

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
**PLANS FOR PROPOSED
BRIDGE REPLACEMENT
STP – BRIDGE**

**FAU 7455 (KRUSE RD.) OVER BIG CREEK
MT. ZION TOWNSHIP
SECTION 16-11117-00-BR
PROJECT MMVG(621)
MACON COUNTY**

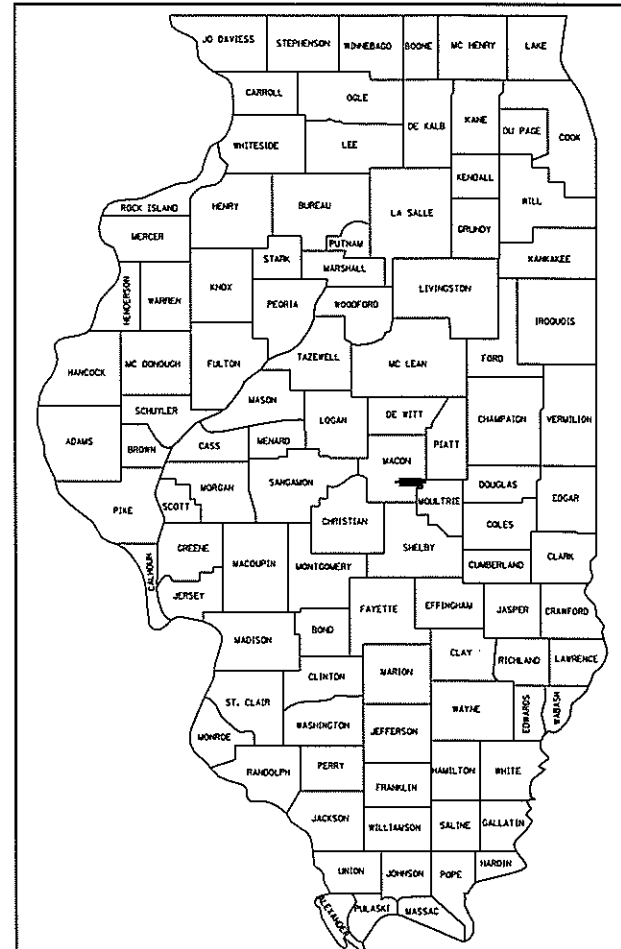
C-97-006-19

INDEX OF SHEETS

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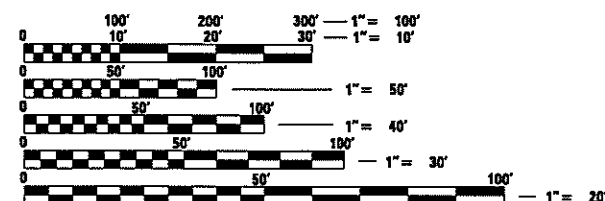
STANDARDS (IN PROPOSAL)

- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 001001-02 AREAS OF REINFORCEMENT BARS
- 280001-07 TEMPORARY EROSION CONTROL SYSTEMS
- 515001-03 NAME PLATE FOR BRIDGES
- 630001-12 STEEL PLATE BEAM GUARDRAIL
- 630301-08 SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
- 631032-09 TRAFFIC BARRIER TERMINAL TYPE 6A
- 701901-07 TRAFFIC CONTROL DEVICES
- 725001-01 OBJECT AND TERMINAL MARKERS
- 782006-00 GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
- BLR 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS



LOCATION OF SECTION INDICATED THUS: — ■ —

FUNCTIONAL CLASSIFICATION – MAJOR COLLECTOR
ADT = 1,550(2019) 1900(2039)
DESIGN SPEED = 40 MPH



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 LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT MANAGER: CORY W. CHAMBERLAIN, P.E., S.E.
PROJECT ENGINEER: RICHARD K. ALLENDER III, P.E.
CONTRACT NO. 95838

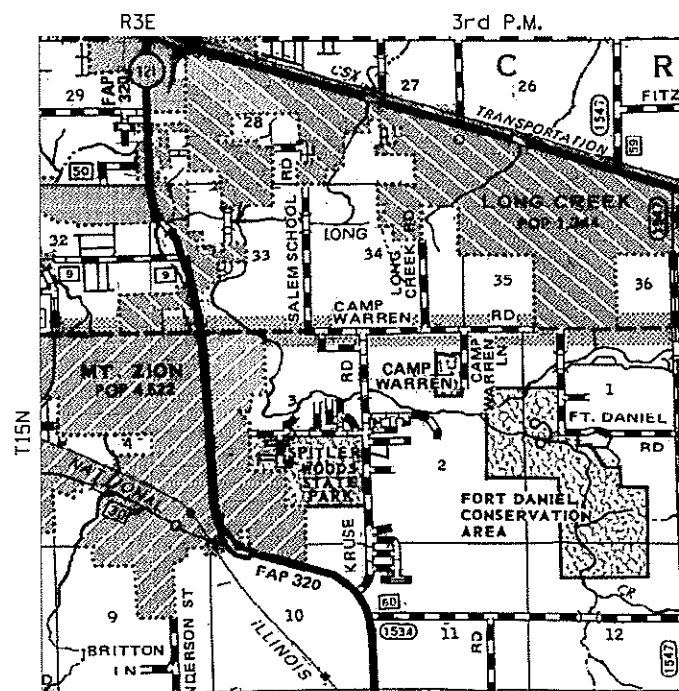
**UTILITY COMPANIES:**

AMEREN IP * (SOUTH)
370 S MAIN ST.
DECATUR, IL 62523
PHONE: (217) 424-8784
CONTACT: SARAH SYLVESTER DRAKE

FRONTIER COMMUNICATIONS
109 E. MARKET ST.
BLOOMINGTON, IL 61701
PHONE: (815) 895-1515
CONTACT: KALIN HINSHAW

LONG CREEK TOWNSHIP WATER DISTRICT
2610 SALEM SCHOOL RD
DECATUR, IL 62521
PHONE: (217) 519-0199
CONTACT: WAYNE DOTSON

PANHANDLE EASTERN PIPELINE
11615 OLD RTE 66
GLENARM, IL 62536
PHONE: (217) 299-1018
CONTACT: ROB JONES

**LOCATION MAP**

TOTAL LENGTH = 600 FEET (0.114 MI)
NET LENGTH = 600 FEET (0.114 MI)

PROPOSED
SECTION 16-11117-00-BR
BEGINS STA. 12+00.00
ENDS STA. 18+00.00
EXIST. SN 058-3201
PROP. SN 058-3411



Richard K. Allender III 3-23-18
Expires: 11/30/2019

APPROVED	<i>April 20</i> 20 18
	<i>Richard K. Allender III</i> COUNTY ENGINEER
APPROVED	<i>April 20</i> 20 18
	<i>John B. Whelan</i> ROAD COMMISSIONER
PASSED	<i>April 27</i> 20 18
	<i>SA Phillips</i> DISTRICT SEVEN ENGINEER OF LOCAL ROADS AND STREETS
Released For Bid Based on Limited Review	<i>April 27</i> 20 18
	<i>Jeffrey M. South</i> REGION FOUR ENGINEER
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	

THE WORK CONSISTS OF REMOVING THE EXISTING BRIDGE (S.N. 058-3201) AND CONSTRUCTING A NEW STRUCTURE AT STATION 15+05.00 WITH A 3-SPAN PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE ON CONCRETE PILE BENT ABUTMENTS AND CONCRETE SOILD WALL PIERS, 162'-11" BACK TO BACK OF ABUTMENTS, 30'-0" FACE TO FACE OF RAIL, 0° SKEW, VARIABLE WIDTH TRANSITION APPROACHES AND OTHER COLLATERAL WORK.

GENERAL NOTES

1. EXCEPT AS NOTED ON THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.
2. THE ENGINEER WILL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS HOT-MIX ASPHALT LIFTS.
3. FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SAND BAGS PER BARRICADE.
4. ALL ELEVATIONS ARE BASED ON NAVD 88-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 CONTRACT ITEMS INVOLVED.
6. THE FOLLOWING APPLICATION RATES HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

BITUMINOUS MATERIALS (TACK COAT) AGGREGATE BASE	0.250	LB/SQ FT
BITUMINOUS MATERIALS (TACK COAT) BETWEEN LIFTS	0.025	LB/SQ FT
HOT MIX ASPHALT	112	112 LBS/SQ YD/ INCH
AGGREGATE:		
AGGREGATE SHOULDERS, TYPE A	2.05	TON/CU YD
TEMPORARY EROSION CONTROL SEEDING	100	LBS/ACRE

7. THE CONTRACTOR'S OPERATIONS AND TEMPORARY STORAGE ACTIVITIES SHALL BE LIMITED TO THE WORK AREA AND/OR CONSTRUCTION LIMITS. ANY ADDITIONAL STAGING AREAS ADJACENT TO THE PROJECT AREA ARE SUBJECT TO PRIOR APPROVAL BY THE ENGINEER AND MUST NOT CONFLICT WITH EXISTING SIDE ROADS, INTERSECTIONS, DRIVEWAYS, OR DRAINAGE. ALL OPERATIONS SHALL BE SUBJECT TO REGULATORY REQUIREMENTS PERMITTED FOR THIS PROJECT. NO ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR COMPLIANCE WITH THE ABOVE REQUIREMENTS.
8. DISTURBED AREAS SHALL RECEIVE PERMANENT STABILIZATION WITHIN 7 DAYS OF COMPLETION OF CONSTRUCTION ACTIVITIES. TEMPORARY STABILIZATION OF WORK AREAS IS REQUIRED FOR ALL AREAS REMAINING UNDISTURBED FOR 14 DAYS, UNLESS WORK RESUMES PRIOR TO 21 DAYS. TEMPORARY STABILIZATION MUST BE APPROVED BY THE ENGINEER.
9. THE CONTRACTOR SHALL INSTALL ALL EROSION CONTROL MEASURES PRIOR TO STARTING ANY OTHER CONSTRUCTION WORK AT THE SITE.
- 10.BEFORE ORDERING PIPE CULVERTS AND BOX CULVERTS, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER TO DETERMINE THE EXACT LENGTH AND QUANTITY REQUIRED.
11. THE CONTRACTOR SHALL RELOCATE OR REMOVE AND REPLACE ALL SIGNS THAT INTERFERE WITH THE CONSTRUCTION OPERATIONS AND TEMPORARILY RESET ALL SUCH SIGNS DURING ALL STAGES OF CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE ENGINEER WILL DETERMINE THE PERMANENT LOCATION FOR EXISTING SIGNS TO BE RE-ERECTED. ALL NEW SIGNS WILL BE INSTALLED BY OTHERS.
- 12.ALL FIELD TILES ENCOUNTERED SHALL BE CAREFULLY PRESERVED AND REPAIRED OR CONNECTED TO THE PROPOSED DRAINAGE STRUCTURES, SEWERS OR DITCHES AS DIRECTED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE VARIOUS DRAINAGE ITEMS OR AS DIRECTED BY THE ENGINEER.
- 13.A UNIFORMLY STRAIGHT SAW CUT SHALL BE MADE AT LOCATIONS WHERE PROPOSED NEW CONSTRUCTION WILL ABUT EXISTING HOT-MIX ASPHALT SURFACES. THE SAW CUT SHALL BE MADE FULL DEPTH THROUGH THE EXISTING SURFACE. THIS WORK WILL BE CONSIDERED INCLUDED IN THE COST OF THE CONTRACT ITEMS INVOLVED AND NO EXTRA COMPENSATION WILL BE ALLOWED.
- 14.THE LOCATIONS OF EXISTING WATER MAINS, GAS MAINS, SEWERS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON THE BEST INFORMATION AVAILABLE, BUT THEY ARE NOT GUARANTEED, UNLESS ELEVATIONS ARE SHOWN. ALL UTILITY LOCATIONS SHOWN ON THE CROSS SECTIONS ARE BASED ON THE APPROXIMATE DEPTH SUPPLIED BY THE UTILITY COMPANY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE UTILITY COMPANIES AND BY FIELD INSPECTION.
- 15.EMBANKMENTS ON HILLSIDES OR SLOPES SHALL BE CONSTRUCTED ACCORDING TO ARTICLE 205.03.
- 16.PAVEMENT REMOVAL TO INCLUDE THE EXISTING AGGREGATE BASE COURSE AND OIL AND CHIP SURFACE TREATMENT.

STRUCTURAL DESIGN TRAFFIC: YEAR 2029

PV = 1748 SU = 76 MU = 76

ROADWAY/STREET CLASSIFICATION: CLASS III

PERCENT OF STRUCTURAL DESIGN TRAFFIC IN DESIGN TRAFFIC IN DESIGN LANE:

P = 92% S = 4% M = 4%

TRAFFIC FACTOR: ACTUAL TF = 0.38

PG GRADE: BINDER = 64-22 SURFACE = 64-22

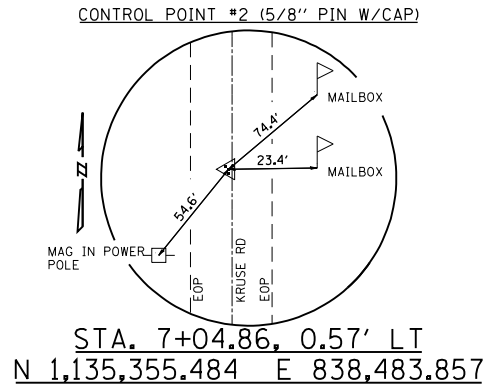
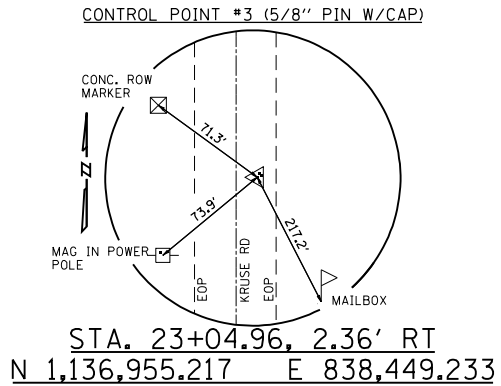
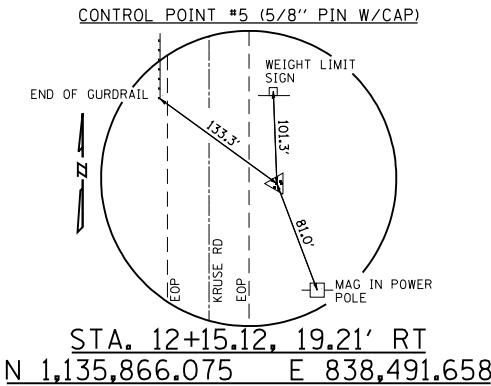
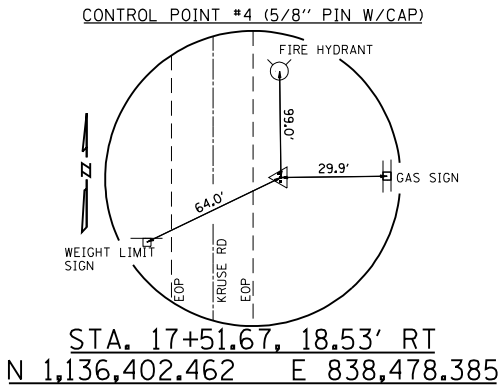
SUBGRADE SUPPORT RATING:

SSR = POOR (ASSUMED)

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT.

	BINDER (5'')	SURFACE (2'')
PERFORMANCE GRADE	PG64-22	PG64-22
MAX % RAP ALLOWABLE**	SEE SPECIAL PROVISION	
DESIGN AIR VOIDS	4.0%@N50	4.0%@N50
MIXTURE COMPOSITION	IL 19.0	IL 12.5 OR IL 9.5
FRICTION AGGREGATE	N/A	MIXTURE C
DENSITY TEST METHOD	CORES/NUCLEAR	CORES/NUCLEAR

** IF RAP OPTION IS SELECTED, THE ASPHALT CEMENT GRADE MAY NEED TO BE ADJUSTED. THIS WILL BE DETERMINED BY THE ENGINEER.



CODE NO.	ITEM	UNIT	TOTAL QUANTITY
20200100	EARTH EXCAVATION	CU YD	499
20300100	CHANNEL EXCAVATION	CU YD	936
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	25
28000305	TEMPORARY DITCH CHECKS	FOOT	66
28000400	PERIMETER EROSION BARRIER	FOOT	793
28100109	STONE RIPRAP, CLASS A5	SQ YD	1643
28200200	FILTER FABRIC	SQ YD	1643
30300112	AGGREGATE SUBGRADE IMPROVEMENT 12"	SQ YD	1170
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	71
40700100	BITUMINOUS MATERIALS (TACK COAT)	POUND	3113
40701821	HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 7"	SQ YD	1066
44000100	PAVEMENT REMOVAL	SQ YD	1175
48100500	AGGREGATE SHOULDERS, TYPE A 6"	SQ YD	390
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1

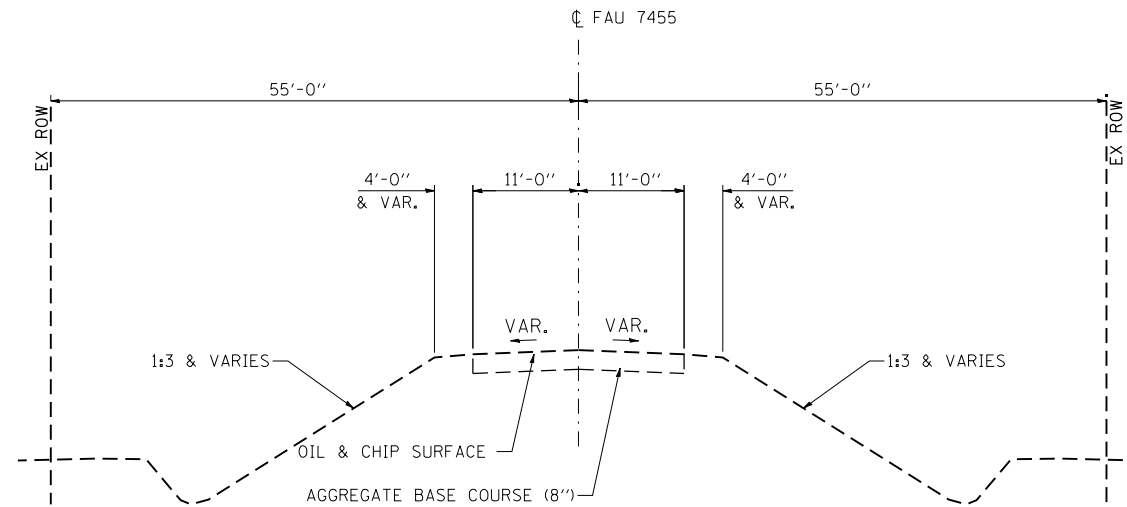
CODE NO.	ITEM	UNIT	TOTAL QUANTITY
50200100	STRUCTURE EXCAVATION	CU YD	76
50200300	COFFERDAM EXCAVATION	CU YD	122
50201121	COFFERDAM (TYPE 2) (LOCATION - 1)	EACH	1
50201122	COFFERDAM (TYPE 2) (LOCATION - 2)	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	131.8
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	4828
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	14280
50901050	STEEL RAILING, TYPE SM	FOOT	326
51200957	FURNISHING METAL SHELL PILES 12" X 0.250"	FOOT	340
51200959	FURNISHING METAL SHELL PILES 14" X 0.312"	FOOT	476
51202305	DRIVING PILES	FOOT	816
51203200	TEST PILE METAL SHELLS	EACH	4
51500100	NAME PLATES	EACH	1
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	538

