

04-27-2018 LETTING ITEM 173

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
403	09-08141-00-BR	WHITE	17	1
		ILLINOIS	CONTRACT NO. 99588	

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PLANS FOR PROPOSED FEDERAL AID – S.T.P. BRIDGE

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES AND GENERAL NOTES
3.	TYPICAL SECTIONS
4.	PLAN AND PROFILE
5.-8.	CROSS SECTIONS
9.-16.	BRIDGE PLANS
17.	BORINGS

HIGHWAY STANDARDS:

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
515001-03	NAME PLATE FOR BRIDGES
701901-07	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 TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAY (TWO-LANE TWO WAY RURAL TRAFFIC) (ROAD CLOSED TO THRU TRAFFIC)

UTILITIES

FRONTIER COMMUNICATIONS
200 WEST CHERRY STREET
CARM, IL 62821
618-382-2887

COUNTRYMARK
1200 REFINERY ROAD
MT VERNON, IN 47620
812-838-8545

WAYNE-WHITE ELECTRIC
DRAWER E
FAIRFIELD, IL 62837
618-842-2196



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.

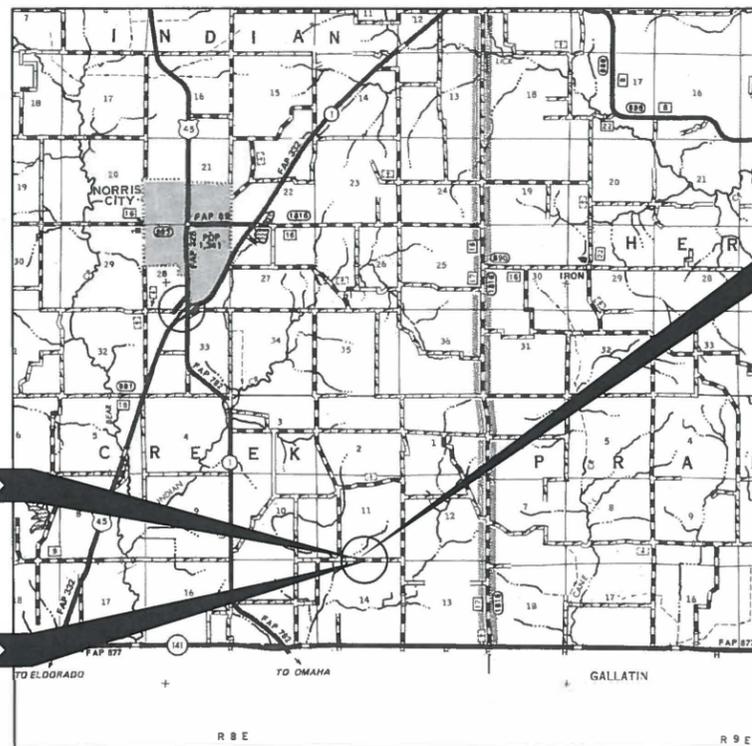
FUNCTIONAL CLASSIFICATION: LOCAL ROAD
DESIGN SPEED: 30 MPH
DESIGN TRAFFIC: 25 ADT (2016)

CONTRACT NO. 99588

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**

**TOWNSHIP ROUTE 403
SECTION 09-08141-00-BR
PROJECT NO. M5H4(956)
DRAINAGE DITCH
WHITE COUNTY**

C-99-518-10



IMPROVEMENT BEGINS
STATION 6+77.5

IMPROVEMENT ENDS
STATION 12+65

STATION 10+00
PRECAST PRESTRESSED CONCRETE DECK
BEAM BRIDGE. SINGLE SPAN @ 70'-0"
24'-0" RDWY.; SKEW = 35°
EXISTING STRUCTURE NO. 097-3161
PROPOSED STRUCTURE NO. 097-3277

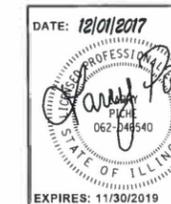


**Know what's below.
Call before you dig.**

APPROXIMATE SCALE: 0 1 MILE

NET LENGTH OF SECTION = 587.5 FT. = 0.111 MILE

WHITE COUNTY HIGHWAY DEPARTMENT	
APPROVED	<i>Deborah B. Quinn</i> 20 17 COUNTY ENGINEER
PASSED	<i>Dec 18</i> 20 17 <i>Dev. W. Hill</i> DISTRICT NINE ENGINEER OF LOCAL ROADS & STREETS
Releasing For BRI Based on Limited Review	<i>DEC 19</i> 20 17 <i>Jeffrey L. Keri</i> REGION FIVE ENGINEER STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



LMAC ENGINEERING
A division of Hampton, Lenzini and Renwick, Inc.
323 W. 3RD ST.; P.O. BOX 160
MT. CARMEL, ILLINOIS 62863
184-000959 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP

DATE: 12/01/2017
PROJECT NUMBER: 15.1431
DATE: 12/1/17

SUMMARY OF QUANTITIES			
	ITEM	UNIT	TOTAL QUANTITY
20100500	TREE REMOVAL, ACRES	ACRE	0.1
20200100	EARTH EXCAVATION	CU YD	112.0
20300100	CHANNEL EXCAVATION	CU YD	270.0
20400800	FURNISHED EXCAVATION	CU YD	879.0
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	508.0
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	465.0
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1.0
50300225	CONCRETE STRUCTURES	CU YD	29.6
50300280	CONCRETE ENCASEMENT	CU YD	3.4
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	1680.0
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	3110.0
* 50900205	STEEL RAILING, TYPE S1	FOOT	139.0
51201400	FURNISHING STEEL PILES HP10X42	FOOT	750.0
51202305	DRIVING PILES	FOOT	750.0
51500100	NAME PLATES	EACH	1.0
542A0229	PIPE CULVERTS, CLASS A, TYPE 1 24"	FOOT	50.0
542A0241	PIPE CULVERTS, CLASS A, TYPE 1 36"	FOOT	50.0
58700300	CONCRETE SEALER	SQ FT	115.0
67100100	MOBILIZATION	LSUM	1.0
* 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4.0
^ X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.5

* SEE SPECIAL PROVISIONS

* SPECIALTY ITEMS

STONE DUMPED RIPRAP, CLASS A4	
LOCATION - DITCH AREAS	28100807 TON
T.R. 403	
STA 9+25 RT. TO STA 9+45 RT	13.0
STA 10+60 LT. TO STA 11+00 LT	25.0
STA 10+70 RT TO STA 10+75 RT	5.0
STA 11+49 LT TO STA 11+54 LT	5.0
TOTAL	48.0

AGGREGATE SURFACE COURSE, TYPE B	
LOCATION	40200800 TON
T.R. 403	
STA 6+77.5 TO STA 9+64.19	180.0
STA 10+35.81 TO STA 12+65	140.0
FILL NEXT TO BRIDGE	50.0
FIELD ENTRANCE	
STA 8+50 RT	38.0
STA 10+58 RT	28.0
STA 11+24 LT	29.0
TOTAL	465

GENERAL NOTES

- THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS, SPECIAL PROVISIONS AND "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED APRIL 1, 2016, THESE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
- ALL CLEARING AND GRUBBING, FENCE REMOVAL, REMOVAL OF EXISTING DRAINAGE STRUCTURES, AND REMOVAL OF THE EXISTING ROADWAY SURFACE SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.
- UTILITIES SHOWN WERE LOCATED PER QUALITY LEVEL "C", A.S.C.E. STANDARD C138-02, STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA FROM SURFACE MARKINGS ONLY. UTILITIES SHALL BE FIELD LOCATED HORIZONTALLY AND VERTICALLY PRIOR TO BEGINNING ANY WORK. THE CONTRACTOR IS RESPONSIBLE FOR THE FIELD LOCATION OF THESE UTILITIES.
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING FIELD DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.
- ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER LISTED ON THE INDEX OF SHEETS OR THE COPY OF THE STANDARD INCLUDED IN THE PLANS.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES.
 AGGREGATE SURFACE COURSE 2.05 TONS/CU.YD.
 STONE RIPRAP 1.8 TONS/CU.YD.
- EARTHWORK COMPACTION SHALL BE TO THE SATISFACTION OF THE ENGINEER.
- THE AREA TO BE SEEDDED SHALL CONSIST OF ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER.
 ESTIMATED QUANTITY: SEEDING CLASS 2 (SPECIAL) = 0.5 ACRES
- ALL WASTE MATERIAL FROM EXCAVATIONS SHALL BE DISPOSED OF BY THE CONTRACTOR. NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

ENTRANCE SCHEDULE					
STATION	LOC	TYPE	W1 WIDTH FOOT	R1 RADIUS FOOT	R2 RADIUS FOOT
8+50	RT.	FE	20	15	15
10+58	RT.	FE	10	20	20
11+24	LT.	FE	20	15	15

EARTHWORK SUMMARY							
LOCATION	EARTH EXCAVATION	CHANNEL EXCAVATION	SHRINKAGE FACTOR	% USED	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE(25%)	EMBANKMENT REQUIRED	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CU. YD.	CU. YD.			CU. YD.	CU. YD.	CU. YD.
T.R. 403							
STA 6+77.5 TO STA 9+64.19	43.8	0.0	25.00%	100.00%	33.0	611.5	-579.0
STA 9+64.19 TO STA 10+35.81	0.0	270.0	25.00%	50.00%	101.0	0.0	101.0
STA 10+35.81 TO STA 12+65	67.8	0.0	25.00%	100.00%	51.0	309.4	-258.0
FIELD ENTRANCE							
STA 8+50 RT	0.0	0.0	25.00%	100.00%	0.0	39.3	-39.0
STA 10+58 RT	0.0	0.0	25.00%	100.00%	0.0	84.9	-85.0
STA 11+24 LT	0.0	0.0	25.00%	100.00%	0.0	18.8	-19.0
	111.6	270			185	1063.9	-879
					FURNISHED EXCAVATION	879	CU.YD.



