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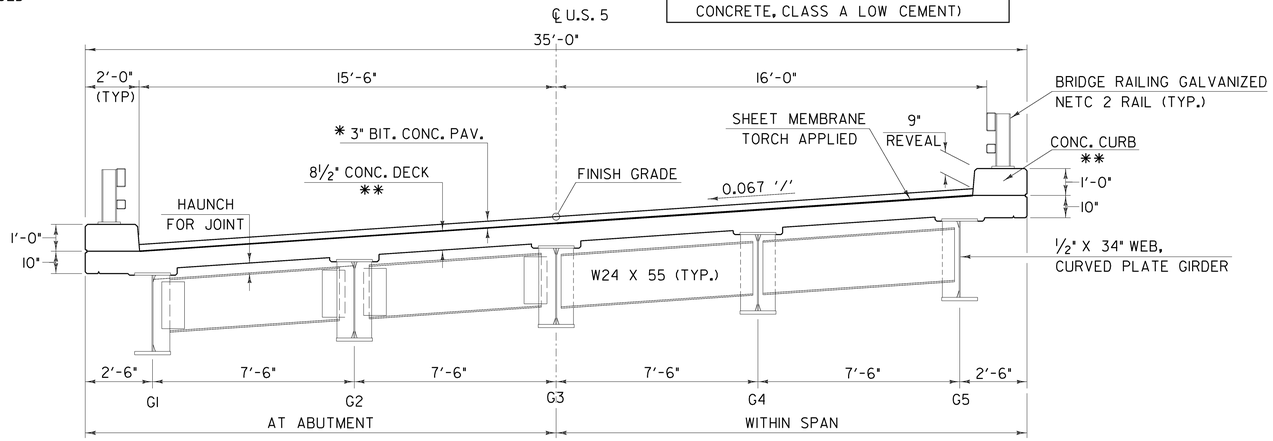
* TWO 1½" LIFTS MEDIUM DUTY BIT. CONC. PAVEMENT (TYPE IV)

** SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT)



PROPOSED BRIDGE TYPICAL SECTION ALL HORIZONTAL DIMENSIONS RADIAL

SCALE: ⅜" = 1'-0"

EXISTING STRUCTURE

1. STRUCTURE TYPE FOUR SIMPLE SPAN STEEL BEAM OVERALL LENGTH 331 FEET INVENTORY RATING HS-20
2. SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS SPAN 1 (59.82 FEET), SPAN 2 (88.56 FEET), SPAN 3 (97.17 FEET), SPAN 4 (79.24 FEET)
3. CLEAR SPAN LENGTH(S) NORMAL TO STREAM N/A
4. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM N/A VERTICAL CLEARANCE ABOVE STREAMBED
5. WATER SURFACE ELEVATION @ Q 2.33 N/A WATER SURFACE ELEVATION @ Q N/A
6. WATER SURFACE ELEVATION AT FLOOD OF RECORD N/A YEAR N/A ESTIMATED DISCHARGE N/A
7. DOES ALL WATER PASS THROUGH EXISTING STRUCTURE? N/A IF NOT, AT WHAT FREQUENCY AND ELEVATION DOES RELIEF OCCUR? N/A
   ADDITIONAL WATERWAY AREA PROVIDED BY RELIEF N/A
8. TYPE OF SUBSTRUCTURE FOUNDATION MATERIAL N/A
9. DISPOSITION OF STRUCTURE REMOVE ENTIRE SUPERSTRUCTURE INCLUDING PIER CAPS AND REPLACE. • SEE NOTE BELOW.

