

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1351	16-00133-00-BR	FORD	24	1
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 87790	

INDEX OF SHEETS

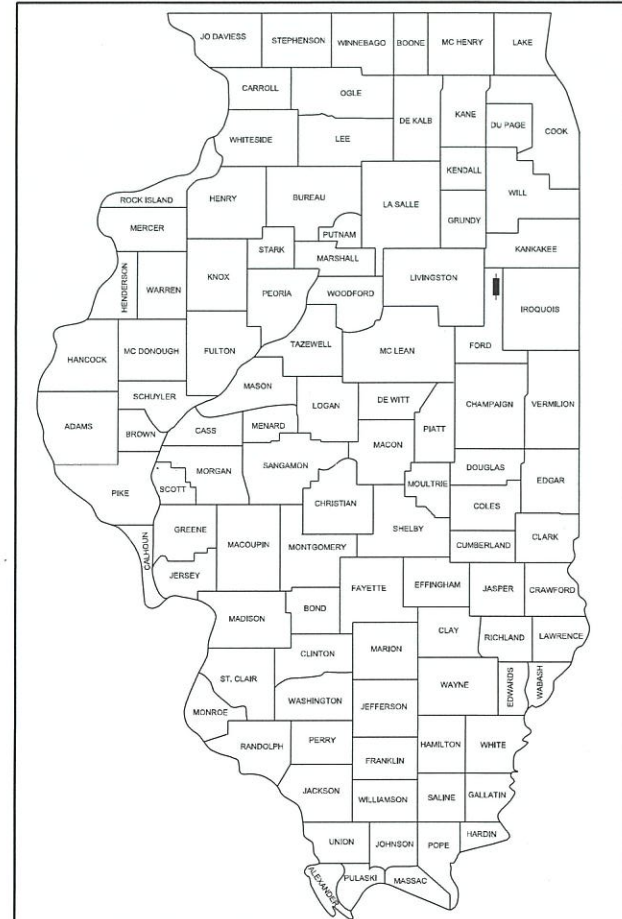
SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES AND GENERAL NOTES
3.	SCHEDULE OF QUANTITIES
4.	TYPICAL CROSS SECTIONS
5.	PLAN AND PROFILE
6.	SHOULDER & GUARDRAIL LAYOUT
7-18.	STRUCTURE PLANS
19-24.	STATION CROSS SECTIONS

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

**PROJECT 1NR2(411)
SECTION 16-00133-00-BR
FORD COUNTY
F.A.S. 1351 /C.H. 18 /BUCKINGHAM ROAD
PROPOSED STRUCTURE NO. 027-3460
C-93-004-23**

HIGHWAY STANDARDS:

515001-04	NAME PLATE FOR BRIDGES
630001-12	STEEL PLATE BEAM GUARDRAIL
630301-09	SHOULDER WIDENING FOR THE TYPE 1, (SPECIAL) GUARDRAIL TERMINALS
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
BLR 22-7	TYPICAL APPLICATION OF, FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS (TWO-LANE TWO WAY RURAL TRAFFIC) (ROAD CLOSED TO THRU TRAFFIC)
BLR 27-1	TRAFFIC BARRIER TERMINAL TYPE 5A



LOCATION OF SECTION INDICATED THUS: - [Symbol] -

ILLINOIS DEPARTMENT OF TRANSPORTATION

APPROVED April 6 2023

[Signature]
COUNTY ENGINEER

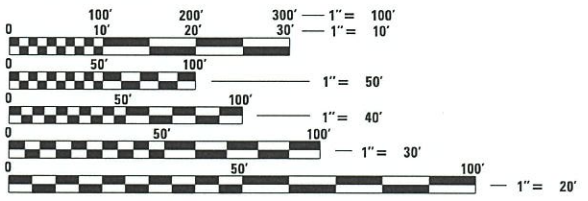
PASSED April 14 2023

[Signature]
DISTRICT THREE ENGINEER OF LOCAL ROADS & STREETS

Releasing For Bid Based on Limited Review April 14 2023

[Signature]
REGION TWO ENGINEER

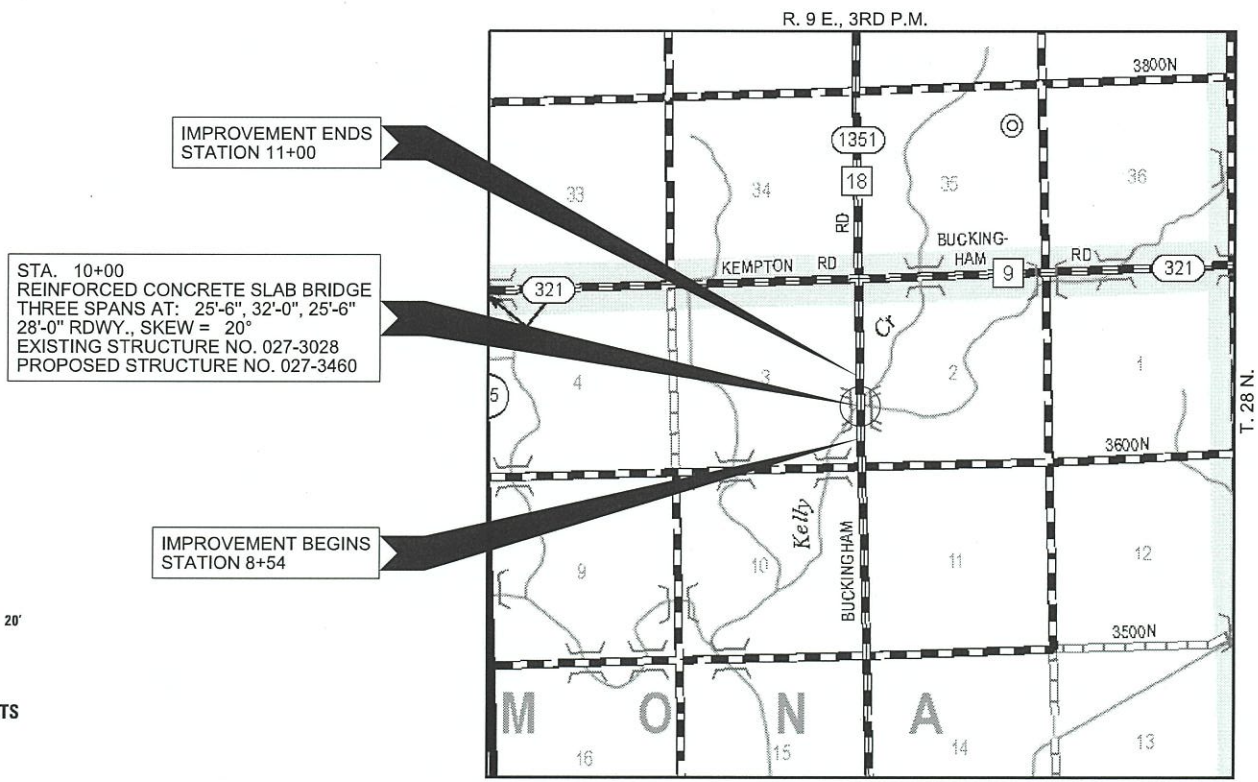
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



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: MINOR COLLECTOR (RURAL)
DESIGN SPEED: 30 MPH
DESIGN TRAFFIC: 100 ADT (2022)

CONTRACT NO. 87790 PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS



LOCATION MAP

APPROXIMATE SCALE: 0 1/2 MILE
NET LENGTH OF SECTION = 246 FEET = 0.05 MILES



WARNING

CALL JULIE TOLL FREE
1-800-892-0123

**CALL 811
BEFORE YOU DIG**

DIG NO: A2561641

DATE: 04/06/2023

ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION

EXPIRES: 11/30/2023

HAMPTON, LENZINI AND RENWICK, INC.
CIVIL ENGINEERS - STRUCTURAL ENGINEERS - LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
217.546.3400 www.hlrengineering.com

184.000959
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION

PROJECT NUMBER: 16.0454.130 DATE: 04/06/2023

SUMMARY OF QUANTITIES

CODE NO.	ITEM	CONSTRUCTION TYPE CODE 0010	
		UNIT	TOTAL QUANTITY
20200100	EARTH EXCAVATION	CU YD	360
20300100	CHANNEL EXCAVATION	CU YD	525
20700110	POROUS GRANULAR EMBANKMENT	TON	160
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	670
35101400	AGGREGATE BASE COURSE, TYPE B	TON	208
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	139
40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	684
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	64
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	38
40604050	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N50	TON	24
48101200	AGGREGATE SHOULDERS, TYPE B	TON	105
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	45.6
50300255	CONCRETE SUPERSTRUCTURE	CU YD	128.4
50300260	BRIDGE DECK GROOVING	SQ YD	268
50300280	CONCRETE ENCASMENT	CU YD	13.4
50300300	PROTECTIVE COAT	SQ YD	315
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	48,200
* 50900205	STEEL RAILING, TYPE S1	FOOT	170
51200957	FURNISHING METAL SHELL PILES 12" X 0.250"	FOOT	800
51202305	DRIVING PILES	FOOT	800
51203200	TEST PILE METAL SHELLS	EACH	2
51500100	NAME PLATES	EACH	1
542D0223	PIPE CULVERTS, CLASS D, TYPE 1 18"	FOOT	70
* 63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	3
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	2
63200310	GUARDRAIL REMOVAL	FOOT	246
67100100	MOBILIZATION	L SUM	1
* 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.2
* X6330725	STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS)	FOOT	25
X7011800	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1

* SPECIALTY ITEMS

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED JANUARY 1, 2022," THESE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
- THE LOCATION OF EXISTING GAS MAINS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATION 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.
- 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.
- THE CONTRACTOR SHALL CONSULT THE ENGINEER IN REGARD TO THE EXACT LENGTH OF PIPE CULVERTS AND PIPE DRAINS BEFORE ORDERING THESE ITEMS.
- THE REVISION NUMBER INDICATED FOR THE STANDARDS LISTED IN THE INDEX SHEETS SHALL BE USED IN THE CONSTRUCTION OF THIS SECTION.
- PIPE DRAINS AND PIPE CULVERTS SHALL BE PRECOATED IN ACCORDANCE WITH ARTICLE 1006.01(b) OF THE STANDARD SPECIFICATIONS.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES.

AGGREGATE BASE COURSE	2.05 TON / CU YD
AGGREGATE SURFACE COURSE	2.05 TON / CU YD
AGGREGATE SHOULDERS	2.05 TON / CU YD
HOT-MIX ASPHALT	112 LBS / SQ YD / INCH THICKNESS
BITUMINOUS MATERIALS (PRIME COAT)	0.25 POUNDS / SQ YD
BITUMINOUS MATERIALS (TACK COAT)	0.025 POUNDS / SQ YD
STONE DUMPED RIPRAP	1.75 TON / CU YD
TEMPORARY EROSION CONTROL SEEDING	100 LBS / ACRE
POROUS GRANULAR EMBANKMENT	1.5 TON / CU YD
- EARTH SURFACES SHALL BE SEEDED WITHIN 14 DAYS OF THE END OF ACTIVE DISTURBANCE. THE AREA TO BE SEEDED SHALL CONSIST OF ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION AND AS DIRECTED BY THE ENGINEER. ESTIMATED AREAS OF SEEDING: SEEDING, CLASS 2 (SPECIAL) = 0.2 ACRES
- THE CONTRACTOR HAS THE OPTION OF USING A VIBRATING SCREEN IN LIEU OF A FINISHING MACHINE FOR THE CONCRETE SUPERSTRUCTURE, AT THE APPROVAL OF THE ENGINEER.
- COMMITMENTS:
 - NONE

UTILITIES

FRONTIER COMMUNICATIONS
109 E. MARKET ST., 2ND FLOOR
BLOOMINGTON, IL

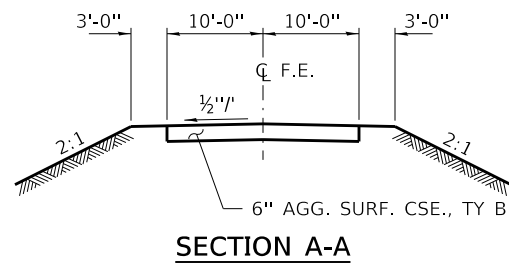
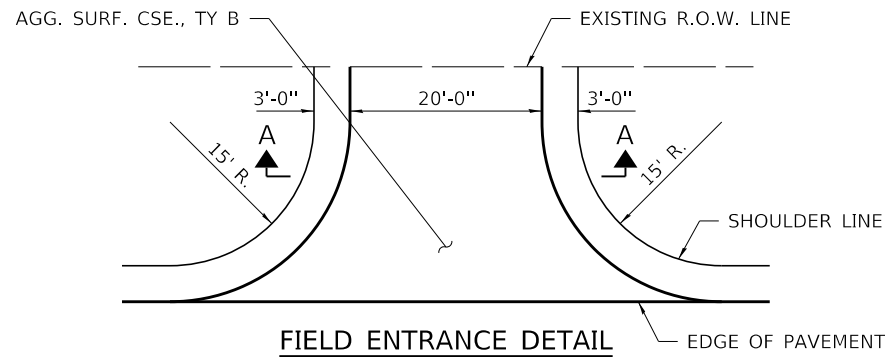
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HAMPTON, LENZINI AND RENWICK, INC. 2015 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE = 5/8"=1'	DRAWN - G.D.M.	REVISED -			1351	16-00133-00-BR	FORD	24	2
ILLINOIS PROFESSIONAL DESIGN FIRM L3 LICENSE NO. 0214	PLOT DATE = 4/8/2023	CHECKED - S.W.M.	REVISED -			C.H. 18 / BUCKINGHAM ROAD		CONTRACT NO. 87790		
		DATE - 04/08/2023	REVISED -			SCALE:	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	C-93-004-23 ILLINOIS FED. AID PROJECT INR2(111)

GUARDRAIL SCHEDULE					
LOCATION	TRAFFIC BARRIER TERMINAL, TYPE 5A	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	GUARDRAIL REMOVAL	TERMINAL MARKER - DIRECT APPLIED	STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS)
CH 18 / BUCKINGHAM ROAD	63100075	63100167	63200310	72501000	X6330725
SEE SHEET 6 FOR LAYOUT	EACH	EACH	FOOT	EACH	FOOT
LT. STA. 8+88.20 TO LT. STA. 10+83.17	2	1	110	2	25
RT. STA. 8+98.39 TO RT. STA. 9+51.45	1	1	136	2	
TOTAL	3	2	246	4	25

ROADWAY SCHEDULE							
LOCATION	AGGREGATE BASE COURSE, TYPE B	AGGREGATE SURFACE COURSE, TYPE B	BITUMINOUS MATERIALS (PRIME COAT)	BITUMINOUS MATERIALS (TACK COAT)	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N50	AGGREGATE SHOULDERS, TYPE B
CH 18 / BUCKINGHAM ROAD	35101400	40200800	40600275	40600290	40603080	40604050	48101200
	TON	TON	POUND	POUND	TON	TON	TON
STA. 9+00.00 TO STA. 9+56.90	104	-	342	32	19	12	56
STA. 10+43.10 TO STA. 11+00.00	104	-	342	32	19	12	49
ENTRANCES	-	139	-	-	-	-	-
TOTAL	208	139	684	64	38	24	105

EARTHWORK SCHEDULE							
LOCATION	EARTH EXCAVATION	CHANNEL EXCAVATION	SHRINKAGE FACTOR	PERCENT USED	EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT REQUIRED	EARTHWORK BALANCE
	CU.YD.	CU.YD.			CU.YD.	CU.YD.	CU.YD.
CH 18 / BUCKINGHAM ROAD							
STA. 9+00.00 TO STA. 9+56.90	108		25.00%	100.00%	81	94	-13
STA. 9+56.90 TO STA. 10+43.10		525	25.00%	70.00%	276		276
STA. 10+43.10 TO STA. 11+00.00	252		25.00%	100.00%	189	217	-28
TOTAL	359	525			546	311	235
USE	360	525					235

