

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
526	19-20126-00-BR	McLEAN	9	1
ILLINOIS				

PLANS FOR PROPOSED LOCAL NON-MFT PROJECT

MCLEAN COUNTY
LAWNDALE ROAD DISTRICT
SECTION 19-20126-00-BR
ROUTE: TR 526 (3300E)
CORPE BRIDGE REHABILITATION
STRUCTURE NO: 057-4802

INDEX OF SHEETS

- 1 COVER SHEET
- 2 GENERAL ROADWAY PLAN
- 3 GENERAL STRUCTURE PLAN
- 4-5 GENERAL STRUCTURE DATA
- 6-8 EXISTING PLANS
- 9 SOIL BORING LOGS

HIGHWAY STANDARD DETAILS

- 000001-07 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
 001001-02 AREAS OF REINFORCEMENT BARS
 001006 DECIMAL OF AN INCH AND OF A FOOT
 630101-10 STRONG POST GUARDRAIL ATTACHED TO CULVERT
 701901-08 TRAFFIC CONTROL DEVICES
 B.L.R. 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
 B.L.R. 22-7 TYP. APPL. OF T.C.D FOR RURAL LOC. HWYS. (2-LANE 2 WAY RURAL TRAFF.) (RD. CLOSED TO THRU TRAFF.)
 B.L.R. 26-3 STEEL PLATE BEAM GUARDRAIL 29" HEIGHT

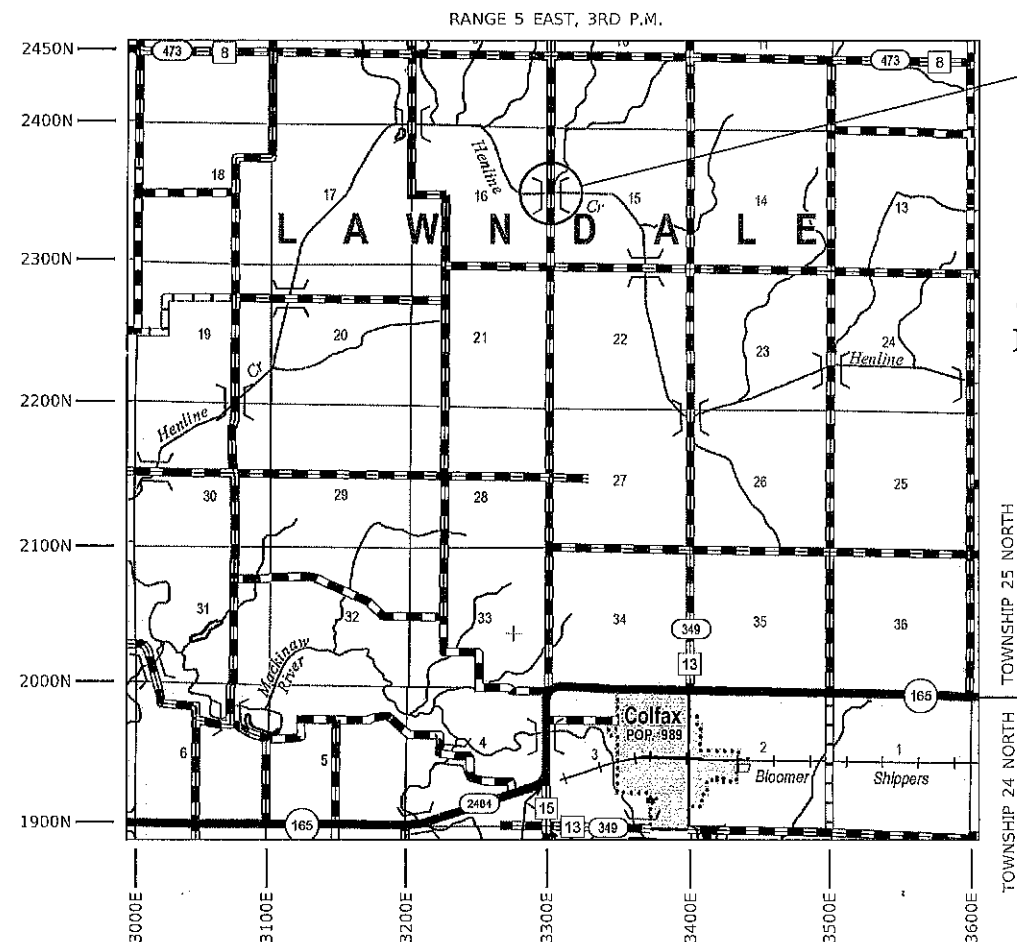
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS
1-800-892-0123
OR 811

SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	QUANTITY
1	POROUS GRANULAR EMBANKMENT, SPECIAL	TON	46
2	AGGREGATE BASE COURSE, TYPE B (SPECIAL)	TON	25
3	CONCRETE REMOVAL	CU YD	8.0
4	STRUCTURE EXCAVATION	CU YD	40
5	CONCRETE STRUCTURES	CU YD	29.0
6	REINFORCEMENT BARS, EPOXY COATED	POUND	1,940
7	PERMANENT SHEET PILING	SQ FT	1,719
8	STEEL POST, ATTACHED TO STRUCTURES	EACH	2

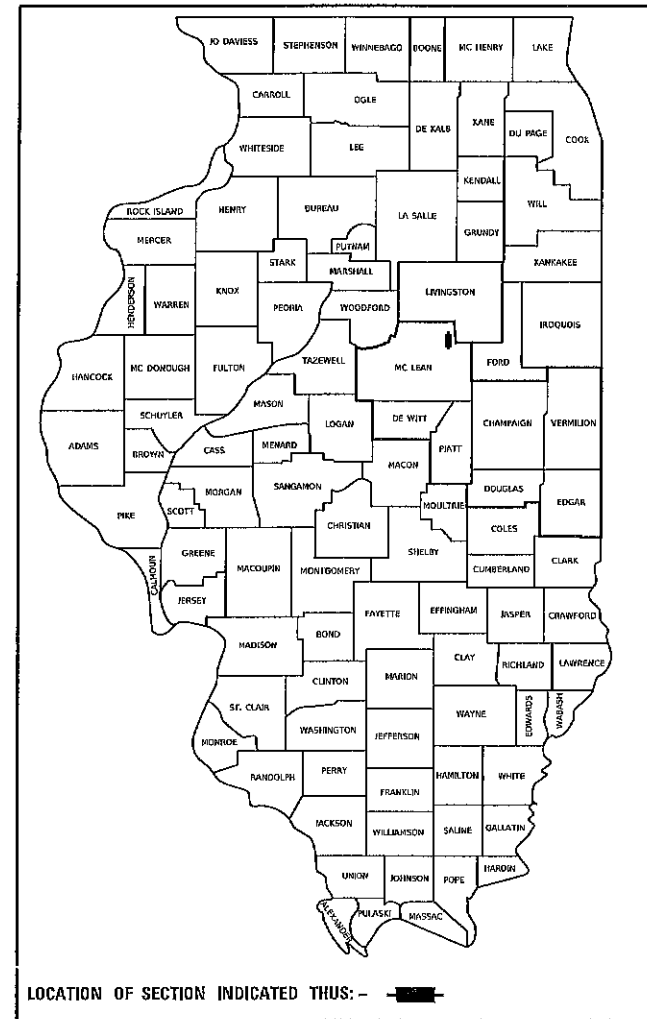
* PAY ITEM WITH SPECIAL PROVISION

FUNCTIONAL CLASSIFICATION: LOCAL
 DESIGN SPEED: 30 MPH
 DESIGN TRAFFIC: 2015 ADT = 150
 % TRUCKS: 0
 % PASSENGER VEHICLES: 100



LOCATION MAP

STATION 9+40.65
S.N. 057-4802
PROPOSED IMPROVEMENTS



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED May 29 2019
Jeff Wilkerson
TOWNSHIP COMMISSIONER OF HIGHWAYS

