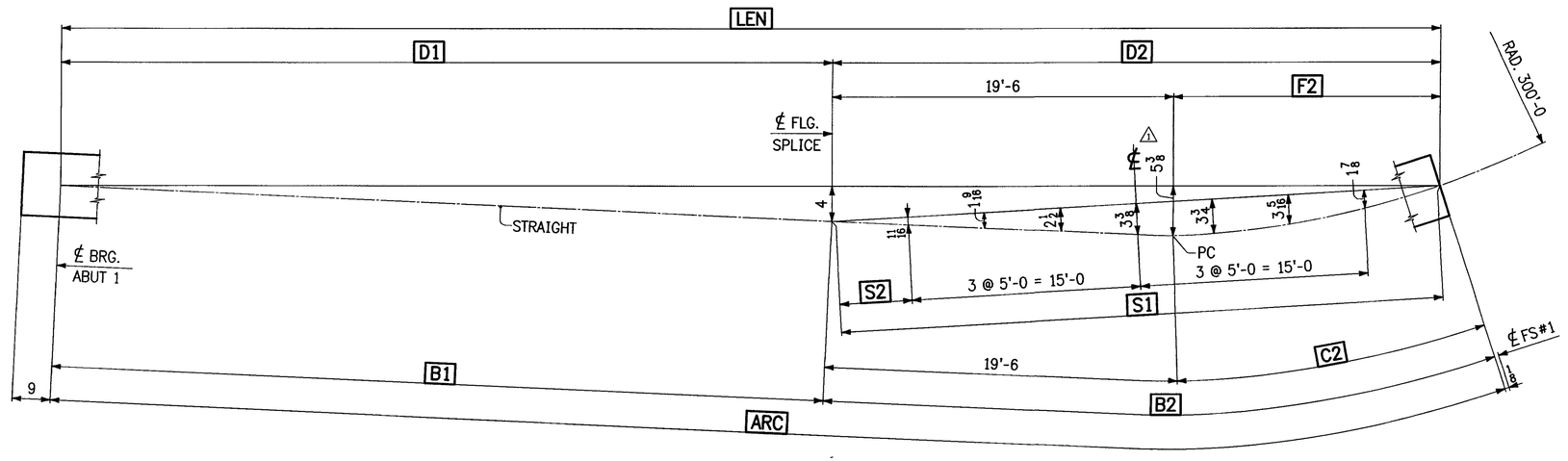
PAINT	HOLES U N	WELD U N	Q C REVIEW
PROJECT: TH NO.1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT			DATE: 6-4-09 DRAWN BY: RLK 5-22-09
DESCRIPTION: CAMBER DIAGRAMS			CHK'D BY: GDC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT NO: 2

Sheet 2 - Plotted 07/16/2009 @ 09:30 (HEATHER)

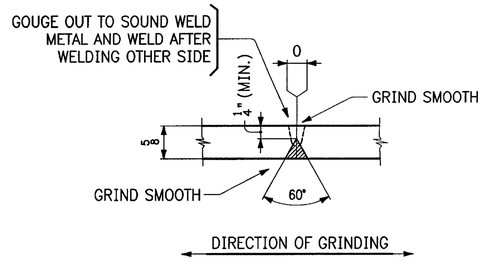


WEB CUTTING DIAGRAM FOR 14G3A



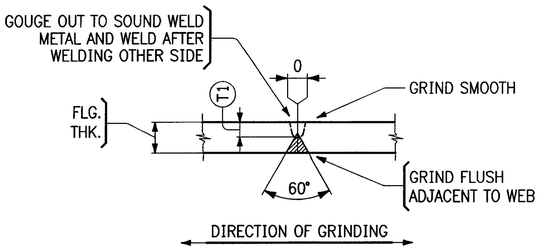


LOCATION	ARC	LEN	B1	B2	C2	D1	D2	F2	S1	S2
VIEW T-T	91'-3 5/8	91'-3 1/2	53'-6 1/16	37'-9 9/16	18'-3 9/16	53'-6	37'-9 1/2	18'-3 1/2	37'-9 1/2	3'-10 3/4
SECT. B-B	91'-3 3/4	91'-3 5/8	53'-5 15/16	37'-9 13/16	18'-3 13/16	53'-5 7/8	37'-9 3/4	18'-3 3/4	37'-9 3/4	3'-10 7/8



SECT. W

(B-L2c-S)



TYPICAL FLANGE PLATE SPLICE

(B-L2c-S)

FLG. THK.	(T1)
1"	5/16
1 1/2	1/2

RECEIVED
CK'D BY JCL CK'D BY KmH
JUL 23 2009
ADJUST ___ APPROVED ✓
BY KmH DATE 7/21/09

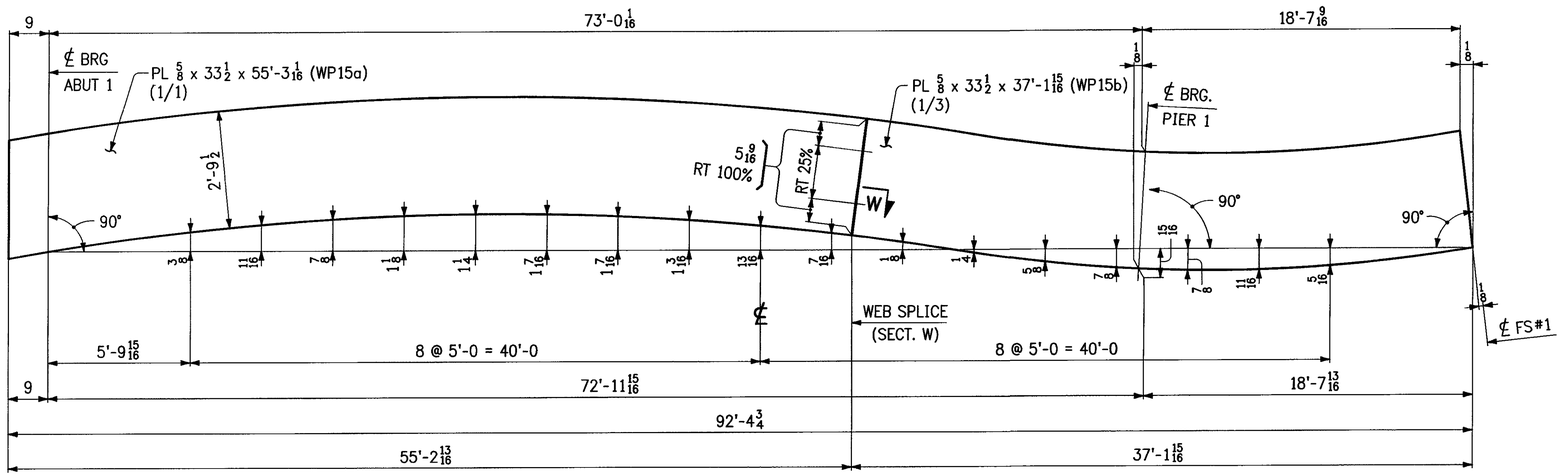
NOTES:

1. FOR GENERAL NOTES, SEE DWG. GN1.
2. THE LETTER "t" AT FLANGE SPLICES INDICATES SPLICES IN TENSION.
3. ALL MATERIAL SHALL BE M270-50W (CVN).
4. ALL FLANGE SPLICES ARE TO BE RADIOGRAPHICALLY TESTED 100%.

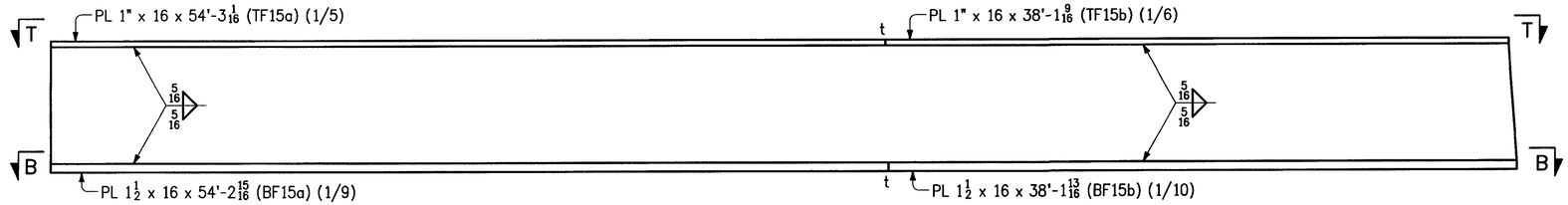
REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			7-16	5P	Appr.
⚠	7-14-09	REVISED HORIZONTAL CURVING DIAGRAM.			

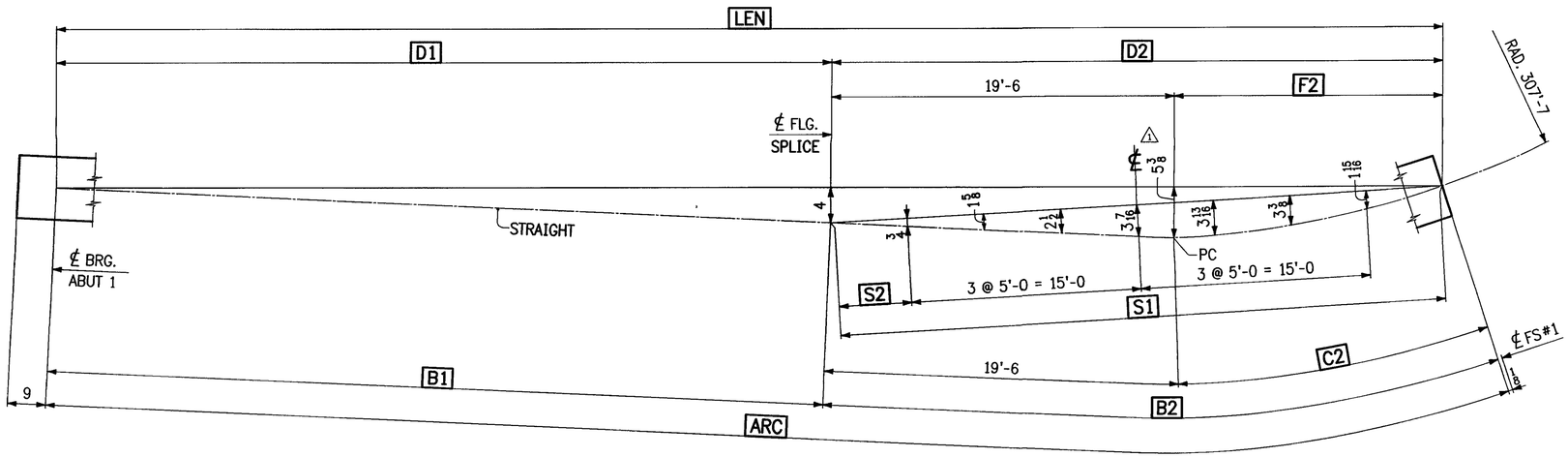
MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT	HOLES U N	WELD U N	Q C REVIEW
PROJECT: TH NO.1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT			DATE: 6-4-09 DRAWN BY: RLK 5-22-09
DESCRIPTION: CAMBER DIAGRAMS			CHK'D BY: GDC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT NO: 3

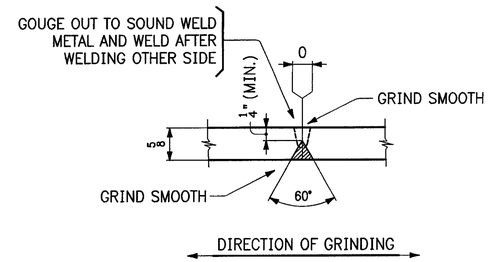


WEB CUTTING DIAGRAM FOR 15G4A



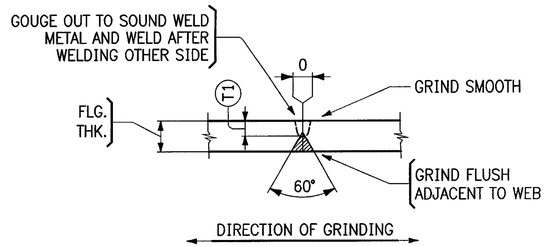


LOCATION	ARC	LEN	B1	B2	C2	D1	D2	F2	S1	S2
VIEW T-T	91'-7 5/8	91'-7 1/2	53'-6 1/16	38'-1 9/16	18'-7 9/16	53'-6	38'-1 1/2	18'-7 1/2	38'-1 1/2	4'-0 3/4
SECT. B-B	91'-7 3/4	91'-7 5/8	53'-5 15/16	38'-1 13/16	18'-7 13/16	53'-5 7/8	38'-1 3/4	18'-7 3/4	38'-1 3/4	4'-0 7/8



SECT. W

(B-L2c-S)



TYPICAL FLANGE PLATE SPLICE

(B-L2c-S)

FLG. THK.	(T1)
1"	5/16
1 1/2	1/2

NOTES:

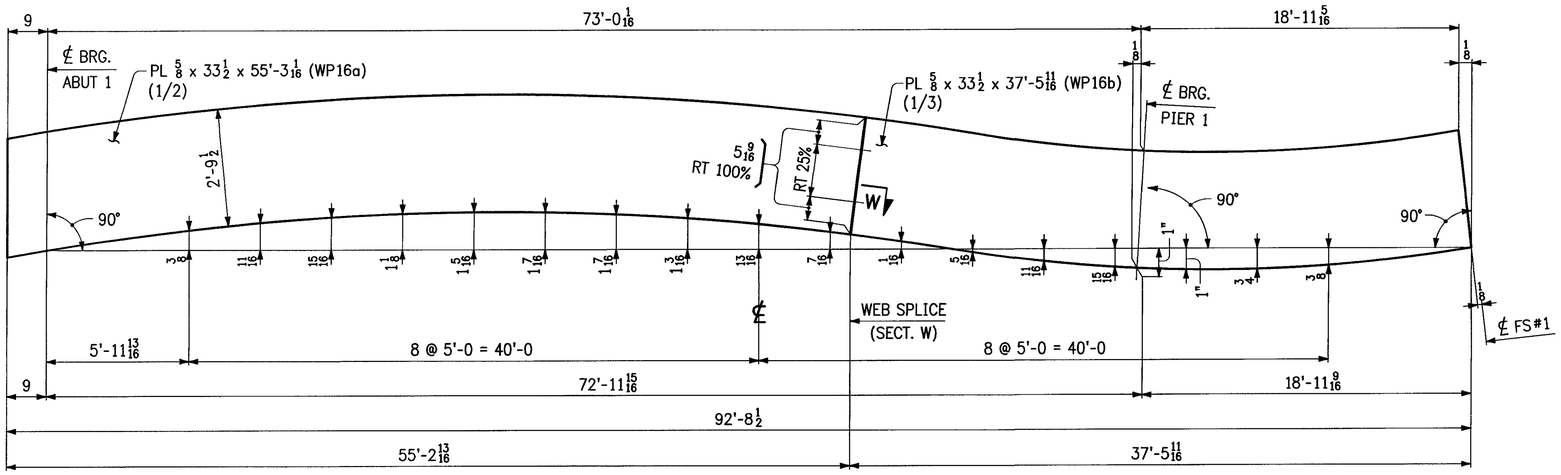
1. FOR GENERAL NOTES, SEE DWG. GN1.
2. THE LETTER "t" AT FLANGE SPLICES INDICATES SPLICES IN TENSION.
3. ALL MATERIAL SHALL BE M270-50W (CVN).
4. ALL FLANGE SPLICES ARE TO BE RADIOGRAPHICALLY TESTED 100%.

RECEIVED
CK'D BY JEL OK'D BY KMH
JUL 29 2009
RECEIVED APPROVED ✓
BY KMH DATE 7/31/09

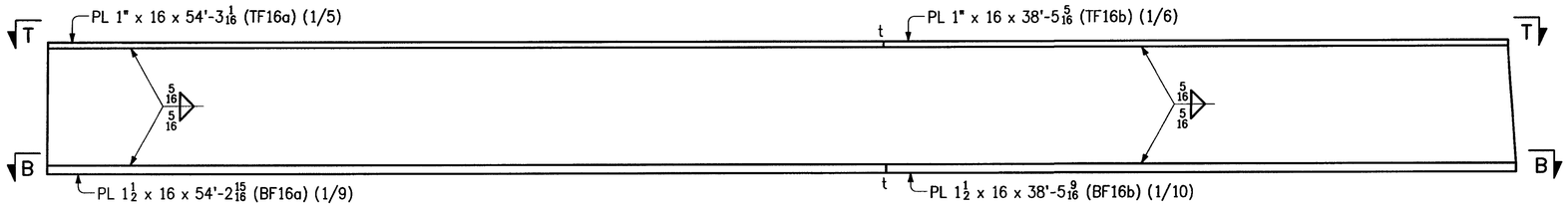
REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			7-16	SP	Appr.
1	7-14-09	REVISED HORIZONTAL CURVING DIAGRAM.			

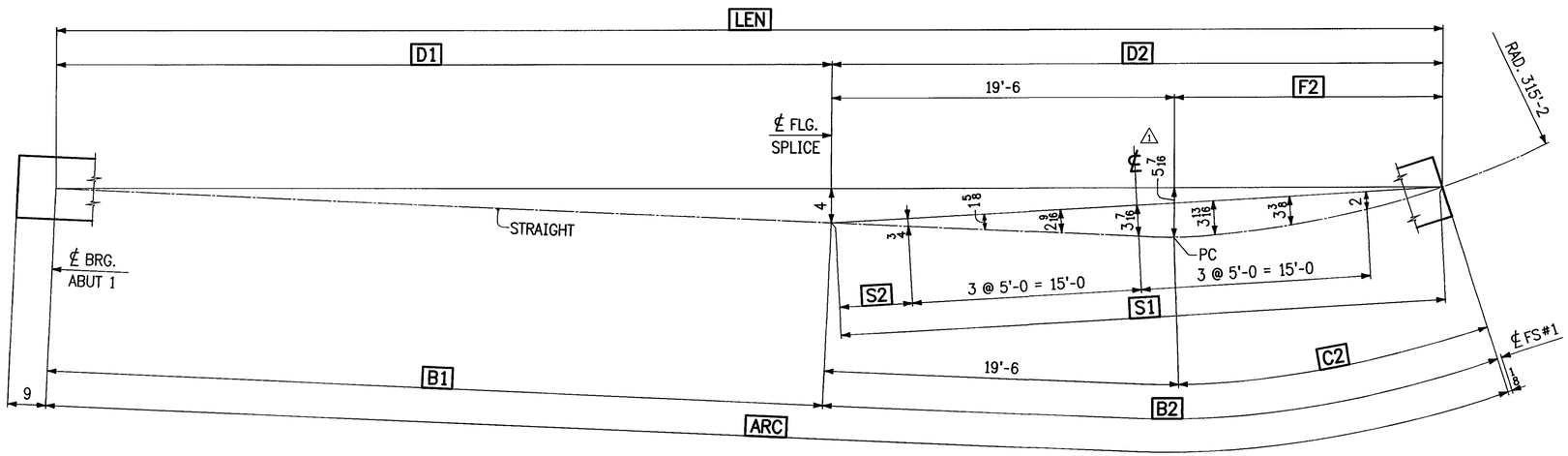
MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT	HOLES U N	WELD U N	Q.C REVIEW
PROJECT: TH NO.1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT			DATE: 6-4-09 DRAWN BY: KLK 5-22-09
DESCRIPTION: CAMBER DIAGRAMS			CHK'D BY: GDC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT NO: 4

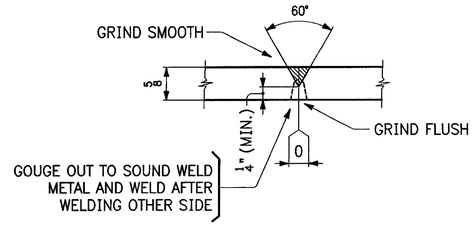


WEB CUTTING DIAGRAM FOR 16G5A



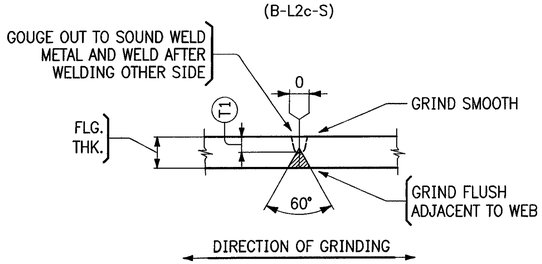


LOCATION	ARC	LEN	B1	B2	C2	D1	D2	F2	S1	S2
VIEW T-T	91'-11 3/8	91'-11 1/4	53'-6 1/16	38'-5 5/16	18'-11 5/16	53'-6	38'-5 1/4	18'-11 1/4	38'-5 1/4	4'-2 5/8
SECT. B-B	91'-11 1/2	91'-11 3/8	53'-5 15/16	38'-5 9/16	18'-11 9/16	53'-5 7/8	38'-5 1/2	18'-11 1/2	38'-5 1/2	4'-2 3/4



SECT. W

(B-L2c-S)



TYPICAL FLANGE PLATE SPLICE

(B-L2c-S)

FLG. THK.	T1
1"	5/16
1 1/2	1/2

NOTES:

1. FOR GENERAL NOTES, SEE DWG. GN1.
2. THE LETTER "t" AT FLANGE SPLICES INDICATES SPLICES IN TENSION.
3. ALL MATERIAL SHALL BE M270-50W (CVN).
4. ALL FLANGE SPLICES ARE TO BE RADIOGRAPHICALLY TESTED 100%.

RECEIVED
CK'D BY JEL OK'D BY KmH
JUL 20 2009
BY CU Email APPROVED ✓
BY KmH DATE 7/21/09

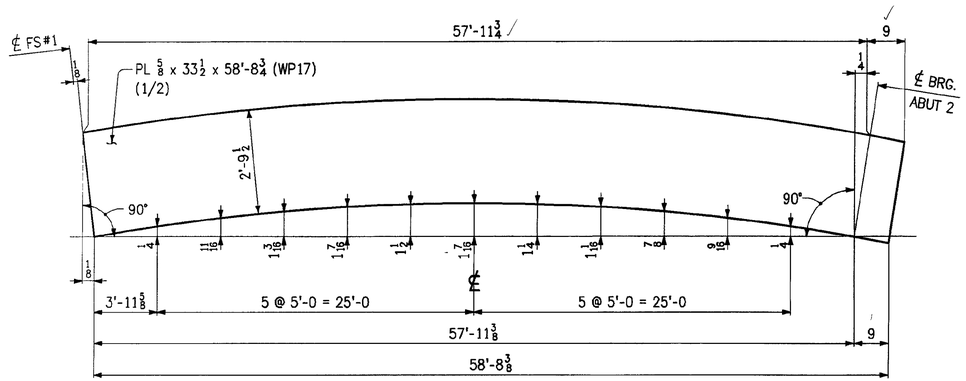
REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			7-16	5p	Appr.
1	7-14-09	REVISED HORIZONTAL CURVING DIAGRAM.			

MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

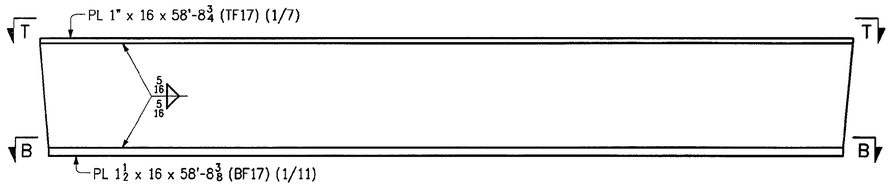
PAINT	HOLES U N	WELD U N	Q C REVIEW

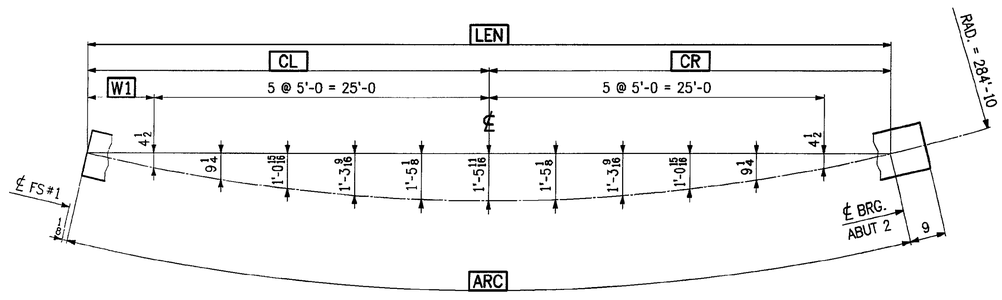
PROJECT: TH NO.1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT	DATE: 6-4-09
DRAWN BY: T.L.K 5-22-09	
DESCRIPTION: CAMBER DIAGRAMS	CHK'D BY: GDC
ARCH: N/A — ENGR: VERMONT AGENCY OF TRANSPORTATION	JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.	SHT NO: 5

Sheet 5 - Plotted 07/16/2009 @ 09:30 (HEATHER)



WEB CUTTING DIAGRAM FOR 17G1B





LOCATION	ARC	LEN	CL	CR	W1
VIEW T-T	57'-11¾	57'-10 9/16	28'-11 5/16	28'-11¼	3'-11 5/16
SECT. B-B	57'-11⅜	57'-10 3/16	28'-11 1/16	28'-11⅛	3'-11 1/16

NOTES:

1. FOR GENERAL NOTES, SEE DWG. GN1.
2. ALL MATERIAL SHALL BE M270-50W (CVN).

Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable

Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents verifies their accuracy as stipulated on the Contractors Shop Drawing Stamp.

7/7/09 DuBOIS AND KING By

RECEIVED
CK'D BY JL CK'D BY KMH
JUN 10 20[illegible]
APPROVED ✓
BY KMH DATE 7/13/09

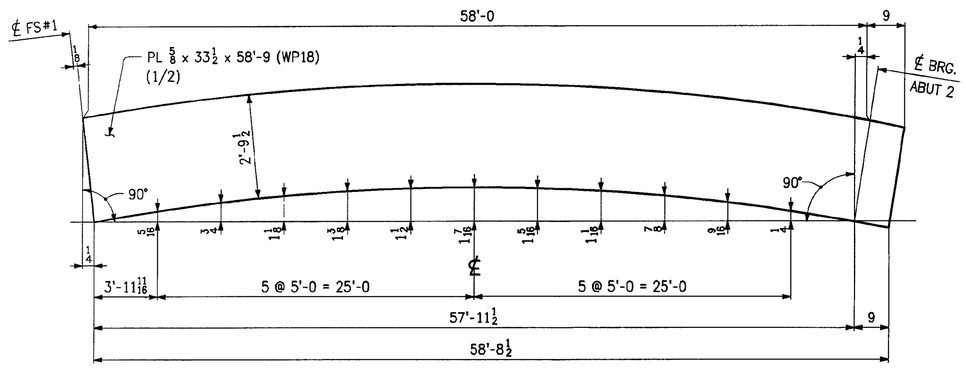
REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			6-15	E	Appr.

MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

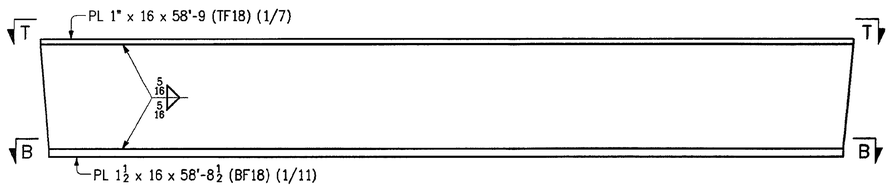
PAINT	HOLES U N	WELD U N	Q C REVIEW
PROJECT: TH NO.1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT			DATE: 6-4-09
			DRAWN BY: RLK 5-22-09
DESCRIPTION: CAMBER DIAGRAMS			CHK'D BY: GEC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP			SHT NO: 6

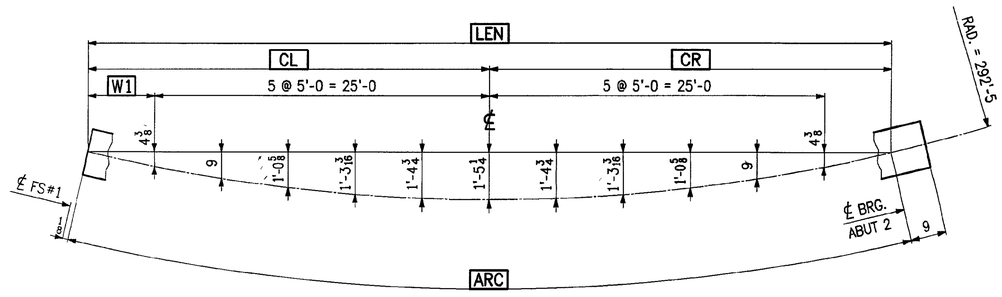
998-4 WC998F

Sheet F Plotted 06/17/2009 @ 10:39 (HEATHER)



WEB CUTTING DIAGRAM FOR 18G2B





LOCATION	ARC	LEN	CL	CR	W1
VIEW T-T	58'-0	57'-10 7/8	28'-11 7/16	28'-11 7/16	3'-11 7/16
SECT. B-B	57'-11 1/2	57'-10 3/8	28'-11 3/16	28'-11 3/16	3'-11 3/16

NOTES:

1. FOR GENERAL NOTES, SEE DWG. GN1
2. ALL MATERIAL SHALL BE M270-50W (CVN).

Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable

Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents, verifies their accuracy as stipulated on the Contractor's Shop Drawing Stamp

DuBOIS AND KING
By
D.: 7/7/09

RECEIVED
OK'D BY JL OK'D BY KmH
JUN 10 20
APPROVED
BY KmH DATE 7/9/09

REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			6-15	E	Appr.

MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

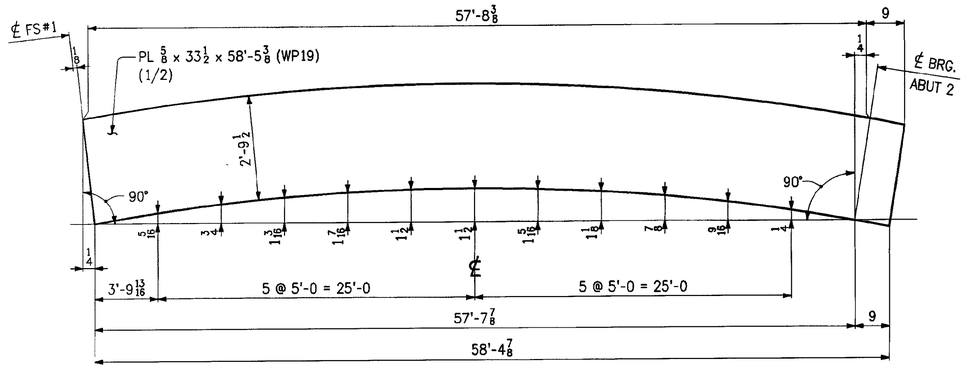
PAINT	HOLES U N	WELD U N	Q C REVIEW

PROJECT: TH NO.1 OVER THE GIHON RIVER
PROJECT NO. BHO 1448 (29) BRIDGE NO. 5
TOWN OF JOHNSON, VERMONT

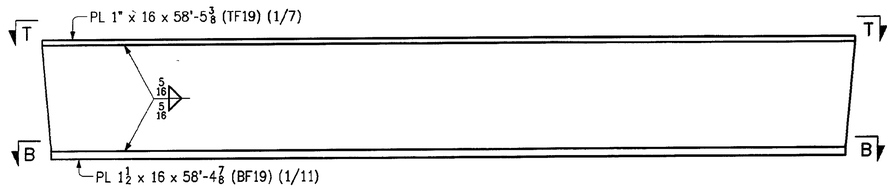
DATE: 6-4-09
DRAWN BY: RLK 5-27-09
CHK'D BY: EDC
JOB NO: J-81
SHT NO: 7

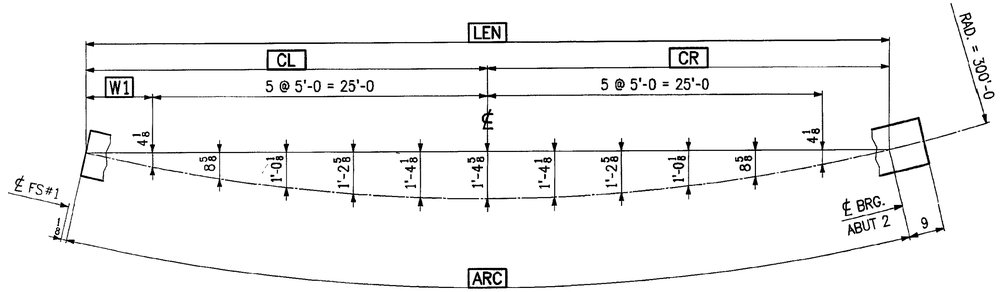
DESCRIPTION: CAMBER DIAGRAMS
ARCH: N/A
ENGR: VERMONT AGENCY OF TRANSPORTATION
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.

Sht 7 Plotted 06/11/2009 @ 10:33 (HEATHER)



WEB CUTTING DIAGRAM FOR 19G3B





LOCATION	ARC	LEN	CL	CR	W1
VIEW T-T	57'-8 3/8	57'-7 5/16	28'-9 5/8	28'-9 11/16	3'-9 5/8
SECT. B-B	57'-7 7/8	57'-6 13/16	28'-9 3/8	28'-9 7/16	3'-9 3/8

NOTES:

1. FOR GENERAL NOTES, SEE DWG. GN1.
2. ALL MATERIAL SHALL BE M270-50W (CVN).

Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable

Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents, verifies their accuracy, as stipulated on the Contractor's Shop Drawing Stamp.

DuBOIS AND KING
By
7/7/09

RECEIVED
CK'D BY JFL OK'D BY KmH
JUN 15 2!
APPROVED ✓
BY KmH DATE 7/13/09

REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			6-15	E	Appr

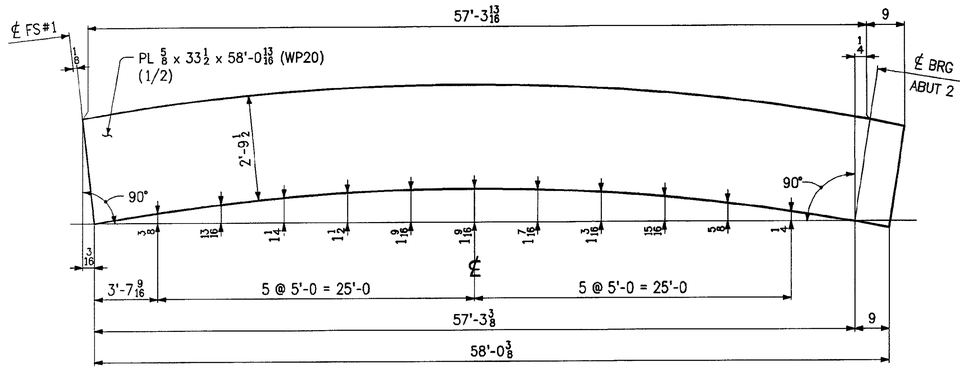
MEGQUIER & JONES INC.

STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

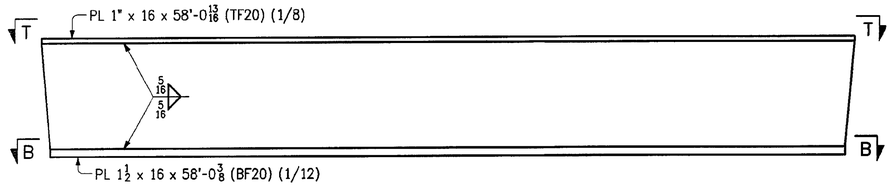
PAINT	HOLES U N	WELD U N	Q.C. REVIEW
PROJECT: TH NO.1 OVER THE GIHON RIVER PROJECT NO BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT			DATE: 6-4-09
			DRAWN BY: RLK 5-27-09
DESCRIPTION: CAMBER DIAGRAMS			CHK'D BY: GDC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP			SHT NO: 8

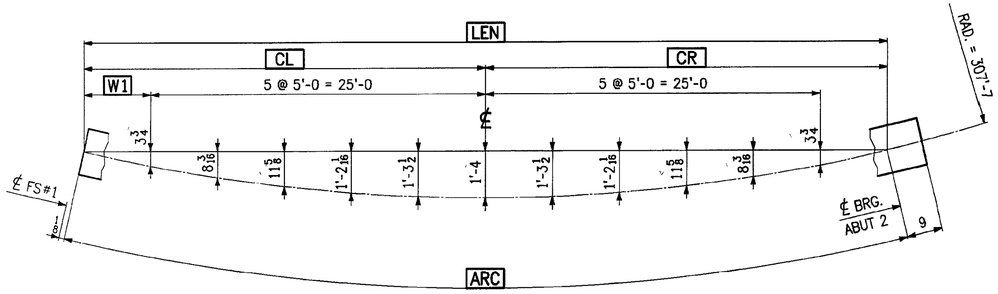
998-4 WC998H

Sheet 8 Plotted 06/11/2009 @ 10:39 (HOANER)



WEB CUTTING DIAGRAM FOR 20G4B





LOCATION	ARC	LEN	CL	CR	W1
VIEW T-T	57'-3 13/16	57'-2 13/16	28'-7 3/8	28'-7 7/16	3'-7 3/8
SECT. B-B	57'-3 3/8	57'-2 3/8	28'-7 3/8	28'-7 3/16	3'-7 3/16

NOTES:

1. FOR GENERAL NOTES, SEE DWG. GN1
2. ALL MATERIAL SHALL BE M270-50W (CVN).

Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable

Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents, verifies their accuracy as stipulated on the Contractor's Shop Drawing Stamp.

DuBOIS AND KING
By [signature] 7/7/09

RECEIVED
CK'D BY JEL CK'D BY KmH
JUN 18 '09
APPROVED ✓
BY KmH DATE 7/13/09

REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			6-15	E	APPR.

MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT	HOLES U N	WELD U N	Q C REVIEW

PROJECT: TH NO.1 OVER THE GIHON RIVER
PROJECT NO. BHO 1448 (29) BRIDGE NO. 5
TOWN OF JOHNSON, VERMONT

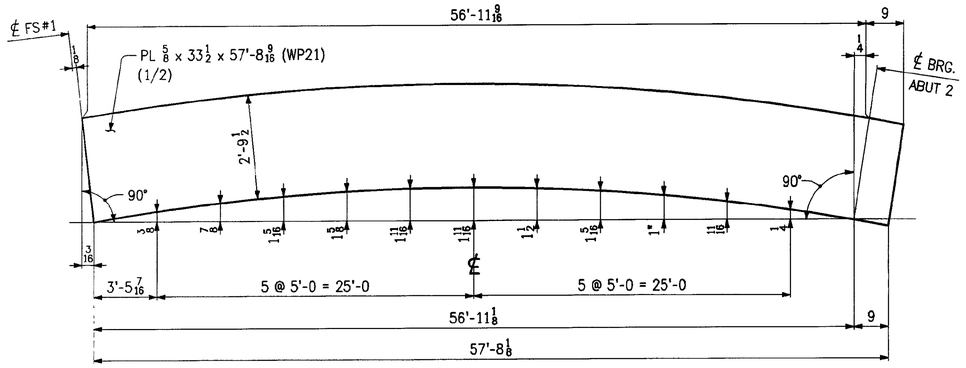
DATE: 6-4-09
DRAWN BY: RJK 5-27-09
CHK'D BY: GDC

DESCRIPTION: CAMBER DIAGRAMS

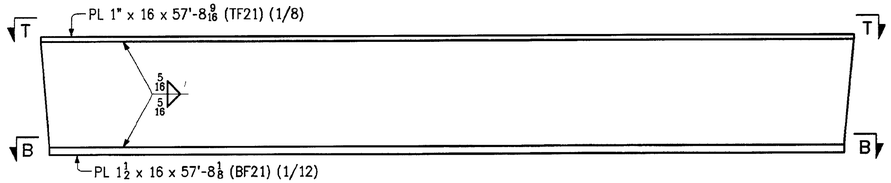
ARCH: N/A
ENGR: VERMONT AGENCY OF TRANSPORTATION
JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.
SHT NO: 9

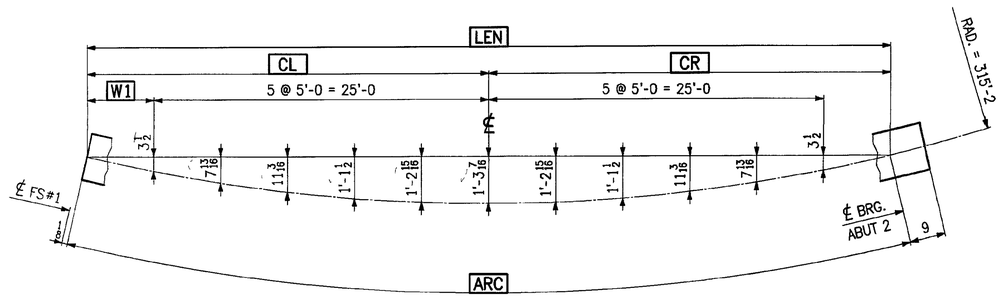
998-4 WC998J

Sheet 9 Plotted: 06/17/2009 @ 10:23 (JCAD CD)



WEB CUTTING DIAGRAM FOR 21G5B





LOCATION	ARC	LEN	CL	CR	W1
VIEW T-T	56'-11 9/16	56'-10 5/8	28'-5 5/16	28'-5 5/16	3'-5 5/16
SECT. B-B	56'-11 1/8	56'-10 3/16	28'-5 1/16	28'-5 1/8	3'-5 1/16

NOTES:

1. FOR GENERAL NOTES, SEE DWG. GN1.
2. ALL MATERIAL SHALL BE M270-50W (CVN).

Accepted
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable

Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents, verifies their accuracy as stipulated on the Contractors Shop Drawing Stamp.

DATE 7/7/09 By DuBOIS AND KING

RECEIVED
CK'D BY JFL CK'D BY KMH
JUN 19 20
APPROVED ✓
BY KMH DATE 7/21/09

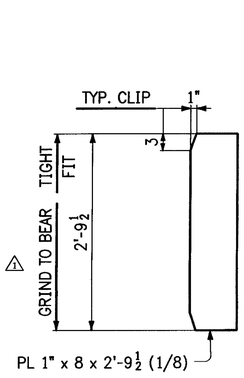
REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			6-15	E	Appr.

MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

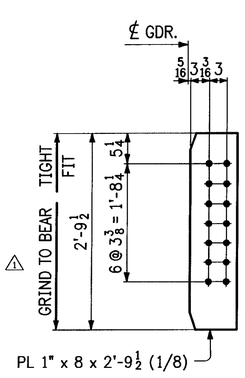
PAINT	HOLES U N	WELD U N	Q C REVIEW
PROJECT: TH NO.1 OVER THE GIHON RIVER PROJECT NO BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT			DATE: 6-4-09
			DRAWN BY: RLK 5-27-09
DESCRIPTION: CAMBER DIAGRAMS			CHK'D BY: EDC
ARCH. N/A	ENGR VERMONT AGENCY OF TRANSPORTATION		JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT NO: 10

998-4 WC998K

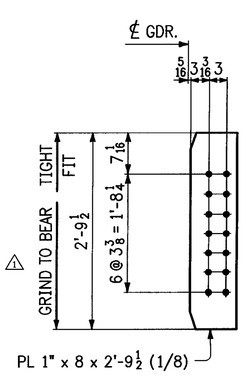
Sheet 10 Plotted 06/11/2009 @ 10:39 (HEATHER)



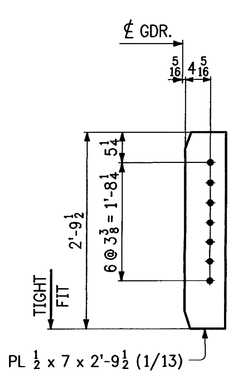
⚠ 22 ~ p1
(PIER)
(ABUT)



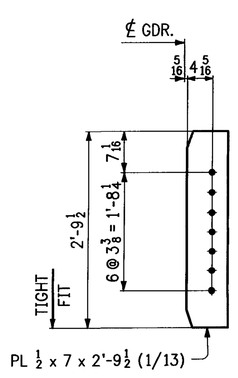
4 ~ p2
(PIER)
(LOW)



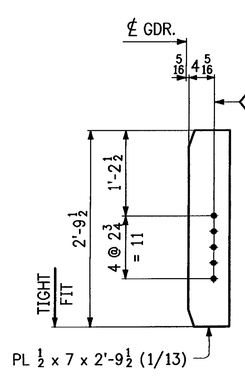
4 ~ p3
(PIER)
(HIGH)



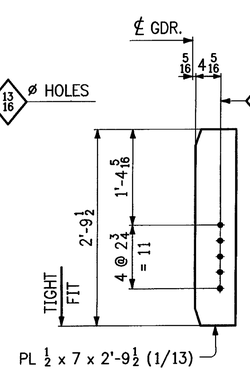
36 ~ p4
(INT)
(LOW)



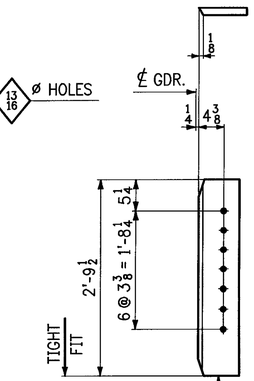
36 ~ p5
(INT)
(HIGH)



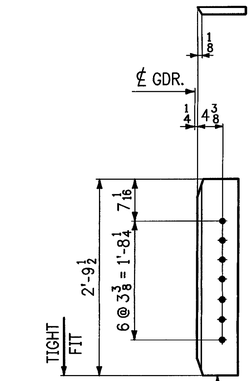
4 ~ p6
(UTILITY CONN)
(LOW)



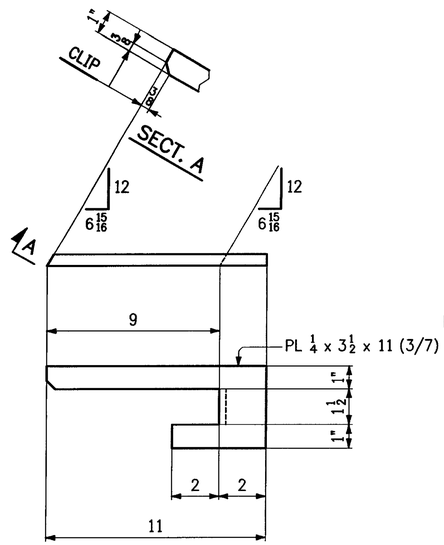
4 ~ p7
(UTILITY CONN)
(HIGH)



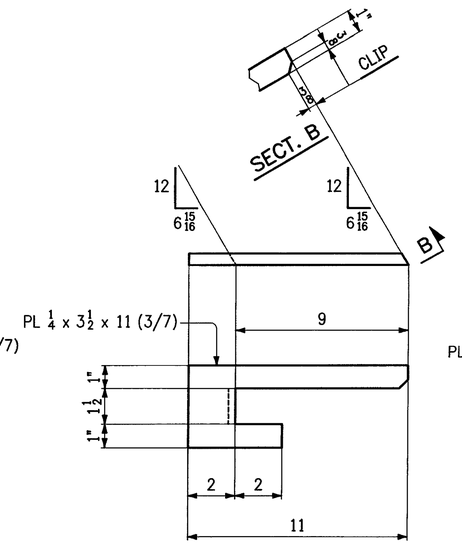
⚠ 4 ~ p13
(INT)
(LOW)



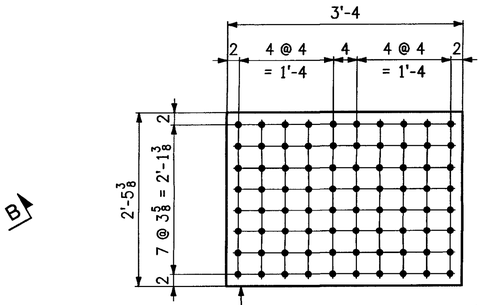
⚠ 4 ~ p14
(INT)
(HIGH)



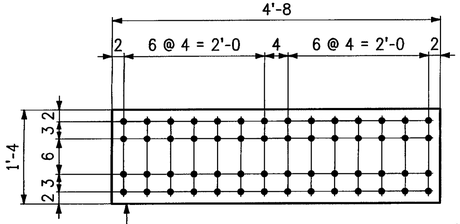
2 ~ DRIP BARS ~ p8
(LINE 1)



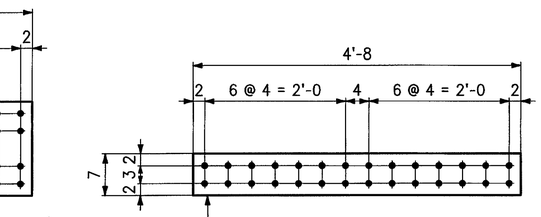
2 ~ DRIP BARS ~ p9
(LINE 5)



10 ~ p10



10 ~ p11



20 ~ p12

NOTES:

1. FOR GENERAL NOTES SEE SHT. GN1
2. MATERIAL: M270-50W.

RECEIVED
OK'D BY JEC OK'D BY KMH
JUL 23 2009
RECEIVED APPROVED ✓
BY KMH DATE 7/21/09

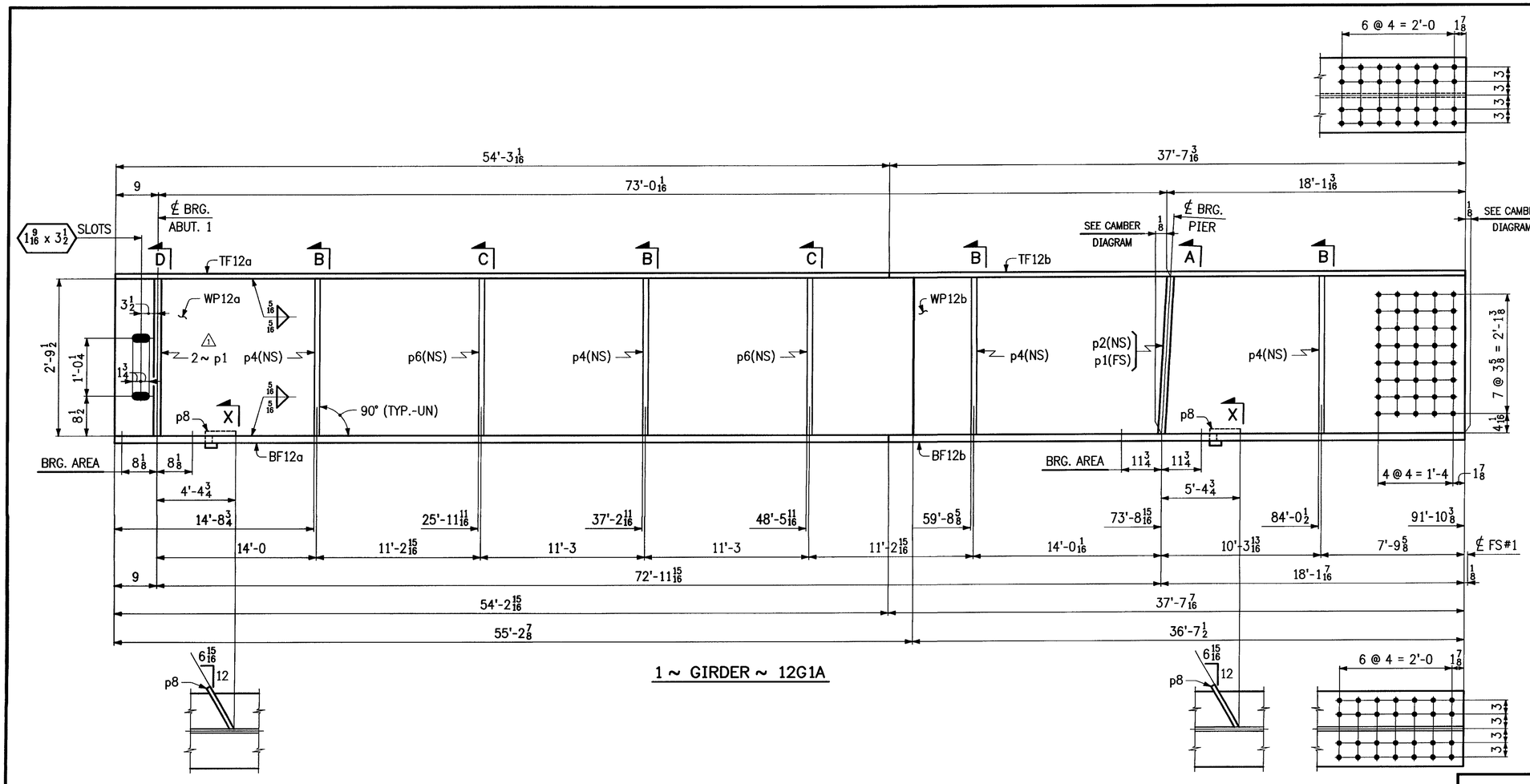
REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			7-16	SP	Appr.
⚠	7-14-09	ADDED CONN. PL'S, REV QUANTITIES & REV. TO "GRIND TO BEAR".			

MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

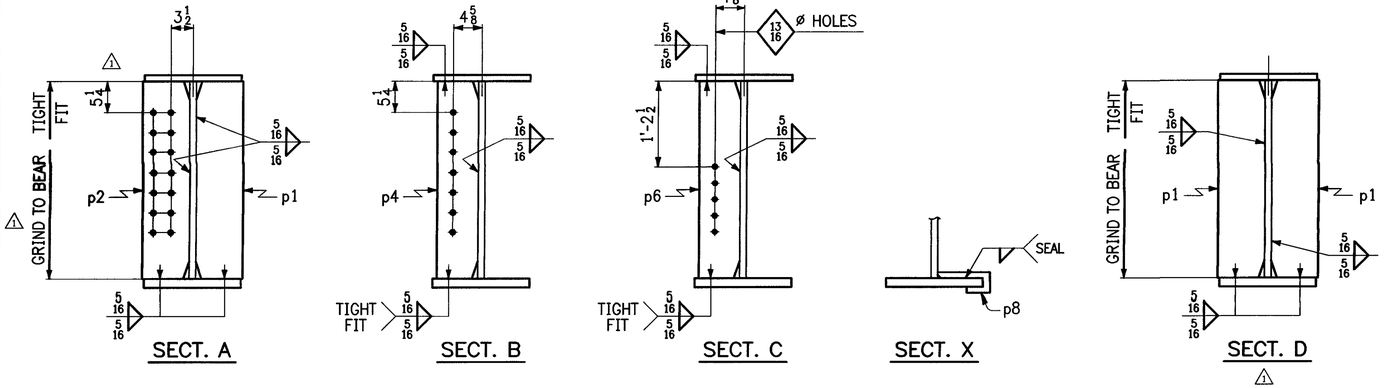
PAINT	HOLES U N 15/16 ø	WELD U N	Q C REVIEW
PROJECT: TH NO.1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT			DATE: 6-8-09
			DRAWN BY: RLK
DESCRIPTION: GIRDER STANDARDS			CHK'D BY: GDC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT NO: 11

998-9 STD998

Sheet 11 - Plotted 07/16/2009 @ 09:31 (HEATHER)



1 ~ GIRDER ~ 12G1A



NOTES:

1. FOR GIRDER STANDARDS, SEE SHT. NO. 11.
2. FOR CAMBER DIAGRAM, SEE SHT. NO. 1.
2. FOR GENERAL NOTES, SEE SHT. NO. GN1.

BILL OF MATERIAL

SHIP MARK	QTY	PIECE MARK	DESCRIPTION	LENGTH FT	LENGTH IN	REMARKS	PAGE LINE
12G1A	1		GIRDER				
	1	WP12a	PL 5/8 x 33 1/2	55	3 1/8	(CVN)	1/1
	1	WP12b	PL 5/8 x 33 1/2	36	7 1/2	(CVN)	1/3
	1	TF12a	PL 1 x 16	54	3 1/16	(CVN)	1/5
	1	TF12b	PL 1 x 16	37	7 3/16	(CVN)	1/6
	1	BF12a	PL 1 1/2 x 16	54	2 15/16	(CVN)	1/9
	1	BF12b	PL 1 1/2 x 16	37	7 7/16	(CVN)	1/10
1	3	p1	PL 1 x 8	2	9 1/2	(CVN)	1/8
	1	p2	PL 1 x 8	2	9 1/2	(CVN)	1/8
	4	p4	PL 1/2 x 7	2	9 1/2	(CVN)	1/13
	2	p6	PL 1/2 x 7	2	9 1/2	(CVN)	1/13
	2	p8	PL 1/4 x 3 1/2	0	11		3/7

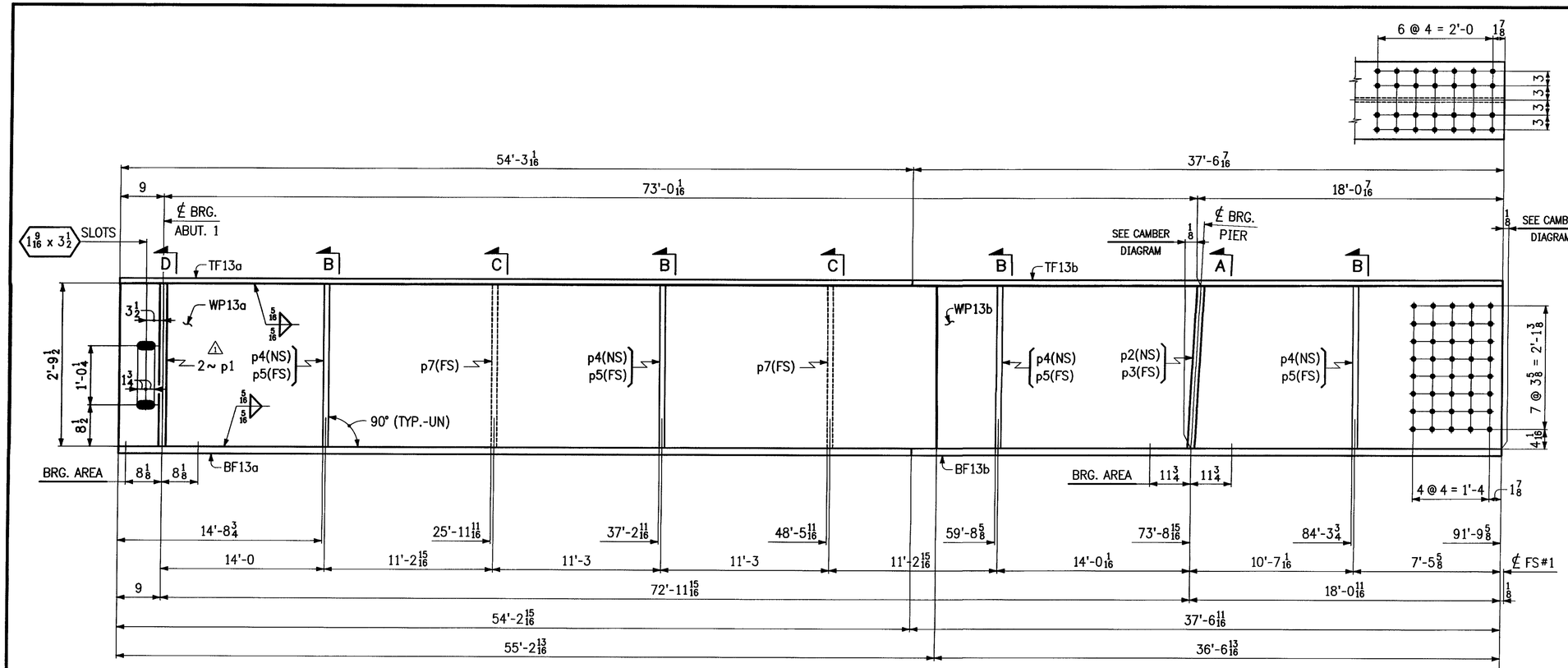
RECEIVED
CK'D BY JFL OK'D BY KMH
JUL 23 2009
R. COMMIT ___ APPROVED ✓
BY KMH DATE 7/21/09

REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			7-16	SP	APPR
1	7-14-09	ADDED BRG STIFFS @ ABUT, ADDED SECT D, REMOVED WELD ℄ REV TO GRIND TO BEAR IN SECT A			

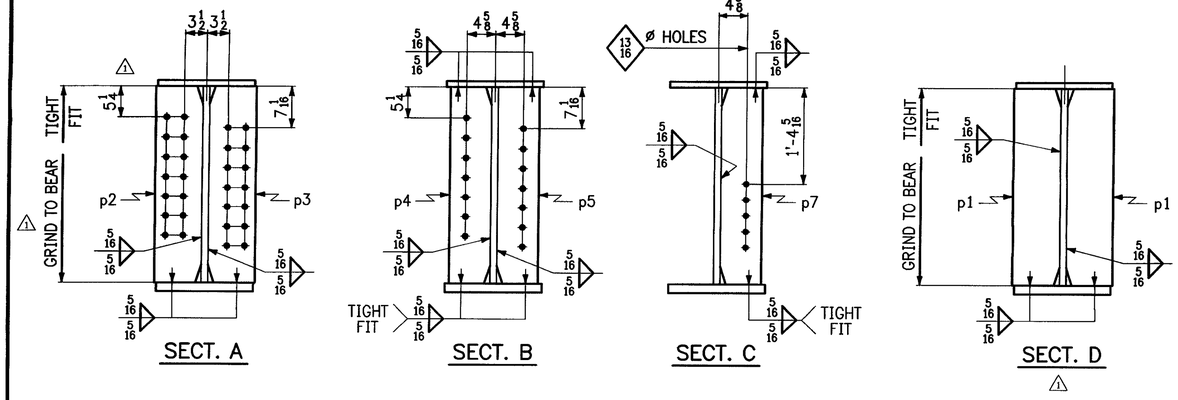
MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT: SSPC-SP10	HOLES U N: 15/16 Ø	WELD U N.	Q C REVIEW
PROJECT: TH NO.1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT			DATE: 6-8-09
DESCRIPTION: GIRDER ~ 12G1A			DRAWN BY: RLK
			CHK'D BY: GDC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT NO: 12

Sheet 12 - Plotted 07/16/2009 @ 09:32 (HEATHER)



1 ~ GIRDER ~ 13G2A



NOTES:

1. FOR GIRDER STANDARDS, SEE SHT. NO. 11.
2. FOR CAMBER DIAGRAM, SEE SHT. NO. 2.
2. FOR GENERAL NOTES, SEE SHT. NO. GN1.

BILL OF MATERIAL

SHIP MARK	QTY	PIECE MARK	DESCRIPTION	LENGTH FT	LENGTH IN	REMARKS	PAGE LINE
13G2A	1		GIRDER				
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	1	WP13b	PL 5/8 x 33 1/2	36	6 13/16	(CVN)	1/4
	1	TF13a	PL 1 x 16	54	3 1/16	(CVN)	1/5
	1	TF13b	PL 1 x 16	37	6 7/16	(CVN)	1/6
	1	BF13a	PL 1 1/2 x 16	54	2 15/16	(CVN)	1/9
	1	BF13b	PL 1 1/2 x 16	37	6 11/16	(CVN)	1/10
	1	p2	PL 1 x 8	2	9 1/2	(CVN)	1/8
	1	p3	PL 1 x 8	2	9 1/2	(CVN)	1/8
	4	p4	PL 1/2 x 7	2	9 1/2	(CVN)	1/13
	4	p5	PL 1/2 x 7	2	9 1/2	(CVN)	1/13
	2	p7	PL 1/2 x 7	2	9 1/2	(CVN)	1/13
⚠	2	p1	PL 1 x 8	2	9 1/2	(CVN)	1/8

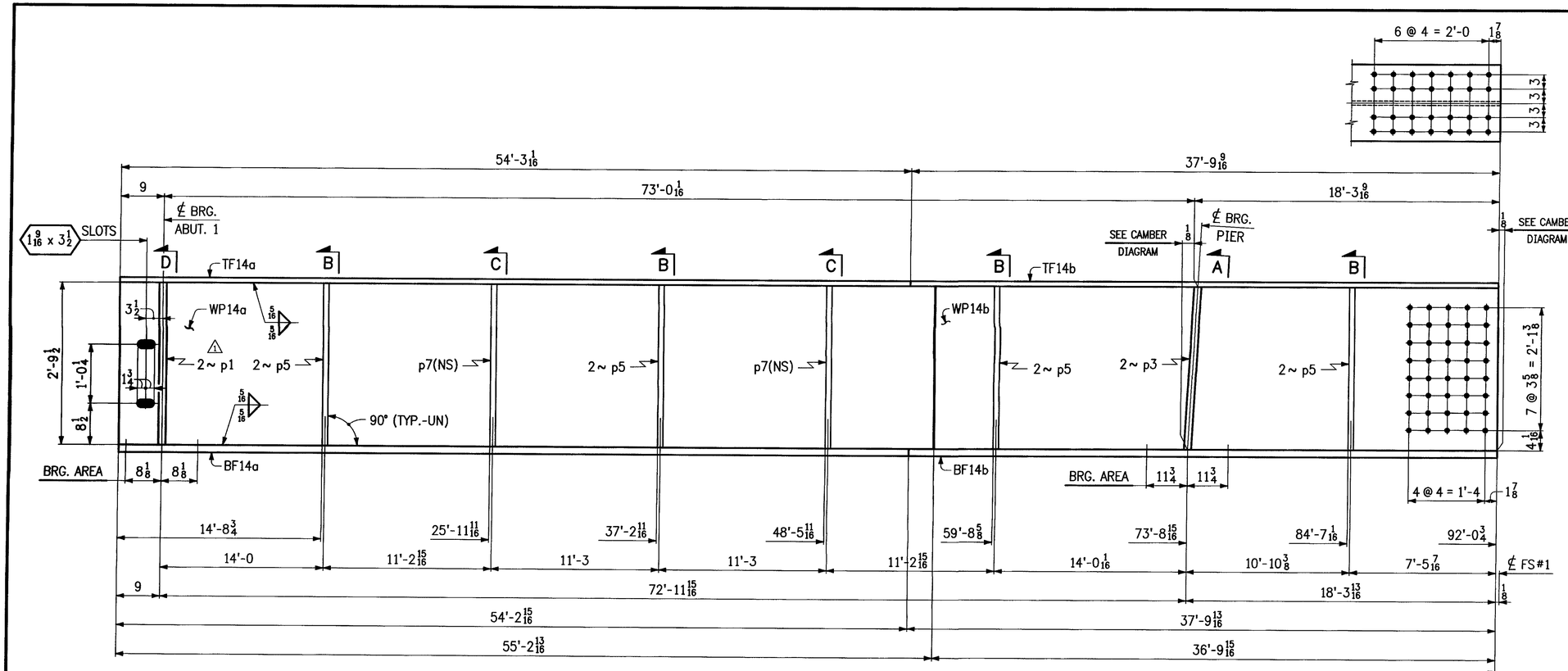
RECEIVED
OK'D BY JFL OK'D BY KMH
JUL 22 20..
R ..SUBMIT ___ APPROVED ✓
BY KMH DATE 7/21/09

REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			7-16	5P	Appr.
⚠	7-14-09	ADDED BRG STIFFS @ ABUT. ADDED SECT D. REMOVED WELD ℄ REV TO GRIND TO BEAR IN SECT A			

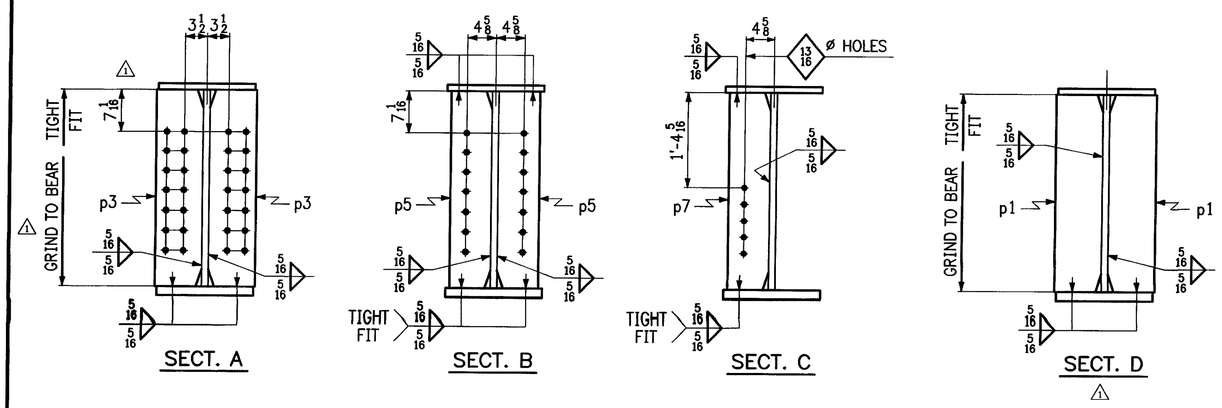
MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT: SSPC-SP10	HOLES U N 15/16ø	WELD U N	Q C REVIEW
PROJECT: TH NO.1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT			DATE: 6-8-09 DRAWN BY: RLK
DESCRIPTION: GIRDER ~ 13G2A			CHK'D BY: GDC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT NO: 13

Sheet 13 - Plotted 07/16/2009 @ 09:32 (MSHTHER)



1 ~ GIRDER ~ 14G3A



NOTES:

1. FOR GIRDER STANDARDS, SEE SHT. NO. 11.
2. FOR CAMBER DIAGRAM, SEE SHT. NO. 3.
2. FOR GENERAL NOTES, SEE SHT. NO. GN1.

BILL OF MATERIAL

SHIP MARK	QTY	PIECE MARK	DESCRIPTION	LENGTH FT	LENGTH IN	REMARKS	PAGE LINE
14G3A	1		GIRDER				
	1	WP14a	PL 5/8 x 33 1/2	55	3 1/16	(CVN)	1/1
	1	WP14b	PL 5/8 x 33 1/2	36	9 15/16	(CVN)	1/3
	1	TF14a	PL 1 x 16	54	3 1/16	(CVN)	1/5
	1	TF14b	PL 1 x 16	37	9 9/16	(CVN)	1/6
	1	BF14a	PL 1 1/2 x 16	54	2 15/16	(CVN)	1/9
	1	BF14b	PL 1 1/2 x 16	37	9 13/16	(CVN)	1/10
	2	p3	PL 1 x 8	2	9 1/2	(CVN)	1/8
	8	p5	PL 1/2 x 7	2	9 1/2	(CVN)	1/13
	2	p7	PL 1/2 x 7	2	9 1/2	(CVN)	1/13
1	2	p1	PL 1 x 8	2	9 1/2	(CVN)	1/8

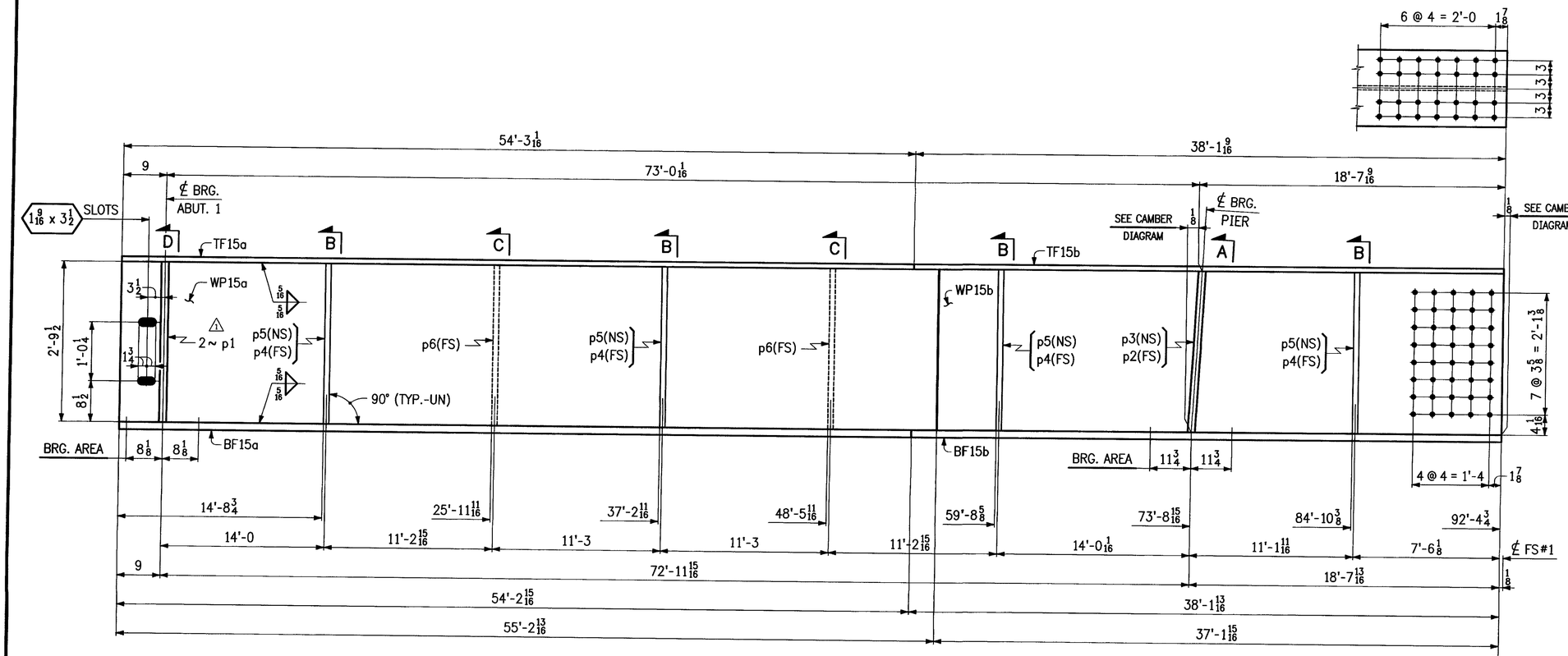
RECEIVED
GK'D BY SCL OK'D BY KmH
JUL 22 24
R SUBMIT ___ APPROVED ✓
BY KmH DATE 7/21/09

REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			7-16	SP	Appr.
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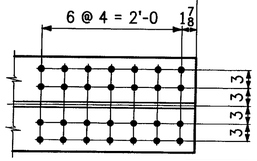
MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT: SSPC-SP10	HOLES U N 15/16Ø	WELD U N	Q C. REVIEW
PROJECT: TH NO.1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT			DATE: 6-8-09 DRAWN BY: TLK
DESCRIPTION: GIRDER ~ 14G3A			CHK'D BY: GDC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT NO: 14

Sheet 14 - Plotted 07/16/2009 @ 09:32 (HEATHER)



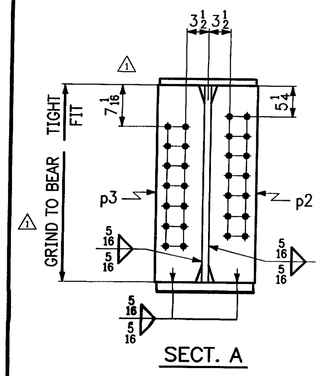
1 ~ GIRDER ~ 15G4A

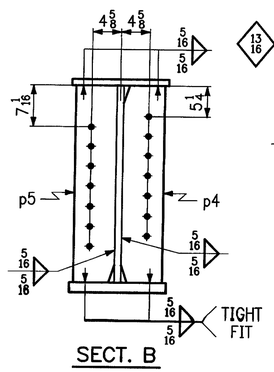


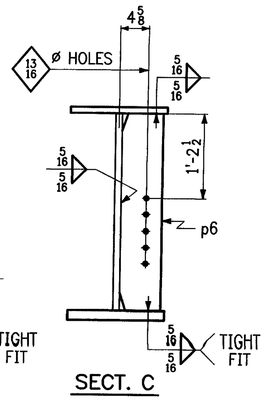
BILL OF MATERIAL

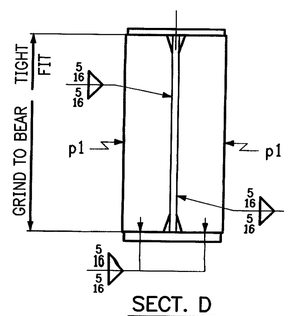
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	1	WP15b	PL 5/8 x 33 1/2	37	1 15/16	(CVN)	1/3
	1	TF15a	PL 1 x 16	54	3 1/16	(CVN)	1/5
	1	TF15b	PL 1 x 16	38	1 1/16	(CVN)	1/6
	1	BF15a	PL 1 1/2 x 16	54	2 15/16	(CVN)	1/9
	1	BF15b	PL 1 1/2 x 16	38	1 13/16	(CVN)	1/10
	1	p2	PL 1 x 8	2	9 1/2	(CVN)	1/8
	1	p3	PL 1 x 8	2	9 1/2	(CVN)	1/8
	4	p4	PL 1/2 x 7	2	9 1/2	(CVN)	1/13
	4	p5	PL 1/2 x 7	2	9 1/2	(CVN)	1/13
	2	p6	PL 1/2 x 7	2	9 1/2	(CVN)	1/13
1	2	p1	PL 1 x 8	2	9 1/2	(CVN)	1/8

RECEIVED
CK'D BY JEL CK'D BY KmH
JUL 22 20..
APPROVED ✓
BY KmH DATE 7/21/09









NOTES:

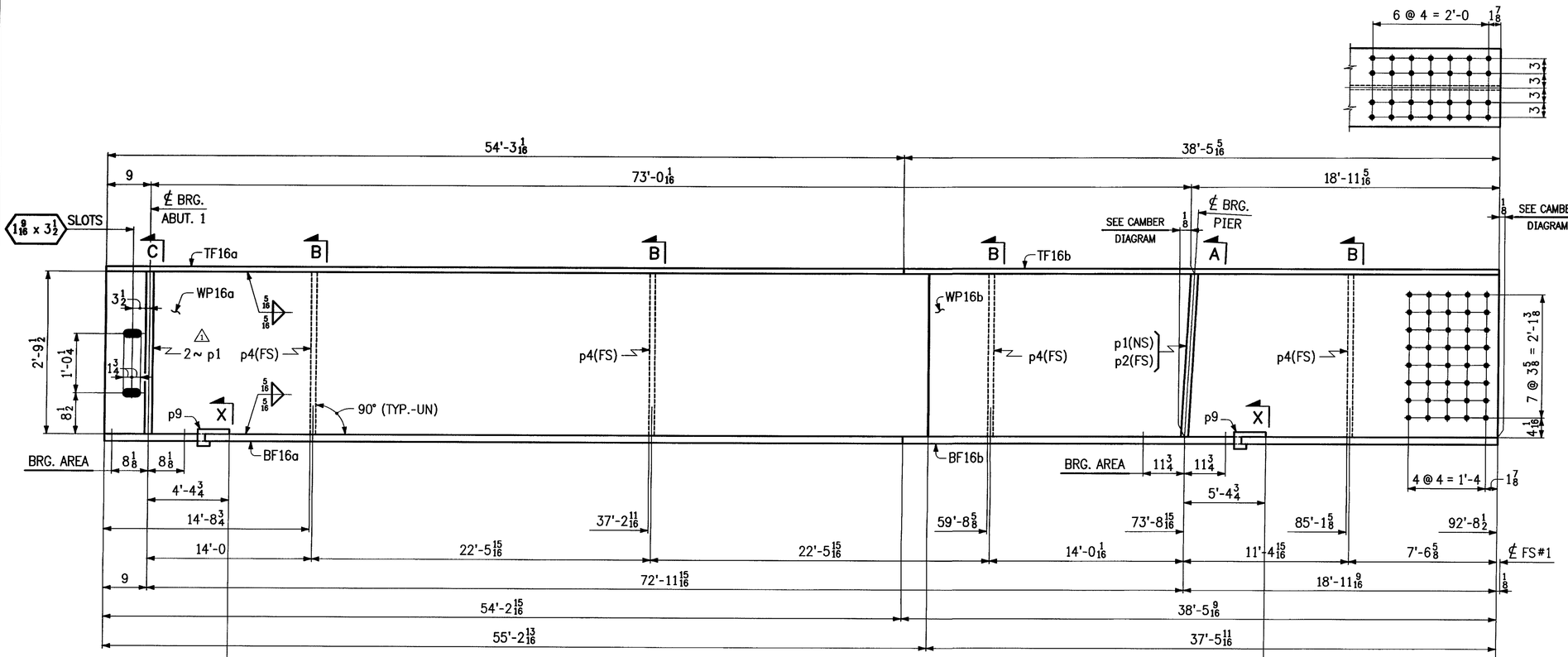
1. FOR GIRDER STANDARDS, SEE SHT. NO. 11.
2. FOR CAMBER DIAGRAM, SEE SHT. NO. 4.
2. FOR GENERAL NOTES, SEE SHT. NO. GN1.

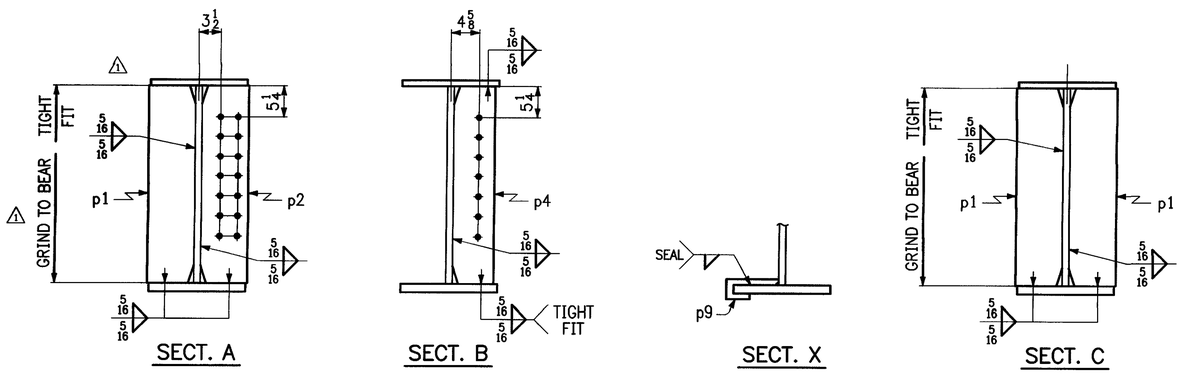
REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			7-16	SP	Appr.
1	7-14-09	ADDED BRG STIFFS @ ABUT, ADDED SECT D, REMOVED WELD ℄ REV TO GRIND TO BEAR IN SECT A			

MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT: SSPC-SP10	HOLES U N 15/16ø	WELD U.N	Q C REVIEW
PROJECT: TH NO.1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT			DATE: 6-8-09 DRAWN BY: RLK
DESCRIPTION: GIRDER ~ 15G4A			CHK'D BY: GDC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT NO: 15

Sheet 15 - Plotted 07/16/2009 @ 09:32 (HEATHER)





NOTES:

1. FOR GIRDER STANDARDS, SEE SHT. NO. 11.
2. FOR CAMBER DIAGRAM, SEE SHT. NO. 5.
2. FOR GENERAL NOTES, SEE SHT. NO. GN1.

BILL OF MATERIAL

SHIP MARK	QTY	PIECE MARK	DESCRIPTION	LENGTH FT	LENGTH IN	REMARKS	PAGE LINE
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	1	WP16b	PL 5/8 x 33 1/2	37	5 11/16	(CVN)	1/3
	1	TF16a	PL 1 x 16	54	3 1/16	(CVN)	1/5
	1	TF16b	PL 1 x 16	38	5 5/16	(CVN)	1/6
	1	BF16a	PL 1 1/2 x 16	54	2 15/16	(CVN)	1/9
	1	BF16b	PL 1 1/2 x 16	38	5 9/16	(CVN)	1/10
⚠	3	p1	PL 1 x 8	2	9 1/2	(CVN)	1/6
	1	p2	PL 1 x 8	2	9 1/2	(CVN)	1/8
	4	p4	PL 1/2 x 7	2	9 1/2	(CVN)	1/13
⚠	2	p9	PL 1/4 x 3 1/2	0	11		3/7

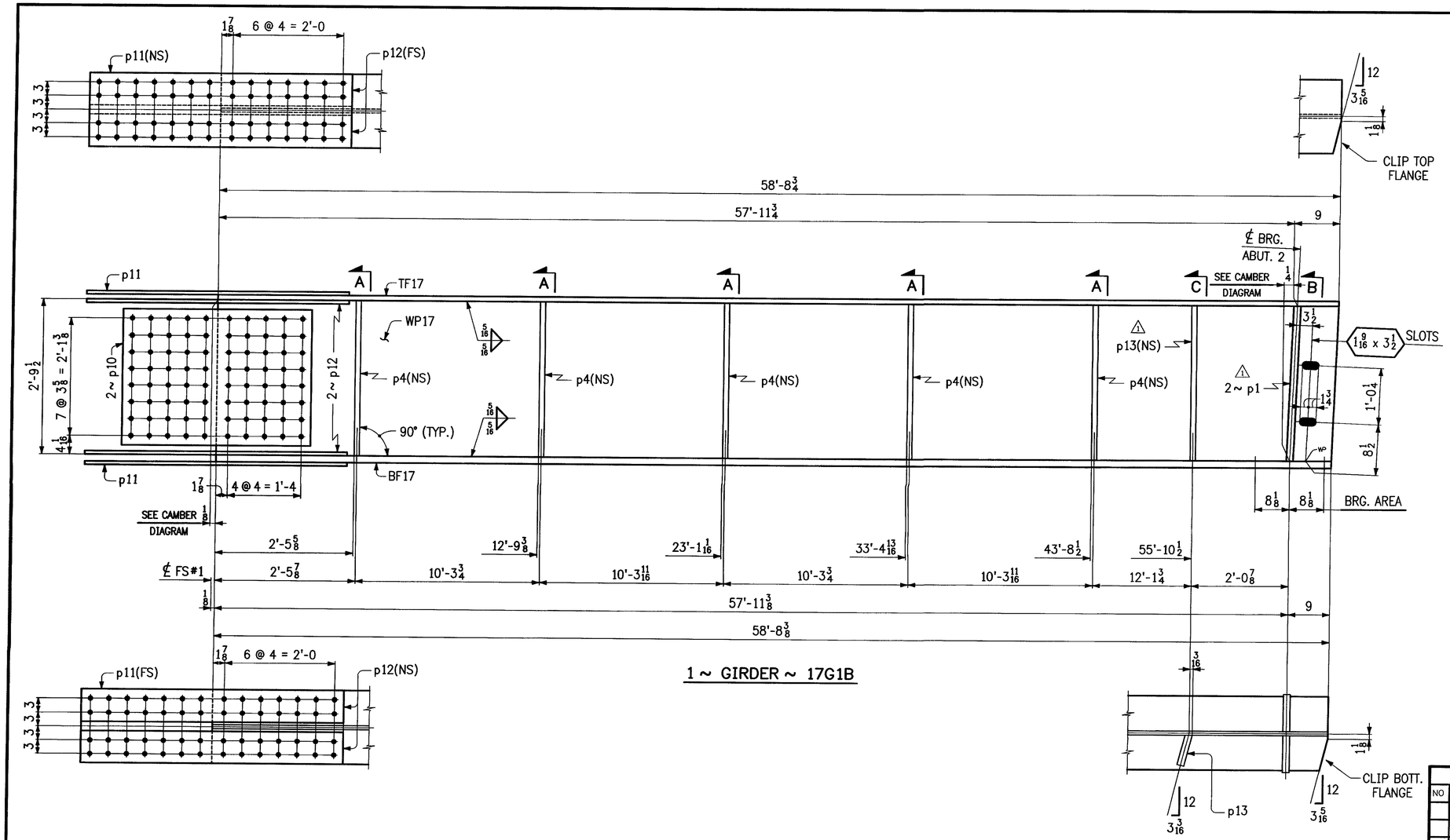
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CK'D BY JFL OK'D BY KmH
JUL 23 20
R SUBMIT APPROVED ✓
BY KmH DATE 7/31/09

REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			7-10	SP	Appr.
⚠	7-14-09	REV LENGTH FOR p9, ADDED BRG STIFFS @ ABUT, ADDED SECT C, REMOVED WELD ℄ REV TO GRIND TO BEAR IN SECT A			

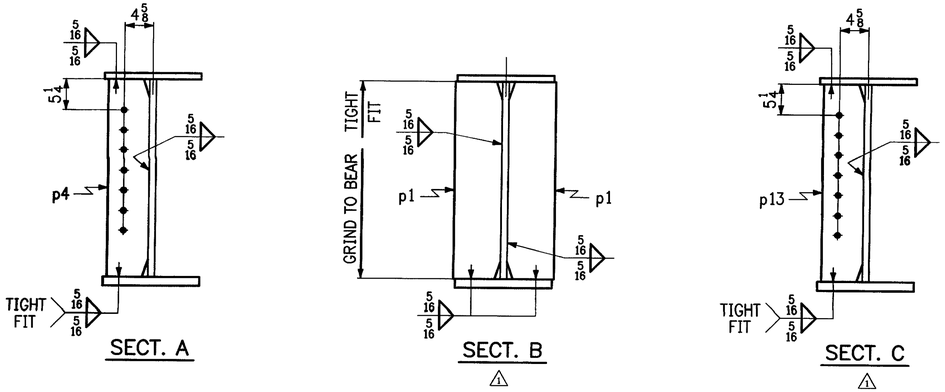
MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT: SSPC-SP10	HOLES U N 15/16	WELD U N	Q C REVIEW
PROJECT: TH NO.1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT			DATE: 6-8-09 DRAWN BY: RLK
DESCRIPTION: GIRDER ~ 16G5A			CHK'D BY: GDC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT NO: 16

Sheet 16 - Plotted 07/16/2009 @ 09:33 (HEATHER)



1 ~ GIRDER ~ 17G1B



NOTES:

1. FOR GIRDER STANDARDS, SEE SHT. NO. 11.
2. FOR CAMBER DIAGRAM, SEE SHT. NO. 6.
2. FOR GENERAL NOTES, SEE SHT. NO. GN1.

BILL OF MATERIAL

SHIP MARK	QTY	PIECE MARK	DESCRIPTION	LENGTH FT	LENGTH IN	REMARKS	PAGE LINE
17G1B	1		GIRDER				
	1	WP17	PL 5/8 x 33 1/2	58	8 3/4	(CVN)	1 / 2
	1	TF17	PL 1 x 16	58	8 3/4	(CVN)	1 / 7
	1	BF17	PL 1 1/2 x 16	58	8 3/8	(CVN)	1 / 11
	2	p10	PL 1/2 x 29 3/8	3	4	(CVN)	1 / 13
	2	p11	PL 1 1/2 x 16	4	8	(CVN)	1 / 14
	4	p12	PL 1 1/2 x 7	4	8	(CVN)	1 / 14
1	2	p1	PL 1 x 8	2	9 1/2	(CVN)	1 / 8
1	1	p13	PL 1/2 x 7	2	9 1/2	(CVN)	1 / 13
	5	p4	PL 1/2 x 7	2	9 1/2	(CVN)	1 / 13
	2		7/8ø MB	0	3	A307, W/NUT	4 / 2
	4		7/8ø MB	0	5 1/2	A307, W/NUT	4 / 3
	4		7/8ø MB	0	6	A307, W/NUT	4 / 4
	10		7/8ø WASHER			A307	4 / 5

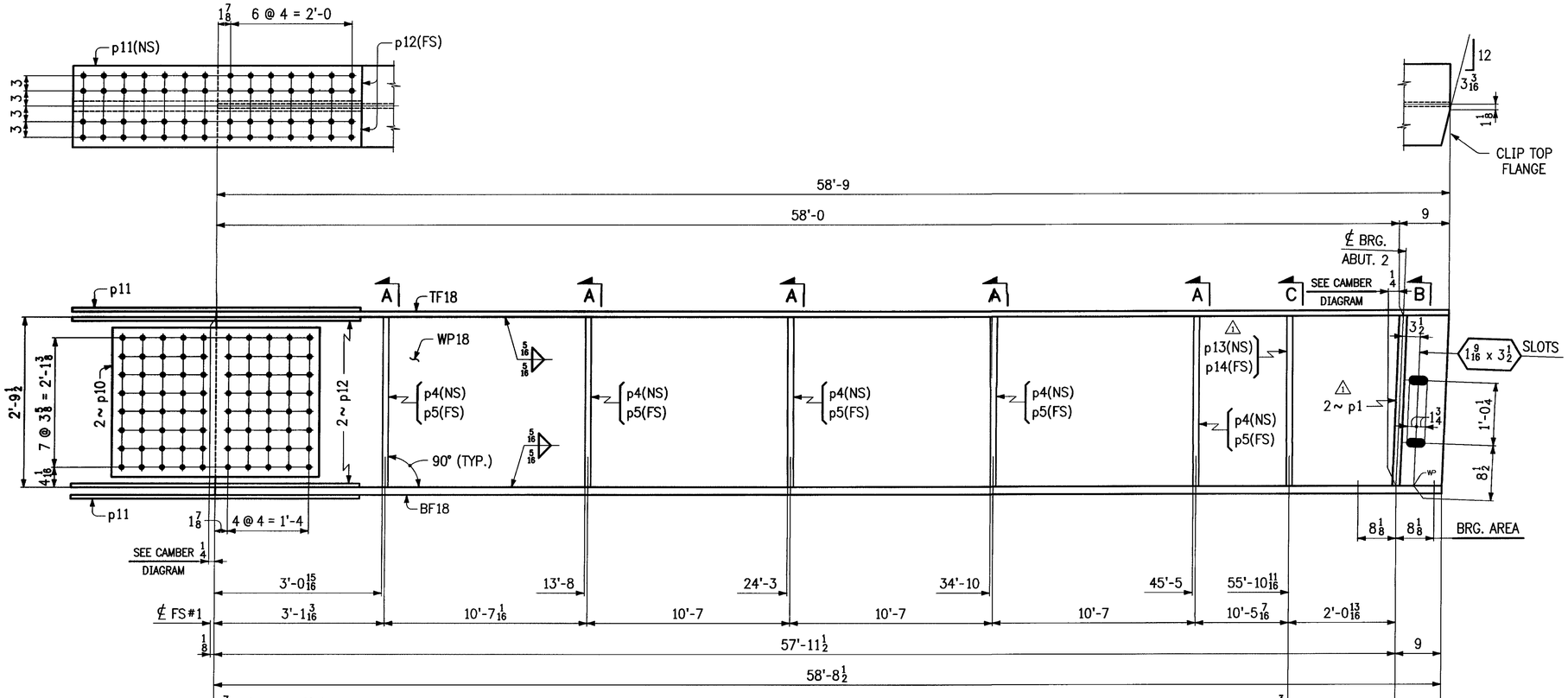
RECEIVED
CK'D BY JEL OK'D BY KmH
JUL 22 20..
R...E UNIT ... APPROVED ✓
BY KmH DATE 7/21/09

REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			7-16	5p	Appr.
1	7-14-09	ADDED BRG STIFFS ℄ CONN PL'S @ ABUT, ADDED SECTS B ℄ C,			

MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT: SSPC-SP10	HOLES U N 15/16ø	WELD U N	Q.C. REVIEW
PROJECT: TH NO.1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT			DATE: 6-8-09 DRAWN BY: RLK
DESCRIPTION: GIRDER ~ 17G1B			CHK'D BY: GDC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT NO: 17

Sheet 17 - Plotted 07/16/2009 @ 09:33 (HSKINNER)



BILL OF MATERIAL

SHIP MARK	QTY	PIECE MARK	DESCRIPTION	LENGTH FT	LENGTH IN	REMARKS	PAGE LINE
18G2B	1		GIRDER				
	1	WP18	PL 5/8 x 33 1/2	58	9	(CVN)	1 / 2
	1	TF18	PL 1 x 16	58	9	(CVN)	1 / 7
	1	BF18	PL 1 1/2 x 16	58	8 1/2	(CVN)	1 / 11
	2	p10	PL 1/2 x 29 3/8	3	4	(CVN)	1 / 13
	2	p11	PL 1 1/2 x 16	4	8	(CVN)	1 / 14
	4	p12	PL 1 1/2 x 7	4	8	(CVN)	1 / 14
	5	p4	PL 1/2 x 7	2	9 1/2	(CVN)	1 / 13
	5	p5	PL 1/2 x 7	2	9 1/2	(CVN)	1 / 13
1	2	p1	PL 1 x 8	2	9 1/2	(CVN)	1 / 8
1	1	p13	PL 1/2 x 7	2	9 1/2	(CVN)	1 / 13
1	1	p14	PL 1/2 x 7	2	9 1/2	(CVN)	1 / 13
	2		7/8 ø MB	0	3	A307, W/NUT	4 / 2
	4		7/8 ø MB	0	5 1/2	A307, W/NUT	4 / 3
	4		7/8 ø MB	0	6	A307, W/NUT	4 / 4
	10		7/8 ø WASHER			A307	4 / 5

RECEIVED
CK'D BY JFL OK'D BY KmH
JUL 22 20[illegible]
RECEIVED APPROVED ✓
BY KmH DATE 7/21/09

NOTES:

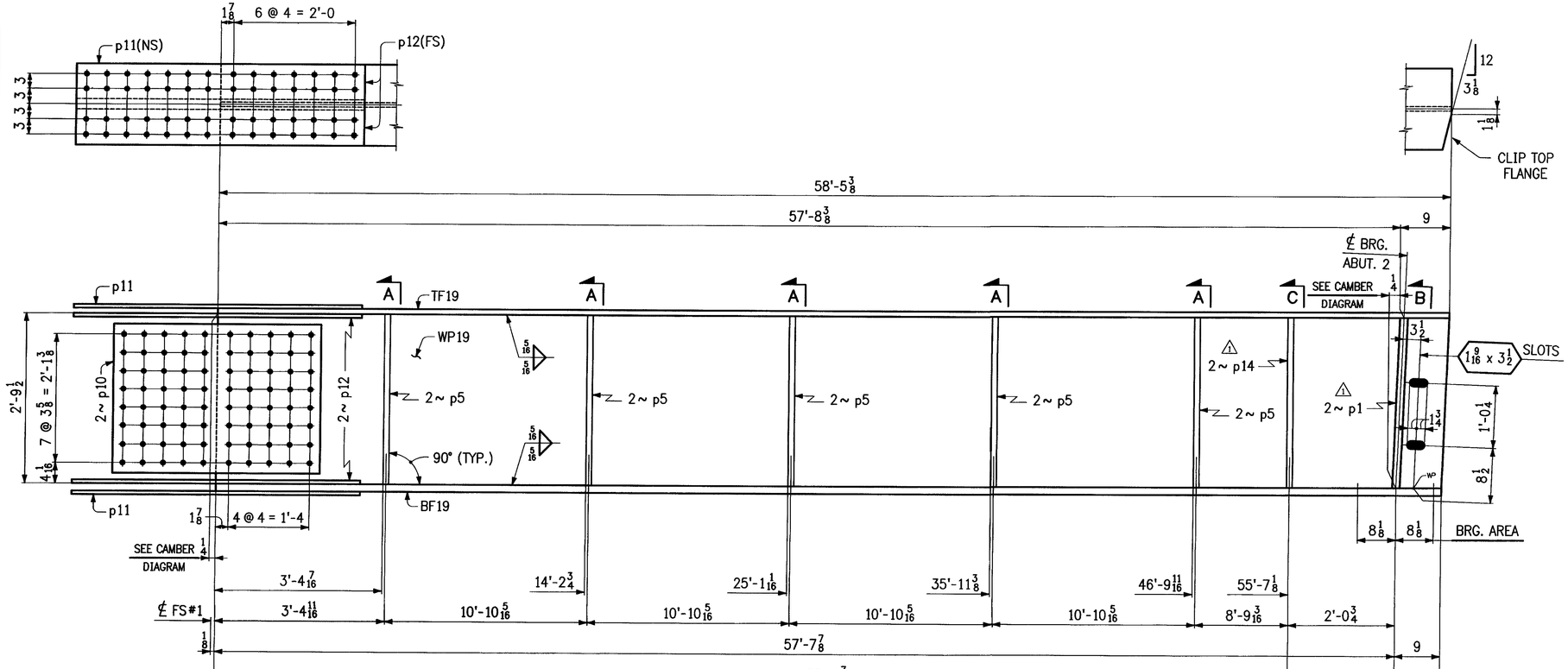
1. FOR GIRDER STANDARDS, SEE SHT. NO. 11.
2. FOR CAMBER DIAGRAM, SEE SHT. NO. 7.
2. FOR GENERAL NOTES, SEE SHT. NO. GN1.

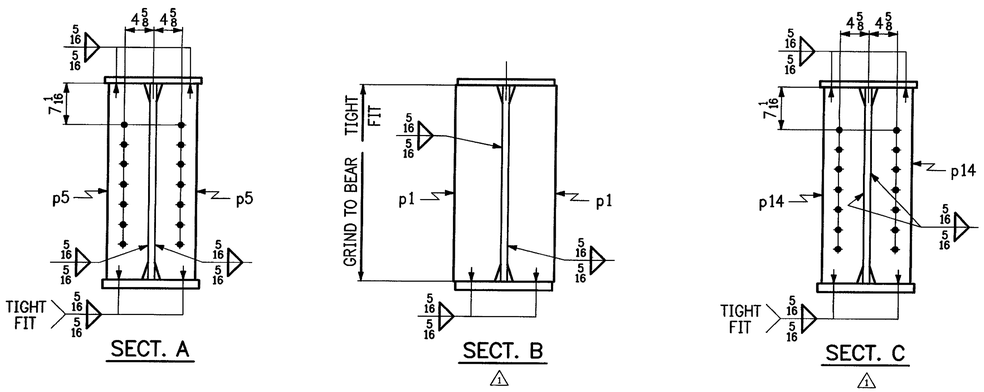
REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			7-16	5p	Appr.
1	7-14-09	ADDED BRG STIFFS ℄ CONN PL'S @ ABUT, ADDED SECTS B ℄ C,			

MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT: SSPC-SP10	HOLES U N 15/16ø	WELD U N	Q C REVIEW
PROJECT: TH NO.1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT			DATE: 6-8-09 DRAWN BY: RLK
DESCRIPTION: GIRDER ~ 18G2B			CHK'D BY: GDC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT NO: 18

Sheet 18 - Plotted 07/16/2009 @ 09:33 (MEATHER)





BILL OF MATERIAL

SHIP MARK	QTY	PIECE MARK	DESCRIPTION	LENGTH FT	LENGTH IN	REMARKS	PAGE LINE
19G3B	1		GIRDER				
	1	WP19	PL 5/8 x 33 1/2	58	5 3/8	(CVN)	1/2
	1	TF19	PL 1 x 16	58	5 3/8	(CVN)	1/7
	1	BF19	PL 1 1/2 x 16	58	4 7/8	(CVN)	1/11
	2	p10	PL 1/2 x 29 3/8	3	4	(CVN)	1/13
	2	p11	PL 1 1/2 x 16	4	8	(CVN)	1/14
	4	p12	PL 1 1/2 x 7	4	8	(CVN)	1/14
	10	p5	PL 1/2 x 7	2	9 1/2	(CVN)	1/13
1	2	p1	PL 1 x 8	2	9 1/2	(CVN)	1/8
1	2	p14	PL 1/2 x 7	2	9 1/2	(CVN)	1/13
	2		7/8ø MB	0	3	A307, W/NUT	4/2
	4		7/8ø MB	0	5 1/2	A307, W/NUT	4/3
	4		7/8ø MB	0	6	A307, W/NUT	4/4
	10		7/8ø WASHER			A307	4/5

NOTES:

1. FOR GIRDER STANDARDS, SEE SHT. NO. 11.
2. FOR CAMBER DIAGRAM, SEE SHT. NO. 8.
2. FOR GENERAL NOTES, SEE SHT. NO. GN1.

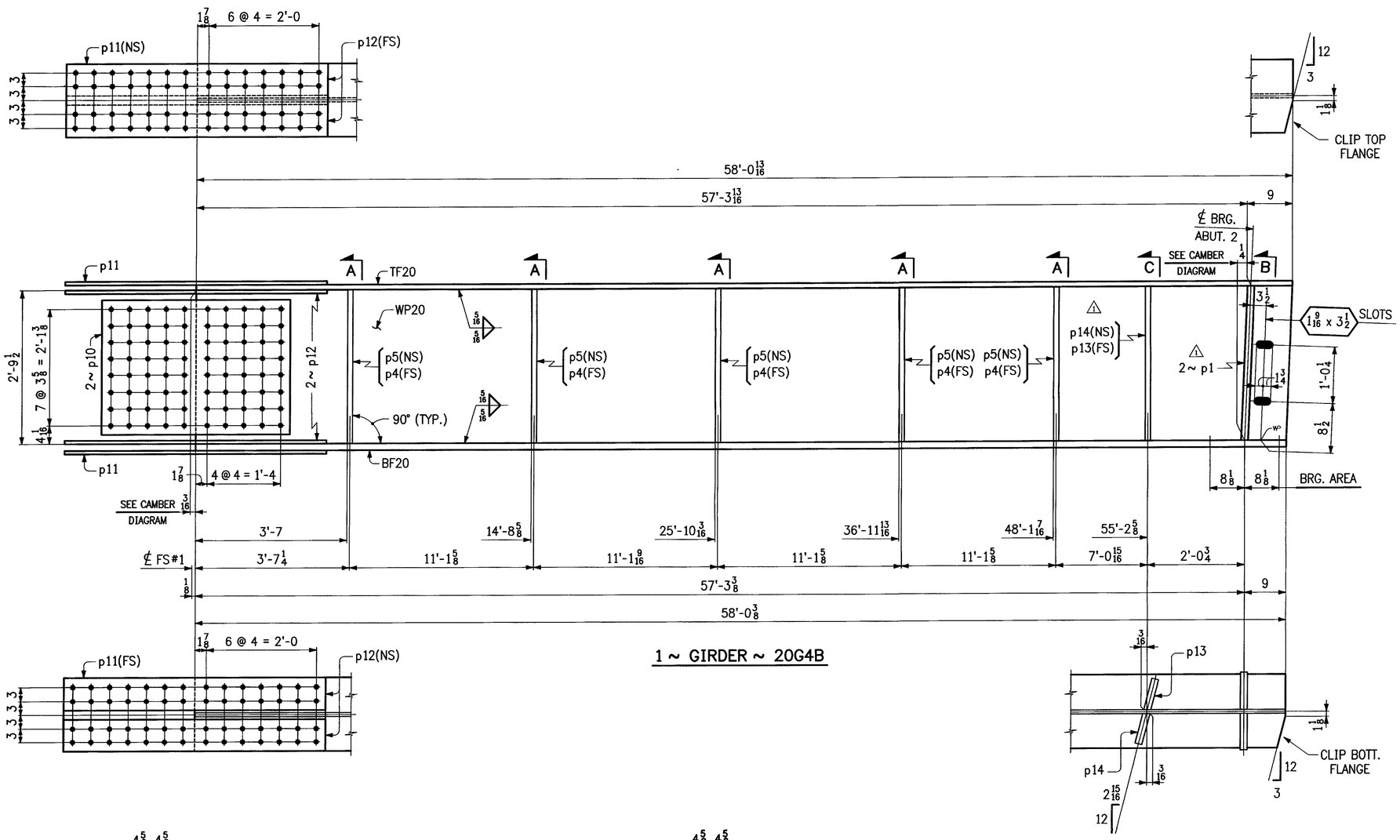
RECEIVED
CK'D BY JEL CK'D BY KMH
JUL 22 20[illegible]
RECEIVED APPROVED ✓
BY KMH DATE 7/21/09

REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			7-16	5p	Appr.
1	7-14-09	ADDED BRG STIFFS ℄ CONN PL'S @ ABUT, ADDED SECTS B ℄ C.			

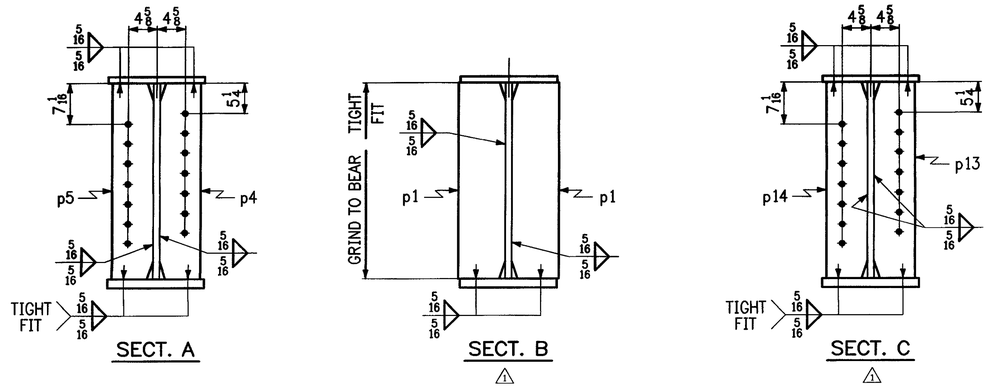
MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT: SSPC-SP10	HOLES U N 15/16	WELD U N	Q C REVIEW
PROJECT: TH NO.1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT			DATE: 6-8-09 DRAWN BY: RLK
DESCRIPTION: GIRDER ~ 19G3B			CHK'D BY: GDC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT NO: 19

Sheet 19 - Plotted 07/16/2009 @ 09:33 (HEATHER)



1 ~ GIRDER ~ 20G4B



NOTES:

1. FOR GIRDER STANDARDS, SEE SHT. NO. 11.
2. FOR CAMBER DIAGRAM, SEE SHT. NO. 9.
2. FOR GENERAL NOTES, SEE SHT. NO. GN1.

BILL OF MATERIAL

SHIP MARK	QTY	PIECE MARK	DESCRIPTION	LENGTH FT	LENGTH IN	REMARKS	PAGE LINE
20G4B	1		GIRDER				
	1	WP20	PL 5/8 x 33 1/2	58	0 13/16	(CVN)	1/2
	1	TF20	PL 1 x 16	58	0 13/16	(CVN)	1/8
	1	BF20	PL 1 1/2 x 16	58	0 3/8	(CVN)	1/12
	2	p10	PL 1/2 x 29 3/8	3	4	(CVN)	1/13
	2	p11	PL 1 1/2 x 16	4	8	(CVN)	1/14
	4	p12	PL 1 1/2 x 7	4	8	(CVN)	1/14
	5	p4	PL 1/2 x 7	2	9 1/2	(CVN)	1/13
	5	p5	PL 1/2 x 7	2	9 1/2	(CVN)	1/13
⚠1	2	p1	PL 1 x 8	2	9 1/2	(CVN)	1/8
⚠1	1	p13	PL 1/2 x 7	2	9 1/2	(CVN)	1/13
⚠1	1	p14	PL 1/2 x 7	2	9 1/2	(CVN)	1/13
	2		7/8ø MB	0	3	A307, W/NUT	4/2
	4		7/8ø MB	0	5 1/2	A307, W/NUT	4/3
	4		7/8ø MB	0	6	A307, W/NUT	4/4
	10		7/8ø WASHER			A307	4/5

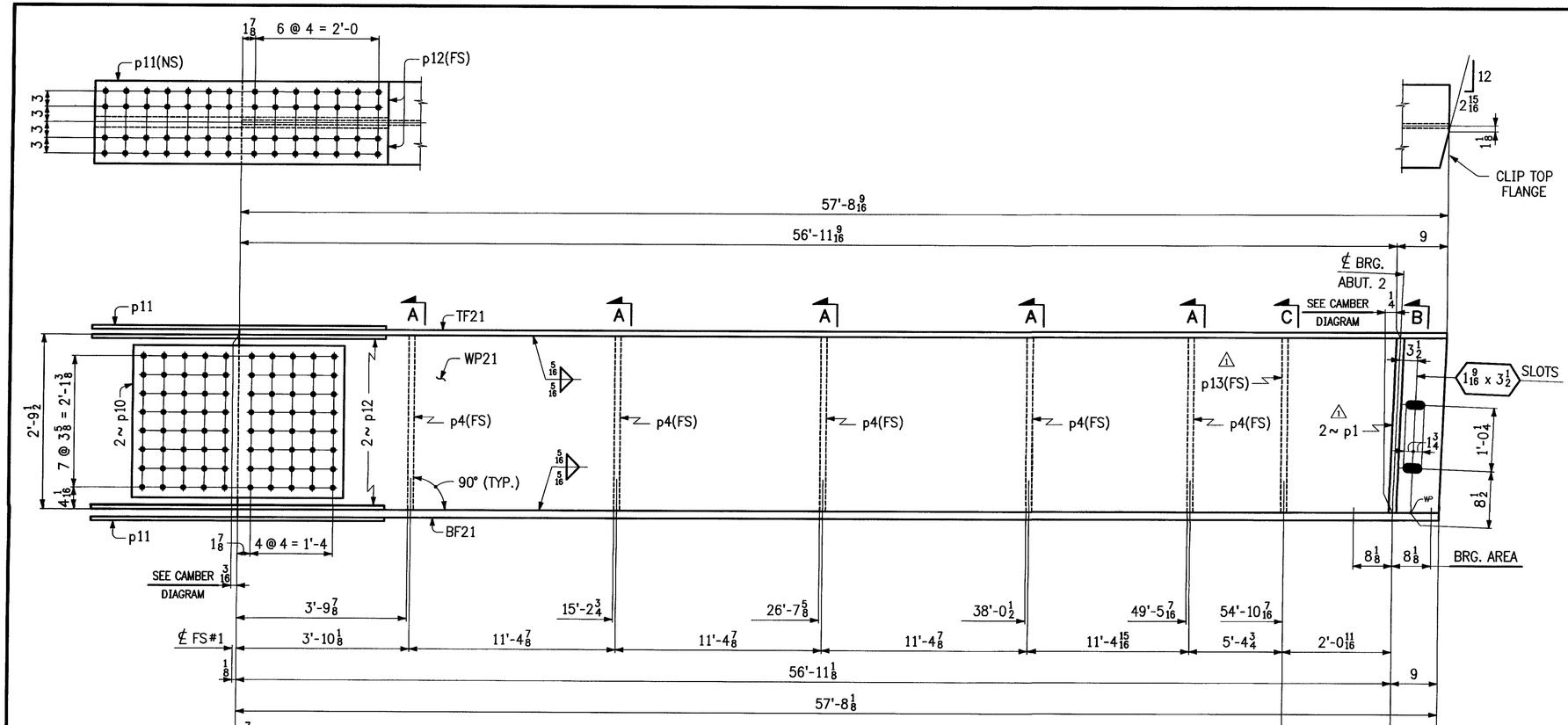
RECEIVED
CK'D BY SFL OK'D BY KWH
JUL 29 '09
RESUBMIT ✓ APPROVED
BY KWH DATE 7/31/09

REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			7-16	SP	Appr.
⚠1	7-14-09	ADDED BRG STIFFS ℄ CONN PL'S @ ABUT, ADDED SECTS B ℄ C,			

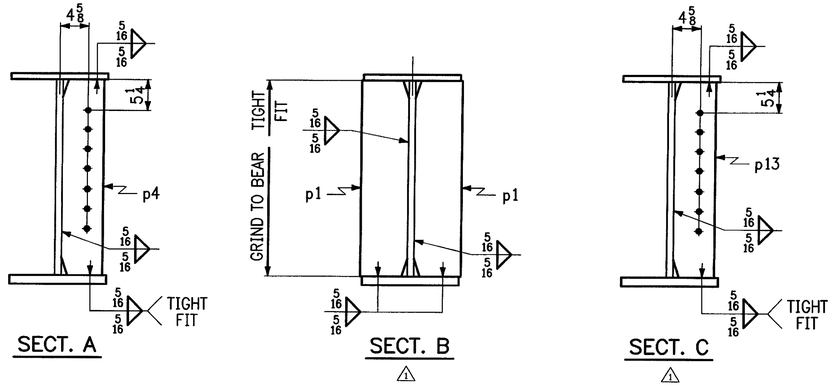
MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT SSPC-SP10	HOLES U N 15/16ø	WELD U N	Q C REVIEW
PROJECT TH NO.1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT			DATE 6-8-09 DRAWN BY RLK
DESCRIPTION GIRDER ~ 20G4B			CHK'D BY GDC
ARCH N/A	ENGR VERMONT AGENCY OF TRANSPORTATION		JOB NO J-81
CUSTOMER S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT NO 20

Sheet 20 - Plotted 07/16/2009 @ 09:33 (HEATHER)



1 ~ GIRDER ~ 21G5B



NOTES:

1. FOR GIRDER STANDARDS, SEE SHT. NO. 11.
2. FOR CAMBER DIAGRAM, SEE SHT. NO. 10.
2. FOR GENERAL NOTES, SEE SHT. NO. GN1.

