

Benchmark: 4598-02 Top of Hubgard N.W. corner of Bridge S.N. 092-0064 Elev. 658.30

Existing structure: Structure number 092-0064 was built in 1932 as a FA Route 119, Section 115B-1 at Sta. 286+46.00. The superstructure was replaced and substructure was widened in 1970 as Section 115B-1. The existing structure is 46'-6" out-to-out of deck, 16'-5 1/4" back-to-back of abutments. It has 2" precast concrete deck beams with spill thru counterfort abutments on timber piling and solid piers on pile supported footings. The existing structure shall be removed and replaced using staged construction. No salvage.

F.A.P. DIST.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	115B-1 DBR	VERMILION	93	48
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 90843				

SHEET NO. 1
SHEETS 20

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A4	Sq Yd		1,635	1,635
Filter Fabric	Sq Yd		1,635	1,635
Removal of Existing Structures No. 2	Each	1		1
Structure Excavation	Sq Yd		344	344
Bridge Deck Grooving	Sq Yd	717		717
Floor Drains	Each	20		20
Neoprene Expansion Joint 2"	Foot	106.0		106.0
Protective Coat	Sq Yd	943		943
Concrete Structures	Cu Yd		236.5	236.5
Concrete Superstructure	Cu Yd	256.0		256.0
Elastomeric Bearing Assembly, Type 1	Each	12		12
Furnishing & Erecting Precast Prestressed Concrete I-Beams 42"	Foot	1,118		1,118
Porous Granular Embankment	Cu Yd		197	197
Reinforcement Bars, Epoxy Coated	Pound	54,270	18,940	73,210
Furnishing Steel Piles HP 12x53	Foot		1,329	1,329
Furnishing Steel Piles HP 12x63	Foot		1,446	1,446
Driving Steel Piles	Foot		2,775	2,775
Test Pile Steel HP 12x53	Each		1	1
Test Pile Steel HP 12x63	Each		1	1
Bridge Seat Sealer	Sq Ft		371	371
Name Plates	Each		1	1
Bar Splicers	Each	536	198	734
* Underwater Structure Excavation Protection Location 3	Each		1	1
Temporary Soil Retention System	Sq Ft		742	742

* For pier 1

GENERAL NOTES

- Reinforcement Bars shall conform to the requirements of AASHTO M 31 or M 322 Grade 60.
- Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
- The Contractor shall drive two steel HP test piles in a permanent location - one at the West Abutment and one at Pier 1 as directed by the Engineer before ordering the remainder of the piles.
- Bridge Seat Sealer shall be applied to the seat area of the abutments.
- All construction joints shall be bonded.
- The concrete for bridge floors finished according to Article 503.17 of the Standard Specifications, shall be placed and compacted parallel to the skew in uniform increments along centerline of bridge. The finishing machine, when required, shall be set parallel to the skew for striking off and screeding the concrete.

INDEX OF SHEETS

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- 10 Neoprene Expansion Joint 2"
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- 14 Abutment Details
- 15 Piers
- 16 Bar Splicer Assembly Details
- 17 Anchor Bolt Details
- 18-20 Boring Logs

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

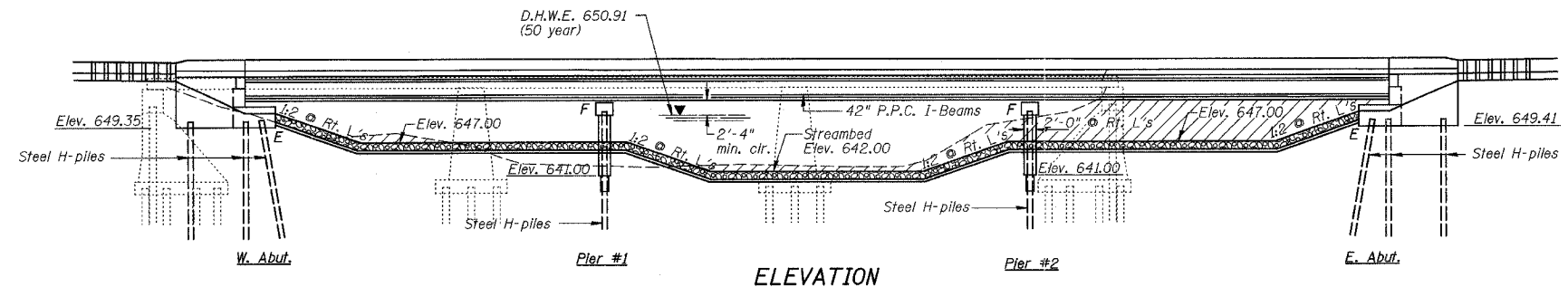
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