Δ

Δ SPECIALTY ITEMS

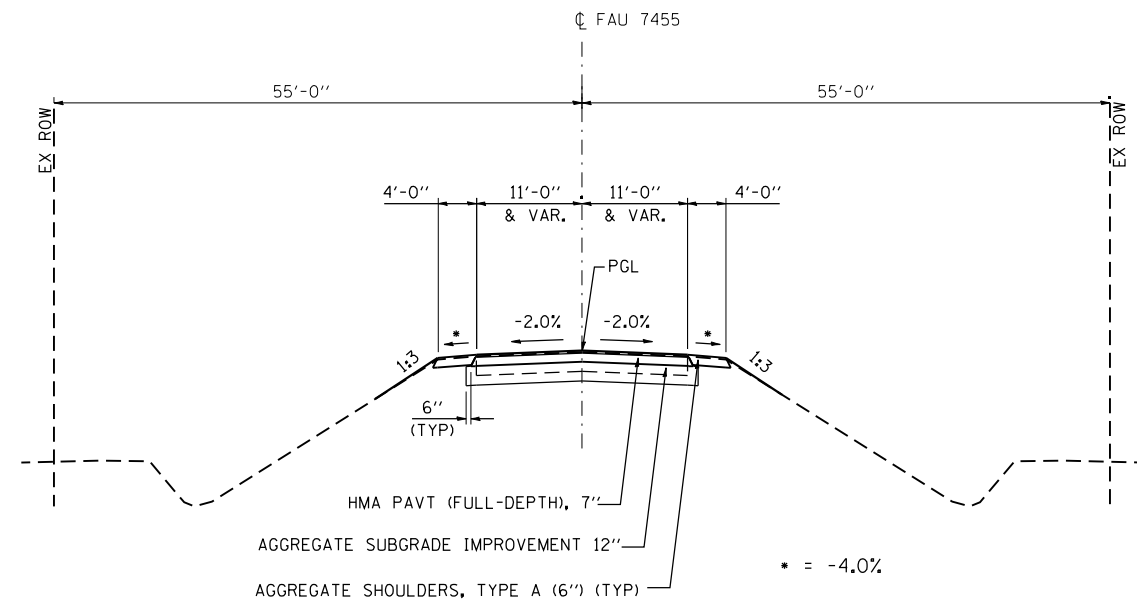
CODE NO.	ITEM	UNIT	TOTAL QUANTITY
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	869
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	37.2
△ 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	75
△ 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4
△ 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4
63200310	GUARDRAIL REMOVAL	FOOT	404
67100100	MOBILIZATION	L SUM	1
70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1
△ 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
△ 78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	10
X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.25
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	36

△ SPECIALTY ITEMS



EXISTING TYPICAL SECTION

STA. 12+00.00 TO STA. 18+00.00
(LOOKING NORTH)

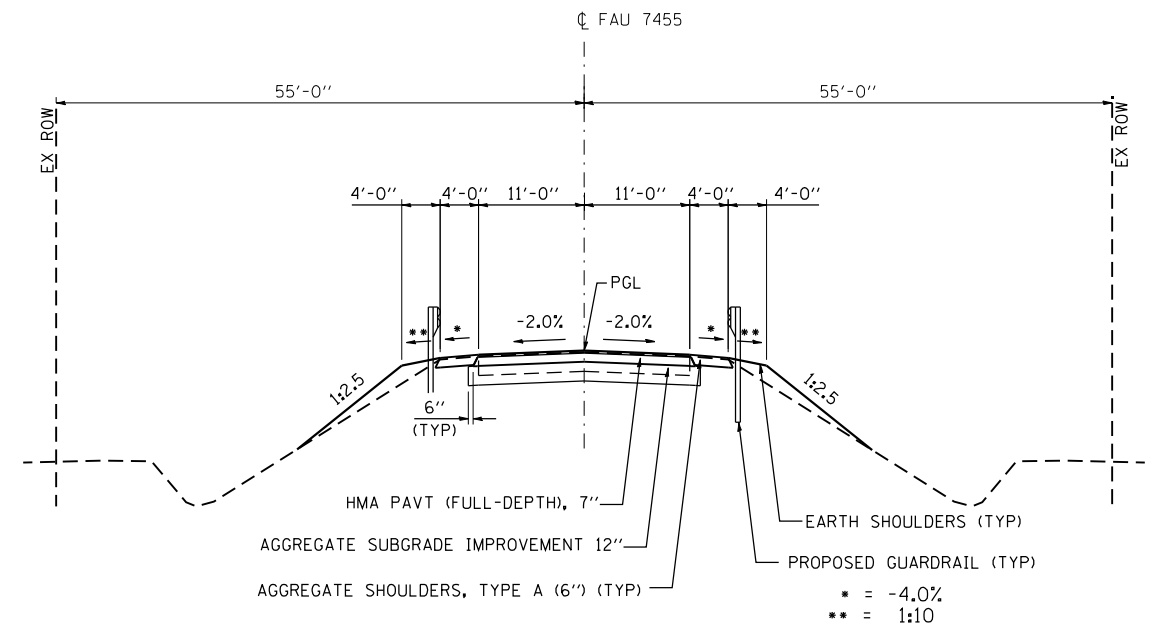


PROPOSED TYPICAL SECTION

STA. 12+00.00 TO STA. 12+71.00 LT
STA. 12+00.00 TO STA. 12+64.50 RT
STA. 17+45.50 TO STA. 18+00.00 LT
STA. 17+08.00 TO STA. 18+00.00 RT
(LOOKING NORTH)

BRIDGE OMISSION:

STA. 14+23.54 TO STA. 15+86.46



PROPOSED TYPICAL SECTION

STA. 12+71.00 TO STA. 17+45.50 LT
STA. 12+64.50 TO STA. 17+08.00 RT
(LOOKING NORTH)

design firm
no. 184001036



USER NAME = g.jameson	DESIGNED - BJJ	REVISED
FILE NAME = TYPICAL_SHT.dgn	CHECKED - RKA	REVISED
PLOT SCALE = 20.0000' / IN.	DRAWN - GSJ	REVISED
PLOT DATE = 4/23/2018	CHECKED - BJJ	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

SCALE: 1" = 10' SHEET NO. 1 OF 1 SHEETS STA. 12+00.00 TO STA. 18+00.00

FAU	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7455	16-11117-00-BR	MACON	32	6
CONTRACT NO. 95838			ILLINOIS FED. AID PROJECT	

LOCATION	20200100	20300100	FOR INFORMATION ONLY		20400800
	EARTH EXCAVATION	CHANNEL EXCAVATION	EXCAVATION TO BE USED IN EMBANKMENT (ADJUSTED FOR SHRINKAGE) (EXC. x 0.75)	EMBANKMENT (FILL)	EARTHWORK BALANCE WASTE(+) AND SHORTAGE (-)
	CU. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.
STA. 12+00.00 TO STA. 14+23.54	223		167	60	107
STA. 14+23.54 TO STA. 15+86.46		936	702	317	385
STA. 15+86.46 TO STA. 18+00.00	276		155	43	112
TOTAL	499		1024	420	604

EARTH EXCAVATION SHRINKAGE FACTOR = 25%

ASSUMES A PORTION OF THE CHANNEL EXCAVATION IS SUITABLE FOR THE EMBANKMENT REQUIRED TO CONSTRUCT CHANNEL BENCHES ON GRADING PLAN

28000250 TEMPORARY EROSION CONTROL SEEDING

FAU 7455 (KRUSE ROAD)		POUND
LT 12+00.0 TO LT 14+23.54		3
LT 15+86.4 TO LT 18+00.00		4
RT 12+00.0 TO RT 14+23.54		6
RT 15+86.4 TO RT 18+00.00		5
TOTAL		25

28000305 TEMPORARY DITCH CHECKS

FAU 7455 (KRUSE ROAD)		FOOT
LT 14+12.00		21
RT 14+50.00		16
RT 15+60.00		16
LT 16+00.00		13
TOTAL		66

28000400 PERIMETER EROSION BARRIER

FAU 7455 (KRUSE ROAD)		FOOT
LT 12+00.0 TO LT 14+07.00		207
LT 16+09.0 TO LT 18+00.00		198
RT 12+00.0 TO RT 14+13.00		213
RT 16+25.0 TO RT 18+00.00		175
TOTAL		793

30300112 AGGREGATE SUBGRADE IMPROVEMENT 12"

FAU 7455 (KRUSE ROAD)		SQ YD
CL 12+00.0 TO CL 12+50.00		130
CL 12+50.0 TO CL 14+23.54		466
CL 15+86.4 TO CL 17+50.00		439
CL 17+50.0 TO CL 18+00.00		135
TOTAL		1,170

40700100 BITUMINOUS MATERIALS (TACK COAT)

FAU 7455 (KRUSE ROAD)		POUND
CL 12+00.0 TO CL 12+50.00		345
CL 12+50.0 TO CL 14+23.54		1240
CL 15+86.4 TO CL 17+50.00		1169
CL 17+50.0 TO CL 18+00.00		359
TOTAL		3113

40701821 HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 7"

FAU 7455 (KRUSE ROAD)		SQ YD
CL 12+00.0 TO CL 12+50.00		118
CL 12+50.0 TO CL 14+23.54		425
CL 15+86.4 TO CL 17+50.00		400
CL 17+50.0 TO CL 18+00.00		123
TOTAL		1066

44000100 PAVEMENT REMOVAL

FAU 7455 (KRUSE ROAD)		SQ YD
CL 12+00.0 TO CL 14+45.25		600
CL 15+65.0 TO CL 18+00.00		575
TOTAL		1,175

48100500 AGGREGATE SHOULDERS, TYPE A 6"

FAU 7455 (KRUSE ROAD)		SQ YD
LT 12+00.0 TO LT 14+23.54		100
LT 15+86.4 TO LT 18+00.00		95
RT 12+00.0 TO RT 14+23.54		100
RT 15+86.4 TO RT 18+00.00		95
TOTAL		390

63000001 SPBGR TY A 6FT POSTS

FAU 7455 (KRUSE ROAD)		FOOT
LT 16+23.9 TO LT 16+61.46		37.5
RT 13+48.5 TO RT 13+86.04		37.5
TOTAL		75.0

63100087 TRAFFIC BARRIER TERMINAL, TYPE 6A

FAU 7455 (KRUSE ROAD)		EACH
LT 13+86.0 TO LT 14+23.54		1
LT 15+86.4 TO LT 16+23.96		1
RT 13+86.0 TO RT 14+23.54		1
RT 15+86.4 TO RT 16+23.96		1
TOTAL		4

63100167 TR BAR TRM T1 SPL TAN

FAU 7455 (KRUSE ROAD)		EACH
LT 13+36.0 TO LT 13+86.04		1
LT 16+61.4 TO LT 17+11.46		1
RT 12+98.5 TO RT 13+48.54		1
RT 16+23.9 TO RT 16+73.96		1
TOTAL		4

63200310 GUARDRAIL REMOVAL

FAU 7455 (KRUSE ROAD)		FOOT
LT 13+42.7 TO LT 14+43.74		101
LT 15+66.1 TO LT 16+67.13		101
RT 13+42.8 TO RT 14+43.87		101
RT 15+66.3 TO RT 16+67.32		101
TOTAL		404

67100100 MOBILIZATION

FAU 7455 (KRUSE ROAD)		L SUM
TOTAL		1

70101830 TRAF CONT-PROT BLR 21

FAU 7455 (KRUSE ROAD)		L SUM
TOTAL		1

72501000 TERMINAL MARKER - DIRECT APPLIED

FAU 7455 (KRUSE ROAD)		EACH
LT 13+36.04		1
LT 17+11.46		1
RT 12+98.54		1
RT 16+73.96		1
TOTAL		4

78200005 GUARDRAIL REFLECTORS, TYPE A

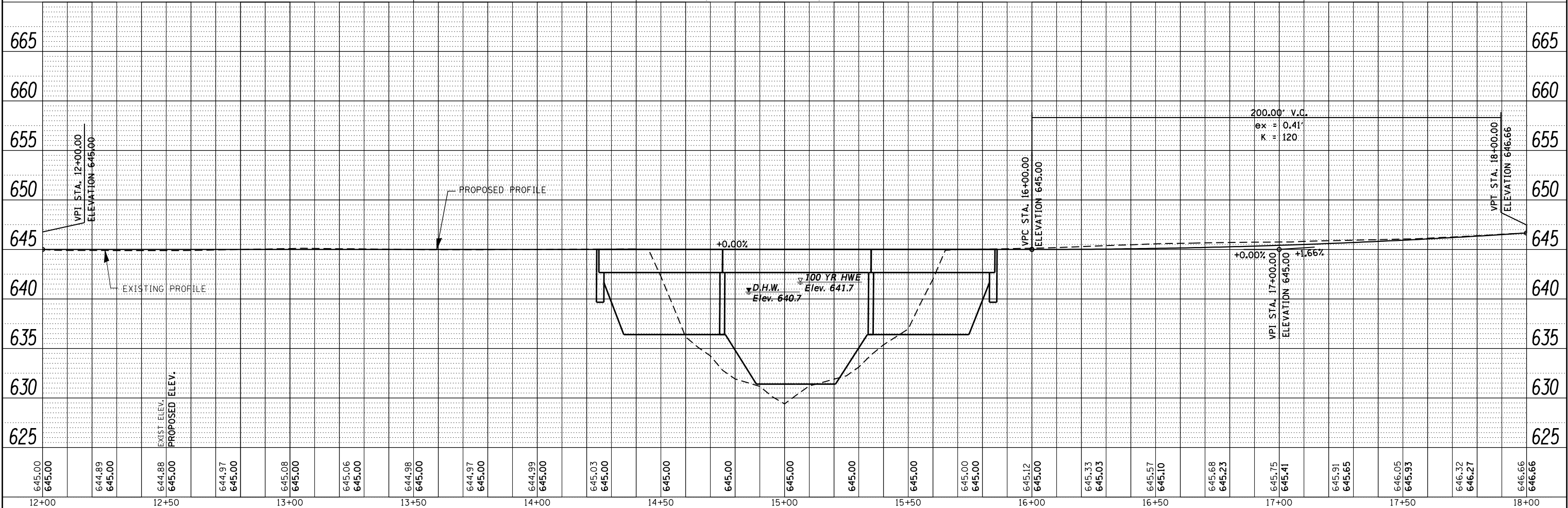
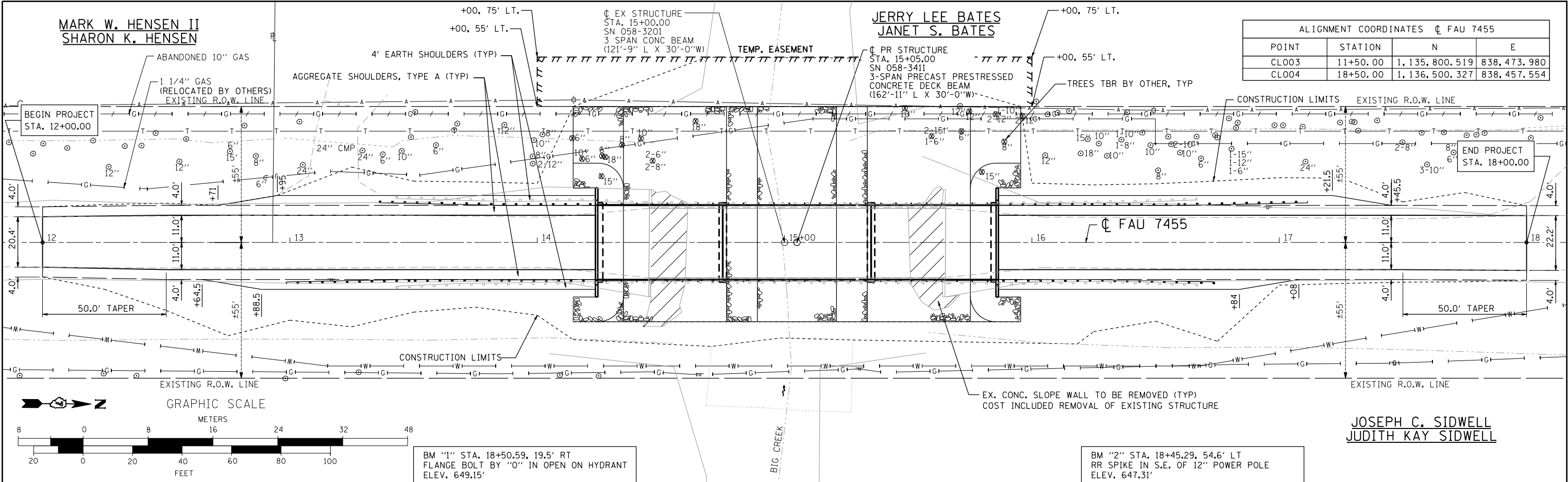
FAU 7455 (KRUSE ROAD)		EACH
LT 13+36.0 TO LT 17+11.46		5
RT 12+98.5 TO RT 16+73.96		5
TOTAL		10

X2501000 SEEDING, CLASS 2 (SPECIAL)

FAU 7455 (KRUSE ROAD)		ACRE
LT 12+00.0 TO LT 14+23.54		0.03
LT 15+86.4 TO LT 18+00.00		0.04
RT 12+00.0 TO RT 14+23.54		0.06
RT 15+86.4 TO RT 18+00.00		0.05
TOTAL		0.25

PLAN	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	CHECKED		
	ALIGNED		
	CADD FILE NAME		

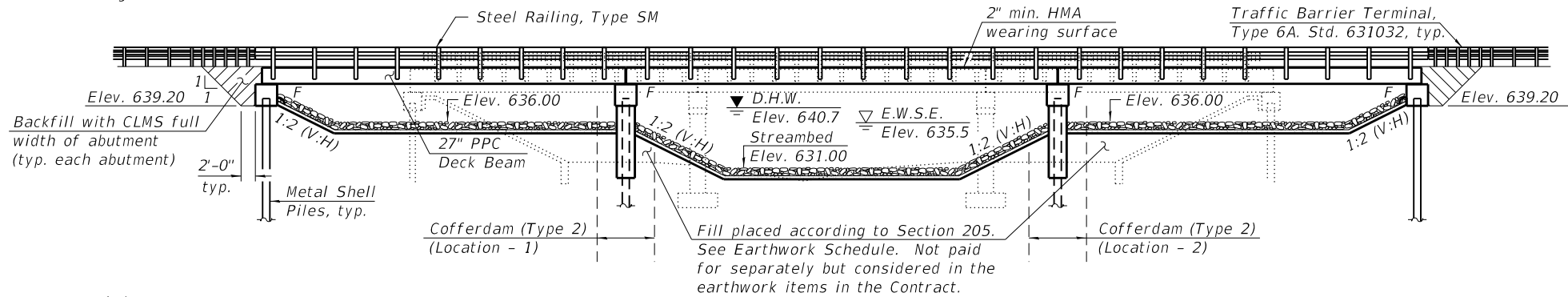
PROFILE	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	CHECKED		
	STRUCTURE		
	NOTATION CHKO		



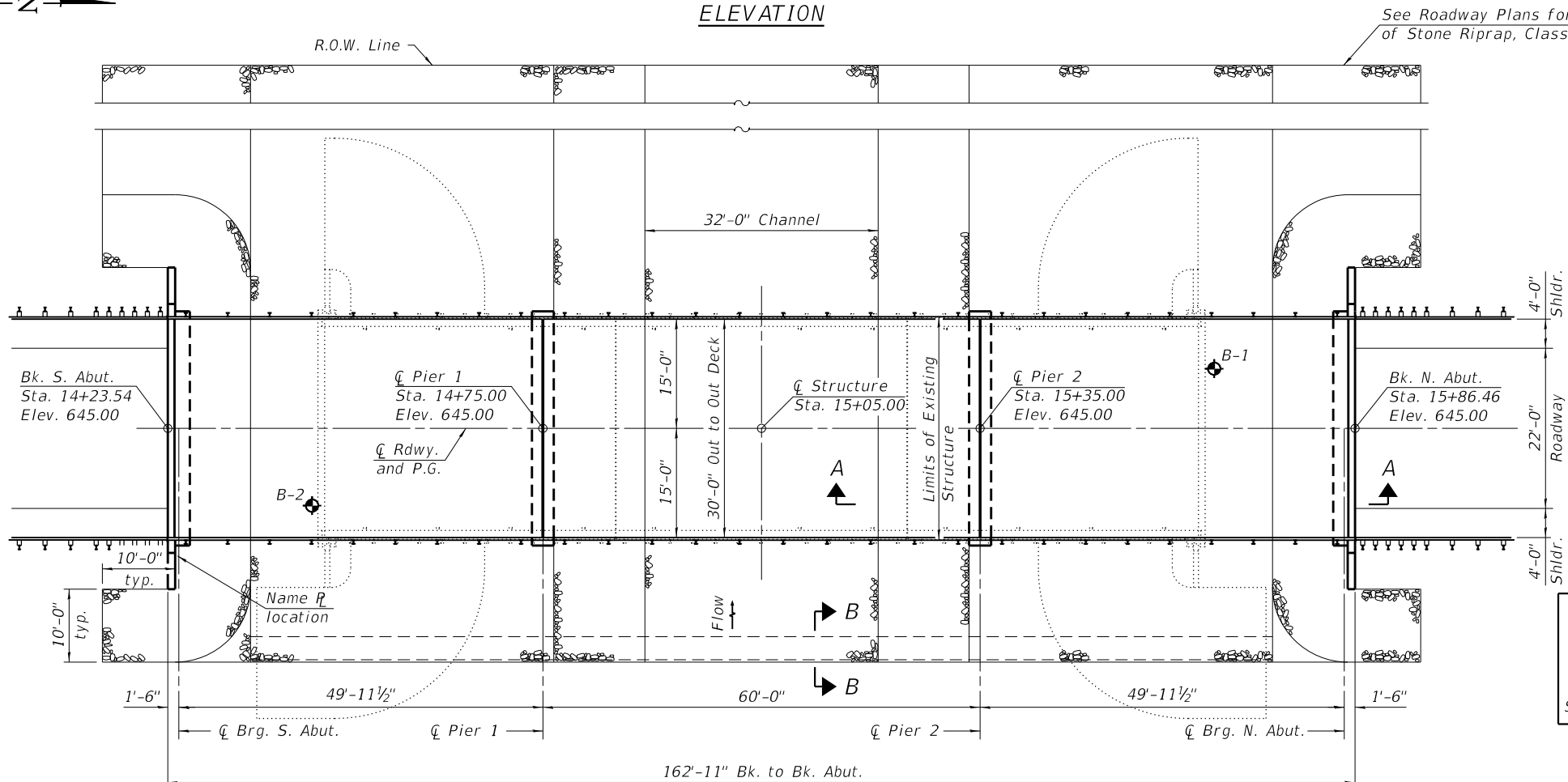
Benchmark: BM2, RR spike set in S.E. face of 12" power pole, 320' N.W. of bridge C. Elev. 647.31'

Existing Structure: SN 058-3201 (Sta. 15+00) is a three-span precast concrete channel beam bridge on pile bent abutments and concrete solid wall piers on spread footings. The bridge was constructed with no skew, three equal span lengths of 40'-0" (end to end of beam), and a total bridge length of 121'-9" (back to back of abutments). The out-to-out width of the bridge is 30'-0". Road to be closed during construction.

