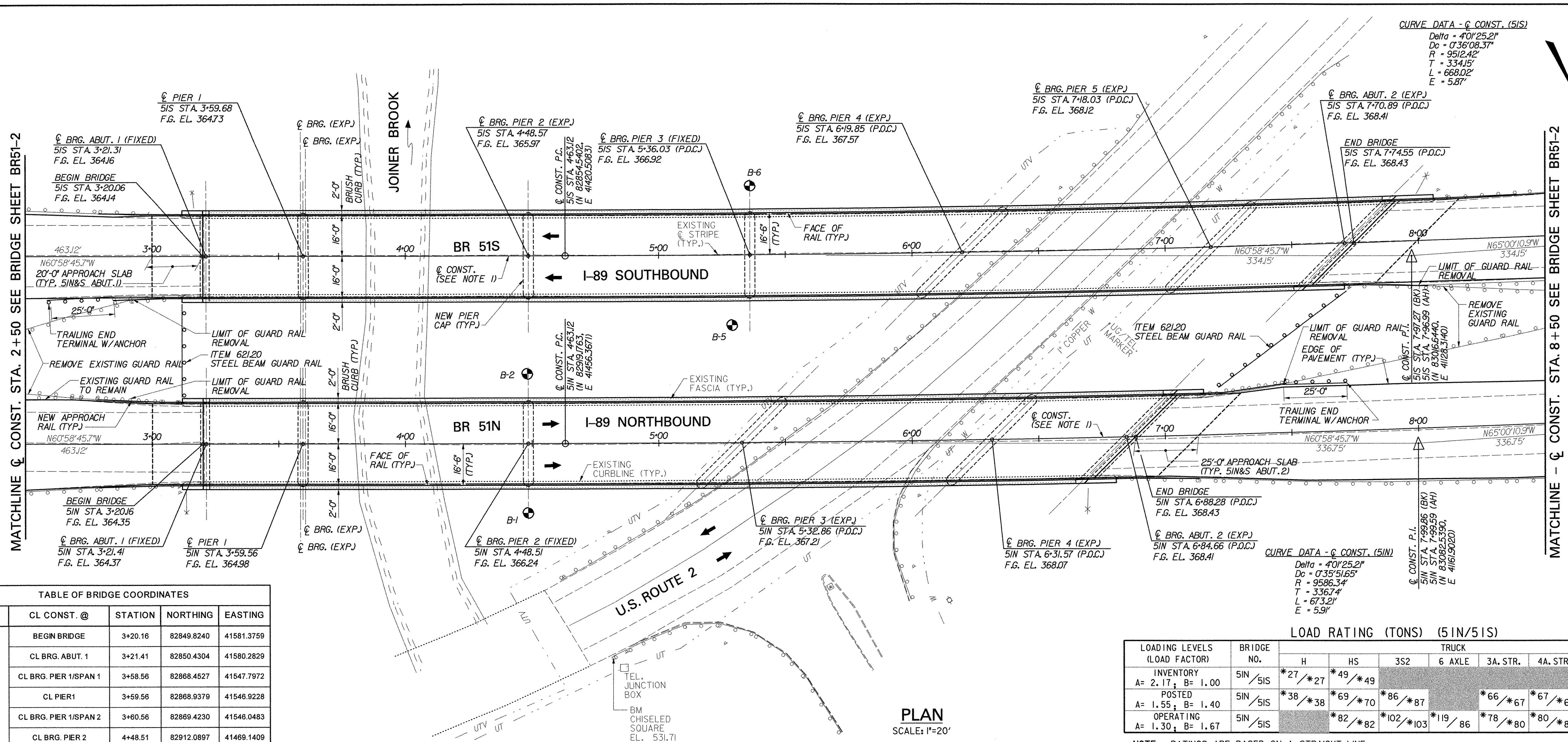


CURVE DATA - C CONST. (5IS)
 Delta = 40°25.2"
 Dc = 0°36'08.37"
 R = 9512.42'
 T = 334.15'
 L = 668.02'
 E = 5.87'



PLAN
 SCALE: 1"=20'

LOAD RATING (TONS) (5IN/5IS)

LOADING LEVELS (LOAD FACTOR)	BRIDGE NO.	TRUCK						
		H	HS	3S2	6 AXLE	3A. STR.	4A. STR.	5A. SEMI
INVENTORY A = 2.17, B = 1.00	5IN/5IS	*27/*27	*49/*49					
POSTED A = 1.55, B = 1.40	5IN/5IS	*38/*38	*69/*70	*86/*87		*66/*67	*67/*69	*79/*80
OPERATING A = 1.30, B = 1.67	5IN/5IS		*82/*82	*102/*103	*119/86	*78/*80	*80/*81	

NOTE: RATINGS ARE BASED ON A STRAIGHT-LINE GIRDER ANALYSIS, DIVIDED BY 1.05 TO ACCOUNT FOR THE EFFECTS OF CURVATURE.

