# 06-14-13 LETTING ITEM 023

FOR INDEX OF SHEETS. SEE SHEET NO. 2

# STATE OF ILLINOIS

# **DEPARTMENT OF TRANSPORTATION**

**DIVISION OF HIGHWAYS** 

# **PROPOSED** HIGHWAY PLANS

FAP RTE. 333-IL 120 (WASHINGTON ST) US 14 TO CHARLES ROAD (C.H. 1) SECTION 15-RS-12

# McHENRY COUNTY **ROADWAY RESURFACING**

C-91-324-11

City of

TRAFFIC DATA \*\*\*\*\*\*\*

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EXISTING ADT IL 120 (2009): 3800 - US 14 TO MAIN ST. 10700 - MAIN ST. TO CHARLES RD.

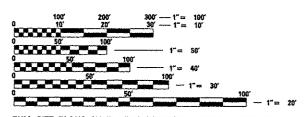
POSTED SPEED LIMIT: VARIES

50 - 55 MPH RURAL

30 - 35 MPH URBAN

**IMPROVEMENT BEGINS** STA. 109 + 95.0

PROJECT IS LOCATED IN THE CITY OF WOODSTOCK



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES.

JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION 1-800-892-0123 OR 811

**PROJECT ENGINEER** PROJECT MANAGER ROBERT BORO (847) 705-4237 ISSAM RAYYAN

**CONTRACT NO. 60N54** 



HARTLAND TWP

**LOCATION MAP** NOT TO SCALE GROSS LENGTH = 35,080 FT. = 6.644 MILE NET LENGTH = 34700.3 FT. = 6.572 MILE

STA. 460 + 75.0 GREENWOOD TWP & T.44.N Village of

**Bull Valley** 

LOCATION OF SECTION INDICATED THUS: -IMPROVEMENT ENDS

> DIVISION OF HIGHWAYS SUBMITTED De cem Gen 14 20 12

F.A.P. RTE. 333

15-R\$-12

MC HENRY 33 1

The D. Basanzoli PE. Br. ENGINEER OF DESIGN AND ENVIRONMENT May 10 20 13 Oner Osman PE la

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

EXP 11-30-2013 DATE 12-12-2012 PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

### INDEX OF SHEETS \*\*\*\*\*\*\*\*\*\*\*

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL NOTES AND HIGHWAY STANDARDS
3	SUMMARY OF QUANTITIES
4 - 5	TYPICAL CROSS SECTIONS
6 - 18	EXISTING AND PROPOSED ROADWAY AND PAVEMENT MARKING PLANS
19 - 20	DETECTOR LOOP REPLACEMENT PLAN
21	DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING (BD-8)
22	PAVEMENT PATCHING FOR HMA SURFACED PAVMENT (BD-22)
23	CURB AND GUTTER REMOVAL AND REPLACEMENT (BD-24)
24	BUTT JOINT AND HMA TAPER DETAIL (BD-32)
25	DETAILS FOR DEPRESSED CURB & GUTTER AND SHOULDER TREATMENT AT TBT TY 1 SPL (BD-34)
26	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS. INTERSECTIONS, AND DRIVEWAYS (TC-10)
27	TYPICAL APPLICATION RAISED REFLECTIVE PAVEMENT MARKERS (SNOW PLOW RESISTANT) (TC-11)
28	DISTRICT ONE TYPICAL PAVEMENT MARKINGS (TC-13)
29	PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING (TC-16)
30	ARTERIAL ROAD INFORMATION SIGN (TC-22)
31	TYPICAL SUPPLEMENTAL SIGNING AND PAVEMENT MARKING TREATMENT FOR RAILROAD CROSSINGS (TC-23)
32	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS (TS-05)
33	DISTRICT ONE DETECTOR LOOP INSTALLATION DETAILS FOR ROADWAY RESURFACING (TS-07)

### GENERAL NOTES

- 1. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 1-800-892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, AND GAS FACILITIES, (48 HOUR NOTIFICATION IS REQUIRED)
- 2. 10 FOOT TRANSITIONS SHALL BE USED TO MATCH PROPOSED CURB AND GUTTER AND MEDIAN ITEMS OF WORK TO EXISTING CURBS AND GUTTER AND MEDIANS IN THE FIELD, UNLESS OTHERWISE SHOWN, THE TRANSITIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEMS OF WORK SPECIFIED.
- 3. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES, AND THE CITY OF WOODSTOCK.
- 4. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE ENGINEER.
- 5. ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OR RAISED REFLECTIVE PAVEMENT MARKERS OUTSIDE THE REMOVAL LINE SHOWN ON THE PLANS SHALL BE REPLACED AT NO ADDITIONAL COST TO THE DEPARTMENT.
- 6. BEFORE BEGINNING ANY WORK. THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINES AND RAISED REFLECTIVE PAVEMENT MARKERS IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER.
- 7. ALL PAVEMENT PATCHING LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 8. LOCATION OF COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT, WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 9. DRAINAGE ADJUSTMENT OR RECONSTRUCTION LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 10. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
- II. THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS PRIOR TO THE PLACEMENT OF ANY TRAFFIC CONTROL DEVICES.
- 12. THE RESIDENT ENGINEER SHALL CONTACT MS. DEBBIE HANLON, AREA TRAFFIC FIELD ENGINEER AT (847) 438-2300 A MINIMUM OF TWO WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
- 13. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT. THIS SHALL BE INCIDENTAL TO THE CONTRACT.
- 14. DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
- 15. WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1.5 INCHES WHERE THE SPEED LIMIT IS 45 MPH OR LESS AND I INCH WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH. WITH WRITTEN APPROVAL FROM THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 (V:H).

- 16. BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE WITH THE "BUTT JOINT AND HMA TAPER DETAILS." SHEET INCLUDED IN THE PLANS, UNLESS OTHERWISE SPECIFIED.
- 17. OVERNIGHT CLOSURES SHALL NOT BE ALLOWED FOR REHABILITATION PROJECTS INVOLVING DAYTIME MILLING AND RESURFACING OPERATIONS AND CLASS D PATCHING UNLESS OTHER CONDITIONS WARRANT EXTENDED LANE CLOSURES AS DETERMINED AND APPROVED IN WRITING BY THE ENGINEER OR AS PROVIDED FOR IN THE CONTRACT SPECIFICATIONS.
- 18. PAVEMENT MARKING TAPE, TYPE III SHALL BE USED FOR SHORT TERM PAVEMENT MARKINGS ON ALL FINAL SURFACES. THE COST OF THE PAVEMENT MARKING TAPE. TYPE III AND ITS REMOVAL SHALL BE INCLUDED IN THE COST OF SHORT TERM PAVEMENT MARKINGS.
- 19, SEE PLANS FOR EXIST TERMINAL SECTION TO BE REPLACED WITH NEW TYPE 1 (SPECIAL) TERMINAL, OTHER PAY ITEMS WITH QUANTITIES ESTIMATED FOR THIS AREA INCLUDE: REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL, FURNISHDED EXCAVATION. TOPSOIL FURNISH AND PLACE, 4", SEEDING, CLASS 2A, NITROGEN FERTILIZER NUTRIENT. POTASSIUM FERTILIZER NUTRIENT. EROSION CONTROL BLANKET, AGGREGATE SHOULDER, TYP B - 10". AND GUARDRAIL REMOVAL.

HIGHWAY STANDARDS

\*\*\*\*\*\*\*\*\*\* 442201-03CLASS C AND D PATCHES

606001-04CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER

630301-06SHOULDER WIDENING FOR TYPE (SPECIAL) GUARDRAIL TERMINALS

635006-03 REFLECTOR AND TERMINAL MARKER PLACEMENT

635011-07REFLECTOR MARKER AND MOUNTING DETAILS

701006-040FF-ROAD OPERATIONS, 2L, 2W. 4.5 m (15") TO 600 mm (24") FROM PAVEMENT EDGE

701011-D30FF-ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY

701101-030FF-ROAD OPERATIONS, MULTILANE, 4.5 m (15') TO 600 mm (24") FROM PAVEMENT EDGE

701301-04 ANE CLOSURE, 2L. 2W, SHORT TIME OPERATIONS

701306-03LANE CLOSURE, 2L. 2W. SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS >= 45 MPH

701311-03LANE CLOSURE, 2L. 2W. MOVING OPERATIONS - DAY ONLY

701336-06 ANE CLOSURE, 2L. 2W, WORK AREAS IN SERIES. FOR SPEEDS >= 45 MPH

701501-06URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED

701502-05 URBAN LANE CLOSURE, 2L. 2W, WITH BIDIRECTIONAL LEFT TURN LANE

701606-08URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN

701701-09URBAN LANE CLOSURE, MULTILANE INTERSECTION

701901-02TRAFFIC CONTROL DEVICES

**Stantec** 

DESIGNED - DJ8 REVISED DRAWN STANTEC REVISED PLOT SCALE : 50,0000 17 IN. CHECKED -TMH REVISED LOT CATE : 1/4/2013 DATE 12/12/2012 REVISED

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

IL ROUTE 120 ROADWAY RESURFACING **GENERAL NOTES & HIGHWAY STANDARDS** SCALE, SO. DEET NO. OF SHEETS STA. TO STA.

# SUMMARY OF QUANTITIES

URBAN 100% STATE

				URBAN 100%	CONSTRUCTIO	N TYPE CODE
				STATE	ROADWAY 0005	
	CODE NO.	ITEM	UNIT	TOTAL		
	20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YO	185	185	
	20400800	FURNISHED EXCAVATION	CU YO	100	100	
Ì	21101615	TOPSOIL FURNISH AND PLACE, 4"	SO YD	1,667	1,667	
	21400100	CRADING AND SHAPING DITCHES	FOOT	800	800	
	25000210	SEEDING, CLASS 2A	ACRE	0.3	0.3	
	25000400	NITROGEN FERTILIZER NUTRIENT	POUND	31	31	
	25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	31	31	
	25100630	EROSION CONTROL BLANKET	SO YO	1,667	1,667	
	40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	84	84	
	40600300	ACGREGATE (PRIME COAT)	TON	497	497	
	40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	630	630	
	40600827	POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50	TON	4,948	4,948	
-	40600895	CONSTRUCTING TEST STRIP	EACH	2	2	
į	40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SO YO	753	753	
	40601005	HOT-MIX ASPHALT REPLACEMENT OVER PATCHES	TON	276	276	
	40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "O", N70	TON	10,993	10,993	
	42001300	PROTECTIVE COAT	SO YO	33	33	
	44000158	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/4"	SO YO	123,589	123,589	
	44002209	HOT-MIX ASPHALT REMOVAL OVER PATCHES, 2 1/4"	SO YD	2,190	2,190	
	44201761	CLASS D PATCHES, TYPE I, 10 INCH	SO YD	100	100	
	44201765	CLASS D PATCHES, TYPE II, 10 INCH	SO YD	460	460	
ŀ	44201769	CLASS D PATCHES, TYPE III, 10 INCH	SO YD	760	760	-
	44201771	CLASS D PATCHES, TYPE IV, 10 INCH	SO YD	870	870	
	48101500	ACGREGATE SHOULDERS, TYPE B 6"	SO YO	90	90	
	48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	1,182	1,182	
	60300105	FRAMES AND GRATES TO BE ADJUSTED	EACH	10	10	
X	63100167	TRAFFIC BARRIER TERMINAL, TYPE I (SPECIAL) TANGENT	EACH	3	3	
	63200310	CUARDRAIL REMOVAL	FOOT	150	150	
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6	
	67100100	MOBILIZATION	L SUM			
	70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM		1	
	70100600	TRAFFIC CONTROL AND PROTECTION, STANDARD 701336	L SUM		1	·
	70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM		1	
ľ	70102622	TRAFFIC CONTROL AND PROTECTION, STANDARD 701502	L SUM		1	
ļ	70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM		1	
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-						N TYPE CODE
-				-	ROADWAY 0005	
	CODE NO.	ITEM	UNIT	TOTAL QUANTITY		
***************************************	70106800	CHANGEABLE MESSAGE SIGN	CAL MO	12	12	
70 70 70 70 70 70 70 70 70 70	70300100	SHORT-TERM PAVEMENT MARKING	FOOT	42,330	42,330	
· · · · · · · · · · · · · · · · · · ·	70300210	TEMPORARY PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	1,189	1,189	
-	70300220	TEMPORARY PAVEMENT MARKING - LINE, 4"	FOOT	207,626	207,626	
	70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	11,094	11,094	
ŀ	70300260	TEMPORARY PAVEMENT MARKING - LINE 12"	FOOT	6,366	6,366	
}	70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	870	870	
	70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SO FT	84,050	84,050	
{	78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SO FT	1,189	1,189	
<i>(</i>	78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	103,588	103,588	
{	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	5,322	5,322	······································
{	78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	- F00T	450	450	
1	78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	3,184	3,184	
	78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	435	435	
· ·	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	1,070	1,070	
-	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	3	3	
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	1,070	1,070	
ŧ þ	88600600	DETECTOR LOOP REPLACEMENT	FOOT	313	313	
.	X2020110	GRADING AND SHAPING SHOULDERS	UNIT	118	118	
	X6030310	FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)	EACH:	85	85	
-	Z0004562	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	100	100	
- h	Z0018500	DRAINAGE STRUCTURES TO BE CLEANED	EACH	70	70	
	Z0030850	TEMPORARY INFORMATION SIGNING	SO FT	154,2	154.2	
	Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	11		
4	10102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	ITEM			
)	20074604	TRAINEES-TRAINING PROGRAM GRADUATE	HOUR	500	500	
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\*SPECIALTY ITEMS

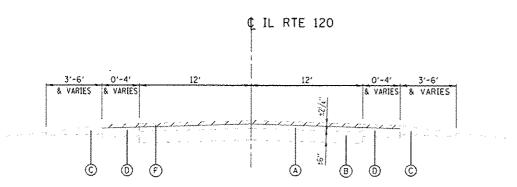
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

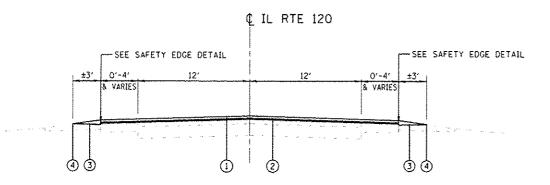
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-	SHEET NO				TO ST

			Re	V .
	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS
	333	15-RS-12	MCHENRY	33
-			CONTRACT	NO. 60



# EXISTING TYPICAL SECTION

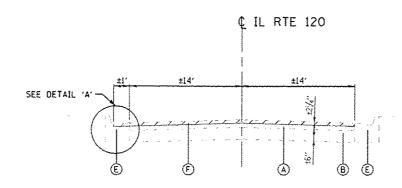
FACING EAST STA, 109+95 TO STA, 200+75 N.T.S.



# PROPOSED TYPICAL SECTION

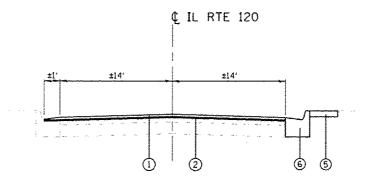
FACING EAST STA. 109+95 TO STA. 200+75 N.T.S.

EXISTING PAVEMENT -



# EXISTING TYPICAL SECTION

FACING EAST STA. 200+75 TO STA. 229+70 STA, 244+29 TO STA, 252+00 N.T.S.



# PROPOSED TYPICAL SECTION

FACING EAST STA. 200+75 TO STA. 229+70 STA. 244+29 TO STA. 252+00 N.T.S.

