APPROVED

JAN 1 7 2002

NAME	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 230	10-6 HB-4	CHAMPAIGN		
STA.		TO STA.		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Bench Mark:

IDOT BM92 Iron Pin w/cap, North Approach East Shoulder, El. 704.38.

Existing Structure:

Existing Structure No. 010-0178. The existing structure was built in 1960 as F.A.I. Route 74, Section 10-6HB-4 at station 536+96.7. The structure is a four-span bridge, 184'-6" long back to back abutments and 32'-6" out-to-out of deck, carrying two lanes of traffic. The superstructure is a 4 simple span P.P.C. beam structure with reinforced concrete deck. The substructure consists of reinforced concrete open and multi-column piers. The abutments are founded on a single row of piles and the piers on spread footings. The contractor shall remove and replace the existing superstructure with rolled steel beams and reinforced concrete deck. The bridge will be closed and traffic detoured during construction. The existing minimum vertical clearance above F.A.I. Route 74 is approximately 14'-9" at the crown of westbound F.A.I. Route 74.

Scope of Work

1. Remove all existing Traffic Barrier Terminals and replace with new Traffic Barrier Terminals.
2. Remove and replace superstructure.
3. Modify abutments to semi-integral type.
4. Extend abutments and piers to increase vertical clearance.
5. Place new Abutment Drains and backfill with Porous Granular Embankment.
6. Provide elastomeric expansion bearings at Piers 1 and 3 and at the abutments. Provide new low profile fixed bearings at Pier 2.
7. Place Bridge Approach Pavement.

No Salvage.

HIGHWAY CLASSIFICATION

TR 230	F.A.I. 74
Functional Class: Local Road	CLASS: Interstate
ADT: 200 (1999)	ADT: 30,200 (1998)
DHV: 20 (2018)	Design Speed: 65mph
Design Speed: 30 m.p.h.	Posted Speed: 65 mph
Posted Speed: 55 m.p.h.	

LOADING HL93 (STRUCT. STEEL)
LOADING HS20 (REINF. CONC. & BRG.)

Allow 50 psf for future wearing surface.

DESIGN SPECIFICATIONS (NEW CONSTRUCTION)

STRUCT. STEEL

1998 AASHTO LRFD Bridge Design Specifications with 1999 and 2000 Interims.

REINF. CONC. & BRG.

1996 AASHTO with 1997 thru 2000 Interims.

DESIGN STRESSES

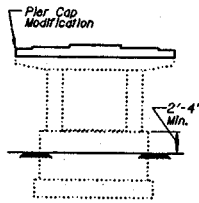
FIELD UNITS NEW CONSTRUCTION

f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 50,000 psi (structural steel) (M270 Grade 50)

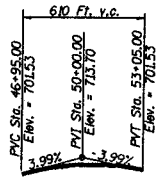
SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.047g
Site Coefficient (S) = 1.0

