

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PLANS FOR PROPOSED
FEDERAL AID HIGHWAY**

F. A. I. D. REC.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1045	14-00062-00-RS	COOK	15	1
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	M-4003 (432)	

CONTRACT #61B48

INDEX OF SHEETS

1. COVER SHEET, INDEX OF SHEETS & STATE STANDARDS
2. SUMMARY OF QUANTITIES & GENERAL NOTES
3. TYPICAL SECTIONS
- 4.-5. PAVEMENT PLAN
- 6.-7. PAVEMENT MARKING PLAN
- 8.-15. IDOT DISTRICT 1 STANDARD DETAILS

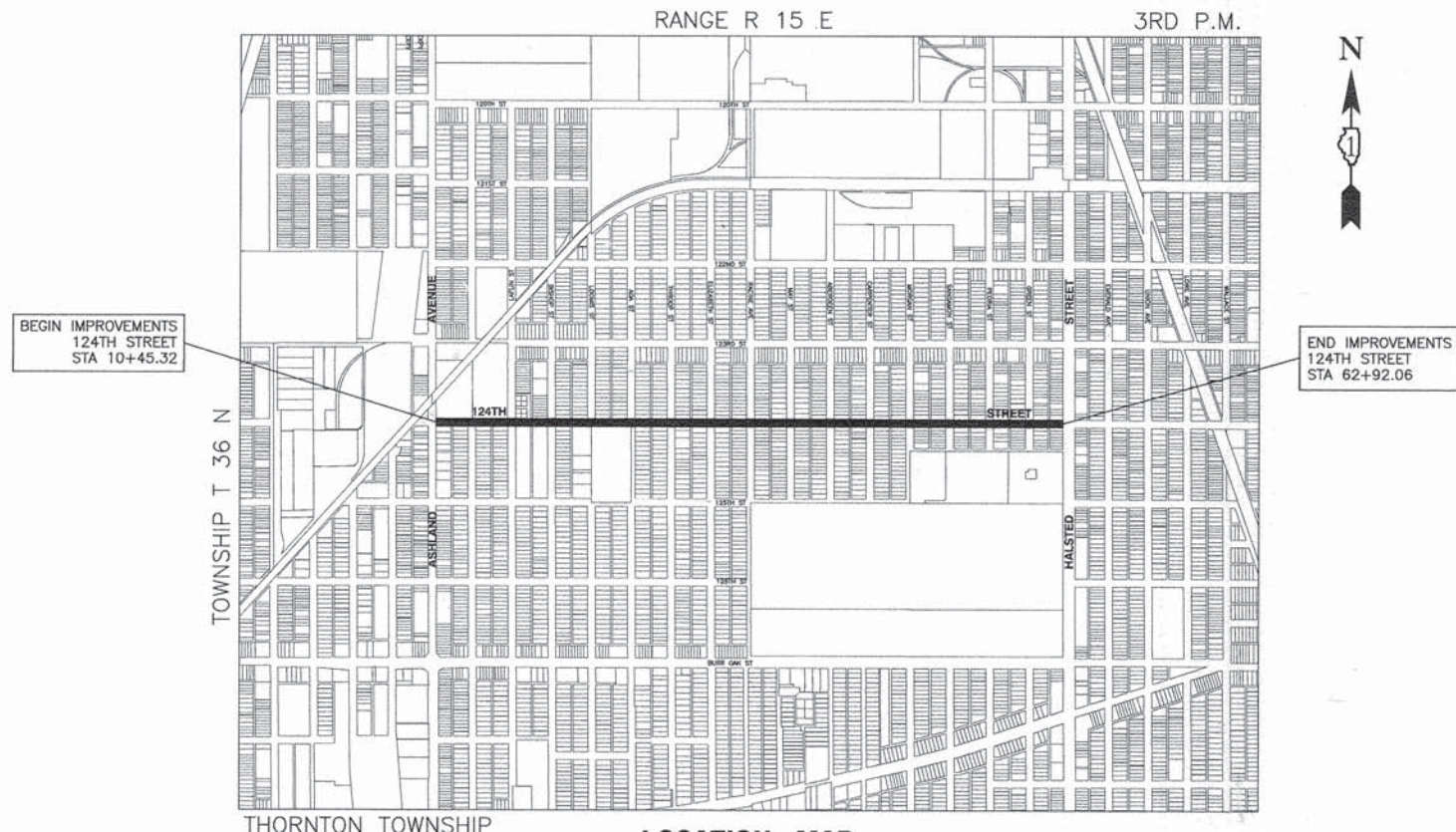
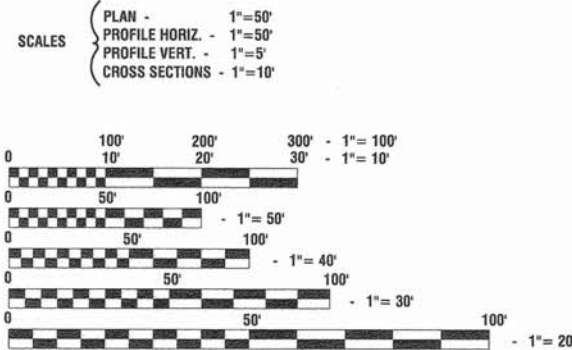
HIGHWAY STANDARDS

- 00001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 424001-08 PERPENDICULAR CURB RAMPS
- 442201-03 CLASS C AND D PATCHES
- 606001-06 CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
- 701501-06 URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
- 701801-05 SIDEWALK, CORNER OR CROSSWALK CLOSURE
- 701901-04 TRAFFIC CONTROL DEVICES

**FAU1045 (124TH STREET)
FAU 2857 (ASHLAND AVENUE) TO FAU 3730 (HALSTED STREET)
ROADWAY RESURFACING
SECTION NO.: 14-00062-00-RS
PROJECT NO.: M-4003 (432)
VILLAGE of CALUMET PARK
COOK COUNTY
JOB NO.: C-91-158-15**



124TH STREET	
2014 ADT -	3,000
2040 ADT -	3,000
POSTED SPEED LIMIT -	25 mph
DESIGN PERIOD -	20 YEARS
DESIGN SPEED LIMIT -	30 mph
STREET CLASSIFICATION -	COLLECTOR URBAN



LOCATION MAP

GROSS LENGTH= 5,247 FEET= 0.994 MILES
NET LENGTH= 5,247 FEET= 0.994 MILES

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Approved: 3-2-15
Ronald Denson
Village of Calumet Park

Passed: April 8, 2015
C. Hill *Christopher Hill*
District 1 Engineer of Local Roads & Streets

Released for Bid Based on Limited Review: April 8, 2015
John Fortmann
Deputy Director of Highways, Region 1 Engineer

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

CONTRACT NO. 61B48

PREPARED BY OR UNDER THE DIRECT SUPERVISION OF:
John K. Blum
3/2/2015

PATRICIA K. BURKE
62-51255
REGISTERED PROFESSIONAL ENGINEER
STATE OF ILLINOIS
LICENSE EXPIRES: 11/30/15

I.D.O.T. FEDERAL AID DESIGN ENGINEER: FAWAD AQUEEL, P.E. 847-705-4021, SCHAMBURG, IL.
CONSULTANTS: ROBINSON ENGINEERING, LTD. 708-331-6700

SUMMARY OF QUANTITIES					CONSTRUCTION TYPE CODE
S.I.	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY 0005
	20101700	SUPPLEMENTAL WATERING	UNIT	2	2
	40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUNDS	13242	13242
	40600900	<i>MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS</i>	<i>TON</i>	<i>10</i>	<i>10</i>
	40600827	POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50	TON	824	824
	40600985	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	536	536
	40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	2198	2198
	42300300	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 7 INCH	SQ YD	74	74
	42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	9600	9600
	42400800	DETECTABLE WARNINGS	SQ FT	1504	1504
	44000159	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/2"	SQ YD	19617	19617
	44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	137	137
	44000600	SIDEWALK REMOVAL	SQ FT	9600	9600
	44201383	CLASS C PATCHES, TYPE IV, 12 INCH	SQ YD	352	352
	44201785	CLASS D PATCHES, TYPE I, 12 INCH	SQ YD	3	3
	44201789	CLASS D PATCHES, TYPE II, 12 INCH	SQ YD	509	509
	44201794	CLASS D PATCHES, TYPE III, 12 INCH	SQ YD	108	108
	44201796	CLASS D PATCHES, TYPE IV, 12 INCH	SQ YD	289	289
	60250200	CATCH BASINS TO BE ADJUSTED	EACH	37	37
	60250400	CATCH BASINS TO BE ADJUSTED WITH NEW TYPE 1 FRAME, OPEN LID	EACH	2	2
	60252800	CATCH BASINS TO BE RECONSTRUCTED	EACH	3	3
	60255500	MANHOLES TO BE ADJUSTED	EACH	2	2
	60257900	MANHOLES TO BE RECONSTRUCTED	EACH	2	2
	67100100	MOBILIZATION	L SUM	1	1
	70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	1

* - INDICATES SPECIALTY ITEMS

SUMMARY OF QUANTITIES					CONSTRUCTION TYPE CODE
S.I.	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY 0005
	70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	1
	70300100	SHORT TERM PAVEMENT MARKING	FOOT	2703	2703
	70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	901	901
*	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	1688	1688
*	78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	588	588
*	78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	439	439
			SQ YD	957	957
	X6030310	FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)	EACH	22	22
	Z0004538	HOT-MIX ASPHALT DRIVEWAY PAVEMENT, 10"	SQ YD	63	63
	Z0004562	COMBINATION CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	2033	2033

