

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	.	COOK	29	1

• (0202 & 0208) RS-8  
D-91-210-04  
62748

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

# PROPOSED HIGHWAY PLANS

FAU ROUTE 1581 (111TH STREET)  
US 45 (96TH AVENUE) TO IL 7 (SOUTHWEST HIGHWAY)  
SECTION (0202 & 0208) RS-8  
COOK COUNTY  
C-91-210-04  
3P RESURFACING PROJECT

FOR INDEX OF SHEETS, SEE SHEET NO. 2

IMPROVEMENT LOCATED IN  
THE VILLAGE OF PALOS HILLS

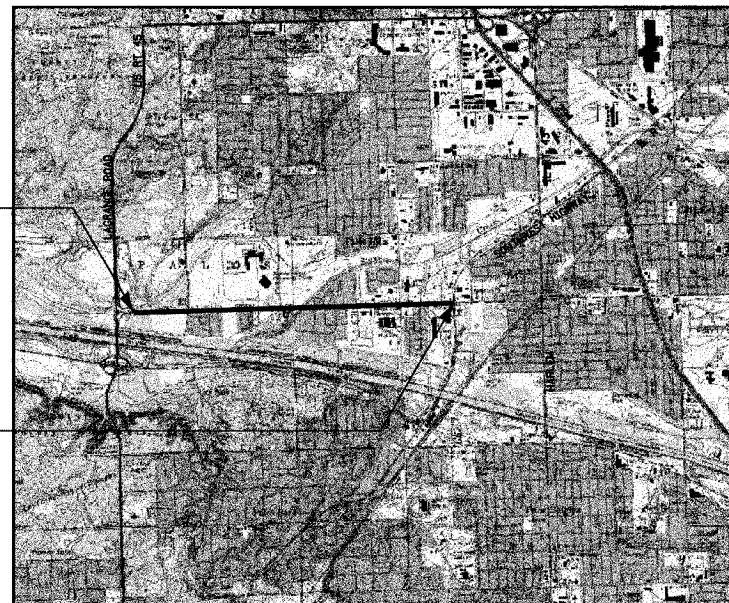


SIGNED *Stephen R. Mawzy*  
DATE *3/20/05*  
EXPIRES *11/30/05*



IMPROVEMENT BEGINS  
STA. 19 + 90

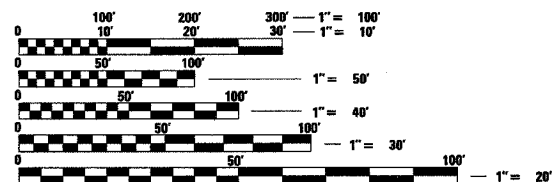
IMPROVEMENT ENDS  
STA. 134 + 90



**TRAFFIC DATA**

2002 ADT = 21,300  
SPEED LIMIT = 35 TO 45 MPH

PALOS TOWNSHIP T37N, R12E  
NET LENGTH = 11,500 FT = 2.18 MILES



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

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

CONTRACT NO. 62748

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED *March 31, 20 05*  
*Diana O'Keefe, PE*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER  
*May 13, 20 05*  
*Mike Nire, PE*  
ENGINEER OF DESIGN AND ENVIRONMENT  
*May 13, 20 05*  
*Victor Moderski*  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER



RJN GROUP, INC.  
CONSULTING ENGINEERS  
200 W FRONT STREET  
WHEATON, IL 60187  
PROFESSIONAL DESIGN FIRM  
LICENSE NO. 184-000813  
EXPIRES 4/30/2005

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	*		29	2
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• (0202 & 0208) RS-8  
62748

**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	INDEX OF SHEETS, STATE STANDARDS, GENERAL NOTES
3	SUMMARY OF QUANTITIES
4	TYPICAL SECTIONS
5-7	ROADWAY AND PAVEMENT MARKING PLANS
8-12	DETECTOR LOOP REPLACEMENT PLANS
13	DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING
14	PAVEMENT PATCHING FOR BITUMINOUS SURFACED PAVEMENT
15	CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT
16	BUTT JOINT AND BITUMINOUS TAPER DETAILS
17	BITUMINOUS TAPER AT EDGE OF P.C.C. PAVEMENT
18	METHOD OF FLAGGING
19	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS AND DRIVEWAYS
20	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
21	DISTRICT ONE TYPICAL PAVEMENT MARKINGS
22	TRAFFIC CONTROL AND PROTECTION AT TURN BAYS
23	PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING
24	TEMPORARY INFORMATION SIGNING
25-28	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS
29	DISTRICT 1 DETECTOR LOOP INSTALLATION DETAILS FOR ROADWAY RESURFACING

**STATE STANDARDS**

STANDARD NO.	DESCRIPTION
00001-04	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
424001-03	CURB RAMPS FOR SIDEWALKS
442201-01	CLASS C AND D PATCHES
604001-02	FRAME AND LIDS TYPE 1
606001-02	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
701301-02	LANE CLOSURE 2L, 2W SHORT TIME OPERATIONS
701602-02	URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE
701606-04	URBAN LANE CLOSURE MULTILANE 2W WITH MOUNTABLE MEDIAN
701701-04	URBAN LANE CLOSURE MULTILANE INTERSECTION
702001-05	TRAFFIC CONTROL DEVICES
780001-01	TYPICAL PAVEMENT MARKINGS

**GENERAL NOTES**

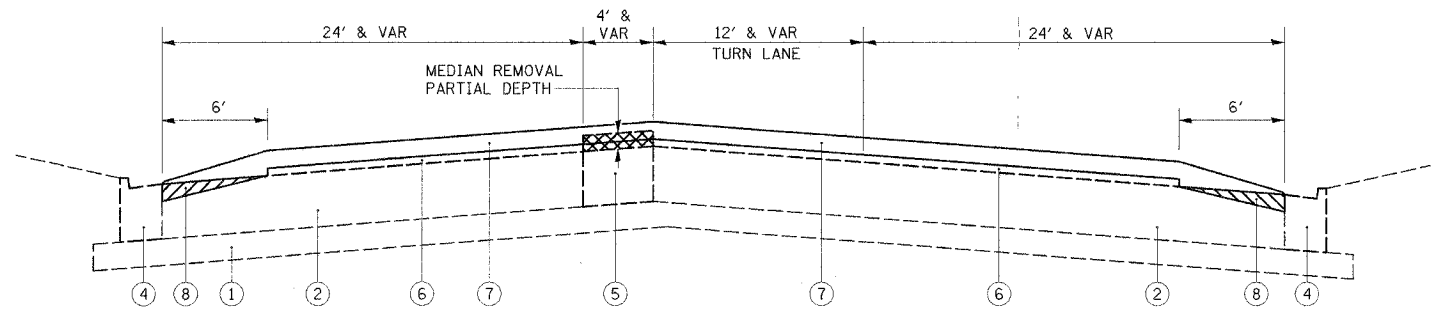
- BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT (800)892-0123 OR "CUAN" (CHICAGO UTILITY ALERT NETWORK), 312-744-7000 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS UTILITIES. (48 HOUR NOTIFICATION IS REQUIRED).
- TRANSITIONS SHALL BE USED TO MATCH PROPOSED CURB 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.
- THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
- ANY PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS OBLITERATED BY MILLING AND RESURFACING OPERATIONS ON SIDE STREETS AND ENTRANCES SHALL BE REPLACED AND PAID FOR IN KIND.
- BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD (FOR FUTURE REFERENCES), ALL EXISTING PAVEMENT MARKING LINES IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL STRIPING SHALL BE AS DIRECTED BY THE ENGINEER.
- ALL PAVEMENT PATCHING LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- LOCATION OF COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND COMBINATION CURB AND GUTTER (THE TYPE SPECIFIED ON THE PLANS), WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- DRAINAGE ADJUSTMENT OR RECONSTRUCTION LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- FRAMES AND GRATES ADJUSTMENT OF PRIVATE UTILITIES WITHIN THE LIMITS OF THE IMPROVEMENTS SHALL BE DONE BY THEIR RESPECTIVE OWNERS AND ARE NOT PART OF THIS CONTRACT.
- THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
- THE ENGINEER SHALL CONTACT THE TRAFFIC FIELD ENGINEER, PATRICE HARRIS AT 708-597-9800, TWO (2) WEEKS PRIOR TO THE START OF THIS PROJECT SO THAT EXACT STATIONING OF NO PASSING ZONES AND OTHER PERMANENT PAVEMENT MARKINGS MAY BE ESTABLISHED.
- THESE PLANS HAVE BEEN PREPARED FROM NOTES RECEIVED FROM FIELD MAINTENANCE ENGINEERS.
- THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS 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.
- DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
- DOUBLE LANE MARKERS ARE TO BE USED AS SHOWN ON THE DISTRICT ONE DETAIL FOR TYPICAL APPLICATION OF RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT) SHOWN IN THE PLANS.
- 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 MARKING.
- WHEN ARTIFICIAL LIGHTING IS USED IN NIGHT OPERATIONS THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AND ADJOINING RESIDENTIAL AREAS.
- WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 40 MM (1 1/2 INCHES) WHERE THE SPEED LIMIT IS 80 KMH (45 MPH) OR LESS AND 25 MM (1 INCH) WHERE THE SPEED LIMIT IS GREATER THAN 80 KMH (45 MPH). WITH WRITTEN APPROVAL FROM THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 75 MM (3 INCHES) MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 (V:H)
- BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE WITH THE "BUTT JOINT AND BITUMINOUS TAPER DETAILS" SHEET INCLUDED IN THE PLANS, UNLESS OTHERWISE SPECIFIED.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**FAU ROUTE 1581 (111TH STREET)  
 US 45 (96TH AVE) TO IL 7 (SOUTHWEST HWY)**  
**INDEX OF SHEETS, STATE STANDARDS  
 AND GENERAL NOTES**  
 SCALE: VERT. \_\_\_\_\_ DRAWN BY \_\_\_\_\_  
 HORIZ. \_\_\_\_\_ CHECKED BY \_\_\_\_\_  
 DATE \_\_\_\_\_



F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	*		29	4
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* (0202 & 0208) RS-8 62748				



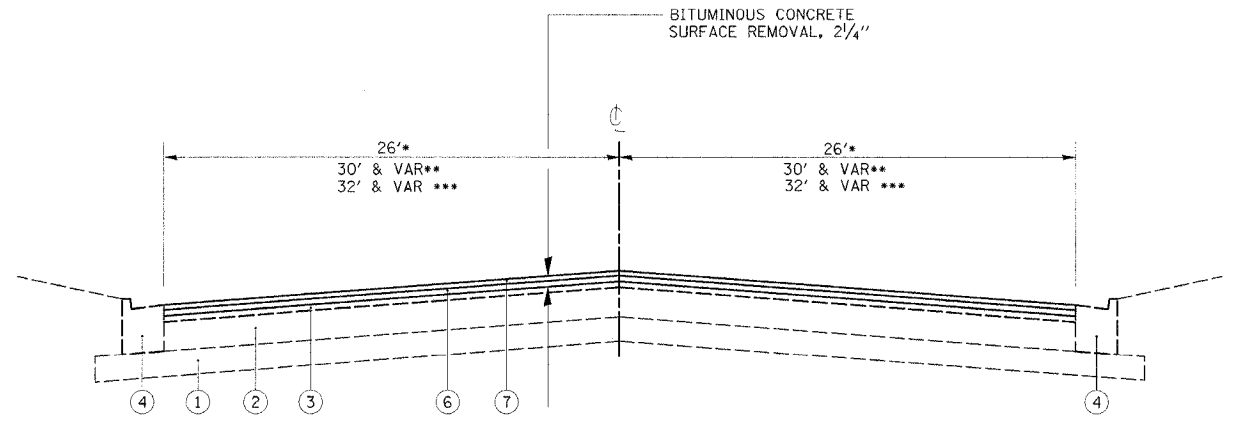
**PROPOSED TYPICAL SECTION 111TH STREET**

STA 110+11 TO STA 120+30  
SEE PLAN FOR PAVEMENT WIDTH VARIATIONS

**MIXTURE REQUIREMENTS**  
THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE TO THIS PROJECT

MIXTURE	AC TYPE	MIX RAP (%)	AIR VOIDS (%)
POLYMERIZED BIT. CONC. SURFACE COURSE SUPERPAVE, MIX F, N90	SBS/SBR PG 76-22	0	4% @ 90 GYR.
POLYMERIZED LEVELING BINDER (MACHINE METHOD) IL-4.75, N50	SBS/SBR PG 76-28	0	2.5% @ 50 GYR.
BITUMINOUS REPLACEMENT OVER PATCHES IL 19.0 mm	PG 64-22	15	4% @ 70 GYR.

**NOTE:**  
THE UNIT WEIGHT USED TO CALCULATE ALL BITUMINOUS SURFACE MIXTURE REQUIREMENTS IS 112 POUNDS PER SQUARE YARD PER INCH.



**PROPOSED TYPICAL SECTION 111TH STREET**

\* STA 19+89.67 TO STA 31+63.00  
\*\* STA 31+63.00 TO STA 110+11.00  
\*\*\* STA 126+37.00 TO STA 132+04.00  
STA 120+30.00 TO STA 126+37.00

**LEGEND**

- ① EXISTING AGGREGATE BASE COURSE
- ② EXISTING PCC PAVEMENT
- ③ EXISTING BITUMINOUS SURFACE COURSE
- ④ EXISTING COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24
- ⑤ EXISTING CORRUGATED MEDIAN
- ⑥ PROPOSED POLYMERIZED LEVELING BINDER (MACHINE METHOD) SUPERPAVE, IL4.75, N50, 3/4"
- ⑦ PROPOSED POLYMERIZED BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX F, N90, 1 3/4"
- ⑧ PROPOSED PORTLAND CEMENT CONCRETE SURFACE REMOVAL (VARIABLE DEPTH)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
FAU ROUTE 1581 (111TH STREET)  
US 45 (96TH AVE) TO IL 7 (SOUTHWEST HWY)

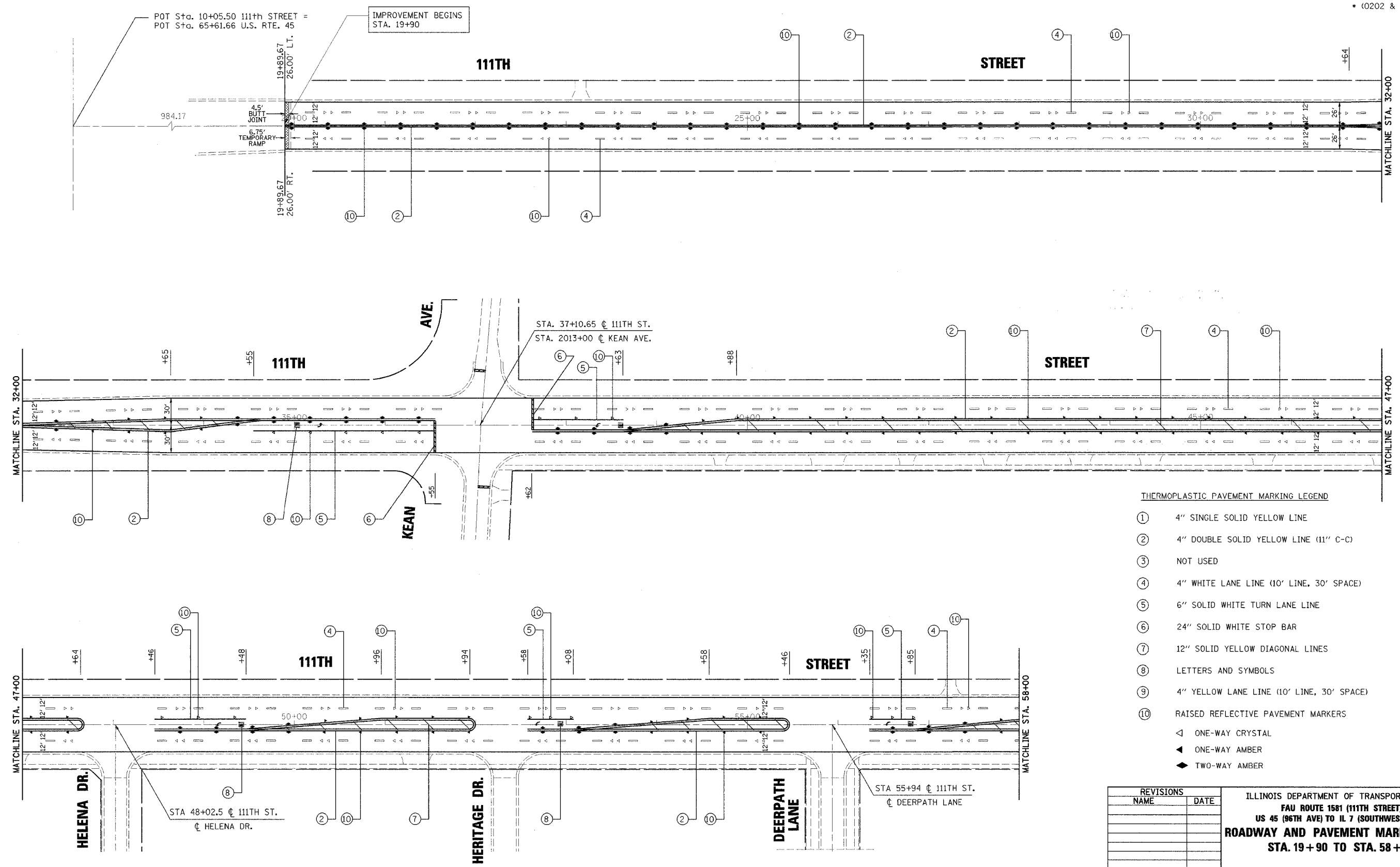
**TYPICAL SECTIONS**

SCALE: VERT. \_\_\_\_\_  
HORIZ. \_\_\_\_\_

DATE \_\_\_\_\_ DRAWN BY \_\_\_\_\_  
CHECKED BY \_\_\_\_\_

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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	*		29	5
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
* (0202 & 0208) RS-8 62748				



**THERMOPLASTIC PAVEMENT MARKING LEGEND**

- ① 4" SINGLE SOLID YELLOW LINE
- ② 4" DOUBLE SOLID YELLOW LINE (11" C-C)
- ③ NOT USED
- ④ 4" WHITE LANE LINE (10' LINE, 30' SPACE)
- ⑤ 6" SOLID WHITE TURN LANE LINE
- ⑥ 24" SOLID WHITE STOP BAR
- ⑦ 12" SOLID YELLOW DIAGONAL LINES
- ⑧ LETTERS AND SYMBOLS
- ⑨ 4" YELLOW LANE LINE (10' LINE, 30' SPACE)
- ⑩ RAISED REFLECTIVE PAVEMENT MARKERS
- ◁ ONE-WAY CRYSTAL
- ◄ ONE-WAY AMBER
- ◆ TWO-WAY AMBER