BILL OF MATERIAL

SHIP MARK	QTY	PIECE MARK	DESCRIPTION	LENGTH FT	LENGTH IN	REMARKS	PAGE LINE
21G5B	1		GIRDER				
	1	WP21	PL 5/8 x 33 1/2	57	8 9/16	(CVN)	1/2
	1	TF21	PL 1 x 16	57	8 9/16	(CVN)	1/8
	1	BF21	PL 1 1/2 x 16	57	8 1/8	(CVN)	1/12
	2	p10	PL 1/2 x 29 3/8	3	4	(CVN)	1/13
	2	p11	PL 1 1/2 x 16	4	8	(CVN)	1/14
	4	p12	PL 1 1/2 x 7	4	8	(CVN)	1/14
	5	p4	PL 1/2 x 7	2	9 1/2	(CVN)	1/13
⚠1	2	p1	PL 1 x 8	2	9 1/2	(CVN)	1/8
⚠1	1	p13	PL 1/2 x 7	2	9 1/2	(CVN)	1/13
	2		7/8ø MB	0	3	A307, W/NUT	4/2
	4		7/8ø MB	0	5 1/2	A307, W/NUT	4/3
	4		7/8ø MB	0	6	A307, W/NUT	4/4
	10		7/8ø WASHER			A307	4/5

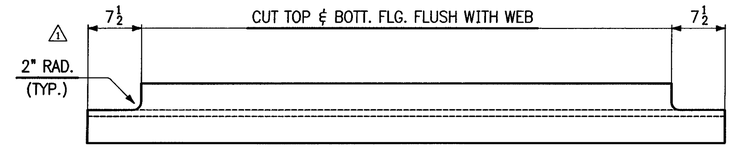
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CK'D BY SPL OK'D BY kmH
JUL 2 9 '09
RESUBMIT ____ APPROVED ✓
BY kmH DATE 7/27/09

REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			7-16	5p	Appr.
⚠1	7-14-09	ADDED BRG STIFFS ℄ CONN PL'S @ ABUT, ADDED SECTS B ℄ C			

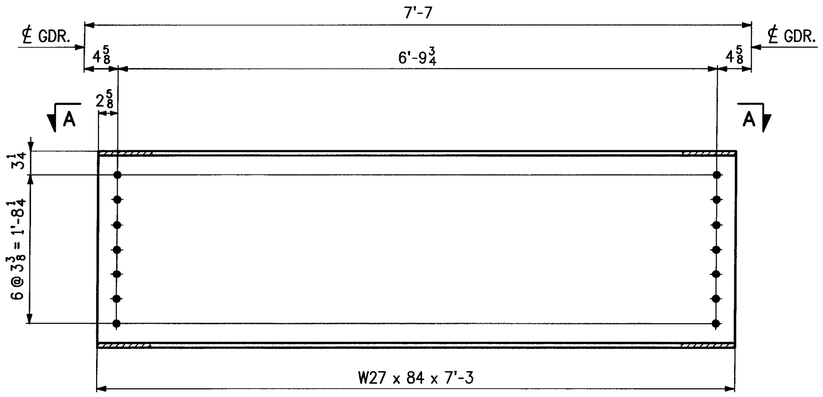
MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT: SSPC-SP10	HOLES U N 15/16ø	WELD U N	Q C REVIEW
PROJECT: TH NO.1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT			DATE: 6-8-09 DRAWN BY: RLK
DESCRIPTION: GIRDER ~ 21G5B			CHK'D BY: GDC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT NO: 21

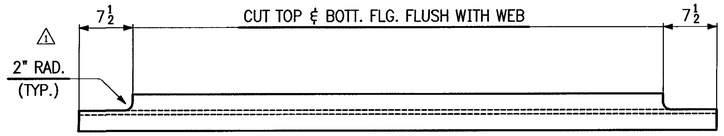
Sheet 21 - Plotted 07/16/2009 @ 09:33 (HEATHER)



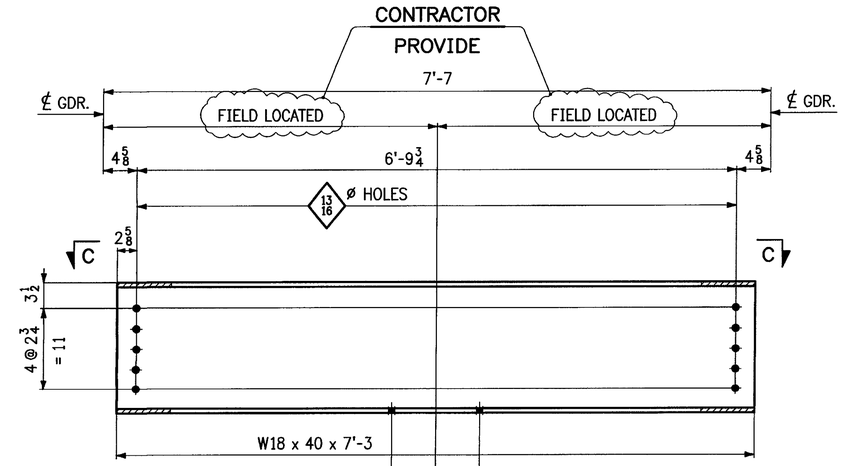
VIEW A-A

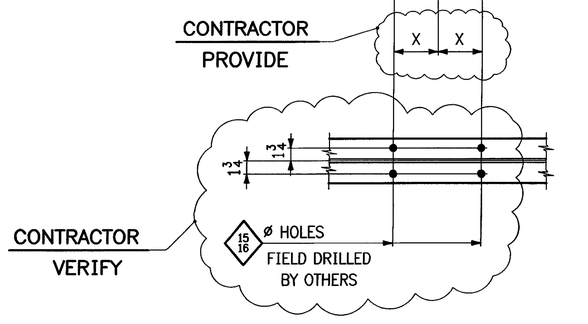


36 ~ INTERMEDIATE DIAPHRAGM ~ D1

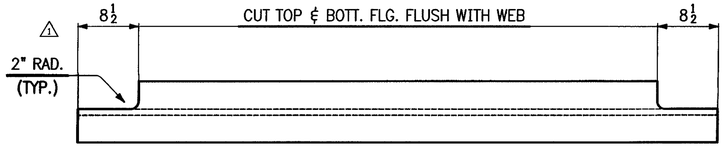


VIEW C-C

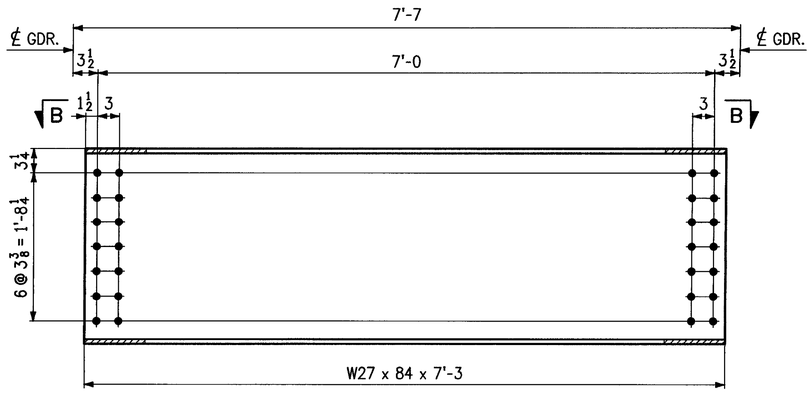




4 ~ UTILITY SUPPORT ~ D3



VIEW B-B



4 ~ PIER DIAPHRAGM ~ D2

BILL OF MATERIAL

SHIP MARK	QTY	PIECE MARK	DESCRIPTION	LENGTH FT	LENGTH IN	REMARKS	PAGE LINE
			DIAPHRAGMS				
D1	36		W27 x 84	7	3		3/10
D2	4		W27 x 84	7	3		3/10
			UTILITY SUPPORTS				
D3	4		W18 x 40	7	3		3/11

RECEIVED
CK'D BY _____ OK'D BY KmH
JUL 20 2009
RESUBMIT _____ APPROVED _____
BY KmH DATE 7/21/09

REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			7-16	5p	Appr.
⚠	7-14-09	REVISED DIMENSION ℄ ADDED RADIUS.			

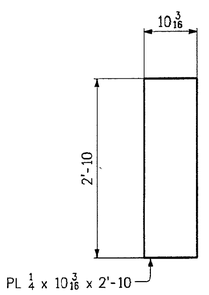
MEGQUIER & JONES INC.

STRUCTURAL STEEL SINCE 1895

1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

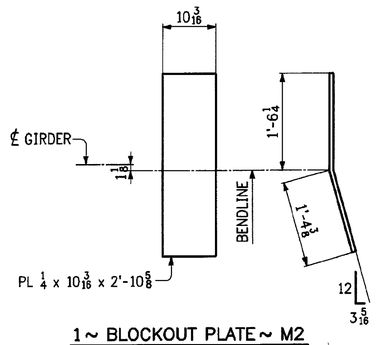
PAINT	HOLES U N 15/16ø	WELD U N	Q C REVIEW
PROJECT: TH NO.1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT			DATE: 6-8-09 DRAWN BY: CPM
DESCRIPTION: DIAPHRAGMS			CHK'D BY: WCG
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT NO: 22

Sheet 22 - Plotted: 07/16/2009 @ 09:34 (HEATHER)



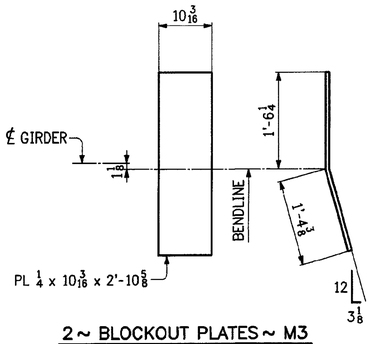
5 ~ BLOCKOUT PLATES ~ M1

(ABUT. 1)



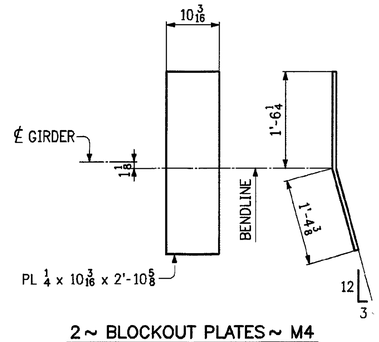
1 ~ BLOCKOUT PLATE ~ M2

(ABUT. 2 - LINE 1)



2 ~ BLOCKOUT PLATES ~ M3

(ABUT. 2 - LINES 2 ℄ 3)



2 ~ BLOCKOUT PLATES ~ M4

(ABUT. 2 - LINES 4 ℄ 5)

BILL OF MATERIAL

SHIP MARK	QTY	PIECE MARK	DESCRIPTION	LENGTH FT	LENGTH IN	REMARKS	PAGE LINE
M1	5		BLOCKOUT PLS.				
			PL $\frac{1}{4}$ x $10\frac{3}{16}$	2	10		3/14
M2	1		BLOCKOUT PL				
			PL $\frac{1}{4}$ x $10\frac{3}{16}$	2	$10\frac{5}{8}$	BENT	3/15
M3	2		BLOCKOUT PLS.				
			PL $\frac{1}{4}$ x $10\frac{3}{16}$	2	$10\frac{5}{8}$	BENT	3/15
M4	2		BLOCKOUT PLS				
			PL $\frac{1}{4}$ x $10\frac{3}{16}$	2	$10\frac{5}{8}$	BENT	3/15

NOTES:

1. FOR GENERAL NOTES SEE SHT. GN1
2. MATERIAL: M270-50W.

Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable

Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents, verifies their accuracy as stipulated on the Contractor's Shop Drawing Stamp.

DATE 7/7/09 DuBOIS AND KING By

RECEIVED
CK'D BY JFL CK'D BY KmH
JUN 15 2
APPROVED ✓
BY KmH DATE 7/13/09

REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			6 15	E	Appr.

MEGQUIER & JONES INC.

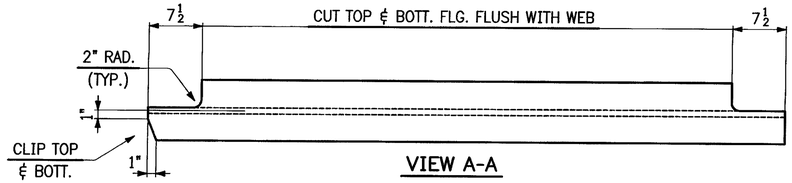
STRUCTURAL STEEL SINCE 1895

1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

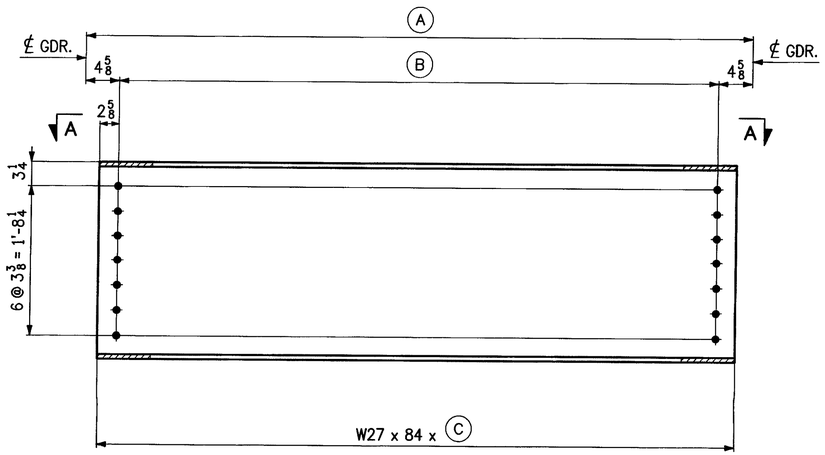
PAINT.	HOLES U N	WELD U N	Q C REVIEW

PROJECT: TH NO 1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO 5 TOWN OF JOHNSON, VERMONT	DATE: 6-8-09
	DRAWN BY: RJK
DESCRIPTION: ABUTMENT BLOCKOUT PLATES	CHK'D BY: GDC
ARCH: N/A — ENGR: VERMONT AGENCY OF TRANSPORTATION	JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP	SHT NO: 23

Sheet 23 Plotted 06/09/2009 @ 11:45 (EASTERN)



VIEW A-A



DIAPHRAGM MARK	QUANTITY	A	B	C
D4	1	7'-10 1/16	7'-0 13/16	7'-6 1/16
D5	1	7'-9 15/16	7'-0 11/16	7'-5 15/16
D6	1	7'-9 3/4	7'-0 1/2	7'-5 3/4
D7	1	7'-9 5/8	7'-0 3/8	7'-5 5/8

BILL OF MATERIAL

SHIP MARK	QTY	PIECE MARK	DESCRIPTION	LENGTH FT	LENGTH IN	REMARKS	PAGE LINE
			DIAPHRAGMS				
D4	1		W27 x 84	7	6 1/16		3/12
D5	1		W27 x 84	7	5 15/16		3/12
D6	1		W27 x 84	7	5 3/4		3/12
D7	1		W27 x 84	7	5 5/8		3/12

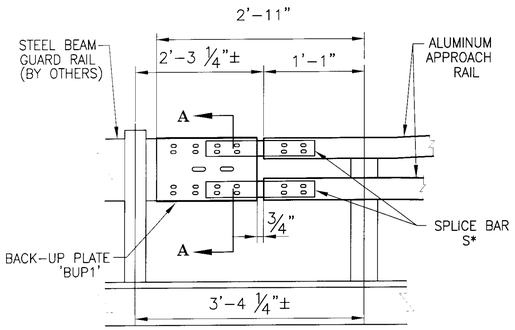
RECEIVED
CK'D BY JCL OK'D BY KmH
JUL 23 20
RESUBMIT ___ APPROVED ✓
BY KmH DATE 7/21/09

REVISIONS			PRINT RECORD		
NO	DATE	DESCRIPTION	DATE	QTY	ISSUED
			7-16	SP	APPR.

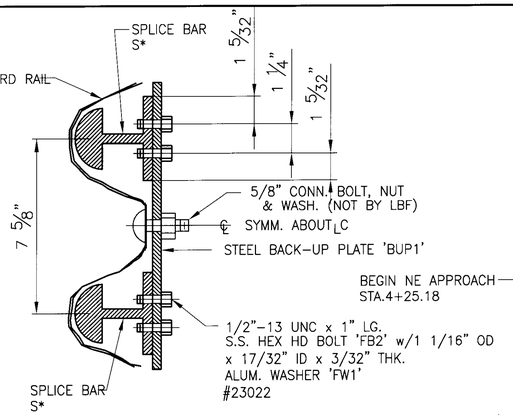
MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT	HOLES U N 15/16ø	WELD U N	Q C REVIEW
PROJECT: TH NO.1 OVER THE GIHON RIVER PROJECT NO. BHO 1448 (29) BRIDGE NO. 5 TOWN OF JOHNSON, VERMONT			DATE: 7-14-09
			DRAWN BY: WCG
DESCRIPTION: DIAPHRAGMS			CHK'D BY: GDC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO: J-81
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT NO: 24

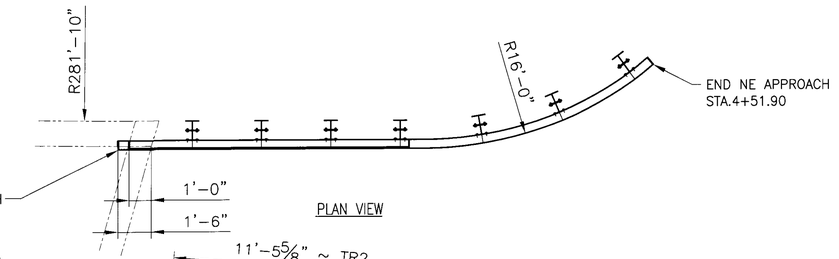
Sheet 24 - Plotted 07/16/2009 @ 09:34 (HEATHER)



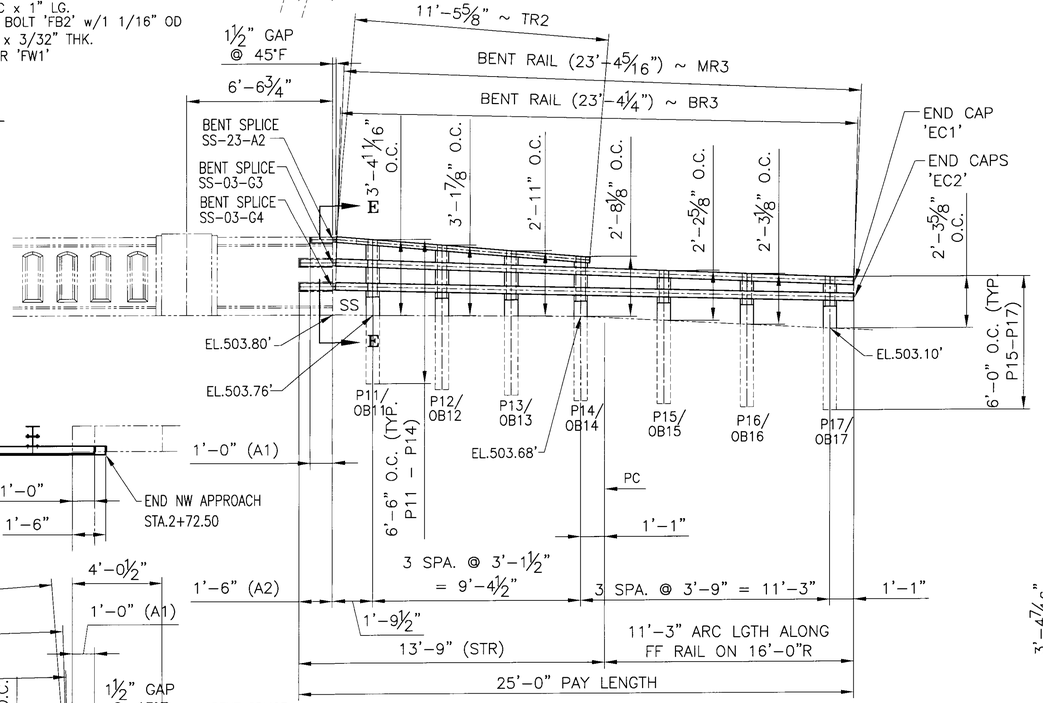
DETAIL "B"



SECTION A–A



PLAN VIEW



NE APPROACH ~ INSIDE ELEV. VIEW

PLAN VIEW

NW APPROACH ~ INSIDE ELEV. VIEW

NOTE:
- THIS CONTRACT IS BASED UPON THE CONTRACTOR SETTING AND SPACING THE ANCHOR BOLTS TO THE MEASUREMENTS SHOWN ON THE APPROVED SHOP DRAWINGS. THE L.B. FOSTER CO. WILL NOT BE RESPONSIBLE FOR WORK NECESSITATED BY ANY OTHER SETTING AND SPACING.
- THIS DRAWING IS NOT TO SCALE.
- LENGTH OF RAILING ON THIS SHEET IS 62.5 LF PAY LENGTH.
- POST SPACING IS MEASURED HORIZONTALLY ALONG FF OF RAILING.
- SPLICE GAP AT SLEEVE = 3/4" TYP. U.N.
- ✳ RAIL LENGTHS DO NOT INCLUDE GAPS.
- COMPENSATION FOR VERTICAL CURVE HAS BEEN INCLUDED IN RAIL LENGTHS

ANODIZED

- ALL ALUM. COMPONENTS SHALL BE ANODIZED TO A BLACK (HARD SATIN FINISH) COLOR, FED. STD. COLOR No. 27038. THE ANODIC COATING SHALL BE ARCHITECTURAL CLASS I WITH A MIN. THICKNESS OF 0.7 mils AND A MIN. WEIGHT OF 35 mg/sq in
- ALL VISIBLE STN. STL. HARDWARE SHALL BE FIELD PAINTED BLACK TO MATCH THE ANODIZED RAIL. TOUCH UP PAINT SHALL BE PROVIDED.
- SAMPLES SHALL BE SUBMITTED FOR THE ENGINEER'S APPROVAL.

GENERAL NOTES

1 ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006 AND ITS LATEST REVISIONS.

DESCRIPTION	ASTM	ALLOY/GR.	REMARKS
RAILS, POSTS, SPLICES, CLAMP BARS, PINS,	B221	6061–T6 OR 6351–T5	MIN. YIELD STRENGTH Fy = 35,000 psi.
STAINLESS STEEL BOLTS	A193	GRADE B8	
	A449		GALV. A153
	A563	GRADE DH	GALV. A153
STEEL WASHERS	F436		GALV. A153
END CAPS	B26		356–F
ALUMINUM WASHERS	B209	2024–T4	
PREFORMED PADS			SECTION 731.01 OR 731.02
ELECTRODES FOR WELDING		AWS A5.10 ER5356	

POSTS TO BE NORMAL TO GRADE AND RAILS SHALL BE PARALLEL TO GRADE.
RAILS TO BE ATTACHED TO A MINIMUM OF THREE POSTS WHEN POSSIBLE.

ALL RAILS AND WELDS TO BE FREE FROM ALL BURRS AND ROUGH EDGES. ENDS OF TUBE SECTIONS SHALL BE SAWED OR MILLED. GRIND ALL CUT EDGES SMOOTH.

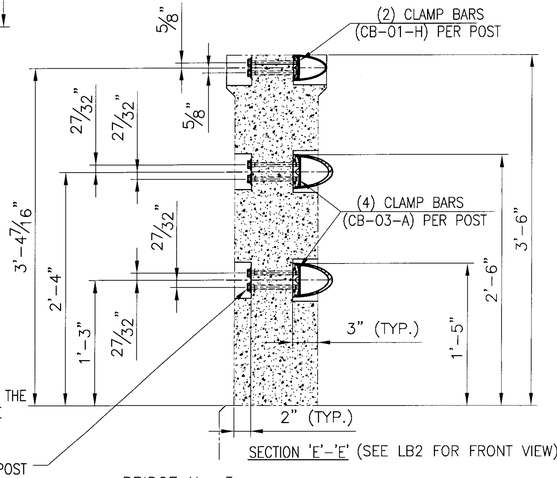
ALL THREADS TO BE UNC CLASS 2A/2B.

ALL EXTRUSION TOLERANCES NOT SHOWN SHALL BE IN ACCORDANCE WITH ASTM B221.

IF CUT THREADS ARE USED, BOLT DIAMETER SHALL NOT BE LESS THAN NOMINAL DIAMETER. IF ROLLED THREADS ARE USED, BOLT DIAMETER SHALL NOT BE LESS THAN THE ROOT DIAMETER OF THREADS

THE SPLICE BAR SHALL BE ATTACHED TO THE RAIL ELEMENT AS FOLLOWS:
THE RAIL SPLICE AT THE BRIDGE EXPANSION JOINT SHALL BE FASTENED ON BOTH SIDES OF THE RAIL SPLICE USING THE FULLY THREADED WASHER FACED BOLTS, TIGHTENED SECURELY TO THE END OF THREADS, AND LEAVING A 1/8" GAP, THIS ALLOWS EXPANSION ON BOTH SIDES OF THE JOINT.

ALL NUTS SHALL COMPLY WITH AMERICAN HEXAGON ANSI SPECIFICATIONS B18.2



SECTION 'E'–'E' (SEE LB2 FOR FRONT VIEW)

12 PER END POST
1/2"ø x 5 1/2" LG.
SS HEX HD BOLT 'FB3' w/
1 1/16"OD x 17/32"ID
3/32" THK ALUM WASHER
'FW1' (#15280 & 19404)

BRIDGE No. 5
PROJECT No. BH0 1448 (29)
ITEM No: 900–640

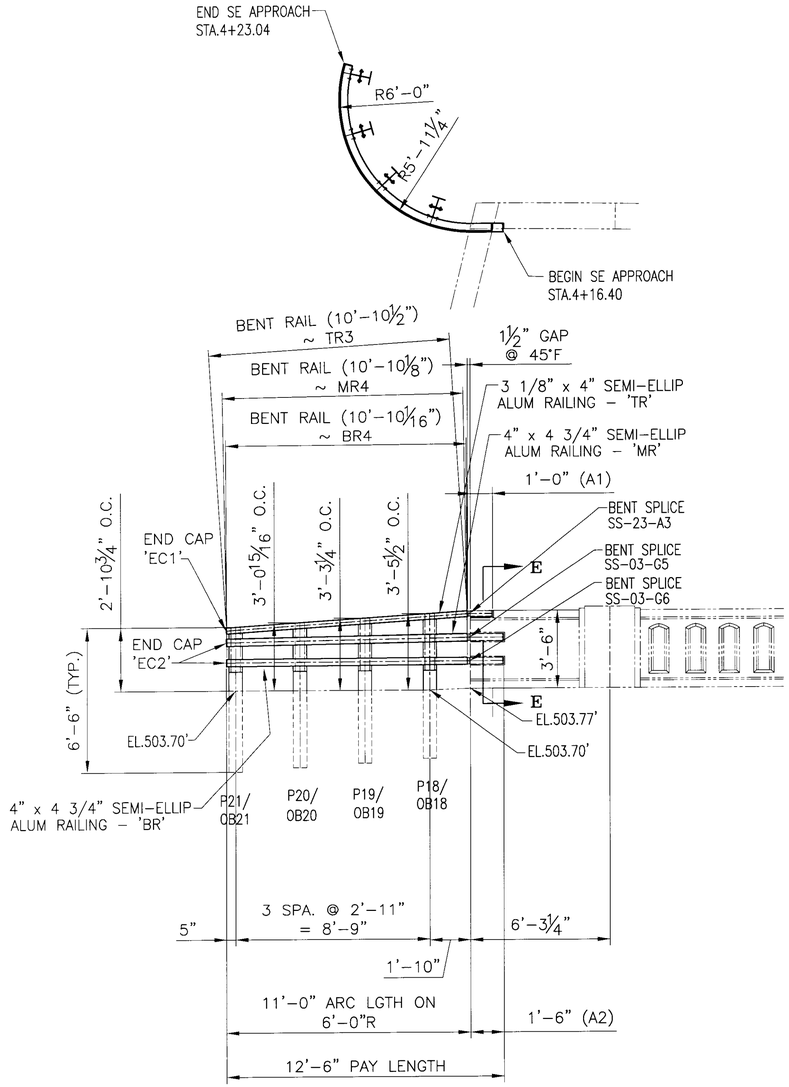
APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

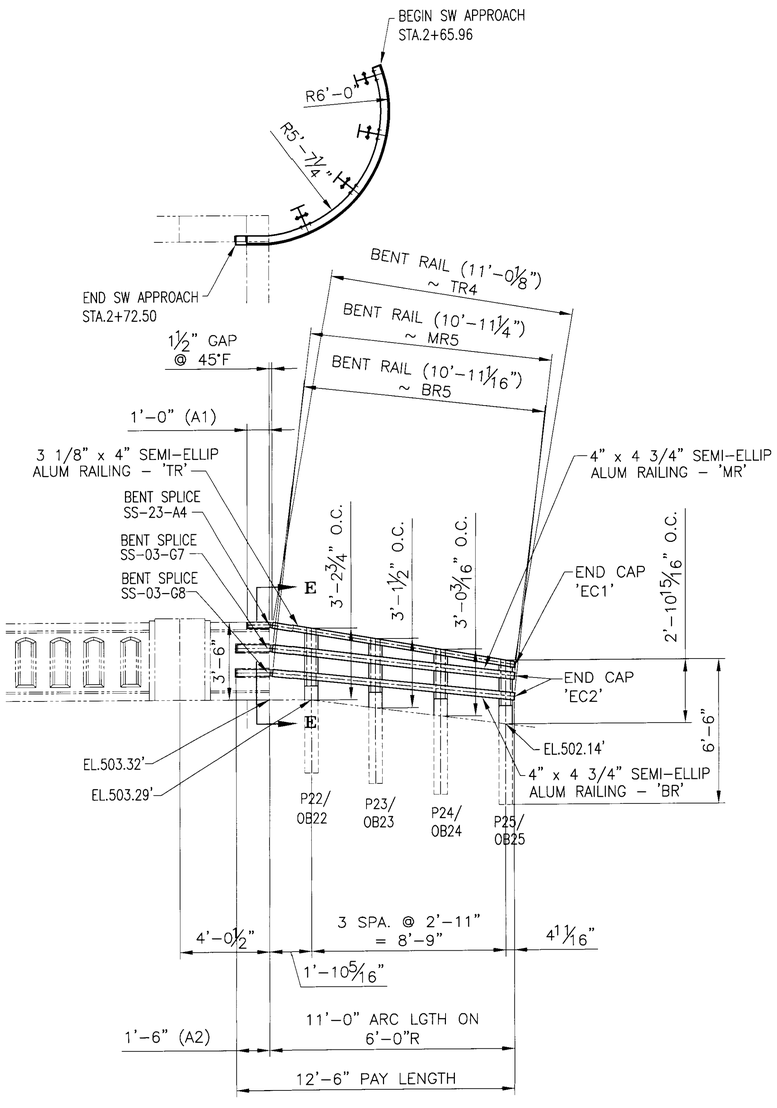
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
APPROACH RAILING FOR TH No 1 OVER THE GIHON RIVER
3L ALUM BRIDGE APPROACH RAILING ~ ELEVATION VIEWS

MADE CMS DATE 10/24/09 JOB No. AR0573 CUST. No.
CHECK BLJ DATE 11/06/09 DRAWING LB1 REV. No. ONE

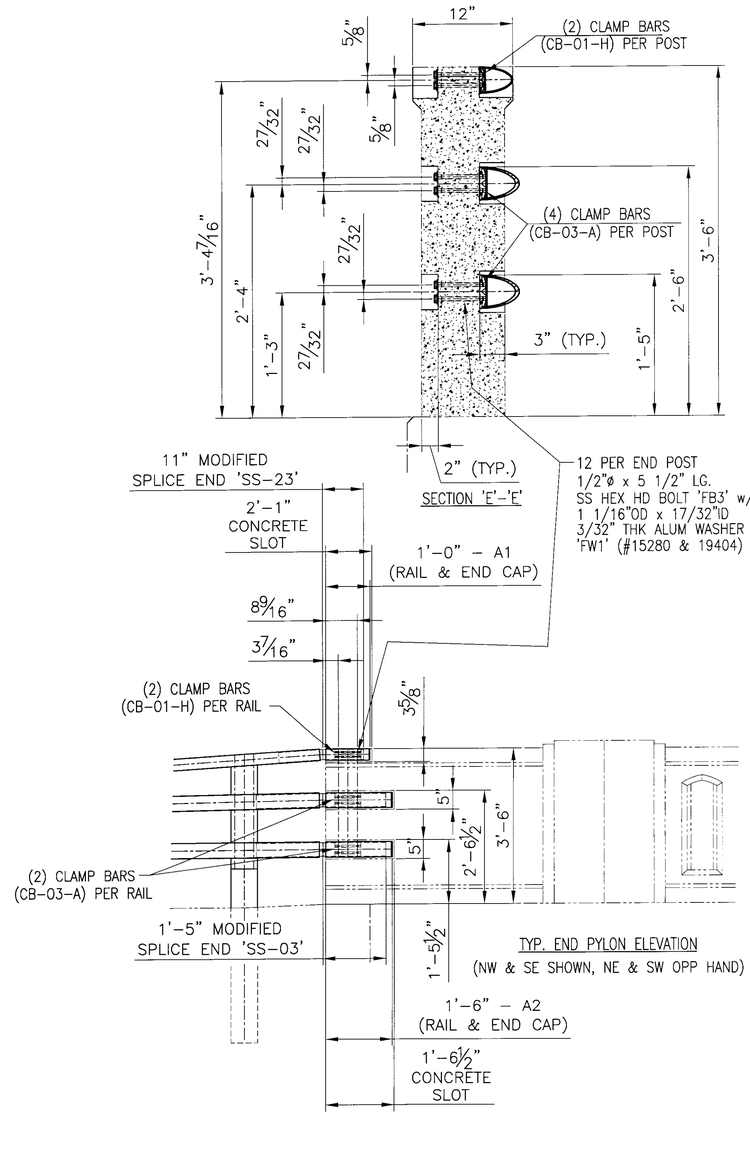
REV.	DESCRIPTION	BY	DATE
1	REVISED PER APPROVER COMMENTS	CMS	01 11 10



SE APPROACH ~ INSIDE ELEV. VIEW



SW APPROACH ~ INSIDE ELEV. VIEW



NOTE:
- THIS CONTRACT IS BASED UPON THE CONTRACTOR SETTING AND SPACING THE ANCHOR BOLTS TO THE MEASUREMENTS SHOWN ON THE APPROVED SHOP DRAWINGS. THE L.B. FOSTER CO. WILL NOT BE RESPONSIBLE FOR WORK NECESSITATED BY ANY OTHER SETTING AND SPACING.
- THIS DRAWING IS NOT TO SCALE.
- LENGTH OF RAILING ON THIS SHEET IS 25 LF PAY LENGTH.
- POST SPACING IS MEASURED HORIZONTALLY ALONG FF OF RAILING.
- SPLICE GAP AT SLEEVE = 1 1/2" TYP.
- ✳ RAIL LENGTHS DO NOT INCLUDE GAPS.
- COMPENSATION FOR VERTICAL CURVE HAS BEEN INCLUDED IN RAIL LENGTHS

ANODIZED
- (FOR ANODIZING SPECS SEE LB1)

kmh 1/14/10

REV.	DESCRIPTION	BY	DATE

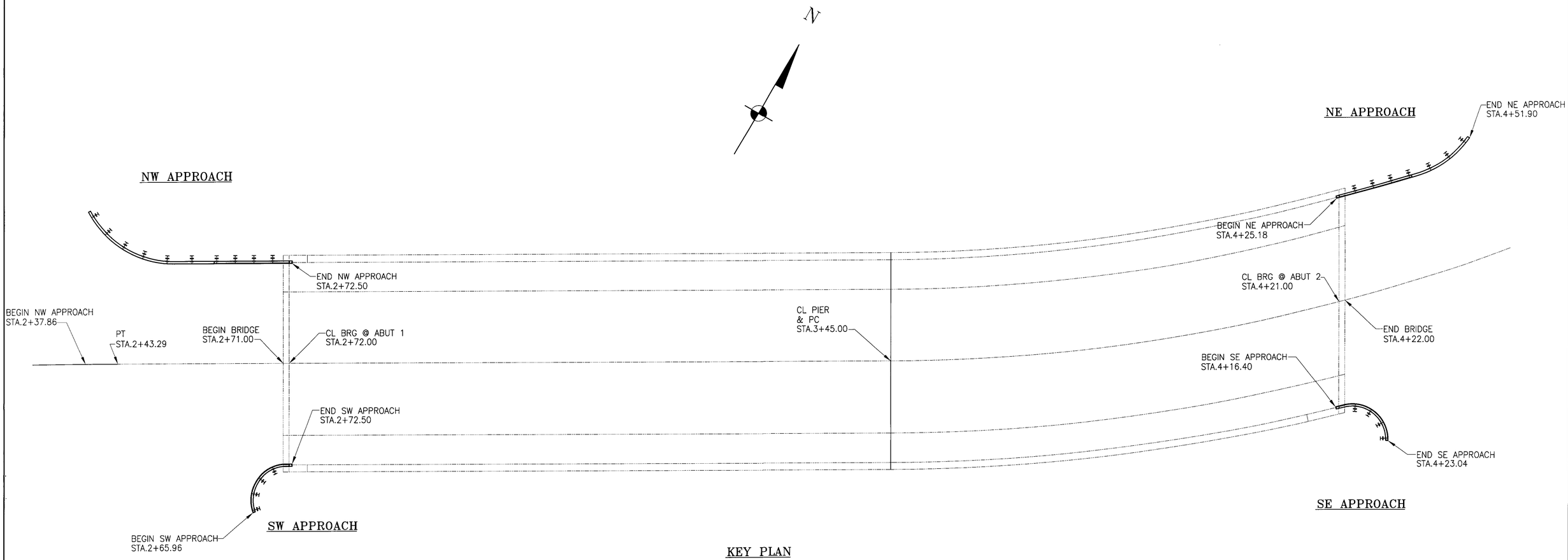
BRIDGE No. 5
PROJECT No. BHO 1448 (29) ITEM No: 900-640

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
APPROACH RAILING FOR TH No 1 OVER THE GIHON RIVER
3L ALUM BRIDGE APPROACH RAILING ~ ELEVATION VIEWS

MADE CMS DATE 10/24/09 JOB No. AR0573 CUST. No.
CHECK BLJ DATE 11/06/09 DRAWING LB2 REV. No.



KEY PLAN

BRIDGE No. 5
PROJECT No. BH0 1448 (29) ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____
DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
APPROACH RAILING FOR TH No 1 OVER THE GIHON RIVER
3L ALUM BRIDGE RAILING ~ KEY PLAN

MADE CMS DATE 10/24/09 JOB No. AR0573 CUST. No.
CHECK BLJ DATE 11/06/09 DRAWING LB3 REV. No.

KMH 11/19/09 ✓

REV.	DESCRIPTION	BY	DATE

POST DETAIL CHART FOR NW APPROACH

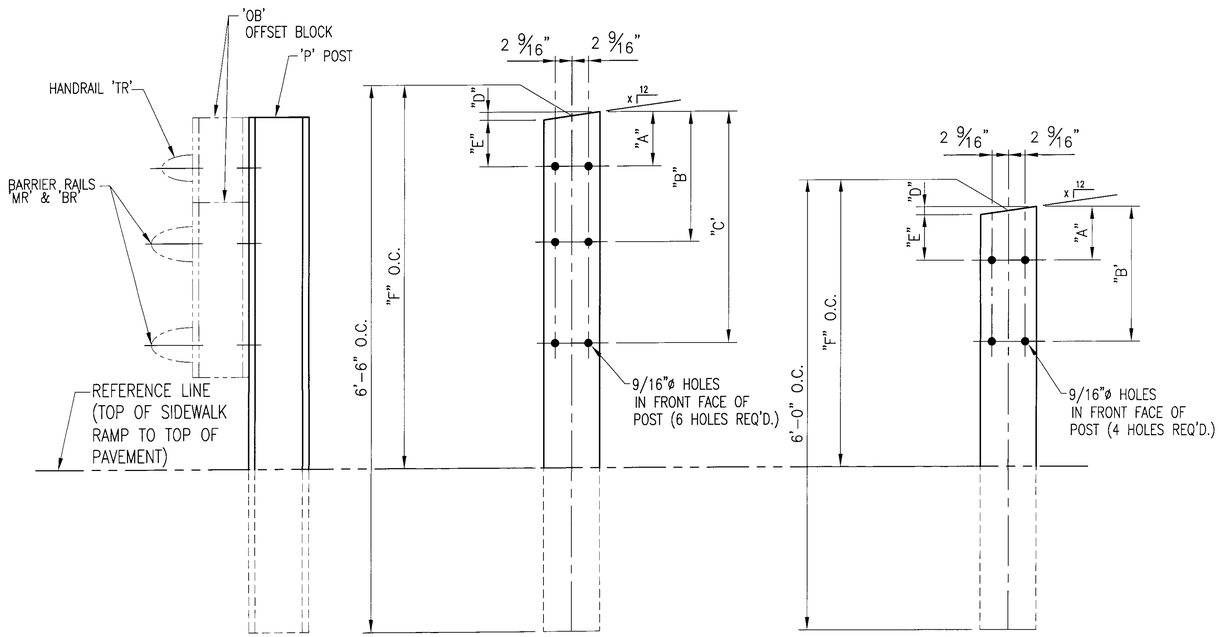
		OFFSET BLOCK MTG. DIMENSIONS						BEV
POST No.	QTY.	A	B	C	D	E	F (0.C.)	X
P1	1	1 7/8"	1'-1 3/8"	2'-2 1/8"	9/16"	1 5/16"	3'-4 13/16"	15/16
P2	1	1 7/8"	11 11/16"	2'-0"	9/16"	1 5/16"	3'-2 3/8"	15/16
P3	1	1 7/8"	10"	1'-9 13/16"	9/16"	1 5/16"	3'-0"	15/16
P4	1	1 7/8"	8 3/8"	1'-7 11/16"	9/16"	1 5/16"	2'-9 9/16"	15/16
P5	1	2 1/8"	1'-0 13/16"		1/4"	1 7/8"	2'-3"	3/8
P6	1	2 1/8"	1'-0 3/16"		1/4"	1 7/8"	2'-2 9/16"	3/8
P7	1	2 1/8"	11 5/8"		1/4"	1 7/8"	2'-2 1/8"	3/8
P8	1	2 1/8"	11 1/16"		1/4"	1 7/8"	2'-2 5/16"	3/8
P9	1	2 1/8"	10 1/2"		1/4"	1 7/8"	2'-2 9/16"	3/8
P10	1	2 1/8"	9 15/16"		1/4"	1 7/8"	2'-2 3/4"	3/8

POST DETAIL CHART FOR SE APPROACH

		OFFSET BLOCK MTG. DIMENSIONS						BEV
POST No.	QTY.	A	B	C	D	E	F (0.C.)	X
P18	1	1 3/4"	1'-1 1/4"	2'-1 15/16"	7/16"	1 5/16"	3'-5 1/2"	3/4
P19	1	1 3/4"	11 9/16"	1'-11 7/8"	7/16"	1 5/16"	3'-3 1/4"	3/4
P20	1	1 3/4"	9 7/8"	1'-9 3/4"	7/16"	1 5/16"	3'-0 15/16"	3/4
P21	1	1 3/4"	8 1/4"	1'-7 11/16"	7/16"	1 5/16"	2'-10 3/4"	3/4

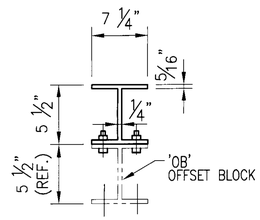
NOTE:
2 CLAMPING BARS CB-01-H (#28596) PER POSTS P8-P11
4 CLAMPING BARS CB-03-A (#19447) PER POSTS P12-P14 w/ 1/2"ø-13 UNC S.S. BOLT x 1" LG. 'FB1', 1 1/16" O.D. x 17/32" I.D. x 3/32" THK. ALUM WASHER 'FW1' (#15280 & # 19404) (16 PER POST)

NOTE:
4 CLAMPING BARS CB-03-A (#19447) PER POSTS P12-P14 w/ 1/2"ø-13 UNC S.S. BOLT x 1" LG. 'FB1', 1 1/16" O.D. x 17/32" I.D. x 3/32" THK. ALUM WASHER 'FW1' (#15280 & # 19404) (8 PER POST)



P1 - P4
P18 - P21
FRT VIEW

P5 - P10
FRT VIEW



TYP. SECT. POST & OFFSET BLOCK

KMH 11/14/11
ANODIZED
(SEE NOTES ON LB1)

BRIDGE No. 5
PROJECT No. BH0 1448 (29) ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
APPROACH RAILING FOR TH No 1 OVER THE GIHON RIVER
3L ALUMINUM APPROACH RAIL POST DETAILS

MADE CMS DATE 10/24/09 JOB No. AR0573 CUST. No.
CHECK BLJ DATE 11/06/09 DRAWING LB4 REV. No.

REV.	DESCRIPTION	BY	DATE

POST DETAIL CHART ~ NE APPROACH

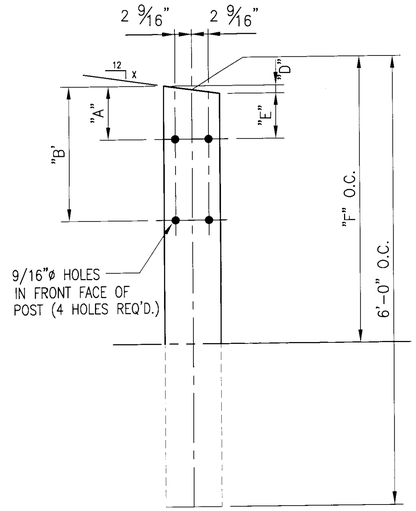
POST No.	QTY.	OFFSET BLOCK MTG. DIMENSIONS A	B	C	D	E	F (0.C.)	BEV X
P11	1	1 7/8"	1'-1 3/8"	2'-2 1/16"	5/8"	1 1/4"	3'-4 11/16"	1
P12	1	1 7/8"	11 11/16"	1'-11 3/4"	5/8"	1 1/4"	3'-1 7/8"	1
P13	1	1 7/8"	10"	1'-9 7/16"	5/8"	1 1/4"	2'-11"	1
P14	1	1 7/8"	8 5/16"	1'-7 1/8"	5/8"	1 1/4"	2'-8 1/8"	1
P15	1	2 3/16"	1'-0 1/4"		5/16"	1 7/8"	2'-2 5/8"	1/2
P16	1	2 3/16"	11 1/2"		5/16"	1 7/8"	2'-3 1/8"	1/2
P17	1	2 3/16"	10 3/4"		5/16"	1 7/8"	2'-3 5/8"	1/2

POST DETAIL CHART ~ SW APPROACH

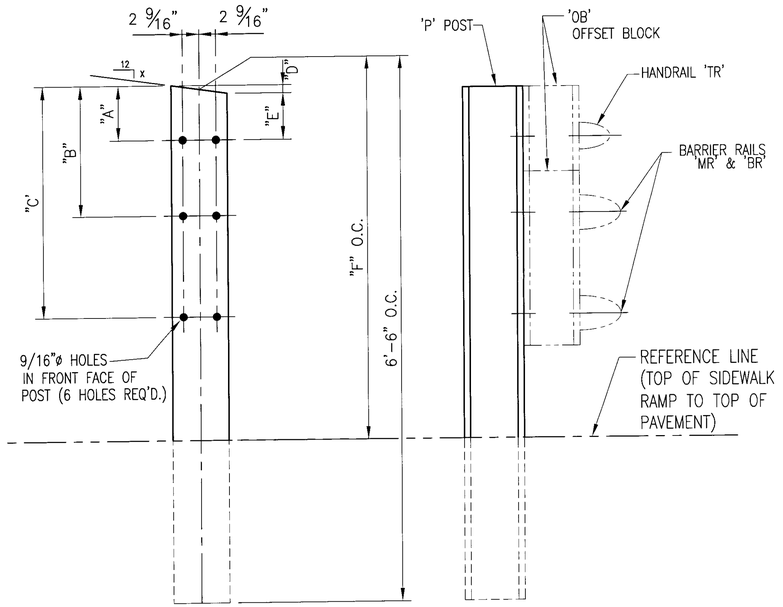
POST No.	QTY.	OFFSET BLOCK MTG. DIMENSIONS A	B	C	D	E	F (0.C.)	BEV X
P22	1	2 3/16"	1'-1 5/8"	2'-2 3/8"	1 3/16"	1"	3'-2 3/4"	2
P23	1	2 3/16"	11 15/16"	2'-0 5/16"	1 3/16"	1"	3'-1 1/2"	2
P24	1	2 3/16"	10 1/4"	1'-10 3/16"	1 3/16"	1"	3'-0 3/16"	2
P25	1	2 3/16"	8 5/8"	1'-8 1/8"	1 3/16"	1"	2'-10 15/16"	2

NOTE:
2 CLAMPING BARS CB-01-H (#28596) PER POSTS P8-P11
4 CLAMPING BARS CB-03-A (#19447) PER POSTS P12-P14
w/ 1/2"ø-13 UNC S.S. BOLT x 1" LG. 'FB1', 1 1/16" O.D. x 17/32" I.D. x 3/32" THK. ALUM WASHER 'FW1' (#15280 & # 19404) (16 PER POST)

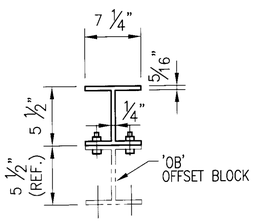
NOTE:
4 CLAMPING BARS CB-03-A (#19447) PER POSTS P12-P14
w/ 1/2"ø-13 UNC S.S. BOLT x 1" LG. 'FB1', 1 1/16" O.D. x 17/32" I.D. x 3/32" THK. ALUM WASHER 'FW1' (#15280 & # 19404) (8 PER POST)



FRT ELEV VIEW
P15 - P17



FRT ELEV VIEW
P11 - P14
P22 - P25



TYP. SECT. POST & OFFSET BLOCK

ANODIZED
(SEE NOTES ON LB1)

BRIDGE No. 5
PROJECT No. BH0 1448 (29) ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
APPROACH RAILING FOR TH No 1 OVER THE GIHON RIVER
3L ALUMINUM APPROACH RAIL POST DETAILS

MADE CMS DATE 10/24/09 JOB No. AR0573 CUST. No.
CHECK BLJ DATE 11/06/09 DRAWING LB5 REV. No.

KMH 11/4/10

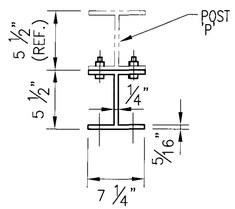
REV.	DESCRIPTION	BY	DATE

OFFSET BLOCK DETAIL CHART FOR NW–SE APPROACHES

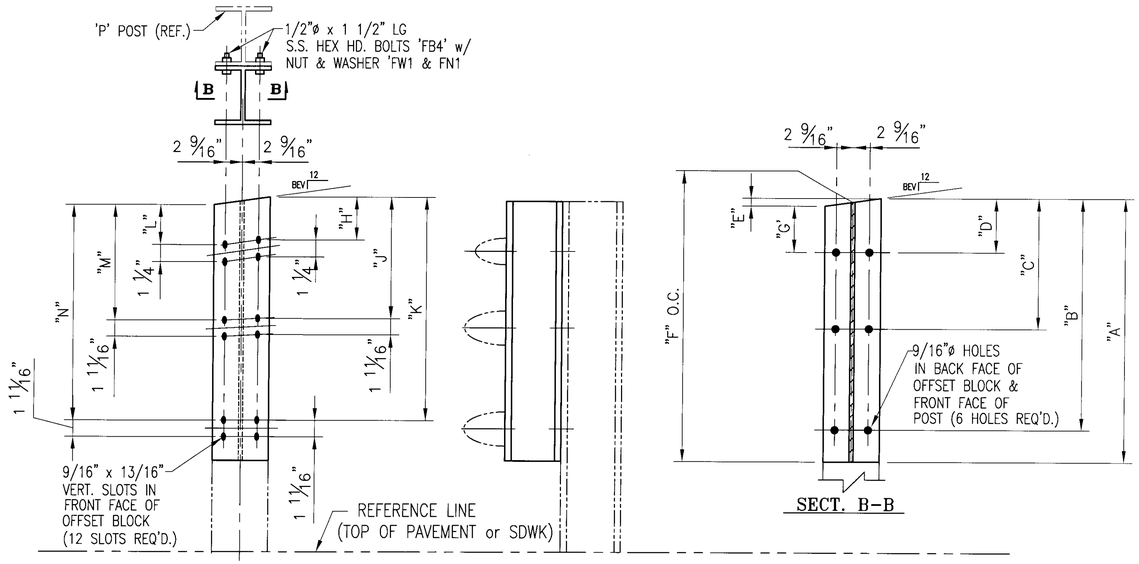
POST No.	QTY.	OFFSET BLOCK MTG. DIMENSIONS A	B	C	D	E	F (0.C.)	G	BEV X
P1	1	2'–7 3/16"	2'–2 1/8"	1'–1 3/8"	1 7/8"	9/16"	2'–6 7/8"	1 5/16"	15/16
P2	1	2'–5 1/16"	2'–0"	11 11/16"	1 7/8"	9/16"	2'–4 3/4"	1 5/16"	15/16
P3	1	2'–2 15/16	1'–9 13/16"	10"	1 7/8"	9/16"	2'–2 5/8"	1 5/16"	15/16
P4	1	2'–0 3/4"	1'–7 11/16"	8 3/8"	1 7/8"	9/16"	2'–0 1/2"	1 5/16"	15/16
P18	1	2'–6 15/16"	2'–1 15/16"	1'–1 1/4"	1 3/4"	7/16"	2'–6 11/16"	1 5/16"	3/4
P19	1	2'–4 7/8"	1'–11 7/8"	11 9/16"	1 3/4"	7/16"	2'–4 5/8"	1 5/16"	3/4
P20	1	2'–2 3/4"	1'–9 3/4"	9 7/8"	1 3/4"	7/16"	2'–2 1/2"	1 5/16"	3/4
P21	1	2'–0 5/8"	1'–7 11/16"	8 1/4"	1 3/4"	7/16"	2'–0 7/16"	1 5/16"	3/4

OFFSET BLOCK ~ RAIL MTG. DIMENSIONS

POST No.	OFFSET BLOCK	H	J	K	L	M	N
P1	OB1	1"	1'–0 5/16"	2'–1 3/16"	7/8"	1'–0 1/16"	2'–0 3/4"
P2	OB2	1"	10 11/16"	1'–11 1/16"	7/8"	10 3/8"	1'–10 5/8"
P3	OB3	1"	9"	1'–8 15/16"	7/8"	8 11/16"	1'–8 1/2"
P4	OB4	1"	7 3/8"	1'–6 13/16"	7/8"	7 1/16"	1'–6 3/8"
P18	OB18	1"	1'–0 1/8"	2'–1 1/8"	7/8"	11 15/16"	2'–0 11/16"
P19	OB19	1"	10 9/16"	1'–11"	7/8"	10 5/16"	1'–10 9/16"
P20	OB20	1"	8 15/16"	1'–8 7/8"	7/8"	8 5/8"	1'–8 7/16"
P21	OB21	1"	7 3/8"	1'–6 13/16"	7/8"	7"	1'–6 3/8"



TYP. SECT. POST & OFFSET BLOCK



FRT ELEV VIEW ~ OB1–OB4, OB18–OB21

OFFSET BLOCK DETAIL CHART FOR NW APPROACH

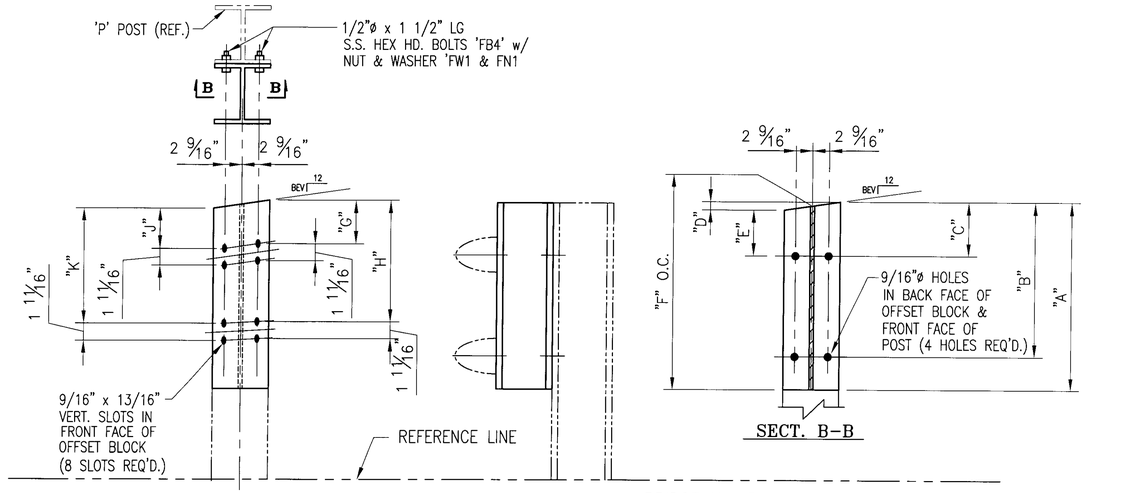
POST No.	QTY.	OFFSET BLOCK MTG. DIMENSIONS A	B	C	D	E	F (0.C.)	BEV X
P5	1	1'–5 15/16"	1'–0 13/16"	2 1/8"	1/4"	1 7/8"	1'–5 13/16"	3/8
P6	1	1'–5 5/16"	1'–0 3/16"	2 1/8"	1/4"	1 7/8"	1'–5 3/16"	3/8
P7	1	1'–4 11/16"	11 5/8"	2 1/8"	1/4"	1 7/8"	1'–4 9/16"	3/8
P8	1	1'–4 1/8"	11 1/16"	2 1/8"	1/4"	1 7/8"	1'–4"	3/8
P9	1	1'–3 9/16"	10 1/2"	2 1/8"	1/4"	1 7/8"	1'–3 7/16"	3/8
P10	1	1'–2 7/8"	9 15/16"	2 1/8"	1/4"	1 7/8"	1'–2 3/4"	3/8

OFFSET BLOCK ~ RAIL MTG. DIMENSIONS

POST No.	OFFSET BLOCK	G	H	J	K
P5	OB5	1 3/16"	11 15/16"	1 1/8"	11 13/16"
P6	OB6	1 3/16"	11 5/16"	1 1/8"	11 3/16"
P7	OB7	1 3/16"	10 11/16"	1 1/8"	10 9/16"
P8	OB8	1 3/16"	10 1/8"	1 1/8"	10"
P9	OB9	1 3/16"	9 9/16"	1 1/8"	9 7/16"
P10	OB10	1 3/16"	9"	1 1/8"	8 7/8"

NOTE:
2 CLAMPING BARS CB–01–H (#28596) PER POSTS P1– P4, P8 – P11
4 CLAMPING BARS CB–03–A (#19447) PER POSTS P1– P4, P8 – P11 w/ 1/2"ø–13 UNC S.S. BOLT x 1" LG. 'FB1', 1 1/16" O.D. x 17/32" I.D. x 3/32" THK. ALUM WASHER 'FW1' (#15280 & #19404) (16 PER POST)

NOTE:
4 CLAMPING BARS CB–03–A (#19447) PER POSTS P1 – P4, P8 – P11 w/ 1/2"ø–13 UNC S.S. BOLT x 1" LG. 'FB1', 1 1/16" O.D. x 17/32" I.D. x 3/32" THK. ALUM WASHER 'FW1' (#15280 & #19404) (8 PER POST)



FRT ELEV VIEW ~ OB5–OB10

ANODIZED
(SEE NOTES ON LB1)

REV.	DESCRIPTION	BY	DATE
		EMH	11/14/10

BRIDGE No. 5
PROJECT No. BH0 1448 (29)
ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
APPROACH RAILING FOR TH No 1 OVER THE GIHON RIVER
OFFSET BOX DETAILS

MADE CMS DATE 10/24/09 JOB No. AR0573 CUST. No.
CHECK BLJ DATE 10/06/09 DRAWING LB6 REV. No.

