APPROVED
AS A BASIS FOR
~~PREPARATION OF DETAILED PLANS~~

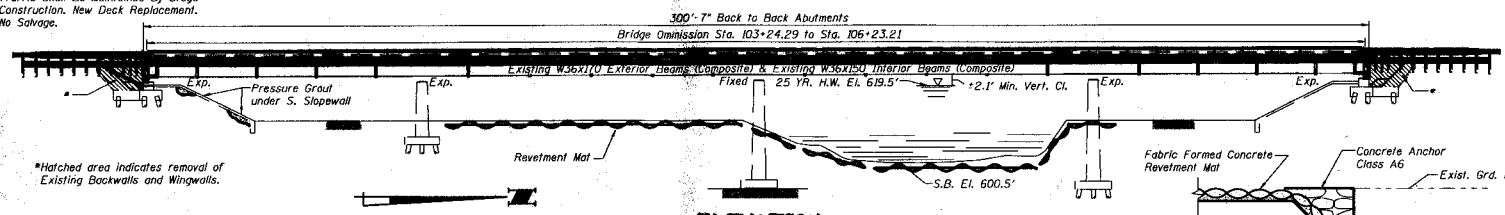
SEP 21 2001

ROUTE NO.	SECTION	COUNTY	TOTAL SHTS.	SHT. NO.
F.A.S. 220	23 BR	MERCER		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT-	
STRUCTURAL	SHEET	OF		

EXISTING STRUCTURE: NO. 066-0008
A 4 Span (66'-0",82'-6",82'-6",66'-0") Steel Girder Structure On Spill-Thru Concrete Abutments And Reinforced Concrete Piers At Sta. 104+73.75. Skewed 0°. To Be Rehabilitated.

Traffic Shall Be Maintained By Stage Construction. New Deck Replacement. No Salvage.

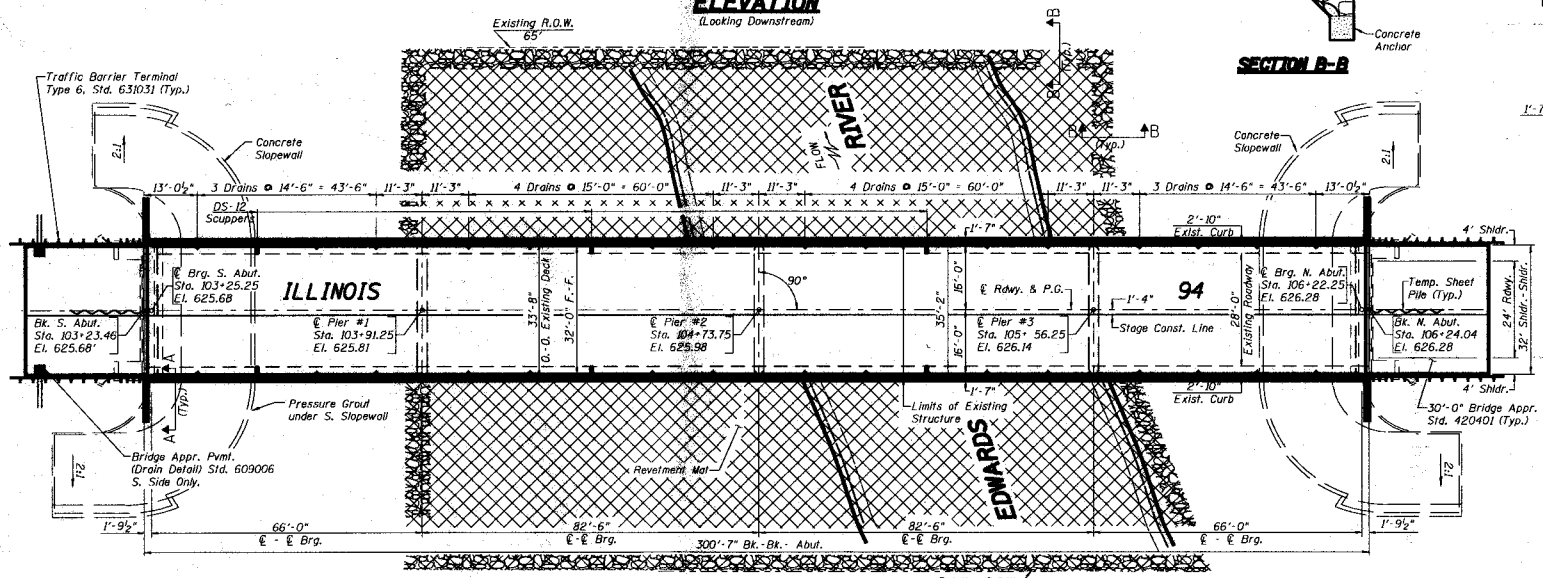
BENCH MARK: Chis. "□" S.E. Corner Of Bridge On Abutment Wall. Elev. = 626.35



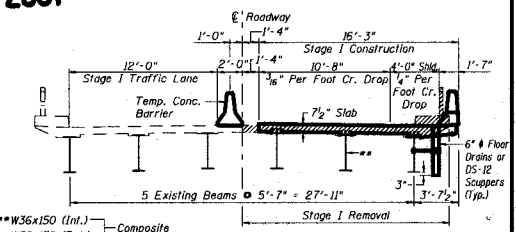
*Hatched area indicates removal of Existing Backwalls and Wingwalls.

