Bench Mark: Railroad spike in power pole no. 280 on West side of US 45. Sta. 906+06, 29.7' o/s. Elev. 438.46

Existing Structure: SN 096-0019 was originally built in 1920. The superstructure was replaced and the substructure widened in 1973. The structure consists of 3 spans of PPC deck beams on closed abutments and solid shaft piers. The bridge is 129'-0" bk.-bk. abuts. and 33'-0" o.-o. deck. Existing structure is to be removed and replaced. One lane of traffic will be maintained utilizing stage construction.

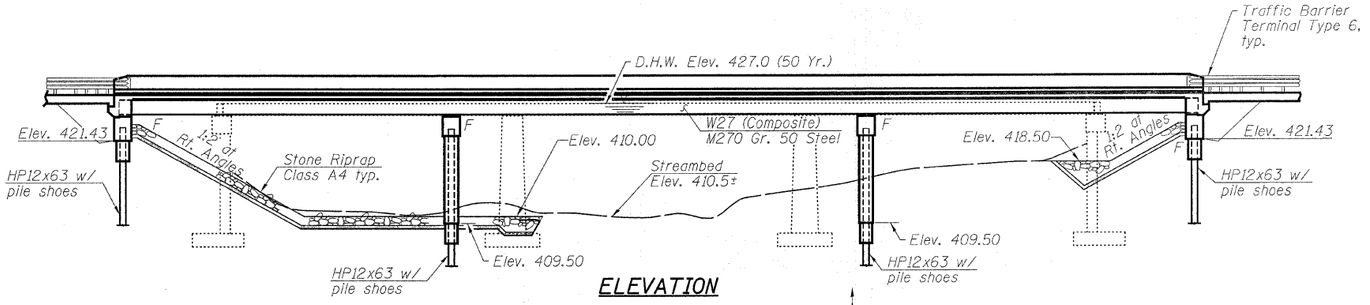
No salvage.

# STATE OF ILLINOIS
# DEPARTMENT OF TRANSPORTATION

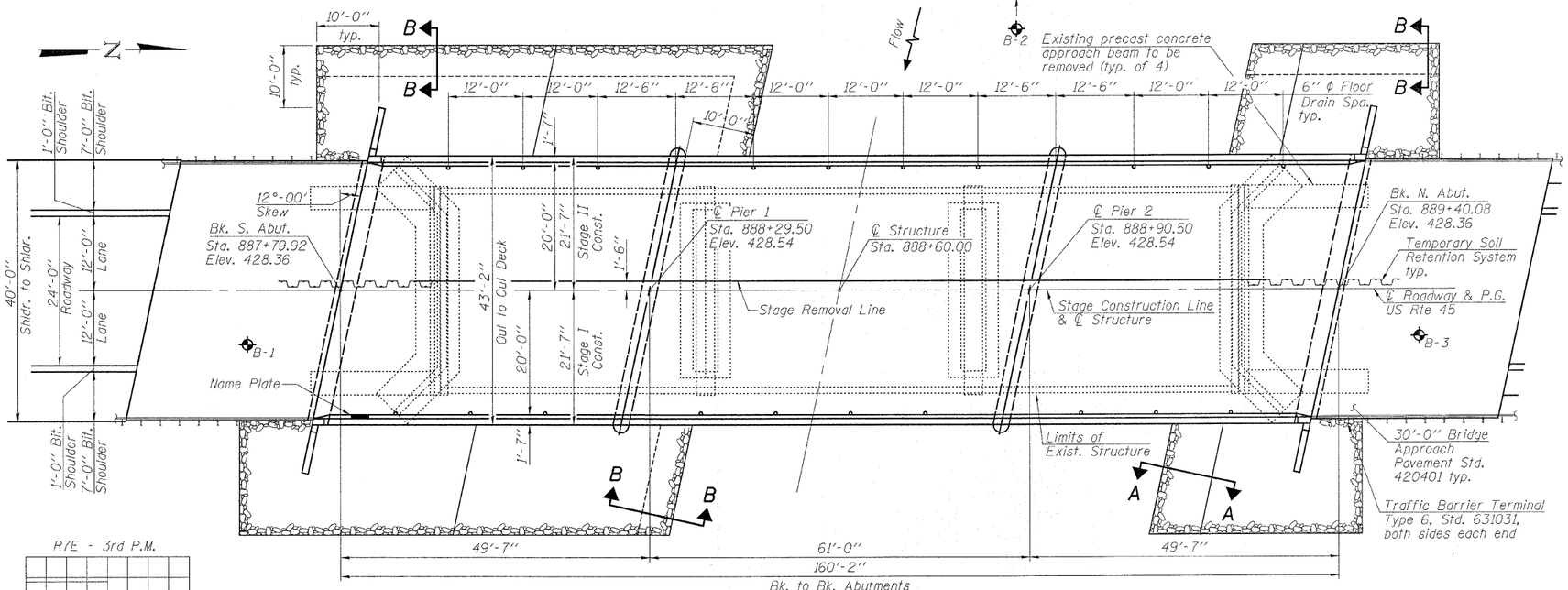
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| F.A.P. 328 | (8BR-2) B-1 | WAYNE | 140 | 23 |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT- | | |