REVISIONS	
NAME	DATE

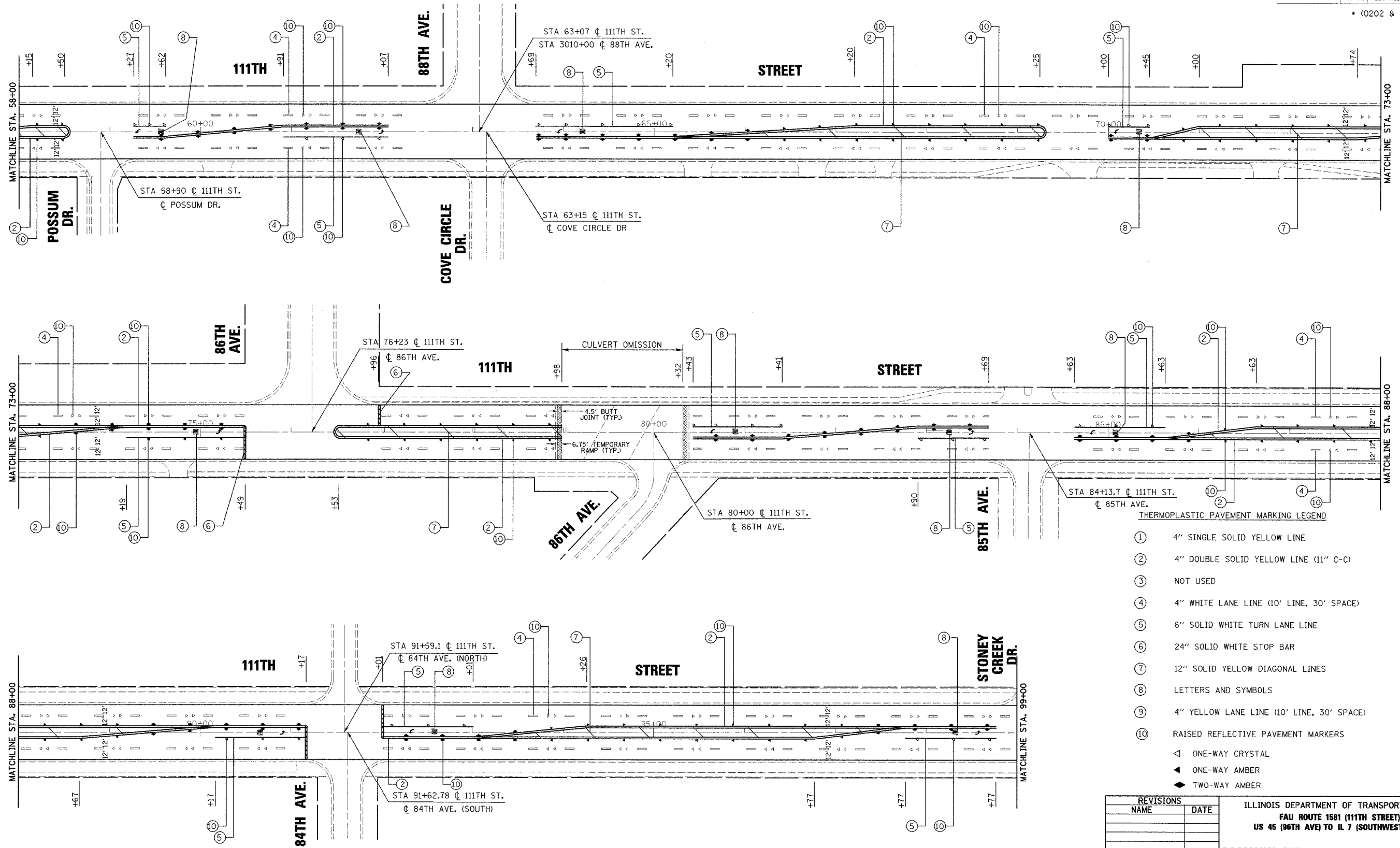
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**FAU ROUTE 1581 (111TH STREET)**  
**US 45 (96TH AVE) TO IL 7 (SOUTHWEST HWY)**  
**ROADWAY AND PAVEMENT MARKING PLAN**  
**STA. 19+90 TO STA. 58+00**

SCALE: VERT. \_\_\_\_\_  
 HORIZ. \_\_\_\_\_  
 DATE \_\_\_\_\_

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 CHECKED BY \_\_\_\_\_

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F.A.I.D. RTE. 1581	SECTION *	COUNTY	TOTAL SHEETS 29	SHEET NO. 6
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
* (0202 & 0208) RS-8 62748				



- THERMOPLASTIC PAVEMENT MARKING LEGEND**
- ① 4" SINGLE SOLID YELLOW LINE
  - ② 4" DOUBLE SOLID YELLOW LINE (11" C-C)
  - ③ NOT USED
  - ④ 4" WHITE LANE LINE (10' LINE, 30' SPACE)
  - ⑤ 6" SOLID WHITE TURN LANE LINE
  - ⑥ 24" SOLID WHITE STOP BAR
  - ⑦ 12" SOLID YELLOW DIAGONAL LINES
  - ⑧ LETTERS AND SYMBOLS
  - ⑨ 4" YELLOW LANE LINE (10' LINE, 30' SPACE)
  - ⑩ RAISED REFLECTIVE PAVEMENT MARKERS
  - ◁ ONE-WAY CRYSTAL
  - ▲ ONE-WAY AMBER
  - ◆ TWO-WAY AMBER

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**FAU ROUTE 1581 (111TH STREET)**  
**US 45 (96TH AVE) TO IL 7 (SOUTHWEST HWY)**

**ROADWAY AND PAVEMENT MARKING PLAN**  
**STA. 58+00 TO STA. 99+00**

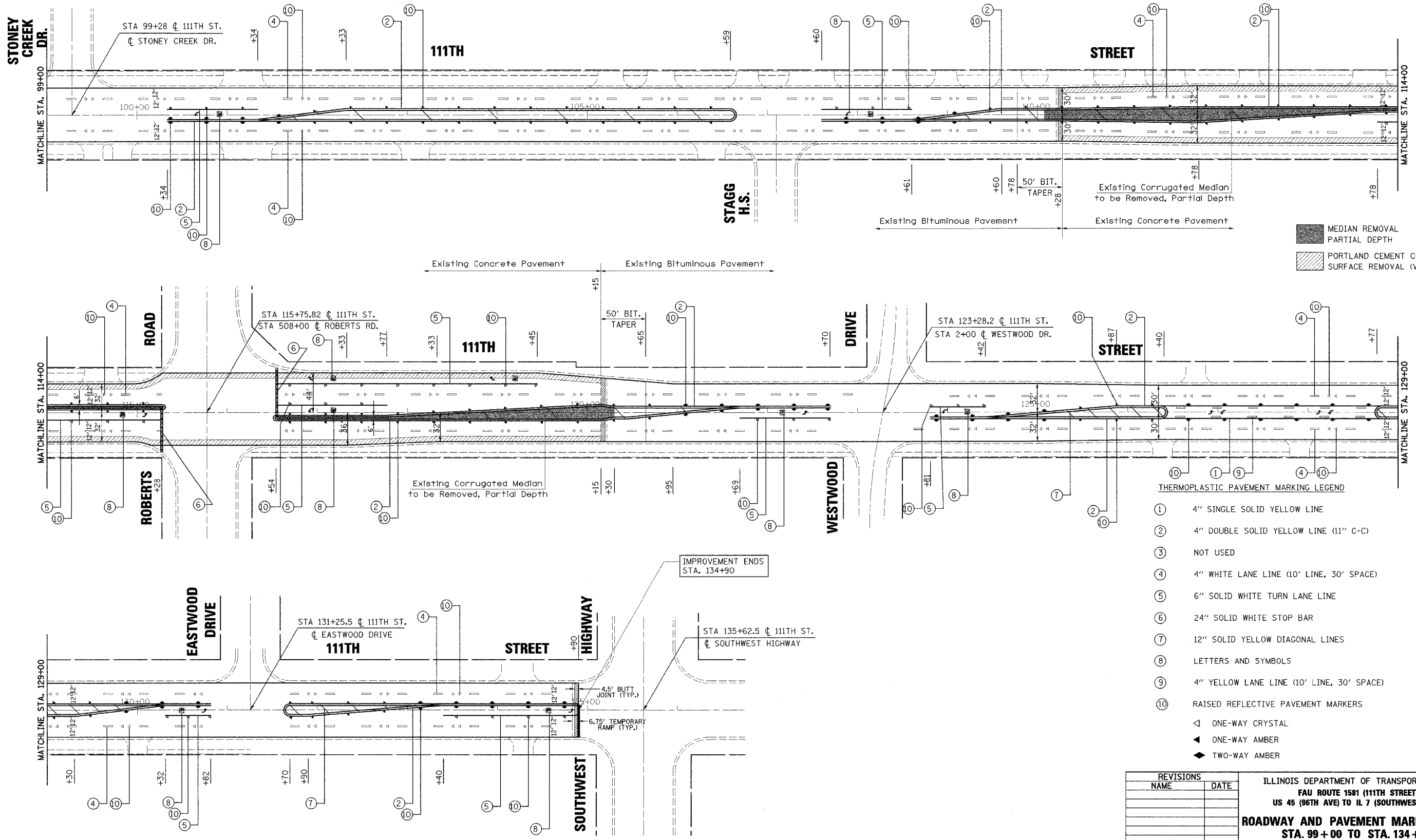
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	*		29	7
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

• (0202 & 0208) RS-8  
62748



- MEDIAN REMOVAL PARTIAL DEPTH
- PORTLAND CEMENT CONCRETE SURFACE REMOVAL (VAR. DEPTH)

- THERMOPLASTIC PAVEMENT MARKING LEGEND**
- ① 4" SINGLE SOLID YELLOW LINE
  - ② 4" DOUBLE SOLID YELLOW LINE (11" C-C)
  - ③ NOT USED
  - ④ 4" WHITE LANE LINE (10' LINE, 30' SPACE)
  - ⑤ 6" SOLID WHITE TURN LANE LINE
  - ⑥ 24" SOLID WHITE STOP BAR
  - ⑦ 12" SOLID YELLOW DIAGONAL LINES
  - ⑧ LETTERS AND SYMBOLS
  - ⑨ 4" YELLOW LANE LINE (10' LINE, 30' SPACE)
  - ⑩ RAISED REFLECTIVE PAVEMENT MARKERS
  - ◁ ONE-WAY CRYSTAL
  - ◄ ONE-WAY AMBER
  - ◆ TWO-WAY AMBER

IMPROVEMENT ENDS STA. 134+90

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**FAU ROUTE 1581 (111TH STREET)**  
**US 45 (96TH AVE) TO IL 7 (SOUTHWEST HWY)**  
**ROADWAY AND PAVEMENT MARKING PLAN**  
**STA. 99+00 TO STA. 134+90**

SCALE: VERT. \_\_\_\_\_  
 HORIZ. \_\_\_\_\_  
 DATE \_\_\_\_\_

DRAWN BY \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_

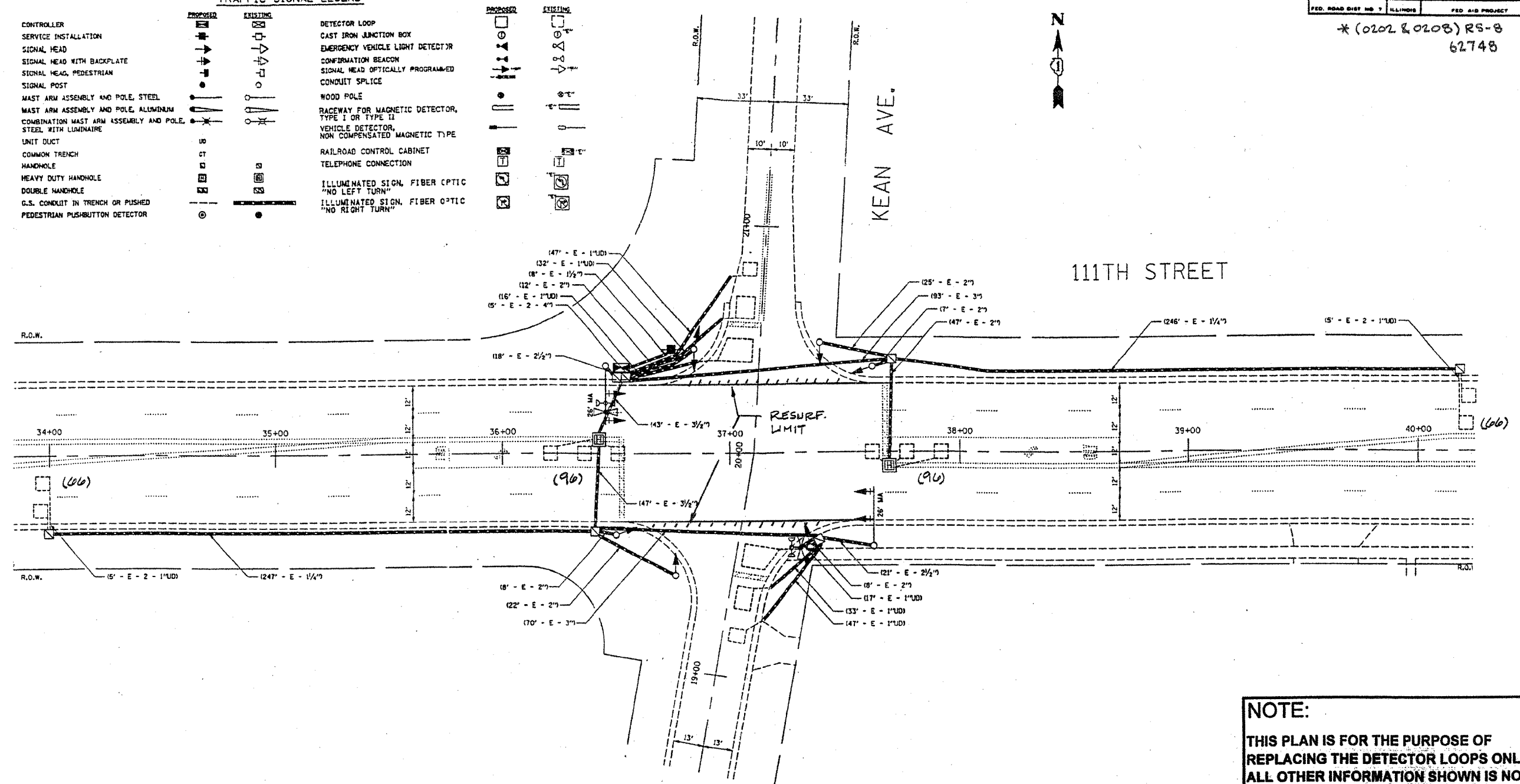
SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*		27	8
STA. TO STA.		FED. ROAD DIST. NO. 1 ILLINOIS	
		FED. AID PROJECT	

\*(0202 & 0203) RS-8  
62748

**TRAFFIC SIGNAL LEGEND**

CONTROLLER		EXISTING	
SERVICE INSTALLATION		EXISTING	
SIGNAL HEAD		EXISTING	
SIGNAL HEAD WITH BACKPLATE		EXISTING	
SIGNAL HEAD, PEDESTRIAN		EXISTING	
SIGNAL POST		EXISTING	
MAST ARM ASSEMBLY AND POLE, STEEL		EXISTING	
MAST ARM ASSEMBLY AND POLE, ALUMINUM		EXISTING	
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE		EXISTING	
UNIT DUCT		EXISTING	
COMMON TRENCH		EXISTING	
HANDHOLE		EXISTING	
HEAVY DUTY HANDHOLE		EXISTING	
DOUBLE HANDHOLE		EXISTING	
G.S. CONDUIT IN TRENCH OR PUSHED		EXISTING	
PEDESTRIAN PUSHBUTTON DETECTOR		EXISTING	

DETECTOR LOOP		EXISTING	
CAST IRON JUNCTION BOX		EXISTING	
EMERGENCY VEHICLE LIGHT DETECTOR		EXISTING	
CONFIRMATION BEACON		EXISTING	
SIGNAL HEAD OPTICALLY PROGRAMMED		EXISTING	
CONDUIT SPLICE		EXISTING	
WOOD POLE		EXISTING	
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		EXISTING	
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		EXISTING	
RAILROAD CONTROL CABINET		EXISTING	
TELEPHONE CONNECTION		EXISTING	
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		EXISTING	
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		EXISTING	



**REPLACE ALL DETECTOR LOOPS AS SHOWN**  
(WITHIN THE RESURFACING LIMITS)

CODE NO.	QUANTITY	UNIT	ITEM
86600600	351	Foot	Detector Loop Replacement

REVISIONS	
NAME	DATE

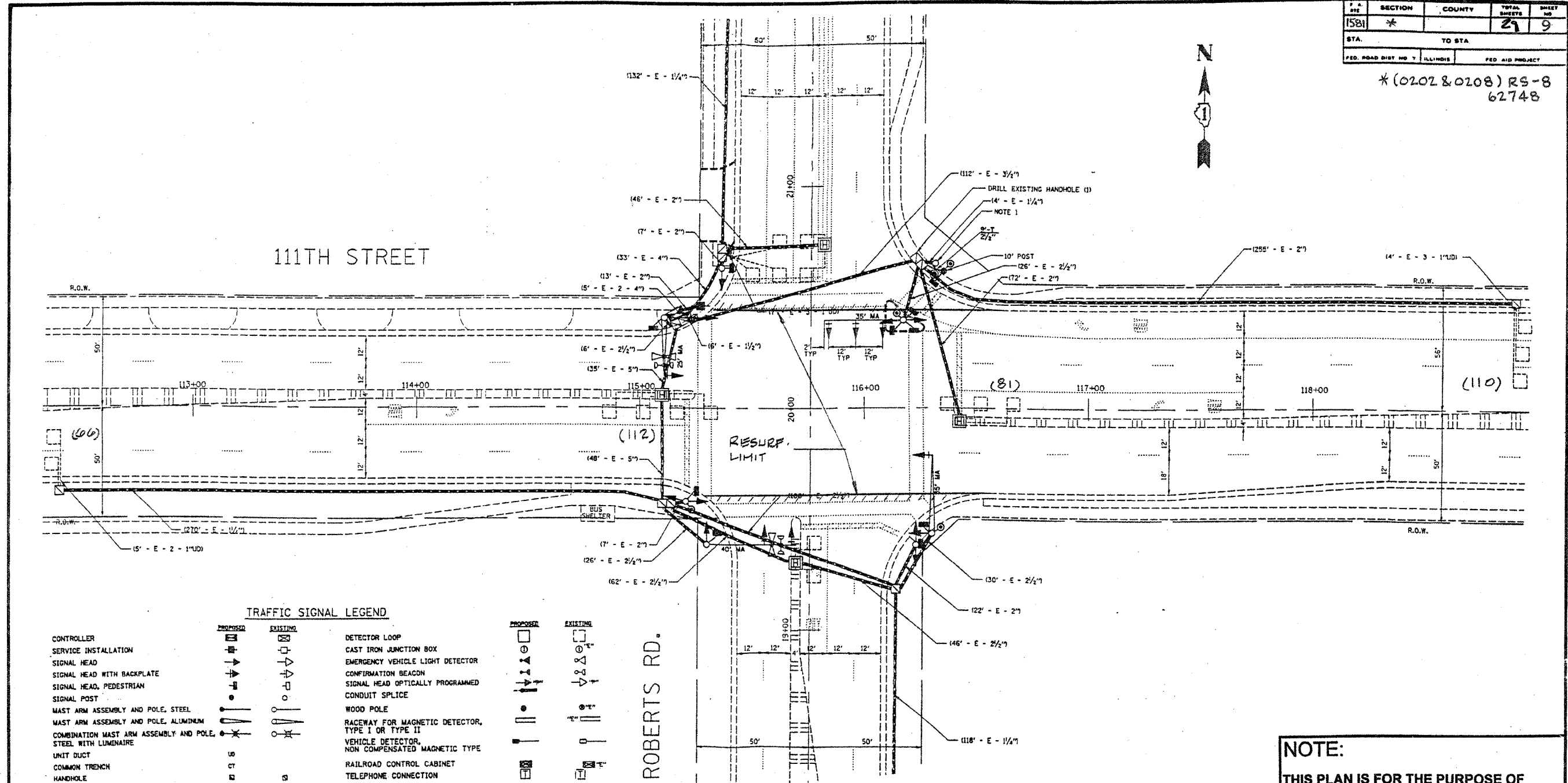
**NOTE:**  
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
**DETECTOR LOOP REPLACEMENT**  
111TH STREET @ KEAN AVENUE  
SCALE: 1" = 20'  
DATE: MAR. 04  
DRAWN BY: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_



F. & S. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	*		29	9
STA.		TO STA.		
FED. ROAD DIST. NO. 7		ILLINOIS		
		FED. AID PROJECT		

\*(0202 & 0208) RS-8  
62748



TRAFFIC SIGNAL LEGEND			
PROPOSED	EXISTING	PROPOSED	EXISTING
CONTROLLER	[Symbol]	DETECTOR LOOP	[Symbol]
SERVICE INSTALLATION	[Symbol]	CAST IRON JUNCTION BOX	[Symbol]
SIGNAL HEAD	[Symbol]	EMERGENCY VEHICLE LIGHT DETECTOR	[Symbol]
SIGNAL HEAD WITH BACKPLATE	[Symbol]	CONFIRMATION BEACON	[Symbol]
SIGNAL HEAD, PEDESTRIAN	[Symbol]	SIGNAL HEAD OPTICALLY PROGRAMMED	[Symbol]
SIGNAL POST	[Symbol]	CONDUIT SPLICE	[Symbol]
MAST ARM ASSEMBLY AND POLE, STEEL	[Symbol]	WOOD POLE	[Symbol]
MAST ARM ASSEMBLY AND POLE, ALUMINUM	[Symbol]	RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II	[Symbol]
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE	[Symbol]	VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE	[Symbol]
UNIT DUCT	[Symbol]	RAILROAD CONTROL CABINET	[Symbol]
COMMON TRENCH	[Symbol]	TELEPHONE CONNECTION	[Symbol]
HANDHOLE	[Symbol]	ILLUMINATED SIGN, FIBER OPTI: "NO LEFT TURN"	[Symbol]
HEAVY DUTY HANDHOLE	[Symbol]	ILLUMINATED SIGN, FIBER OPTI: "NO RIGHT TURN"	[Symbol]
DOUBLE HANDHOLE	[Symbol]		
G.S. CONDUIT IN TRENCH OR PUSHED	[Symbol]		
PEDESTRIAN PUSHBUTTON DETECTOR	[Symbol]		

