

9.03 Raised Pavement Markers

To: Department of Public Service, Division of Planning and Operations, City of Columbus, Ohio

Date: November 30, 2022

Subject: Street Selection for Raised Pavement Markers

Category: Traffic

1 Purpose

The purpose of this policy is to establish procedures for street selection for the installation of Raised Pavement Markers (hereafter referred to as RPMs) on all City projects.

2 Background

RPMs are a special form of pavement markings described in OHIO MANUAL of TRAFFIC CONTROL DEVICES (OMUTCD) Sections 3B.11 through 3B.14. Plowable RPMs were developed for use in states that typically have to deal with snow. City of Columbus CMS Item 621 and 721 establish the specifications for RMPs.

As noted in OMUTCD Sections 3B.12 through 3B.14, RPMs may be used as positioning guides or to supplement or substitute for the standard pavement markings. The City's program uses them as supplements for standard pavement markings.

3 Applicability

This policy shall be applicable to all projects in the City of Columbus, regardless of the owner, developer, City Agency, or funding source.

4 Effective Date

This policy shall be effective 01/01/2023, regardless of funding source and shall supersede all previous applicable policies and standards. This policy shall apply to all city owned and maintained roadways.

5 Projects In Design

All plans that have not received stage 2 comments prior to the effective date of this policy shall be subject to the full requirements of this policy regardless of date submitted.

6 Guidelines and Placement Standards

RPM.s shall be included in all city construction and maintenance projects with pavement markings as per ODOT TC-65.11 with the following exceptions.

