

01-15-2021 LETTING ITEM 155

DESIGN DESIGNATION

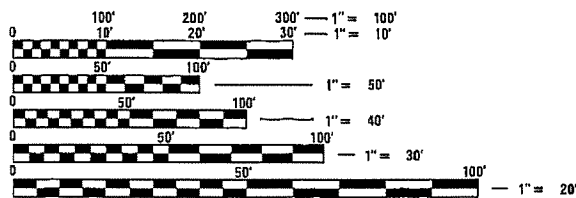
FUNCTIONAL CLASSIFICATION: LOCAL ROAD (NON-URBAN)
ADT (STRAWN ROAD): 50
DESIGN SPEED: 30 MPH

INDEX OF SHEETS

- 1 COVER SHEET
- 2 GENERAL DATA
- 3 SUMMARY OF QUANTITIES
- 4 TYPICAL SECTIONS
- 5 SCHEDULE OF QUANTITIES
- 6 ALIGNMENT, TIES, HORIZONTAL LAYOUT AND R.O.W.
- 7 PLAN AND PROFILE
- 8 EROSION CONTROL PLAN
- 9-16 BRIDGE PLANS
- 17-23 CROSS SECTIONS

LIST OF STANDARDS

SEE SHEET NO. 2



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.

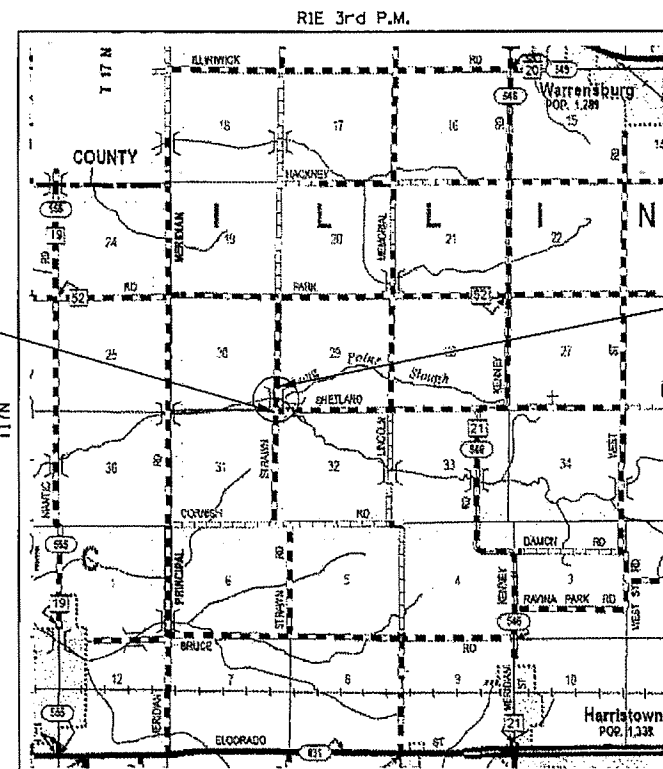
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

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OF THE STATE OF ILLINOIS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED
LOCAL AGENCY IMPROVEMENT

STP - BRIDGE PROGRAM
TR 30A (STRAWN ROAD) OVER WILLOW BRANCH
SECTION 16-07117-00-BR
MACON COUNTY
BRIDGE REPLACEMENT
PROJECT NO. XDCO(604)
JOB NO. C-97-061-19



LOCATION MAP

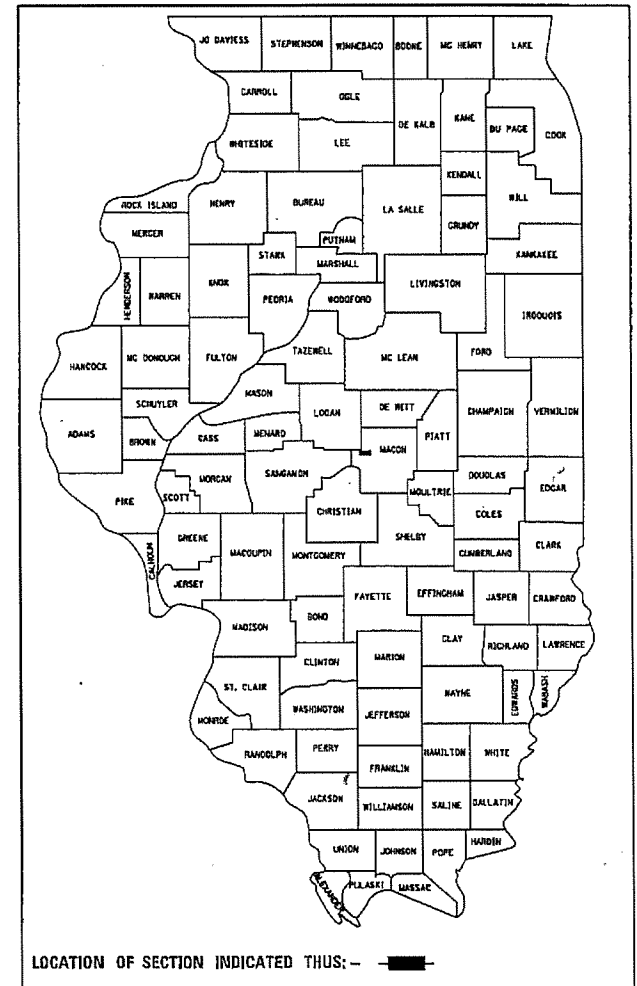


TOTAL AND NET LENGTH OF IMPROVEMENT = 405.00 FT. = 0.077 MILE

EXISTING STRUCTURE
NUMBER 058-3096

PROPOSED STRUCTURE
NUMBER 058-3413

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR30A	16-07117-00-BR	MACON	23	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 95881		

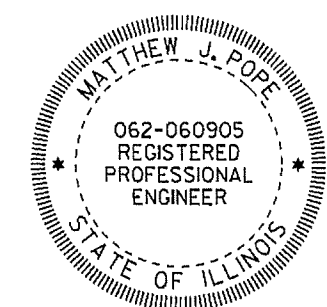


LOCATION OF SECTION INDICATED THUS: -

END IMPROVEMENT
STA. 11+60.00

BEGIN IMPROVEMENT
STA. 7+55.00

ILLINI TOWNSHIP



Matthew J. Pope
SIGNATURE DATE: 8/7/2020
ILL. REG. P.E. NO. 062-060905
EXPIRES: 11/30/2021

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

APPROVED August 10, 2020
[Signature]
COUNTY ENGINEER

PASSED September 9, 2020
[Signature]
DISTRICT SEVEN ENGINEER OF
LOCAL ROADS & STREETS

RELEASING FOR
BID BASED ON
LIMITED REVIEW September 9, 2020
[Signature]
REGION FOUR ENGINEER

AECOM 345 EAST ASH AVENUE, SUITE B
DECATUR, ILLINOIS 62526
PH. 217-875-4800

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," ADOPTED APRIL 1, 2016, THESE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
2. ALL ELEVATIONS ARE BASED ON NAVD 88 (NORTH AMERICAN VERTICAL DATUM OF 1988).
3. FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SAND BAGS PER BARRICADE.
4. 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 EARTH EXCAVATION.
5. THE AREA TO BE SEEDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT-OF-WAY AS DIRECTED BY THE ENGINEER.
6. ALL TREES WITHIN THE RIGHT-OF-WAY THAT INTERFERE WITH CONSTRUCTION SHALL BE REMOVED ONLY AT THE DIRECTION OF THE ENGINEER.
7. THE CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENT CONTROL MEASURES WEEKLY AND AFTER EACH RAINFALL EVENT EQUAL TO 1/2 INCH OR MORE.
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. LAYOUT OF EROSION CONTROL ITEMS MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.
10. 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.
11. FORTY-EIGHT HOURS BEFORE STARTING EXCAVATION, THE CONTRACTOR SHALL CALL J.U.L.I.E. (1-800-892-0123) TO HAVE THE LOCATION OF EXISTING UTILITIES STAKED. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UNDERGROUND UTILITIES. DRAWINGS INDICATE ONLY APPROXIMATE LOCATIONS OF UTILITIES KNOWN TO EXIST AT THE TIME OF DESIGN.
12. ALL FIELD TILES ENCOUNTERED SHALL BE CAREFULLY PRESERVED AND REPAIRED OR CONNECTED TO THE PROPOSED DRAINAGE STRUCTURES OR DITCHES AS DIRECTED BY THE ENGINEER. PAYMENT OF THIS WORK SHALL BE INCLUDED IN THE VARIOUS DRAINAGE ITEMS OR AS DIRECTED BY THE ENGINEER.
13. LAYOUT OF RIPRAP PROTECTION SYSTEM MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.
14. PAVEMENT REMOVAL SHALL INCLUDE THE EXISTING AGGREGATE BASE COURSE AND OIL & CHIP SURFACE TREATMENT.
15. MINIMAL TREE REMOVAL MAY BE REQUIRED FOR TREES LINING THE CHANNEL SOUTH OF THE BRIDGE NEAR THE CONSTRUCTION LIMITS OF RIPRAP PLACEMENT. SEE EROSION CONTROL PLAN SHEET FOR LOCATIONS AND NOTE 3 ON THAT SHEET FOR PAYMENT INFORMATION.
16. THE MACON COUNTY HIGHWAY DEPARTMENT WILL BE RESPONSIBLE FOR THE CONSTRUCTION LAYOUT.

APPLICATION RATES

AGG BASE COURSE	2.05	TONS/CU YD
STONE RIPRAP	1.50	TONS/CU YD
BITUMINOUS MATERIALS (PRIME COAT)	0.25	LBS/SQ FT (ON AGG BASE COURSE)
BITUMINOUS MATERIALS (COVER AND SEAL COAT)	0.25	LBS/SQ FT
COVER COAT AGGREGATE	25	LBS/SQ YD
SEAL COAT AGGREGATE	25	LBS/SQ YD
FERTILIZER NUTRIENTS	90	LBS/ACRE
TEMPORARY EROSION CONTROL SEEDING	100	LBS/ACRE (2 APPLICATIONS)

COMMITMENTS

TREES 3 INCHES OR GREATER IN DIAMETER AT BREAST HEIGHT SHALL NOT BE CLEARED FROM APRIL 1 THROUGH SEPTEMBER 30.

THE BRIDGE BAT ASSESSMENT WAS COMPLETED BY BDE ON 11/26/2019 AND EXPIRES ON 11/26/2021. THIS VALID ASSESSMENT IS REQUIRED PRIOR TO CONDUCTING ANY WORK BELOW THE EXISTING BRIDGE DECK SURFACE. THE ASSESSMENT STATES THAT "THE STRUCTURE IS A CONCRETE SLAB/STONE BRIDGE NOT SUITABLE FOR BATS. FORESTED HABITAT IN THE PROJECT VICINITY IS MINIMAL."

HIGHWAY STANDARDS

STANDARD 000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
STANDARD 001001-02	AREAS OF REINFORCEMENT BARS
STANDARD 001006	DECIMAL OF AN INCH AND OF A FOOT
STANDARD 280001-07	TEMPORARY EROSION CONTROL SYSTEMS
STANDARD 515001-04	NAME PLATE FOR BRIDGES
STANDARD 701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
STANDARD 701901-08	TRAFFIC CONTROL DEVICES
STANDARD 725001-01	OBJECT AND TERMINAL MARKERS
STANDARD BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA
TR 30A (STRAWN RD) OVER WILLOW BRANCH**

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 30A	16-07117-00-BR	MACON	23	2
			CONTRACT NO. 95881	

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		DATE - 6/4/2020	REVISED -

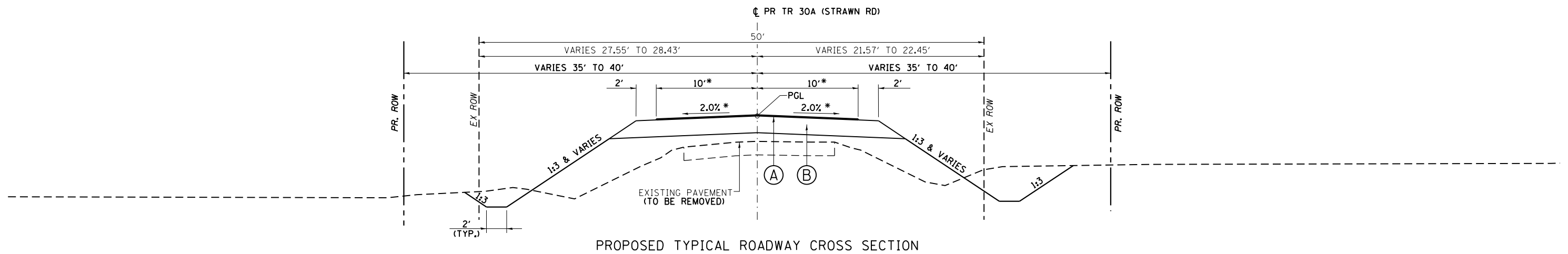
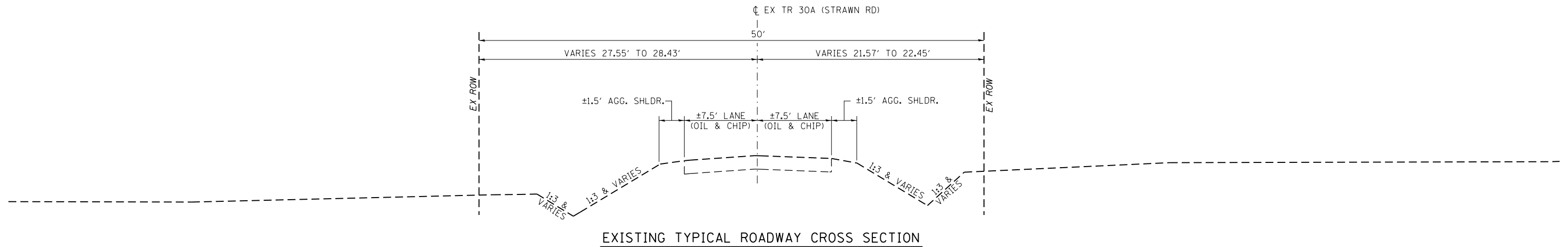
SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.

ILLINOIS FED. AID PROJECT

CODE NO.	ITEM	UNIT	TOTAL QUANTITY
20200100	EARTH EXCAVATION	CU YD	190
20300100	CHANNEL EXCAVATION	CU YD	248
20400800	FURNISHED EXCAVATION	CU YD	172
25000200	SEEDING, CLASS 2	ACRE	0.25
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	24
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	24
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	24
25100630	EROSION CONTROL BLANKET	SQ YD	1,078
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	48
28000305	TEMPORARY DITCH CHECKS	FOOT	84
28000400	PERIMETER EROSION BARRIER	FOOT	805
28100207	STONE RIPRAP, CLASS A4	TON	181
28200200	FILTER FABRIC	SQ YD	279
35100900	AGGREGATE BASE COURSE, TYPE A 10"	SQ YD	884
40300200	BITUMINOUS MATERIALS (PRIME COAT)	TON	1
40300400	BITUMINOUS MATERIALS (COVER AND SEAL COATS)	TON	2
40300500	COVER COAT AGGREGATE	TON	11
40300600	SEAL COAT AGGREGATE	TON	11
44000100	PAVEMENT REMOVAL	SQ YD	595
* 50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	24.6
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	1,477
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	3,220
△ 50900205	STEEL RAILING, TYPE S1	FOOT	123
51200957	FURNISHING METAL SHELL PILES 12" X 0.250"	FOOT	344
51202305	DRIVING PILES	FOOT	344

CODE NO.	ITEM	UNIT	TOTAL QUANTITY
51203200	TEST PILE METAL SHELLS	EACH	2
51500100	NAME PLATES	EACH	1
* 59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	40.7
67100100	MOBILIZATION	LSUM	1
72400310	REMOVE SIGN PANEL - TYPE 1	SQ FT	8
△ 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
* X7011800	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	LSUM	1

* SEE SPECIAL PROVISIONS
△ SPECIALTY ITEMS



NORMAL CROWN: STA 8+00.00 TO STA 9+67.15 AND STA 10+30.82 TO STA 11+10.00
 * TRANSITION FROM EXISTING TO PROPOSED (WIDTH AND CROWN): STA 7+55.00 TO STA 8+00.00
 * TRANSITION FROM PROPOSED TO EXISTING (WIDTH AND CROWN): STA 11+10.00 TO STA 11+60.00
 PROPOSED BRIDGE: STA 9+67.15 TO STA 10+30.82

PROPOSED LEGEND

- (A) PROPOSED BITUMINOUS SURFACE TREATMENT (CLASS A-2) **
- (B) PROPOSED AGGREGATE BASE COURSE, TYPE A 10"

** BITUMINOUS SURFACE TREATMENT (CLASS A-2) CONSISTS OF 4 PAY ITEMS:

- BITUMINOUS MATERIALS (PRIME COAT)
- BITUMINOUS MATERIALS (COVER AND SEAL COATS)
- COVER COAT AGGREGATE
- SEAL COAT AGGREGATE

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PLOT DATE = 8/7/2020		DATE - 6/4/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTIONS
TR 30A (STRAWN RD) OVER WILLOW BRANCH**

SCALE: N.T.S. SHEET 1 OF 1 SHEETS STA. TO STA.