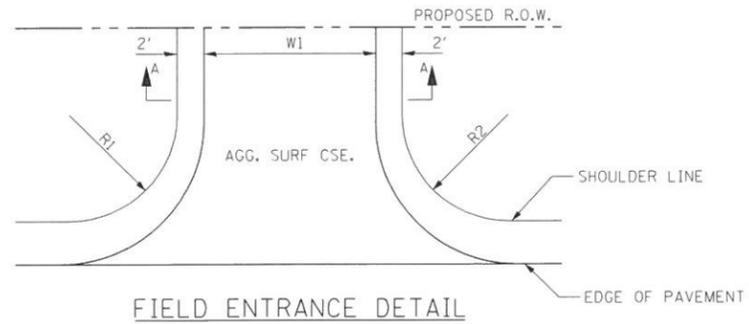
DESIGNED - L.L.P.	REVISOR -
DRAWN - C.L.D.	REVISOR -
CHECKED -	REVISOR -
DATE - 12/1/17	REVISOR -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

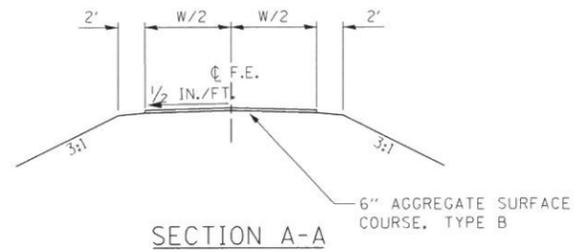
SUMMARY OF QUANTITIES AND GENERAL NOTES

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

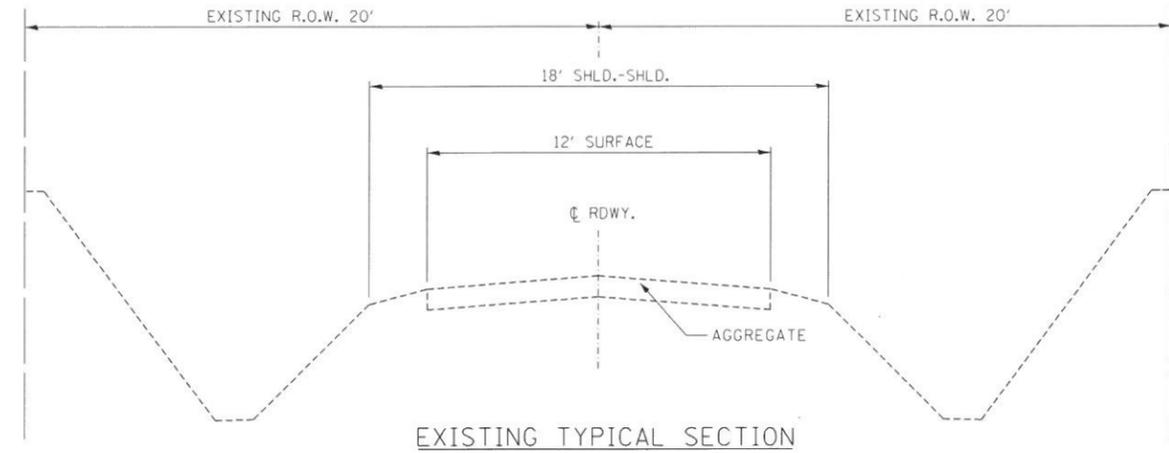
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
403	09-08141-00-BR	WHITE	17	2
CONTRACT NO. 99588				



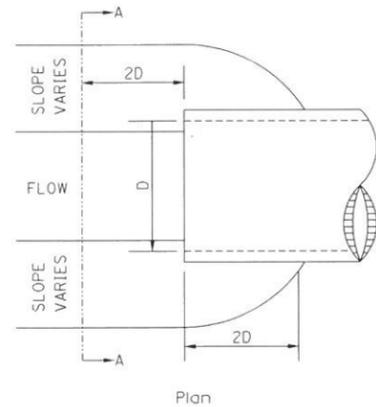
FIELD ENTRANCE DETAIL



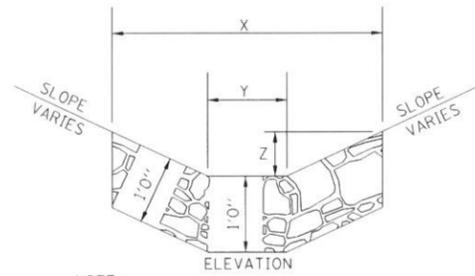
SECTION A-A



EXISTING TYPICAL SECTION



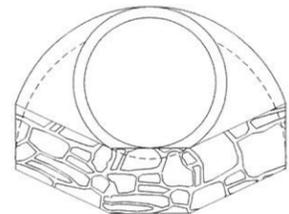
Plan



ELEVATION

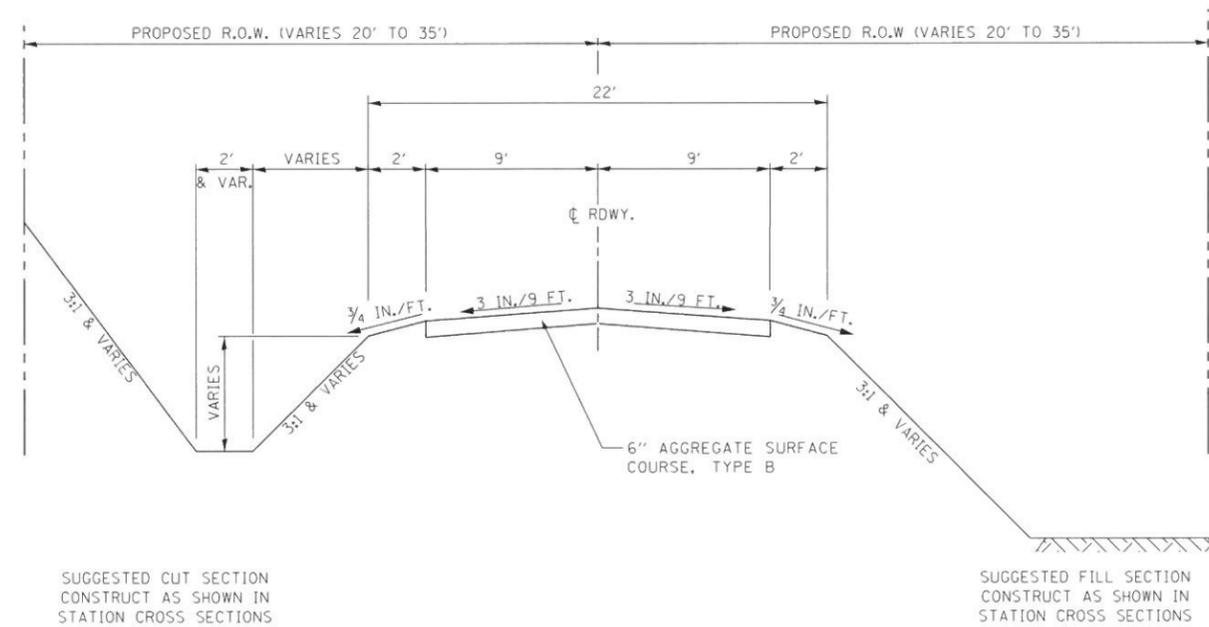
NOTE:

BOTTOM OF DITCH	SLOPE			
	1 1/2:1	2:1	3:1	
2 FT	X= 5 FT	6 FT	8 FT	
	Y= 2 FT	2 FT	2 FT	
	Z= 1 FT	1 FT	1 FT	
	0.40	0.48	0.62	TON/LIN. FT



Section A-A

STONE DUMPED RIPRAP, CLASS A4 DITCH AREA DETAILS



SUGGESTED CUT SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

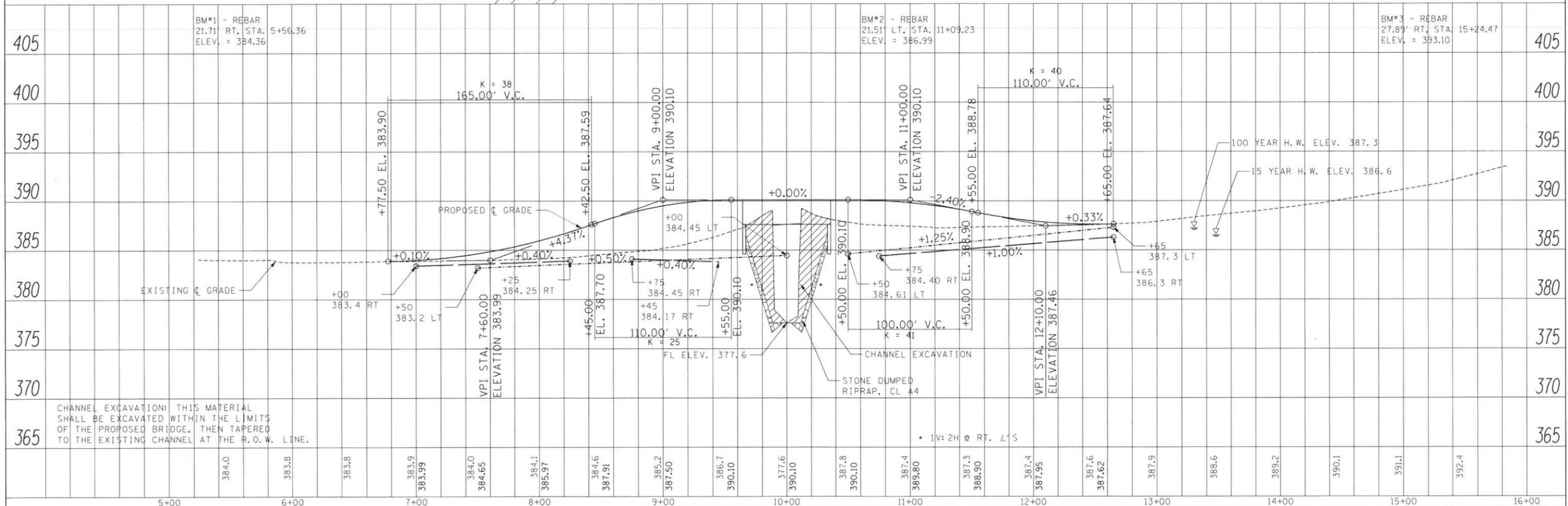
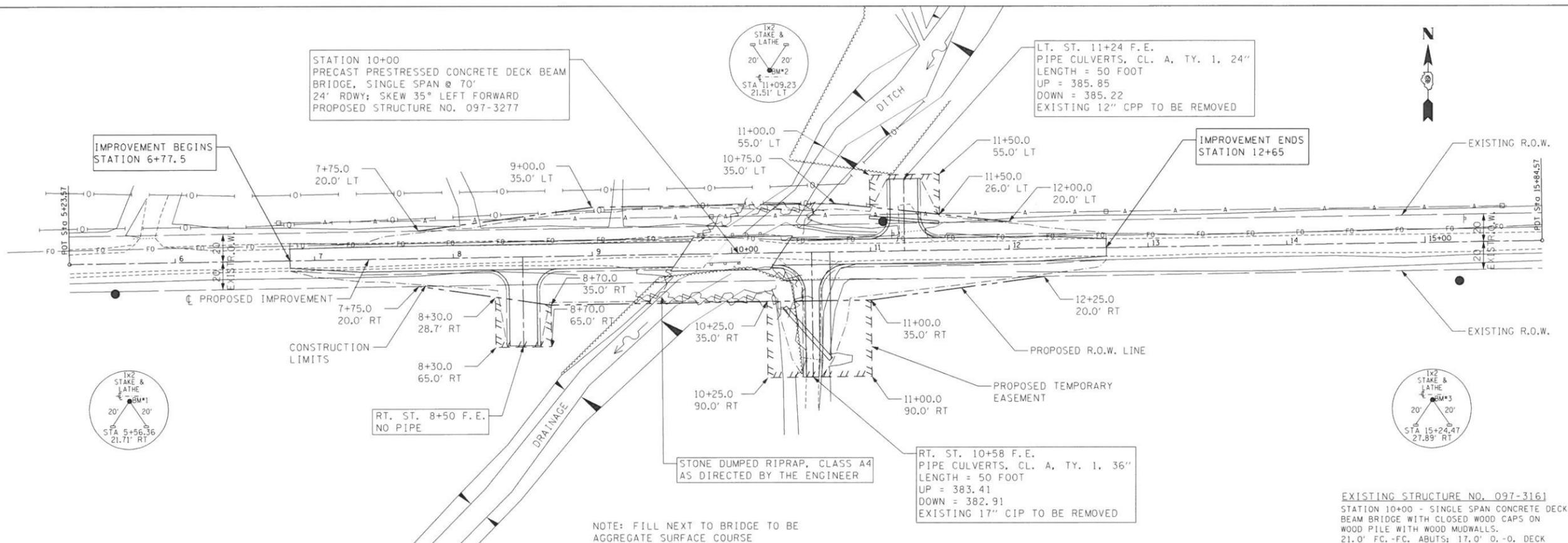
SUGGESTED FILL SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

PROPOSED TYPICAL SECTION

TRANSITIONS FROM THE PROPOSED ROADWAY TO THE EXISTING ROADWAY ARE TO BE CONSTRUCTED FROM STA. 6+77.5 TO 7+27.5 AND STA. 12+15 TO 12+65. SEE SHEET 9 FOR TRANSITION AT BRIDGE.

