

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED HIGHWAY PLANS

FAS ROUTE 747/FAU ROUTE 8813 (IL 109)
SECTION (57,58,59)RS-2
PROJECT COVD-SZOE(494)
RESURFACING - STANDARD OVERLAY
AND ADA IMPROVEMENTS
JERSEY COUNTY

F.A.S. F.A.U. 747 8813	SECTION (57,58,59)RS-2	COUNTY JERSEY	TOTAL SHEETS 60	SHEET NO. 1
ILLINOIS		CONTRACT NO. 76L10		

FOR INDEX OF SHEETS, SEE SHEET NO. 2

BRIDGE OMISSION		
STRUCTURE NO.	LOCATION	DECK LENGTH
042-0025	5.82 M.S. - 5.84 M.S.	125 FT.

TRAFFIC DATA			
	US 67 - W. COUNTY RD.	W. COUNTY RD.	BLUEBIRD LN.
ADT (CONSTRUCTION YR.):	3600		7300
MU%	0.8		1.4
SU%	2.3		3.5
20 YR. ESAL'S:	0.88		0.88

	BLUEBIRD LN. - CRYSTAL LAKE RD.	CRYSTAL LAKE RD. - IL 3
ADT (CONSTRUCTION YR.):	3900	3800
MU%	1.5	0.5
SU%	3.1	2.7
20 YR. ESAL'S:	0.87	0.88



C-98-158-18



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER: BILLIE OWEN (618)346-3209
PROJECT MANAGER: PHILLIP FREIMUTH (618)346-3194

CONTRACT NO. 76L10

LOCATION MAP
0 MI 1 MI 2 MI 3 MI
1" = 1 MILE
GROSS LENGTH = 43401.6 FT. = 8.220 MILE
NET LENGTH = 43276.6 FT. = 8.200 MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
SUBMITTED *Aug 4 20 21*
OK Roberts JDM
REGIONAL ENGINEER
October 1 20 21
[Signature]
ENGINEER OF DESIGN AND ENVIRONMENT
October 2 20 21
Stephen M. Smith
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				100% FEDERAL			
				FAS RTE 747 ROADWAY	FAS RTE 747 ROADWAY	FAS RTE 747 BOX CULVERT	FAU RTE 8813 ROADWAY
				0005 RURAL	0005 URBAN	0004 042-2403 RURAL	0005 URBAN
20100500	TREE REMOVAL, ACRES	ACRE	0.75	0.40		0.35	
20200100	EARTH EXCAVATION	CU YD	840	610		230	
20300100	CHANNEL EXCAVATION	CU YD	170	20		150	
20400800	FURNISHED EXCAVATION	CU YD	210			210	
20700220	POROUS GRANULAR EMBANKMENT	CU YD	168	95		73	
20800150	TRENCH BACKFILL	CU YD	49	10		39	
25000200	SEEDING, CLASS 2	ACRE	0.75	0.40		0.35	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	56	30		26	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	56	30		26	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	56	30		26	
25100115	MULCH, METHOD 2	ACRE	0.75	0.40		0.35	
25100630	EROSION CONTROL BLANKET	SQ YD	1170	506		664	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	30	13		17	
28000305	TEMPORARY DITCH CHECKS	FOOT	370	186		184	

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DRAWN - _____	REVISIONS - _____	
PLOT SCALE = 2,0000' / in.	CHECKED - _____	REVISED - _____
PLOT DATE = 8/11/2021	DATE - _____	REVISED - _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES			
SCALE: _____	SHEET 1	OF 7 SHEETS	STA. _____ TO STA. _____

F.A.S. F.A.U. 747 8813	SECTION (57,58,59)RS-2	COUNTY JERSEY	TOTAL SHEETS 60	SHEET NO. 3
CONTRACT NO. 76L10				
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				100% FEDERAL			
				FAS RTE 747 ROADWAY	FAS RTE 747 ROADWAY	FAS RTE 747 BOX CULVERT	FAU RTE 8813 ROADWAY
				0005 RURAL	0005 URBAN	0004 042-2403 RURAL	0005 URBAN
28100109	STONE RIPRAP, CLASS A5	SQ YD	254	207		47	
28200200	FILTER FABRIC	SQ YD	254	207		47	
35101400	AGGREGATE BASE COURSE, TYPE B	TON	6				6
35101800	AGGREGATE BASE COURSE, TYPE B 6"	SQ YD	16	16			
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	11	11			
40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	220	108			112
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	90401	70648	11199	16	8538
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	601	461	47		93
40600990	TEMPORARY RAMP	SQ YD	993	449	53		491
40602970	HOT-MIX ASPHALT BINDER COURSE, IL-9.5FG, N70	TON	8082	6279	995		808
40604052	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N70	TON	9699	7534	1195		970
40800029	BITUMINOUS MATERIALS (TACK COAT)	POUND	362	291	29		42
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	36	29.5	2.6		3.9
42400100	PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH	SQ FT	126				126

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 DATE: 8/11/2021

USER NAME = murrayda	DESIGNED - _____	REVISED - _____
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PLOT SCALE = 2,0000' / in.	DATE - _____	REVISID - _____
PLOT DATE = 8/11/2021		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: _____ SHEET 2 OF 7 SHEETS STA. _____ TO STA. _____

F.A.S. 747	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8813	(57,58,59)RS-2	JERSEY	60	4
CONTRACT NO. 76L10			ILLINOIS FED. AID PROJECT	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				100% FEDERAL			
				FAS RTE 747 ROADWAY 0005 RURAL	FAS RTE 747 ROADWAY 0005 URBAN	FAS RTE 747 BOX CULVERT 0004 042-2403 RURAL	FAU RTE 8813 ROADWAY 0005 URBAN
42400800	DETECTABLE WARNINGS	SQ FT	28				28
44000100	PAVEMENT REMOVAL	SQ YD	152				152
44000157	HOT-MIX ASPHALT SURFACE REMOVAL, 2"	SQ YD	138160	17776	112112		8272
44000159	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/2"	SQ YD	4928				4928
44000600	SIDEWALK REMOVAL	SQ FT	93				93
44004250	PAVED SHOULDER REMOVAL	SQ YD	50	28		22	
44200211	PAVEMENT PATCHING, TYPE IV, 18 INCH	SQ YD	192	107		85	
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	2532	1966	312	2	252
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	50	28		22	
48203100	HOT-MIX ASPHALT SHOULDERS	TON	4256	3453	548		255
50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1			1	
50102400	CONCRETE REMOVAL	CU YD	5	2		3	
50105220	PIPE CULVERT REMOVAL	FOOT	98	98			
54001001	BOX CULVERT END SECTIONS, CULVERT NO. 1	EACH	2			2	

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES			
SCALE: _____	SHEET 3	OF 7 SHEETS	STA. _____ TO STA. _____

F.A.S. F.A.U. 747 8813	SECTION (57,58,59)RS-2	COUNTY JERSEY	TOTAL SHEETS 60	SHEET NO. 5
CONTRACT NO. 76L10				ILLINOIS FED. AID PROJECT

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				100% FEDERAL			
				FAS RTE 747 ROADWAY	FAS RTE 747 ROADWAY	FAS RTE 747 BOX CULVERT	FAU RTE 8813 ROADWAY
				0005 RURAL	0005 URBAN	0004 042-2403 RURAL	0005 URBAN
54001002	BOX CULVERT END SECTIONS, CULVERT NO. 2	EACH	2	2			
54010505	PRECAST CONCRETE BOX CULVERTS 5' X 5'	FOOT	91	91			
54010605	PRECAST CONCRETE BOX CULVERTS 6' X 5'	FOOT	67			67	
542D0220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	131	131			
54213450	END SECTIONS 15"	EACH	2	2			
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	141	68		73	
60224459	MANHOLES, TYPE A, 8'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1			
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	43				43
63500105	DELINEATORS	EACH	4	2		2	
64200108	SHOULDER RUMBLE STRIPS, 8 INCH	FOOT	86809	67481	10666		8662
66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	16	16			
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	12	9.4	1.4		1.2
67100100	MOBILIZATION	L SUM	1	0.8	0.1		0.1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	0.8	0.1		0.1

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 OFFICE: \\OFFICE\NAME
 DRAWING: \\DRAWING\NAME
 DATE: 8/11/2021

USER NAME = murrayda	DESIGNED - _____	REVISED - _____
DRAWN - _____	REVISIONS - _____	REVISIONS - _____
CHECKED - _____	REVISIONS - _____	REVISIONS - _____
DATE - _____	REVISIONS - _____	REVISIONS - _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES			
SCALE: _____	SHEET 4	OF 7 SHEETS	STA. _____ TO STA. _____

F.A.S. F.A.U. 747 8813	SECTION (57,58,59)RS-2	COUNTY JERSEY	TOTAL SHEETS 60	SHEET NO. 6
CONTRACT NO. 76L10				
ILLINOIS FED. AID PROJECT				

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CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				100% FEDERAL			
				FAS RTE 747 ROADWAY 0005 RURAL	FAS RTE 747 ROADWAY 0005 URBAN	FAS RTE 747 BOX CULVERT 0004 042-2403 RURAL	FAU RTE 8813 ROADWAY 0005 URBAN
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	0.8	0.1		0.1
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1				1
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	0.8	0.1		0.1
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1				1
70107025	CHANGEABLE MESSAGE SIGN	CAL DAY	56	28		28	
70300100	SHORT TERM PAVEMENT MARKING	FOOT	12840	9900	1470		1470
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	1460	1122	164		174
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	123628	98827	11900		12901
70300260	TEMPORARY PAVEMENT MARKING - LINE 12"	FOOT	277				277
70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	35				35
72400200	REMOVE SIGN PANEL ASSEMBLY - TYPE B	EACH	1				1
* 72400600	RELOCATE SIGN PANEL ASSEMBLY - TYPE B	EACH	1				1
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	123628	98827	11900		12901
* 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	277				277

* SPECIALTY ITEM

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: _____ SHEET 5 OF 7 SHEETS STA. _____ TO STA. _____

F.A.S. F.A.U. 747 8813	SECTION (57,58,59)RS-2	COUNTY JERSEY	TOTAL SHEETS 60	SHEET NO. 7
CONTRACT NO. 76L10			ILLINOIS FED. AID PROJECT	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				100% FEDERAL			
				FAS RTE 747 ROADWAY 0005 RURAL	FAS RTE 747 ROADWAY 0005 URBAN	FAS RTE 747 BOX CULVERT 0004 042-2403 RURAL	FAU RTE 8813 ROADWAY 0005 URBAN
* 78000620	THERMOPLASTIC PAVEMENT MARKING - LINE 18"	FOOT	48	48			
* 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	35				35
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	552	428	68		56
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	552	428	68		56
* 88600600	DETECTOR LOOP REPLACEMENT	FOOT	662				662
X0900064	MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES	SQ YD	141	68		73	
X6660445	RIGHT-OF-WAY AND PROPERTY CORNERS	EACH	1	1			
X7011800	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1	0.5		0.5	
X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	41585	32962	3967		4656
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	0.5		0.5	
Z0016702	DETOUR SIGNING	L SUM	1	0.5		0.5	
Z0023500	FILLING EXISTING CULVERTS	CU YD	49	49			
Z0033700	LONGITUDINAL JOINT SEALANT	FOOT	43296	33634	5332		4330
Z0034105	MATERIAL TRANSFER DEVICE	TON	17781	13813	2190		1778
* Z0054517	ROCK FILL - FOUNDATION	TON	59	39		20	

* SPECIALTY ITEM

REV. - MS

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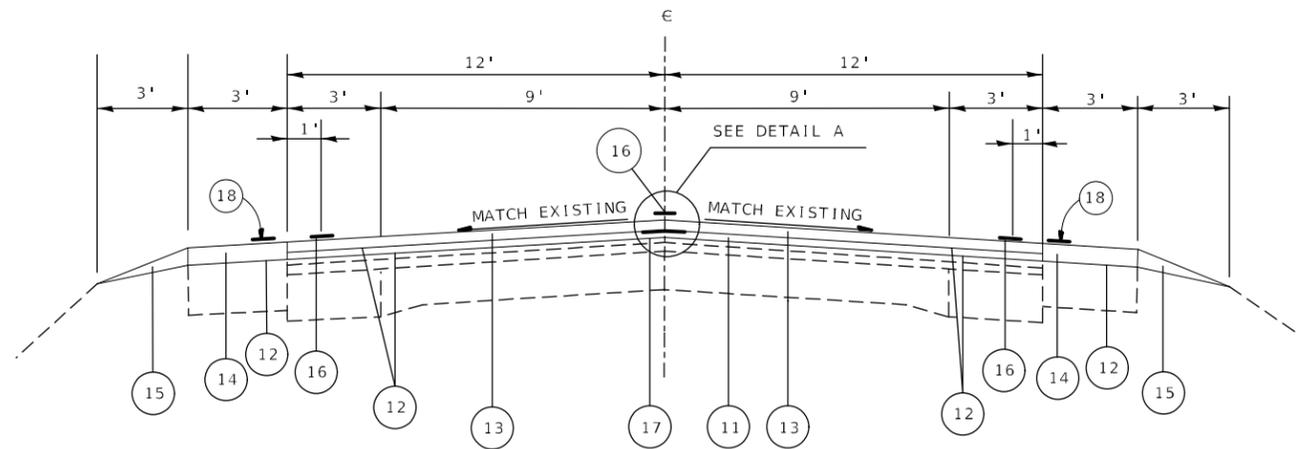
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PLOT SCALE = 2.0000' / in.	DRAWN - _____	REVISED - _____
PLOT DATE = 8/11/2021	CHECKED - _____	REVISED - _____
	DATE - _____	REVISED - _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

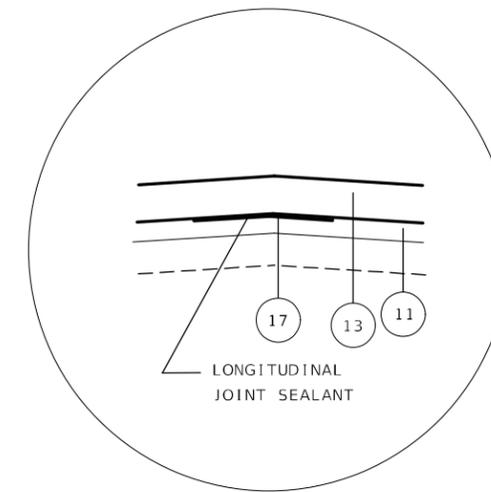
SUMMARY OF QUANTITIES

SCALE: _____ SHEET 6 OF 7 SHEETS STA. _____ TO STA. _____

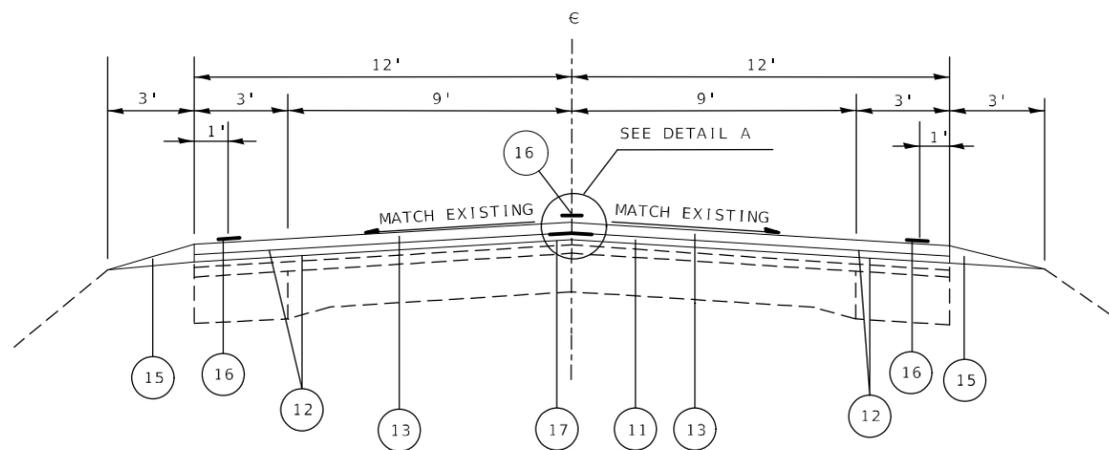
F.A.S. F.A.U. 747 8813	SECTION (57,58,59)RS-2	COUNTY JERSEY	TOTAL SHEETS 60	SHEET NO. 8
ILLINOIS FED. AID PROJECT			CONTRACT NO. 76L10	



PROPOSED TYPICAL SECTION
 IL 109
 MILE STA. 0.00 TO MILE STA. 7.87



DETAIL A



PROPOSED TYPICAL SECTION
 IL 109
 MILE STATION 7.87 TO MILE STATION 8.22

LEGEND

- ① EXISTING CONCRETE PAVEMENT (9"-6"-9")
- ② EXISTING BASE COURSE WIDENING (BITUMINOUS), 9"
- ③ EXISTING LEVELING BINDER, TYPE 2, VAR 0" TO 3 1/4"
- ④ EXISTING BITUMINOUS OVERLAY, VAR. 6 1/2" TO 8"
- ⑤ EXISTING HOT-MIX ASPHALT SHOULDERS, 8"
- ⑥ EXISTING THERMOPLASTIC PAVEMENT MARKING - LINE 4"
- ⑦ EXISTING AGGREGATE WEDGE, TYPE A
- ⑧ EXISTING SHOULDER RUMBLE STRIPS, 8"
- ⑨ PROPOSED HOT-MIX ASPHALT SURFACE REMOVAL, 2"
- ⑩ PROPOSED HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/2"
- ⑪ PROPOSED HOT-MIX ASPHALT BINDER COURSE, IL - 9.5FG, N70, 1 1/4"
- ⑫ PROPOSED BITUMINOUS MATERIALS (TACK COAT)
- ⑬ PROPOSED HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70, 1 1/2"
- ⑭ PROPOSED HOT-MIX ASPHALT SHOULDERS
- ⑮ PROPOSED AGGREGATE WEDGE SHOULDERS, TYPE B
- ⑯ PROPOSED THERMOPLASTIC PAVEMENT MARKING - LINE 4"
- ⑰ PROPOSED LONGITUDINAL JOINT SEALANT
- ⑱ PROPOSED SHOULDER RUMBLE STRIPS, 8"

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 TIME: I:\MODEL\NAME\TIME

USER NAME = murrayda	DESIGNED - _____	REVISED - _____
PLOT SCALE = 2,000' / in.	DRAWN - _____	REVISED - _____
PLOT DATE = 8/2/2021	CHECKED - _____	REVISED - _____
	DATE - _____	REVISED - _____

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

TYPICAL SECTIONS	
SCALE: _____	SHEET 2 OF 2 SHEETS
STA. _____	TO STA. _____

F.A.S. F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
747 8813	(57,58,59) RS-2	JERSEY	60	11
CONTRACT NO. 76L10				
ILLINOIS FED. AID PROJECT				

ENTRANCE SCHEDULE						
LOCATION		LENGTH	WIDTH	AREA	BITUMINOUS MATERIALS (TACK COAT)	INCIDENTAL HMA SURFACING
MILE STATION	DIRECTION	FOOT	FOOT	SQ YD	POUND	TON
1.15	LEFT	30	3	10.0	4.5	0.4
1.29	LEFT	50	3	16.7	7.5	0.7
1.42	LEFT	26	3	8.7	3.9	0.4
1.51	LEFT	27.5	3	9.2	4.1	0.4
1.55	LEFT	32.5	3	10.8	4.9	0.5
2.49	LEFT	31.5	3	10.5	4.7	0.4
2.84	RIGHT	17.5	3	5.8	2.6	0.2
2.85	RIGHT	17.5	3	5.8	2.6	0.2
2.91	RIGHT	31.5	3	10.5	4.7	0.4
3.09	LEFT	47.5	3	15.8	7.1	0.7
3.23	RIGHT	24	3	8.0	3.6	0.3
3.37	LEFT	27.5	3	9.2	4.1	0.4
3.56	LEFT	31.5	3	10.5	4.7	0.4
3.77	LEFT	24	3	8.0	3.6	0.3
3.82	LEFT	55	3	18.3	8.3	0.8
3.89	LEFT	130	3	43.3	19.5	1.8
4.38	RIGHT	14.5	3	4.8	2.2	0.2
4.41	RIGHT	14	3	4.7	2.1	0.2
5.46	RIGHT	35	3	11.7	5.3	0.5
5.50	LEFT	15	3	5.0	2.3	0.2
5.54	LEFT	23	3	7.7	3.5	0.3
5.57	LEFT	28.5	3	9.5	4.3	0.4
5.65	RIGHT	12.5	3	4.2	1.9	0.2
5.65	LEFT	17.5	3	5.8	2.6	0.2
5.68	LEFT	16.5	3	5.5	2.5	0.2
5.68	RIGHT	16.5	3	5.5	2.5	0.2
5.72	RIGHT	13	3	4.3	2.0	0.2
5.73	LEFT	16.5	3	5.5	2.5	0.2
5.75	LEFT	15	3	5.0	2.3	0.2
5.77	LEFT	17.5	3	5.8	2.6	0.2
5.77	RIGHT	14	3	4.7	2.1	0.2
5.86	LEFT	12.5	3	4.2	1.9	0.2
5.87	LEFT	12	3	4.0	1.8	0.2
5.95	RIGHT	17.5	3	5.8	2.6	0.2
6.72	LEFT	24	3	8.0	3.6	0.3
7.13	LEFT	23.5	3	7.8	3.5	0.3
TOTAL:					145	13

SIDEROAD SCHEDULE							
LOCATION		DIRECTION	EXISTING MATERIAL	LENGTH	WIDTH	BITUMINOUS MATERIALS (TACK COAT)	INCIDENTAL HMA SURFACING
MILE STATION	NAME			FOOT	FOOT	POUND	TON
0.02	IL 3	LEFT	HMA	50	3.5	8.8	0.8
0.51	JOE KNIGHT RD.	LEFT	HMA	70	3.5	12.3	1.1
1.02	DOW RD.	LEFT	HMA	70	3.5	12.3	1.1
1.02	AIRPORT RD.	RIGHT	HMA	65	3.5	11.4	1.1
2.24	BETHEL LN.	LEFT	HMA	50	3.5	8.8	0.8
2.24	BETHEL LN.	RIGHT	HMA	70	3.5	12.3	1.1
3.37	MCCLUSKY RD.	LEFT	HMA	85	3.5	14.9	1.4
3.37	MCCLUSKY RD.	RIGHT	HMA	105	3.5	18.4	1.7
3.43	MCCLUSKY TR.	RIGHT	HMA	55	3.5	9.7	0.9
4.38	HAGEN RD.	LEFT	HMA	70	3.5	12.3	1.1
4.38	HAGEN RD.	RIGHT	HMA	75	3.5	13.2	1.2
4.88	LODI RD.	LEFT	HMA	65	3.5	11.4	1.1
5.39	DAVIDSON RD.	RIGHT	HMA	45	3.5	7.9	0.7
6.39	CRYSTAL LAKE RD.	LEFT	HMA	60	3.5	10.5	1.0
6.39	CRYSTAL LAKE RD.	RIGHT	HMA	60	3.5	10.5	1.0
7.40	BLUEBIRD LN.	LEFT	HMA	35	3.5	6.2	0.6
7.68	COMMERCE BLVD.	LEFT	HMA	70	3.5	12.3	1.1
7.79	ESSEX ST.	RIGHT	HMA	90	3.5	15.8	1.5
7.85	ROSEWOOD DR.	RIGHT	HMA	45	3.5	7.9	0.7
TOTAL:						217	20

ROW SCHEDULE					
DESCRIPTION/LOCATION	STATION	OFFSET	DIRECTION	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	RIGHT-OF-WAY AND PROPERTY CORNERS
				EACH	EACH
DOW ROAD	69+00.00	30.21	LT	1	
DOW ROAD	69+00.00	29.79	RT	1	
DOW ROAD	69+75.00	90.00	RT	1	
DOW ROAD	70+00.00	80.00	LT	1	
DOW ROAD	70+50.00	80.00	LT	1	
DOW ROAD	70+50.00	90.00	RT	1	
DOW ROAD	71+30.00	30.35	LT	1	
DOW ROAD	71+40.00	29.64	RT	1	
HAGEN ROAD	245+10.00	29.74	RT	1	
HAGEN ROAD	245+75.00	30.28	LT	1	1
HAGEN ROAD	246+00.00	90.00	RT	1	
HAGEN ROAD	246+55.00	95.00	LT	1	
HAGEN ROAD	246+75.00	90.00	RT	1	
HAGEN ROAD	247+00.00	95.00	LT	1	
HAGEN ROAD	247+55.00	30.28	LT	1	
HAGEN ROAD	247+60.00	29.75	RT	1	
TOTAL:				16	1

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DRAWN - _____	REVISED - _____	
PLOT SCALE = 2,000' / in.	CHECKED - _____	REVISED - _____
PLOT DATE = 7/29/2021	DATE - _____	REVISED - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES			
SCALE: _____	SHEET 2	OF 5 SHEETS	STA. _____ TO STA. _____

F.A.S. F.A.U. 747/8813	SECTION (57,58,59) RS-2	COUNTY JERSEY	TOTAL SHEETS 60	SHEET NO. 13
CONTRACT NO. 76L10				
ILLINOIS FED. AID PROJECT				

ADA SCHEDULE								
LOCATION	PAVEMENT REMOVAL	SIDEWALK REMOVAL	AGGREGATE BASE COURSE, TYPE B	PC CONCRETE SIDEWALK 4 INCH	DETECTABLE WARNINGS	COMBINATION CURB AND GUTTER, TYPE B6.24	REMOVE SIGN PANEL ASSEMBLY, TYPE B	RELOCATE SIGN PANEL ASSEMBLY, TYPE B
	SQ YD	SQ FT	TON	SQ FT	SQ FT	FOOT	EACH	EACH
NE QUADRANT HWY 109 AND W. COUNTY RD	81	52	3.5	75	20	23	1	1
NW QUADRANT HWY 109 AND W. COUNTY RD	71	41	2.5	51	8	20		
TOTAL:	152	93	6	126	28	43	1	1

PAVEMENT MARKING SCHEDULE						
MILE STATION	DESCRIPTION	TEMPORARY PAVEMENT MARKING		TEMPORARY PAVEMENT MARKING REMOVAL	THERMOPLASTIC PAVEMENT MARKING	
		12" SOLID WHITE	24" SOLID WHITE		12" SOLID WHITE	24" SOLID WHITE
		FOOT	FOOT	SQ FT	FOOT	FOOT
8.22	IL 109 - STOP BAR		35	70	0	35
8.22	IL 109 - CROSSWALK	172		172	172	
8.22	US 67 - CROSSWALK	105		105	105	
TOTAL:		277	35	347	277	35

PAVEMENT MARKING SCHEDULE	
MILE STATION	THERMOPLASTIC PAVEMENT MARKING
	18" SOLID WHITE
	FOOT
0.602	8
0.727	8
0.852	8
3.844	8
3.969	8
4.094	8
TOTAL:	48

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	DRAWN - _____	REVISED - _____
PLOT SCALE = 2,0000' / in.	CHECKED - _____	REVISED - _____
PLOT DATE = 7/29/2021	DATE - _____	REVISED - _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCHEDULE OF QUANTITIES

SCALE: _____ SHEET 3 OF 5 SHEETS STA. _____ TO STA. _____

F.A.S. F.A.U. 747 8813	SECTION (57,58,59) RS-2	COUNTY JERSEY	TOTAL SHEETS 60	SHEET NO. 14
CONTRACT NO. 76L10			ILLINOIS FED. AID PROJECT	

PAVEMENT MARKING SCHEDULE																			
MILE STATION TO MILE STATION	LENGTH		SHORT TERM PAVEMENT MARKING	TEMPORARY PAVEMENT MARKING				RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	RAISED REFLECTIVE PAVEMENT MARKERS CRYSTAL	SHORT TERM PAVEMENT MARKING REMOVAL	TEMPORARY PAVEMENT MARKING REMOVAL	THERMOPLASTIC PAVEMENT MARKING				SHOULDER RUMBLE STRIP, 8"			
				4" SKIP-DASH YELLOW	4" SOLID WHITE	4" SKIP-DASH YELLOW	NO PASSING ZONE					4" SOLID WHITE	4" SKIP- DASH YELLOW	NO PASSING ZONE					
							DIR							FOOT	DIR		FOOT		
FOOT	FOOT	FOOT	FOOT	FOOT	DIR	FOOT	EACH	EACH	SQ FT	SQ FT	FOOT	FOOT	DIR	FOOT	FOOT				
0.00	-	0.01	53	30	106		BOTH	106	1	1	4	71	106		BOTH	106	106		
0.01	-	0.07	317	90	634		SB	317	4	4	10	344	634		SB	317	634		
0.07	-	0.18	581	180	1162		BOTH	1162	7	7	20	775	1162		BOTH	1162	1162		
0.18	-	0.22	211	60	422		NB	211	3	3	7	232	422	60	NB	211	422		
0.22	-	0.23	53	30	53		NB	53	1	1	4	42	53	20	NB	53	106		
0.23	-	0.25	106	30	211		NB	106	1	1	4	116	211	30	NB	106	211		
0.25	-	0.29	211	60	422				3	3	7	161	422	60			422		
0.29	-	0.41	634	180	1267		SB	634	8	8	20	687	1267	160	SB	634	1267		
0.41	-	0.51	528	150	1056				7	7	17	399	1056	140			1056		
0.51	-	0.52	53	30	53				1	1	4	25	53	20			106		
0.52	-	0.86	1795	510	3590				22	22	57	1347	3590	450			3590		
0.86	-	0.98	634	180	1267		NB	634	8	8	20	687	1267	160	NB	634	1267		
0.98	-	1.01	158	60	317				2	2	7	119	317	40			317		
1.01	-	1.03	106	30					1	1	4	10		30			211		
1.03	-	1.10	370	120	739				5	5	14	280	739	100			739		
1.10	-	1.20	528	150	1056		SB	528	7	7	17	575	1056	140	SB	528	1056		
1.20	-	1.48	1478	420	2957				18	18	47	1109	2957	370			2957		
1.48	-	1.69	1109	330	2218		NB	1109	14	14	37	1203	2218	280	NB	1109	2218		
1.69	-	1.73	211	60	422		BOTH	422	3	3	7	282	422		BOTH	422	422		
1.73	-	1.93	1056	300	2112		SB	1056	13	13	34	1146	2112	270	SB	1056	2112		
1.93	-	1.99	317	90	634				4	4	10	238	634	80			634		
1.99	-	2.12	686	210	1373		NB	686	9	9	24	747	1373	180	NB	686	1373		
2.12	-	2.24	634	180	1267		BOTH	1267	8	8	20	845	1267		BOTH	1267	1267		
2.24	-	2.25	53	30			BOTH	106	1	1	4	36			BOTH	106	106		
2.25	-	2.26	53	30	106		BOTH	106	1	1	4	71	106		BOTH	106	106		
2.26	-	2.46	1056	300	2112		SB	1056	13	13	34	1146	2112	270	SB	1056	2112		
2.46	-	2.47	53	30	106		BOTH	106	1	1	4	71	106		BOTH	106	106		
2.47	-	2.66	1003	300	2006		NB	1003	13	13	34	1090	2006	260	NB	1003	2006		
2.66	-	3.08	2218	630	4435		BOTH	4435	28	28	70	2957	4435		BOTH	4435	4435		
3.08	-	3.29	1109	330	2218		SB	1109	14	14	37	1203	2218	280	SB	1109	2218		
3.29	-	3.36	370	120	739				5	5	14	280	739	100			739		
3.36	-	3.38	106	30					1	1	4	10		30			211		
3.38	-	3.42	211	60	422				3	3	7	161	422	60			422		
3.42	-	3.43	53	30	53				1	1	4	25	53	20			106		
3.43	-	4.25	4330	1200	8659				54	54	134	3250	8659	1090			8659		
4.25	-	4.38	686	210	1373		NB	686	9	9	24	747	1373	180	NB	686	1373		
4.38	-	4.39	53	30			NB	53			4	25		20	NB	53	106		
4.39	-	4.46	370	120	739		NB	370	5	5	14	403	739	100	NB	370	739		
SUBTOTAL (1):				6930	46306			5080		17321	299	299	787	22915	46306	5080		17321	47099
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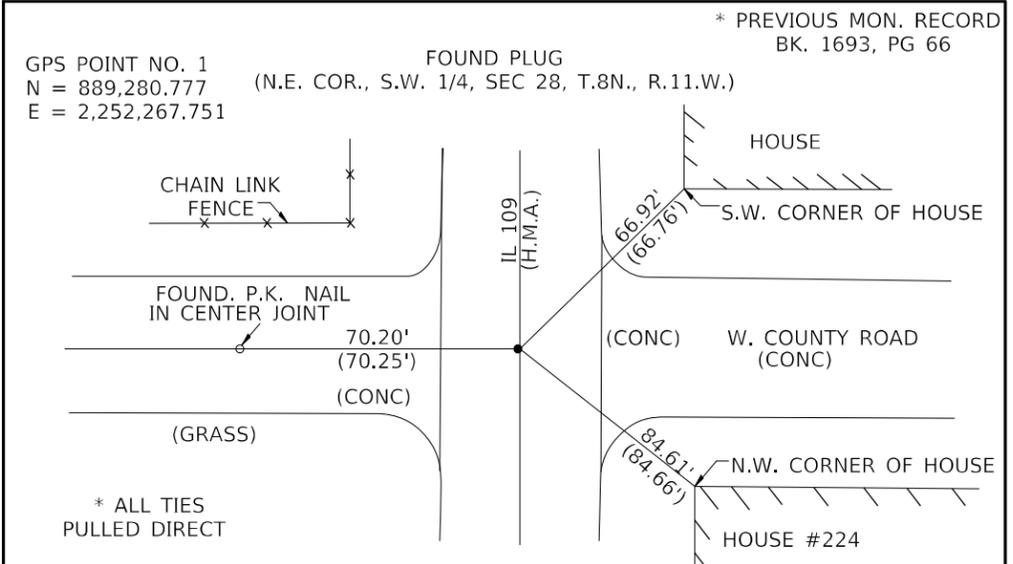
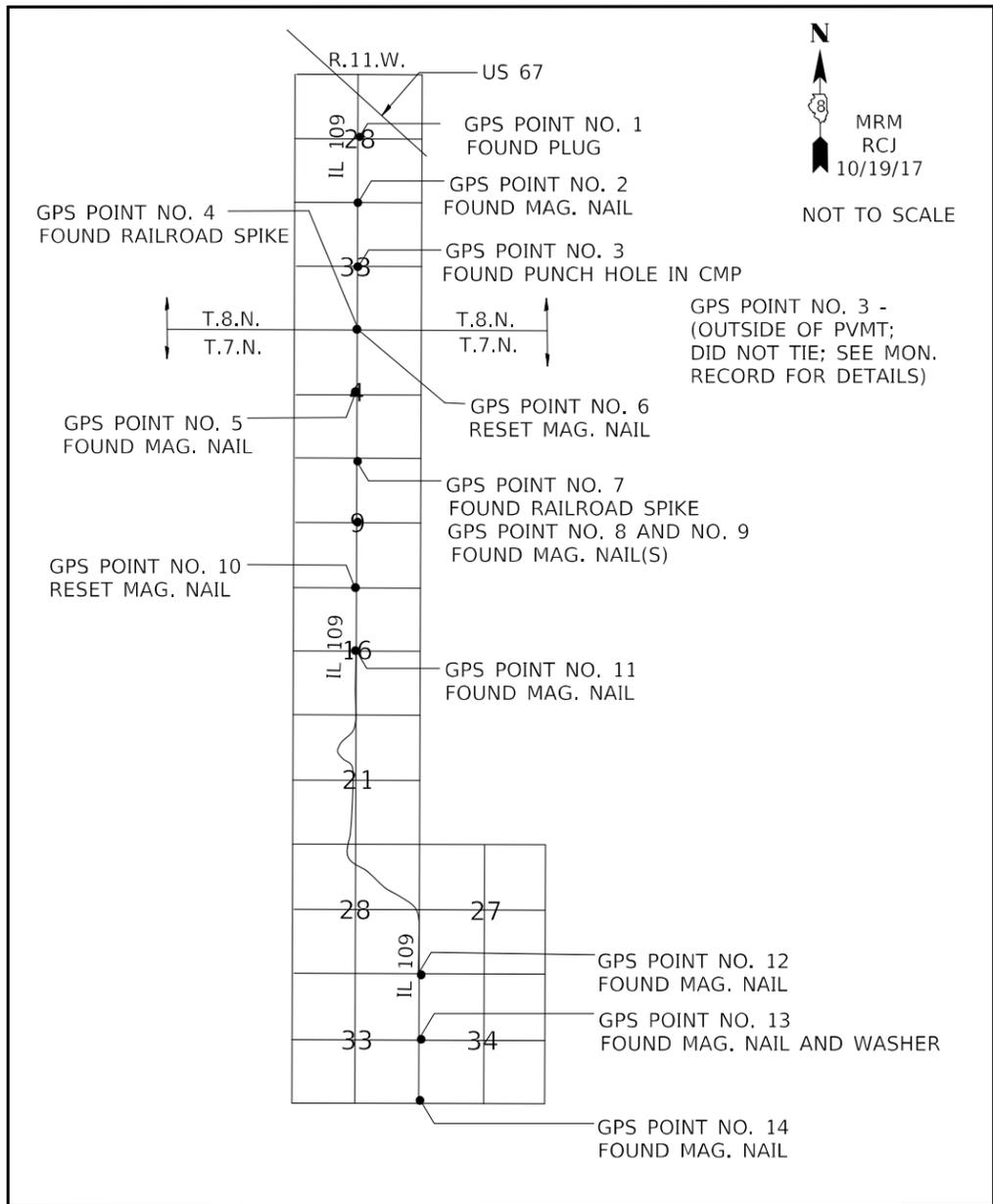
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PLOT SCALE = 2,000' / in.	CHECKED - _____	REVISED - _____
PLOT DATE = 7/29/2021	DATE - _____	REVISED - _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCHEDULE OF QUANTITIES			
SCALE: _____	SHEET 4	OF 5 SHEETS	STA. _____ TO STA. _____