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 30A	16-07117-00-BR	MACON	23	4
CONTRACT NO. 95881				

ILLINOIS FED. AID PROJECT

EARTHWORK SCHEDULE					
LOCATION	EARTH EXCAVATION	*EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	**CHANNEL EXCAVATION	EMBANKMENT	EARTHWORK BALANCE WASTE (+) AND SHORTAGE (-) (FURNISHED EXCAVATION)
	(CU YD)	(CU YD)	(CU YD)	(CU YD)	(CU YD)
SOUTH OF BRIDGE STA. 7+55.00 TO STA. 9+67.15	137	103	133	288	-185
NORTH OF BRIDGE STA. 10+30.82 TO STA. 11+60.00	53	40	115	27	13
TOTALS	190	143	248	315	-172

*SHRINKAGE FACTOR FOR EARTH EXCAVATION = 25%

**CHANNEL EXCAVATION IS ASSUMED TO BE UNSUITABLE MATERIAL

LANDSCAPING SCHEDULE									
STATION	STATION	OFFSET	AREA	SEEDING, CLASS 2	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	EROSION CONTROL BLANKET	* TEMPORARY EROSION CONTROL SEEDING
			SQ FT	ACRE	POUND	POUND	POUND	SQ YD	POUND
7+55.00	9+79.25	LT	3,559	0.09	9	9	9	396	18
7+55.00	9+54.40	RT	3,480	0.08	8	8	8	387	16
10+35.19	11+60.00	LT	513	0.02	2	2	2	57	4
10+20.93	11+60.00	RT	2,137	0.05	5	5	5	238	10
TOTALS				0.25	24	24	24	1,078	48

*ASSUMED 2 APPLICATIONS OF TEMPORARY EROSION CONTROL SEEDING

PAVEMENT SCHEDULE									
STATION	STATION	LENGTH	AVERAGE WIDTH	AREA	AGGREGATE BASE COURSE, TYPE A 10"	BITUMINOUS MATERIALS (PRIME COAT)	BITUMINOUS MATERIALS (COVER AND SEAL COATS)	COVER COAT AGGREGATE	SEAL COAT AGGREGATE
		FOOT	FOOT	SQ FT	SQ YD	TON	TON	TON	TON
7+55.00	8+00.00	45.00	21.41*	964	107	0.12	0.25	1.34	1.34
8+00.00	9+67.15	167.15	24.00	4,012	446	0.51	1.01	5.58	5.58
10+30.82	11+10.00	79.18	24.00	1,901	211	0.24	0.48	2.64	2.64
11+10.00	11+60.00	50.00	21.59**	1,080	120	0.14	0.27	1.50	1.50
TOTALS					884	1	2	11	11

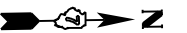
* WIDTH VARIES FROM 18.81' AT 7+55 TO 24' AT 8+00

** WIDTH VARIES FROM 24' AT 11+10 TO 19.18' AT 11+60

PAVEMENT REMOVAL SCHEDULE				
STATION	STATION	LENGTH	AREA	PAVEMENT REMOVAL
		FOOT	SQ FT	SQ YD
7+55.00	9+78.38	223.38	3,323	370
10+20.28	11+60.00	139.72	2,025	225
TOTALS				595

EROSION CONTROL SCHEDULE				
STATION	STATION	OFFSET	TEMPORARY DITCH CHECKS	PERIMETER EROSION BARRIER
			FOOT	FOOT
7+55	8+40	LT		92
7+55	7+90	RT		49
7+90	8+90	RT		105
8+20		RT	8	
8+40	9+50	LT		115
8+50		LT	8	
8+90	9+73	RT		84
9+00		RT	8	
9+50	10+05	LT		55
9+67		RT	7	
9+88		LT	7	
10+19	10+50	LT		31
10+26	10+50	RT		29
10+50	11+35	RT		98
10+50	11+60	LT		122
11+35	11+60	RT		25
10+50		RT	8	
10+70		RT	8	
10+90		RT	8	
11+10		RT	8	
11+30		RT	7	
11+50		RT	7	
TOTALS			84	805

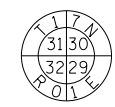
SIGNING SCHEDULE					
STATION	OFFSET	DESCRIPTION	LENGTH	WIDTH	REMOVE SIGN PANEL - TYPE 1
			INCH	INCH	SQ FT
9+66	11' LT	TERMINAL MARKER - POST MOUNTED	20	12	2
9+70	10' RT	TERMINAL MARKER - POST MOUNTED	20	12	2
10+27	12' RT	TERMINAL MARKER - POST MOUNTED	20	12	2
10+29	12' LT	TERMINAL MARKER - POST MOUNTED	20	12	2
TOTALS					8



BENCHMARK
 TOP OF 5/8" THREADED ROD IN P. POLE
 STA. 16+16, 23.5' LT.
 ELEV. = 637.62

DAVID F. BROWN, ET AL.
 PROP. STR. NO. 058-3413
 STA 9+98.99, SPECIAL BRIDGE DESIGN
 PRECAST PRESTRESSED CONCRETE DECK
 BEAM BRIDGE, SINGLE SPAN @ 60'-3 5/8"
 24'-0" O-O DECK, SKEWED 20° LT FWD
 N1174911.70, E762055.12

BENCHMARK
 TOP OF 5/8" THREADED ROD IN P. POLE
 STA 16+16, 23.5' LT
 ELEV= 637.62



S.W. COR., SEC. 29,
 T17N, R1E, 3RD P.M.
 COTTON PICKER SPINDLE FOUND

POT STA 4+00.00
 N1174312.82
 E762043.84

BEGIN IMPROVEMENT - MATCH EXISTING
 STA 7+55.00, N1174667.74, E762051.19

STA 8+40.00, 35.00' LT.
 N1174753.27, E762017.64
 STA 8+40.00, 28.34' LT.
 N1174753.17, E762024.30

PI STA 7+79.31
 $\Delta = 00^\circ 17' 28''$ (LT)
 N1174692.05, E762051.69

STA 7+90.00, 21.55' RT.
 N1174702.40, E762073.40

STA 7+90.00, 35.00' RT.
 N1174702.19, E762086.85

STA 8+90.00, 35.00' RT.
 N1174802.18, E762088.42

STA 8+90.00, 40.00' RT.
 N1174802.10, E762093.41

JOSEPH N. BROWN, KATHLEEN A. BROWN, DAVID F. BROWN, BRANDON J. BROWN

PROP. STR. NO. 058-3413
 STA 9+98.99, SPECIAL BRIDGE DESIGN
 PRECAST PRESTRESSED CONCRETE DECK
 BEAM BRIDGE, SINGLE SPAN @ 60'-3 5/8"
 24'-0" O-O DECK, SKEWED 20° LT FWD
 N1174911.70, E762055.12

STA 10+50.00, 40.00' LT.
 N1174963.33, E762015.92

STA 10+50.00, 27.85' LT.
 N1174963.14, E762028.07

END IMPROVEMENT - MATCH EXISTING
 STA 11+60.00, N1175072.69, E762057.59

STA 11+35.00, 22.36' RT.
 N1175047.37, E762079.59

STA 11+35.00, 35.00' RT.
 N1175047.19, E762092.23

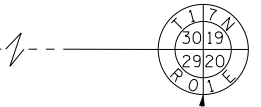
PI STA 11+20.80
 $\Delta = 00^\circ 04' 07''$ (LT)
 N1175033.50, E762057.02

STA 10+50.00, 35.00' RT.
 N1174962.16, E762090.91

STA 10+50.00, 40.00' RT.
 N1174962.08, E762095.91

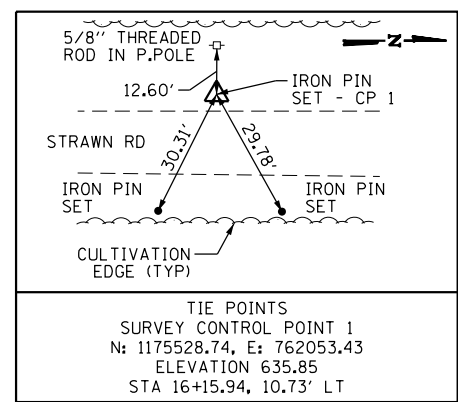
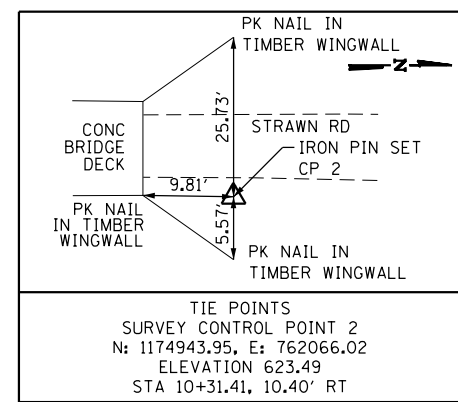
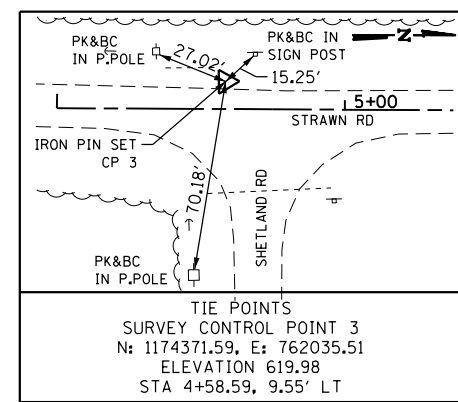
SURVEY CONTROL POINT #2

POT STA 16+23.36
 N1175536.00
 E762064.27



N.W. COR., SEC. 29,
 T17N, R1E, 3RD P.M.
 IRON PIN FOUND
 PER MONUMENT
 RECORD 1088491

ALIGNMENT COORDINATES - TR 30A (STRAWN RD.)			
CL TR 30A	STATION	N	E
POT	4+00.00	1174312.82	762043.84
PI	7+79.31	1174692.05	762051.69
BK. S. ABUT.	9+67.15	1174879.86	762054.62
C. L. BRIDGE	9+98.99	1174911.70	762055.12
BK. N. ABUT.	10+30.82	1174943.52	762055.62
PI	11+20.80	1175033.50	762057.02
POT	16+23.36	1175536.00	762064.27



FILE NAME =	USER NAME = matt.pope	DESIGNED - MJP	REVISED -
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Default	PLOT SCALE = 100.0000' / in.	CHECKED - TDN	REVISED -
	PLOT DATE = 8/7/2020	DATE - 6/4/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALIGNMENT, TIES, HORIZONTAL LAYOUT AND R.O.W.
TR 30A (STRAWN RD) OVER WILLOW BRANCH
 SCALE: 1" = 50' SHEET 1 OF 1 SHEETS STA. TO STA.

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 30A	16-07117-00-BR	MACON	23	6
CONTRACT NO. 95881				
ILLINOIS FED. AID PROJECT				

STRUCTURE NO. 058-3096

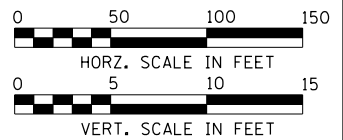
EXIST. SINGLE SPAN CONCRETE DECK BEAM SUPERSTRUCTURE ON CLOSED CONCRETE ABUTMENTS W/ TEMP. TIMBER PILE SHORING 43'-0" BK.-BK. ABUTMENTS 20'-11" O.-O. DECK

BENCHMARK

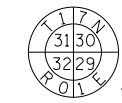
TOP OF 5/8" THREADED ROD IN P. POLE STA. 16+16, 23.5' LT. ELEV. = 637.62

DAVID F. BROWN, ET AL.

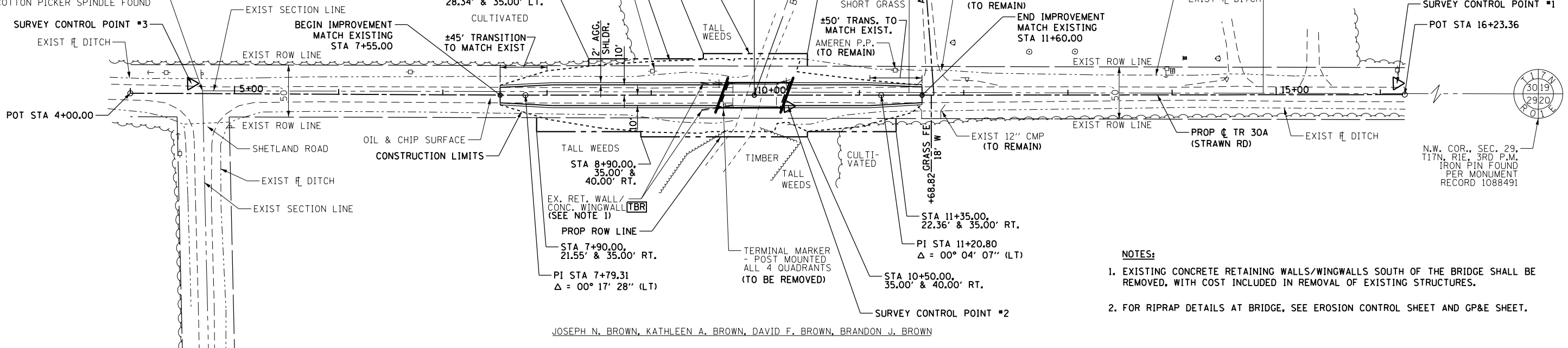
PROP. STR. NO. 058-3413 STA 9+98.99, SPECIAL BRIDGE DESIGN PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE. SINGLE SPAN @ 60'-3 5/8" 24'-0" O-O DECK, SKEWED 20° LT FWD



DATE	
BY	
PLAN	
NO.	
DATE	
BY	
PROFILE	
NO.	



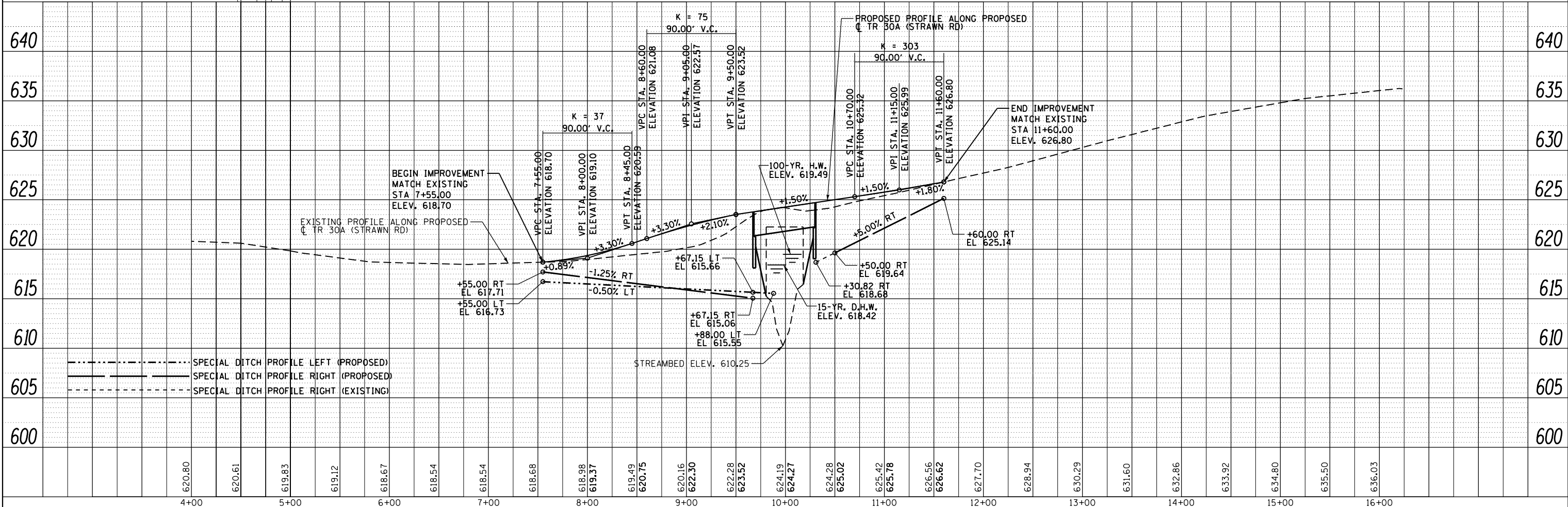
S.W. COR., SEC. 29, T17N, R1E, 3RD P.M. COTTON PICKER SPINDLE FOUND



- NOTES:**
- EXISTING CONCRETE RETAINING WALLS/WINGWALLS SOUTH OF THE BRIDGE SHALL BE REMOVED, WITH COST INCLUDED IN REMOVAL OF EXISTING STRUCTURES.
 - FOR RIPRAP DETAILS AT BRIDGE, SEE EROSION CONTROL SHEET AND GP&E SHEET.

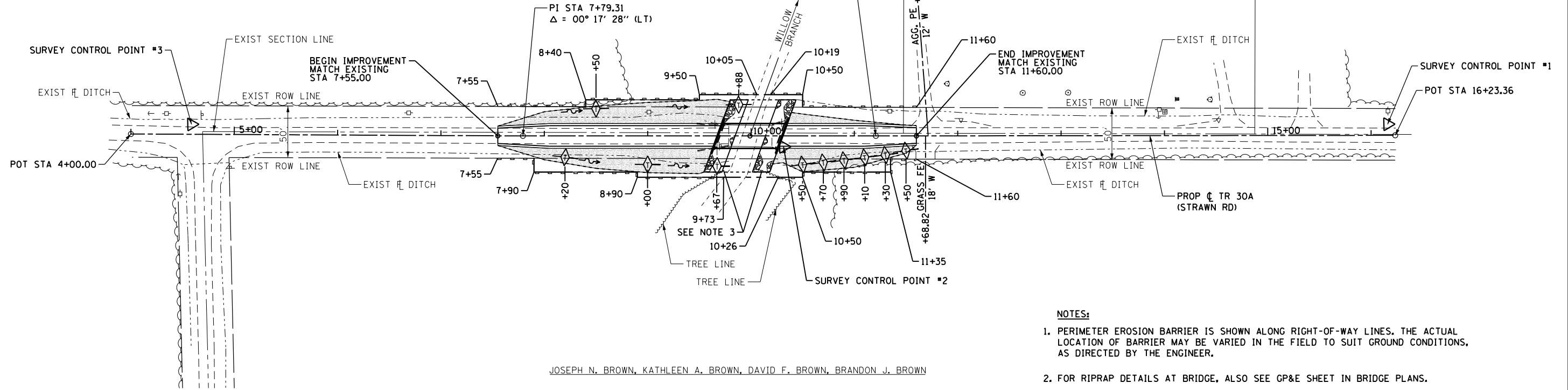
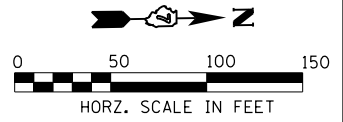
JOSEPH N. BROWN, KATHLEEN A. BROWN, DAVID F. BROWN, BRANDON J. BROWN

DATE	
BY	
PROFILE	
NO.	
DATE	
BY	
PLAN	
NO.	



FILE NAME =	USER NAME = matt.pope	DESIGNED - MJP	REVISED -	<p align="center">STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</p> <p align="center">PLAN AND PROFILE TR 30A (STRAWN RD) OVER WILLOW BRANCH</p>	RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S:\60546824 Batchelder\900-CAD-GIS\910 CAD\60546824_Plan_Prof.sht.dgn	PLOT SCALE = 100.0000' / in.	DRAWN - MCD	REVISED -		TR 30A	16-07117-00-BR	MACON	23	7
Default	PLOT DATE = 8/7/2020	CHECKED - TDN	REVISED -		CONTRACT NO. 95881				
		DATE - 6/4/2020	REVISED -		ILLINOIS FED. AID PROJECT				

DAVID F. BROWN, ET AL.



JOSEPH N. BROWN, KATHLEEN A. BROWN, DAVID F. BROWN, BRANDON J. BROWN

NOTES:

1. PERIMETER EROSION BARRIER IS SHOWN ALONG RIGHT-OF-WAY LINES. THE ACTUAL LOCATION OF BARRIER MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS, AS DIRECTED BY THE ENGINEER.
2. FOR RIPRAP DETAILS AT BRIDGE, ALSO SEE GP&E SHEET IN BRIDGE PLANS.
3. MINIMAL TREE REMOVAL MAY BE REQUIRED FOR RIPRAP PLACEMENT AT THESE TWO LOCATIONS. IF TREE REMOVAL IS REQUIRED, THE COST SHALL BE INCLUDED IN CHANNEL EXCAVATION. SEE ALSO NOTE 15 ON GENERAL DATA SHEET.

