

# PRELIMINARY INFORMATION SHEET (BRIDGE)

LRFD

INDEX OF SHEETS						FINAL HYDRAULIC REPORT																	
<b>PLAN SHEETS</b>						<b>STANDARDS LIST</b>						<b>HYDROLOGIC DATA</b> <span style="float: right;">Date: January 2013</span>						<b>PROPOSED STRUCTURE</b>					
1	TITLE SHEET	E-100	CONSTRUCTION APPROACH SIGNS	01-02-2004		DRAINAGE AREA : 11.6 sq. mi.						STRUCTURE TYPE: <u>Single span precast concrete beam bridge</u>											
2	PRELIMINARY INFORMATION SHEET	E-101	CONSTRUCTION SIGN DETAILS	05-30-2003		CHARACTER OF TERRAIN : <u>Hilly to mountainous, mostly forested</u>						CLEAR SPAN(NORMAL TO STREAM): <u>56'</u>											
3	LEGEND SHEET	E-102	CONSTRUCTION SIGN DETAILS	06-30-2003		STREAM CHARACTERISTICS : <u>Semi-alluvial, sinuous, flood damaged</u>						VERTICAL CLEARANCE ABOVE STREAMBED: <u>11'</u>											
4	GENERAL NOTES	E-102A	CONSTRUCTION SIGN DETAILS	05-01-2004		NATURE OF STREAMBED : <u>Mostly gravel and cobbles with some boulders and ledge</u>						WATERWAY OF FULL OPENING: <u>430 sq. ft.</u>											
5 - 6	QUANTITY SHEETS	E-108	CONSTRUCTION ZONE LONGITUDINAL DROP OFFS	06-08-2009		PEAK FLOW DATA						WATER SURFACE ELEVATIONS AT:											
7 - 8	TYPICAL SECTIONS	E-134	BRIDGE NUMBER PLAQUE	08-08-1995		Q 2.33 = <u>550 cfs</u>	Q 50 = <u>2000 cfs</u>					Q2.33 = <u>874.2'</u>	VELOCITY= <u>8.7 fps</u>										
9	TIE SHEET	E-164	SQUARE STEEL SIGN POST	06-08-2009		Q 10 = <u>1200 cfs</u>	Q 100 = <u>2400 cfs</u>					Q10 = <u>876.0'</u>	" <u>10.7 fps</u>										
10	EXISTING CONDITIONS	E-193	PAVEMENT MARKING DETAILS	08-18-1995		Q 25 = <u>1600 cfs</u>	Q 500 = <u>3350 cfs</u>					Q25 = <u>876.8'</u>	" <u>13.4 fps</u>										
11	LAYOUT SHEET	G-1B	BOX BEAM GUARD RAIL	06-01-1994		DATE OF FLOOD OF RECORD : <u>Unknown</u>						Q500 = <u>877.6'</u>											
12	MAINLINE PROFILE	G-4	PLANK RAIL, GUIDE POSTS, MARKER POSTS	06-01-1994		ESTIMATED DISCHARGE: <u>Unknown</u>						Q100 = <u>878.2'</u>											
13	RAIL LAYOUT SHEET	S-364A	BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM	04-23-2012		WATER SURFACE ELEV.: <u>Unknown</u>																	
14	BORING LAYOUT SHEET	S-364B	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM	04-23-2012		NATURAL STREAM VELOCITY : @ Q50 = <u>12.9 fps</u>																	
15 - 16	BORING LOGS	S-364C	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM	04-23-2012		ICE CONDITIONS : <u>Moderate</u>																	
17	FRAMING PLAN	S-364D	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM	04-23-2012		DEBRIS: <u>Moderate</u>																	