No Salvage



ELEVATION



PLAN

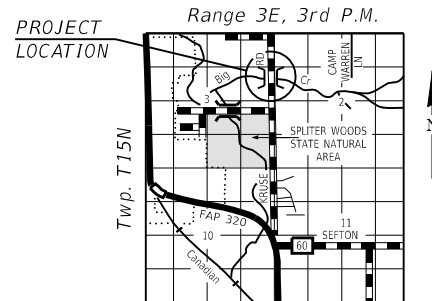
WATERWAY INFORMATION TABLE

Drainage Area = 23.48 sq. mi.		Exist. Low Grade Elev. = 644.88 at Sta. 12+50.00 Prop. Low Grade Elev. = 645.00 at Sta. 15+05.00							
Flood	Freq.	Q	Opening	Sq. Ft.	Nat.	Head - Ft.	Headwater	El.	
	Yr.	C.F.S.	Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.	Prop.
Design	20	2970	733	895	640.7	0.7	0.6	641.4	641.3
Base	100	4370	840	1025	641.7	0.9	0.8	642.6	642.5
Scour Design Check	200	5020	890	1100	642.1	1.1	0.9	643.2	643.0
Max. Calc.	500	5900	900	1125	642.6	1.3	1.1	643.9	643.7

DESIGN SCOUR ELEVATION TABLE

Event / Limit State	Design Scour Elevations (ft.)					Item 113
	S. Abut.	Pier 1	Pier 2	N. Abut.		
Q100	-	629.40	629.50	-		5
Q200	-	629.30	629.50	-		
Design	639.20	628.50	628.50	639.20		
Check	639.20	628.50	628.50	639.20		

NAME PLATE
See Std. 515001



LOCATION SKETCH

INDEX OF SHEETS

- General Plan and Elevation
- General Data
- PPC Deck Beam Details
- Superstructure Details
- Steel Railing, Type SM
- Abutments
- Piers
- Metal Shell Pile Details
- Boring Logs

LOADING HL-93

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

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2016 Interims

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 ($\frac{1}{2}$ " $\emptyset$ low-lax strands)
 $f'_{pbt} = 201,960$ psi ($\frac{1}{2}$ " $\emptyset$ low-lax strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.111g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.219g
Soil Site Class = C



I certify that to the best of 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 LRFD Bridge Design Specifications.

GENERAL PLAN AND ELEVATION
F.A.U. 7455 (KRUSE RD.) OVER BIG CREEK
SECTION 16-11117-00-BR
MACON COUNTY
STATION 15+05.00
PROPOSED STRUCTURE NO. 058-3411

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 058-3411

SHEET 1 OF 11 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7455	16-11117-00-BR	MACON	32	10
CONTRACT NO. 95838				

ILLINOIS FED. AID PROJECT

USER NAME =	DESIGNED - SBC	REVISED -
	CHECKED - CWC	REVISED -
PLOT SCALE =	DRAWN - DLH	REVISED -
PLOT DATE =	CHECKED - SBC	REVISED -

GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

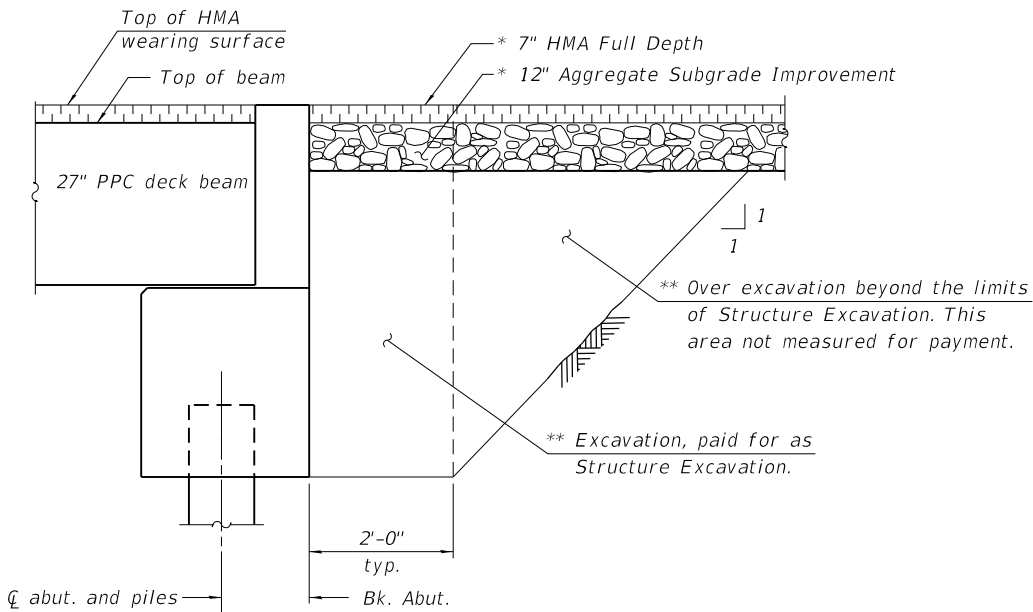


PROFILE GRADE

TOTAL BILL OF MATERIAL

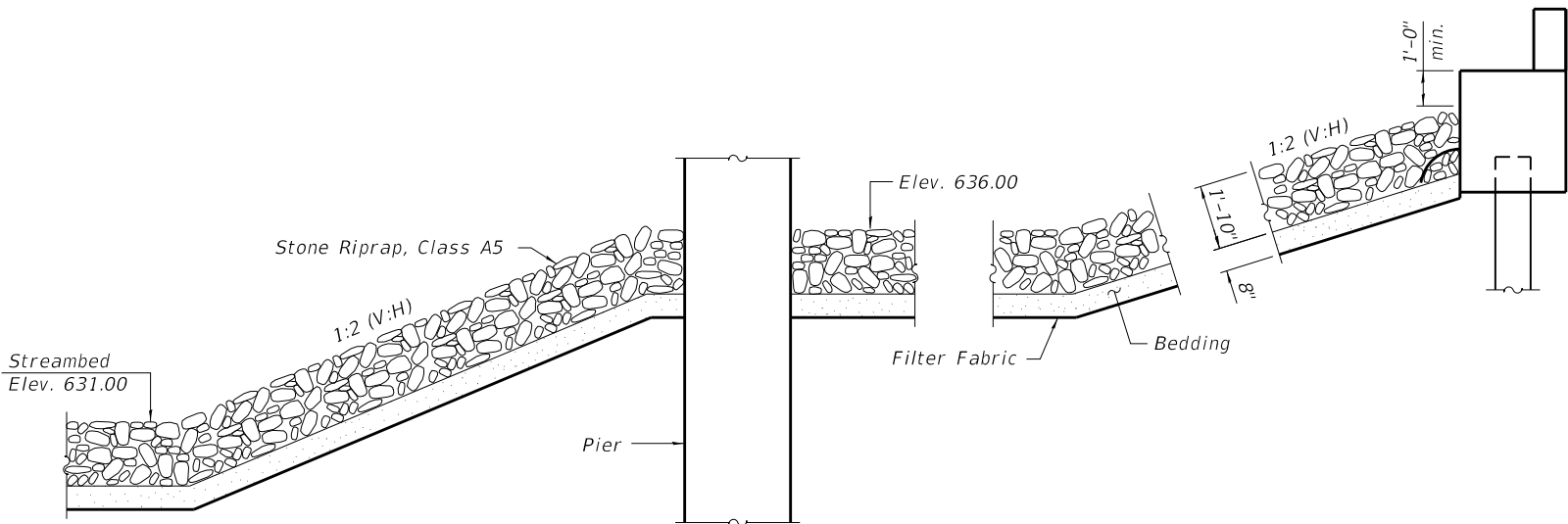
Item	Unit	Super	Sub	Total
Channel Excavation	Cu. Yd.		936	936
Stone Riprap, Class A5	Sq. Yd.		1643	1643
Filter Fabric	Sq. Yd.		1643	1643
Hot-Mix Asphalt Surface Course, Mix "C", N50	Ton	71		71
Removal of Existing Structures	Each	1		1
Structure Excavation	Cu. Yd.		76	76
Cofferdam Excavation	Cu. Yd.		122	122
Cofferdam (Type 2) (Location - 1)	Each		1	1
Cofferdam (Type 2) (Location - 2)	Each		1	1
Concrete Structures	Cu. Yd.		131.8	131.8
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	4828		4828
Reinforcement Bars, Epoxy Coated	Pound		14280	14280
Steel Railing, Type SM	Foot	326		326
Furnishing Metal Shell Piles 12" x 0.250"	Foot		340	340
Furnishing Metal Shell Piles 14" x 0.312"	Foot		476	476
Driving Piles	Foot		816	816
Test Pile Metal Shells	Each		4	4
Name Plates	Each		1	1
Waterproofing Membrane System	Sq. Yd.	538		538
Portland Cement Mortar Fairing Course	Foot	869		869
Controlled Low-Strength Material	Cu. Yd.		37.2	37.2
# Asbestos Bearing Pad Removal	Each	36		36

Note that there are 2 - 1/4" asbestos bearing pads at the $\varnothing$ key and edge of beam at each abutment. (18 removal locations, 36 pads to be removed.)

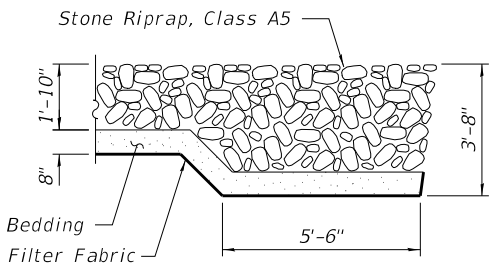


SECTION AT ABUTMENT

- * See roadway plans.
- ** Backfill with Controlled Low-Strength Material (CLSM) (Mix 2).



SECTION A-A



SECTION B-B

MODEL: \$MODELNAME\$
FILE NAME: L:\Jobs\Macon_County\8404 Kruse Rd Bridge Replacement\CADD\CADD Sheets\0583411-00000.dgn

design firm
no. 164001036



USER NAME	=	DESIGNED - SBC	REVISED -
		CHECKED - CWC	REVISED -
PLOT SCALE	=	DRAWN - DLH	REVISED -
PLOT DATE	=	CHECKED - SBC	REVISED -

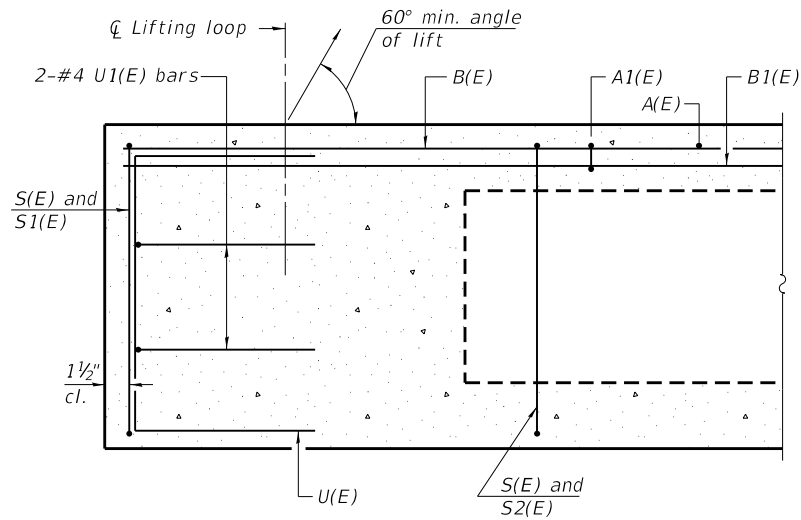
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STRUCTURE NO. 058-3411

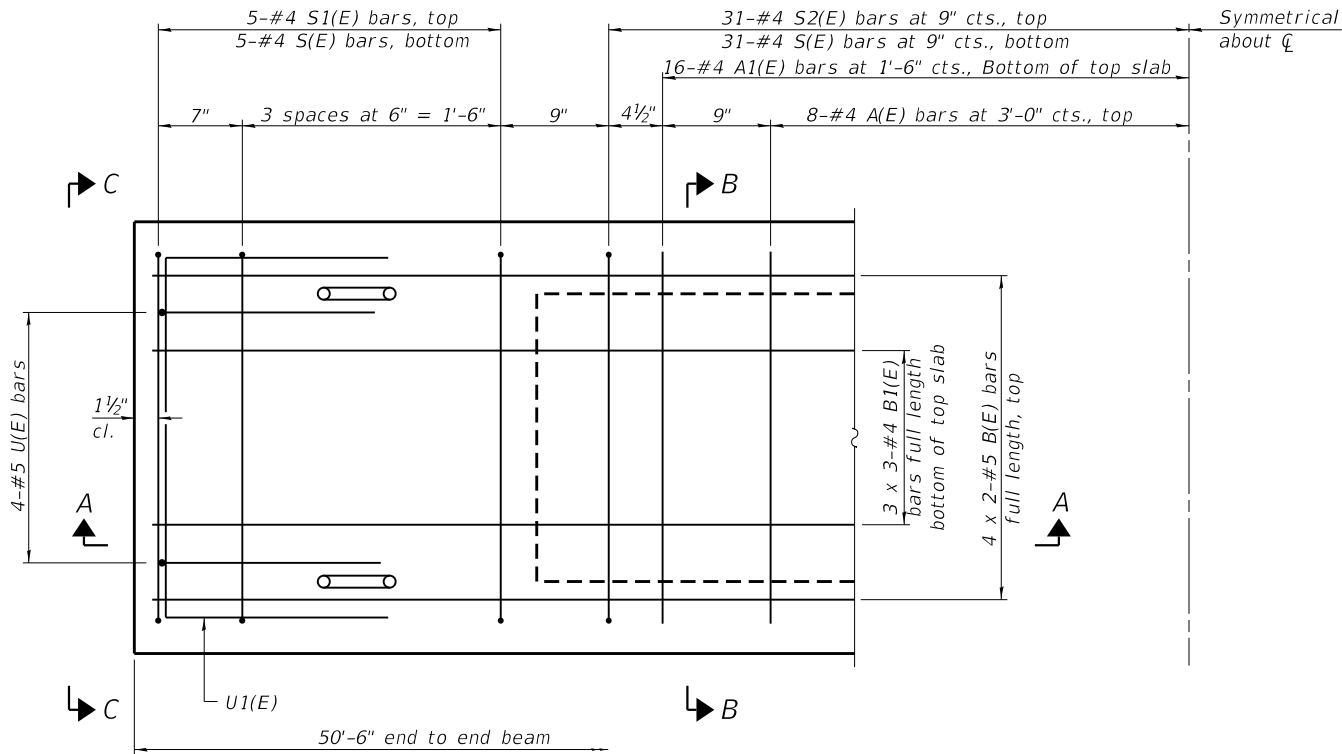
SHEET 2 OF 11 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7455	16-11117-00-BR	MACON	32	11
CONTRACT NO. 95838				
ILLINOIS FED. AID PROJECT				

MODEL: \$MODELNAME\$
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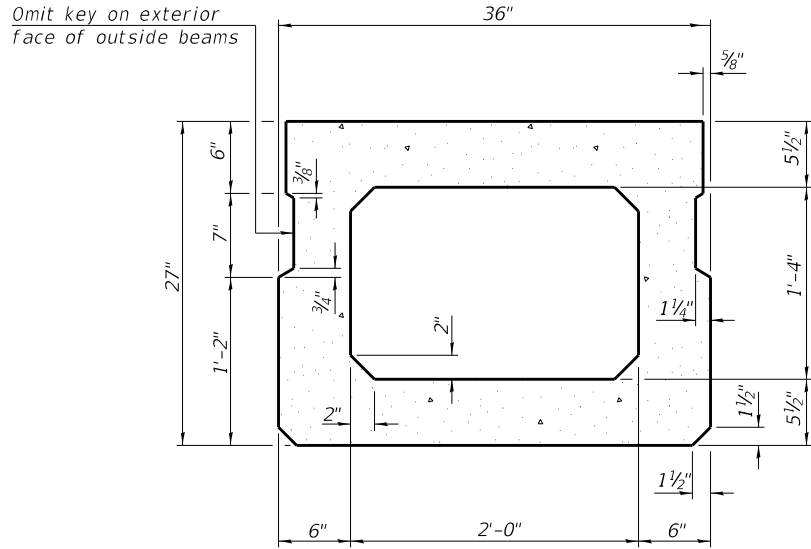


SECTION A-A

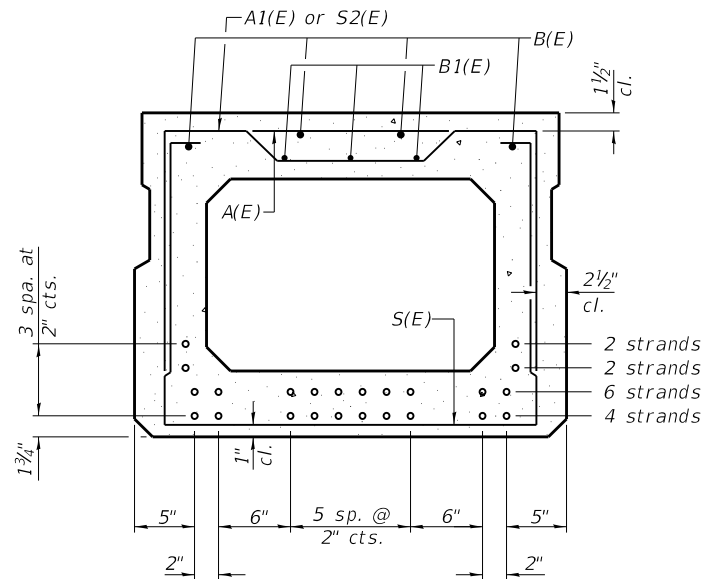


PLAN VIEW

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.

