

CONTRACT NO. : 95928

04-28-2023 LETTING ITEM 097

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED  
STP OFF-SYSTEM BRIDGE FUNDING

TR 178 (N 725 STREET) OVER STEVE BRANCH  
SECTION 19-05125-00-BR  
KASKASKIA ROAD DISTRICT  
PROJECT NO. EDEX(677)  
FAYETTE COUNTY  
JOB NO. C-97-003-22

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 178	19-05125-00-BR	FAYETTE	11	1
			CONTRACT NO. 95928	

GCL JOB NO. 20-6016

INDEX OF SHEETS

- COVER SHEET
- SUMMARY OF QUANTITIES, GENERAL NOTES, AND TYPICAL SECTIONS
- PLAN AND PROFILE OF ROADWAY
- GENERAL PLAN AND ELEVATION
- 5.-6. PRECAST PRESTRESSED CONCRETE DECK BEAM DETAILS
- STEEL RAILING, TYPE S1 DETAILS
- ABUTMENT DETAILS
- HP PILE DETAILS
- 10.-11. CROSS SECTIONS OF ROADWAY

HIGHWAY STANDARDS (SEE SPECIFICATIONS)

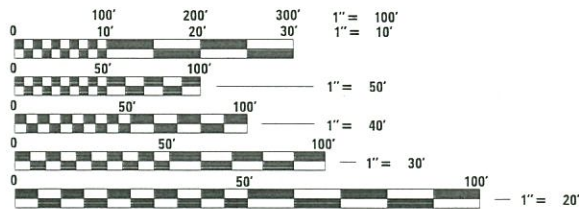
- 000001-08 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 515001-04 NAME PLATE FOR BRIDGES
- 701901-08 TRAFFIC CONTROL DEVICES
- 725001-01 OBJECT AND TERMINAL MARKERS
- BLR 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

SOIL BORINGS (SEE SPECIFICATIONS)

DESIGN CLASSIFICATION: RURAL LOCAL ROAD

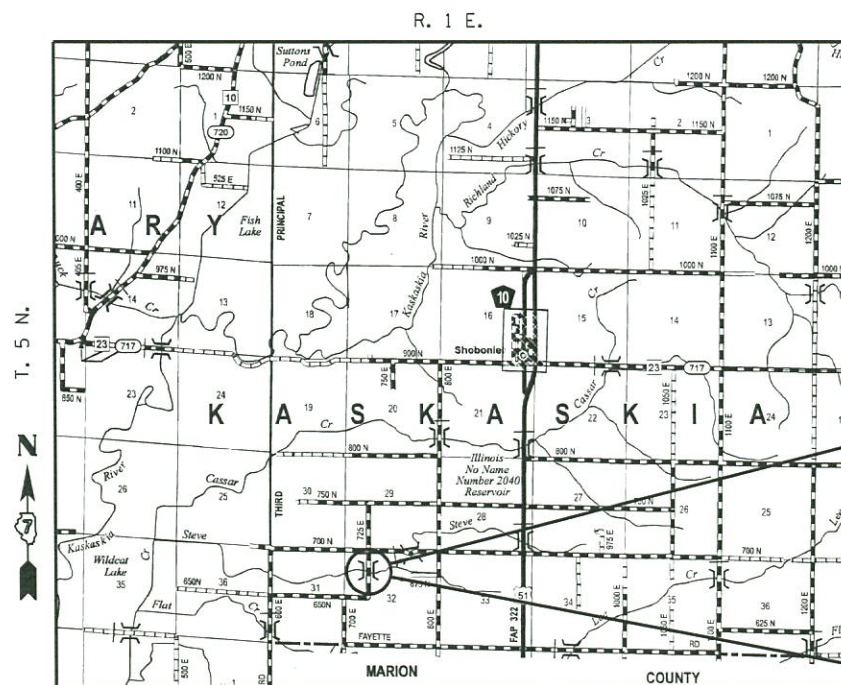
ADT<sub>2021</sub> : 50

DESIGN SPEED: 30mph



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.  
JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS  
1-800-892-0123 or 811 Website: <http://www.illinois1call.com>

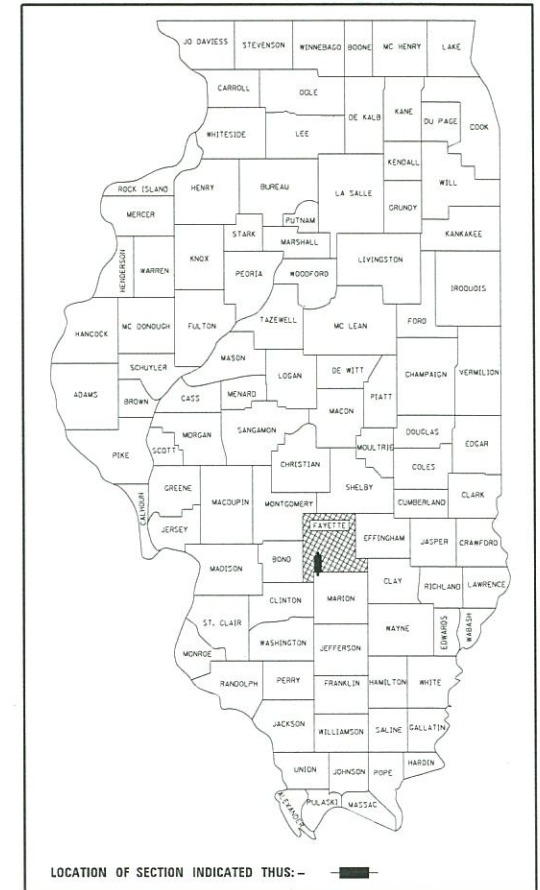


SECTION ENDS  
STA. 12+24.89

SECTION 19-05125-00-BR INCLUDES THE CONSTRUCTION OF A SINGLE SPAN PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE CARRYING TR 178 OVER STEVE BRANCH, 56'-0" BK. TO BK. ABUTMENTS X 24' WIDE, NO SKEW. EXISTING STRUCTURE NO. 026-3091 PROPOSED STRUCTURE NO. 026-3477

SECTION BEGINS  
STA. 7+55.14

LOCATION: NEAR THE NW CORNER OF THE SE 1/4 OF THE NW 1/4, SECTION 32, T5N, R1E, 3RD P.M.  
GROSS LENGTH OF PROJECT: 469.75 FT. = 0.089 MI.  
NET LENGTH OF PROJECT: 469.75 FT. = 0.089 MI.



LOCATION OF SECTION INDICATED THUS: -

FAYETTE COUNTY  
HIGHWAY DEPARTMENT

APPROVED 11-7-2022  
*Michael J. Taylor*  
FAYETTE COUNTY, COUNTY ENGINEER

PASSED 11/10/22  
*Brett Walker*  
DISTRICT SEVEN ENGINEER OF LOCAL ROADS & STREETS

RELEASING FOR BID  
BASED ON LIMITED  
REVIEW 11/10/22  
*Jeffrey Myers PW*  
REGION FOUR ENGINEER

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS



Brent L. Taylor 11/07/2022  
BRENT L. TAYLOR  
SALEM, ILLINOIS  
ILLINOIS LICENSED PROFESSIONAL  
ENGINEER NO. 062-066114  
EXPIRES NOV. 30, 2023

gonzalez

GONZALEZ COMPANIES, LLC  
7 CARPENTER DRIVE  
SALEM, IL 62881  
PHONE (618) 222-2221  
www.gonzalezcos.com  
ILLINOIS PROFESSIONAL DESIGN FIRM 184.304564

### UTILITIES

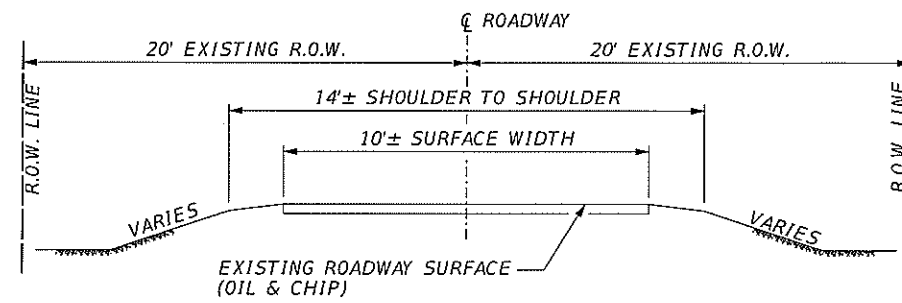
DESIGN PHASE LOCATE  
J.U.L.I.E. DIG NO. A2852420-00A  
DATE: 10/12/2021

ELECTRIC:  
AMEREN ILLINOIS  
NATHAN HILL  
NHILL2@AMEREN.COM  
PHONE: 618-301-5327

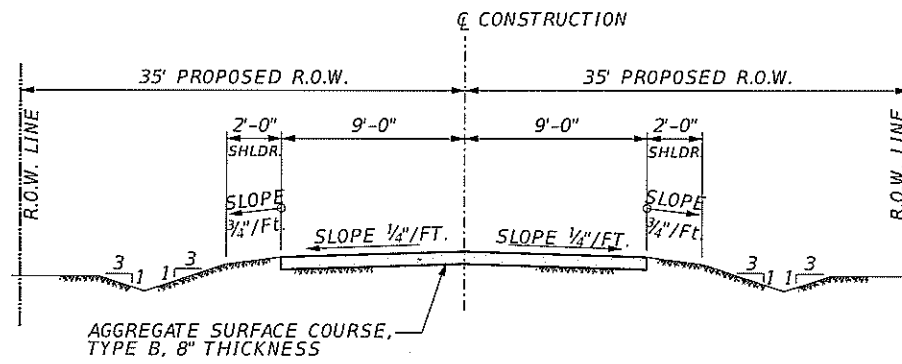
WATER:  
F M C WATER COMPANY  
JASON GREEN  
618-292-7622 OR 618-532-8569  
CWSWATER@NETWITZ.NET

FAYETTE WATER COMPANY  
DENNIS VAUGHN  
618-427-3000  
FWC\_DRV@FRONTIER.COM

TELEPHONE:  
FRONTIER COMMUNICATIONS  
KALIN HINSHAW  
815-895-1515  
KALIN.HINSHAW@FTR.COM



TYPICAL SECTION  
EXISTING APPROACH ROADWAY



TYPICAL SECTION  
PROPOSED APPROACH ROADWAY

### GENERAL NOTES

- THIS SECTION SHALL BE CONSTRUCTED ACCORDING TO THE PLANS, THE SPECIAL PROVISIONS, AND THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JANUARY 1, 2022.
- ROADWAY CENTERLINE PROFILES REFER TO THE FINISHED SURFACE.
- EXISTING UTILITIES SHOWN ARE LOCATED FROM SURFACE OBSERVATIONS OR INFORMATION PROVIDED BY THE RESPECTIVE UTILITIES AND MUST BE CONSIDERED APPROXIMATE AND ARE ONLY INCLUDED FOR THE CONVENIENCE OF THE BIDDER. THERE MAY BE OTHERS, THE EXACT LOCATION OF WHICH ARE UNKNOWN AND NOT SHOWN. THE CONTRACTOR WILL BE RESPONSIBLE FOR NOTIFYING THE RESPECTIVE UTILITIES BEFORE WORK IS BEGUN. FIELD MARKING OF UNDERGROUND UTILITIES MAY BE OBTAINED BY PROVIDING A MINIMUM OF 48 HOURS ADVANCE NOTICE THROUGH THE J.U.L.I.E. SYSTEM BY CALLING 1-800-892-0123, 811, OR BY DIRECT CONTACT WITH NON-MEMBERS OF J.U.L.I.E.
- FACTORS USED FOR QUANTITY CALCULATIONS ARE AS FOLLOWS:  
 POROUS GRANULAR EMBANKMENT 2.1 TONS/CU. YD.  
 STONE DUMPED RIPRAP 130 POUNDS/CU. FT.  
 AGGREGATE SURFACE COURSE 2.1 TONS/CU. YD.
- COMMITMENTS:  
 NO TREE CLEARING WILL BE ALLOWED OR PERFORMED FROM APRIL 1 THROUGH SEPTEMBER 30, IN AN EFFORT TO CONSERVE THE NORTHERN LONG-EARED BAT AND THE INDIANA BAT.

