

06-12-2020 LETTING ITEM 193

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 1A	16-13112-00-BR	JEFFERSON	23	1
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 99615		

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES AND GENERAL NOTES
3.	TYPICAL CROSS SECTIONS
4.	PLAN AND PROFILE
5-12.	BRIDGE PLANS
13.	BORINGS
14-23.	STATION CROSS SECTIONS

HIGHWAY STANDARDS:

000001-07	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
515001-04	NAME PLATE FOR BRIDGES
542401-03	METAL FLARED END SECTION FOR PIPE CULVERTS
701901-08	TRAFFIC CONTROL DEVICES
725001-01	OBJECT AND TERMINAL MARKERS
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

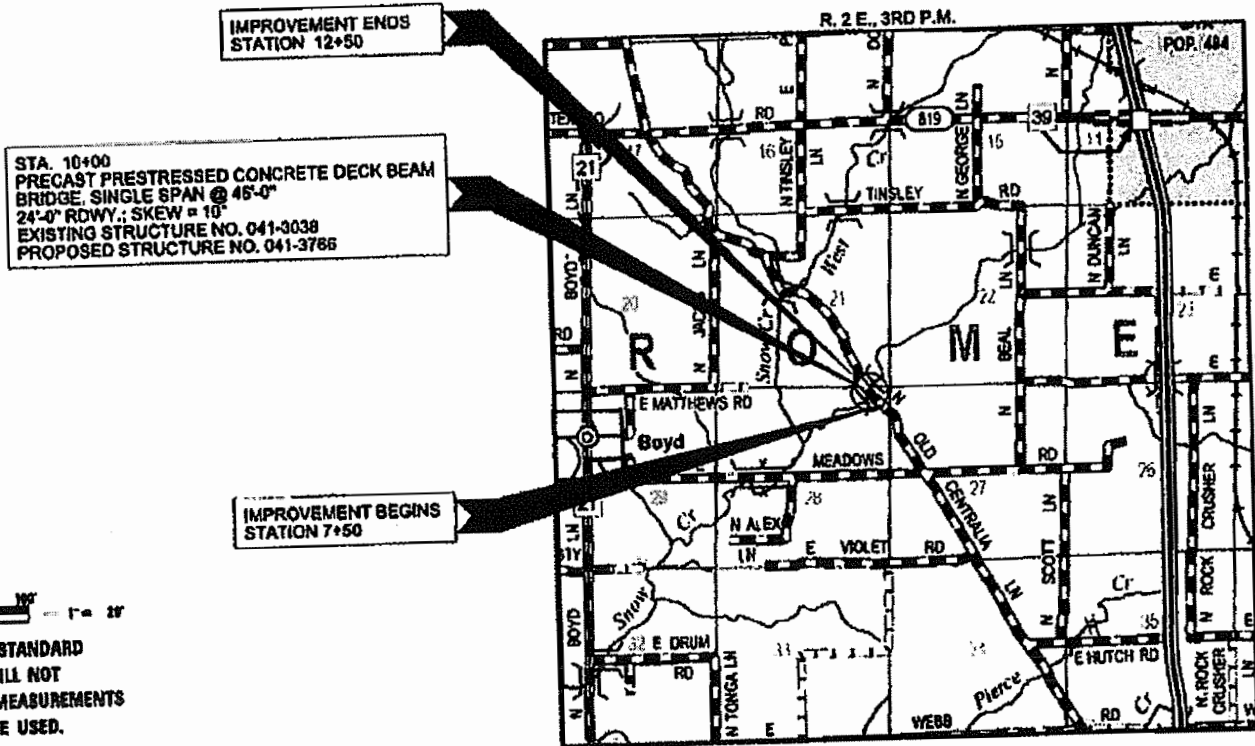
**PLANS FOR PROPOSED
SURFACE TRANSPORTATION PROGRAM - BRIDGE**

**PROJECT C3BI(214)
SECTION 16-13112-00-BR
ROME ROAD DISTRICT
JEFFERSON COUNTY
T.R. 1A / NORTH OLD CENTRALIA LANE
PROPOSED STRUCTURE NO. 041-3766
C-99-040-18**



UTILITIES

AT&T
3528 STATE ROUTE 161
CENTRALIA, IL 62801



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.

FUNCTIONAL CLASSIFICATION: LOCAL ROAD
DESIGN SPEED: 30 MPH
DESIGN TRAFFIC: 125 ADT (2010)

LOCATION MAP

APPROXIMATE SCALE: 1" = 1 MILE
NET LENGTH OF SECTION = 560 FEET = 0.095 MILES

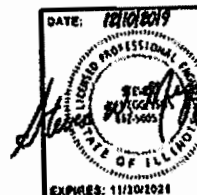


ILLINOIS DEPARTMENT OF TRANSPORTATION

APPROVED December 27 2019
COUNTY ENGINEER

APPROVED December 27 2019
TOWNSHIP COMMISSIONER

PASSED DEC 31 2019
DISTRICT NINE ENGINEER OF LOCAL ROADS & STREETS
DEC 31 2019
Keith Robert
ACTING DEPUTY DIRECTOR OF HIGHWAYS
REGION FIVE ENGINEER
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



HAMPTON, LENZINI AND RENWICK, INC.
CIVIL ENGINEERS - STRUCTURAL ENGINEERS - LAND SURVEYORS
3045 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
217.546.3400 www.hranengineering.com

DATE: 12/10/2019
PROJECT NUMBER: 17.0104.198
DATE: 12/11/2019

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	CONSTRUCTION TYPE CODE 0011	
		UNIT	TOTAL
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	75
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	150
^ 20200100	EARTH EXCAVATION	CU YD	300
20400800	FURNISHED EXCAVATION	CU YD	560
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	180
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	640
^ 50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	22.6
^ 50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ FT	1,104
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	2,540
* 50900205	STEEL RAILING, TYPE S1	FOOT	88
51201400	FURNISHING STEEL PILES HP10X42	FOOT	210
51202305	DRIVING PILES	FOOT	210
51203400	TEST PILE STEEL HP10X42	EACH	1
51500100	NAME PLATES	EACH	1
54010503	PRECAST CONCRETE BOX CULVERTS 5' X 3'	FOOT	54
54262730	METAL FLARED END SECTIONS 30"	EACH	2
542D0235	PIPE CULVERTS, CLASS D, TYPE 1 30"	FOOT	84
^ 59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	95
67100100	MOBILIZATION	L SUM	1
* 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
^ X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.4

^ SEE SPECIAL PROVISIONS
* SPECIALTY ITEMS

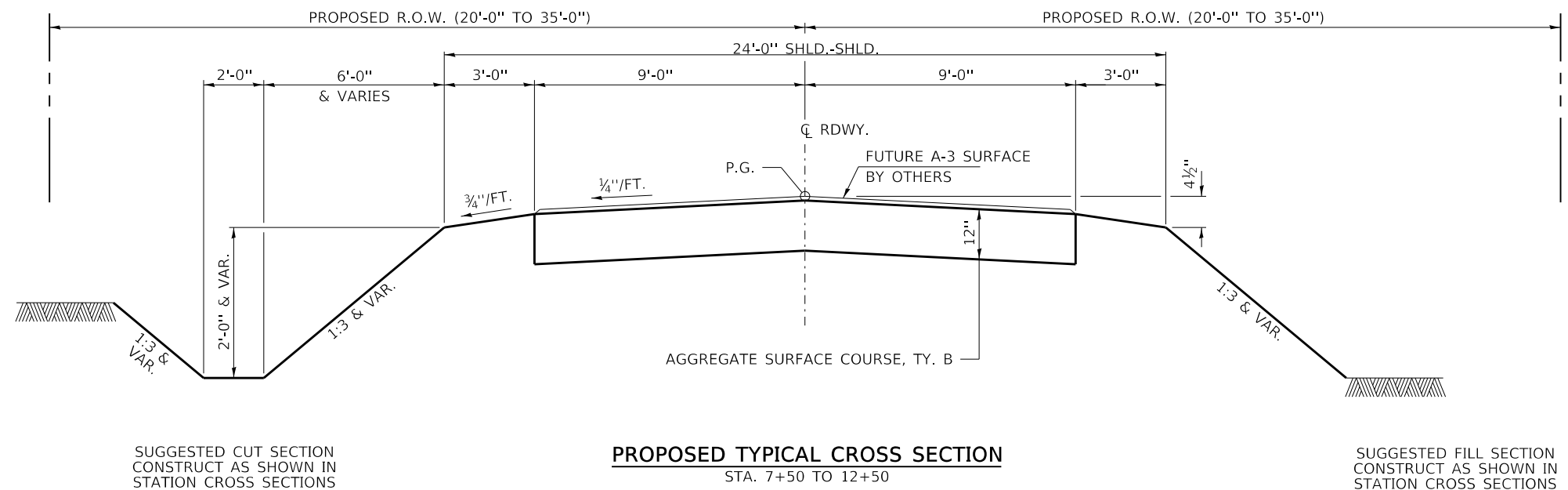
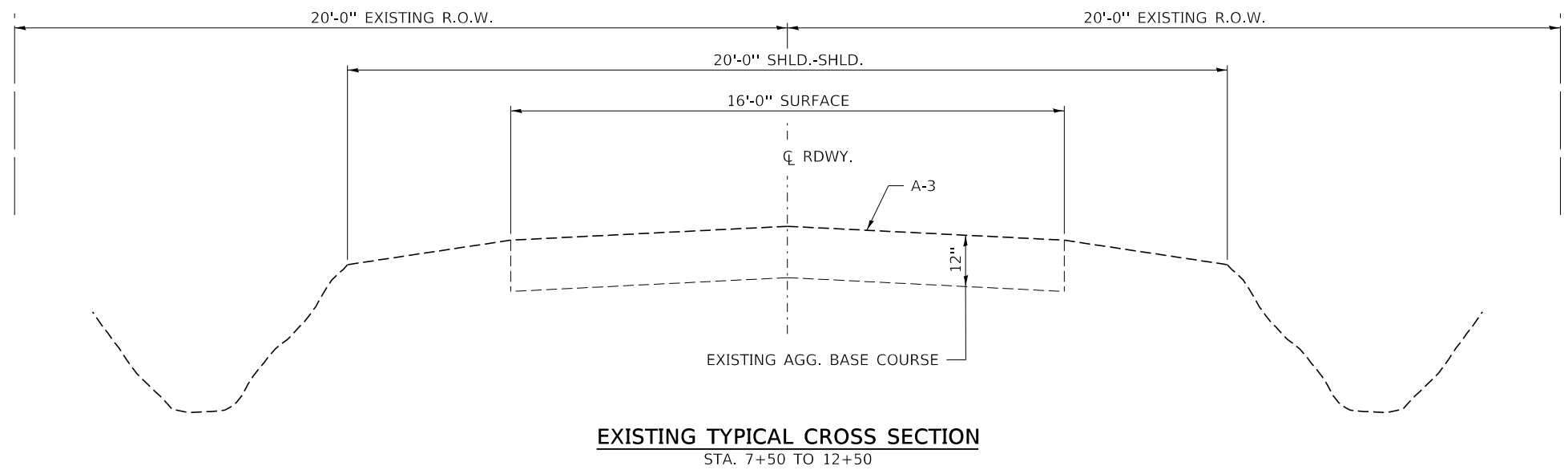
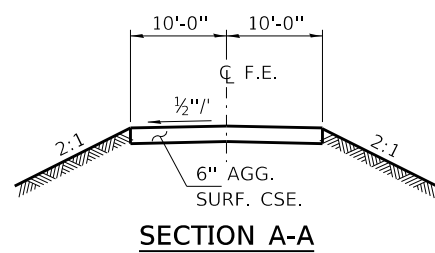
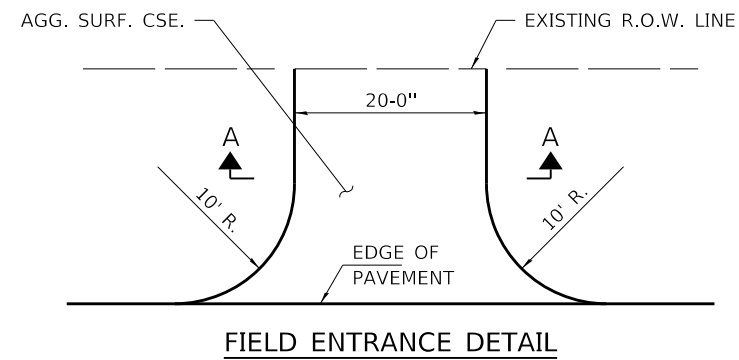
EARTHWORK SUMMARY						
LOCATION	EARTH EXCAVATION	SHRINKAGE FACTOR	PERCENT USED	EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT REQUIRED	EARTHWORK BALANCE
	CU.YD.			CU.YD.	CU.YD.	CU.YD.
TR 1A / NORTH OLD CENTRALIA LANE STA. 7+50 TO STA. 9+76.32	165	25.00%	100.00%	124	462	-338
STA. 9+76.32 TO STA. 10+23.68						
STA. 10+23.68 TO STA. 12+50	133	25.00%	100.00%	100	324	-224
TOTAL	298			224	786	-562
USE	300					560

FURNISHED 560 CU YDS

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED APRIL 1, 2016", (HERE IN AFTER REFERRED TO AS THE STANDARD SPECIFICATIONS; THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS" ADOPTED JAN 1, 2020; THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS"; THE DETAILS IN THE PLANS AND THE "SPECIAL PROVISIONS" INCLUDED IN THE DOCUMENTS.
- ALL CLEARING, GRUBBING, FENCE REMOVAL, PAVEMENT REMOVAL, AND REMOVAL OF EXISTING DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION. ALL BITUMINOUS MATERIAL SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR IN A METHOD APPROVED BY THE ENGINEER. REMOVAL AND DISPOSAL OF BITUMINOUS MATERIAL SHALL BE INCLUDED INCLUDED IN THE COST OF EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
- ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED TO BE THE LATEST STANDARD OF THE DEPARTMENT.
- THE LOCATION ON THE PLANS OF EXISTING DRAINAGE STRUCTURES, TELEPHONE LINES, ELECTRIC LINES, WATER SERVICE LINES, GAS MAINS, AND OTHER UTILITY FACILITIES AS SHOWN ON THE PLANS ARE BASED ON FIELD INVESTIGATIONS AND THE BEST INFORMATION AVAILABLE, BUT THE LOCATIONS ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE INDIVIDUAL UTILITY COMPANIES AND BY FIELD INSPECTION.
- THE CONTRACTOR SHALL PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING CONSTRUCTION OF THE PROJECT.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES

AGGREGATE SURFACE COURSE	2.05 TON/CU YD
STONE DUMPED RIPRAP	1.75 TON/CU YD
- THE FINAL SURFACE OF ALL EMBANKMENT AREAS SHALL BE SEEDED. THE TOP 4 INCHES OF THE SEEDED AREAS SHALL BE TOPSOIL SUBJECT TO THE APPROVAL OF THE ENGINEER. THE COST OF SHAPING THE SLOPES AND PROVIDING TOP SOIL WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.
- THE AREA TO BE SEEDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT OF WAY OR AS DIRECTED BY THE ENGINEER. SEEDING, CLASS 2 (SPECIAL) = 0.4 ACRES
- ALL WASTE MATERIAL FROM EXCAVATIONS SHALL BE DISPOSED OF BY THE CONTRACTOR. NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- COMMITMENTS:
 - TREES GREATER THAN 3" DIAMETER WILL NOT BE REMOVED BETWEEN APRIL 1 THROUGH SEPTEMBER 30.
 - A BAT ASSESSMENT SHALL BE CONDUCTED IF WORK OCCURS TO THE EXISTING STRUCTURE AFTER MAY 25, 2019.



SUGGESTED CUT SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

SUGGESTED FILL SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

TRANSITIONS FROM THE PROPOSED ROADWAY TO THE EXISTING
ROADWAY ARE TO BE CONSTRUCTED FROM STA. 7+50 TO 8+00
AND STA. 12+00 TO STA. 12+50.
SEE SHEET 5 FOR TRANSITION AT BRIDGE.

FILE NAME = 170104-shi-tysecdtkns.dgn	USER NAME = mpaul	DESIGNED - J.W.F.	REVISED -	STATE OF ILLINOIS JEFFERSON COUNTY HIGHWAY DEPARTMENT	TYPICAL CROSS SECTIONS		T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT SCALE = \$SCALE\$	DRAWN - M.M.P.	REVISED -				1A	16-13112-00-BR	JEFFERSON	23	3	
PLOT DATE = 12/10/2019	DATE = 12/10/19	CHECKED - S.W.M.	REVISED -				ROME ROAD DISTRICT		CONTRACT NO. 99615		ILLINOIS	FED. AID PROJECT
		DATE = 12/10/19	REVISED -				SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.		

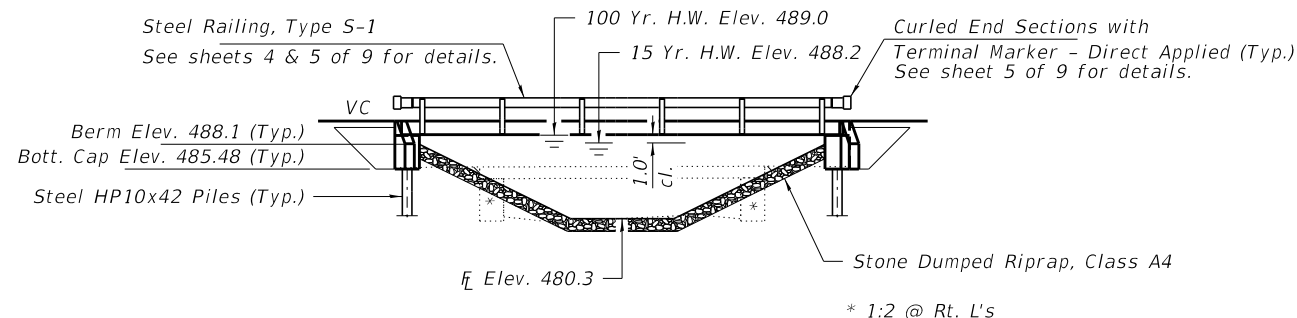
EXISTING STRUCTURE NO. 041-3038: Sta. 10+00 - Single Span precast concrete channel beam bridge on closed timber abutments with timber back wall and timber piles.
24.70' fc.-fc. abuts., 18.77' o.-o. deck.

