

***Regional Cashless Tolling Planning Study  
Technical Advisory Committee Meeting #1  
Meeting Summary***

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**MEETING DATE:** April 12, 2016  
**TIME:** 11:00 A.M.  
**LOCATION:** SPC Conference Center, 4<sup>th</sup> floor, South Room

**ATTENDEES:**

|                                      |                            |
|--------------------------------------|----------------------------|
| Tammy Frank                          | Beaver County              |
| Joel MacKay                          | Butler County              |
| Amy McKinney                         | Lawrence County            |
| Chris Bova                           | Westmoreland County        |
| Ann Ogoreuc                          | Allegheny County           |
| Melissa McFeaters                    | PennDOT District 10-0      |
| Doug Smith                           | Southwestern PA Commission |
| Domenic D'Andrea                     | Southwestern PA Commission |
| Joshua Spano                         | Southwestern PA Commission |
| Gary Barber (via teleconference)     | PennDOT District 12-0      |
| Brian Walker (via teleconference)    | PennDOT District 12-0      |
| Alan Williamson (via teleconference) | PA Turnpike Commission     |
| Keith Johnson                        | AECOM                      |
| John Petulla                         | McCormick Taylor           |

**Meeting Purpose:**

The purpose of the meeting was to serve as an initial kickoff meeting for the Regional Cashless Tolling Planning Study Technical Advisory Committee (TAC). Additionally, the study team and TAC initially reviewed potential new Cashless Tolling interchange locations along the PA Turnpike within the SPC Region.

Domenic D'Andrea thanked the group for being part of the advisory committee and for their involvement in the study. Each attendee introduced themselves and indicated the organization they represent.

**Discussion:**

1. Mr. D'Andrea provided background on the origin of the Regional Cashless Tolling Study. The study will evaluate the impact at existing interchange locations associated with the conversion to Cashless Tolling and provide a high level evaluation of the feasibility of several potential new Cashless Tolling Interchange locations within the SPC Region. Doug Smith added the study should provide a useful future planning tool to determine the effect of the conversion to Cashless Tolling on the adjacent state roadway system and help evaluate new interchange location requests within the SPC's long range plan.
2. A short informative presentation was presented on the PTC's Cashless Tolling initiative including a video of the PTC's planned initial conversion at existing locations.

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3. Keith Johnson reviewed the scope of work of the study summarized as follows:
  - Task 1 – Data Collection at existing PTC Interchanges.
  - Task 2 – Analysis of future 2022 traffic conditions without Cashless Tolling
  - Task 3 - Analysis of future 2022 traffic conditions with Cashless Tolling
  - Task 4 – Analysis of proposed improvements for 2022 with Cashless Tolling
  - Task 5 – Analysis of potential new Cashless Tolling Interchange locations.
  - Task 6 – Detailed simulation of Pittsburgh (Monroeville) Interchange.
  - Task 7 – Draft and Final Study Report.
4. It was noted the use of the E-Z Pass is more ideal to be able to capture revenue generated by Cashless Tolling. Alan Williamson noted currently roughly 80-85% of PTC customers utilize E-Z Pass in the Philadelphia Area and approximately 70% of PTC users in the Pittsburgh Area. System wide approximately 30% of the tolls are still cash based.
5. Mr. Johnson provided an overview of each existing interchange location to be evaluated for conversion to Cashless Tolling. A handout was provided summarizing the conditions at each interchange and potential evaluation issues.
6. The study team’s initial high level evaluation of potential new interchange locations was presented to the TAC for consideration and discussion. The discussion of potential new interchanges is summarized below:
  - The Cashless Tolling provides opportunities for full and partial interchange options with less of an impact to adjacent properties compared to a traditional PTC interchange with toll plazas.
  - Examples of partial interchanges using slip ramps that could be applied at new access locations were discussed. The examples included the Virginia Drive Interchange (Exit #340) in Fort Washington and more recently opened Street Road Interchange (Exit #352) in Bensalem Township.
  - A total of nine potential new interchange locations in Lawrence, Beaver, Allegheny and Westmoreland Counties were considered as part of a high level evaluation. The results of the high level evaluation for each interchange location along with input from the TAC will result in advancing three to four locations for further detailed analysis within the study.
  - The TAC was provided a Preliminary Matrix Evaluation of Potential New Access Ramp Locations. The matrix provided an initial scoring system of each location for comparison purposes. Mr. Johnson reviewed the methodology and scoring criteria used as the basis to develop the matrix. It was noted the scores of the criteria for potential congestion reduction impact, potential to attract new PTC customers, and economic revitalization were weighted twice the value as the other criteria evaluated. These considered primary criteria critical to the success of the potential new access locations.
  - It was noted the scoring of the potential new locations was meant to serve as a tool to assist in the decision making process. The scores will help to evaluate the general feasibility at each location and provide a basis for comparison. An initial lower score was not intended to indicate the location is not potentially viable for a new full

