APPENDIX A

Environmental Constraints Memorandum

NEWELL TERESKA & MACKAY ENGINEERING

NTM Engineering, Inc.
130 W. Church St., Suite 200
Dillsburg, PA 17019-1278
717-432-4425

MEMORANDUM

To: McMahon, a Bowman Company

From: Alyssa Hovanec, Environmental Scientist

Date: February 2, 2023

Subject: Walkable Lederach Feasibility Study
Lower Salford Township, Montgomery County, Pennsylvania
NTM Project No. 22095
Environmental Constraints

NTM Engineering, Inc. (NTM) has researched the existing environmental constraints located within the Lederach town center Project Study Area (PSA) and surrounding area as summarized below.

Environmental Constraints

The following provides an overview of the studies performed to identify and evaluate the existing natural, cultural, community facility, and farmland resources, as well as potential sensitive waste concerns within the Walkable Lederach Feasibility Project Study Area (PSA), located in Lower Salford Township, Montgomery County, Pennsylvania (**Attachment A - Figure 1**). The level of investigation includes a desktop review of available data and a limited field view. The results of the investigations described in this section are shown in the Natural Resources and Manmade Environment Mapping and the Above-Ground Historic Resources Mapping included in **Attachment A**.

1. Natural Resources

a. Surface Waters

The identification of surface waters was completed through a review of the Pennsylvania Department of Environmental Protection's (PADEP) Historic Streams dataset for GIS and a windshield survey conducted by NTM on January 20, 2023. Ten streams were identified in the PSA, seven are unnamed tributaries (UNTs) to East Branch Perkiomen Creek and three are UNTs to West Branch Skippack Creek. According to 25 Pa. Code 93, all of the UNTs within the PSA are classified as Trout Stocked Fishery (TSF) and Migratory Fishes (MF) Streams. Located approximately 500 feet west of the PSA, East Branch Perkiomen Creek is listed by Pennsylvania Fish and Boat Commission (PFBC) as a stocked trout stream. Additionally, four open water ponds were identified through the windshield survey. These surface water resources are mapped on **Attachment A - Figure 2**.

According to the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer for Montgomery County, the PSA is within Zone X Floodplain. The Zone X Floodplain is defined as "Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level." Zone AE is located outside of the PSA, along the channel of East Branch Perkiomen Creek. Zone AE is defined as "Areas subject to a one percent or greater annual chance of flooding in any given year. Base flood elevations are shown as derived from detailed hydraulic analyses." This is generally referred to as the 100-Year Floodplain as depicted on **Figure 2**.

b. Groundwater Wells

According to Pennsylvania Department of Conservation and Natural Resources (DCNR) Pennsylvania Groundwater Information System (PaGWIS) Search, there are several wells located within the PSA, which are all used for domestic water withdrawal, except for one closed-loop geothermal well. The wells are depicted on **Figure 2.**

c. Wetlands

The identification of wetlands was completed through review of the United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) Online Mapper and the University of Vermont Spatial Analysis Laboratory's Modeled Wetlands dataset for GIS, in addition to a windshield survey performed by NTM. The Modeled Wetlands dataset mapped one wetland in the southwestern portion of the PSA. The windshield survey identified two additional potential wetlands within the PSA. One wetland, an assumed Palustrine Emergent (PEM) wetland, occurred along a residential cul-de-sac with a stream running through the wetland and connected to an open water pond, on Sharon Lane. The other wetland, an assumed Palustrine Scrub-Shrub (PSS) wetland, occurred along a stream that runs perpendicular to a paved multi-use trail adjacent to Truman Court within the PSA. These three wetlands are displayed on **Figure 2**. Multiple other modeled wetlands are mapped outside of the PSA.

d. Threatened and Endangered Species

This project was reviewed for potential conflicts with threatened and endangered species using the Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Tool on January 18, 2023. One potential conflict with a PFBC unidentified threatened species was identified via the PNDI. Once the project scope of work is finalized, coordination with PFBC would be required.

2. Cultural Resources

a. Above-Ground Historic Resources

Identification of above-ground historic resources was conducted through review of information with the Pennsylvania State Historic Preservation Office (SHPO) PA-SHARE database system. There are two resources within the PSA that have been determined eligible for listing in the National Register of Historic Places (NRHP), the Lederach Historic District (1996RE01054) and the Andrew Lederach Homestead (1996RE00026). A desktop review and windshield survey identified 63 additional properties that are potentially 50 years old or older. The two eligible resources and the additional potential resources are shown on **Figure 3** and listed in **Attachment B**.

b. Archaeology

Assessment of known archaeological sites within the PSA was completed through a review of information available within the Pennsylvania State Historic and Archaeological Resource Exchange (PA-SHARE) database regarding recorded archaeological sites. No known sites are located within or in the vicinity of the PSA.

3. Farmland Resources

According to the USDA NRCS Web Soil Survey there are several mapped soils within the PSA listed as farmland of statewide importance soils and prime farmland soils. The farmland soils are included in **Table 2**, below.

Table 2: Farmland Soils Mapped in Project Study Area

Mapping Unit Name	Mapping Unit Symbol	Farmland Classification
Abbottstown silt loam, 3 to 8 percent slopes	AbB	Farmland of statewide importance
Bowmansville-Knauers silt loams	Bo	Farmland of statewide importance
Penn silt loam, 3 to 8 percent slopes	PeB	All areas are prime farmland
Penn silt loam, 8 to 15 percent slopes	PeC	Farmland of statewide importance

Mapping Unit Name	Mapping Unit Symbol	Farmland Classification
Penn-Lansdale complex, 3 to 8 percent slopes	PlB	All areas are prime farmland
Penn-Lansdale complex, 8 to 15 percent slopes	PlC	Farmland of statewide importance
Readington silt loam, 0 to 3 percent slopes	ReA	All areas are prime farmland
Readington silt loam, 3 to 8 percent slopes	ReB	Farmland of statewide importance
Readington silt loam, 8 to 15 percent slopes	ReC	Farmland of statewide importance
Reaville silt loam, 0 to 3 percent slopes	RhA	Farmland of statewide importance
Reaville silt loam, 3 to 8 percent slopes	RhB	Farmland of statewide importance
Reaville silt loam, 8 to 15 percent slopes	RhC	Farmland of statewide importance
Rowland silt loam, 3 to 8 percent slopes	RwB	All areas are prime farmland

However, the project is exempt from the provisions of the Farmland Protection Policy Act (FPPA) as the PSA is identified as an urbanized area according to the US Census Bureau. According to Pennsylvania's Agricultural Land Preservation Policy (ALPP), there are prime agricultural lands in active agricultural use within the PSA. If these agricultural lands will be impacted by the project, further evaluation may be required depending on project type and funding. According to the Pennsylvania Natural Heritage Program's (PNHP) Conservation Explorer there are no Agricultural Security Areas (ASA), or Agricultural Easements located within the PSA. Based on review of the Montgomery County parcel viewer website, there are two parcels, 711 Cross Road and 660 Harleysville Pike, that are enrolled in agricultural preferential tax assessment program Act 319. Both parcels are displayed on **Figure 2.**

4. Socioeconomic Resources

The PSA is zoned as village commercial, residential areas, and a land preservation overlay district. East Branch of the Perkiomen Creek and Wawa Park are located northwest of the PSA. The surrounding land use south is primarily residential and commercial, with forested and open land on the outskirts of the PSA. The PSA is located within two residential neighborhoods, Lederach and Harleysville, in Lower Salford Township. The PSA contains paved roadways, maintained lawn, wooded areas, and open fields.

a. Section 4(f)/ Section 2002

Section 4(f) of the U.S Department of Transportation Act of 1966 governs the use of land from publicly owned parks, recreation areas, historic resources, and National Wildlife Refuges for transportation projects. Section 2002 of the Pennsylvania Administrative Code of 1929. amended in 1970, adds requirements to address environmental impacts from transportation projects. This amendment serves as the state counterpart to Section 4(f). Section 4(f) resources were investigated using the PA DCNR Explore PA Local Parks Mapper, PNHP Conservation Explorer, and PA DCNR's Explore Pennsylvania Trails websites.

The following Section 4(f) Resources are present within the PSA:

- Lederach Historic District (1996RE01054)
- Andrew Lederach Homestead (1996RE00026)

Wawa Park, a publicly owned park, is located just outside the PSA, approximately 70 feet west, along Camp Wawa Road. Further evaluation may be required if this park will be impacted by the project. The Section 4(f) resources and Wawa Park are displayed on **Figure 2**.

b. Section 6(f)

Section 6(f) of the Land and Water Conservation Act applies to the conversion of public outdoor recreation sites and facilities to nonrecreational purposes. The program provides matching grants (up to 50%) to states and through local governments for the acquisition and development of public outdoor recreation sites and facilities. According to PA DCNR's Bureau of Recreation and Conservation Grant Viewer, there are no properties within or adjacent to the PSA that have received a Land and Water Conservation Fund (LWCF) grant.

Wawa Park may have received funding, as it was documented on PNHP Conservation Explorer to have received state or federal funding. Wawa Park is located about 70 feet west of the PSA. Further evaluation may be required if this park will be impacted by the project.

c. Environmental Justice

Environmental Justice (EJ) refers to the implementation of Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. This identifies and addresses any disproportionality high and adverse human health and environmental effects, including social and economic effects, to EJ populations.

The goal is to avoid, minimize, or mitigate those effects on EJ populations and ensure the full and fair participation of the EJ communities in the transportation decision making process. The PSA is not located within EJ populations according to the Environmental Protection Agency (EPA) Environmental Justice Screening and Mapping Tool (EJScreen). The PSA is located within three census block groups, and all three have lower percentages of Low-Income (LI) and People of Color (POC) than Montgomery County. Montgomery County's LI percentage is 15 and POC percentage is 25.

Block Groups located within the project PSA:
Block group: 4204912070014 LI: 1%, POC: 7%
Block group: 4204912070011 LI: 0%, POC: 13%
Block group: 4204912070013 LI: 8%, POC: 7%
The EJ Block groups are not displayed on **Figure 2.*

d. Community Facilities

Properties surrounding the area and immediately adjacent to the PSA were investigated for community facilities. The community facilities are displayed on **Figure 2**.

1: Grand View Health Primary Care Lederach (658 Harleysville Pike Suite 120)

2: Advent Lutheran Church (470 Landis Road)

5. Sensitive Wastes

Potential sensitive waste sites were identified through the review of PADEP's GIS datasets, including Captive Hazardous Waste Operations, Commercial Hazardous Waste Operations, Land Recycling Cleanup Locations, Municipal Waste Operations, Residual Waste Operations, and Active and Inactive Storage Tank Locations. PADEP eMapPA and DEP's ESA Viewer were also reviewed to identify potential hazardous waste locations. Potential sensitive waste locations are shown on **Figure 2.**

a. PADEP Hazardous Waste Sites

There is one PADEP regulated facility located within the PSA, an active land recycling location. The Dennis Fish Landscape Design and Contractor facility is an active cleanup location due to soil contamination. It is located at the corner of Harleysville Pike (S.R. 0113) and Morris Road, 698 Harleysville Pike. As the project progresses and the scope of work is finalized, further studies may be necessary.

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b. Federal EPA Sites

There are no federally regulated EPA sites located within the PSA. There are multiple located outside of the PSA and as the project progresses and the scope of work is finalized, further studies may be necessary.

A Phase I Environmental Site Assessment (ESA) may be required. This would include a more in-depth evaluation of the regulatory records, site reconnaissance, a PADEP File Review, and review of historic land use (including review of historic aerial photographs and historic topographic maps). A Phase I ESA would discern if any sites would adversely affect the project, and recommendations would be made regarding additional studies or testing that should be completed as part of a Phase II or Phase III ESA to adequately address the waste related concern(s).

6. Summary

Anticipated investigations and coordination needed to further progress multimodal connection studies include the following:

- Wetland and Waterways Investigation
- Threatened and Endangered Species agency coordination
- Cultural Resources (Section 106) Coordination and Review for Above-Ground Resources
- Section 4(f)/Section 2002 Evaluation/Coordination
- Phase I ESA/Field Reconnaissance

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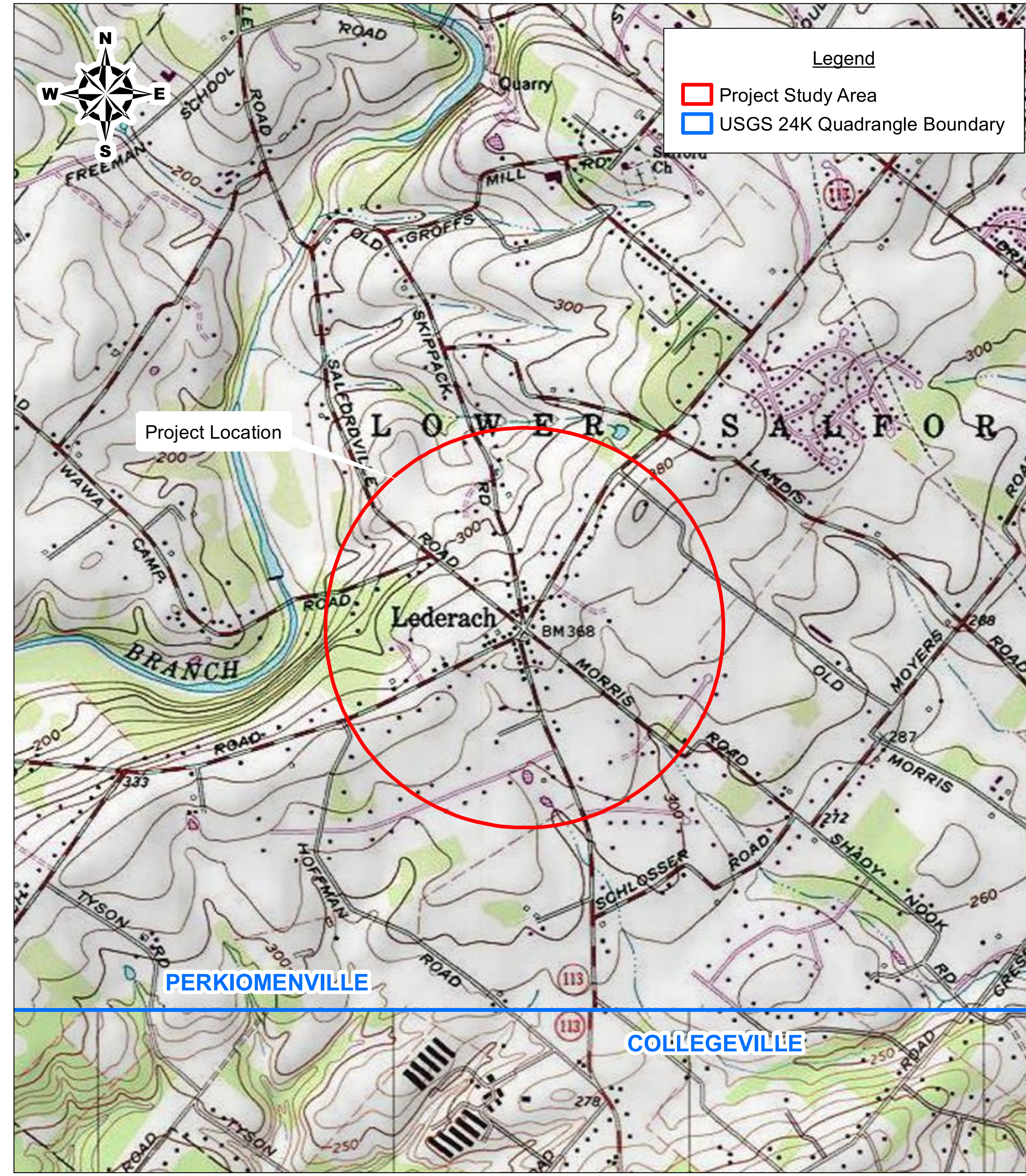
Appendix A

Figure 1 – Project Location Map

Figure 2 – Natural Resources and Manmade Environment Mapping

Figure 3 – Above-Ground Historic Resources Mapping



Basemap Source: Perkiomenville and Collegeville, PA Quadrangles, USGS Copyright:© 2013 National Geographic Society, i-cubed

0 1,000 2,000 4,000 6,000 Feet

SCALE: 1 inch = 2,000 feet

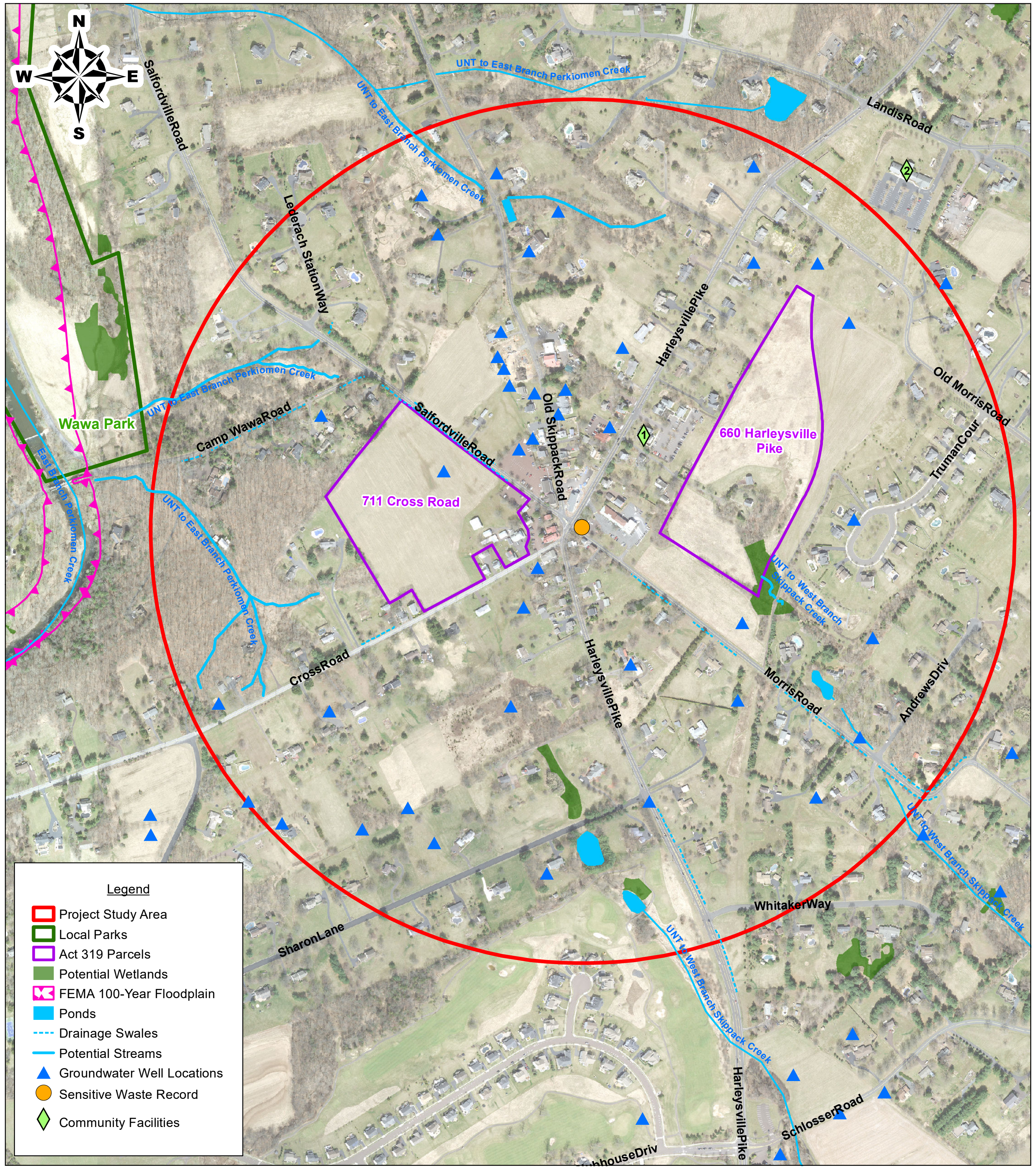
DATE: February 2023

PREPARED BY: NTM Engineering, Inc.

PREPARED FOR: McMahon, a Bowman Company

Figure 1 - Project Location Map

Walkable Lederach Feasibility Study
Lower Salford Township, Montgomery County, Pennsylvania



0	350	700	1,400	2,100 Feet

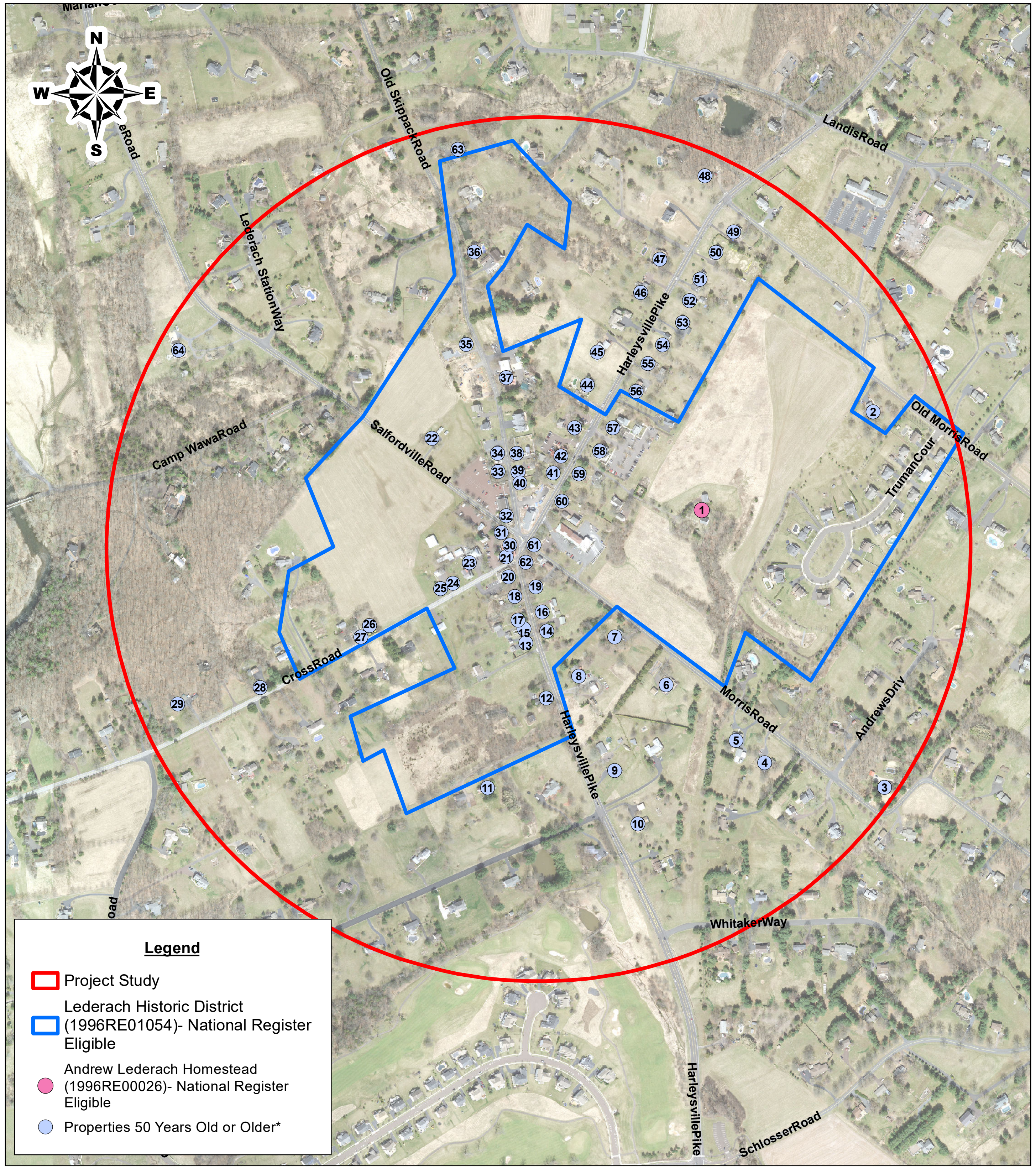
SCALE: 1 inch = 700 feet | DATE: February 2023

PREPARED BY: NTM Engineering, Inc.

PREPARED FOR: McMahon, a Bowman Company

Figure 2 - Natural Resources and Manmade Environment Mapping

Walkable Lederach Feasibility Study
Lower Salford Township, Montgomery County, Pennsylvania



* : The list of properties 50 years old or older is included in Attachment B.

0	350	700	1,400	2,100 Feet

SCALE: 1 inch = 700 feet | DATE: February 2023

PREPARED BY: NTM Engineering, Inc.

PREPARED FOR: McMahon, a Bowman Comapny

Figure 3 - Above-Ground Historic Resource Mapping

Walkable Lederach Feasibility Study
Lower Salford Township, Montgomery County, Pennsylvania

Appendix B

Above-Ground Historic Properties Table

Walkable Lederach Feasibility Study
Properties 50 Years Old or Older
Attachment B

Property Number	Property Address
1	444 Old Morris Road
2	395 Morris Road
3	430 Morris Road
4	440 Morris Road
5	450 Morris Road
6	478 Morris Road
7	744 Harleysville Pike
8	756 Harleysville Pike
9	690 Harleysville Pike
10	743 Harleysville Pike
11	729 Harleysville Pike
12	721 Harleysville Pike
13	724 Harleysville Pike
14	717 Harleysville Pike
15	718 Harleysville Pike
16	713 Harleysville Pike
17	709 Harleysville Pike
18	693 Harleysville Pike
19	703 Harleysville Pike
20	701 Cross Road
21	711 Cross Road
22	711 Cross Road
23	715 Cross Road
24	721 Cross Road
25	731 Cross Road
26	739 Cross Road
27	759 Cross Road
28	771 Lederach Cross Road
29	503 Salfordville Road
30	507 Salfordville Road
31	508 Old Skippack Road
32	514 Old Skippack Road
33	520 Old Skippack Road
34	542 Old Skippack Road
35	555 Old Skippack Road
36	531 Old Skippack Road
37	519 Old Skippack Road
38	513 Old Skippack Road
39	509 Old Skippack Road
40	685 Harleysville Pike
41	681 Harleysville Pike

Walkable Lederach Feasibility Study
Properties 50 Years Old or Older
Attachment B

Property Number	Property Address
42	675 Harleysville Pike
43	659 Harleysville Pike
44	651 Harleysville Pike
45	635 Harleysville Pike
46	625 Harleysville Pike
47	601 Harleysville Pike
48	604 Harleysville Pike
49	610 Harleysville Pike
50	616 Harleysville Pike
51	620 Harleysville Pike
52	626 Harleysville Pike
53	632 Harleysville Pike
54	638 Harleysville Pike
55	644 Harleysville Pike
56	654 Harleysville Pike
57	658 Harleysville Pike
58	666 Harleysville Pike
59	674 Harleysville Pike
60	698 Harleysville Pike
61	706 Harleysville Pike
62	571 Old Skippack Road
63	611 Salfordville Road

APPENDIX B
Public Feedback

PUBLIC MEETING #1

WALKABLE LEDERACH

June 15, 2023

The first public meeting took was hosted at the Lower Salford Township Municipal Building on June 15, 2023 from 6:30 - 8:30 PM. The event was structured in an open-house-style format where attendees were invited to visit stations with boards explaining various aspects of the plan and work that had been done to create the initial set of improvements for the Village Core, Gateways, and Edge project areas. More than 85 people attended the open house representing the members of the local community as well people from nearby areas who spend time within the village.

Many of the stations included interactive elements where participants were asked to provide their insights on the existing conditions within the community and feedback on elements of the plan. Members of the project team and steering committee were on hand at each station to answer questions and engage in meaningful discussion with participants. Materials from the open house were hosted on the township website including and interactive survey to allow those that were not able to attend in person to provide input on the interactive exhibits.

The following section provides a summary of key takeaways from participant input and conversations that was used to help refine and guide the further development of the plan.

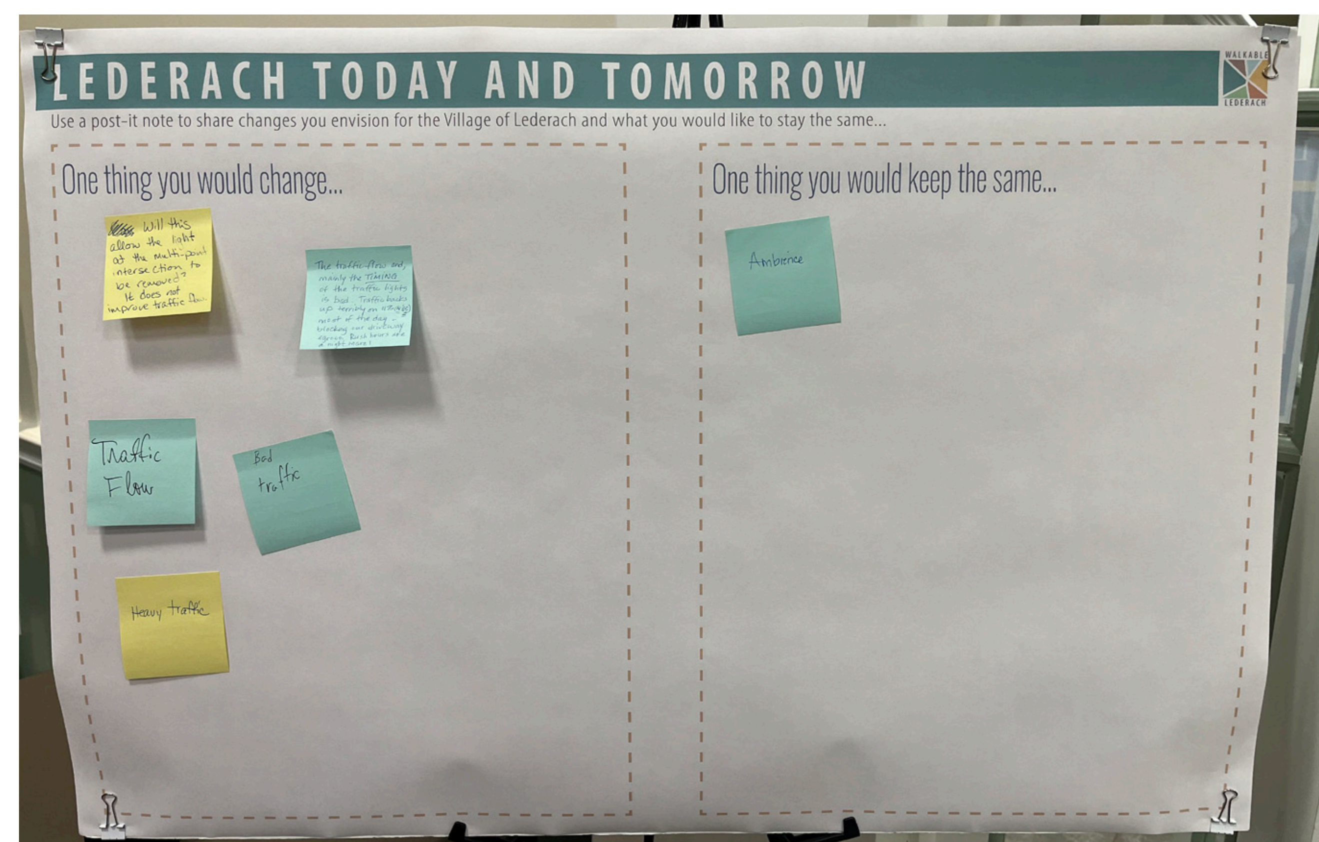
LEDERACH TODAY AND TOMORROW

One thing you would Change

- Will this allow the light at the multi-point intersection to be removed? It does not improve traffic flow.
- The traffic flow and mainly the TIMING of the traffic lights is bad. Traffic backs up terribly on 113 (NB&SB) most of the day - blocking our driveway egress. Rush hours are a nightmare!
- Traffic Flow
- Bad Traffic
- Heavy Traffic
- Encourage USPS to close, or normalize hours of, the Post Office branch so that it is more usable. Create a closed cul-de-sac at the end of Morris Rd, thus eliminating ingress/egress at the 5-point intersection (it's not like it would be left 'inaccessible'). Discourage high-density housing development in favor of the more environmentally friendly open/green spaces. Add a walk/bike path behind existing buildings to keep it safely separate from the major roadway (Rt 113).
- I would like to see the proposed bypass implemented.
- Traffic lights are a huge problem!!! Late in the afternoon one can't travel North on Route 113. Most traffic is trying to turn onto Salfordville Pike and traffic backs up sometimes all the way to Lederach Golf Course. If traveling South on Route 113 at all times of day cars going North run that light to turn onto Salforville Pike and traffic going South can't see them. I have seen some accidents almost happen. That includes both cars and trucks.
- Get rid of the huge traffic lights at 5 points. Get the trucks off 113 and Cross road.
- Reduce traffic! Get the 18 wheelers off of Cross Road!
- The five point intersection in Lederach gets a lot of traffic and it is an awkward intersection. I'd like to see less traffic there and I am hoping the relocation of Route 113 would help achieve that.
- Remove the one way between the Bay Pony and the old post office.
- Traffic light takes too long. If 113 is relocated, maybe change Lederach intersection where traffic light is. Maybe traffic circle will work there.
- Parking
- The efficiency of the light at the intersection. It is not synced correctly.
- The traffic back up at the 5-points intersection. The timing of the light is off and does not allow enough time for the 113 traffic, especially during the morning and evening rush, but also at other times of the day. It is hard to get out of our driveway to turn left much of the time. Can this be made a "smart light" for off-peak (like the light on Rt. 23 and Matson-Ford Rd. in Conshohocken)? In addition, the traffic needs to be calmed and SLOWED DOWN at the intersection and leading up to it! Also, we do NOT want street lights on 113! It is a residential area and would cause excessive light pollution and disturb both our sleep and worsen the insect die off, which has been called an 'insect apocalypse'. It is very bad for fireflies, which have been declining, largely because of light pollution that is mostly unnecessary.

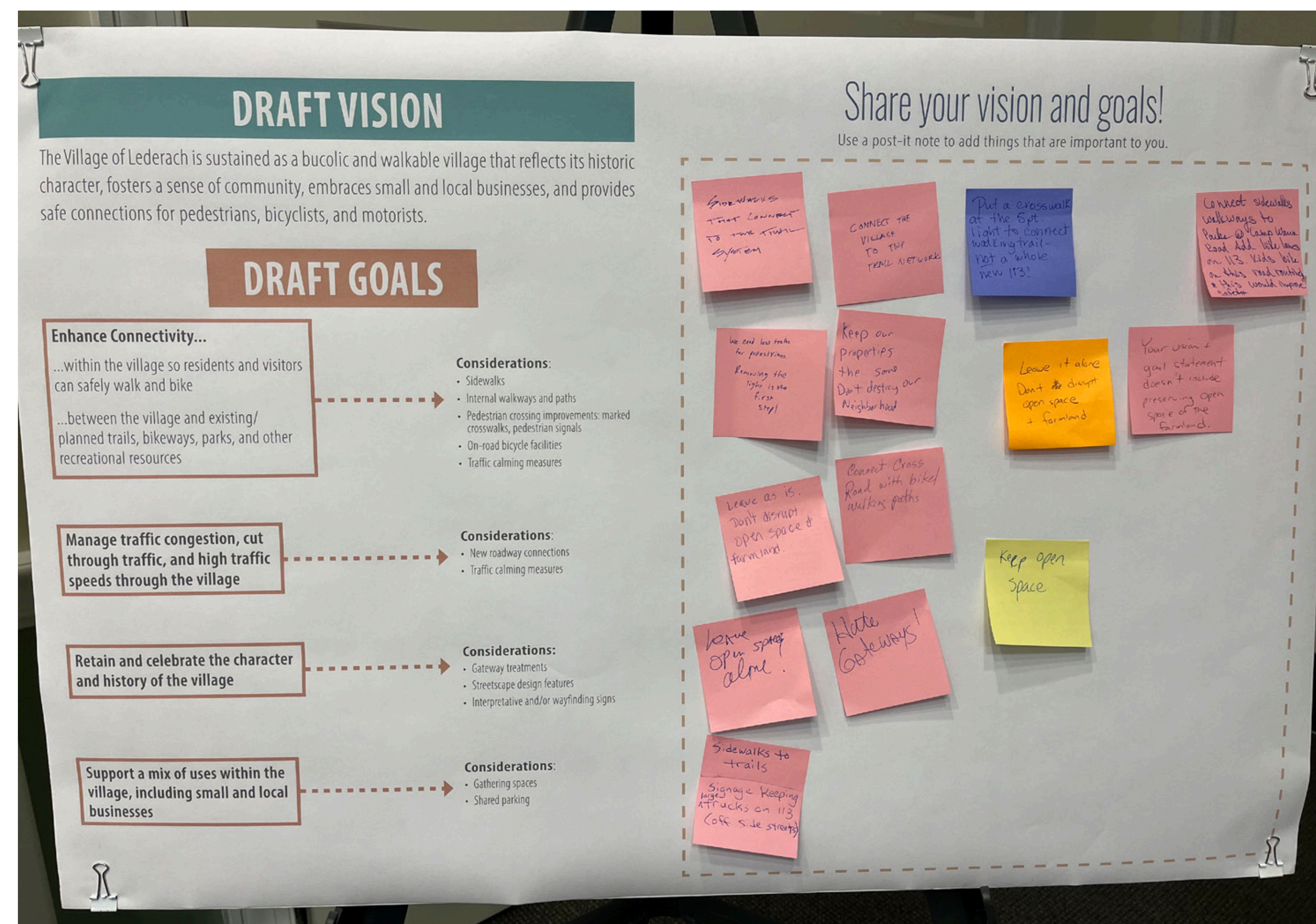
One thing you would keep the same

- Ambiance
- Lovely, rural-like settings of the existing historic buildings.
- Keep the quaint Village feeling. Every time of the year we come home from being away, driving through the village is a beautiful site. The large colorful trees in the Fall to the snow covered branches in the Winter.
- Its former quaint, village nature.
- I like some of the older buildings like the Bay Pony Inn and where the new Lederach Piano Bar. I'd like to keep the charm of the older structures.
- The light
- Historic buildings
- The character. The piano bar took away from some of that with the recent renovation
- The historic character of the Lederach Village around the intersection. It would be great to have a small pocket park there with some benches, a shade tree and a historic sign, explaining the history. A good place might be in between the two buildings next to the Lederach Piano Bar (across from the Bay Pony). It used to be open there until recently, when a shop owner put up a fence. Can this be removed to reveal views of the village center? This could also help bring more visibility and foot traffic to the businesses located there.



SHARE YOUR VISION AND GOALS

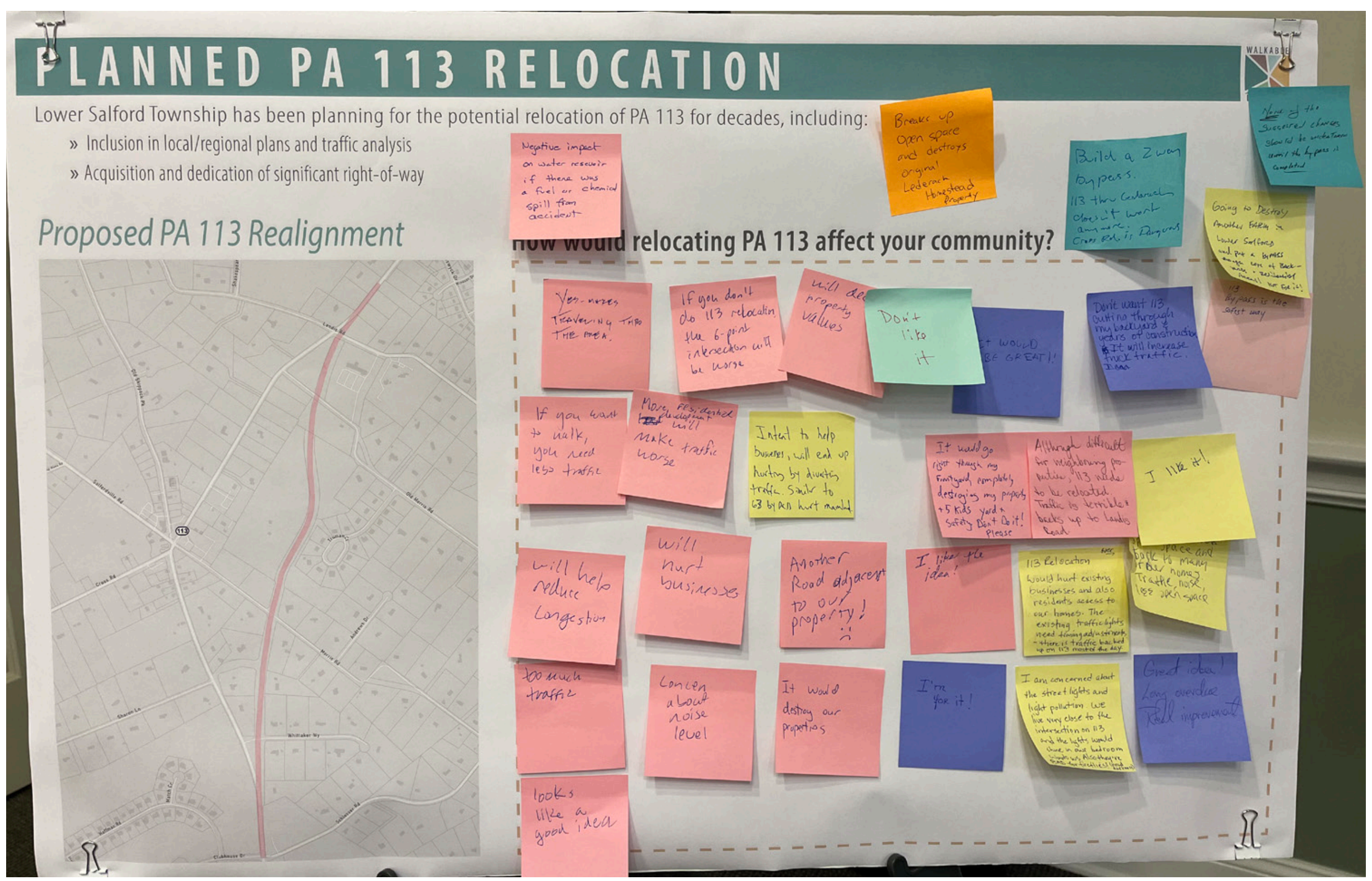
- Sidewalks that connect to the trail system
- We need less traffic for pedestrians. Removing the light is the first step!
- Leave as is. Don't disrupt open space and farmland.
- Leave open space alone.
- Sidewalks to trails. Signage keeping large trucks on 113 (off side streets)
- Connect the village to the trail network.
- Keep our properties the same, Don't destroy our neighborhood.
- Connect Cross Road with bike/walking paths.
- Hate Gateways!
- Put a crosswalk at the 5-point light to connect the walking trail - not a whole new 113
- Leave it alone - Don't disrupt open space + farmland.
- Keep open space
- Your vision + goal statement does not include perserving open space of the farmland.
- Connect sidewalks and walkways to parks at Camp Wawa Rd. Add bike lanes on 113. Kids bike on this road routinely and this would improve safety.
- Separate walk/bike lanes completely from the roadway. Who in their right mind is going to take their kids for a bike ride on Rt 113? Look at how badly the Rt 202 'improvements' are coming out for the residents that have to live with it (super high speeds because drivers are generally lawless anymore, bike lanes that have traffic lanes crossing over them for right turns, no shoulder for residents to safely view traffic prior to exiting their own driveways). FYI, also, pedestrian-scale lighting can negatively impact the vision of drivers on the actual roadway.
- Lederach is a village of many century-old buildings. There is no room for sidewalks, on street parking etc. All buildings are currently on the edge of the road. Seems the village will change dramatically.
- Any sidewalks, foot paths and/or shared Use Path ect. should extend to the proposed Gate Way. If not the are paths going nowhere. The Shared Use Path and or -----future path should be on BOTH side of the proposed bypass. This would make it more useful visitors and residents
- After making Lederach "walkable" and seemingly draw more people to the village, what is your plan for increased security? Montgomery County is becoming more like Philadelphia.
- I'd love to see something done to that awkward structure that was placed immediately next to the Bay Pony Inn when Old Skippack Road became one-way coming from Route 113. Right now it is a slab of concrete. If there is a way to make it more visually appealing for Lederach, that would be nice.
- Stop all the high density developing in Lower Salford Twp
- I think 113 relocation is a great idea. I do not think existing 113 should be one way through Lederach and there should not be on street parking. Not many people like parallel parking, and the street is not wide enough.
- Seems like there are way better things to spend money on than trying to boost the revenue of the piano bar and bay pony inn. Love the bay pony inn, but it's fine as it is.
- The idea of a walkable lederach for a few business does not make economic sense.
- More biking and walking/hiking trails would be great! They would get a lot of use. Bikers ride on the roads here, already, but there are no shoulders and can get dicey. In addition to the above trail off Morris Rds. can a trail be added and expanded off of Salfordville and Old Skippack Rds.? Could a bike trial lane be added to Salfordville Rd. that connects with the short spur near the bottom of the hill and extended along the creek? That could then go over the bridge and cross the road to connect with the small park and trial on the other side along the Branch creek, near where the old stream ford used to be. The trail could be expanded along the creek to Groff's Mill Rd., too. It would be really great if a trail could be added, at some point, to connect with Upper Salford Park and the Perkiomen Trail, which are now connected, and which we and other neighbors use all the time.



HOW WOULD RELOCATING PA 113 AFFECT YOUR COMMUNITY?

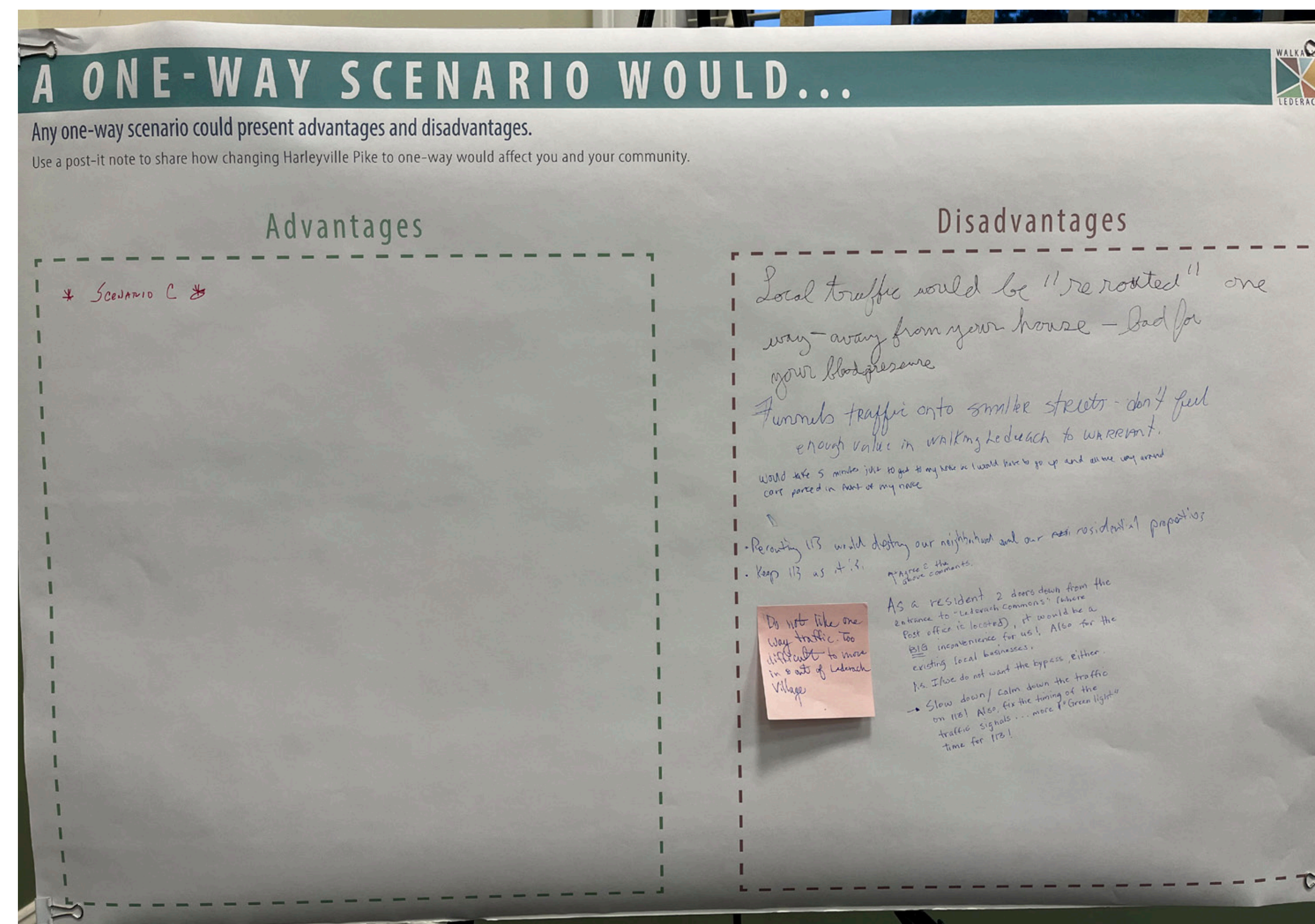
- Negative impact on water reservoir if there was a fuel or chemical spill from accident
- Yes - Makes traveling through the area,
- If you want to walk, you need less traffic
- Will help reduce congestion
- Too much traffic
- looks like a good idea
- If you don't do 113 relocation, the 6 point intersection will be worse.
- More residential development will make traffic worse
- Will hurt businesses
- Concern about noise level
- Will decrease property values
- Intent to help businesses, will end up hurting by diverting traffic. Similar to 63(67) bypass hurt mainland.
- Another road adjacent to our property! :(
- It would destroy our properties
- Breaks up open space and destroys original Lederach Homestead Property
- Don't like it
- It would be great!
- It would go right through my front yard, completely destroying my property + 5 kids yard+ safety. Don't do it! Please!
- I like the idea!
- Im for it!
- Build a 2way bypass. 113 through Lederach doesn't work anymore. Cross Rd is dangerous!
- Don't want 113 cutting through my backyard and years of construction. It will increase truck traffic.
- Although difficult for neighboring properties, 113 needs to be relocated. Traffic is terrible and backs up to Landis Rd.
- 113 Relocation would hurt existing businesses and also residents access to our homes. The existing traffic lights need timing adjustments - there is traffic backed up on 113 most of the day. Also, the proposed location of the bypass would go right through some of the nicest natural walking areas! There is a short trail there now; and many people walk along Morris Road, etc.
- I am concerned about the street lights and pollution. We live very close to the intersection on 113 and the lights would shine in our bedroom windows. Also, they're bad for fireflies! (need darkness)
- None of the suggested changes should be undertaken until the bypass is completed.
- Going to destroy another farm in Lower Salford, and put a bypass through lots of backyards + residential areas! Not for it!
- Bypass is the safest way
- I like it!
- Will cut through our neighborhoods, open space, back to many of our homes, Traffic noise, less open space.
- Great Idea! Long overdue. Real Improvement!
- I think it will be negative in many respects because: It will increase impermeable surface, leading to more needs for storm water management (since we don't see any 'old' roadways being removed - just adding more) It will likely lead to higher speed of travel on the 'new' section because there will not be the slowing for the light/curve at the 5-point. I'm sure we will see more congestion because more traffic lights will be added (under the illusion that this is 'traffic calming'). I don't think I understand why? Is this because we are jamming in some high-density housing, or because 'free' grant money is available and we need to spend it? I see the Bay Pony, Piano Bar, Dance Studio and Post Office... what else is there for someone to walk/bike to? I personally don't use any of those businesses (the post office is weird, the Bay Pony overpriced and pretentious, the Piano Bar - well I don't drink, and I don't take dance lessons) In the current economic climate, I just don't understand what dire needs we are addressing with all this potential expenditure.
- It would reduce the amount of traffic passing my house, increasing the safety for my family.
- Yes for over 40 years this has been a possibility but never passes as the owners of the property will not sell. Unless this happens, more and more danger will be coming to this intersection.
- The village would be safer/more enjoyable for home owners, businesses, pedestrians, automobiles and bikes. Because of all of the development and the light at 5 points (put in to our understanding when the bridges were out), the traffic is obscene. It could only enhance the village.
- It would be a vast improvement. Unless you get rid of the traffic at the 5-points intersection, a "walkable Lederach" is ridiculous!

- I love the idea of relocating Route 113 and allowing for Lederach to become more of a quaint little village. I live just outside of Lederach on Old Skippack Road so that will move Route 113 farther from my home and there will be less traffic. I suspect I may see a different kind of "traffic" in my neighborhood since the goal is to make Lederach walkable. There might be more pedestrians and people walking their dogs in my neighborhood.
- Would probably bring even more traffic
- It wouldn't
- I think it is a terrible idea as it would impact many homes in the area.
- Relocating PA 113 along the proposed route would ruin and bring a lot of traffic to what is now a very nice and quiet residential and recreational trail area. It is our walking, jogging and biking route, now. The trail off Morris Rd. now crosses our neighbor's property and connects with Old Morris Rd. and the development there. Could this trail be expanded and further connected to the rest of the trail system that goes through Alderfer Park and on into Harleysville and their existing trail system.