F.A.S. F.A.U. 747 8813	SECTION (57,58,59) RS-2	COUNTY JERSEY	TOTAL SHEETS 60	SHEET NO. 15
CONTRACT NO. 76L10				
ILLINOIS FED. AID PROJECT				



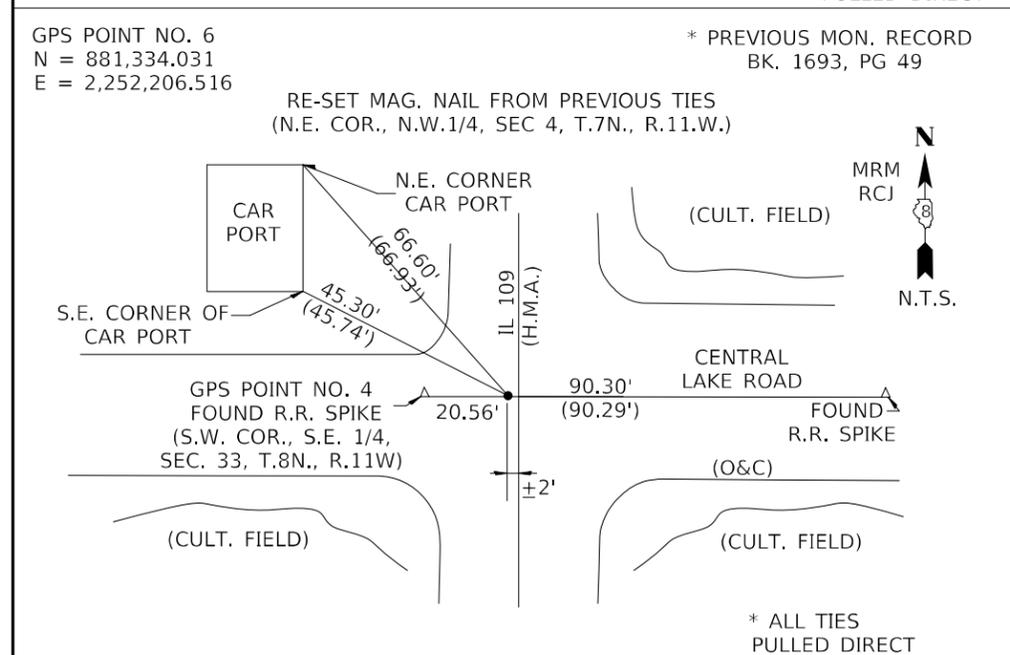
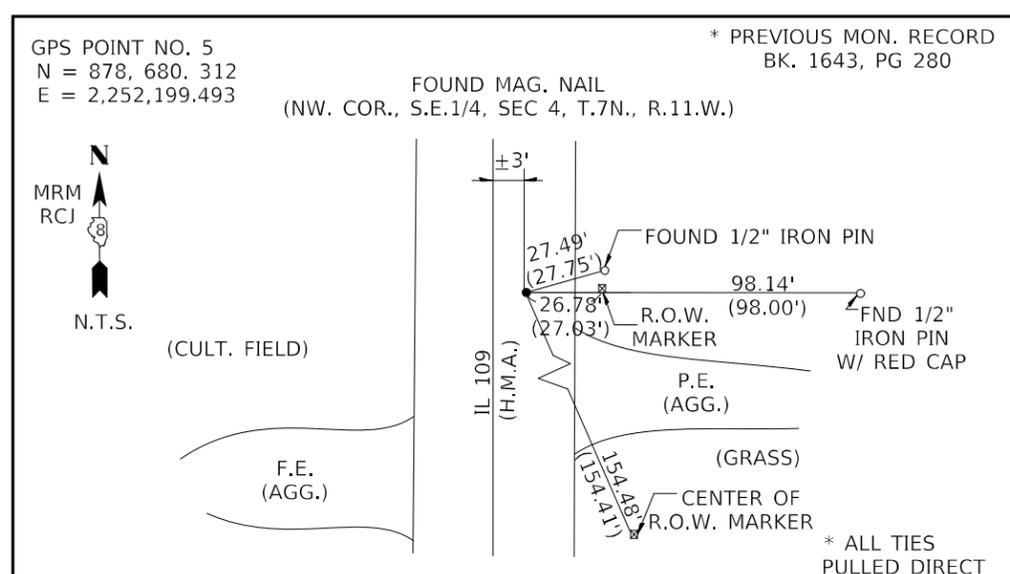
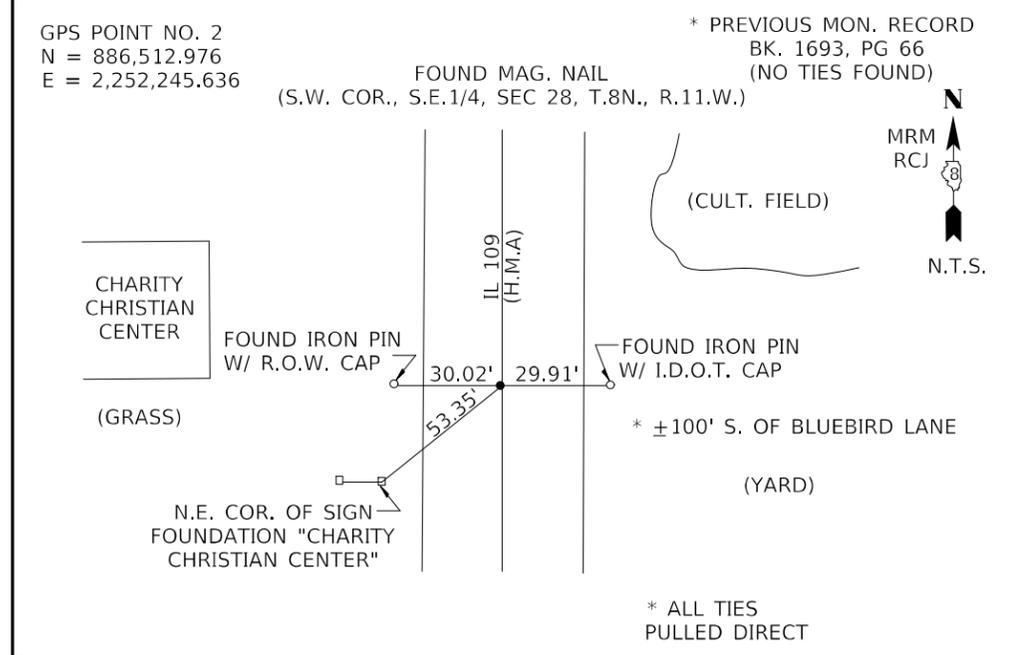
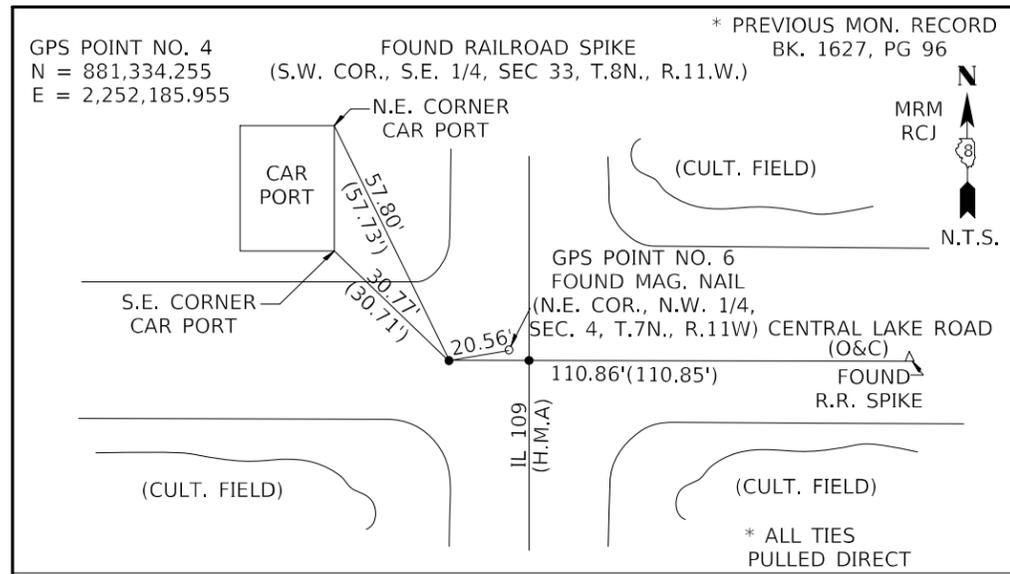
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PLOT SCALE = 2,0000' / in.	DRAWN - _____	REVISED - _____
PLOT DATE = 7/29/2021	CHECKED - _____	REVISED - _____
	DATE - _____	REVISED - _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SURVEY MONUMENT LOCATIONS			
SCALE: _____	SHEET 1	OF 4 SHEETS	STA. _____ TO STA. _____

F.A.S. F.A.U. 747 8813	SECTION (57,58,59)RS-2	COUNTY JERSEY	TOTAL SHEETS 60	SHEET NO. 17
CONTRACT NO. 76L10				
ILLINOIS FED. AID PROJECT				



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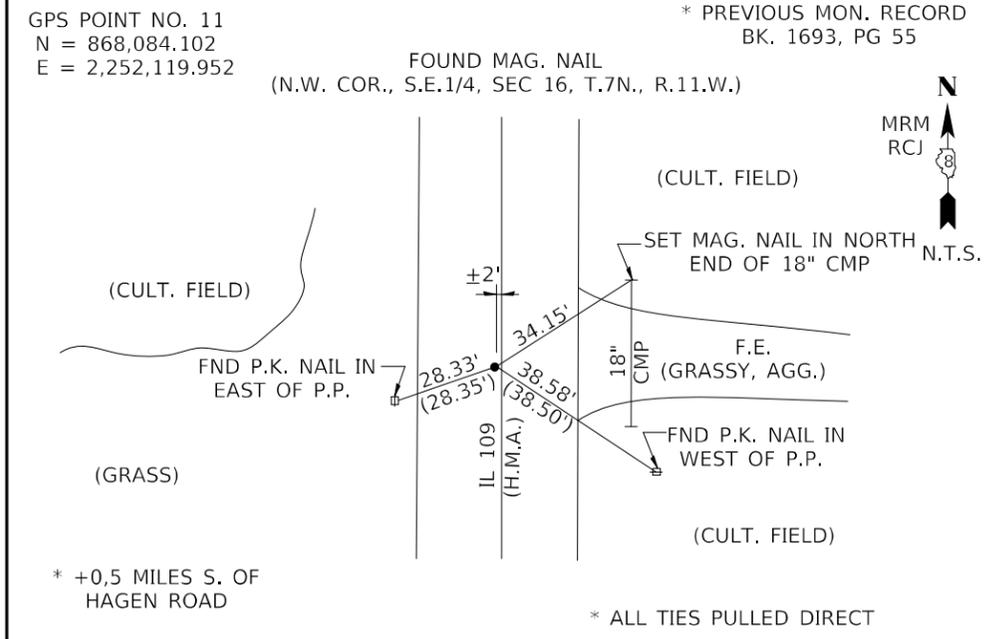
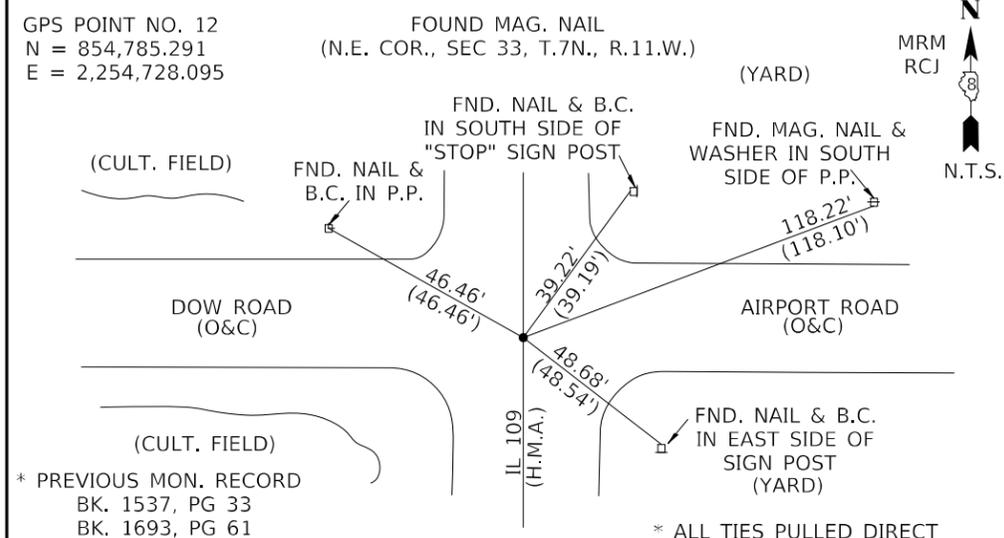
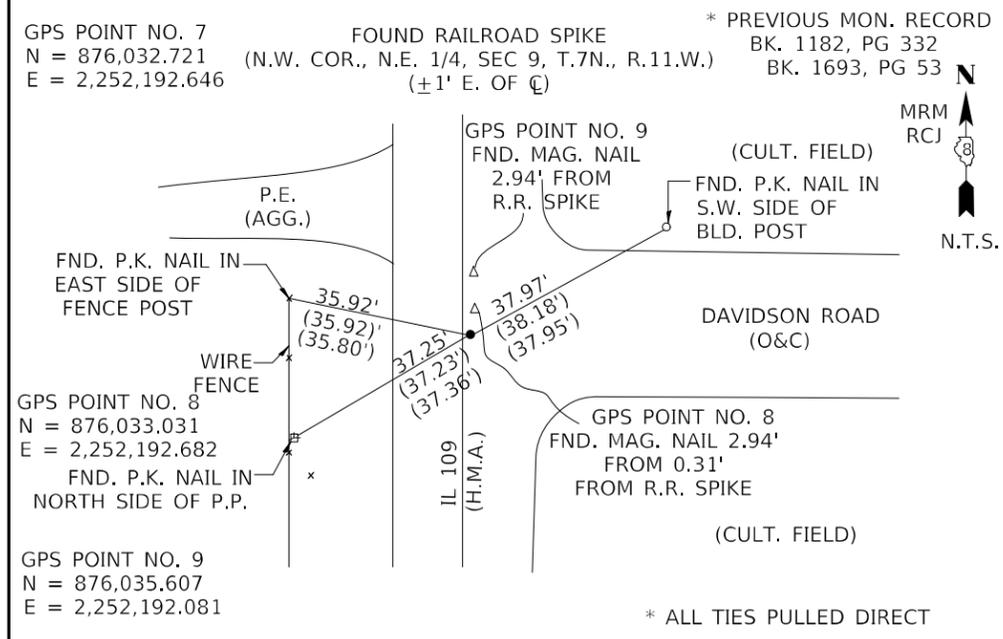
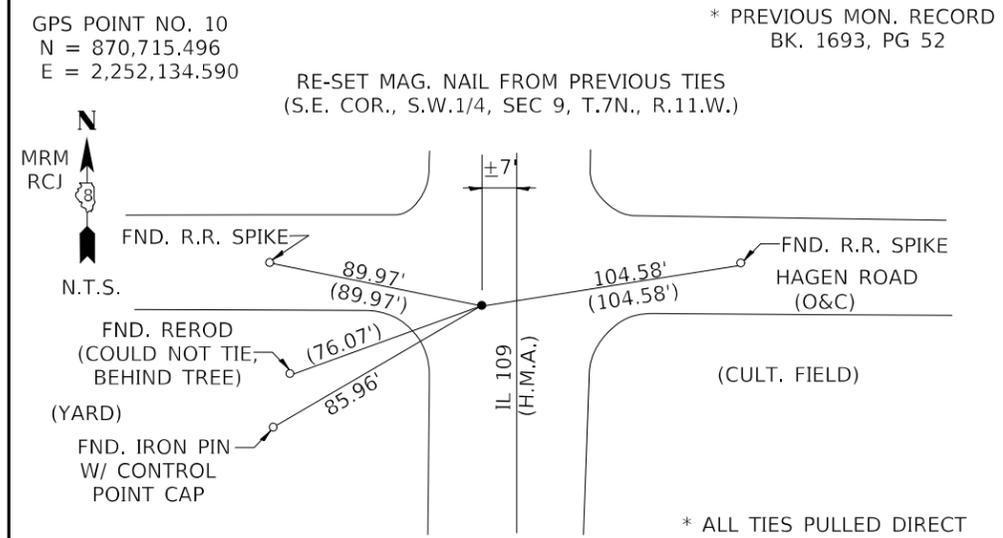
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PLOT DATE = 7/29/2021	DATE - _____	REVISED - _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SURVEY MONUMENT LOCATIONS

SCALE: _____ SHEET 2 OF 4 SHEETS STA. _____ TO STA. _____

F.A.S. F.A.U. 747 8813	SECTION (57,58,59)RS-2	COUNTY JERSEY	TOTAL SHEETS 60	SHEET NO. 18
CONTRACT NO. 76L10				
ILLINOIS FED. AID PROJECT				



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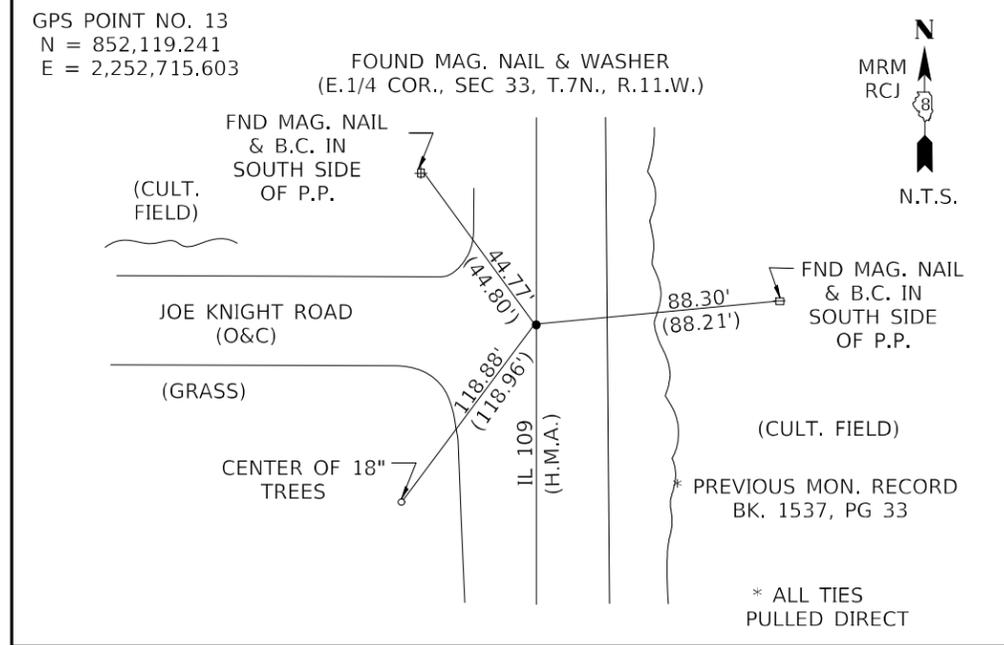
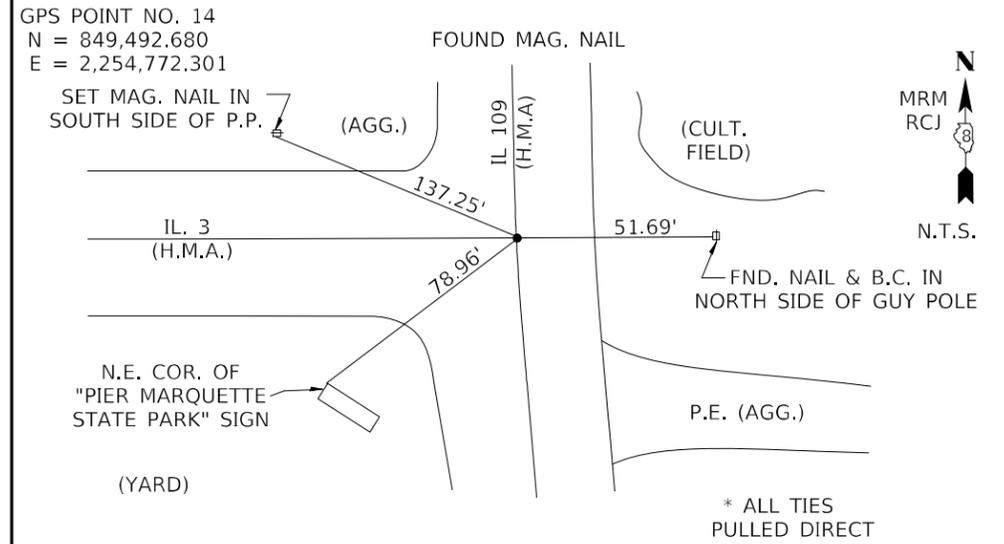
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PLOT DATE = 7/29/2021	DATE - _____	REVISIONS - _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SURVEY MONUMENT LOCATIONS

SCALE: _____ SHEET 3 OF 4 SHEETS STA. _____ TO STA. _____

F.A.S. F.A.U. 747 8813	SECTION (57.58.59)RS-2	COUNTY JERSEY	TOTAL SHEETS 60	SHEET NO. 19
CONTRACT NO. 76L10				
ILLINOIS FED. AID PROJECT				



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PLOT SCALE = 2,000' / in.	CHECKED - _____	REVISIONS - _____
PLOT DATE = 7/29/2021	DATE - _____	REVISIONS - _____

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

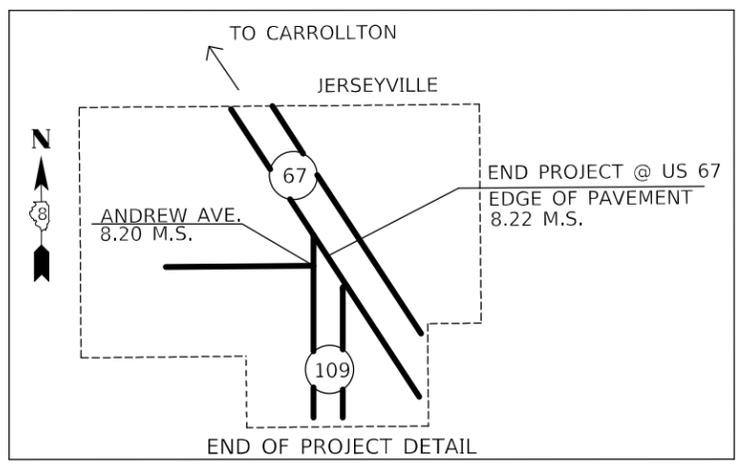
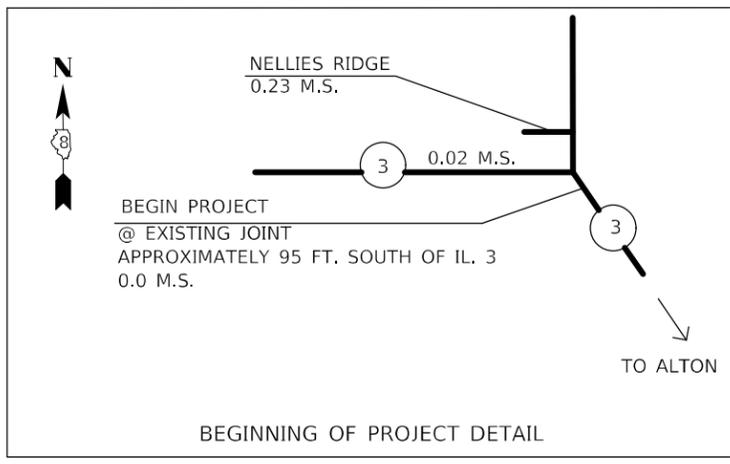
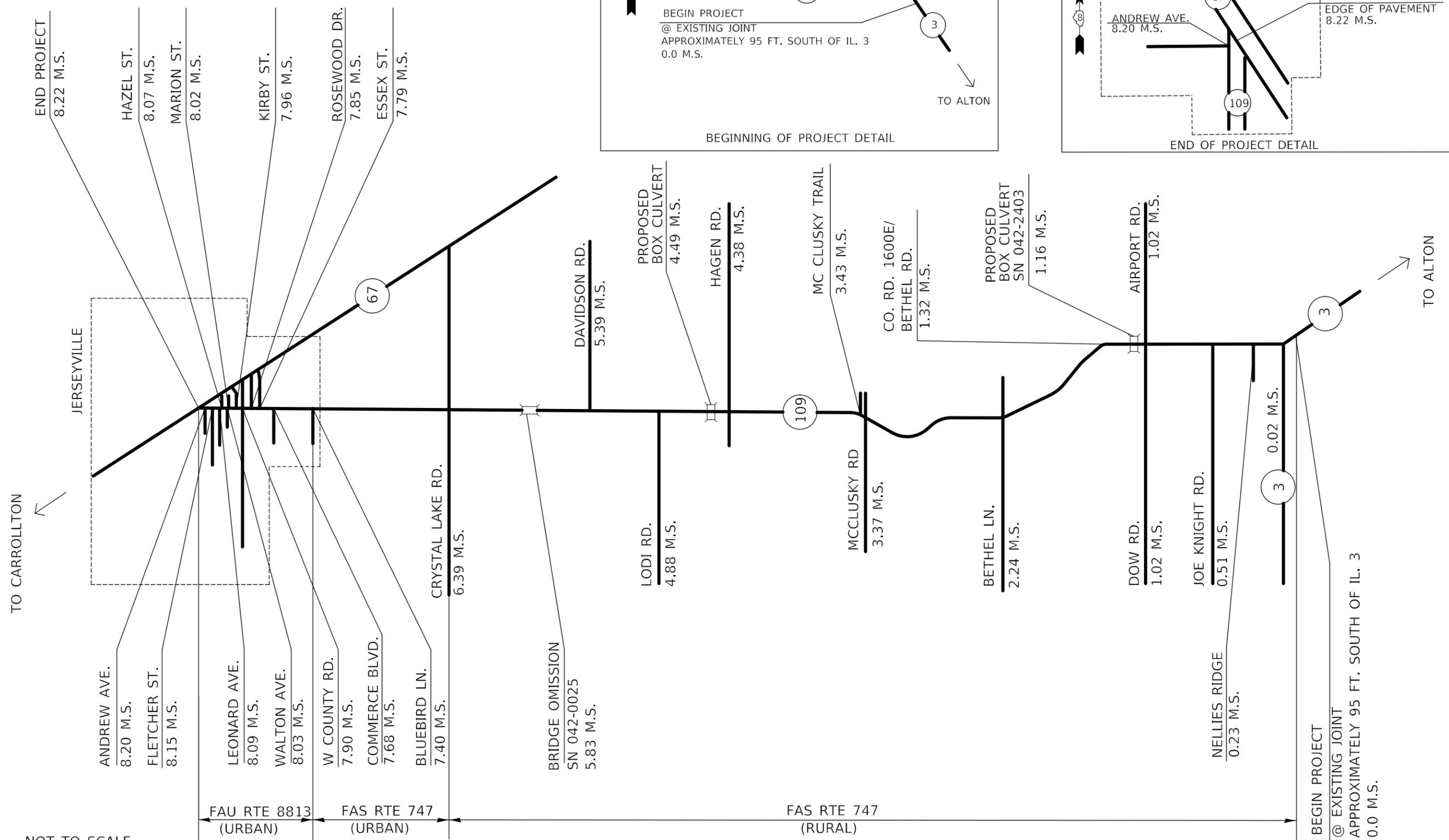
SURVEY MONUMENT LOCATIONS

SCALE: _____ SHEET 4 OF 4 SHEETS STA. _____ TO STA. _____

F.A.S. F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
747 8813	(57,58,59)RS-2	JERSEY	60	20
CONTRACT NO. 76L10				
ILLINOIS FED. AID PROJECT				

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NOT TO SCALE



USER NAME = murrayda	DESIGNED - _____	REVISED - _____
DRAWN - _____	REVISIONS - _____	REVISED - _____
PLOT SCALE = 2,0000' / in.	CHECKED - _____	REVISED - _____
PLOT DATE = 7/29/2021	DATE - _____	REVISED - _____

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

LOCATION MAP

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

F.A.S. 747 8813	SECTION (57,58,59) RS-2	COUNTY JERSEY	TOTAL SHEETS 60	SHEET NO. 21
CONTRACT NO. 76L10				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
OFFICE OF HIGHWAYS PROJECT IMPLEMENTATION

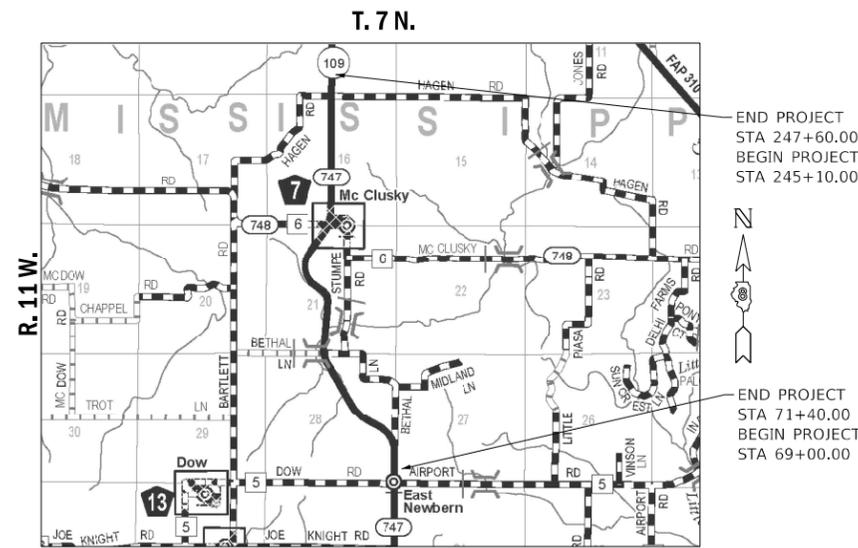
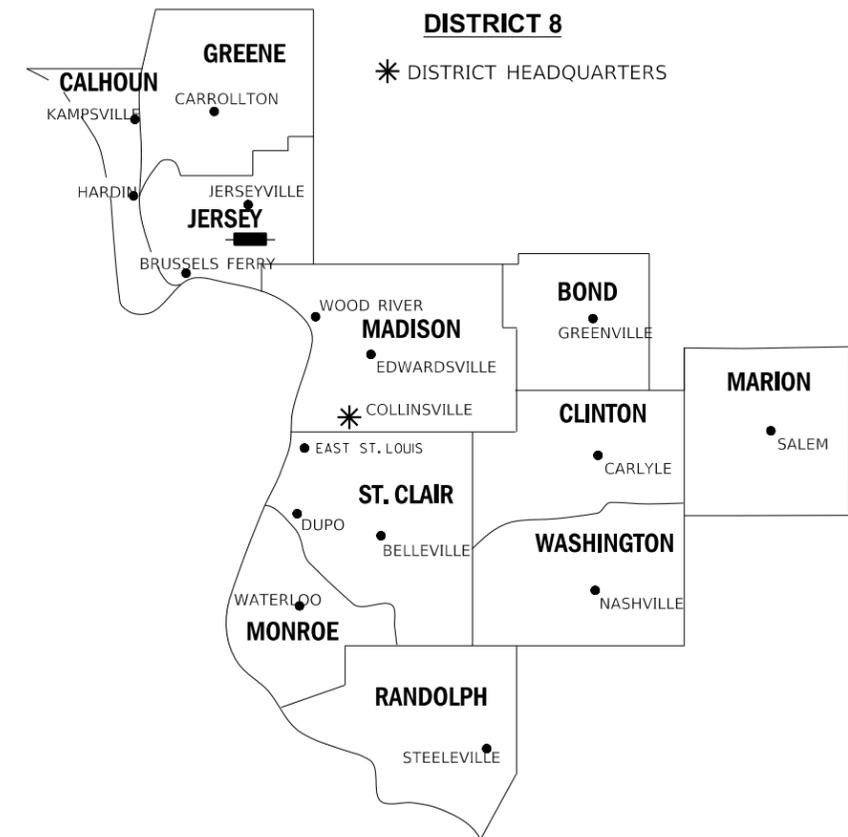
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SPACE RESERVED FOR RECORDING OFFICER

SHEET INDEX		
SHEET NO.	STATION to STATION	DESCRIPTION
1		COVER SHEET
2		LEGEND
3-4		ROW PLAT
5		TIE POINTS

PLAT OF HIGHWAYS

**F.A.S. 747/F.A.U. 8813 (IL ROUTE 109)
SECTION (57,58,59)RS-2
JERSEY COUNTY
JOB NO. R-98-006-20**



END PROJECT
STA 247+60.00
BEGIN PROJECT
STA 245+10.00

END PROJECT
STA 71+40.00
BEGIN PROJECT
STA 69+00.00

**PROJECT LENGTH = 240 LIN. FT. = 0.0455 MILES
250 LIN. FT. = 0.0473 MILES**

LOCATION OF SECTION INDICATED THUS: ■■■

WK
Veenstra & Kimm, Inc.
2417 West White Oaks Dr.
Springfield, IL 62704
217-544-8033

PREPARED BY:

PRELIMINARY

SHEET 1 OF 5

SHAYLA E. PFAFFE, PLS NO. 35-003411
LICENSE EXPIRATION DATE: 11/30/2022

ILLINOIS DEPARTMENT OF TRANSPORTATION OFFICE OF HIGHWAYS PROJECT IMPLEMENTATION/REGION 5/DISTRICT 8 1102 EASTPORT PLAZA DRIVE COLLINSVILLE, ILLINOIS 62234-6198				
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 747/ FAU 8813	(57,58,59)RS-2	JERSEY	60	22
CONTRACT NO. 76L10				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

LEGEND FOR EXISTING TOPOGRAPHIC SYMBOLS

TRAFFIC SIGNAL GULFBOX		DRAINAGE FLOW LINE	
TRAFFIC SIGNAL HANDHOLE		RIP RAP	
TRAFFIC SIGNAL SIGNAL POST		HEADWALL	
TRAFFIC SIGNAL STEEL MAST ARM		CULVERT END SECTION	
TRAFFIC SIGNAL PEDESTRIAN PUSH BUTTON		DRAINAGE MANHOLE	
TRAFFIC SIGNAL WOODEN POLE		INLET	
TRAFFIC SIGNAL VEHICLE DETECTION PRIORITY		ROADWAY DITCH FLOW	
TRAFFIC SIGNAL VEHICLE DETECTION MAGNET		VEGETATION LINE	
TRAFFIC SIGNAL JUNCTION BOX		STUMP	
TRAFFIC SIGNAL CONTROLLER		SHRUB	
TRAFFIC SIGNAL HEAVY DUTY HANDHOLE		EVERGREEN TREE	
RAILROAD CANTILEVER MAST ARM		DECIDUOUS TREE	
RAILROAD CROSSBUCK		WOODS/BUSH LINE	
RAILROAD TRACK		TRAFFIC SIGN	
RAILROAD TRACK (ABANDONED)		GUARDRAIL POST	
RAILROAD CROSSGATE		GUARDRAIL	
RAILROAD CONTROL BOX		FIELD LINE	
RAILROAD FLASHING SIGNAL		LEVEE/NOISE BARRIER	
UTILITY TELEPHONE SPLICE BOX		FENCE	
UTILITY POWER POLE		MAIL BOX	
UTILITY TRAFFIC SIGNAL		ADVERTISING SIGN	
UTILITY LIGHT POLE		MARSH	
UTILITY FIRE HYDRANT		LIGHTING HANDHOLE	
UTILITY MANHOLE		LIGHTING POWER POLE	
UTILITY TELEPHONE POLE		LIGHTING JUNCTION BOX	
UTILITY GUY ANCHOR		LIGHTING HEAVY DUTY HANDHOLE	
UTILITY PIPELINE WARNING SIGN		LIGHTING CONTROLLER	
UTILITY HANDHOLE		LIGHTING PULL POINT	
UTILITY SPLICE BOX		HIGHWAY LIGHTING ELECTRICAL GROUND	
UTILITY JUNCTION BOX		HIGHWAY LIGHTING SINGLE UNIT	
UTILITY HEAVY DUTY HANDHOLE		HIGHWAY LIGHTING DOUBLE UNIT	
UTILITY DOUBLE HANDHOLE		EXISTING CONCRETE BARRIER	
UTILITY CONTROLLER		EXISTING CREEK OR DITCH	
UTILITY WATER METER		EXISTING EDGE OF PAVEMENT	

RIGHT-OF-WAY LEGEND

	SECTION CORNERS		QUARTER SECTION CORNERS
---	EXISTING CENTERLINE	---	EXISTING RIGHT-OF-WAY LINE
---	FORMER RIGHT-OF-WAY LINE	---	EXISTING IDOT EASEMENT LINE
---	EXISTING EASEMENT LINE	---	BUILDING SETBACK LINE
---	EXISTING ACCESS CONTROL LINE	---	EXISTING RIGHT-OF-WAY & PROPOSED ACCESS CONTROL LINE
---	PROPOSED ACCESS CONTROL LINE	---	PROPOSED CENTERLINE
---	PROPOSED RIGHT-OF-WAY LINE	---	PROPOSED TEMPORARY EASEMENT LINE
---	PROPOSED PERMANENT EASEMENT LINE	---	SECTION LINE
---	QUARTER SECTION LINE	---	QUARTER QUARTER SECTION LINE
---	PROPERTY LINE (TITLE)	---	RECORDED PLAT/DEED LINE
---	APPARENT PROPERTY LINE	---	SAME OWNERSHIP
121.45'	MEASURED DIMENSION	121.45'	RECORDED DIMENSION
□	FOUND STONE	○	FOUND IRON PIPE OR IRON ROD AT CORNER UNLESS OTHERWISE NOTED
○	SET 5/8 INCH IRON ROD WITH PLASTIC CAP IDENTIFIED BY SURVEYORS LICENSE NUMBER AT CORNER UNLESS OTHERWISE NOTED	⊕	PERMANENT SURVEY MONUMENT, I.D.O.T. STD. 667101 (TO BE SET BY OTHERS)
△	SET 5/8 INCH IRON ROD AS SURVEY CONTROL UNLESS OTHERWISE NOTED	+	FOUND CUT CROSS
+	SET CUT CROSS		

- STAKING OF PROPOSED RIGHT-OF-WAY AND PERMANENT EASEMENT CORNERS. SET 5/8 INCH METAL ROD WITH DEPARTMENT OF TRANSPORTATION SURVEY ALUMINUM CAP TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS LICENSE NUMBER.
- ^B STAKING OF PROPOSED RIGHT-OF-WAY AND PERMANENT EASEMENT CORNERS IN CULTIVATED AREA, A MINIMUM OF 20 INCHES BELOW THE GROUND SURFACE. SET 5/8 INCH METAL ROD WITH DIVISION OF HIGHWAY SURVEY ALUMINUM CAP TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS LICENSE NUMBER.