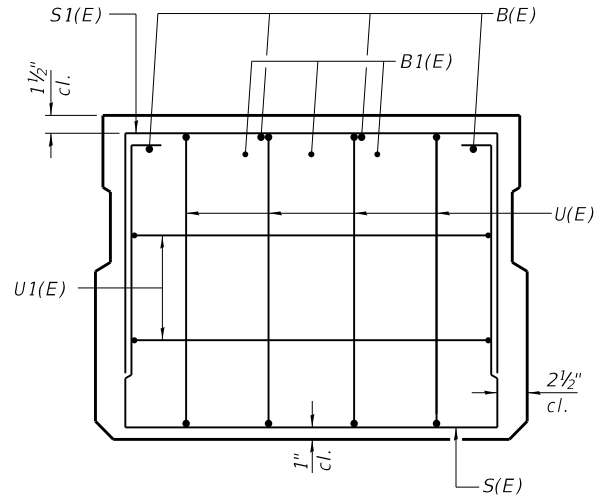


SECTION B-B
(Showing dimensions)



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.



VIEW C-C

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	16	#4	2'-7"	—
A1(E)	32	#4	2'-10"	~
B(E)	8	#5	26'-6"	—
B1(E)	9	#4	18'-2"	—
S(E)	72	#4	7'-5"	U
S1(E)	10	#4	5'-11"	U
S2(E)	62	#4	6'-2"	U
U(E)	8	#5	4'-6"	U
U1(E)	4	#4	5'-0"	U

Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

Note:
See sheet 5 of 11 for additional details and Bill of Material.

MINIMUM BAR LAP

#4 bar = 1'-11"
#5 bar = 2'-6"

PD-2736-0

2-17-2017

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no. 164001036

whks
engineers + planners + land surveyors

USER NAME	=	DESIGNED	-	SBC	REVISED	-
		CHECKED	-	CWC	REVISED	-
PLOT SCALE	=	DRAWN	-	DLH	REVISED	-
PLOT DATE	=	CHECKED	-	SBC	REVISED	-

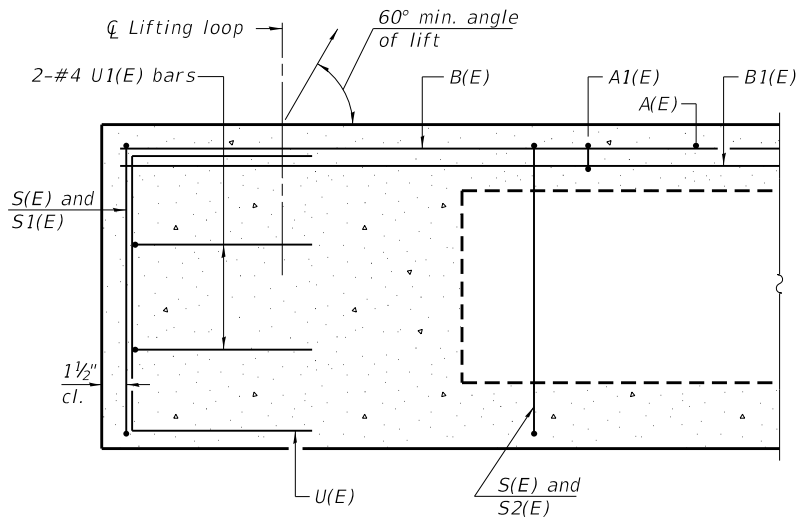
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

27" x 36" PPC DECK BEAM (SPANS 1 AND 3)
STRUCTURE NO. 058-3411

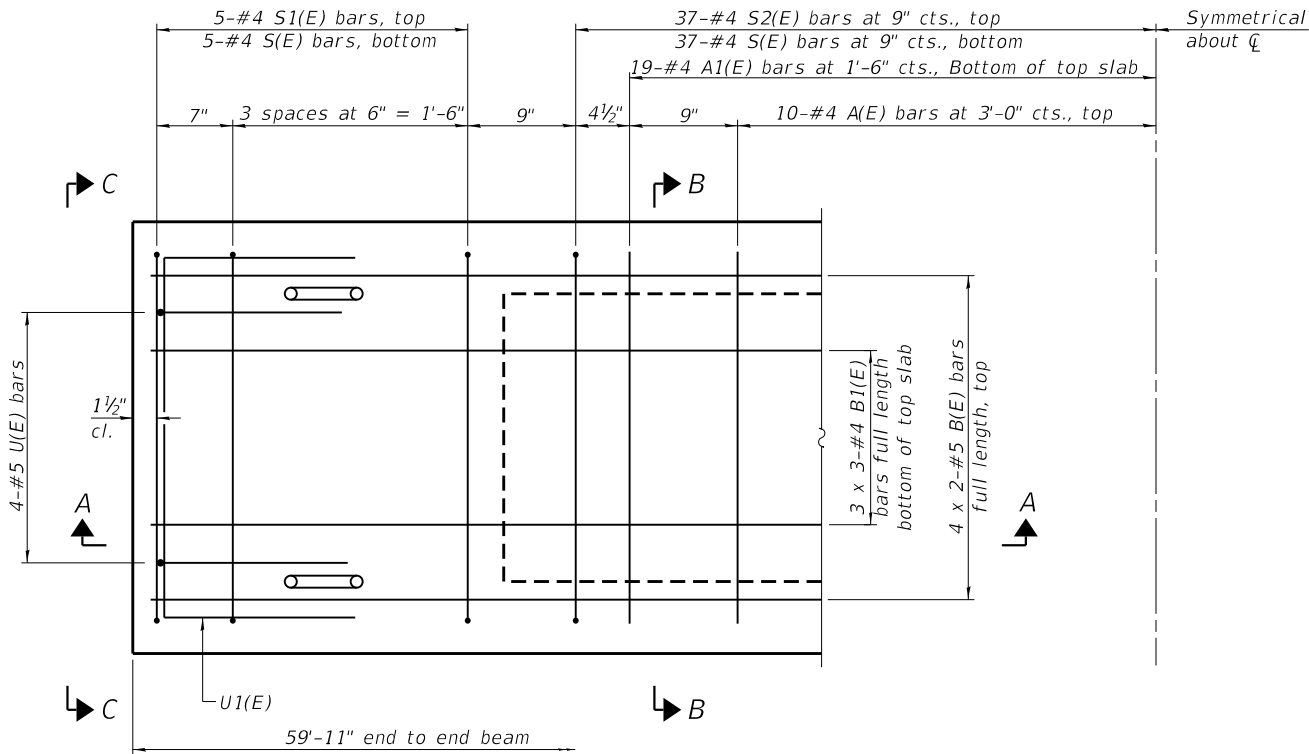
SHEET 3 OF 11 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7455	16-11117-00-BR	MACON	32	12
CONTRACT NO. 95838				
ILLINOIS FED. AID PROJECT				

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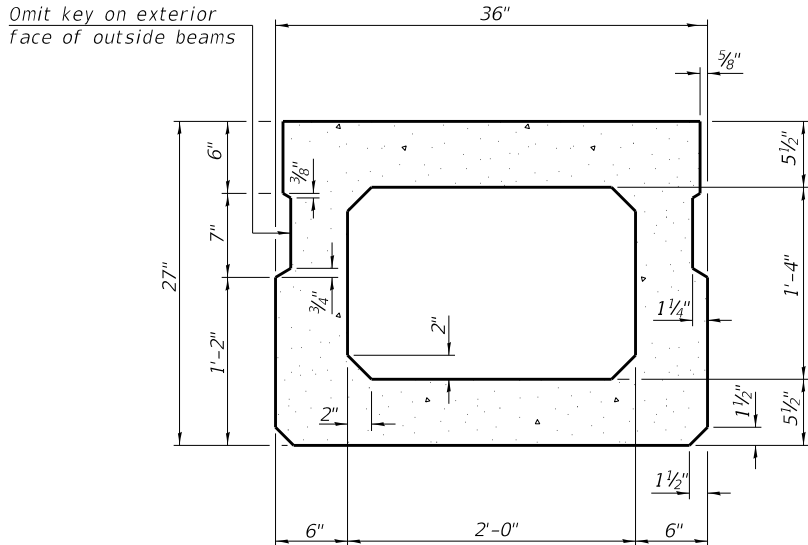


SECTION A-A

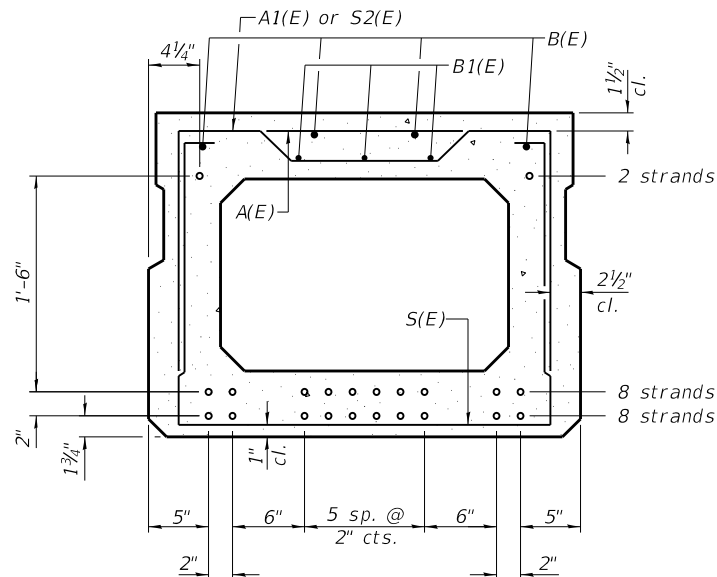


PLAN VIEW

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.



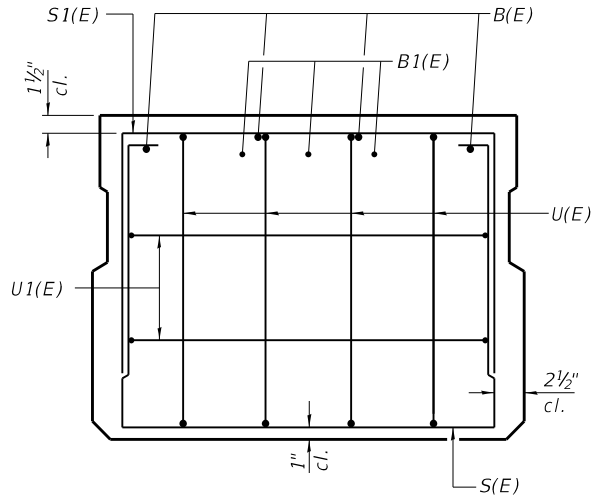
SECTION B-B
(Showing dimensions)



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.



VIEW C-C

BAR LIST
ONE BEAM ONLY

(For information only)

Bar	No.	Size	Length	Shape
A(E)	20	#4	2'-7"	—
A1(E)	38	#4	2'-10"	~
B(E)	8	#5	31'-3"	—
B1(E)	9	#4	21'-3"	—
S(E)	84	#4	7'-5"	┌
S1(E)	10	#4	5'-11"	┌
S2(E)	74	#4	6'-2"	┌
U(E)	8	#5	4'-6"	┌
U1(E)	4	#4	5'-0"	┌

Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

Note:
See sheet 5 of 11 for additional details and Bill of Material.

PD-2736-0

2-17-2017

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engineers + planners + land surveyors

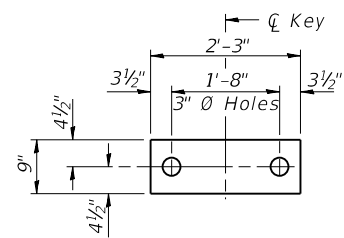
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		CHECKED	-	CWC	REVISED	-
PLOT SCALE	=	DRAWN	-	DLH	REVISED	-
PLOT DATE	=	CHECKED	-	SBC	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

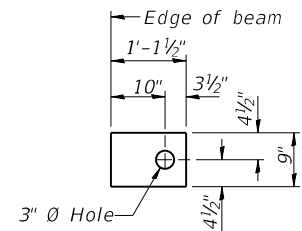
27" x 36" PPC DECK BEAM (SPAN 2)
STRUCTURE NO. 058-3411

SHEET 4 OF 11 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7455	16-11117-00-BR	MACON	32	13
CONTRACT NO. 95838				
ILLINOIS FED. AID PROJECT				



FABRIC BEARING PAD
(Interior)

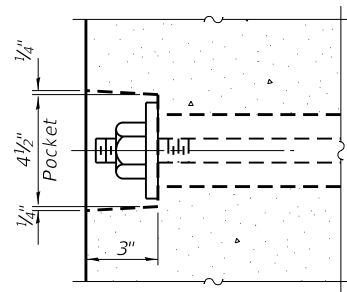


FABRIC BEARING PAD
(Exterior)

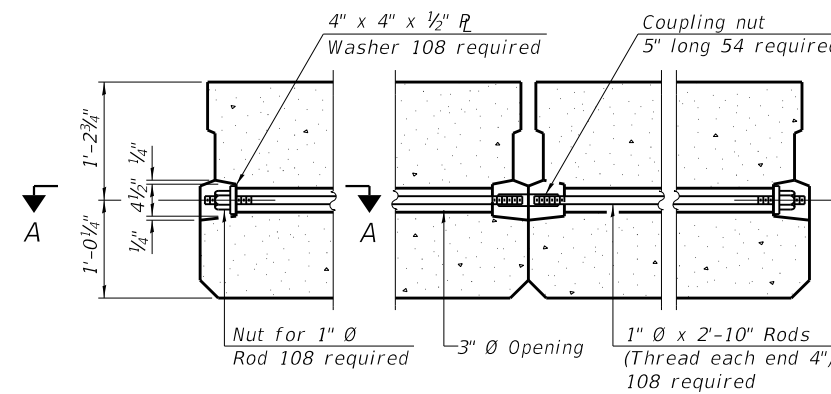
FIXED

Note:

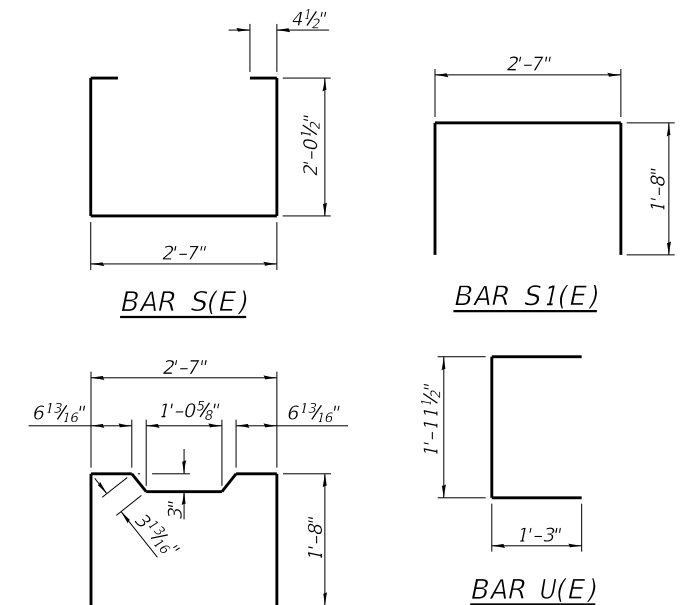
All bearing pads shall be 1" thick.



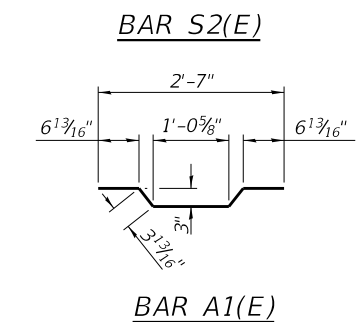
SECTION A-A



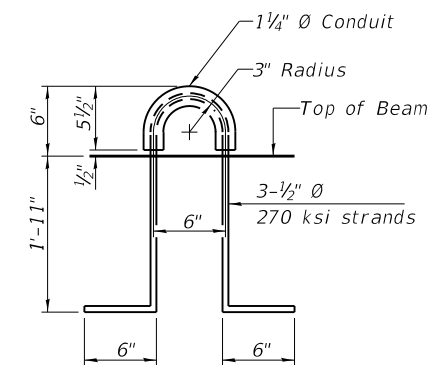
TYPICAL TRANSVERSE TIE ASSEMBLY



BAR S(E)

BAR S1(E)BAR U(E)BAR S2(E)

BAR U1(E)



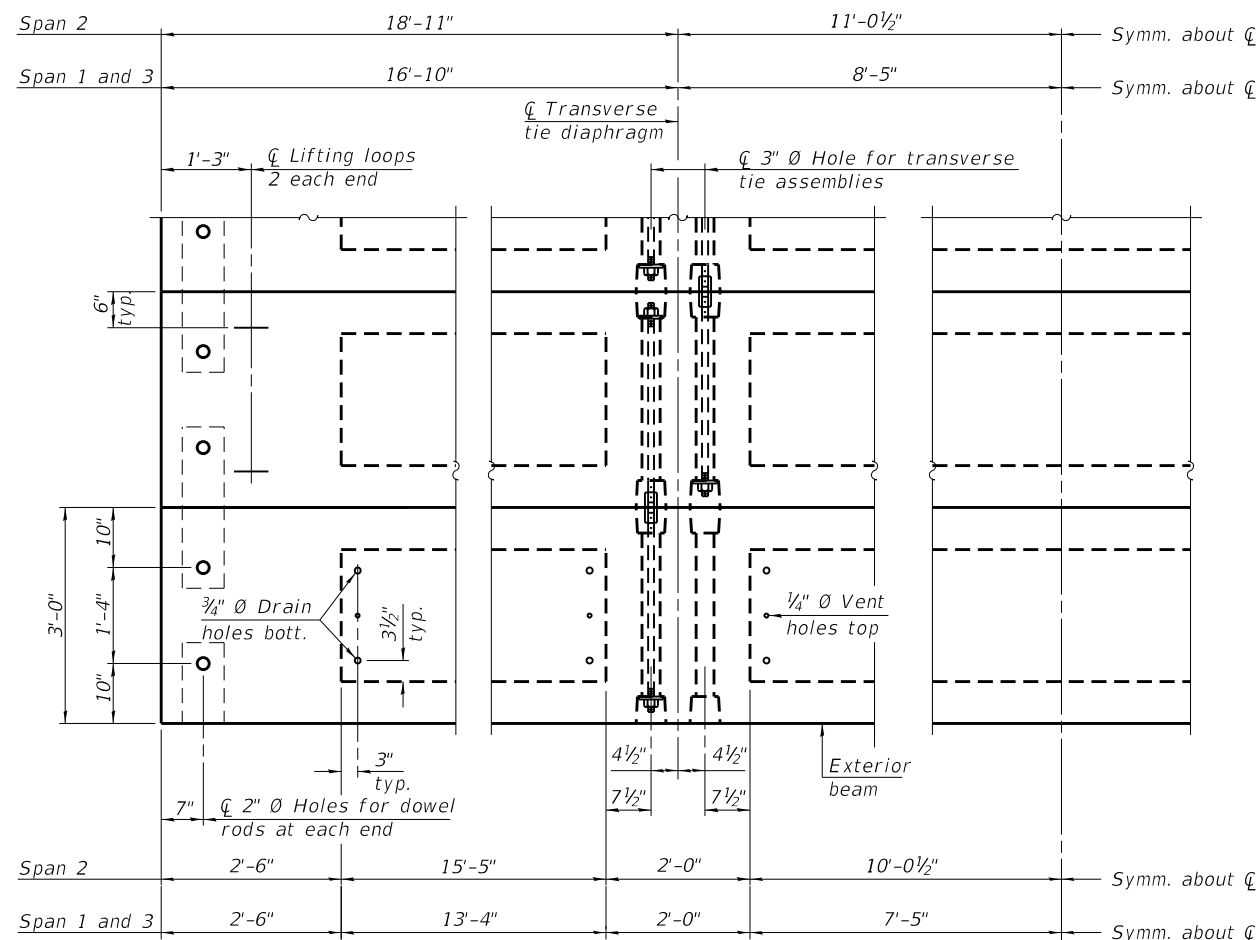
LIFTING LOOP DETAIL

GENERAL NOTES

1. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be $\frac{1}{2}$ " and the nominal cross-sectional area shall be 0.153 sq. in.
2. The 1" $\varnothing$ 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.
3. Two $\frac{1}{8}$ " fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
4. A minimum $2\frac{1}{2}$ " $\varnothing$ lifting pin shall be used to engage the lifting loops during handling.
5. 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.
6. Compressive strength of prestressed concrete, f'_c , shall be 6000 psi.
7. Compressive strength of prestressed concrete at release, f'_{ci} , shall be 5000 psi.

