Directional interchanges have one or more grade separations with direct or semidirect ramp connections for one or more left turning movements. Free flow is provided for high turning traffic volumes in one or two quadrants comparable in volume to through traffic.

When one or more interchange connections are indirect in alignment yet more direct than loops, the interchange is described as semi-directional. All left-turn connections or only those that accommodate major left-turn movements may be semi-direct in alignment.

The most widely used type of directional interchange is the four-level layout system shown in Figure 500.11A. A variation of this type is the four-level interchange with two exits from both major roadways, as shown in Figure 500.11B.

Chapter X of "A Policy on Geometric Design of Highways and Streets," AASHTO, 1994, has additional examples of directional interchanges.

*Application* - Semi-direct or direct connections for one or more left-turning movements are often required at major interchanges in urban areas. Interchanges involving two freeways nearly always call for directional layouts. In such cases turning movements in one or two quadrants often are comparable in volume to through movements.

***Advantages*** -

- Reduced travel distance.
- Increased speed and capacity.
- Weaving eliminated.
- Avoids the indirection in driving on a loop.
- Higher levels of service .
- Require little right of way.

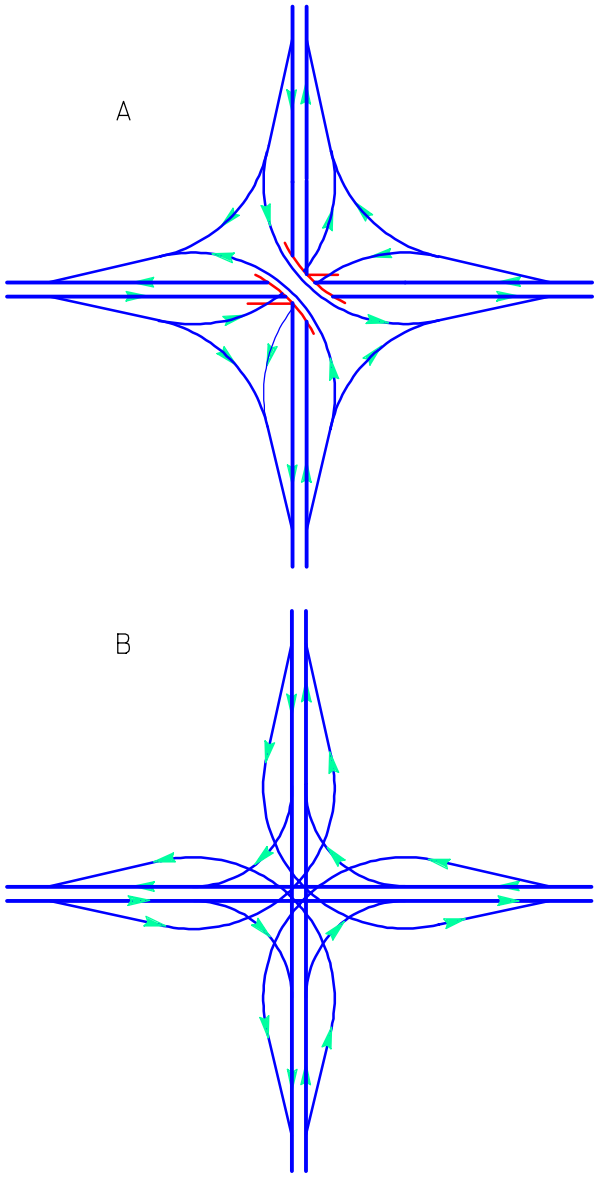


*Figure 500.11*
**Directional Interchanges**

***Disadvantages*** -

- High construction costs.
- Require detailed, time-consuming study.