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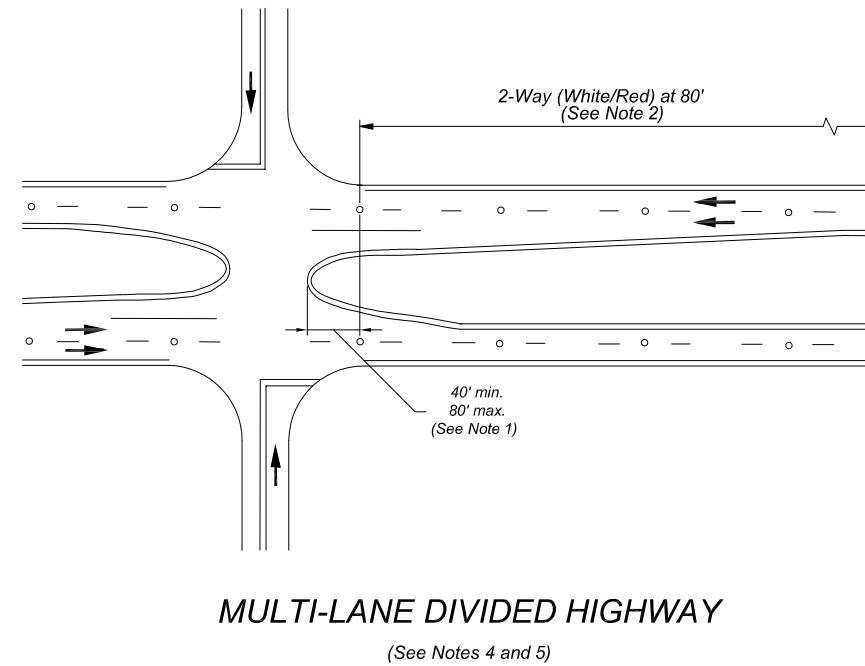
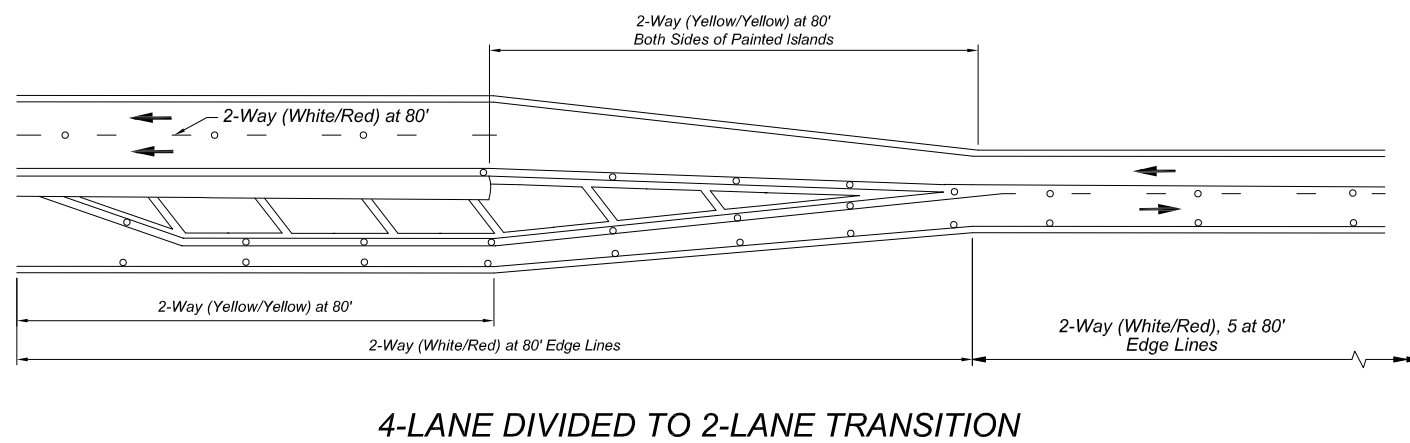
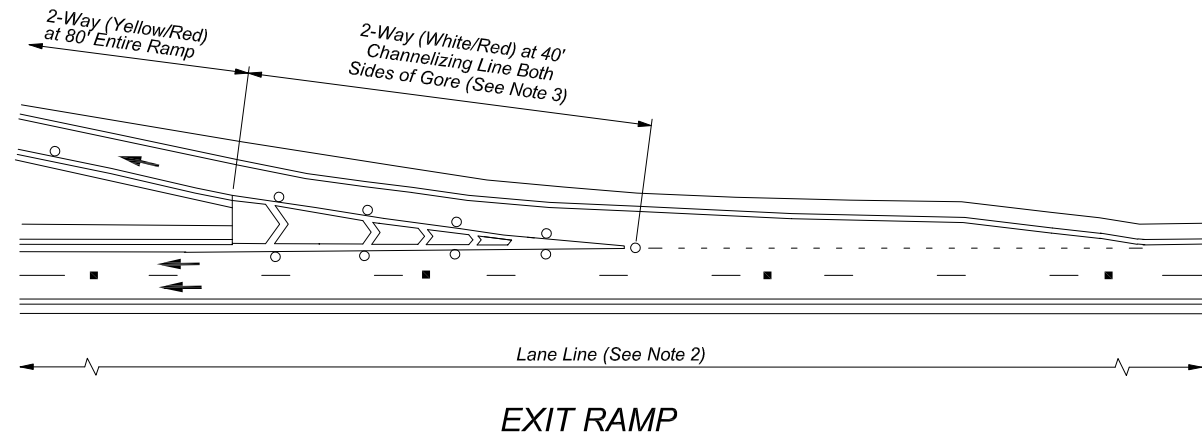
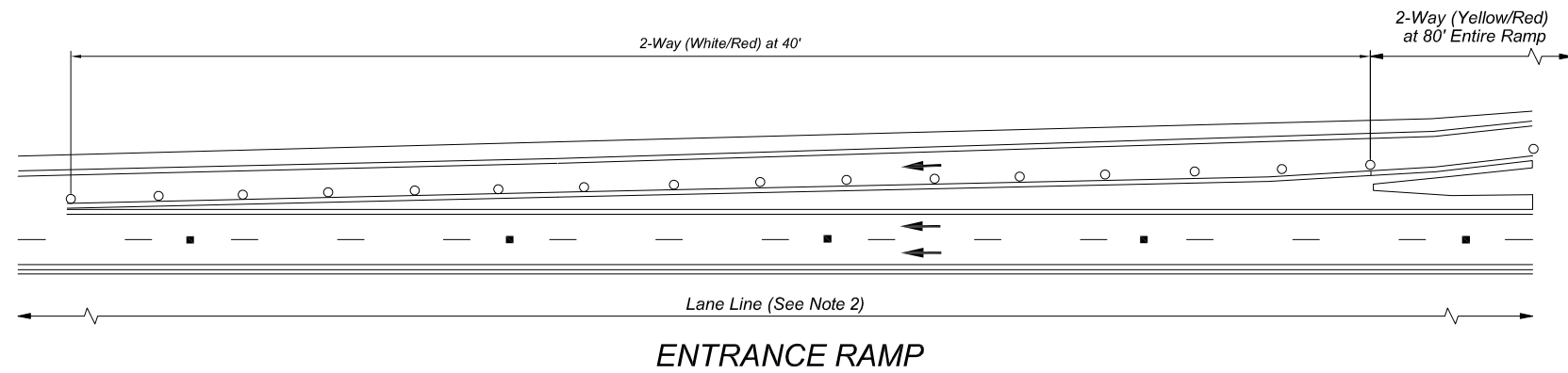
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- A. Permanent plowable RPM.s shall be installed on all city owned and maintained roadways with pavement markings except for the following:
1. Residential streets.
 2. Roadways with traffic volume of less than 2500 vehicles per day.
 3. Downtown business district.
 4. Pavement surfaces with a maximum life expectancy of four years or less.
 5. White edge line RPMs shall not be installed adjacent to curb even if edge line exists.
 6. Streets with adequate roadway lighting (not including freeways/highways)
 7. Where isolated centerline extends less than 500'
 8. RPMs shall not be placed in the circulatory area of roundabouts.
- B. Temporary RPMs will only be installed if specified in the maintenance of traffic roadway plans general notes or as directed by project engineer.





