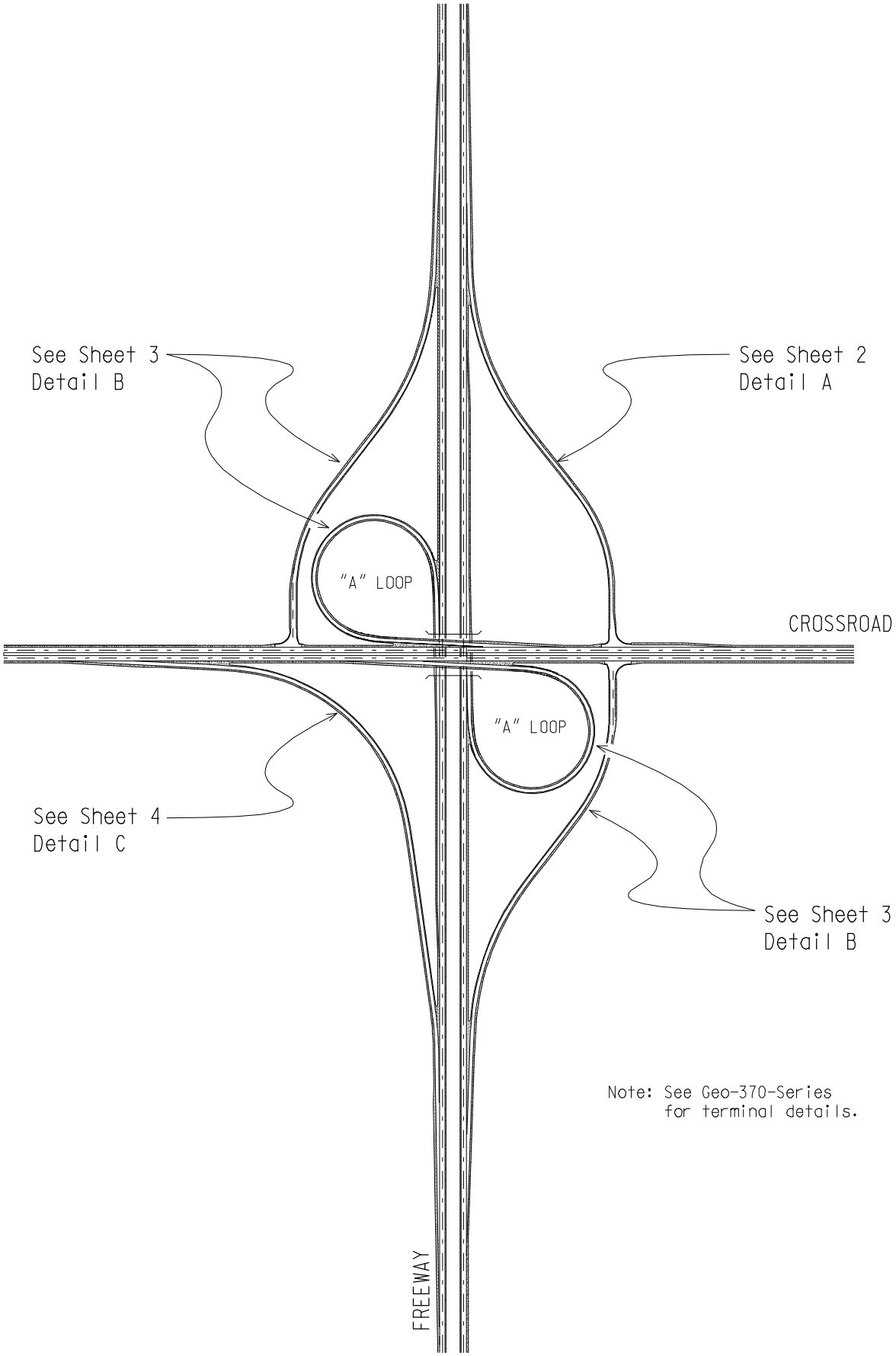

Note: See Geo-370-Series
for terminal details.