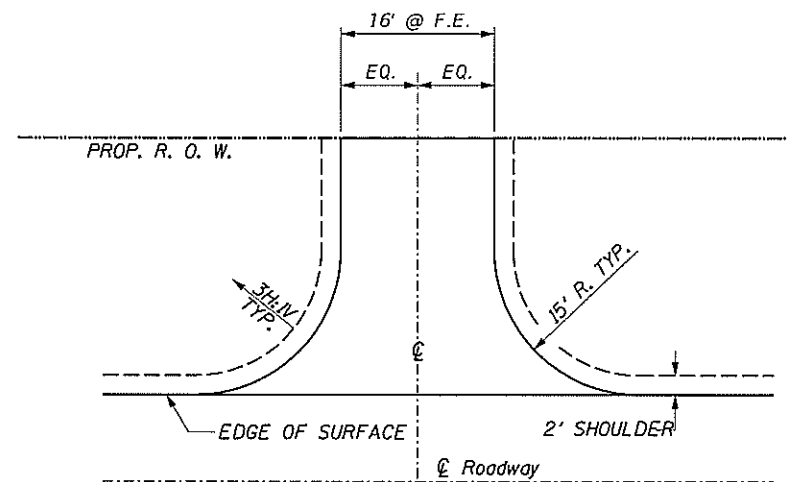
EXISTING FENCE REMOVAL / REPLACEMENT WITHIN THE LIMITS OF CONSTRUCTION WILL BE DONE BY OTHERS AND WILL BE COORDINATED BY THE TOWNSHIP. THE REMOVAL WILL BE DONE PRIOR TO THE START OF CONSTRUCTION.

THE COUNTY ENGINEER WILL NOTIFY PUBLIC SERVICE PROVIDERS PRIOR TO THE START OF CONSTRUCTION.

### SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	QUANTITY
20100500	TREE REMOVAL, ACRES	ACRE	0.24
20200100	EARTH EXCAVATION	CU YD	223
20300100	CHANNEL EXCAVATION	CU YD	282
20400800	FURNISHED EXCAVATION	CU YD	209
20700110	POROUS GRANULAR EMBANKMENT	TON	92
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	185
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	377
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50105220	PIPE CULVERT REMOVAL	FOOT	20
50300225	CONCRETE STRUCTURES	CU YD	29.2
50300280	CONCRETE ENCASEMENT	CU YD	2.8
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	1296
50800105	REINFORCEMENT BARS	POUND	4490
Δ 50900205	STEEL RAILING, TYPE S1	FOOT	112
51201600	FURNISHING STEEL PILES HP12X53	FOOT	388
51202305	DRIVING PILES	FOOT	388
51203600	TEST PILE STEEL HP12X53	EACH	1
51204650	PILE SHOES	EACH	8
51500100	NAME PLATES	EACH	1
542D0223	PIPE CULVERTS, CLASS D, TYPE 1 18"	FOOT	66
67100100	MOBILIZATION	L SUM	1
Δ 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.3
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1

Δ SPECIALTY ITEMS



TYPICAL ENTRANCE DETAIL

LT., STA. 9+00 (AGG. SURF. CSE. TY. B, 6" THICKNESS, 20 TON)  
 LT., STA. 10+72 (AGG. SURF. CSE. TY. B, 6" THICKNESS, 20 TON)  
 (QUANTITY INCLUDED IN SOQ)



GONZALEZ COMPANIES, LLC  
 7 CARPENTER DRIVE  
 SALEM, IL 62981  
 PHONE (618) 222-2221  
 www.gonzales.com  
 ILLINOIS PROFESSIONAL DESIGN FIRM 184.004564

DESIGNED - BLT  
 DRAWN - JN, KMA, JMW  
 CHECKED - BLT  
 DATE - 11/07/2022

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES, GENERAL NOTES, AND TYPICAL SECTIONS

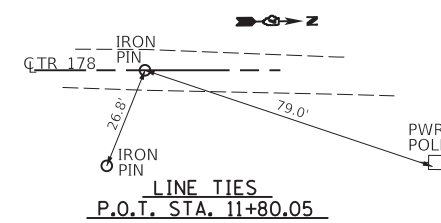
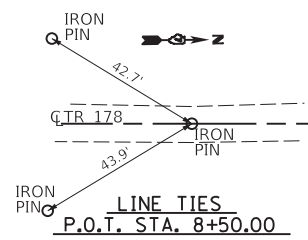
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 178	19-05125-00-BR	FAYETTE	11	2
			CONTRACT NO. 95928	

GCL JOB NO. 20-6016



PLAN	SURVEYED	DATE
	PLOTTED	
	ALIGNED	
	CHECKED	
	BY	
	NO.	

PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADES	
	CHECKED	
	BY	
	NO.	



EXISTING STRUCTURE: STRUCTURE NO.: 026-3091, SINGLE SPAN BRIDGE WITH REMOVED SUPERSTRUCTURE AND CLOSED CONCRETE ABUTMENTS (IN FAILED CONDITION). 26'±L. x 14'±W. NO SKEW. TO BE REMOVED.

TREE REMOVAL, ACRES	
LOCATION	TREE REMOVAL (ACRES)
RT., STA. 8+50 TO 9+25	0.06
LT., STA. 9+80 TO STA. 12+00	0.18
<b>TOTAL</b>	<b>0.24</b>

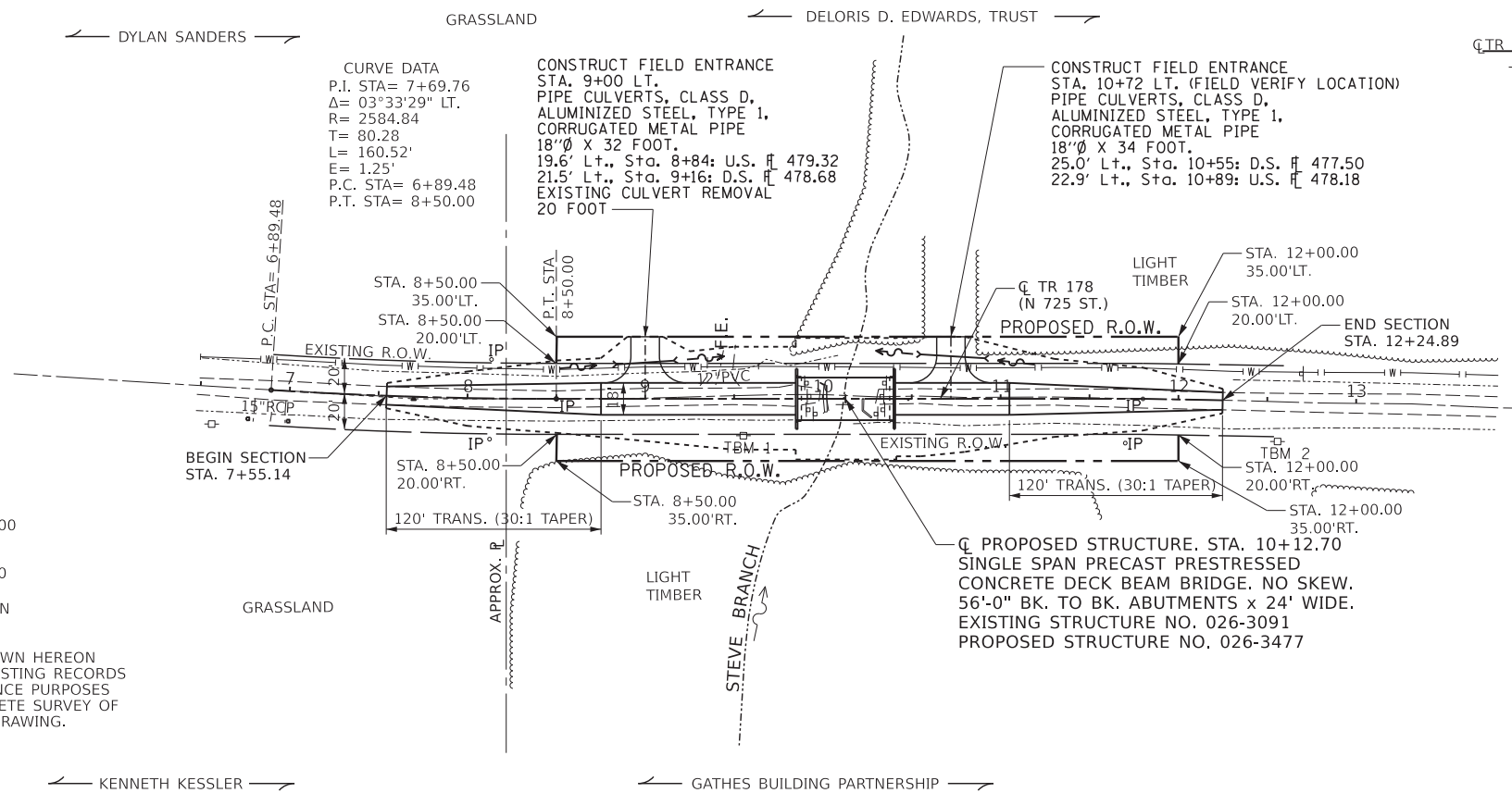
EARTHWORK SCHEDULE				
LOCATION	EARTH EXCAVATION CU. YD.	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE* CU. YD.	EMBANKMENT CU. YD.	EARTHWORK BALANCE** WASTE (+) OR SHORTAGE (-) CU. YD.
STA. 7+55.14 TO STA. 9+84.70	92	69	203	-134
STA. 10+40.70 TO STA. 12+24.89	131	98	173	-75
<b>TOTAL</b>	<b>223</b>	<b>167</b>	<b>376</b>	<b>-209</b>

\*25% SHRINKAGE      \*\*FURNISHED EXCAVATION

CURVE DATA  
P.I. STA= 7+69.76  
Δ= 03°33'29" LT.  
R= 2584.84  
T= 80.28  
L= 160.52'  
E= 1.25'  
P.C. STA= 6+89.48  
P.T. STA= 8+50.00

