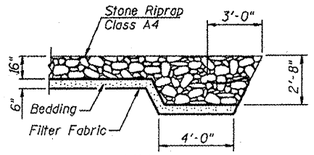
VARIOUS ROUTES
D9 BRIDGE PAINTING FY 09-1
VARIOUS COUNTIES
CONTRACT 78093
FOR INFORMATION ONLY
SHEET 14 OF 31

B.M. #403 Chiseled Square on the Northeast Wingwall of Structure 041-0027, 17.5' Lt of Sta. 130+90, Elev. 455.235

Existing Structure: S.N. 041-0027, Built in 1957 as SBI-15 Section 15-2B at Station 129+81. The existing structure is a Three Span Non-Composite Continuous Wide Flange Beam Bridge supporting a R.C. Slab on concrete pile bent piers and abutments. Overall length is 168'-0" back to back of abutments. Bridge width is 34'-5" out to out of deck with two 14'-0" traffic lanes measured face to face curbs. The contractor will remove and replace the existing concrete deck, widen substructure, add new beam lines and complete other work as described in the plans.

Traffic shall be maintained at all times utilizing Stage Construction.

No Salvage.



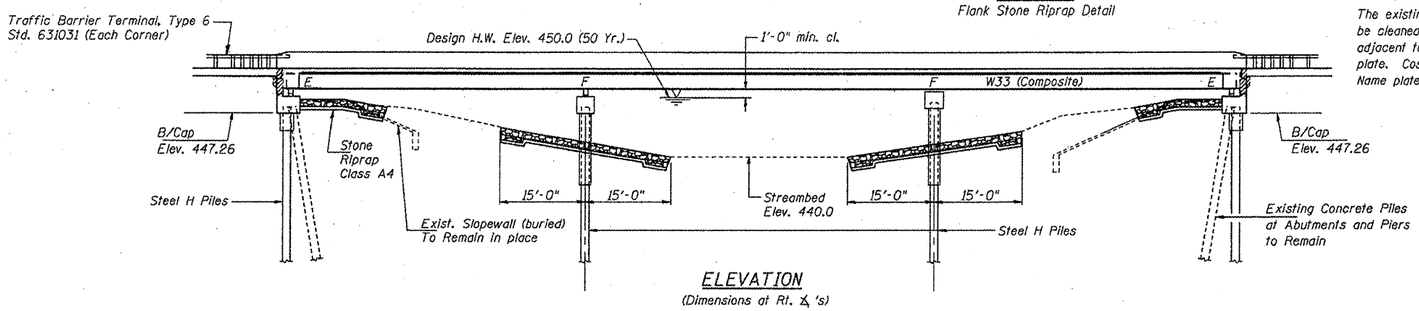
SEC A-A
Flank Stone Riprap Detail

STATION 129+81
REBUILT 200 BY
STATE OF ILLINOIS
F.A.P. RT. 821 SEC. (15-2)BR
F.A. PROJ.
LOADING HS20
STR. NO. 041-0027

LETTERING FOR NAME PLATES

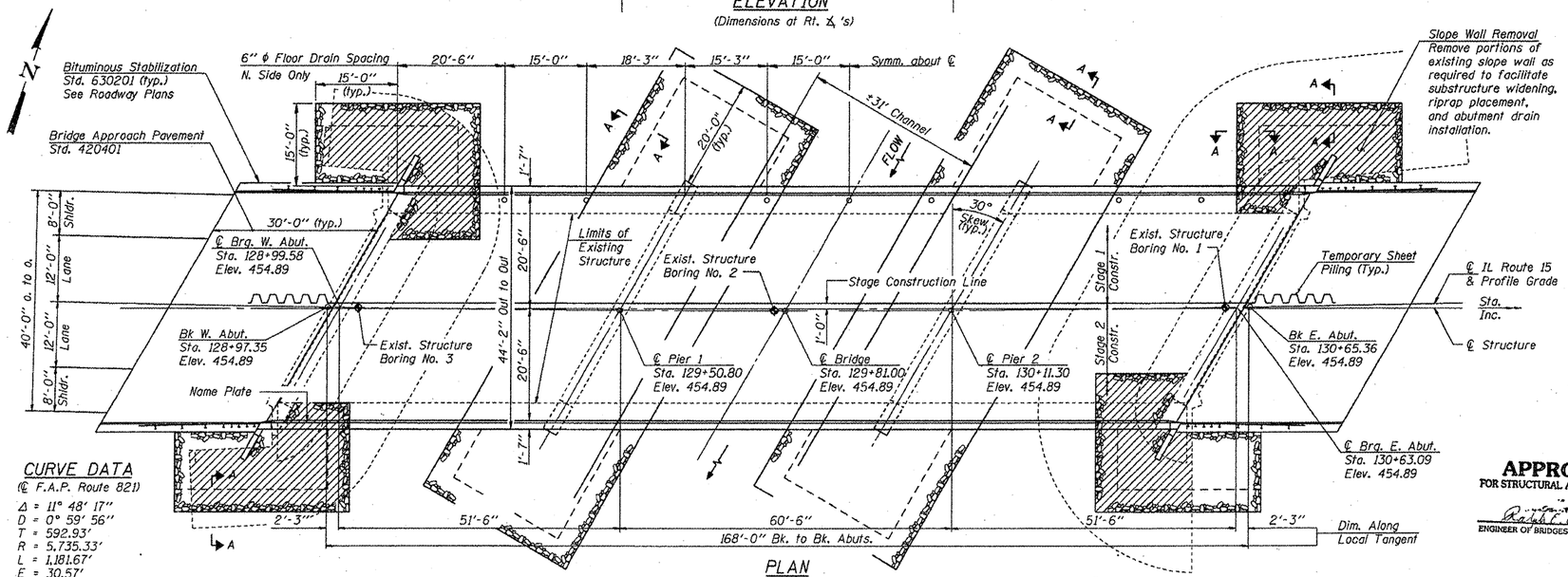
See Std. 515001

The existing name plate shall be cleaned and relocated adjacent to the new name plate. Cost included with Name plates.



ELEVATION

(Dimensions at Rt. ℄'s)



PLAN

CURVE DATA

(℄ F.A.P. Route 821)

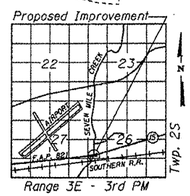
Δ = 11° 48' 17"
D = 0° 59' 56"
T = 592.93'
R = 5,735.33'
L = 1,181.67'
E = 30.57'
P.C. Sta. = 120+72.65
P.I. Sta. = 126+65.59
P.T. Sta. = 132+54.32
