

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE OF HIGHWAYS PROJECT IMPLEMENTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	4B-1	JACKSON	30	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 78204		

FOR INDEX OF SHEETS, SEE SHEET NO. 2  
 FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 3-6  
 FOR STRUCTURAL PAVEMENT DESIGN INFORMATION, SEE SHEET NO.: NA

# PROPOSED HIGHWAY PLANS

F.A.P. ROUTE 322 (US 51)  
 OVER DRAINAGE DITCH  
 SECTION: 4B-1  
 PROJECT ACF-0322(099)  
 STRUCTURE REPLACEMENT  
 JACKSON COUNTY

C-99-062-10

**TRAFFIC DATA**

**US 51 TRAFFIC DATA**

2012 ADT = 8202  
 2032 ADT = 10228  
 6.40 % TRUCKS

**TOWNSHIP:**

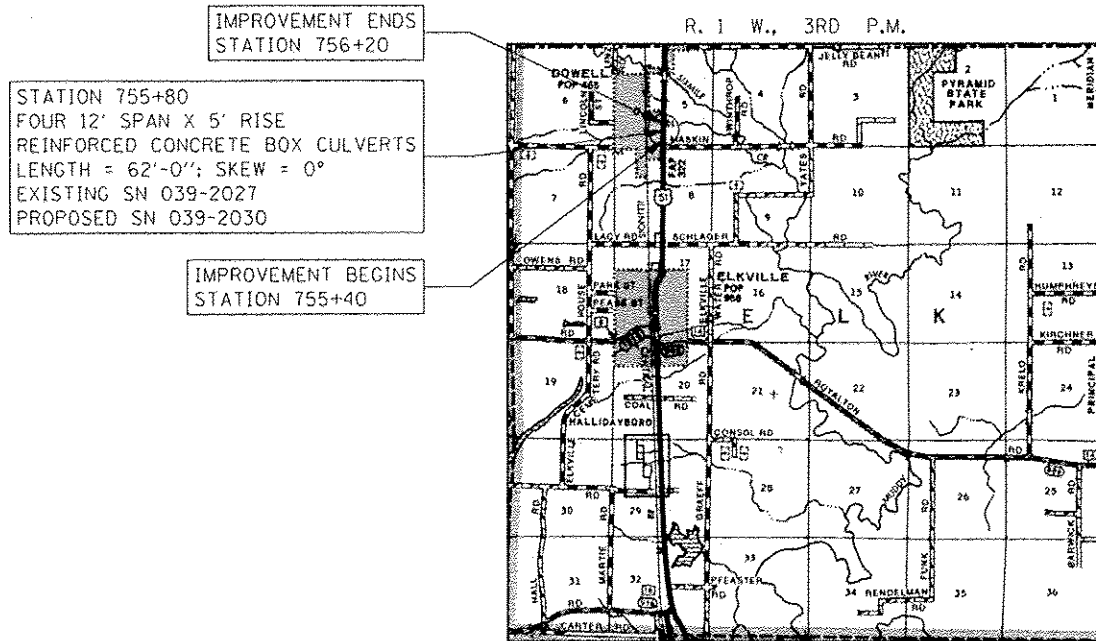
ELK

DESIGN DESIGNATION : NA  
 COORDINATE SYSTEM : NA  
 POSTED SPEED : 55 MPH

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

PROJECT ENGINEER: DAVID PICHE

CONTRACT NO. 78204



LOCATION MAP

APPROXIMATE SCALE: 0 1 MILE  
 NET LENGTH OF PROJECT = 80 FEET = 0.015 MILES  
 GROSS LENGTH OF PROJECT = 80 FEET = 0.015 MILES

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

DATE: 07/08/2016  
 LICENSED PROFESSIONAL ENGINEER  
 DAVID PICHE  
 062-54470  
 STATE OF ILLINOIS  
 EXPIRES: 11/30/2017



LOCATION OF SECTION INDICATED THUS: -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE OF HIGHWAYS PROJECT IMPLEMENTATION

SUBMITTED August 4 2016  
 Jeffrey J. Kern  
 REGION FIVE ENGINEER  
 Sept 30 2016  
 Maureen M. Addis P.E.  
 ENGINEER OF DESIGN AND ENVIRONMENT  
 Sept 30 2016  
 Daniel Allen 2  
 DIRECTOR OF PROGRAM DEVELOPMENT

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 OF THE STATE OF ILLINOIS

**GENERAL NOTES**

- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING FIELD DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.
- 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 MONUMENTS UNTIL AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR REESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS.
- 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.
- PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING CONDITIONS HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NORMAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE A CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK. THE CONTRACTOR, HOWEVER, WILL BE PAID FOR THE ACTUAL QUANTITY FURNISHED AT THE UNIT PRICE FOR THE WORK. CONSTRUCTION PLANS ARE AVAILABLE FOR REVIEW AT THE DISTRICT 9 OFFICE.
- THE THICKNESS OF HOT MIX ASPHALT MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HOT MIX ASPHALT MIXTURE IS PLACED.
- ALL OBSTRUCTIONS WHICH ARE WITHIN THE CLEAR ZONE SHOWN ON THE TYPICAL SECTION SHALL BE REMOVED BETWEEN STATION **753+80** AND STATION **757+80**. TYPICAL OBSTRUCTIONS ARE HEADWALLS, FOUNDATIONS, ETC. WHICH PROJECT 100 mm (4 IN.) OR MORE ABOVE THE GROUND LINE AND TREES WHICH WILL MATURE TO A DIAMETER OF 100 mm (4 IN.) OR GREATER.
- IF SO DIRECTED BY THE ENGINEER, DITCHES ADJACENT TO EMBANKMENTS SHALL BE CONSTRUCTED PRIOR TO STARTING THE CONSTRUCTION OF THE EMBANKMENT FILL.
- FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:  
 HOT MIX ASPHALT - 112 LBS/SQ.YD./INCH  
 BITUMINOUS MATERIALS:  
 ON PAVEMENT - 0.05 LB./SQ.FT.  
 INTERMEDIATE LIFTS (TACK COAT) - 0.025 LB./SQ.FT.  
 ON AGGREGATE SURFACE - 0.25 LB./SQ.FT.  
 RIPRAP - 1.5 TONS/CU.YD.
- WHEN WIDENING FLEXIBLE BASE PAVEMENT, THE CONTRACTOR SHALL TRIM EXISTING SURFACE AND BASE TO A FIRM, NEAR VERTICAL PLANE BEFORE CONSTRUCTING THE WIDENING. THE COST OF THIS REQUIREMENT IS INCLUDED IN THE UNIT PRICE BID FOR THE BASE COURSE WIDENING.
- AT ALL LOCATIONS WHERE THE PROPOSED HOT MIX ASPHALT OR CONCRETE PAVEMENT JOINS AN EXISTING HOT MIX ASPHALT OR CONCRETE PAVEMENT, A FULL DEPTH SAWED JOINT SHALL BE CONSTRUCTED. THE COST OF THIS JOINT WILL BE INCLUDED IN THE COST OF THE TYPE OF PAVEMENT BEING CONSTRUCTED.
- THE MINIMUM VERTICAL CLEARANCE FOR PERMANENT SIGNS PLACED ON BACKSLOPES SHALL BE 0.914 m (3 FT.) MEASURED FROM A POINT DIRECTLY BENEATH THE FAR EDGE OF THE SIGN.
- THE LIMITS OF ROCK AND EARTH SLOPES SHOWN IN THE CROSS SECTIONS ARE APPROXIMATE. THE ACTUAL SLOPE USED SHALL BE DETERMINED BY THE MATERIAL CLASSIFICATION AS DEFINED IN ARTICLE 202.04, AND AS DIRECTED BY THE ENGINEER.
- PRIOR TO PLACEMENT OF THE FINAL PAVEMENT MARKINGS THE RESIDENT ENGINEER SHOULD CONTACT THE BUREAU OF OPERATIONS AND ARRANGE FOR INSPECTION AND APPROVAL OF THE PAVEMENT MARKING LAYOUT.
- THE ADVANCE DETECTOR LOOPS ARE TYPICALLY LOCATED 275 FEET IN ADVANCE OF THE STOP BAR. THE BUREAU OF OPERATIONS SHOULD APPROVE THE LOOP LOCATIONS PRIOR TO INSTALLATION.

**GENERAL NOTES**

- THE CENTERLINE PAVEMENT MARKING SHOULD BE REMOVED FROM THE STOP BAR TO THE SAND ATTENUATORS OR DRUMS. EDGE LINE PAVEMENT MARKING SHOULD BE REMOVED IF A 10 FOOT LANE WIDTH CANNOT BE MAINTAINED. TEMPORARY EDGE LINES SHOULD BE INSTALLED WHEN THE EDGE LINES ARE REMOVED.
- ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC. THE TEMPORARY TRAFFIC SIGNALS SHALL BE TURNED OFF OR COVERED.
- ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE LEFT IN PLACE UNTIL REMOVAL IS REQUIRED TO CONSTRUCT FINAL GRADE LINES.
- COMMITMENTS: NONE AS OF 8/12/2016

**UTILITIES**

AMEREN ILLINOIS I.P.  
 2610 BROADWAY  
 MT. VERNON, IL 62864  
 ATTN: MIKE TATLOCK  
 TEL#: (618) 244-8271  
 CELL: (618) 367-3338

MCI  
 7719 WEST 60TH PLACE  
 SUMMIT, IL 60501  
 ATTN: JIM TODD  
 TEL#: (708) 458-6410  
 CELL: (219) 771-2672

ZAYO GROUP  
 900 CAMBRIDGE CT  
 GODFREY, IL 62035  
 ATTN: TIM PLANK  
 TEL#: (314) 774-2133  
 CELL: (618) 971-0586

FRONTIER COMMUNICATIONS  
 208 WEST UNION  
 MARION, IL 62959  
 ATTN: RICK SHAW  
 TEL#: (618) 997-0253

MEDIACOM  
 1603 E. DEYOUNG ST.  
 MARION, IL. 62959  
 ATTN: CRAIG THOMPSON  
 TEL#: (270) 703-9490

DOWELL, VILLAGE OF  
 213 UNION AVE  
 DOWELL, IL. 62927  
 ATTN: DENNIS STEWART  
 TEL#: (618) 568-1513

**HIGHWAY STANDARDS**

- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
- 001001-02 AREAS OF REINFORCEMENT BARS
- 280001-07 TEMPORARY EROSION CONTROL SYSTEMS
- 420001-08 PAVEMENT JOINTS
- 420601-06 24' (7.2m) PCC PAVEMENT
- 482001-02 HMA SHOULDERS ADJACENT TO FLEXIBLE PAVEMENT
- 482006-03 HMA SHOULDER ADJACENT TO RIGID PAVEMENT
- 515001-03 NAME PLATE FOR BRIDGES
- 701001-02 OFF-ROAD OPERATIONS 2L, 2W, MORE THAN 4.5M (15') AWAY
- 701006-05 OFF-ROAD OPERATIONS 2L, 2W, 15' (4.5M) TO 24" (600 MM) FROM PAVEMENT EDGE
- 701011-04 OFF-ROAD MOVING OPERATIONS 2L, 2W, DAY ONLY
- 701201-04 LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
- 701301-04 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
- 701321-15 LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
- 701326-04 LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
- 701901-05 TRAFFIC CONTROL DEVICES
- 704001-08 TEMPORARY CONCRETE BARRIER
- 780001-05 TYPICAL PAVEMENT MARKINGS
- 781001-04 TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	INDEX, GENERAL NOTES AND HIGHWAY STANDARDS
3.-6.	SUMMARY OF QUANTITIES
7.	TYPICAL SECTIONS
8.	SCHEDULE OF QUANTITIES
9.	ALIGNMENT, TIES AND BENCHMARKS
10.	PLAN AND PROFILE
11.	STAGE 1 CONSTRUCTION
12.	STAGE 2 CONSTRUCTION
13.	EROSION CONTROL PLAN
14.	PAVEMENT MARKING PLAN
15.	PAVED SHOULDER PLAN
16.	STANDARD DETAILS DISTRICT 9
17.-23.	STRUCTURE PLANS
24.	BORINGS
25.-30.	STATION CROSS SECTIONS

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

PREPARED BY: [Signature]  
 DISTRICT STUDIES & PLANS ENGINEER

EXAMINED BY: [Signature]  
 DISTRICT LAND ACQUISITION ENGINEER

EXAMINED BY: [Signature]  
 DISTRICT PROGRAM DEVELOPMENT ENGINEER

EXAMINED BY: [Signature]  
 DISTRICT OPERATIONS ENGINEER

EXAMINED BY: [Signature]  
 DISTRICT PROJECT IMPLEMENTATION ENGINEER

EXAMINED BY: [Signature]  
 DISTRICT CONSTRUCTION ENGINEER

EXAMINED BY: [Signature]  
 DISTRICT MATERIALS ENGINEER

FILE NAME : 78204-shr-gennote.dgn	USER NAME : #USER#	DESIGNED - J.W.F.	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>INDEX, GENERAL NOTES &amp; STANDARDS US 51 / ROOSEVELT STREET</b>	F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3305 STEVENSON DRIVE, SUITE 204 SPRINGFIELD, IL 62768-8750 ILLINOIS PROFESSIONAL DESIGN FIRM L.L.P./P.C. CORP. 184-000233	PLOT SCALE = #SCALE#	DRAWN - T.W.K.	REVISED -			322	4B-1	JACKSON	30	2	
PLOT DATE = 7/14/2016	DATE = 07/08/16	CHECKED - L.F.S.	REVISED -			CONTRACT NO. 78204					
						SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	CONSTRUCTION TYPE CODE 0011	
		UNIT	039-2030 80% FEDERAL 20% STATE
20200100	EARTH EXCAVATION	CU YD	210
20700220	POROUS GRANULAR EMBANKMENT	CU YD	220
25000210	SEEDING, CLASS 2A	ACRE	0.25
25000350	SEEDING, CLASS 7	ACRE	0.25
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	19
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	13
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	13
25000700	AGRICULTURAL GROUND LIMESTONE	TON	0.2
25100115	MULCH, METHOD 2	ACRE	0.50
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	59
28000400	PERIMETER EROSION BARRIER	FOOT	535
28100107	STONE RIPRAP, CLASS A4	SQ YD	83
28100109	STONE RIPRAP, CLASS A5	SQ YD	203
28200200	FILTER FABRIC	SQ YD	286

14 ^ SEE SPECIAL PROVISIONS

FILE NAME = 78204-eh-t-SQQ.dgn	USER NAME = *USER*	DESIGNED - J.W.F.	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES US 51 / ROOSEVELT STREET</b>	F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
<b>HAMPTON, LENZINI AND RENWICK, INC.</b> 2275 W. SPRINGFIELD, ILLINOIS 62703	PLOT SCALE = *SCALE*	DRAWN - T.W.K.	REVISED -			322	48-1	JACKSON	30	3	
<b>HLR</b> ILLINOIS PROFESSIONAL ENGINEERING 101 W. WASHINGTON, SPRINGFIELD, ILLINOIS 62702	PLOT DATE = 7/13/2016	CHECKED - L.F.S.	REVISED -			CONTRACT NO. 78204					
		DATE - 07/08/16	REVISED -			ILLINOIS FED. AID PROJECT					

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	CONSTRUCTION TYPE CODE 0011	
		UNIT	039-2030 80% FEDERAL 20% STATE
31100910	SUBBASE GRANULAR MATERIAL, TYPE A 12"	SQ YD	454
35600716	HOT-MIX ASPHALT BASE COURSE WIDENING, 10"	SQ YD	495
40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	1301
42000500	PORTLAND CEMENT CONCRETE PAVEMENT 10"	SQ YD	232
42001300	PROTECTIVE COAT	SQ YD	232
44000100	PAVEMENT REMOVAL	SQ YD	294
44004250	PAVED SHOULDER REMOVAL	SQ YD	108
44213100	PAVEMENT FABRIC	SQ YD	232
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	82
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CU YD	673
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	68560
50800515	BAR SPLICERS	EACH	306
51500100	NAME PLATES	EACH	1

14 ^ SEE SPECIAL PROVISIONS

FILE NAME = 78204-hs-500.dgn	USER NAME = #USER#	DESIGNED - J.W.F.	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES US 51 / ROOSEVELT STREET</b>	F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 2015 STEVENSON AVENUE, SUITE 200 SPRINGFIELD, ILLINOIS 62783	PLLOT SCALE = #SCALE#	DRAWN - T.W.K.	REVISED -			322	4B-1	JACKSON	30	4
BLR ILLINOIS PROFESSIONAL DESIGN FIRM 13111/13112/13113/13114/13115/13116/13117/13118/13119/13120/13121/13122/13123/13124/13125/13126/13127/13128/13129/13130/13131/13132/13133/13134/13135/13136/13137/13138/13139/13140/13141/13142/13143/13144/13145/13146/13147/13148/13149/13150/13151/13152/13153/13154/13155/13156/13157/13158/13159/13160/13161/13162/13163/13164/13165/13166/13167/13168/13169/13170/13171/13172/13173/13174/13175/13176/13177/13178/13179/13180/13181/13182/13183/13184/13185/13186/13187/13188/13189/13190/13191/13192/13193/13194/13195/13196/13197/13198/13199/13200	PLLOT DATE = 7/13/2016	CHECKED - L.F.S.	REVISED -			CONTRACT NO. 78204				
	DATE = 07/08/16	REVISED -	REVISED -			SCALE:	SHEET NO. 2 OF 4 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT



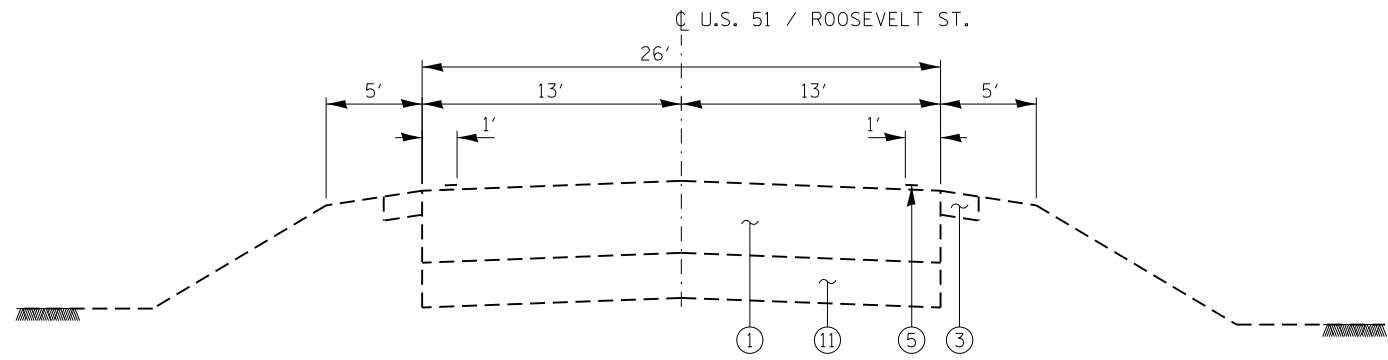
SUMMARY OF QUANTITIES			
CODE NO.	ITEM	CONSTRUCTION TYPE CODE 0011	
		UNIT	039-2030 80% FEDERAL 20% STATE
52200010	TEMPORARY SHEET PILING	SQ FT	465
54003000	CONCRETE BOX CULVERTS	CU YD	307.3
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6
67100100	MOBILIZATION	L SUM	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	6
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	1.0
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	2438.0
70300100	SHORT TERM PAVEMENT MARKING	FOOT	108
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	37
70400100	TEMPORARY CONCRETE BARRIER	FOOT	388

14

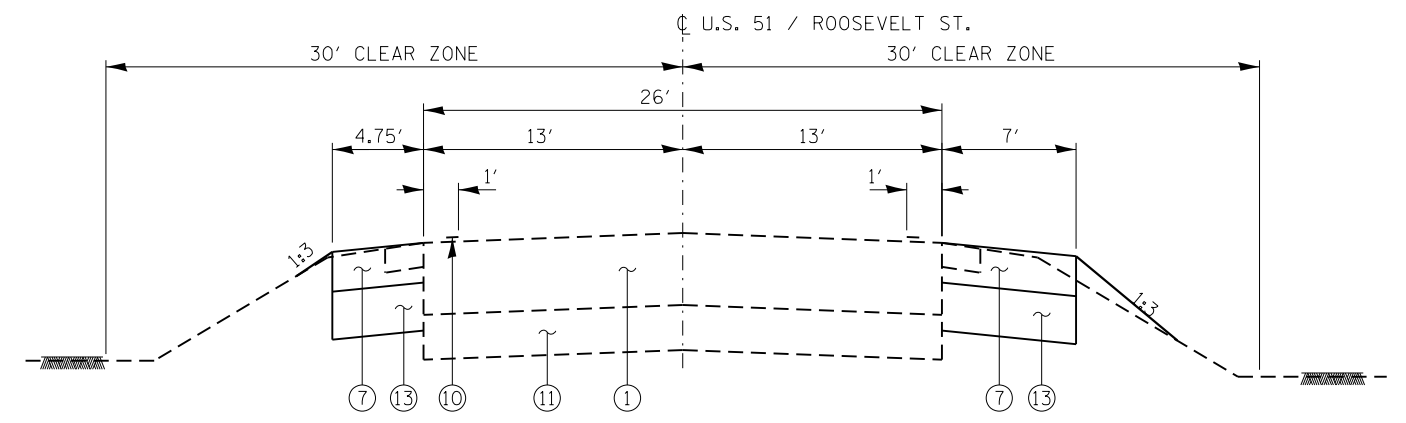
^ SEE SPECIAL PROVISIONS

FILE NAME : 78204-shc-550.dgn	USER NAME : AUSER	DESIGNED - J.W.F.	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES US 51 / ROOSEVELT STREET</b>	F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
<b>HAMPTON, LENZINI AND RENWICK, INC.</b> 303 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62761 ILLINOIS PROFESSIONAL SEALS FROM 18.00/1.00 COMP. 104-000813	PLOT SCALE : # SCALES	DRAWN - T.W.K.	REVISED -			322	48-1	JACKSON	30	5	
	PLOT DATE : 7/13/2016	CHECKED - L.F.S.	REVISED -			CONTRACT NO. 78204					
		DATE - 07/08/16	REVISED -			ILLINOIS FED. AID PROJECT					

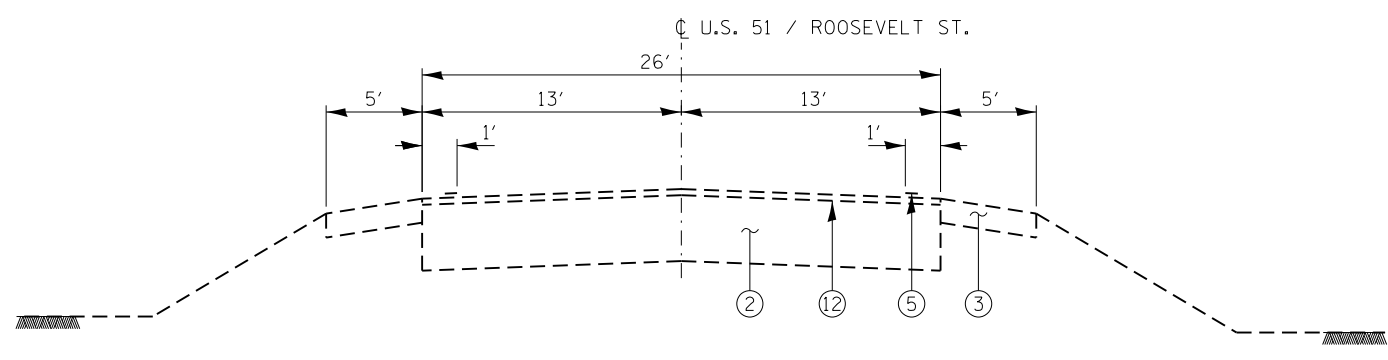




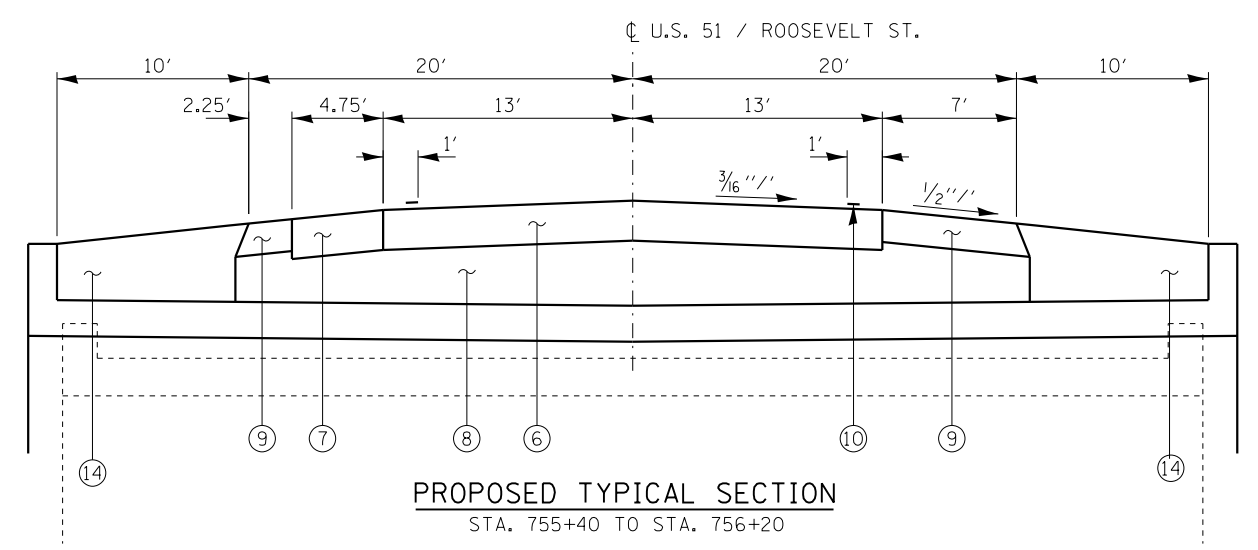
**EXISTING TYPICAL SECTION**  
 STA. 753+80 TO STA. 755+50  
 STA. 756+14 TO STA. 756+27



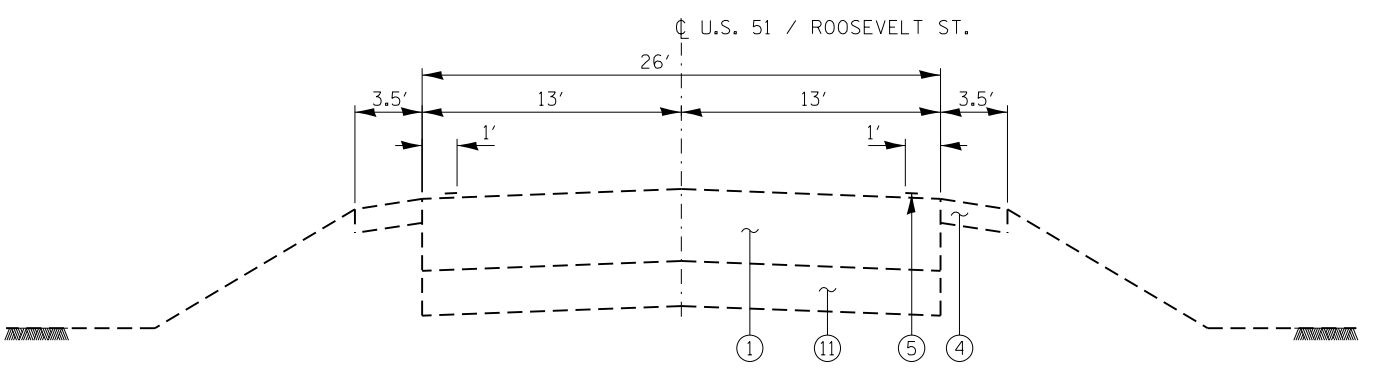
**PROPOSED TYPICAL SECTION**  
 STA. 753+80 TO STA. 755+40  
 STA. 756+20 TO STA. 757+80



**EXISTING TYPICAL SECTION**  
 STA. 755+50 TO STA. 756+14



**PROPOSED TYPICAL SECTION**  
 STA. 755+40 TO STA. 756+20



**EXISTING TYPICAL SECTION**  
 STA. 756+27 TO STA. 757+80

NOTE: ALL CROSS SECTIONS LOOKING UP STATION

HMA MIXTURE REQUIREMENTS			
LOCATION(S):	HMA BASE COURSE WIDENING	HMA SHOULDERS (TOP LIFT)	HMA SHOULDERS (LOWER LIFT)
MIXTURE USE(S):	HMA BASE COURSE WIDENING	HMA SHOULDERS, IL-9.5L	HMA SHOULDERS, IL-19.0L
PG:	PG 64-22	PG 64-22	PG 64-22
DESIGN AIR VOIDS:	4% @ Ndes 70	4% @ Ndes 30	4% @ Ndes 30
MIXTURE COMPOSITION:	IL 19.0	IL 9.5L	IL 19.0L
(MIXTURE GRADATION):			
FRICTION AGGREGATE:	NONE	NONE	NONE
MIXTURE WEIGHTS:	112 LBS\SY\INCH THICKNESS	112 LBS\SY\INCH THICKNESS	112 LBS\SY\INCH THICKNESS
QUALITY MANAGEMENT PROGRAM	QC/QA	QC/QA	QC/QA

- LEGEND**
- ① EXISTING PAVEMENT (4 1/2" HMA, 10" AGGR BASE)
  - ② EXISTING REINFORCED PCC PAVEMENT (10")
  - ③ EXISTING AGGREGATE SHOULDERS (6")
  - ④ EXISTING HMA SHOULDER
  - ⑤ EXISTING PAVEMENT MARKING
  - ⑥ PCC PAVEMENT (10")
  - ⑦ HMA BASE COURSE WIDENING (10")
  - ⑧ POROUS GRANULAR EMBANKMENT CA6 OR CA10 (12")
  - ⑨ HMA SHOULDERS (8")
  - ⑩ PROPOSED PAVEMENT MARKING
  - ⑪ EXISTING PCC PAVEMENT (VARIES 7" TO 9")
  - ⑫ EXISTING HMA SURFACE (1 1/2")
  - ⑬ SUBBASE GRANULAR MATERIAL, TYPE A 12"
  - ⑭ EMBNK. OR COARSE AGG, SEE SHT. 18 OF 30

ROADWAY SCHEDULE									
LOCATION	SUBBASE GRANULAR MATERIAL TYPE A 12" SQ YD	HOT-MIX ASPHALT BASE COURSE WIDENING 10" SQ YD	BITUMINOUS MATERIALS (PRIME COAT) POUND	PORTLAND CEMENT CONCRETE PAVEMENT 10" SQ YD	PAVEMENT FABRIC SQ YD	PROTECTIVE COAT SQ YD	PAVEMENT REMOVAL SQ YD	PAVED SHOULDER REMOVAL SQ YD	HOT-MIX ASPHALT SHOULDERS 8" SQ YD
FAP 322 / US 51									
STAGE I									
RT. STA 753+80 TO RT. STA 757+80	311	310	700					60	
LT. STA 754+00 TO LT. STA 757+50	143	185	461	116	116	116	116	48	20
STAGE II									
RT. STA 755+40 TO RT. STA 756+20			140	116	116	116	178		62
TOTAL	454	495	1301	232	232	232	294	108	82

EARTHWORK SUMMARY						
LOCATION	EARTH EXCAVATION	SHRINKAGE FACTOR	% USED	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT REQUIRED	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
FAP 322 / US 51	20200100					
	CU YD			CU YD	CU YD	CU YD
STA 753+80 TO STA 755+45.62	123	25.00%	100.00%	92	1	91
STA 756+14.36 TO STA 757+80	87	25.00%	70.00%	46	10	36
TOTAL	210			138	11	127
					WASTE =	127 CU YD

20700220 POROUS GRANULAR EMBANKMENT	
LOCATION	CU YD
FAP 322 / US 51	
STAGE I	
LT. STA 755+40 TO LT. STA 756+20	110
STAGE II	
RT. STA 755+40 TO RT. STA 756+20	110
TOTAL	220

28000400 PERIMETER EROSION BARRIER	
LOCATION	FOOT
FAP 322 / US 51	
STAGE I	
LT. STA 754+00 TO LT. STA 757+50	240
STAGE II	
RT. STA 753+70 TO RT. STA 757+80	295
TOTAL	535

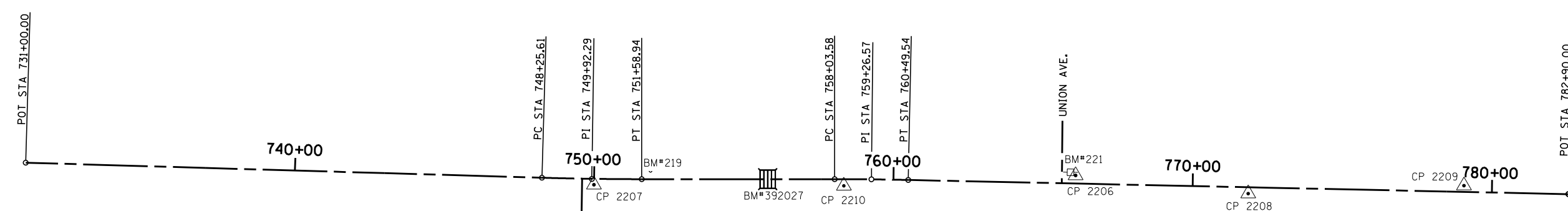
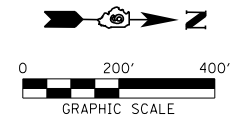
SEEDING SCHEDULE								
LOCATION	SEEDING CLASS 2A SPECIAL	SEEDING CLASS 7	NITROGEN FERTILIZER NUTRIENT**	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	AGRICULTURAL GROUND LIMESTONE	MULCH METHOD 2	TEMPORARY EROSION CONTROL SEEDING *
FAP 322 / US 51	25000210	25000350	25000400	25000500	25000600	25000700	25100115	28000250
	ACRE	ACRE	LBS	LBS	LBS	TONS	ACRE	LBS
RT. STA 753+80 TO RT. STA 757+80	0.07	0.07	9.3	6.4	6.4	0.1	0.14	29
LT. STA 754+00 TO LT. STA 757+50	0.07	0.07	9.7	6.7	6.7	0.1	0.14	30
TOTAL	0.14	0.14	19.0	13.1	13.1	0.2	0.28	59
USE	0.25	0.25	19	13	13	0.2	0.50	59