CONSTRUCT FIELD ENTRANCE STA. 9+00 LT. PIPE CULVERTS, CLASS D, ALUMINIZED STEEL, TYPE 1, CORRUGATED METAL PIPE 18"Ø X 32 FOOT. 19.6' Lt., Sta. 8+84; U.S. # 479.32 21.5' Lt., Sta. 9+16; D.S. # 478.68 EXISTING CULVERT REMOVAL 20 FOOT

CONSTRUCT FIELD ENTRANCE STA. 10+72 LT. (FIELD VERIFY LOCATION) PIPE CULVERTS, CLASS D, ALUMINIZED STEEL, TYPE 1, CORRUGATED METAL PIPE 18"Ø X 34 FOOT. 25.0' Lt., Sta. 10+55; D.S. # 477.50 22.9' Lt., Sta. 10+89; U.S. # 478.18

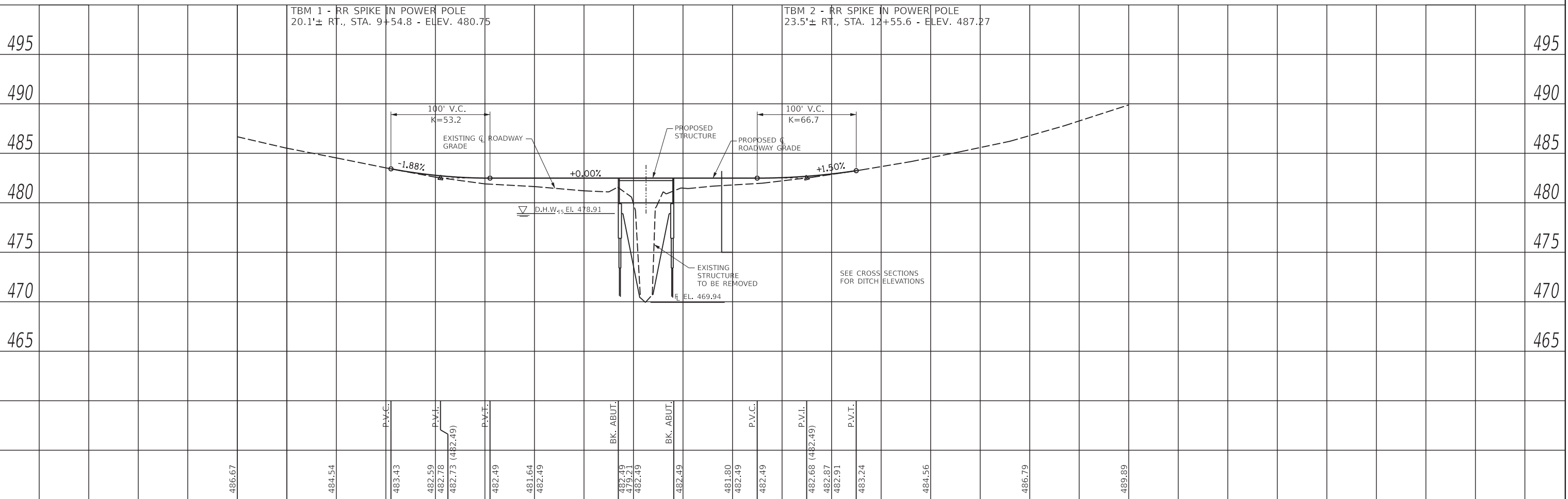


SCALES:  
HORIZ.- 0 50 100  
VERT.- 0 5 10  
----- LIMITS OF CONSTRUCTION

THE EXISTING RIGHT OF WAY SHOWN HEREON HAS BEEN PROTRACTED FROM EXISTING RECORDS AND IS TO BE USED FOR REFERENCE PURPOSES ONLY. FURTHERMORE, NO COMPLETE SURVEY OF SAID R.O.W. IS IMPLIED BY THIS DRAWING.

← KENNETH KESSLER →

← GATHES BUILDING PARTNERSHIP →



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7 CARPENTER DRIVE  
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ILLINOIS PROFESSIONAL DESIGN FIRM 184.004564

DESIGNED - BLT	REVISED -
DRAWN - JN, KMA, JMW	REVISED -
CHECKED - BLT	REVISED -
DATE - 11/07/2022	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

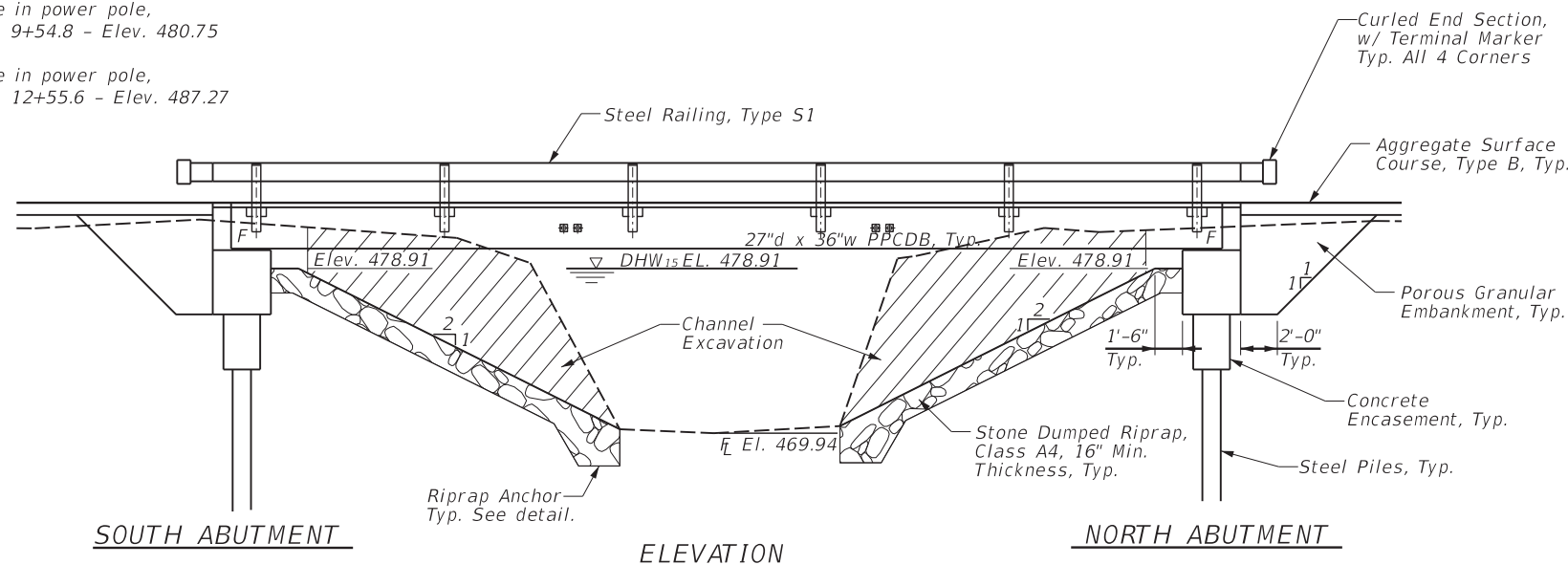
PLAN AND PROFILE OF ROADWAY  
STA. 6+00 TO STA. 15+00

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 178	19-05125-00-BR	FAYETTE	11	3
			CONTRACT NO. 95928	

GCL JOB NO. 20-6016

TBM 1 - RR spike in power pole,  
20.1± Rt. of Sta. 9+54.8 - Elev. 480.75

TBM 2 - RR spike in power pole,  
23.5± Rt. of Sta. 12+55.6 - Elev. 487.27



**LOADING HL-93**  
50#/sq. ft. included in dead load  
for future wearing surface.

**DESIGN SPECIFICATIONS**  
2017 (8th Ed.)  
AASHTO LRFD Bridge Design Specifications.

**DESIGN STRESSES**  
**FIELD UNITS**  
 $f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (reinforcement)  
**PRECAST PRESTRESSED UNITS**  
 $f'_c = 6,000$  psi  
 $f_{ci} = 5,000$  psi  
 $f_{pu} = 270,000$  psi ( $1/2$ " low lax. strands)  
 $f_{pbt} = 201,960$  psi ( $1/2$ " low lax. strands)  
 $f_y = 60,000$  psi (reinforcement)

**SEISMIC DATA**  
Seismic Performance Zone (SPZ) = 2  
Soil Site Classification = C  
 $S_{D1} = 0.173$   $S_{D5} = 0.440$

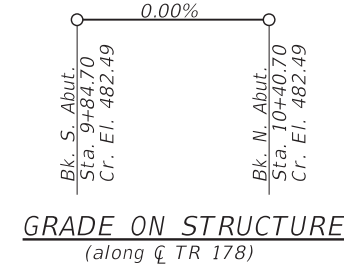
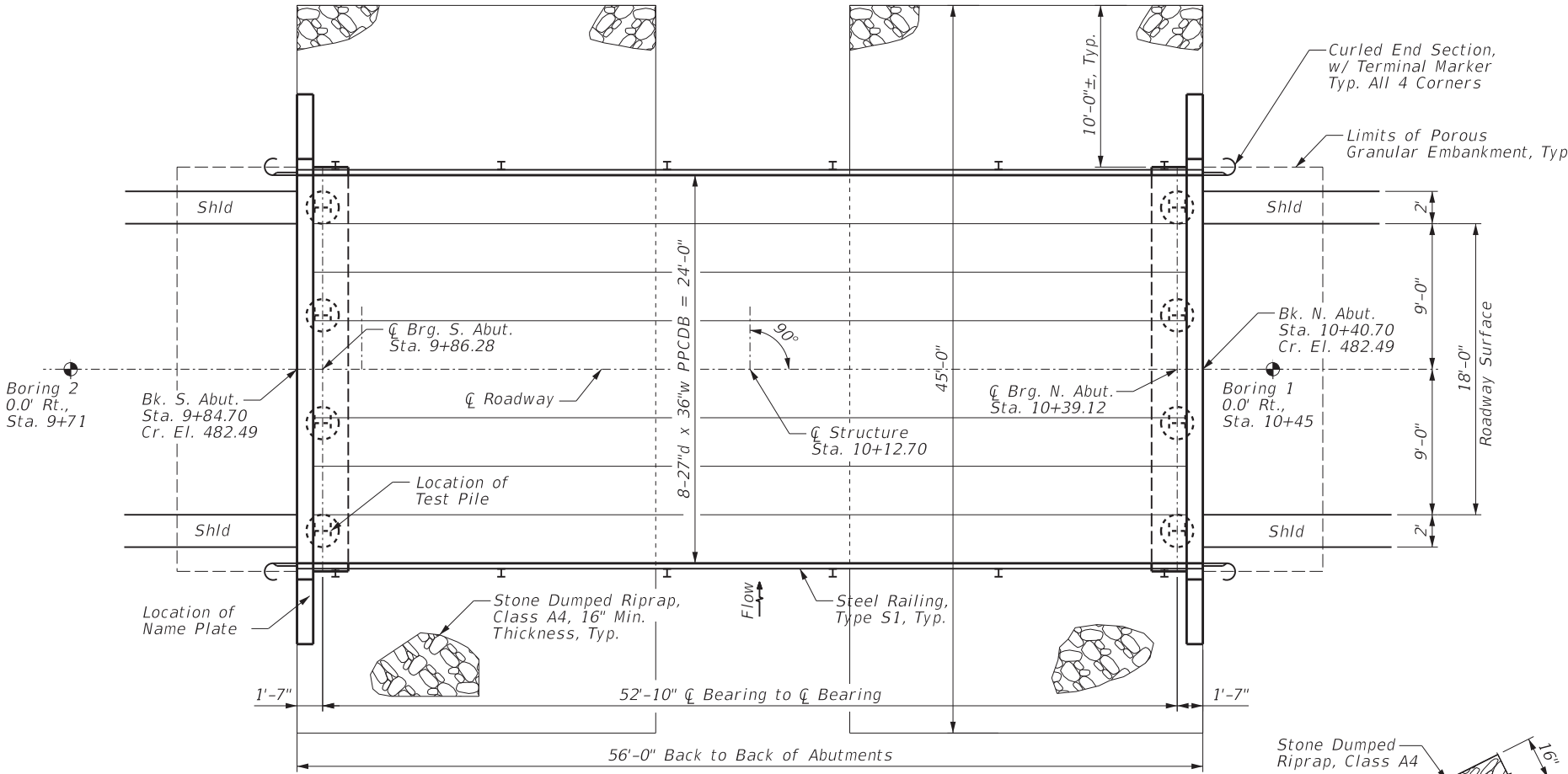
Existing Structure: Structure No.: 026-3091. Single span bridge with removed superstructure and closed concrete abutments (In Failed Condition).  
26'± L. x 14'± W. No Skew. To be removed.

