

04-26-13 LETTING ITEM 024

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATIONS

|                     |          |                    |              |           |
|---------------------|----------|--------------------|--------------|-----------|
| F.A.U. RTE.         | SECTION  | COUNTY             | TOTAL SHEETS | SHEET NO. |
| 2711                | 27-RS-3  | LAKE               | 32           | 1         |
| FED. ROAD DIST. NO. | ILLINOIS | CONTRACT NO. 60N56 |              |           |

D-91-326-11

PROJECT LOCATED IN THE VILLAGE OF  
WADSWORTH IN LAKE COUNTY, IL

FOR INDEX OF SHEETS, SEE SHEET NO. 2

DESIGN DESIGNATION  
OTHER PRINCIPAL ARTERIAL

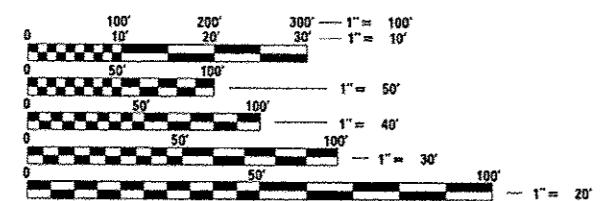
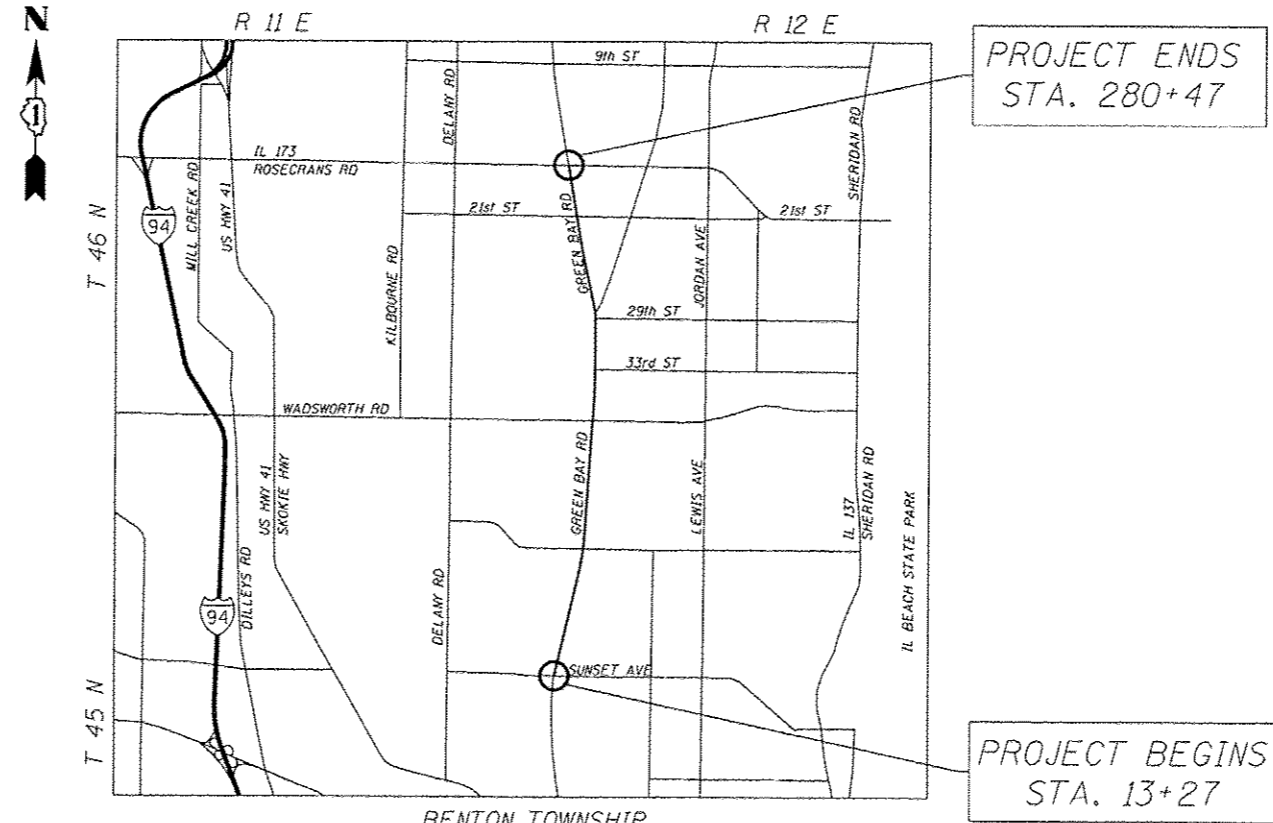
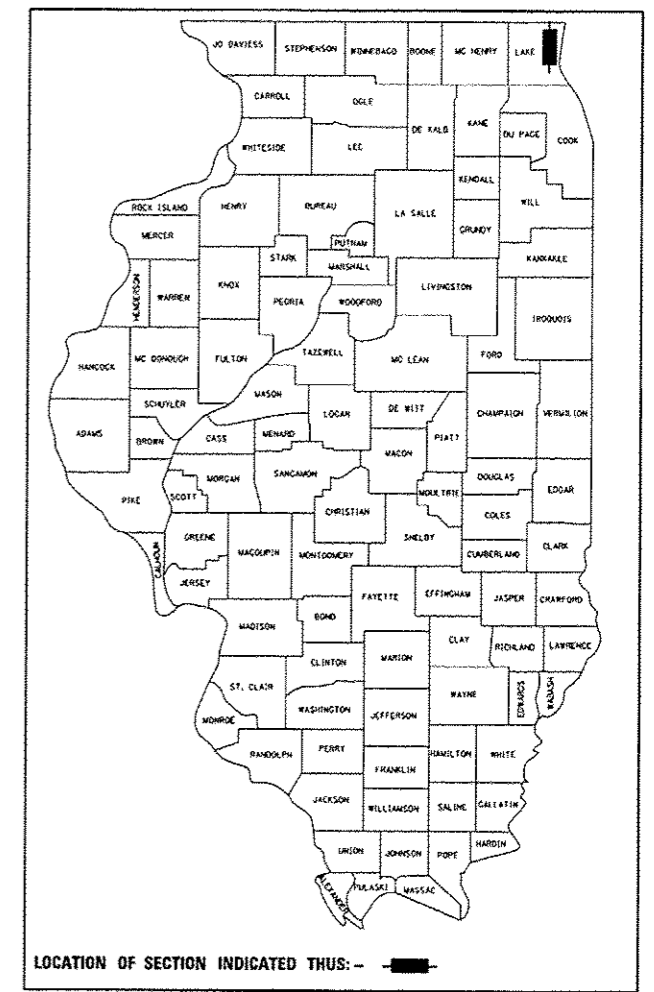
ADT 29100 (2009)  
POSTED SPEED LIMIT 45 MPH

OMMISSIONS  
STA. 112+71.3 TO STA. 128+10

DIVISION OF HIGHWAYS  
**PROPOSED  
HIGHWAY PLANS**

F.A.U. ROUTE 2711 /IL ROUTE 131 (GREEN BAY ROAD)  
IL ROUTE 173 (ROSECRANS ROAD) TO SUNSET AVE

SECTION: 27-RS-3  
RESURFACING (3P)  
LAKE COUNTY  
C-91-326-11



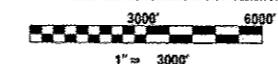
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD  
ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT  
CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS  
ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT MANAGER: ISSAM RAYYAN (847) 705-4178  
PROJECT ENGINEER: ROBERT BORO (847) 705-4237

CONTRACT NO. 60N56

BENTON TOWNSHIP  
LOCATION MAP



GROSS LENGTH OF PROJECT = 26720.0' = 5.061 MI  
NET LENGTH OF PROJECT = 25181.3' = 4.769 MI

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED DECEMBER 12, 2012

*John D. Baranzelli*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

March 22, 2013  
*John D. Baranzelli* P.E.  
acting ENGINEER OF DESIGN AND ENVIRONMENT

March 22, 2013  
*Omar Osman* P.E.  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS

benesch  
engineers • ecologists • planners

Alfred Benesch & Company  
1900 West 5th St, Suite 222  
Naperville, Illinois 60563  
630-577-9100 Job No. 10229-00

*John D. Baranzelli*  
Exp 11-30-13

SHEET NO. TITLE

|       |   |
|-------|---|
| 1     | TITLE SHEET   |
| 2     | GENERAL NOTES, STATE STANDARDS AND INDEX OF SHEETS                                  |
| 3     | SUMMARY OF QUANTITIES   |
| 4     | TYPICAL SECTIONS  |
| 5-14  | ROADWAY AND PAVEMENT MARKING PLAN   |
| 15-19 | DETECTOR LOOP PLAN  |
| 20    | DETECTOR LOOP DETAILS   |
| 21    | FRAMES AND LIDS ADJUSTMENT WITH MILLING   |
| 22    | PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT   |
| 23    | CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT                                     |
| 24    | BUTT JOINTS AND HMA TAPER   |
| 25    | TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS (TC-10) |
| 26    | RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT) (TC-11)                    |
| 27    | DISTRICT ONE TYPICAL PAVEMENT MARKINGS (TC-13)                                      |
| 28    | TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) (TC-14)     |
| 29    | PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING (TC-16)                    |
| 30    | ARTERIAL ROAD INFORMATION SIGN (TC-22)  |
| 31    | DRIVEWAY ENTRANCE SIGNING (TC-26)   |
| 32    | DISTRICT ONE DETECTOR LOOP INSTALLATION DETAIL FOR ROADWAY RESURFACING (TS-07)      |

STATE STANDARDS

SHEET NO. TITLE

|           |   |
|-----------|---|
| 442201-03 | CLASS C AND CLASS D PATCHES   |
| 604001-03 | FRAME AND LIDS, TYPE 1  |
| 606001-04 | CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER                   |
| 701006-04 | OFF-ROAD OPERATIONS, 2L, 2W, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE       |
| 701011-03 | OFF-ROAD MOVING OPERATION, 2L, 2W, DAY ONLY                                     |
| 701101-03 | OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE    |
| 701301-04 | LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS                                     |
| 701306-03 | LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY $\geq$ 45 MPH             |
| 701311-03 | LANE CLOSURE, 2L, 2W, MOVING OPERATIONS, DAY ONLY                               |
| 701336-06 | LANE CLOSURE, 2L, 2W, WORK AREAS IN SERIES, FOR SPEEDS $\geq$ 45 MPH            |
| 701426-05 | LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS $\geq$ 45 MPH |
| 701501-06 | URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED   |
| 701502-05 | URBAN LANE CLOSURE, 2L, 2W, WITH BIDIRECTIONAL LEFT TURN LANE                   |
| 701606-08 | URBAN LANE CLOSURE MULTILANE, 2W WITH MOUNTABLE MEDIAN                          |
| 701701-08 | URBAN LANE CLOSURE, MULTILANE INTERSECTION                                      |
| 701901-02 | TRAFFIC CONTROL DEVICES   |
| 886001-01 | DETECTOR LOOP INSTALLATIONS   |
| 886006-01 | TYPICAL LAYOUTS FOR DETECTION LOOPS   |

GENERAL NOTES (CONTINUATION)

UNLESS OTHER CONDITIONS WARRANT EXTENDED LANE CLOSURE AS DETERMINED AND APPROVED IN WRITING BY THE ENGINEER OR AS PROVIDED FOR IN THE CONTRACT SPECIFICATIONS, OVERNIGHT CLOSURES SHALL NOT BE ALLOWED FOR REHABILITATION PROJECTS INVOLVING DAYTIME MILLING AND RESURFACING OPERATIONS AND CLASS D PATCHING.

ALL PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS OBLITERATED BY MILLING AND RESURFACING OPERATIONS ON SIDE STREET AND ENTRANCE SHALL BE REPLACED AND PAID FOR IN KIND.

BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL OBTAIN AND RECORD FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINES AND RAISED REFLECTIVE MARKERS IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE DIRECTED BY THE ENGINEER.

ALL PAVEMENT PATCHING LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

DRAINAGE ADJUSTMENTS OR RECONSTRUCTION LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

LOCATION OF COMBINATION CONCRETE CURB AND GUTTER OF THE TYPE AND SIZE SPECIFIED IN THE PLANS, AND COMBINATION CURB AND GUTTER REMOVAL WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.

THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.

THE ENGINEER SHALL CONTACT DEBBIE HANLON, THE AREA TRAFFIC FIELD TECHNICIAN, AT (847) 438-2300 A MINIMUM OF TWO (2) WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKINGS.

THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.

DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.

DOUBLE LANE MARKERS ARE TO BE USED AS SHOWN ON THE DISTRICT ONE DETAIL "TYPICAL APPLICATIONS - RAISED REFLECTIVE PAVEMENT MARKERS (SNOW PLOW RESISTANT)" SHOWN IN THE PLANS.

PAVEMENT MARKING TAPE, TYPE III SHALL BE USED FOR SHORT TERM PAVEMENT MARKINGS ON ALL FINAL SURFACES. THE COST OF THE PAVEMENT MARKING TAPE, TYPE III AND ITS REMOVAL SHALL BE INCLUDED IN THE COST OF SHORT TERM PAVEMENT MARKING.

GENERAL NOTES

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

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND THE VILLAGE OF WADSWORTH IN LAKE COUNTY, ILLINOIS.

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

WHEN THE MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1/2 INCHES (40 mm) WHERE THE SPEED LIMIT IS 40 MPH (64 KM/H), OR LESS AND 1 INCH (25 mm) WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH (72 KM/H). WITH WRITTEN APPROVAL FROM THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES (75 mm) MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 (V:H).

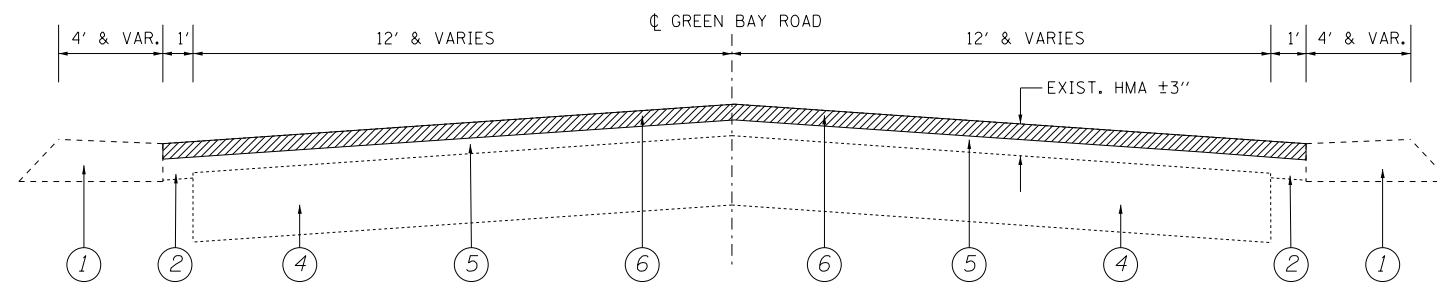
| SUMMARY OF QUANTITIES |  |        | URBAN<br>100%<br>STATE |                 | CONSTRUCTION TYPE CODE |  |
|-----------------------|--|--------|------------------------|-----------------|------------------------|--|
| CODE NO.              | ITEM   | UNIT   | TOTAL                  | ROADWAY<br>0005 |                        |  |
| 20201200              | REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL                | CU YD  | 20                     | 20              |                        |  |
| 40600200              | BITUMINOUS MATERIALS (PRIME COAT)                          | TON    | 77                     | 77              |                        |  |
| 40600300              | AGGREGATE (PRIME COAT)                                     | TON    | 381                    | 381             |                        |  |
| 40600400              | MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS                 | TON    | 143                    | 143             |                        |  |
| 40600827              | POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50 | TON    | 3996                   | 3996            |                        |  |
| 40600895              | CONSTRUCTING TEST STRIP                                    | EACH   | 2                      | 2               |                        |  |
| 40600982              | HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT               | SO YD  | 697                    | 697             |                        |  |
| 40601005              | HOT-MIX ASPHALT REPLACEMENT OVER PATCHES                   | TON    | 243                    | 243             |                        |  |
| 40603595              | POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90   | TON    | 9324                   | 9324            |                        |  |
| 42001300              | PROTECTIVE COAT  | SO YD  | 100                    | 100             |                        |  |
| 44000158              | HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/4"                    | SO YD  | 95139                  | 95139           |                        |  |
| 44002209              | HOT-MIX ASPHALT REMOVAL OVER PATCHES, 2 1/4"               | SO YD  | 2165                   | 2165            |                        |  |
| 44201761              | CLASS D PATCHES, TYPE I, 10 INCH                           | SO YD  | 20                     | 20              |                        |  |
| 44201765              | CLASS D PATCHES, TYPE II, 10 INCH                          | SO YD  | 660                    | 660             |                        |  |
| 44201769              | CLASS D PATCHES, TYPE III, 10 INCH                         | SO YD  | 820                    | 820             |                        |  |
| 44201771              | CLASS D PATCHES, TYPE IV, 10 INCH                          | SO YD  | 665                    | 665             |                        |  |
| 48102100              | AGGREGATE WEDGE SHOULDER, TYPE B                           | TON    | 553                    | 553             |                        |  |
| 60252800              | CATCH BASINS TO BE RECONSTRUCTED                           | EACH   | 1                      | 1               |                        |  |
| 60300105              | FRAMES AND GRATES TO BE ADJUSTED                           | EACH   | 15                     | 15              |                        |  |
| 60404950              | FRAMES AND GRATES, TYPE 24                                 | EACH   | 15                     | 15              |                        |  |
| 60406000              | FRAMES AND LIDS, TYPE I, OPEN LID                          | EACH   | 5                      | 5               |                        |  |
| 67000400              | ENGINEER'S FIELD OFFICE, TYPE A                            | CAL MO | 6                      | 6               |                        |  |
| 67100100              | MOBILIZATION   | L SUM  | 1                      | 1               |                        |  |
| 70100460              | TRAFFIC CONTROL AND PROTECTION, STANDARD 701306            | 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   | 26632                  | 26632           |                        |  |

27 \* SPECIALTY ITEMS

28

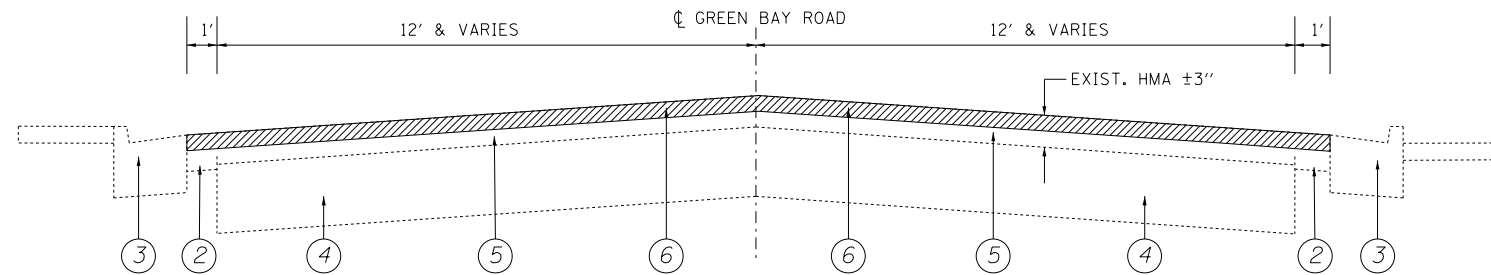
| SUMMARY OF QUANTITIES |  |             | URBAN<br>100%<br>STATE |                 | CONSTRUCTION TYPE CODE |  |
|-----------------------|--|-------------|------------------------|-----------------|------------------------|--|
| CODE NO.              | ITEM   | UNIT        | TOTAL                  | ROADWAY<br>0005 |                        |  |
| 70300210              | TEMPORARY PAVEMENT MARKING LETTERS AND SYMBOLS             | SO FT       | 896                    | 896             |                        |  |
| 70300220              | TEMPORARY PAVEMENT MARKING - LINE 4"                       | FOOT        | 86820                  | 86820           |                        |  |
| 70300240              | TEMPORARY PAVEMENT MARKING - LINE 6"                       | FOOT        | 3011                   | 3011            |                        |  |
| 70300260              | TEMPORARY PAVEMENT MARKING - LINE 12"                      | FOOT        | 1454                   | 1454            |                        |  |
| 70300280              | TEMPORARY PAVEMENT MARKING - LINE 24"                      | FOOT        | 550                    | 550             |                        |  |
| <b>70301000</b>       | <b>WORK ZONE PAVEMENT MARKING REMOVAL</b>                  | <b>SAFT</b> | <b>8878</b>            | <b>8878</b>     |                        |  |
| 78000100              | THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS       | SO FT       | 896                    | 896             |                        |  |
| * 78000200            | THERMOPLASTIC PAVEMENT MARKING - LINE 4"                   | FOOT        | 86820                  | 86820           |                        |  |
| * 78000400            | THERMOPLASTIC PAVEMENT MARKING - LINE 6"                   | FOOT        | 3011                   | 3011            |                        |  |
| * 78000600            | THERMOPLASTIC PAVEMENT MARKING - LINE 12"                  | FOOT        | 1454                   | 1454            |                        |  |
| * 78000650            | THERMOPLASTIC PAVEMENT MARKING - LINE 24"                  | FOOT        | 550                    | 550             |                        |  |
| * 78100100            | RAISED REFLECTIVE PAVEMENT MARKER                          | EACH        | 618                    | 618             |                        |  |
| 78300100              | PAVEMENT MARKING REMOVAL                                   | SO FT       | 9570                   | 9570            |                        |  |
| 78300200              | RAISED REFLECTIVE PAVEMENT MARKER REMOVAL                  | EACH        | 618                    | 618             |                        |  |
| * 88600600            | DETECTOR LOOP REPLACEMENT                                  | FOOT        | 2581                   | 2581            |                        |  |
| X2020110              | GRADING AND SHAPING SHOULDERS                              | UNITS       | 550                    | 550             |                        |  |
| X5537800              | STORM SEWERS TO BE CLEANED 12"                             | FOOT        | 150                    | 150             |                        |  |
| X5537900              | STORM SEWERS TO BE CLEANED 15"                             | FOOT        | 150                    | 150             |                        |  |
| X6030310              | FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)                   | EACH        | 10                     | 10              |                        |  |
| Z0018500              | DRAINAGE STRUCTURES TO BE CLEANED                          | EACH        | 15                     | 15              |                        |  |
| Z0030850              | TEMPORARY INFORMATION SIGNING                              | SO FT       | 318                    | 318             |                        |  |
| Z0004562              | COMBINATION CURB AND GUTTER REMOVE AND REPLACE<br>CONCRETE | FOOT        | 300                    | 300             |                        |  |
| 70100600              | TRAFFIC CONTROL AND PROTECTION,<br>STANDARD 701336         | L SUM       | 1                      | 1               |                        |  |
| 70102622              | TRAFFIC CONTROL AND PROTECTION,<br>STANDARD 701502         | L SUM       | 1                      | 1               |                        |  |
| 70102625              | TRAFFIC CONTROL AND PROTECTION,<br>STANDARD 701606         | L SUM       | 1                      | 1               |                        |  |

Rev.



