

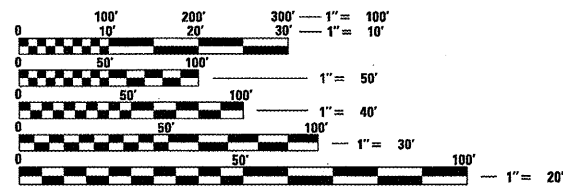
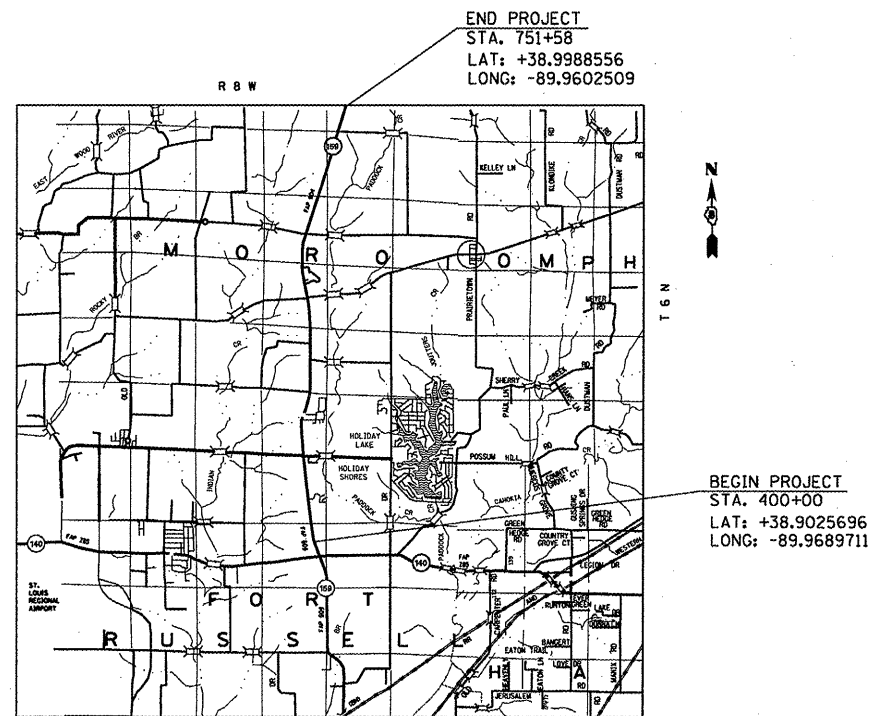
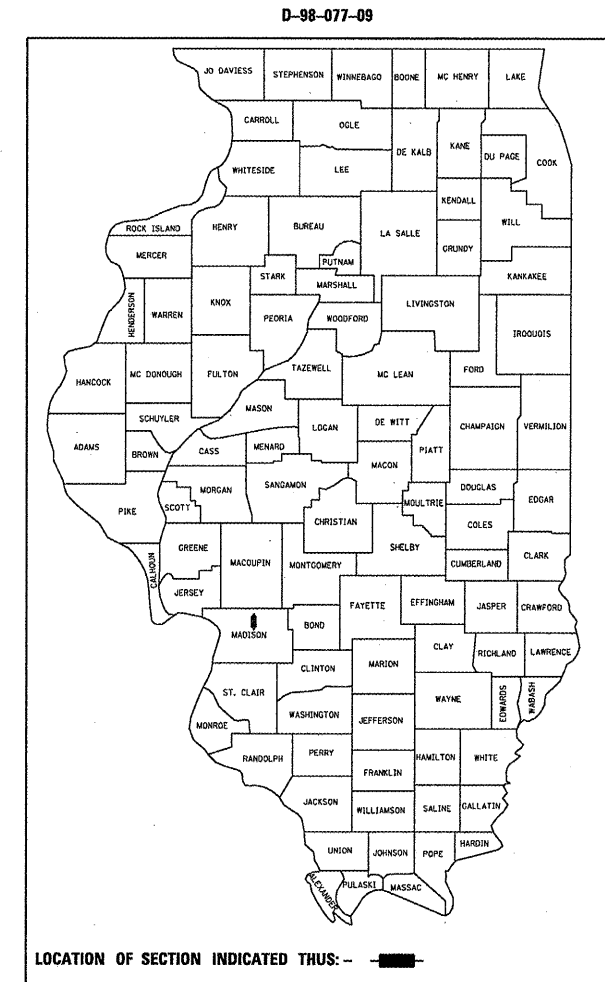
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 604 (IL 159)
SECTION (101,102)RS-3
PROJECT: ACF-0604(024)
MADISON COUNTY
RESURFACING
C-98-073-10

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
604	(101,102)RS-3	MADISON	13	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 76D27		

FOR INDEX OF SHEETS, SEE SHEET NO. 2



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: PATTI LEBEAU (618) 346-3179
PROJECT MANAGER: CHERYL KEPLAR (618) 346-3186

CONTRACT NO. 76D27

TRAFFIC DATA
2010 ADT = 5150
2030 ADT = 6300
SU = 3.9%
MU = 3.9%

GROSS LENGTH = 35,158' = 6.66 MI
NET LENGTH = 35,158' = 6.66 MI

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED *De S De*
May C Hamis
DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

January 29, 2010
Scott E. Stitt P.E.
ENGINEER OF DESIGN AND ENVIRONMENT

January 29, 2010
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

GENERAL NOTES

1. THE STANDARDS AND REVISION NUMBERS LISTED SHALL APPLY TO THIS PROJECT.

2. ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE BE GIVEN TO UTILITIES BEFORE DIGGING. FIELD MARKING OF FACILITIES MAY BE OBTAINED BY CONTACTING J.U.L.I.E. OR FOR NON-MEMBERS, THE UTILITY COMPANY DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:

UTILITY	ABOVE GROUND	BELOW GROUND
• AMEREN IP (GAS & ELECTRIC)	X	X
• AT&T ILLINOIS	X	X
• BUCKEYE PARTNERS, L.P.		X
• EXPLORER PIPELINE COMPANY		X
• FOSTERBURG WATER DISTRICT		X
• FRONTIER COMMUNICATIONS COMPANY	X	X
• HOLIDAY SHORES SANITARY DISTRICT		X
• MADISON TELEPHONE COMPANY	X	X
• MARATHON PIPE LINE LLC		X
• NORTHEAST CENTRAL COUNTY PUBLIC WATER DISTRICT		X
• SOUTHWESTERN ELECTRIC COOPERATIVE, INC.	X	X

MEMBERS OF J.U.L.I.E. (800) 892-0123 ARE INDICATED BY •. NON-J.U.L.I.E. MEMBERS MUST BE NOTIFIED INDIVIDUALLY.

3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.

4. PROPOSED PAVEMENT MARKING SHALL BE PLACED IN THE SAME LOCATION AS EXISTING, AS DIRECTED BY THE RESIDENT ENGINEER.

5. FLAGGERS SHALL BE PRESENT DURING ALL CLOSURE HOURS INCLUDING LUNCH HOUR AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.

6. 'ROAD CONSTRUCTION AHEAD' SIGNS SHALL BE PLACED AT THE BEGINNING OF THE PROJECT PLUS THE INTERSECTING SIDEROADS, AND WILL BE CONSIDERED INCLUDED IN THE TRAFFIC CONTROL PAY ITEMS. ALL CONSTRUCTION SIGNS SHALL BE 48" X 48" FLUORESCENT ORANGE.