BILL OF MATERIAL

Item	Unit	Total
Precast Prestressed Conc Deck Bms (27" depth)	Sq. Ft.	4828



PLAN VIEW

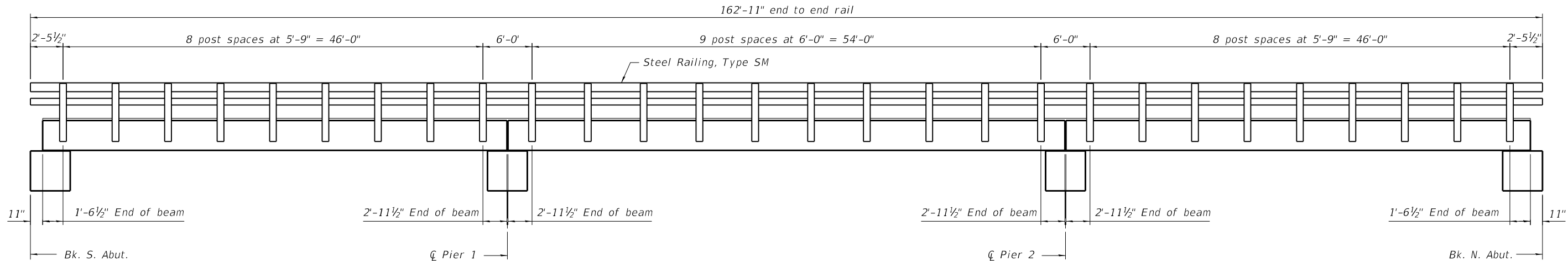
Note:

Connect beams in pairs with the transverse tie configuration shown.

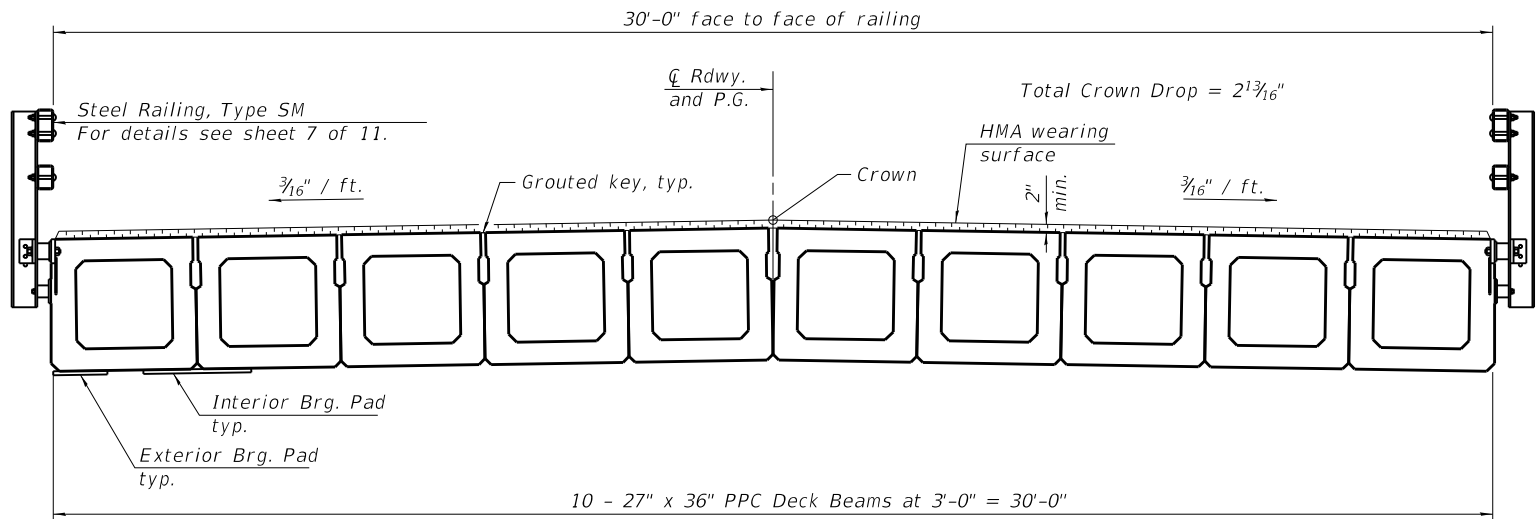
PD-2736-0D

2-17-2017

MODEL: \$MODELNAME\$
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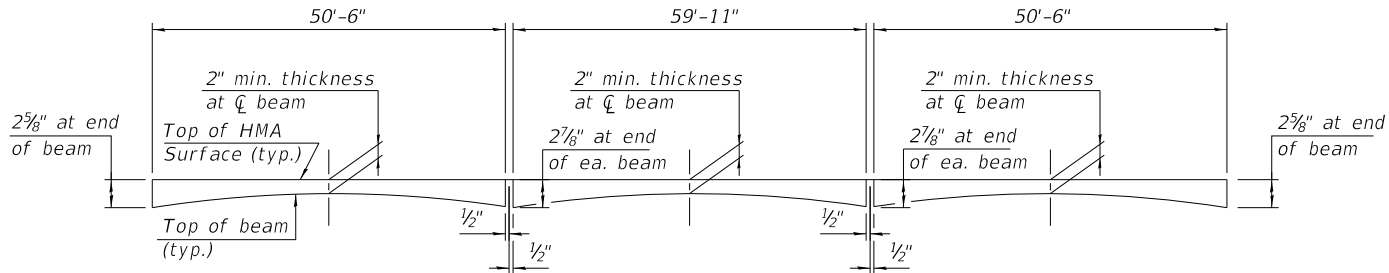
RAIL POST SPACING



CROSS SECTION
(Looking North)

BILL OF MATERIAL

Item	Unit	Total
Hot-Mix Asphalt Surface Course, Mix "C", N50	Ton	71
Waterproofing Membrane System	Sq. Yd.	538
Portland Cement Mortar Fairing Course	Foot	869



ANTICIPATED HOT-MIX ASPHALT WEARING SURFACE PROFILE
(For information only)

design firm
no. 164001036



USER NAME =	DESIGNED - SBC	REVISED -
	CHECKED - CWC	REVISED -
PLOT SCALE =	DRAWN - DLH	REVISED -
PLOT DATE =	CHECKED - SBC	REVISED -

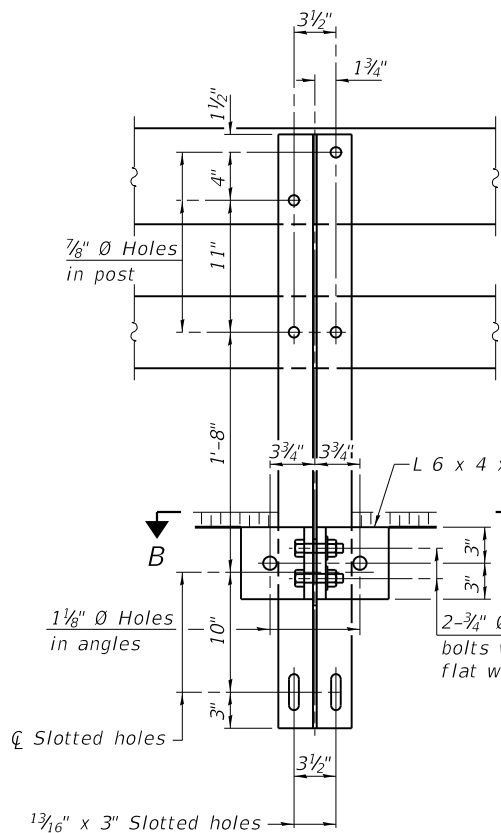
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 058-3411

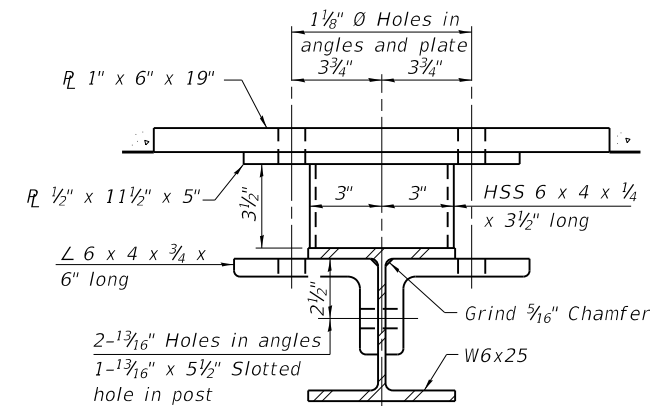
SHEET 6 OF 11 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7455	16-11117-00-BR	MACON	32	15
CONTRACT NO. 95838				
ILLINOIS FED. AID PROJECT				

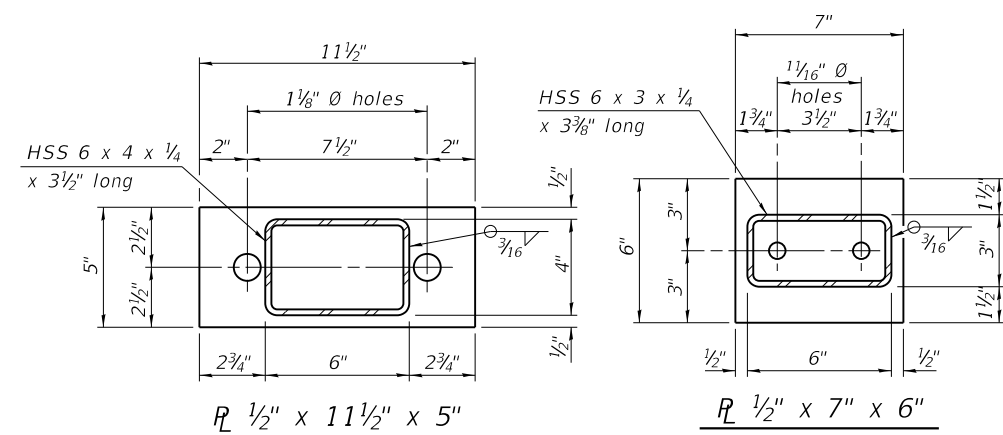
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SECTION A-A

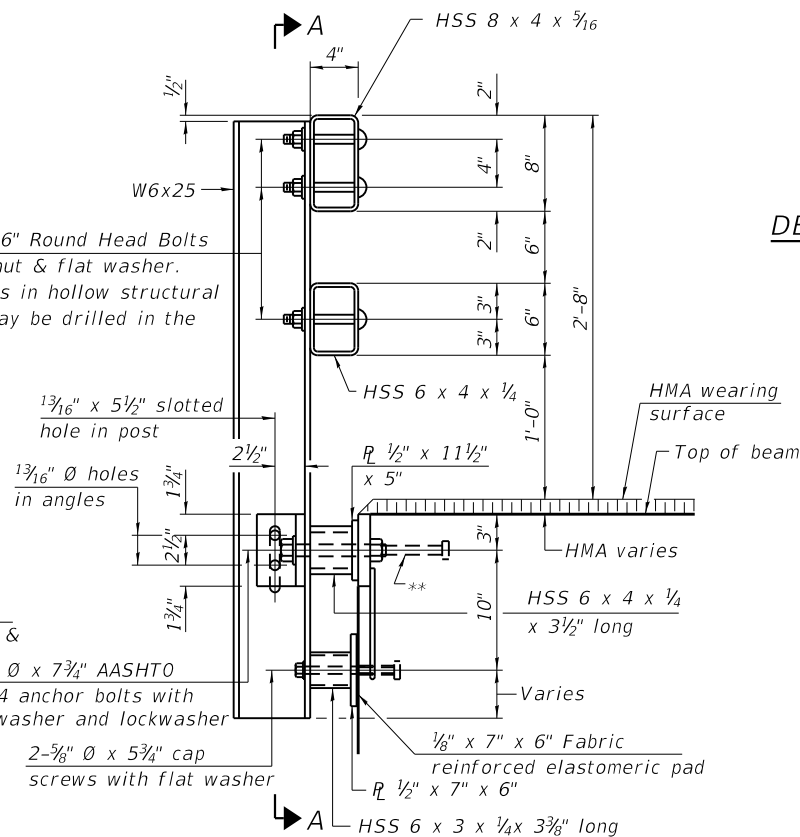


SECTION B-B

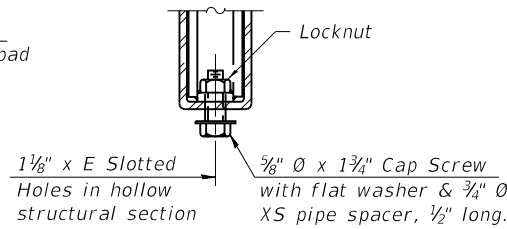
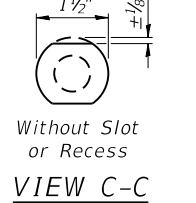
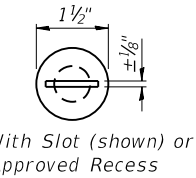
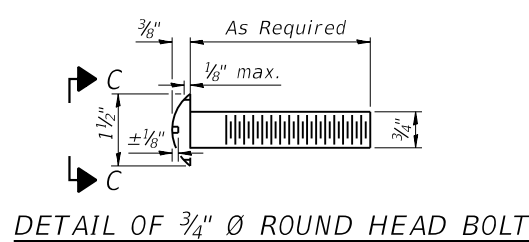


R 1/2" x 11 1/2" x 5"

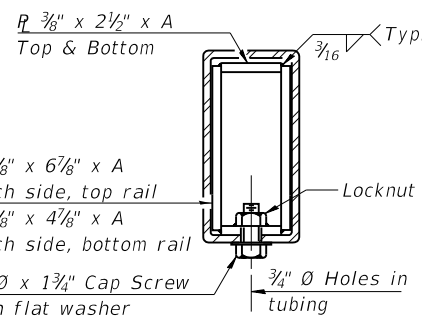
R 1/2" x 7" x 6"



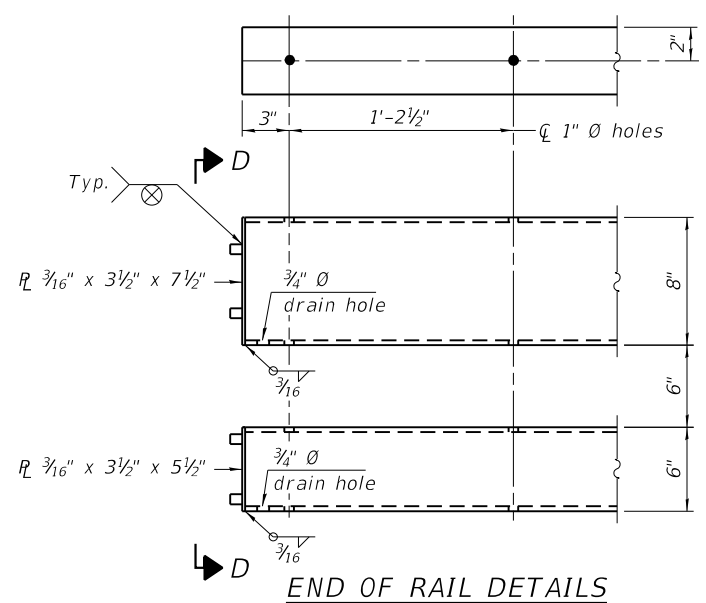
SECTION AT RAIL POST



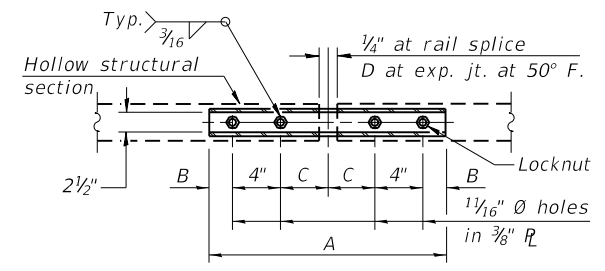
RAIL SPLICE CONNECTION AT EXPANSION JT.



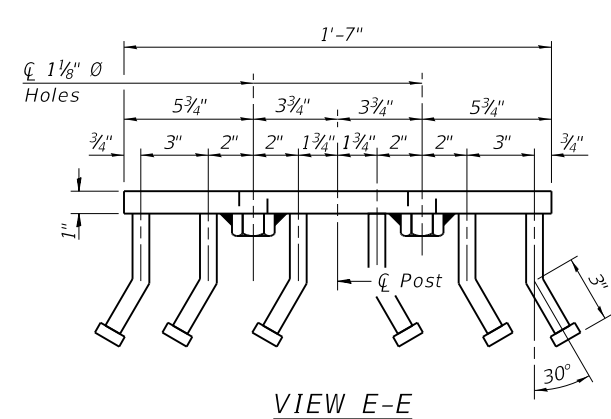
SECTION AT RAIL SPLICE



END OF RAIL DETAILS



PLAN-BOTT. SPLICE R TYPICAL



VIEW E-E

- Notes:
- For multi-span bridges, sufficient 1/4 inch x 6 inch x 1'-2 inch galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type SM.
 - All steel rail members shall be galvanized according to Article 509.05 of the Standard Specifications.

SPLICE DIMENSIONS

T	D	A	B	C	E
≤ 4"	2 1/2"	1'-8"	2"	4"	2 1/2"
> 4" ≤ 6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
> 6 1/2" ≤ 9"	5"	2'-4"	3 1/2"	6 1/2"	9"
> 9" ≤ 13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	1/4"	1'-8"	2"	4"	—

T = Total movement at expansion joint as shown on the design plans.

BILL OF MATERIAL

Item	Unit	Total
Steel Railing, Type SM	Foot	326

R-34HMAWS

8-11-2017 (6'-3" Maximum Post Spacing) (1 1/4" minimum to 3 1/8" maximum HMA thickness)

USER NAME =	DESIGNED - SBC	REVISED -
CHECKED - CWC	REVISED -	
PLOT SCALE =	DRAWN - DLH	REVISED -
PLOT DATE =	CHECKED - SBC	REVISED -

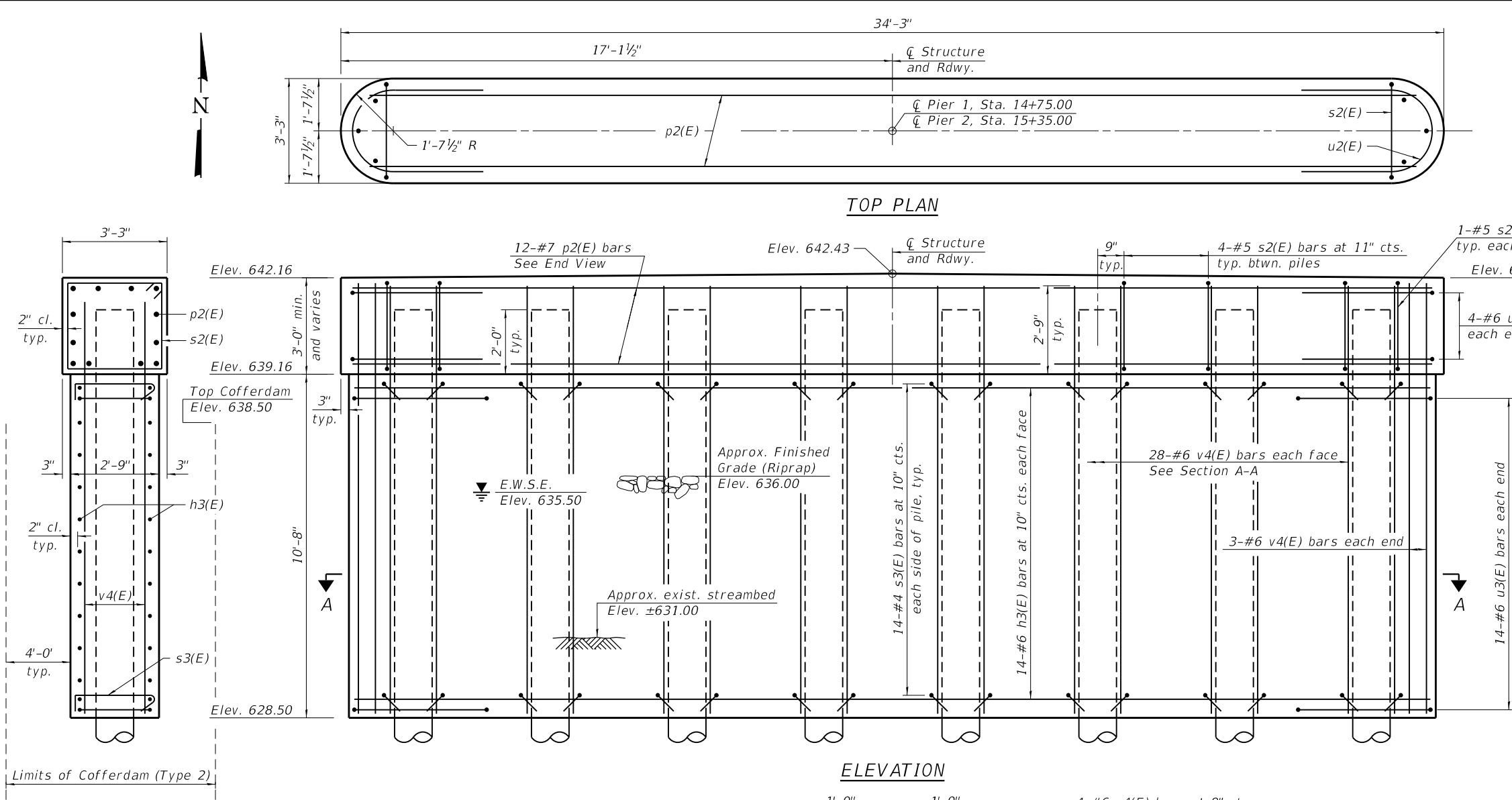
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STEEL RAILING, TYPE SM WITH HOT-MIX ASPHALT WEARING SURFACE
STRUCTURE NO. 058-3411