\* 100 LBS/ACRE FOR 4 APPLICATIONS

\*\* 90 LBS/ACRE FOR SEEDING CLASS 2A AND 40 LBS/ACRE FOR SEEDING CLASS 7

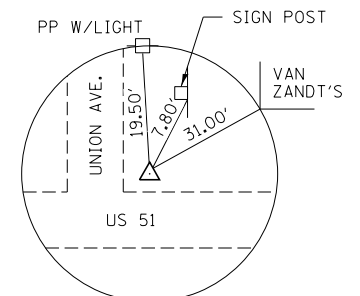
PAVEMENT MARKING SCHEDULE														
LOCATION	SHORT TERM PAVEMENT MARKING	SHORT TERM PAVEMENT MARKING REMOVAL	TEMPORARY PAVEMENT MARKING, LINE 4"				PAINT PAVEMENT MARKING LINE 4"				RAISED REFLECTIVE PAVEMENT MARKER	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	PAVEMENT MARKING REMOVAL WATER BLASTING	
			SOLID WHITE	SKIP-DASH YELLOW CENTERLINE	SOLID YELLOW	SOLID DOUBLE YELLOW	SOLID WHITE	SKIP-DASH YELLOW CENTERLINE	SOLID YELLOW	SOLID DOUBLE YELLOW				
			EDGE LINE	CENTERLINE	DIAGONAL	NO PASSING	EDGE LINE	CENTERLINE	DIAGONAL	MEDIAN				
FAP 322 / US 51	70300100	70300150	70300220				78001110				78100100	78300200	X0327980	
	FOOT	SQ FT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	EACH	EACH	SQ FT
STAGE I														
RT. STA 753+80 TO RT. STA 757+80														132
CL. STA 752+20.25 TO CL. STA 753+86.25														14
CL. STA 757+73.75 TO CL. STA 759+33.75														13
LT. STA 754+00 TO LT. STA 757+50														89
CL. STA 752+20.25 TO CL. STA 759+33.75													19	
STAGE II														
RT. STA 752+18.25 TO RT. STA 759+35.75	32	11	718					718						237
LT. STA 752+18.25 TO LT. STA 759+35.75	32	11	718					718						237
CL. STA 752+18.25 TO CL. STA 756+30	44	15		103					103					34
CL. STA 756+30 TO CL. STA 758+00							340				340			112
RT. STA 758+00 TO RT. STA 759+35.75							272				272			90
LCL. STA 758+00 TO LCL. STA 759+35.75							272				272			90
CL. STA 758+40 TO CL. STA 759+20					15					15				5
CL. STA 752+20.25 TO CL. STA 759+33.75												19		
SUBTOTAL	108	37	1436	103	15	884	1436	103	15	884	19	19		1053
TOTAL	108	37			2438					2438	19	19		1053

STAGING SCHEDULE						
LOCATION	TEMPORARY CONCRETE BARRIER	RELOCATE TEMPORARY CONCRETE BARRIER	IMPACT ATTENUATORS TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3	IMPACT ATTENUATORS RELOCATE (NON-REDIRECTIVE) TEST LEVEL 3	TEMPORARY BRIDGE TRAFFIC SIGNALS	PINNING TEMPORARY CONCRETE BARRIER
FAP 322 / US 51	70400100	70400200	70600250	70600350	70106500	X7040125
	FOOT	FOOT	EACH	EACH	EACH	EACH
STAGE I						
LT. STA 753+56.25 TO LT. STA 758+03.75	387.5		2		1	33
STAGE II						
RT. STA 753+81.25 TO RT. STA 757+78.75		337.5		2		33
TOTAL	387.5	337.5	2	2	1	66

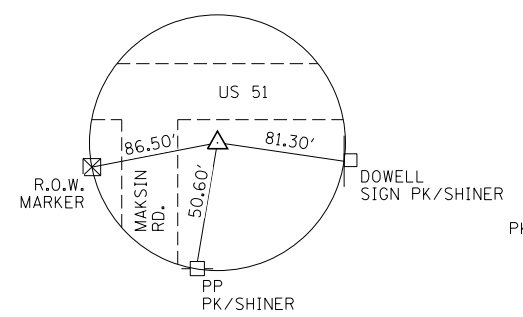


PI STA. = 749+92.29  
 $\Delta = 1^\circ 40' 00''$  (LT)  
 $D = 0^\circ 30' 00''$   
 $R = 11,459.19'$   
 $T = 166.68'$   
 $L = 333.33'$   
 $E = 1.21'$   
 S.E. = NORMAL CROWN  
 P.C. STA = 748+25.61  
 P.T. STA = 751+58.94

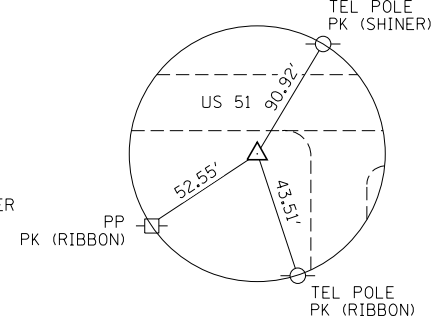
PI STA. = 759+26.57  
 $\Delta = 1^\circ 13' 47''$  (RT)  
 $D = 0^\circ 30' 00''$   
 $R = 11,459.19'$   
 $T = 122.98'$   
 $L = 245.95'$   
 $E = 0.66'$   
 S.E. = NORMAL CROWN  
 P.C. STA = 758+03.58  
 P.T. STA = 760+49.54



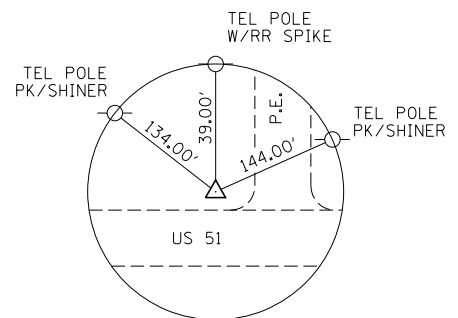
CP 2206



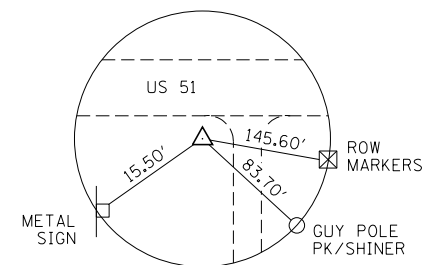
CP 2207



CP 2208



CP 2209



CP 2210

US 51 / ROOSEVELT STREET			
DESCRIPTION	STATION	NORTHING	EASTING
POT	731+00.00	461436.332014	724433.604860
PI	749+92.29	463328.055702	724479.837591
PI	759+26.57	464262.347236	724475.489169
POT	782+56.00	466591.458125	724514.643614

CONTROL POINTS				
DESCRIPTION	STATION	OFFSET	NORTHING	EASTING
CP#2206	766+08.25	27.11' LT	464944.398000	724459.838000
CP#2207	749+99.62	19.6' RT	463335.231500	724498.341900
CP#2208	771+86.06	21.2' RT	465521.312000	724517.864000
CP#2209	779+06.30	20.9' LT	466242.160000	724487.914000
CP#2210	758+34.40	22.2' RT	464170.228200	724498.115200

BENCHMARKS	
BM#392027	CHISLED "□" ON N.E. COR OF E. HDWL 33' RT., STA. 755+91 ELEV. 390.71
BM#219	CUT "□" IN TOP OF HDWL 23' LT., STA. 751+89 ELEV. 391.35
BM#221	RR. SPIKE IN POWER POLE 36' LT., STA. 765+91 ELEV. 397.65

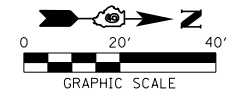
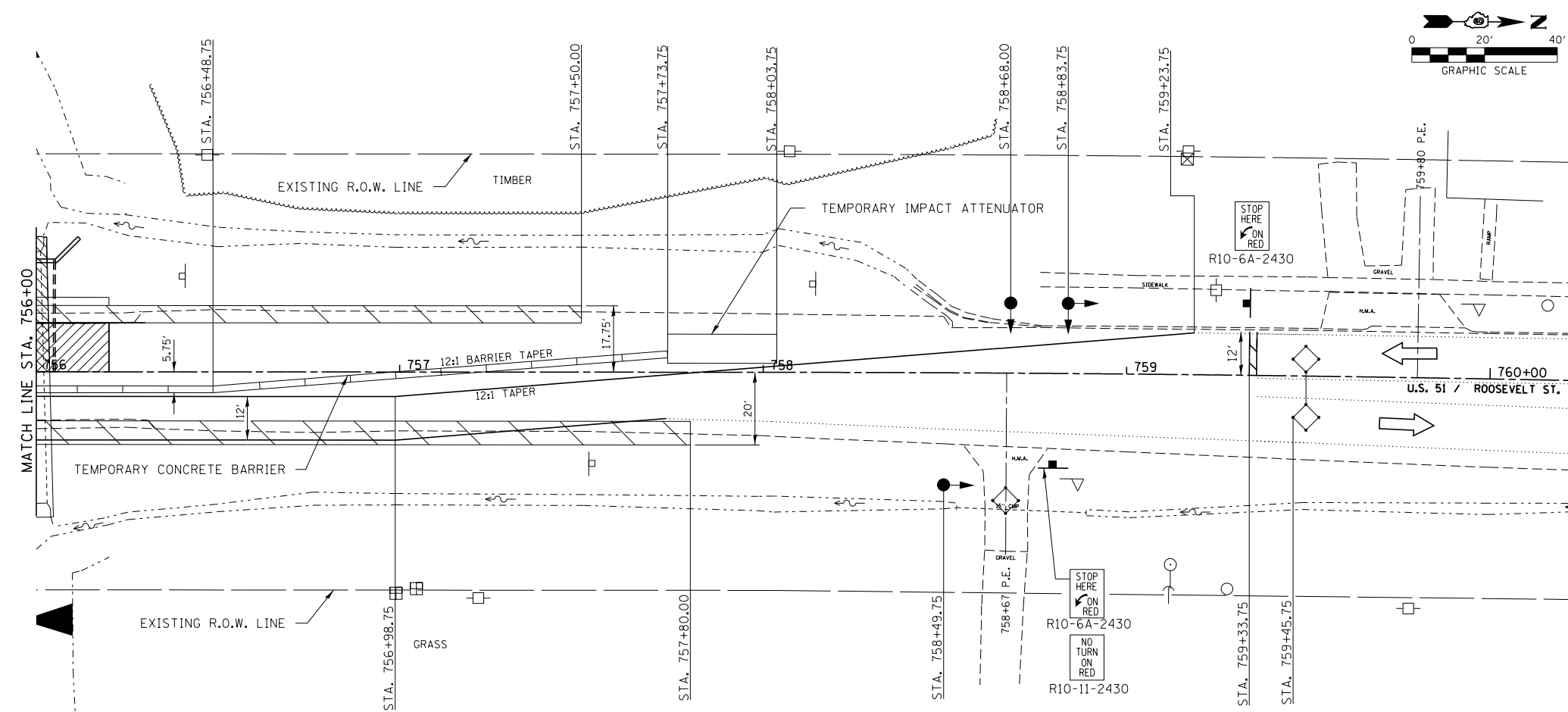
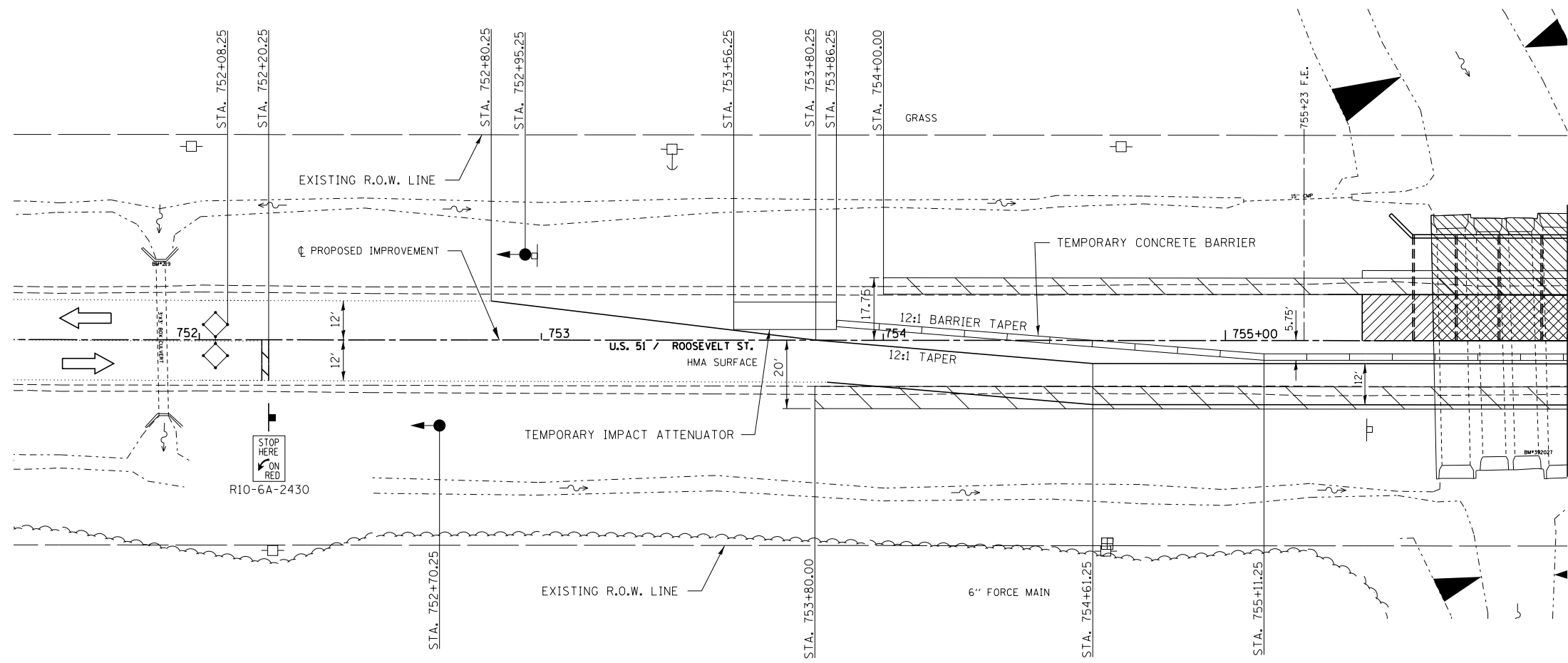
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HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT SCALE = *SCALE*	DRAWN - T.W.K.	REVISED -
	PLOT DATE = 7/13/2016	CHECKED - L.F.S.	REVISED -
		DATE - 07/08/16	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

ALIGNMENT, TIES AND BENCHMARKS US 51 / ROOSEVELT STREET			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.
1:200			

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	4B-1	JACKSON	30	9
CONTRACT NO. 78204				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