7. THE CONTRACTOR SHALL POST AND MAINTAIN THE ROADWAY WITH "NO PASSING ZONES NOT STRIPED NEXT MILES" SIGNS UNTIL MARKINGS HAVE BEEN RESTORED IN ACCORDANCE WITH ARTICLE 701.17(C). COST INCLUDED IN THE TRAFFIC CONTROL ITEM.

8. ALL TRAFFIC CONTROL DEVICES AS HEREIN SPECIFIED AND ANY ADDITIONAL TRAFFIC CONTROL DEVICES AS DEEMED NECESSARY BY THE RESIDENT ENGINEER SHALL BE INCLUDED IN THE CONTRACT TRAFFIC CONTROL AND PROTECTION PAY ITEMS.

9. NO OVERNIGHT LANE CLOSURES WILL BE ALLOWED.

10. ALL EXISTING AND PROPOSED RIGHT-OF-WAY LINES AND PROPERTY LINES SHOWN ON THE PLAN SHEETS ARE GRAPHICAL REPRESENTATIONS AND SHALL NOT BE USED AS A MEANS TO ESTABLISH OWNERSHIP. IN ALL MATTERS RELATING TO RIGHT-OF-WAY, THE PLAT OF HIGHWAYS SHALL BE THE CONTROLLING DOCUMENT.

11. ALL EXISTING AND PROPOSED RIGHT-OF-WAY LINES AND PROPERTY LINES SHOWN ON THE PLAN SHEETS ARE GRAPHICAL REPRESENTATIONS AND SHALL NOT BE USED AS A MEANS TO ESTABLISH OWNERSHIP. IN ALL MATTERS RELATING TO RIGHT-OF-WAY, THE PLAT OF HIGHWAYS SHALL BE THE CONTROLLING DOCUMENT.

12. THE CONTRACTOR AND THE ENGINEER SHALL BE AWARE THAT NO SURVEY WAS PERFORMED FOR THIS PROJECT. THE STATIONING AND TOPO SHOWN IN THE PLANS WERE CREATED USING MICROFILM AND FIELD MEASUREMENTS MADE BY DESIGN PERSONNEL. BOTH SHALL BE ASSUMED TO BE APPROXIMATE.

13. SHORT-TERM PAVEMENT MARKING SHALL BE APPLIED TO THE MILLED AND FINAL BITUMINOUS SURFACE. A QUANTITY FOR TEMPORARY PAVEMENT MARKING EQUAL TO THE AMOUNT OF PERMANENT PAVEMENT MARKING HAS BEEN ADDED TO THE PLANS. ONLY REMOVAL OF SHORT TERM PAVEMENT MARKING REMOVAL FROM FINAL SURFACE TO BE PAID AS 'WORK ZONE PAVEMENT MARKING REMOVAL'.

14. THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

ROUTE	FAP 604 (IL 159)
SECTION	(101,102)RS-2
COUNTY	MADISON
CONTRACT	76D27

DESCRIPTION:	IL 159 FROM 0.1 MI NORTH OF IL 140 TO MACOUPIN CO. LINE
--------------	---

ADT (Construction Yr)	5150
MU%:	3.9
SU%:	3.9
20 YR. ESAL'S:	1.35

MIXTURE USE	SURFACE*	FULL DEPTH PATCHING	PARTIAL DEPTH PATCH
AC/PG	PG 64-22	PG 64-22	PG 64-22
RAP % (MAX)	10%	15%	10%
DESIGN AIR VOIDS	4.0% @ Ndes=70	4.0% @ Ndes=70	4.0% @Ndes=70
MIX COMPOSITION			
(GRADATION MIXTURE)		IL 19.0	
FRICTION AGG	MIXTURE "D"	MIXTURE "B"	MIXTURE "D"

• HMA Surface shall meet IL 9.5 Gradation.

•• Top Lift Shoulders - Design this mix at 2.0% voids and add asphalt to reduce voids to 1.5%.

Plan quantities for Bituminous Concrete Surface Course Items are calculated using a unit weight of 112 lb/sq yd/in (59.8 kg/sq m/25 mm thickness).

INDEX OF SHEETS

1. COVER SHEET
2. INDEX OF SHEETS, STANDARDS & COMMITMENTS, GENERAL NOTES
3. SUMMARY OF QUANTITIES
4. LOCATION MAP
- 5.-6. TYPICAL SECTIONS
- 7.-8. SCHEDULES OF QUANTITIES
- 9.-10. DETECTOR LOOP REPLACEMENT
- 11.-13. PAVEMENT MARKING SHEETS

STANDARDS

- 000001-05
- 701201-03
- 701306-02
- 701311-03
- 701901-01
- 780001-02
- 781001-03
- 886001-01
- 886006-01

COMMITMENTS

NONE

FILE NAME = #FILE#	USER NAME = #USER#	DESIGNED - ---	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES, INDEX OF SHEETS, & COMMITMENTS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = #SCALE#	CHECKED - ---	REVISED - ---			604	(101,102)RS-3	MADISON	13	2
	PLOT DATE = #DATE#	DATE - -----	REVISED - ---			CONTRACT NO. 76D27				
						FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT				