DATE	
BY	
PLAN	
NO.	
DATE	
BY	
PROFILE	
NO.	

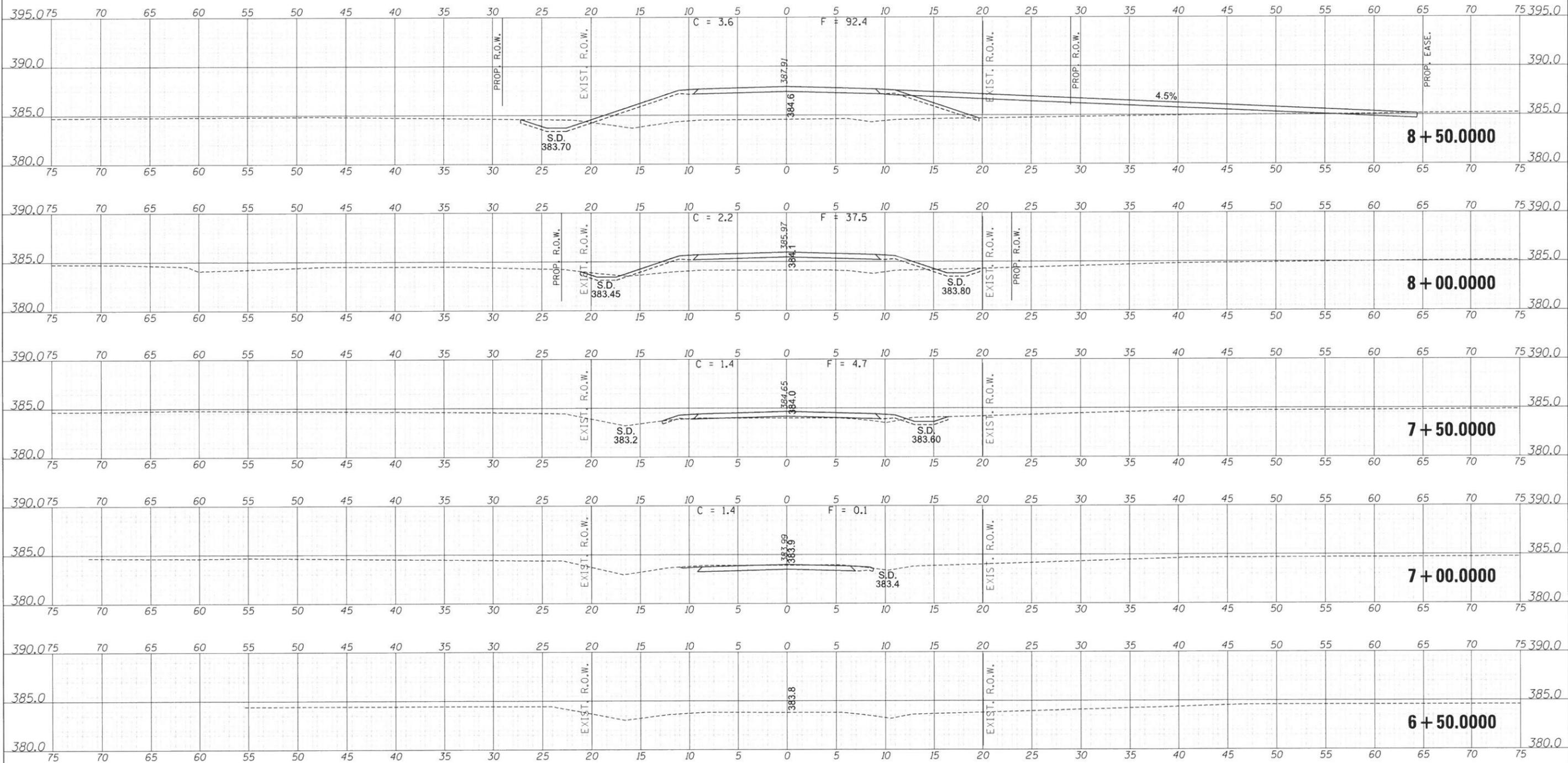
DATE	
BY	
PROFILE	
NO.	
DATE	
BY	
PLAN	
NO.	



LAMAC ENGINEERING <small>323 W. 3RD ST. P.O. BOX 160 MT. CARMEL, IL 62883 A Division of Hampton, Larson and Remick, Inc. ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184000569</small>	HLR JOB NO = 15,1431	DESIGNED - L.L.P.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN & PROFILE SCALE: 1" = 40' SHEET 1 OF 1 SHEETS STA. 5+00 TO STA. 16+00	TR	SECTION	COUNTY	TOTAL SHEETS NO.
	PLOT SCALE = 48,00000" / 1m. PLOT DATE = 12/1/17	CHECKED -	REVISED -			403	09-08141-00-BR	WHITE	17
	DATE - 12/1/17	REVISOR -	REVISOR -			CONTRACT NO. 99588			
						ILLINOIS FED. AID PROJECT			

DATE	
BY	
SUPERVISED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
SUPERVISED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	



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ILLINOIS PROFESSIONAL DESIGN FIRM LS 1/PE /SE CORP 18400669

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DRAWN - C.L.D.
CHECKED -
DATE - 12/1/17

REVISIED -
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REVISIED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

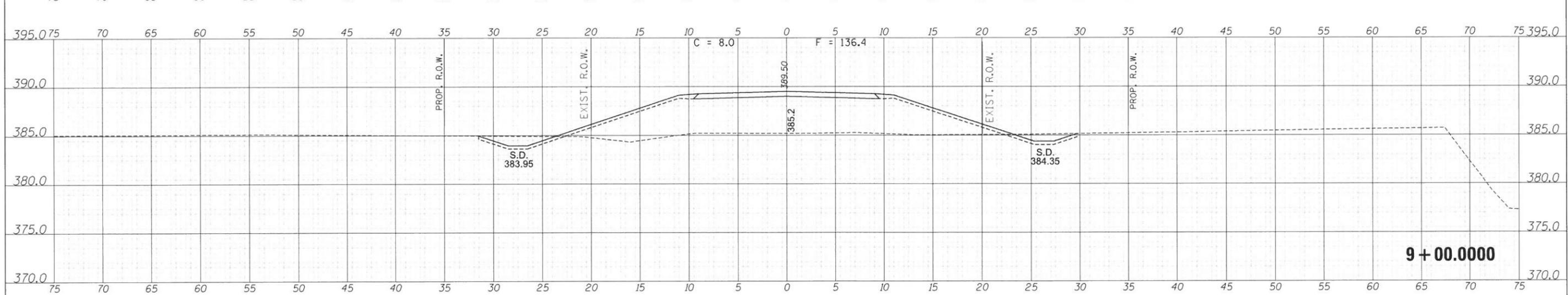
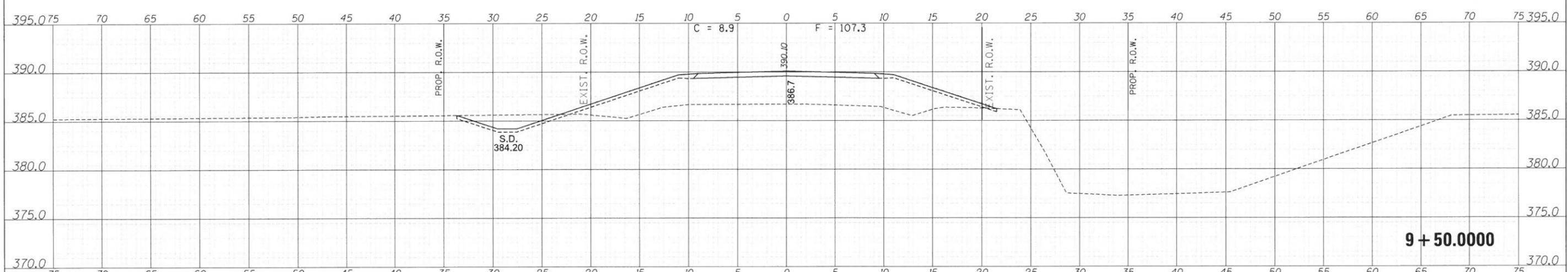
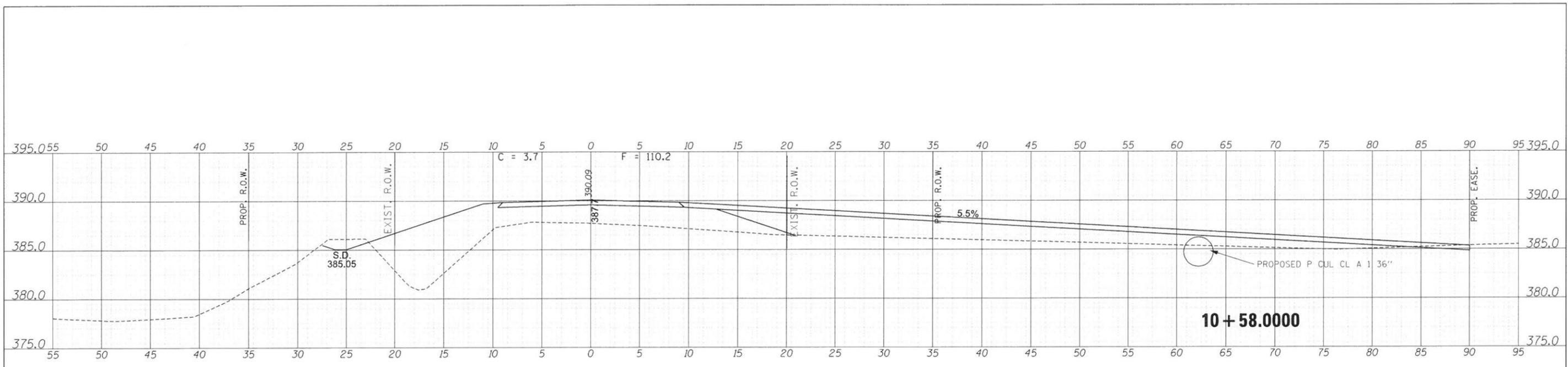
STATION CROSS SECTIONS

SCALE: 1" = 5' SHEET 1 OF 4 SHEETS STA. 6+50.0 TO STA. 8+50.0

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
403	09-08141-00-BR	WHITE	17	5
CONTRACT NO. 99588				
ILLINOIS FED. AID PROJECT				

DATE	
BY	
FINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	



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ENGINEERING
A Division of Hampton, Lenth and Remick, Inc.
321 W. 3RD ST.
P.O. BOX 160
VT. CARMEL, IL 62803
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP 184000869

HLR JOB NO = 15.1431	DESIGNED - L.L.P.	REVISED -
	DRAWN - C.L.D.	REVISED -
PLLOT SCALE = 5.0000" / in.	CHECKED -	REVISED -
PLLOT DATE = 12/1/17	DATE - 12/1/17	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