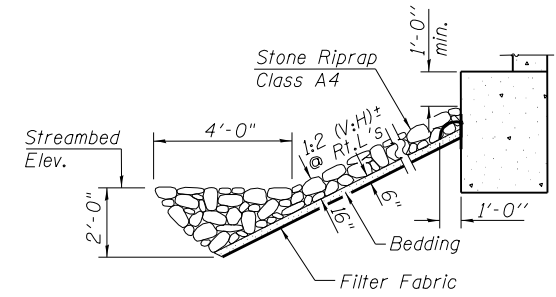
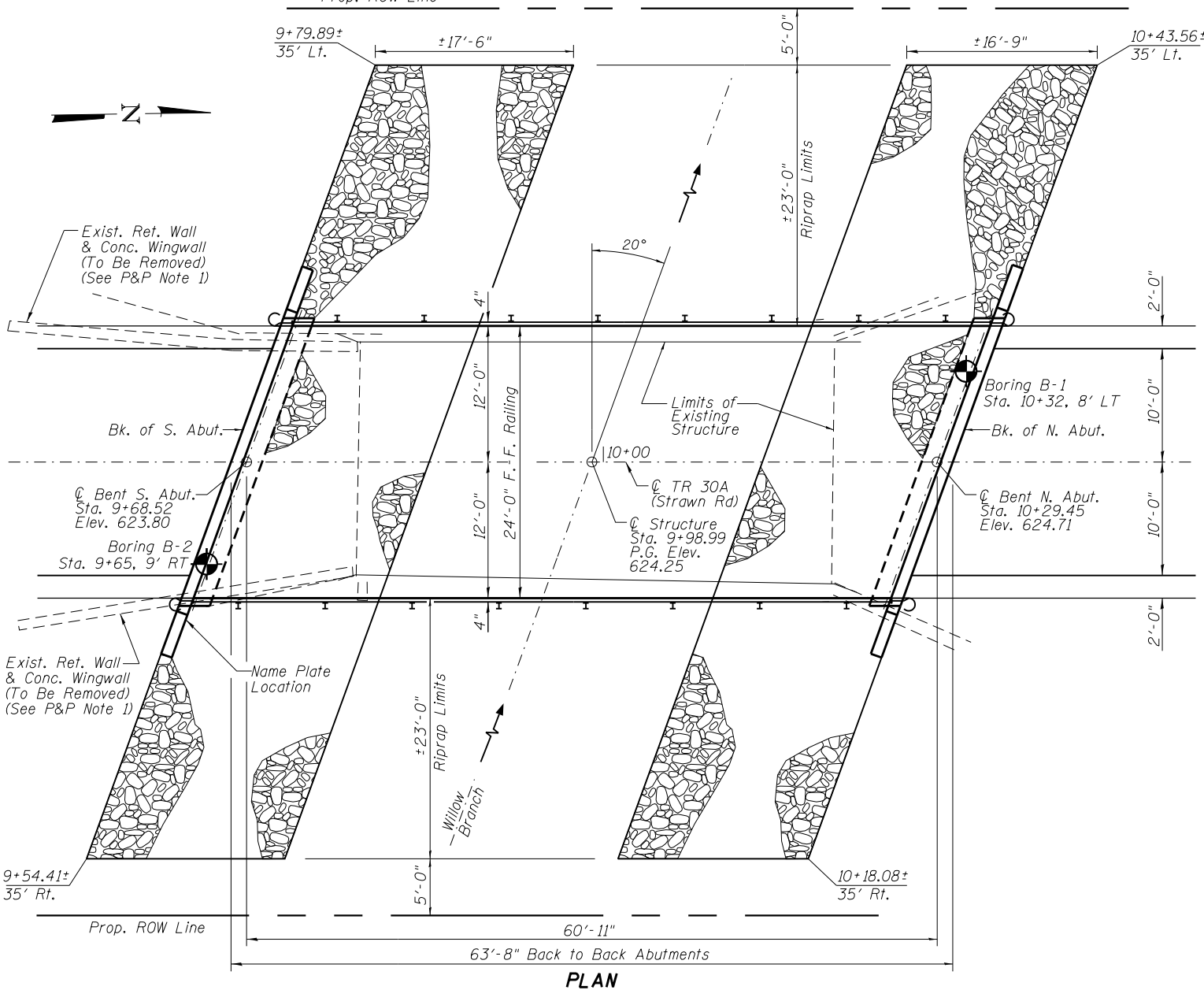
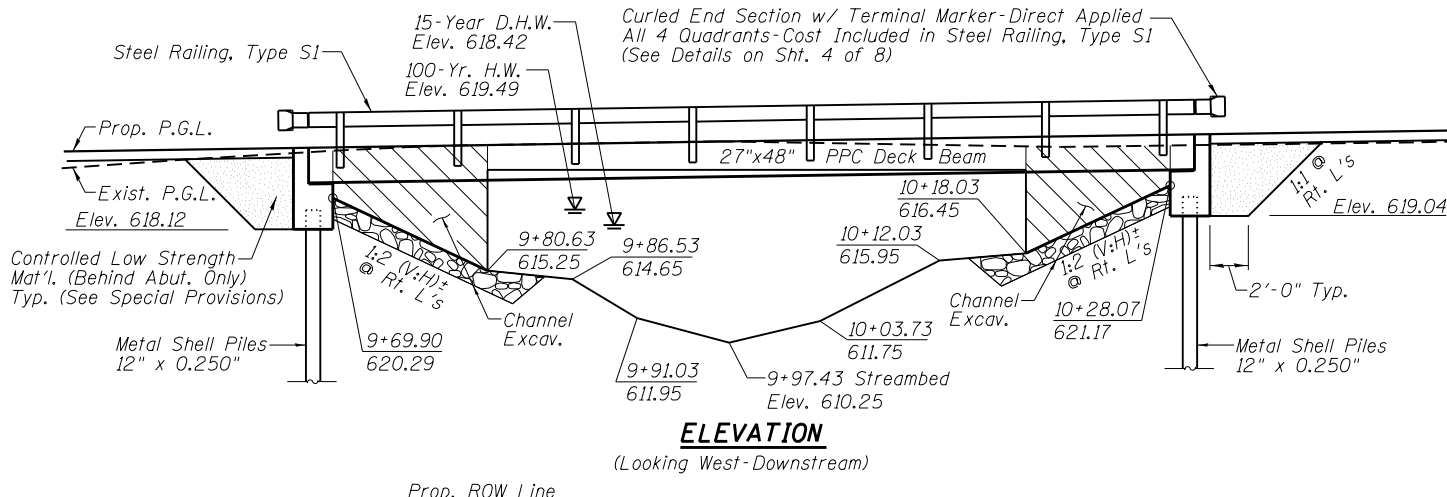
LEGEND

- TEMPORARY DITCH CHECKS
- PERIMETER EROSION BARRIER
- STONE RIPRAP, CLASS A4
- SEEDING, CLASS 2 & EROSION CONTROL BLANKET
- PROPOSED R.O.W.
- EXISTING R.O.W.
- CONSTRUCTION LIMITS

FILE NAME = S:\60546824 Batchelder\900-CAD-GIS\910	USER NAME = matt.pope	DESIGNED - MJP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EROSION CONTROL PLAN TR 30A (STRAWN RD) OVER WILLOW BRANCH	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
Default	CAO\60546824_EC_Plan.sht.dgn	DRAWN - JTC	REVISED -			TR 30A	16-07117-00-BR	MACON	23	8	
	PLOT SCALE = 100.0000' / in.	CHECKED - TDN	REVISED -			CONTRACT NO. 95881					
	PLOT DATE = 8/10/2020	DATE - 6/4/2020	REVISED -			ILLINOIS FED. AID PROJECT					

Benchmark: Top of 5/8" Threaded Rod in Power Pole, Lt. Sta. 16+16 = Elev. 637.62.

Existing Structure: Originally constructed in 1909, and re-constructed in 1980, the existing structure is a single span precast prestressed concrete deck beam superstructure on closed concrete abutments and temporary timber pile shoring. The structure is ±37' face to face of abutments and ±21' out to out of deck. Existing structure is to be removed and replaced. Existing roadway will be closed during construction. No salvage.



STONE RIPRAP ANCHOR DETAIL

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications - 8th Edition

LOADING HL - 93

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

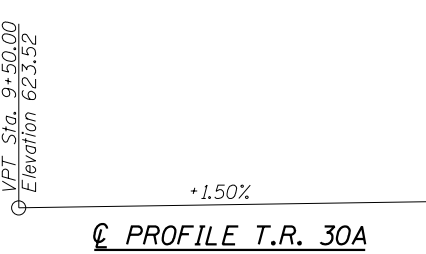
DESIGN STRESSES

FIELD UNITS
 $f'_c = 3,500$ p.s.i.
 $f_y = 60,000$ p.s.i. (Reinforcement)
 $n = 9$

PPC UNITS
 $f'_{ci} = 5,000$ p.s.i.
 $f'_c = 6,000$ p.s.i.
 $f'_s = 270,000$ p.s.i.
 $f'_{si} = 201,960$ p.s.i.

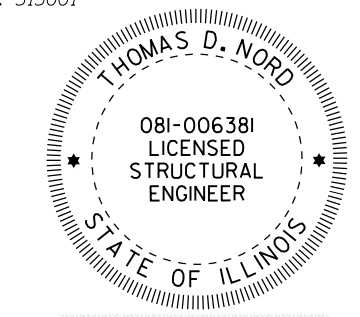
SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.150 g
 Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.269 g
 Soil Site Class = D



WILLOW BRANCH
 BUILT 2021 BY
 MACON COUNTY
 SEC. 16-07117-00-BR
 T.R. 30A STA. 9+98.99
 STR. NO. 058-3413 LOADING HL-93
 BATCHELDER BRIDGE

NAME PLATE
 See Std. 515001



THOMAS D. NORD
 SIGNATURE DATE: 11/10/2020
 ILL. STRUCTURAL NO. 081-006381
 EXP. DATE: 11/30/2022

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.

GENERAL NOTES

Layout of Stone Riprap, Class A4 may be varied in the field to suit ground conditions as directed by the Engineer.
 See Proposal for Boring Data.
 Reinforcement Bars shall conform to the requirements of ASTM A 706, Grade 60. See Special Provisions.
 The Contractor shall drive one Metal Shell Test Pile in a permanent location at the North Abutment and South Abutment as directed by the Engineer before ordering the remainder of piles.
 Excavation required for abutment construction shall be included in Concrete Structures. No additional compensation will be provided for Structure Excavation.

WATERWAY INFORMATION

Drainage Area = 12.67 Sq. Mi. Existing Low Grade Elev. 618.54 @ Sta. 7+00.00
 Proposed Low Grade Elev. 618.54 @ Sta. 7+00.00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Head-Ft.		Headwater El.		
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	
Design	15	1573	332	365	618.42	0.96*	0.88*	619.38	619.30
Base	100	2670	332	365	619.49	1.12*	1.11*	620.61	620.60
Max. Calc.	500	3610	332	365	620.16	1.29*	1.29*	621.45	621.45

Low Beam Elev. (Prop.) = 621.26 at Sta. 9+65.53, 12' Rt.
 * Over-the Road Flow Occurs

Over-the Road Flow (sq.ft.)

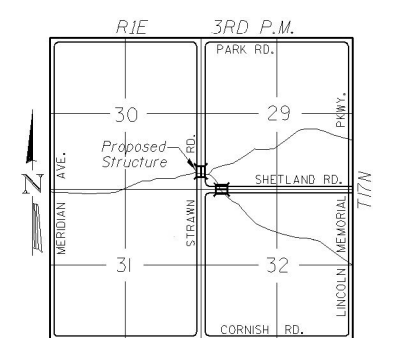
	Existing	Proposed
15 Yr.	145	51
100 Yr.	563	434
500 Yr.	975	790

DESIGN SCOUR ELEVATION TABLE

Event/Limit State	Design Scour Elev. (ft.)		Item 113
	South Abut.	North Abut.	
Design	618.12	619.04	8
Check	618.12	619.04	

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu Yd		248	248
Stone Riprap, Class A4	Ton		181	181
Filter Fabric	Sq Yd		279	279
Removal of Existing Structures	Each			1
Concrete Structures	Cu Yd		24.6	24.6
PPC Deck Beams (27" Depth)	Sq Ft	1477		1477
Reinforcement Bars, Epoxy Coated	Pound		3220	3220
Steel Railing, Type S1	Foot	123		123
Furnishing Metal Shell Piles 12" x 0.250"	Foot		344	344
Driving Piles	Foot		344	344
Test Piles Metal Shells	Each		2	2
Name Plates	Each		1	1
Controlled Low-Strength Material	Cu Yd		40.7	40.7
Terminal Marker-Direct Applied	Each	4		4



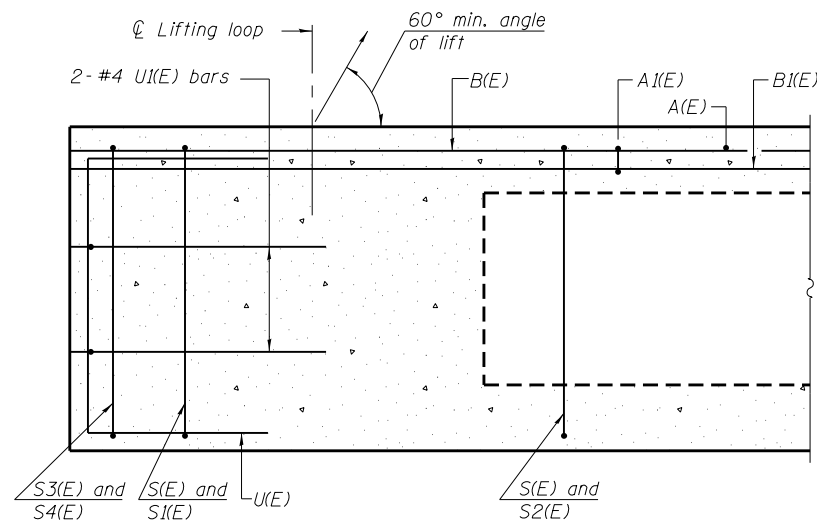
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PLOT DATE = 11/18/2020	DRAWN - MJP	REVISED -
PLOT TIME = 7:47:11 AM	CHECKED - TDN	REVISED -
	DATE - 6/4/2020	REVISED -

AECOM 345 EAST ASH AVE, SUITE B
 DECATUR, ILLINOIS 62526
 PH. 217-875-4800

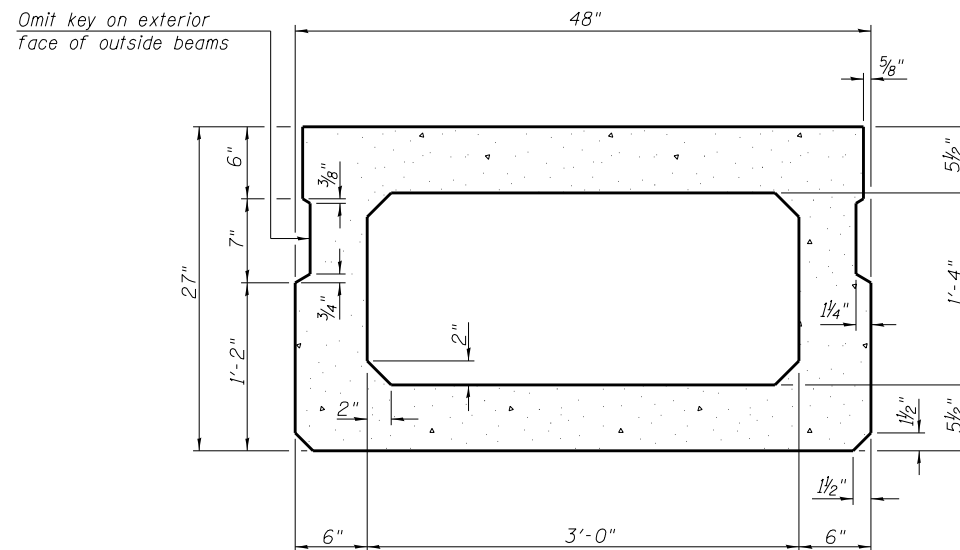
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
 STRUCTURE NO. 058-3413

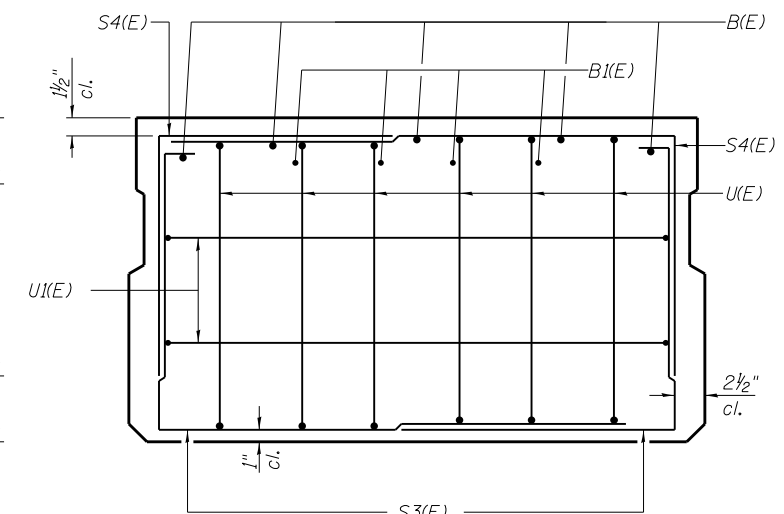
RT. 30A	SECTION 16-07117-00-BR	COUNTY MACON	TOTAL SHEETS 23	SHEET NO. 9
			CONTRACT NO. 95881	
ILLINOIS FED. AID PROJECT				



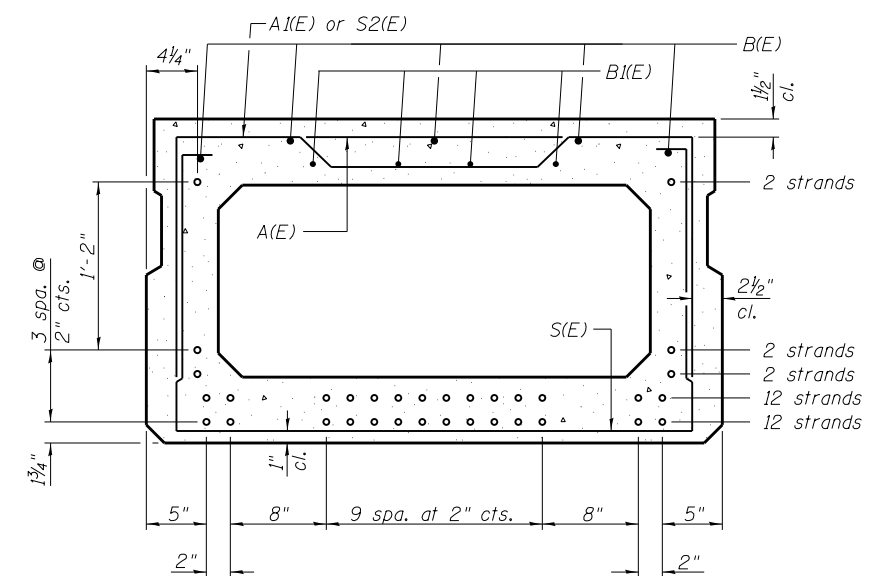
SECTION A-A



SECTION B-B
(Showing dimensions)



