

Executive Summary

The SR 39 corridor study area extends from the Hersheypark Drive/Park Boulevard intersection in Derry Township to Front Street in Susquehanna Township. The SR 743 corridor study area extends from the Hersheypark Drive/Park Boulevard intersection in Derry Township to SR 443 in East Hanover Township. Both roadways are primarily two-lane facilities with widening for auxiliary lanes at major intersections.

Data Collection

At the beginning of the study, a significant field data collection program was initiated.

A **safety audit** was conducted of the study roadways to identify roadway conditions that may contribute to crashes or undesirable operating conditions.

A **comprehensive data collection program** was completed to establish existing traffic volumes for the study area. The data collection program consisted of a combination of 24-hour traffic volume recordings through the placement of Automatic Traffic Recording (ATR) devices at 9 locations as well as Intersection Turning movement Counts at all study intersections.

For SR 39, traffic volumes are at their highest at the limits of the study area, with much lower volumes experienced immediately west of SR 81. On SR 743, traffic volumes increase as you approach Hersheypark Drive. While truck percentages were higher on SR 743, the total number of trucks was comparable for both roadways between SR 81 and Hersheypark Drive.

With few exceptions, the highest traffic volumes were observed during the PM Peak Hour. Pedestrian activity was minimal, while total intersection truck percentages on a weekday ranged from 1.7 percent during the PM Peak Hour at SR 39 and Progress Avenue to 9.1 percent during the AM Peak Hour at SR 743 and the SR 81 Southbound Ramp.

Crash Analysis

The Pennsylvania Department of Transportation (PENNDOT) provided a five-year reportable crash history for the years 1996-2000 for the intersections in the study area. Only the intersection of SR 39 and SR 2016/Park Boulevard is considered to be a high crash location. The following intersections have crash rates of 5-9 crashes per year:

SR 743 and Sand Beach Road/Park Avenue
SR 743 and Laudermilch Road
SR 743 and SR 22.

As expected, the majority of crashes at signalized intersections are angle-type crashes, which are generally related to red-light running. Most of the crashes at unsignalized

intersections are rear-end crashes, involving vehicles being struck while waiting to execute turning maneuvers. Also, the crashes at unsignalized locations are generally more severe and involve more injuries.

The following six locations experienced fatal crashes during this time frame:

- SR 39 and Piketown Road
- SR 39 and Fairville Avenue
- SR 39 and SR 22
- SR 39 and SR 2016/Park Boulevard
- SR 743 and Meadow Lane
- SR 743 and SR 81.

In addition, a very serious crash occurred on July 13, 2002 along SR 39 between Greenwood Road and Pleasant Hill Road involving six fatalities. An extensive investigation of this crash indicated that alcohol and reckless driving were the cause and roadway conditions in the area were not a contributing factor.

Existing Operations

Capacity calculations were conducted for the existing traffic volumes utilizing the Synchro traffic analysis and simulation software package. This package follows the methodologies outlined in the *Highway Capacity Manual*.

Several intersections along the SR 39 corridor are presently experiencing operational problems during one or more of the peak hours analyzed (LOS E and F), including the following:

- SR 39 and Canal Street
- SR 39 and Hanover Street
- SR 39 and Grandview Drive
- SR 39 and Devonshire Heights Road
- SR 39 and Green Hill Road
- SR 39 and Mountain Road
- SR 39 and Blue Mountain Parkway
- SR 39 and Crums Mill Road
- SR 39 and Progress Avenue
- SR 39 and SR 22/322 Eastbound Ramp/Industrial Road.

Land Use and Development

Each of the Township's Zoning Plans was reviewed to identify zoning practices along each of the corridors. For both corridors, the area between Hersheypark Drive and SR 81 is primarily zoned residential, except for a small portion of SR 743 that is zoned agricultural. Those areas near SR 22, Jonestown Road, and SR 81 are zoned for commercial development. SR 39 from SR 81 to approximately Crums Mill Road is a

mix of uses, while the predominant zoning from Crums Mill Road to Front Street is residential.

In addition to existing zoning, information was obtained relative to planned/approved developments in each of the Townships that may affect the study area. The following is a summary of these developments.

Table 1 Planned/Approved Developments

Susquehanna Township	<ul style="list-style-type: none"> • Dennison Estates – 348 residential units located on the south side of SR 39 between Progress Avenue and Crums Mill Road. • Vartan Supply Company – 413,410 square foot office/retail development located on the north side of SR 39 between Progress Avenue and Crooked Hill Road.
Lower Paxton Township	<ul style="list-style-type: none"> • No anticipated developments.
West Hanover Township	<ul style="list-style-type: none"> • Capital Baptist Church – 60,000 square foot church located on SR 39 between SR 22 and Jonestown Road. • Sagewicke, Brynfield, and Brynfield East – 262 condominium unit, 80 student daycare, and 100 unit congregational care development located on SR 39 between SR 22 and Green Hill Road. • Central Dauphin High School – 1,800 student high school located on Blue Ridge Avenue between SR 39 and Jonestown Road. • Russell Tract – 143 residential units located on SR 39 between Piketown Road and SR 81. • The Townes of Hershey Road – 79 residential units located on SR 39 between Green Hill Road and SR 22. • Sandy Hollow – 79 residential units located on Manor Drive south of SR 39. • Mayberry – 90 residential units located on Clover Lane. • Meadows of Fort Stewart – 80 residential units located Sandy Hollow Road between Piketown Road and Jonestown Road.
East Hanover Township	<ul style="list-style-type: none"> • Truck Terminal – Truck terminal located on Bow Creek Road.
South Hanover Township	<ul style="list-style-type: none"> • Meadows of Hanover – 824 residential unit and 96,000 square foot commercial development located on SR 39 north of Grandview Road.
Derry Township	<ul style="list-style-type: none"> • No anticipated developments.

Other Studies and Projects

There are a number of other transportation studies being conducted in the study area along with several planned improvements that may impact traffic operations in the corridors. The following table outlines each project.

Table 2 Other Studies and Projects

I-81 Widening Study	Evaluation of impacts associated with widening SR 81 to 3 lanes in each direction from Maryland border to Interstate 83.
SR 39 and Sturbridge Drive	Signalization
Linglestown Square Study	Evaluation of improvement alternatives to reduce congestion and improve safety for the intersections of SR 39 with Blue Mountain Parkway, Mountain Road, and surrounding area.

SR 39 and Piketown Road	Realignment to form four-leg intersection with signalization.
SR 39/SR 81 Study	Evaluation of improvements to the SR 39/SR 81 area including Fairville Avenue and Jonestown Road.
SR 22 Corridor Study	Traffic signal upgrades and retiming from Blue Ribbon Road to Interstate 78.
SR 39 and Grandview Drive/Hanover Street	Signalization.
SR 39/SR 2016 and Park Boulevard	Geometric and signalization upgrades presently under construction.
Hersheypark Drive Extension	Extension of Hersheypark Drive from Laudermilch Road to US 422 presently under construction.

Traffic Volume Forecasting

Traffic was forecasted based on current and approved land use within the study area for 2012 and 2022 to evaluate study intersections and identify existing and future problems to determine possible mitigating improvements. A scenario with three potential changes in land use was also developed to forecast traffic given certain potential developments.

Two options for determining the average weekday and weekend projections for the study were examined and compared. Recommendations were made from these comparisons.

PENNDOT HPMS Projections – The PENNDOT HPMS is one option for deriving the traffic forecasts for the 39/743 Transportation and Land Use Study. This section examines the HPMS projections and the corresponding traffic growth factors and forecast factors. By applying HPMS factors to the traffic counts, the average weekday and weekend 2012 and 2022 projections can be determined.

Tri-County Regional Planning Commission (TCRPC) Model Projections – Another option for predicting the traffic forecasts for the study is through the TCRPC Model. Growth factors and forecast factors are identified for this option and applied to the traffic counts.

For this study it was determined that the TCRPC model be used to factor existing traffic counts to yield the 2012 and 2022 forecast year traffic volumes for all locations except between I-81 and Linglestown Square, Progress Avenue and SR 22-322 on SR 39, and SR 22 and SR 81 on SR 743.

These locations have significantly higher volumes using the model method over the HPMS method. The traffic volume counts are higher for 2002 than would have been expected in the model outputs. Therefore, the model values were not utilized in this study for those segments. HPMS projections are the preferred set of traffic volumes for these three segments only.

The TCRPC identified three possible land use changes within the study area. These were identified as potentially having significant impacts within the 39/743 corridor. The three changes include:

- **The development of a truck terminal north of I-81 exit 80** – There has been a filing of a preliminary land development plan for a 102,900 SF truck facility terminal and office building. A traffic impact study has been completed for this development.
- **The addition of slot machines to the Penn National Racetrack complex** – A recent initiative by Governor Rendell is to allow for slot machines at race tracks in Pennsylvania. Yet to be approved by the state legislature, a traffic impact study was completed by Penn National Gaming for the addition of 3,000 slots by 2013.
- **The building of an amphitheater just south of SR 22 along SR 743** – Hershey Entertainment and Resorts has been discussing the concept of developing a 20,000 seat Performing Art Center specifically for concerts. The concept has not progressed past the conceptual stage and several East Hanover Township concerns must be resolved before a proposal will be considered.

Based on the development possibilities provided and the model projections the following final projections were derived:

Table 3 Projected Traffic Volumes

Location #	Location	Scenario Projections	
		2012 Projections	2022 Projections
1	SR 39 between Hersheypark Drive and Canal Street	18,396	22,100
1A	SR 39 between Hersheypark Drive and Canal Street	16,116	19,361
2	SR 39 between Grandview Drive and U.S.22	16,808	19,777
3	SR 39 between U.S. 22 and SR 81	15,443	20,755
4	SR 39 between I-81 and Linglestown Square	11,093	15,664
5	SR 39 between Linglestown Square and Progress Avenue	20,738	28,597
6	SR 39 between Progress Avenue and SR 22-322	27,805	34,918
7	SR 39 between SR 22-322 and Front Street	16,454	17,830
8A	SR 743 between Sand Beach Road and S.R.2012 Connector	18,330	21,064
8B	SR 743 between Sand Beach Road and S.R.2012 Connector	16,193	18,607
9	SR 743 between SR 2012 Connector and Canal Street	12,290	14,123
10	SR 743 between U.S.22 and SR 81	12,263	16,673
S1	SR 743 North of SR 81	15,055	25,740

Traffic is expected to increase at all locations throughout the corridor. The annual factor will vary from 0.8percent to 7.8percent among the segments.

Based on these results, the improvement options shown in the table at the end of this section are being recommended.

Results

Table 4 Prioritization and Scenario Funding Amounts

SCENARIO	PRIORITY LEVEL				TOTAL
	HIGH	MED	LOW	NA	
SHORT-TERM	\$268,800	\$48,900	\$108,600	\$0	\$426,300
MID-TERM	\$8,720,000	\$16,224,000	\$2,959,000	\$8,712,000 (1)	\$36,615,000
LONG-TERM	\$226,470,000	\$20,374,000	\$5,458,000	\$0	\$252,302,000
TOTAL	\$235,458,800	\$36,646,900	\$8,525,600	\$8,712,000	\$289,343,000

(1) SR 39 and I-81 Upgrade under design was not prioritized.

(2) Linglestown plan was not included in cost estimates and was not prioritized.

Ultimately, the total costs of improvements will likely exceed funding available. Creative funding of improvements including private funding sources may reduce some burden. By developing timeframe scenarios and identifying priority levels, the plan is intended to assist stakeholders in identifying appropriate projects when funding becomes available.

Table 5 Prioritization and Scenario Funding Amounts

Int #	Location	Municipality	Timeframe	Improvement	Total Improvement Cost	Priority Level	Funding Considerations	Action Items and Other Considerations	Responsible Party
NA.1	SR 39 from Mountain Road to Fairview Avenue	West Hanover Township	MID	Utility pole and drainage enhancement program to improve roadway clear zone and to prevent water on the roadway.	\$2,490,000	MEDIUM	<input type="checkbox"/> Local funding should be used to address drainage issues. Consider use of Liquid Fuels. <input type="checkbox"/> State/ Federal funding should be pursued to address utility pole issues. Consider a partnership with utility providers. <input type="checkbox"/> The Agility Program may be a mechanism to be considered.	<input type="checkbox"/> Pursue partnership with utility providers.	Local/State
NA.2	Linglestown	Lower Paxton Township	LONG	Alteration of traffic patterns through Linglestown Borough	Others	NA	<input type="checkbox"/> Final design funds of \$225,000 have been set aside in the first four years of the Twelve-year plan	<input type="checkbox"/> ONGOING -Study group currently moving project forward	NA
NA.3	I-81 to Hershey Park Drive	Multiple	LONG	Add capacity to corridors from I-81 to HPD via new alignment, upgrades or other means.	\$120,000,000	HIGHER	<input type="checkbox"/> State/Federal funding. Pursue funding through Twelve-year Program or innovative alternative.	<input type="checkbox"/> Consider formation of working group to move project forward. Group should consist of Tri-County, PENNDOT, municipalities, political leaders and local stakeholders such as HERCO and Hershey Medical Center <input type="checkbox"/> Program and initiate feasibility and environmental studies	HATS/ State
NA.4	Meadows of Hanover to Hershey Park Dr	South Hanover Township/ Derry Township	SHORT	Interjurisdictional signal system between Meadows of Hanover signals and Hersheypark Dr signal	\$80,000	HIGHER	<input type="checkbox"/> Local funding should be used.	<input type="checkbox"/> Coordinate with Meadows of Hanover to ensure the proper equipment is purchased	Local
NA.5	Meadows of Hanover to Hershey park Dr	South Hanover Township/ Derry Township	MID	Extend the cross section near Meadows of Hanover to the south to include turning lanes and wider shoulders	\$1,900,000	MEDIUM	<input type="checkbox"/> Local and/or State funding. Consider Liquid Fuels and/ or Transportation Enhancement Program. <input type="checkbox"/> The Agility Program may be a mechanism to be considered.	<input type="checkbox"/> Coordination between South Hanover Township and Derry Township should continue <input type="checkbox"/> Before implementing this improvements review status of I81 to HPD upgrade to determine if improvement is still worth considering	Local/State
NA.6	Orchard Hill Rd	West Hanover	MID	Provide geometric improvements to improve sight distance	\$406,000	MEDIUM	<input type="checkbox"/> State/ Federal funding should be used. Consider Twelve-year Program.	<input type="checkbox"/> Before implementing this improvements review status of I81 to HPD upgrade to determine if improvement is still worth considering	Local/State
1	SR 39 & Front Street	Susquehanna Township	SHORT	Install WB lane use control signs. Improve pavement markings to delineate travel way boundaries	\$24,000	MEDIUM	<input type="checkbox"/> Local and/or State funding. Consider Liquid Fuels and/ or Transportation Enhancement Program. <input type="checkbox"/> The Agility Program may be a mechanism to be considered.	<input type="checkbox"/> Coordinate improvements with investigation of signal warrants and possible implementation of a signal at SR 39 and Sixth Street	Local/ State
2	Intersections 2 and 3 SR 39 & SR 0322 WB/EB Ramps/Industrial Road	Susquehanna Township	LONG	Construct one of the upgrade options presented in report.	\$57,000,000	HIGHER	<input type="checkbox"/> State/Federal funding. Pursue funding through Twelve-year Program or innovative alternative.	<input type="checkbox"/> Program and initiate feasibility and environmental studies	HATS/ State
4	SR 39 & Crooked Hill Road AND SR 39 Widening	Susquehanna Township	MID	Construct an eastbound right-turn lane, a westbound right-turn lane and an additional southbound left-turn lane. THIS INCLUDES PART OF WIDENING (4-lane) OF SR 39 FROM US 322 THRU PROGRESS AVENUE.	\$7,500,000	MEDIUM	<input type="checkbox"/> State/Federal funding. Pursue funding through Twelve-year Program or innovative alternative. <input type="checkbox"/> Consider packaging with Intersection 5/MID-TERM as one project.	<input type="checkbox"/> Program and initiate feasibility and environmental studies	HATS/ State
5	SR 39 & Progress Avenue AND SR 39 Widening	Susquehanna Township	MID	Construct an additional eastbound thru lane and a westbound thru lane. Construct a westbound right-turn lane and a northbound right-turn lane. Modify signal phasing by adding a protected westbound left-turn phase and northbound left-turn turn phase to the existing signal configuration. THIS INCLUDES PART OF WIDENING (4-lane) OF SR 39 FROM US 322 THRU PROGRESS AVENUE	\$6,600,000	HIGHER	<input type="checkbox"/> State/Federal funding. Pursue funding through Twelve-year Program or innovative alternative. <input type="checkbox"/> Consider packaging with Intersection 4/MID-TERM as one project.	<input type="checkbox"/> Program and initiate feasibility and environmental studies <input type="checkbox"/> Consider long-term needs and possibly merge with LONG-TERM improvements at this location.	HATS/ State
5	SR 39 & Progress Avenue	Susquehanna Township	LONG	Option 1 – Traditional Intersection: Northbound lane requirements -triple left-turn, single thru, double right; Southbound lane requirements -single left, single thru, single/free right; Eastbound lane requirements- single left, triple thru, single/ free right; Westbound lane requirement-triple left, double thru, single/ free right or Option 2 – Single Point Urban Interchange (SPUI) Construct a single point urban interchange with Progress Avenue crossing over SR 39.	\$31,800,000	HIGHER	<input type="checkbox"/> State/Federal funding. Pursue funding through Twelve-year Program or innovative alternative.	<input type="checkbox"/> Program and initiate feasibility and environmental studies <input type="checkbox"/> Consider mid-term needs and possibly merge with MID-TERM improvements at this location.	HATS/ State
6	SR 39 & Crums Mills Road	Lower Paxton Township	MID	Install a traffic signal and construct a northbound right-turn lane	\$431,000	LOWER	<input type="checkbox"/> State/Federal funding. Pursue funding through Twelve-year Program or innovative alternative. <input type="checkbox"/> Since this is a LOWER priority and there are long-term Improvements identified, it may be beneficial to consider Developer Funded Improvements if additional development occurs in the vicinity of the intersection.	<input type="checkbox"/> Consider long-term needs and possibly merge with LONG-TERM improvements at this location.	HATS/ State

Table 5 Prioritization and Scenario Funding Amounts

Int #	Location	Municipality	Timeframe	Improvement	Total Improvement Cost	Priority Level	Funding Considerations	Action Items and Other Considerations	Responsible Party
6	SR 39 & Crums Mills Road AND SR 39 Widening	Lower Paxton Township	LONG	Construct an additional eastbound thru lane and a westbound thru lane. THIS INCLUDES PART OF THE COST OF THE EXTENSION OF WIDENING (4-lane) PROGRESS AVE THRU COLONIAL ROAD.	\$5,250,000	HIGHER	<input type="checkbox"/> State/Federal funding. Pursue funding through Twelve-year Program or innovative alternative. <input type="checkbox"/> Consider packaging with Intersection 7/LONG-TERM as one project.	<input type="checkbox"/> Program and initiate feasibility and environmental studies <input type="checkbox"/> Consider long-term needs and possibly merge with MID-TERM improvements at this location.	HATS/ State
7	SR 39 & Colonial Road	Lower Paxton Township	SHORT	Modify signal phasing by adding a protected eastbound left-turn phase and southbound left-turn turn phase to the existing signal configuration	\$4,400	HIGHER	<input type="checkbox"/> Local funding should be used. Consider use of Liquid Fuels.	<input type="checkbox"/> Contact PENNDOT to begin process of revising signal permit.	Local
7	SR 39 & Colonial Road	Lower Paxton Township	MID	Construct a westbound right-turn lane and a northbound right-turn lane. Construct a westbound left-turn lane	\$1,440,000	HIGHER	<input type="checkbox"/> State/Federal funding. Pursue funding through Twelve-year Program or innovative alternative. <input type="checkbox"/> Since there are Long-term Improvements identified, it may be beneficial to consider developer funded Improvements if additional development occurs in the vicinity of the intersection.	<input type="checkbox"/> Consider long-term needs and possibly merge with LONG-TERM improvements at this location.	HATS/ State
7	SR 39 & Colonial Road AND SR 39 Widening	Lower Paxton Township	LONG	Construct an additional eastbound thru lane and a westbound thru lane. Construct an additional southbound left-turn lane. Construct an additional northbound left-turn lane. THIS INCLUDES PART OF THE COST OF THE EXTENSION OF WIDENING (4-lane) PROGRESS AVE THRU COLONIAL ROAD.	\$19,000,000	MEDIUM	<input type="checkbox"/> State/Federal funding. Pursue funding through Twelve-year Program or innovative alternative. <input type="checkbox"/> Consider packaging with Intersection 6/LONG-TERM as one project.	<input type="checkbox"/> Program and initiate feasibility and environmental studies <input type="checkbox"/> Consider long-term needs and possibly merge with MID-TERM improvements at this location.	HATS/ State
10	Intersections 10 and 11 SR 39 & Piketown Road	West Hanover Township	LONG	Based on analysis of the proposed design, additional capacity may be needed, construct an additional EB left, an additional WB through lane, and a WB right-turn lane.	\$5,300,000	LOWER	<input type="checkbox"/> State/Federal funding. Pursue funding through Twelve-year Program or innovative alternative. <input type="checkbox"/> Since this is a LOWER priority and there have been recent improvements, it may be beneficial to consider Developer Funded Improvements if additional development occurs in the vicinity of the intersection.		HATS/ State
12	SR 39 & Manor Drive (NW)	West Hanover Township	SHORT	Improve sight distance for traffic entering SR 39 by grading and clearing vegetation to the east and clearing vegetation to the west. Consider intersection and curve warning signs.	\$12,000	MEDIUM	<input type="checkbox"/> Local funding should be used. Consider use of Liquid Fuels. <input type="checkbox"/> Consider trying to get developer funding for these improvements as part of ongoing development.		Local
14	Intersections 14, 15 AND 16 SR 39 & SR 0081 NB/SB Ramps	West Hanover Township	MID	SB- Realign westbound right-turn lane, NB-Realignment of the eastbound right-turn lane. Addition of a westbound left-turn lane on SR 39 @ Jonestown Road	\$8,712,000	NA	<input type="checkbox"/> Preliminary Engineering funds of \$2,293,000 have been set aside in the first four years of the Twelve-year plan	<input type="checkbox"/> ONGOING – Preliminary engineering activities are ongoing.	HATS/ State
16	SR 39 & Jonestown Road	West Hanover Township	SHORT	Shoulder widening on the eastern side	\$3,000	LOWER	<input type="checkbox"/> Local funding should be used. Consider use of Liquid Fuels.		Local
17	SR 39 & SR 0022	West Hanover Township	SHORT	Modify phasing by adding a northbound protected left-turn phase	\$2,200	HIGHER	<input type="checkbox"/> Local funding should be used. Consider use of Liquid Fuels.	<input type="checkbox"/> Contact PENNDOT to begin process of revising signal permit.	Local
17	SR 39 & SR 0022	West Hanover Township	MID	Construct a northbound left-turn lane and a southbound left-turn lane	\$680,000	HIGHER	<input type="checkbox"/> Local/ State/ Federal and local funding should be considered. <input type="checkbox"/> Pursue Twelve-year Program funding or developer/private funding		HATS/ State
17	SR 39 & SR 0022	West Hanover Township	LONG	Construct an additional northbound, southbound and westbound left-turn lane. Construct an additional northbound and southbound thru lane or alternate route	Cost included in NA.3 (I-81 to HPD)	NA	<input type="checkbox"/> To be determined	<input type="checkbox"/> COORDINATE LONG-TERM NEEDS WITH NA.3 (I-81 TO HPD) STUDIES AND OUTCOMES. OUTCOME OF FEASIBILITY AND ENVIRONMENTAL STUDIES MAY IMPACT LONG-TERM IMPROVEMENTS AT THIS LOCATION.	TBD
18	SR 39 & Manor Drive (SE)	West Hanover Township	SHORT	Install traffic calming devices to limit cut-through traffic from SR 22 to SR 39. Install curbing to control access to adjacent properties	\$10,000	LOWER	<input type="checkbox"/> Local funding should be used. Consider use of Liquid Fuels.	<input type="checkbox"/> Contact PENNDOT for guidance on evaluation and installation of traffic calming measures.	Local
19	SR 39 & Green Hill Road	West Hanover Township	SHORT	Restrict traffic to right-in/right-out movements. Northbound SR 39 traffic will be rerouted to SR 22 or Manor Drive. Eastbound left Green Hill Rd traffic will be rerouted to Clover Lane and SR 22.	\$4,300	MEDIUM	<input type="checkbox"/> State/ Federal funding should be used. <input type="checkbox"/> Consider packaging short-term restrictions at intersections 19, 34 and 35 as one improvement project.	<input type="checkbox"/> Pursue mid-term and long-term improvement alternatives to determine if short-term restrictions should be implemented or if other improvements can be implemented as restrictions may have negative feedback.	State
19	SR 39 & Green Hill Road	West Hanover Township	MID	Grade the southern approach to improve sight distance for entering vehicles if complete access remains	\$1,800,000	LOWER	<input type="checkbox"/> State/ Federal funding should be used. Consider Twelve-year Program.	<input type="checkbox"/> Before implementing this improvements review status of I81 to HPD upgrade to determine if improvement is still worth considering	HATS/ State

Table 5 Prioritization and Scenario Funding Amounts

Int #	Location	Municipality	Timeframe	Improvement	Total Improvement Cost	Priority Level	Funding Considerations	Action Items and Other Considerations	Responsible Party
20	SR 39 & Devonshire Heights Road	West Hanover Township	SHORT	Install curbing to control access to the church parking lot in the southeast quadrant and install a speed warning system (SWS) as a rural Intelligent Transportation System (ITS): YOUR SPEED XX, SAFE SPEED XX. In Colorado, speeds went from 66 to 45 mph.	\$79,000	LOWER	<input type="checkbox"/> Local and private funding for access control as part of Church expansion is ongoing. <input type="checkbox"/> State and local should coordinate and fund SWS through Twelve-year Program or it may be beneficial to pursue funding as a pilot evaluation of SWS in this application.	<input type="checkbox"/> ONGOING - Church and local coordinate access improvements as part of expansion. <input type="checkbox"/> Investigate SWS pilot initiative.	Local/ HATS/ State
20	SR 39 & Devonshire Heights Road	West Hanover Township	MID	Relocate the Douglas Road intersection onto Devonshire Heights and realign to the Devonshire Heights to east. Grade roadway to provide optimum site distance.	\$440,000	LOWER	<input type="checkbox"/> State/ Federal funding should be used. Consider the Twelve-year Program.	<input type="checkbox"/> Before implementing this improvements review status of I81 to HPD upgrade to determine if improvement is still worth considering	HATS/ State
20	SR 39 & Devonshire Heights Road	West Hanover Township	LONG	Construct exclusive left and right-turn lanes for both approaches of Devonshire Heights Road.	Cost included in NA.3 (I-81 to HPD)	NA	<input type="checkbox"/> To be determined	<input type="checkbox"/> COORDINATE LONG-TERM NEEDS WITH NA.3 (I-81 TO HPD) STUDIES AND OUTCOMES. OUTCOME OF FEASIBILITY AND ENVIRONMENTAL STUDIES MAY IMPACT LONG-TERM IMPROVEMENTS AT THIS LOCATION.	TBD
27	SR 39 & Hershey Park Dr	Derry Township/ South Hanover Township	SHORT	Install a changeable message sign on EB SR 39 to direct traffic to the appropriate lanes	\$180,000	HIGHER	<input type="checkbox"/> Local funding should be used.	<input type="checkbox"/> Coordination between South Hanover and Derry Townships should continue in monitoring this area	Local
27	SR 39 & Hershey Park Drive	Derry Township	LONG	Construct and additional SB left-turn lane	Cost included in NA.3 (I-81 to HPD)	NA	<input type="checkbox"/> To be determined	<input type="checkbox"/> COORDINATE LONG-TERM NEEDS WITH NA.3 (I-81 TO HPD) STUDIES AND OUTCOMES. OUTCOME OF FEASIBILITY AND ENVIRONMENTAL STUDIES MAY IMPACT LONG-TERM IMPROVEMENTS AT THIS LOCATION.	TBD
28	Hershey Park Drive & Sand Beach Road	Derry Township	SHORT	Modify phasing by adding a protected/permitted northbound left-turn phase	\$2,200	HIGHER	<input type="checkbox"/> Local funding should be used. Consider use of Liquid Fuels.	<input type="checkbox"/> Contact PENNDOT to begin process of revising signal permit.	Local
30	SR 743 & Gravel Hill Road	Derry Township	MID	Install a traffic signal including a southbound protected left-turn phase	\$158,000	LOWER	<input type="checkbox"/> State/Federal funding. Pursue funding through the Twelve-year Program <input type="checkbox"/> It may be beneficial to consider developer funded Improvements if additional development occurs in the vicinity of the intersection	<input type="checkbox"/> Monitor traffic volumes to determine when levels warrant signalization.	HATS/ State
31	SR 743 & Bindnagle Road	Derry Township	LONG	Install a traffic signal	\$158,000	LOWER	<input type="checkbox"/> State/Federal funding. Pursue funding through the Twelve-year Program <input type="checkbox"/> It may be beneficial to consider Developer Funded Improvements if additional development occurs in the vicinity of the intersection	<input type="checkbox"/> Monitor traffic volumes to determine when levels warrant signalization.	TBD
32	SR 743 & Canal Street	East Hanover Township	SHORT	Improve sight distance by grading slopes to north and south	\$11,600	LOWER	<input type="checkbox"/> Local funding should be used. Consider use of Liquid Fuels.	<input type="checkbox"/> Talk to property owners.	Local
33	SR 743 & Pine Road	East Hanover Township	SHORT	Relocate utility pole on southeast corner. Install curve warning pavement markings to north	\$5,000	LOWER	<input type="checkbox"/> Local funding should be used. Consider use of Liquid Fuels. <input type="checkbox"/> State should install curve-warning markings as part of maintenance activities.		Local/ State
34	SR 743 & Earlys Mill Road	East Hanover Township	SHORT	Restrict access to right-in/ right-out and grade roadway surface to north, possible SWS site	\$4,300	MEDIUM	<input type="checkbox"/> State/ Federal funding should be used. <input type="checkbox"/> Consider packaging short-term restrictions at intersections 19, 34 and 35 as one improvement project.	<input type="checkbox"/> Pursue mid-term and long-term improvement alternatives to determine if short-term restrictions should be implemented or if other improvements can be implemented as restrictions may have negative feedback.	HATS/ State
34	SR 743 & Earlys Mill Road	East Hanover Township	MID	Improve sight distance by realigning the west leg to align with the east leg (to the south) and grade roadway surface to north; or improve sight distance by removing structure and grade roadway surface to north	\$406,000	MEDIUM	<input type="checkbox"/> State/ Federal funding should be used. Consider Twelve-year Program.	<input type="checkbox"/> Before implementing this improvements review status of I81 to HPD upgrade to determine if improvement is still worth considering	HATS/ State
35	SR 743 & Meadow Lane	East Hanover Township	SHORT	Restrict access to right-in/ right-out, possible SWS site	\$4,300	MEDIUM	<input type="checkbox"/> State/ Federal funding should be used. <input type="checkbox"/> Consider packaging short-term restrictions at intersections 19, 34 and 35 as one improvement project.	<input type="checkbox"/> Pursue mid-term and long-term improvement alternatives to determine if short-term restrictions should be implemented or if other improvements can be implemented as restrictions may have negative feedback.	HATS/ State
35	SR 743 & Meadow Lane	East Hanover Township	MID	Improve sight distance by realigning the west leg to the south or improve sight distance by removing structure	\$256,000	MEDIUM	<input type="checkbox"/> State/ Federal funding should be used. Consider Twelve-year Program.	<input type="checkbox"/> Before implementing this improvements review status of I81 to HPD upgrade to determine if improvement is still worth considering	HATS/ State

Table 5 Prioritization and Scenario Funding Amounts

Int #	Location	Municipality	Timeframe	Improvement	Total Improvement Cost	Priority Level	Funding Considerations	Action Items and Other Considerations	Responsible Party
36	SR 743 & SR 0022	East Hanover Township	MID	Construct a second westbound left-turn lane	\$2,200,000	MEDIUM	<input type="checkbox"/> State/Federal funding. Pursue funding through Twelve-year program or innovative alternative.	<input type="checkbox"/> Program and initiate feasibility and environmental studies <input type="checkbox"/> Consider long-term needs and possibly merge with LONG-TERM improvements at this location.	HATS/ State
36	SR 743 & SR 0022	East Hanover Township	LONG	Construct a northbound left-turn lane and a southbound left-turn lane. Construct a southbound right-turn lane	\$974,000	MEDIUM	<input type="checkbox"/> State/Federal funding. Pursue funding through Twelve-year Program or innovative alternative.	<input type="checkbox"/> Program and initiate feasibility and environmental studies <input type="checkbox"/> Consider mid-term needs and possibly merge with MID-TERM improvements at this location.	HATS/ State
37	SR 743 & Jonestown Road	East Hanover Township	MID	Install a signal	\$130,000	LOWER	<input type="checkbox"/> State/Federal funding. Pursue funding through the Twelve-year program <input type="checkbox"/> It may be beneficial to consider Developer Funded Improvements if additional development occurs in the vicinity of the intersection	<input type="checkbox"/> Monitor traffic volumes to determine when levels warrant signalization. <input type="checkbox"/> Consider long-term needs and possibly merge with LONG-TERM improvements at this location.	TBD
37	SR 743 & Jonestown Road	East Hanover Township	LONG	Construct a northbound left-turn lane and a southbound left-turn lane	\$400,000	MEDIUM	<input type="checkbox"/> State/Federal funding. Pursue funding through Twelve-year Program or innovative alternative.	<input type="checkbox"/> Consider mid-term needs and possibly merge with MID-TERM improvements at this location	HATS/ State
38	Intersections 38 and 39 SR 743 & I-81 Northbound Ramps/Southbound Ramps	East Hanover Township	MID	NB Ramps: Install a traffic signal. Construct an eastbound free right. SB Ramps: Install a traffic signal. Construct a northbound left-turn lane.	\$1,066,000	MEDIUM	<input type="checkbox"/> State/Federal funding. Pursue funding through Twelve-year program or innovative alternative. <input type="checkbox"/> Consider developer-funded improvements.	<input type="checkbox"/> Program and initiate feasibility and environmental studies <input type="checkbox"/> Consider long-term needs and possibly merge with LONG-TERM improvements at this location.	HATS/ State
38	Intersections 38 and 39 SR 743 & I-81 Northbound Ramps/Southbound Ramps	East Hanover Township	LONG	NB Ramps: Construct an additional northbound thru lane. Construct an additional southbound thru lane. Construct eastbound double left-turn lanes. SB Ramps: Construct an additional westbound left-turn lane. Construct an additional northbound thru lane. Construct an additional southbound thru lane. Construct a southbound free right	\$12,420,000	HIGHER	<input type="checkbox"/> State/Federal funding. Pursue funding through Twelve-year program or innovative alternative. <input type="checkbox"/> Consider developer-funded improvements.	<input type="checkbox"/> Program and initiate feasibility and environmental studies <input type="checkbox"/> Consider mid-term needs and possibly merge with MID-TERM improvements at this location.	HATS/ State

Public Involvement

Three public meetings were held for this project:

The first public meeting for the project was held on February 6, 2003 at the West Hanover Township Volunteer Fire Company Social Hall. An open house forum was utilized to present project information and solicit input from the public. The meeting served to introduce the study, present the existing transportation situation for the subject corridors, and allow the community to meet and interact with the project team. A survey was also distributed to assist in gathering input from the public. Approximately 100 people attended the meeting, of which 41 completed and returned the survey.

The second public meeting for the project was held at 2 locations: the Linglestown Junior High School on September 11, 2003 and at the East Hanover Township Building on September 17, 2003. An open house forum was utilized to present project information and solicit input from the public. The meeting served to present proposed improvement alternatives for the public to view and comment on. A survey was also distributed to assist in gathering input from the public. Approximately 77 people total attended the meetings, of which 23 completed and returned the survey.

The third public meeting for the project was held at the Linglestown Junior High School on December 17, 2003. An open house forum was utilized to present project information and solicit input from the public. The meeting served to present final results of the study for the public to view and comment on. A survey was also distributed to assist in gathering input from the public. Approximately 40 people attended the meeting, of which 6 completed and returned the survey.