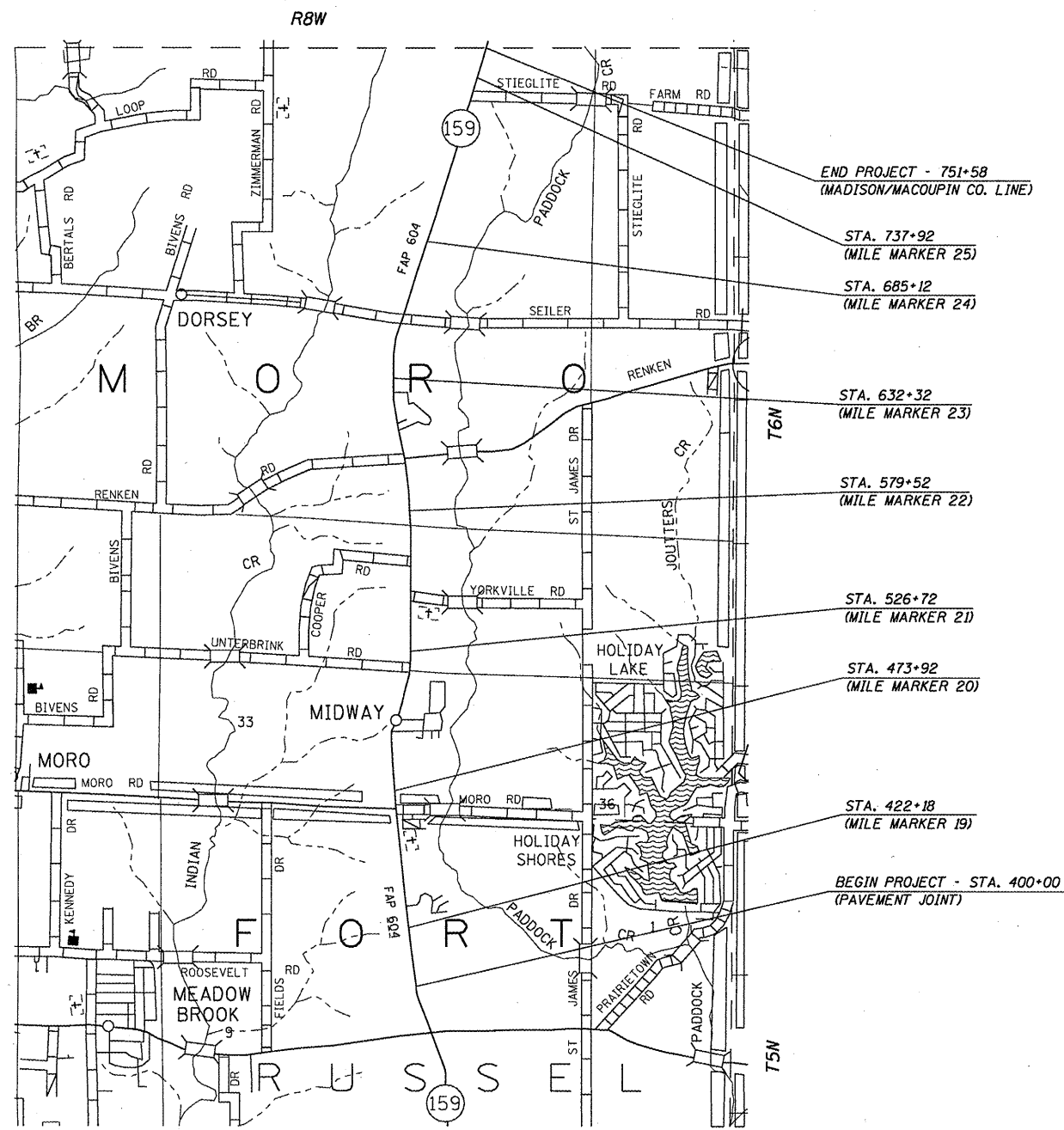
SUMMARY OF QUANTITIES

SUMMARY OF QUANTITIES			80% FED. 20% STATE TOTAL QUANTITIES	CONSTRUCTION TYPE CODE			SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		1000	-----	-----	CODE NO	ITEM	UNIT		-----	-----	-----
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	31	31									
40600300	AGGREGATE (PRIME COAT)	TON	145	145									
40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	8119	8119									
44000155	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"	SQ YD	96652	96652									
44200168	PAVEMENT PATCHING, TYPE II, 14 INCH	SQ YD	265	265									
44200172	PAVEMENT PATCHING, TYPE III, 14 INCH	SQ YD	69	69									
44200174	PAVEMENT PATCHING, TYPE IV, 14 INCH	SQ YD	93	93									
44300200	STRIP REFLECTIVE CRACK CONTROL TREATMENT	FOOT	73231	73231									
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	4									
67100100	MOBILIZATION	L SUM	1	1									
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1									
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1									
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	7081	7081									
70300210	TEMPORARY PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	260	260									
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	95366	95366									
70300250	TEMPORARY PAVEMENT MARKING - LINE 8"	FOOT	470	470									
70300260	TEMPORARY PAVEMENT MARKING - LINE 12"	FOOT	693	693									
70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	144	144									
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	1180	1180									
* 78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	229	229									
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	95366	95366									
* 78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	470	470									
* 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	693	693									
* 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	144	144									
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	541	541									
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	541	541									
* 80300100	LOCATING UNDERGROUND CABLE	FOOT	100	100									
* 88600600	DETECTOR LOOP REPLACEMENT	FOOT	1635	1635									
92007600	TRAINNEES	HOUR	500	500									

@YDBO *Specialty Items

Rev.

FILE NAME =	USER NAME = #USER#	DESIGNED - ---	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#		DRAWN - ---	REVISED - ---			604	(101,102,1RS-3)	MADISON	13	3	
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	PLOT DATE = #DATE#	DATE - -----	REVISED - ---			FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT					



LOCATION MAP

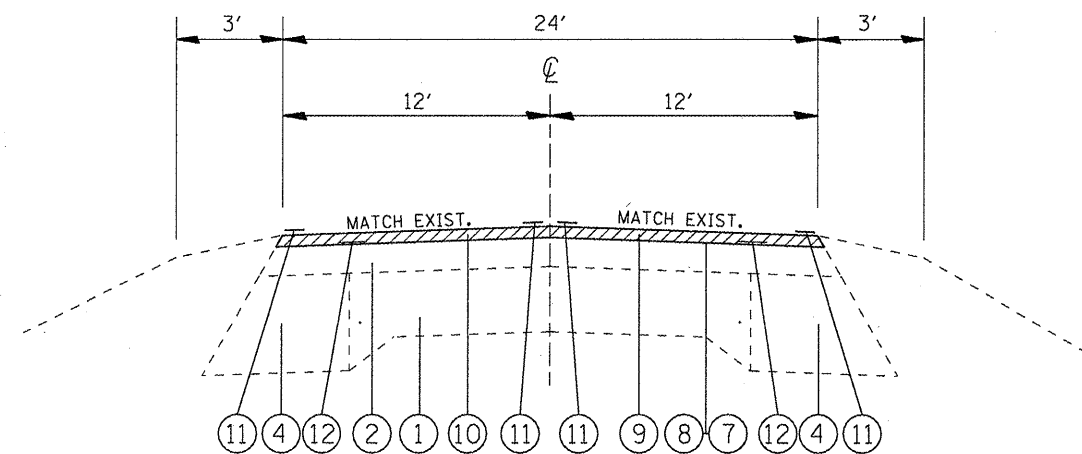
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	PLOT DATE = #DATE#	DATE -	REVISD -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