ADVANTAGES VS DISADVANTAGES OF ONE-WAY SCENARIO

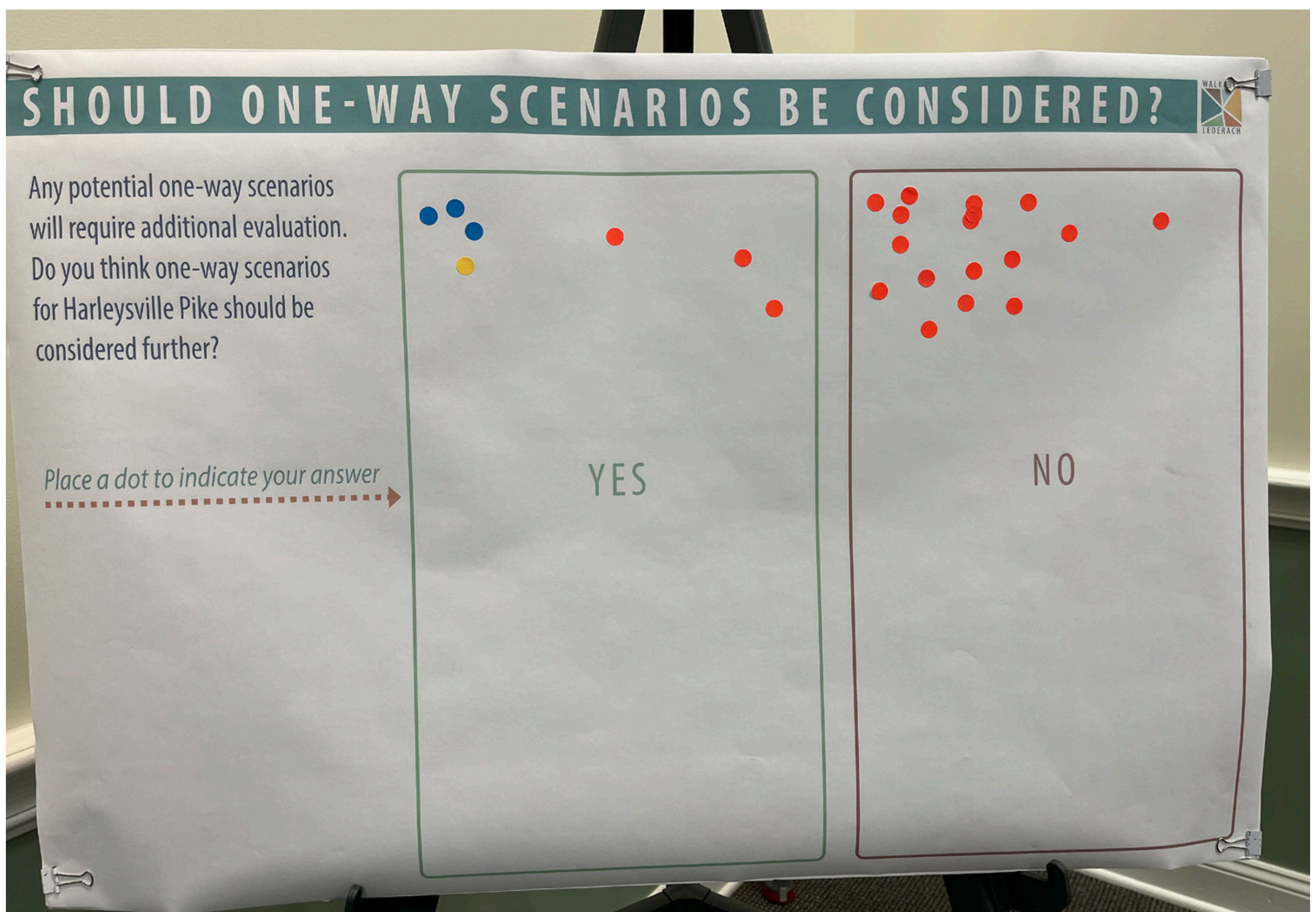
- Local traffic would be "rerouted" one way - away from your house - bad for your blood pressure
- Funnels traffic onto smaller streets - don't feel enough value in walking in Lederach to warrant.
- Would take 5 minutes just to get to my house because I would have to go up and all the way around cars parked in front of my house.
- Rerouting 113 would destroy our neighborhood and our residential properties.
- Keep 113 as it is.
- Agree with the above comments - As a resident 2 doors down from the entrance to "Lederach commons"(where post office is located), it would be a big inconveniece for us! Also for the existing businesses. P.S. I/We do not want the the bypass either. Slow down/Calm down the traffic on 113! Also, fix the timing of the traffic signals... more "Green light" time for 113!
- Do not like one way traffic. Too difficult to move in and out of Lederach Village.



SHOULD ONE-WAY SCENARIOS BE CONSIDERED?

Yes = 9

No = 24



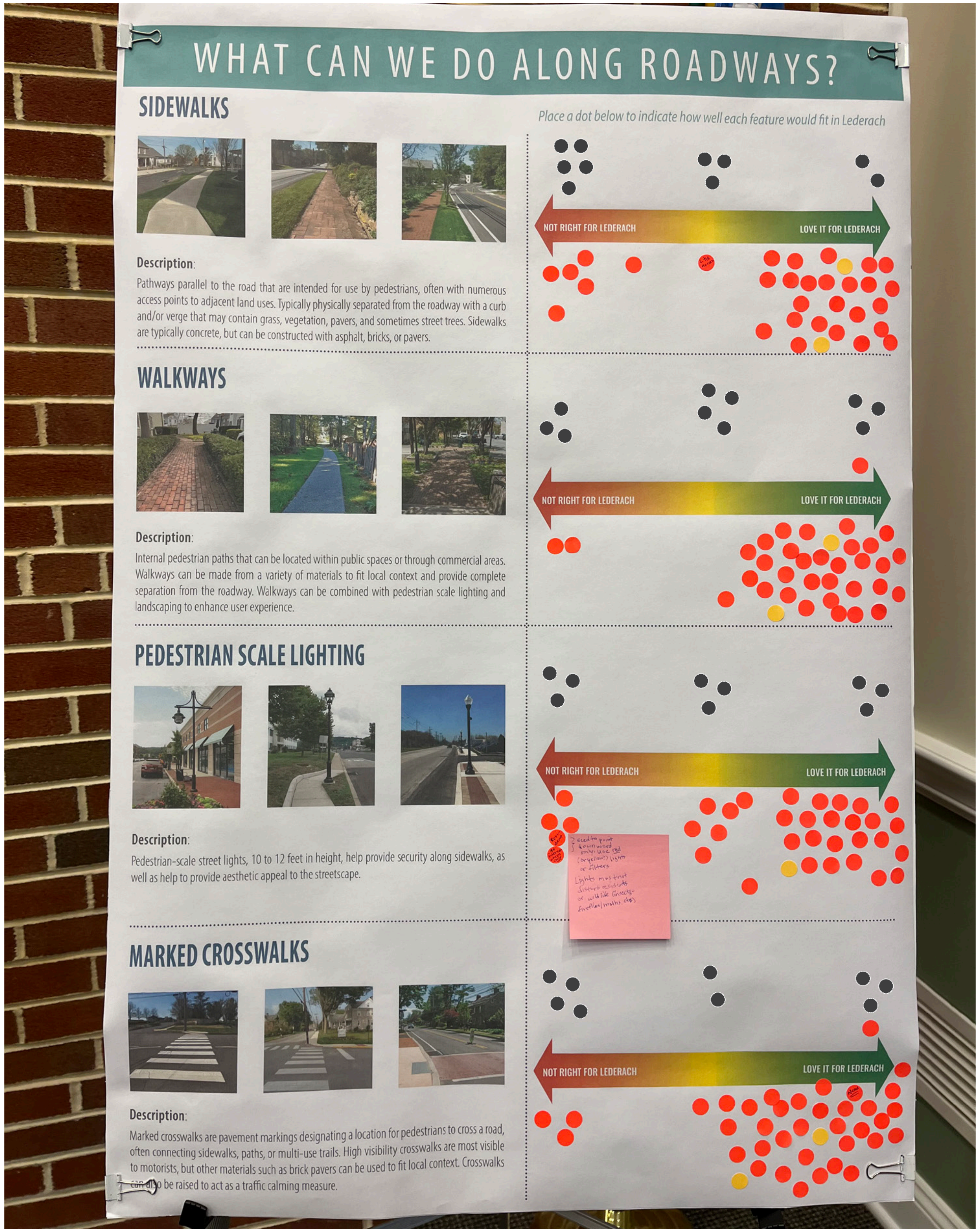
VILLAGE CORE POTENTIAL TREATMENTS

Participants were presented with a series of boards highlighting potential treatment option within the village core. Treatments were group into three categories:

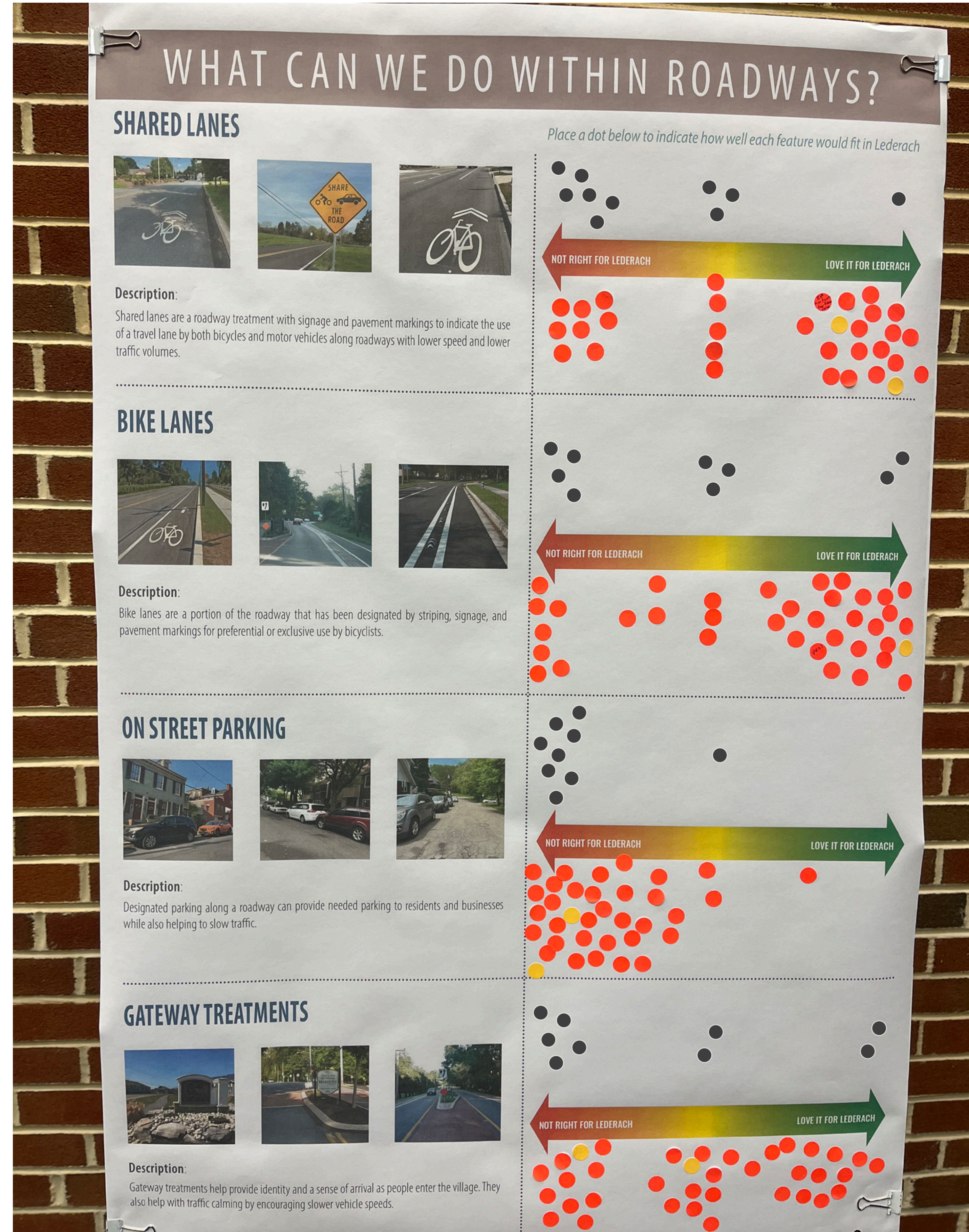
1. *What we can do along roadways*
2. *What we can do within roadways*
3. *How we can enhance user experience*

Participants were given a dot for each category and asked to place it on a scale from "Not right for Lederach" to "Love it for Lederach" based on how well they thought each would fit in the village. The following pages display the results from the public meeting as well as responses collected via the online survey (black dots).

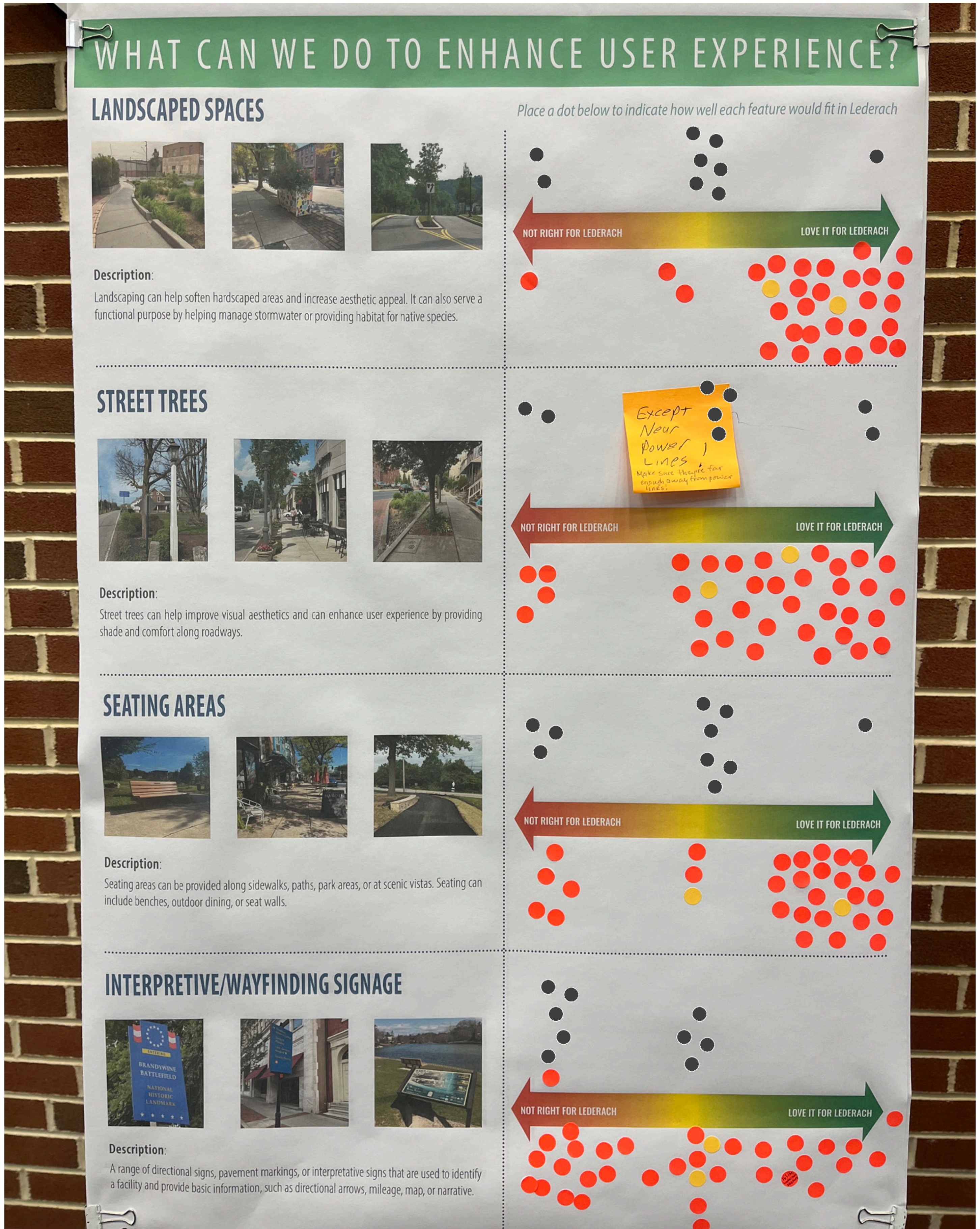
WHAT CAN WE DO ALONG ROADWAYS?



WHAT CAN WE DO WITHIN ROADWAYS?



WHAT CAN WE DO TO ENHANCE USER EXPERIENCE



COMMENTS ON VILLAGE CORE - POTENTIAL IMPROVEMENTS MAP

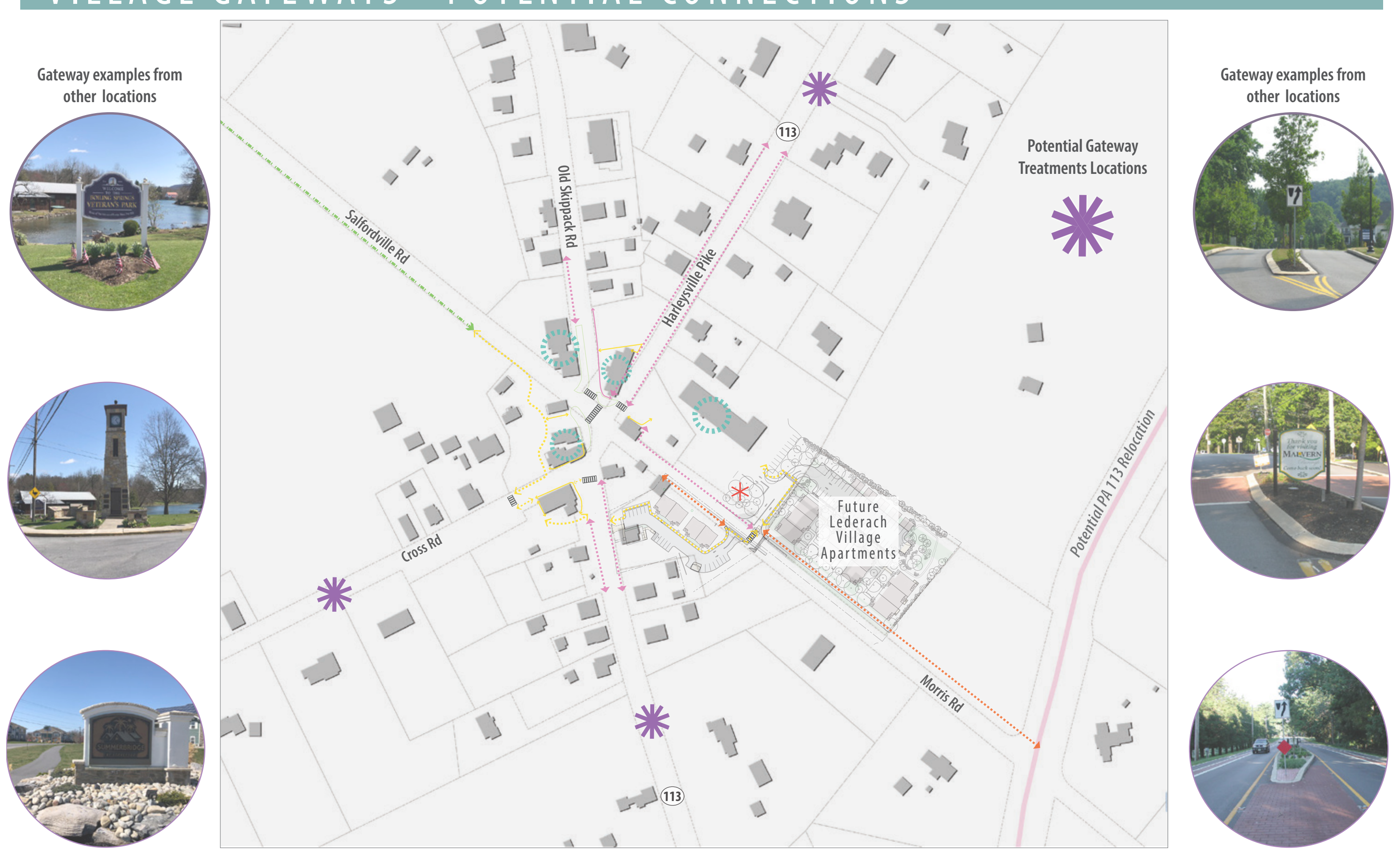
- The village core doesn't need to change much, there isn't enough present to warrant the changes in the presentation. The walkability only affects a few people and would not be worth the money that would need to be invested.
- The Village Core should be extended to the Proposed Gateways. This would make it a real village and offer the residents the ability to enjoy the village safely as well as visitors. Sides walks/foot paths etc. should extend to the Gateway or it is just inadequate and makes no sense!
- Part of the intent in plan seems to me to be drawing people from other areas for shopping and dining, kind of like a mini Skippack. Unless there is expansion for both, there simply is not enough of either. Expansion would destroy the village nature. BTW, the monstrosity that replaced the old corner store/ post office did much to destroy the village nature.
- Stop Developing
- That many crosswalks by traffic light will make traffic even worse if people have to wait for people to cross the road and can't drive.
- Fix Cross Road
- Not in favor of the changes

COMMENTS ON THE VILLAGE GATEWAYS - POTENTIAL CONNECTIONS MAP

- The village gateways seem like a waste of tax payers dollars. There doesn't seem to be a good reason to add the expense and upkeep cost
- Some minimal Village Gateway is good.
- Stop Developing
- Signs will be nice, but landscaped islands in the road will not be worth the expense to install and maintain.
- Do you really believe lederach will become walkable with skippack down the street?
- Not in favor of the changes

VILLAGE GATEWAYS - POTENTIAL CONNECTIONS

DRAFT - 6/15/23

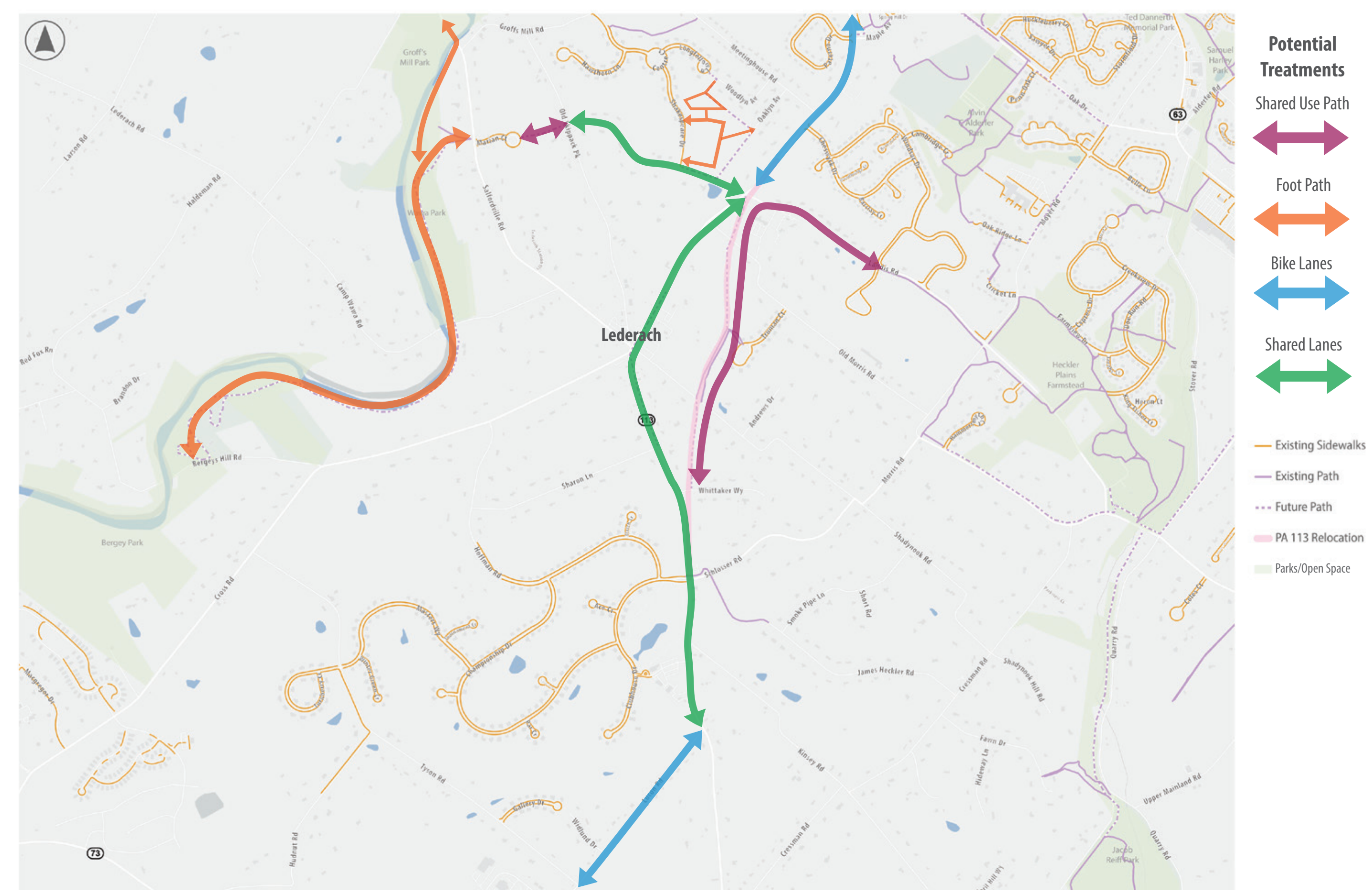


COMMENTS ON THE VILLAGE EDGE - POTENTIAL CONNECTIONS MAP

- If the bypass is added I do not see a reason to modify the existing road much. The bike paths and foot paths wouldn't be use as much by the residents of Lederach as they would by people out side of lederach that are just passing through. This would bring more unnecessary/unwanted people into our town, decreasing our safety and the safety of our children.
- I have concerns about labeling Landis Rd for "shared lanes". As someone who travels on this road daily (the section between Old Skippack Rd and the current Route 113), I can say that road is quite narrow. The road is curvy, doesn't have sidewalks, and I always have to be on the lookout for pedestrians and cyclists. There aren't even yellow lines on the road because even having two cars is a tight squeeze. That road needs to be widened. It's a hard road to share.
- Stop Developing
- Shared pathways through Lederach is great!
- Really?
- Not in favor of the changes

VILLAGE EDGE - POTENTIAL CONNECTIONS

DRAFT - 6/15/23



GENERAL COMMENTS

- Perhaps someone could share the "why" of this necessity of this whole plan. The one thing that grabbed me was the use of the ESG crap in the planning slides. Really, we are going to measure climate change in Lederach Village? Maybe it would help if we stop paving stuff.
- Adding the bypass would increase the value of our area, we wouldn't have to worry as much about the safety of our families as people wont be whizzing by at high speeds. Keeping the current 113 as a 2 way is a must, any of the one ways would majorly inconvenience the residence. Also the current 113 is a main artery for large farm vehicles, keeping this road 2 way would keep those vehicles off of the bypass. aside from the bypass, there really isn't a need to do much more upgrading of Lederach, it seems like the benefits would be minimal and the costs high.
- As a resident of the area, I must travel back roads to avoid the lights and traffic congestion. I have waited up to 15 minutes to get through the intersection traveling North. True shame this project was not done before the traffic lights and trucks were added!!!
- On the potential connections draft, there is a Shared Use Path on one side of the bypass (Harleysville side) and also a future plan down the middle of the bypass. For Village enhancement the path/paths should be on both sides or on the Lederach side. This way the visitors and residents are able to reap some of the benefits of a walkable village. They can loop on bike or foot the inside of the village perimeter.
- The very first step must be the relocation of R113. Without that, a "walkable" Lederach is crazy talk. No one wants to walk around an area with the likelihood of being run over by the likes of a Mascaro 18-wheeler roaring by.
- Stop allowing high density developments and start growing food on the farms!
- There are not many businesses in Lederach to be worth making it "walkable." Relocating 113 is a great idea, but there are not many businesses to walk to in Lederach. Also if existing 113 through Lederach is one way, then it will be much more difficult to get to existing businesses, and it will potentially hurt their business.
- Take care of the streets first
- I think adding attractive walkways with some benches and attractive, sustainable, low-maintenance landscaping would really enhance the outdoor spaces and invite pedestrians. Calming and slowing down the traffic and eliminating traffic back ups would also really enhance the village center.
- Attractive pedestrian walkways would be the best option in and round the village center with some nice landscaping, shade trees and some benches. There are beautiful views behind the Bay Pony restaurant from what is not the parking lot. Can part of this be set aside for a small viewing area near the existing shade trees along the bottom of the parking lot with some benches and low-maintenance perennials, like a pollinator garden, including milkweed and also other nectar plants for pollinators?

PUBLIC MEETING #2

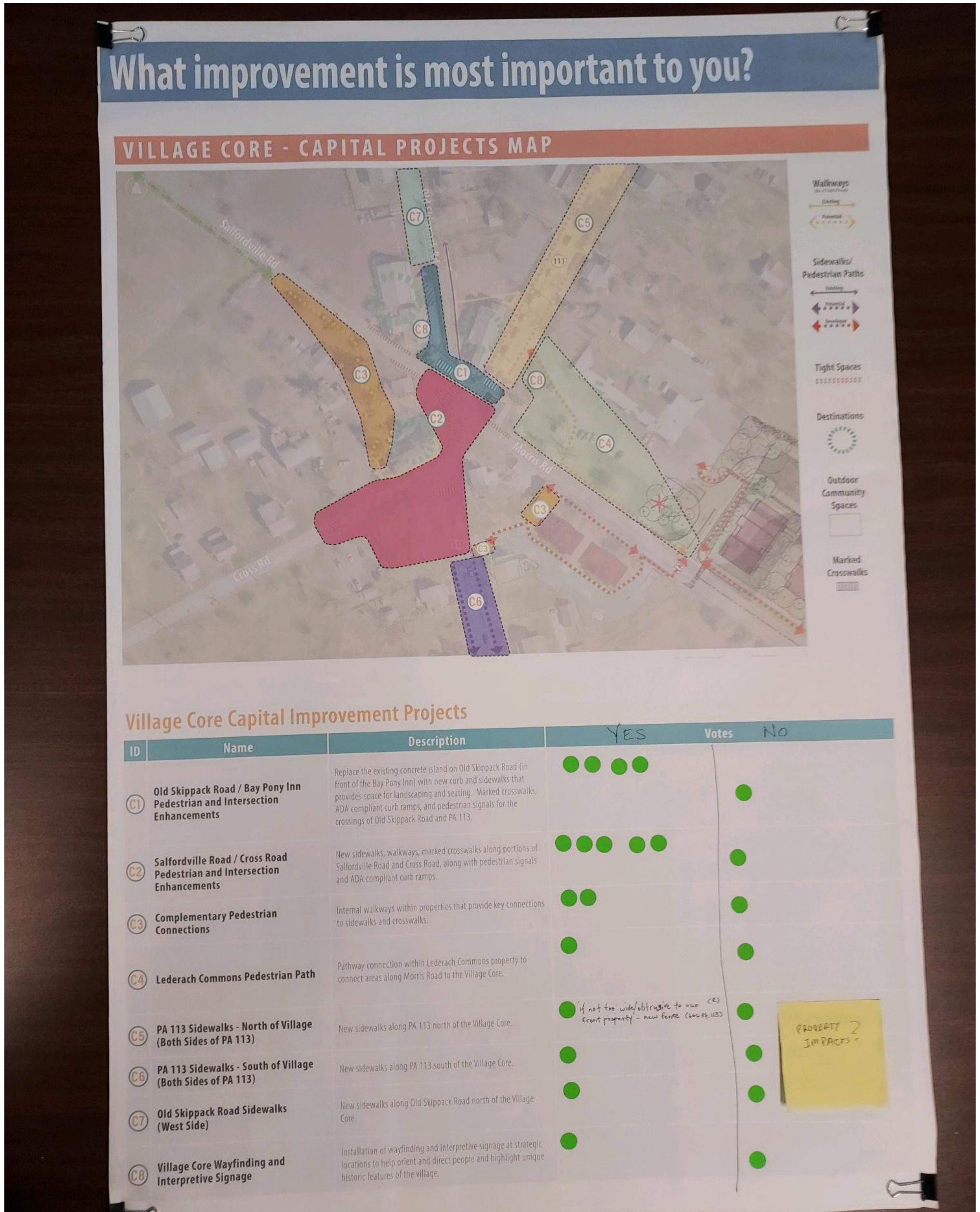
November 15, 2023

A second public meeting took was hosted at the Lower Salford Township Municipal Building on November 15, 2023 from 6:30 - 8:30 PM. The event was structured in a similar open-house-style format at the first public meeting and attendees were again encouraged to visit stations with boards explaining various aspects of the plan and work done to date including updates improvements for the Village Core, Gateways, and Edge project areas based on public and stakeholder feedback. More than 50 people attended the open house representing the members of the local community as well people from nearby areas who spend time within the village.

Like Public Meeting #1, many of the stations included interactive elements where participants were asked to provide their insights regarding feedback on elements of the plan. Members of the project team and steering committee helped guide participants through the various stations and were available to answer questions and discuss. Materials from the open house were hosted on the township website including and interactive survey to allow those that were not able to attend in person to provide input on the interactive exhibits.

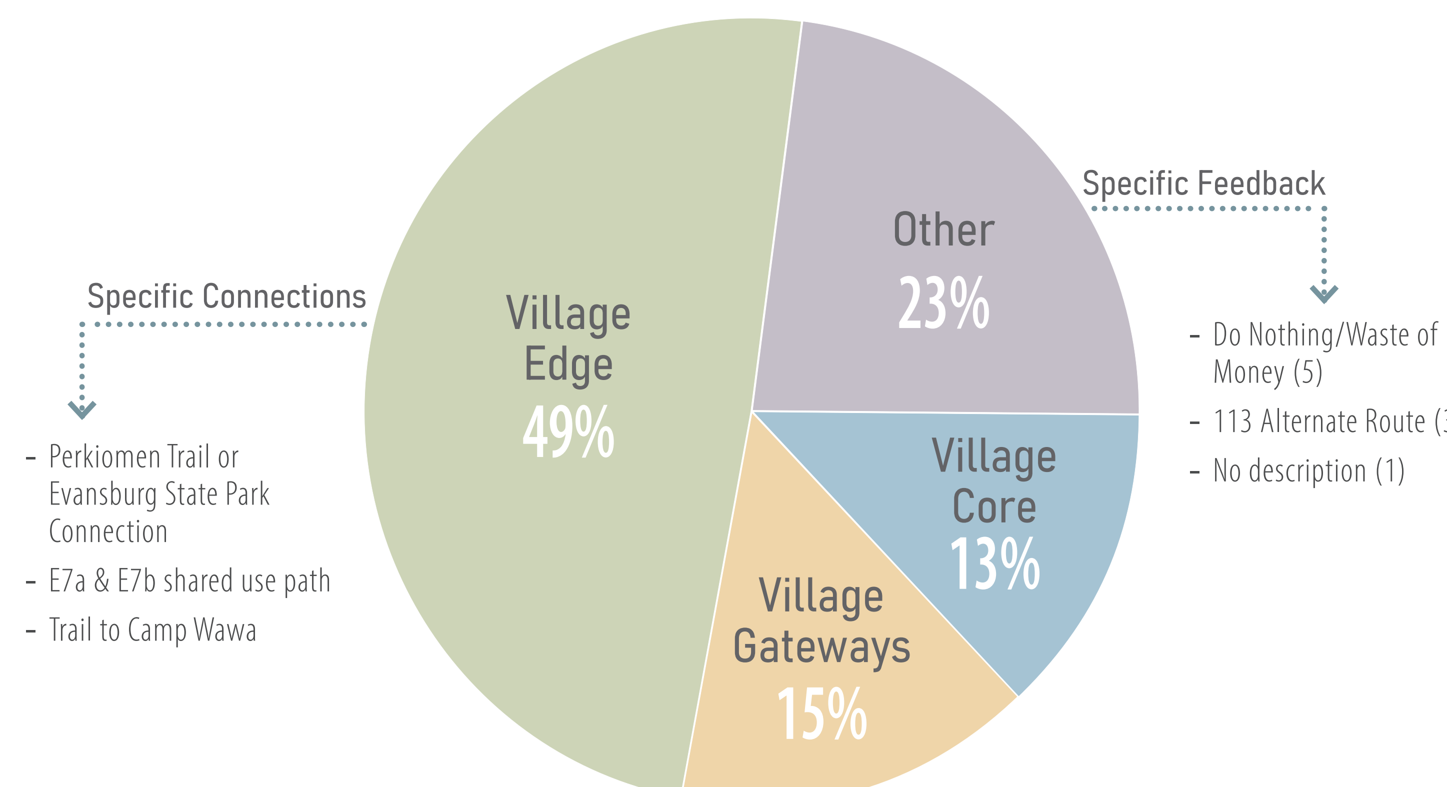
The following section provides a summary of key takeaways from participant input and conversations that was used to help refine and guide the further development of the plan.

WHAT IMPROVEMENT IS MOST IMPORTANT TO YOU?

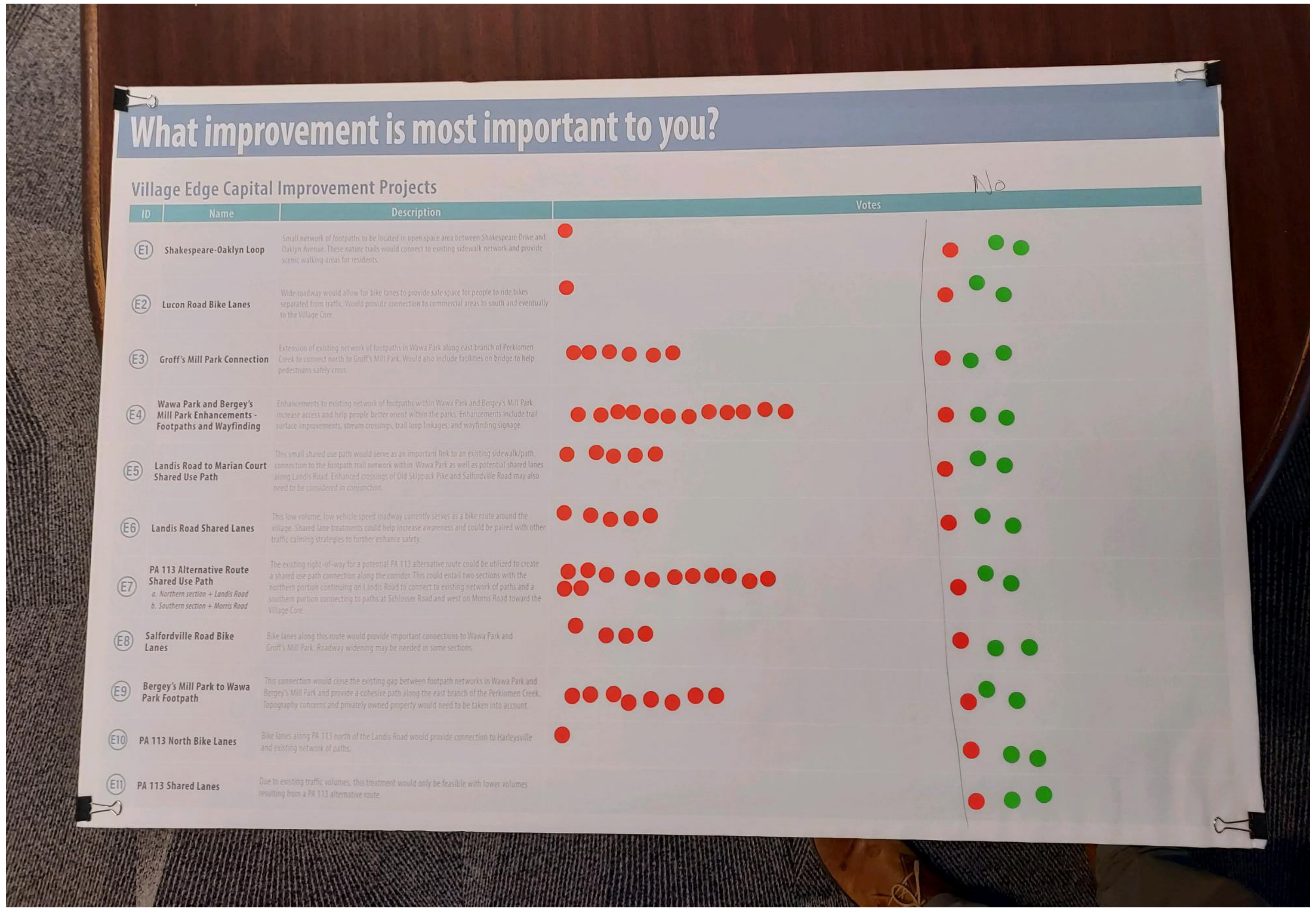


What We Heard...

Close to half of respondents indicated that they would prioritize improvements to the Village Edge with some pointing out specific connections they would like to see. Around a quarter of respondents chose "Other" and listed where they thought priority should be given.

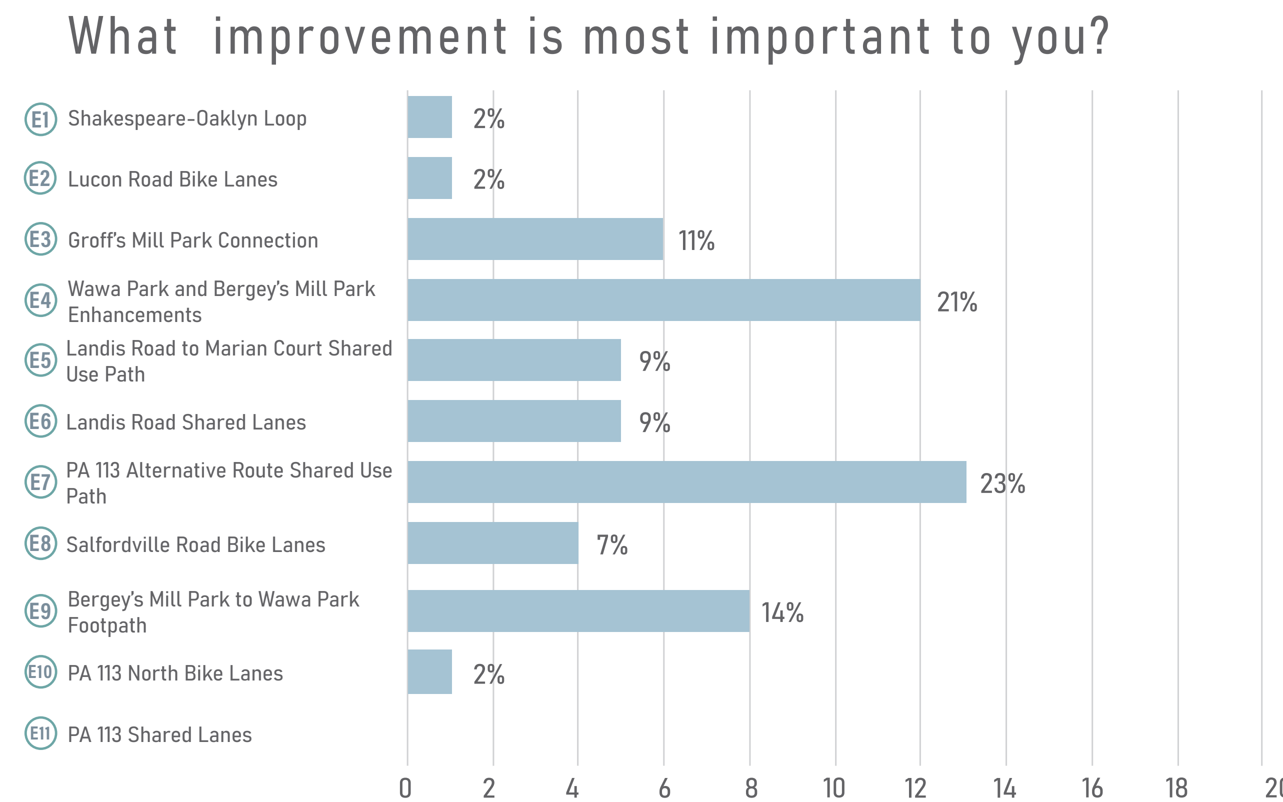


WHAT IMPROVEMENT IS MOST IMPORTANT TO YOU?



What We Heard...

During Public Meeting #2, participants were asked to prioritize projects by voting on which edge connections they felt were most important. E7 - PA 113 Alternative Route Shared Use Path received the most votes (23%), followed by E4 - Wawa Park and Bergey's Mill Park enhancements(21%), and E9 - Bergey's Mill Park to Wawa Park Footpath (14%).



COMMENT FORM RESPONSES

Interest					Name	Address	Email	Comment
Live in Village	*Work in village*	*Own business or Property*	*Travel through*	*Other*				
					Dawn	611 Harleysville Pike	DLATAN926@gmail.com	- Not much possible without the bypass
X					Kelly Miller	Cheswyck		- The sidewalks + walkability will be a great asset to Lederach. The issue is it will cause more traffic and most likely pedestrian deaths. Less traffic (the bypass) would help alleviate the congestion and make Lederach desirable.
X					Bruce Rhoades	825 Clubhouse Drive, Harleysville	Brucerhoadespel@gmail.com	- Walking trails (Edge) should be a priority
			X	Live in the Lederach Golf Course	Clay Jones	727 Smokepipe Lane, Harleysville	sjones82@gmail.com	- I am concerned about the 113 bypass since the 6-point light was installed, crossing 113 from Schlosser to Clubhouse Dr became easier because traffic was placed in pockets. If the bypass is built, new complex lights would be needed at both Landis Road and Scholler/Clubhouse as well as just above clubhouse where the bypass rejoins PA 113. Without a light, access to the Lederach golf course would be more difficult affecting over 100 households in the community
			X	Also run regularly				- In advance of PA 113 Alternate, we should pursue E7 (Shared use paths from Schlosser to Landis along the already secured right of way) While all of these plans would be nice, with limited resources, this is the first thing that should be done and it fits within the township's vision of connecting its entire trail system.
			X					- "During the ""Open House"" time it was very hard to see and move around the displays because of the table. It would have been better if the information was spread around the room or in the foyer. - 113 Alternative Route and bike path should be #1 priority - 113 should not be one-way. That's too inconvenient. Traffic will be reduced with alternative route! - Spending money on brick sidewalks seems unnecessary. Regular sidewalk are okay - Roadside gateways unnecessary - Priority should be improving traffic, there are not enough businesses in Lederach that it needs to be walkable. There are only a couple ""destinations"" in the village. Improving the village edge will have the biggest impact and benefit for the most people. If some of the existing buildings in Lederach become ""destinations"" it might make more sense to spend money on the core, but now it is a waste of money. - The traffic light should be improved so it is not as long - Bike paths and ability to connect to parks and trails would be great"

Interest					Name	Address	Email	Comment
Live in Village	*Work in village*	*Own business or Property*	*Travel through*	*Other*				
			X	Live nearby	Timur Karimov		karimov.timur@gmail.com	- Include Old Skippack Rd into the project. Improve ability to use it as a bike/walk path. Using that road on a regular basis last 4 years.
			X		Pat Christoforette	690 Andrews Drive, Harleysville	adcpjc@comcast.net	- I love the idea of more sidewalks. I cannot walk anywhere on Morris anymore. I wish they could connect to other bike paths and trails. The area of the proposed alternate Route 113 would be a great trail path. It is a beautiful area and with all the houses since the road was proposed, I think it would make a great trail + safe walking + biking as opposed to a road. Also, the area of the alternate 113 would only take some of the Lederach traffic. The numbers coming from Salfordville Rd across to Morris is growing constantly and alt 113 will not help that traffic.
								- Remove traffic signal. No sidewalks. Want crosswalks loves trails. Remove 18 wheelers from Cross Rd.
			X					- Making Lederach "Walkable" seems to be a waste of a lot of money. There are not many businesses in Lederach right now. The village edge should be the priority. The alternate 113 will be great for traffic. Even with the traffic light in Lederach it is still difficult with so many roads at the itersection. Avoiding the village will be quicker to travel along 113
			X					- The six point intersection needs to be improved, but the priority should be the alternate 113. That will greately reduce traffic through the village, which should continue to be two way traffic.
X					Mary Slemmer	PO Box 194	MRSlemmer@aol.com	- I believe it will be hard to make Lederach walkable until the bypass is built and the traffic (trucks) are rerouted out of the village.
X								- I am not interested in wasteful spending. - I am not interested in the economic development planned for with the Lederach Walking Plan - During the past two meetings, there was not an option to vote "no" to the entire project. I would request that option for voting the next time. - Please open the floor to public comment at the next meeting. - All supervisors who will be voting on the project should be present to hear their constituents.
X								- Alleviate and improve traffic flow through the village. We do not think a "Walkable Lederach" is feasible or needed unless more shops and retail businesses of interest are brought to the village. Our biggest concern in the traffic which will probably get worse with more interest to Lederach! Unfortunately!

X					Lisa Kern	674 Harleysville Pike	aslinrek@aol.com	Hello- We have lived in the Village of Lederach at the five-point intersection for 24 years. Our house was built in 1830 and sits VERY close to Harleysville Pike aka Route 113. In the years that we have lived here, traffic moving through our village has increased exponentially. While the traffic light has reduced the number of accidents, it has created almost a parking lot outside of our house. Most times, we are unable to make a left turn out of our driveway at all, and traffic backs up horribly in both directions of Route 113. This backup has brought with it impatient noisy drivers who love to beep their horns and yell as well as exhaust fumes that come right into our house from idling vehicles and trucks. The fumes and dirt negatively impact my severe asthma. All of this is majorly disruptive for those of us living so close to the road. I work from home full-time, and my office is literally ten feet from the street. During Zoom meetings and conference calls, people ask me if I am outside because the traffic is so loud. It is our experience that any improvements here in the center of the village to encourage foot traffic will not be feasible until/unless the Route 113 bypass is built. Pedestrians trying to navigate the heavy traffic will only add to the lengthy delays in moving traffic through the village. You would essentially need to stop traffic in all directions for pedestrians to cross the street due to several blind spots in the five point intersection. Additionally, putting a sidewalk in front of our house would mean the loss of our front bushes and trees which are the only buffer and privacy we have from the street noise and dirt. With the bushes gone, our front porch would literally be next to the sidewalk, further reducing the little bit of privacy we have currently. We're sure that our other neighbors with homes close to the road would agree on this point. While we appreciate the idea of a cute village atmosphere with interesting shops and stores within walking distance, we cannot see that happening in Lederach without the construction of the bypass. It *would* be nice to have a sidewalk down Morris Road from Lederach Commons to the paved walking trail. A sidewalk would enable people in Lederach and in the housing development behind the walking trail to be able to walk safely since Morris Road has now become a popular route for through-traffic. In summary, please do your best to get the bypass built before proceeding with "improvements" to this congested area which would further negatively impact the traffic flow and our experience as residents. Thank you, Lisa Kern

X					Dan Kern	674 Harleysville Pike	mach1dan73@yahoo.com	1. Absolutely nothing can be done if it hinders traffic flow AT All. It is already way out of control and people are pissed off by the time they get to the light. Three to four cycles of the light are not uncommon before traffic can pass through the intersection. The bypass must be built first I 40 years ago when almost no one used Route 113/Harleysville Pike, it was recognized as a problem. Since then, thousands more people now use it. 2. The intersection is too wide and has blocked views from all directions for foot traffic. You would have to stop traffic from ALL directions for someone to cross any of the branches of the intersection. 3. Who is going to pay for the sidewalks to nowhere? 4. Route 113 does not have sidewalks from Route 63 to Skippack. Why would you put them in the most restricted area of Route 113? 5. The few people and businesses that would benefit from Walkable Lederach are far outweighed by the inconvenience and expense of the vast majority of us. 6. Most businesses are destination businesses, not the casual walk by and walk in variety. People will need to drive to them anyway. 7. The bushes in front of my house would need to be removed along with some trees to install a sidewalk. People using the sidewalk would literally be able to place their hands on my front porch railings as they walk by. This is not acceptable to me. The bushes are our only protection from the noise and dirt generated by people stuck at the traffic light. 8. Gateways are useless. The problem is not the speed of cars entering the village; it's that they are stopped because of traffic and the long light cycles. Then people get mad and become aggressive. 9. Allowing the proposed apartments on Morris Road to exit to Route 113 via Lederach Commons does not make sense. The apartments should exit onto Morris Road. People exiting from Lederach Commons onto Route 113 already behave as if they have the right-of-way, and adding more traffic from the apartments would make this much worse and more dangerous. Thank you, Dan Kern

EMAIL COMMENTS

1. I am not interested in wasteful spending.
2. I am not interested in the economic development planned for with the Lederach Walking Plan
3. During the past two meetings, there was not an option to vote "no" to the entire project. I would request that option for voting the next time.
4. Please open the floor to public comment at the next meeting.
5. All supervisors who will be voting on the project should be present to hear their constituents.

