

PRELIMINARY INFORMATION SHEET (BRIDGE)

LRFD

| INDEX OF SHEETS | | | | | | FINAL HYDRAULIC REPORT | | | | | |
|---------------------|-------------------------------|-----------|--|------------|---|--|--|--|---------------------------|--|--|
| PLAN SHEETS | | | STANDARDS LIST | | | HYDROLOGIC DATA | | | PROPOSED STRUCTURE | | |
| 1 | TITLE SHEET | E-100 | CONSTRUCTION APPROACH SIGNS | 01-02-2004 | Date: March 2012 | | | STRUCTURE TYPE: <u>Single span prestressed concrete beam bridge</u> | | | |
| 2 | PRELIMINARY INFORMATION SHEET | E-101 | CONSTRUCTION SIGN DETAILS | 05-30-2003 | DRAINAGE AREA : <u>5.0 sq. mi.</u> | | | CLEAR SPAN(NORMAL TO STREAM): <u>54' max., 30' min. effective</u> | | | |
| 3 | GENERAL NOTES | E-102 | CONSTRUCTION SIGN DETAILS | 05-30-2003 | CHARACTER OF TERRAIN : <u>Hilly to mountainous, mostly forested land cover</u> | | | VERTICAL CLEARANCE ABOVE STREAMBED: <u>6.5'</u> | | | |
| 4 - 5 | QUANTITY SHEETS 1-2 | E-102A | CONSTRUCTION SIGN DETAILS | 05-01-2004 | STREAM CHARACTERISTICS : <u>Sinuuous, alluvial, bend coming into the bridge</u> | | | WATERWAY OF FULL OPENING: <u>180 sq. ft.</u> | | | |
| 6 - 7 | TYPICAL SECTIONS 1-2 | E-108 | CONSTRUCTION ZONE LONGITUDINAL DROP OFFS | 08-08-2009 | NATURE OF STREAMBED : <u>Sand, gravel and cobbles</u> | | | WATER SURFACE ELEVATIONS AT: | | | |
| 8 | TIE SHEET | E-134 | BRIDGE NUMBER PLAQUE | 08-08-1995 | PEAK FLOW DATA | | | Q2.33 = <u>1168.6'</u> VELOCITY= <u>5.3 fps</u> | | | |
| 9 | LAYOUT SHEET | E-164 | SQUARE STEEL SIGN POST | 06-08-2009 | Q 2.33 = <u>190 cfs</u> Q 50 = <u>675 cfs</u> | | | Q10 = <u>1170.0'</u> " <u>7.4 fps</u> | | | |
| 10 | MAINLINE PROFILE | E-193 | PAVEMENT MARKING DETAILS | 08-18-1995 | Q 10 = <u>420 cfs</u> Q 100 = <u>825 cfs</u> | | | Q25 = <u>1170.7'</u> " <u>8.4 fps</u> | | | |
| 11 | RAIL LAYOUT SHEET | G-1B | BOX BEAM GUARDRAIL | 06-01-1994 | Q 25 = <u>560 cfs</u> Q 500 = <u>1150 cfs</u> | | | Q50 = <u>1171.2'</u> " <u>9.1 fps</u> | | | |
| 12 | BORING LAYOUT SHEET | S-364A | BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM | 04-23-2012 | DATE OF FLOOD OF RECORD : <u>Unknown</u> | | | Q100 = <u>1171.8'</u> " <u>10.0 fps</u> | | | |
| 13 - 14 | BORING LOGS | S-364B | GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM | 04-23-2012 | ESTIMATED DISCHARGE: <u>Unknown</u> | | | IS THE ROADWAY OVERTOPPED BELOW Q100: <u>No</u> | | | |
| 15 | FRAMING PLAN | S-364C | GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM | 04-23-2012 | WATER SURFACE ELEV.: <u>Unknown</u> | | | FREQUENCY: <u>Above Q100</u> | | | |
| 16 | NEXT BEAM TYPICAL SECTION | S-364D | GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM | 04-23-2012 | NATURAL STREAM VELOCITY : <u>@ Q50 = 9.4 fps</u> | | | RELIEF ELEVATION: <u>1173.5'</u> | | | |
| 17 | BEARING DETAILS | | | | ICE CONDITIONS : <u>Moderate</u> | | | DISCHARGE OVER ROAD @Q100: <u>None</u> | | | |
| 18 | APPROACH SLAB DETAILS | | | | DEBRIS: <u>Moderate</u> | | | AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: <u>1172.3'</u> | | | |
| 19 | ABUTMENT PLAN | | | | DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? <u>Yes</u> | | | VERTICAL CLEARANCE: <u>@ Q50 = 1.1'</u> | | | |