SHEET 7 OF 11 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7455	16-11117-00-BR	MACON	32	16
CONTRACT NO. 95838				
ILLINOIS FED. AID PROJECT				

MODEL: \$MODELNAME\$
FILE NAME: L:\Jobs\Macon_County\8404_Kruse Rd Bridge Replacement\CADD\CADD Sheets\0583411-00000.dgn



END VIEW

PILE DATA - PIER 1

Type: Metal Shell 14" Ø x 0.312" walls
Nominal Required Bearing: 486 kips
Factored Resistance Available: 277 kips
Est. Length: 34 ft.
Min. Tip Elevation: 607.00 **
No. Production Piles: 7
No. Test Piles: 1

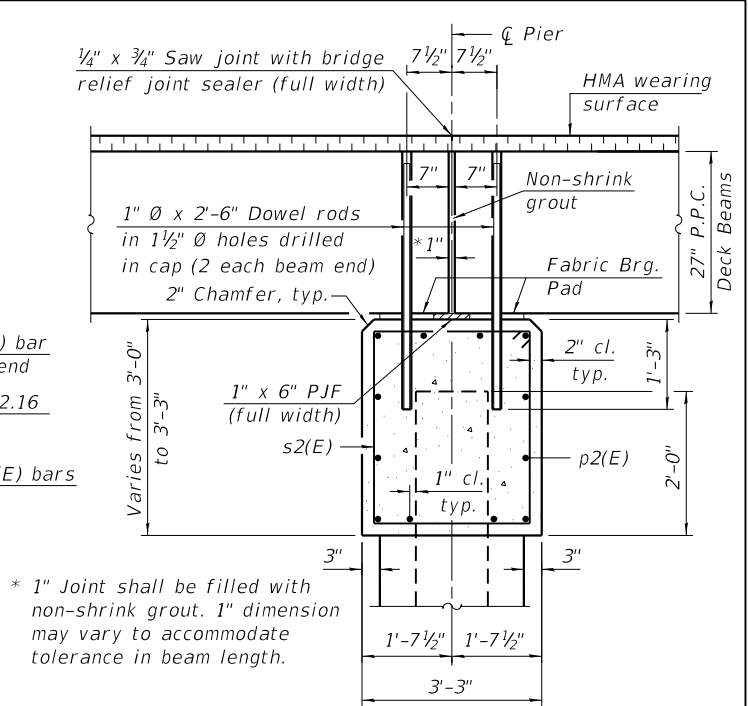
PILE DATA - PIER 2

Type: Metal Shell 14" Ø x 0.312" walls
Nominal Required Bearing: 519 kips
Factored Resistance Available: 296 kips
Est. Length: 34 ft.
Min. Tip Elevation: 607.00 **
No. Production Piles: 7
No. Test Piles: 1

** If the minimum tip elevation can not be achieved due to excessive driving stresses, the Structural Engineer of record shall be contacted for further disposition.

Notes:

1. Dowel holes in beams shall be filled with non-shrink grout to the top of the beam and allowed to cure for a minimum of 24 hours prior to grouting the keyways. Cost included with Precast Prestressed Concrete Deck Beams (27" Depth).
2. If pile interferes with dowel embedment, reduce dowel embedment so dowel is at the top of the pile (min. embedment = 1'-0").
3. Individual concrete pile encasement is not required.
4. For details of piles, see sheet 10 of 11.

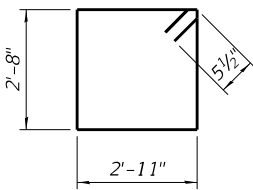


SECTION THRU PIER

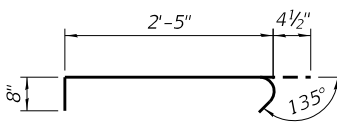
(See sheet 5 of 11 for fabric bearing pad details.)

BILL OF MATERIAL
TWO PIERS

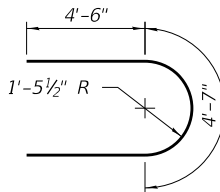
Bar	No.	Size	Length	Shape
h3(E)	56	#6	31'-6"	—
p2(E)	24	#7	31'-6"	—
s2(E)	60	#5	12'-1"	□
s3(E)	448	#4	3'-5 1/2"	└┐
u2(E)	16	#6	13'-7"	U
u3(E)	56	#6	14'-5 1/2"	U
v4(E)	124	#6	13'-3"	—
Cofferdam Excavation		Cu. Yd.	122	
Cofferdam (Type 2) (Location - 1)		Each	1	
Cofferdam (Type 2) (Location - 2)		Each	1	
Concrete Structures		Cu. Yd.	99.2	
Reinforcement Bars, Epoxy Coated		Pound	10000	
Furnishing Metal Shell Piles 14" x 0.312"		Foot	476	
Driving Piles		Foot	476	
Test Pile Metal Shells		Each	2	



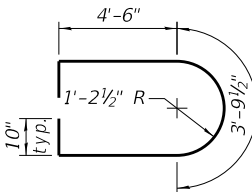
BAR s2(E)



BAR s3(E)



BAR u2(E)



BAR u3(E)

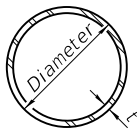
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIERS
STRUCTURE NO. 058-3411

SHEET 9 OF 11 SHEETS

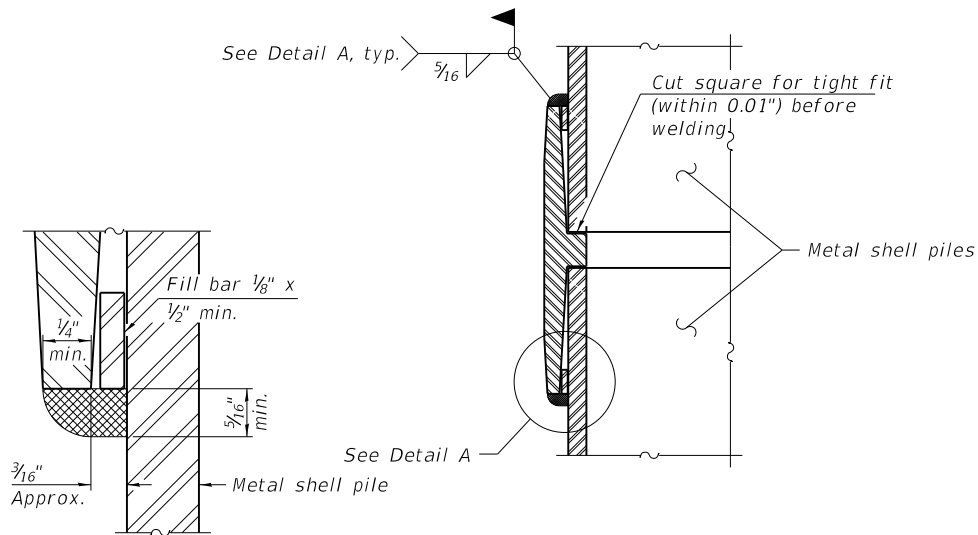
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7455	16-11117-00-BR	MACON	32	18
CONTRACT NO. 95838				
ILLINOIS FED. AID PROJECT				

design firm no. 164001036	USER NAME =	DESIGNED - SBC	REVISED -
		CHECKED - CWC	REVISED -
	PLOT SCALE =	DRAWN - DLH	REVISED -
	PLOT DATE =	CHECKED - SBC	REVISED -



METAL SHELL PILE TABLE

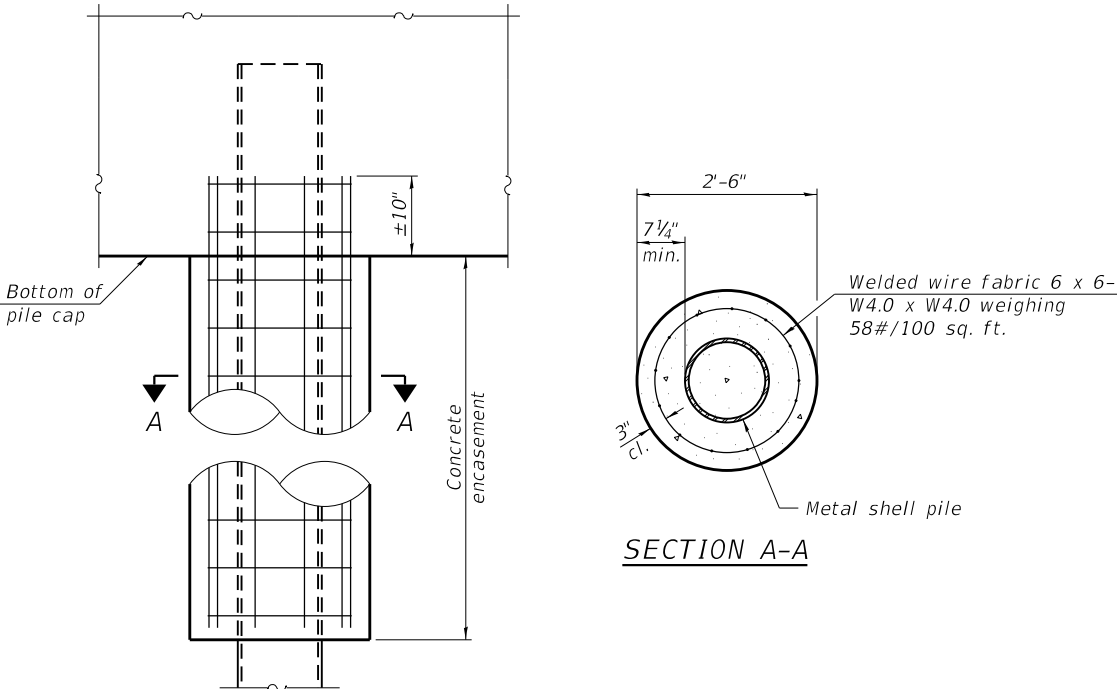
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. ³ /ft.)
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361
PP16	0.312"	52.32	0.0478
PP16	0.375"	62.64	0.0470



DETAIL A

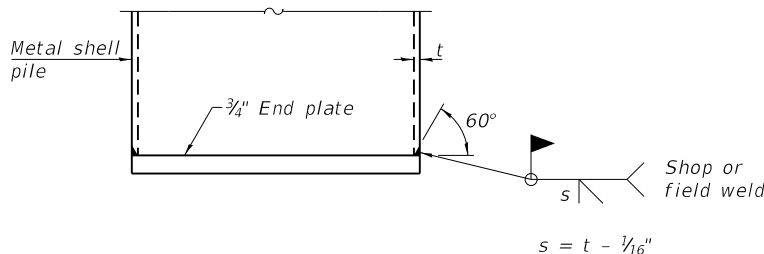
WELDED COMMERCIAL SPLICE

- Notes:
- The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.
 - Pile segments shall be driven to solid contact with splicer before welding.

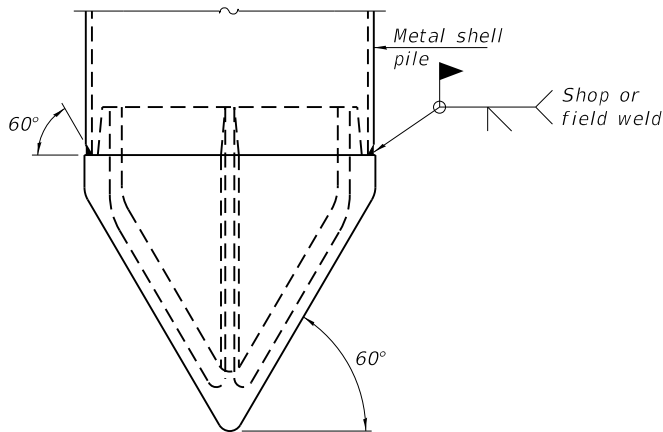


SECTION A-A

INDIVIDUAL PILE CONCRETE ENCASEMENT AT PIERS

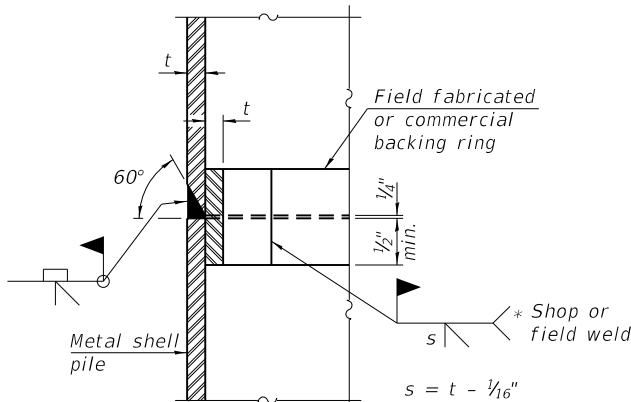


END PLATE ATTACHMENT



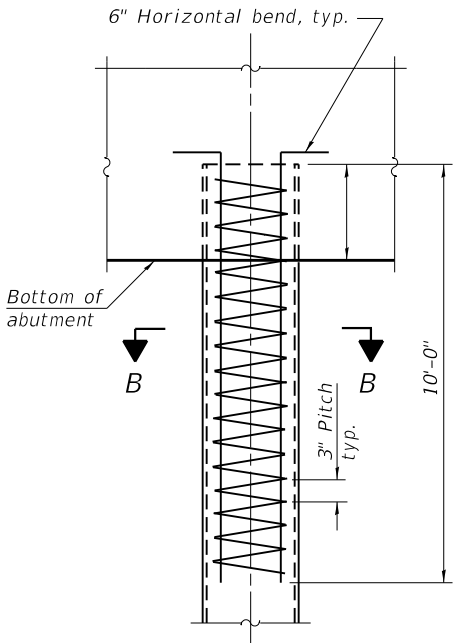
PILE SHOE ATTACHMENT

(When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 90-60 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld).



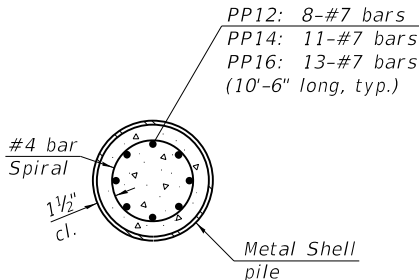
COMPLETE PENETRATION WELD SPLICE

- * Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



ELEVATION

REINFORCEMENT AT ABUTMENTS



SECTION B-B

Note:
The metal shell piles shall be according to Article 1006.05 of the Standard Specifications.

MODEL: \$MODELNAME\$
FILE NAME: L:\Jobs\Macon_County\8404_Kruse_Rd_Bridge_Replacement\CADD\CADD Sheets\0583411-00000.dgn

F-MS 8-11-2017



USER NAME =	DESIGNED - SBC	REVISED -
	CHECKED - CWC	REVISED -
PLOT SCALE =	DRAWN - DLH	REVISED -
PLOT DATE =	CHECKED - SBC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

METAL SHELL PILE DETAILS
STRUCTURE NO. 058-3411

SHEET 10 OF 11 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7455	16-11117-00-BR	MACON	32	19
CONTRACT NO. 95838				
ILLINOIS FED. AID PROJECT				

Sta. 15+67.12, Elev. 644.79'



SOIL BORING LOG

Page 1 of 1
Project #: 715637
Date 06/15/17

ROUTE DESCRIPTION BRIDGE BORINGS
SECTION LOCATION KRUSE ROAD
COUNTY MACON COUNTY STRUCTURE NO. 058 3201 (Exist) X (Prop.)
BORING NO. B-1 DRILLING METHOD HOLLOW STEM HAMMER TYPE 140# SAFETY HAMMER

Station 4+52	ELEV	DEPTH	BL	UC	MO	Surface Water Elev. 83.32 (ft.)	ELEV	DEPTH	BL	UC	MO
Offset 8.2' LT.	V	H	S	Qu	T	Groundwater Elev. 89.83 (ft.)	V	H	S	Qu	T
Ground Surface Elev. 101.33 (ft.)						First Encounter 91.73 (ft.)					
						Upon Completion (ft.)					
						After Hrs. (ft.)					
SOIL DESCRIPTION (ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	SOIL DESCRIPTION (ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)
2-5" OIL & CHIP on											
SILTY CLAY LOAM A-6											
Dark Brown, very moist, very stiff, low plasticity, with sand, trace gravel											
-firm											
-stiff											
-firm											
SILTY CLAY LOAM A-6											
Gray, very moist, soft-firm, low plasticity, with sand, trace gravel											
(*)free water @ 14.0'											
-stiff-very stiff											
SILTY CLAY LOAM A-6											
Brown-Mottled-Gray, very moist, very stiff, low plasticity, with sand, trace gravel											
SILTY CLAY LOAM A-6											
Gray, moist, hard, low plasticity, with sand, trace gravel											
SILTY CLAY LOAM A-6											
Gray, moist, hard, low plasticity, with sand, trace gravel											
SILTY CLAY LOAM A-6											
Brown-Mottled-Gray, moist, hard, low plasticity, with sand, trace gravel											
SILTY CLAY LOAM A-6											
Gray, moist, hard, low plasticity, with sand, trace gravel											

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer).
The Standard Penetration Test (SPT) N Value is per (AASHTO T206)

BBS 137 (9/05)

Sta. 14+43.32, Elev. 644.77'



SOIL BORING LOG

Page 1 of 1
Project #: 715637
Date 06/15/17

ROUTE DESCRIPTION BRIDGE BORINGS
SECTION LOCATION KRUSE ROAD
COUNTY MACON COUNTY STRUCTURE NO. 058 3201 (Exist) X (Prop.)
BORING NO. B-2 DRILLING METHOD HOLLOW STEM HAMMER TYPE 140# SAFETY HAMMER

Station 3+29	ELEV	DEPTH	BL	UC	MO	Surface Water Elev. 83.32 (ft.)	ELEV	DEPTH	BL	UC	MO
Offset 10.6' RT	V	H	S	Qu	T	Groundwater Elev. 78.61 (ft.)	V	H	S	Qu	T
Ground Surface Elev. 101.21 (ft.)						First Encounter (ft.)					
						Upon Completion (ft.)					
						After Hrs. (ft.)					
SOIL DESCRIPTION (ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	SOIL DESCRIPTION (ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)
ASPHALT on											
SILTY CLAY LOAM A-6											
Dark Brown, very moist, stiff, low plasticity, with sand, trace gravel											
-firm-stiff, trace cinders											
SILTY CLAY LOAM A-6											
Dark Brown, very moist, stiff, low plasticity, some sand, trace gravel											
SILTY CLAY LOAM A-6											
Gray, very moist, firm-stiff, low plasticity, with sand, trace gravel											
SILTY CLAY LOAM A-6											
Gray, very moist, firm-stiff, low plasticity, with sand, trace gravel											
SANDY LOAM A-2-4											
Gray, very moist, very loose, fine-medium											
SILTY CLAY LOAM A-6											
Gray, moist, hard, low plasticity, with sand, trace gravel											
(*)free water @ 17.0'											
-no recovery											
-very stiff											

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer).
The Standard Penetration Test (SPT) N Value is per (AASHTO T206)

BBS 137 (9/05)

MODEL: \$MODELNAME\$
FILE NAME: L:\Jobs\Macon_County\8404 Kruse Rd Bridge Replacement\CADD\CADD Sheets\0583411-00000.dgn

design firm
no. 164001036



USER NAME =	DESIGNED - SBC	REVISED -
CHECKED - CWC	REVISED -	
PLOT SCALE =	DRAWN - DLH	REVISED -
PLOT DATE =	CHECKED - SBC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

