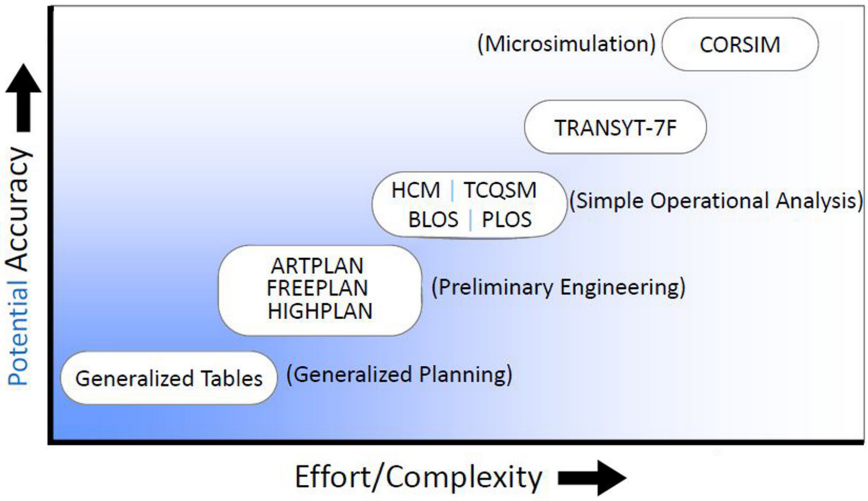
Florida Department of Transportation Research

Improvements and Enhancements to LOSPLAN 2009
BDK77 977-05

LOSPLAN is software that supports the Quality/Level of Service (Q/LOS) Handbook. The Handbook was developed by the Florida Department of Transportation Systems Planning Office with the intention that engineers, planners, and decision makers would use it in development and review of roadway users' quality/level of service at the planning and preliminary engineering stages of project development. Since LOSPLAN was first developed in 1987, the Systems Planning Office has maintained it, making sure that it was up to date with the latest recommendations and research.



This chart shows where LOSPLAN and its components fit into the overall scheme of roadway planning.

In this project, researchers updated several parts of the LOSPLAN software, incorporating results from tasks specific to this project, as well as tasks from several other recently completed projects sponsored by FDOT or the National Cooperative Highway Research Program (NCHRP). Changes were made to all three components of LOSPLAN: ARTPLAN, HIGHPLAN, and FREEPLAN.

ARTPLAN is the part of LOSPLAN that assists conceptual planning and preliminary engineering with Level of Service (LOS) analysis of multimodal arterial roads. Researchers revised ARTPLAN more extensively than other LOSPLAN components. Areas of the software affected included two-way and all-way stop control conditions, truck passenger car equivalent and start-up lost time values, movement flow rate related to left turn spillover, signal controller input related to actuated-coordinated signal timing plans, effective green time to cycle length ratios as a function of cycle length, multimodal calculations, truck effect on bicycle LOS, bicycle side path calculations, segment running speed, and right turn adjustment factor for exclusive right-turn lanes.

HIGHPLAN is the part of LOSPLAN that assists conceptual planning and preliminary engineering with Level of Service (LOS) analysis of multilane and two-lane highways. Revised areas of HIGHPLAN included service measure calculations that accommodate the FDOT constraint for improvement to LOS due to incorporation of passing lanes and incorporation of the two-lane highway facility analysis methodology.

FREEPLAN is the part of LOSPLAN that assists conceptual planning and preliminary engineering with Level of Service (LOS) analysis of freeways. Several areas of FREEPLAN were revised, including volume-to-capacity outputs, weaving analysis methodology, auxiliary lane calculations, and impact to service volumes due to oversaturated traffic flow conditions.

The revised software, LOSPLAN 2009, is available on the FDOT Web site, and is now the standard for review of plans submitted to FDOT.

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