NOTES:

1. Raised pavement markers shall not be placed within the intersection area.
2. Raised pavement markers on lane lines on freeways shall be one-way white spaced at 120'. All other raised pavement markers on lane lines on multi-lane roadways and ramps shall be two-way white/red spaced at 80'.
3. When a channelizing line is less than 80' in length, one raised pavement marker shall be placed at each end of the line, and one shall be placed in the center of the line.
4. Raised pavement markers shall not be placed on edge lines on a through approach.
5. All approaches at a signalized intersection shall be treated as shown in the Stop Approach detail by adding edge line markers along the right edge line.

LEGEND

■	1-Way Reflectors
○	2-Way Reflectors
←	Direction of Travel

RAISED PAVEMENT MARKING SPACING DETAILS

CITY OF COLUMBUS, OHIO
DEPARTMENT OF PUBLIC SERVICE
DESIGN AND CONSTRUCTION DIVISION

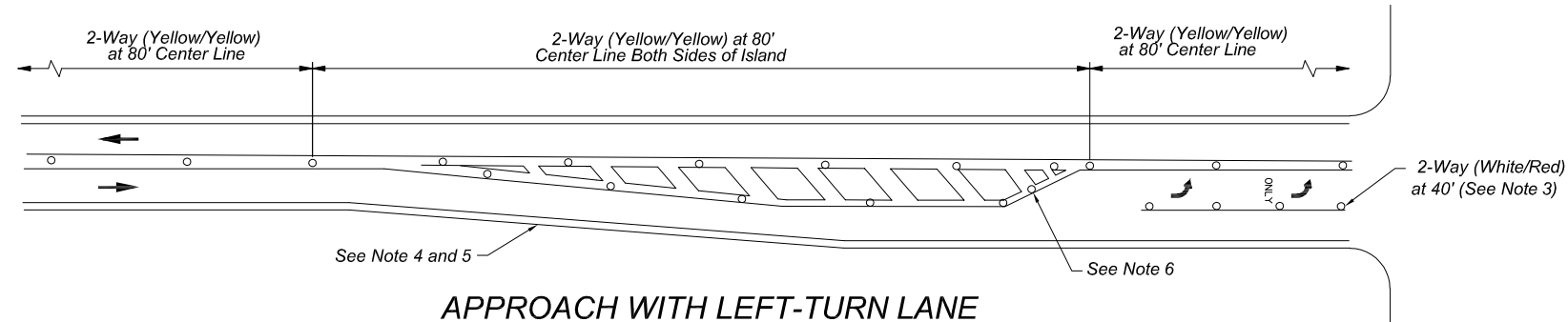
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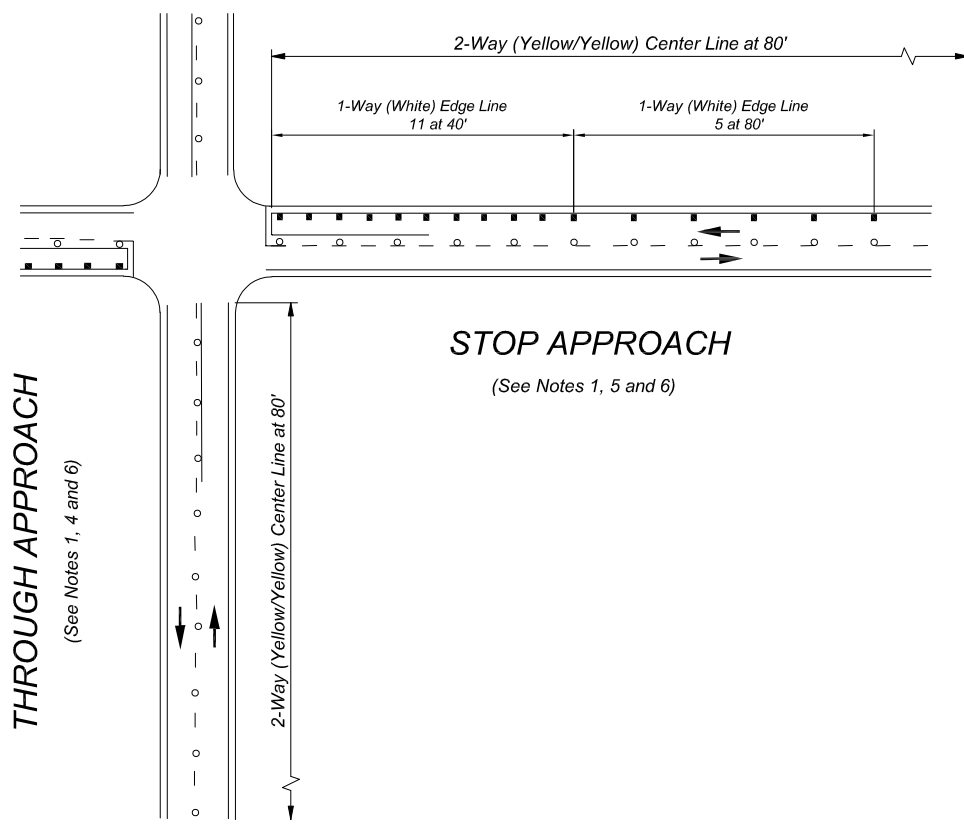
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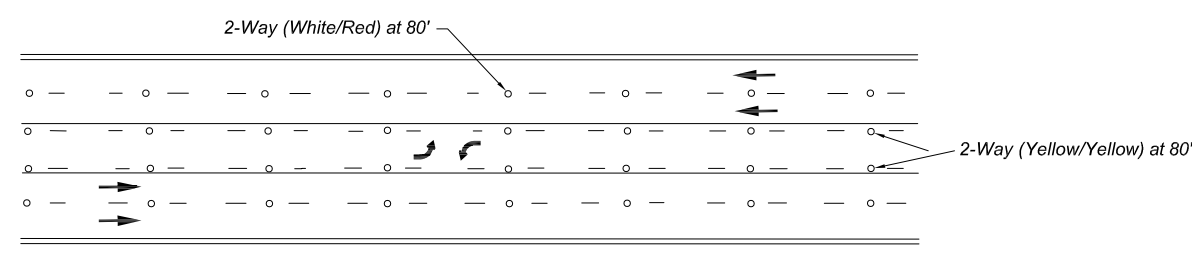