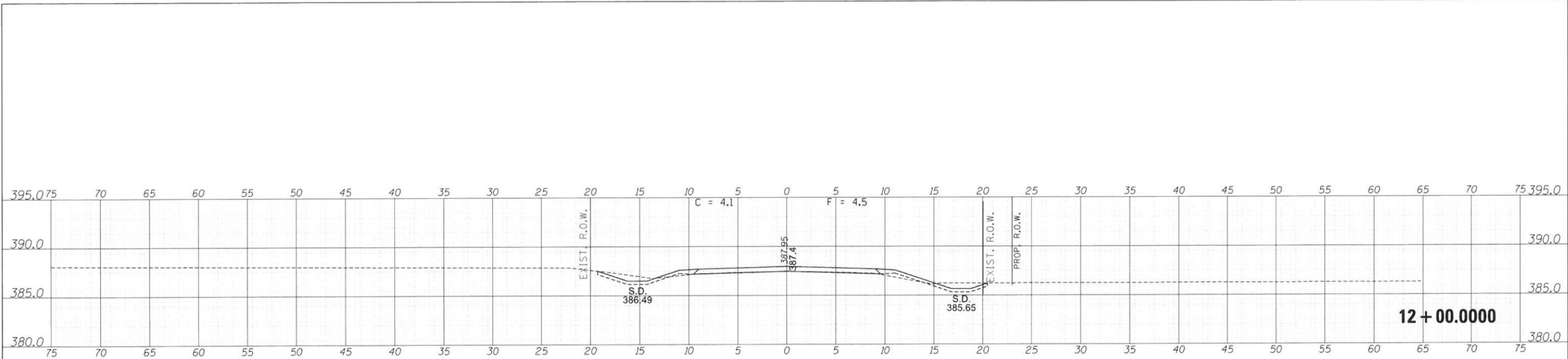
STATION CROSS SECTIONS

SCALE: 1" = 5' SHEET 2 OF 4 SHEETS STA. 9+00.0 TO STA. 10+58.0

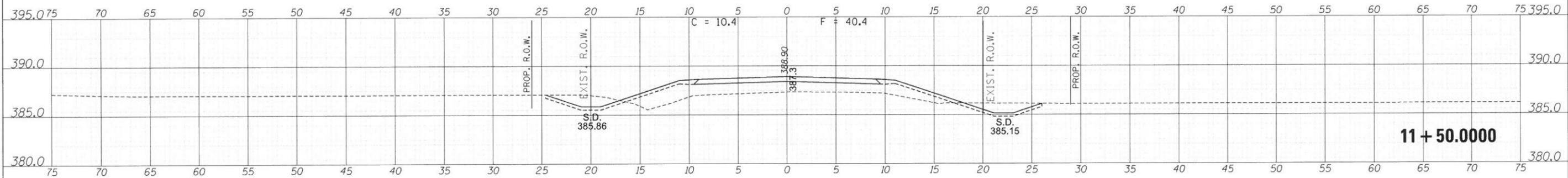
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403	09-08141-00-BR	WHITE	17	6
CONTRACT NO. 99588			ILLINOIS FED. AID PROJECT	

DATE	
BY	
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SURVEYED	
PLOTTED	
NOTE BOOK	
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NO.	

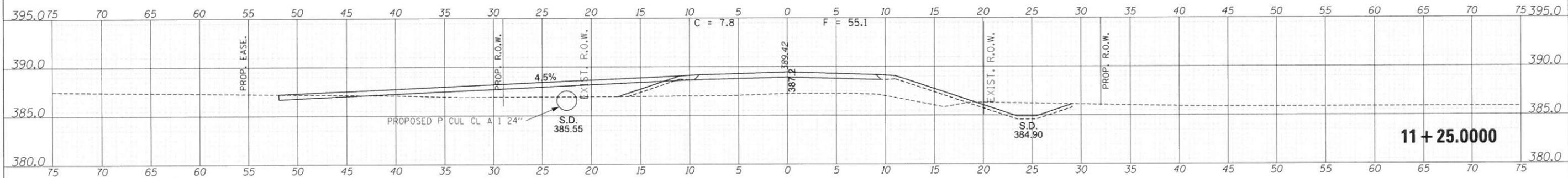
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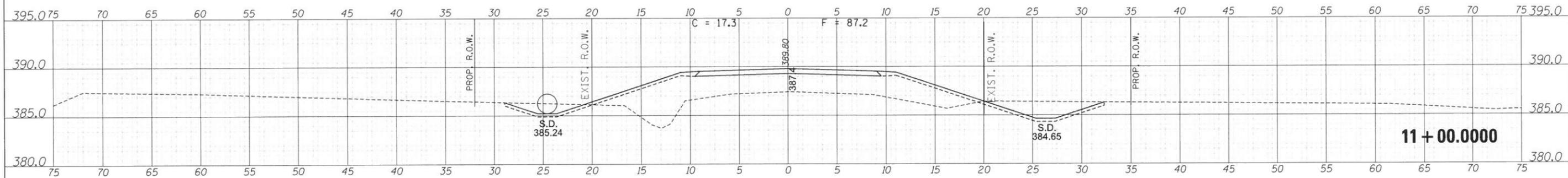
12 + 00.0000



11 + 50.0000



11 + 25.0000



11 + 00.0000



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	DRAWN - C.L.D.	REVISED -
PLLOT SCALE = 5,0000' / 1".	CHECKED -	REVISED -
PLLOT DATE = 12/1/17	DATE - 12/1/17	REVISED -

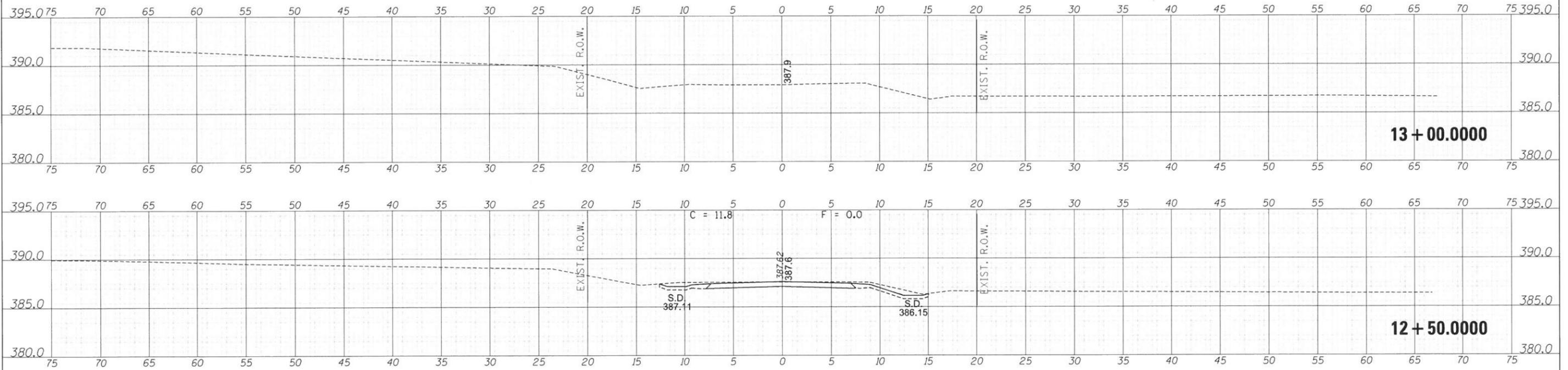
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

STATION CROSS SECTIONS
SCALE: 1" = 5'
SHEET 3 OF 4 SHEETS
STA. 11+00.0 TO STA. 12+00.0

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
403	09-08141-00-BR	WHITE	17	7
				CONTRACT NO. 99588
ILLINOIS FED. AID PROJECT				

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

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



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HLR JOB NO = 15.1431
DESIGNED - L.L.P.
DRAWN - C.L.D.
CHECKED -
DATE - 12/1/17
PLOT SCALE = 5.0000' / in.
PLOT DATE = 12/1/17

REVISIED -
REVISIED -
REVISIED -
REVISIED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

STATION CROSS SECTIONS

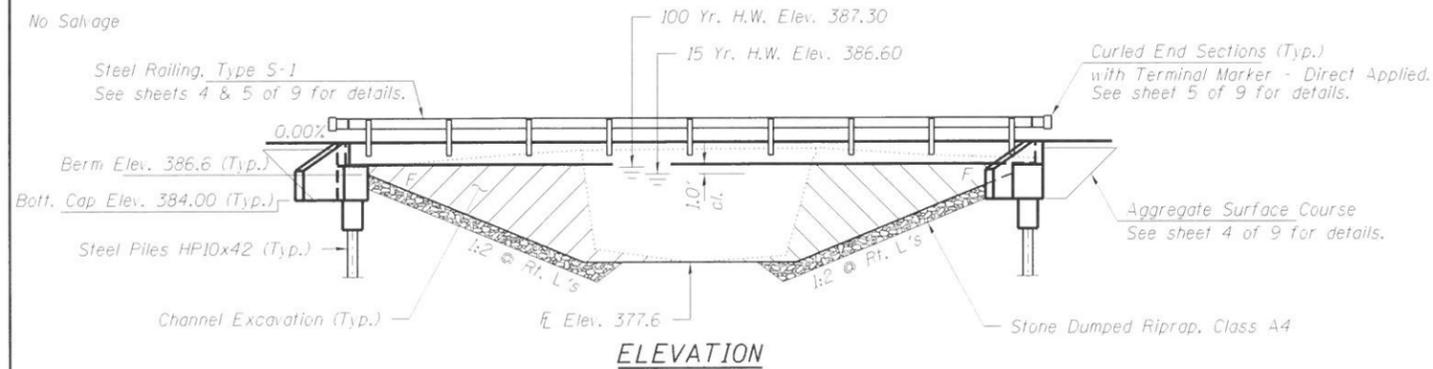
SCALE: 1" = 5' SHEET 4 OF 4 SHEETS STA. 12+50.0 TO STA. 13+00.0

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
403	09-08141-00-BR	WHITE	17	8
CONTRACT NO. 99588			ILLINOIS FED. AID PROJECT	

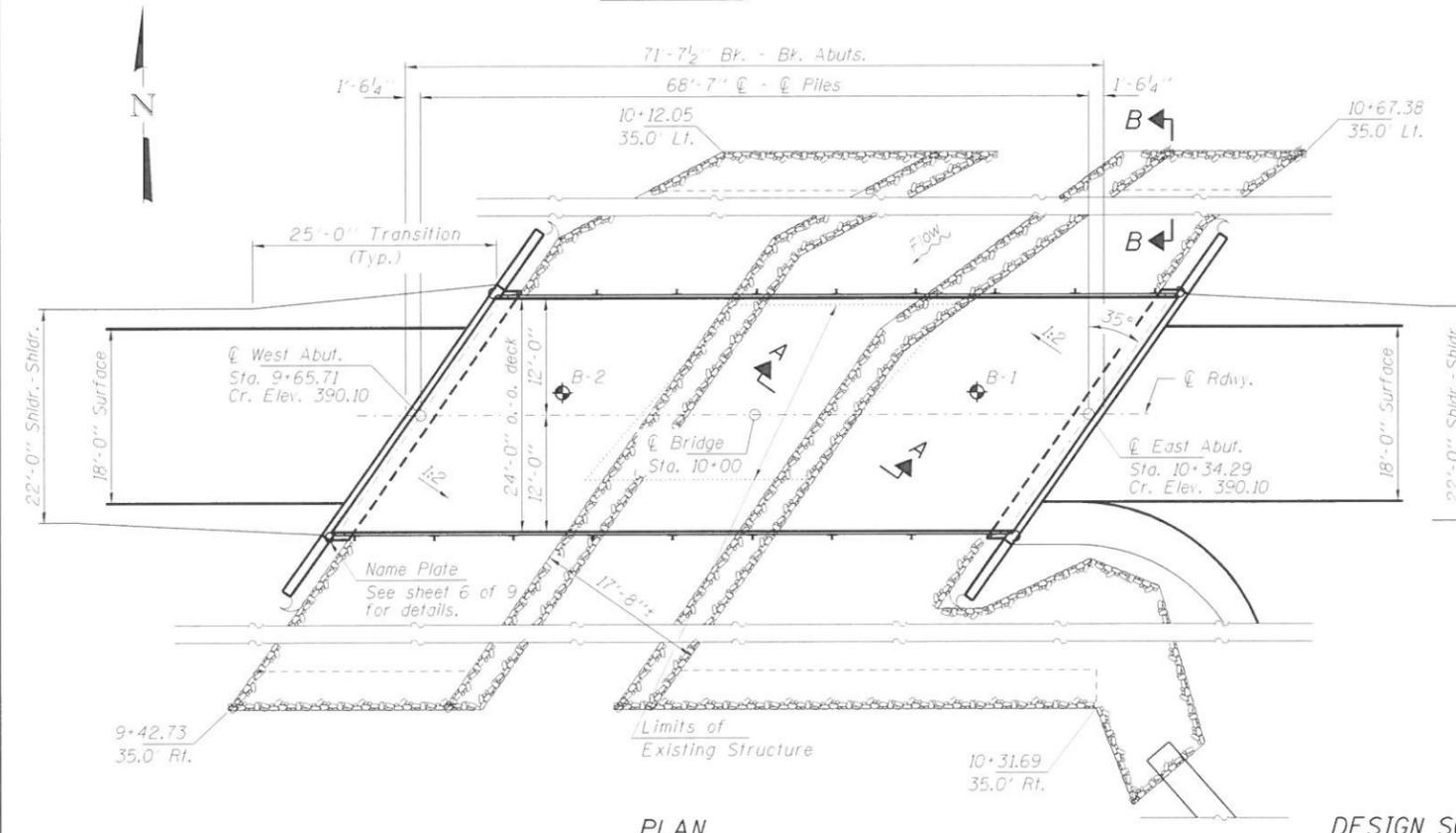
EXISTING STRUCTURE: SN 097-3161; Sta. 10+00; Single span concrete deck beam bridge with closed wood caps on wood pile with wood mudwalls. 21.0' fc.-fc. abuts.; 17.0' o.-o. deck

Structure closed to traffic during construction.

