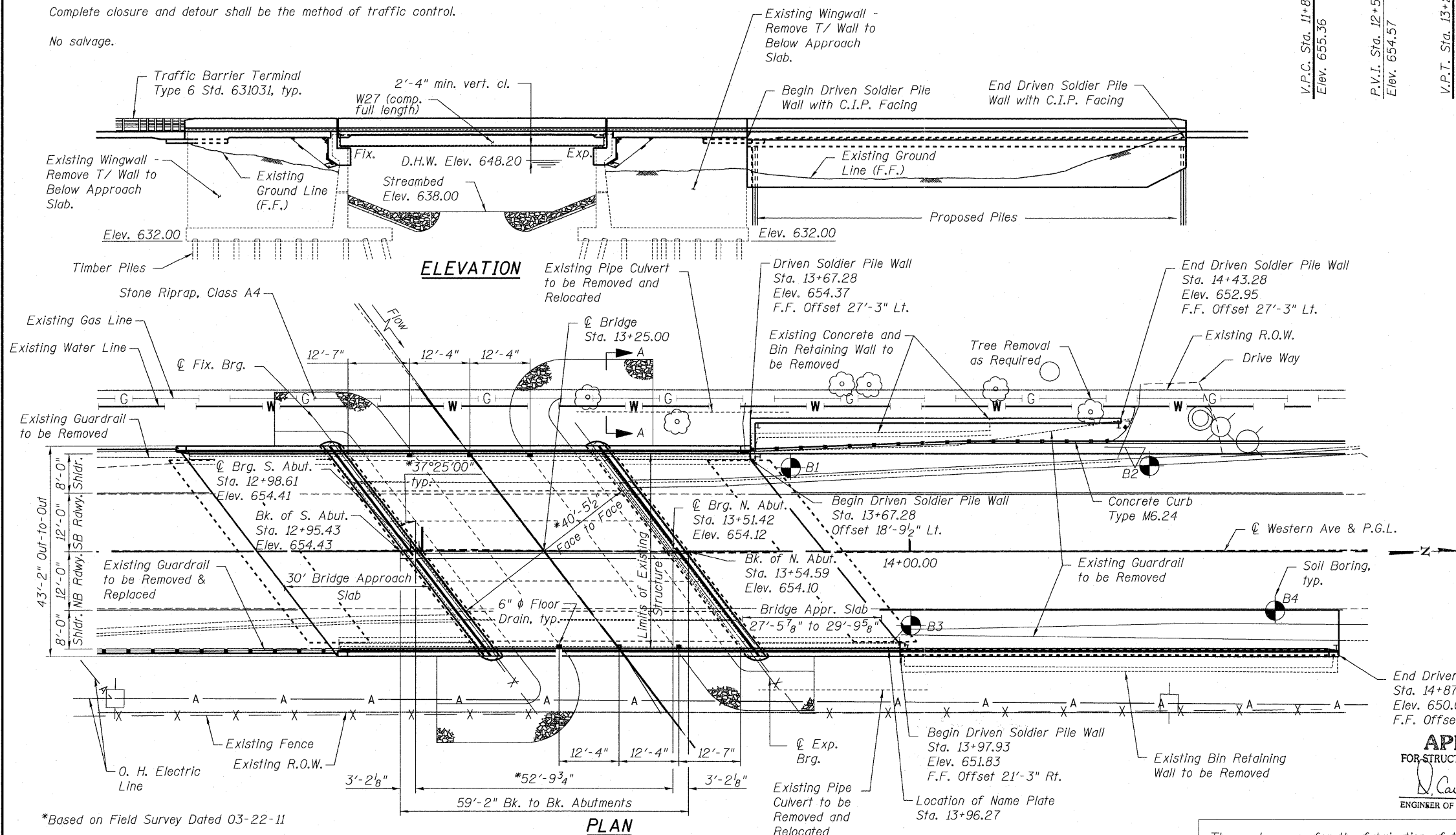
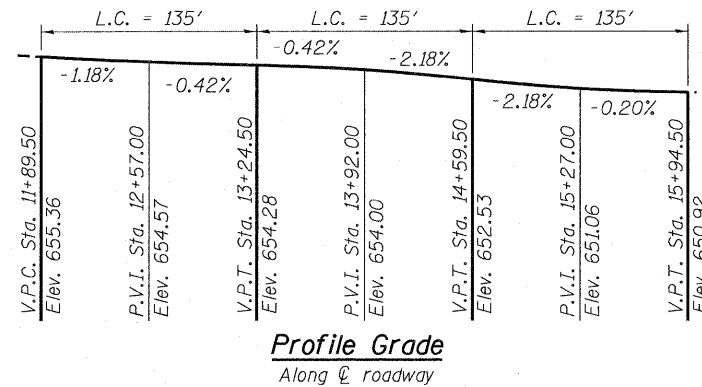


BENCHMARK: Square cut on the south east corner of south west wingwall of the Western Avenue Bridge over Butterfield Creek, Elevation 654.70.
Existing Structure: S.N. 016-0772 built in 1960 as a FAU 2845, Section 62742 at Station 13+25. Structure consists of 1 span PPC deck beam structure supported on cantilevered type reinforced concrete abutments. Groups of untreated timber piles support the abutments and wingwalls. The bridge spans 53'-0" center-to-center of bearing and 57'-8" back-to-back of abutments along center line of Western Avenue. The structure width is 40'-0" out-to-out of deck. Existing elements to be removed include wearing surface, PPC deck beams, approaches and joints. Replace superstructure with 8" concrete deck supported on steel beams. Approach slabs to be replaced with structural approach slabs. Remove and reconstruct abutment caps to accommodate new superstructure. Provide riprap protection at abutments. Remove existing bin retaining walls and replace with new driven soldier pile retaining walls with C.I.P. Facing.

