

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	29RS-4	MCHENRY	17	1
FED. ROAD DIST. NO. 1	ILLINOIS	CONTRACT NO. 60E18		

D-91-339-08

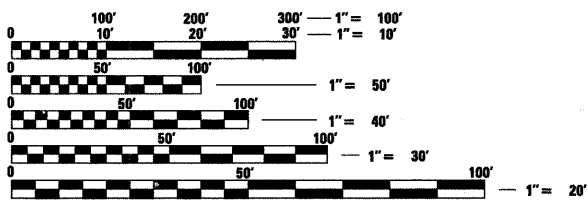
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**  
**PROPOSED**  
**HIGHWAY PLANS**  
**F.A.P. 305 (US ROUTE 14)**  
**BUNKER HILL ROAD TO PARK LANE DRIVE**  
**SECTION 29RS-4**  
**RESURFACING (3P)**  
**MCHENRY COUNTY**  
**PROJECT NO. ESP-0305 (041)**  
**C-91-339-08**



FOR INDEX OF SHEETS, SEE SHEET NO. 2

IMPROVEMENT LOCATED WITHIN UNINCORPORATED MCHENRY COUNTY

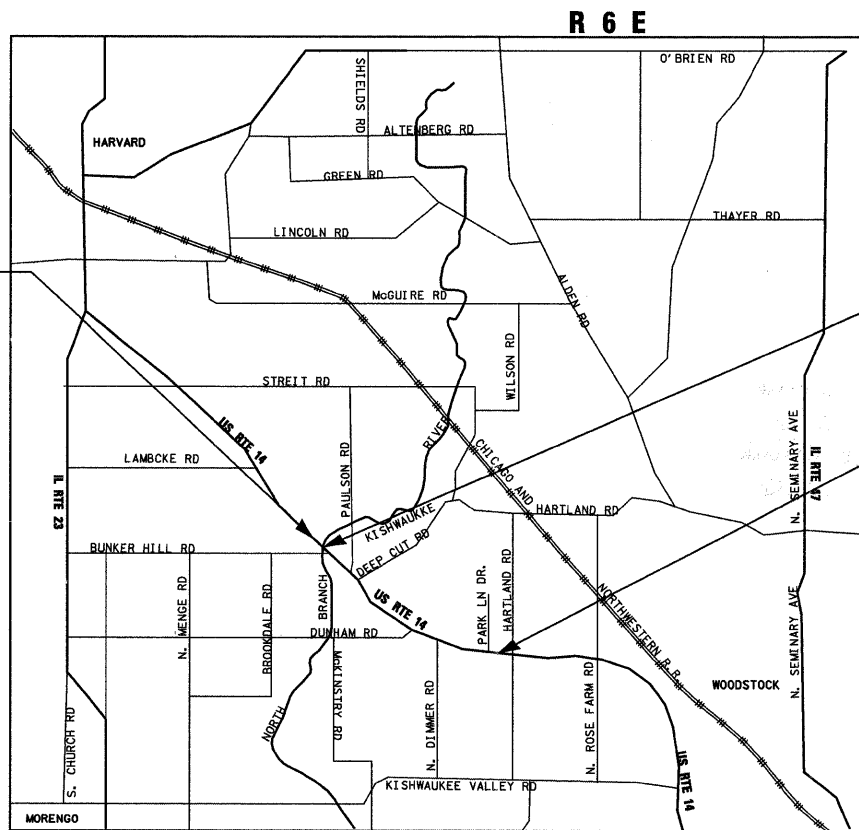
**TRAFFIC DATA**  
**US ROUTE 14**  
**2006 ADT=8,500**  
**SPEED LIMIT=55 MPH**



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

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

**DISTRICT ONE -**  
**PROJECT MANAGER: LONG TRAN (847) 705-4232**  
**PROJECT ENGINEER: MICHELLE AQUINO (847) 705-4606**  
**CONTRACT NO. 60E18**



PROJECT BEGINS STA. 16 + 85

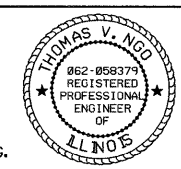
BRIDGE OMISSION STA. 17 + 85 TO 19 + 65

PROJECT ENDS STA. 143 + 58

SCALE: NTS

**HARTLAND TOWNSHIP**  
**GROSS LENGTH OF PROJECT = 12,515 FT = 2.37 MILES**  
**NET LENGTH OF PROJECT = 12,335 FT = 2.34 MILES**

MILLENNIA ENGINEERING  
 THOMAS V. NGO, P.E.  
 062-058379  
 DATE: *Thomas V. Ngo 1/09*  
 SIGNATURE AND SEAL APPLIES TO DRWG.  
 NOS. 1-16



**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**

SUBMITTED *JANUARY 9, 20 09*

*Diana M. O'Keefe* DE  
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

*March 13, 20 09*

*Charles G. Ingersoll*  
 ENGINEER OF DESIGN AND ENVIRONMENT

*March 13, 20 09*

*Christine M. Reed*  
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**ME** 200 22ND Street, Suite 216, Lombard, IL 60148  
 630.705.0110 voice, 630.839.2568 fax  
 www.millenniaeng.com  
**MILLENNIA ENGINEERING**

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**HIGHWAY STANDARDS**

**LIST OF ILLINOIS DOT HIGHWAY STANDARDS**

- 000001-5 STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
- 442201-03 CLASS C AND D PATCHES
- 482011-03 HMA SHLD. STRIPS/SHLDS. WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
- 701301-03 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
- 701306-02 LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY FOR SPEEDS > OR = 45 MPH
- 701311-03 LANE CLOSURE, 2L, 2W, MOVING OPERATIONS-DAY ONLY
- 701336-05 LANE CLOSURE, 2L, 2W, WORK AREAS IN SERIES, FOR SPEEDS > OR = 45 MPH
- 701901-01 TRAFFIC CONTROL DEVICES

**COMMITMENTS**

NO COMMITMENTS FOR THIS PROJECT

**GENERAL NOTES**

1. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT 800-892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, AND GAS FACILITIES. 48 HOUR NOTIFICATION IS REQUIRED.
2. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE UTILITY COMPANIES AND MCHENRY COUNTY.
3. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
4. WHEN ARTIFICIAL LIGHTING IS UTILIZED IN NIGHT OPERATIONS, THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AND ADJOINING RESIDENTIAL AREAS.
5. 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.
6. ALL DAMAGE TO EXISTING PAVEMENT MARKING OR RAISED REFLECTIVE PAVEMENT MARKERS OUTSIDE THE REMOVAL LINE SHOWN ON THE PLANS SHALL BE REPLACED AT THE CONTRACTORS EXPENSE. NO ADDITIONAL COST TO THE DEPARTMENT.
7. BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCES, ALL EXISTING PAVEMENT MARKING LINES AND RAISED REFLECTIVE PAVEMENT MARKERS IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL STRIPING SHALL BE AS DIRECTED BY THE ENGINEER.
8. ALL PAVEMENT PATCHING LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.
10. THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
11. THE ENGINEER SHALL CONTACT DEBBIE HANLON, THE TRAFFIC FIELD TECHNICIAN AT (847) 438-2300 A MINIMUM OF TWO (2) WEEKS PRIOR TO START OF THIS PROJECT SO THAT EXACT STATIONING OF NO PASSING ZONES AND OTHER PERMANENT PAVEMENT MARKINGS MAY BE ESTABLISHED.
12. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.
13. WHEN CONSTRUCTION OPERATIONS ON TWO-LANE ROADS OPEN TO TRAFFIC RESULT IN THE REMOVAL OR COVERING OF ANY PAVEMENT STRIPING INDICATING PASSING RESTRICTIONS, "NO PASSING ZONES NOT STRIPED NEXT.....MILES" SIGNS SHALL BE USED. THE CONTRACTOR SHALL PLACE THE SIGNS AT THE BEGINNING OF THE UNSTRIPED AREA, JUST BEYOND EACH MAJOR INTERSECTION WITHIN THE UNSTRIPED, AND AT SUCH OTHER LOCATIONS AS THE ENGINEER MAY DIRECT TO ENSURE A MINIMUM SPACING OF FIVE MILES.
14. DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
15. DOUBLE LANE MARKERS ARE TO BE USED AS SHOWN ON THE DISTRICT ONE DETAIL "TYPICAL APPLICATIONS - RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)" SHOWN ON THE PLANS.
16. WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1 1/2 INCHES WHERE THE SPEED LIMIT IS 45 MPH OR LESS AND 1 INCH WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH. WITH WRITTEN APPROVAL FROM THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 (V:H).
17. BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE WITH THE "BUTT JOINT AND HOT-MIX ASPHALT TAPER DETAILS" SHEET INCLUDED IN THE PLANS UNLESS OTHERWISE SPECIFIED.
18. PAVEMENT MARKING TAPE, TYPE III SHALL BE USED FOR SHORT TERM PAVEMENT MARKINGS ON ALL FINAL SURFACES. THE COST OF THE PAVEMENT MARKING TAPE, TYPE III AND IT'S REMOVAL SHALL BE INCLUDED IN THE COST OF SHORT TERM PAVEMENT MARKING.
19. THE CONTRACTOR SHALL PLACE PROPOSED PAVEMENT MARKINGS IN ACCORDANCE WITH DISTRICT 1 TYPICAL PAVEMENT MARKINGS DETAIL (TC-13).

PLOT DATE : 1/12/2009  
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 USER NAME : MCHENRY, JIN  
 MODEL : Engineering  
 MODEL :



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CHECKED	-	RPD	REVISED	-
DATE	-	01/14/09	REVISED	-

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**U.S. ROUTE 14  
 BUNKER HILL RD TO PARK LANE DR**

**INDEX OF SHEETS, LIST OF IDOT  
 HIGHWAY STANDARD, GENERAL NOTES,  
 AND COMMITMENTS**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	29RS-4	MCHENRY	17	2
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 60E18	

SCALE: N/A SHEET NO. OF SHEETS STA. TO STA.

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**SUMMARY OF QUANTITIES**

CODE NO.	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE	
				100% FED	
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	15.1	15.1	
40600300	AGGREGATE (PRIME COAT)	TON	75.5	75.5	
40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	3.77	3.77	
40600895	CONSTRUCTING TEST STRIP	EACH	1	1	
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	110	110	
40601005	HOT-MIX ASPHALT REPLACEMENT OVER PATCHES	TON	379	379	
40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	3169.1	3169.1	
44000158	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/4"	SQ YD	35948	35948	
44001700	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	100	100	
44002215	HOT-MIX ASPHALT REMOVAL OVER PATCHES, 3 3/4"	SQ YD	1804	1804	
44201761	CLASS D PATCHES, TYPE I, 10 INCH	SQ YD	115	115	
44201765	CLASS D PATCHES, TYPE II, 10 INCH	SQ YD	1031	1031	
44201769	CLASS D PATCHES, TYPE III, 10 INCH	SQ YD	93	93	
44201771	CLASS D PATCHES, TYPE IV, 10 INCH	SQ YD	329	329	
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	1008	1008	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3	3	
67100100	MOBILIZATION	L SUM	1	1	
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1	
70100600	TRAFFIC CONTROL AND PROTECTION, STANDARD 701336	L SUM	1	1	
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	9125	9125	
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	90303	90303	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	15050	15050	
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	45151	45151	
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	293	293	
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	293	293	
* 88600100	DETECTOR LOOP, TYPE I	FOOT	66	66	
20201006	GRADING AND SHAPING SHOULDERS	UNIT	253.3	253.3	
X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	52	52	
X4067107	POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50	TON	1485.60	1485.60	
70076600	TRAINEES	HOUR			
7080	(100% FED)				

\* SPECIALTY ITEM

PLT DATE : 1/12/2009  
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 USER NAME : Millennium Engineering  
 MODEL :



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DATE - 01/14/09	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**U.S. ROUTE 14  
 BUNKER HILL RD TO PARK LANE DR**

**SUMMARY OF QUANTITIES**

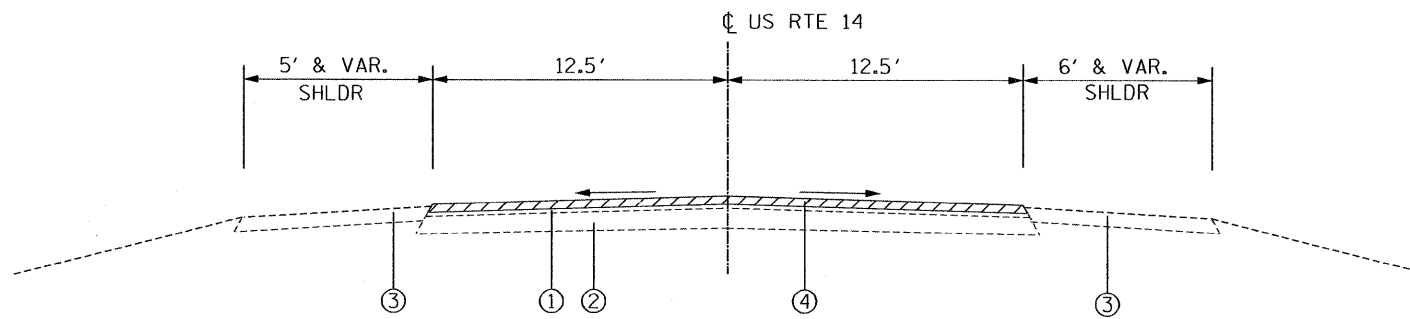
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305	29RS-4	MCHENRY	17	3
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 60E18	

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

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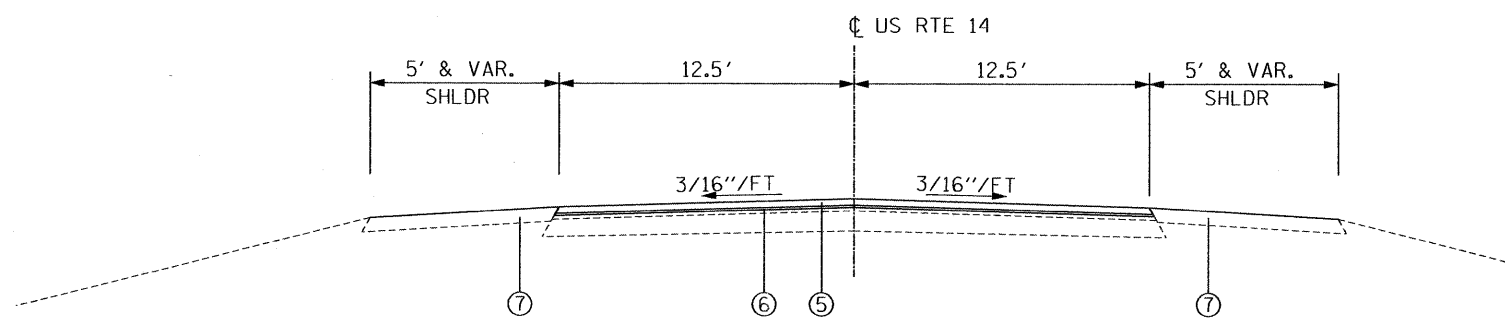
**LEGEND**

- ① EXISTING +/-3.75" HMA SURFACE
- ② EXISTING +/-10' P.C.C. BASE
- ③ EXISTING AGGREGATE SHOULDER +/- 6"
- ④ HMA SURFACE REMOVAL - 2 1/4"
- ⑤ HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 (IL-9.5MM) -1 1/2"
- ⑥ POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50 -3/4"
- ⑦ GRADING AND SHAPING SHOULDERS & AGGREGATE WEDGE SHOULDER, TYPE B



**EXISTING TYPICAL SECTION**

US ROUTE 14  
STA. 16+85 TO STA. 143+58



**PROPOSED TYPICAL SECTION**

US ROUTE 14  
STA. 16+85 TO STA. 143+58

HMA MIXTURES REQUIREMENT		
MIXTURE USES	AC TYPE	VOIDS
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 (IL-9.5mm)	PG 64-22	4% @ 50 GYR.
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50	SBS/SBR PG 76-28/-22	4% @ 50 GYR.
CLASS D PATCHES (HMA BINDER IL-19 MM)	PG 64-22 (SEE NOTE 2)	4% @ 70 GYR.
HMA REPLACEMENT OVER PATCHES (HMA BINDER IL-19MM)	PG 64-22 (SEE NOTE 2)	4% @ 70 GYR.

- MIXTURE NOTES:  
 1. THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURES IS 112 LBS/SQ YD/IN  
 2. WHEN RAP EXCEEDS 20%, THE NEW ASPHALT BINDER IN THE MIX SHALL BE PG 58-22.

PLOT DATE = 1/14/2009  
 PLOT SCALE = 4.0000 / IN.  
 USER NAME = Millennium Engineering  
 MODEL =



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DATE - 01/14/09	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

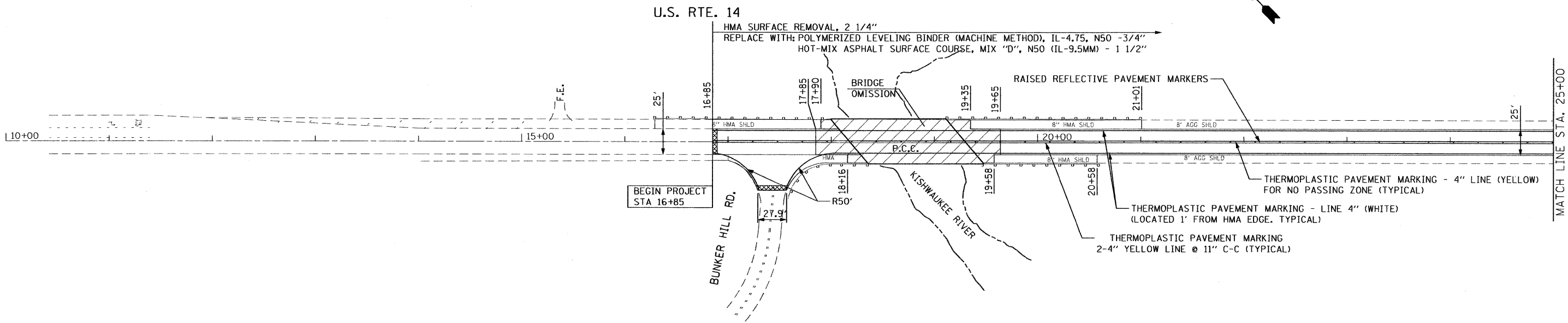
**U.S. ROUTE 14  
BUNKER HILL RD TO PARK LANE DR**


**TYPICAL SECTIONS**

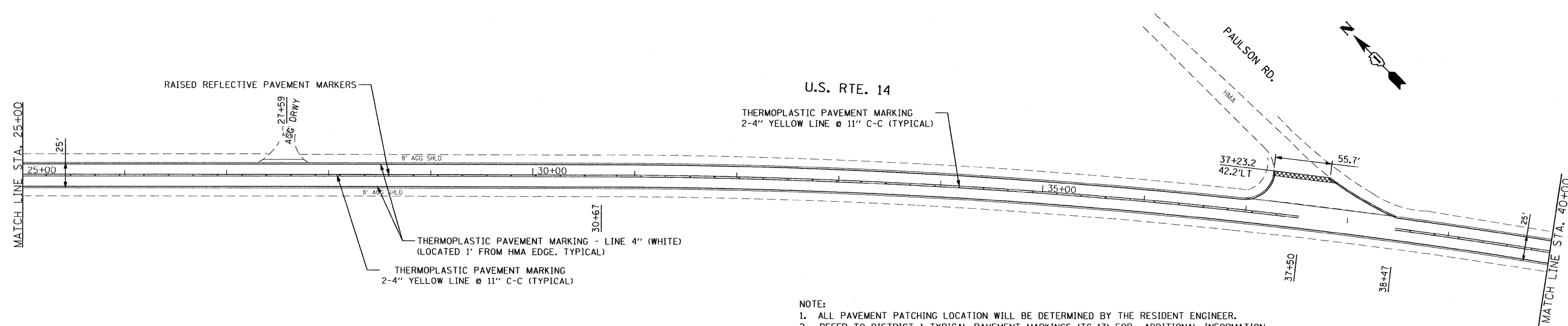
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CONTRACT NO. 60E18				

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

FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT  
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 PROPOSED 4.5' HMA SURFACE REMOVAL BUTT JOINT  
SEE BUTT JOINTS AND HMA TAPER DETAILS (BD32)



- NOTE:
1. ALL PAVEMENT PATCHING LOCATION WILL BE DETERMINED BY THE RESIDENT ENGINEER.
  2. REFER TO DISTRICT 1 TYPICAL PAVEMENT MARKINGS (TC-13) FOR ADDITIONAL INFORMATION.
  3. REFER TO DISTRICT 1 RAISED REFLECTIVE PAVEMENT MARKERS (TC-11) FOR ADDITIONAL INFORMATION.
  4. THE ENGINEER SHALL CONTACT: DEBBIE HANLON FIELD TECHNICIAN, AT (847) 438-2300 A MINIMUM OF TWO (2) WEEKS PRIOR TO START OF PROJECT FOR PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
  5. WHEN PLACING HMA WITHIN 200 FEET OF BRIDGE ABUTMENT, THE AUTOMATIC ELECTRONIC GRADE CONTROL ON THE PAVER SHALL BE OPERATED FROM A PRESET GRADE CONTROL STRINGLINE PER ART. 406.06 OF THE STANDARD SPECIFICATIONS.

PLOT DATE : 1/9/2009  
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 PLOT SCALE : 50,0000 / 1  
 USER NAME : Millennium Engineering  
 MODEL :

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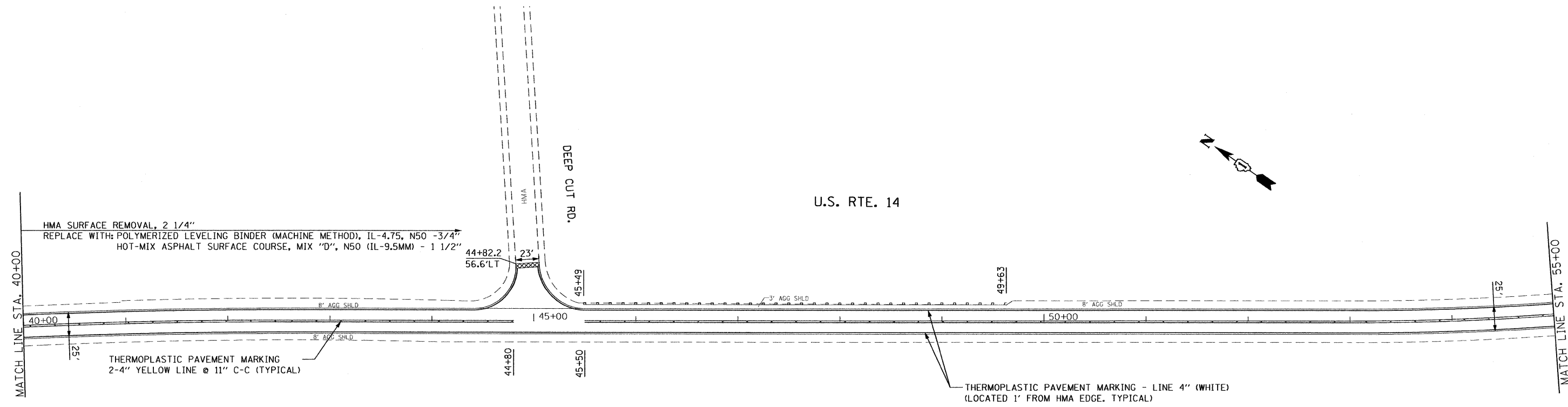
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DATE - 01/14/09	REVISED -


**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

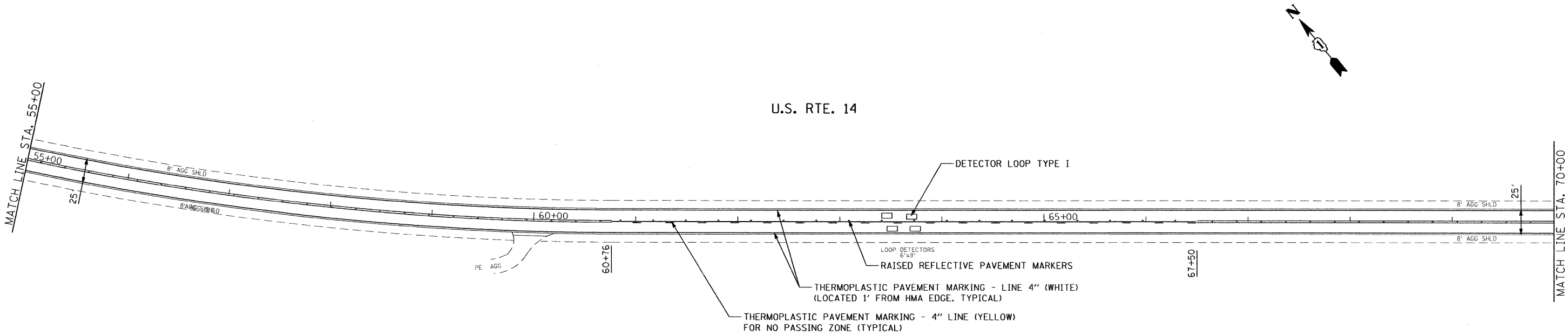
<b>U.S. ROUTE 14</b>		<b>ROADWAY &amp; PAVEMENT MARKING PLAN</b>	
BUNKER HILL RD TO PARK LANE DR		ROADWAY & PAVEMENT MARKING PLAN	
SCALE:	SHEET NO. OF SHEETS	STA. 10+00 TO STA. 40+00	

F.A.P. RTE. 305	SECTION 29RS-4	COUNTY MCHENRY	TOTAL SHEETS 16	SHEET NO. 5
CONTRACT NO. 60E18				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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 PROPOSED 4.5' HMA SURFACE REMOVAL BUTT JOINT  
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 USER NAME = Millennia Engineering  
 MODEL =



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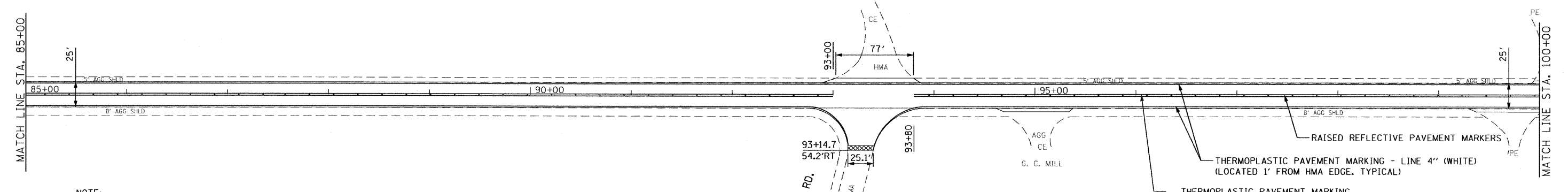
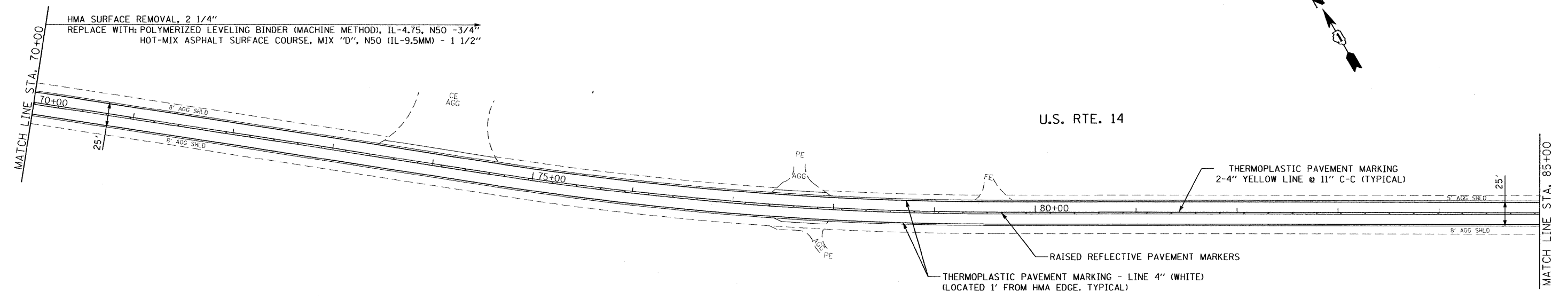
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**DEPARTMENT OF TRANSPORTATION**

**U.S. ROUTE 14**  
**BUNKER HILL RD TO PARK LANE DR**  
**ROADWAY & PAVEMENT MARKING PLAN**


SCALE: 1"=50'    SHEET NO.    OF    SHEETS    STA. 40+00    TO    STA. 70+00

F.A.P. RTE. 305	SECTION 29RS-4	COUNTY MCHENRY	TOTAL SHEETS 16	SHEET NO. 6
FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT				
CONTRACT NO. 60E18				

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1. ALL PAVEMENT PATCHING LOCATION WILL BE DETERMINED BY THE RESIDENT ENGINEER.
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 PROPOSED 4.5' HMA SURFACE REMOVAL BUTT JOINT  
SEE BUTT JOINTS AND HMA TAPER DETAILS (BD32)

PLOT DATE: 1/9/2009  
 USER: jmc  
 USER NAME: jmc  
 MODEL: 305

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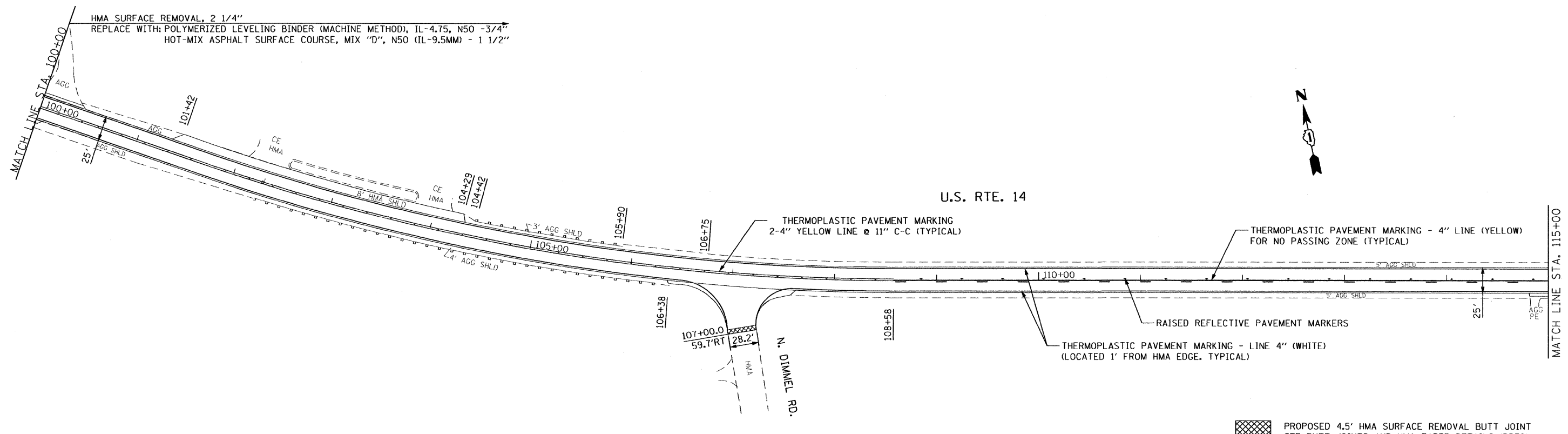
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CHECKED - RPD	REVISED -
DATE - 01/14/09	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

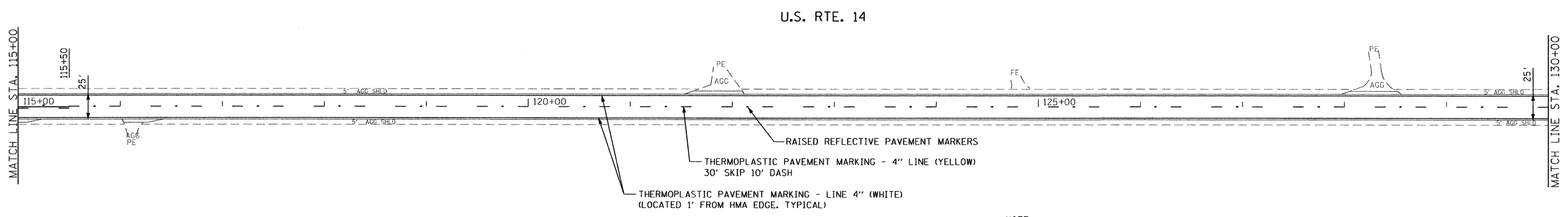
<b>U.S. ROUTE 14 BUNKER HILL RD TO PARK LANE DR</b>		<b>ROADWAY &amp; PAVEMENT MARKING PLAN</b>	
SCALE: 1"=50'	SHEET NO. OF SHEETS	STA. 70+00 TO STA. 100+00	

F.A.P. RTE. 305	SECTION 29RS-4	COUNTY MCHENRY	TOTAL SHEETS 16	SHEET NO. 7
CONTRACT NO. 60E18				

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT  
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PROPOSED 4.5' HMA SURFACE REMOVAL BUTT JOINT  
 SEE BUTT JOINTS AND HMA TAPER DETAILS (BD32)



- NOTE:
1. ALL PAVEMENT PATCHING LOCATION WILL BE DETERMINED BY THE RESIDENT ENGINEER.
  2. REFER TO DISTRICT 1 TYPICAL PAVEMENT MARKINGS (TC-13) FOR ADDITIONAL INFORMATION.
  3. REFER TO DISTRICT 1 RAISED REFLECTIVE PAVEMENT MARKERS (TC-11) FOR ADDITIONAL INFORMATION.
  4. THE ENGINEER SHALL CONTACT: DEBBIE HANLON FIELD TECHNICIAN, AT (847) 438-2300 A MINIMUM OF TWO (2) WEEKS PRIOR TO START OF PROJECT FOR PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
  5. WHEN PLACING HMA WITHIN 200 FEET OF BRIDGE ABUTMENT, THE AUTOMATIC ELECTRONIC GRADE CONTROL ON THE PAVER SHALL BE OPERATED FROM A PRESET GRADE CONTROL STRINGLINE PER ART. 406.06 OF THE STANDARD SPECIFICATIONS.

PLOT DATE = 1/9/2009  
 PLOT SCALE = 1"=50'  
 USER NAME = M.L.  
 MODEL =

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 200 22ND Street, Suite 216, Lombard, IL 60148  
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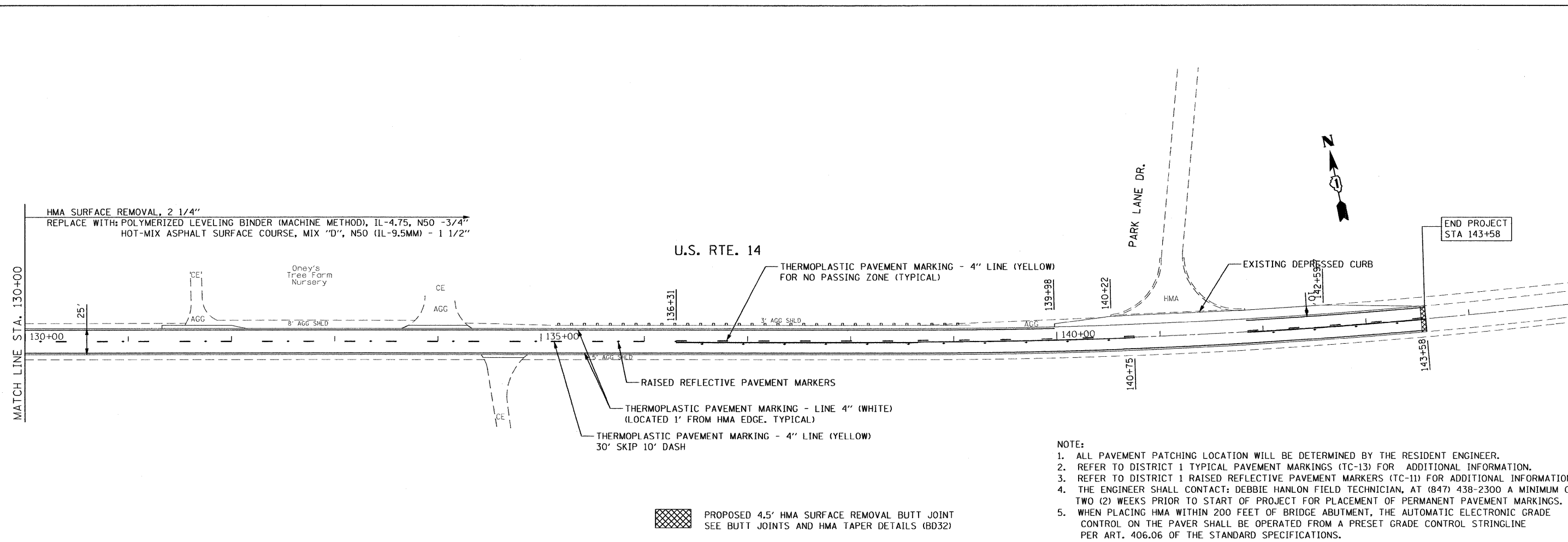
DESIGNED - TVN	REVISED -
DRAWN - TVN	REVISED -
CHECKED - RPD	REVISED -
DATE - 01/14/09	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

<b>U.S. ROUTE 14</b> <b>BUNKER HILL RD TO PARK LANE DR</b>		<b>ROADWAY &amp;</b> <b>PAVEMENT MARKING PLAN</b>	
SCALE: 1"=50'	SHEET NO. OF SHEETS	STA. 100+00 TO STA. 130+00	

F.A.P. RTE. 305	SECTION 29RS-4	COUNTY MCHENRY	TOTAL SHEETS 16	SHEET NO. 8
CONTRACT NO. 60E18				





- NOTE:
1. ALL PAVEMENT PATCHING LOCATION WILL BE DETERMINED BY THE RESIDENT ENGINEER.
  2. REFER TO DISTRICT 1 TYPICAL PAVEMENT MARKINGS (TC-13) FOR ADDITIONAL INFORMATION.
  3. REFER TO DISTRICT 1 RAISED REFLECTIVE PAVEMENT MARKERS (TC-11) FOR ADDITIONAL INFORMATION.
  4. THE ENGINEER SHALL CONTACT: DEBBIE HANLON FIELD TECHNICIAN, AT (847) 438-2300 A MINIMUM OF TWO (2) WEEKS PRIOR TO START OF PROJECT FOR PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
  5. WHEN PLACING HMA WITHIN 200 FEET OF BRIDGE ABUTMENT, THE AUTOMATIC ELECTRONIC GRADE CONTROL ON THE PAVER SHALL BE OPERATED FROM A PRESET GRADE CONTROL STRINGLINE PER ART. 406.06 OF THE STANDARD SPECIFICATIONS.

1/12/2009  
 P:\2007\ME07080\_VerVar\_Phil\Cadd\W06\_US14\US14\Shets\05US14Rdway.sht  
 USER: TVN  
 MILLENNIA ENGINEERING



200 22ND Street, Suite 216, Lombard, IL 60148  
 630.705.0110 voice, 630.839.2566 fax  
 www.millenniaeng.com  
**MILLENNIA ENGINEERING**

DESIGNED	- TVN	REVISED	-
DRAWN	- TVN	REVISED	-
CHECKED	- RPD	REVISED	-
DATE	- 01/14/09	REVISED	-

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

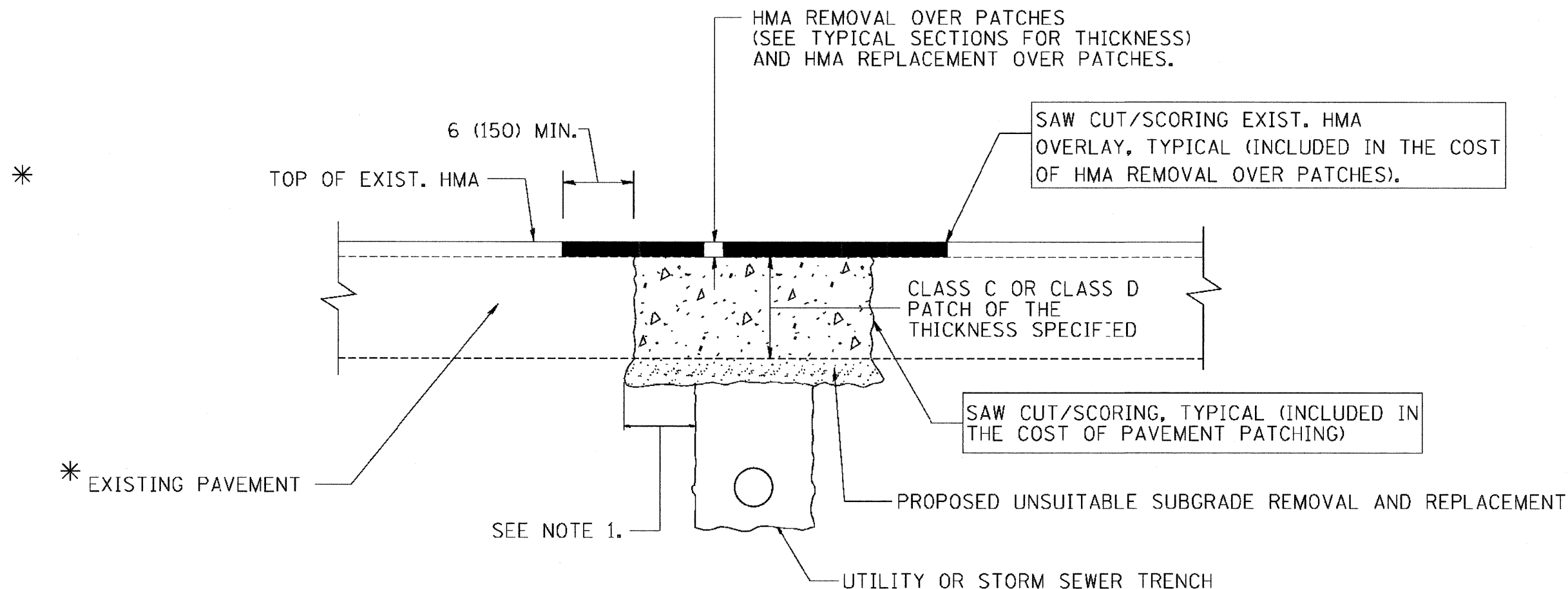
**U.S. ROUTE 14**  
**BUNKER HILL RD TO PARK LANE DR**  
**ROADWAY & PAVEMENT MARKING PLAN**

SCALE: 1"=50'    SHEET NO.    OF    SHEETS    STA. 130+00    TO    STA. 150+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	29RS-4	MCHENRY	16	9
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 60E18	

P:\2007\ME07080\_VerVar\_Phil\Cadd\W06\_US14\US14\Shets\05US14Rdway.sht

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		



\* 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**

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

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

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE		
R. SHAH	10/25/94	<b>PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT</b>  SCALE: VERT. NONE HORIZ. NONE DRAWN BY CHECKED BY BD400-04 (BD-22)	
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		
ART ABBAS	04/27/98		
R. BORO	01/01/07		
R. BORO	09/04/07		

PLOT DATE = 1/9/2009  
 FILE NAME = P:\2007\ME07080\_Ver-Var-Ph1\Cadd\W06.US14\US14\SH14\168022D1.DETAILS.sht  
 USER NAME = M080 / JN.  
 MODEL = SMODEL0  
 ENGINEER = R. SHAH



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CHECKED - RPD	REVISED -
DATE - 01/14/09	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**U.S. ROUTE 14  
BUNKER HILL RD TO PARK LANE DR**

**DISTRICT ONE STANDARD DETAILS  
BD400-04**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	29RS-4	MCHENRY	17	10
CONTRACT NO. 60E18				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

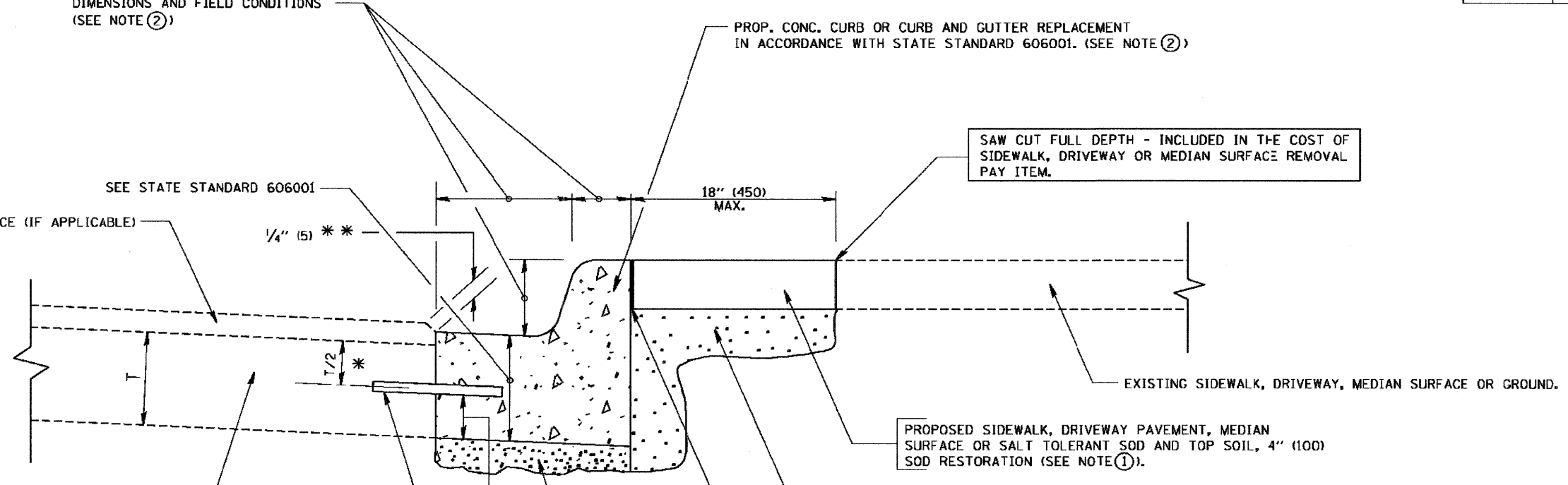
CONTRACT NO.				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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.

SEE STATE STANDARD 606001  
EXISTING OR PROPOSED HMA SURFACE (IF APPLICABLE)



PROPOSED SIDEWALK, DRIVEWAY PAVEMENT, MEDIAN SURFACE OR SALT TOLERANT SOD AND TOP SOIL, 4" (100) SOD RESTORATION (SEE NOTE ①).

SUITABLE BACKFILL MATERIAL (INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT)

PROPOSED 3/4" (20) PREFORMED EXPANSION JOINT AT CONCRETE SIDEWALKS, DRIVEWAYS, AND MEDIANS. (INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.)

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".

- \* 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.

SALT TOLERANT SOD AND TOP SOIL, 4" (100) 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 HMA 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.

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

REVISIONS	
NAME	DATE
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
R. BORO	01/01/07

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

SCALE: VERT. NONE  
HORIZ. DRAWN BY  
CHECKED BY  
BD600-06 (BD-24)

# CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

PLOT DATE = 1/9/2009  
 FILE NAME = P:\2007\ME07080-Var-Phil\Cadd\W06.US14\US14\Shvs\11B02401.DETAIL5.rvt  
 USER = M0000 / JN  
 MODEL = Engineering  
 \$MODEL\$

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DESIGNED - TVN	REVISED -
DRAWN - TVN	REVISED -
CHECKED - RPD	REVISED -
DATE - 01/14/09	REVISED -

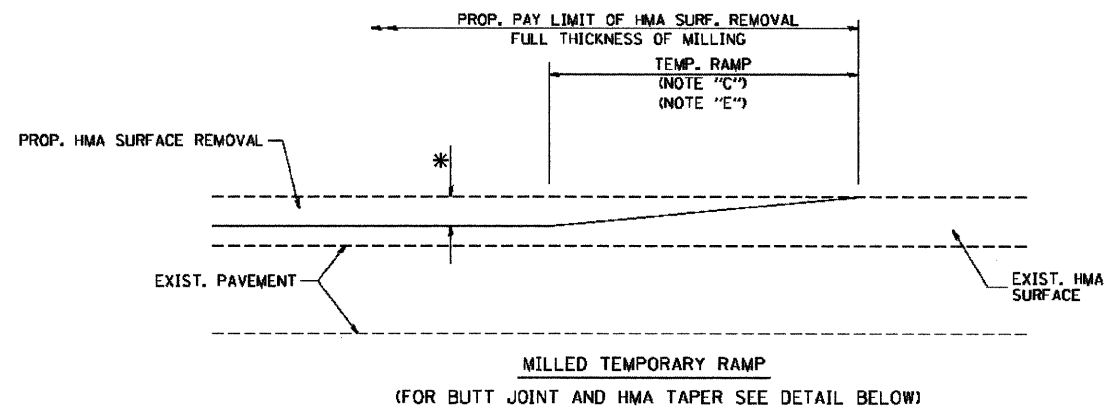
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

U.S. ROUTE 14  
BUNKER HILL RD TO PARK LANE DR  
DISTRICT ONE STANDARD DETAILS  
BD-24

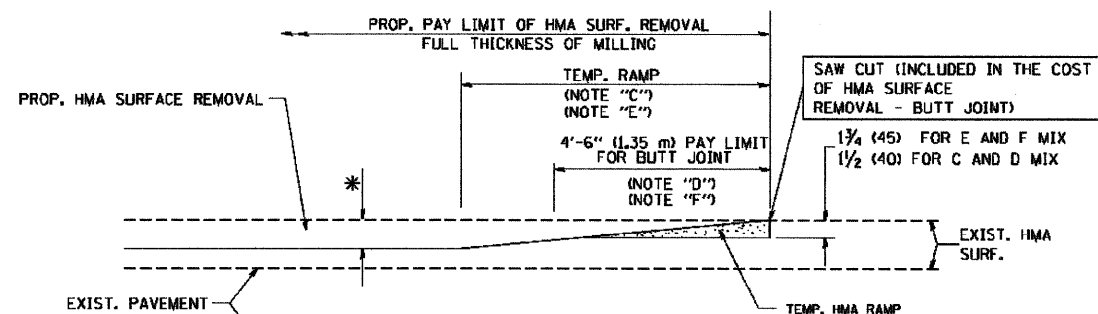
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	29RS-4	MCHENRY	17	11
CONTRACT NO. 60E18				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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CONTRACT NO.				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.	TO STA.			
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

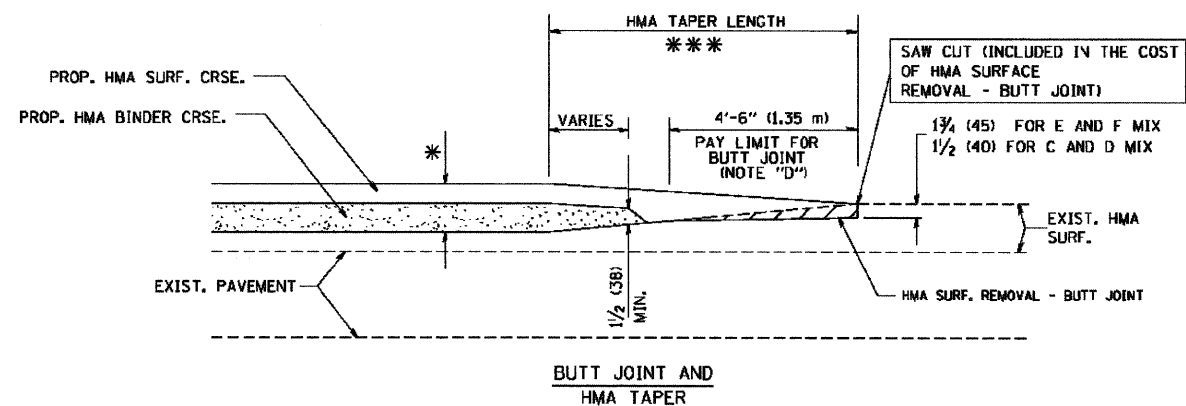


OPTION 1

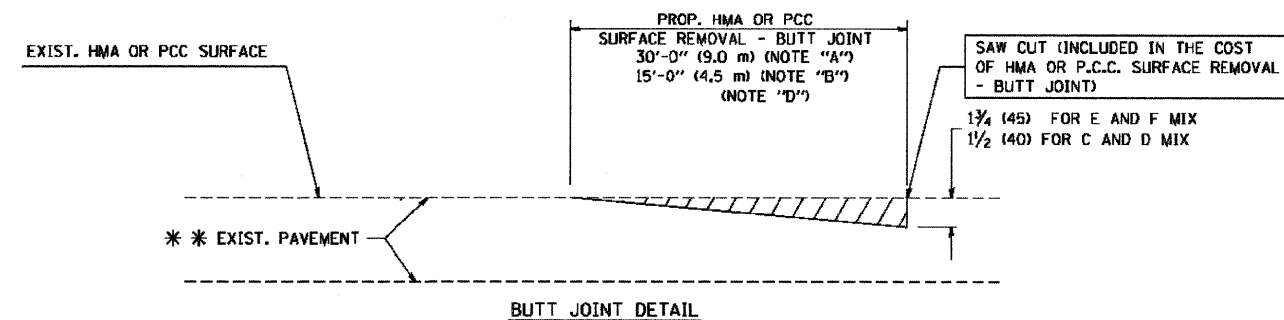


HMA CONSTRUCTED TEMPORARY RAMP  
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

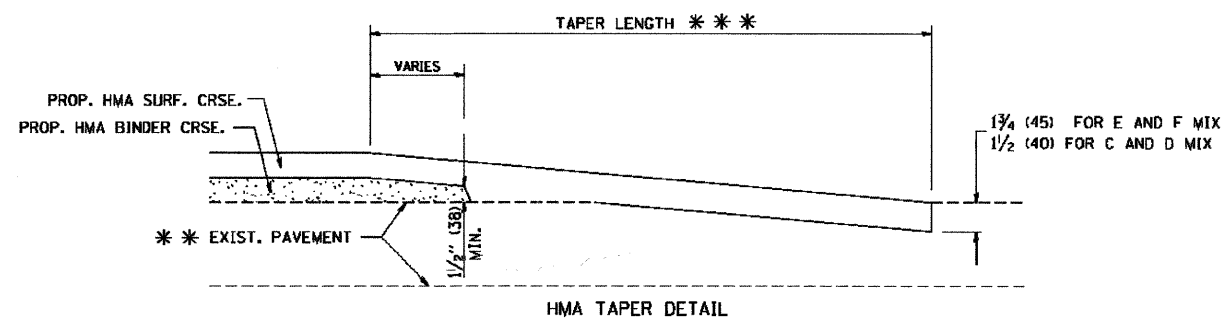
OPTION 2  
TYPICAL TEMPORARY RAMP



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")

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

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".

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
R. BORO	01/01/07

ILLINOIS DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND  
HMA TAPER  
DETAILS

SCALE: VERT. NONE  
HORIZ.

DRAWN BY  
CHECKED BY

BD400-05 (VI-BD32)

PLOT DATE: 1/9/2009  
 PLOT TIME: 10:07:00  
 PLOT SCALE: 1/8" = 1'-0"  
 USER NAME: Millennium Engineering  
 MODEL:



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MILLENNIA ENGINEERING

DESIGNED - TVN	REVISED -
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CHECKED - RPD	REVISED -
DATE - 01/14/09	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

U.S. ROUTE 14  
BUNKER HILL RD TO PARK LANE DR

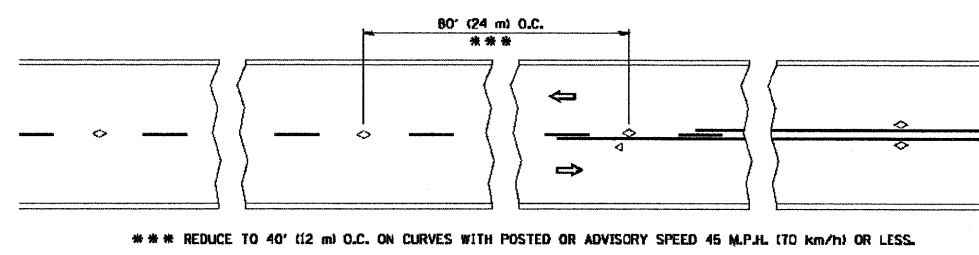
DISTRICT ONE STANDARD DETAILS  
BD400-05

F.A.P. RTE. 305	SECTION 29RS-4	COUNTY MCHENRY	TOTAL SHEETS 17	SHEET NO. 12
CONTRACT NO. 60E18				

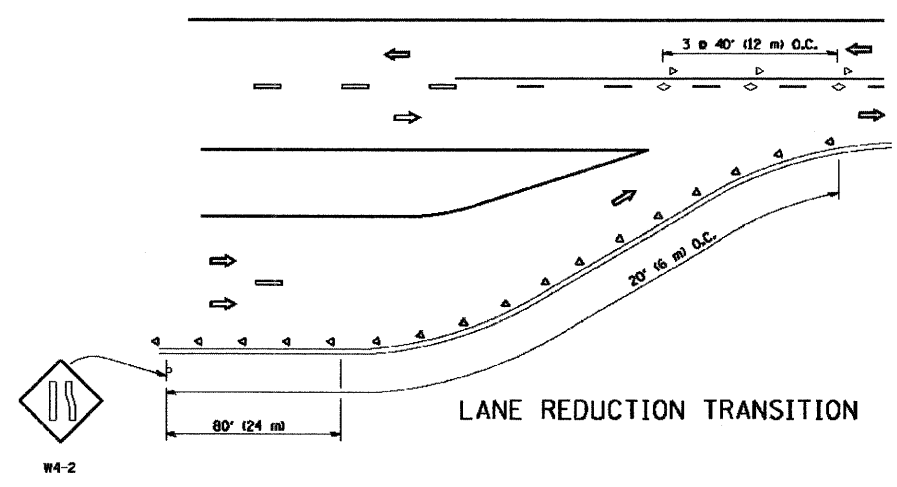
SCALE: SHEET NO. OF SHEETS STA. TO STA.

FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT

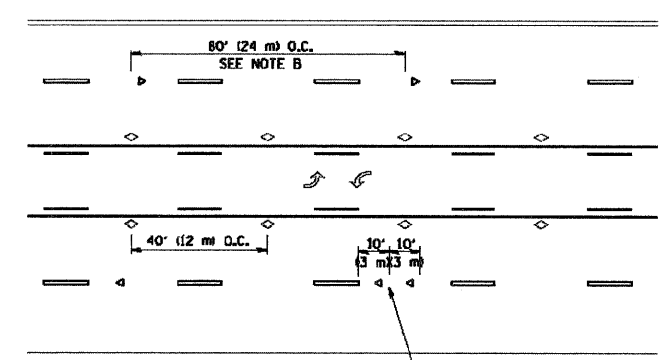




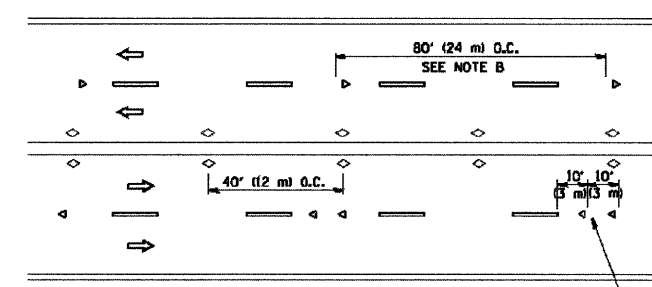
TWO-LANE/TWO-WAY



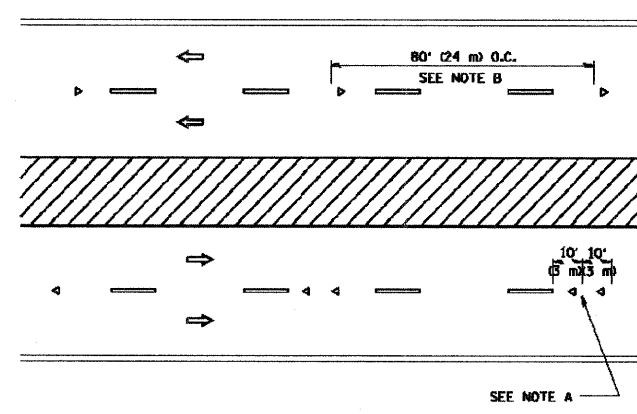
LANE REDUCTION TRANSITION



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 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

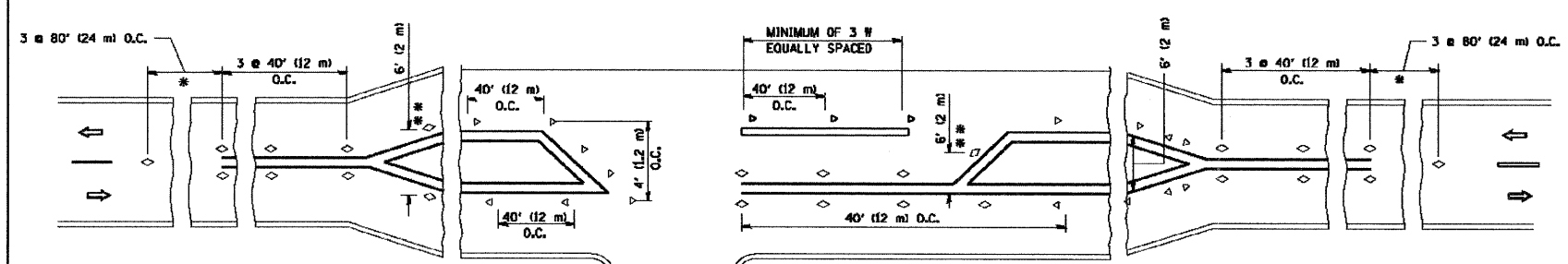
- YELLOW STRIPE
- WHITE STRIPE
- ◁ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◇ TWO-WAY AMBER MARKER

LANE MARKER NOTES

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

DESIGN NOTES

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



LEFT TURN

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

All dimensions are in inches (millimeters) 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  
 DRAWN BY CADD  
 CHECKED BY TC-11

PLOT DATE = 1/9/2009  
 PLOT SCALE = 1/8"=1'-0"  
 USER NAME = Millennium Engineering  
 MODEL = #MODELS

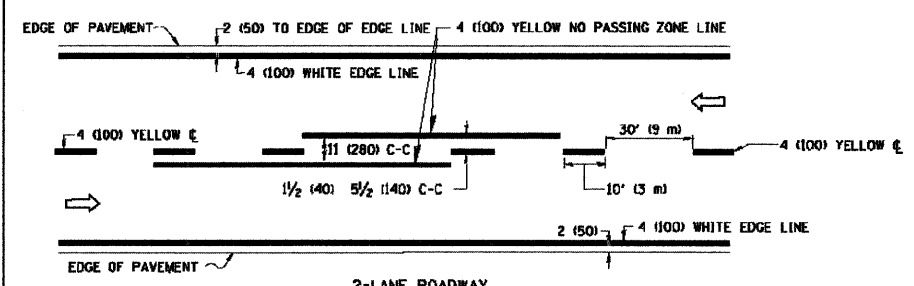
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DESIGNED - TVN	REVISED -
DRAWN - TVN	REVISED -
CHECKED - RPD	REVISED -
DATE - 01/14/09	REVISED -

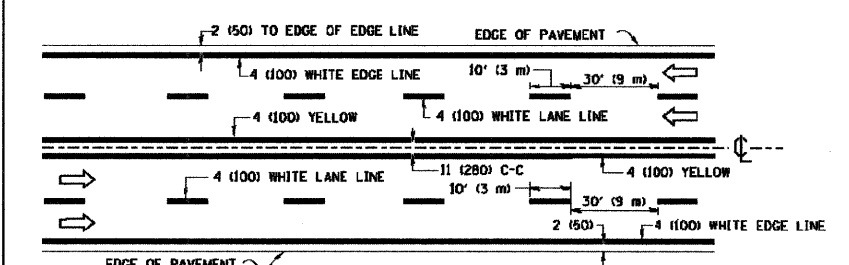
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

U.S. ROUTE 14 BUNKER HILL RD TO PARK LANE DR		DISTRICT ONE STANDARD DETAILS TC-11	
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

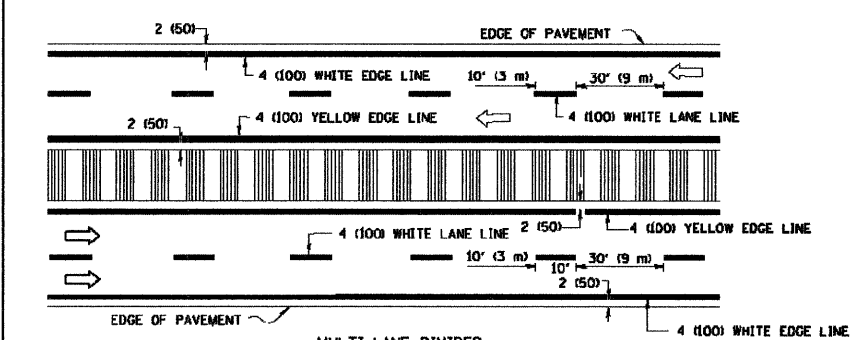
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	29RS-4	MCHENRY	17	14
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				CONTRACT NO. 60E18



2-LANE ROADWAY



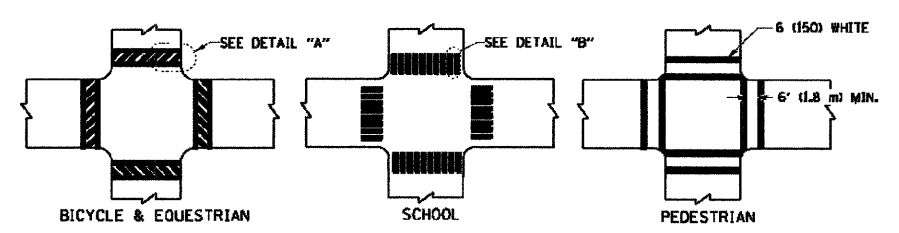
MULTI-LANE UNDIVIDED



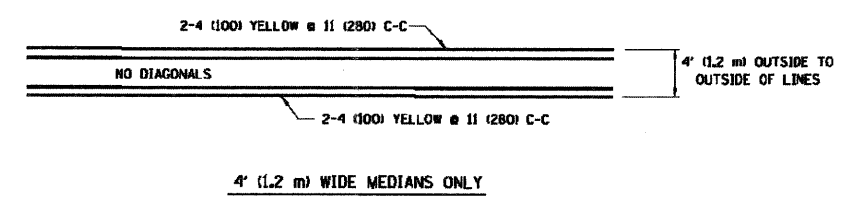
MULTI-LANE DIVIDED WITH MOUNTABLE MEDIAN

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

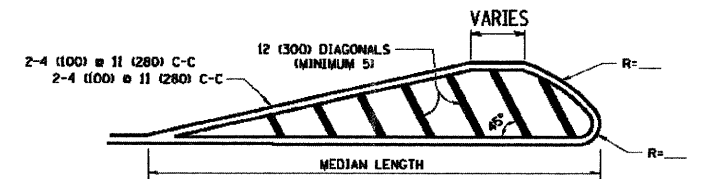
TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING



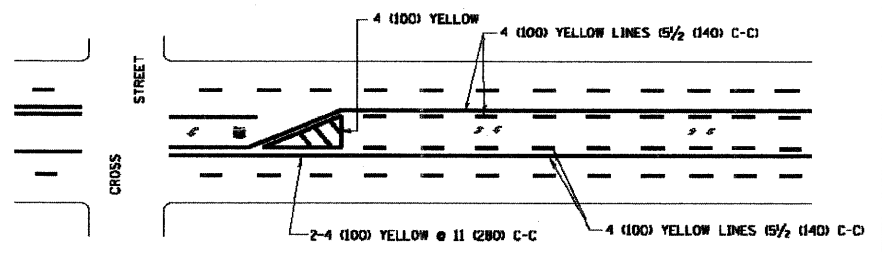
4' (1.2 m) WIDE MEDIANS ONLY



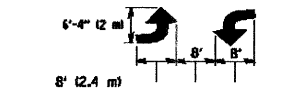
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

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

MEDIANS OVER 4' (1.2 m) WIDE

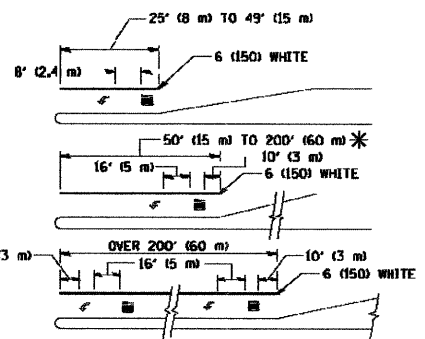


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

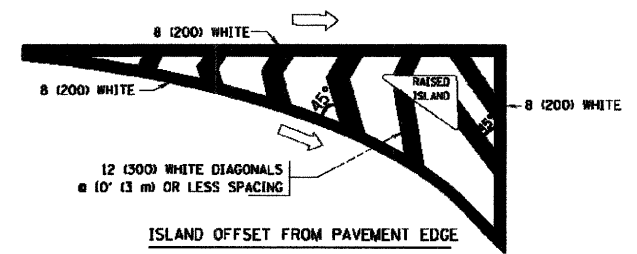


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.  
 \* AREA = 15.6 SQ. FT. (1.5 m<sup>2</sup>) AREA = 20.8 SQ. FT. (1.9 m<sup>2</sup>)

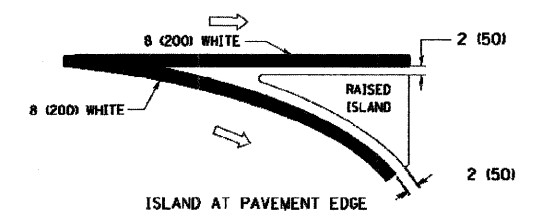
\* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



ISLAND OFFSET FROM PAVEMENT EDGE



ISLAND AT PAVEMENT EDGE

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 FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 2' (600) APART 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) 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° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	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: "X" = 3.6 SQ. FT. (0.33 m <sup>2</sup> ) EACH "X" = 54.0 SQ. FT. (5.0 m <sup>2</sup> )
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

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

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

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

DRAWN BY CADD  
CHECKED BY TC-13

PLOT DATE: 1/9/2009  
 FILE NAME: P:\2007\ME07880\_Ver-Vor-Phi\Cadd\W06\_US14\US14\Sheet\151C13D1.DETAILS.shp  
 PLOT SCALE: 1:8000  
 USER NAME: Millennium Engineering  
 MODEL:

**MILLENNIA ENGINEERING**

200 22ND Street, Suite 216, Lombard, IL 60148  
 630.785.8110 voice, 630.839.2566 fax  
 www.millenniaeng.com

DESIGNED - TVN	REVISED -
DRAWN - TVN	REVISED -
CHECKED - RPD	REVISED -
DATE - 01/14/09	REVISED -

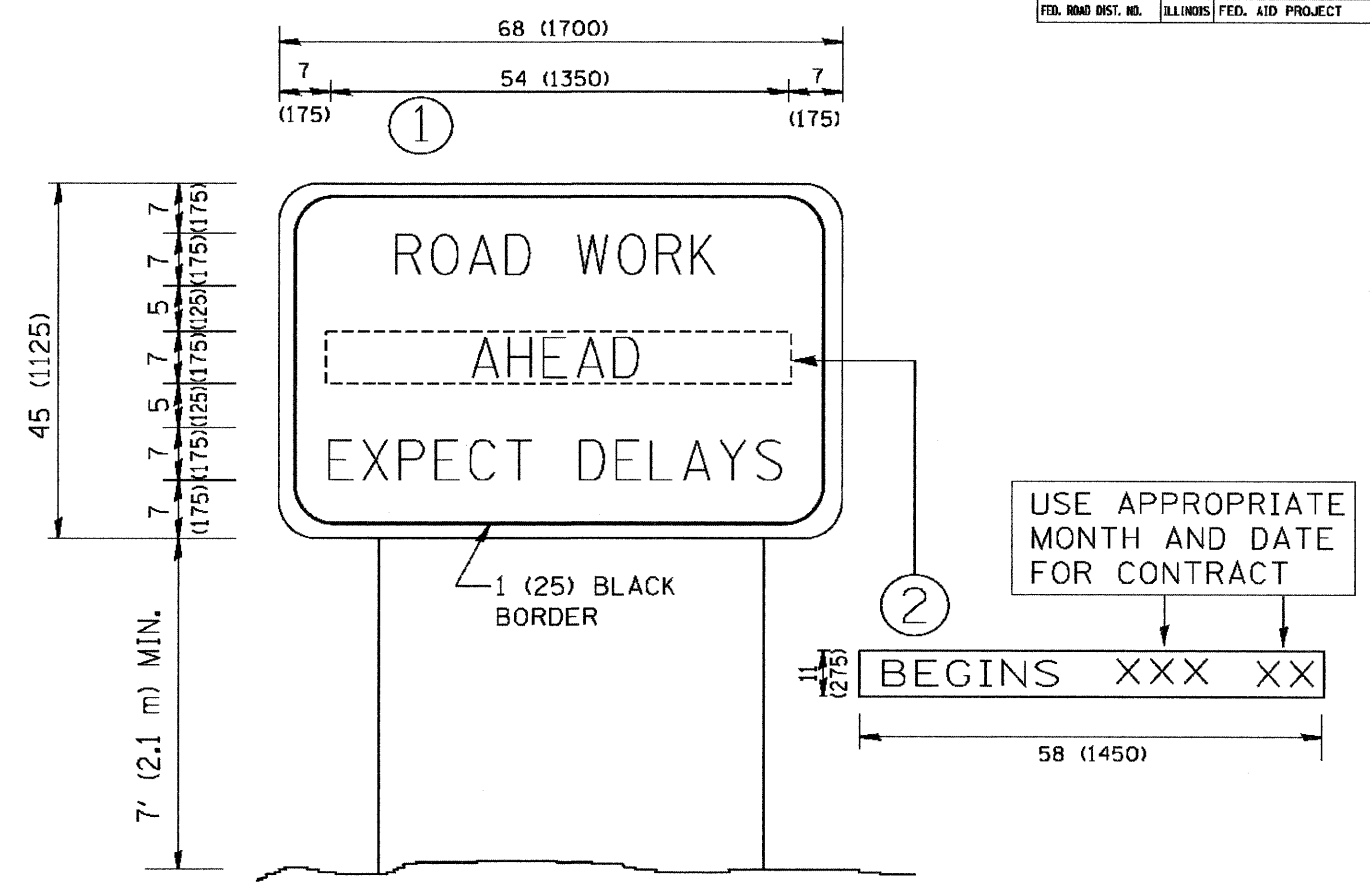
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

U.S. ROUTE 14  
BUNKER HILL RD TO PARK LANE DR

DISTRICT ONE STANDARD DETAILS  
TC-13

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	29RS-4	MCHENRY	17	15
CONTRACT NO. 60E18				

CONTRACT NO.				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



**NOTES:**

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

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

REVISIONS	
NAME	DATE
R. MIRS	9-15-97
R. MIRS	12-11-97
T. RAMMACHER	2-2-99
C. JUCLIS	1-31-07

ILLINOIS DEPARTMENT OF TRANSPORTATION

**ARTERIAL ROAD INFORMATION SIGN**

SCALE: NONE

DRAWN BY DESIGN

CHECKED BY

TC22

PLOT DATE = 1/16/09  
 FILE NAME = P:\2007\ME\07080\_Vor-Vor-Phit\Cadd\W06\_US14\US14\Sh1a\16TC2201.DETAIL.SHT  
 PLOT SCALE = 1:8000 / IN.  
 USER NAME = Millennia Engineering  
 MODEL =



200 22ND Street, Suite 216, Lombard, IL 60148  
 630.785.8110 voice, 630.839.2566 fax  
 www.millenniaeng.com

**MILLENNIA ENGINEERING**

DESIGNED - TVN	REVISED -
DRAWN - TVN	REVISED -
CHECKED - RPD	REVISED -
DATE - 01/14/09	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**U.S. ROUTE 14**  
**BUNKER HILL RD TO PARK LANE DR**

**DISTRICT ONE STANDARD DETAILS**  
**TC-22**

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

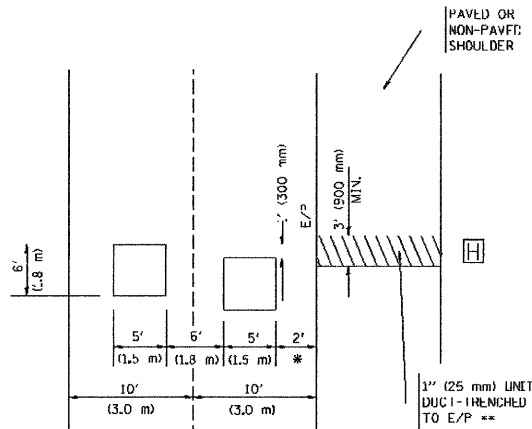
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	29RS-4	MCHENRY	17	16
CONTRACT NO. 60E18			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	



F.A. REC.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	ILL. AID PROJECT		

**LOOPS NEXT TO SHOULDERS**

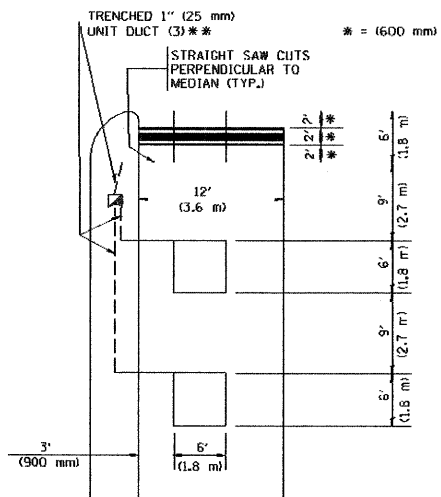
PROVIDE A PAVEMENT REPLACEMENT NOTE WHICH SHOULD EQUAL 3' (900 mm) X WIDTH OF PAVED SHOULDER.



\* = (600 mm)  
 \*\* UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

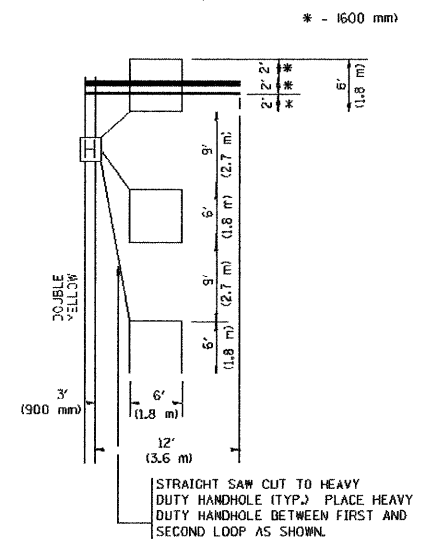
**LEFT TURN LANES WITH MEDIANS  
 VOLUME DENSITY ("FAR OUT" DETECTION)  
 ON SAME APPROACH  
 (PROTECTED / PERMITTED LEFT TURN PHASING)**

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 B14001 TO ENSURE THAT HANDHOLE FITS IN MEDIAN.



\* = (600 mm)  
 \*\* 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) UNLIT DUCT BETWEEN THE EDGE OF PAVEMENT AND THE FIRST HANDHOLE OR JUNCTION BOX. EACH UNIT DUCT RUN SHALL BE SHOWN ON THE PLANS BY THE DESIGNER, BUT SHALL NOT BE PAID FOR SEPARATELY. 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.

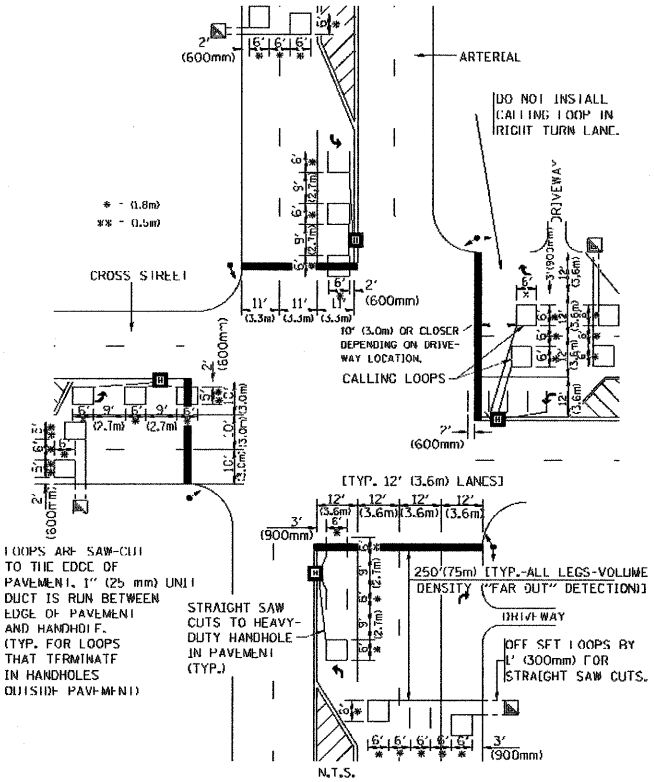
"FAR OUT" DETECTION REFERS TO LOCKING, PRESENCE TYPE DETECTION LOCATED IN THRU LANES, RIGHT TURN LANES, AND RIGHT TURN LANE TAPER AREAS (IF APPLICABLE), USUALLY 250' (75 m) IN ADVANCE OF STOP BARS. "UPTIGHT" DETECTION REFERS TO NON-LOCKING PRESENCE TYPE DETECTION LOCATED IN ALL LANES AND 10'-15' (3.0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

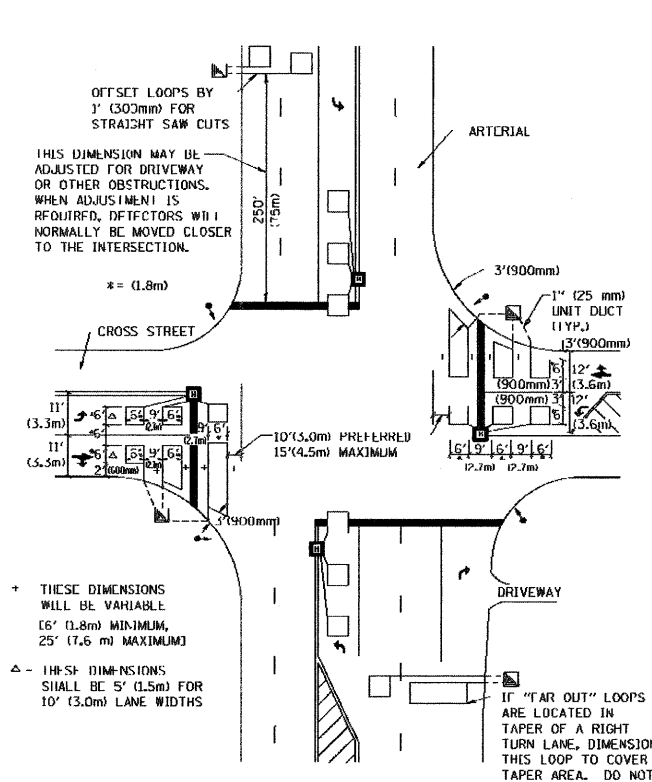
THIS DRAWING HAS BEEN PREPARED TO ASSIST THE RESIDENT ENGINEER FOR ALL ROADWAY RESURFACING OR S.M.A.R.T. PROJECTS WHERE THE DIMENSIONS ARE NOT SHOWN ON THE PLANS AND THE FINAL LOCATIONS FOR CROSSWALKS OR STOP BARS ARE NOT DETERMINED.

**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.

10/18/2009  
 PLOT DATE = 10/18/2009  
 FILE NAME = F:\2007\MEB7080\_Ver-Vor-Phl\Cadd\W06\_US14\US14\Shets\1750701.DETAIL5.dwg  
 PLOT SCALE = 1/8"=1'-0"  
 USER NAME = Millennium Engineering  
 MODEL =

**MILLENNIA ENGINEERING**  
 200 22ND Street, Suite 216, Lombard, IL 60148  
 630.785.0110 voice, 630.839.2566 fax  
 www.millenniaeng.com

DESIGNED - TVN	REVISED -
DRAWN - TVN	REVISED -
CHECKED - RPD	REVISED -
DATE - 01/14/09	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**U.S. ROUTE 14  
 BUNKER HILL RD TO PARK LANE DR**

SCALE: SHEET NO. 02020F SHEETS STA. TO STA.

ILLINOIS DEPARTMENT OF TRANSPORTATION

**DISTRICT 1  
 DETECTOR LOOP  
 INSTALLATION DETAILS  
 FOR ROADWAY RESURFACING**

REVISIONS	
NAME	DATE

SCAF: NONF  
 DATF: 10/18/2002

DRAWN BY: CAJD  
 DESIGNED BY: CHECKED BY: R.K.J.  
 T507

F.A.P. RTE. 305	SECTION 29RS-4	COUNTY MCHENRY	TOTAL SHEETS 17	SHEET NO. 17
CONTRACT NO. 60E18				

FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT  
 P:\2007\MEB7080\_Ver-Vor-Phl\Cadd\W06\_US14\US14\Shets\1750701.DETAIL5.dwg