**NOTE:**  
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**REPLACE ALL DETECTOR LOOPS AS SHOWN**  
(WITHIN THE RESURFACING LIMITS)

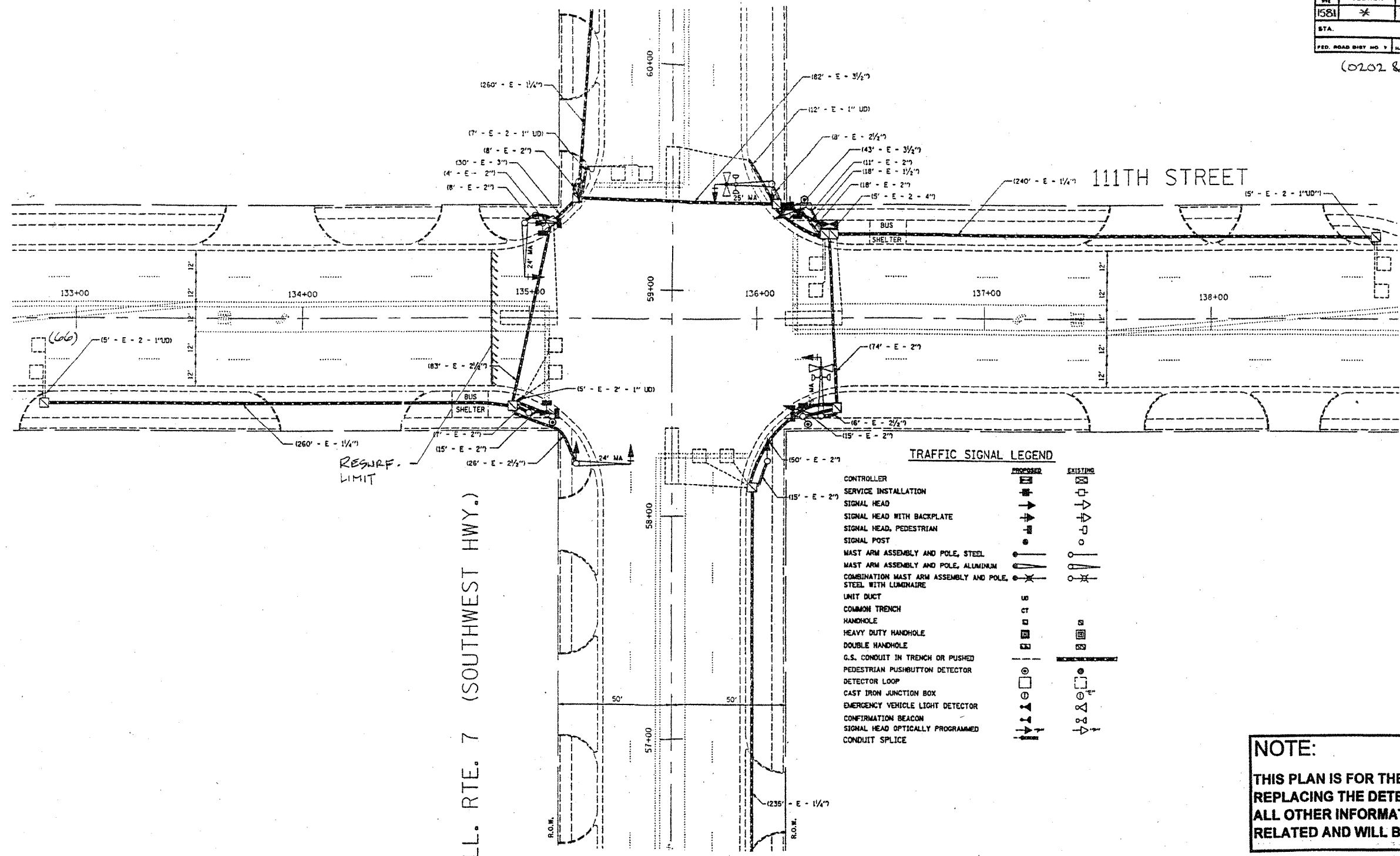
CODE NO.	QUANTITY	UNIT	ITEM
86600600	369	Foot	Detector Loop Replacement

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**DETECTOR LOOP REPLACEMENT**  
111TH STREET @ ROBERTS ROAD  
SCALE: 1" = 20'  
DATE: MAR. 04  
DRAWN BY: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581 *		29	10
STA. TO STA.		FED. ROAD DIST. NO. 7 ILLINOIS	
		FED. AID PROJECT	

(0202 & 0208) RS-8  
62748



ILL. RTE. 7 (SOUTHWEST HWY.)

**TRAFFIC SIGNAL LEGEND**

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
SIGNAL POST		
MAST ARM ASSEMBLY AND POLE, STEEL		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LOMHAIRE		
UNIT DUCT		
COMMON TRENCH		
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S. CONDUIT IN TRENCH OR PUSHED		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		
EMERGENCY VEHICLE LIGHT DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED		
CONDUIT SPLICE		

**NOTE:**  
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**REPLACE ALL DETECTOR LOOPS AS SHOWN**  
(WITHIN THE RESURFACING LIMITS)

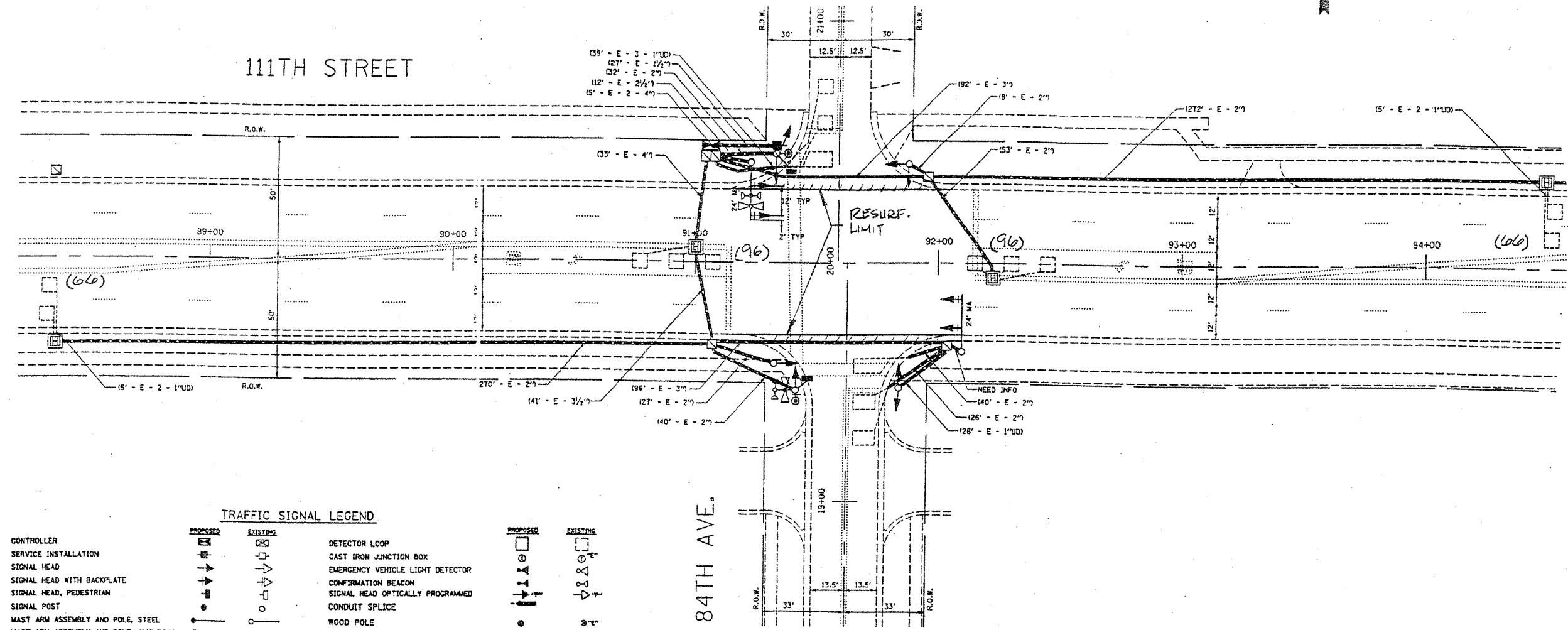
CODE NO.	QUANTITY	UNIT	ITEM
86600600	66	Foot	Detector Loop Replacement

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**DETECTOR LOOP REPLACEMENT**  
111TH ST. @ ILL. RTE. 7  
SCALE: 1" = 20'  
DATE: MAR 04  
DRAWN BY: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_

F.A.D. SHEET NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1584	*		29	11
STA.	TO STA.			
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

\*(0202 & 0208)RS-8  
62748



**TRAFFIC SIGNAL LEGEND**

PROPOSED	EXISTING	DESCRIPTION
[Symbol]	[Symbol]	CONTROLLER
[Symbol]	[Symbol]	SERVICE INSTALLATION
[Symbol]	[Symbol]	SIGNAL HEAD
[Symbol]	[Symbol]	SIGNAL HEAD WITH BACKPLATE
[Symbol]	[Symbol]	SIGNAL HEAD, PEDESTRIAN
[Symbol]	[Symbol]	SIGNAL POST
[Symbol]	[Symbol]	MAST ARM ASSEMBLY AND POLE, STEEL
[Symbol]	[Symbol]	MAST ARM ASSEMBLY AND POLE, ALUMINUM
[Symbol]	[Symbol]	COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE
[Symbol]	[Symbol]	UNIT DUCT
[Symbol]	[Symbol]	COMMON TRENCH
[Symbol]	[Symbol]	HANDHOLE
[Symbol]	[Symbol]	HEAVY DUTY HANDHOLE
[Symbol]	[Symbol]	DOUBLE HANDHOLE
[Symbol]	[Symbol]	G.S. CONDUIT IN TRENCH OR PUSHED
[Symbol]	[Symbol]	PEDESTRIAN PUSHBUTTON DETECTOR
[Symbol]	[Symbol]	DETECTOR LOOP
[Symbol]	[Symbol]	CAST IRON JUNCTION BOX
[Symbol]	[Symbol]	EMERGENCY VEHICLE LIGHT DETECTOR
[Symbol]	[Symbol]	CONFIRMATION BEACON
[Symbol]	[Symbol]	SIGNAL HEAD OPTICALLY PROGRAMMED
[Symbol]	[Symbol]	CONDUIT SPLICE
[Symbol]	[Symbol]	WOOD POLE
[Symbol]	[Symbol]	RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II
[Symbol]	[Symbol]	VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE
[Symbol]	[Symbol]	RAILROAD CONTROL CABINET
[Symbol]	[Symbol]	TELEPHONE CONNECTION
[Symbol]	[Symbol]	ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
[Symbol]	[Symbol]	ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"

**NOTE:**  
THIS PLAN IS FOR THE PURPOSE OF REPLACING THE DETECTOR LOOPS ONLY. ALL OTHER INFORMATION SHOWN IS NOT RELATED AND WILL BE DISREGARDED.

**REPLACE ALL DETECTOR LOOPS AS SHOWN**

(WITHIN THE RESURFACING LIMITS)

CODE NO.	QUANTITY	UNIT	ITEM
86600600	360	Foot	Detector Loop Replacement

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**DETECTOR LOOP REPLACEMENT**

111TH STREET @ 84TH AVENUE

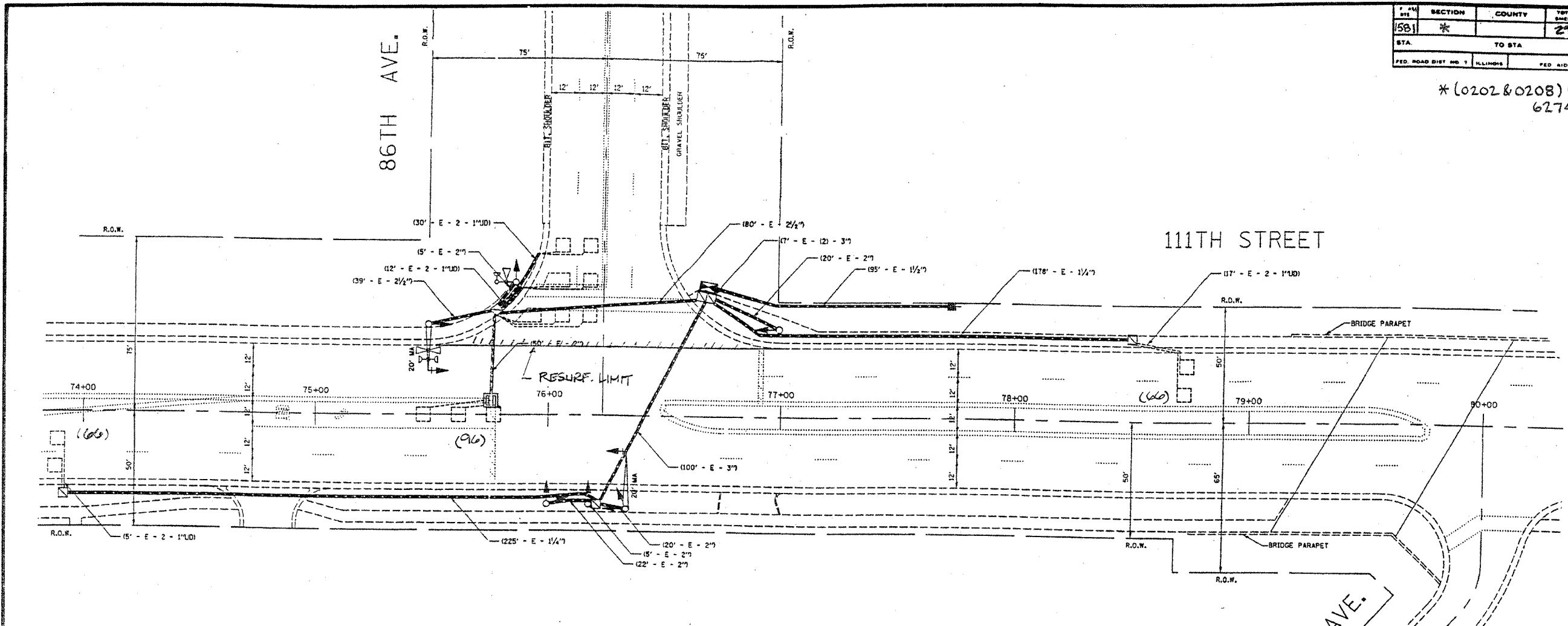
SCALE: 1" = 20'

DATE: \_\_\_\_\_

DRAWN BY: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581 *		27	12
STA. TO STA.			
FED. ROAD DIST. NO. 1 ILLINOIS		FED. AID PROJECT	

\*(0202 & 0208) R5-8  
62748



**TRAFFIC SIGNAL LEGEND**

<p>CONTROLLER</p> <p>SERVICE INSTALLATION</p> <p>SIGNAL HEAD</p> <p>SIGNAL HEAD WITH BACKPLATE</p> <p>SIGNAL HEAD, PEDESTRIAN</p> <p>SIGNAL POST</p> <p>MAST ARM ASSEMBLY AND POLE, STEEL</p> <p>MAST ARM ASSEMBLY AND POLE, ALUMINUM</p> <p>COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE</p> <p>UNIT DUCT</p> <p>COMMON TRENCH</p> <p>HANDHOLE</p> <p>HEAVY DUTY HANDHOLE</p> <p>DOUBLE HANDHOLE</p> <p>G.S. CONDUIT IN TRENCH OR PUSHED</p> <p>PEDESTRIAN PUSHBUTTON DETECTOR</p>	<p>PROPOSED</p> <p>EXISTING</p>	<p>DETECTOR LOOP</p> <p>CAST IRON JUNCTION BOX</p> <p>EMERGENCY VEHICLE LIGHT DETECTOR</p> <p>CONFIRMATION BEACON</p> <p>SIGNAL HEAD OPTICALLY PROGRAMMED</p> <p>CONDUIT SPLICE</p> <p>WOOD POLE</p> <p>RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II</p> <p>VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE</p> <p>RAILROAD CONTROL CABINET</p> <p>TELEPHONE CONNECTION</p> <p>ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"</p> <p>ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"</p>	<p>PROPOSED</p> <p>EXISTING</p>
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**REPLACE ALL DETECTOR LOOPS AS SHOWN**  
(WITHIN THE RESURFACING LIMITS)

CODE NO.	QUANTITY	UNIT	ITEM
86600600	246	Foot	Detector Loop Replacement

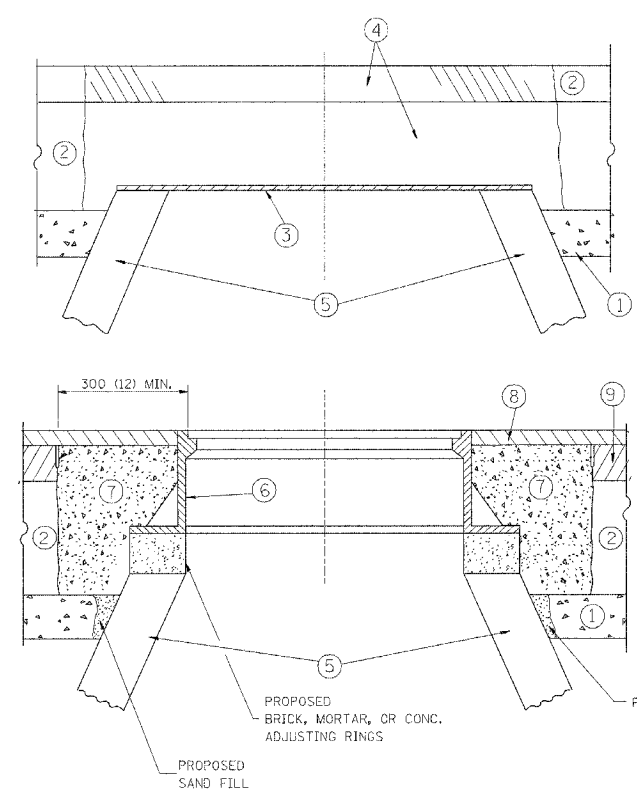
REVISIONS	
NAME	DATE

**NOTE:**  
THIS PLAN IS FOR THE PURPOSE OF REPLACING THE DETECTOR LOOPS ONLY. ALL OTHER INFORMATION SHOWN IS NOT RELATED AND WILL BE DISREGARDED.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**DETECTOR LOOP REPLACEMENT**  
111TH STREET @ 86TH AVENUE  
SCALE: 1" = 20'  
DATE: MAR. 04  
DRAWN BY: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_

F. A. U. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1881	*		29	13
STA.	TO STA.			
FED. ROAD DIST. NO.	MILES	FED. AID PROJECT		

\* (0202 & 0208) R5-B  
62148



**CONSTRUCTION PROCEDURES**

**STAGE 1 (BEFORE PAVEMENT MILLING)**

- A) REMOVE A MINIMUM OF 300 (12) OF THE PAVEMENT FROM AROUND THE STRUCTURE.
- B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.
- C) COVER THE STRUCTURE OPENING WITH A 900 (36) DIAMETER METAL PLATE.
- D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 40 (1 1/2) THICK BITUMINOUS MATERIAL APPROVED BY THE ENGINEER.