LEGEND FOR ABBREVIATIONS

A/C	ACCESS CONTROL
AC	ACRE
AVE	AVENUE
BK	BOOK
BLVD	BOULEVARD
CL	CENTERLINE
CAB	CABINET
CH	COUNTY HIGHWAY
Ch	CHAIN
CP	CONTROL POINT
CPS	COTTON PICKER SPINDLE
DB	DEED BOOK
E	EAST
EX	EXISTING
FA	FEDERAL AID
FAI	FEDERAL AID INTERSTATE
FAP	FEDERAL AID PRIMARY
FAS	FEDERAL AID SECONDARY
FAU	FEDERAL AID URBAN
FND	FOUND
ha	HECTARE
IP	IRON PIPE
IR	IRON ROD
LT	LEFT
m ²	METER
m	SQUARE METERS
N	NORTH
N/F	NOW OR FORMERLY
N & BC	NAIL AND BOTTLE CAP
N & C	NAIL AND CAP
N & W	NAIL AND WASHER
NE	NORTHEAST
NW	NORTHWEST
PB	PLAT BOOK
PG	PAGE
POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
POT	POINT ON TANGENT
PL	PROPERTY LINE
PR	PROPOSED
R	RANGE
RD	ROAD
REC	RECORD
ROW	RIGHT-OF-WAY
RR	RAILROAD
RRS	RAILROAD SPIKE
RT	RIGHT
RTE	ROUTE
S	SOUTH
SBI	STATE BOND ISSUE
SE	SOUTHEAST
SEC	SECTION
SQ FT	SQUARE FEET
SR	STATE ROUTE
ST	STREET
STA	STATION
SMK	SURVEY MARKER
SW	SOUTHWEST
T	TOWNSHIP
TR	TOWNSHIP ROAD
USGS	U.S. GEOLOGICAL SURVEY
W	WEST

RECEIVED: 05-25-21

SPACE RESERVED FOR RECORDING OFFICER

PROPOSED PARCEL NUMBER LEGEND

8001001	PROPOSED FEE SIMPLE ACQUISITION
8001001TE	PROPOSED TEMPORARY EASEMENT

CURVE ABBREVIATIONS

PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
PRC	POINT OF REVERSE CURVE
PCC	POINT OF COMPOUND CURVE
R	RADIUS OF CURVE
L	LENGTH OF CURVE
CB	CHORD BEARING
C	CHORD LENGTH
D	DEGREE OF CURVE
E	EXTERNAL ORDINATE
Δ	CENTRAL ANGLE

BASIS OF COORDINATE & BEARING STATEMENT

THE COORDINATES AND BEARINGS FOR THIS SURVEY ARE BASED ON THE PROJECT SURVEY CONTROL DATA ESTABLISHED AND PROVIDED TO THE SURVEYOR BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE GRID VALUES BASED ON THE FOLLOWING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT GRID DISTANCES ARE EQUIVALENT TO "GROUND" DISTANCES.

LOW DISTORTION PROJECTION - JERSEY & GREENE COUNTIES
PROJECTION PARAMETERS

LINEAR UNIT: US SURVEY FEET
GEODETIC DATUM: NAD 1983 (2011)- EPOCH: 2010
VERTICAL DATUM: NAVD 1988
PROJECTION: TRANSVERSE MERCATOR
LATITUDE OF ORIGIN: 38°54'00"N
CENTRAL MERIDIAN: 90°20'00"W
FALSE NORTHING: 0.000 SFT
FALSE EASTING: 88,000 SFT
CM SCALE FACTOR: 1.00002152

THE SURVEY WAS REFERENCED TO THE NATIONAL SPATIAL REFERENCE SYSTEM BY DIRECT CONNECTION TO THE FOLLOWING MONUMENTS.

CONTROL: No. 6
LATITUDE: N39°04'20.78673" NORTHING: 62808.3172 SFT
LONGITUDE: W90°19'22.05978" EASTING: 90992.2488 SFT
ELLIPSOIDAL HEIGHT: 510.4534 SFT ORTHO HT.: 614.2563 SFT (GEOID 12B)

CONTROL: No. 106
LATITUDE: N38°59'46.99471" NORTHING: 35109.0233 SFT
LONGITUDE: W90°17'49.95303" EASTING: 98267.4744 SFT
ELLIPSOIDAL HEIGHT: 496.8124 SFT ORTHO HT.: 600.3836 (G'EOID 12B)

**PROJECT SURVEY CONTROL DATA
GROUND SURFACE COORDINATE SYSTEM**

POINT NO.	NORTH (FEET)	EAST (FEET)	DESCRIPTION
100	42,397.6870	90,714.5879	IRON PIN W/ALUM CAP
102	41,981.2368	93,470.0244	IRON PIN W/PLASTIC CAP
103	41,530.4929	92,188.2172	IRON PIN W/ALUM CAP
104	41,509.9798	94,996.8377	IRON PIN W/ALUM CAP
1	57,424.9627	90,907.8137	IRON PIN W/CAP
2	57,943.9721	90,918.5836	IRON PIN W/CAP
5	58,705.0013	90,865.3434	IRON PIN W/CAP
7	57,452.0066	95,129.3304	IRON PIN W/CAP
9	60,160.0814	85,565.9604	IRON PIN W/CAP

TOTAL HOLDING AREA SOURCE TABLE

1	AREA ACCORDING TO THE SURVEY PERFORMED BY THE CONSULTANT.
2	AREA LISTED IN RECORDED DEED.
3	AREA ACCORDING TO A RECORDED SUBDIVISION PLAT.
4	AREA ACCORDING TO A PLAT OF SURVEY.
5	AREA CALCULATED FROM RECORDED DEEDS OR TITLE COMMITMENTS - NOT SURVEYED.
6	AREA ACCORDING TO COUNTY TAX MAPS AND COUNTY ASSESSMENT RECORDS.
7	AREA ACCORDING TO OTHER RECORDS, SEE NOTE ON THE PLAT OF HIGHWAYS.

TOPOGRAPHIC STATEMENT

THE TOPOGRAPHY SHOWN HEREON WAS PROVIDED TO THE SURVEYOR BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION. THE SURVEYOR VISUALLY FIELD VERIFIED THE EXISTENCE OF THE TOPOGRAPHY SHOWN HEREON. IN ADDITION THE SURVEYOR PHYSICALLY LOCATED IN THE FIELD THE FOLLOWING ITEMS ON 05/19/21:

1. RESIDENTIAL HOUSES AND OUT BUILDINGS
- 2.
- 3.

PREPARED BY:

PRELIMINARY



Veenstra & Kimm, Inc.
2417 West White Oaks Dr.
Springfield, IL 62704
217-544-8033

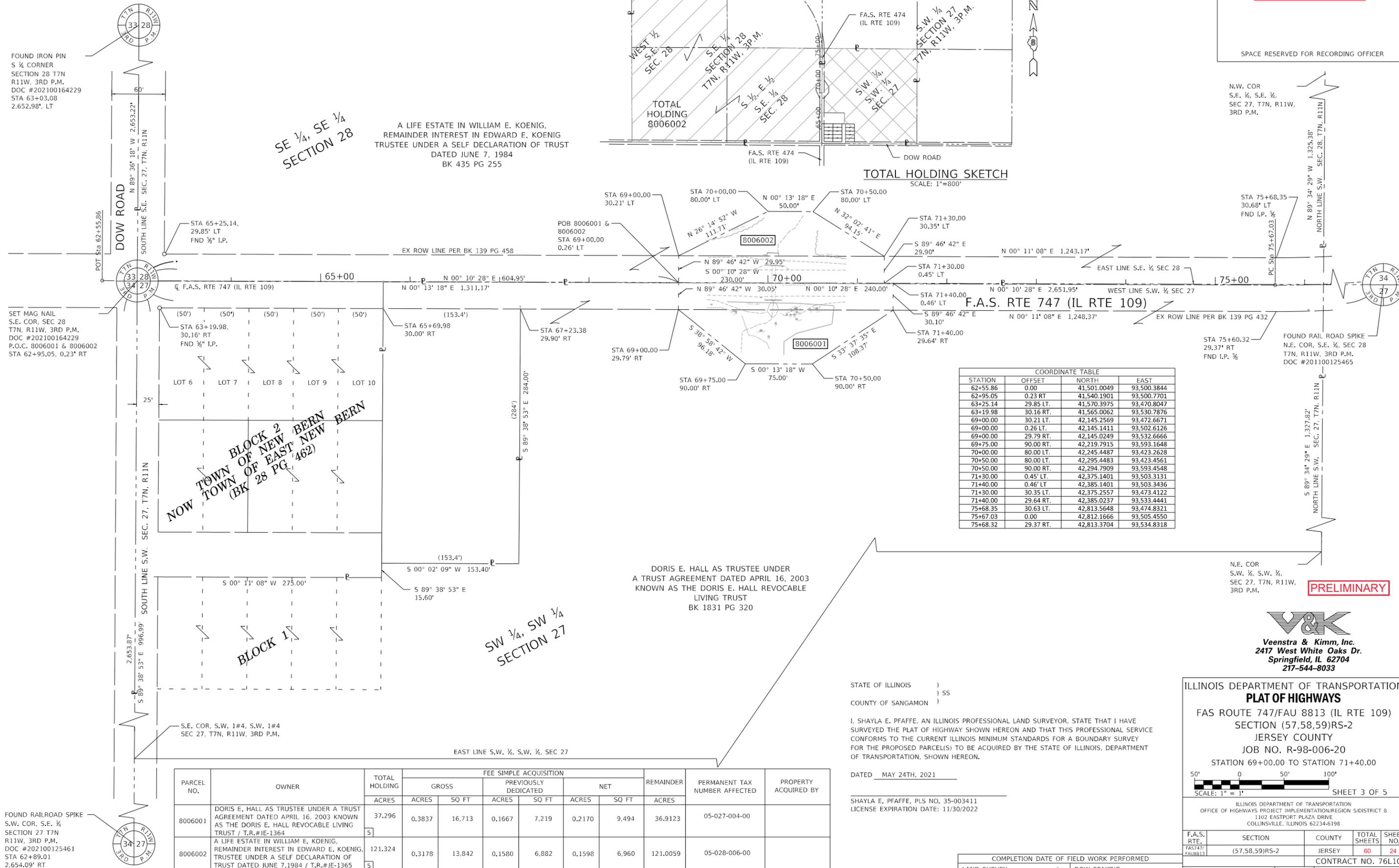
ILLINOIS DEPARTMENT OF TRANSPORTATION
PLAT OF HIGHWAYS
FAS 747/FAU8813 (IL ROUTE 109)
SECTION (57,58,59)RS-2
JERSEY COUNTY
JOB NO. R-98-006-20
STATION 00+00 TO STATION 00+00

NOT TO SCALE		SHEET 2 OF 5	
ILLINOIS DEPARTMENT OF TRANSPORTATION OFFICE OF HIGHWAYS PROJECT IMPLEMENTATION/REGION 5/DISTRICT 8 1102 EASTPORT PLAZA DRIVE COLLINSVILLE, ILLINOIS 62234-6198			
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS
FAS747/FAU8813	(57,58,59)RS-2	JERSEY	60
		SHEET NO. 23	
CONTRACT NO. 76L10			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	

SEE LEGENDS, TOPOGRAPHIC STATEMENT, SURVEYORS NOTE(S) AND BASIS OF COORDINATES & BEARINGS STATEMENT ON SHEET 2

RECEIVED: 05-25-21

SPACE RESERVED FOR RECORDING OFFICER



TOTAL HOLDING SKETCH
SCALE: 1"=800'

STATION	OFFSET	NORTH	EAST
62+55.86	0.00	41,501.0049	93,500.3844
62+95.05	0.23 RT	41,540.1901	93,500.7701
63+25.14	29.85 LT	41,570.3975	93,470.8047
63+19.98	30.16 RT	41,565.0062	93,530.7876
69+00.00	30.21 LT	42,145.2569	93,472.6671
69+00.00	0.26 LT	42,145.1411	93,502.6126
69+00.00	29.79 RT	42,145.0249	93,532.6666
69+75.00	90.00 RT	42,219.7915	93,593.1648
70+00.00	80.00 LT	42,245.4487	93,423.2628
70+50.00	90.00 RT	42,294.7909	93,593.4548
71+30.00	0.45' LT	42,375.1401	93,503.3131
71+40.00	0.46' LT	42,385.1401	93,503.3436
71+30.00	30.35 LT	42,375.2557	93,473.4122
71+40.00	29.64 RT	42,385.0237	93,533.4441
75+68.35	30.63 LT	42,813.5648	93,474.8321
75+67.03	0.00	42,812.1666	93,505.4550
75+68.32	29.37 RT	42,813.3704	93,534.8318

DORIS E. HALL AS TRUSTEE UNDER A TRUST AGREEMENT DATED APRIL 16, 2003 KNOWN AS THE DORIS E. HALL REVOCABLE LIVING TRUST BK 1831 PG 320

STATE OF ILLINOIS)
) SS
COUNTY OF SANGAMON)

I, SHAYLA E. PFAFFE, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, STATE THAT I HAVE SURVEYED THE PLAT OF HIGHWAY SHOWN HEREON AND THAT THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY FOR THE PROPOSED PARCEL(S) TO BE ACQUIRED BY THE STATE OF ILLINOIS, DEPARTMENT OF TRANSPORTATION, SHOWN HEREON.

DATED MAY 24TH, 2021

SHAYLA E. PFAFFE, PLS NO. 35-003411
LICENSE EXPIRATION DATE: 11/30/2022

PARCEL NO.	OWNER	TOTAL HOLDING ACRES	FEE SIMPLE ACQUISITION				REMAINDER ACRES	PERMANENT TAX NUMBER AFFECTED	PROPERTY ACQUIRED BY		
			GROSS ACRES	SQ FT	PREVIOUSLY DEDICATED ACRES	NET SQ FT					
8006001	DORIS E. HALL AS TRUSTEE UNDER A TRUST AGREEMENT DATED APRIL 16, 2003 KNOWN AS THE DORIS E. HALL REVOCABLE LIVING TRUST / T.R.#JE-1364	37.296	0.3837	16,713	0.1667	7,219	0.2170	9,494	36.9123	05-027-004-00	
8006002	A LIFE ESTATE IN WILLIAM E. KOENIG, REMAINDER INTEREST IN EDWARD E. KOENIG, TRUSTEE UNDER A SELF DECLARATION OF TRUST DATED JUNE 7, 1984 / T.R.#JE-1365	121.324	0.3178	13,842	0.1580	6,882	0.1598	6,960	121.0059	05-028-006-00	

ILLINOIS DEPARTMENT OF TRANSPORTATION
PLAT OF HIGHWAYS
FAS ROUTE 747/FAU 8813 (IL RTE 109)
SECTION (57,58,59)RS-2
JERSEY COUNTY
JOB NO. R-98-006-20
STATION 69+00.00 TO STATION 71+40.00

50' 0 50' 100'
SCALE: 1" = 1'

ILLINOIS DEPARTMENT OF TRANSPORTATION
OFFICE OF HIGHWAYS PROJECT IMPLEMENTATION/REGION 5/DISTRICT 8
1102 EASTPORT PLAZA DRIVE
COLLINSVILLE, ILLINOIS 62234-6198

F.A.S. RTE. FAU8813	SECTION (57,58,59)RS-2	COUNTY JERSEY	TOTAL SHEETS 60	SHEET NO. 24
COMPLETION DATE OF FIELD WORK PERFORMED			CONTRACT NO. 76L10	
LAND SURVEY: 6	ROW STAKING:	FED. ROAD DIST. NO. ILLINOIS	FED. AID PROJECT	



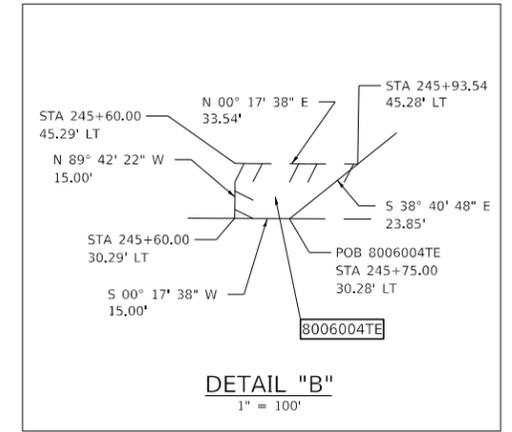
PRELIMINARY

SEE LEGENDS, TOPOGRAPHIC STATEMENT, SURVEYORS NOTE(S) AND BASIS OF COORDINATES & BEARINGS STATEMENT ON SHEET 2

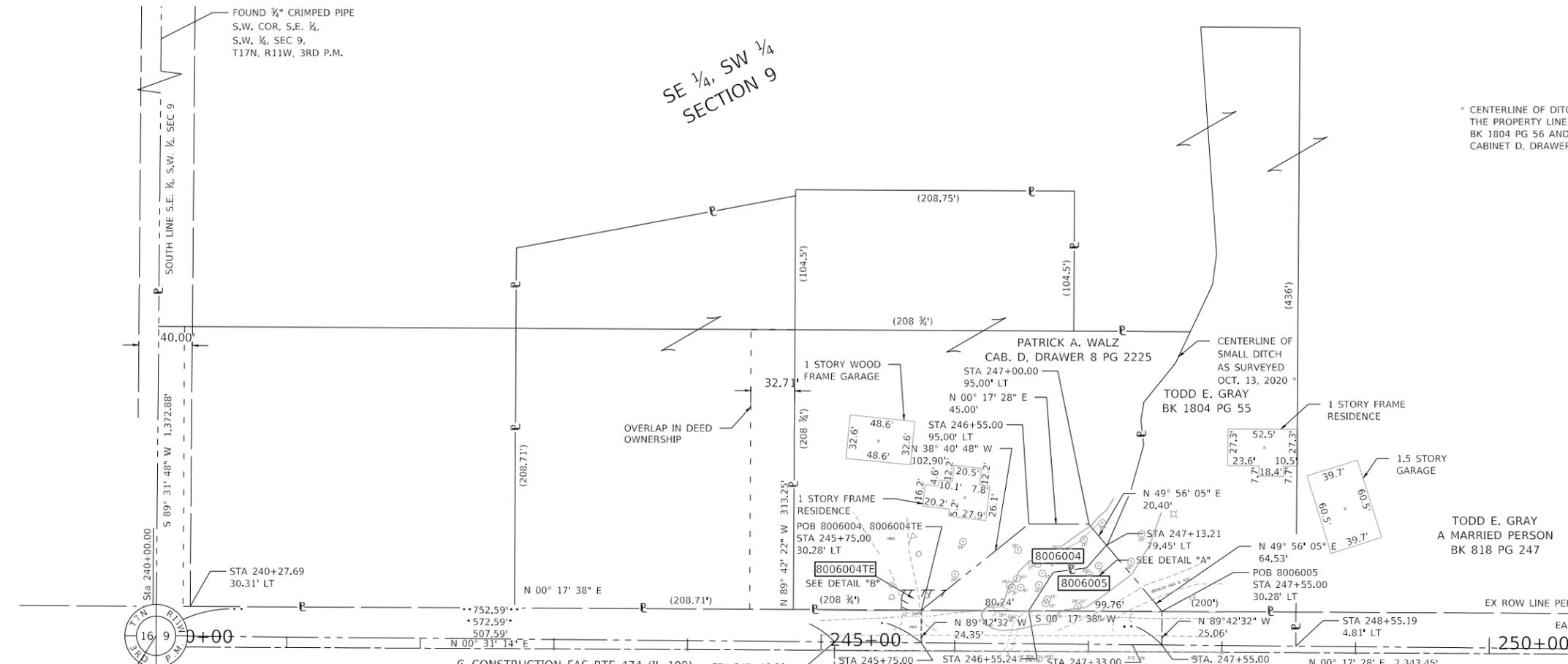
RECEIVED: 05-25-21

SPACE RESERVED FOR RECORDING OFFICER

* CENTERLINE OF DITCH CALLED FOR AS THE PROPERTY LINE PER DOCUMENT BK 1804 PG 56 AND DOCUMENT CABINET D, DRAWER 8, PG 2225



DETAIL "B"
1" = 100'



TODD E. GRAY
A MARRIED PERSON
BK 818 PG 247

SURAKE FAMILY LP
AN ILLINOIS LIMITED
PARTNERSHIP
BK 1317 PG 290

I, SHAYLA E. PFAFFE, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, STATE THAT I HAVE SURVEYED THE PLAT OF HIGHWAY SHOWN HEREON AND THAT THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY FOR THE PROPOSED PARCEL(S) TO BE ACQUIRED BY THE STATE OF ILLINOIS, DEPARTMENT OF TRANSPORTATION, SHOWN HEREON.

DATED MAY 24, 2021

SHAYLA E. PFAFFE, PLS NO. 35-003411
LICENSE EXPIRATION DATE: 11/30/2022

PRELIMINARY



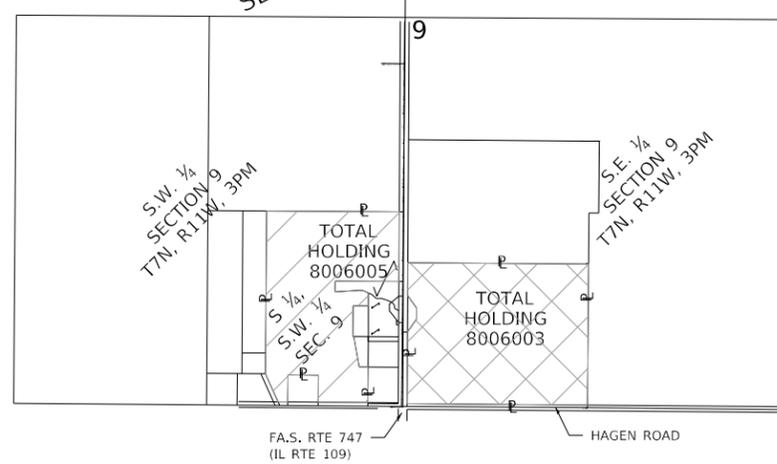
ILLINOIS DEPARTMENT OF TRANSPORTATION
PLAT OF HIGHWAYS
FAS ROUTE 747/FAU 8813 (IL RTE 109)
SECTION (57,58,59)RS-2
JERSEY COUNTY
JOB NO. R-98-006-20
STATION 245+10.00 TO STATION 247+60.00



ILLINOIS DEPARTMENT OF TRANSPORTATION
OFFICE OF HIGHWAYS PROJECT IMPLEMENTATION/REGION 5/DISTRICT 8
1102 EASTPORT PLAZA DRIVE
COLLINGSVILLE, ILLINOIS 62234-6198

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS747/FAU8813	(57,58,59)RS-2	JERSEY	60	25
COMPLETION DATE OF FIELD WORK PERFORMED			CONTRACT NO. 76L10	
LAND SURVEY:	6	ROW STAKING:	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	

COORDINATE TABLE			
STATION	OFFSET	NORTH	EAST
240+00.00	0.00	57,464.2339	90,886.2140
240+02.42	8.23 LT.	57,466.6920	90,877.9990
240+27.69	30.31 LT.	57,492.0733	90,856.0430
240+22.43	29.71 RT.	57,486.5171	90,916.0394
245+10.00	6.19 LT.	57,974.2588	90,882.6103
245+10.00	29.74 RT.	57,974.0762	90,918.5412
245+60.00	30.29 LT.	58,024.3805	90,858.7744
245+60.00	45.29 LT.	58,024.4575	90,843.7746
245+75.00	5.93 LT.	58,039.2566	90,883.2008
246+00.00	90.00 RT.	58,063.7689	90,979.2612
245+75.00	30.28 LT.	58,039.3803	90,858.8513
245+93.54	45.28 LT.	58,057.9978	90,843.9467
246+55.00	95.00 LT.	58,119.7081	90,794.5430
246+55.24	30.28 LT.	58,119.6201	90,859.2631
246+73.45	59.11 LT.	58,137.9790	90,830.5260
246+98.31	62.35 LT.	58,162.8530	90,827.4110
247+00.00	95.00 LT.	58,164.7075	90,794.7716
247+13.21	79.45 LT.	58,177.8399	90,810.3860
246+75.00	90.00 RT.	58,138.7679	90,979.6422
247+22.67	47.34 LT.	58,187.1357	90,842.5468
247+55.00	5.21 LT.	58,219.2506	90,884.8361
247+55.00	30.28 LT.	58,219.3780	90,859.7749
247+60.00	29.75 RT.	58,224.0729	90,919.8239
263+43.45	0.00	59,807.6531	90,898.1200
249+83.77	29.76 RT.	58,447.8391	90,920.9721
N XCOR.	*	62,784.5118	90,926.3122



TOTAL HOLDING SKETCH
SCALE: 1"=800'

PARCEL NO.	OWNER	TOTAL HOLDING ACRES	FEE SIMPLE ACQUISITION		REMAINDER ACRES	EASEMENTS		PERMANENT TAX NUMBER AFFECTED	PROPERTY ACQUIRED BY
			ACRES	SQ FT		PE = PERMANENT ACRES	TE = TEMPORARY SQ FT		
8006003	SURAKE FAMILY LP, AN ILLINOIS LIMITED PARTNERSHIP T.R.#JE-1363	27.813	0.2248	9,792	27.5878			05-009-011-00	ADD DOCUMENT INFORMATION
8006004	PATRICK A. WALZ T.R.#JE-1366	1.5	0.1063	4,629	1.3937	TE 0.0084	TE 364	05-109-004-00	
8006005	TODD E. GRAY, A MARRIED PERSON T.R.#JE-1367	21.76	0.0609	2,652	21.6991			05-009-009-00	

SECTION CORNER AND CENTERLINE TIE SHEET

<p>S 1/4 COR SEC 28, T.7N., R.11W. 05/18/2021 MONUMENT RECORD DOC. NO. 202100164229 N=41,558,4846, E=90,847,6100</p>	<p>S.E. COR SEC 28, T.7N., R.11W. 05/18/2021 MONUMENT RECORD DOC. NO. 202100164229 N=41,540,1901, E=93,500,7701</p>	<p>N.E. COR, S.E. 1/4 SEC 28, T.7N., R.11W. 11/2003 MONUMENT RECORD BK 1693 PG 63 N=44,192,1305, E=93,508,8471</p>	<p>S.W. COR, S.E. 1/4 SEC 27, T.7N., R.11W. 11/2003 MONUMENT RECORD BK 1693 PG 59 N=41,523,8920, E=96,154,5860</p>		
<p>S.W. COR S.E. 1/4 S.W. 1/4 SEC 9, T.7N., R.11W. 01/31/2011 BK 1693 PG 56 N=57,477,7260, E=89,543,1060</p>	<p>S.E. COR 1/4 SEC 9, T.7N., R.11W. 01/31/2011 BK 1693 PG 53 N=57,445,0250, E=93,547,4630</p>	<p>S.E. COR S.W. 1/4 SEC 9, T.7N., R.11W. 10/26/2017 BK 2081 PG 328 N=57,466,6920, E=90,877,9990</p>	<p>N.W. COR N.E. 1/4 SEC 9, T.7N., R.11W. 11/30/2012 BK 1693 PG 53 N=62,784,5118, E=90,926,3122</p>		
<p>POT #400 STA 62+55.86 N=41,501,0049, E=93,500,3844</p>	<p>PC CURVE C2 STA 75+67.03 N=42,812,1666, E=93,505,4550</p>	<p>POT #102 STA 240+00.00 N=57,464,2339, E=90,886,2140</p>	<p>POT #101 STA 263+43.34 N=59,807,6531, E=90,898,1200</p>		



RECEIVED: 05-25-21

SPACE RESERVED FOR RECORDING OFFICER

NOTE: STATE AND COUNTY WHERE PLATS WERE SIGNED AND SEALED SHOULD FILLED IN BELOW

PRELIMINARY



Veenstra & Kimm, Inc.
2417 West White Oaks Dr.
Springfield, IL 62704
217-544-8033

STATE OF ILLINOIS)
) SS
COUNTY OF SANGAMON)

I, SHAYLA E. PFAFFE, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, STATE THAT I HAVE SURVEYED THE PLAT OF HIGHWAY SHOWN HEREON AND THAT THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY FOR THE PROPOSED PARCEL(S) TO BE ACQUIRED BY THE STATE OF ILLINOIS, DEPARTMENT OF TRANSPORTATION, SHOWN HEREON.

DATED MAY 24TH, 2021

SHAYLA E. PFAFFE, PLS NO. 35-003411
LICENSE EXPIRATION DATE: 11/30/2022

ILLINOIS DEPARTMENT OF TRANSPORTATION
PLAT OF HIGHWAYS
FAS 747/FAU8813 (IL ROUTE 109)
SECTION (57,58,59)RS-2
JERSEY COUNTY
JOB NO. R-98-006-20
STATION 00+00 TO STATION 00+00

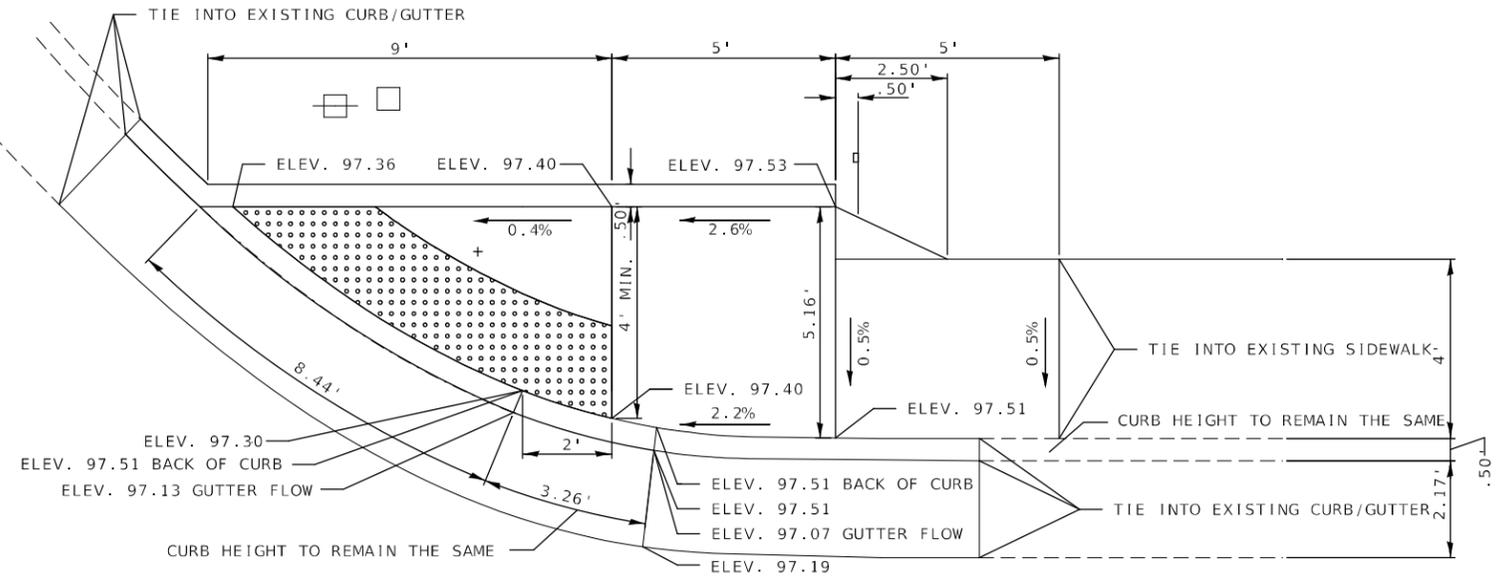
NOT TO SCALE SHEET 5 OF 5

ILLINOIS DEPARTMENT OF TRANSPORTATION
OFFICE OF HIGHWAYS PROJECT IMPLEMENTATION/REGION 5/DISTRICT 8
1102 EASTPORT PLAZA DRIVE
COLLINSVILLE, ILLINOIS 62234-6198

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS747/FAU8813	(57,58,59)RS-2	JERSEY	60	26
COMPLETION DATE OF FIELD WORK PERFORMED			CONTRACT NO. 76L10	
LAND SURVEY:	ROW STAKING:	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		

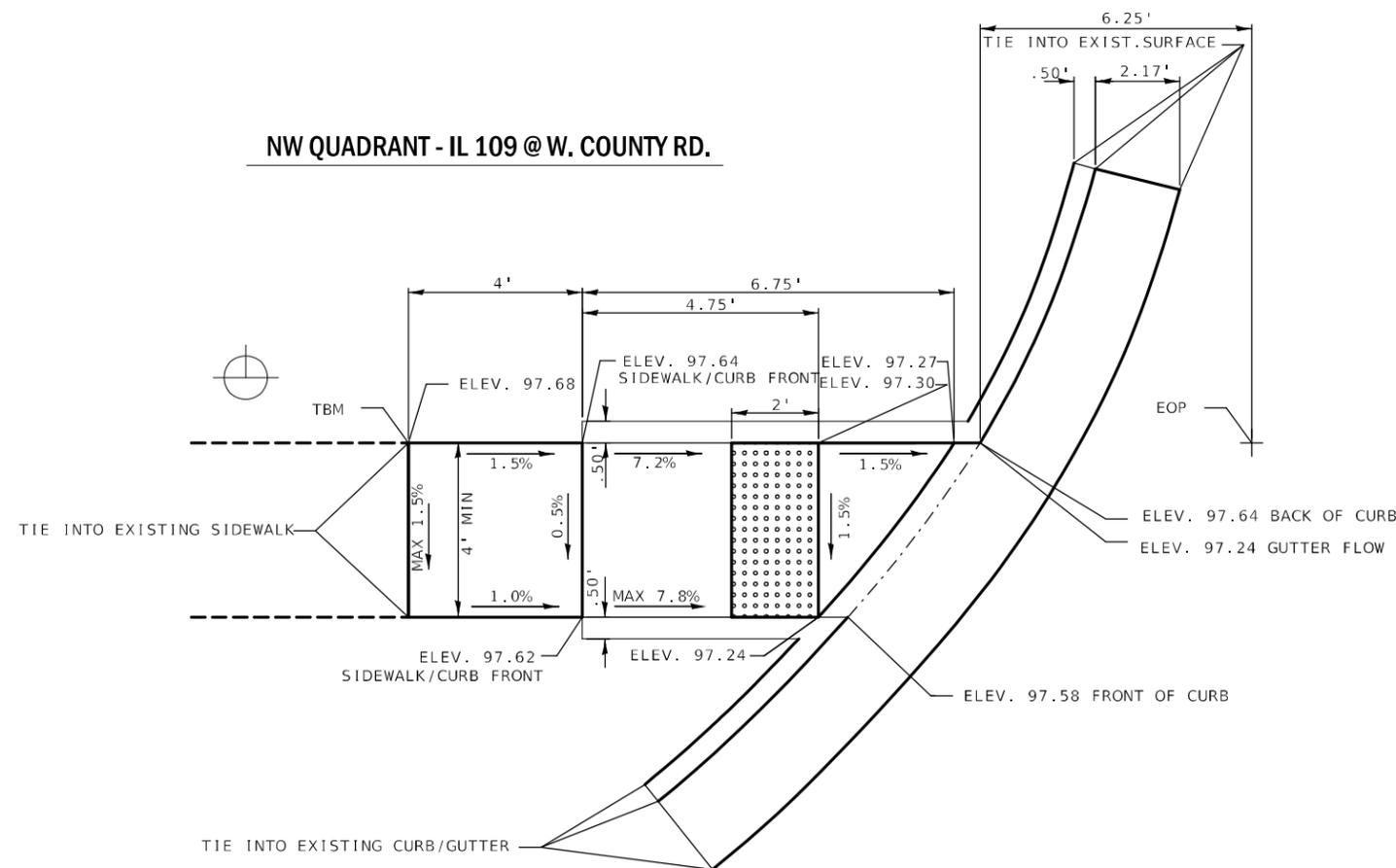


NE QUADRANT - IL 109 @ W. COUNTY RD.



NOTE: ALL AREAS DISTURBED FOR ANY REASON SHALL BE PERMANENTLY SEEDED AND MULCHED AS DIRECTED BY THE ENGINEER.

NW QUADRANT - IL 109 @ W. COUNTY RD.



NOTE: ALL DIMENSIONS AND ELEVATIONS IN FT.

