

INTERSECTION DESIGN AND CHECK VEHICLES

401-15a

REFERENCE SECTIONS
401.9.3

FOR TURN MADE		INTERSECTION DESIGN VEHICLE (DE=A1) ^{[1][2][3]}	INTERSECTION CHECK VEHICLE(S) (DE=[XX]) ^{[1][2][3]}
FROM (APPROACH)	ONTO (DEPARTURE)		
ARTERIAL COLLECTOR LOCAL	RAMP	WB-62 ^[4]	
RAMP	ARTERIAL COLLECTOR LOCAL	WB-62 ^[4]	
ARTERIAL	ARTERIAL COLLECTOR	SU-30	WB-62 [A2]
ARTERIAL	LOCAL	SU-30	WB-40 [A2] ^[6] WB-62 [B2] ^{[5][7]}
COLLECTOR	ARTERIAL COLLECTOR	SU-30	WB-40 [A2] WB-62 [B2] ^{[5][7]}
COLLECTOR	LOCAL	SU-30	WB-40 [A2] ^[6] WB-62 [B3] ^[5]
LOCAL	ARTERIAL COLLECTOR	SU-30	WB-40 [B2] WB-62 [C2] ^[5]

NOTES:

1. A smaller Intersection Design/Check Vehicle than shown in the table above may be appropriate at some locations, but must be justified. Conditions that might justify the consideration of a smaller Intersection Design/Check Vehicle include
 - Limited right of way
 - Trucks prohibited on cross streets
 - Current and future traffic counts show a small amount of the Intersection Design/Check Vehicle (<3/day) making the turn(s).
 - Cross street volume is minimal (<400 AADT) and the route is unlikely to be used as a detour route for a nearby higher volume roadway.

(continued on next page)

INTERSECTION DESIGN AND CHECK VEHICLES (CONT.)

401-15a

REFERENCE SECTIONS
401.9.3

NOTES:

2. A larger Intersection Design/Check Vehicle than shown in the table above may be appropriate at some locations, but must be justified. Conditions that might justify the consideration of a larger Intersection Design/Check Vehicle include
 - Current and future traffic counts show a significant amount of vehicles larger than the Intersection Design/Check Vehicle making the turn(s).
 - The encroachment of even a few larger vehicles will cause significant traffic impacts.
 3. If an Intersection Design/Check Vehicle is used that is not shown in the table on the previous page, then the following conditions apply:
 - Use the default Intersection Design Vehicle from the table on the previous page as an Intersection Check Vehicle, and verify that it can make the turn(s) (by encroaching into other traffic lanes if necessary) without significantly impacting traffic. For signalized intersections, if the default Intersection Design Vehicle is a WB-62, verify that the WB-62 can make the turns(s) with a $DE=A2$.
 - Verify that WB-62 trucks can physically make the turns at an intersection of two routes on the National Network without backing up and without impacting curbs, parked cars, utility poles, mailboxes, traffic control devices, or any other obstructions, regardless of the selected Intersection Design/Check Vehicle or allowable encroachment.
 4. At signalized intersections, $DE=A2$ is acceptable for left turns from a single left turn lane if:
 - Left turns are only allowed during the protected phase
 - or
 - There are no opposing vehicles (e.g., on the non-crossing leg of a T-intersection)
 5. At signalized intersections, for the WB-62 Intersection Check Vehicle, use a preferred degree of encroachment (DE) = $A2$, with a minimum DE as shown.
 6. A Degree of Encroachment (DE) = $A3$ may be acceptable for right turns by an Intersection Check Vehicle if there is a right-turn lane on the approach. This allows the right turning vehicle to wait outside of the approach through lane until traffic clears from the opposing lane on the departure leg. Use only if this is an infrequent occurrence and does not cause backups or other traffic impacts.
 7. At right-turn lanes with a contiguous bike lane between the turn lane and the through lane, check the swept path of the WB-62 Intersection Check Vehicle to see if it is possible to avoid encroaching into the bike lane without significantly disrupting traffic or going outside of the roadway. Otherwise, consider:
 - accepting infrequent bike lane encroachments but consider adding warning signage that states right turning large trucks swing left before turning (or similar).
- If the bike lane encroachment is frequent enough to be potentially dangerous, consider:
- parking restrictions and/or a larger curb radius
 - mark as a shared bike/right-turn lane instead of a separate bike lane and right-turn lane
 - re-design to reduce or eliminate the conflict