# EXISTING LEGEND

- (A) HMA PAVEMENT, VARIES 21/4"-7"
- PCC PAVEMENT, VARIES 6"-10"
- AGGREGATE SHOULDER, VARIABLE DEPTH
- HMA SHOULDER
- (E) PCC CURB & GUTTER
- HMA SURFACE REMOVAL. 21/4"

# PROPOSED LEGEND

- (1) HMA SURFACE COURSE, MIX "D", N70, 11/2"
- (2) POLYMERIZED LEVELING BINDER (MM), IL-4.75, NSO. 3/4"
- \*(3) AGGREGATE WEDGE SHOULDER, TYPE 8
- \* (4) GRADING & SHAPING SHOULDERS
- \*5 TOPSOIL FURNISH AND PLACE, 4" AND SEEDING, CLASS 2A
- \*6 COMBINATION CONCRETE CURB & GUTTER REMOVAL AND REPLACEMENT

\* NOTE: LIMITS OF THESE PROPOSED ITEMS TO BE DETERMINED IN THE FIELD BY THE RESIDENT ENGINEER.

# INTO THE GUTTER FLAG FROM STA. 200+75 TO STA. 229+70 LT & RT (LIMITS ARE APPROXIMATE) REMOVE AND OVERLAY THE ENTIRE WIDTH OF HMA SURFACE COURSE FOR THE DRIVE LANE AND GUTTER FLAG HMA SURFACE COURSE. MIX "D", N70. 11/2"--AGGREGATE WEDGE SHOULDER, TYPE B POLYMERIZED LEVELING BINDER (MM), IL-4.75, N50, 1/4" DETAIL "A" -EXISTING SHOULDER

SAFETY EDGE DETAIL

(WHEN HMA SHOULDER < 3 FT)

AIR VOIDS (%) @ NoEs MIX DESIGNS RESURFACING \*\* HMA SURFACE COURSE, MIX 'D', N70 (IL-9.5mm); 11/2" 4% @ 70 GYRATIONS POLYMERIZED LEVELING BINDER, IL-4.75. N50: 3.5% o 50 GYRATIONS PATCHING CLASS D PATCHES (BINDER IL-19MM) 4% @ 70 GYRATIONS HMA REPLACEMENT OVER PATCHES 4% @ 70 GYRATIONS

NOTE: THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURES IS 112 LBS/SY/IN.

THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PC 76-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS.

FOR USE OF RECYCLED MATERIALS SEE SPECIAL PROVISIONS.

\*\* PFP SPECIAL PROVISION ONLY APPLIES TO HMA SURFACE CSE, MIXD, N70

THE CONTRACTOR SHALL PATCH FIRST **BEFORE MILLING** 

Stantec Stantec
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USER MAYE - dpjeniazek	DESIGNED	-	DJB	REVISED -	_
	DRAWN	-	STANTEC	REVISED -	
PLOT SCALE - 50.00 '/ IN.	CHECKED	•	TMH	REVISEO -	
PLOT DATE = 12/12/2812 .	DATE	^	12/12/2012	REVISED -	

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

EXISTING HMA SURFACE EXTENDS -

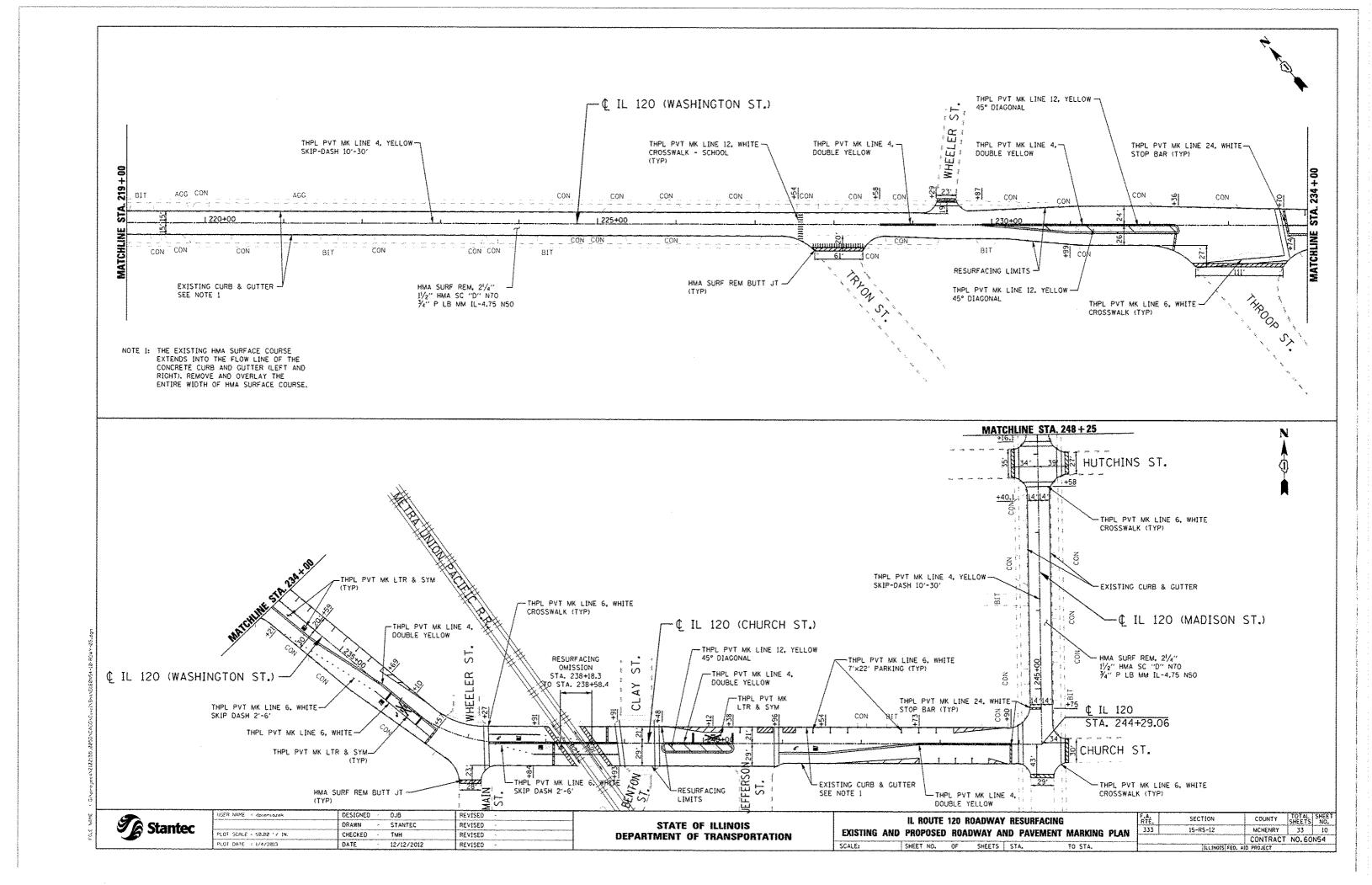
1	IL ROUTE 120 ROADWAY RESURFACING	F,A,P, RTE,	SECTION	
***************************************	TYPICAL CROSS SECTIONS	333	15-R5-1	
	SCALE:58.88 / IN. SHEET NO. OF SHEETS STA.	TO STA.	FEO. ROAD DIS	T. NO. 1 ILL

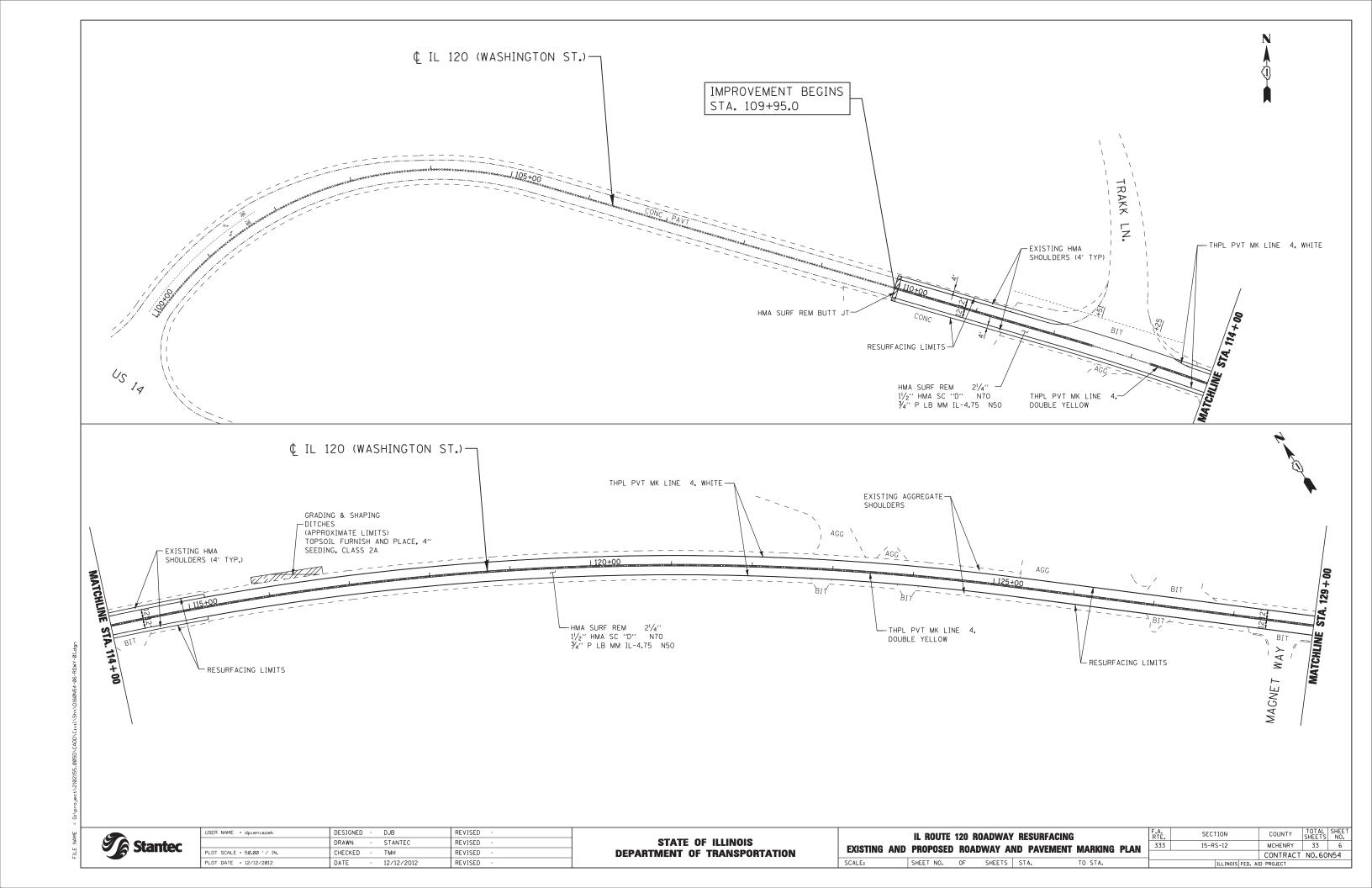
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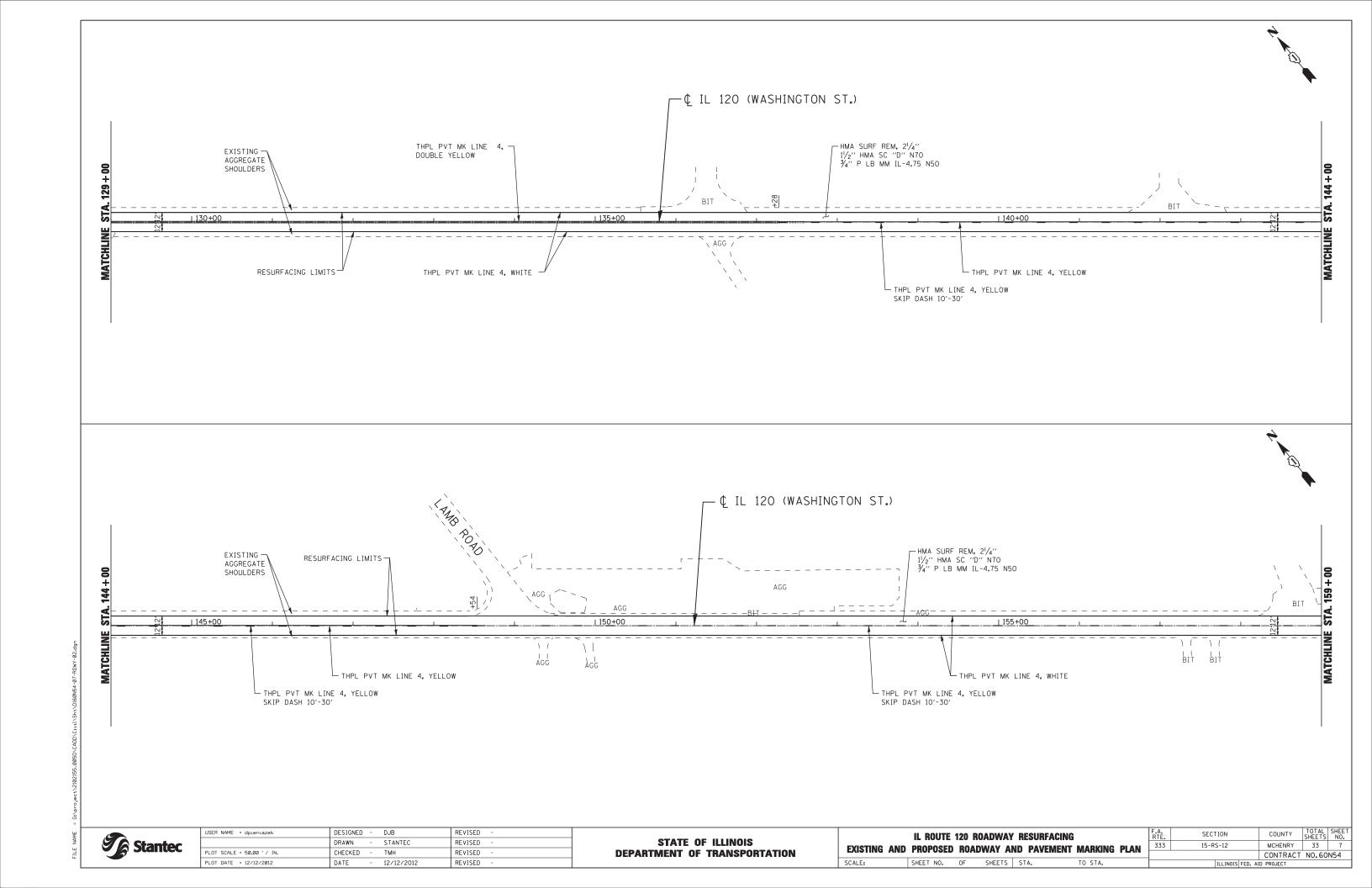
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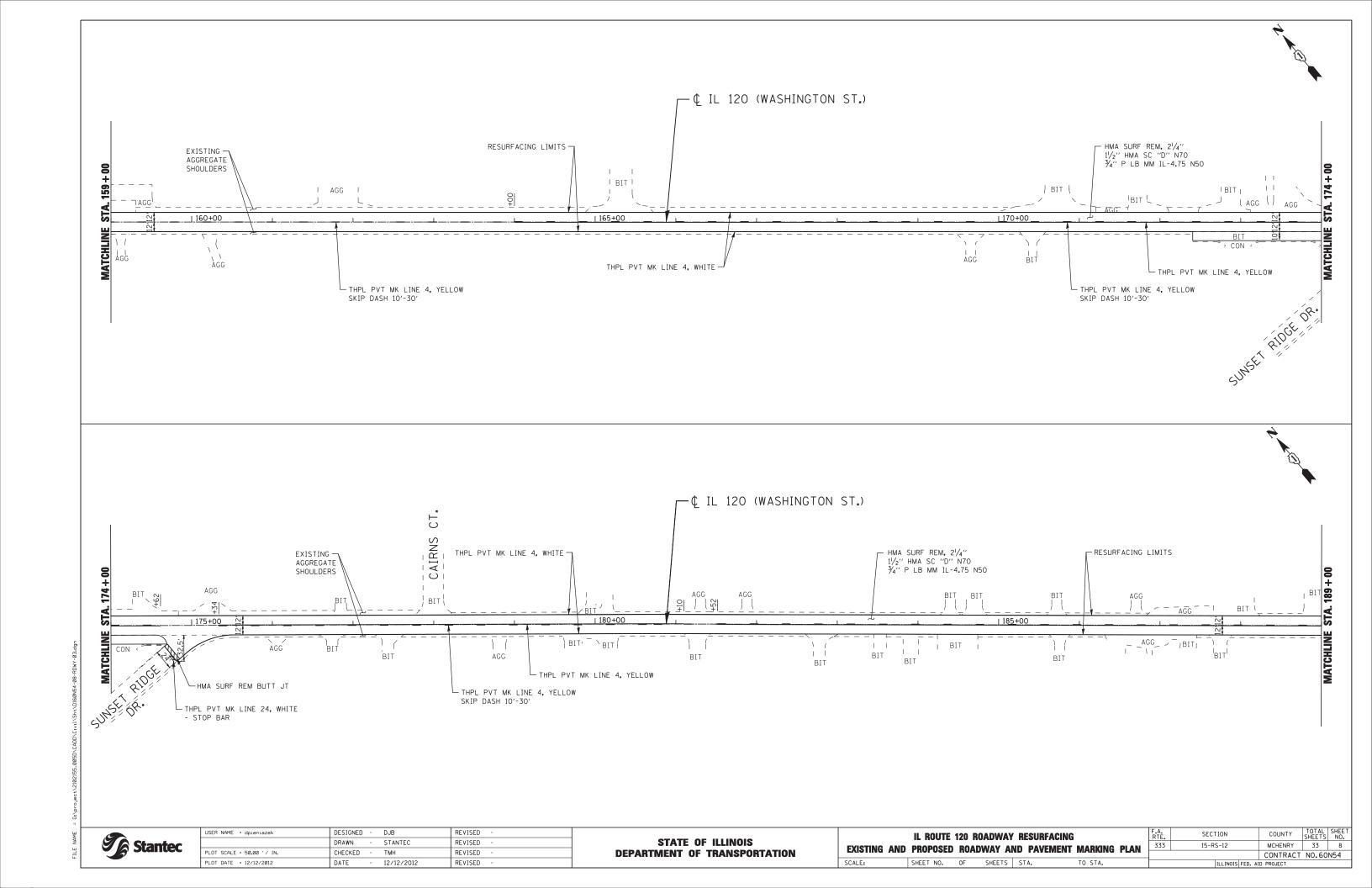
COUNTY

