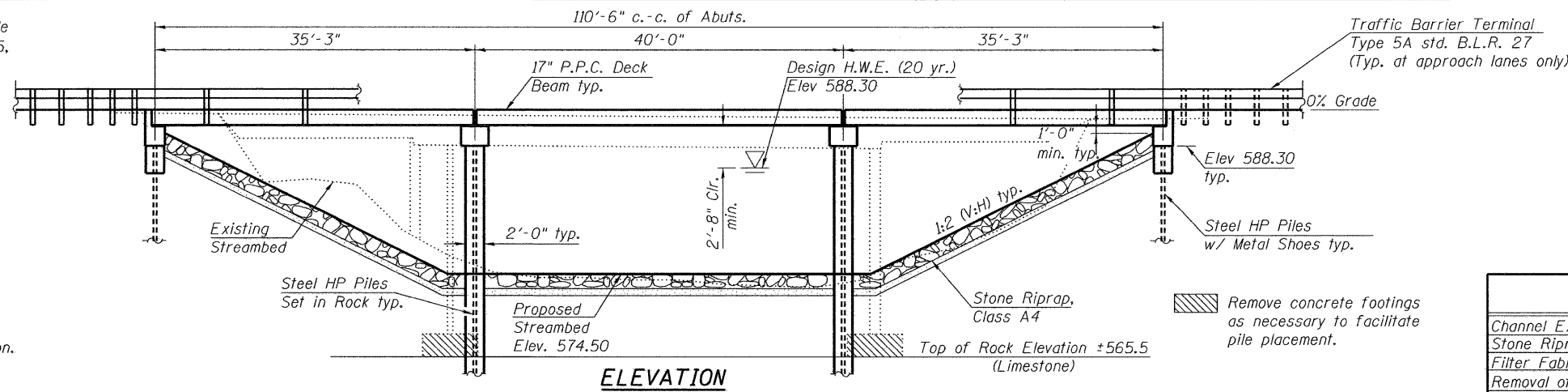


Bench Mark- Railroad spike in power pole north of Fillmore Trail, Station 138+61.25, 45' Left. Elevation 599.56.

Existing Structure S.N. 068-3009 was built in 1938 under Section 14-B MFT. The 3-span structure consists of a 7" cast-in-place concrete deck with bituminous overlay over steel stringers. The superstructure is supported by a combination of steel and wood piles, and steel bents on spread footings. The structure includes timber pile wingwalls and guardrail end sections. Overall dimensions are 22 feet wide by 91 feet long.

Traffic to be detoured during construction.

Salvage-No Salvage.