**BILL OF MATERIALS (BRIDGE ONLY)**

ITEM	UNIT	TOTAL
Channel Excavation	Cu Yd	282
Porous Granular Embankment	Ton	92
Stone Dumped Riprap, Class A4	Ton	185
Removal of Existing Structures	Each	1
Concrete Structures	Cu Yd	29.2
Concrete Encasement	Cu Yd	2.8
PPCDB (27" Depth)	Sq Ft	1296
Reinforcement Bars	Pound	4490
Steel Railing, Type S1	Foot	112
Furnishing Steel Piles HP12x53	Foot	388
Driving Piles	Foot	388
Test Pile Steel HP12x53	Each	1
Pile Shoes	Each	8
Name Plates	Each	1
Terminal Marker - Direct Applied	Each	4

**GENERAL NOTES**

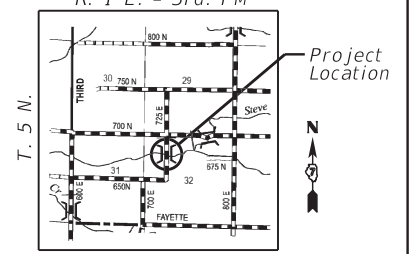
- Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
- See Section 502 of the Standard Specifications for Structural Excavation.
- Channel excavation shall be excavated as shown within the limits of the proposed bridge, then tapered to the existing channel at the ROW line. If the Engineer deems the material satisfactory, it may be used to construct the roadway embankment.
- See Specifications for Soil Borings.
- Do not scale these drawings.
- Reinforcement bars designated (E) shall be epoxy coated.
- The abutment bearing seat surfaces for the precast prestressed concrete deck beams shall be adjusted by shimming to assure firm and even bearing. As required,  $1/8$ " fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing. The top surface of the beams shall be finished according to the IDOT Manual for Fabrication of Precast Prestressed Concrete Products.
- The Contractor is hereby advised that very stiff soils may be encountered prior to the location of anticipated nominal required bearing. See the soil borings for further information.



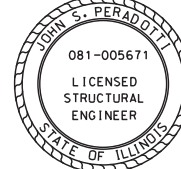
STEVE BRANCH  
BUILT 20\_\_ BY  
FAYETTE COUNTY  
SEC. 19-05125-00-BR  
TR 178 STA. 10+12.70  
LOADING HL-93  
STRUCTURE NO. 026-3477

**NAME PLATE**

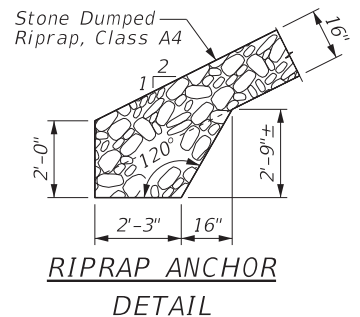
See Std. 515001  
R. 1 E. - 3rd. PM



I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO Standard Specifications for Highway Bridges.



John S. Peradotti  
Salem, Illinois  
Illinois Licensed Structural Engineer No. 081-005671  
Expires Nov. 30, 2024



**WATERWAY INFORMATION**

Drainage Area = 2.66 sq. mi.		Exist. Low Grade Elev. 481.19 @ Sta. 9+75		Prop. Low Grade Elev. 482.49 @ Sta. 10+00		
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Nat. H.W.E. Prop.	Head - Ft. Exist. Prop.	Headwater El. Exist. Prop.
Design	15	1000	136	478.91	0.60 0.26	479.51 479.17
Base	100	1660	172	480.48	1.75 0.29	482.23 480.77
Max. Calc.	500	2280	206	481.34	2.78 0.94	484.12 482.28

**PLAN**

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION  
STRUCTURE NO. 026-3477

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 178	19-05125-00-BR	FAYETTE	11	4

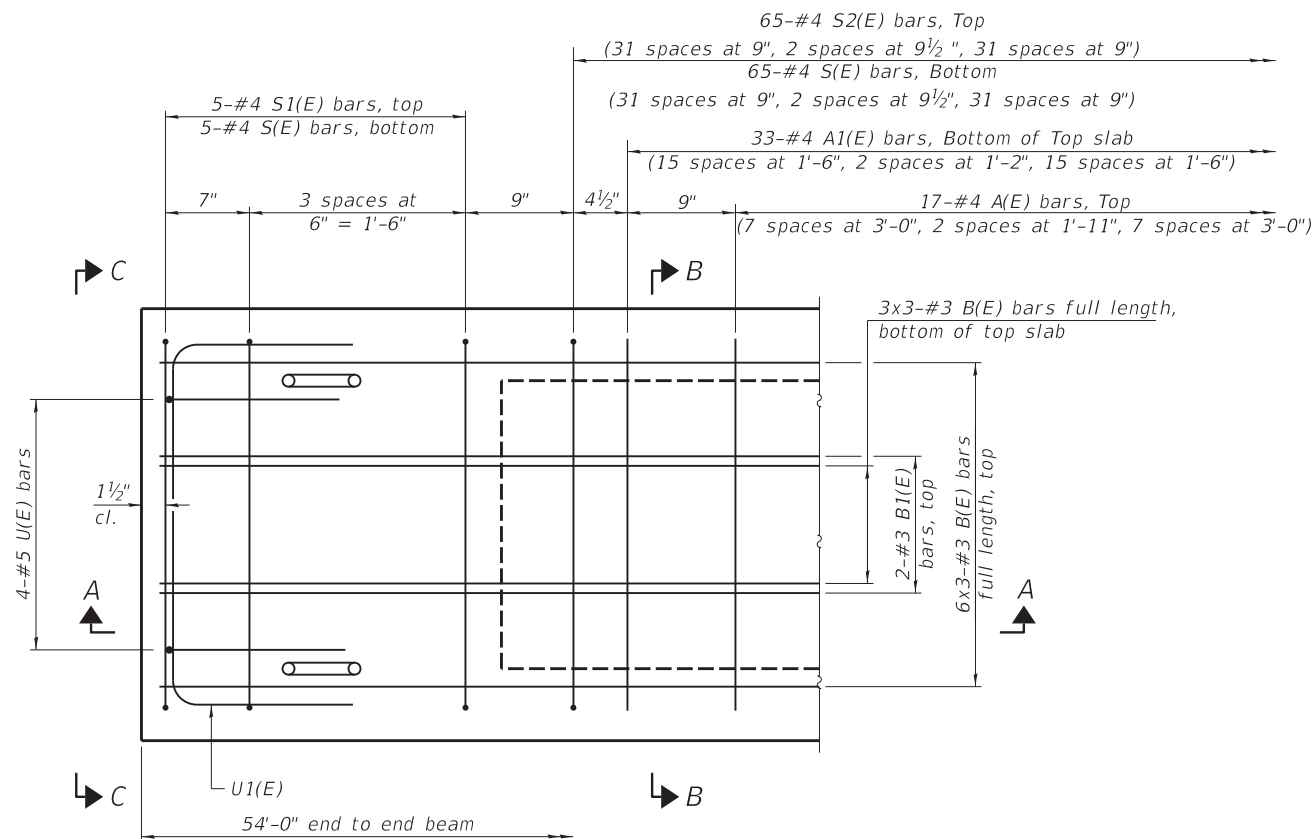
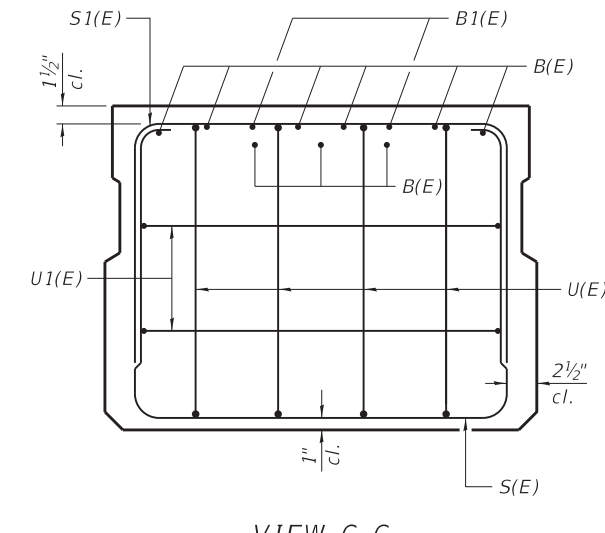
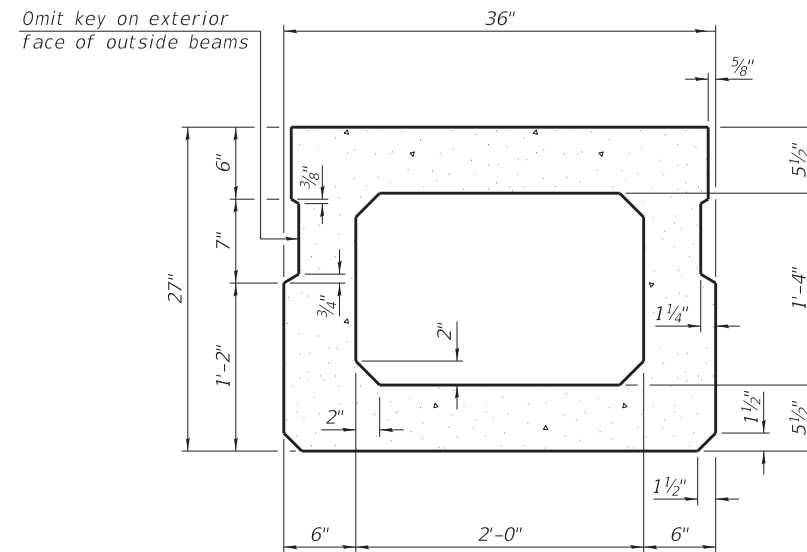
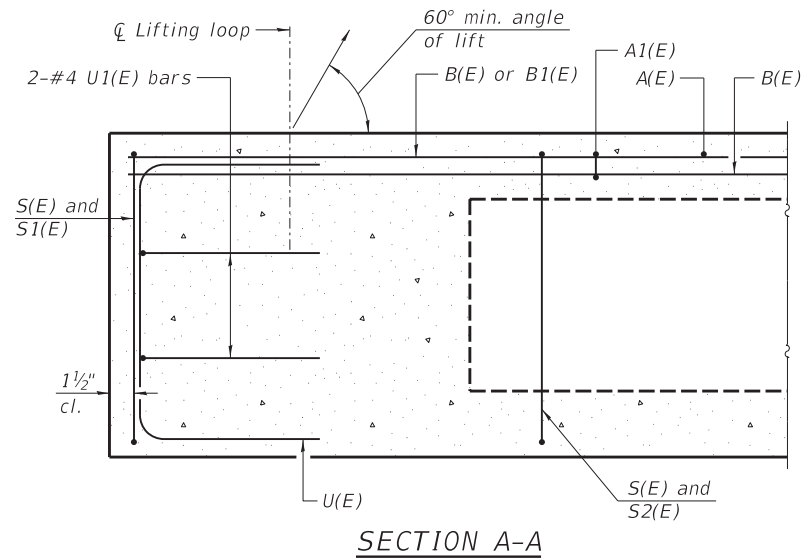
**gonzalez** GONZALEZ COMPANIES, LLC  
7 CARPENTER DRIVE  
SALEM, IL 62881  
PHONE (618) 222-2221  
www.gonzalezcos.com  
ILLINOIS PROFESSIONAL DESIGN FIRM 184,004564

