

The following Table shows each of the five abbreviated needs of this study and the criteria used to establish whether or not the improvements meet those particular needs.

TABLE 2
Project Needs and Evaluation Criteria

Needs	Criteria
Improve Safety on U.S. Route 22	The interchanges do not meet current design standards. The scenarios that improve interchanges or add capacity to the existing mainline facility (thereby reducing congestion) are presumed to be favorable to the safety need thus, the impact is Positive . If no interchanges are improved then the scenario has a Neutral impact. No scenario Negatively impacts safety.
Reduce Congestion on U.S. Route 22	For the 2020 Base condition (includes existing roads plus the construction of all major projects programmed in the current Transportation Improvement Program), the percent of vehicle miles of travel (VMT) for the U.S. Route 22 corridor at LOS A, B, and C conditions is 50 percent and VMT occurring at LOS E and F is 18 percent. The scenarios that result in 75 percent or more total VMT at LOS A, B, and C and 10 percent or less VMT at LOS E and F are considered to have a Positive impact for this need. If improvements result in 50 to 75 percent of VMT in LOS A, B and C or between 10-17 percent VMT for LOS E and F, then the scenario is considered to have a Marginal impact. Anything below the 2020 Base condition LOS levels have Negative impact.
Recommended improvements must not increase congestion on regional road network	For 2020 Base condition, the percent of vehicle miles of travel (VMT) for the Lehigh Valley region roads at LOS A, B, and C conditions is 76 percent and VMT occurring at LOS E and F is approximately 10 percent. Any scenario which improves traveling conditions is considered to have a Positive impact. Conversely, any scenario which does not improve travel conditions has a Negative impact.
Reduce Impacts of incidents on U.S. Route 22 traffic flow	For 2020 Base condition, the annual delay in millions of hours for the U.S. Route 22 corridor due to <i>Congestion</i> is 0.69 (or 690,000 hours), delay due to <i>Crashes</i> is 0.31 (or 310,000 hours), and delay due to <i>Mechanical/Electrical or Tire Failure and Other incidents</i> is 0.13 (or 130,000 hours). Any scenario which reduces delay is considered to have a Positive impact. Conversely, any scenario which does not reduce delay has a Negative impact.
Support Land Use and Redevelopment Goals of Regional Comprehensive Plan	Scenarios that attempt to improve facilities within the urban areas are considered to have a Positive impact. Those scenarios that introduce a major facility in areas designated for rural development in the Lehigh Valley Comprehensive Plan (see Map 3 - General Land Use Plan) are considered to have a Negative impact on this need.

TABLE 3
U.S. Route 22 Corridor Planning Study - Scenario Descriptions

Route 22 Improvements	A01	Widen Route 22 from 4 lanes to 8 lanes from I-78 to Route 33. Improve Interchanges from I-78 to Route 33.
	A02	Widen Route 22 to 6 lanes from Cedar Crest Blvd. to Route 145/MacArthur Rd. Widen Route 22 to 8 lanes from Route 145/MacArthur Rd. to Schoenersville Rd. Widen Route 22 to 6 lanes from Schoenersville Rd. to Route 33. Improve Interchanges from Cedar Crest Blvd. to Route 33.
	A03	Widen Route 22 to 6 lanes from I-78 to Route 145/MacArthur Rd. Widen Route 22 to 8 lanes from Route 145/MacArthur Rd. to Schoenersville Rd. Widen Route 22 to 6 lanes from Schoenersville Rd. to Route 33. Improve Interchanges from I-78 to Route 33.
	A10	Widen Route 22 to 6 lanes from Cedar Crest Blvd. to Route 33. Improve Interchanges from Cedar Crest Blvd. to Route 33 .
	A12	Widen Route 22 to 6 lanes from I-78 to Route 33. Improve Interchanges from I-78 to Route 33 .
	A15	Remove Fullerton Avenue Interchange. Improve Interchanges on Route 22 from I-78 to Route 33.
Bypass Improvements	B01	Build new 4-lane divided, limited access highway approximately 5 miles north of Route 22 from Route 309 to Route 33, in the vicinity of the boroughs of Northampton and Bath.
	B02	Build new 4-lane arterial road approximately 1.5 miles north of Route 22 from Route 309 to Route 33, using existing roads such as Schadt Ave., Ract St., Airport Rd., Hanoverville Rd., and Hecktown Rd.
Existing Network Improvements	C01	Widen I-78 to 6 lanes from Route 309 to Route 611.
Public Transportation Improvements	D01	Initiate 2 new light rail transit (LRT) lines connecting urban downtowns, major employers, malls, Lehigh University, and Lehigh Valley Airport. Initiate express bus feeder bus service to assist residents in reaching LRT stops. Increase frequency of existing bus service to every 10 minutes during peak periods and 20 minutes during off-peak times.
	D08	Initiate express bus service along two major east-west corridors and along Route 145/Lehigh St. Increase frequency of existing bus service to every 10 minutes during peak periods and 20 minutes during off-peak times.
Non-Construction Improvements	E02	Provide carpool, bike, and walk incentives to employers of 400 or more in the Lehigh Valley region.
Combination Improvements	F02	Widen Route 22 to 6 lanes from Cedar Crest Blvd to Route 33. Improve Interchanges from Cedar Crest Blvd. to Route 33 . Widen I-78 to 6 lanes from Route 309 to Route 611. Add an Interchange at I-78 and Route 378. Widen S. 4th St. from I-78 to Hamilton Blvd.
	F05	Improve Interchanges from I-78 to Route 33 . Add an Interchange at I-78 and Route 378. Widen S. 4th St. from I-78 to Hamilton Blvd. Extend a 4-lane American Parkway from Airport Rd. to Route 378. Widen Cedar Crest Blvd. From I-78 to Main St. Widen Airport Rd. from Route 22 to Route 329. Widen Route 512 from Route 22 to the Borough of Bath. Widen Route 191 from Oakland Rd. to Newburg Rd. Build an in-town bypass from Route 145 to Route 191.
	F08	Provide carpool, bike, and walk incentives to employers of 400 or more in the Lehigh Valley region. Initiate a LRT line connecting major generators and supply feeder express bus routes to LRT stations. Increase frequency of existing bus service to every 10 minutes during peak periods and 20 minutes during off-peak times. Limit future residential growth to urban areas.