* - INDICATES SPECIALTY ITEMS

GENERAL NOTES

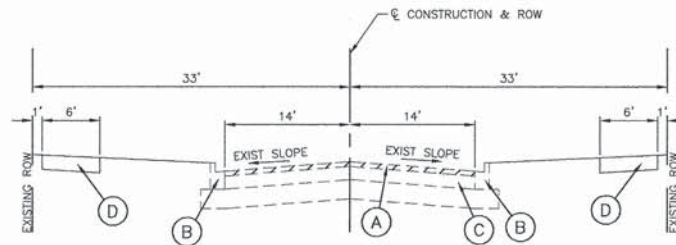
- BEFORE STARTING ANY EXCAVATION THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT (800) 892-0123 OR 811 AND (312) 744-7000 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS UTILITIES. (48 HOUR NOTIFICATION REQUIRED)
- UTILITIES INDICATED ON THE PLANS ARE PROVIDED FOR THE CONTRACTOR'S USE AND ARE BASED UPON INFORMATION AVAILABLE AT THE TIME OF THE ADVERTISEMENT FOR BIDS. THE OWNER AND ENGINEER DO NOT GUARANTEE THE ACCURACY OF UTILITY INFORMATION.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
- THE THICKNESS OF HMA MIXTURE STATED IN THE SPECIFICATIONS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HMA SURFACE IS PLACED.
- ACCESS TO DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES BY LIMITING CURB AND GUTTER REPAIR TO ONE-HALF THE DRIVEWAY WIDTH AT ONE TIME AS WELL AS TEMPORARY AGGREGATE. ANY TEMPORARY AGGREGATE REQUIRED SHALL BE CONSIDERED INCLUDED IN THE COST OF THE RELATED PAY ITEM IT IS NEEDED FOR WHEN DIRECTED BY THE ENGINEER.
- THE REMOVAL AND/OR REPLACEMENT OF ANY DRIVEWAYS, PAVEMENT, CURB, SIDEWALK, ETC. SHALL BE ACCOMPLISHED BY MEANS OF A SAW CUT JOINT, AT THE DIRECTION OF THE ENGINEER. SAW CUTTING WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE UNIT PRICE FOR THE VARIOUS REMOVAL ITEMS.
- ANY LOOSE MATERIAL DEPOSITED IN THE FLOW LINE OF DITCHES, GUTTERS OR OTHER DRAINAGE STRUCTURES SHALL BE REMOVED BY THE END OF EACH DAY BY THE CONTRACTOR AT THEIR EXPENSE.
- THE CONTRACTOR SHALL LEAVE ANY CLEAN EXCESS ORGANIC FILL EXCAVATED DURING THE CURB AND GUTTER AND SIDEWALK REMOVAL AND REPLACEMENT OPERATIONS ON SITE. ANY EXCESS MATERIAL SHALL BE SPREAD OR PLACED AT LOCATIONS DETERMINED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE UNIT PRICE FOR THE VARIOUS REMOVAL AND REPLACEMENT ITEMS. RESTORATION OF AREAS WHERE EXCESS MATERIALS IS PLACED SHALL BE PAID FOR AS SEEDING (COMPLETE).
- CLASS D PATCHING QUANTITIES FOR THIS CONTRACT SHALL BE PERFORMED AT THE DIRECTION OF THE ENGINEER AFTER PAVEMENT MILLING.

FILE NAME = 14633-QUAN-01 - IDOT P01

USER NAME =	DESIGNED -- JPH	REVISED --
	CHECKED -- PKB	REVISED --
PLOT SCALE =	DRAWN -- RG	REVISED --
PLOT DATE = 03-02-15	CHECKED -- AG	REVISED --

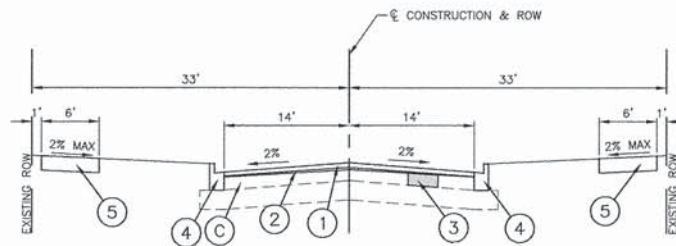
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAU 2829 (124TH STREET) ROADWAY RESURFACING		F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SUMMARY OF QUANTITIES & GENERAL NOTES		2829	14-00062-00-RS	COOK	15	2
SCALE: NONE		SHEET NO. 2 OF 15 SHEETS		STA. TO STA.		CONTRACT NO. 61B48
		FED. ROAD DIST. NO. 1		ILLINOIS		FED. AID PROJECT M-4003 (432)



EXISTING TYPICAL SECTION

124TH STREET
ASHLAND AVENUE TO HALSTED STREET
STA. 10+45.32 TO STA. 62+92.06



PROPOSED TYPICAL SECTION

124TH STREET
ASHLAND AVENUE TO HALSTED STREET
STA. 10+45.32 TO STA. 62+92.06
NOTE: CONTRACTOR SHALL MILL BEFORE PATCHING

EXISTING LEGEND

- (A) HOT MIX ASPHALT SURFACE REMOVAL, 2 1/2"
- (B) EXISTING CURB & GUTTER TO BE REMOVED AT LOCATIONS SHOWN ON PLANS OR DIRECTED BY ENGINEER
- (C) EXISTING HOT-MIX ASPHALT PAVEMENT
- (D) EXISTING PCC SIDEWALK TO BE REMOVED AT LOCATIONS SHOWN ON PLANS OR DIRECTED BY ENGINEER

PROPOSED LEGEND

- (1) HOT MIX ASPHALT SURFACE COURSE, MIX "D", N50, 2"
- (2) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4"
- (3) CLASS C/D PATCH, 12" AT LOCATIONS SHOWN ON PLANS OR DIRECTED BY ENGINEER
- (4) PROPOSED CURB AND GUTTER TO BE INSTALLED AT LOCATIONS SHOWN ON PLAN OR DIRECTED BY ENGINEER (IN KIND)
- (5) PROPOSED PORTLAND CEMENT CONCRETE SIDEWALK 5" (REPLACEMENT AT LOCATIONS DIRECTED BY THE ENGINEER)

HOT-MIX ASPHALT MIXTURE REQUIREMENTS
(CONTRACTOR SHALL MILL BEFORE PATCHING)

MIXTURE TYPE	AIR VOIDS @ Ndes
RESURFACING	
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50, 2" (IL 9.5 MM)	4% @ 50 Gyr.
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50, 3/4"	3.5% @ 50 Gyr.
HMA PAVEMENT REPAIR	
CLASS D PATCHES, TYPE I, II, III, IV, (HMA BINDER IL-19.0mm): 12" (IN 3 LIFTS)	4% @ 70 Gyr.
DRIVEWAYS	
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50, 2" (IL 9.5 MM)	4% @ 50 Gyr.
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50, 8" (IN 3 LIFTS)	4% @ 50 Gyr.
CURB PATCH	
HOT-MIX ASPHALT PATCH (HMA BINDER IL-19.0mm): 12" (IN 3 LIFTS)	4% @ 70 Gyr.

NOTES:

1. THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN. FOR "AC TYPE" AND "PERCENT RAP" SEE DISTRICT ONE SPECIAL PROVISIONS.
2. THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS. FOR "PERCENT OF RAP" SEE DISTRICT ONE SPECIAL PROVISIONS.

NOTE:

CLASS D PATCHES, TYPE I, II, III & IV AT APPROXIMATE STATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

FILE NAME = 14633-TYPX-01 - IDOT P01

USER NAME =	DESIGNED -- JPH	REVISED --
	CHECKED -- PKB	REVISED --
PLOT SCALE =	DRAWN -- RG	REVISED --
PLOT DATE = 03-02-15	CHECKED -- AG	REVISED --

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAU 2829 (124TH STREET)
ROADWAY RESURFACING
TYPICAL SECTIONS

SCALE: NONE SHEET NO. 3 OF 15 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2829	14-00062-00-RS	COOK	15	3
FED. ROAD DIST. NO. 1 ILLINOIS			CONTRACT NO. 61B48	
FED. AID PROJECT M-4003 (432)				

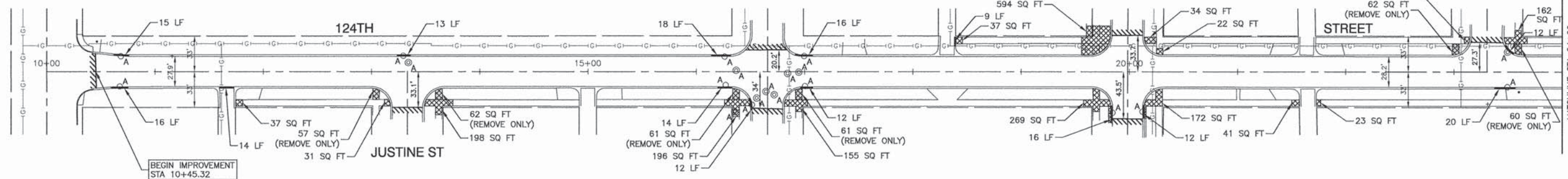


ASHLAND AVENUE

LAFLIN STREET

BISHOP STREET

LOOMIS STREET

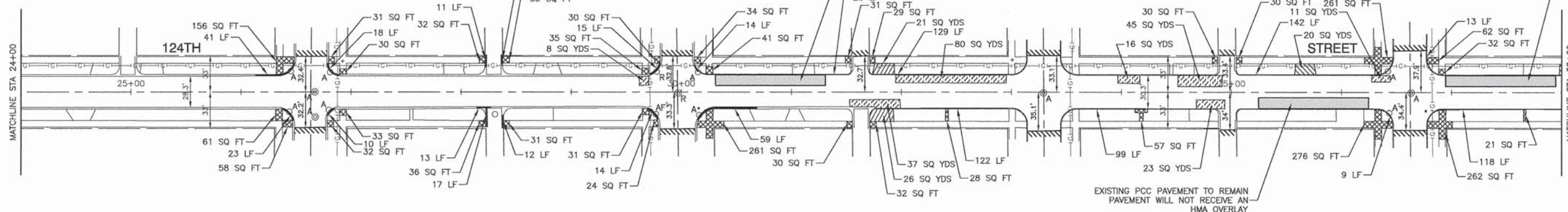


ADA STREET

THROOP STREET

ELIZABETH STREET

RACINE AVENUE



LEGEND

- CLASS D PATCH, 12"
- CLASS C PATCH, 12"
- HMA DRIVEWAY REMOVAL AND REPLACEMENT
- CONCRETE DRIVEWAY REMOVAL AND REPLACEMENT
- CONCRETE SIDEWALK REMOVAL AND REPLACEMENT
- EXISTING PCC PAVEMENT
- BUTT JOINTS
- CURB REMOVAL AND REPLACEMENT
- "A" STRUCTURE TO BE ADJUSTED
- "AF" STRUCTURE TO BE ADJUSTED WITH NEW FRAME AND GRATE
- "R" STRUCTURE TO BE RECONSTRUCTED