No Salvage



ELEVATION



PLAN

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th 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" low lax. strands)
fpbt = 201,960 psi (1/2" low lax. strands)
fy = 60,000 psi (Reinf.)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 3
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.314g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.743g
Soil Site Class = D

WATERWAY INFORMATION

Drainage Area = 1.0 Sq. Mi.		Existing Low Grade Elev. 383.9 @ Sta. 6+85		Proposed Low Grade Elev. 383.9 @ Sta. 6+85					
Flood	Freq. Yr.	0 C.F.S.	Opening Sq. Ft.	Natural H.W.E.	Head - Ft.	Headwater El.			
		Exist.	Prop.	Exist.	Prop.	Exist.			
Design	15	780	150	310	386.39	0.41	0.00	386.80	386.39
Base	100	1360	160	360	387.26	0.85	0.24	387.44	386.83
Scour Check	200	1580	170	370	387.49	0.02	0.03	387.28	387.29
Max. Calc.	500	1910	170	380	387.78	0.00	0.04	387.49	387.53
						0.04	0.07	387.82	387.85

10 Year Velocity through Existing Bridge = 4.5 Tps
10 Year Velocity through Proposed Bridge = 2.2 Tps

DESIGN SCOUR ELEVATION TABLE

Event/Limit State	Design Scour Elevations (ft.)		Item 113
	W. Abut.	E. Abut.	
0100	384.0	384.0	B
0200	384.0	384.0	
Design	384.0	384.0	
Check	384.0	384.0	

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."

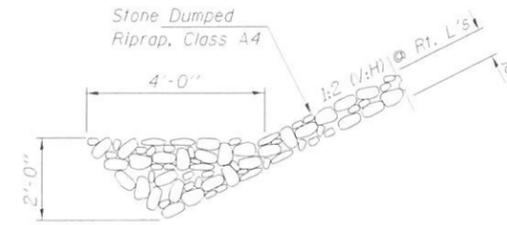
Steven W. Megginson 11/20/2017
ILLINOIS STRUCTURAL ENGINEER NO. 081-6064



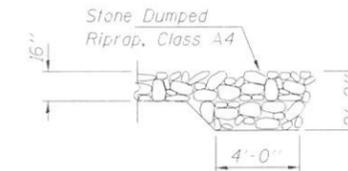
Expires 11-30-2018

GENERAL NOTES

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
Reinforcement bars designated (E) shall 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.
Concrete Sealer shall be applied to the designated areas of the abutments.



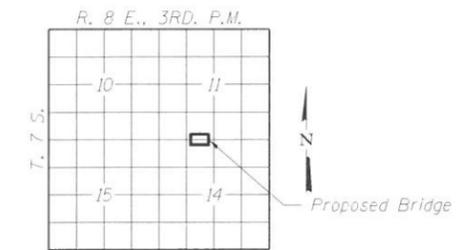
SECTION A-A



SECTION B-B

INDEX OF STRUCTURE SHEETS

1. General Plan & Elevation
2. 27"x48" PPC Deck Beam
3. 27"x48" PPC Deck Beam Details
4. Superstructure Details
5. Steel Railing, Type S-1
6. Abutments
7. HP Pile Details
- 8-9. Borings



LOCATION SKETCH

BUILT 2011 BY
WHITE COUNTY
SEC. 09-08141-00-BR
INDIAN CREEK ROAD DISTRICT
STR. NO. 097-3277
LOADING HL-93

NAME PLATE

See Std. 515001

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			270
Stone Dumped Riprap, Class A4	Ton			460
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		29.6	29.6
Concrete Encasement	Cu. Yd.		3.4	3.4
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	1,680		1,680
Reinforcement Bars, Epoxy Coated	Pound		3,110	3,110
Steel Railing, Type S-1	Foot	139		139
Furnishing Steel Piles HP10x42	Foot		750	750
Driving Piles	Foot		750	750
Name Plates	Each		1	1
Concrete Sealer	Sq. Ft.		115	115
Terminal Marker - Direct Applied	Each	4		4

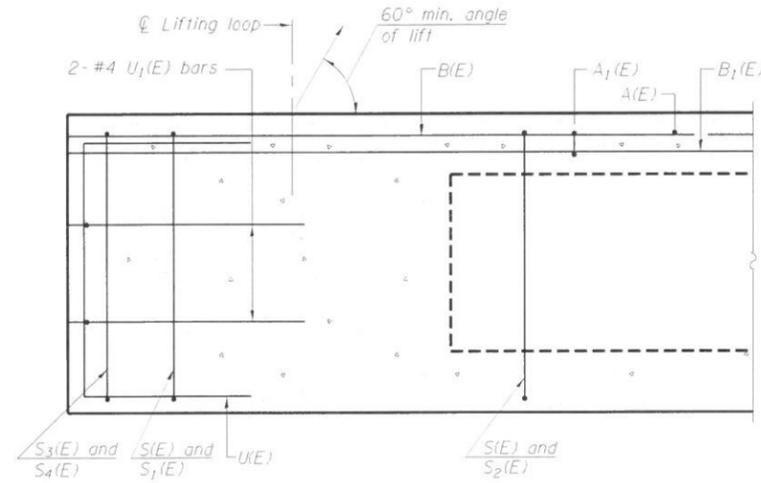
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USER 1641E = phosick
DESIGNED - L.A.P.
CHECKED - S.W.M.
DRAWN - R.D.H.
CHECKED - S.W.M.
PLOT SCALE = 1/8"=1'-0"
PLOT DATE = 11/21/2017

DESIGNED - L.A.P.
CHECKED - S.W.M.
DRAWN - R.D.H.
CHECKED - S.W.M.
PLOT DATE = 11/21/2017

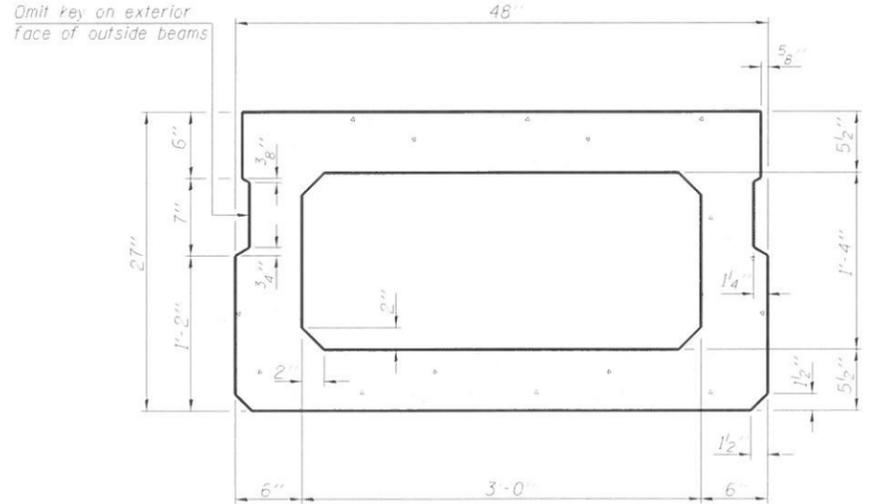
STATE OF ILLINOIS
WHITE COUNTY HIGHWAY DEPARTMENT

GENERAL PLAN & ELEVATION
STRUCTURE NO. 097-3277
SHEET NO. 1 OF 9 SHEETS

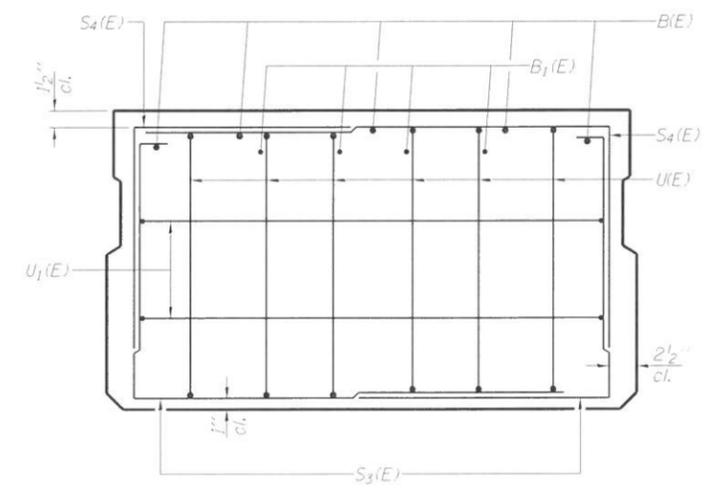
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
403	09-08141-00-BR	WHITE	17	9
INDIAN CREEK ROAD DISTRICT			CONTRACT NO. 99588	
[ILLINOIS] FED. AID PROJECT				