Alyssa Picard

To whom it may concern:

I am writing with concerns about this proposed new road. If built, it would essentially make our home an island surrounded by 113, cars and traffic. Please do not allow that to happen. Please also include me in the mailings for the meetings about this proposed new road. I have been told neighbors have been getting the letters, yet I have not. Thank you for your attention to this matter. I look forward to hearing from you soon.

Sincerely,

Mary Eckert
499 Old Morris Road
Harleysville, PA 19438
215-513-2927

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1. I am not interested in wasteful spending.
2. I am not interested in the economic development planned for with the Lederach Walking Plan
3. During the past two meetings, there was no option to vote "no" to the entire project. I would request that option for voting the next time.
4. Please open the floor to public comment at the next meeting.

Mike Picard

Hello,

My name is David Wismer

I live just outside village at 441 Morris Rd. I would just like to express my comments regarding the proposed plan for the village. I believe this is a ridiculous proposal, including high maintenance features, "feel good" focal points and walkways to nowhere. Including gateways to what will be a deserted village should the bypass be constructed. Also, the absolutely ridiculous proposal of bike lanes, this is ludicrous! I live on a highly traveled bicycle route for avid cyclists in the township. These people do not need, nor will they use a dedicated bike lane for a 1/4 mile stretch in the village. I also believe the tail is wagging the dog here as far as getting the village proposal pushed through, and then the real fruit gets picked which is the bypass construction. As we all know, this would be a huge contract for the oversight and development of this proposed roadway. On another front, I have personally been affected and have watched the flooding from the Rt. 113 right away and walking path. The pathway Creates a sort of viaduct to my property. Also my neighbors pond, takes on a lot of the runoff from the right away which flows through and under my property via a drainage pipe, and from the Truman Ct development, irrespective of the drainage reservoir. So all that to say is with all the proposed impervious surface area, I would like to know where the water will go? My property and neighbor's pond can certainly not be the passthrough as it already overflows badly in heavy rain. I would certainly hope much deep consideration is put into this proposal, aside from the monetary benefits to the engineering and oversight companies involved.

Sincerely,

David A Wismer

To whom it may concern,

1. I am not interested in wasteful spending.
2. I am not interested in the economic development planned for with the Lederach Walking Plan
3. During the past two meetings, there was not an option to vote "no" to the entire project. I would request that option for voting the next time.
4. Please open the floor to public comment at the next meeting.
5. All supervisors who will be voting on the project should be present to hear their constituents.

Thank you.

Jennifer Cameron

My name is Bryon Lomas.

I am a resident of Whittaker Ave, right off of 113.

I have a few thoughts about this "walkable Lederach" plan.

1) I am appalled, yet not surprised, that the residents of Whittaker Way have yet to be directly contacted about these plans since our homes and quiet street will be directly impacted by this plan.

2) Not only will our quiet street, which is the home to many small children and older adults, now find itself in the middle of traffic, but this move will directly impact the value of our homes. All of the residents have spent years improving our properties and homes to increase their value, only to have them instantly reduced by this short-sighted measure.

3) Lederach is a small village with a few businesses in the surrounding area. None of which need to be "walkable," either. If any location is in the immediate area, it should be Skippack, home to many shops, stores, and restaurants. All of which would be made better by being more "walkable." I am a fan of Skippack and all of the local businesses that are located there. However, whenever there is a fair or event, I feel like I am taking my life in my hands, walking down the sidewalk that is barely wide enough for three people, yet alone walking traffic in both directions on either side of the street.

4) On the calendar on the project overview, there was a time frame outlined for a stakeholder interview, yet none of us were interviewed. Are we not stakeholders? I would argue that we are, and we were purposely left out.

5. On the plans, I see no allocation for those whose houses, communities, and families will be negatively affected by this change.

I look forward to hearing your responses to these comments and these questions.

I'll also be in touch this week via phone

Bryon Lomas

660 Whittaker Way

blomas74@gmail.com

Timothy and Donna McKee
666 Harleysville Pike
Lederach, PA 19450-0129
215-527-2011

donna_mckee@verizon.net

We live in the village – 2 doors from the Village Core – and have since 1994.

Walkable Lederach Comments November 30, 2023

- 1. Village Core – Potential Improvements and Pedestrian and Intersection Enhancements
  - Overall, we love the most of the proposed improvements around the village core and, especially, the potential connections to Wawa Park and other nearby parks off of Salfordville Rd. The crosswalks, crossing signals, protective seating wall area with native landscaping/green stormwater management, flexible café seating at the Bay Pony (some nice container plantings would enhance this space, too) and a gathering area in front of the Dance Studio. The Piano Bar front porch is another potential seating area.
  - The only thing we do not like, or are concerned about, is the proposed sidewalk/pedestrian path (purple dashed line) on the east side of Rt. 113 (Harleysville Pike) going north in front of our home and how it will impact our new fence. We recently spent over $8,000 on this high-end fence and do NOT want to have to move it! Moving it back would be very difficult, given the space constraints. The fence is located 6 feet from the road. So, if a pedestrian path/walkway (brick or other porous paving?) would fit within that lawn space and would not impact our fence, then that would be acceptable.
  - How far would the pedestrian walkways extend along Rt. 113 going north? Would they be on both sides of Rt. 113? Would they extend to Landis Rd. or stop short of that? How far south would they go? Also, where would the traffic calming "Gateway" be located on the north side of Rt. 113? We like the Gateways concept for alerting drivers/visitors to the village core and for calming traffic. Stamped asphalt and landscaping would be very nice.
  - We really like the proposed landscaping with native plants to support pollinators and for scenic, aesthetic value! (Please add some milkweed, if possible, along with nectar plants.)
  - We do NOT want street lighting on RT. 113 in front of or near our home, or our neighbors homes. We need to have it dark at night, both for sleeping and so it does not negatively affect fireflies and other important nocturnal species that are in decline. Light pollution is a huge and increasing problem.

However, some limited, pedestrian scale, downward directed lighting right at the 6 points intersection would probably be OK, if the light can be restricted to that area. This is primarily a residential area.

- Capital Improvements Map / Potential Treatments
  - We like the median Gateways for Rt. 113 north (stamped asphalt and median landscaping) and stamped asphalt, median and roadside landscaping for Rt. 113 south, as shown. But, we don't think roadside landscaping would work as well on Rt. 113 North, unless it is very low, because the views looking West from there are highly scenic and valued by the community and beyond.
  - Also, we like the Gateways proposed for Cross Road and Morris Road (stamped asphalt and roadside landscaping) and for Salfordville Road (stamped asphalt and roadside landscaping, if feasible). Please include milkweed and nectar plants for pollinators.
- Village Edge – Capital Improvements Projects Map
  - We really love the proposed pathway connections to our parks in the area. The ones we would prioritize the highest are:
    - E4 - Wawa Park & Bergey's Mill Park Footpaths & Wayfinding signage; E9 - Bergey's Mill Park to Wawa Park Footpath;
    - E3 - Groff's Mill Park Footpath Connection, if feasible.
    - E8 - Salfordville Road Bike Lanes: if this is feasible, it would be a top priority, too, along with E4, E9 & E3; Plus E6 Landis Road Shared Lanes
    - E7 - PA Rt. 113 Alt. Rt. as a Multi-Use Path with some landscaping added. WE ARE STRONGLY OPPOSED TO THE 40 YR. PROPOSED ALT. RT. 113! There is a reason that it has not happened in 40 years. And it is far less feasible now that there are new roads, subdivisions and homes along the route that it would cross and require traffic lights at each street! This would be a nightmare for the residents, as well as for drivers, and would be very costly, too. This corridor is one of the nicest open spaces in the area; it and the surrounding areas afford favorite walking paths for many residents. [Question: Why is there a gap between E7a and E7b as shown on the map? Wouldn't they be connected?}
    - E10 - PA 113 Bike Lanes (Landis to Maple Roads) to connect with Harleysville Core and the other paths and trails there; E11 - PA 113 South Shared Lanes (Landis to Lucon Rd.); E2 - Lucon Bike Lanes
    - Finally, E1 Footpath and E5 Shared Use Path would be our lowest priority.
- Village Core - Capital Improvement Project
  - We would place the highest priority on the following; C1 - Old Skippack Rd./Bay Pony and C2 – Salfordville Rd./Cross Rd. Pedestrian & Intersection Enhancements; C3 – Complimentary Pedestrian Connections; C4 – Lederach Commons Pedestrian Path; C7 – Old Skippack Rd. Sidewalks on west side (to end of Bay Pony?); C8 – Village Core Wayfinding and Interpretive Signage.
  - Lower priority with caveats: C6 – PA 113 South Sidewalks on both sides, if feasible; C5 – PA 113 North Sidewalks on both sides would only be acceptable on the east side IF a pedestrian path/walkway would fit and would not impact our fence. (3-4 ft. wide?)

Note: Please include signage for NO Jake-brakes (Decompression Brakes) in the Village Core! This is a big problem now with large trucks and tractor trailers as they approach the intersection.

I forgot to mention in my comments sent yesterday to make the lights at the village core intersection 'smarter'. The timing of the lights is not very good. There needs to be more 'green light' time for RT. 113 north and south during the rush hours, especially, but also even outside of those times. There is a nearly constant long line of traffic on Rt. 113 north, and during rush hours on Rt. 113 south. It is hard to get out of one's driveway if you live anywhere near the village core. Also, this causes vehicle pollution and noise to accumulate in front of our homes, everyday, as well as the village core. Can this light be made "smarter"? Other lights elsewhere are able to achieve this, so I hope we can get this done here.

DRAFT REPORT

Public Review: 2/7/2024 - 3/11/2024

A draft report of the Walkable Lederach Feasibility Study and accompanying appendices was hosted on the Lower Salford Township website from 2/7/2024 to 3/11/2024 for public review and comments. All written comments received through/postmarked by March 11, 2024 are included in the following pages. These comments will remain part of the report and be considered if, and when, any future actions are pursued.

Hello,

I am a resident of Lower Salford Township. I live at 691 Sharon Ln, Lower Salford Township, PA 19438

I am in opposition to the proposal of a "Walkable Lederach" for the following reasons:

1. I moved to Lower Salford because of the limited amount of development and quiet here. I do not want my town to become different because of the changes in zoning that are allowing for roads and large amounts of additional housing. Along with a "Walkable Lederach" comes the possibility for byways and throughways that lead to more development. This will change my town into the opposite of the kind of town I wanted when I decided to live here,

2. The amount of pollution and runoff that will be incurred through the course of this project is unacceptable to me.

3. The amount of wildlife that will be disrupted through the course of this project is unacceptable to me.

4. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors.

5. Placing crosswalks at the Lederach 5 point turn will only increase the traffic and congestion that is already taking place with little to no benefit for "walkers" in that area, who really don't exist.

6. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project.

I vote NO to this project in its entirety and will be watching to see how supervisors vote in order to know how to vote come the next election cycle.

Your neighbor,

Alyssa Picard

A major problem with the printed study is:

The study contains many map diagrams with different colored arrows, but the maps do not have legends or insets which show what the different colors mean.

Can this be amended and republished?

D. Roessler

To Whom It May Concern:

We are residents of Lower Salford Township and live at 372 Old Morris Road. We are contacting you because we are in opposition to the proposal of a "Walkable Lederach"

We moved our family to Lower Salford because of the limited amount of development here. We enjoy a quiet environment where our kids are free to ride bikes and deer pass through our backyard regularly.

We do not want our town to become different because of the changes in zoning that are allowing for roads and large amounts of additional housing. Along with a "Walkable Lederach" comes the possibility for byways and throughways that lead to more development. This will change my town into the opposite of the kind of town I wanted when I decided to live here. We are concerned about the disruption to wildlife and amount of pollution/ runoff that will be incurred through the course of this project.

Further, placing crosswalks at the Lederach 5 point turn will only increase the traffic and congestion that is already taking place with little to no benefit for "walkers" in that areaIMPORTANT NOTE: Walkers in this area don't exist.

Finally, there will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project.

I vote NO to this project in its entirety and will be watching to see how supervisors vote.

Thanks,

Michael and Melissa Barnacz

Hello,

I am a resident of Lower Salford Township. I live at 339 old Morris rd, harleysville.

I am in opposition to the proposal of a "Walkable Lederach" for the following reasons:

1. I moved to Lower Salford because of the limited amount of development and quiet here. I do not want my town to become different because of the changes in zoning that are allowing for roads and large amounts of additional housing. Along with a "Walkable Lederach" comes the possibility for byways and throughways that lead to more development. This will change my town into the opposite of the kind of town I wanted when I decided to live here,

2. The amount of pollution and runoff that will be incurred through the course of this project is unacceptable to me.

3. The amount of wildlife that will be disrupted through the course of this project is unacceptable to me.

4. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors.

5. Placing crosswalks at the Lederach 5 point turn will only increase the traffic and congestion that is already taking place with little to no benefit for "walkers" in that area, who really don't exist.

6. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project.

I vote NO to this project in its entirety and will be watching to see how supervisors vote in order to know how to vote come the next election cycle.

Your neighbor,

Danielle Landis

> Hello,

>

> I am a resident of Lower Salford Township. I live at 401, Ace Circle, Harleysville PA 19438.

> I am in opposition to the proposal of a "Walkable Lederach" for the following reasons:

> > 1. I moved to Lower Salford because of the limited amount of development and quiet here. I do not want my town to become different because of the changes in zoning that are allowing for roads and large amounts of additional housing. Along with a "Walkable Lederach" comes the possibility for byways and throughways that lead to more development. This will change my town into the opposite of the kind of town I wanted when I decided to live here,

>

> 2. The amount of pollution and runoff that will be incurred through the course of this project is unacceptable to me.

> 3. The amount of wildlife that will be disrupted through the course of this project is unacceptable to me.

> 4. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors.

> 5. Placing crosswalks at the Lederach 5 point turn will only increase the traffic and congestion that is already taking place with little to no benefit for "walkers" in that area, who really don't exist.

> 6. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project.

>

> I vote NO to this project in its entirety and will be watching to see how supervisors vote in order to know how to vote come the next election cycle.

>

> Your neighbor,

> Allison Beresovoy

Hello,

I am a resident of Lower Salford Township. I live at 491 Moyer rd,

I am in opposition to the proposal of a "Walkable Lederach" for the following reasons:

1. I moved to Lower Salford because of the limited amount of development and quiet here. I do not want my town to become different because of the changes in zoning that are allowing for roads and large amounts of additional housing. Along with a "Walkable Lederach" comes the possibility for byways and throughways that lead to more development. This will change my town into the opposite of the kind of town I wanted when I decided to live here,

2. The amount of pollution and runoff that will be incurred through the course of this project is unacceptable to me.

3. The amount of wildlife that will be disrupted through the course of this project is unacceptable to me.

4. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors.

5. Placing crosswalks at the Lederach 5 point turn will only increase the traffic and congestion that is already taking place with little to no benefit for "walkers" in that area, who really don't exist.

6. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project.

I vote NO to this project in its entirety and will be watching to see how supervisors vote in order to know how to vote come the next election cycle.

Your neighbor,

Glenn and Angela Fayer

Hello,

I am a resident of Lower Salford Township. I live on Sharon Lane.

I am in opposition to the proposal of a "Walkable Lederach" for the following reasons:

1. I moved to Lower Salford because of the limited amount of development and quiet here. I do not want my town to become different because of the changes in zoning that are allowing for roads and large amounts of additional housing. Along with a "Walkable Lederach" comes the possibility for byways and throughways that lead to more development. This will change my town into the opposite of the kind of town I wanted when I decided to live here,

2. The amount of pollution and runoff that will be incurred through the course of this project is unacceptable to me.

3. The amount of wildlife that will be disrupted through the course of this project is unacceptable to me.

4. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors.

5. Placing crosswalks at the Lederach 5 point turn will only increase the traffic and congestion that is already taking place with little to no benefit for "walkers" in that area, who really don't exist.

6. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project.

I vote NO to this project in its entirety and will be watching to see how supervisors vote in order to know how to vote come the next election cycle.

Your neighbor,

Michael Picard

Hello,

I am a resident of Lower Salford Township. I live at 307 Doe Run Road in Harleysville.

I am in opposition to the proposal of a "Walkable Lederach" for the following reasons:

1. I moved to Lower Salford because of the limited amount of development and quiet here. I do not want my town to become different because of the changes in zoning that are allowing for roads and large amounts of additional housing. Along with a "Walkable Lederach" comes the possibility for byways and throughways that lead to more development. This will change my town into the opposite of the kind of town I wanted when I decided to live here,

2. The amount of pollution and runoff that will be incurred through the course of this project is unacceptable to me.

3. The amount of wildlife that will be disrupted through the course of this project is unacceptable to me.

4. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors.

5. Placing crosswalks at the Lederach 5 point turn will only increase the traffic and congestion that is already taking place with little to no benefit for "walkers" in that area, who really don't exist.

6. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project.

I vote NO to this project in its entirety and will be watching to see how supervisors vote in order to know how to vote come the next election cycle.

Your neighbor,

Rich Mancini

Hello LS Township,

I am a resident of Lower Salford Township. I live at 816 Church Road.

I am in opposition to the proposal of a "Walkable Lederach" for the following reasons:

1. I moved to Lower Salford because of the limited amount of development and quiet here. I do not want my town to become different because of the changes in zoning that are allowing for roads and large amounts of additional housing. Along with a "Walkable Lederach" comes the possibility for byways and throughways that lead to more development. This will change my town into the opposite of the kind of town I wanted when I decided to live here,

2. The amount of pollution and runoff that will be incurred through the course of this project is unacceptable to me.

3. The amount of wildlife that will be disrupted through the course of this project is unacceptable to me.

4. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors.

5. Placing crosswalks at the Lederach 5 point turn will only increase the traffic and congestion that is already taking place with little to no benefit for "walkers" in that area, who really don't exist.

6. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project.

I vote NO to this project in its entirety and will be watching to see how supervisors vote in order to know how to vote come the next election cycle.

Grace & Peace from Your neighbor,

Michele Hannum,

Hello,

I am a resident of Lower Salford Township. I live at 380 Cambridge Circle.

I am in opposition to the proposal of a "Walkable Lederach" for the following reasons:

1. I moved to Lower Salford because of the limited amount of development and quiet here. I do not want my town to become different because of the changes in zoning that are allowing for roads and large amounts of additional housing. Along with a "Walkable Lederach" comes the possibility for byways and throughways that lead to more development. This will change my town into the opposite of the kind of town I wanted when I decided to live here,

2. The amount of pollution and runoff that will be incurred through the course of this project is unacceptable to me.

3. The amount of wildlife that will be disrupted through the course of this project is unacceptable to me.

4. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors.

5. Placing crosswalks at the Lederach 5 point turn will only increase the traffic and congestion that is already taking place with little to no benefit for "walkers" in that area, who really don't exist.

6. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project.

I vote NO to this project in its entirety and will be watching to see how supervisors vote in order to know how to vote come the next election cycle.

Signed,

Jenny Iannucci

Hello LS Township,

I am a resident of Lower Salford Township. I live at 816 Church Road.

I am in opposition to the proposal of a "Walkable Lederach" for the following reasons:

1. I moved to Lower Salford because of the limited amount of development and quiet here. I do not want my town to become different because of the changes in zoning that are allowing for roads and large amounts of additional housing. Along with a "Walkable Lederach" comes the possibility for byways and throughways that lead to more development. This will change my town into the opposite of the kind of town I wanted when I decided to live here,

2. The amount of pollution and runoff that will be incurred through the course of this project is unacceptable to me.

3. The amount of wildlife that will be disrupted through the course of this project is unacceptable to me.

4. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors.

5. Placing crosswalks at the Lederach 5 point turn will only increase the traffic and congestion that is already taking place with little to no benefit for "walkers" in that area, who really don't exist.

6. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project.

I vote NO to this project in its entirety and will be watching to see how supervisors vote in order to know how to vote come the next election cycle.

Your Neighbor,

Donald Hannum

Hello LS Township,

I am a resident of Lower Salford Township. I live at 90 Kinsey Road.

I am in opposition to the proposal of a "Walkable Lederach" for the following reasons:

1. I moved to Lower Salford because of the limited amount of development and quiet here. I do not want my town to become different because of the changes in zoning that are allowing for roads and large amounts of additional housing. Along with a "Walkable Lederach" comes the possibility for byways and throughways that lead to more development. This will change my town into the opposite of the kind of town I wanted when I decided to live here!

2. The amount of pollution and runoff that will be incurred through the course of this project is unacceptable to me. Especially given the current climate crisis we are facing.

3. The amount of wildlife that will be disrupted through the course of this project is unacceptable.

4. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors.

5. Placing crosswalks at the Lederach 5 point turn will only increase the traffic and congestion that is already taking place with little to no benefit for "walkers" in that area.

6. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project which does not benefit ALL residents that do not frequent that area.

I vote NO to this project in its entirety and will be watching to see how supervisors vote in order to know how to vote come the next election cycle.

Your Neighbors,

Amy and Michael Wotlinski

Hello,

I am a resident of Lower Salford Township. I live at 651 Salfordville Rd.

I am in opposition to the proposal of a "Walkable Lederach" for the following reasons:

1. I moved to Lower Salford because of the limited amount of development and quiet here. I do not want my town to become different because of the changes in zoning that are allowing for roads and large amounts of additional housing. Along with a "Walkable Lederach" comes the possibility for byways and throughways that lead to more development. This will change my town into the opposite of the kind of town I wanted when I decided to live here.

2. The amount of pollution and runoff that will be incurred through the course of this project is unacceptable to me.

3. The amount of wildlife that will be disrupted through the course of this project is unacceptable to me.

4. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors AND CRIME.

5. Placing crosswalks at the Lederach 5 point turn will only increase the traffic and congestion that is already taking place with little to no benefit for "walkers" in that area, who really don't exist.

6. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project.

I vote NO to this project in its entirety and will be watching to see how supervisors vote in order to know how to vote come the next election cycle.

Your neighbor,

--

David Long

Hello,

I am a resident of Lower Salford Township. I live at 690 Sharon Ln, Harleysville PA 19438 .

I am in opposition to the proposal of a "Walkable Lederach" for the following reasons:

1. I moved to Lower Salford because of the limited amount of development and quiet here. I do not want my town to become different because of the changes in zoning that are allowing for roads and large amounts of additional housing. Along with a "Walkable Lederach" comes the possibility for byways and throughways that lead to more development. This will change my town into the opposite of the kind of town I wanted when I decided to live here,

2. The amount of pollution and runoff that will be incurred through the course of this project is unacceptable to me.

3. The amount of wildlife that will be disrupted through the course of this project is unacceptable to me.

4. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors.

5. Placing crosswalks at the Lederach 5 point turn will only increase the traffic and congestion that is already taking place with little to no benefit for "walkers" in that area, who really don't exist.

6. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project.

I vote NO to this project in its entirety and will be watching to see how supervisors vote in order to know how to vote come the next election cycle.

Your neighbor,

Jennifer Nyce

Hello,

I am a resident of Lower Salford Township. I live at 690 Sharon Ln, Harleysville PA 19438 .

I am in opposition to the proposal of a "Walkable Lederach" for the following reasons:

1. I moved to Lower Salford because of the limited amount of development and quiet here. I do not want my town to become different because of the changes in zoning that are allowing for roads and large amounts of additional housing. Along with a "Walkable Lederach" comes the possibility for byways and throughways that lead to more development. This will change my town into the opposite of the kind of town I wanted when I decided to live here,

2. The amount of pollution and runoff that will be incurred through the course of this project is unacceptable to me.

3. The amount of wildlife that will be disrupted through the course of this project is unacceptable to me.

4. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors.

5. Placing crosswalks at the Lederach 5 point turn will only increase the traffic and congestion that is already taking place with little to no benefit for "walkers" in that area, who really don't exist.

6. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project.

I vote NO to this project in its entirety and will be watching to see how supervisors vote in order to know how to vote come the next election cycle.

Your neighbor,

Avalynn Nyce

Hello,

I am a resident of Lower Salford Township. I live at 483 Cheswyck dr In Harleysville.

I am in opposition to the proposal of a "Walkable Lederach" for the following reasons:

1. I moved to Lower Salford because of the limited amount of development and quiet here. I do not want my town to become different because of the changes in zoning that are allowing for roads and large amounts of additional housing. Along with a "Walkable Lederach" comes the possibility for byways and throughways that lead to more development. This will change my town into the opposite of the kind of town I wanted when I decided to live here,

2. The amount of pollution and runoff that will be incurred through the course of this project is unacceptable to me.

3. The amount of wildlife that will be disrupted through the course of this project is unacceptable to me.

4. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors.

5. Placing crosswalks at the Lederach 5 point turn will only increase the traffic and congestion that is already taking place with little to no benefit for "walkers" in that area, who really don't exist.

6. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project. I vote NO to this project in its entirety and will be watching to see how supervisors vote in order to know how to vote come the next election cycle.

THESE ARE SOME REASONS I OPPOSE RT 113 BYPASS : (proposed to be one way direction into Lederach ..) Reasons-

1.-We will still have major traffic leading into Lederach on 113

2. This would be Taking away normal traffic from the center of the village -

3.there would be Bottlenecks on both ends of the bypass

4.it Takes up Open space which we have done enough in this county .

5. -Doesn't benefit Cross rd -As it doesn't connect directly with bypass.

6. We would have through traffic in Cheswyck to get around the one way or Lederach walkways traffic.

Both projects are a terrible idea … we are trying to simplify our life in this township… we are not looking to be Montgomeryville, Doylestown, or any size community that has congestion with its modern conveniences.

Thank you

Bette and Alan Duddy

I am writing you in concern about the proposal of " Walkable Lederach Project". After learning about this I wanted to express my concern of over development of more area in the township that seems to be a project for developers to make money and not be utilized by township residents. In the more densely populated town of Harleysville, it is not even walkable down Main street from the township building to the local Hennings shopping center. Why would the township want to spend that kind of money for a walkable Lederach when most homes in and around Lederach are two or more acres apart, who is going to walk it. Commercial Real estate is down more than 20% across the nation and the brick and mortar business are closing at a 37% rate. So the question is what are local township residents going to walk to. One of the plans included a new bypass through residents properties that would cause both more runoff pollution and noise pollution and destroy more open space. Was an environmental impact study done on these proposals? The builder that is developing the apartments in Lederach could not get the land to perk for septic and needs the apartments in order to afford to connect to sewer which means ground is already under stress. Did the township think about the children's safety of the residents properties that the bypass will run along?

When they built the development at Truman Court all the runoff has poisoned the pond on Morris rd and killed all life in this pond. Which is a sludge looking polluted pond all summer. So where will all the run off go from a bypass? These project

Residents here moved here for the quiet and natural peaceful views. If you look at what has happened with the new Wawa it has turned into a traffic nightmare every morning and evening and you can actually smell the exhaust fumes every morning when shopping at Hennings.

The township should look at the big picture of these kind of projects that have several phases and look at the total impact on maintenance and cost to the taxpayers.

Please look at Audubon, Jeffersonville, Eagleville, Montgomeryville and even Collegeville areas of over crowded Towns.

Eric Kerr.

Hello,

I am a resident of Lower Salford Township. I live at 400 Tyson Road, Schwenksville, PA 19473.

I am in opposition to the proposal of a "Walkable Lederach" for the following reasons:

1. I moved to Lower Salford because of the limited amount of development and quiet here. I do not want my town to become different because of the changes in zoning that are allowing for roads and large amounts of additional housing. Along with a "Walkable Lederach" comes the possibility for byways and through ways that lead to more development. This will change my town into the opposite of the kind of town I wanted when I decided to live here,

2. The amount of pollution and runoff that will be incurred through the course of this project is unacceptable to me.

3. The amount of wildlife that will be disrupted through the course of this project is unacceptable to me.

4. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors.

5. Placing crosswalks at the Lederach 5 point turn will only increase the traffic and congestion that is already taking place with little to no benefit for "walkers" in that area, who really don't exist.

6. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project.

I vote NO to this project in its entirety and will be watching to see how supervisors vote in order to know how to vote come the next election cycle.

Your neighbor,

Tara Turner

Hello,

I am a resident of Lower Salford Township. I live at 413 Cheswyck Dr, Harleysville Pennsylvania 19438, UnitedStates

I am in opposition to the proposal of a "Walkable Lederach" for the following reasons:

1. I moved to Lower Salford because of the limited amount of development and quiet here. I do not want my town to become different because of the changes in zoning that are allowing for roads and large amounts of additional housing. Along with a "Walkable Lederach" comes the possibility for byways and throughways that lead to more development. This will change my town into the opposite of the kind of town I wanted when I decided to live here,

2. The amount of pollution and runoff that will be incurred through the course of this project is unacceptable to me.

3. The amount of wildlife that will be disrupted through the course of this project is unacceptable to me.

4. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors.

5. Placing crosswalks at the Lederach 5 point turn will only increase the traffic and congestion that is already taking place with little to no benefit for "walkers" in that area, who really don't exist.

6. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project.

I vote NO to this project in its entirety and will be watching to see how supervisors vote in order to know how to vote come the next election cycle. Please stop the over development in our beautiful town.

Your neighbor,

Jamie Coyne

Hello,

I am a resident of Lower Salford Township. I live at 511 Winter Green Circle, Harleysville PA 19438. (Lower salford)

I am in opposition to the proposal of a "Walkable Lederach" for the following reasons:

1. I moved to Lower Salford because of the limited amount of development and quiet here. I do not want my town to become different because of the changes in zoning that are allowing for roads and large amounts of additional housing. Along with a "Walkable Lederach" comes the possibility for byways and throughways that lead to more development. This will change my town into the opposite of the kind of town I wanted when I decided to live here,

2. The amount of pollution and runoff that will be incurred through the course of this project is unacceptable to me.

3. The amount of wildlife that will be disrupted through the course of this project is unacceptable to me.

4. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors.

5. Placing crosswalks at the Lederach 5 point turn will only increase the traffic and congestion that is already taking place with little to no benefit for "walkers" in that area, who really don't exist.

6. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project.

I vote NO to this project in its entirety and will be watching to see how supervisors vote in order to know how to vote come the next election cycle.

Your neighbor,

Alison Kauffman, Esquire

Dear Lower Salford,

I am writing to stand with the residents of Lower Salford in encouraging you to vote NO to the "Walkable Lederach Project". It is guesstimated that this will ruin the property for at least 20 homes and create pollution for sustainable farmers. We should be encouraging and growing our farmlands, not pushing them out through over development.

I was told that you received grant money for this project that needs to be used. I'm sure if you work with the residents of Lower Salford, you will find creative ways to use these funds that will help the community as a whole. Possibly playgrounds, 4H facilities, etc. Are there initiatives you could work with the local farmers on to better the community?

I also understand that this project would significantly help the local businesses and their costly parking situation. It is my view that we should not be making homeowners and Lower Salford farmers suffer for that reality. The business owners bought these properties full-well knowing the parking situation. Families should not be forced to sacrifice their land to help with that.

I hope you will do the right thing in representing the people you serve.

Best!

Kaitlin Derstine

Dear Mr. Gates and members of the Lower Salford Township Planning Commission,

My name is Jennifer Heavener, and I attended the Lower Salford Township meeting on 2/28/24, and would like to submit a written comment on the Walkable Lederach project. I am 35 years old, and I have lived in Harleysville for my entire life, with the exception of about 4 years from 2010 - 2014, when I was away at school and working in Buffalo, NY.

I am not in favor of the proposal for a "Walkable Lederach" for several reasons:

1. I love the Indian Valley because of the limited amount of development and quiet here. I do not want Lower Salford to become like the city due to changes in zoning that allow for roads and large amounts of additional housing. Along with a "Walkable Lederach" comes the possibility for byways and throughways that lead to more development. We want to preserve the beautiful farmland and quiet that is here.

2. I am opposed to the 113 relocation/bypass/alternative route. I think the arguments that compare Lederach with Mainland in this regard are very compelling. Mainland used to be a lovely little community before the 63 bypass was put in, but now that virtually all traffic has been moved out of the area, it is clearly dying. When I drive through Mainland (sometimes as a shortcut when there is a lot of turnpike traffic) I think, "Gosh, what happened to this place?" Because even visually, it does not look like an appealing, populated place to be anymore. It looks abandoned.

Since I lived in Buffalo for a couple years, I also think the city of Buffalo provides an example of how a place that's very much alive can die without any traffic coming through. This is more extreme, but years ago the city of Buffalo decided to convert the downtown portion of Main Street into a rail line, so people could avoid the hassle of city parking and easily walk or take the train to wherever they needed to go. But it backfired; since people could no longer drive their cars down Main Street, downtown Buffalo started to die. By the time I lived there, there was almost nothing worth visiting downtown - a very austere place, with most of the buildings being devoted to government agencies. There was the remnant of what used to be a city shopping mall, but with only two or three stores in it, largely deserted. In the years since, I believe they have again replaced the rail line with a street, and hopefully that is bringing downtown Buffalo back to life.

Let's not do the same thing to Lederach. I really believe if the main thoroughfare is moved somewhere else, no one will go through Lederach anymore, and the village will start to die.

3. The amount of pollution and runoff that will be incurred through the course of this project is unacceptable, especially to the local farmers who are trying to keep healthy crops and animals.

4. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project.

5. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors.

6. Placing crosswalks at the Lederach 5-point turn will only increase the traffic and congestion that is already there, with little to no benefit for "walkers" in that area, who don't even exist.

Thank you very much for reading my email and considering my opinion.

Sincerely,

Jennifer Heavener

206 Brookside Circle

Harleysville, PA 19438

Dear Lower Salford,

I am writing in opposition to the proposal of a "Walkable Lederach" for the following reasons:

1. The beauty of the Indian Valley is the limited amount of development and quiet here. I do not want Lower Salford to become like the city because of the changes in zoning that are allowing for roads and large amounts of additional housing. Along with a "Walkable Lederach" comes the possibility for byways and throughways that lead to more development. We want to preserve the beautiful farmland and quiet that is here.

2. The amount of pollution and runoff that will be incurred through the course of this project is unacceptable, especially to the local farmers who are trying to keep healthy crops and animals.

3. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project.

4. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors.

5. Placing crosswalks at the Lederach 5-point turn will only increase the traffic and congestion that is already taking place with little to no benefit for "walkers" in that area, who don't even exist.

6. You are being bribed by Montgomery township with all of the AFFH housing money being offered to our townships. (EX: sale of Lower Salford School Project) Along with that money comes many regulations that are NOT in line with our community. It is time for you to put the people of Lower Salford first and have the COURAGE to say NO to this Project.

I vote NO to this project in its entirety and will be watching to see how supervisors vote in order to know how to vote come the next election cycle.

Sincerely,

Victoria West

I grew up on Maple Ave which you have already developed to much and have created traffic flow that is unsustainable all through town.

"Dear Lower Salford,

I am writing in opposition to the proposal of a "Walkable Lederach" for the following reasons:

1. We moved to Indian Valley because of the limited amount of development and quiet here. I do not want Lower Salford to become like the city because of the changes in zoning that are allowing for roads and large amounts of additional housing. Along with a "Walkable Lederach" comes the possibility for byways and throughways that lead to more development. We want to preserve the beautiful farmland and quiet that is here.

2. The amount of pollution and runoff that will be incurred through the course of this project is unacceptable, especially to the local farmers who are trying to keep healthy crops and animals.

3. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project.

4. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors.

5. Placing crosswalks at the Lederach 5-point turn will only increase the traffic and congestion that is already taking place with little to no benefit for "walkers" in that area, who don't even exist.

I vote NO to this project in its entirety and will be watching to see how supervisors vote in order to know how to vote come the next election cycle.

Sincerely,

Angela Tippett

To Lower Salford Township:

Over the past decade of living in this township I've seen the changes in development and loss of lands. Let's preserve our farm lands to keep this area less congested and with beautiful views of open spaces. This was the entire reason of moving out of Chalfont Bucks County to this area. Please consider my message.

Regards,

Vincent Sasso

Dear Lower Salford,

I purchased the 15 acre Andrew Lederach Homestead about 3 years ago because I wanted to provide a quiet farmland to raise my family.

Currently there are plans to build townhouses adjacent to my property that that do not even fit the single-family style homes around the 5 points in Lederach. Now the plans for a walkable Lederach include more intrusive ideas like a walking path that cuts across the farmland near my property. This is unacceptable and will destroy beautiful Lederach that many have come to love.

I am fully opposed to the high costs, possible tax hikes, and construction runoff of this project. In addition, there will be little to no benefit for "walkers" in the area. Very few walkers even exist!

I vote NO to this project in its entirety and will be watching to see how supervisors vote in order to know how to vote come the next election cycle.

I will be attending the upcoming meeting on March 27 to support the supervisors in voting no on the "Walkable Lederach Project".

Sincerely,

Justin Barry

Owner of Andrew Lederach Homestead

660 Harleysville Pike

Harleysville, PA 19438

Mr. Gates,

I reviewed the info available on the Lower Salford website about the Walkable Lederach project. I am a resident that lives on the "edge" on Old Skippack Road. My street is currently one-way coming from Route 113, which has led to some drivers cutting through the Bay Pony Inn parking lot. I am in favor of the creation of an alleyway connection to Salfordville Road adjacent to the parking lot of the Bay Pony Inn.

I know they are trying to problem-solve this situation and I absolutely do not want to see them extend the one-way on Old Skippack Road, so I am hoping the creation of the alleyway would alleviate the issue. I don't want the only way I can get home to be limited to driving through Lederach (I often take backroads). In addition, if our street remains two-way it will be easier for emergency vehicles to get through. There is currently a lot of traffic that runs through Lederach so it's important that the residents on our stretch of the street have other ways to get to and from their homes.

Sincerely,

Tara Lowden

Hello,

As a long term resident of Lower Salford, I feel strongly about preserving the beauty of our area.

Please do not let this township change priorities that put money before the beautiful farmland that we all love as our home.

Kind regards,

Nancy Stiles

873 Brandon Lane

Schwenksville, PA

Dear Mr. Gates and members of the Lower Salford Township Planning Commission,

My name is Gerald Heavener, and other than going to school I have lived all of my 70 some years in Harleysville, PA. I want you to know that I am not in favor of the proposal for a "Walkable Lederach" for several reasons:

1. I am opposed to the 113 relocation/bypass/alternative route. I think the arguments that compare Lederach with Mainland in this regard are very compelling. Mainland used to be a lovely little community before the 63 bypass was put in, but now that virtually all traffic has been moved out of the town, it is clearly dying. When I drive through Mainland it now feels like an old town that has been passed by. Let's not do the same thing to Lederach.

Safer and more efficient traffic flow is a worthy goal, but it can be very costly with very limited benefits. It too often seems to promote more and more development which in turn generates more and more traffic and within short order the congestion is back, only in a greater volume. I would like to hold onto the Lower Salford and Indian Valley small community feel with its open spaces and limited development.

2. Removing all traffic from Lederach will make it even more difficult to visit and support businesses there. Parking would have to be more remote, and although walking is healthy it is also less convenient. Providing the right amount of parking and then using it can create its own frustrations. If traffic is still allowed in Lederach, then making it "walkable" also creates frustrations and hazards adding to the large amount that already exists.

3. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project for no obvious benefit to the local community.

4. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors.

Thank you very much for your consideration of my views.

Sincerely,

Gerald Heavener

>> Hello,

>> I am a resident of Lower Salford Township. I live at 661 Truman Ct, Harleysville.

>> I am in opposition to the proposal of a "Walkable Lederach" for the following reasons:

>> 1. I moved to Lower Salford because of the limited amount of development and quiet here. I do not want my town to become different because of the changes in zoning that are allowing for roads and large amounts of additional housing. Along with a "Walkable Lederach" comes the possibility for byways and throughways that lead to more development. This will change my town into the opposite kind of town I wanted when I decided to live here.

>> 2. The amount of pollution and runoff that will be incurred through the course of this project is unacceptable to me.

>> 3. The amount of wildlife that will be disrupted through the course of this project is unacceptable to me.

>> 4. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors.

>> 5. Placing crosswalks at the Lederach 5 point turn will only increase the traffic and congestion that is already taking place with little to no benefit for "walkers" in that area, who really don't exist.

>> 6. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project.

>> I vote NO to this project in its entirety and will be watching to see how supervisors vote in order to know how to vote come the next election cycle.

>>

>> Your neighbor,

>> Stacey McDonough

“Dear Lower Salford,

I am writing in opposition to the proposal of a “Walkable Lederach” for the following reasons:

1. We moved to Indian Valley because of the limited amount of development and quiet here. I do not want Lower Salford to become like the city because of the changes in zoning that are allowing for roads and large amounts of additional housing. Along with a “Walkable Lederach” comes the possibility for byways and throughways that lead to more development. We want to preserve the beautiful farmland and quiet that is here.

2. The amount of pollution and runoff that will be incurred through the course of this project is unacceptable, especially to the local farmers who are trying to keep healthy crops and animals.

3. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project.

4. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors.

5. Placing crosswalks at the Lederach 5-point turn will only increase the traffic and congestion that is already taking place with little to no benefit for “walkers” in that area, who don’t even exist.

I vote NO to this project in its entirety and will be watching to see how supervisors vote in order to know how to vote come the next election cycle.

Sincerely,

Deboeah Case-Tuccillo

Dear Lower Salford,

I am writing in opposition to the proposal of a “Walkable Lederach” for the following reasons:

1. We moved to Indian Valley 7 years ago because of the limited amount of development and quiet here. We came from the busy Norristown area and we wanted quiet green surroundings! I do not want Lower Salford to become like the city because of the changes in zoning that are allowing for roads and large amounts of additional housing. Along with a “Walkable Lederach” comes the possibility for byways and throughways that lead to more development. We want to preserve the beautiful farmland and quiet that is here.

2. The amount of pollution and runoff that will be incurred through the course of this project is unacceptable, especially to the local farmers who are trying to keep healthy crops and animals.

3. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project.

4. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors.

5. Placing crosswalks at the Lederach 5-point turn will only increase the traffic and congestion that is already taking place with little to no benefit for “walkers” in that area, who don’t even exist.

I vote NO to this project in its entirety and will be watching to see how supervisors vote in order to know how to vote come the next election cycle.

Sincerely,

Mark & Valerie Perry

Hello to the Lower Salford Township and associate parties,

My name is Catie Frederick, and I'm a resident of Lower Salford Township. My family and I live at 360 Morris Rd, Harleysville, PA 19438; we bought our little plot of land because it was tucked in a residential area that we thought was free from further development. Learning about the "Walkable Lederach Project" has been disappointing because it continues to change our neighborhood in unfavorable ways.

I am in opposition to the proposal of a "Walkable Lederach" for the following reasons:

1. I moved to Lower Salford because of the limited amount of development and quiet here. I do not want my town to become different because of the changes in zoning that are allowing for roads and large amounts of additional housing. Along with a "Walkable Lederach" comes the possibility for byways and throughways that lead to more development. This will change my town into the opposite of the kind of town I wanted when I decided to live here,

2. The amount of pollution and runoff that will be incurred through the course of this project is unacceptable to me.

3. The amount of wildlife that will be disrupted through the course of this project is unacceptable to me.

4. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors.

5. Placing crosswalks at the Lederach 5 point turn will only increase the traffic and congestion that is already taking place with little to no benefit for "walkers" in that area, who really don't exist.

6. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project.

I vote NO to this project in its entirety and will be watching to see how supervisors vote in order to know how to vote come the next election cycle.

Your neighbor,

Catie and Chad Frederick

My name is Chad Frederick and we live at 360 Morris Rd Harleysville, PA 19438. I'd like to take this opportunity to echo my wife's comments below regarding our opposition to the "Walkable Lederach Project".

Warmly,

Chad Frederick

Hello, I am a resident of Lower Salford Township. I live at 453 Windsor Drive. I am in opposition to the proposal of a "Walkable Lederach" for the following reasons:

1. I moved to Lower Salford because of the limited amount of development and quiet here. I do not want my town to become different because of the changes in zoning that are allowing for roads and large amounts of additional housing. Along with a "Walkable Lederach" comes the possibility for byways and throughways that lead to more development. This will change my town into the opposite of the kind of town I wanted when I decided to live here,

2. The amount of pollution and runoff that will be incurred through the course of this project is unacceptable to me.

3. The amount of wildlife that will be disrupted through the course of this project is unacceptable to me.

4. This project both during and after construction will create noise pollution and safety concerns for the surrounding neighbors.

5. Placing crosswalks at the Lederach 5 point turn will only increase the traffic and congestion that is already taking place with little to no benefit for "walkers" in that area, who really don't exist.

6. There will be huge costs and presumably tax hikes incurred in order to both develop and maintain this project.

REASONS TO OPPOSE RT 113 BYPASS:

1. We will still have major traffic leading into Lederach on 113 -Taking away from the center of the village.

2. Bottlenecks on both ends

3. Takes up Open space

4. Doesn't benefit Cross Rd. as it doesn't connect directly with bypass

5. Cheswyck may be a cut through for avoiding the one way /Walkways area etc.

I vote NO to this project in its entirety and will be watching to see how supervisors vote in order to know how to vote come the next election cycle.

Your neighbor,

Michael & Jacklyn Ferraro

APPENDIX C

Stakeholder and Technical Meeting Minutes

Walkable Lederach – Stakeholder Meeting
MINUTES

Date: June 8, 2023
Location: Richard C. Mast Associates Office
(658 Harleysville Pike, Harleysville, PA 19438)
Time: 9:00 AM

Attendees:

Key Stakeholders		
Richard Mast	Richard C Mast Associates	rmast@rcmaonline.com
Mary Slemmer	Resident	mrslemmer@aol.com
Phil Lederach	Lederach Architecture	phil@lederach.com
Brenda Lederach	Lederach Architecture	
Florence Knechtl	Bay Pony Inn	fknechtl@yahoo.com
Edward Knechtl	Bay Pony Inn	
Eric Callahan	Callahan Financial	eric.callahan@equitable.com
Lower Salford Township		
Kevin Shelly	Board of Supervisors, LST Sidewalk and Trails Commission	kshelly@lowersalfordtownship.org
Mike Beuke	Director of Building and Zoning, LST	mbeuke@lowersalfordtownship.org
Project Team		
Natasha Manbeck	Project Manager, McMahon, a Bowman company	nmanbeck@bowman.com
Stephanie Butler	Project Manager, McMahon, a Bowman company	sbutler@bowman.com
Rob Gates	Senior Planner, McMahon, a Bowman company	rgates@bowman.com
Emily Gates	Thomas Jefferson University	emily.casey89@gmail.com

Introduction and Project Overview

Natasha Manbeck welcomed the group and provided an overview of the Walkable Lederach Feasibility Study, including the project purpose (make more walkable, maintain village character, plan for potential 113 relocation) and the work done to date including analyzing existing conditions and developing initial potential improvements with guidance from the Steering Committee (Lower Salford Township Sidewalk and Trails Committee).

Natasha also explained the purpose of the stakeholder meeting was to provide the key stakeholders with an opportunity to share their insights and any concerns about the project in general, as well as preview and help refine materials for the June 15th Public Meeting. Natasha confirmed that minutes would be taken and provided to the group. She clarified that the study is separate from PA 113

relocation project and is meant to assess options to improve connectivity and walkability based on existing conditions and for a future scenario with PA 113 relocation. All participants acknowledged that they are familiar with the concept of the PA 113 relocation. The project team and Mike Beuke (Lower Salford Township) noted that the potential PA 113 relocation efforts have been ongoing for decades with significant portions of right-of-way acquired/dedicated by the Township through land development processes.

Effects of Potential PA 113 Relocation

The project team asked participants to share their thoughts on how the potential PA 113 would affect their community. Responses are summarized below:

Phil Lederach:

- The PA 113 relocation will decrease property values due to loss of traffic in the village. Also recognized it as a double-edged sword with potential benefits of traffic safety and walkability.
- There are better and more pressing needs for funds (compared to PA 113 relocation), such as other safety improvements.
- Traffic signal has improved traffic flow and operations (especially on Morris Rd and Cross Rd).
- Very frustrated and disappointed with the process for locating the mast arm for the signal and lack of communication and public outreach throughout that process.
- Concerned this study could lead to similar results and wants to make sure the project team/township are not just “checking a box” for public participation and will actually use and follow-through on stakeholder and public feedback.
- Asked what will happen with the new odd intersections that will be created at the intersections of relocated PA 113 at Landis Rd and Whittaker Way.
- Worried it will be left to businesses to promote the village if the bypass is built.
- Village Commercial District was also set up to protect open spaces that play an important role in the character of the village and the right-of-way for the bypass is an important piece of that.

Rick Mast:

- Not in support of PA 113 relocation. Pointed to the Village Commercial Zoning as an effort that has helped make the village viable to preserve older buildings for commercial activity and is worried that a lack of traffic would hinder those efforts and decrease viability (particularly for non-residential space).
- Existing issues finding and maintaining commercial tenants in buildings and that would be exacerbated by the bypass. Is worried that apartments will be the only viable option if the bypass is built because there will not be the pass-by traffic and visibility needed for commercial uses.
- Agreed that traffic signal has vastly improved the operations at the intersection and may negate the need for a bypass.
- Pointed to Skippack’s reliance on PA 73 as a similar example and cautioned against the PA 63 bypass example at Mainland as an outcome to avoid in Lederach. (There was general agreement the Mainland example highlights what can happen and should be avoided if 113 relocation is built).

Edward Knechtl:

- Mentioned that the signal has made people less wary of the intersection and more willing to come to the village and stop and look around, which has helped business at Bay Pony Inn.

Stephanie Butler pointed out that with the PennDOT PA 63 bypass project in Mainland, her understanding was that much of the public involvement with the municipalities (both Lower Salford and Towamencin) was limited, focused on the bypass only and not the residual impact to Mainland Village. This is one of the reasons this study was undertaken, to ensure that that is avoided and public input is received and utilized early and throughout the process. Natasha also reiterated the purpose of the study is to assess walkability under both existing conditions and the potential PA 113 relocation scenario.

Kevin Shelly:

- Hearing this feedback early in the process (and not just at the end) is essential to the success of the study. Stakeholder and public feedback is critical guidance for moving forward. Noted that one of the goals of the study is to encourage people to stay in Lederach and to feel safe getting out of their cars and walking around to enjoy the village.

Mary Slemmer:

- Pointed to the failures of one-way operations in Mainland and does not like the conversion to one-way on Old Skippack Rd Has led to increased cut-through traffic through parking lots.
- Noted a very long delay on Cross Rd waiting at intersection. (Stephanie noted this could be a sun glare issue in the late afternoon/evening with the video detection. LST Public Works can be notified and investigate with their signal maintenance contractor.)

Edward and Florence Knechel:

- The change to one-way on Old Skippack Rd has increased visibility of the Bay Pony Inn, but has also made the parking lot more dangerous and resulted in close calls. Vehicles cut through the parking lot do not slow down and are not aware of pedestrians leading to conflict between drivers/people who walk.
    - Thought of speed bump options
    - No quick fixes
- Would like to see sidewalks so people can get out of their cars.
- Used to be more shops in Village Core that did not survive due to lack of foot traffic.

Project Process

Natasha presented the group with a diagram graphically outlining the various steps involved in the feasibility study process. The final product will be a report that identifies future projects, which each would require funding and involved additional opportunities for public input. Natasha pointed to a second public meeting, scheduled for the fall, that will offer another opportunity for public input. The deadline for the final report is June 2024 to meet the grant requirements.

Kevin pointed out that the feasibility study will help inform the township on ways to improve Lederach.

Phil: Brought up the issue of cut-through traffic at Lederach Commons and noted that the post office used to be community hub. Also noted that cut-through traffic behind the Piano Bar and drivers ignore signage.

Natasha thanked the group for their feedback and mentioned that the project team would take the input and update the draft vision and goals to ensure everything is covered.