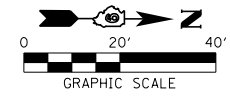
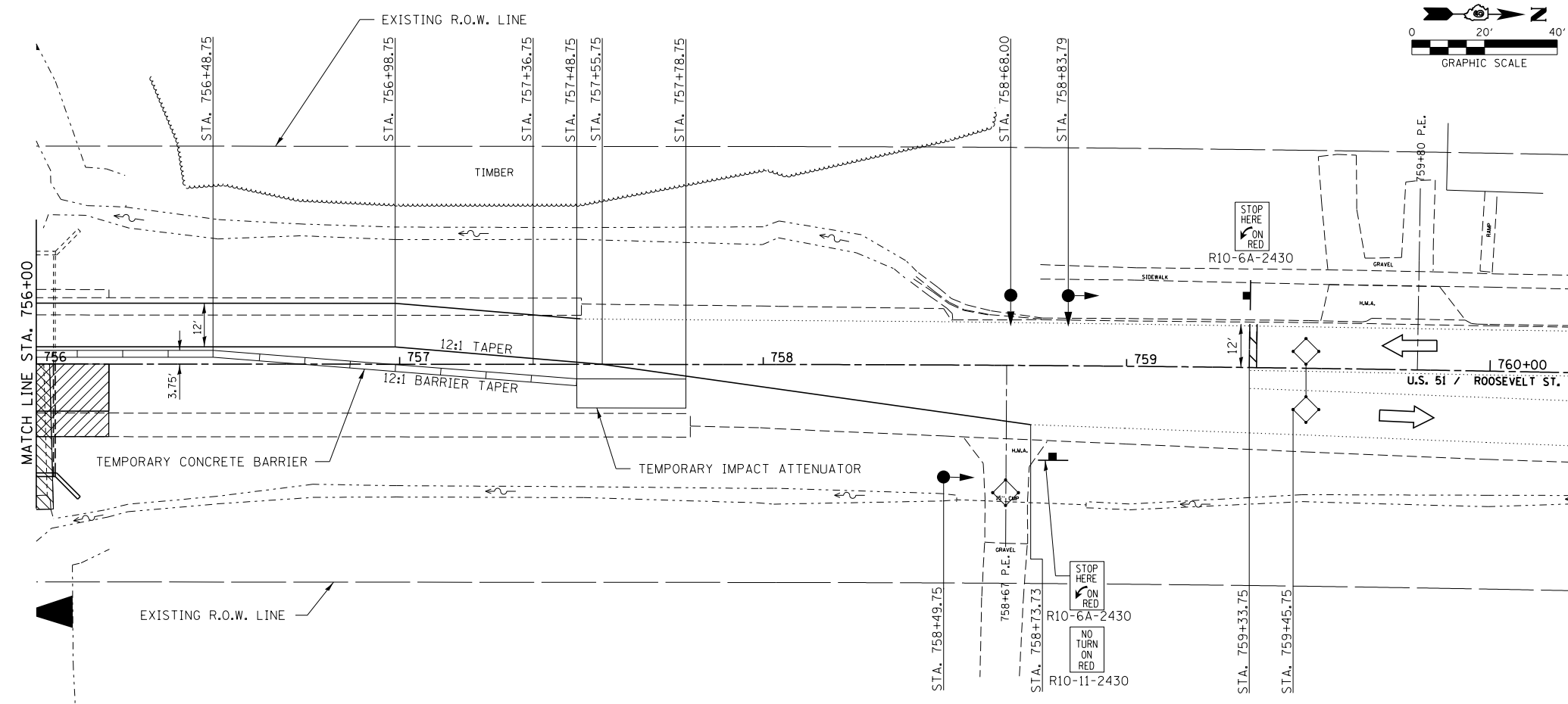
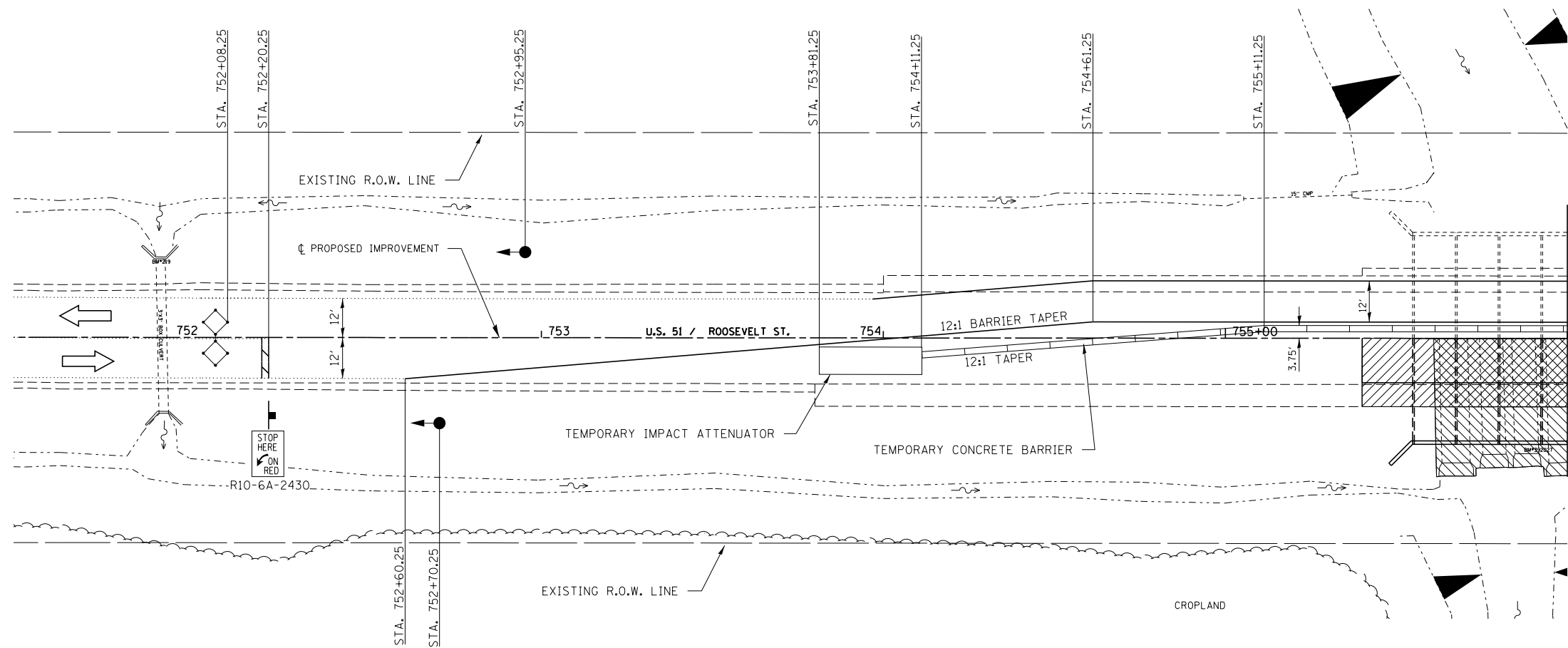


- LEGEND**
- EXISTING STRUCTURE REMOVAL
  - EXISTING PAVEMENT REMOVAL
  - BASE COURSE WIDENING
  - DETECTOR LOOP

- NOTES:**
1. ALL TRAFFIC SIGNALS SHOWN ARE INCLUDED IN TEMPORARY BRIDGE TRAFFIC SIGNALS - 1 EACH.
  2. THE ADDITIONAL DETECTOR LOOP AT THE ENTRANCE IS INCLUDED IN TEMPORARY BRIDGE TRAFFIC SIGNALS - 1 EACH.
  3. TEMPORARY BRIDGE TRAFFIC SIGNALS SHALL BE A 3-PHASE SIGNAL WITH ACTUATION PROVIDED FOR THE PRIVATE ENTRANCE AT STATION 758+67.

FILE NAME = 78204-sht-staging.dgn	USER NAME = \$USER\$	DESIGNED - J.W.F.	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>STAGE 1 CONSTRUCTION US 51 / ROOSEVELT STREET</b>	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
HAMPTON, LENZINI AND RENWICK, INC. <small>3035 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959</small>						DRAWN - T.W.K. CHECKED - L.F.S. DATE - 07/08/16	REVISED - REVISED - REVISED -	322	4B-1	JACKSON	30	11
PLOT SCALE = *SCALE*								CONTRACT NO. 78204				
PLOT DATE = 7/14/2016								FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

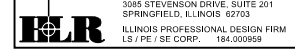


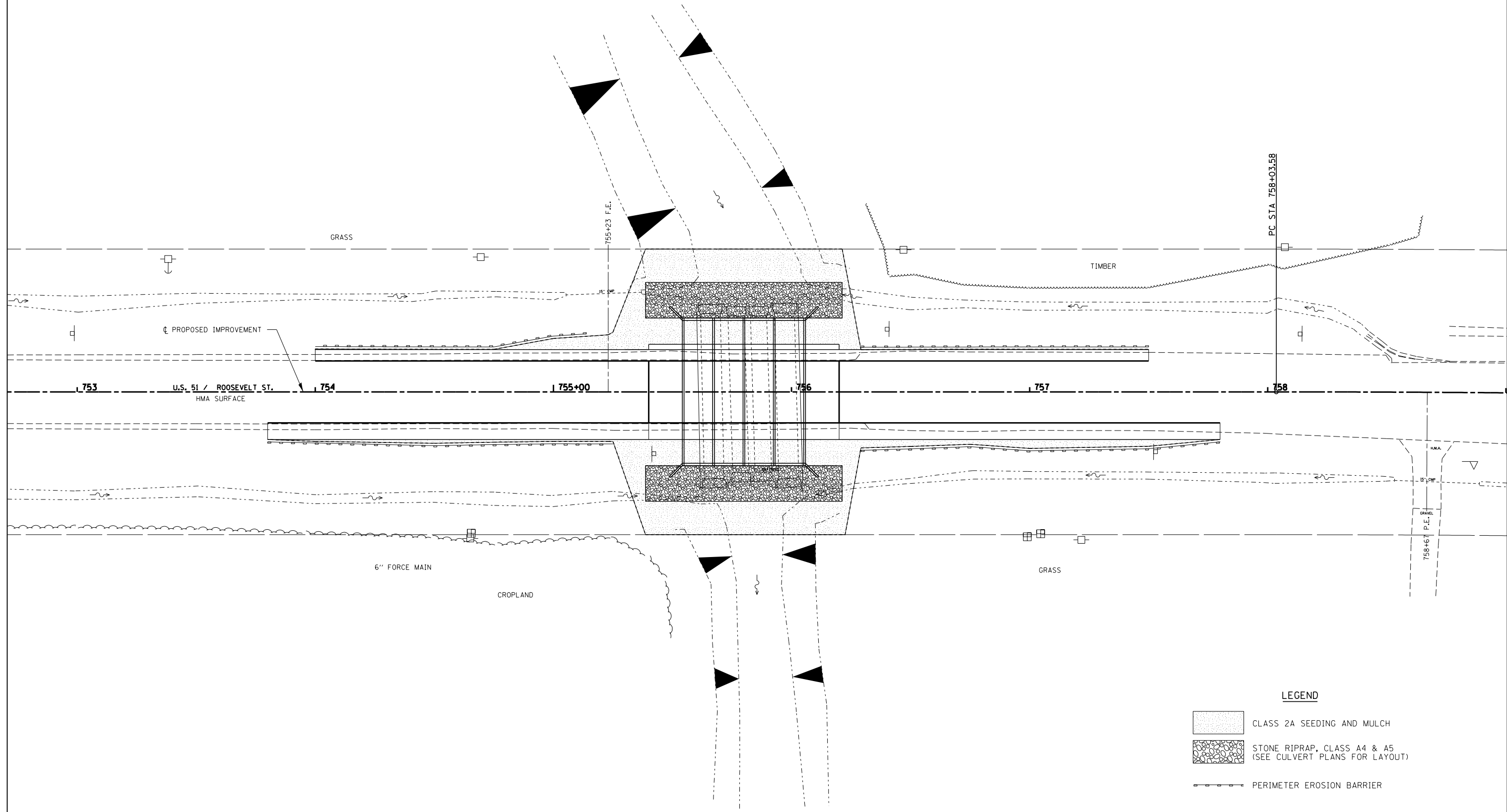
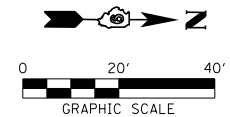


- LEGEND**
- EXISTING STRUCTURE REMOVAL
  - EXISTING PAVEMENT REMOVAL
  - BASE COURSE WIDENING
  - DETECTOR LOOP




- NOTES:**
1. ALL TRAFFIC SIGNALS SHOWN ARE INCLUDED IN TEMPORARY BRIDGE TRAFFIC SIGNALS - 1 EACH.
  2. THE ADDITIONAL DETECTOR LOOP AT THE ENTRANCE IS INCLUDED IN TEMPORARY BRIDGE TRAFFIC SIGNALS - 1 EACH.
  3. TEMPORARY BRIDGE TRAFFIC SIGNALS SHALL BE A 3-PHASE SIGNAL WITH ACTUATION PROVIDED FOR THE PRIVATE ENTRANCE AT STATION 758+67.

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DRAWN - T.W.K.						322	4B-1	JACKSON	30	12	
CHECKED - L.F.S.						CONTRACT NO. 78204					
DATE - 07/08/16						FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					
PLOT SCALE = \$SCALE\$		PLOT DATE = 7/13/2016		SCALE:		SHEET NO. 2 OF 2 SHEETS		STA. TO STA.			





**LEGEND**

-  CLASS 2A SEEDING AND MULCH
-  STONE RIPRAP, CLASS A4 & A5  
(SEE CULVERT PLANS FOR LAYOUT)
-  PERIMETER EROSION BARRIER

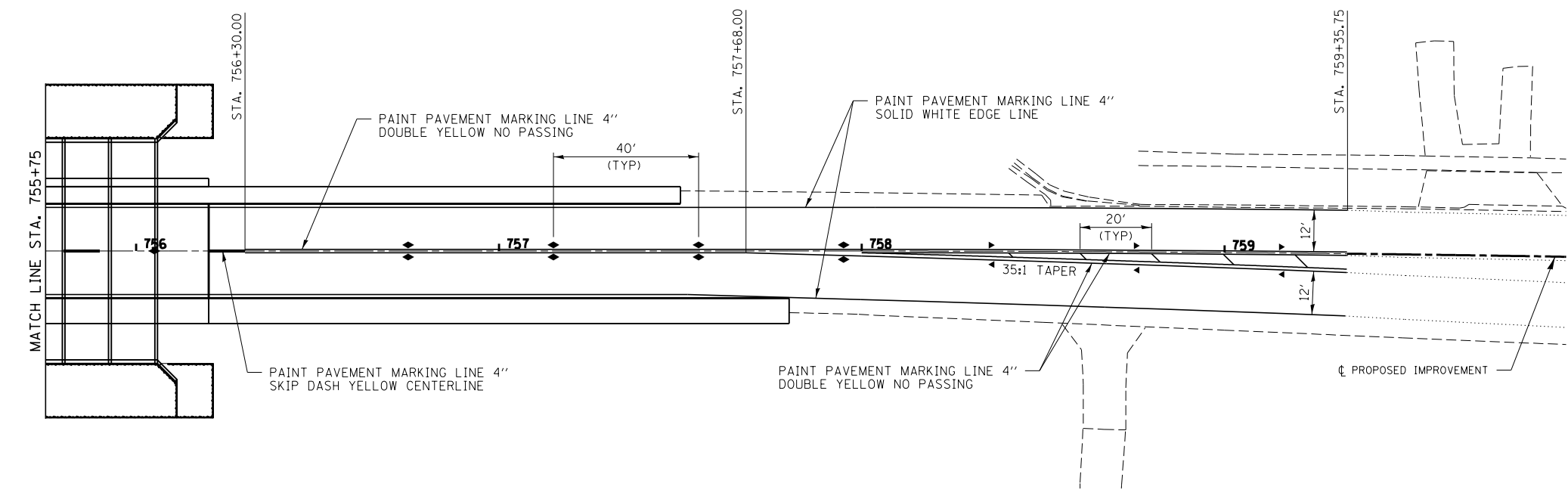
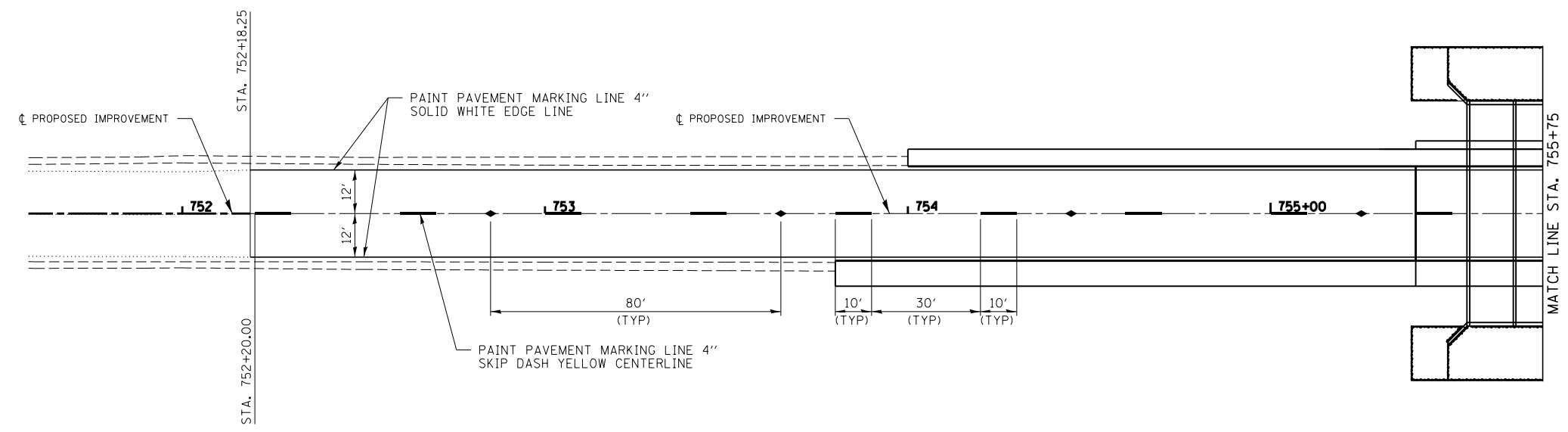
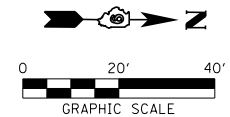
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<b>HAMPTON, LENZINI AND RENWICK, INC.</b> 3035 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959		DRAWN - T.W.K.	REVISED -
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	PLOT DATE = 7/14/2016	DATE - 07/08/16	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**EROSION CONTROL PLAN  
US 51 / ROOSEVELT STREET**

