Florida Department of Transportation Research

LOSPLAN 2012: Updates for the HCM 2010
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LOSPLAN is a widely used computational tool developed by the Florida Department of Transportation (FDOT) for determining level of service and quality of service for several modes of transportation on Florida's roadways. It is used primarily in the planning stages of new projects. For bicycle and pedestrian modes, LOSPLAN calculations are based on the Highway Capacity Manual (HCM), published by the Transportation Research Board. Calculations for automobile and bus modes are based largely on HCM methodologies and on other research-based methodologies. As research advances ways of determining quality and level of service, LOSPLAN is updated to include the latest proven methods.

Florida's roadways are managed to maximize the level of service for all users.

A new edition of the HCM was published in 2010, and the FDOT contracted with University of Florida researchers to update the software. Changes were made to each of the major components of LOSPLAN: ARTPLAN, HIGHPLAN, and FREEPLAN. Respectively, these components deal with arterial planning, highway planning (multilane and two-lane local access roads), and freeway planning (multilane, limited access roads). Additional work was done to update installation, documentation, and help files.

Computational elements of ARTPLAN and its user interface were revised to accommodate changes in HCM 2010 in five areas: signal delay calculations and signal coordination/progression methods; accommodation of permitted left turn phasing; arterial running speed; bringing bicycle and LOS methodologies more in line with HCM 2010; and parking activity components.

For HIGHPLAN, four computational areas were revised: grade adjustment factor values; passenger car equivalency factors; capacity adjustments; and implementing two-lane facility analysis methodology. Additional revisions were made to the service measure thresholds.

For FREEPLAN, the researchers revised three computational areas: full implementation of downstream segment speed constraint; auxiliary lane service volume adjustments; and implementation of rural LOS thresholds.

For all programs, default K-values were revised based on recent publications. K-values are critical to LOS calculations because they define the volume of traffic a road is designed to handle.

As Florida's transportation infrastructure becomes more diverse, continuing improvements to LOSPLAN will more accurately capture the level of service on roadways. Application of more accurate level of service analyses make Florida's roadways safer and more efficient for all users.

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For more information, visit http://www.dot.state.fl.us/research-center