APPROACH WITH LEFT-TURN LANE



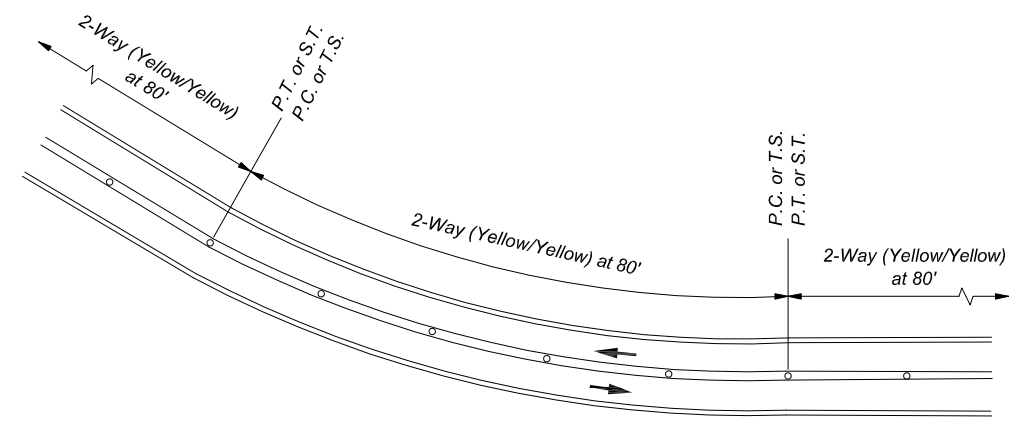
STOP APPROACH

(See Notes 1, 5 and 6)



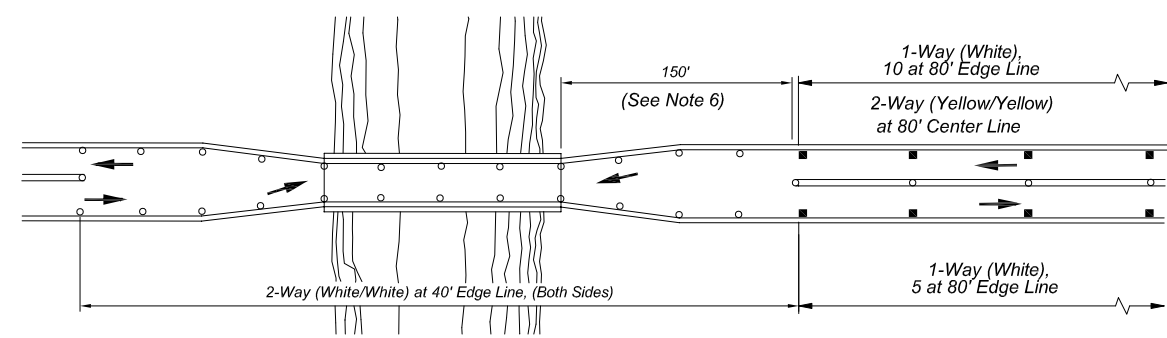
TWO-WAY LEFT-TURN LANE

(See Notes 2 and 6)



HORIZONTAL CURVE

(See Note 6)



ONE-LANE BRIDGE

LEGEND

- 1-Way Reflectors
- 2-Way Reflectors
- ← Direction of Travel

NOTES:

1. Raised pavement markers shall not be placed within the intersection area.
2. Raised pavement markers on lane lines on multi-lane roadways and ramps shall be two-way white/red spaced at 80'.
3. When a channelizing line is less than 80' in length, one raised pavement marker shall be placed at each end of the line, and one shall be placed in the center of the line.
4. Raised pavement markers shall not be placed on edge lines on a through approach.
5. All approaches at a signalized intersection shall be treated as shown in the Stop Approach detail by adding edge line markers along the right edge line.
6. The spacing for center line raised pavement markers shall be 80' except for the following:

For one-lane bridges, center line pavement markings, including raised pavement markers, shall be omitted 150' on each side and across the bridge.

