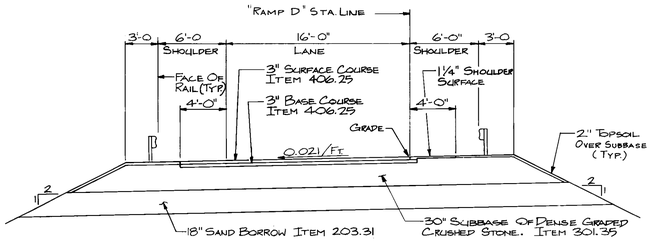
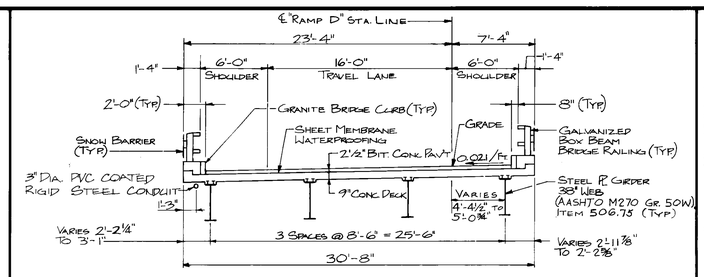


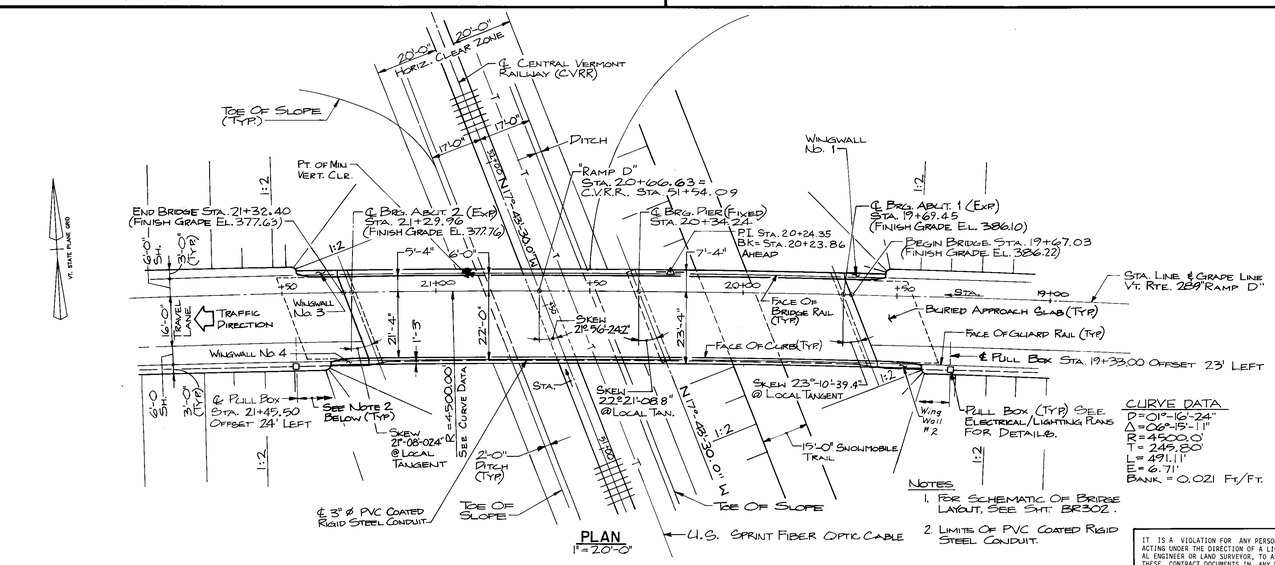
NEW HIGHWAY SECTION — BRIDGE APPROACHES

3/16" = 1'-0"



BRIDGE TYPICAL SECTION

3/16" = 1'-0"



