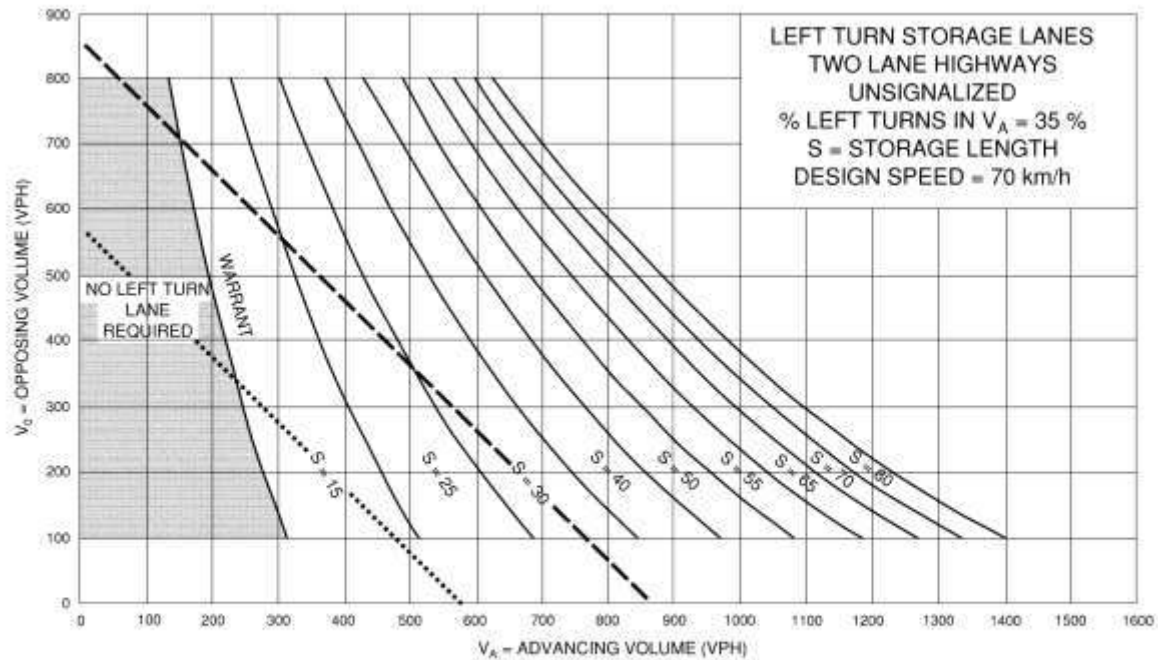


Exhibit -9A-14



----- TRAFFIC SIGNALS MAY BE WARRANTED IN RURAL AREAS OR URBAN AREAS WITH RESTRICTED FLOW

..... TRAFFIC SIGNALS MAY BE WARRANTED IN "FREE FLOW" URBAN AREAS

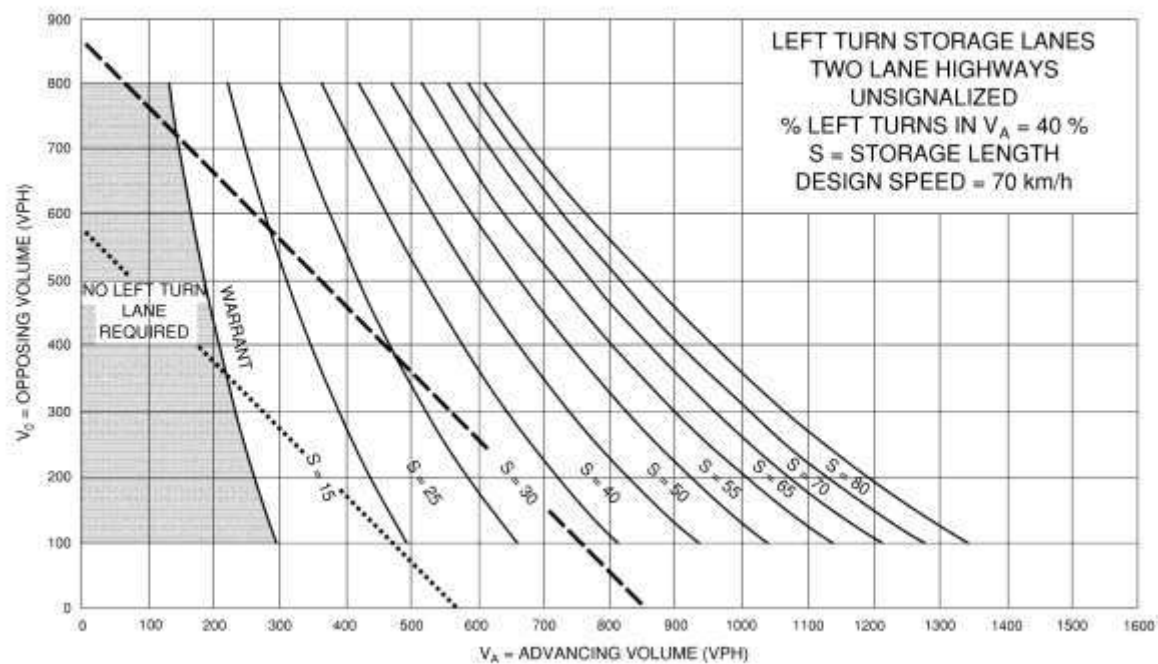
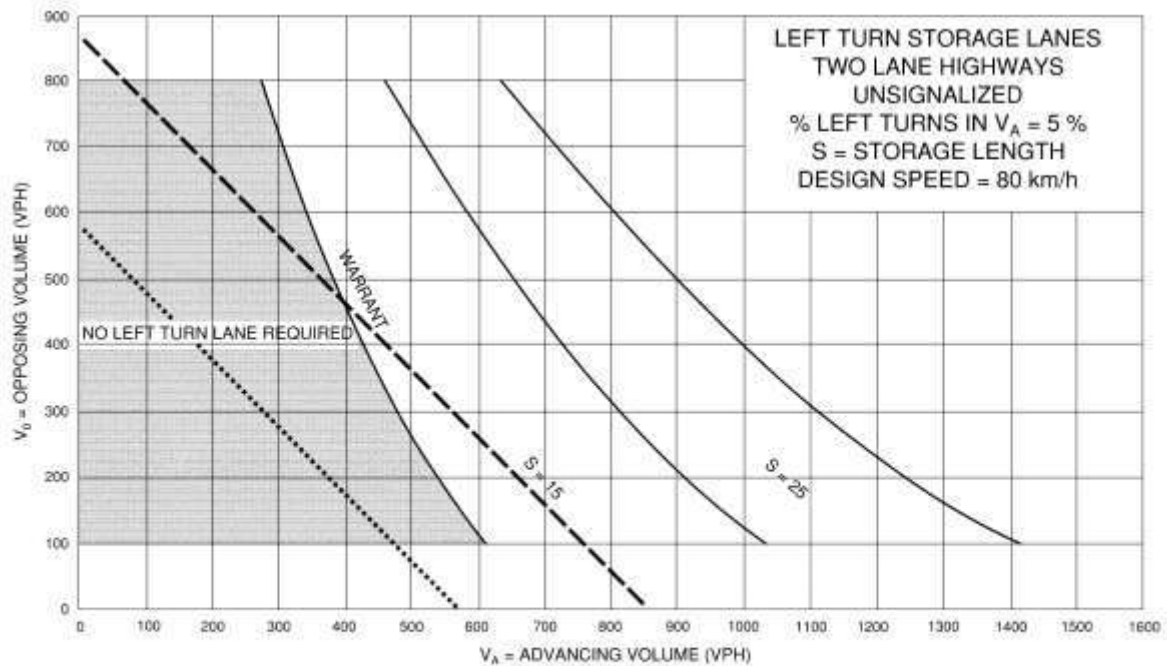


Exhibit -9A-15



- TRAFFIC SIGNALS MAY BE WARRANTED IN RURAL AREAS OR URBAN AREAS WITH RESTRICTED FLOW
- TRAFFIC SIGNALS MAY BE WARRANTED IN "FREE FLOW" URBAN AREAS