SUBMITTED MAY 29 2019
Jimmy Stika
COUNTY HIGHWAY ENGINEER

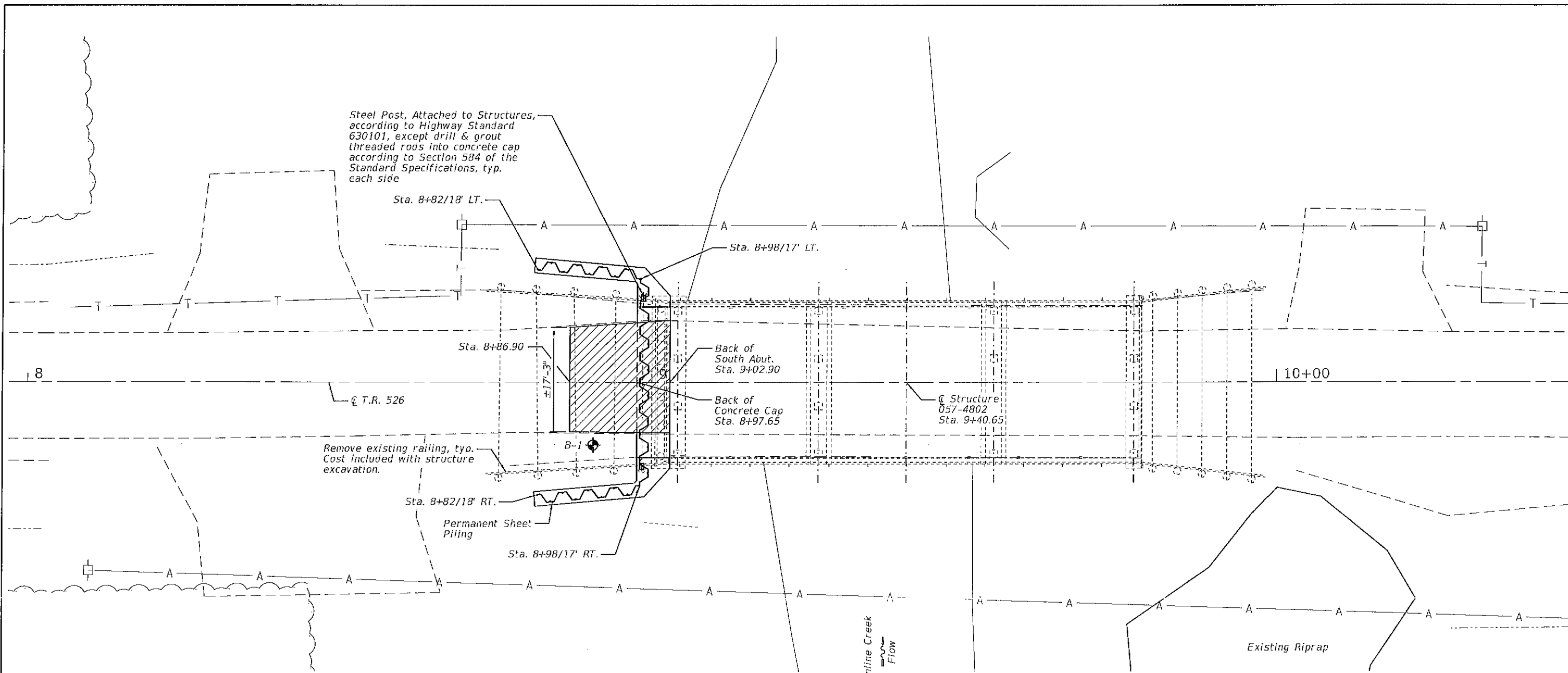
PASSED _____ 20 _____
AGREEMENT OF UNDERSTANDING
DISTRICT 5 LOCAL ROADS AND STREETS ENGINEER

RELEASING FOR BID BASED ON LIMITED REVIEW _____ 20 _____
DEPUTY DIRECTOR OF HIGHWAYS, REGION 3 ENGINEER



John Zeman Date 5/29/19
JOHN ZEMAN
ILLINOIS PROFESSIONAL ENGINEER
NO. 062-065759
Exp. Date 11/30/19

Farnsworth GROUP
2709 MCGRAW DRIVE
BLOOMINGTON, ILLINOIS 61704
(309) 663-9435 / Info@f-w.com



GENERAL NOTES

- 1.) For stabilization, all type III barricades shall require a minimum of eight sand bags per barricade.
- 2.) Where section or subsection monuments are encountered, the Engineer shall be notified before such monuments are removed. The Contractor shall protect and carefully preserve all monuments until an authorized surveyor or agent has witnessed or otherwise referenced their location. The Contractor shall be responsible for having an authorized surveyor re-establish any section or subsection monuments destroyed by the Contractor's operations.
- 3.) The finished earthwork shall have a vegetation sustaining soil covering the top four inches in areas to be seeded or sodded. The vegetation sustaining soil required will not be paid for separately but shall be included in the cost of structure excavation.
- 4.) All elevations refer to U.S.G.S. mean sea level datum.
- 5.) Abandoned underground utilities that conflict with construction shall be disposed of outside the limits of the right of way according to Article 202.03 of the Standard Specifications and as directed by the Engineer. This work will not be paid for separately, but shall be included in the cost of structure excavation.
- 6.) Any reference to a standard in these plans shall be interpreted to mean the edition as indicated by the subnumber shown in the list of standards included in these plans.
- 7.) The Contractor shall be responsible for protecting utility property from construction operations as outlined in Article 107.39 of the Standard Specifications.
- 8.) The following rates of application have been used in calculating plan quantities:

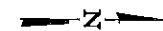
Granular Materials	2.05	Tons / Cu. Yd.

- 9.) Work performed by the McLean County Highway Department:
 - Permanent Seeding
 - Furnish and erect guardrail rail elements