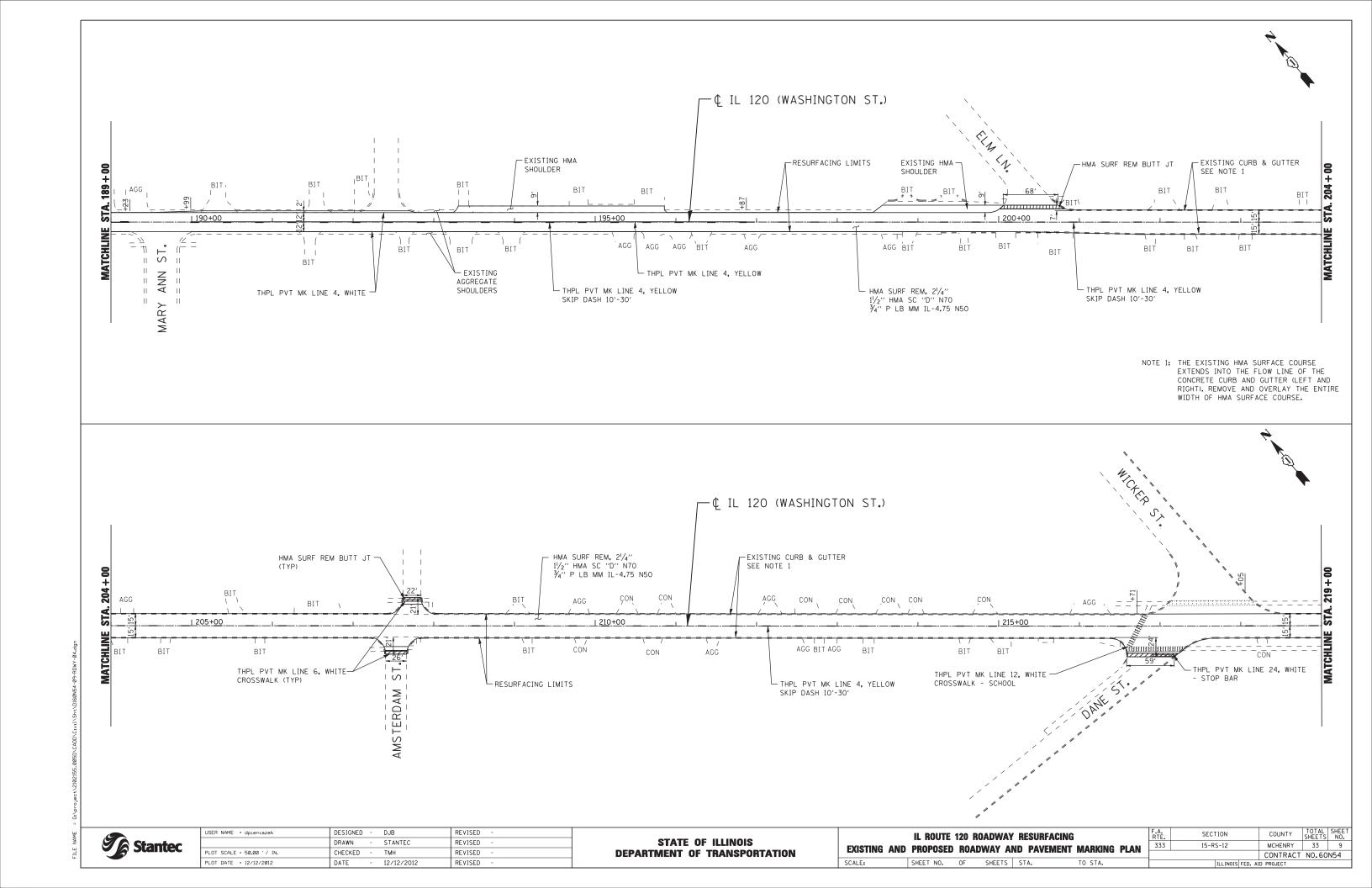
CONTRACT NO. 60N54 FEO. ROAD DIST. NO. 1 | ILLINOIS FED. AID PROJECT

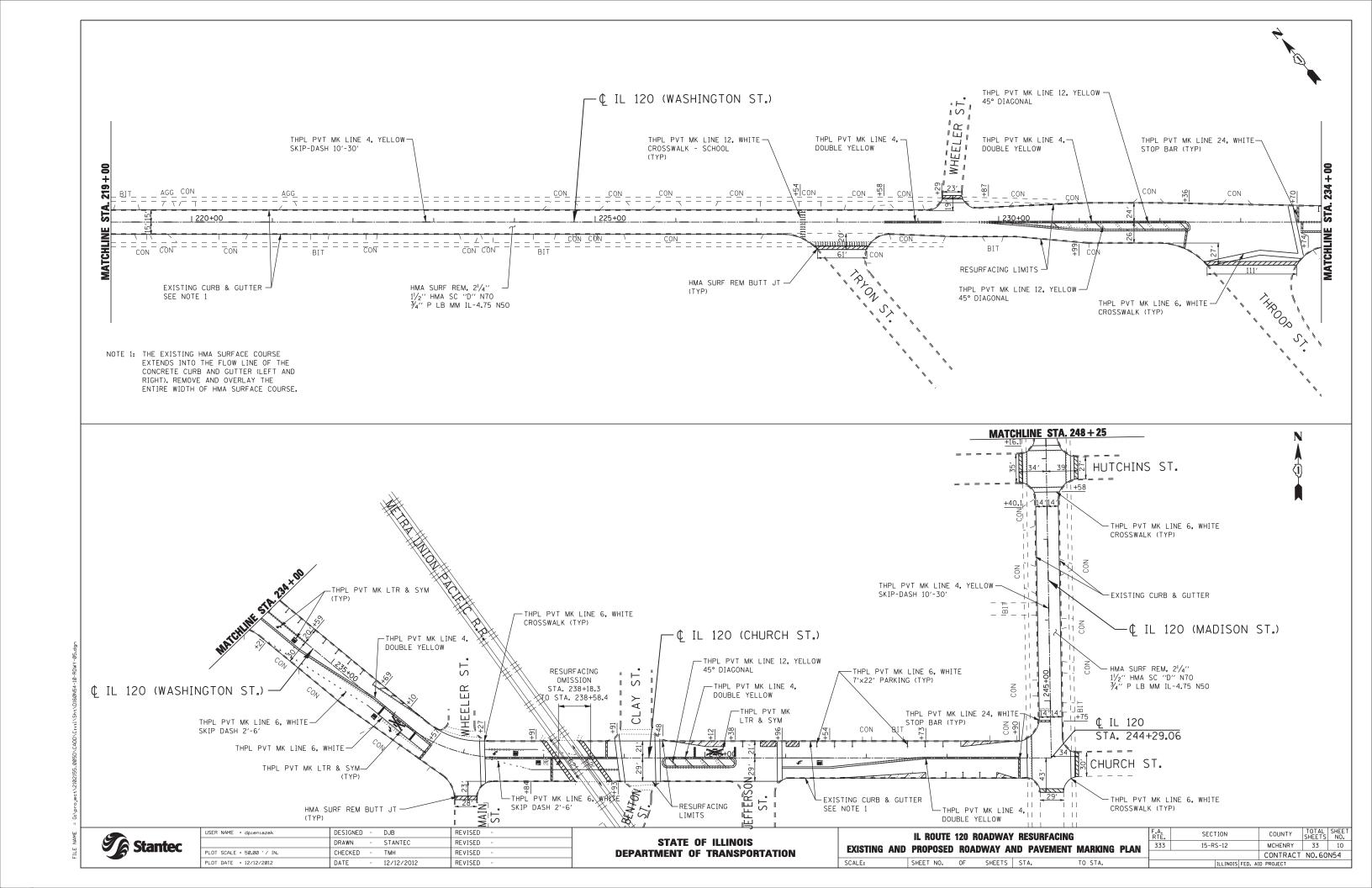


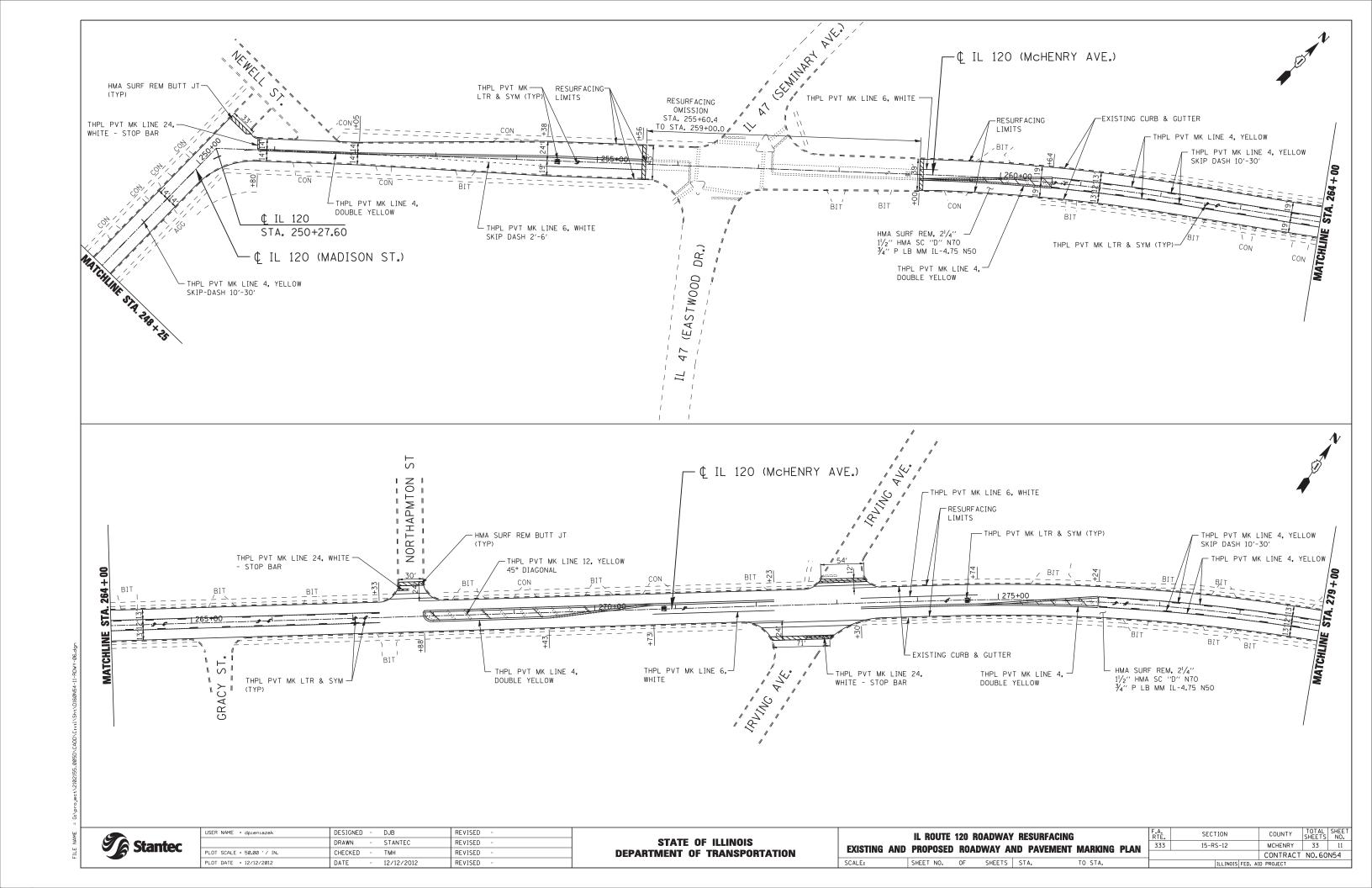


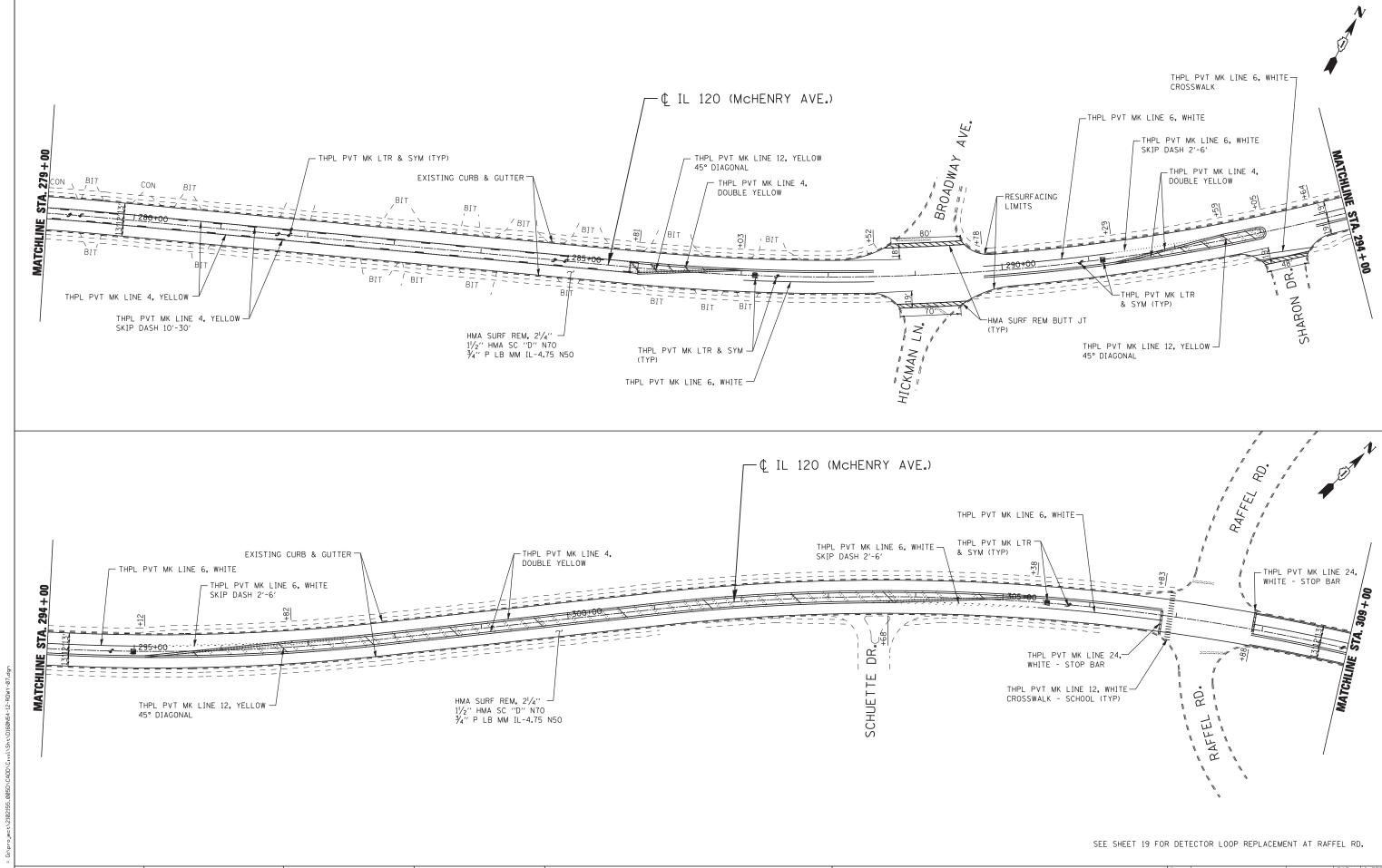












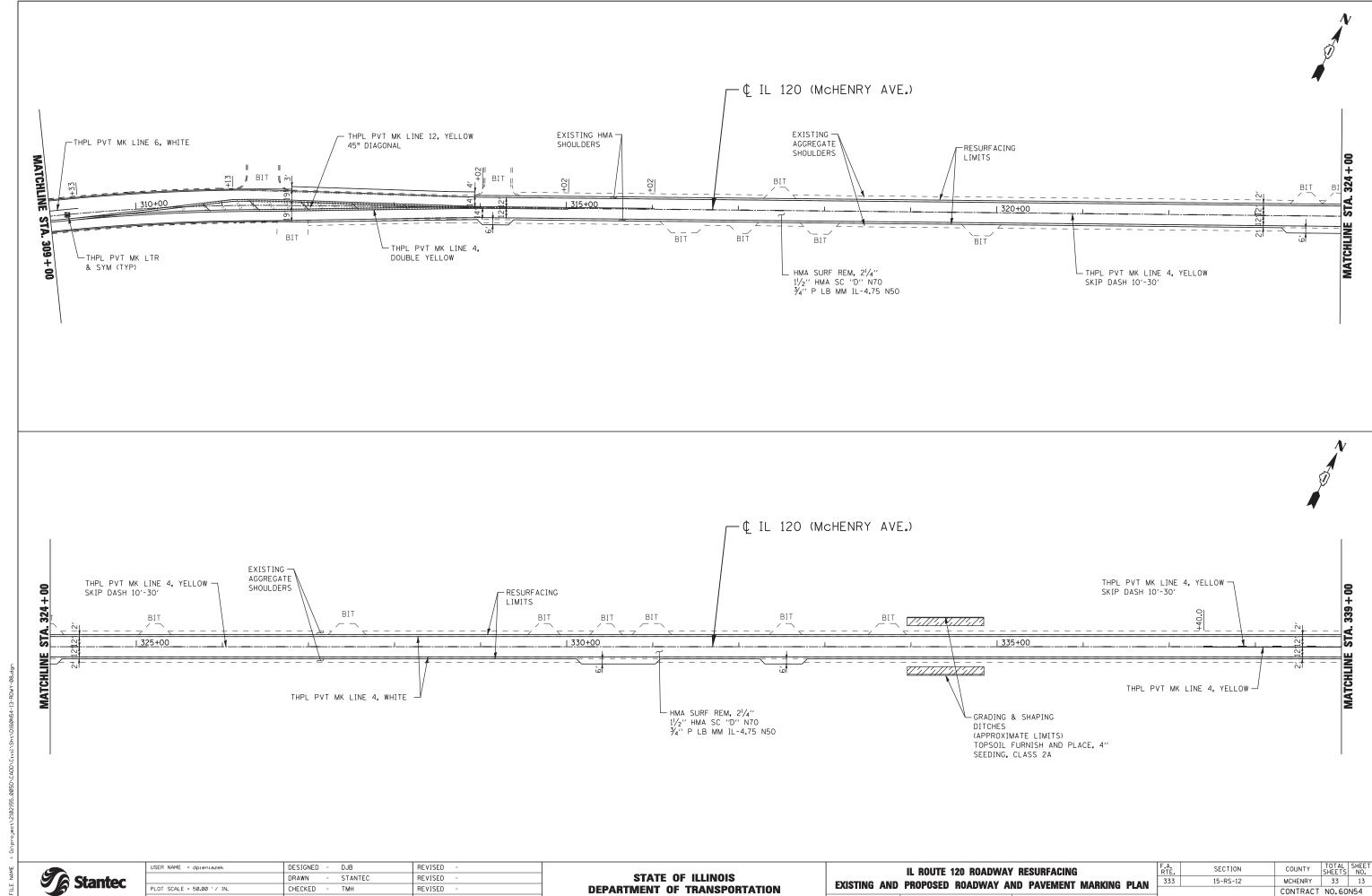
**Stantec** 

DESIGNED - DJB REVISED USER NAME = dpieniazek DRAWN STANTEC REVISED PLOT SCALE = 50.00 '/ IN. CHECKED REVISED PLOT DATE = 12/12/2012 DATE 12/12/2012 REVISED

