

042004L76B01.DWG.PEL.DGN DEC. 1, 2008

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BENCHMARK: R.R. Spike in South Side of Power Pole
Sta. 120+50, 75' Lt.
El. 451.895

Hatched areas indicate excavation between existing abutments and the new abutments. For quantities of Pavement Removal and Excavation see Roadway Plans.

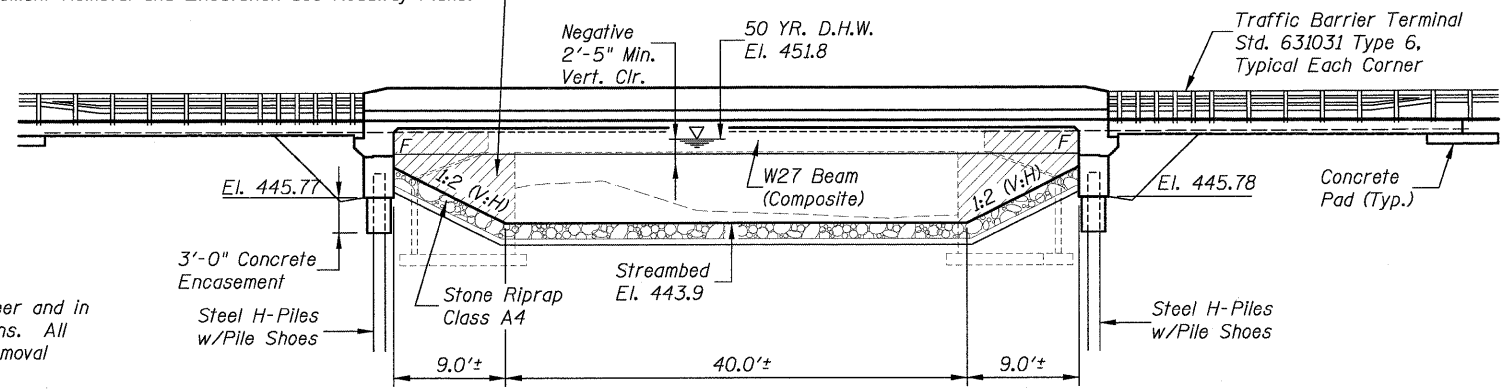
EXISTING STRUCTURE S.N. 042-0006
Built in 1926 as FAP Rte. 28, the Superstructure was reconstructed in 1979 as FAP Rte. 325. The structure consists of 21" P.P.C. deck beams with a bituminous concrete overlay on closed concrete abutments, all with timber piles.
The existing structure measures 42'-0" back to back of abutments and 33'-0" out to out of deck.

The road shall be kept open to one lane of traffic at all times by utilizing stage construction.

SALVAGE:
Bridge Rail shall be salvaged as directed by the Engineer and in accordance with the General Notes of the Roadway Plans. All costs associated with this work shall be included in Removal of Existing Structures.

WATERWAY INFORMATION TABLE

| Drainage Area = 1.63 Sq. Miles | | Existing Low Grade El. 451.63 @ Station 119+25 Proposed Low Grade El. 452.41 @ Station 118+78 | | | | | | | |
|--------------------------------|------------|--|----------------|---------------|---------------------|--------------|------------|-------------|------------|
| Flood | Freq. (Yr) | Q (CFS) | Opening | | Natural H.W.E. (Ft) | Created Head | | H.W.E. | |
| | | | Exlst. (Sq Ft) | Prop. (Sq Ft) | | Exlst. (Ft) | Prop. (Ft) | Exlst. (Ft) | Prop. (Ft) |
| Design | 50 | 1,711 | 155 | 279 | 451.78 | 1.02 | 0.82 | 452.80 | 452.60 |
| Base | 100 | 2,052 | 155 | 279 | 452.12 | 1.23 | 0.63 | 453.35 | 452.75 |
| Existing Overtopping | 9 | 978 | 155 | --- | 450.99 | 0.64 | --- | 451.63 | --- |
| Proposed Overtopping | 40 | 1,622 | --- | 279 | 451.69 | --- | 0.72 | --- | 452.41 |
| Scour | 10 | 992 | 155 | 279 | 451.01 | 0.66 | 0.12 | 451.67 | 451.13 |



DESIGN SCOUR ELEVATION TABLE

| Design Scour Elevation (Feet) | W. Abut. E. Abut. |
|-------------------------------|-------------------|
| 442.77 | 442.78 |

INDEX OF SHEETS

1. General Plan & Elevation
2. General Data
3. Stage Construction Details
4. Temporary Concrete Barrier for Stage Construction
5. Cantilever Forming Brackets for Superstructures with W27 Beams and Smaller
6. Top Of Slab Elevations
7. Top Of Slab Elevations
8. Top Of Slab Elevations
9. Top of West Approach Pavement Elevations
10. Top of East Approach Pavement Elevations
11. Superstructure
12. Superstructure Details
13. Integral Abutment Diaphragm Details
14. Structural Steel
15. Steel Details
16. West Abutment
17. East Abutment
18. Bar Splicer Assembly Details
19. HP Pile Details
20. Soil Boring Logs
21. Soil Boring Logs

