



TYPICAL SECTION  
SCALE 1/4" = 1'-0"

EXISTING STRUCTURE

- STRUCTURE TYPE 3 SPAN CONCRETE T-BEAM OVERALL LENGTH 125' INVENTORY RATING
- SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS 28'-0" - 1'-0"
- CLEAR SPAN LENGTH(S) NORMAL TO STREAM 27'-0" - 1'-0"
- WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM) 622 SQ. FT. VERTICAL CLEARANCE ABOVE STREAMBED 12'
- WATER SURFACE ELEVATION @ Q 233 775.2 WATER SURFACE ELEVATION @ Q 100 775.6
- WATER SURFACE ELEVATION AT FLOOD OF RECORD UNKNOW YEAR 1976 ESTIMATED DISCHARGE UNKNOW
- DOES ALL WATER PASS THROUGH EXISTING STRUCTURE? YES IF NOT AT WHAT FREQUENCY AND ELEVATION DOES RELIEF OCCUR? N/A
- ADDITIONAL WATERWAY AREA PROVIDED BY RELIEF N/A
- TYPE OF SUBSTRUCTURE FOUNDATION MATERIAL GRAVEL
- DISPOSITION OF STRUCTURE REMOVE

NEW STRUCTURE

- STRUCTURE GEOMETRY
- STRUCTURE TYPE 3 SPAN CONCRETE T-BEAM OVERALL LENGTH
  - SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS 110'
  - VERTICAL CLEARANCE ABOVE STREAMBED OR ROAD UNDER
  - CLEAR SPAN LENGTH(S) NORMAL TO STREAM 110'
  - WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM) 110' x 110'
  - ARE PROVISIONS TO BE MADE FOR PUBLIC UTILITIES?

HYDRAULIC DATA:

1	Q 233	1150 CFS	WATER ELEVATION	775.2	VELOCITY	6.9 FPS.
2	Q 10	250 CFS	WATER ELEVATION	775.6	VELOCITY	2.6 FPS.
3	Q 50	1700 CFS	WATER ELEVATION	775.8	VELOCITY	3.6 FPS.
4	Q 100	2500 CFS	WATER ELEVATION	775.7	VELOCITY	10.2 FPS.

- DRAINAGE AREA 212 SQ. MI. CHARACTER OF TERRAIN ROLLING TO HILLY
- ARE THERE OBJECTIONS TO A PIER IN THE STREAM? NO
- DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY? YES IS ORDINARY RISE RAPID? YES
- NATURE OF NATURAL STREAMBED GRAVEL AND Boulders
- ESTIMATED SCOUR DEPTH 2'-6" COMMENT ON DRIFT MODERATE OR ADDS
- WILL ALL WATER PASS THROUGH NEW STRUCTURE? YES IF NOT WHAT FREQUENCY AND ELEVATION WILL RELIEF OCCUR? N/A
- ADDITIONAL WATERWAY AREA PROVIDED BY RELIEF N/A
- VERTICAL CLEARANCE ABOVE Q 50 110'
- ALLOWABLE WATER SURFACE ELEVATION 776 LIMITED BY LOW FLOOD SEAT
- IS DESIGN STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? NO IF YES DESCRIBE N/A
- AVERAGE DAILY LOW FLOW 250 CFS DEPTH 1.8' AVERAGE DAILY HIGH FLOW 2000 CFS DEPTH 2.5'
- STREAMBANK OR CHANNEL PROTECTION REQUIRED NO
- DISTANCE TO EXISTING UPSTREAM STRUCTURE 500' SPAN 110' WATERWAY AREA OF FULL OPENING 0
- DISTANCE TO EXISTING DOWNSTREAM STRUCTURE 500' SPAN 110' WATERWAY AREA OF FULL OPENING 0

ALLOWABLE STRESSES

- DESIGN LIVE LOAD RATING 4 E57 ON LEDGE N/A
- ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL 4 E57 TYPE N/A ESTIMATED LENGTH N/A
- ALLOWABLE STRESS FOR STRUCTURAL STEEL ASTM A 572 TENSION 47,000 PSI
- ALLOWABLE STRESS FOR REINFORCING STEEL GRADE 60 TENSION 47,000 PSI COMPRESSION 40,000 PSI
- ALLOWABLE STRESS FOR CONCRETE CLASS A 3,500 PSI CLASS B 3,500 PSI

- TRAFFIC MAINTENANCE
- IS TRAFFIC TO BE MAINTAINED? YES IF YES ON EXISTING STRUCTURE NO OR ON TEMPORARY BRIDGE YES
  - TEMPORARY BRIDGE REQUIREMENTS ONE OR TWO WAYS 2 TRAFFIC CONTROL SIGNALS REQUIRED 2
  - MINIMUM CLEAR SPAN 50' MINIMUM CLEAR HEIGHT 8' MINIMUM WATERWAY AREA
  - ARE SIDEWALKS REQUIRED? NO IF SO ON WHAT SIDE? N/A

\* SEE ROADWAY DESIGN DETAILS.

ADDITIONAL DESIGN CONSIDERATIONS

STRESS LEVELS	LOAD RATING (TONS)					
	H	HS	SS2	6 AXLE	3A STR	4A STR
INVENTORY						
POSTED						
OPERATING						

RECOMMENDED FOR APPROVAL

STRUCTURES ENGINEER DATE

RECOMMENDED FOR APPROVAL

CHIEF OF DESIGN DATE

APPROVED BY

DIRECTOR OF ENGINEERING & CONSTRUCTION DATE

NO.	DESCRIPTION	BY & DATE

STATE OF VERMONT  
AGENCY OF TRANSPORTATION

TOWN OF CHESTER Bridge No. 40

Log Sta. 15+00

HIGHWAY NO. Vt. RTE. 11 Surv. Sta. 15+00

PRELIMINARY INFORMATION

VT. 11 OVER MILLER RIVER WILLIAMS RIVER

Designed by G.V. SPILAK Drawn by D.G. WILLEY

CHESTER  
BRF FO16-1(3)  
R.O.W. SHEET 3 OF 10 SHEETS

MAR 17 1994