MODEL: I:\MODELS\141815\141815.dwg
 FILE: 141815.dwg
 PROJECT: I:\PROJECTS\141815\141815.dwg
 USER: murrayda
 DATE: 7/29/2021

USER NAME = murrayda	DESIGNED - _____	REVISED - _____
DRAWN - _____	REVISIONS - _____	REVISIONS - _____
PLOT SCALE = 2.0006" / in.	CHECKED - _____	REVISIONS - _____
PLOT DATE = 7/29/2021	DATE - _____	REVISIONS - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ADA DETAILS

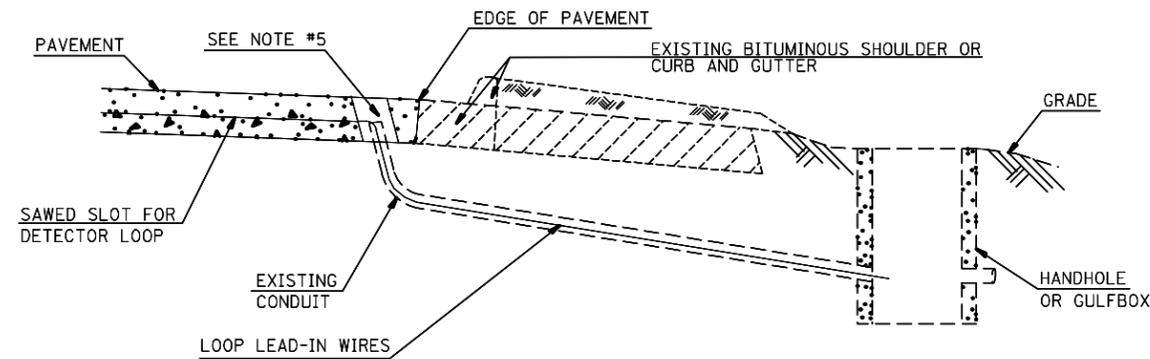
SCALE: _____ SHEET 1 OF 1 SHEETS STA. _____ TO STA. _____

F.A.S. F.A.U. 747 8813	SECTION (57.58,59) RS-2	COUNTY JERSEY	TOTAL SHEETS 60	SHEET NO. 27
CONTRACT NO. 76L10				ILLINOIS FED. AID PROJECT

NOTES:

SEE TABLE "DETECTOR LOOP REQUIREMENTS AND CALCULATIONS" FOR LOOP SIZE AND CALCULATED NUMBER OF TURNS.
SEE "DETAIL A" FOR INSTALLING DETECTOR LOOP WIRES IN EXISTING CONDUITS.

SCHEDULE OF QUANTITIES			TOTAL QUANTITIES	IL 109 & US 67
CODE NO	ITEM	UNIT		
88600600	DETECTOR LOOP REPLACEMENT	FOOT	662	662



DETAIL A
(NO SCALE)

INSTALLING DETECTOR LOOP WIRES IN EXISTING CONDUIT

1. DRILL OUT PAVEMENT SEALANT AND CLEAN EXISTING CONDUIT.
2. REMOVE EXISTING DETECTOR LOOP WIRES TO HANDHOLE OR GULFBOX.
3. INSTALL NEW LOOP LEAD-IN WIRES IN EXISTING CONDUIT.
4. SPLICE NEW DETECTOR LOOP WIRES TO EXISTING LOOP LEAD-IN CABLE IN HANDHOLE OR GULFBOX.
5. FILL HOLE WITH APPROVED SEALER. PREVENT SEALER FROM ENTERING INTO CONDUIT.

NOT A PAY ITEM. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "DETECTOR LOOP REPLACEMENT"

DETECTOR LOOP REPLACEMENT LEGEND

- ☐ EX. HANDHOLE
- ⋯ EX. DETECTOR LOOP
- ⊠ EX. TRAFFIC SIGNAL CONTROLLER
- EXISTING CONDUIT
- ▭ PROPOSED DETECTOR LOOP

MODEL: \$MODEL\$NAME\$ FILE: \$NAME\$. \$FILETYPE\$ PROJECT: \$PROJECT\$ DRAWN: \$DRAWN\$ DATE: \$DATE\$

USER NAME = murrayda	DESIGNED - _____	REVISED - _____
DRAWN - _____	REVISIONS - _____	REVISIONS - _____
PLOT SCALE = 2,0017' / in.	CHECKED - _____	REVISIONS - _____
PLOT DATE = 7/29/2021	DATE - _____	REVISIONS - _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DETECTOR LOOP REPLACEMENT
GENERAL NOTES, SCHEDULE OF QUANTITIES,
DETAIL AND LEGEND**

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	(57,58,59)RS-2	JERSEY	60	28
*FAS-747/FAU 8813			CONTRACT NO. 76L10	
ILLINOIS FED. AID PROJECT				

TREE REMOVAL SCHEDULE				
LOCATION				TREE REMOVAL, ACRES
STATION	TO	STATION	SIDE	ACRE
69+44	TO	71+13	RT	0.15
69+48	TO	71+12	LT	0.13
245+41	TO	247+26	RT	0.17
245+74	TO	247+49	LT	0.15
SUBTOTAL				0.60
TOTAL				0.75

EARTHWORK SCHEDULE								
CULVERT NORTH OF DOW ROAD								
LOCATION			EARTH EXCAVATION	SHRINKAGE	EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT	WASTE (+) OR SHORTAGE (-)	CHANNEL EXCAVATION
STATION	TO	STATION	CU YD		CU YD	CU YD	CU YD	CU YD
69+55.00	TO	70+00.00	126.79	25%	95.09	213.60	-118.50	
70+18.20	TO	70+29.36				22.10	-22.10	149.06
70+40.00	TO	71+00.00	96.88	25%	72.66	136.14	-63.48	
SUBTOTAL			223.68		167.76	371.84	-204.08	149.06
ROUNDED							-210.00	
EARTH EXCAVATION							230	
CHANNEL EXCAVATION								150
FURNISHED EXCAVATION							210	
CULVERT NORTH OF HAGEN ROAD								
LOCATION			EARTH EXCAVATION	SHRINKAGE	EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT	WASTE (+) OR SHORTAGE (-)	CHANNEL EXCAVATION
STATION	TO	STATION	CU YD		CU YD	CU YD	CU YD	CU YD
245+60.00	TO	246+40.00	296.71	25%	222.53	108.65	113.88	
246+41.09	TO	246+51.84				26.92	-26.92	14.13
246+60.00	TO	247+20.00	305.49	25%	229.12	118.14	110.98	
SUBTOTAL			602.20		451.65	253.71	197.94	
ROUNDED							200.00	
EARTH EXCAVATION							610	
CHANNEL EXCAVATION								20
TOTAL EARTH EXCAVATION							840	
TOTAL CHANNEL EXCAVATION								170
TOTAL FURNISHED EXCAVATION							210	

EROSION CONTROL SCHEDULE					
LOCATION				EROSION CONTROL BLANKET	* TEMPORARY EROSION CONTROL SEEDING
STATION	TO	STATION	SIDE	SQ YD	POUND
69+50	TO	69+80	RT	33	1
69+50	TO	71+00	LT	209	5
69+50	TO	71+00	RT	259	6
69+60	TO	70+30	LT	85	2
70+31	TO	71+01	RT	50	2
70+31	TO	71+00	LT	28	1
245+59	TO	246+22	RT	174	4
245+87	TO	245+97	LT	13	1
245+87	TO	246+55	LT	60	2
246+33	TO	247+05	RT	225	5
246+80	TO	247+17	LT	34	1
SUBTOTAL				1,170	30
TOTAL				1,170	30

* SEEDING TO BE PLACED IN THREE (3) APPLICATIONS.

SEEDING SCHEDULE								
LOCATION				SEEDING, CLASS 2	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	MULCH, METHOD 2
STATION	TO	STATION	SIDE	ACRE	POUND	POUND	POUND	ACRE
69+44	TO	71+13	RT	0.15	14	14	14	0.15
69+48	TO	71+12	LT	0.13	12	12	12	0.13
245+41	TO	247+26	RT	0.17	16	16	16	0.17
245+74	TO	247+49	LT	0.15	14	14	14	0.15
SUBTOTAL				0.60	56	56	56	0.60
TOTAL				0.75	56	56	56	0.75

TEMPORARY DITCH CHECK SCHEDULE

LOCATION		TEMPORARY DITCH CHECKS
STATION	SIDE	FOOT
NORTH OF DOW ROAD		
69+63	LT	18
69+85	LT	18
70+07	LT	18
70+34	LT	18
70+47	LT	18
70+60	LT	17
70+73	LT	17
70+03	RT	15
70+43	RT	15
70+58	RT	15
70+73	RT	15
SUBTOTAL		184
NORTH OF HAGEN ROAD		
245+60	RT	24
245+77	RT	24
245+94	RT	27
246+11	RT	29
246+40	RT	46
246+55	RT	36
SUBTOTAL		186
TOTAL		370

* FAS ROUTE 747, FAU ROUTE 8813 (IL ROUTE 109)

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PLOT DATE = 7/30/2021	CHECKED -	REVISED -
	DATE -	REVISED -

DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULES	
IL ROUTE 109 CULVERT REPLACEMENTS	
SCALE:	SHEET 1 OF 2 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	(57,58,59) RS-2	JERSEY	60	34
CONTRACT NO. 76L10				
ILLINOIS FED. AID PROJECT				

ENTRANCE SCHEDULE				
LOCATION		AGGREGATE BASE COURSE, TYPE B 6"	AGGREGATE SURFACE COURSE, TYPE B	INCIDENTAL HOT-MIX ASPHALT SURFACING
STATION	SIDE	SQ YD	TON	TON
247+10	LT	16	11	3
SUBTOTAL		16	11	3
TOTAL		16	11	3

PAVEMENT SCHEDULE										
LOCATION				TRENCH BACKFILL	PAVED SHOULDER REMOVAL	PAVEMENT PATCHING, TYPE IV, 18 INCH	BITUMINOUS MATERIALS (PRIME COAT)	HOT-MIX ASPHALT SHOULDERS, 8"	BITUMINOUS MATERIALS (TACK COAT)	AGGREGATE WEDGE SHOULDER, TYPE B
STATION	TO	STATION	SIDE	CU YD	SQ YD	SQ YD	POUND	SQ YD	POUND	TON
70+08	TO	70+40		39		85	112			
70+08	TO	70+40	LT		11			11	8	1
70+08	TO	70+40	RT		11			11	8	1
246+25	TO	246+65		10		107	108			
246+25	TO	246+65	LT		14			14	9	2
246+25	TO	246+65	RT		14			14	9	2
SUBTOTAL				49	50	192	220	50	34	6
TOTAL				49	50	192	220	50	34	6

(1) PLACE BETWEEN LIFTS AT A RATE OF 0.025 POUNDS PER SQUARE FOOT. 3 LIFTS REQUIRED.

(1)

DRAINAGE SCHEDULE						
LOCATION				PIPE CULVERT REMOVAL	END SECTIONS 15"	PIPE CULVERTS, CLASS D, TYPE 1 15"
STATION	TO	STATION	SIDE	FOOT	EACH	FOOT
245+97.08			LT		1	
245+97.08	TO	246+54.48	LT			58
246+29.69	TO	246+49.21	LT	20		
246+54.20	TO	247+31.46	LT	78		
246+59.15	TO	247+31.46	LT			73
247+31.46			LT		1	
SUBTOTAL				98	2	131
TOTAL				98	2	131

TRAFFIC CONTROL SCHEDULE					
LOCATION		DELINEATORS	CHANGEABLE MESSAGE SIGN	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	DETOUR SIGNING
STATION	SIDE	EACH	CAL DA	L SUM	L SUM
70+20.00	RT	1			
70+27.00	LT	1			
246+29.80	RT	1			
246+66.25	LT	1			
TOTAL		4	56	1	1

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* FAS ROUTE 747, FAU ROUTE 8813 (IL ROUTE 109)



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PLOT DATE = 7/30/2021	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SCHEDULES
IL ROUTE 109 CULVERT REPLACEMENTS**

SCALE: SHEET 2 OF 2 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	(57,58,59) RS-2	JERSEY	60	35
CONTRACT NO. 76L10				
ILLINOIS FED. AID PROJECT				

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	PLOTTED	BY
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	CADD FILE NAME	

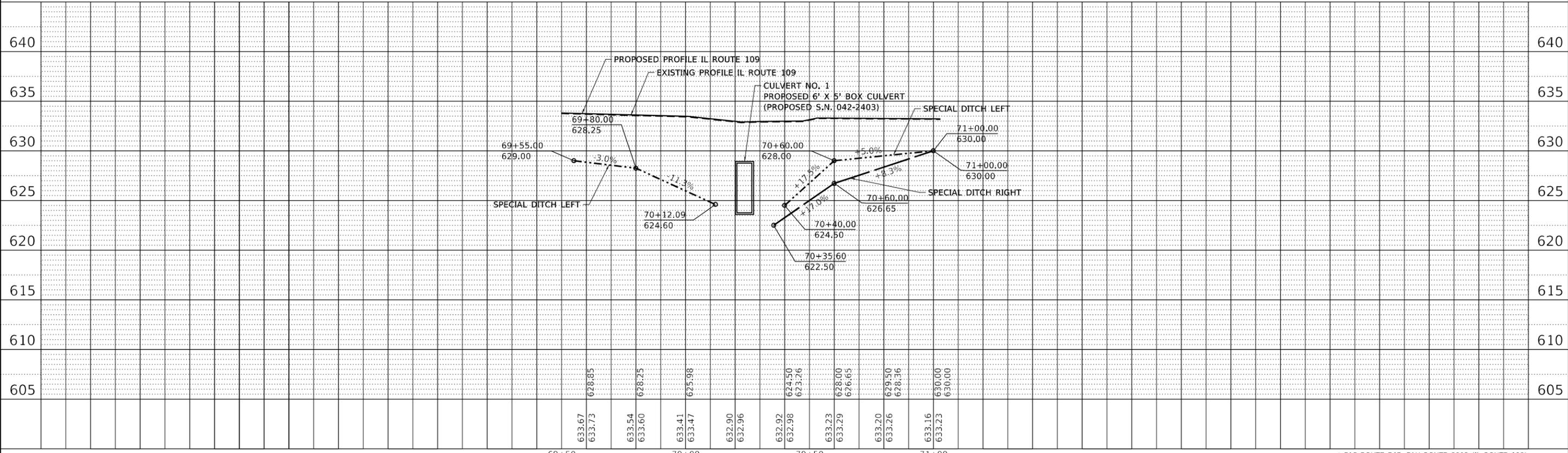
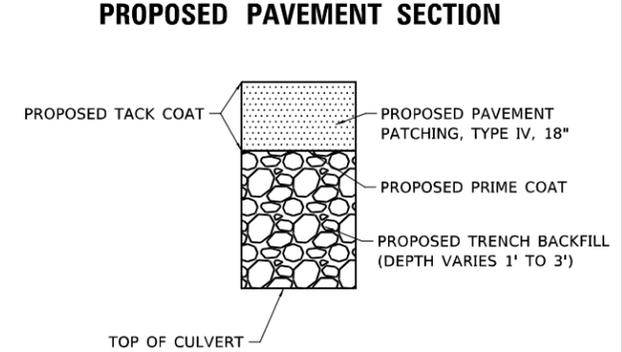
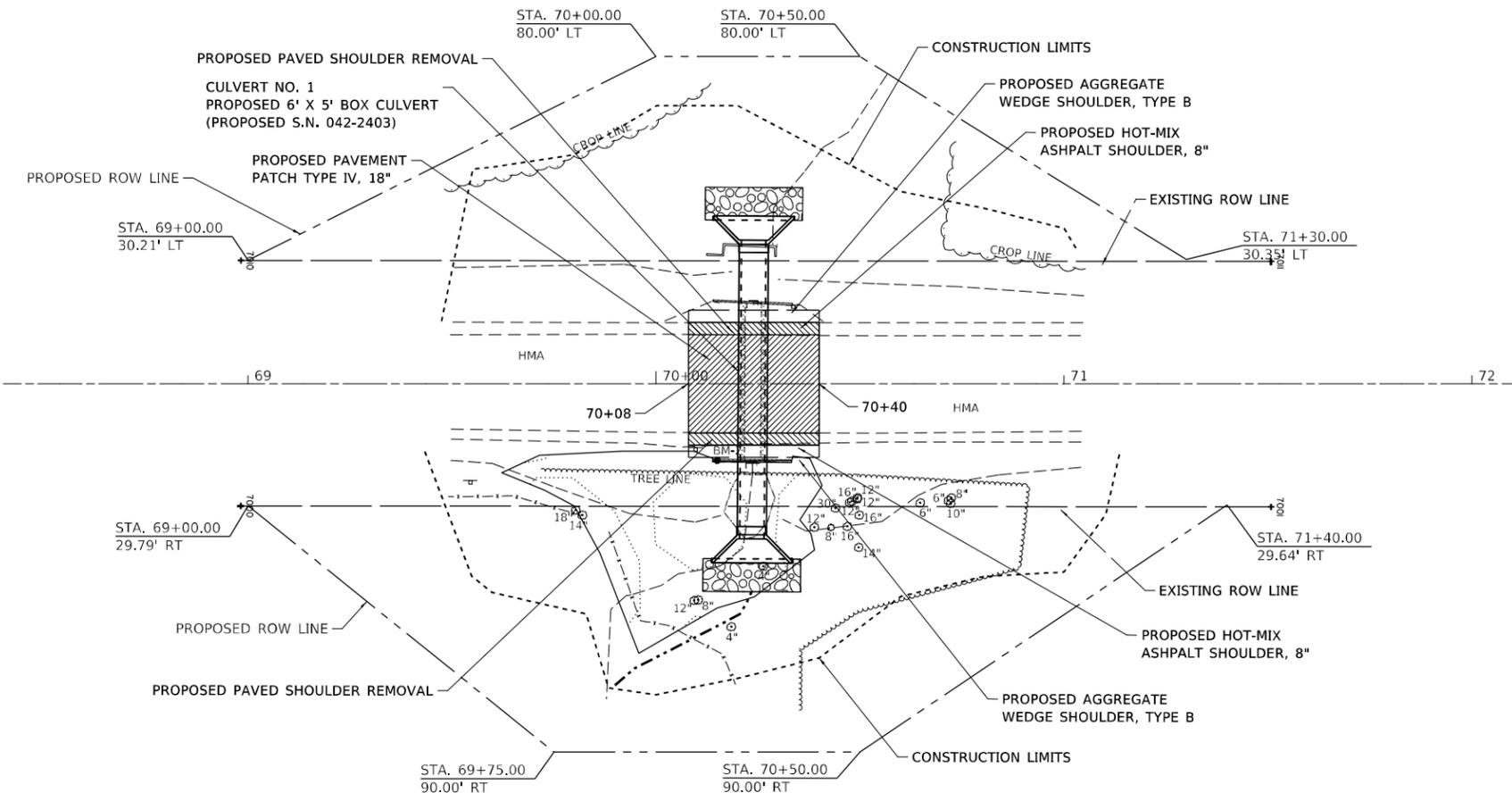


David Holloway

DAVID R. HOLLOWAY, P.E.
LICENSED PROFESSIONAL ENGINEER
ILLINOIS NO. 062-064771
EXPIRES: 11-30-2021

PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	NOTE BOOK NO.	
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	DATE -	REVISD -

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DRAWN -	REVISD -
CHECKED -	REVISD -
DATE -	REVISD -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH OF DOW ROAD - PLAN & PROFILE SHEET
IL ROUTE 109 CULVERT REPLACEMENT
 SCALE: 1"=20' SHEET 1 OF 2 SHEETS STA. TO STA.

* FAS ROUTE 747, FAU ROUTE 8813 (IL ROUTE 109)			
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS
-	(57,58,59) RS-2	JERSEY	60
			SHEET NO. 36
CONTRACT NO. 76L10			
ILLINOIS		FED. AID PROJECT	

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	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOTATION	
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PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOTATION	
	NO.	

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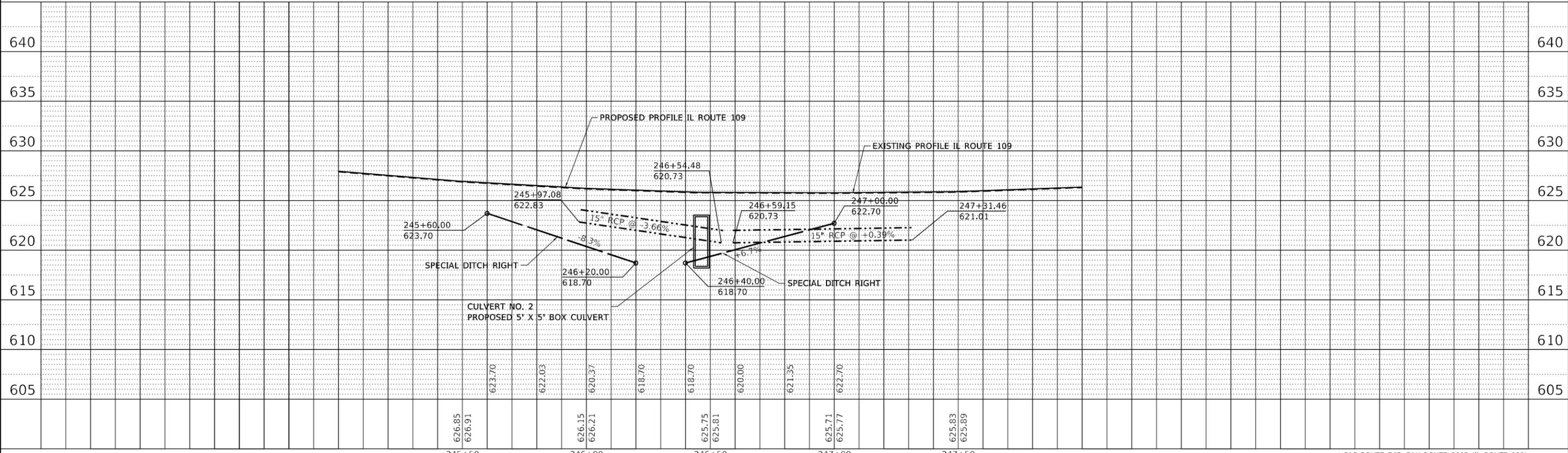
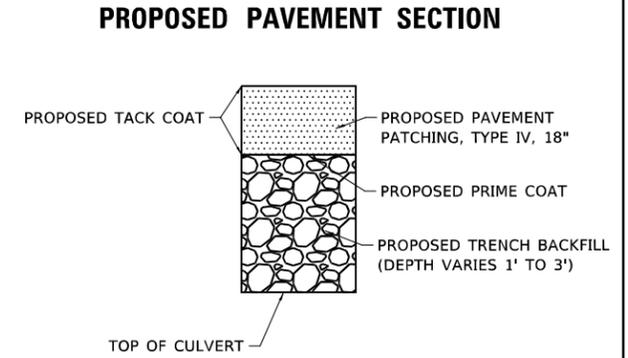
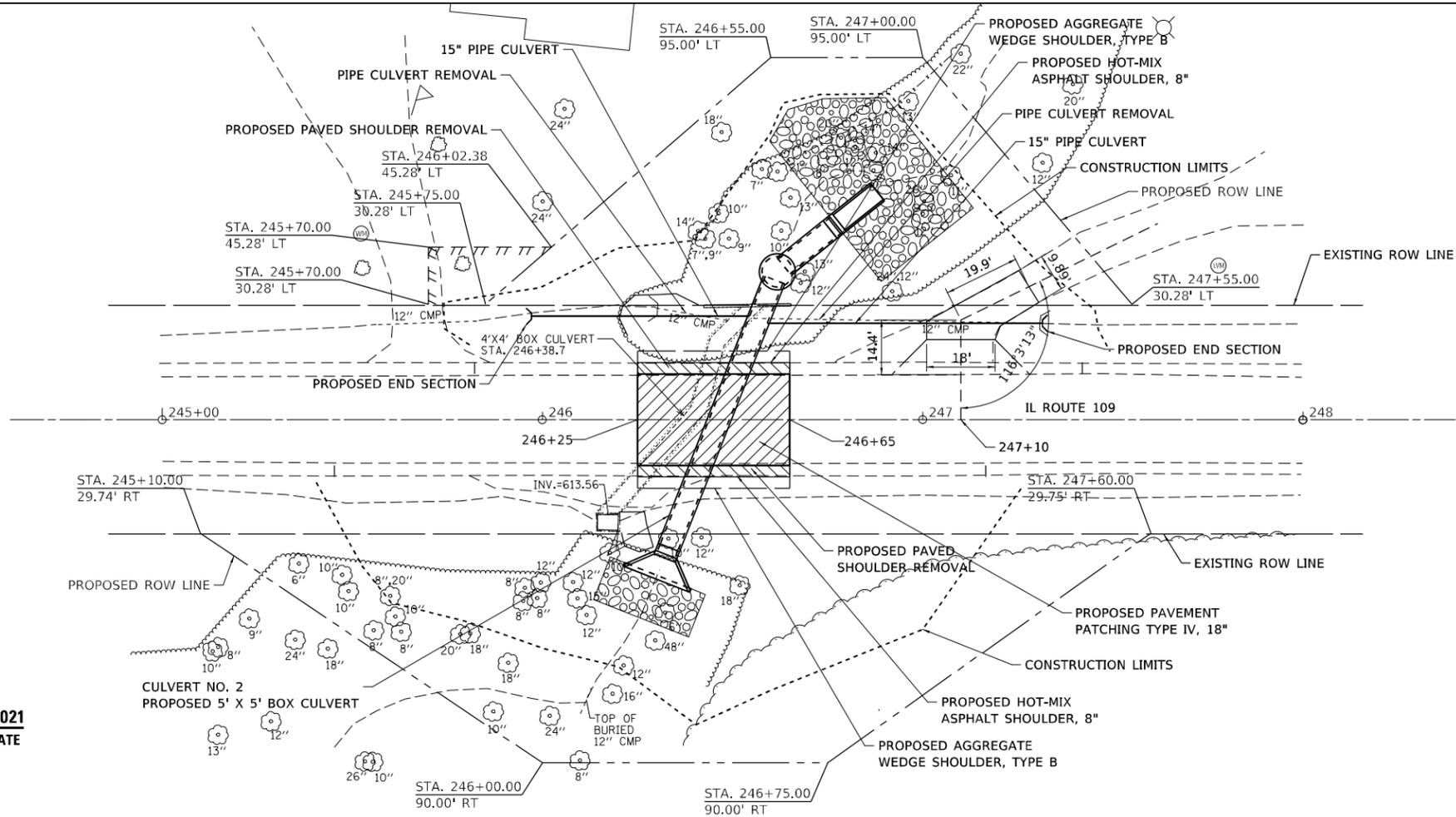


David Holloway

DAVID R. HOLLOWAY, P.E.
LICENSED PROFESSIONAL ENGINEER
ILLINOIS NO. 062-064771
EXPIRES: 11-30-2021

7/19/2021

DATE



VOLKERT USER NAME = default PLOT SCALE = 40.0000' / in. PLOT DATE = 7/30/2021	DESIGNED - DRAWN - CHECKED - DATE -	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	NORTH OF HAGEN ROAD - PLAN & PROFILE SHEET IL ROUTE 109 CULVERT REPLACEMENT	F.A. RTE. - SECTION (57,58,59) RS-2 COUNTY JERSEY CONTRACT NO. 76L10	TOTAL SHEETS 60 SHEET NO. 37
	SCALE: 1"=20' SHEET 2 OF 2 SHEETS STA. TO STA.	* FAS ROUTE 747, FAU ROUTE 8813 (IL ROUTE 109) ILLINOIS FED. AID PROJECT				

Benchmark: BM-1, Cut "□" in top of east headwall, 1'± north of south end of box culvert, Elev. 629.82.

Existing Structure: The existing 4'-0" x 5'-0" reinforced concrete box culvert was built at an unknown date. Existing structure is a single cell box culvert with a 5'-0" overall width and a 6'-0" overall height that is 38'-11 3/8" long out to out of headwalls. The existing culvert will be removed and replaced. Roadway will be closed and traffic detoured during construction. No Salvage.

INDEX OF SHEETS

1. General Plan and Elevation
2. General Data
- 3.-4. Precast Apron End Section Details
5. Soil Boring Logs



Vincent P. Tabor 7/16/2021

Vincent P. Tabor
 Licensed Structural Engineer
 State of Illinois No. 081-007047
 Expires 11/30/2022

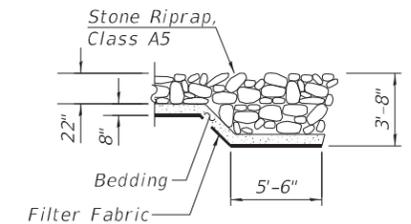
DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th Edition

LOADING HL-93

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

*2'-0" width of P.G.E. to be installed full length of proposed culvert, to 3'-0" from the end of the proposed wingwalls. Adjacent to culvert, vertical limits are from bottom of bottom slab to top of top slab. Along wingwalls, vertical limits are from bottom of culvert bottom slab to 1'-0" below top of wingwall. P.G.E. shall be capped with a 12" thick layer of impervious material. Cost of impervious material shall be included in the cost of Porous Granular Embankment.



SECTION A-A

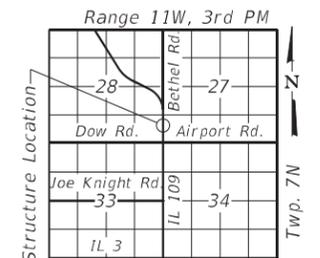
DESIGN STRESSES

PRECAST UNITS (New Construction)

$f'_c = 5,000$ psi
 $f_y = 65,000$ psi (Welded Wire Reinforcement)

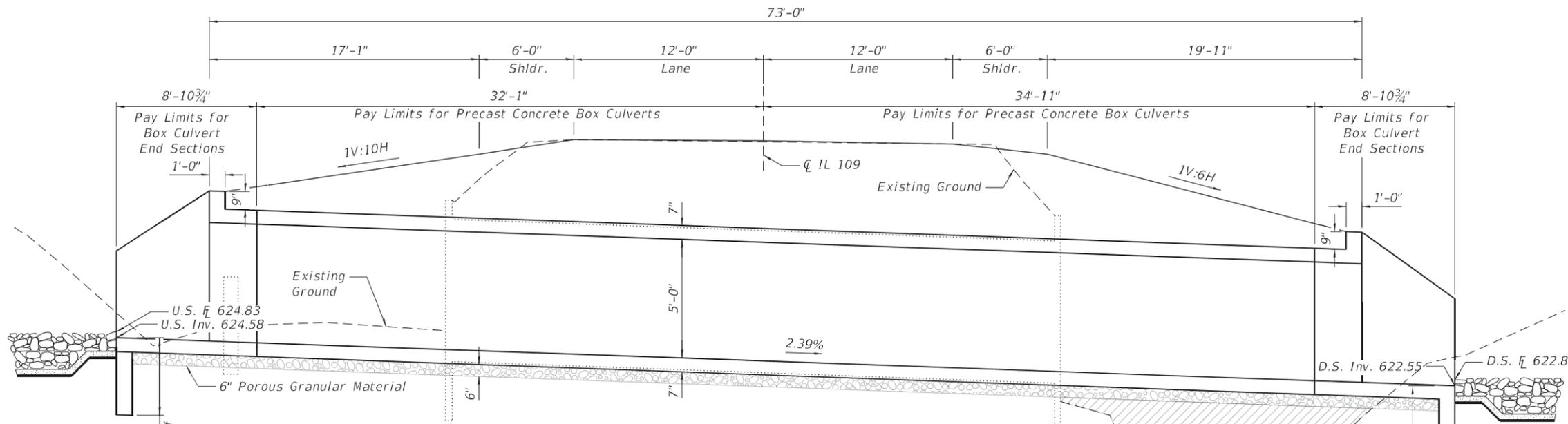
FIELD UNITS (New Construction)

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



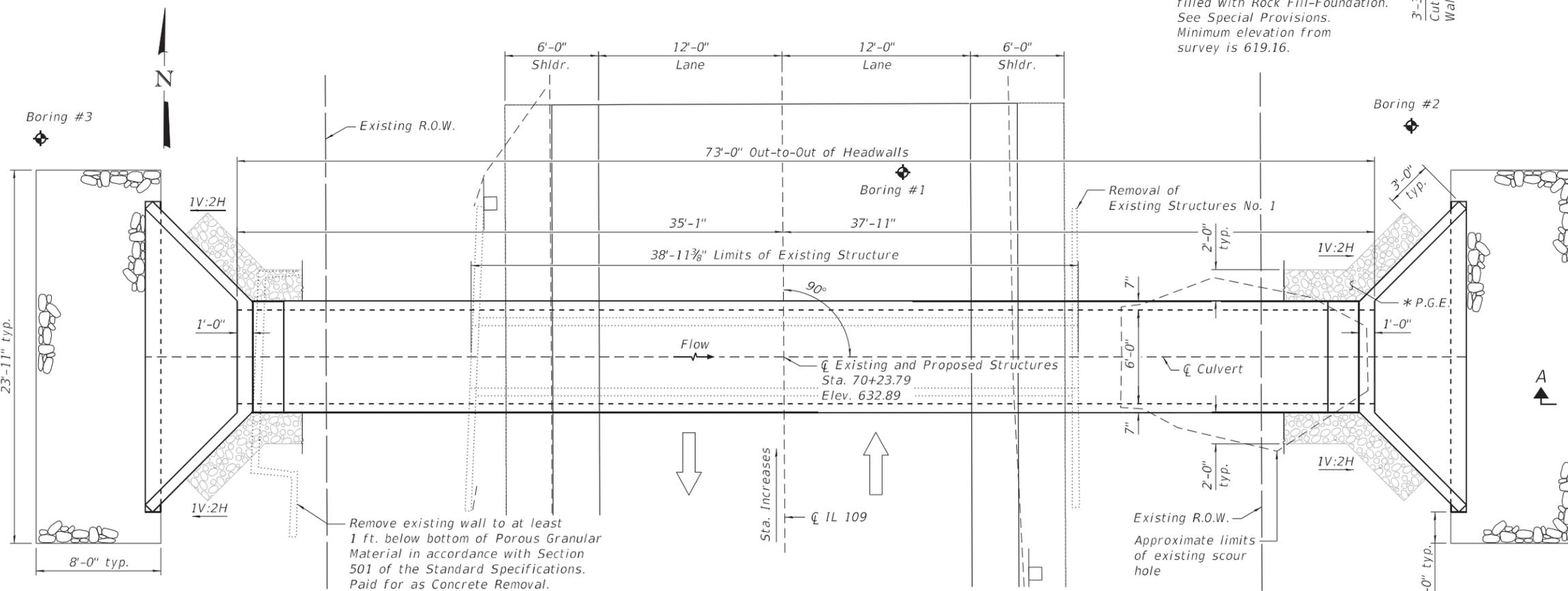
LOCATION SKETCH

GENERAL PLAN AND ELEVATION
IL 109 OVER UNNAMED DITCH
F.A.S. RTE. 747 SEC. (57,58,59) RS-2
JERSEY COUNTY
STATION 70+23.79
S.N. 042-2403



LONGITUDINAL SECTION

Existing scour hole to be filled with Rock Fill-Foundation. See Special Provisions. Minimum elevation from survey is 619.16.



PLAN

Remove existing wall to at least 1 ft. below bottom of Porous Granular Material in accordance with Section 501 of the Standard Specifications. Paid for as Concrete Removal.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

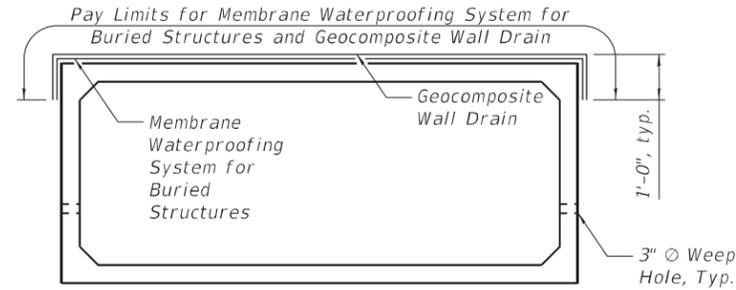
GENERAL PLAN AND ELEVATION
STATION 70 + 23.79
STRUCTURE NO. 042-2403
 SHEET 1 OF 5 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
747	(57,58,59) RS-2	JERSEY	60	38
CONTRACT NO. 76L10				

ILLINOIS FED. AID PROJECT

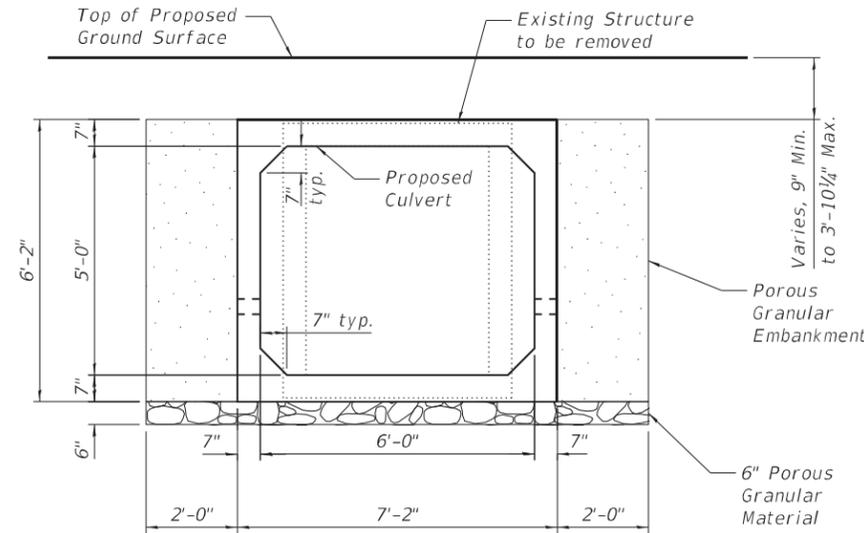
TOTAL BILL OF MATERIAL

ITEM NO.	ITEM	UNIT	TOTAL
20700220	Porous Granular Embankment	Cu. Yd.	73
28100109	Stone Riprap, Class A5	Sq. Yd.	47
28200200	Filter Fabric	Sq. Yd.	47
50100800	Removal of Existing Structures No. 1	Each	1
50102400	Concrete Removal	Cu. Yd.	3
54001001	Box Culvert End Sections, Culvert No. 1	Each	2
54010605	Precast Concrete Box Culverts 6'x5'	Foot	67.0
59100100	Geocomposite Wall Drain	Sq. Yd.	73
Y0900064	Membrane Waterproofing System for Buried Structures	Sq. Yd.	73
Z005451X	Rock Fill - Foundation	Ton	20

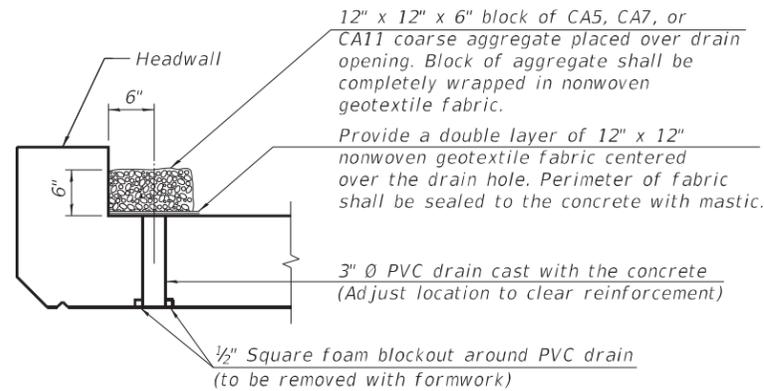


LIMITS OF MEMBRANE WATERPROOFING

Longitudinal limits of membrane waterproofing for the precast concrete culvert are along the full length between the headwalls.