18	NEXT BEAM TYPICAL SECTIONS					DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? <u>Yes</u>						IS THE ROADWAY OVERTOPPED BELOW Q100: <u>No</u>											
19	BEARING DETAILS					IS ORDINARY RISE RAPID? <u>Yes</u>						FREQUENCY: <u>Above Q100</u>											
20	APPROACH SLAB DETAILS					IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? <u>No</u>						RELIEF ELEVATION: <u>885.4'</u>											
21	ABUTMENT 1 PLAN					IF YES, DESCRIBE: _____						DISCHARGE OVER ROAD @Q100: <u>None</u>											
22	ABUTMENT 1 REINFORCING					WATERSHED STORAGE: <u>&lt; 1%</u> HEADWATERS: _____						AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: <u>881.8'</u>											
23	ABUTMENT 2 PLAN					UNIFORM: <u>X</u>						VERTICAL CLEARANCE: <u>@ Q50 = 4.2'</u>											
24	WINGWALL DETAILS					IMMEDIATELY ABOVE SITE: _____						SCOUR: <u>Contraction scour = 2' at Q100 and Q500, or to ledge if it is higher.</u>											
25	DECK CLOSURE POUR					<b>EXISTING STRUCTURE INFORMATION</b>						<b>PERMIT INFORMATION</b>											
26	DETOUR PLAN					STRUCTURE TYPE: <u>Single span concrete T-beam bridge</u>						REQUIRED CHANNEL PROTECTION: <u>Stone fill, Type IV</u>											
27	NORTH ROAD SIGN LAYOUT					YEAR BUILT: <u>1930</u>						<b>TEMPORARY BRIDGE REQUIREMENTS</b>											
28	NORTH ROAD SIGN SUMMARY					CLEAR SPAN(NORMAL TO STREAM): <u>24'</u>						STRUCTURE TYPE: <u>No temporary bridge required. Road will be closed &amp; traffic detoured.</u>											
29	EPSC NARRATIVE					VERTICAL CLEARANCE ABOVE STREAMBED: <u>11'</u>						CLEAR SPAN (NORMAL TO STREAM): _____											
30	EPSC PLAN					WATERWAY OF FULL OPENING: <u>280 sq. ft.</u>						VERTICAL CLEARANCE ABOVE STREAMBED: _____											
31	EPSC DETAILS					DISPOSITION OF STRUCTURE: <u>This structure has been removed*</u>						WATERWAY AREA OF FULL OPENING: _____											
32 - 35	MAINLINE SECTIONS					TYPE OF MATERIAL UNDER SUBSTRUCTURE: <u>See boring logs.</u>						<b>ADDITIONAL INFORMATION</b>											
36 - 39	CHANNEL SECTIONS					WATER SURFACE ELEVATIONS AT:						* The previous existing bridge was damaged in the August 2011 flood and has been removed. There is now a temporary bridge in place. Existing bridge information listed in this report is for the bridge that was removed in 2011.											
<b>STRUCTURES DETAILS</b>						<b>UPSTREAM STRUCTURE</b>						<b>TRAFFIC MAINTENANCE NOTES</b>											
SD-501.00	CONCRETE DETAILS AND NOTES	4/7/2010				TOWN: <u>Barnard</u>	DISTANCE: <u>1900'</u>					1. MAINTAIN TRAFFIC ON AN OFF SITE DETOUR.											
SD-502.00	CONCRETE DETAILS AND NOTES	5/4/2010				HIGHWAY #: <u>TH 29</u>	STRUCTURE #: <u>34</u>					2. TRAFFIC SIGNALS ARE NOT NECESSARY.											
