

|                     |                |                    |              |           |
|---------------------|----------------|--------------------|--------------|-----------|
| F.A.P. RTE.         | SECTION        | COUNTY             | TOTAL SHEETS | SHEET NO. |
| 347                 | (G & 2) Y-RS-7 | DUPAGE             | 22           | 1         |
| FED. ROAD DIST. NO. | ILLINOIS       | CONTRACT NO. 60H31 |              |           |

D-91-601-09

PROJECT LOCATED ADJACENT TO  
THE CITY OF WEST CHICAGO, THE CITY OF  
WHEATON, AND THE CITY OF WINDFIELD

FOR INDEX OF SHEETS, SEE SHEET NO. 2

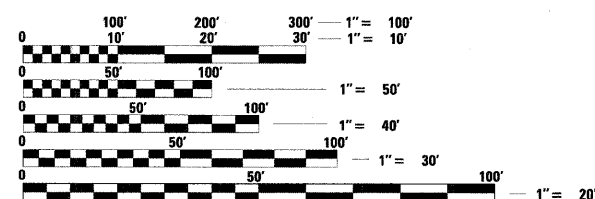
ADT 32,300 (2007)  
SPEED LIMIT 50 MPH

OMMISSIONS  
STA. 20 + 69 TO STA. 22 + 87

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PROPOSED  
HIGHWAY PLANS**  
FAP ROUTE 347 (ILL ROUTE 38)  
ILL ROUTE 59 TO COUNTY FARM ROAD  
SECTION: (G & 2) Y-RS-7

RESURFACING (3P)  
DUPAGE COUNTY  
C-91-601-09



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

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

PROJECT MANAGER: RAJENDRA C. SHAH (847) 705-4555  
PROJECT ENGINEER: ERSKINE W. KLYCE (847) 705-4594

CONTRACT NO. 60H31

PROJECT BEGINS  
STA. 13 + 00



PROJECT ENDS  
STA. 150 + 00

LOCATION SKETCH

GROSS LENGTH OF PROJECT = 13,700' = 2.595 MI  
NET LENGTH OF PROJECT = 13,553' = 2.553 MI

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED APRIL 21, 20 09

*Diana M. O'Keefe* DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER  
May 1, 20 09

*Charles J. Ingessol* ENGINEER OF DESIGN AND ENVIRONMENT  
May 1, 20 09

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

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS

LOXCO, INC.  
CONSULTING ENGINEERS  
1560 WALL ST., SUITE 222  
NAPERVILLE, ILLINOIS 60563 PH: 630/577-9100

WILLIAM H. EBY  
082-047827  
REGISTERED  
PROFESSIONAL  
ENGINEER  
ILLINOIS

*W. H. Eby*  
Expires 11.30.09

INDEX OF SHEETS

STATE STANDARDS

PLAN NOTES

| <u>SHEET NO.</u> | <u>DESCRIPTION</u>  |
|------------------|---|
| 1                | TITLE SHEET   |
| 2                | INDEX OF SHEETS, STATE STANDARDS, GENERAL NOTES AND MIX SCHEDULE              |
| 3                | SUMMARY OF QUANTITIES   |
| 4                | EXISTING AND PROPOSED TYPICAL CROSS SECTIONS                                  |
| 5-10             | ROADWAY AND PAVEMENT MARKING PLANS  |
| 11-12            | DETECTOR LOOP PLANS   |
| 13               | DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING                           |
| 14               | PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT                                   |
| 15               | CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT                               |
| 16               | BUTT JOINT AND HMA TAPER DETAILS  |
| 17               | TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS   |
| 18               | TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLow RESISTANT) |
| 19               | DISTRICT ONE TYPICAL PAVEMENT MARKINGS  |
| 20               | PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING                      |
| 21               | ARTERIAL ROAD INFORMATION SIGN  |
| 22               | DISTRICT ONE DETECTOR LOOP INSTALLATION DETAILS FOR ROADWAY RESURFACING       |
|                  | STATE STANDARDS   |

| <u>STANDARD NO.</u> | <u>DESCRIPTION</u>                           |
|---------------------|--|
| 000001-05           | STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS |
| 442201-03           | CLASS C AND CLASS D PATCHES                  |
| 701301-03           | LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS  |
| 701311-03           | LANE CLOSURE, 2L, 2W, MOVING DAY OPERATIONS  |
| 701501-05           | URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED        |
| 701701-06           | URBAN LANE CLOSURE, MULTILANE INTERSECTION   |
| 701901-01           | TRAFFIC CONTROL DEVICES                      |
| 886001-01           | DETECTOR LOOP INSTALLATIONS                  |
| 886006-01           | TYPICAL LAYOUT FOR DETECTION LOOPS           |

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 800-892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES. (48 HOUR NOTIFICATION IS REQUIRED)

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES WITHIN THE VILLAGE OF WINFIELD AND THE CITY OF WHEATON.

THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OF FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.

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" SHEETS INCLUDED ON THE PLANS, UNLESS OTHERWISE SPECIFIED.

THE RESIDENT ENGINEER SHALL CONTACT MS. PATRICE HARRIS AREA TRAFFIC FIELD ENGINEER AT (708) 597-9800 A MINIMUM OF 2 WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKING.

10 FEET (3 METERS) TRANSITION SHALL BE USED TO MATCH PROPOSED CURB AND GUTTER TO EXISTING CURB AND GUTTERS IN THE FIELD, UNLESS OTHERWISE SHOWN. THE TRANSITION SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEMS OR WORK SPECIFIED.

WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1/2 INCHES (40MM) WHERE THE SPEED LIMIT IS 45 MPH (80 KM/H) OR LESS AND 1 INCH (25MM) WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH (80 KM/H). WITH WRITTEN APPROVAL FROM THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES (75MM) MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 (V:H).



|                      |                   |           |
|----------------------|-------------------|-----------|
| USER NAME = #USER#   | DESIGNED - MJY    | REVISED - |
| PLOT SCALE = #SCALE# | DRAWN - ZDA       | REVISED - |
| PLOT DATE = #DATE#   | CHECKED - MJY     | REVISED - |
|                      | DATE - 04/22/2009 | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**INDEX OF SHEETS, STATE STANDARDS, AND GENERAL NOTES  
ILL 38 ROOSEVELT RD.**

SCALE: NONE SHEET NO. 2 OF 22 SHEETS STA. 13+00 TO STA. 150+00

|   |                |        |                    |           |
|---|----------------|--------|--------------------|-----------|
| F.A.P. RIE.                                     | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
| 347   | (G & 2) Y-RS-7 |        | 22                 | 2         |
| C-91-601-09                                     |                |        | CONTRACT NO. 60H31 |           |
| FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT |                |        |                    |           |

| SUMMARY OF QUANTITIES |  |        | URBAN            |                 | CONSTRUCTION TYPE CODE |  | SUMMARY OF QUANTITIES |   |       | URBAN                       |       | CONSTRUCTION TYPE CODE |  |
|-----------------------|--|--------|------------------|-----------------|------------------------|--|-----------------------|---|-------|-----------------------------|-------|------------------------|--|
| CODE NO.              | ITEM   | UNIT   | TOTAL QUANTITIES | 1000 100% STATE |                        |  | CODE NO.              | ITEM  | UNIT  | TOTAL QUANTITIES 100% STATE | 1000  |                        |  |
| 40600200              | BITUMINOUS MATERIALS (PRIME COAT)                            | TON    | 33               | 33              |                        |  | 70300280              | TEMPORARY PAVEMENT MARKING - LINE 24"                                 | FOOT  | 160                         | 160   |                        |  |
| 40600300              | AGGREGATE (PRIME COAT)                                       | TON    | 163              | 163             |                        |  | 70301000              | WORK ZONE PAVEMENT MARKING REMOVAL                                    | SQ FT | 18702                       | 18702 |                        |  |
| 40600400              | MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS                   | TON    | 34               | 34              |                        |  | * 78000100            | THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS                  | SQ FT | 182                         | 182   |                        |  |
| 40600895              | CONSTRUCTING TEST STRIP                                      | EACH   | 1                | 1               |                        |  | * 78000200            | THERMOPLASTIC PAVEMENT MARKING - LINE 4"                              | FOOT  | 52836                       | 52836 |                        |  |
| 40600982              | HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT                 | SQ YD  | 6546             | 6546            |                        |  | * 78000400            | THERMOPLASTIC PAVEMENT MARKING - LINE 6"                              | FOOT  | 420                         | 420   |                        |  |
| 40601005              | HOT-MIX ASPHALT REPLACEMENT OVER PATCHES                     | TON    | 822              | 822             |                        |  | * 78000500            | THERMOPLASTIC PAVEMENT MARKING - LINE 8"                              | FOOT  | 230                         | 230   |                        |  |
| 40603390              | HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N70                 | TON    | 9115             | 9115            |                        |  | * 78000600            | THERMOPLASTIC PAVEMENT MARKING - LINE 12"                             | FOOT  | 224                         | 224   |                        |  |
| 42001300              | PROTECTIVE COAT  | SQ YD  | 1218             | 1218            |                        |  | * 78000650            | THERMOPLASTIC PAVEMENT MARKING - LINE 24"                             | FOOT  | 160                         | 160   |                        |  |
| 44000155              | HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"                      | SQ YD  | 1854             | 1854            |                        |  | * 78100100            | RAISED REFLECTIVE PAVEMENT MARKER                                     | EACH  | 692                         | 692   |                        |  |
| 44000159              | HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/2"                      | SQ YD  | 75571            | 75571           |                        |  | 78300200              | RAISED REFLECTIVE PAVEMENT MARKER REMOVAL                             | EACH  | 692                         | 692   |                        |  |
| 44001700              | COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT | FOOT   | 685              | 685             |                        |  | * 88600600            | DETECTOR LOOP REPLACEMENT   | FOOT  | 381                         | 381   |                        |  |
| 44002212              | HOT-MIX ASPHALT REMOVAL OVER PATCHES, 3"                     | SQ YD  | 4059             | 4059            |                        |  | X0322256              | TEMPORARY INFORMATION SIGNING   | SQ FT | 514                         | 514   |                        |  |
| 44201765              | CLASS D PATCHES, TYPE II, 10 INCH                            | SQ YD  | 2841             | 2841            |                        |  | X0656100              | DRIVEWAY PAVEMENT REMOVAL AND REPLACEMENT                             | SQ YD | 333                         | 333   |                        |  |
| 44201769              | CLASS D PATCHES, TYPE III, 10 INCH                           | SQ YD  | 406              | 406             |                        |  | X0326125              | POLYMERIZED LEVELING BINDER (MACHINE METHOD) <sup>IL-4.75,</sup> INTO | TON   | 4111                        | 4111  |                        |  |
| 44201771              | CLASS D PATCHES, TYPE IV, 10 INCH                            | SQ YD  | 812              | 812             |                        |  | Z0018500              | DRAINAGE STRUCTURES TO BE CLEANED                                     | EACH  | 17                          | 17    |                        |  |
| 67000400              | ENGINEER'S FIELD OFFICE, TYPE A                              | CAL MO | 6                | 6               |                        |  |                       |   |       |                             |       |                        |  |
| 67100100              | MOBILIZATION   | L SUM  | 1                | 1               |                        |  |                       |   |       |                             |       |                        |  |
| 70102620              | TRAFFIC CONTROL AND PROTECTION, STANDARD 701501              | L SUM  | 1                | 1               |                        |  |                       |   |       |                             |       |                        |  |
| 70102635              | TRAFFIC CONTROL AND PROTECTION, STANDARD 701701              | L SUM  | 1                | 1               |                        |  |                       |   |       |                             |       |                        |  |
| 70300100              | SHORT - TERM PAVEMENT MARKING                                | FOOT   | 16180            | 16180           |                        |  |                       |   |       |                             |       |                        |  |
| 70300210              | TEMPORARY PAVEMENT MARKING - LETTERS AND SYMBOLS             | SQ FT  | 182              | 182             |                        |  |                       |   |       |                             |       |                        |  |
| 70300220              | TEMPORARY PAVEMENT MARKING - LINE 4"                         | FOOT   | 52836            | 52836           |                        |  |                       |   |       |                             |       |                        |  |
| 70300240              | TEMPORARY PAVEMENT MARKING - LINE 6"                         | FOOT   | 420              | 420             |                        |  |                       |   |       |                             |       |                        |  |
| 70300250              | TEMPORARY PAVEMENT MARKING - LINE 8"                         | FOOT   | 230              | 230             |                        |  |                       |   |       |                             |       |                        |  |
| 70300260              | TEMPORARY PAVEMENT MARKING - LINE 12"                        | FOOT   | 224              | 224             |                        |  |                       |   |       |                             |       |                        |  |