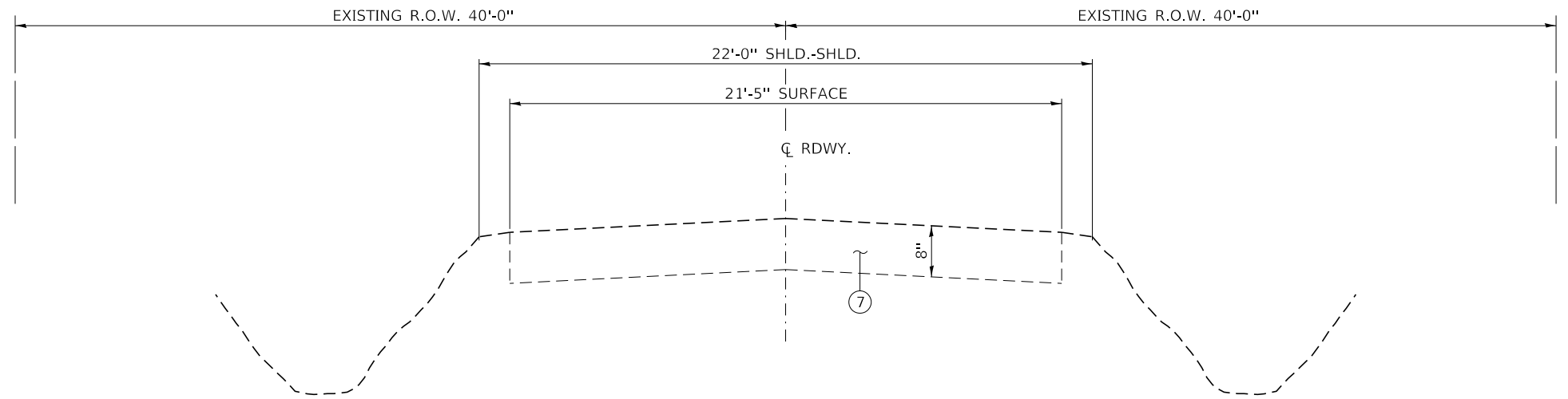
WASTE EXCAVATION 235 CU YDS



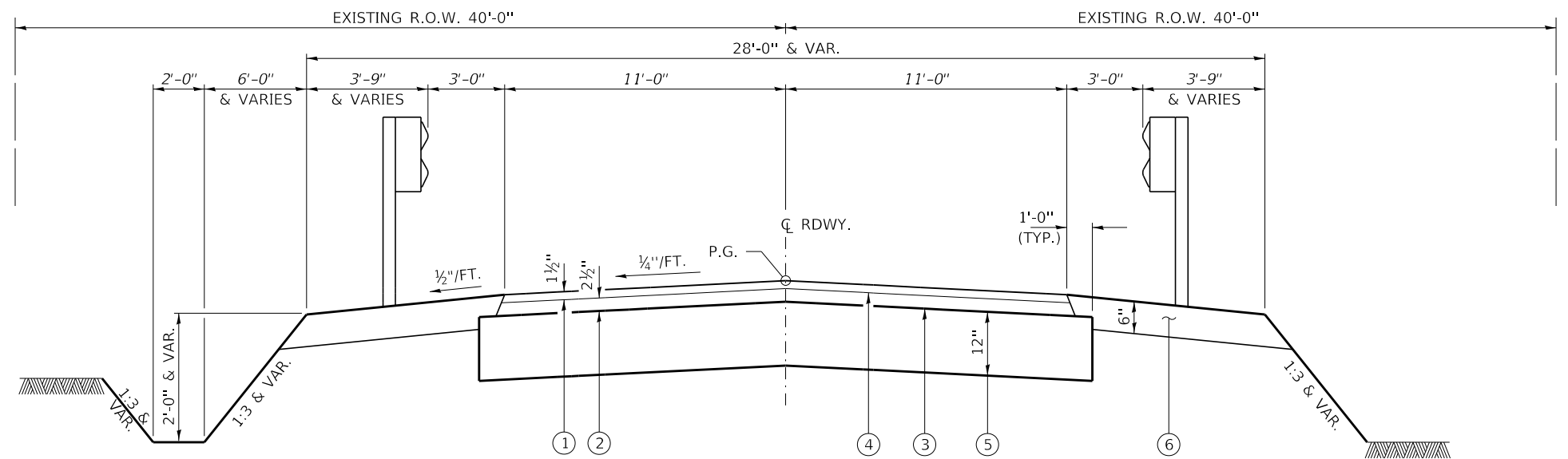
LEGEND

- ① HMA SURFACE COURSE, MIX C, IL-9.5, N50 (1½" THICKNESS)
- ② HMA BINDER COURSE, IL-19.0, N50 (2½" THICKNESS)
- ③ BITUMINOUS MATERIALS (PRIME COAT)
- ④ BITUMINOUS MATERIALS (TACK COAT)
- ⑤ AGGREGATE BASE COURSE, TYPE B (12")
- ⑥ AGGREGATE SHOULDERS, TYPE B (6")
- ⑦ EXISTING HMA SURFACE (8") ON AGGREGATE BASE (8")

HOT-MIX ASPHALT MIXTURE REQUIREMENTS		
LOCATIONS(S)	CH 18 / BUCKINGHAM	CH 18 / BUCKINGHAM
MIXTURE USE(S):	HOT-MIX ASPHALT SURFACE COURSE	HOT-MIX ASPHALT BINDER COURSE
PG:	PG 64-22	PG 64-22
DESIGN AIR VOIDS:	4% @ 50 Gyr.	4% @ 50 Gyr.
MIXTURE COMPOSITION: (MIXTURE GRADATION)	IL 9.5	IL 19.0
FRICITION AGGREGATE:	MIXTURE C	NONE
DENSITY TEST METHOD	CORES	CORES
MIXTURE WEIGHT:	112 LBS \ SY \ INCH	112 LBS \ SY \ INCH
QUALITY MANAGEMENT PROGRAM	QC/QA	QC/QA



EXISTING TYPICAL CROSS SECTION
STA. 8+50 TO 11+50



SUGGESTED CUT SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

SUGGESTED FILL SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

PROPOSED TYPICAL CROSS SECTION
STA. 9+00 TO 11+00
* STA. 8+54 TO 11+00 (SHOULDER & TRAFFIC BARRIERS ONLY)

FILE NAME = 160454-shit-tysec@ons.dgn	USER NAME = gmetcaff	DESIGNED - S.W.M.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3088 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT SCALE = \$SCALE\$	DRAWN - G.D.M.	REVISED -
	PLOT DATE = 4/8/2023	CHECKED - S.W.M.	REVISED -
		DATE - 04/06/2023	REVISED -

STATE OF ILLINOIS
FORD COUNTY HIGHWAY DEPARTMENT

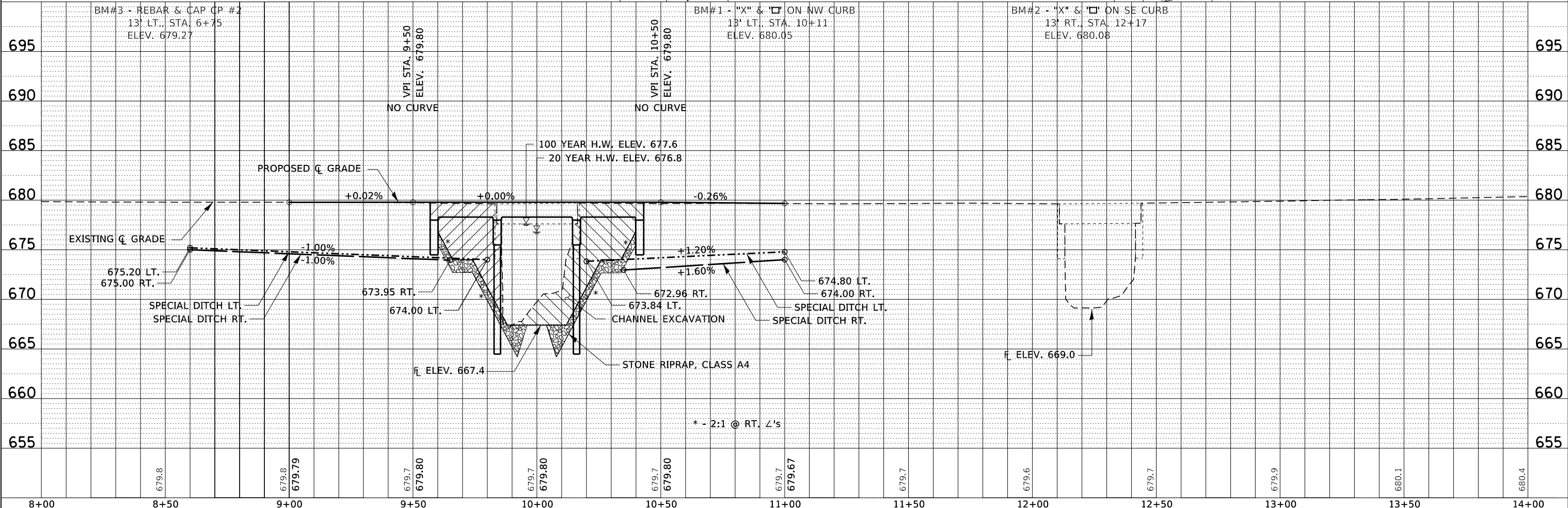
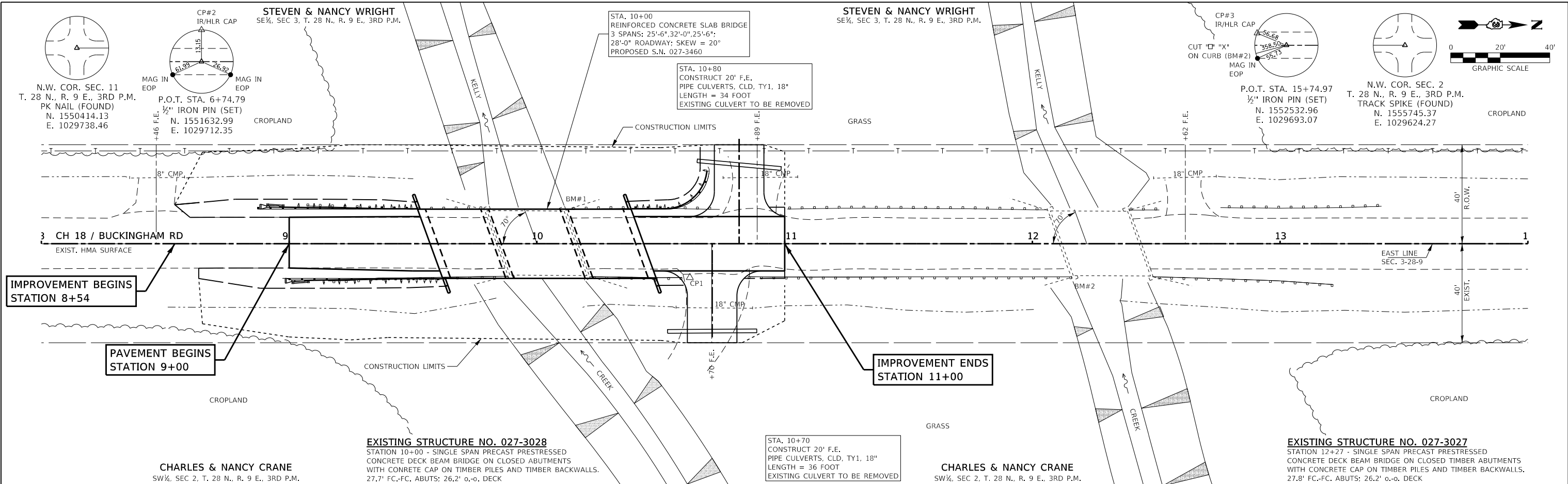
TYPICAL CROSS SECTIONS

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

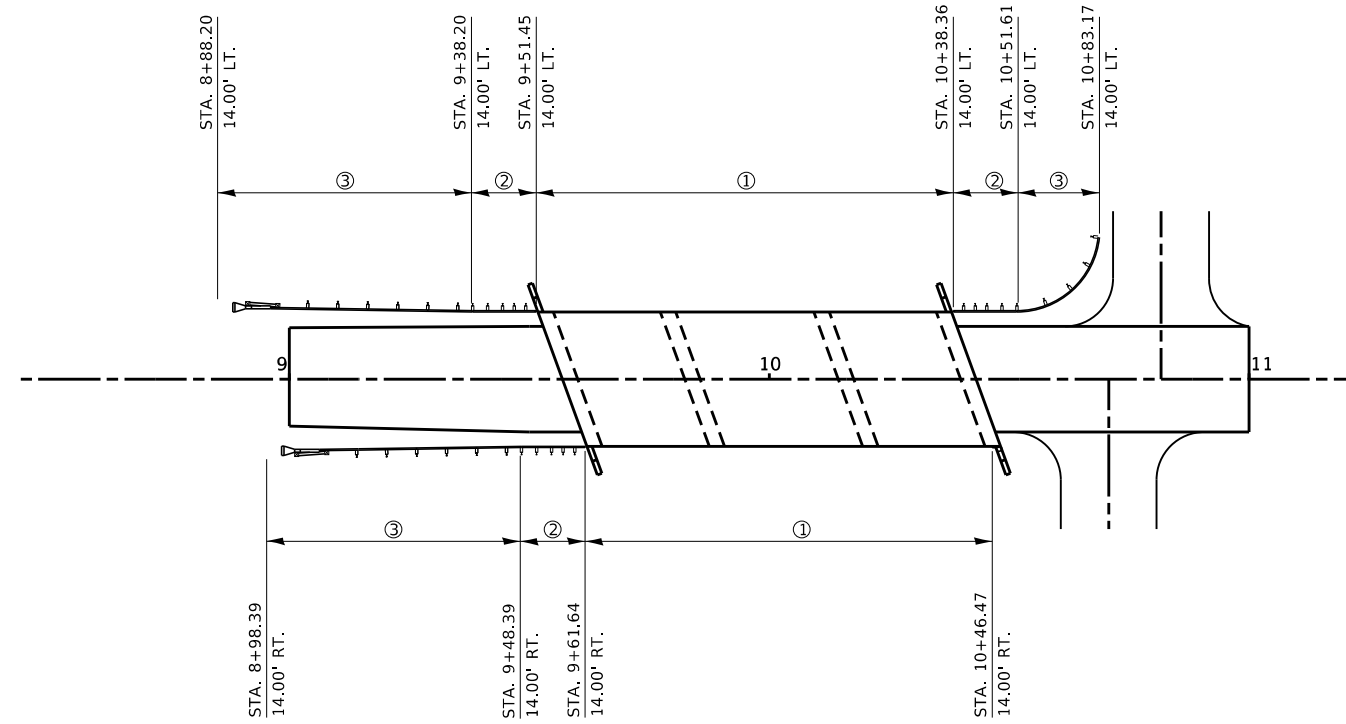
F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1351	16-00133-00-BR	FORD	24	4
C.H. 18 / BUCKINGHAM ROAD		CONTRACT NO. 87790		
C-93-004-23	ILLINOIS	FED. AID PROJECT 1NR2(411)		

DATE	
BY	
PLAN	SURVEYED
	NOTED
	CHECKED
	FILED
	NO.