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- or partial interchange in the future.
- Mr. Johnson provided an overview of the evaluation criteria and matrix results of the potential new locations at SR 551, SR 65, SR 68, SR 910 (west of Route 8), SR 28 (replacement), and SR 28 (new location).
  - John Petulla provided an overview of the evaluation criteria and matrix results of the potential new locations at SR 380, SR 130, SR 136, and SR 981.
7. After the overview of the potential new locations there was discussion of the locations and scoring, as follows:
- It was discussed a location should be considered within each county for further study. This was considered, though the general consensus of the group seemed to favor the locations considered for further study should be based upon the evaluation results and input from the TAC at each location.
  - Due to the regional importance and amount of traffic on SR 28, it was discussed a replacement option or potential new location should be considered for further study.
  - It was noted that currently the PTC would not see a gain in revenue for potential interchanges located to the west of I-79. These new locations would be difficult for the PTC to fund.
  - The PTC is still discussing the implementation of the Cashless Tolling system to the west of I-79. It has not been determined if this section of the turnpike will be tolled in the future as part of the Cashless Tolling conversion process.
  - It was noted the information provided to the TAC was a lot of new data to consider during the meeting. Additional time was provided to the TAC to consider and comment on the new interchange location matrix, criteria, and scoring. However in order to maintain the study schedule to be completed in June, it was requested comments to be provided within a week of the meeting.
8. Mr. D'Andrea requested the TAC review the new interchange locations and provide input on the interchanges to be considered for further analysis to him via email within one week of the meeting by April 19<sup>th</sup>. It was noted the study is scheduled to be finalized in late June, so a prompt review by the TAC would be appreciated.
9. ***The next TAC meeting will be tentatively scheduled for the week of May 9<sup>th</sup>. Mr. D'Andrea will coordinate with the committee on the exact time and date.*** This meeting will focus on the initial analysis results of the existing PTC interchanges evaluated with a conversion to Cashless Tolling.

*We believe these minutes accurately describe what occurred at this meeting. Anyone with a different understanding of what occurred, please contact John Petulla at 412.922.6880 within 5 days of this transmission. Otherwise this meeting summary will be considered finalized.*

Summary prepared by:

John L. Petulla, P.E.  
McCORMICK TAYLOR, INC.

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Cc: Attendees

Attachments: Work Plan Overview; Existing Toll Plaza/ Interchanges in Study Area; Virginia Drive Slip Ramp Example; and Matrix Evaluation of Potential New Access Ramp Locations.

***Regional Cashless Tolling Planning Study  
Technical Advisory Committee Meeting #2  
Meeting Summary***

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**MEETING DATE:** May 17, 2016  
**TIME:** 11:00 A.M.  
**LOCATION:** SPC Conference Center, 4<sup>th</sup> floor, South Room