SECTION THROUGH PRECAST BOX CULVERT



DRAIN DETAIL

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)

GENERAL NOTES

The precast box culvert sections shall conform to the requirements of ASTM C 1577.

Drain holes shall be provided on exterior culvert walls for each precast box segment with a clear rise greater than 3 ft. The drain hole shall be located within 1/3 of the clear rise of the box culvert, shall not intercept the haunch, and shall conform to the requirements of Article 503.11 of the Standard Specifications.

The 6 in. thick layer of porous granular material required for the precast concrete box culvert per Art. 540.06 of the Standard Specifications shall also apply to the end sections. Cost of the porous granular material will not be paid for separately but shall be included in the unit price of the work for which it is required.

Nonwoven geotextile fabric shall conform to the requirements of Art. 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard, unless noted otherwise.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

See Special Provisions and Roadway and Maintenance of Traffic plans for time restrictions relative to installation of the structure.

PRECAST BOX CULVERT SCHEDULE (ASTM C1577)

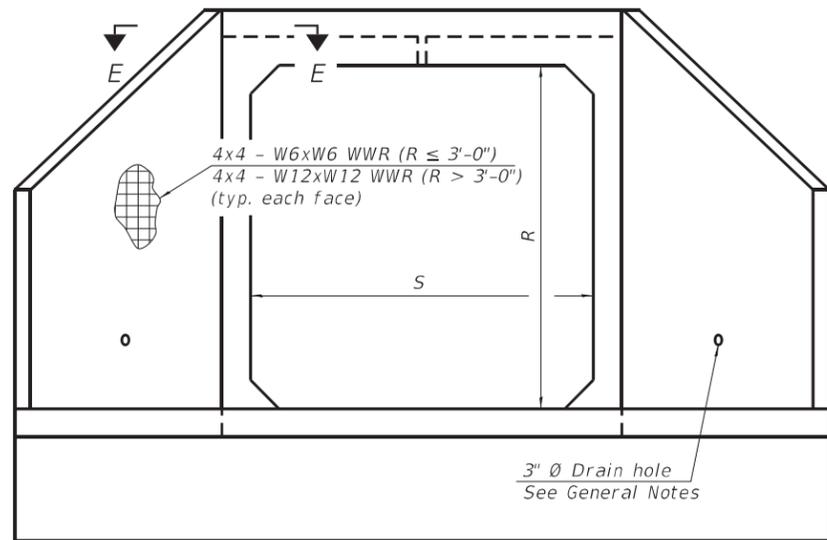
Station	Size (Span x Height)	Skew	Design Fill	
			Min.	Max.
70+23.79	6'-0" x 5'-0"	0°	2'-8 1/2"	3'-10 1/4"

The Design Fill heights shown in the culvert schedule are located between the outside edges of the paved shoulders.

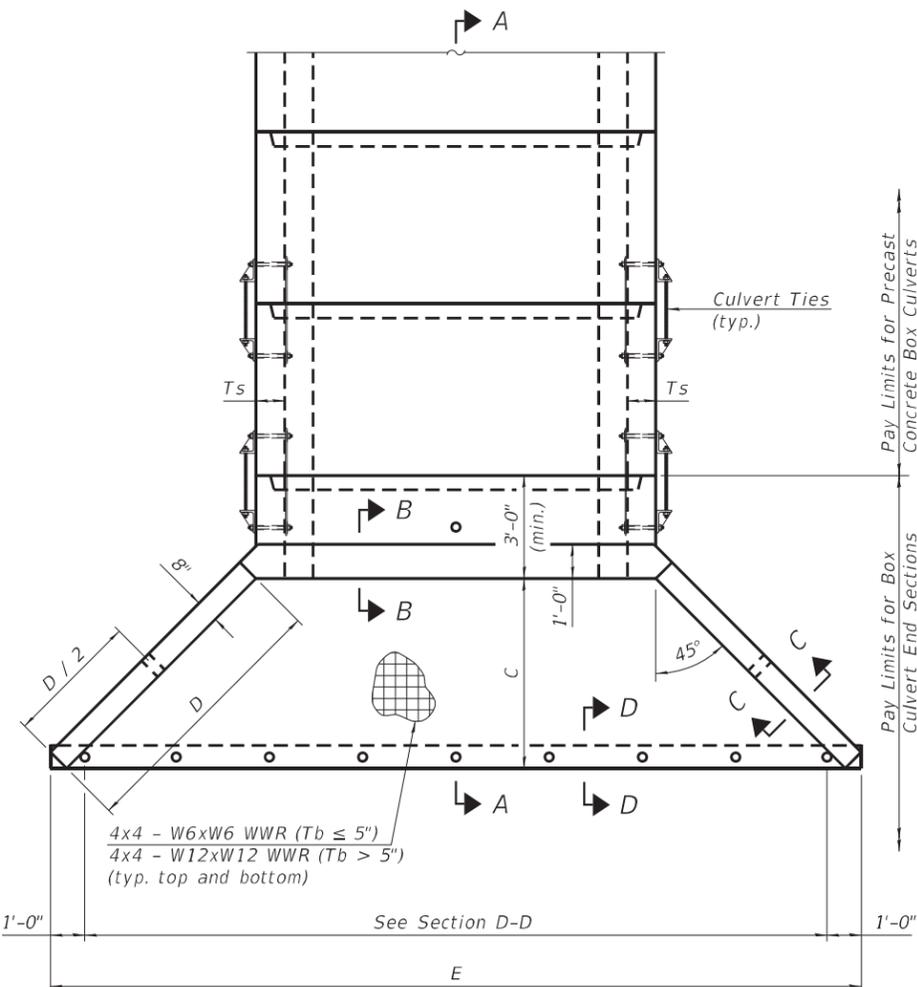
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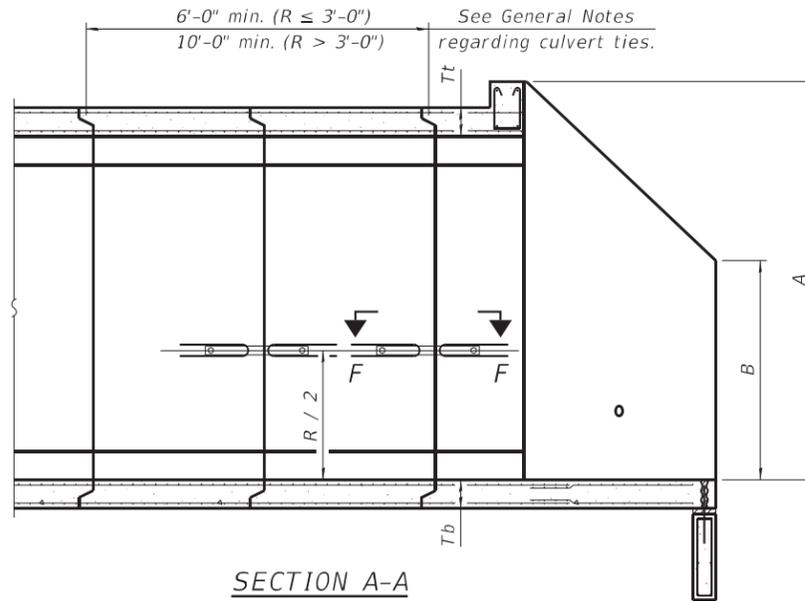
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
747	(57,58,59) RS-2	JERSEY	60	39
CONTRACT NO. 76L10				
ILLINOIS FED. AID PROJECT				



END VIEW



PLAN



SECTION A-A

GENERAL NOTES

Box Culvert End Sections shall be constructed according to the requirements of Section 540 of the Standard Specifications except as modified herein. End sections will be paid for at the contract unit price per each for Box Culvert End Sections.

The Contractor may furnish the end section as a single precast concrete piece or construct the end section in the field using cast-in-place (CIP) construction. For CIP construction, the bottom slab thickness shall be increased by 2" and the clear cover to the bottom mat of reinforcement shall be increased to 3".

Box section dimensions, materials, and reinforcement details for Box Culvert End Sections shall be according to the requirements for ASTM C 1577 as required for the design of the portion of the culvert within the limits of Precast Concrete Box Culverts except as modified herein.

The number of culvert ties shall be sufficient to engage the minimum length of culvert barrel shown within the pay limits for Precast Concrete Box Culverts and will be dependent upon the length of box culvert segments furnished by the Contractor. Culvert ties are not required for box culverts having a rise (R) less than or equal to 3 ft and a span (S) greater than or equal to 10 ft.

All costs associated with furnishing and installing or constructing the toewall and culvert ties will not be measured for payment but shall be included in the unit price for Box Culvert End Sections of the culvert number specified.

Shop drawings that detail slab thickness and reinforcement layout for the Box Culvert End Sections shall be provided to the Engineer for review and approval. Reinforcement bars not detailed herein shall be detailed with a clear distance at the end of the reinforcement not less than 1/2" nor more than 2". For the precast option, it shall be the Contractor's responsibility for determining a method of handling and a construction procedure shall be included in the shop drawings. The Contractor shall determine and detail in the shop drawings any necessary strengthening or stiffening provisions necessary to handle the precast segment. Any required modifications shall be at no extra charge.

The Contractor may use reinforcement bars in lieu of welded wire reinforcement (WWR). Reinforcement bars shall be limited to the sizes of #3 through #5 bars, a maximum spacing of the lesser of 8" or the member thickness, and shall result in an area of reinforcement equal to or greater than that provided by the WWR. Minimum lap lengths detailed herein are applicable to WWR and reinforcement bars.

Reinforcement (circumferential and longitudinal) in the culvert barrel portion of the end section being lapped with reinforcement from the wingwalls or bottom slab of the end section shall not be less than that required by ASTM C 1577 for the design fill height or the reinforcement detailed for the end section, whichever is greater.

One drain hole shall be provided in each wingwall for end sections of box culverts having an opening with a clear rise greater than 3 ft. The drain hole shall be located within the lower 1/3 of the clear rise of the box culvert and shall conform to the requirements of Article 503.11 of the Standard Specifications.

APRON END SECTION DIMENSIONS

Span (S)	Rise (R)	Tt	Tb	Ts	A	B	C	D	E	Concrete Cu. Yd.	Culvert Ties Required
3'-0"	2'-0"	7"	6"	4"	3'-4"	2'-2"	2'-10 5/8"	4'-1"	10'-4 5/8"	2.8	Yes
3'-0"	2'-0"	4"	4"	4"	3'-1"	2'-1"	2'-7 1/8"	3'-9"	9'-11"	2.3	Yes
3'-0"	3'-0"	7"	6"	4"	4'-4"	2'-8"	3'-10 3/8"	5'-6"	12'-4 3/8"	3.7	Yes
3'-0"	3'-0"	4"	4"	4"	4'-1"	2'-7"	3'-7 1/8"	5'-2"	11'-11"	3.1	Yes
4'-0"	2'-0"	7.5"	6"	5"	3'-4 1/2"	2'-2 1/2"	2'-11 3/8"	4'-2"	11'-8"	3.3	Yes
4'-0"	2'-0"	5"	5"	5"	3'-2"	2'-1"	2'-8 1/2"	3'-10"	11'-2 3/8"	2.8	Yes
4'-0"	3'-0"	7.5"	6"	5"	4'-4 1/2"	2'-8 1/2"	3'-11 3/8"	5'-7"	13'-8 3/8"	4.2	Yes
4'-0"	3'-0"	5"	5"	5"	4'-2"	2'-7"	3'-8 1/2"	5'-3"	13'-2 3/8"	3.7	Yes
4'-0"	4'-0"	7.5"	6"	5"	5'-4 1/2"	3'-2 1/2"	4'-11 3/8"	7'-0"	15'-8 1/8"	5.3	Yes
4'-0"	4'-0"	5"	5"	5"	5'-2"	3'-1"	4'-8 3/8"	6'-8"	15'-2 1/2"	4.7	Yes
5'-0"	2'-0"	8"	7"	6"	3'-5"	2'-3"	2'-11 3/8"	4'-2"	12'-10"	3.9	Yes
5'-0"	2'-0"	6"	6"	6"	3'-3"	2'-2"	2'-10"	4'-0"	12'-7 1/4"	3.5	Yes
5'-0"	3'-0"	8"	7"	6"	4'-5"	2'-9"	3'-11 3/8"	5'-7"	14'-11 1/8"	4.9	Yes
5'-0"	3'-0"	6"	6"	6"	4'-3"	2'-8"	3'-10"	5'-5"	14'-7 1/4"	4.5	Yes
5'-0"	4'-0"	8"	7"	6"	5'-5"	3'-3"	4'-11 3/8"	7'-0"	16'-10 1/8"	6.1	Yes
5'-0"	4'-0"	6"	6"	6"	5'-3"	3'-2"	4'-9 1/4"	6'-9"	16'-5 7/8"	5.5	Yes
5'-0"	5'-0"	8"	7"	6"	6'-5"	3'-9"	5'-11 3/8"	8'-5"	18'-10 1/8"	7.4	Yes
5'-0"	5'-0"	6"	6"	6"	6'-3"	3'-8"	5'-9 1/4"	8'-2"	18'-5 7/8"	6.8	Yes
6'-0"	2'-0"	8"	7"	7"	3'-5"	2'-3"	2'-11 3/8"	4'-2"	14'-0"	4.3	Yes
6'-0"	2'-0"	7"	7"	7"	3'-4"	2'-2"	2'-10 3/8"	4'-1"	13'-10 3/8"	4.2	Yes
6'-0"	3'-0"	8"	7"	7"	4'-5"	2'-9"	3'-11 3/8"	5'-7"	16'-0 1/8"	5.4	Yes
6'-0"	3'-0"	7"	7"	7"	4'-4"	2'-8"	3'-10 3/8"	5'-6"	15'-10 3/8"	5.2	Yes
6'-0"	4'-0"	8"	7"	7"	5'-5"	3'-3"	4'-11 3/8"	7'-0"	18'-0 3/8"	6.5	Yes
6'-0"	4'-0"	7"	7"	7"	5'-4"	3'-2"	4'-10 3/4"	6'-11"	17'-10 3/4"	6.5	Yes
6'-0"	5'-0"	8"	7"	7"	6'-5"	3'-9"	5'-11 3/8"	8'-5"	20'-0 1/8"	8.0	Yes
6'-0"	5'-0"	7"	7"	7"	6'-4"	3'-8"	5'-10 3/4"	8'-4"	19'-10 3/4"	7.8	Yes
6'-0"	6'-0"	8"	7"	7"	7'-5"	4'-3"	6'-11 1/2"	9'-10"	22'-0 1/4"	9.5	Yes
6'-0"	6'-0"	7"	7"	7"	7'-4"	4'-2"	6'-10 3/4"	9'-9"	21'-10 3/4"	9.3	Yes
7'-0"	2'-0"	8"	8"	8"	3'-5"	2'-3"	2'-11 3/8"	4'-2"	15'-2"	4.9	Yes
7'-0"	3'-0"	8"	8"	8"	4'-5"	2'-9"	3'-11 3/8"	5'-7"	17'-2 1/8"	6.1	Yes
7'-0"	4'-0"	8"	8"	8"	5'-5"	3'-3"	4'-11 3/8"	7'-0"	19'-2 1/8"	7.4	Yes
7'-0"	5'-0"	8"	8"	8"	6'-5"	3'-9"	5'-11 3/8"	8'-5"	21'-2 1/8"	8.9	Yes
7'-0"	6'-0"	8"	8"	8"	7'-5"	4'-3"	6'-11 1/2"	9'-10"	23'-2 1/4"	10.6	Yes
8'-0"	2'-0"	8"	8"	8"	3'-5"	2'-3"	2'-11 3/8"	4'-2"	16'-2"	5.3	Yes
8'-0"	3'-0"	8"	8"	8"	4'-5"	2'-9"	3'-11 3/8"	5'-7"	18'-2 1/8"	6.5	Yes
8'-0"	4'-0"	8"	8"	8"	5'-5"	3'-3"	4'-11 3/8"	7'-0"	20'-2 1/8"	7.8	Yes
8'-0"	5'-0"	8"	8"	8"	6'-5"	3'-9"	5'-11 3/8"	8'-5"	22'-2 1/8"	9.3	Yes
8'-0"	6'-0"	8"	8"	8"	7'-5"	4'-3"	6'-11 1/2"	9'-10"	24'-2 1/4"	11.0	Yes
9'-0"	2'-0"	9"	9"	9"	3'-6"	2'-3"	3'-0 3/4"	4'-4"	17'-6 7/8"	6.2	Yes
9'-0"	3'-0"	9"	9"	9"	4'-6"	2'-9"	4'-0 3/4"	5'-9"	19'-6 1/8"	7.5	Yes
9'-0"	4'-0"	9"	9"	9"	5'-6"	3'-3"	5'-0 3/4"	7'-2"	21'-6 7/8"	9.0	Yes
9'-0"	5'-0"	9"	9"	9"	6'-6"	3'-9"	6'-0 7/8"	8'-7"	23'-7"	10.6	Yes
9'-0"	6'-0"	9"	9"	9"	7'-6"	4'-3"	7'-0 1/8"	9'-11"	25'-5 5/8"	12.4	Yes
10'-0"	2'-0"	10"	10"	10"	3'-7"	2'-4"	3'-1 1/2"	4'-5"	18'-10 1/4"	7.1	No
10'-0"	3'-0"	10"	10"	10"	4'-7"	2'-10"	4'-1 1/2"	5'-10"	20'-10 1/4"	8.6	No
10'-0"	4'-0"	10"	10"	10"	5'-7"	3'-4"	5'-1 1/2"	7'-3"	22'-10 3/8"	10.2	Yes
10'-0"	5'-0"	10"	10"	10"	6'-7"	3'-10"	6'-1 1/2"	8'-8"	24'-10 3/8"	12.0	Yes
10'-0"	6'-0"	10"	10"	10"	7'-7"	4'-4"	7'-1 1/2"	10'-1"	26'-10 3/8"	13.9	Yes
11'-0"	2'-0"	11"	11"	11"	3'-8"	2'-4"	3'-2 7/8"	4'-7"	20'-3 1/8"	8.2	No
11'-0"	3'-0"	11"	11"	11"	4'-8"	2'-10"	4'-2 7/8"	6'-0"	22'-3 1/8"	9.8	No
11'-0"	4'-0"	11"	11"	11"	5'-8"	3'-4"	5'-2 1/4"	7'-4"	24'-1 3/4"	11.5	Yes
11'-0"	5'-0"	11"	11"	11"	6'-8"	3'-10"	6'-2 1/4"	8'-9"	26'-1 3/4"	13.3	Yes
11'-0"	6'-0"	11"	11"	11"	7'-8"	4'-4"	7'-2 1/4"	10'-2"	28'-1 1/8"	15.5	Yes
12'-0"	2'-0"	12"	12"	12"	3'-9"	2'-5"	3'-3 3/8"	4'-8"	21'-6 1/2"	9.3	No
12'-0"	3'-0"	12"	12"	12"	4'-9"	2'-11"	4'-3 3/8"	6'-1"	23'-6 1/2"	11.1	No
12'-0"	4'-0"	12"	12"	12"	5'-9"	3'-5"	5'-3 3/8"	7'-6"	25'-6 3/8"	13.0	Yes
12'-0"	5'-0"	12"	12"	12"	6'-9"	3'-11"	6'-3 3/8"	8'-11"	27'-6 3/8"	14.1	Yes
12'-0"	6'-0"	12"	12"	12"	7'-9"	4'-5"	7'-3 3/8"	10'-4"	29'-6 3/8"	17.4	Yes

Note:

Two sets of apron end section dimensions are shown above for some box culvert sizes due to the top and bottom slabs having different thicknesses per ASTM C 1577 for design fill heights less than 2 ft.

(Sheet 1 of 2)

SCB-AES

2-17-2017

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LE LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

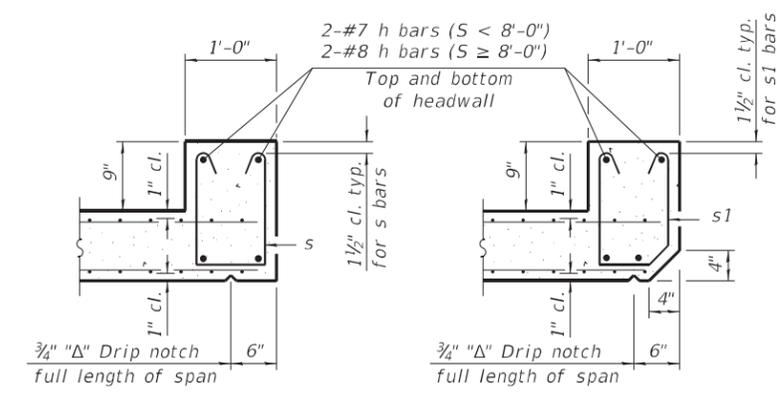
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRECAST CONCRETE BOX CULVERT APRON END SECTION DETAILS
STATION 70 + 23.79
STRUCTURE NO. 042-2403
SHEET 3 OF 5 SHEETS

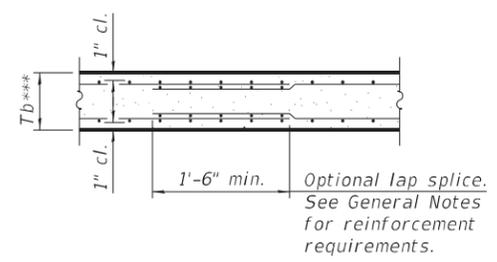
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
747	(57,58,59) RS-2	JERSEY	60	40
CONTRACT NO. 76L10				
ILLINOIS FED. AID PROJECT				

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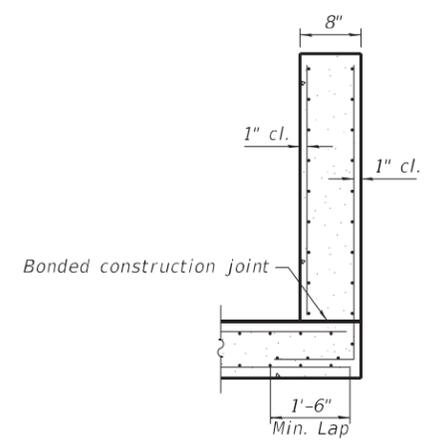
SECTION B-B
 (Top slab at downstream end)

SECTION B-B
 (Top slab at upstream end)

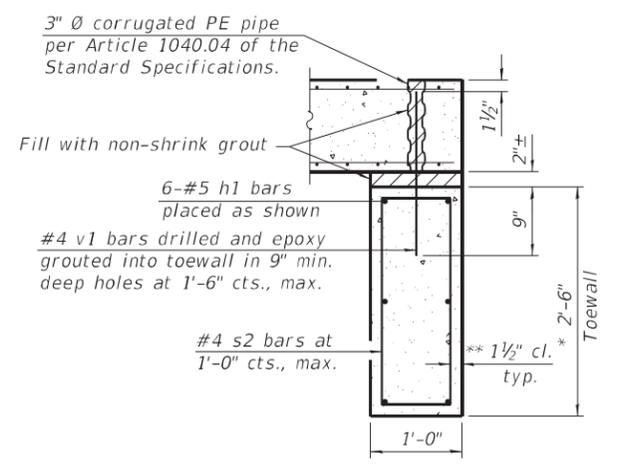


SECTION B-B
 (Bottom Slab)

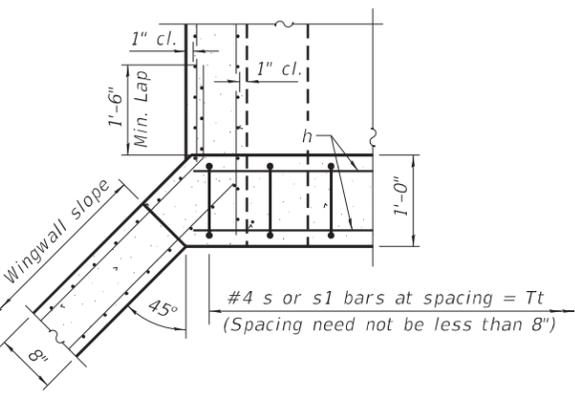
*** This dimension shall be increased by 2" for CIP construction.



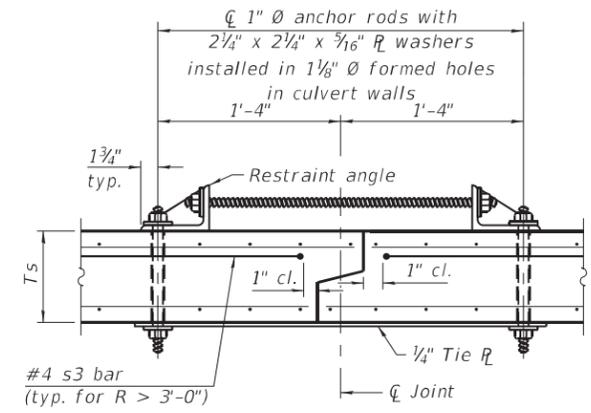
SECTION C-C



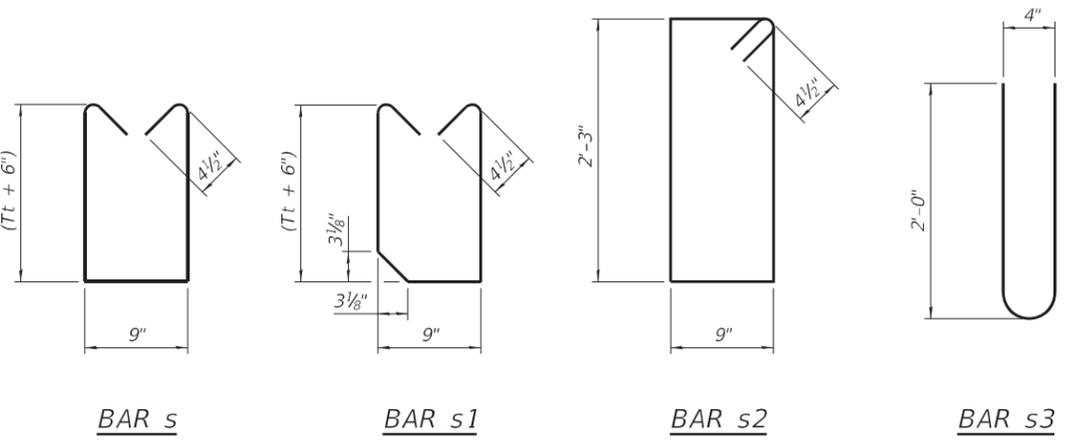
SECTION D-D



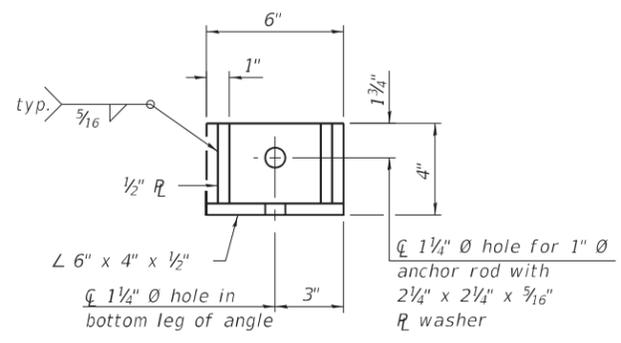
SECTION E-E



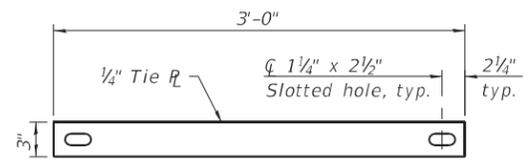
SECTION F-F
 (Showing culvert tie details)



BAR s **BAR s1** **BAR s2** **BAR s3**



RESTRAINT ANGLE DETAIL



TIE PLATE DETAIL

TOEWALL CONSTRUCTION SEQUENCE

1. Perform excavation and construct toewall.
2. Backfill accordingly and place bedding for precast box culvert end sections.
3. Set precast box culvert end section.
4. Drill and epoxy grout reinforcement in toewall in accordance with Section 584 of the Standard Specifications.
5. Pressure grout voids using non-shrink grout conforming to Section 1024 of the Standard Specifications.

* The Contractor may furnish a precast or cast-in-place toewall. The Contractor shall be responsible for the strength and stability of the precast toewall during handling. Additional lifting points may be required depending upon the length of the toewall or the Contractor may need to modify the design of the toewall for the proposed handling method.

** If soil conditions permit, the sides of the toewall may be poured directly against the soil. The clear cover on the sides of the toewall shall be increased to 3" by increasing the thickness of the toewall.

Notes:
 1" Ø anchor rods for the culvert ties shall conform to the requirements of ASTM F1554, Grade 105. Structural steel for the tie plate and restraint angle shall conform to the requirements of Article 1006.04 of the Standard Specifications. All components of the culvert tie detail shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable. 2 1/4" x 2 1/4" x 3/16" plate washers shall be provided under each nut required for the anchor rods. Anchor rods connecting precast sections shall be brought to a snug tight condition followed by an additional 1/2 turn on one of the nuts for anchor rods installed in the walls. Match marks shall be provided on the bolt and nut to verify relative rotation between the bolt and the nut. Holes in the walls for the culvert tie assembly may be drilled using core bits in lieu of using formed holes.

SCB-AES 2-17-2017

(Sheet 2 of 2)



USER NAME = LIN06-PC	DESIGNED - VPT	REVISED -
PLOT TIME = 6:56:25 AM	CHECKED - AML	REVISED -
PLOT DATE = 7/30/2021	DRAWN - AML	REVISED -
	CHECKED - VPT	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRECAST CONCRETE BOX CULVERT APRON END SECTION DETAILS
 STATION 70 + 23.79
 STRUCTURE NO. 042-2403
 SHEET 4 OF 5 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
747	(57,58,59) RS-2	JERSEY	60	41
CONTRACT NO. 76L10				
ILLINOIS FED. AID PROJECT				



SOIL BORING LOG

Page 1 of 1
Date 3/9/01

ROUTE FAS 747 DESCRIPTION IL 109 over Tributary to Little Piasa Creek, 1 mi South of McClusky LOGGED BY Larry Ford

SECTION (57,58,59)RS-1 LOCATION SW 1/4, SEC. 21, TWP. 7N, RNG. 11W, 3rd PM. Latitude, Longitude

COUNTY Jersey DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140# Automatic

Table with columns for Depth (ft), Blows (blows/ft), Soil Description, and SPT values. Includes entries for Asphalt and Concrete Pavement, Brown Silt LOAM (fill), Brown Silty Clay LOAM (fill), and Brown and Gray Silty CLAY.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, form 137 (Rev. 8-99)



SOIL BORING LOG

Page 1 of 1
Date 7/9/01

ROUTE FAS 747 DESCRIPTION IL 109 over Tributary to Little Piasa Creek, 1 mi South of McClusky LOGGED BY Larry Ford

SECTION (57,58,59)RS-1 LOCATION SW 1/4, SEC. 21, TWP. 7N, RNG. 11W, 3rd PM. Latitude, Longitude

COUNTY Jersey DRILLING METHOD Hand Auger HAMMER TYPE

Table with columns for Depth (ft), Blows (blows/ft), Soil Description, and SPT values. Includes entries for Brown and Gray SILTY SAND, Brown and Gray SILTY CLAY, Brown and Gray CLAY LOAM, and Refusal at GRAVEL and Glacial TILL.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, form 137 (Rev. 8-99)



SOIL BORING LOG

Page 1 of 1
Date 7/9/01

ROUTE FAS 747 DESCRIPTION IL 109 over Tributary to Little Piasa Creek, 1 mi South of McClusky LOGGED BY Larry Ford

SECTION (57,58,59)RS-1 LOCATION SW 1/4, SEC. 21, TWP. 7N, RNG. 11W, 3rd PM. Latitude, Longitude

COUNTY Jersey DRILLING METHOD Hand Auger HAMMER TYPE

Table with columns for Depth (ft), Blows (blows/ft), Soil Description, and SPT values. Includes entries for Gray SILTY CLAY, Gray SANDY LOAM, Gray SILTY CLAY, Brown and Gray CLAY LOAM with SAND and GRAVEL, and Glacial TILL CLAY LOAM.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, form 137 (Rev. 8-99)

The boring logs represent point information. Presentation of this information in no way implies that subsurface conditions are the same at locations other than the exact location of the boring.

MODEL: Default FILE NAME: \\CHATHAM\jlr\jobs\1513-15\Structure - Culvert Replacements\4 - Final Design\Design Plans\CADD_Sheets\Draw-D876L10-005-Boring_Logs.dgn



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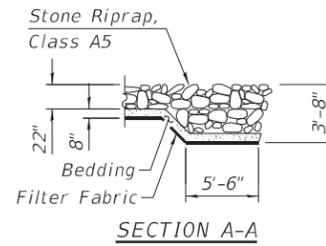
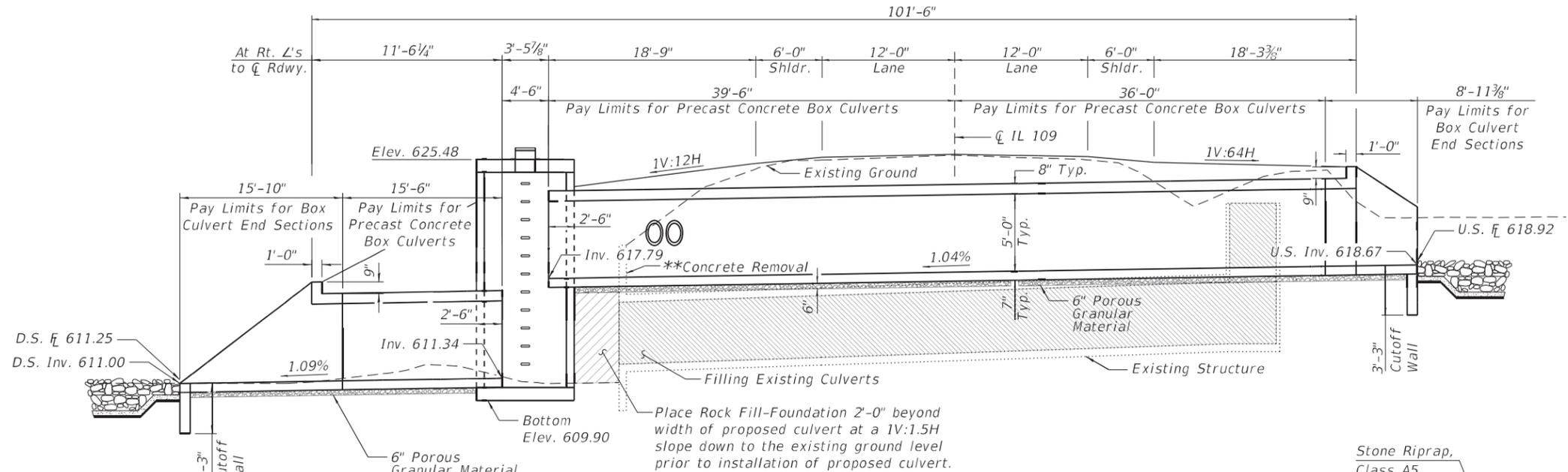
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS STATION 70 + 23.79 STRUCTURE NO. 042-2403 SHEET 5 OF 5 SHEETS

Table with columns for F.A.S. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., and CONTRACT NO.

Benchmark: BM 109-7, Cut "□" on the center top of the N. headwall over a 12" CMP culvert located on the W. side of IL 109, approx. 720' North of Hagen Road, approx. 4.65 miles North of IL Rte. 3; Elev. 623.17.
 Existing Structure: The existing 4'-0" x 4'-0" reinforced concrete box culvert was built at an unknown date and extended in 1922. Existing structure is a single cell box culvert with a 5'-0" overall width and a 5'-0" overall height that is 59'-7" long at Rt. L's to centerline of roadway, 73'-5" along centerline of structure. The existing culvert will be filled and remain in place, with the exception of portions interfering with the proposed structure, which will be removed. Roadway will be closed and traffic detoured during construction.
 No Salvage.

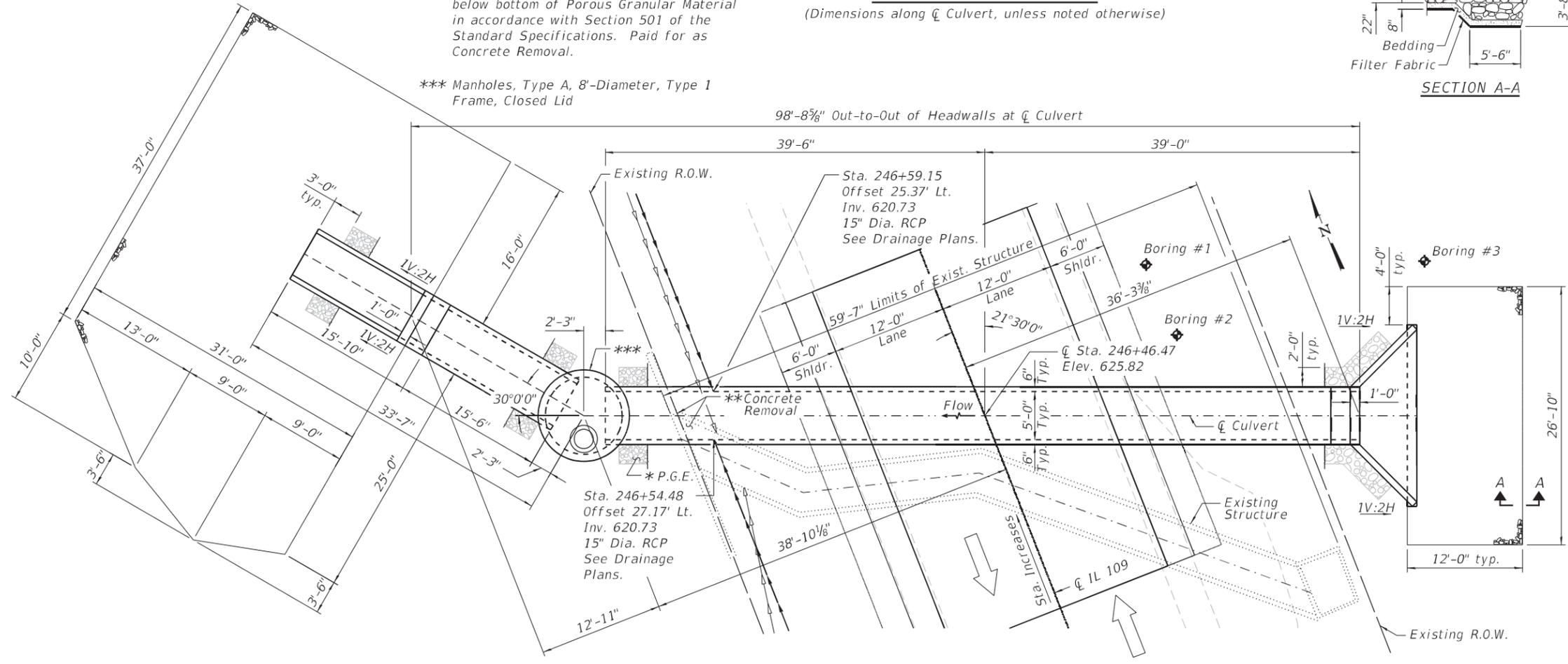
* 2'-0" width of P.G.E. to be installed full length of proposed culvert, to 3'-0" from the end of the proposed wingwalls. Adjacent to culvert, vertical limits are from bottom of bottom slab to top of top slab. Along wingwalls, vertical limits are from bottom of culvert bottom slab to 1'-0" below top of wingwall. P.G.E. shall be capped with a 12" thick layer of impervious material. Cost of impervious material shall be included in the cost of Porous Granular Embankment.



** Remove existing structure to at least 1 ft. below bottom of Porous Granular Material in accordance with Section 501 of the Standard Specifications. Paid for as Concrete Removal.
 *** Manholes, Type A, 8'-Diameter, Type 1 Frame, Closed Lid

LONGITUDINAL SECTION

(Dimensions along centerline of culvert, unless noted otherwise)



DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th Edition

LOADING HL-93

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

DESIGN STRESSES

PRECAST UNITS (New Construction)

$f'_c = 5,000$ psi
 $f_y = 65,000$ psi (Welded Wire Reinforcement)

FIELD UNITS (New Construction)

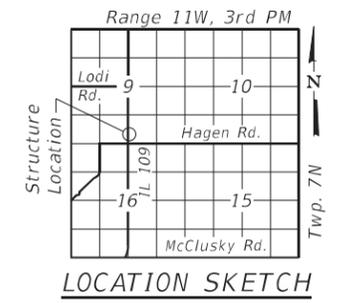
$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

INDEX OF SHEETS

1. General Plan and Elevation
2. General Data
- 3.-4. Precast Tapered End Section Details
- 5.-6. Precast Apron End Section Details
7. Soil Boring Logs



Vincent P. Tabor 7/16/2021
 Vincent P. Tabor
 Licensed Structural Engineer
 State of Illinois No. 081-007047
 Expires 11/30/2022



GENERAL PLAN AND ELEVATION
IL 109 OVER UNNAMED DITCH
F.A.S. RTE. 747 SEC. (57,58,59) RS-2
JERSEY COUNTY
STATION 246+46.47

MODEL: Default
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LINE ENGINEERING, LTD.
 Consulting Engineers
 Springfield, Illinois

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7/30/2021	VPT	

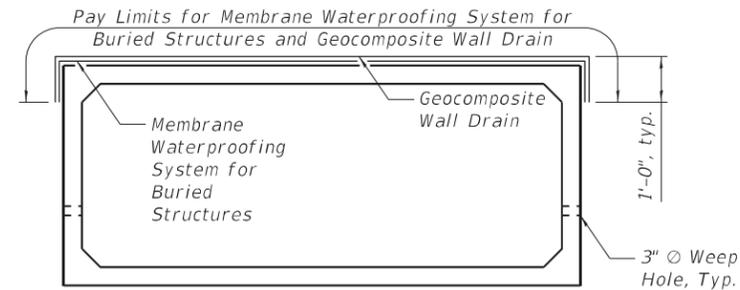
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STATION 246 + 46.47
 SHEET 1 OF 7 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
747	(57,58,59) RS-2	JERSEY	60	43
CONTRACT NO. 76L10				
ILLINOIS FED. AID PROJECT				

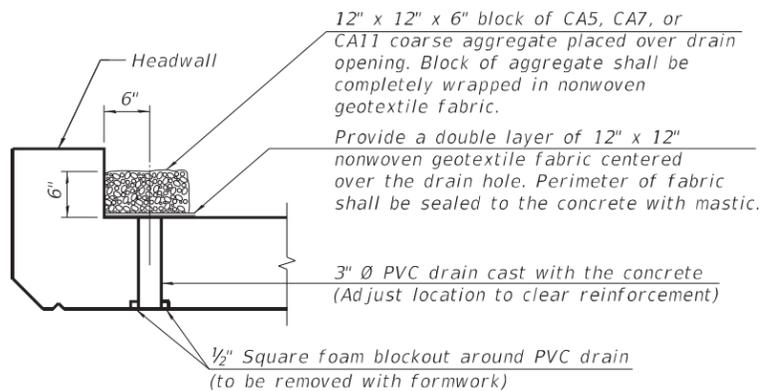
TOTAL BILL OF MATERIAL

ITEM NO.	ITEM	UNIT	TOTAL
20700220	Porous Granular Embankment	Cu. Yd.	95
28100109	Stone Riprap, Class A5	Sq. Yd.	207
28200200	Filter Fabric	Sq. Yd.	207
50102400	Concrete Removal	Cu. Yd.	2
54001002	Box Culvert End Sections, Culvert No. 2	Each	2
54000505	Precast Concrete Box Culverts 5'x5'	Foot	91.0
59100100	Geocomposite Wall Drain	Sq. Yd.	68
60224459	Manholes, Type A, 8'-Diameter, Type 1 Frame, Closed Lid	Each	1
X0900064	Membrane Waterproofing System for Buried Structures	Sq. Yd.	68
Z0023500	Filling Existing Culverts	Cu. Yd.	49
Z005451X	Rock Fill - Foundation	Ton	39



LIMITS OF MEMBRANE WATERPROOFING

Longitudinal limits of membrane waterproofing for the precast concrete culvert are between the east side of the manhole and the east headwall.



DRAIN DETAIL

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)

GENERAL NOTES

The precast box culvert sections shall conform to the requirements of ASTM C 1577.

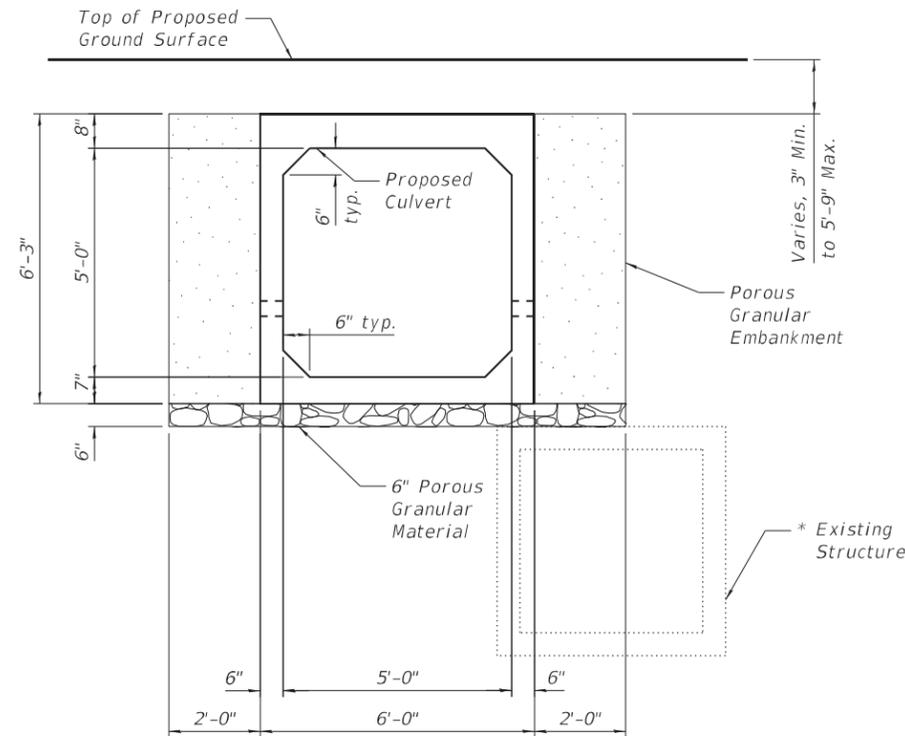
Drain holes shall be provided on exterior culvert walls for each precast box segment with a clear rise greater than 3 ft. The drain hole shall be located within 1/3 of the clear rise of the box culvert, shall not intercept the haunch, and shall conform to the requirements of Article 503.11 of the Standard Specifications.

The 6 in. thick layer of porous granular material required for the precast concrete box culvert per Art. 540.06 of the Standard Specifications shall also apply to the end sections. Cost of the porous granular material will not be paid for separately but shall be included in the unit price of the work for which it is required.

Nonwoven geotextile fabric shall conform to the requirements of Art. 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard, unless noted otherwise.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

See Special Provisions and Roadway and Maintenance of Traffic plans for time restrictions relative to installation of the structure.



SECTION THROUGH PRECAST BOX CULVERT

PRECAST BOX CULVERT SCHEDULE (ASTM C1577)

Station	Size (Span x Height)	Skew	Design Fill	
			Min.	Max.
246+46.47	5'-0" x 5'-0"	21.5°	1'-5"	1'-11 1/2"

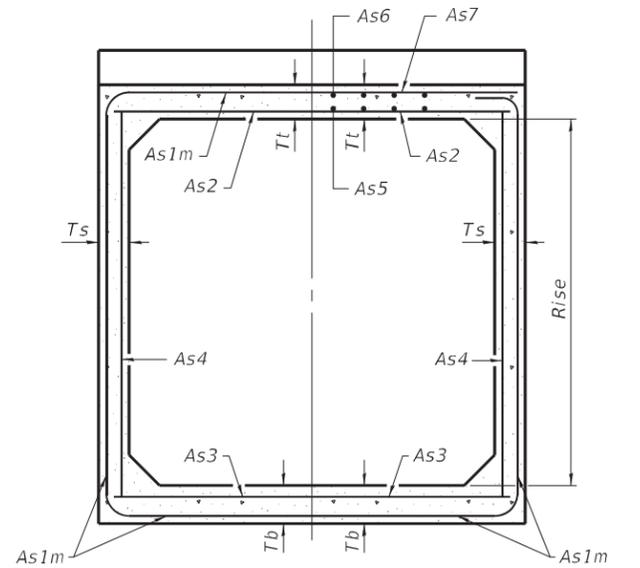
The Design Fill heights shown in the culvert schedule are located between the outside edges of the paved shoulders.

MODEL: Default
FILE NAME: \\CHATHAM1\lfrj\jobs\1513-15\Struct\E_Culvert\Design_Plans\CADD_Sheets\Hagen-D8761.10-002-General Data.dgn

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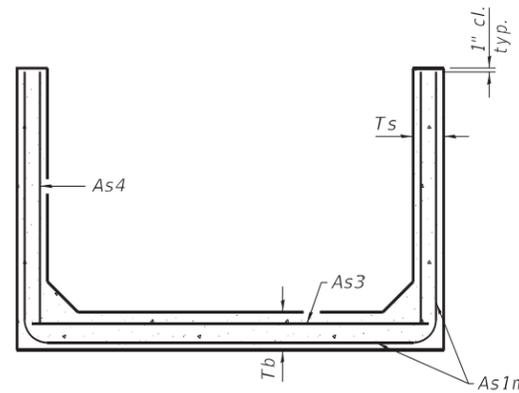
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
747	(57,58,59) RS-2	JERSEY	60	44
CONTRACT NO. 76L10				
ILLINOIS FED. AID PROJECT				

MODEL: Default
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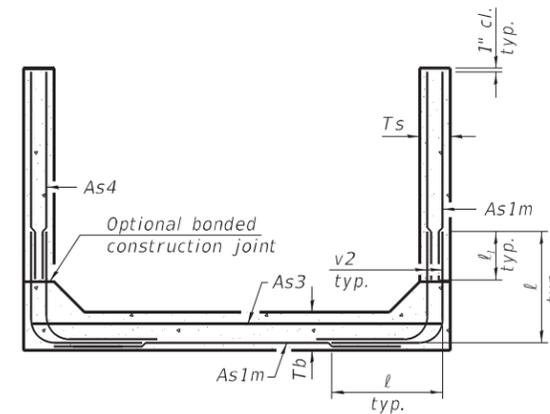


(Design Earth Cover \geq 2 ft) (Design Earth Cover < 2 ft)

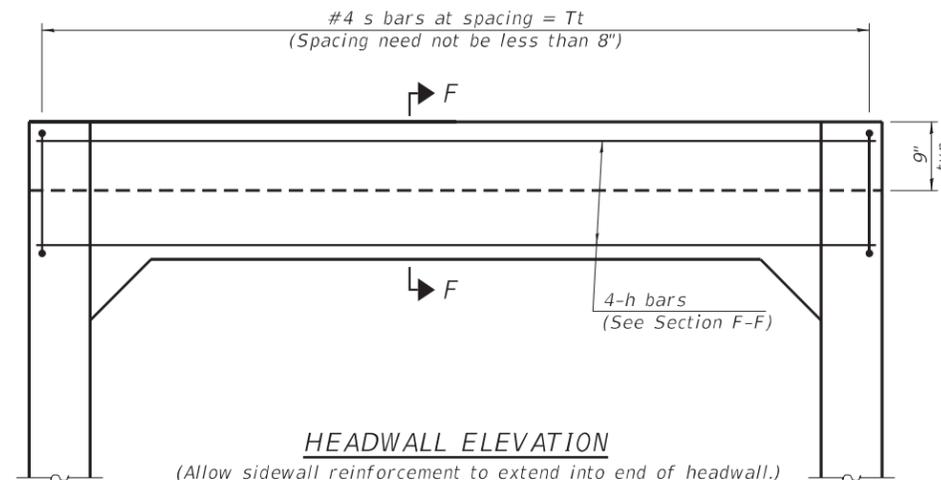
SECTION C-C



SECTION D-D



ALTERNATE SECTION D-D



HEADWALL ELEVATION

(Allow sidewall reinforcement to extend into end of headwall.)

		As1m REINFORCEMENT										
		(in. ² /ft)										
Ts (in.)	Rise (ft)	2	3	4	5	6	7	8	9	10	11	12
4	0.19	0.17										
5	0.26	0.21	0.18									
6	0.22	0.26	0.23	0.22								
7	0.25	0.33	0.59	0.27	0.28							
8	0.40	0.35	0.43	0.39	0.36	0.34	0.40					
9	0.44	0.39	0.35	0.43	0.40	0.37	0.36	0.48				
10	0.48	0.42	0.38	0.47	0.44	0.41	0.38	0.42	0.56			
11	0.52	0.45	0.54	0.50	0.46	0.44	0.41	0.46	0.50	0.65		
12	0.55	0.49	0.58	0.54	0.50	0.48	0.45	0.46	0.46	0.61	0.75	

(As1m reinforcement based upon welded wire reinforcement conforming to AASHTO M 55 or M 221).

ℓ₁ DIMENSION

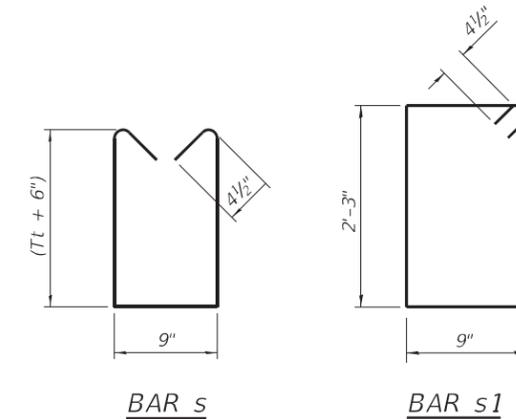
- #3 bar = 2'-0"
- #4 bar = 2'-8"
- #5 bar = 3'-4"
- #6 bar = 3'-11"

Notes:

Alternate Section D-D is provided to allow the Contractor the option of casting the bottom slab of the end section first followed by construction of the sidewalls using conventional forming methods. Shop drawings that detail slab thickness and reinforcement layout shall be submitted to the Engineer for review and approval when using Alternate Section D-D.

The size and spacing of the v2 bars shall provide a minimum reinforcement area along each face of the walls (in.²/ft.) equal to 1.10*(As1m). v2 bars may consist of #3 thru #6 size reinforcement bars and the longitudinal spacing shall not exceed the lesser of the wall thickness or 8 inches.

Bonded construction joints shall be prepared according to Article 503.09 of the Standard Specifications.



BAR s

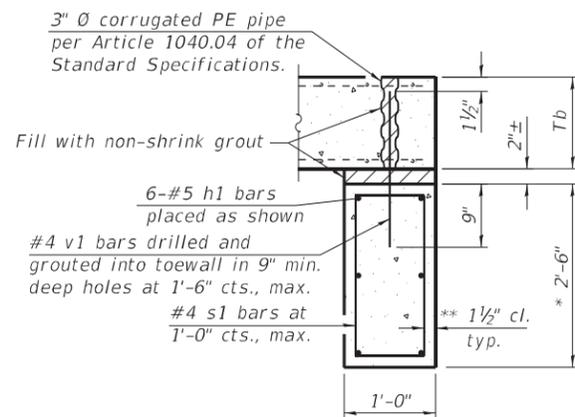
BAR s1

TOEWALL CONSTRUCTION SEQUENCE

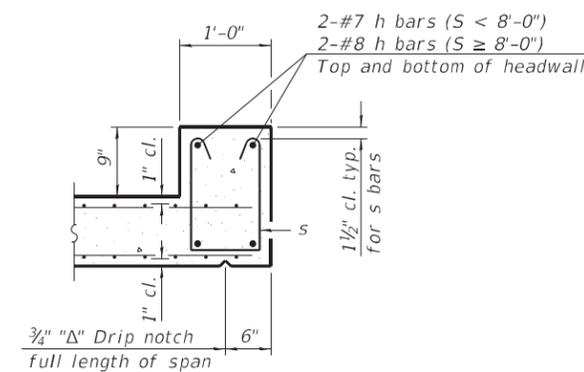
1. Perform excavation and construct toewall.
2. Backfill according to the applicable paragraphs of Article 502.10 of the Standard Specifications and place bedding for precast box culvert end sections.
3. Set precast box culvert end section.
4. Drill and epoxy grout reinforcement in toewall in accordance with Section 584 of the Standard Specifications.
5. Pressure grout voids using non-shrink grout conforming to Section 1024 of the Standard Specifications.

* The Contractor may furnish a precast or cast-in-place toewall. The Contractor shall be responsible for the strength and stability of the precast toewall during handling. Additional lifting points may be required depending upon the length of the toewall or the Contractor may need to modify the design of the toewall for the proposed handling method.

** If soil conditions permit, the sides of the toewall may be poured directly against the soil. The clear cover on the sides of the toewall shall be increased to 3" by increasing the thickness of the toewall.



SECTION E-E



SECTION F-F

SCB-TES

2-17-2017

(Sheet 2 of 2)



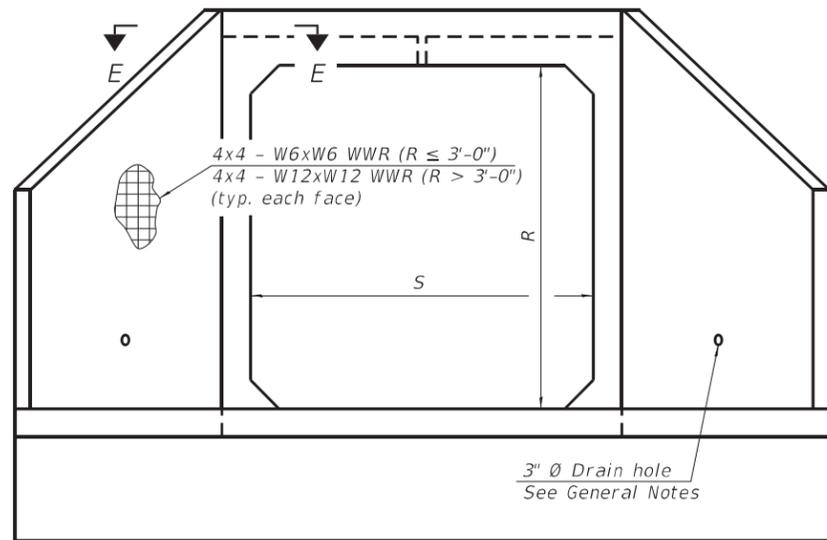
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

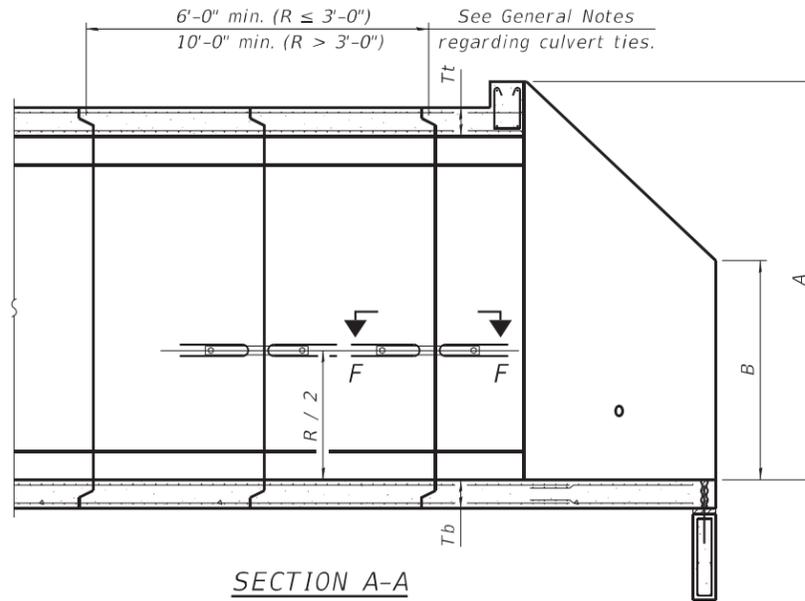
**SINGLE CELL PRECAST BOX CULVERT TAPERED END SECTIONS
STATION 246 + 46.47**

SHEET 4 OF 7 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
747	(57,58,59) RS-2	JERSEY	60	46
CONTRACT NO. 76L10				
ILLINOIS FED. AID PROJECT				



END VIEW



SECTION A-A

GENERAL NOTES

Box Culvert End Sections shall be constructed according to the requirements of Section 540 of the Standard Specifications except as modified herein. End sections will be paid for at the contract unit price per each for Box Culvert End Sections.

The Contractor may furnish the end section as a single precast concrete piece or construct the end section in the field using cast-in-place (CIP) construction. For CIP construction, the bottom slab thickness shall be increased by 2" and the clear cover to the bottom mat of reinforcement shall be increased to 3".

Box section dimensions, materials, and reinforcement details for Box Culvert End Sections shall be according to the requirements for ASTM C 1577 as required for the design of the portion of the culvert within the limits of Precast Concrete Box Culverts except as modified herein.

The number of culvert ties shall be sufficient to engage the minimum length of culvert barrel shown within the pay limits for Precast Concrete Box Culverts and will be dependent upon the length of box culvert segments furnished by the Contractor. Culvert ties are not required for box culverts having a rise (R) less than or equal to 3 ft and a span (S) greater than or equal to 10 ft.

All costs associated with furnishing and installing or constructing the toewall and culvert ties will not be measured for payment but shall be included in the unit price for Box Culvert End Sections of the culvert number specified.

Shop drawings that detail slab thickness and reinforcement layout for the Box Culvert End Sections shall be provided to the Engineer for review and approval. Reinforcement bars not detailed herein shall be detailed with a clear distance at the end of the reinforcement not less than 1/2" nor more than 2". For the precast option, it shall be the Contractor's responsibility for determining a method of handling and a construction procedure shall be included in the shop drawings. The Contractor shall determine and detail in the shop drawings any necessary strengthening or stiffening provisions necessary to handle the precast segment. Any required modifications shall be at no extra charge.

The Contractor may use reinforcement bars in lieu of welded wire reinforcement (WWR). Reinforcement bars shall be limited to the sizes of #3 through #5 bars, a maximum spacing of the lesser of 8" or the member thickness, and shall result in an area of reinforcement equal to or greater than that provided by the WWR. Minimum lap lengths detailed herein are applicable to WWR and reinforcement bars.

Reinforcement (circumferential and longitudinal) in the culvert barrel portion of the end section being lapped with reinforcement from the wingwalls or bottom slab of the end section shall not be less than that required by ASTM C 1577 for the design fill height or the reinforcement detailed for the end section, whichever is greater.

One drain hole shall be provided in each wingwall for end sections of box culverts having an opening with a clear rise greater than 3 ft. The drain hole shall be located within the lower 1/3 of the clear rise of the box culvert and shall conform to the requirements of Article 503.11 of the Standard Specifications.

APRON END SECTION DIMENSIONS

Span (S)	Rise (R)	Tt	Tb	Ts	A	B	C	D	E	Concrete Cu. Yd.	Culvert Ties Required
3'-0"	2'-0"	7"	6"	4"	3'-4"	2'-2"	2'-10 5/8"	4'-1"	10'-4 5/8"	2.8	Yes
3'-0"	2'-0"	4"	4"	4"	3'-1"	2'-1"	2'-7 1/8"	3'-9"	9'-11"	2.3	Yes
3'-0"	3'-0"	7"	6"	4"	4'-4"	2'-8"	3'-10 3/8"	5'-6"	12'-4 3/8"	3.7	Yes
3'-0"	3'-0"	4"	4"	4"	4'-1"	2'-7"	3'-7 7/8"	5'-2"	11'-11"	3.1	Yes
4'-0"	2'-0"	7.5"	6"	5"	3'-4 1/2"	2'-2 1/2"	2'-11 3/8"	4'-2"	11'-8"	3.3	Yes
4'-0"	2'-0"	5"	5"	5"	3'-2"	2'-1"	2'-8 1/2"	3'-10"	11'-2 3/8"	2.8	Yes
4'-0"	3'-0"	7.5"	6"	5"	4'-4 1/2"	2'-8 1/2"	3'-11 3/8"	5'-7"	13'-8 3/8"	4.2	Yes
4'-0"	3'-0"	5"	5"	5"	4'-2"	2'-7"	3'-8 1/2"	5'-3"	13'-2 3/8"	3.7	Yes
4'-0"	4'-0"	7.5"	6"	5"	5'-4 1/2"	3'-2 1/2"	4'-11 3/8"	7'-0"	15'-8 3/8"	5.3	Yes
4'-0"	4'-0"	5"	5"	5"	5'-2"	3'-1"	4'-8 3/8"	6'-8"	15'-2 1/2"	4.7	Yes
5'-0"	2'-0"	8"	7"	6"	3'-5"	2'-3"	2'-11 3/8"	4'-2"	12'-10"	3.9	Yes
5'-0"	2'-0"	6"	6"	6"	3'-3"	2'-2"	2'-10"	4'-0"	12'-7 1/4"	3.5	Yes
5'-0"	3'-0"	8"	7"	6"	4'-5"	2'-9"	3'-11 3/8"	5'-7"	14'-11 1/8"	4.9	Yes
5'-0"	3'-0"	6"	6"	6"	4'-3"	2'-8"	3'-10"	5'-5"	14'-7 1/4"	4.5	Yes
5'-0"	4'-0"	8"	7"	6"	5'-5"	3'-3"	4'-11 3/8"	7'-0"	16'-10 3/8"	6.1	Yes
5'-0"	4'-0"	6"	6"	6"	5'-3"	3'-2"	4'-9 1/4"	6'-9"	16'-5 7/8"	5.5	Yes
5'-0"	5'-0"	8"	7"	6"	6'-5"	3'-9"	5'-11 3/8"	8'-5"	18'-10 3/8"	7.4	Yes
5'-0"	5'-0"	6"	6"	6"	6'-3"	3'-8"	5'-9 1/4"	8'-2"	18'-5 7/8"	6.8	Yes
6'-0"	2'-0"	8"	7"	7"	3'-5"	2'-3"	2'-11 3/8"	4'-2"	14'-0"	4.3	Yes
6'-0"	2'-0"	7"	7"	7"	3'-4"	2'-2"	2'-10 3/8"	4'-1"	13'-10 3/8"	4.2	Yes
6'-0"	3'-0"	8"	7"	7"	4'-5"	2'-9"	3'-11 3/8"	5'-7"	16'-0 1/8"	5.4	Yes
6'-0"	3'-0"	7"	7"	7"	4'-4"	2'-8"	3'-10 3/8"	5'-6"	15'-10 3/8"	5.2	Yes
6'-0"	4'-0"	8"	7"	7"	5'-5"	3'-3"	4'-11 3/8"	7'-0"	18'-0 3/8"	6.5	Yes
6'-0"	4'-0"	7"	7"	7"	5'-4"	3'-2"	4'-10 3/4"	6'-11"	17'-10 3/4"	6.5	Yes
6'-0"	5'-0"	8"	7"	7"	6'-5"	3'-9"	5'-11 3/8"	8'-5"	20'-0 1/8"	8.0	Yes
6'-0"	5'-0"	7"	7"	7"	6'-4"	3'-8"	5'-10 3/4"	8'-4"	19'-10 3/4"	7.8	Yes
6'-0"	6'-0"	8"	7"	7"	7'-5"	4'-3"	6'-11 1/2"	9'-10"	22'-0 1/4"	9.5	Yes
6'-0"	6'-0"	7"	7"	7"	7'-4"	4'-2"	6'-10 3/4"	9'-9"	21'-10 3/4"	9.3	Yes
7'-0"	2'-0"	8"	8"	8"	3'-5"	2'-3"	2'-11 3/8"	4'-2"	15'-2"	4.9	Yes
7'-0"	3'-0"	8"	8"	8"	4'-5"	2'-9"	3'-11 3/8"	5'-7"	17'-2 1/8"	6.1	Yes
7'-0"	4'-0"	8"	8"	8"	5'-5"	3'-3"	4'-11 3/8"	7'-0"	19'-2 1/8"	7.4	Yes
7'-0"	5'-0"	8"	8"	8"	6'-5"	3'-9"	5'-11 3/8"	8'-5"	21'-2 1/8"	8.9	Yes
7'-0"	6'-0"	8"	8"	8"	7'-5"	4'-3"	6'-11 1/2"	9'-10"	23'-2 1/4"	10.6	Yes
8'-0"	2'-0"	8"	8"	8"	3'-5"	2'-3"	2'-11 3/8"	4'-2"	16'-2"	5.3	Yes
8'-0"	3'-0"	8"	8"	8"	4'-5"	2'-9"	3'-11 3/8"	5'-7"	18'-2 1/8"	6.5	Yes
8'-0"	4'-0"	8"	8"	8"	5'-5"	3'-3"	4'-11 3/8"	7'-0"	20'-2 1/8"	7.8	Yes
8'-0"	5'-0"	8"	8"	8"	6'-5"	3'-9"	5'-11 3/8"	8'-5"	22'-2 1/8"	9.3	Yes
8'-0"	6'-0"	8"	8"	8"	7'-5"	4'-3"	6'-11 1/2"	9'-10"	24'-2 1/4"	11.0	Yes
9'-0"	2'-0"	9"	9"	9"	3'-6"	2'-3"	3'-0 3/4"	4'-4"	17'-6 7/8"	6.2	Yes
9'-0"	3'-0"	9"	9"	9"	4'-6"	2'-9"	4'-0 3/4"	5'-9"	19'-6 1/8"	7.5	Yes
9'-0"	4'-0"	9"	9"	9"	5'-6"	3'-3"	5'-0 3/4"	7'-2"	21'-6 7/8"	9.0	Yes
9'-0"	5'-0"	9"	9"	9"	6'-6"	3'-9"	6'-0 7/8"	8'-7"	23'-7"	10.6	Yes
9'-0"	6'-0"	9"	9"	9"	7'-6"	4'-3"	7'-0 1/8"	9'-11"	25'-5 5/8"	12.4	Yes
10'-0"	2'-0"	10"	10"	10"	3'-7"	2'-4"	3'-1 1/2"	4'-5"	18'-10 1/4"	7.1	No
10'-0"	3'-0"	10"	10"	10"	4'-7"	2'-10"	4'-1 1/2"	5'-10"	20'-10 1/4"	8.6	No
10'-0"	4'-0"	10"	10"	10"	5'-7"	3'-4"	5'-1 1/2"	7'-3"	22'-10 3/8"	10.2	Yes
10'-0"	5'-0"	10"	10"	10"	6'-7"	3'-10"	6'-1 1/2"	8'-8"	24'-10 3/8"	12.0	Yes
10'-0"	6'-0"	10"	10"	10"	7'-7"	4'-4"	7'-1 1/2"	10'-1"	26'-10 3/8"	13.9	Yes
11'-0"	2'-0"	11"	11"	11"	3'-8"	2'-4"	3'-2 7/8"	4'-7"	20'-3 3/8"	8.2	No
11'-0"	3'-0"	11"	11"	11"	4'-8"	2'-10"	4'-2 7/8"	6'-0"	22'-3 3/8"	9.8	No
11'-0"	4'-0"	11"	11"	11"	5'-8"	3'-4"	5'-2 1/4"	7'-4"	24'-1 3/4"	11.5	Yes
11'-0"	5'-0"	11"	11"	11"	6'-8"	3'-10"	6'-2 1/4"	8'-9"	26'-1 3/4"	13.3	Yes
11'-0"	6'-0"	11"	11"	11"	7'-8"	4'-4"	7'-2 1/4"	10'-2"	28'-1 7/8"	15.5	Yes
12'-0"	2'-0"	12"	12"	12"	3'-9"	2'-5"	3'-3 3/8"	4'-8"	21'-6 1/2"	9.3	No
12'-0"	3'-0"	12"	12"	12"	4'-9"	2'-11"	4'-3 3/8"	6'-1"	23'-6 1/2"	11.1	No
12'-0"	4'-0"	12"	12"	12"	5'-9"	3'-5"	5'-3 3/8"	7'-6"	25'-6 3/8"	13.0	Yes
12'-0"	5'-0"	12"	12"	12"	6'-9"	3'-11"	6'-3 3/8"	8'-11"	27'-6 3/8"	14.1	Yes
12'-0"	6'-0"	12"	12"	12"	7'-9"	4'-5"	7'-3 3/8"	10'-4"	29'-6 5/8"	17.4	Yes

Note:

Two sets of apron end section dimensions are shown above for some box culvert sizes due to the top and bottom slabs having different thicknesses per ASTM C 1577 for design fill heights less than 2 ft.