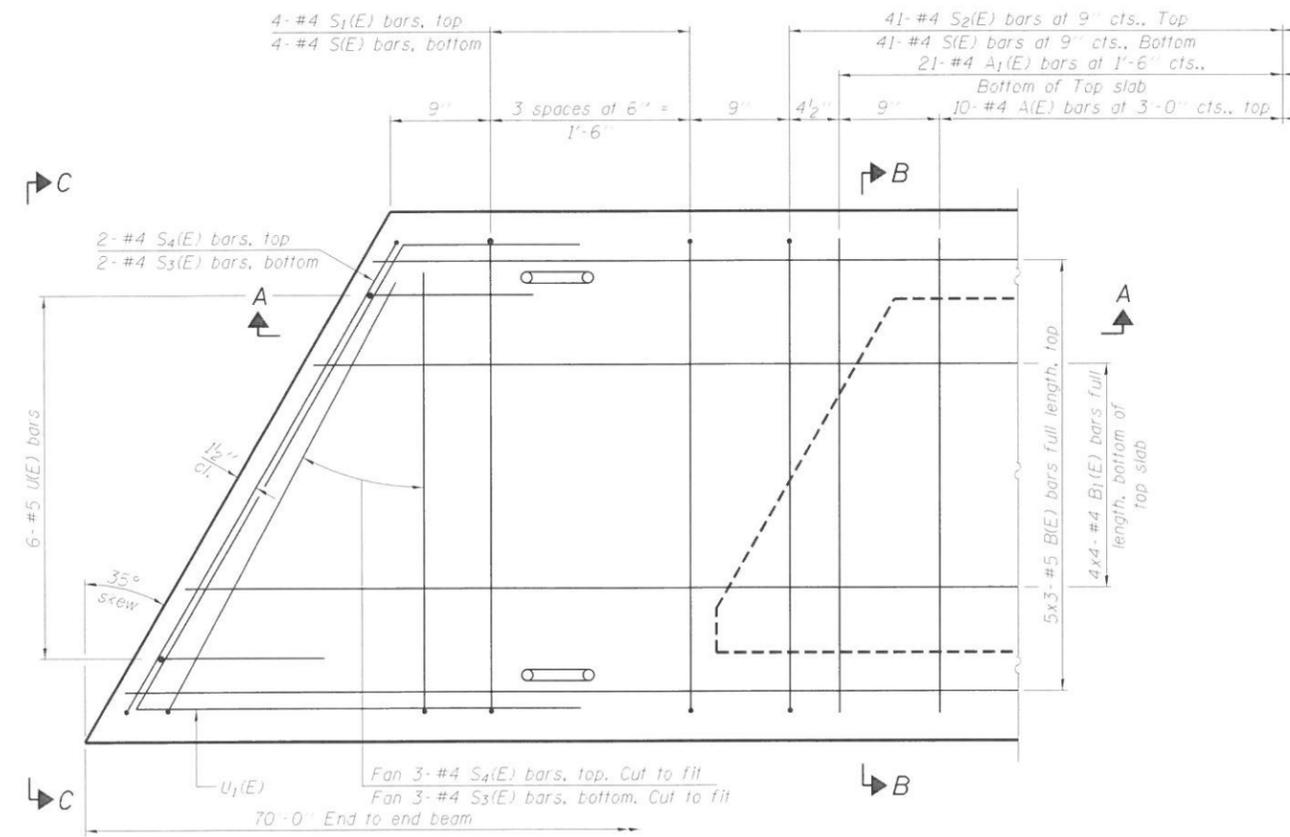
SECTION A-A



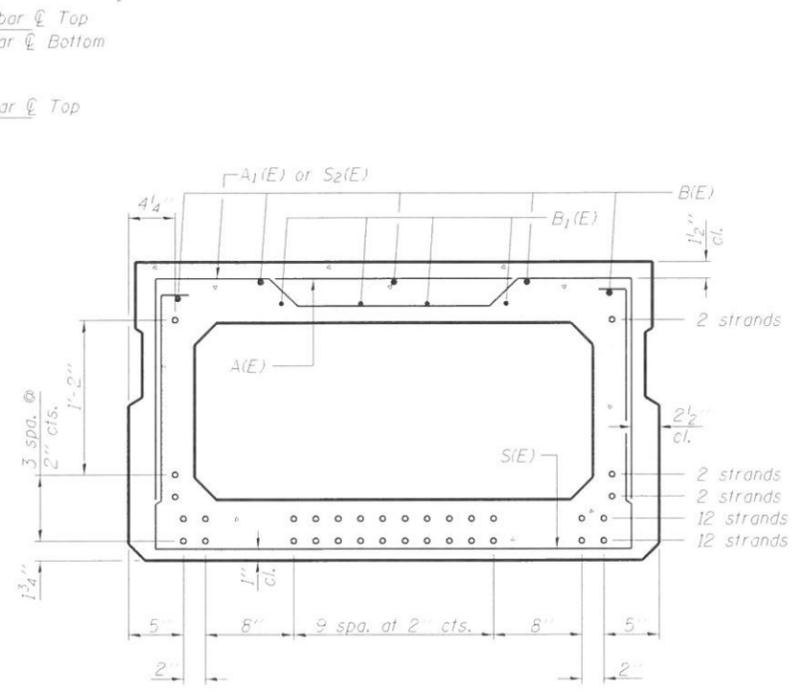
SECTION B-B
(Showing dimensions)



VIEW C-C



PLAN VIEW



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)	21	#4	3'-7"	—
A1(E)	42	#4	3'-10"	—
B(E)	15	#5	24'-11"	—
B1(E)	16	#4	18'-11"	—
S(E)	91	#4	8'-5"	U
S1(E)	8	#4	6'-11"	U
S2(E)	83	#4	7'-2"	U
S3(E)	10	#4	5'-8"	U
S4(E)	10	#4	4'-11"	U
U(E)	12	#5	4'-6"	U
U1(E)	4	#4	9'-3"	U

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

Notes:
 Spacing of S1(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 5x3-#5 etc. indicates 5 lines of bars with 3 lengths per line.

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

PD-2748-L 06-01-16

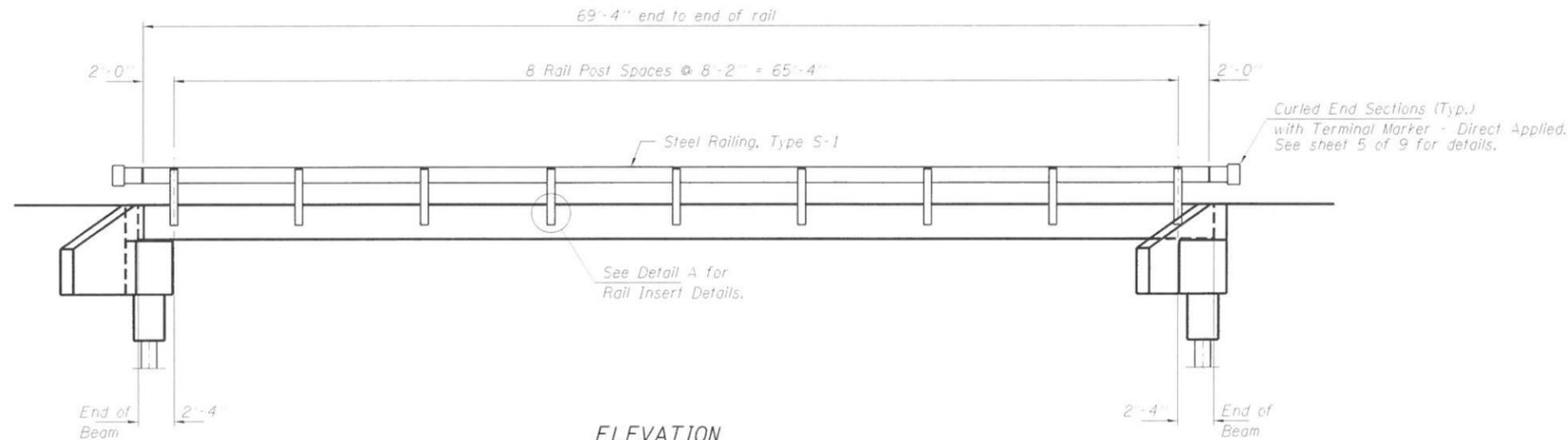
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ILLINOIS PROFESSIONAL DESIGN FIRM L.L.R. PEI & CO. INC. 184.00355	PLOT DATE = 11-21-2017	DRAWN - R.D.H.	REVISED -
		CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
WHITE COUNTY HIGHWAY DEPARTMENT

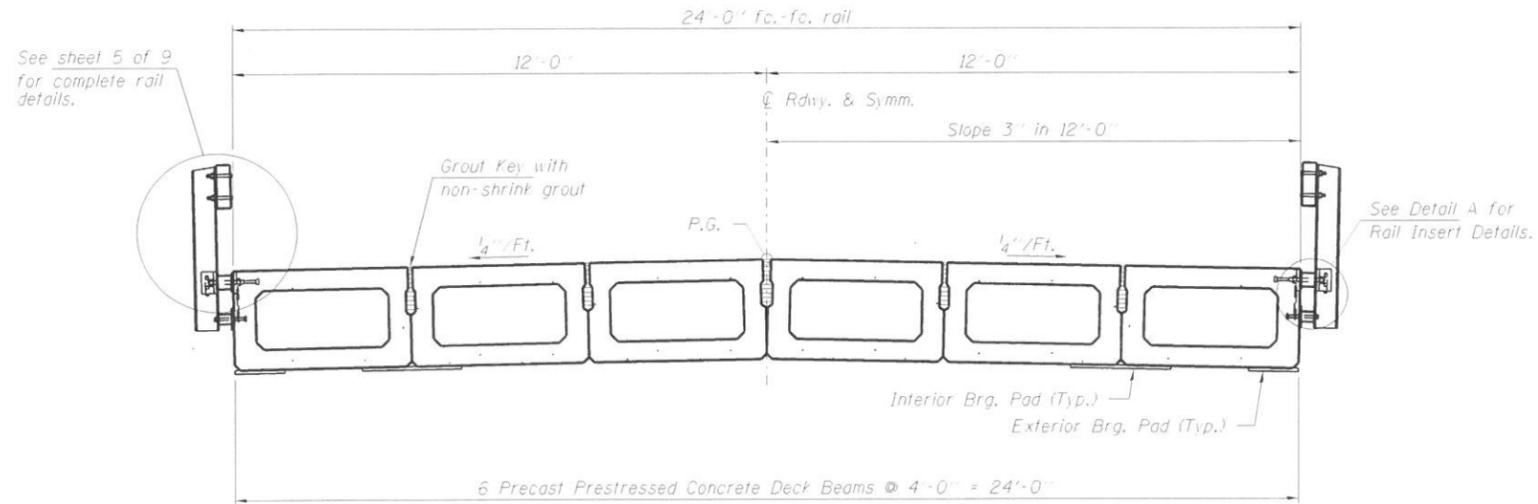
27" x 48" PPC DECK BEAM
STRUCTURE NO. 097-3277

SHEET NO. 2 OF 9 SHEETS

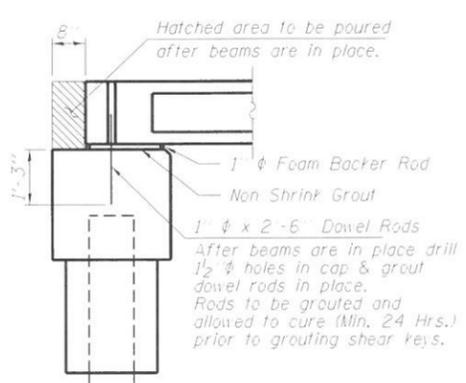
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INDIAN CREEK ROAD DISTRICT			CONTRACT NO. 99588	
[ILLINOIS] FED. AID PROJECT				



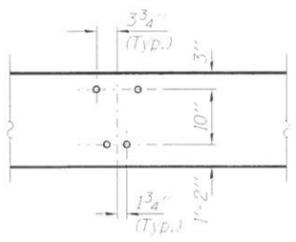
ELEVATION
Showing Rail Post Spacing
See sheet 5 of 9 for Railing Details.