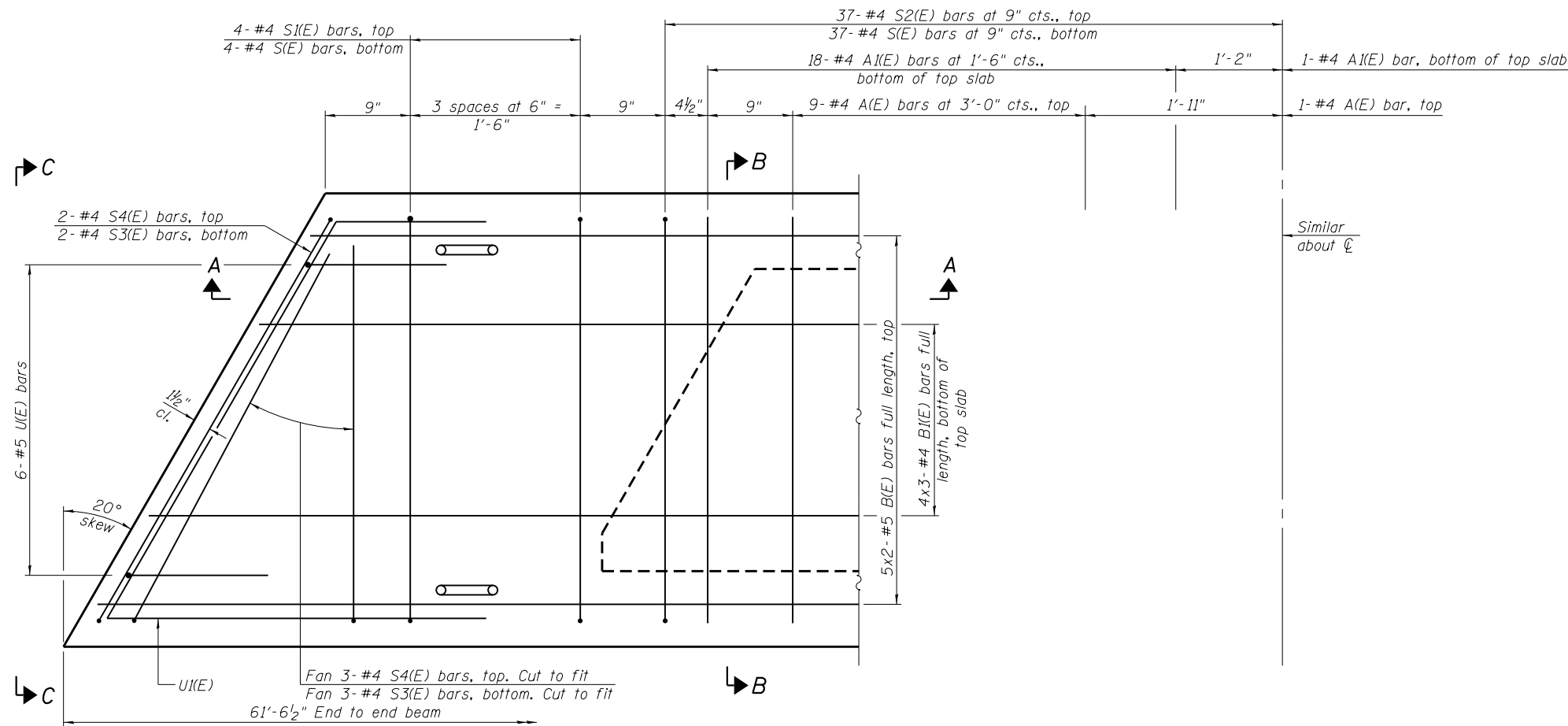
VIEW C-C



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.



PLAN VIEW

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

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

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	19	#4	3'-7"	—
A1(E)	37	#4	3'-10"	~
B(E)	10	#5	32'-0"	—
B1(E)	12	#4	21'-9"	—
S(E)	82	#4	8'-5"	U
S1(E)	8	#4	6'-11"	U
S2(E)	74	#4	7'-2"	U
S3(E)	10	#4	5'-4"	J
S4(E)	10	#4	4'-7"	J
U(E)	12	#5	4'-6"	C
U1(E)	4	#4	7'-6"	C

Note:
See sheet 3 & 4 of 8 for additional details and Bill of Material.

PD-2748-L

2-17-2017

FILE NAME =	DESIGNED - MJP	REVISED -
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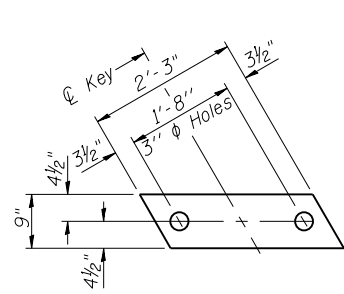
AECOM 345 EAST ASH AVE, SUITE B
DECATUR, ILLINOIS 62526
PH. 217-875-4800

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

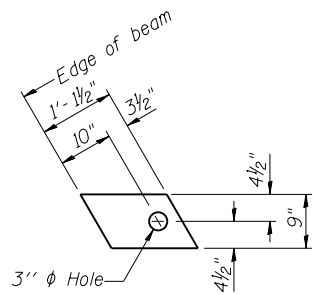
27" x 48" PPC DECK BEAM
STRUCTURE NO. 058-3413

SHEET 2 OF 8 SHEETS

RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 30A	16-07117-00-BR	MACON	23	10
CONTRACT NO. 95881				
ILLINOIS FED. AID PROJECT				



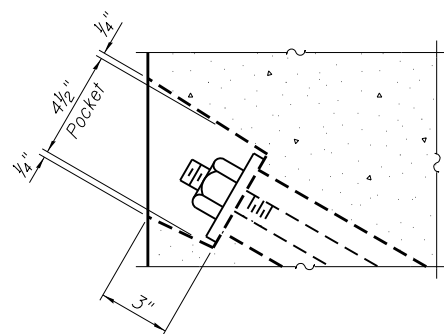
FABRIC BEARING PAD
(Interior)



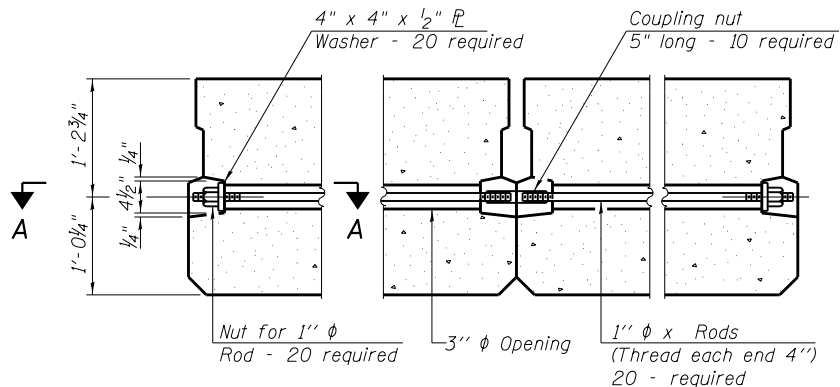
FABRIC BEARING PAD
(Exterior)

Notes:

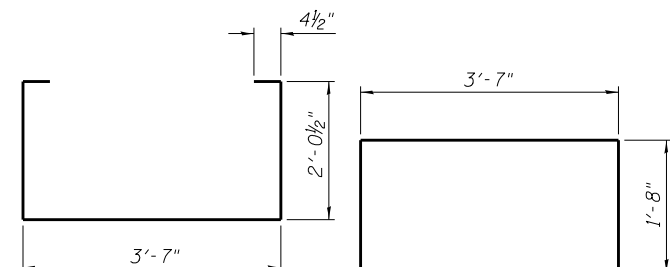
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.



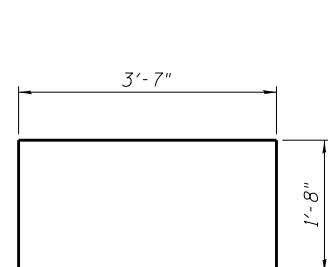
SECTION A-A



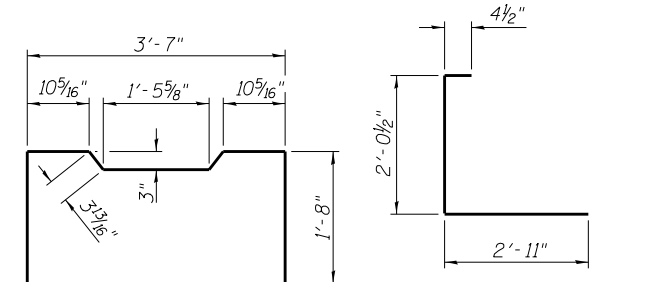
TYPICAL TRANSVERSE TIE ASSEMBLY



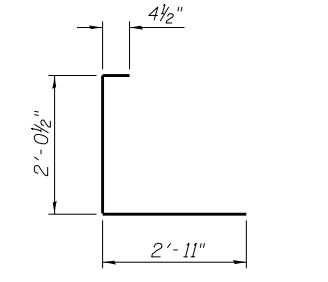
BAR S(E)



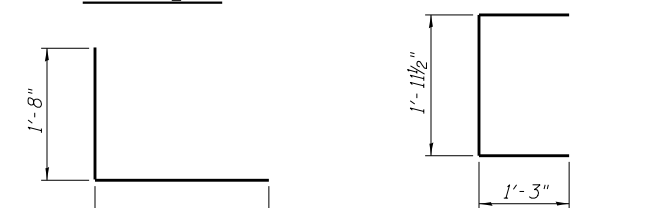
BAR S1(E)



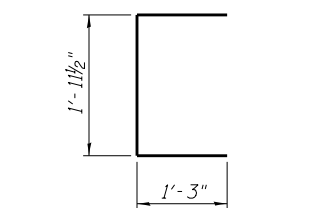
BAR S2(E)



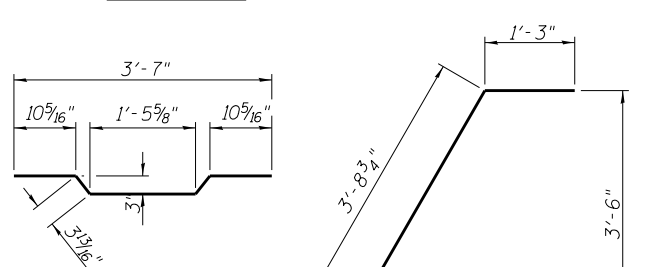
BAR S3(E)



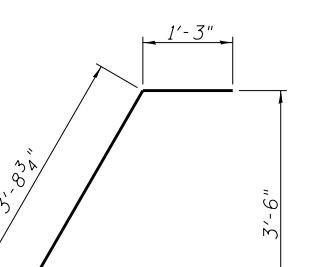
BAR S4(E)



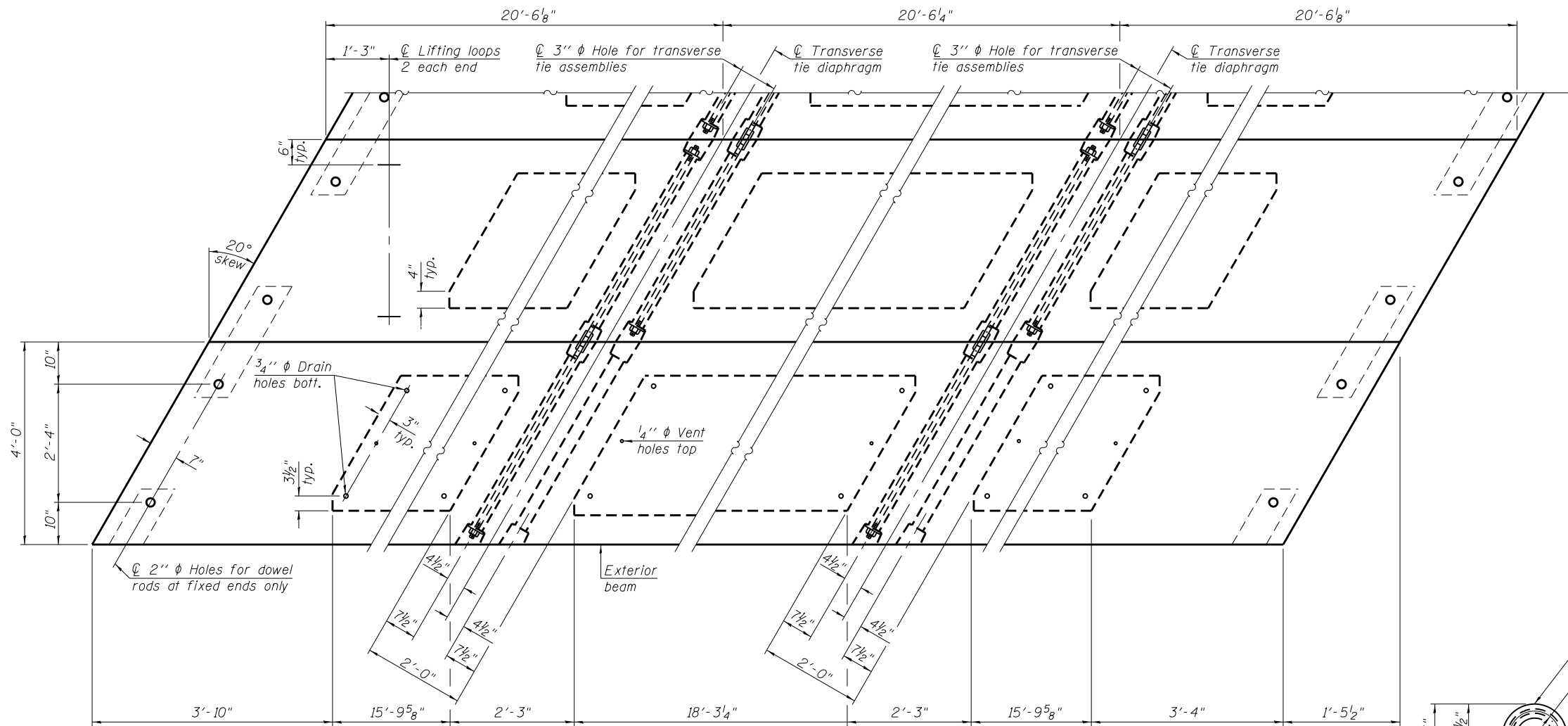
BAR U(E)



BAR A1(E)



BAR U1(E)



PLAN VIEW

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" 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. Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location. A minimum 2 1/2" 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.

Note: Connect beams in pairs with the transverse tie configuration shown.

PD-2748-LD 2-17-2017

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PLOT DATE = 8/7/2020	DRAWN - MJP	REVISED -
PLOT TIME = 1:33:24 PM	CHECKED - TDN	REVISED -
	DATE - 6/4/2020	REVISED -

AECOM 345 EAST ASH AVE, SUITE B
DECATUR, ILLINOIS 62526
PH. 217-875-4800

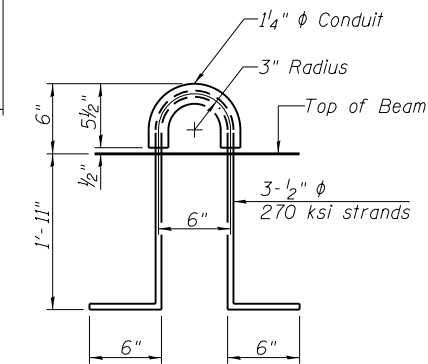
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

27" x 48" PPC DECK BEAM DETAILS
STRUCTURE NO. 058-3413

SHEET 3 OF 8 SHEETS

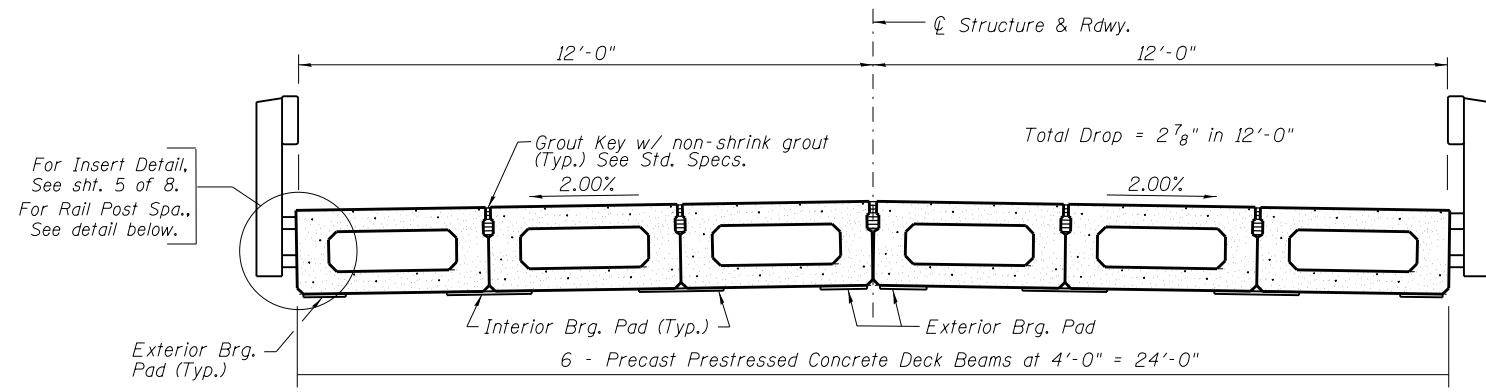
BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (27" depth)	Sq. Ft.	1,477
-------------------------------------------------	---------	-------