FILE NAME = 14633-PLAN-01 - IDOT P01

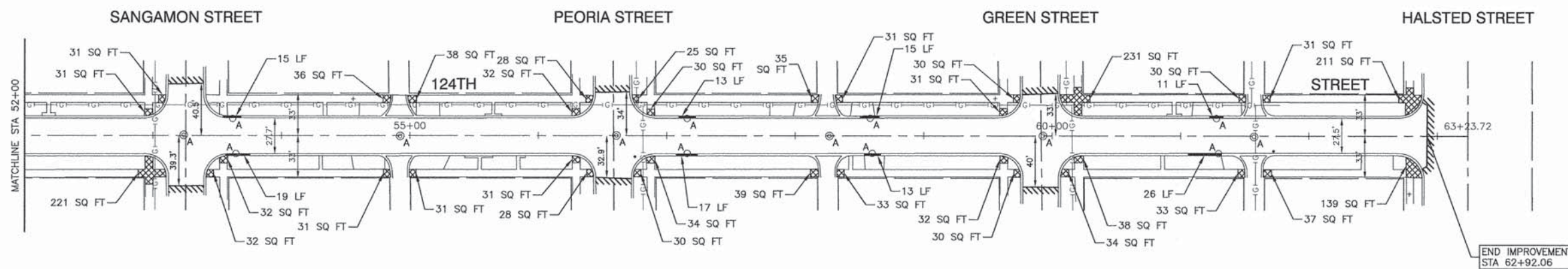
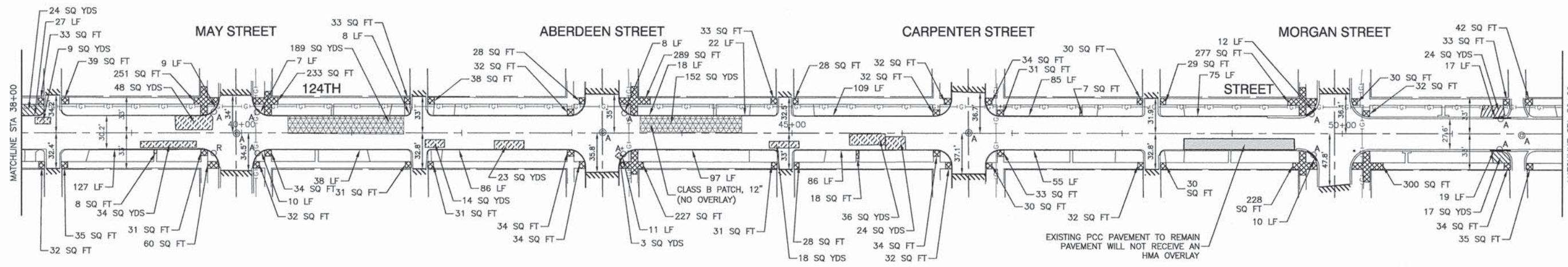
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PLOT DATE = 03-02-15	DRAWN -- FB/RG	REVISED --
	CHECKED -- AG	REVISED --

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAU 2829 (124TH STREET)
ROADWAY RESURFACING
PROPOSED PLAN

F.A.U. RTE. 2829	SECTION 14-00062-00-RS	COUNTY COOK	TOTAL SHEETS 15	SHEET NO. 4
CONTRACT NO. 61B48				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003 (432)				

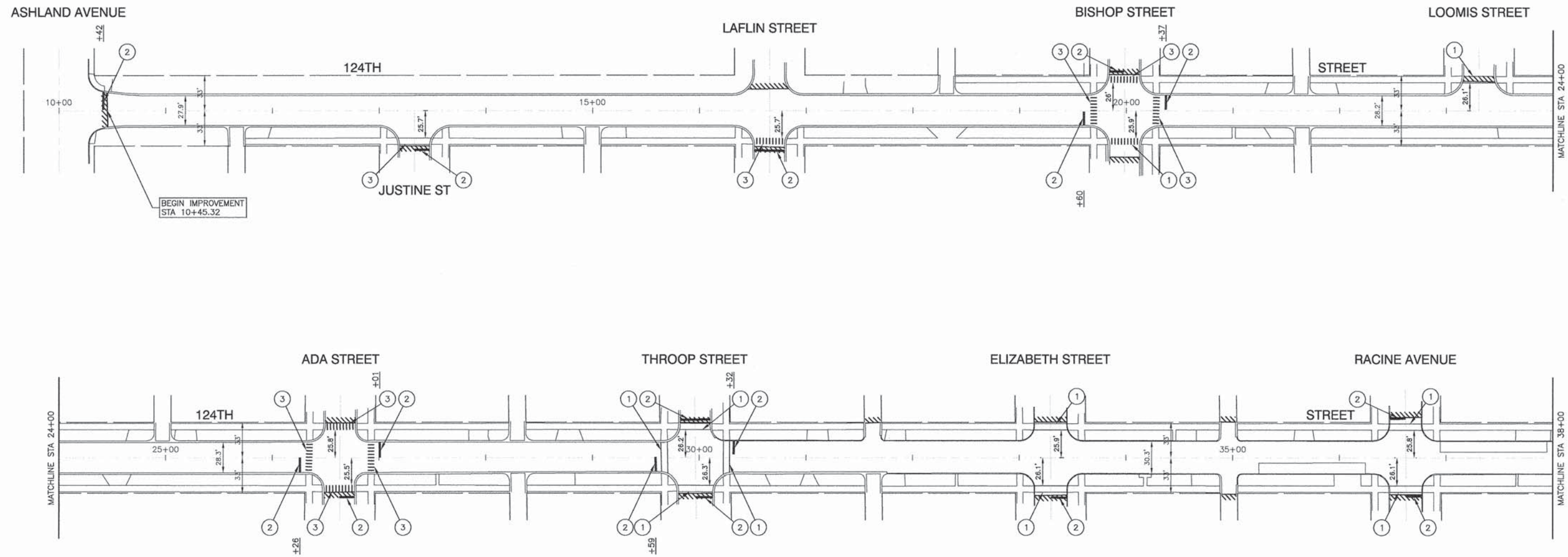
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LEGEND

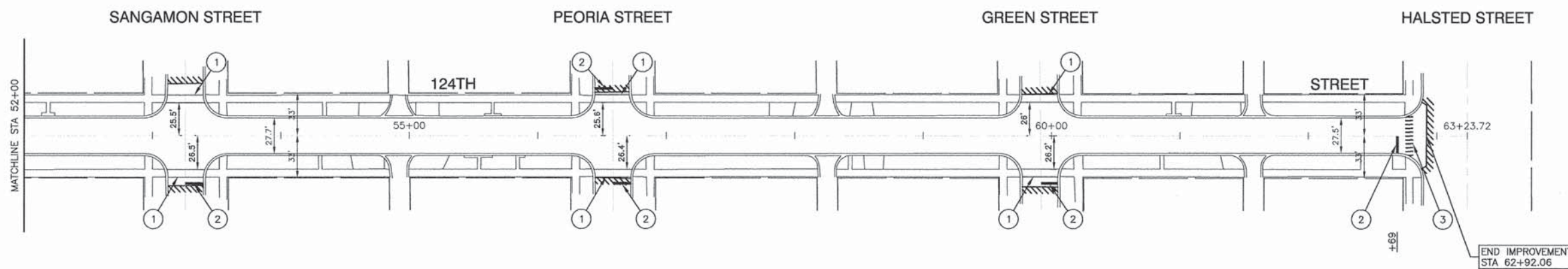
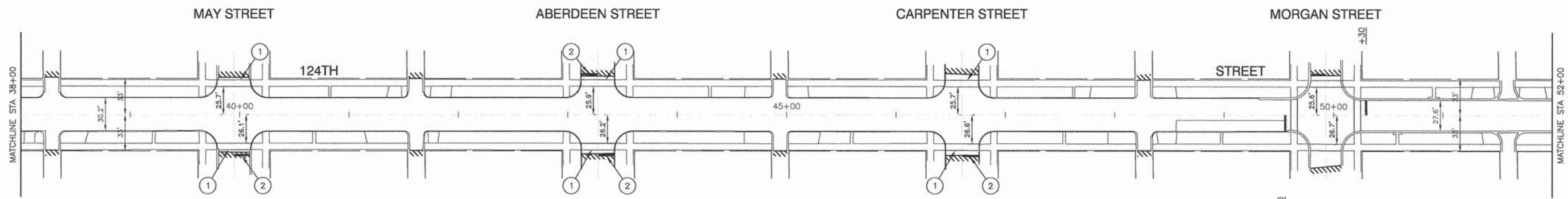
	CLASS D PATCH, 12"
	CLASS C PATCH, 12"
	HMA DRIVEWAY REMOVAL AND REPLACEMENT
	CONCRETE DRIVEWAY REMOVAL AND REPLACEMENT
	CONCRETE SIDEWALK REMOVAL AND REPLACEMENT
	EXISTING PCC PAVEMENT
	BUTT JOINTS
	CURB REMOVAL AND REPLACEMENT
"A"	STRUCTURE TO BE ADJUSTED
"AF"	STRUCTURE TO BE ADJUSTED WITH NEW FRAME AND GRATE
"R"	STRUCTURE TO BE RECONSTRUCTED

FILE NAME = 14633-PLAN-01 - IDOT P02	USER NAME =	DESIGNED -- JPH	REVISED --	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FAU 2829 (124TH STREET) ROADWAY RESURFACING PROPOSED PLAN		F.A.U. RTE. 2829	SECTION 14-00062-00-RS	COUNTY COOK	TOTAL SHEETS 15	SHEET NO. 5	
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	PLOT DATE = 03-02-15	DRAWN -- FB/RG	REVISED --		FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-4003 (432)					
		CHECKED -- AG	REVISED --									



- LEGEND**
- ① 6" WHITE CROSSWALK LINE
 - ② 24" WHITE STOP BAR
 - ③ 12" WHITE LINE (3' OC)