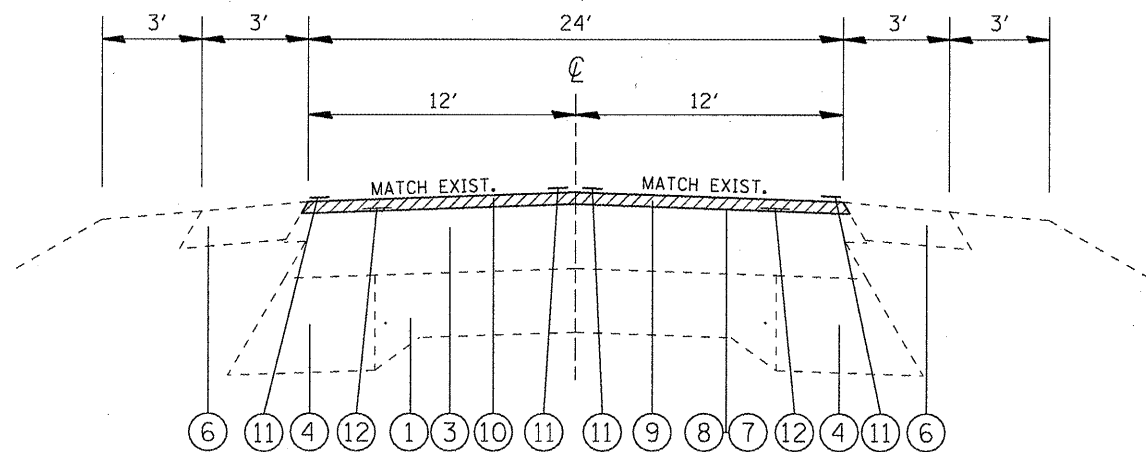
LOCATION MAP

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

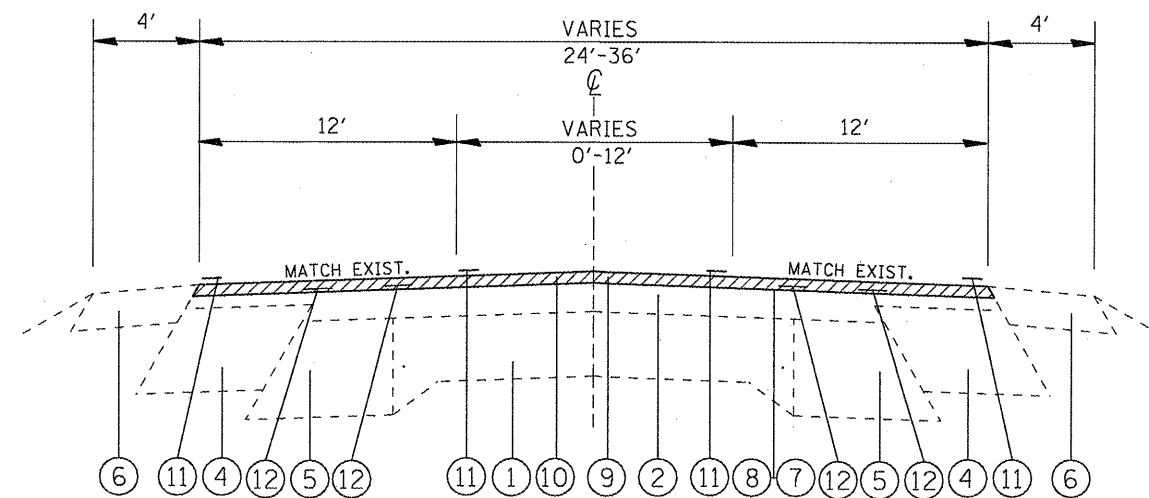
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
604	(101,102)RS-3	MADISON	13	4
FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT			CONTRACT NO. 76D27	



TYPICAL SECTION
(IL 159)
STA. 400+00 TO STA. 440+45
STA. 470+70 TO STA. 751+58



TYPICAL SECTION
(IL 159)
STA. 440+45 TO STA. 457+90



TYPICAL SECTION (@ MORO RD.)
(IL 159)
STA. 457+90.00 TO 470+70.00

LEGEND

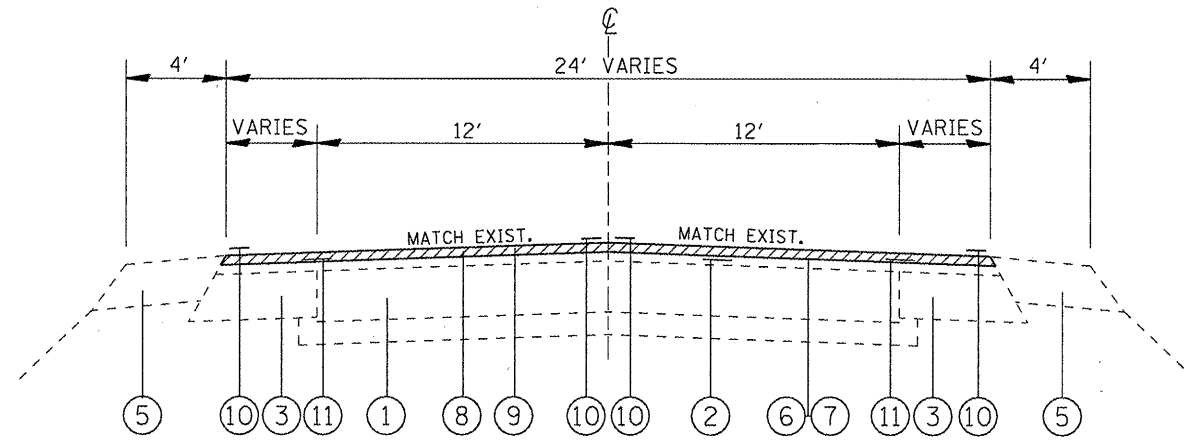
- ① EXISTING 9"-6"-9" CONCRETE PAVEMENT
- ② EXISTING HMA RESURFACING 5 1/2"
- ③ EXISTING HMA RESURFACING VARIES 5 1/2" TO 25"
- ④ EXISTING HMA WIDENING, 11"
- ⑤ EXISTING HMA WIDENING, 10 3/4"
- ⑥ EXISTING BITUMINOUS SHOULDERS, 8"
- ⑦ PROPOSED AGGREGATE (PRIME COAT)
- ⑧ PROPOSED BITUMINOUS MATERIAL (PRIME COAT)
- ⑨ PROPOSED HMA SURFACE REMOVAL, 1 1/2"
- ⑩ PROPOSED HMA SURFACE COURSE, 1 1/2"
- ⑪ PROPOSED THERMOPLASTIC PAVEMENT MARKING
- ⑫ PROPOSED STRIP REFLECTIVE CRACK CONTROL

FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -
#FILE#		DRAWN -	REVISED -
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	PLOT DATE = #DATE#	DATE -	REVISED -

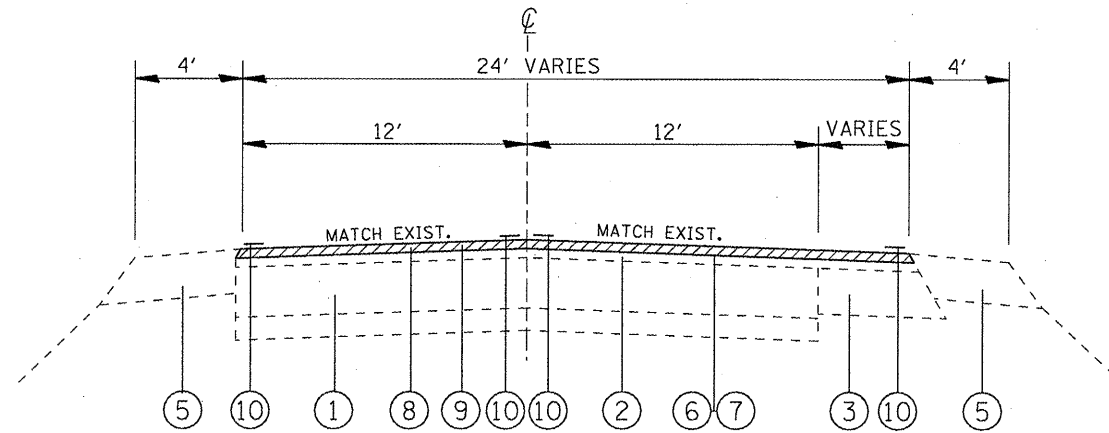
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS	
IL 159	
SCALE: _____	SHEET NO. ___ OF ___ SHEETS
STA. _____ TO STA. _____	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
604	(101.102)RS-3	MADISON	13	5
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 76D27	