Potential Improvements

Natasha then introduced a set of draft boards that depict various types of treatments that can be considered along roadways, within roadways, and to enhance user experience. Natasha noted that the team is looking for input on what treatments might be appropriate in the village. The group did not go through each item in detail but some that were discussed include:

- Sidewalks
    - Rick: Walking and biking is currently almost impossible with no shoulders and no room to escape oncoming vehicles. (Also noted that there have been instances of vehicles going off the roadway.)
    - Eric Callahan: Concerned about lack of space to fit sidewalks.
- Walkways (Natasha pointed out that internal walkways could be a creative way to deal constraints of narrow roadways.)
    - Consensus about exploring this as an option
    - Concerns about liability and maintenance responsibilities (Phil, Rick, Eric)
    - Rick: Open to paths outside of public right-of-way if they provide a benefit and there could there be way to work with township on liability/maintenance issues.
    - Phil: Asked if all property owners will be required to build sidewalks. Expressed concern that different property owners/developers may be held to different standards.
    - Mike: Part of process with Township is going back through old plans/resolutions to identify sidewalk waivers and outstanding easements. One location on the property with post office is a blanket easement for a trail connection.
- Pedestrian Scale Lighting
    - Generally in favor.
- Crosswalks
    - Generally in favor.
    - Phil noted his preference for the stamped asphalt look to fit with village character.
- Outdoor community spaces
    - Generally in favor.
    - Example brought up of how Bay Pony Inn island could be redesigned to be landscaped and better fit needs of community. General agreement among participants that the current design is urban/suburban and does not fit into the village and is an opportunity for improvements.

Future of Harleysville Pike

Natasha then discussed the future of Harleysville Pike if the 113 relocation project is built. This includes scenarios for one-way operations, which would provide space for pedestrian/bicycle facilities or on-street parking. Natasha then asked the group for feedback regarding potential one-way operation scenarios.

Mary:

- Strongly opposed to one-way operations.

Rick:

- One-way operation would be the dirt on the grave of the PA 113 relocation.
- PA 113 is the reason for the village.
- People do not want to go out of their way. Area will just be apartments.
- We want traffic.
- It is equally important to connect to the village to other areas in the township. Could increase viability if it becomes a destination.

Phil:

- Strongly opposed to one-way operations.
- Noted that all of the one-way scenarios include a cul-de-sac at the northern end of Harleysville Pike and that would be a huge mistake.

Stephanie mentioned that the reason for the cul-de-sac was to avoid the creation of another odd, multi-legged intersection. The scenarios with the cul-de-sac reflect the current concept plan for the potential PA 113 relocation, but do not reflect the full range of alternatives that could be considered. There will be the need for additional analysis of design and operational alternatives if/when preliminary engineering is advanced for PA 113 relocation. Stephanie noted that feedback on the cul-de-sac can help to information alternatives that will be evaluated. There was discussion of the potential for roundabouts at Landis Rd and Whittaker Way and the project team mentioned that traffic analysis had not been done for those options, but it is some that could be evaluated. Stephanie also mentioned if the PA 113 relocation moved forward that will trigger further traffic analysis that would include assessment of roundabout options. The group also indicated that potential roundabouts could serve a dual purpose as traffic control and village gateway. Kevin thanked the group for the suggestion and mentioned that this is the kind of feedback needed.

Mary showed the group a map of future trail considerations that was developed by the township and pointed out the pathway along the proposed PA 113 alignment and questioned what that trail was and why the future roadway was not shown. Mike noted that the township had decided at the time to just show the trail. There was discussion among the group as to whether the trail could be built without the roadway. Phil agreed that this would be a huge connection for the village and a better use of funds. Stephanie explained that there could be a possible phasing where the trail could be developed in the short term, especially since the right-of-way has been acquired. There was general agreement on this as a possible option.

Additional Questions/Comments

Natasha opened the floor for any other questions/comments.

- Phil noted that if this project is to move forward, there needs to be a landscape architect involved in the design process. Natasha noted that the project team for this project includes certified planners (and not only traffic/design engineers). Natasha and Stephanie agreed that the design of improvements should include a landscape architect and a multidisciplinary team. She also noted that changes from the recent infrastructure bill requiring implementation plans (with strong emphasis on public feedback) to access federal funding.

- Phil offered feedback on the gateway treatments shown in the handouts. He would like to see roadside gateways inviting people to the village, not just a traffic calming median in the roadway. Natasha asked Phil if he had any specific examples he could share.

- Rick noted that Souderton is an example of a good investment in streetscape improvements.

- Natasha shared an example of Route 100 in the Village of Eagle in Upper Uwchlan Township, in which a parallel route was constructed but the numbered state route was not relocated. This area has two parallel roadways, one through the Village of Eagle and one adjacent. While the gateways are not ideal in this location, it was noted that traffic does flow through and around maintaining the viability of the village.

- Phil noted the undesirable location of the equipment/mast arm needs to be addressed. Phil asked if there is a possibility to re-visit the signal configuration. Natasha indicated that would likely be a part of any improvements for traffic and pedestrians. Different pedestrian traffic signal equipment maybe necessary to provide crossings. Mast arm locations can be re-considered, particularly if right-of-way acquisition is part of the plan. Stephanie iterated that the location PennDOT placed the mast arm was due to the state's legal right-of-way availability at that time.

- Phil asked about potential grant funding for implementation and if there were any stipulations/baggage associated with grant requirements. Natasha and Stephanie noted that most grant funds do have requirements that have to be considered when evaluating whether to pursue grant opportunities.

- Rick asked about the public meeting. Natasha explained that the meeting materials cold be taken and reviewed by the stakeholders and they can provide additional feedback after this meeting, as well as at the June 15th public meeting. McMahon will refine the materials based on the stakeholder feedback for the public meeting. Natasha explained that these will be larger boards for public view, feedback, etc.

- Phil asked to be kept informed throughout the feasibility study (and any future phases for implementation). Phil asked that stakeholders be informed if plans or designs change. Phil re-iterated his strong disappointment, frustration, and lack of trust associated with the lack of communication and last minute change for traffic signal installation and wants to make sure that does not happen again.

Public Meeting Information

The project team encouraged the stakeholders to attend the June 15th public meeting. Rick is unavailable due to a conflict but others indicated that they plan to attend.

Stephanie explained that the Township Trail and Sidewalk Committee (TSC) members will also be present and assisting with the discussion. The TSC consists of two members from the Board of Supervisors, Planning Commission, and Park and Recreation.

Phil asked how the Public Meeting was advertised. Stephanie indicated the mailings were sent to every property owner within nearly a 1-mile radius of the village (identified as village edge on the graphics). It was also posted on the website and in the monthly e-news from the Township. Phil appreciated the invitation distribution. Phil also acknowledged that the public in attendance may indeed have varying opinions about the 113 relocation and some participants may be more interested in bypassing the village instead of making it better. He suggested asking meeting attendees for their perspective.

Stephanie also stated that the project included an environmental constraints memorandum which identified several environmental considerations included eligible historic property(ies) and village districts, natural resources, etc. While this is not the focus at this public meeting, she wanted the group to be aware that an initial preliminary environmental evaluation was developed as part of the study.

Closing Remarks

Natasha thanked the participants for their time and input. The project team reiterated that this study is the Township and Community's study. Input from this group, Township Staff and Board/Commission members, and community members is paramount for it to represent the goals and objectives of all the entities. The dialogue must and will continue throughout this process.

Walkable Lederach – Stakeholder Meeting #2
MINUTES

Date: October 12, 2023
Location: Village of Lederach (met outside Bay Pony Inn for field walk)
Time: 11:00 AM

Key Stakeholders		
Richard Mast	Richard C Mast Associates	rmast@rcmaonline.com
Mary Slemmer	Resident	mrslemmer@aol.com
Phil Lederach	Lederach Architecture	phil@lederach.com
Florence Knechtl	Bay Pony Inn	f.knechtl@yahoo.com
Edward Knechtl	Bay Pony Inn	
Eric Callahan	Callahan Financial	eric.callahan@equitable.com
Lower Salford Township		
Mike Beuke	Director of Building and Zoning, LST	mbeuke@lowersalfordtownship.org
Project Team		
Natasha Manbeck	Project Manager, McMahon, a Bowman company	nmanbeck@bowman.com
Stephanie Butler	Project Manager, McMahon, a Bowman company	sbutler@bowman.com
Rob Gates	Senior Planner, McMahon, a Bowman company	rgates@bowman.con

Natasha Manbeck welcomed the group and provided an overview of the work done since the last Stakeholder Meeting on June 8, 2023 including a public open house (June 15, 2023) to gather local input and development of draft capital improvement projects based on public/stakeholder feedback and guidance from the Lower Salford Township Sidewalk and Trails Committee. Natasha provided a summary of the public input received from the previous stakeholder meeting and the public open house and how that has influenced the development of the plan including:

- A lack of support for one-way scenarios for Harleysville Pike led to dismissal of one-way scenarios from further consideration/evaluation.
- A mix of support/opposition related to potential PA 113 Relocation leading to the following considerations:
  - Identifying the need to gather addition public input
  - Potential to keep Harleysville Pike designated as PA 113
  - Evaluation of options for providing trail connection within right-of-way secured for the PA 113 Alternate Route
  - Continue to pursue funding for design and construction of the PA 113 Alternate Route.
  - If/when funding is secured for preliminary engineering of the PA 113 Alternate Route, further evaluate options for the road design, including intersections and connections at the northern and southern ends.

  - Focus on identifying improvements in the Village of Lederach that are not dependent on implementation of the PA 113 Alternate Route.

Risk Mast asked whether or not a decision has been made regarding PA 113 and what the timing might be for the project. Natasha explained that the project has been identified as a priority by the Lower Salford Township and Montgomery County for many years. Feedback from this stakeholder group and the public has indicated a need to reassess and consider what options are available. Stephanie added that if work were to begin today there would likely be an 8-10 year horizon before the project was completed. Mike Beuke explained that the Board of Supervisors has not officially voted on anything related to PA 113 and that the design phase would be an opportunity to shape what the project would ultimately look like.

Rick Mast and Phil Lederach commented that things have been confusing from a communication standpoint and that the township should make a point to better communicate the current and future plans for PA 113. Rick stated that the village needs traffic to be viable and any projects must keep this in mind and be done in a way that can still support local businesses. Rick also asked how stakeholders could remain involved beyond this study and once the project moves to design phase. Natasha explained that PennDOT has a process (called PennDOT Connects) for projects with state funding and opportunities for public input within that process as well as opportunities to share input directly with the township through the citizens request portal.

Phil Lederach mentioned the importance of open space within the village (and how that related to the Village Commercial Zoning) and specifically within the ROW where the PA 113 Relocation (Alternate Route) would be located. He also stated concerns that the township has already made a decision and that these conversations are just a “smoke screen” to help provide justification for the PA 113 Relocation (Alternate Route) project. He pointed out that things have changed in the 30+ years since the bypass was originally proposed and it may no longer make sense for the village. He asked how the pedestrian signals and crosswalks would be phased in with the other intersections movements and, if they caused additional delay, would that be used as justification for building the PA 113 Relocation (Alternate Route). Natasha assured that the intent of the intersection enhancements are to improve pedestrian safety and that the signals would be pedestrian actuated and only trigger if a pedestrian is present. Additional analysis and signal timing would be involved to allow the signal to operate as efficiently as possible.

Mike explained that these discussion help shape the next steps and public input plays a major role in the ultimate direction the township decides to move. Natasha, Stephanie, and Mike also urged the group to reach out to the Board of Supervisors through the township’s citizen request portal on the website and other avenues for public comment to let officials know their opinions and insight on this project and other matters. Natasha also explained that comments from the stakeholder meetings and public meetings would help shape the plan and be included in the study as an appendix.

Natasha reiterated that the Walkable Lederach Feasibility Study scope includes developing potential improvements under existing conditions, as well as with a potential PA 113 Relocation (Alternate Route). She also pointed out that many of the improvements being shown would need be placed on private property due to space constraints on roadways. Eric Callahan expressed concerns with potential pedestrian facilities on his property including maintenance and public access. He stated that he did not think there is currently a need because people are not walking in the Village Core and there are not desirable destinations for people to go. Natasha mentioned that people might not currently feel comfortable walking due to lack of space, excess traffic, and limited visibility. She also noted that new developments in and around the Village Core may bring new residents to the area who might be interested in safe connections for walking and biking. Natasha mentioned that the township has received a preliminary land development plan for six dwelling units (twin houses) on the south side of Cross Road. Some stakeholders suggested involving developers and other major property owners in the planning process.

Natasha explained two options for the improvements at the Village Core, with one option involving pedestrian enhancements with the existing traffic signal and the other with relocated traffic signal. Mary Slemmer asked if Old Skippack Pike could be returned to two-way operations. Natasha and Stephanie responded that would not be feasible (or supported by PennDOT) due to the traffic signal operations. Phil asked for consideration of the option of providing one large traffic signal mast arm on the south side of Morris Road. Stakeholders didn't express a clear preference for the traffic signal location, but did express concerns about having more poles for the pedestrian crosswalks.

Rick stated that he like the ideas of having sidewalks and connecting to internal walkways within the Village Core, but also thinks there should be a focus on connecting outward from the village to link to existing trail/open space resources. Phil also felt this was important and pointed out that, although such connections are listed as capital improvement projects, they are not clearly represented on the concept plans and worried that public will have trouble envisioning the overall vision. Natasha explained that the scope of the plan only allowed for a certain number of concept plans to be developed but agreed there could be better ways of integrating the other projects into the graphics so people can understand the bigger picture. Natasha also discussed how the prioritization/phasing of projects could be reconsidered to start outside of the Village Core (possibly with Village Gateways) and that would be some of the feedback the project team would look to gather during the upcoming public meeting. Natasha asked the group for feedback on the proposed improvements in front of the Bay Pony Inn. There was general support among the stakeholders for the improvements included in the conceptual plan.

Natasha then presented the Village Gateways Capital Improvement Projects map showing locations for possible locations as well as a draft concept plan for a median gateway treatment and rendering depicting a roadside option. The group was in favor of the gateway treatment options and liked the idea of using them as a traffic calming feature in conjunction with speed limit reductions. The following recommendations related to gateways were proposed:

- Move PA 113 North Gateway location further north to include historic property.
- Extend pedestrian facilities to gateway locations.
- Incorporate native/indigenous species for plantings in medians and along roadsides (including shade trees to create tunnelling effect).
- Select planting heights so as to not interfere with sightlines.
- Consider and plan for maintenance.

The stakeholders shared their general support for prioritizing and advancing the Village Gateways, shared use path along the PA 113 Relocation (Alternate Route) ROW, and improvements in front of the Bay Pony Inn.

Natasha thanked the stakeholders for their continued involvement in the project and willingness to take the time to provide their input. She encouraged them to attend the upcoming public open house on November 16th at the Lower Salford Township Municipal building and explained that their feedback from this meeting would be used to refine materials presented to the public. She also outlined the next steps following the public meeting which will include a public comment period for the draft plan in December and a final presentation to the Board of Supervisors prior to the release of the final plan in early 2024. Natasha noted she would inform the stakeholders when the draft plan would be made available for public review and comment, as well as when the draft plan would be presented and discussed at a Planning Commission meeting.

Walkable Lederach Feasibility Study

PennDOT and Montgomery County Planning Commission Technical Coordination Meeting Notes
10/12/2023

Attendees:

Paul Lutz, PennDOT	Claire Warner, Montgomery County
Nidhi Mehra, PennDOT	Michael Beuke, Lower Salford Township
Ashwin Patel, PennDOT	Natasha Manbeck, McMahon (Bowman)
Doug Schmeelk, PennDOT	Stephanie Butler, McMahon (Bowman)
Matt Popek, Montgomery County	Rob Gates, McMahon (Bowman)

Meeting Summary:

The PennDOT Coordination meeting took place on October 12, 2023 with attendees gathering in the parking lot of the Bay Pony Inn restaurant in the Village of Lederach. Natasha Manbeck (consultant project manager) provided a brief overview of the Walkable Lederach Feasibility Study including the funding source (DVRPC TCDI Grant), project scope/timeline, past/future public outreach, and draft capital improvements. She explained the history and ongoing efforts by the township and county concerning the PA 113 Alternate Route project and how the feasibility study was tasked with exploring ways to make the village more walkable under two possible scenarios:

1. Under current conditions
2. With PA 113 Alternate Route

Stephanie Butler explained how the township has acquired most of the right-of-way along the potential PA 113 alternate route corridor and has explored funding for the project. Matt Popek provided context from the county's perspective and indicated that the PA 113 Alternate Route project was identified as one of the top three priorities on the county's most recent submission to the Delaware Valley Regional Planning Commission for the next Transportation Improvement Plan (TIP) Update. The group discussed how public and stakeholder feedback related to the PA 113 Alternate Route has been varied with some in favor of the project and others opposed. The Mainland bypass was brought as a cautionary example and Paul Lutz (PennDOT) referenced the Village of Eagle as an example of where an alternate route has been beneficial. The group agreed that there is a balance that must be found between diverting excess traffic volumes (especially trucks) while still maintaining viability for businesses and properties within the Village Core. Some potential strategies discussed included:

- Building the alternate route but keeping Harleysville Pike designated as PA 113
- Restricting truck access on existing Harleysville Pike
- Utilizing existing ROW for a shared use path connection (as initial phase)
- Reassessing the need and design features for an alternative route including targeted public and local stakeholder outreach

The group discussed the existing traffic island installed by PennDOT to create one-way section of Old Skippack Road. Natasha presented a rendering showing curbing, sidewalk, and potential seating areas

that could replace the existing feature to make the areas safer and more comfortable/appealing for pedestrians. The group also discussed the issue of cut-through traffic within the Bay Pony Inn parking lot and potential ideas to help alleviate issues including delineating existing parking area, eliminating an access point, and adding an alley-way connection behind parking lot.

Natasha then led the group on a walking tour of the Village Core area beginning with the six-point intersection. The group discussed how the addition of the signal has improved the function of the intersection but has also resulted in complaints about the size, location, and lack of property owner coordination. Natasha presented two concept plans for the Village Core pedestrian and intersection enhancements that include high visibility crosswalks with dedicated pedestrian signals and a network of pedestrian pathways. The concept plan also presented two options for signal placement:

1. Existing single centralized traffic pole location
    a. Could make signals black to blend in better
2. Five smaller signal poles spread out on legs of the intersection
    a. More poles overall but could be combined with ped crossing signals

Ashwin Patel (PennDOT) raised a concern that the location of the crosswalk on Cross Road could be blocked by eastbound traffic queuing at the signal. The consultant team agreed to check the queue lengths based on the traffic analysis and further evaluate the following options for the crosswalk location:

1. Locate the crosswalk at the signalized intersection (possibly with a sidewalk connection along the Piano Bar property and with a dedicated pedestrian phase for the crossing movement).
2. Locate the crosswalk further west on Cross Road to minimize potential vehicle queues blocking the crosswalk. (Natasha and Stephanie noted that the Township has received a land development proposal on the south side of Cross Road and will share the traffic engineering review letter with PennDOT.)
3. Locate the crosswalk further west on Cross Road and combine with the proposed median gateway treatment.

Natasha then presented the potential gateway treatments including median gateways (Cross Road and PA 113 north and south of village) and roadside treatments (Salfordville Road and Morris Road). Natasha noted that the Township would likely be interested in possibly reducing the posted speed limits in the village in conjunction with implementation of the gateway treatments. The current speed limit signage within the village (particularly on Salfordville Road) is somewhat confusing. Natasha noted that the Township understands that gateway treatments on state-owned roadways will require a maintenance agreement with PennDOT.

APPENDIX D

Steering Committee Meeting Minutes

LOWER SALFORD TOWNSHIP
TRAIL PLANNING COMMITTEE
MINUTES

Monday, February 6, 2023
7:00 p.m.

Lower Salford Township Building

1. Walkable Lederach (Natasha)
   a. Introductions and Welcome
   Natasha Manbeck introduced the project team and provided a brief overview of the project purpose, background, scope, and schedule. Natasha explained the purpose of the meeting was to introduce the project and gather initial feedback regarding project direction and priorities to help guide efforts moving forward including the upcoming field visit. Additionally, she outlined the role of the committee and the importance of sharing information with the wide range of committees and outside groups represented by members of the committee.

      1. The committee recommended adding a presentation to the Planning Commission as part of the public outreach portion.
      2. There was some discussion about the lack of a space to host the planned pop-up event.
         a. Possible locations may be The Bay Pony Inn, Piano Bar (if opened), or the Advent Lutheran Church. Depending on weather, parking lots could be used (Park area at Schlosser Road), etc.

   b. Natasha explained the three levels of scale that comprise the project:
      1. Village Core – immediate area within the village proper
      2. Gateways – entryways in and out of the village
      3. Edge Connections – connections to trail, park, and other surrounding regional resources

   For each of the level, the committee was given a map and engaged in a brief discussion regarding elements they would and would not like to see within the plan.

   c. Village Core
      1. Things you love?
         b. The new signal
         c. Historic properties
         d. The village feel
         e. Availability of parking at existing businesses

      2. What do you want to see?

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         a. Safe place to walk
            i. Crosswalks
            ii. Wide walking paths (for strollers, passing in both directions)
         b. Both sides of the roadway preferable but one side better than nothing (could also help limit need to cross)
         c. Parking
            i. Possibility of connecting to existing parking area on Salfordville Rd (Mary Slemmer property)
         d. Options for 113 relocation and without relocation
         e. New traffic signal has improved cycling but still need pedestrian improvements within the village area.
         f. Pedestrian connections through existing properties (due to constrained ROW on roadways)
         g. Gathering areas
         h. Marketing/branding through light posts

      3. On road bike facilities?
         a. Depends on what type of visitors/patrons we want to attract
         b. Park car and walk.
         c. Park bike and walk
         d. Cyclists passing through
         e. Not sure about need for bike lanes with limited space
            i. Priority placed on pedestrian facilities
            ii. Cycling currently popular on PA 113 (signal at Landis has helped)
            iii. PA 113 identified as important bike route on Bike Montco plan. Outside of core area there is more room (shoulders) to work with. Possibly traffic calming and share the road signs through core.

      4. Other streetscape amenities?
         a. Keep the neighborhood/village feel
         b. Benches/places to take a break
         c. Bay Pony island (PennDOT)
            i. Opportunity for streetscape amenities/landscaping trial project
            ii. Could be a phase 1 project
         d. Better signage (wayfinding/gateway)

      5. Anything you don't want to see?
         a. Distracting neon lighting/signage (e.g., vape shop)
         b. Additional driveways/curb cuts/accesses

      6. Other village examples you like?

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a. Skippack
b. Ambler (street parking, street amenities)
c. New Hope
d. Centerville, MD (median island, one-way traffic)

7. Problem Areas?
   a. Left turn from PA 113 to Cross Rd (truck traffic)

d. Gateways
1. What do you want to see?
   a. Connection to future PA 113 Trail, utilize Morris Rd to include new developments. Existing network of 10' asphalt paths (not maintained during the winter)
2. Gateway entry treatments
   a. Create sense of arrival/destination
   b. Landscaping and welcome signage to increase village branding

e. Edge
   a. Opportunity to add bike lanes on PA 113 (Landis Rd to Paterno Dr)
   b. Old Skippack Pk (slower traffic and gradual) could connect to Marian Ct and Wawa Park
   c. Cross Rd may only be wide enough for Share the Road signage due to width constraints

f. Traffic Analysis
The committee discussed existing traffic related issues within the village including:
- No room for turning lanes
- Receive the most complaints about PA 113 northbound (queues behind left turning vehicles
- Cross Rd is regularly backed up (up to Tyson Rd)
- Avoid during rush hour

The project team presented the results of the initial traffic analysis looking at the future relocation of PA 113 and potential traffic flow configurations on old PA 113
- Old PA 113 Two-Way Traffic
  - Once the cul-de-sac is in place heavy volume on Cross Rd will still need to be accommodated

- Old PA 113: One-Way Traffic (northbound from Salfordville Rd and southbound from Cross Rd with small two-way section in between)
  - Provides more road space for opportunity to add more pedestrian facilities

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  - Might need to reconfigure Old Skippack Rd due to emergency management issues

- Other Ideas
  - Southside two-way/North one-way (out of village)
  - One-way south throughout 113 relocation limits
  - Traffic analysis for one-way options should consider potential impacts to Morris Road

g. Next steps
   i. Stakeholder interviews: The committee provided input on potential stakeholders for the consultant team to interview, including: Mary Slemmer, Phil Lederach, Rick/John Mast
   ii. The consultant team will provide a very brief presentation (5 min or less) at an upcoming Board of Supervisors meeting to introduce the project and highlight future opportunities for community input.
   iii. The consultant team will also work with the Township to post an overview of the project on the website.
   iv. The next Lederach discussion will likely be scheduled as part of the April or May committee meeting.

2. Project Mapping Updates
   a. Jason Emmel has left the County. Updates are being addressed by Bill McLay.
   b. Updates requested of MontCo (previously Jason, now Bill)
      i. 355 Maple Ave Area, ***John Kennedy and Keith Bergman requested the map edits and updates be as comprehensive as possible and as quickly as possible to reflect future connections.***
      ii. Stephanie to follow up on request from 355 Maple Traffic Engineer regarding sidewalk project questions.
      iii. See attached mark ups to be added to Mapping Application and Project Prioritization List/Tool
   c. Next Steps and Action Items
      i. Developing projects for future applications, scope of work, etc.
      ii. Deliverables and Integration with County Mapping Application https://experience.arcgis.com/experience/c9a67fbca2c44f5aa94594aab4824356/ - Working with Bill at MontCo to include the following info on the Future Trail/Sidewalk Consideration Layer when clicking on each project:
         1. Project Name and ID number
         2. Brief Summary: Sidewalk, Path, Structure, On-Road, Off-Road
         3. Construction Funding Status: Not Funded, Partially Funded, Fully Funded (GRANT NAME/DEVELOPER/TOWNSHIP/STATE/FEDERAL)

3. On-Road Bike Lanes
   a. Stephanie and Doug met to review potential roadways, limits, etc.

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b. Stephanie/McMahon prepared initial map and detail sheets for discussion. Suggest continued preparation for MontCo CTP application (aerial plan, scope of work, cost estimate) so that when the application opens, the materials are ready.
c. Stephanie had a meeting with Anne Leavitt-Gruberger (ALG) re: MontCo2040 application and also talked about the on-road bike lane application. ALG was supportive of this type of project for CTP.
d. McMahon to continue the mapping for the designated bike lane roadways in preparation for CTP application, Develop grant cost estimate including share the road items.

4. Yoder Road Sidewalk Evaluation
   a. Right of way research and topographic survey completed. Certain areas are being coordinated with Twp to determine if they have accepted yet or can move forward to accept. Coordinating with Holly and Andy Freimuth regarding resolutions/acceptance.
   b. Preliminary layouts have been developed with cost estimates. Copies of Option A and Option B are attached for discussion.
   c. Committee is concerned about proximity of sidewalk to existing house, however, has asked that Township staff approach the property owner to begin discussions of potential sidewalk on that side of Yoder Road. Reasons include minimizing crossings of pedestrians from school to park system, use of existing curb and drainage system, less impact to existing trees, generally less cost and greater opportunity to fund and provide local match.

5. Park Ave Sidewalk
   a. Met with Doug to review scope. He recommends keeping it on one side with one crossing but additional coordination with Twp staff and BOS is necessary before advancing it further into engineering.

6. Updates on Submitted Funding Applications/Current Projects
   a. ***DCED LSA*** – 113/Paterno/Maple submitted in March 2022. -Awaiting Award Decisions
   b. ***2021 TASA*** SR 63-Ruth Rd – Design Progressing-Information on Twp Website
   c. ***DCED MTF*** – Submitted for SR 113 and Shared Use Path -Awaiting Award Decisions
   d. ***MontCo2040*** App in Preparation for School Flasher Upgrades (previously submitted for ARLE but not selected in 2022). Confirmed with County that these are eligible for MontCo 2040 and these have been a Twp priority. Application preparation for 3/1 submission continues, meeting held with Anne L-G suggested referencing the TSC work and potential future projects in each area.
   e. ***DCNR C2P2*** now open, due April 2023 – Jacob Reiff Park Trail suggested for future project, requires more preparation and meeting with Drew Gilchrist, etc. No project ready for this year but prepping for next year remains important.
   f. ***2023 TASA Round***s – If considering a project submission, the time is NOW to select and prepare the project information, meet with County reps, etc.

7. Village Visits (Or Other Township Locations) by Committee Members
   a. Feedback and Discussion Items
      i. Mainland Village
      ii. Vernfield
      iii. Harleysville
      iv. Lederach – TCDI study to address walkability

8. Future Meeting Schedule
   a. Next Meeting: ***TBD*** – Start Time and Location

9. Action Items
   a. Continue with county coordination on mapping app items.
   b. Continue discussion with Township Staff on Yoder Rd Right of Way and property owner coordination.
   c. Walkable Lederach Next Steps as identified, including stakeholder interviews, field view.
   d. Set up meeting with DCED and Regional Rep (Michael Shorr) between Tracy P., Donna S., Keith, Chris C., Joe C.

LOWER SALFORD TOWNSHIP
TRAIL PLANNING COMMITTEE
MINUTES

Monday, May 8, 2023
7:00 p.m.
Lower Salford Township Building

We welcomed both Claire Warner and Matt Popek from the Montgomery County Planning Commission to the May 8th Meeting in addition to the regular TSC members.

1. 355 Maple Avenue – Trail Layout Discussion
    a. Mike B. to communicate with Christen that they need to come to TSC first before walking the location in the field. TSC will likely meet again in July.

2. Walkable Lederach (Natasha/Rob)
    a. Activities since last meeting
        i. Field View
        ii. Traffic Analysis
        iii. Stakeholder Interviews
            - Keith iterated a summary of his phone call Phil Lederach. To the extent that something can be done to improve the characteristics of the signal/buildings, study should address this. Can the signal be modified or removed in a future condition?
            - Still trying to get in touch with Eric Callahan and Bay Pony Inn.
        iv. Committee Meeting Focus
            - Share and discuss draft materials to get the committee's feedback and refine materials for the public meeting in June.

    b. Preliminary Traffic Analysis Results
        i. Overall, the plan will consider opportunities without 113 relocation and with 113 relocation in the future
            - For the public meeting, need to explain why this project is being undertaken, including some background regarding the 113 relocation and potential benefits (reducing traffic volumes in the village, lower traffic speeds, etc.) . Also, need to be clear on what improvements can be considered without or with 113 relocation.
        ii. Traffic analysis completed for four alternatives that all assume relocation of 113. An overview of the options and the future capacity/level-of-service was presented. Two-way vs. one-way options. Key Question: Does this group think that any of the one-way options would be palatable? Some of the one-way options do improve operations at the five-points intersection, but increased delay at other intersections, such as Relocated 113 and Morris Road.

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            - Need to present the benefits and opportunities of one-way options before asking that question. One-way provides more space for parking, pedestrian/bike infrastructure, etc. Could one-way eliminate the need for a signal at the five-points intersection or have a revised signal? Need to find a way to highlight the positives when presenting traffic analysis to the public.

    c. Opportunities & Issues
        i. Existing Conditions – Rob reviewed the field view photos and existing opportunities for future connections.
            - Some property owners not happy with new traffic signal design/placement (operations/flow has improved). Possibility of bi-directional signal with pedestrian movements. Modify location to provide more space/flexibility.
            - Signage clutter leads to confusion and takes away from village character.

    d. Potential Improvements (Map Series)
        i. Village Core
            - Natasha identified the destinations, or potential future destinations, existing sidewalks, existing internal connections
            - Mike B. to send information on land development agreement for internal connection in location of Lederach Architecture and Commercial Lot.
            - Support for idea of internal connections but will require coordination and support from Property Owners and Businesses. For the public meeting, need to highlight co-benefits for different stakeholders, including business owners. Property owners will have questions about how it will work regarding maintenance and liability.
            - Discussion of public gathering spaces/open space. Support for idea of including wayfinding and historical signage. May need to come up with new terminology. Need to address concerns about too much pavement being added in the village.
                - Pedestrian Zones
                - Landscaped Buffers
                - Refuge Zones
                - Parklets/Pocket Parks
                - See Attachment from Claire Warner with example from Lancaster (rain gardens and landscaped buffers)
            - Ways to show improvements in a phased approach
                - What can be done with current conditions?

5/22/2023 1:46 PM

- With PA 113 Relocation?
- Future scenarios?

ii. Gateways
- Natasha discussed options for medians, etc.
- Broad support for concept and locations
- Discussion of consideration of maintenance responsibilities
- Salfordville Road not currently showing a gateway treatment, maybe roadside signage could be considered

iii. Edge
- Discussion of adding connection to connect to Groff's Mill Park (Serve as trailhead)
- Support for keeping a natural surface trail within the parks
- Remove connection from Salfordville Road to Camp Wawa due to feasibility concerns.
- Review feasibility/limits of potential bike lanes on 113 south of the village
- Support for other connections and facilities shown on map

iv. Route 113 Typical Sections- Save for later, not for public meeting

e. Vision and Goals
i. Committee agreed the draft vision and goals should be presented in the beginning at the public meeting.

f. Public Meeting
i. June 15, 2023 (6:30-8:30 PM with presentation at 7pm)
- McMahon to coordinate with Township on distribution of Meeting Announcement
- Update Invitation to add more descriptors to "walkable"

ii. Format and content
- How do we incorporate a pre-meeting with stakeholders? Natasha suggested modifying the pop-up event in the scope to be directed to the 5 interviewees/stakeholders prior to the larger public meeting.
- Liked idea of starting with Vision and Goals (presentation and first station of open house) then moving on to interactive education/brainstorming (charrette style) portion followed by project team concepts.
- Prepare for diverse audience with very different perspectives and visions.

g. Next Steps
i. May / June: McMahon team will be focused on preparing for the public meeting, including:

- Coordinating with the Township to send invitations and publicize the meeting and possibly meeting with key property owners/stakeholders prior to the meeting
- Preparing boards, public input opportunities, and presentation slides for the public meeting based on feedback from the committee
- Compile comments and input received at the meeting

ii. July: Refine draft concepts based on public input received
-

Items 3 through 5 are for informational update only

3. Project Mapping Updates – No Updates at this time
   a. Useful reference tool for the 355 Maple Land Development

4. On-Road Bike Lanes
   a. Stephanie and Doug preparing for ARLE application submission which will include on-road bike lanes (Sturgis, Yoder, portion of Maple), lane striping and signage for Kulp, Lucon, Moyer, Indian Creek, portion of Maple

5. Yoder Road Sidewalk Evaluation
   a. Right of Way accepted and DCED GTRP application preparation underway for submission by May 31st. Additional Project Development steps continue.

6. Future Meeting Schedule
   a. Next Meeting: July 31, 2023 – 7 pm

7. Action Items
   a. Schedule pre-meeting with stakeholders
   b. Ongoing public meeting material preparation
   c. Update invitation and send out to village and post on website (completed)

LOWER SALFORD TOWNSHIP
TRAIL PLANNING COMMITTEE
AGENDA

Monday, July 31, 2023
7:00 p.m.
Lower Salford Township Building

1. 355 Maple Avenue – Trail Layout Discussion (Mike B., Christen Pionzio)
    a. McMahon Review
        i. SLB summarized the McMahon review and discussed the revised layout particularly between the access and Oak/113 intersection. General agreement with revised layout along Oak Drive.
        ii. Stephanie and Lindsey met to discuss the comments and revised plan layout to address concerns with drainage, guiderail, buffers and ADA ramps.
        iii. Variable buffer (2' to 5') is available in the section between 113 and the first site access. A 14' curbed lane will be provided with a 5' paved sidewalk due to the physical constraints in this area of the frontage. The natural drainage pattern flows to a low point so curbing in this section would block the runoff flow. Instead, a boardwalk with curb opening will be provided to allow for the runoff to leave the roadway. The 5' min buffer is provided in the area that the curb is not shown.
    b. Park Board and PC Feedback
        i. Applicant was encouraged to attend the next PC meeting to discuss the revised plan, prior to attending the BOS meeting.
        ii. Internal Connections are still not consistent. Applicant does not want internal connections on the property. Concerned about liability. Keith said the Twp could take an easement on the internal connections and be responsible for maintenance. It is noted that the trail along Oak and Maple was initially intended to be maintained by the property owner.
        iii. Kevin stated his concerns about not providing the internal connections and inconsistencies with previous meeting discussions.
        iv. The TSC was in general agreement with the revised plan for the trail and sidewalk areas along Oak Drive and Maple Ave.
        v. Kevin asked for notes on the plans to cover maintenance and liability. Stephanie indicated additional plan details will be necessary including notes.

2. Walkable Lederach (Natasha/Rob)
    a. Public Meeting #1 Recap
        i. Technical Appendix- distributed to committee for review, every comment from the public workshop is included.
        ii. Survey Results/Email Responses
            ▪ Black dots in the responses were noted as being from online survey

8/17/2023 9:12 AM

        iii. Key Takeaways
            ▪ Route 113 Alternate Route
                • Public opinion generally split between oppose/support
                • Concerns related to negative economic effects
                • May need more public input regarding potential relocation
                • Potential option to move forward with trail connection along ROW alignment as initial phase.
            ▪ One-Way Scenarios
                • Clear opposition to concept from public.
                • Since traffic analysis did not who overwhelming benefits, recommend not moving forward for further evaluation.
            ▪ Vision and Goals
                • Recommendation to add goal about open space, maintaining existing farmsteads
                • Could be framed: "Enhance and connect to existing open spaces, natural landscapes, and historic resources."
            ▪ Village Core Potential Improvements
                • In general, the layout of sidewalk is acceptable to committee. Possibility of a raised intersection was discussed as another treatment option.
            ▪ Village Gateways
                • 113 Gateways should be more of the median style. Develop rendering of this style for the study
                • Add a gateway location on Salfordville Rd. This location and Cross Rd could be more of welcoming signs on sides of the road, no median.
            ▪ Village Edge Potential Connections
                • Update to include a connection on Salfordville Road as future project/evaluation
    b. Draft Village Core Concept Plan
        i. General consensus of the plan is positive. McMahon can move forward with finalizing these plans (add legends, details of barrier, etc.)
        ii. Request was made to not show the Legal R/W on the concept plan at this time since all the improvements will require property owner coordination/agreements, easements, etc.
    c. Potential Treatments for Public Spaces (Emily Gates, Sustainable Design Graduate Studies Capstone Project)
        i. This summary will be provided as a technical appendix in the study.
        ii. Committee was pleased with ideas for plantings, amenities, etc. Helped the visualize what could potentially fit in the small areas.
    d. Next Steps

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i. Develop renderings and Implementation Plan for the report/study
ii. Committee meeting in September to prepare for Late October/Early November Public Meeting #2.
iii. Finalize Report, Present to BOS, and complete the study.

Items 3 through 5 are for informational update only

3. Project Mapping Updates – No Updates at this time

4. On-Road Bike Lanes
   a. ARLE application submitted. Awaiting grant award announcements

5. Yoder Road Sidewalk Evaluation
   a. Right of Way accepted and DCED GTRP application submitted. Doug spoke to Mrs. Mayhew and she understood the need for the project and asked to be kept in the loop as it progresses. We will hold on engineering until DCED grant is announced unless Twp wants to advance before that time.

6. Future Meeting Schedule
   a. Next Meeting: September 25th at 7 pm

7. Action Items
   a. Keith requested a list of recently submitted grant applications (Stephanie)

8/17/2023 9:12 AM

LOWER SALFORD TOWNSHIP
TRAIL PLANNING COMMITTEE
AGENDA

Monday, September 25, 2023
7:00 p.m.
Lower Salford Township Building

1. Walkable Lederach (Natasha, Rob)
    a. Capital Improvement Projects
        i. Overview
        ii. Village Core Overview
            1. Keith asked for C7 to be added to the capital projects map at potential locations
        iii. Village Core – Phase 1 (including concept plans/renderings)
            1. Kevin asked about the relative size difference between the existing signal pole and alternative option.
            2. Amy asked if the alternate signal pole locations can be shown to better compare to the existing conditions and mentioned the consideration of extra costs related to relocating poles with the second option
            3. Natasha presented a rendering of the potential improvements within the Village Core Phase 1 project
                a. The group liked the options presented in the rendering and recommended a knee-wall be added to the area in front of the dance studio to provide a flexible option for seating that could help break up the space.
            4. Natasha presented a draft summary table with description of each project and brief overviews for each of the remaining Village Core Capital Improvement Projects along with potential phasing.
                a. Kevin and Amy recommended a section in the report that provides an explanation and context for the phasing as well as the methodology for how it was determined.
        iv. Gateways (including concept plan/rendering)
            1. Natasha presented a summary table for the Village Gateway Capital Improvements as well as a concept plan of potential median gateway treatments and a rendering of what a roadside gateway treatment could look like for Salfordville Road.
                a. Roadside Gateway
                    i. Kevin asked if the idea of a knee-wall consistent with those shown in the Village Core would be possible for the approach. PennDOT regulations would probably not allow within the ROW but could be an option if permission was given to place of Mary Slemmer property (will discuss during

Stakeholder Meeting). (Others liked this idea as well.)
                    ii. Ensure there would be space for snow removal.
                    iii. Group like the idea of the stamped asphalt and potential traffic calming effects.
                    iv. Natasha mentioned could be done in conjunction with speed limit reduction (staring with moving existing speed limit change sign away from Village Core).
                    v. Kevin asked about maintenance responsibilities
                        1. Keith proposed that it could potentially be included in Golf Course maintenance contract.
                b. Median Gateway
                    i. Keith suggested removal of the departure sign.
                    ii. Would like the whole area to be stamped asphalt
                    iii. Provide options for plantings that would not interfere with sightlines (minimal height, low maintenance, native, drought resistant, etc.)
        v. Village Edge
            1. Natasha presented an overview map and table of potential Village Edge Capital Improvement projects. General discussion of the connections and feedback including:
                a. Further evaluation would be needed for Salfordville Road bike lanes with existing roadway width from Marion Court north to Groff's Mill (could be a priority) but will be more difficult with less space south towards village.
                b. Add future connection arrow for Evansburg Park
                c. Group liked the idea of utilizing PA 113 alternate route ROW to advance implementation of the shared use path.

    b. Plans, Policies, and Partnerships (PPP)
        i. Natasha presented a table with a list of potential actions related to plans, policies, and partnerships that would help facilitate implementation of the plan
            1. Design Guidelines
                a. Group in favor and agreed there should be village representatives and oversight from the township. Potential to use as best practices for other villages as well.
            2. Address cut-through traffic
                a. Continue to coordinate with property owners and phase with redevelopment.
            3. Activate Village – Remove

a. Doesn't see the opportunity currently and prefer to let it happen organically initially. This will be removed from the table based on feedback.

ii. Natasha presented a table from the Township SALDO and discussed how existing shoulder width requirements might cause issues for areas with tight spaces within the Village Core and may need to be reconsidered. Natasha mentioned that this issue came up during McMahon's review of the proposed Lederach-Cross Road Residential Development. Mike mentioned these issues have come up in Lederach and other villages.

1. Group decided to include as an item with the PPP table.

c. PennDOT/Stakeholder Meeting Field Meeting

i. Natasha discussed a next step of an in-field coordination with representatives from PennDOT to present potential projects and gather their feedback. The meeting is scheduled for October 12 at 9:30 am. Natasha also proposed the idea of holding a second key stakeholders meeting following the PennDOT coordination to provide Stakeholders with updated materials and gather additional feedback prior to the next public meeting, the group supported this. Natasha asked if there were preferences for the location of the third rendering (another perspective of Village Core, example of median gateway treatment, etc.) and proposed the option of asking the key stakeholders for input. The group agreed on this approach.

d. Public Workshop – 11/16/23 @ 6:30pm

i. Natasha shared that the township has sent out invitations and posted the flyer online. The meeting format will be the same as the first public workshop held in June with an open house period and a presentation at 7 pm.

e. Draft Report

i. Natasha shared that the consultant team has started working on the draft report and plans to send the committee chapters for review and comment. The consultant team will incorporate comments from the committee and prepare a draft report for public review.

Items 2 through 5 are for informational update only

2. Upcoming Grant Applications
   a. Stephanie, Joe, Doug, Mike, Holly, Michele F meeting on 9/26 to review project list and targeted program applications.

3. Project Mapping Updates – No Updates at this time

4. On-Road Bike Lanes
   a. ARLE application submitted. Still awaiting grant award announcements

5. Yoder Road Sidewalk Evaluation

1/2/2024 12:55 PM

a. Awaiting grant announcements.

6. Future Meeting Schedule
   a. Next Meeting: _______________ at 7 pm

7. Action Items

1/2/2024 12:55 PM

Lower Salford
Township Planning
Commission Meeting
February 28, 2024

Planning Commission Vice Chair John Kennedy called to order the Lower Salford Township Planning Commission meeting at 7:30pm. Other Planning Commission members in attendance were Joe Harwanko, David Goodman, David Bowe, Scott Bamford, and Julia Hurle. Also in attendance was George DiPersio, P.E. of CKS, the Township Engineer's office, and Claire Warner of the Montgomery County Planning Commission. Planning Commission Chair Manus McHugh and Stephanie Butler, P.E. of Bowman, the Township Traffic Engineer's office attended the meeting via Zoom.

Minutes

The minutes from the January 24, 2024, meeting were reviewed. Mr. Goodman made a motion to approve the minutes, Mr. Harwanko seconded the motion.

Motion 7 yes; 0 No

Plan Reviews

196 Main Street

Present to discuss the revised Conditional Use application was Rick Mast, P.E. of RCMA; he was joined by applicants Bryan Hunsberger and Leo Orloski. One review letter was prepared by Michele Fountain, P.E. of CKS Engineers, dated 2/13/2024.

Mr. Mast gave a brief overview of the project stating that bank use is now allowed following the new ordinance amendment. A drive-through ATM only is planned, the residential units are now proposed as two-stories, and nothing is proposed to be built in the drainage feature area due to the alluvial soils.

Addressing the CKS letter, Mr. Mast said they will comply with the lighting and landscaping, the building materials will be revised to stone veneer and cement board siding and the windows will be changed to be more residential in character.

The Planning Commission requested the applicant supply a rendering of the Quarry Road side of the apartment building. Discussed was the appearance of the buildings, including facade, materials, façade breaks and building length. The Planning Commission would like to see a more simplified color pallet.

Mr. Kennedy pointed out a correction that needs to be made to the plan where the parking is listed erroneously for restaurant. He also asked if a dumpster is necessary for the bank building.

Mr. Kennedy also pointed out an area where he would like to see buffering in lieu of the 4 or 5 parking spaces since there is more parking shown than required.

Mr. Goodman commented that there are no dumpsters at other Chase Bank sites. Mr. Mast will inquire if it can be eliminated.

It was noted that a monument sign will be requested for the Rt 63 side of the parcel and perhaps the Quarry Road side. Sidewalks are also proposed for the site.

Mr. McHugh would like to further discuss the parking between the bank and retail space at land development.

19082

Mr. Kennedy asked the applicant to supply a rendering of the side of the retail building, confirmed that the residential units are two bed/two bath with no three bed options and inquired if the applicant would agree to no three bed units as a condition. He also encouraged the applicant to investigate including the horizontal breaks as discussed.

Mr. Mast requested a recommendation as his client is under a strict time constraint with Chase Bank and waiting until June is not viable for them.

After a brief discussion, it was agreed that an exception will be made regarding the deadline for the next Planning Commission meeting and the Planning Commission would suggest that the Board authorize advertisement at their March meeting.

Mr. Kennedy asked the applicant if they would consider the condition that the area north of the drainage never be used for residential as he would like the commercial and residential areas kept separate; the applicant will take this into consideration.

The applicant was given permission to return to the Planning Commission in March. Mr. Kennedy requested that revised plans be submitted in a timely fashion (approximately a week period) for review prior to the March PC meeting.

Walkable Lederach Feasibility Study

Natasha Manbeck, P.E. of Bowman was present to review the draft report. She gave a brief historical description of Lederach, the six-point intersection and the planning that has gone into this study. She noted that the deadline to submit written comments on this study is 3/11/2024.

Ms. Manbeck presented the slideshow of the report and discussed traffic data, stakeholder input, previous meetings, the possible Route 113 bypass as well as the village core, village gateways, and village edge. Sidewalks, crosswalks, speed limits, signage and traffic calming were also discussed. Ms. Manbeck noted that the last step associated with the TCDI grant process will be for the BOS to accept that the report was completed in accordance with the grant requirements and scope of work. This acceptance is not an adoption of the report or approval of the projects identified in the study.

Trail connection for walkability and biking were discussed as well as potential future connections of these trails to the Perkiomen Trail and Evansburg State Park.

It was noted that at the first public meeting more than eighty residents were in attendance and fifty residents attended the second meeting; both written responses and emails have been received.

Ms. Butler explained that the study is a planning tool, a study for potential ideas; projects noted in the study are for future consideration by the Township and that none of the projects listed are considered a done deal. Hundreds of residents were notified via USPS for each meeting. Mr. Kennedy added by stating that the trails and sidewalk committee was established three years ago to identify gaps in the system and prepare the Township for future available grants. He reiterated that this is certainly not a done deal.

Resident Phil Lederach expressed that no Lederach Village businesses are interested in this change nor is he a proponent of the bypass. He acknowledged that the new traffic signal has improved traffic.

Rick Mast of Lederach mostly agrees with Mr. Lederach but is in favor of the trails and sidewalks if they are connected to other parts of the Township. He is opposed to the bypass as he sees no benefit to the Township; he feels the bypass will hurt the commercial businesses as the village needs the traffic to be viable.

Mr. Kennedy informed everyone that this study is not dependent on the bypass; he stressed that the trail connections are critical, and it is difficult to get trails built due to the expense. These studies prepare the Township to be ready for grants when they become available, and this can be done with or without the bypass. Mr. Kennedy reiterated that the Walkable Lederach study was intended to look at the village independently as well as with consideration of the PA 113 Alternate Route due to its proximity and effect(s) on the village.
Mr. Bamford completely supports the trail system and would like more people to make use of it. He was a proponent of the bypass but is now reconsidering his original thoughts after listening to the public comments.
Mr. Goodman stated that he is not in favor of the by-pass but likes the walkable Lederach idea; he too agrees the new traffic light has been an improvement.
Ms. Butler stated that truck traffic must be addressed, especially for walkability and that taking truck traffic away from the village is one of the traffic considerations. Ms. Butler noted that any engineering for the PA 113 Alternate Route will be required to evaluate all types of traffic conditions and intersection controls at each intersection location. Ms. Butler also noted that while comparisons can be made to the Mainland Village, there are other circumstances that make the traffic movement through Lederach Village different than Mainland. Both Salfordville Road and Cross Road are significantly traveled roadways that end at the village of Lederach. Traffic on (and using) these roads will continue to do so by traveling into and out of the village, even if the alternate route ever comes to fruition.

Restaurant Parking
Mr. Beuke reviewed the Proposed Restaurant Parking Study. A brief discussion followed.
Mr. Goodman shared newer parking scenarios he has been working on in other municipalities.
Mr. Kennedy suggests including outdoor seating in the seating count.

Dwelling Unit Definitions
Mr. Beuke led the discussion on defining a Townhouse. The discussion included triplexes, quads, duplexes, multiplexes, limiting the number of contiguous units and façade breaks.

Stormwater Management
Mr. Beuke led a discussion on appropriate planning for stormwater management; he explained concerns that have arisen following the development of a recent subdivision.
A brief discussion ensued regarding cluster lot developments and basing the impervious coverage on the largest size home proposed and allowing for common site improvement.
It was discussed that a 100% design would not be appropriate, and the Township should investigate alternative solutions.

County Plan Reviews
Ms. Warner revised the amendments and supplied a red-line draft from the solicitor's office. Due to the late hour, this discussion will take place as the first agenda item in March.

There being no additional public comment, Mr. Bamford made a motion to adjourn the meeting; Mr. Goodman seconded the motion. With all members in favor, the meeting adjourned at 9:55pm.

19082

The next meeting of the Planning Commission is scheduled for 7:30pm on Wednesday March 27, 2024.

Respectfully submitted,

Patti Reimel

Patti Reimel
Administrative Assistant

Appendix E: Traffic Analysis Memo

This memo summarizes the traffic analysis completed as part of the Walkable Lederach Feasibility Study. The traffic evaluation focused on comparing four build alternatives associated with the proposed PA 113 Alternate Route to the east of the Village of Lederach between Landis Road (to the north) and Whitaker Way (to the south). Implementing the PA 113 Alternate Route would result in a reduction of traffic through the village and may create opportunities to provide bicycle and pedestrian facilities in the village, particularly along Harleysville Pike.

The traffic evaluation includes 2022 existing and 2035 future projected base volumes along the existing Harleysville Pike (SR 0113) corridor through the Village of Lederach, including regional traffic growth and projections for known land development projects in the area. Four build alternatives were then evaluated to determine the potential level-of-service/delays associated with changes in travel patterns associated with implementation of the PA 113 Alternate Route.

EXISTING TRANSPORTATION SETTING

The existing study area roadway network and characteristics are illustrated in **Map 1**, which illustrates the Harleysville Pike (SR 0113) corridor along with the proposed PA 113 Alternate Route corridor to the east. A summary of the existing roadway characteristics is then provided in **Table 1.** The existing corridor includes the following intersections with Harleysville Pike (SR 0113):

- Landis Road (signalized)
- Old Morris Road (unsignalized)
- Morris Road/Salfordville Road (SR 1017)/Old Skippack Road (signalized)
- Cross Road (SR 1020) (signalized)
- Whitaker Way (unsignalized)

The existing characteristics of the study intersections, including photographs, field sketches, and signal permit plans are provided in **Attachment 1**.

