



TRANSVERSE SECTION

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

LIST OF SHEETS

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- BRI02 BRIDGE QUANTITY SHEET
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- BRI04 TYPICAL SECTION AND DECK REINFORCING PLAN
- BRI05 FRAMING PLAN AND GIRDER ELEVATION
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LIST OF STANDARD

- SB-R4a-82 9-18-89R
- SB-R4b-82 3-30-88R
- SB-R6-82 12-28-81R

EXISTING STRUCTURE

1. STRUCTURE TYPE J span rolled beam OVERALL LENGTH 252.00' INVENTORY RATING
2. SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS 82'-7" 84'-0" 82'-7"
3. CLEAR SPAN LENGTH(S) NORMAL TO STREAM 55'-4" 55'-2 1/2" 55'-4"
4. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM) 3000 sq. ft. VERTICAL CLEARANCE ABOVE STREAMBED 27'
5. WATER SURFACE ELEVATION @ 2.33 395.0 WATER SURFACE ELEVATION @ 50 395.8
6. WATER SURFACE ELEVATION AT FLOOD OF RECORD 394.5 YEAR 1936 ESTIMATED DISCHARGE
7. DOES ALL WATER PASS THROUGH EXISTING STRUCTURE? NO IF NOT, AT WHAT FREQUENCY AND ELEVATION DOES RELIEF OCCUR? 0.60
8. ADDITIONAL WATERWAY AREA PROVIDED BY RELIEF unlimited
9. TYPE OF SUBSTRUCTURE FOUNDATION MATERIAL timber piles in fine sand/clay
10. DISPOSITION OF STRUCTURE skating beams to remain property of the state

NEW STRUCTURE

- STRUCTURE GEOMETRY:
1. STRUCTURE TYPE J span continuous plate girder OVERALL LENGTH 256.24'
 2. SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS 82'-7" 84'-0" 82'-7"
 3. VERTICAL CLEARANCE ABOVE STREAMBED OR ROAD UNDER
 4. CLEAR SPAN LENGTH(S) NORMAL TO STREAM 55'-4" 55'-2 1/2" 55'-4"
 5. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM)
 6. ARE PROVISIONS TO BE MADE FOR PUBLIC UTILITIES? NO

HYDRAULIC DATA:

1. 0 2.33 <u>2050 cfs</u>	WATER ELEVATION <u>388.0</u>	VELOCITY <u>1.1 fps</u>
0 18 <u>2800 cfs</u>	WATER ELEVATION <u>392.0</u>	VELOCITY <u>1.1 fps</u>
0 25 <u>2850 cfs</u>	WATER ELEVATION <u>393.0</u>	VELOCITY <u>1.1 fps</u>
0 50 <u>3000 cfs</u>	WATER ELEVATION <u>395.8</u>	VELOCITY <u>1.2 fps</u>
0 100 <u>3375 cfs</u>	WATER ELEVATION <u>397.5</u>	VELOCITY <u>1.2 fps</u>

2. DRAINAGE AREA 136.0 sq. mi. CHARACTER OF TERRAIN hilly to mountainous wide floodplain at bridge
3. ARE THERE OBJECTIONS TO A PIER IN THE STREAM? NO
4. DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY? NO IS ORDINARY RISE RAPID? NO
5. NATURE OF NATURAL STREAMBED fine sand and clay DRIFT slight ICE heavy
6. ESTIMATED SCOUR DEPTH 2' COMMENT ON: DRIFT slight ICE heavy
7. WILL ALL WATER PASS THROUGH NEW STRUCTURE? NO IF NOT, WHAT FREQUENCY AND ELEVATION WILL RELIEF OCCUR? 0.60 +/- 395.0
8. VERTICAL CLEARANCE ABOVE WATERWAY BEAMS AT 0.40 +/-
9. ALLOWABLE WATER SURFACE ELEVATION 395.0 LIMITED BY average bottom of low beam elevation
10. IS DESIGN STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? YES IF YES, DESCRIBE Connecticut River Wilder Dam
11. AVERAGE DAILY LOW FLOW 125 cfs DEPTH 1.0 AVERAGE DAILY HIGH FLOW 500 cfs DEPTH
12. STREAMBANK OR CHANNEL PROTECTION REQUIRED stone fill, tyds, etc.
13. DISTANCE TO EXISTING UPSTREAM STRUCTURE 2200' SPAN 219' WATERWAY AREA OF FULL OPENING 0
14. DISTANCE TO EXISTING DOWNSTREAM STRUCTURE 800' SPAN 121' WATERWAY AREA OF FULL OPENING 0

- ALLOWABLE STRESSES:
1. DESIGN LIVE LOAD AASHTO HS 25 ON LEDGE
 2. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL TYPE grade 50 ESTIMATED LENGTH
 3. ALLOWABLE STRESS FOR PILING TYPE grade 50 TENSION 27 ksi
 4. ALLOWABLE STRESS FOR STRUCTURAL STEEL AASHTO M 270 grade 50 TENSION 27 ksi
 5. ALLOWABLE STRESS FOR REINFORCING STEEL GRADE 60 TENSION 24 ksi COMPRESSION 20 ksi
 6. ALLOWABLE STRESS FOR CONCRETE CLASS A 76 TENSION 1400 psi COMPRESSION 1400 psi

- TRAFFIC MAINTENANCE:
1. IS TRAFFIC TO BE MAINTAINED? X YES IF YES, ON EXISTING STRUCTURE NO OR ON TEMPORARY BRIDGE NO
 2. TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY NA TRAFFIC CONTROL SIGNALS REQUIRED NA
 - MINIMUM CLEAR SPAN NA MINIMUM CLEAR HEIGHT NA MINIMUM WATERWAY AREA NA
 - ARE SIDEWALKS REQUIRED? NA IF SO, ON WHAT SIDE? NA
- x traffic to be maintained by a detour via I91 between the Thetford and Norwich Interchanges*

ADDITIONAL DESIGN CONSIDERATIONS

LOAD RATING (TONS)

STRESS LEVELS	TRUCK						
	H	HS	3S2	6 AXLE	3A STR.	4A STR.	BASED
INVENTORY 0.65 Fy	36	45					
POSTED 0.67 Fy	53	64	75		57	59	69
OPERATING 0.75 Fy		76	90	105	68	71	

REVISIONS

NO.	DESCRIPTION	BY & DATE

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of NORWICH Bridge No. 81

Highway No. U. S. ROUTE 5 Log Sta. 345+47
Surv. Sta. 345+47

PRELIMINARY INFORMATION

U. S. ROUTE 5 OVER THE OMPOMPANOOSUC RIVER

Designed By D. J. HOYNE Drawn By K. S. CLAIRMONT

Checked By D. J. HOYNE Date 2/92 Bridge Design Supervisor F. W. Bol/kum Date 4/92

PROJECT NORWICH PROJECT NO. BHS 0113361

L.O.C. Info. ZH1(30,47) 77B069.DGN;1

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