Design Standards Letter

Letter Number: G-2002-07

Letter Date: 09/16/2002

Effective Date: 09/16/2002

Section/Plan No.: None

Subject: Two-Way Left-Turn Lanes

Body

Recently, two-way left-turn lanes (TWLTLs) have been receiving much statewide attention. This letter provides guidelines for consideration, design and implementation of TWLTLs on the state system.

One of the key benefits of this design includes the removal of turning vehicles from the through traffic lanes, thereby reducing travel time and delay by 40 to 60 percent. Two-way left-turn lanes are far less controversial than raised medians, and can be an effective traffic management tool when used under the right circumstances, however they have limitations.

TWLTLs do not function well once certain traffic volumes or recommended driveway spacing limits have been exceeded. In areas of high traffic volumes, i.e. AADT is greater than 28,000, raised medians are at least 25 percent safer than multilane undivided sections and 15 percent safer than TWLTLs. Two-way left-turn lanes should only be considered in places where commercial driveways make up a substantial portion of total driveways, overall driveway density is managed, and where the percentage of vehicles turning left at peak hour is at least 20 percent.

Two-way left-turn lane configurations should not be used in areas that are expected to remain rural in the foreseeable future or on roadways with posted speeds in excess of 45 mph. In no case should any district attempt to create a two-way left turn lane on routes with more than two through-traffic lanes in each direction to create a "seven lane" facility.

Criteria for use and design of TWLTLs on our state system include the following:

Roadway/Traffic Conditions	Two-Way Left-Turn Lanes (Five-Lane Facilities)	Two-Way Left-Turn Lanes (Three-Lane Facilities)
AADT	May be used where AADT in the design year is less than	May be used where AADT in the design year is less than

	28,000; otherwise use a raised median	17,500
Driveway Spacing	May be used when driveway spacing is 12 or less per mile in each direction (Average spacing of 440 feet)	May be used when driveway spacing is 12 or less per mile in each direction (Average spacing of 440 feet)

Roads that may be candidates for TWLTLs should be evaluated to determine whether accidents are a significant factor, and if, alternatively, access management strategies could be implemented to reduce accidents. All core team members should be involved in the evaluation process, and alternatives weighed against the "Purpose and Need" we are trying to achieve with the project. If a TWLTL is the best solution for existing conditions, supporting information addressing safety concerns must be included in the conceptual plan submittal.

Designing or implementing a TWLTL on a roadway that does not warrant the use of this type of facility will require a design exception. For TWLTLs currently under design not meeting the defined criteria, the conceptual plan and justification must be submitted to their respective Project Development Liaison Engineer for review as soon as possible.

If you have any questions concerning the use of two-way left-turn lanes, please contact your Project Development Liaison Engineer for assistance.

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