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

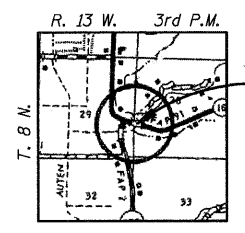
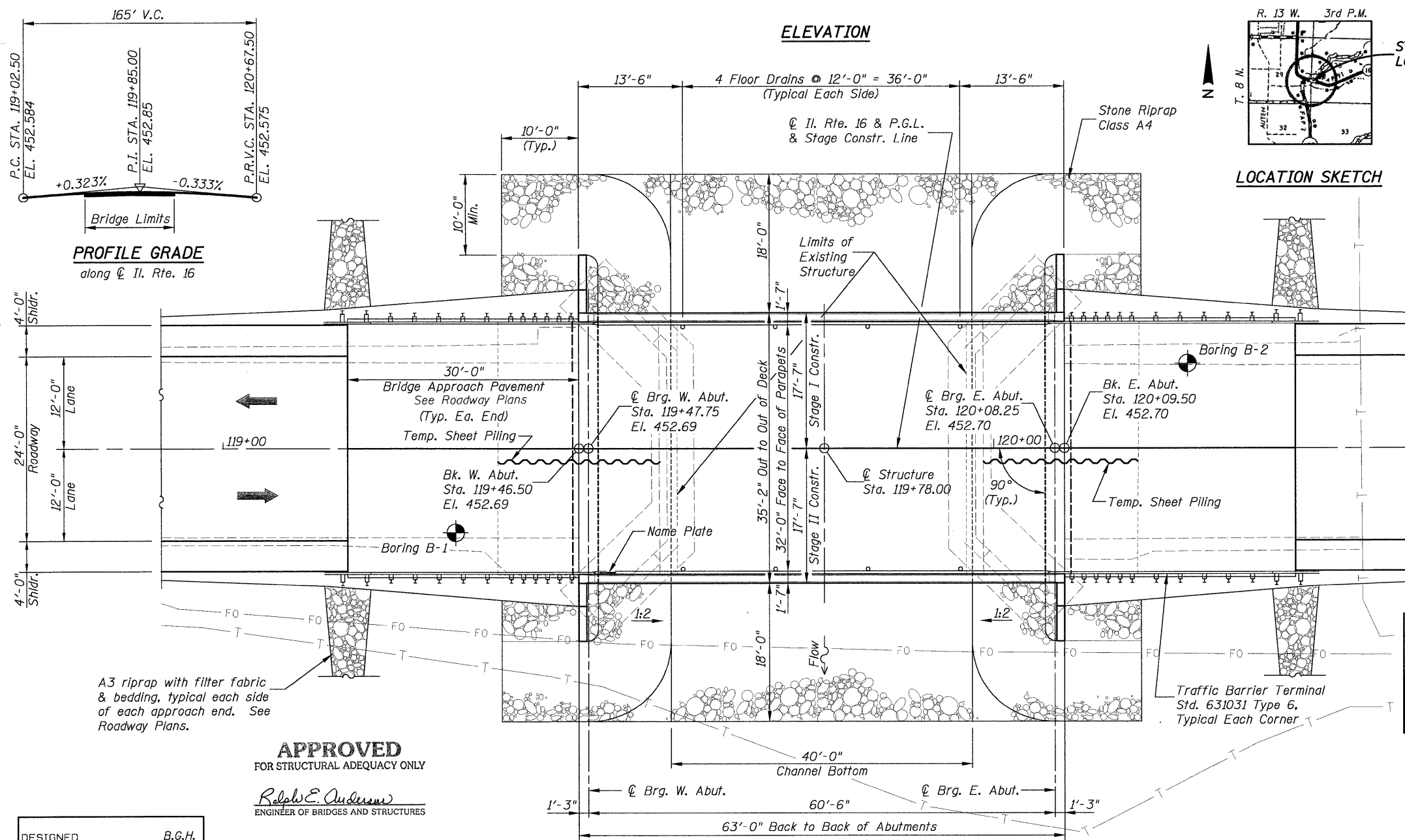
LOADING HL-93

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

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Bedrock Acceleration Coefficient (A) = 0.065g
Site Coefficient (S) = 1.0

ELEVATION



STRUCTURE LOCATION

STATION 119+78
BUILT 20 BY
STATE OF ILLINOIS
F.A.P. RT. 325 SEC. 3BR-2
LOADING HL93
STRUCTURE NO. 042-0041

NAME PLATE
See Std. 515001

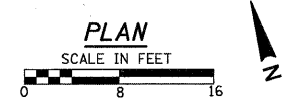
GENERAL PLAN & ELEVATION

**IL. RTE. 16
OVER BAUM BRANCH CREEK
STATION 119+78**

| | |
|----------|--------|
| DESIGNED | B.G.H. |
| CHECKED | L.D.G. |
| DRAWN | K.H.L. |
| CHECKED | B.G.H. |

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Bradley G. Hummert
ENGINEER OF BRIDGES AND STRUCTURES

Bradley G. Hummert Date: 11/30/08
Bradley G. Hummert
Licensed Structural Engineer
in Carlyle, Illinois
No. 081-005428 Expires 11/30/2010



| | | | | | |
|---|-----------------|---------------|--------------------|-----------------|--------------|
| SHEET NO. 1 21 SHEETS | F.A.P. RTE. 325 | SECTION 3BR-2 | COUNTY JERSEY | TOTAL SHEETS 90 | SHEET NO. 42 |
| | S.N. 042-0041 | | CONTRACT NO. 76B01 | | |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | | |

H.M. & G. INC. 6020111