FILE NAME = 14633-PLAN-01 - PVMK P01	USER NAME =	DESIGNED -- JPH	REVISED --	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FAU 2829 (124TH STREET) ROADWAY RESURFACING PAVEMENT MARKING PLAN	F.A.U. RTE. 2829	SECTION 14-00062-00-RS	COUNTY COOK	TOTAL SHEETS 15	SHEET NO. 6
	PLOT SCALE =	DRAWN -- FB/RG	REVISED --			SCALE: 1"=50'	SHEET NO. 6 OF 15 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS
	PLOT DATE = 03-02-15	CHECKED -- AG	REVISED --							



- LEGEND**
- ① 6" WHITE CROSSWALK LINE
 - ② 24" WHITE STOP BAR
 - ③ 12" WHITE LINE (3' OC)

FILE NAME = 14633-PLAN-01 - P/MK P02

USER NAME =	DESIGNED -- JPH	REVISED --
	CHECKED -- PKB	REVISED --
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PLOT DATE = 03-02-15	CHECKED -- AG	REVISED --

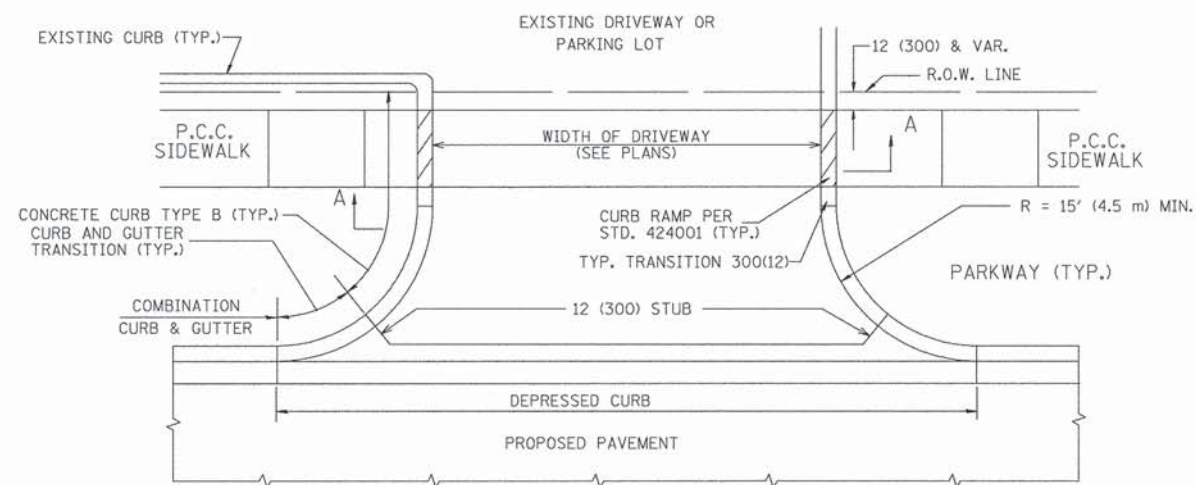
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAU 2829 (124TH STREET)
ROADWAY RESURFACING
PAVEMENT MARKING PLAN

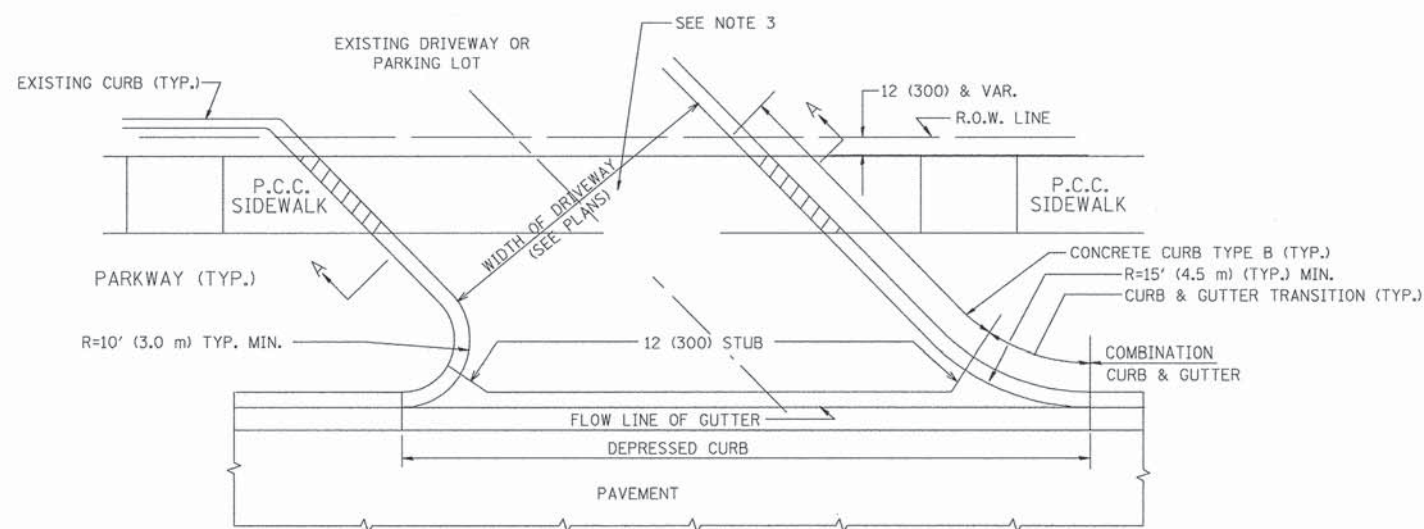
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2829	14-00062-00-RS	COOK	15	7
CONTRACT NO. 61B48				

SCALE: 1"=50' SHEET NO. 7 OF 15 SHEETS STA. TO STA.

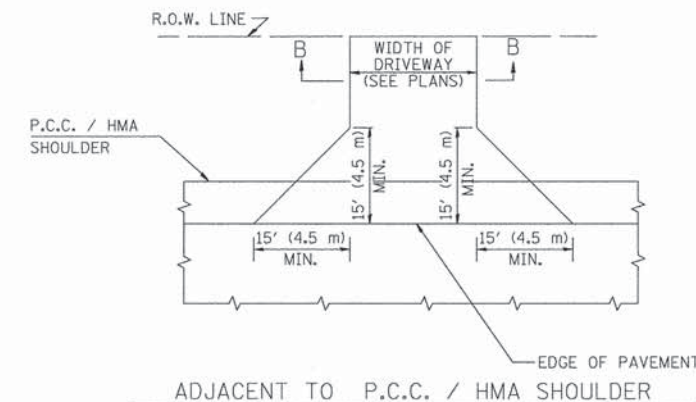
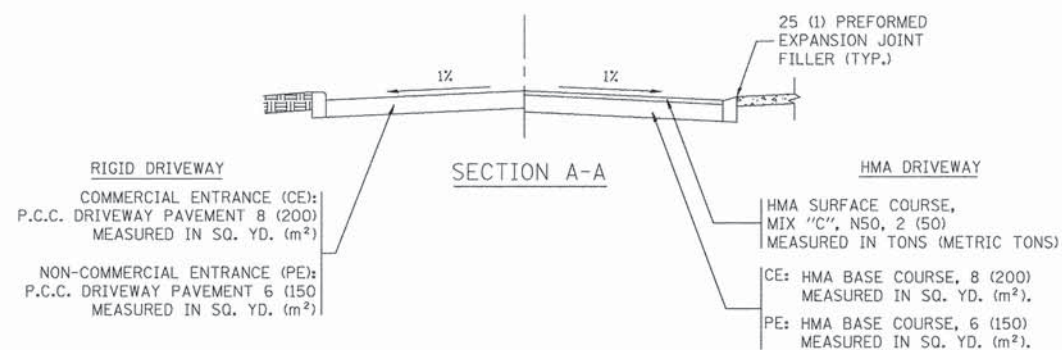
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003 (432)



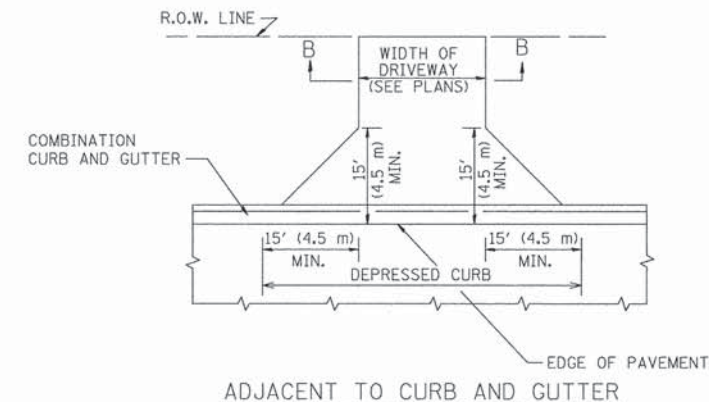
WITH CONCRETE CURB, TYPE B



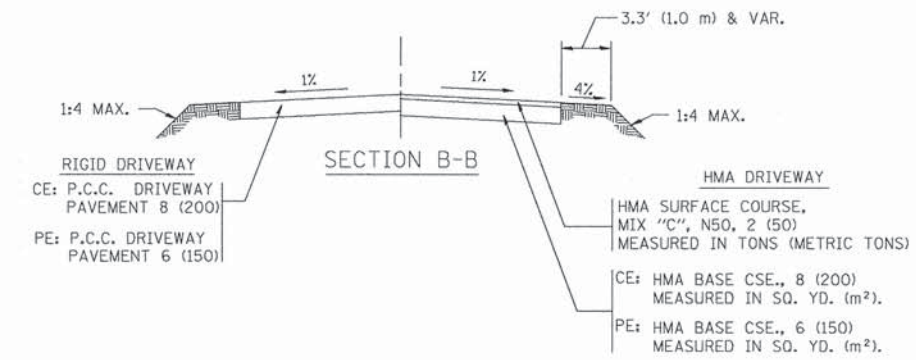
WITH CONCRETE CURB, TYPE B



ADJACENT TO P.C.C. / HMA SHOULDER



ADJACENT TO CURB AND GUTTER



RURAL FIELD ENTRANCE (FE)
 HMA SURFACE COURSE,
 MIX "C", N50, 2 (50)
 MEASURED IN TONS (METRIC TONS)
 AGGREGATE BASE CSE., TYPE B, 8 (200)
 MEASURED IN SQ. YD. (m²).