NOT TO SCALE

MDOT Michigan Department of Transportation
TRAFFIC AND SAFETY

BY: John C. Friend
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FILE:PW:RD/T&S/Typicals/Geom D/GEO320C.dgn REV. 09/22/2008 JK

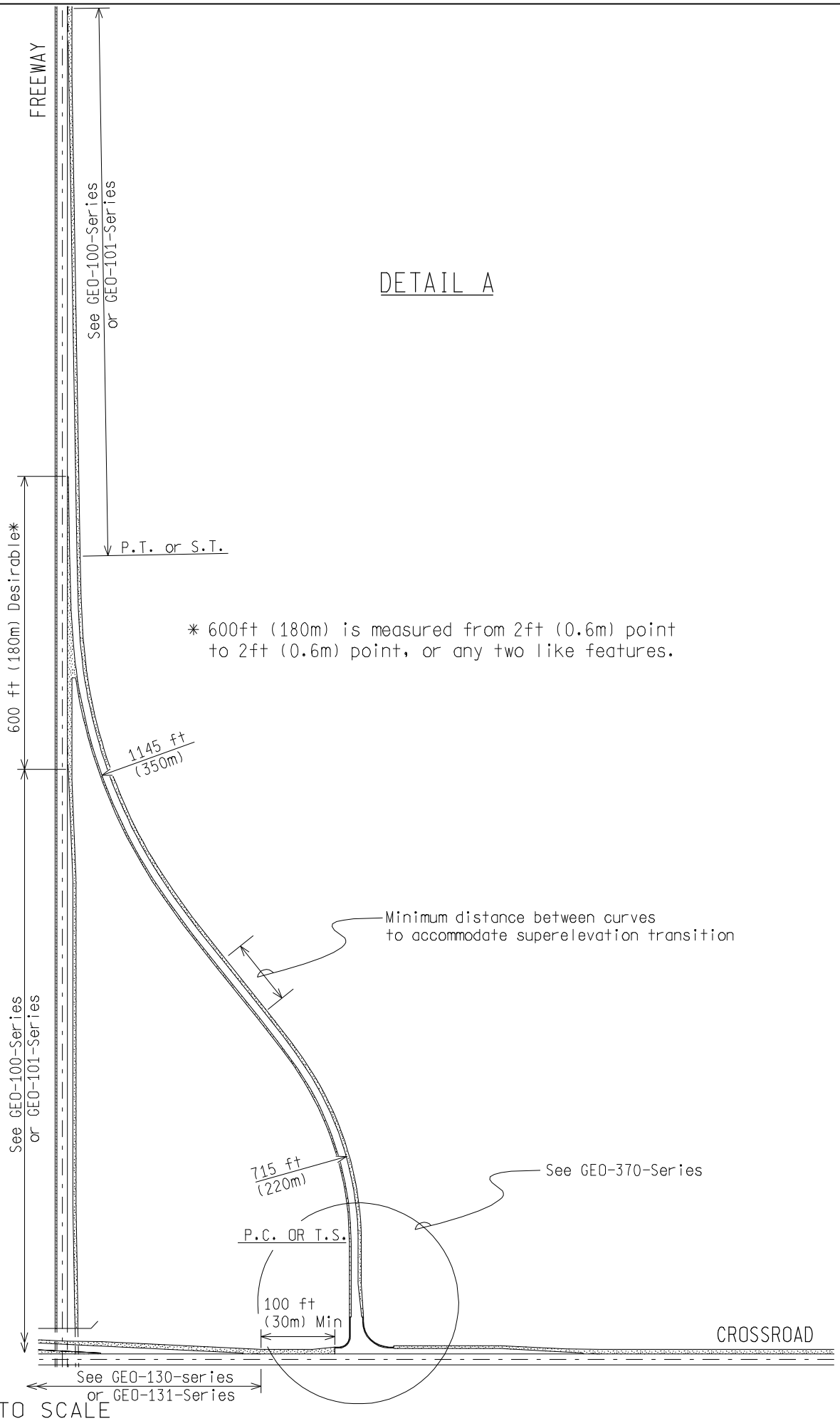
GEOMETRIC DESIGN GUIDE FOR

PARCLO-A-4-QUAD

08/07/2008
PLAN DATE:

GEO-320-C

SHEET 1 OF 5



DETAIL A

* 600ft (180m) is measured from 2ft (0.6m) point to 2ft (0.6m) point, or any two like features.