DESIGNED - JSP  
DRAWN - JN, KMA, JMW  
CHECKED - BLT  
DATE - 11/07/2022

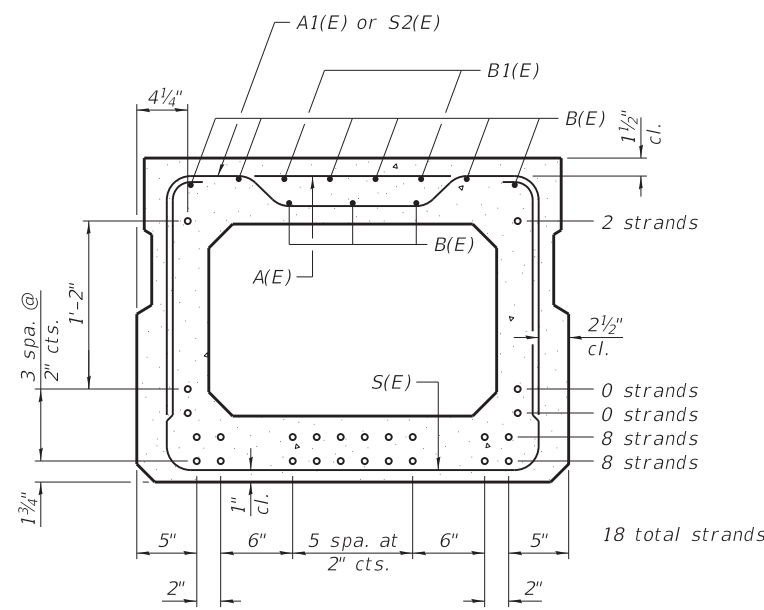
REVISED -  
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REVISED -  
REVISED -

GCL JOB NO. 20-6016

CONTRACT NO. 95928



Similar about  $\bar{C}$



**BAR LIST**  
**ONE BEAM ONLY**  
(For information only)

Bar	No.	Size	Length	Shape
A(E)	17	#4	2'-7"	—
A1(E)	33	#4	2'-10"	—
B(E)	27	#3	18'-11"	—
B1(E)	4	#3	10'-0"	—
S(E)	75	#4	7'-5"	⌈
S1(E)	10	#4	5'-11"	⌈
S2(E)	65	#4	6'-2"	⌈
U(E)	8	#5	4'-6"	⌈
U1(E)	4	#4	5'-0"	⌈

Note:  
See sheet 6 of 11 for additional details and Bill of Material.

**PLAN VIEW**

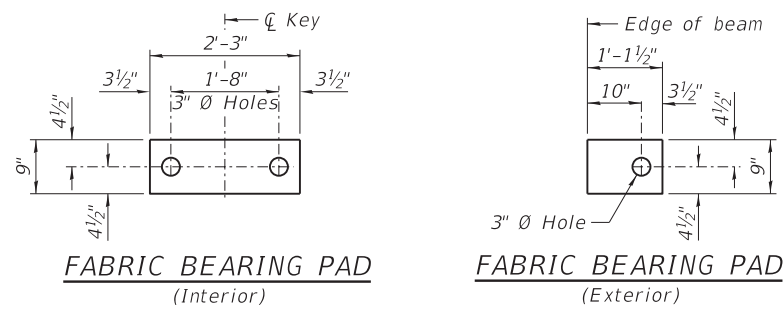
Note:  
Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

Bars indicated thus: 4x3-#3 etc. Indicates 4 lines of bars with 3 lengths per line.

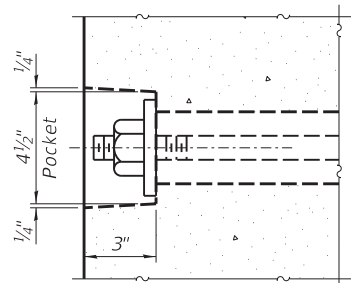
**SECTION B-B**  
(Showing reinforcement and permissible strand locations)

Note:  
Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

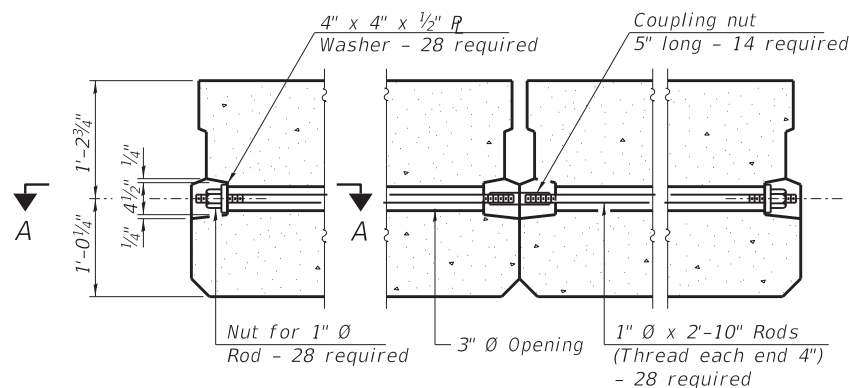
**MINIMUM BAR LAP**  
#3 bar = 1'-6"



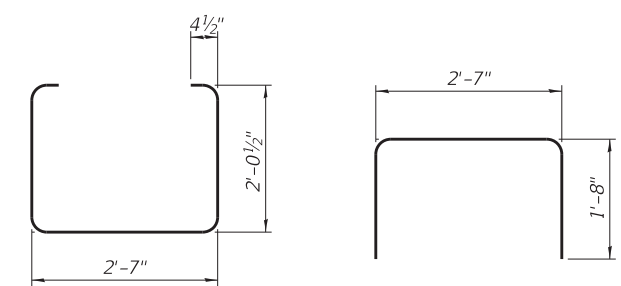
Notes: All bearing pads shall be 1" thick.



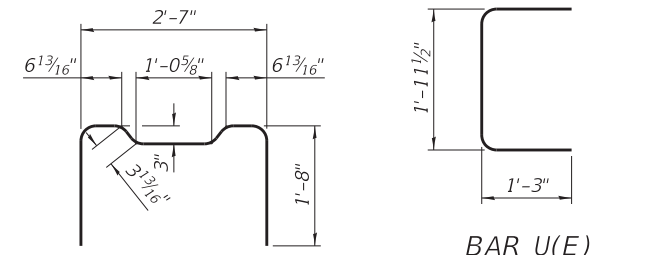
SECTION A-A



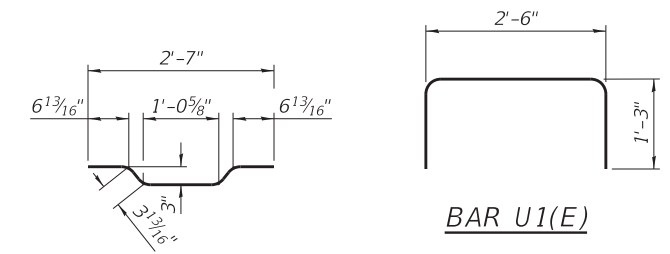
TYPICAL TRANSVERSE TIE ASSEMBLY



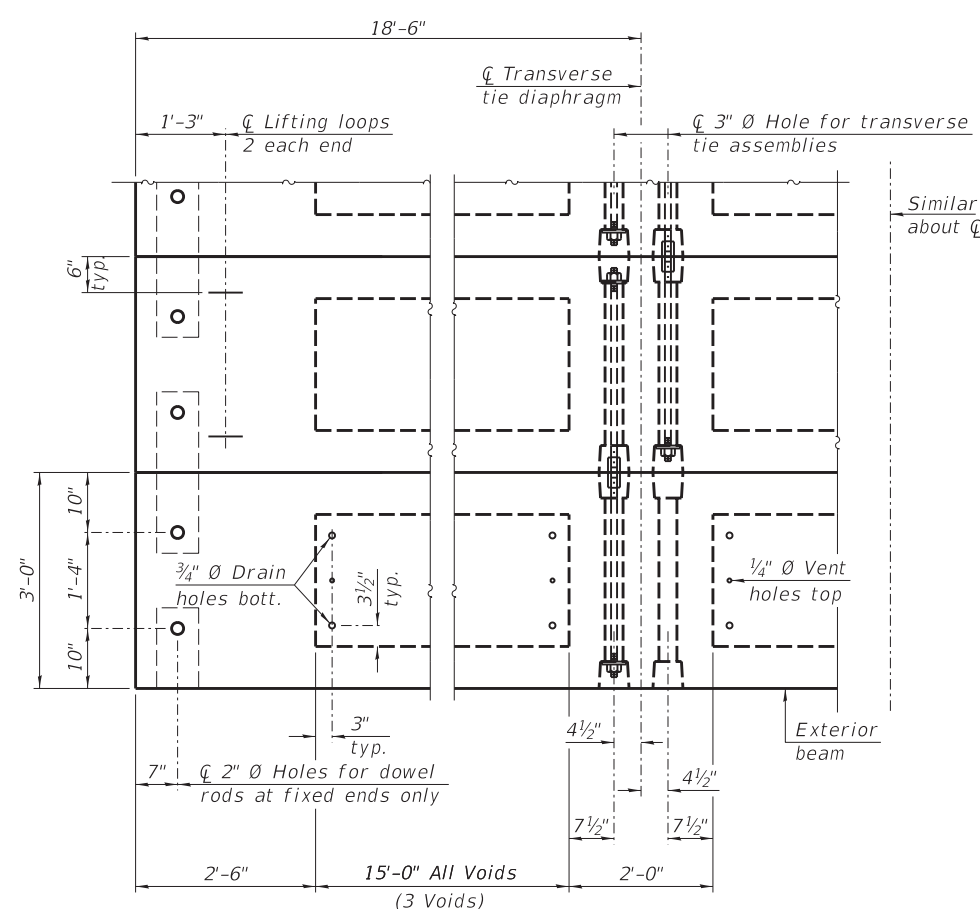
BAR S(E) BAR S1(E)