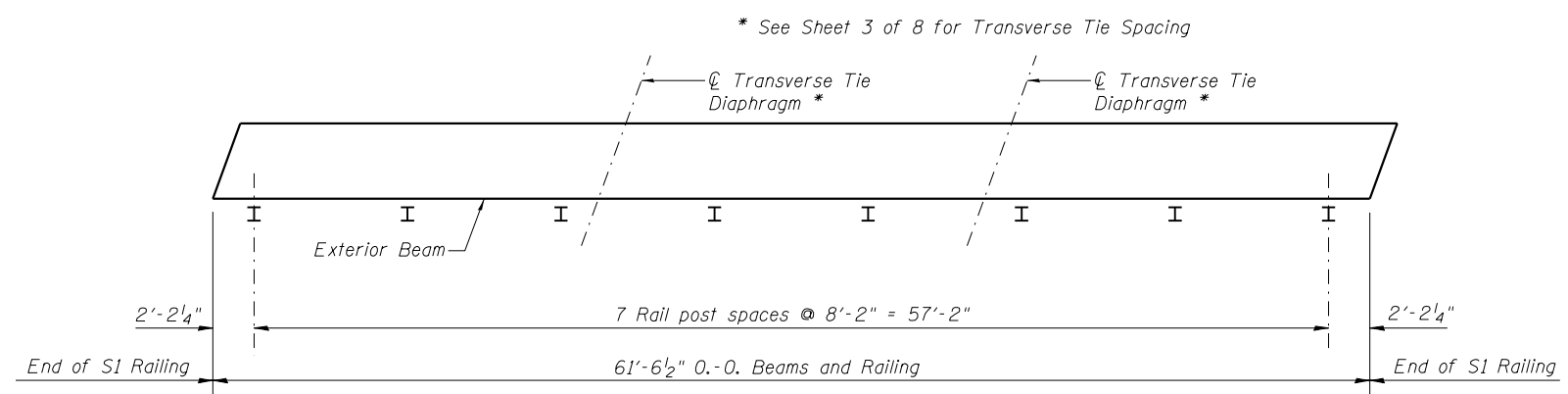


LIFTING LOOP DETAIL

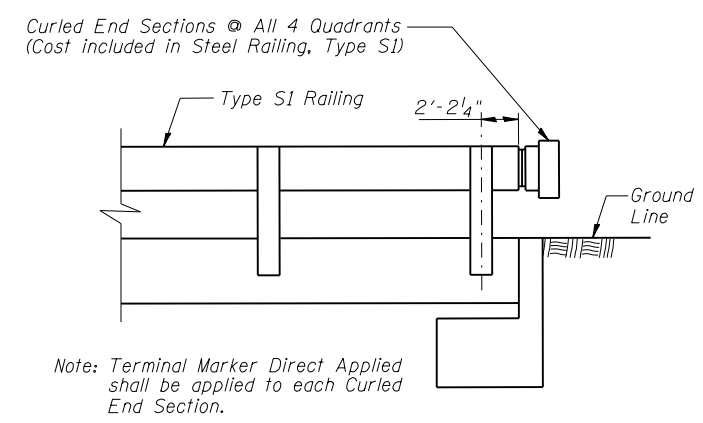
RTA	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 30A	16-07117-00-BR	MACON	23	11
CONTRACT NO. 95881				
ILLINOIS FED. AID PROJECT				



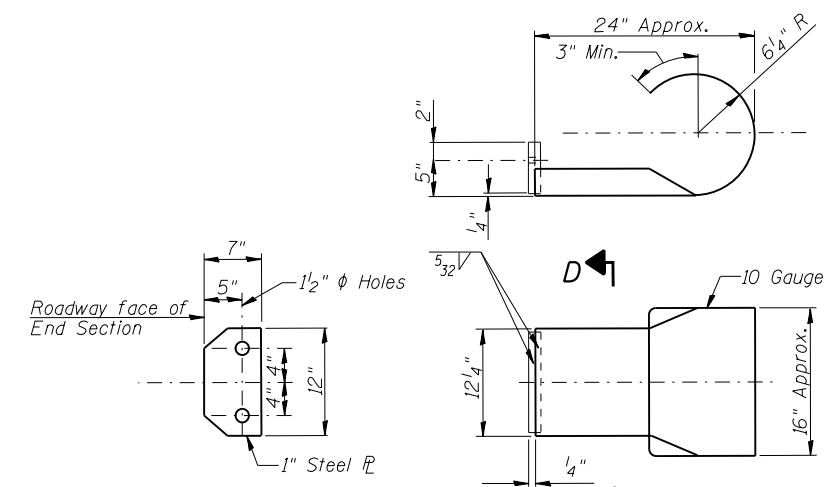
SUPERSTRUCTURE CROSS SECTION
See sheets 2 & 3 of 8 for Superstructure.



PLAN VIEW - EXTERIOR BEAMS
(Showing Rail Post Spacing)



ELEVATION VIEW - EXTERIOR BEAMS
(Showing Rail Post Details)



SECTION D-D

CURLED END SECTION DETAILS
(4 Required)

FILE NAME =	DESIGNED - MJP	REVISED -
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PLOT DATE = 8/7/2020	CHECKED - TDN	REVISED -
PLOT TIME = 1:35:41 PM	DATE - 6/4/2020	REVISED -

AECOM 345 EAST ASH AVE, SUITE B
DECATUR, ILLINOIS 62526
PH. 217-875-4800

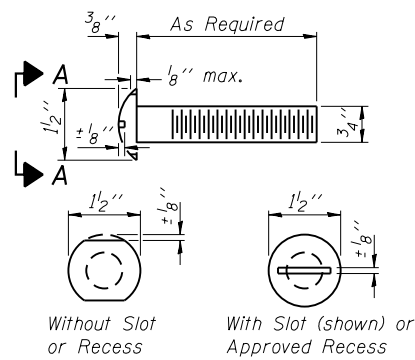
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE DETAILS
STRUCTURE NO. 058-3413**

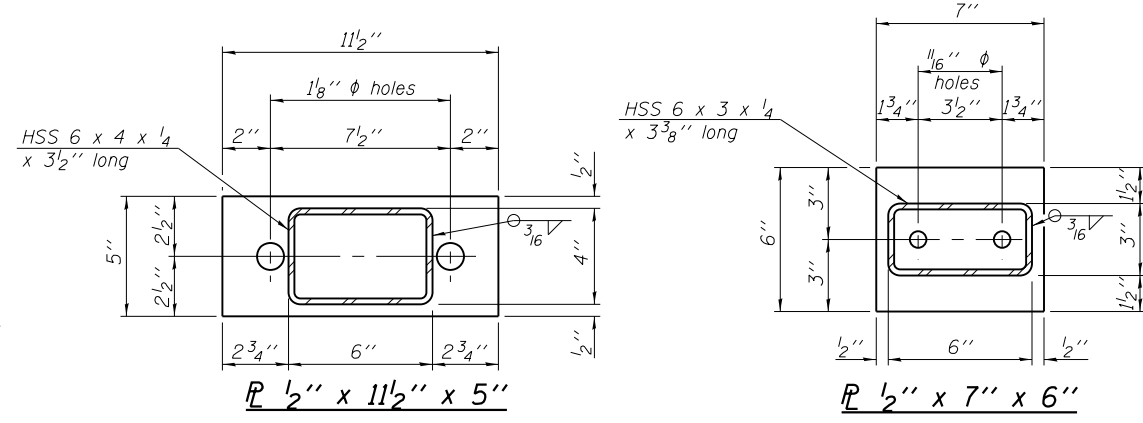
SHEET 4 OF 8 SHEETS

RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 30A	16-07117-00-BR	MACON	23	12
CONTRACT NO. 95881				

ILLINOIS FED. AID PROJECT



**VIEW A-A
ROUND HEAD BOLT**

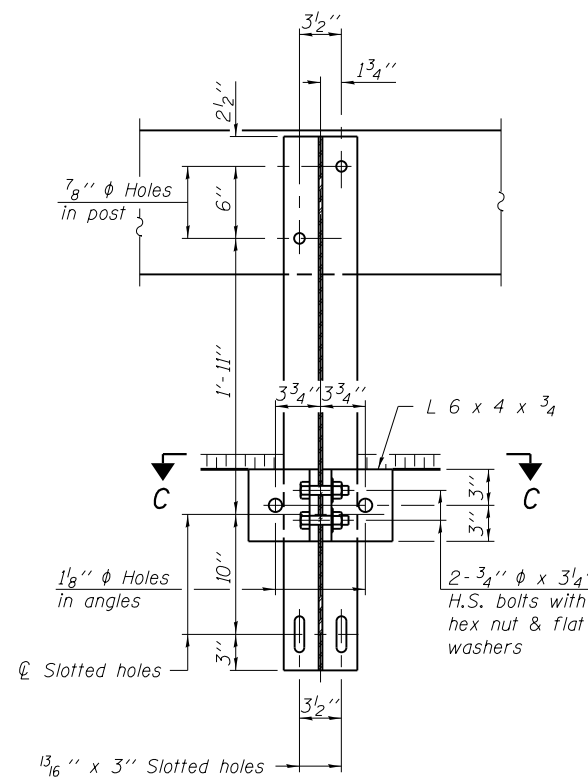


SPLICE DIMENSIONS

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 1/4"	1'-8"	2"	4"	—

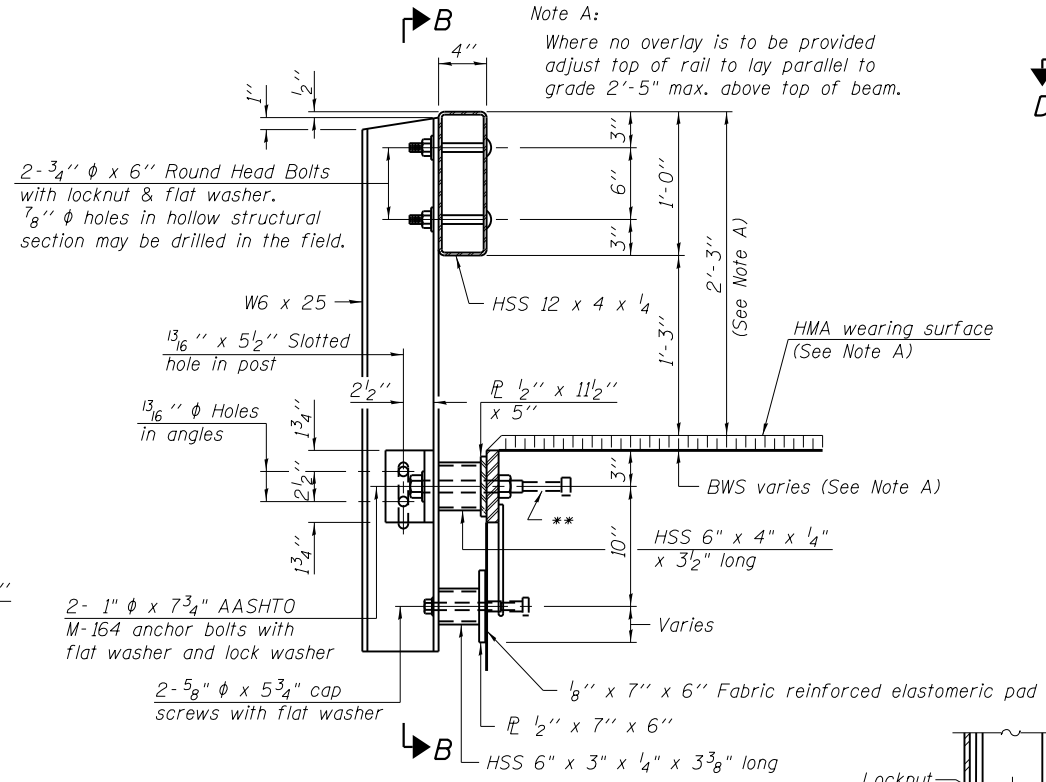
T = Total movement at expansion joint as shown on the design plans.

Notes:
 For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S1.
 All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
 ** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device. The anchor studs may be bent down 1/2" to accommodate the top reinforcement bar placement.

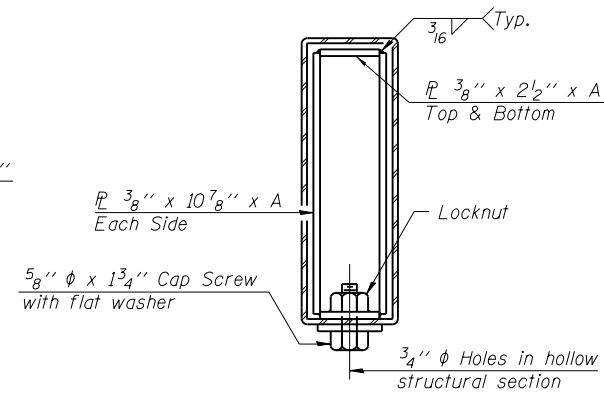


SECTION B-B

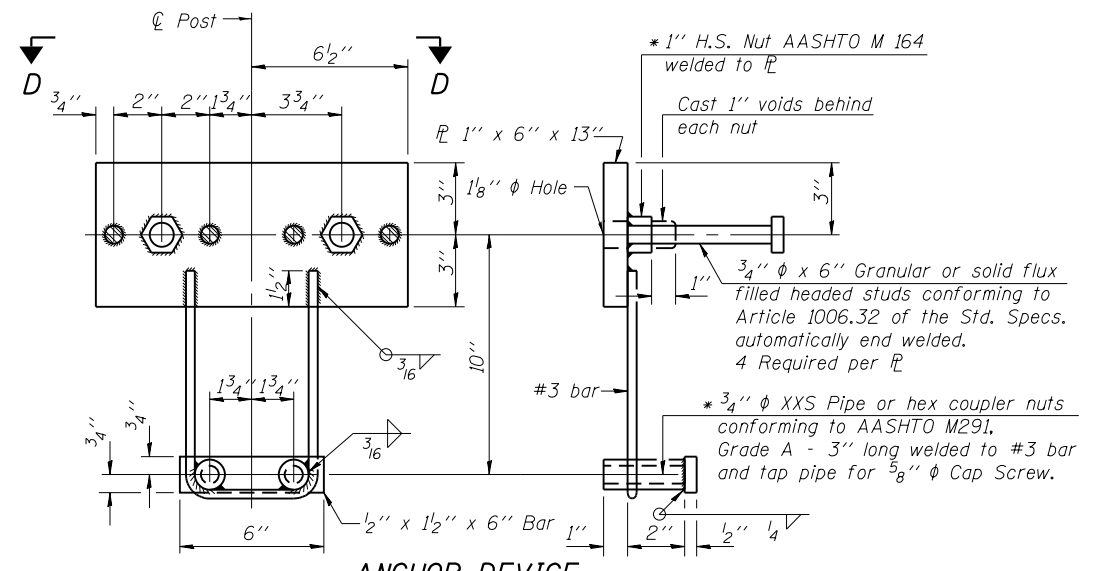
SECTION C-C



SECTION AT RAILING POST

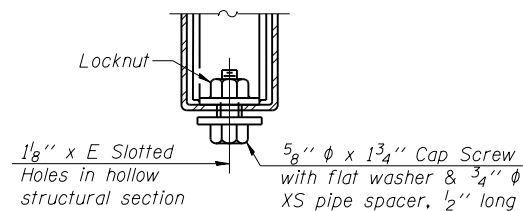


SECTIONS AT RAIL SPLICE

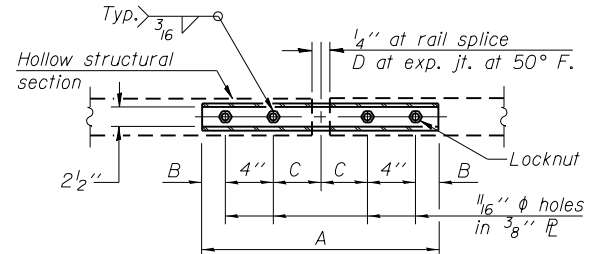


ANCHOR DEVICE

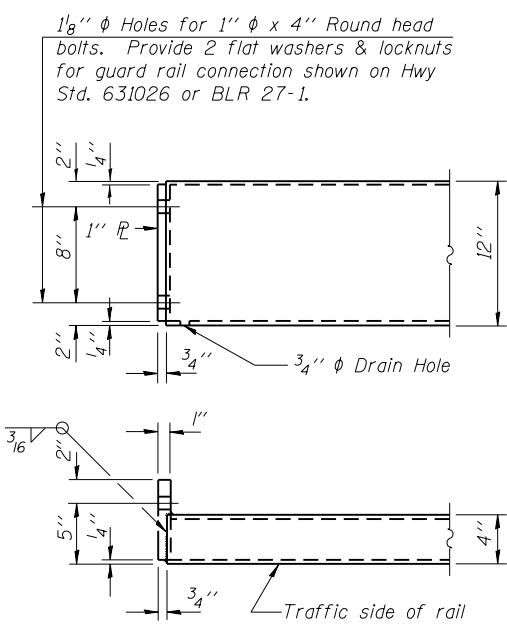
* Threaded areas shall be plugged or blocked off during casting of beam.



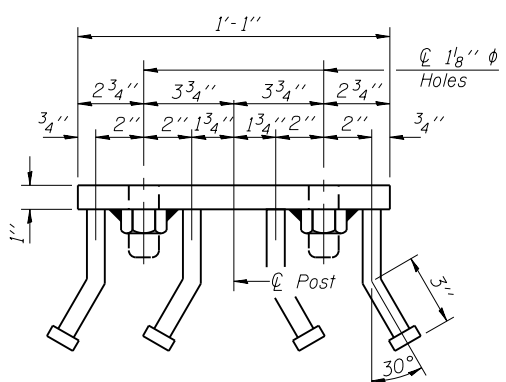
RAIL SPLICE CONNECTION AT EXPANSION JT.