Map 1: Study Area

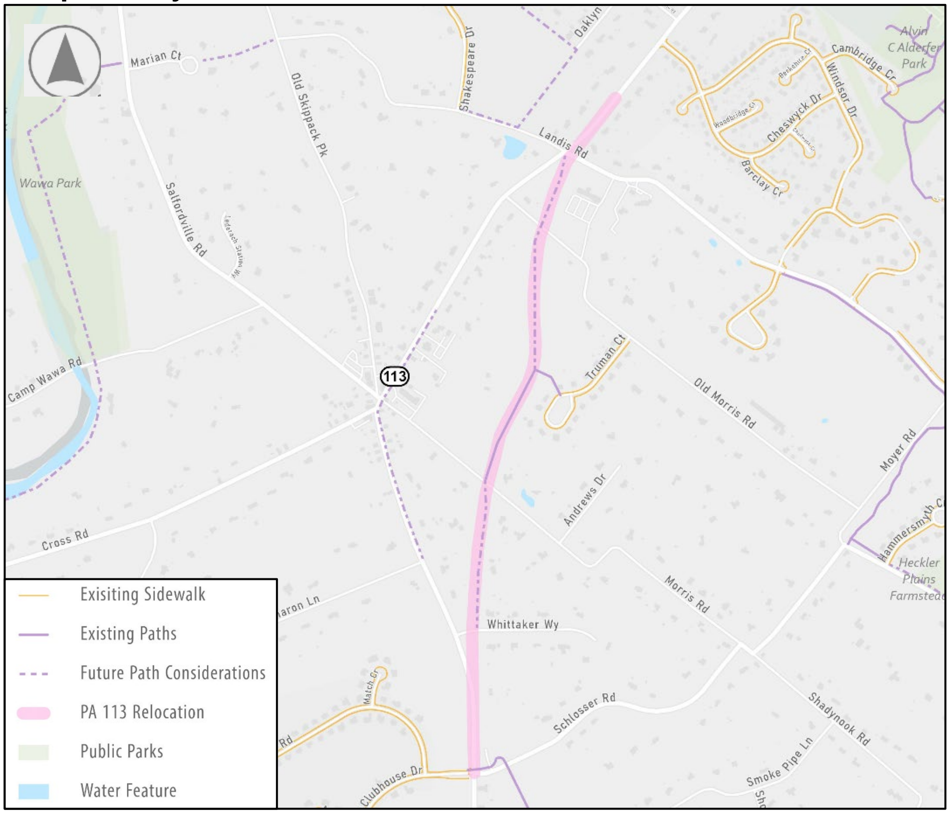


Table 1 - Existing Roadway Characteristics

Roadway Name	Average Daily Traffic Volumes (vehicles per day)	Roadway Classification		Travel Lanes (per direction)	Posted Speed Limit (mph)
		Roadway Typology (1)	Township (2)		
Harleysville Pike (SR 0113)	9,167 to 11,803 (3)	Regional Arterial	Principal Arterial	1	35-45
Cross Road (SR 1020)	n/a	Neighborhood Collector	Major Collector	1	40
Salfordville Road (SR 1017)	3,931 (3)	Neighborhood Collector	Major Collector	1	40
Landis Road	n/a	Local	Major Collector (Eastern Leg) Minor Collector (Western Leg)	1	35
Old Skippack Pike	n/a	Local	Local	1	35
Morris Road	n/a	Local	Local	1	35
Old Morris Road	n/a	Local	Local	1	35
Whittaker Way	n/a	Local	Local	1	25

(1) Based on Table 1.2 – Roadway Typologies in the PennDOT *Publication 13M, Design Manual Part 2*.
(2) Based on the roadway classification from Lower Salford Township's *Road Classification & Ultimate R/W Widths Map.*
(3) Based on traffic data from PennDOT's Traffic Information Repository (TIRe) website.

TRAFFIC COUNT DATA

Daily traffic counts were obtained from PennDOT's Traffic Information Repository (TIRe) website. Copies of the daily traffic count data is provided in **Attachment 2**. Turning movement counts were conducted on Wednesday, November 9, 2022, during the weekday morning (7:00 AM to 9:00 AM) and weekday afternoon (4:00 PM to 6:00 PM) peak periods at the existing study intersections located along the Harleysville Pike (SR 0113) corridor.

The turning movement counts tabulated by 15-minute intervals are provided in **Attachment 3**. The four highest consecutive 15-minute peak intervals during these traffic count periods constitute the peak hours that are the basis of this traffic analysis. The existing peak hour traffic volumes were then conservatively balanced with one another as documented in the figures provided in Attachment 3. The resultant peak hour traffic volumes are illustrated in Attachment 3 that form the basis of the traffic evaluation.

REGIONAL TRAFFIC GROWTH

To account for regional traffic growth, the existing traffic volumes were increased by an annual traffic growth rate of 0.27 percent per year compounded for 13 years to 2035, or 3.57 percent total to 2035. This growth rate is consistent with the traffic growth rate recommended by the PennDOT Bureau of Planning and Research *Growth Factors for August 2022 and July 2023* for similar, Urban Non-Interstate roadways in Montgomery County. The growth rate is also more conservative than the current recommended growth rate of 0.21 percent per year from the *Growth Factors for August 2023 and July 2024* as shown in **Attachment 4**.

LOCAL TRAFFIC GROWTH

To account for local traffic growth, traffic associated with the following land development projects were also accounted for in the future projections in Lower Salford Township:

- Harleysville Homes: Development of nine (9) apartments in the southeastern quadrant at the intersection of Morris Road and Harleysville Pike (SR 0113).
- Morris Homes: Development of twenty (20) apartments along Morris Road approximately 310 feet east of the stop bar at the intersection of Morris Road and Harleysville Pike (SR 0113).

Details on the other developments are shown in **Attachment 4.**

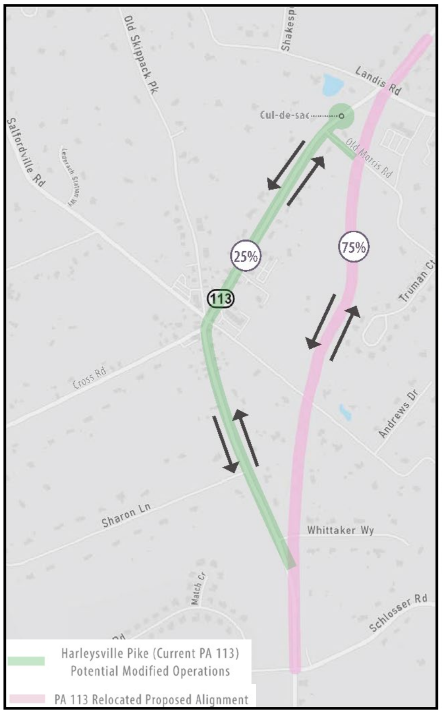
FUTURE BASE AND BUILD CONDITIONS

The 2022 existing peak hour traffic volumes were projected to obtain the 2035 future base peak hour traffic volumes by applying the regional growth rate to the existing volumes and then adding the additional development generated traffic as illustrated on the figures in **Attachment 4**. Volume projection worksheets documenting this process are then provided in **Attachment 5.**

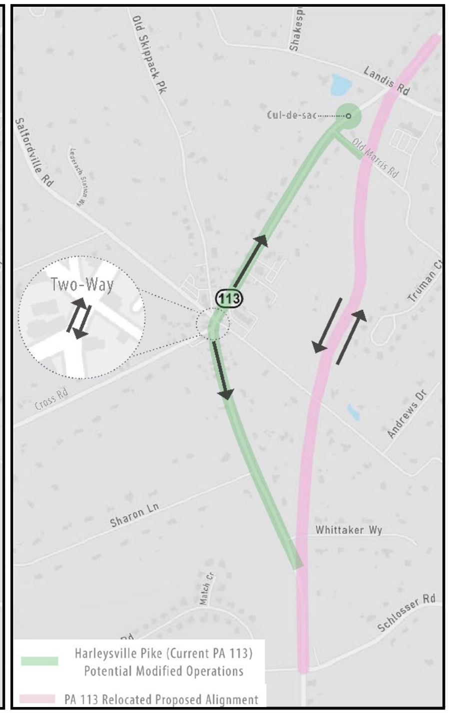
Four build options associated with the construction of the PA 113 Alternate Route were evaluated. **Exhibit A** illustrates the four build options along with the corresponding traffic patterns within the Village of Lederach.

Exhibit A: Traffic Pattern Alternatives with Completion of PA 113 Alternate Route

Alternative #1

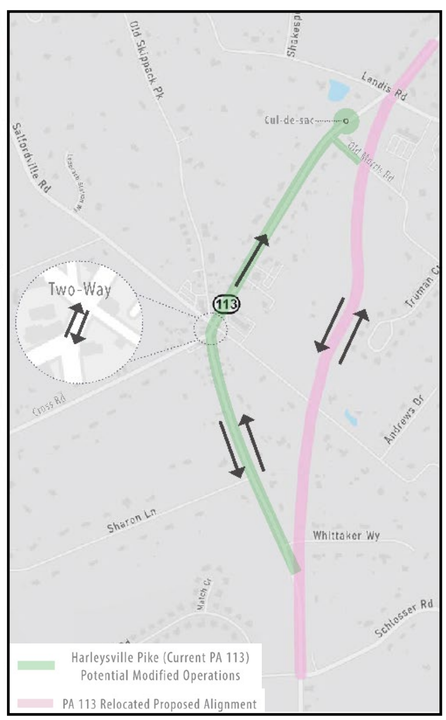


Alternative #2



Alternative #3

Alternative #4



CAPACITY/LEVEL-OF-SERVICE RESULTS

The peak hour traffic volumes were analyzed to determine the existing and future traffic operating conditions, both without and with the proposed development, in accordance with the standard techniques contained in the current *Highway Capacity Manual (HCM), 6th Edition,* for both signalized and unsignalized intersections. The HCM 6th Edition Methodology within Synchro 11.1 (build 2, rev. 9) traffic analysis software was utilized in the traffic analyses. These standard capacity/level-of-service analysis techniques, which calculate total control delay, are described in **Attachment 6** for both signalized and unsignalized intersections, as well as the correlation between average total control delay and the respective level-of-service (LOS) criteria for each intersection type.

The following is a summary of analysis assumptions utilized and notes on specific intersections:

- For unsignalized intersections, the base critical headways at TWSC intersections (Exhibit 10-11) and base follow-up headways at TWSC intersections (Exhibit 10-12) outlined in PennDOT's Publication 46, Traffic Engineering Manual, were used.

- For signalized intersections, the Pennsylvania base saturation flow rate (Exhibit 10-9) and Pennsylvania traffic signal control calibration parameters (Exhibit 10-10) outlined in PennDOT's *Publication 46, Traffic Engineering Manual*, were used.

- The queues from the *Highway Capacity Manual* methodology are initially reported in number of vehicles. These queues have been converted to feet using a conversion factor of 25 feet per vehicle.

- The intersection evaluation for the signalized intersection of Harleysville Pike (SR 0113) with Cross Road and Morris Road/Salfordville Road is based upon Synchro's percentile methodology since the two closely spaced signals are clustered to operate on the same controller.

The results of the level-of-service analysis are contained in the matrices provided in **Attachment 7,** while the corresponding 95th percentile queues are summarized in matrices provided in **Attachment 8**. The detailed capacity/level-of-service analysis worksheets are provided in **Attachments 9 and 10** for the 2022 existing and 2035 future base traffic conditions, respectively. The detailed capacity/level-of-service worksheets for the four 2035 build alternatives are then provided in **Attachments 11 through 14.** Attachments 9 through 14 also include the peak hour volume figures associated with each of the alternatives.

Exhibit B provides a summary of the operations along the existing corridor, while **Exhibit C** illustrates the existing geometric configuration at the signalized intersection of Harleysville Pike (SR 0113) at its intersection with Morris Road/Salfordville Road (SR 1017)/Old Skippack Road and Cross Road (SR 1020), which are clustered to operate on the same controller. This intersection operates at over capacity conditions on all three side streets and at capacity conditions along the southbound approach of Harleysville Pike (SR 0113).

Exhibit D provides a summary of the operations associated each of the build alternatives. Based upon the presentation of the build alternatives to the steering committee and public at various meetings throughout the project, the preferred build alternative was Alternative #1, which maintains two-way traffic along the existing Harleysville Pike (SR 0113) corridor as well as the PA 113 Alternate Route. All build alternatives result in a reduction of traffic along Harleysville Pike (SR 0113) within the Village of Lederach, which allows for improved operations at the signalized intersection of Harleysville Pike (SR 0113) at its intersection with Morris Road/Salfordville Road (SR 1017)/Old Skippack Road and Cross Road (SR 1020).

Exhibit B: 2022 Existing and 2035 Future Base Levels of Service

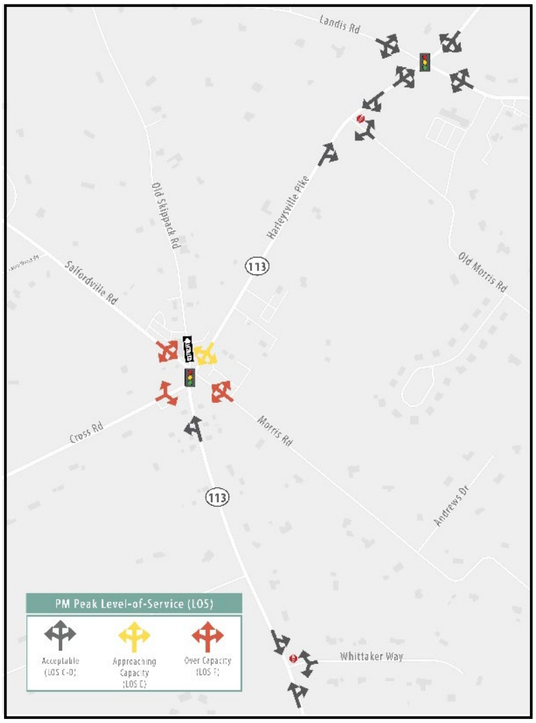
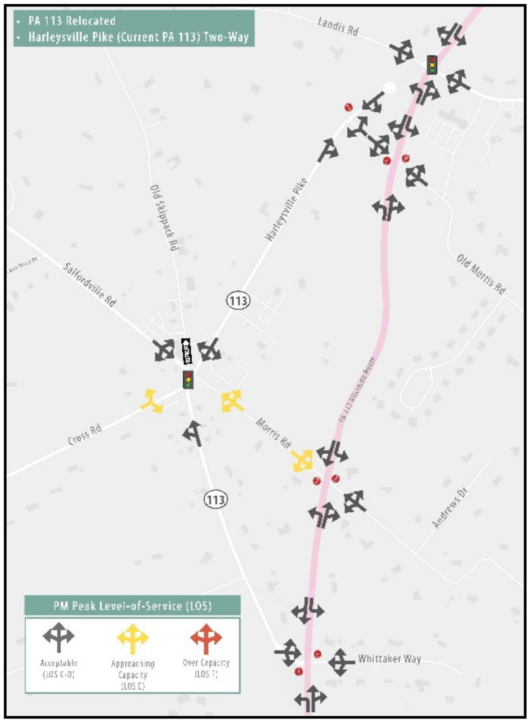


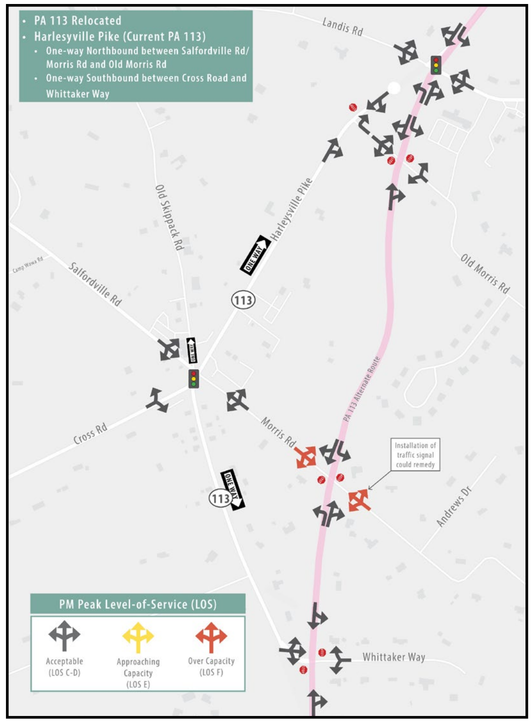
Exhibit C: Intersection Geometrics

Exhibit D: 2035 Future Build Levels of Service with Completion of Relocated SR 0113

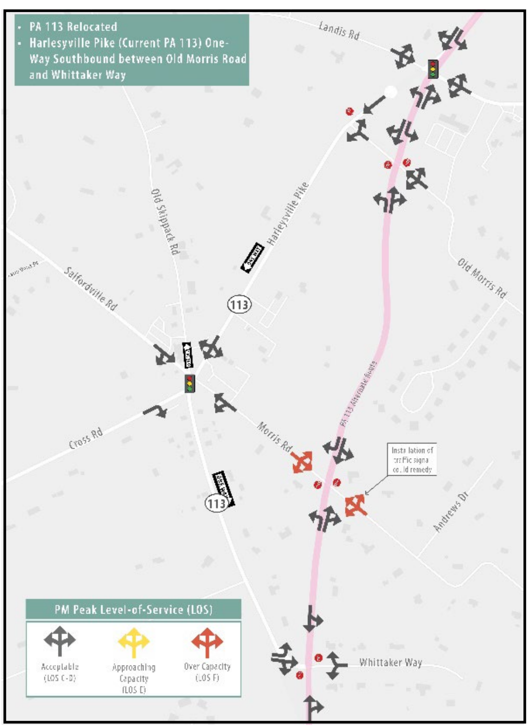
Alternative #1



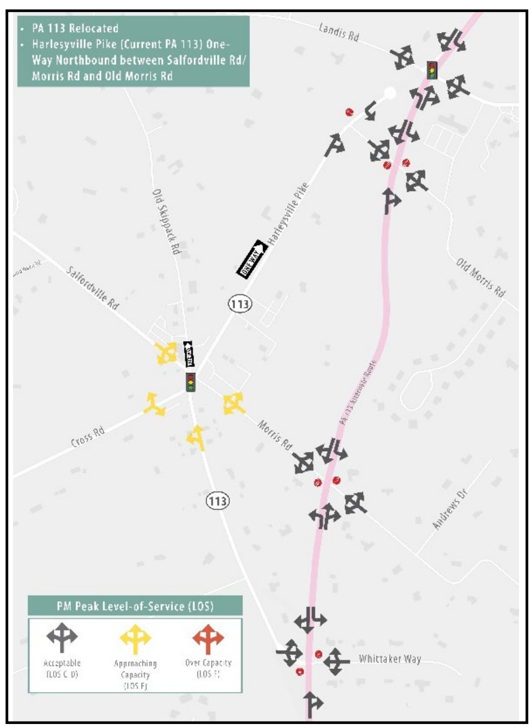
Alternative #2



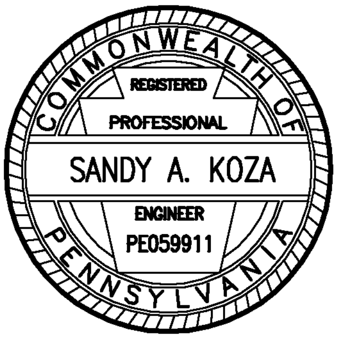
Alternative #3



Alternative #4



Prepared by:



Sandy A Koza

Sandy A. Koza, P.E., PTOE
Senior Project Manager

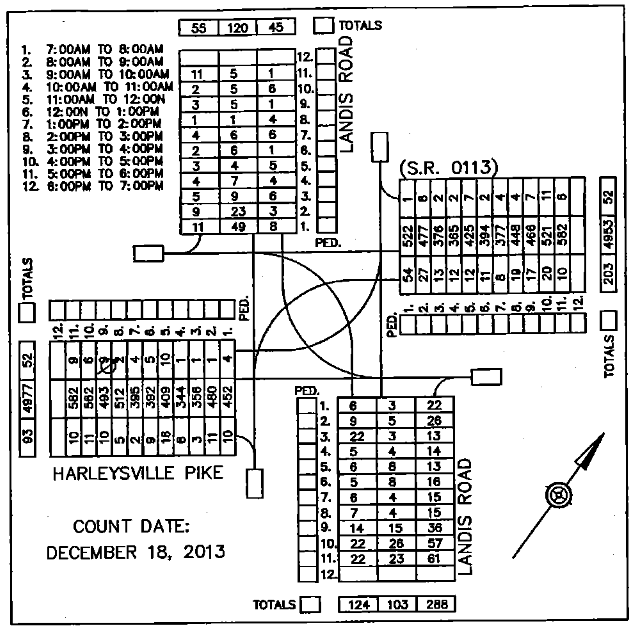
Q:\PA-FTWA-MC\MCM\eng\LOWERSA1\822255_TCDI Walkable Lederach\Traffic\2-TrafficEval\8-Report\2023-12-21   Letter Report for Walkable Lederach.docx

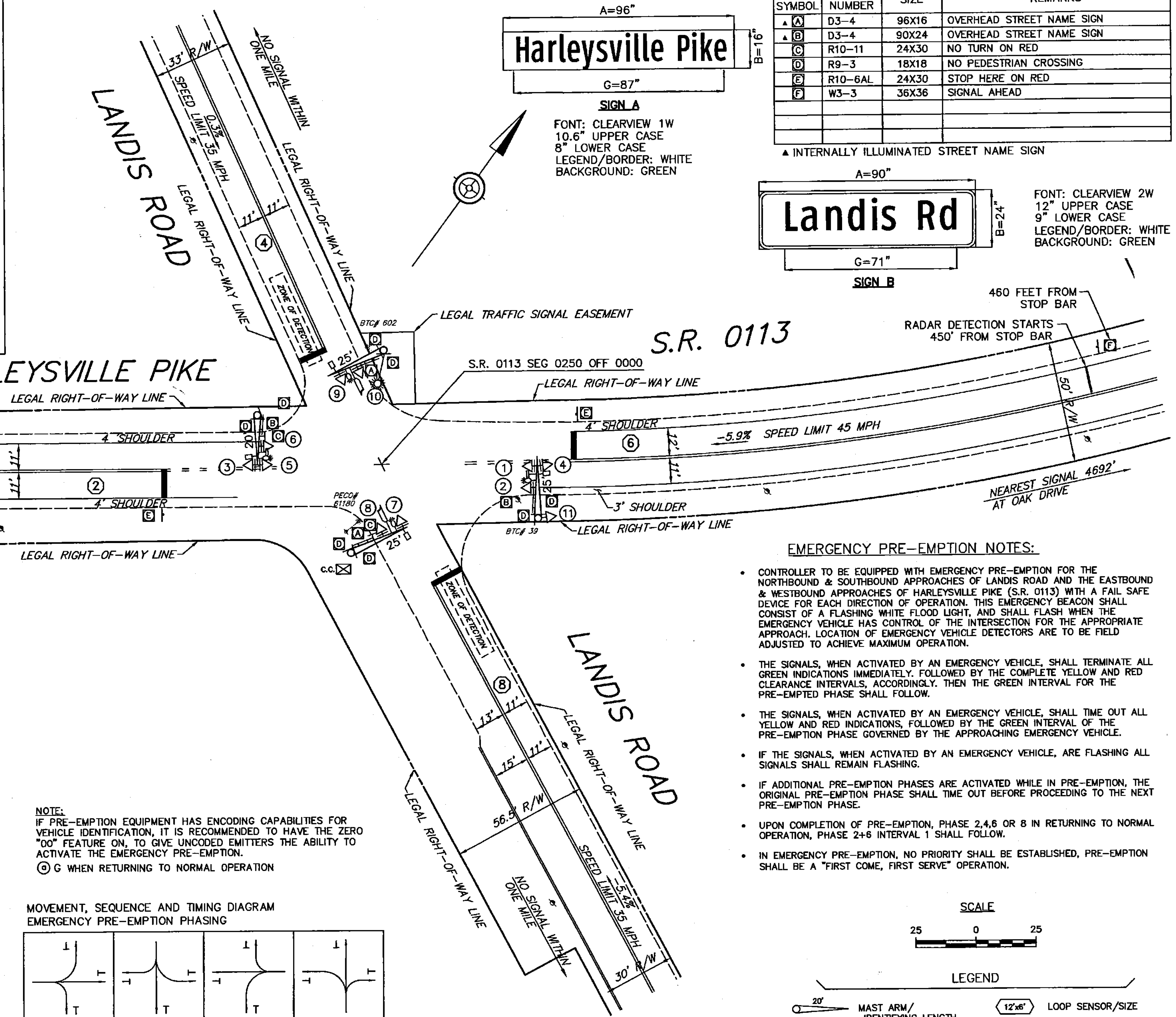
McMAHON
a Bowman company

Attachment 1

Sketches and Signal Permit Plans

425 Commerce Drive, Suite 200, Fort Washington, PA 19034
P: 215.283.9444
mcmahonassociates.com | bowman.com





SIGN DETAILS

NOT TO SCALE

A=96"

Harleysville Pike

B=16"

G=87"

SIGN A

FONT: CLEARVIEW 1W
10.6" UPPER CASE
8" LOWER CASE
LEGEND/BORDER: WHITE
BACKGROUND: GREEN

A=90"

Landis Rd

B=24"

G=71"

SIGN B

FONT: CLEARVIEW 2W
12" UPPER CASE
9" LOWER CASE
LEGEND/BORDER: WHITE
BACKGROUND: GREEN

SIGN TABULATION

PLAN SYMBOL	SERIES NUMBER	SIZE	REMARKS
▲ A	D3-4	96X16	OVERHEAD STREET NAME SIGN
▲ B	D3-4	90X24	OVERHEAD STREET NAME SIGN
C	R10-11	24X30	NO TURN ON RED
D	R9-3	18X18	NO PEDESTRIAN CROSSING
E	R10-6AL	24X30	STOP HERE ON RED
F	W3-3	36X36	SIGNAL AHEAD

▲ INTERNALLY ILLUMINATED STREET NAME SIGN

GENERAL NOTES

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED IN WRITING BY A REPRESENTATIVE OF THE DEPARTMENT OF TRANSPORTATION.

ALL MAINTENANCE WORK INCLUDING TRIMMING OF TREES, NECESSARY FOR PROPER VISIBILITY OF THE SIGNALS IS THE RESPONSIBILITY OF THE PERMITTEE.

ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH PUBLICATION NO. 212.

POST MOUNTED SIGNALS SHALL BE INSTALLED WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF CURB OR THE EDGE OF THE SHOULDER. SUPPORT POLES FOR OVERHEAD SIGNALS SHALL ALSO HAVE A MINIMUM CLEARANCE HORIZONTALLY OF 2 FEET.

SIGNALS ERECTED OVER THE ROADWAY SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 16 FT. ABOVE THE ROADWAY. POST MOUNTED SIGNALS SHALL BE A MINIMUM OF 8 FT. ABOVE THE SIDEWALK OR PAVEMENT.

ALL OVERHEAD SIGNALS MUST BE RIGIDLY MOUNTED, TOP AND BOTTOM, AND EQUIPPED WITH BACKPLATES.

THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNALS MEASURED AT RIGHT ANGLES TO THE APPROACH SHALL BE 8 FEET.

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

CURBING TO BE INSTALLED BY MUNICIPALITY AND WHERE NOTED, SHALL BE PLAIN CEMENT CONCRETE CURB OR GRANITE CURB, INSTALLED IN ACCORDANCE WITH DEPARTMENT SPECIFICATIONS FORM 408.

PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF THE LATEST AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, DATED DECEMBER 20, 1974.

WHEN LIQUID FUELS MONEY IS USED, SIGNAL INSTALLATION MUST CONFORM TO FORM 408 AND A COPY OF THE PROPOSED SPECIFICATIONS MUST BE SUBMITTED TO THE DISTRICT TRAFFIC UNIT, FOR REVIEW, PRIOR TO BIDDING.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETRY REGARDING EXCAVATION.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC-8800 SERIES.

EMERGENCY PRE-EMPTION NOTES:

- CONTROLLER TO BE EQUIPPED WITH EMERGENCY PRE-EMPTION FOR THE NORTHBOUND & SOUTHBOUND APPROACHES OF LANDIS ROAD AND THE EASTBOUND & WESTBOUND APPROACHES OF HARLEYSVILLE PIKE (S.R. 0113) WITH A FAIL SAFE DEVICE FOR EACH DIRECTION OF OPERATION. THIS EMERGENCY BEACON SHALL CONSIST OF A FLASHING WHITE FLOOD LIGHT, AND SHALL FLASH WHEN THE EMERGENCY VEHICLE HAS CONTROL OF THE INTERSECTION FOR THE APPROPRIATE APPROACH. LOCATION OF EMERGENCY VEHICLE DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.
- THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, SHALL TERMINATE ALL GREEN INDICATIONS IMMEDIATELY, FOLLOWED BY THE COMPLETE YELLOW AND RED CLEARANCE INTERVALS, ACCORDINGLY. THEN THE GREEN INTERVAL FOR THE PRE-EMPTED PHASE SHALL FOLLOW.
- THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, SHALL TIME OUT ALL YELLOW AND RED INDICATIONS, FOLLOWED BY THE GREEN INTERVAL OF THE PRE-EMPTION PHASE GOVERNED BY THE APPROACHING EMERGENCY VEHICLE.
- IF THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, ARE FLASHING ALL SIGNALS SHALL REMAIN FLASHING.
- IF ADDITIONAL PRE-EMPTION PHASES ARE ACTIVATED WHILE IN PRE-EMPTION, THE ORIGINAL PRE-EMPTION PHASE SHALL TIME OUT BEFORE PROCEEDING TO THE NEXT PRE-EMPTION PHASE.
- UPON COMPLETION OF PRE-EMPTION, PHASE 2,4,6 OR 8 IN RETURNING TO NORMAL OPERATION, PHASE 2+6 INTERVAL 1 SHALL FOLLOW.
- IN EMERGENCY PRE-EMPTION, NO PRIORITY SHALL BE ESTABLISHED, PRE-EMPTION SHALL BE A "FIRST COME, FIRST SERVE" OPERATION.

++ADVANCE DILEMMA ZONE RADAR DETECTION SYSTEM NOTES

EST. TIME OF ARRIVAL: MIN. 2.5 – MAX. 5.5 SEC.
RANGE OF PROTECTION:
HARLEYSVILLE PIKE WESTBOUND APPROACH: MIN 0 – MAX 500 FEET FROM STOP BAR
HARLEYSVILLE PIKE EASTBOUND APPROACH: MIN 0 – MAX 470 FEET FROM STOP BAR
SPEED BOUNDARY: MIN. 27 MPH – MAX 100 MPH

++DENSITY ZONE NOTES

RANGE OF DETECTION: 0 – 100 FEET FROM STOP BAR
MINIMUM SPEED BOUNDARY: MIN. 5 MPH – MAX. 30 MPH

- MAX. 2 SHALL OPERATE 06:00 TO 09:00 AND 15:00 TO 19:00, MONDAY – FRIDAY.
  MAX. 1 SHALL OPERATE ALL OTHER TIMES.

NOTE:
IF PRE-EMPTION EQUIPMENT HAS ENCODING CAPABILITIES FOR VEHICLE IDENTIFICATION, IT IS RECOMMENDED TO HAVE THE ZERO "00" FEATURE ON, TO GIVE UNCODED EMITTERS THE ABILITY TO ACTIVATE THE EMERGENCY PRE-EMPTION.
(a) G WHEN RETURNING TO NORMAL OPERATION

MOVEMENT, SEQUENCE AND TIMING DIAGRAM

PHASE	2+6				4+8				FLASH
SIGNALS \ INTERVAL	1	2	3		4	5	6		
1,2,3	G	Y	R		R	R	R		Y
4,5,6,11	G	Y	R		R	R	R		Y
7,8	R	R	R		G	Y	R		R
9,10	R	R	R		G	Y	R		R

FIXED		5	2			4	2	
MINIMUM	15				3			
PASSAGE	++				3			
MAXIMUM 1	47				15			
MAXIMUM 2	55				15			
MEMORY	MN				NL			

++ADVANCE DILEMMA ZONE

MOVEMENT, SEQUENCE AND TIMING DIAGRAM EMERGENCY PRE-EMPTION PHASING

PHASE	2				4				6				8			
SIGNALS \ INTERVAL	7	8	9		10	11	12		13	14	15		16	17	18	
1,2,3	G	Y(a)	R(a)		R	R	R		R	R	R		R	R	R	
4,5,6,11	R	R	R		R	R	R		G	Y(a)	R(a)		R	R	R	
7,8	R	R	R		G	Y	R		R	R	R		R	R	R	
9,10	R	R	R		R	R	R		R	R	R		G	Y	R	
FIXED	**	5	2		**	4	2		**	5	2		**	4	2	

** FOR DURATION OF PRE-EMPTION

SIGNAL INDICATIONS

12" LENS

R
Y
G

1,2,3,4
5,6,7,8
9,10,11

SCALE

25 0 25

LEGEND

- 20' MAST ARM/ IDENTIFYING LENGTH
- VEHICULAR SIGNAL HEAD/ BACKPLATE/VISORS/ DIRECTIONAL ARROW/ IDENTIFYING NUMBER
- PEDESTRIAN SIGNAL HEAD/ IDENTIFYING NUMBER
- PEDESTRIAN PUSHBUTTON/ SIGN
- SIGN/IDENTIFYING LETTER
- VIDEO DETECTOR
- C.C. CONTROLLER CABINET
- 12'x6' LOOP SENSOR/SIZE
- ZONE OF DETECTION
- MICROWAVE PRESENCE DETECTOR
- EMERGENCY PRE-EMPTION FLASHING BEACON
- EMERGENCY PRE-EMPTION DEVICE
- ADA CURB RAMP
- UTILITY POLE
- 1 PHASE NUMBER
- INLET

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY: MONTGOMERY
MUNICIPALITY: LOWER SALFORD TOWNSHIP
INTERSECTION: HARLEYSVILLE PIKE (S.R. 0113) AND LANDIS ROAD

REVIEWED:
DATE
MUNICIPAL OFFICIAL DATE

RECOMMENDED:
DAVID ADAMS 7/22/14
ASHWIN PATEL 7/22/14
DISTRICT TRAFFIC ENGINEER DATE

NO.	REVISION	DES./REVW.	DATE	REVW.	DATE	RECOM.	DATE
1	AS-BUILT	MCM	7/13/15	DLA	7/24/15	[illegible]	7/27/15
2							
3							
4							
5							
6							
7							
8							

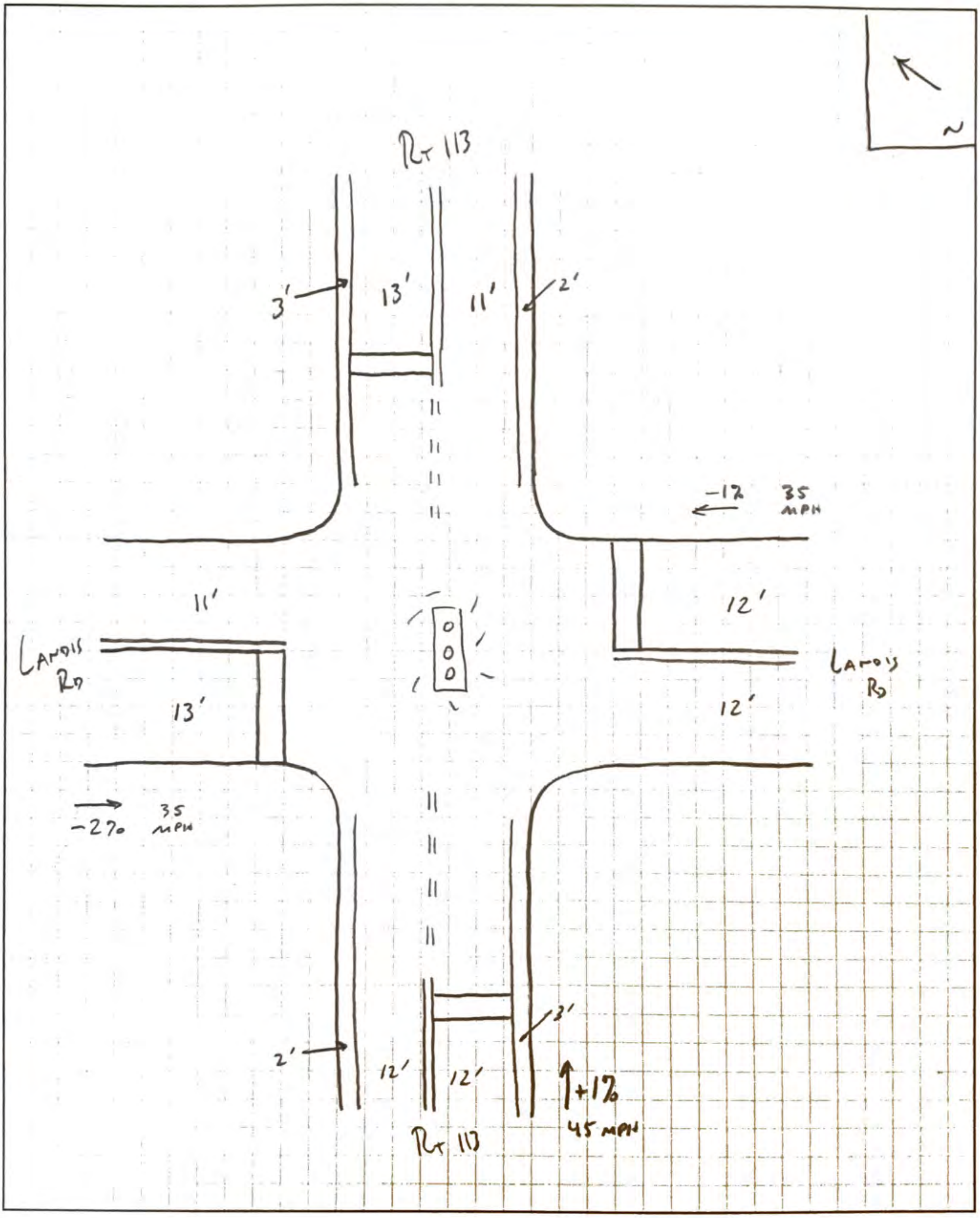
SHEET 2 OF 2 PERMIT # 64-3867 FILE # 3867

McMAHON
TRANSPORTATION ENGINEERS & PLANNERS

Job ______ McMahon Project No. ______ Sheet ____ of ____

Description Rt 113 + Landis Rd Designed By NOB Date ______

Checked By ______ Date ______



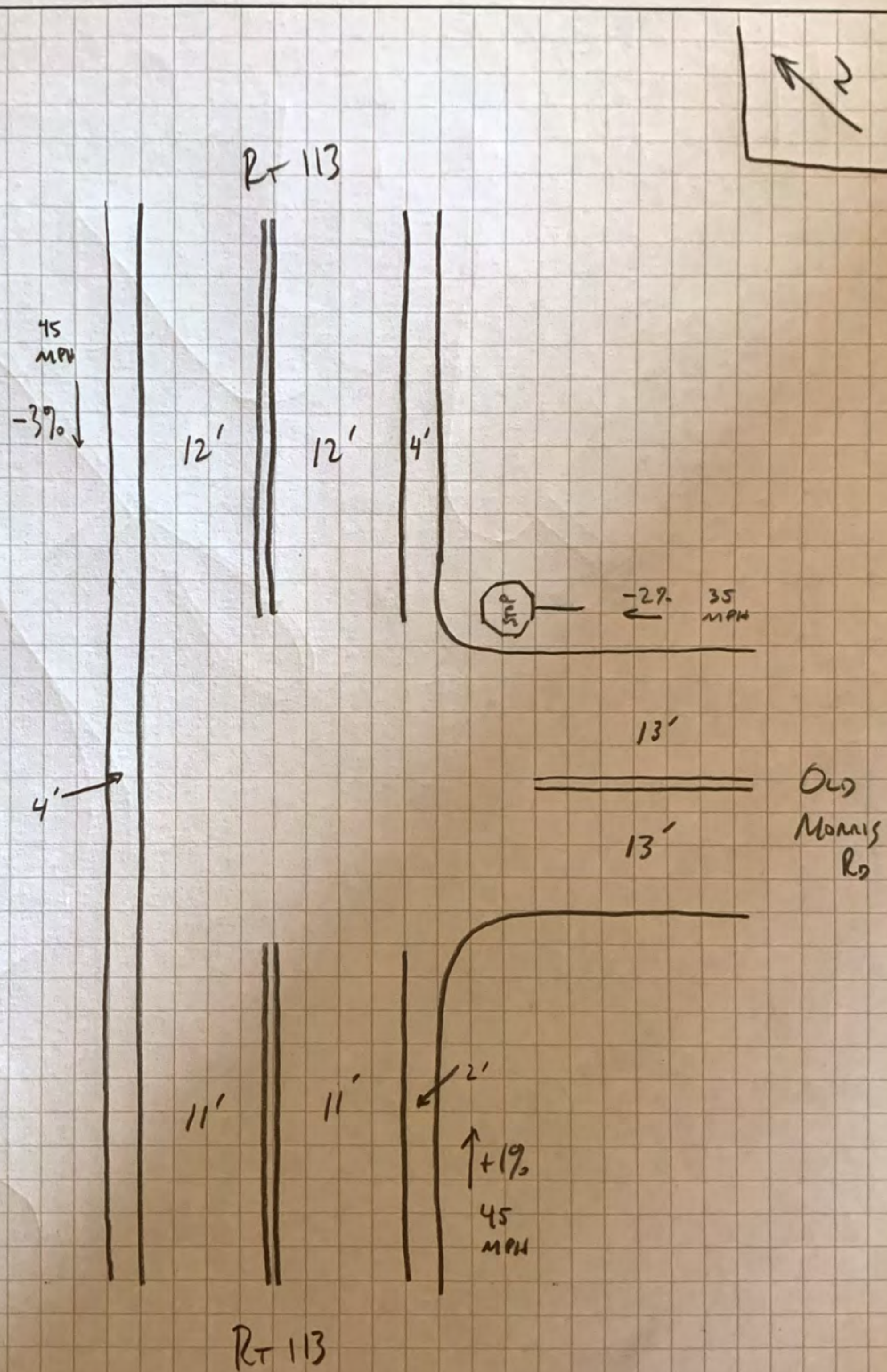
McMAHON
TRANSPORTATION ENGINEERS & PLANNERS

Job ______ McMahon Project No. ______ Sheet ______ of ______

Description Rt 113 + Old Morris Rd

Designed By NDB Date ______

Checked By ______ Date ______



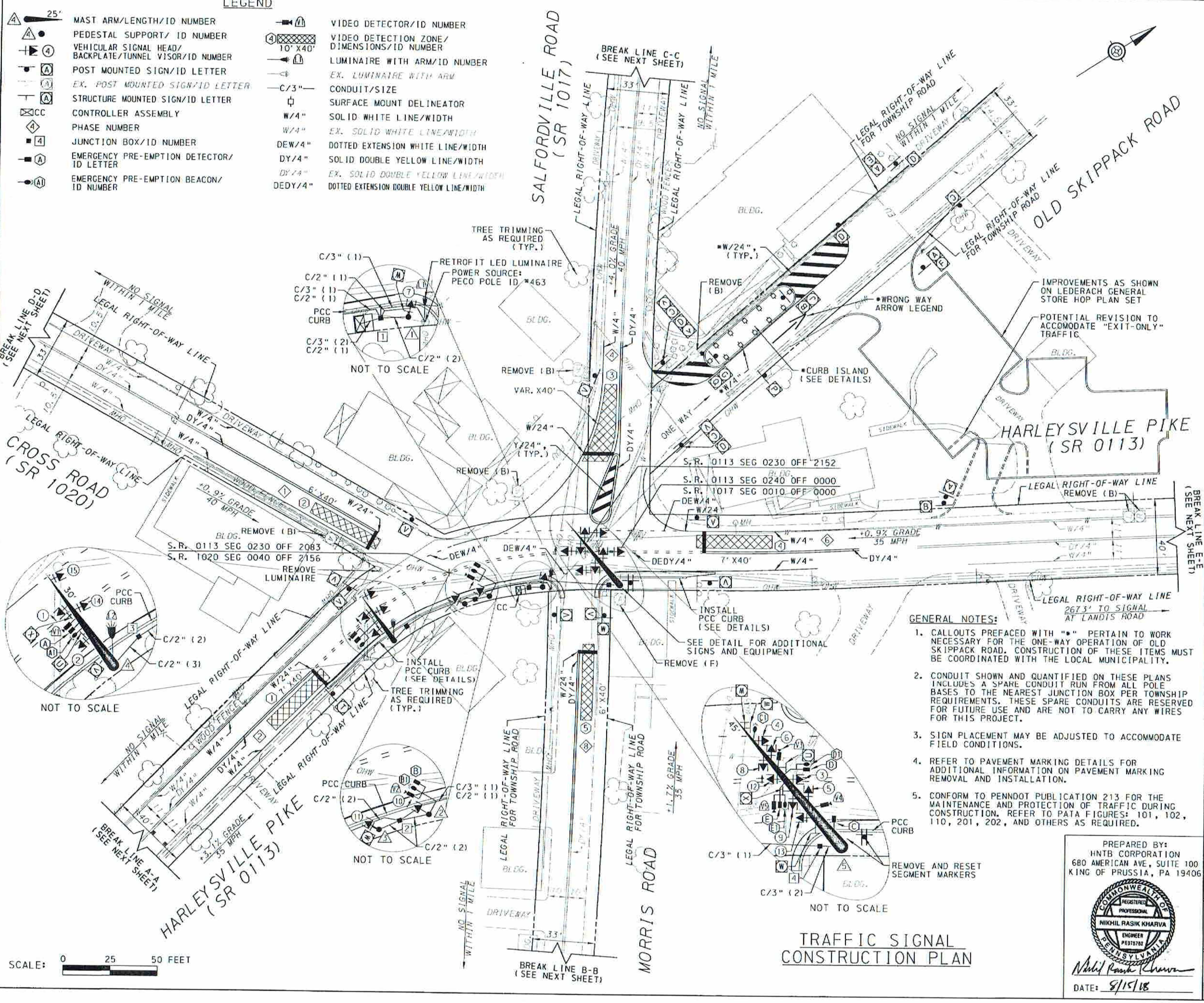
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	MONTGOMERY	0113	TSP	1 OF 6

LOWER SALFORD TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY

LEGEND

25'	MAST ARM/LENGTH/ID NUMBER
	PEDESTAL SUPPORT/ ID NUMBER
	VEHICULAR SIGNAL HEAD/ BACKPLATE/TUNNEL VISOR/ID NUMBER
	POST MOUNTED SIGN/ID LETTER
	EX. POST MOUNTED SIGN/ID LETTER
	STRUCTURE MOUNTED SIGN/ID LETTER
CC	CONTROLLER ASSEMBLY
	PHASE NUMBER
	JUNCTION BOX/ID NUMBER
	EMERGENCY PRE-EMPTION DETECTOR/ ID LETTER
	EMERGENCY PRE-EMPTION BEACON/ ID NUMBER
	VIDEO DETECTOR/ID NUMBER
10' X40'	VIDEO DETECTION ZONE/ DIMENSIONS/ID NUMBER
	LUMINAIRE WITH ARM/ID NUMBER
	EX. LUMINAIRE WITH ARM
C/3"	CONDUIT/SIZE
	SURFACE MOUNT DELINEATOR
W/4"	SOLID WHITE LINE/WIDTH
W/4"	EX. SOLID WHITE LINE/WIDTH
DEW/4"	DOTTED EXTENSION WHITE LINE/WIDTH
DY/4"	SOLID DOUBLE YELLOW LINE/WIDTH
DY/4"	EX. SOLID DOUBLE YELLOW LINE/WIDTH
DEDY/4"	DOTTED EXTENSION DOUBLE YELLOW LINE/WIDTH



GENERAL NOTES

DO NOT MODIFY INSTALLATION WITHOUT PRIOR WRITTEN APPROVAL BY THE DEPARTMENT.

ALL SIGNS AND PAVEMENT MARKINGS INDICATED ARE PART OF THE PERMIT. INSTALL AND MAINTAIN IN ACCORDANCE WITH PUBLICATION 212 AND PUBLICATION 236.

INSTALL POST MOUNTED SIGNALS WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF THE CURB OR EDGE OF THE SHOULDER. PROVIDE A MINIMUM HORIZONTAL CLEARANCE OF 2 FEET FOR ALL SUPPORT POLES FOR OVERHEAD SIGNALS.

ERECT THE BOTTOM OF SIGNAL HEADS AND SIGNS OVER THE ROADWAY NOT LESS THAN 15 FEET NOR MORE THAN 19 FEET ABOVE THE ROADWAY. ERECT THE BOTTOM OF POST MOUNTED SIGNAL HEADS NOT LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE SIDEWALK OR PAVEMENT GRADE.

MAINTAIN A MINIMUM HORIZONTAL DISTANCE OF 8 FEET BETWEEN SIGNAL HEADS, MEASURED AT RIGHT ANGLES TO THE APPROACH.

DETERMINE THE EXACT LOCATION OF DETECTORS WITH A PENNDOT REPRESENTATIVE PRIOR TO INSTALLATION.

THE CONTRACTOR IS TO COMPLETE THE NECESSARY APPLICATION(S) IN ORDER TO OBTAIN ELECTRICAL SERVICE FROM THE LOCAL POWER COMPANY.

CONSULT WITH LOCAL OFFICIALS AND UTILITIES TO RESOLVE CONFLICTS PRIOR TO CONSTRUCTION.

COMPLY WITH THE PROVISIONS OF THE LATEST AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, DATED DECEMBER 20, 1974.

UNDERGROUND UTILITY INFORMATION HAS BEEN PROVIDED BY THE RESPECTIVE USERS IN RESPONSE TO THE PA ONE CALL SYSTEM.
REFERENCE SERIAL NUMBER: 20172562704
ISSUED ON: 09/13/2017

HNTB CORPORATION HAS NOT MADE AN INDEPENDENT DETERMINATION WITH RESPECT TO THE ACCURACY OR COMPLETENESS OF SUCH INFORMATION AND SPECIFICALLY DISCLAIMS ANY WARRANTY OR REPRESENTATION AS TO THE ACCURACY OF SUCH INFORMATION. ALL LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE AND MUST BE FIELD VERIFIED PRIOR TO CONSTRUCTION.

CALL BEFORE YOU DIG !

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE.

BEFORE YOU DIG, CALL THE PA ONE CALL SYSTEM TELEPHONE NUMBER.

1-800-242-1776

GENERAL NOTES:

1. CALLOUTS PREFACED WITH "*" PERTAIN TO WORK NECESSARY FOR THE ONE-WAY OPERATION OF OLD SKIPPACK ROAD. CONSTRUCTION OF THESE ITEMS MUST BE COORDINATED WITH THE LOCAL MUNICIPALITY.
2. CONDUIT SHOWN AND QUANTIFIED ON THESE PLANS INCLUDES A SPARE CONDUIT RUN FROM ALL POLE BASES TO THE NEAREST JUNCTION BOX PER TOWNSHIP REQUIREMENTS. THESE SPARE CONDUITS ARE RESERVED FOR FUTURE USE AND ARE NOT TO CARRY ANY WIRES FOR THIS PROJECT.
3. SIGN PLACEMENT MAY BE ADJUSTED TO ACCOMMODATE FIELD CONDITIONS.
4. REFER TO PAVEMENT MARKING DETAILS FOR ADDITIONAL INFORMATION ON PAVEMENT MARKING REMOVAL AND INSTALLATION.
5. CONFORM TO PENNDOT PUBLICATION 213 FOR THE MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION. REFER TO PATA FIGURES: 101, 102, 110, 201, 202, AND OTHERS AS REQUIRED.

SCALE: 0 25 50 FEET

TRAFFIC SIGNAL CONSTRUCTION PLAN

PREPARED BY:
HNTB CORPORATION
680 AMERICAN AVE., SUITE 100
KING OF PRUSSIA, PA 19406

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL NIKHIL RASIK KHARVA ENGINEER PE075782

Nikhil Rasik Kharva

DATE: 8/15/18

COUNTY: MONTGOMERY

MUNICIPALITY: LOWER SALFORD TOWNSHIP

INTERSECTION: HARLEYSVILLE PIKE (SR 0113), CROSS ROAD (SR 1020), SALFORDVILLE ROAD (SR 1017), OLD SKIPPACK ROAD, AND MORRIS ROAD

REVIEWED:

MUNICIPAL OFFICIAL — DATE 8/1/18

RECOMMENDED: KRL 8/15/18

For David Adam — 8/20/18
DISTRICT TRAFFIC ENGINEER — DATE

FILENAME: 5803105-s---tsp01.dgn

PERMIT: ...