**STAGE 2 (AFTER PAVEMENT MILLING)**

- A) REMOVE THE BITUMINOUS MATERIAL 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 SI CONCRETE, OR BITUMINOUS CONCRETE SURFACE OR BINDER COURSE MATERIAL TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

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

**LEGEND**

- ① SUB-BASE GRANULAR MATERIAL
- ② EXISTING PAVEMENT
- ③ 900 (36) DIAMETER METAL PLATE
- ④ PROPOSED CRUSHED STONE AND BITUMINOUS MATERIAL
- ⑤ EXISTING STRUCTURE
- ⑥ FRAME AND LID (SEE NOTES)
- ⑦ CLASS SI CONCRETE, BITUMINOUS CONCRETE SURFACE OR BINDER COURSE MATERIAL
- ⑧ PROPOSED BITUMINOUS CONCRETE SURFACE COURSE
- ⑨ PROPOSED BITUMINOUS CONCRETE 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:** FRAMES AND LIDS TO BE ADJUSTED, SPECIAL EACH

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 MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN

ILLINOIS DEPARTMENT OF TRANSPORTATION

**DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING**

REVISIONS	
NAME	DATE
R. SHAH	10/25/94
R. SHAH	01/30/95
R. SHAH	03/10/95
A. ABBAS	03/21/97
R. WIEDEMAN	05/14/04

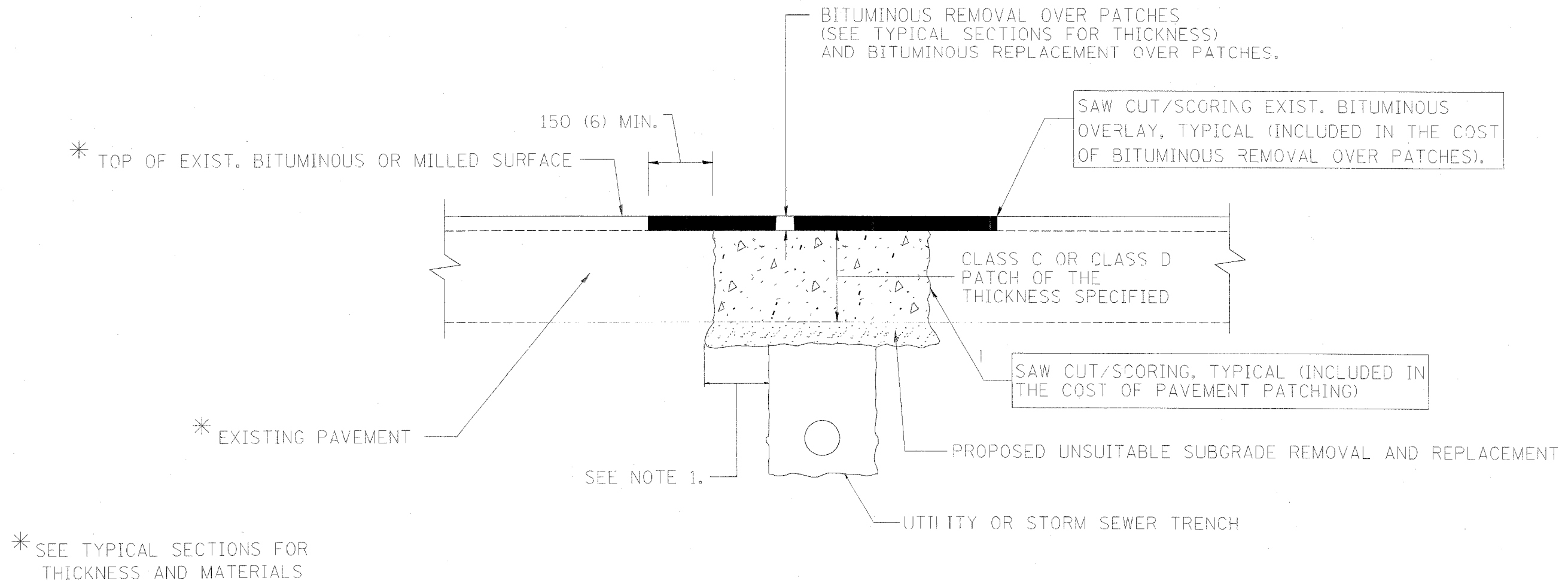
SCALE: NONE  
DATE: 05/17/2004

DRAWN BY  
CHECKED BY

BD600-03 (BD-8)  
REVISION DATE: 05/17/04

P. A. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	*		29	14
STA.	TO STA.			
FED. ROAD DIST. NO.	BLDG.	FED. AID PROJECT		

\*(0202 & 0208) RS-8  
6274B



**NOTES:**

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

**SEQUENCE OF CONSTRUCTION**

1. REMOVE THE EXISTING BITUMINOUS MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE FULL DEPTH PATCHES
3. REPLACE BITUMINOUS MATERIAL OVER THE AREA TO BE PATCHED.

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

ILLINOIS DEPARTMENT OF TRANSPORTATION

**PAVEMENT PATCHING FOR BITUMINOUS SURFACED PAVEMENT**

REVISIONS		REVISIONS	
NAME	DATE	NAME	DATE
R. SHAH	10/25/94	ART ABBAS	04/27/98
R. SHAH	01/14/95		
R. SHAH	03/23/95		
R. SHAH	04/24/95		
A. HOUSEH	03/15/96		
A. ABBAS	03/21/97		
A. ABBAS	01/20/98		

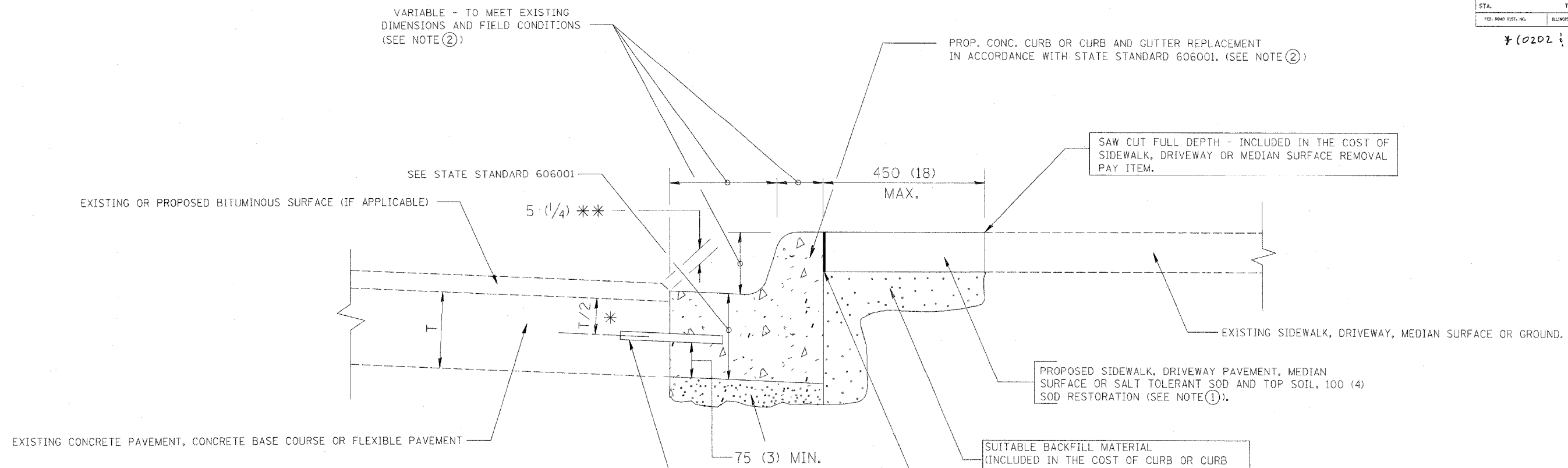
SCALE: NONE  
DATE 10/18/2002

DRAWN BY  
CHECKED BY  
BD400-04 (BD-22)

REVISION DATE: 04/27/98

PLAN NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	*		29	15
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

\* (0202 & 0208) RS-B  
6274B



\* 75 (3) 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.
- SALT TOLERANT SOD AND TOP SOIL, 100 (4) RESTORATION WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.
- ② CURB OR CURB AND GUTTER REPLACEMENT SHALL MATCH THE SHAPE OF THE EXISTING CURB OR CURB AND GUTTER UNLESS OTHERWISE SPECIFIED.
- ③ FOR CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT ADJACENT TO FLEXIBLE PAVEMENT DELETE EPOXY COATED TIE BARS.
- ④ 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.
- ⑤ THE COST OF BITUMINOUS SURFACE REMOVAL IN THE EXISTING GUTTER FLAG SHALL BE INCLUDED IN THE COST OF THE CURB AND GUTTER REMOVAL AND REPLACEMENT.
- ⑥ 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.
- ⑦ 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.

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

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

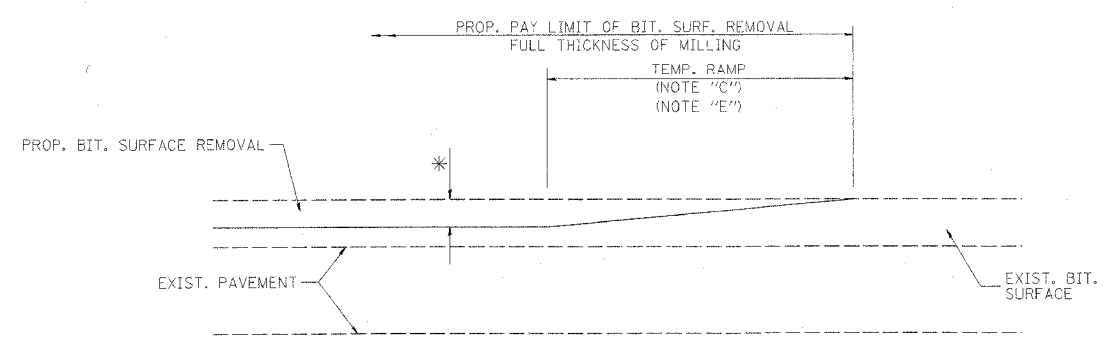
## CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

REVISIONS	
NAME	DATE
M. DE YONG	05/28/91
A. HOUSEH	03/11/94
R. SHAH	02/24/95
R. SHAH	03/02/95
R. SHAH	08/19/96
R. SHAH	09/12/96
R. SHAH	09/19/96
R. SHAH	10/03/96
A. ABBAS	03/21/97
M. GOMEZ	01/22/01

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT**

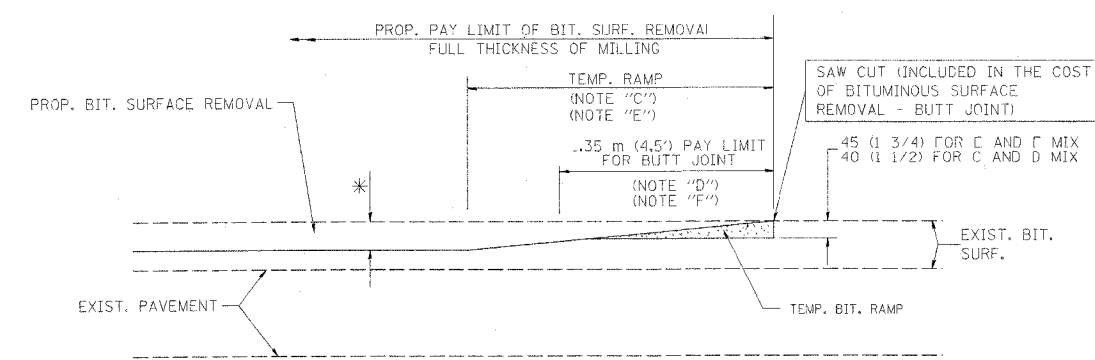
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DRAWN BY  
CHECKED BY  
DATE 10/18/2002  
BD600-06 (BD-24)  
REVISION DATE: 12/06/88

F. & M. FILE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	*		29	16
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
		* (0202 & 0208) RS-8 62748		



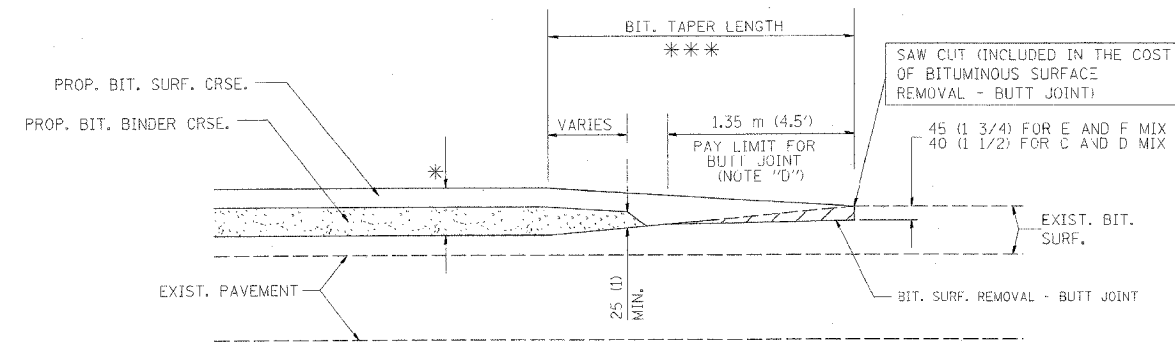
MILLED TEMPORARY RAMP  
(FOR BUTT JOINT AND BIT. TAPER SEE DETAIL BELOW)

OPTION 1



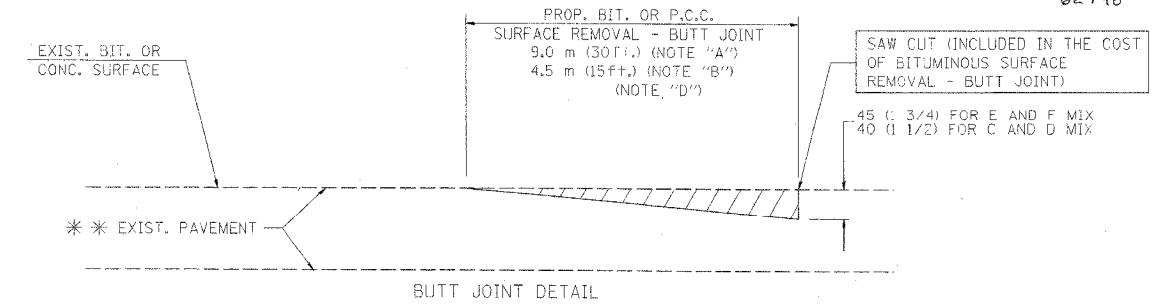
BITUMINOUS CONSTRUCTED TEMPORARY RAMP  
(FOR BUTT JOINT AND BIT. TAPER SEE DETAIL BELOW)

OPTION 2  
TYPICAL TEMPORARY RAMP

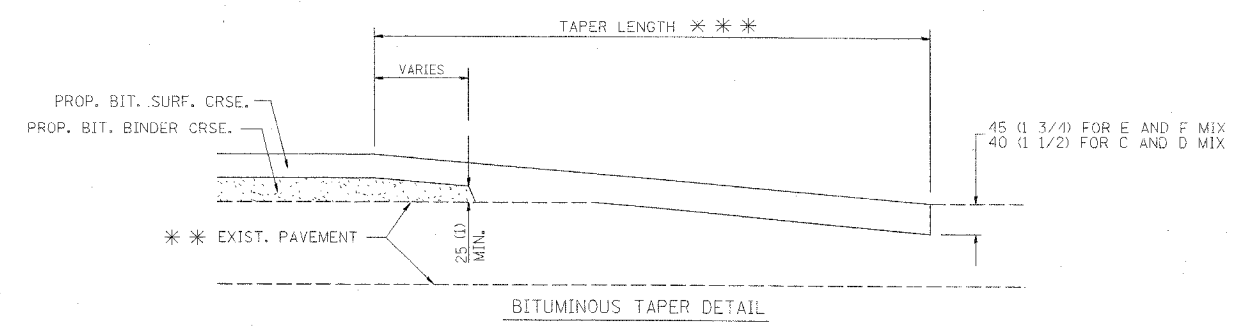


BUTT JOINT AND BITUMINOUS TAPER

TYPICAL BUTT JOINT AND BITUMINOUS TAPER  
FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



BITUMINOUS TAPER DETAIL

TYPICAL BUTT JOINT AND BITUMINOUS TAPER  
FOR RESURFACING ONLY

\*\*\* PC CONCRETE, BITUMINOUS OR BITUMINOUS 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 BITUMINOUS SURFACE.
  - D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED BITUMINOUS COURSES.
  - E: TAPER THE TEMP. RAMP AT A RATE OF 900 (3 ft.) PER INCH OF MILLING THICKNESS.
  - F: INSTALLATION AND REMOVAL OF THE 1.35 m (4.5') TEMP. BIT. RAMP WILL BE PAID AS "BITUMINOUS SURFACE REMOVAL - BUTT JOINT".
  - G: SEE ARTICLE 406.18 AND 406.24 OF THE STANDARD SPECIFICATIONS FOR "BITUMINOUS AND PCC SURFACE REMOVAL, BUTT JOINT".
- \* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- \*\*\* 6.1 m (20') PER 25 (1) RESURFACING (NOTE "A")  
3.0 m (10') PER 25 (1) RESURFACING (NOTE "B")

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

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR PER SQUARE METER (SQUARE YARD) AS "BITUMINOUS SURFACE REMOVAL - BUTT JOINT" OR AS "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

REVISIONS	
NAME	DATE
M. DE YONG	6-13-90
M. DE YONG	7-3-90
M. DE YONG	3-27-92
R. SHAH	09/09/94
R. SHAH	10/25/94
A. ABBAS	03/21/97
M. GOMEZ	04/06/01

ILLINOIS DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND BITUMINOUS TAPER DETAILS

SCALE: NONE  
DATE PLOTTED: 10/18/2002

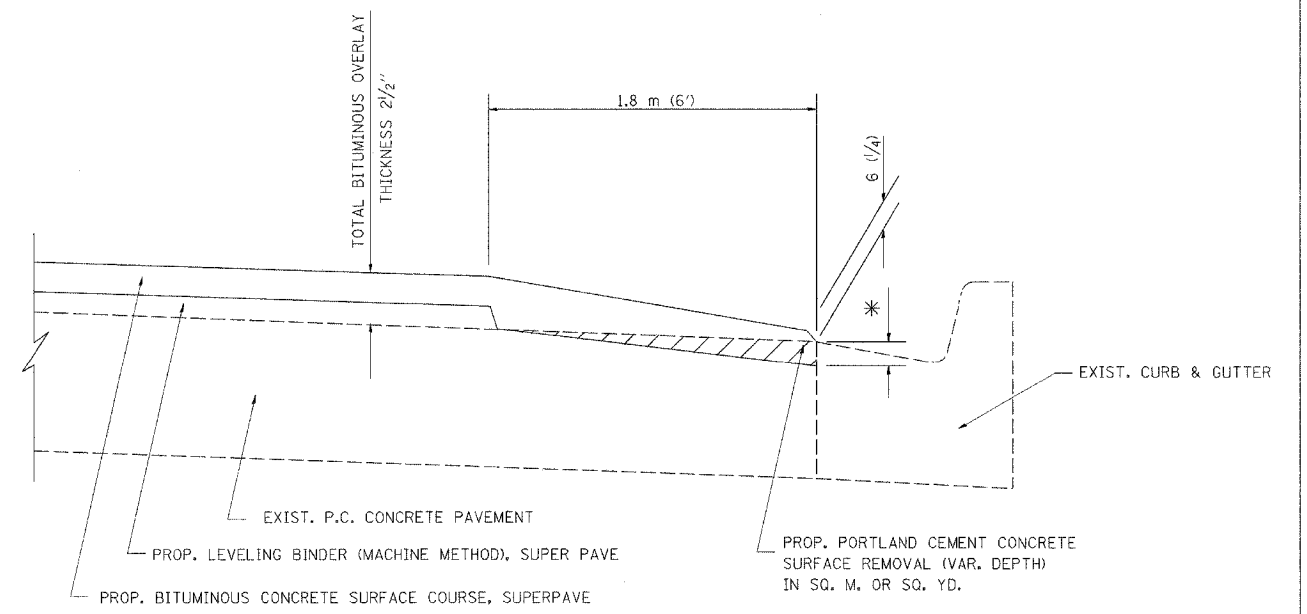
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BD400-05 (VI-BD32)  
REVISION DATE: 04/06/01



P. & U. REC.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	*		29	17
STA. *		TO STA.		
FED. ROAD DIST. NO.		BILLINGS	FED. AID PROJECT	

\*(0202 & 0208) RS-8  
6274B



BITUMINOUS TAPER AT  
EDGE OF P.C.C PAVEMENT

SUPERPAVE	LEVELING BINDER SUPERPAVE		* MILLING AT GUTTER FLAG
	SURFACE MIX	THICKNESS	
C OR D	38 (1 1/2)	25 (1)	33 (1 1/4)
E OR F	44 (1 3/4)	19 (3/4)	38 (1 1/2)