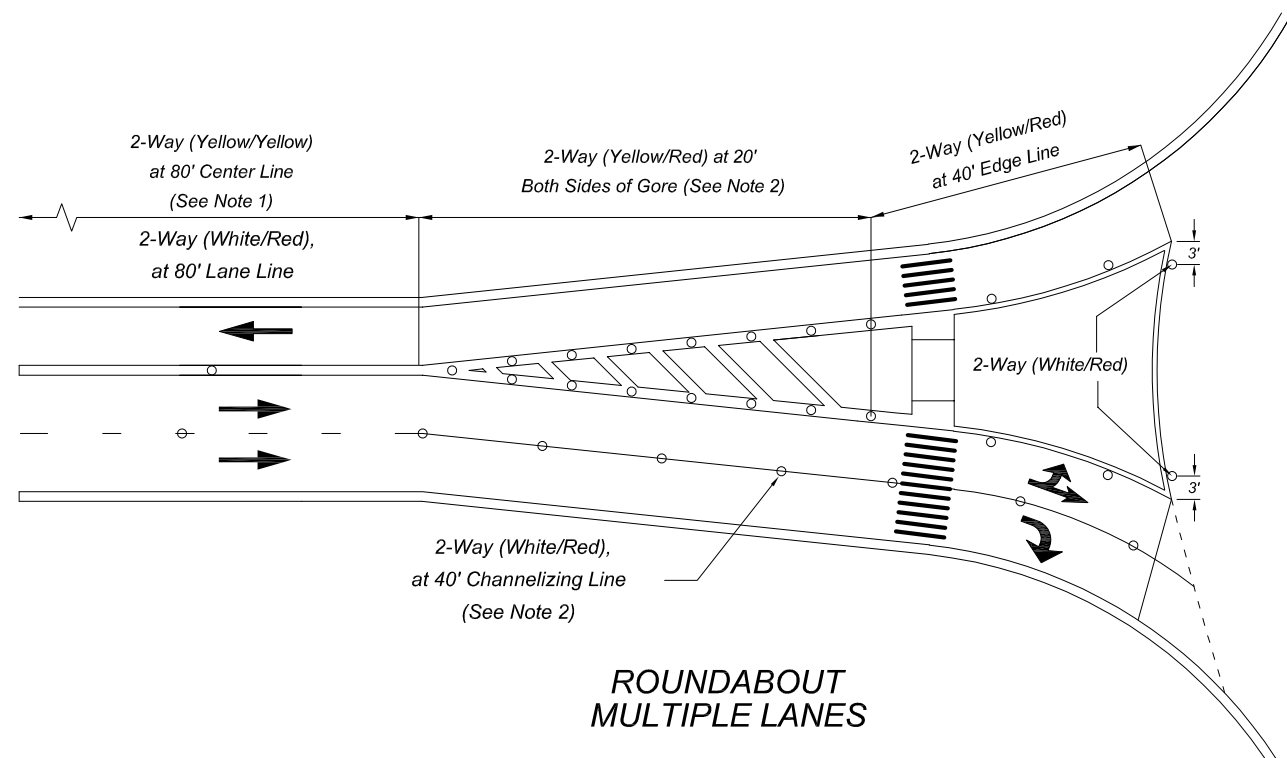
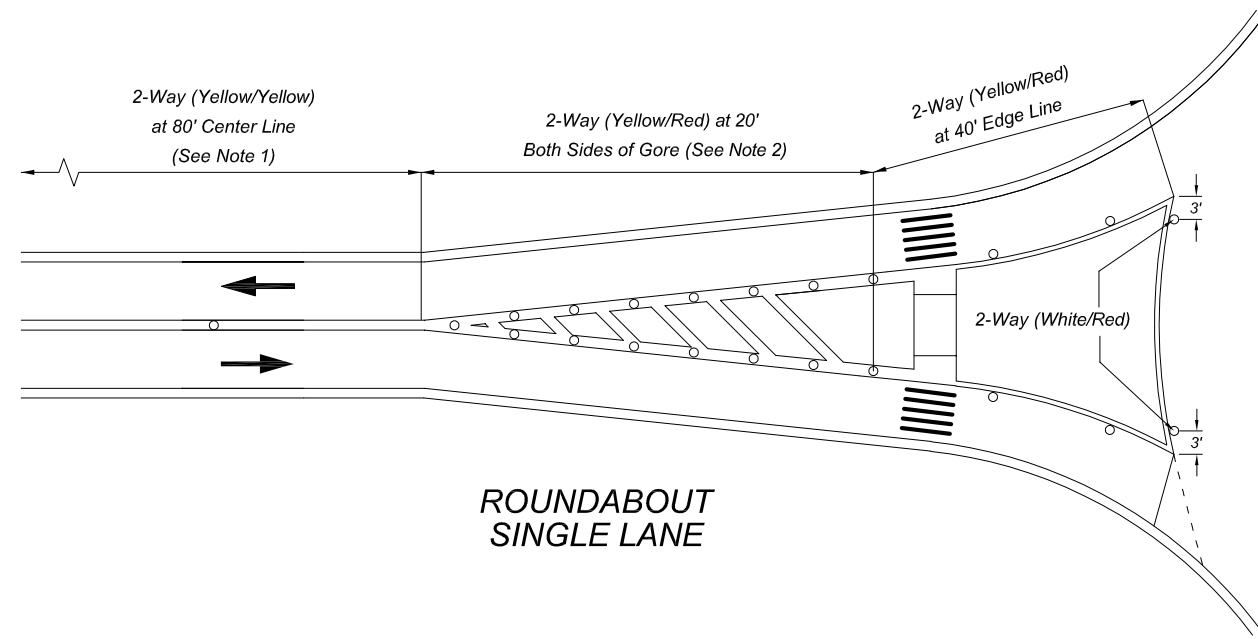
For horizontal curves of 5° or greater, the spacing of the center line markers shall be reduced to 40' between P.C. or T.S. and P.T. or S.T.