TYPICAL SECTION
(MORO RD)
STA. 238+38.00 TO STA. 239+50.00



TYPICAL SECTION
(MORO RD)
STA. 239+89.00 TO STA. 241+20.00

LEGEND

- ① EXISTING 9'-6"-9" CONCRETE PAVEMENT
- ② EXISTING HMA RESURFACING 5 1/2"
- ③ EXISTING HMA WIDENING, 11"
- ④ EXISTING HMA WIDENING, 10 3/4"
- ⑤ EXISTING BITUMINOUS SHOULDERS, 8"
- ⑥ PROPOSED AGGREGATE (PRIME COAT)
- ⑦ PROPOSED BITUMINOUS MATERIAL (PRIME COAT)
- ⑧ PROPOSED HMA SURFACE REMOVAL, 1 1/2"
- ⑨ PROPOSED HMA SURFACE COURSE, 1 1/2"
- ⑩ PROPOSED THERMOPLASTIC PAVEMENT MARKING
- ⑪ PROPOSED STRIP REFLECTIVE CRACK CONTROL

FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL SECTIONS MORO ROAD	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#		DRAWN -	REVISED -			604	(101.102)RS-3	MADISON	13	6
		CHECKED -	REVISED -			SCALE: _____ SHEET NO. ___ OF ___ SHEETS STA. _____ TO STA. _____		CONTRACT NO. 76D27		
		PLOT SCALE = #SCALE#	DATE -			FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT				

PAVEMENT MARKING SCHEDULE

LOCATION			LENGTH	THERMOPLASTIC PAVEMENT MARKING							LETTERS & SYMBOLS	RAISED RELFLECTIVE PAVEMENT MARKER REMOVAL	RAISED RELFLECTIVE PAVEMENT MARKERS	COMMENTS
				4"			8"	12"		24"				
				SOLID YELLOW CENTER LINE	SKIP-DASH YELLOW CENTER LINE	SOLID WHITE EDGE LINE	SOLID WHITE	SOLID WHITE	SOLID YELLOW	STOP BARS				
STATION	TO	STATION	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT
IL 159														
400+00	TO	450+40	5040		1260	10080							63	63
450+40	TO	457+90	750		188	1500							9	9
457+90	TO	470+70	1280	4302		2511	470	407	286	48	176.4	112	112	MORO RD. INTER.
470+70	TO	490+41	1971		493	3942							25	25
490+41	TO	499+61	920	920	230	1840							12	12
499+61	TO	545+19	4558		1140	9116							57	57
545+19	TO	547+54	235	235	59	470							3	3
547+54	TO	550+95	341	682		682							4	4
550+95	TO	553+05	210	210	53	420							3	3
553+05	TO	559+63	658		165	1316							8	8
559+63	TO	564+35	472	472	118	944							6	6
564+35	TO	565+14	79	158		158							1	1
565+14	TO	575+21	1007	1007	252	2014							13	13
575+21	TO	580+42	521	1042		1042							7	7
580+42	TO	591+51	1109	1109	277	2218							14	14
591+51	TO	620+43	2892		723	5784							36	36
620+43	TO	632+02	1159	1159	290	2318							14	14
632+02	TO	634+38	236	472		472							3	3
634+38	TO	645+43	1105	1105	276	2210							14	14
645+43	TO	656+28	1085	1085	271	2170							14	14
656+28	TO	657+56	128		32	256							2	2
657+56	TO	667+86	1030	1030	258	2060							13	13
667+86	TO	742+83	7497		1874	14994							94	94
742+83	TO	751+58	875	875	164	1750							11	11
MORO RD.														
239+89	TO	241+20	131			333					41.4	3	3	
238+38	TO	239+50	112			350					41.4	3	3	
SUB-TOTALS				15863	8121	70950	470	407	286	48	259.20	541.48	541.48	
TOTAL					94934		470	693		48	260	541	541	

FILE NAME =	USER NAME = #USER#	DESIGNED - ---	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULES			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#		DRAWN - ---	REVISED - ---		SCALE: _____	SHEET NO. _____ OF _____ SHEETS	STA. _____ TO STA. _____	604	(101,102)RS-3	MADISON	13	7
		CHECKED - ---	REVISED - ---					CONTRACT NO. 76D27				
		DATE - -----	REVISED - ---					FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT				

RESURFACING SCHEDULE

LOCATION			BIT. MAT'L PRIME COAT	AGGREGATE PRIME COAT	SURFACE COURSE	HMA SURFACE REMOVAL 1.5"	STRIP REFLECTIVE CRACK CONTROL	REMARKS
Sta.	To	Sta.	(TON)	(TON)	(TON)	(SQ YD)	(FOOT)	
IL 159								
400+00	to	422+18	1.85	8.87	496.83	5914.67	4436	
422+18	to	440+45	1.52	7.31	409.25	4872.00	3654	M.M. 19
440+45	to	457+90	1.46	6.98	390.88	4653.33	3490	BEG. 3' SHLDRS
457+90	to	460+92	0.31	1.51	84.56	1006.67	1208	MORO RD. INT.
460+92	to	467+70	0.85	4.07	227.81	2712.00	2712	MORO RD. INT.
467+70	to	470+70	0.31	1.50	84.00	1000.00	1200	MORO RD. INT.
470+70	to	473+92	0.27	1.29	72.13	858.67	644	MORO RD. INT.
473+92	to	526+72	4.41	21.12	1182.72	14080.00	10560	M.M. 20
526+72	to	579+52	4.41	21.12	1182.72	14080.00	10560	M.M. 21
579+52	to	632+32	4.41	21.12	1182.72	14080.00	10560	M.M. 22
632+32	to	685+12	4.41	21.12	1182.72	14080.00	10560	M.M. 23
685+12	to	737+92	4.41	21.12	1182.72	14080.00	10560	M.M. 24
737+92	to	751+58	1.14	5.46	305.98	3642.67	2732	M.M. 25
MORO RD								
239+89	to	241+20	0.26	1.25	70.22	836.00	131	
238+38	to	239+50	0.24	1.13	63.5	756.00	224	
TOTAL			31	145	819	96652	73231	

PATCHING SCHEDULE

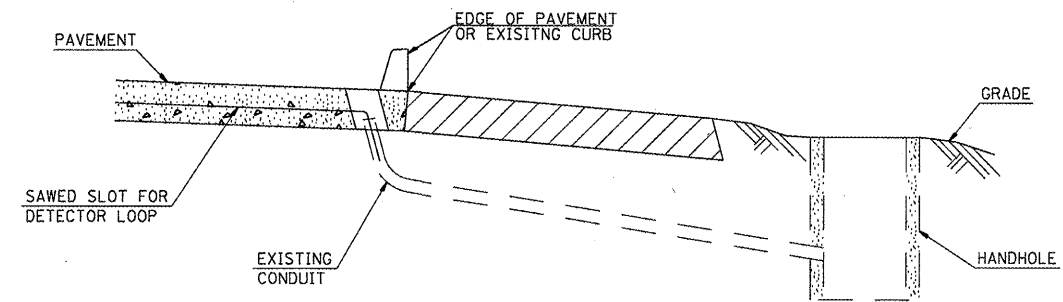
LOCATION	SB/NB	LENGTH (FEET)	WIDTH (FEET)	PAVEMENT PATCHING 14"		
				TYPE 2	TYPE 3	TYPE 4
				(SQ YDS)	(SQ YDS)	(SQ YDS)
400+53	SB	8	12	11		
426+40	SB	20	12			27
426+40	NB	20	12			27
442+24	NB	6	12	8		
484+48	NB	6	12	8		
502+96	SB	15	12		20	
502+96	NB	15	12		20	
505+60	SB	8	12	11		
505+60	NB	8	12	11		
526+72	SB	6	12	8		
547+84	SB	6	12	8		
547+84	NB	6	12	8		
548+90	SB	6	12	8		
548+90	NB	10	12	13		
558+40	SB	10	12	13		
563+68	SB	10	12	13		
563+68	NB	8	12	11		
627+04	SB	20	12			27
627+04	NB	8	12	11		
648+16	SB	6	12	8		
648+16	NB	6	12	8		
669+28	SB	6	12	8		
674+56	SB	6	12	8		
695+68	SB	15	12		20	
698+32	SB	6	12	8		
698+32	NB	6	12	8		
719+44	SB	6	12	8		
727+36	SB	6	12	8		
727+36	NB	6	12	8		
732+64	SB	6	12	8		
743+20	SB	6	12	8		
SUB-TOTALS				230	60	81
15% FOR ANTICIPATED FAILURES				35	9	12
TOTALS				265	69	93