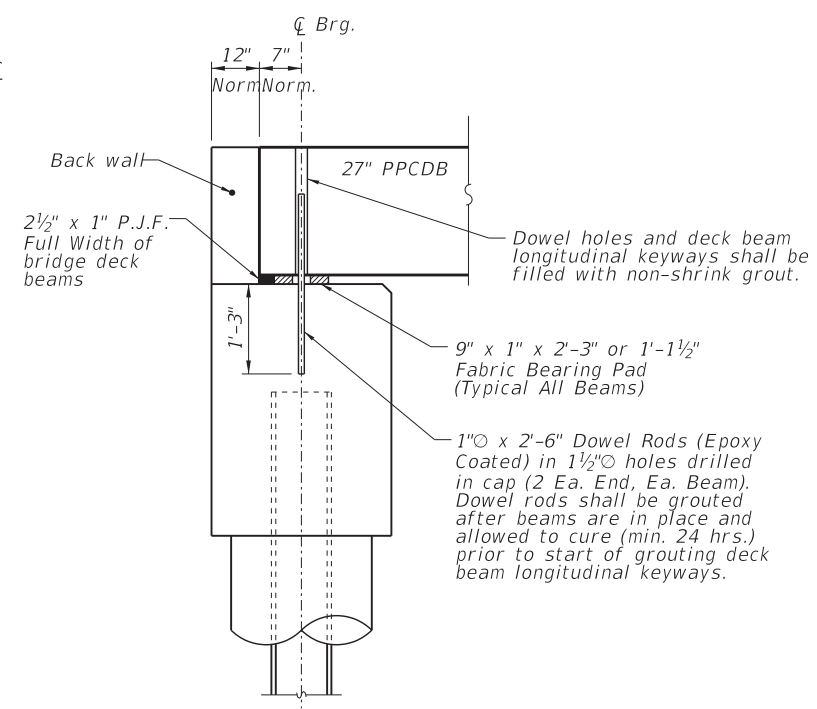
BAR S2(E) BAR U(E)



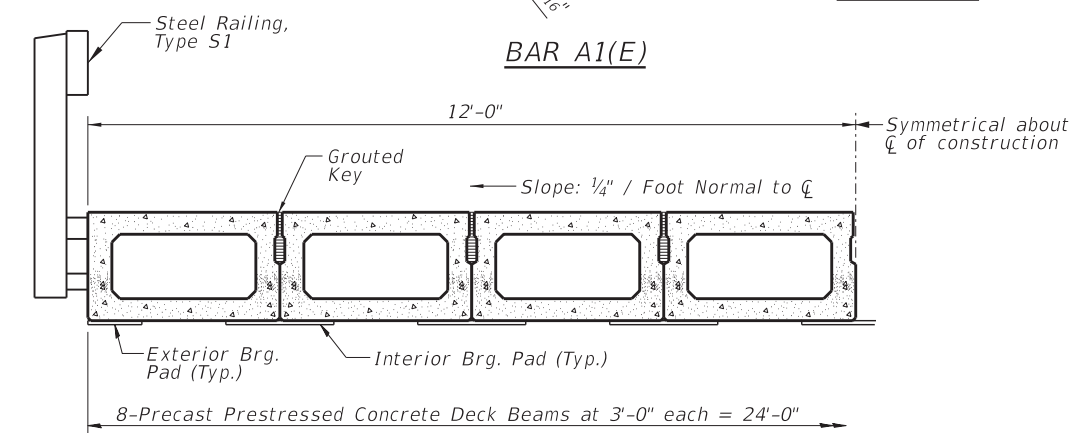
BAR A1(E) BAR U1(E)



PLAN VIEW

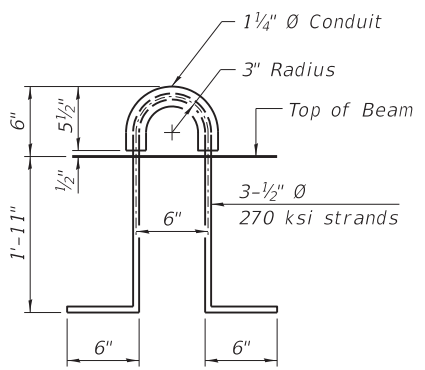


FIXED BEARING ABUTMENT (Normal to C)



HALF CROSS SECTION

See Sheet 7 for the details showing the spacing and mounting of posts and rails to the PPCDB.



LIFTING LOOP DETAIL

NOTES

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2 inch and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1 inch diameter rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Reinforcement bars shall conform to the requirements of ASTM A706, Grade 60 (IL Modified).
- Two 1/8 inch fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2 inch diameter lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (27" depth)	Sq. Ft.	1296
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DATE -	11/07/2022	REVISED -	

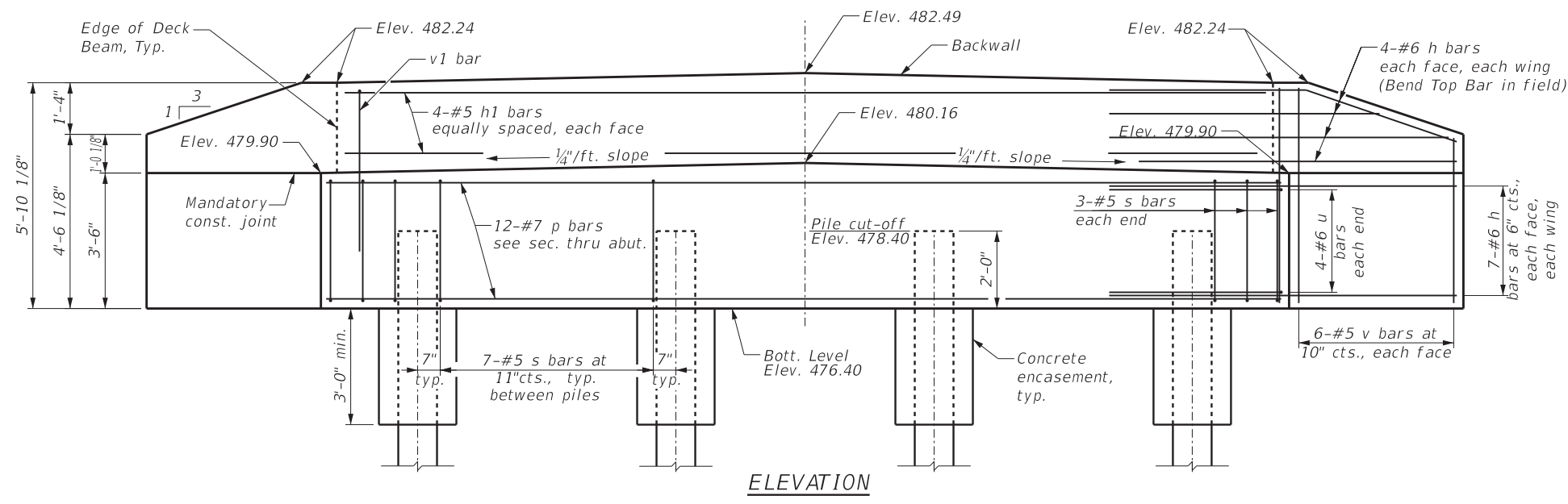
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PRECAST PRESTRESSED CONCRETE DECK BEAM DETAILS

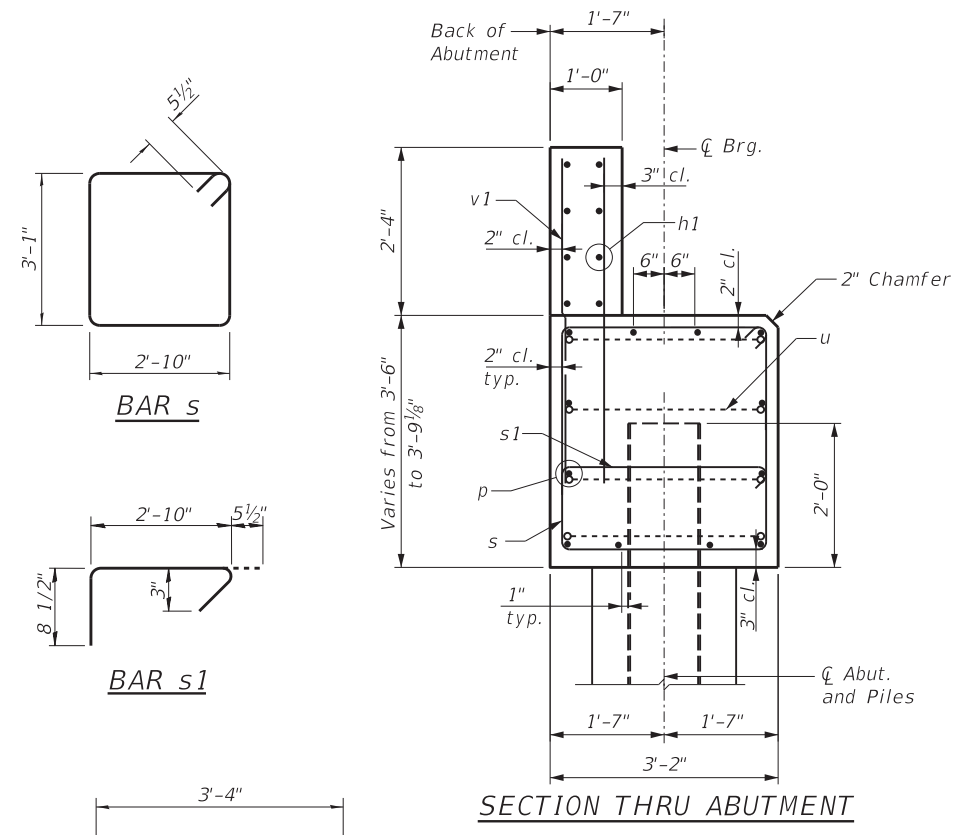
GCL JOB NO. 20-6016			
ROUTE	SECTION	COUNTY	TOTAL SHEETS
TR 178	19-05125-00-BR	FAYETTE	11
			SHEET NO. 6
CONTRACT NO. 95928			