**ATTENDEES:**

|                                      |                            |
|--------------------------------------|----------------------------|
| Joel MacKay                          | Butler County              |
| Chris Bova                           | Westmoreland County        |
| Ann Ogoreuc                          | Allegheny County           |
| Melissa McFeaters                    | PennDOT District 10-0      |
| Todd Kravits                         | PennDOT District 11-0      |
| Doug Smith                           | Southwestern PA Commission |
| Domenic D’Andrea                     | Southwestern PA Commission |
| Joshua Spano                         | Southwestern PA Commission |
| Alan Williamson (via teleconference) | PA Turnpike Commission     |
| Amy McKinney (via teleconference)    | Lawrence County            |
| Keith Johnson                        | AECOM                      |
| Jennifer McCracken                   | AECOM                      |
| Emily Hoffman                        | McCormick Taylor           |

**Meeting Purpose:**

The purpose of the meeting was to review the existing turnpike interchanges with regard to functioning as they do today and the effects of cashless tolling in the future. The purpose of the meeting was also to discuss possible improvements to model at each interchange.

Domenic D’Andrea thanked the group for being part of the advisory committee and for their involvement in the study. Each attendee introduced themselves and indicated the organization they represent.

**Discussion:**

1. Keith Johnson provided background on the origin of the Regional Cashless Tolling Study. The study will evaluate the impact at existing interchange locations associated with the conversion of the turnpike to Cashless Tolling and provide a high level evaluation of the feasibility of several potential new Cashless Tolling Interchange locations within the SPC Region.
2. Keith Johnson gave a presentation on the analysis of Task 2 – Analysis of future Year 2022 traffic conditions without Cashless Tolling and Task 3 - Analysis of future Year 2022 traffic conditions with Cashless Tolling.
3. Some facts presented in the presentation included:
  - a. Peak hour volumes of traffic leaving the turnpike at the various interchanges ranged from 300 vph to 1100 vph (Allegheny Interchange had the highest).
  - b. Truck percentages for traffic leaving the turnpike interchanges were mostly in the 5-10% range. The lowest truck percent was 1% at the Butler Interchange during

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- the Saturday peak hour and 34% at the New Stanton Interchange during the PM peak hour.
- c. Traffic growth rates ranged from 0.33%/year to 1.23%/year.
  - d. E-ZPass usage for the interchanges has grown over the years. Most interchanges had E-ZPass truck market share in the 85% range. Auto E-ZPass usage ranged from 63 to 73%.
  - e. The capacities of the different toll lane types were presented. Cashless tolling lanes will have a capacity of 1900-2000 veh/hr/lane. E-ZPass only toll plaza exit lanes have a capacity of about 1000 veh/hr/ln and Cash only toll plaza exit lanes have a capacity of about 200 veh/hr/ln.
  - f. As part of the project, queuing at the toll plaza exit lanes was measured during the peak hours. The amount of queued vehicles was about 1.8 vehicles every minute. The maximum amount of queued vehicles seen at this time ranged from 4 to 12 vehicles - depending on the interchange.
4. Keith Johnson then explained the simulation process to determine the amount of traffic not currently being serviced by the toll plazas due to the queuing and how the delays at the toll plazas were integrated into the simulation models.
  5. The committee was presented with the “before/after” results at each interchange. The general results concluded the following:
    - a. Travel times improved for turnpike traffic from 8 to 34 seconds, on average.
    - b. Only negligible effects on state roadway performance measures were found.
    - c. There were some merge and intersection areas where the Level of Service was at unacceptable levels in both the cash and cashless scenarios, but the relative differences between the scenarios were small.
  6. Both Alan Williamson and Emily Hoffman mentioned similar results with some studies in the eastern part of the state.
  7. Keith Johnson, Jennifer McCracken and Emily Hoffman then presented the committee with the simulation models of each interchange – showing where the congestion occurs in both the cash and cashless scenarios.
  8. Domenic D’Andrea mentioned that there were areas at some of the interchange locations where the Level of Service is failing and the study should try to address these areas.
  9. After the overview of the interchanges, there was an informal discussion of possible improvements to consider. The possible improvements discussed were as follows:
    - a. Butler Interchange
      - i. The Hardies Road intersection was recently upgraded by District 11-0. Additional improvements at this intersection were not considered.
      - ii. Possible signal timing improvements at the Bardonner Intersection was considered or realignment of this intersection because of the offset.
      - iii. Any type of widening or road dieting for Route 8 in the area was discussed, but no particular improvement was identified.