\*Specialty Items

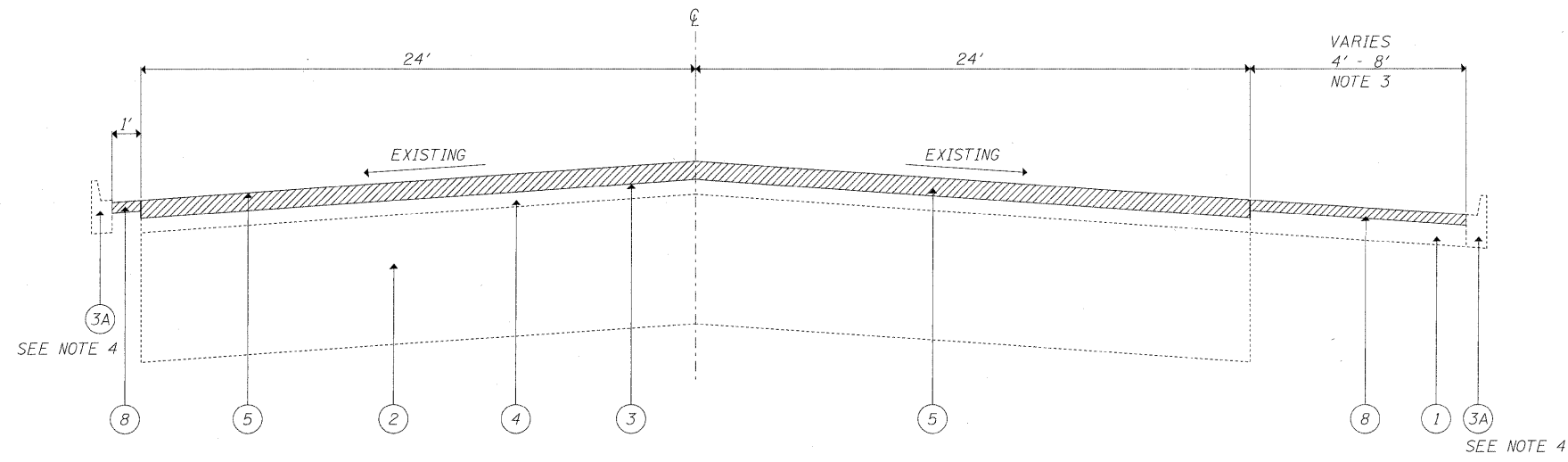


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|                      | DATE - 04/22/2009 | REVISED - |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

|   |                          |                           |
|---|--------------------------|---------------------------|
| SUMMARY OF QUANTITIES<br>ILL 38 ROOSEVELT RD. |                          |                           |
| SCALE: NONE                                   | SHEET NO. 3 OF 22 SHEETS | STA. 13+00 TO STA. 150+00 |

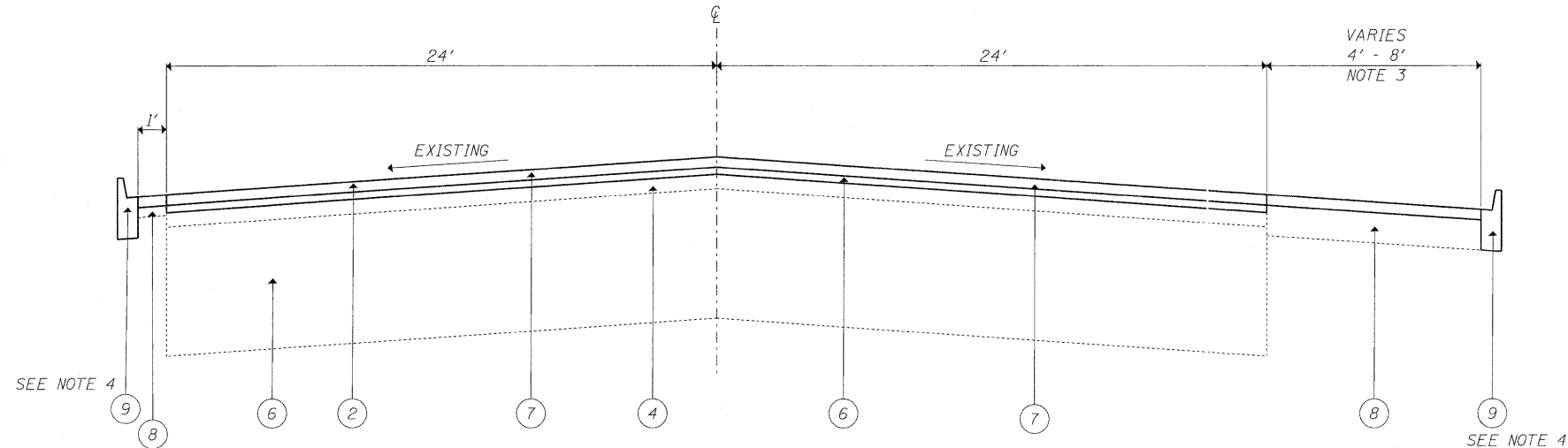
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| F.A.P. R.T.E.                                 | SECTION        | COUNTY             | TOTAL SHEETS | SHEET NO. |
| 347   | (G & 2) Y-RS-7 | DUPAGE             | 22           | 3         |
| C-91-601-09                                   |                | CONTRACT NO. 60H31 |              |           |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT |                |                    |              |           |



EXISTING TYPICAL SECTION  
STA. 13+00 TO STA. 150+00

**LEGEND**

- ① EXISTING BITUMINOUS SHOULDER
- ② EXISTING P.C. CONCRETE PAVEMENT +/- 9"
- ③ EXISTING HMA SURFACE COURSE +/- 4 1/2"
- ③A EXISTING COMBINATION CONCRETE CURB AND GUTTER
- ④ EXISTING HMA SURFACE OVERLAY AFTER MILLING, +/- 2"
- ⑤ PROPOSED HMA SURFACE REMOVAL (2 1/2")
- ⑥ PROPOSED POLYMERIZED LEVELING BINDER (MACHINE METHOD) N50 (3/4")
- ⑦ PROPOSED HMA SURFACE COURSE, MIX "F", N70 (1 3/4 ")
- ⑧ PROPOSED HMA SURFACE REMOVAL (1 1/2 ")
- ⑨ PROPOSED CONCRETE COMBINATION CURB AND GUTTER

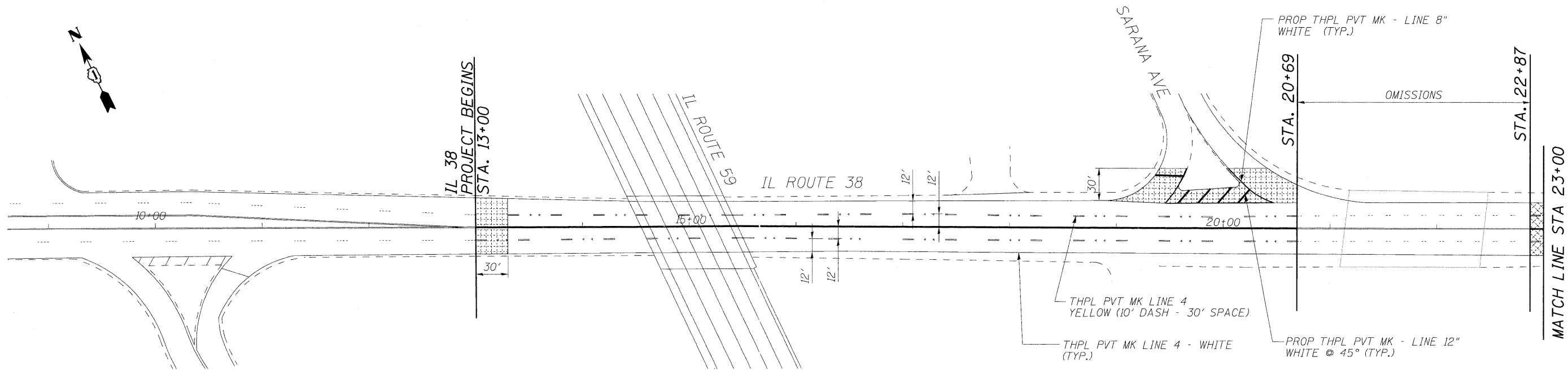


PROPOSED TYPICAL SECTION  
STA. 7+00 TO STA. 150+00

| HOT-MIX ASPHALT MIXTURE REQUIREMENTS               |                     |                  |
|--|---------------------|------------------|
| MIXTURE TYPE                                       | AC/PG               | DESIGN AIR VOIDS |
| HMA SURFACE COURSE, MIX F, N70. (IL-9.5 mm)        | PG 64-22            | 4% @ 70 GYR      |
| LEVELING BINDER (MACHINE METHOD), N50              | SBS-SBR PG 76-28/22 | 4% @ 50 GYR      |
| CLASS D PATCHES (HMA BINDER IL 19 mm)              | PG 64-22*           | 4% @ 70 GYR      |
| HMA REPLACEMENT OVER PATCHES (HMA BINDER IL 19 mm) | PG 64-22*           | 4% @ 70 GYR      |

**NOTE:**

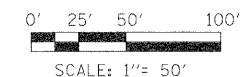
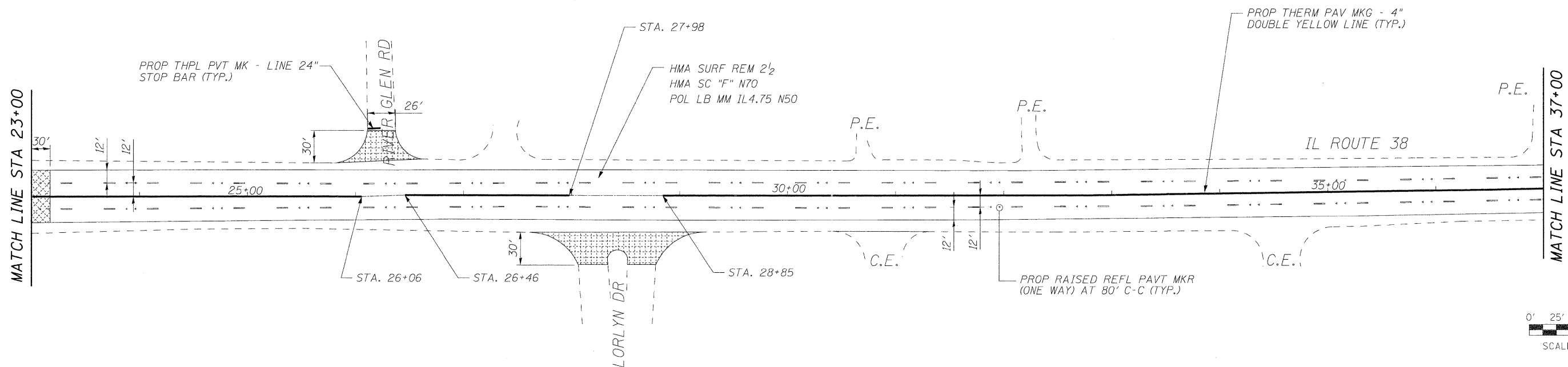
- 1: THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE COURSE MIXTURES IS 135 LBS/SQYD/IN AND LEVELING BINDER IS 112 LBS/SQYD/IN. \*WHEN RAP EXCEEDS 20%. THE NEW ASPHALT BINDER IN THE MIX SHALL BE PG 58-22
- 2: THE CONTRACTOR SHALL PATCH FIRST BEFORE MILLING
- 3: WHEN SHOULDER WIDENS GREATER THAN 4', SURFACE REMOVAL AND REPLACEMENT WILL COVER WIDTH OF SHOULDER
- 4: CONCRETE CURB AND GUTTER SHOWN AT VARIOUS LOCATIONS AS DETAILED IN THE PLANS, REMOVED AND REPLACED AT THE DIRECTION OF THE ENGINEER.



**NOTES:**

1. ALL PAVEMENT PATCHING, COMBINATION CONCRETE CURB AND GUTTER REPLACEMENT, AND DRIVEWAY REMOVAL & REPLACEMENT 1.5 FT. LOCATIONS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
2. LOCATIONS FOR DRAINAGE STRUCTURES TO BE CLEANED SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
3. IN ADDITION TO FIELD REVIEW AND AERIAL DATA, PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING FACILITIES HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD. SUCH VARIATIONS SHALL NOT BE A CAUSE FOR ADDITIONAL COMPENSATION DUE TO A CHANGE IN THE SCOPE OF THE WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE BID PRICE FOR THE WORK.
4. THE LOCATION AND CONFIGURATION OF ALL EXISTING PAVEMENT MARKINGS, INCLUDING NO PASSING ZONES, WILL BE NOTED PRIOR TO RESURFACING AND REPLACED IN THE SAME LOCATIONS AFTER RESURFACING. COST TO BE INCLUDED IN THE REPLATED PAVEMENT MARKING PAY ITEMS.

**LEGEND**



**LONCO, INC.**  
CONSULTING ENGINEERS  
1560 WALL STREET, SUITE 222  
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

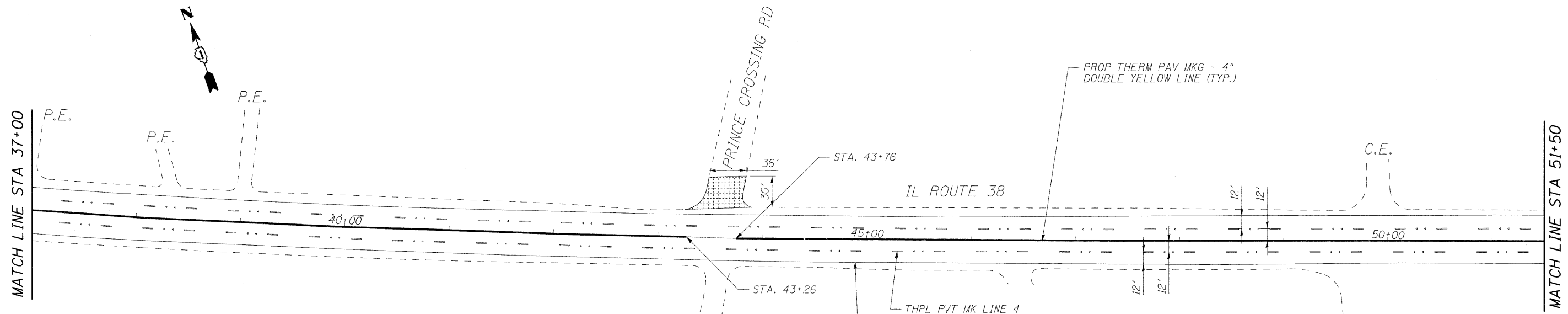
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| PLDT DATE = #DATE#   | CHECKED - MJY     | REVISED - |
|                      | DATE - 04/22/2009 | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PAVING & PAVEMENT MARKING PLAN  
ILL 38 ROOSEVELT RD.**