COMMITMENTS

None

PLAN

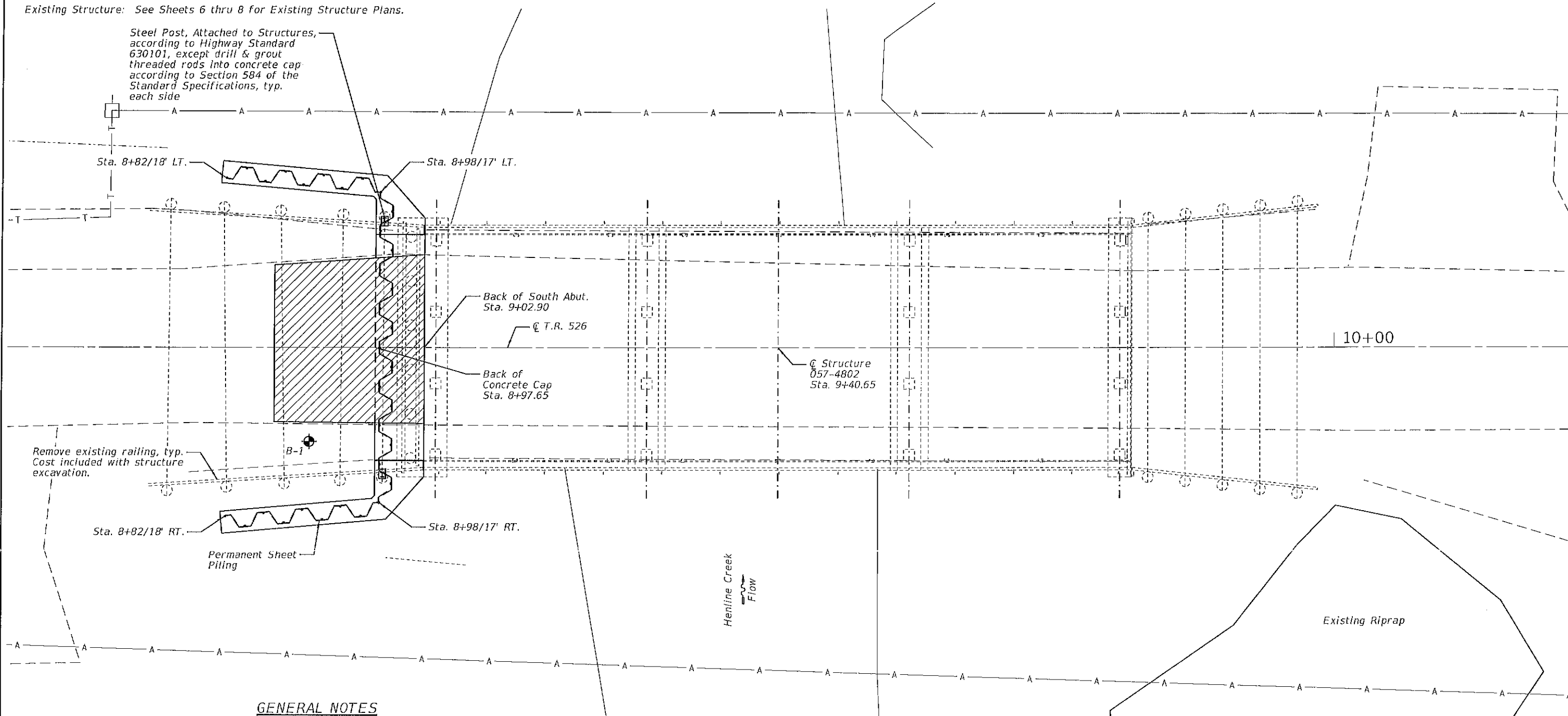


LEGEND

Aggregate Base Course, Type B (Special), 12" (min)

Benchmarks: #01, Nail in first power pole South of SN 057-4802, East side of 3300E Road. Elevation = 738.34.
 #02, Nail in first power pole North of SN 057-4802, East side of 3300E Road. Elevation = 737.94.

Existing Structure: See Sheets 6 thru 8 for Existing Structure Plans.



GENERAL NOTES

- 1.) Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the actual in place measured quantity.
- 2.) Exposed edges shall be beveled 3/4".
- 3.) Reinforcement bars designated (E) shall be epoxy coated.
- 4.) There will be no additional compensation should any reinforcement need to be cut or bent in the field.
- 5.) When bricks are used to support reinforcing bars, only full bricks shall be used. Broken or partial bricks will not be allowed. Bricks that become broken shall be replaced at no additional compensation.
- 6.) Removal of existing timber piles, timber lagging, or tie rods in order to install permanent sheet piling shall be considered included in the cost of "Concrete Removal". The existing closed timber abutment and timber piles shall remain in place, while the existing timber piles at the wing walls shall be removed to 2' below grade. See special provisions for "Concrete Removal" and "Structure Excavation".
- 7.) General tolerances for a straight and plumb sheet piling wall shall be in accordance with the following:
 - a. Deviation normal to the wall line at the top of the pile shall be $\pm 2"$.
 - b. Finished level deviation from normal level at the top of the pile shall be $\pm 3/4"$ and at the bottom of the pile shall be $\pm 4 3/4"$.
 - c. Deviation of verticality normal to the line of piles shall be $\pm 1\%$ of the driving depth.
 - d. Deviation of verticality along the line of piles shall be $\pm 1/2\%$ of the driving depth.

PLAN

DESIGN SPECIFICATIONS

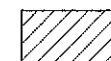
2017 AASHTO LRFD Bridge Design Specifications, Customary U.S. Units, 8th Edition

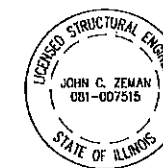
DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi (Cast-in-Place)
 $f_y = 50,000$ psi (ASTM A 572 Sheet Piling)
 $f_y = 60,000$ psi (Reinforcement)

LEGEND

 Aggregate Base Course, Type B (Special), 12" (min.)



John C. Zeman Date **5/29/19**
 JOHN C. ZEMAN
 ILLINOIS STRUCTURAL ENGINEER
 NO. 081-007515
 Exp. Date 11/30/20

Farnsworth GROUP
 2709 McGRAW DRIVE
 BLOOMINGTON, ILLINOIS 61704
 (309) 663-8435 / info@fgr.com