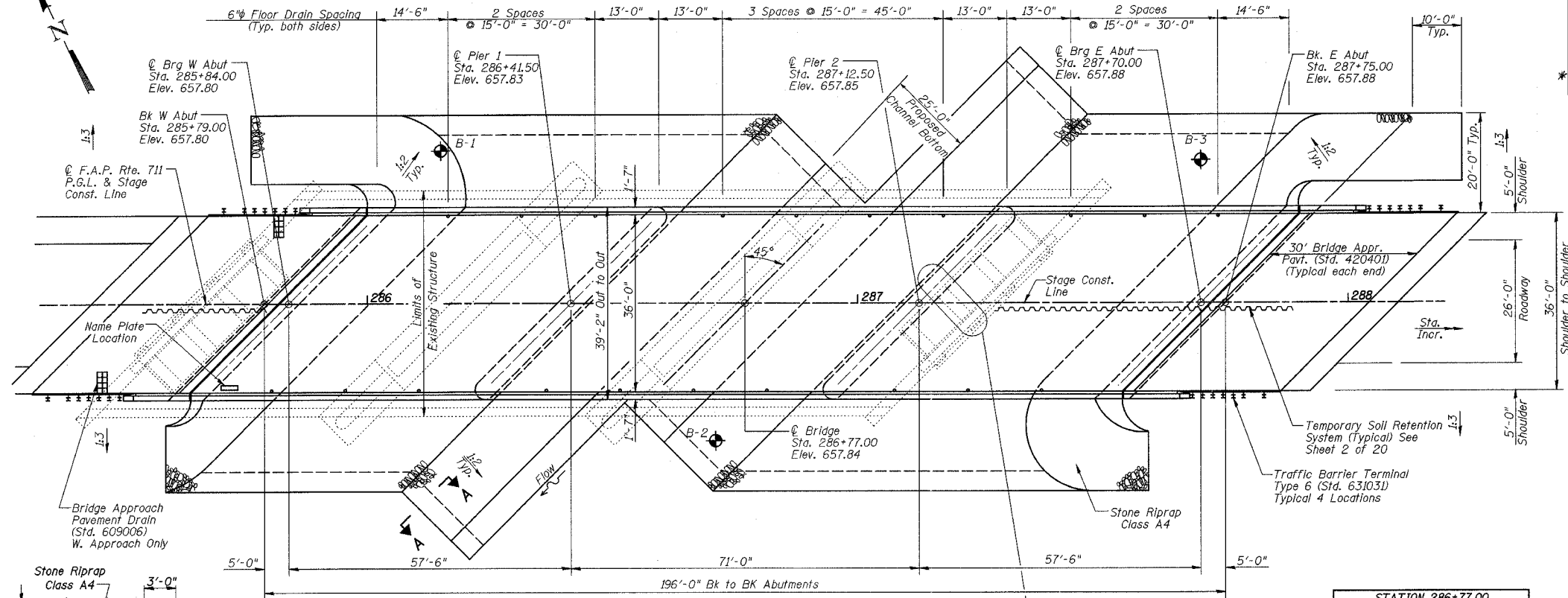
Sheila Kinginger
Sheila J. Kinginger, S.E.
Structural Engineer License No. 081-005283
Expiration Date: 11/30/2004
Date: 6/14/04

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN
U.S. ROUTE 136 OVER
BEAN CREEK
F.A.P. ROUTE 711
SECTION 115(BY)-DBR
VERMILION COUNTY
STA. 286+77.00
STRUCTURE NUMBER 092-0201

DATE: OCT. 2003 DRAWN BY: MLO/NJV CHECKED BY: PBB/SJK



ELEVATION

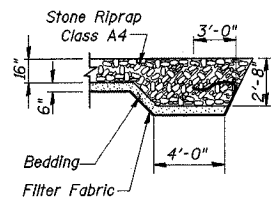


PLAN

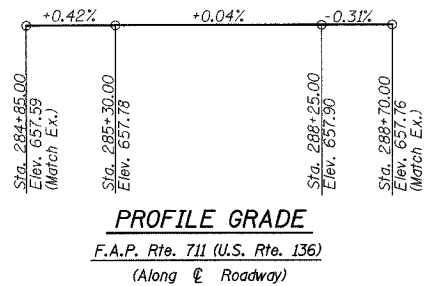
STATION 286+77.00
BUILT 20__ BY
STATE OF ILLINOIS
F.A.P. RTE. 711 SECTION 115(BY)-DBR
LOADING HS20
STR. NO. 092-0201

NAME PLATE
See Std. 515001

Note: For stability of existing abutment cap, portion of this counterfort North of removal line shall be removed during stage II removal.



SECTION A-A

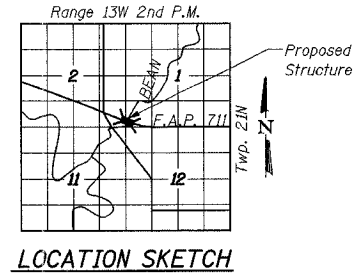


PROFILE GRADE
F.A.P. Rte. 711 (U.S. Rte. 136)
(Along & Roadway)

WATERWAY INFORMATION

Drainage Area = 17.33 sq.mil. Low Grade Elev. = 657.51 @ Sta. 284+00.00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E. Ft.	Head-Ft.		Headwater Elev. - Ft.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	1369.00	525.00	612.50	650.91	0.04	0.04	650.95	650.95
Base	100	1536.00	559.40	657.50	651.27	0.08	0.06	651.35	651.33
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	1920.00	639.10	758.10	652.07	0.10	0.08	652.17	652.15



LOCATION SKETCH

DESIGN SPECIFICATIONS
2002 AASHTO

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.047g
Site Coefficient (S) = 1.5

LOADING HS20-44
Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS
f_c = 3,500 psi
f_y = 60,000 psi (Reinf.)

PRECAST PRESTRESSED UNITS
f_c = 6,000 psi
f_c = 5,000 psi
f_s = 270,000 psi (1/2" ϕ Low Relax. strands)
f_{si} = 201,960 psi (1/2" ϕ Low Relax. strands)