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**ESTIMATED TRAFFIC DATA**

US ROUTE 7 SB 2030 ADT : 5500

**HYDROLOGIC DATA**

*(This section is crossed out with a large X)*

DRAINAGE AREA= \_\_\_\_\_  
 CHARACTER OF TERRAIN= \_\_\_\_\_  
 CHARACTER & TYPE OF STREAM= \_\_\_\_\_  
 NATURE OF STREAMBED= \_\_\_\_\_

Q2.33= \_\_\_\_\_ cms      Q50= \_\_\_\_\_ cms  
 Q10= \_\_\_\_\_ cms      Q100= \_\_\_\_\_ cms  
 Q25= \_\_\_\_\_ cms      Q500= \_\_\_\_\_ cms

DATE OF FLOOD OF RECORD= \_\_\_\_\_  
 WATER SURFACE ELEV. # \_\_\_\_\_ ESTIMATED DISCHARGE # \_\_\_\_\_  
 NATURAL STREAM VELOCITY @ Q50 = \_\_\_\_\_ mps  
 ICE CONDITIONS# \_\_\_\_\_ DEBRIS# \_\_\_\_\_  
 DOES THE STREAM REACH MAXIMUM HIGHWATER ELEVATION RAPIDLY? \_\_\_\_\_  
 IS ORDINARY BASE RAPID? \_\_\_\_\_  
 IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? \_\_\_\_\_  
 IF YES, DESCRIBE. \_\_\_\_\_

WATERSHED STORAGE \_\_\_\_\_ HEADWATERS \_\_\_\_\_ UNIFORM THROUGHOUT WATERSHED \_\_\_\_\_  
 IMMEDIATELY ABOVE SITE \_\_\_\_\_

**EXISTING STRUCTURE**

STRUCTURE TYPE# Two span contin. curved plate girder bridge YEAR BUILT# 1973  
 CLEAR SPAN (NORMAL TO STREAM) # \_\_\_\_\_ N/A  
 VERTICAL CLEARANCE ABOVE STREAMBED# \_\_\_\_\_ N/A  
 WATERWAY OF FULL OPENING# \_\_\_\_\_ N/A  
 DISPOSITION OF STRUCTURE# \_\_\_\_\_ N/A

TYPE OF MATERIAL UNDER SUBSTRUCTURE# \_\_\_\_\_ N/A

WATER SURFACE ELEV. @ Q2.33= \_\_\_\_\_ VELOCITY# \_\_\_\_\_ mps  
 Q10= \_\_\_\_\_ " \_\_\_\_\_ mps  
 Q25= \_\_\_\_\_ " \_\_\_\_\_ mps  
 Q50= \_\_\_\_\_ " \_\_\_\_\_ mps  
 Q100= \_\_\_\_\_ " \_\_\_\_\_ mps

LONG TERM STREAM BED CHANGES# N/A

IS THE ROADWAY OVERTOPPED BELOW THE Q100? N/A FREQUENCY# N/A  
 RELIEF ELEVATION# N/A DISCHARGE OVER ROAD @ Q100# N/A

UPSTREAM STRUCTURE# TOWN# N/A DISTANCE# \_\_\_\_\_  
 HIGHWAY NO.# \_\_\_\_\_ STRUCTURE NO.# \_\_\_\_\_  
 STRUCTURE TYPE# \_\_\_\_\_  
 CLEAR SPAN# \_\_\_\_\_ CLEAR HEIGHT# \_\_\_\_\_  
 YEAR BUILT# \_\_\_\_\_ FULL WATERWAY# \_\_\_\_\_

DOWNSTREAM STRUCTURE# TOWN# N/A DISTANCE# \_\_\_\_\_  
 HIGHWAY NO.# \_\_\_\_\_ STRUCTURE NO.# \_\_\_\_\_  
 STRUCTURE TYPE# \_\_\_\_\_  
 CLEAR SPAN# \_\_\_\_\_ CLEAR HEIGHT# \_\_\_\_\_  
 YEAR BUILT# \_\_\_\_\_ FULL WATERWAY# \_\_\_\_\_

**PROPOSED STRUCTURE**

STRUCTURE TYPE# N/A  
 CLEAR SPAN (NORMAL TO STREAM) # N/A  
 VERTICAL CLEARANCE ABOVE STREAMBED# N/A  
 WATERWAY OF FULL OPENING# N/A

WATER SURFACE ELEV. @ Q2.33= \_\_\_\_\_ VELOCITY# \_\_\_\_\_ mps  
 Q10= \_\_\_\_\_ " \_\_\_\_\_ mps  
 Q25= \_\_\_\_\_ " \_\_\_\_\_ mps  
 Q50= \_\_\_\_\_ " \_\_\_\_\_ mps  
 Q100= \_\_\_\_\_ " \_\_\_\_\_ mps