DESIGNED - IIP	REVISED
CHECKED - JCZ	REVISED
DRAWN - DJM	REVISED
DATE - 05/29/19	REVISED
CHECKED - JML	REVISED

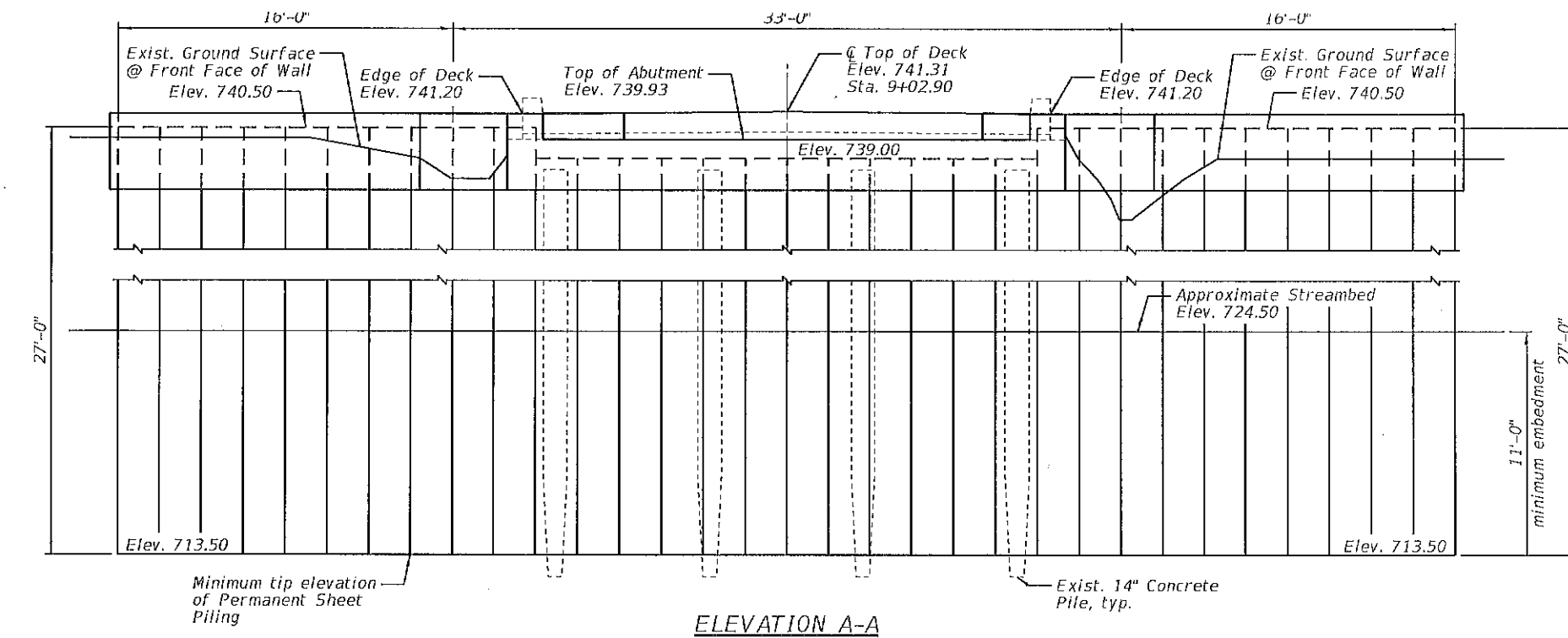
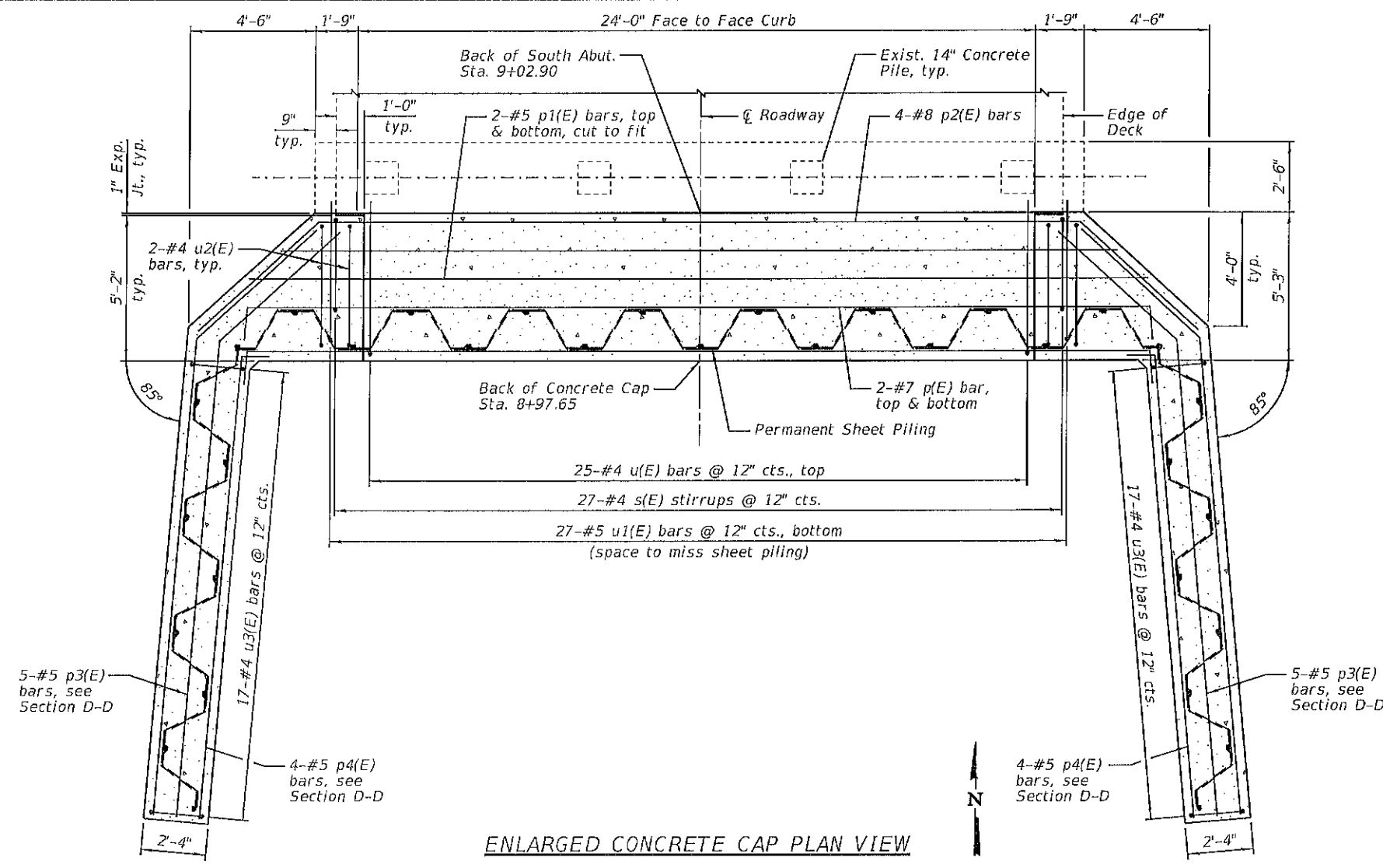
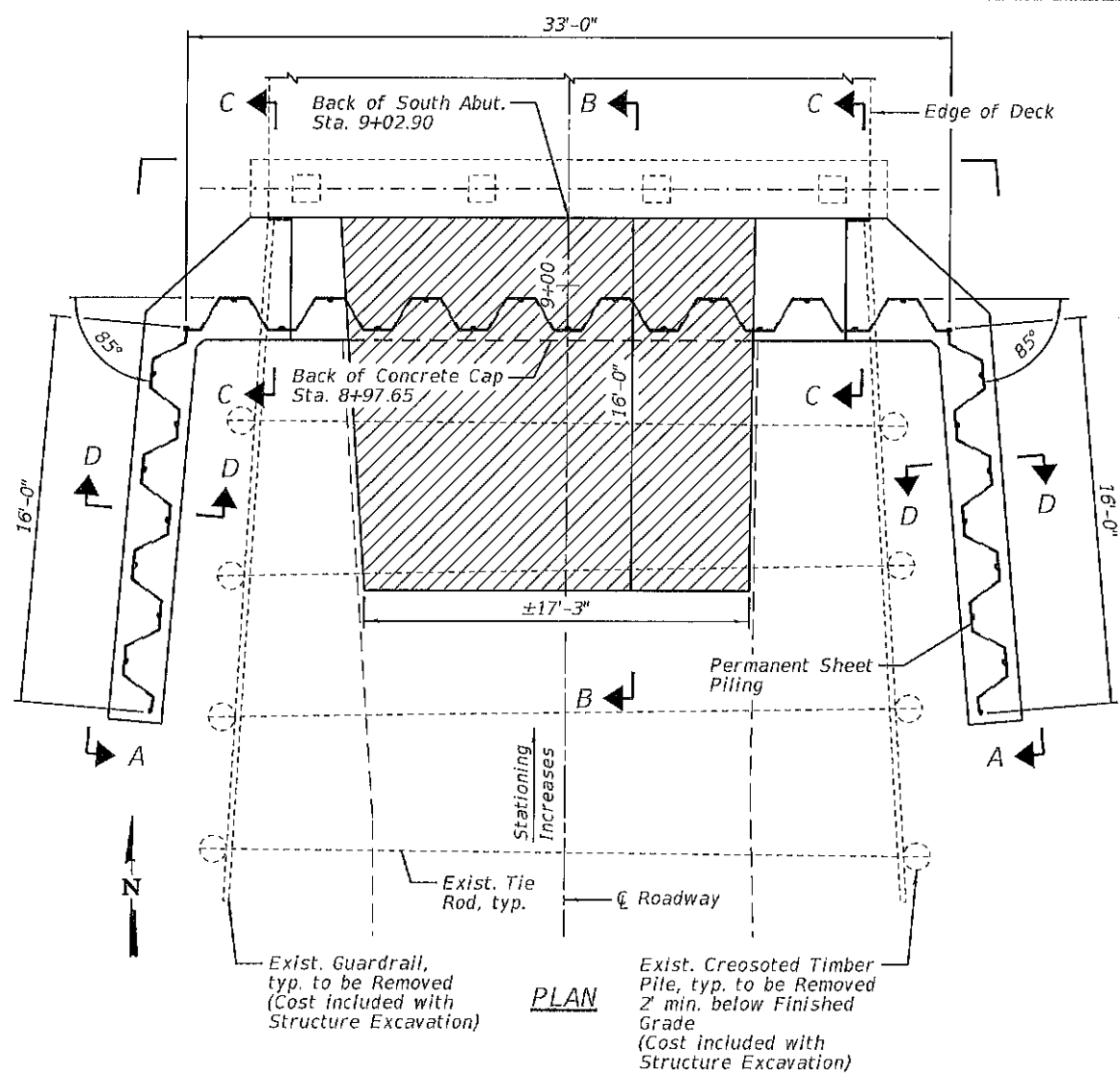
**McLEAN COUNTY
 HIGHWAY DEPARTMENT**

**GENERAL STRUCTURE PLAN
 STRUCTURE NO. 057-4802**

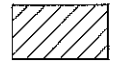
SHEET NO. 3 OF 9 SHEETS

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
526	19-20126-00-BR	McLEAN	9	3