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	MONTGOMERY	0113	TSP	6 OF 6
LOWER SALFORD TOWNSHIP				

REVISION NUMBER	REVISIONS	DATE	BY

FLAT SHEET ALUMINUM SIGN TABULATION

PLAN SYMBOL	SERIES NUMBER	SIZE (IN)	AREA EACH (SF)	DESCRIPTION	QUANTITY (FOR INFO. ONLY): POST MOUNTED SIGNS, TYPE B, STEEL SQUARE POST	QUANTITY (FOR INFO. ONLY): POST MOUNTED SIGNS, TYPE F, MODIFIED	QUANTITY (FOR INFO. ONLY): STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS, BLACK BANDING	ITEM NUMBER 0931 0003: POST MOUNTED SIGNS, TYPE B, STEEL SQUARE POST	ITEM NUMBER 4935 0001: POST MOUNTED SIGNS, TYPE F, MODIFIED	ITEM NUMBER 4936 0200: STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS, BLACK BANDING	ITEM NUMBER 0936 0400: FLASHING WARNING SIGN	ITEM NUMBER 0941 0001: RESET POST MOUNTED SIGNS, TYPE B	ITEM NUMBER 0971 0001: REMOVE POST MOUNTED SIGNS, TYPE B	ITEM NUMBER 0975 0001: REMOVE POST MOUNTED SIGNS, TYPE F
					EACH	EACH	EACH	SF	SF	SF	EACH	EACH	EACH	EACH
A A	R1-1	30X30	5.2	STOP	3			15.6					4	1
B	R5-1	30X30	6.25	DO NOT ENTER	2			12.5						
C	R6-1L	36X12	3	HORIZONTAL LEFT ONE-WAY	3			9						
D	R6-1R	36X12	3	HORIZONTAL RIGHT ONE-WAY	1	3		3	9					
E	R3-7-1L	30X30	6.25	ALL TRAFFIC MUST TURN LEFT		1			6.3					
F	R3-7-1R	30X30	6.25	ALL TRAFFIC MUST TURN RIGHT		1			6.3					
G	R4-7	24X30	5	KEEP RIGHT	1			5						
J	OM4-3	18X18	2.25	END OF ROADWAY MARKER		1			2.3					
K	W3-1	36X36	9	STOP AHEAD									1	
L	W1-1L	30X30	6.25	LEFT TURN (CUSTOM)									1	
M	W1-1R	30X30	6.25	RIGHT TURN (CUSTOM)										
P	W6-3	36X36	9	TWO-WAY TRAFFIC	1			9						
Q	OM1-3	18X18	2.25	OBJECT MARKER		1			2.3					
R	W13-1P	18X18	2.25	ADVISORY SPEED PLAQUE (20 MPH)										
T	R10-6AL	24X30	5	STOP HERE ON RED	1			5						
U	W25-1	24X30	5	ONCOMING TRAFFIC HAS EXTENDED GREEN			2			10				
V	R9-3	18X18	2.25	NO PEDESTRIAN CROSSING	6	6		13.5	13.5					
W	R10-11	24X30	5	NO TURN ON RED ●	1	2	3	5	10	15				
X	R10-12	30X36	7.5	LEFT TURN YIELD ON GREEN ●			2			15				
Y	W3-3	36X36	9	SIGNAL AHEAD	4			36						
Z	W3-3	36X36	9	SIGNAL AHEAD							1			
-	-	-	-	STATE ROUTE SEGMENT MARKER(S)								1		
							TOTALS:	114	50	40	1	1	6	1

MISCELLANEOUS ITEMS

ITEM NUM.	QUAN.	UNIT	DESCRIPTION	LOCATION
0203 0001	7	CY	CLASS 1 EXCAVATION	AS SHOWN ON PLANS
0203 0004	23	CY	CLASS 1B EXCAVATION	AS SHOWN ON PLANS
0311 0423	52	SY	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BASE COURSE, PG 64-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 4 1/2" DEPTH	AS SHOWN ON PLANS
0350 0103	52	SY	SUBBASE 3" DEPTH (NO. 2A)	AS SHOWN ON PLANS
0411 0481	52	SY	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING COURSE, PG 64-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-E	AS SHOWN ON PLANS
0411 6450	52	SY	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BINDER COURSE, PG 64-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH	AS SHOWN ON PLANS
0460 0001	127	SY	BITUMINOUS TACK COAT	AS SHOWN ON PLANS
0630 0001	335	LF	PLAIN CEMENT CONCRETE CURB	AS SHOWN ON PLANS
0676 0001	70	SY	CEMENT CONCRETE SIDEWALK	AS SHOWN ON PLANS
0810 0024	-	LS	TREE TRIMMING TO AN UNLIMITED HEIGHT	AS SHOWN ON PLANS
0937 0311	12	EACH	FLEXIBLE DELINEATOR POST, SURFACE-MOUNT TYPE SM-2, WHITE POST WITH WHITE/RED SHEETING	AS SHOWN ON PLANS
4952 1030	1	EACH	NEMA TS-2: TYPE 1 CONTROLLER ASSEMBLY, TYPE 1 MOUNTING, ECONOLITE	C.C.
4954 0600	1	EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS), LED INDICATOR LIGHT	C.C.
4955 3208	12	EACH	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS, MODIFIED	2 3 4 5 6 7 8 9 11 13 14 15
4955 3209	1	EACH	VEHICULAR SIGNAL HEAD, FOUR 12" SECTIONS, MODIFIED	10
4955 3210	2	EACH	VEHICULAR SIGNAL HEAD, FIVE 12" SECTIONS, MODIFIED	1 12
0960 0001	1198	LF	4" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	AS SHOWN ON PLANS
0960 0002	1196	LF	4" YELLOW HOT THERMOPLASTIC PAVEMENT MARKINGS	AS SHOWN ON PLANS
0960 0021	213	LF	24" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	AS SHOWN ON PLANS
0960 0022	31	LF	24" YELLOW HOT THERMOPLASTIC PAVEMENT MARKINGS	AS SHOWN ON PLANS
0960 0230	1	EACH	WHITE HOT THERMOPLASTIC LEGEND, "WRONG WAY ARROW", 23' - 0"	AS SHOWN ON PLANS
0963 0001	438	SF	PAVEMENT MARKING REMOVAL	AS SHOWN ON PLANS
0963 0010	1	EACH	PAVEMENT MARKING REMOVAL (LEGENDS AND SYMBOLS)	AS SHOWN ON PLANS
9000 0021	1	EACH	LED LUMINAIRE, ARM MOUNT, PAINTED, 250 WATT EQUIVALENT	L2
9000 0023	1	EACH	REMOVE STREET LIGHT ARM AND LUMINAIRE FROM EXISTING WOOD UTILITY POLE	AS SHOWN ON PLANS
9000 0024	1	EACH	VIDEO DETECTOR, FIVE CAMERAS	V1 V2 V3 V4 V5
9000 0025	1	EACH	EMERGENCY PRE-EMPTION SYSTEM, FIVE APPROACHES	A B C D E A B C D E
9000 0030	1	EACH	RETROFIT OF EXISTING HPS LUMINAIRE WITH NEW LED LUMINAIRE	L1

ELECTRICAL DISTRIBUTION SYSTEM

DESCRIPTION	2 INCH CONDUIT	3 INCH CONDUIT	TRENCH AND BACKFILL, TYPE 1	TRENCH AND BACKFILL, TYPE III	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	SIGNAL CABLE, 14 AWG, 7 CONDUCTOR	AWG 8 UNDERGROUND CABLE, COPPER, 1 CONDUCTOR	JUNCTION BOX, JB-27	ELECTRICAL SERVICE, TYPE B	ELECTRICAL SERVICE, TYPE C
ITEM NUMBER	0954 0012	0954 0013	0954 0151	0954 0153	0954 0202	0954 0203	0910 4116	0954 0302	0954 0402	0954 0403
UNIT	LF	LF	LF	LF	LF	LF	LF	EACH	EACH	EACH
LOCATION										
U.P. TO C.C.										1
U.P. TO JB-1	20		16							
C.C. TO JB-1	10	20	6					1		
JB-1 TO POLE 1	20		8							
JB-1 TO JB-2	35	35	33					1		
JB-2 TO POLE 2	20		8							
JB-2 TO POLE 3	20		6							
JB-2 TO JB-3	80		40					1		
JB-3 TO POLE 4	45		11							
JB-1 TO JB-4		45	17	28				1		
JB-4 TO POLE 5		20	6							
ENTIRE INTERSECTION					1010	680	100			
POLE 6 (SIGN Z)									1	
TOTALS	250	120	151	28	1010	680	100	4	1	1

TRAFFIC SIGNAL AND SIGN SUPPORTS

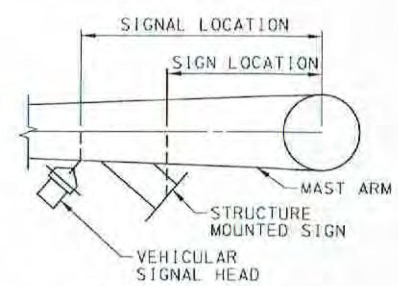
STRUCT. NO.	ITEM NUMBER 4951-0145	ITEM NUMBER 4951-2130	ITEM NUMBER 4951-4014			ROUTE	SEGMENT/ OFFSET	SIDE	OFFSET	MAST ARM H	K	ARM A L	SIDE	SIGNAL LOCATION M	N	O	P	Q	SIGN LOCATION R	S	T	U	W	ARM C G	X	Z	PEDESTAL SHAFT H	M
1			1			SR 0113	0230 / 2130	RT	18'																		14'	10'
2			1			SR 0113	0230 / 2101	RT	18'																		14'	10'
3			1			SR 0113	0230 / 2086	RT	18'																		14'	10'
4		1				SR 0113	0230 / 2038	RT	18'	15' MIN.		30'	*	20'	10'				17'	14'			0°	12'	30'	315°		
													**	28'	18'													
5	1					SR 0113	0240 / 0000	RT	18'	15' MIN.		45'	***	32'	24'	19'	11'		21'	7'			40°					
													****	36'	30'	22'	15'		41'	39'	25'							
6			1			SR 0113	0230 / 1549	RT	15'																		14'	10'
TOTALS	1	1	4																									

* EQUIPMENT FACING NORTHBOUND SR 0113 TRAFFIC
** EQUIPMENT FACING SOUTHBOUND SR 0113 TRAFFIC
*** EQUIPMENT FACING NORTHBOUND SR 0113 AND WESTBOUND MORRIS ROAD TRAFFIC
**** EQUIPMENT FACING SOUTHBOUND SR 0113 AND EASTBOUND SR 1017 TRAFFIC

NOTES:

THE EXACT LOCATION OF THE SUPPORTS IS TO BE DETERMINED BY A PENNDOT REPRESENTATIVE.

VERTICAL POLES AND MAST ARMS ARE TO BE DESIGNED BY THE MANUFACTURER TO ADEQUATELY SUPPORT LOADS AS SHOWN ON THE PLAN OR MAXIMUM LOAD REQUIREMENTS ESTABLISHED BY AASHTO SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, WHICHEVER IS GREATER.



ANGLED SIGNS AND SIGNAL MEASUREMENT DETAIL

TRAFFIC SIGNAL CONSTRUCTION PLAN

PREPARED BY:
HNTB CORPORATION
680 AMERICAN AVE, SUITE 100
KING OF PRUSSIA, PA 19406

REGISTERED PROFESSIONAL NIKHIL RASIK KHARVA ENGINEER PE075192 PENNSYLVANIA

Nikhil Kharva
8/14/18

COUNTY: MONTGOMERY
MUNICIPALITY: LOWER SALFORD TOWNSHIP
INTERSECTION: HARLEYSVILLE PIKE (SR 0113), CROSS ROAD (SR 1020), SALFORDVILLE ROAD (SR 1017), OLD SKIPPACK ROAD, AND MORRIS ROAD

REVIEWED:

MUNICIPAL OFFICIAL 8/14/18 DATE

RECOMMENDED: KPL 8/15/18

DISTRICT TRAFFIC ENGINEER 8/20/18 DATE

PERMIT: #W-229

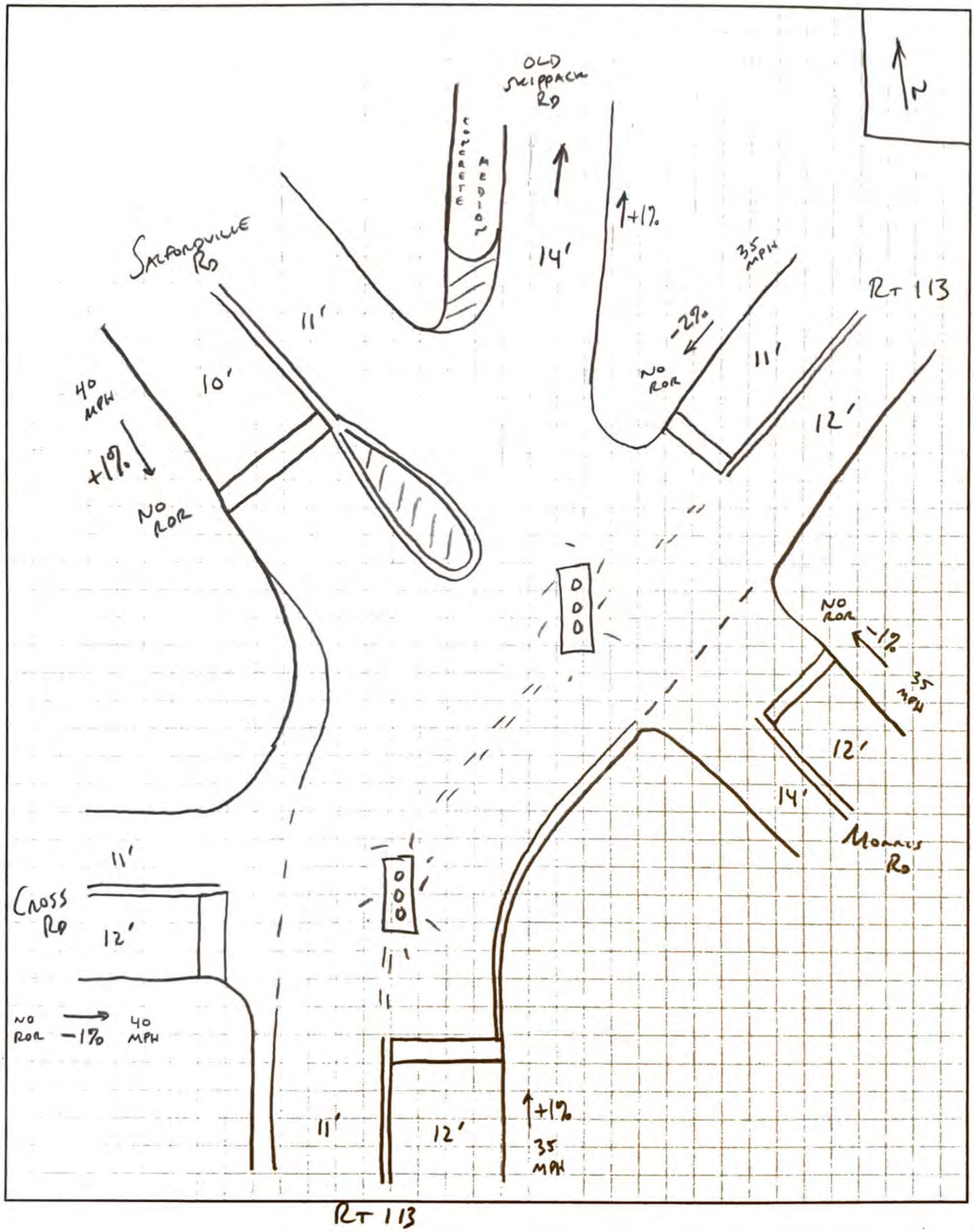
FILENAME: 6803105-w-tr-tsp06.dgn

McMAHON
TRANSPORTATION ENGINEERS & PLANNERS

Job ______ McMahon Project No. ______ Sheet ____ of ____

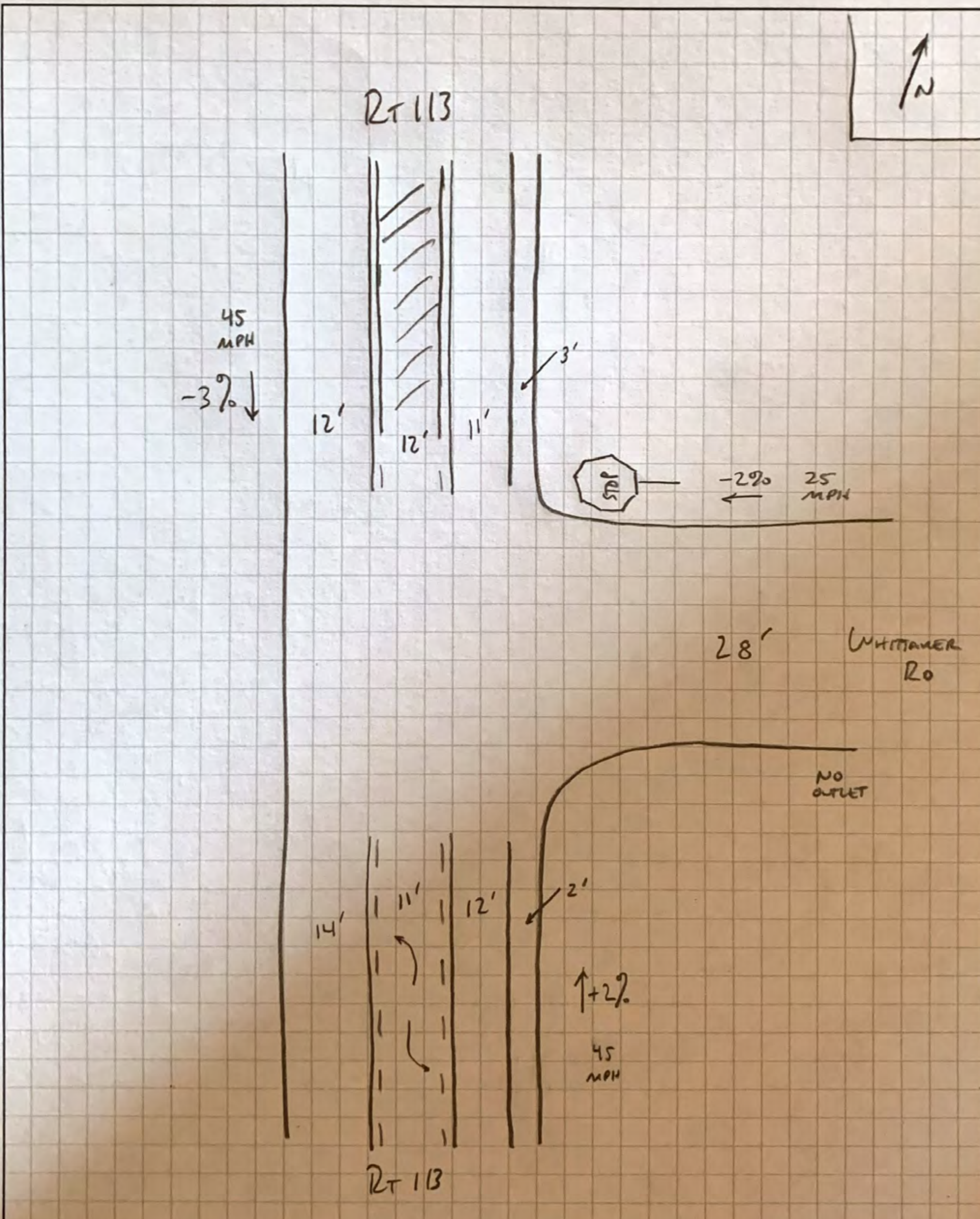
Description Rt 113 + Morris Rd + Cross Rd + Salfordville Rd + Old Skippack Rd Designed By NDB Date ______

Checked By ______ Date ______



McMAHON
TRANSPORTATION ENGINEERS & PLANNERS

Job	McMahon Project No.	Sheet ____ of ____
Description RT 113 + WHITTAKER WAY	Designed By NOB	Date
	Checked By	Date



McMAHON
a Bowman company

Attachment 2

Daily Count Data

425 Commerce Drive, Suite 200, Fort Washington, PA 19034
P: 215.283.9444
mcmahonassociates.com | bowman.com

Harleysville Pike (SR 0113), Landis Road to Cheswick Drive

TMS Site 25844: Traffic Monitoring Report

Location Description: Btwn Landis Rd & Cheswyck Dr.

Details

Type of Count	MACHINE CLASS
Type of Site	Portable
Schedule	1 TIME/YR
Duration	24 HRS
Frequency Cycle	03
Cycle Year	02

Location

County	MONTGOMERY (46)
Route	0113
Segment	0250
Offset	1000
Latitude	40.26951
Longitude	-75.39858

Map

Traffic Data

Timeframe: All Years / Sep 13, 2022

Hourly Traffic for Sep 13, 2022

Show All Classes: ☐

Hour	Volume	Trucks	Truck %	Volume Graph
12:00 AM	25	4	16	
01:00 AM	20	1	5	
02:00 AM	24	5	20.8	
03:00 AM	30	4	13.3	
04:00 AM	70	11	15.7	
05:00 AM	256	19	7.4	
06:00 AM	572	47	8.2	
07:00 AM	874	76	8.7	
08:00 AM	703	76	10.8	
09:00 AM	683	65	9.5	
10:00 AM	581	87	15	
11:00 AM	632	66	10.4	
12:00 PM	689	67	9.7	
01:00 PM	712	74	10.4	
02:00 PM	835	75	9	
03:00 PM	919	73	7.9	
04:00 PM	935	66	7.1	
05:00 PM	977	41	4.2	
06:00 PM	772	34	4.4	
07:00 PM	593	9	1.5	
08:00 PM	444	11	2.5	
09:00 PM	262	12	4.6	
10:00 PM	133	1	0.8	
11:00 PM	62	2	3.2	
Total	**11,803**			

Harleysville Pike (SR 0113), South of Sharon Lane

TMS Site 25843: Traffic Monitoring Report

Location Description: 260 Feet South of Sharon Ln. (Class Count Btwn Telephone Poles)

Details	
Type of Count	MACHINE CLASS
Type of Site	Portable
Schedule	1 TIME/YR
Duration	24 HRS
Frequency Cycle	03
Cycle Year	03

Location	
County	MONTGOMERY (46)
Route	0113
Segment	0230
Offset	0480
Latitude	40.25732
Longitude	-75.40501

Map

Traffic Data

Timeframe: All Years / Aug 02, 2023

Hourly Traffic for Aug 02, 2023

Show All Classes:

Hour	Volume	Trucks	Truck %	Volume Graph
12:00 AM	30	5	16.7	
01:00 AM	13	0	0	
02:00 AM	11	2	18.2	
03:00 AM	19	2	10.5	
04:00 AM	49	6	12.2	
05:00 AM	190	23	12.1	
06:00 AM	376	53	14.1	
07:00 AM	681	72	10.6	
08:00 AM	625	74	11.8	
09:00 AM	533	61	11.4	
10:00 AM	465	73	15.7	
11:00 AM	522	55	10.5	
12:00 PM	532	58	10.9	
01:00 PM	552	67	12.1	
02:00 PM	598	58	9.7	
03:00 PM	694	71	10.2	
04:00 PM	787	65	8.3	
05:00 PM	734	61	8.3	
06:00 PM	543	38	7	
07:00 PM	417	18	4.3	
08:00 PM	376	21	5.6	
09:00 PM	220	10	4.5	
10:00 PM	133	9	6.8	
11:00 PM	67	3	4.5	
Total	**9,167**			

Salfordville Road (SR 1017), West of Camp Wawa Road

TMS Site 15866: Traffic Monitoring Report

Location Description: 0.21 Mile North of Lederach Station Way.

Details	
Type of Count	VOLUME
Type of Site	Portable
Schedule	1 TIME/YR
Duration	24 HRS
Frequency Cycle	05
Cycle Year	01

Location	
County	MONTGOMERY (46)
Route	1017
Segment	0020
Offset	1040
Latitude	40.26682
Longitude	-75.41339

Map

Traffic Data

Timeframe: All Years / **May 09, 2019**

Hourly Traffic for May 09, 2019

Hour	Volume	Volume Graph
12:00 AM	11	
01:00 AM	6	
02:00 AM	3	
03:00 AM	8	
04:00 AM	28	
05:00 AM	89	
06:00 AM	340	
07:00 AM	418	
08:00 AM	294	
09:00 AM	145	
10:00 AM	115	
11:00 AM	140	
12:00 PM	123	
01:00 PM	162	
02:00 PM	207	
03:00 PM	327	
04:00 PM	451	
05:00 PM	422	
06:00 PM	220	
07:00 PM	138	
08:00 PM	137	
09:00 PM	63	
10:00 PM	57	
11:00 PM	27	
Total	**3,931**	

Attachment 3

Turning Movement Counts and Volume Balancing Notes

TURNING MOVEMENT COUNTS

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 822255.11 Lower Salford - 113 & Landis
Site Code:
Start Date: 11/09/2022
Page No: 1

Turning Movement Data

	Route 113 Southbound							Landis Rd Westbound							Route 113 Northbound							Landis Rd Eastbound							
Start Time	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Int. Total
7:00 AM	8	87	2	0	0	0	97	3	1	2	1	0	0	7	0	92	0	1	0	0	93	8	14	0	0	0	0	22	219
7:15 AM	11	68	1	0	0	0	80	3	2	4	0	0	0	9	0	101	3	0	0	0	104	4	11	1	1	0	0	17	210
7:30 AM	11	125	1	0	0	0	137	4	1	3	2	0	0	10	0	108	2	0	0	0	110	3	18	3	1	0	0	25	282
7:45 AM	9	97	1	0	0	0	107	2	1	5	3	0	0	11	0	87	6	2	0	0	95	6	14	1	1	0	0	22	235
Hourly Total	39	377	5	0	0	0	421	12	5	14	6	0	0	37	0	388	11	3	0	0	402	21	57	5	3	0	0	86	946
8:00 AM	6	96	2	0	0	0	104	0	2	5	1	0	0	8	0	95	4	0	0	0	99	0	18	3	0	0	0	21	232
8:15 AM	4	78	1	0	0	0	83	3	1	2	1	0	0	7	2	98	4	0	0	0	104	2	9	0	0	0	0	11	205
8:30 AM	4	93	1	0	0	0	98	0	0	6	1	0	0	7	1	64	3	0	0	0	68	8	6	1	0	0	0	15	188
8:45 AM	4	91	3	0	0	0	98	2	0	5	0	0	0	7	1	92	0	0	0	0	93	3	6	0	0	0	0	9	207
Hourly Total	18	358	7	0	0	0	383	5	3	18	3	0	0	29	4	349	11	0	0	0	364	13	39	4	0	0	0	56	832
9:00 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00 PM	5	111	3	0	0	0	119	1	9	9	7	0	0	26	3	104	4	0	0	0	111	5	5	2	0	0	0	12	268
4:15 PM	7	96	7	0	0	0	110	1	13	8	10	0	0	32	5	125	5	0	0	0	135	7	5	0	0	0	0	12	289
4:30 PM	8	101	2	0	0	0	111	2	18	9	5	0	0	34	0	92	3	1	0	0	96	3	0	1	1	0	0	5	246
4:45 PM	5	104	5	0	0	0	114	5	19	6	7	0	0	37	0	101	2	0	0	0	103	2	2	2	0	0	0	6	260
Hourly Total	25	412	17	0	0	0	454	9	59	32	29	0	0	129	8	422	14	1	0	0	445	17	12	5	1	0	0	35	1063
5:00 PM	2	130	4	0	0	0	136	1	19	6	10	0	0	36	0	82	5	0	0	0	87	2	7	0	0	0	0	9	268
5:15 PM	4	106	2	0	0	0	112	4	23	10	6	0	0	43	3	97	2	0	0	0	102	2	4	2	0	0	0	8	265
5:30 PM	3	90	0	0	0	0	93	1	9	3	5	0	0	18	2	98	2	0	0	0	102	4	6	0	0	0	0	10	223
5:45 PM	6	88	0	0	0	0	94	1	8	3	5	0	0	17	2	110	4	0	0	0	116	4	3	2	0	0	0	9	236
Hourly Total	15	414	6	0	0	0	435	7	59	22	26	0	0	114	7	387	13	0	0	0	407	12	20	4	0	0	0	36	992
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	97	1562	35	0	0	0	1694	33	126	86	64	0	0	309	19	1546	49	4	0	0	1618	63	128	18	4	0	0	213	3834
Approach %	5.7	92.2	2.1	0.0	0.0	-	-	10.7	40.8	27.8	20.7	0.0	-	-	1.2	95.6	3.0	0.2	0.0	-	-	29.6	60.1	8.5	1.9	0.0	-	-	-
Total %	2.5	40.7	0.9	0.0	0.0	-	44.2	0.9	3.3	2.2	1.7	0.0	-	8.1	0.5	40.3	1.3	0.1	0.0	-	42.2	1.6	3.3	0.5	0.1	0.0	-	5.6	-
Lights	90	1471	33	0	0	-	1594	32	123	80	62	0	-	297	18	1458	44	2	0	-	1522	59	127	18	4	0	-	208	3621
% Lights	92.8	94.2	94.3	-	-	-	94.1	97.0	97.6	93.0	96.9	-	-	96.1	94.7	94.3	89.8	50.0	-	-	94.1	93.7	99.2	100.0	100.0	-	-	97.7	94.4
Other Vehicles	7	91	2	0	0	-	100	1	3	6	2	0	-	12	1	88	5	2	0	-	96	4	1	0	0	0	-	5	213
% Other Vehicles	7.2	5.8	5.7	-	-	-	5.9	3.0	2.4	7.0	3.1	-	-	3.9	5.3	5.7	10.2	50.0	-	-	5.9	6.3	0.8	0.0	0.0	-	-	2.3	5.6
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 822255.11 Lower Salford - 113 & Landis
Site Code:
Start Date: 11/09/2022

Route 113 [SB]

Out	In	Total
1659	1594	3253
100	100	200
0	0	0
1759	**1694**	**3453**

R	T	L	U	P
33	1471	90	0	0
2	91	7	0	0
0	0	0	0	0
35	**1562**	**97**	**0**	**0**

Landis Rd [EB]

Out	In	Total
174	208	382
6	5	11
0	0	0
180	**213**	**393**

U	L	T	R	P
0	59	127	22	0
0	4	1	0	0
0	0	0	0	0
0	**63**	**128**	**22**	**0**

11/09/2022 7:00 AM
Ending At
11/09/2022 6:15 PM

Lights
Other Vehicles
Pedestrians

Landis Rd [WB]

Out	In	Total
263	297	560
15	12	27
0	0	0
278	**309**	**587**

R	T	L	U	P
142	123	32	0	0
8	3	1	0	0
0	0	0	0	0
150	**126**	**33**	**0**	**0**

U	L	T	R	P
0	18	1458	46	0
0	1	88	7	0
0	0	0	0	0
0	**19**	**1546**	**53**	**0**

Out	In	Total
1525	1522	3047
92	96	188
0	0	0
1617	**1618**	**3235**

Route 113 [NB]

Turning Movement Data Plot

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 822255.11 Lower Salford - 113 & Landis
Site Code:
Start Date: 11/09/2022

Turning Movement Peak Hour Data (7:15 AM)

	Route 113							Landis Rd							Route 113							Landis Rd							
	Southbound							Westbound							Northbound							Eastbound							
Start Time	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Int. Total
7:15 AM	11	68	1	0	0	0	80	3	2	4	0	0	0	9	0	101	3	0	0	0	104	4	11	1	1	0	0	17	210
7:30 AM	11	125	1	0	0	0	137	4	1	3	2	0	0	10	0	108	2	0	0	0	110	3	18	3	1	0	0	25	282
7:45 AM	9	97	1	0	0	0	107	2	1	5	3	0	0	11	0	87	6	2	0	0	95	6	14	1	1	0	0	22	235
8:00 AM	6	96	2	0	0	0	104	0	2	5	1	0	0	8	0	95	4	0	0	0	99	0	18	3	0	0	0	21	232
Total	37	386	5	0	0	0	428	9	6	17	6	0	0	38	0	391	15	2	0	0	408	13	61	8	3	0	0	85	959
Approach %	8.6	90.2	1.2	0.0	0.0	-	-	23.7	15.8	44.7	15.8	0.0	-	-	0.0	95.8	3.7	0.5	0.0	-	-	15.3	71.8	9.4	3.5	0.0	-	-	-
Total %	3.9	40.3	0.5	0.0	0.0	-	44.6	0.9	0.6	1.8	0.6	0.0	-	4.0	0.0	40.8	1.6	0.2	0.0	-	42.5	1.4	6.4	0.8	0.3	0.0	-	8.9	-
PHF	0.841	0.772	0.625	0.000	0.000	-	0.781	0.563	0.750	0.850	0.500	0.000	-	0.864	0.000	0.905	0.625	0.250	0.000	-	0.927	0.542	0.847	0.667	0.750	0.000	-	0.850	0.850
Lights	34	342	4	0	0	-	380	8	5	16	6	0	-	35	0	359	12	1	0	-	372	12	60	8	3	0	-	83	870
% Lights	91.9	88.6	80.0	-	-	-	88.8	88.9	83.3	94.1	100.0	-	-	92.1	-	91.8	80.0	50.0	-	-	91.2	92.3	98.4	100.0	100.0	-	-	97.6	90.7
Other Vehicles	3	44	1	0	0	-	48	1	1	1	0	0	-	3	0	32	3	1	0	-	36	1	1	0	0	0	-	2	89
% Other Vehicles	8.1	11.4	20.0	-	-	-	11.2	11.1	16.7	5.9	0.0	-	-	7.9	-	8.2	20.0	50.0	-	-	8.8	7.7	1.6	0.0	0.0	-	-	2.4	9.3
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 822255.11 Lower Salford - 113 & Landis
Site Code:
Start Date: 11/09/2022
Page No: 4

Peak Hour Data

11/09/2022 7:15 AM
Ending At
11/09/2022 8:15 AM

Lights
Other Vehicles
Pedestrians

Route 113 [SB]

Out	In	Total
393	380	773
34	48	82
0	0	0
427	**428**	**855**

R	T	L	U	P
4	342	34	0	0
1	44	3	0	0
0	0	0	0	0
5	**386**	**37**	**0**	**0**

Landis Rd [EB]

Out	In	Total
9	83	92
2	2	4
0	0	0
11	**85**	**96**

U	L	T	R	P
0	12	60	11	0
0	1	1	0	0
0	0	0	0	0
0	**13**	**61**	**11**	**0**

Landis Rd [WB]

Out	In	Total
107	35	142
8	3	11
0	0	0
115	**38**	**153**

R	T	L	U	P
22	5	8	0	0
1	1	1	0	0
0	0	0	0	0
23	**6**	**9**	**0**	**0**

Route 113 [NB]

U	L	T	R	P
0	0	359	13	0
0	0	32	4	0
0	0	0	0	0
0	**0**	**391**	**17**	**0**

Out	In	Total
361	372	733
45	36	81
0	0	0
406	**408**	**814**

Turning Movement Peak Hour Data Plot (7:15 AM)

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 822255.11 Lower Salford - 113 & Landis
Site Code:
Start Date: 11/09/2022
Page No: 5

Turning Movement Peak Hour Data (4:00 PM)

	Route 113							Landis Rd							Route 113							Landis Rd							
	Southbound							Westbound							Northbound							Eastbound							
Start Time	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Int. Total
4:00 PM	5	111	3	0	0	0	119	1	9	9	7	0	0	26	3	104	4	0	0	0	111	5	5	2	0	0	0	12	268
4:15 PM	7	96	7	0	0	0	110	1	13	8	10	0	0	32	5	125	5	0	0	0	135	7	5	0	0	0	0	12	289
4:30 PM	8	101	2	0	0	0	111	2	18	9	5	0	0	34	0	92	3	1	0	0	96	3	0	1	1	0	0	5	246
4:45 PM	5	104	5	0	0	0	114	5	19	6	7	0	0	37	0	101	2	0	0	0	103	2	2	2	0	0	0	6	260
Total	25	412	17	0	0	0	454	9	59	32	29	0	0	129	8	422	14	1	0	0	445	17	12	5	1	0	0	35	1063
Approach %	5.5	90.7	3.7	0.0	0.0	-	-	7.0	45.7	24.8	22.5	0.0	-	-	1.8	94.8	3.1	0.2	0.0	-	-	48.6	34.3	14.3	2.9	0.0	-	-	-
Total %	2.4	38.8	1.6	0.0	0.0	-	42.7	0.8	5.6	3.0	2.7	0.0	-	12.1	0.8	39.7	1.3	0.1	0.0	-	41.9	1.6	1.1	0.5	0.1	0.0	-	3.3	-
PHF	0.781	0.928	0.607	0.000	0.000	-	0.954	0.450	0.776	0.889	0.725	0.000	-	0.872	0.400	0.844	0.700	0.250	0.000	-	0.824	0.607	0.600	0.625	0.250	0.000	-	0.729	0.920
Lights	22	403	16	0	0	-	441	9	58	30	27	0	-	124	8	402	14	1	0	-	425	16	12	5	1	0	-	34	1024
% Lights	88.0	97.8	94.1	-	-	-	97.1	100.0	98.3	93.8	93.1	-	-	96.1	100.0	95.3	100.0	100.0	-	-	95.5	94.1	100.0	100.0	100.0	-	-	97.1	96.3
Other Vehicles	3	9	1	0	0	-	13	0	1	2	2	0	-	5	0	20	0	0	0	-	20	1	0	0	0	0	-	1	39
% Other Vehicles	12.0	2.2	5.9	-	-	-	2.9	0.0	1.7	6.3	6.9	-	-	3.9	0.0	4.7	0.0	0.0	-	-	4.5	5.9	0.0	0.0	0.0	-	-	2.9	3.7
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 822255.11 Lower Salford - 113 & Landis
Site Code:
Start Date: 11/09/2022
Page No: 6

Peak Hour Data

11/09/2022 4:00 PM
Ending At
11/09/2022 5:00 PM

Lights
Other Vehicles
Pedestrians

Route 113 [SB]

Out	In	Total
475	441	916
25	13	38
0	0	0
500	**454**	**954**

R	T	L	U	P
16	403	22	0	0
1	9	3	0	0
0	0	0	0	0
17	**412**	**25**	**0**	**0**

Landis Rd [EB]

Out	In	Total
82	34	116
2	1	3
0	0	0
84	**35**	**119**

U	L	T	R	P
0	16	12	6	0
0	1	0	0	0
0	0	0	0	0
0	**17**	**12**	**6**	**0**

Landis Rd [WB]

Out	In	Total
49	124	173
3	5	8
0	0	0
52	**129**	**181**

R	T	L	U	P
57	58	9	0	0
4	1	0	0	0
0	0	0	0	0
61	**59**	**9**	**0**	**0**

Route 113 [NB]

U	L	T	R	P
0	8	402	15	0
0	0	20	0	0
0	0	0	0	0
0	**8**	**422**	**15**	**0**

Out	In	Total
418	425	843
9	20	29
0	0	0
427	**445**	**872**

Turning Movement Peak Hour Data Plot (4:00 PM)

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 822255.11 Lower Salford - Rt 113 & Old Morris
Site Code:
Start Date: 11/09/2022
Page No: 1

Turning Movement Data

Start Time	Route 113 Southbound					Old Morris Rd Westbound					Route 113 Northbound					
	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:00 AM	2	98	0	0	100	0	4	0	0	4	83	0	0	0	83	187
7:15 AM	2	83	0	0	85	2	6	0	0	8	103	1	0	0	104	197
7:30 AM	4	121	0	0	125	1	2	0	0	3	106	1	0	0	107	235
7:45 AM	1	104	0	0	105	0	3	0	0	3	99	0	0	0	99	207
Hourly Total	9	406	0	0	415	3	15	0	0	18	391	2	0	0	393	826
8:00 AM	2	94	0	0	96	1	2	0	0	3	98	0	0	0	98	197
8:15 AM	1	78	0	0	79	1	3	0	0	4	101	2	0	0	103	186
8:30 AM	3	91	0	0	94	1	1	0	0	2	68	0	0	0	68	164
8:45 AM	1	85	0	0	86	0	1	0	0	1	89	0	0	0	89	176
Hourly Total	7	348	0	0	355	3	7	0	0	10	356	2	0	0	358	723
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	2	104	0	0	106	0	2	0	0	2	110	0	1	0	111	219
4:15 PM	0	108	0	0	108	1	1	0	0	2	133	1	0	0	134	244
4:30 PM	3	97	0	0	100	1	1	0	0	2	101	0	0	0	101	203
4:45 PM	1	115	0	0	116	1	3	0	0	4	95	0	0	0	95	215
Hourly Total	6	424	0	0	430	3	7	0	0	10	439	1	1	0	441	881
5:00 PM	9	117	0	0	126	0	4	0	0	4	82	0	0	0	82	212
5:15 PM	7	115	0	0	122	2	6	0	0	8	98	0	0	0	98	228
5:30 PM	4	84	0	0	88	2	2	0	0	4	101	3	0	0	104	196
5:45 PM	3	93	0	0	96	0	2	0	0	2	113	2	0	0	115	213
Hourly Total	23	409	0	0	432	4	14	0	0	18	394	5	0	0	399	849
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	45	1587	0	0	1632	13	43	0	0	56	1580	10	1	0	1591	3279
Approach %	2.8	97.2	0.0	-	-	23.2	76.8	0.0	-	-	99.3	0.6	0.1	-	-	-
Total %	1.4	48.4	0.0	-	49.8	0.4	1.3	0.0	-	1.7	48.2	0.3	0.0	-	48.5	-
Lights	42	1502	0	-	1544	13	39	0	-	52	1484	8	1	-	1493	3089
% Lights	93.3	94.6	-	-	94.6	100.0	90.7	-	-	92.9	93.9	80.0	100.0	-	93.8	94.2
Other Vehicles	3	85	0	-	88	0	4	0	-	4	96	2	0	-	98	190
% Other Vehicles	6.7	5.4	-	-	5.4	0.0	9.3	-	-	7.1	6.1	20.0	0.0	-	6.2	5.8
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 822255.11 Lower Salford - Rt 113 & Old Morris
Site Code:
Start Date: 11/09/2022
Page No: 2

Route 113 [SB]		
Out	In	Total
1523	1544	3067
100	88	188
0	0	0
1623	**1632**	**3255**

1502	42	0	0
85	3	0	0
0	0	0	0
1587	**45**	**0**	**0**
T	L	U	P

11/09/2022 7:00 AM
Ending At
11/09/2022 6:15 PM

Lights
Other Vehicles
Pedestrians

R	L	U	P
39	13	0	0
4	0	0	0
0	0	0	0
43	**13**	**0**	**0**

Old Morris Rd [WB]		
Out	In	Total
50	52	102
5	4	9
0	0	0
55	**56**	**111**

U	T	R	P
1	1484	8	0
0	96	2	0
0	0	0	0
1	**1580**	**10**	**0**

1516	1493	3009
85	98	183
0	0	0
1601	**1591**	**3192**
Out	In	Total
Route 113 [NB]		

Turning Movement Data Plot

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 822255.11 Lower Salford - Rt 113 & Old Morris
Site Code:
Start Date: 11/09/2022

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Route 113 Southbound					Old Morris Rd Westbound					Route 113 Northbound					
	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:15 AM	2	83	0	0	85	2	6	0	0	8	103	1	0	0	104	197
7:30 AM	4	121	0	0	125	1	2	0	0	3	106	1	0	0	107	235
7:45 AM	1	104	0	0	105	0	3	0	0	3	99	0	0	0	99	207
8:00 AM	2	94	0	0	96	1	2	0	0	3	98	0	0	0	98	197
Total	9	402	0	0	411	4	13	0	0	17	406	2	0	0	408	836
Approach %	2.2	97.8	0.0	-	-	23.5	76.5	0.0	-	-	99.5	0.5	0.0	-	-	-
Total %	1.1	48.1	0.0	-	49.2	0.5	1.6	0.0	-	2.0	48.6	0.2	0.0	-	48.8	-
PHF	0.563	0.831	0.000	-	0.822	0.500	0.542	0.000	-	0.531	0.958	0.500	0.000	-	0.953	0.889
Lights	9	363	0	-	372	4	11	0	-	15	369	1	0	-	370	757
% Lights	100.0	90.3	-	-	90.5	100.0	84.6	-	-	88.2	90.9	50.0	-	-	90.7	90.6
Other Vehicles	0	39	0	-	39	0	2	0	-	2	37	1	0	-	38	79
% Other Vehicles	0.0	9.7	-	-	9.5	0.0	15.4	-	-	11.8	9.1	50.0	-	-	9.3	9.4
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 822255.11 Lower Salford - Rt 113 & Old Morris
Site Code:
Start Date: 11/09/2022
Page No: 4

Peak Hour Data

11/09/2022 7:15 AM
Ending At
11/09/2022 8:15 AM

Lights
Other Vehicles
Pedestrians

Route 113 [SB]

Out	In	Total
380	372	752
39	39	78
0	0	0
419	**411**	**830**

T	L	U	P
363	9	0	0
39	0	0	0
0	0	0	0
402	**9**	**0**	**0**

Old Morris Rd [WB]

Out	In	Total
10	15	25
1	2	3
0	0	0
11	**17**	**28**

R	L	U	P
11	4	0	0
2	0	0	0
0	0	0	0
13	**4**	**0**	**0**

Route 113 [NB]

U	T	R	P
0	369	1	0
0	37	1	0
0	0	0	0
0	**406**	**2**	**0**

Out	In	Total
367	370	737
39	38	77
0	0	0
406	**408**	**814**

Turning Movement Peak Hour Data Plot (7:15 AM)

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 822255.11 Lower Salford - Rt 113 & Old Morris
Site Code:
Start Date: 11/09/2022

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Route 113 Southbound					Old Morris Rd Westbound					Route 113 Northbound					
	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
4:00 PM	2	104	0	0	106	0	2	0	0	2	110	0	1	0	111	219
4:15 PM	0	108	0	0	108	1	1	0	0	2	133	1	0	0	134	244
4:30 PM	3	97	0	0	100	1	1	0	0	2	101	0	0	0	101	203
4:45 PM	1	115	0	0	116	1	3	0	0	4	95	0	0	0	95	215
Total	6	424	0	0	430	3	7	0	0	10	439	1	1	0	441	881
Approach %	1.4	98.6	0.0	-	-	30.0	70.0	0.0	-	-	99.5	0.2	0.2	-	-	-
Total %	0.7	48.1	0.0	-	48.8	0.3	0.8	0.0	-	1.1	49.8	0.1	0.1	-	50.1	-
PHF	0.500	0.922	0.000	-	0.927	0.750	0.583	0.000	-	0.625	0.825	0.250	0.250	-	0.823	0.903
Lights	6	413	0	-	419	3	7	0	-	10	421	1	1	-	423	852
% Lights	100.0	97.4	-	-	97.4	100.0	100.0	-	-	100.0	95.9	100.0	100.0	-	95.9	96.7
Other Vehicles	0	11	0	-	11	0	0	0	-	0	18	0	0	-	18	29
% Other Vehicles	0.0	2.6	-	-	2.6	0.0	0.0	-	-	0.0	4.1	0.0	0.0	-	4.1	3.3
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 822255.11 Lower Salford - Rt 113 & Old Morris
Site Code:
Start Date: 11/09/2022

Route 113 [SB]		
Out	In	Total
428	419	847
18	11	29
0	0	0
446	**430**	**876**

413	6	0	0
11	0	0	0
0	0	0	0
424	**6**	**0**	**0**
T	L	U	P

Peak Hour Data

11/09/2022 4:00 PM
Ending At
11/09/2022 5:00 PM

Lights
Other Vehicles
Pedestrians

7	3	0	0
0	0	0	0
0	0	0	0
7	**3**	**0**	**0**
R	L	U	P

Old Morris Rd [WB]		
Out	In	Total
7	10	17
0	0	0
0	0	0
7	**10**	**17**

U	T	R	P
1	421	1	0
0	18	0	0
0	0	0	0
1	**439**	**1**	**0**

417	423	840
11	18	29
0	0	0
428	**441**	**869**
Out	In	Total
Route 113 [NB]		

Turning Movement Peak Hour Data Plot (4:00 PM)

McMahon a Bowman Company

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Lower Salford Townshi
Location: Route 113 & Morris Road &
Salfordville Road & Old Skippack Road
Counter: M

File Name : lsalford01w
Site Code :
Start Date : 11/9/2022
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles

	Old Skippack Rd Southbound					Route 113 Southwestbound					Morris Rd Westbound					Route 113 Northbound					Salfordville Rd Eastbound					
Start Time	Hard Left	Left	Thru	Right	Peds	Hard Left	Bear Left	Bear Right	Hard Right	Peds	Left	Thru	Right	Hard Right	Peds	Left	Thru	Bear Right	Right	Peds	Left	Bear Left	Thru	Right	Peds	Int. Total
07:00 AM	0	0	0	0	0	0	81	2	0	0	3	2	0	2	0	16	0	81	7	0	0	2	11	53	0	260
07:15 AM	0	0	0	0	0	0	93	1	0	0	0	1	0	3	0	15	0	83	8	0	0	9	7	67	0	287
07:30 AM	0	0	0	0	0	0	94	1	0	0	0	4	0	0	0	7	1	104	5	0	0	3	15	57	0	291
07:45 AM	0	0	0	0	0	0	110	1	1	0	0	0	1	0	0	15	0	96	5	0	0	6	14	66	0	315
Total	0	0	0	0	0	0	378	5	1	0	3	7	1	5	0	53	1	364	25	0	0	20	47	243	0	1153
08:00 AM	0	0	0	0	0	1	97	2	0	0	0	1	0	0	0	13	0	92	4	0	0	3	16	53	0	282
08:15 AM	0	0	0	0	0	0	80	0	0	0	0	3	0	0	0	16	0	101	4	0	0	4	10	32	0	250
08:30 AM	0	0	0	0	0	0	83	1	0	0	0	2	0	0	0	16	0	67	5	0	0	1	11	36	0	222
08:45 AM	0	0	0	0	0	0	80	1	0	0	1	3	0	1	0	21	0	85	1	0	0	7	5	25	0	230
Total	0	0	0	0	0	1	340	4	0	0	1	9	0	1	0	66	0	345	14	0	0	15	42	146	0	984
04:00 PM	1	0	0	0	0	0	94	2	0	0	5	14	0	1	0	37	4	106	3	0	2	0	4	17	0	290
04:15 PM	0	0	0	0	0	0	107	5	2	0	7	17	5	0	0	46	5	128	1	0	0	6	5	24	0	358
04:30 PM	0	0	0	0	0	0	99	1	0	0	5	8	2	2	0	71	3	92	1	0	0	5	5	20	0	314
04:45 PM	0	0	0	0	0	0	95	0	3	0	4	21	1	0	0	54	6	94	2	0	1	2	1	26	0	310
Total	1	0	0	0	0	0	395	8	5	0	21	60	8	3	0	208	18	420	7	0	3	13	15	87	0	1272
05:00 PM	0	0	0	0	0	1	104	4	1	0	9	23	0	0	0	40	1	77	2	0	0	5	3	25	0	295
05:15 PM	0	0	0	0	0	0	103	5	2	0	6	29	4	2	0	40	5	92	0	0	0	0	2	28	0	318
05:30 PM	0	0	0	0	0	0	94	4	5	0	4	16	1	1	0	44	7	96	4	0	0	2	3	19	0	300
05:45 PM	0	0	0	0	0	0	86	5	2	0	2	15	1	0	0	29	8	112	0	0	0	5	3	16	0	284
Total	0	0	0	0	0	1	387	18	10	0	21	83	6	3	0	153	21	377	6	0	0	12	11	88	0	1197
Grand Total	1	0	0	0	0	2	1500	35	16	0	46	159	15	12	0	480	40	1506	52	0	3	60	115	564	0	4606
Apprch %	100	0	0	0	0	0.1	96.6	2.3	1	0	19.8	68.5	6.5	5.2	0	23.1	1.9	72.5	2.5	0	0.4	8.1	15.5	76	0	
Total %	0	0	0	0	0	0	32.6	0.8	0.3	0	1	3.5	0.3	0.3	0	10.4	0.9	32.7	1.1	0	0.1	1.3	2.5	12.2	0	
Passenger Vehicles	1	0	0	0	0	1	1420	32	15	0	45	155	15	12	0	462	39	1395	49	0	2	56	110	550	0	4359
% Passenger Vehicles	100	0	0	0	0	50	94.7	91.4	93.8	0	97.8	97.5	100	100	0	96.2	97.5	92.6	94.2	0	66.7	93.3	95.7	97.5	0	94.6
Heavy Vehicles	0	0	0	0	0	1	80	3	1	0	1	4	0	0	0	18	1	111	3	0	1	4	5	14	0	247
% Heavy Vehicles	0	0	0	0	0	50	5.3	8.6	6.2	0	2.2	2.5	0	0	0	3.8	2.5	7.4	5.8	0	33.3	6.7	4.3	2.5	0	5.4