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

ILLINOIS DEPARTMENT OF TRANSPORTATION

BITUMINOUS TAPER AT  
EDGE OF P.C.C. PAVEMENT

REVISIONS	
NAME	DATE
R. SHAH	09/10/94
R. SHAH	10/25/94
A. ABBAS	05/05/99
E. GOMEZ	12/21/00

SCALE: NONE  
DATE 10/18/2002

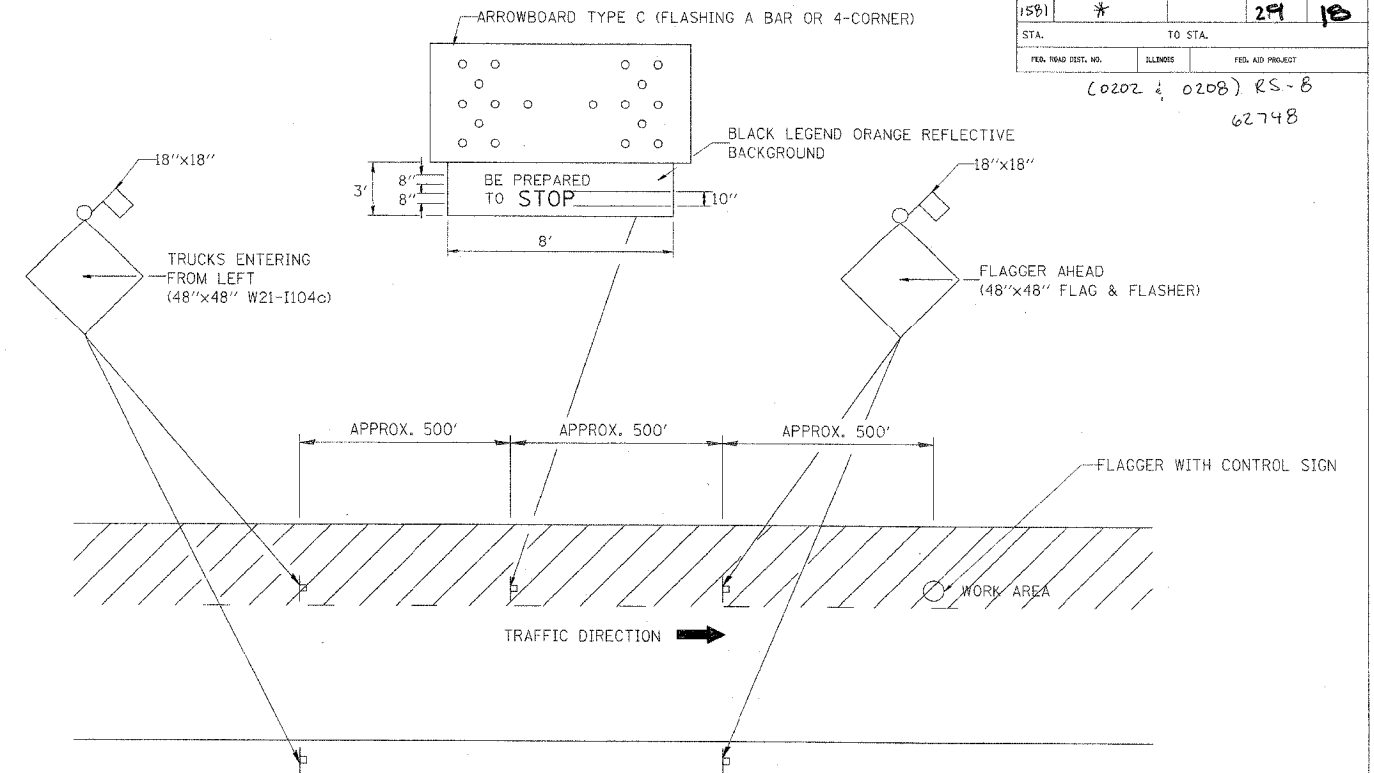
DRAWN BY Jis  
CHECKED BY A. ABBAS  
BD400-06 (BD33)

\*DATE-TIME\*  
\*CON-SPEC\*  
VH-BD33

REVISION DATE: 12/21/00

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	*	29	18
STA. TO STA.		FED. AID PROJECT	

(0202 & 0208) RS-8  
62748



METHOD OF FLAGGING

NOTE:

1. SIGNS SHALL BE MOUNTED AT A MINIMUM CLEARANCE HEIGHT OF 5 FEET
2. ALL SIGNS SHALL BE REMOVED WHEN THE FLAGGING OPERATION CEASES.
3. THIS CASE ALSO APPLIES WHEN THE WORK ZONE IS ON THE RIGHT. UNDER THESE CONDITIONS "TRUCKS ENTERING FROM RIGHT" SIGNS SHALL BE SUBSTITUTED FOR "TRUCKS ENTERING FROM LEFT" SIGNS. ALSO THE ARROWBOARD AND "BE PREPARED TO STOP" SIGNS SHALL BE RELOCATED TO THE RIGHT SIDE OF THE ROAD.
4. WORK ZONE ACCESS POINTS SHOULD BE A MINIMUM OF ONE HALF MILE APART. MEDIAN WORK ZONE ACCESS POINTS SHOULD NOT BE LOCATED OPPOSITE OF EACH OTHER.
5. NIGHTTIME FLAGGING OPERATIONS: THE FLAG STATION SHALL BE LIGHTED WITH ADDITIONAL LIGHTS OTHER THAN STREET LIGHTS. THE FLAGGER CONTROL SIGN AND THE FLAGGER'S VEST SHALL BE REFLECTORIZED. IN ADDITION, THE FLAGGER SHALL HAVE A FLASHLIGHT OR LIGHTED WAND.

REVISIONS	
NAME	DATE
RAY FITCHIE	5/10/00

ILLINOIS DEPARTMENT OF TRANSPORTATION

METHOD OF FLAGGING

SCALE: NOT TO SCALE  
DATE 10/18/2002

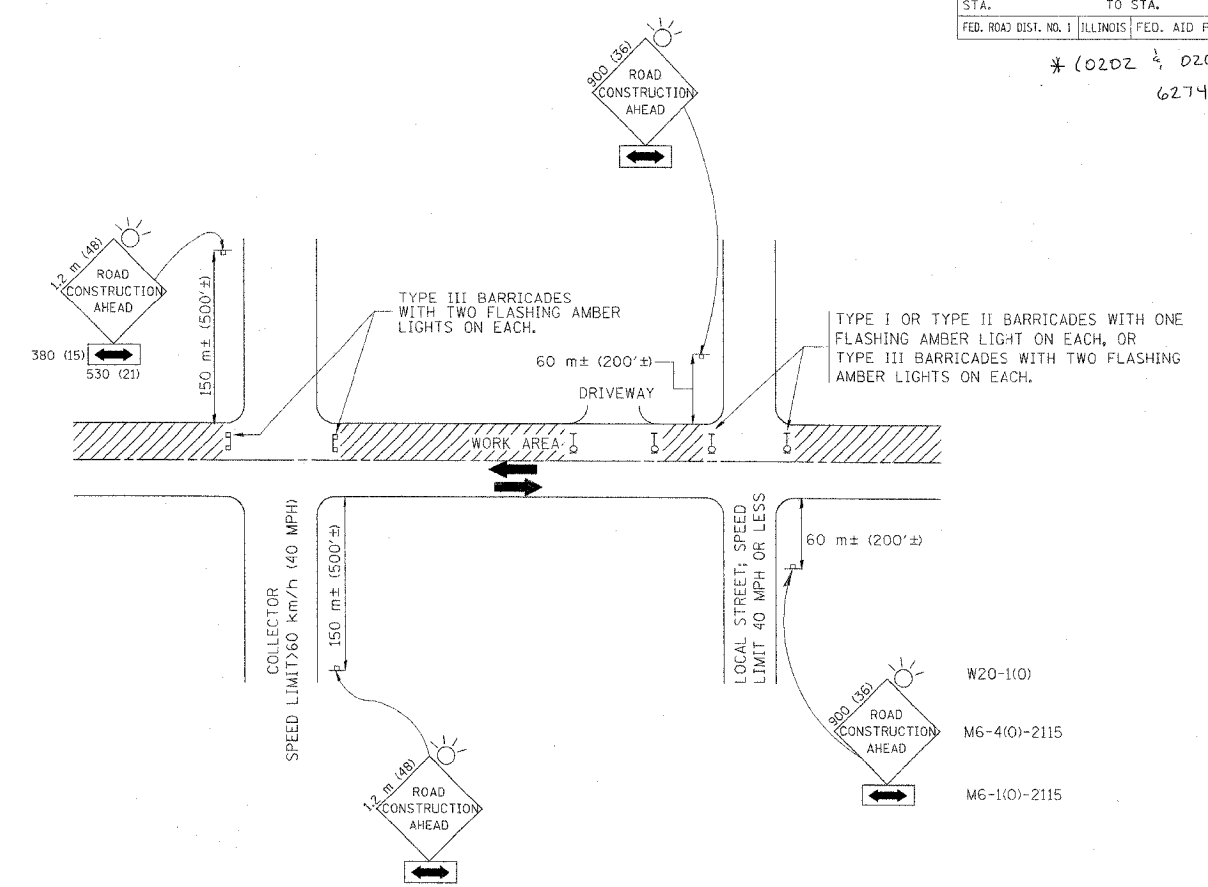
DRAWN BY C.A.D.  
CHECKED BY

BM-14

REVISION DATE: 05/10/00

F.A.M. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	5		29	19
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		

\* (0202 & 0208) RS-8  
62748



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 60 km/h (40 MPH) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
    - ONE **ROAD CONSTRUCTION AHEAD** SIGN 900x900 (36x36) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 60 m (200') IN ADVANCE OF THE MAIN ROUTE.
    - 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.
  - SIDE ROAD WITH A SPEED LIMIT GREATER THAN 60 km/h (40 MPH) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
    - ONE **ROAD CONSTRUCTION AHEAD** SIGN 1.2 m x 1.2 m (48x48) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 150 m (500') IN ADVANCE OF THE MAIN ROUTE.
    - 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.
  - 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.

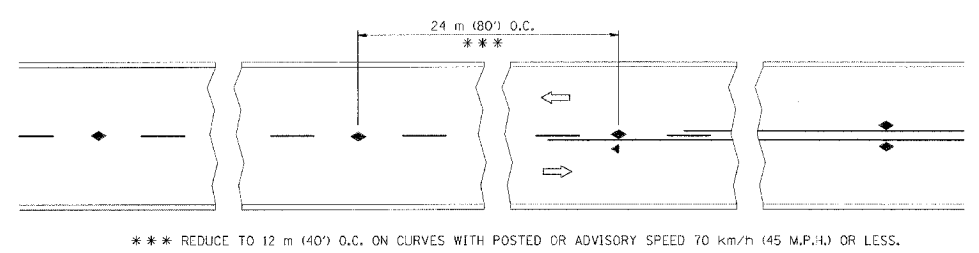
REVISIONS	
NAME	DATE
LHA	6/89
T. RAMMACHER	09/08/94
J. OBERLE	10/18/95
A. HOUSEH	03/06/96
A. HOUSEH	10/15/96
T. RAMMACHER	01/06/00

ILLINOIS DEPARTMENT OF TRANSPORTATION  
TRAFFIC CONTROL AND PROTECTION  
FOR  
SIDE ROADS, INTERSECTIONS, AND  
DRIVEWAYS

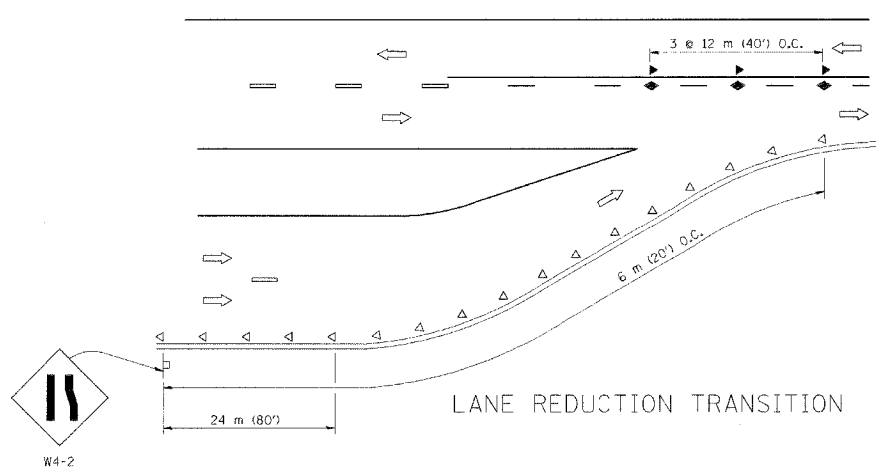
SCALE: VERT.  
HORIZ.  
DATE 10/18/2002

DRAWN BY  
CHECKED BY  
TC-10

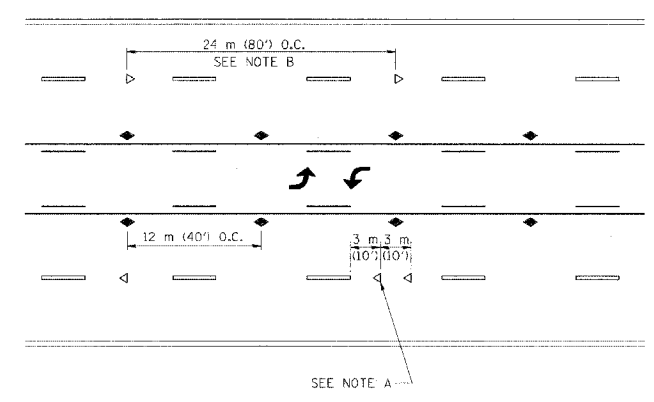
F. A. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	*		29	20
STA.	TO STA.			
FED. ROAD DIST. NO.	ALIGNMENT	FED. AID PROJECT		
* (0202 & 0208) RS-8 @2748				



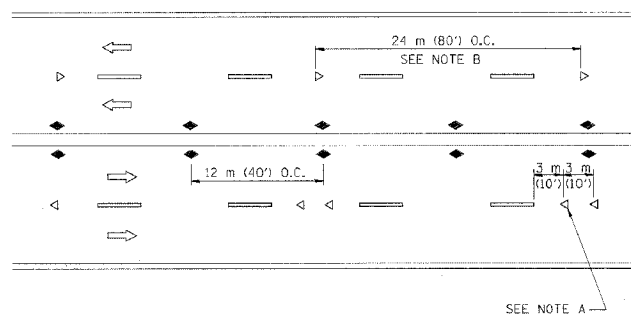
TWO-LANE/TWO-WAY



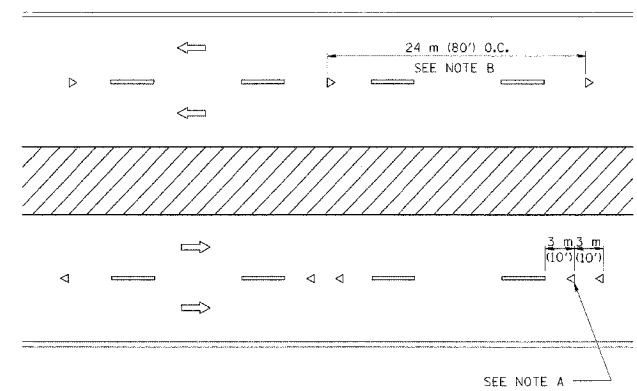
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

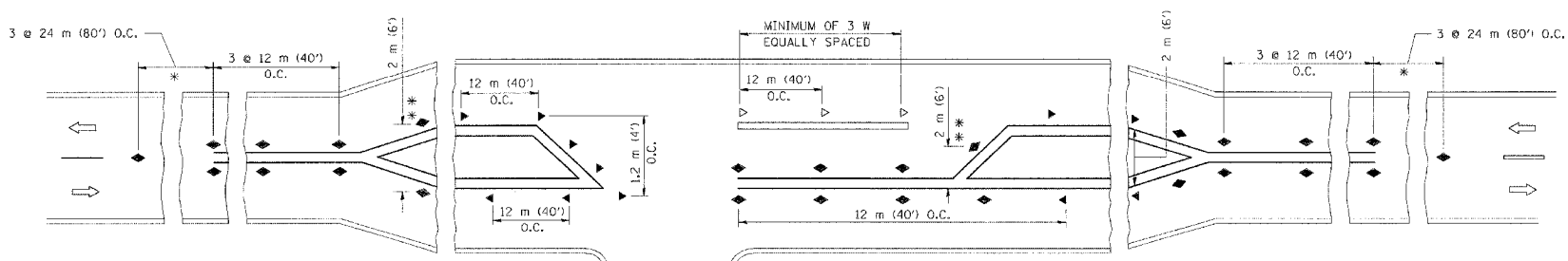
1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 50 TO 75 (2 TO 3) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 150 m (500') IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE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

SYMBOLS

- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

- B. REDUCE TO 12 m (40') O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 20 km/h (10 M.P.H.) LOWER THAN POSTED SPEEDS.
- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.



LEFT TURN

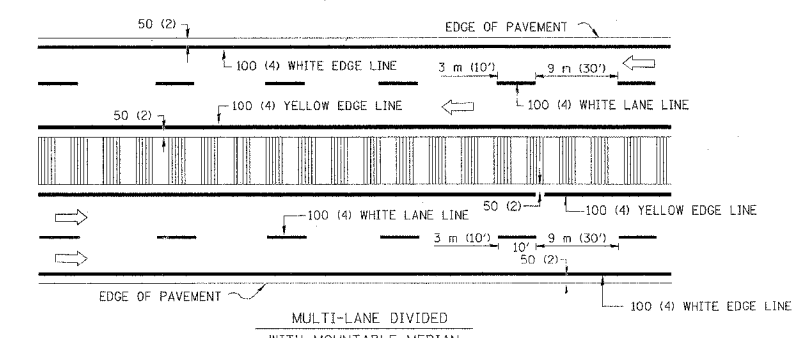
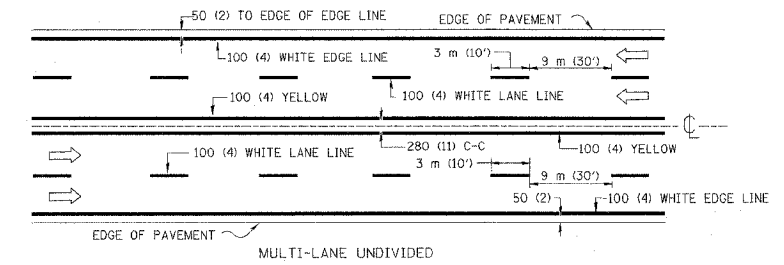
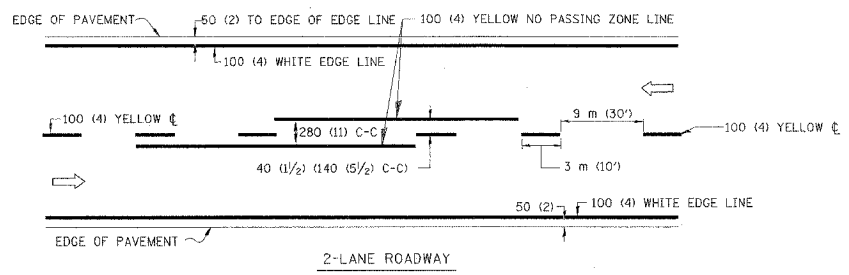
- \* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE
- \*\* WHERE THE MEDIAN WIDTH IS 2 m (6') OR LESS USE TWO-WAY MARKERS.