PLAN-BOTT. SPLICE R TYPICAL



END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S1	Foot	123
Terminal Marker-Direct Applied	Each	4

R-23A 8-11-17 (10'-9" Maximum Post Spacing)

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PLOT DATE = 8/7/2020	DRAWN - MJP	REVISED -
PLOT TIME = 1:37:50 PM	CHECKED - TDN	REVISED -
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AECOM 345 EAST ASH AVE, SUITE B
 DECATUR, ILLINOIS 62526
 PH. 217-875-4800

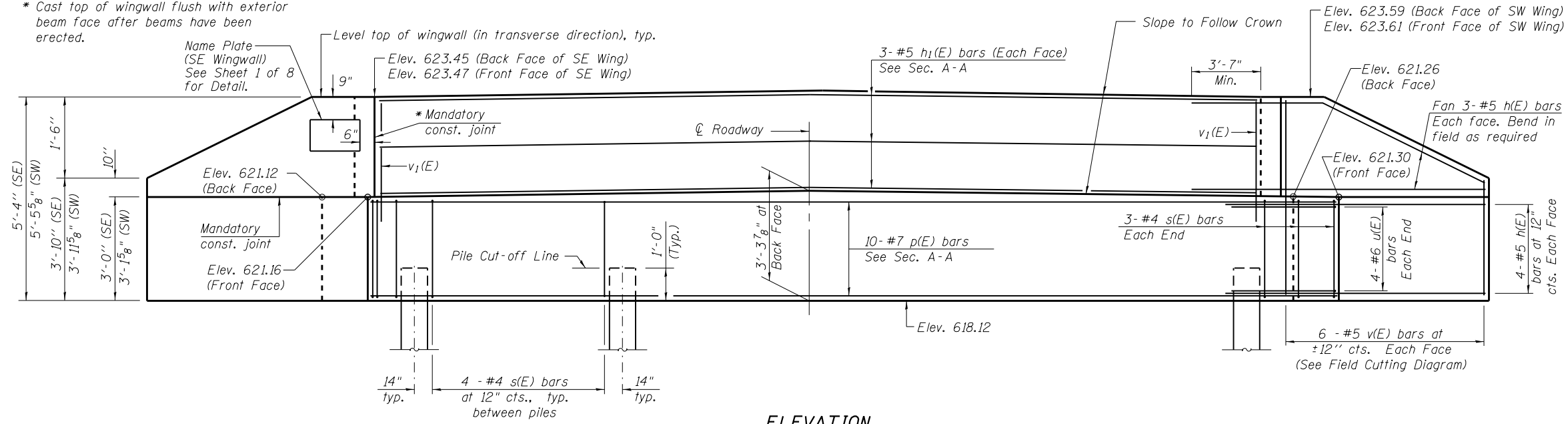
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**STEEL RAILING, TYPE S-1
 STRUCTURE NO. 058-3413**

SHEET 5 OF 8 SHEETS

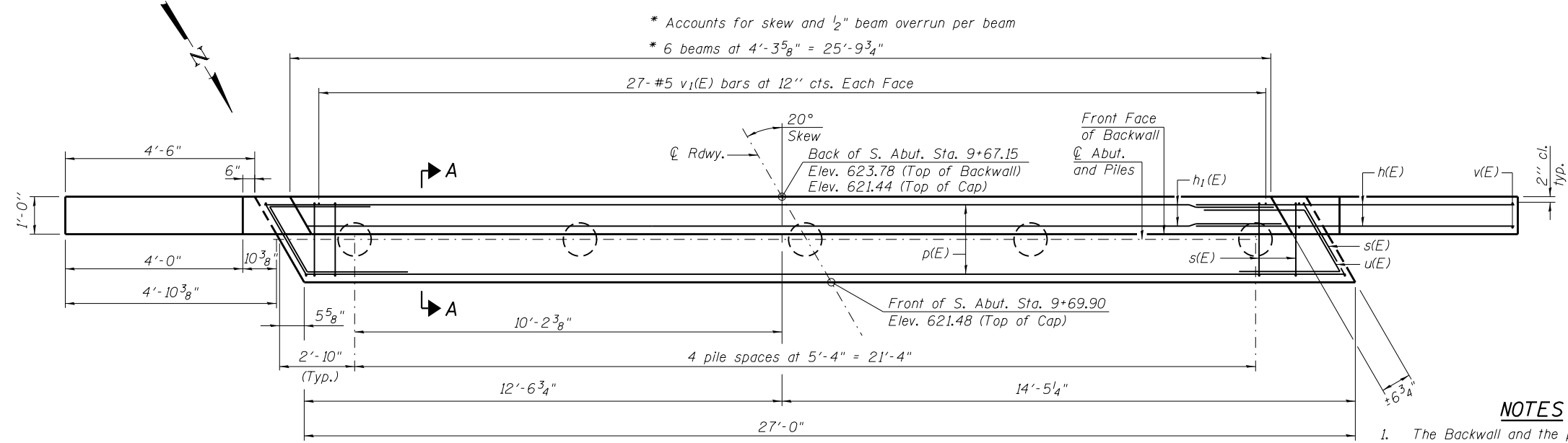
RTA	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 30A	16-07117-00-BR	MACON	23	13
			CONTRACT NO. 95881	
ILLINOIS FED. AID PROJECT				

* Cast top of wingwall flush with exterior beam face after beams have been erected.



ELEVATION

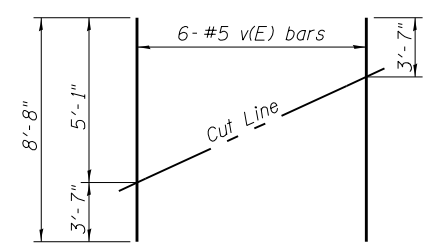
* Accounts for skew and 1/2" beam overrun per beam
 * 6 beams at 4'-3 5/8" = 25'-9 3/4"



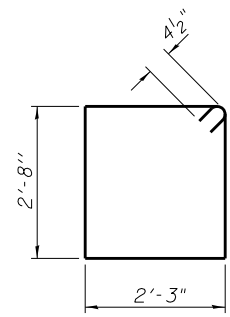
PLAN

PILE DATA

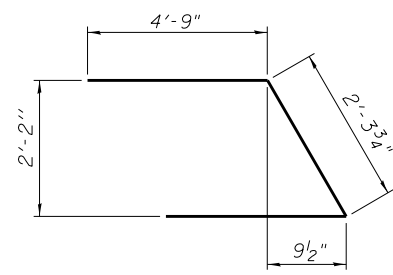
South Abutment
 Type: Metal Shell 12" ϕ x 0.25" walls
 Nominal Required Bearing: 219 kips
 Factored Resistance Available: 121 kips
 Est. Length: 43 ft.
 No. Production Piles: 4
 No. Test Piles: 1



FIELD CUTTING DIAGRAM
 Order v(E) full length. Cut as shown and use remainder of bars in opposite face.



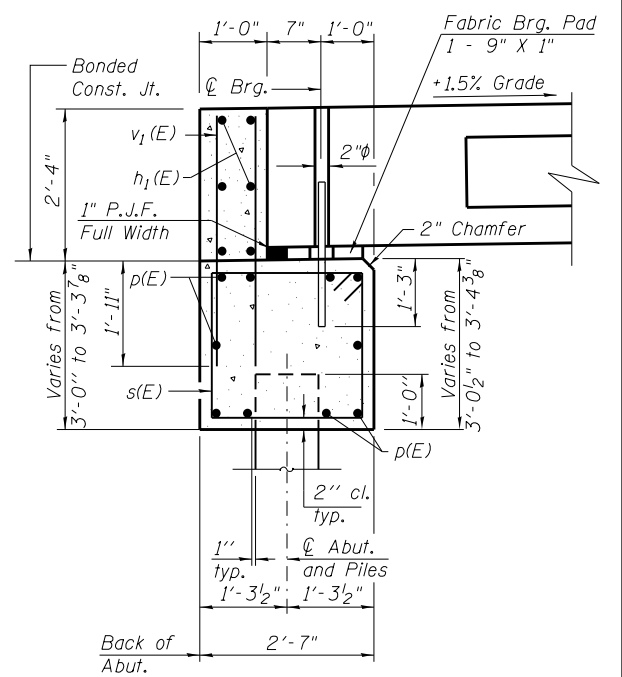
BAR s(E)



BAR u(E)

DESIGN STRESSES

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi



SECTION A-A
 (Dimensions are at Rt. L's)

NOTES

- The Backwall and the portion of the Wingwalls above the bonded construction joint shall be cast against the in-place beam.
- 1" dia. x 2'-6" dowel rods in 1 1/2" dia. holes drilled in cap (2 each beam). Dowel rods to be grouted after beams are in place and allowed to cure (min. 24 hrs.) prior to grouting the shear keys. The grout shall be an approved non-shrink grout.
- Reinforcement bars designated (E) shall be Epoxy coated.
- Reinforcement bars shall conform to the requirements of A.S.T.M. A706 Grade 60.
- Space reinforcement in cap to miss dowel rods.
- For pile details, see sheet 8 of 8.
- Ends of abutment cap shall be constructed parallel to ϕ of Roadway.
- North arrow is depicted relative to ϕ Rdwy., not relative to abutment. See GP&E sheet for a depiction of north arrow relative to abutment.

BILL OF MATERIAL SOUTH ABUTMENT

Bar	No.	Size	Length	Shape	
h(E)	28	#5	9'-1"	—	
h1(E)	6	#5	25'-6"	—	
p(E)	10	#7	26'-8"	—	
s(E)	22	#4	10'-7"	□	
u(E)	8	#6	11'-10"	∩	
v(E)	12	#5	8'-8"	—	
v1(E)	54	#5	4'-1"	—	
Concrete Structures				Cu. Yd.	12.3
Reinforcement Bars, Epoxy Coated				Pound	1610
Furnishing Metal Shell Piles 12" x 0.250"				Foot	172
Driving Piles				Foot	172
Test Pile Metal Shells				Each	1

AD-2742-L 2-17-2017

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PLOT DATE = 8/7/2020	DRAWN - MJP	REVISED -
PLOT TIME = 1:39:01 PM	CHECKED - TDN	REVISED -
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 DECATUR, ILLINOIS 62526
 PH. 217-875-4800

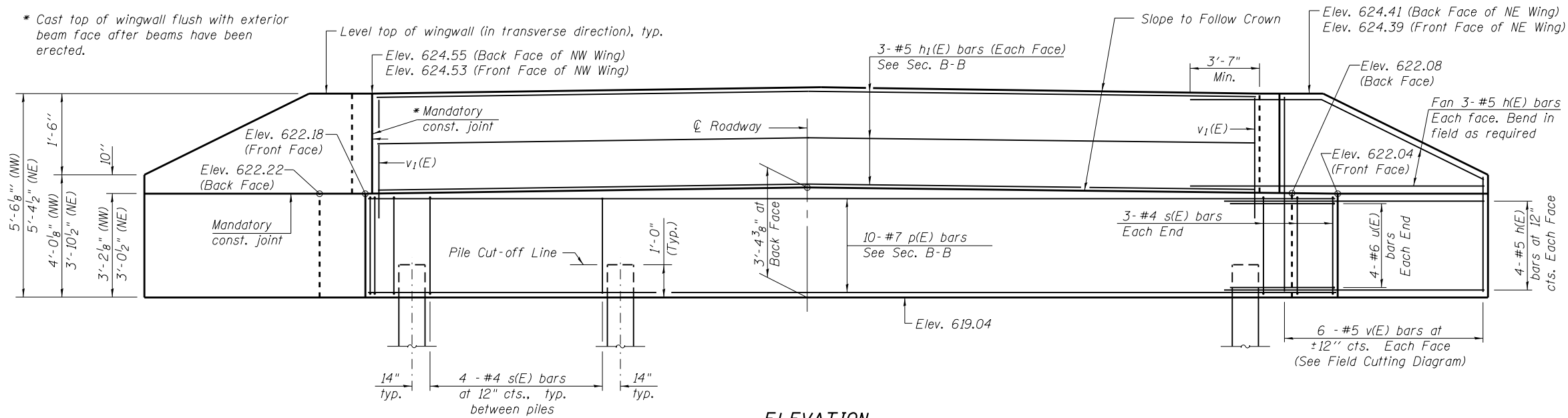
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT
STRUCTURE NO. 058-3413

SHEET 6 OF 8 SHEETS

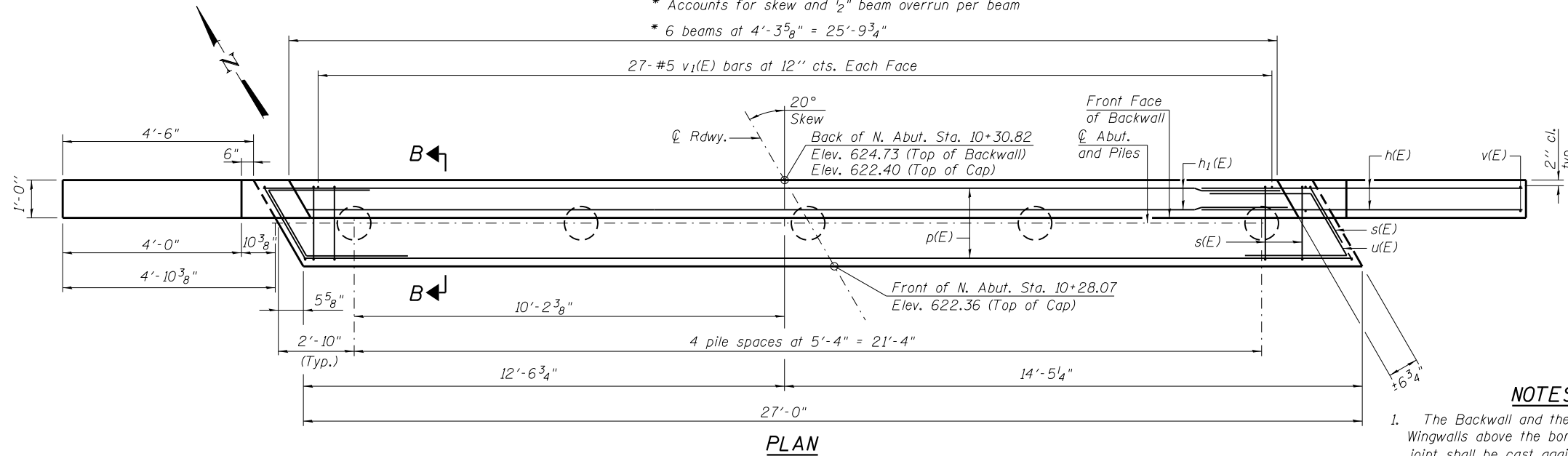
RTA	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 30A	16-07117-00-BR	MACON	23	14
CONTRACT NO. 95881				
ILLINOIS FED. AID PROJECT				

* Cast top of wingwall flush with exterior beam face after beams have been erected.



ELEVATION

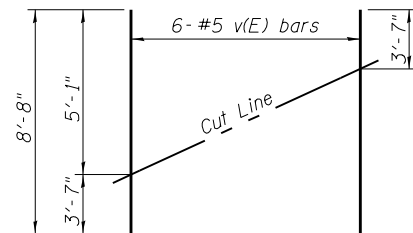
* Accounts for skew and 1/2" beam overrun per beam
 * 6 beams at 4'-3 5/8" = 25'-9 3/4"



PLAN

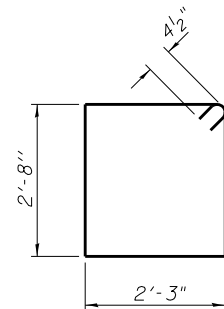
PILE DATA

North Abutment
 Type: Metal Shell 12" ϕ x 0.25" walls
 Nominal Required Bearing: 219 kips
 Factored Resistance Available: 121 kips
 Est. Length: 43 ft.
 No. Production Piles: 4
 No. Test Piles: 1

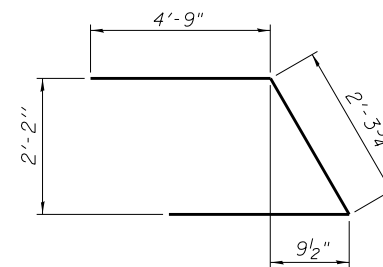


FIELD CUTTING DIAGRAM

Order v(E) full length. Cut as shown and use remainder of bars in opposite face.



BAR s(E)



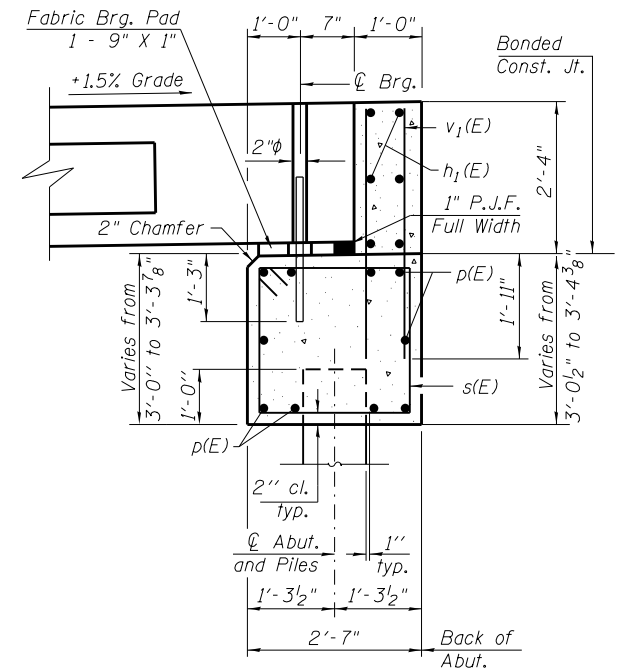
BAR u(E)

DESIGN STRESSES

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi

NOTES

- The Backwall and the portion of the Wingwalls above the bonded construction joint shall be cast against the in-place beam.
- 1" dia. x 2'-6" dowel rods in 1 1/2" dia. holes drilled in cap (2 each beam). Dowel rods to be grouted after beams are in place and allowed to cure (min. 24 hrs.) prior to grouting the shear keys. The grout shall be an approved non-shrink grout.
- Reinforcement bars designated (E) shall be Epoxy coated.
- Reinforcement bars shall conform to the requirements of A.S.T.M. A706 Grade 60.
- Space reinforcement in cap to miss dowel rods.
- For pile details, see sheet 8 of 8.
- Ends of abutment cap shall be constructed parallel to ϕ of Roadway.
- North arrow is depicted relative to ϕ Rdwy., not relative to abutment. See GP&E sheet for a depiction of north arrow relative to abutment.