ELEVATION



SECTION THRU ABUTMENT

BAR s

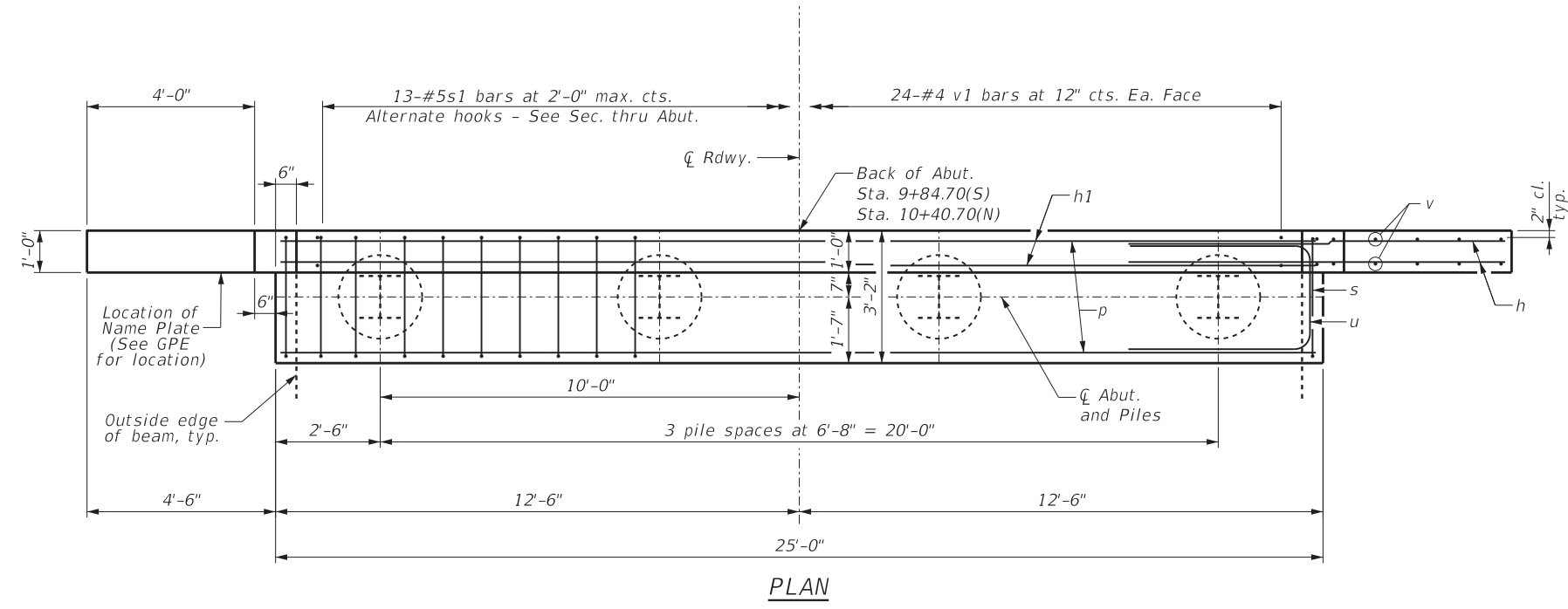
BAR s1

BAR u

BILL OF MATERIAL FOR TWO ABUTMENTS

Bar	No.	Size	Length	Shape
h	88	#6	8'-6"	—
h1	16	#5	23'-8"	—
p	24	#7	24'-8"	—
s	54	#5	12'-9"	□
s1	26	#5	4'-0"	┌
u	16	#6	9'-5"	▭
v	48	#5	5'-5"	Cut in Field
v1	96	#5	4'-4"	—
Concrete Structures		Cu Yd	29.2	
Concrete Encasement		Cu Yd	2.8	
Reinforcement Bars		Pound	4490	
Furnishing Steel Piles HP12x53		Foot	388	
Driving Piles		Foot	388	
Test Pile Steel HP12x53		Each	1	
Pile Shoes		Each	8	

Notes:  
For details of piles and Concrete Encasement, see sheet 9.



PLAN

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 60 (IL Modified).  
All exposed edges shall have standard 3/4" chamfer, unless otherwise noted or as directed by the Engineer.  
All clearances between rebar and form surface shall be 2", unless otherwise noted.  
Space reinforcement in cap to miss PPCDB dowel rods.  
The Steel H-piles shall be according to AASHTO M270 Grade 50.

The Contractor shall drive one (1) Test Pile of the size indicated in a permanent location as shown on the plans or as directed by the Engineer before ordering the remainder of the piles.  
The Test Pile shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.  
The back wall and portion of the wingwalls above the construction joint shall be cast against the in-place deck beams.  
The position of the 90° & 135° hooked ends of the s1 bar shall be alternated between adjacent bars.

PILE DATA SOUTH ABUTMENT

Type: Steel HP12x53  
Nominal Required Bearing: 418 kips  
Factored Resistance Available: 230 kips  
Est. Length: 56'/pile  
No. Production Piles w/Piles shoes: 3  
No. Test Piles w/ Pile shoes: 1

PILE DATA NORTH ABUTMENT

Type: Steel HP12x53  
Nominal Required Bearing: 418 kips  
Factored Resistance Available: 230 kips  
Est. Length: 55'/pile  
No. Production Piles w/Piles shoes: 4  
No. Test Piles w/ Pile shoes: 0



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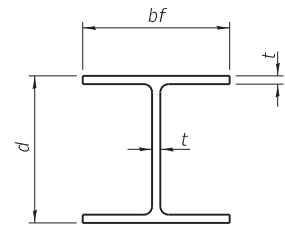
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DEPARTMENT OF TRANSPORTATION

ABUTMENT DETAILS

ROUTE		SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 178		19-05125-00-BR	FAYETTE	11	8
CONTRACT NO. 95928					

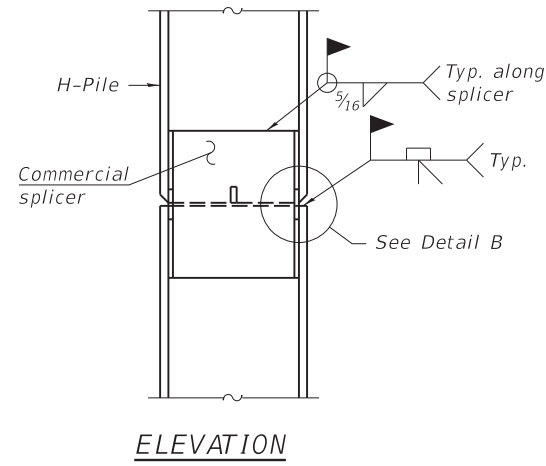
GCL JOB NO. 20-6016



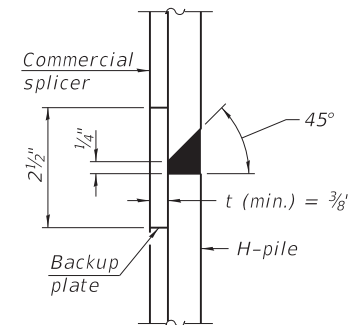


**STEEL PILE TABLE**

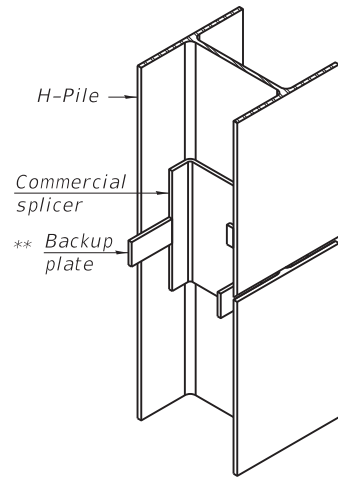
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



**ELEVATION**

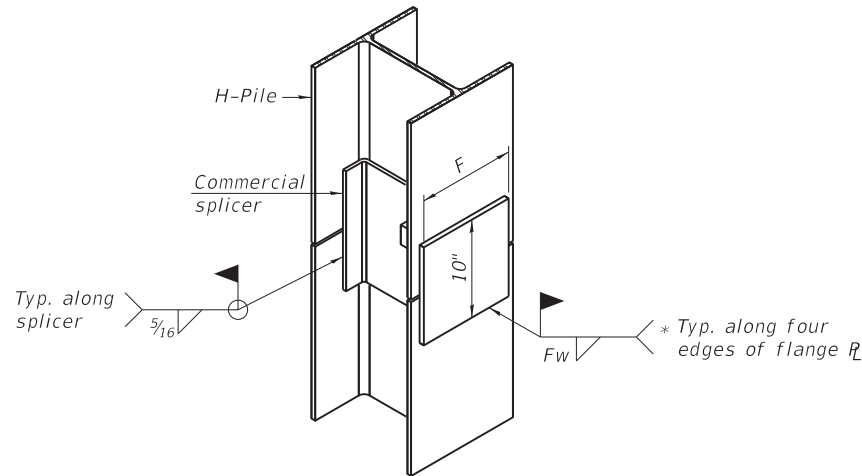


**DETAIL "B"**



**ISOMETRIC VIEW**

**WELDED COMMERCIAL SPLICE**



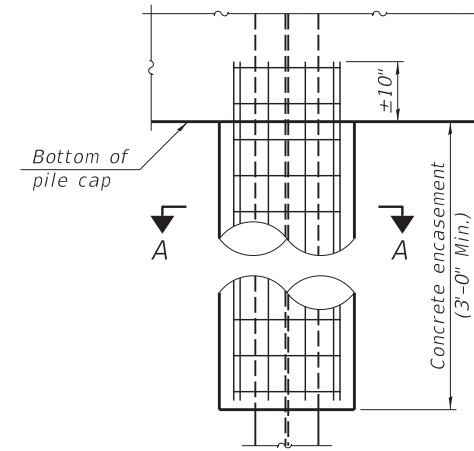
**ISOMETRIC VIEW**

**WELDED COMMERCIAL SPLICE ALTERNATE**

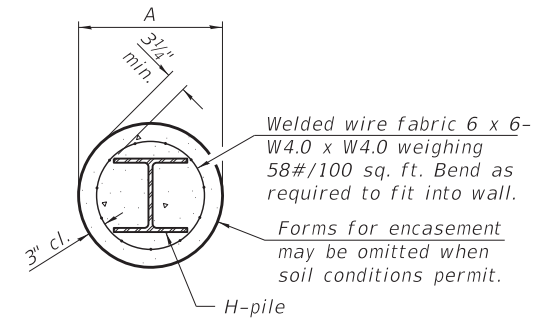
\* Interrupt welds 1/4" from end of web and/or each flange.

\*\* Remove portions of backup plates that extend outside the flanges.

\*\*\* Weld size per pile shoe manufacturer (5/16" min.).