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

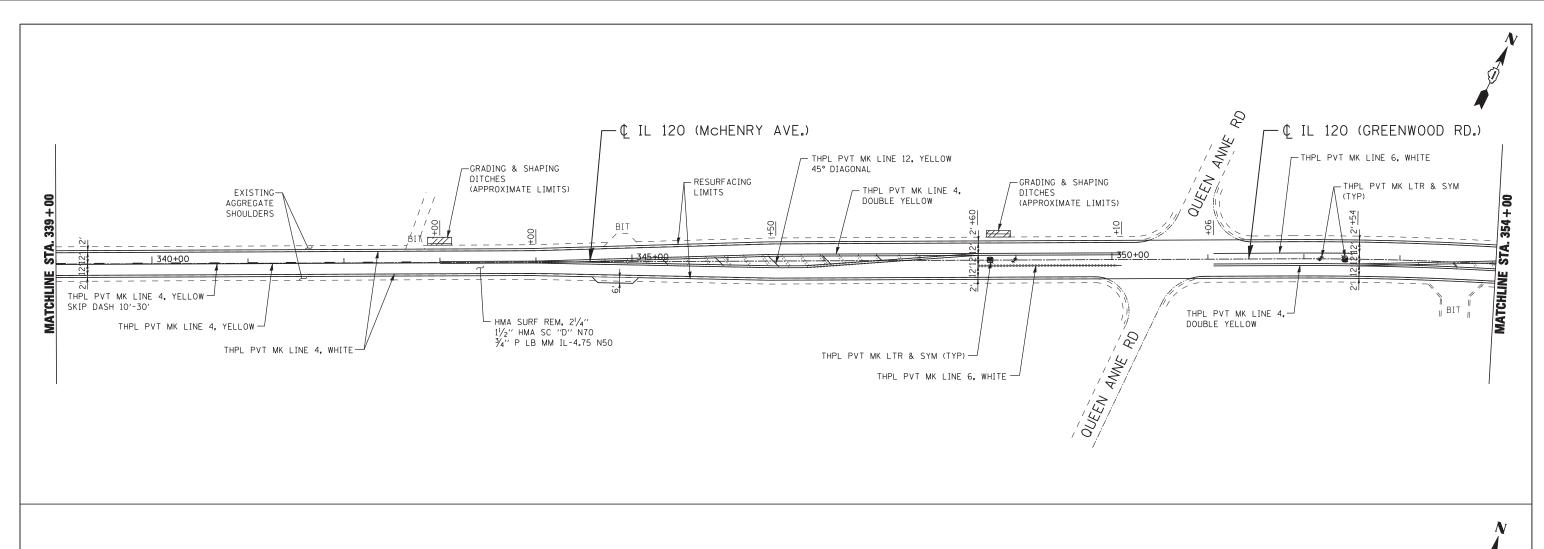
IL ROUTE 120 ROADWAY RESURFACING EXISTING AND PROPOSED ROADWAY AND PAVEMENT MARKING PLAN SHEET NO. OF SHEETS STA.

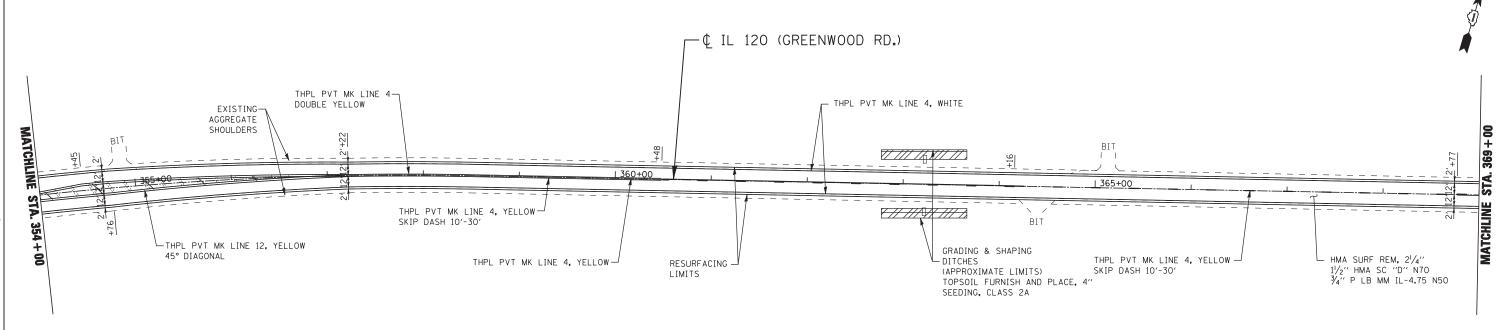
COUNTY TOTAL SHEET NO. MCHENRY 33 12 SECTION 15-RS-12 CONTRACT NO.60N54



PLOT DATE = 12/12/2012 DATE REVISED 12/12/2012

SHEET NO. OF SHEETS STA.