SECTION B-B
 (Dimensions are at Rt. L's)

BILL OF MATERIAL
NORTH ABUTMENT

Bar	No.	Size	Length	Shape	
h(E)	28	#5	9'-1"	—	
h1(E)	6	#5	25'-6"	—	
p(E)	10	#7	26'-8"	—	
s(E)	22	#4	10'-7"	□	
u(E)	8	#6	11'-10"	∩	
v(E)	12	#5	8'-8"	—	
v1(E)	54	#5	4'-1"	—	
Concrete Structures				Cu. Yd.	12.3
Reinforcement Bars, Epoxy Coated				Pound	1610
Furnishing Metal Shell Piles 12" x 0.250"				Foot	172
Driving Piles				Foot	172
Test Pile Metal Shells				Each	1

AD-2742-L 2-17-2017

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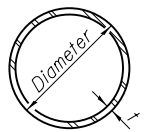
AECOM 345 EAST ASH AVE, SUITE B
 DECATUR, ILLINOIS 62526
 PH. 217-875-4800

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT
STRUCTURE NO. 058-3413

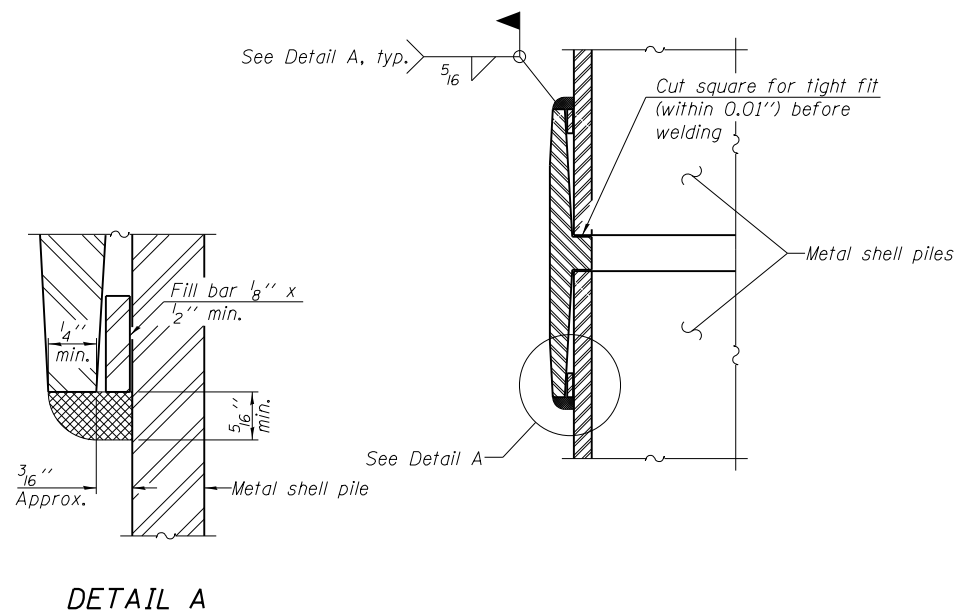
SHEET 7 OF 8 SHEETS

RT. 30A	SECTION 16-07117-00-BR	COUNTY MACON	TOTAL SHEETS 23	SHEET NO. 15
			CONTRACT NO. 95881	
ILLINOIS FED. AID PROJECT				

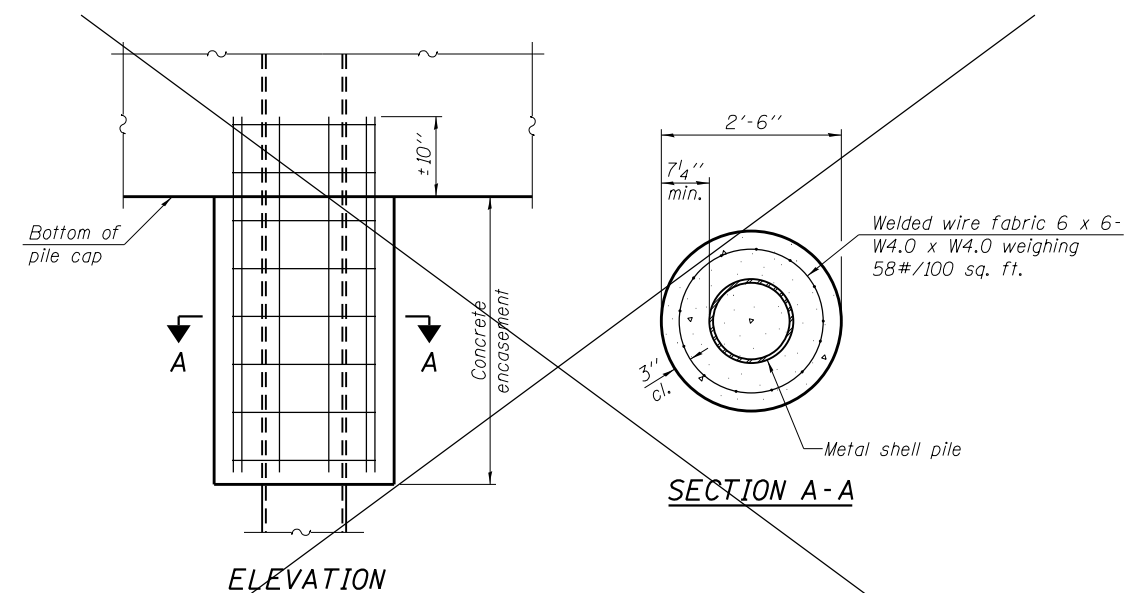


METAL SHELL PILE TABLE

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



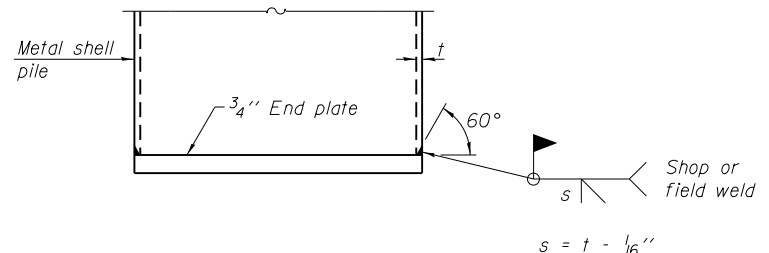
DETAIL A



ELEVATION

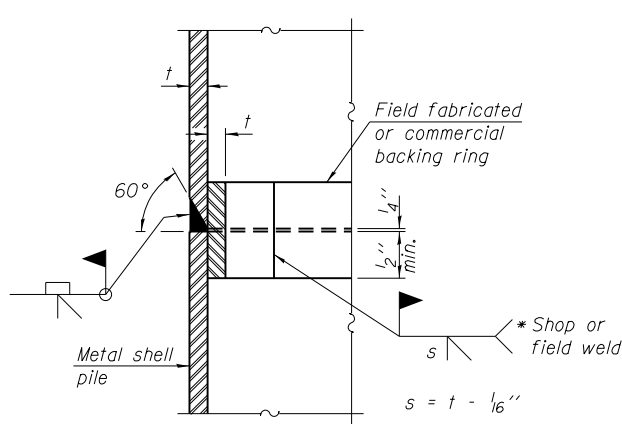
SECTION A-A

INDIVIDUAL PILE CONCRETE ENCASEMENT AT PIERS



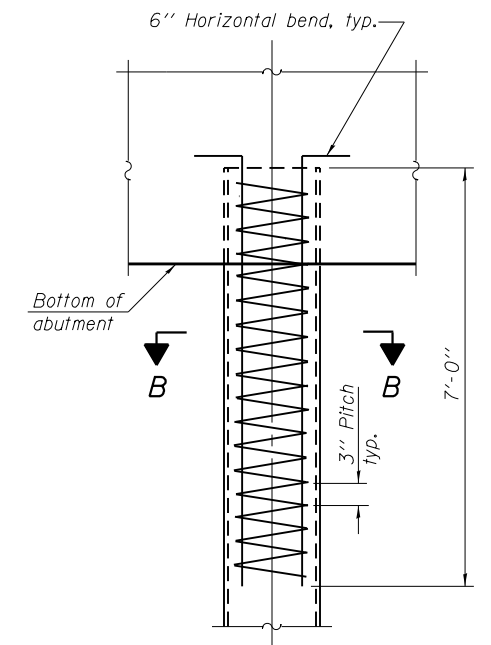
END PLATE ATTACHMENT

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.



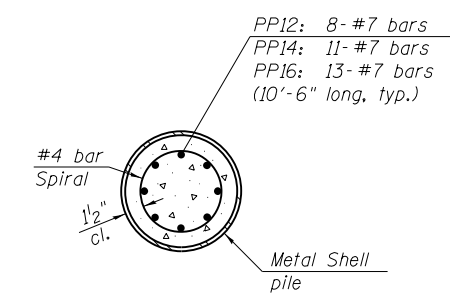
COMPLETE PENETRATION WELD SPLICE

* 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.

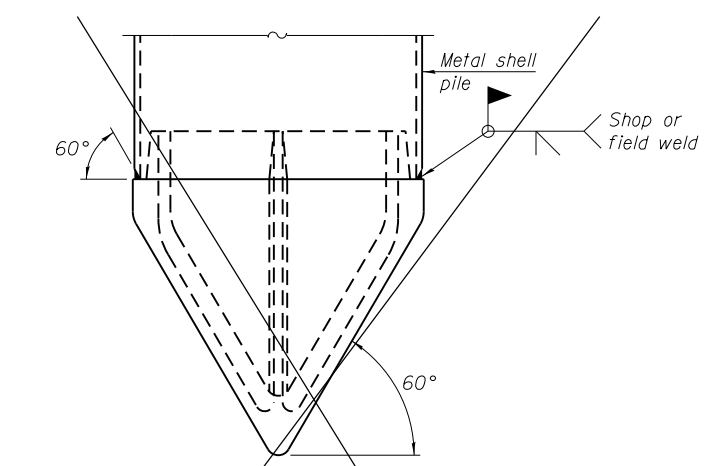


ELEVATION

REINFORCEMENT AT ABUTMENTS



SECTION B-B



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).

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

F-MS 8-11-2017

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PLOT DATE = 8/7/2020	DRAWN - MJP	REVISED -
PLOT TIME = 2:44:54 PM	CHECKED - TDN	REVISED -
	DATE - 6/4/2020	REVISED -

AECOM 345 EAST ASH AVE, SUITE B
 DECATUR, ILLINOIS 62526
 PH. 217-875-4800

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**METAL SHELL PILE DETAILS
 STRUCTURE NO. 058-3413**

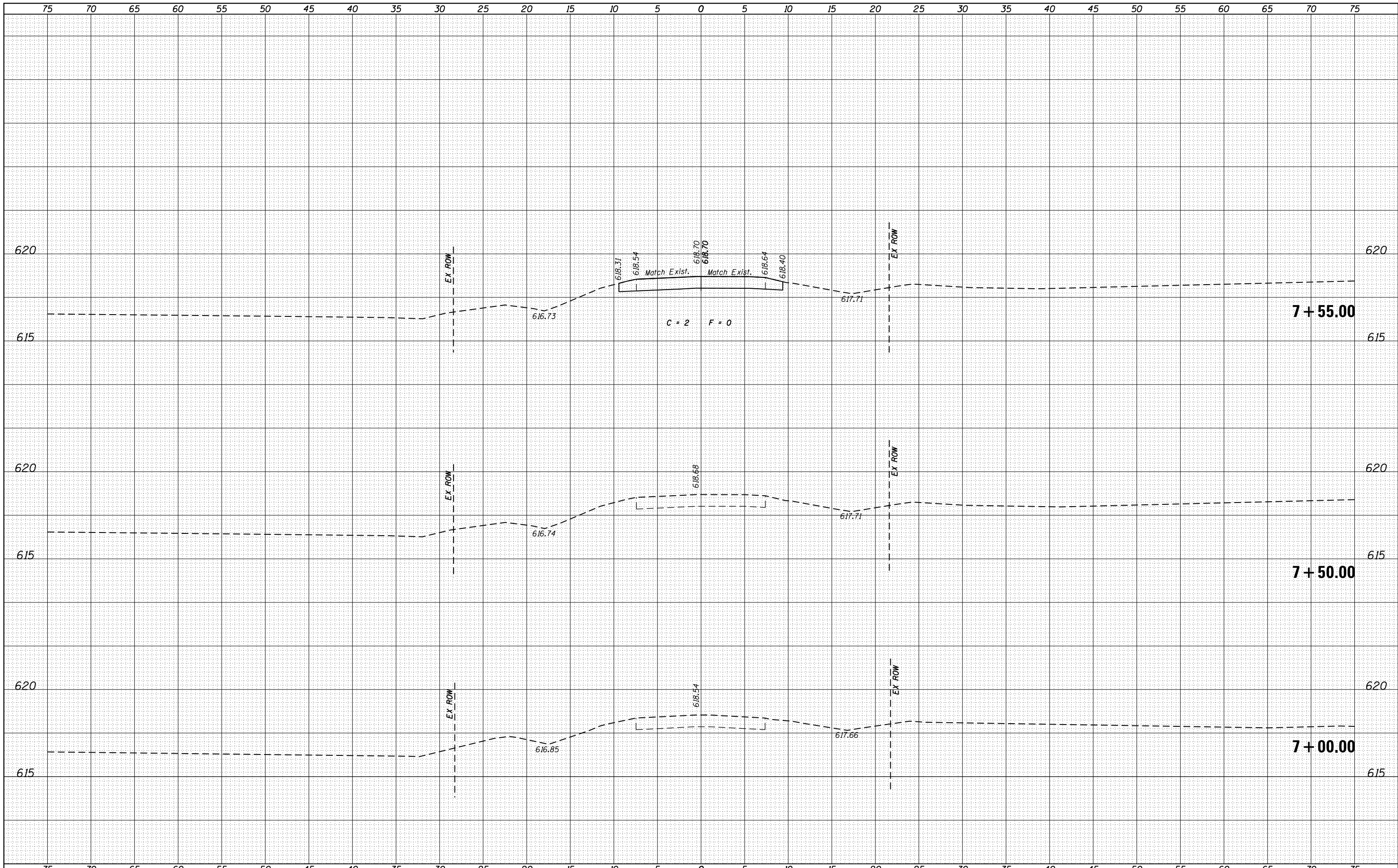
SHEET 8 OF 8 SHEETS

RTA	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 30A	16-07117-00-BR	MACON	23	16
CONTRACT NO. 95881				

ILLINOIS FED. AID PROJECT

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BY	
FINISHED	
DATE	
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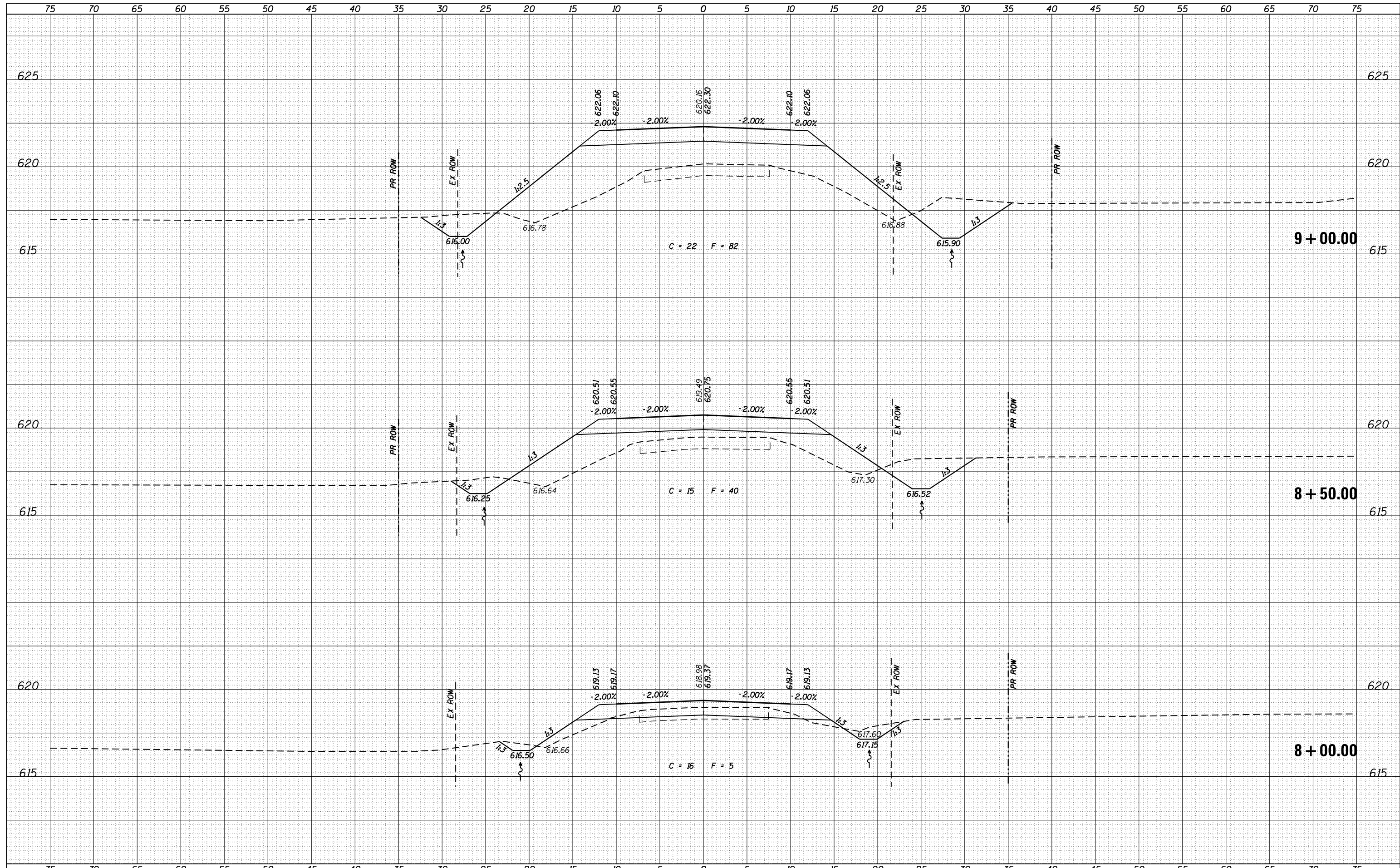
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Default		CHECKED - TDN	REVISED -		SCALE: 1" = 5'	SHEET 1 OF 7 SHEETS	STA. 7+00.00 TO STA. 7+55.00	ILLINOIS FED. AID PROJECT				
		DATE - 6/4/2020	REVISED -									

DATE	
BY	
SURVEYED	
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TEMPLATE	
AREAS	
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FINAL SURVEY	
NOTE BOOK	
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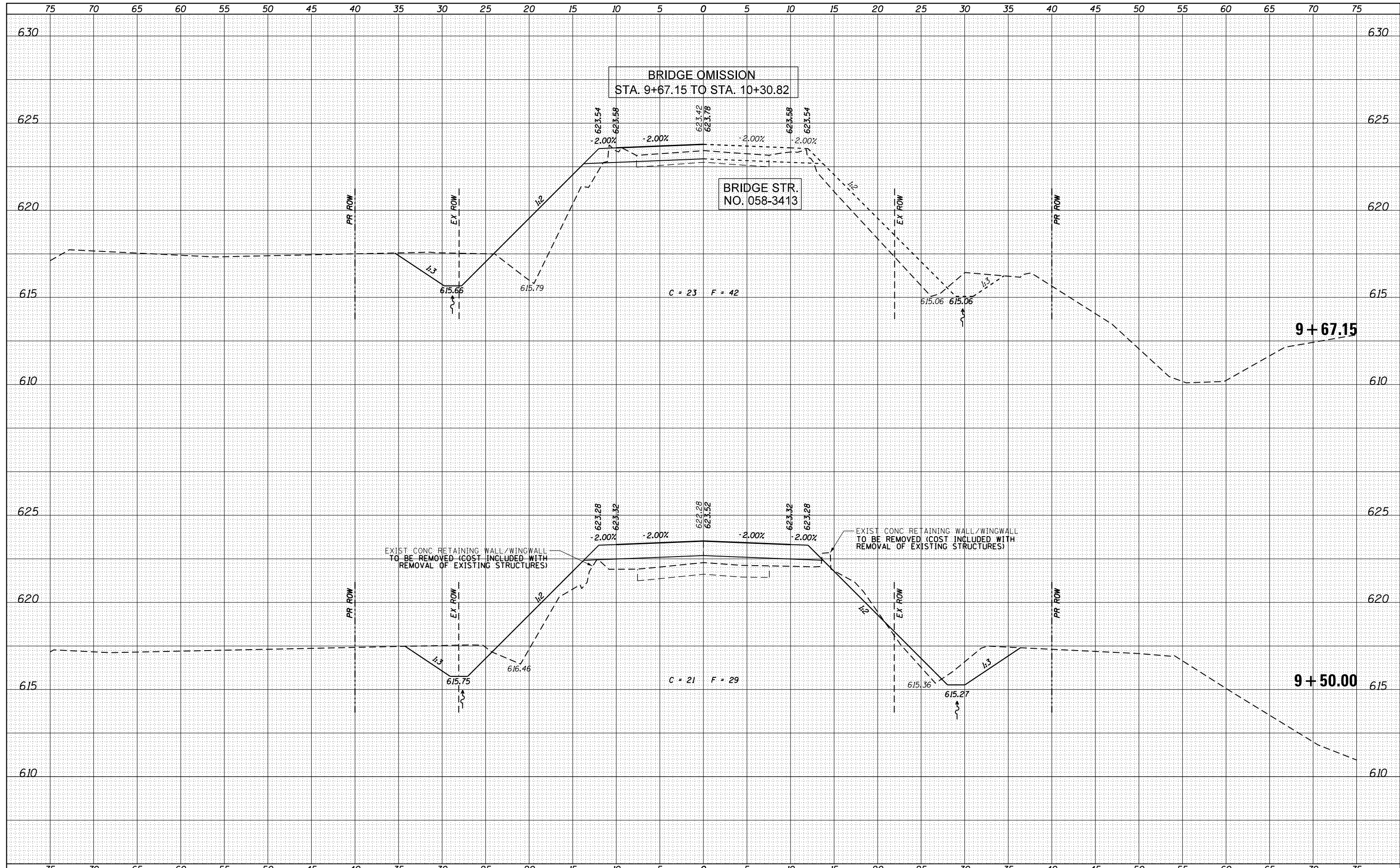
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AREAS	
CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
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FILE NAME =	USER NAME = matt.pope	DESIGNED - MJP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS TR 30A (STRAWN RD) OVER WILLOW BRANCH			RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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Default	PLOT DATE = 8/7/2020	CHECKED - TDN	REVISED -		SCALE: 1" = 5'			SHEET 2 OF 7 SHEETS		STA. 8+00.00 TO STA. 9+00.00	CONTRACT NO. 95881	
		DATE - 6/4/2020	REVISED -		ILLINOIS FED. AID PROJECT							