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

REVISIONS	
NAME	DATE
T. RAMMACHER	09-19-94
T. RAMMACHER	03-12-99
T. RAMMACHER	01-06-00

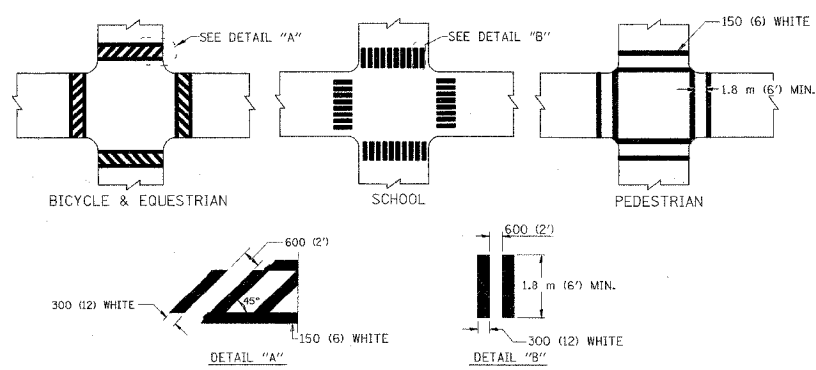
ILLINOIS DEPARTMENT OF TRANSPORTATION  
TYPICAL APPLICATIONS  
RAISED REFLECTIVE PAVEMENT MARKERS  
(SNOW-PLOW RESISTANT)

SCALE: NONE  
DATE: 10/18/2002  
DRAWN BY CADD  
CHECKED BY

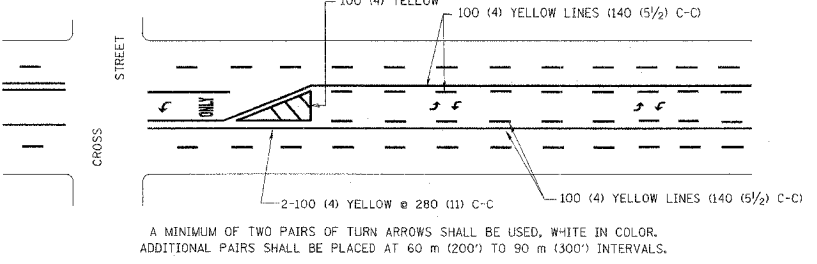
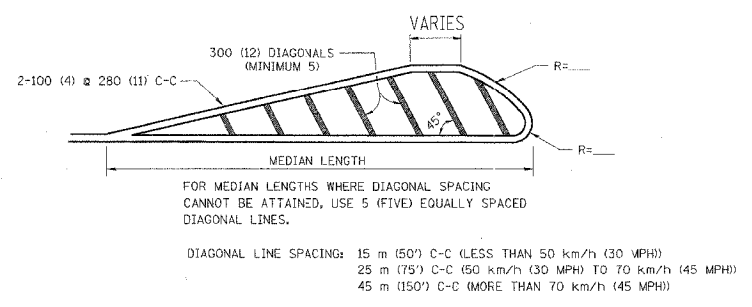
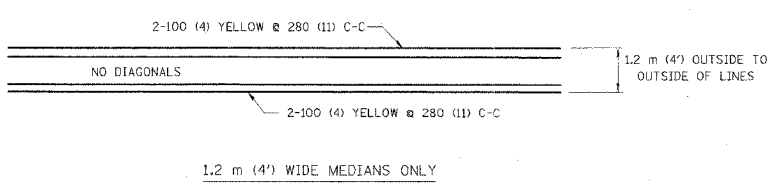


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

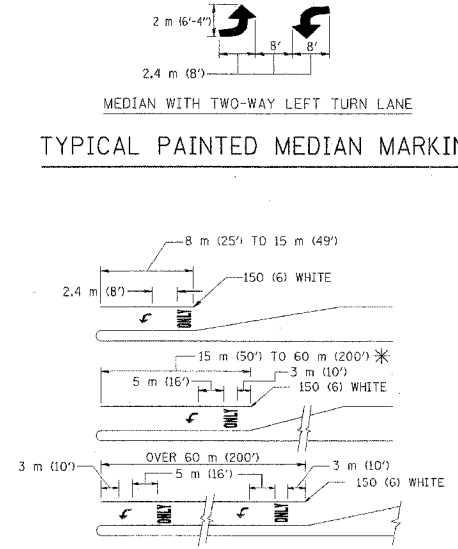
TYPICAL LANE AND EDGE LINE MARKING



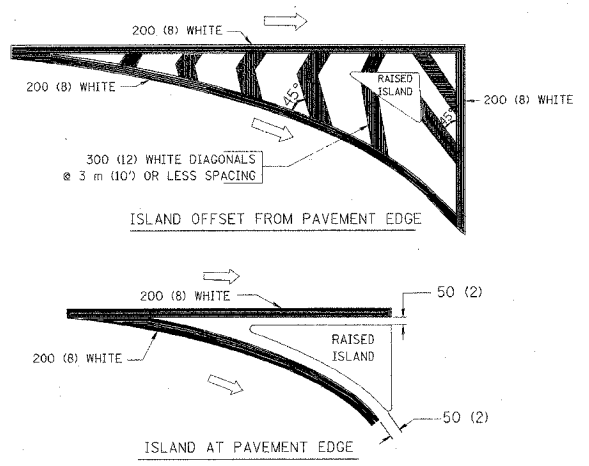
TYPICAL CROSSWALK MARKING



TYPICAL PAINTED MEDIAN MARKING



TYPICAL TURN LANE MARKING



TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	100 (4)	SKIP-DASH	YELLOW	3 m (10') LINE WITH 9 m (30') SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 100 (4)	SOLID	YELLOW	280 (11) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION	100 (4)	SOLID	YELLOW	140 (5 1/2) C-C FROM SKIP-DASH CENTERLINE
NO PASSING ZONE LINES: FOR BOTH DIRECTIONS	2 @ 100 (4)	SOLID	YELLOW	280 (11) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	100 (4)	SKIP-DASH	WHITE	3 m (10') LINE WITH 9 m (30') SPACE
LANE LINES	125 (5) ON FREEWAYS	SKIP-DASH	WHITE	
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	600 (2') LINE WITH 1.8 m (6') SPACE
EDGE LINES	100 (4)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	150 (6) LINE; FULL SIZE LETTERS & SYMBOLS (2.4 m (8'))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 100 (4) EACH DIRECTION	SKIP-DASH AND SOLID	YELLOW	3 m (10') LINE WITH 9 m (30') SPACE FOR SKIP-DASH; 140 (5 1/2) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE
TWO WAY LEFT TURN MARKING	2.4 m (8') LEFT ARROW	IN PAIRS	WHITE	SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN)	2 @ 150 (6)	SOLID	WHITE	NOT LESS THAN 1.8 m (6') APART
CROSSWALK LINES (BIKE & EQUESTRIAN)	300 (12) @ 45°	SOLID	WHITE	600 (2') APART
CROSSWALK LINES (LONGITUDINAL BARS (SCHOOL))	300 (12) @ 90°	SOLID	WHITE	600 (2') APART
STOP LINES	600 (24)	SOLID	WHITE	PLACE 1.2 m (4') IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 100 (4) WITH 300 (12) DIAGONALS @ 45°	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	280 (11) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	200 (8) WITH 300 (12) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 4.5 m (15') C-C (LESS THAN 50 km/h (30 MPH)) 6 m (20') C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH)) 9 m (30') C-C (OVER 70 km/h (45 MPH))
RAILROAD CROSSING	600 (24) TRANSVERSE LINES; "RR" IS 1.8 m (6') LETTERS; 400 (16) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=0.33m <sup>2</sup> (3.6 SQ. FT.) EACH "X"=5.0 m <sup>2</sup> (54.0 SQ. FT.)
SHOULDER DIAGONALS	300 (12) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	15 m (50') C-C (LESS THAN 50 km/h (30 MPH)) 25 m (75') C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH)) 45 m (150') C-C (OVER 70 km/h (45 MPH))

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

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

REVISIONS	
NAME	DATE
EVERS	03-19-90
T. RAMMACHER	10-27-94
ALEX HOUSEH	10-09-96
ALEX HOUSEH	10-17-96
T. RAMMACHER	01-06-00

ILLINOIS DEPARTMENT OF TRANSPORTATION

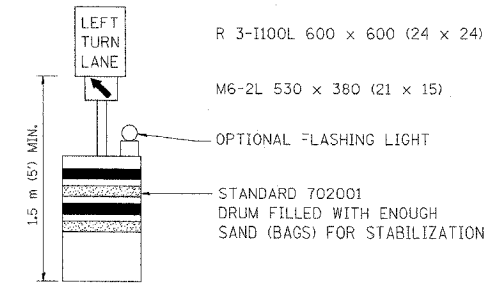
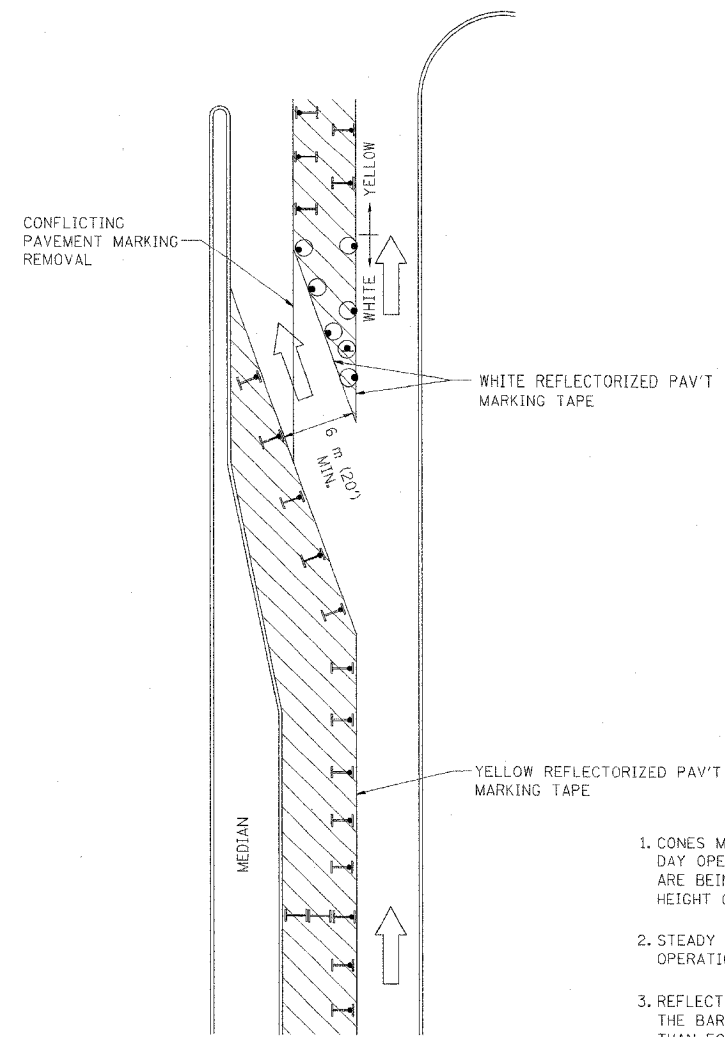
DISTRICT ONE  
TYPICAL PAVEMENT MARKINGS

SCALE: NONE  
DATE 10/18/2002

DRAWN BY CADD  
CHECKED BY  
TC-13  
REVISION DATE: 01/06/00

P. & M. SHEET	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	*		29	22
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

\* (0202 & 0208) RS-B  
6274B



**GENERAL NOTES**

1. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 710 (28) IN HEIGHT. WHEN CONES ARE BEING USED, THE "LEFT TURN LANE" SIGN MAY BE SKID MOUNTED AT A MINIMUM HEIGHT OF 1.5 m (5').
2. STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
3. REFLECTORIZED TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH TURN BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.
4. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-100 600 x 600 (24 x 24) AND M6-2R 530 x 380 (21 x 15) SHALL BE USED.
5. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
6. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
7. FORM BT 725 IS REQUIRED.
8. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

**LEGEND**

- WORK AREA
- LANE OPEN TO TRAFFIC
- TYPE I OR II BARRICADE WITH STEADY BURN LIGHT
- DRUM WITH STEADY BURN LIGHT
- DRUM WITH SIGN (WITH OPTIONAL FLASHING LIGHT) SEE DETAIL
- TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

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

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION  
AT TURN BAYS  
(TO REMAIN OPEN TO TRAFFIC)

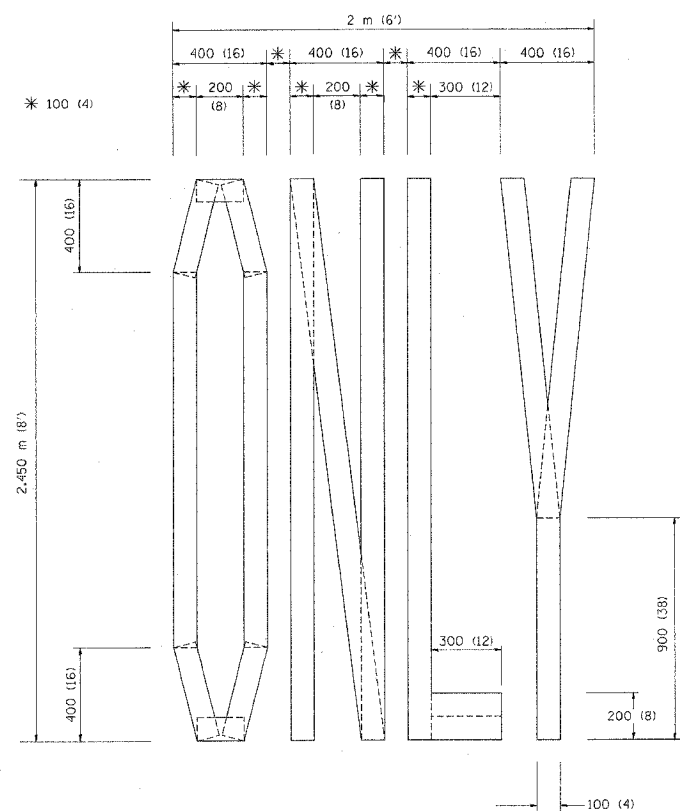
REVISIONS	
NAME	DATE
T. RAMMACHER	09/08/94
A. HOUSEH	11/07/95
A. HOUSEH	10/12/96
T. RAMMACHER	01/06/00

SCALE: NONE  
DATE: 10/18/2002

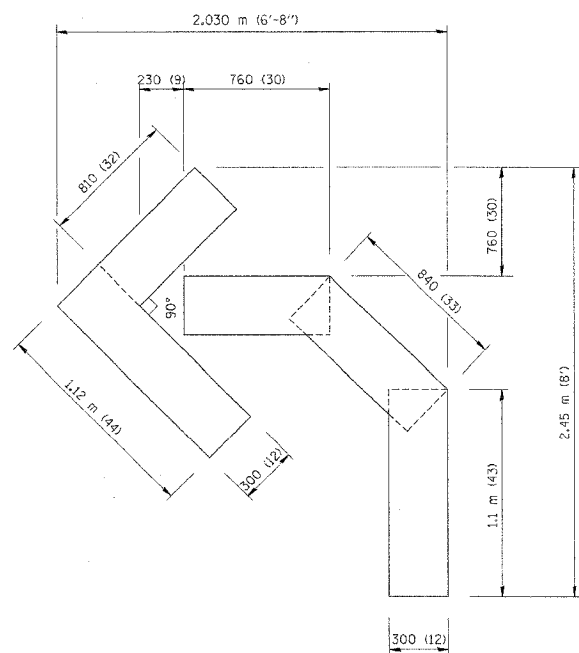
DRAWN BY  
CHECKED BY LHA

TC-14  
REVISION DATE: 01/06/00

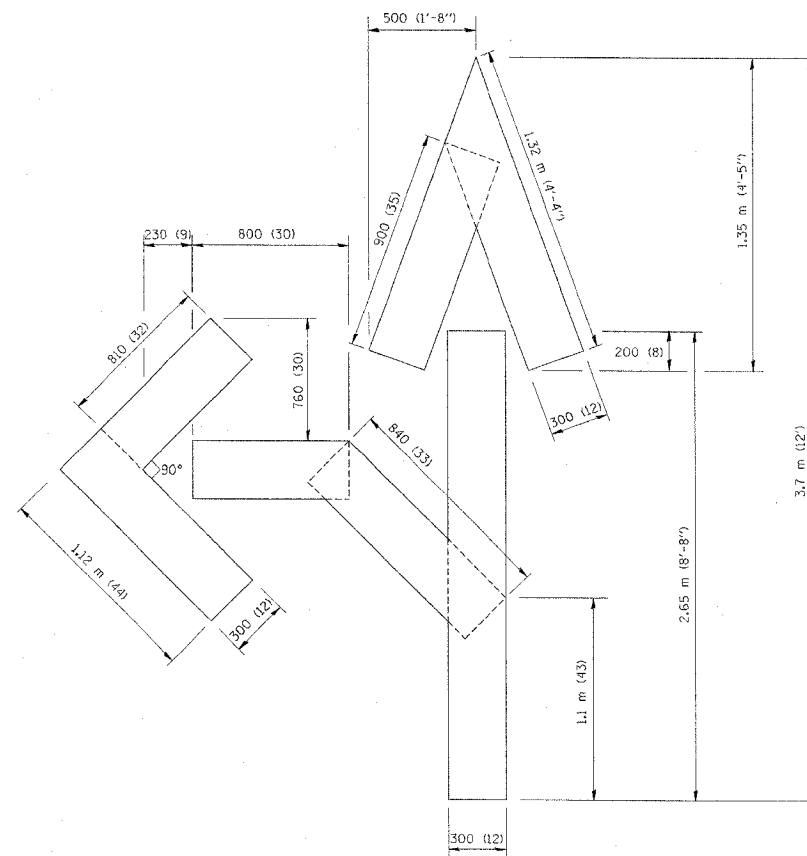
P. A. DIST. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	*		29	23
STA.	TO STA.			
FED. ROAD DIST. NO.	BLINDS	FED. AID PROJECT		
		* (0202 & 0208) RS-8 62748		



QUANTITY  
 100 (4) LINE = 19.7 m (64.1 ft.)  
 1.97 sq. m (21.1 sq. ft.)



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



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

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

ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING  
 LETTERS AND SYMBOLS  
 FOR TRAFFIC STAGING

REVISIONS	
NAME	DATE
T. RAMMACHER	09/18/94
J. OBERLE	06/01/96
T. RAMMACHER	06/05/96
T. RAMMACHER	11/04/97
T. RAMMACHER	03/02/98
E. GOMEZ	08/28/00

SCALE: NONE  
 DATE 10/18/2002

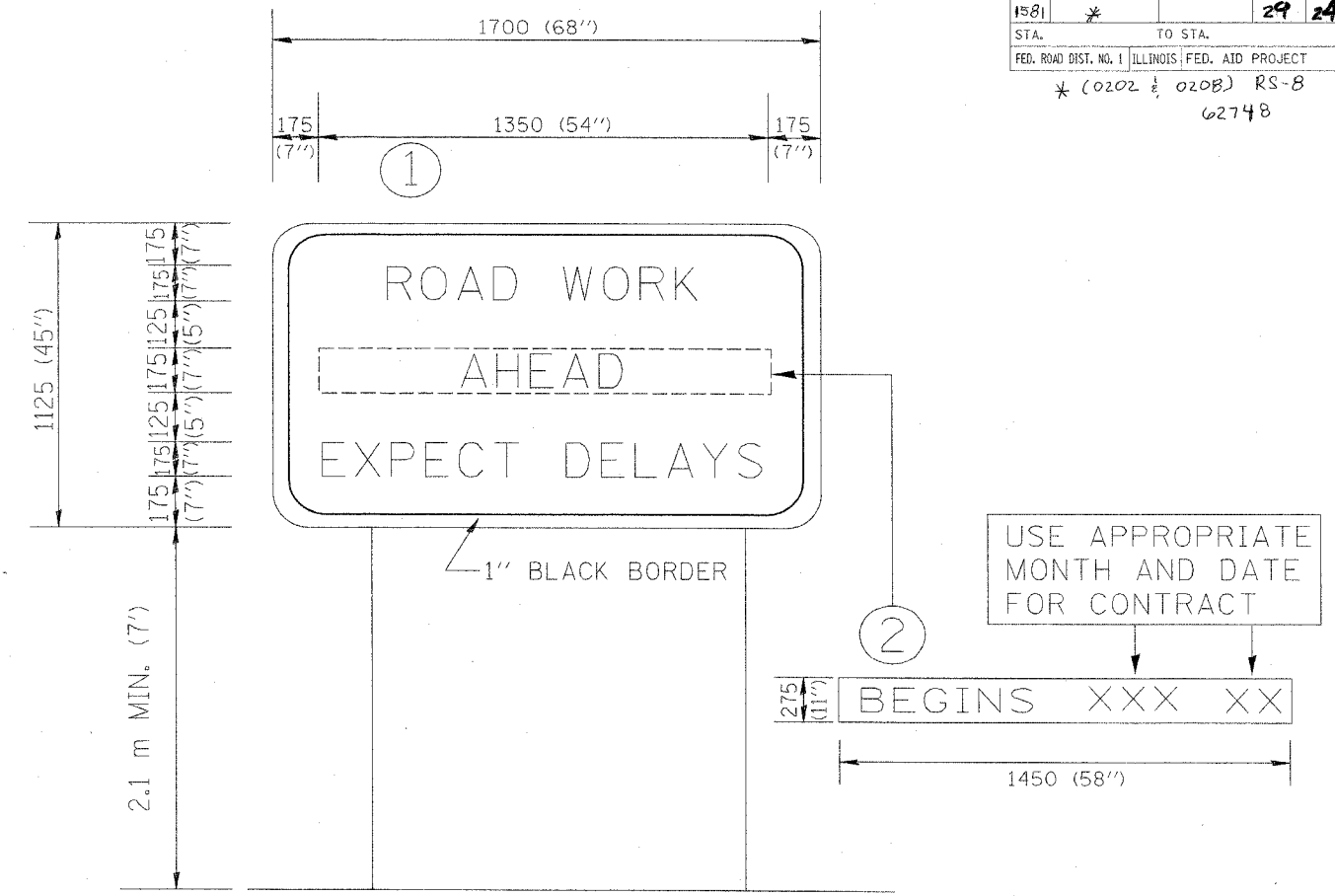
DRAWN BY CADD

CHECKED BY

TC-16

REVISION DATE: 08/28/00

F.A. DIST. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	*		29	24
STA.		TO STA.		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
* (0202 & 0208) RS-8				
62748				



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 2.3 SQ. M. (25.70 SQ. FT.)