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

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	4B-1	JACKSON	30	13
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
<b>CONTRACT NO. 78204</b>				



**RAISED REFLECTIVE PAVEMENT MARKERS**  
 ◆ TWO WAY AMBER MARKER  
 ▶ ONE WAY AMBER MARKER

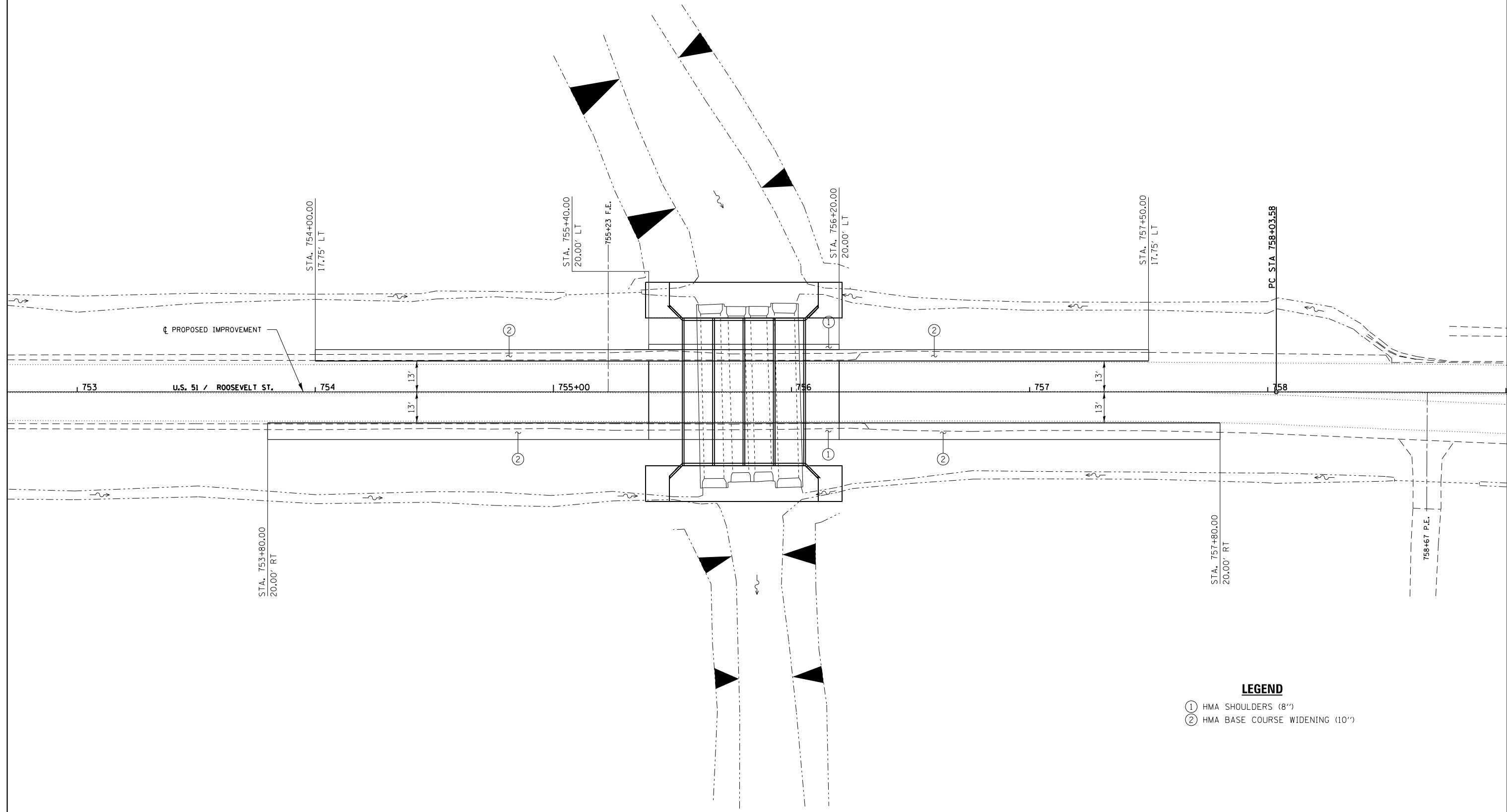
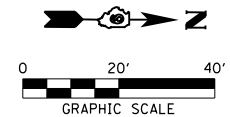
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	PLOT SCALE = *SCALE*	CHECKED - L.F.S.	REVISED -
	PLOT DATE = 7/13/2016	DATE - 07/08/16	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLAN  
US 51 / ROOSEVELT STREET**

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

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	4B-1	JACKSON	30	14
CONTRACT NO. 78204				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



- LEGEND**
- ① HMA SHOULDERS (8")
  - ② HMA BASE COURSE WIDENING (10")

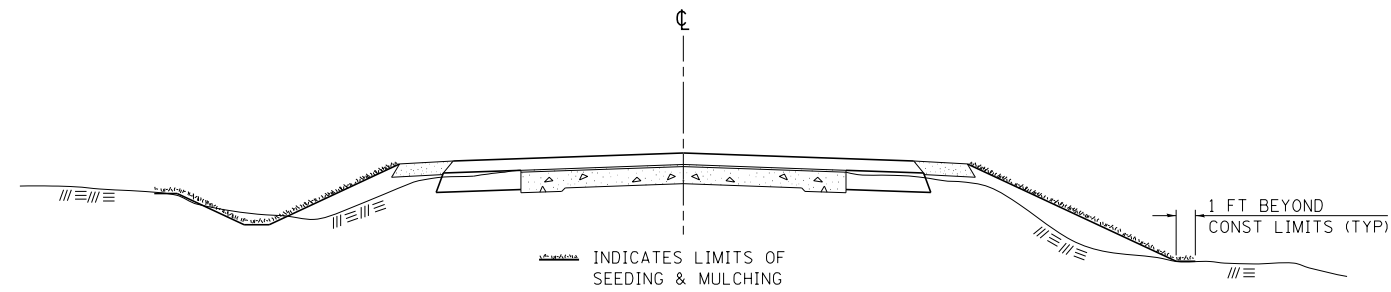
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HAMPTON, LENZINI AND RENWICK, INC. 3035 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	CHECKED - L.F.S.	REVISED -
PLOT SCALE = 40.0000' / in.	DATE - 07/08/16	REVISED -
PLOT DATE = 8/3/2016		

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>PAVED SHOULDER PLAN US 51 / ROOSEVELT STREET</b>			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	4B-1	JACKSON	30	15
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 78204	

## SEEDING & MULCHING



### GENERAL NOTES

IN GENERAL, ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION OPERATIONS SHALL BE SEEDED AND MULCHED UPON COMPLETION OF ALL GRADING OPERATIONS.

FERTILIZER NUTRIENTS AND LIMESTONE SHALL BE APPLIED TO ALL SEEDED AREAS.

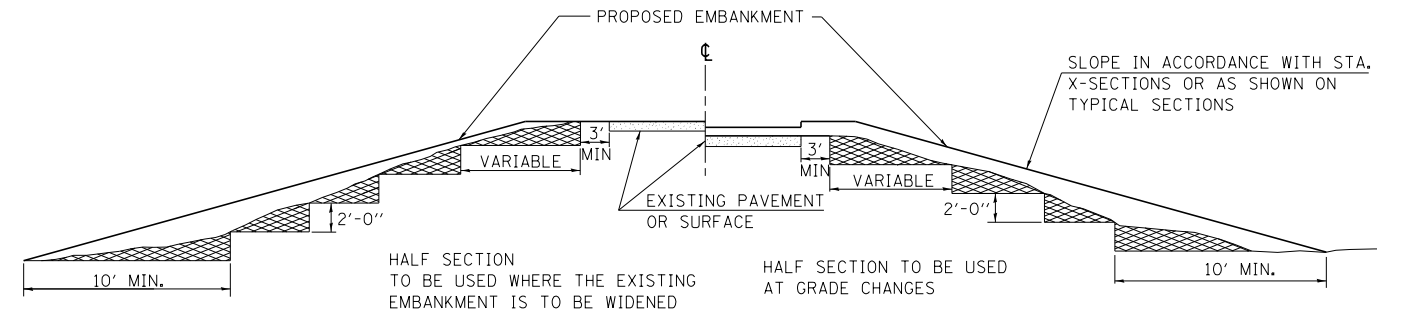
THE RATES OF APPLICATION OF FERTILIZER, MULCH AND LIMESTONE SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS.

SECTIONS 250 AND 251 OF THE STANDARD SPECIFICATIONS SHALL GOVERN THIS WORK EXCEPT AS SPECIFIED HEREIN OR AS NOTED IN THE SPECIAL PROVISIONS.

REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
REVISED	6-3-99
REVISED	3-27-08

STD. 9-12

## TYPICAL CROSS SECTION SHOWING STEP CONSTRUCTION ON EXISTING FILL



MATERIAL TO BE REMOVED AND REPLACED IN THE EMBANKMENT IN ACCORDANCE WITH ART. 205.04 OF THE STANDARD SPECIFICATION. COST TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED BECAUSE OF THIS WORK.

REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
CHECKED	6-3-99
RESIZED	5-7-08

STD. 9-16

FILE NAME = 78204-sht-details2.dgn	USER NAME = *USER*	DESIGNED - J.W.F.	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>STANDARD DETAILS DISTRICT 9 US 51 / ROOSEVELT STREET</b>	F.A.B.	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	DRAWN - T.W.K.	REVISED -	322			4B-1	JACKSON	30	16	
PLOT SCALE = *SCALE*	CHECKED - L.F.S.	REVISED -	CONTRACT NO. 78204							
PLOT DATE = 7/13/2016	DATE - 07/08/16	REVISED -	ILLINOIS FED. AID PROJECT							
SCALE:		SHEET NO. 1 OF 1 SHEETS		STA. TO STA.						

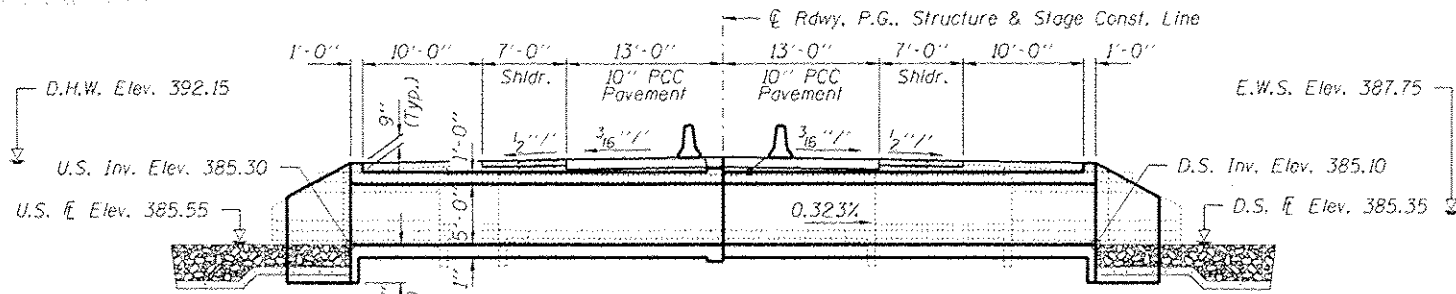
BENCHMARK: BM#392027 - Top of culvert 33' Rl., Sta. 755+91, Elev. 390.71.

EXISTING STRUCTURE: SN 039-2027 was originally built in 1922 as SB1-2, Section 4. The culvert was extended in 1954 and two additional culvert barrels were added in 1998. The structure is a four barrel culvert with 2-8'x4' CIP and 2-10'x4' PC boxes with a length of 68'-0" o.a. headwall exterior barrels, 64'-0" interior barrels and 39'-10" fc.-fc. of outer sidewalls. Structure will be removed and replaced using stage construction to maintain one lane of traffic at all times.

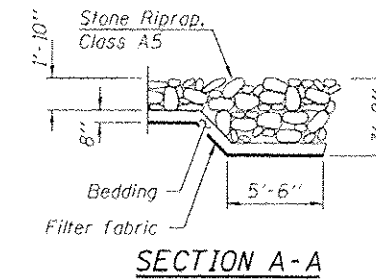
Salvage: None.

**GENERAL NOTES**

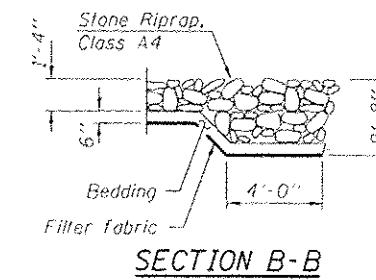
Reinforcement bars designated (E) shall be epoxy coated. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer. Precast alternate not allowed.



**LONGITUDINAL SECTION**



**SECTION A-A**



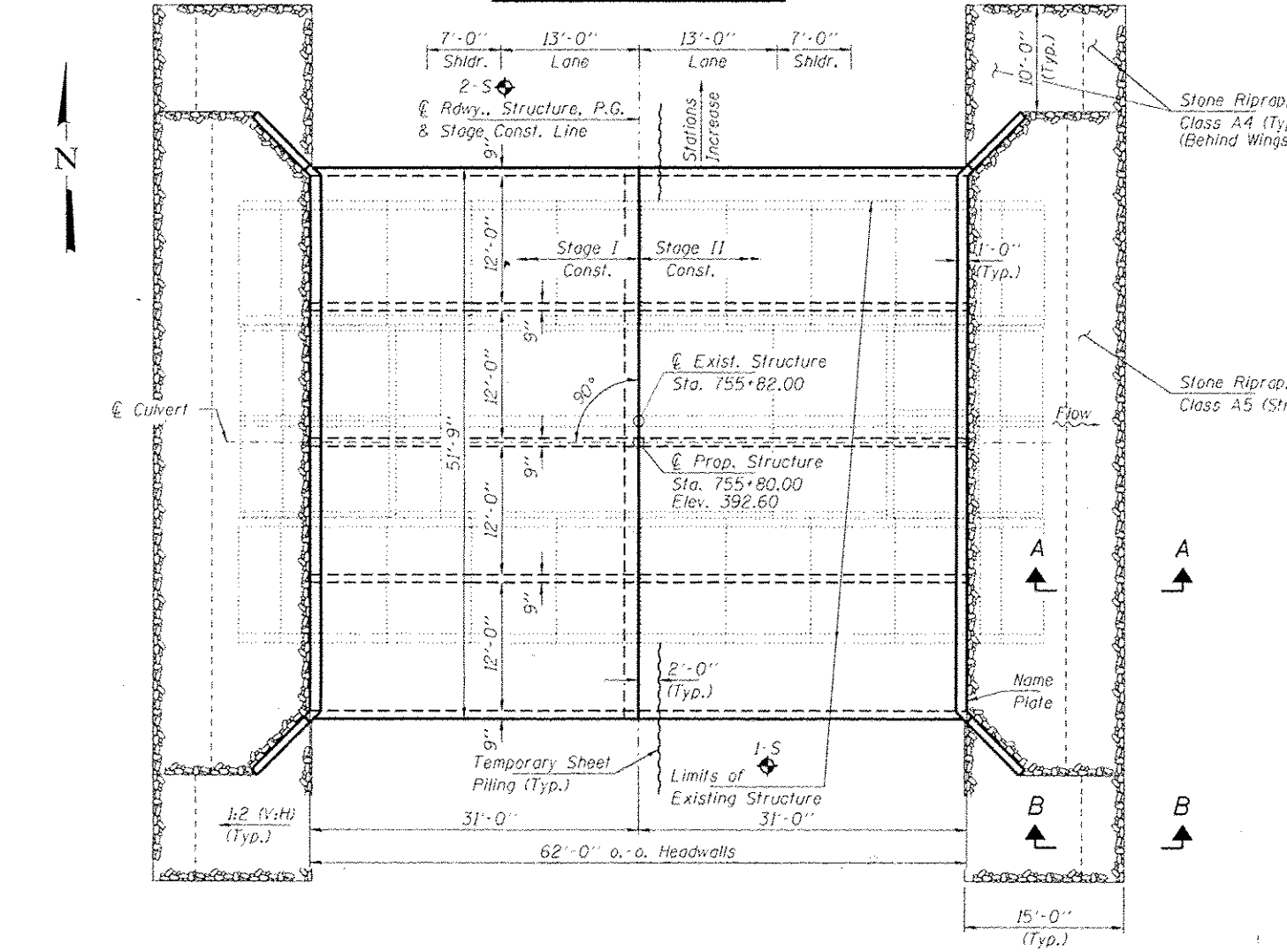
**SECTION B-B**

**INDEX OF STRUCTURE SHEETS**

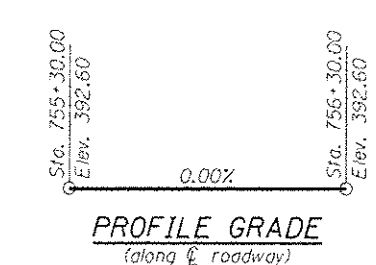
1. General Plan
2. General Details
3. Stage Construction Details
4. Temporary Concrete Barrier for Stage Construction
5. Culvert Plan
6. Culvert Details
7. Bar Splicer Assembly and Mechanical Splicer Details
8. Borings

STA. 755+80.00  
BUILT 20L BY  
STATE OF ILLINOIS  
F.A.P. RTE 322 SEC. 4B-1  
LOADING HL-93  
STR. NO. 039-2030

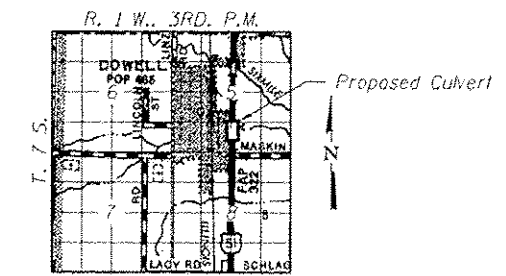
**NAME PLATE**  
See Std. 515001



**PLAN**

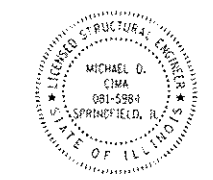


**PROFILE GRADE**  
(along E roadway)



**LOCATION SKETCH**

**APPROVED**  
For Structural Adequacy Only  
*Michael P. Cima*  
Engineer of Bridges & Structures



*Michael P. Cima* 03/14/2016  
ILLINOIS STRUCTURAL NO. 081-5984 Expires 11-30-2016

**DESIGN SPECIFICATIONS**

2012 AASHTO LRFD Bridge Design Specifications  
6th Edition with 2013 Interims.

**LOADING HL-93**

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

**DESIGN STRESSES**

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinf.)