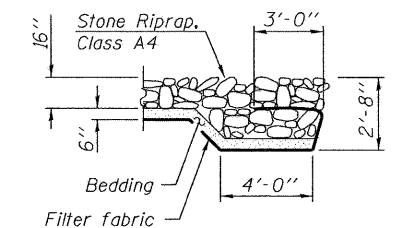
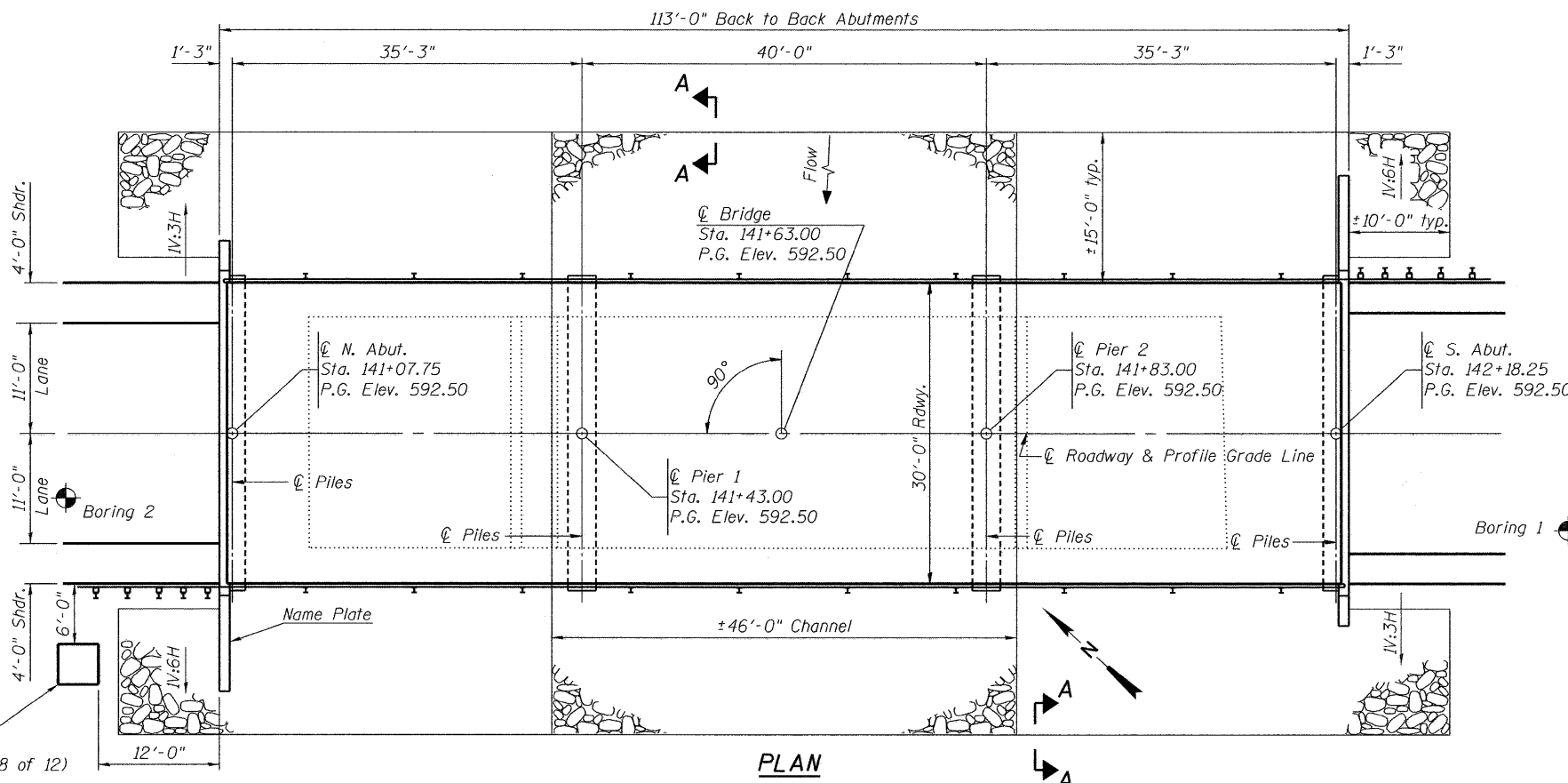


GENERAL NOTES

1. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
2. Reinforcement bars designated (E) shall be epoxy coated.
3. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
4. The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.

TOTAL BILL OF MATERIAL

| Item | Unit | Super | Sub. | | Total |
|---|---------|-------|-------|--------|-------|
| | | | Piers | Abuts. | |
| Channel Excavation | Cu. Yd. | - | - | - | 263 |
| Stone Riprap, Class A4 | Sq. Yd. | - | - | - | 850 |
| Filter Fabric | Sq. Yd. | - | - | - | 850 |
| Removal of Existing Structures | Each | - | - | - | 1 |
| Structure Excavation | Cu. Yd. | - | - | 77 | 77 |
| Concrete Structures | Cu. Yd. | - | 18.4 | 22.5 | 40.9 |
| Concrete Encasement | Cu. Yd. | - | 31.8 | 3.5 | 35.3 |
| Precast Prestressed Concrete Deck Beams (17" Depth) | Sq. Ft. | 3338 | - | - | 3338 |
| Reinforcement Bars, Epoxy Coated | Pound | - | 1960 | 3070 | 5030 |
| Steel Railing, Type S1 | Foot | 223 | - | - | 223 |
| Furnishing Steel Piles HP 12x53 | Foot | - | 408 | 216 | 624 |
| Driving Piles | Foot | - | - | 216 | 216 |
| Test Pile Steel HP 12x53 | Each | - | - | 2 | 2 |
| Pile Shoes | Each | - | - | 10 | 10 |
| Name Plates | Each | - | - | - | 1 |
| Setting Piles in Rock | Each | - | 12 | - | 12 |