SD-516.10	BRIDGE JOINT ASPHALTIC PLUG	4/7/2010				CLEAR SPAN: <u>30'</u>	CLEAR HEIGHT: <u>9'</u>					3. SIDEWALKS ARE NOT NECESSARY											
						YEAR BUILT: <u>1974</u>	FULL WATERWAY: <u>Unknown</u>					<b>DESIGN VALUES</b>											
						STRUCTURE TYPE: <u>Bridge</u>						1. DESIGN LIVE LOAD <u>HL-93</u>											
						<b>DOWNSTREAM STRUCTURE</b>						2. FUTURE PAVEMENT <u>dp: 0.0 INCH</u>											
						TOWN: <u>Not applicable - confluence</u>	DISTANCE: _____					3. DESIGN SPAN <u>L: 85.00 FT</u>											
						HIGHWAY #: _____	STRUCTURE #: _____					4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS) <u>Δ: 1.50 INCH</u>											
						CLEAR SPAN: _____	CLEAR HEIGHT: _____					5. PRESTRESSING STRAND (0.60 INCH DIAMETER - LOW RELAX) <u>fy: 270 KSI</u>											
						YEAR BUILT: _____	FULL WATERWAY: _____					6. PRESTRESSED CONCRETE STRENGTH <u>f'c: 10.0 KSI</u>											
						STRUCTURE TYPE: _____						7. PRESTRESSED CONCRETE RELEASE STRENGTH <u>f'cr: 8.0 KSI</u>											
						<b>LRFR LOAD RATING FACTORS</b>						8. CONCRETE, HIGH PERFORMANCE CLASS AA <u>f'c: ---</u>											
						LOADING LEVELS						9. CONCRETE, HIGH PERFORMANCE CLASS A <u>f'c: ---</u>											
						<b>TRUCK</b>						10. CONCRETE, HIGH PERFORMANCE CLASS B <u>f'c: ---</u>											
						H-20	HL-93	3S2	6 AXLE	3A STR	4A STR	5A SEMI	11. CONCRETE, CLASS C <u>f'c: ---</u>										
						TONNAGE	20	36	36	66	30	34.5	38	12. REINFORCING STEEL <u>fy: 60 KSI</u>									
						INVENTORY	2.48	1.57						13. STRUCTURAL STEEL AASHTO M270 <u>fy: ---</u>									
						POSTING								14. SOIL UNIT WEIGHT <u>γ: 0.140 KCF</u>									
						OPERATING	3.34	2.12	2.52	1.65	2.33	2.08	2.18	15. NOMINAL BEARING RESISTANCE OF SOIL <u>qn: ---</u>									
						COMMENTS:												16. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD) <u>φ: ---</u>					
						<b>AS BUILT "REBAR" DETAIL</b>						17. NOMINAL BEARING RESISTANCE OF ROCK <u>qn: 10.0 KSF</u>											
						LEVEL I	LEVEL II	LEVEL III										18. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD) <u>φ: ---</u>					
						TYPE:	TYPE:	TYPE:										19. NOMINAL AXIAL PILE RESISTANCE <u>qp: ---</u>					
						GRADE:	GRADE:	GRADE:										20. PILE YIELD STRENGTH ASTM A572 <u>fy: 50 KSI</u>					
						<b>TRAFFIC DATA</b>						21. PILE SIZE <u>SEE GEN. NOTES</u>											
YEAR	ADT	DHV	% D	% T	ADTT	20 year ESAL for flexible pavement from 2014 to 2034 : 416000						22. EST. PILE LENGTH <u>Lp: SEE BORING LOGS</u>											
2014	1000	140	54	7.3	120	40 year ESAL for flexible pavement from 2014 to 2054 : 978000						23. PILE RESISTANCE FACTOR <u>φ: ---</u>											
2034	1100	150	54	10.8	190	Design Speed : 50 mph						24. LATERAL PILE DEFLECTION <u>Δ: ---</u>											
						<b>PILE DRIVING AND TESTING REQUIREMENTS</b>						25. BASIC WIND SPEED <u>V3s: ---</u>											
						1. NOMINAL PILE DRIVING CAPACITY <u>SEE GEN. NOTES</u>						26. MINIMUM GROUND SNOW LOAD <u>ps: ---</u>											
						2. PILE TEST RESISTANCE FACTOR <u>φ: SEE GEN. NOTES</u>						27. SEISMIC DATA <u>PGA: --- Ss: --- St: ---</u>											
						3. MAXIMUM PILE TIP ELEVATION <u>SEE GEN. NOTES</u>						PROJECT NAME: <b>BARNARD</b>											
						4. SEE GENERAL NOTES						PROJECT NUMBER: <b>ER BRF 0241(39)</b>											
												FILE NAME: <b>s10c410pi.dgn</b> PLOT DATE: <b>16-SEP-2013</b>											
												PROJECT LEADER: <b>K. M. HIGGINS</b> DRAWN BY: <b>J. SALVATORI</b>											
												DESIGNED BY: <b>W. LAMMER</b> CHECKED BY: <b>W. LAMMER</b>											
												PRELIMINARY INFORMATION SHEET SHEET 2 OF 39											