| 20 | ABUTMENT REINFORCING | | | | IS ORDINARY RISE RAPID? <u>Yes</u> | | | SCOUR: <u>4' of contraction scour up to Q500.</u> | | | |
| 21 | DECK CLOSURE POUR DETAILS | | | | IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? <u>No</u> | | | REQUIRED CHANNEL PROTECTION: <u>Stone Fill, Type III</u> | | | |
| 22 | WINGWALL DETAILS | SD-501.00 | CONCRETE DETAILS AND NOTES | 05-07-2010 | IF YES, DESCRIBE: _____ | | | PERMIT INFORMATION | | | |
| 23 - 24 | DETOUR PLAN 1-2 | SD-502.00 | CONCRETE DETAILS AND NOTES | 06-04-2010 | WATERSHED STORAGE: <u>2%</u> HEADWATERS: <u>X</u> | | | AVERAGE DAILY FLOW: <u>10 cfs</u> DEPTH OR ELEVATION: | | | |
| 25 | EPSC NARRATIVE | SD-516.10 | BRIDGE JOINT ASPHALTIC PLUG | 05-07-2010 | UNIFORM: _____ | | | ORDINARY LOW WATER: <u>5 cfs</u> <u>Depth = 0.5'</u> | | | |
| 26 | EPSC PLAN | | | | IMMEDIATELY ABOVE SITE: _____ | | | ORDINARY HIGH WATER: <u>80 cfs</u> <u>Depth = 2.0'</u> | | | |
| 27 - 28 | EPSC DETAILS | | | | EXISTING STRUCTURE INFORMATION | | | TEMPORARY BRIDGE REQUIREMENTS | | | |
| 29 - 33 | MAINLINE SECTIONS | | | | STRUCTURE TYPE: <u>Single span concrete slab bridge</u> | | | STRUCTURE TYPE: <u>No temporary bridge required.</u> | | | |
| 34 - 36 | CHANNEL SECTIONS | | | | YEAR BUILT: <u>Built 1928, reconstructed 1972</u> | | | CLEAR SPAN (NORMAL TO STREAM): _____ | | | |
| | | | | | CLEAR SPAN(NORMAL TO STREAM): <u>Approximately 20' *</u> | | | VERTICAL CLEARANCE ABOVE STREAMBED: _____ | | | |
| | | | | | VERTICAL CLEARANCE ABOVE STREAMBED: <u>Approximately 3.5' *</u> | | | WATERWAY AREA OF FULL OPENING: _____ | | | |
| | | | | | WATERWAY OF FULL OPENING: <u>Unknown *</u> | | | ADDITIONAL INFORMATION | | | |
| | | | | | DISPOSITION OF STRUCTURE: <u>It has already been removed.</u> | | | * The existing bridge was destroyed in a flood and removed. We do not have accurate information on that bridge, so no hydraulics was done for it. The new bridge is longer and higher and has a larger waterway area than the previous bridge, so it will be better hydraulically. | | | |
| | | | | | TYPE OF MATERIAL UNDER SUBSTRUCTURE: <u>See boring logs</u> | | | TRAFFIC MAINTENANCE NOTES | | | |
| | | | | | WATER SURFACE ELEVATIONS AT: | | | 1. MAINTAIN TRAFFIC ON AN OFF SITE DETOUR. | | | |
| | | | | | Q2.33 = <u>*</u> VELOCITY= <u>*</u> | | | 2. TRAFFIC SIGNALS ARE NOT NECESSARY. | | | |
| | | | | | Q10 = _____ " _____ | | | 3. SIDEWALKS ARE NOT NECESSARY | | | |
| | | | | | Q25 = _____ " _____ | | | DESIGN VALUES | | | |
| | | | | | Q50 = _____ " _____ | | | 1. DESIGN LIVE LOAD <u>HL-93</u> | | | |
| | | | | | Q100 = _____ " _____ | | | 2. FUTURE PAVEMENT <u>dp: 3.0 INCH</u> | | | |
| | | | | | LONG TERM STREAMBED CHANGES: <u>Unknown</u> | | | 3. DESIGN SPAN <u>L: 70.00 FT</u> | | | |
| | | | | | IS THE ROADWAY OVERTOPPED BELOW Q100: <u>*</u> | | | 4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS) <u>Δ: 3.86 INCH</u> | | | |
| | | | | | FREQUENCY: <u>*</u> | | | 5. PRESTRESSING STRAND (0.60 INCH DIAMETER - LOW RELAX) <u>fy: 270 KSI</u> | | | |
