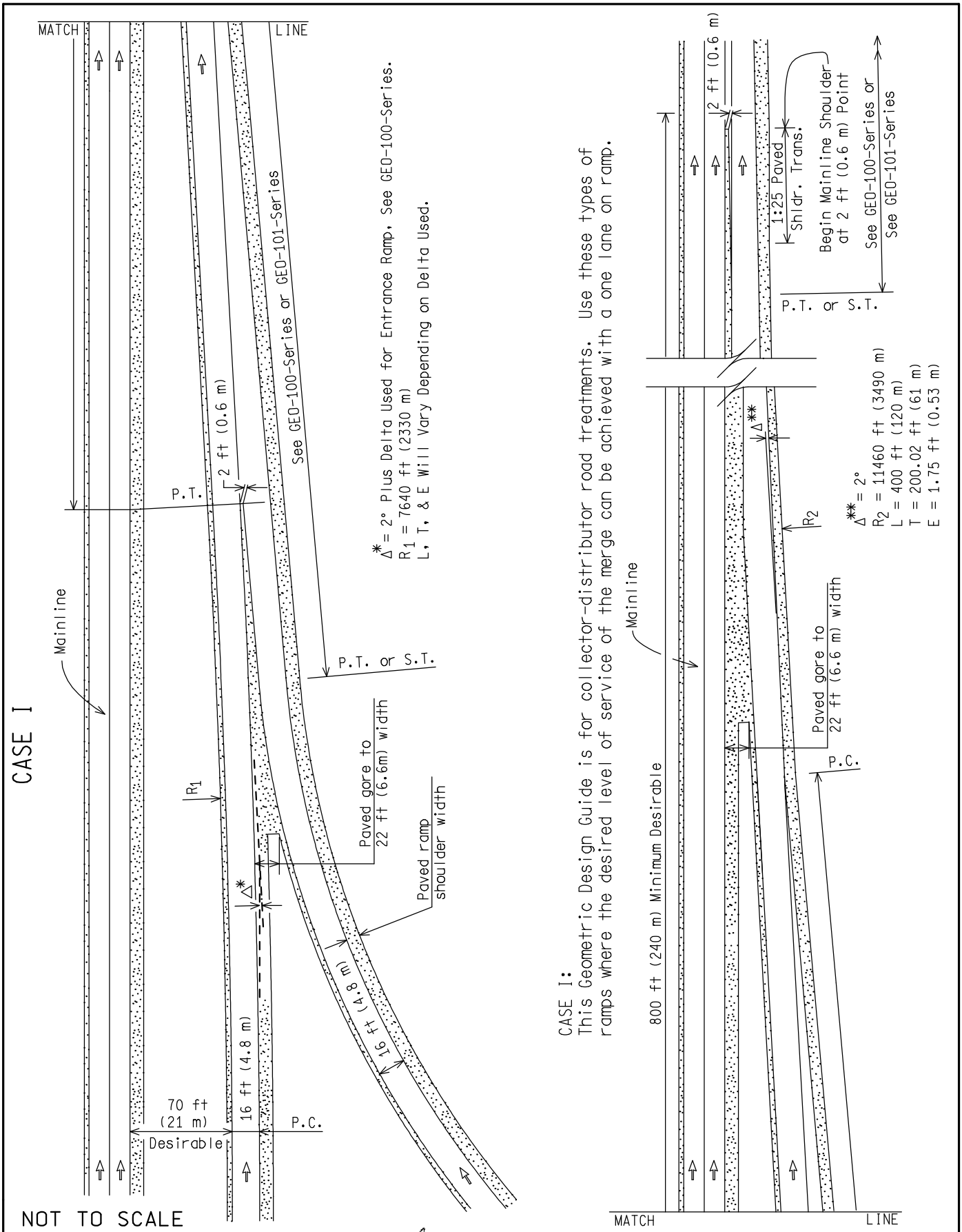

MDOT Michigan Department of Transportation
TRAFFIC AND SAFETY

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REV. 09/06/2007

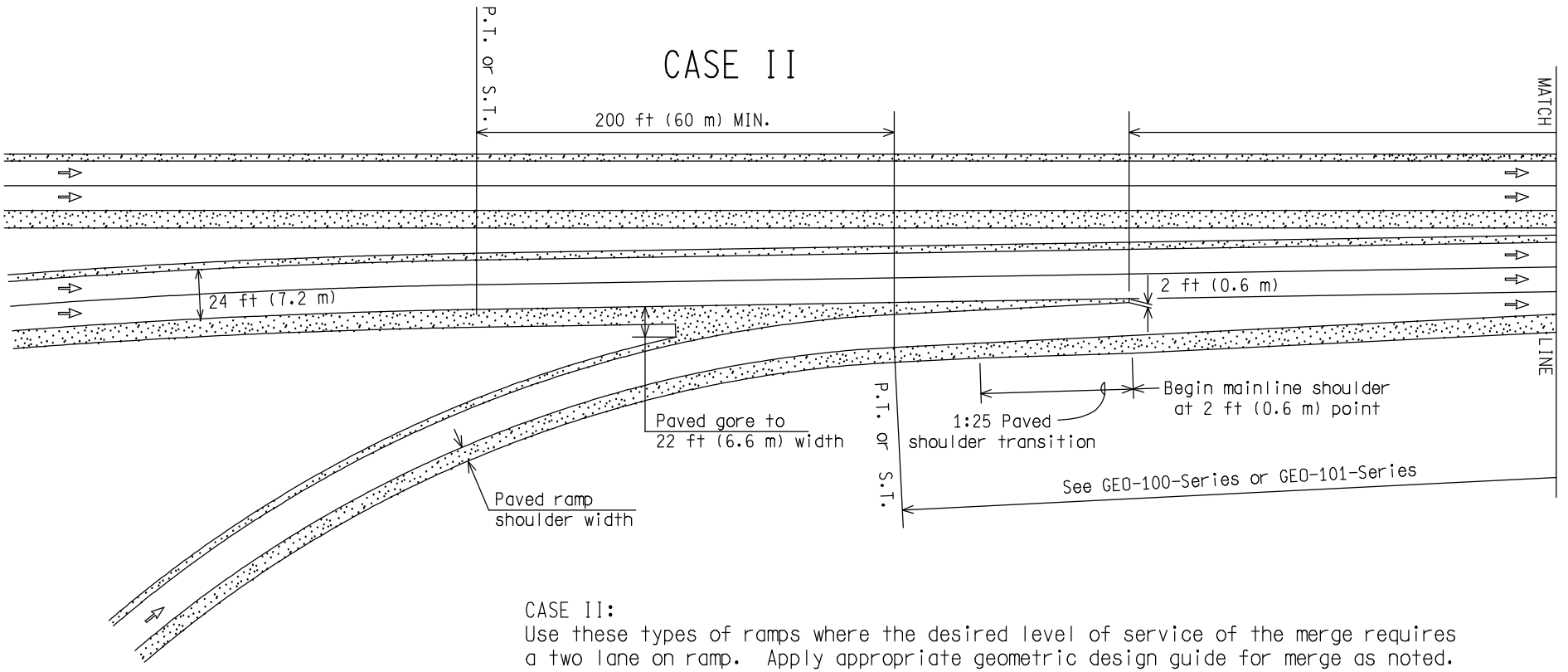
GEOMETRIC DESIGN GUIDE FOR
SUCCESSIVE ENTRANCE RAMPS

09/06/2007
PLAN DATE:

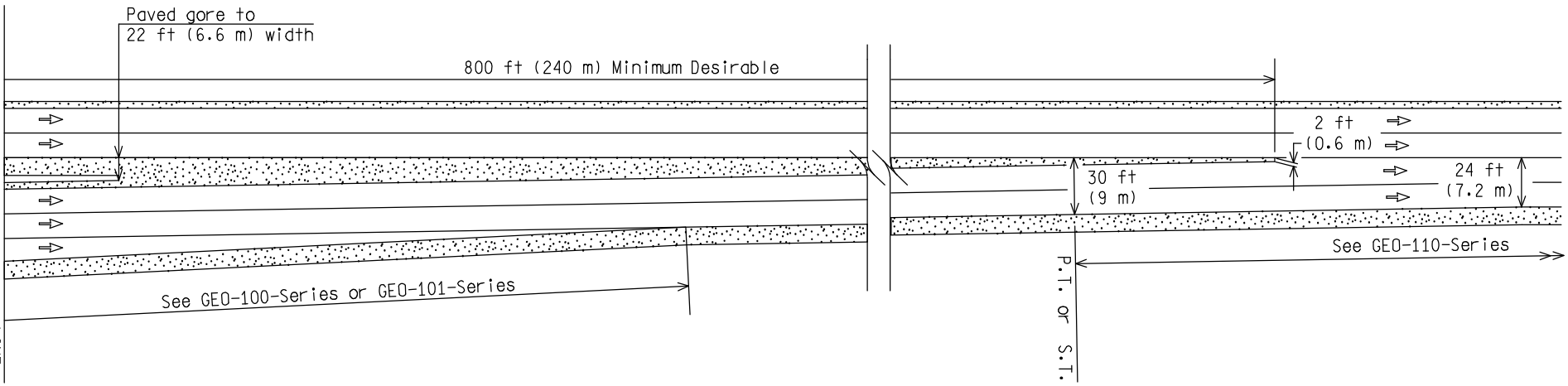
GEO-120-C

NOT TO SCALE

CASE II



CASE II:
Use these types of ramps where the desired level of service of the merge requires a two lane on ramp. Apply appropriate geometric design guide for merge as noted.



NOTES:

1. Select design speed based on combination of the superelevation rate and the radius of the curve. See chapter 3 of the MDOT Road Design Manual.

2. The design speed of the collector-distributor (C-D) roadway is generally 60 mph (100 km/hr).

3. If the through pavement is curved, plot offsets for the taper and connect with the appropriate curve.

4. Spiral transitions should be used on new ramp alignments, based on the design speed of the curve and the radius as shown in the table of the Road Standard Plan R-107-Series. The table gives the maximum radius in which a spiral should be used.

5. The cross slope in the gore area between the 2 ft (0.6 m) point and the 22 ft (6.6 m) point should not exceed 8%, with a 6% maximum algebraic difference in cross slope difference between the gore and the adjacent lane. This algebraic difference also applies within crowned gores.

6. The design speed of the ramp vertical alignment should meet or exceed the design speed of the ramp horizontal alignment.

7. The mainline shoulder width should extend along the ramp to where the gore is 2 ft (0.6 m) wide. Use a 1:25 taper transition where it joins the ramp shoulder paving.

8. Each ramp should be carefully studied to provide maximum vision at its merge points. See Geometric Design Guide GEO-300-Series.

9. Two lane ramps should be 24 ft (7.2 m) minimum edge to edge. Radii less than 500 ft (150 m) may require lane widening, consult the Geometric Design Unit of Lansing Traffic and Safety.

10. The longitudinal joint on a 24 foot (7.2 m) ramp pavement shall be located 12 feet (3.6 m) from the right edge of the pavement and ended where the ramp width becomes 16 feet (4.8 m).

11. These design concepts are for new construction. Where modifications may be needed for retrofitting to existing road features, consult the Geometric Design Unit of Lansing Traffic and Safety.

NOT TO SCALE