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- iv. Continuation of the merge lane southbound was discussed, but this would entail the widening of the bridge over the turnpike.
  - b. Allegheny Interchange
    - i. Todd Kravits mentioned possible plans for adaptive signals along Freeport Rd. This was considered a good improvement since the Alpha Drive East signal showed queuing issues with the turnpike ramp traffic.
    - ii. It was discussed that the possible new access ramp connection with SR 28 would reduce congestion on Freeport Rd.
  - c. Pittsburgh / Monroeville Interchange
    - i. Doug Smith proposed looking at a possible connection with SR 48 south of Business 22 to alleviate the congestion at SR 48/ Business 22 intersection.
    - ii. A 2<sup>nd</sup> lane for the I-376 off-ramp to the SR48/Business 22 intersection may alleviate traffic, but could impact the car dealership property.
    - iii. It was mentioned that the Mon/Fayette Expressway Project may impact this area.
    - iv. It was mentioned that the Turnpike is currently looking at the Pittsburgh Interchange and AECOM should coordinate with them on their possible alternatives in the area.
    - v. Todd Kravits mentioned that GAI was recently evaluating some roadway improvements in the area with regard to the Forbes Regional Hospital.
  - d. Irwin Interchange
    - i. Keith Johnson mentioned a small study completed several years ago looked at connecting the northern area of the turnpike overpass with SR 30 to Pennsylvania Ave – to reduce the amount of traffic using the existing ramps onto SR 30.
    - ii. As part of the Irwin Interchange rehabilitation project, the widening of the abutments for the SR 30 overpass from the current toll plazas could provide widening of SR 30.
  - e. New Stanton Interchange
    - i. Because of the upcoming New Stanton Interchange project for District 12-0, additional improvements in this area were not considered.
10. Domenic D’Andrea requested the TAC review the interchange materials and provide input on possible improvements to be considered as soon as possible. It was noted the study is scheduled to be finalized in late June, so a prompt review by the TAC would be appreciated.
11. Domenic D’Andrea explained that two additional meeting are to be planned. One will involve a briefing of the municipalities in the existing interchange areas and the new access interchange areas. For this meeting, the committee members are invited to attend. Another meeting of this committee will also be held to show the results of the

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interchange improvements and the new access location results.

12. Ann Ogoreuc requested the dates for upcoming meetings be scheduled as soon as possible, since June dates on everyone's calendars were filling up fast.

*We believe these minutes accurately describe what occurred at this meeting. Anyone with a different understanding of what occurred, please contact Keith Johnson at 412.503.4553 within 5 days of this transmission. Otherwise this meeting summary will be considered finalized.*

Summary prepared by:

Keith A. Johnson  
AECOM

Cc: Attendees



***Regional Cashless Tolling Planning Study  
Technical Advisory Committee Meeting #3  
Meeting Summary***

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**MEETING DATE:** June 23, 2016  
**TIME:** 10:00 A.M.  
**LOCATION:** SPC Conference Center, 4<sup>th</sup> floor, South Room

**ATTENDEES:**

|                    |                      |                            |
|--------------------|----------------------|----------------------------|
| Alan Williamson    | (via teleconference) | PA Turnpike Commission     |
| Joel MacKay        |                      | Butler County              |
| Ann Ogoreuc        |                      | Allegheny County           |
| Amy McKinney       |                      | Lawrence County            |
| Melissa McFeaters  |                      | PennDOT District 10-0      |
| Todd Kravits       |                      | PennDOT District 11-0      |
| Doug Smith         |                      | Southwestern PA Commission |
| Domenic D'Andrea   |                      | Southwestern PA Commission |
| Joshua Spano       |                      | Southwestern PA Commission |
| Dan Alwine         |                      | Southwestern PA Commission |
| Keith Johnson      |                      | AECOM                      |
| Jennifer McCracken |                      | AECOM                      |
| Kelly Rigot        |                      | Lochner                    |
| John Petulla       |                      | McCormick Taylor           |

**Meeting Purpose:**

The purpose of the meeting was to review the new access interchanges conceptual layouts / traffic demand and the existing turnpike interchanges with regard to possible improvements. Also discussed was the task items to be completed with the project and schedule

Domenic thanked the group for being part of the advisory committee and for their involvement in the study. Each attendee introduced themselves and indicated the organization they represent.