FILE NAME =	USER NAME = #USER#	DESIGNED - ---	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULES	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#		DRAWN - ---	REVISED - ---			604	(101,102)RS-3	MADISON	13	8
	PLOT SCALE = #SCALE#	CHECKED - ---	REVISED - ---			CONTRACT NO. 76D27				
	PLOT DATE = #DATE#	DATE - -----	REVISED - ---	SCALE: -----	SHEET NO. -- OF --- SHEETS	STA. ----- TO STA. -----	FED. ROAD DIST. NO. -- ILLINOIS FED. AID PROJECT			

**DETECTOR LOOP REQUIREMENTS AND CALCULATIONS
FOR IL 159 AND MORO ROAD**

LOOP	PHASE (Ø)	LOOP SIZE(FT)	REQUIRED # OF TURNS	CALCULATED INDUCTANCE MICROHENRIES (µH)	CALCULATED RESISTANCE OHMS (Ω)
1 NB_LI	5	6' X 50'	3-6-3	1235.74	2.71
2 NB_THRU-L2	2	6' X 50'	3-6-3	1235.74	2.71
3 NB_RI	2	6' X 20'	3-6-3	1235.74	2.71
4 NB_THRU-L2	2	6' X 6'	6	369.72	2.79
5 WB_THRU-L1	8	6' X 50'	3-6-3	1262.36	3.31
6 WB_RI	8	6' X 30'	3-6-3	1546.36	2.84
7 SB_THRU-L2	6	6' X 50'	3-6-3	1239.48	2.79
8 SB_LI	1	6' X 50'	3-6-3	1239.48	2.79
9 SB_THRU-L2	6	6' X 6'	6	378.74	3.18
10 SB_RI	6	6' X 20'	3-6-3	1239.48	2.79
11 EB_THRU-L1	4	6' X 50'	3-6-3	1214.84	2.23
12 EB_RI	4	6' X 50'	3-6-3	1214.84	2.23

THE ABOVE VALUES ARE CALCULATED OF COMBINED LOOP AND LEAD-IN INDUCTANCE AND RESISTANCE. ACTUAL MEASURED VALUES SHOULD BE WITHIN +/- 20% OF THESE VALUES.



**DETAIL
(NO SCALE)
RE-USE EXISTING DETECTOR LOOP LEAD-IN CABLE IN ONDUIT**

- 1 LOCATE UNDERGROUND CABLE FROM H.H. TO PAVEMENT.
- 2 DRILL OUT PAVEMENT SEALANT AND CLEAN EXISTING CONDUIT.
- 3 REMOVE EXISTING LEAD-IN CONDUCTORS TO HANDHOLE.
- 4 INSTALL LOOP LEAD-IN CONDUCTORS IN EXISTING CONDUIT.
- 5 SPLICE NEW DETECTOR LOOP LEAD-IN CONDUCTORS TO EXISTING LEAD-IN CABLE IN HANDHOLE.
- 6 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"

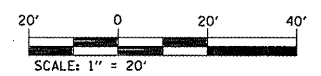
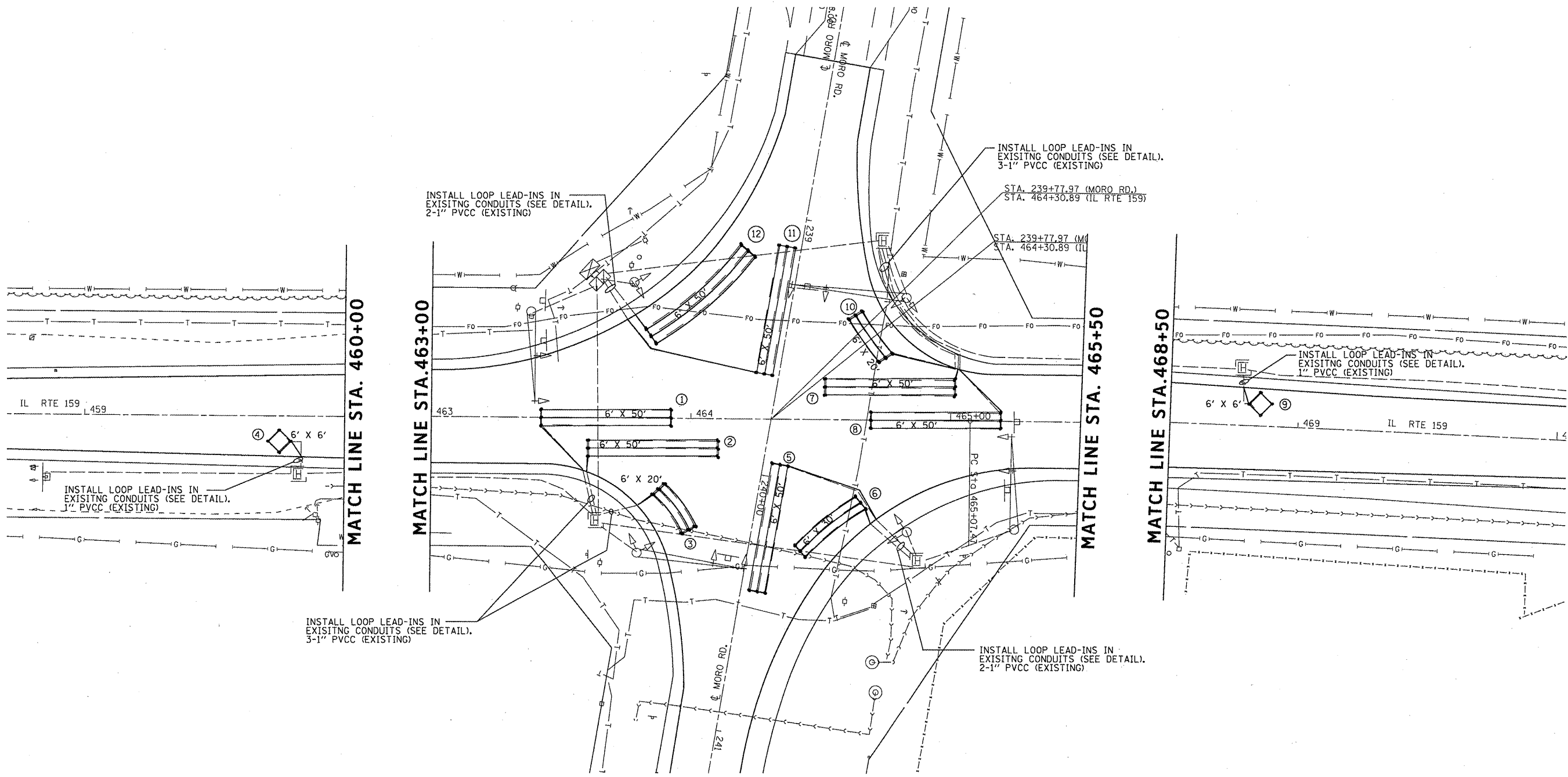
ELECTRICAL GENERAL NOTES:

- 1 THE EXISTING DETECTOR LOOP CONDUIT FROM PAVEMENT TO THE HANDHOLE WILL BE RE-USED FOR THE REPLACED DETECTOR LOOP. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING THE EXISTING CONDUIT DURING THE CONSTRUCTION OPERATION. SHOULD ANY DAMAGE OCCURS DUE TO THE CONTRACTOR'S OPERATIONS, REPAIRS WILL BE MADE TO THE SATISFACTION OF THE ENGINEER AND WILL BE DONE AT THE CONTRACTOR'S EXPENSE.

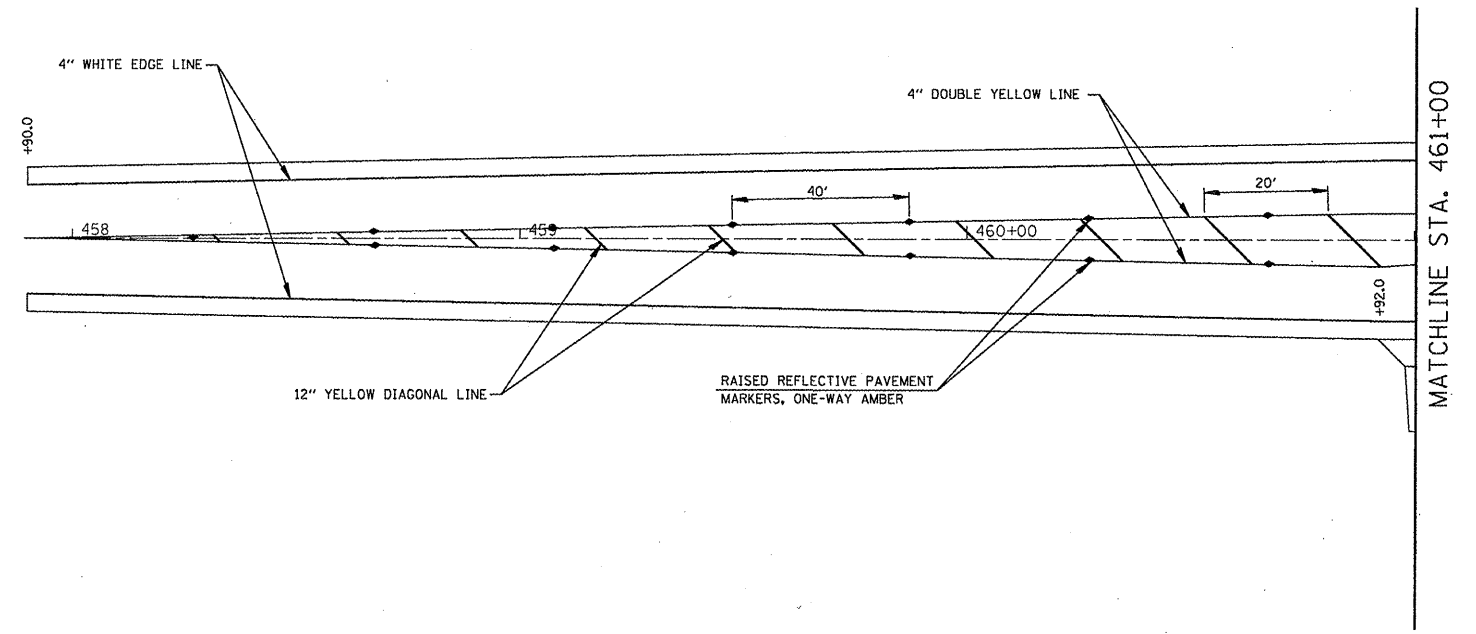
ELECTRICAL QUANTITIES:

CODE NO.	DESCRIPTION	UNIT	QUANTITY
88600600	DETECTOR LOOP REPLACEMENT	FOOT	1635
80300100	LOCATING UNDER GROUND CABLE	FOOT	100

FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETECTOR LOOP REPLACEMENT	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#		DRAWN -	REVISED -			604	(101, 102)BS-3	MADISON	33	9	
		CHECKED -	REVISED -			SCALE: 50' = 1"		SHEET NO. OF SHEETS		STA. TO STA.	
		DATE	REVISED					FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		CONTRACT NO. 76027	



FILE NAME = #FILE#	USER NAME = #USER#	DESIGNED - ---	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETECTOR LOOP REPLACEMENT	F.A.P. RTE. 604	SECTION 1101.102/BS-3	COUNTY MADISON	TOTAL SHEETS 13	SHEET NO. 10	
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	PLOT DATE = #DATE#	DATE - ---	REVISED - ---					FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			