SHEET NO. 1
25 SHEETS

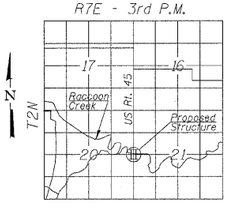
Contract #74040



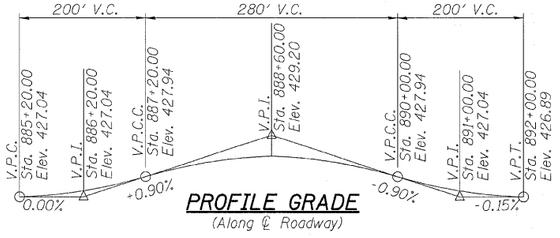

## ELEVATION




## PLAN




## LOCATION SKETCH




## PROFILE GRADE
(Along ℄ Roadway)

| | |
|---|---|
| DESIGNED | SJB |
| CHECKED | EML |
| DRAWN | KLH |
| CHECKED | EML |

## WATERWAY INFORMATION

Drainage Area = 72.6 Sq. Mi.
Exist. Low Grade Elev. = 426.9 Ft. @ Sta. 893+00
Prop. Low Grade Elev. = 426.9 Ft. @ Sta. 893+00

| Flood Frequency | | Discharge (cfs) Exist. | Discharge (cfs) Prop. | 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 Yr | Main Channel | 4431 | 4505 | 1158 | 1557 | 425.7 | 0.5 | 0.3 | 426.2 | 426.0 |
| | Relief Structure | 276 | 202 | 70 | 70 | | | | | |
| | Total | 4707 | 4707 | 1228 | 1627 | | | | | |
| Design 50 Yr | Main Channel | 6669 | 6774 | 1158 | 1557 | 427.0 | 0.8 | 0.6 | 427.8 | 427.6 |
| | Relief Structure | 322 | 217 | 70 | 70 | | | | | |
| | Total | 6991 | 6991 | 1228 | 1627 | | | | | |
| 100 Yr | Main Channel | 7489 | 7600 | 1158 | 1557 | 427.4 | 0.7 | 0.5 | 428.1 | 427.9 |
| | Relief Structure | 452 | 341 | 70 | 70 | | | | | |
| | Total | 7941 | 7941 | 1228 | 1627 | | | | | |
| Overtopping 25 Yr | Main Channel | 5741 | 5835 | 1158 | 1557 | 426.4 | 0.9 | 0.7 | 427.3 | 427.1 |
| | Relief Structure | 290 | 196 | 70 | 70 | | | | | |
| | Total | 6031 | 6031 | 1228 | 1627 | | | | | |

## INDEX OF SHEETS



## DESIGN SPECIFICATIONS
2002 AASHTO

## LOADING HS20-44
Allow 50 psf for future wearing surface.

## DESIGN STRESSES

### FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinf.)
fy = 50,000 psi (structural steel AASHTO M270, Gr. 50)
fy = 36,000 psi (structural steel AASHTO M270, Gr. 36)

## SEISMIC DATA
Seismic Performance Category (SPC) = B
Bedrock Acceleration Coefficient (A) = 9.1%g
Site Coefficient (S) = 1.5

STATION 888+60.00
BUILT 200 BY
STATE OF ILLINOIS
FAP RT 328 - SEC (8BR-2)B-1
LOADING HS20
STR. NO. 096-0067

## NAME PLATE
See Std. 515001

## DESIGN SCOUR ELEVATION TABLE

| Design Scour Elevation (ft.) | N. Abut. | Pier 1 | Pier 2 | S. Abut. |
|---|---|---|---|---|
| | 421.42 | 410.50 | 415.00 | 421.42 |

ERIC M. LAGEMANN
LICENSE NO. 081-006124
STATE OF ILLINOIS LICENSED STRUCTURAL ENGINEER

**APPROVED**
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

Eric Lagemann 8/2/07
Expires 11/30/2008

HORNER & SHIFRIN, INC.
ENGINEERS

## GENERAL PLAN
## US ROUTE 45 OVER RACCOON CREEK
## F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
## WAYNE COUNTY
## STATION 888+60.00
## STRUCTURE NO. 096-0067