### Section D  Roadway Appurtenances

<table>
<thead>
<tr>
<th>Standard</th>
<th>Modification Summary</th>
<th>Effective:</th>
<th>3/1/2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>D3</td>
<td>PERMANENT SURVEY MONUMENTS AND RIGHT-OF-WAY MARKERS</td>
<td>Sheet 1</td>
<td>Changed to constant-slope median barrier for centerline monument</td>
</tr>
<tr>
<td>D4</td>
<td>ROADWAY DELINEATORS AND REFLECTORS</td>
<td>Sheet 1 &amp; 2</td>
<td>No changes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sheet 3</td>
<td>Modified Section A-A and Barrier or Parapet Reflector Installation section to show constant-slope barrier.</td>
</tr>
<tr>
<td>D6</td>
<td>PAVEMENT MARKING AND SHOULDER RUMBLE STRIP DETAILS</td>
<td>Sheet 1</td>
<td>Added Single Exit Lane with Aux Lane - Taper Type Detail</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sheet 2</td>
<td>Changed dimension of ramp width to match RDC on Single Lane Entrance - Parallel Type</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sheet 3</td>
<td>No changes</td>
</tr>
<tr>
<td>D7</td>
<td>LANDSCAPE PLANTING DETAILS</td>
<td>Sheet 1</td>
<td>Revised most Planting Notes. Added Notes 2, 21 &amp; 22. Revised Deciduous, Steep Slope and Shrub Planting Details.</td>
</tr>
<tr>
<td>D8</td>
<td>RAISED PAVEMENT LANE MARKER</td>
<td>Sheet 1</td>
<td>New Note</td>
</tr>
</tbody>
</table>

- **New Sheet**
- **Retired Standard**
**GENERAL NOTES**

1. On straight runs of fence, pull posts shall be used at 50' centers for Type 1 and 30' centers for Type 2.

2. Where slope follows right-of-way line, it shall be installed parallel to and at 11° inside the right-of-way line on Illinois Tollway property.


4. When the tension of the fence tends to pull the posts from the ground, the line posts shall be anchored with anchorage specified for corner posts.

5. When the fence line has a change in direction of 10° or more, a corner post shall be placed at the point of change, where the angle of change is less than 10° a pull post shall be used.

6. When grade line has a change in slope of 10° or more, a corner post with brackets as required shall be placed, where angle is less than 10° line post may be used.

7. Where right-of-way fence, Type 1 is used, the fabric shall be knuckled selvage on top and tied to top wire of woven fence, and knuckled selvage top on bottom wire. Where right-of-way fence, Type 2 is used, the fabric shall be knuckled selvage on top and twisted and knuckled selvage on bottom.

8. Placement of spaced end posts or corner posts within the clear zone shall be avoided.

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**RIGHT OF WAY FENCE, TYPE 1, 6’**

- Line Post
- Corner or End Post

**RIGHT OF WAY FENCE, TYPE 2, 4’**

- Pull Post
- Line Post

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**PEDESTRIAN GATE**

- Gate Frame
- Gate Post
- Gate Frame
- Gate Opening
- Ground Line
- Concrete Footing

**VEHICULAR GATE**

- Gate Frame
- Gate Post
- Gate Frame
- Gate Opening
- Concrete Footing

---

**CORNER OR END POST**

- Corner or End Post
- Pull Post
- Line Post

---

**FOOTING**

- Corner or End Post
- Pull Post
- Line Post

---

**GENERAL NOTES**

- On straight runs of fence, pull posts shall be used at 50' centers for Type 1 and 30' centers for Type 2.

- Where slope follows right-of-way line, it shall be installed parallel to and at 11° inside the right-of-way line on Illinois Tollway property.

- Line posts and braces shall be on Illinois Tollway right-of-way line of fence fabric.

- When the tension of the fence tends to pull the posts from the ground, the line posts shall be anchored with anchorage specified for corner posts.

- When the fence line has a change in direction of 10° or more, a corner post shall be placed at the point of change, where the angle of change is less than 10° a pull post shall be used.

- When grade line has a change in slope of 10° or more, a corner post with brackets as required shall be placed, where angle is less than 10° line post may be used.