S.E. = 0.02"/Ft.

DESIGNED	Ruben V. Boehler
CHECKED	Tim S. Howard
DRAWN	TSH / RVB
CHECKED	Michael D. Cummins

WATERWAY INFORMATION

Drainage Area = 21.10 Sq. Mi. Low Grade Elevation: 454.7 ft. @ Sta. 128+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	2090	651	651	449.5	0.9	0.9	450.4	450.4
Design	50	3030	714	714	450.0	1.5	1.5	451.5	451.5
Base	100	3440	741	741	450.2	1.7	1.7	451.9	451.9
Overtopping									
Max. Calc.	500	4355	794	794	450.6	2.4	2.4	453.0	453.0



LOCATION SKETCH

MICHAEL D. CUMMINS
081-004822
LICENSED STRUCTURAL ENGINEER
OF
ILLINOIS
SPRIN
IL

BRIDGE NO. 2

(Expires

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

ENGINEER OF BRIDGES AND STRUCTURES

INDEX OF SHEETS

DESIGN SPECIFICATIONS

2002 AASHTO
1995 Seismic Retrofitting Manual for Highway Bridges FHWA-RD-94-052

LOADING HS20-44

Allow 25#/Sq. Ft. for future wearing surface

SEISMIC DATA

Seismic Performance Category (SPC) = B
Bedrock Acceleration Coefficient (A) = 0.098g
Site Coefficient (S) = 1.2

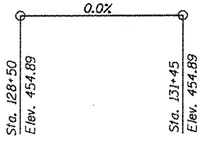
DESIGN STRESSES

New Construction

f'_c = 3,500 psi
f_y = 36,000 psi (Structural Steel)
f_y = 60,000 psi (Reinforcement)

Existing Structure

f'_c = 1,400 psi (Superstructure)
f'_c = 800 psi (Substructure)
f_s = 20,000 psi (Reinforcement)
f_s = 18,000 psi (Structural Steel)



PROFILE GRADE

(along ℄ F.A.P. Rte. 821)

GENERAL PLAN & ELEVATION

IL ROUTE 15 OVER SEVEN MILE CREEK
F.A.P. ROUTE 821 SECTION (15-2)BR
JEFFERSON COUNTY
STA. 129+81.00
S.N. 041-0027

CUMMINS ENGINEERING CORPORATION

JOB #: 2175
FILE: 2175gpe
DATE: 8/17/06