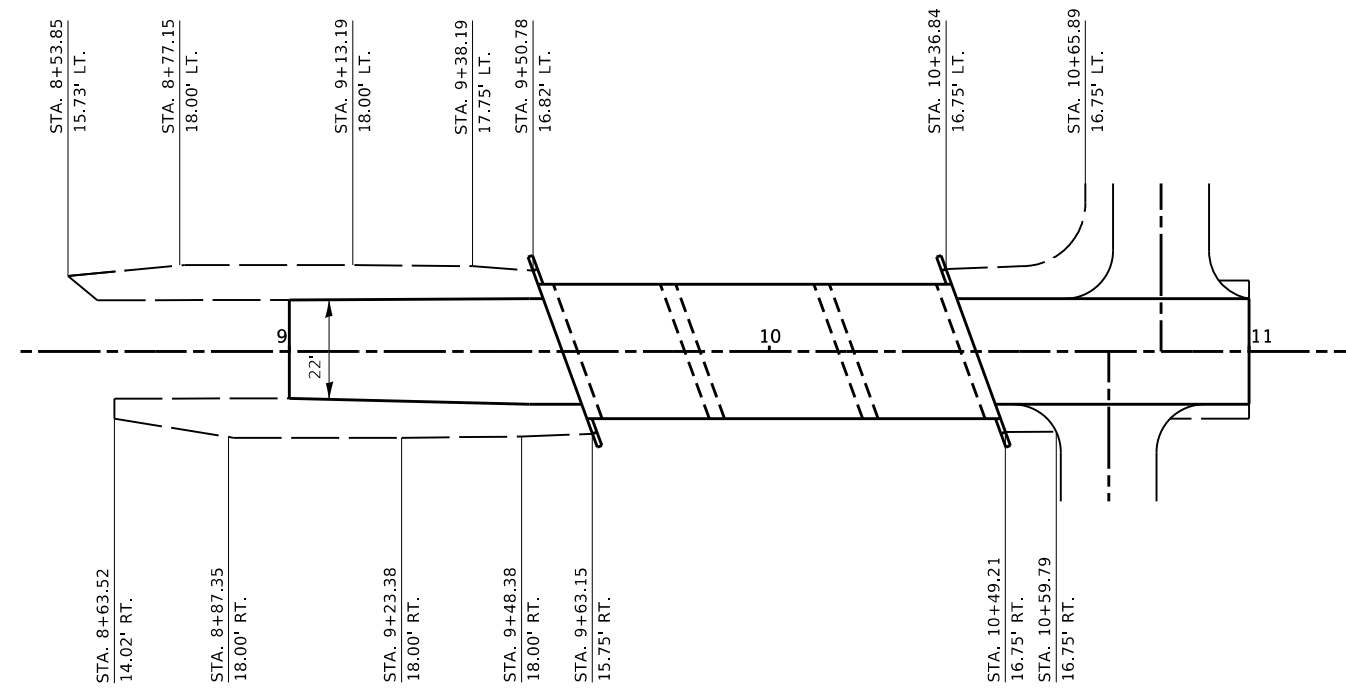
DATE	
BY	
PROFILE	SURVEYED
	NOTED
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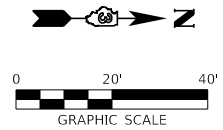
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HAMPTON, LENZINI AND RENWICK, INC.	PLOT SCALE = \$SCALE\$	DRAWN - T.W.K.	REVISED -			1351	16-00133-00-BR	FORD	24	5	
3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	CHECKED - J.W.F.	DATE - 04/06/2023	REVISED -			C.H. 18 / BUCKINGHAM ROAD CONTRACT NO. 87790					
PLOT DATE = 4/6/2023	DATE - 04/06/2023	REVISED -	C-93-004-23 ILLINOIS FED. AID PROJECT 1NR2(411)								



GUARDRAIL LAYOUT



SHOULDER LAYOUT

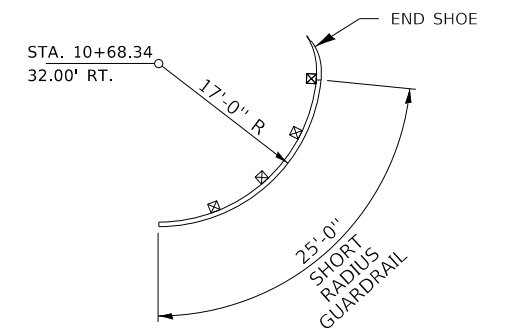


NOTE:
CONSTRUCT VERTICAL TRANSITION
FOR GUARDRAIL HEIGHT FROM TBT 5A
TO TBT T1 SPL TAN IN 25 FT.

NOTES:

1. THE END SHOE SHALL BE CONSTRUCTED AT THE TERMINI OF THE SHORT RADIUS GUARDRAIL INSTEAD OF THE TYPE 2.
2. SEE SHEET 13 OF 24 FOR END OF BRIDGE RAIL TREATMENTS.
3. SEE GUARDRAIL SCHEDULE ON SHEET 3 OF 24.

- ① STEEL RAILING, TYPE S-1
- ② TBT TY 5A
- ③ SPBGR TYPE A, 6 FT. POSTS
- ④ SPBGR (SHORT RADIUS)



GUARDRAIL DETAIL

NO SCALE
NORTHEAST BRIDGE DEPARTURE

FILE NAME = 160454-shrt-std-grd.dgn	USER NAME = gmetcaif	DESIGNED - L.A.P.	REVISED -	STATE OF ILLINOIS FORD COUNTY HIGHWAY DEPARTMENT	GUARDRAIL AND SHOULDER LAYOUT		F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3088 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959		DRAWN - G.D.M.	REVISED -				1351	16-00132-00-BR	FORD	24	6
PLOT SCALE = \$SCALE\$		CHECKED - S.W.M.	REVISED -		C.H. 18 / BUCKINGHAM ROAD		CONTRACT NO. 87790				
PLOT DATE = 4/8/2023		DATE - 04/06/2023	REVISED -		SCALE:	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	C-93-004-23	ILLINOIS	FED. AID PROJECT 1NR2(411)

BENCHMARK: Chiseled "X" on NE of Curb, 13' Lt., Sta. 10+11, Elev. 680.05

EXISTING STRUCTURE NO. 027-3028: Sta. 10+00 single span precast prestressed concrete deck beam bridge, closed timber pile abutments, and wingwalls. 27.7 FC.-FC. abuts., 26.2' o-o deck.

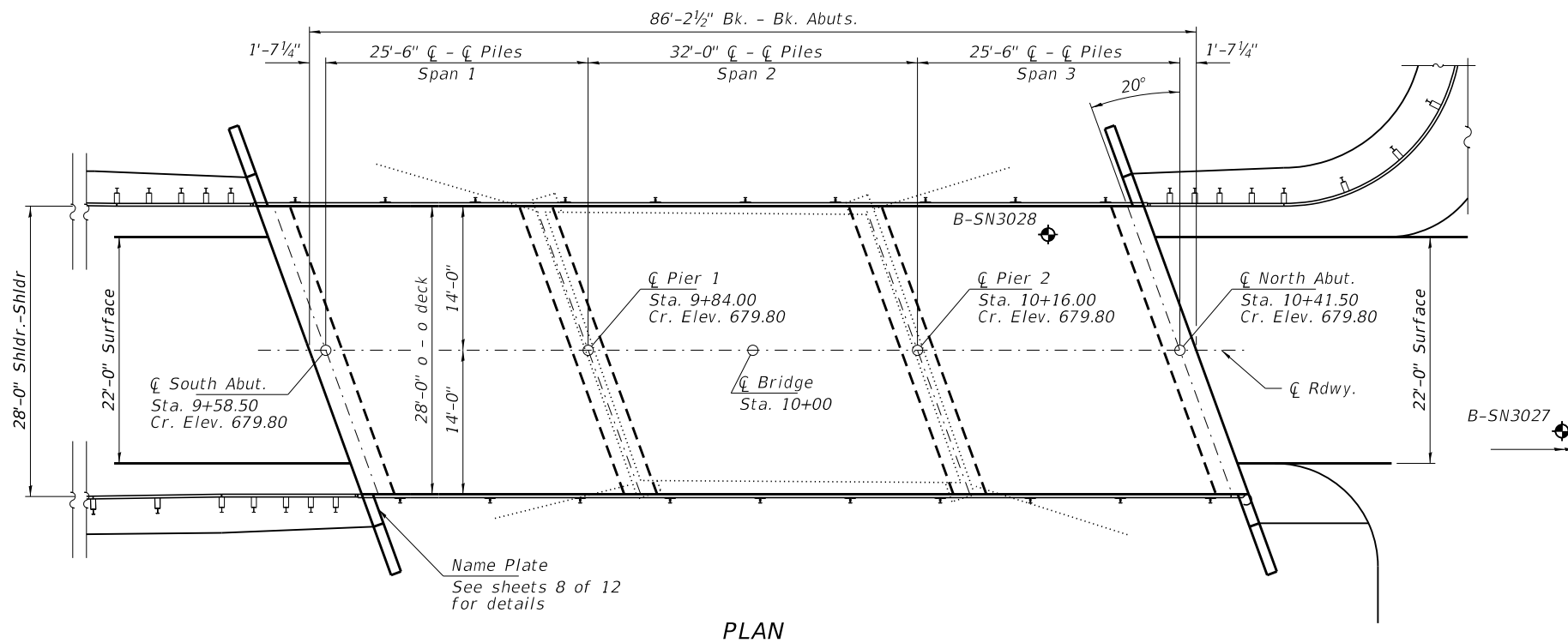
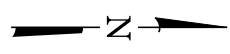
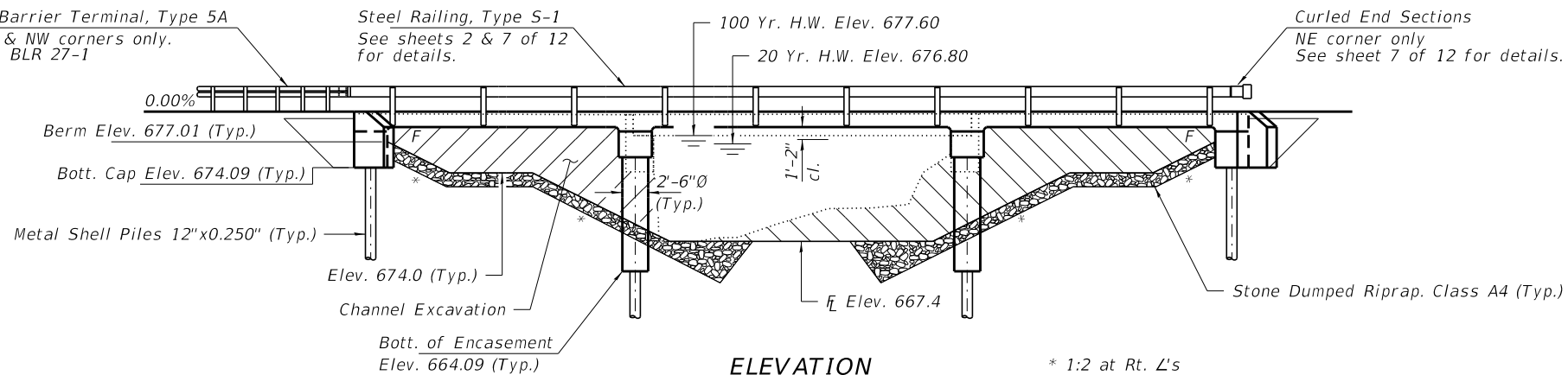
Structure closed to traffic during construction.

No Salvage - See Special Provisions

Traffic Barrier Terminal, Type 5A
SE, SW, & NW corners only.
See Std. BLR 27-1

Steel Railing, Type S-1
See sheets 2 & 7 of 12
for details.

Curled End Sections
NE corner only
See sheet 7 of 12 for details.



DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition with all interims.

LOADING HL-93

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

DESIGN STRESSES

FIELD UNITS

f'c = 5,000 psi (Superstructure)
f'c = 3,500 psi (Substructure)
fy = 60,000 psi (Reinf.)
fy = 50,000 psi (Metal Shell Pile) (M270 Gr. 50)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.076g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.131g
Soil Site Class = C

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 04/16/2021
ILLINOIS STRUCTURAL ENGINEER NO. 081-6064



Expires 11-30-2024

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 South Abutment and Pier 1 or approved by the Engineer before ordering the remainder of piles.
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 Contractor shall make allowance for the deflection of forms, shrinkage, and settlement of falsework, in addition to allowance for dead load deflection. Forms for deck slab shall be removed prior to placement of bridge approach slab.
Protective Coat shall be applied to the top surface and the sides of the concrete deck and wingwalls.
Reinforcement bars designated (E) shall be epoxy coated.
Excavation required to construct the Abutments and Piers shall be included in the cost of Concrete Structures. No additional compensation will be allowed for Structure Excavation or Cofferdam Excavation.
Bridge Deck Grooving shall be completed on the bridge deck.
Pavement rollers shall not be allowed on bridge deck grooving.
All construction joints shall be bonded.

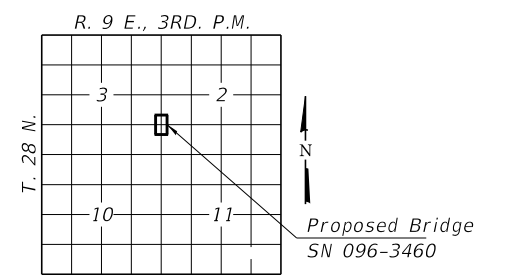
INDEX OF STRUCTURE SHEETS

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4. Top of Slab Elevations
5. Superstructure
6. Superstructure Details
7. Steel Railing, Type S-1
8. Abutments
9. Piers
10. Metal Shell Pile Details
- 11-12. Borings

KELLY CREEK
BUILT 202_ BY
FORD COUNTY
SEC. 16-00133-00-BR
FORD COUNTY
STR. NO. 027-3460
LOADING HL-93

NAME PLATE

See Std. 515001



LOCATION SKETCH

**GENERAL PLAN & ELEVATION
C.H. 18 / BUCKINGHAM ROAD**

**SECTION 16-00133-00-BR
FORD COUNTY
STATION 10+00
STRUCTURE NO. 027-3460**

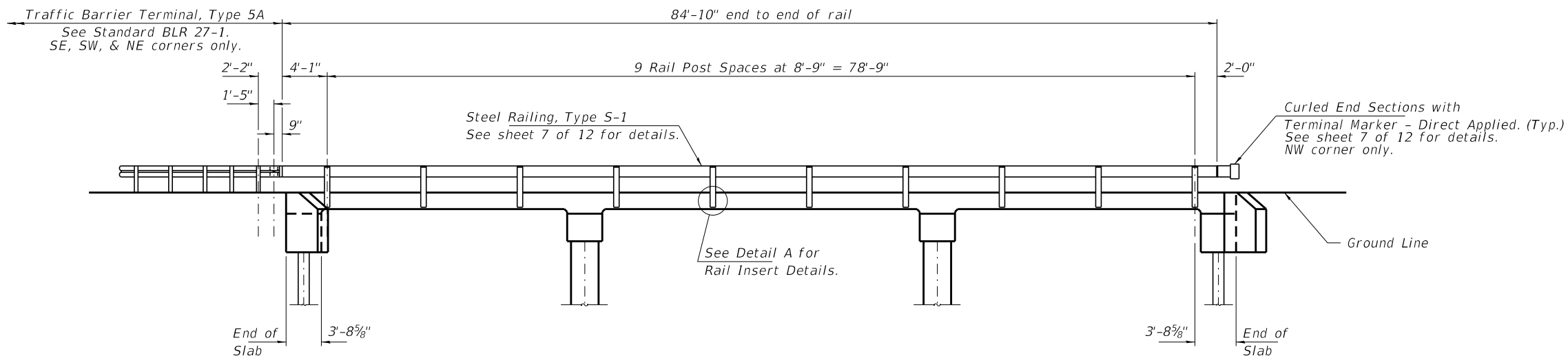
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HAMPTON, LENZINI AND RENWICK, INC. 3035 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT SCALE = \$SCALE\$	CHECKED - S.W.M.	REVISED -
	PLOT DATE = 4/6/2023	DRAWN - D.M.F.	REVISED -
		CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
FORD COUNTY HIGHWAY DEPARTMENT

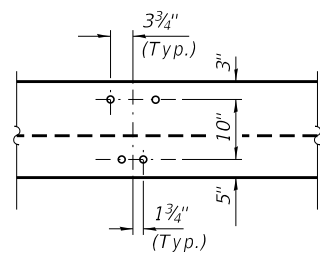
GENERAL PLAN AND ELEVATION
STRUCTURE NO. 027-3460

SHEET NO. 1 OF 12 SHEETS

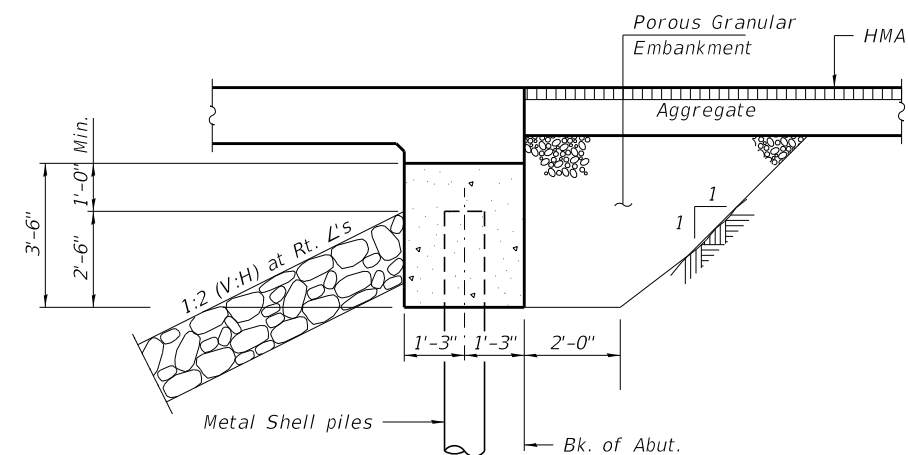
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1351	16-00133-00-BR	FORD	24	7
CH. 18/BUCKINGHAM ROAD		CONTRACT NO. 87790		
C-93-004-23		ILLINOIS FED. AID PROJECT INR(2411)		



RAILING ELEVATION



DETAIL A



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

DESIGN SCOUR ELEVATION TABLE

Event/Limit State	Design Scour Elevations (ft.)				Item
	N. Abut.	Pier 1	Pier 2	S. Abut.	
Q100	674.5	658.0	658.0	674.5	113
Design	674.5	658.0	658.0	674.5	5