GENERAL NOTES:

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATIONS IN THE PERMIT HANDBOOK. DRIVEWAYS SHALL BE REPLACED IN KIND, UNLESS OTHERWISE NOTED ON THE PLANS.

COMMERCIAL DRIVEWAYS SHALL BE CONSTRUCTED WITH CONCRETE CURB, TYPE B RETURNS EXCEPT WHEN THE SIDEWALK EDGE IS 4 FEET (1.2 METERS) OR LESS FROM THE BACK OF CURB, CONSTRUCT A FLARE DRIVEWAY WITHOUT CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

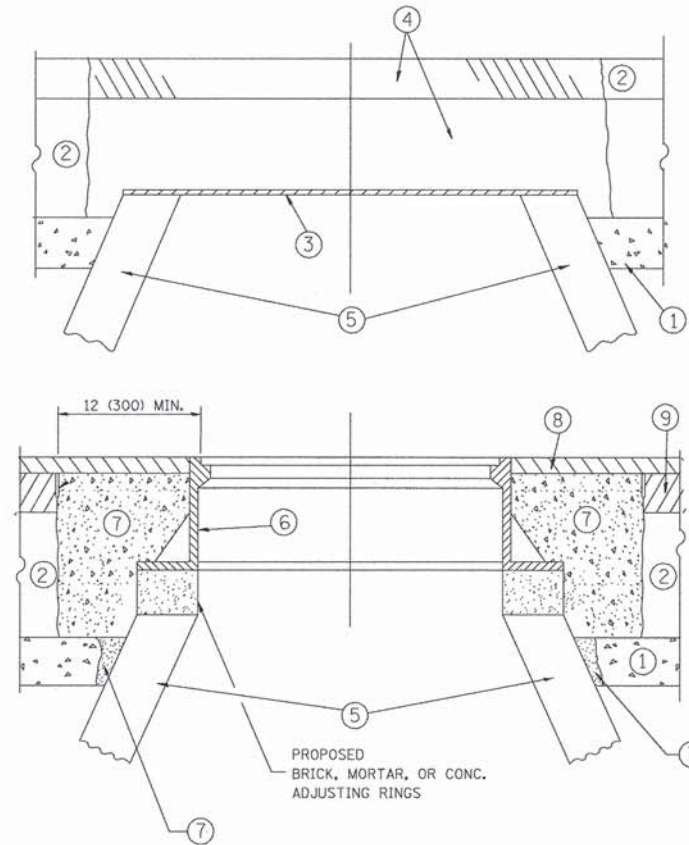
WHEN THE P.C.C. SIDEWALK EXTENDS THROUGH THE DRIVEWAY, THE THICKNESS OF THE SIDEWALK IN THE DRIVEWAY AREA SHALL BE THE SAME AS THE DRIVEWAY THICKNESS. SIDEWALK WILL BE PAID FOR AS P.C.C. SIDEWALK OF THE THICKNESS SPECIFIED. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

FILE NAME = c:\projects\diststd22x34\bd01.dgn	USER NAME = bauer-dl	DESIGNED - R. SHAH	REVISED - M. GOMEZ 04-06-01
		DRAWN -	REVISED - P. LaFLUER 04-15-03
	PLOT SCALE = 49.9999" / IN.	CHECKED -	REVISED - R. BORO 01-01-07
	PLOT DATE = 6/12/2008	DATE - 11-04-95	REVISED - R. BORO 06-11-08

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

DISTRICT ONE DRIVEWAY DETAILS	
DISTANCE BETWEEN ROW AND FACE OF CURB & EDGE OF SHOULDER >= 15' (4.5m)	
SCALE: NONE	SHEET NO. 8 OF 15 SHEETS
STA. TO STA.	

F.A.U. RTE. 2829	SECTION 14-00082-00-RS	COUNTY COOK	TOTAL SHEETS 15	SHEET NO. 8
BD0156-07 BD-01		CONTRACT NO. 61B48		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003 (432)				



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 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 EXCEPT THAT "THE CONTRACTOR SHALL ADJUST THE STRUCTURES TO THE FINISHED PAVEMENT ELEVATION NO MORE THAN 5 CALENDAR DAYS PRIOR TO PLACEMENT OF THE FINAL LIFT OF SURFACE UNLESS APPROVED BY THE ENGINEER."

LEGEND

- ① SUB-BASE GRANULAR MATERIAL
- ② EXISTING PAVEMENT
- ③ 36 (900) DIAMETER METAL PLATE
- ④ PROPOSED CRUSHED STONE AND HMA SURFACE MIX
- ⑤ EXISTING STRUCTURE
- ⑥ FRAME AND LID (SEE NOTES)
- ⑦ CLASS PP-1* CONCRETE
- ⑧ PROPOSED HMA SURFACE COURSE
- 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:

REMOVING FRAMES AND LIDS ON DRAINAGE AND UTILITY STRUCTURES IN THE PAVEMENT PRIOR TO MILLING, AND ADJUSTING TO FINAL GRADE PRIOR TO PLACING THE SURFACE COURSE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)."

THIS WORK WILL NOT BE PAID FOR WHEN DRAINAGE AND UTILITY STRUCTURES ARE SPECIFIED FOR PAYMENT AS STRUCTURE RECONSTRUCTION.

NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

NOTES:

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.

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.

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

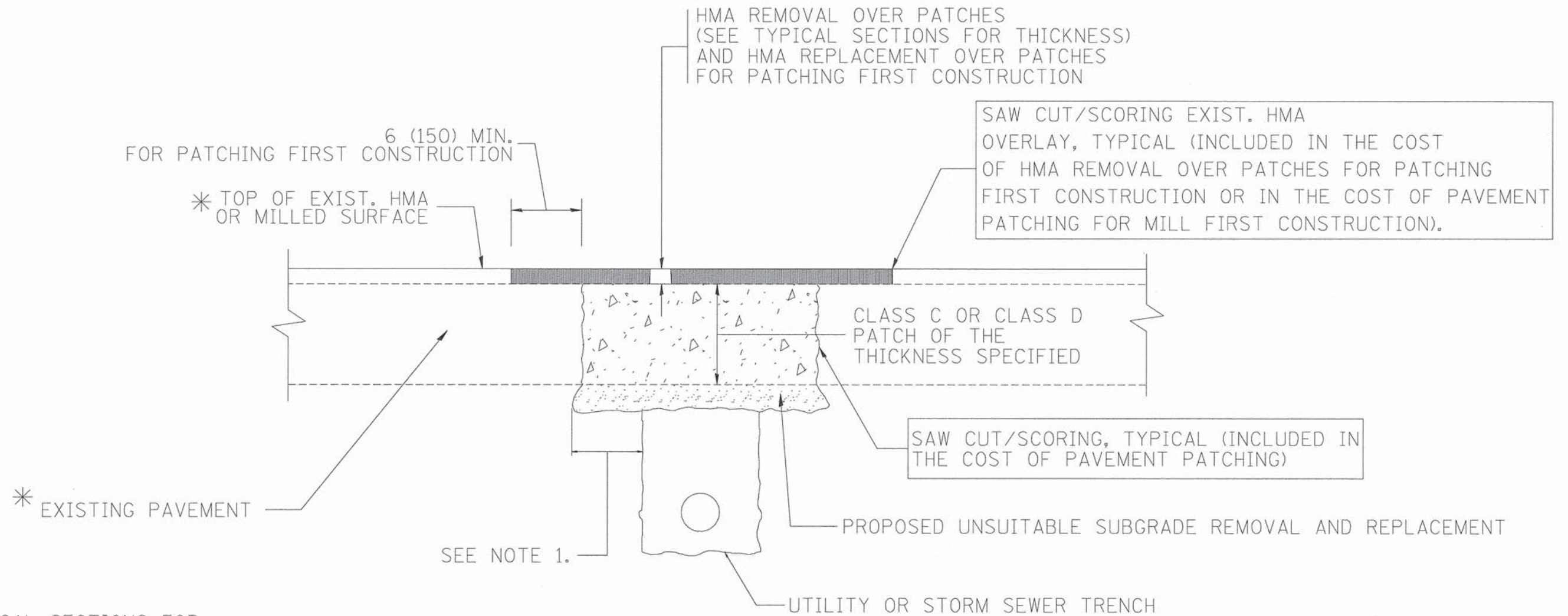
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	PLOT DATE = 12/6/2011	DATE - 10-25-94	REVISED - R. BORO 12-06-11

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS FOR
FRAMES AND LIDS ADJUSTMENT WITH MILLING

SCALE: NONE SHEET NO. 9 OF 15 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2829	14-00062-00-RS	COOK	15	9
BD600-03 (BD-8)		CONTRACT NO. 61B48		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-4003 (432)		



* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

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 4 1/2 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.

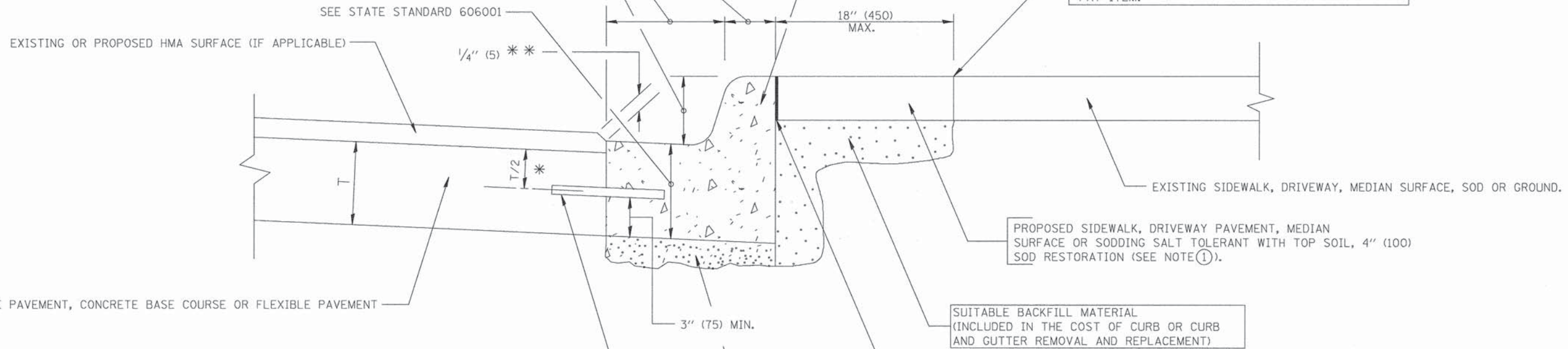
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - R. BORO 01-01-07		SCALE: NONE	SHEET NO. 10 OF 15 SHEETS	STA.	TO STA.	BD400-04 (BD-22)		CONTRACT NO. 61B48	
	PLOT DATE = 10/27/2008	DATE - 10-25-94	REVISED - R. BORO 09-04-07						FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT M-4003 (432)
			REVISED - K. ENG 10-27-08									

VARIABLE - TO MEET EXISTING DIMENSIONS AND FIELD CONDITIONS (SEE NOTE ②)

PROP. CONC. CURB OR CURB AND GUTTER REPLACEMENT IN ACCORDANCE WITH STATE STANDARD 606001. (SEE NOTE ②)

SAW CUT FULL DEPTH - INCLUDED IN THE COST OF SIDEWALK, DRIVEWAY OR MEDIAN SURFACE REMOVAL PAY ITEM.