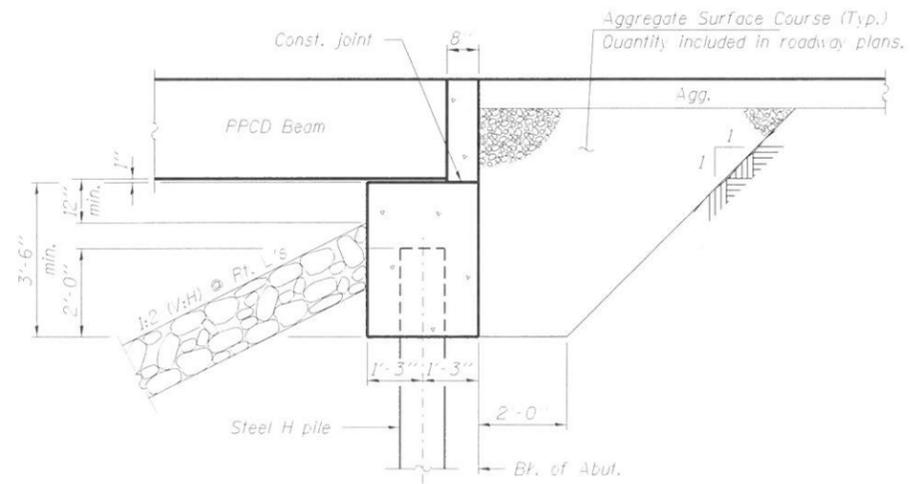
CROSS SECTION
See sheets 3 & 4 of 9 for Superstructure.



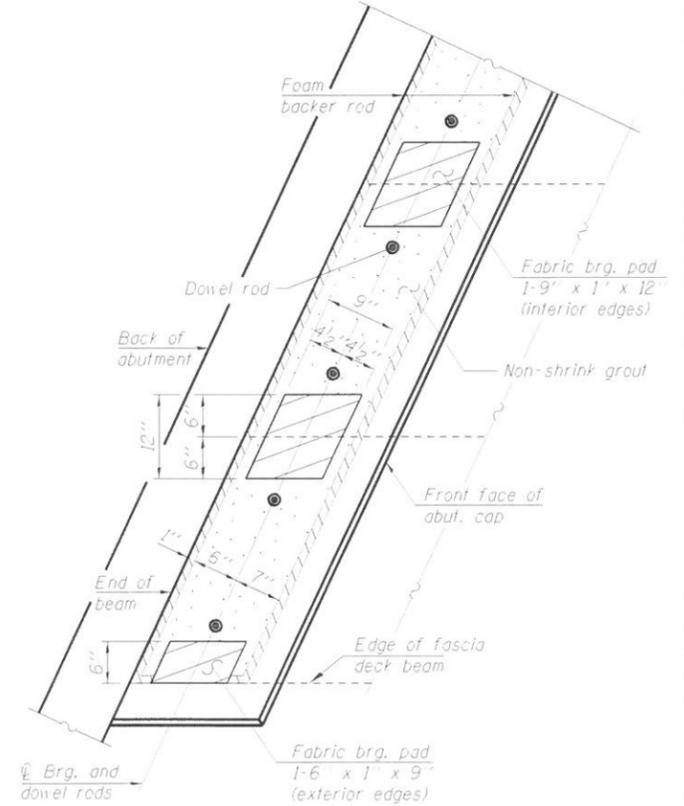
SECTION AT ABUTMENTS
© Rt. L's



DETAIL A



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



PLAN
(Abutment)

Notes:
The bearing seat surfaces shall be adjusted by shimming the bearing to assure firm and even bearing prior to placement of grout. 2'-6" fabric adjusting shims of the dimensions of the exterior bearing pad shown shall be provided for each bearing.

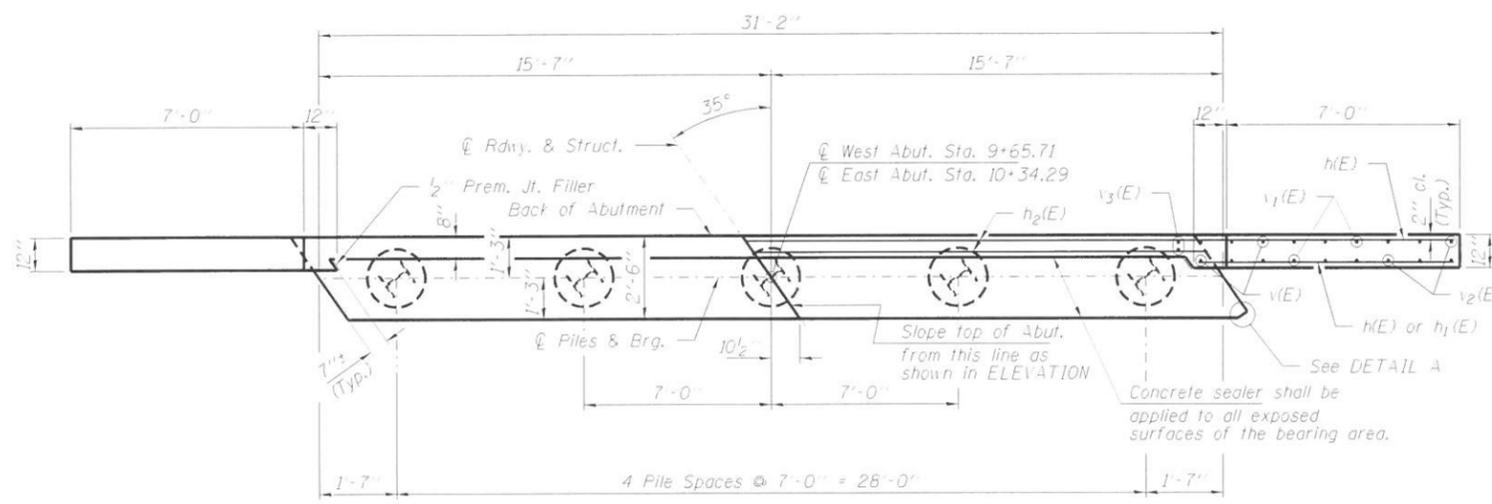
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HAMPTON, LENZINI AND RENWICK, INC.	3015 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62761	CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM L.S. PE. & SE. CORP. 164-800262	PLLOT SCALE : 1/8"=1'-0"	DRAWN - R.D.H.	REVISED -
	PLLOT DATE : 11/21/2017	CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
WHITE COUNTY HIGHWAY DEPARTMENT

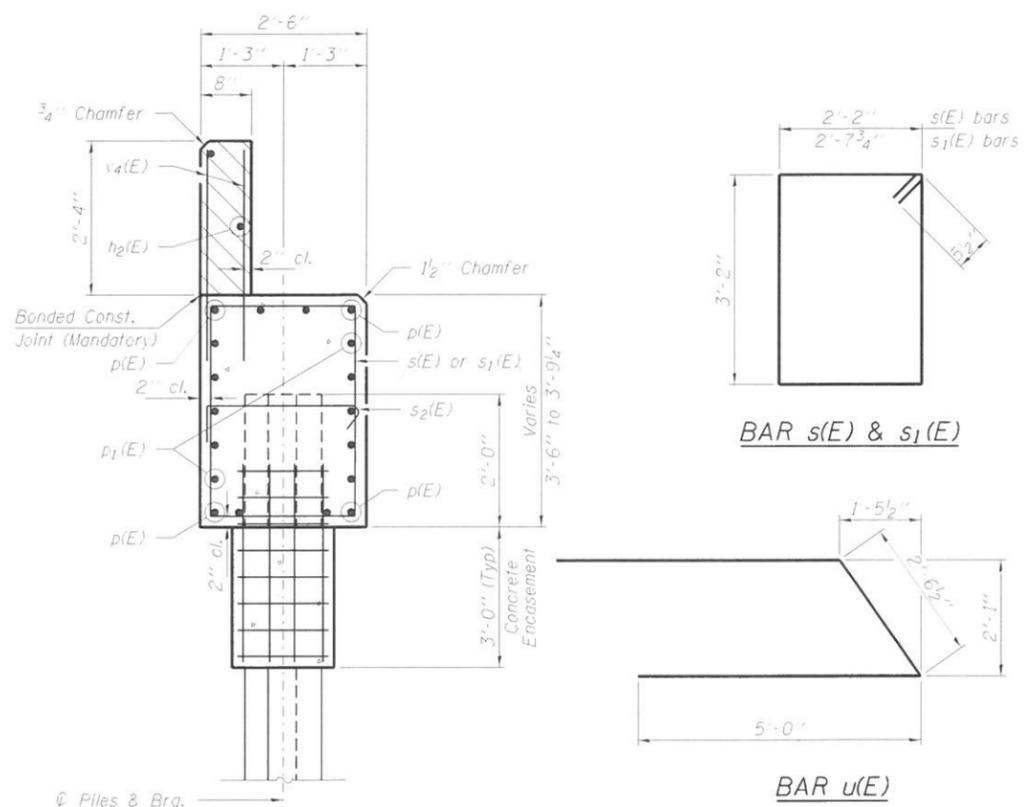
SUPERSTRUCTURE DETAILS
STRUCTURE NO. 097-3277

SHEET NO. 4 OF 9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
403	09-08141-00-BR	WHITE	17	12
INDIAN CREEK ROAD DISTRICT			CONTRACT NO. 99588	
ILLINOIS FED. AID PROJECT				

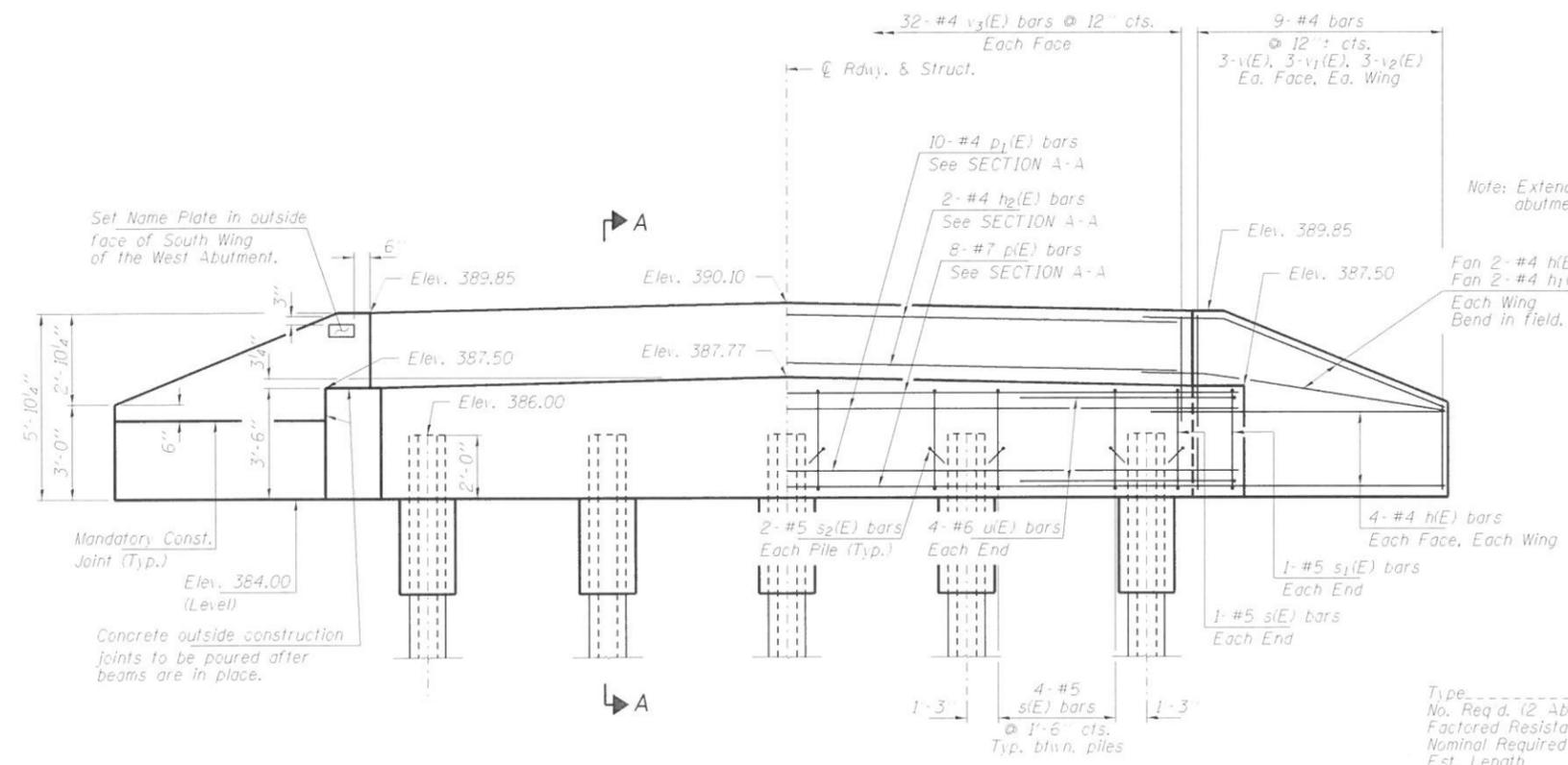


PLAN



SECTION A-A

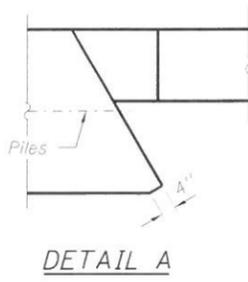
Hatched area to be poured after beams are in place.
Cast top of wingwall flush with exterior beam face after beams have been erected.