(Sheet 1 of 2)

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SCB-AES

2-17-2017

LE LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

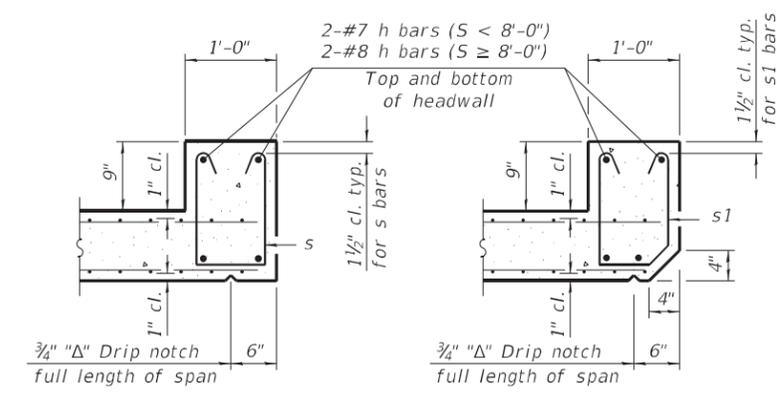
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	CHECKED - VPT	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRECAST CONCRETE BOX CULVERT APRON END SECTION DETAILS
STATION 246+46.47

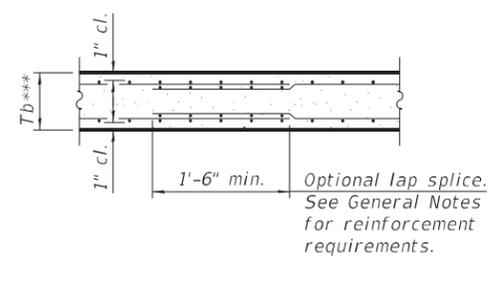
SHEET 5 OF 7 SHEETS

F.A.S. RTE. 747	SECTION (57,58,59) RS-2	COUNTY JERSEY	TOTAL SHEETS 60	SHEET NO. 47
CONTRACT NO. 76L10				
ILLINOIS FED. AID PROJECT				

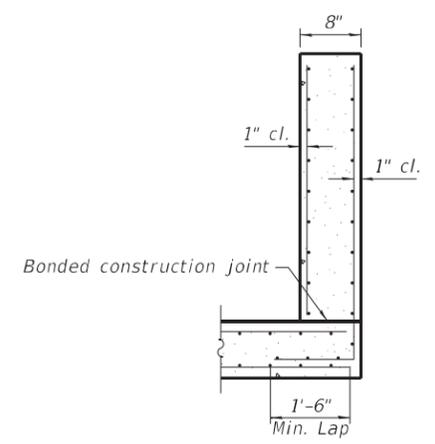


SECTION B-B
(Top slab at downstream end)

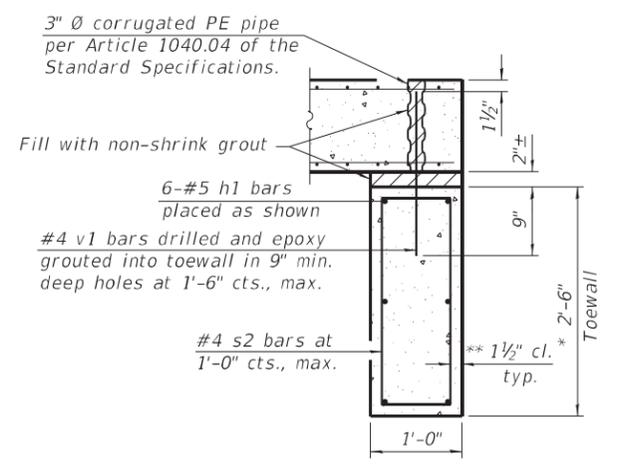
SECTION B-B
(Top slab at upstream end)



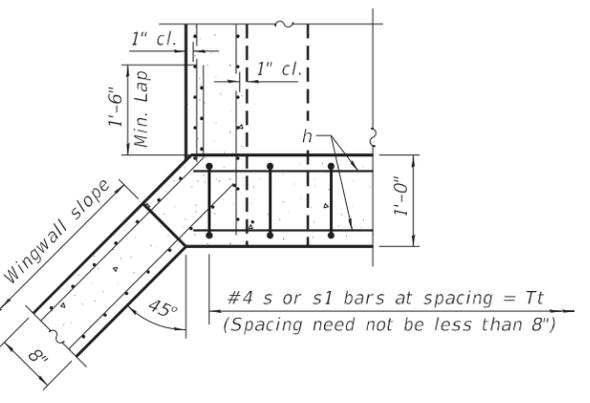
SECTION B-B
(Bottom Slab)



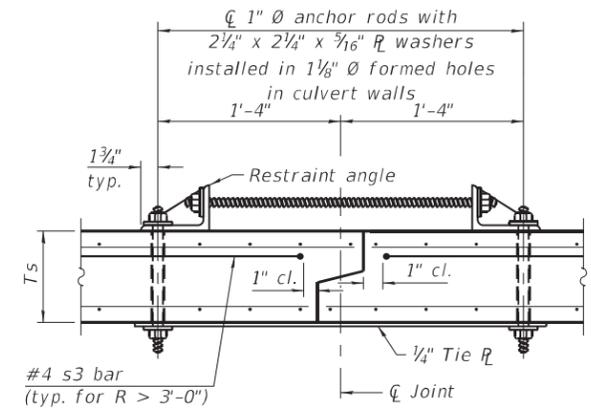
SECTION C-C



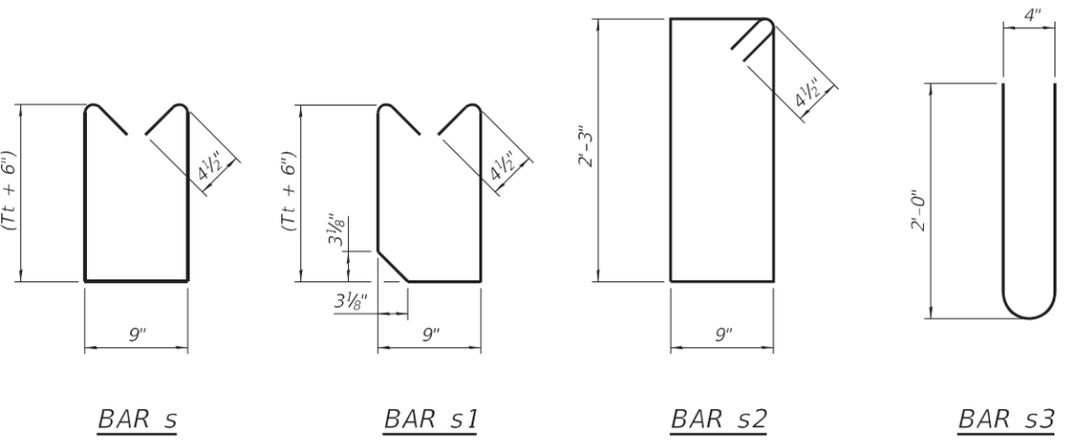
SECTION D-D



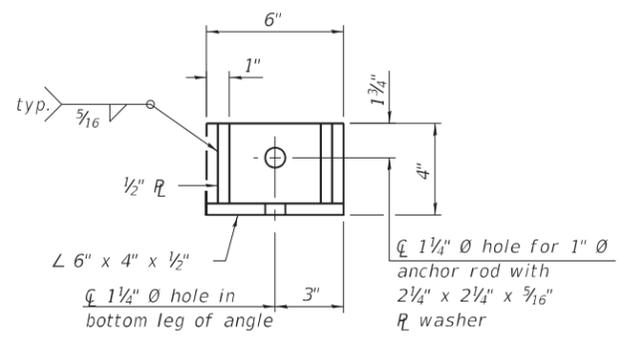
SECTION E-E



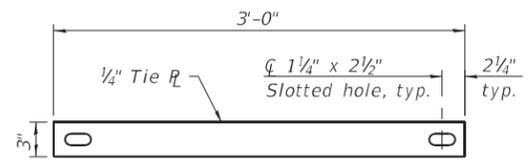
SECTION F-F
(Showing culvert tie details)



BAR s **BAR s1** **BAR s2** **BAR s3**



RESTRAINT ANGLE DETAIL



TIE PLATE DETAIL

TOEWALL CONSTRUCTION SEQUENCE

1. Perform excavation and construct toewall.
2. Backfill accordingly and place bedding for precast box culvert end sections.
3. Set precast box culvert end section.
4. Drill and epoxy grout reinforcement in toewall in accordance with Section 584 of the Standard Specifications.
5. Pressure grout voids using non-shrink grout conforming to Section 1024 of the Standard Specifications.

* The Contractor may furnish a precast or cast-in-place toewall. The Contractor shall be responsible for the strength and stability of the precast toewall during handling. Additional lifting points may be required depending upon the length of the toewall or the Contractor may need to modify the design of the toewall for the proposed handling method.

** If soil conditions permit, the sides of the toewall may be poured directly against the soil. The clear cover on the sides of the toewall shall be increased to 3" by increasing the thickness of the toewall.

Notes:
1" Ø anchor rods for the culvert ties shall conform to the requirements of ASTM F1554, Grade 105. Structural steel for the tie plate and restraint angle shall conform to the requirements of Article 1006.04 of the Standard Specifications. All components of the culvert tie detail shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable. 2 1/4" x 2 1/4" x 3/16" plate washers shall be provided under each nut required for the anchor rods. Anchor rods connecting precast sections shall be brought to a snug tight condition followed by an additional 1/2 turn on one of the nuts for anchor rods installed in the walls. Match marks shall be provided on the bolt and nut to verify relative rotation between the bolt and the nut. Holes in the walls for the culvert tie assembly may be drilled using core bits in lieu of using formed holes.

(Sheet 2 of 2)

MODEL: Default
FILE NAME: \\CHATHAM1\j\jobs\1513-15\Struct\E_Culvert_Replacements\4_Final_Design\Design_Plans\CADD_Sheets\Hagen+D8761.10-006-Precast_Apron_End_Section.dgn

SCB-AES

2-17-2017



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRECAST CONCRETE BOX CULVERT APRON END SECTION DETAILS
STATION 246 + 46.47

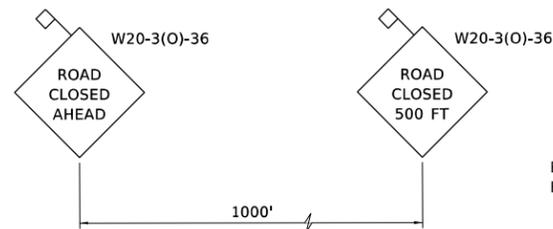
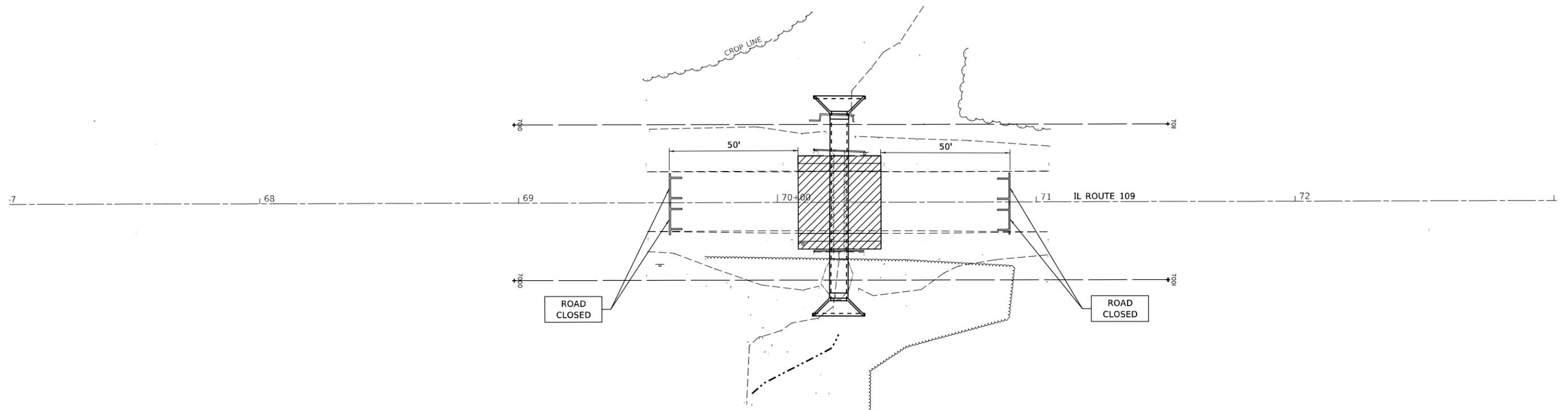
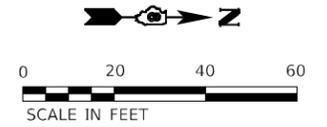
SHEET 6 OF 7 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
747	(57,58,59) RS-2	JERSEY	60	48
CONTRACT NO. 76L10				

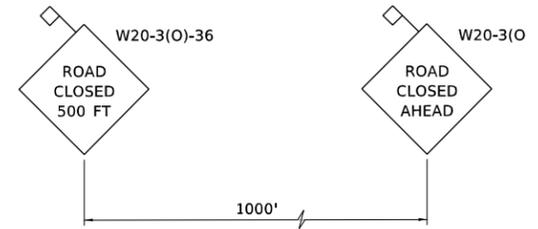
ILLINOIS FED. AID PROJECT

LEGEND

-  WORK ZONE
-  TYPE III BARRICADE
-  SIGN WITH 18x18 (450x450) MIN. ORANGE FLAG ATTACHED



FIRST SIGN LOCATED APPROXIMATELY 500' FROM DOUBLE TYPE III BARRICADES



MODEL: 610021.NAMES
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	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**NORTH OF DOW ROAD - ROAD CLOSURE DETAIL
IL ROUTE 109 CULVERT REPLACEMENT**

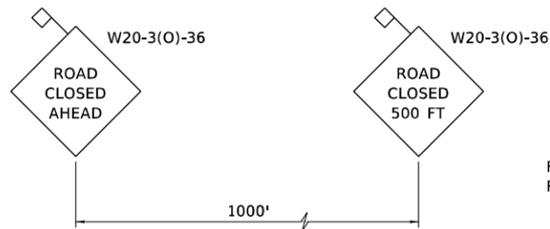
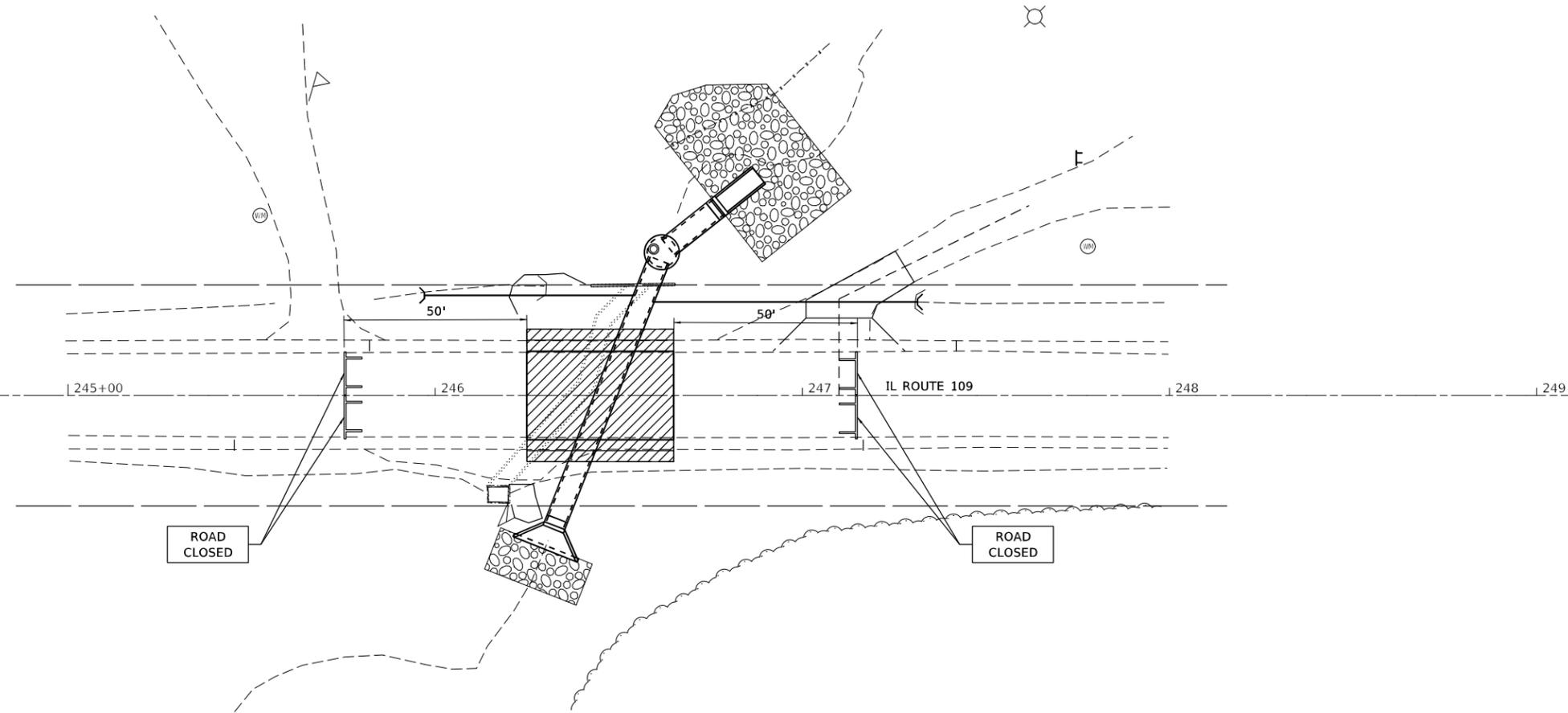
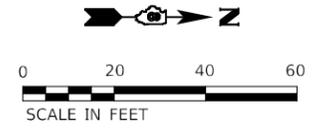
SCALE: 1"=20' SHEET 1 OF 2 SHEETS STA. TO STA.

* FAS ROUTE 747, FAU ROUTE 8813 (IL ROUTE 109)

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	(57,58,59) RS-2	JERSEY	60	50
CONTRACT NO. 76L10				
ILLINOIS FED. AID PROJECT				

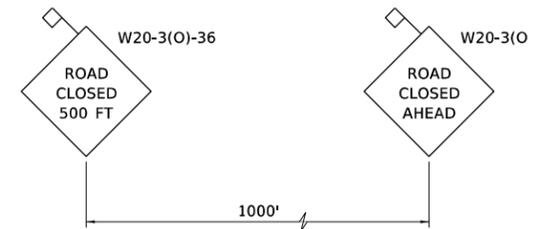
LEGEND

-  WORK ZONE
-  TYPE III BARRICADE
-  SIGN WITH 18x18 (450x450) MIN. ORANGE FLAG ATTACHED



FIRST SIGN LOCATED APPROXIMATELY 500'
FROM DOUBLE TYPE III BARRICADES

FIRST SIGN LOCATED APPROXIMATELY 500'
FROM DOUBLE TYPE III BARRICADES



MODEL: 610001.NAMES
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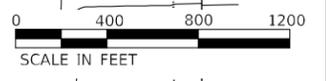
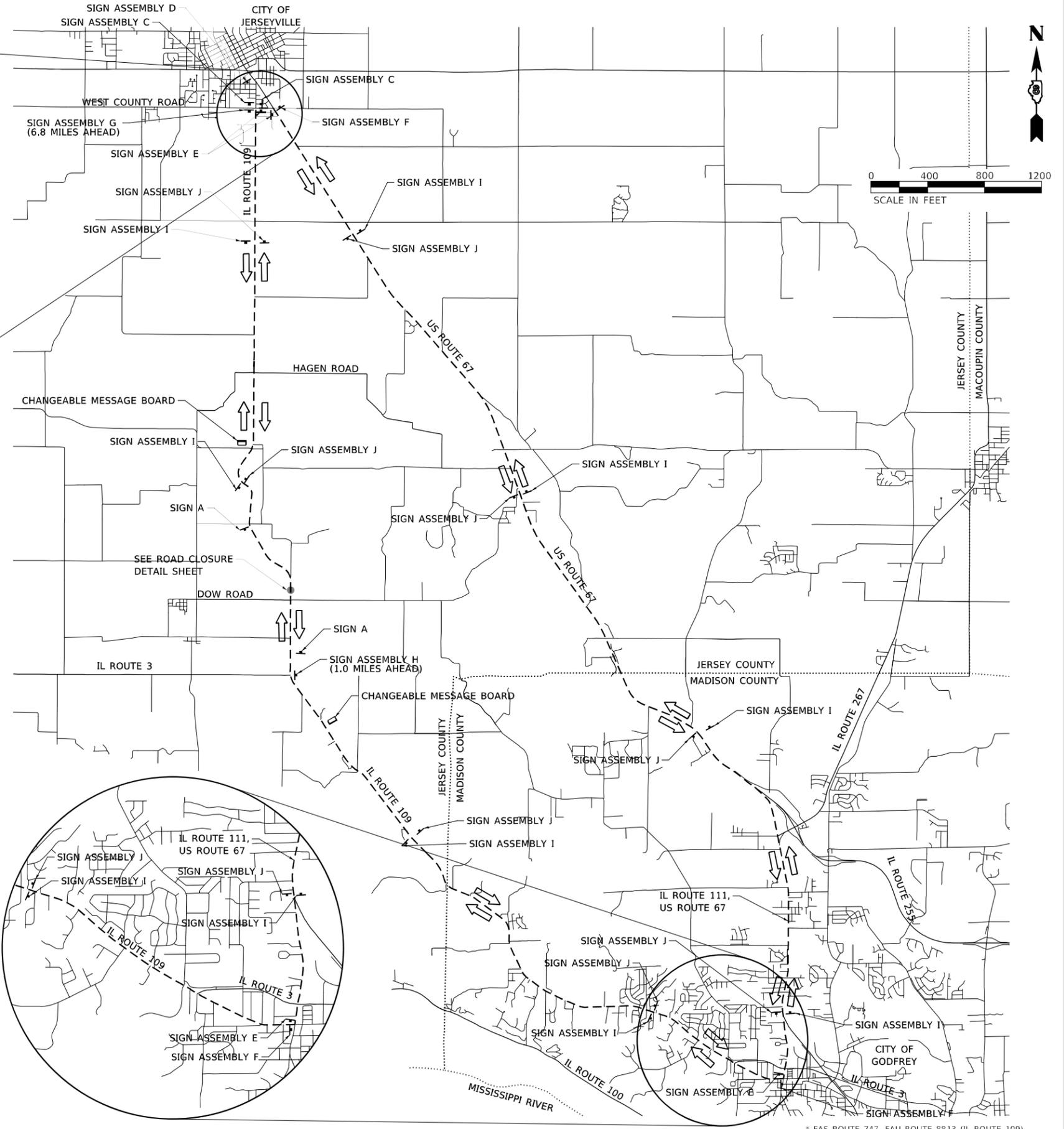
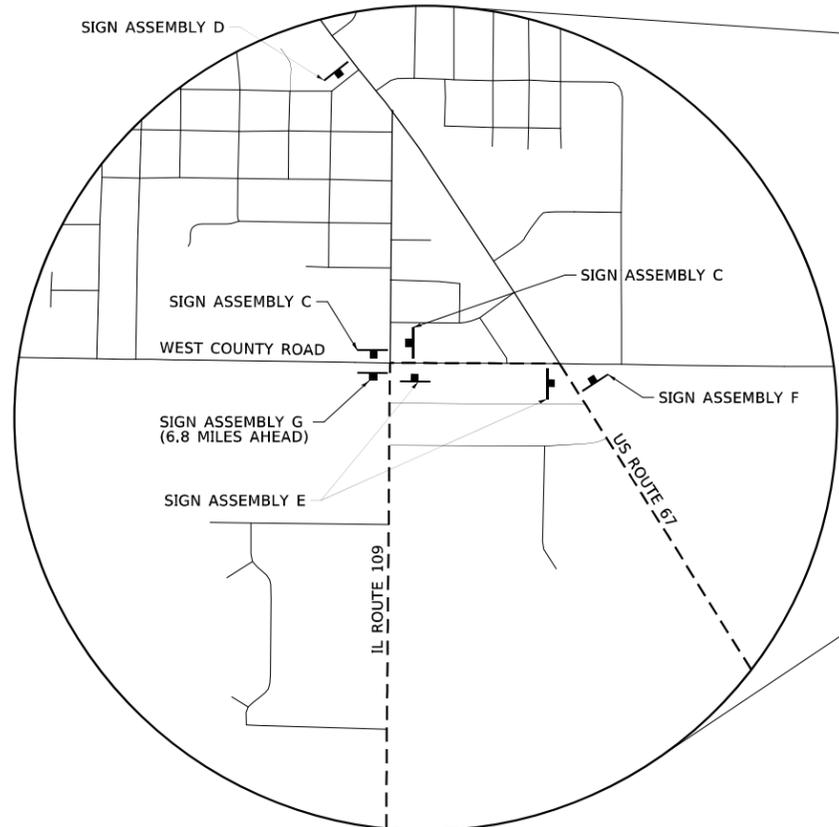
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**NORTH OF HAGEN ROAD - ROAD CLOSURE DETAIL
IL ROUTE 109 CULVERT REPLACEMENT**

SCALE: 1"=20' SHEET 2 OF 2 SHEETS STA. TO STA.

* FAS ROUTE 747, FAU ROUTE 8813 (IL ROUTE 109)

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	(57,58,59) RS-2	JERSEY	60	51
CONTRACT NO. 76L10				
ILLINOIS FED. AID PROJECT				



SIGN A ROAD CLOSED TO THRU TRAFFIC R11-4	SIGN ASSEMBLY B DETOUR ILLINOIS 109 M4-8 M1-1100 M5-1R	SIGN ASSEMBLY C DETOUR ILLINOIS 109 M4-8 M1-1100 M5-1L	SIGN ASSEMBLY D DETOUR ILLINOIS 109 M4-8 M1-1100 M6-1	SIGN ASSEMBLY E DETOUR ILLINOIS 109 M4-8 M1-1100 M6-1R
SIGN ASSEMBLY F DETOUR ILLINOIS 109 M4-8 M1-1100 M6-1L	SIGN ASSEMBLY G ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY R11-3a M4-10L	SIGN ASSEMBLY H ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY R11-3a M4-10R	SIGN ASSEMBLY I DETOUR NORTH ILLINOIS 109 M4-8 M3-1 M1-1100	SIGN ASSEMBLY J DETOUR SOUTH ILLINOIS 109 M4-8 M3-3 M1-1100

LEGEND

- CHANGEABLE MESSAGE BOARD
- ROAD CLOSURE LOCATION
- ROAD DETOUR
- DETOUR ROUTE

DETOUR GENERAL NOTES

1. MILEAGE FOR SIGNS ASSEMBLY G IS SHOWN IN PLAN VIEW.
2. CHANGEABLE MESSAGE BOARDS SHALL BE PLACED ONE WEEK PRIOR TO EACH ROAD CLOSURE.
3. SIGN PANEL ASSEMBLIES I AND J ARE LOCATED APPROXIMATELY 2 MILES APART.

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 DATE: 7/30/2021



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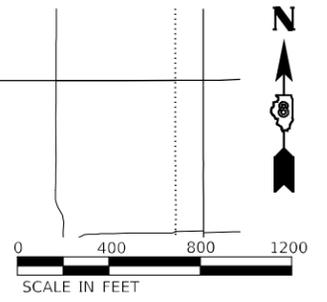
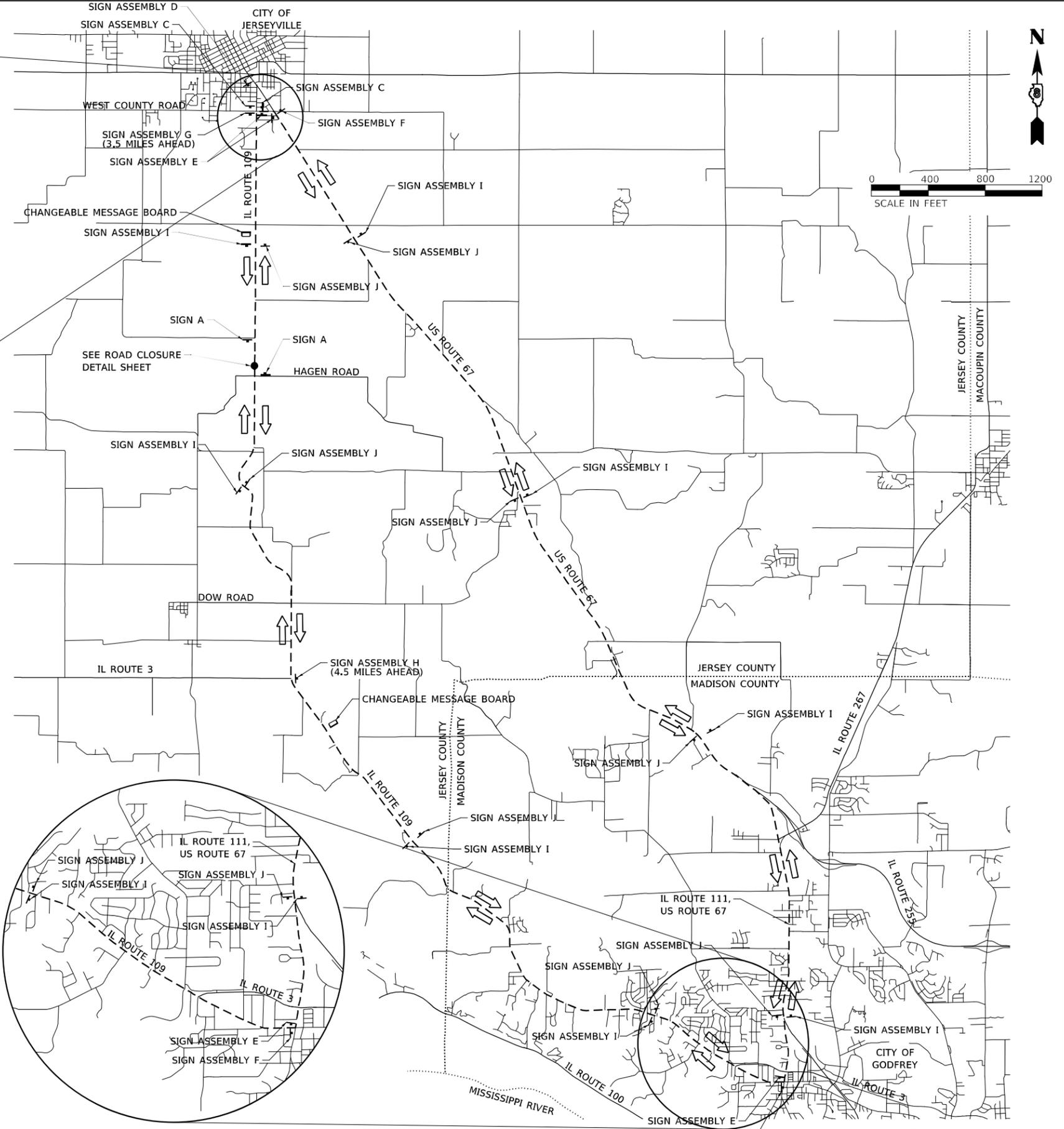
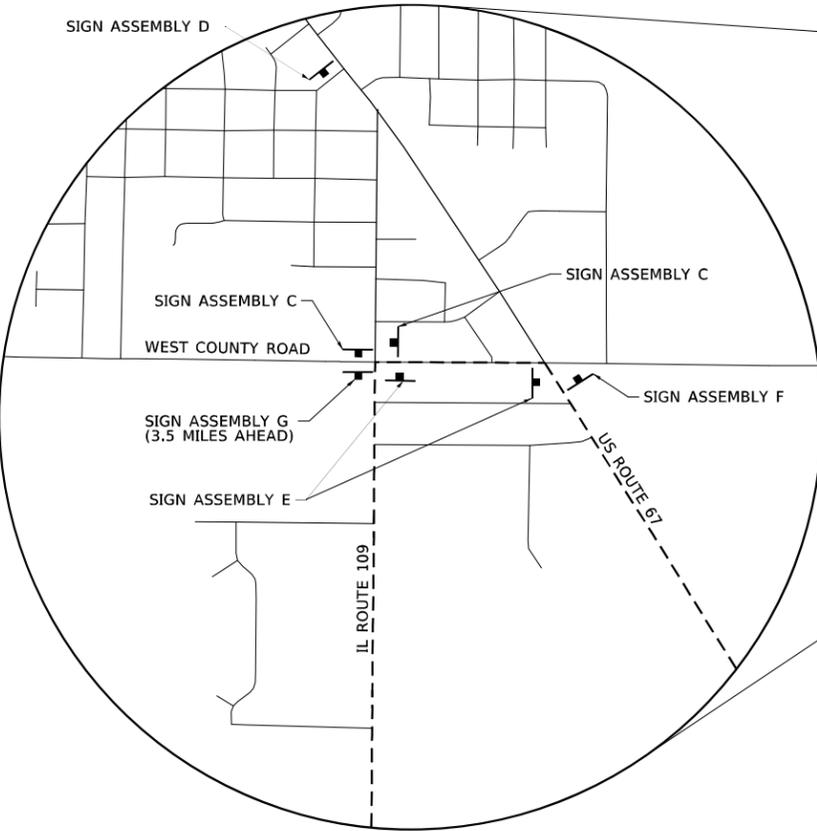
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**NORTH OF DOW ROAD - DETOUR SIGNING SHEET
FAP ROUTE 109 CULVERT REPLACEMENTS**

SCALE: SHEET 1 OF 2 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	(57,58,59) RS-2	JERSEY	60	52
			CONTRACT NO. 76L10	
ILLINOIS FED. AID PROJECT				

* FAS ROUTE 747, FAU ROUTE 8813 (IL ROUTE 109)



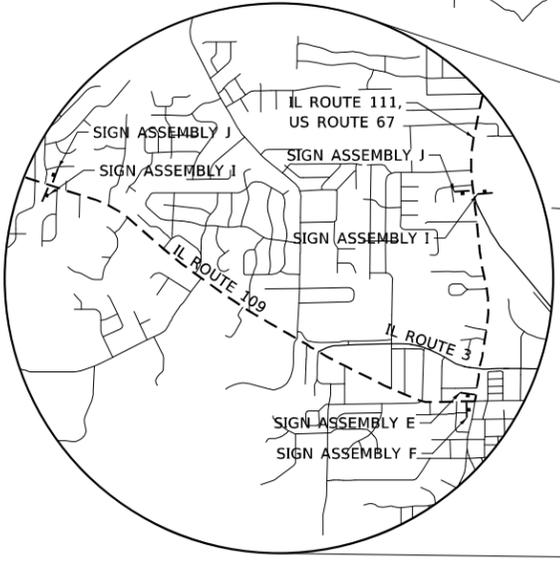
SIGN A	SIGN ASSEMBLY B	SIGN ASSEMBLY C	SIGN ASSEMBLY D	SIGN ASSEMBLY E
ROAD CLOSED TO THRU TRAFFIC R11-4	DETOUR ILLINOIS 109 M4-8 M1-1100 M5-1R	DETOUR ILLINOIS 109 M4-8 M1-1100 M5-1L	DETOUR ILLINOIS 109 M4-8 M1-1100 M6-1	DETOUR ILLINOIS 109 M4-8 M1-1100 M6-1R
SIGN ASSEMBLY F	SIGN ASSEMBLY G	SIGN ASSEMBLY H	SIGN ASSEMBLY I	SIGN ASSEMBLY J
DETOUR ILLINOIS 109 M4-8 M1-1100 M6-1L	ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY DETOUR R11-3a M4-10L	ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY DETOUR R11-3a M4-10R	DETOUR NORTH ILLINOIS 109 M4-8 M3-1 M1-1100	DETOUR SOUTH ILLINOIS 109 M4-8 M3-3 M1-1100

LEGEND

- CHANGEABLE MESSAGE BOARD
- ROAD CLOSURE LOCATION
- ROAD DETOUR
- DETOUR ROUTE

DETOUR GENERAL NOTES

1. MILEAGE FOR SIGNS ASSEMBLY G IS SHOWN IN PLAN VIEW.
2. CHANGEABLE MESSAGE BOARDS SHALL BE PLACED ONE WEEK PRIOR TO EACH ROAD CLOSURE.
3. SIGN PANEL ASSEMBLIES I AND J ARE LOCATED APPROXIMATELY 2 MILES APART.



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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**NORTH OF HAGEN ROAD - DETOUR SIGNING SHEET
FAP ROUTE 109 CULVERT REPLACEMENTS**

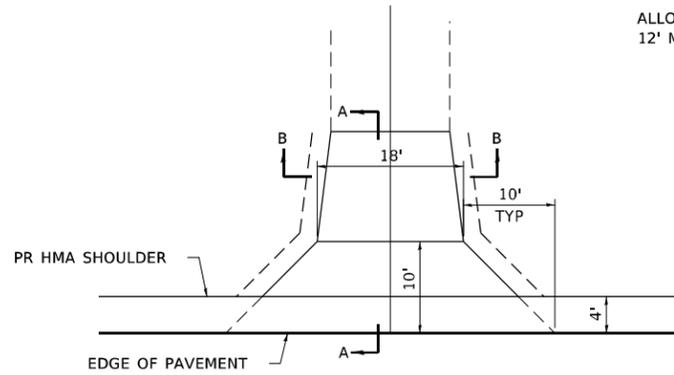
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 76L10				
ILLINOIS FED. AID PROJECT				

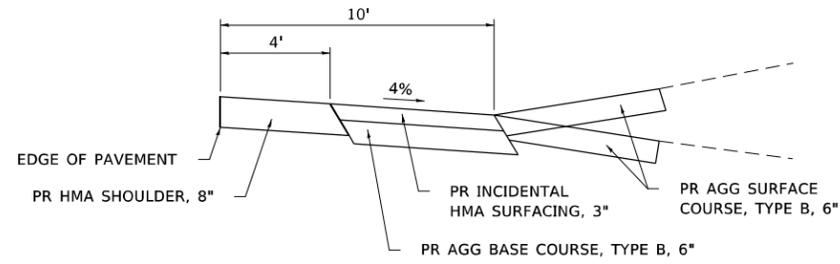
* FAS ROUTE 747, FAU ROUTE 8813 (IL ROUTE 109)

**AGGREGATE PRIVATE/COMMERCIAL
ENTRANCE DETAIL**

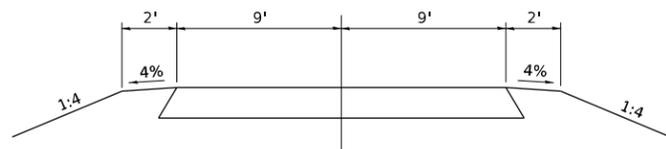
ALLOWABLE PRIVATE ENTRANCE WIDTHS (W):
12' MINIMUM, 24' MAXIMUM.



