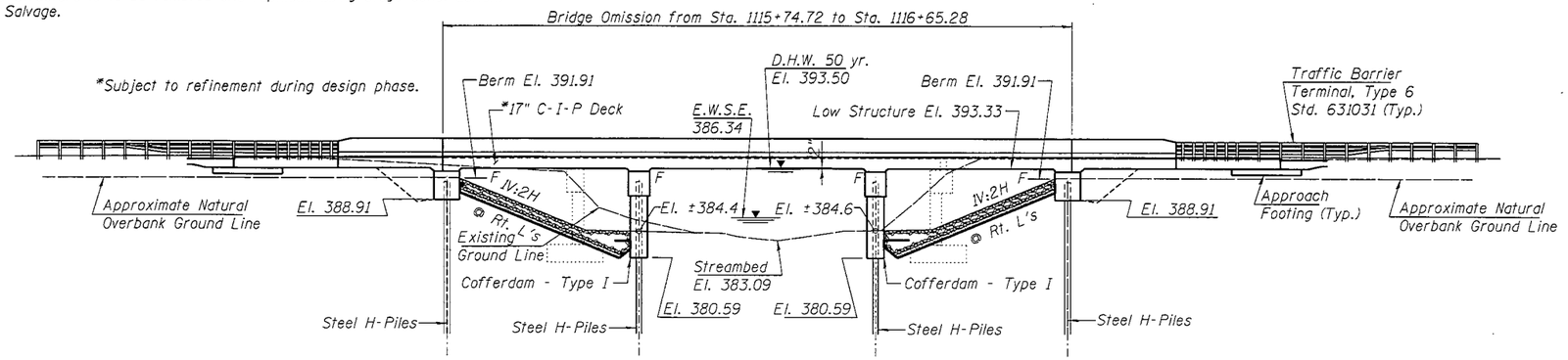
B.M.#1020: Chiseled "□" on top of N.W. Wingwall of Existing Structure No. 083-0026. Elev. 392.865

Existing Structure (No. 083-0026):

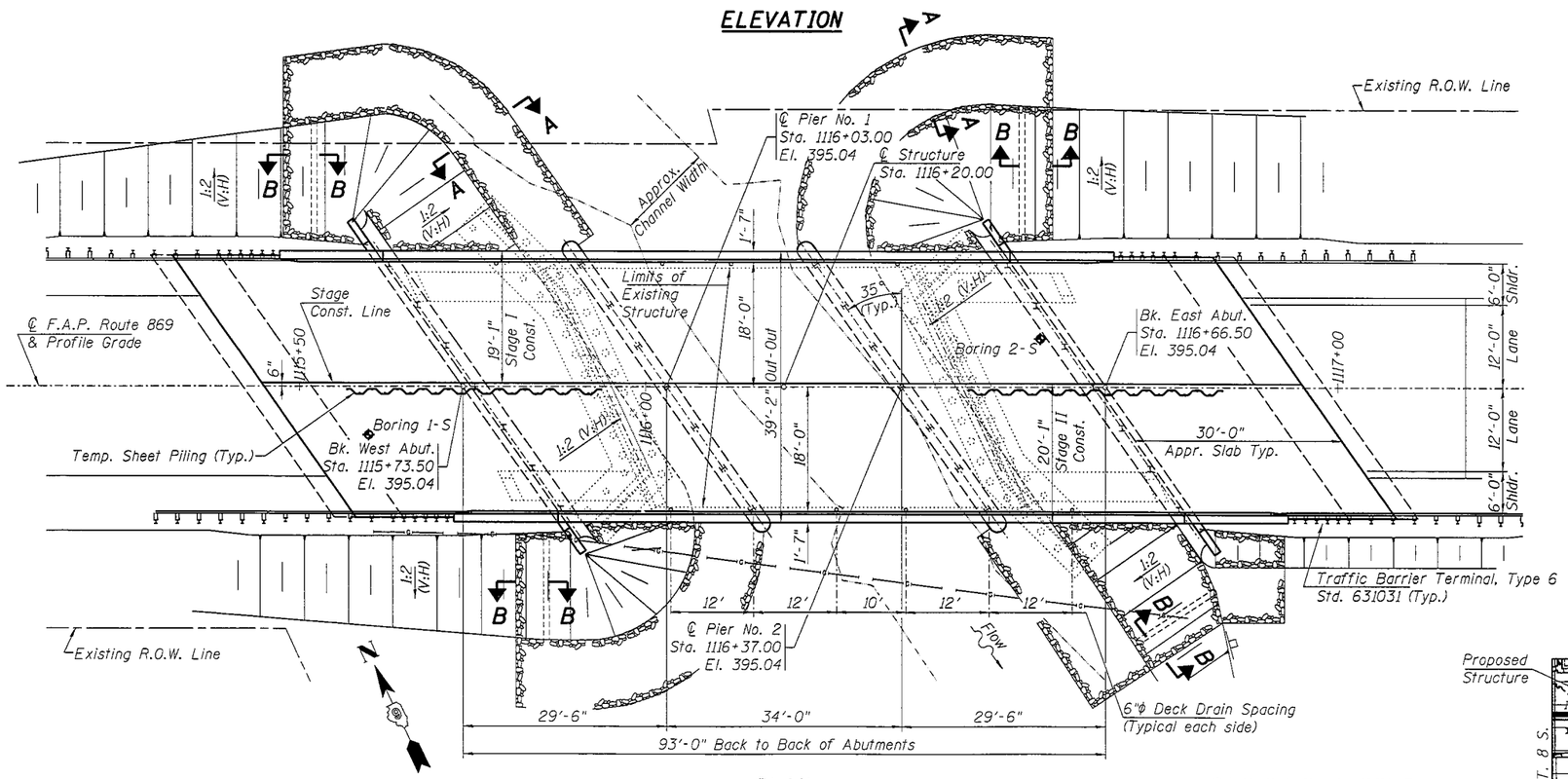
Originally constructed in 1928 and reconstructed in 1976. The original 1928 superstructure was removed. the existing closed reinforced concrete abutments were modified to accomodate the new 21" PPC Deck Beam Superstructure. The present structure is a Single Span measuring 53'-0 5/8" back to back of abutments, with an out to out width of 33'-0". The existing ℄ of Structure is at Sta. 1116+20.00.