SCALE: 1" = 50' SHEET NO. 5 OF 22 SHEETS STA. 17+00 TO STA. 37+00

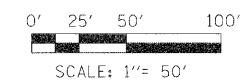
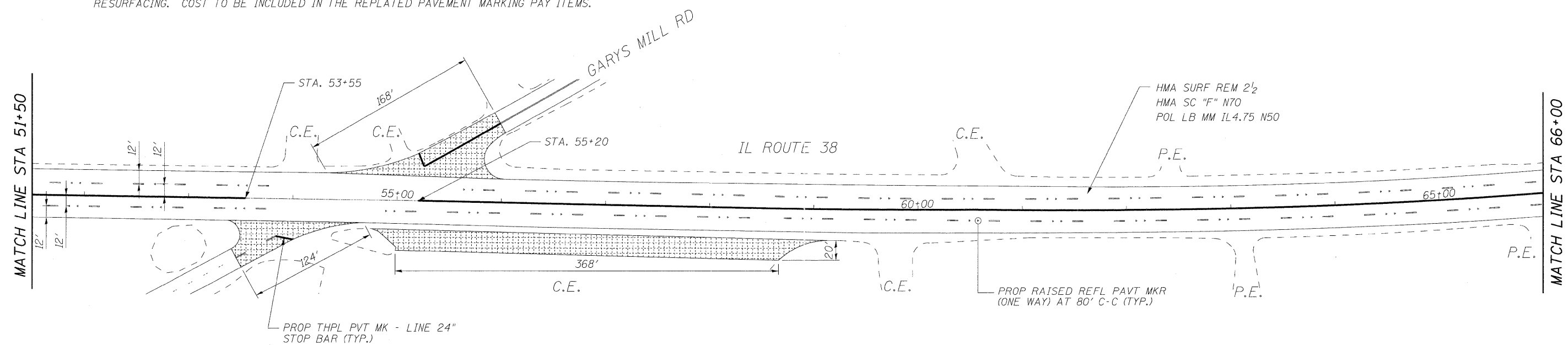
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|---|------------------------|--------------------|-----------------|-------------|
| F.A.P. RTE. 347                                 | SECTION (G & 2) Y-RS-7 | COUNTY DUPAGE      | TOTAL SHEETS 22 | SHEET NO. 5 |
| D-91-601-09                                     |                        | CONTRACT NO. 60H31 |                 |             |
| FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT |                        |                    |                 |             |



**NOTES:**

1. ALL PAVEMENT PATCHING, COMBINATION CONCRETE CURB AND GUTTER REPLACEMENT, AND DRIVEWAY REMOVAL & REPLACEMENT 1.5 FT, LOCATIONS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
2. LOCATIONS FOR DRAINAGE STRUCTURES TO BE CLEANED SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
3. IN ADDITION TO FIELD REVIEW AND AERIAL DATA, PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING FACILITIES HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DEMENSIONS AND DETAILS IN THE FIELD. SUCH VARIATIONS SHALL NOT BE A CAUSE FOR ADDITIONAL COMPENSATION DUE TO A CHANGE IN THE SCOPE OF THE WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE BID PRICE FOR THE WORK.
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**LEGEND**



**LONGO INC.**  
CONSULTING ENGINEERS  
1560 WALL STREET, SUITE 222  
NAPERVILLE, ILLINOIS 60563 PH: 630/577-9100

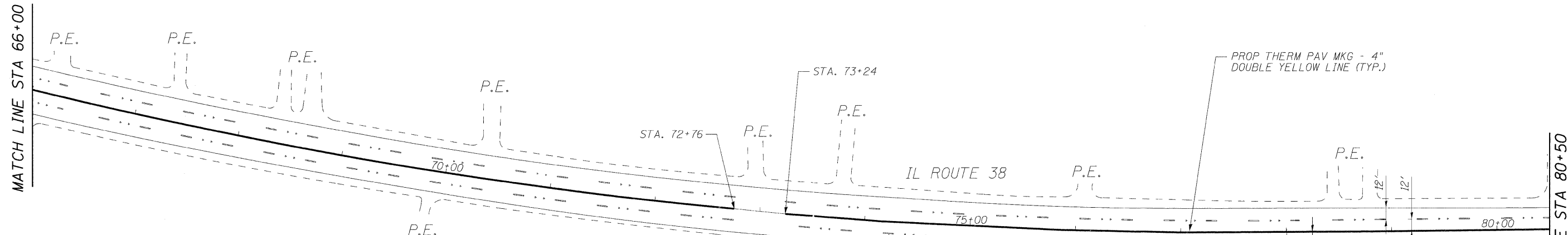
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| PLOT DATE = #DATE#   | CHECKED - MJY     | REVISED - |
|                      | DATE - 04/22/2009 | REVISED - |

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

**PAVING & PAVEMENT MARKING PLAN**  
**ILL 38 ROOSEVELT RD.**

SCALE: 1" = 50' SHEET NO. 6 OF 22 SHEETS STA. 37+00 TO STA. 66+00

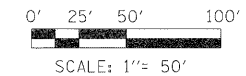
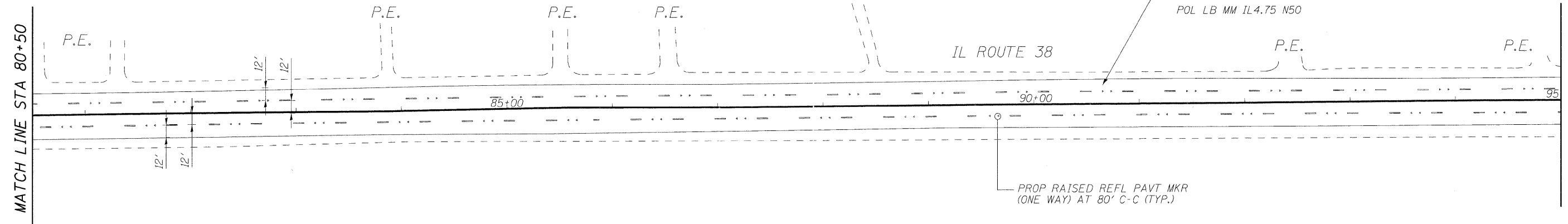
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|---|---------------------------|--------------------|--------------------|----------------|
| F.A.P. RTE.<br>347                              | SECTION<br>(G & 2) Y-RS-7 | COUNTY<br>DUPAGE   | TOTAL SHEETS<br>22 | SHEET NO.<br>6 |
| D-91-601-09                                     |                           | CONTRACT NO. 60H31 |                    |                |
| FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT |                           |                    |                    |                |



**NOTES:**

1. ALL PAVEMENT PATCHING, COMBINATION CONCRETE CURB AND GUTTER REPLACEMENT, AND DRIVEWAY REMOVAL & REPLACEMENT 1.5 FT, LOCATIONS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
2. LOCATIONS FOR DRAINAGE STRUCTURES TO BE CLEANED SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
3. IN ADDITION TO FIELD REVIEW AND AERIAL DATA, PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING FACILITIES HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DEMENSIONS AND DETAILS IN THE FIELD. SUCH VARIATIONS SHALL NOT BE A CAUSE FOR ADDITIONAL COMPENSATION DUE TO A CHANGE IN THE SCOPE OF THE WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE BID PRICE FOR THE WORK.
4. THE LOCATION AND CONFIGURATION OF ALL EXISTING PAVEMENT MARKINGS, INCLUDING NO PASSING ZONES, WILL BE NOTED PRIOR TO RESURFACING AND REPLACED IN THE SAME LOCATIONS AFTER RESURFACING. COST TO BE INCLUDED IN THE REPLATED PAVEMENT MARKING PAY ITEMS.

**LEGEND**



**LOCO, INC.**  
CONSULTING ENGINEERS  
1560 WALL STREET, SUITE 222  
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

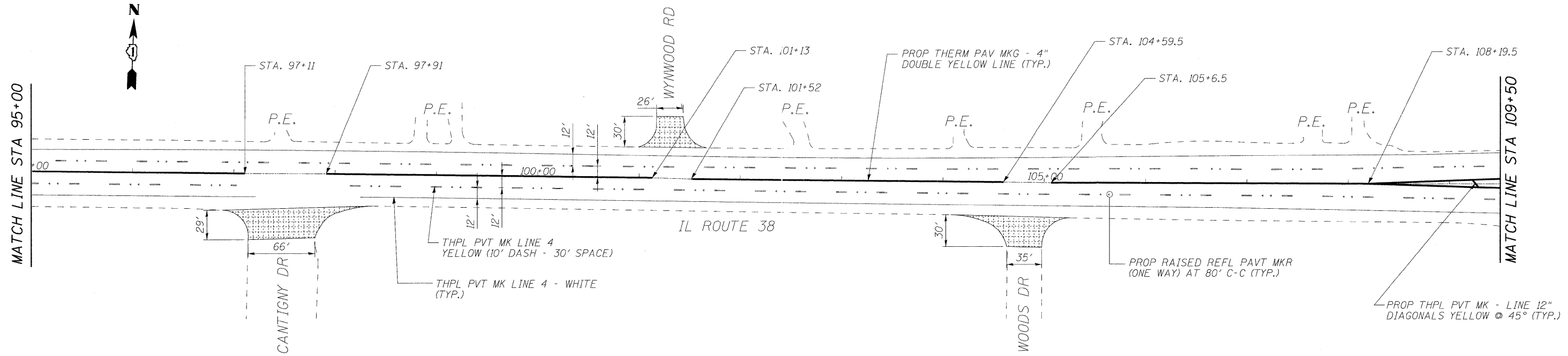
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|                      | DATE - 04/22/2009 | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PAVING & PAVEMENT MARKING PLAN  
ILL 38 ROOSEVELT RD.**

SCALE: 1" = 50'    SHEET NO. 7 OF 22 SHEETS    STA. 66+00 TO STA. 95+00

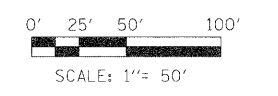
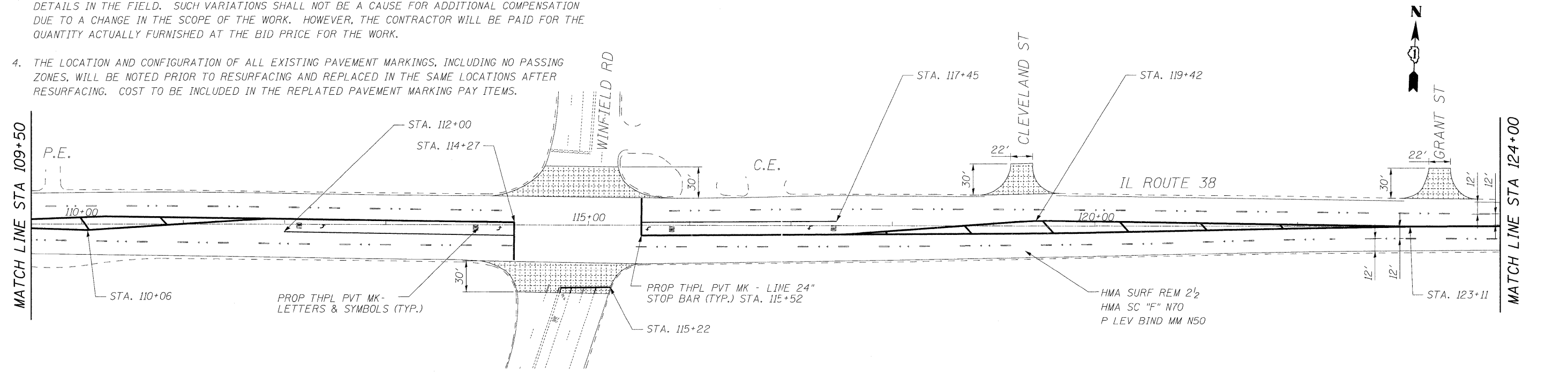
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| F.A.P. RTE. 347                                 | SECTION (G & 2) Y-RS-7 | COUNTY DUPAGE | TOTAL SHEETS 22    | SHEET NO. 7 |
| D-91-601-09                                     |                        |               | CONTRACT NO. 60H31 |             |
| FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT |                        |               |                    |             |



**NOTES:**

1. ALL PAVEMENT PATCHING, COMBINATION CONCRETE CURB AND GUTTER REPLACEMENT, AND DRIVEWAY REMOVAL & REPLACEMENT 1.5 FT. LOCATIONS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
2. LOCATIONS FOR DRAINAGE STRUCTURES TO BE CLEANED SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
3. IN ADDITION TO FIELD REVIEW AND AERIAL DATA, PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING FACILITIES HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DEMENSIONS AND DETAILS IN THE FIELD. SUCH VARIATIONS SHALL NOT BE A CAUSE FOR ADDITIONAL COMPENSATION DUE TO A CHANGE IN THE SCOPE OF THE WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE BID PRICE FOR THE WORK.
4. THE LOCATION AND CONFIGURATION OF ALL EXISTING PAVEMENT MARKINGS, INCLUDING NO PASSING ZONES, WILL BE NOTED PRIOR TO RESURFACING AND REPLACED IN THE SAME LOCATIONS AFTER RESURFACING. COST TO BE INCLUDED IN THE REPLATED PAVEMENT MARKING PAY ITEMS.