WATERWAY INFORMATION

Flood Event		Discharge (cfs)		Opening Sq. Ft.		Natural H.W.E.	Head - Ft.		Headwater El.	
		Exist.	Prop.	Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Drainage Area = 9.1 Sq. Mi. Existing Low Grade Elev. 679.7 @ Sta. 11+00 Proposed Low Grade Elev. 679.7 @ Sta. 11+00										
10	Main Channel			190	330	676.1	0.1	0.3	676.2	676.4
	Relief Struct.	1400	1400	180	47					
	Total			370	377					
20	Main Channel			210	370	676.8	0.4	0.4	677.2	677.2
	Relief Struct.	1760	1760	200	49					
	Total			410	419					
100	Main Channel			230	430	677.6	1.1	1.0	678.7	678.6
	Relief Struct.	2630	2630	220	50					
	Total			450	480					
200	Main Channel			240	450	677.9	1.3	1.0	679.2	678.9
	Relief Struct.	3030	3030	220	50					
	Total			460	500					
500/ Overtopping	Main Channel			240	460	378.2	1.2	1.0	679.4	679.2
	Relief Struct.	3560	3560	220	50					
	Total			460	510					

10 Year Velocity through Existing Bridge = 4.3 fps 10 Year Velocity through Proposed Bridge = 3.6 fps

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			525
Porous Granular Embankment	Ton			160
Stone Dumped Riprap, Class A4	Ton			670
Protective Coat	Sq. Yd.	297	18	315
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.			45.6
Concrete Superstructure	Cu. Yd.			128.4
Concrete Encasement	Cu. Yd.			18.3
Bridge Deck Grooving	Sq. Yd.			268
Reinforcement Bars, Epoxy Coated	Pound	42,130	6,070	48,200
Steel Railing, Type S-1	Foot	170		170
Furnishing Metal Shell Piles 12"x0.250"	Foot		800	800
Driving Piles	Foot		800	800
Test Pile Metal Shells	Each		2	2
Name Plates	Each	1		1
Terminal Marker - Direct Applied	Each			4

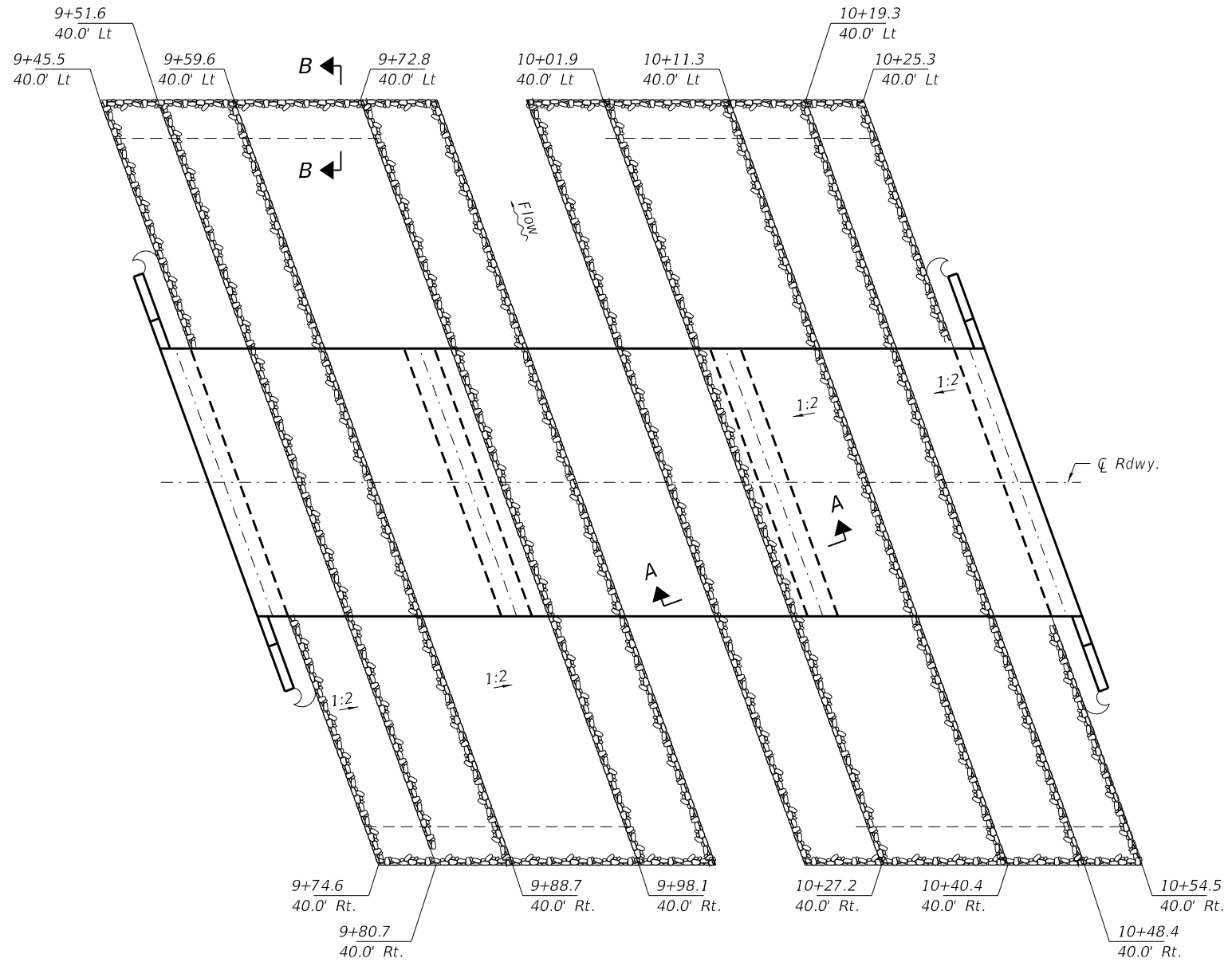
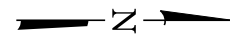
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HAMPTON, LENZINI AND RENWICK, INC. 3035 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT SCALE = \$SCALE\$	CHECKED - S.W.M.	REVISED -
PLOT DATE = 4/6/2023		DRAWN - D.M.F.	REVISED -
		CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
FORD COUNTY HIGHWAY DEPARTMENT

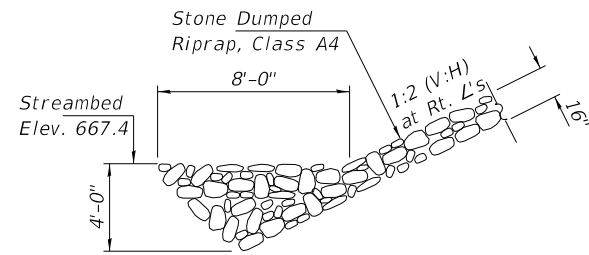
GENERAL DETAILS
STRUCTURE NO. 027-3460

SHEET NO. 2 OF 12 SHEETS

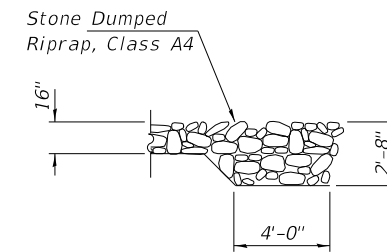
F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1351	16-00133-00-BR	FORD	24	8
CH. 18/BUCKINGHAM ROAD		CONTRACT NO. 87790		
C-93-004-23	ILLINOIS	FED. AID PROJECT INR(2411)		



RIPRAP PLAN



SECTION A-A



SECTION B-B

FILE NAME = 160454-shi-bridge.dgn
 USER NAME = gmetcalf
 DESIGNED - S.M.S.
 CHECKED - S.W.M.
 DRAWN - D.M.F.
 CHECKED - S.W.M.
 PLOT SCALE = \$SCALE\$
 PLOT DATE = 4/6/2023

DESIGNED - S.M.S.
 CHECKED - S.W.M.
 DRAWN - D.M.F.
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 PLOT SCALE = \$SCALE\$
 PLOT DATE = 4/6/2023

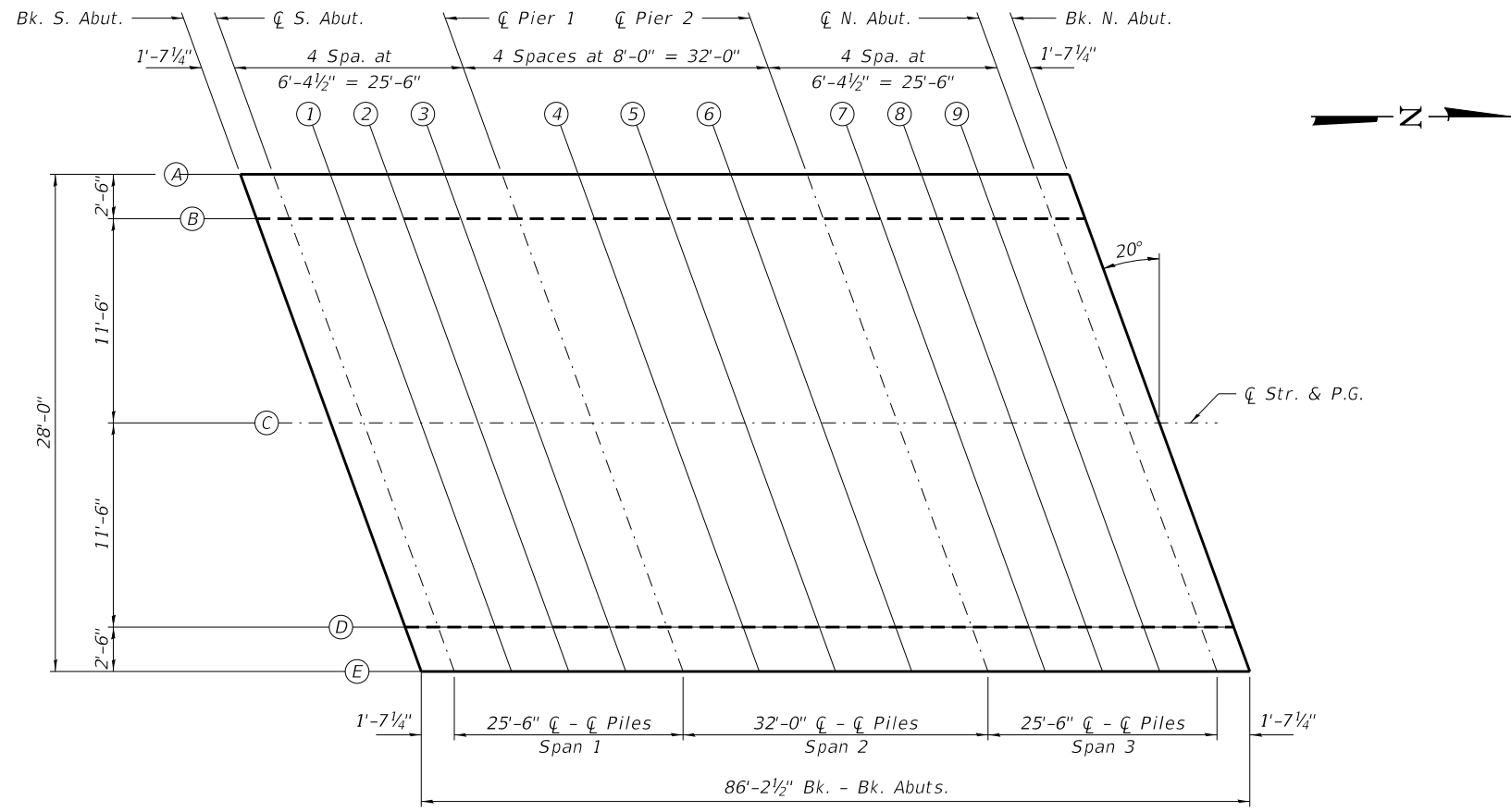
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 PLOT DATE = 4/6/2023

DESIGNED - S.M.S.
 CHECKED - S.W.M.
 DRAWN - D.M.F.
 CHECKED - S.W.M.
 PLOT SCALE = \$SCALE\$
 PLOT DATE = 4/6/2023

STATE OF ILLINOIS
 FORD COUNTY HIGHWAY DEPARTMENT

RIPRAP LAYOUT
 STRUCTURE NO. 027-3460
 SHEET NO. 3 OF 12 SHEETS

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1351	16-00133-00-BR	FORD	24	9
CH. 18/BUCKINGHAM ROAD		CONTRACT NO. 87790		
C-93-004-23	ILLINOIS	FED. AID PROJECT INR(411)		



PLAN

LOCATION		BK. W.	CL W.	SPAN 1			CL	SPAN 2			CL	SPAN 3			CL E.	BK. E.
LINE	T.	ABUT.	ABUT.	1	2	3	PIER 1	4	5	6	PIER 2	7	8	9	ABUT.	ABUT.
-14	ADJ.	679.800	679.800	679.815	679.817	679.808	679.800	679.814	679.824	679.814	679.800	679.808	679.817	679.815	679.800	679.800
*Bott. of Slab		678.009	678.009	678.023	678.026	678.016	678.009	678.022	678.032	678.022	678.009	678.016	678.026	678.023	678.009	678.009

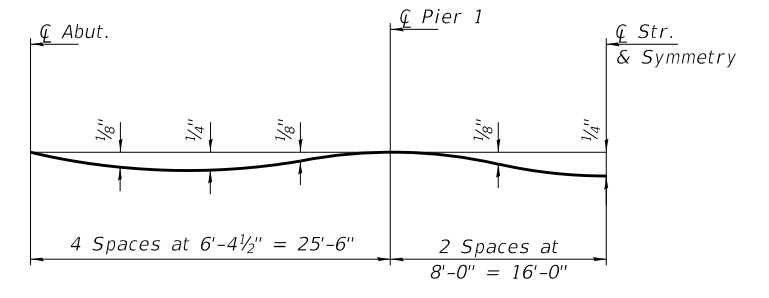
LOCATION		BK. W.	CL W.	SPAN 1			CL	SPAN 2			CL	SPAN 3			CL E.	BK. E.
LINE	T.	ABUT.	ABUT.	1	2	3	PIER 1	4	5	6	PIER 2	7	8	9	ABUT.	ABUT.
-11.5	ADJ.	679.800	679.800	679.815	679.817	679.808	679.800	679.814	679.824	679.814	679.800	679.808	679.817	679.815	679.800	679.800
Bott. of Slab		678.061	678.061	678.075	678.078	678.068	678.061	678.074	678.084	678.074	678.061	678.068	678.078	678.075	678.061	678.061

LOCATION		BK. W.	CL W.	SPAN 1			CL	SPAN 2			CL	SPAN 3			CL E.	BK. E.
LINE	T.	ABUT.	ABUT.	1	2	3	PIER 1	4	5	6	PIER 2	7	8	9	ABUT.	ABUT.
0	ADJ.	679.800	679.800	679.815	679.817	679.808	679.800	679.814	679.824	679.814	679.800	679.808	679.817	679.815	679.800	679.800
Bott. of Slab		678.550	678.550	678.565	678.567	678.558	678.550	678.564	678.574	678.564	678.550	678.558	678.567	678.565	678.550	678.550

LOCATION		BK. W.	CL W.	SPAN 1			CL	SPAN 2			CL	SPAN 3			CL E.	BK. E.
LINE	T.	ABUT.	ABUT.	1	2	3	PIER 1	4	5	6	PIER 2	7	8	9	ABUT.	ABUT.
11.5	ADJ.	679.800	679.800	679.815	679.817	679.808	679.800	679.814	679.824	679.814	679.800	679.808	679.817	679.815	679.800	679.800
Bott. of Slab		678.061	678.061	678.075	678.078	678.068	678.061	678.074	678.084	678.074	678.061	678.068	678.078	678.075	678.061	678.061