ELEVATION
(Looking Downstream)

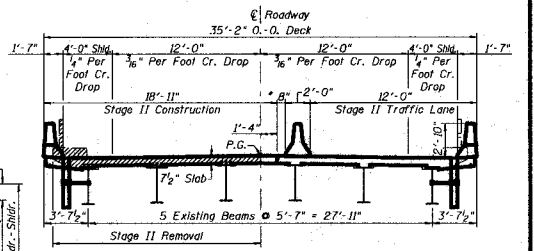
SECTION B-B



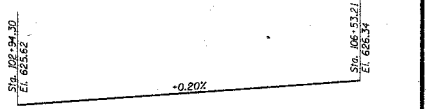
PLAN



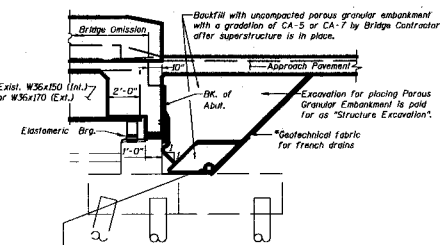
CROSS SECTION STAGE I
Looking Up-Station (North)



CROSS SECTION STAGE II
Looking Up-Station (North)

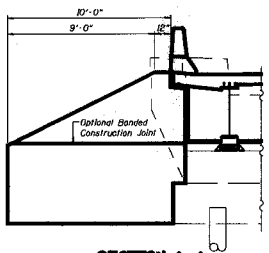


PROFILE GRADE
(ALONG ℄ ROADWAY)



A 6" ϕ perforated drain pipe shall be situated at the bottom of an approximate 2' x 2' area of porous granular embankment. The 2' x 2' area shall be wrapped completely in geotechnical fabric for french drains. Extend pipe parallel with the cap until intersecting with the sideslope.

SECTION THRU ABUTMENT



SECTION A-A

SCOPE OF WORK

1. Remove and replace existing deck, utilizing stage construction.
2. Remove existing expansion bearings at abutments only and replace with elastomeric bearings.
3. Install stud shear connectors in positive moment region of existing beams.
4. Remove and replace approach slab.
5. Remove existing wingwalls and backwalls, and modify as shown.
6. Pressure grout under south slopewall.
7. Eliminate expansion joints by incorporating semi-intergral Abutments.
8. Scour protection at middle pier.

HIGHWAY CLASSIFICATION

F.A.S. Route 220
Class: Rural Major Collector
A.D.T.: 3700(2001) 4863(2021)
A.D.T.T.: 260(2001) 340(2021)
D.H.V.: 370(2001) 500(2021)
Design Speed: 55 M.P.H.
Posted Speed: 55 M.P.H.

DESIGN SPECIFICATIONS

1996 AASHTO & 1997, 1998, 1999, & 2000 Interims

LOADING HS20-44

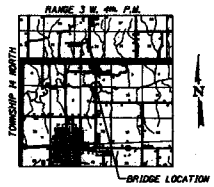
ALLOW 50 P.S.F. For Future Wearing Surface

DESIGN STRESSES

f'_c = 3500 PSI
f_y = 33000 PSI (Struct. Steel)
f_y = 60000 PSI (Prop. Reinf.)
f_y = 40000 PSI (Exist. Reinf.)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.03
Site Coefficient (S) = 1.0



LOCATION SKETCH

WATERWAY INFORMATION (From Existing Plans)

Drainage Area ..... 216,300 Acres
Character ..... Rolling Hilly & Cult.
Required Opening (25 Yr.) ..... 2,650 Sq. Ft.
Proposed Opening ..... 2,660 Sq. Ft.
Ordinary Water Elev. ..... 607.5±
Low Water Elev. ..... 602.0±

TYPE, SIZE & LOCATION
F.A.S. 220 SECTION 23BR
ILLINOIS 94 OVER EDWARDS RIVER
STA. 104+73.75 (S.N. 066-0008)
MERCER COUNTY

EXHIBIT #9

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DESIGNED BY: B.K. CONVERSE DATE: 3/01
CHECKED BY: M.R. LESLIE DATE: 3/01
DRAWN BY: F.D. LACHAT DATE: 3/01