**LEGEND**



**LONGO, INC.**  
CONSULTING ENGINEERS  
1560 WALL STREET, SUITE 222  
NAPERVILLE, ILLINOIS 60563 PH: 630/577-9100

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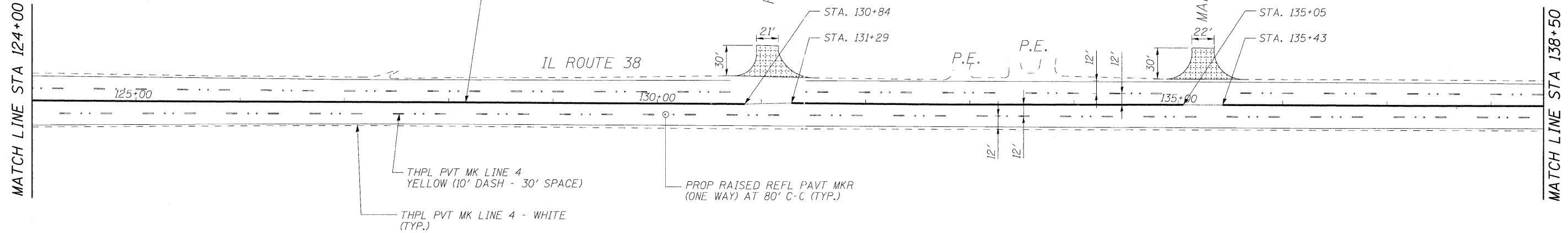
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PAVING & PAVEMENT MARKING PLAN  
ILL 38 ROOSEVELT RD.**

SCALE: 1" = 50'    SHEET NO. 8 OF 22 SHEETS    STA. 95+00 TO STA. 124+00

|   |                        |                    |                 |             |
|---|------------------------|--------------------|-----------------|-------------|
| F.A.P. RTE. 347                                 | SECTION (G & 2) Y-RS-7 | COUNTY DUPAGE      | TOTAL SHEETS 22 | SHEET NO. 8 |
| D-91-601-09                                     |                        | CONTRACT NO. 60H31 |                 |             |
| FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT |                        |                    |                 |             |

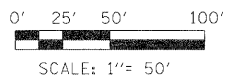
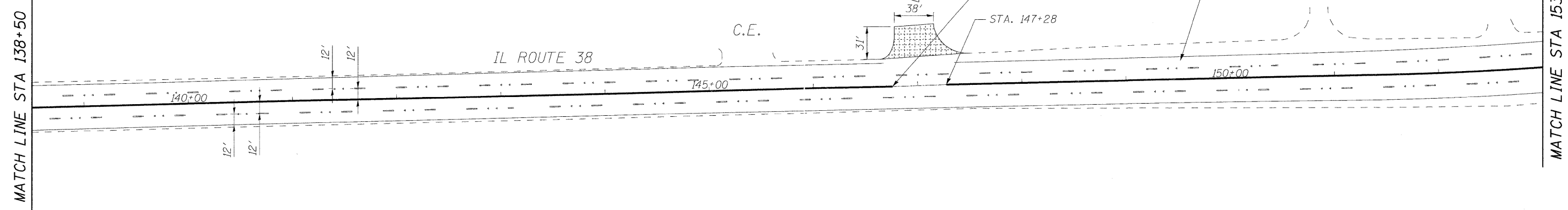
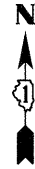




**NOTES:**

1. ALL PAVEMENT PATCHING, COMBINATION CONCRETE CURB AND GUTTER REPLACEMENT, AND DRIVEWAY REMOVAL & REPLACEMENT 1.5 FT, LOCATIONS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
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**LEGEND**



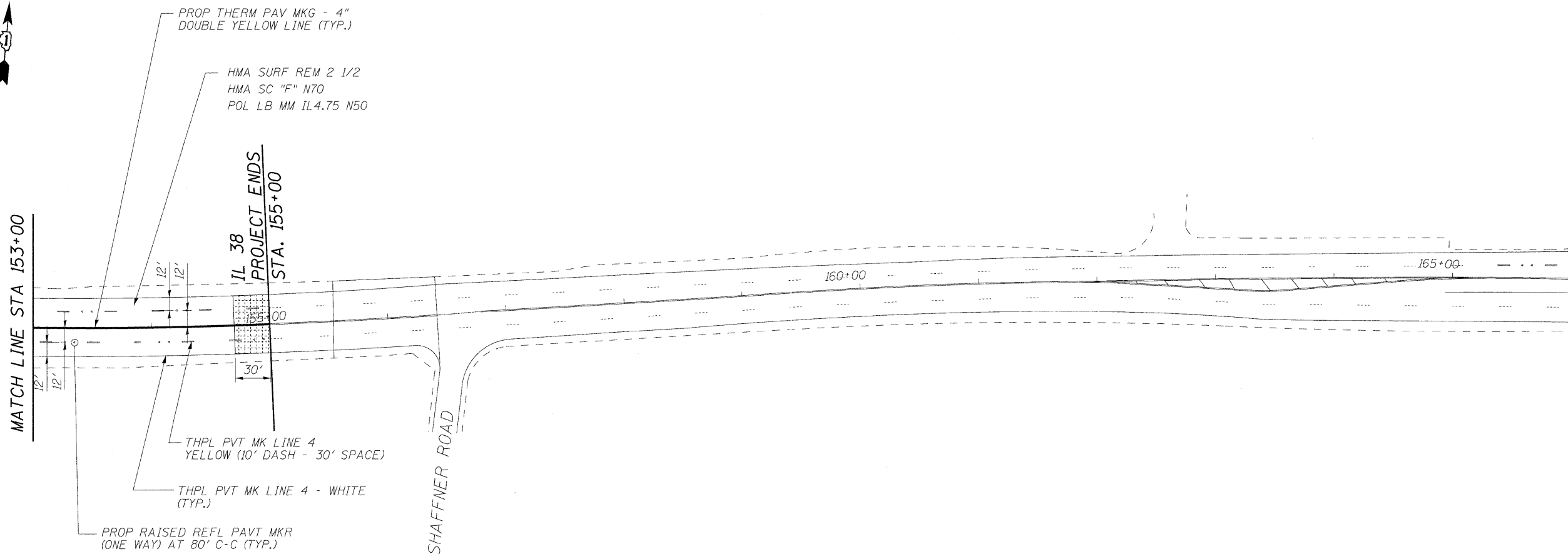
**LONCO, INC.**  
CONSULTING ENGINEERS  
1560 WALL STREET, SUITE 222  
NAPERVILLE, ILLINOIS 60563 PH: 630/577-9100

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| PLOT SCALE = \$SCALE\$ | DRAWN - ZDA & ST  | REVISED - |
| PLOT DATE = \$DATE\$   | CHECKED - MJY     | REVISED - |
|                        | DATE - 04/22/2009 | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

|  |                          |                            |
|--|--------------------------|----------------------------|
| <b>PAVING &amp; PAVEMENT MARKING PLAN<br/>ILL 38 ROOSEVELT RD.</b> |                          |                            |
| SCALE: 1" = 50'  | SHEET NO. 9 OF 22 SHEETS | STA. 124+00 TO STA. 153+00 |

|   |                        |               |                    |             |
|---|------------------------|---------------|--------------------|-------------|
| F.A.P. RTE. 347                                 | SECTION (G & 2) Y-RS-7 | COUNTY DUPAGE | TOTAL SHEETS 22    | SHEET NO. 9 |
| D-91-601-09                                     |                        |               | CONTRACT NO. 60H31 |             |
| FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT |                        |               |                    |             |

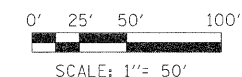


**NOTES:**

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**LEGEND**

- HMA SURFACE REMOVAL - BUTT JOINT



**LONCO, INC.**  
CONSULTING ENGINEERS  
1560 WALL STREET, SUITE 222  
NAPERVILLE, ILLINOIS 60563 PH: 630/577-9100

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|                      | DRAWN - ZDA & ST  | REVISED - |
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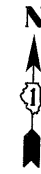
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PAVING & PAVEMENT MARKING PLAN  
ILL 38 ROOSEVELT RD.**

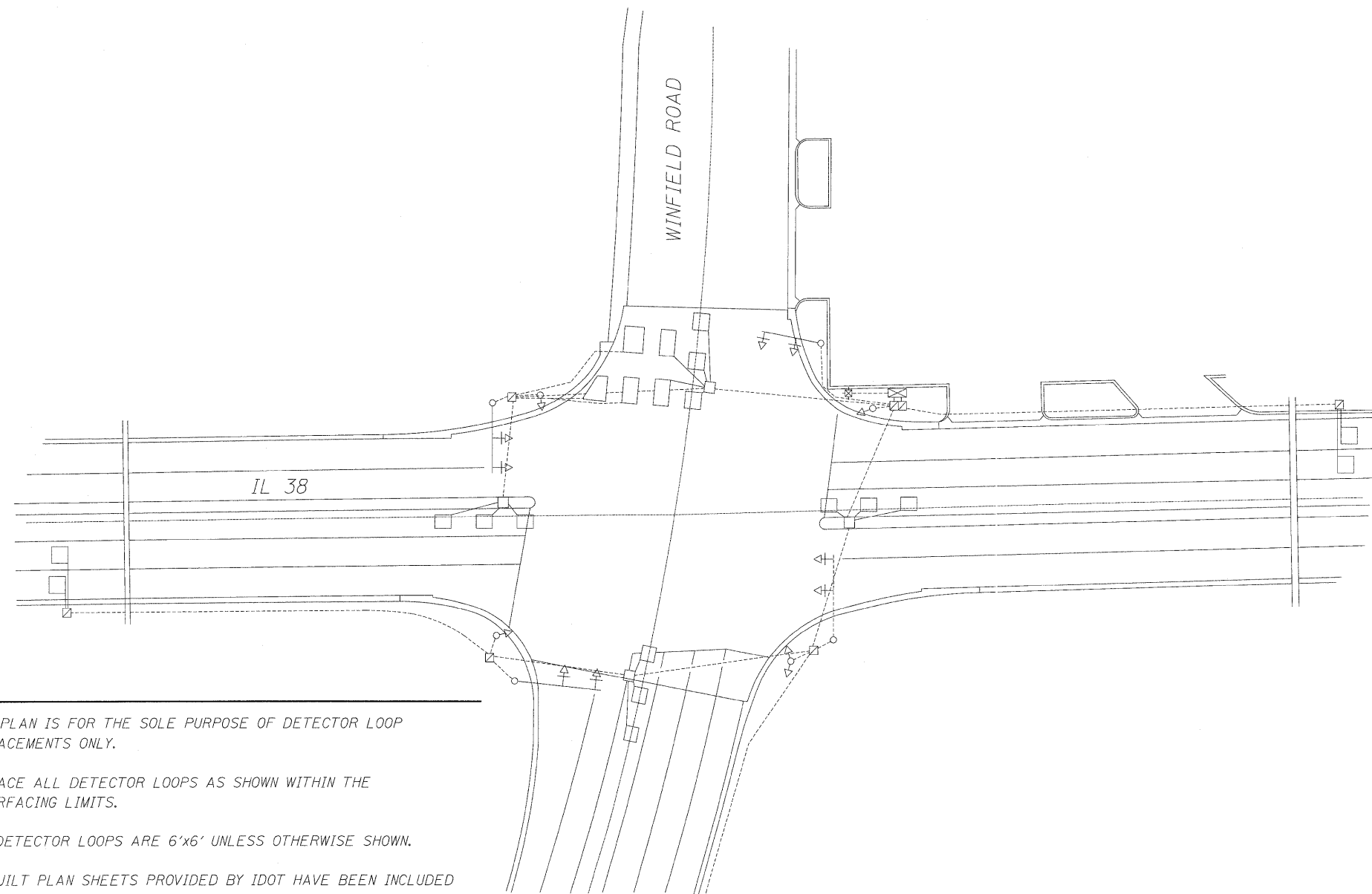
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| F.A.P. RTE. 347     | SECTION (G & 2) Y-RS-7 | COUNTY DUPAGE             | TOTAL SHEETS 22 | SHEET NO. 10               |
| SCALE: 1" = 50'     |                        | SHEET NO. 10 OF 22 SHEETS |                 | STA. 153+00 TO STA. 155+00 |
| FED. ROAD DIST. NO. |                        | ILLINOIS FED. AID PROJECT |                 |                            |

**CONTRACT NO. 60H31**

TRAFFIC SIGNAL LEGEND



|   | PROPOSED | EXISTING |
|---|----------|----------|
| DETECTOR LOOP                                   |          |          |
| SIGNAL HEAD                                     |          |          |
| G.S. CONDUIT IN TRENCH OR PUSHED                |          |          |
| SIGNAL HEAD WITH BACKPLATE                      |          |          |
| RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR II     |          |          |
| VEHICLE DETECTOR, NON-COMPENSATED MAGNETIC TYPE |          |          |



NOTES:

1. THIS PLAN IS FOR THE SOLE PURPOSE OF DETECTOR LOOP REPLACEMENTS ONLY.
2. REPLACE ALL DETECTOR LOOPS AS SHOWN WITHIN THE RESURFACING LIMITS.
3. ALL DETECTOR LOOPS ARE 6'x6' UNLESS OTHERWISE SHOWN.
4. AS-BUILT PLAN SHEETS PROVIDED BY IDOT HAVE BEEN INCLUDED FOR BIDDING PURPOSES ONLY, AND DO NOT NECESSARILY REFLECT ACTUAL FIELD CONDITIONS. PROPOSED DETECTOR LOOPS SHALL BE REPLACED AT ALL EXISTING LOCATIONS WITHIN THE PROJECT LIMITS, IN ACCORDANCE WITH STANDARD TS-07, SPECIAL PROVISIONS, AND AS DIRECTED BY THE ENGINEER.

