OREGON DEPARTMENT OF TRANSPORTATION TECHNICAL SERVICES

Traffic-Roadway Section BULLETIN

SUBJECT	FINAL NUMBER	EFFECTIVE DATE	VALIDATION DATE	SUPERSEDES or RESCINDS
Design Exception Update Interchange Spacing Standards	RD08-04(B)	08/01/2008	N/A	New
	WEB LINK(S) http://www.oregon.gov/ODOT/HWY/ENGSERVICES/tech_bulletin.shtm			
TOPIC/PROGRAM Highway Design Manual	APPROVED SIGNATURE Edward L. Fischer, P.E., PTOE State Roadway Engineer			

PURPOSE

This bulletin provides clarification and guidance for interchange spacing standards and where a design exception to those standards is required.

GUIDANCE

New interchanges not meeting interchange spacing requirements outlined in the Highway Design Manual (HDM) and the Oregon Highway Plan (Appendix C- Table 12) shall require a design exception as outlined in Chapter 13 of the HDM.

DEFINITIONS

HDM – Highway Design Manual.
OHP – Oregon Highway Plan.
OAR – Oregon Administrative Rule.
Design Exception – A departure from the prescribed design standard.
Deviation – A departure from an access management standard.
RAME – Region Access Management Engineer.

BACKGROUND/REFERENCE

Both the Oregon Highway Plan (OHP) and OAR 734 Division 51 outline the requirements and administration of spacing standards relative to interchanges. Changes in OAR and OHP language resulted in a need to clarify the difference between a deviation and a design exception as it relates to interchange spacing only. Table 12 in Appendix C of the OHP notes that a design exception is required to change the spacing standards. Past OHP language called for a deviation for those locations not meeting the interchange spacing standards. This memo provides clarification regarding new interchanges that do not meet the appropriate spacing standard.

EXPLANATION

New interchanges that do not meet spacing requirements outlined in Table 6-2 of the HDM and Table 12 in Appendix C of the OHP shall require a design exception. Chapter

13 of the HDM outlines the design exception process. Existing interchanges that do not meet current standards will not require a design exception, although, moving towards the access management spacing standards should always be a project consideration. Consideration of design exceptions for interchanges should always include coordination with the Region Access Management Engineer.

Only the spacing between interchanges (crossroad to crossroad) requires a design exception. This bulletin does not change the requirements of mainline spacing standards and deviations as outlined in Tables 16-19 of the OHP and Tables 4-7 in OAR 734 Division 51. Other access management spacing standards such as the distance between the ramp terminal and the first approach or first full intersection, and the distance between start and end of tapers of adjacent interchanges need to comply with the OHP and Division 51 spacing standards or obtain a spacing deviation.

ACTION REQUIRED

Modify Chapter 13 of the Highway Design Manual. Add "Interchange Spacing" to Design Exception Request form. Add "Interchange Spacing" to Table 13-2, Design Exception List.

Modify Section 6.2 of the HDM as follows:

With the high number of vehicles and demand in an urban area, the interchange spacing for urban freeways is less than the spacing for rural interchanges. Minimum interchange spacing for urban areas is 3 miles and for rural areas it is 6 miles (See Table 6-2 and Oregon Highway Plan, Appendix C). The spacing is generally measured from crossroad to crossroad.

Existing interchanges that do not meet current standards will not require a design exception, although, moving towards the access management spacing standards should always be a project consideration. Consideration of design exceptions for interchanges should always include coordination with the Region Access Management Engineer. This section does not change the requirements of mainline spacing standards and deviations outlined in the Oregon Highway Plan (Tables 16-19) and OAR 734 Division 51 (Tables 4-7). Other access management spacing standards such as the distance between the ramp terminal and the first approach or first full intersection, and the distance between start and end of tapers of adjacent interchanges need to comply with the OHP and Division 51 spacing standards or obtain a spacing deviation.

Table 6-2
Interchange Spacing

Access Management Classification	Area	Interchange Spacing
Interstate and Non-Interstate Freeways	Urban	3 miles
	Rural	6 miles

Notes:

A design exception is required if interchange spacing standards are not met for new interchanges.
Distance is measured from crossroad to crossroad

Modify Section 7.1.1 of the HDM (page 7-6) as follows:

- Intersections/Interchanges

Connections to rural expressways can be either at-grade intersections or grade separated, grade separation being preferred in most cases. Locating intersections along curves presents some design difficulties such as dealing with superelevation rates and sight distance. Rural interchange spacing (crossroad to crossroad) shall follow Table 9-2. For more information relating to intersections and interchange design, refer to Chapter 9.

Modify Section 8.2.1 of the HDM (page 8-6) as follows:

- Intersections/Interchanges

Connections to expressways can be either at-grade intersections or grade separated. There are many factors to consider in the design of these types of connections. Urban interchange spacing (crossroad to crossroad) shall follow Table 9-2. For more information relating to intersection and interchange design for expressways, refer to Chapter 9.

Modify Section 9.6.1 of the HDM (page 9-45) as follows:

9.6.1 FREEWAY INTERCHANGE DESIGN

- **Interchange Spacing**

  Table 9-2 shows the access spacing standards for interchanges for freeway and non-freeway locations. The spacing shown is measured crossroad to crossroad centerline distance. Other access management spacing standards such as the distance between the ramp terminal and the first approach or first full intersection, and the distance between start and end of tapers of adjacent interchanges need to comply with the OHP and Division 51 spacing standards or obtain a spacing deviation.

Table 9-2
Freeway and Non-Freeway Interchange Spacing

Access Management Classification	Area	Interchange Spacing
Freeways Interstate and Non-Interstate	Urban Rural	3 miles 6 miles
Non-Freeways Expressways, Statewide, Regional, and District Highways	Urban Rural	1.9 miles 3 miles

Notes:

A design exception is required if interchange spacing standards are not met for new interchanges.
Distance is measured from crossroad to crossroad

Modify Section 9.6.2 of the HDM (page 9-62) as follows: (Add new bullet between general bullet and design speed bullet)

- **Interchange Spacing**

  Table 9-2 shows the access spacing standards for non-freeway locations. The spacing shown is measured crossroad to crossroad centerline distance. Other access management spacing standards such as the distance between the ramp terminal and the first approach or first full intersection, and the distance between start and end of tapers of adjacent interchanges need to comply with the OHP and Division 51 spacing standards or obtain a spacing deviation.

LIST OF STAKEHOLDERS PROVIDING REVIEW OF DRAFTS

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CONTACT INFORMATION

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