$$\text{STRENGTH RF} = \frac{\phi M_n - 1.3 M_{DL}}{A X M_{LL+1}}$$

$$\text{*SERVICEABILITY RF} = B \left[\frac{0.95 F_y S_{LL+1} - M_{DL} \frac{S_{LL+1}}{S_{DL}} - M_{SD} \frac{S_{LL+1}}{S_{SD}}}{167 M_{LL+1}} \right]$$

BRIDGE	CL CONST. @	STATION	NORTHING	EASTING
51N	BEGIN BRIDGE	3+20.16	82849.8240	41581.3759
	CL BRG. ABUT. 1	3+21.41	82850.4304	41580.2829
	CL BRG. PIER 1/SPAN 1	3+58.56	82868.4527	41547.7972
	CL PIER 1	3+59.56	82868.9379	41546.9228
	CL BRG. PIER 1/SPAN 2	3+60.56	82869.4230	41546.0483
	CL BRG. PIER 2	4+48.51	82912.0897	41469.1409
	CL BRG. PIER 3	5+32.86	82952.7878	41395.2589
	CL BRG. PIER 4	6+31.57	82999.5982	41308.3546
5IS	CL BRG. ABUT. 2	6+84.66	83024.4039	41261.4161
	END BRIDGE	6+88.28	83026.0858	41258.2105
	BEGIN BRIDGE	3+20.06	82785.1394	41545.6046
	CL BRG. ABUT. 1	3+21.31	82785.7458	41544.5115
	CL BRG. PIER 1/SPAN 1	3+58.68	82803.8749	41511.8335
	CL PIER 1	3+59.68	82804.3600	41510.9590
	CL BRG. PIER 1/SPAN 2	3+60.68	82804.8451	41510.0846
	CL BRG. PIER 2	4+48.57	82847.4827	41433.2296
	CL BRG. PIER 3	5+36.03	82889.6670	41356.6157
	CL BRG. PIER 4	6+19.85	82929.4423	41282.8345
CL BRG. PIER 5	7+18.03	82975.2030	41195.9715	
CL BRG. ABUT. 2	7+70.89	82999.4686	41149.0102	
END BRIDGE	7+74.55	83001.1390	41145.7537	

BR 51N&S SPECIFIC CONSTRUCTION NOTES:

- THE PROPOSED CONSTRUCTION CENTERLINE FOR EACH BRIDGE WAS ESTABLISHED BASED ON BEST FIT BETWEEN EXISTING CURB LINES. IT DOES NOT EXACTLY MATCH THE ORIGINAL CONSTRUCTION CENTERLINE.
- FOR CONTROL POINT LOCATION MAP, SEE GENERAL PLAN (5IN&S) (2 OF 2), BRIDGE SHEET BR51-2.
- FOR BORING LOGS, SEE BRIDGE SHEETS BR51-3 AND BR51-4.
- REPLACE SUPERSTRUCTURE STEEL, BEARINGS, DECK SLABS, APPROACH SLABS, BRIDGE RAIL AND APPROACH RAIL.
- NEW SCUPPERS ARE REQUIRED ON THESE BRIDGES. FOR LOCATION OF NEW SCUPPERS, SEE THE FRAMING PLAN FOR EACH BRIDGE.
- REPLACE PIER NO. 2 AT BRIDGE 5IN AND PIER NO. 3 AT BRIDGE 5IS WITH NEW WALL PIERS. REPLACE PIER CAPS ON ALL OTHER PIERS. REPAIR PIER COLUMNS AND APPLY FIBER REINFORCED POLYMER WRAP TO COLUMNS AS INDICATED ON THE PLANS.
- CONSTRUCT NEW BACKWALLS AT EXPANSION ABUTMENTS AND NEW CURTAINWALLS AT FIXED ABUTMENTS. REBUILD ABUTMENT BRIDGE SEATS AND MODIFY WINGWALLS AS SHOWN IN THE PLANS.

LEGEND

⊙ BORING LOCATION



TVA TVGA ENGINEERING, SURVEYING, P. C.

STATE OF VERMONT AGENCY OF TRANSPORTATION

Town Of **BOLTON** Bridge No. **51N&S**

Highway No. **I-89** Log Sta.

Surv. Sta.

I-89 OVER U.S. ROUTE 2 AND JOINER BROOK

GENERAL PLAN (5IN&S) (1 OF 2)

Designed By **P.W. SZUSTAK** Drawn By **R.A. BOTZENHART**

Checked By **J.P. HALSTEAD** Date **10/99** Bridge Design Supervisor **J.P. HALSTEAD** Date **10/99**

PROJECT **BOLTON** PROJECT NO. **IM-089-2(29)**

TVGA CAD Drawing No. **5igpl** Date **06/04**

Bridge Sheet No. **BR51-1** Sheet **99** of **307**