**Discussion:**

**Municipal Meeting on June 6, 2016**

1. Domenic and Keith briefed the group on the Municipal Meeting held on June 6<sup>th</sup>. The meeting was used to brief the municipalities covering the existing interchanges and the potential new access locations. Three of the municipalities participated (Monroeville, Penn and North Huntingdon Township). The municipalities mentioned they were interested in new investments in their area. North Huntingdon was interested and in favor of the proposed improvements at the Irwin Interchange. North Huntingdon was somewhat skeptical with regard to the conclusion that cashless tolling will have a nominal impact to downstream intersections.

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**New Access Locations**

2. Keith facilitated the discussion of the four New Access Locations with Kelly and John also assisting in the discussion. For each location, a conceptual plan, cost estimates and travel demand traffic was presented.
3. Kelly explained that the SPC Cycle 10 Travel Demand Model was used to develop Year 2035 traffic demand for each individual new access location. Mainline traffic projections as well as ramp traffic projections were presented for each location. Kelly noted that all of the new access interchanges increase traffic on the turnpike.
4. Keith and John explained how the cost estimates were developed and that the current cost estimates included a 40% contingency line item, due to the nature of the conceptual estimates. It was agreed to by the group that the cost estimates should be conservative.
5. SR 910 New Access
  - a. Keith presented the conceptual layout of the SR 910 interchange, explaining the reasoning behind connecting Ramp 4 to N. Montour Rd. Keith also mentioned that one of the thoughts with this interchange was that it could reduce some of the traffic at the I-79 Wexford Interchange. Kelly explained that Ramps 1 and 2 had slightly higher projected daily traffic volumes than Ramps 3 and 4. Kelly also noted that the traffic at the I-79 Wexford Interchange did reduce with this interchange – in the 3-5% range.
  - b. A number of comments and suggestions were made by the committee for this location. Doug suggested these suggestions be incorporated into the report to illustrate the possible variations that could be considered for the location, as well as identifying the relative change in cost that could be associated with the variations. Below are the suggestions by the committee:
    - i. Review the need for widening the SR910 structure if turn lanes are incorporated.
    - ii. Review the possibility of relocating N. Montour Rd and Ramp 1 so only 1 intersection would be required, as 3 additional access points along SR 910 would not be desirable.
    - iii. Consider moving Ramp 1 toward the east and relocating Ramp 4 as a “loop” ramp in the same quadrant as Ramp 1. This would lead to less confusion from a signing perspective.
    - iv. Consider a partial interchange utilizing only Ramps 3 and 4 to aid in reducing congestion at the I-79 Wexford Interchange.
6. SR 130 Interchange
  - a. John presented the SR 130 interchange. He noted that the PTC is currently planning this section to be widened to 6 lanes, which impacted the tie in with Ramp 2 to Nike Site Rd. Additionally, constraints with the existing SR 130 bridge restricted tying directly into SR 130. Kelly noted that the travel demand model

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indicated 3 important features for this interchange:

- i. Ramps 3 and 4 (to/from the Pittsburgh Area) had much stronger traffic demand than Ramps 1 and 2.
- ii. This interchange actually reduces traffic demand at the Irwin Interchange.
- iii. This interchange greatly increases the overall traffic on SR 130 by about 8,000 more vehicles/day, 75-80% increase to traffic.

b. Below are the suggestions by the committee:

- i. The greater traffic demand on Ramps 1 and 2 should be taken into consideration for a partial interchange.
- ii. The greater traffic demand on SR 130 should be considered in the cost estimate if widening of SR 130 is required. There is no current project planned that involves widening SR 130.
- iii. The right-of-way costs for this section should be reviewed.