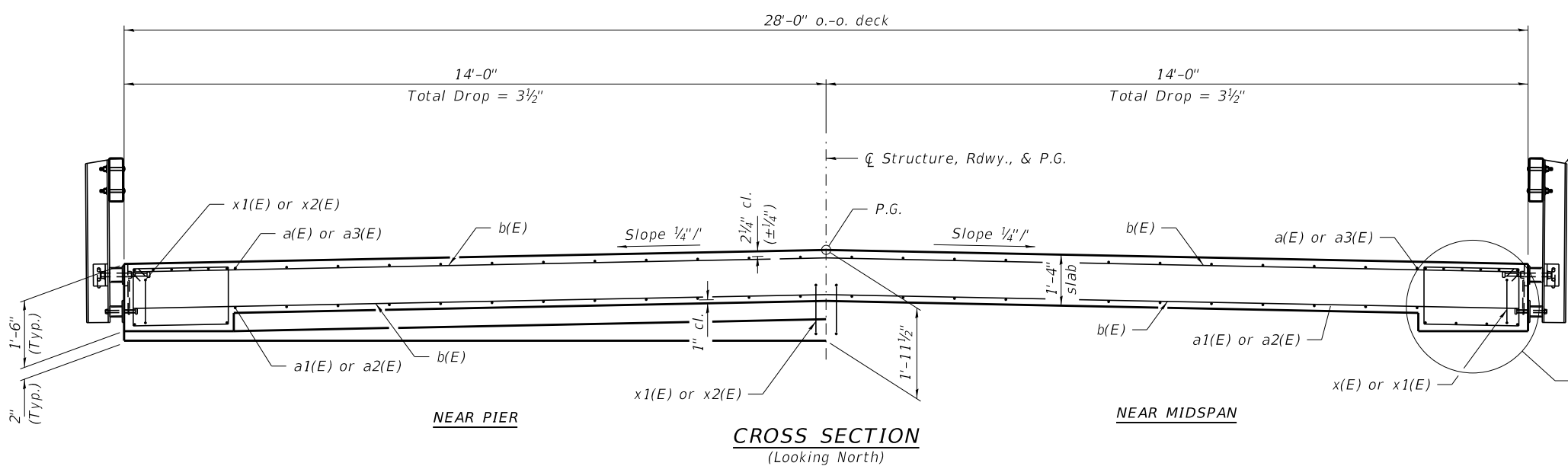
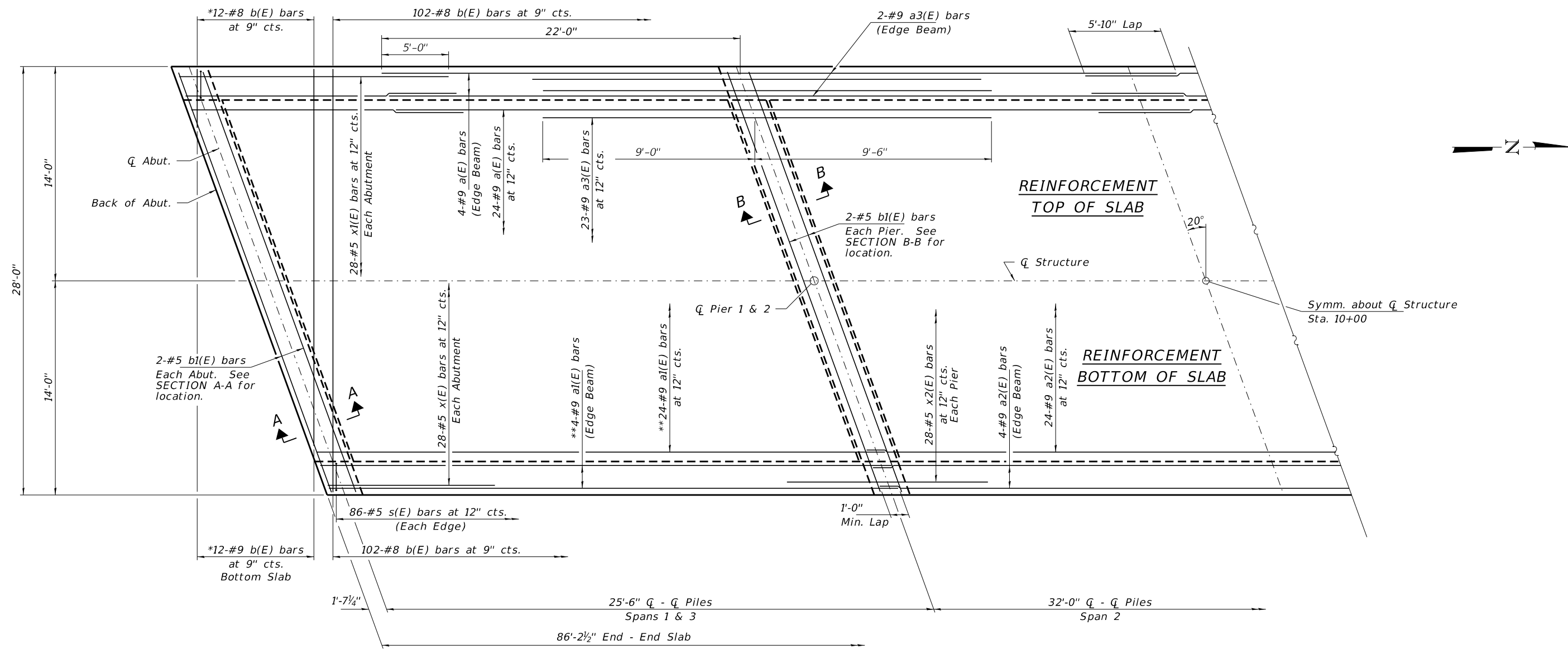
LOCATION		BK. W.	CL W.	SPAN 1			CL	SPAN 2			CL	SPAN 3			CL E.	BK. E.
LINE	T.	ABUT.	ABUT.	1	2	3	PIER 1	4	5	6	PIER 2	7	8	9	ABUT.	ABUT.
14	ADJ.	679.800	679.800	679.815	679.817	679.808	679.800	679.814	679.824	679.814	679.800	679.808	679.817	679.815	679.800	679.800
*Bott. of Slab		678.009	678.009	678.023	678.026	678.016	678.009	678.022	678.032	678.022	678.009	678.016	678.026	678.023	678.009	678.009

T. - Theoretical elevation at top of slab
 Adj. - T adjusted for dead load deflection
 * Bottom of slab elevation equals bottom of edge beam



DEAD LOAD DEFLECTION DIAGRAM
 (Includes weight of concrete only.)

Notes:
 The deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown.
 The Contractor shall make allowance for the deflection of forms, shrinkage and settlement of falsework in addition to allowance for dead load deflection.

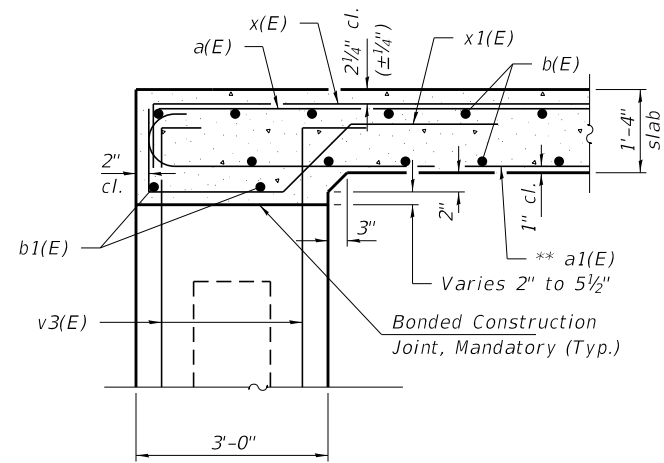


Steel Railing, Type S-1
See sheets 2 & 7 of 12 for details.

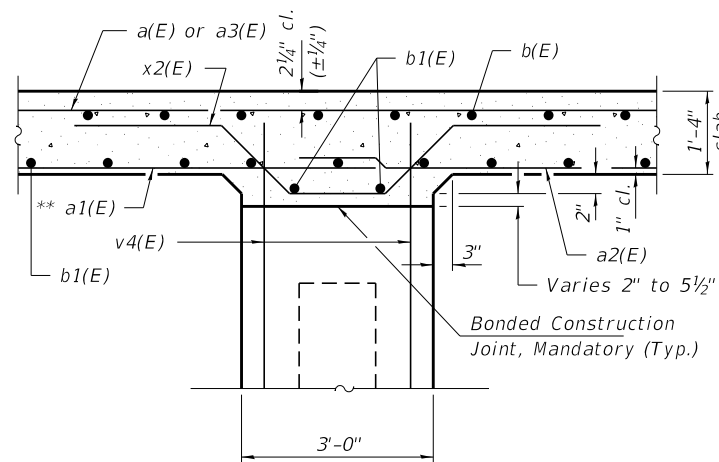
Notes:
See sheets 6 of 12 for Superstructure Details and Bill of Material.
See sheet 6 of 12 for SECTION A-A, SECTION B-B and DETAIL A.
* Order b(E) and b(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.
** a1(E) bars may be rotated to provide clearance for hooked ends.

MIN. BAR LAP
#9 = 5'-10"

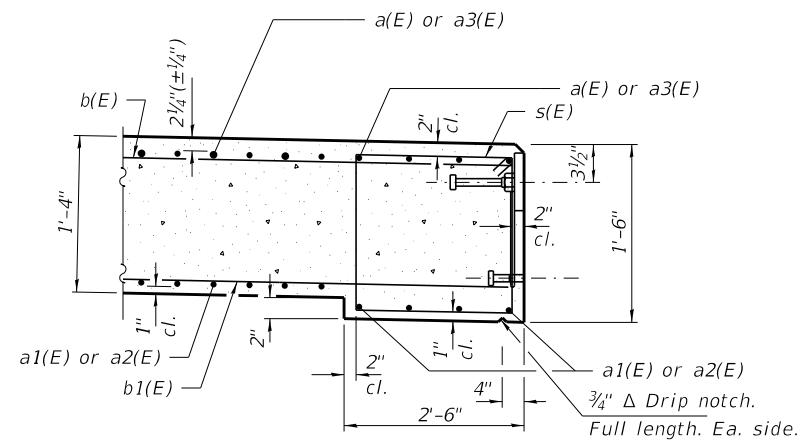
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HAMPTON, LENZINI AND RENWICK, INC. 3035 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. CORP. 184.000959	PLOT SCALE = \$SCALE\$	CHECKED - S.W.M.	REVISED -			1351	16-00133-00-BR	FORD	24	11
PLOT DATE = 4/6/2023	DRAWN - D.M.F.	CHECKED - S.W.M.	REVISED -			CH. 18/BUCKINGHAM ROAD		CONTRACT NO. 87790		
						C-93-004-23		ILLINOIS FED. AID PROJECT INR2(411)		



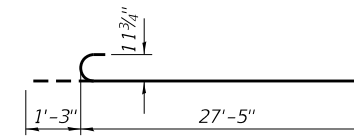
SECTION A-A



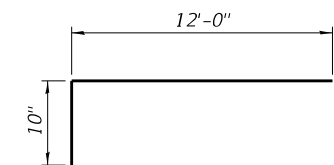
SECTION B-B



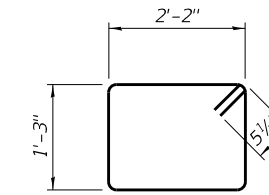
DETAIL A



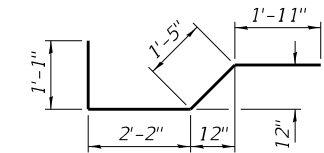
BAR a1(E)



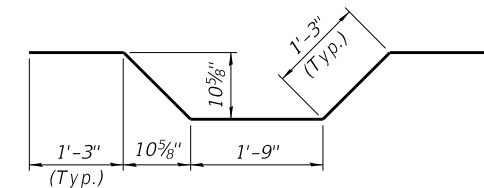
BAR x(E)



BAR s(E)



BAR x1(E)



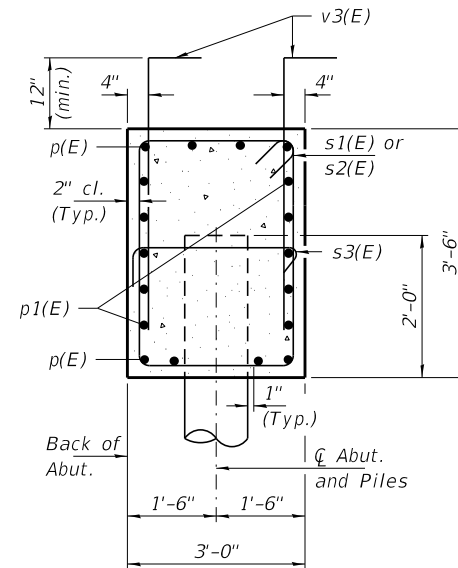
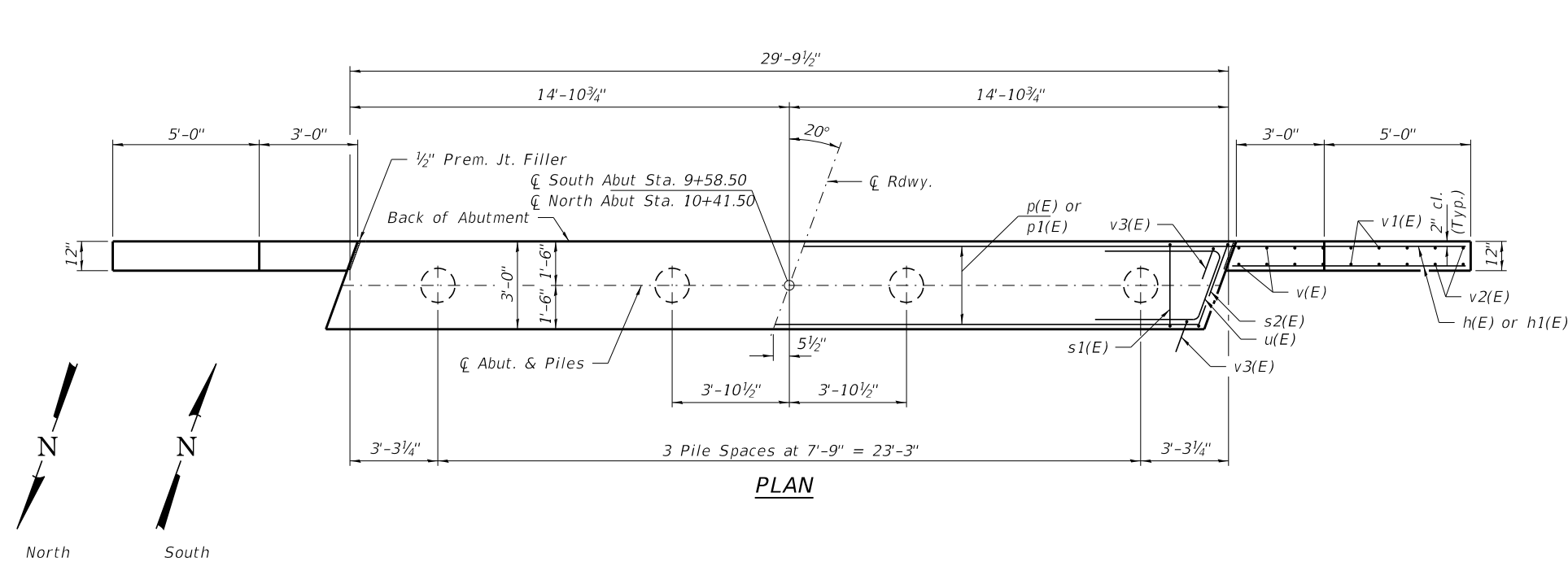
BAR x2(E)

**SUPERSTRUCTURE
BILL OF MATERIAL**

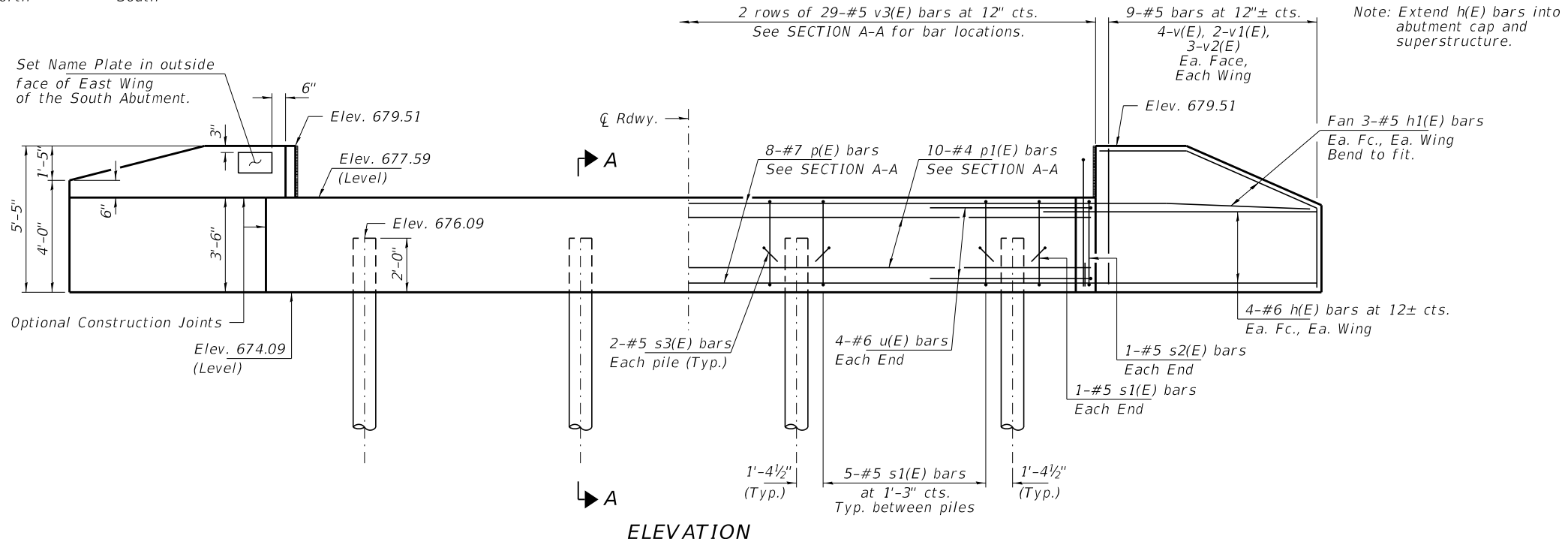
BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	64	#9	40'-11"	—
a1(E)	64	#9	28'-8"	C
a2(E)	32	#9	33'-0"	—
a3(E)	54	#9	18'-6"	—
b(E)	228	#8	27'-8"	—
b1(E)	8	#5	29'-6"	—
s(E)	172	#5	7'-9"	□
x(E)	56	#5	12'-10"	┌
x1(E)	56	#5	6'-7"	┌
x2(E)	56	#5	6'-9"	┌
Protective Coat			Sq. Yd.	297
Bridge Deck Grooving			Sq. Yd.	268
Concrete Superstructures			Cu. Yd.	128.4
Reinforcement Bars, Epoxy Coated			Pound	42,150

Notes:
See sheets 8 of 12 for v3(E) placement
See sheet 9 of 12 v4(E) placement

** a1(E) bars may be rotated to provide clearance for hooked ends.



SECTION A-A
Dimensions at right angles to abutment.