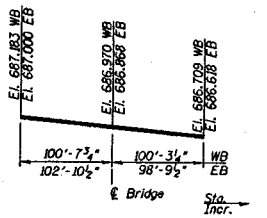
AS A BASIS FOR
PREPARATION OF DETAILED PLANS



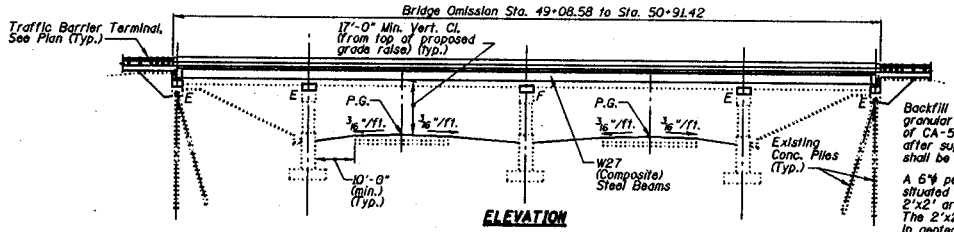
PIER SKETCH



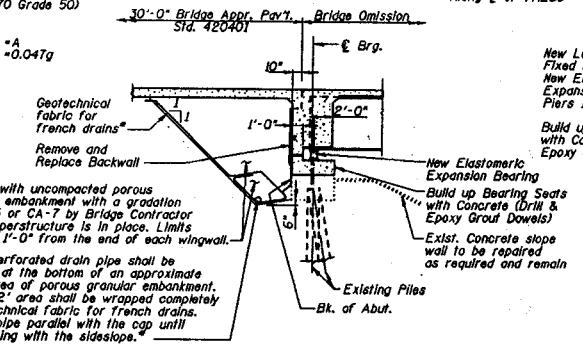
PROFILE GRADE
Along ℄ of TR230



MAX. TOP OF PAVEMENT ELEVATIONS
I-74 Crown

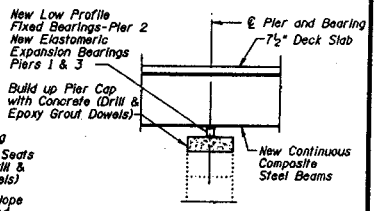


ELEVATION

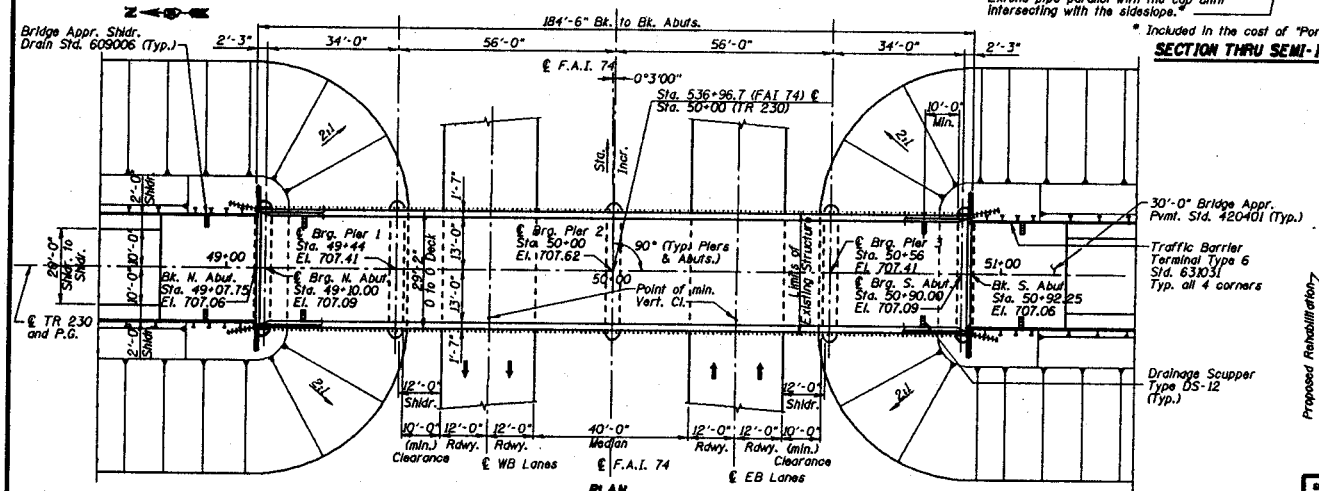


* Included in the cost of "Porous Granular Embankment".

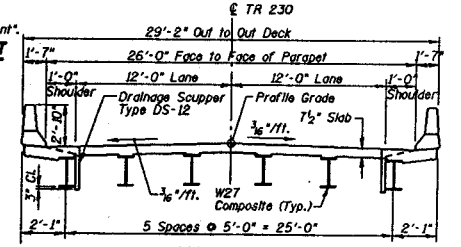
SECTION THRU SEMI-INTEGRAL ABUTMENT



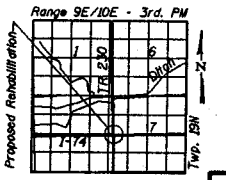
SECTION THRU PIER



PLAN



CROSS SECTION
(Looking North)



LOCATION SKETCH

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL PLAN

TR 230 OVER FAI 74
SECTION (10-6HB-4) BR-1 STATION 536+96.7
CHAMPAIGN COUNTY
SN 010-0178

SCALE: VERT. 0.1"=1' HORIZ. 0.1"=1'
DATE: 01/2002
DRAWN BY: YR
DESIGNED BY: YEVS
CHECKED BY: LP/BL

COMPUTER FILE NO. 0178tsl.dgn
PROJECT 10446-C-13-2