The Structure is to be removed and replaced using stage construction.

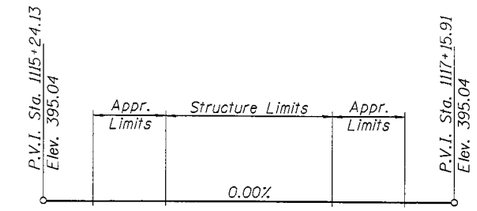
No Salvage.



ELEVATION



PLAN



PROFILE GRADE - IL. RTE. 34

(Along ℄ of Roadway)

DESIGN SCOUR ELEVATION TABLE

		W. Abut.	Pier 1	Pier 2	E. Abut.
Design Scour Elevation (ft.)	Q 50	388.9	365.6	364.2	388.9
	Q 100	388.9	366.1	364.8	388.9
	Q 500	388.9	370.5	369.8	388.9

WATERWAY INFORMATION

Drainage Area = 5.30 Sq. Mi. Existing & Proposed Low Grade Elev. 394.70 @ Sta. 1105+54

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.
Ten-Year	10	1759	343	385	392.0	0.1	0.3	392.1	392.3
Design	50	2897	366	468	393.5	1.6	0.7	395.1	394.2
Base	100	3412	366	468	394.3	1.4	1.0	395.7	395.3
Existing Overtopping	38	2738	366	-	393.3	1.4	-	394.7	-
Proposed Overtopping	58	3055	-	468	393.6	-	1.1	-	394.7

10 year velocity through existing structure = 5.1 fps

10 year velocity through proposed structure = 4.6 fps

SEISMIC DATA

Seismic Performance Zone (SPZ) = 3

Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.33

Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.79

Soil Site Class = D

HIGHWAY CLASSIFICATION

F.A.P. Rte. 869 - IL. Rte. 34

Functional Class: Minor Arterial, (Non-Urban)

ADT: 3860 (2008) ; 5190 (2028)

ADTT: 355 (2008) ; 480 (2028)

DHV: 520 (2028)

Design Speed: 40 m.p.h.

Posted Speed: 40 m.p.h.

2-Way Traffic

Directional Distribution: 50:/50

APPROVED

FEB 26 2013

AS A BASIS FOR PREPARATION OF DETAILED PLANS

LEGEND

Indicates Boring Location

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with 2012 Interims

LOADING HL-93

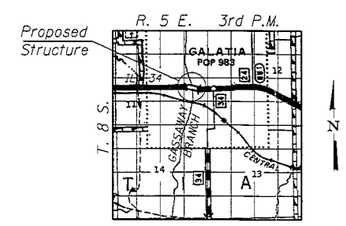
Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi

fy = 60,000 psi (Reinforcement)



LOCATION SKETCH

GENERAL PLAN

IL. ROUTE 34 over GASSAWAY BRANCH

F.A.P. ROUTE 869 - SECTION 104B-1

SALINE COUNTY

STATION 1116+20.00

STRUCTURE NO. 083-0069

FILE NAME = 78166_083-0069_TSL.dgn	USER NAME = pap00836	DESIGNED - MNM	REVISED -
HANSON	PROFESSIONAL DESIGN FIRM LICENSE #184-001084	CHECKED - TEH	REVISED -
	PLOT SCALE =	DRAWN - Rod	REVISED -
	PLOT DATE = 02/18/2013	CHECKED - MNM	REVISED -