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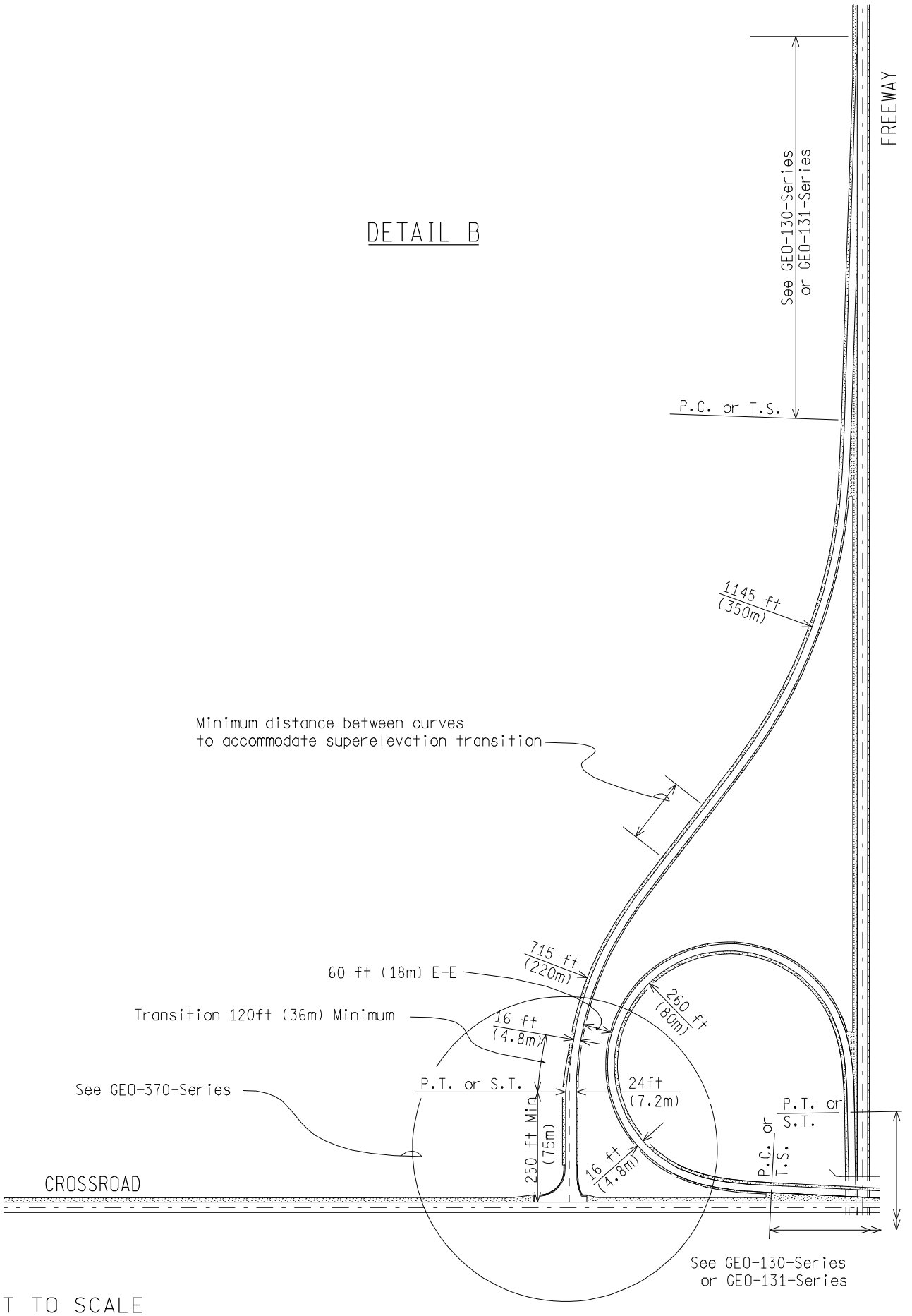
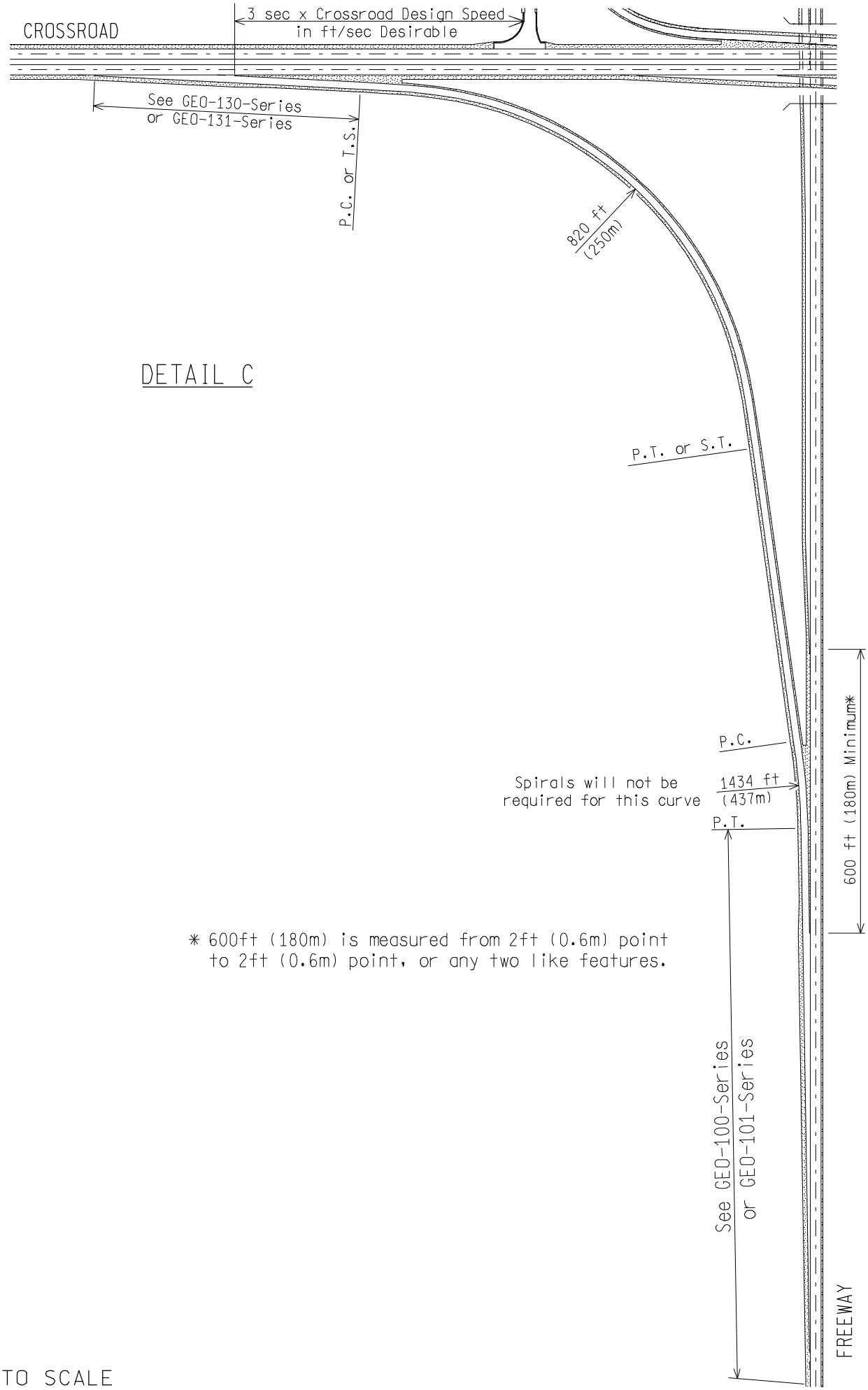