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

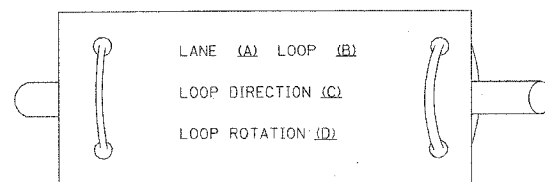
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE		
R. MIRS	9-15-97	TEMPORARY INFORMATION SIGNING	
R. MIRS	12-11-97		
T. RAMMACHER	2-2-99		
		SCALE:	DRAWN BY: BUR. OF DESIGN
		DATE 10/18/2002	CHECKED BY



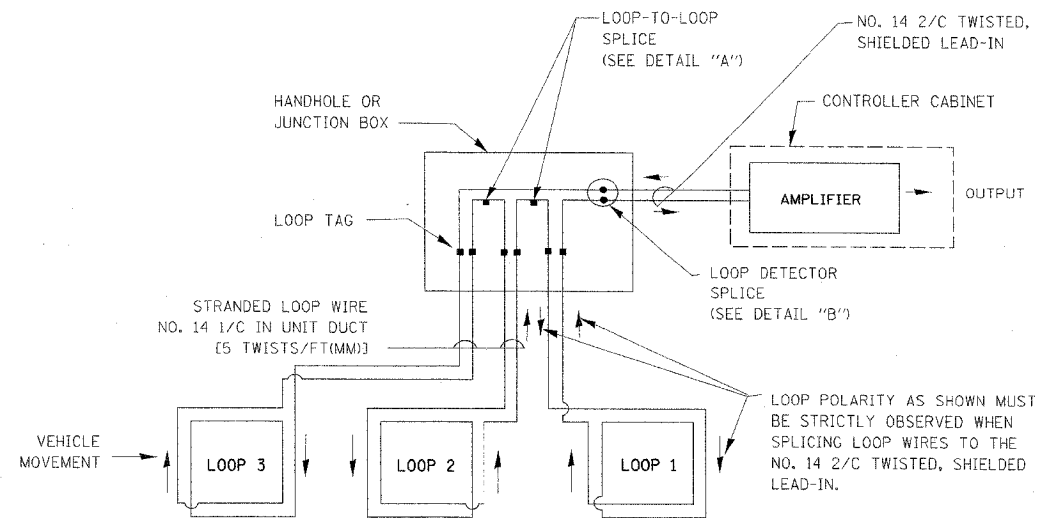
### LOOP DETECTOR NOTES

- EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
- 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.
- 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.
- ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
- IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVESHOLES 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.
- 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.
- 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

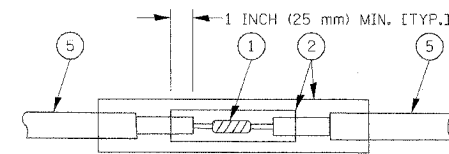


- LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

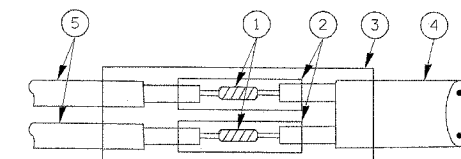


#### DETECTOR LOOP WIRING SCHEMATIC

- 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

#### LOOP DETECTOR SPLICE

- WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.
- WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- NO. 14 2/C TWISTED, SHIELDED CABLE.
- LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

REVISIONS	
NAME	DATE
CADD	5/30/00
ADD NOTE NO. 8	11/12/01
BUREAU OF TRAFFIC	1-01-02

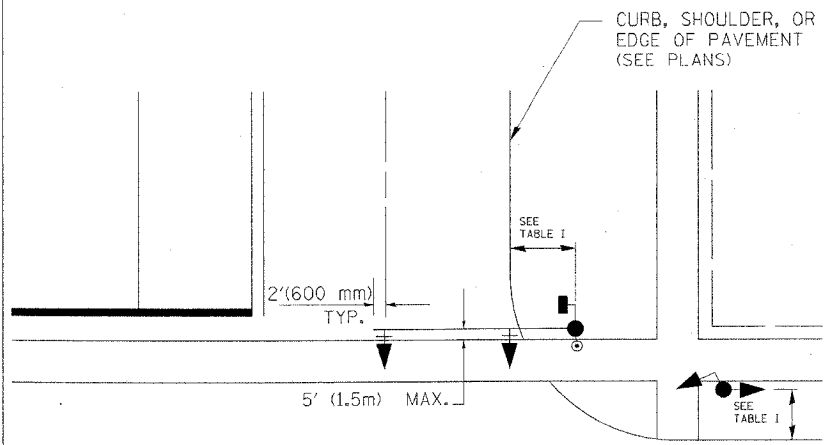
ILLINOIS DEPARTMENT OF TRANSPORTATION  
DISTRICT ONE  
STANDARD TRAFFIC SIGNAL  
DESIGN DETAILS

SCALE: VERT. NONE  
HORIZ.  
DATE 10/18/2002

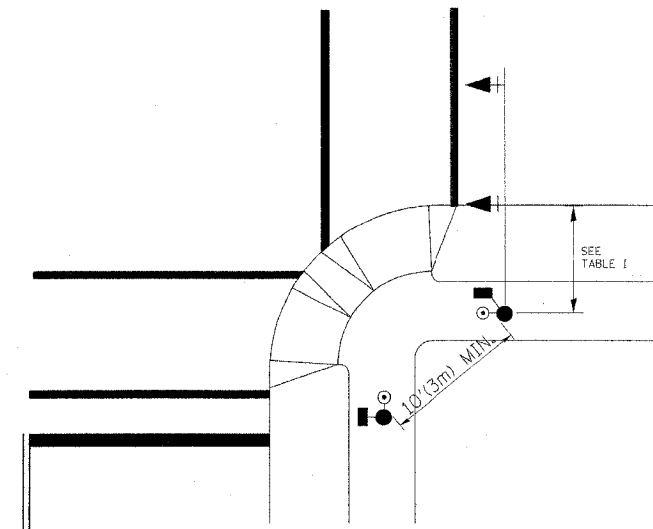
DRAWN BY: RWP  
DESIGNED BY: DAD  
CHECKED BY: DAZ  
SHEET 1 OF 4

**TRAFFIC SIGNAL MAST ARM AND POST**

MAST ARM MOUNTED SIGNAL IN PROPOSED & FUTURE SIDEWALK AREA, INTERSECTION SHOWN WITH PEDESTRIAN SIGNAL AND PUSHBUTTON DETECTOR



**PEDESTRIAN SIGNAL PUSHBUTTON**



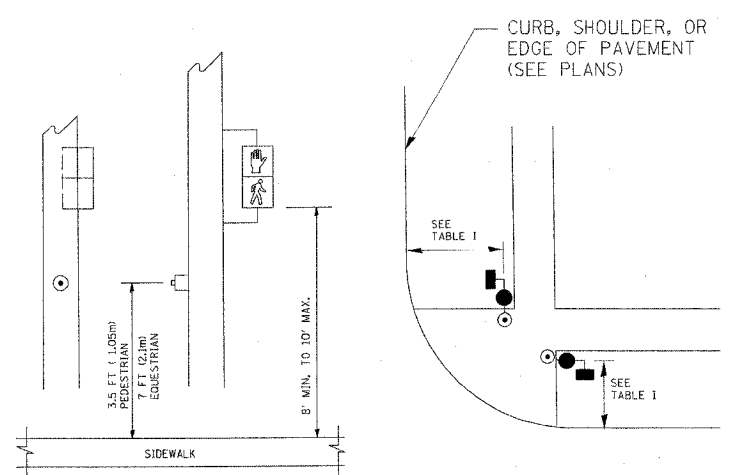
RECOMMENDED PUSHBUTTON LOCATIONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHALL BE IN ACCORDANCE WITH THE CURRENT MUTCD (SEE NOTE 1). TO MEET MUTCD REQUIREMENTS, PEDESTRIAN SIGNAL PUSHBUTTONS MAY HAVE TO BE MOUNTED ON A SEPARATE POST.

**NOTES:**

- AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS WITH PEDESTRIAN ACTUATION, EACH PUSHBUTTON SHALL ACTIVATE BOTH THE WALK INTERVAL AND THE ACCESSIBLE PEDESTRIAN SIGNALS.  
  
AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS, PUSHBUTTONS SHOULD CLEARLY INDICATE WHICH CROSSWALK SIGNAL IS ACTUATED BY EACH PUSHBUTTON. PUSHBUTTONS AND TACTILE ARROWS SHOULD HAVE HIGH VISUAL CONTRAST (SEE THE DEPARTMENT OF JUSTICE'S AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN, 1991). TACTILE ARROWS SHOULD POINT IN THE SAME DIRECTION AS THE ASSOCIATED CROSSWALK. AT CORNERS OF SIGNALIZED LOCATIONS WITH ACCESSIBLE PEDESTRIAN SIGNALS WHERE PEDESTRIAN PUSHBUTTONS ARE PROVIDED, THE PUSHBUTTONS SHOULD BE SEPARATED BY THE DISTANCE OF AT LEAST 10 FT (3m). THIS ENABLES PEDESTRIANS WHO HAVE VISUAL DISABILITIES TO DISTINGUISH AND LOCATE THE APPROPRIATE PUSHBUTTON.  
  
PUSHBUTTONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHOULD BE LOCATED AS FOLLOWS:  
  - A: ADJACENT TO A LEVEL ALL-WEATHER SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS AN ALL WEATHER SURFACE, WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP.
  - B: WITHIN 5 FT (1.5m) OF THE CROSSWALK EXTENDED.
  - C: WITHIN 10 FT (3m) OF THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
  - D: PARALLEL TO THE CROSSWALK TO BE USED (SEE MUTCD FIGURE 4E-2).
  - E: NORMAL PEDESTRIAN PUSHBUTTON MOUNTING HEIGHT SHOULD BE 3.5 FT (1.05m) ABOVE ADJACENT SIDEWALK
- PEDESTRIAN SIGNAL FACES SHALL BE MOUNTED WITH THE BOTTOM OF THE HOUSING NOT LESS THAN 8 FT (2.4m) NOR MORE THAN 10 FT (3.0m) ABOVE THE SIDEWALK LEVEL AND SO THERE IS A PEDESTRIAN INDICATION IN THE LINE OF PEDESTRIANS' VISION WHICH PERTAINS TO THE CROSSWALK BEING USED.
- THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, NOT MOUNTED OVER A ROADWAY, SHALL BE AT LEAST 10 FT (3.0m) BUT NOT MORE THAN 15 FT (4.5m) ABOVE THE SIDEWALK OR, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALKS EXIST.
- THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, MOUNTED OVER A ROADWAY, SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001 AND 877006. (16 FT (5m) MIN., 18 FT (5.5m) MAX., FROM HIGHEST POINT OF PAVEMENT)

**PEDESTRIAN SIGNAL POST**

PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON DETECTOR LOCATION



**TABLE I**

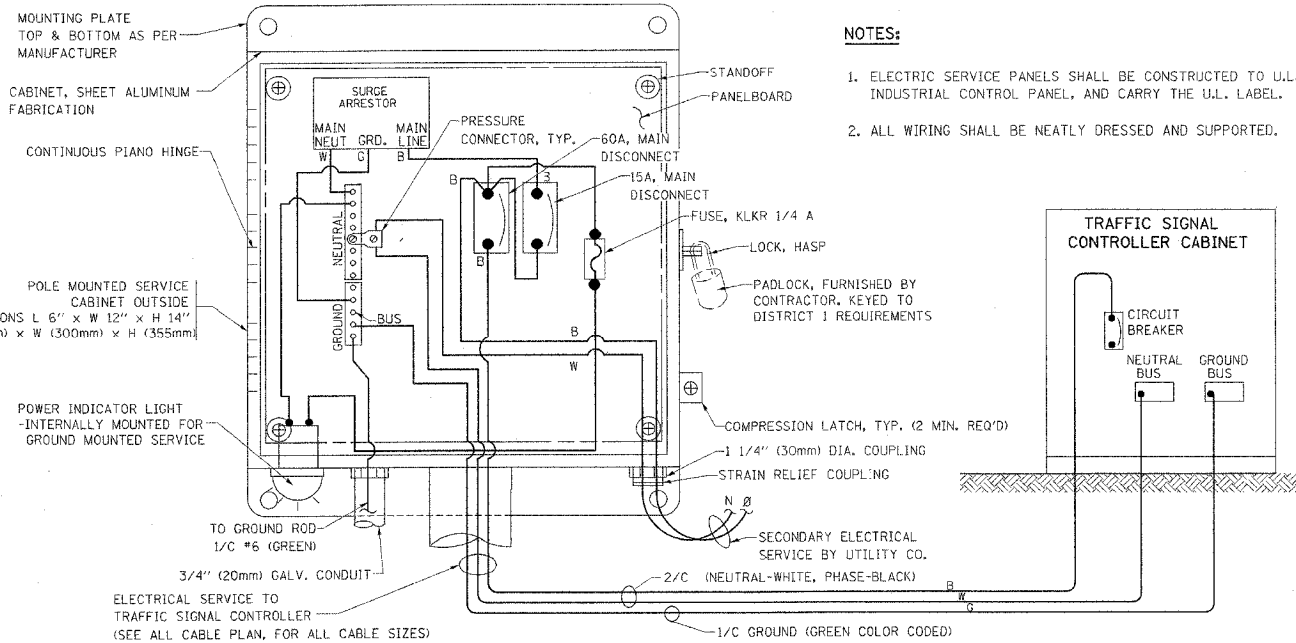
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MIN. DIST. FROM BACK OF CURB)	SHOULDER/NON-CURBED AREA (MIN. DIST. FROM EDGE OF PAVEMENT)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN PUSHBUTTON	SEE NOTE 1	SEE NOTE 1

REVISIONS	
NAME	DATE
BUREAU OF TRAFFIC	1/01/02

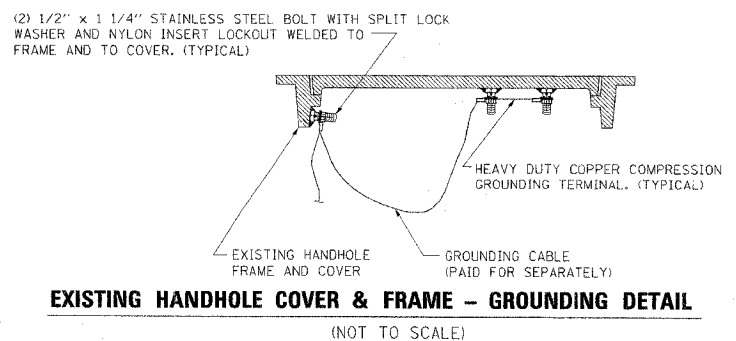
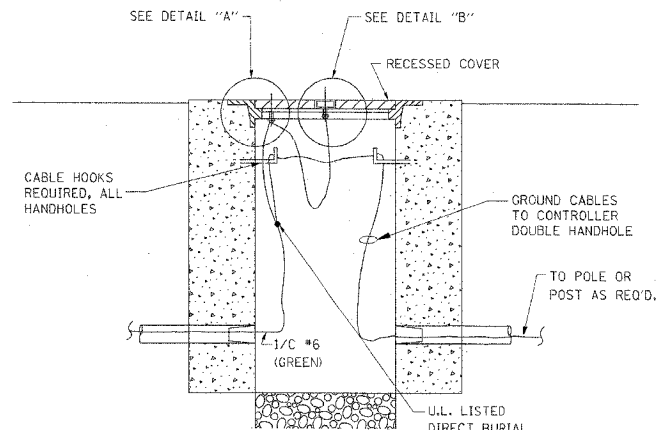
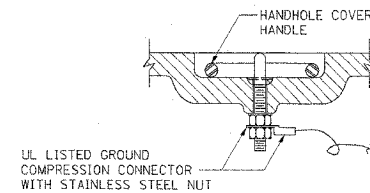
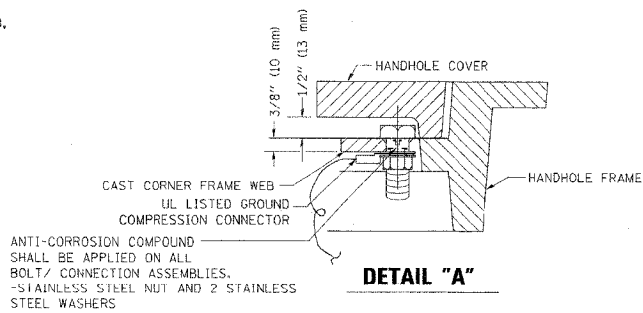
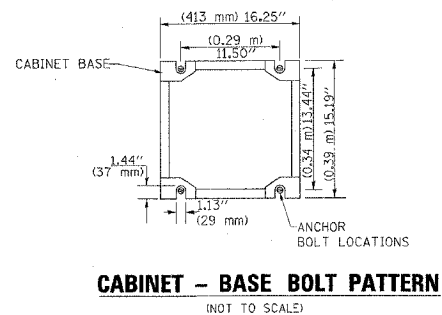
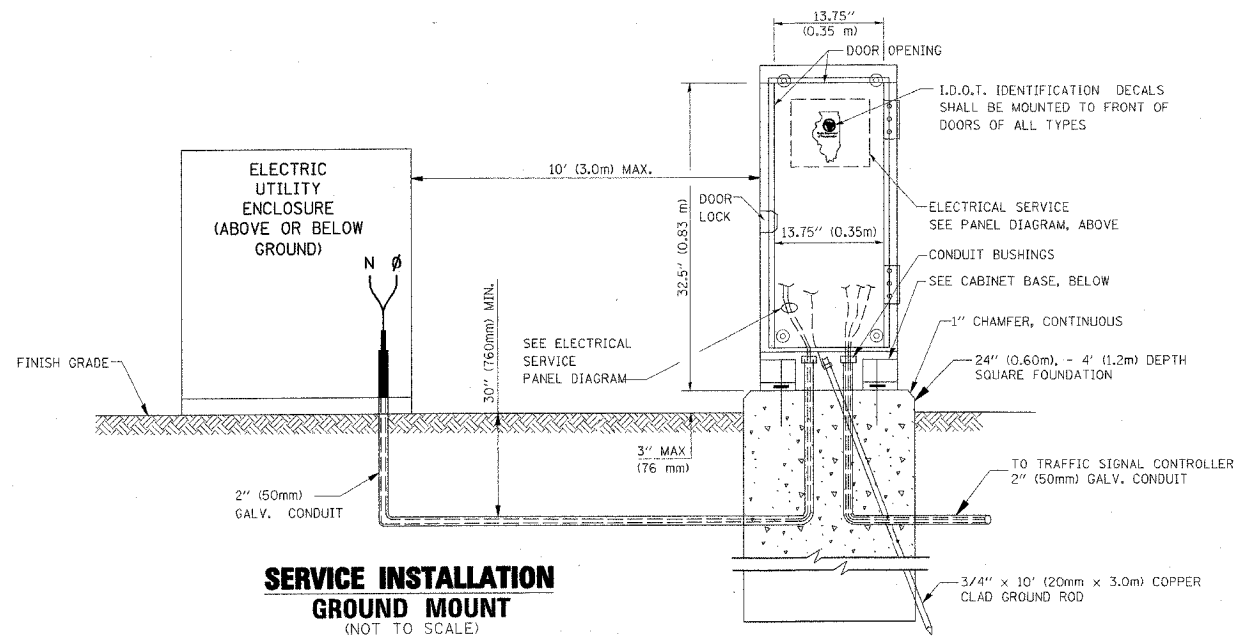
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**DISTRICT 1**  
**STANDARD TRAFFIC SIGNAL**  
**DESIGN DETAILS**  
 SCALE: VERT. NONE  
 HORIZ. NONE  
 DATE 10/18/2002  
 DRAWN BY: RWP  
 DESIGNED BY: DAD  
 CHECKED BY: DAZ  
 SHEET 2 OF 4