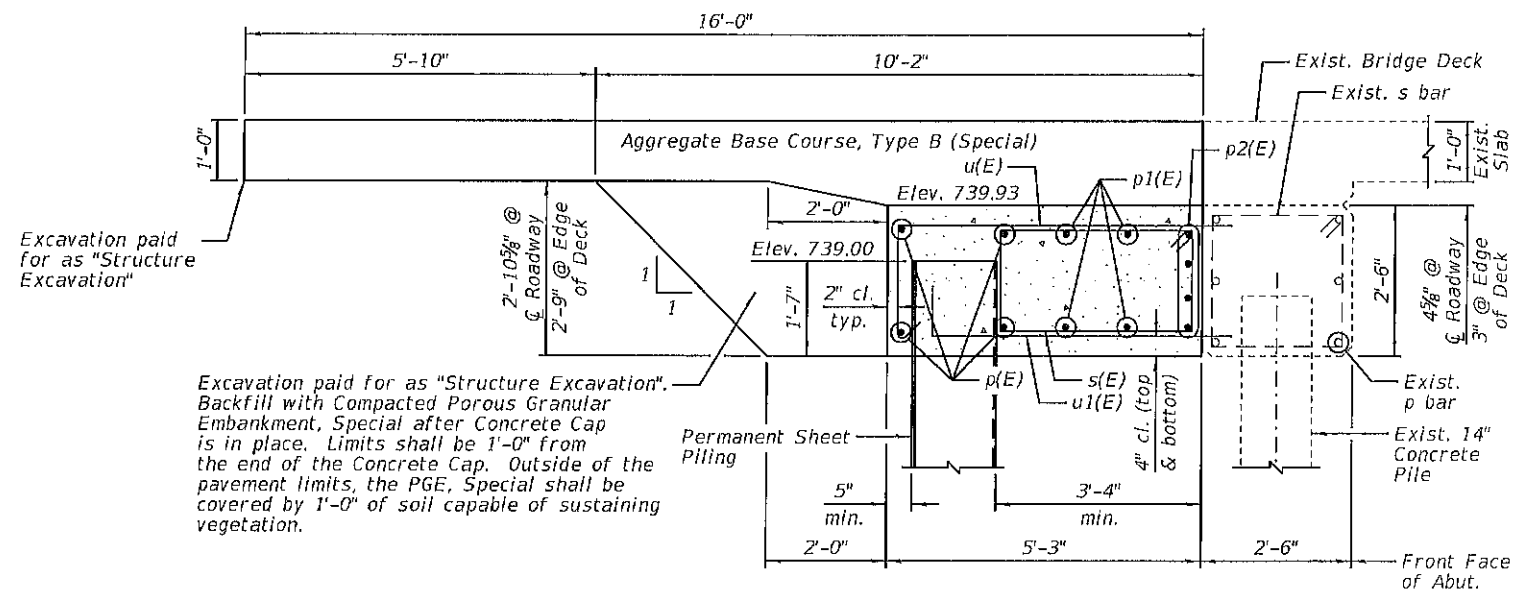
ILLINOIS FED. AID PROJECT



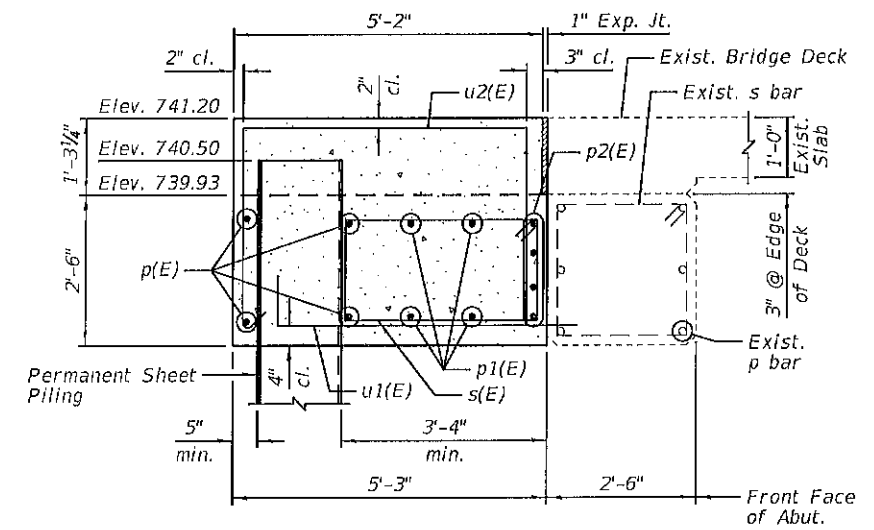
LEGEND

 Aggregate Base Course, Type B (Special), 12" (min.)

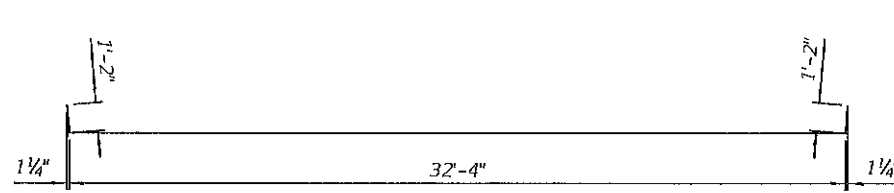
- NOTES:**
- 1.) See Sheet 5 for Sections B-B thru D-D.
 - 2.) See Sheet 5 for Reinforcing Bill of Material.
 - 3.) The minimum effective section modulus of the permanent sheet pile wall shall be 15 in.³/ft. The minimum effective moment of inertia of the permanent sheet pile wall shall be 80 in.⁴/ft. The height of the section shall be no less than 9" and no greater than 18".
 - 4.) Sheet piling shall be installed in full length segments, and no splicing of segments will be allowed.
 - 5.) Drill & grout u(E) and u1(E) bars into existing concrete according to Section 584 of the Standard Specifications. The type of chemical adhesive shall be approved by the Engineer.



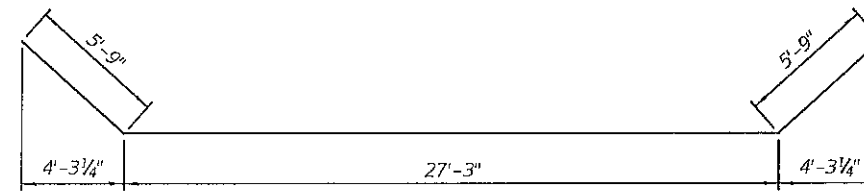
SECTION B-B



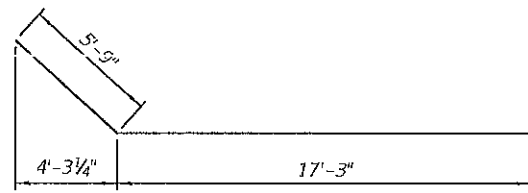
SECTION C-C
Porous Granular Embankment, Special
is not shown for clarity.



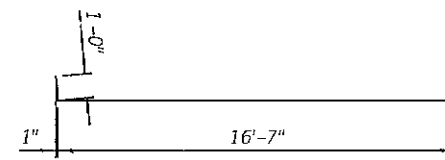
p(E) BAR



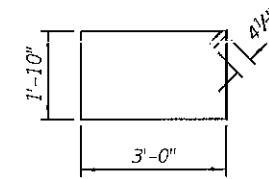
p2(E) BAR



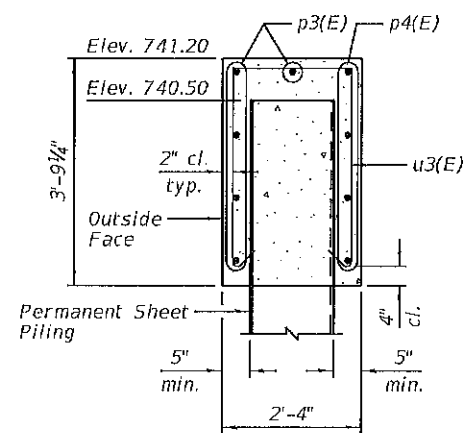
p3(E) BAR



p4(E) BAR

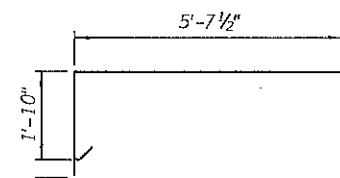


s(E) BAR

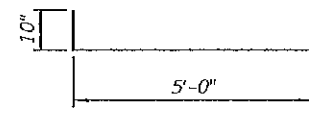


SECTION D-D

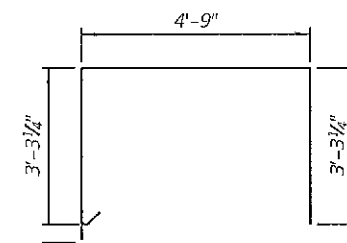
Porous Granular Embankment, Special
is not shown for clarity.