| | | | | | RELIEF ELEVATION: <u>1173.5'</u> | | | 6. PRESTRESSED CONCRETE STRENGTH <u>f'c: 10.0 KSI</u> | | | |
| | | | | | DISCHARGE OVER ROAD @Q100: <u>*</u> | | | 7. PRESTRESSED CONCRETE RELEASE STRENGTH <u>f'c: 8.0 KSI</u> | | | |
| | | | | | UPSTREAM STRUCTURE | | | 8. CONCRETE, HIGH PERFORMANCE CLASS AA <u>f'c: ---</u> | | | |
| | | | | | TOWN: <u>None</u> DISTANCE: _____ | | | 9. CONCRETE, HIGH PERFORMANCE CLASS A <u>f'c: ---</u> | | | |
| | | | | | HIGHWAY #: _____ STRUCTURE #: _____ | | | 10. CONCRETE, HIGH PERFORMANCE CLASS B <u>f'c: ---</u> | | | |
| | | | | | CLEAR SPAN: _____ CLEAR HEIGHT: _____ | | | 11. CONCRETE, CLASS C <u>f'c: ---</u> | | | |
| | | | | | YEAR BUILT: _____ FULL WATERWAY: _____ | | | 12. REINFORCING STEEL <u>fy: 60 KSI</u> | | | |
| | | | | | STRUCTURE TYPE: _____ | | | 13. STRUCTURAL STEEL AASHTO M270 <u>fy: ---</u> | | | |
| | | | | | DOWNSTREAM STRUCTURE | | | 14. SOIL UNIT WEIGHT <u>γ: 0.140 KCF</u> | | | |
| | | | | | TOWN: <u>N.A. - confluence with Clyde River</u> DISTANCE: _____ | | | 15. NOMINAL BEARING RESISTANCE OF SOIL <u>qn: 4.0 KSF</u> | | | |
| | | | | | HIGHWAY #: _____ STRUCTURE #: _____ | | | 16. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD) <u>φ: ---</u> | | | |
| | | | | | CLEAR SPAN: _____ CLEAR HEIGHT: _____ | | | 17. NOMINAL BEARING RESISTANCE OF ROCK <u>qn: 10.0 KSF</u> | | | |
| | | | | | YEAR BUILT: _____ FULL WATERWAY: _____ | | | 18. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD) <u>φ: ---</u> | | | |
| | | | | | STRUCTURE TYPE: _____ | | | 19. NOMINAL AXIAL PILE RESISTANCE <u>qp: ---</u> | | | |
| | | | | | LRFR LOAD RATING FACTORS | | | 20. PILE YIELD STRENGTH ASTM A572 <u>fy: 50 KSI</u> | | | |
| | | | | | LOADING LEVELS | | | 21. PILE SIZE <u>HP 12X53</u> | | | |
| | | | | | TRUCK | | | 22. EST. PILE LENGTH <u>Lp: 80 FT</u> | | | |
| | | | | | HL-20 HL-93 3S2 6 AXLE 3A STR. 4A STR. 5A SEM | | | 23. PILE RESISTANCE FACTOR <u>φ: ---</u> | | | |
| | | | | | TONNAGE <u>20 36 36 66 30 34.5 38</u> | | | 24. LATERAL PILE DEFLECTION <u>Δ: ---</u> | | | |
| | | | | | INVENTORY <u>4.51 1.14</u> | | | 25. BASIC WIND SPEED <u>V3s: ---</u> | | | |
| | | | | | POSTING | | | 26. MINIMUM GROUND SNOW LOAD <u>p0: ---</u> | | | |
| | | | | | OPERATING <u>5.85 1.48 3.19 2.14 2.73 2.45 2.68</u> | | | 27. SEISMIC DATA <u>PGA: --- S1: ---</u> | | | |
| | | | | | COMMENTS: | | | PILE DRIVING AND TESTING REQUIREMENTS | | | |
| | | | | | | | | PROJECT NAME: BRIGHTON | | | |
| | | | | | | | | PROJECT NUMBER: ER STP 034-3(25) | | | |
| | | | | | | | | FILE NAME: s11b208pi.xls PLOT DATE: 9/11/2012 | | | |
| | | | | | | | | PROJECT LEADER: K. HIGGINS DRAWN BY: J. SALVATORI | | | |
| | | | | | | | | DESIGNED BY: W. LAMMER CHECKED BY: W. LAMMER | | | |
| | | | | | | | | PRELIMINARY INFORMATION SHEET 1 SHEET 2 OF 36 | | | |
| TRAFFIC DATA | | | | | | | | | | | |
| YEAR | ADT | DHV | % D | % T | ADTT | 20 year ESAL for flexible pavement from 2013 to 2033 : 2053000 | | | | | |
| 2013 | 1600 | 180 | 56 | 12.7 | 250 | 40 year ESAL for flexible pavement from 2013 to 2053 : 4873000 | | | | | |
| 2033 | 1700 | 190 | 56 | 18.2 | 380 | Design Speed : 50 mph | | | | | |