F.A.W. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1501	*		29	27
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

\* (0202 & 0208) RS-8  
62748



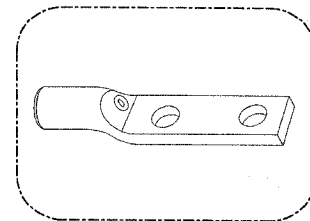
**ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)**  
**SERVICE INSTALLATION POLE MOUNT (SHOWN)**  
(NOT TO SCALE)



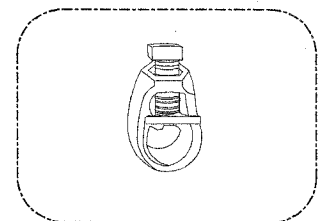
**NOTES:**

**GROUNDING SYSTEM**

- THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.
- THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
- ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
- THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



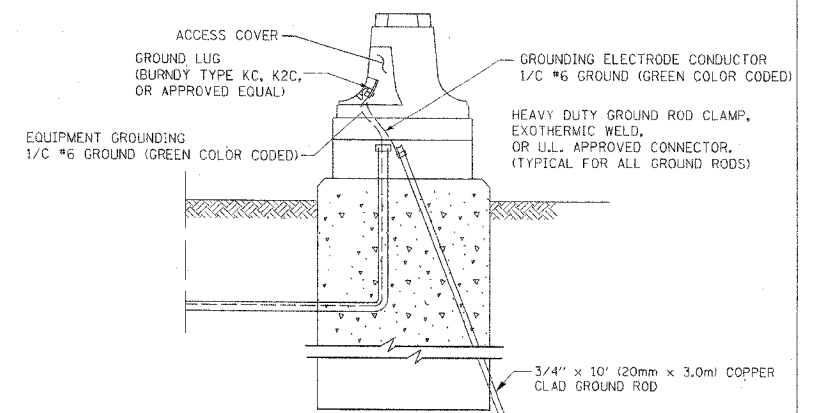
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EQUAL)

**NOTES:**

- ALL CLAMPS SHALL BE BRONZE OR COPPER, U.L. APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES. 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES. 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE		
CADD	5/30/00		
CADD	3/15/01		
BUREAU OF TRAFFIC	1/01/02		

**DISTRICT 1  
STANDARD TRAFFIC SIGNAL  
DESIGN DETAILS**

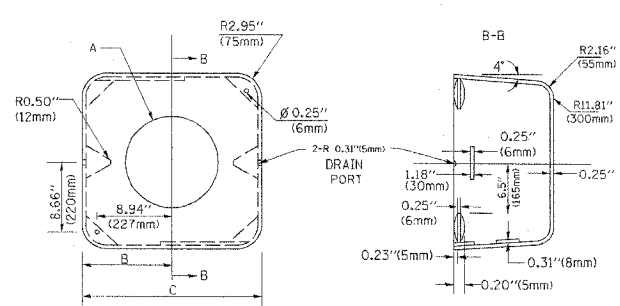
SCALE: VERT. NONE  
HORIZ. NONE  
DATE 10/18/2002

DRAWN BY: RWP  
DESIGNED BY: DAZ  
CHECKED BY: DAZ  
SHEET 3 OF 4

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	3		29	28

STA. TO STA.  
 ILLINOIS FED. AID PROJECT  
 \* 0202 & 0208) RS-8  
 62748

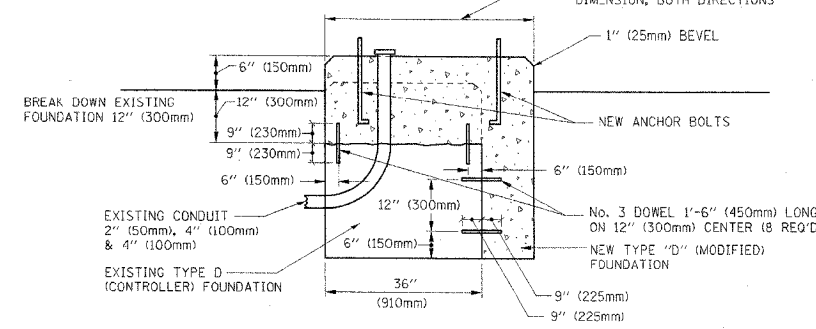
MATERIAL:  
 - ASTM A48 CLASS 30 GREY IRON  
 - ASTM A123 HOT DIPPED GALVANIZED



TYPE	A	B	C	HEIGHT	WEIGHT
I	Ø 10.125" (257mm)	9.5" (241mm)	19" (483mm)	12" (300mm)	24kg
II	Ø 11.125" (283mm)	10.75" (273mm)	21.5" (546mm)	12" (300mm)	26kg

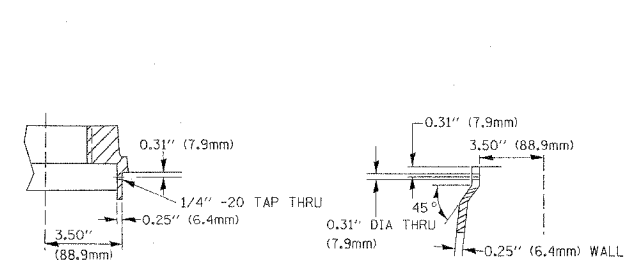
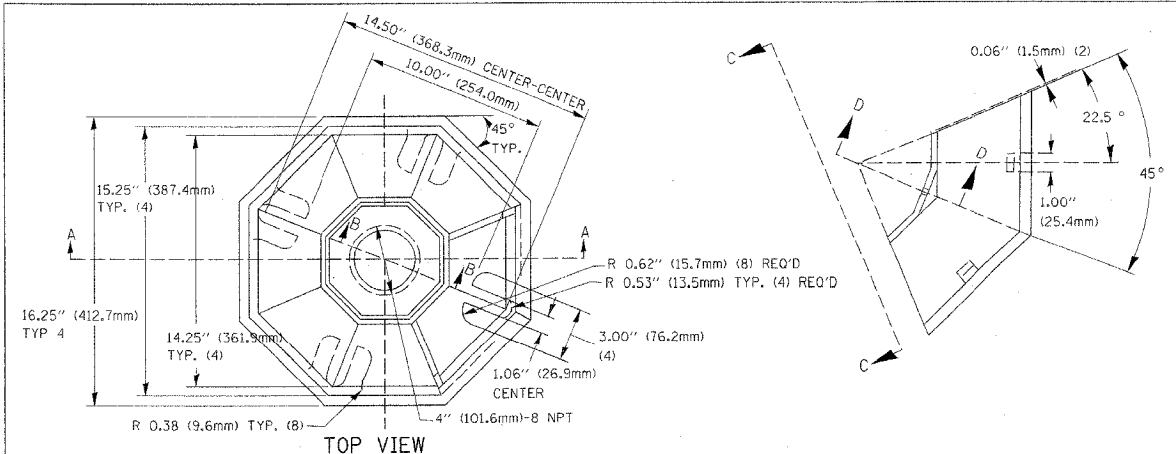
**SHROUD DETAIL**

NOTE:  
 SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



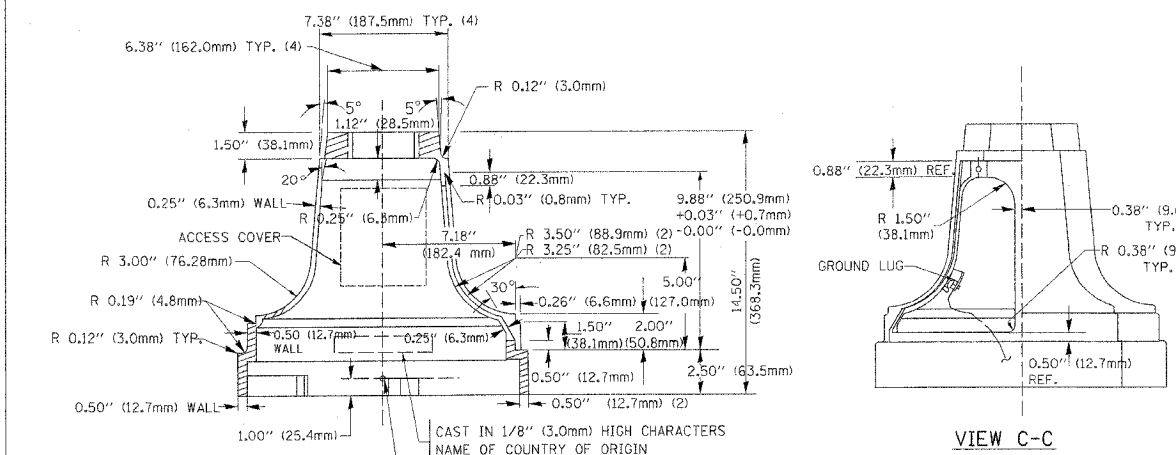
**MODIFY EXISTING TYPE "D" FOUNDATION**

(NOT TO SCALE)



**SECTION B-B**

**SECTION D-D**

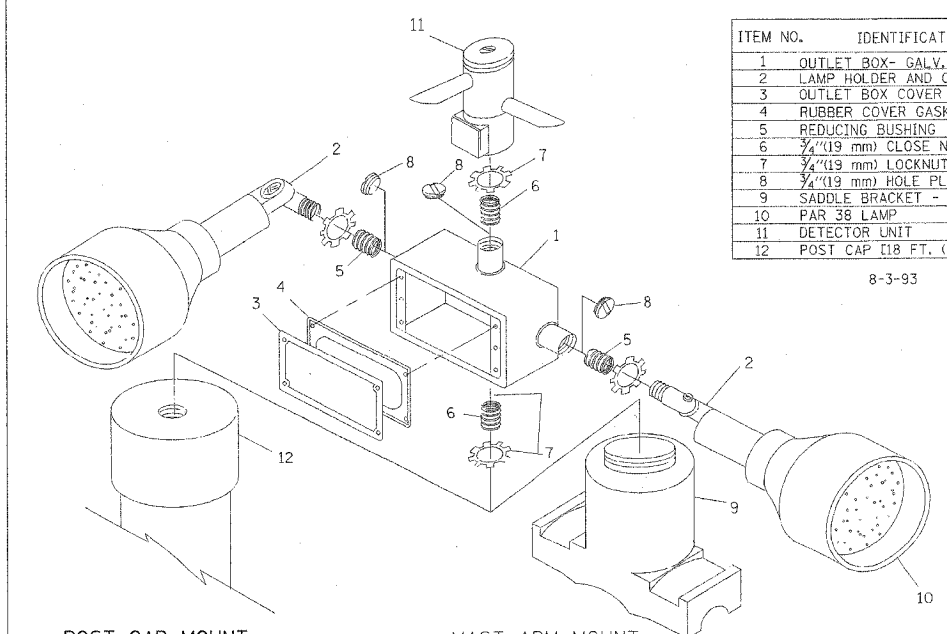


**SECTION A-A**

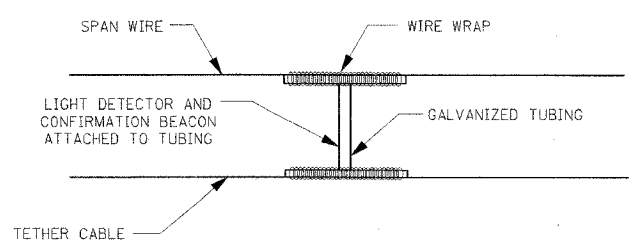
**TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A**

**NOTES:**

- ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
- ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT  
 ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT  
 ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
- WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4" (19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.

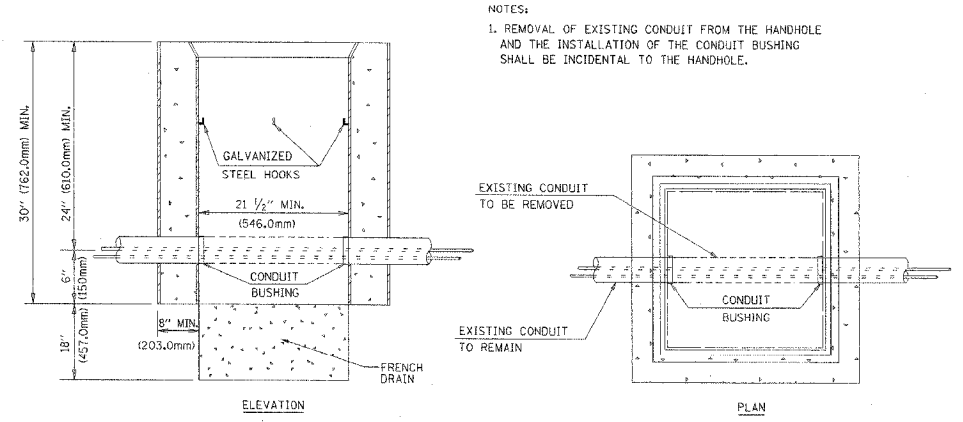


**POST CAP MOUNT**  
**MAST ARM MOUNT**  
**EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL**



**LIGHT DETECTOR AND CONFIRMATION BEACON MOUNTING FOR TEMPORARY TRAFFIC SIGNALS**

(NOT TO SCALE)



**DETAIL HANDHOLE TO INTERCEPT EXISTING CONDUIT**

1/4" S.

REVISIONS	
NAME	DATE
BUREAU OF TRAFFIC	5/30/00
BUREAU OF TRAFFIC	3/15/01
BUREAU OF TRAFFIC	11/12/01
BUREAU OF TRAFFIC	1-01-02

ILLINOIS DEPARTMENT OF TRANSPORTATION

**DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

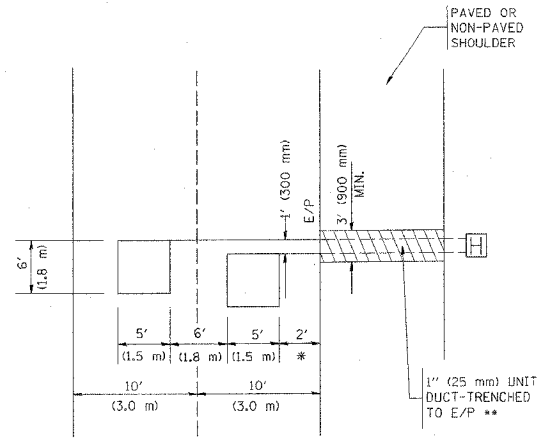
SCALE: VERT. NONE  
 HORIZ. DATE 10/18/2002

DRAWN BY: RWP  
 DESIGNED BY: DAD  
 CHECKED BY: DAZ  
 SHEET 4 OF 4

F. L. U. R. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	*		29	29
STA.	TO STA.			
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		
		* (0202 & 0208) RS-8		
		62748		

**LOOPS NEXT TO SHOULDERS**

PROVIDE A PAVEMENT REPLACEMENT NOTE WHICH SHOULD EQUAL 3' (900 mm) X WIDTH OF PAVED SHOULDER.



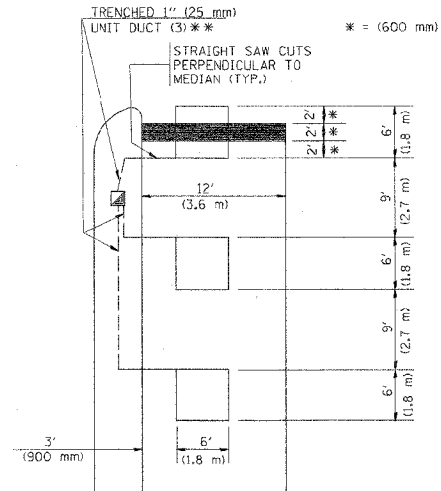
\* = (600 mm)

\*\* UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

**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 814001 TO ENSURE THAT HANDHOLE FITS IN MEDIAN.

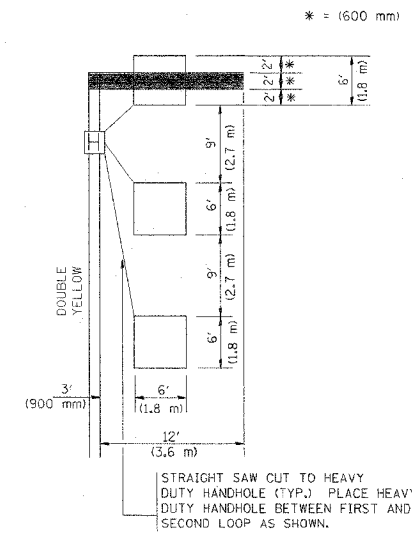


\*\* UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

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

**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 HAND-HOLE 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 ALL 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 DIMENSIONS 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.

REVISIONS	
NAME	DATE

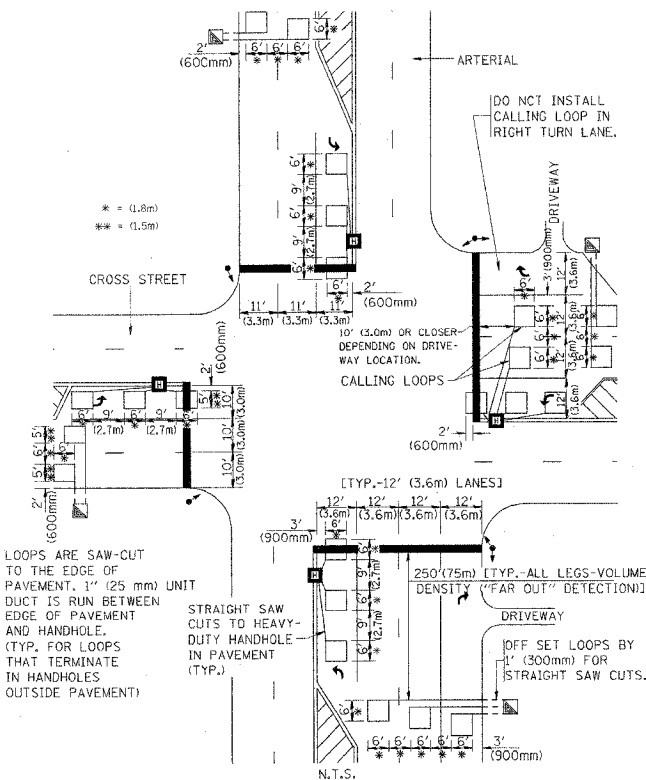
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**DISTRICT 1  
DETECTOR LOOP  
INSTALLATION DETAILS  
FOR ROADWAY RESURFACING**

SCALE: NONE  
DATE 10/18/2002

DRAWN BY CADD  
DESIGNED BY  
CHECKED BY R.K.F.  
TS07

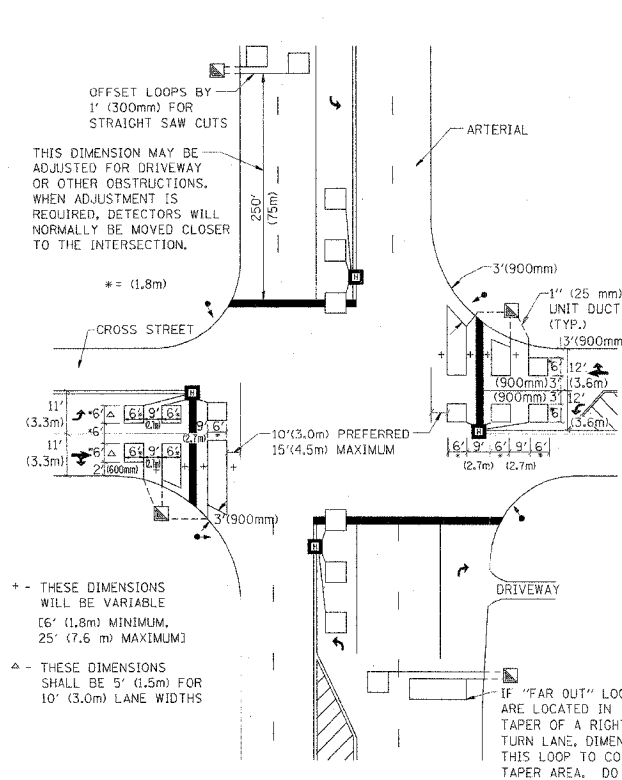
REVISION DATE:

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



DETAIL 1  
N.T.S.

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



DETAIL 2  
N.T.S.