Structure closed to traffic during construction.

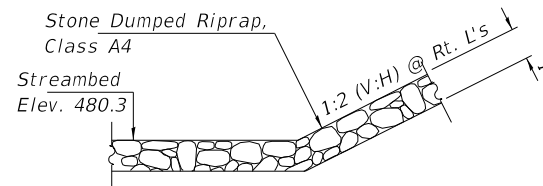
No Salvage

GENERAL NOTES

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at West Abutment or approved by the Engineer before ordering the remainder of piles.
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.
All bars to be epoxy coated.
Excavation required to construct the Abutments shall be included in the cost of Concrete Structures. No additional compensation will be allowed for Structure Excavation.
All proposed construction activities shall be in accordance with Nationwide Permit number 14 of the Department of the Army authorized under Section 404 of the Clean Water Act.
The IEPA has issued Section 401 Water Quality Certification for this activity. See Special Provisions for conditions.



ELEVATION

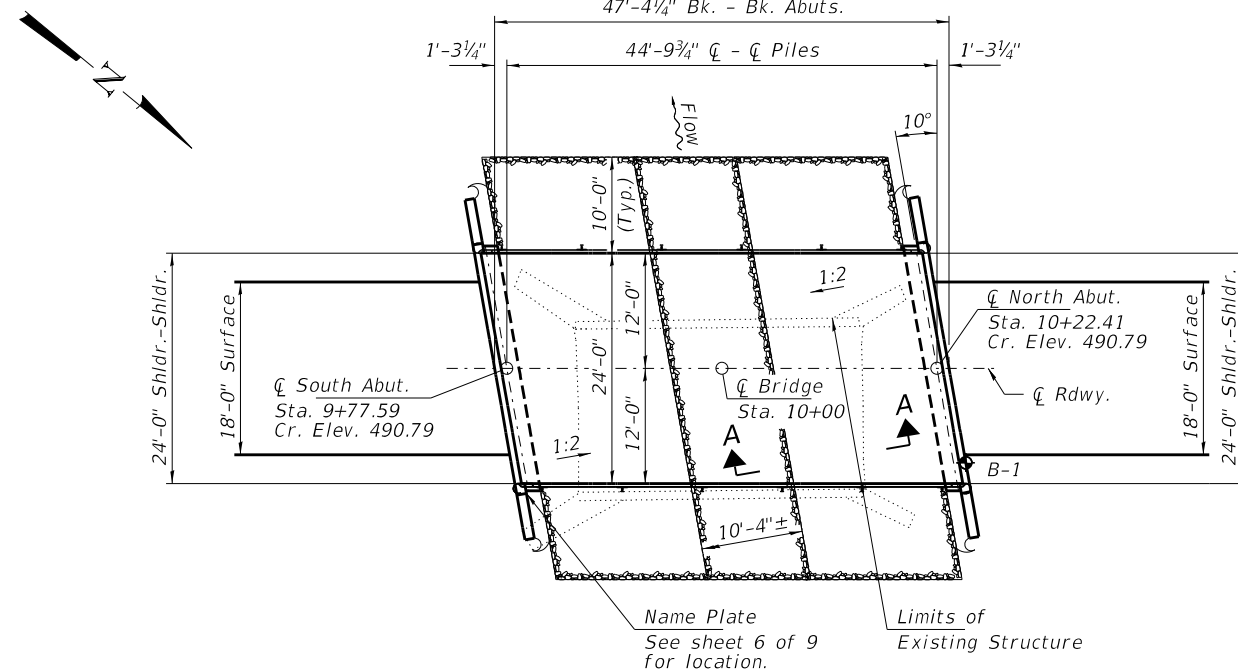


SECTION A-A

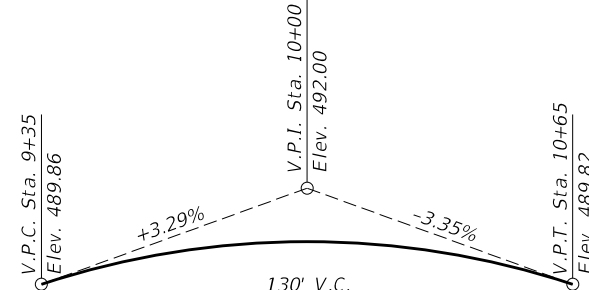
Note: See Special Provisions for Stone Dumped Riprap, Class A4.

INDEX OF STRUCTURE SHEETS

1. General Plan & Elevation
2. 17"x48" PPC Deck Beam
3. 17"x48" PPC Deck Beam Details
4. Superstructure Details
5. Steel Railing, Type S-1
6. South Abutment
7. North Abutment
8. HP-Pile Details
9. Borings



PLAN



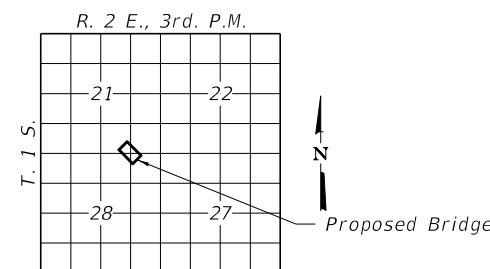
PROFILE GRADE

TR 1A

EAST CREEK
BUILT 201 BY
JEFFERSON COUNTY
SEC. 16-13112-00-BR
ROME ROAD DISTRICT
STR. NO. 041-3766
LOADING HL-93

NAME PLATE

See Std. 515001



LOCATION SKETCH

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th Edition with all interims.

LOADING HL-93

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

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinf.)

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi
f'ci = 5,000 psi
fpu = 270,000 psi (1/2"Ø low lax. strands)
fpbt = 201,960 psi (1/2"Ø low lax. strands)
fy = 60,000 psi (Reinf.)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.208g
Design Spectral Acceleration at 0.2 sec. (SD3) = 0.570g
Soil Site Class = C

WATERWAY INFORMATION

Drainage Area = 5.4 Sq. Mi.		Existing Low Grade Elev. 486.2 @ Sta. 8+50		Proposed Low Grade Elev. 487.1 @ Sta. 12+00		
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Natural H.W.E.	Head - Ft.	Headwater El.
			Exist. Prop.	Exist. Prop.	Exist. Prop.	Exist. Prop.
Existing Overtop	10	1740	110 200	488.00 0.19 0.14	488.19 488.14	
Design	15	2000	110 200	488.20 0.16 0.12	488.36 488.32	
Proposed Overtop	100	3370	110 240	489.02 0.08 0.07	489.10 489.09	
Scour Check	200	3910	110 250	489.28 0.07 0.00	489.38 489.28	
Max Calc.	500	4700	110 250	489.63 0.05 0.00	489.68 489.63	

15 Year Velocity through Existing Bridge = 5.0 fps
15 Year Velocity through Proposed Bridge = 5.3 fps

DESIGN SCOUR ELEVATION TABLE

Event/Limit State	Design Scour Elev. (ft.)		Item 113
	W. Abut.	E. Abut.	
Q100	485.7	485.7	8
Q200	485.7	485.7	
Design	485.7	485.7	
Check	485.7	485.7	

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 LRFD Specifications."

Steven W. Megginson 12/10/2019
ILLINOIS STRUCTURAL ENGINEER NO. 081-6064 Expires 11-30-2020



TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Dumped Riprap, Class A4	Ton			180
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		22.6	22.6
Precast Prestressed Conc. Deck Beams (17" Depth)	Sq. Ft.	1,104		1,104
Reinforcement Bars, Epoxy Coated	Pound		2,540	2,540
Steel Railing, Type S-1	Foot	88		88
Furnishing Steel Piles HP10x42	Foot		210	210
Driving Piles	Foot		210	210
Test Pile Steel HP10x42	Each		1	1
Name Plates	Each		1	1
Controlled Low-Strength Material	Cu. Yd.		95	95

FILE NAME = 170104-shl-bridge.dgn	USER NAME = mpaul	DESIGNED - J.W.F.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3035 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.009959	PLOT SCALE =	CHECKED - S.W.M.	REVISED -
PLOT DATE = 12/10/2019		DRAWN - M.M.P.	REVISED -
		CHECKED - S.W.M.	REVISED -

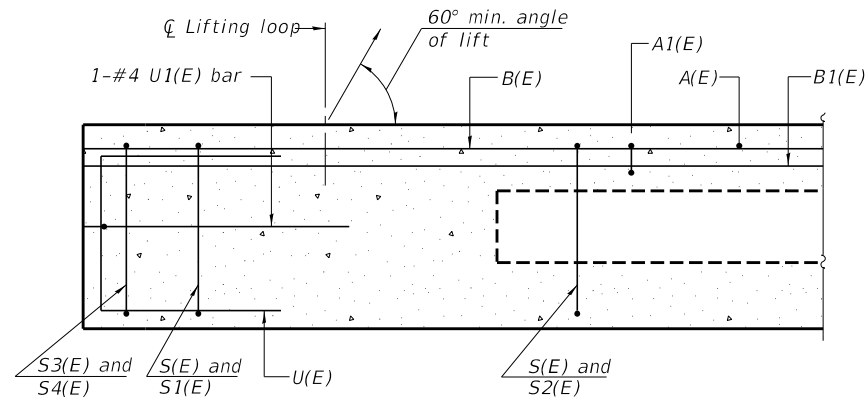
STATE OF ILLINOIS
JEFFERSON COUNTY HIGHWAY DEPARTMENT

GENERAL PLAN & ELEVATION
STRUCTURE NO. 041-3766

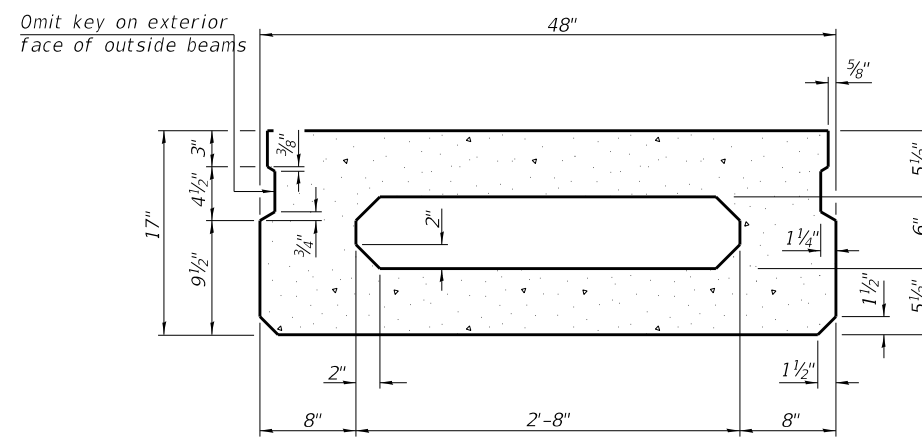
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1A	16-13112-00-BR	JEFFERSON	23	5
ROME ROAD DISTRICT		CONTRACT NO. 99615		

SHEET NO. 1 OF 9 SHEETS

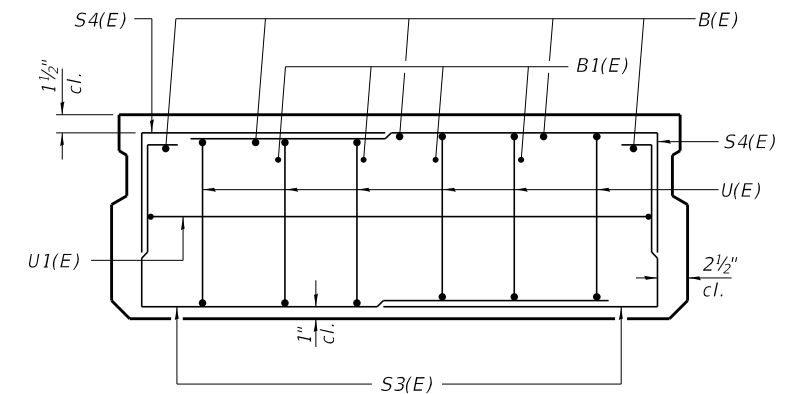
ILLINOIS FED. AID PROJECT C38(214)



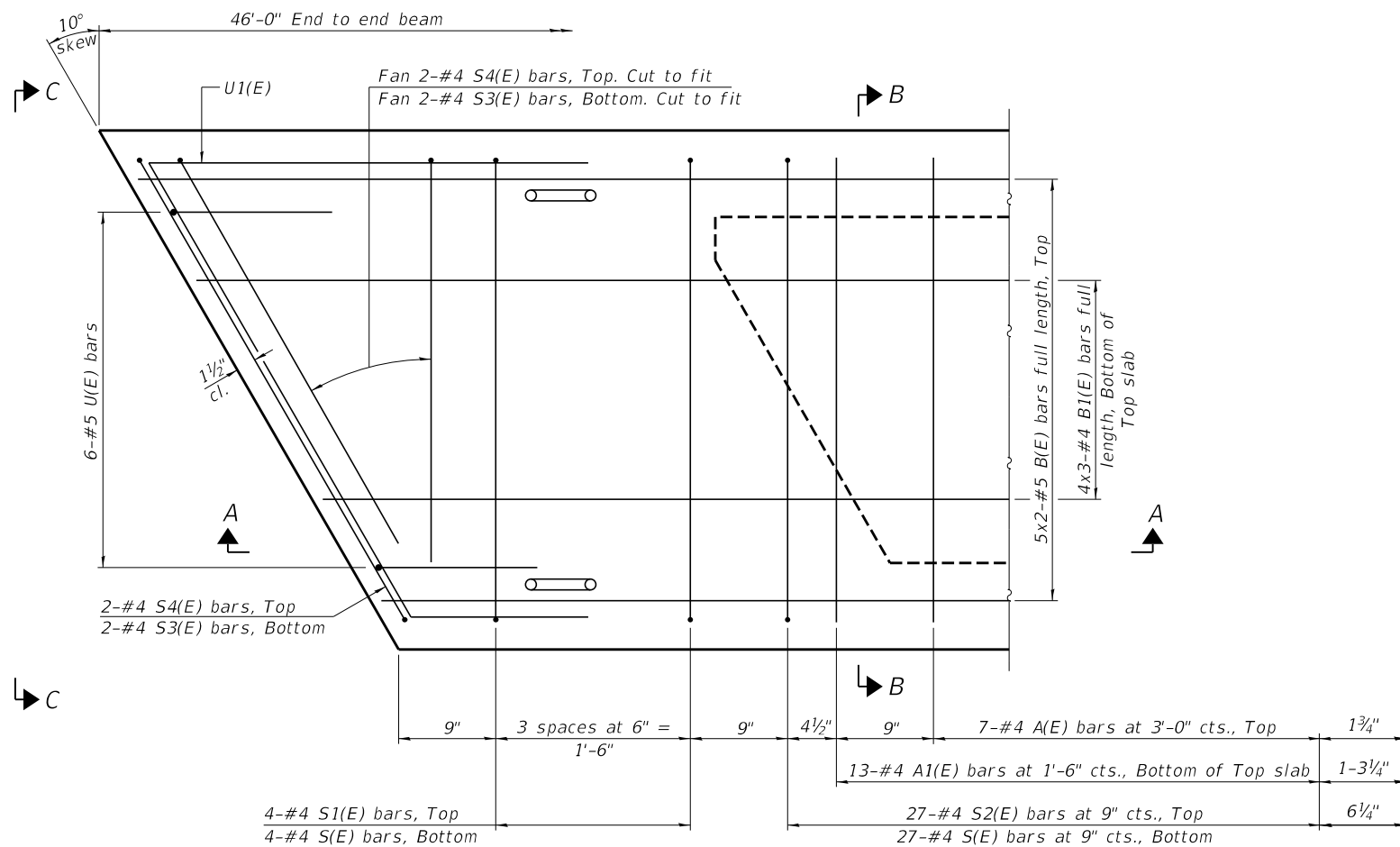
SECTION A-A



SECTION B-B
(Showing dimensions)

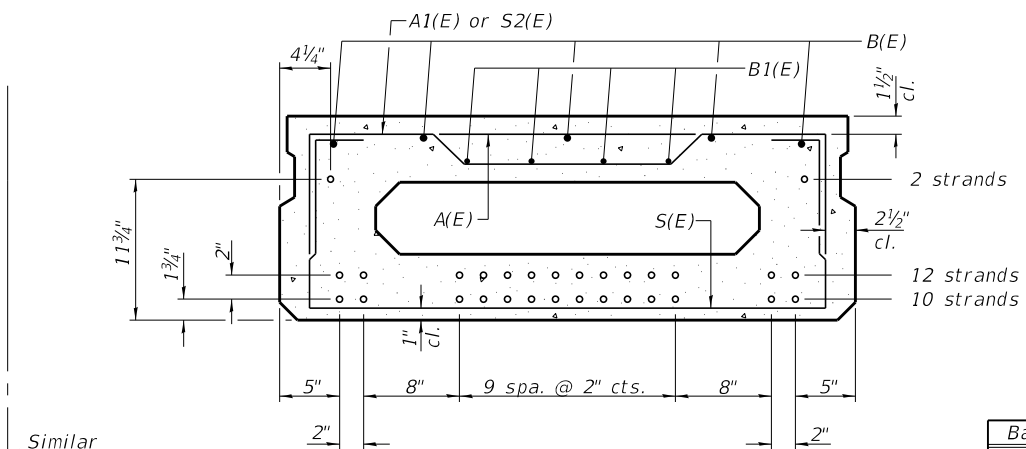


VIEW C-C



PLAN VIEW

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.
Bars indicated thus 5x2-#5 etc. indicates 5 lines of bars with 2 lengths per line.



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

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

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	14	#4	3'-7"	—
A1(E)	27	#4	3'-10"	—
B(E)	10	#5	24'-1"	—
B1(E)	8	#4	16'-6"	—
S(E)	62	#4	6'-9"	⌊
S1(E)	8	#4	5'-3"	⌊
S2(E)	54	#4	5'-6"	⌊
S3(E)	8	#4	4'-5"	⌊
S4(E)	8	#4	3'-8"	⌊
U(E)	12	#5	3'-8"	⌊
U1(E)	2	#4	6'-8"	⌊

Note: See sheet 3 & 4 of 9 for additional details and Bill of Material.

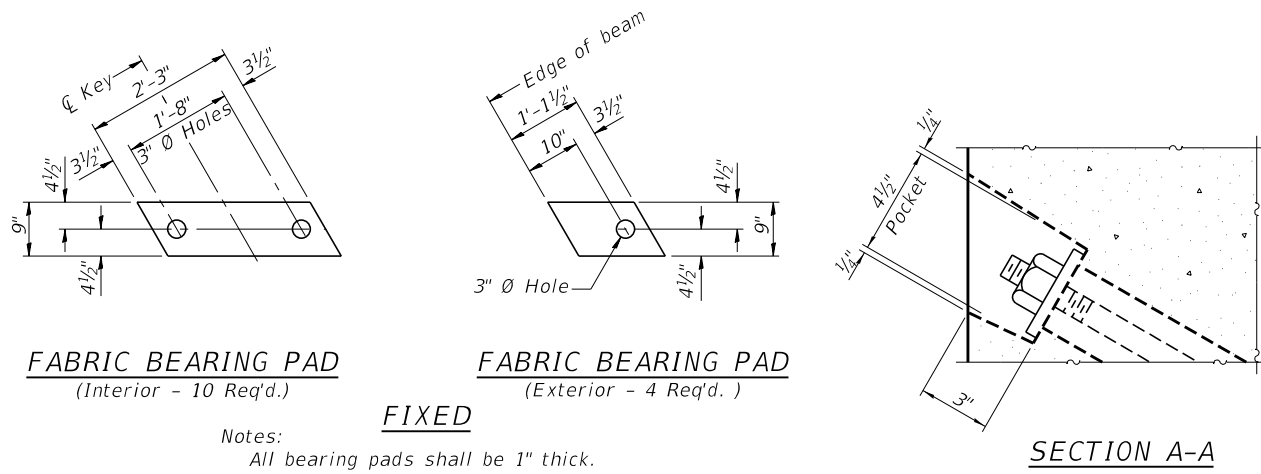
MINIMUM BAR LAP
#4 bar = 1'-11"
#5 bar = 2'-6"

PD-1748-R

2-17-2017

FILE NAME = 170104-shl-brdge.dgn	USER NAME = mpaul	DESIGNED - J.W.F.	REVISED -	STATE OF ILLINOIS JEFFERSON COUNTY HIGHWAY DEPARTMENT	17" x 48" PPC DECK BEAM STRUCTURE NO. 041-3766	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			1A	16-13112-00-BR	JEFFERSON	23	6
PLotted DATE = 12/10/2019		DRAWN - M.M.P.	REVISED -			ROME ROAD DISTRICT				CONTRACT NO. 99615
		CHECKED - S.W.M.	REVISED -					ILLINOIS	FED. AID PROJECT C38(214)	

SHEET NO. 2 OF 9 SHEETS



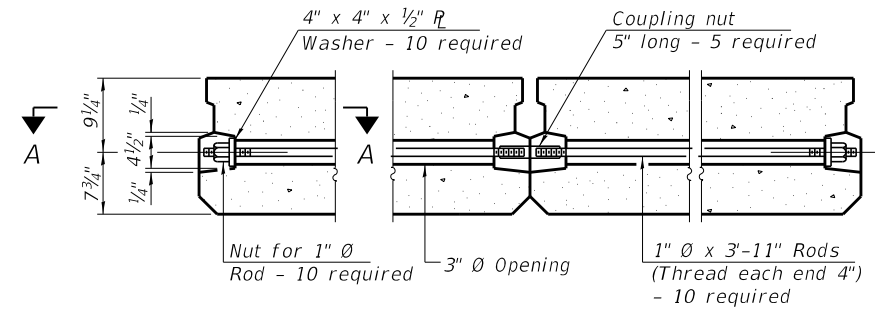
FABRIC BEARING PAD
(Interior - 10 Req'd.)

FABRIC BEARING PAD
(Exterior - 4 Req'd.)

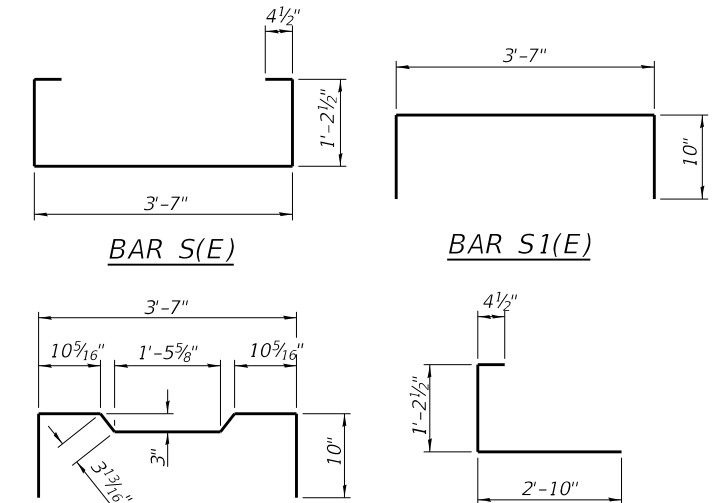
FIXED

Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.
23'-0"

SECTION A-A

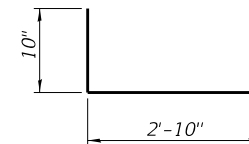


TYPICAL TRANSVERSE TIE ASSEMBLY

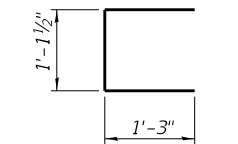


BAR S(E)

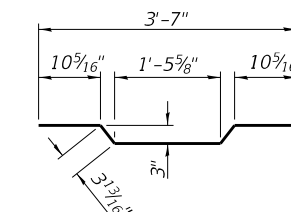
BAR S1(E)



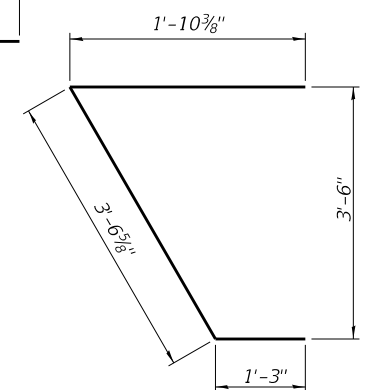
BAR S4(E)



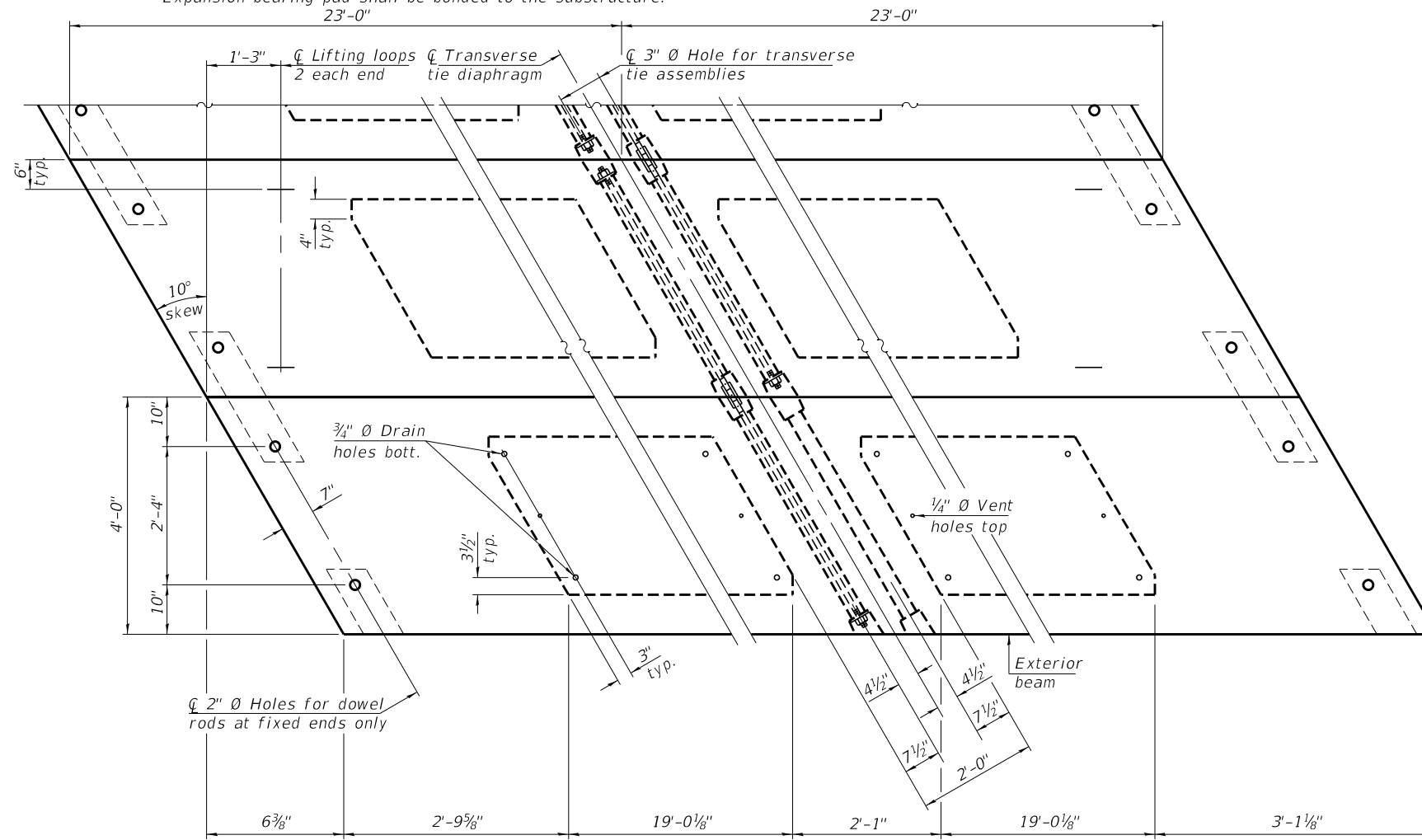
BAR U(E)



BAR A1(E)



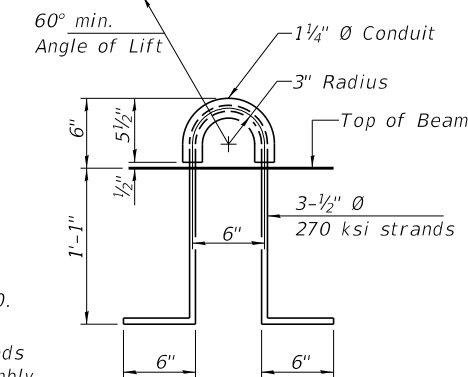
BAR U1(E)



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" diameter lifting pin shall be used to engage the lifting loops during handling.
Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
Reinforcement bars designated (E) shall be epoxy coated.



LIFTING LOOP DETAIL

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	1,104
---	---------	-------

PD-1748-LD 2-17-2017

FILE NAME = 170104-shl-bridge.dgn	USER NAME = mpaul	DESIGNED - J.W.F.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT SCALE =	CHECKED - S.W.M.	REVISED -
PLOT DATE = 12/10/2019		DRAWN - M.M.P.	REVISED -
		CHECKED - S.W.M.	REVISED -

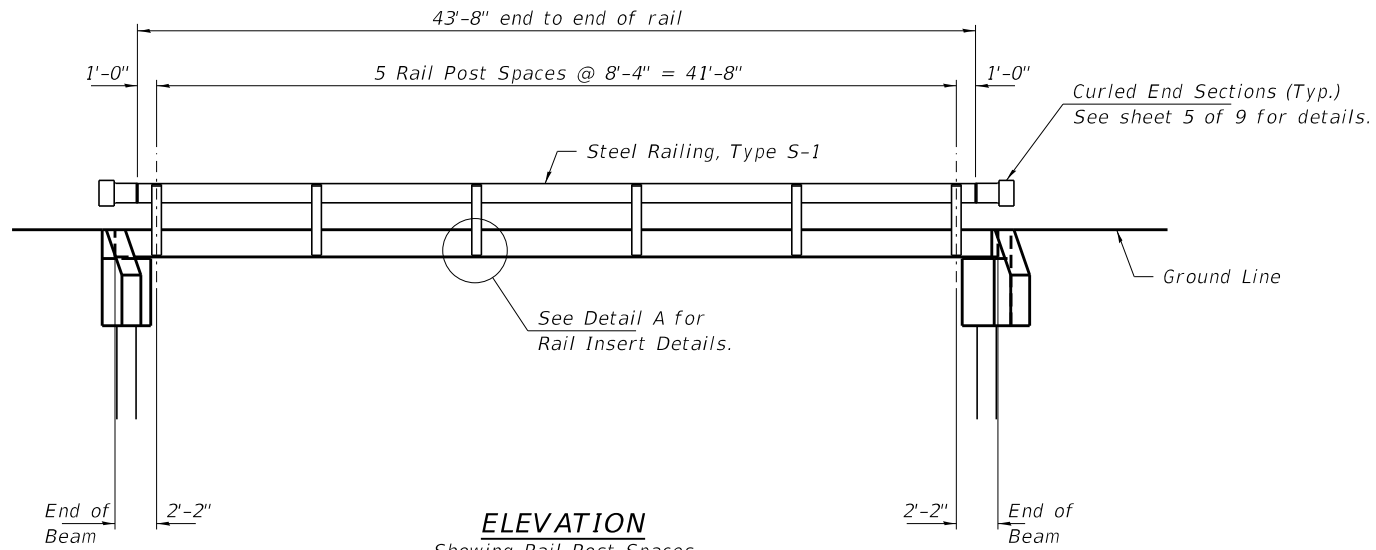
STATE OF ILLINOIS
JEFFERSON COUNTY HIGHWAY DEPARTMENT

17" x 48" PPC DECK BEAM DETAILS
STRUCTURE NO. 041-3766

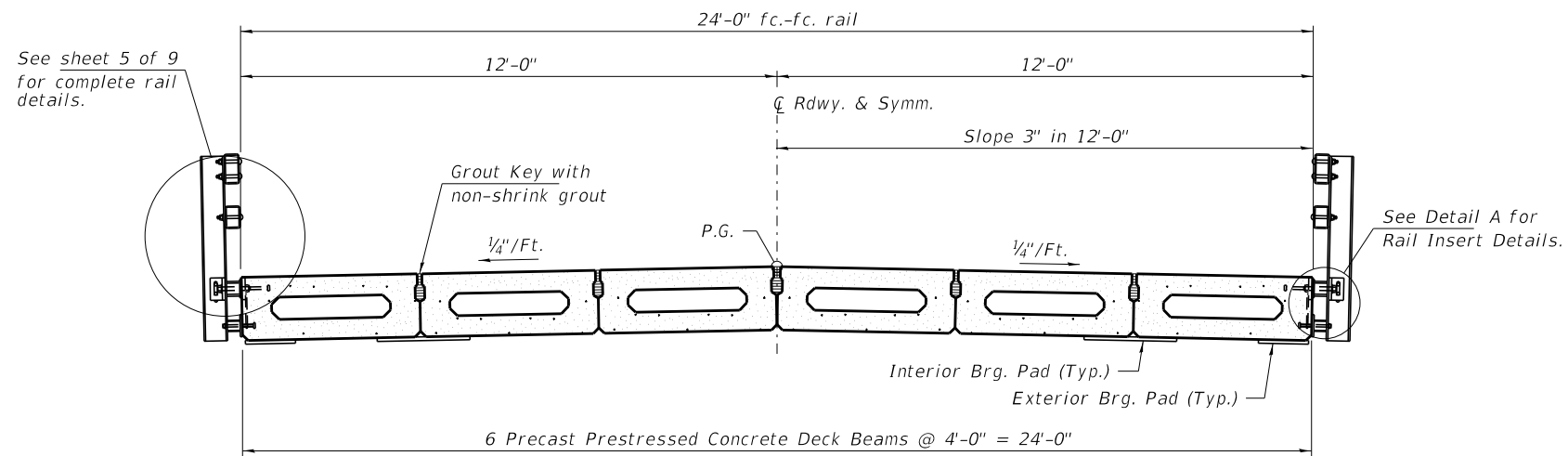
SHEET NO. 3 OF 9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1A	16-13112-00-BR	JEFFERSON	23	7
ROME ROAD DISTRICT		CONTRACT NO. 99615		

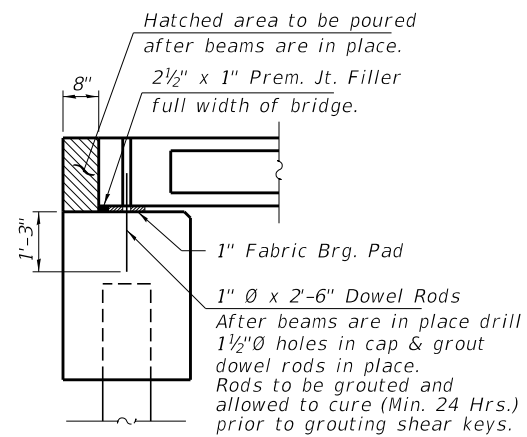
ILLINOIS FED. AID PROJECT C38(214)



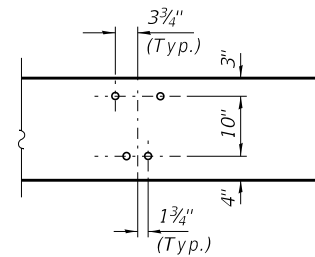
ELEVATION
 Showing Rail Post Spaces
 See sheet 5 of 9 for Railing Details.



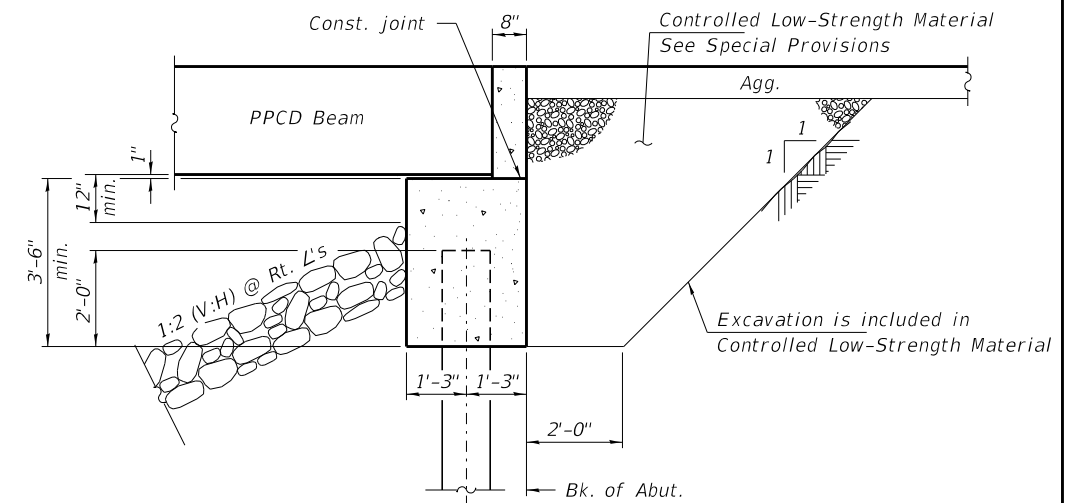
CROSS SECTION
 See sheets 2 & 3 of 9 for Superstructure.



SECTION AT ABUTMENTS
 @ Rt. L's

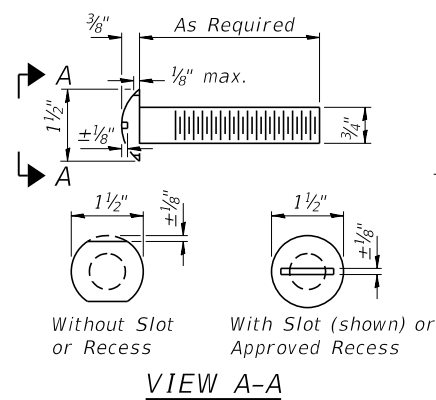


DETAIL A

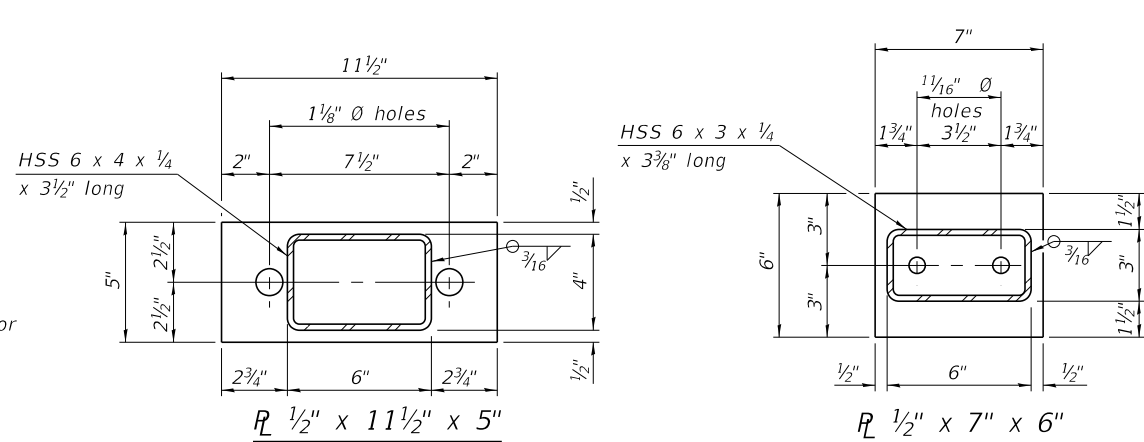


SECTION THRU ABUTMENT
 (Horiz. dim. @ Rt. L's)

FILE NAME = 170104-shl-bridge.dgn	USER NAME = mpaul	DESIGNED - J.W.F.	REVISED -	STATE OF ILLINOIS JEFFERSON COUNTY HIGHWAY DEPARTMENT	SUPERSTRUCTURE DETAILS STRUCTURE NO. 041-3766	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959		CHECKED - S.W.M.	REVISED -			1A	16-13112-00-BR	JEFFERSON	23	8
	PLOT SCALE =	DRAWN - M.M.P.	REVISED -			ROME ROAD DISTRICT		CONTRACT NO. 99615		
	PLOT DATE = 12/10/2019	CHECKED - S.W.M.	REVISED -					ILLINOIS	FED. AID PROJECT C38(214)	



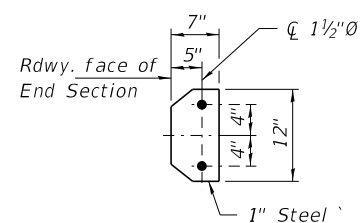
VIEW A-A
ROUND HEAD BOLT



SECTION B-B
R 1/2" x 11 1/2" x 5"

SECTION C-C
R 1/2" x 7" x 6"

Note: Cost of curled end sections shall be included with the Steel Railing. (4 Required)

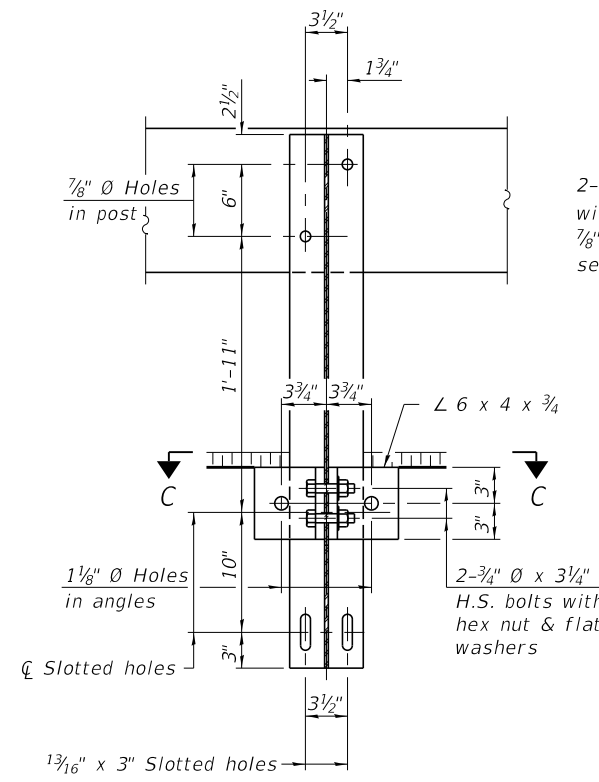


SECTION E-E
CURLLED END SECTION DETAILS

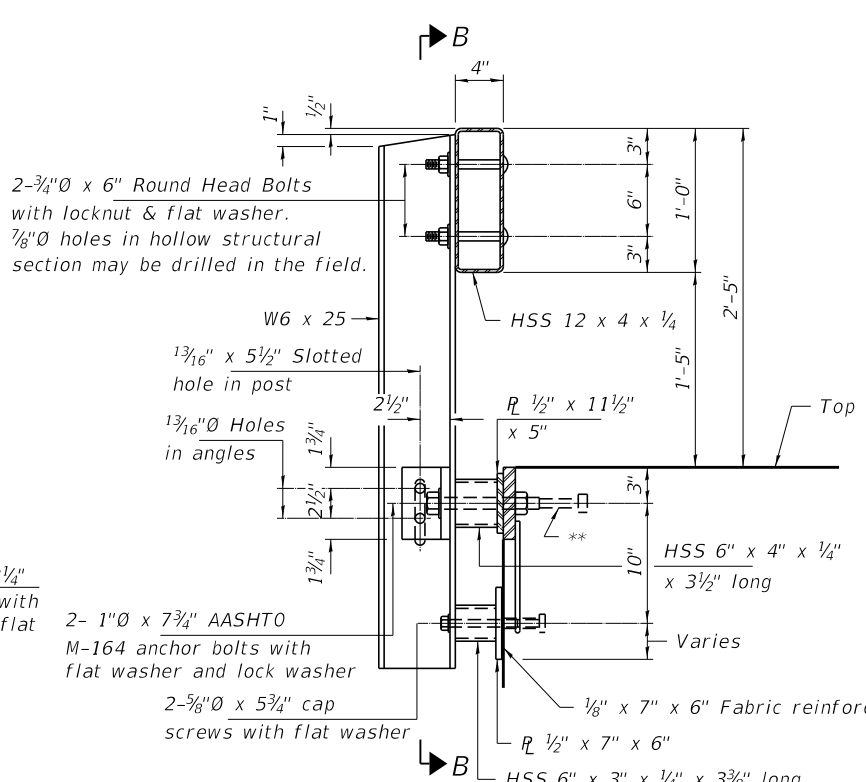
SPLICE DIMENSIONS

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"	—

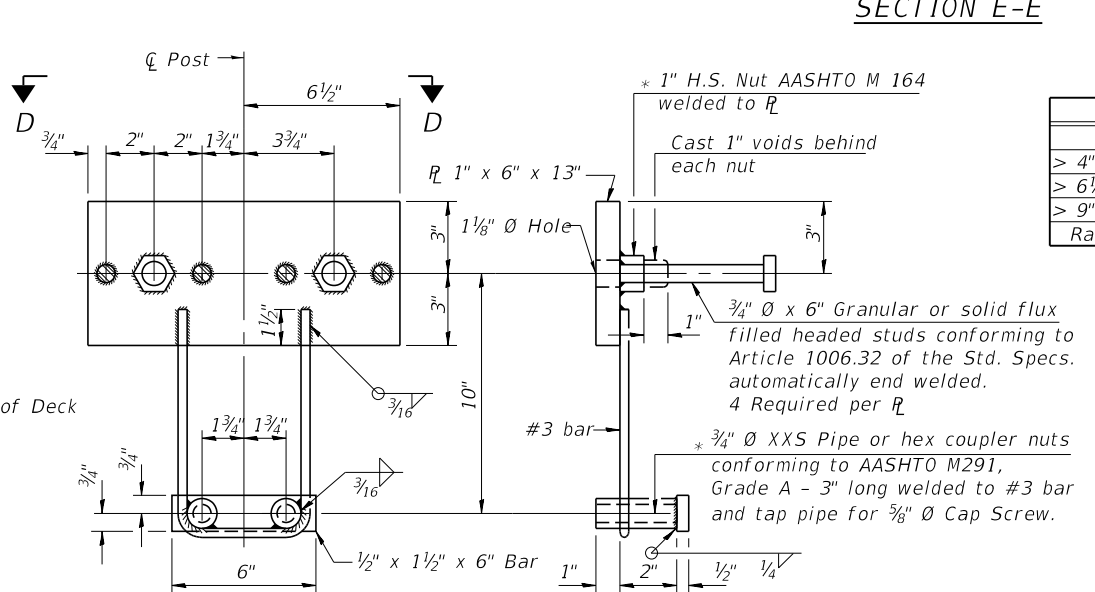
T = Total movement at expansion joint as shown on the design plans.



SECTION B-B

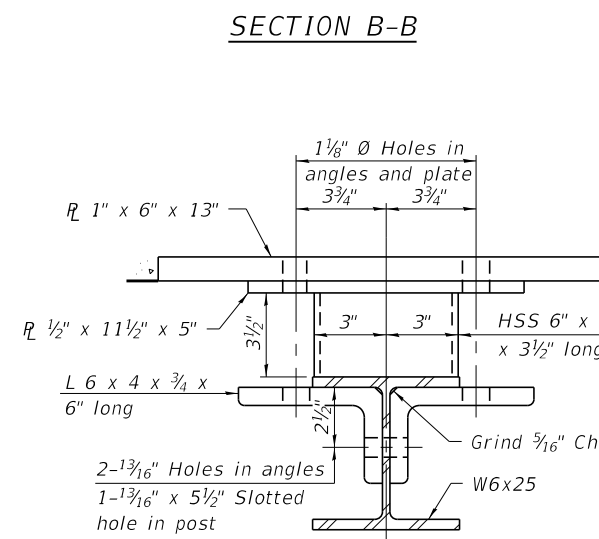


SECTION AT RAILING POST

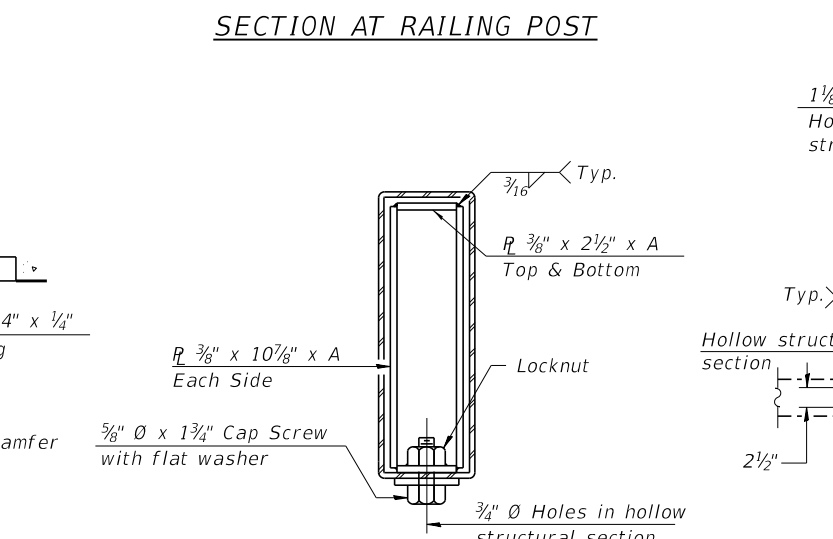


ANCHOR DEVICE

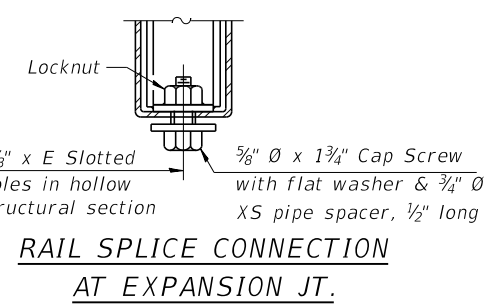
Notes:
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.



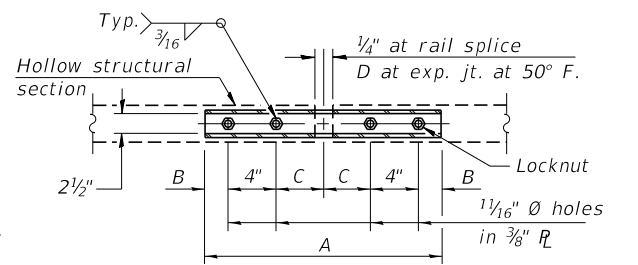
SECTION C-C



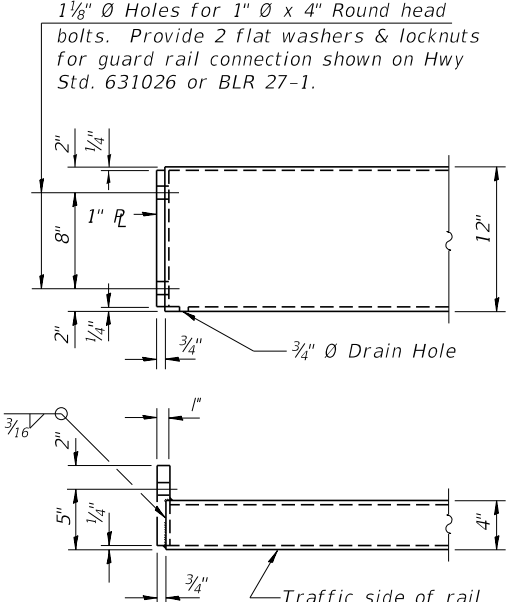
SECTIONS AT RAIL SPLICE



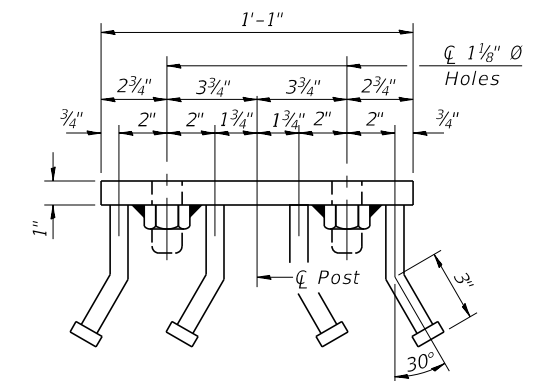
RAIL SPLICE CONNECTION AT EXPANSION JT.



PLAN-BOTT. SPLICE R TYPICAL



END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	88

R-23A 8-11-2017 (10'-9" Maximum Post Spacing)

FILE NAME	USER NAME	DESIGNED	REVISIONS
170104-shi-bridge.dgn	mpaul	J.W.F.	-
		S.W.M.	-
		M.M.P.	-
		S.W.M.	-

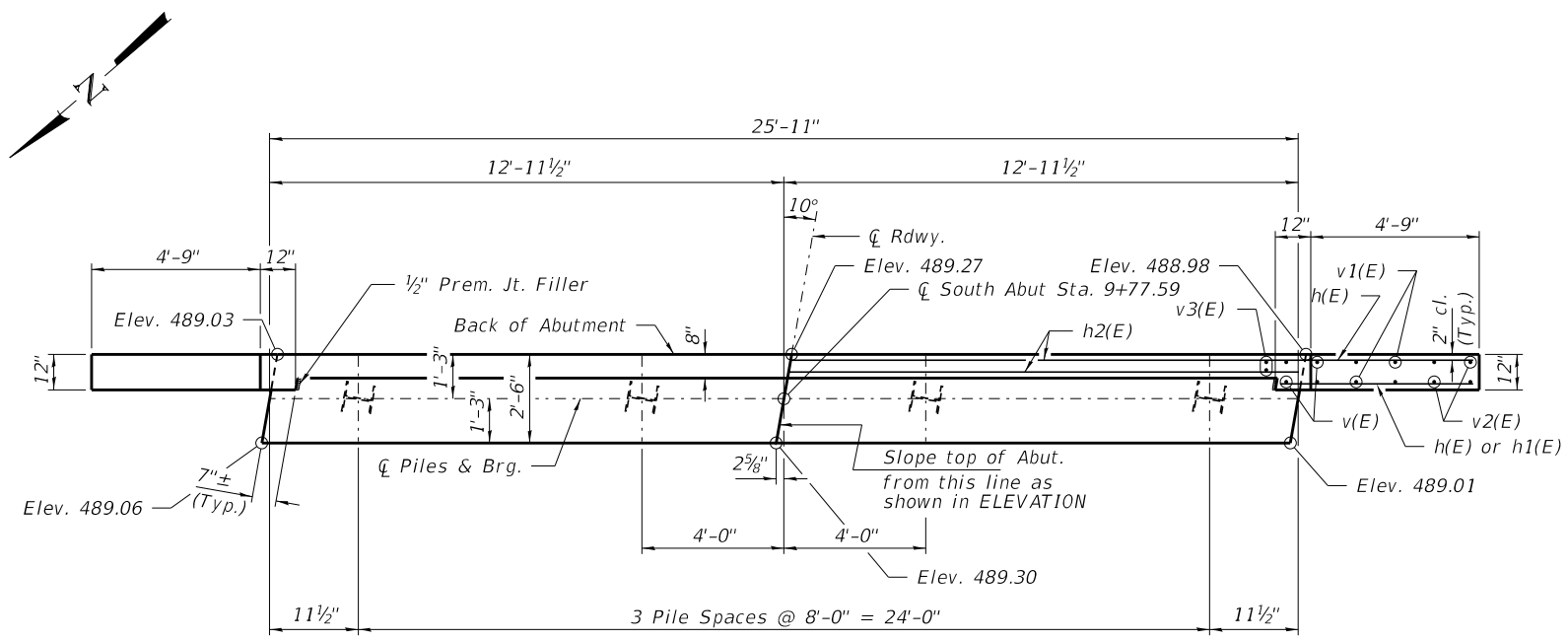
STATE OF ILLINOIS
JEFFERSON COUNTY HIGHWAY DEPARTMENT

STEEL RAILING, TYPE S-1
STRUCTURE NO. 041-3766

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1A	16-13112-00-BR	JEFFERSON	23	9
ROME ROAD DISTRICT		CONTRACT NO. 99615		

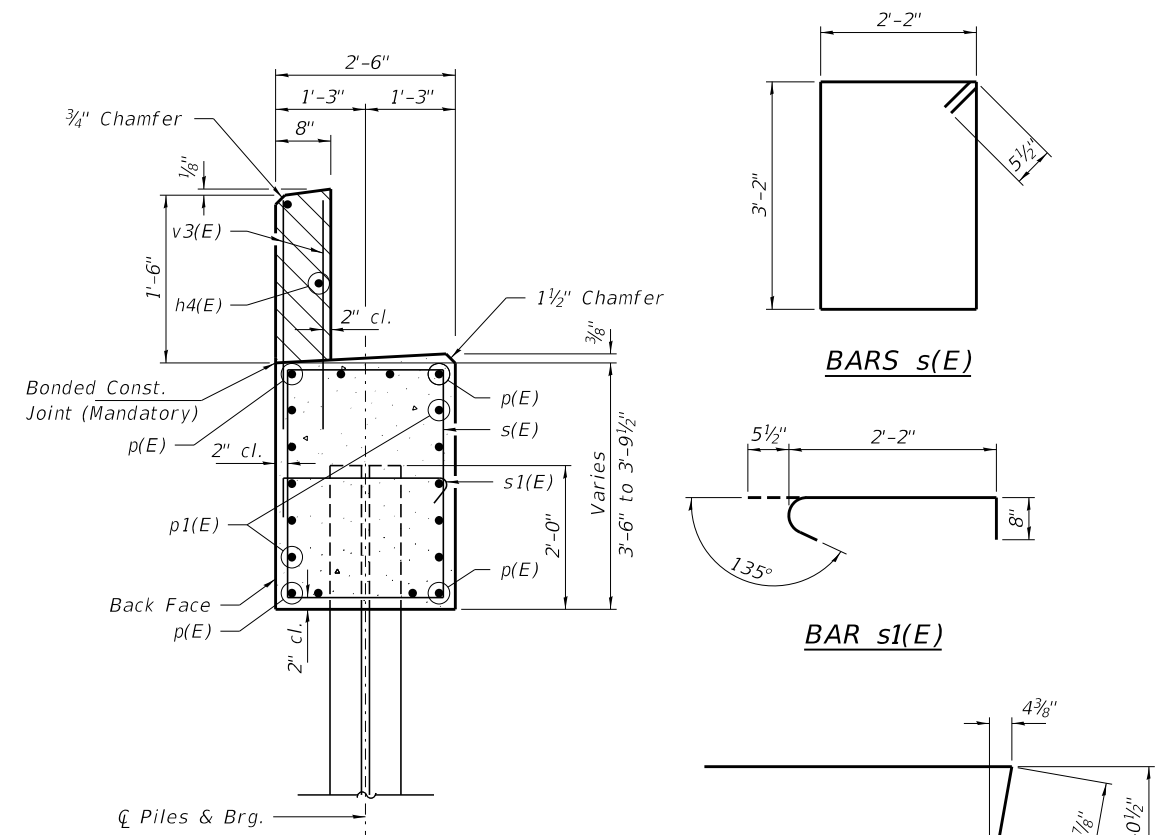
SHEET NO. 5 OF 9 SHEETS

ILLINOIS FED. AID PROJECT C38(214)



PLAN

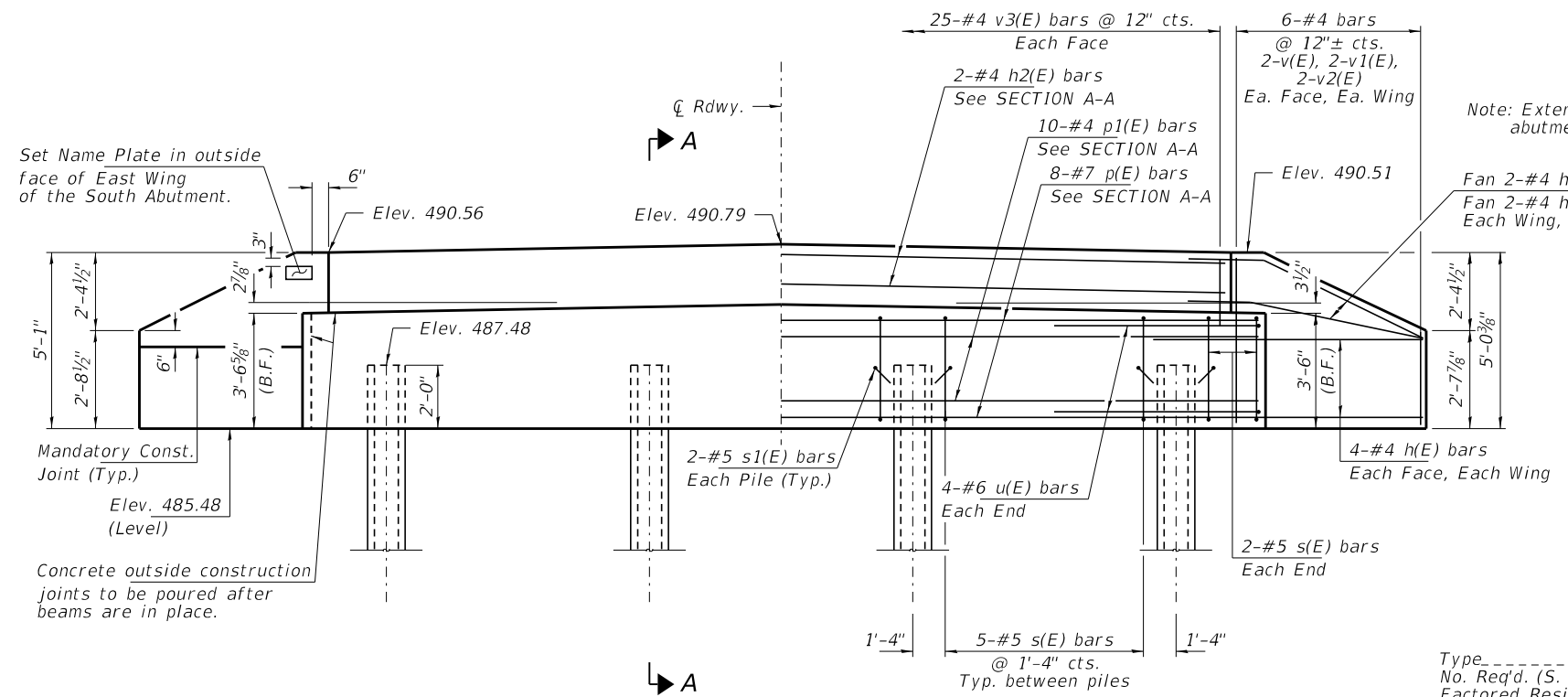
Note: Elevations in PLAN are to top of concrete cap.
*Elevations to top of walls are to Front Fc.



SECTION A-A

Hatched area to be poured after beams are in place.

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



ELEVATION
(Looking South)

Note: Extend h(E) bars into abutment cap.

Fan 2-#4 h(E) bars (B.F.)
Fan 2-#4 h1(E) bars (F.F.)
Each Wing, Bend in field.

PILE DATA

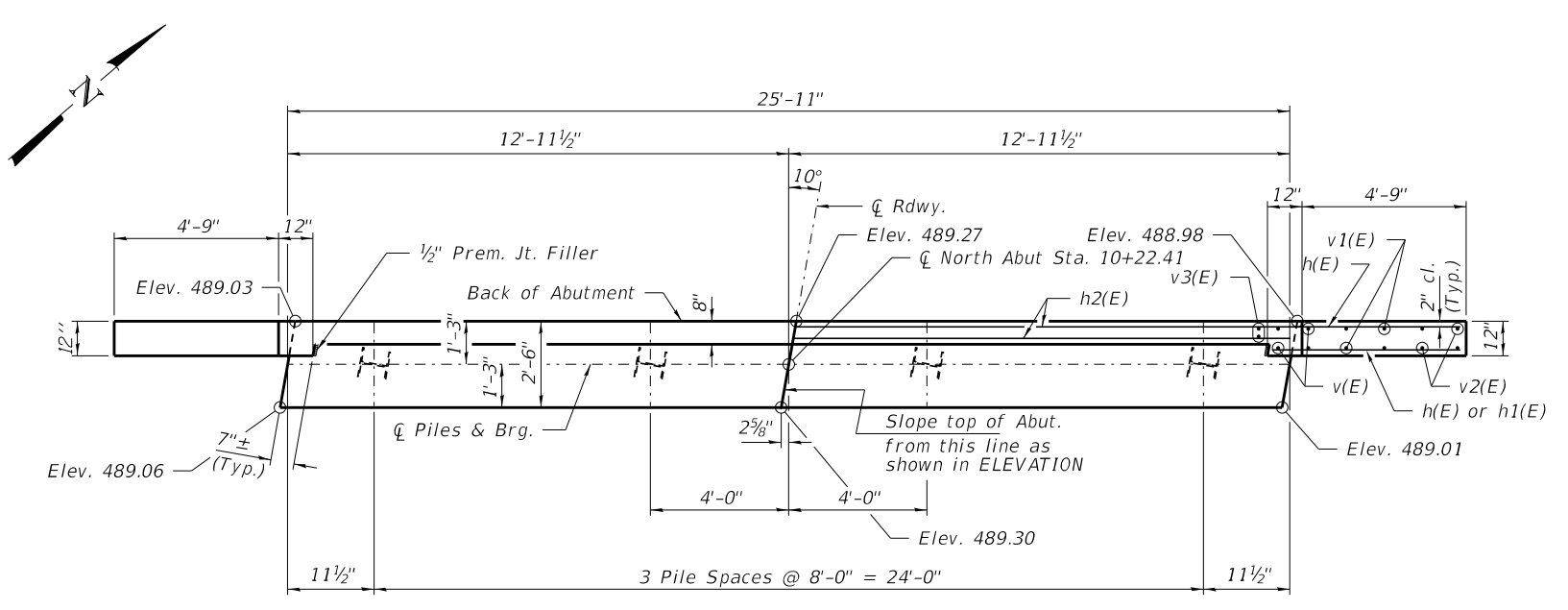
Type _____ Steel HP 10x42
No. Req'd. (S. Abut.) _____ *4
Factored Resistance Available (Rf) _____ 184 Kips/Pile
Nominal Required Bearing (Rn) _____ 335 Kips/Pile
Est. Length _____ 30 Ft/Pile

Notes: *Includes one test pile to be driven in a permanent location at the South Abutment.

The test piles shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.

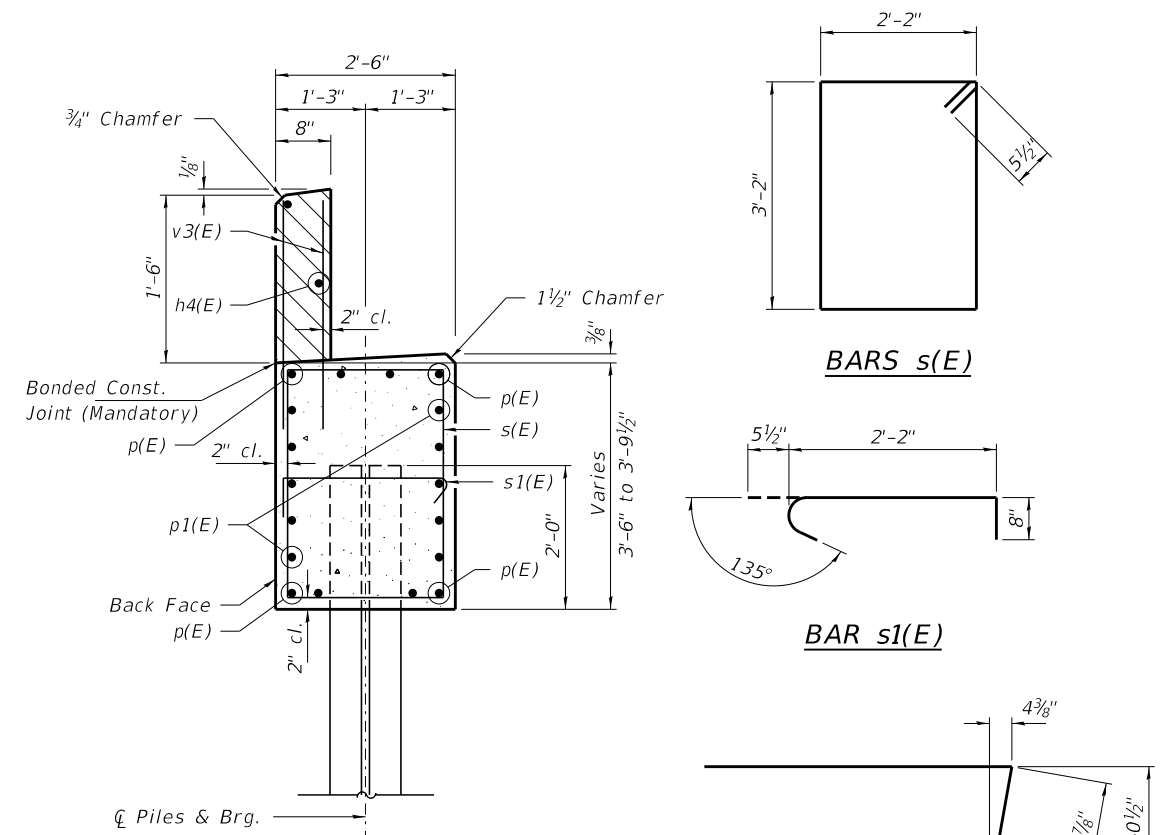
BILL OF MATERIAL - S. ABUT.

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	20	#4	7'-0"	—
h1(E)	4	#4	5'-6"	—
h2(E)	2	#4	25'-7"	—
p(E)	8	#7	25'-7"	—
p1(E)	10	#4	25'-7"	—
s(E)	19	#5	11'-7"	□
s1(E)	8	#5	3'-4"	┌
u(E)	8	#6	12'-1"	▭
v(E)	8	#4	4'-6"	—
v1(E)	8	#4	3'-5"	—
v2(E)	8	#4	2'-4"	—
v3(E)	50	#4	2'-4"	—
Concrete Structures			Cu. Yd.	11.3
Reinf. Bars, Epoxy Coated			Pound	1,270
Steel Piles HP10X42			Foot	90
Test Pile Steel HP10x42			Each	1
Name Plates			Each	1



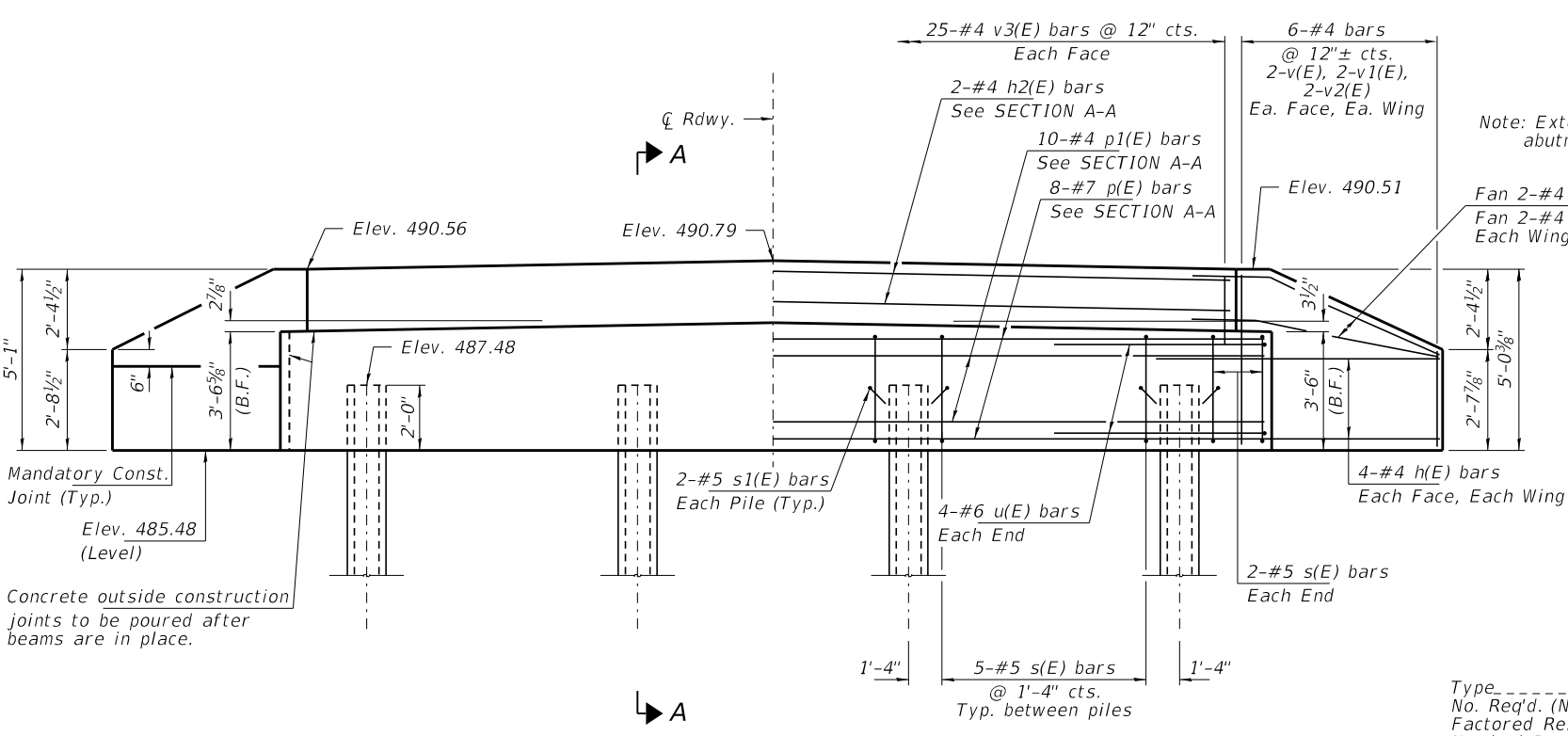
PLAN

Note: Elevations in PLAN are to top of concrete cap.
*Elevations to top of walls are to Front Fc.



SECTION A-A

Hatched area to be poured after beams are in place.
Cast top of wingwall flush with exterior beam face after beams have been erected.



ELEVATION
(Looking North)

Note: Extend h(E) bars into abutment cap.

Fan 2-#4 h(E) bars (B.F.)
Fan 2-#4 h1(E) bars (F.F.)
Each Wing, Bend in field.

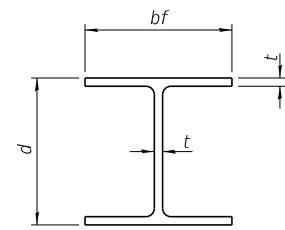
PILE DATA

Type _____ Steel HP 10x42
No. Req'd. (N. Abut.) _____ 4
Factored Resistance Available (Rf) _____ 184 Kips/Pile
Nominal Required Bearing (Rn) _____ 335 Kips/Pile
Est. Length _____ 30 Ft/Pile

BAR u(E)

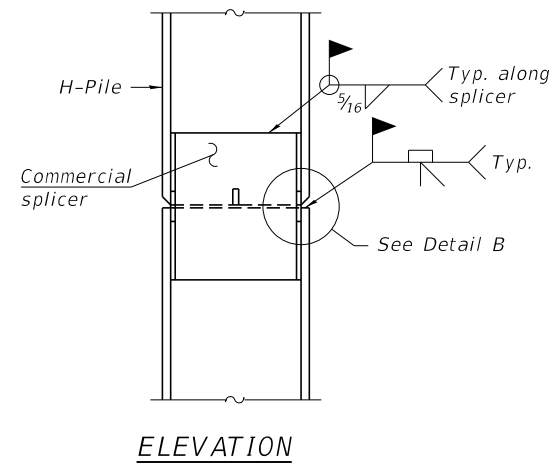
BILL OF MATERIAL - N. ABUT.

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	20	#4	7'-0"	—
h1(E)	4	#4	5'-6"	—
h2(E)	2	#4	25'-7"	—
p(E)	8	#7	25'-7"	—
p1(E)	10	#4	25'-7"	—
s(E)	19	#5	11'-7"	□
s1(E)	8	#5	3'-4"	┌
u(E)	8	#6	12'-1"	▭
v(E)	8	#4	4'-6"	—
v1(E)	8	#4	3'-5"	—
v2(E)	8	#4	2'-4"	—
v3(E)	50	#4	2'-4"	—
Concrete Structures			Cu. Yd.	11.3
Reinf. Bars, Epoxy Coated			Pound	1,270
Steel Piles HP10X42			Foot	120

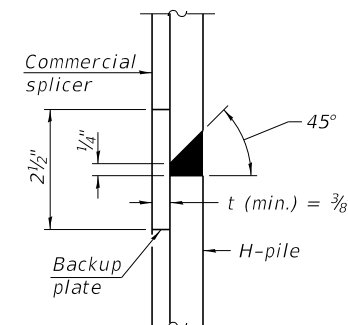


STEEL PILE TABLE

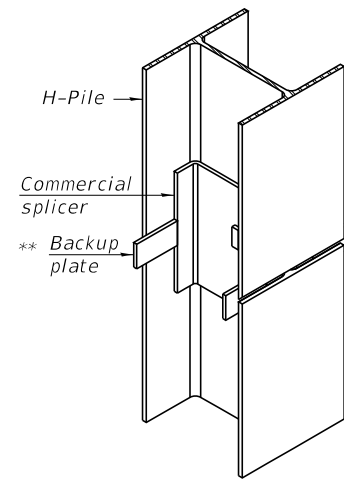
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 3/8"	14 3/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"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



ELEVATION

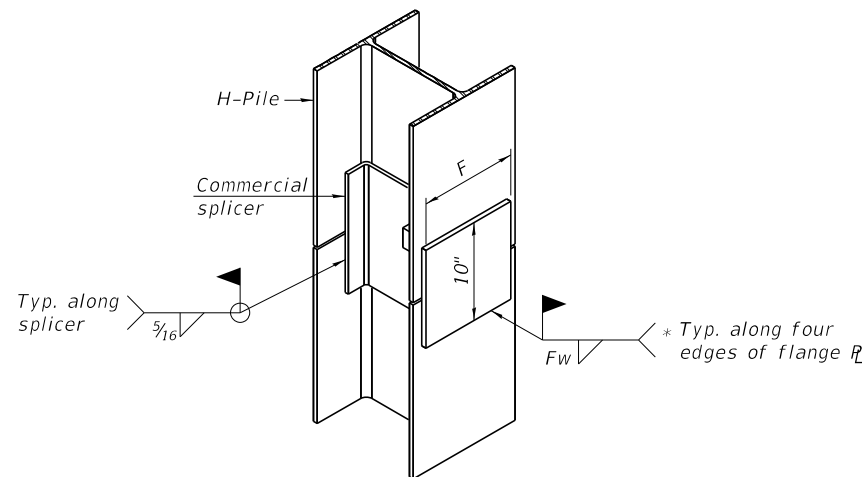


DETAIL "B"



ISOMETRIC VIEW

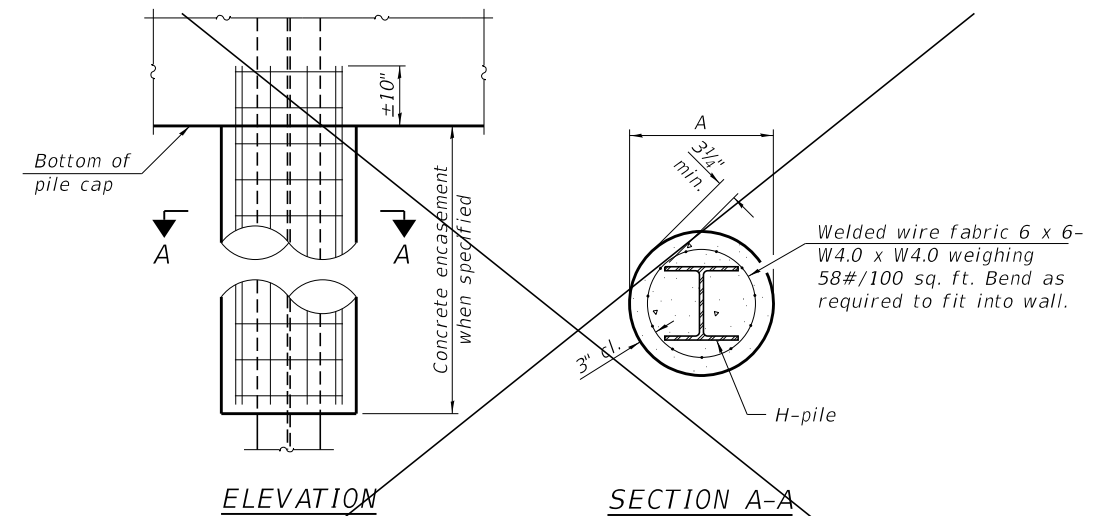
WELDED COMMERCIAL SPLICE



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).

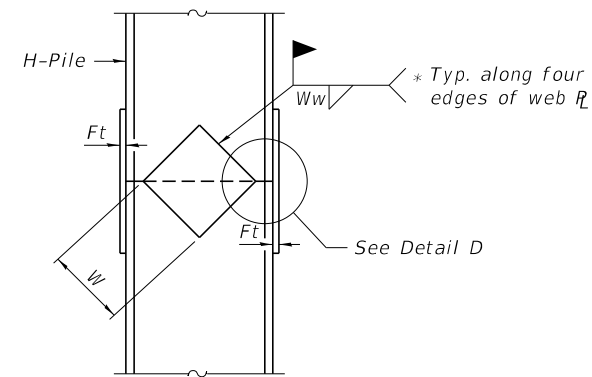


ELEVATION

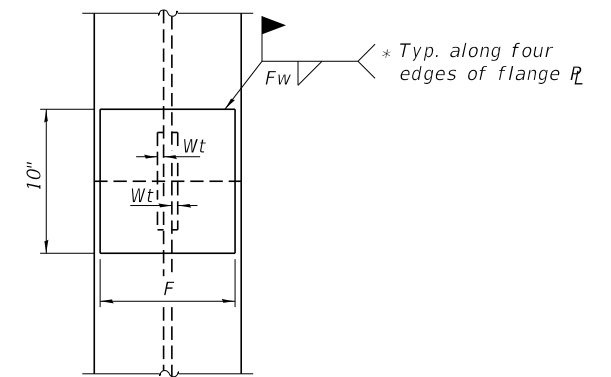
SECTION A-A

INDIVIDUAL PILE CONCRETE ENCASUREMENT

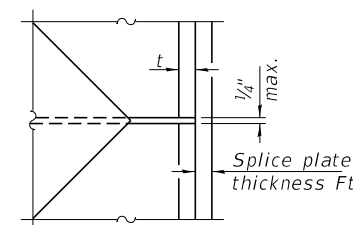
(Forms for encasement may be omitted when soil conditions permit).
(Not Required)



ELEVATION



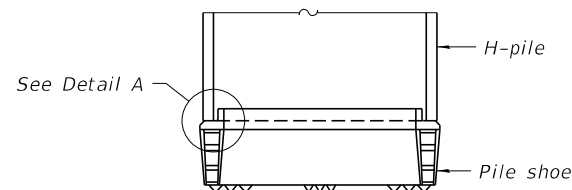
END VIEW



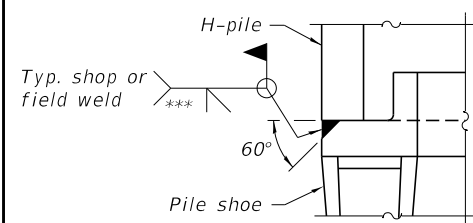
DETAIL D

WELDED PLATE FIELD SPLICE

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



ELEVATION



DETAIL A

SHOE ATTACHMENT

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

F-HP 8-11-2017

FILE NAME = 170104-shi-bridge.dgn	USER NAME = mpaul	DESIGNED - J.W.F.	REVISIONS -	STATE OF ILLINOIS JEFFERSON COUNTY HIGHWAY DEPARTMENT	HP PILE DETAILS STRUCTURE NO. 041-3766	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT SCALE =	CHECKED - S.W.M.	REVISIONS -			1A	16-13112-00-BR	JEFFERSON	23	\$STR85
	PLOT DATE = 12/10/2019	DRAWN - M.M.P.	REVISIONS -			ROME ROAD DISTRICT				CONTRACT NO. 99615
		CHECKED - S.W.M.	REVISIONS -							ILLINOIS FED. AID PROJECT C38(214)

HOLCOMB FOUNDATION ENGINEERING INC.
 393 Wood Road 618-529-5262
 Carbondale, IL 62901 618-457-8991 fax Page 1 of 1

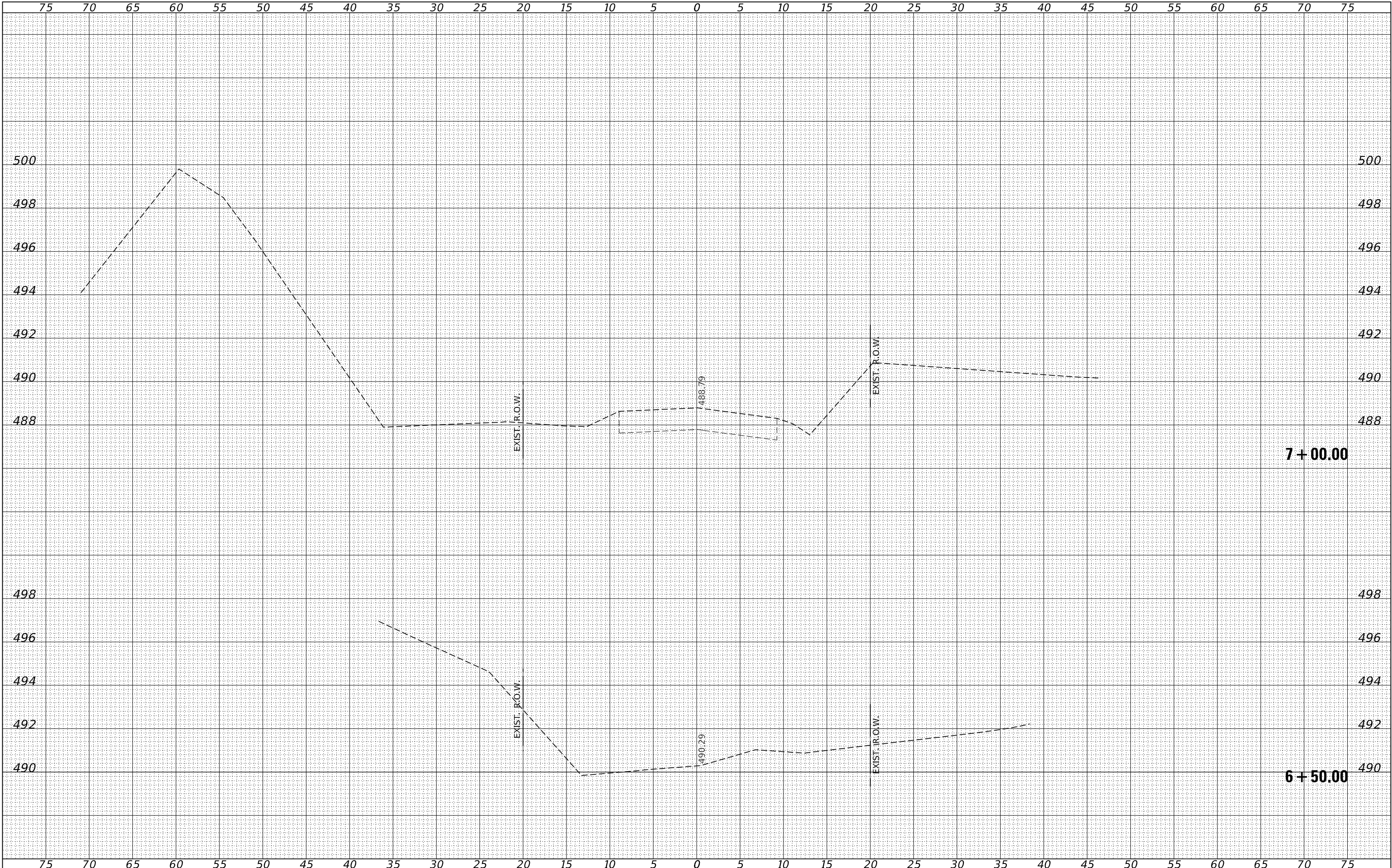
Bridge Foundation Boring Log

Project: H-18011 Bridge N Old Centralia Ln over East Creek Date: 1/19/2018
 Section: 16-13112-00-BR Station _____ Bored by: B. Schwartz
 Structure: _____ Checked By: T. Holcomb
 County: Jefferson

Boring No.: 1 Station: Offset:	Elevation	N	Qu	tsf	w	Surface Water Elev. _____				
						Elevation	N	Qu	w	
						Ground Water Elev. During Drilling	473.4			
						Upon Completion	475.9			
Ground Surface	486.9	0				silty clay (continued)				
1" A-3 Surface over 1" C.S.							463.4			
Gray Mottled Brown Silty CLAY (A-6)		5	0.6S	24				100		16
								/3"		
	483.4									
Brown Mottled Gray Silty CLAY (A-6)		0	0.5B	29				100		12
								/4"		
		2	0.7S	20				100		9
								/2"		
	478.4					End of Boring @ -30.0'				
Gray Mottled Brown Sandy CLAY (A-6)		2	0.4B	24						
	475.9									
Gray Mottled Brown Silty CLAY (A-6)		5	0.8B	25						
	473.4									
Brown Mottled Gray Sandy CLAY (A-6)		7	--	21						
	470.9									
Gray Mottled Brown Silty CLAY (A-6)		5	1.4B	22						
		4	1.1B	26						
		12	1.5S	28						

N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"
 Qu - Unconfined Compressive Strength in tons/sq.ft.
 w - Water Content - percentage of oven dry weight-%
 B = Bulge Failure
 S = Shear Failure
 E = Estimated Value
 P = Penetrometer

BORING-1



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

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

FILE NAME = 170104-shf-xssht.dgn
 USER NAME = mpaul
 DESIGNED - J.W.F.
 DRAWN - M.M.P.
 CHECKED - S.W.M.
 DATE - 12/10/19
 PLOT SCALE = \$SCALE\$
 PLOT DATE = 12/10/2019

DESIGNED - J.W.F.
 DRAWN - M.M.P.
 CHECKED - S.W.M.
 DATE - 12/10/19
 REVISIONS:
 REVISIONS:
 REVISIONS:
 REVISIONS:

STATE OF ILLINOIS
JEFFERSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS

SCALE: 5H:2V | SHEET NO. 1 OF 10 SHEETS | STA. 6+50.00 TO STA. 7+00.00

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1A	16-13112-00-BR	JEFFERSON	23	14
ROME ROAD DISTRICT		CONTRACT NO. 99615		

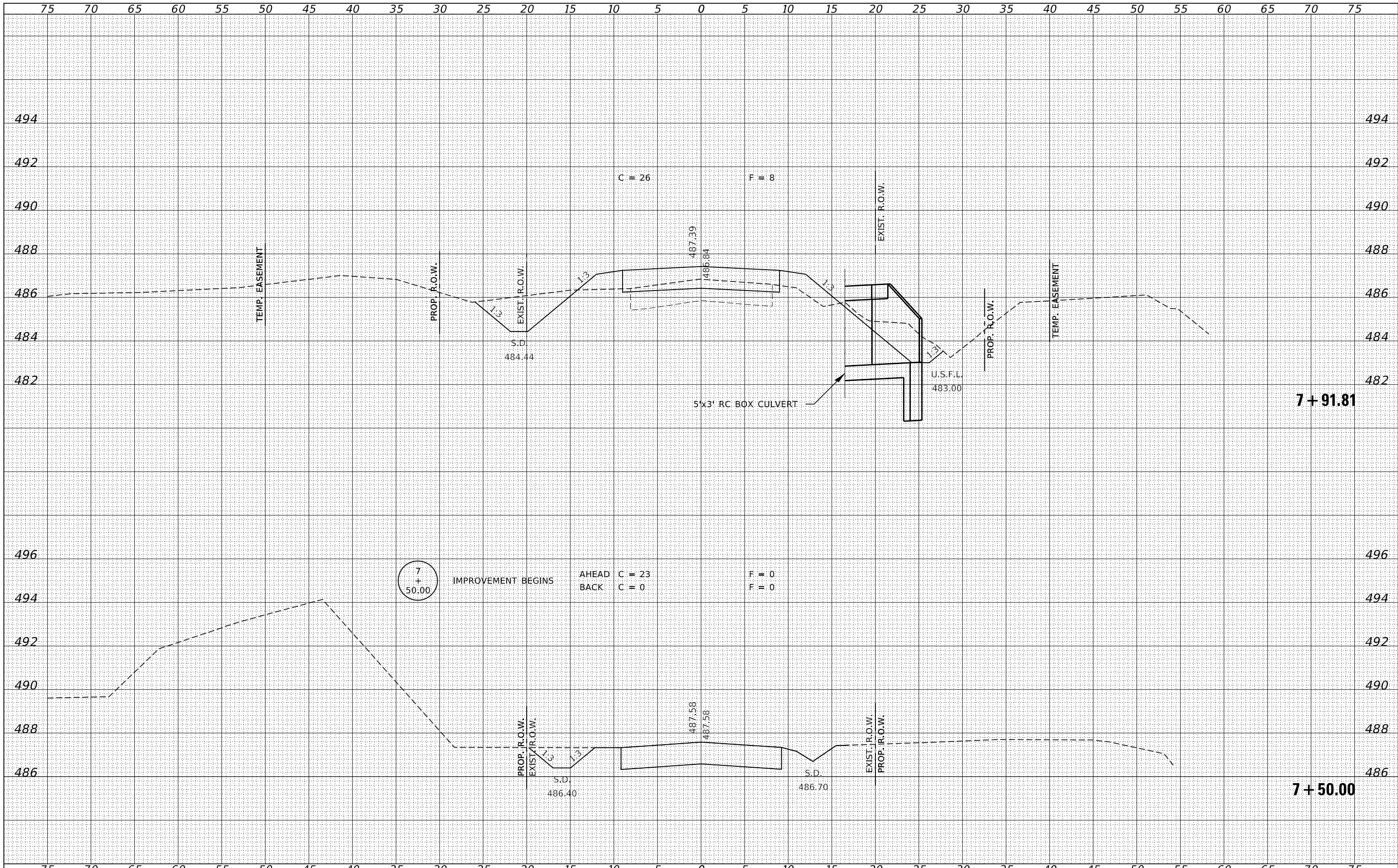
ILLINOIS FED. AID PROJECT C38(214)



HAMPTON, LENZINI AND RENWICK, INC.
 3885 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LS / PE / SE CORP. 184.009958

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

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



FILE NAME = 170104-shl-xssh.dgn
 USER NAME = mpaul
 DESIGNED - J.W.F.
 DRAWN - M.M.P.
 CHECKED - S.W.M.
 DATE - 12/10/19
 PLOT SCALE = \$SCALE\$
 PLOT DATE = 12/10/2019

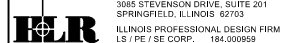
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STATE OF ILLINOIS
 JEFFERSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS

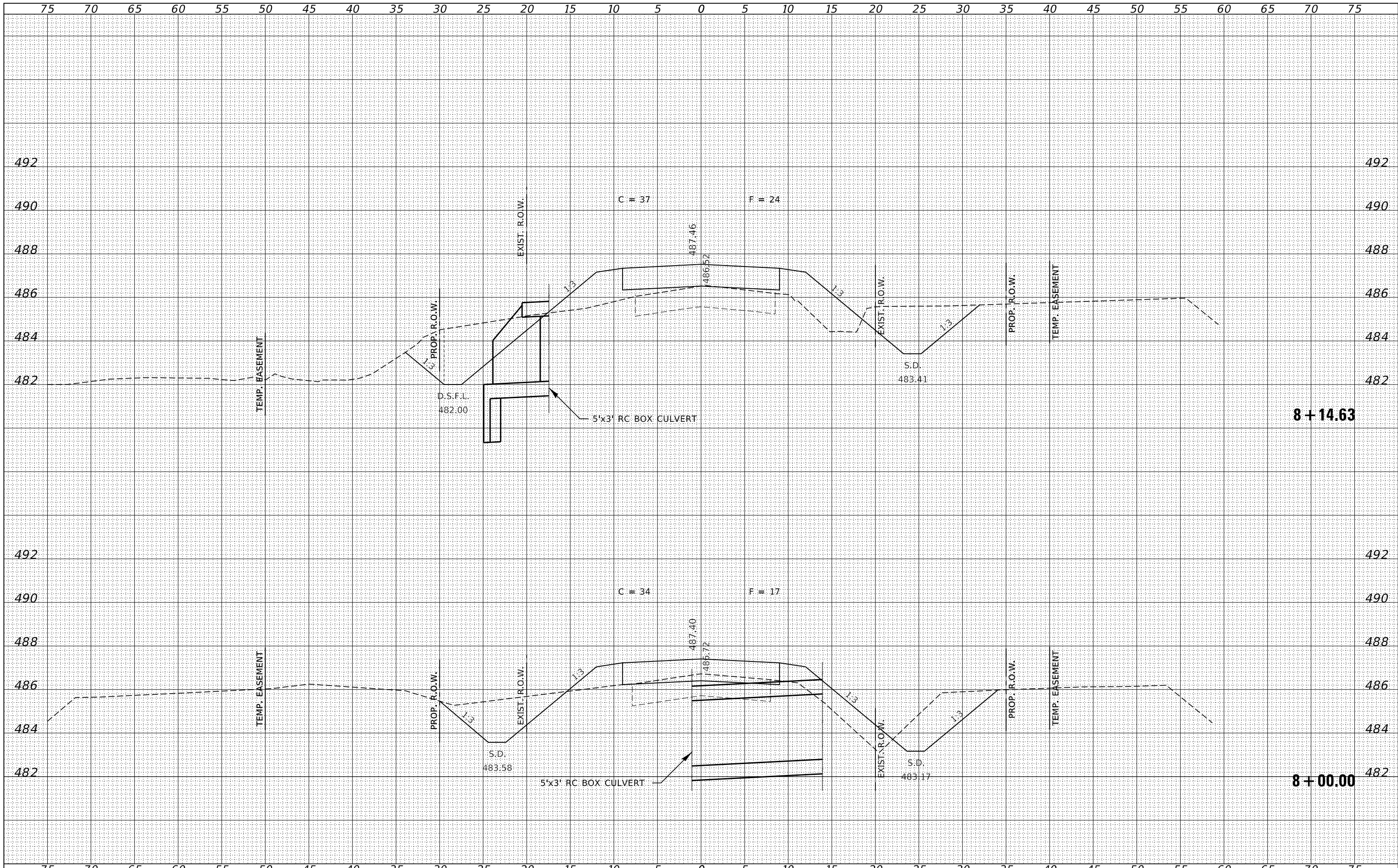
SCALE: 5H:2V SHEET NO. 2 OF 10 SHEETS STA. 7+50.00 TO STA. 7+91.81

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1A	16-13112-00-BR	JEFFERSON	23	15
ROME ROAD DISTRICT			CONTRACT NO. 99615	
ILLINOIS FED. AID PROJECT C38(214)				



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

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



FILE NAME = 170104-shl-xssht.dgn
 USER NAME = mpaul
 DESIGNED - J.V.F.
 DRAWN - M.M.P.
 CHECKED - S.W.M.
 DATE - 12/10/19
 PLOT SCALE = \$SCALE\$
 PLOT DATE = 12/10/2019

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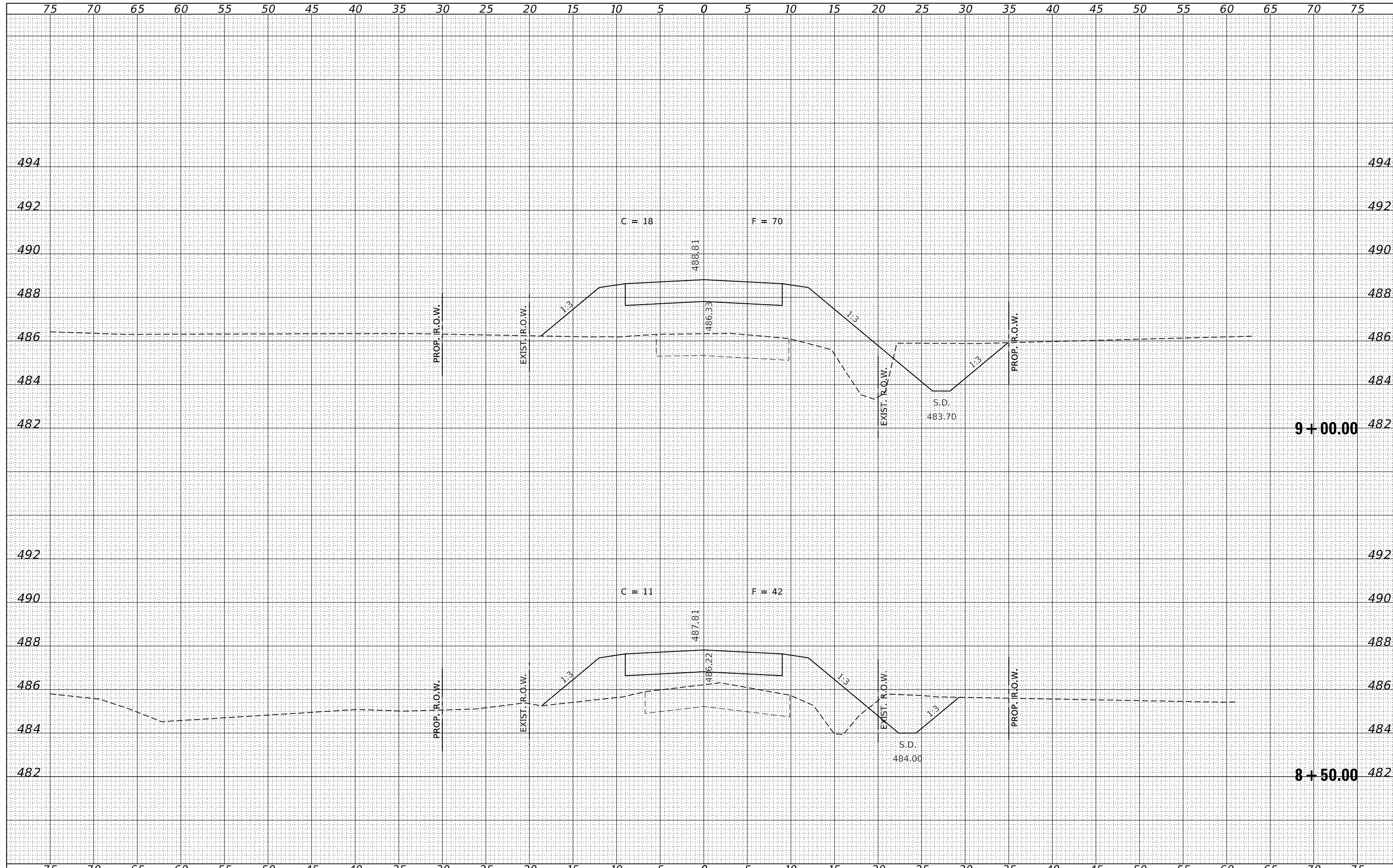
STATE OF ILLINOIS
 JEFFERSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
 SCALE: 5H:2V
 SHEET NO. 3 OF 10 SHEETS
 STA. 8+00.00 TO STA. 8+14.63

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1A	16-13112-00-BR	JEFFERSON	23	16
ROME ROAD DISTRICT			CONTRACT NO. 99615	
ILLINOIS FED. AID PROJECT C38(214)				

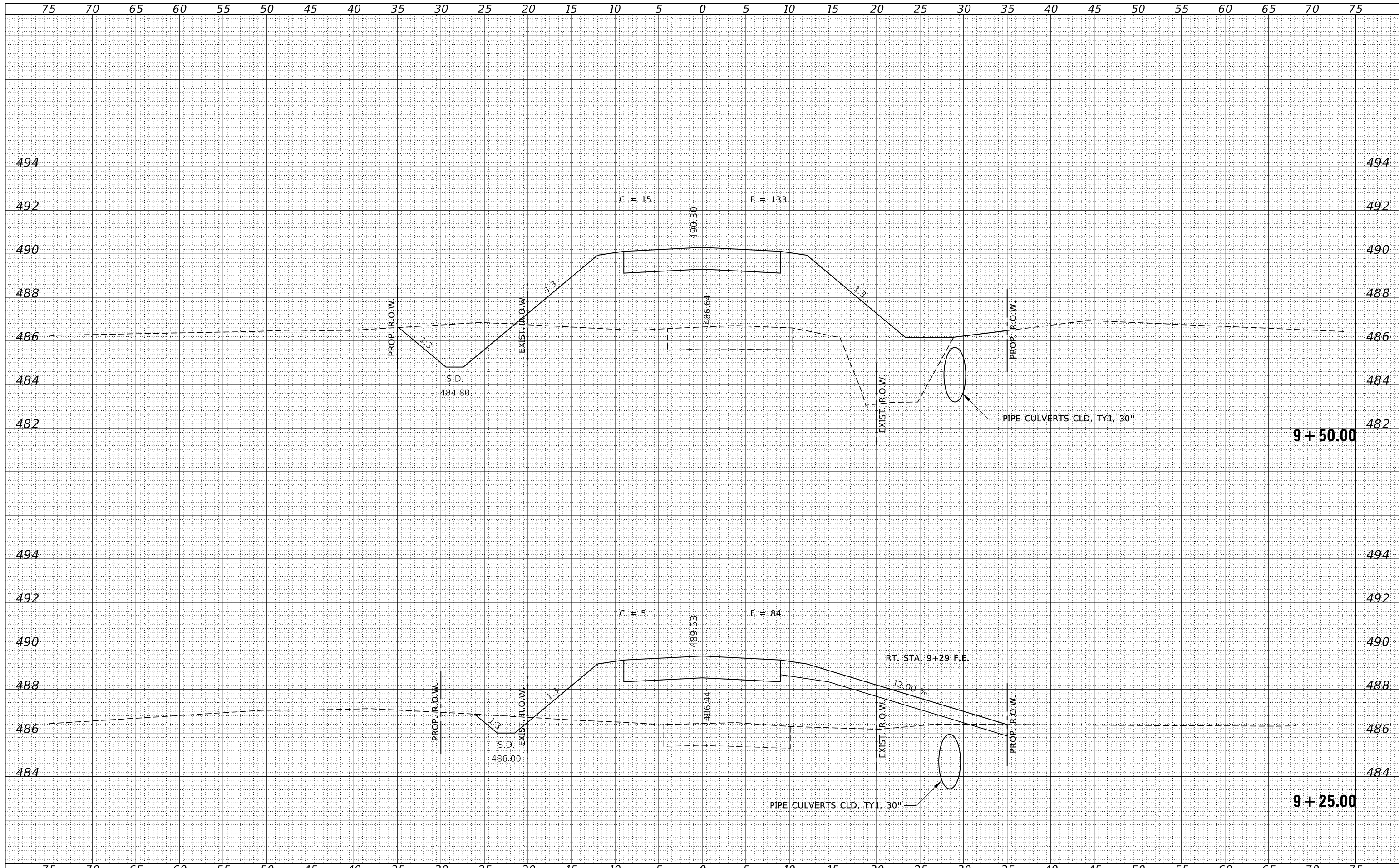
BY	DATE

ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
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DATE	
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FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS
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ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
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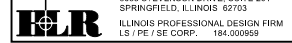
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 DRAWN - M.M.P.
 CHECKED - S.W.M.
 DATE - 12/10/19
 PLOT SCALE = \$SCALES
 PLOT DATE = 12/10/2019