- * 3" (75) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.
- ** IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH WITH THE PAVEMENT.

NOTE: ① SIDEWALK, DRIVEWAY PAVEMENT OR MEDIAN SURFACE SHALL BE SIMILAR TO THE MATERIAL BEING REMOVED AND WILL BE PAID FOR SEPARATELY.

SODDING, SPECIAL AND TOP SOIL, FURNISH AND PLACE 4" WILL BE PAID FOR SEPARATELY,

- ② FERTILIZER FOR THE PLACEMENT OF THE SOD IS NOT REQUIRED
- ③ CURB OR CURB AND GUTTER REPLACEMENT SHALL MATCH THE SHAPE OF THE EXISTING CURB OR CURB AND GUTTER UNLESS OTHERWISE SPECIFIED.
- ④ FOR CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT ADJACENT TO FLEXIBLE PAVEMENT DELETE EPOXY COATED TIE BARS.
- ⑤ LONGITUDINAL BARS, IF ENCOUNTERED IN THE EXISTING CURB OR CURB AND GUTTER, ARE NOT TO BE REPLACED. CUTTING AND REMOVING LONGITUDINAL BARS SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.
- ⑥ THE COST OF HMA SURFACE REMOVAL IN THE EXISTING GUTTER FLAG SHALL BE INCLUDED IN THE COST OF THE CURB AND GUTTER REMOVAL AND REPLACEMENT.
- ⑦ THE REMOVAL AND REPLACEMENT OF THE EXISTING CURB OR CURB AND GUTTER SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 440 AND 606 OF THE STANDARD SPECIFICATIONS.
- ⑧ THE LOCATIONS OF REMOVAL AND REPLACEMENT OF EXISTING CURB OR CURB AND GUTTER SHALL BE DETERMINED BY THE RESIDENT ENGINEER AT THE TIME OF CONSTRUCTION.

UNSUITABLE SUB-BASE MATERIAL TO BE REMOVED, IF DIRECTED BY THE ENGINEER, SHALL BE REPLACED WITH EITHER SUB-BASE GRANULAR MATERIAL, TYPE B OR ADDITIONAL THICKNESS OF CONCRETE.

REMOVAL AND REPLACEMENT 4" (100) OR LESS IS INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

REMOVAL AND REPLACEMENT IN EXCESS OF 4" (100) WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.

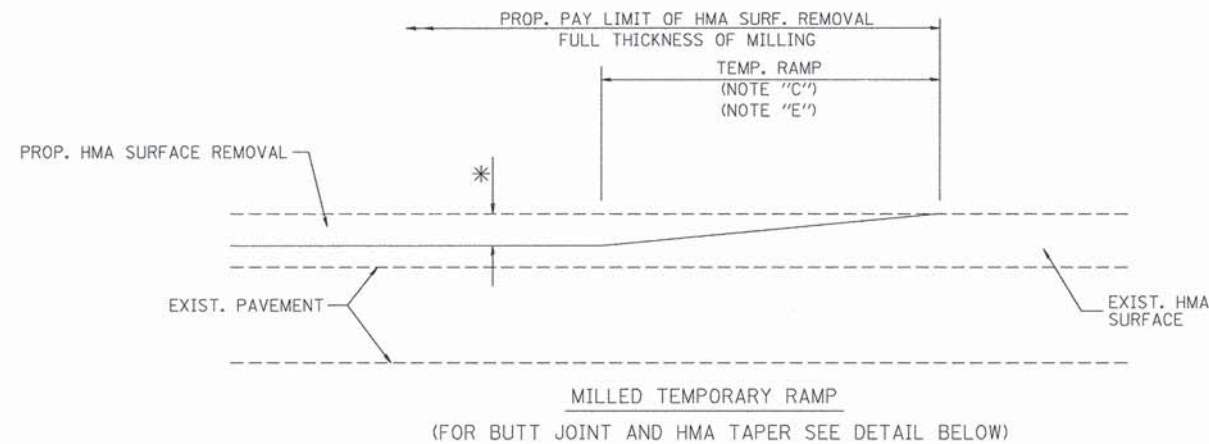
PROPOSED #6 (20) EPOXY COATED TIE BARS 24" (600) LONG AT 24" (600) CENTERS WILL NOT BE PAID FOR SEPARATELY. DELETE EPOXY COATED TIE BARS IF EXISTING TIE BARS ARE USABLE AS DETERMINED BY THE ENGINEER. (SEE NOTE ③).

BASIS OF PAYMENT:
THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT (METER) FOR "CURB REMOVAL AND REPLACEMENT" OR "COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT".

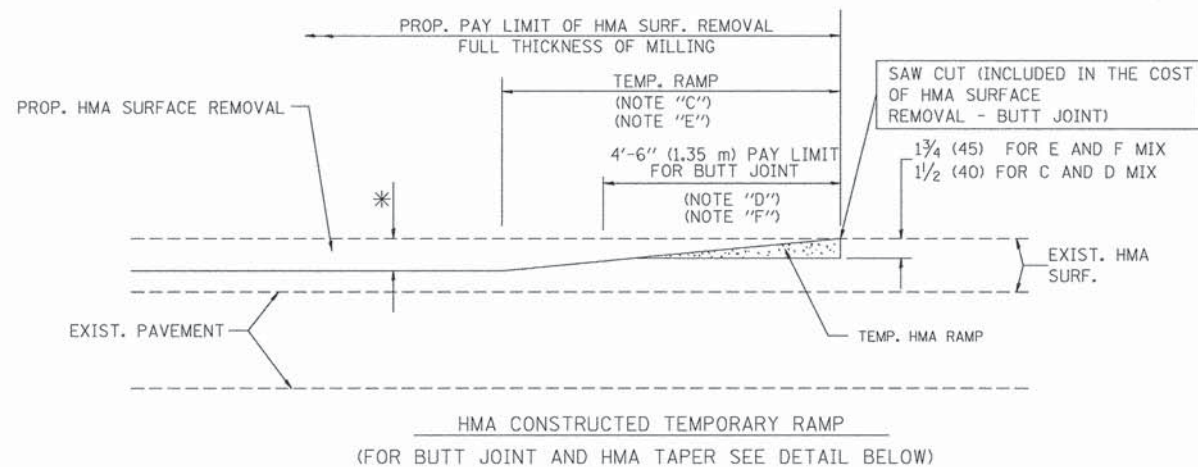
CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

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

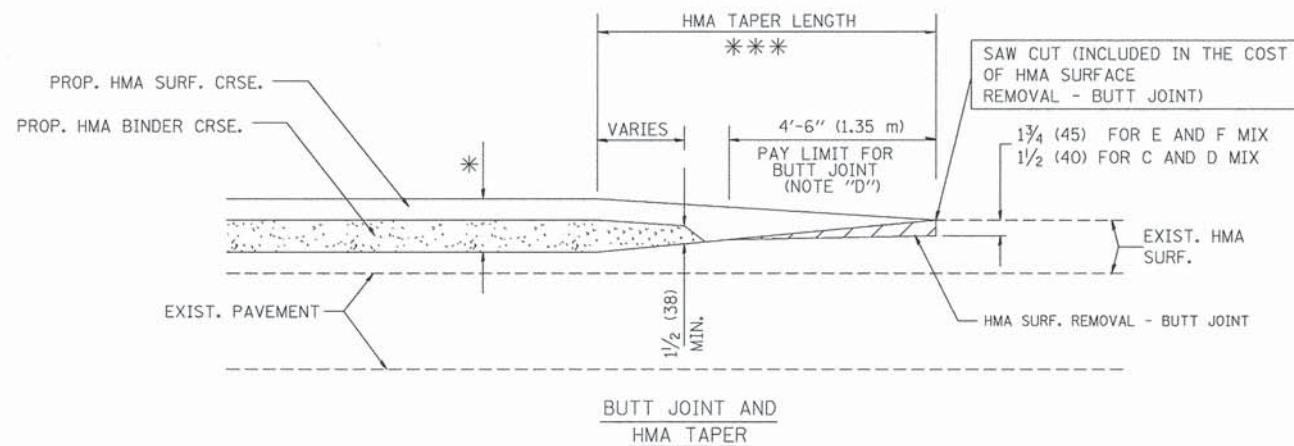
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PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - M. GOMEZ 01-22-01	REVISED - R. BORO 12-15-09			BD600-06 (BD-24)		CONTRACT NO. 61B48			
PLOT DATE = 12/15/2009	DATE - 03-11-94	REVISED - R. BORO 12-15-09	SCALE: NONE			SHEET NO. 11 OF 15 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-4003 (432)	