**WATERWAY INFORMATION**

Drainage Area = 1.89 Sq. Mi. Proposed Low Grade Elev. 392.1 @ Sta. 753+00

Flood	Freq. Yr.	C.F.S.	Opening Sq. Ft.		Natural H.W.E.		Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Exist. Overtop	10	827	130	220	391.02	1.23	0.43	392.25	391.45	
Prop. Overtop	25	1120	130	220	391.66	1.07	0.71	392.73	392.37	
Design	50	1360	130	220	392.15	0.79	0.59	392.94	392.74	
Base	100	1600	130	220	392.61	0.49	0.37	393.10	392.98	
Max. Calc.	500	2230	130	220	393.68	0.00	0.00	393.68	393.68	

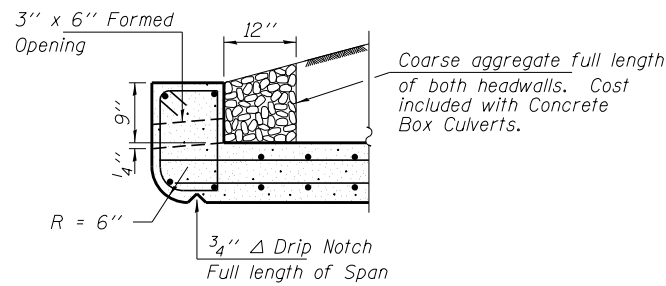
**GENERAL PLAN AND ELEVATION**  
**US ROUTE 51**  
**OVER DRAINAGE DITCH**  
**FAP ROUTE 322 - SECTION 4B-1**  
**JACKSON COUNTY**  
**STATION 755+80.00**  
**STRUCTURE NUMBER 039-2030**

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

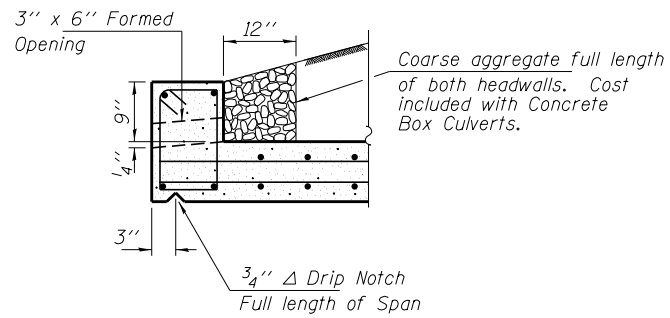
GENERAL PLAN AND ELEVATION  
STRUCTURE NO. 039-2030  
SHEET NO. 1 OF 8 SHEETS

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	4B-1	JACKSON	30	17
ILLINOIS			FED. AID PROJECT	

FILE NAME: 78204-shr-culvert.dgn	USER NAME: #USER#	DESIGNED: A.C.	REVISION: -
HAMPTON, LENZINI AND RENWICK, INC. 3345 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62783 KLINGSTADT PROFESSIONAL DESIGN FIRM 161 PC/ISE CORP. 184-000355	PLOT SCALE: #SCALE#	CHECKED: D.W.T.	REVISION: -
ELR	PLOT DATE: 7/13/2016	DRAWN: D.A.B.	REVISION: -
		CHECKED: M.D.C.	REVISION: -

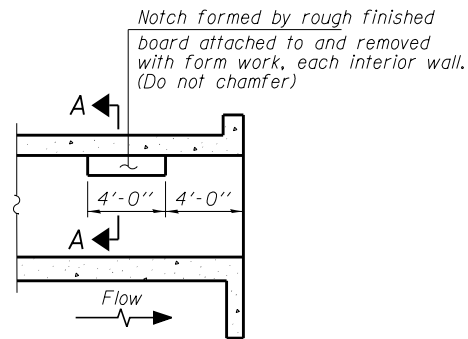


UPSTREAM END

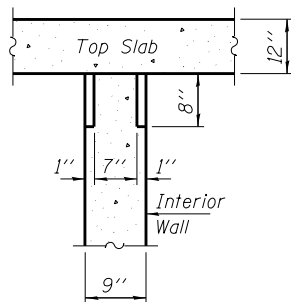


DOWNSTREAM END

HEADWALL DRAIN DETAILS

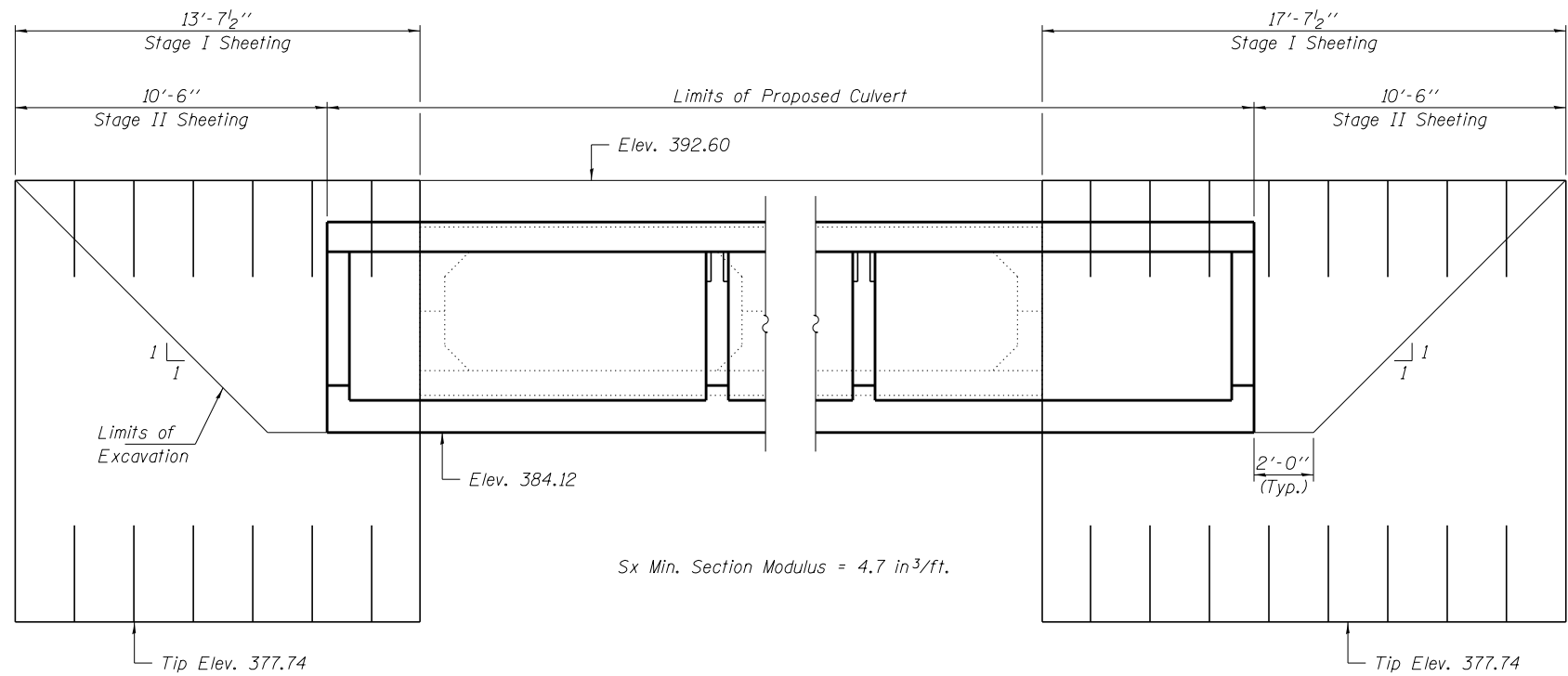


LONGITUDINAL SECTION



SECTION A-A

PHOEBE NESTING  
SITE DETAILS  
(Downstream End Only)



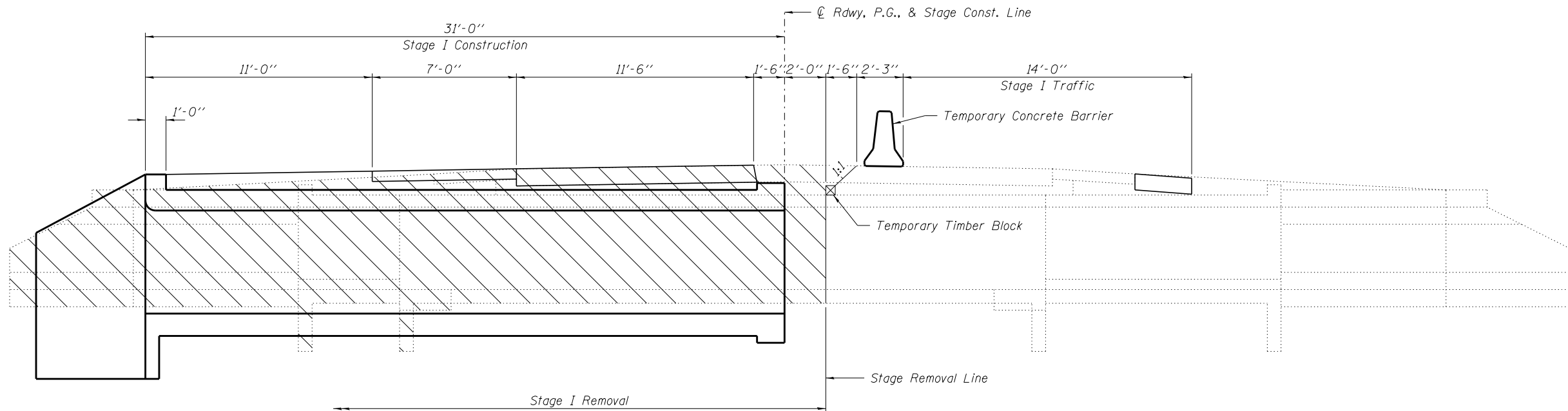
TEMPORARY SHEET PILING

If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

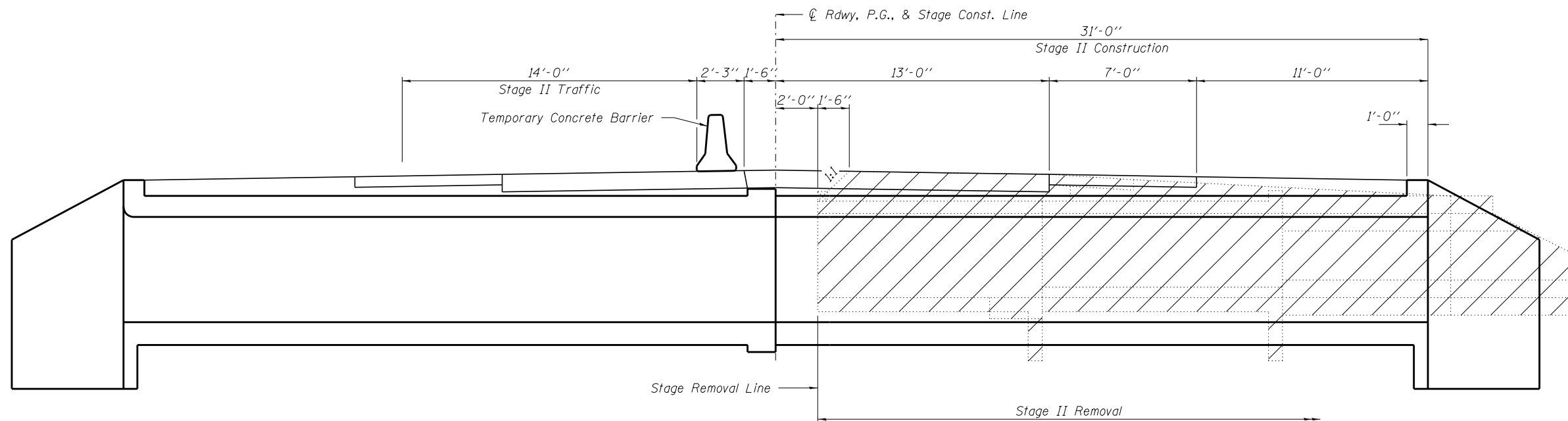
TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Stone Riprap, Class A4	Sq. Yd.	83
Stone Riprap, Class A5	Sq. Yd.	203
Filter Fabric	Sq. Yd.	286
Removal of Existing Structures	Each	1
Structure Excavation	Cu. Yd.	673
Reinforcement Bars, Epoxy Coated	Pound	68,560
Bar Splicers	Each	306
Temporary Sheet Piling	Sq. Ft.	465
Name Plates	Each	1
Concrete Box Culvert	Cu. Yd.	307.3





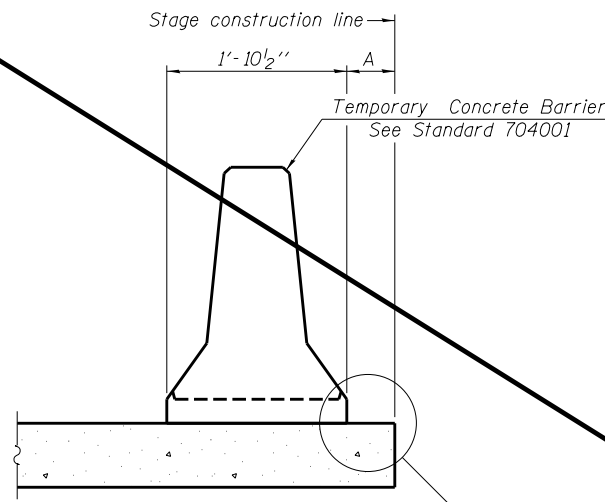
**STAGE I**



**STAGE II**

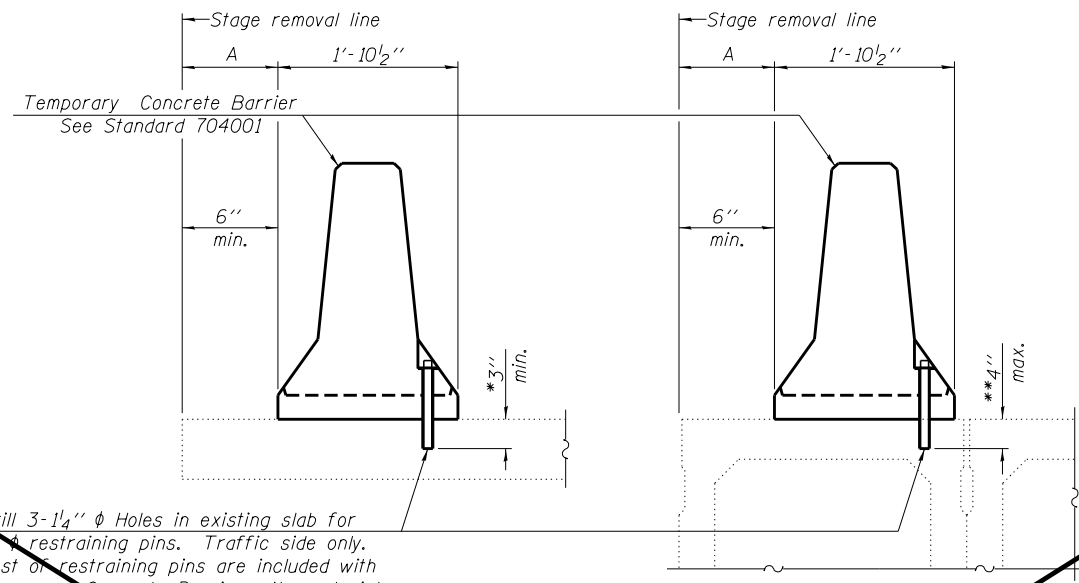
Notes:  
 All sections are looking North.  
 Hatched areas indicate removal.  
 See Roadway Plans for quantity of Temporary Concrete Barrier.  
 Cost of Temporary Timber Block included in Removal of Existing Structures.