Complete closure and detour shall be the method of traffic control.

No salvage.



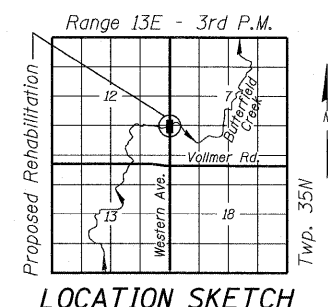
SEISMIC DATA
 Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (SD1) = 0.096g
 Design Spectral Acceleration at 0.2 sec. (SDS) = 0.16g
 Soil Site Class = D

LOADING HL-93
 Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS
 AASHTO LRFD Bridge Design Specifications, 5th Edition, with 2010 Interims
 17TH Edition - AASHTO Standard Specifications for Highway Bridges (Driven Soldier Pile Wall Design)

DESIGN STRESSES
FIELD UNITS (New Construction)
 f'c = 3,500 psi
 fy = 60,000 psi (Reinforcement)
 fy = 50,000 psi (M270 Grade 50)
 Soldier Piles Shall Be M270 Grade 36

DESIGN STRESSES
FIELD UNITS (Exist. Construction)
 f'c = 3,500 psi
 fs = 20,000 psi (Reinforcement)



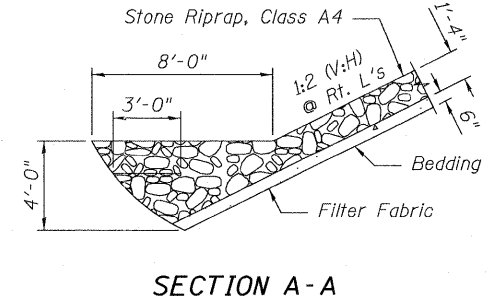
WATERWAY INFORMATION TABLE (DESIGN)

Drainage Area = 21.7 sq miles Proposed Low Grade Elev. = 654.77 feet @ Sta. 13+55.00 Max. Recorded H.W.E. = 649.0

| Flood | Freq. Yr. | Discharge C.F.S. | Waterway Opening | | Natural H.W.E. | Created Head | | Headwater Elevation | |
|-------------|-----------|------------------|------------------|----------|----------------|--------------|----------|---------------------|----------|
| | | | Existing | Proposed | | Existing | Proposed | Existing | Proposed |
| Design | 10 | 1730 | 372.7 | 372.7 | 647.8 | 1.4 | 1.3 | 649.2 | 649.1 |
| Base | 50 | 2430 | 399.0 | 399.0 | 648.2 | 1.2 | 0.8 | 649.4 | 649.0 |
| Overtopping | 100 | 2890 | 419.5 | 419.5 | 648.5 | 1.8 | 1.3 | 650.3 | 649.8 |
| Max. Calc. | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | 500 | 4040 | 445.2 | 445.2 | 649.2 | 4.0 | 2.9 | 653.2 | 652.1 |

DESIGN SCOUR ELEVATION TABLE

| Design Scour Elevation (ft.) | N. Abut. | S. Abut. |
|------------------------------|----------|----------|
| | 634.75 | 634.75 |



These plans are for the fabrication of the structural steel and bearings. All work shown that is not related to the fabrication is for information only. It is not included in this contract, and is identified as "Not Included in this Contract" or "For Information only"



APPROVED
 FOR STRUCTURAL ADEQUACY ONLY
 Raghad Adeis Dahhan
 ENGINEER OF BRIDGES AND STRUCTURES
 IL. LIC. NO. 081-006300
 EXP. 11-30-2012
 DATE 10-13-2011

GENERAL PLAN & ELEVATION
WESTERN AVENUE OVER BUTTERFIELD CREEK
F.A.U. 2845 - SECTION 2011-206-F
COOK COUNTY
STATION 13+25.00
STRUCTURE NO. 016-0772



| | | |
|------------------------|----------------|-----------|
| USER NAME = | DESIGNED - HAA | REVISOR - |
| PLOT SCALE = | CHECKED - RAD | REVISOR - |
| PLOT DATE = 10/13/2011 | DRAWN - HAA | REVISOR - |
| | CHECKED - RAD | REVISOR - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 016-0772
 SHEET NO. S1 OF S33 SHEETS

| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|--------------------|------------|--------|--------------|-----------|
| 2845 | 2011-206-F | COOK | 18 | 3 |
| CONTRACT NO. 60R36 | | | | |