THIS PLAN IS FOR THE SOLE PURPOSE OF DETECTOR LOOP REPLACEMENTS ONLY

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

**LONGO, INC.**  
CONSULTING ENGINEERS  
1560 WALL STREET  
NAPERVILLE, ILLINOIS 60563 PH (630) 577-9100

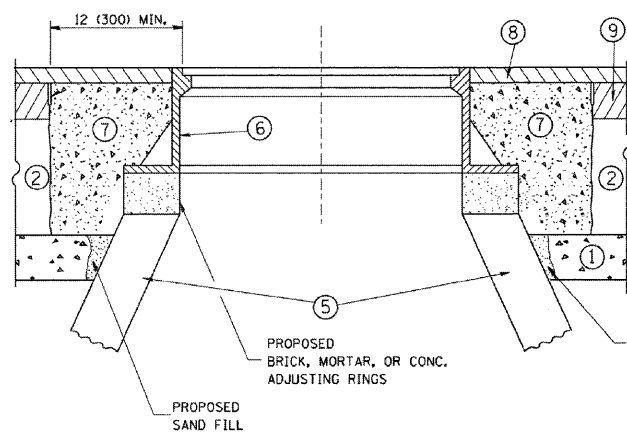
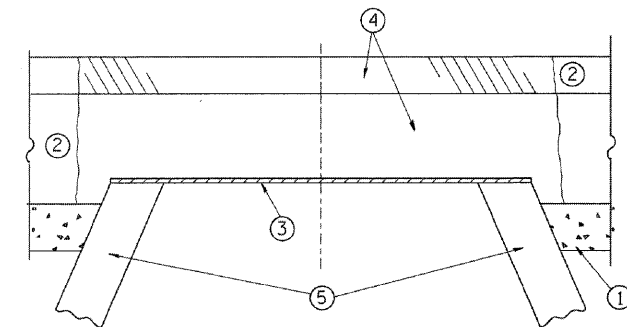
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|                      | DRAWN - ZDA       | REVISED - |
| PLOT SCALE = #SCALE# | CHECKED - MJY     | REVISED - |
| PLOT DATE = #DATE#   | DATE - 04/22/2009 | REVISED - |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE - DETECTOR LOOP REPLACEMENT  
IL ROUTE 38 AT WINFIELD ROAD

SCALE: 1" = 50' SHEET NO. 11 OF 22 SHEETS STA. 13+00 TO STA. 150+00

|   |                        |                    |                 |              |
|---|------------------------|--------------------|-----------------|--------------|
| F.A.P. RTE. 347                                 | SECTION (G & Z) Y-RS-7 | COUNTY DUPAGE      | TOTAL SHEETS 22 | SHEET NO. 11 |
| C-91-601-09                                     |                        | CONTRACT NO. 60H31 |                 |              |
| FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT |                        |                    |                 |              |



**CONSTRUCTION PROCEDURES**

**STAGE 1 (BEFORE PAVEMENT MILLING)**

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

**STAGE 2 (AFTER PAVEMENT MILLING)**

- A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.
- B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
- C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS SI CONCRETE, OR HMA SURFACE COURSE OR HMA BINDER COURSE 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 36 (900) DIAMETER METAL PLATE
- ④ PROPOSED CRUSHED STONE AND HMA SURFACE MIX
- ⑤ EXISTING STRUCTURE
- ⑥ FRAME AND LID (SEE NOTES)
- ⑦ CLASS SI CONCRETE, HMA SURFACE COURSE OR HMA BINDER COURSE
- ⑧ PROPOSED HMA SURFACE COURSE
- ⑨ PROPOSED HMA BINDER COURSE

**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.

**LOCATION OF STRUCTURES:**

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

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

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

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

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

**LOCO INC.**  
CONSULTING ENGINEERS  
1560 WALL ST, SUITE 222  
NAPERVILLE, ILLINOIS 60563 PH: 630/571-9100

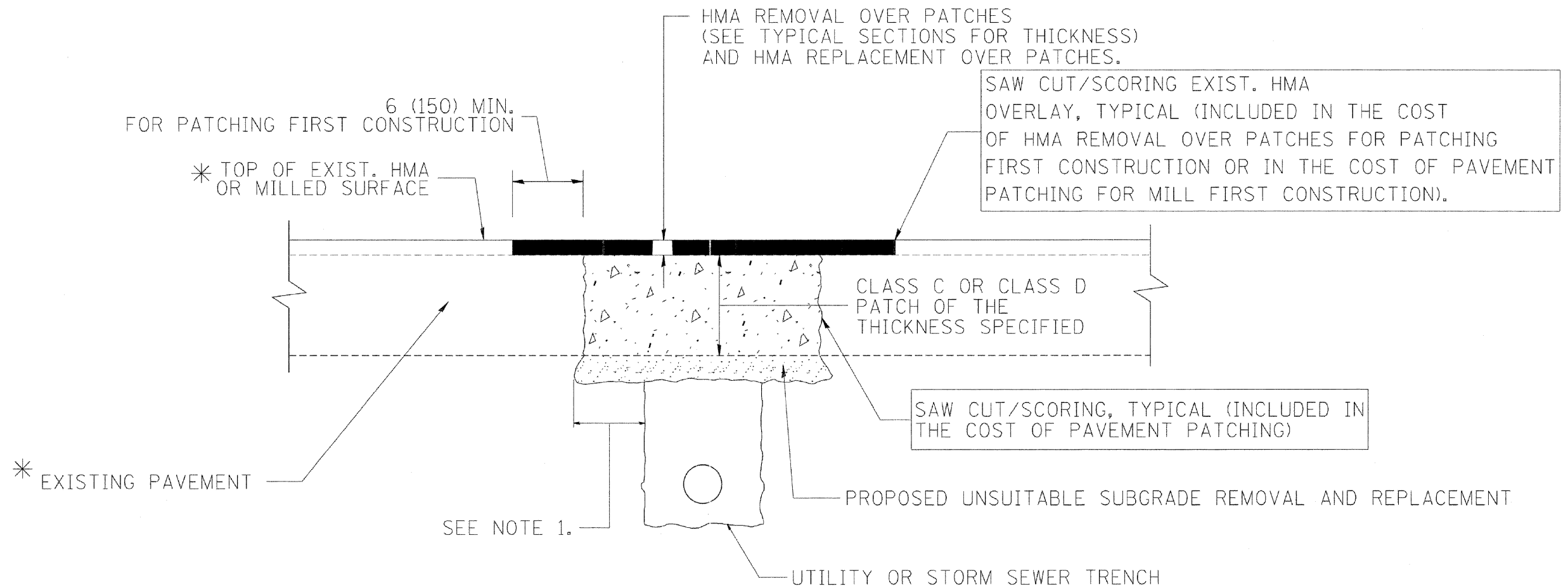
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| PLOT DATE = #DATE#   | DATE - 04/15/2009 | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE DETAIL SHEETS  
ILL 38 ROOSEVELT RD.**

SCALE: NONE SHEET NO. 12 OF 22 SHEETS STA. 13+00 TO STA. 150+00

|   |                |                    |              |           |
|---|----------------|--------------------|--------------|-----------|
| F.A.P. RTE.                                   | SECTION        | COUNTY             | TOTAL SHEETS | SHEET NO. |
| 347   | (G & 2) Y-RS-7 | DUPAGE             | 22           | 12        |
| C-91-601-09                                   |                | CONTRACT NO. 60H31 |              |           |
| FED. ROAD DIST. NO. 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 (PATCHING FIRST)**

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

**SEQUENCE OF CONSTRUCTION (MILLING FIRST)**

1. MILL HMA FIRST IF THERE IS AT LEAST 4 1/2 INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

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

**PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT**

**LONCO, INC.**  
CONSULTING ENGINEERS  
1560 WALL ST., SUITE 222  
NAPERVILLE, ILLINOIS 60563 PH (630) 577-9100

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|----------------------|-------------------|-----------|
| USER NAME = #USER#   | DESIGNED - MJY    |           |
|                      | DRAWN - RJG       | REVISED - |
| PLOT SCALE = #SCALE# | CHECKED - MJY     | REVISED - |
| PLOT DATE = #DATE#   | DATE - 04/15/2009 | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE DETAIL SHEETS  
ILL 38 ROOSEVELT RD.**

SCALE: NONE SHEET NO. 13 OF 22 SHEETS STA. 13+00 TO STA. 150+00

|   |                |        |                    |           |
|---|----------------|--------|--------------------|-----------|
| F.A.P. RTE.                                     | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
| 347   | (G & 2) Y-RS-7 | DUPAGE | 22                 | 13        |
| C-91-601-09                                     |                |        | CONTRACT NO. 60H31 |           |
| FED. ROAD DIST. NO. [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

18" (450) MAX.

EXISTING OR PROPOSED HMA SURFACE (IF APPLICABLE)

1/4" (5) \*\*

EXISTING SIDEWALK, DRIVEWAY, MEDIAN SURFACE OR GROUND.

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

EXISTING CONCRETE PAVEMENT, CONCRETE BASE COURSE OR FLEXIBLE PAVEMENT

3" (75) MIN.

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.)

- \* 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.

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.

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.

REMOVAL AND REPLACEMENT 4" (100) OR LESS IS 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.

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

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.

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 USUABLE AS DETERMINED BY THE ENGINEER. (SEE NOTE ③).

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.

**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".

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.

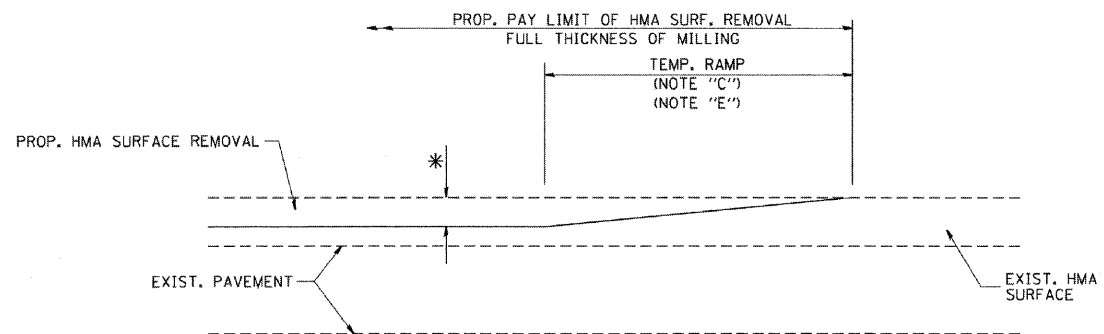
⑦ THE LOCATIONS OF REMOVAL AND REPLACEMENT OF EXISTING CURB OR CURB AND GUTTER SHALL BE DETERMINED BY THE RESIDENT ENGINEER AT THE TIME OF CONSTRUCTION.

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

## CURB OR CURB AND GUTTER REMOVAL AND REPACEMENT

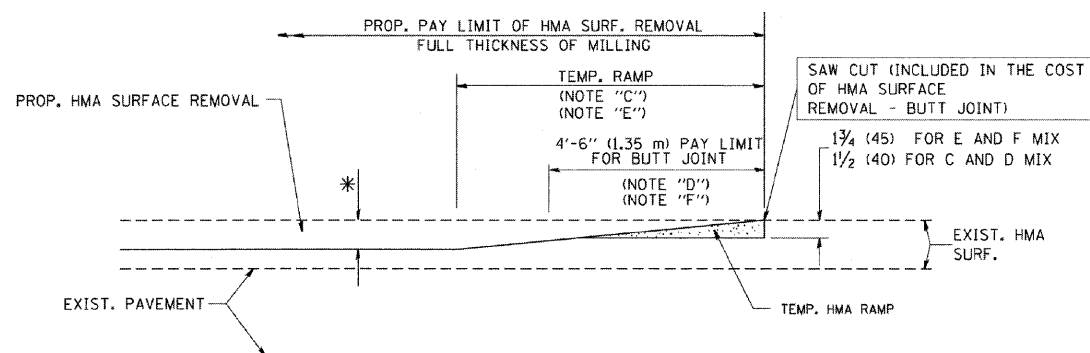
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|----------------------|-------------------|-----------|
| USER NAME = #USERS#  | DESIGNED - MJY    |           |
|                      | DRAWN - RJG       | REVISED - |
| PLOT SCALE = #SCALE# | CHECKED - MJY     | REVISED - |
| PLOT DATE = #DATE#   | DATE - 04/15/2009 | REVISED - |

|   |                |        |                    |           |
|---|----------------|--------|--------------------|-----------|
| F.A.P. RTE.                                     | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
| 347   | (G & 2) Y-RS-7 | DUPAGE | 22                 | 14        |
| C-91-601-09                                     |                |        | CONTRACT NO. 60H31 |           |
| FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT |                |        |                    |           |



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

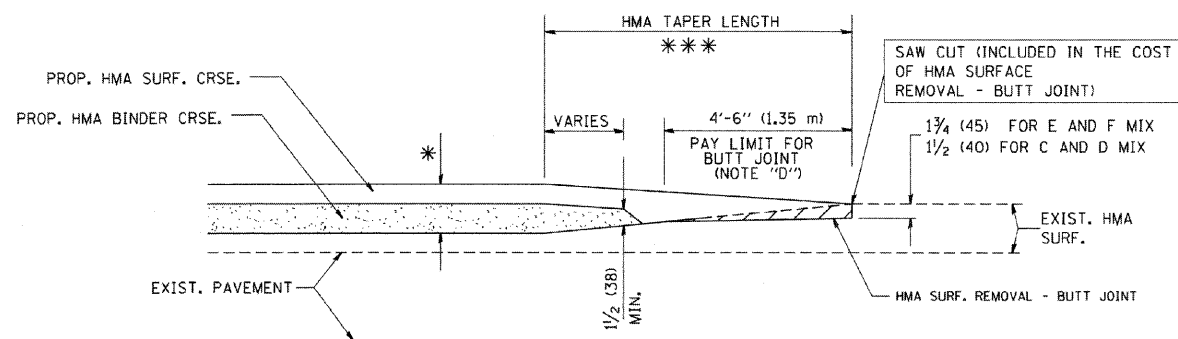
OPTION 1



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

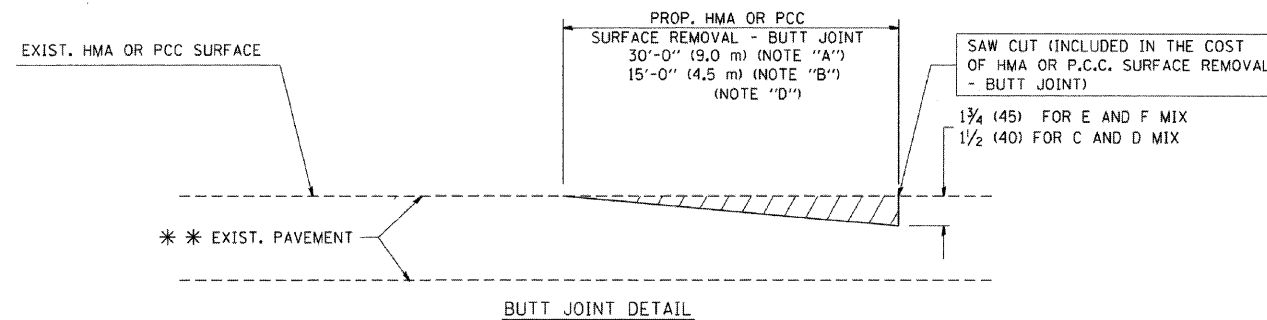
OPTION 2

TYPICAL TEMPORARY RAMP

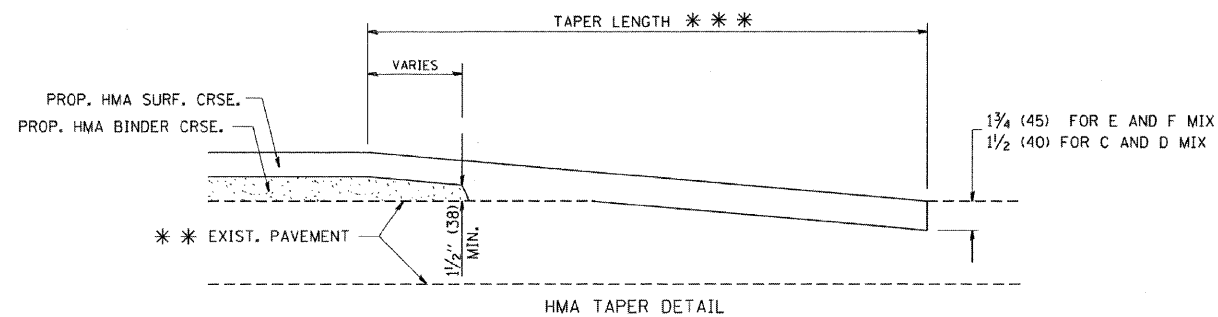


BUTT JOINT AND HMA TAPER

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.

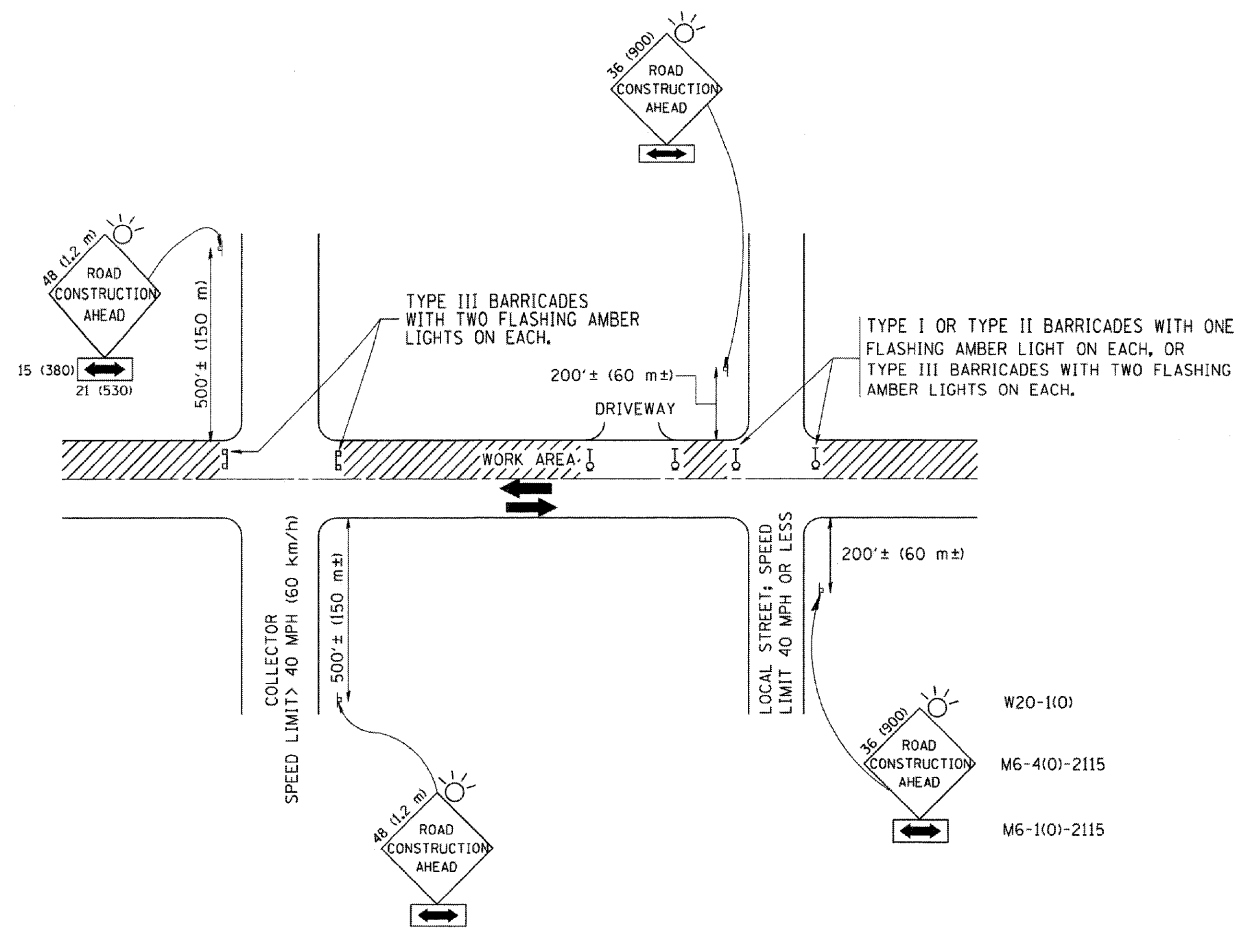
BASIS OF PAYMENT:

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".

BUTT JOINT AND HMA TAPER DETAILS

|                        |                   |           |
|------------------------|-------------------|-----------|
| USER NAME = \$USER\$   | DESIGNED - MJY    |           |
|                        | DRAWN - RJG       | REVISED - |
| PLOT SCALE = \$SCALE\$ | CHECKED - MJY     | REVISED - |
| PLOT DATE = \$DATE\$   | DATE - 04/15/2009 | REVISED - |

|                     |                |                           |              |           |
|---------------------|----------------|---------------------------|--------------|-----------|
| F.A.P. RTE.         | SECTION        | COUNTY                    | TOTAL SHEETS | SHEET NO. |
| 347                 | (G & 2) Y-RS-7 | DUPAGE                    | 22           | 15        |
| C-91-601-09         |                | CONTRACT NO. 60H31        |              |           |
| FED. ROAD DIST. NO. |                | ILLINOIS FED. AID PROJECT |              |           |



**NOTES:**

**A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS**

1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

a) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.

b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.

2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

a) ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.

b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.

3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

**B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:**

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.

C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.

D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

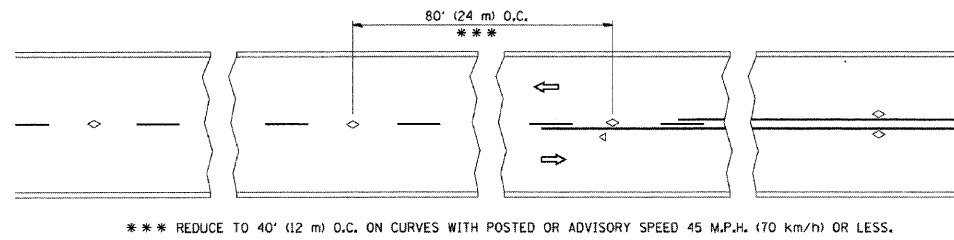
All dimensions are in millimeters (inches) unless otherwise shown.

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

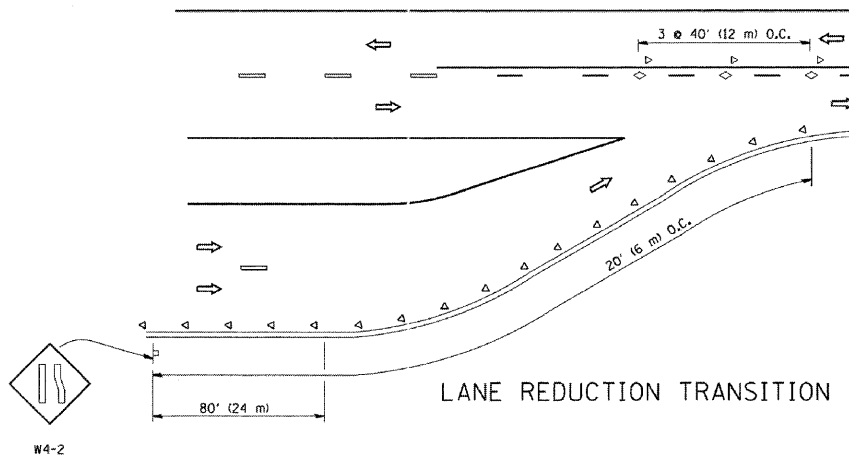
|                      |                   |           |
|----------------------|-------------------|-----------|
| USER NAME = #USER#   | DESIGNED - MJY    |           |
|                      | DRAWN - RJG       | REVISED - |
| PLOT SCALE = #SCALE# | CHECKED - MJY     | REVISED - |
| PLOT DATE = #DATE#   | DATE - 04/15/2009 | REVISED - |

|   |                        |                    |                 |              |
|---|------------------------|--------------------|-----------------|--------------|
| F.A.P. RTE. 347                                 | SECTION (G & 2) Y-RS-7 | COUNTY DUPAGE      | TOTAL SHEETS 22 | SHEET NO. 16 |
| C-91-601-09                                     |                        | CONTRACT NO. 60H31 |                 |              |
| FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT |                        |                    |                 |              |

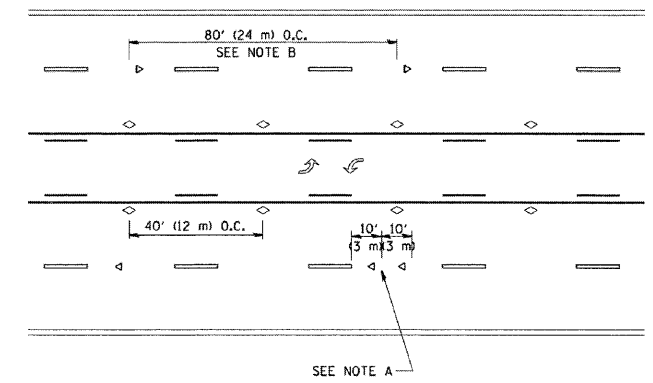




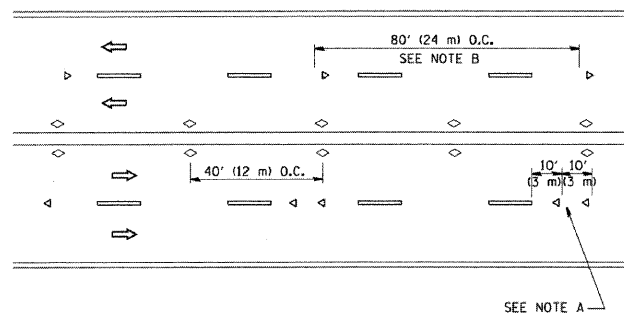
TWO-LANE/TWO-WAY



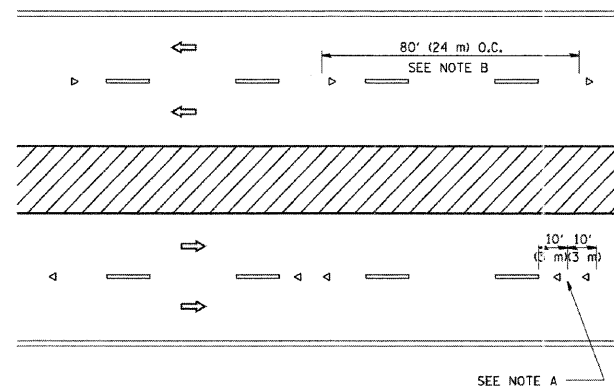
LANE REDUCTION TRANSITION



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

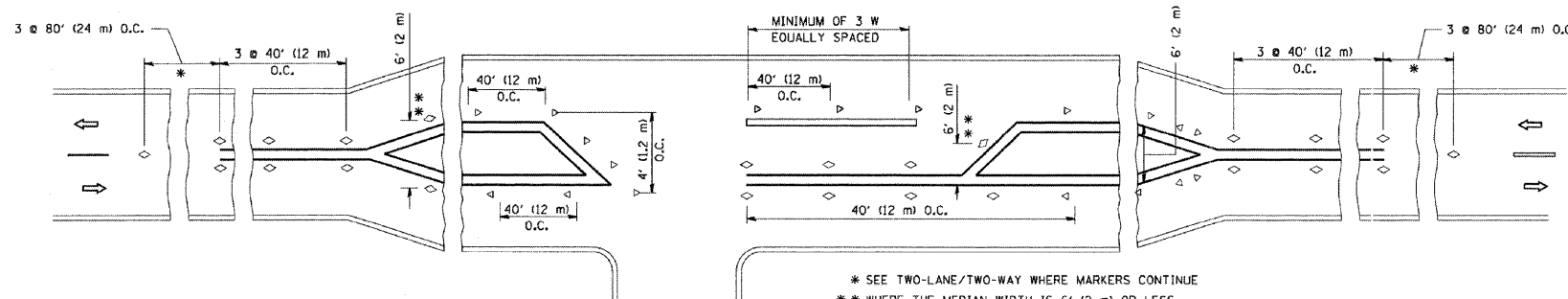
- YELLOW STRIPE
- WHITE STRIPE
- ◁ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◇ TWO-WAY AMBER MARKER