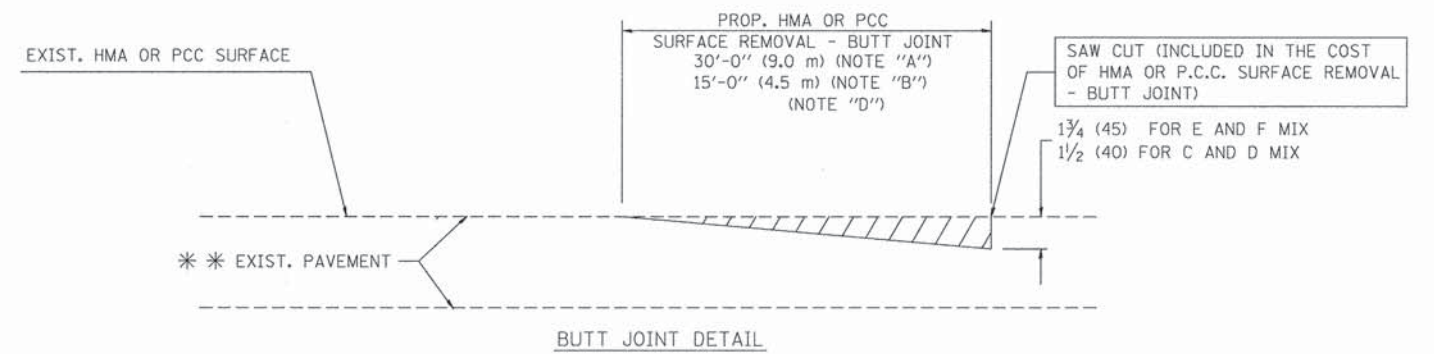
OPTION 1



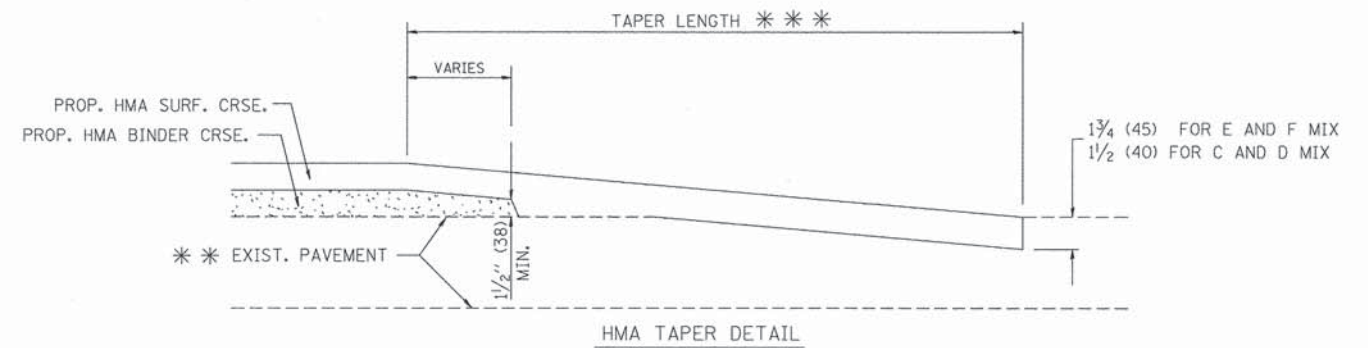
OPTION 2
TYPICAL TEMPORARY RAMP



TYPICAL BUTT JOINT AND HMA TAPER
FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

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".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- *** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE 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.

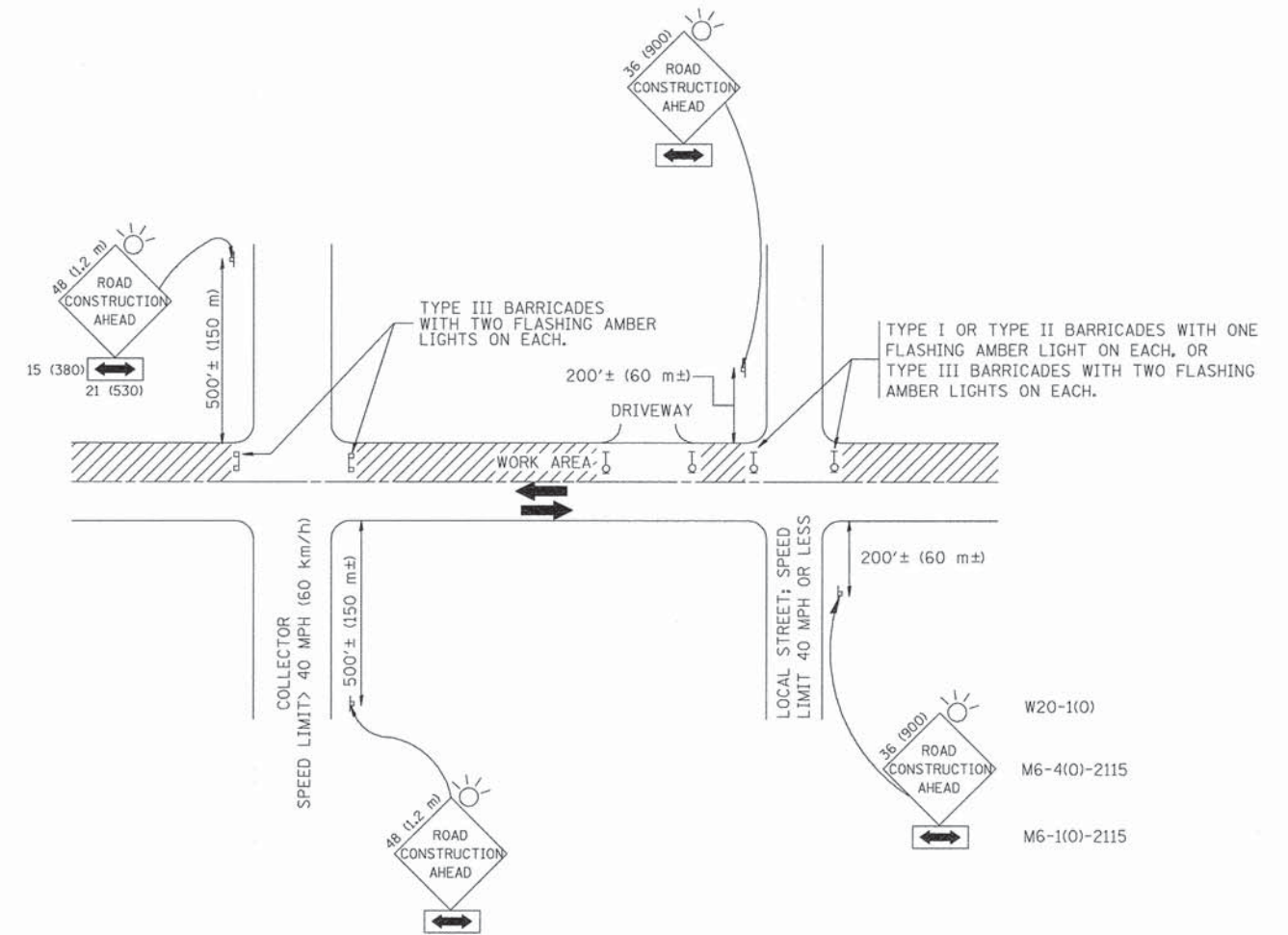
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	PLOT DATE = 1/4/2008	DATE - 06-13-90	REVISED - R. BORO 01-01-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
BUTT JOINT AND HMA TAPER
DETAILS

SCALE: NONE SHEET NO. 12 OF 15 SHEETS STA. TO STA.

F.A.U. RTE. 2829	SECTION 14-00082-00-RS	COUNTY COOK	TOTAL SHEETS 15	SHEET NO. 12
BD400-05 BD32			CONTRACT NO. 61B48	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003 (432)				



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

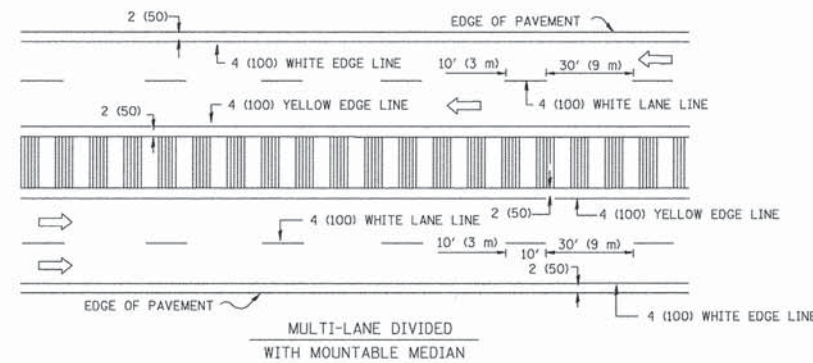
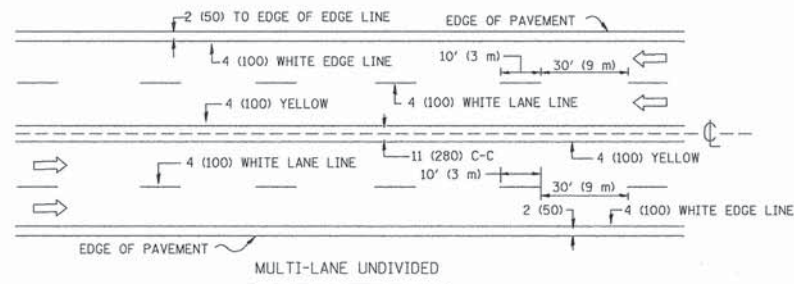
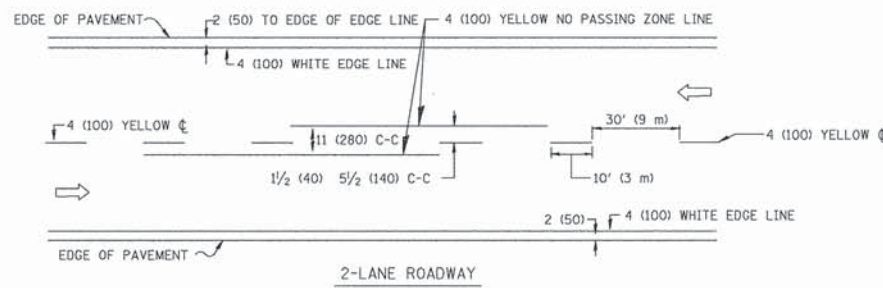
NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
 1. 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:
 - a) 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:
 - a) ONE **ROAD CONSTRUCTION AHEAD** SIGN 48 x 48 (1.2 m x 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.