7. SR 28 Interchange

- a. Keith explained that the SR 28 interchange was approached differently than the other interchanges. Discussions on how to approach this interchange ranged from assuming the existing Allegheny Valley Interchange was not to be removed to assuming it was removed. Also, ramp connections looked at including all possible movements (8 ramps), to reviewing only the least expensive connections. The layout presented to the group represented the four ramp configurations that were considered the least expensive.
- b. Committee members mentioned the interest in access to/from Route 28 North from/to the Turnpike from municipalities in the area and state representative offices.
- c. Keith explained that connections in this area had the following constraints:
  - i. The railroad line and railroad bridge directly paralleling the turnpike to the north
  - ii. Three adjacent interchanges (Exit 11 and 12 on Route 28 and Allegheny Valley Interchange on the Turnpike) constrain potential acceleration, deceleration and weaving movements.
  - iii. The Northbound climbing lane on Route 28 restricts a direct Westbound Turnpike off-ramp to a direct Northbound Route 28 on-ramp.
- d. Kelly explained that all 8 connections were modeled with the travel demand model and conclusions from that modeling included:
  - i. A full Route 28 interchange would both increase the amount of turnpike and Route 28 traffic and reduce traffic on Freeport Rd.
  - ii. The ramp volumes on the new ramps ranged from 3,000 -5,500 vehicles / day.
  - iii. The higher volumes were associated with traffic to and from northern Route 28 (i.e., to/from Kittanning Area).

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- e. Below are the suggestions by the committee:
  - i. Define all of the constraints that need to be considered for an interchange in this area. (i.e., limitations of the railroad bridge, limitation due to the adjacent Exit 11 and 12 on Route 28 and Allegheny Valley Interchange on the Turnpike, weaving movement limitations, etc., ).
  - ii. Show the complete interchange (all 8 possible ramp movements) to illustrate the complexity of the full access interchange when considering the limitations of the railroad bridge, considerations of no design exceptions and the assumption that the existing Allegheny Valley Interchange is kept.
  - iii. Show the presented interchange as the minimum cost ramp movements that could be pursued considering the limitations of the railroad bridge, considerations of no design exceptions and the assumption that the existing Allegheny Valley Interchange is kept.
  - iv. Show the possibility of direct Westbound Turnpike off-ramp to a direct Northbound Route 28 on-ramp if the Northbound Route 28 climbing lane on Route 28 is not considered a restriction.
  - v. Show a possible interchange concept if the Allegheny Valley Interchange was considered closed in the future.

8. SR 981 Interchange

- a. John presented the SR 981 interchange. He noted that this interchange is also being considered in PennDOT District 12-0's Laurel Valley Improvement Study. As part of that study, improvements to SR 981 as a whole are being considered with the inclusion of this new access interchange, but those improvements are not included in the cost estimate presented. Additionally, unlike SR 130, the ADT of SR 981 is significantly less. The committee agreed that discussion of the Laurel Valley study should be included in the final report.
- b. John mentioned that he wanted to revisit the right-of-way and utility cost estimates for this area.
- c. John mentioned that there is currently not an interest in this interchange being a partial interchange from the local / Westmoreland County perspective. Kelly explained that the majority of traffic demand for this interchange was for the ramps coming from / going to the New Stanton Interchange direction, , however she also flagged that this interchange is at the edge of the SPC network, which may have an impact on volumes to and from the East.
- d. Below are the suggestions by the committee:
  - i. Note that costs are associated with the improvements to SR 981 outside the area of the proposed interchange, but are not included in this cost estimate.
  - ii. Update right-of-way and utility costs.

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**Possible Improvements to Existing Interchanges**

9. Keith facilitated the discussion of the simulation analysis of the possible improvements to the existing interchanges (Butler Valley, Allegheny Valley, Pittsburgh/Monroeville, Irwin and Donegal (No improvements were proposed for the New Stanton Interchange since a new interchange at this location on I-70 is currently being constructed by PennDOT District 12-0). Domenic mentioned that the result of the Cash vs. Cashless analysis indicated that there was negligible difference in delays. Therefore, possible improvements were centered on areas at the interchanges where there was deficient Levels of Service.
10. Alan Williamson requested that the performance measure tables for the improvements also show the results of both the Cash and Cashless without improvements for comparison purposes.
11. Butler Valley Interchange
  - a. The improvements in this area included analyzing a southbound left turn lane and a northbound right turn lane for the intersection of East Bardommer Rd. No improvements were considered for the Hardies Rd intersection.
  - b. Todd Kravits noted these additional lanes would be difficult to construct with the limited right-of-way in the area and the proximity of the existing business.
12. Allegheny Valley Interchange
  - a. McCormick Taylor simulated the retiming of the signals (to represent adaptive signals) at SR 910, Alpha Dr. East and Alpha Dr. West intersections on Freeport Rd. This retiming was based on the peak hour traffic collected during the AM and PM peak hours. These projects showed a definite improvement in the delay at these intersections and the queuing at the turnpike ramp entering Westbound Freeport Rd.
13. Pittsburgh / Monroeville Interchange
  - a. Keith stated that two types of improvements were modeled to try to alleviate the congestion at the US Business 22 / SR 48 intersection. The main improvement was the consideration of widening of the I-376 off-ramp to Haymaker Rd to two lanes, then providing an exclusive right turn lane along Haymaker Rd. to the US Business 22/ SR 48 intersection. The second improvement was the consideration of an additional access point south of the intersection (via Holiday Ln. or Northern Pike) that would be utilized by traffic currently destined for the turnpike via Northbound SR 48. The modeling assumption was to eliminate this traffic from the intersection. The results of the analysis did show improvements to the delay at the intersection, but still showed a deficient Level of Service.
  - b. Domenic and Keith then presented the concept of an additional access point to the Turnpike via Holiday Ln or Northern Pike. The Holiday Ln. access may be

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problematic with the private businesses (i.e., Holiday Inn). The Northern Pike access concept could include slip ramps from Circle Way Dr. to Eastbound Turnpike and/or a slip ramp from Westbound Turnpike to Northern Pike. Domenic noted that these access points had the possibility of drawing traffic off of Business 22 from the west and east of the current turnpike access points on Business 22. Keith mentioned that not enough information is known at this time to estimate what the possible traffic demand implications are of this concept.

14. Irwin Interchange

- a. Keith reviewed the improvements modeled for the Irwin interchange. These possible improvements included providing a slip ramp for exiting Turnpike traffic from SR 30 overpass to Pennsylvania Ave., extending exclusive right turn lane on SR 30 to Arona Rd intersection back to Turnpike Eastbound Exit Ramp, and retiming the signals at Ronda Ct. and Arona Rd. The combinations of these projects did improve the level of service at both intersections.
- b. Domenic mentioned that these improvements were considered favorable by North Huntingdon Township at the municipal meeting briefing. Keith mentioned that the slip ramp concept was looked at by URS about 10 years ago for Westmoreland County.

15. Donegal Interchange

- a. Although not modeled for this study, Keith presented PennDOT District 12-0 proposed improvements at the Donegal / SR 31 area. It is comprised of extending the thought of the turnpike approach to SR 31 and constructing a “Continuous T” intersection. Jennie mentioned it is programmed for FY 2017.

**Additional Items Regarding the Study**

16. Domenic mentioned having an additional meeting with municipalities in the study area to brief them on the results of the study in the next two weeks, where this committee would also be invited to attend.
17. Domenic will send out the information today to the Committee members for their review after the meeting.
18. A draft final report will be sent out the Committee members for their input.
19. The project will be finalized in the next few weeks.

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*We believe this meeting summary accurately describe what occurred at this meeting. Anyone with a different understanding of what occurred, please contact Keith Johnson at 412-297-4464 within 5 days of this transmission. Otherwise this meeting summary will be considered finalized.*

Summary prepared by:

Keith A. Johnson  
AECOM

Cc: Attendees