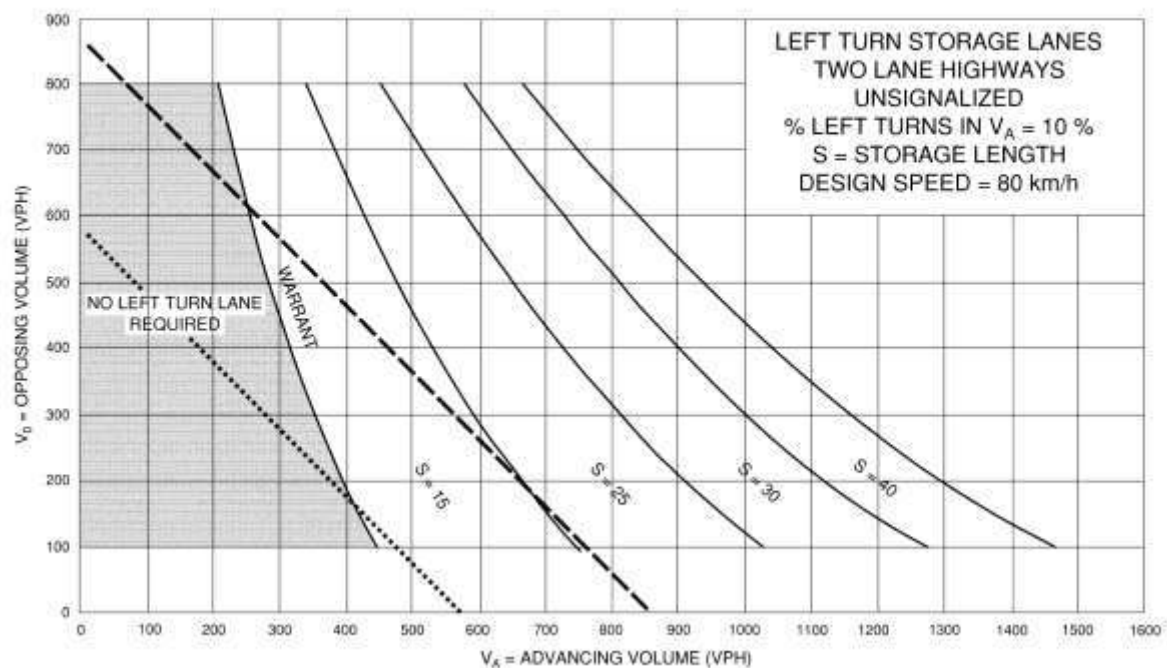


Exhibit -9A-16

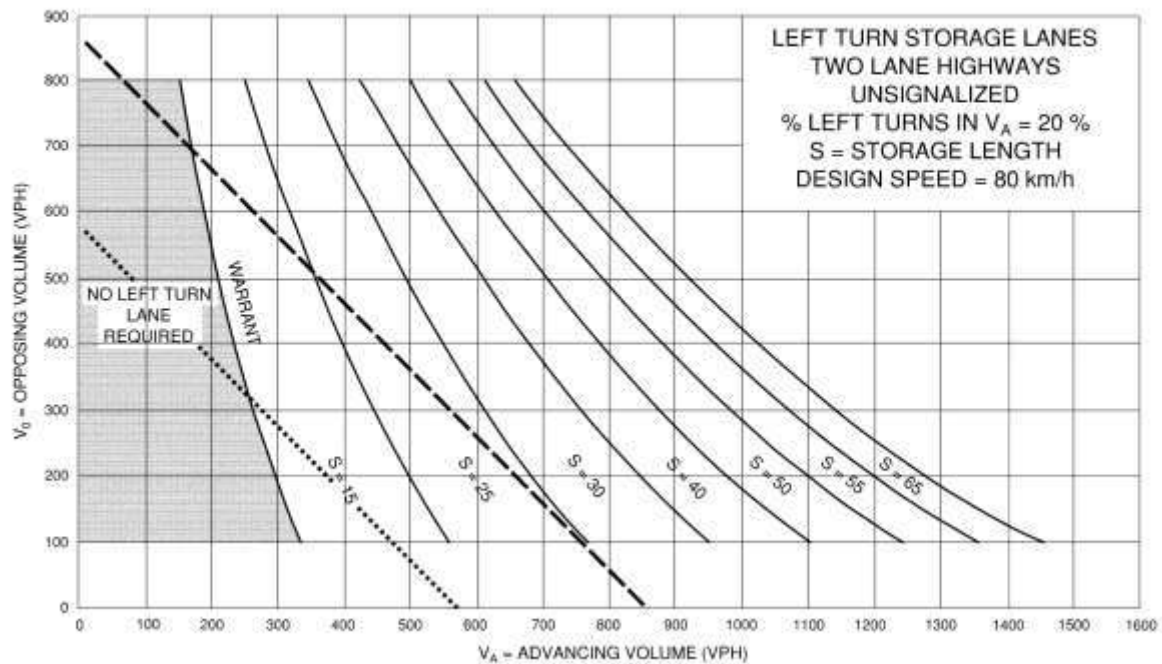
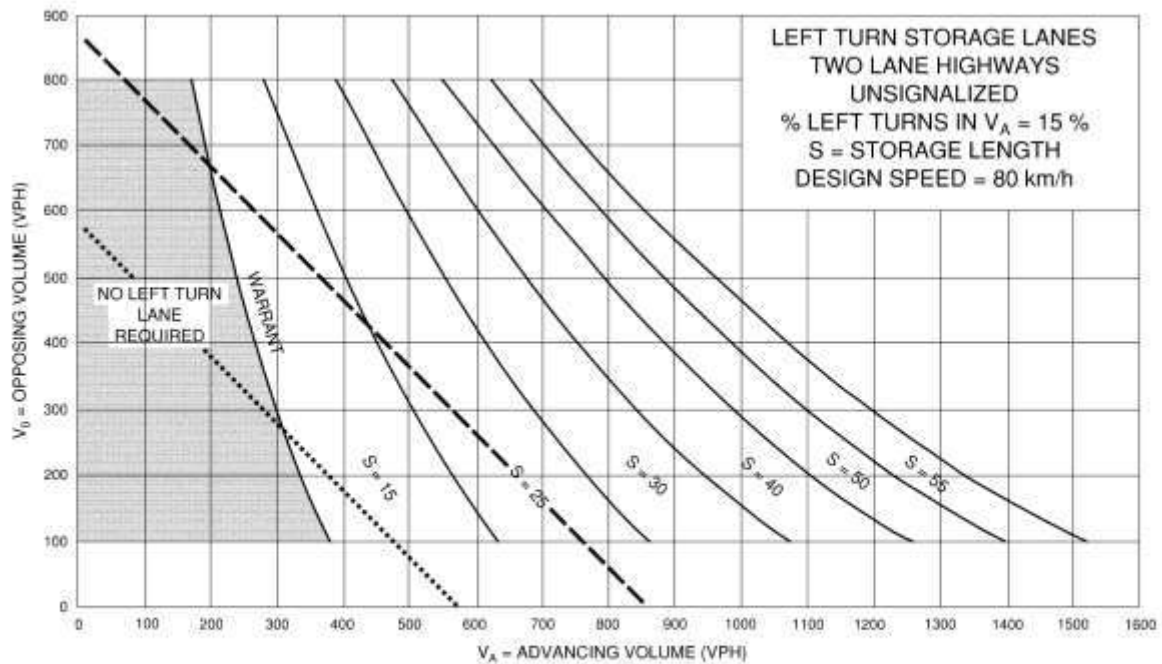
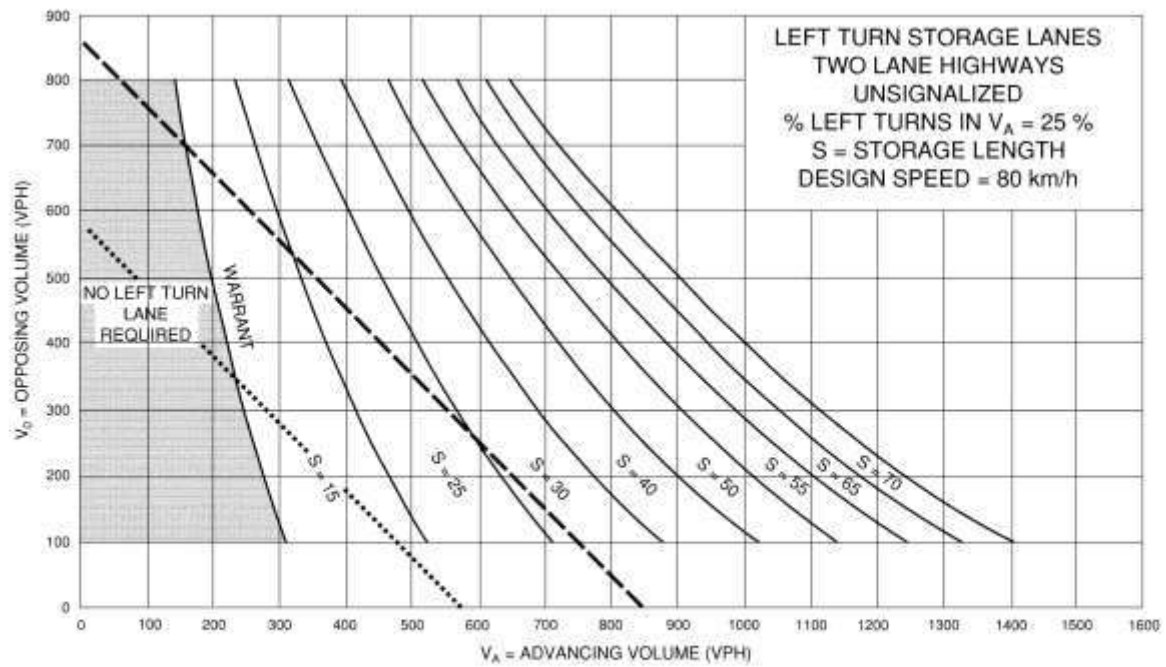


Exhibit -9A-17



--- TRAFFIC SIGNALS MAY BE WARRANTED IN RURAL AREAS OR URBAN AREAS WITH RESTRICTED FLOW

..... TRAFFIC SIGNALS MAY BE WARRANTED IN "FREE FLOW" URBAN AREAS

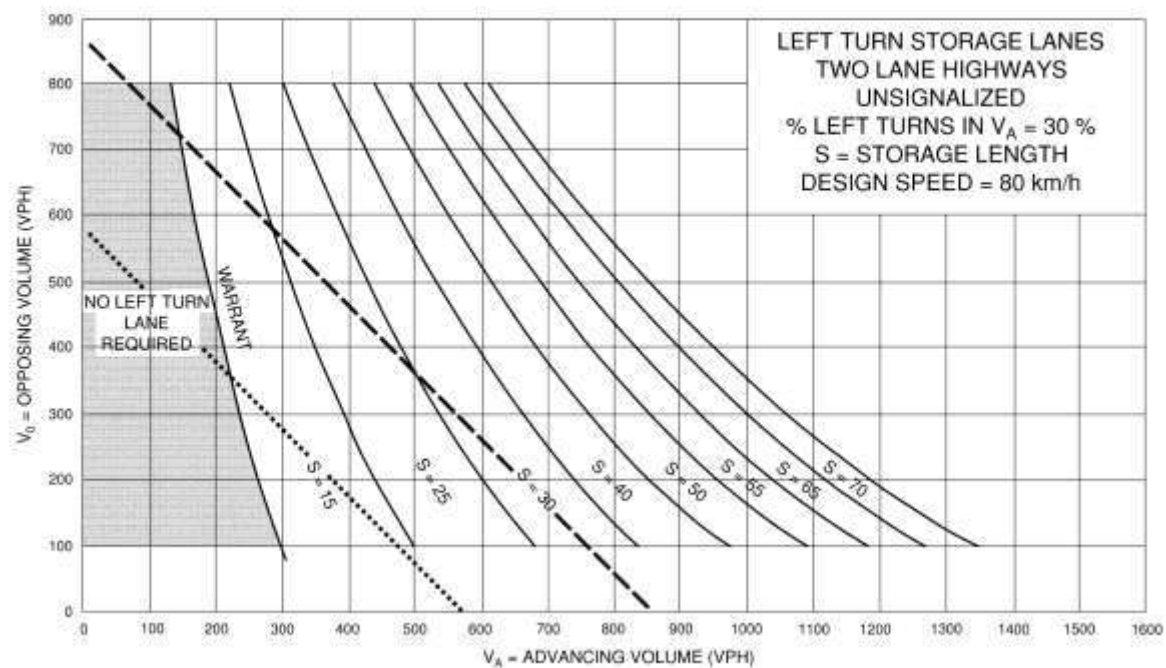
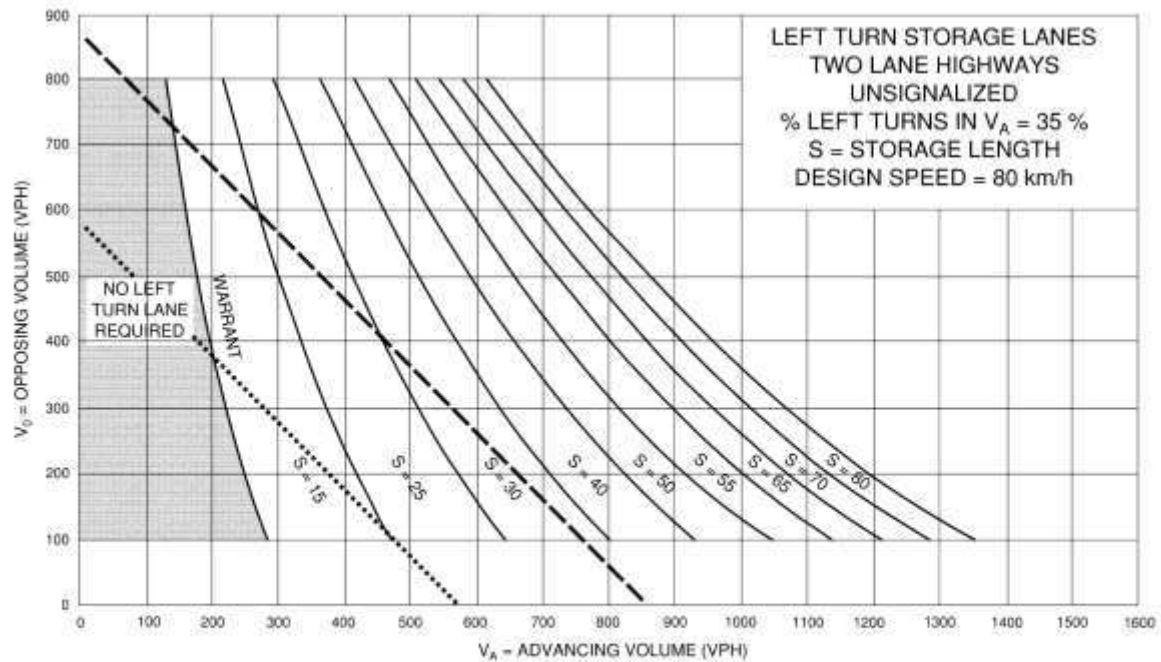