McMahon a Bowman Company

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Lower Salford Townshi
Location: Route 113 & Morris Road &
Salfordville Road & Old Skippack Road
Counter: M

File Name : lsalford01w
Site Code :
Start Date : 11/9/2022
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	Old Skippack Rd Southbound						Route 113 Southwestbound						Morris Rd Westbound						Route 113 Northbound						Salfordville Rd Eastbound						
Start Time	Hard Left	Left	Thru	Right	Peds	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	Peds	App. Total	Left	Thru	Right	Hard Right	Peds	App. Total	Left	Thru	Bear Right	Right	Peds	App. Total	Left	Bear Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																															
Peak Hour for Entire Intersection Begins at 07:15 AM																															
07:15 AM	0	0	0	0	0	0	0	93	1	0	0	94	0	1	0	**3**	0	**4**	**15**	0	83	**8**	0	106	0	**9**	7	**67**	0	83	287
07:30 AM	0	0	0	0	0	0	0	94	1	0	0	95	0	**4**	0	0	0	4	7	**1**	**104**	5	0	**117**	0	3	15	57	0	75	291
07:45 AM	0	0	0	0	0	0	0	**110**	1	**1**	0	**112**	0	0	**1**	0	0	1	15	0	96	5	0	116	0	6	14	66	0	**86**	**315**
08:00 AM	0	0	0	0	0	0	**1**	97	**2**	0	0	100	0	1	0	0	0	1	13	0	92	4	0	109	0	3	**16**	53	0	72	282
Total Volume	0	0	0	0	0	0	1	394	5	1	0	401	0	6	1	3	0	10	50	1	375	22	0	448	0	21	52	243	0	316	1175
% App. Total	0	0	0	0	0		0.2	98.3	1.2	0.2	0		0	60	10	30	0		11.2	0.2	83.7	4.9	0		0	6.6	16.5	76.9	0		
PHF	.000	.000	.000	.000	.000	.000	.250	.895	.625	.250	.000	.895	.000	.375	.250	.250	.000	.625	.833	.250	.901	.688	.000	.957	.000	.583	.813	.907	.000	.919	.933
Passenger Vehicles	0	0	0	0	0	0	0	360	4	0	0	364	0	6	1	3	0	10	47	0	341	20	0	408	0	17	51	235	0	303	1085
% Passenger Vehicles	0	0	0	0	0	0	0	91.4	80.0	0	0	90.8	0	100	100	100	0	100	94.0	0	90.9	90.9	0	91.1	0	81.0	98.1	96.7	0	95.9	92.3
Heavy Vehicles	0	0	0	0	0	0	1	34	1	1	0	37	0	0	0	0	0	0	3	1	34	2	0	40	0	4	1	8	0	13	90
% Heavy Vehicles	0	0	0	0	0	0	100	8.6	20.0	100	0	9.2	0	0	0	0	0	0	6.0	100	9.1	9.1	0	8.9	0	19.0	1.9	3.3	0	4.1	7.7

McMahon a Bowman Company

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Lower Salford Townshi
Location: Route 113 & Morris Road &
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Counter: M

File Name : lsalford01w
Site Code :
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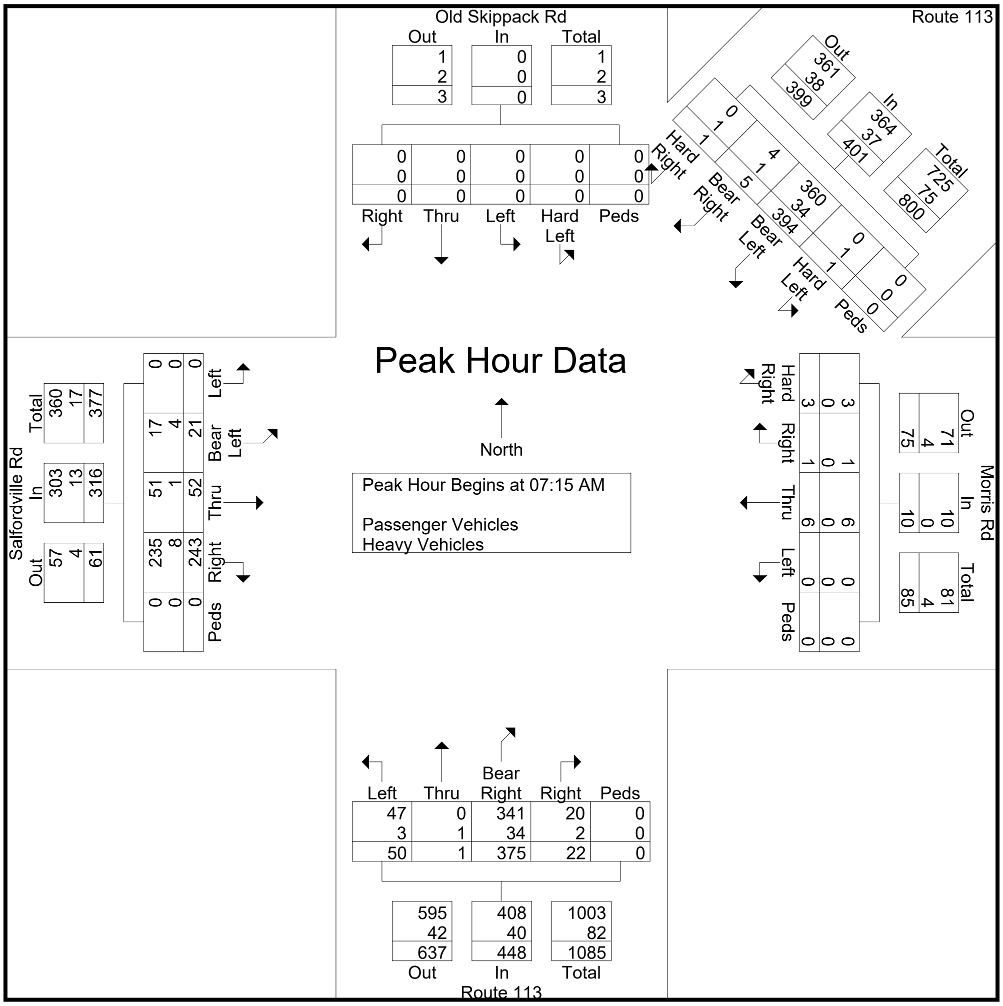

McMahon a Bowman Company

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Lower Salford Townshi
Location: Route 113 & Morris Road &
Salfordville Road & Old Skippack Road
Counter: M

File Name : lsalford01w
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	Old Skippack Rd Southbound						Route 113 Southwestbound						Morris Rd Westbound						Route 113 Northbound						Salfordville Rd Eastbound						
Start Time	Hard Left	Left	Thru	Right	Peds	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	Peds	App. Total	Left	Thru	Right	Hard Right	Peds	App. Total	Left	Thru	Bear Right	Right	Peds	App. Total	Left	Bear Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:00 PM - Peak 1 of 1																															
Peak Hour for Entire Intersection Begins at 04:15 PM																															
04:15 PM	0	0	0	0	0	0	0	107	5	2	0	114	7	17	5	0	0	29	46	5	128	1	0	180	0	6	5	24	0	35	358
04:30 PM	0	0	0	0	0	0	0	99	1	0	0	100	5	8	2	2	0	17	71	3	92	1	0	167	0	5	5	20	0	30	314
04:45 PM	0	0	0	0	0	0	0	95	0	3	0	98	4	21	1	0	0	26	54	6	94	2	0	156	1	2	1	26	0	30	310
05:00 PM	0	0	0	0	0	0	1	104	4	1	0	110	9	23	0	0	0	32	40	1	77	2	0	120	0	5	3	25	0	33	295
Total Volume	0	0	0	0	0	0	1	405	10	6	0	422	25	69	8	2	0	104	211	15	391	6	0	623	1	18	14	95	0	128	1277
% App. Total	0	0	0	0	0		0.2	96	2.4	1.4	0		24	66.3	7.7	1.9	0		33.9	2.4	62.8	1	0		0.8	14.1	10.9	74.2	0		
PHF	.000	.000	.000	.000	.000	.000	.250	.946	.500	.500	.000	.925	.694	.750	.400	.250	.000	.813	.743	.625	.764	.750	.000	.865	.250	.750	.700	.913	.000	.914	.892
Passenger Vehicles	0	0	0	0	0	0	1	396	10	6	0	413	24	66	8	2	0	100	207	15	374	6	0	602	1	18	14	95	0	128	1243
% Passenger Vehicles	0	0	0	0	0	0	100	97.8	100	100	0	97.9	96.0	95.7	100	100	0	96.2	98.1	100	95.7	100	0	96.6	100	100	100	100	0	100	97.3
Heavy Vehicles	0	0	0	0	0	0	0	9	0	0	0	9	1	3	0	0	0	4	4	0	17	0	0	21	0	0	0	0	0	0	34
% Heavy Vehicles	0	0	0	0	0	0	0	2.2	0	0	0	2.1	4.0	4.3	0	0	0	3.8	1.9	0	4.3	0	0	3.4	0	0	0	0	0	0	2.7

McMahon a Bowman Company

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Lower Salford Townshi
Location: Route 113 & Morris Road &
Salfordville Road & Old Skippack Road
Counter: M

File Name : lsalford01w
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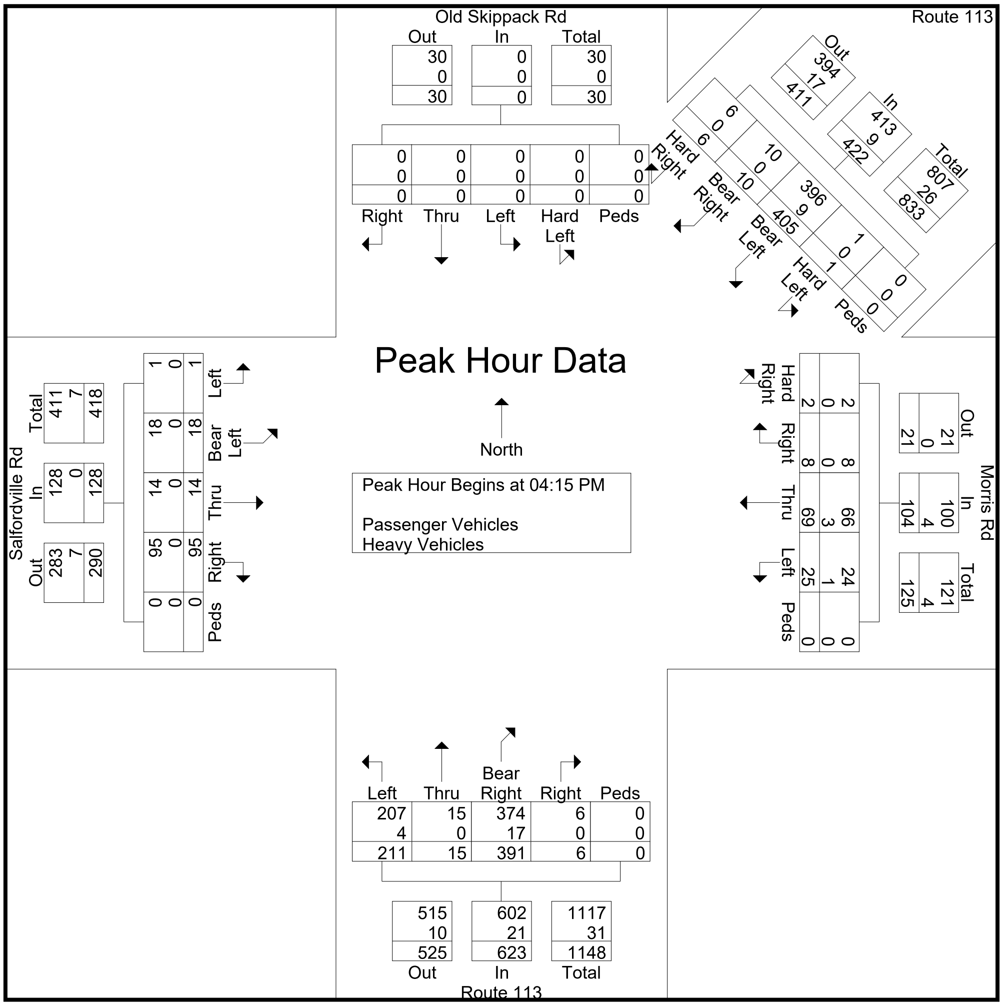

McMahon a Bowman Company

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Lower Salford Townshi
Location: Route 113 & Morris Road &
Salfordville Road & Old Skippack Road
Counter: M

File Name : lsalford01w
Site Code :
Start Date : 11/9/2022
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Groups Printed- Heavy Vehicles

	Old Skippack Rd Southbound					Route 113 Southwestbound					Morris Rd Westbound					Route 113 Northbound					Salfordville Rd Eastbound					
Start Time	Hard Left	Left	Thru	Right	Peds	Hard Left	Bear Left	Bear Right	Hard Right	Peds	Left	Thru	Right	Hard Right	Peds	Left	Thru	Bear Right	Right	Peds	Left	Bear Left	Thru	Right	Peds	Int. Total
07:00 AM	0	0	0	0	0	0	10	1	0	0	0	0	0	0	0	0	0	6	0	0	0	0	2	1	0	20
07:15 AM	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	6	1	0	0	1	0	1	0	14
07:30 AM	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	1	1	10	0	0	0	2	0	2	0	19
07:45 AM	0	0	0	0	0	0	14	0	1	0	0	0	0	0	0	0	0	9	1	0	0	1	0	3	0	29
Total	0	0	0	0	0	0	32	1	1	0	0	0	0	0	0	1	1	31	2	0	0	4	2	7	0	82
08:00 AM	0	0	0	0	0	1	12	1	0	0	0	0	0	0	0	2	0	9	0	0	0	0	1	2	0	28
08:15 AM	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	1	0	13	1	0	0	0	0	0	0	23
08:30 AM	0	0	0	0	0	0	4	1	0	0	0	0	0	0	0	1	0	12	0	0	0	0	1	1	0	20
08:45 AM	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	5	0	7	0	0	0	0	0	3	0	23
Total	0	0	0	0	0	1	32	2	0	0	0	0	0	0	0	9	0	41	1	0	0	0	2	6	0	94
04:00 PM	0	0	0	0	0	0	3	0	0	0	0	1	0	0	0	0	0	13	0	0	1	0	0	0	0	18
04:15 PM	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	2	0	3	0	0	0	0	0	0	0	8
04:30 PM	0	0	0	0	0	0	3	0	0	0	1	0	0	0	0	2	0	7	0	0	0	0	0	0	0	13
04:45 PM	0	0	0	0	0	0	3	0	0	0	0	2	0	0	0	0	0	4	0	0	0	0	0	0	0	9
Total	0	0	0	0	0	0	12	0	0	0	1	3	0	0	0	4	0	27	0	0	1	0	0	0	0	48
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3	0	0	0	0	0	0	0	4
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	4	0	0	0	0	0	1	0	8
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	3
05:45 PM	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	8
Total	0	0	0	0	0	0	4	0	0	0	0	1	0	0	0	4	0	12	0	0	0	0	1	1	0	23
Grand Total	0	0	0	0	0	1	80	3	1	0	1	4	0	0	0	18	1	111	3	0	1	4	5	14	0	247
Apprch %	0	0	0	0	0	1.2	94.1	3.5	1.2	0	20	80	0	0	0	13.5	0.8	83.5	2.3	0	4.2	16.7	20.8	58.3	0	
Total %	0	0	0	0	0	0.4	32.4	1.2	0.4	0	0.4	1.6	0	0	0	7.3	0.4	44.9	1.2	0	0.4	1.6	2	5.7	0	

McMahon a Bowman Company

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Lower Salford Townshi
Location: Route 113 & Morris Road &
Salfordville Road & Old Skippack Road
Counter: M

File Name : lsalford01w
Site Code :
Start Date : 11/9/2022
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Groups Printed- Passenger Vehicles

	Old Skippack Rd Southbound					Route 113 Southwestbound					Morris Rd Westbound					Route 113 Northbound					Salfordville Rd Eastbound					
Start Time	Hard Left	Left	Thru	Right	Peds	Hard Left	Bear Left	Bear Right	Hard Right	Peds	Left	Thru	Right	Hard Right	Peds	Left	Thru	Bear Right	Right	Peds	Left	Bear Left	Thru	Right	Peds	Int. Total
07:00 AM	0	0	0	0	0	0	71	1	0	0	3	2	0	2	0	16	0	75	7	0	0	2	9	52	0	240
07:15 AM	0	0	0	0	0	0	88	1	0	0	0	1	0	3	0	15	0	77	7	0	0	8	7	66	0	273
07:30 AM	0	0	0	0	0	0	91	1	0	0	0	4	0	0	0	6	0	94	5	0	0	1	15	55	0	272
07:45 AM	0	0	0	0	0	0	96	1	0	0	0	0	1	0	0	15	0	87	4	0	0	5	14	63	0	286
Total	0	0	0	0	0	0	346	4	0	0	3	7	1	5	0	52	0	333	23	0	0	16	45	236	0	1071
08:00 AM	0	0	0	0	0	0	85	1	0	0	0	1	0	0	0	11	0	83	4	0	0	3	15	51	0	254
08:15 AM	0	0	0	0	0	0	72	0	0	0	0	3	0	0	0	15	0	88	3	0	0	4	10	32	0	227
08:30 AM	0	0	0	0	0	0	79	0	0	0	0	2	0	0	0	15	0	55	5	0	0	1	10	35	0	202
08:45 AM	0	0	0	0	0	0	72	1	0	0	1	3	0	1	0	16	0	78	1	0	0	7	5	22	0	207
Total	0	0	0	0	0	0	308	2	0	0	1	9	0	1	0	57	0	304	13	0	0	15	40	140	0	890
04:00 PM	1	0	0	0	0	0	91	2	0	0	5	13	0	1	0	37	4	93	3	0	1	0	4	17	0	272
04:15 PM	0	0	0	0	0	0	104	5	2	0	7	17	5	0	0	44	5	125	1	0	0	6	5	24	0	350
04:30 PM	0	0	0	0	0	0	96	1	0	0	4	8	2	2	0	69	3	85	1	0	0	5	5	20	0	301
04:45 PM	0	0	0	0	0	0	92	0	3	0	4	19	1	0	0	54	6	90	2	0	1	2	1	26	0	301
Total	1	0	0	0	0	0	383	8	5	0	20	57	8	3	0	204	18	393	7	0	2	13	15	87	0	1224
05:00 PM	0	0	0	0	0	1	104	4	1	0	9	22	0	0	0	40	1	74	2	0	0	5	3	25	0	291
05:15 PM	0	0	0	0	0	0	103	5	2	0	6	29	4	2	0	37	5	88	0	0	0	0	2	27	0	310
05:30 PM	0	0	0	0	0	0	94	4	5	0	4	16	1	1	0	43	7	95	4	0	0	2	2	19	0	297
05:45 PM	0	0	0	0	0	0	82	5	2	0	2	15	1	0	0	29	8	108	0	0	0	5	3	16	0	276
Total	0	0	0	0	0	1	383	18	10	0	21	82	6	3	0	149	21	365	6	0	0	12	10	87	0	1174
Grand Total	1	0	0	0	0	1	1420	32	15	0	45	155	15	12	0	462	39	1395	49	0	2	56	110	550	0	4359
Apprch %	100	0	0	0	0	0.1	96.7	2.2	1	0	19.8	68.3	6.6	5.3	0	23.8	2	71.7	2.5	0	0.3	7.8	15.3	76.6	0	
Total %	0	0	0	0	0	0	32.6	0.7	0.3	0	1	3.6	0.3	0.3	0	10.6	0.9	32	1.1	0	0	1.3	2.5	12.6	0	

McMahon a Bowman Company

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Lower Salford Townshi
Location: Route 113 & Morris Road &
Salfordville Road & Old Skippack Road
Counter: M

File Name : lsalford01w
Site Code :
Start Date : 11/9/2022
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Groups Printed- Pedestrians

	Old Skippack Rd Southbound					Route 113 Southwestbound					Morris Rd Westbound					Route 113 Northbound					Salfordville Rd Eastbound					
Start Time	Hard Left	Left	Thru	Right	Peds	Hard Left	Bear Left	Bear Right	Hard Right	Peds	Left	Thru	Right	Hard Right	Peds	Left	Thru	Bear Right	Right	Peds	Left	Bear Left	Thru	Right	Peds	Int. Total
04:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 822255.11 Lower Salford - Rt 113 & Cross
Site Code:
Start Date: 11/09/2022

Turning Movement Data

	Route 113						Route 113					Eastbound Approach						
	Southbound						Northbound					Eastbound						
Start Time	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Left	Right	Right on Red	U-Turn	Peds	App. Total	Int. Total
7:00 AM	107	42	0	0	0	149	0	53	0	0	53	47	1	0	0	0	48	250
7:15 AM	129	29	0	0	0	158	0	58	0	0	58	52	0	0	0	0	52	268
7:30 AM	119	44	0	0	0	163	0	68	0	0	68	50	0	0	0	0	50	281
7:45 AM	134	29	0	0	0	163	3	62	0	0	65	54	0	0	0	0	54	282
Hourly Total	489	144	0	0	0	633	3	241	0	0	244	203	1	0	0	0	204	1081
8:00 AM	121	22	0	0	0	143	0	52	0	0	52	54	0	0	0	0	54	249
8:15 AM	89	31	0	0	0	120	1	66	0	0	67	49	1	0	0	0	50	237
8:30 AM	90	30	0	0	0	120	1	49	0	0	50	41	0	0	0	0	41	211
8:45 AM	80	28	0	0	0	108	1	66	0	0	67	39	0	0	0	0	39	214
Hourly Total	380	111	0	0	0	491	3	233	0	0	236	183	1	0	0	0	184	911
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	63	46	1	0	0	110	0	120	0	0	120	34	0	0	0	0	34	264
4:15 PM	68	53	2	0	0	123	0	133	0	0	133	39	0	0	0	0	39	295
4:30 PM	70	49	0	0	0	119	1	124	0	0	125	39	1	0	0	0	40	284
4:45 PM	85	53	2	0	0	140	1	109	0	0	110	43	0	0	0	0	43	293
Hourly Total	286	201	5	0	0	492	2	486	0	0	488	155	1	0	0	0	156	1136
5:00 PM	74	50	5	0	0	129	1	89	0	0	90	44	1	0	0	0	45	264
5:15 PM	81	50	1	0	0	132	0	95	0	0	95	41	0	0	0	0	41	268
5:30 PM	69	52	0	0	0	121	0	105	0	0	105	36	0	0	0	0	36	262
5:45 PM	60	44	0	0	0	104	1	104	0	0	105	41	0	0	0	0	41	250
Hourly Total	284	196	6	0	0	486	2	393	0	0	395	162	1	0	0	0	163	1044
6:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	1439	653	11	0	0	2103	10	1353	0	0	1363	703	4	0	0	0	707	4173
Approach %	68.4	31.1	0.5	0.0	-	-	0.7	99.3	0.0	-	-	99.4	0.6	0.0	0.0	-	-	-
Total %	34.5	15.6	0.3	0.0	-	50.4	0.2	32.4	0.0	-	32.7	16.8	0.1	0.0	0.0	-	16.9	-
Lights	1370	631	11	0	-	2012	9	1278	0	-	1287	667	4	0	0	-	671	3970
% Lights	95.2	96.6	100.0	-	-	95.7	90.0	94.5	-	-	94.4	94.9	100.0	-	-	-	94.9	95.1
Other Vehicles	69	22	0	0	-	91	1	75	0	-	76	36	0	0	0	-	36	203
% Other Vehicles	4.8	3.4	0.0	-	-	4.3	10.0	5.5	-	-	5.6	5.1	0.0	-	-	-	5.1	4.9
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

McMahon a Bowman Company
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Count Name: 822255.11 Lower Salford - Rt 113 & Cross
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Route 113 [SB]		
Out	In	Total
1945	2012	3957
111	91	202
0	0	0
2056	**2103**	**4159**

R	T	U	P
642	1370	0	0
22	69	0	0
0	0	0	0
664	**1439**	**0**	**0**

Eastbound Approach [EB]		
Out	In	Total
651	671	1322
23	36	59
0	0	0
674	**707**	**1381**

U	L	R	P
0	667	4	0
0	36	0	0
0	0	0	0
0	**703**	**4**	**0**

11/09/2022 7:00 AM
Ending At
11/09/2022 6:15 PM

Lights
Other Vehicles
Pedestrians

U	L	T	P
0	9	1278	0
0	1	75	0
0	0	0	0
0	**10**	**1353**	**0**

Out	In	Total
1374	1287	2661
69	76	145
0	0	0
1443	**1363**	**2806**
Route 113 [NB]		

Turning Movement Data Plot

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Count Name: 822255.11 Lower Salford - Rt 113 & Cross
Site Code:
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Turning Movement Peak Hour Data (7:00 AM)

	Route 113 Southbound						Route 113 Northbound					Eastbound Approach Eastbound						
Start Time	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Left	Right	Right on Red	U-Turn	Peds	App. Total	Int. Total
7:00 AM	107	42	0	0	0	149	0	53	0	0	53	47	1	0	0	0	48	250
7:15 AM	129	29	0	0	0	158	0	58	0	0	58	52	0	0	0	0	52	268
7:30 AM	119	44	0	0	0	163	0	68	0	0	68	50	0	0	0	0	50	281
7:45 AM	134	29	0	0	0	163	3	62	0	0	65	54	0	0	0	0	54	282
Total	489	144	0	0	0	633	3	241	0	0	244	203	1	0	0	0	204	1081
Approach %	77.3	22.7	0.0	0.0	-	-	1.2	98.8	0.0	-	-	99.5	0.5	0.0	0.0	-	-	-
Total %	45.2	13.3	0.0	0.0	-	58.6	0.3	22.3	0.0	-	22.6	18.8	0.1	0.0	0.0	-	18.9	-
PHF	0.912	0.818	0.000	0.000	-	0.971	0.250	0.886	0.000	-	0.897	0.940	0.250	0.000	0.000	-	0.944	0.958
Lights	460	136	0	0	-	596	2	218	0	-	220	194	1	0	0	-	195	1011
% Lights	94.1	94.4	-	-	-	94.2	66.7	90.5	-	-	90.2	95.6	100.0	-	-	-	95.6	93.5
Other Vehicles	29	8	0	0	-	37	1	23	0	-	24	9	0	0	0	-	9	70
% Other Vehicles	5.9	5.6	-	-	-	5.8	33.3	9.5	-	-	9.8	4.4	0.0	-	-	-	4.4	6.5
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Peak Hour Data

11/09/2022 7:00 AM
Ending At
11/09/2022 8:00 AM

Lights
Other Vehicles
Pedestrians

Route 113 [SB]

Out	In	Total
412	596	1008
32	37	69
0	0	0
444	**633**	**1077**

R	T	U	P
136	460	0	0
8	29	0	0
0	0	0	0
144	**489**	**0**	**0**

Eastbound Approach [EB]

Out	In	Total
138	195	333
9	9	18
0	0	0
147	**204**	**351**

U	L	R	P
0	194	1	0
0	9	0	0
0	0	0	0
0	**203**	**1**	**0**

Route 113 [NB]

U	L	T	P
0	2	218	0
0	1	23	0
0	0	0	0
0	**3**	**241**	**0**

Out	In	Total
461	220	681
29	24	53
0	0	0
490	**244**	**734**

Turning Movement Peak Hour Data Plot (7:00 AM)

Turning Movement Peak Hour Data (4:00 PM)

	Route 113 Southbound						Route 113 Northbound					Eastbound Approach Eastbound						
Start Time	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Left	Right	Right on Red	U-Turn	Peds	App. Total	Int. Total
4:00 PM	63	46	1	0	0	110	0	120	0	0	120	34	0	0	0	0	34	264
4:15 PM	68	53	2	0	0	123	0	133	0	0	133	39	0	0	0	0	39	295
4:30 PM	70	49	0	0	0	119	1	124	0	0	125	39	1	0	0	0	40	284
4:45 PM	85	53	2	0	0	140	1	109	0	0	110	43	0	0	0	0	43	293
Total	286	201	5	0	0	492	2	486	0	0	488	155	1	0	0	0	156	1136
Approach %	58.1	40.9	1.0	0.0	-	-	0.4	99.6	0.0	-	-	99.4	0.6	0.0	0.0	-	-	-
Total %	25.2	17.7	0.4	0.0	-	43.3	0.2	42.8	0.0	-	43.0	13.6	0.1	0.0	0.0	-	13.7	-
PHF	0.841	0.948	0.625	0.000	-	0.879	0.500	0.914	0.000	-	0.917	0.901	0.250	0.000	0.000	-	0.907	0.963
Lights	280	198	5	0	-	483	2	473	0	-	475	146	1	0	0	-	147	1105
% Lights	97.9	98.5	100.0	-	-	98.2	100.0	97.3	-	-	97.3	94.2	100.0	-	-	-	94.2	97.3
Other Vehicles	6	3	0	0	-	9	0	13	0	-	13	9	0	0	0	-	9	31
% Other Vehicles	2.1	1.5	0.0	-	-	1.8	0.0	2.7	-	-	2.7	5.8	0.0	-	-	-	5.8	2.7
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

McMahon a Bowman company

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Count Name: 822255.11 Lower Salford - Rt 113 & Cross
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Peak Hour Data

11/09/2022 4:00 PM
Ending At
11/09/2022 5:00 PM

Lights
Other Vehicles
Pedestrians

Route 113 [SB]

Out	In	Total
619	483	1102
22	9	31
0	0	0
641	**492**	**1133**

R	T	U	P
203	280	0	0
3	6	0	0
0	0	0	0
206	**286**	**0**	**0**

Eastbound Approach [EB]

Out	In	Total
205	147	352
3	9	12
0	0	0
208	**156**	**364**

U	L	R	P
0	146	1	0
0	9	0	0
0	0	0	0
0	**155**	**1**	**0**

U	L	T	P
0	2	473	0
0	0	13	0
0	0	0	0
0	**2**	**486**	**0**

Out	In	Total
281	475	756
6	13	19
0	0	0
287	**488**	**775**

Route 113 [NB]

Turning Movement Peak Hour Data Plot (4:00 PM)

McMahon a Bowman Company
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215-283-9444

Count Name: 822255.11 Lower Salford - Rt 113 & Whittaker
Site Code:
Start Date: 11/09/2022
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Turning Movement Data

Start Time	Route 113 Southbound					Whittaker Way Westbound					Route 113 Northbound					
	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:00 AM	0	112	0	0	112	2	0	0	0	2	55	0	0	0	55	169
7:15 AM	0	133	0	0	133	1	2	0	0	3	55	0	0	0	55	191
7:30 AM	1	123	0	0	124	0	0	0	0	0	70	0	0	0	70	194
7:45 AM	0	137	0	0	137	3	0	0	0	3	70	0	0	0	70	210
Hourly Total	1	505	0	0	506	6	2	0	0	8	250	0	0	0	250	764
8:00 AM	0	126	0	0	126	0	0	0	0	0	47	0	0	0	47	173
8:15 AM	0	91	0	0	91	0	1	1	0	2	61	0	0	0	61	154
8:30 AM	2	87	0	0	89	0	0	0	0	0	49	0	0	0	49	138
8:45 AM	0	82	0	0	82	2	0	0	0	2	64	1	0	0	65	149
Hourly Total	2	386	0	0	388	2	1	1	0	4	221	1	0	0	222	614
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	1	71	0	0	72	0	1	0	0	1	131	1	0	0	132	205
4:15 PM	1	76	0	0	77	1	1	0	0	2	117	1	0	0	118	197
4:30 PM	1	68	0	0	69	0	0	0	0	0	135	0	0	0	135	204
4:45 PM	1	84	0	0	85	0	2	0	0	2	115	1	0	0	116	203
Hourly Total	4	299	0	0	303	1	4	0	0	5	498	3	0	0	501	809
5:00 PM	0	77	0	0	77	0	0	0	0	0	133	1	1	0	135	212
5:15 PM	0	84	0	0	84	2	0	0	0	2	108	2	1	0	111	197
5:30 PM	1	62	0	0	63	1	4	0	0	5	90	4	0	0	94	162
5:45 PM	1	67	0	0	68	0	0	0	0	0	83	0	0	0	83	151
Hourly Total	2	290	0	0	292	3	4	0	0	7	414	7	2	0	423	722
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	9	1480	0	0	1489	12	11	1	0	24	1383	11	2	0	1396	2909
Approach %	0.6	99.4	0.0	-	-	50.0	45.8	4.2	-	-	99.1	0.8	0.1	-	-	-
Total %	0.3	50.9	0.0	-	51.2	0.4	0.4	0.0	-	0.8	47.5	0.4	0.1	-	48.0	-
Lights	9	1412	0	-	1421	12	11	1	-	24	1311	11	2	-	1324	2769
% Lights	100.0	95.4	-	-	95.4	100.0	100.0	100.0	-	100.0	94.8	100.0	100.0	-	94.8	95.2
Other Vehicles	0	68	0	-	68	0	0	0	-	0	72	0	0	-	72	140
% Other Vehicles	0.0	4.6	-	-	4.6	0.0	0.0	0.0	-	0.0	5.2	0.0	0.0	-	5.2	4.8
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

McMahon a Bowman Company
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Count Name: 822255.11 Lower Salford - Rt 113 & Whittaker
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Route 113 [SB]

Out	In	Total
1322	1421	2743
72	68	140
0	0	0
1394	**1489**	**2883**

T	L	U	P
1412	9	0	0
68	0	0	0
0	0	0	0
1480	**9**	**0**	**0**

Whittaker Way [WB]

	Out	In	Total
	21	24	45
	0	0	0
	0	0	0
	21	**24**	**45**

R	L	U	P
11	12	1	0
0	0	0	0
0	0	0	0
11	**12**	**1**	**0**

11/09/2022 7:00 AM
Ending At
11/09/2022 6:15 PM

Lights
Other Vehicles
Pedestrians

U	T	R	P
2	1311	11	0
0	72	0	0
0	0	0	0
2	**1383**	**11**	**0**

Out	In	Total
1426	1324	2750
68	72	140
0	0	0
1494	**1396**	**2890**

Route 113 [NB]

Turning Movement Data Plot

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215-283-9444

Count Name: 822255.11 Lower Salford - Rt 113 & Whittaker
Site Code:
Start Date: 11/09/2022

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Route 113 Southbound					Whittaker Way Westbound					Route 113 Northbound					
	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:15 AM	0	133	0	0	133	1	2	0	0	3	55	0	0	0	55	191
7:30 AM	1	123	0	0	124	0	0	0	0	0	70	0	0	0	70	194
7:45 AM	0	137	0	0	137	3	0	0	0	3	70	0	0	0	70	210
8:00 AM	0	126	0	0	126	0	0	0	0	0	47	0	0	0	47	173
Total	1	519	0	0	520	4	2	0	0	6	242	0	0	0	242	768
Approach %	0.2	99.8	0.0	-	-	66.7	33.3	0.0	-	-	100.0	0.0	0.0	-	-	-
Total %	0.1	67.6	0.0	-	67.7	0.5	0.3	0.0	-	0.8	31.5	0.0	0.0	-	31.5	-
PHF	0.250	0.947	0.000	-	0.949	0.333	0.250	0.000	-	0.500	0.864	0.000	0.000	-	0.864	0.914
Lights	1	489	0	-	490	4	2	0	-	6	214	0	0	-	214	710
% Lights	100.0	94.2	-	-	94.2	100.0	100.0	-	-	100.0	88.4	-	-	-	88.4	92.4
Other Vehicles	0	30	0	-	30	0	0	0	-	0	28	0	0	-	28	58
% Other Vehicles	0.0	5.8	-	-	5.8	0.0	0.0	-	-	0.0	11.6	-	-	-	11.6	7.6
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: 822255.11 Lower Salford - Rt 113 & Whittaker
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Peak Hour Data

11/09/2022 7:15 AM
Ending At
11/09/2022 8:15 AM

Lights
Other Vehicles
Pedestrians

Route 113 [SB]

Out	In	Total
216	490	706
28	30	58
0	0	0
244	**520**	**764**

T	L	U	P
489	1	0	0
30	0	0	0
0	0	0	0
519	**1**	**0**	**0**

Whittaker Way [WB]

R	L	U	P
2	4	0	0
0	0	0	0
0	0	0	0
2	**4**	**0**	**0**

Out	In	Total
1	6	7
0	0	0
0	0	0
1	**6**	**7**

Route 113 [NB]

U	T	R	P
0	214	0	0
0	28	0	0
0	0	0	0
0	**242**	**0**	**0**

Out	In	Total
493	214	707
30	28	58
0	0	0
523	**242**	**765**

Turning Movement Peak Hour Data Plot (7:15 AM)

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Count Name: 822255.11 Lower Salford - Rt 113 & Whittaker
Site Code:
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Turning Movement Peak Hour Data (4:15 PM)

Start Time	Route 113 Southbound					Whittaker Way Westbound					Route 113 Northbound					
	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
4:15 PM	1	76	0	0	77	1	1	0	0	2	117	1	0	0	118	197
4:30 PM	1	68	0	0	69	0	0	0	0	0	135	0	0	0	135	204
4:45 PM	1	84	0	0	85	0	2	0	0	2	115	1	0	0	116	203
5:00 PM	0	77	0	0	77	0	0	0	0	0	133	1	1	0	135	212
Total	3	305	0	0	308	1	3	0	0	4	500	3	1	0	504	816
Approach %	1.0	99.0	0.0	-	-	25.0	75.0	0.0	-	-	99.2	0.6	0.2	-	-	-
Total %	0.4	37.4	0.0	-	37.7	0.1	0.4	0.0	-	0.5	61.3	0.4	0.1	-	61.8	-
PHF	0.750	0.908	0.000	-	0.906	0.250	0.375	0.000	-	0.500	0.926	0.750	0.250	-	0.933	0.962
Lights	3	299	0	-	302	1	3	0	-	4	492	3	1	-	496	802
% Lights	100.0	98.0	-	-	98.1	100.0	100.0	-	-	100.0	98.4	100.0	100.0	-	98.4	98.3
Other Vehicles	0	6	0	-	6	0	0	0	-	0	8	0	0	-	8	14
% Other Vehicles	0.0	2.0	-	-	1.9	0.0	0.0	-	-	0.0	1.6	0.0	0.0	-	1.6	1.7
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 822255.11 Lower Salford - Rt 113 & Whittaker
Site Code:
Start Date: 11/09/2022

Peak Hour Data

11/09/2022 4:15 PM
Ending At
11/09/2022 5:15 PM

Lights
Other Vehicles
Pedestrians

Route 113 [SB]

Out	In	Total
495	302	797
8	6	14
0	0	0
503	**308**	**811**

T	L	U	P
299	3	0	0
6	0	0	0
0	0	0	0
305	**3**	**0**	**0**

Whittaker Way [WB]

Out	In	Total
6	4	10
0	0	0
0	0	0
6	**4**	**10**

R	L	U	P
3	1	0	0
0	0	0	0
0	0	0	0
3	**1**	**0**	**0**

U	T	R	P
1	492	3	0
0	8	0	0
0	0	0	0
1	**500**	**3**	**0**

Out	In	Total
301	496	797
6	8	14
0	0	0
307	**504**	**811**

Route 113 [NB]

Turning Movement Peak Hour Data Plot (4:15 PM)

Existing Volume Figures and Balancing Notes

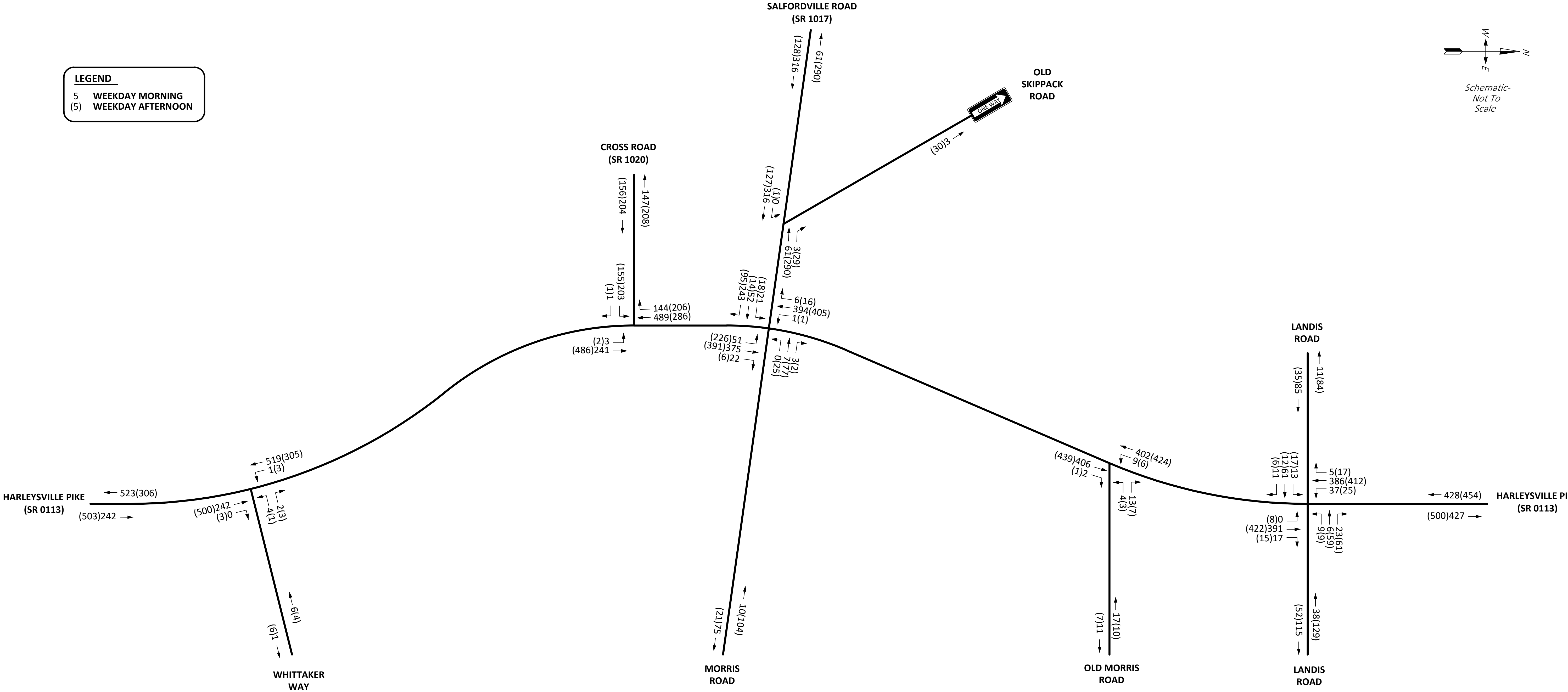

FIGURE A

2022 Unbalanced Peak Hour Traffic Volumes

WALKABLE LEDERACH

LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

Q:\PA-FTWA-MC\MCM\eng\LOWERSA1\822255_TCDI Walkable Lederach\Traffic\2-TrafficEval\7-Graphics\Figure AB.dwg

LEGEND

5 WEEKDAY MORNING
(5) WEEKDAY AFTERNOON

NOTES

VOLUMES BALANCED TO ZERO ALONG SR 0113 BETWEEN CROSS ROAD AND SALFORDVILLE ROAD
2. VOLUMES BALANCED TO ZERO ALONG SALFORDVILLE ROAD BETWEEN SR 0113 AND OLD SKIPPACK ROAD.

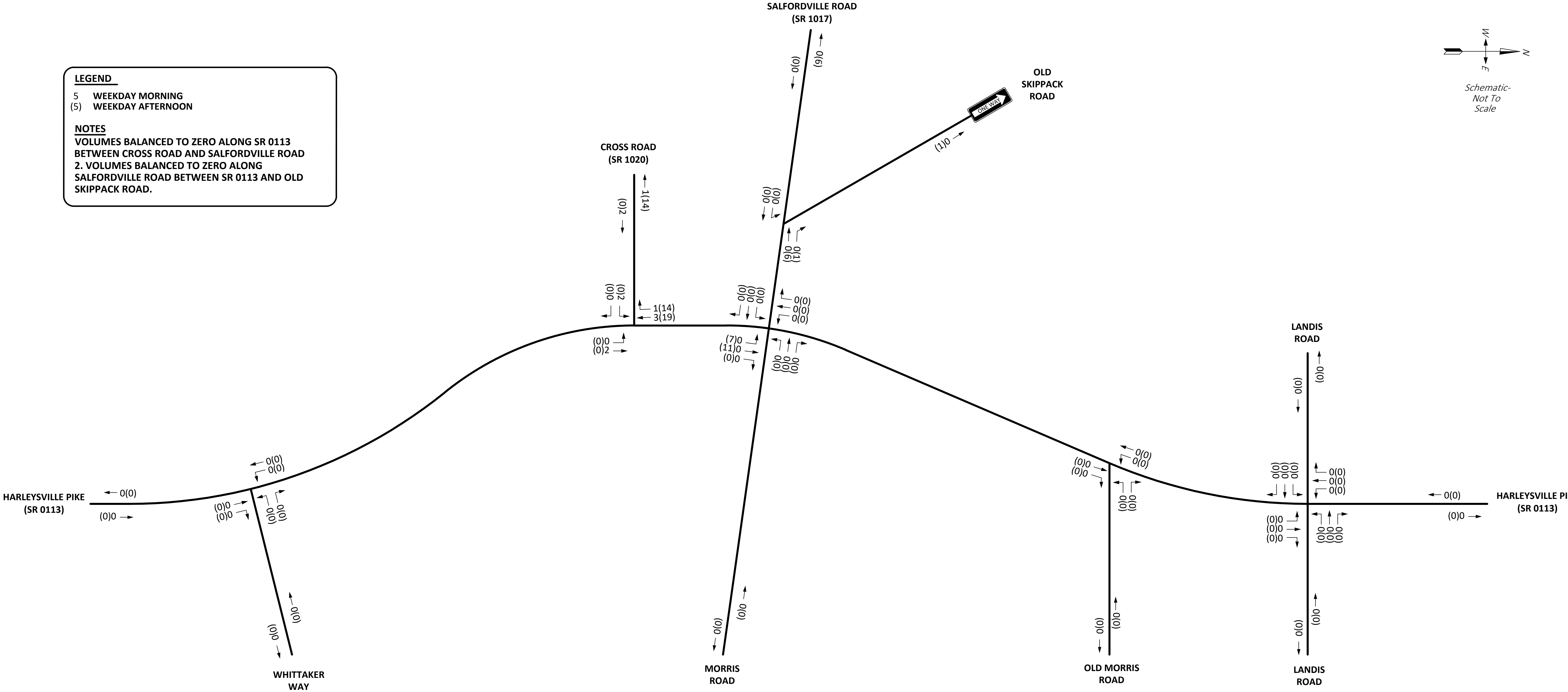

FIGURE B

Balancing Notes and Adjustments

WALKABLE LEDERACH

LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PA

McMAHON a Bowman company

Q:\PA-FTWA-MC\MCM\eng\LOWERSA1\822255_TCDI Walkable Lederach\Traffic\2-TrafficEval\7-Graphics\Figure AB.dwg

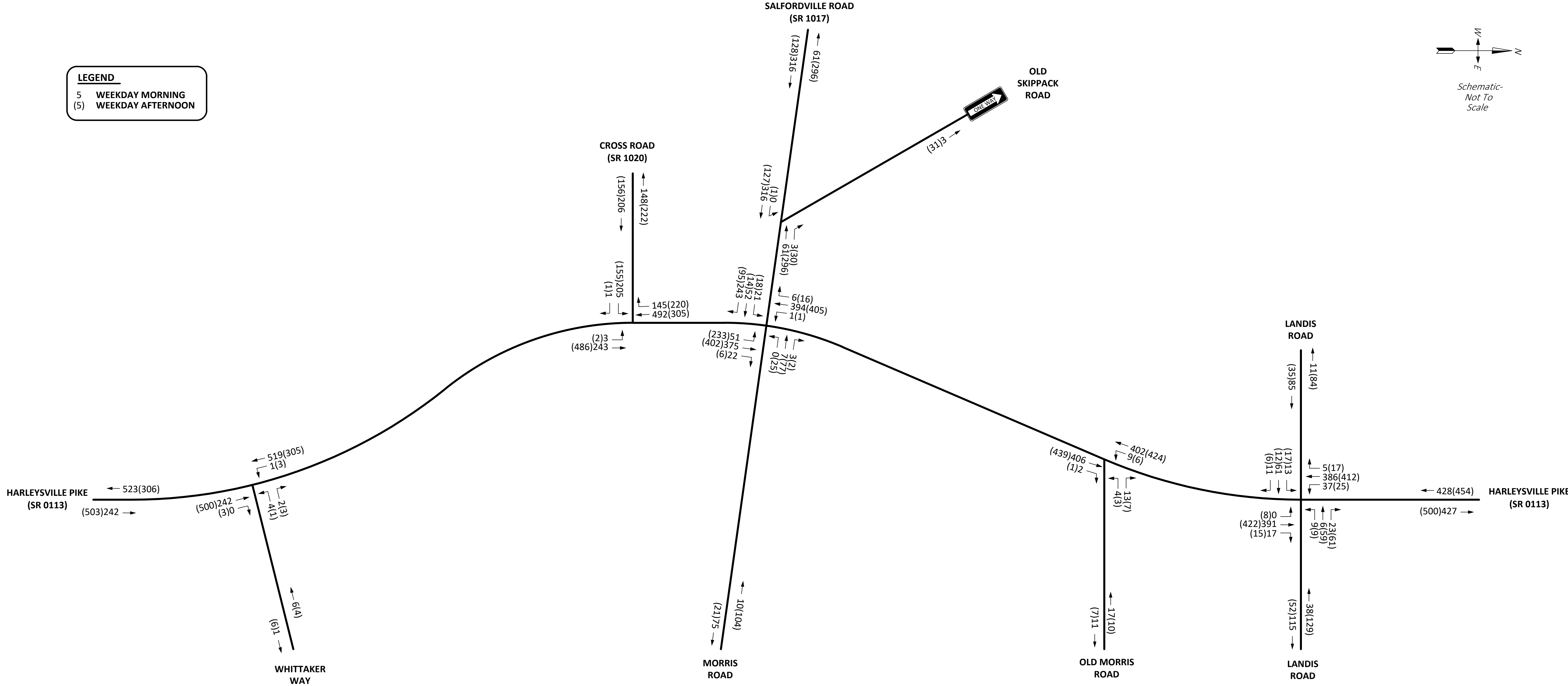

FIGURE C

2022 Existing Peak Hour Traffic Volumes

WALKABLE LEDERACH

LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PA

McMAHON a Bowman company

Q:\PA-FTWA-MC\MCM\eng\LOWERSA1\822255_TCDI Walkable Lederach\Traffic\2-TrafficEval\7-Graphics\Figure 2A.dwg

Attachment 4

Regional and Local Traffic Growth

425 Commerce Drive, Suite 200, Fort Washington, PA 19034
P: 215.283.9444
mcmahonassociates.com | bowman.com

REGIONAL GROWTH

Growth Factors for August 2022 to July 2023				
County	Urban Interstate	Rural Interstate	Urban Non-Interstate	Rural Non-Interstate
ADAMS	*	*	0.50	0.60
ALLEGHENY	0.98	*	0.00	0.43
ARMSTRONG	0.80	*	0.00	0.37
BEAVER	0.64	2.05	0.00	0.30
BEDFORD	*	2.20	0.00	0.39
BERKS	1.34	2.53	0.32	0.58
BLAIR	0.86	2.34	0.00	0.40
BRADFORD	1.06	*	0.00	0.48
BUCKS	1.35	2.63	0.22	0.58
BUTLER	1.66	2.88	0.29	0.71
CAMBRIA	0.35	*	0.00	0.19
CAMERON	*	*	*	0.12
CARBON	1.42	2.68	0.28	0.60
CENTRE	1.79	2.75	0.72	0.74
CHESTER	1.77	2.92	0.54	0.77
CLARION	0.79	2.23	0.00	0.37
CLEARFIELD	0.61	1.94	0.00	0.31
CLINTON	1.10	2.36	0.02	0.48
COLUMBIA	1.10	2.32	0.06	0.48
CRAWFORD	0.74	2.12	0.00	0.36
CUMBERLAND	1.63	2.79	0.59	0.69
DAUPHIN	1.54	*	0.35	0.66
DELAWARE	1.27	*	0.00	*
ELK	*	*	0.00	0.30
ERIE	0.96	2.31	0.00	0.43
FAYETTE	0.86	*	0.00	0.39
FOREST	*	*	*	0.96
FRANKLIN	1.71	2.81	0.73	0.72
FULTON	*	2.33	*	0.50
GREENE	0.73	2.28	0.00	0.36
HUNTINGDON	*	2.49	0.00	0.49
INDIANA	0.94	*	0.00	0.44
JEFFERSON	*	2.32	0.00	0.46
JUNIATA	*	*	*	0.53
LACKAWANNA	0.99	2.36	0.00	0.44
LANCASTER	1.66	2.84	0.60	0.70
LAWRENCE	0.69	2.18	0.00	0.33
LEBANON	*	2.55	0.48	0.62
LEHIGH	1.75	3.09	0.53	0.75
LUZERNE	1.04	2.41	0.00	0.47
LYCOMING	0.99	2.37	0.00	0.44
MCKEAN	0.60	*	0.00	0.30
MERCER	0.92	2.52	0.00	0.43
MIFFLIN	1.17	*	0.00	0.51
MONROE	1.77	2.88	0.79	0.75
MONTGOMERY	1.29	*	0.27	0.55
MONTOUR	1.30	2.68	0.00	0.57
NORTHAMPTON	1.80	3.16	0.47	0.78
NORTHUMBERLAND	1.00	2.28	0.00	0.43
PERRY	*	*	0.24	0.54
PHILADELPHIA	1.18	*	0.05	*
PIKE	1.72	2.72	0.86	0.73
POTTER	*	*	*	0.35
SCHUYLKILL	1.00	2.45	0.00	0.45
SNYDER	1.23	*	0.21	0.54
SOMERSET	0.60	2.06	0.00	0.34
SULLIVAN	*	*	*	0.37
SUSQUEHANNA	1.09	2.43	0.00	0.47
TIOGA	*	*	*	0.42
UNION	1.54	2.68	0.44	0.63
VENANGO	*	1.91	0.00	0.27
WARREN	*	*	0.00	0.35
WASHINGTON	1.22	2.74	0.00	0.55
WAYNE	*	2.53	0.31	0.58
WESTMORELAND	0.89	2.18	0.00	0.40
WYOMING	*	*	0.00	0.44
YORK	1.57	2.89	0.47	0.69