SECTION A-A

INDEX OF SHEETS

1. General Plan & Elevation
- 2.-3. PPC Deck Beam Superstructure
- 4.-5. 17"x36" PPC Deck Beam
6. 17"x36" PPC Deck Beam Details
7. Steel Railing, Type S-1
8. Abutments
9. Piers
10. HP Pile Details
- 11.-12. Soil Borings

GENERAL PLAN AND ELEVATION

**FILLMORE TR. (C.H.#8)
OVER E. FORK OF SHOAL CREEK
F.A.S. ROUTE 721 SECTION 08-00128-00 BR
MONTGOMERY COUNTY
STATION 141+63.00
STRUCTURE NO. 068-3358**

WATERWAY INFORMATION

| Drainage Area=55.5 SQ. MI. Low Grade Elev.=592.50 @ Sta. 141+63 Max. Rec. H.W.E.=Unknown | | | | | | | |
|--|-----------|----------|-----------------|-------------|------------|---------------|-------------|
| Flood | Freq. Yr. | Q C.F.S. | Opening Sq. Ft. | Nat. H.W.E. | Head - Ft. | Headwater El. | |
| Design | 20 | 5100 | 959 | 588.3 | 0.7 | 0.6 | 589.0 588.9 |
| Base | 100 | 7050 | 999 | 589.2 | 1.5 | 1.0 | 590.7 590.2 |
| Overtopping (Prop.) | 500(+) | SEE 0500 | | | | | |
| Max. Calc. | 500 | 9040 | 1004 | 589.9 | 2.4 | 1.5 | 592.3 591.4 |

Construction Permits: The requirements of the IDNR - Office of Water Resources have been fulfilled in accordance with Statewide Permit No. 2.

DESIGN SCOUR ELEVATION TABLE

| N. ABUTMENT | S. ABUTMENT | PIER 1 | PIER 2 |
|-------------|-------------|--------|--------|
| 585.30 | 585.30 | 570.54 | 570.54 |

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications

LOADING HL-93

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

SEISMIC DATA

Seismic Performance Zone (S.P.Z.) = 2
Design Spectral Acceleration at 1 second (S_{D1}) = 0.205
Design Spectral Acceleration at 0.2 second (S_{D5}) = 0.449
Soil Site Class (S) = D

DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
f_y = 60,000 psi (Reinforcement)

PRECAST UNITS

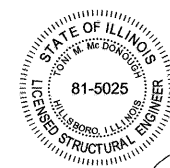
f'_c = 6,000 psi
f'_{ci} = 5,000 psi
f'_s = 270,000 psi (1/2" φ low lax. strands)
f'_{si} = 201,960 psi (1/2" φ low lax. strands)

EAST FORK OF SHOAL CREEK
BUILT 20 BY
MONTGOMERY COUNTY HIGHWAY DEPT.
MONTGOMERY COUNTY
SEC. 08-00128-00-BR
F.A.S. ROUTE 721 STA. 141+63.00
STR. NO. 068-3358 LOADING HL-93

NAME PLATE

Locate Name Plate at Northwest Corner of Bridge (See Std 515001)

| |
|--------------|
| DESIGNED CMF |
| CHECKED TMM |
| DRAWN RNH |
| CHECKED TMM |



Signature: *Bromm, Cheryl* Date: 7-29-09



McDonough-Whitlow, P.C.
Consulting Engineers & Land Surveyors
138 East Wood Street
Hillsboro, IL 62049
Phone: 217.532.9233
Fax: 217.532.6300
PROFESSIONAL DESIGN NO. 184-002754

SHEET NO. 1

12 SHEETS

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|----------------|------------|--------------|-----------|
| 721 | 08-00128-00 BR | MONTGOMERY | 22 | 7 |
| CONTRACT NO. 93496 | | | | |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | |