

Lincoln County Transportation System Plan: Evaluation Process and Measures of Effectiveness

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The purpose of this memorandum is to propose (1) an evaluation process; (2) an evaluation scoring system; and (3) measures of effectiveness - for use in evaluating proposed improvements and developing the preferred alternative for the Lincoln County Transportation System Plan (TSP) (prepared for ODOT under agreement #23238, work order #40). This memorandum fulfills the requirements of Task 4.1 in the project scope.

Evaluation Process

The Transportation Planning Rule (TPR) direct TSPs to be based on an evaluation process to identify the impacts of potential projects and improvements for evaluating transportation system alternatives. According to the TPR, system alternatives should:

- Provide types and levels of transportation facilities and services appropriate to serve land uses identified in the acknowledged comprehensive plan;
- Be consistent with state and federal air quality, land use, and water quality standards;
- Facilitate connections (minimize conflicts) between modes of transportation; and
- Avoid principal reliance on any one mode of transportation/ reduce principal reliance on the automobile.

For the Lincoln County TSP, the evaluation process will (1) guide the identification and evaluation of potential transportation improvements and projects that will provide for a safe, adequate, connected transportation system throughout Lincoln County for the next 20 years, and (2) prioritize the recommended transportation improvements and projects. Proposed projects will address capacity improvements, safety improvements, intersection improvements, pedestrian and bicycle improvements, other roadway needs (parking and bridge improvements), and improvements to address other modes of transportation (air, rail, water, and public transportation).

In developing and evaluating system alternatives, ODOT TSP guidelines state the following:

- “Communities are advised to scale their analysis to a reasonable level based on the size of the community and the complexity of the transportation issues,” and;

- “Smaller communities with less complex transportation issues may find an abbreviated analysis adequate to meet their needs.”

Based on this understanding, the projects evaluated and recommended for the Lincoln County TSP are proposed to be evaluated by project type. Proposed project types are:

- Safety (mostly county and state roadways)
- Capacity (mostly county road/state hwy intersections)
- Transit and TDM
- Bicycle and Pedestrian
- Intermodal and Freight (including air, water, rail, pipelines)

The following summarizes key steps in the evaluation process:

1. Identify potential improvements and projects;
2. Evaluate potential improvements and projects within each project type (listed above);
3. Determine which improvements and projects are not recommended, based on the proposed evaluation criteria (measures of effectiveness and scoring system, described below);
4. Prioritize remaining improvements and projects;
5. Include recommended improvements and projects in the TSP for County adoption.

A general scoring system was developed to evaluate proposed improvements and projects. This scoring system and the general definitions are illustrated in Exhibit 1.

EXHIBIT 1
General Score Definitions

Score	General Score Definitions
+	Project addresses the goal and meets the goal's objectives
0	Neither good, nor bad, or not applicable
-	Project does not address the goal or has an adverse impact on the goal's objectives

Measures of Effectiveness

Proposed measures of effectiveness were developed for the evaluation process to identify and evaluate potential transportation improvements and projects (Exhibit 2). The analysis proposes ten measures to determine project priorities. These measures are:

- Mobility
- System Capacity
- Safety
- Accessibility

- Coordination
- Non-Motorized Users
- Feasibility
- Environment
- Cost
- Lifeline Routes

Priorities for projects will be determined by assigning a priority number of 1 to 4, with 1 meaning the highest priority and 4 meaning the lowest priority. The prioritized list of projects will make up the TSP to be adopted by the County.

EXHIBIT 2
TSP Measures of Effectiveness

Measure and Goal	Rating	Project Criterion
Mobility (v/c ratio): Provide a viable transportation system that meets state and local mobility standards	+	Improves mobility and meets mobility standard
	0	Does not significantly improve or decrease mobility
	-	Decreases mobility and does not meet mobility standard
System Capacity: Provide a transportation system that maintains adequate levels of capacity.	+	Provides additional capacity to the system and improves the operating conditions at deficient locations
	0	Does not significantly improve capacity of the system
	-	Decreases capacity to levels below TSP guidelines
Safety: Provide a transportation system that maintains adequate safety levels for all users	+	Improves safety for users
	0	Does not significantly change roadway/facility safety
	-	Decreases safety or creates unsafe conditions for users
Accessibility: Develop a transportation system that will improve connectivity and transportation options, and thus support economic development	+	Provides or improves new transportation options or connectivity to serve different types of users (i.e. bikes, pedestrians, freight, street connections)
	0	Does not significantly change transportation options or connectivity
	-	Limits the transportation options or connectivity of the system
Coordination: Maintain a TSP that is consistent with the goals and objectives of the TSP and relevant state, regional, and local plans and policies.	+	Included as part of other local, county, regional or state policies or plans
	0	Not specifically mentioned in other policies or plans, but not out of compliance with such plans
	-	Indirectly or specifically identified as being not in compliance with other plans and policies
Non-Motorized Uses: Provide non-motorized facilities to serve commuter and recreational users	+	Improves the transportation system for bicycle, pedestrian, and non-motorized users. The improvement is expected to serve moderate levels of non-motorized users (i.e. near schools, unincorporated urbanized areas)
	0	Does not significantly change existing non-motorized facilities. The improvement is not expected to serve many non-motorized users.
	-	Reduces some or key connectivity, safety, or aesthetics of existing non-motorized facilities.
Feasibility: Identify reasonable transportation	+	The project has no barriers, or some barriers but they are not considered significant, or the project is already

EXHIBIT 2

TSP Measures of Effectiveness

Measure and Goal	Rating	Project Criterion
improvements and projects		approved/funded
	0	The project has barriers, but the project is recommended in another adopted plan
	-	The project is costly, would require right-of-way acquisition, or would have significant environmental impacts.
Environment or Social: Provide a transportation system that balances transportation services with the need to protect the environment, and meet social goals.	+	Enhances environmentally significant areas or social goals, or both
	0	No impact to environmentally significant areas or social goals, or both
	-	Adversely impacts environmentally significant areas or social goals, or both
Cost: Provide reasonably accurate cost estimate to base funding requests	L	The project cost is likely to be less than \$100,000
	M	The project cost is likely between \$100,000 to \$500,000
	H	The project cost is likely to be greater than \$500,000
Lifeline Routes: Provide links for county residents and through traffic in the event of an emergency	+	Creates a new lifeline route or improves the effectiveness and connectivity of an existing lifeline route
	0	Does not significantly change the quality or identification of a lifeline route
	-	Removes key connectivity or adversely affects the effectiveness or connectivity of a lifeline route