OFFSET BLOCK DETAIL CHART FOR NE–SW APPROACHES

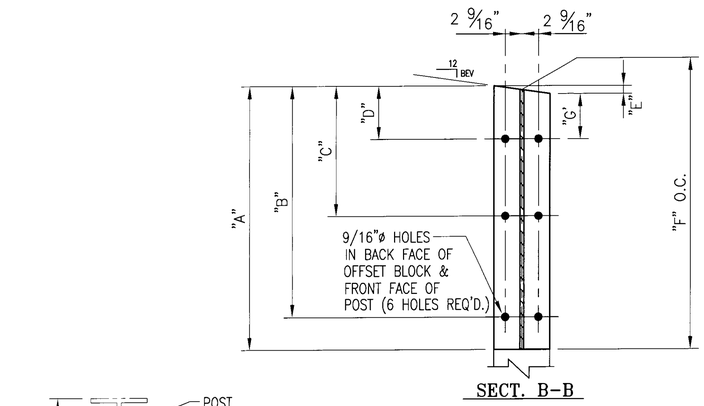
		OFFSET BLOCK MTG. DIMENSIONS							BEV
POST No.	QTY.	A	B	C	D	E	F (0.C.)	G	X
P11	1	2'–7 1/8"	2'–2 1/16"	1'–1 3/8"	1 7/8"	5/8"	2'–6 13/16"	1 1/4"	1
P12	1	2'–4 13/16"	1'–11 3/4"	11 11/16"	1 7/8"	5/8"	2'–4 1/2"	1 1/4"	1
P13	1	2'–2 9/16"	1'–9 7/16"	10"	1 7/8"	5/8"	2'–2 1/4"	1 1/4"	1
P14	1	2'–0 1/4"	1'–7 1/8"	8 5/16"	1 7/8"	5/8"	1'–11 15/16"	1 1/4"	1
P22	1	2'–7 3/4"	2'–2 3/8"	1'–1 5/8"	2 3/16"	1 3/16"	2'–7 3/16"	1"	2
P23	1	2'–5 11/16"	2'–0 5/16"	11 15/16"	2 3/16"	1 3/16"	2'–5 1/8"	1"	2
P24	1	2'–3 5/8"	1'–10 3/16"	10 1/4"	2 3/16"	1 3/16"	2'–3"	1"	2
P25	1	2'–1 1/2"	1'–8 1/8"	8 5/8"	2 3/16"	1 3/16"	2'–0 15/16"	1"	2

OFFSET BLOCK ~ RAIL MTG. DIMENSIONS							
POST No.	OFFSET BLOCK	H	J	K	L	M	N
P11	OB11	1 1/16"	1'–0 7/16"	2'–1 1/8"	7/8"	1'–0"	2'–0 5/8"
P12	OB12	1 1/16"	10 3/4"	1'–10 13/16"	7/8"	10 5/16"	1'–10 5/16"
P13	OB13	1 1/16"	9 1/16"	1'–8 9/16"	7/8"	8 5/8"	1'–8 1/16"
P14	OB14	1 1/16"	7 3/8"	1'–6 1/4"	7/8"	6 15/16"	1'–5 3/4"
P22	OB22	1 1/8"	1'–0 7/16	2'–1 1/4"	3/4"	11 7/8"	2'–0 9/16"
P23	OB23	1 1/8"	10 13/16"	1'–11 13/16"	3/4"	10 3/16"	1'–10 1/2"
P24	OB24	1 1/8"	9 1/8"	1'–9 1/16"	3/4"	8 1/2"	1'–8 3/8"
P25	OB25	1 1/8"	7 7/16"	1'–7"	3/4"	6 13/16"	1'–6 5/16"

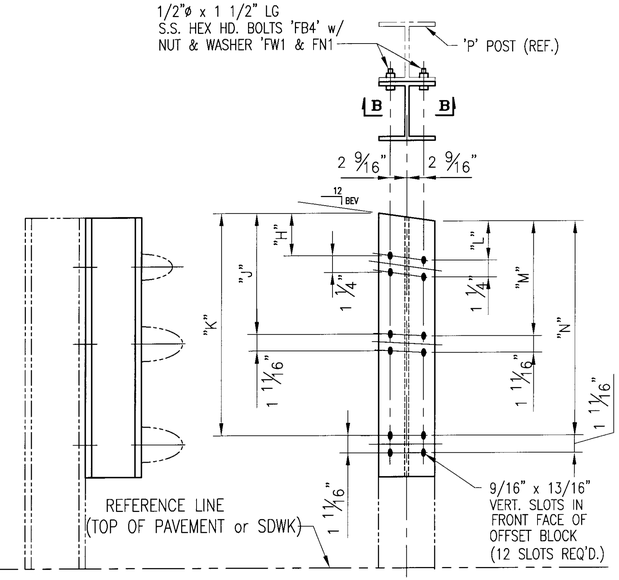
OFFSET BLOCK DETAIL CHART FOR NE APPROACH

		OFFSET BLOCK MTG. DIMENSIONS						BEV
POST No.	QTY.	A	B	C	D	E	F (0.C.)	X
P15	1	1'–5 5/16"	1'–0 1/4"	2 3/16"	5/16"	1 7/8"	1'–5 3/16"	1/2
P16	1	1'–4 5/8"	11 1/2"	2 3/16"	5/16"	1 7/8"	1'–4 7/16"	1/2
P17	1	1'–3 7/8"	10 3/4"	2 3/16"	5/16"	1 7/8"	1'–3 11/16"	1/2

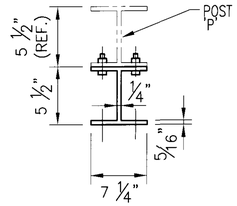
OFFSET BLOCK ~ RAIL MTG. DIMENSIONS					
POST No.	OFFSET BLOCK	G	H	J	K
P15	OB15	1 3/16"	11 5/16"	1 1/8"	11 3/16"
P16	OB16	1 3/16"	10 5/8"	1 1/8"	10 7/16"
P17	OB17	1 3/16"	9 7/8"	1 1/8"	9 11/16"



SECT. B–B



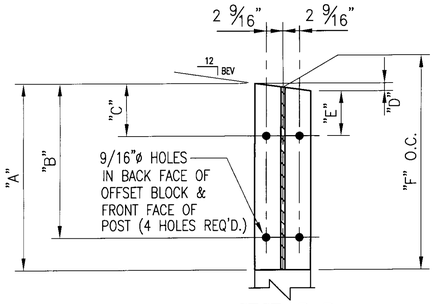
FRT ELEV VIEW ~ OB11–OB14, OB22–OB25



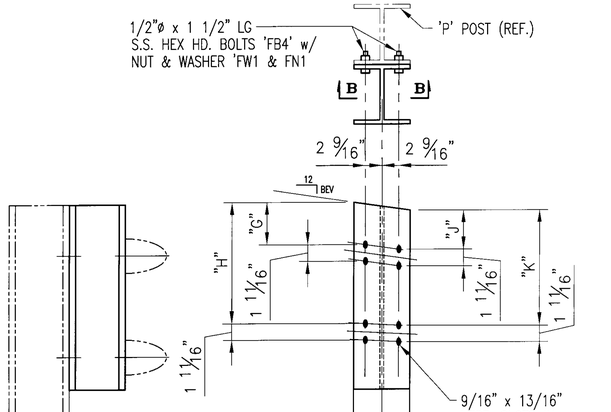
TYP. SECT. POST & OFFSET BLOCK

NOTE:
2 CLAMPING BARS CB–01–H (#28596) PER POSTS P1– P4, P8 – P11
4 CLAMPING BARS CB–03–A (#19447) PER POSTS P1– P4, P8 – P11 w/ 1/2"ø–13 UNC S.S. BOLT x 1" LG. 'FB1', 1 1/16" O.D. x 17/32" I.D. x 3/32" THK. ALUM WASHER 'FW1' (#15280 & #19404) (16 PER POST)

NOTE:
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SECT. B–B



FRT ELEV VIEW ~ OB15–OB17

ANODIZED
(SEE NOTES ON LB1)

REV.	DESCRIPTION	BY	DATE
		RMH	11/9/10

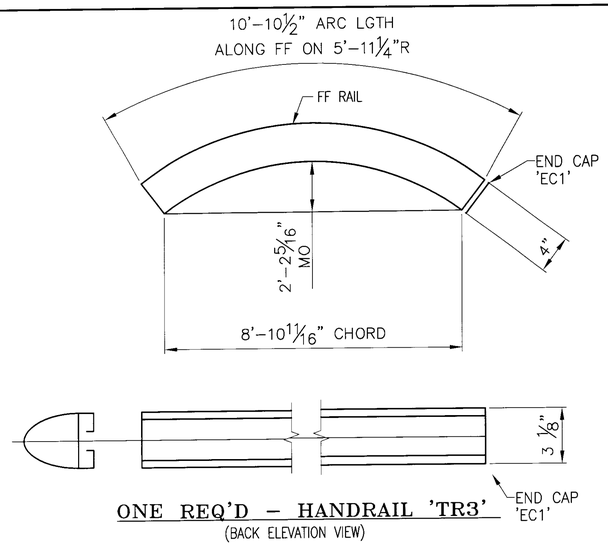
BRIDGE No. 5
PROJECT No. BH0 1448 (29) ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

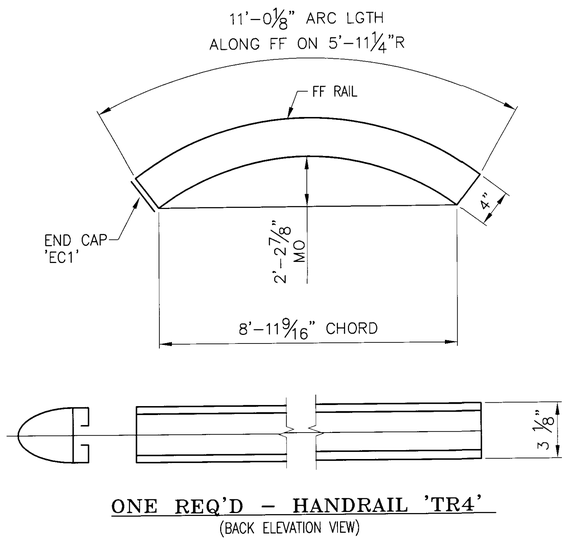
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
APPROACH RAILING FOR TH No 1 OVER THE GIHON RIVER
OFFSET BOX DETAILS

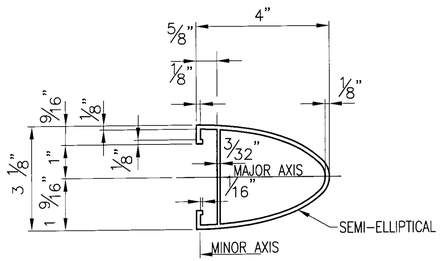
MADE CMS DATE 10/24/09 JOB No. AR0573 CUST. No.
CHECK BLJ DATE 11/06/09 DRAWING LB7 REV. No.



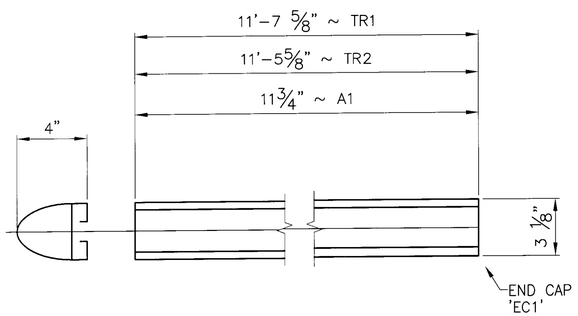
ONE REQ'D – HANDRAIL 'TR3'
(BACK ELEVATION VIEW)



ONE REQ'D – HANDRAIL 'TR4'
(BACK ELEVATION VIEW)



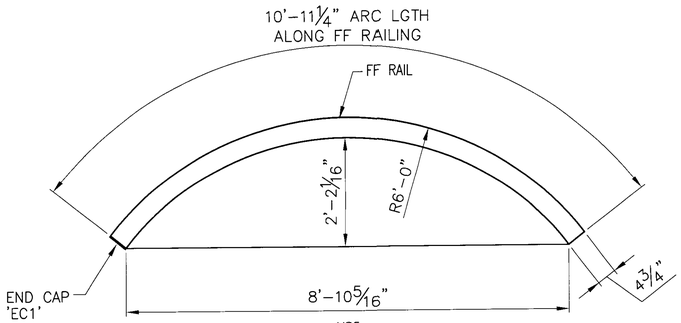
TYPICAL SECTION
(HANDRAIL)



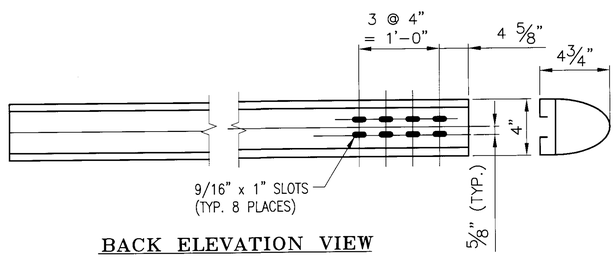
ONE REQ'D – HANDRAIL 'TR1'
(BACK ELEVATION VIEW)

ONE REQ'D – HANDRAIL 'TR2'
(BACK ELEVATION VIEW)

4 REQ'D – HANDRAIL 'A1'
(BACK ELEVATION VIEW)

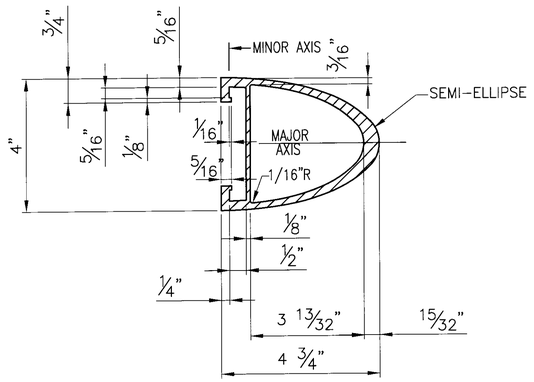


PLAN VIEW

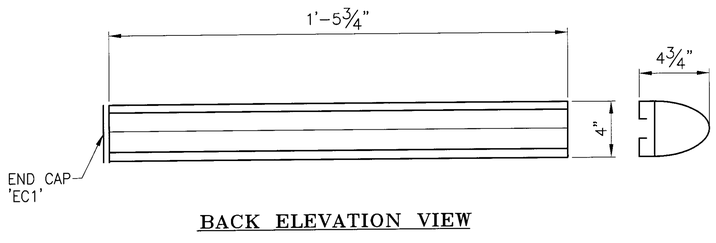


BACK ELEVATION VIEW

ONE REQ'D – BARRIER RAIL 'MR5'
(BACK ELEVATION VIEW)

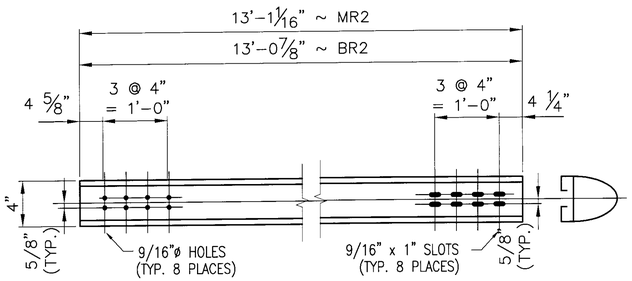


TYPICAL SECTION
(BARRIER RAIL)



BACK ELEVATION VIEW

ONE REQ'D – BARRIER RAIL 'A2'
(BACK ELEVATION VIEW)



ONE REQ'D. ~ RAIL 'MR2'
(BACK ELEVATION VIEW)

ONE REQ'D. ~ RAIL 'BR2'
(BACK ELEVATION VIEW)

ANODIZED
(SEE NOTES ON LB1)

KMH 11/11/10

REV.	DESCRIPTION	BY	DATE

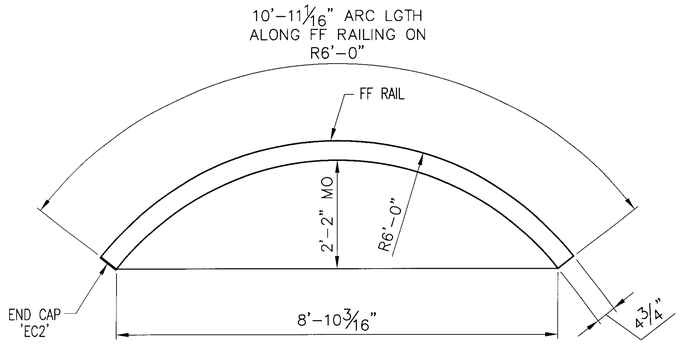
BRIDGE No. 5
PROJECT No. BHO 1448 (29) ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____
DRAWING _____

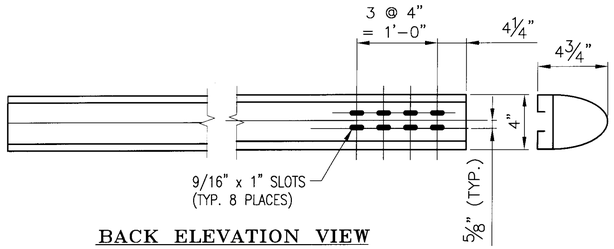
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
APPROACH RAILING FOR TH No 1 OVER THE GIHON RIVER
3L ALUMINUM APPROACH RAIL – RAIL DETAILS

MADE CMS DATE 10/26/09 JOB No. AR0573 CUST. No.
CHECK BLJ DATE 11/06/09 DRAWING LB8 REV. No.



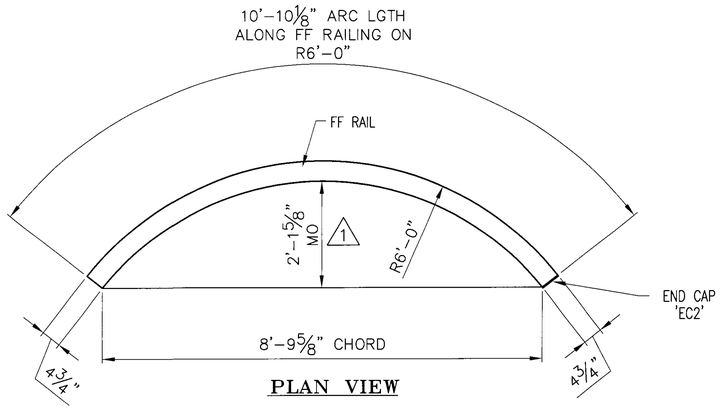
PLAN VIEW



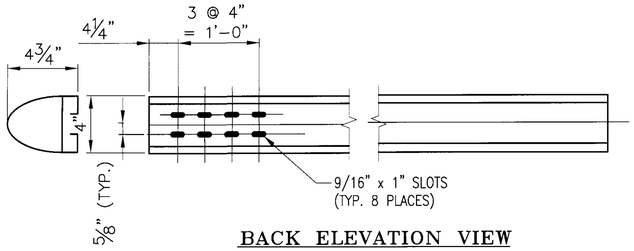
BACK ELEVATION VIEW

ONE REQ'D – BARRIER RAIL 'BR5'

(BACK ELEVATION VIEW)



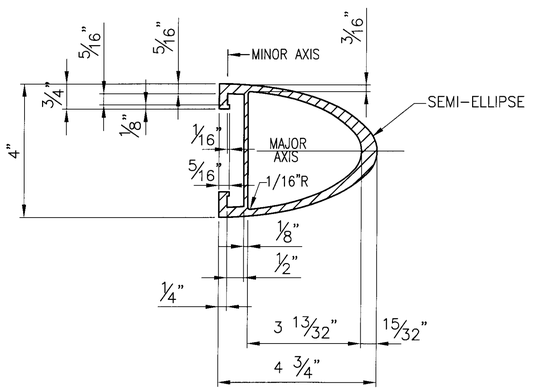
PLAN VIEW



BACK ELEVATION VIEW

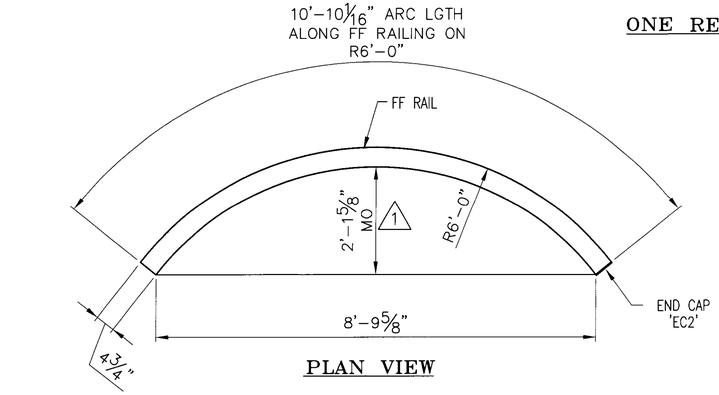
ONE REQ'D – BARRIER RAIL 'MR4'

(BACK ELEVATION VIEW)

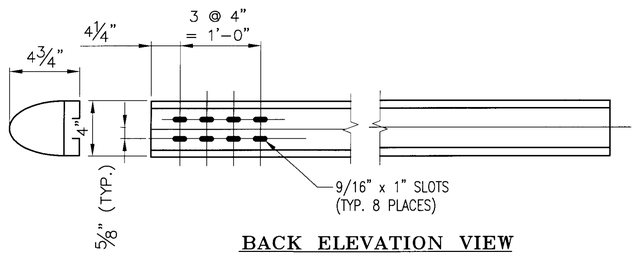


TYPICAL SECTION

(BARRIER RAIL)



PLAN VIEW



BACK ELEVATION VIEW

ONE REQ'D – BARRIER RAIL 'BR4'

(BACK ELEVATION VIEW)

ANODIZED

(SEE NOTES ON LB1)

BRIDGE No. 5

PROJECT No. BHO 1448 (29) ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY

1016 GREENTREE ROAD

PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED

VERMONT AGENCY OF TRANSPORTATION

TOWN OF JOHNSON, COUNTY OF LAMOILLE

APPROACH RAILING FOR TH No 1 OVER THE GIHON RIVER

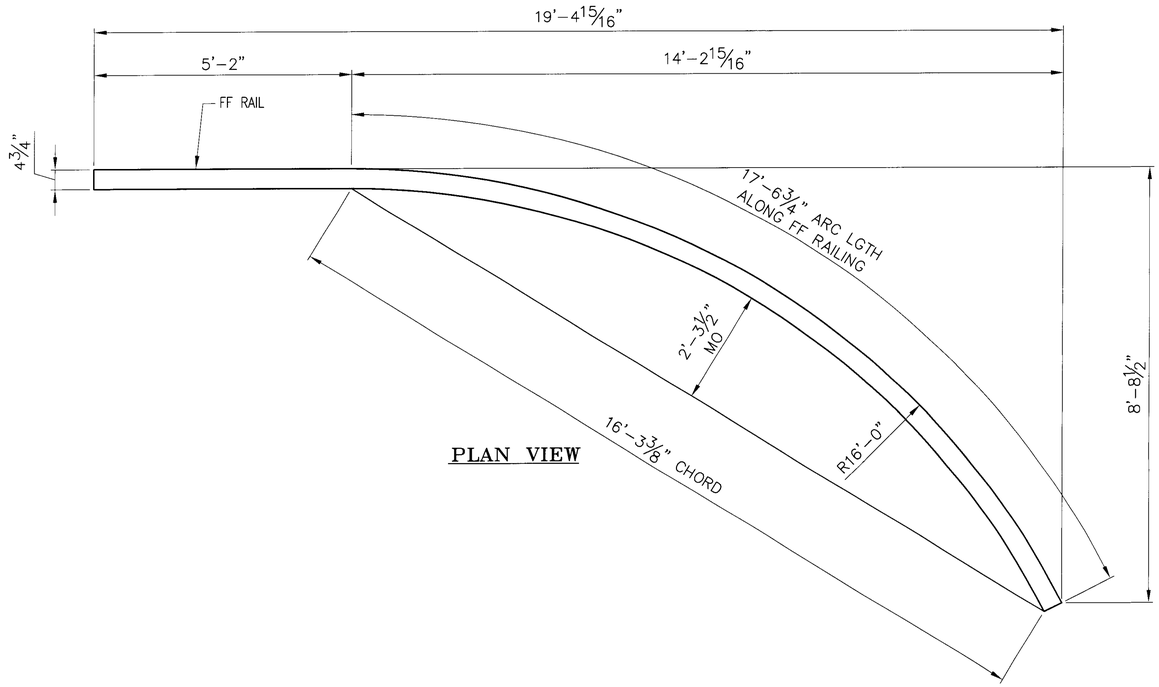
3L ALUMINUM APPROACH RAIL – RAIL DETAILS

MADE CMS DATE 10/26/09 JOB No. AR0573 CUST. No.