DETAIL B
FREEWAY
See GEO-130-Series
or GEO-131-Series
P.C. or T.S.
1145 ft
(350m)
Minimum distance between curves
to accommodate superelevation transition
715 ft
(220m)
60 ft (18m) E-E
Transition 120ft (36m) Minimum
16 ft
(4.8m)
260 ft
(80m)
See GEO-370-Series
P.T. or S.T.
24ft
(7.2m)
250 ft Min
(75m)
16 ft
(4.8m)
P.T. or
S.T.
P.C. or
T.S.
See GEO-100-Series
or GEO-101-Series
CROSSROAD
See GEO-130-Series
or GEO-131-Series

NOT TO SCALE


CROSSROAD
3 sec x Crossroad Design Speed
in ft/sec Desirable
See GEO-130-Series
or GEO-131-Series
P.C. or T.S.
820 ft
(250m)
DETAIL C
P.T. or S.T.
P.C.
Spirals will not be
required for this curve
1434 ft
(437m)
P.T.
600 ft (180m) Minimum*
* 600ft (180m) is measured from 2ft (0.6m) point
to 2ft (0.6m) point, or any two like features.
See GEO-100-Series
or GEO-101-Series
FREEWAY

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NOTES:

1. This Geometric Design Guide is applicable where physical restrictions or lack of R.O.W. prohibit usage of a full Cloverleaf design.

2. This layout is applicable for crossroad passing over or under the freeway.

3. A free-flow ramp from the crossroad to the freeway is preferred in place of a diamond ramp provided the greater required length of limited access along the crossroad can be met.

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. This table gives the maximum radius in which a spiral should be used.

5. The cross slope in the gore area between the 2 ft (0.6m) point and the 22 ft (6.6 m) point should not exceed 8%, with a 6% maximum algebraic difference in cross slope 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. For allowable approach grades between the cross road and ramp terminal, see GEO-650-Series.

8. See Geometric Design Guide GEO-370-Series for ramp terminal details.

9. See Geometric Design Guide GEO-300-Series for clear vission area requirements.

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

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