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

BILL OF MATERIAL - 2 ABUTS.

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	32	#6	9'-3"	—
h1(E)	24	#5	7'-9"	—
p(E)	16	#7	29'-5"	—
p1(E)	20	#4	29'-5"	—
s1(E)	34	#5	12'-7"	□
s2(E)	4	#5	12'-11"	□
s3(E)	16	#5	3'-8"	┌┐
u(E)	16	#6	11'-4"	┌┐
v(E)	32	#5	5'-0"	—
v1(E)	16	#5	4'-5"	—
v2(E)	24	#5	3'-7"	—
v3(E)	116	#5	4'-10"	—
Concrete Structures			Cu. Yd.	29.0
Protective Coat			Sq. Yd.	18
Reinf. Bars, Epoxy Coated			Pound	3,740
Furnishing Steel Piles HP10x42			Foot	280
Driving Piles			Foot	280
Test Pile Metal Shells			Each	1
Name Plates			Each	1

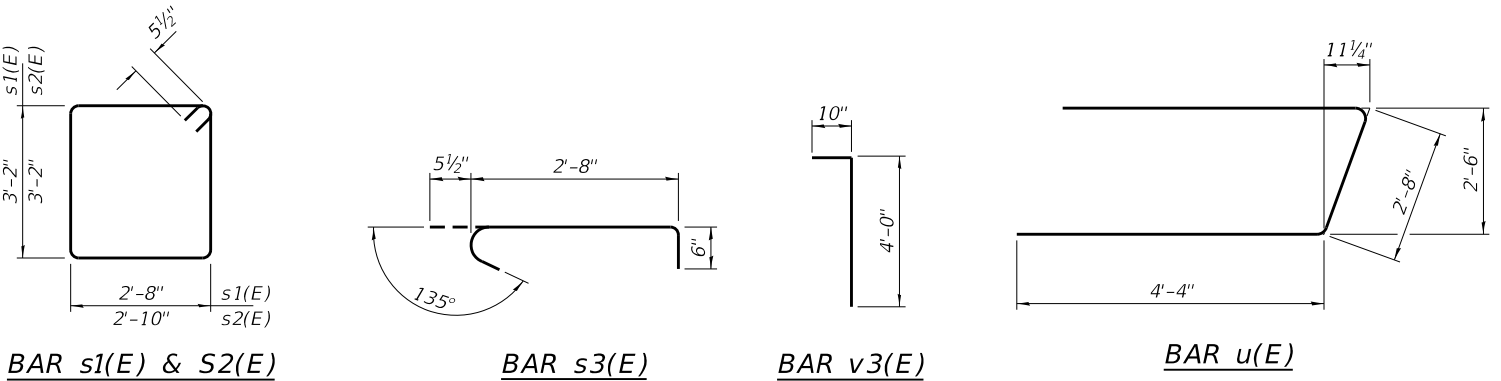
Notes:
For details of piles, see sheet 9 of 12.
All edges shall have Standard 3/4" Chamfer

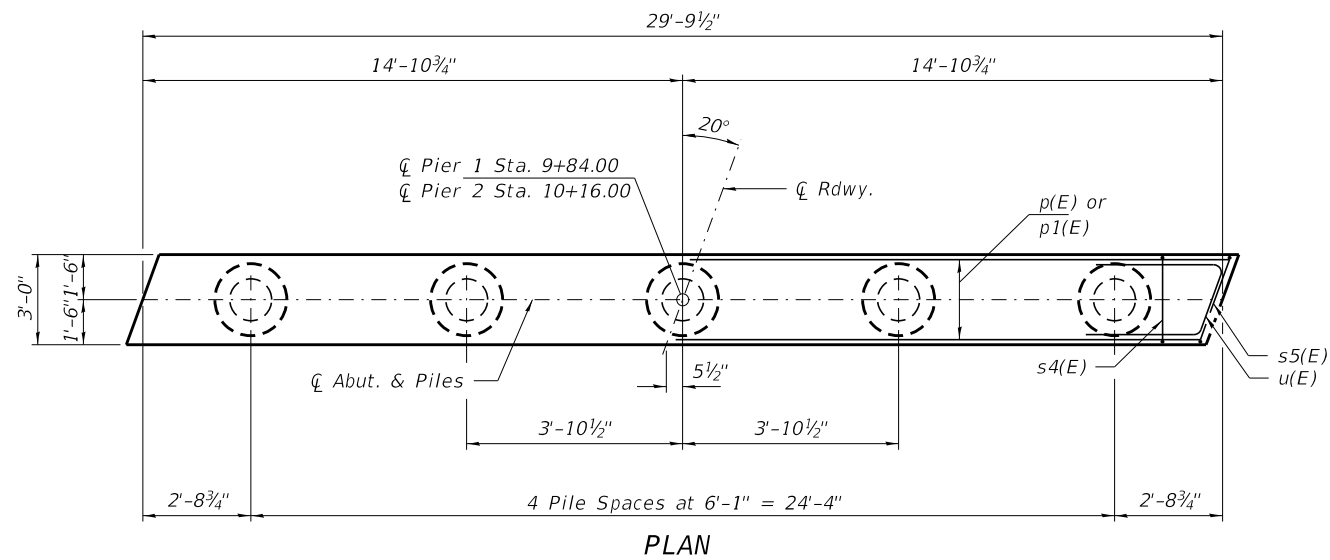
PILE DATA

Type: Metal Shell Piles 12"x0.250"
Nominal Required Bearing: 151 Kips/Pile
Factored Resistance Available: 83 Kips/Pile
Est. Length: 40 Ft/Pile
No. Production Piles: 7
No. Test Piles: 1

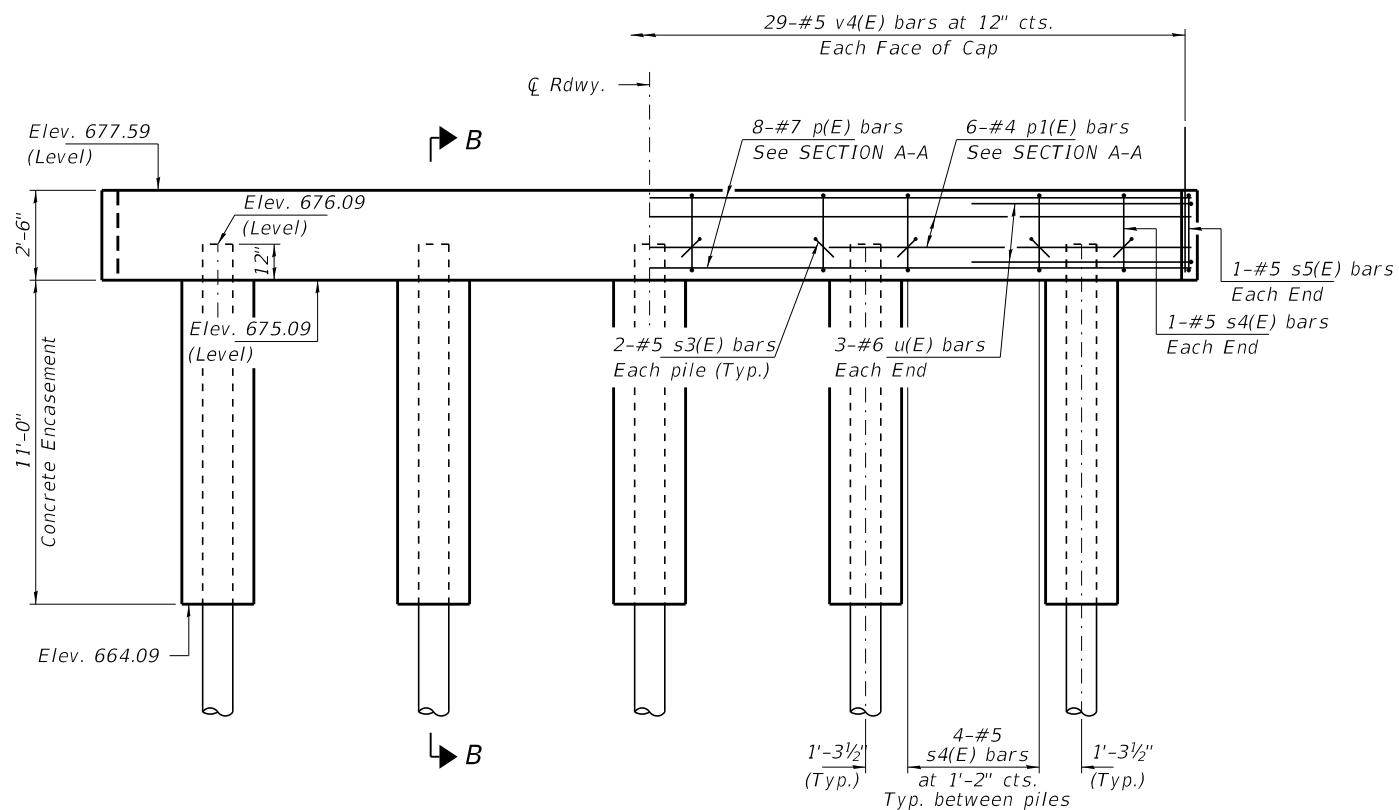
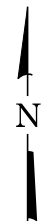
Notes: One test pile shall be driven in a permanent location at the South Abutment.

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





PLAN



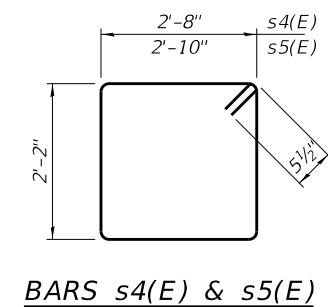
ELEVATION
(Looking North)

PILE DATA

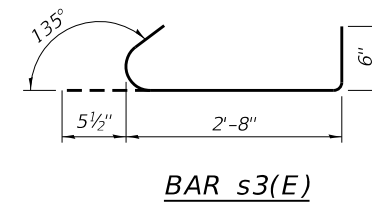
Type: Metal Shell Piles 12"x0.250"
 Nominal Required Bearing: 355 Kips/Pile
 Factored Resistance Available: 195 Kips/Pile
 Est. Length: 50 Ft/Pile
 No. Production Piles: 9
 No. Test Piles: 1

Notes: One test pile shall be driven in a permanent location at Pier 2.

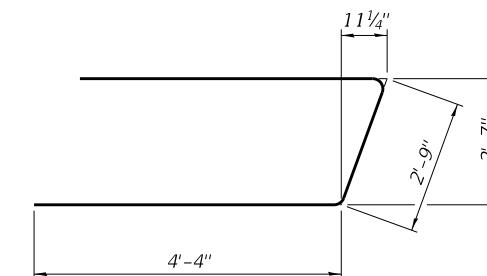
The test pile shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.



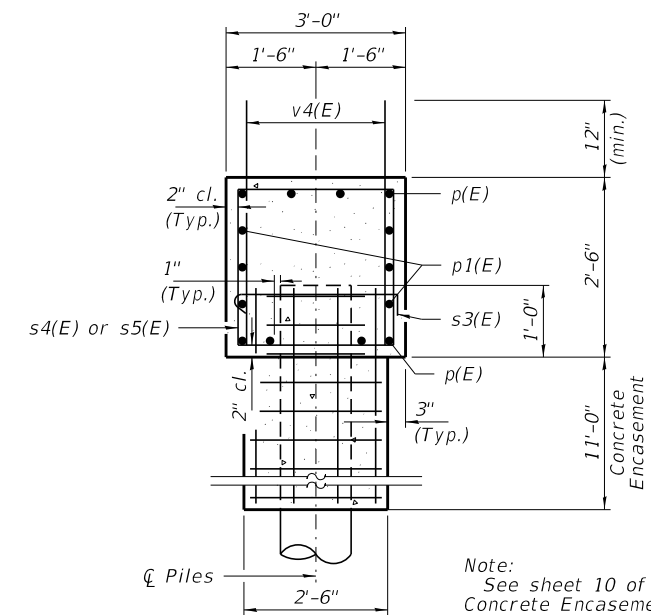
BARS s4(E) & s5(E)



BAR s3(E)



BAR u(E)



SECTION B-B
Dimensions at right L's to Pier.

Note: See sheet 10 of 12 for Concrete Encasement reinforcement.

BILL OF MATERIAL - 2 PIERS

BAR	NO.	SIZE	LENGTH	SHAPE
p(E)	16	#7	29'-5"	—
p1(E)	12	#4	29'-5"	—
s3(E)	20	#5	3'-8"	┌
s4(E)	36	#5	10'-7"	□
s5(E)	4	#5	10'-11"	□
u(E)	12	#6	11'-5"	—
v4(E)	116	#5	3'-4"	—
Concrete Structures			Cu. Yd.	16.6
Concrete Encasement			Cu. Yd.	13.4
Reinf. Bars, Epoxy Coated			Pound	2,330
Metal Shell Piles 12"x0.250"			Foot	450
Driving Piles			Foot	450
Test Pile Metal Shells			Each	1

Note: For details of piles, see sheet 9 of 12. All edges shall have Standard 3/4" Chamfer

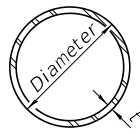
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PLOT DATE = 4/6/2023		DRAWN - D.M.F.	REVISED -
		CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
FORD COUNTY HIGHWAY DEPARTMENT

PIERS
STRUCTURE NO. 027-3460

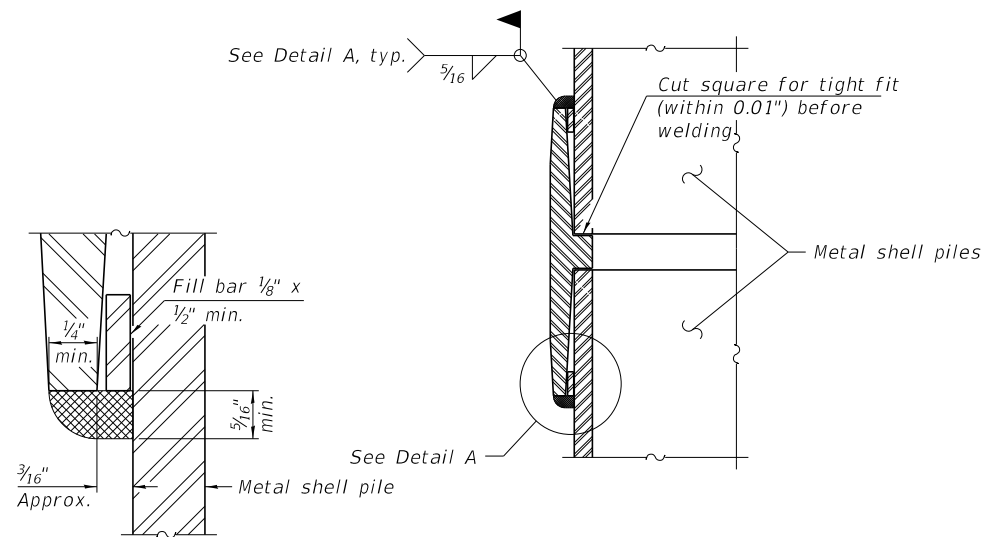
SHEET NO. 9 OF 12 SHEETS

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1351	16-00133-00-BR	FORD	24	15
CH. 18/BUCKINGHAM ROAD		CONTRACT NO. 87790		
C-93-004-23	ILLINOIS	FED. AID PROJECT INR(2411)		