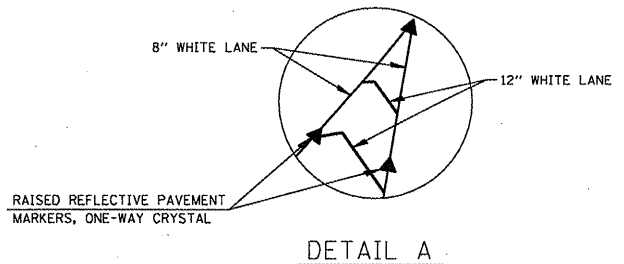
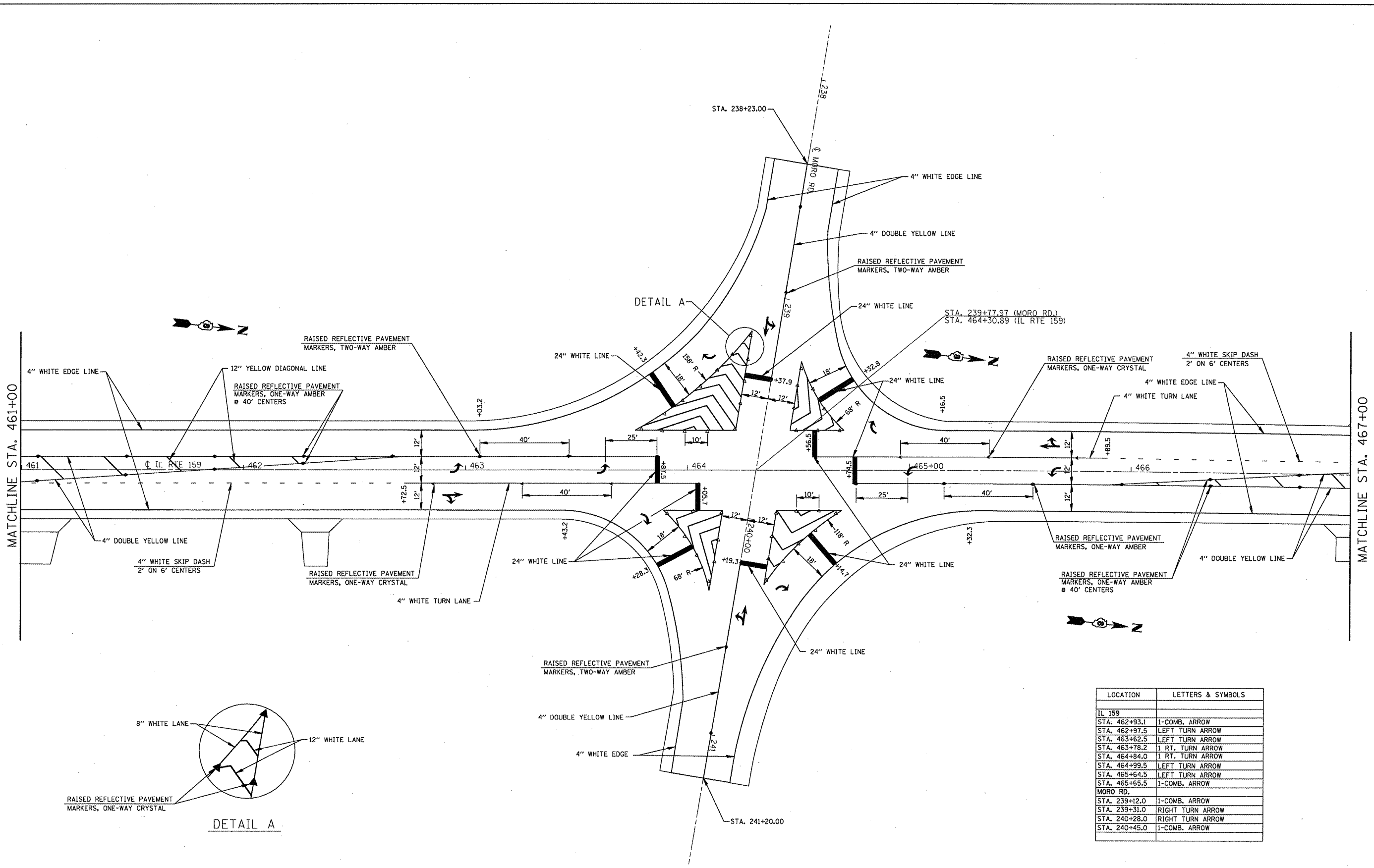
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#FILE#		DRAWN -	REVISED -
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	PLOT DATE = #DATE#	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PAVEMENT MARKING SHEETS

SCALE: _____ SHEET NO. ___ OF ___ SHEETS | STA. _____ TO STA. _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
604	(101,102)RS-3	MADISON	13	11
CONTRACT NO. 76D27				
ILLINOIS FED. AID PROJECT				



LOCATION	LETTERS & SYMBOLS
IL 159	
STA. 462+93.1	1-COMB. ARROW
STA. 462+97.5	LEFT TURN ARROW
STA. 463+62.5	LEFT TURN ARROW
STA. 463+78.2	1 RT. TURN ARROW
STA. 464+84.0	1 RT. TURN ARROW
STA. 464+99.5	LEFT TURN ARROW
STA. 465+64.5	LEFT TURN ARROW
STA. 465+65.5	1-COMB. ARROW
MORO RD.	
STA. 239+12.0	1-COMB. ARROW
STA. 239+31.0	RIGHT TURN ARROW
STA. 240+28.0	RIGHT TURN ARROW
STA. 240+45.0	1-COMB. ARROW

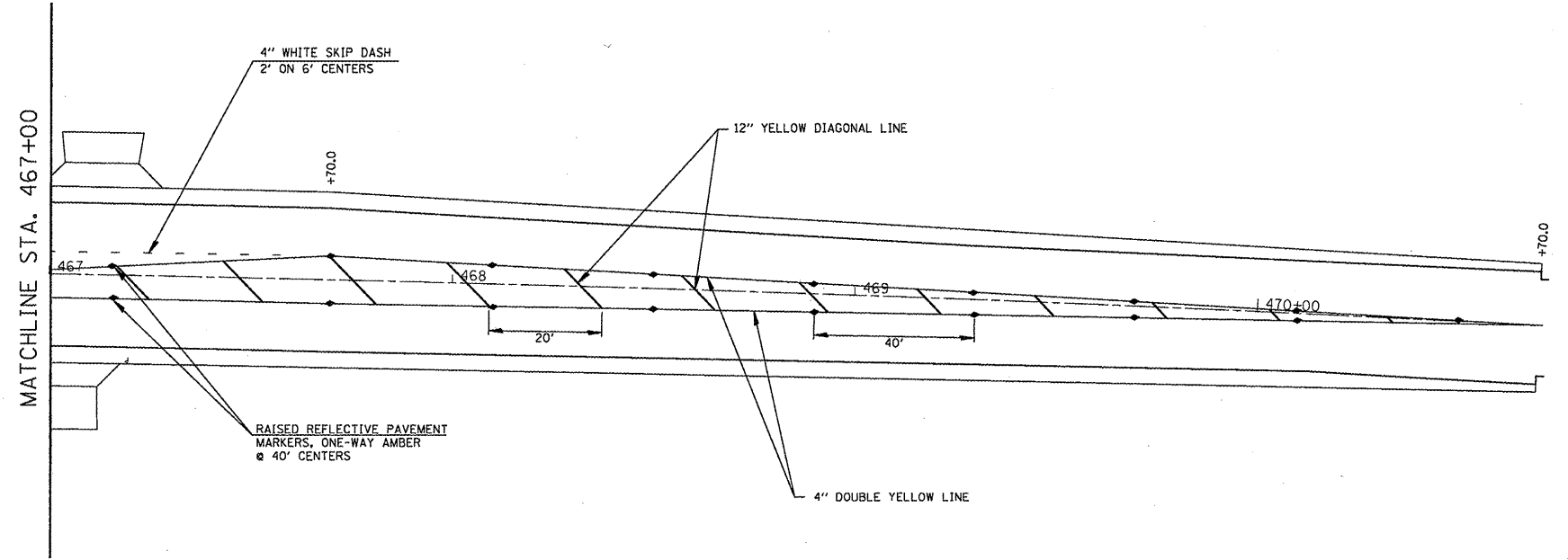
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#FILE#		DRAWN -	REVISD -
	PLOT SCALE = #SCALE#	CHECKED -	REVISD -
	PLOT DATE = #DATE#	DATE -	REVISD -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PAVEMENT MARKING SHEETS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
604	(101,102)RS-3	MADISON	13	12
CONTRACT NO. 76D27			[ILLINOIS] FED. AID PROJECT	



FILE NAME =	USER NAME = *USER*	DESIGNED -	REVISED -
*FILE#		DRAWN -	REVISED -
	PLOT SCALE = *SCALE*	CHECKED -	REVISED -
	PLOT DATE = *DATE*	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCALE: _____		SHEET NO. ___ OF ___ SHEETS		STA. _____ TO STA. _____	
		PAVEMENT MARKING SHEETS			

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
604	(101,102)RS-3	MADISON	13	13
CONTRACT NO. 76D27				
ILLINOIS FED. AID PROJECT				