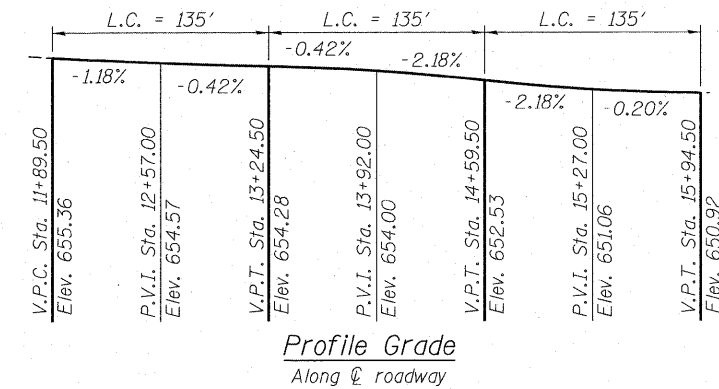


BENCHMARK: Square cut on the south east corner of south west wingwall of the Western Avenue Bridge over Butterfield Creek, Elevation 654.70.
Existing Structure: S.N. 016-0772 built in 1960 as a FAU 2845, Section 62742 at Station 13+25. Structure consists of 1 span PPC deck beam structure supported on 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)

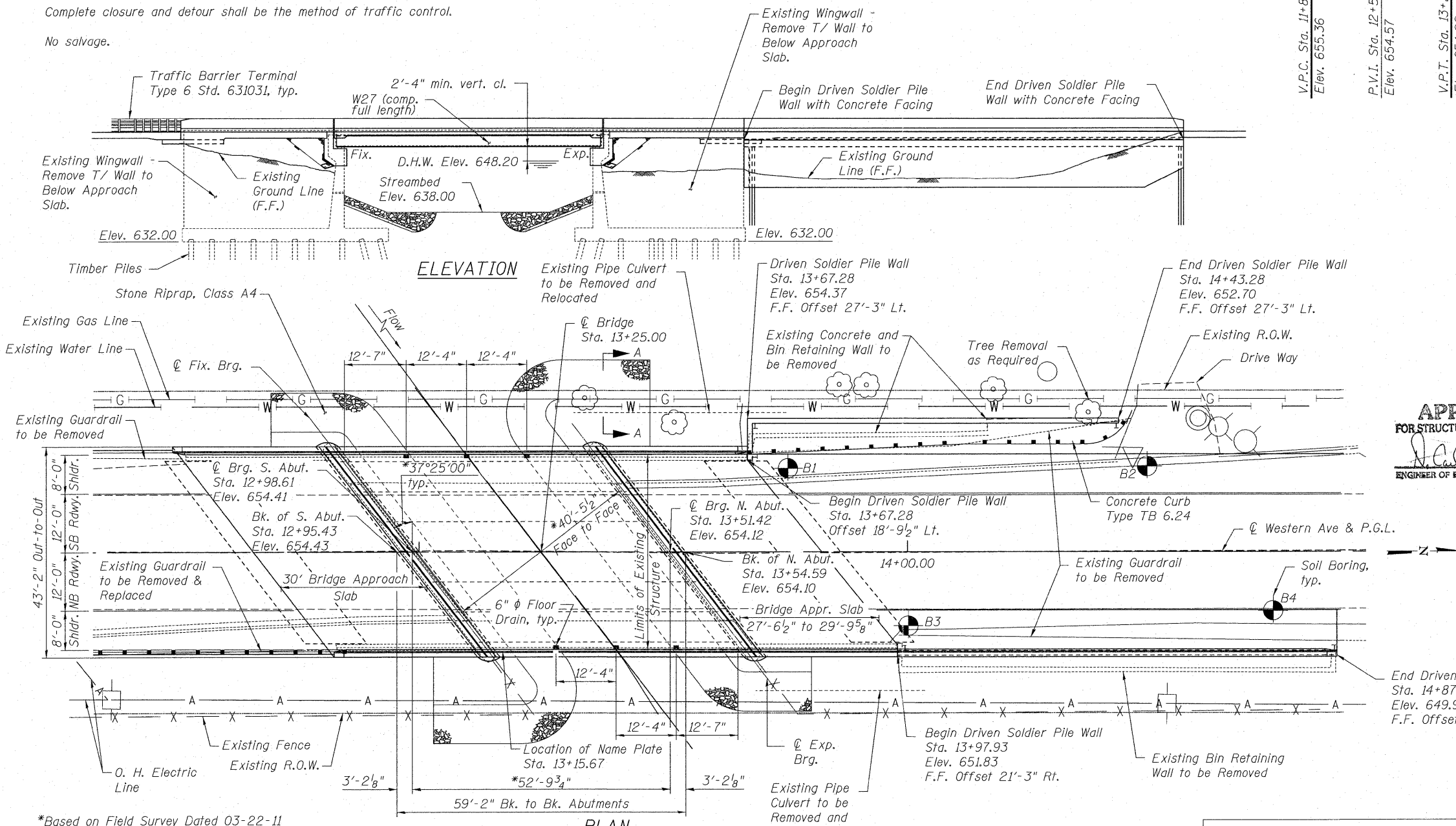
DESIGN STRESSES

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)

APPROVED
 FOR STRUCTURAL ADEQUACY ONLY
 [Signature]
 ENGINEER OF BRIDGES AND STRUCTURES



*Based on Field Survey Dated 03-22-11

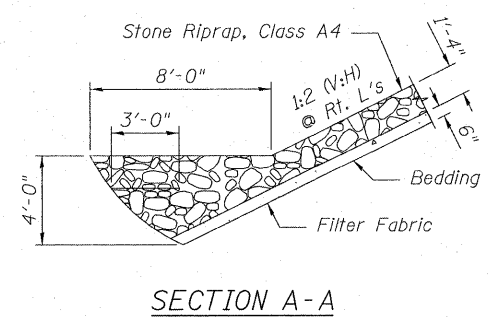
WATERWAY INFORMATION TABLE

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

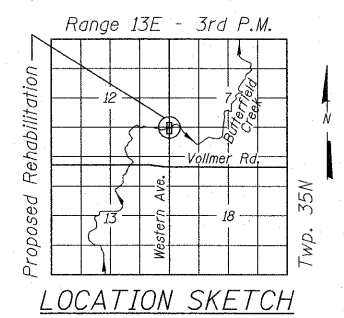
Flood	Freq. Yr.	Discharge C.F.S.	Waterway Opening		Natural H.W.E.	Created Head		Headwater Elevation	
			Existing	Proposed		Existing	Proposed	Existing	Proposed
Design	10	1730	372.7	372.7	647.8	1.4	1.3	649.2	649.1
Base	50	2430	399.0	399.0	648.2	1.2	0.8	649.4	649.0
Overtopping	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max. Calc.	500	2890	419.5	419.5	648.5	1.8	1.3	650.3	649.8
		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 erection of the bridge. All work shown related to the Beam and Bearing Fabrication Contract is for information only. It is not included in this contract, and is identified as "Not Included in this Contract" or "For Information only"



GENERAL PLAN & ELEVATION
WESTERN AVENUE OVER
BUTTERFIELD CREEK
F.A.U. 2845 - SECTION 0505-B
COOK COUNTY
STATION 13+25.00
STRUCTURE NO. 016-0772



RAGHAD ADEIS DAHMAN, S.E.
 IL. LIC. NO. 081-006300
 EXP. 11-30-2012
 DATE 12-17-2011