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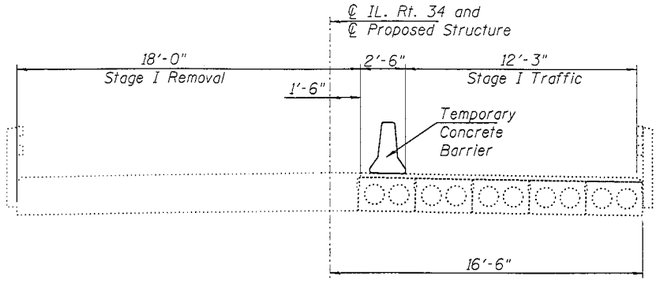
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 01 OF 02 SHEETS

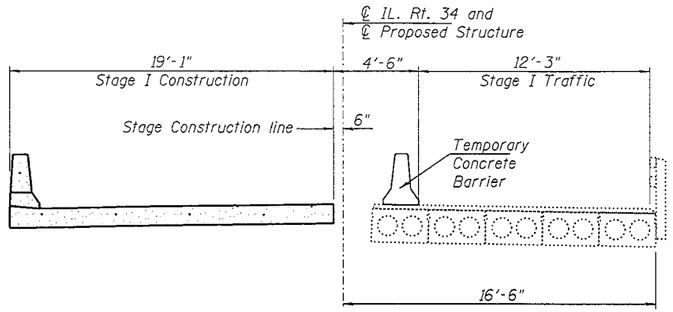
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	104B-1	SALINE		

CONTRACT NO. 78166

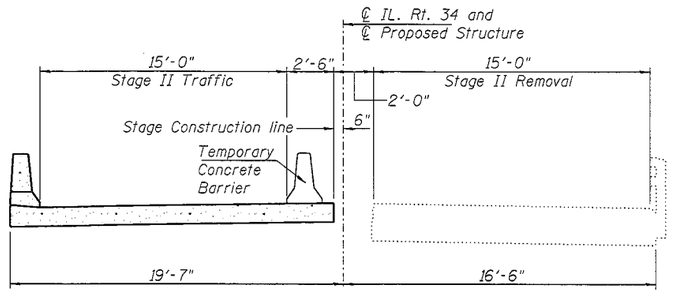
ILLINOIS FED. AID PROJECT



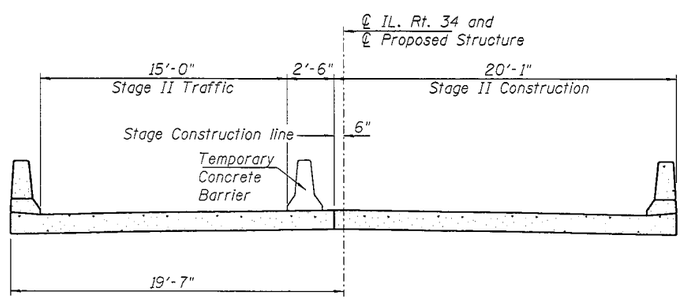
STAGE I REMOVAL
(Looking East)



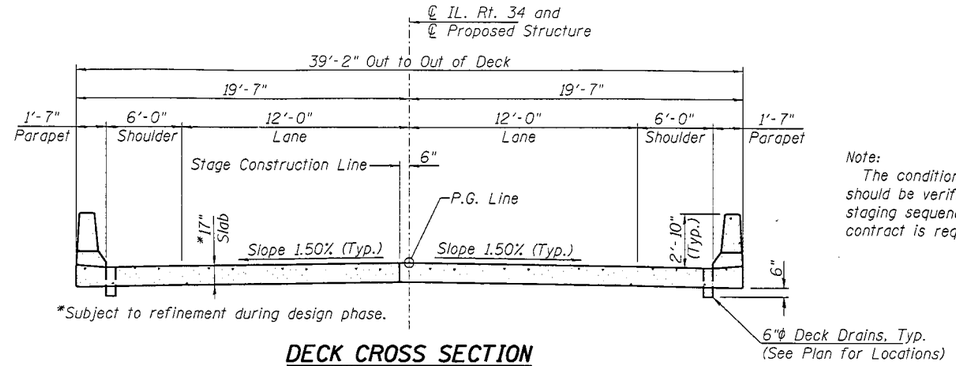
STAGE I CONSTRUCTION
(Looking East)



STAGE II REMOVAL
(Looking East)



STAGE II CONSTRUCTION
(Looking East)

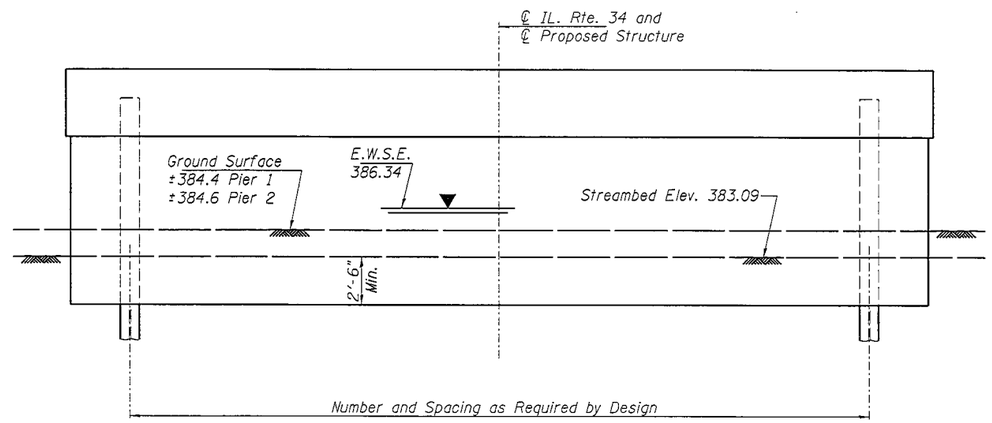


*Subject to refinement during design phase.

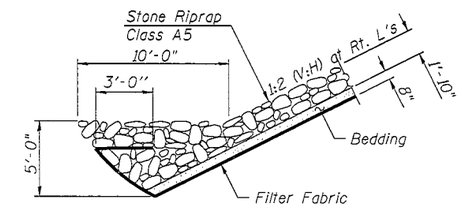
DECK CROSS SECTION
(Looking East)

Note:
The condition of the existing deck beams for the duration of Stage I Traffic should be verified during final design. If the condition changes, the proposed staging sequence shall be re-evaluated. If a beam replacement, or beam support contract is required, the designer shall provide the necessary plans.

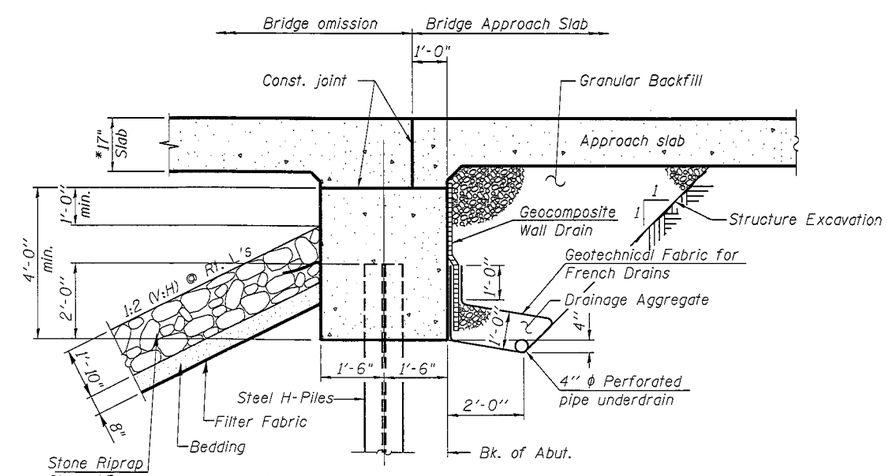
APPROVED
FEB 26 2013
AS A BASIS FOR
PREPARATION OF DETAILED PLANS



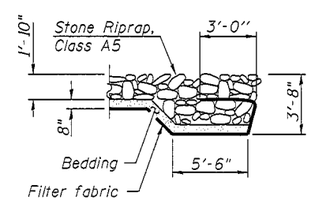
PIER SKETCH



SECTION A-A



SECTION THRU ABUTMENT
(Horiz. dim. @ Rt. L's)



SECTION B-B

DETAILS
IL. ROUTE 34 over GASSAWAY BRANCH
F.A.P. ROUTE 869 - SECTION 104B-1
SALINE COUNTY
STATION 1116+20.00
STRUCTURE NO. 083-0069

FILE NAME = 78166_086-0069_TSL.dgn	USER NAME = pop00836	DESIGNED - MNM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		F.A.P. RTE. 869	SECTION 104B-1
HANSON	PROFESSIONAL DESIGN FIRM LICENSE #184-001084	CHECKED - TEH	REVISED -			COUNTY SALINE	TOTAL SHEETS / SHEET NO.
	PLOT SCALE =	DRAWN - Rod	REVISED -			CONTRACT NO. 78166	
	PLOT DATE = 02/5/2013	CHECKED - MNM	REVISED -		SHEET NO. 02 OF 02 SHEETS	ILLINOIS FED. AID PROJECT	

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