LANE MARKER NOTES

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

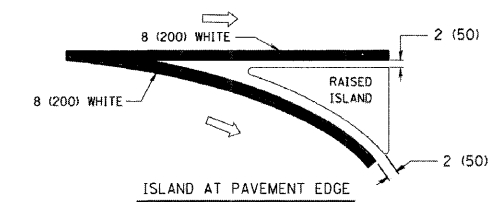
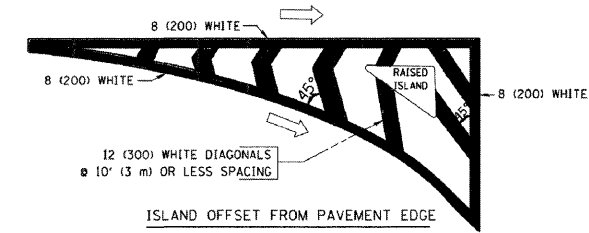
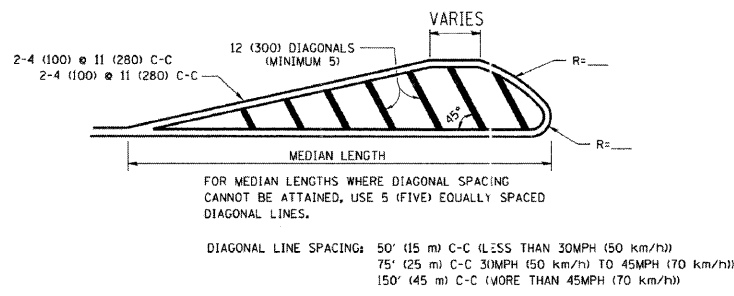
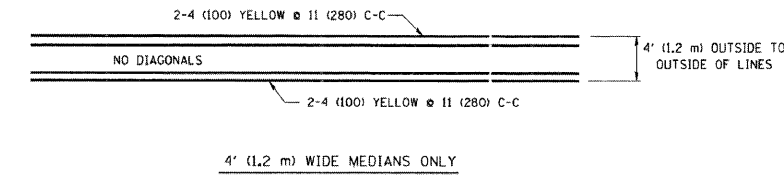
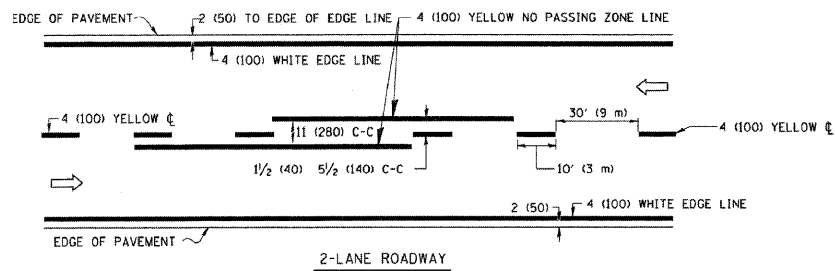
DESIGN NOTES

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.

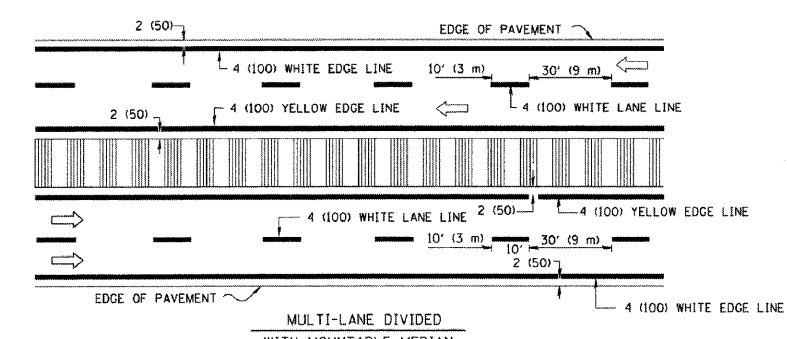
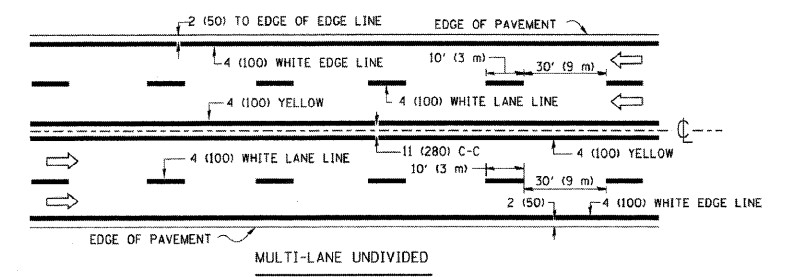


LEFT TURN

TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)

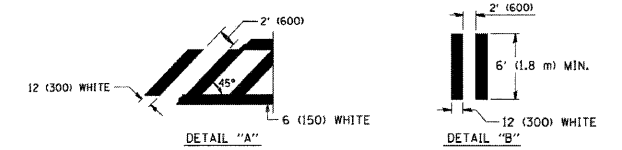
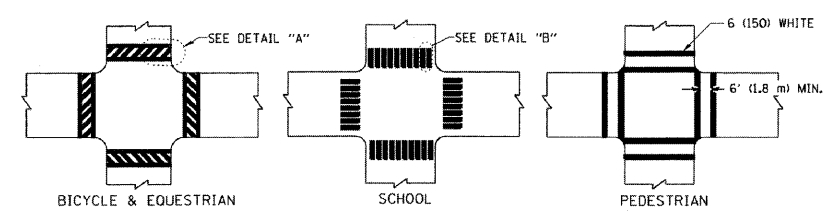


TYPICAL ISLAND MARKING

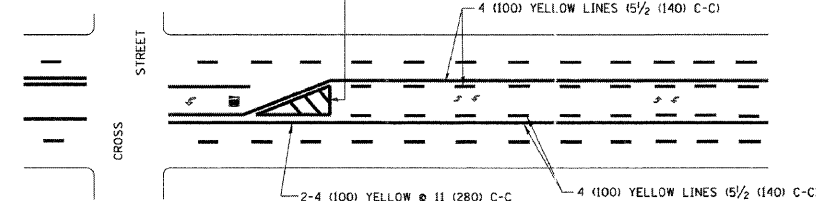


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

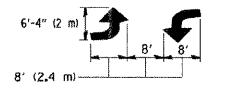
TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING

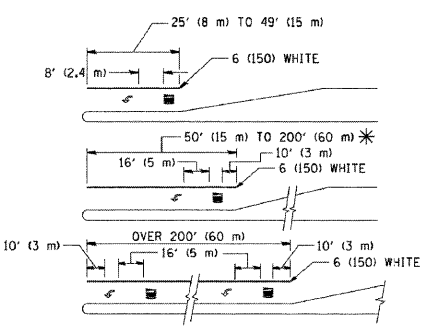


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



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>) ONLY 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

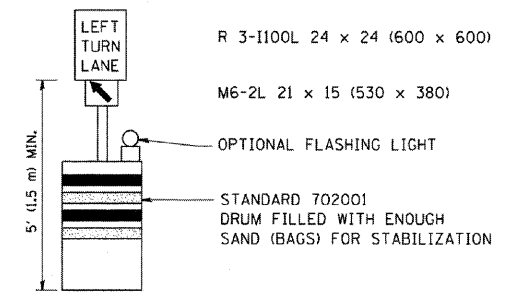
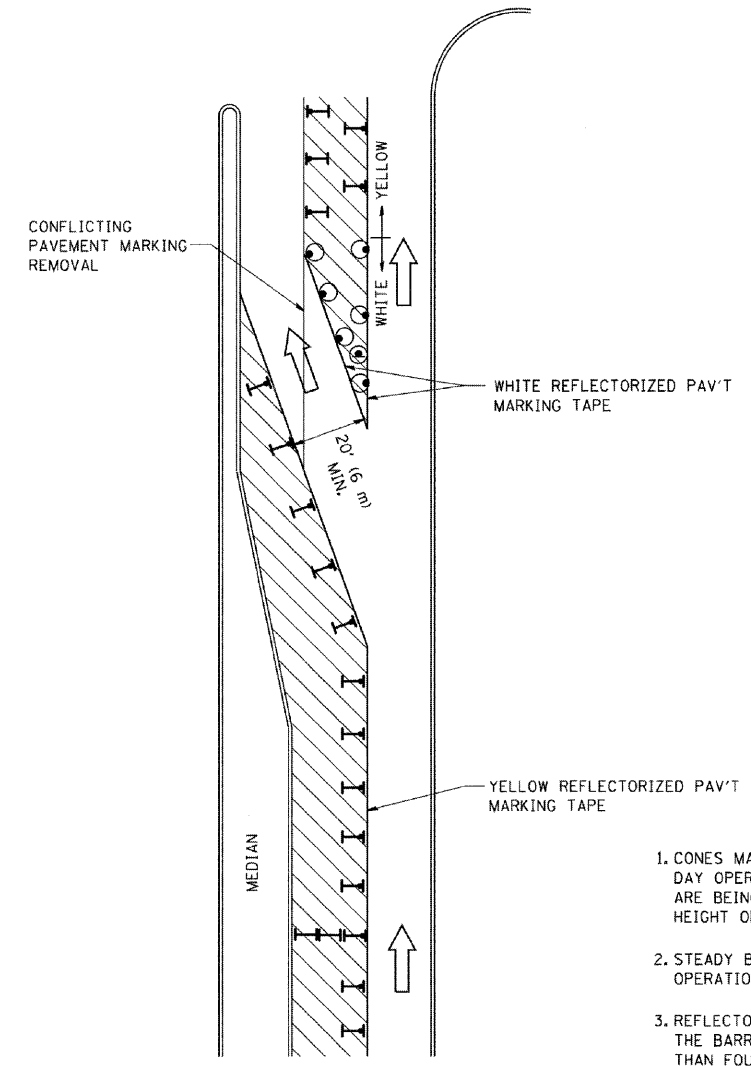
TYPICAL TURN LANE MARKING

| 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)<br>2 @ 4 (100)   | SOLID<br>SOLID                  | YELLOW<br>YELLOW                                  | 5/2 (140) C-C FROM SKIP-DASH CENTERLINE<br>11 (280) C-C<br>OMIT SKIP-DASH CENTERLINE BETWEEN   |
| LANE LINES  | 4 (100)<br>5 (125) ON FREEWAYS   | SKIP-DASH<br>SKIP-DASH          | WHITE<br>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<br>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<br>8' (2.4m) LEFT ARROW   | SKIP-DASH AND SOLID<br>IN PAIRS | YELLOW<br>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<br>SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL             |
| CROSSWALK LINES (PEDESTRIAN)<br>A. DIAGONALS (BIKE & EQUESTRIAN)<br>B. LONGITUDINAL BARS (SCHOOL) | 2 @ 6 (150)<br>12 (300) @ 45°<br>12 (300) @ 90°  | SOLID<br>SOLID<br>SOLID         | WHITE<br>WHITE<br>WHITE                           | NOT LESS THAN 6' (1.8 m) APART<br>2' (600) APART<br>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°<br>NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS | SOLID                           | YELLOW: TWO WAY TRAFFIC<br>WHITE: ONE WAY TRAFFIC | 11 (280) C-C FOR THE DOUBLE LINE<br>SEE TYPICAL PAINTED MEDIAN MARKING.  |
| GORE MARKING AND CHANNELIZING LINES   | 8 (200) WITH 12 (300) DIAGONALS @ 45°  | SOLID                           | WHITE   | DIAGONALS:<br>15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h))<br>20' (6 m) C-C (30MPH (50 km/h) TO 45MPH (70 km/h))<br>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<br>AREA OF:<br>"R"=3.6 SQ. FT. (0.33 m <sup>2</sup> ) EACH<br>"X"=54.0 SQ. FT. (5.0 m <sup>2</sup> )                                     |
| SHOULDER DIAGONALS  | 12 (300) @ 45°   | SOLID                           | WHITE - RIGHT<br>YELLOW - LEFT                    | 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))<br>75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h))<br>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.

# DISTRICT ONE TYPICAL PAVEMENT MARKINGS



**GENERAL NOTES**

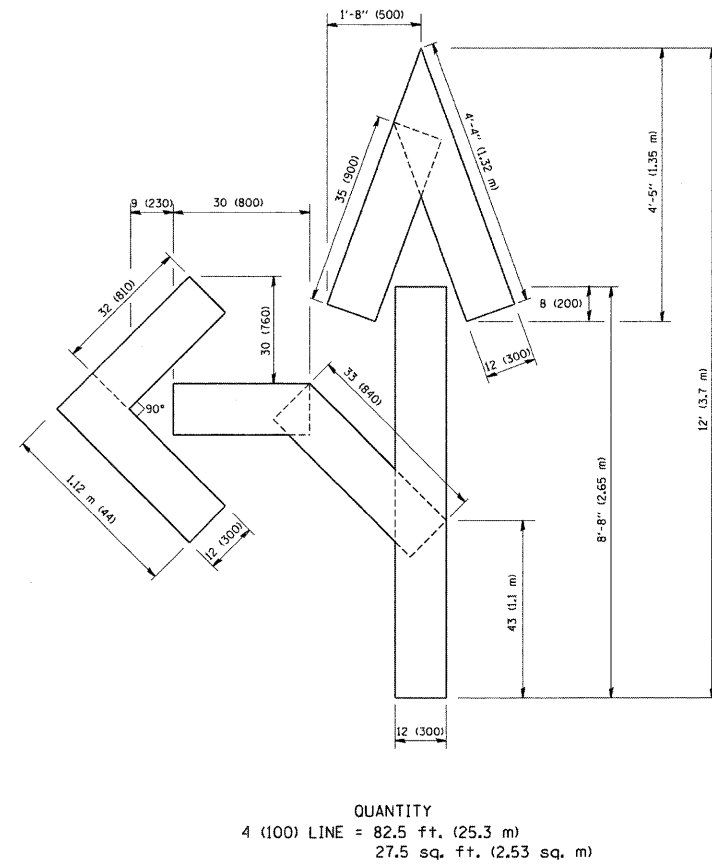
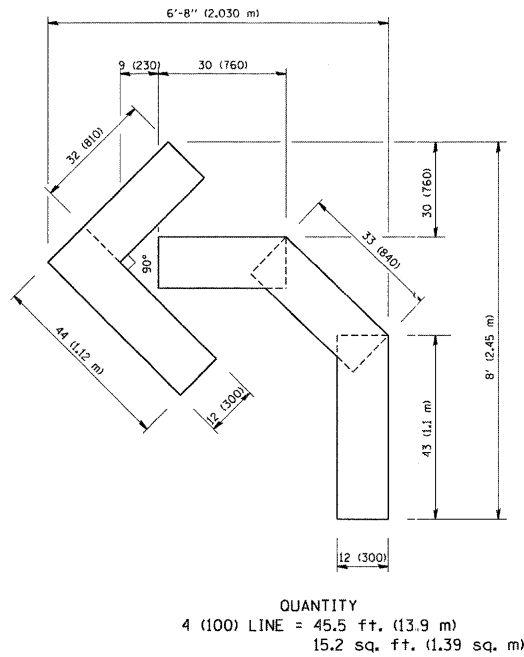
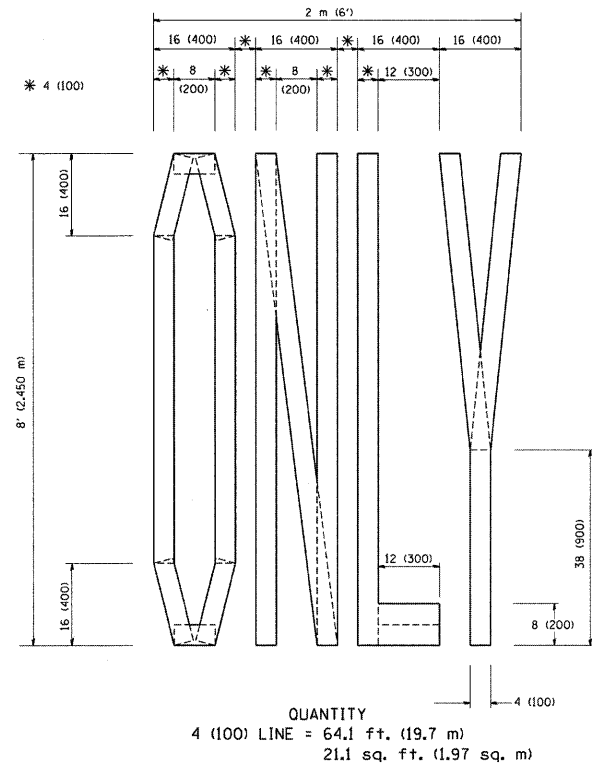
1. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT. WHEN CONES ARE BEING USED, THE "LEFT TURN LANE" SIGN MAY BE SKID MOUNTED AT A MINIMUM HEIGHT OF 5' (1.5 m).
2. STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES 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 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) 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.

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

**LEGEND**

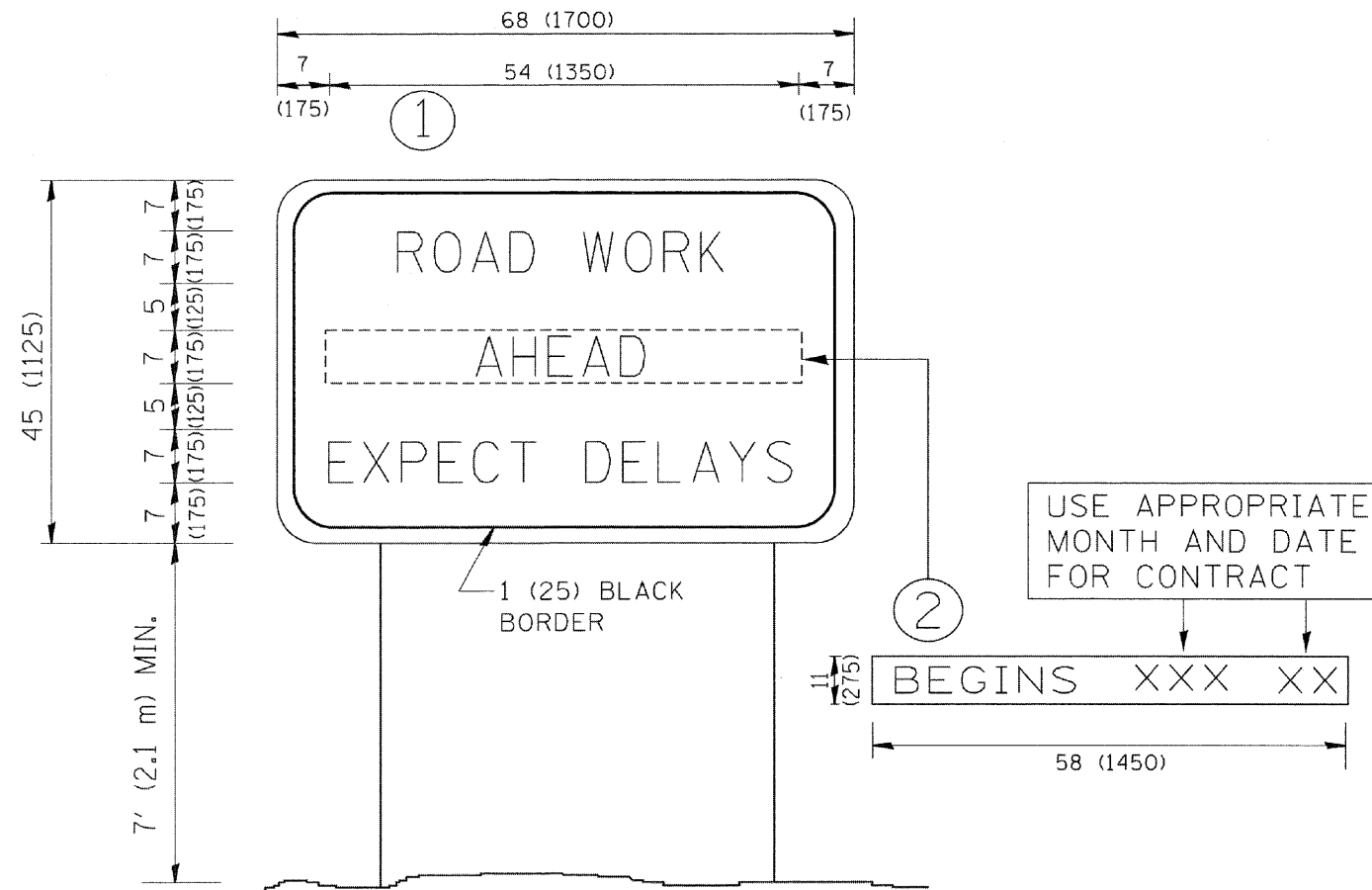
- WORK AREA
- LANE OPEN TO TRAFFIC
- TYPE I OR II BARRICADE WITH STEADY BURN LIGHT
- DRUM WITH STEADY BURN LIGHT
- DRUM WITH SIGN (WITH OPTIONAL FLASHING LIGHT) SEE DETAIL
- TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

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



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

## PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING



**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.

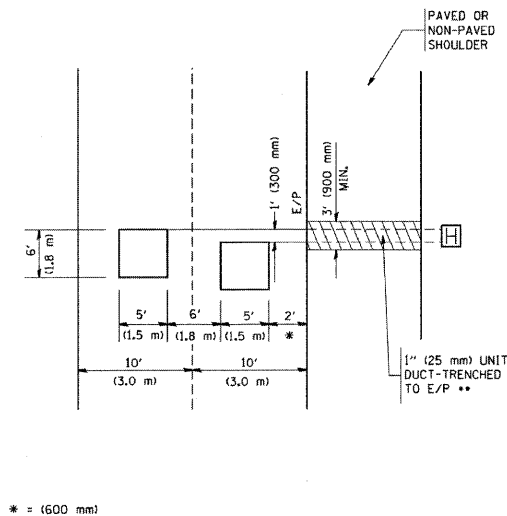
**ARTERIAL ROAD INFORMATION SIGN**

|                      |                   |           |
|----------------------|-------------------|-----------|
| USER NAME = #USER#   | DESIGNED - MJY    |           |
|                      | DRAWN - RJG       | REVISED - |
| PLOT SCALE = #SCALE# | CHECKED - MJY     | REVISED - |
| PLOT DATE = #DATE#   | DATE - 04/15/2009 | REVISED - |

|   |                           |                    |                    |                 |
|---|---------------------------|--------------------|--------------------|-----------------|
| F.A.P. RTE.<br>347                            | SECTION<br>(G & 2) Y-RS-7 | COUNTY<br>DUPAGE   | TOTAL SHEETS<br>22 | SHEET NO.<br>21 |
| C-91-601-09                                   |                           | CONTRACT NO. 60H31 |                    |                 |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT |                           |                    |                    |                 |

**LOOPS NEXT TO SHOULDERS**

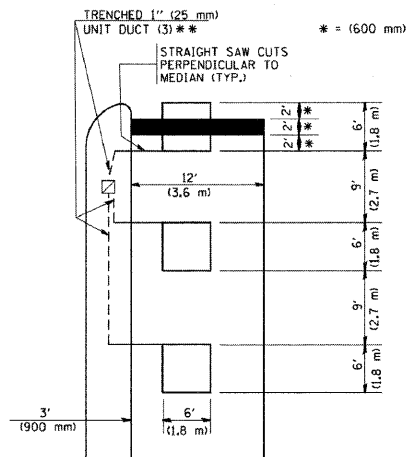
PROVIDE A PAVEMENT REPLACEMENT NOTE WHICH SHOULD EQUAL 3' (900 mm) X WIDTH OF PAVED SHOULDER.



\*\* 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)**

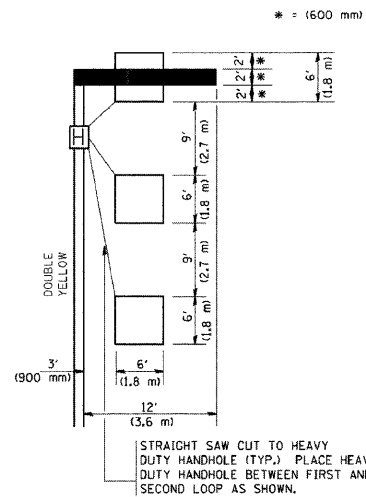
HANDHOLE LOCATION MAY VARY DEPENDING ON GEOMETRICS AND DESIGN OF TRAFFIC SIGNALS. HEAVY-DUTY HANDHOLES TO BE USED WHEN THE MEDIAN IS MOUNTABLE. REFER TO STANDARD B14001 TO ENSURE THAT HANDHOLE FITS IN MEDIAN.



\*\* 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)**



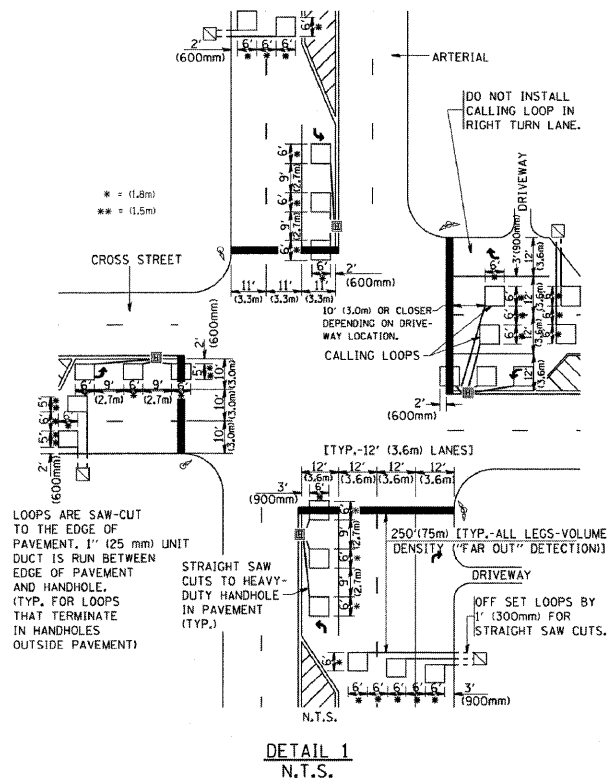
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

**NOTES:**

**VEHICLES LOOP DETECTORS**

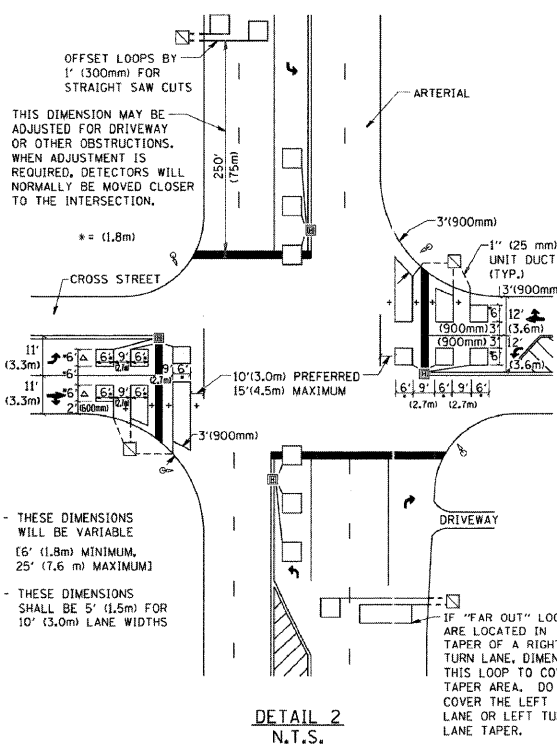
- \* ALL LEAD IN CABLE SHALL BE TWO CONDUCTOR NO. 14 TWISTED, SHIELDED.
- \* EACH DETECTOR LOOP SHALL HAVE ITS OWN SAW CUT FROM THE LOOP TO THE EDGE OF PAVEMENT OR TO A HANDHOLE IN THE PAVEMENT.
- \* EACH DETECTOR LOOP SHALL HAVE ITS OWN ONE INCH (25 mm) UNIT DUCT BETWEEN THE EDGE OF PAVEMENT AND THE FIRST 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.

**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.

**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.

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