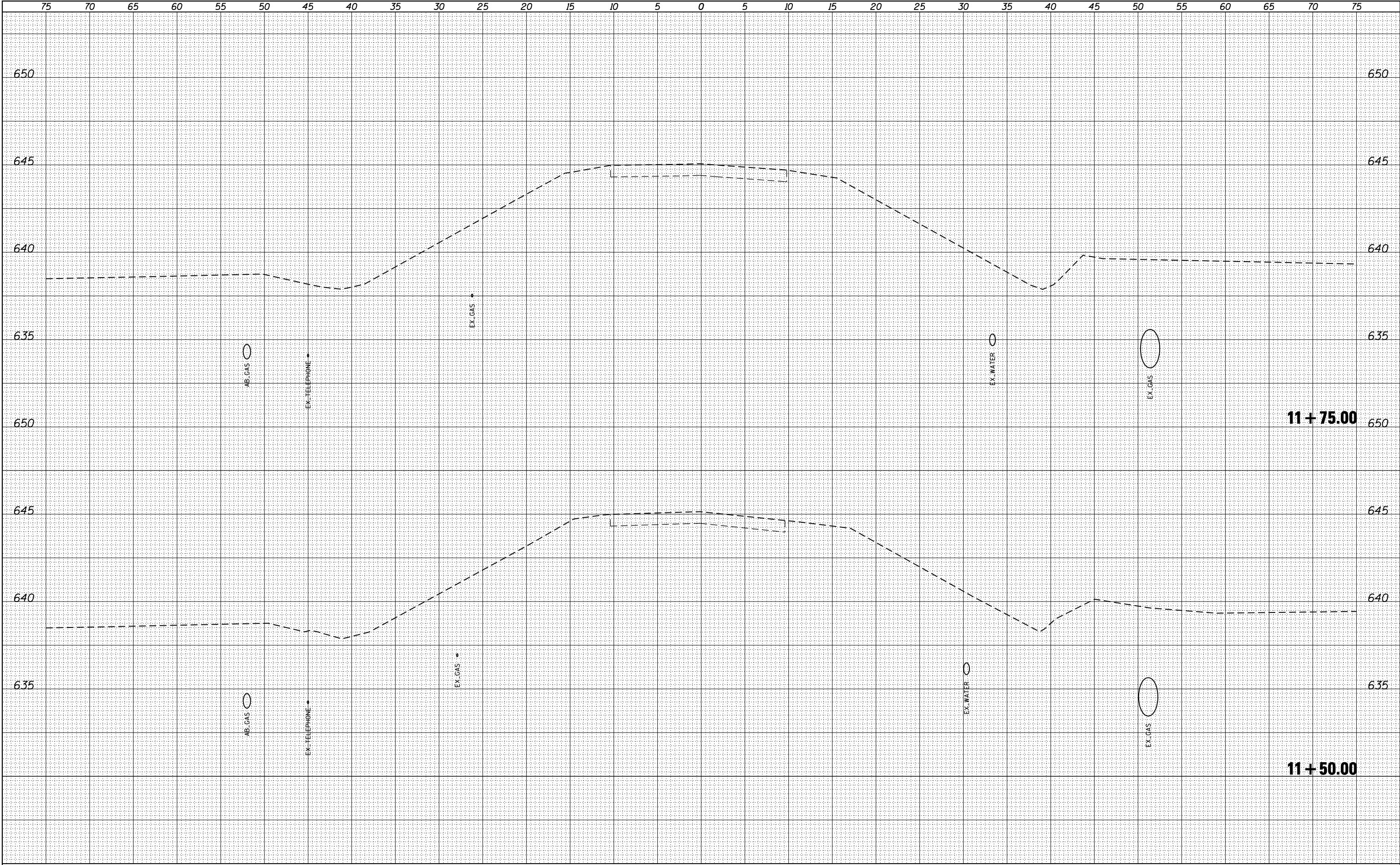
BORING LOGS
STRUCTURE NO. 058-3411

SHEET 11 OF 11 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7455	16-11117-00-BR	MACON	32	20
CONTRACT NO. 95838				
ILLINOIS FED. AID PROJECT				

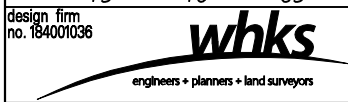
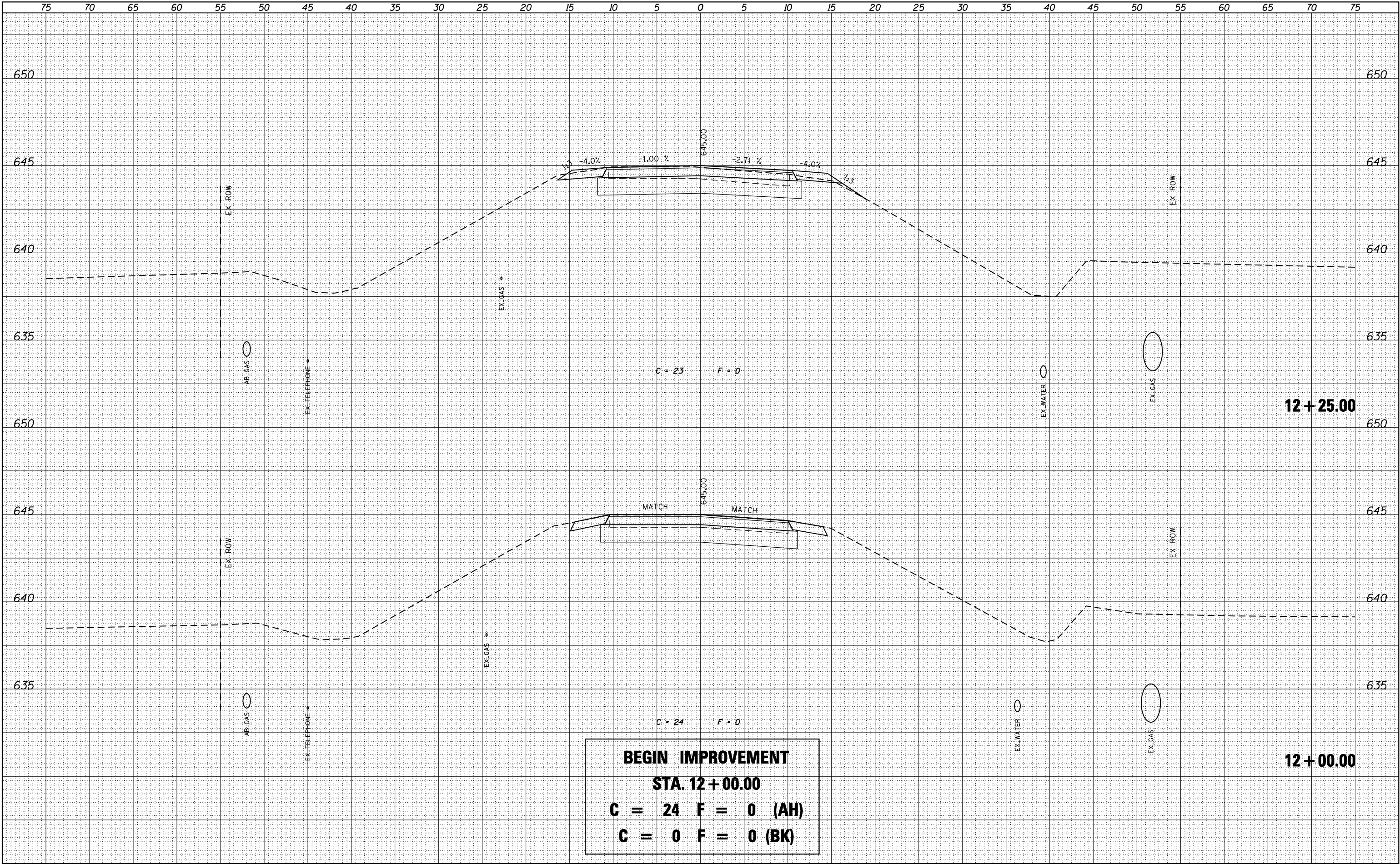
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AREAS CHECKED	AREAS CHECKED	BY	DATE

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AREAS CHECKED	AREAS CHECKED	BY	DATE



FINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS	CHECKED	

ORIGINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS	CHECKED	



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FILE NAME = XS_SHT.dgn
PLOT SCALE = 10.000' / IN.
PLOT DATE = 4/23/2018

DESIGNED - BJJ
CHECKED - RKA
DRAWN - GSJ
CHECKED - BJJ

REVISED
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REVISED
REVISED

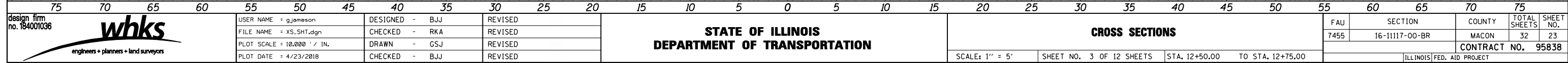
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

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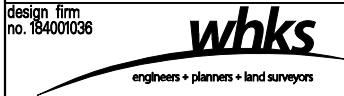
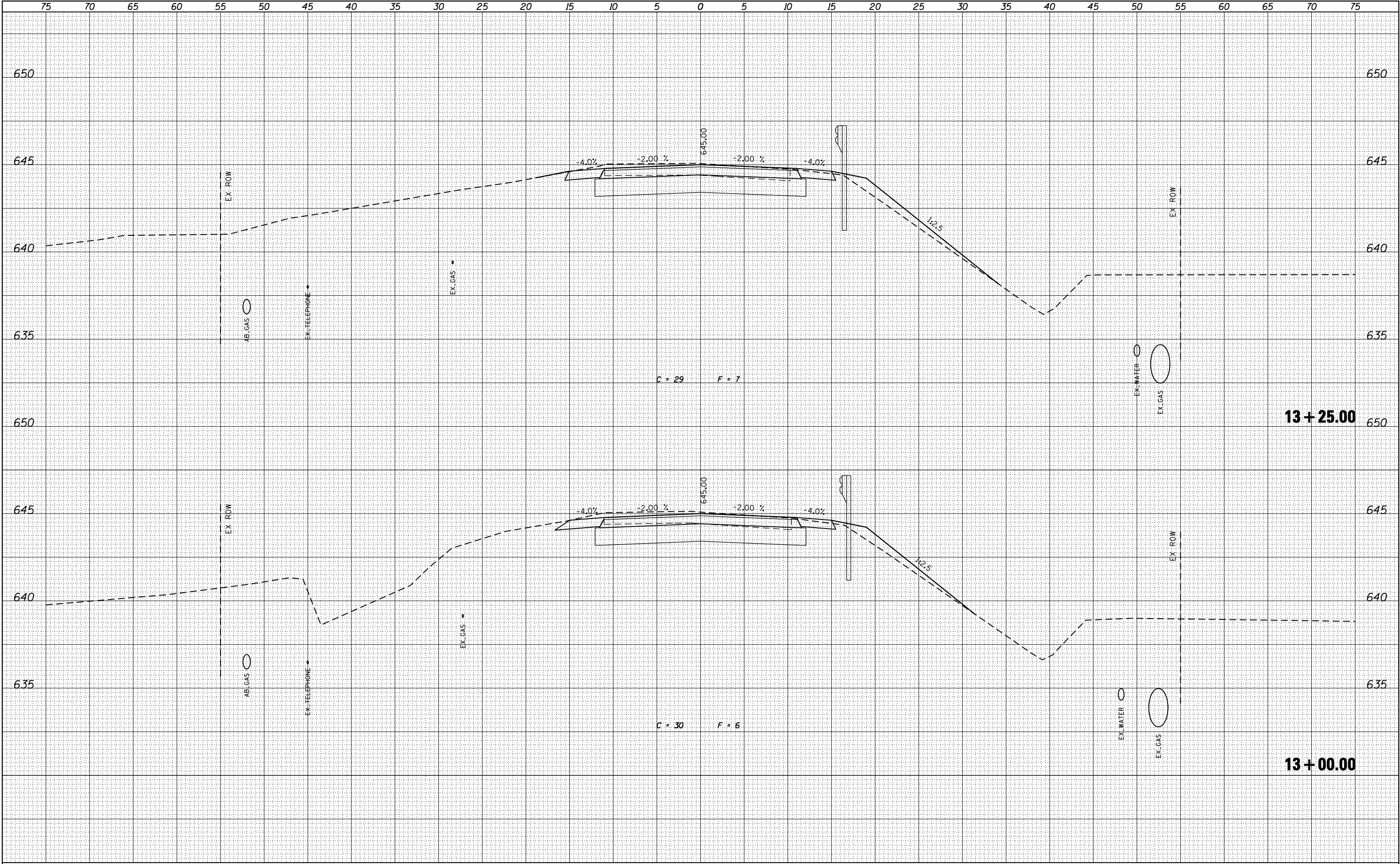
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7455	16-11117-00-BR	MACON	32	22
CONTRACT NO.				95838
ILLINOIS FED. AID PROJECT				

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SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

ORIGINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		



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FILE NAME = XS_SHT.dgn
PLOT SCALE = 10,000' / IN.
PLOT DATE = 4/23/2018

DESIGNED - BJJ
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REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

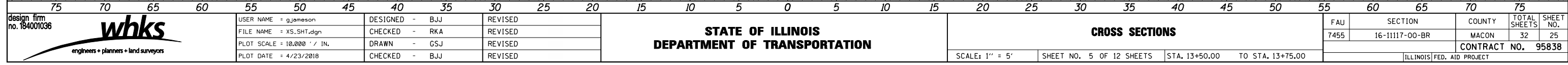
CROSS SECTIONS

SCALE: 1" = 5' SHEET NO. 4 OF 12 SHEETS STA. 13+00.00 TO STA. 13+25.00

FAU	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO.			95838	

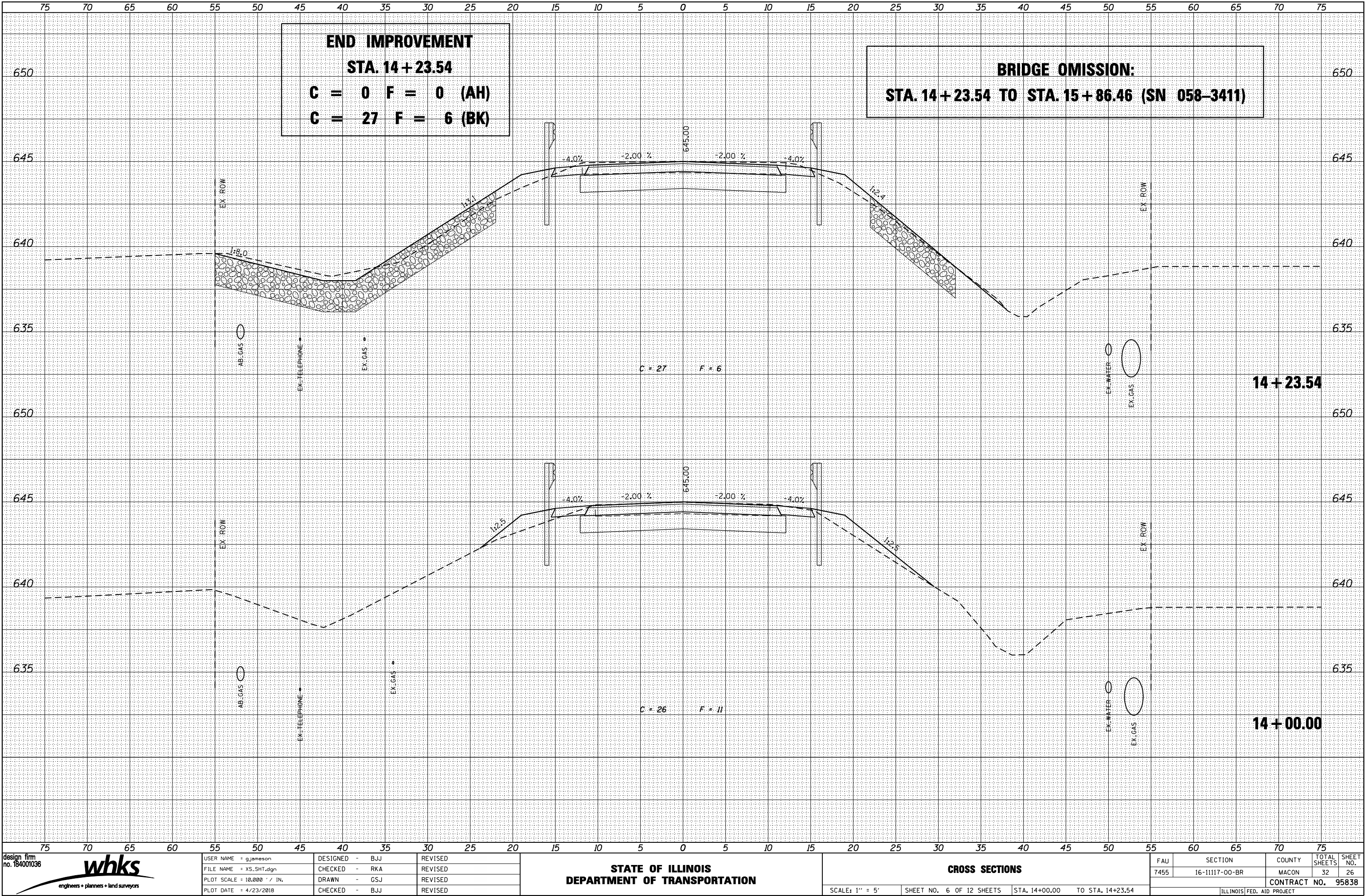
ILLINOIS FED. AID PROJECT

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NO.	AREAS CHECKED		

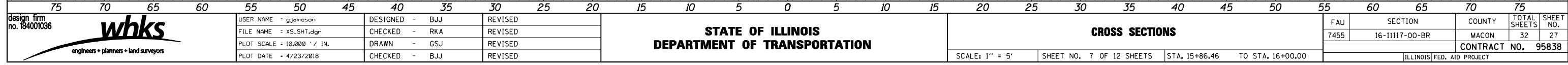
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FAU	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7455	16-11117-00-BR	MACON	32	26
CONTRACT NO. 95838				ILLINOIS FED. AID PROJECT

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	SURVEYED		
	PLOTTED		
NOTE BOOK	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		



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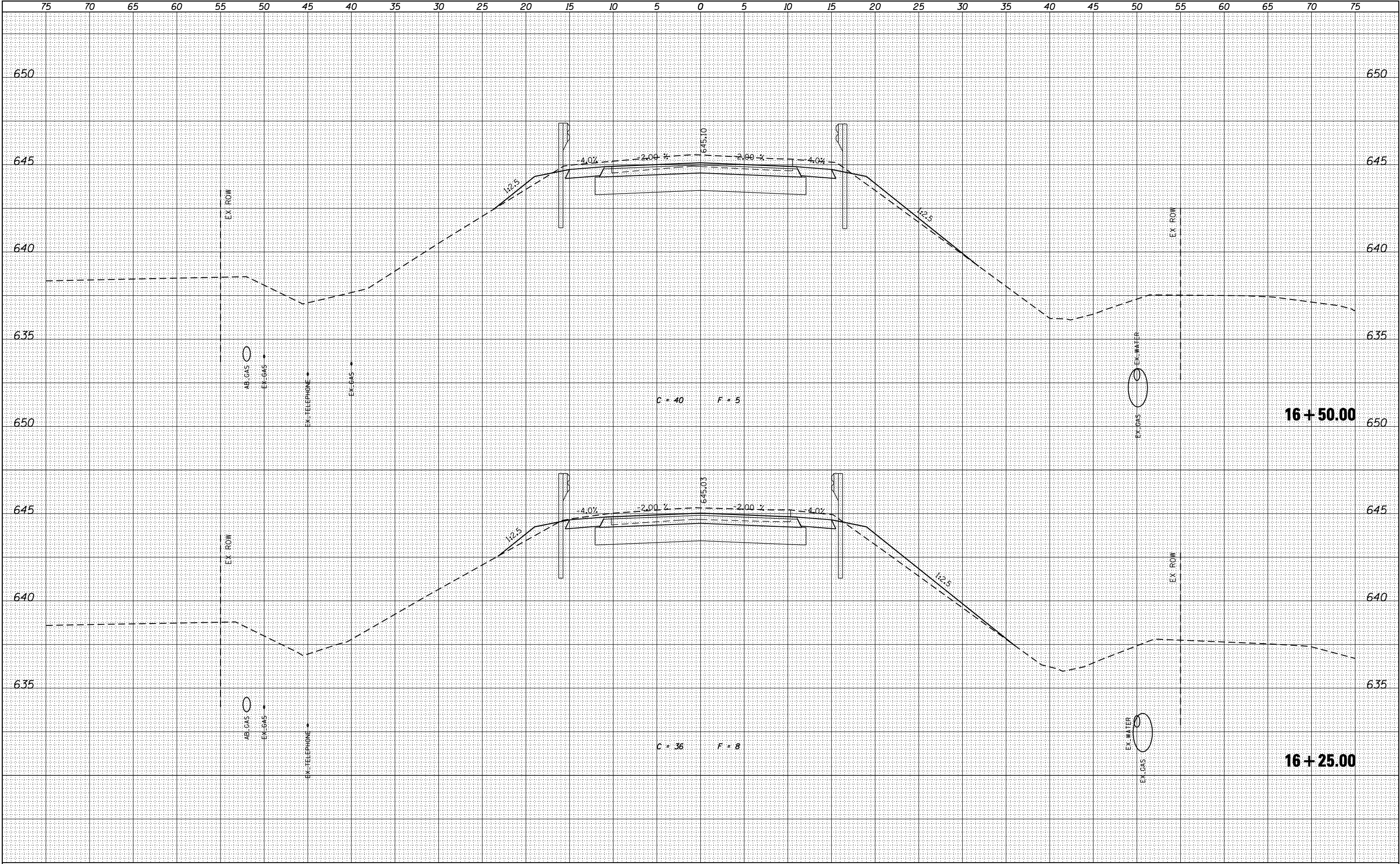
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS			
SCALE: 1" = 5'	SHEET NO. 7 OF 12 SHEETS	STA. 15+86.46	TO STA. 16+00.00

FAU	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7455	16-11117-00-BR	MACON	32	27
		CONTRACT NO. 95838		
ILLINOIS		FED. AID PROJECT		

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NOTE BOOK	TEMPLATE		
NO.	AREAS	CHECKED	

ORIGINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS	CHECKED	



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PLOT DATE = 4/23/2018	CHECKED - BJJ	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

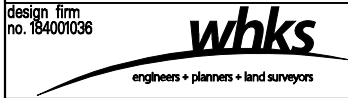
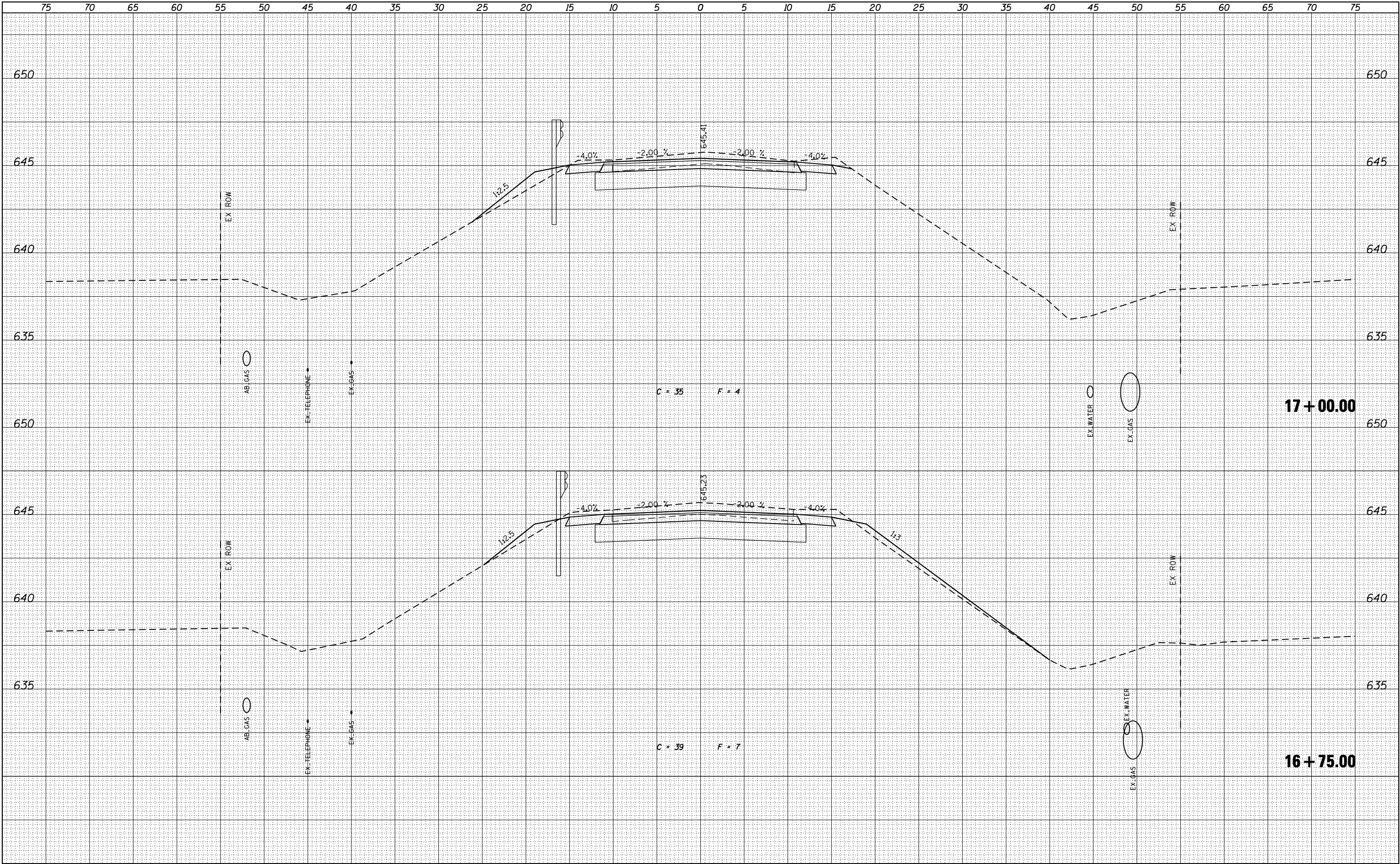
SCALE: 1" = 5' SHEET NO. 8 OF 12 SHEETS STA. 16+25.00 TO STA. 16+50.00

FAU	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7455	16-11117-00-BR	MACON	32	28
CONTRACT NO.			95838	

ILLINOIS FED. AID PROJECT

FINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		

ORIGINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS CHECKED		



USER NAME = g.jameson
FILE NAME = XS_SHT.dgn
PLOT SCALE = 10.000' / IN.
PLOT DATE = 4/23/2018

DESIGNED - BJJ
CHECKED - RKA
DRAWN - GSJ
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REVISED
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REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

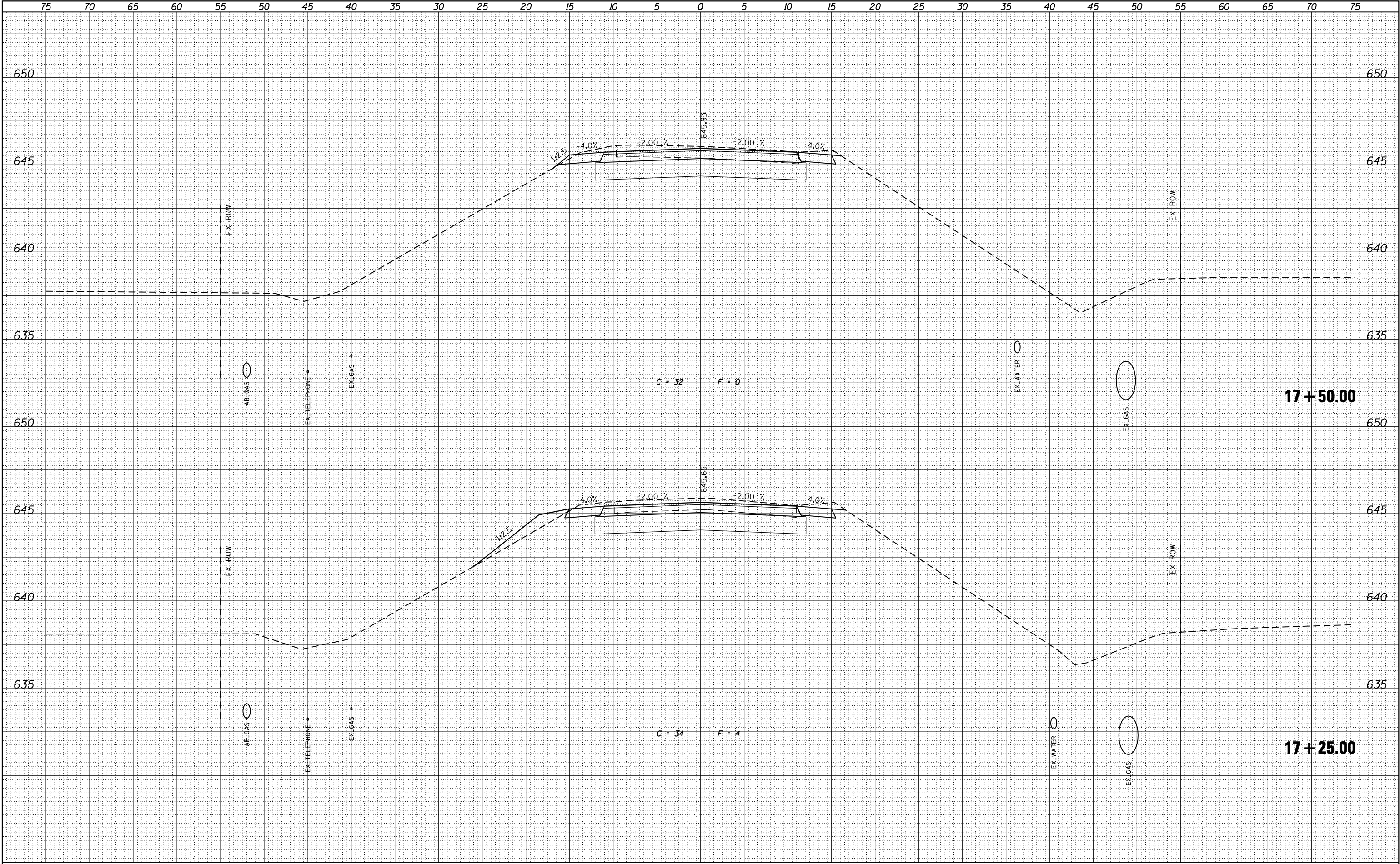
SCALE: 1" = 5' SHEET NO. 9 OF 12 SHEETS STA. 16+75.00 TO STA. 17+00.00

FAU	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7455	16-11117-00-BR	MACON	32	29
CONTRACT NO.			95838	

ILLINOIS FED. AID PROJECT

FINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
NO.	AREAS	CHECKED	

ORIGINAL	SURVEYED	BY	DATE
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NOTE BOOK	TEMPLATE		
NO.	AREAS	CHECKED	



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

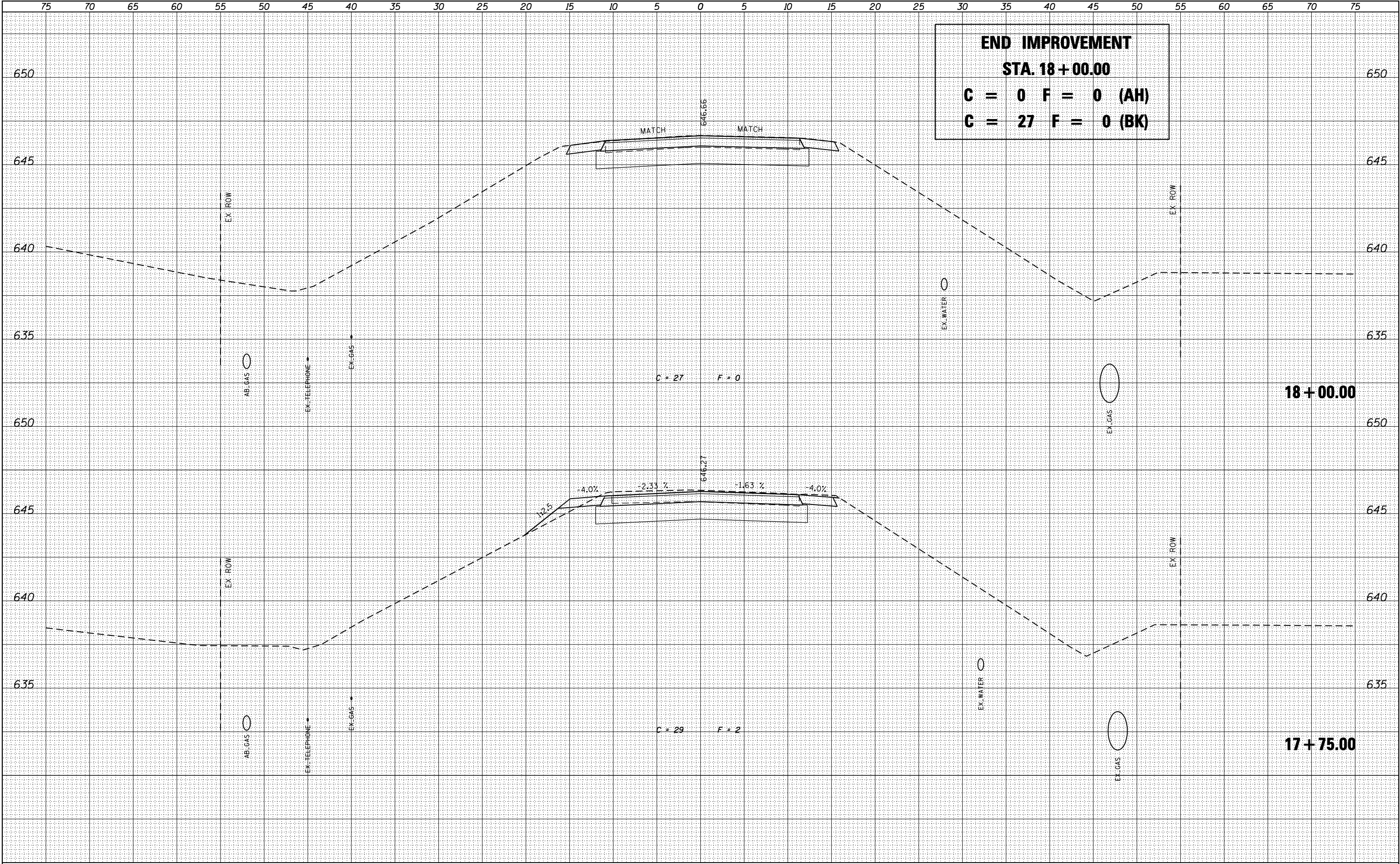
CROSS SECTIONS

SCALE: 1" = 5' SHEET NO. 10 OF 12 SHEETS STA. 17+25.00 TO STA. 17+50.00

FAU	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7455	16-11117-00-BR	MACON	32	30
CONTRACT NO.			95838	
ILLINOIS FED. AID PROJECT				

FINAL SURVEY	NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

ORIGINAL SURVEY	NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE



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PLOT SCALE = 10.000' / IN.	DRAWN - GSJ	REVISED
PLOT DATE = 4/23/2018	CHECKED - BJJ	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

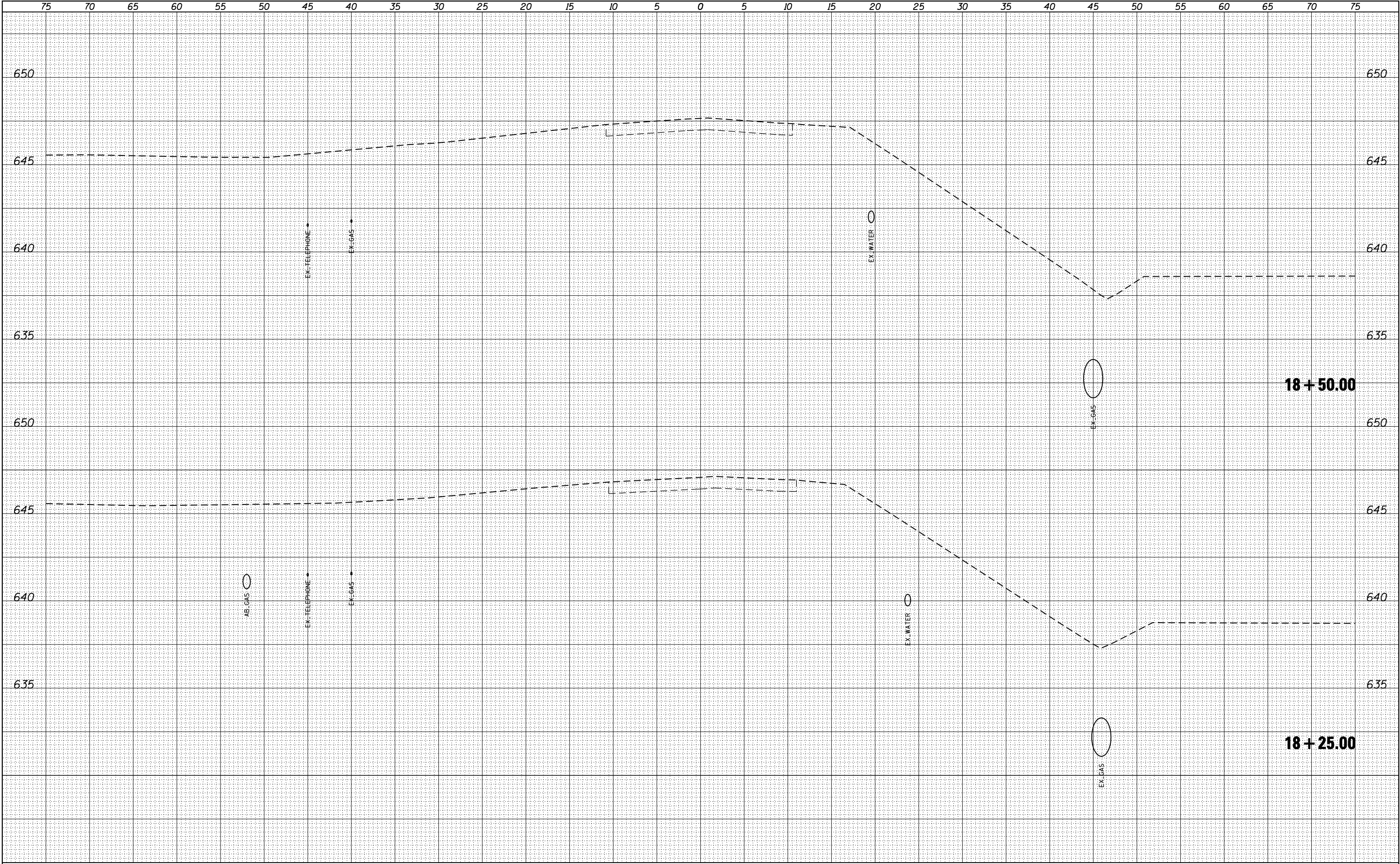
CROSS SECTIONS

SCALE: 1" = 5' SHEET NO. 11 OF 12 SHEETS STA. 17+75.00 TO STA. 18+00.00

FAU	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7455	16-11117-00-BR	MACON	32	31
		CONTRACT NO. 95838		
ILLINOIS FED. AID PROJECT				

FINAL SURVEY	NO.	SURVEYED	BY	DATE		
					PLOTTED	
						TEMPLATE
NOTE BOOK						

ORIGINAL SURVEY	NO.	SURVEYED	BY	DATE		
					PLOTTED	
						TEMPLATE
NOTE BOOK						



USER NAME = g.jameson	DESIGNED - BJJ	REVISED
FILE NAME = XS_SHT.dgn	CHECKED - RKA	REVISED
PLOT SCALE = 10,000 ' / IN.	DRAWN - GSJ	REVISED
PLOT DATE = 4/23/2018	CHECKED - BJJ	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: 1" = 5' SHEET NO. 12 OF 12 SHEETS STA. 18+25.00 TO STA. 18+50.00

FAU	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7455	16-11117-00-BR	MACON	32	32
		CONTRACT NO. 95838		
ILLINOIS		FED. AID PROJECT		