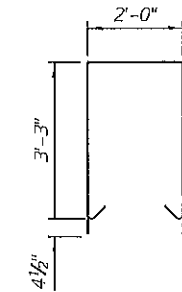
u(E) BAR
135° Hook



u1(E) BAR



u2(E) BAR
135° Hook



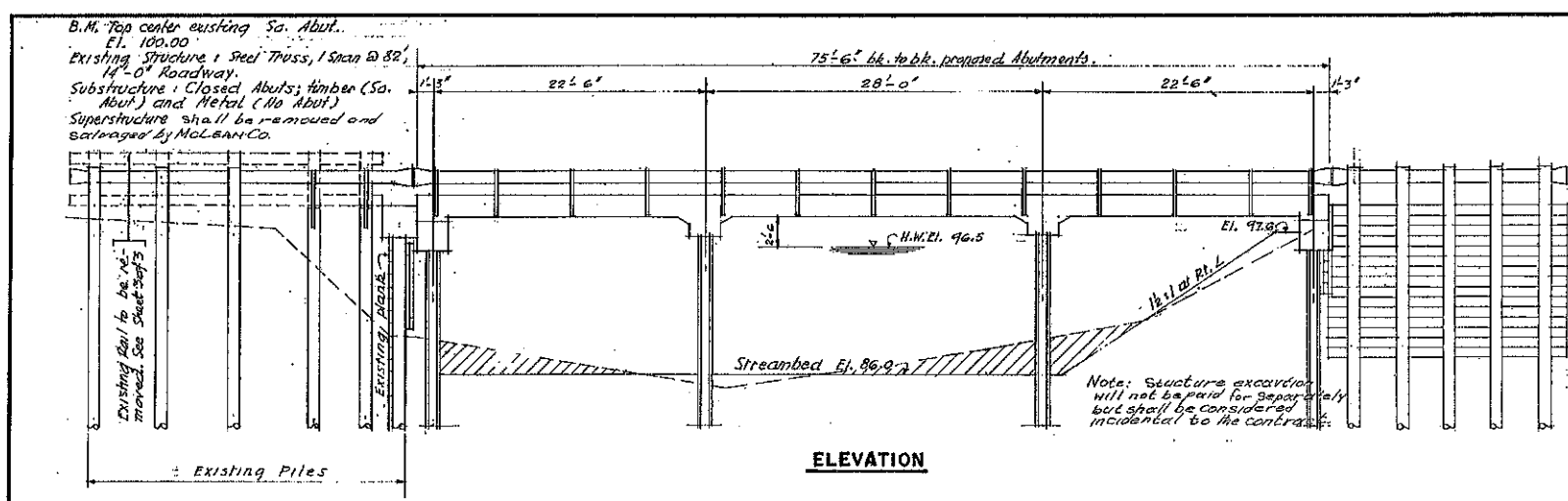
u3(E) BAR
135° Hook

REINFORCING BILL OF MATERIAL

Bar	No.	Size	Length	Shape
p(E)	4	#7	34'-8"	┌
p1(E)	4	#5	32'-2"	—
p2(E)	4	#8	38'-9"	┌
p3(E)	10	#5	23'-0"	┌
p4(E)	8	#5	17'-7"	┌
s(E)	27	#4	10'-5"	□
u(E)	25	#4	7'-10"	┌
u1(E)	27	#5	5'-10"	┌
u2(E)	4	#4	11'-8"	┌
u3(E)	34	#4	9'-3"	┌

NOTES:

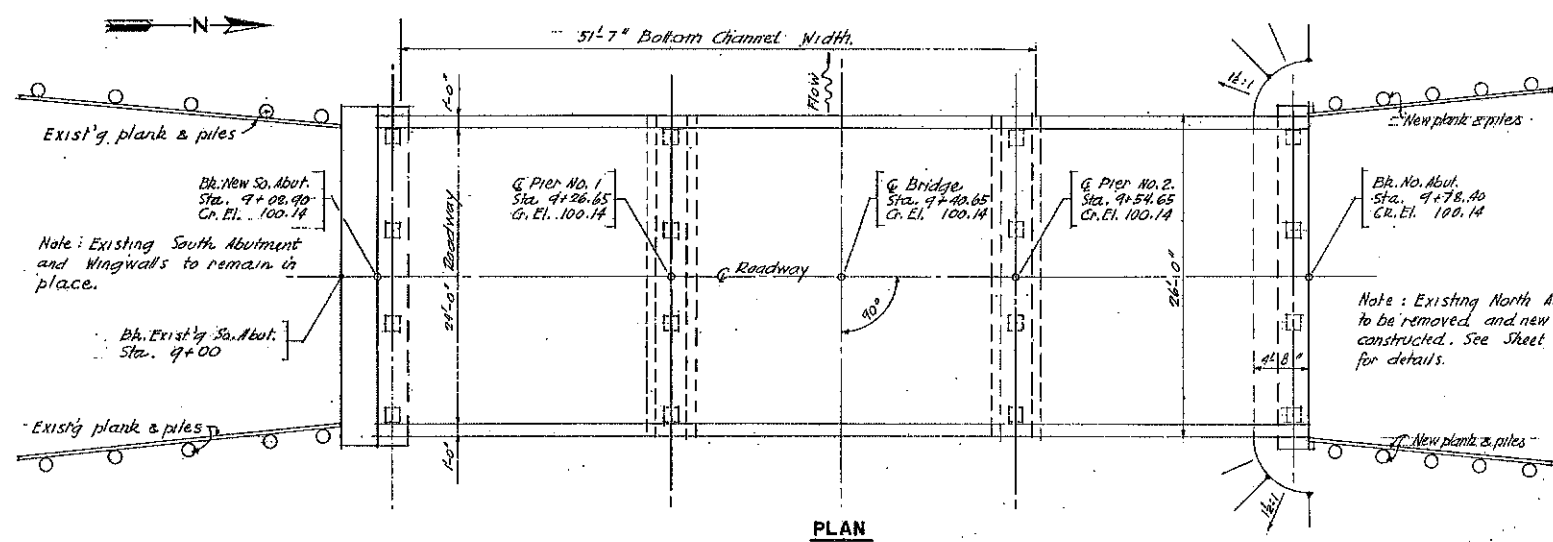
- See Sheet 4 for location of Sections B-B thru D-D.
- Drill & grout u(E) and u1(E) bars into existing concrete according to Section 584 of the Standard Specifications. The type of chemical adhesive shall be approved by the Engineer.



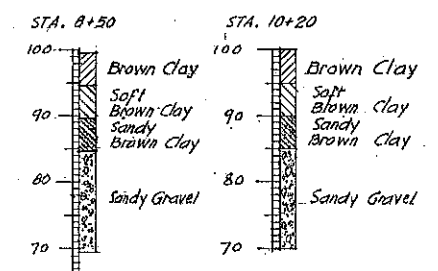
ELEVATION

GENERAL NOTES

Class X Concrete shall be used throughout. Concrete floor slab shall be finished in accordance with Article 5.19 of the Standard Specifications and shall be poured in one continuous operation. Curbs shall be poured monolithically with the slab. For items Graphited Asbestos Bearing Pads, Metal Plate Bridge Rail and Name Plates see Special Provisions. The Contractor shall drive one concrete test pile in a permanent location in one pier, as directed by the Engineer, before casting the remainder of the concrete piles. Pier piles shall have a minimum penetration of 15 feet below streambed elevation and wing piles shall be driven a minimum of 10 feet below undisturbed earth. All lumber shall be creosoted and full sawn rough.