Exhibit -9A-18



- TRAFFIC SIGNALS MAY BE WARRANTED IN RURAL AREAS OR URBAN AREAS WITH RESTRICTED FLOW
- TRAFFIC SIGNALS MAY BE WARRANTED IN "FREE FLOW" URBAN AREAS

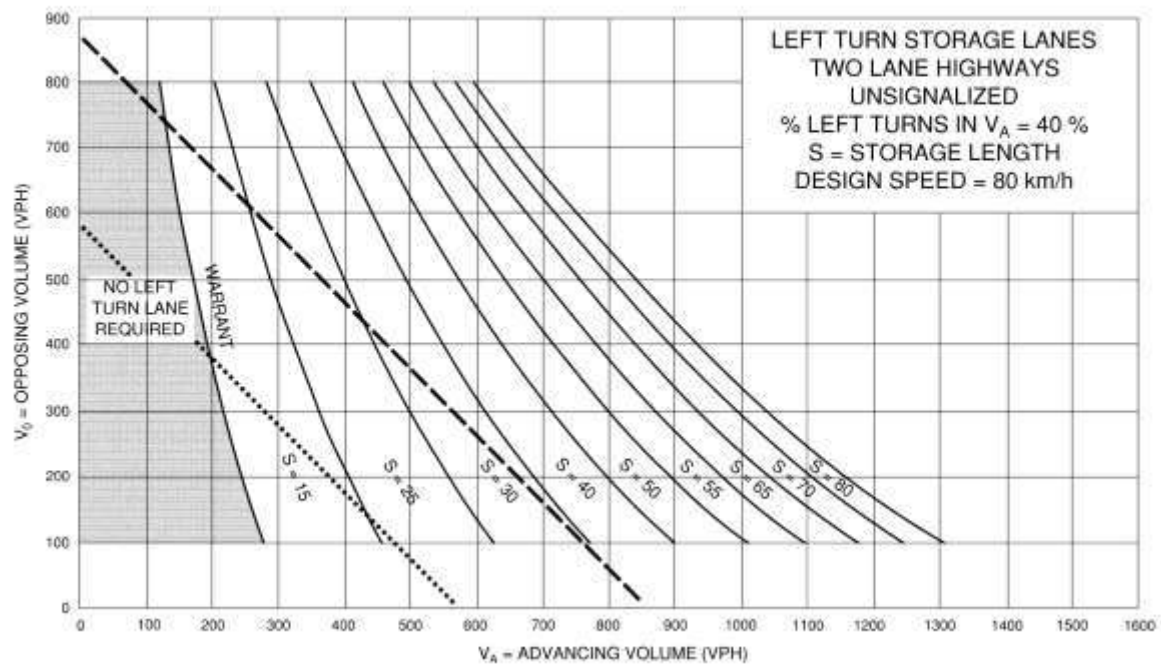


Exhibit -9A-19

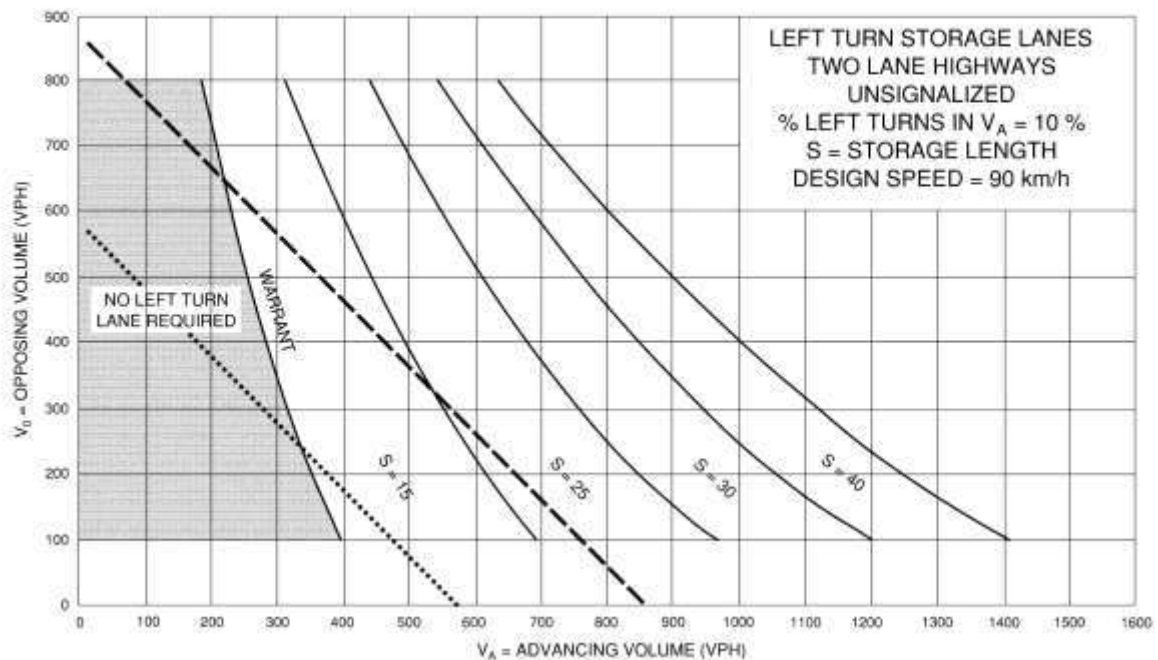
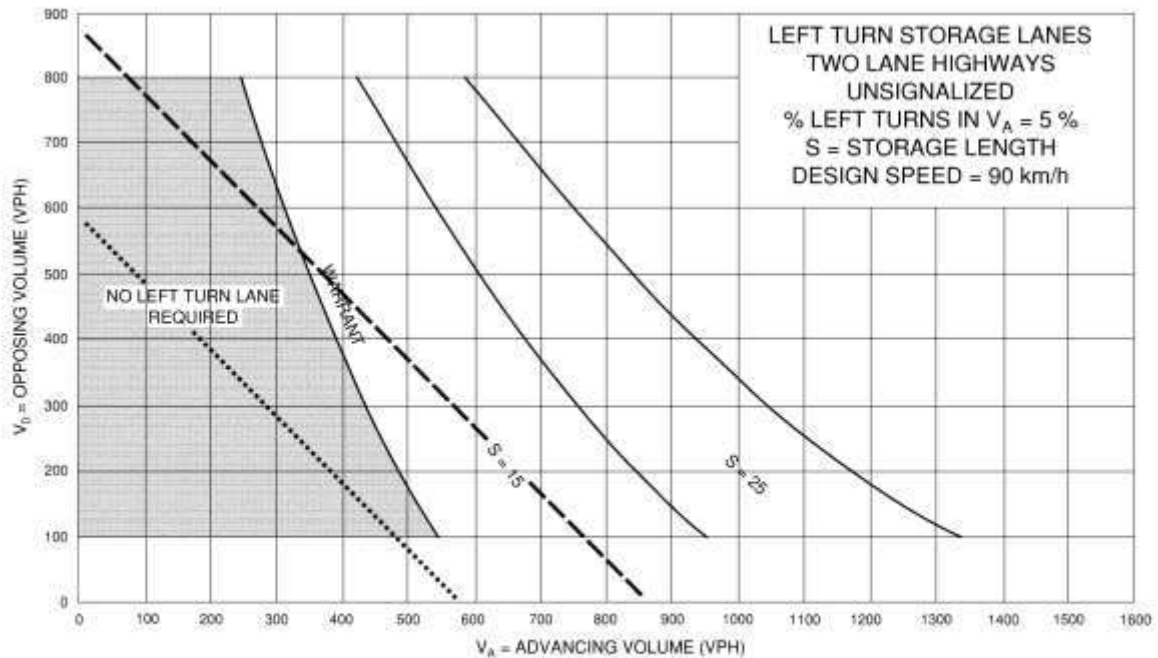
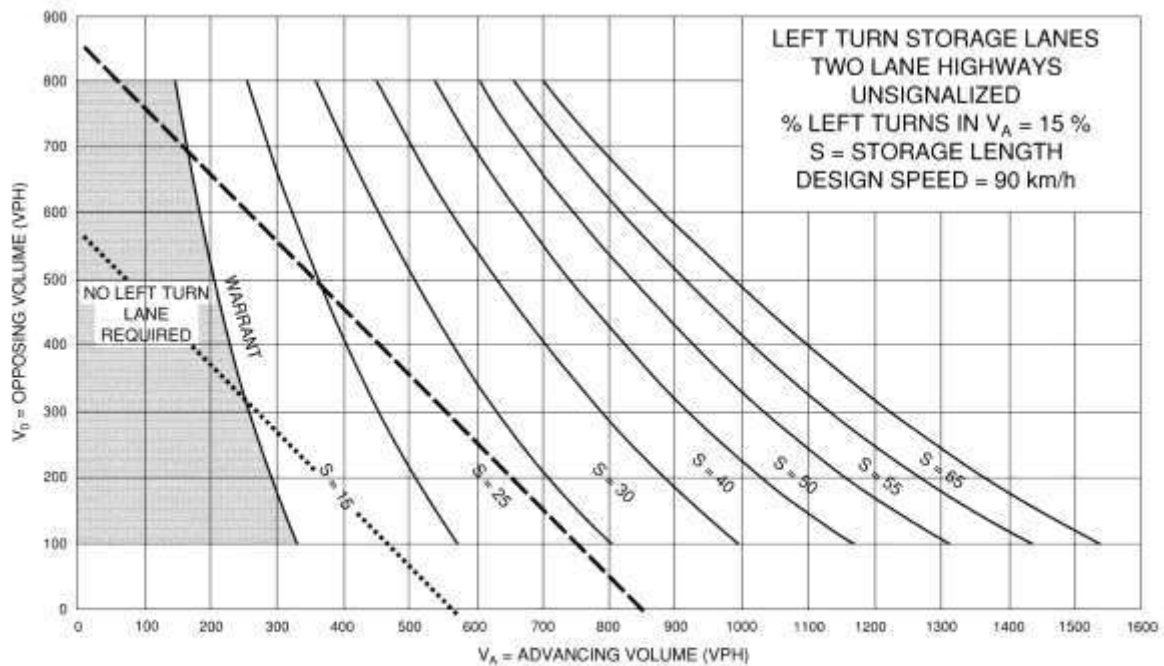


Exhibit -9A-20



- TRAFFIC SIGNALS MAY BE WARRANTED IN RURAL AREAS OR URBAN AREAS WITH RESTRICTED FLOW
- TRAFFIC SIGNALS MAY BE WARRANTED IN "FREE FLOW" URBAN AREAS