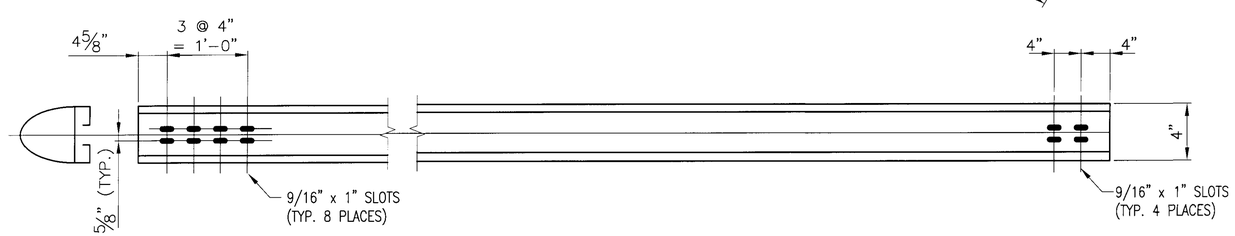
CHECK BLJ DATE 11/06/09 DRAWING LB9 REV. No. ONE

KMH 1/14/10

REV.	DESCRIPTION	BY	DATE
1	REVISED PER APPROVAL MARKUP	CMS	01 11 10

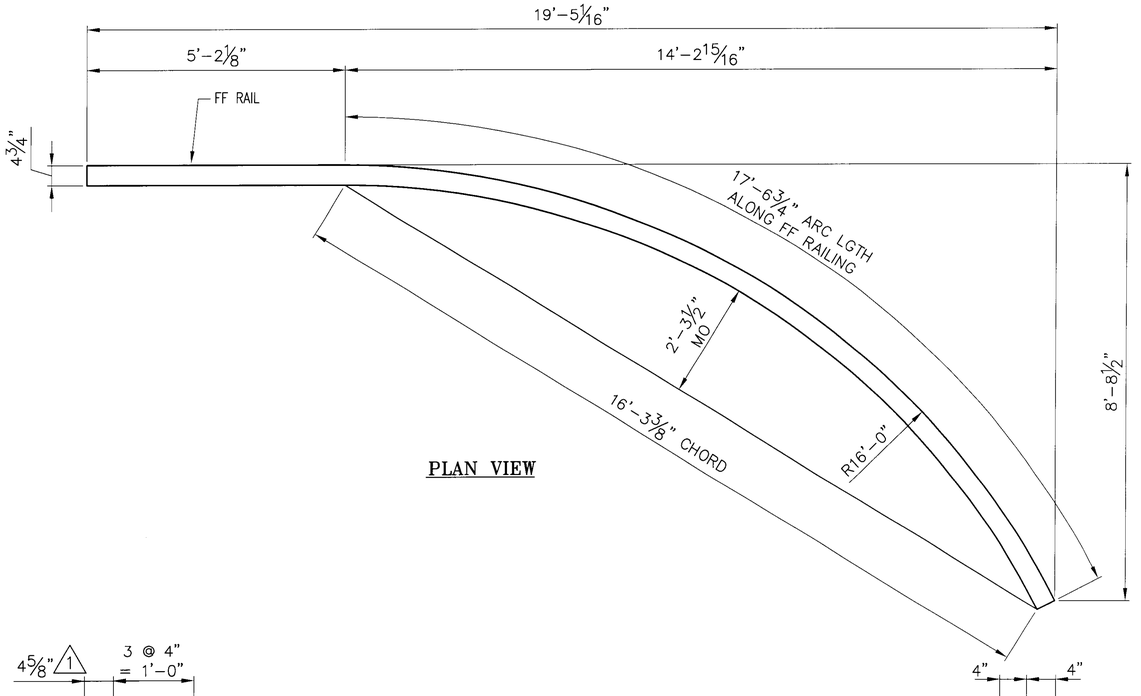


PLAN VIEW

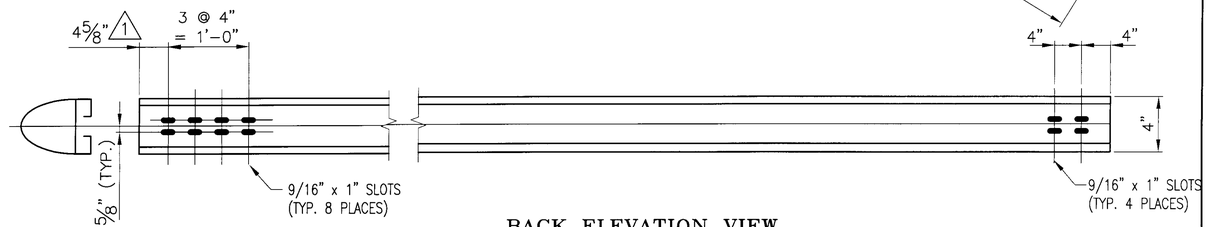


BACK ELEVATION VIEW

ONE REQ'D – BARRIER RAIL 'MR1'

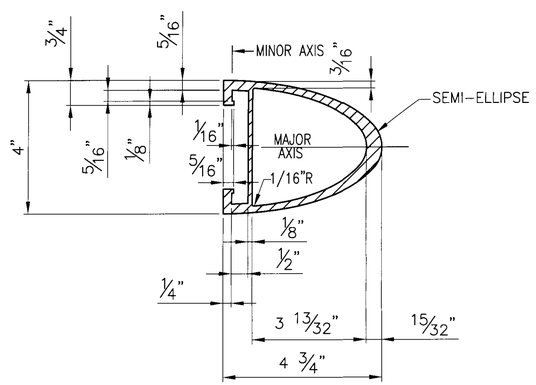


PLAN VIEW



BACK ELEVATION VIEW

ONE REQ'D – BARRIER RAIL 'BR1'



TYPICAL SECTION
(BARRIER RAIL)

ANODIZED
(SEE NOTES ON LB1)

KMH 1/14/10

BRIDGE No. 5
PROJECT No. BHO 1448 (29) ITEM No: 900.640

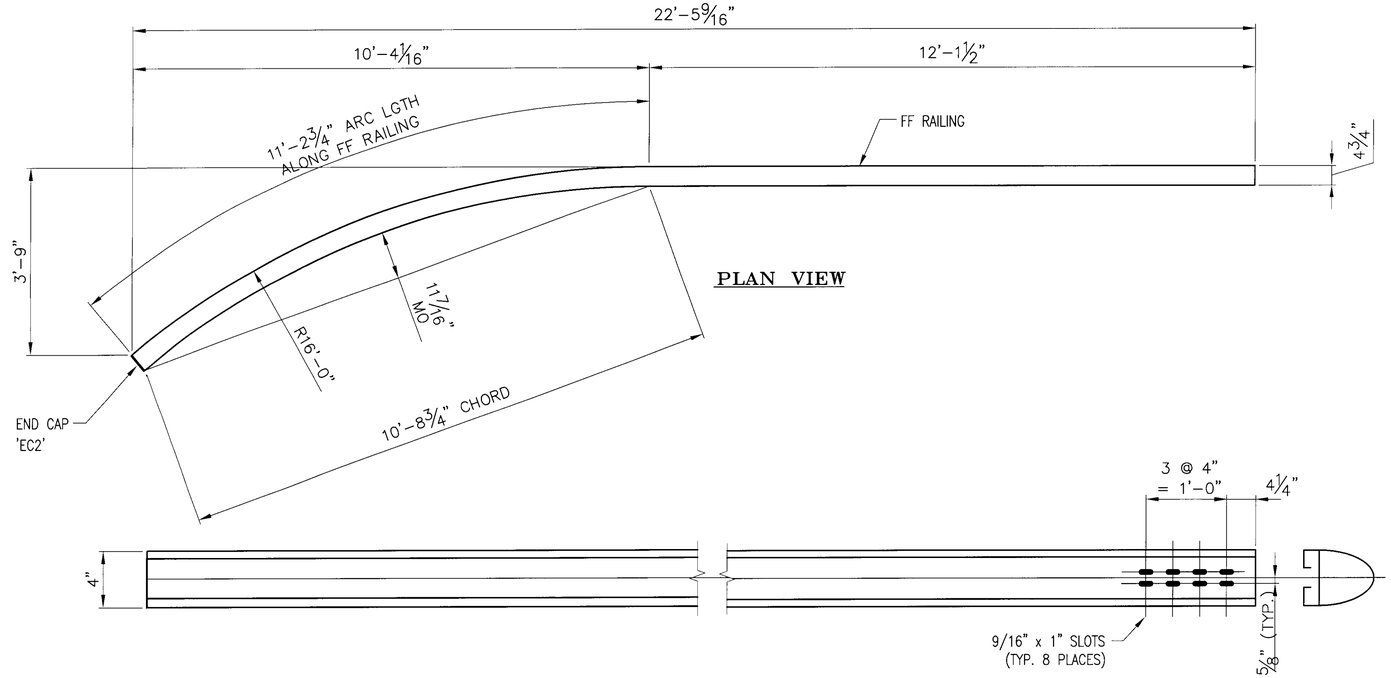
APPROVED: _____ REC'D APPROVAL _____
DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
APPROACH RAILING FOR TH No 1 OVER THE GIHON RIVER
3L ALUMINUM APPROACH RAIL – RAIL DETAILS

MADE CMS DATE 10/26/09 JOB No. AR0573 CUST. No.
CHECK BLJ DATE 11/06/09 DRAWING LB10 REV. No. ONE

REV.	DESCRIPTION	BY	DATE
1	REVISED DIMENSION	CMS	01 11 10

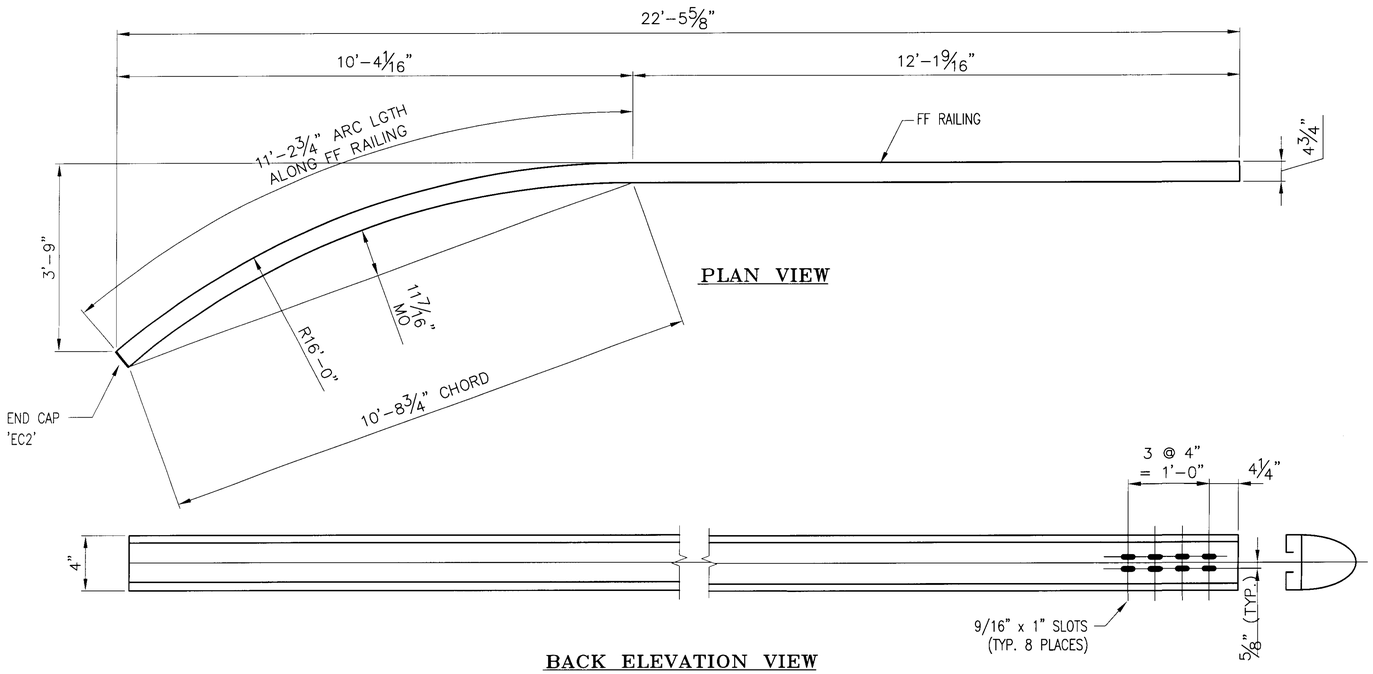


PLAN VIEW

BACK ELEVATION VIEW

ONE REQ'D – BARRIER RAIL 'BR3'

(BACK ELEVATION VIEW)

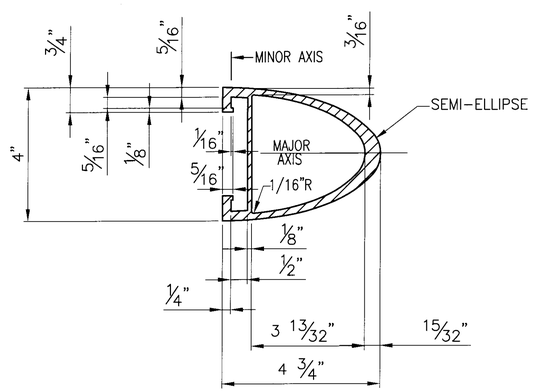


PLAN VIEW

BACK ELEVATION VIEW

ONE REQ'D – BARRIER RAIL 'MR3'

(BACK ELEVATION VIEW)



TYPICAL SECTION

(BARRIER RAIL)

ANODIZED

(SEE NOTES ON LB1)

BRIDGE No. 5

PROJECT No. BHO 1448 (29) ITEM No: 900.640

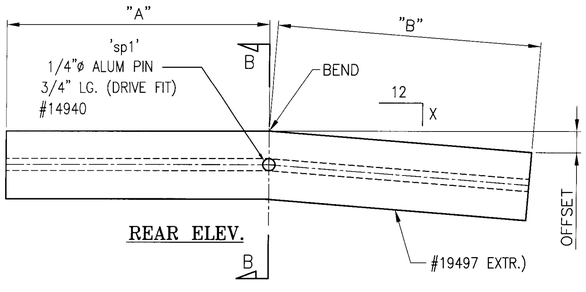
APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
APPROACH RAILING FOR TH No 1 OVER THE GIHON RIVER
3L ALUMINUM APPROACH RAIL – RAIL DETAILS

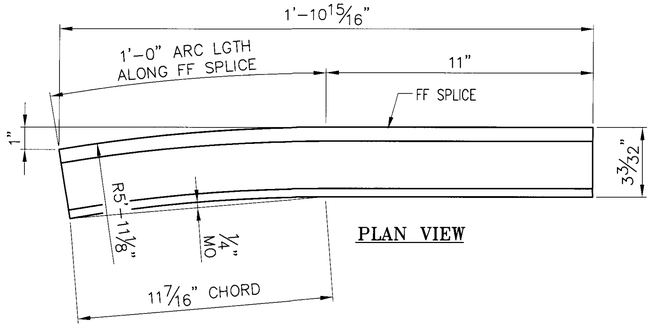
MADE CMS DATE 10/26/09 JOB No. AR0573 CUST. No.
CHECK BLJ DATE 11/06/09 DRAWING LB11 REV. No.

REV.	DESCRIPTION	BY	DATE

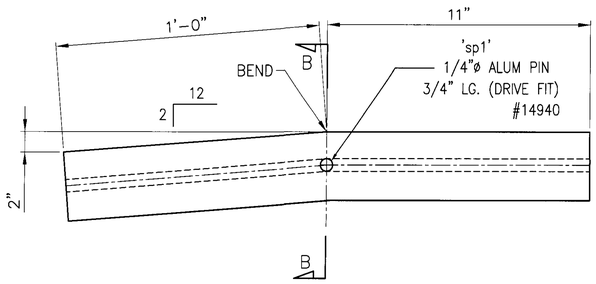


REAR ELEV.

HANDRAIL SPLICES					
MK.	X	QTY.	"A"	"B"	OFFSET
SS-23-A1	15/16	1	11"	12"	15/16"
SS-23-A2	1	1	12"	11"	1"



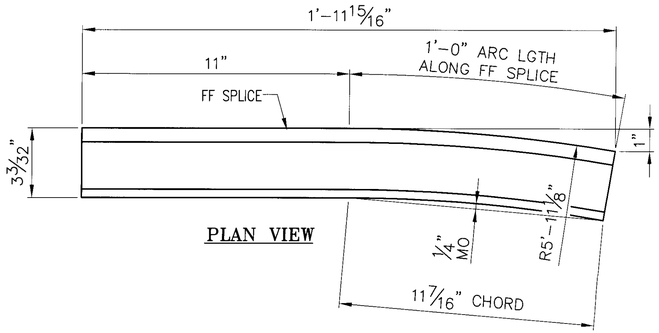
PLAN VIEW



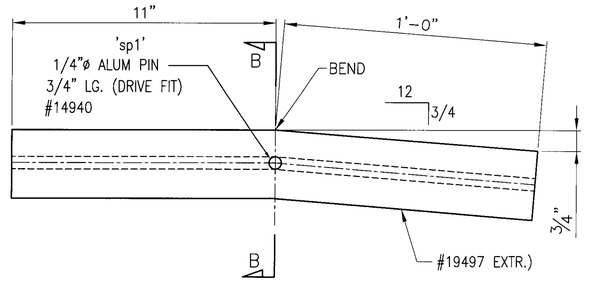
REAR ELEV.

ONE~ REQ'D SPLICE SLEEVES SS-23-A4

(HANDRAIL) (#19497 EXTR.)



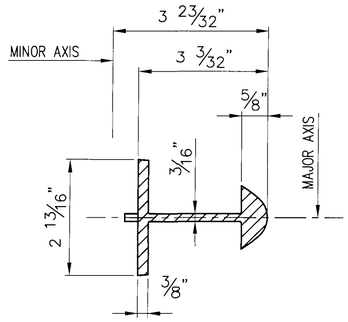
PLAN VIEW



REAR ELEV.

ONE~ REQ'D SPLICE SLEEVES SS-23-A3

(HANDRAIL) (#19497 EXTR.)



SECTION B-B

KMH 1/14/10

ANODIZED

(SEE NOTES ON LB1)

REV.	DESCRIPTION	BY	DATE

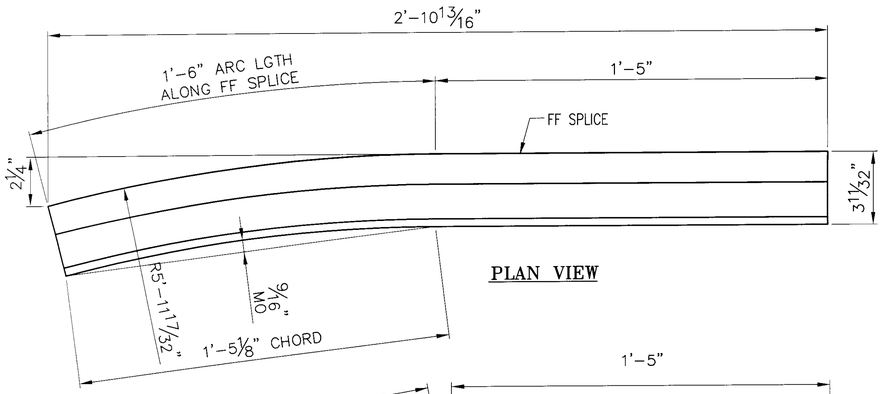
BRIDGE No. 5
PROJECT No. BHO 1448 (29) ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____
DRAWING _____

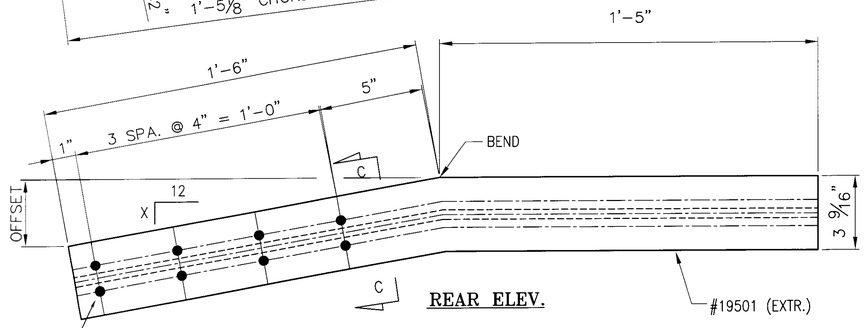
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
APPROACH RAILING FOR TH No 1 OVER THE GIHON RIVER
3L ALUMINUM APPROACH ~ SPLICE DETAILS

MADE CMS DATE 10/26/09 JOB No. AR0573 CUST. No.
CHECK BLJ DATE 11/06/09 DRAWING LB12 REV. No.



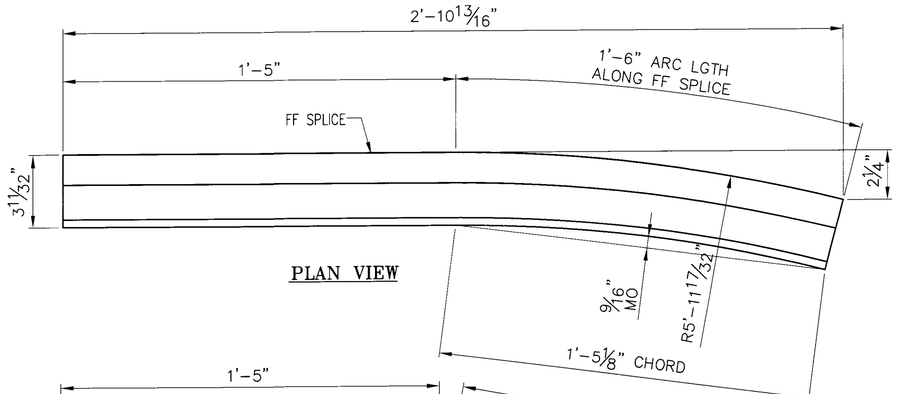
PLAN VIEW



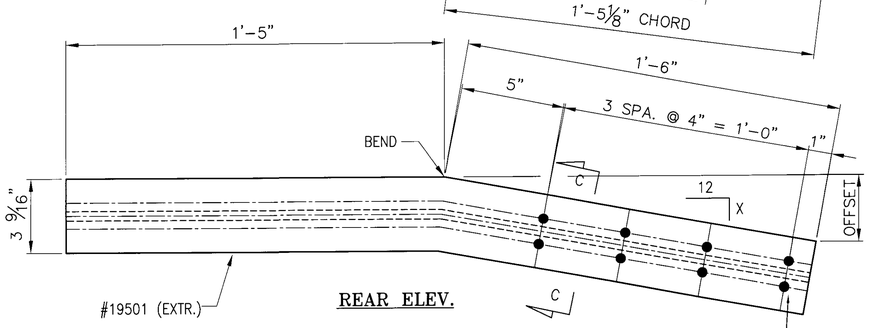
REAR ELEV.

DRILL AND TAP FOR 1/2"-13UNC BOLT (8 REQ'D) 'FB2'

MOD. BARRIER RAIL SPLICES			
MK.	X	QTY.	OFFSET
SS-03-G7	1 7/16	1	2 1/8"
SS-03-G8	1 5/16	1	1 15/16"



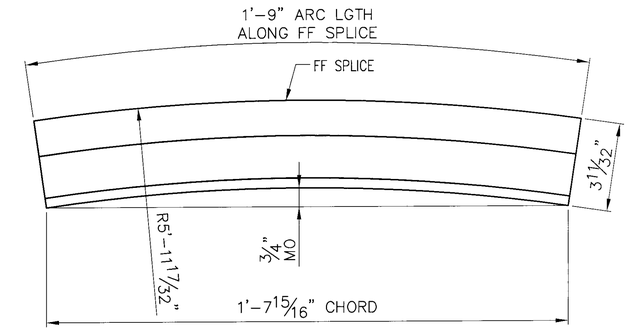
PLAN VIEW



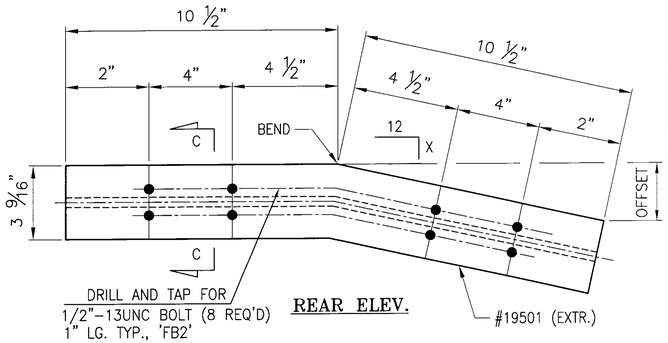
REAR ELEV.

DRILL AND TAP FOR 1/2"-13UNC BOLT (8 REQ'D) 'FB2'

MOD. BARRIER RAIL SPLICES			
MK.	X	QTY.	OFFSET
SS-03-G5	3/16	1	5/16"
SS-03-G6	1/16	1	1/16"



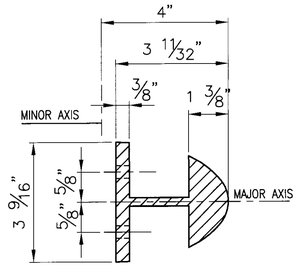
PLAN VIEW



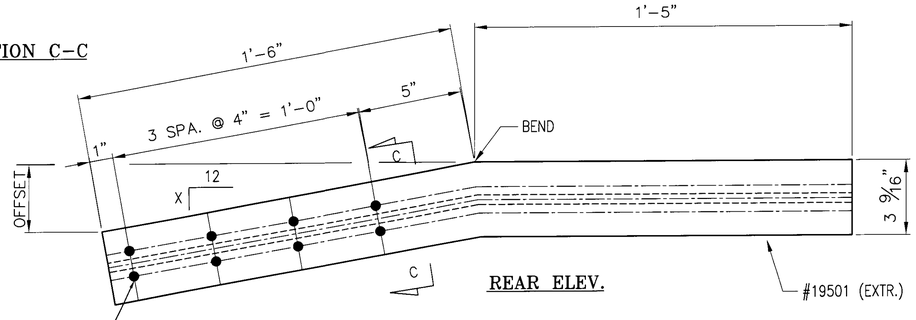
DRILL AND TAP FOR 1/2"-13UNC BOLT (8 REQ'D) 1" LG. TYP., 'FB2'

REAR ELEV.

BARRIER RAIL SPLICES			
MK.	X	QTY.	OFFSET
SS-03-H1	3/8	1	1/16"
SS-03-H2	1/4	1	3/16"



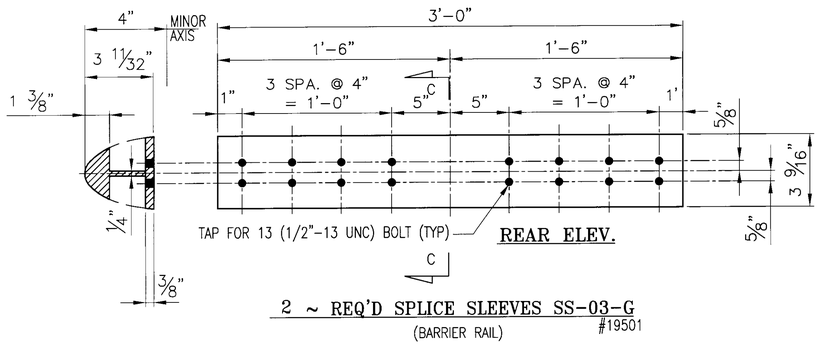
SECTION C-C



REAR ELEV.

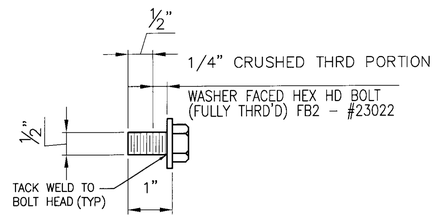
DRILL AND TAP FOR 1/2"-13UNC BOLT (8 REQ'D) 'FB2'

BARRIER RAIL SPLICES			
MK.	X	QTY.	OFFSET
SS-03-G1	3/8	1	9/16"
SS-03-G2	1/4	1	3/8"
SS-03-G3	1/2	1	3/4"
SS-03-G4	5/16	1	7/16"



REAR ELEV.

2 ~ REQ'D SPLICE SLEEVES SS-03-G
(BARRIER RAIL) #19501



SPLICE BOLT DETAILS

BRIDGE No. 5
PROJECT No. BHO 1448 (29) ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

ANODIZED
(SEE NOTES ON LB1)

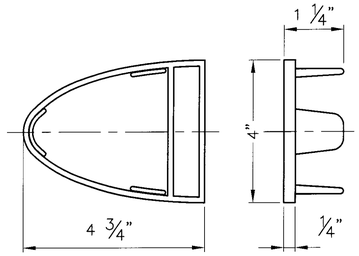
KMH 1/19/10

REV.	DESCRIPTION	BY	DATE
1	GENERAL REVISION PER APPROVER COMMENTS	CMS	01 11 10

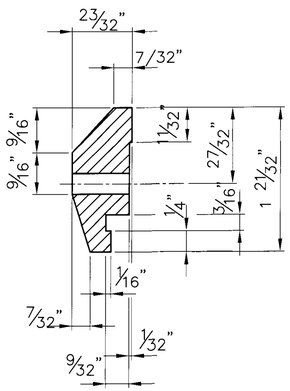
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
APPROACH RAILING FOR TH No 1 OVER THE GIHON RIVER
3L ALUMINUM APPROACH ~ SPLICE DETAILS

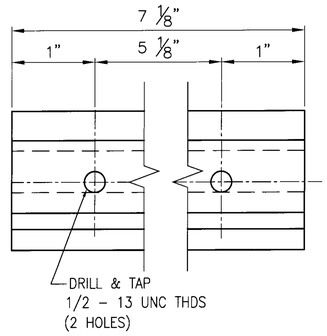
MADE CMS DATE 10/26/09 JOB No. AR0573 CUST. No.
CHECK BLJ DATE 11/06/09 DRAWING LB13 REV. No. ONE

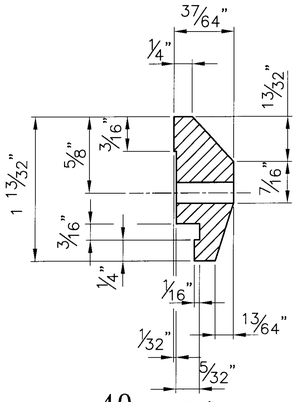


14 ~ REQ'D. ALUM
END CAPS EC2
#19345

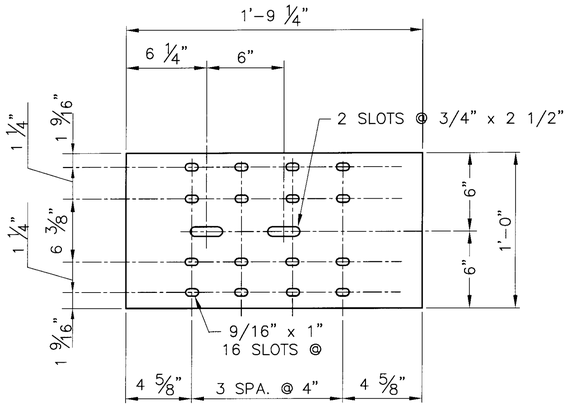


116 ~ REQ'D CLAMP
BAR CB-03-A
(BARRIER RAIL - 4 PER POST)
(#19447)

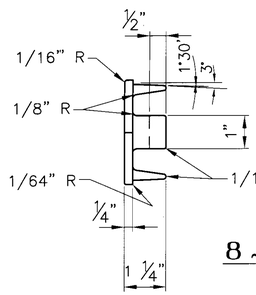


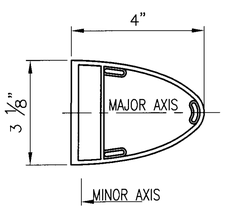


40 ~ REQ'D CLAMP
BAR CB-01-H
(HANDRAIL - 2 PER POST)
(#28596)



ONE REQ'D. ~ BACK-UP PLATE BUP1
(1/4" THK. PLATE ~ A36 - GALV.)





8 ~ REQ'D END CAPS 'EC1'
HANDRAIL (DRIVE TYPE)
#19344

ANODIZED
(SEE NOTES ON LB1)

BRIDGE No. 5
PROJECT No. BHO 1448 (29) ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____
DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
TOWN OF JOHNSON, COUNTY OF LAMOILLE
APPROACH RAILING FOR TH No 1 OVER THE GIHON RIVER
3L ALUMINUM APPROACH RAIL ~ MISC DETAILS

MADE CMS DATE 10/26/09 JOB No. AR0573 CUST. No.
CHECK BLJ DATE 11/09/09 DRAWING LB14 (LAST) REV. No.

KMH 11/10

REV.	DESCRIPTION	BY	DATE