- Where right-of-way fence, Type 1 is used, the fabric shall be knuckled selvage on top and tied to top wire of woven fence, and knuckled selvage top on bottom wire. Where right-of-way fence, Type 2 is used, the fabric shall be knuckled selvage on top and twisted and knuckled selvage on bottom.

- Placement of spaced end posts or corner posts within the clear zone shall be avoided.
METHOD OF TYING FABRIC TO TENSION WIRES

STANDARD GROUND

COUNTERPOISE GROUND (ALTERNATE)

NOTES FOR STANDARD AND COUNTERPOISE GROUND (ALTERNATE):

1. THE INTERVALS FOR GROUNDING CONTINUOUS FENCING SHALL NOT EXCEED 500 FEET IN URBAN AREAS AND 1000 FEET IN RURAL AREAS. FENCE ADJACENT TO A GATE SHALL BE GROUNDED A MAXIMUM DISTANCE 100 FEET FROM EDGE OF THE GATE.

2. FENCE CROSSING UNDER A POWER LINE SHALL BE GROUNDED, ONE HORIZONTAL UNDER A TELEPHONE WIPE OR CABLE CROSSING SHALL HAVE A SINGLE GROUND.

3. COUNTERPOISE GROUNDS SHALL BE USED AT LOCATIONS WHERE GROUND HOLES CAN NOT BE DRIVEN DUE TO IMPERVIOUS EARTHS MATERIALS.

4. THE GROUND WIRES SHALL BE CONNECTED TO FENCE FABRIC AND GROUND ROD BY STAINLESS STEEL BOLTS AND WASHERS, THE LOWER CONNECTION OF THE GROUND WIRES SHALL BE MADE TO THE BOTTOM TENSION WIRE.

ELECTRICAL GROUNDING DETAILS

ALTERNATE DRIVEN LINE POST ANCHORAGE WITH OR WITHOUT DRIVE ANCHORS

NOTE FOR FENCE POST:

ALTERNATE DRIVEN LINE POST ANCHORAGE IS OPTIONAL. DRIVEN LINE POST ANCHORAGE WITHOUT DRIVE ANCHORS MAY BE USED IN URBANITIES TO GOOD SOIL CONDITIONS. WHEN SOIL IS MERRY OR QUICHT, SIMPL IFY THE TYPE, SHAPE, DIMENSIONS AND COATING REQUIREMENTS OF DRIVE ANCHORS (ANCHOR BLADES AND COLLARS, EMBEDMENT) FOR DIFFERENT TYPE OF POSTS SHALL BE AS RECOMMENDED BY THE MANUFACTURER.
RIGHT OF WAY FENCE

FENCE INSTALLATION OVER DITCH

STREAM CROSSING, TYPE 1

NOTES FOR STREAM CROSSING TYPE 1 AND TYPE 2:

1. These installation conditions are typical and are not to be construed as representative of all conditions which may be encountered. Construction will be varied as required or directed to meet field conditions.

2. For stream crossing of the type required, the bottom barbed wire shall be anchored to concrete footing or to holes drilled in posts, and intermediate wires shall be tied to the bottom wire and to posts in an evenly spaced fashion to prevent sagging.

3. Concrete and fittings for all types of fence shall be as detailed for similar conditions per standard drawings.

DETAIL A

NO TOP POSTS

4" MAX.

CONCRETE CENTERED IN END POST

END POST

FENCE, TYPE 1 OR TYPE 2

FENCE INSTALLATION AROUND HEADWALL

NOTES FOR INSTALLATION AROUND HEADWALL:

1. This type of installation is to be used only when specifically called for in the contract plans.

2. When the width of the culvert makes necessary to anchor a post to the top of the culvert, a cast iron shoe or other device approved by the engineer shall be used.

END POST

FENCE, TYPE 1 OR TYPE 2

END POST

FENCING INSTALLATION OVER DITCH

STREAM CROSSING, TYPE 2

END POST

FENCE, TYPE 1 OR TYPE 2

END POST

NOTE:

"X" & "Y" SMALL NOT EXCEED 20", WHEN "X" IS 0" TO 15", "Y" MAY BE SHORTENED AS REQUIRED. WHEN "Y" EXCEEDS 20", "X" SMALL BE DECREASED ACCORDINGLY.
ELECTRICAL AND MECHANICAL ITEMS

EXISTING | PROPOSED
---|---
COMPRESSED AIR (AI) | A
ACID RESISTANT WASTE OR DRAIN | AR
ACID RESISTANT VENT | AR
STORM SEWER (DOWNSPOUT) | DS
GAS LINE | G
HOT GAS BYPASS LINE (HGB) | HG
HEATING HOT WATER RETURN (HHWR) | HHWS
HEATING HOT WATER SUPPLY (HHWS) | HHWS
DRY COMPRESSED AIR (INSTRUMENT AIR) | DA
PROCESS WATER (PW) | PW
PROTECTED WATER OR PLANT WATER (PW) | PW
REFRIGERANT DISCHARGE LINE (RD) | RD
REFRIGERANT SUCTION LINE (RS) | RS
VENT LINE (V) | V

NOTE:
ALL SYMBOLS AND PATTERNS ON THIS DRAWING ARE PROPOSED UNLESS OTHERWISE NOTED.

STANDARD D2-04
ELECTRICAL AND MECHANICAL ITEMS

- CFM OR CFM
- Duct size and type: size of duct shown, second size type of side not shown.
- Supply duct sections.
- Return or exhaust duct sections.
- Duct drop in the direction of flow.
- Duct rise in the direction of flow.
- Turning valves.
- 8" throat diameter ceiling diffuser: air flow -- 100 CFM.
- Balancing or volume damper.
- Motor operated damper.
- Flexible duct.
- Fire damper.
- Sound attenuator.
- Zone damper.
- Flexible connection at fan or equipment.
- Extractor.

- Splitter damper.
- Plug valve with memory stop (balancing).
- Plug valve.
- Solenoid valve.
- Temperature control valve.
- Three-way temperature control valve (two-way).
- Three-way temperature control valve (top view).
- Pressure reducing valve.
- Air pressure reducing station.
- Corresponinds with air pressure reducing schedule.
- Safety valve.
- Float operated valve.
- Quick coupling (QC).
- Horizontal unit heater (H.U.):
  - Unit heater schedule.
- Vertical unit heater (V.U.):
  - Unit heater schedule.
- Cabinet type unit heater (C.U.):
  - Unit heater schedule.
- Thermostat or room temperature sensor.
- Gate valve.
- Flow switch.
- Pressure switch.
- Venturi flow meter and flow to be indicated.
- Connection between new and existing.

- Globe valve.
- Butterfly valve.
- Check valve.
- Angle gate valve.
- Convergent reducer.
- Eccentric reducer.
- Office flange.
- Crossover.
- Pipe guide.
- Expansion joint (slip type).
- Expansion joint (bellow type).
- Air eliminator (air vent).
- Pipe cap.
- Straight cross.
- Not elbow.
- Not elbow turned down.
- Not elbow turned up.
- Side outlet elbow turned down.
- Side outlet elbow turned up.
- Lateral.
- Tee.
- Tee outlet up.
- Tee outlet down.
- Union.
- Strainer.
- Pipe anchor.
- Thermometer.
  - Inches -- range in degrees Fahrenheit.
  - Pressure, vacuum or compound gauge.

NOTES

All symbols and patterns on this drawing are proposed unless otherwise noted.

APPROVED

DATE

CHIEF ENGINEER

7-1-2009

STANDARD D2-04
### Permanent Delineation Spacing

<table>
<thead>
<tr>
<th>Reflectors</th>
<th>Mainline</th>
<th>Ramp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangent</td>
<td>Curve</td>
<td>Tangent</td>
</tr>
<tr>
<td>Guardrail</td>
<td>100'</td>
<td>100'</td>
</tr>
<tr>
<td>Barrier Wall (Double Face)</td>
<td>100'</td>
<td>100'</td>
</tr>
<tr>
<td>Barrier Wall (Single Face)</td>
<td>100'</td>
<td>100'</td>
</tr>
<tr>
<td>Shoulder Narrowing</td>
<td>3 @ 15'</td>
<td>3 @ 15'</td>
</tr>
<tr>
<td>Bridge Approaches</td>
<td>3 @ 15'</td>
<td>3 @ 15'</td>
</tr>
<tr>
<td>Bridge Parapet</td>
<td>50'</td>
<td>50'</td>
</tr>
<tr>
<td>Noise Abatement Wall (Crashworthy)</td>
<td>100'</td>
<td>100'</td>
</tr>
</tbody>
</table>

### Temporary Delineation Spacing

<table>
<thead>
<tr>
<th>Temporary Concrete Barrier</th>
<th>Tapered</th>
<th>Reverse Curve</th>
<th>Shift</th>
<th>Taper</th>
</tr>
</thead>
<tbody>
<tr>
<td>T R A N G E N T</td>
<td>50'</td>
<td>25'</td>
<td>25'</td>
<td>25'</td>
</tr>
</tbody>
</table>

*When adjacent shoulder is used as a traveled lane, use spacing requirements as shown for temporary delineation.*

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**General Notes:**

Emergency turnarounds delineation - the following delineation should be installed on the left side of the pavement approaching emergency turnarounds.

A. One-half of a mile in advance of the emergency turnarounds use one white reflector unit over three amber reflector units.

B. One-fourth of a mile in advance of the emergency turnarounds use one white reflector unit over two amber reflector units.

C. At a point near the intersection of the edge of the left shoulder and near edge of the emergency turnarounds use one white reflector unit over one amber reflector unit.

**Notes for roadway delineators, post mounted installation:**

1. Mainline - Single white reflector units shall be placed continuously on the right and single amber reflector units shall be placed on the left on main line sections without barrier wall.

2. Ramps - Single reflector units shall be placed on the outside of all curved sections of ramps. Single white shall be placed on the right side and amber on the left side. The delineators shall be overlapped for a short distance to clearly indicate where delineation on one side of the ramp ends and delineation on the other side begins.

3. Double white reflector units shall be placed on the right at all acceleration and deceleration lanes.

4. Reflectors shall be mounted on supports such that the top of reflectors is four feet above the roadway edge and two feet outside the outer edge of the paved shoulder or two feet minimum and six feet maximum outside the back of curbs or gutters.

5. In all cases, the color of the reflectors shall be the same as the adjacent edge line except as specified in General Notes.

6. Post mounted reflectors shall be placed continuously as noted above in conjunction with guardrail installed.

7. The placement of roadway delineator “CIRCULAR REFLECTORS” shall be used for all major projects which have a length of less than 5 miles. The placement of roadway delineator “RECTANGULAR REFLECTORS” shall be used for all major projects which have a length greater than 5 miles. All roadway delineators within a roadway segment shall be of the same type.

**Notes for guardrail and barrier wall reflector:**

1. Reflectors type B and type C shall have reflective surface only on one side.

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**Table A: Reflectors Spacing on Ramp-Curves**

<table>
<thead>
<tr>
<th>Radius of Curve (ft)</th>
<th>Spacing Along Curve (ft)</th>
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</thead>
<tbody>
<tr>
<td>&lt; 1050</td>
<td>50</td>
</tr>
<tr>
<td>1050-1399</td>
<td>100</td>
</tr>
<tr>
<td>1300-1999</td>
<td>125</td>
</tr>
<tr>
<td>2000-2999</td>
<td>150</td>
</tr>
<tr>
<td>3000-3999</td>
<td>175</td>
</tr>
<tr>
<td>&gt; 3999</td>
<td>200</td>
</tr>
</tbody>
</table>

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Sheet 1 of 3
ROADWAY DELINEATORS AND REFLECTORS

SHORT EDGE AT 200 FT. INTERVALS ON MAIN LINE ROADWAY

SINGLE WHITE REFLECTOR UNITS SHALL BE PLACED CONTINUOUSLY AT 200 FT. INTERVALS ON MAIN LINE ROADWAY.

NOTE:
See sheet 1 of this series for notes.

OPTIONAL TAPER

Paving

GRADE OF PAVEMENT EDGE

A

STEEL POST

NOTE:
REFLECTOR UNIT TO BE PLACED ON THIS SURFACE AND AT TOP OF POST, SEE DETAIL B.

STEEL POST

CIRCULAR REFLECTORS

RECTANGULAR REFLECTORS

NOTE:
SEE SHEET 1 OF THIS SERIES FOR NOTES.

STANDARD D4-07

ROADWAY DELINEATORS AND REFLECTORS

NOTE:

ELASTIC STOP NUT

BOLT WITH VANDAL PROOF SHEETING

VANDAL PROOF BOLT WITH ELASTIC STOP NUT

3M/DG3 REFLECTIVE SHEETING
CROSS-SECTION
TEMPORARY CONCRETE BARRIER

NOTE:
SEE SHEET 1 OF THIS SERIES FOR NOTES.

FOR ADDITIONAL INFORMATION
ALSO SEE SHEET 1 IN THIS SERIES

ROADWAY DELINEATORS
AND REFLECTORS
STANDARD D4-07

SHEET 3 OF 3

CHIEF ENGINEERING OFFICER

APPROVED
DATE
7-1-2009
GENERAL NOTES:

1. Diagonal shoulder stripping required where the shoulder width is less than standard.

2. Roadway marking materials to be used on finished concrete surface and asphalt. Surface shall be as shown on the plans.

3. Where the guardrail encroaches on the shoulder the diagonal markings shall extend as close to the face of the rail as possible.

4. All permanent lane lines and edge lines shall be grooved, on roadway surfaces, unless otherwise noted.

5. Diagonal striping shall be surface applied.

6. Gore striping (chevron) shall be surface applied.

7. All lane lines and edge lines shall be surface applied on bridges.

8. Pavement markings shall not be grooved at the cash side of mainline toll plazas or the open road tolling (ORT), 100'-8' continuously reinforced concrete (CRC) pavement section of mainline under moisture.

SECTION A-A

ROADWAY AND SHOULDER STRIPING - NEW CONSTRUCTION
**GENERAL NOTES:**

1. Rumble strips shall be installed between the theoretical gore and taper when lengths (L) of auxiliary lanes, acceleration lanes or deceleration lanes, are greater than 1000'.

2. Roadway marking materials to be used on finished concrete surface and asphalt surface shall be as shown on the plans.

3. All lane lines and edge lines shall be grooved.

4. Arrow striping and chevrons shall be surface applied.

5. Letters and symbol marking shall be surface applied.

6. Dotted lines shall consist of 3' line and 9' gaps.
PLANTING NOTES:

1. MARK THE LOCATIONS OF ALL UNDERGROUND UTILITIES BEFORE BEGINNING WORK. REPORT ANY CONFLICTS TO THE ENGINEER IMMEDIATELY FOR RESOLUTION.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL UNDERGROUND, SURFACE AND VOYD UTILITIES REGARDLESS OF LOCATION OR LACK OF LOCATION ON PLANS.

3. PLANTING PLANS ARE DRAWN TO SCALE. PLANT LOCATIONS SHALL BE REVIEWED BY THE CONTRACTOR AND ENGINEER AND ON ILLINOIS TOLLWAY LANDSCAPE ARCHITECT AND ADJUSTED IN THE FIELD AS NECESSARY PRIOR TO PLANTING.

4. TREES SHALL BE LOCATED CLEAR OF HIGHWAY PAYMENT EDGES, FIFTY (50) FEET MINIMUM.

5. TREES AND SHRUBS PLANTING SHALL NOT BLOCK ACCESS TO GATES IN FENCES, MIRRORS ON NOBILE HOLES, OR OTHER ACCESS DOORS.

6. TREES PLANTED IN TURF AREAS SHALL BE LOCATED TEN (10) FEET MINIMUM CLEAR FROM THE EDGE OF PLANTING BEDS.

7. TO AVOID POTENTIAL CONFLICTS, TREES AND SHRUBS SHALL BE OFFSET FROM UTILITIES A MINIMUM OF TEN (10) FEET.

8. CONTRACTOR SHALL INSTALL ALTERNATIVE GROWTH HABITAS REQUIRES BY CONTROLLER COMMANDS. EXCEPTIONALLY, TREES AND SHRUBS SHALL BE LOCATED TEN (10) FEET MINIMUM CLEAR FROM FENCES, WALLS, SPACES AND OTHER STRUCTURES. THIS DISTANCE SHALL BE INCREASED FOR THE PROJECTED NATURE TREE CANOPY SIZE TO PREVENT TRUNK GROWTH OR DAMAGE.

9. THE VERTICAL CLEAR DISTANCE BETWEEN DITCH BOTTOMS, PLANTINGS AND PLANTING BEDS SHALL BE THREE (3) FEET MINIMUM AND NINE (9) FEET MINIMUM HORIZONTAL DISTANCE FOR STRUCTURES LESS THAN THREE (3) FEET DEEP.

10. PERFORMANCE SPECIFICATIONS WITHIN PLANTING AREAS - ONE-THIRD (⅓) PERCENT OF PLANTING MATERIALS, PLANT MATERIALS, FORTY (40) FEET WITHIN PLANTING AREAS. CLEAN OF THE OBJECT. WHEN A TREE IS PLANTED IN A SHRUB BED, THE MINIMUM DISTANCE BETWEEN THE TREE AND THE ADJACENT SHRUB SHALL BE SIX (6) FEET.

11. PLANTS SHALL BE HEALTHY, VIGOROUS, FREE OF DISEASE, INSECT PESTS AND THEIR EGGS. BASIS OF PLANT SELECTION INCLUDES BUT IS NOT LIMITED TO PLANT MORE THAN TWICE THE CANOPY SIZE, PROPERLY TRAINED, SUFFICIENT GROWTH PATTERNS OR DOES NOT MEET SPECIFIED SELECTION REQUIREMENTS.

12. REMOVE ALL BINDING MATERIALS, CONTAINERS (SEE NOTES) AND MARKING TAPES FROM PLANTINGS PRIOR TO BACKFILLING. REMOVE ALL BINDING MATERIALS, CONTAINERS, AND MARKING TAPES FROM PLANTINGS PRIOR TO BACKFILLING.

13. ALL FACILITIES AND LANDSCAPE AREAS ON AND OFF SITE DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION.

14. PLANTINGS SHALL BE INSTALLED PLUMB WITH THE BEST SIDE FACING THE PRIMARY VIEWING DIRECTION.

15. PLANTINGS SHALL BE INSTALLED IN TURF AREAS SHALL BE LOCATED TEN (10) FEET MINIMUM CLEAR FROM THE EDGE OF PLANTINGS.

16. PLANTINGS SHALL BE LOCATED CLEAR OF ROADWAY PAVEMENT EDGES, FIFTY (50) FEET MINIMUM.

17. PLANTINGS SHALL BE LOCATED CLEAR OF ROADWAY PAVEMENT EDGES, FIFTY (50) FEET MINIMUM.

18. PLANTINGS SHALL BE LOCATED CLEAR OF ROADWAY PAVEMENT EDGES, FIFTY (50) FEET MINIMUM.

19. PLANTINGS SHALL BE LOCATED CLEAR OF ROADWAY PAVEMENT EDGES, FIFTY (50) FEET MINIMUM.

20. PLANTINGS SHALL BE LOCATED CLEAR OF ROADWAY PAVEMENT EDGES, FIFTY (50) FEET MINIMUM.

21. PLANTINGS SHALL BE LOCATED CLEAR OF ROADWAY PAVEMENT EDGES, FIFTY (50) FEET MINIMUM.

22. THE CONTRACTOR SHALL COMPLETE A-37 TO DOCUMENT MILESTONE DATES ASSOCIATED WITH PLANT INSTALLATION AND ESTABLISHMENT AS REQUIRED BY THE ILLINOIS TOLLWAY.
RAISED PAVEMENT LANE MARKER DETAILS

NOTES:

1. USE OF RAISED PAVEMENT LANE MARKERS SHALL BE IN ACCORDANCE WITH THE ILLINOIS TOLLWAY, ROADWAY SIGNING AND PAVEMENT MARKING GUIDELINES.

2. FOR COLLECTOR-DISTRIBUTOR (C-D) ROADWAYS, PLACE ONE-WAY CRYSTAL MARKER, 2 EACH AT 100' CENTERS, USE DETAIL A.

3. FOR MULTI LANE DIRECTIONAL RAMPS, PLACE ONE-WAY CRYSTAL MARKER, 1 EACH AT 50' CENTERS, USE DETAIL B.

4. FOR AUXILIARY LANES, PLACE ONE-WAY CRYSTAL MARKER, 1 EACH AT 48' CENTERS, USE DETAIL C.