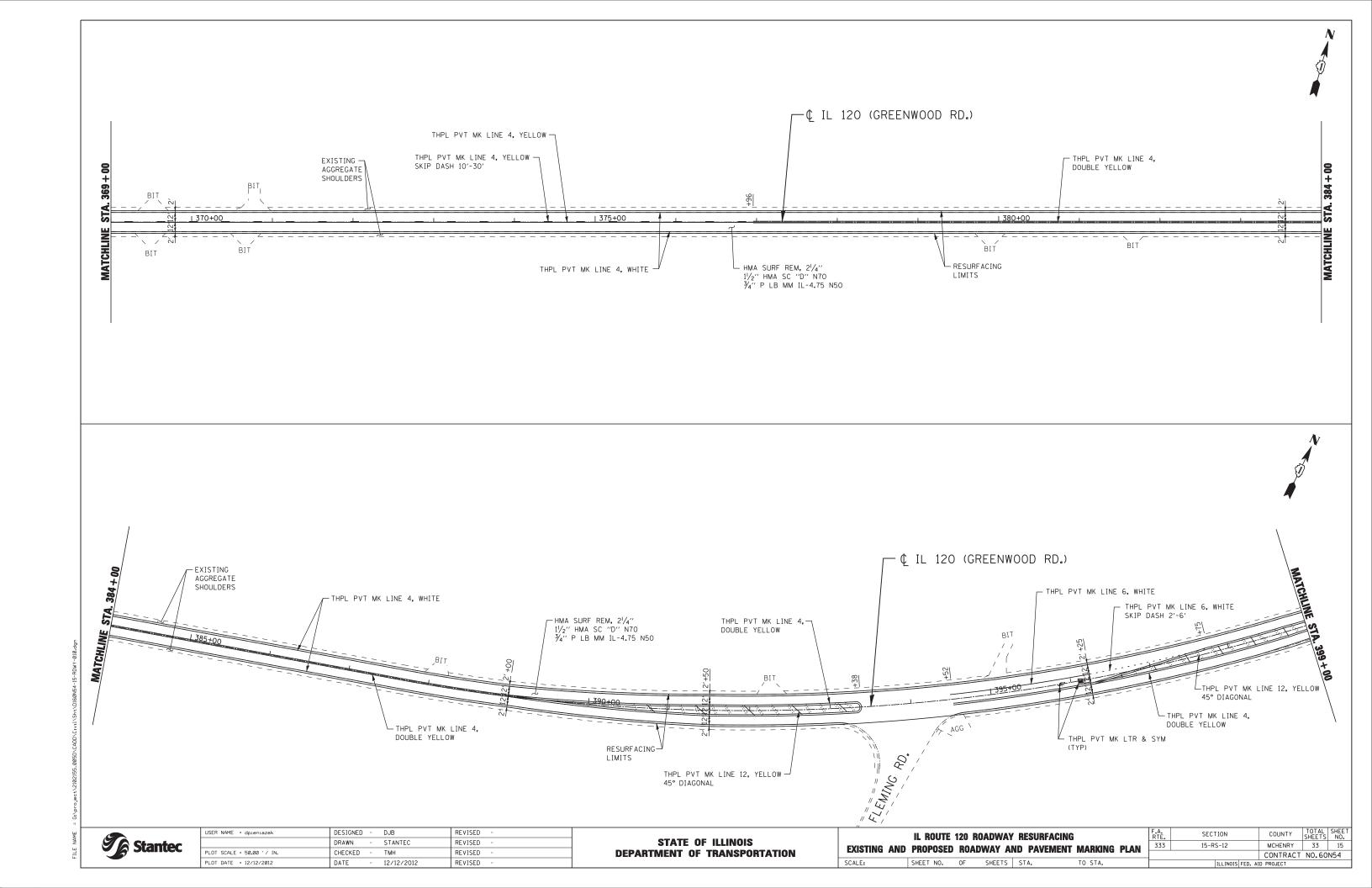


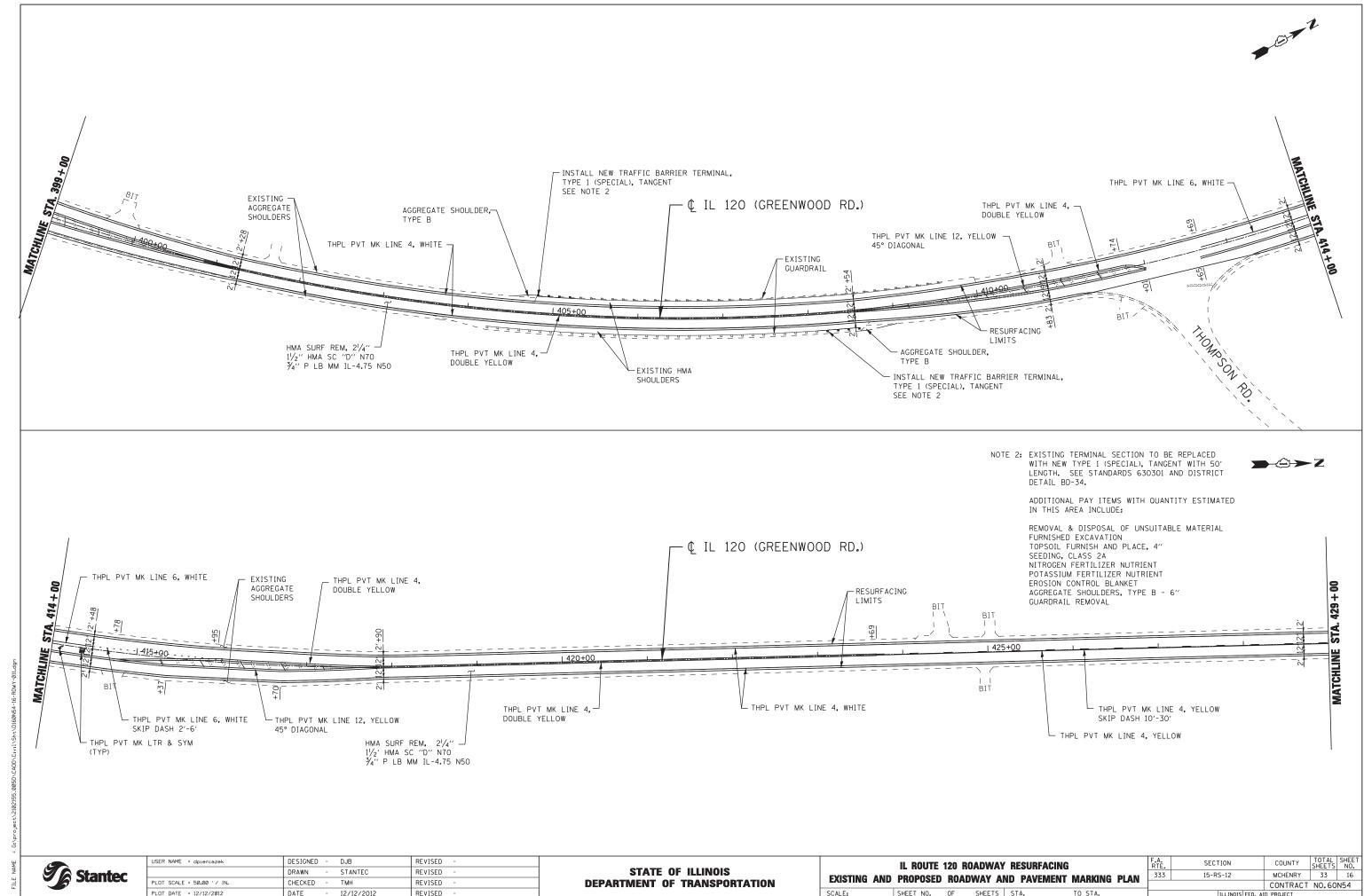
<b>Stantec</b>
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USER NAME = dpieniazek	DESIGNED	-	DJB	REVISED -	
	DRAWN	-	STANTEC	REVISED -	
PLOT SCALE = 50.00 '/ IN.	CHECKED	-	ТМН	REVISED -	
PLOT DATE = 12/12/2012	DATE	-	12/12/2012	REVISED -	

STATE	<b>OF</b>	ILLINOIS
DEPARTMENT (	DF 1	TRANSPORTATION

IL ROUTE 120 ROADWAY RESURFACING					F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
EXISTING AND PROPOSED ROADWAY AND PAVEMENT MARKING PLAN				333	15-RS-12	MCHENRY	33	14		
EXISTING AND PROPUSED ROADWAY AND PAVEMENT MARKING PLAN							CONTRACT	NO.60	N54	
SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.		ILLINOIS FED. AID PROJECT			

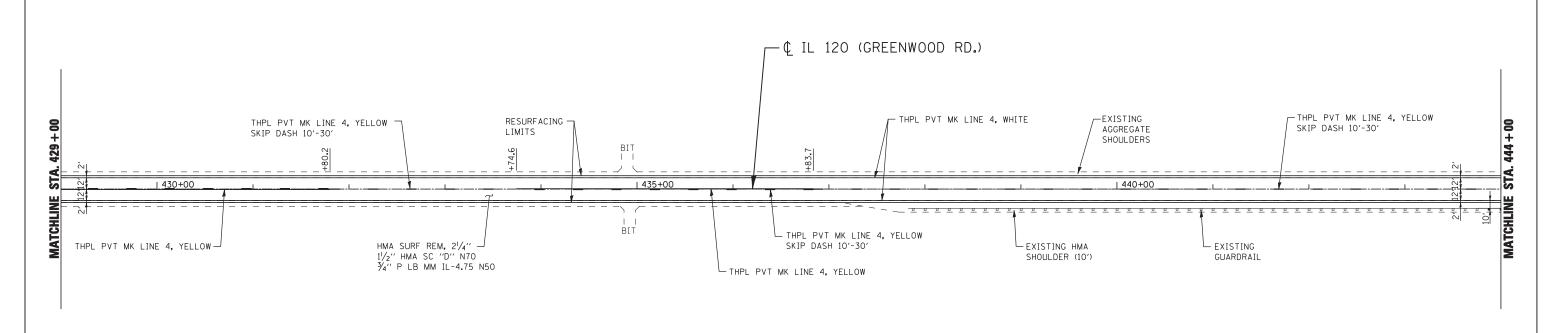




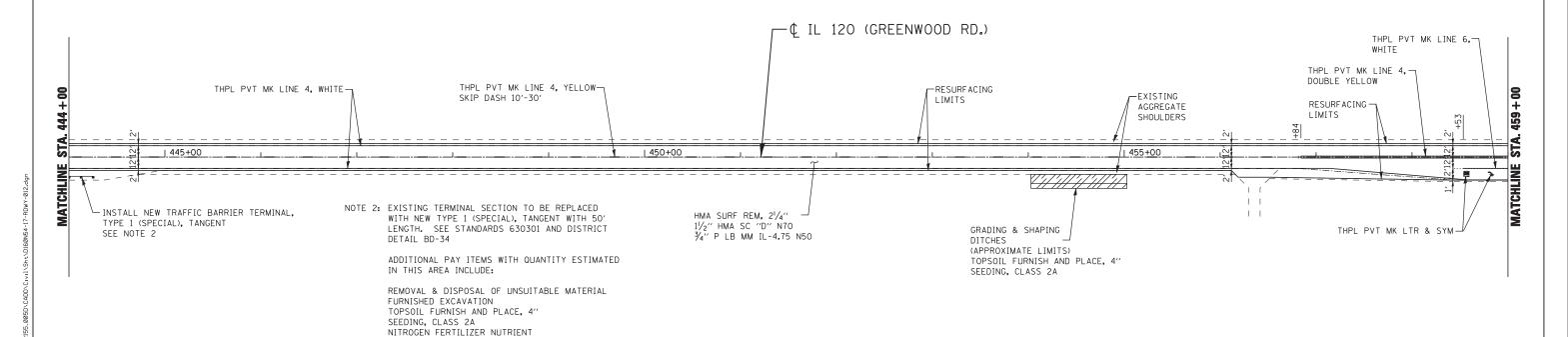
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	IL ROUTE	120 F	ROADWAY	RESURF	ACING	F.A. RTE.	SECT
CING AND	PROPOSED	ROA	DWAY A	IN PAVE	MENT MARKING PLAN	333	15-RS
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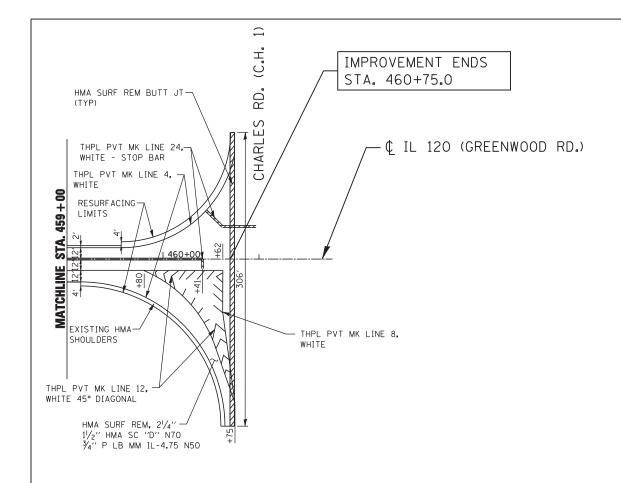
POTASSIUM FERTILIZER NUTRIENT EROSION CONTROL BLANKET AGGREGATE SHOULDERS, TYPE B - 6"

GUARDRAIL REMOVAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING AND PROPOSED ROADWAY AND PAVEMENT MARKING PLAN

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



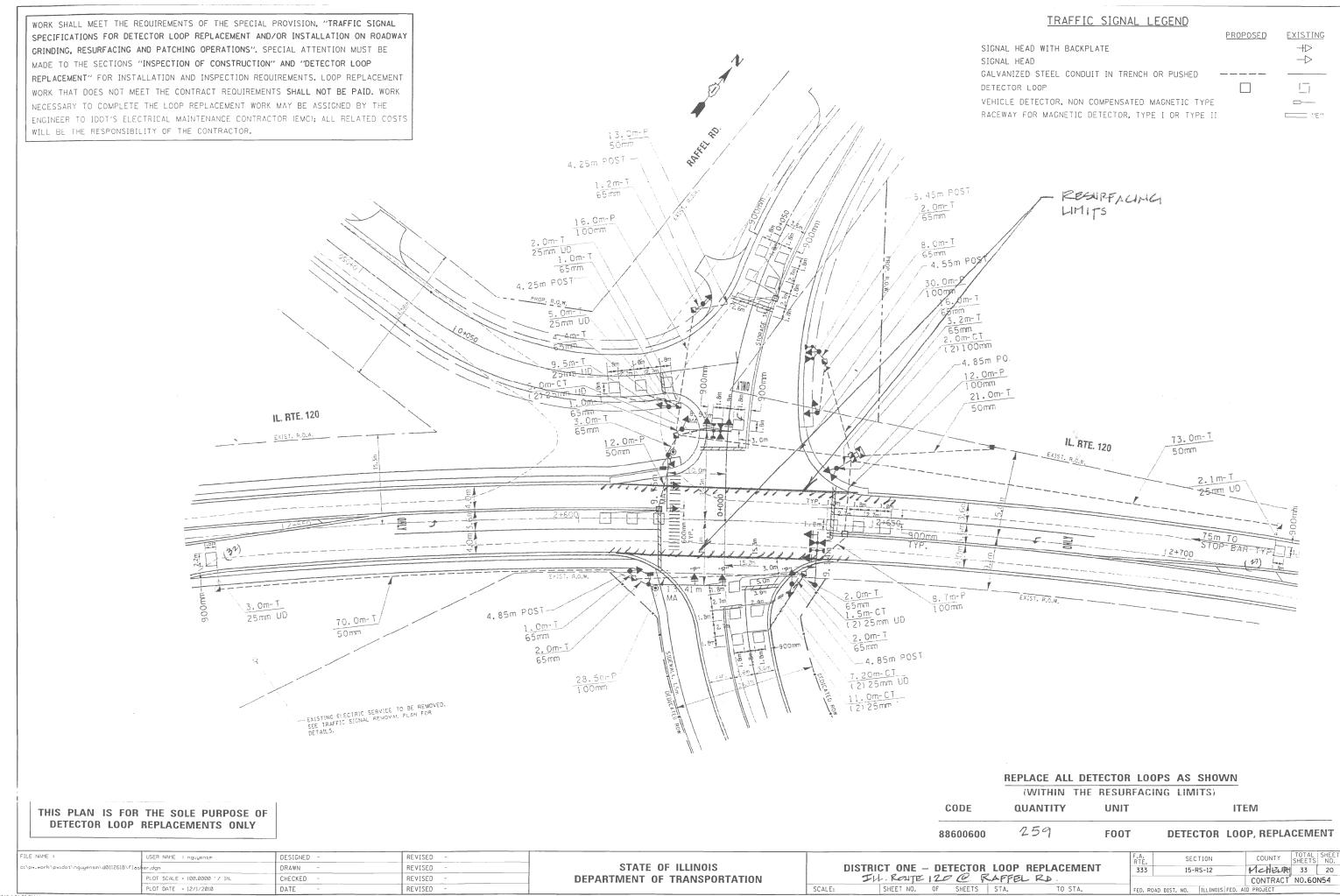
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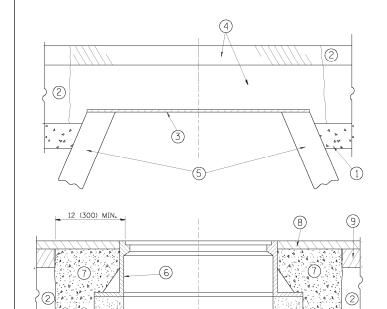
STATE	<b>OF</b>	ILLINOIS	
DEPARTMENT (	DF 1	<b>TRANSPORTATION</b>	

IL ROUTE 120 ROADWAY RESURFACING									
	EXISTING AND	PROPOSED	ROA	DWAY AI	ND PAVE	MENT MARKING	PLAN	333	
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	SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.			

F.A. RTE.	SECTION				COUNTY	TOTAL SHEETS	SHEET NO.		
333	15-RS-12			MCHENRY	33	18			
				CONTRACT	NO.60	N54			
ILLINOIS FED. AID PROJECT									

WORK SHALL MEET THE REQUIREMENTS OF THE SPECIAL PROVISION, "TRAFFIC SIGNAL TRAFFIC SIGNAL LEGEND SPECIFICATIONS FOR DETECTOR LOOP REPLACEMENT AND/OR INSTALLATION ON ROADWAY PROPOSED EXISTING GRINDING, RESURFACING AND PATCHING OPERATIONS". SPECIAL ATTENTION MUST BE SIGNAL HEAD WITH BACKPLATE + MADE TO THE SECTIONS "INSPECTION OF CONSTRUCTION" AND "DETECTOR LOOP SIGNAL HEAD --> REPLACEMENT" FOR INSTALLATION AND INSPECTION REQUIREMENTS, LOOP REPLACEMENT GALVANIZED STEEL CONDUIT IN TRENCH OR PUSHED DETECTOR LOOP WORK THAT DOES NOT MEET THE CONTRACT REQUIREMENTS SHALL NOT BE PAID. WORK NECESSARY TO COMPLETE THE LOOP REPLACEMENT WORK MAY BE ASSIGNED BY THE VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE \_\_\_ ENGINEER TO IDOT'S ELECTRICAL MAINTENANCE CONTRACTOR (EMC); ALL RELATED COSTS RACEWAY FOR MACNETIC DETECTOR, TYPE I OR TYPE II WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. INTERSECTION AND SAMPLING SYSTEM) DETECTOR 110 REGULFACING LIMIT - (7.3m-E-40mm) -(4.5m-E-65mm) (67.0m-E-30mm) . (15m-E-2-100mm) - (75.5m-E-30mm 17.3m-E 125mm)7 17.5m-E-25mm)7 (1.2m-E-25mm) SEMINARY AVENUE 2 : en-E-25" ~\_46m-E-25mm - (17.0m-E-100mm) ALBM-E-65MA ~(60m-E-65mm) ~(3.0m-E-30mm) L(9.7m-E-65mm) (10.9m-E-65mm -(2.4m-E-65mm) (1.2m-E-65mm) (2.7m-E-25mm)-(6.0m-E-25mm) -(52.4m-E-30mm) (9.0m-E-25mm) (2.7m-E-25mm)-(14 Om-E-25mm) -DRILL EXISTING HANDHOLE (1) REGURFACING LIMITS REPLACE ALL DETECTOR LOOPS AS SHOWN (WITHIN THE RESURFACING LIMITS) THIS PLAN IS FOR THE SOLE PURPOSE OF CODE QUANTITY UNIT ITEM DETECTOR LOOP REPLACEMENTS ONLY 88600600 54 FOOT DETECTOR LOOP, REPLACEMENT FILE NAME USER NAME = nguyensm DESIGNED REVISED SECTION DRAWN REVISED STATE OF ILLINOIS DISTRICT ONE - DETECTOR LOOP REPLACEMENT IN ROUTE 120 @ IN ROUTE 47 CONTRACT NO. 60N54 333 CHECKED PLDT SCALE = 100,0000 '/ IN. REVISED DEPARTMENT OF TRANSPORTATION DATE REVISED ilasher,dgn 12/1/2010 1:21:56 PM User≂nguyensir SHEETS STA. FED. ROAD DIST. NO. | ILLINOIS FED. AID PROJECT





EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.

