

## Summary of the Current Transportation Evaluation Criteria used by the Pioneer Valley Planning Commission

The current Pioneer Valley Transportation Evaluation Criteria (TEC) has been in use since 2004. Scoring is based on a range from negative 18 to positive 18. TEC criteria are divided into two categories; Transportation Criteria and Other Impact Criteria.

Transportation Criteria consists of three sub categories; Condition, Mobility, and Safety. Each Sub category has several scoring criteria, which are outlined below. The Transportation Criteria section of the TEC allows for up to 9 point or 50% of the total TEC score

### Breakdown of Transportation Criteria Scoring Criteria

Condition	Mobility	Safety
Magnitude of pavement condition improvement <b>(-3 to +3)</b>	Effect on magnitude and duration of congestion <b>(-3 to +3)</b>	Effect on crash rate compared to state average <b>(-3 to +3)</b>
Magnitude of improvement of other infrastructure elements <b>(-3 to +3)</b>	Effect on travel time and connectivity / access <b>(-3 to +3)</b>	Effect on bicycle and pedestrian safety <b>(-3 to +3)</b>
	Effect on other modes using facility <b>(-3 to +3)</b>	Effect on transportation security and evacuation routes <b>(-3 to +3)</b>
	Effect on regional and local traffic <b>(-3 to +3)</b>	
<b>Avg. Score (-3 to +3)</b>	<b>Avg. Score (-3 to +3)</b>	<b>Avg. Score (-3 to +3)</b>

Other Impact Criteria consists of three sub categories; Community Effects and Support, Land Use and Economic Development, and Environmental Effects. Each Sub category has several scoring criteria, which are outlined on the next page. Other Impact Criteria allows for up to 9 points or 50% of the total TEC Score.

### Breakdown of Other Impact Criteria

<b>Community Effects and Support</b>	<b>Land Use and Economic Development</b>	<b>Environmental Effects</b>
Residential effects: right-of-way, noise, aesthetics, cut-through traffic, other  <b>(-3 to +3)</b>	Business effects: right-of-way, access, noise, traffic, parking, freight access other  <b>(-3 to +3)</b>	Air Quality/Climate effects  <b>(-3 to +3)</b>
Effect on service to minority or low income neighborhoods - EJ  <b>(-3 to +3)</b>	Sustainable development effects  <b>(-3 to +3)</b>	Water quality/supply effects; wetlands effects  <b>(-3 to +3)</b>
Other impact/benefits to minority or low income neighborhoods  <b>(-3 to +3)</b>	Consistent with regional land-use and economic development plans  <b>(-3 to +3)</b>	Historic and cultural resource effects  <b>(-3 to +3)</b>
Public, local government, legislative, and regional support  <b>(-3 to +3)</b>	Effect on job creation.  <b>(-3 to +3)</b>	Effect on wildlife habitat and endangered species  <b>(-3 to +3)</b>
Effect on development and redevelopment of housing stock.  <b>(-3 to +3)</b>		Effect on Green House Gas Emissions  <b>(-3 to +3)</b>

<b>Avg. Score (-3 to +3)</b>	<b>Avg. Score (-3 to +3)</b>	<b>Avg. Score (-3 to +3)</b>
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Since 2004 there have been three adjustments to the criteria:

1. Add Impacts/Benefits to low income neighborhoods under Land Use and Economic Development (Other Impact Criteria)
2. Add Effect on wildlife habitat and endangered species under Environmental Effects (Other Impact Criteria)
3. Add Effect on Green House Gas Emissions under Environmental Effects (Other Impact Criteria)

Under the current TEC, general guidelines are laid out for what can qualify as an improvement; this can result in debates during project scoring regarding the interpretation of the specific criteria. Not all sub categories are data driven (as required by MAP-21); projects can be scored based on potential improvements. This can result in the inconsistent scoring of project by the subcommittee.

Attached Please Figure 1 – TEC Scoring Sheet and also TEC Roadway Example 1

# TRANSPORTATION EVALUATION CRITERIA

Community Project Description  
 Highway-funded Roadway Improvement/Expansion Projects

PROJECT TYPE	TRANSPORTATION CRITERIA				OTHER IMPACT CRITERIA		
	Condition	Mobility	Safety	Cost Effectiveness	Community Effects and Support	Land Use and Economic Development	Environmental Effects
Roadways	Magnitude of pavement condition improvement	Effect on magnitude and duration of congestion	Effect on crash rate compared to state average	Cost per Unit Change in Condition	Residential effects: right-of-way, noise, aesthetics, cut-through traffic, other	Business effects: right-of-way, access, noise, traffic, parking, freight access other	Air Quality/Climate effects
	<b>0</b>	<b>0</b>	<b>0</b>		<b>0</b>	<b>0</b>	<b>0</b>
	Magnitude of improvement of other infrastructure elements	Effect on travel time and connectivity/access	Effect on bicycle and pedestrian safety	Cost per lane Mile	Effect on service to minority or low income neighborhoods EJ	Sustainable development effects	Water quality/supply effects; wetlands effects
	<b>0</b>	<b>0</b>	<b>0</b>	\$ -	<b>0</b>	<b>0</b>	<b>0</b>
		Effect on other modes using facility	Effect on transportation security and evacuation routes	Cost per AADT	Other impact/benefits to minority or low income neighborhoods	Consistent with regional land-use and economic development plans	Historic and cultural resource effects
	<b>0</b>	<b>0</b>	\$ -	<b>0</b>	<b>0</b>	<b>0</b>	
	Effect on regional and local traffic		Cost per AADT per lane mile	Public, local government, legislative, and regional support	Effect on job creation.	Effect on wildlife habitat and endangered species	
	<b>0</b>		\$ -	<b>0</b>	<b>0</b>	<b>0</b>	
					Effect on development and redevelopment of housing stock.	Effect on Green House Gas Emissions	
					<b>0</b>	<b>0</b>	

Avg. Score to +3)	(-3)	Avg. Score to +3)	(-3)	Avg. Score to +3)	(-3)		Avg. Score to +3)	(-3)	Avg. Score to +3)	(-3)	Avg. Score to +3)	(-3)
<b>0</b>		<b>0</b>		<b>0</b>			<b>0</b>		<b>0</b>		<b>0</b>	

<b>Total Score to +18)</b>	<b>(-18)</b>
<b>0</b>	

## Roadway Example # 1

<b>Project Description:</b>	<p>Make intersection improvements at two locations on a principal arterial that provides direct access to the Interstate System. Improvements include signal updating, minor widening to allow for two lanes of travel in each direction, resurfacing, drainage repairs, and sidewalk construction.</p>
<b>Condition Factors</b>	<p>The pavement serviceability index is 2.5. According to the town and the MassHighway District, the deteriorated pavement slows traffic flow and encourages erratic driving to avoid damaged roadway surfaces. <i>Based upon the relatively poor PSR (2.5 on a 5-point scale) and the additional operational information provided Planning would recommend giving the pavement sub-factor a score of 3 to reflect the pavement improvement that the project would provide.</i></p> <p>The intersections also have traffic lights and signs that are poorly located and confusing to motorists, as well as poor drainage that results in dangerous surface conditions during winter months. Most of the roadway surface and subsurface has been disturbed and undermined due to water penetrating into the roadway base. This, along with truck traffic, causes the breakup of roadway pavement. <i>Based upon the very poor drainage condition and the poor signage, Planning would recommend giving the other infrastructure sub-factor a score of 3 because the project would correct the significant drainage problems.</i></p> <p><i>Planning's recommended average score for this criteria category is a 3.</i></p>
<b>Mobility Factors</b>	<p>Traffic analysis indicates that these intersections currently operate at an LOS F during the weekday morning and evening peak hours. According to the functional design report, the proposed improvements will improve the weekday morning peak hour to an LOS C and the weekday evening peak hour to an LOS B. <i>Based upon the poor operational functions of these intersections and the projected improvements to be made by the project, Planning would recommend giving the congestion sub-factor a score of 3.</i></p> <p>MassHighway's existing information contains no specific information regarding the project's impact on travel time and connectivity/access. <i>Unless additional information could be developed through other channels (RPA/MPO knowledge, District knowledge, etc.), Planning would recommend giving the connectivity sub-factor a score of 0.</i></p> <p>Sidewalks currently exist on a portion of the corridor. The sidewalk within the project limits will be reconstructed and new sidewalks will be added for the remainder of the project limits. <i>Based upon the fact that this project will improve existing sidewalks and provide additional sidewalks, Planning would recommend giving the other modes sub-factor a score of 1.</i></p> <p>MassHighway's existing information contains no specific information regarding the project's effect on regional and local traffic. <i>Nevertheless, given the project's improvement in LOS at two intersections, its functional classification and its proximity to the Interstate System, Planning would recommend giving the regional traffic factor a 2,</i></p> <p><i>The average score for this factor is 1.5; however, Planning would recommend a category score of 2.0, because of the significant LOS improvement at the two intersections.</i></p>
<b>Safety Factors</b>	<p>The intersections lack channelization, the visibility of the existing signals is poor, and the signals are not fully actuated.</p> <p>Both of these intersections are listed as High Hazard Locations. <i>Based upon the description of the existing problems and the fact that both intersections are High Accident Locations, Planning would recommend giving the crash rate sub-factor a score of 3 because it is expected that the projects will improve safety.</i></p> <p>The most recent accident history includes one accident involving a pedestrian and one involving a bicyclist. <i>Based upon the description of the existing problems and the fact that the accident history has involved a pedestrian and a bicyclist, Planning would recommend giving the bicyclist and pedestrian safety sub-factor a score of 3.</i></p> <p><i>Planning's recommended average score for this factor is a 3.</i></p>

The project is being designed to have a minimum impact on abutting properties. In addition, the Town will provide a registered professional Landscape Architect to design improvements to disturbed property and will reimburse residents for the cost of installing plants, grass, furniture etc. ***Based upon the efforts of the town to beautify the neighborhood and maintain or improve the existing community character, Planning would recommend giving the residential effects sub-factor a 2.***

This project has no environmental justice effects. ***It would, therefore, be given a score of zero for this sub-factor.***

**Community Effects**

The project is the town's number one priority, is included as a recommendation in an MPO-sponsored corridor study, and is the subject of letters of support from the local legislative delegation. ***Based upon the expressed local, regional and legislative support, Planning would recommend giving the community support sub-factor a score of 3.***

This project has no known effect on the development or redevelopment of housing stock. ***It would, therefore, be given a score of zero for this sub-factor.***

***The average score for this factor is 1.25. Planning would recommend increasing this score to a 2.0, based upon the extra effort the town is taking to maintain and improve community character and the relative importance of the residential improvements.***

MassHighway's existing information contains no specific information regarding the project's impacts on affected businesses. ***Unless additional information could be developed through other channels (RPA/MPO knowledge, District knowledge, etc.), Planning would recommend giving the business effects sub-factor a score of 0.***

The town is currently developing a Master Plan to provide general and uniform policies on land use and development, including encouraging mixed-use development where appropriate. ***Based upon the limited information provided, Planning would recommend giving the sustainable development sub-factor a score of 1.***

**Land Use and Economic Development**

This project is a key component of the economic development objectives of the town, and in particular, the viability and enhancement of a town-defined Economic Development Corridor. ***Based upon this information, Planning would recommend giving the planning sub-factor a score of 3.***

MassHighway's existing information contains no specific information regarding the project's impacts on job creation. ***Unless additional information could be developed through other channels (RPA/MPO knowledge, District knowledge, etc.), Planning would recommend giving the job creation sub-factor a score of 0.***

***Planning's recommended average score for this factor is a 1.0.***

**Environmental Effects**

According to the town, the environmental impacts of the project are minimal and will be offset by implementing proposed mitigation measures. ***Based upon the available information, Planning would recommend giving this project a score of zero for this factor.***

**Overall Score:** Transportation Criteria: 8 out of a possible 9  
 Other Impact Criteria: 3 out of a possible 9  
 Total Score, All Criteria: 11 out of a possible 18

**Cost Effectiveness:** Cost/ADT = \$18.26; cost per lane mile = \$543,000.