PLAN



BORING DATA

TOTAL BILL OF MATERIAL

ITEM	SUPER.	SUB.	TOTAL
Class X Concrete	Cu. Yds.	86.2	12.5
Reinforcement Bars	Lbs.	14,180	2,030
Furnishing Precast Concrete Piles 14' Lin. Ft.	Lin. Ft.	146	404
Test Piles (Precast concrete)	Each	1	1
Driving Precast concrete Piles	Lin. Ft.	146	404
Furnishing Creosoted Piles 20' to 36.0'	Lin. Ft.	270	270
Driving Timber Piles	Lin. Ft.	270	270
Treated Timber	R.B.M.	1550	1550
Hardware	Lbs.	343	343
Name Plates	Each	1	1
Metal Plate Bridge Rail	Lin. Ft.	145	229

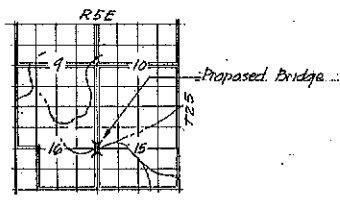
CORPE BRIDGE
 HTS-512 1963
 MC LEAN COUNTY
 SB 4 - 71 - 1459
 R.J. KELLER, SOFT OF HWYS.

WATERWAY DATA

Drainage Area: 21,100 Acres
 Present Opening: 578 Sq. Ft.
 Required Opening (10 yrs): 600 Sq. Ft.
 Proposed Opening: 600 Sq. Ft.

DESIGN STRESSES

$f_s = 20,000$ psi. (reinf)
 $f_c = 1,400$ psi.
 $n = 10$



LOCATION PLAN

LETTERING FOR NAME PLATE

Locate Name Plate at Southeast corner of bridge. See Special Provisions.

John C. Cannon
 Illinois Structural # 2529



GENERAL PLAN & ELEVATION
CORPE BRIDGE
LAWDALE ROAD DISTRICT
MC LEAN COUNTY
STATION 9+40.65

WALTER E. HANSON & COMPANY
 ENGINEERS-CONSULTANTS
 PHONE: GL 6-26-63
 CHIEF: REO
 DATE: 6-26-63
 DRAWN: REO
 NO.: 62-556

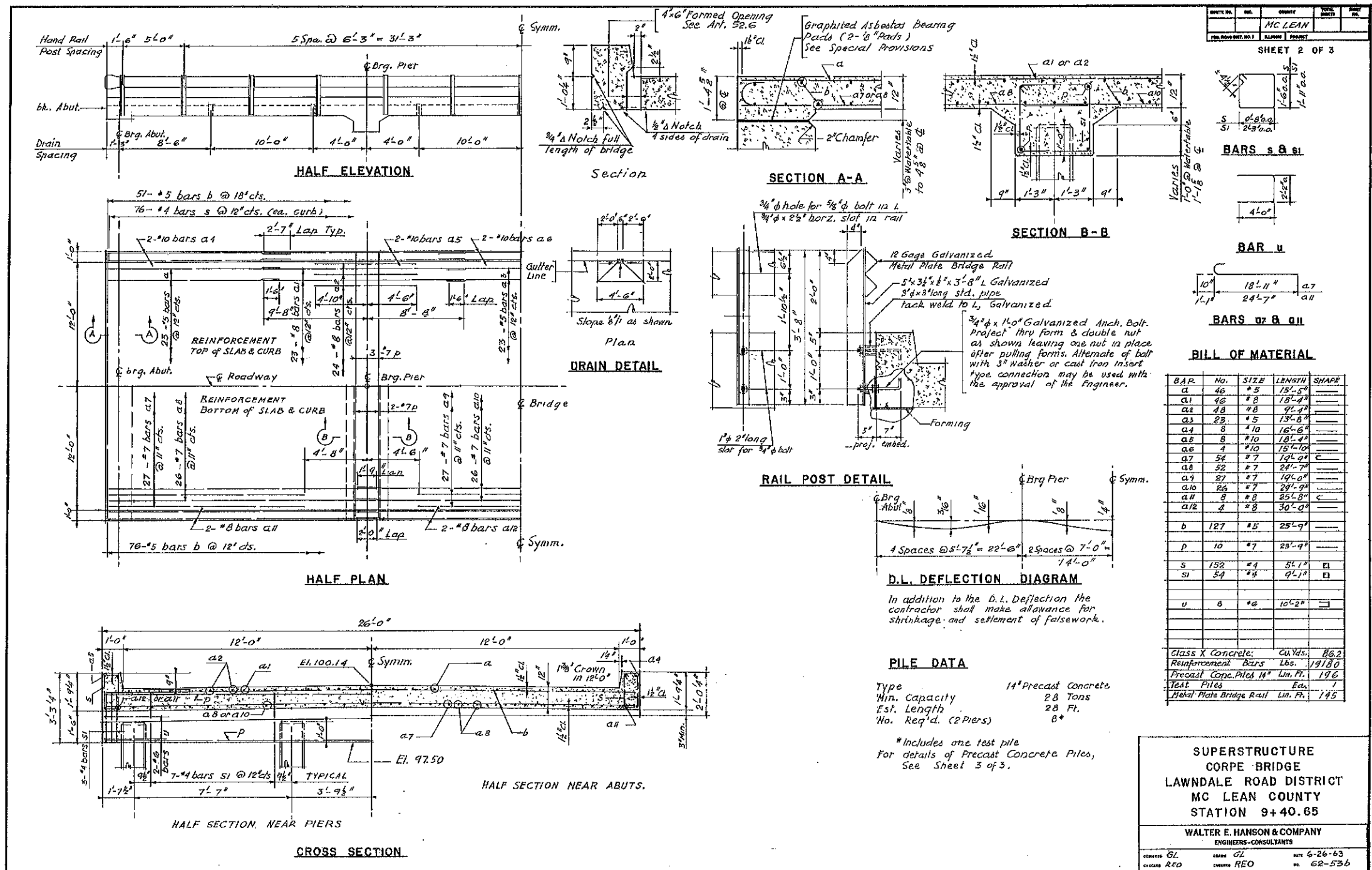
087-4802

FOR INFORMATIONAL
 USE ONLY

DESIGNED - IIP	REVISOR
CHECKED - JCZ	REVISOR
DRAWN - DJM	REVISOR
CHECKED - JML	REVISOR
DATE - 05/29/19	

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
526	19-20126-00-BR	MCLEAN	9	6

ILLINOIS FED. AID PROJECT



DATE	BY	CHKD	TITLE
			MC LEAN
SHEET 2 OF 3			

BARS s & si

BAR u

BARS u7 & u11

BILL OF MATERIAL

BAR	No.	SIZE	LENGTH	SHAPE
a1	46	#5	15'-5"	
a1	46	#8	18'-0"	
a2	48	#8	9'-8"	
a3	23	#5	13'-8"	
a4	8	#10	16'-6"	
a5	8	#10	18'-4"	
a6	4	#10	15'-10"	
a7	34	#7	15'-10"	
a8	22	#7	24'-7"	
a9	27	#7	19'-0"	
a10	26	#7	29'-9"	
a11	8	#8	25'-8"	
a12	4	#8	30'-0"	
b	127	#5	25'-9"	
p	10	#7	23'-9"	
s	152	#4	35'-1"	E
si	54	#8	9'-1"	E
u	8	#6	10'-2"	

PILE DATA

Type 14" Precast Concrete
 Min. Capacity 28 Tons
 Est. Length 28 Ft.
 No. Req'd. (2 Piers) 8*

*Includes one test pile for details of Precast Concrete Piles, See Sheet 3 of 3.