PROPOSED

BRICK, MORTAR, OR CONC. ADJUSTING RINGS

IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.

CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.

THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

WHEN STRUCTURES ARE TO BE ADJUSTED OR RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE CORRESPONDING PAY ITEM.

### CONSTRUCTION PROCEDURES

### STAGE 1 (BEFORE PAVEMENT MILLING)

- A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM
- AROUND THE STRUCTURE.

  B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.
- C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.
- D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 1/2 (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

# STAGE 2 (AFTER PAVEMENT MILLING)

- A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.
- B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
- C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS PP-1\*
  CONCRETE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.
- \* UNLESS OTHERWISE SPECIFIED IN THE PLANS.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS.

- 1 SUB-BASE GRANULAR MATERIAL
- (6) FRAME AND LID (SEE NOTES)
- 2 EXISTING PAVEMENT

5 EXISTING STRUCTURE

- (7) CLASS PP-1\* CONCRETE
- 3 36 (900) DIAMETER METAL PLATE
- 8 PROPOSED HMA SURFACE COURSE
- PROPOSED CRUSHED STONE AND HMA SURFACE MIX
- 9 PROPOSED HMA BINDER COURSE

# LOCATION OF STRUCTURES:

THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

BASIS OF PAYMENT: THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR "FRAMES AND LIDS TO BE ADJUSTED, SPECIAL" NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

# DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

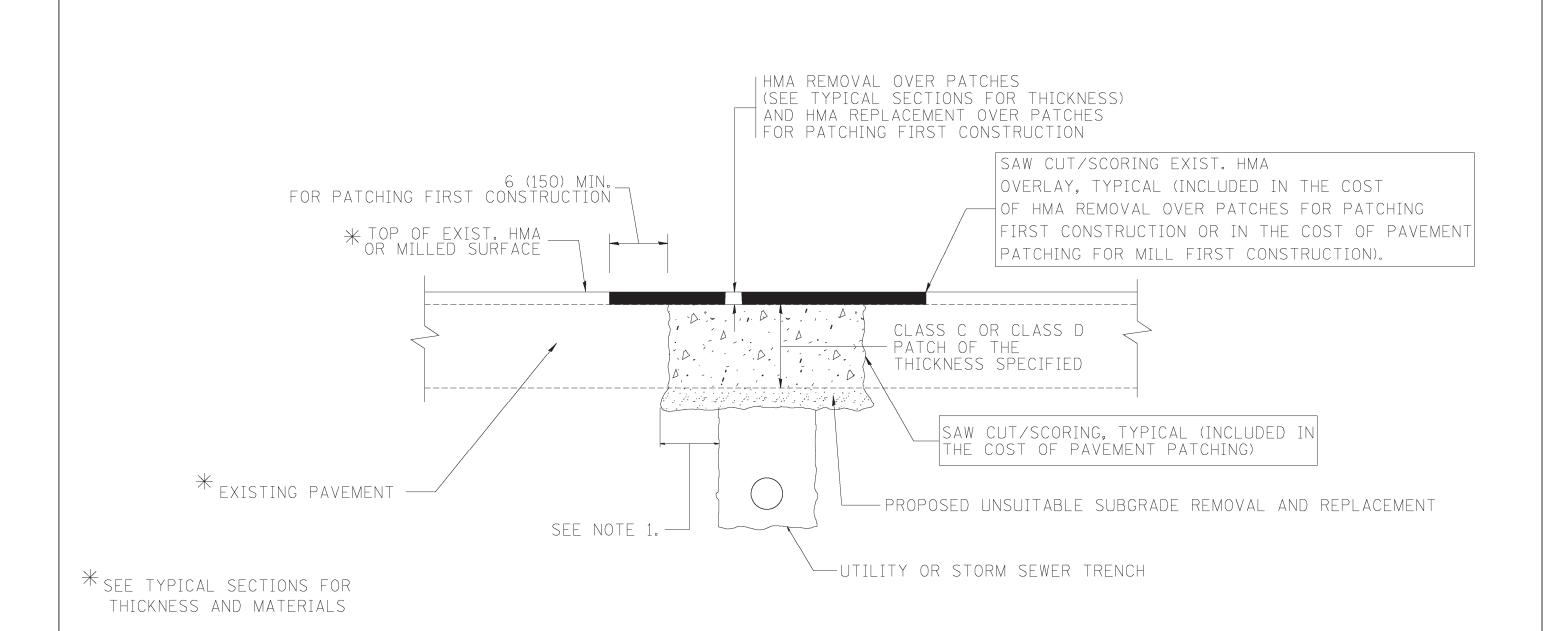
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	PLOT DATE = 3/18/2011	DATE - 10-25-94	REVISED - R. BORO 03-09-11

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

		D	ETAILS FO	R	
	FRAMES AND	LIDS	ADJUSTN	IENT WITH	H MILLING
SCALE: NONE	SHEET NO. 1	OF 1	SHEETS	STA.	TO ST

COUNTY SHEETS NO.

MCHENRY 33 21 333 15-RS-12 CONTRACT NO. 60N54 BD600-03 (BD-8)



# NOTES:

- 1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12 (300) WIDER ON EACH SIDE OF THE TRENCH.
- 2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL".

# SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

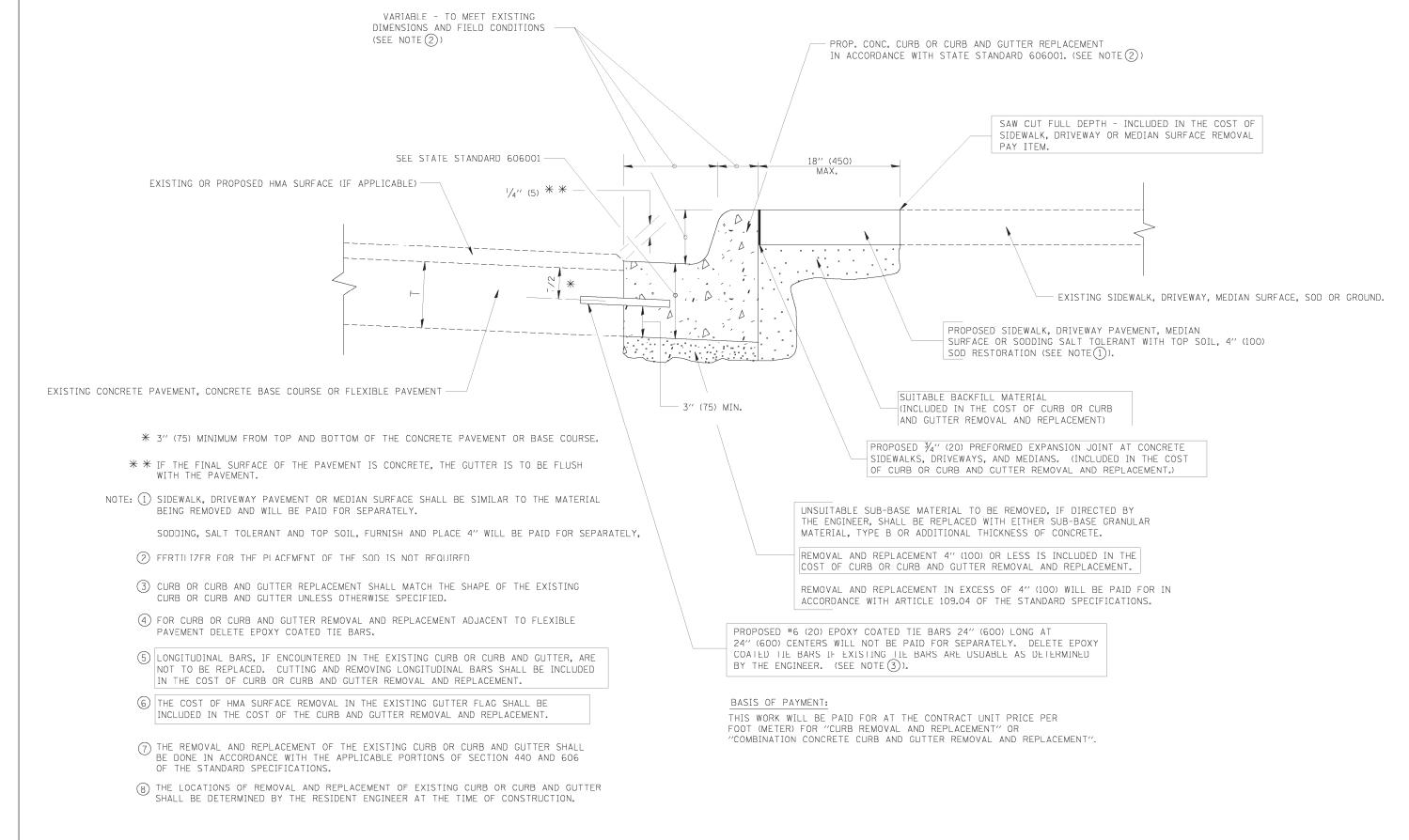
- 1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
- 2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
- 3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

# SEQUENCE OF CONSTRUCTION (MILLING FIRST)

- 1. MILL HMA FIRST IF THERE IS AT LEAST 41/2 INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
- 2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

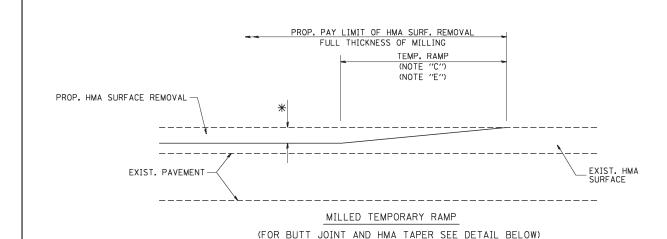
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c:\projects\dists	tstd22x34\bd22.dgn		DRAWN -	REVISED - R. BORO 01-01-07	STATE OF ILLINOIS			333	15-RS-12	MCHENRY	33	22
		PLOT SCALE = 50.000 '/ IN.	CHECKED -	REVISED - R. BORO 09-04-07	DEPARTMENT OF TRANSPORTATION	HMA SURFACED PAVEME	ENT		400-04 (BD-22)	CONTRACT	T NO. 6	50N54
		PLOT DATE = 10/27/2008	DATE - 10-25-94	REVISED - K. ENG 10-27-08		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA.	TO STA.	FED. ROAD	DIST. NO. 1   ILLINOIS FED.	AID PROJECT		70113 1



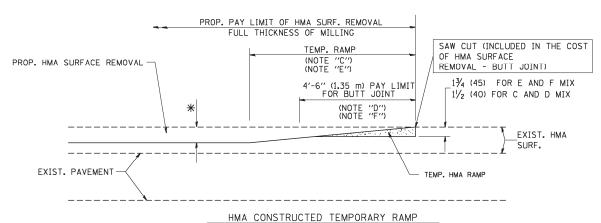
# CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME = USER NAME = drivakosgn DESI	SIGNED - A. HOUSEH	REVISED - R. SHAH 10-03-96		CURB OR CURB AND GUTTER		F.A	SECTION C	COUNTY TOTA	AL SHEET
c:\pw_work\pwidot\drivakosgn\d0108315\bd24.dgn DRAN	RAWN -	REVISED - A. ABBAS 03-21-97	STATE OF ILLINOIS			333	15-RS-12 MC	CHENRY 33	23
PLOT SCALE = 50.000 '/ IN. CHEC	HECKED -	REVISED - M. GOMEZ 01-22-01	DEPARTMENT OF TRANSPORTATION	REMOVAL AND REPLACEMENT		BD600-		ONTRACT NO.	60N54
PLOT DATE = 12/15/2009 DATE	ATE - 03-11-94	REVISED - R. BORO 12-15-09	SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA.	TO STA.	FED. ROAD DIST.	NO. 1 ILLINOIS FED. AID PRO	ROJECT	001101



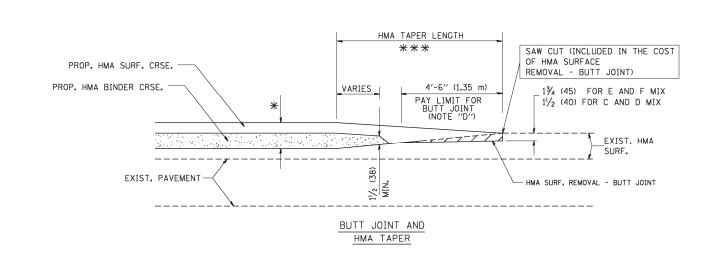
# OPTION 1



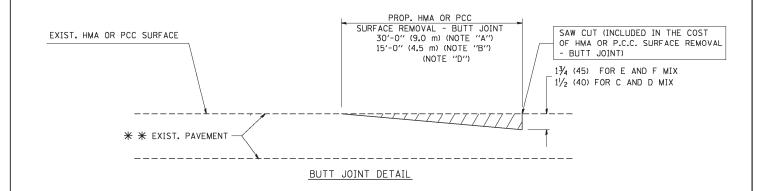
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

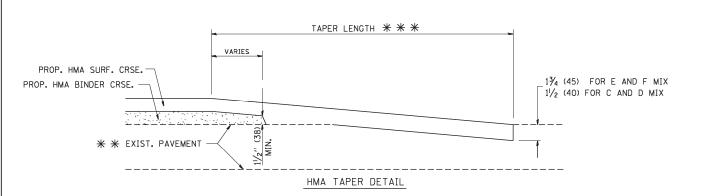
# OPTION 2

# TYPICAL TEMPORARY RAMP



# TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING





# TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

\* \* PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

# NOTES

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
- B: MINOR SIDE ROADS.
- C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
- D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
- E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
- F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL BUTT JOINT
- G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- $m{\#}$  SEE TYPICAL SECTIONS FOR MILLING THICKNESS.

# BASIS OF PAYMENT:

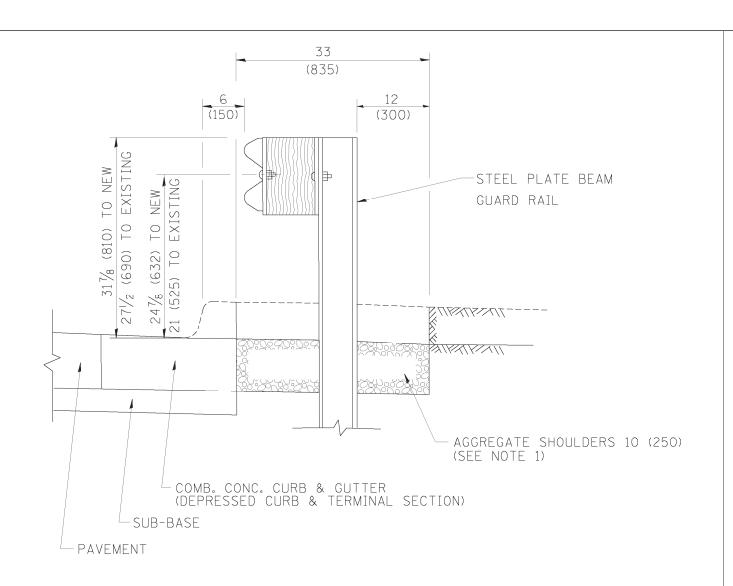
THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SOUARE YARD (SQUARE METER)
FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL- BUTT JOINT".