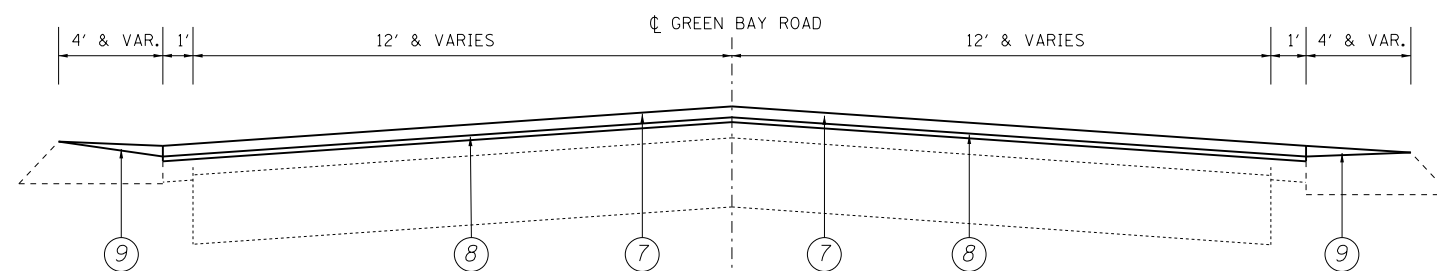
GREEN BAY ROAD  
EXISTING TYPICAL SECTION

STA. 19+80 TO STA. 80+05  
STA. 82+30 TO STA. 112+71.30  
STA. 128+10 TO STA. 143+10  
STA. 149+00 TO STA. 280+47



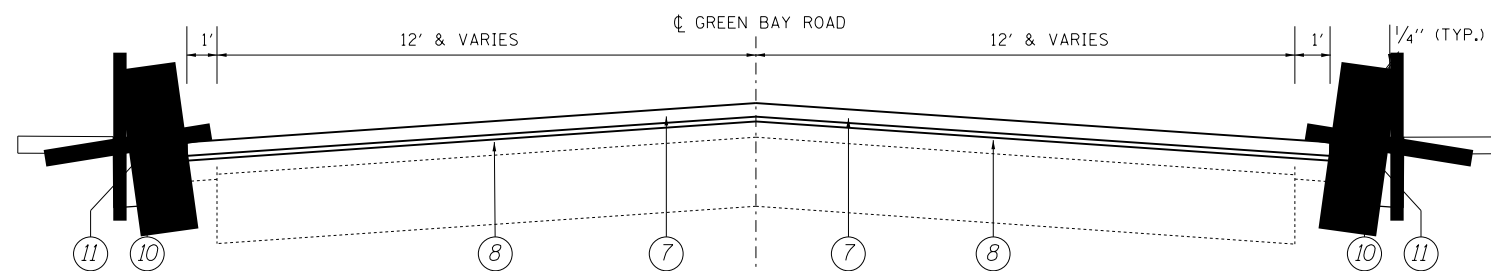
GREEN BAY ROAD  
EXISTING TYPICAL SECTION

STA. 13+27 TO STA. 19+80  
STA. 80+05 TO STA. 82+30  
STA. 143+10 TO STA. 149+00



GREEN BAY ROAD  
PROPOSED TYPICAL SECTION

STA. 19+80 TO STA. 80+05  
STA. 82+30 TO STA. 112+71.30  
STA. 128+10 TO STA. 143+10  
STA. 149+00 TO STA. 280+47



GREEN BAY ROAD  
PROPOSED TYPICAL SECTION

STA. 13+27 TO STA. 19+80  
STA. 80+05 TO STA. 82+30  
STA. 143+10 TO STA. 149+00

LEGEND

- ① EXISTING AGGREGATE SHOULDER
- ② EXISTING HMA SHOULDER
- ③ EXISTING COMBINATION CONCRETE CURB AND GUTTER
- ④ EXISTING PCC BASE COURSE, ±10"
- ⑤ EXISTING REMAINING HMA AFTER MILLING, ±3/4"
- ⑥ PROPOSED HMA SURFACE REMOVAL, 2 1/4"
- ⑦ PROPOSED POLYMERIZED HMA SURFACE COURSE, MIX "F", N90, 1 3/4"
- ⑧ PROPOSED POLYMERIZED LEVELING BINDER (MM), IL-4.75, N50, 3/4"
- ⑨ PROPOSED GRADING AND SHAPING SHOULDERS, WITH AGGREGATE WEDGE SHOULDER, TYPE B PLACED AS NEEDED.
- ⑩ PROPOSED COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT, OF THE TYPE & SIZE AS DIRECTED BY THE ENGINEER, AT THE LOCATIONS DETERMINED BY THE ENGINEER.
- ⑪ PROTECTIVE COAT TO BE APPLIED ON ANY NEW COMBINATION CONCRETE CURB & GUTTER, OF THE TYPE & SIZE INSTALLED.

| HOT-MIX ASPHALT MIXTURE REQUIREMENTS                       |                  |           |
|--|------------------|-----------|
| MIXTURE TYPE   | DESIGN AIR VOIDS | THICKNESS |
| <b>ROADWAY RESURFACING</b>                                 |                  |           |
| POLYMERIZED HMA SURFACE COURSE, MIX "F", N90 (IL-9.5 mm) * | 4% @ 90 GYR      | 1 3/4"    |
| POLYMERIZED LEVELING BINDER (MM), IL-4.75, N50             | 3.5% @ 50 GYR    | 3/4"      |
| <b>PAVEMENT PATCHING</b>                                   |                  |           |
| CLASS D PATCH (HMA BINDER IL-19 mm)                        | 4% @ 70 GYR      | 10"       |
| HMA REPLACEMENT OVER PATCHES (HMA BINDER IL-19 mm)         | 4% @ 70 GYR      | 2 1/4"    |

\* PFP SPECIAL PROVISION APPLIES TO POLY HMA SURFACE COURSE, MIX "F", N90 ONLY.

NOTES:

THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE COURSE MIXTURES IS 112 LBS/SQ-YD/IN.

THE CONTRACTOR SHALL PATCH FIRST BEFORE MILLING

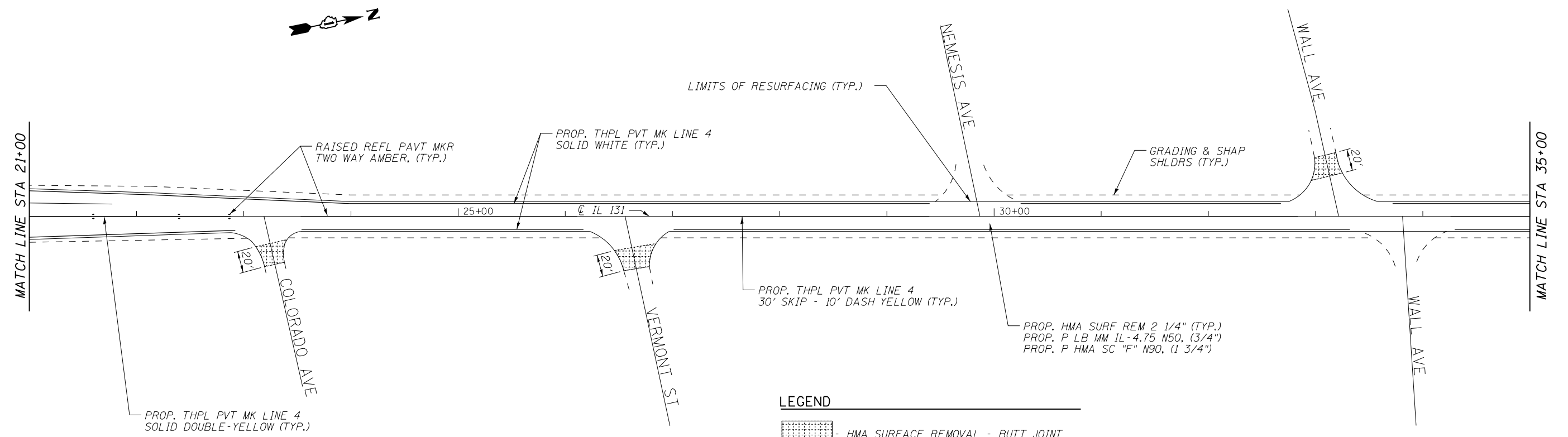
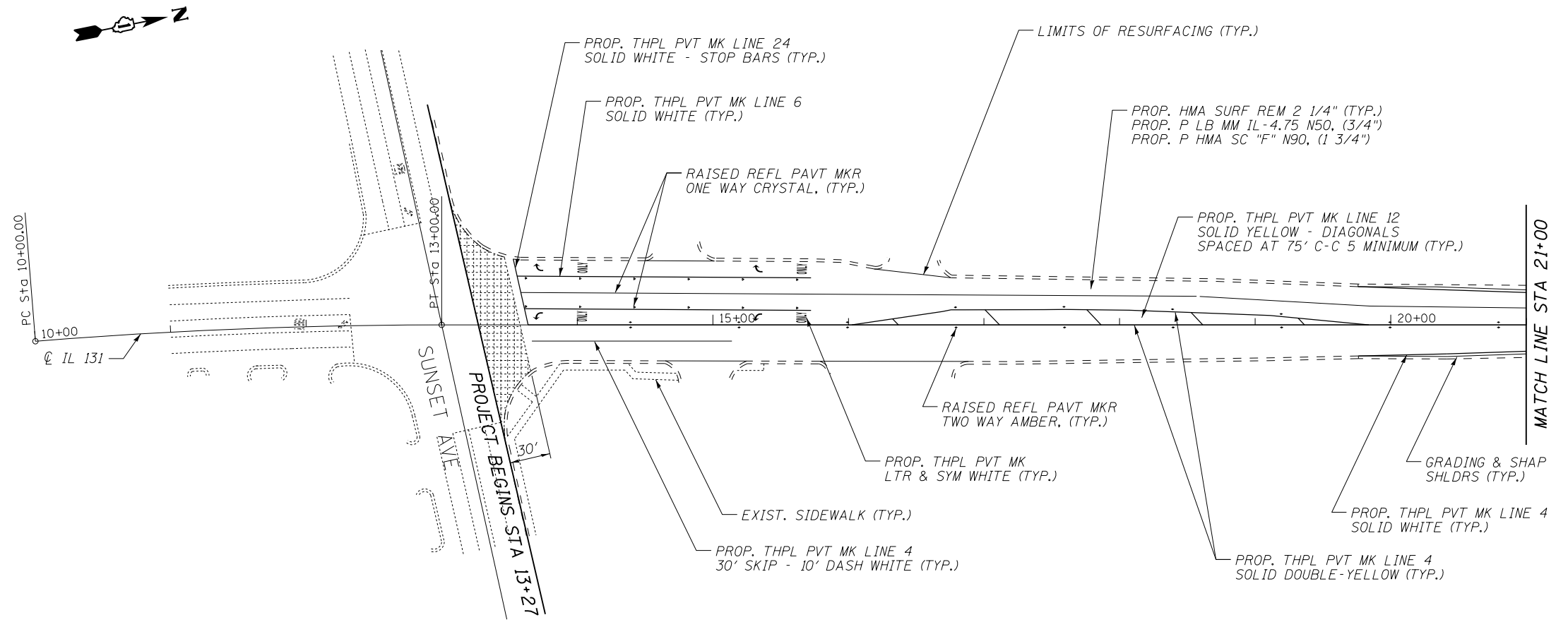
FOR "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76 -22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64 -28" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS.

FOR USE OF RECYCLED MATERIALS SEE SPECIAL PROVISIONS.

|                    |           |
|--------------------|-----------|
| DESIGNED - MJY     | REVISED - |
| DRAWN - ST, TSC    | REVISED - |
| CHECKED - MJY, SLV | REVISED - |
| DATE - 12/11/2012  | REVISED - |

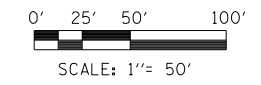
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|---------------------|---------|---------------------------|--------------|-----------|
| F.A.U. RTE.         | SECTION | COUNTY                    | TOTAL SHEETS | SHEET NO. |
| 2711                | 27-RS-3 | LAKE                      | 32           | 4         |
| D-91-326-11         |         | CONTRACT NO. 60N56        |              |           |
| FED. ROAD DIST. NO. |         | ILLINOIS FED. AID PROJECT |              |           |





**LEGEND**

 - HMA SURFACE REMOVAL - BUTT JOINT



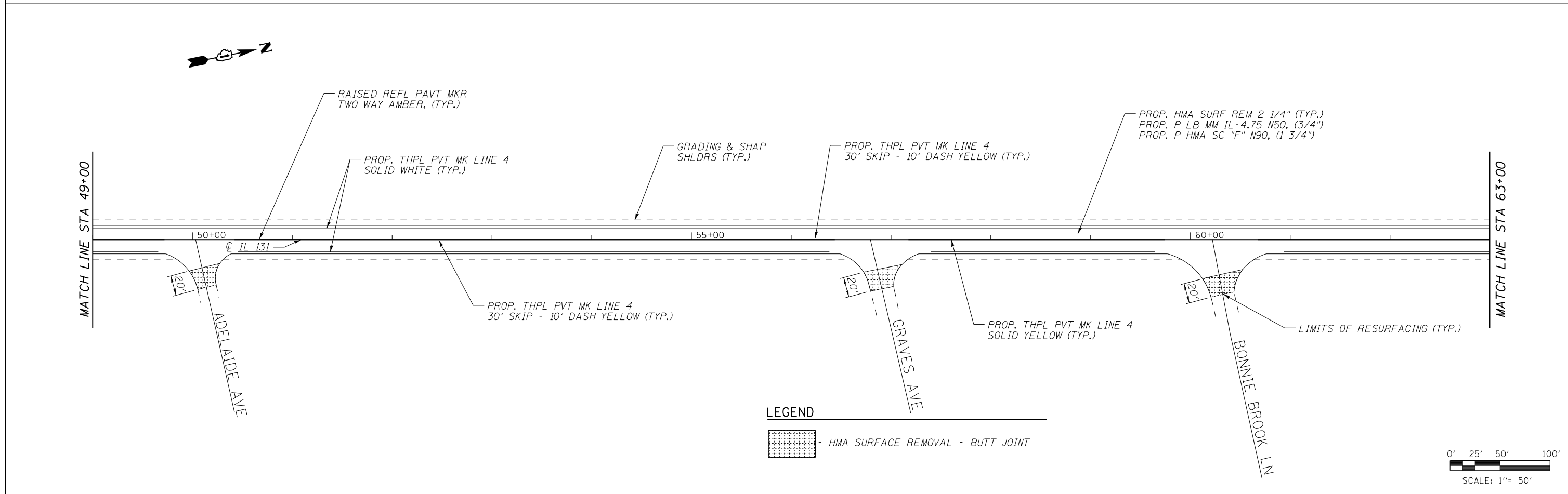
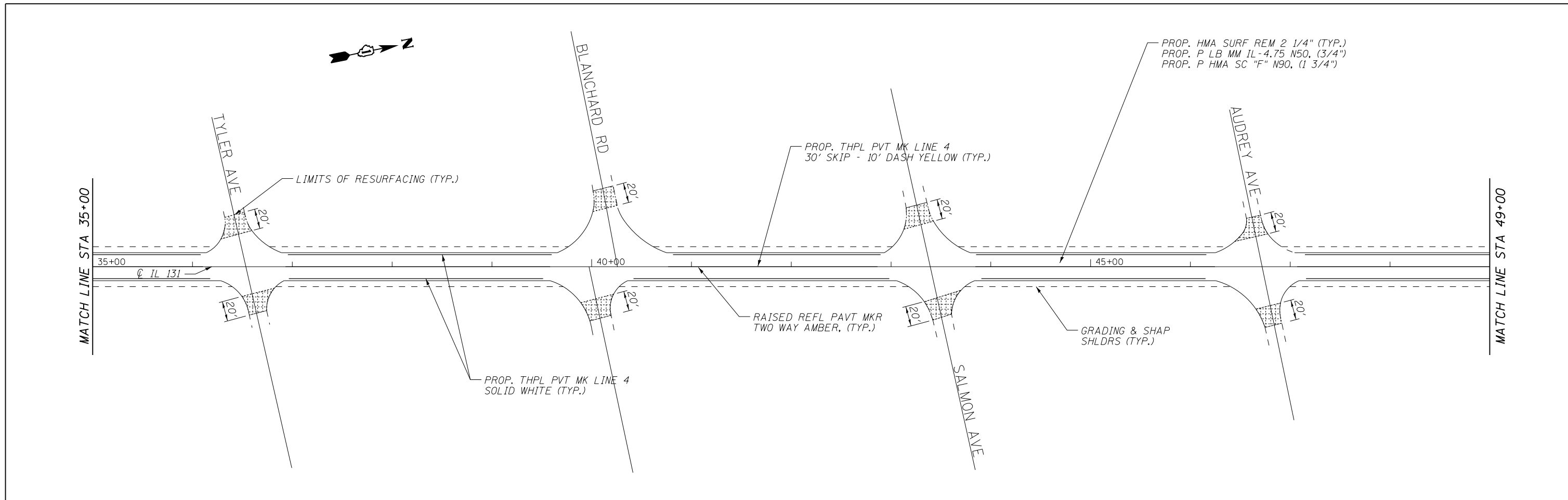
|          |              |         |   |
|----------|--------------|---------|---|
| DESIGNED | - SLV        | REVISED | - |
| DRAWN    | - SLV        | REVISED | - |
| CHECKED  | - MJV, ST    | REVISED | - |
| DATE     | - 12/11/2012 | REVISED | - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ROADWAY PAVING AND PAVEMENT MARKING PLAN  
IL 131 (GREEN BAY ROAD) FROM IL 173 TO SUNSET AVENUE**

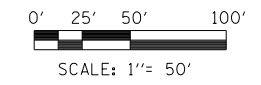
SCALE: 1" = 50'    SHEET NO. 1 OF 10 SHEETS    STA. 13+27 TO STA. 35+00

|   |         |                    |              |           |
|---|---------|--------------------|--------------|-----------|
| F.A.U. RTE.                                     | SECTION | COUNTY             | TOTAL SHEETS | SHEET NO. |
| 2711  | 27-RS-3 | LAKE               | 32           | 5         |
| D-91-326-11                                     |         | CONTRACT NO. 60N56 |              |           |
| FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT |         |                    |              |           |



**LEGEND**

 - HMA SURFACE REMOVAL - BUTT JOINT



**benesch**  
engineers · scientists · planners

Alfred Benesch & Company  
1560 Wolf St., Suite 222  
Naperville, Illinois 60563  
630-577-9100 Job No. 10259.00

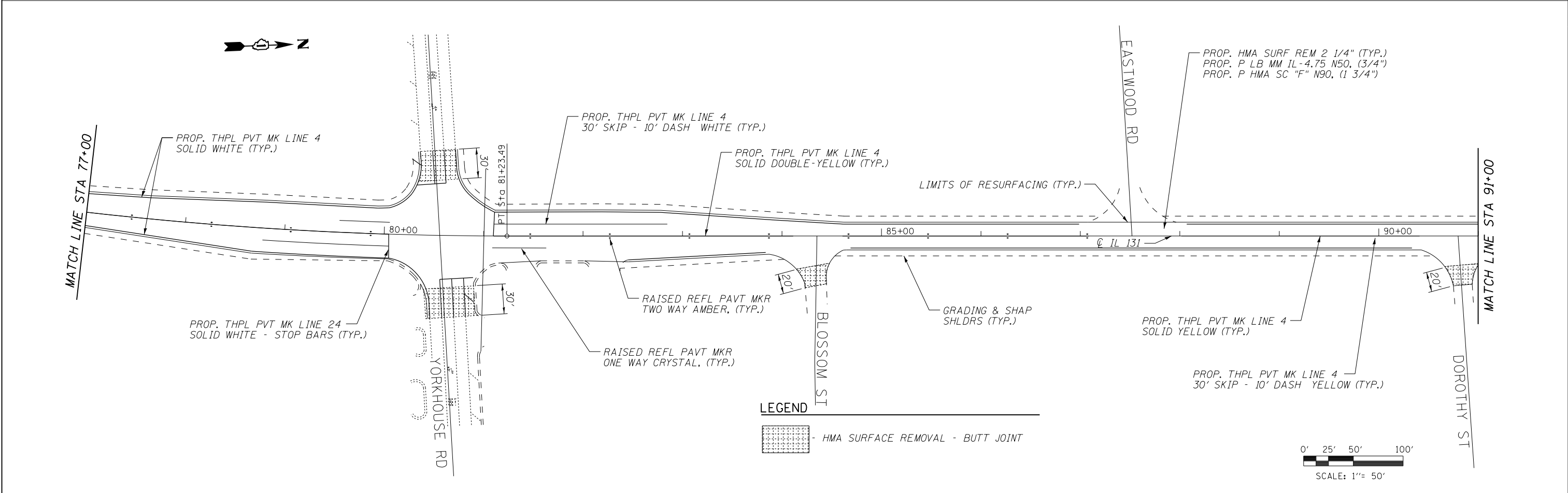
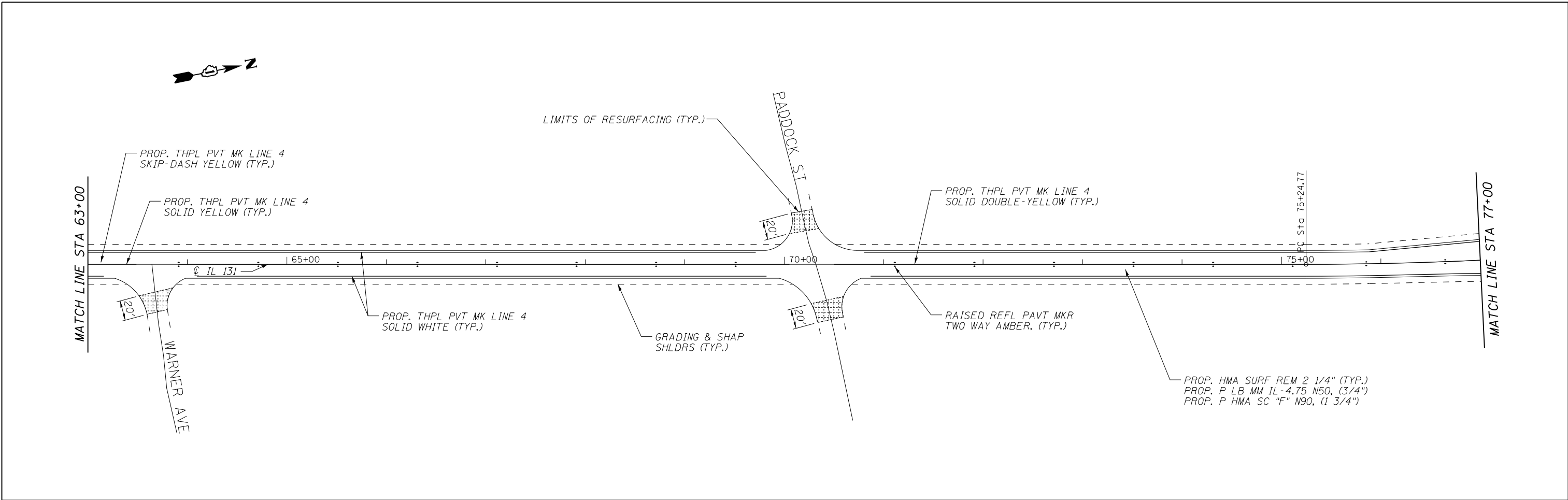
|                   |           |
|-------------------|-----------|
| DESIGNED - SLV    | REVISED - |
| DRAWN - SLV       | REVISED - |
| CHECKED - MJY, ST | REVISED - |
| DATE - 12/11/2012 | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

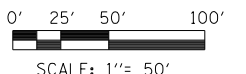
**ROADWAY PAVING AND PAVEMENT MARKING PLAN  
IL 131 (GREEN BAY ROAD) FROM IL 173 TO SUNSET AVENUE**

SCALE: 1" = 50'    SHEET NO. 2 OF 10 SHEETS    STA. 35+00 TO STA. 63+00

|   |         |                    |              |           |
|---|---------|--------------------|--------------|-----------|
| F.A.U. RTE.                                     | SECTION | COUNTY             | TOTAL SHEETS | SHEET NO. |
| 2711  | 27-RS-3 | LAKE               | 32           | 6         |
| D-91-326-11                                     |         | CONTRACT NO. 60N56 |              |           |
| FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT |         |                    |              |           |