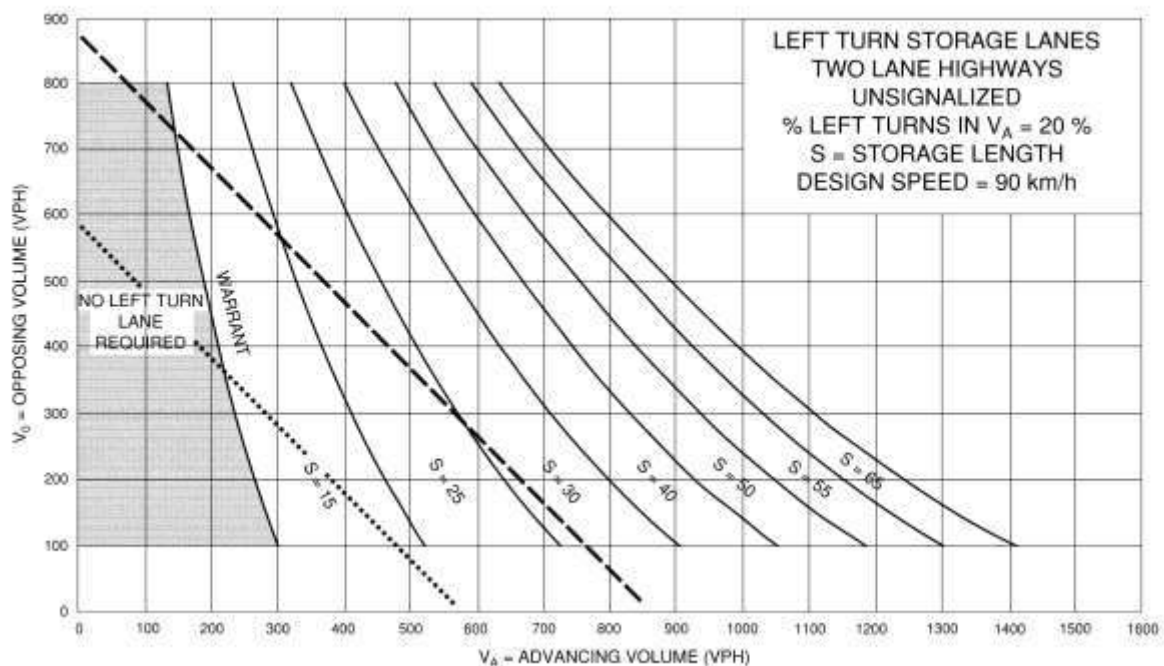


Exhibit -9A-21

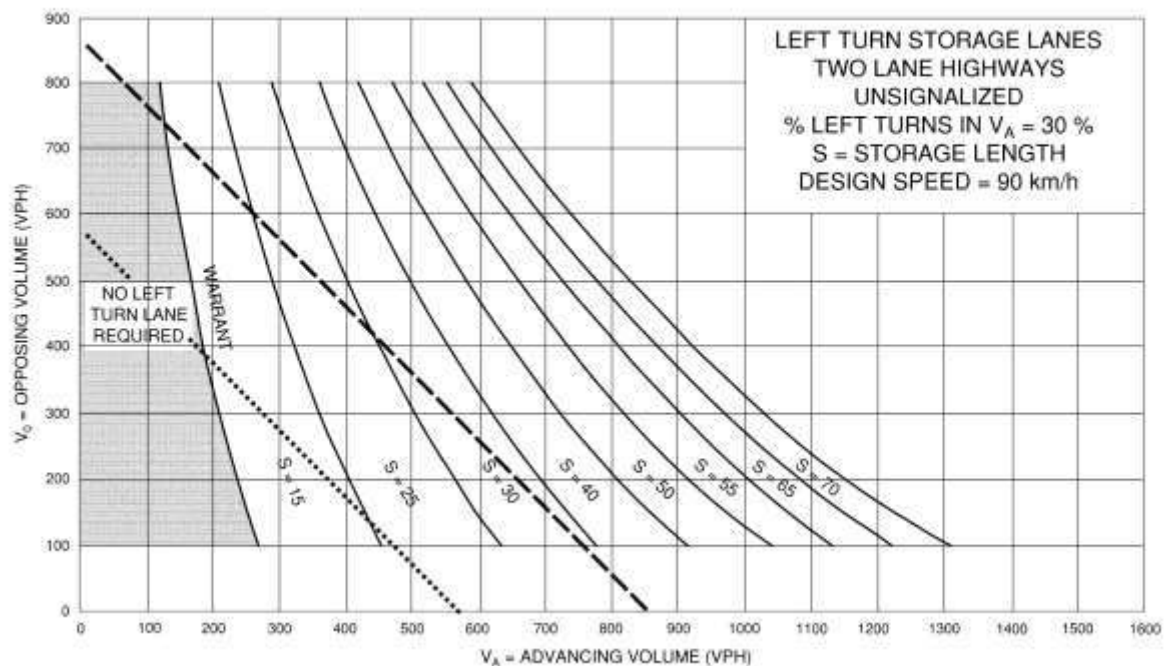
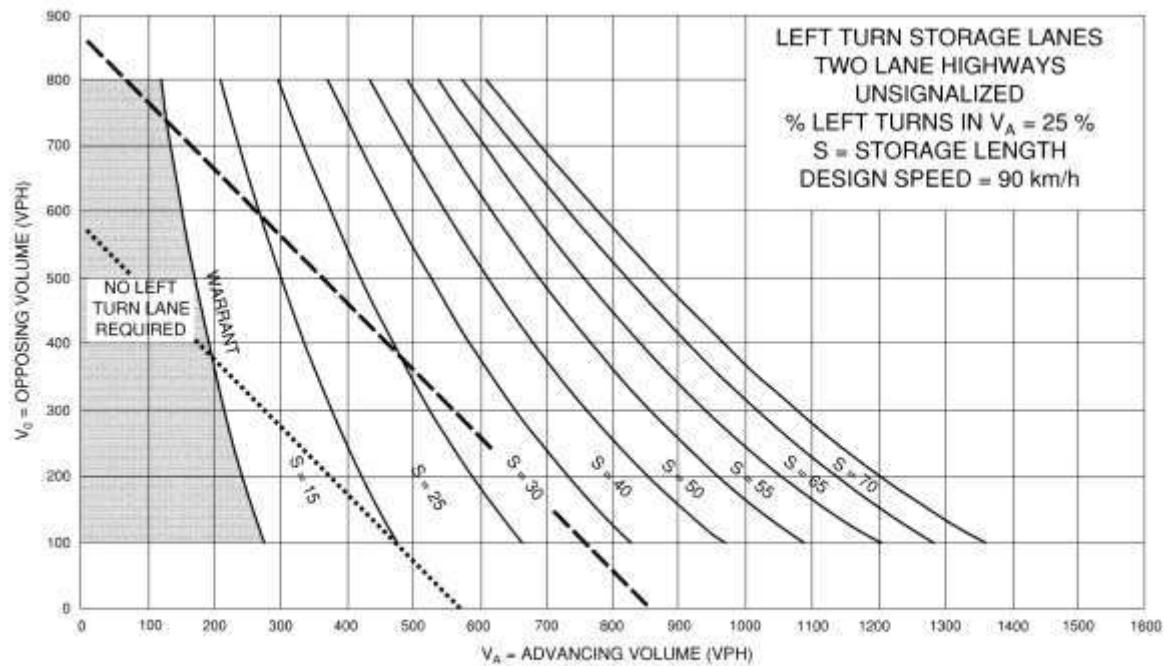


Exhibit -9A-22

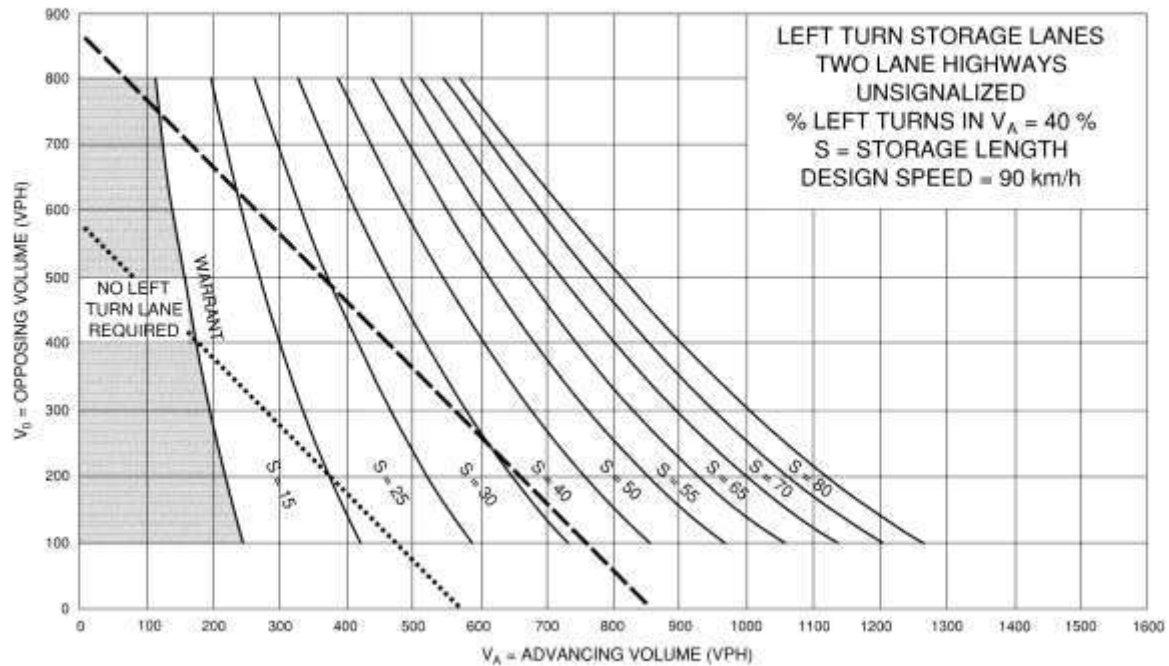
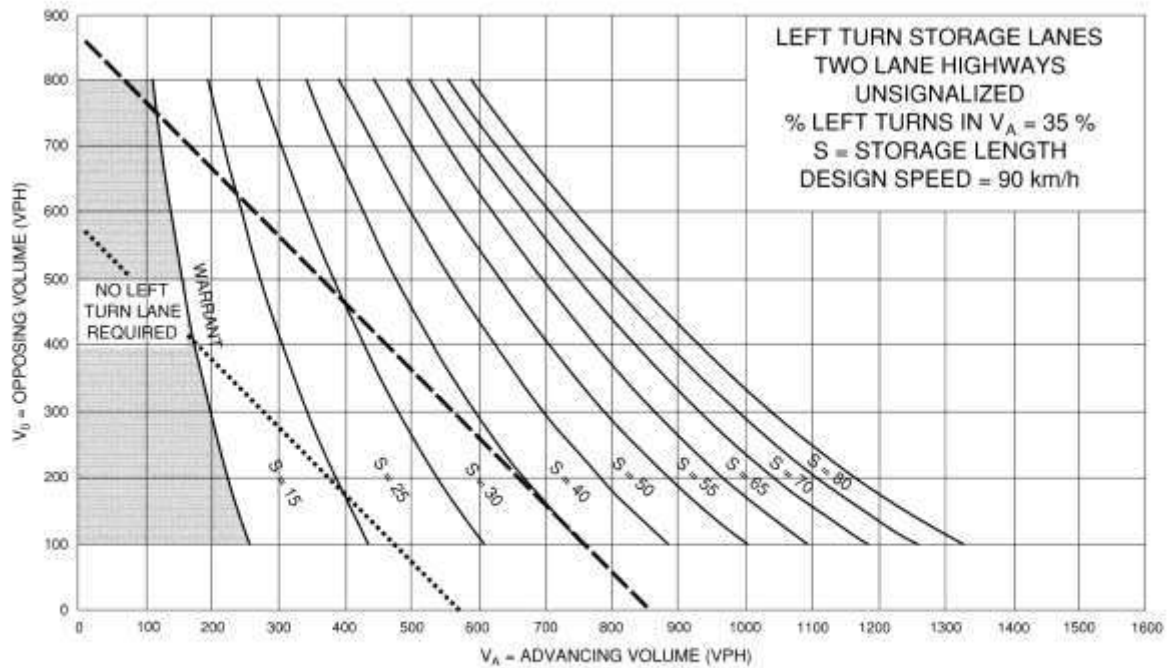


Exhibit -9A-23

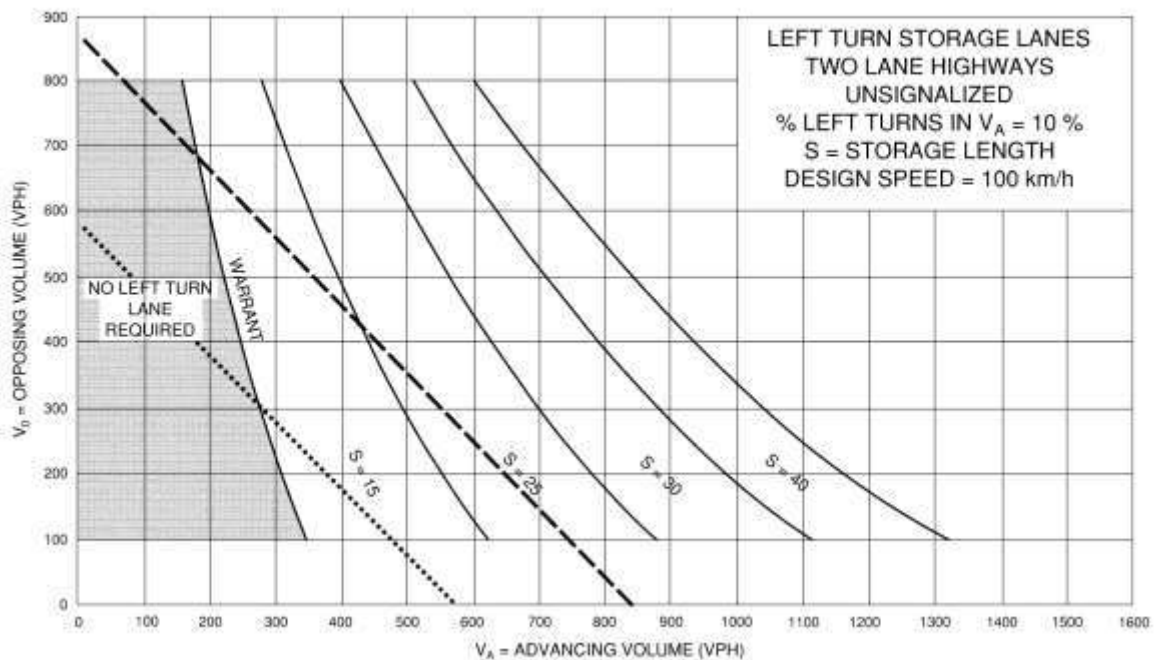
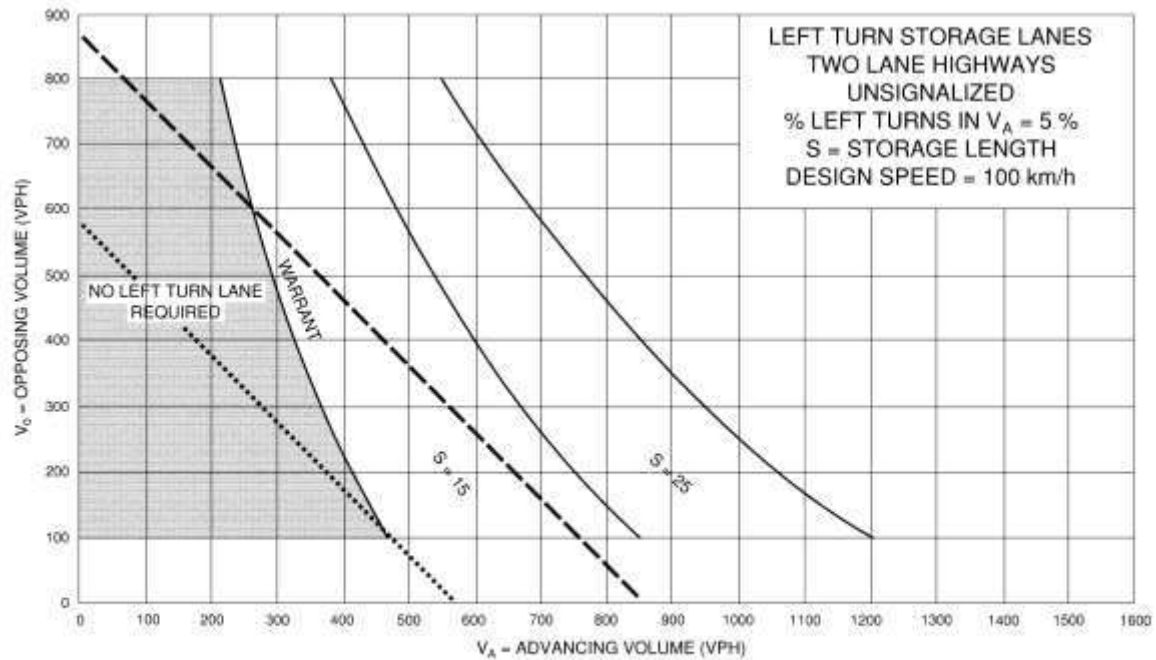
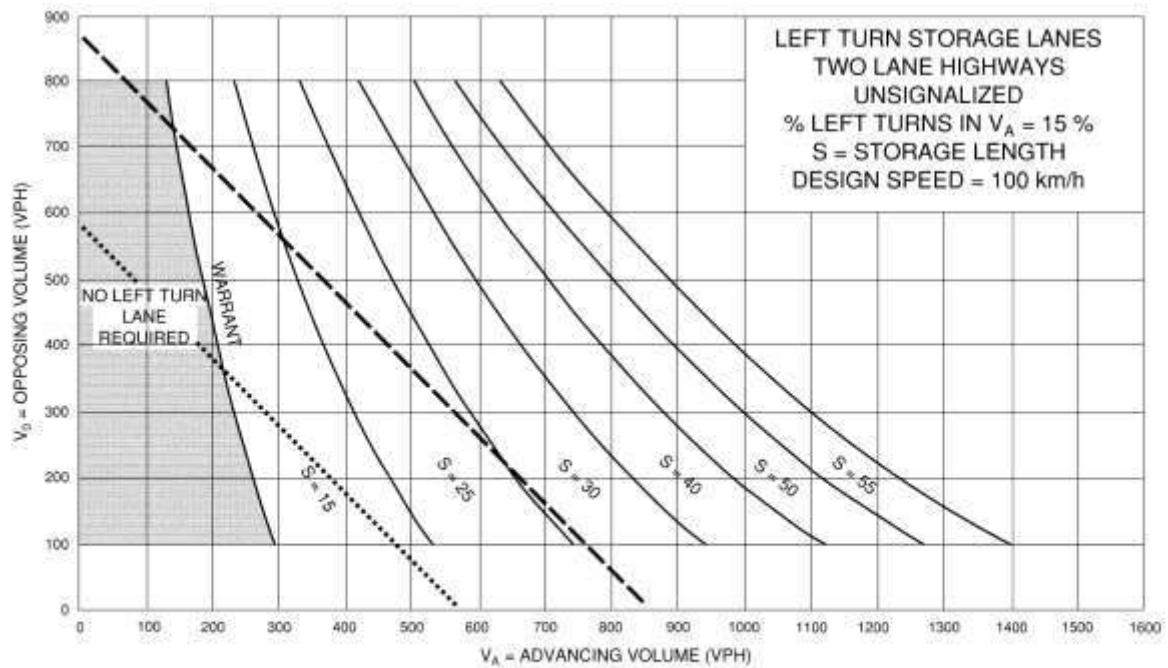


Exhibit -9A-24



- TRAFFIC SIGNALS MAY BE WARRANTED IN RURAL AREAS OR URBAN AREAS WITH RESTRICTED FLOW
- TRAFFIC SIGNALS MAY BE WARRANTED IN "FREE FLOW" URBAN AREAS

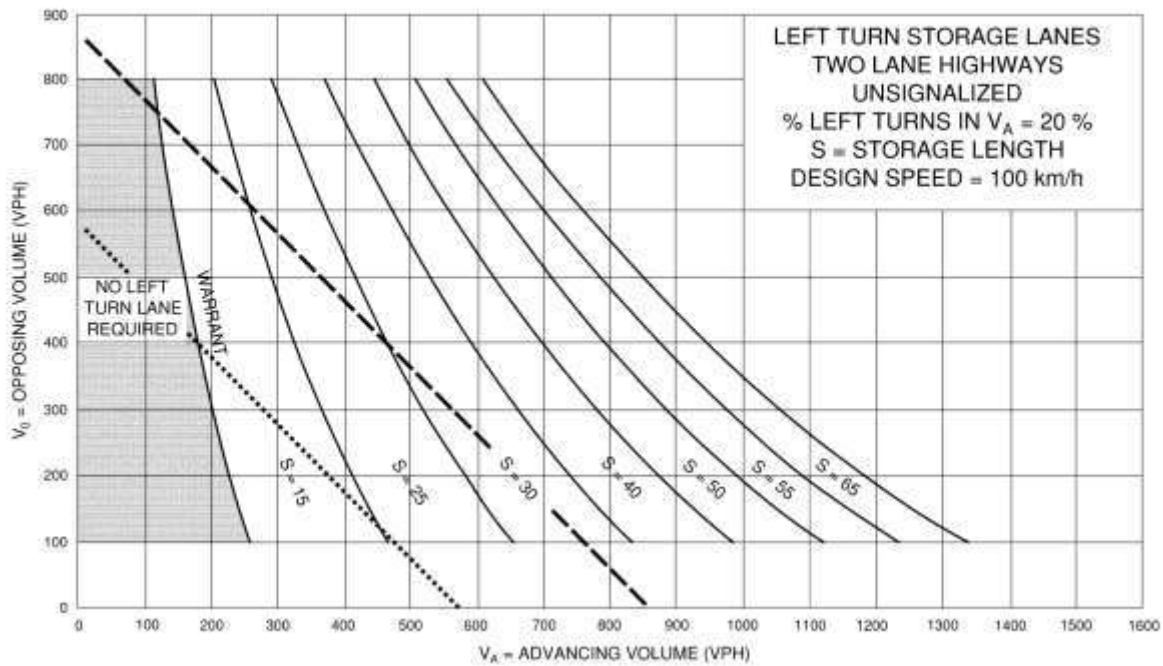


Exhibit -9A-25

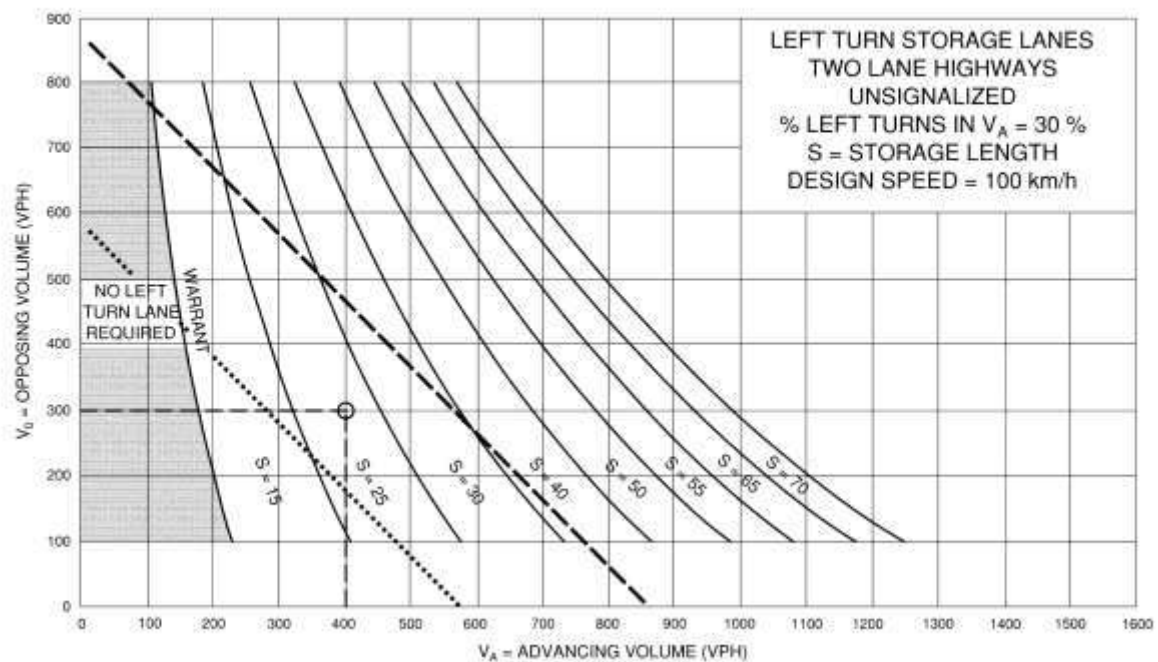
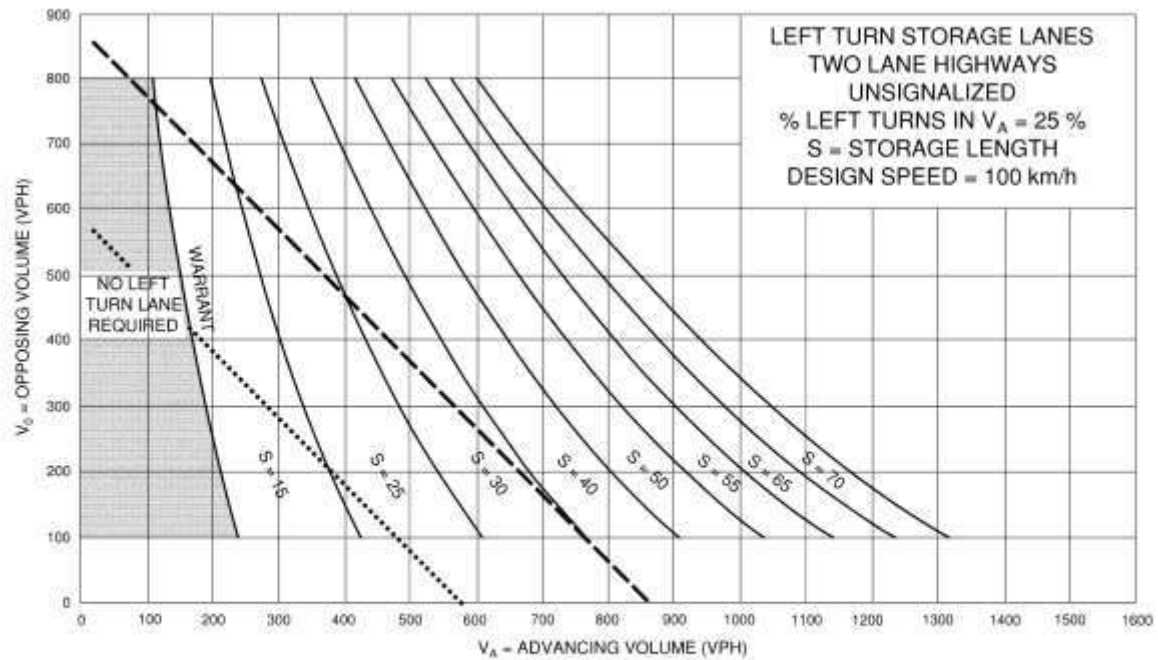


Exhibit -9A-26

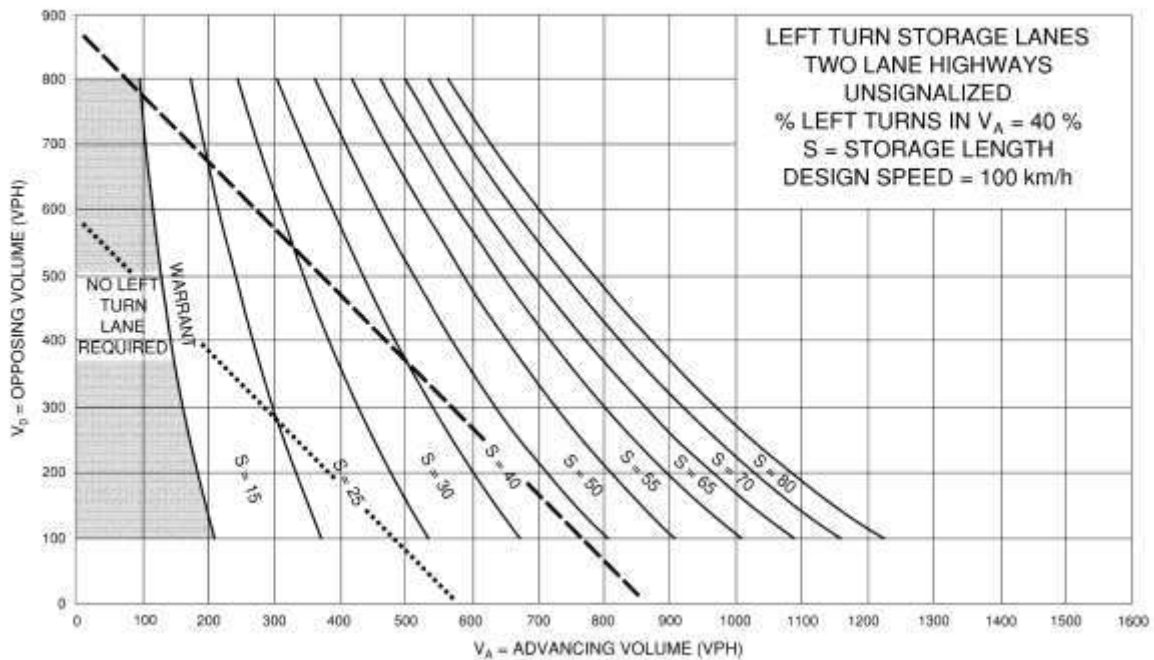
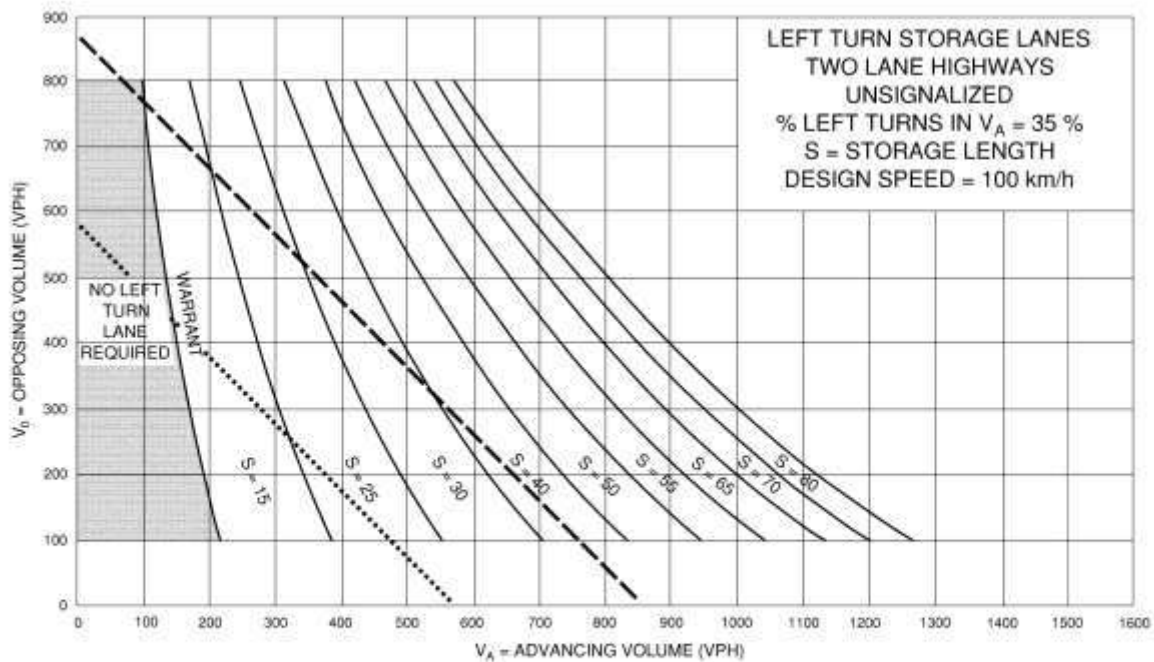


Exhibit -9A-27

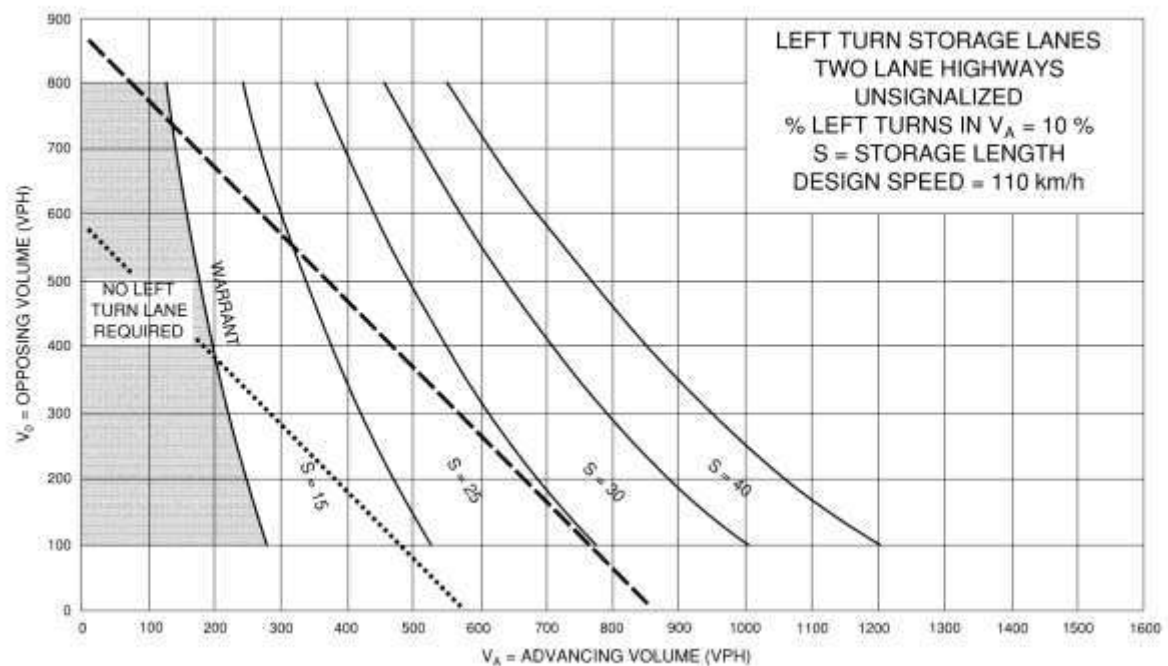
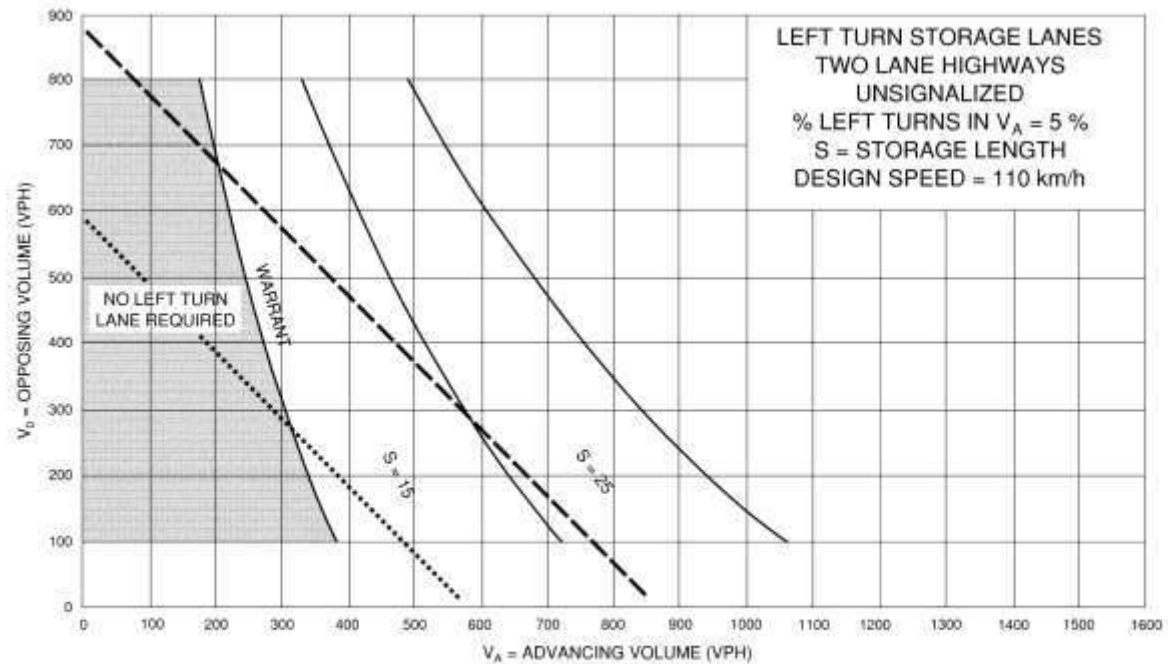
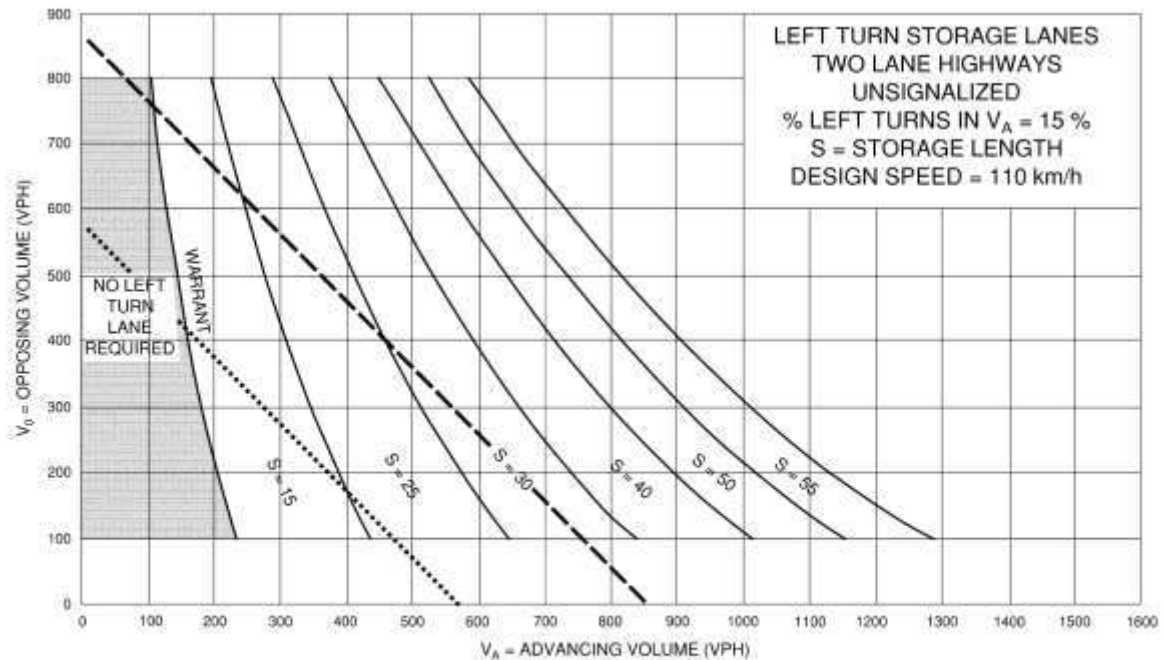


Exhibit- 9A-28



--- TRAFFIC SIGNALS MAY BE WARRANTED IN RURAL
AREAS OR URBAN AREAS WITH RESTRICTED FLOW

..... TRAFFIC SIGNALS MAY BE WARRANTED IN
"FREE FLOW" URBAN AREAS

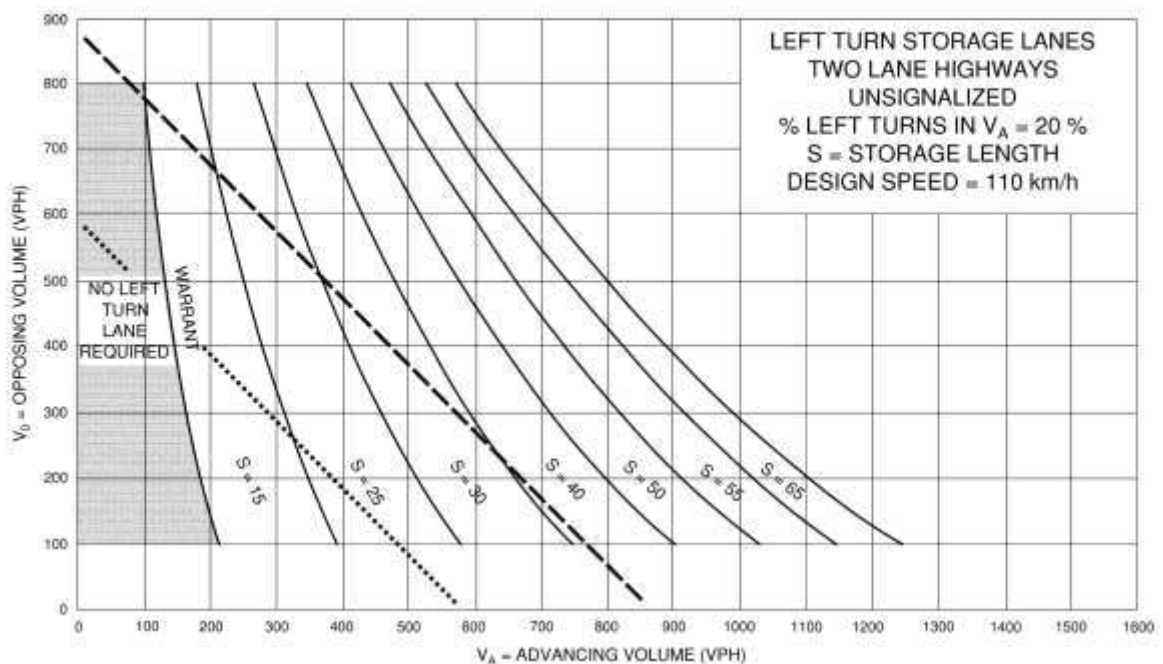


Exhibit -9A-29

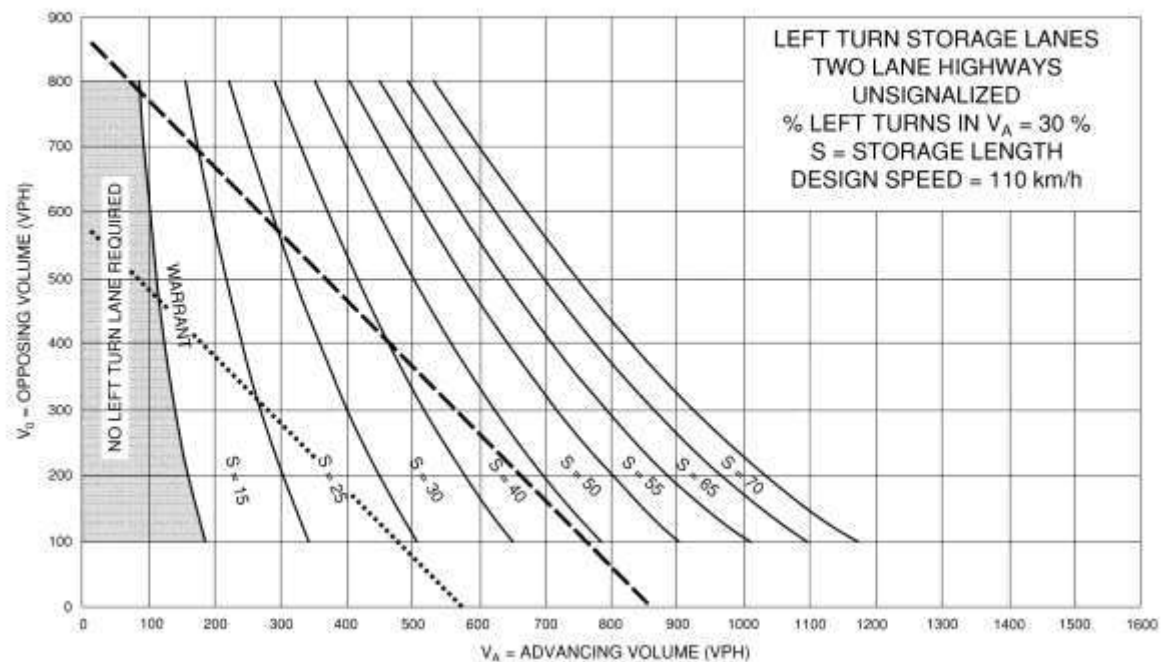
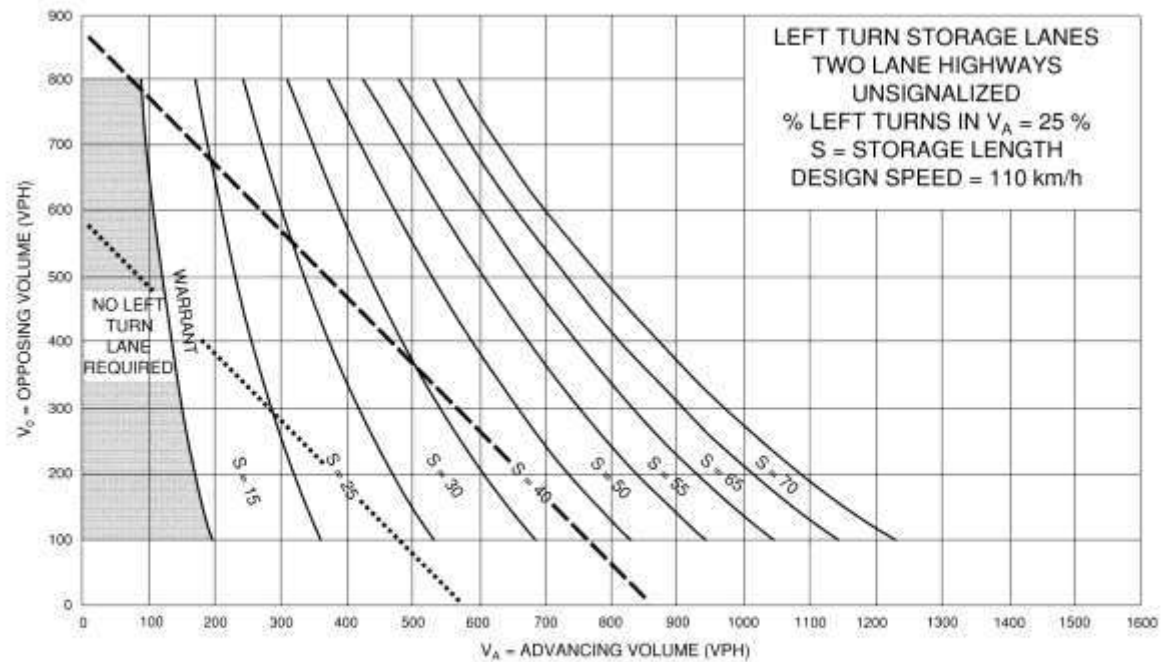
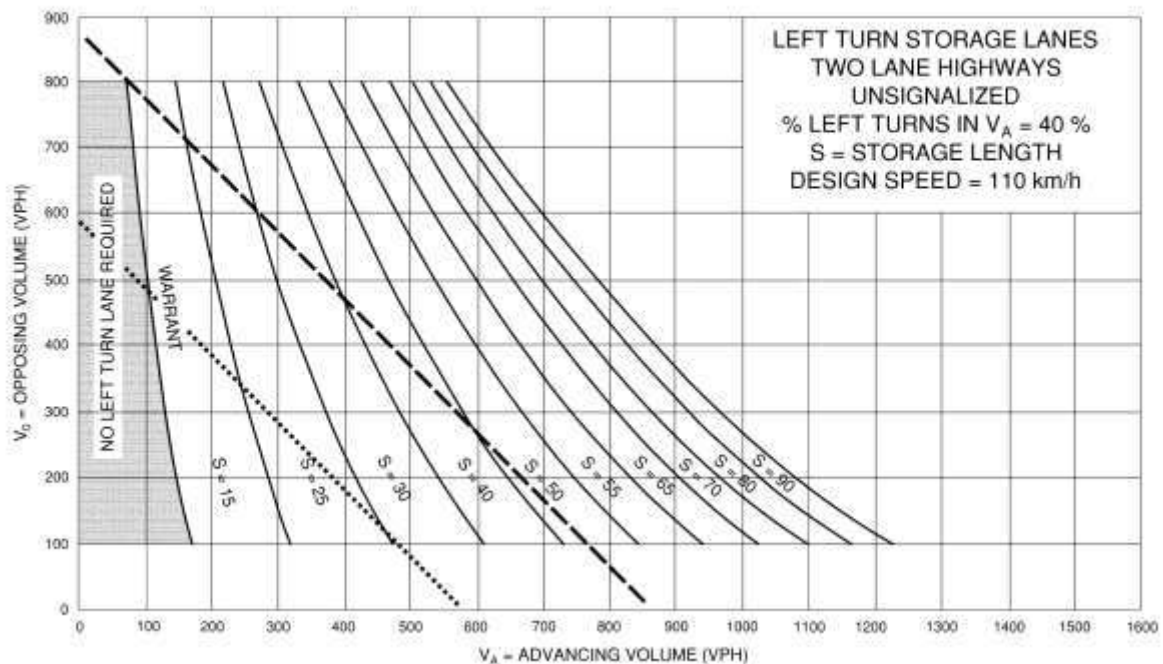
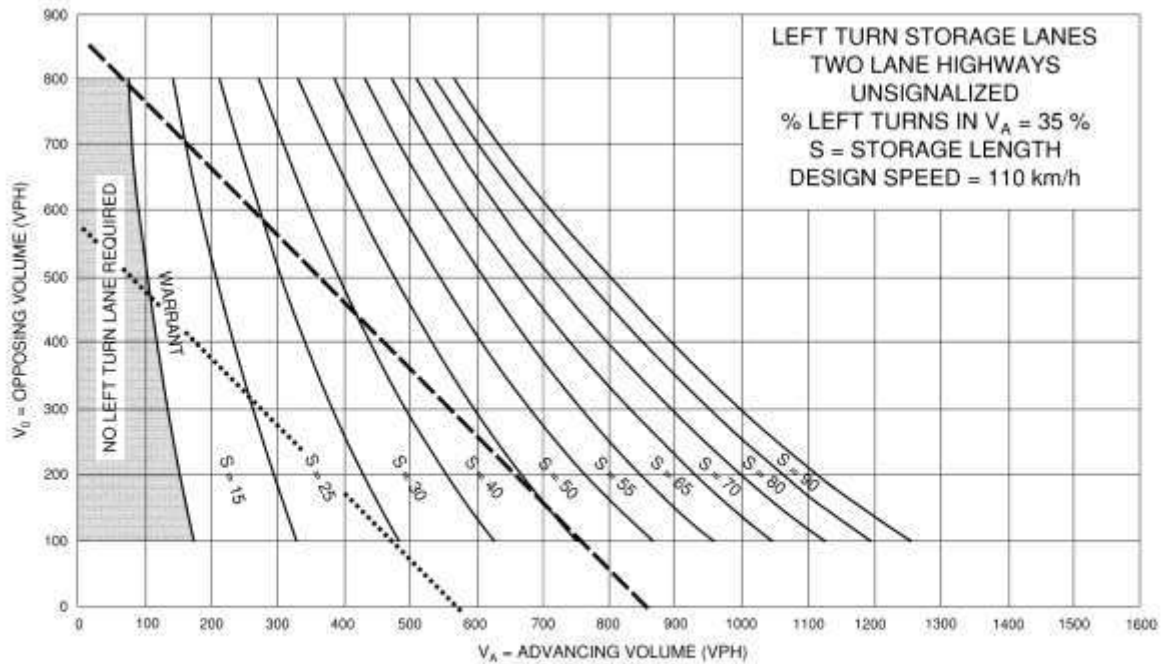


Exhibit -9A-30



~~TBD July/October 20263~~

Left-Turn Lane Warrant and Storage-Lane Lengths for Four-lane Undivided Highways Unsignalized Intersections

Use of Graph

1. Select the appropriate ~~figure~~value for left-turning volumes from the bottom of the graph and extend a line upward.
2. Select the appropriate ~~value~~figure for the opposing volumes from the left-hand side of the graph and extend a line across.
3. Locate the point of intersection of the extended lines. If the point falls to the left of the warrant line, a left-turn lane is not warranted.
4. If the point falls to the right of the warrant line, a left-turn lane is warranted, and its storage length is indicated by the value of 'S' shown on the graph.

An example of applying the graph shown in **Exhibit_9A-31** is illustrated below:

Left-turning Volume $V_L = 100$ vph

Opposing Volume $V_O = 400$ vph

Projected line from these values intersect to the right of the warrant line and within the area marked 'S' – 15 m – a left-turn lane is warranted, and the storage length should be 15 m.

Left-Turn Lane Warrants and Storage-Lane Lengths for Four-lane Divided Highways Unsignalized Intersections

For use of graph, see **Exhibit_9A-32**.

Exhibit -9A-31

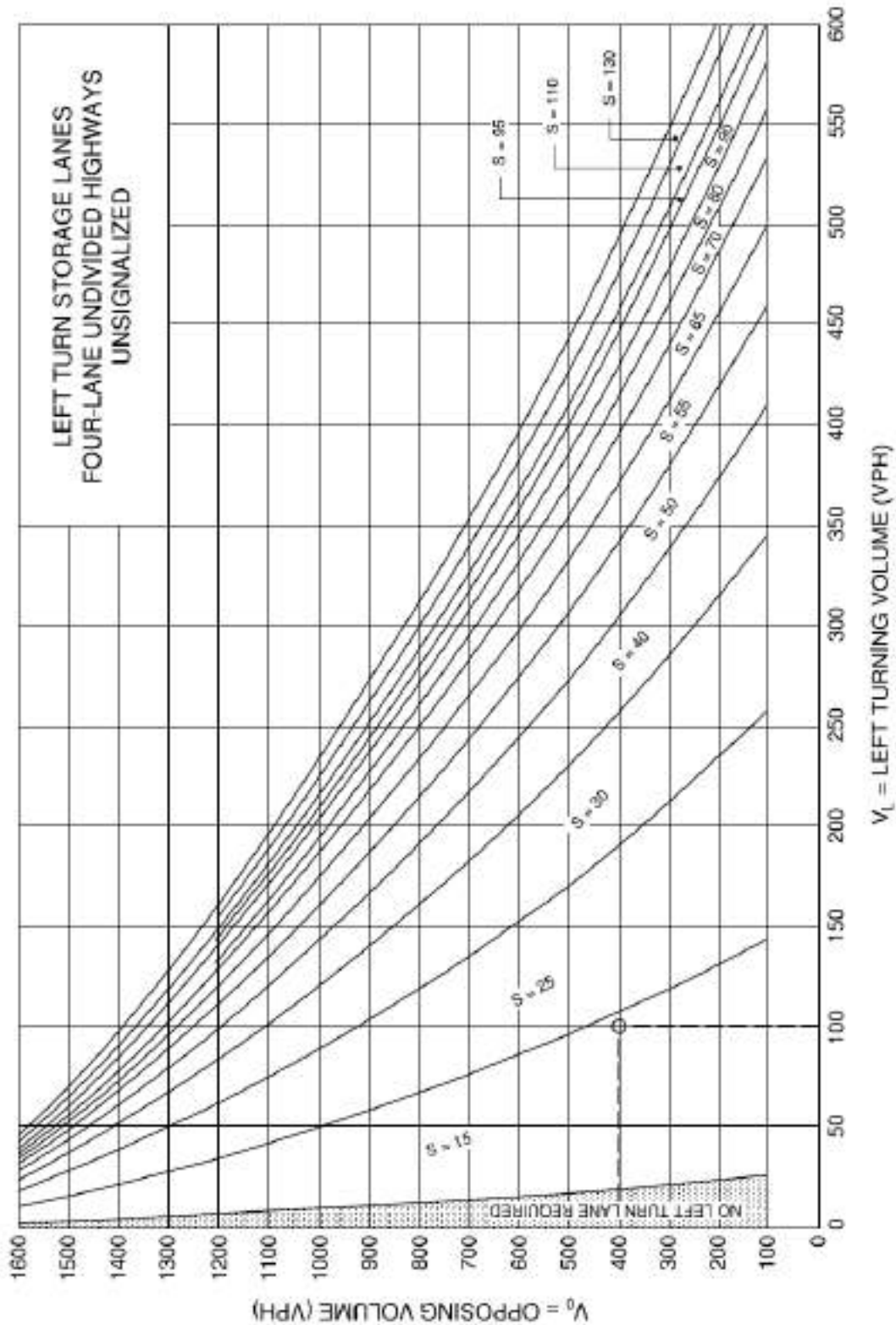


Exhibit -9A-32