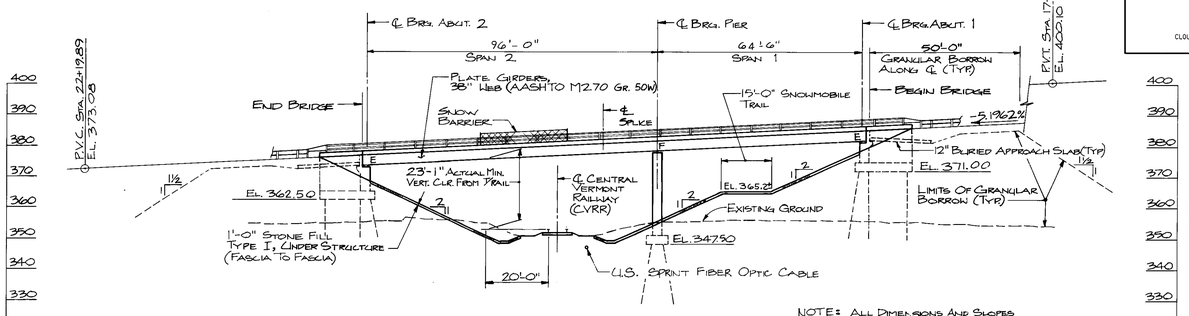
PLAN

1" = 20'-0"

CURVE DATA
D=01°-16'-24"
Δ=06°-19'-11"
R=4500.0'
T=249.80'
L=491.11'
E=6.71'
BANK = 0.021 Ft/Ft.

NOTES

1. FOR SCHEMATIC OF BRIDGE LAYOUT, SEE SHT. BR302.
2. LIMITS OF PVC COATED RIGID STEEL CONDUIT.



ELEVATION

1" = 20'-0"

NOTE: ALL DIMENSIONS AND SLOPES INDICATED IN ELEVATION, EXCEPT SPAN LENGTHS, ARE NORMAL TO C.V.R.R.

CLOUGH, HARBOUR & ASSOCIATES ENGINEERS & PLANNERS

STATE OF VERMONT JOHN M. KRUEGER NO. 5599 REGISTERED PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL John M Krueger 10/12/90 DATE

EXISTING STRUCTURE

1. STRUCTURE TYPE N/A OVERALL LENGTH ____ INVENTORY RATING ____
2. SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS ____
3. CLEAR SPAN LENGTH(S) NORMAL TO STREAM ____
4. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM) ____ VERTICAL CLEARANCE ABOVE STREAMBED ____
5. WATER SURFACE ELEVATION @ Q 2.33 ____ WATER SURFACE ELEVATION @ Q ____
6. WATER SURFACE ELEVATION AT FLOOD OF RECORD ____ YEAR ____ ESTIMATED DISCHARGE ____
7. DOES ALL WATER PASS THROUGH EXISTING STRUCTURE? ____ IF NOT, AT WHAT FREQUENCY AND ELEVATION DOES RELIEF OCCUR? ____
   ADDITIONAL WATERWAY AREA PROVIDED BY RELIEF ____
8. TYPE OF SUBSTRUCTURE FOUNDATION MATERIAL ____
9. DISPOSITION OF STRUCTURE ____

NEW STRUCTURE

STRUCTURE GEOMETRY:

1. STRUCTURE TYPE Two Span Steel Multi-Girder OVERALL LENGTH 162.37
2. SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS 64'-6" (Span 1) 96'-0" (Span 2)
3. VERTICAL CLEARANCE ABOVE STREAMBED OR ROAD UNDER 23'-1" to CVRR
4. CLEAR SPAN LENGTH(S) NORMAL TO STREAM —
5. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM) —
6. ARE PROVISIONS TO BE MADE FOR PUBLIC UTILITIES? N.A.

HYDRAULIC DATA:

1. Q 2.33 N/A WATER ELEVATION ____ VELOCITY ____
   Q 10 ____ WATER ELEVATION ____ VELOCITY ____
   Q 25 ____ WATER ELEVATION ____ VELOCITY ____
   Q 50 ____ WATER ELEVATION ____ VELOCITY ____
   Q 100 ____ WATER ELEVATION ____ VELOCITY ____
2. DRAINAGE AREA ____ CHARACTER OF TERRAIN ____
3. ARE THERE OBJECTIONS TO A PIER IN THE STREAM? ____
4. DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY? ____ IS ORDINARY RISE RAPID? ____
5. NATURE OF NATURAL STREAMBED ____
6. ESTIMATED SCOUR DEPTH ____ COMMENT ON: DRIFT ____ ICE ____
7. WILL ALL WATER PASS THROUGH NEW STRUCTURE? ____ IF NOT, WHAT FREQUENCY AND ELEVATION WILL RELIEF OCCUR? ____
   ADDITIONAL WATERWAY AREA PROVIDED BY RELIEF ____
8. VERTICAL CLEARANCE ABOVE Q ____
9. ALLOWABLE WATER SURFACE ELEVATION ____ LIMITED BY ____
10. IS DESIGN STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? ____ IF YES, DESCRIBE ____
11. AVERAGE DAILY LOW FLOW ____ DEPTH ____ AVERAGE DAILY HIGH FLOW ____ DEPTH ____
12. STREAMBANK OR CHANNEL PROTECTION REQUIRED ____
13. DISTANCE TO EXISTING UPSTREAM STRUCTURE ____ SPAN ____ WATERWAY AREA OF FULL OPENING ____ Q ____
14. DISTANCE TO EXISTING DOWNSTREAM STRUCTURE ____ SPAN ____ WATERWAY AREA OF FULL OPENING ____ Q ____

ALLOWABLE STRESSES:

1. DESIGN LIVE LOAD AASHTO HS-25 + 44
2. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL ____ ON LEDGE ____
3. ALLOWABLE LOAD FOR PILING 70 Tons TYPE HP 12 x 74 ESTIMATED LENGTH Beg = 60' Pier = 35' End = 95'
4. ALLOWABLE STRESS FOR STRUCTURAL STEEL AASHTO M270 GR 50W TENSION 24,000 PSI COMPRESSION 20,000 PSI
5. ALLOWABLE STRESS FOR REINFORCING STEEL GRADE 60 TENSION 27,000 PSI
6. ALLOWABLE STRESS FOR CONCRETE CLASS A f'c 3600 PSI * f'c 1400 PSI
   CLASS B f'c 2500 PSI f'c 1400 PSI

* See General Note 15 Dwg. BR302

TRAFFIC MAINTENANCE:

1. IS TRAFFIC TO BE MAINTAINED? N/A IF YES, ON EXISTING STRUCTURE ____ OR ON TEMPORARY BRIDGE ____
2. TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY ____ TRAFFIC CONTROL SIGNALS REQUIRED ____
   MINIMUM CLEAR SPAN ____ MINIMUM CLEAR HEIGHT ____ MINIMUM WATERWAY AREA ____
   ARE SIDEWALKS REQUIRED? ____ IF SO, ON WHAT SIDE? ____

ADDITIONAL DESIGN CONSIDERATIONS

VAOT Standard Sheets:

SB-R4A-82 9-18-89R
SB-R4B-82 3-30-88R
E-181 9-10-87

* - Lane Loading Controls

LOAD RATING (TONS)

STRESS LEVELS	TRUCK H	HS	3S2	6 AXLE	3A. STR	4A. STR	5A. SEMI
INVENTORY 0.55 Fy = 27 KSI	26 *	46 *	X	X	X	X	X
POSTED 0.67 Fy = 33.5 KSI	43 *	76 *	88	X	71	72	82
OPERATING 0.75 Fy = 37.5 KSI	X	91	106	122	84	86	X

BUILT AS DESIGNED 5/11/94 JB

INDEX OF DRAWINGS

RECOMMENDED FOR APPROVAL ____ STRUCTURES ENGINEER DATE

RECOMMENDED FOR APPROVAL ____ CHIEF OF DESIGN DATE

APPROVED BY ____ DIRECTOR OF ENGINEERING & CONSTRUCTION DATE

REVISIONS

NO.	DESCRIPTION	BY & DATE

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TOWN OF ESSEX — Bridge No. 13 — Log Sta.

HIGHWAY NO. VT. RT. 289 — Surv. Sta. RAMP 15+00

VT. RT. 289 "RAMP D" OVER CVRR

PLAN, ELEVATION AND SECTIONS

Designed by YS/KRH — Drawn by DJA

Checked by RJS date 10/12/90 — Bridge Design Supervisor MWO date 10/12/90

PROJECT WILLISTON-COLCHESTER — PROJECT NO. PB 033-1(2)

Bridge Sheet No. BR301 — Sheet 166 of 400

BRIDGE 44.13 (4/15)

BR-2