FILE NAME = 78204-sht-culvert.dgn	USER NAME = *USER*	DESIGNED - A.C.	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>STAGE CONSTRUCTION DETAILS STRUCTURE NO. 039-2030</b>	F.A.P.	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*	CHECKED - D.W.T.	REVISED -			322	4B-1	JACKSON	30	19	
PLOT DATE = 7/13/2016	DRAWN - D.A.B.	RECHECKED - M.D.C.	REVISED -			CONTRACT NO. 78204					
						SHEET NO. 3 OF 8 SHEETS					



When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I or Detail II. No restraint is required when "A" is greater than 3'-1".

NEW SLAB



Drill 3/4"  $\phi$  Holes in existing slab for 1"  $\times$  7"  $\times$  "W" restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

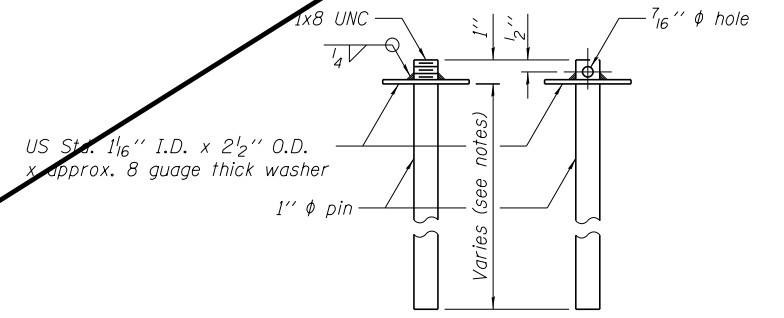
EXISTING SLAB

EXISTING DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM

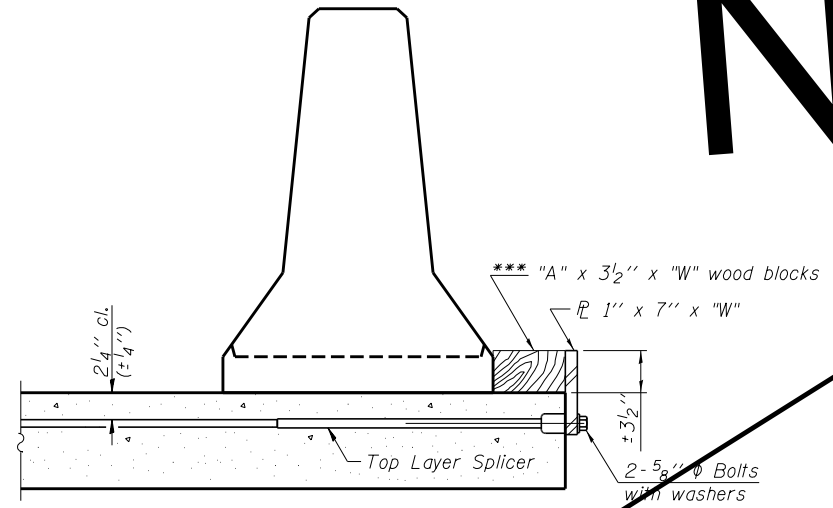
\* Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

\*\* If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.

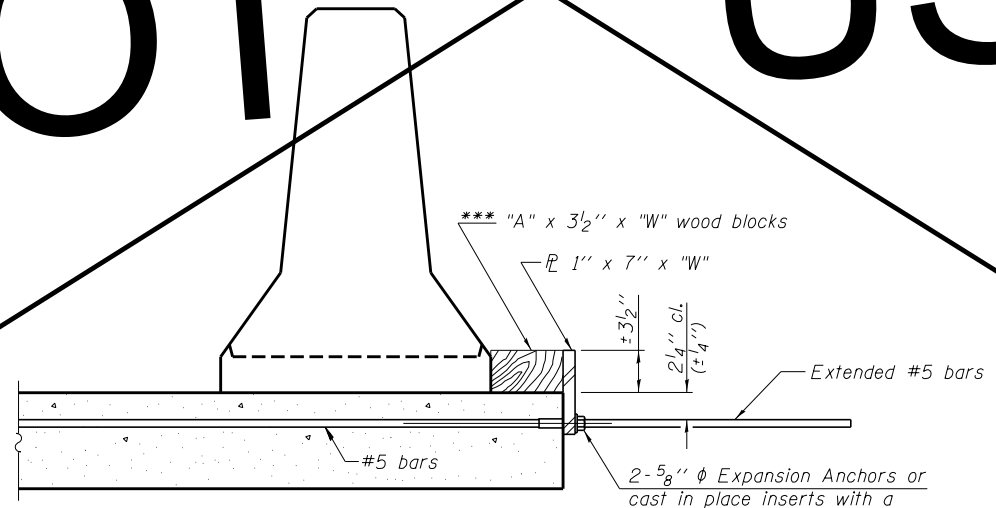


RESTRAINING PIN

**NOT USED**

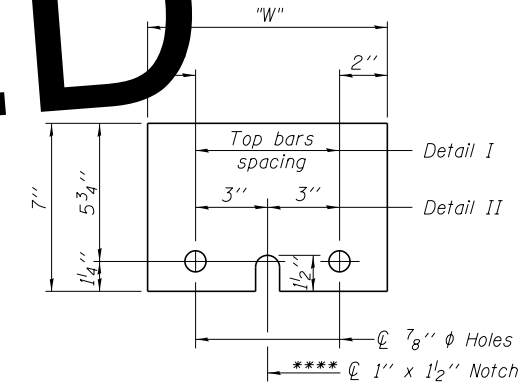


DETAIL I



DETAIL II

RETAINER ASSEMBLY



STEEL RETAINER 1"  $\times$  7"  $\times$  "W"

\*\*\*\* Required only with Detail II

NOTES

Detail I - With Bar Splicer or Couplers:  
Connect one (1) 1"  $\times$  7"  $\times$  "W" steel  $\mathcal{R}$  to the top layer of couplers with 2-5/8"  $\phi$  bolts screwed to coupler at approximate  $\mathcal{C}$  of each barrier panel.

Detail II - With Extended Reinforcement Bars:  
Connect one (1) 1"  $\times$  7"  $\times$  "W" steel  $\mathcal{R}$  to the concrete slab or concrete wearing surface with 2-5/8"  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate  $\mathcal{C}$  of each barrier panel.

Cost of retainer assembly is included with Temporary Concrete Barrier. The 1"  $\times$  7"  $\times$  "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

\*\*\* Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

R-27

2-19-16

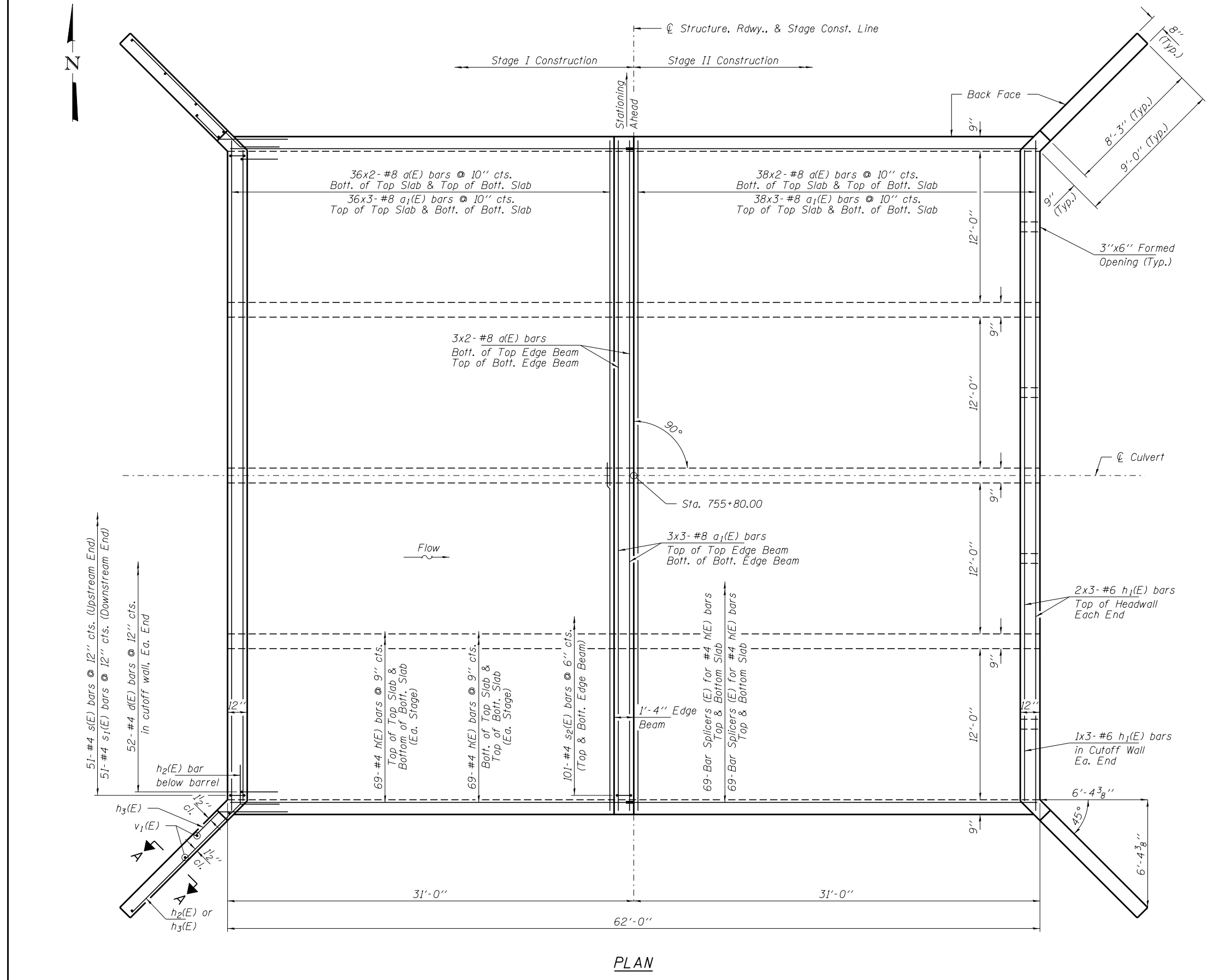
FILE NAME = 78204-sht-culvert.dgn	USER NAME = #USER#	DESIGNED - A.C.	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION STRUCTURE NO. 039-2030</b>	F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT SCALE = #SCALE#	CHECKED - D.W.T.	REVISED -			322	4B-1	JACKSON	30	20	
PLOT DATE = 7/13/2016		DRAWN - D.A.B.	REVISED -			CONTRACT NO. 78204					
		CHECKED - M.D.C.	REVISED -			SHEET NO. 4 OF 8 SHEETS					

Notes:  
 A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.  
 Bars indicated thus 36x2-#8 etc. indicates 36 lines of bars with 2 lengths per line.  
 See sheet 6 of 8 for Culvert Details and SECTION A-A.

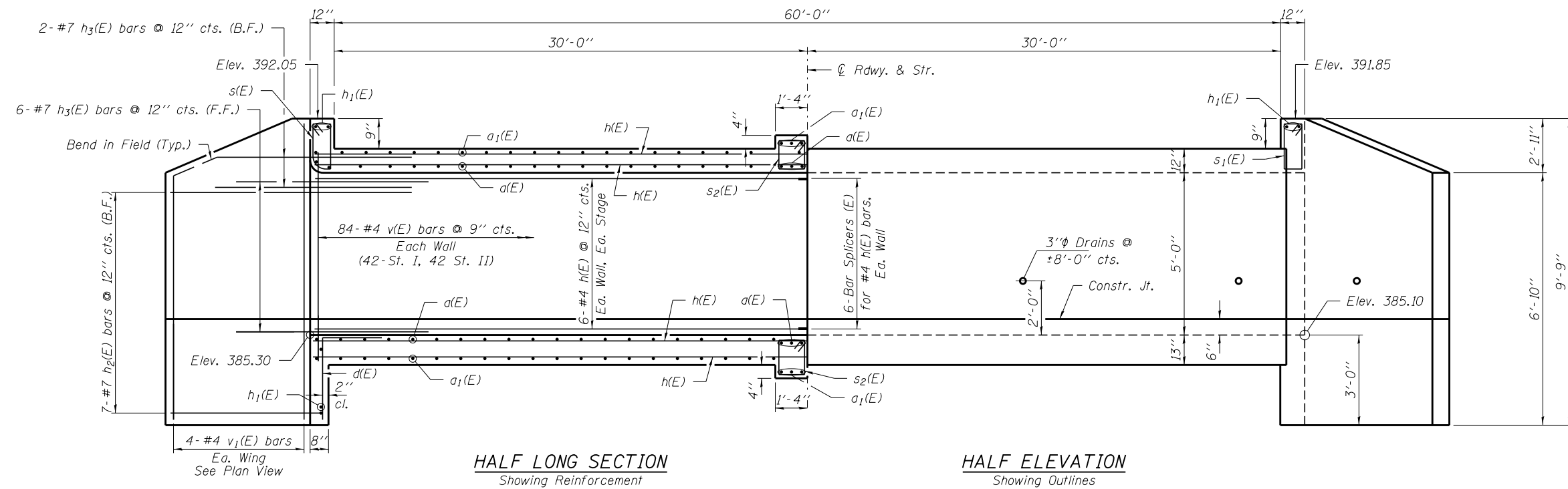
**MIN. BAR LAP**  
 #6 bars = 2'-11"  
 #8 bars = 6'-4"

**BILL OF MATERIAL**

BAR	NO.	SIZE	LENGTH	SHAPE
d(E)	308	#8	29'-10"	C
a <sub>1</sub> (E)	462	#8	21'-5"	—
d(E)	104	#4	4'-6"	└
h(E)	612	#4	30'-8"	—
h <sub>1</sub> (E)	18	#6	18'-11"	—
h <sub>2</sub> (E)	28	#7	12'-1"	—
h <sub>3</sub> (E)	32	#7	8'-0"	—
s(E)	51	#4	5'-1"	□
s <sub>1</sub> (E)	51	#4	5'-3"	□
s <sub>2</sub> (E)	202	#4	5'-1"	□
v(E)	420	#4	6'-9"	—
v <sub>1</sub> (E)	16	#4	9'-5"	—
Concrete Box Culverts			Cu. Yd.	307.3
Reinforcement Bars, Epoxy Coated			Pound	68,560
Bar Splicers			Each	306
Stone Riprap, Class A4			Sq. Yd.	83
Stone Riprap, Class A5			Sq. Yd.	203
Name Plates			Each	1

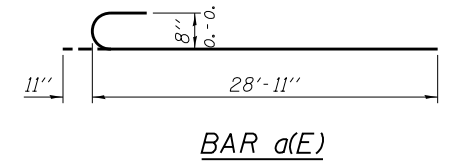


PLAN

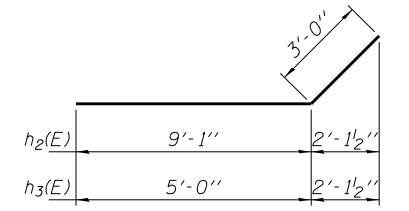


**HALF LONG SECTION**  
Showing Reinforcement

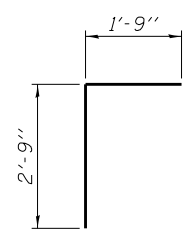
**HALF ELEVATION**  
Showing Outlines



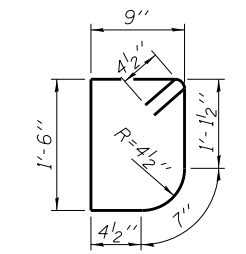
**BAR a(E)**



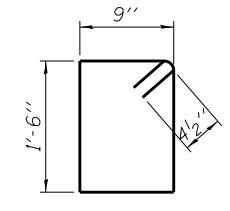
**BARS h2(E) & h3(E)**



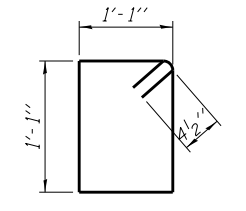
**BAR d(E)**



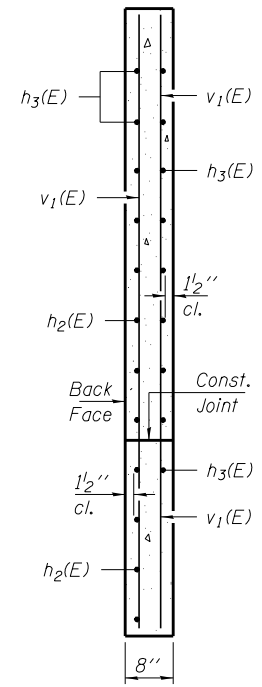
**BAR s(E)**



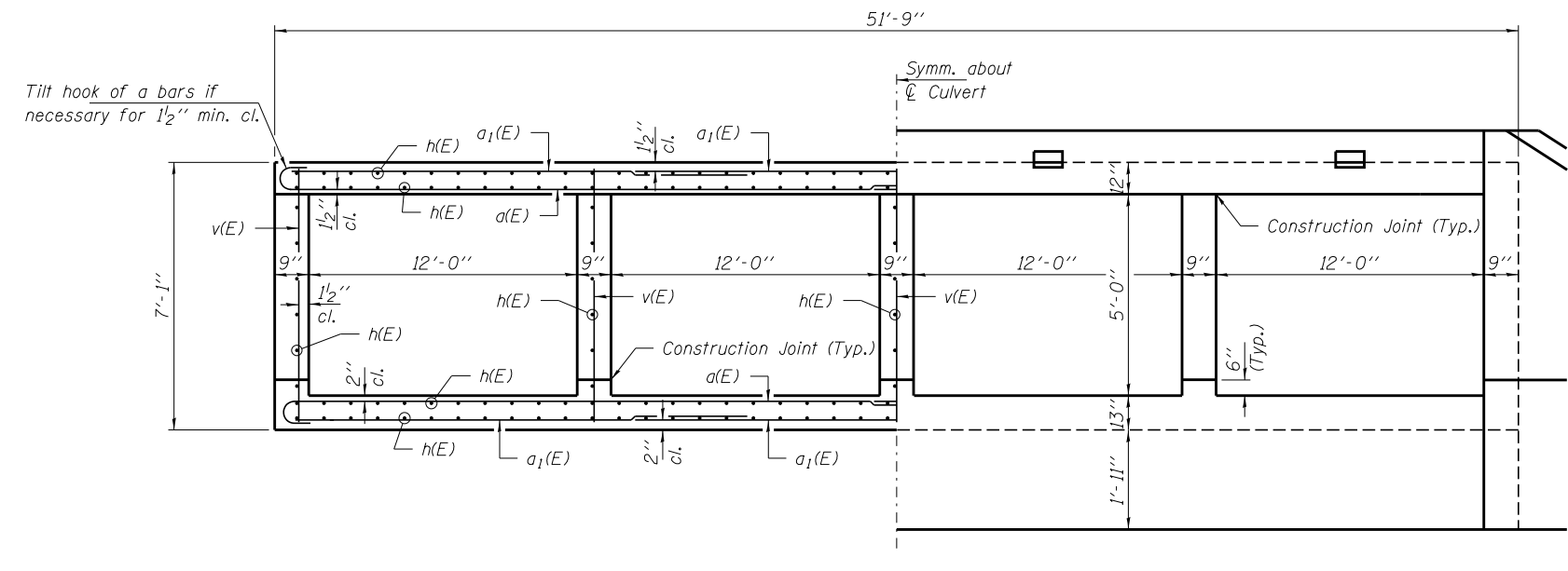
**BAR s1(E)**



**BAR s2(E)**



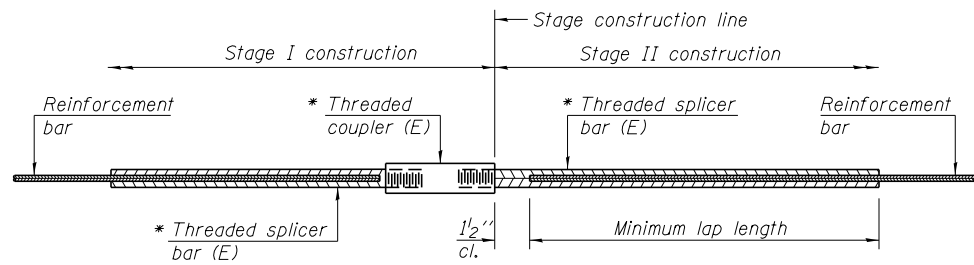
**SECTION A-A**



**HALF SECTION THRU BARRELS**  
Showing Reinforcement

**HALF END ELEVATION**  
Showing Dimensions

FILE NAME = 78204-sht-culvert.dgn	USER NAME = #USER#	DESIGNED - A.C.	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>CULVERT DETAILS STRUCTURE NO. 039-2030</b>	F.A.P.	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 - D.W.T.	REVISED -			322	4B-1	JACKSON	30	22	
PLOT DATE = 7/13/2016		DRAWN - D.A.B.	REVISED -			CONTRACT NO. 78204					
		CHECKED - M.D.C.	REVISED -			SHEET NO. 6 OF 8 SHEETS					

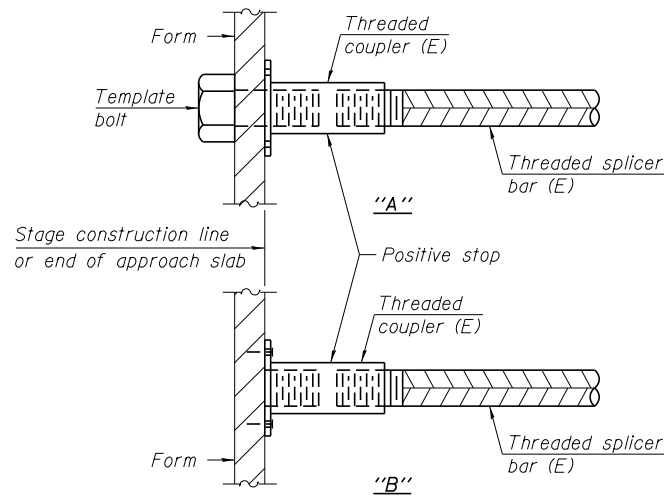


**STANDARD BAR SPLICER ASSEMBLY**

Threaded splicer bar length = min. lap length + 1/2" + thread length

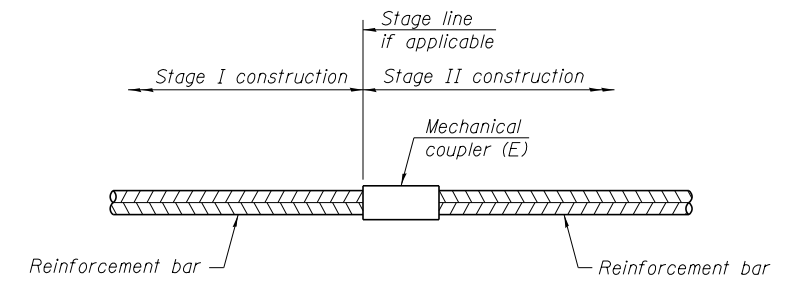
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Top Slab	#4	138	2'-7"
Bottom Slab	#4	138	2'-7"
Sidewalls	#4	30	2'-7"



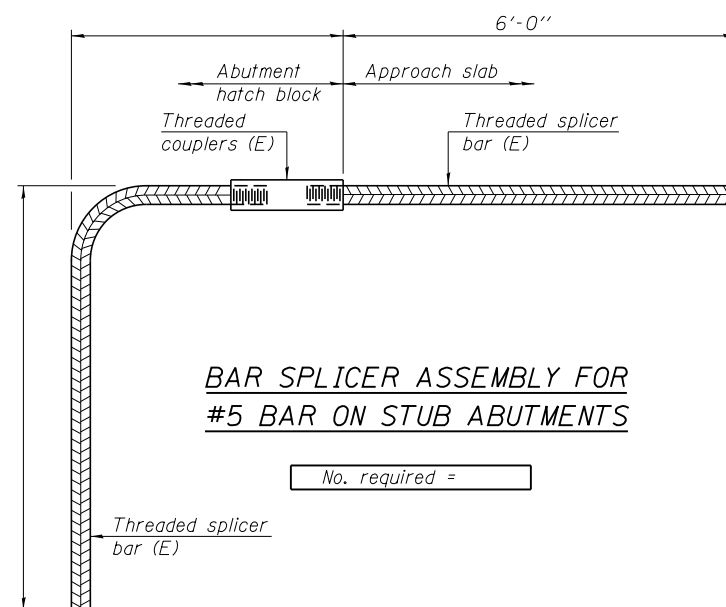
**INSTALLATION AND SETTING METHODS**

"A" : Set bar splicer assembly by means of a template bolt.  
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.  
 (E) : Indicates epoxy coating.



**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required



**BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS**

No. required =

**NOTES**

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.  
 All reinforcement shall be lapped and tied to the splicer bars.  
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.  
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

6-8-15

FILE NAME = 78204-sht-culvert.dgn	USER NAME = #USER#	DESIGNED - A.C.	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS STRUCTURE NO. 039-2030</b>	F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L.S./P.E./S.E. CORP. 184.000959	PLOT SCALE = #SCALE#	CHECKED - D.W.T.	REVISED -			322	4B-1	JACKSON	30	23
PLOT DATE = 7/13/2016		DRAWN - D.A.B.	REVISED -			CONTRACT NO. 78204				
		CHECKED - M.D.C.	REVISED -			ILLINOIS FED. AID PROJECT				





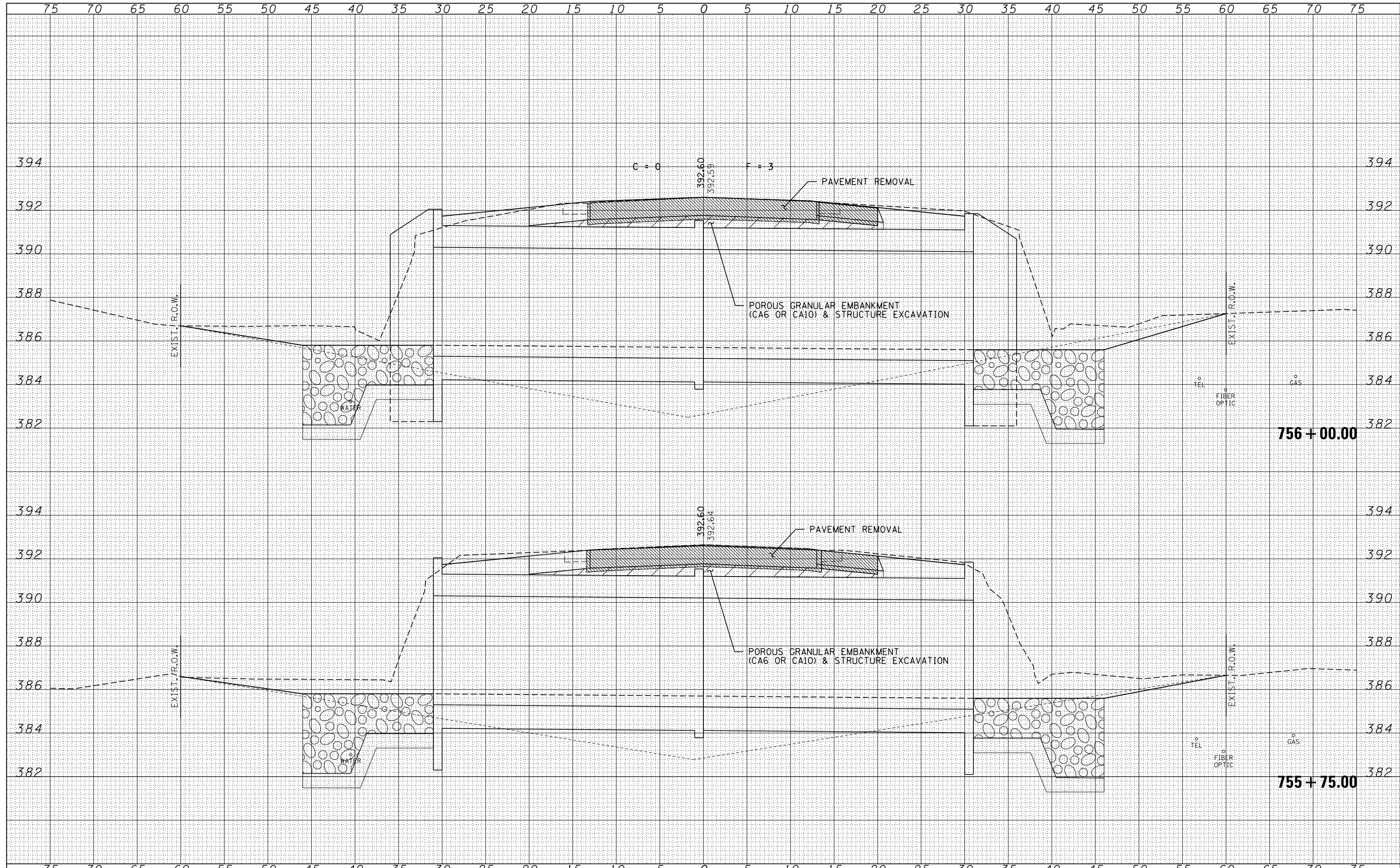






DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
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	CHECKED

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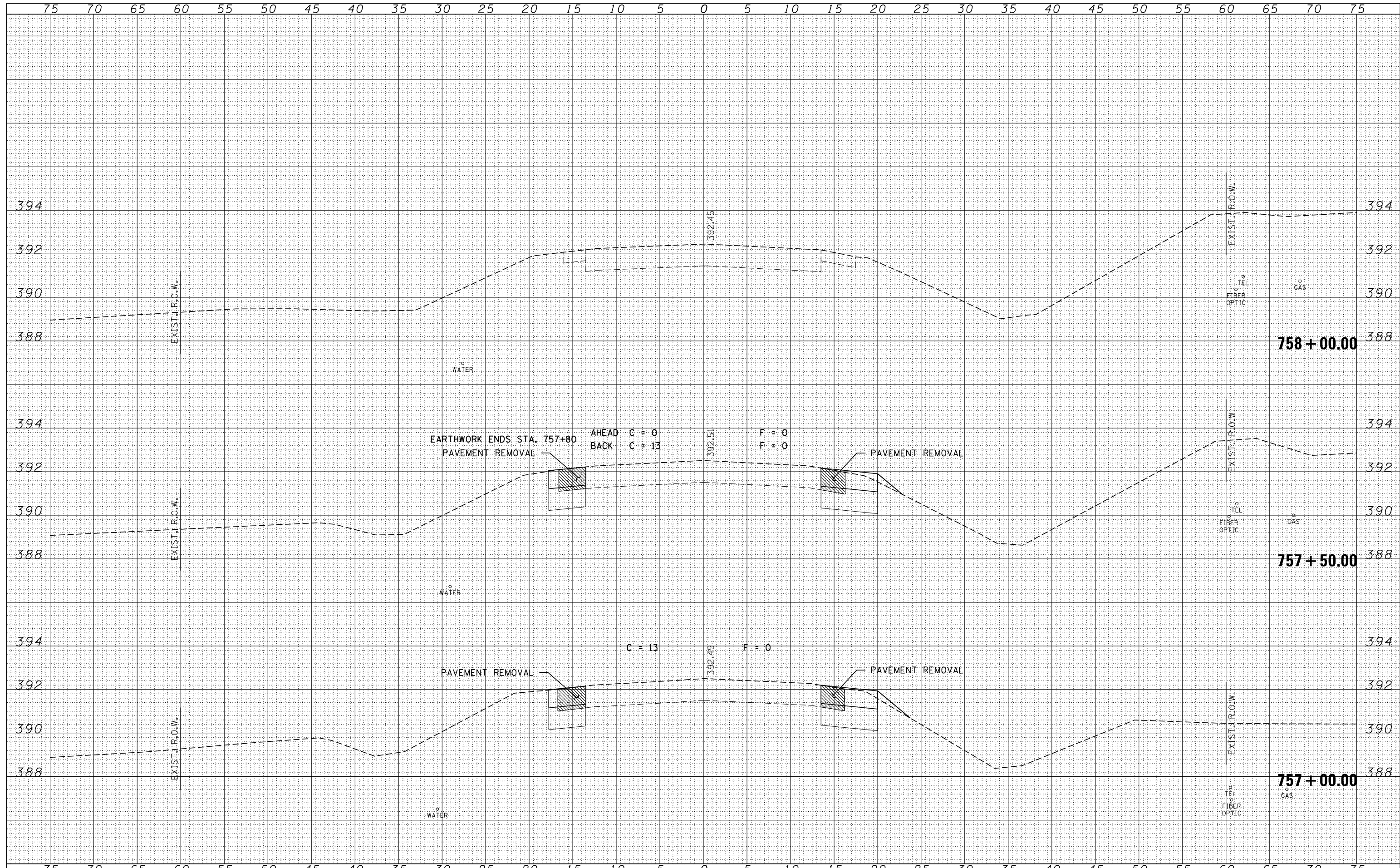


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HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - T.W.K.	REVISED -		322	4B-1	JACKSON	30	28			
3885 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. CORP. 184.000958		CHECKED - S.W.M.	REVISED -		CONTRACT NO. 78204				ILLINOIS FED. AID PROJECT			
		DATE - 07/08/16	REVISED -		SCALE: H5:V2	SHEET NO.	OF SHEETS	STA. 755+75.00	TO STA. 756+00.00			



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



FILE NAME = 78204-sht-ssht.dgn	USER NAME = *USERS*	DESIGNED - J.W.F.	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS</b> <b>US 51 / ROOSEVELT STREET</b>		F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3885 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. CORP. 184.000958		DRAWN - T.W.K.	REVISED -		322	4B-1	JACKSON	30	30		
		CHECKED - S.W.M.	REVISED -		CONTRACT NO. 78204			ILLINOIS FED. AID PROJECT			
		DATE - 07/08/16	REVISED -		SCALE: H5:V2	SHEET NO.	OF	SHEETS	STA. 757+00.00 TO STA. 758+00.00		