PLAN



**SECTION A-A PRIVATE ENTRANCE
(NOT TO SCALE)**



**SECTION B-B
(NOT TO SCALE)**

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* FAS ROUTE 747, FAU ROUTE 8813 (IL ROUTE 109)



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	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**MISCELLANEOUS DETAILS
IL ROUTE 109 CULVERT REPLACEMENTS**

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	(57,58,59) R5-2	JERSEY	60	54
CONTRACT NO. 76L10				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

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DESIGNED -	REvised -
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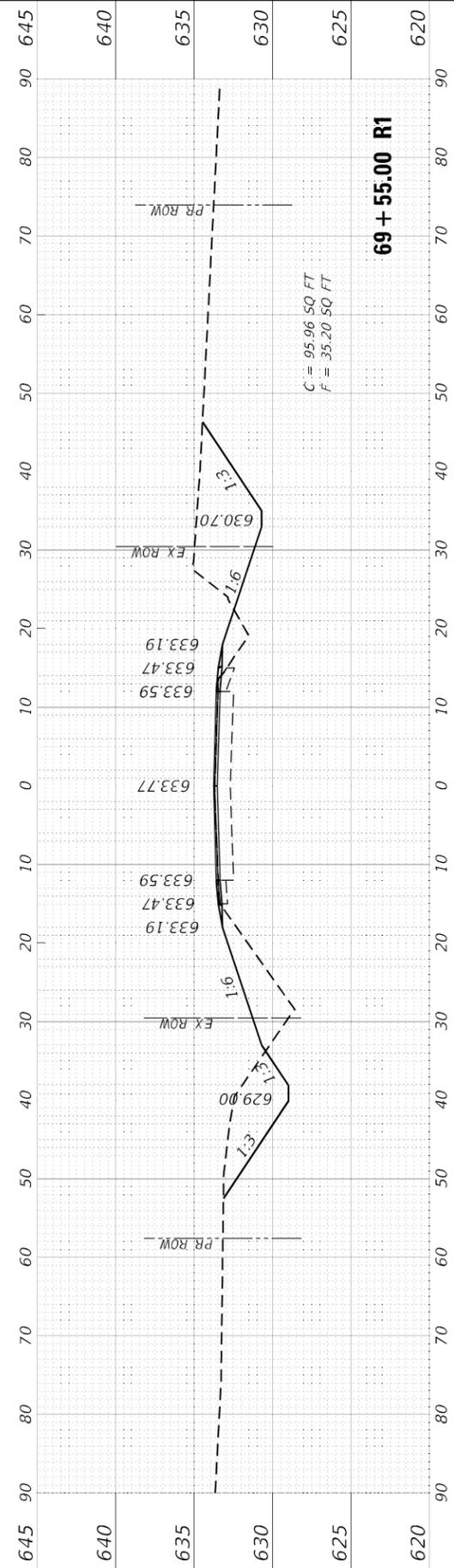
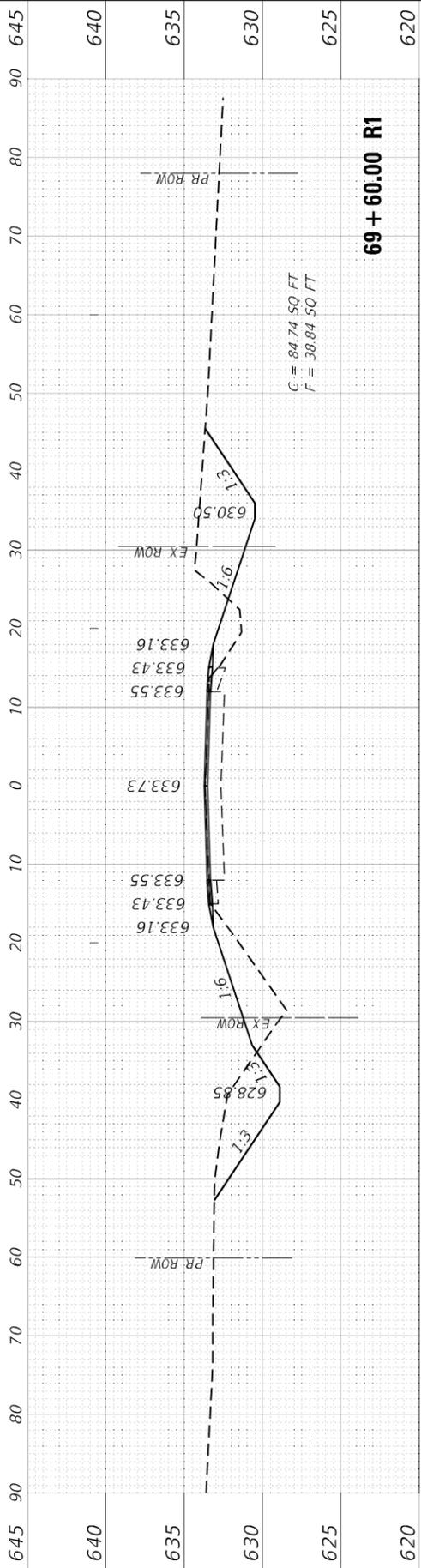
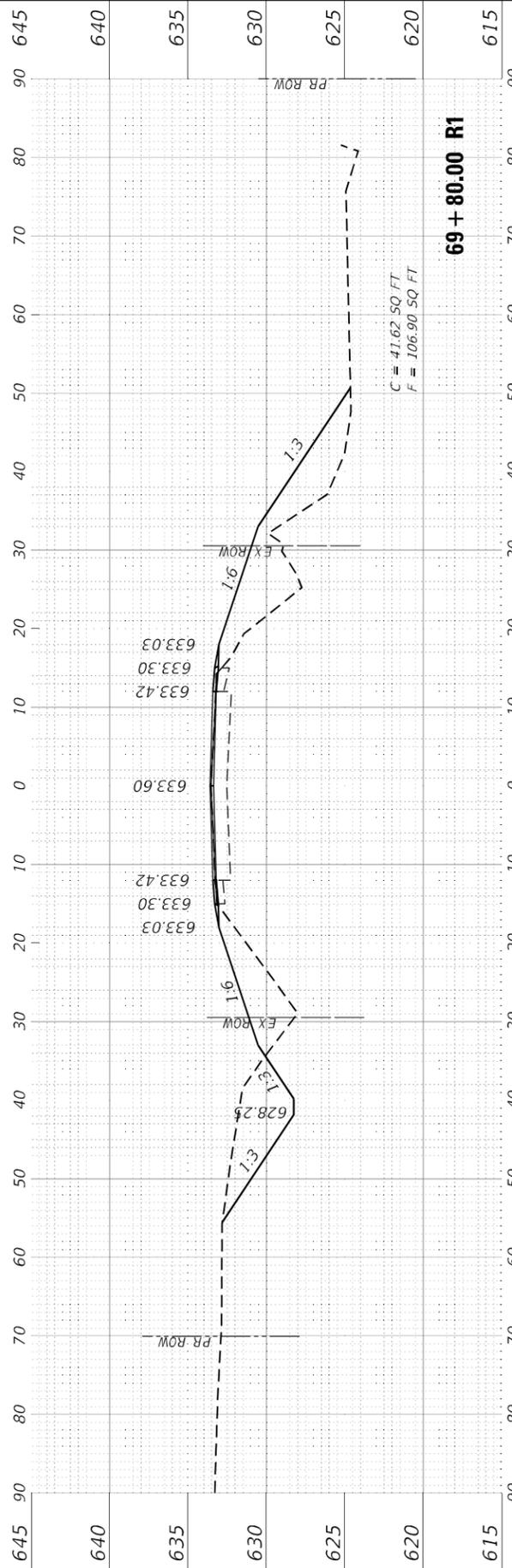
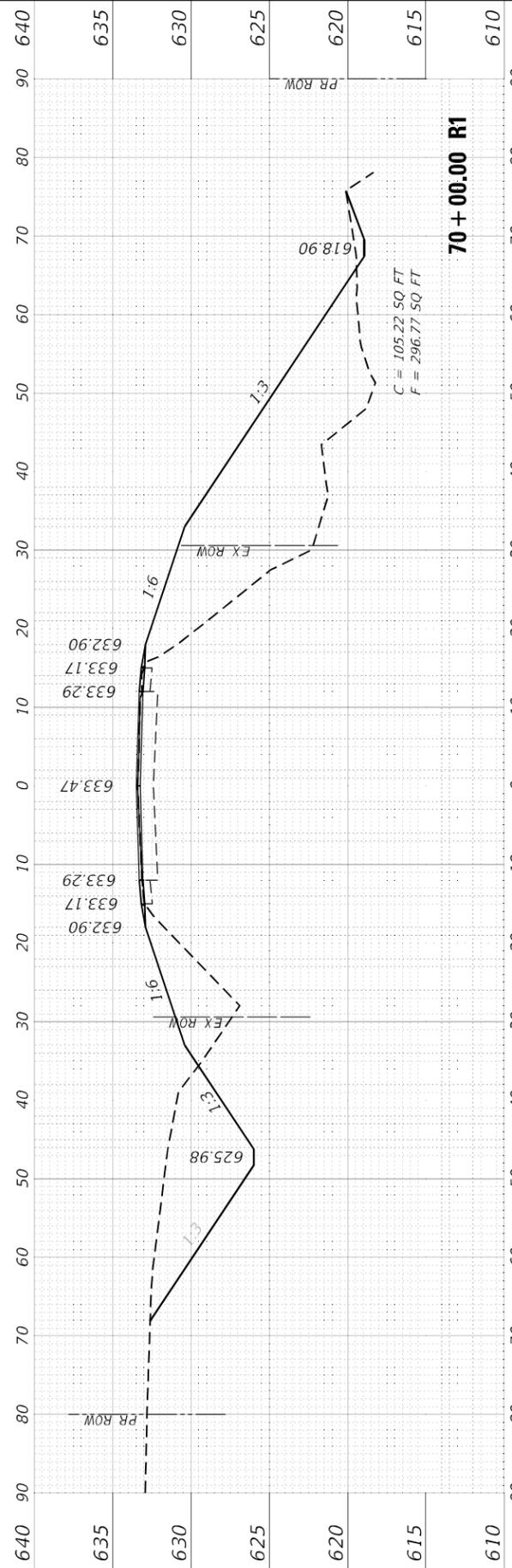
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**DOW ROAD CROSS SECTIONS
 IL ROUTE 109 CULVERT REPLACEMENT**

SCALE: SHEET 1 OF 6 SHEETS STA. 69+55.00 R1 TO STA. 70+00.00 R1

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	(57, 58, 59) RS-2	JERSEY	60	55
CONTRACT NO. 76L10			ILLINOIS FED. AID PROJECT	

* FAS 747, FAU 8813 (IL 109)



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

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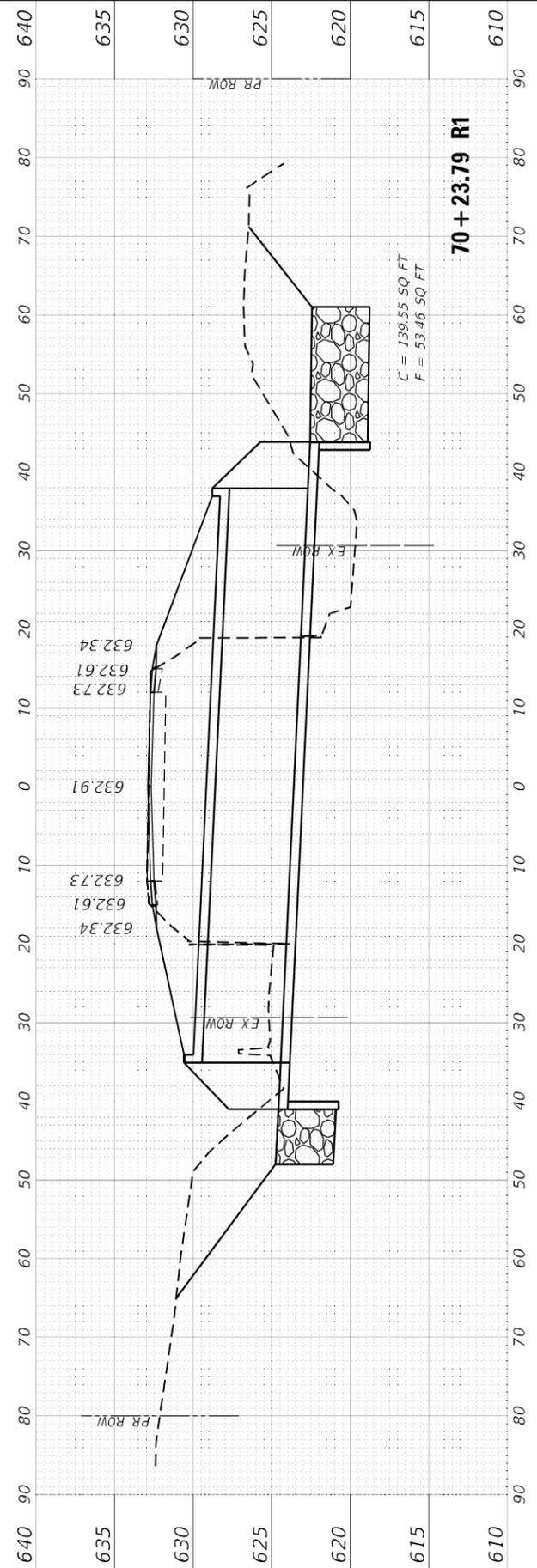
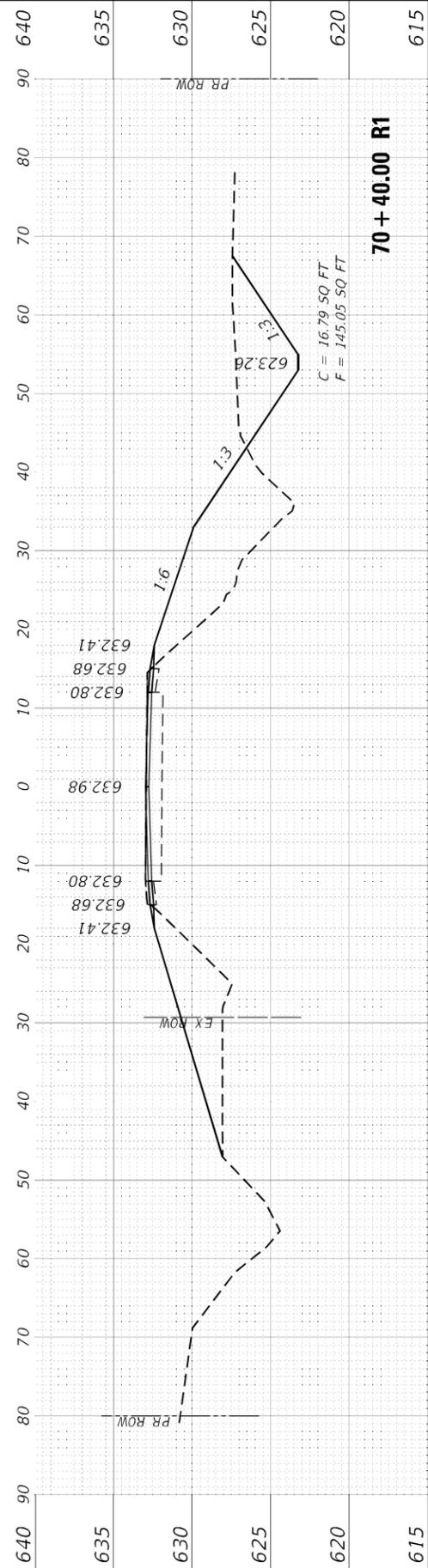
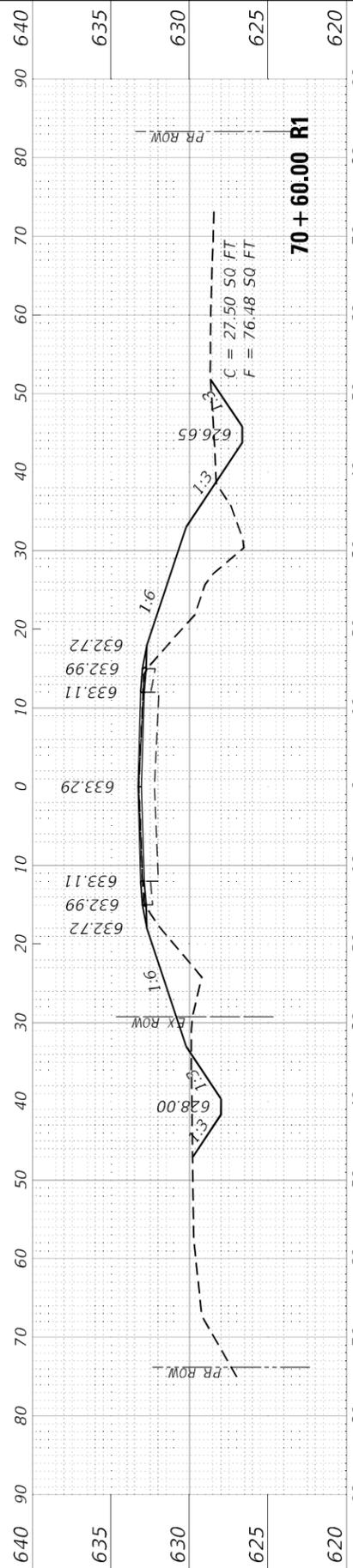
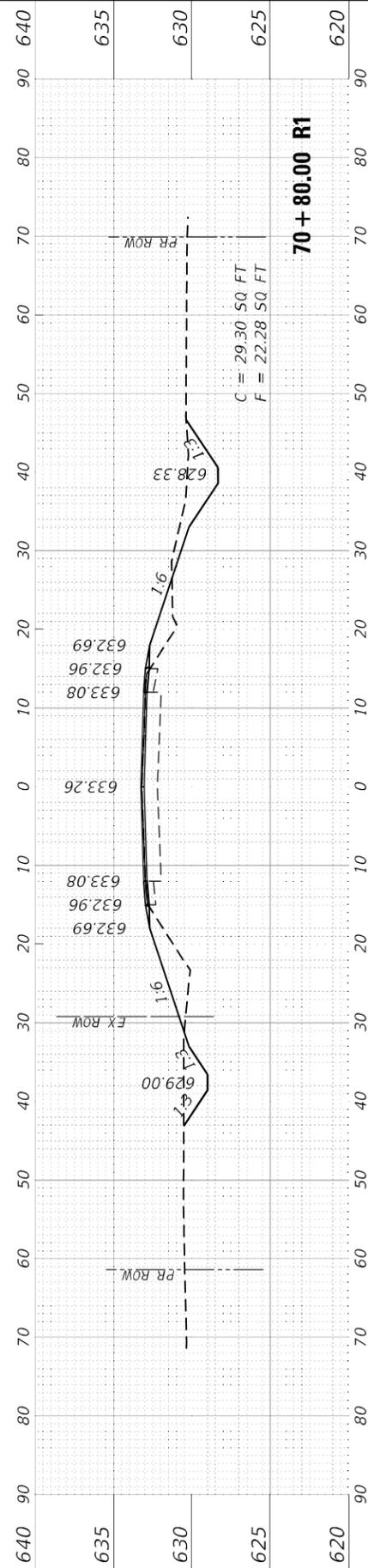
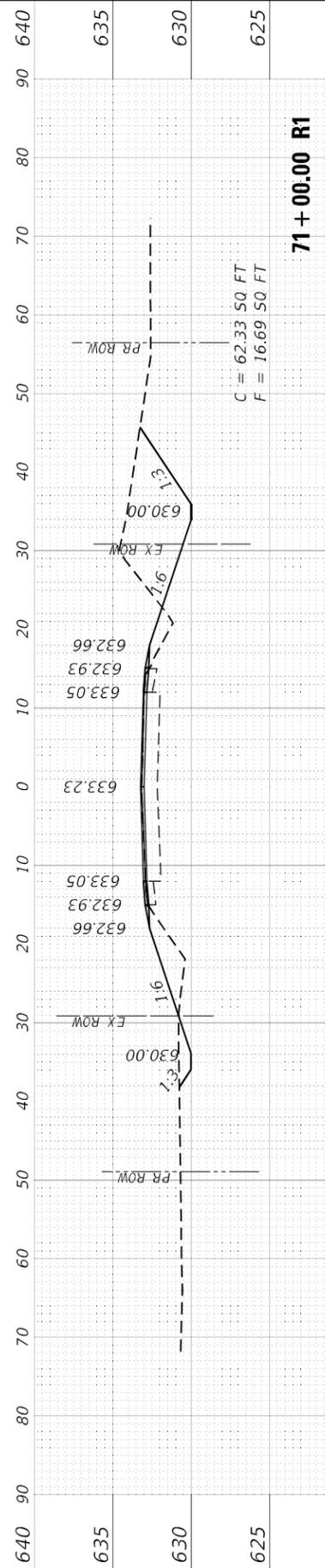
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**DOW ROAD CROSS SECTIONS
 IL ROUTE 109 CULVERT REPLACEMENT**

SCALE: SHEET 2 OF 6 SHEETS STA. 70+23.79 R1 TO STA. 71+00.00 R1

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(57, 58, 59) RS-2	JERSEY	60	56
			CONTRACT NO. 76L10	
			ILLINOIS FED. AID PROJECT	

* FAS 747, FAU 8813 (IL 109)



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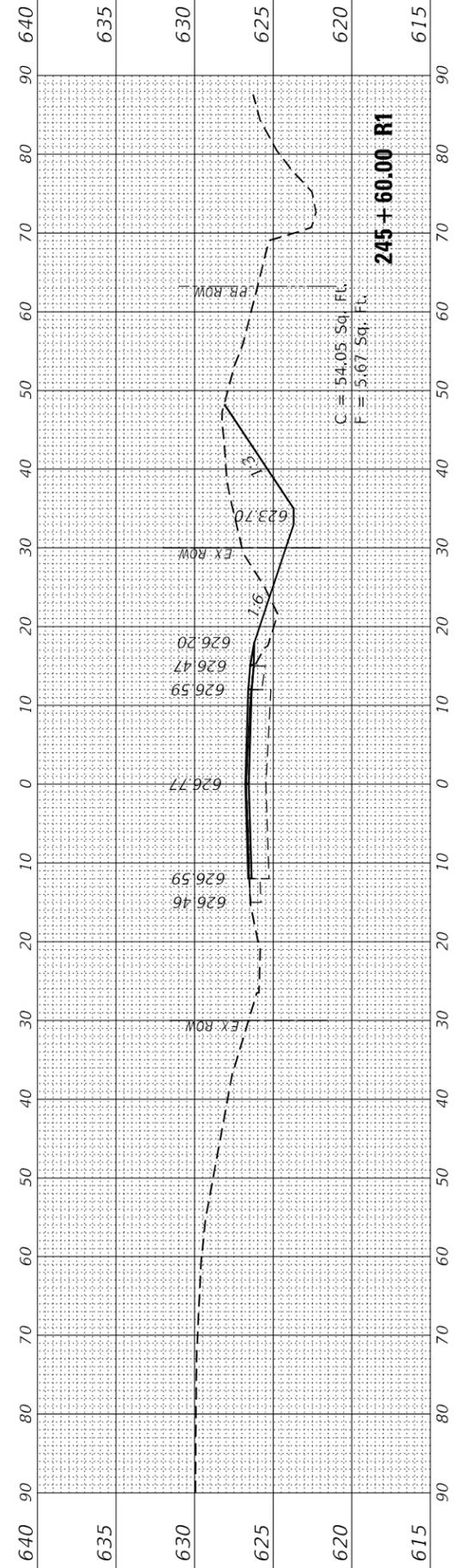
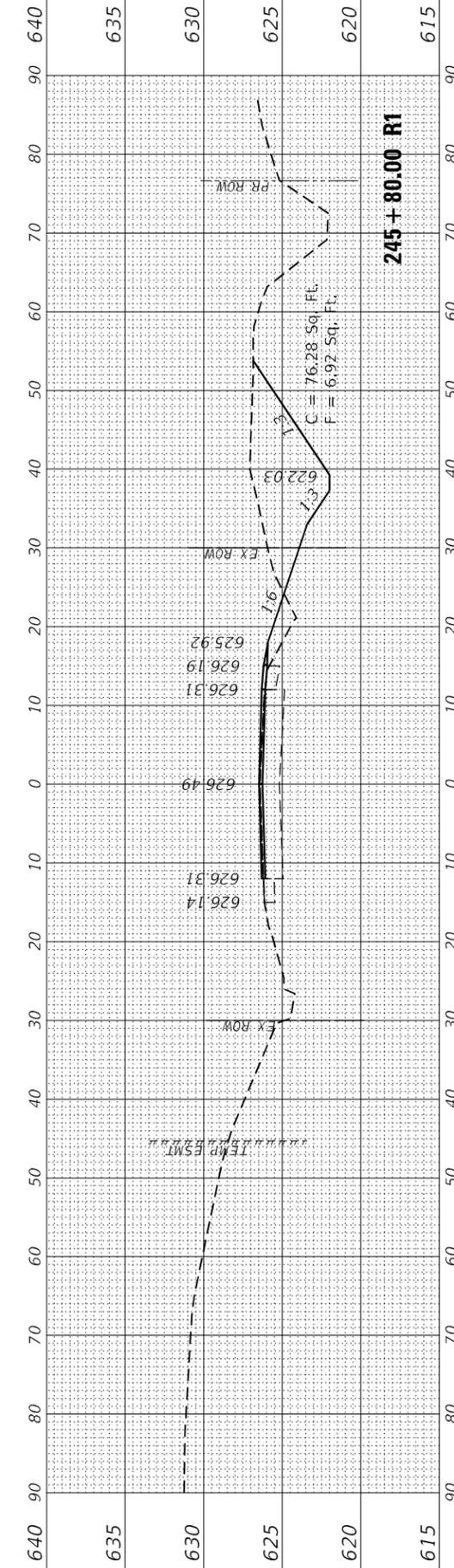
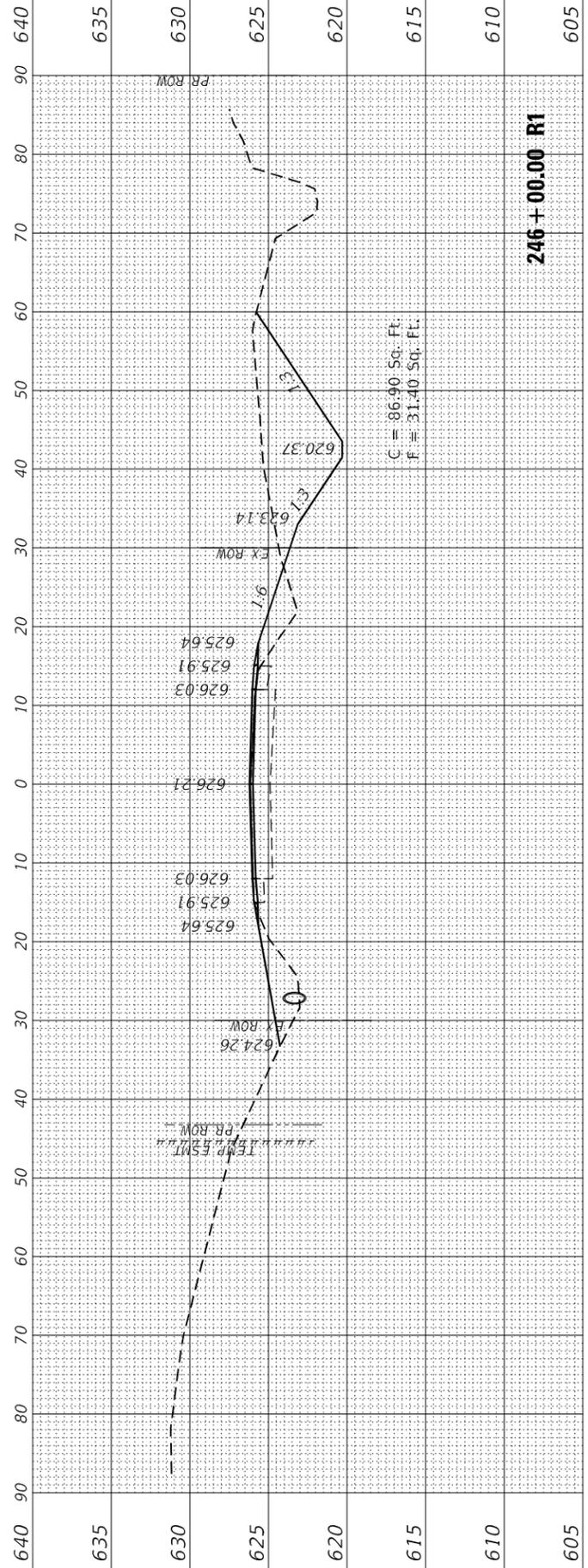
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	NOTE BOOK		
	TEMPLATE		
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STATE OF ILLINOIS	DESIGNED -	REVISED -
DEPARTMENT OF TRANSPORTATION	DRAWN -	REVISED -
	CHECKED -	REVISED -
	DATE -	REVISED -



SCALE:	SHEET 3 OF 6 SHEETS	STA. 245+60.00 R1 TO STA. 246+00.00 R1
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	(57, 58, 59) R5-2	JERSEY	60	57
CONTRACT NO. 76L10			ILLINOIS FED. AID PROJECT	

* FAS 747, FAU 8813 (IL 109)

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

ORIGINAL SURVEY NO.	SURVEYED	BY	DATE
	PLOTTED		
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	AREAS CHECKED		

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DESIGNED -	REvised -
DRAWN -	REvised -
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DATE -	REvised -

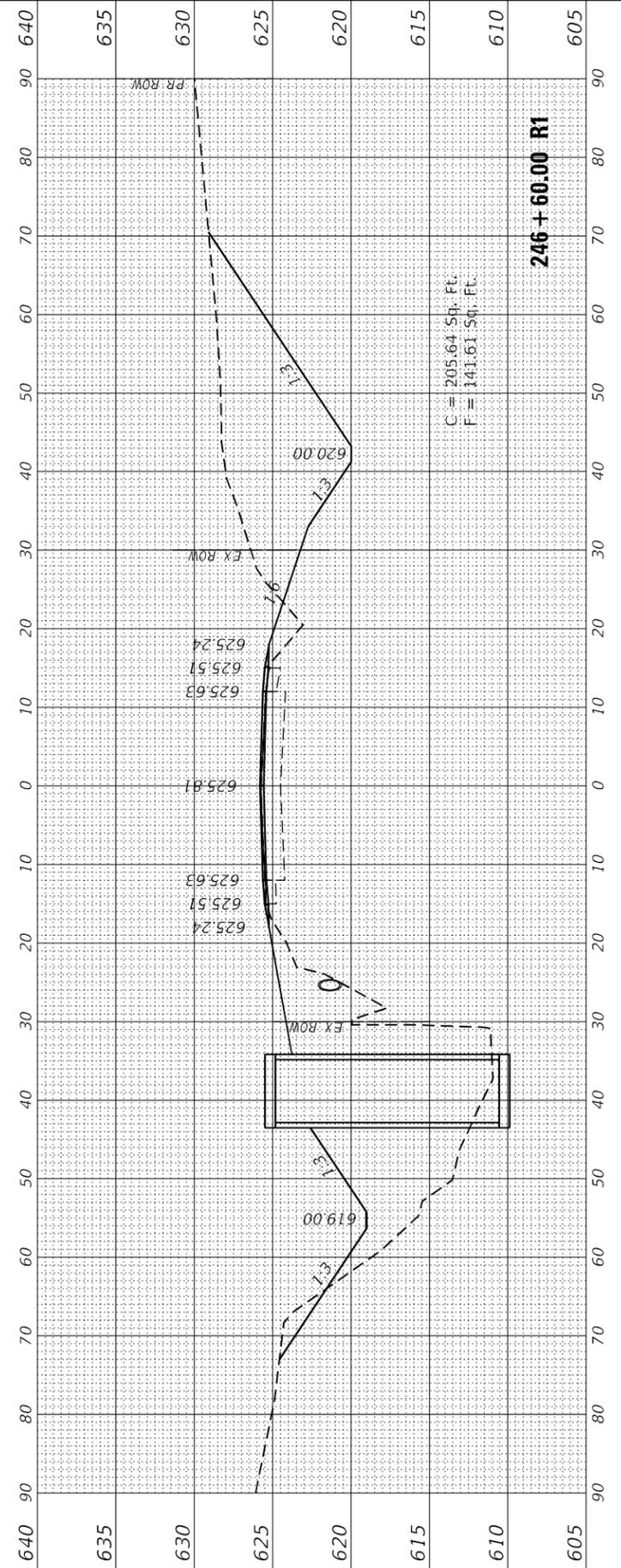
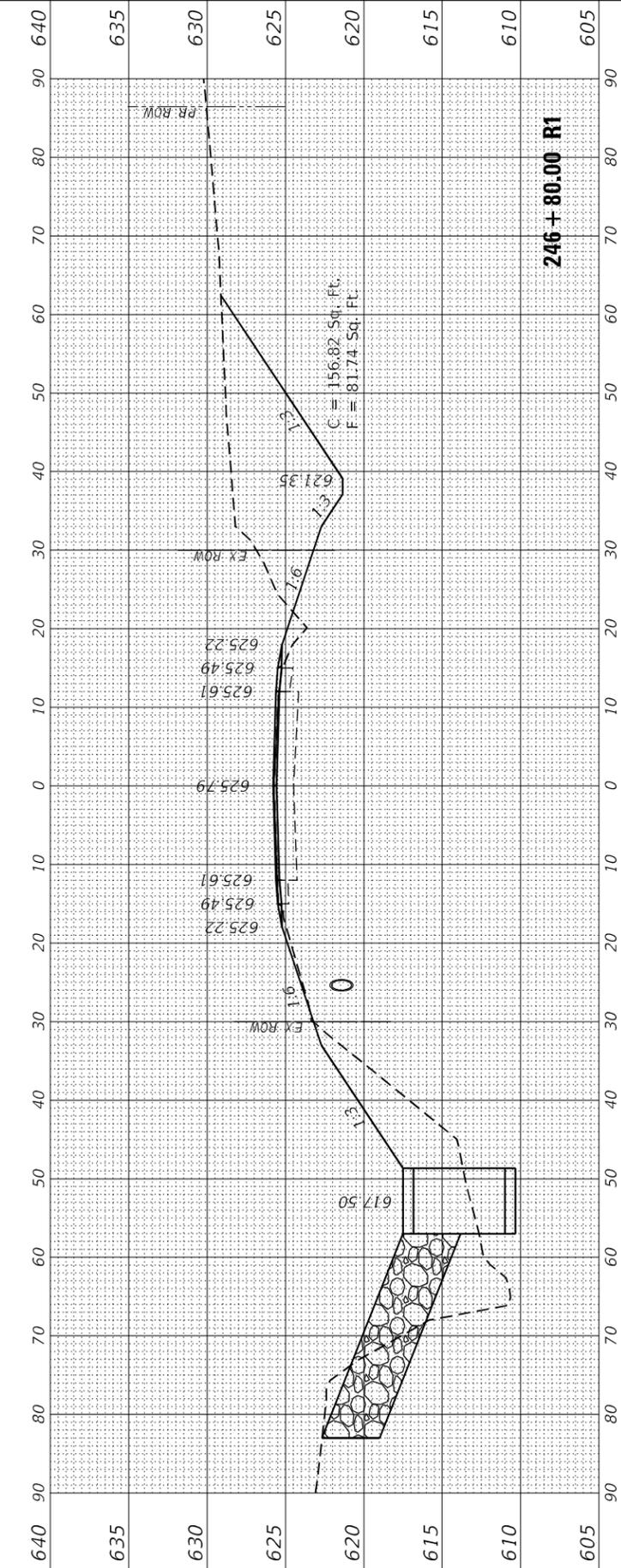
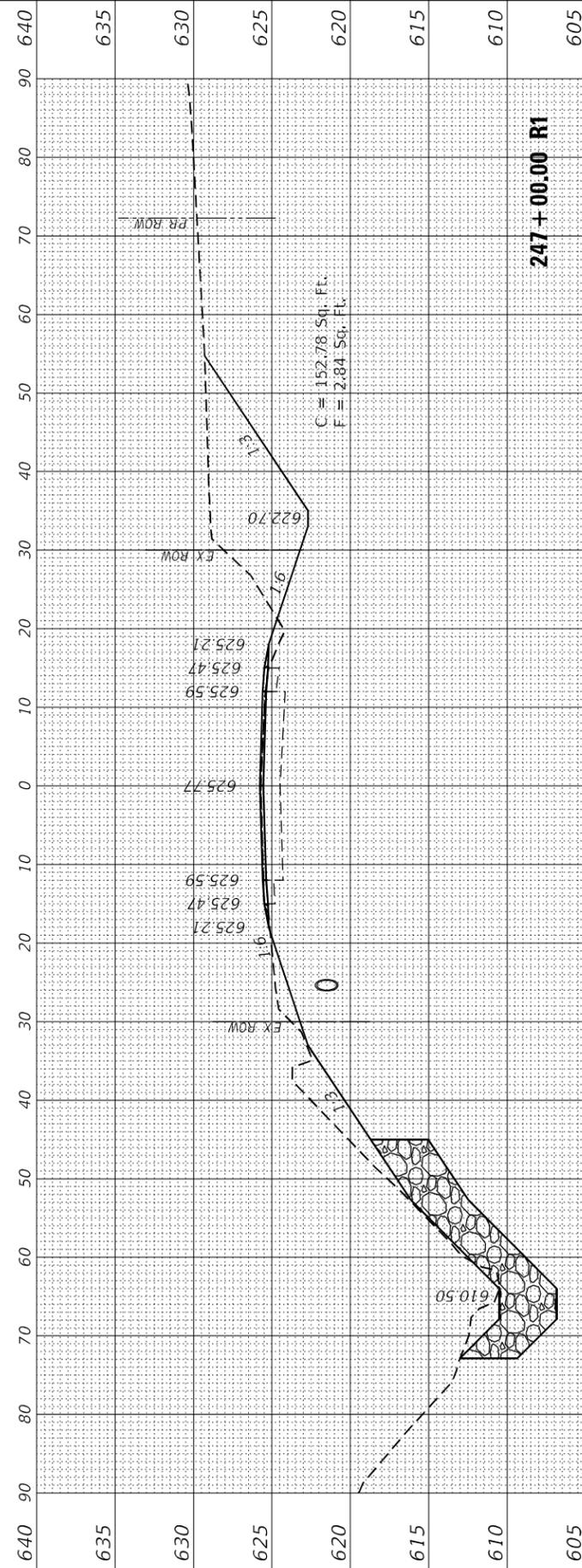
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

HAGEN ROAD CROSS SECTIONS
 IL ROUTE 109 CULVERT REPLACEMENT

SCALE: SHEET 5 OF 6 SHEETS STA. 246+46.47 R1 TO STA. 246+60.00 R1

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	(57, 58, 59) RS-2	JERSEY	60	59
CONTRACT NO. 76L10			ILLINOIS FED. AID PROJECT	

* FAS 747, FAU 8813 (IL 109)



FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

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PLOT DATE = 7/30/2021	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SCALE:		SHEET 6 OF 6 SHEETS		STA. 247+20.00 R1 TO STA. 247+40.00 R1		ILLINOIS FED. AID PROJECT	
HAGEN ROAD CROSS SECTIONS IL ROUTE 109 CULVERT REPLACEMENT				SECTION (57, 58, 59) RS-2		COUNTY JERSEY	
F.A. RTE. *				TOTAL SHEETS 60		SHEET NO. 60	
				CONTRACT NO. 76L10			

* FAS 747, FAU 8813 (IL 109)