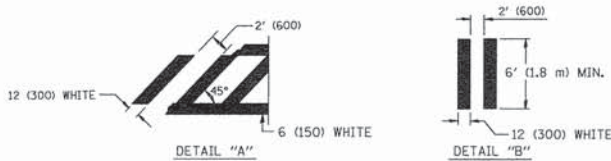
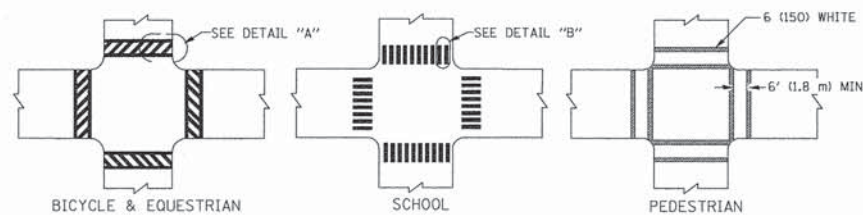
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	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED - A. HOUSEH 03-06-96			2829	14-00062-00-RS	COOK	15	13
	PLOT DATE = 1/4/2008	DATE - 06-89	REVISED - T. RAMMACHER 01-06-00			TC-10		CONTRACT NO. 61B48		
						FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003 (432)				

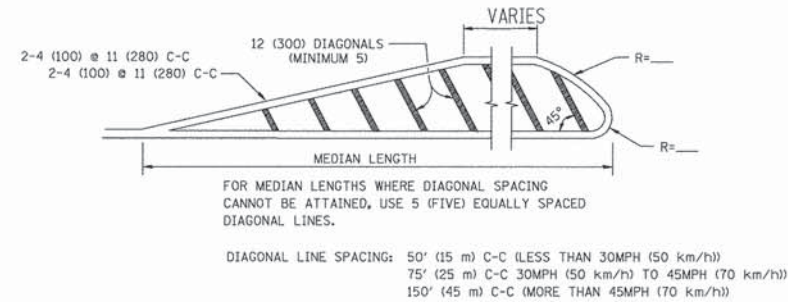
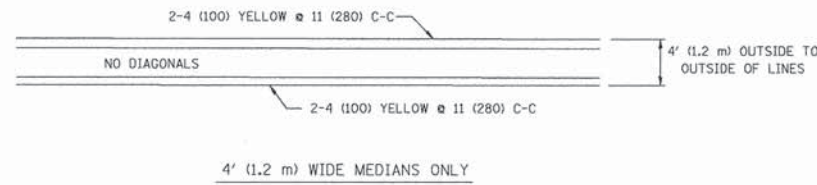


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

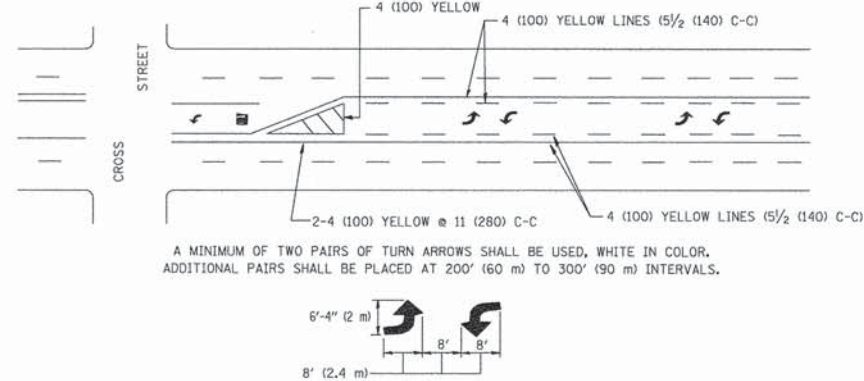
TYPICAL LANE AND EDGE LINE MARKING



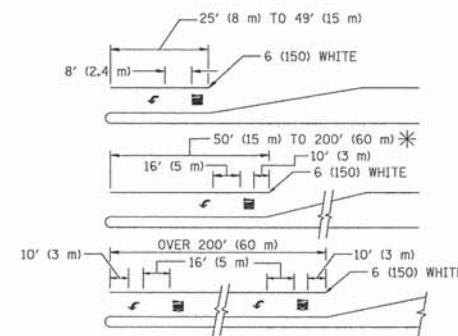
TYPICAL CROSSWALK MARKING



MEDIANS OVER 4' (1.2 m) WIDE

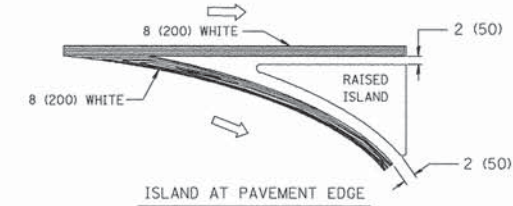
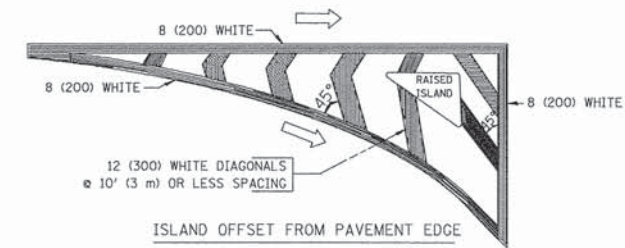


TYPICAL PAINTED MEDIAN MARKING



TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



TYPICAL ISLAND MARKING

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	4 (100)	SOLID	YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE
FOR BOTH DIRECTIONS	2 @ 4 (100)	SOLID	YELLOW	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) LINES; 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; 5/2 (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' (600) 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 @ 45°	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE 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 m²) EACH "X"=54.0 SQ. FT. (5.0 m²)
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))

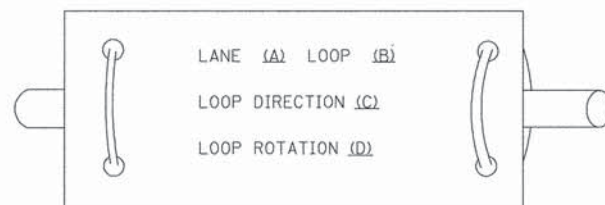
FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO
STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE
CONSTRUCTION AND STATE STANDARD 780001.

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

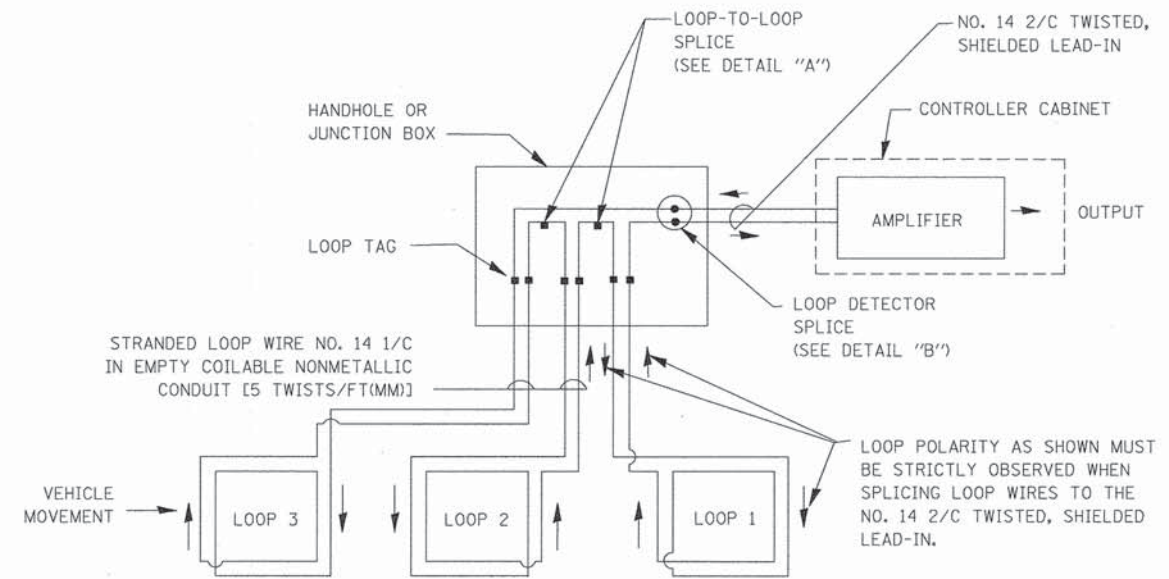
LOOP DETECTOR NOTES

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

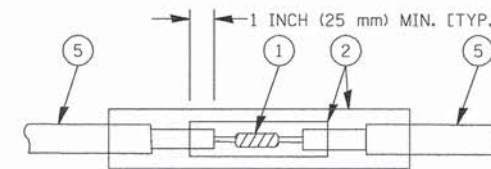


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

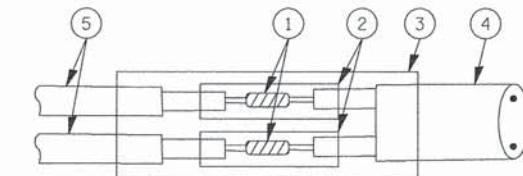


DETECTOR LOOP WIRING SCHEMATIC

- 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.

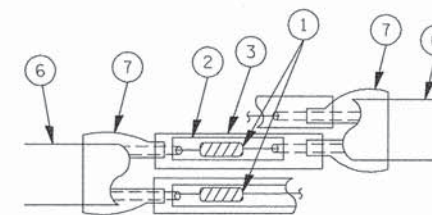


DETAIL "A" LOOP-TO-LOOP SPLICE



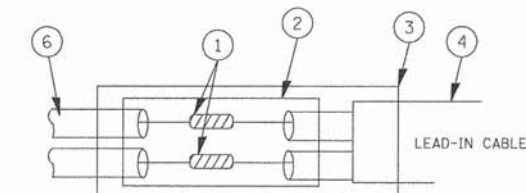
DETAIL "B" LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A" LOOP-TO-LOOP SPLICE

PREFORMED LOOP



DETAIL "B" LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

- 1 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 LENGTH 6" (150 mm), UNDERWATER GRADE.
- 4 NO. 14 2/C TWISTED, SHIELDED CABLE.
- 5 LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- 6 PREFORMED LOOP
- 7 XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL