

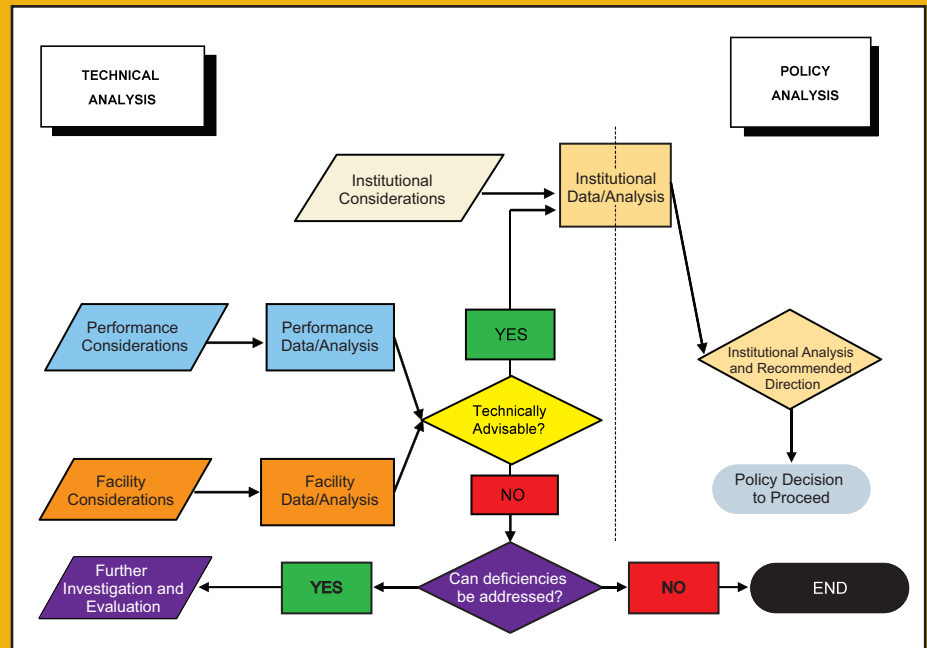
HOV-to-HOT Screening Checklist



U.S. Department of Transportation
Federal Highway Administration

How to Use This Checklist

The decision flowchart in the figure (at right) outlines a high-level screening tool to assess your HOV lane for conversion to HOT. The **Performance Considerations** and **Facility Considerations** are reviewed first to determine if the project is technically advisable. The **Institutional Considerations** are then reviewed to determine if there are non-technical issues that would impact implementation and success of the project. A “No” answer to any of the factors should trigger further investigation into whether the impact can be mitigated. Any factor can become a fatal flaw if it receives a “No” depending on the unique characteristics of the individual project and community.



Tailoring the Process to Your Project

The evaluation should consider the concept of “weighting” the various screening factors based upon project objectives and regional transportation system goals. This is a subjective element that accounts for project-specific needs and conditions. All screening factors can be weighted equally, but more likely there will be certain factors that will have greater emphasis in the analysis. Based on a community’s needs and project specifics (e.g., political, public, operations, geometry), conversion may or may not be practical. The more important a factor, the greater the importance of addressing that factor should it receive a “No” answer.

Performance Considerations

Agencies should consider the potential performance before adapting an HOV lane to a HOT lane. Converting an HOV lane to a HOT lane could provide significant benefits to travelers.

FACTOR	QUESTION	YES	NO
HOV Lane Utilization	Will HOT lane operations remedy an existing utilization problem?		
	Will peak hour use remain below 1600 vehicles per hour per lane?		
	Will conversion have a positive impact on person throughput in the corridor?		
Travel Time	Will average travel-time savings be greater than 1 minute/mile and more than 5 minutes overall?		
	Will there be a higher reliability of travel times on the HOT lane than the general-purpose lanes?		
	Will the conversion create a negative impact on HOT or general-purpose lane speeds?		
	Will the conversion provide reliable trip times for transit?		
Benefits	Will the net agency/societal benefits be greater after conversions in accordance with regional goals? (agency: toll revenue exceeds costs of conversion; societal: overall travel time savings, reduction in emissions, reduction in fuel use)		
	Are there other local toll facilities that drivers are familiar with?		
Willingness to Pay Tolls	If so, will toll collection technology be interoperable?		
	Is there a market of travelers willing to pay for a higher level of service (eg, commuters, high income)?		
	Will HOT lanes have a positive or neutral effect on the crash rate for the facility?		
Environment	Will conversion have a positive or neutral effect on fuel use?		
	Will conversion have a positive or neutral effect on emissions?		
Revenue Generation	Does the estimated revenue cover expected operations, maintenance and enforcement costs, and additional costs necessary for the project to be financially viable?		

Facility Considerations

Facility considerations include design, operations and enforcement features. Certain facility features are essential or desirable for successful HOT lane operation.

FACTOR	QUESTION	YES	NO
Cross Section	Does the design envelope satisfy AASHTO desirable requirements for the entire length?		
	If not, are minimum sections less than 1000 feet in length?		
Lane Separation Between HOT and General Purpose Lanes	Are AASHTO guidelines satisfied for the type of separation?		
Facility Access Satisfies Origin-Destination Requirements	Are current access points located to serve primary users for the HOT lanes?		
Facility Access Design	If proposed access design is for slip ramps at grade, is buffer/barrier opening length at least 1300-1500 ft?		
	Is there sufficient weaving distance for vehicles to cross the general-purpose lanes and access the HOT lane without degrading freeway speed?		
Ability to Enforce	Are there enforcement areas included in the design of the HOT lane for detecting and detaining violators?		
	Is there supporting technology for enforcement?		
	Are current violation rates in the HOV lane < 10 percent?		
	Are enforcement efforts conducted on a routine basis?		
Facility Traffic Control	Does proposed sign placement, messaging and color conform to the MUTCD and best guidance available?		
Pricing Strategy	Can toll system capabilities achieve stated objectives for lane management at desired performance level of HOV and transit given geometric characteristics?		
Existing Toll Technology	Is there an existing tolling system in the region or state that can be leveraged for HOT operation?		
Incident Management	Are operational treatments for incident management available that can be provided to assure travel time reliability?		
Maintenance	Will the level of maintenance be adequate to ensure quality service and operations?		

Institutional Considerations

Agencies must also consider the viewpoints of the public, governmental agencies, legislative authorities, the media and other stakeholders.

FACTOR	QUESTION	YES	NO
Legal	Is there legislation in the state to allow for toll collection and HOT lanes?		
Public Acceptance	Is the public familiar with and accepting of electronic toll collection and video enforcement?		
	Are resources dedicated for enhanced and active public outreach and education?		
	Are HOV advocates amenable to changes in HOV operation?		
	Is the HOT concept compatible with Local and State goals and objectives?		
Political Acceptance	Is there a political champion?		
	Is there political familiarity with the HOT lanes concept?		
	Is there political support for the HOT lanes concept?		
	Is the HOT concept compatible with Local and State goals and objectives?		
Environmental Justice/ Title VI Issues	Are low income/minority populations disproportionately adversely affected?		
	Can a mitigation plan be developed if low income/minority populations are disproportionately adversely affected?		
Revenue Use	If net revenue use is not dictated by federal requirement, is there agreement among agencies on how net revenue will be used?		
	Is the public informed and accepting of proposed use of net revenue generated from the project?		
Interagency Cooperation	Do all transportation agencies in the corridor support the HOT lane concept?		
	Can operating agreements be established to specify areas of responsibility?		
	Is cooperation expected from the enforcement and judiciary systems?		
Media Awareness	Is there a positive working relationship with the media?		
	Are resources available to engage the media in public outreach efforts?		
Project Marketing/ Evaluation	Are resources dedicated to promote the project and inform the public on operating details, both before and after the ribbon cutting?		
	Are resources dedicated to monitor and evaluate the project after opening and to communicate ongoing performance to agency officials and the public?		

For more information about implementing HOT lanes in your community, see the following resources:

FHWA Office of Operations:
<http://www.ops.fhwa.dot.gov/freewaymgmt/index.htm>

FHWA Tolling and Pricing Program:
http://www.ops.fhwa.dot.gov/tolling_pricing/index.htm

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