REVISIED -
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STATE OF ILLINOIS
 JEFFERSON COUNTY HIGHWAY DEPARTMENT

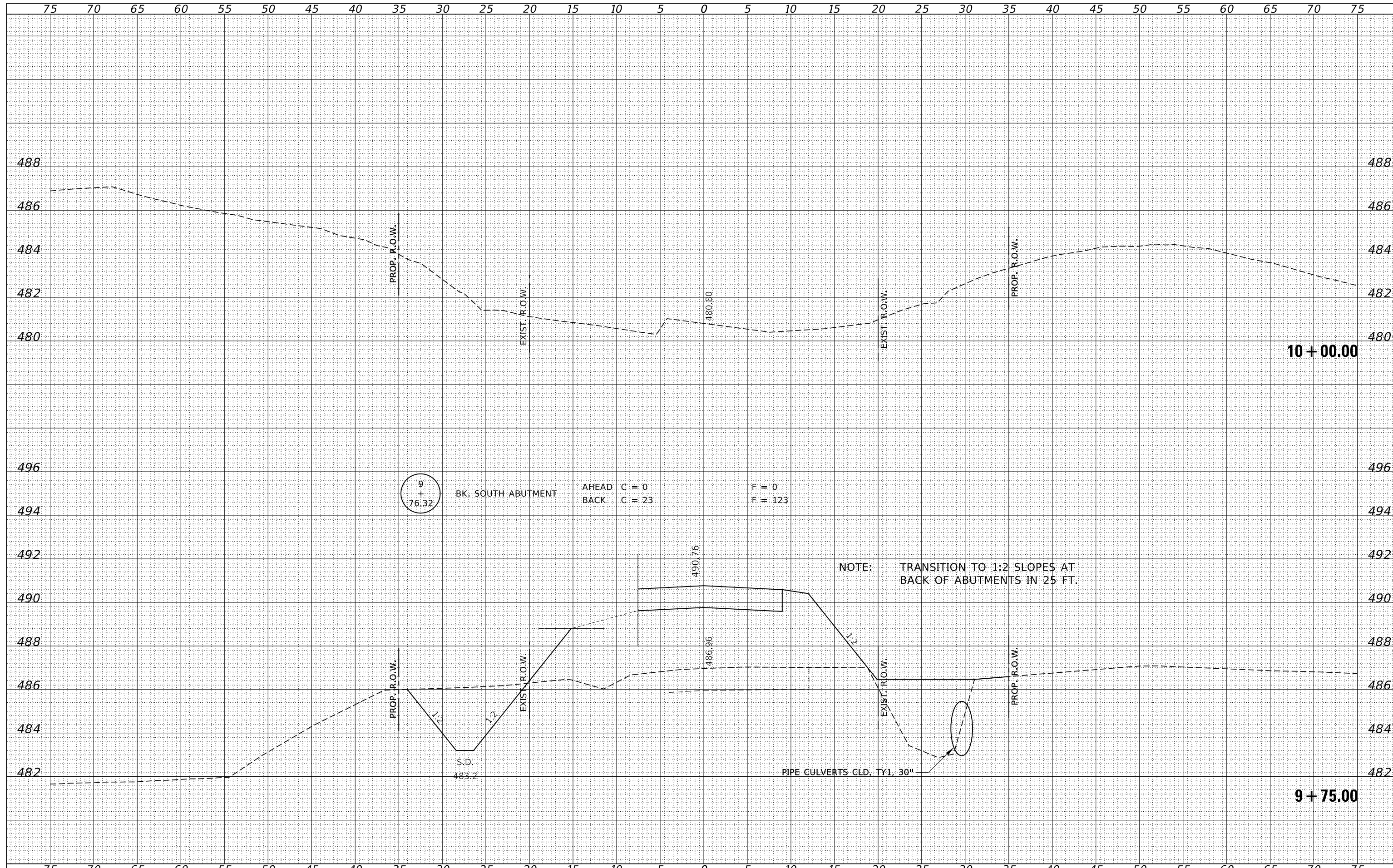
STATION CROSS SECTIONS
 SCALE: 5H:2V
 SHEET NO. 5 OF 10 SHEETS
 STA. 9+25.00 TO STA. 9+50.00

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1A	16-13112-00-BR	JEFFERSON	23	18
ROME ROAD DISTRICT			CONTRACT NO. 99615	
ILLINOIS FED. AID PROJECT C38M214				



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

BY:		DATE:
ORIGINAL SURVEY	SURVEYED	
NOTE BOOK	PLOTTED	
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FILE NAME = 170104-shl-xssht.dgn
 DESIGNED - J.W.F.
 DRAWN - M.M.P.
 CHECKED - S.W.M.
 DATE - 12/10/19

USER NAME = mpaul
 PLOT SCALE = \$\$Scales
 PLOT DATE = 12/10/2019

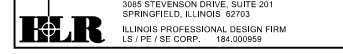
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**STATE OF ILLINOIS
 JEFFERSON COUNTY HIGHWAY DEPARTMENT**

STATION CROSS SECTIONS

SCALE: 5H:2V SHEET NO. 6 OF 10 SHEETS STA. 9+75.00 TO STA. 10+00.00

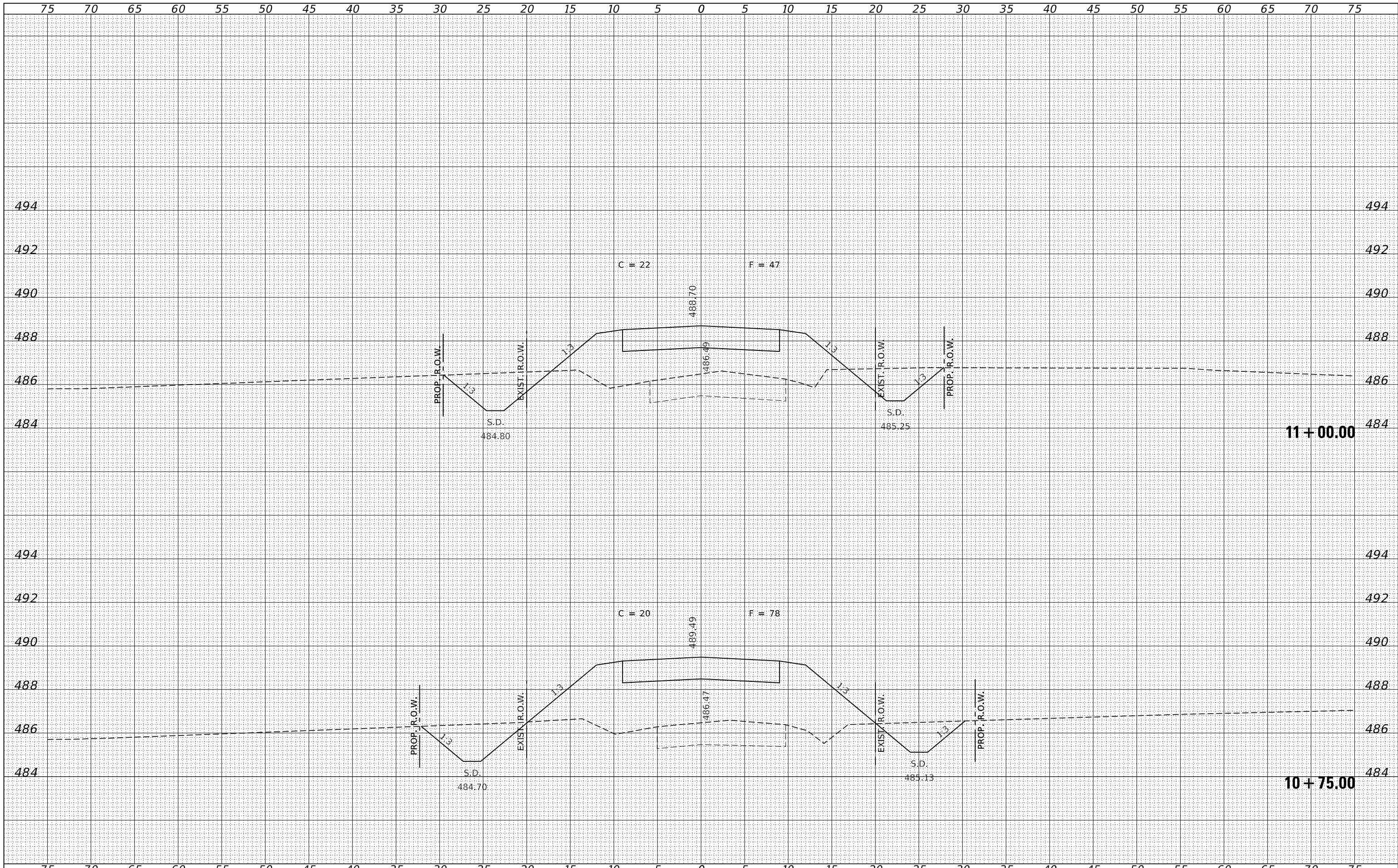
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1A	16-13112-00-BR	JEFFERSON	23	19
ROME ROAD DISTRICT			CONTRACT NO. 99615	



HAMPTON, LENZINI AND RENWICK, INC.
 3885 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 I/S / PE / SE CORP. 184.009858

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

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



FILE NAME = 170104-shi-xssh.dgn
 DESIGNED - J.W.F.
 DRAWN - M.M.P.
 CHECKED - S.W.M.
 DATE - 12/10/19

USER NAME = mpaul
 PLOT SCALE = \$S\$CALES
 PLOT DATE = 12/10/2019

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STATE OF ILLINOIS
 JEFFERSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS

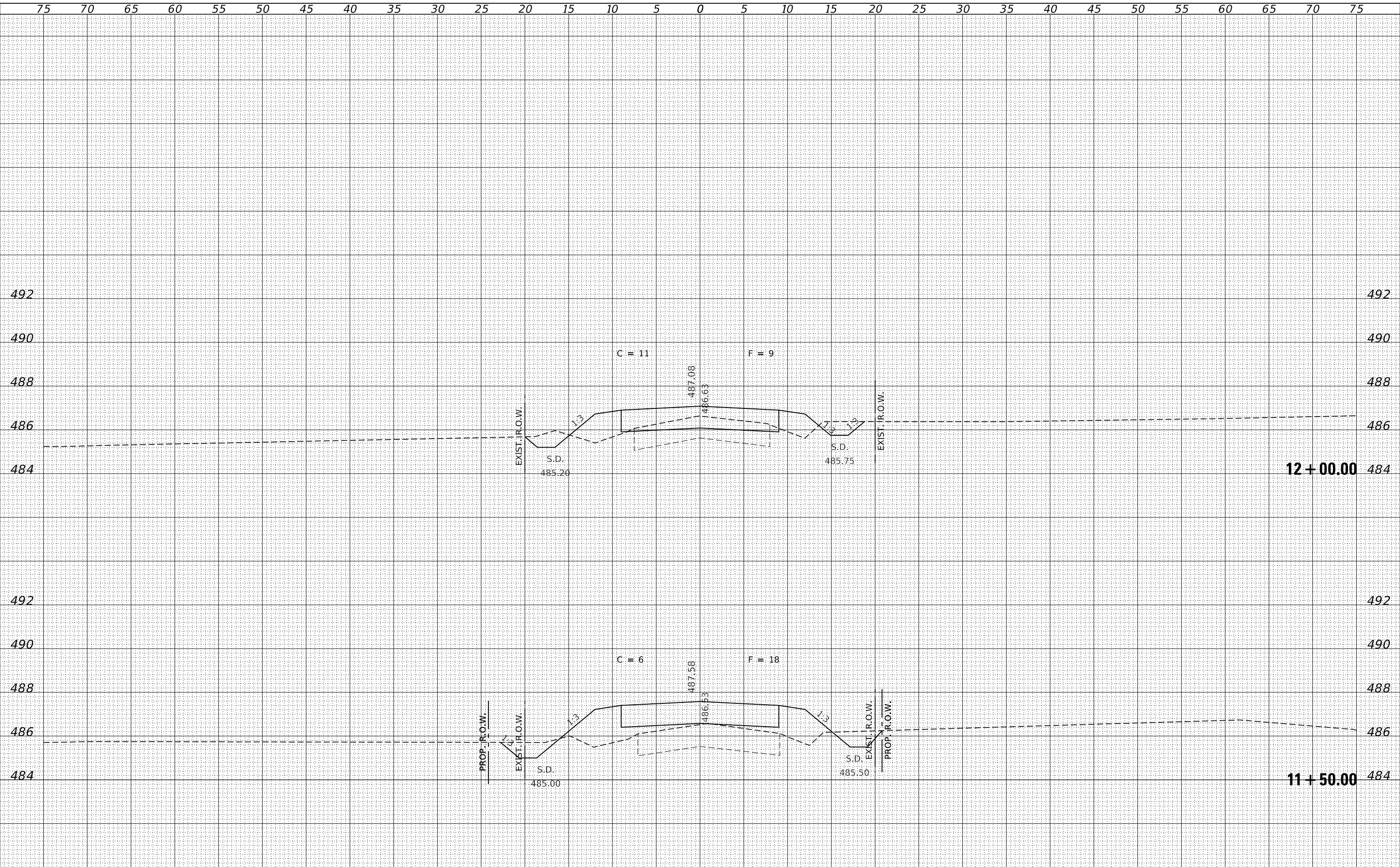
SCALE: 5H:2V
 SHEET NO. 8 OF 10 SHEETS
 STA. 10+75.00 TO STA. 11+00.00

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1A	16-13112-00-BR	JEFFERSON	23	21
ROME ROAD DISTRICT			CONTRACT NO. 99615	

ILLINOIS FED. AID PROJECT C38214

BY	DATE

BY	DATE



FILE NAME = 170104-shl-xssh.dgn

DESIGNED - J.V.F.
DRAWN - M.M.P.
CHECKED - S.W.M.
DATE - 12/10/19

USER NAME = mpaul

PLOT SCALE = \$SCALES

PLOT DATE = 12/10/2019

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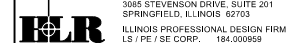
STATE OF ILLINOIS
JEFFERSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS

SCALE: 5H:2V SHEET NO. 9 OF 10 SHEETS STA. 11+50.00 TO STA. 12+00.00

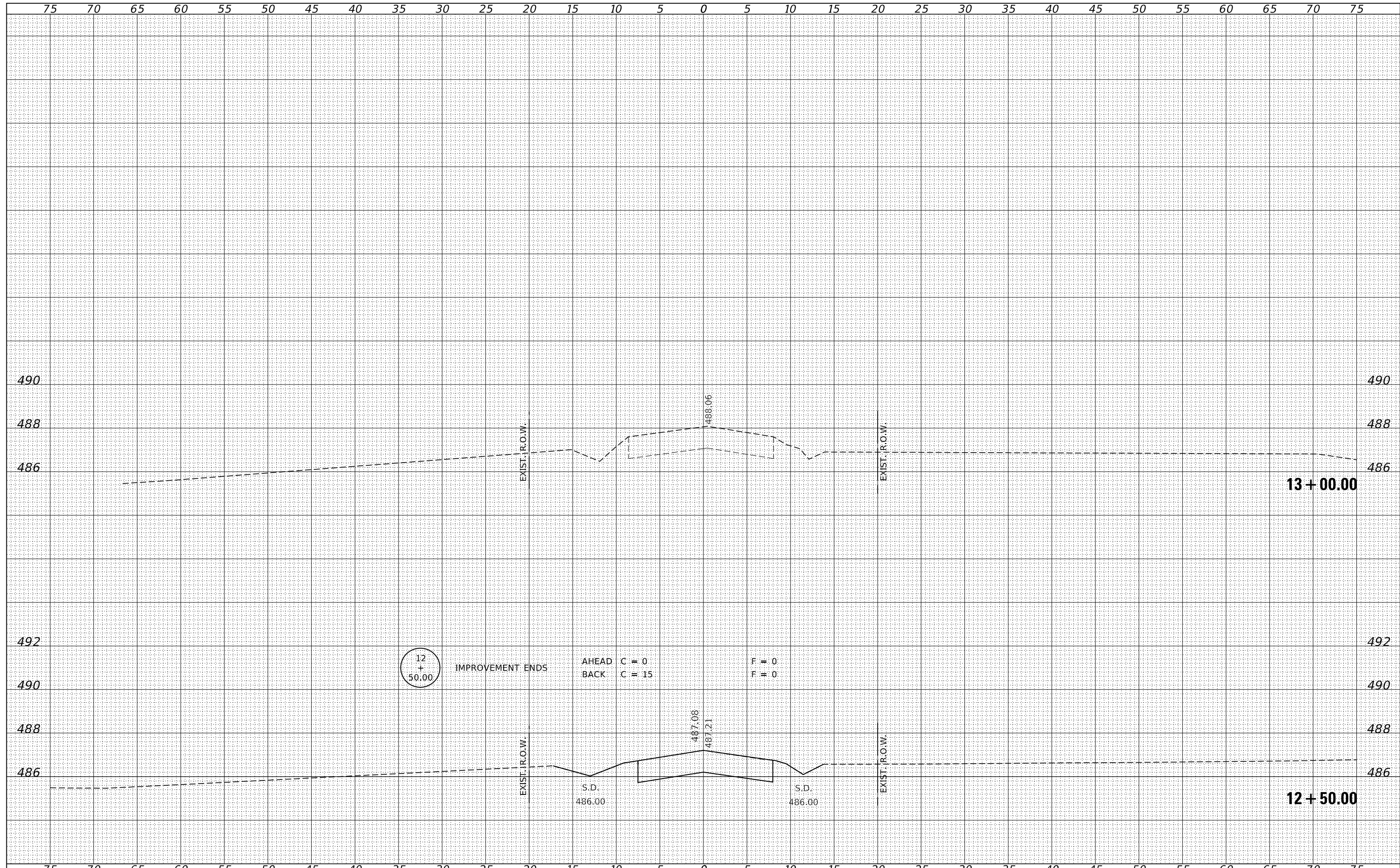
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1A	16-13112-00-BR	JEFFERSON	23	22
ROME ROAD DISTRICT			CONTRACT NO. 99615	

ILLINOIS FED. AID PROJECT C38B214)



DATE	
BY	
SURVEYED	
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TEMPLATE	
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FINAL SURVEY NOTE BOOK NO.	

DATE	
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TEMPLATE	
AREAS	
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ORIGINAL SURVEY NOTE BOOK NO.	



FILE NAME = 170104-shl-xssht.dgn
 DESIGNED - J.V.F.
 DRAWN - M.M.P.
 CHECKED - S.W.M.
 DATE - 12/10/19

USER NAME = mpaul
 PLOT SCALE = \$SCALES
 PLOT DATE = 12/10/2019

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STATE OF ILLINOIS
JEFFERSON COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS

SCALE: 5H:2V SHEET NO. 10 OF 10 SHEETS STA. 12+50.00 TO STA. 13+00.00

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1A	16-13112-00-BR	JEFFERSON	23	23
ROME ROAD DISTRICT			CONTRACT NO. 99615	
ILLINOIS FED. AID PROJECT C38B(214)				