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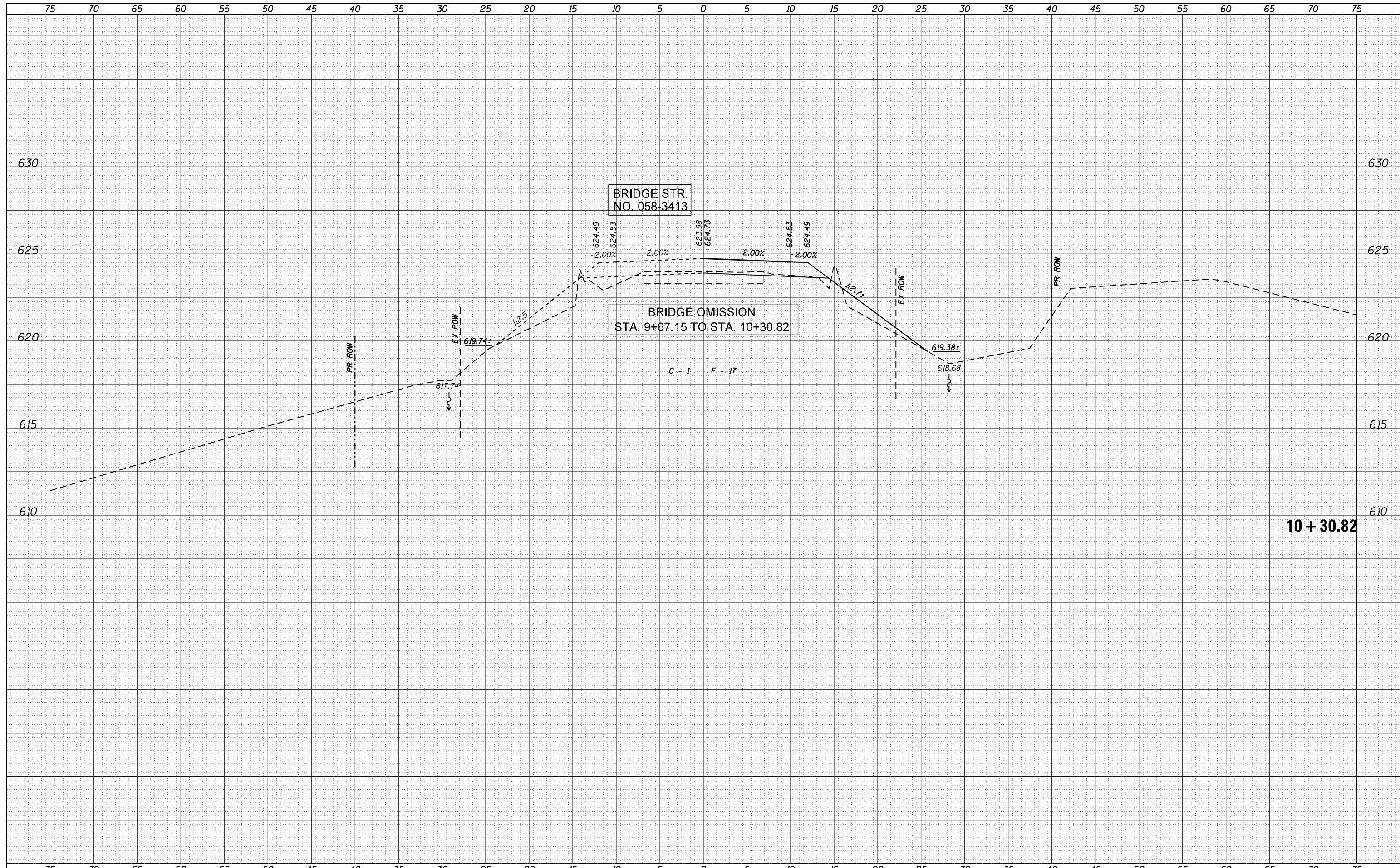
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		DATE - 6/4/2020	REVISED -		SCALE: 1" = 5'	SHEET 3 OF 7 SHEETS	STA. 9+50.00 TO STA. 9+67.15	ILLINOIS FED. AID PROJECT				

DATE	
BY	
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NOTE BOOK	PLOTTED
NO.	TEMPLATE
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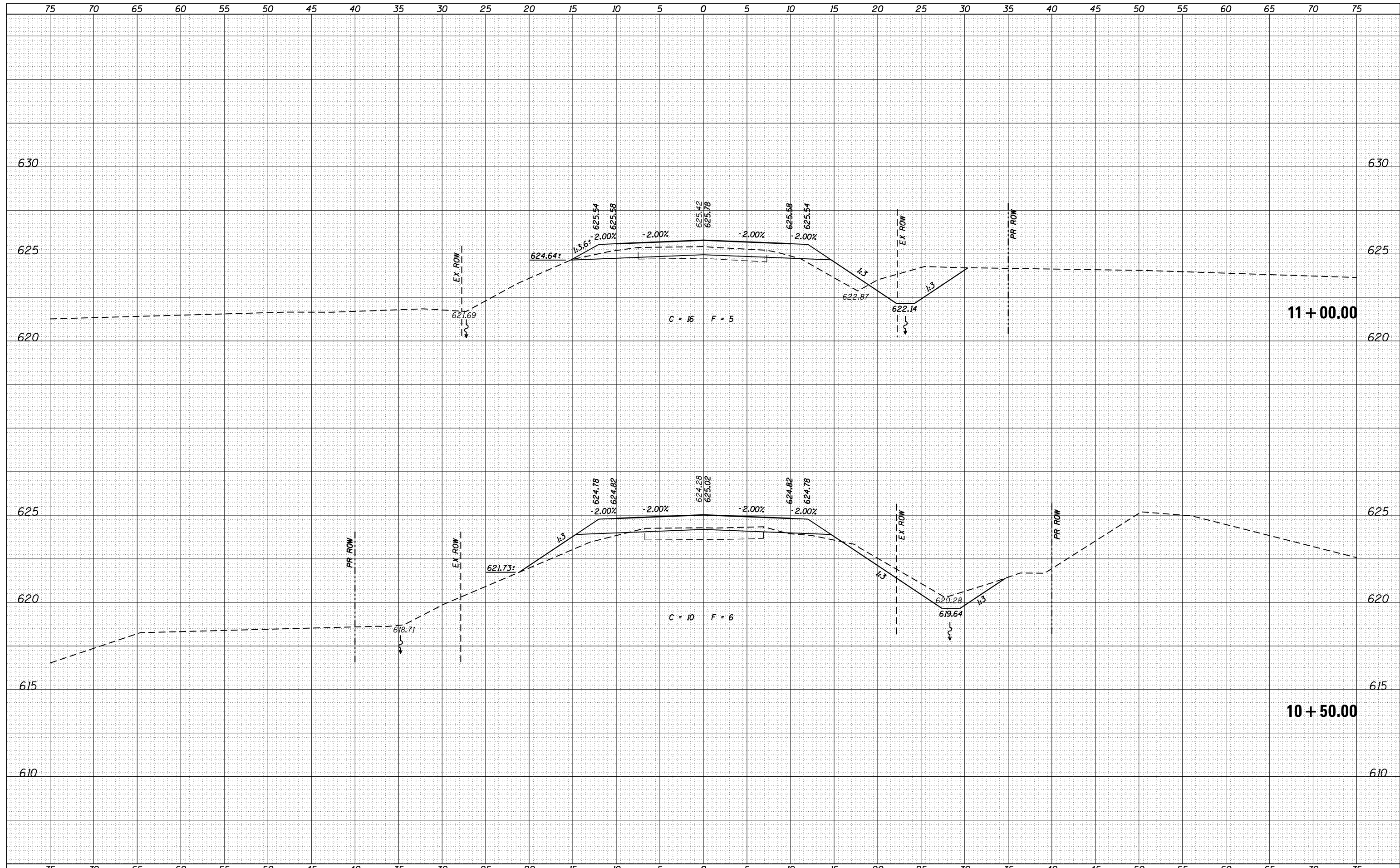


10 + 30.82

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		DATE - 6/4/2020	REVISED -		ILLINOIS FED. AID PROJECT							

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



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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

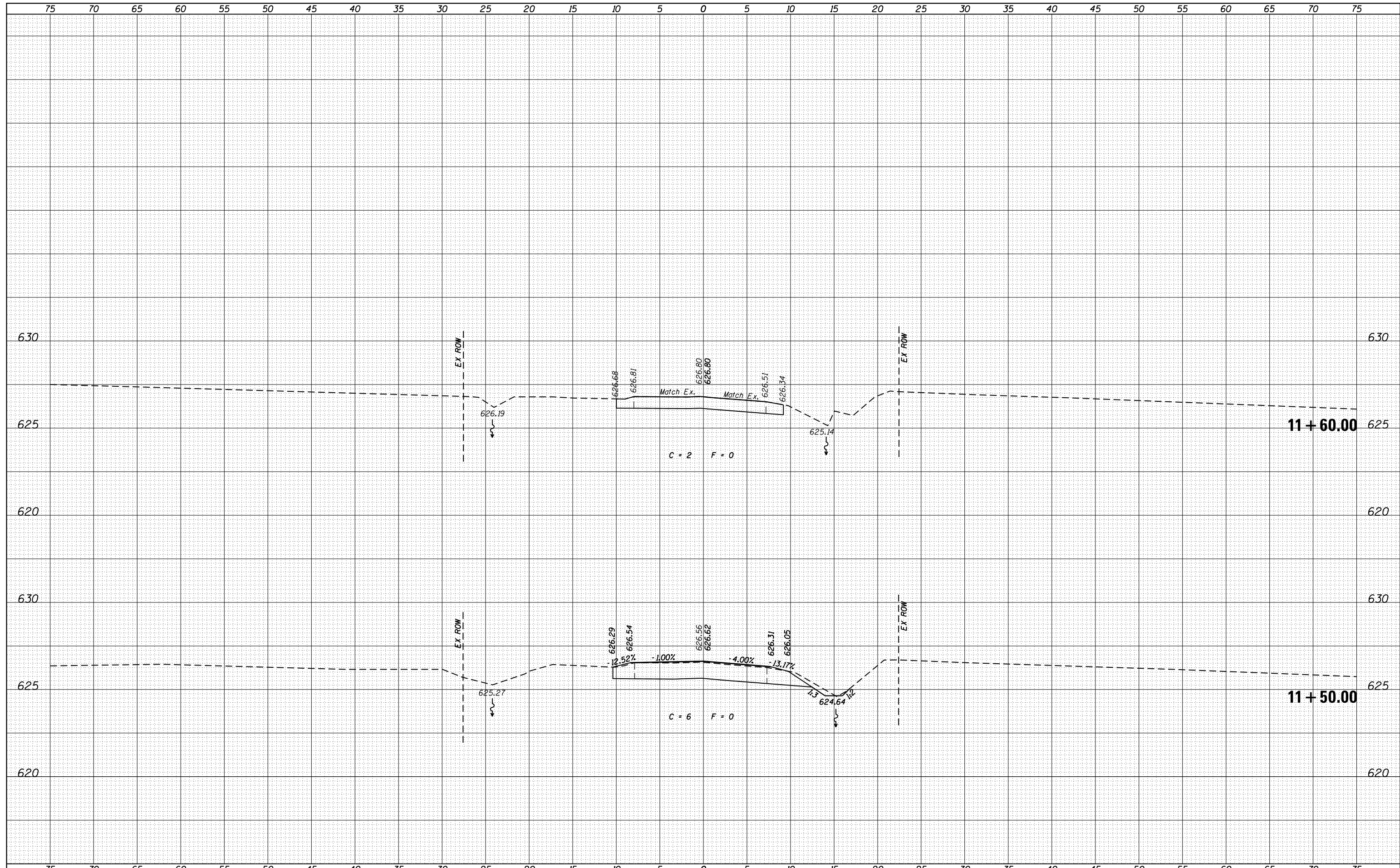
**CROSS SECTIONS
 TR 30A (STRAWN RD) OVER WILLOW BRANCH**

SCALE: 1" = 5' SHEET 5 OF 7 SHEETS STA. 10+50.00 TO STA. 11+00.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 30A	16-07117-00-BR	MACON	23	21
CONTRACT NO. 95881				
ILLINOIS FED. AID PROJECT				

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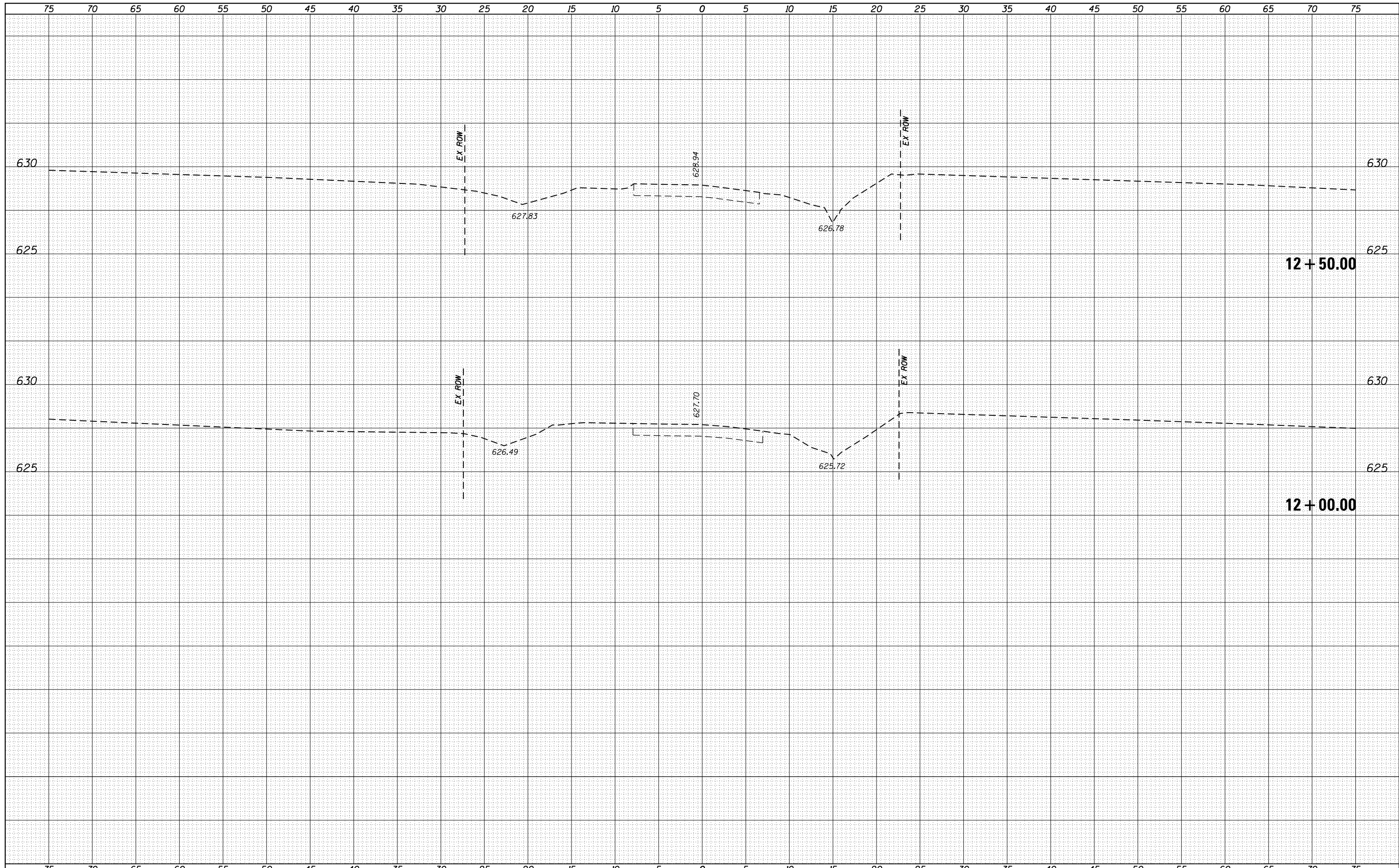
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		DATE - 6/4/2020	REVISED -		ILLINOIS FED. AID PROJECT							

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

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



FILE NAME =	USER NAME = matt.pope	DESIGNED - MJP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS TR 30A (STRAWN RD) OVER WILLOW BRANCH			RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S:\60546824 Batchelder\900-CAD_GIS\910 CAD\60546824_XS_sht.dgn	DRAWN - JTC	REVISED -	TR 30A					16-07117-00-BR	MACON	23	23	
Default	PLOT SCALE = 10.0000' / in.	CHECKED - TDN	REVISED -		SCALE: 1" = 5'			SHEET 7 OF 7 SHEETS	STA. 12+00.00 TO STA. 12+50.00	CONTRACT NO. 95881		
	PLOT DATE = 8/7/2020	DATE - 6/4/2020	REVISED -		ILLINOIS FED. AID PROJECT							