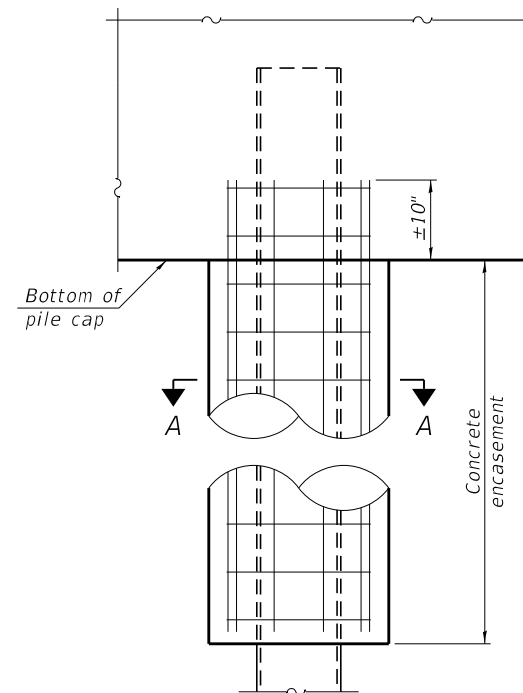


METAL SHELL PILE TABLE

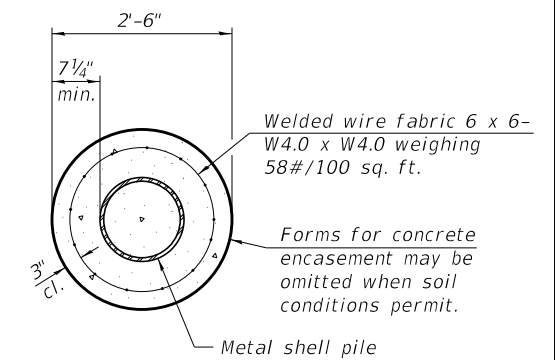
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. ³ /ft.)
PP12	0.250"	31.40	0.0267
PP14	0.250"	36.75	0.0368
PP14	0.312"	45.65	0.0361
PP16	0.312"	52.32	0.0478
PP16	0.375"	62.64	0.0470



DETAIL A

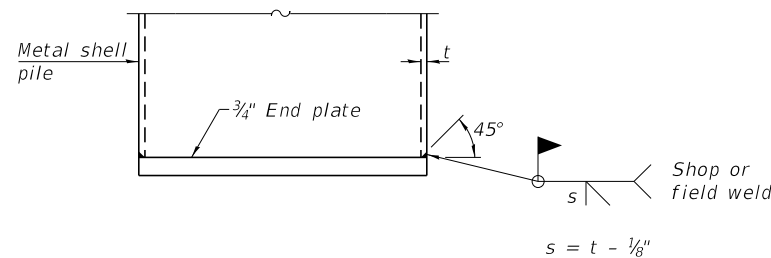


ELEVATION



SECTION A-A

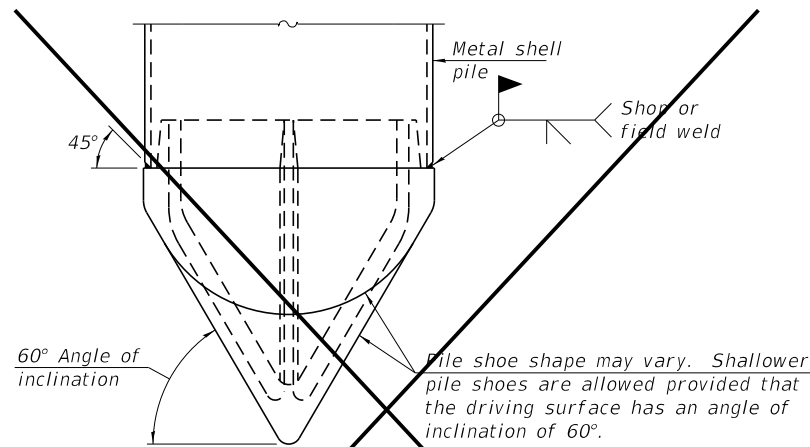
INDIVIDUAL PILE CONCRETE ENCASUREMENT
(When specified)



END PLATE ATTACHMENT

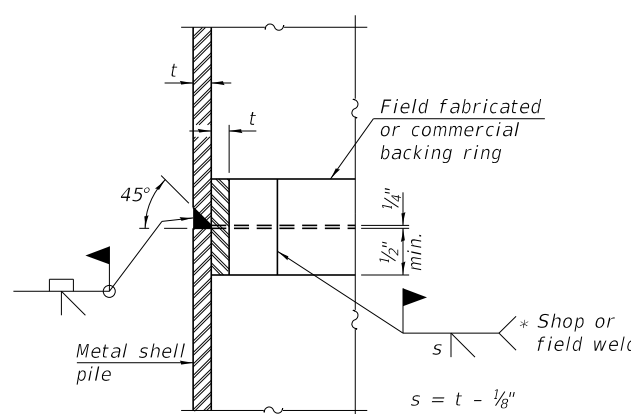
WELDED COMMERCIAL SPLICE

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.



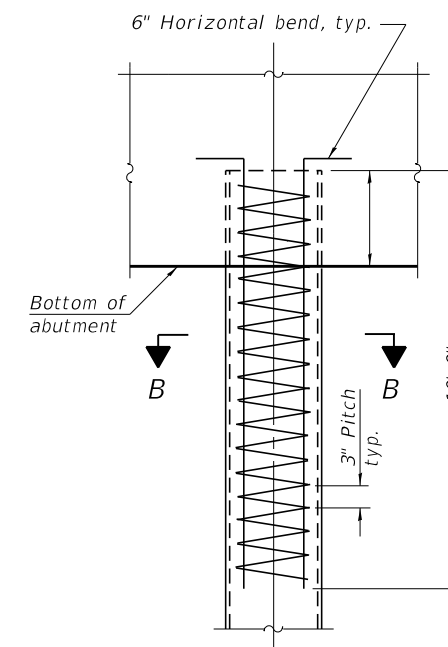
PILE SHOE ATTACHMENT

(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 80-50 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld).

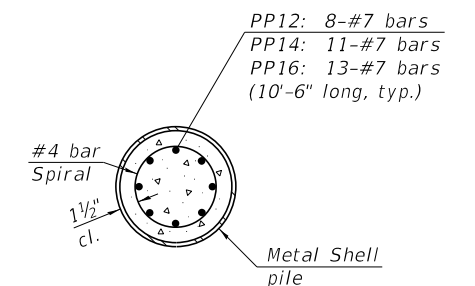


COMPLETE PENETRATION WELD SPLICE

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



ELEVATION



SECTION B-B

REINFORCEMENT AT ABUTMENTS
(Omit when concrete encasement is specified)

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

F-MS 2-1-2023

FILE NAME = 160454-shi-bridge.dgn	USER NAME = gmetcalf	DESIGNED - S.M.S.	REVISIONS -	STATE OF ILLINOIS FORD COUNTY HIGHWAY DEPARTMENT	METAL SHELL PILE DETAILS STRUCTURE NO. 027-3460	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3035 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT SCALE = \$SCALE\$	CHECKED - S.W.M.	REVISIONS -			1351	16-00133-00-BR	FORD	24	16
	PLOT DATE = 4/6/2023	DRAWN - D.M.F.	REVISIONS -			CH. 18/BUCKINGHAM ROAD		CONTRACT NO. 87790		
		CHECKED - S.W.M.	REVISIONS -			C-93-004-23		ILLINOIS FED. AID PROJECT INR(411)		



BORING NO. SN 3028
PAGE 1 OF 2

CLIENT Hampton Lenzini & Renwick PROJECT NAME Buckingham South Bridge Section 16-00133-00-BR
PROJECT NUMBER 17-G0449 PROJECT LOCATION Mona Township, Illinois
DATE COMPLETED 5/3/17 LOGGED BY DS/RR DRILLING METHOD 3.25 in. I.D. HSA

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS					
												LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX			
0	679.34		0-8" ASPHALT PAVEMENT														
1	99.3		8-16" AGGREGATE BASE														
2	98.6		black CLAY AND GRAVEL FILL	SS 1	33	7-4-4 (8)			18.6								
3	98.5		medium dense, moist														
4	678.54		mixed brown and gray CLAY FILL with sand stiff, moist	SS 2	33	2-2-2 (4)	1.5	1.0	24.9								
5	94.0		mottled brown and gray SANDY CLAY medium stiff to stiff, moist	SS 3	100	2-2-3 (5)	1.25	0.8	25.0								
6	674.04																
7	91.0		brown SANDY CLAY trace gravel soft, moist	SS 4	100	1-1-1 (2)			33.7								
8	671.04																
9	88.5		gray SAND AND GRAVEL medium dense, wet	SS 5	100	4-6-5 (11)			15.5								
10	668.54																
11				SS 6	67	5-7-7 (14)			13.1								
12				SS 7	100	7-6-9 (15)			17.9								
13				SS 8	72	6-6-8 (14)	3.25	3.0	15.3								
14	80.5		gray LEAN CLAY with gravel stiff to very stiff, moist	SS 9	100	5-4-5 (9)	2.25	2.6	15.3								
15	660.54																
16				SS 10	100	4-5-5 (10)	1.0	1.0	18.7								
17				SS 11	100	3-2-5 (7)	1.5	2.0	19.0								
18				SS 12	100	3-5-6 (11)	1.5	1.5	18.9								
19																	
20				SS 13	100	5-6-10 (16)	3.5	3.6	14.2								

COMPLETION DEPTH 75 ft GROUND ELEVATION 99.95 ft
 CAVE DEPTH 6 ft BACKFILL Soil Cuttings
 GROUND WATER LEVELS:
 AT TIME OF DRILLING 12.00 ft / Elev 87.95 ft
 AT END OF DRILLING --- Dry at caved depth
 AFTER DRILLING ---

NOTES

Lines of Demarcation represent an approximate boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

9370 W. Laraway Road, Suite D Frankfort, IL 60423 Phone 815-806-9986 Fax 815-464-8691



BORING NO. SN 3028
PAGE 2 OF 2

CLIENT Hampton Lenzini & Renwick PROJECT NAME Buckingham South Bridge Section 16-00133-00-BR
PROJECT NUMBER 17-G0449 PROJECT LOCATION Mona Township, Illinois
DATE COMPLETED 5/3/17 LOGGED BY DS/RR DRILLING METHOD 3.25 in. I.D. HSA

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS					
												LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX			
40			gray LEAN CLAY with gravel stiff to very stiff, moist (continued)	SS 14	67	6-7-11 (18)	4.0	3.8	18.0								
45				SS 15	89	5-5-7 (12)			21.4								
50				SS 16	100	5-5-6 (11)	1.75	1.8	26.9								
55				SS 17	72	6-6-9 (15)	2.5	2.6	23.0								
60				SS 18	100	7-9-11 (20)			19.4								
65				SS 19	100	7-10-12 (22)	3.5	3.2	17.4								
70				SS 20	100	7-9-11 (20)	1.5	1.7	20.8								
75	27.0		gray SILT with weathered limestone very dense, moist	SS 21	67	33-26-23 (49)			10.0								
	25.0																
	605.04		Bottom of borehole at 75.0 feet.														

Lines of Demarcation represent an approximate boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

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BORING-3028

FILE NAME = 160454-shi-bridge.dgn	USER NAME = gmetcalf	DESIGNED - S.M.S.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3035 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT SCALE = \$SCALE\$	CHECKED - S.W.M.	REVISED -
PLOT DATE = 4/6/2023		DRAWN - D.M.F.	REVISED -
		CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
FORD COUNTY HIGHWAY DEPARTMENT

BORINGS
STRUCTURE NO. 027-3460

SHEET NO. 11 OF 12 SHEETS

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1351	16-00133-00-BR	FORD	24	17
CH. 18/BUCKINGHAM ROAD		CONTRACT NO. 87790		
C-93-004-23	ILLINOIS	FED. AID PROJECT INR(2/411)		



BORING NO. SN 3027
PAGE 1 OF 2

CLIENT Hampton Lenzini & Renwick PROJECT NAME Buckingham North Bridge Section 17-00135-00-BR
 PROJECT NUMBER 17-G0450 PROJECT LOCATION Mona Township, Illinois
 DATE COMPLETED 5/5/17 LOGGED BY DS/RR DRILLING METHOD 3.25 in. I.D. HSA

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS					
												LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX			
0	679.50																
0	99.3		0-8" ASPHALT PAVEMENT														
0	98.7		8-16" AGGREGATE BASE														
0	678.90		mixed brown and black CLAY FILL	SS 1	33	9-4-2 (6)			5.3								
0	96.0		trace buried topsoil														
0	676.20		medium stiff, moist	SS 2	44	2-2-2 (4)	1.5	0.6	19.5								
0	94.0		brown CLAY FILL														
0	674.20		with gravel	SS 3	39	2-2-3 (5)	0.5		26.4								
0	91.5		black CLAY FILL														
0	671.70		trace gravel	SS 4	72	2-2-2 (4)	0.5	0.8	22.8								
0	88.5		with buried topsoil														
0	668.70		medium stiff, moist	SS 5	100	4-4-6 (10)	2.25	2.5	16.1								
0	86.5		brown LEAN CLAY														
0	666.20		with sand, trace gravel	SS 6	83	5-6-8 (14)	4.5	4.5	14.2								
0			medium stiff, moist														
0			gray LEAN CLAY	SS 7	56	5-7-9 (16)	4.5	4.4	14.7								
0			with gravel														
0			hard, moist	SS 8	100	5-7-11 (18)	4.5	4.0	15.3								
0	80.0		gray LEAN CLAY														
0	659.70		with gravel	SS 9	72	3-4-6 (10)	3.25	2.2	15.4								
0			with silt seam at 74.5' (1" thick)														
0			stiff to very stiff, moist	SS 10	100	4-6-7 (13)	3.5	3.0	16.8								
0				SS 11	100	5-5-5 (10)	3.5	4.3	15.7								
0				SS 12	100	3-3-4 (7)	1.5	1.8	16.0								
0				SS 13	100	4-3-4 (7)	2.5	2.1	14.4								

COMPLETION DEPTH 75 ft GROUND ELEVATION 100 ft
 CAVE DEPTH 1 ft BACKFILL Soil Cuttings
 GROUND WATER LEVELS:
 AT TIME OF DRILLING 12.00 ft / Elev 88.00 ft
 AT END OF DRILLING --- Dry at caved depth
 AFTER DRILLING ---

Lines of Demarcation represent an approximate boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

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BORING NO. SN 3027
PAGE 2 OF 2

CLIENT Hampton Lenzini & Renwick PROJECT NAME Buckingham North Bridge Section 17-00135-00-BR
 PROJECT NUMBER 17-G0450 PROJECT LOCATION Mona Township, Illinois
 DATE COMPLETED 5/5/17 LOGGED BY DS/RR DRILLING METHOD 3.25 in. I.D. HSA