IS THE ROADWAY OVERTOPPED BELOW THE Q100? N/A FREQUENCY# N/A  
 RELIEF ELEVATION# N/A DISCHARGE OVER ROAD @ Q100# N/A

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE# \_\_\_\_\_  
 VERTICAL CLEARANCE @ Q100 = \_\_\_\_\_ m

SCOUR# Channel = N/A  
 REQUIRED CHANNEL PROTECTION# N/A

**PERMIT INFORMATION**

AVERAGE DAILY FLOW# N/A  
 ORDINARY LOW WATER# \_\_\_\_\_ cms \_\_\_\_\_ ELEV.# \_\_\_\_\_  
 ORDINARY HIGH WATER# \_\_\_\_\_ cms \_\_\_\_\_ ELEV.# \_\_\_\_\_

**TEMPORARY BRIDGE REQUIREMENTS**

STRUCTURE TYPE# N/A  
 CLEAR SPAN (NORMAL TO STREAM) # N/A  
 VERTICAL CLEARANCE ABOVE STREAMBED# N/A  
 WATERWAY OF FULL OPENING# N/A

**DESIGN CRITERIA#**

- DESIGN LIVE LOAD AASHTO MS-18
- DESIGN SPAN 32.900 m + 36.600 m = 69.500 m
- ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL \_\_\_\_\_ ON LEDGE N/A
- ALLOWABLE LOAD FOR PILING \_\_\_\_\_ TYPE \_\_\_\_\_ N/A ESTIMATED LENGTH \_\_\_\_\_ N/A
- STRUCTURAL STEEL AASHTO GRADE AASHTO M 270M, GRADE 250
- REINFORCING STEEL GRADE 420
- CONCRETE, HIGH PERFORMANCE CLASS A  $f_c$  : 30 MPa
- CONCRETE, HIGH PERFORMANCE CLASS B  $f_c$  : N/A
- DESIGN METHOD \_\_\_\_\_

**TRAFFIC MAINTENANCE#**

- IS TRAFFIC TO BE MAINTAINED? YES IF YES, ON EXISTING STRUCTURE NO OR ON TEMPORARY BRIDGE N/A
  - TEMPORARY BRIDGE REQUIREMENTS# ONE OR TWO WAY N/A TRAFFIC CONTROL SIGNALS REQUIRED N/A
- MINIMUM CLEAR SPAN (NORMAL TO STREAM) # N/A VERTICAL CLEARANCE ABOVE STREAMBED# N/A  
 WATERWAY AT FULL OPENING# \_\_\_\_\_ N/A  
 ARE SIDEWALKS REQUIRED? N/A IF SO, ON WHAT SIDE? \_\_\_\_\_ N/A

**LOAD FACTOR LOAD RATING (LFD) (METRIC TONS)**

LOADING LEVELS (LOAD FACTOR)	TRUCK				
	M	MS	3S2	6 AXLE	3A, STR. 4A, STR. 5A, SEMI
INVENTORY A=2.17# B=1.00					
POSTED A=1.55# B=1.40					
OPERATING A=1.30# B=1.67					

STRENGTH RF =  $\frac{0.95 M_N - 1.3 M_{DL}}{A \times M_{LL+1}}$  SERVICEABILITY RF = B  $\frac{0.95 F_y S_{LL+1} - M_{DL} \frac{S_{LL+1}}{S_m} - M_{SOL} \frac{S_{LL+1}}{S_{SM}}}{1.67 M_{LL+1}}$

STRENGTH RF =  $\frac{0.95 M_N - 1.3 M_{DL}}{A \times M_{LL+1}}$  SERVICEABILITY RF = B  $\frac{0.95 F_y S_{LL+1} - M_{DL} \frac{S_{LL+1}}{S_m} - M_{SOL} \frac{S_{LL+1}}{S_{SM}}}{1.67 M_{LL+1}}$

**NOTE:**  
 ALL DIMENSIONS ARE IN MILLIMETERS (mm)  
 UNLESS OTHERWISE NOTED.



**STATE OF VERMONT AGENCY OF TRANSPORTATION**

Town Of **BENNINGTON** Bridge No. **14S**  
 Highway No. \_\_\_\_\_ Log Sta. \_\_\_\_\_  
 Surv. Sta. \_\_\_\_\_  
**US ROUTE 7 SB OVER VT ROUTE 279 WB**  
**PRELIMINARY INFORMATION SHEET**  
 Designed By **M. CHENETTE** Drawn By **J. SOTER**  
 Checked By \_\_\_\_\_ Date \_\_\_\_\_ Bridge Design Supervisor  
**M. CHENETTE** 11/09 **G. BOGUE** Date 11/09  
 PROJECT **BENNINGTON** PROJECT NO. **NH F019-(154)**  
 L.G.C. info \_\_\_\_\_  
 Bridge Sheet No. **BR900** Sheet 294 of 468