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME =	USER NAME = gaglianobt	DESIGNED - M. DE YONG	REVISED -	R. SHAH 10-25-94
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	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED -	M. GOMEZ 04-06-01
	PLOT DATE = 1/4/2008	DATE - 06-13-90	REVISED -	R. BORO 01-01-07

# STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

	BUTT JOINT A	AND		F.A RTE.	SECTION	COUNTY	TOTAL	SHEE.
	HMA TAPER DETAILS			333	15-RS-12	MCHENRY	33	24
					BD400-05 (BD32)	CONTRACT	NO. 6	0N54
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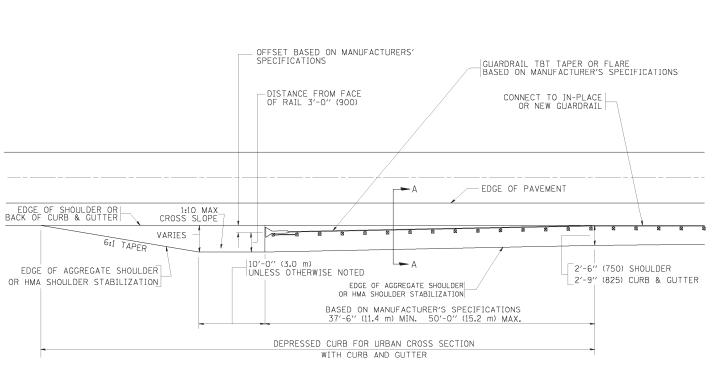


# SECTION A-A

NOTES: 1. THE AGGREGATE SHOULDER, 10" OR HMA SHOULDER, 6" (IF REQUIRED) SHALL EXTEND UNDER THE TRAFFIC BARRIER TERMINAL.

- 2. "EXISTING" GUARDRAIL REFERS TO CONNECTING TERMINAL SECTION TO GUARD RAILING PRIOR TO THE MIDWEST GUARDRAIL SYSTEM.
- 3. THE CONTRACTOR SHALL VERIFY THE TYPE/HEIGHT OF GUARDRAIL IN-PLACE BEFORE ORDERING THE NEW TERMINAL SECTION. COST INCLUDED WITH THE COST OF THE TERMINAL. THE TERMINAL SECTION HEIGHT TO BE PLACED MUST MATCH THE HEIGHT OF THE IN-PLACE GUARDRAIL.

DETAILS FOR STEEL PLATE BEAM GUARD RAIL ADJACENT TO CURB AND GUTTER [FOR ROADWAY SPEED 35 MPH (60 kmh) TO 45 MPH (70 kmh)]



# DEPRESSED CURB AND GUTTER AND SHOULDER TREATMENT AT TBT TY. 1 SPL.

BASIS OF PAYMENT: HMA SHOULDERS 6 (150) (IF REQUIRED) WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SHOULDERS 6" (150 mm)".

> STEEL PLATE BEAM GUARD RAIL AND TRAFFIC BARRIER TERMINAL, OF THE TYPE SPECIFIED WILL BE PAID FOR SEPARATELY.

> > TBT = TRAFFIC BARRIER TERMINAL

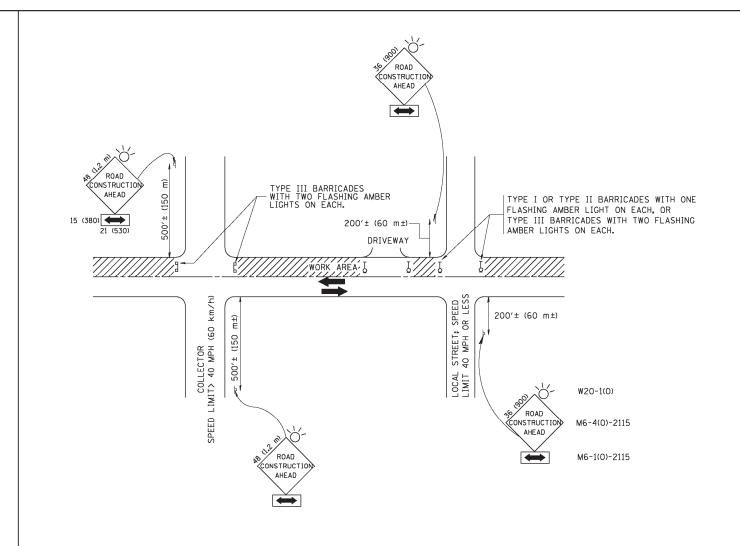
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

DESIGNED M. DE YONG E. GOMEZ 08-28-00 DRAWN REVISED R. BORO 01-01-07 PLOT SCALE = 49.9999 // IN. CHECKED REVISED R. BORO 12-08-2008 PLOT DATE = 9/21/2009 09-22-90 R. BORO 09-14-2009

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

	DETAILS FOR	DEPRESSED C	URB & GUTT	ER AND
	SHOULDER	TREATMENT	AT TBT TY 1	SPL.
SCALE: NONE	SHEET NO. 1	OF 1 SHEETS	STA.	TO STA.

COUNTY 15-RS-12 MCHENRY 33 25 333 CONTRACT NO. 60N54 BD600-10 (BD 34)



# TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

# NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
- SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
- Q) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
- b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
- d) ONE ROAD CONSTRUCTION AHEAD SIGN 48  $\times$  48 (1.2 m  $\times$  1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
- b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:
- USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

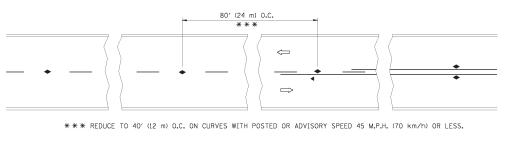
All dimensions are in millimeters (inches) unless otherwise shown.

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	PLOT SCALE = 50.000 '/ IN.	CHECKED -	REVISED - A. HOUSEH 10-15-96
	PLOT DATE = 1/4/2008	DATE - 06-89	REVISED -T. RAMMACHER 01-06-00

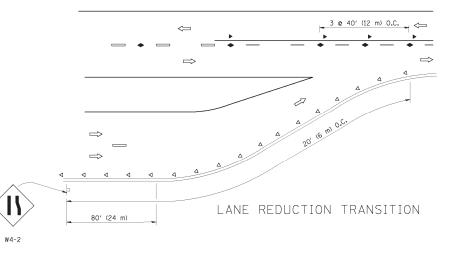
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DEPARTMENT	<b>OF</b>	TRANSPORTATION

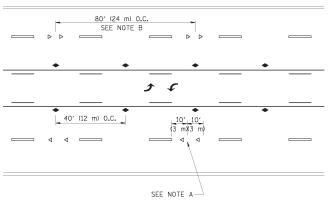
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	SIDE ROADS, INTER	SECTIONS, AND DRIV	<b>YEWAYS</b>
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F.A RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
333	15-RS-12	MCHENRY	33	26
	TC-10	CONTRACT	NO. 6	0N54
FED. R	OAD DIST. NO. 1   ILLINOIS FED. A	ID PROJECT		

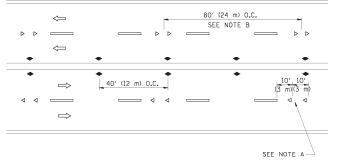


TWO-LANE/TWO-WAY

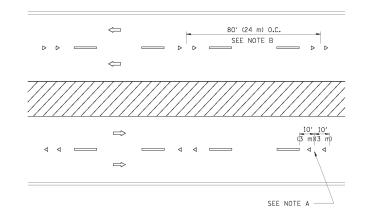




TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

# GENERAL NOTES

- 1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
- 2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
- 3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

# LANE MARKER NOTES

A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.

B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

# SYMBOLS

---- YELLOW STRIPE

----- WHITE STRIPE

- ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER (₩/O)
- ◆ TWO-WAY AMBER MARKER

# DESIGN NOTES

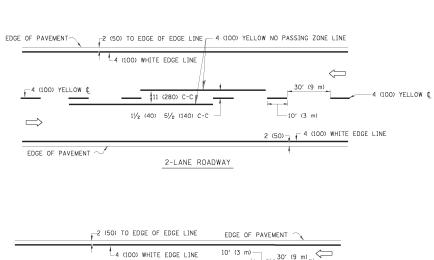
- 1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
- EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
- 3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN THE PLANS.
- MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.

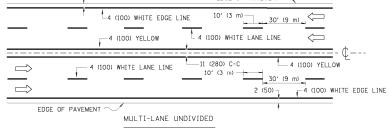
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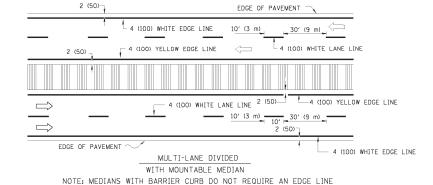
LEFT TURN

All dimensions are in inches (millimeters) unless otherwise shown.

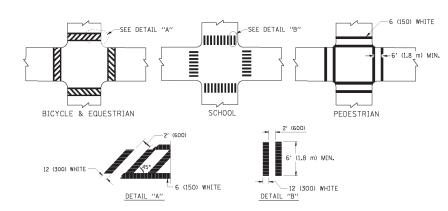
	FILE NAME =	USER NAME = drivakosgn	DESIGNED -	REVISED -T. RAMMACHER 09-19-94			TYPICAL APPLICATIONS	RTE.	SECTION	COUNTY SHEETS NO.
	c:\pw_work\pwidot\drivakosgn\d0108315\tc	l.dgn	DRAWN -	REVISED -T. RAMMACHER 03-12-99	STATE OF ILLINOIS	DAIGED	REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)	333	15-RS-12	MCHENRY 33 27
		PLOT SCALE = 50.000 '/ IN.	CHECKED -	REVISED -T. RAMMACHER 01-06-00	DEPARTMENT OF TRANSPORTATION	LAISED I	HELLECTIVE LANGINIENT MINUKEUS (SMOAN-LTOAN MESISTAMT)		TC-11	CONTRACT NO. 60N54
Į		PINT NATE = 9/9/2009	DATE -	REVISED - C. JUCIUS 09-09-09		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROA	ND DIST. NO. 1   ILLINOIS FE	ED. AID PROJECT



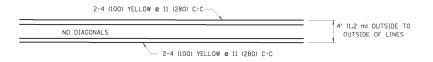




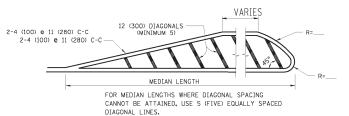
TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING

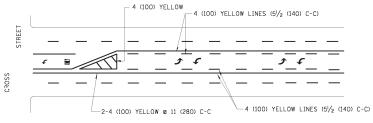


# 4' (1.2 m) WIDE MEDIANS ONLY

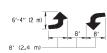


DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

# MEDIANS OVER 4' (1.2 m) WIDE

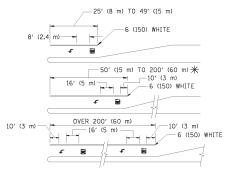


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

# TYPICAL PAINTED MEDIAN MARKING

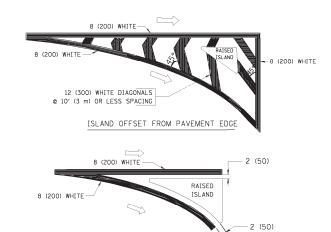


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.  $\P_1$  AREA = 15.6 SO. FT. (1.5 m²) ONLY AREA = 20.8 SO. FT. (1.9 m²)

\* TURN LANES IN EXCESS OF 400" (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

# TYPICAL TURN LANE MARKING



# TYPICAL ISLAND MARKING

ISLAND AT PAVEMENT EDGE

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION	SKIP-DASH AND SOLID	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 51/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE
	8' (2.4m) LEFT ARROW	IN PAIRS	WHITE	SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (500) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS	SOLID	YELLOW: TWO WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE
	0 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS		WHITE: ONE WAY TRAFFIC	SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m <sup>2</sup> ) EACH "X"=54.0 SQ. FT. (5.0 m <sup>2</sup> )
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

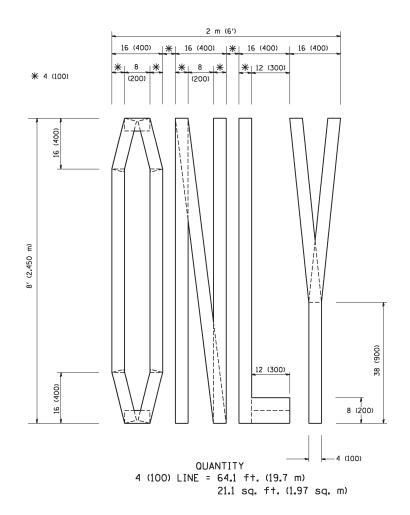
FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

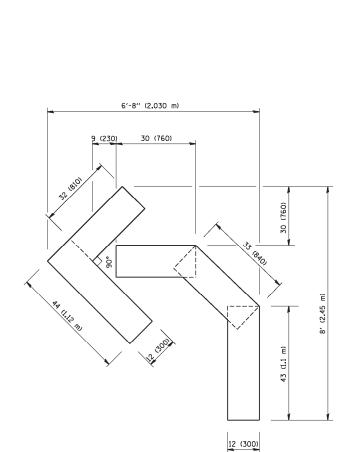
All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = drivakosgn	DESIGNED	-	EVERS	REVISED	-T. R	AMMACHER	10-27-94
c:\pw_work\pwidot\drivakosgn\d0108315\tc	13.dgn	DRAWN	-		REVISED	- C	IUCIUS	09-09-09
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	PLOT DATE = 9/9/2009	DATE	-	03-19-90	REVISED	-		

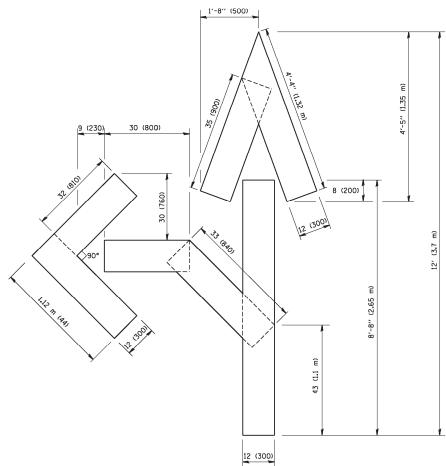
STATE OF	ILLINOIS
<b>DEPARTMENT OF</b>	TRANSPORTATION

	DISTRICT	ONE		F.A RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TYPICAL PAVEMENT	MADVINGS		333	15-RS-12	MCHENRY	33	28
	TIFICAL PAVEINEN	WANKINGS			TC-13	CONTRACT	NO. 6	0N54
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	FED. RO	DAD DIST. NO. 1 ILLINOIS FED. AI	ID PROJECT		





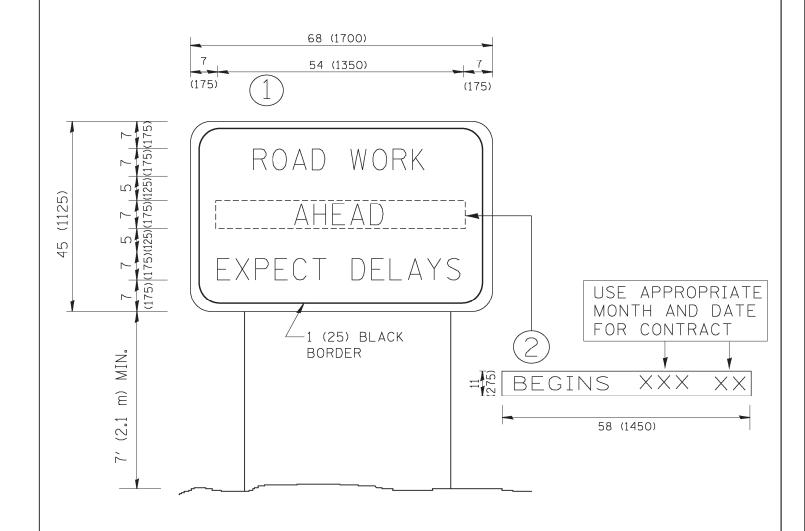
QUANTITY 4 (100) LINE = 45.5 ft. (13.9 m) 15.2 sq. ft. (1.39 sq. m)



QUANTITY 4 (100) LINE = 82.5 ft. (25.3 m) 27.5 sq. ft. (2.53 sq. m)

All dimensions are in inches (millimeters) unless otherwise shown.