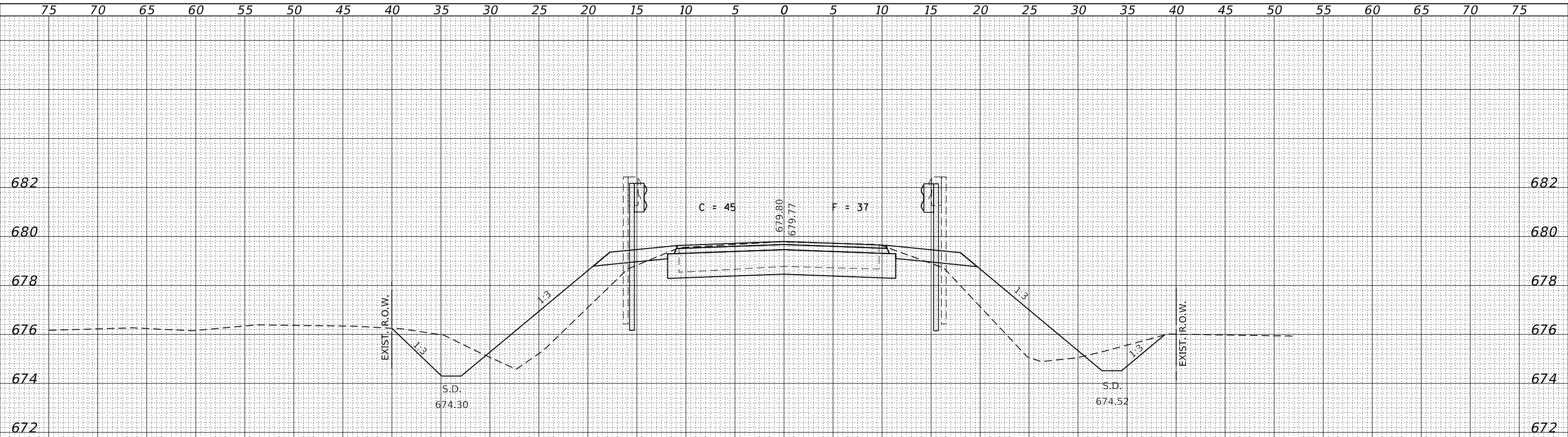
DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (Qp) (tsf)	UNC. STRENGTH (Qu) (tsf)	MOISTURE CONTENT (%)	DRY UNIT WT. (pcf)	ORGANIC CONTENT (%)	ATTERBERG LIMITS					
												LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX			
40			gray LEAN CLAY with gravel with silt seam at 74.5' (1" thick) stiff to very stiff, moist (continued)	SS 14	100	4-5-5 (10)	2.75	2.9	21.7								
45				SS 15	100	5-5-7 (12)	2.5	2.2	22.4								
50				SS 16	67	5-7-7 (14)	1.75	2.1	16.0								
55				SS 17	100	6-6-7 (13)	1.25	1.4	17.1								
60				SS 18	94	7-10-11 (21)	2.5	3.1	18.6								
65				SS 19	100	8-13-10 (23)	3.5	2.2	20.7								
70				SS 20	100	6-6-11 (17)	3.0	2.6	14.3								
75	604.70		Bottom of borehole at 75.0 feet.	SS 21	100	7-6-9 (15)	2.0	2.4	13.6								

Lines of Demarcation represent an approximate boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

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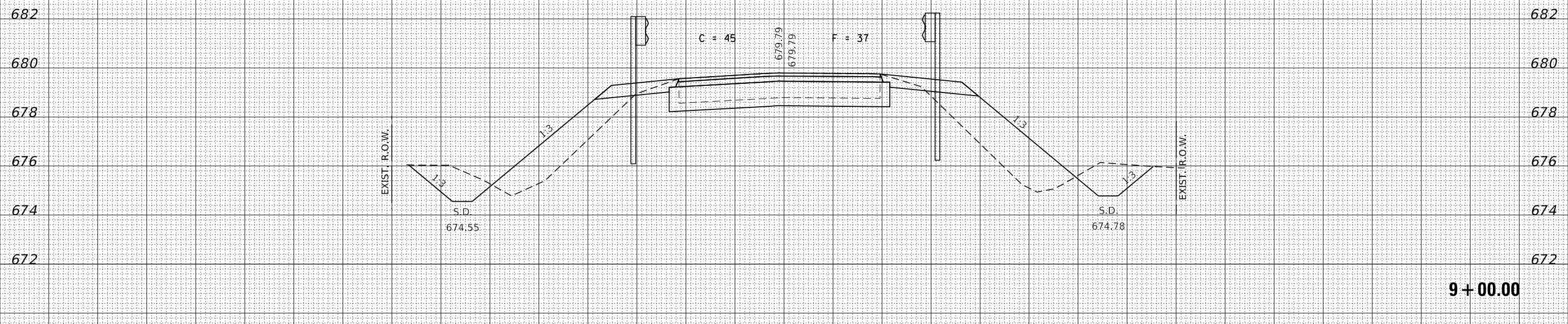
BORING-3027

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BY	
FINAL SURVEY	
SURVEYED	
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TEMPLATE	
AREAS	
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9 + 25.00

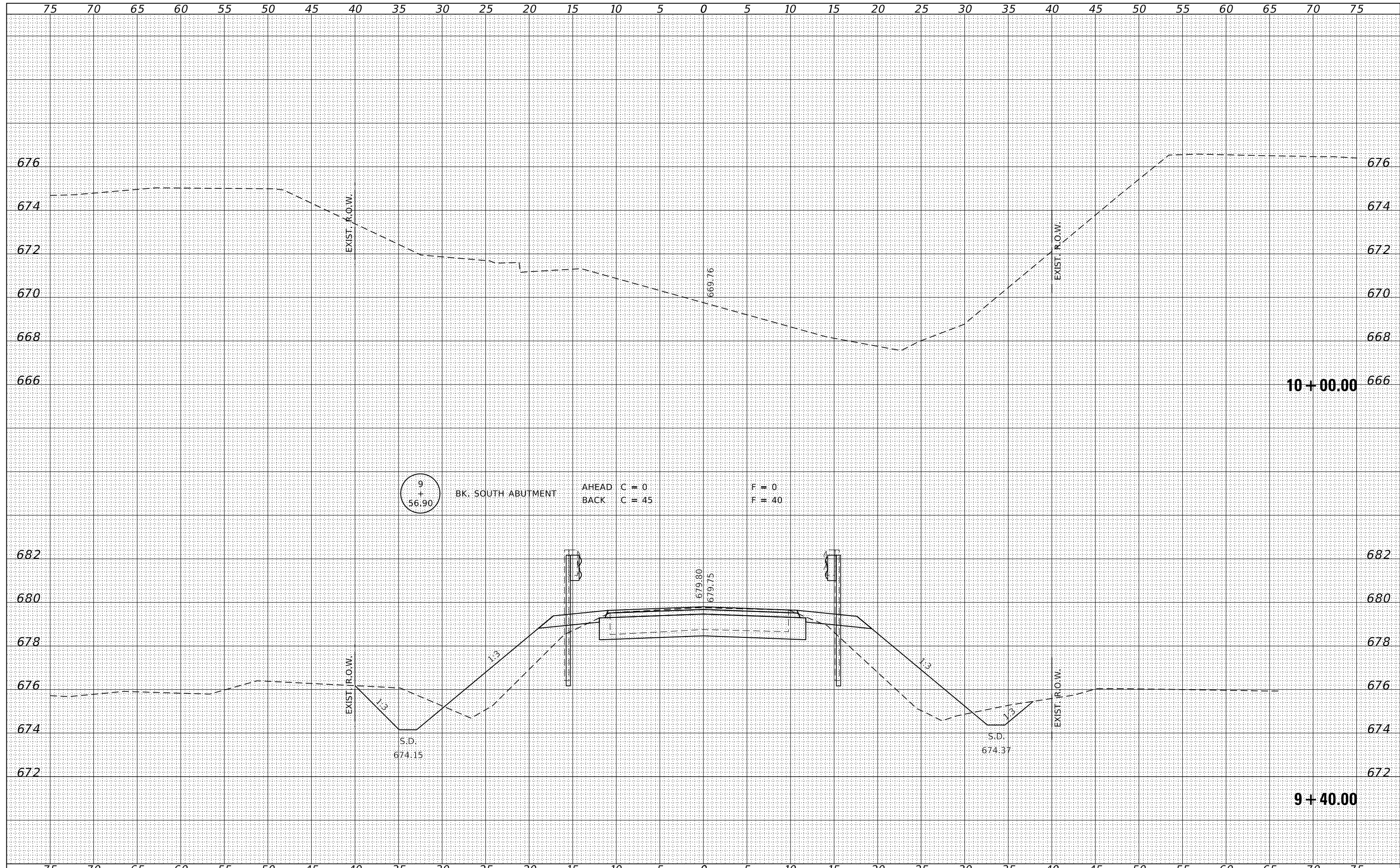
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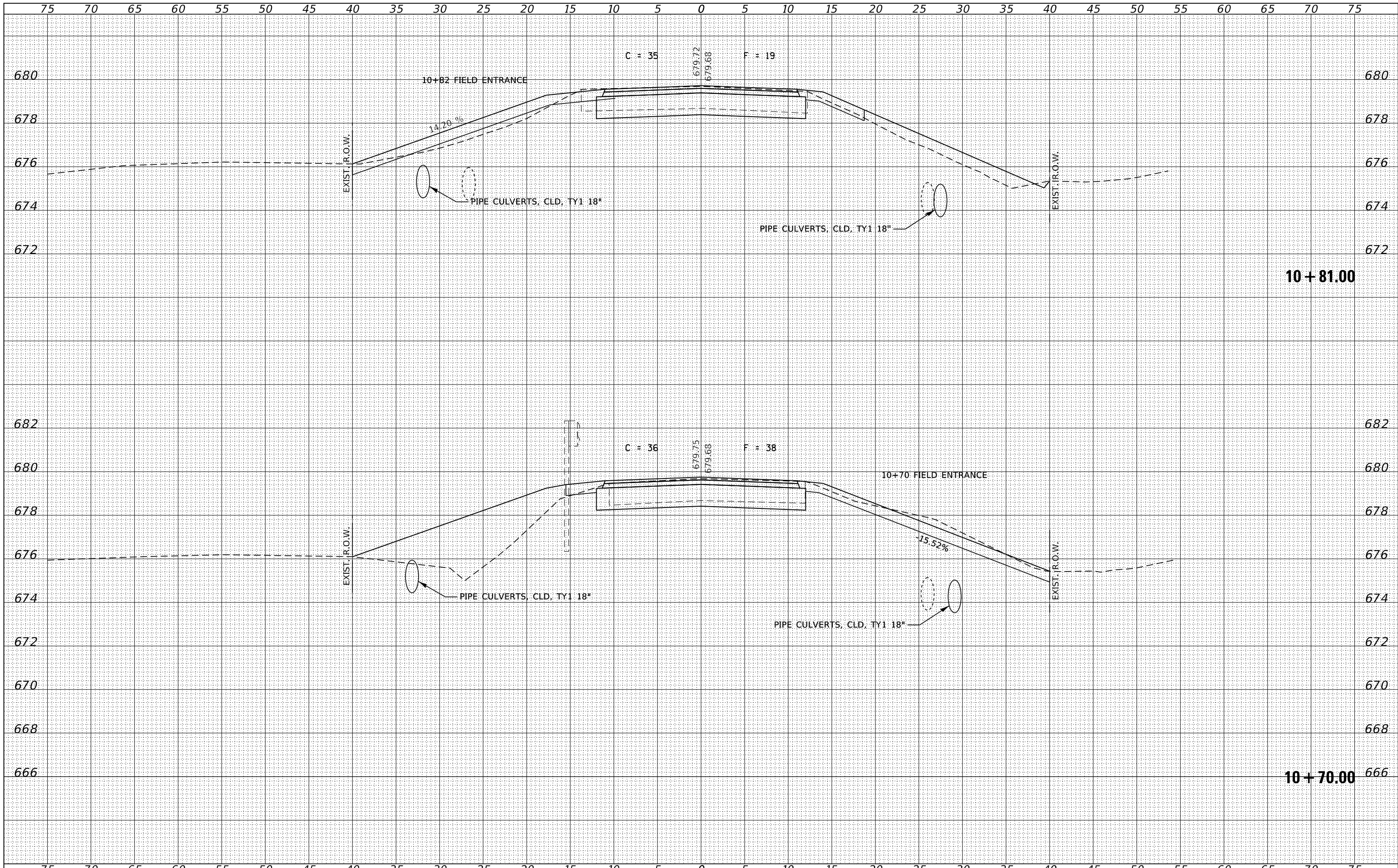
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NOTE BOOK	
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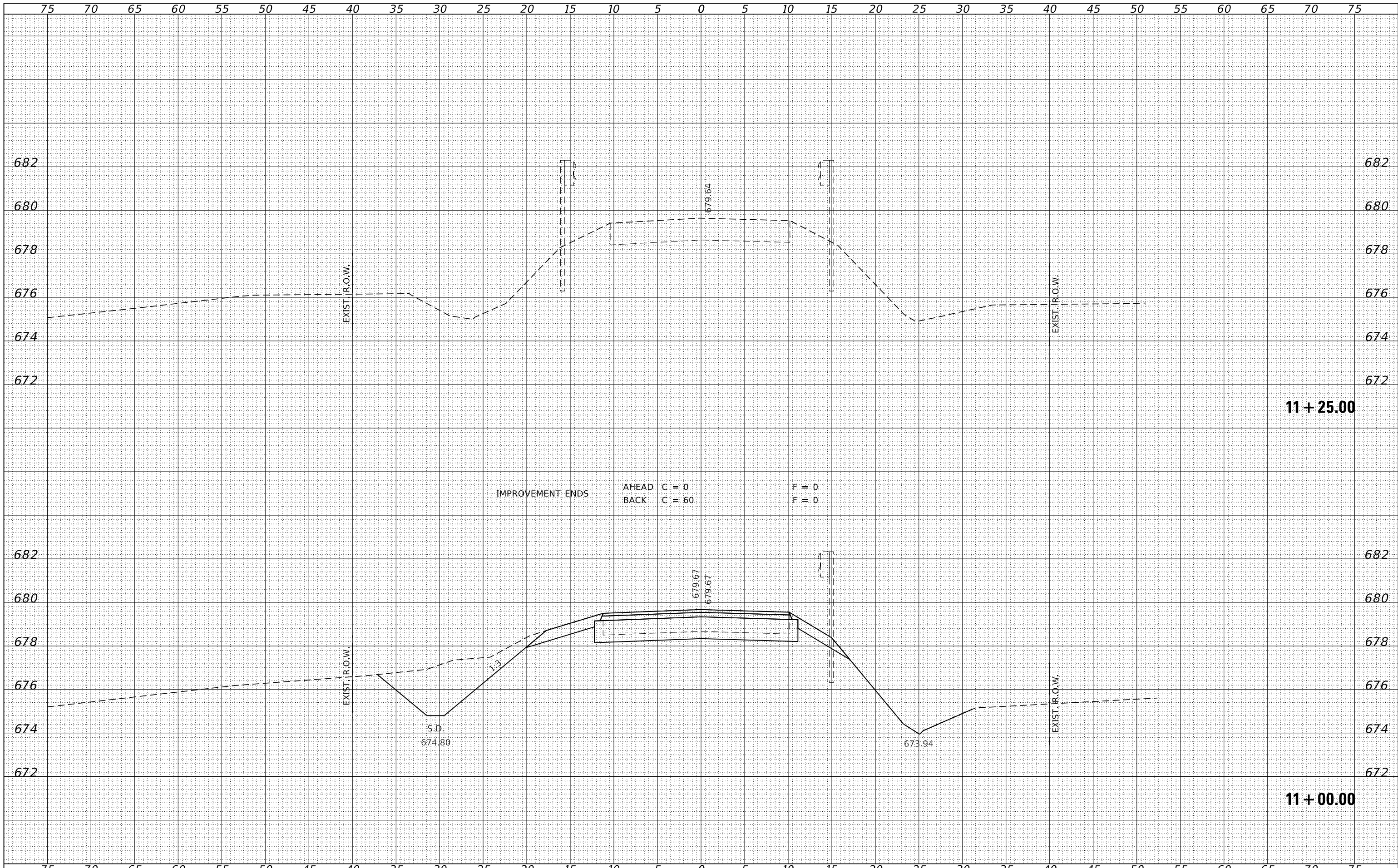
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NOTE BOOK	
NO.	



FILE NAME = 160454-cht-vssheets.dgn	USER NAME = gmetcaif	DESIGNED - S.A.A.	REVISED -	STATE OF ILLINOIS FORD COUNTY HIGHWAY DEPARTMENT	STATION CROSS SECTIONS			F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - T.W.K.	REVISED -		1351	16-00133-00-BR	FORD	24	23			
3885 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. CORP. 184.000958		CHECKED - J.W.F.	REVISED -		C.H. 18 / BUCKINGHAM ROAD			CONTRACT NO. 87790				
		DATE - 04/06/2023	REVISED -		SCALE: 5H:2V	SHEET NO. 5 OF 6 SHEETS	STA. 10+70.00 TO STA. 10+81.00	ILLINOIS FED. AID PROJECT 1NR2(411)				

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

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



FILE NAME = 160454-cht-xssheets.dgn
 DESIGNED - S.A.A.
 DRAWN - T.W.K.
 CHECKED - J.W.F.
 DATE - 04/06/2023

USER NAME = gmetcaff
 PLOT SCALE = \$Scales\$
 PLOT DATE = 4/6/2023

REVISIED -
 REVISIED -
 REVISIED -
 REVISIED -

**STATE OF ILLINOIS
 FORD COUNTY HIGHWAY DEPARTMENT**

STATION CROSS SECTIONS

SCALE: 5H:2V | SHEET NO. 6 OF 6 SHEETS | STA. 11+00.00 TO STA. 11+25.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1351	16-00133-00-BR	FORD	24	24
C.H. 18 / BUCKINGHAM ROAD			CONTRACT NO. 87790	
C-93-004-23		ILLINOIS FED. AID PROJECT 1NR2(411)		