NEW STRUCTURE

STRUCTURE GEOMETRY:
1. STRUCTURE TYPE 4 SPAN CONTINUOUS STEEL CURVED PLATE GIRDER OVERALL LENGTH 335.24
2. SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS 60.65 - 90.28 - 98.61 - 78.88
3. VERTICAL CLEARANCE ABOVE STREAMBED OR ROAD UNDER MINIMUM 16'-6"
4. CLEAR SPAN LENGTH(S) NORMAL TO STREAM N/A
5. WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM N/A
6. ARE PROVISIONS TO BE MADE FOR PUBLIC UTILITIES? YES

ALLOWABLE STRESSES:
1. DESIGN LIVE LOAD AASHTO HS-25
2. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL N/A ON LEDGE N/A
3. ALLOWABLE LOAD FOR PILING N/A TYPE N/A ESTIMATED LENGTH N/A
4. ALLOWABLE STRESS FOR STRUCTURAL STEEL AASHTO M 270M/M 270 TENSION
5. ALLOWABLE STRESS FOR REINFORCING STEEL GRADE 60 TENSION 60,000 PSI COMPRESSION
6. ALLOWABLE STRESS FOR CONCRETE HPC-A (LOW CEMENT) f_c 4000 PSI f_c 1600 PSI
   HPC-B f_c 3500 PSI f_c 1400 PSI

TRAFFIC MAINTENANCE:
1. IS TRAFFIC TO BE MAINTAINED? YES IF YES, ON EXISTING STRUCTURE NO OR ON TEMPORARY BRIDGE YES
2. TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY TWO WAY TRAFFIC CONTROL SIGNALS REQUIRED NO
   MINIMUM CLEAR SPAN SEE PLAN MINIMUM CLEAR HEIGHT 16'-3" OVER INTERSTATE MINIMUM WATERWAY AREA N/A
   ARE SIDEWALKS REQUIRED? NO IF SO, ON WHAT SIDE?

CONSTRUCTION SCOPE:

THE MAIN ELEMENTS OF CONSTRUCTION FOR THIS PROJECT INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:

- ERECTION OF CONSTRUCTION SIGNING FOR BOTH US5 & I-91
- EROSION PREVENTION AND SEDIMENT CONTROL
- CONSTRUCTION OF A TWO WAY TEMPORARY BRIDGE
- PARTIAL REMOVAL OF THE EXISTING BRIDGE, TO INCLUDE THE ENTIRE SUPERSTRUCTURE; THE ABUTMENTS DOWN TO THE EXISTING FOOTINGS; ENTIRE APPROACH SLABS AND THE PIER CAPS.
- CONSTRUCTION OF NECESSARY SUBSTRUCTURES AND COMPLETE NEW REPLACEMENT OF THE SUPERSTRUCTURE WITH A FOUR SPAN STEEL CURVED GIRDER.
- CONSTRUCTION OF ROADWAY APPROACHES & RELATED FEATURES
- REMOVAL OF THE TEMPORARY BRIDGE, APPROACHES AND TRAFFIC CONTROL SIGNS
- PROJECT CLEAN UP AND COMPLETION

NOTE:
TEMPORARY BRIDGE OPENED TO TRAFFIC MAY THROUGH OCTOBER.
NO WINTER TRAFFIC ALLOWED.

ADDITIONAL DESIGN CONSIDERATIONS

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2004	1600	230	51	5	110
2024	2100	280	57	7	210

18 Kip ESAL for flexible pavement from 2004 to 2024: 910,000
18 Kip ESAL for flexible pavement from 2004 to 2044: 2,322,000
Design speed: 45 MPH

LOAD RATING (TONS)

STRESS LEVELS	TRUCK H	HS	352	6 AXLE	3A. STR.	4A. STR.	5A. SEMI
INVENTORY 0.55 Fy=	65	45					
POSTED 0.67 Fy=	108	75	155		122	125	147
OPERATING 0.75 Fy=		63	130	129			

REVISIONS

NO.	DESCRIPTION	BY & DATE

Stantec

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of PUTNEY	Bridge No. 19A
Highway No. U.S. ROUTE 5	Log Sta.
	Surv. Sta.

PRELIMINARY INFORMATION AND INDEX

Designed By	Drawn By
Checked By Date: T. KNIGHT 7/09	Bridge Design Supervisor: G. BOGUE Date 7/09
PROJECT: PUTNEY	PROJECT NO.: IM 091-1(31)
CAD Drawing Name: ...\Plot Files\02 z93 Sheet.dgn	Date: 10/19/2009
Bridge Sheet No.	Sheet 2 of 75