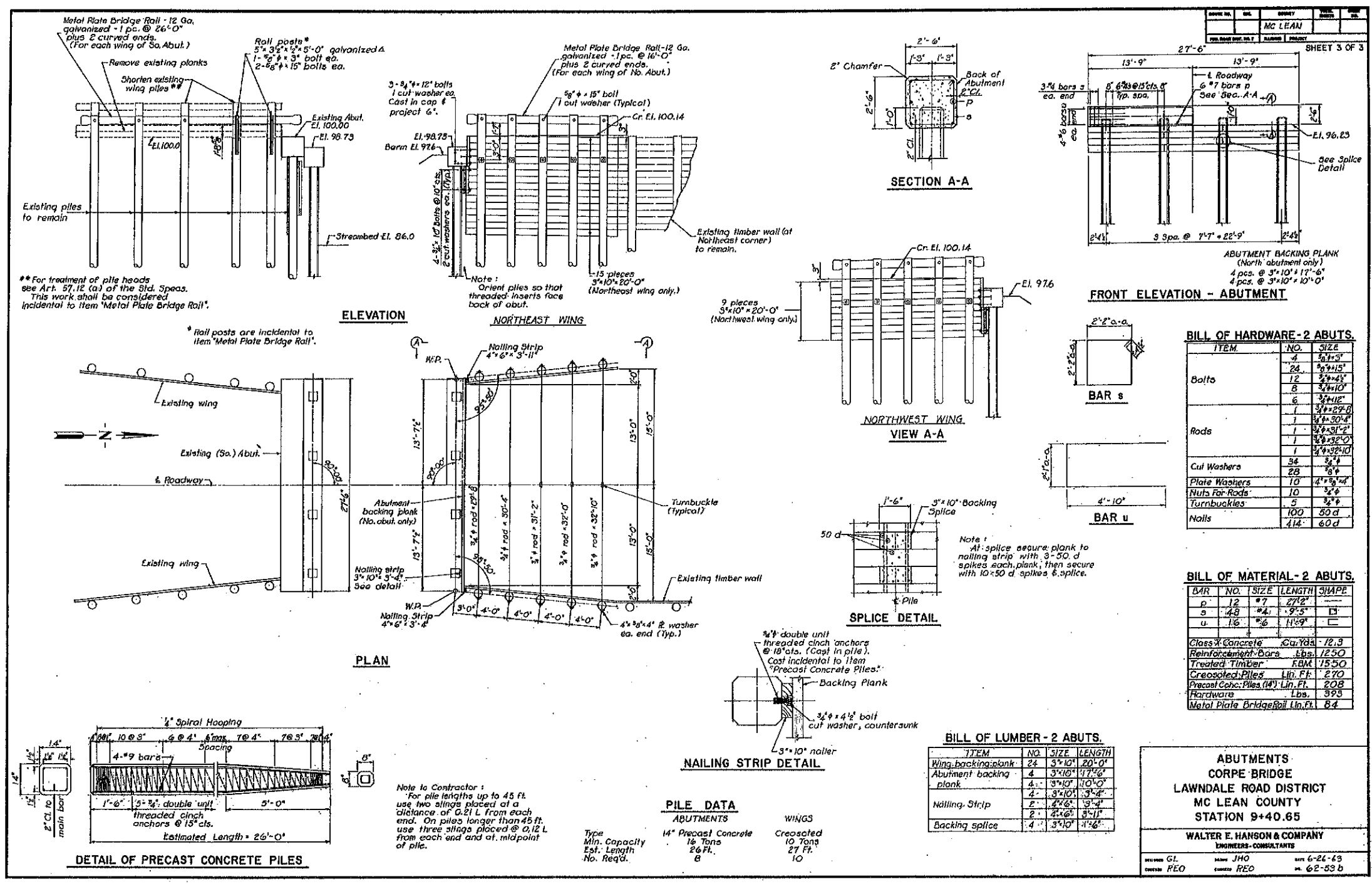
Class X Concrete	Cu Yds.	86.2
Reinforcement Bars	Lbs.	19180
Precast Conc. Piles 14" Dia.	Lin. Ft.	196
Test Piles	Eq.	1
Metal Plate Bridge Rail	Lin. Ft.	145

SUPERSTRUCTURE CORPE BRIDGE
LAWDALE ROAD DISTRICT
MC LEAN COUNTY
STATION 9+40.65

WALTER E. HANSON & COMPANY
 ENGINEERS-CONSULTANTS

DESIGNED BY: GL
 CHECKED BY: RED
 DATE: 6-26-63
 PROJECT NO: 62-536

FOR INFORMATIONAL USE ONLY



FOR INFORMATIONAL USE ONLY

ILLINOIS DEPARTMENT OF TRANSPORTATION
 Ramsey Geotechnical Engineering
 STRUCTURE BORING LOG

Page 1 of 1
 Date 3/25/19

ROUTE CR 3300 E DESCRIPTION Corbe Bridge

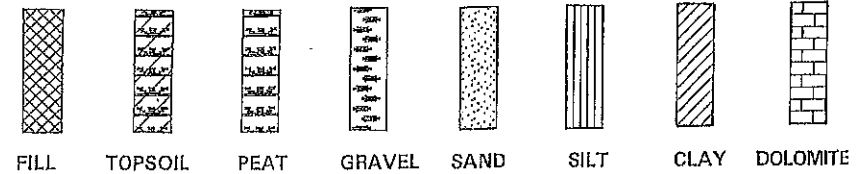
SECT. 19-20126-00-BR STRUCT. NO. DRILLED BY B. Williamson

COUNTY McLean LOCATION Lawndale Township S.15/16, TWP. 25N, RNG. 5E

Boring No.	DEPTH	SOIL	Qu	W	Surface Water Elev.	DEPTH	SOIL	Qu	W
B-1 S. Abutment	H	S	tsf	%	Groundwater Elev.:	H	S	tsf	%
Station					when drilling				
Offset					at Completion				
					after	Hrs.			
Surface Elev. 100.00 ft					86.0				
					90.0				
Loose dark brown-brown fine to coarse SAND, with clay binder	2		16						
	2								
	3								
					72.00				
	3		24						
	2								
	3								
Soft dark brown SILTY CLAY LOAM	2	B	29						
	2	0.57							
	3								
Loose gray fine to coarse SAND, with clay binder	1		16						
	2								
	3								
Medium dense brown fine to medium SAND	3		9						
	5								
	7								
Medium dense gray fine to medium SAND	3		14						
	4								
	6								
	7								
Medium stiff to stiff gray SILTY LOAM	3	B	14						
	4	0.74							
	5								
	3	B	12						
	3	1.07							
	4								
	3	B	12						
	4	0.90							
	5								
End of Boring at 60'	14	P	10						
	21	4.5+							
	41								

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test
 Stations, Depths, Offset, and Elevations are in Feet

TESTING SERVICE CORPORATION
 LEGEND FOR BORING LOGS



SAMPLE TYPE:

- SS = Split Spoon
- ST = Thin-Walled Tube
- A = Auger

FIELD AND LABORATORY TEST DATA:

- N = Standard Penetration Resistance in Blows per Foot
- Wc = In-Situ Water Content
- Qu = Unconfined Compressive Strength in Tons per Square Foot
- * Pocket Penetrometer Measurement; Maximum Reading = 4.5 tsf
- γD = Dry Unit Weight in Pounds per Cubic Foot

WATER LEVELS:

- ▽ While Drilling
- ▽ End of Boring
- ▽ 24 Hours

SOIL DESCRIPTION:

MATERIAL	PARTICLE SIZE RANGE
BOULDER	Over 12 inches
COBBLE	12 inches to 3 inches
Coarse GRAVEL	3 inches to 3/4 inch
Small GRAVEL	3/4 inch to No. 4 Sieve
Coarse SAND	No. 4 Sieve to No. 10 Sieve
Medium SAND	No. 10 Sieve to No. 40 Sieve
Fine SAND	No. 40 Sieve to No. 200 Sieve
SILT and CLAY	Passing No. 200 Sieve

COHESIVE SOILS

CONSISTENCY	Qu
Very Soft	Less than 0.3
Soft	0.3 to 0.6
Stiff	0.6 to 1.0
Tough	1.0 to 2.0
Very Tough	2.0 to 4.0
Hard	4.0 and over

COHESIONLESS SOILS

RELATIVE DENSITY	N
Very Loose	0 - 4
Loose	4 - 10
Firm	10 - 30
Dense	30 - 50
Very Dense	50 and over

MODIFYING TERM

MODIFYING TERM	PERCENT BY WEIGHT
Trace	1 - 10
Little	10 - 20
Some	20 - 35