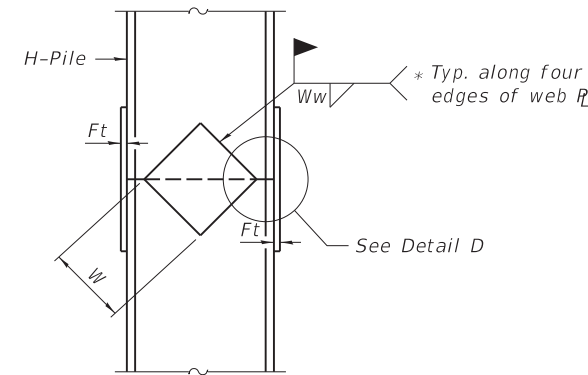


**ELEVATION**

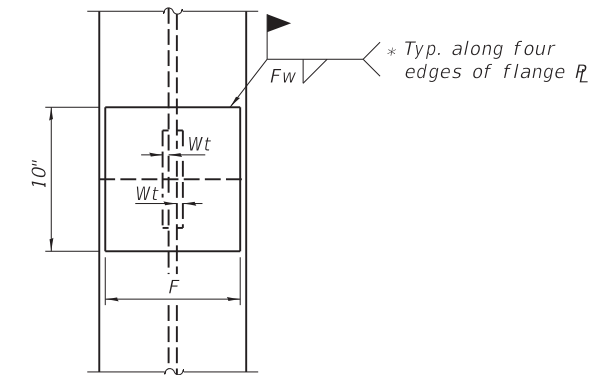


**SECTION A-A**

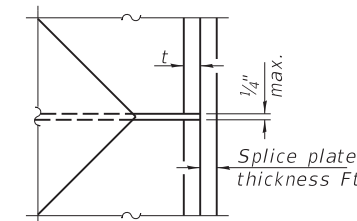
**INDIVIDUAL PILE CONCRETE ENCASUREMENT (when specified)**



**ELEVATION**



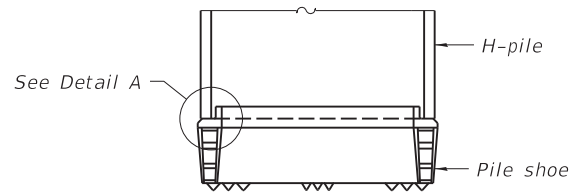
**END VIEW**



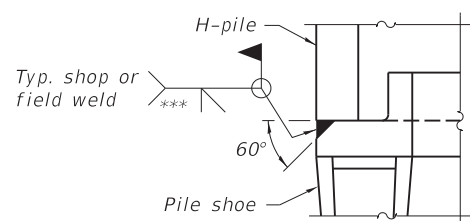
**DETAIL D**

**WELDED PLATE FIELD SPLICE**

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1 1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"



**ELEVATION**



**DETAIL A**

**SHOE ATTACHMENT**

Note:  
The steel H-piles shall be according to AASHTO M270 Grade 50.



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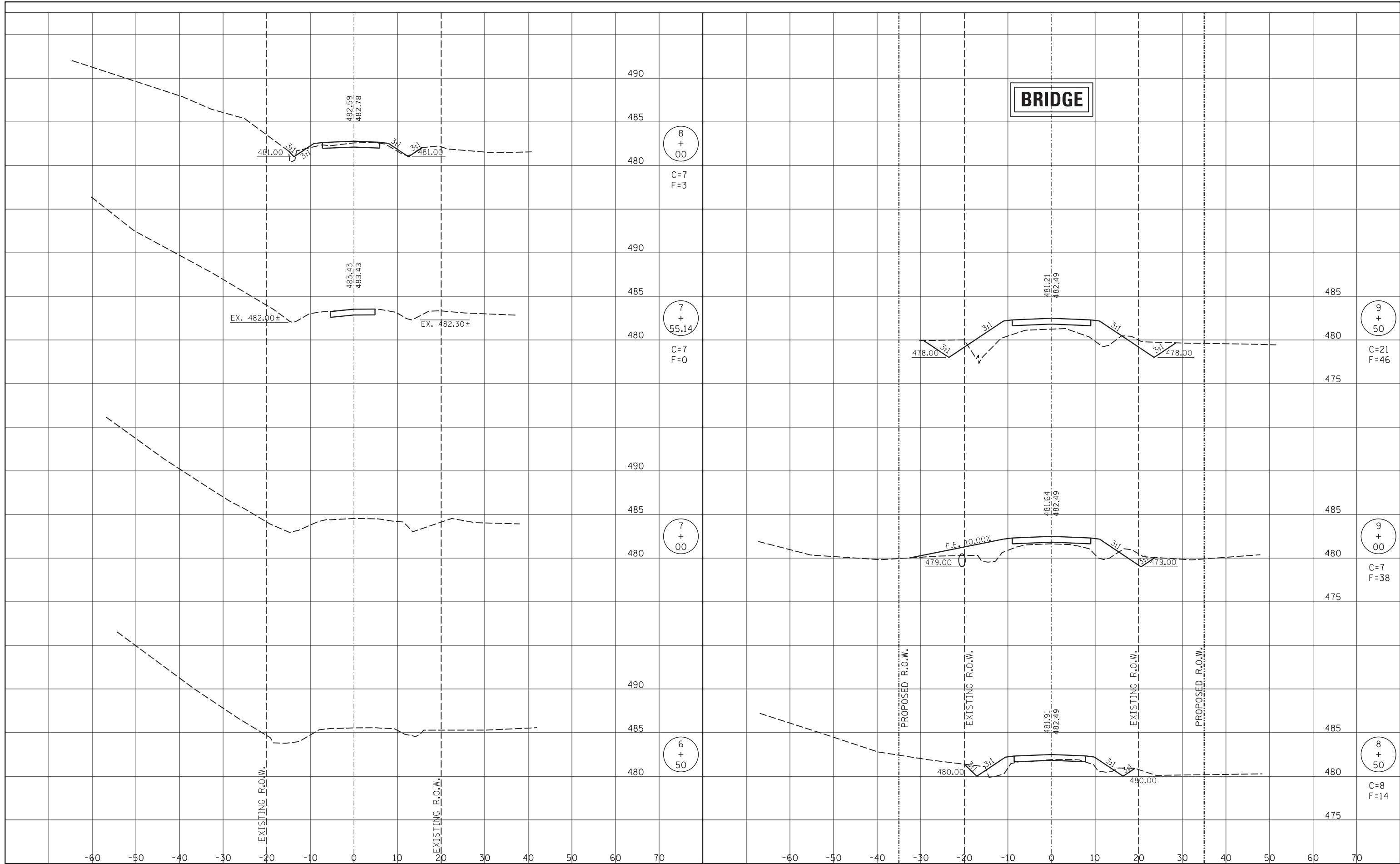
HP PILE DETAILS

ROUTE		SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 178		19-05125-00-BR	FAYETTE	11	9
CONTRACT NO. 95928					

GCL JOB NO. 20-6016

DATE	
BY	
FINISHED SURVEY	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
NO.	



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DATE	-	11/07/2022	REVISED	-

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**CROSS SECTIONS OF ROADWAY**

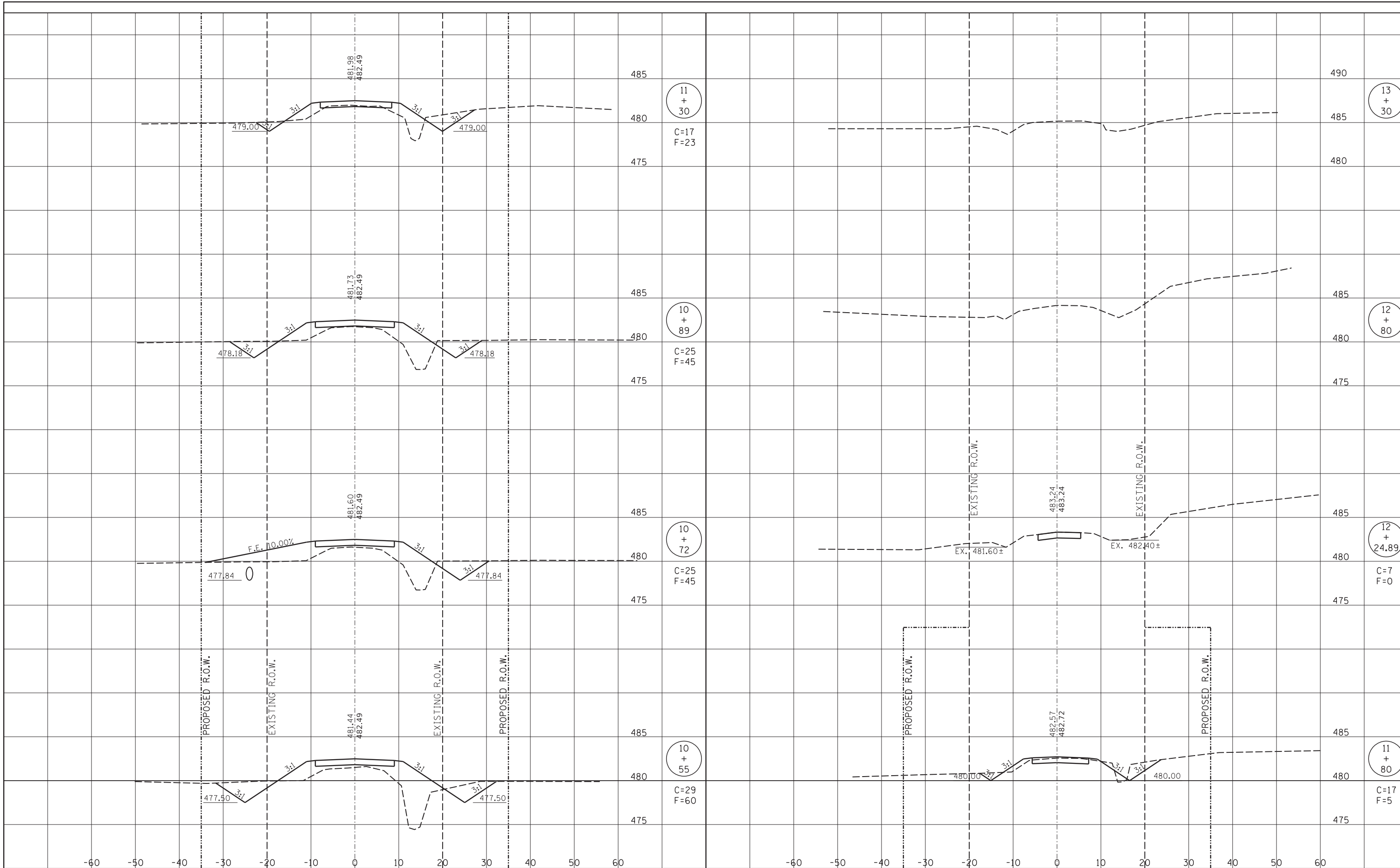
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 178	19-05125-00-BR	FAYETTE	11	10
CONTRACT NO. 95928				

STA. 6+50 TO STA. 9+50

GCL JOB NO. 20-6016

DATE	
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FINISHED SURVEY	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
NO.	

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BY	
ORIGINAL SURVEY	
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TEMPLATE	
AREAS CHECKED	
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DATE -	11/07/2022	REVISED -	

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS OF ROADWAY**  
 ROUTE TR 178 SECTION 19-05125-00-BR COUNTY FAYETTE  
 STA. 10+55 TO STA. 13+80

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 178	19-05125-00-BR	FAYETTE	11	11
CONTRACT NO. 95928				

GCL JOB NO. 20-6016