ELEVATION

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.



DETAIL A

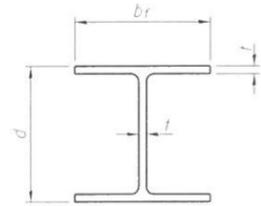
PILE DATA

Type ----- Steel HPI0x42
No. Req'd. (2 Abuts.) ----- 10
Factored Resistance Available (Rf) ----- 184 Kips/Pile
Nominal Required Bearing (Rn) ----- 335 Kips/Pile
Est. Length ----- 75 Ft./Pile

BILL OF MATERIAL - 2 ABUTS.

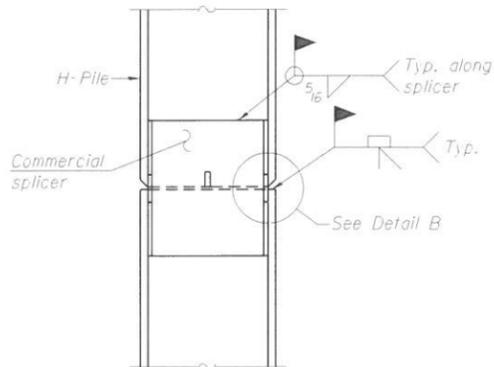
BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	40	#4	9'-3"	—
h1(E)	8	#4	7'-9"	—
h2(E)	4	#4	30'-10"	—
p(E)	16	#7	30'-10"	—
p1(E)	20	#4	30'-10"	—
s(E)	36	#5	11'-7"	□
s1(E)	4	#5	12'-7"	□
s2(E)	20	#5	3'-4"	U
u(E)	16	#6	12'-7"	U
v(E)	24	#4	5'-0"	—
v1(E)	24	#4	3'-10"	—
v2(E)	24	#4	2'-8"	—
v3(E)	128	#4	3'-2"	—

Concrete Structures	Cu. Yd.	29.6
Concrete Encasement	Cu. rd.	3.4
Reinforcement Bars, Epoxy Coated	Pound	3,110
Furnishing Steel Piles HPI0x42	Foot	750
Name Plates	Each	1
Concrete Sealer	Sq. Ft.	115

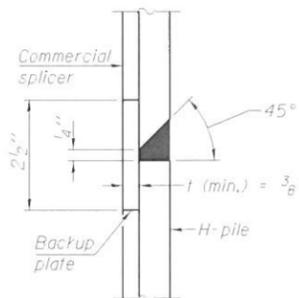


STEEL PILE TABLE

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

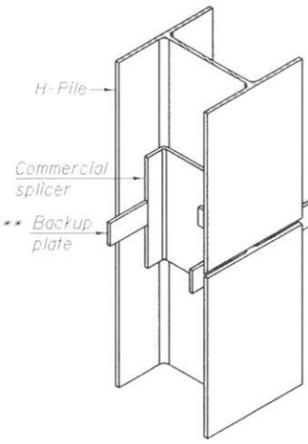


ELEVATION

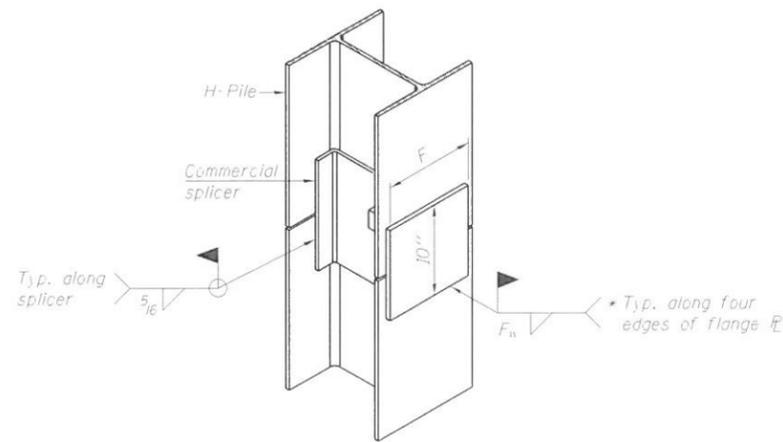


DETAIL "B"

WELDED COMMERCIAL SPLICE



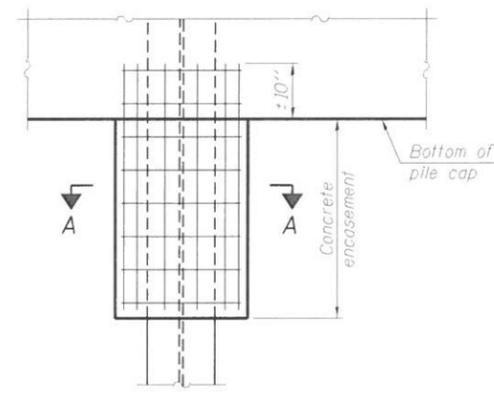
ISOMETRIC VIEW



ISOMETRIC VIEW

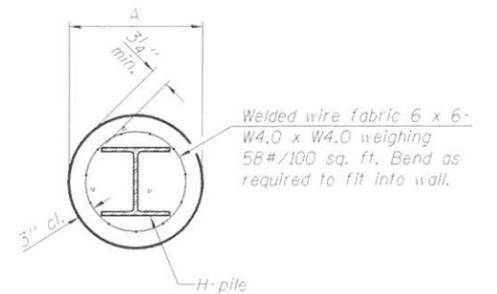
WELDED COMMERCIAL SPLICE ALTERNATE

- * 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.).



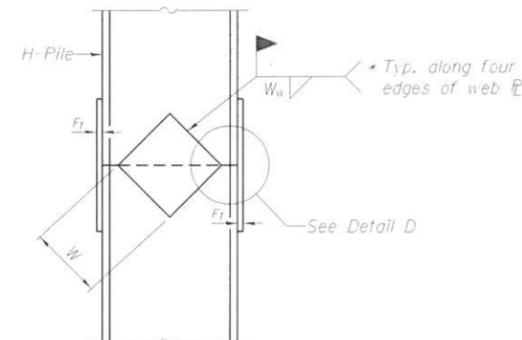
ELEVATION

PILE ENCASEMENT



SECTION A-A

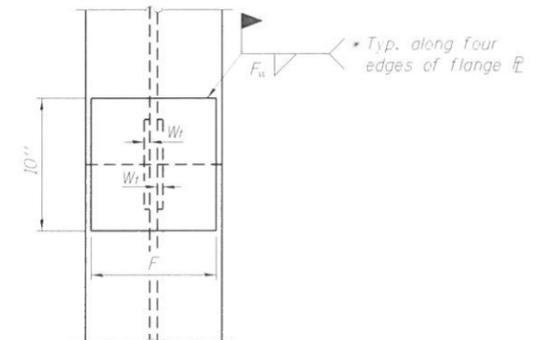
Note:
Forms for encasement may be omitted when soil conditions permit.



ELEVATION

DETAIL D

WELDED PLATE FIELD SPLICE



END VIEW

Designation	F	F _t	F _w	W	W _t	W _w
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"	1/16"	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"	1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	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"

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

F-HP

1-27-12

FILE NAME + 151431-shr-bridge.dgn	USER NAME + rhesick	DESIGNED - L.A.P.	REVISIONS -	STATE OF ILLINOIS WHITE COUNTY HIGHWAY DEPARTMENT	HP PILE DETAILS STRUCTURE NO. 097-3277	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3005 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE = 1/8"=1'-0"	CHECKED - S.W.M.	REVISIONS -			403	09-08141-00-BR	WHITE	17	15	
ALINOR PROFESSIONAL DESIGN FIRM 151 N. PULASKI ST., SUITE 100 SPRINGFIELD, ILLINOIS 62702	PLOT DATE = 11/21/2011	DRAWN - R.D.H.	REVISIONS -			INDIAN CREEK ROAD DISTRICT		CONTRACT NO. 99588		ILLINOIS FED. AID PROJECT	
		CHECKED - S.W.M.	REVISIONS -			SHEET NO. 7 OF 9 SHEETS					

Bridge Foundation Boring Log

Project: H-16050 Bridge TR-403 over Creek Date: 4/7/2016
Section: 09-08141-00-BR Station _____ Bored by: J. Carter
Structure: 097-3161 Checked By: T. Holcomb
County: White

Boring No: <u>1</u>	Station: _____	Offset: _____	Surface Water Elev. _____			Ground Water Elev. _____		
			Elevation	N	Qu tsf	Elevation	N	Qu tsf
Ground Surface	99.7	0						
3" Crushed Stone	368.7							
Brown Clayey SILT (A-4)			6	--	18			
	385.2					-25	4	0.9B 21
	96.2							
Brown Fine to Medium SAND (A-2-4)			4	--	6			
	382.7							
	93.7							
Gray Clayey SAND (A-2-4)			2	--	22			
	380.2					-30	6	1.5B 18
	91.2							
Gray Mottled Brown Silty CLAY (A-6)			7	1.1S	21			
	377.7							
	88.7							
Brown Mottled Gray Sandy CLAY (A-6)			5	0.2B	20			
	374.7					-35	10	1.8B 18
	85.7							
Brown Mottled Gray Silty CLAY (A-6)			7	1.9S	28			
	371.7							
	85.7							
			6	0.9B	33			
	367.2					-40	15	2.6B 16
	78.2							
Gray CLAY (A-6) with pebbles			6	1.4B	32			

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

Bridge Foundation Boring Log

Project: H-16050 Bridge TR-403 over Creek Date: 4/7/2016
Section: 09-08141-00-BR Station _____ Bored by: J. Carter
Structure: 097-3161 Checked By: T. Holcomb
County: White

Boring No: <u>1</u>	Station: _____	Offset: _____	Surface Water Elev. _____			Ground Water Elev. _____		
			Elevation	N	Qu tsf	Elevation	N	Qu tsf
silty clay (continued)	45	12	1.7B	17				
	340.2					-70	100/5	2.5S 19
	51.2							
Gray Fat CLAY (A-7-6)			17	2.8B	22			
	374.2							
	25.2					-75	33	-- 13
Brown Mottled Gray Weathered SHALE								
	370.2							
	21.2					100	7/5	-- 11
Gray SHALE								
	100					100	7/5	-- 7
	304.7							
	15.7					100	7/4	-- 7
End of Boring @ -84.0'						-85		
	325.2							
	36.2							
Gray Silty CLAY (A-6) with trace sand			13	2.9B	21			
	362.2					-65		

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