	PLOT DATE = 1/4/2008	DATE - 09-18-94	REVISED - E. GOMEZ 08-28-00		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. A	AID PROJECT
	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED -T. RAMMACHER 03-02-98	DEPARTMENT OF TRANSPORTATION	FOR TRAFFIC STAGING	TC-16	CONTRACT NO. 60N54
W:\diststd\22x34\tc16.dgn		DRAWN -	REVISED -T. RAMMACHER 11-04-97	STATE OF ILLINOIS		333 15-RS-12	MCHENRY 33 29
	USER NAME = gaglianobt	DESIGNED -	REVISED -T. RAMMACHER 06-05-96		PAVEMENT MARKING LETTERS AND SYMBOLS	RTE. SECTION	COUNTY SHEETS NO.



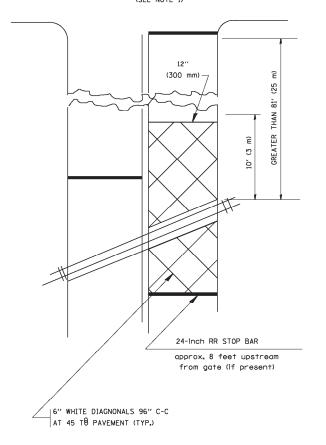
# NOTES:

- 1. USE BLACK LETTERING ON ORANGE BACKGROUND.
- 2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
- 3. ERECT SIGN (1) WITH INSTALLED PANEL (2) ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
- 4. REMOVE PANEL (2) SOON AFTER THE START OF CONSTRUCTION.
- 5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
- 6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
- 7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

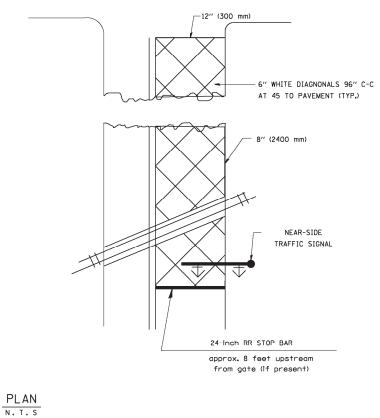
FILE NAME =	USER NAME = gaglianobt	DESIGNED -	REVISED - R. MIRS 09-15-97	·	ARTERIAL ROAD	F.A SECTION	COUNTY TOTAL SHEET
W:\diststd\22x34\to22.dgn		DRAWN -	REVISED - R. MIRS 12-11-97	STATE OF ILLINOIS		333 15-RS-12	MCHENRY 33 30
	PLOT SCALE = 50.000 '/ IN.	CHECKED -	REVISED -T. RAMMACHER 02-02-99	DEPARTMENT OF TRANSPORTATION	INFORMATION SIGN	TC-22	CONTRACT NO. 60N54
	PLOT DATE = 1/4/2008	DATE -	REVISED - C. JUCIUS 01-31-07		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOI	S FED. AID PROJECT

# WITH INTERSECTION TRAFFIC SIGNALS (SEE NOTE 1)



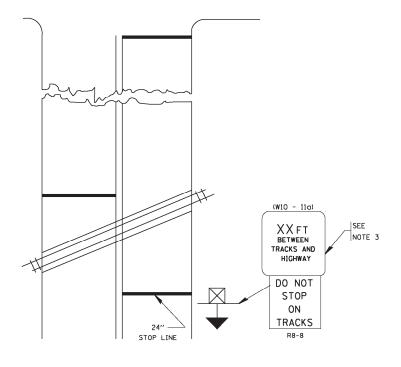
# WITH NEAR-SIDE TRAFFIC SIGNALS

(SEE NOTE 1 & 2)



# WITH NONSIGNALIZED INTERSECTION

81' (25 m) OR LESS TO CLOSEST RAIL



PLAN

# NOTES:

- 1. PAVEMENT MARKINGS TO BE INSTALLED ON APPROACHES TO INTERSECTIONS CONTROLLED BY TRAFFIC SIGNALS WHICH ARE INTERCONNECTED WITH THE RAILROAD WARNING SIGNALS.
- 2. WHERE NEAR-SIDE TRAFFIC SIGNALS ARE USED, THE PAVEMENT MARKINGS EXTENDS TO THE INTERSECTION.
- 3. DISTANCE TO BE SHOWN ON SIGN MEASURED FROM A POINT 6 FEET (1.8 m) FROM THE RAIL CLOSEST TO THE INTERSECTION TO THE STOP LINE OR CROSSWALK, WHICHEVER IS CLOSEST, ROUNDED DOWN TO THE NEAREST 5 FEET (1.5 m). WHERE THERE IS NO STOP LINE, MEASURE TO POINT WHERE THE DRIVER HAS A VIEW OF APPROACHING TRAFFIC.

THE CLEARANCE SIGN IS ALSO TO BE USED AS AN INTERIM MEASURE AT LOCATIONS WITH INTERCONNECTED INTERSECTION TRAFFIC SIGNALS WHERE IT IS PLANNED TO CHANGE THEM TO NEAR-SIDE SIGNALS AT A FUTURE TIME. IN THIS CASE, THE DISTANCE TO BE SHOWN ON THE SIGN IS MEASURED FROM THE EDGE OF THE STRIPED-OUT AREA INSTEAD OF 6-FEET FROM THE RAIL. THE SIGN IS TO BE REMOVED WHEN THE NEAR-SIDE SIGNALS ARE INSTALLED AND THE PAVEMENT MARKINGS EXTEND TO THE INTERSECTION.

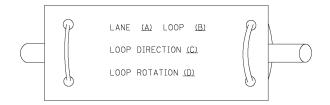
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
UNLESS OTHERWISE SHOWN.

	PLOT DATE = 5/7/2012	DATE -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROAD I		D. AID PROJECT		Ë
	PLOT SCALE = 50.000 '/ in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION		TREATMENT FOR RAILROAD CROSSINGS		TC-23	CONTRACT	NO. 60N5	4
		DRAWN -	REVISED - 04-26-12	STATE OF ILLINOIS			333	15-RS-12	MCHENRY	33 31	
FILE NAME =	USER NAME = drivakosgn	DESIGNED -	REVISED - 02-25-11		TYPIC	AL SUPPLEMENTAL SIGNING AND PAVEMENT MARKING	RTE.	SECTION	COUNTY	SHEETS NO.	1

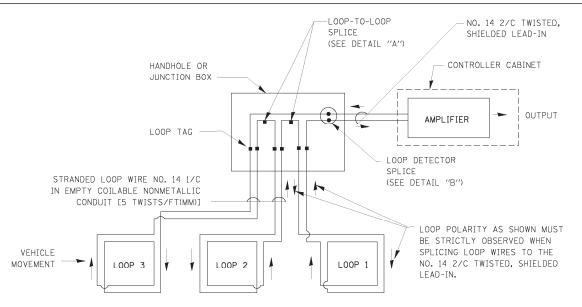
# LOOP DETECTOR NOTES

- 1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
- 2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
- 3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
- 4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
- 5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
- 6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
- 7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

# LOOP LEAD-IN CABLE TAG

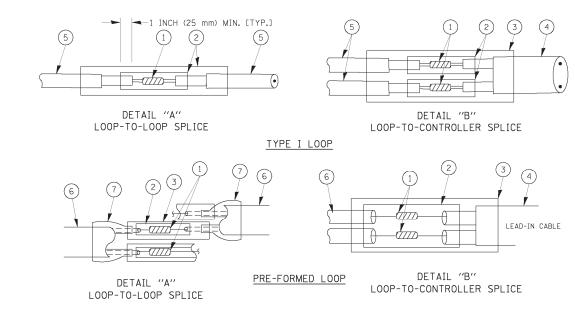


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.



# DETECTOR LOOP WIRING SCHEMATIC

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.



### LOOP DETECTOR SPLICE

- $\stackrel{\textstyle \frown}{}$  Western union splice soldered with rosin core flux. All exposed surfaces of the solder shall be smooth.
- (2) WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- (3) WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGHT 6" (150 mm), UNDERWATER GRADE.
- (4) NO. 14 2/C TWISTED, SHIELDED CABLE.
- (5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- (6) PRE-FORMED LOOP
- 7 XL POLYOLEFIN 2 CONDUCTOR
  BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

NAME = USER NAME = bauerdl	DESIGNED - DAD REVISED -
v_work\PWIDDT\BAUERDL\dØ1Ø8315\tsØ5.dgn	DRAWN - BCK REVISED -
PLOT SCALE = 50.0000 // IN.	CHECKED - DAD REVISED -
PLOT DATE = 11/4/2009	DATE - 10-28-09 REVISED -

STATI	E OF	ILLINOIS	
DEPARTMENT	0F	TRANSPORTA	TION

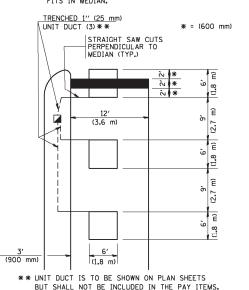
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	STANDARD TRAFFIC SIG	WAL DESIGN	I DETAILS		TS-05	CONTRACT	NO. 6	0N54
SCALE: NONE	SHEET NO. 1 OF 6 SHEET	S STA.	TO STA.	FED. RO	DAD DIST. NO. 1 ILLINOIS FED. AI	D PROJECT		

# PROVIDE A PAVEMENT REPLACEMENT NOTE WHICH SHOULD EQUAL 3' (900 mm) X WIDTH OF PAVED SHOULDER. PAVED OR NON-PAVED SHOULDER \* = (600 mm) \* \* UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS. ARTERIAL - VOLUME DENSITY ("FAR OLD

# LEFT TURN LANES WITH MEDIANS VOLUME DENSITY ("FAR OUT" DETECTION) ON SAME APPROACH

(PROTECTED / PERMITTED LEFT TURN PHASING)

HANDHOLE LOCATION MAY
VARY DEPENDING ON GEOMETRICS
AND DESIGN OF TRAFFIC SIGNALS.
HEAVY-DUTY HANDHOLES TO BE
USED WHEN THE MEDIAN IS
MOUNTABLE. REFER TO STANDARD
B14001 TO ENSURE THAT HANDHOLE
FITS IN MEDIAN.

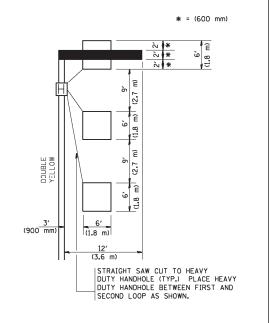


NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO

PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

# LEFT TURN LANES WITHOUT MEDIANS VOLUME DENSITY ("FAR OUT" DETECTION) ON SAME APPROACH

(PROTECTED / PERMITTED LEFT TURN PHASING)

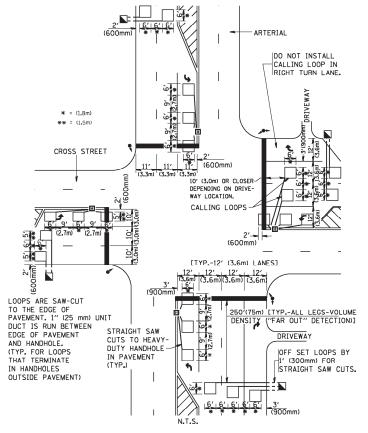


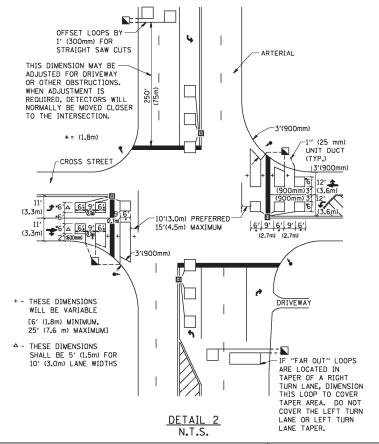
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

SCALE: NONE

ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)
CROSS STREET-VOLUME DENSITY ("FAR OUT" DETECTION)

ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)
CROSS STREET-NON VOLUME DENSITY ("UPTIGHT" PRESENCE DETECTION)





# NOTES:

### VEHICLES LOOP DETECTORS

- \* ALL LEAD IN CABLE SHALL BE TWO CONDUCTOR NO. 14 TWISTED, SHIELDED.
- \* EACH DETECTOR LOOP SHALL HAVE ITS OWN SAW CUT FROM THE LOOP TO THE EDGE OF PAVEMENT OR TO A HANDHOLE IN THE PAVEMENT.
- \* EACH DETECTOR LOOP SHALL HAVE ITS OWN ONE INCH (25 mm) UNIT DUCT BETWEEN THE EDGE OF PAVEMENT AND THE FIRST HANDHOLE OR JUNCTION BOX. EACH UNIT DUCT RUN SHALL BE SHOWN ON THE PLANS BY THE DESIGNER, BUT SHALL NOT BE PAID FOR SEPARATLY. THIS ITEM IS INCIDENTAL TO THE PAY ITEM FOR DETECTOR LOOPS.
- \* ONE DIMENSION OF <u>ALL</u> DETECTOR LOOPS SHALL BE SIX FEET (1.8 m)
- \* EACH LANE OF NON-LOCKING, PRESENCE DETECTION AND EACH LANE OF A DOUBLE LEFT TURN LANE REQUIRES A SEPARATE INDUCTIVE LOOP DETECTOR AND LEAD IN CABLE.
- \* WHEN NON-LOCKING, PRESENCE DETECTION IS USED, MORE
  THAN ONE LOOP PER LANE IS REQUIRED BEHIND THE STOP BAR
  (i.e. 1-1/2, 1-3/4, 2).
- \* WHEN SYSTEM LOOPS ARE REQUIRED ON AN APPROACH OF AN INTERSECTION, THE LOOPS USED FOR VOLUME DENSITY AND INTERSECTION TIMING SHALL ALSO BE USED AS SYSTEM DETECTORS. EACH ONE OF THESE TYPE OF LOOPS REQUIRES A SEPARATE TWO CONDUCTOR NO. 14 TWISTED SHIELDED CABLE AND A SEPARATE INDUCTIVE LOOP DETECTOR WHEN NEW CONTROLLERS ARE UTILIZED. THE DESIGNER SHALL LABEL THESE TYPES OF LOOPS AS "INTERSECTION AND SAMPLING (SYSTEM) DETECTORS" ON THE SIGNAL LAYOUT, THE INTERCONNECT PLAN AND THE SYSTEM CABLE PLAN. WHEN AN EXISTING CONTROLLER IS UTILIZED FOR THIS TYPE OF DETECTION, THE PAY ITEM "INDUCTIVE LOOP DETECTOR WITH SYSTEM OUTPUT" SHOULD BE USED.

### PLACEMENT OF DETECTORS

THE FOLLOWING FIGURES REPRESENT THE MOST COMMON DETECTOR LOOP LOCATIONS AND SIZES. ADJUSTMENTS WILL BE NECESSARY FOR SPECIFIC GEOMETRIC CONSIDERATIONS.

LOCATIONS AND DEMENSIONS OF DETECTOR LOOPS ARE REQUIRED ON ALL SIGNAL LAYOUT PLAN SHEETS.

"FAR OUT" DETECTION REFERS TO LOCKING, PRESENCE TYPE DETECTION LOCATED IN THRU LANES, RIGHT TURN LANES, AND RIGHT TURN LANE TAPER AREAS (IF APPLICABLE), USUALLY 250' (75 m) IN ADVANCE OF STOP BARS. "UPTIGHT" DETECTION REFERS TO NON-LOCKING PRESENCE TYPE DETECTION LOCATED IN ALL LANES AND 10'-15' (3.0 m-4.5 m) BEHIND THE CROSSING STREET'S EDGE OF PAVEMENT EXTENDED.

### NOTE:

ALL DETAILS AND NOTES SHOWN ARE FROM THE I.D.O.T. DISTRICT 1
TRAFFIC SIGNAL DESIGN GUIDELINES DATED JANUARY 1995

THIS DRAWING HAS BEEN PREPARED TO ASSIST THE RESIDENT ENGINEER FOR ALL ROADWAY RESURFACING OR S.M.A.R.T. PROJECTS WHERE THE DIMENSIONS ARE NOT SHOWN ON THE PLANS AND THE FINAL LOCATIONS FOR CROSSWALKS OR STOP BARS ARE NOT DETERMINED.

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DETAIL 1

# STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

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