**LEGEND**  
 - HMA SURFACE REMOVAL - BUTT JOINT



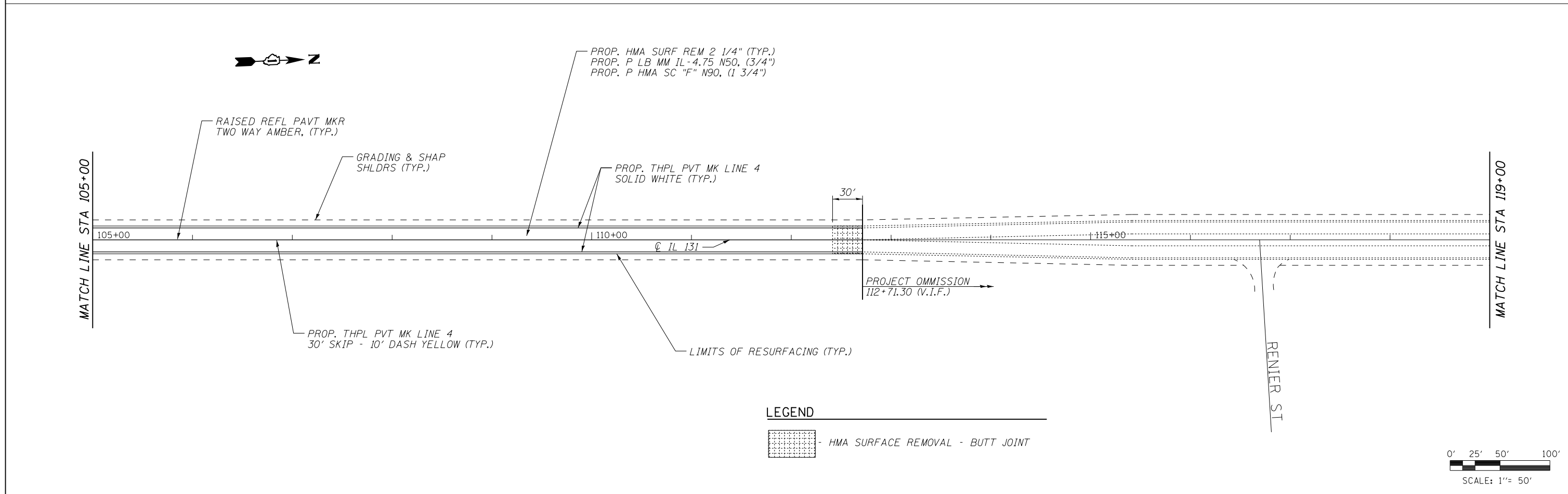
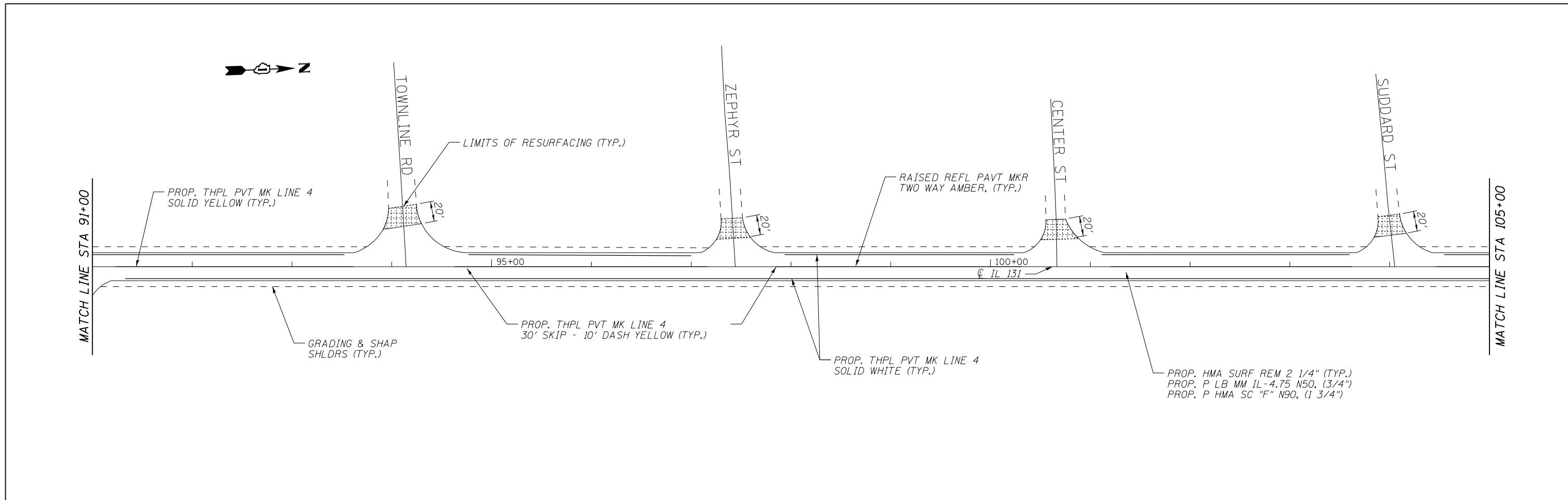
**benesch**  
 engineers · scientists · planners  
 Alfred Benesch & Company  
 1500 Wolf St., Suite 222  
 Naperville, Illinois 60563  
 630-577-9100 Job No. 10258.00

|                   |           |
|-------------------|-----------|
| DESIGNED - SLV    | REVISED - |
| DRAWN - SLV       | REVISED - |
| CHECKED - MJY, ST | REVISED - |
| DATE - 12/11/2012 | REVISED - |

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

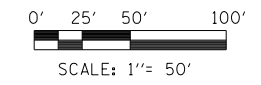
**ROADWAY PAVING AND PAVEMENT MARKING PLAN  
 IL 131 (GREEN BAY ROAD) FROM IL 173 TO SUNSET AVENUE**  
 SCALE: 1" = 50' SHEET NO. 3 OF 10 SHEETS STA. 63+00 TO STA. 91+00

|   |         |                    |              |           |
|---|---------|--------------------|--------------|-----------|
| F.A.U. RTE.                                   | SECTION | COUNTY             | TOTAL SHEETS | SHEET NO. |
| 2711  | 27-RS-3 | LAKE               | 32           | 7         |
| D-91-326-11                                   |         | CONTRACT NO. 60N56 |              |           |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT |         |                    |              |           |



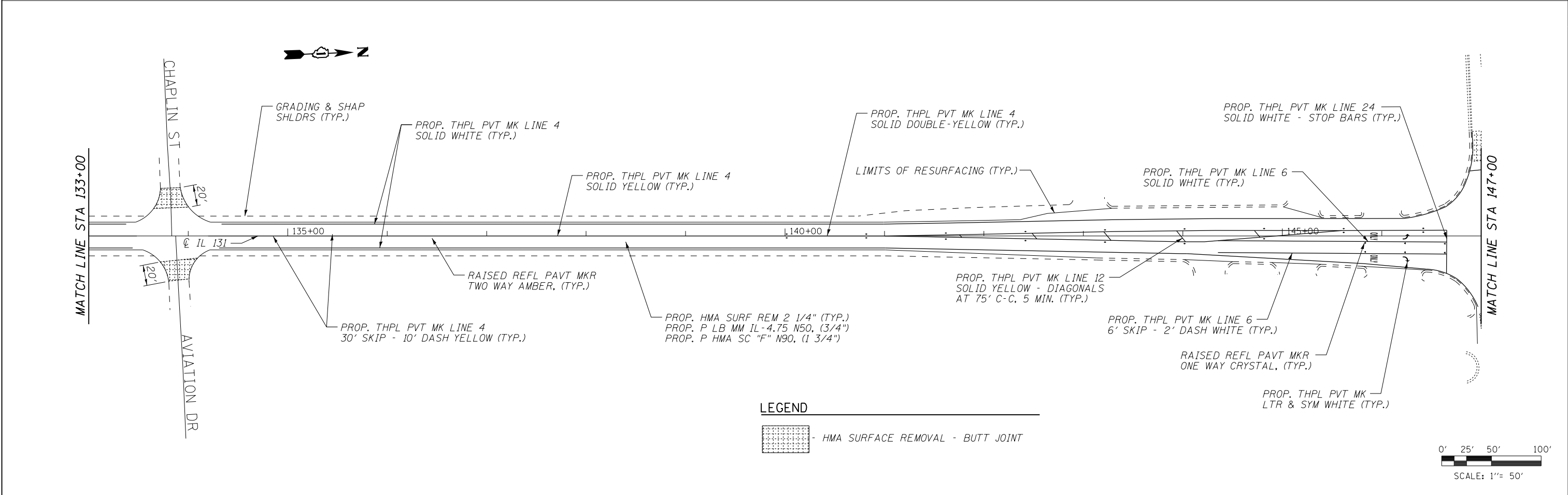
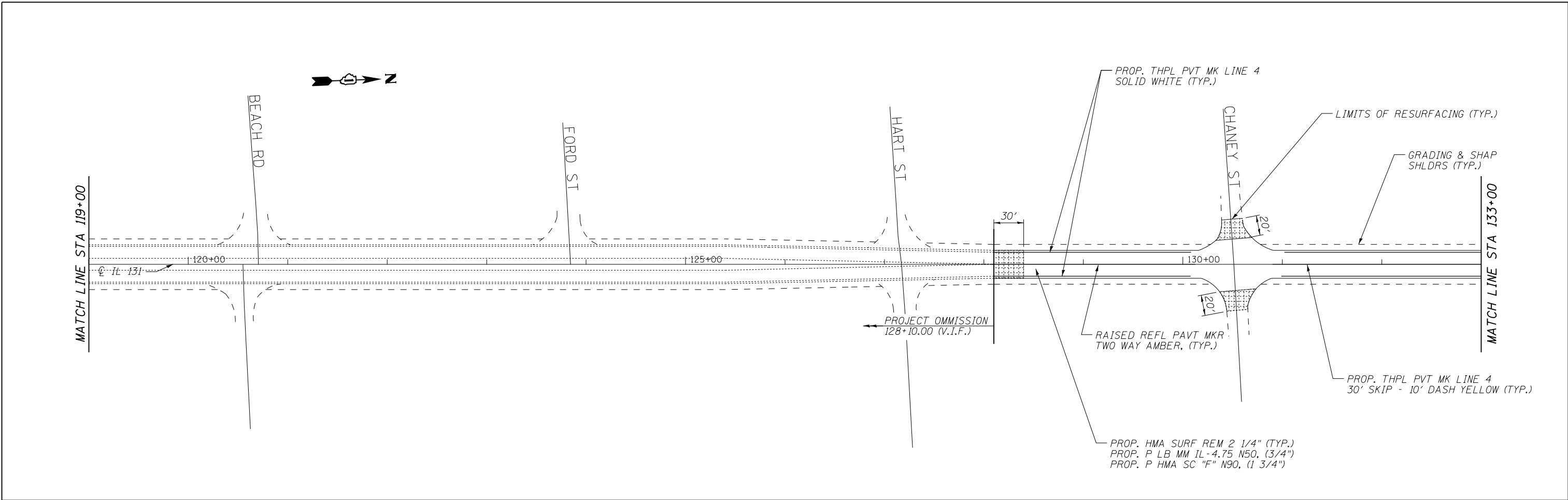
**LEGEND**

 - HMA SURFACE REMOVAL - BUTT JOINT



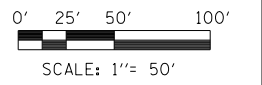
|                   |           |
|-------------------|-----------|
| DESIGNED - SLV    | REVISED - |
| DRAWN - SLV       | REVISED - |
| CHECKED - MJY, ST | REVISED - |
| DATE - 12/11/2012 | REVISED - |

|   |         |                    |              |           |
|---|---------|--------------------|--------------|-----------|
| F.A.U. RTE.                                     | SECTION | COUNTY             | TOTAL SHEETS | SHEET NO. |
| 2711  | 27-RS-3 | LAKE               | 32           | 8         |
| D-91-326-11                                     |         | CONTRACT NO. 60N56 |              |           |
| FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT |         |                    |              |           |

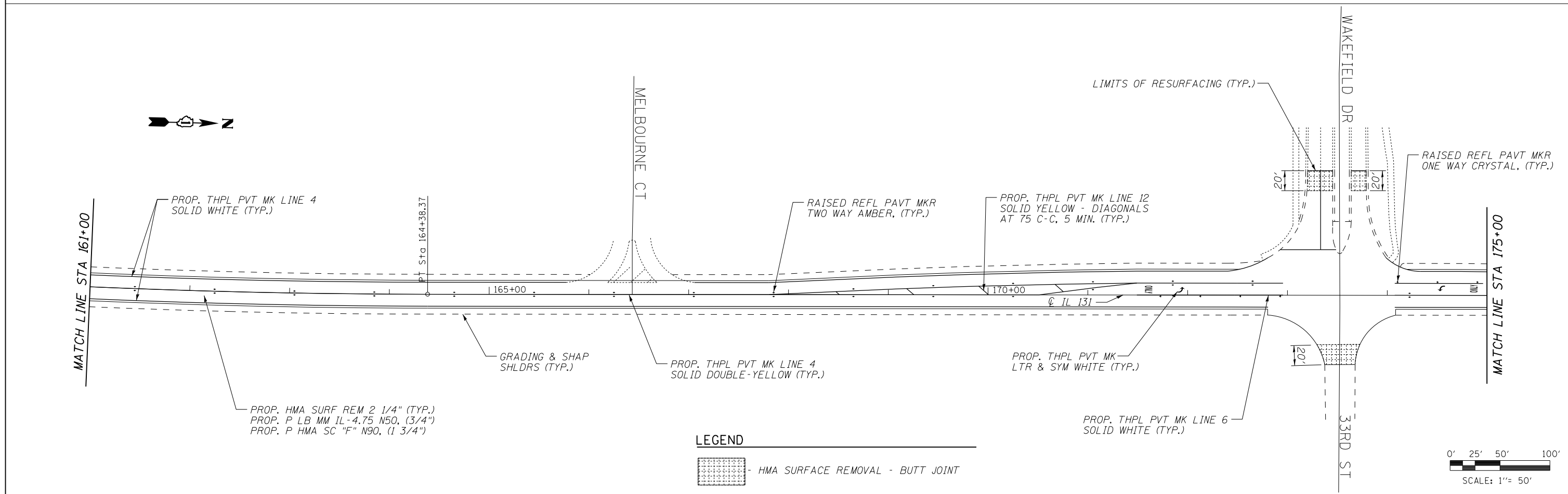
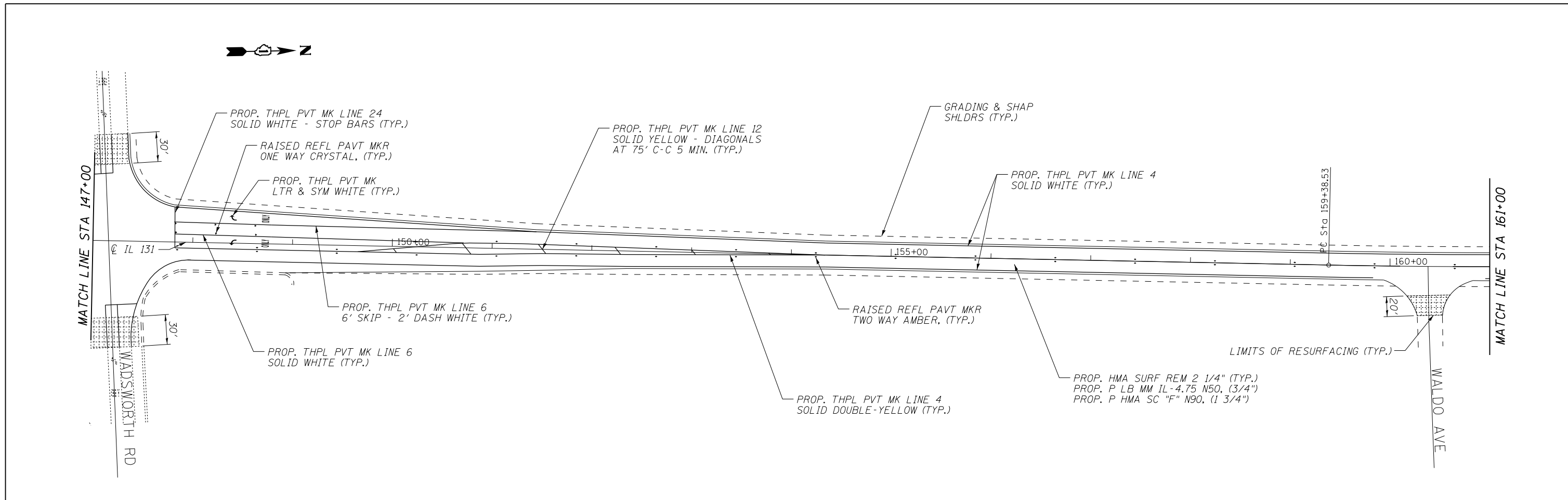


**LEGEND**

 - HMA SURFACE REMOVAL - BUTT JOINT

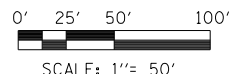


|  |                   |               |   |  |   |                 |                          |                 |                            |  |
|--|-------------------|---------------|---|--|---|-----------------|--------------------------|-----------------|----------------------------|--|
|  Alfred Benesch & Company<br>1500 West St. Suite 222<br>Naperville, Illinois 60563<br>630-577-9100 Job No. 10258.00 | DESIGNED - SLV    | REVISED - ___ | <b>STATE OF ILLINOIS</b><br><b>DEPARTMENT OF TRANSPORTATION</b> | <b>ROADWAY PAVING AND PAVEMENT MARKING PLAN</b><br><b>IL 131 (GREEN BAY ROAD) FROM IL 173 TO SUNSET AVENUE</b> | F.A.U. RTE. 2711                                  | SECTION 27-RS-3 | COUNTY LAKE              | TOTAL SHEETS 32 | SHEET NO. 9                |  |
|  | DRAWN - SLV       | REVISED - ___ |   |  | D-91-326-11                                       |                 | CONTRACT NO. 60N56       |                 |                            |  |
|  | CHECKED - MJY, ST | REVISED - ___ |   |  | SCALE: 1" = 50'                                   |                 | SHEET NO. 5 OF 10 SHEETS |                 | STA. 119+00 TO STA. 147+00 |  |
|  | DATE - 12/11/2012 | REVISED - ___ |   |  | FED. ROAD DIST. NO. [ ] ILLINOIS FED. AID PROJECT |                 |                          |                 |                            |  |



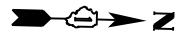
**LEGEND**

 - HMA SURFACE REMOVAL - BUTT JOINT

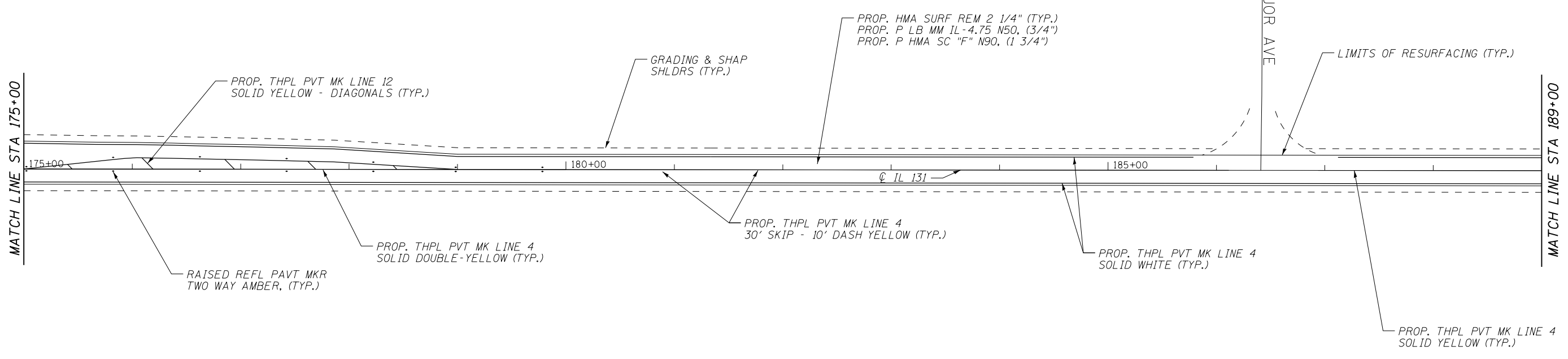


|                   |           |
|-------------------|-----------|
| DESIGNED - SLV    | REVISED - |
| DRAWN - SLV       | REVISED - |
| CHECKED - MJY, ST | REVISED - |
| DATE - 12/11/2012 | REVISED - |

|   |         |                    |              |           |
|---|---------|--------------------|--------------|-----------|
| F.A.U. RTE.                                   | SECTION | COUNTY             | TOTAL SHEETS | SHEET NO. |
| 2711  | 27-RS-3 | LAKE               | 32           | 10        |
| D-91-326-11                                   |         | CONTRACT NO. 60N56 |              |           |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT |         |                    |              |           |



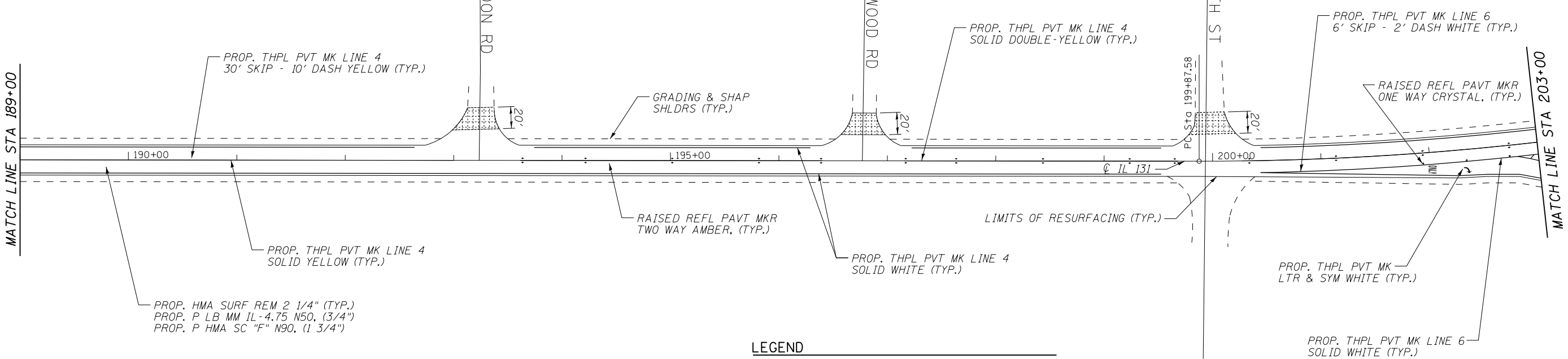
MATCH LINE STA 175+00



MATCH LINE STA 189+00



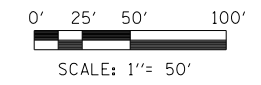
MATCH LINE STA 189+00



MATCH LINE STA 203+00

**LEGEND**

- HMA SURFACE REMOVAL - BUTT JOINT



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Alfred Benesch & Company  
1580 Wolf St. Suite 222  
Naperville, Illinois 60563  
630-577-9100 Job No. 10258.00

|                   |           |
|-------------------|-----------|
| DESIGNED - SLV    | REVISED - |
| DRAWN - SLV       | REVISED - |
| CHECKED - MJY, ST | REVISED - |
| DATE - 12/11/2012 | REVISED - |

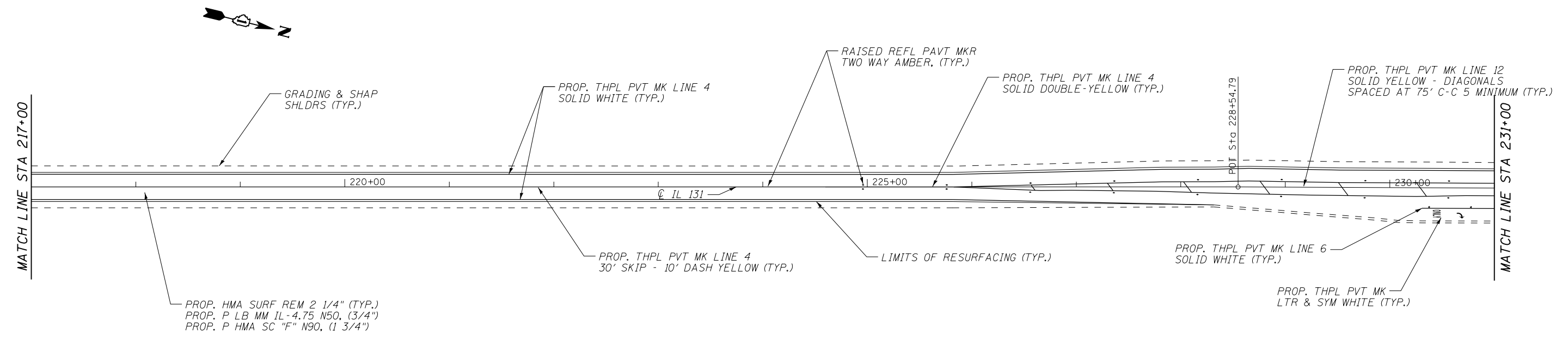
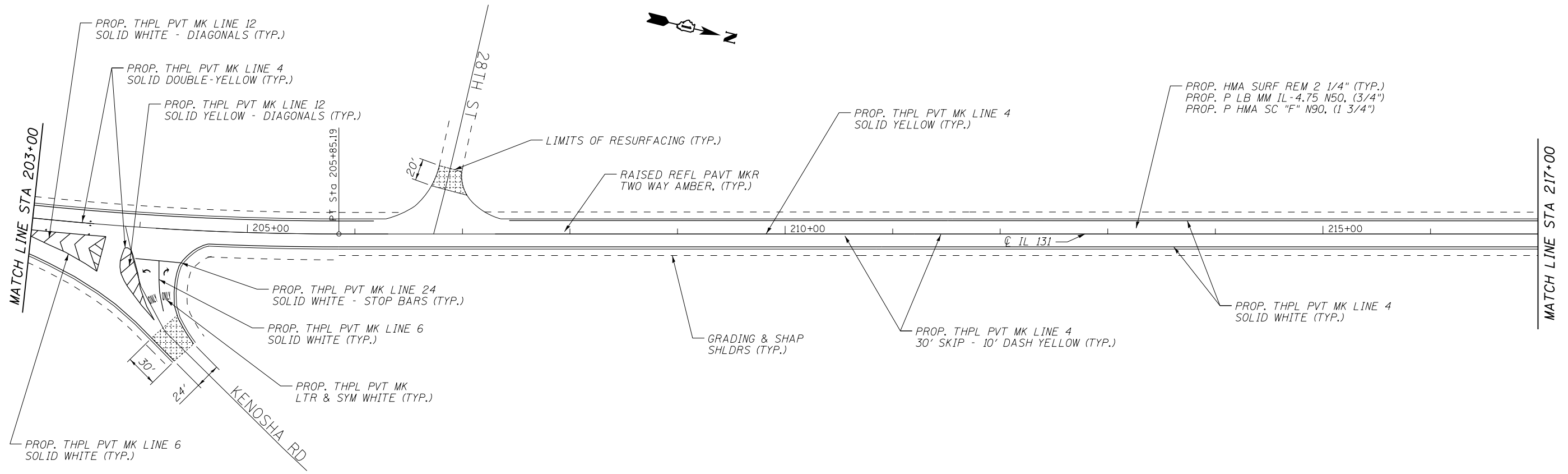
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ROADWAY PAVING AND PAVEMENT MARKING PLAN  
IL 131 (GREEN BAY ROAD) FROM IL 173 TO SUNSET AVENUE**

SCALE: 1" = 50' SHEET NO. 7 OF 10 SHEETS STA. 175+00 TO STA. 203+00

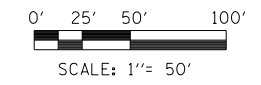
|   |         |                    |              |           |
|---|---------|--------------------|--------------|-----------|
| F.A.U. RTE.                                   | SECTION | COUNTY             | TOTAL SHEETS | SHEET NO. |
| 2711  | 27-RS-3 | LAKE               | 32           | 11        |
| D-91-326-11                                   |         | CONTRACT NO. 60N56 |              |           |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT |         |                    |              |           |





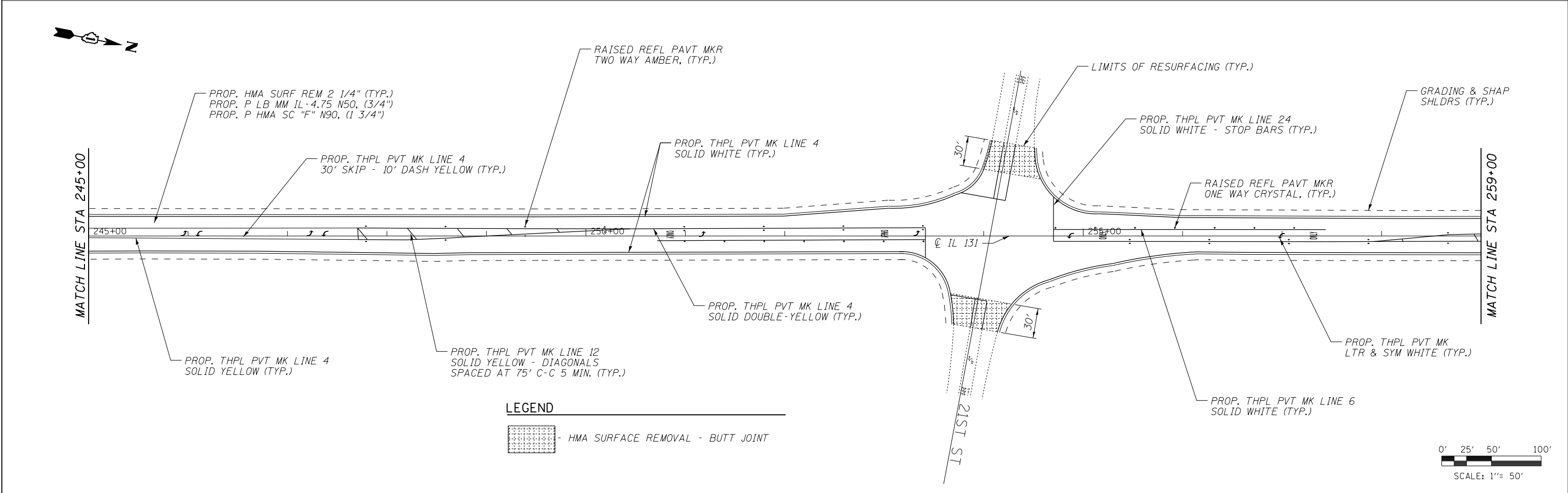
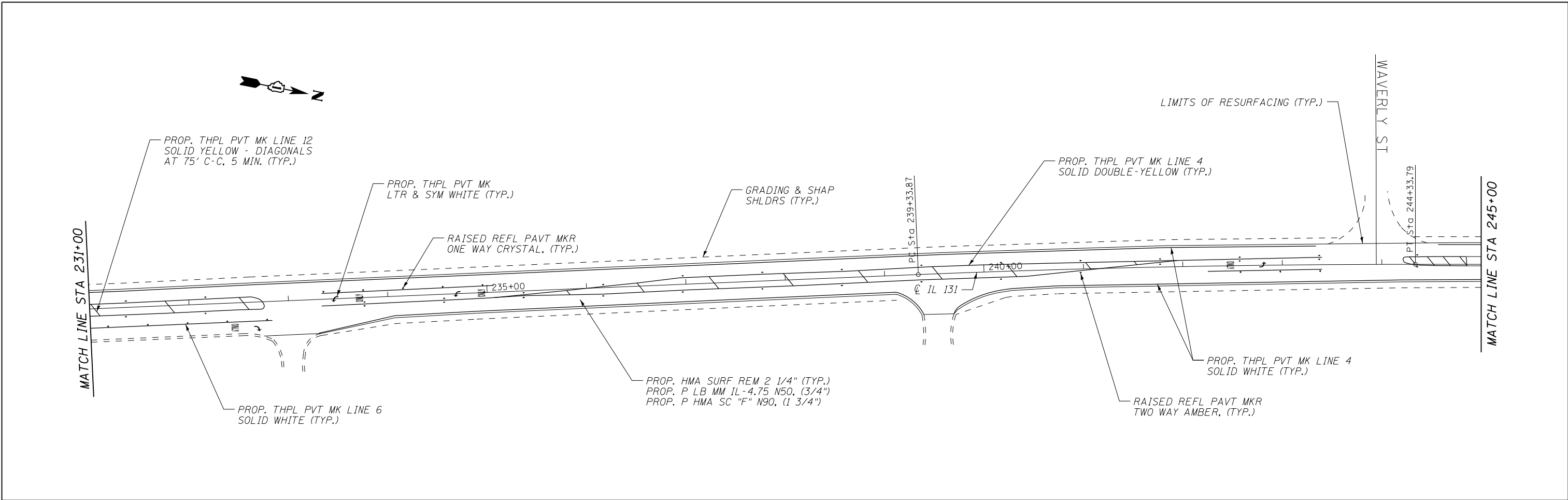
**LEGEND**

 - HMA SURFACE REMOVAL - BUTT JOINT



|          |              |         |   |
|----------|--------------|---------|---|
| DESIGNED | - SLV        | REVISED | - |
| DRAWN    | - SLV        | REVISED | - |
| CHECKED  | - MJY, ST    | REVISED | - |
| DATE     | - 12/11/2012 | REVISED | - |

|   |         |                    |              |           |
|---|---------|--------------------|--------------|-----------|
| F.A.U. RTE.                                     | SECTION | COUNTY             | TOTAL SHEETS | SHEET NO. |
| 2711  | 27-RS-3 | LAKE               | 32           | 12        |
| D-91-326-11                                     |         | CONTRACT NO. 60N56 |              |           |
| FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT |         |                    |              |           |



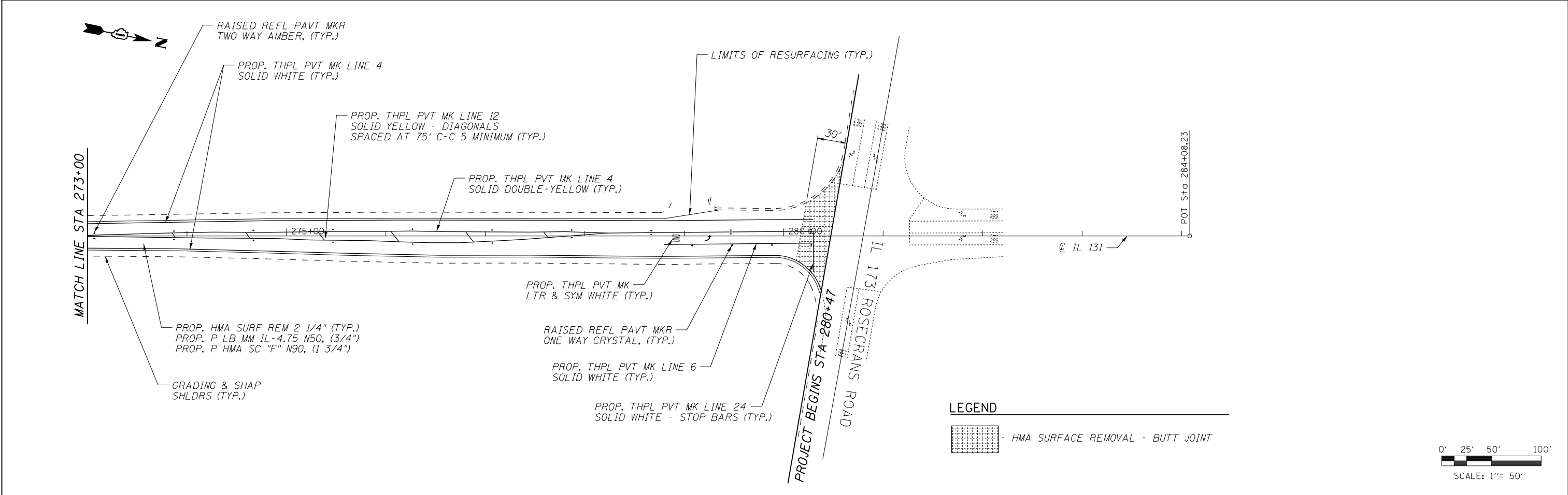
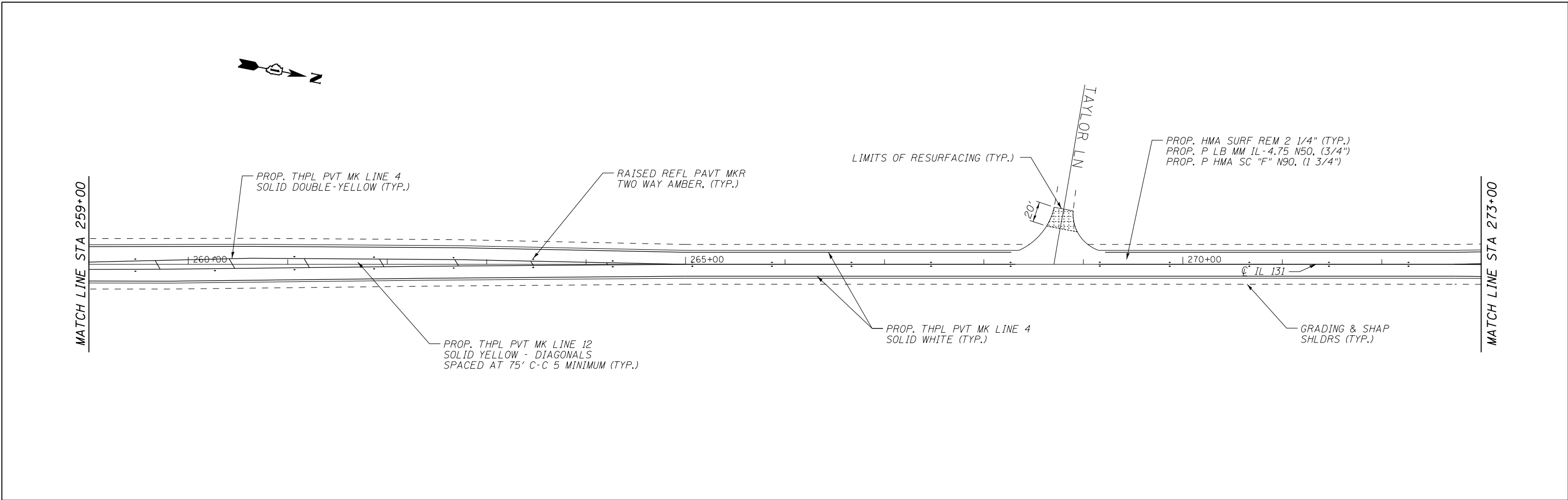
|                   |           |
|-------------------|-----------|
| DESIGNED - SLV    | REVISED - |
| DRAWN - SLV       | REVISED - |
| CHECKED - MJY, ST | REVISED - |
| DATE - 12/11/2012 | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ROADWAY PAVING AND PAVEMENT MARKING PLAN  
IL 131 (GREEN BAY ROAD) FROM IL 173 TO SUNSET AVENUE**

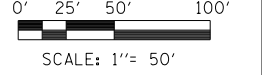
SCALE: 1" = 50'    SHEET NO. 9 OF 10 SHEETS    STA. 231+00 TO STA. 259+00

|   |         |                    |              |           |
|---|---------|--------------------|--------------|-----------|
| F.A.U. RTE.                                     | SECTION | COUNTY             | TOTAL SHEETS | SHEET NO. |
| 2711  | 27-RS-3 | LAKE               | 32           | 13        |
| D-91-326-11                                     |         | CONTRACT NO. 60N56 |              |           |
| FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT |         |                    |              |           |



**LEGEND**

 HMA SURFACE REMOVAL - BUTT JOINT

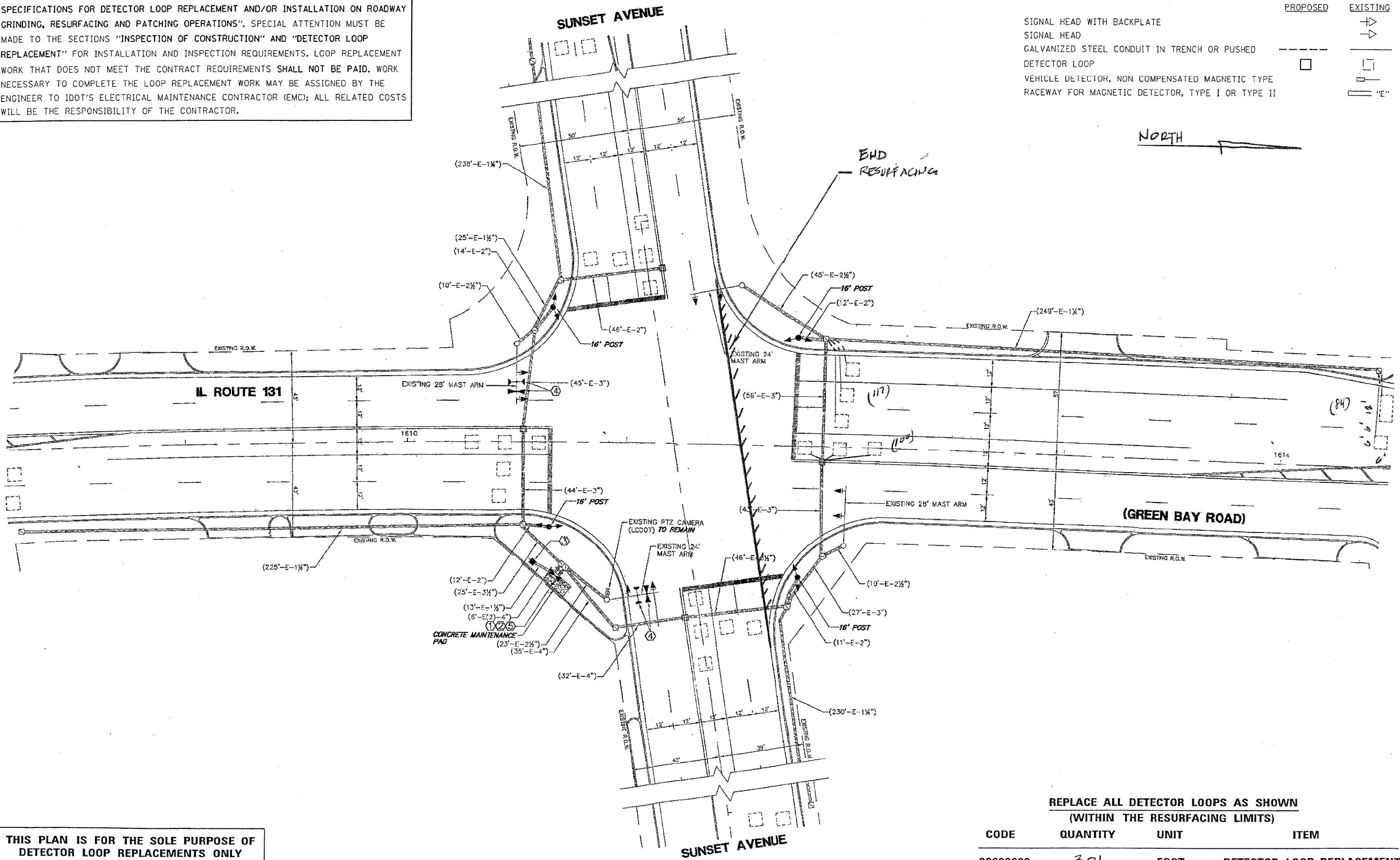
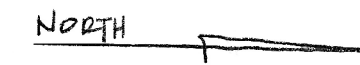


|   |                   |           |   |  |   |         |                    |              |           |
|---|-------------------|-----------|---|--|---|---------|--------------------|--------------|-----------|
|  Alfred Benesch & Company<br>1580 Wolf St., Suite 222<br>Naperville, Illinois 60563<br>630-577-9100 Job No. 10259.00 | DESIGNED - SLV    | REVISED - | <b>STATE OF ILLINOIS</b><br><b>DEPARTMENT OF TRANSPORTATION</b> | <b>ROADWAY PAVING AND PAVEMENT MARKING PLAN</b><br><b>IL 131 (GREEN BAY ROAD) FROM IL 173 TO SUNSET AVENUE</b> | F.A.U. RTE.                                     | SECTION | COUNTY             | TOTAL SHEETS | SHEET NO. |
|   | DRAWN - SLV       | REVISED - |   |  | 2711  | 27-RS-3 | LAKE               | 32           | 14        |
|   | CHECKED - MJY, ST | REVISED - |   |  | D-91-326-11                                     |         | CONTRACT NO. 60N56 |              |           |
|   | DATE - 12/11/2012 | REVISED - |   |  | FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT |         |                    |              |           |
| SCALE: 1" = 50'    SHEET NO. 10 OF 10 SHEETS    STA. 259+00 TO STA. 280+47  |                   |           |   |  |   |         |                    |              |           |

WORK SHALL MEET THE REQUIREMENTS OF THE SPECIAL PROVISION, "TRAFFIC SIGNAL SPECIFICATIONS FOR DETECTOR LOOP REPLACEMENT AND/OR INSTALLATION ON ROADWAY GRINDING, RESURFACING AND PATCHING OPERATIONS". SPECIAL ATTENTION MUST BE MADE TO THE SECTIONS "INSPECTION OF CONSTRUCTION" AND "DETECTOR LOOP REPLACEMENT" FOR INSTALLATION AND INSPECTION REQUIREMENTS. LOOP REPLACEMENT WORK THAT DOES NOT MEET THE CONTRACT REQUIREMENTS SHALL NOT BE PAID. WORK NECESSARY TO COMPLETE THE LOOP REPLACEMENT WORK MAY BE ASSIGNED BY THE ENGINEER TO IDOT'S ELECTRICAL MAINTENANCE CONTRACTOR (EMC); ALL RELATED COSTS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

**TRAFFIC SIGNAL LEGEND**

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



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

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

| CODE     | QUANTITY | UNIT | ITEM                       |
|----------|----------|------|----------------------------|
| 88600600 | 301      | FOOT | DETECTOR LOOP, REPLACEMENT |

**INTERSECTION OF IL 131 (GREEN BAY RD) & SUNSET AVE**



|                   |           |
|-------------------|-----------|
| DESIGNED - SLV    | REVISED - |
| DRAWN - SLV       | REVISED - |
| CHECKED - MJY, ST | REVISED - |
| DATE - 12/11/2012 | REVISED - |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

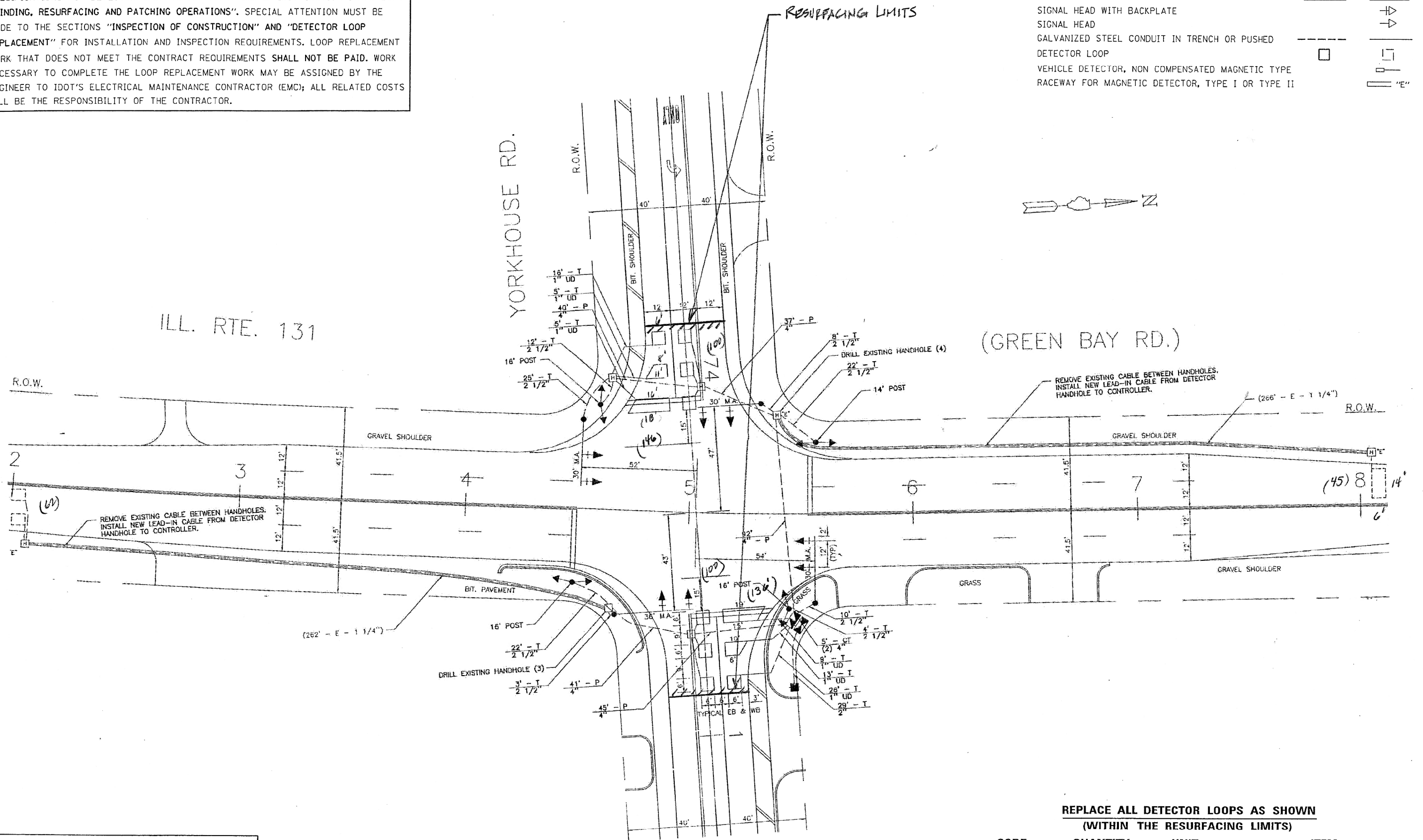
DETECTOR LOOP PLANS  
IL 131 (GREEN BAY ROAD) FROM IL 173 TO SUNSET AVENUE  
SCALE: SHEET NO. 1 OF 6 SHEETS STA. 13+27 TO STA. 280+47

| F.A.U. RTE.         | SECTION | COUNTY                    | TOTAL SHEETS | SHEET NO. |
|---------------------|---------|---------------------------|--------------|-----------|
| 2711                | 27-RS-3 | LAKE                      | 32           | 15        |
| D-91-326-11         |         | CONTRACT NO. 60N56        |              |           |
| FED. ROAD DIST. NO. |         | ILLINOIS FED. AID PROJECT |              |           |

WORK SHALL MEET THE REQUIREMENTS OF THE SPECIAL PROVISION, "TRAFFIC SIGNAL SPECIFICATIONS FOR DETECTOR LOOP REPLACEMENT AND/OR INSTALLATION ON ROADWAY GRINDING, RESURFACING AND PATCHING OPERATIONS". SPECIAL ATTENTION MUST BE MADE TO THE SECTIONS "INSPECTION OF CONSTRUCTION" AND "DETECTOR LOOP REPLACEMENT" FOR INSTALLATION AND INSPECTION REQUIREMENTS. LOOP REPLACEMENT WORK THAT DOES NOT MEET THE CONTRACT REQUIREMENTS SHALL NOT BE PAID. WORK NECESSARY TO COMPLETE THE LOOP REPLACEMENT WORK MAY BE ASSIGNED BY THE ENGINEER TO IDOT'S ELECTRICAL MAINTENANCE CONTRACTOR (EMC); ALL RELATED COSTS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

**TRAFFIC SIGNAL LEGEND**

|  | PROPOSED | EXISTING |
|--|----------|----------|
| SIGNAL HEAD WITH BACKPLATE                       | →        | →        |
| SIGNAL HEAD                                      | →        | →        |
| GALVANIZED STEEL CONDUIT IN TRENCH OR PUSHED     | ---      | ---      |
| DETECTOR LOOP                                    | □        | □        |
| VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE  | —        | —        |
| RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II | —        | — "E"    |



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

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

| CODE     | QUANTITY | UNIT | ITEM                       |
|----------|----------|------|----------------------------|
| 88600600 | 589      | FOOT | DETECTOR LOOP, REPLACEMENT |

**INTERSECTION OF IL 131 (GREEN BAY RD) & YORKHOUSE RD**



|          |              |         |   |
|----------|--------------|---------|---|
| DESIGNED | - SLV        | REVISED | - |
| DRAWN    | - SLV        | REVISED | - |
| CHECKED  | - MJY, ST    | REVISED | - |
| DATE     | - 12/11/2012 | REVISED | - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DETECTOR LOOP PLANS  
IL 131 (GREEN BAY ROAD) FROM IL 173 TO SUNSET AVENUE**

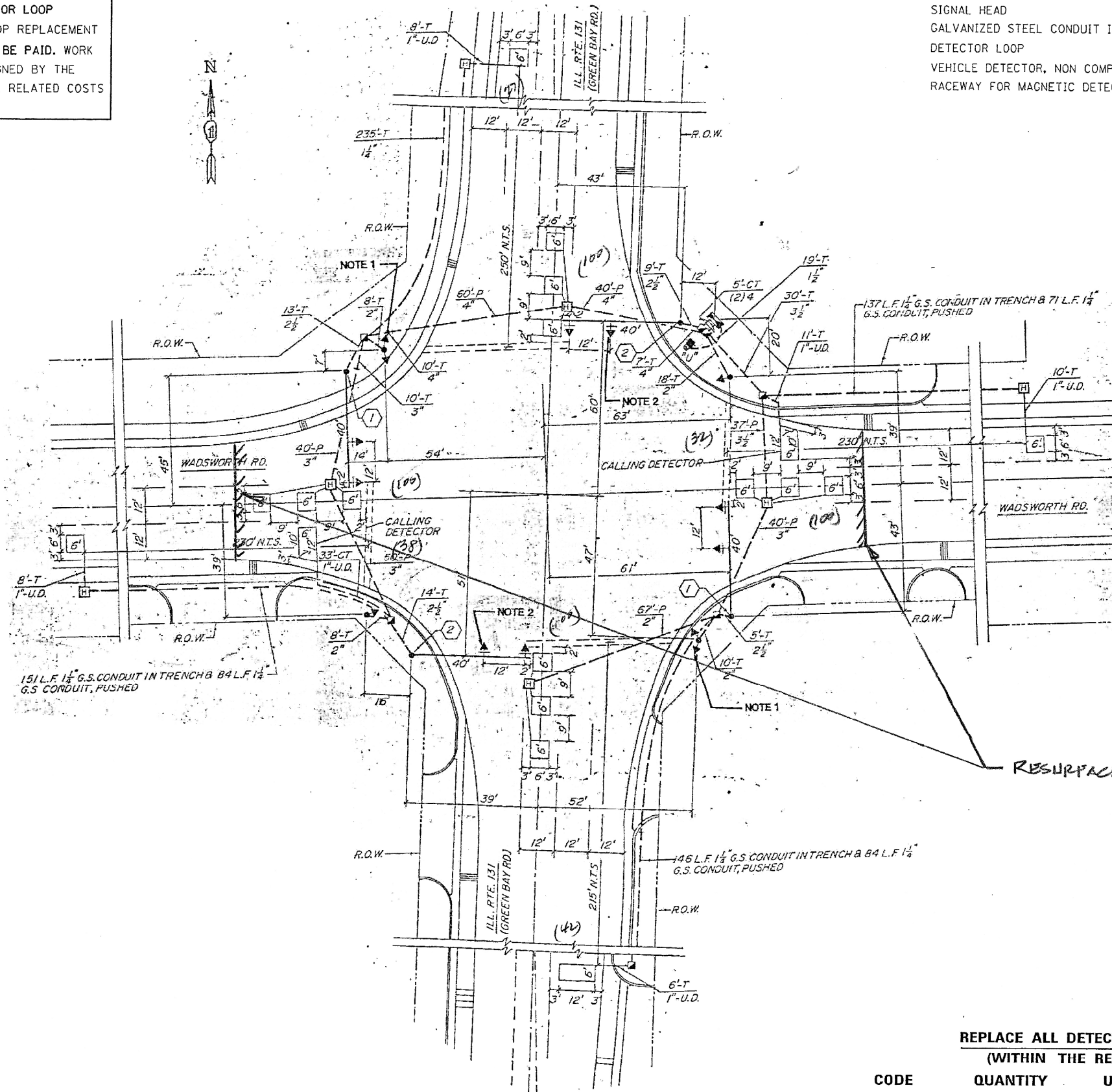
SCALE: SHEET NO. 2 OF 6 SHEETS STA. 13+27 TO STA. 280+47

| F.A.U. RTE.         | SECTION | COUNTY                    | TOTAL SHEETS | SHEET NO. |
|---------------------|---------|---------------------------|--------------|-----------|
| 2711                | 27-RS-3 | LAKE                      | 32           | 16        |
| D-91-326-11         |         | CONTRACT NO. 60N56        |              |           |
| FED. ROAD DIST. NO. |         | ILLINOIS FED. AID PROJECT |              |           |

WORK SHALL MEET THE REQUIREMENTS OF THE SPECIAL PROVISION, "TRAFFIC SIGNAL SPECIFICATIONS FOR DETECTOR LOOP REPLACEMENT AND/OR INSTALLATION ON ROADWAY GRINDING, RESURFACING AND PATCHING OPERATIONS". SPECIAL ATTENTION MUST BE MADE TO THE SECTIONS "INSPECTION OF CONSTRUCTION" AND "DETECTOR LOOP REPLACEMENT" FOR INSTALLATION AND INSPECTION REQUIREMENTS. LOOP REPLACEMENT WORK THAT DOES NOT MEET THE CONTRACT REQUIREMENTS SHALL NOT BE PAID. WORK NECESSARY TO COMPLETE THE LOOP REPLACEMENT WORK MAY BE ASSIGNED BY THE ENGINEER TO IDOT'S ELECTRICAL MAINTENANCE CONTRACTOR (EMC); ALL RELATED COSTS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

**TRAFFIC SIGNAL LEGEND**

|  |          |          |
|--|----------|----------|
|  | PROPOSED | EXISTING |
| SIGNAL HEAD WITH BACKPLATE                       | —        | —        |
| SIGNAL HEAD                                      | —        | —        |
| GALVANIZED STEEL CONDUIT IN TRENCH OR PUSHED     | —        | —        |
| DETECTOR LOOP                                    | □        | □        |
| VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE  | —        | —        |
| RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II | —        | —        |



RESURFACING LIMITS

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

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

| CODE     | QUANTITY | UNIT | ITEM                       |
|----------|----------|------|----------------------------|
| 88600600 | 543      | FOOT | DETECTOR LOOP, REPLACEMENT |

**INTERSECTION OF IL 131 (GREEN BAY RD) & WADSWORTH RD**



|                   |           |
|-------------------|-----------|
| DESIGNED - SLV    | REVISED - |
| DRAWN - SLV       | REVISED - |
| CHECKED - MJY, ST | REVISED - |
| DATE - 12/11/2012 | REVISED - |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

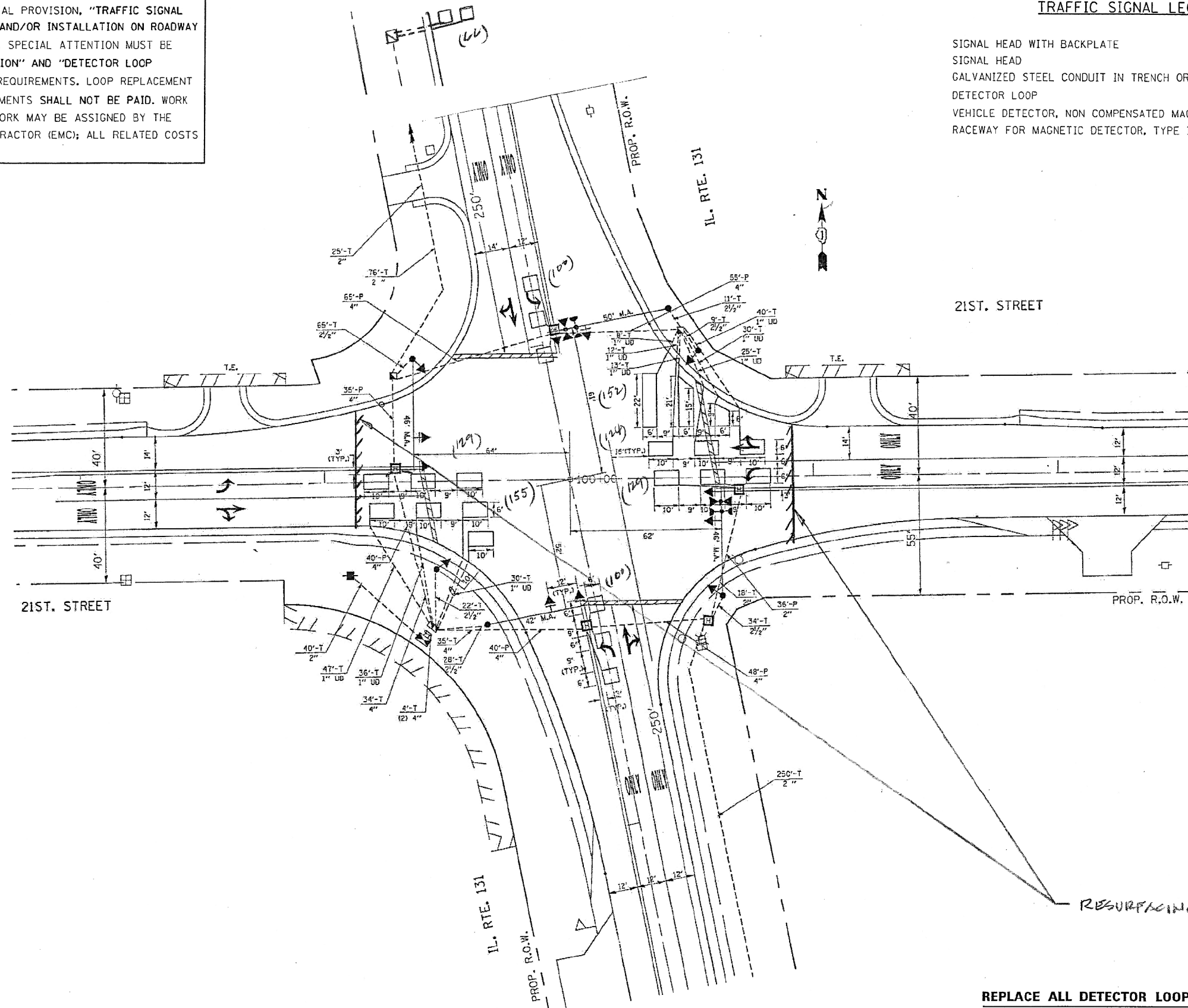
DETECTOR LOOP PLANS  
IL 131 (GREEN BAY ROAD) FROM IL 173 TO SUNSET AVENUE  
SCALE: SHEET NO. 3 OF 6 SHEETS STA. 13+27 TO STA. 280+47

|   |         |                    |              |           |
|---|---------|--------------------|--------------|-----------|
| F.A.U. RTE.                                   | SECTION | COUNTY             | TOTAL SHEETS | SHEET NO. |
| 2711  | 27-RS-3 | LAKE               | 32           | 17        |
| D-91-326-11                                   |         | CONTRACT NO. 60N56 |              |           |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT |         |                    |              |           |

WORK SHALL MEET THE REQUIREMENTS OF THE SPECIAL PROVISION, "TRAFFIC SIGNAL SPECIFICATIONS FOR DETECTOR LOOP REPLACEMENT AND/OR INSTALLATION ON ROADWAY GRINDING, RESURFACING AND PATCHING OPERATIONS". SPECIAL ATTENTION MUST BE MADE TO THE SECTIONS "INSPECTION OF CONSTRUCTION" AND "DETECTOR LOOP REPLACEMENT" FOR INSTALLATION AND INSPECTION REQUIREMENTS. LOOP REPLACEMENT WORK THAT DOES NOT MEET THE CONTRACT REQUIREMENTS SHALL NOT BE PAID. WORK NECESSARY TO COMPLETE THE LOOP REPLACEMENT WORK MAY BE ASSIGNED BY THE ENGINEER TO IDOT'S ELECTRICAL MAINTENANCE CONTRACTOR (EMC); ALL RELATED COSTS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

**TRAFFIC SIGNAL LEGEND**

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



RESURFACING LIMITS

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

| CODE     | QUANTITY | UNIT | ITEM                       |
|----------|----------|------|----------------------------|
| 88600600 | 1,021    | FOOT | DETECTOR LOOP, REPLACEMENT |

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

**INTERSECTION OF IL 131 (GREEN BAY RD) & 21st ST**



|                   |           |
|-------------------|-----------|
| DESIGNED - SLV    | REVISED - |
| DRAWN - SLV       | REVISED - |
| CHECKED - MJY, ST | REVISED - |
| DATE - 12/11/2012 | REVISED - |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DETECTOR LOOP PLANS  
IL 131 (GREEN BAY ROAD) FROM IL 173 TO SUNSET AVENUE  
SCALE: SHEET NO. 4 OF 6 SHEETS STA. 13+27 TO STA. 280+47

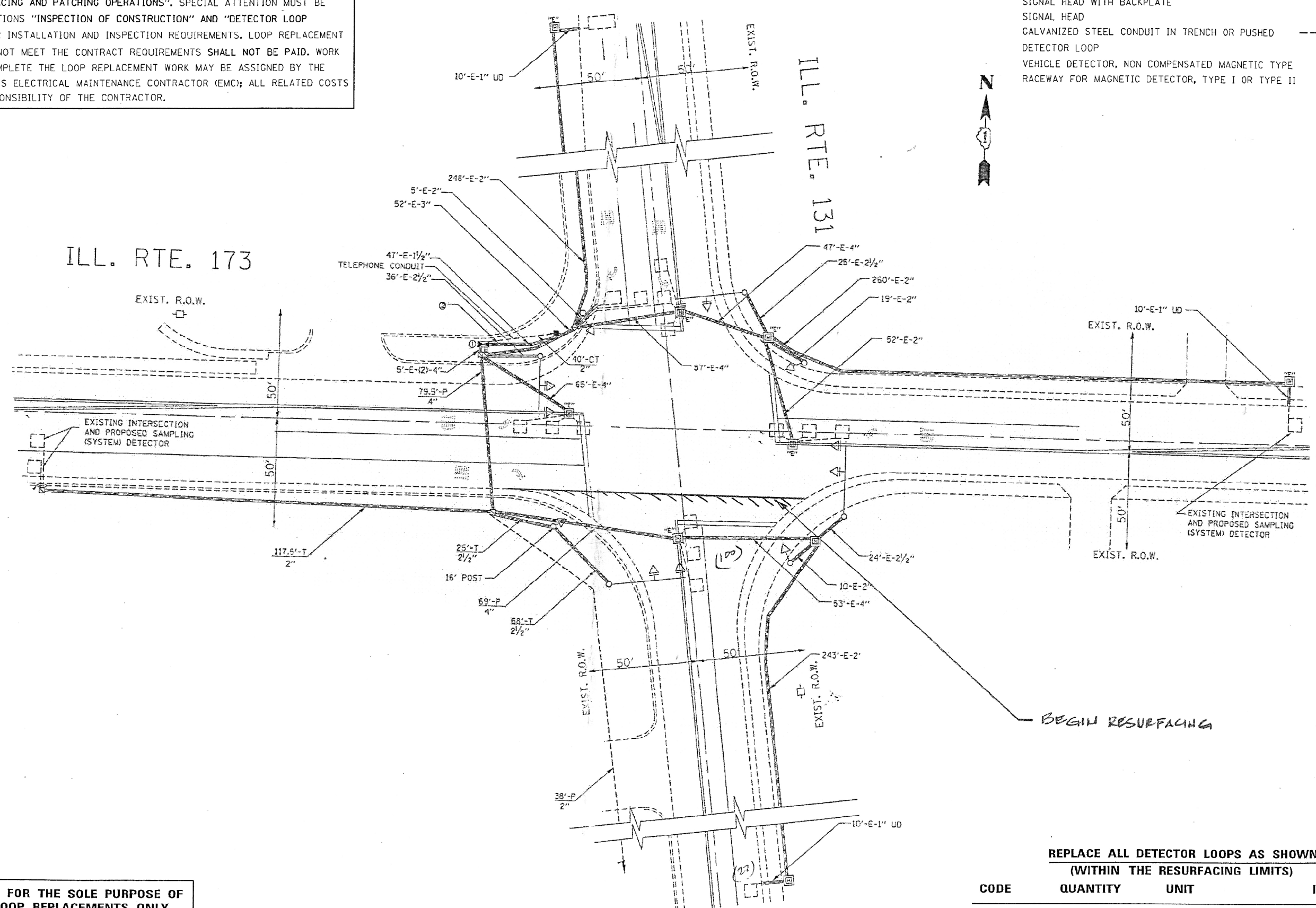
| F.A.U. RTE.         | SECTION | COUNTY                    | TOTAL SHEETS | SHEET NO. |
|---------------------|---------|---------------------------|--------------|-----------|
| 2711                | 27-RS-3 | LAKE                      | 32           | 18        |
| D-91-326-11         |         | CONTRACT NO. 60N56        |              |           |
| FED. ROAD DIST. NO. |         | ILLINOIS FED. AID PROJECT |              |           |



WORK SHALL MEET THE REQUIREMENTS OF THE SPECIAL PROVISION, "TRAFFIC SIGNAL SPECIFICATIONS FOR DETECTOR LOOP REPLACEMENT AND/OR INSTALLATION ON ROADWAY GRINDING, RESURFACING AND PATCHING OPERATIONS". SPECIAL ATTENTION MUST BE MADE TO THE SECTIONS "INSPECTION OF CONSTRUCTION" AND "DETECTOR LOOP REPLACEMENT" FOR INSTALLATION AND INSPECTION REQUIREMENTS. LOOP REPLACEMENT WORK THAT DOES NOT MEET THE CONTRACT REQUIREMENTS SHALL NOT BE PAID. WORK NECESSARY TO COMPLETE THE LOOP REPLACEMENT WORK MAY BE ASSIGNED BY THE ENGINEER TO IDOT'S ELECTRICAL MAINTENANCE CONTRACTOR (EMC); ALL RELATED COSTS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

**TRAFFIC SIGNAL LEGEND**

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



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

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

| CODE     | QUANTITY | UNIT | ITEM                      |
|----------|----------|------|---------------------------|
| 88600600 | 127      | FOOT | DETECTOR LOOP REPLACEMENT |

**INTERSECTION OF IL 131 (GREEN BAY RD) & IL 173 (ROSECRANS RD)**



|                   |           |
|-------------------|-----------|
| DESIGNED - SLV    | REVISED - |
| DRAWN - SLV       | REVISED - |
| CHECKED - MJY, ST | REVISED - |
| DATE - 12/11/2012 | REVISED - |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

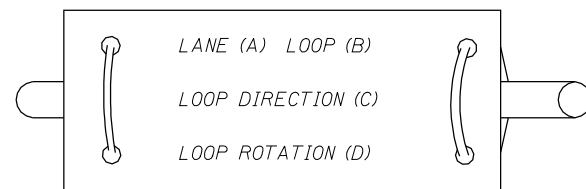
DETECTOR LOOP PLANS  
IL 131 (GREEN BAY ROAD) FROM IL 173 TO SUNSET AVENUE  
SCALE: SHEET NO. 5 OF 6 SHEETS STA. 13+27 TO STA. 280+47

| F.A.U. RTE.                                   | SECTION | COUNTY             | TOTAL SHEETS | SHEET NO. |
|---|---------|--------------------|--------------|-----------|
| 2711  | 27-R5-3 | LAKE               | 32           | 19        |
| D-91-326-11                                   |         | CONTRACT NO. 60N56 |              |           |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT |         |                    |              |           |

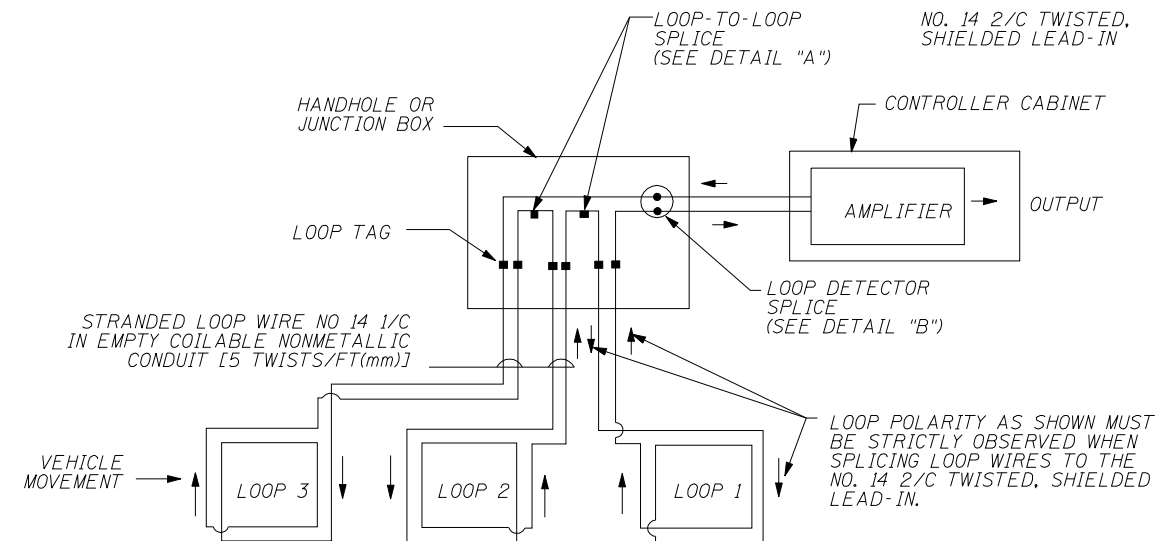
**LOOP DETECTOR NOTES**

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

**LOOP LEAD-IN CABLE TAG**

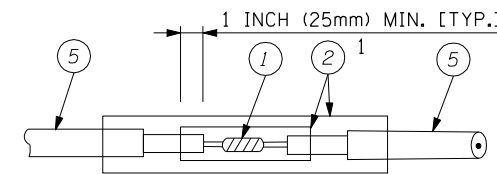


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY.
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

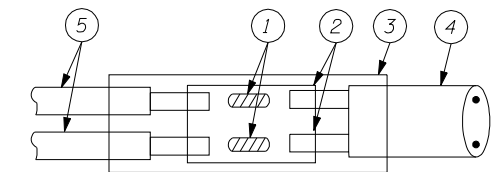


**DETECTOR LOOP WIRING SCHEMATIC**

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

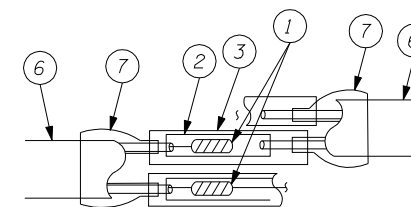


DETAIL "A"  
LOOP-TO-LOOP SPLICE

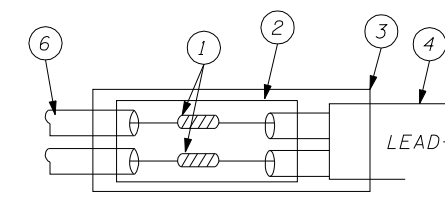


DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE

**TYPE I LOOP**



DETAIL "A"  
LOOP-TO-LOOP SPLICE

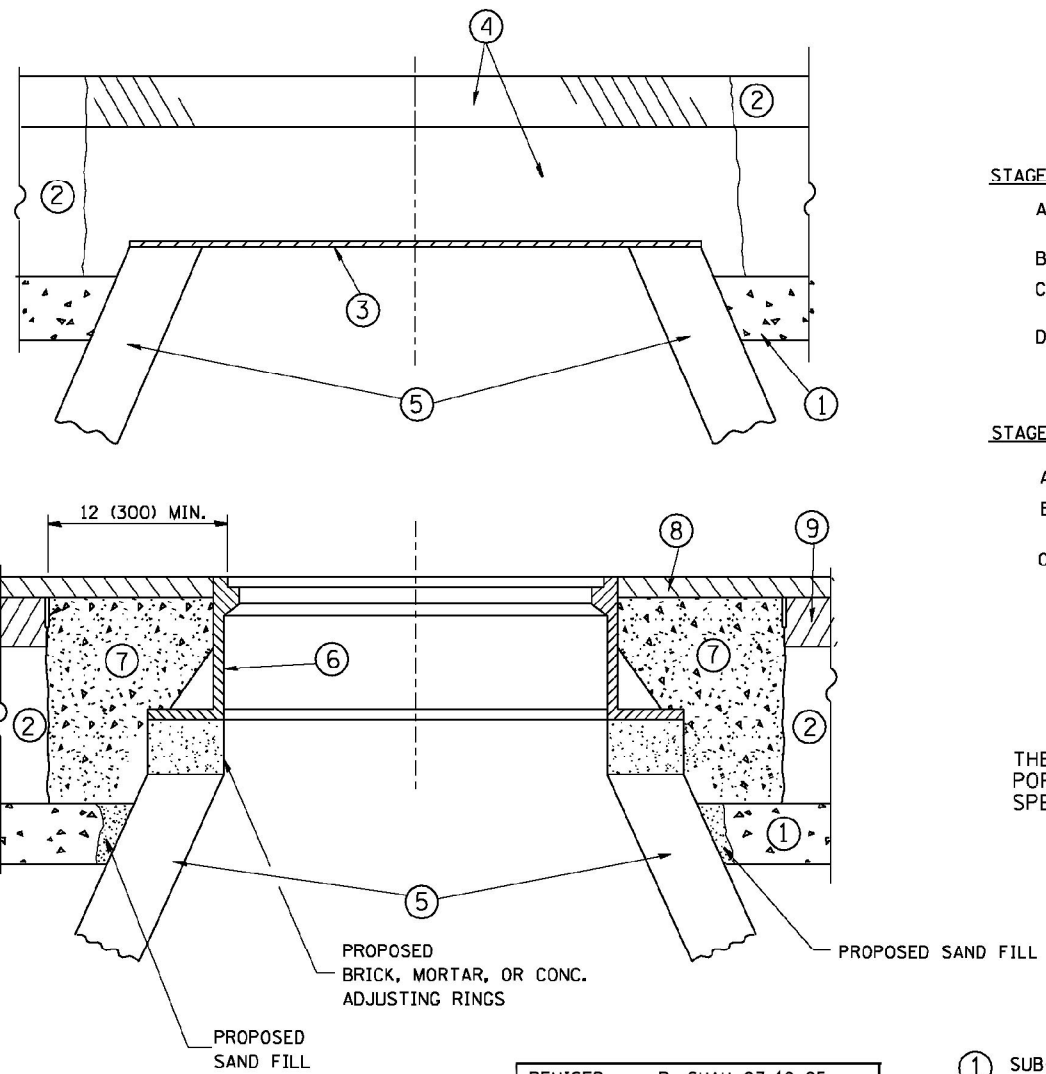


DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE

- ① WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.
- ② WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75mm), UNDERWATER GRADE.
- ③ WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150mm), UNDERWATER GRADE.
- ④ NO. 14 2/C TWISTED, SHIELDED CABLE.
- ⑤ LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- ⑥ PRE-FORMED LOOP.
- ⑦ XL POLYOFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL.

|          |              |         |   |
|----------|--------------|---------|---|
| DESIGNED | - SLV        | REVISED | - |
| DRAWN    | - SLV        | REVISED | - |
| CHECKED  | - MJY, ST    | REVISED | - |
| DATE     | - 12/11/2012 | REVISED | - |

|                     |         |                           |              |           |
|---------------------|---------|---------------------------|--------------|-----------|
| F.A.U. RTE.         | SECTION | COUNTY                    | TOTAL SHEETS | SHEET NO. |
| 2711                | 27-R5-3 | LAKE                      | 32           | 20        |
| D-91-326-11         |         | CONTRACT NO. 60N56        |              |           |
| 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 1/2 (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 S1 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 S1 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.

|         |                        |
|---------|------------------------|
| REVISED | - R. SHAH 03-10-95     |
| REVISED | - A. ABBAS 03-21-97    |
| REVISED | - R. WIEDEMAN 05-14-04 |
| REVISED | - R. BORO 01-01-07     |

**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.

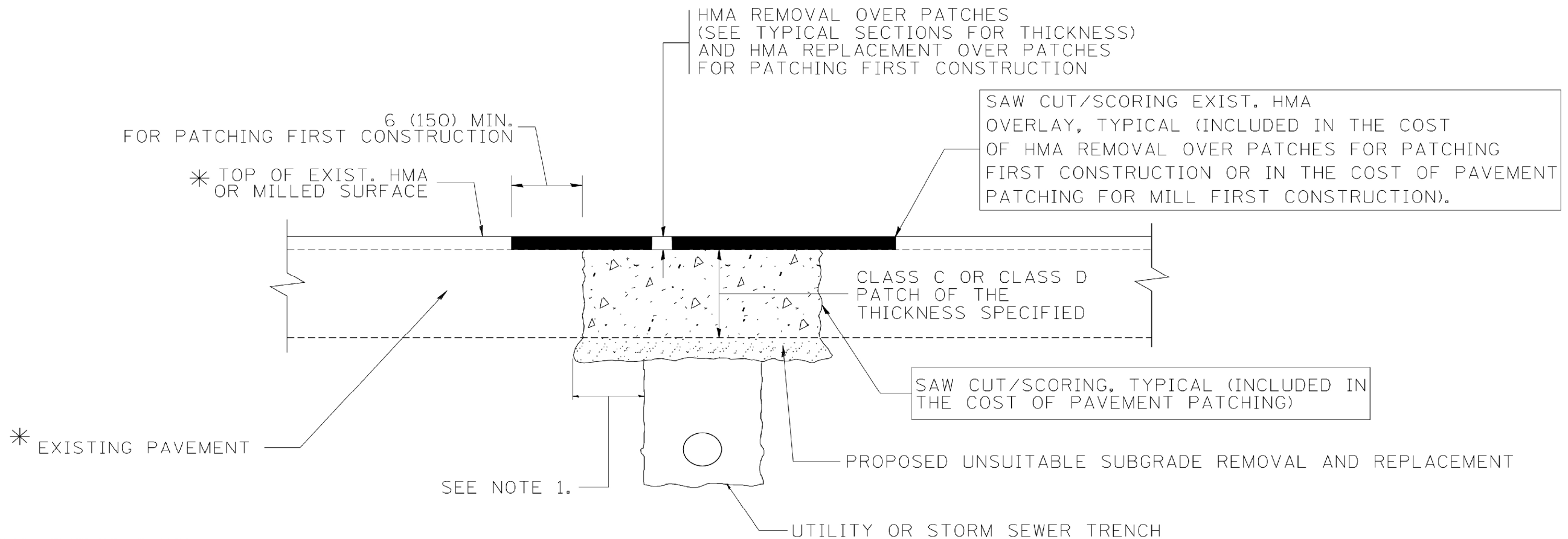
**BASIS OF PAYMENT:** THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR "FRAMES AND LIDS TO BE ADJUSTED, SPECIAL"

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

**FRAMES AND LIDS ADJUSTMENT WITH MILLING**

|          |              |         |   |
|----------|--------------|---------|---|
| DESIGNED | - SLV        | REVISED | - |
| DRAWN    | - SLV        | REVISED | - |
| CHECKED  | - MJY, ST    | REVISED | - |
| DATE     | - 12/11/2012 | REVISED | - |

| F.A.U. RTE.                                   | SECTION | COUNTY | TOTAL SHEETS       | SHEET NO. |
|---|---------|--------|--------------------|-----------|
| 2711  | 27-RS-3 | LAKE   | 32                 | 21        |
| D-91-326-11                                   |         |        | CONTRACT NO. 60N56 |           |
| 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.

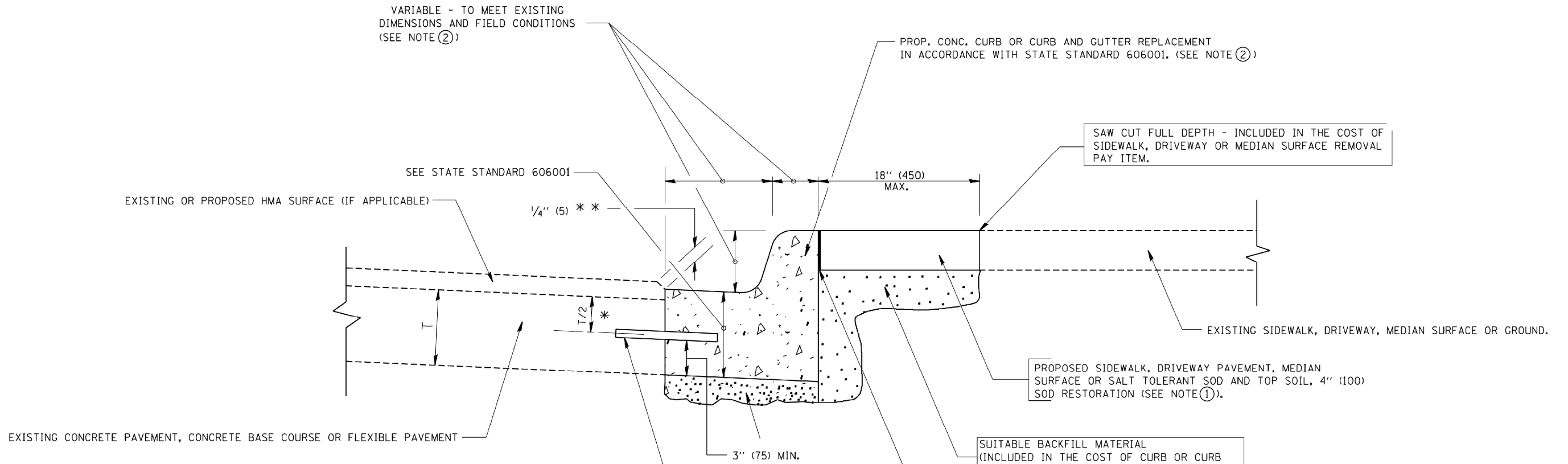
|         |   |          |          |
|---------|---|----------|----------|
| REVISED | - | A. ABBAS | 04-27-98 |
| REVISED | - | R. BORO  | 01-01-07 |
| REVISED | - | R. BORO  | 09-04-07 |
| REVISED | - | K. ENG   | 10-27-08 |

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

**PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT**

|          |   |            |         |   |
|----------|---|------------|---------|---|
| DESIGNED | - | SLV        | REVISED | - |
| DRAWN    | - | SLV        | REVISED | - |
| CHECKED  | - | MJY, ST    | REVISED | - |
| DATE     | - | 12/11/2012 | REVISED | - |

| F.A.U. RTE.         | SECTION | COUNTY                    | TOTAL SHEETS | SHEET NO. |
|---------------------|---------|---------------------------|--------------|-----------|
| 2711                | 27-RS-3 | LAKE                      | 32           | 22        |
| D-91-326-11         |         | CONTRACT NO. 60N56        |              |           |
| FED. ROAD DIST. NO. |         | ILLINOIS FED. AID PROJECT |              |           |



\* 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.

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 USUABLE 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".

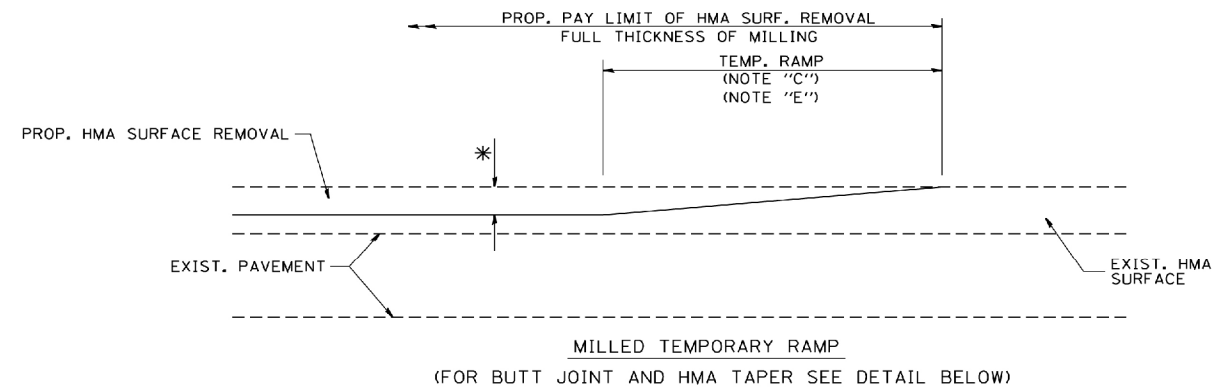
|         |   |          |          |
|---------|---|----------|----------|
| REVISED | - | R. SHAH  | 10-03-96 |
| REVISED | - | A. ABBAS | 03-21-97 |
| REVISED | - | M. GOMEZ | 01-22-01 |
| REVISED | - | R. BORO  | 01-01-07 |

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

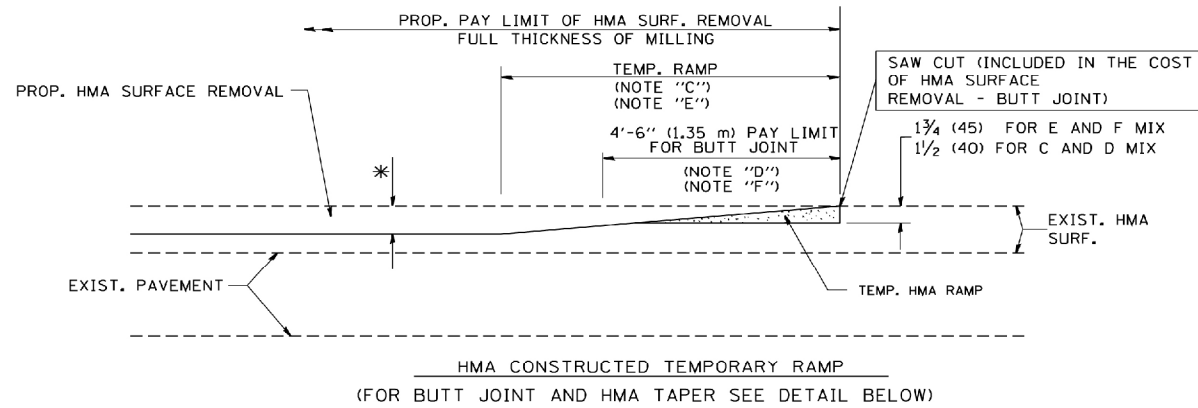
## CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

|          |   |            |         |   |
|----------|---|------------|---------|---|
| DESIGNED | - | SLV        | REVISED | - |
| DRAWN    | - | SLV        | REVISED | - |
| CHECKED  | - | MJY, ST    | REVISED | - |
| DATE     | - | 12/11/2012 | REVISED | - |

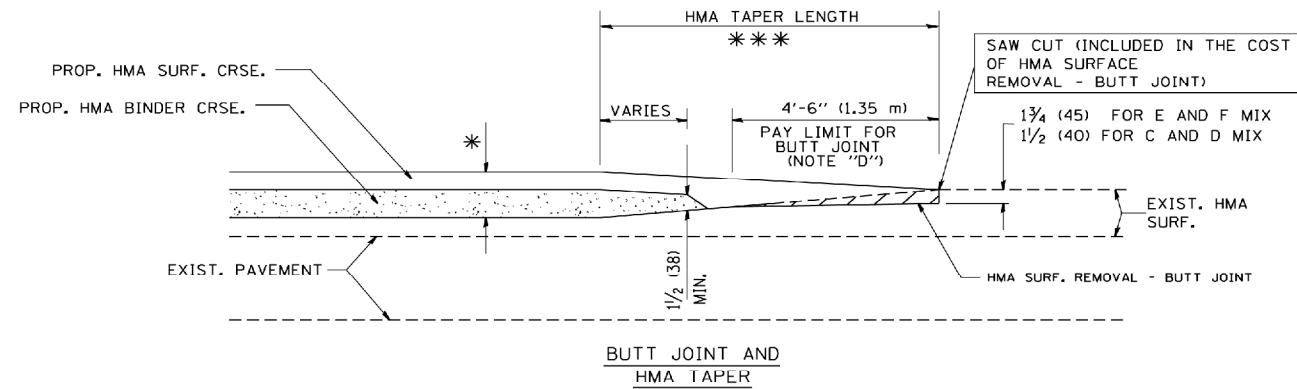
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|---------------------|---------|---------------------------|--------------|-----------|
| F.A.U. RTE.         | SECTION | COUNTY                    | TOTAL SHEETS | SHEET NO. |
| 2711                | 27-RS-3 | LAKE                      | 32           | 23        |
| D-91-326-11         |         | CONTRACT NO. 60N56        |              |           |
| FED. ROAD DIST. NO. |         | ILLINOIS FED. AID PROJECT |              |           |



**OPTION 1**

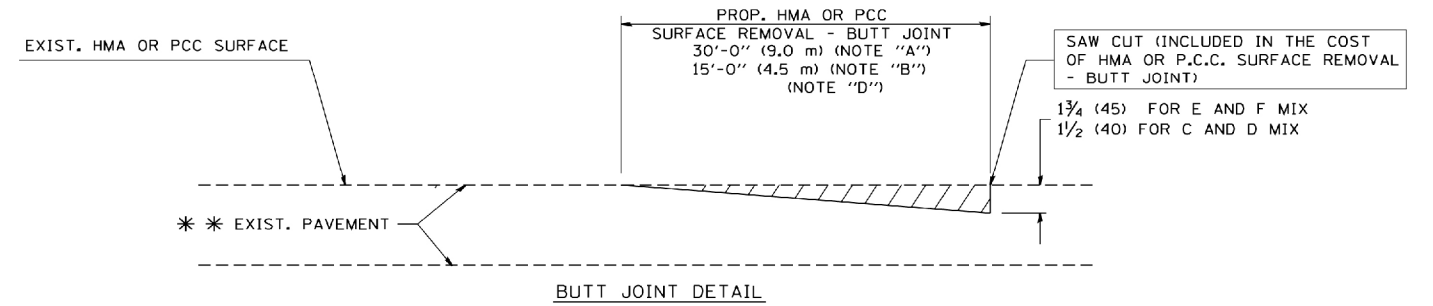


**OPTION 2**  
**TYPICAL TEMPORARY RAMP**

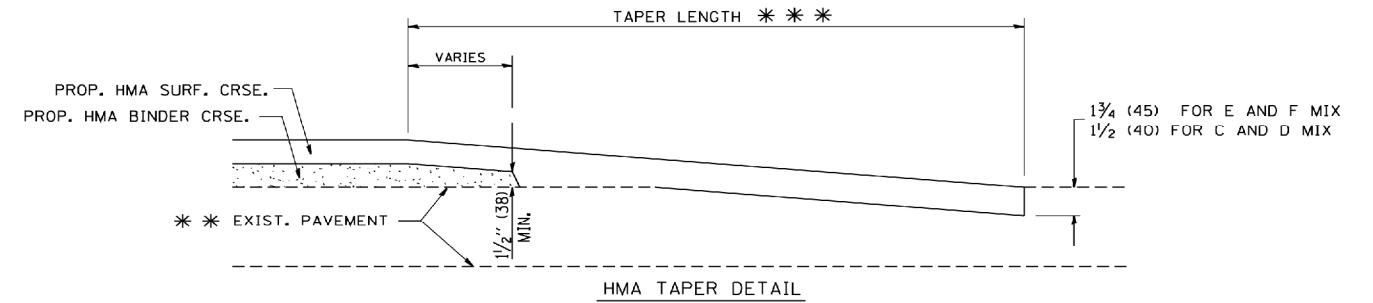


**TYPICAL BUTT JOINT AND HMA TAPER**  
**FOR MILLING AND RESURFACING**

|         |   |          |          |
|---------|---|----------|----------|
| REVISED | - | R. SHAH  | 10-25-94 |
| REVISED | - | A. ABBAS | 03-21-97 |
| REVISED | - | M. GOMEZ | 04-06-01 |
| REVISED | - | R. BORO  | 01-01-07 |



**BUTT JOINT DETAIL**



**HMA TAPER DETAIL**

**TYPICAL BUTT JOINT AND HMA TAPER**  
**FOR RESURFACING ONLY**

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

**NOTES**

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
  - B: MINOR SIDE ROADS.
  - C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
  - D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
  - E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
  - F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
  - G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- \* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- \*\*\* 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")  
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

**BASIS OF PAYMENT:**

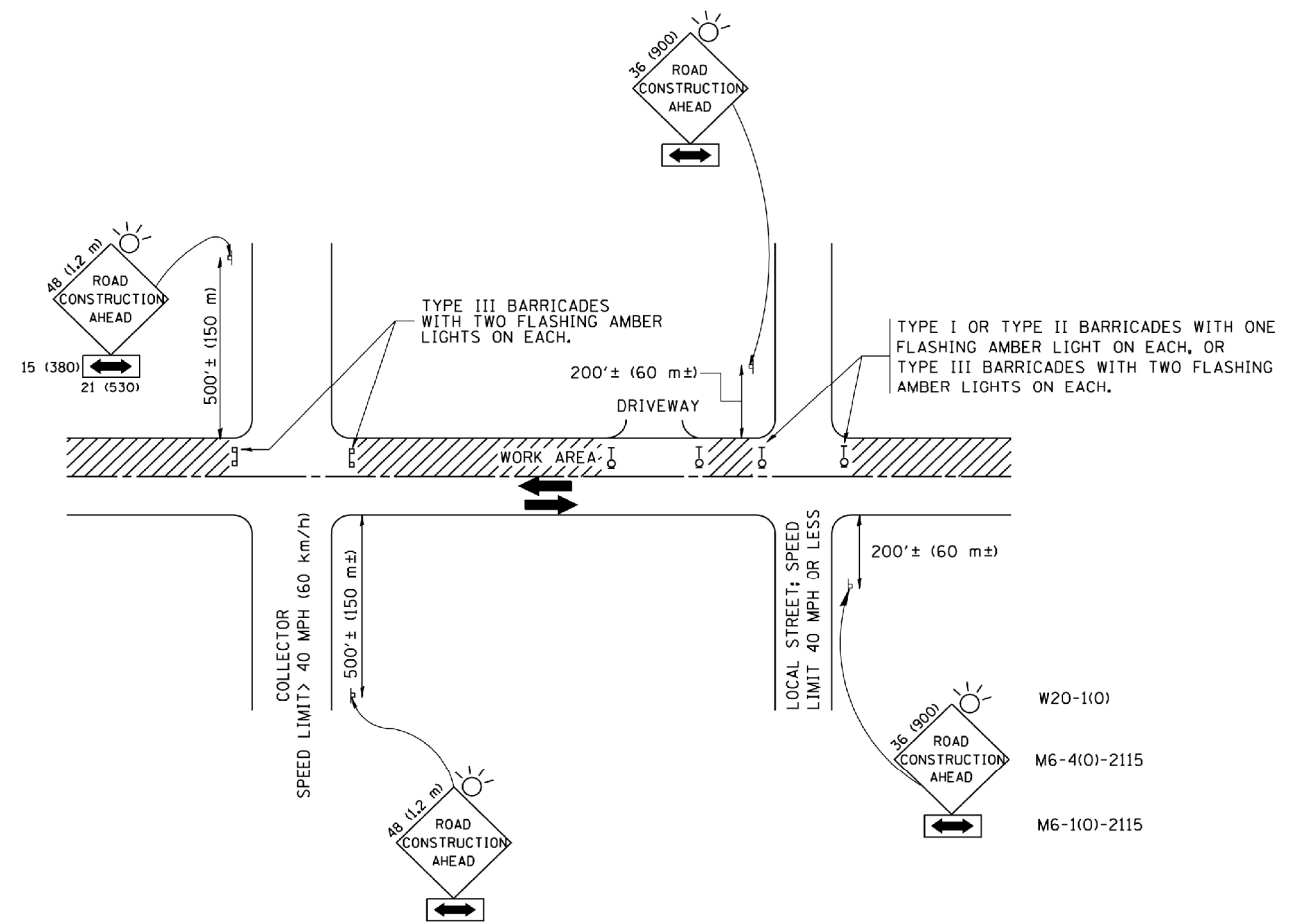
THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

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

**BUTT JOINT AND HMA TAPER DETAILS**

|          |   |            |         |   |
|----------|---|------------|---------|---|
| DESIGNED | - | SLV        | REVISED | - |
| DRAWN    | - | SLV        | REVISED | - |
| CHECKED  | - | MJY, ST    | REVISED | - |
| DATE     | - | 12/11/2012 | REVISED | - |

|                     |         |                           |              |           |
|---------------------|---------|---------------------------|--------------|-----------|
| F.A.U. RTE.         | SECTION | COUNTY                    | TOTAL SHEETS | SHEET NO. |
| 2711                | 27-RS-3 | LAKE                      | 32           | 24        |
| D-91-326-11         |         | CONTRACT NO. 60N56        |              |           |
| 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.

|         |                |          |
|---------|----------------|----------|
| REVISED | - J. OBERLE    | 10-18-95 |
| REVISED | - A. HOUSEH    | 03-06-96 |
| REVISED | - A. HOUSEH    | 10-15-96 |
| REVISED | - T. RAMMACHER | 01-06-00 |

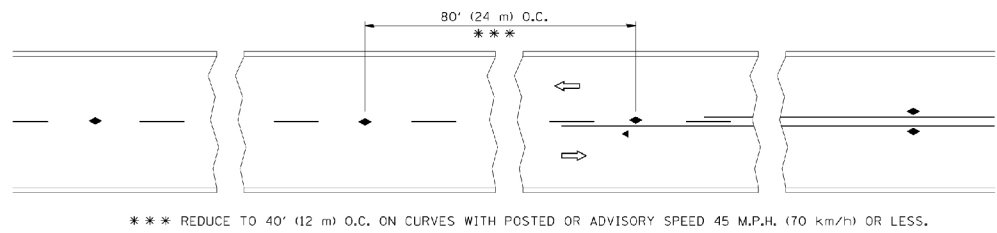
All dimensions are in millimeters (inches) unless otherwise shown.

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

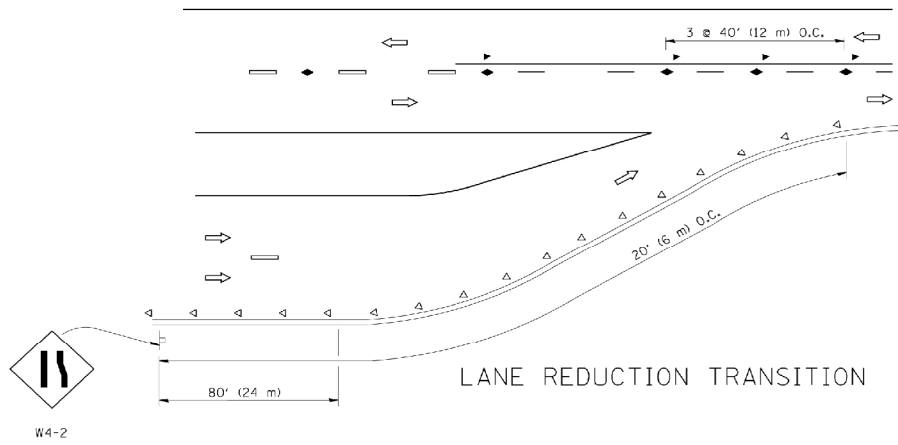
|          |              |         |   |
|----------|--------------|---------|---|
| DESIGNED | - SLV        | REVISED | - |
| DRAWN    | - SLV        | REVISED | - |
| CHECKED  | - MJY, ST    | REVISED | - |
| DATE     | - 12/11/2012 | REVISED | - |

|                     |         |                           |              |           |
|---------------------|---------|---------------------------|--------------|-----------|
| F.A.U. RTE.         | SECTION | COUNTY                    | TOTAL SHEETS | SHEET NO. |
| 2711                | 27-RS-3 | LAKE                      | 32           | 25        |
| D-91-326-11         |         | CONTRACT NO. 60N56        |              |           |
| FED. ROAD DIST. NO. |         | ILLINOIS FED. AID PROJECT |              |           |

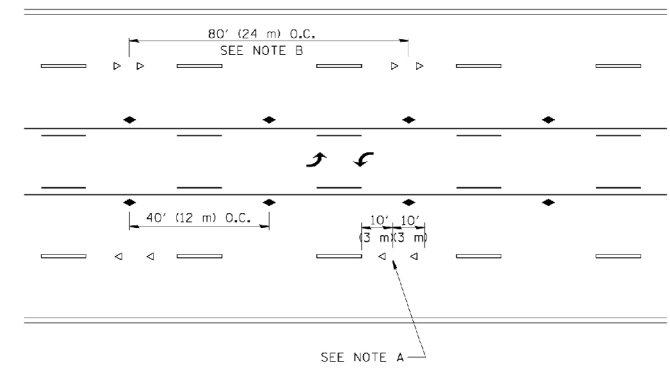




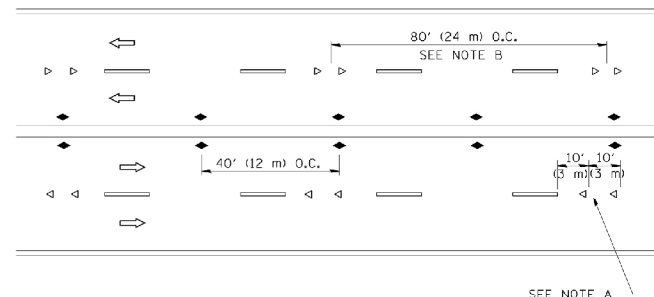
TWO-LANE/TWO-WAY



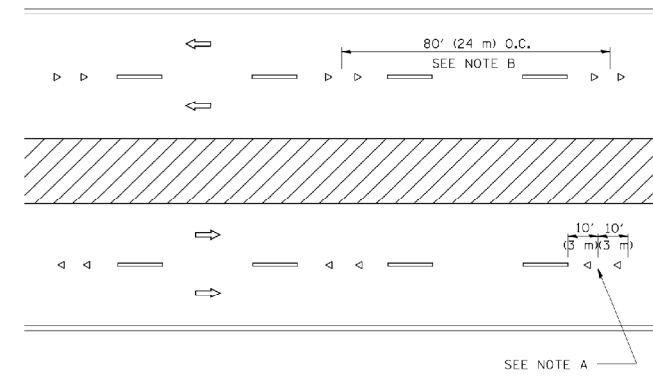
LANE REDUCTION TRANSITION



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.

LANE MARKER NOTES

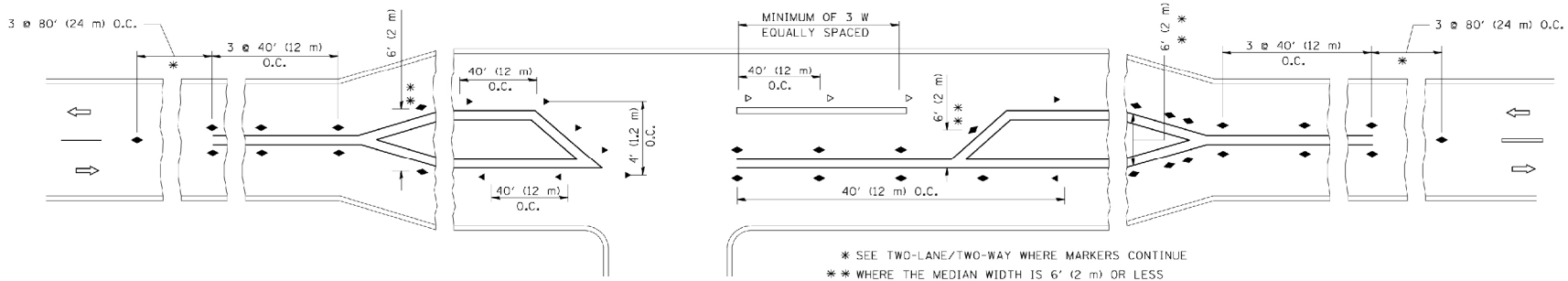
- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H. (20 km/h) LOWER THAN POSTED SPEEDS.

SYMBOLS

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

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

|         |                |          |
|---------|----------------|----------|
| REVISED | - T. RAMMACHER | 09-19-94 |
| REVISED | - T. RAMMACHER | 03-12-99 |
| REVISED | - T. RAMMACHER | 01-06-00 |
| REVISED | - C. JUCIUS    | 09-09-09 |

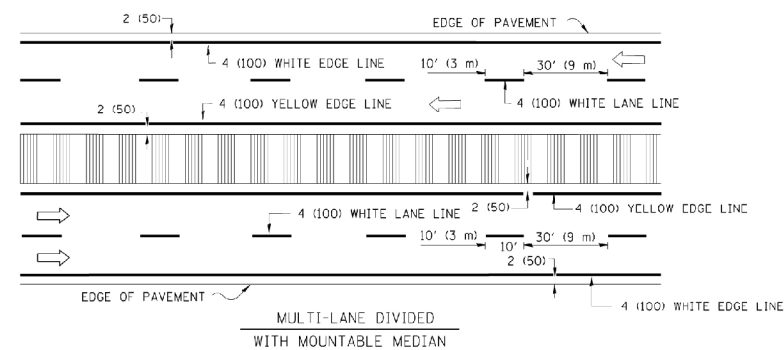
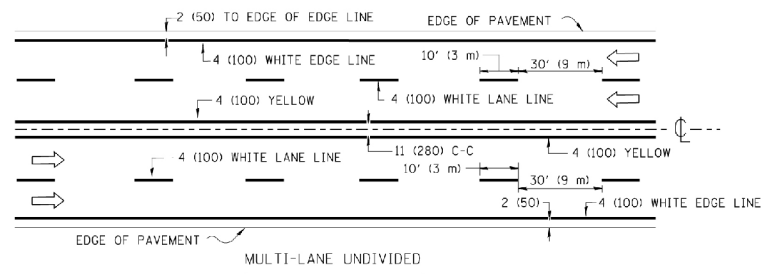
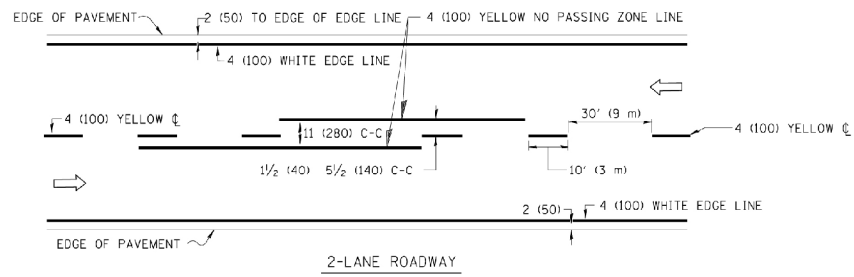
\* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE  
 \*\* WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

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

## RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)

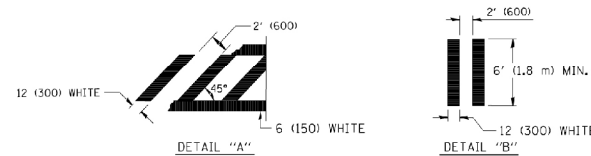
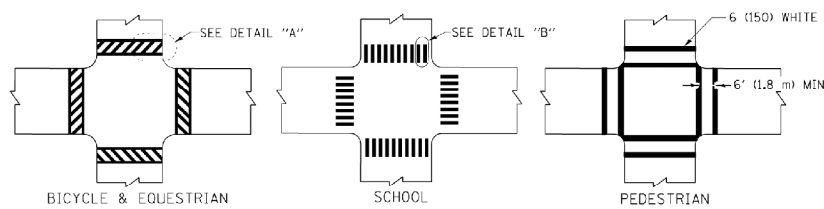
|          |              |         |   |
|----------|--------------|---------|---|
| DESIGNED | - SLV        | REVISED | - |
| DRAWN    | - SLV        | REVISED | - |
| CHECKED  | - MJY, ST    | REVISED | - |
| DATE     | - 12/11/2012 | REVISED | - |

|                     |         |                           |              |           |
|---------------------|---------|---------------------------|--------------|-----------|
| F.A.U. RTE.         | SECTION | COUNTY                    | TOTAL SHEETS | SHEET NO. |
| 2711                | 27-RS-3 | LAKE                      | 32           | 26        |
| D-91-326-11         |         | CONTRACT NO. 60N56        |              |           |
| FED. ROAD DIST. NO. |         | ILLINOIS FED. AID PROJECT |              |           |

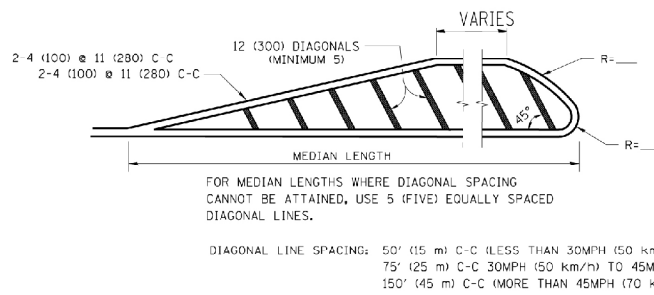
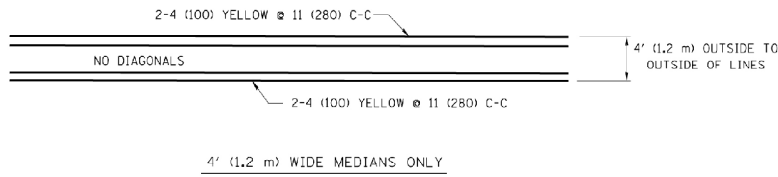


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

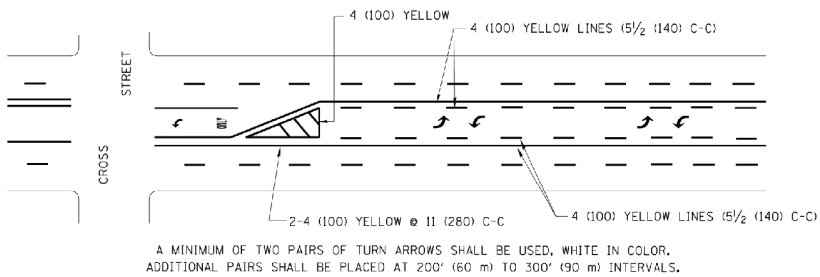
TYPICAL LANE AND EDGE LINE MARKING



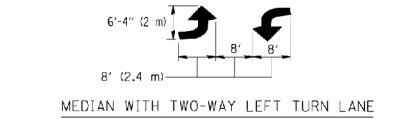
TYPICAL CROSSWALK MARKING



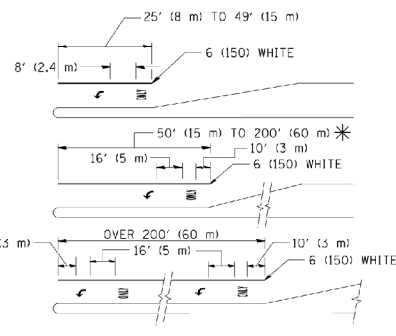
MEDIANS OVER 4' (1.2 m) WIDE



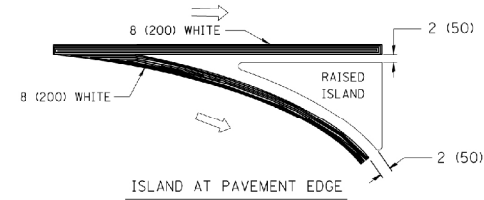
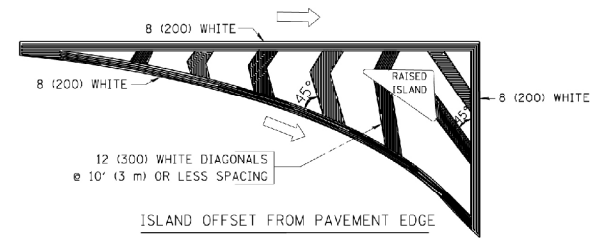
TYPICAL PAINTED MEDIAN MARKING



TYPICAL LEFT (OR RIGHT) TURN LANE



TYPICAL TURN LANE MARKING



TYPICAL ISLAND MARKING

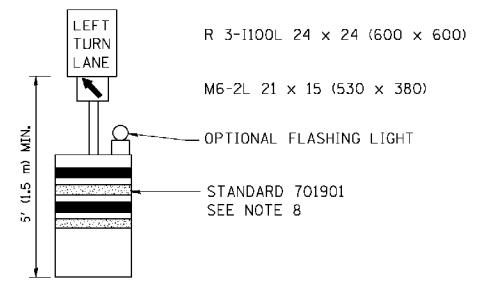
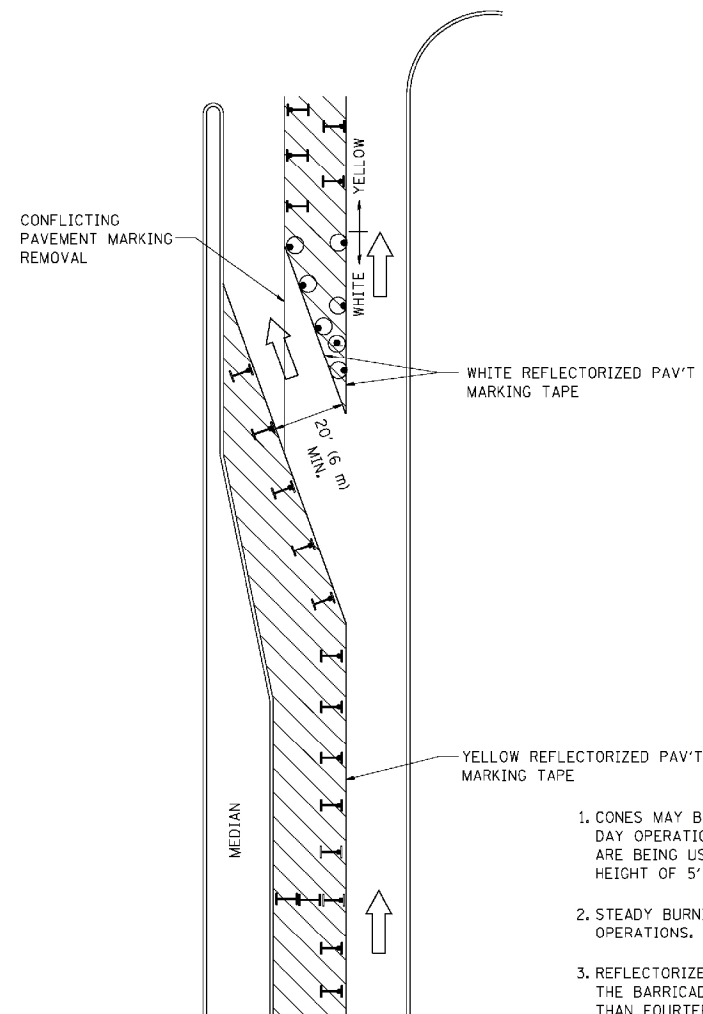
| TYPE OF MARKING   | WIDTH OF LINE  | PATTERN                         | COLOR   | SPACING / REMARKS  |
|---|--|---------------------------------|---|--|
| CENTERLINE ON 2 LANE PAVEMENT   | 4 (100)  | SKIP-DASH                       | YELLOW  | 10' (3 m) LINE WITH 30' (9 m) SPACE  |
| CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT   | 2 @ 4 (100)  | SOLID                           | YELLOW  | 11 (280) C-C   |
| NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS                                      | 4 (100)<br>2 @ 4 (100)   | SOLID<br>SOLID                  | YELLOW<br>YELLOW  | 5 1/2 (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 18" (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 1/2 (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>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;<br>TWO WAY TRAFFIC<br>WHITE;<br>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 m²); EACH<br>"X"=54.0 SQ. FT. (5.0 m²)  |
| 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.

|         |               |          |
|---------|---------------|----------|
| REVISED | -T. RAMMACHER | 10-27-94 |
| REVISED | -C. JUCIUS    | 09-09-09 |
| REVISED | -             |          |
| REVISED | -             |          |

## DISTRICT ONE TYPICAL PAVEMENT MARKINGS

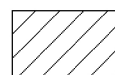







**GENERAL NOTES**

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 OPER 725 IS REQUIRED.
8. IF A DRUM OR TYPE II BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHRP 350 REQUIREMENTS.
9. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

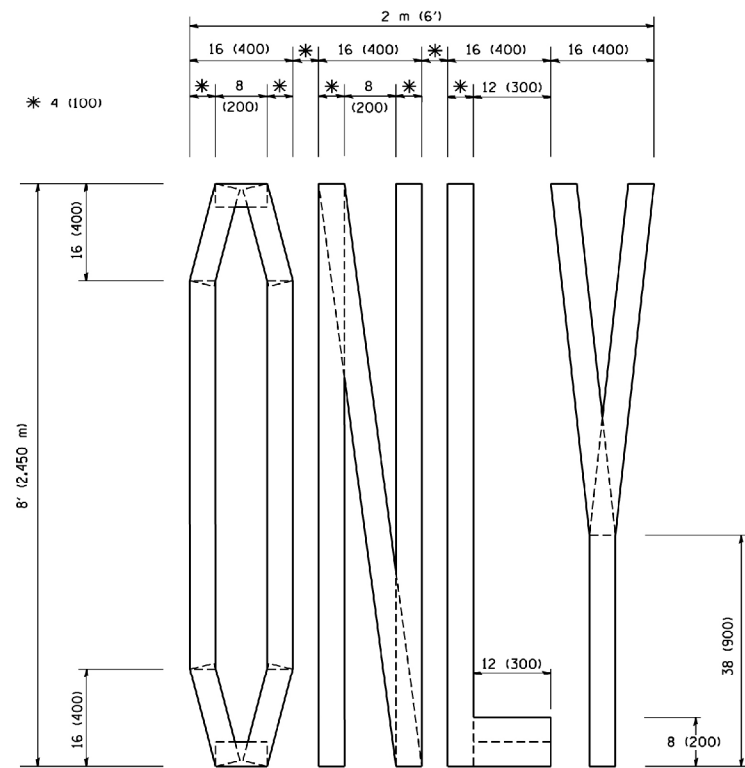
All dimensions are in inches (millimeters) unless otherwise shown.

**LEGEND**

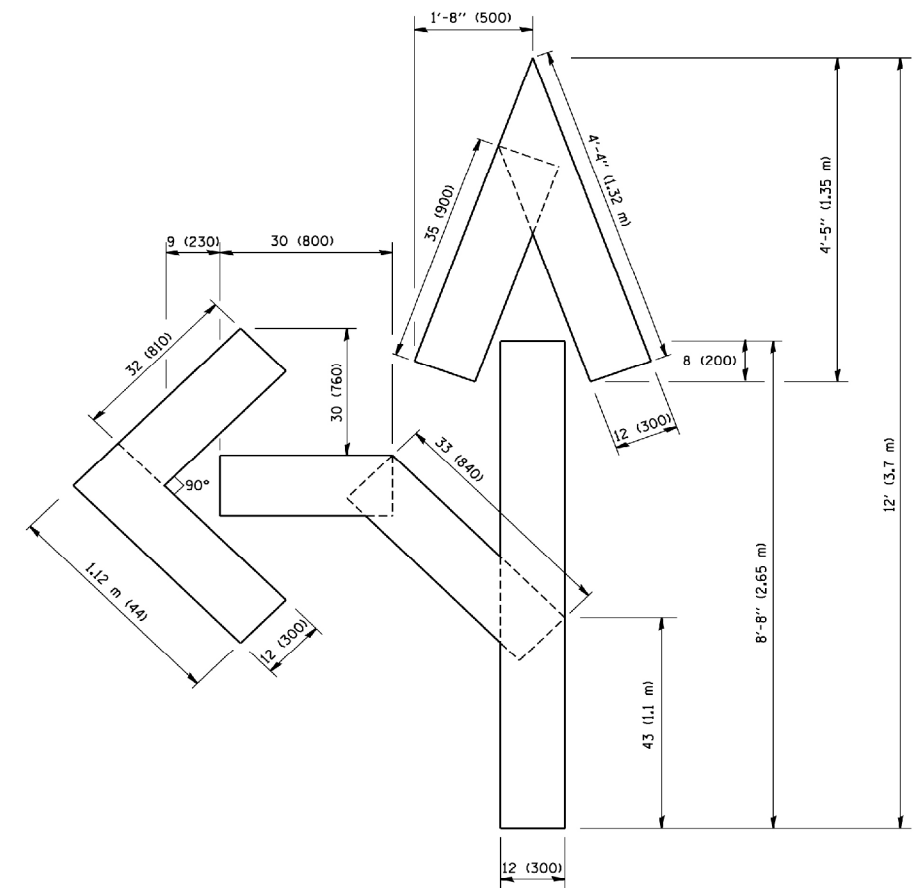
-  WORK AREA
-  LANE OPEN TO TRAFFIC
-  TYPE I OR II BARRICADE WITH STEADY BURN LIGHT
-  DRUM WITH STEADY BURN LIGHT
-  DRUM WITH SIGN (WITH OPTIONAL FLASHING LIGHT) SEE DETAIL
-  TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

|                                |                            |
|--------------------------------|----------------------------|
| REVISED -T. RAMMACHER 09-08-94 | REVISED - R. BORO 09-14-09 |
| REVISED - A. HOUSEH 11-07-95   | REVISED -                  |
| REVISED - A. HOUSEH 10-12-96   | REVISED -                  |
| REVISED -T. RAMMACHER 01-06-00 | REVISED -                  |

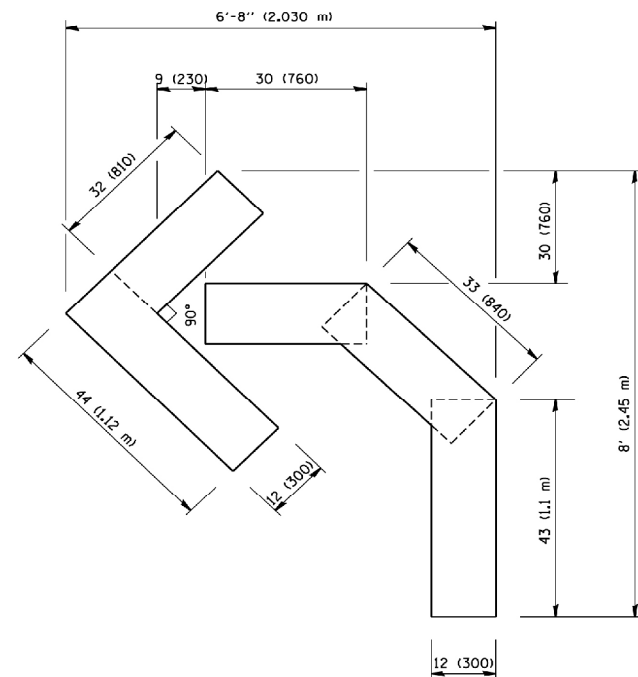
**TRAFFIC CONTROL AND PROTECTION AT TURN BAYS  
(TO REMAIN OPEN TO TRAFFIC)**



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



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



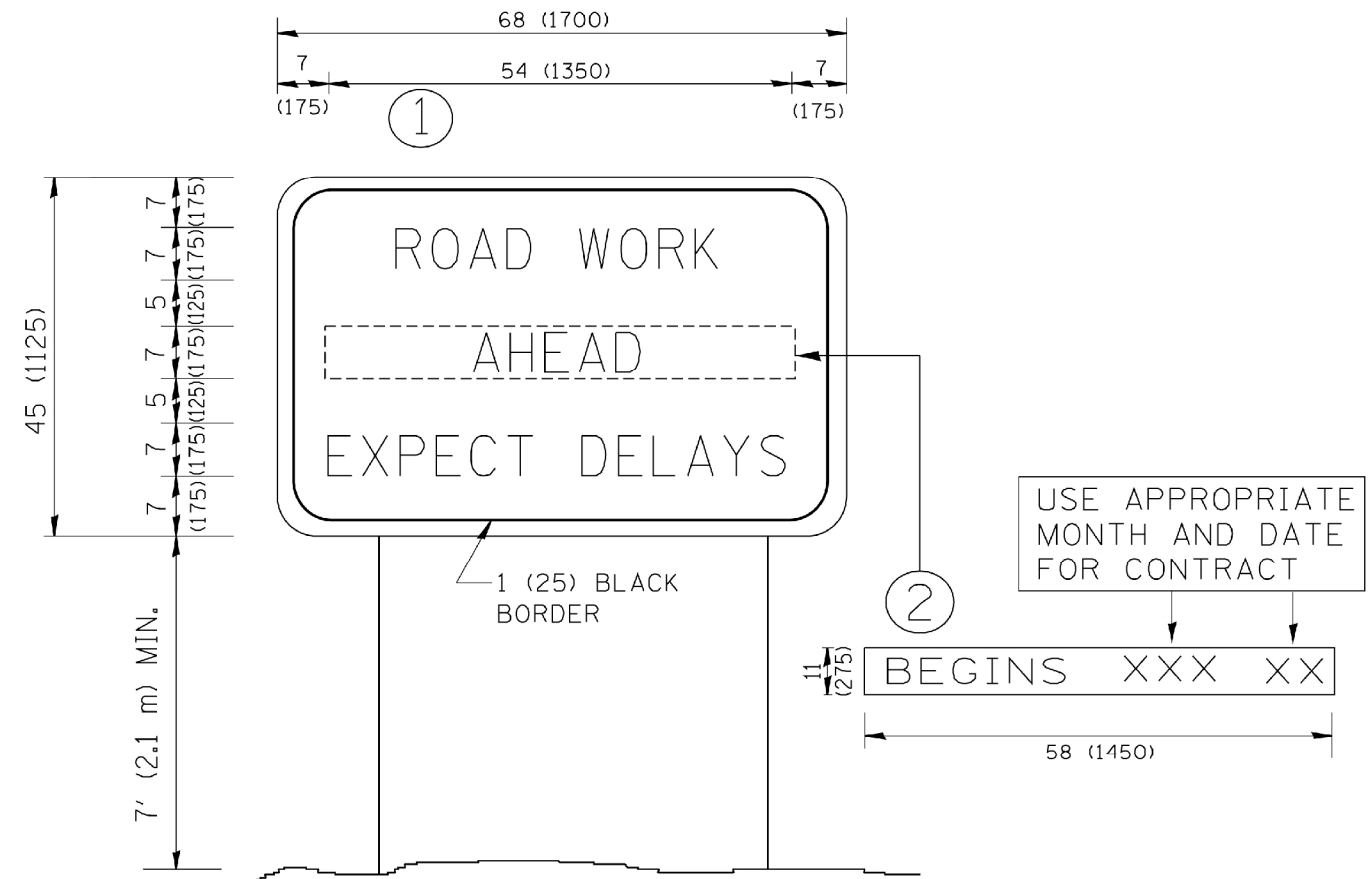
QUANTITY  
 4 (100) LINE = 45.5 ft. (13.9 m)  
 15.2 sq. ft. (1.39 sq. m)

|         |                |          |
|---------|----------------|----------|
| REVISED | - T. RAMMACHER | 06-05-96 |
| REVISED | - T. RAMMACHER | 11-04-97 |
| REVISED | - T. RAMMACHER | 03-02-98 |
| REVISED | - E. GOMEZ     | 08-28-00 |

## PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING

|          |              |         |   |
|----------|--------------|---------|---|
| DESIGNED | - SLV        | REVISED | - |
| DRAWN    | - SLV        | REVISED | - |
| CHECKED  | - MJY, ST    | REVISED | - |
| DATE     | - 12/11/2012 | REVISED | - |

|                     |         |                           |              |           |
|---------------------|---------|---------------------------|--------------|-----------|
| F.A.U. RTE.         | SECTION | COUNTY                    | TOTAL SHEETS | SHEET NO. |
| 2711                | 27-RS-3 | LAKE                      | 32           | 29        |
| D-91-326-11         |         | CONTRACT NO. 60N56        |              |           |
| 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.

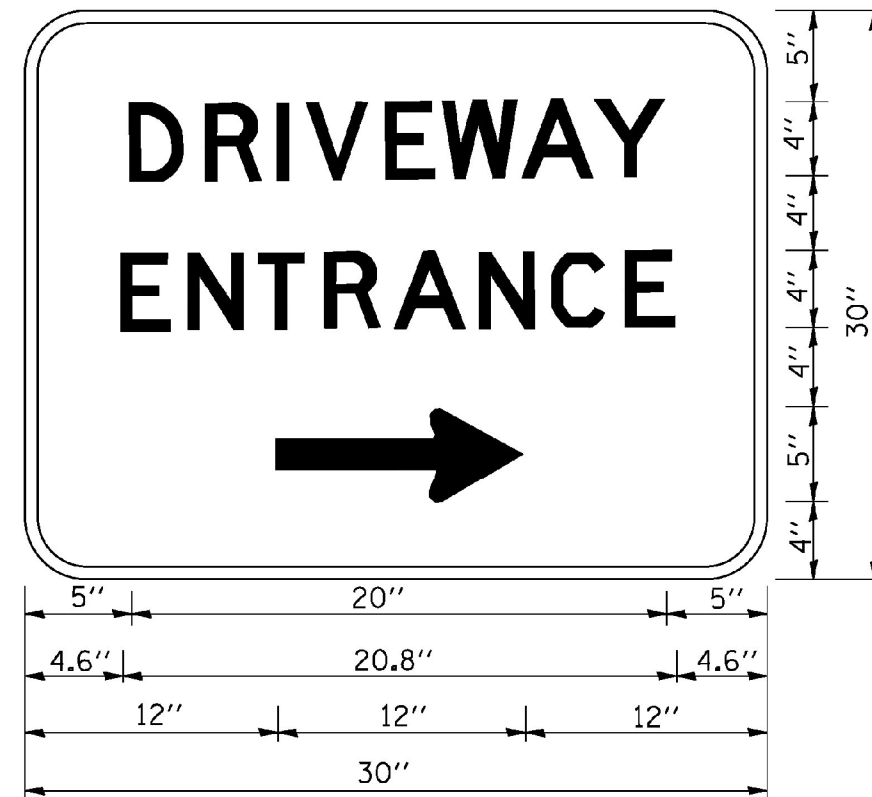
|         |   |                       |
|---------|---|-----------------------|
| REVISED | - | R. MIRS 09-15-97      |
| REVISED | - | R. MIRS 12-11-97      |
| REVISED | - | T. RAMMACHER 02-02-99 |
| REVISED | - | C. JUCIUS 01-31-07    |

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

**ARTERIAL ROAD INFORMATION SIGN**

|          |   |            |         |   |
|----------|---|------------|---------|---|
| DESIGNED | - | SLV        | REVISED | - |
| DRAWN    | - | SLV        | REVISED | - |
| CHECKED  | - | MJY, ST    | REVISED | - |
| DATE     | - | 12/11/2012 | REVISED | - |

| F.A.U. RTE.         | SECTION | COUNTY                    | TOTAL SHEETS | SHEET NO. |
|---------------------|---------|---------------------------|--------------|-----------|
| 2711                | 27-RS-3 | LAKE                      | 32           | 30        |
| D-91-326-11         |         | CONTRACT NO. 60N56        |              |           |
| FED. ROAD DIST. NO. |         | ILLINOIS FED. AID PROJECT |              |           |



3.0" RADIUS, 0.5" BORDER, WHITE ON GREEN; REFLECTORIZED  
 "DRIVEWAY" D; "ENTRANCE" D; STANDARD ARROW CUSTOM 12.0" x 5.0"

**NOTES:**

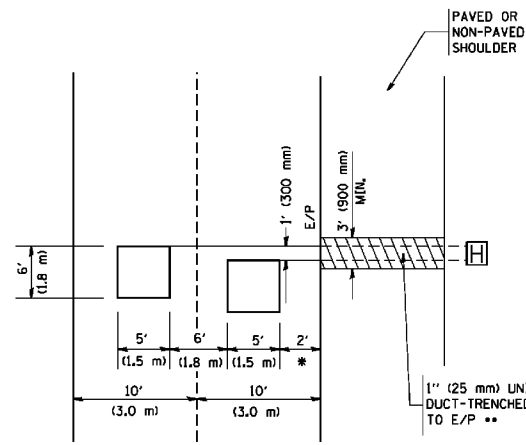
1. HALF OF THE SIGNS WILL REQUIRE A LEFT HAND FACING ARROW.
2. TWO SIGNS SHALL BE USED AT EACH COMMERCIAL ENTRANCE PLACED BACK-TO-BACK; ONE WITH A RIGHT HAND ARROW (SHOWN) SHALL BE PLACED ON THE NEAR RIGHT SIDE THE DRIVEWAY AND ONE WITH A LEFT HAND ARROW SHALL BE PLACED ON THE FAR LEFT SIDE OF THE DRIVEWAY.
3. SIGNS TO BE PAID FOR AS ITEM "TEMPORARY INFORMATION SIGNING".

|         |   |                    |
|---------|---|--------------------|
| REVISED | - | C. JUCIUS 02-15-07 |
| REVISED | - |                    |
| REVISED | - |                    |
| REVISED | - |                    |

**DRIVEWAY ENTRANCE SIGNING**

**LOOPS NEXT TO SHOULDERS**

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

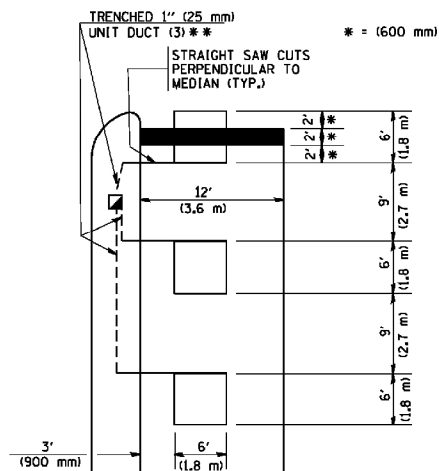


\* = (600 mm)

\*\* 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)**

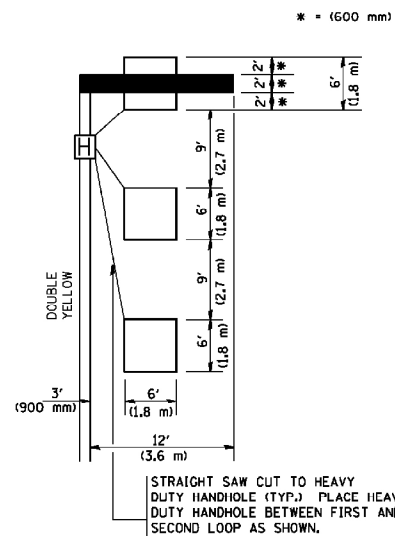
HANDHOLE LOCATION MAY VARY DEPENDING ON GEOMETRICS AND DESIGN OF TRAFFIC SIGNALS. HEAVY-DUTY HANDHOLES TO BE USED WHEN THE MEDIAN IS MOUNTABLE. REFER TO STANDARD S14001 TO ENSURE THAT HANDHOLE FITS IN MEDIAN.



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

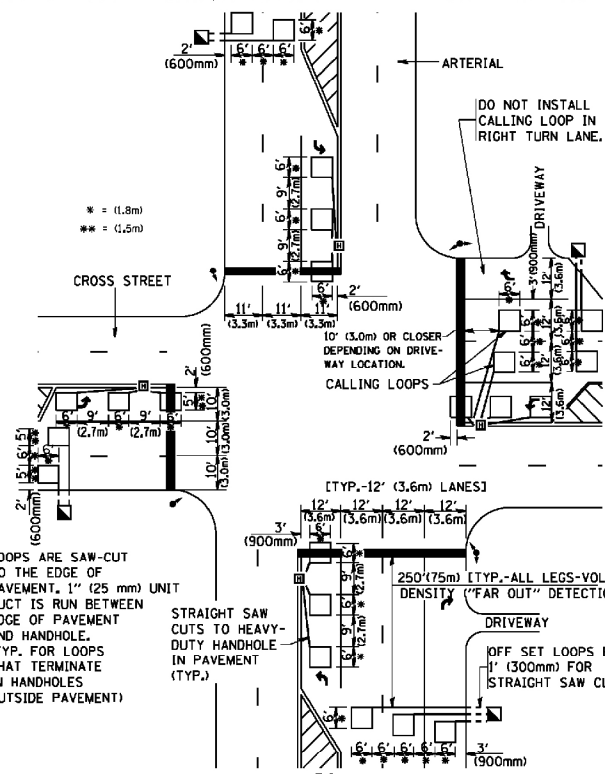
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

**LEFT TURN LANES WITHOUT MEDIANS  
VOLUME DENSITY ("FAR OUT" DETECTION)  
ON SAME APPROACH  
(PROTECTED / PERMITTED LEFT TURN PHASING)**



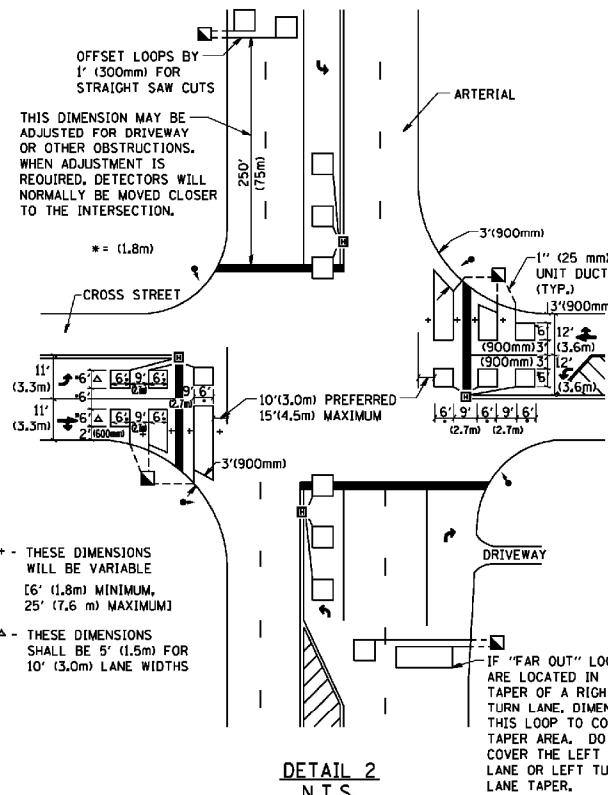
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

**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.

**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.

**PLACEMENT OF DETECTORS**

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

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

"FAR OUT" DETECTION REFERS TO LOCKING, PRESENCE TYPE DETECTION LOCATED IN THRU LANES, RIGHT TURN LANES, AND RIGHT TURN 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 DETAIL FOR ROADWAY RESURFACING**

|            |            |           |  |
|------------|------------|-----------|--|
| DESIGNED - | SLV        | REVISED - |  |
| DRAWN -    | SLV        | REVISED - |  |
| CHECKED -  | MJY, ST    | REVISED - |  |
| DATE -     | 12/11/2012 | REVISED - |  |

|                     |         |                           |              |           |
|---------------------|---------|---------------------------|--------------|-----------|
| F.A.U. RTE.         | SECTION | COUNTY                    | TOTAL SHEETS | SHEET NO. |
| 2711                | 27-RS-3 | LAKE                      | 32           | 32        |
| D-91-326-11         |         | CONTRACT NO. 60N56        |              |           |
| FED. ROAD DIST. NO. |         | ILLINOIS FED. AID PROJECT |              |           |