For horizontal curves of 10° or greater, the spacing of the center line markers shall be reduced to 20' between P.C. or T.S. and P.T. or S.T. When using 20' spacing, 12 raised pavement markers at 40' spacing shall be installed on each end of the 20' spacing.

On an intersection approach with a left-turn lane, a minimum of three equally spaced raised pavement markers shall be installed on the back taper.
7. Raised pavement markers:
 - a.) Shall not be installed on bridges less than 400' on tangent alignments.
 - b.) Shall be installed at twice the normal spacing on bridges longer than 400' on tangent alignments.
 - c.) Shall be installed at the normal spacing on any length bridge on a curve.

RAISED PAVEMENT MARKING SPACING DETAILS

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For the center line markers shall be reduced to 20' between P.C. or T.S. and P.T. or S.T. When using 20' spacing, 12 raised pavement markers at 40' spacing shall be installed on each end of the 20' spacing.
- When the gore or channelizing line is less than 40' in length, one raised pavement marker shall be placed at each end of the line, and one shall be placed in the center of the line.
- Raised pavement markers shall not be placed within crosswalks. This is an ADA tripping hazard.
- The use of raised pavement markers around the central island of a roundabout is optional.

LEGEND

■	1-Way Reflectors
○	2-Way Reflectors
←	Direction of Travel

**RAISED PAVEMENT MARKING
SPACING DETAILS**

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