* = Functional Class Doesn't Exist in County

Questions? Please contact Andrew O'Neill at the Bureau of Planning and Research, 717-346-3250 or andoneill@pa.gov

NOTE: The projected growth factors are derived using historical VMT (Vehicle Miles Traveled) data (1994 to 2021), as well as Woods and Poole demographic and economic data. The factors should be compounded when calculating future values. The factors should not be used to project traffic beyond a 20-year period. Please be aware that these factors are estimates, and unforeseen events (opening of shopping centers, fast food franchises, gas stations, etc) could cause growth to change over time.

pennsylvania
DEPARTMENT OF TRANSPORTATION

Growth Factors for September 2023 to July 2024				
County	**Urban Interstate**	**Rural Interstate**	**Urban Non-Interstate**	**Rural Non-Interstate**
ADAMS	*	*	0.45	0.59
ALLEGHENY	0.94	*	0.00	0.43
ARMSTRONG	0.77	*	0.00	0.36
BEAVER	0.61	2.05	0.00	0.29
BEDFORD	*	2.20	0.00	0.38
BERKS	1.31	2.54	0.27	0.57
BLAIR	0.82	2.34	0.00	0.39
BRADFORD	1.03	*	0.00	0.47
BUCKS	1.31	2.63	0.16	0.57
BUTLER	1.62	2.89	0.23	0.70
CAMBRIA	0.31	*	0.00	0.18
CAMERON	*	*	0.00	0.11
CARBON	1.38	2.68	0.23	0.59
CENTRE	1.74	2.76	0.66	0.72
CHESTER	1.72	2.92	0.48	0.76
CLARION	0.76	2.24	0.00	0.36
CLEARFIELD	0.57	1.94	0.00	0.30
CLINTON	1.07	2.37	0.00	0.48
COLUMBIA	1.07	2.33	0.02	0.48
CRAWFORD	0.70	2.12	0.00	0.35
CUMBERLAND	1.59	2.80	0.54	0.68
DAUPHIN	1.49	*	0.29	0.65
DELAWARE	1.23	*	0.00	0.56
ELK	*	*	0.00	0.29
ERIE	0.92	2.31	0.00	0.42
FAYETTE	0.82	*	0.00	0.38
FOREST	*	*	*	0.96
FRANKLIN	1.67	2.82	0.69	0.71
FULTON	*	2.34	*	0.49
GREENE	0.70	2.29	0.00	0.35
HUNTINGDON	*	2.50	0.00	0.49
INDIANA	0.91	*	0.00	0.43
JEFFERSON	*	2.33	0.00	0.45
JUNIATA	*	*	*	0.53
LACKAWANNA	0.95	2.36	0.00	0.43
LANCASTER	1.62	2.85	0.54	0.69
LAWRENCE	0.65	2.18	0.00	0.32
LEBANON	*	2.56	0.42	0.61
LEHIGH	1.71	3.10	0.49	0.74
LUZERNE	1.00	2.42	0.00	0.46
LYCOMING	0.96	2.37	0.00	0.43
MCKEAN	0.57	*	0.00	0.29
MERCER	0.89	2.53	0.00	0.43
MIFFLIN	1.13	*	0.00	0.50
MONROE	1.73	2.89	0.74	0.75
MONTGOMERY	1.24	*	0.21	0.54
MONTOUR	1.27	2.69	0.00	0.57
NORTHAMPTON	1.76	3.18	0.43	0.77
NORTHUMBERLAND	0.97	2.29	0.00	0.42
PERRY	*	*	0.20	0.53
PHILADELPHIA	1.14	*	*	*
PIKE	1.67	2.72	0.81	0.72
POTTER	*	*	*	0.34
SCHUYLKILL	0.98	2.46	0.00	0.44
SNYDER	1.20	*	0.17	0.53
SOMERSET	0.56	2.06	0.00	0.33
SULLIVAN	*	*	*	0.36
SUSQUEHANNA	1.06	2.43	0.00	0.46
TIOGA	*	*	0.00	0.41
UNION	1.50	2.69	0.39	0.63
VENANGO	*	1.92	0.00	0.26
WARREN	*	*	0.00	0.34
WASHINGTON	1.18	2.74	0.00	0.54
WAYNE	*	2.54	0.28	0.58
WESTMORELAND	0.85	2.18	0.00	0.39
WYOMING	*	*	0.00	0.43
YORK	1.53	2.90	0.41	0.69

* = Functional Class Doesn't Exist in County

Questions? Please contact Andrew O'Neill at the Bureau of Planning and Research, 717-346-3250 or andoneill@pa.gov

NOTE: The projected growth factors are derived using historical VMT (Vehicle Miles Traveled) data (1994 to 2022), as well as Woods and Poole demographic and economic data. The factors should be compounded when calculating future values. The factors should not be used to project traffic beyond a 20-year period. Please be aware that these factors are estimates, and unforeseen events (opening of shopping centers, fast food franchises, gas stations, etc) could cause growth to change over time.

pennsylvania
DEPARTMENT OF TRANSPORTATION

LOCAL GROWTH

OTHER DEVELOPMENT TRIP GENERATION

ITE LAND USE CODE	LAND USE NAME					SIZE	TRIP TYPE	DAILY TOTAL	Weekday 7 AM - 9 AM IN	OUT	TOTAL	Weekday 4 PM - 6 PM IN	OUT	TOTAL	INCLUDE PASS-BY?
220	Harleysville Homes					9	Total	133	6	20	26	15	9	24	
	Daily	TP1	TP2	TP3	TP4	units	Pass-by	0	0	0	0	0	0	0	NO
Pass-by %	0%	0%	0%	0%	0%		New	133	6	20	26	15	9	24	
220	Morris Homes					20	Total	204	7	22	29	18	11	29	
	Daily	TP1	TP2	TP3	TP4	units	Pass-by	0	0	0	0	0	0	0	NO
Pass-by %	0%	0%	0%	0%	0%		New	204	7	22	29	18	11	29	

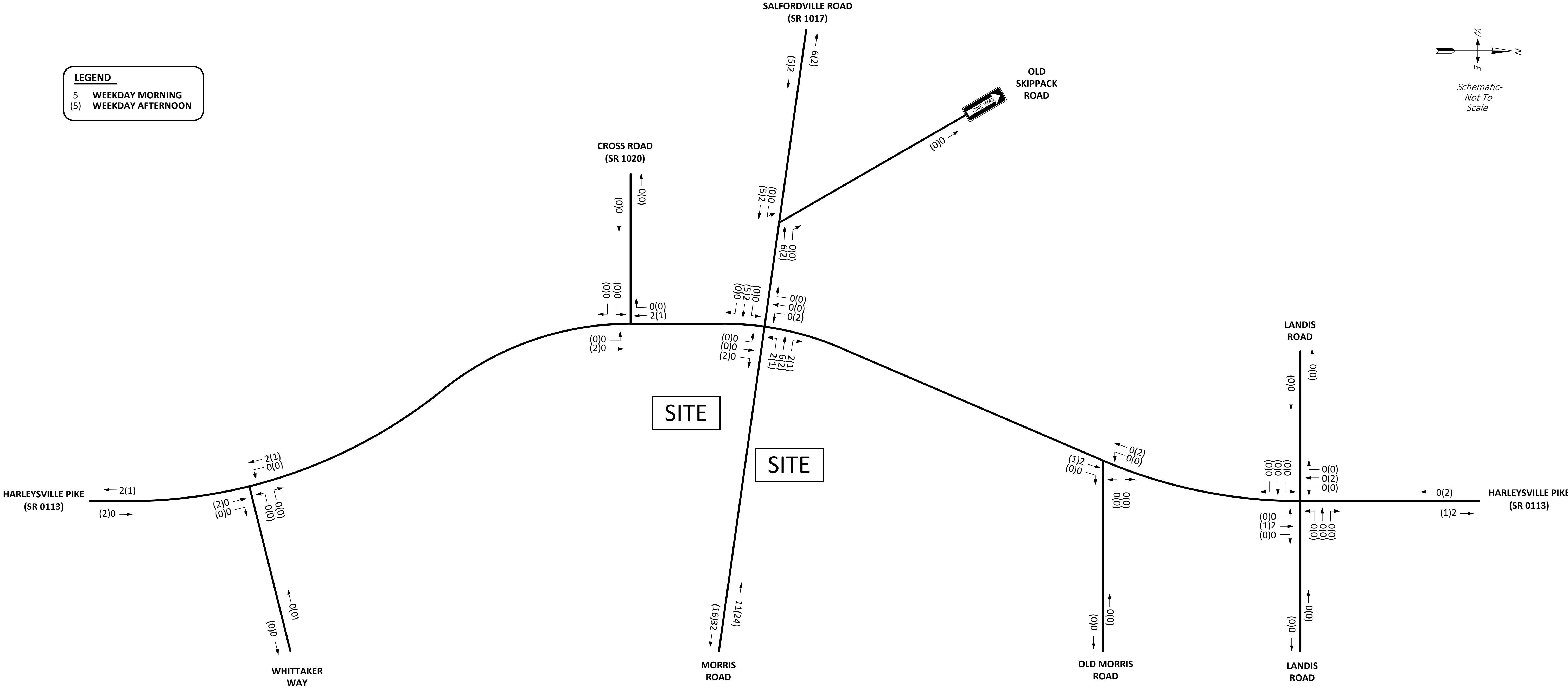

FIGURE D

Local Growth - Combined Trips

WALKABLE LEDERACH

LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

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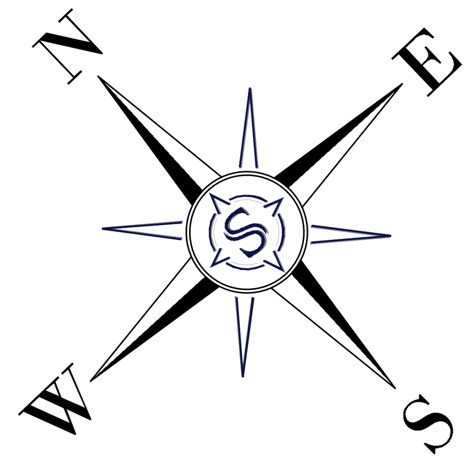
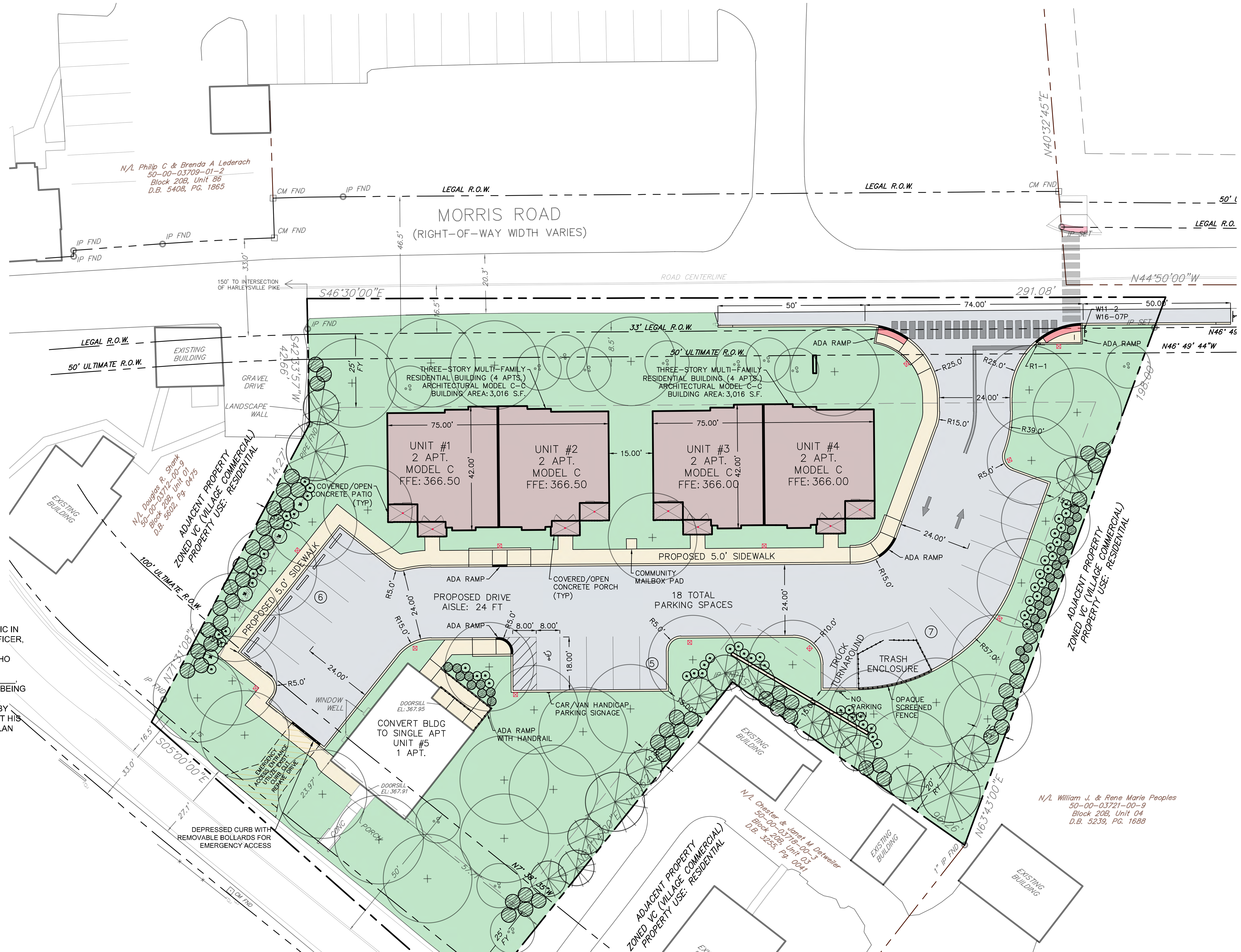
Harleysville Homes



LINETYPE LEGEND

- PROPERTY LINE
- ADJOINER PROPERTY LINE
- EASEMENT LINE
- RIGHT-OF-WAY LINE
- BUILDING SETBACK
- CONCRETE EDGE
- ASPHALT EDGE
- BUILDING
- PROPOSED CURB
- PROPOSED CONCRETE
- CURB
- SOILS LINE
- PROPOSED BUILDING & ROOF
- PROPOSED CONCRETE FEATURE
- PROPOSED ASPHALT
- EXISTING & PROPOSED LANDSCAPE
- X — X FENCE LINE
- // OVERHEAD ELECTRIC
- E ELECTRIC LINE
- G GAS LINE
- T/C TELECOM LINE
- W WATER LINE
- SS SANITARY LINE
- ST EXISTING STORM PIPES
- 378 EXISTING 1' CONTOUR
- 380 EXISTING 5' CONTOUR
- 380 PROPOSED CONTOUR
- x362.00 PROPOSED SPOT ELEVATION
- MONTGOMERY COUNTY 2' LIDAR



SCALE: 1" = 500'

OWNER OF RECORD
LEDERACH VILLAGE HOMES, L.P.
1715 W TOWNSHIP LINE ROAD
BLUE BELL, PA 19422

PROPERTY IDENTIFICATION
TAX MAP ID 50020B002
PARCEL ID 500003715006
BLOCK NO. 20B, UNIT 2
RECORDED DEED BOOK 5285, PAGE 1151

LOT AREA:

LOT AREA:	50,996 S.F. OR 1.1707 ACRES
GROSS LOT AREA (MINUS LEGAL R.O.W.):	46,688 S.F. OR 1.0718 ACRES
NET LOT AREA (MINUS ULTIMATE R.O.W.):	39,254 S.F. OR 0.9011 ACRES

** PER §164-5 "LOT AREA"

EXISTING IMPERVIOUS COVERAGE

BUILDINGS	1,639 S.F.
ASPHALT DRIVE	2,973 S.F.
WOOD DECK	285 S.F.
CONCRETE WALKWAYS & CURB	216 S.F.
TOTAL	5,113 S.F.

(OR 13.03% OF NET LOT AREA)

PROPOSED IMPERVIOUS COVERAGE

BUILDINGS & ROOF	7,101 S.F.
ASPHALT DRIVE & PARKING	11,107 S.F.
CONCRETE WALKWAYS & CURB	2,834 S.F.
TOTAL	21,042 S.F.

(OR 53.60% OF NET LOT AREA)

PLAN NOTES:
1. THIS PLAN REPRESENTS AN ACTUAL FIELD SURVEY PERFORMED ON THE PREMISE IN NOVEMBER 2019 BY RICHARD C. MAST ASSOCIATES, P.C. AND DEPICTS CONDITIONS ON THAT DATE.
2. THE EXISTENCE AND/OR LOCATION OF ALL SUBSURFACE UTILITIES SHALL BE CONSIDERED APPROXIMATE AND MUST BE FIELD VERIFIED BY ALL CONTRACTORS PRIOR TO CONSTRUCTION.
3. THE VERTICAL DATUM SHOWN ON THIS PLAN IS BASED ON APPROXIMATE NAVD 1988.
4. NO PART OF THE SUBJECT PROPERTY IS LOCATED WITHIN A 100-YEAR FLOODPLAIN BASED ON THE FLOOD INSURANCE RATE MAP, PANEL NO. 42091C0119G, EFFECTIVE DATE MARCH 2, 2016, PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.

REFERENCE PLAN
1. A PLAN ENTITLED "PLAN OF SURVEY, BLOCK 20B, UNITS 02" PREPARED BY RICHARD C. MAST ASSOCIATES, P.C., DATED JANUARY 8, 2020.

TOWNSHIP ZONING DISTRICT: VC (VILLAGE COMMERCIAL DISTICT)

REGULATION	REQUIRED	EXISTING	PROPOSED
MIN. NET LOT AREA	10,000 SF	39,254 SF	39,254 SF
MIN. LOT WIDTH	60 FEET	153 FEET	153 FEET
MAX. IMPERV. COVERAGE	80%	13.03%	53.60%
MAX. BLDG. HEIGHT	40 FEET	≤40 FEET	≤40 FEET
PRINCIPAL BUILDING SETBACKS:			
MIN. FRONT	25 FEET	24.0 FEET *	24.0 FEET *
MIN. SIDE	10 FEET	57.7 FEET	24.5 FEET
MIN. REAR	20 FEET	N/A	50.2 FEET
ACCESSORY BUILDING SETBACK:			
MIN. FRONT	25 FEET	0 FEET	NONE
MIN. SIDE	5 FEET	2.2 FEET	NONE
MIN. REAR	5 FEET	N/A	NONE

* EXISTING NON-CONFORMITY RELATIVE TO HARLEYSVILLE PIKE FRONTAGE.
** IMPERVIOUS COVERAGE BASED ON NET LOT AREA PER §164-70.4.D.
** FOR FURTHER DETAILED INFORMATION YOUR ATTENTION IS CALLED TO THE LOWER SALFORD TOWNSHIP ZONING CODE (§164), LATEST EDITION.

PROPERTY DENSITY CALCULATION PER 164-70.4.C.(3).(a)
A = [(1+C)/7500] * [E - 7500(B/(1250+D))]
A = PERMITTED NUMBER OF DWELLING UNITS
B = 0, C = 1, D = 500, E = 39,254
A = 10 UNITS = PERMITTED NUMBER OF DWELLING UNITS
** DENSITY BONUS INCLUDED FOR EXISTING MULTI-FAMILY BUILDING TO REMAIN THAT WAS CONSTRUCTED IN 1900 PER MONTGOMERY COUNTY PROPERTY RECORDS.
** PROPOSED PROJECT NUMBER OF DWELLING UNITS = 9 UNITS

PROPOSED PARKING CALCULATION PER 164-99.A
TWO (2) PARKING SPACES PER DWELLING UNIT
9 DWELLING UNITS * 2 = 18 SPACES REQUIRED
** PROPOSED PROJECT NUMBER OF PARKING SPACES = 18 SPACES

TOWNSHIP ENGINEER NOTES
1. THE AREA BETWEEN TITLE LINE AND ULTIMATE RIGHT OF WAY SHALL BE OFFERED TO THE AGENCY HAVING AUTHORITY AT THE TIME OF DEDICATION.
2. A BLANKET EASEMENT WILL BE REQUIRED TO ALLOW FOR INSPECTION OF THE STORMWATER FACILITIES BY TOWNSHIP OFFICIALS.

RECORDING NOTES
1. THE APPLICANT SHALL BE REQUIRED TO PAY A RECREATION IMPACT FEE IN THE AMOUNT OF $500 PER UNIT FOR THE NEW RESIDENTIAL LAND DEVELOPMENT.
2. A PROPERTY BLANKET EASEMENT SHALL BE REQUIRED FOR INSPECTION OF THE PROPOSED STORMWATER MANAGEMENT FACILITIES BY LOWER SALFORD TOWNSHIP.
3. THE EXISTING PROPERTY BUILDING TO REMAIN IS REQUIRED TO PRESERVE THE BUILDING FACADE, SIDES, AND FRONT PORCH.

RIGHT-OF-WAY LEGAL DESCRIPTIONS
STARTING AT A POINT, SAID POINT BEING THE NORTHEAST CORNER OF THE LOT SITUATED IN THE CARTWAY OF MORRIS ROAD, THE FOLLOWING COURSES AND DISTANCES:
1. N 46° 30' 00'' W THE DISTANCE OF 145.54 FEET TO A POINT,
2. N 46° 30' 00'' W THE DISTANCE OF 145.54 FEET TO A POINT,
3. S 42° 33' 57'' W THE DISTANCE OF 20.62 FEET TO A POINT,
4. S 46° 50' 45'' E THE DISTANCE OF 283.78 FEET TO A POINT,
5. N 63° 43' 00'' E THE DISTANCE OF 20.14 FEET TO THE POINT OF BEGINNING.

SAID AREA CONTAINING THE RIGHT-OF-WAY ALONG MORRIS ROAD.

STARTING AT A POINT, SAID POINT BEING THE WESTERNMOST CORNER OF THE LOT SITUATED IN THE CARTWAY OF HARLEYVILLE PIKE, THE FOLLOWING COURSES AND DISTANCES:
1. S 05° 00' 00'' E THE DISTANCE OF 145.55 FEET TO A POINT,
2. N 82° 14' 00'' E THE DISTANCE OF 44.07 FEET TO A POINT,
3. N 07° 13' 44'' W THE DISTANCE OF 152.67 FEET TO A POINT,
4. S 71° 31' 08'' W THE DISTANCE OF 39.16 FEET TO THE POINT OF BEGINNING,

SAID AREA CONTAINING THE RIGHT-OF-WAY ALONG HARLEYSVILLE PIKE.

STATE OF PENNSYLVANIA
COUNTY OF ________________________________

ON THIS ______ DAY OF ______________, 202__, BEFORE ME A NOTARY PUBLIC IN AND FOR THE COMMONWEALTH OF PENNSYLVANIA, THE UNDERSIGNED OFFICER,

PERSONALLY APPEARED____ , WHO

ACKNOWLEDGED HIMSELF TO BE THE ________________________________,
A PENNSYLVANIA LIMITED LIABILITY COMPANY, THAT HE AS SUCH OFFICER, BEING AUTHORIZED TO DO SO, EXECUTED THE FOREGOING INSTRUMENT FOR THE PURPOSES THEREIN CONTAINED BY SIGNING THE NAME OF THE COMPANY BY HIMSELF AS SUCH OFFICER, AND THAT THE SUBDIVISION PLAN WAS MADE AT HIS DIRECTION AND THAT HE ACKNOWLEDGES THE SAME TO BE HIS ACT AND PLAN AND DESIRES THE SAME TO BE RECORDED AS SUCH ACCORDING TO LAW

WITNESS MY HAND AND SEAL THE DAY AND DATE ABOVE WRITTEN.

____
(SIGNATURE)

____
(SIGNATURE)

____
NOTARY PUBLIC OR OTHER OFFICER

MY COMMISSION EXPIRES:______________________________

I,________________________________, ACKNOWLEDGE THAT ANY REVISION TO THE APPROVED DRAINAGE PLAN MUST BE APPROVED BY THE MUNICIPALITY.

I HEREBY CERTIFY THAT THIS PLAN HAD BEEN MADE UNDER MY IMMEDIATE SUPERVISION, THAT THE MONUMENTS SHOWN EXIST OR SHALL BE LOCATED AND THAT ALL GEODETIC AND DIMENSIONAL DETAILS ARE CORRECT AND THAT THIS MAP COMPLIES WITH THE PROVISIONS OF THE MAP FILING LAW, THE MUNICIPAL ORDINANCES AND REQUIREMENTS APPLICABLE THERETO.

09-16-2022
DATE PROF. LAND SURVEYOR/PROF. ENGINEER

PCSM OPERATION AND MAINTENANCE NOTES:

1. THE RESPONSIBILTY FOR THE CONTINUED MAINTENANCE AND OPERATION OF THE PCSM SYSTEM AND OTHER DRAINAGE FACILITIES SHALL BE THE OBLIGATION OF THE PROPERTY OWNER.
2. THE PROPERTY OWNER SHALL NOT ALTER OR REMOVE THE STORMWATER FACILITIES ON THE SITE.
3. GENERAL OBJECTIVES OF MAINTENANCE ARE TO PREVENT CLOGGING OF THE INLETS, OUTLETS, PREVENT STANDING WATER, AND PREVENT THE GROWTH OF WEEDS AND NOXIOUS PLANTS.
4. REGULAR INSPECTIONS SHOULD BE MADE OF INFILTRATION FACILITIES ESPECIALLY DURING WET WEATHER TO ENSURE THAT THE FACILITY IS MAINTAINING DESIRABLE RETENTION TIMES.
5. ANUALLY ASSESS THE VARIOUS SPECIES OF THE PLANT COVER. IT MAY BE NECESSARY TO SUPPLEMENT AND/OR REMOVE VARIOUS SPECIES DUE TO THEIR GROWING PATTERNS.
6. AFTER ANY STORM RAINFALL EVENT OF A 2-YR OR GREATER MAGNITUDE, THE PCSM SYSTEM AND ASSOCIATED OUTLET WORKS SHOULD BE INSPECTED. ANY DAMAGE OR BLOCKAGE TO THE OUTLET STRUCTURES SHOULD BE REPAIRED OR REMOVED IMMEDIATELY. ANY ERODED AREAS SHOULD BE TOPSOILED AND PERMANENTLY SEEDED AND MULCHED.

I, ________________________________, ACKNOWLEDGE THAT ANY REVISION TO THE APPROVED DRAINAGE PLAN MUST BE APPROVED BY THE MUNICIPALITY.

____
SIGNATURE DATE

PROJECT WAIVER APPROVALS PER RESOLUTION 2022-14
FOR ADDITIONAL INFORMATION PLEASE SEE FINAL RESOLUTION ON FILE AT TOWNSHIP.
1. §142-15 - TO NOT REQUIRE SUBMISSION OF SEPARATE PRELIMINARY & FINAL PLANS
   1.1. REQUEST BASED ON PROJECT SIZE AND PREVIOUS TOWNSHIP SUBMITTALS, REVIEWS, & MEETINGS.
2. §142-29 , §142-26.E , AND §142-41 - TO NOT REQUIRE IMPROVEMENTS AT THIS TIME INCLUDING CURB, SIDEWALK, FULL ROAD WIDENING, AND STORM SEWERS ALONG THE FULL PROPERTY FRONTAGE OF MORRIS ROAD.
   2.1. PARTIAL REQUEST BASED ON THE POTENTIAL ROAD SAFETY HAZARD CREATED FROM THE IMPROVEMENTS. THE PROJECT PROPOSES TO CONSTRUCT THE MENTIONED IMPROVEMENTS ALONG MORRIS ROAD AT AND 50.0-FEET BEYOND THE NEW ACCESS DRIVE AS SHOWN ON THIS PLAN.
3. §142-29 , §142-26.E , AND §142-41 - TO NOT REQUIRE IMPROVEMENTS INCLUDING CURB, SIDEWALK, ROAD WIDENING, AND STORM SEWERS ALONG HARLEYSVILLE PIKE AT THIS TIME.
   3.1. REQUEST BASED ON THE POTENTIAL ROAD SAFETY HAZARD CREATED FROM THE IMPROVEMENTS.
4. §107.6 - TO NOT ALLOW FOR THE USE OF CMP CONTROL RISERS WITHIN THE STORMWATER MANAGEMENT SYSTEMS.
   4.1. REQUEST BASED ON UPDATED DESIGNS OF SYSTEM FUNCTIONALITY.
5. §107.2.D AND §107.5.A - PARTIAL WAIVER TO REQUIRE STORM DRAINAGE PIPE BE A MINIMUM INTERNAL DIAMETER OF 18-INCHES. 15-MIN NOW REQUIRED.
   5.1. REQUEST BASED ON COMPLETE HYDRAULIC ANALYSIS OF STORM SEWERS PROVING ADEQUATE PIPE SIZING OF LESS THAN THE TOWNSHIP REQUIREMENT.
6. §107.6.A - TO REQUIRE ALL STORM DRAINAGE PIPE MATERIAL SHALL BE REINFORCED CEMENT CONCRETE.
   6.1. REQUEST BASED ON RESOLUTION WITH TOWNSHIP ENGINEER TO ALLOW FOR HDPE STORM PIPE.

SCALE: 1" = 20'
20 0 20 40 80

SCHOCK GROUP LLC
1958 BUTLER PIKE, SUITE 200
CONSHOHOCKEN, PA 19428
610.590.7373 | SCHOCKGROUP.COM

REGISTERED PROFESSIONAL ENGINEER
DAVID R. FIORELLO
PE027479E

LOCATIONS OF EXISTING UTILITIES ON THIS PLAN HAVE BEEN DEVELOPED FROM FIELD LOCATIONS OF VISIBLE ABOVE GROUND UTILITY STRUCTURES AND INFORMATION FURNISHED BY THE UTILITY COMPANIES. ALL LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. COMPLETENESS OR ACCURACY OF THE LOCATIONS AND DEPTH OF ALL STRUCTURES CANNOT BE GUARANTEED.

CONTRACTORS MUST VERIFY ALL LOCATIONS AND DEPTHS OF ALL UNDERGROUND UTILITIES BEFORE STARTING ANY WORK.

BEFORE STARTING ANY WORK THE CONTRACTOR SHALL NOTIFY ALL AFFECTED UTILITY COMPANIES THROUGH THE PA ONE CALL SYSTEM THREE DAYS PRIOR TO THE START OF ANY WORK.

RECORD PLAN (1 OF 1)

PROJECT STAGE: LAND DEVELOPMENT PRELIMINARY / FINAL

PROJECT NAME: LEDERACH VILLAGE HOMES - HARLEYSVILLE PIKE
LOWER SALFORD TOWNSHIP * MONTGOMERY COUNTY * PENNSYLVANIA

REV.	DATE	DESCRIPTION
1	09/16/2022	ADDRESS TOWNSHIP COMMENTS

PLAN PREPARED FOR
LEDERACH HOMES LLC
1715 W TOWNSHIP LINE ROAD
BLUE BELL, PA 19422

DRAWN BY:	WOD
CHECKED BY:	DRF
ONE-CALL:	20192801040-000
SCALE:	1" = 20'
DATE:	APRIL 20, 2022
REVISED:	SEPTEMBER 16, 2022
FILE NO.	H-1125
SHEET NO.	2 OF 21

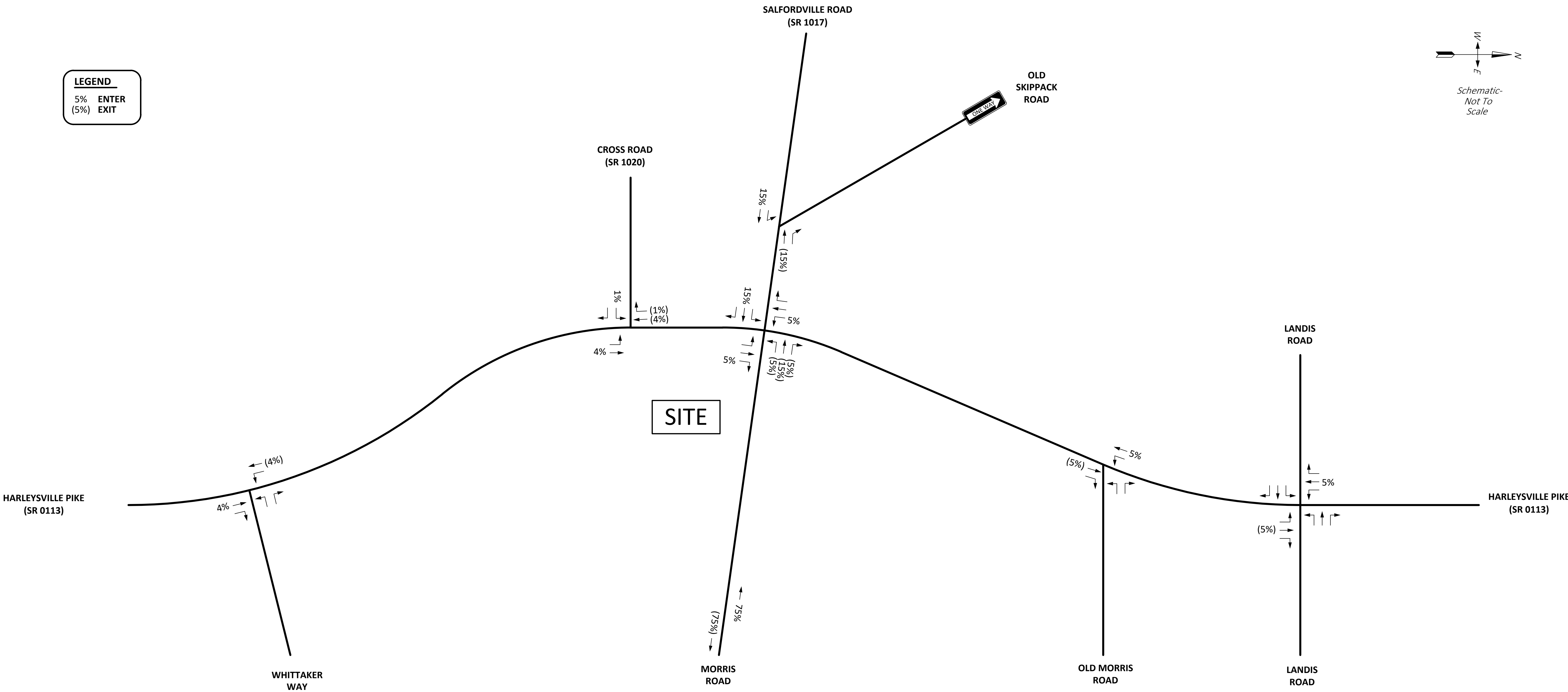


FIGURE E

Local Growth - Harleysville Homes Trip Distribution

WALKABLE LEDERACH

LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

Q:\PA-FTWA-MC\MCM\eng\LOWERSA1\822255_TCDI Walkable Lederach\Traffic\2-TrafficEval\7-Graphics\Figure CDEFG.dwg

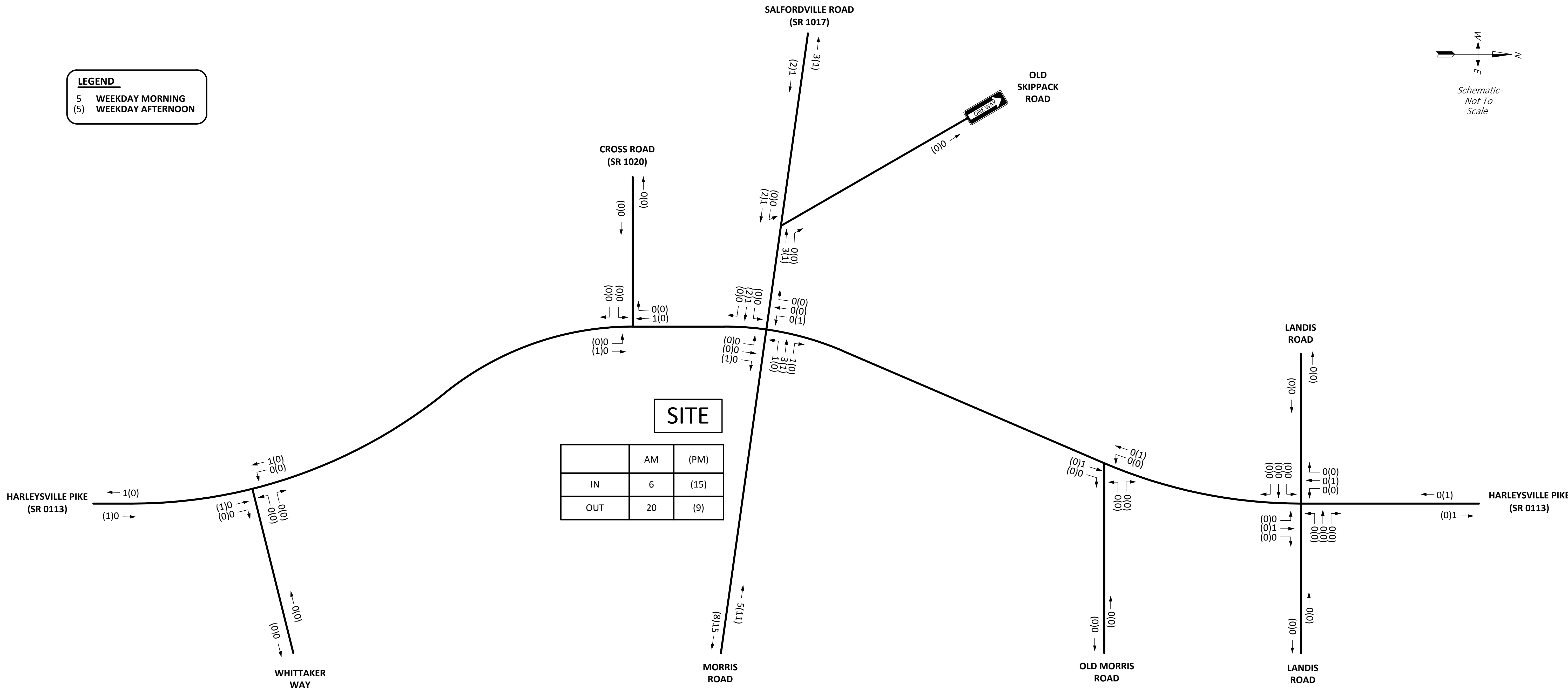


FIGURE F

Local Growth - Harleysville Homes Trip Assignment

WALKABLE LEDERACH

LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PA

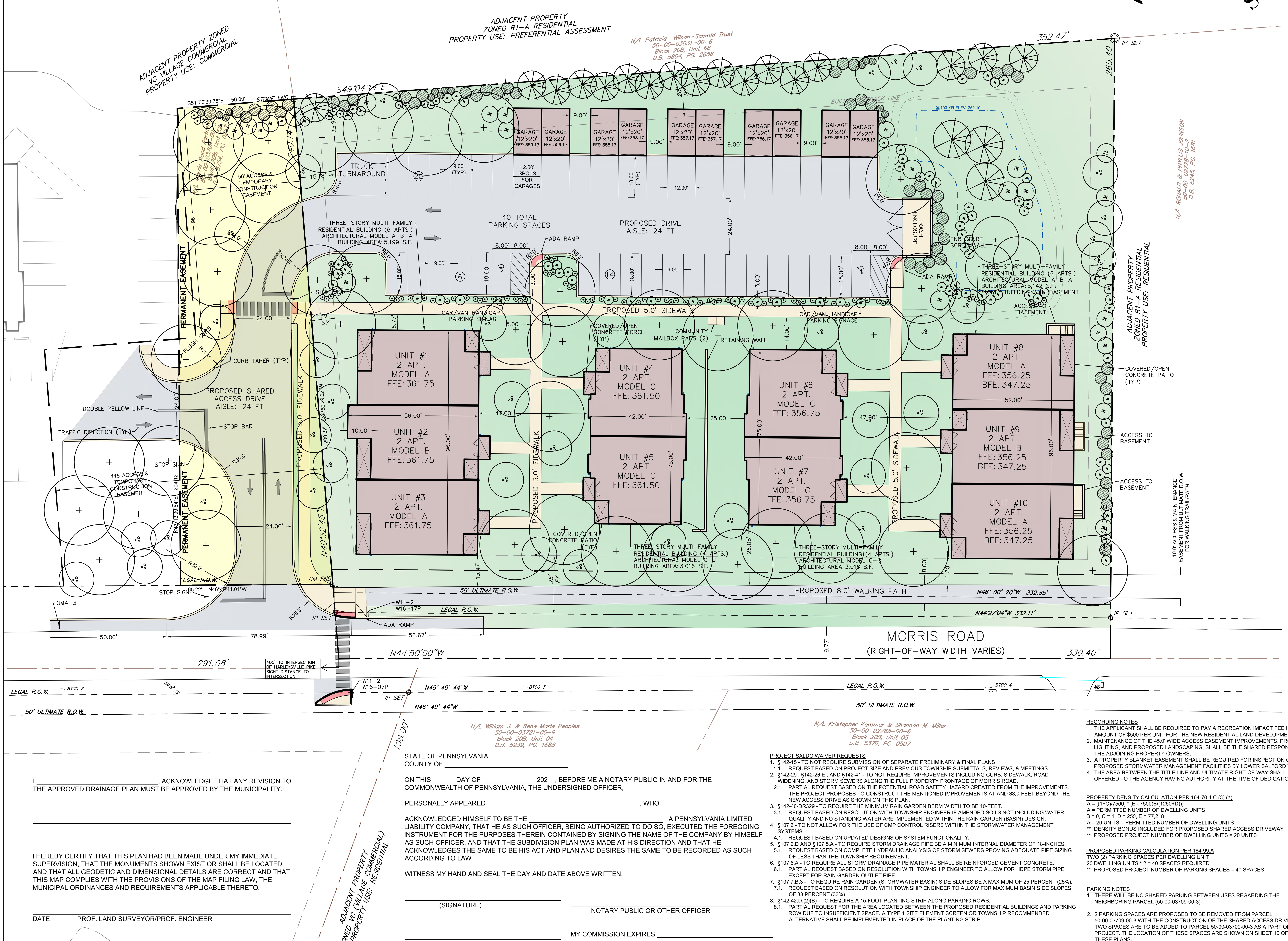
McMAHON a Bowman company

Q:\PA-FTWA-MC\MCM\eng\LOWERSA1\822255_TCDI Walkable Lederach\Traffic\2-TrafficEval\7-Graphics\Figure CDEFG.dwg

Morris Homes

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE STOP AND CALL
PENNSYLVANIA ONE CALL SYSTEM, INC.
1-800-242-1776

PROPOSED GARAGE NOTES
1. THE TEN (10) PROPOSED GARAGES ARE CONSIDERED ACCESSORY USE BUILDINGS.
2. THE GARAGE HEIGHT SHALL BE <15 FEET.
3. THE GARAGES ARE PROPOSED AS SETS OF TWO (2) ATTACHED UNITS WITH GROSS FLOOR AREAS OF 480 S.F. RESPECTIVELY.
4. THE TOTAL GARAGE BUILDING AREA IS 14.6% OF THE TOTAL PRINCIPAL BUILDING AREA.
5. THE GARAGE UNITS WILL BE AVAILABLE TO RENT AS ADDITIONAL STORAGE SPACE FOR THE RESIDENTS. THE PARKING SPACE IN FRONT OF EACH GARAGE WILL BE RESERVED FOR THE USE OF THE GARAGE RENTER.
6. THE GARAGES WERE NOT INCLUDED WITHIN THE PARKING CALCULATION, THOUGH EACH SPACE IN FRONT OF THE GARAGE WAS INCLUDED.



SCALE: 1" = 500'

OWNER OF RECORD
LEDERACH VILLAGE HOMES, L.P.
1715 W TOWNSHIP LINE ROAD
BLUE BELL, PA 19422

PROPERTY IDENTIFICATION
TAX MAP ID 50020B051
PARCEL ID 500002728111
BLOCK NO. 20B, UNIT 51
RECORDED DEED BOOK 5754, PAGE 257

LOT AREA:

LOT AREA:	86,164 S.F. OR 1.9781 ACRES
GROSS LOT AREA (MINUS LEGAL R.O.W.):	80,044 S.F. OR 1.8376 ACRES
NET LOT AREA (MINUS ULTIMATE R.O.W.):	77,218 S.F. OR 1.7727 ACRES

** PER §164-5 "LOT AREA"

EXISTING IMPERVIOUS COVERAGE
** NO IMPERVIOUS COVERAGE ON EXISTING LOT

PROPOSED IMPERVIOUS COVERAGE

RESIDENTIAL BUILDINGS	16,373 S.F.
GARAGE BUILDINGS	2,400 S.F.
ASPHALT DRIVE, PARKING, & TRAIL	15,370 S.F.
CONCRETE WALKWAYS, CURBS, & PADS	4,003 S.F.
WALLS	50 S.F.
TOTAL	38,196 S.F.

(OR 49.46% OF NET LOT AREA)

** THE LOT MAXIMUM ALLOWABLE IMPERVIOUS COVERAGE IS 61,774 S.F.
** PER TOWNSHIP CODE §164-15.B.(1)(a), THE ACCESSORY BUILDING AREA IS 14.66% OF THE PRINCIPAL BUILDING AREA (≤30%).

PLAN NOTES:
1. THIS PLAN REPRESENTS AN ACTUAL FIELD SURVEY PERFORMED ON THE PREMISE IN SEPTEMBER 2019 BY RICHARD C. MAST ASSOCIATES, P.C. AND DEPICTS CONDITIONS ON THAT DATE.
2. THE EXISTENCE AND/OR LOCATION OF ALL SUBSURFACE UTILITIES SHALL BE CONSIDERED APPROXIMATE AND MUST BE FIELD VERIFIED BY ALL CONTRACTORS PRIOR TO CONSTRUCTION.
3. THE VERTICAL DATUM SHOWN ON THIS PLAN IS BASED ON APPROXIMATE NAVD 1988.
4. NO PART OF THE SUBJECT PROPERTY IS LOCATED WITHIN A 100-YEAR FLOODPLAIN BASED ON THE FLOOD INSURANCE RATE MAP, PANEL NO. 42091C0119G, EFFECTIVE DATE MARCH 2, 2016, PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.

REFERENCE PLAN
1. A PLAN ENTITLED "PLAN OF SURVEY, BLOCK 20B, UNITS 50&51" PREPARED BY RICHARD C. MAST ASSOCIATES, P.C., DATED OCTOBER 25, 2019, LAST REVISED OCTOBER 31, 2019.

TOWNSHIP ZONING DISTRICT: VC (VILLAGE COMMERCIAL DISTICT)

REGULATION	REQUIRED	EXISTING	PROPOSED
MIN. NET LOT AREA	10,000 SF	77,218 SF	77,218 SF
MIN. LOT WIDTH	60 FEET	335.9 FEET	335.9 FEET
MAX. IMPERV. COVERAGE	80%	0%	49.46%
MAX. BLDG. HEIGHT	40 FEET	N/A	≤40 FEET
PRINCIPAL BUILDING SETBACKS:			
MIN. FRONT	25 FEET	N/A	25.0 FEET
MIN. SIDE	10 FEET	N/A	10.0 FEET
MIN. REAR	20 FEET	N/A	100.7 FEET
ACCESSORY BUILDING SETBACK:			
MIN. FRONT	25 FEET	N/A	196.4 FEET
MIN. SIDE	5 FEET	N/A	83.6 FEET
MIN. REAR	5 FEET	N/A	10.0 FEET

** IMPERVIOUS COVERAGE BASED ON NET LOT AREA PER §164-70.4.D.
** FOR FURTHER DETAILED INFORMATION YOUR ATTENTION IS CALLED TO THE LOWER SALFORD TOWNSHIP ZONING CODE (§164), LATEST EDITION.

LINETYPE LEGEND

- PROPERTY LINE
- ADJOINER PROPERTY LINE
- EASEMENT LINE
- RIGHT-OF-WAY LINE
- BUILDING SETBACK
- CONCRETE EDGE
- ASPHALT EDGE
- BUILDING
- PROPOSED CURB
- PROPOSED CONCRETE
- CURB
- SOILS LINE
- PROPOSED BUILDING & ROOF
- PROPOSED CONCRETE FEATURE
- PROPOSED ASPHALT
- EXISTING & PROPOSED LANDSCAPE
- PERMANENT ACCESS / MAINTENANCE EASEMENT
- X FENCE LINE
- // OVERHEAD ELECTRIC
- E ELECTRIC LINE
- G GAS LINE
- T/C TELECOM LINE
- W WATER LINE
- SS SANITARY LINE
- ST EXISTING STORM PIPES
- 378 EXISTING 1' CONTOUR
- 380 EXISTING 5' CONTOUR
- 380 PROPOSED CONTOUR
- x362.00 PROPOSED SPOT ELEVATION
- MONTGOMERY COUNTY 2' LIDAR

SCALE: 1" = 20'
20 0 20 40 80

I,______________________________, ACKNOWLEDGE THAT ANY REVISION TO THE APPROVED DRAINAGE PLAN MUST BE APPROVED BY THE MUNICIPALITY.

I HEREBY CERTIFY THAT THIS PLAN HAD BEEN MADE UNDER MY IMMEDIATE SUPERVISION, THAT THE MONUMENTS SHOWN EXIST OR SHALL BE LOCATED AND THAT ALL GEODETIC AND DIMENSIONAL DETAILS ARE CORRECT AND THAT THIS MAP COMPLIES WITH THE PROVISIONS OF THE MAP FILING LAW, THE MUNICIPAL ORDINANCES AND REQUIREMENTS APPLICABLE THERETO.

DATE PROF. LAND SURVEYOR/PROF. ENGINEER

STATE OF PENNSYLVANIA
COUNTY OF ________________________________

ON THIS ______ DAY OF _____________, 202__, BEFORE ME A NOTARY PUBLIC IN AND FOR THE COMMONWEALTH OF PENNSYLVANIA, THE UNDERSIGNED OFFICER,

PERSONALLY APPEARED____, WHO

ACKNOWLEDGED HIMSELF TO BE THE ___________________________________, A PENNSYLVANIA LIMITED LIABILITY COMPANY, THAT HE AS SUCH OFFICER, BEING AUTHORIZED TO DO SO, EXECUTED THE FOREGOING INSTRUMENT FOR THE PURPOSES THEREIN CONTAINED BY SIGNING THE NAME OF THE COMPANY BY HIMSELF AS SUCH OFFICER, AND THAT THE SUBDIVISION PLAN WAS MADE AT HIS DIRECTION AND THAT HE ACKNOWLEDGES THE SAME TO BE HIS ACT AND PLAN AND DESIRES THE SAME TO BE RECORDED AS SUCH ACCORDING TO LAW

WITNESS MY HAND AND SEAL THE DAY AND DATE ABOVE WRITTEN.

(SIGNATURE)

NOTARY PUBLIC OR OTHER OFFICER

(SIGNATURE)

MY COMMISSION EXPIRES:______________________________

PROJECT SALDO WAIVER REQUESTS
1. §142-15 - TO NOT REQUIRE SUBMISSION OF SEPARATE PRELIMINARY & FINAL PLANS
   1.1. REQUEST BASED ON PROJECT SIZE AND PREVIOUS TOWNSHIP SUBMITTALS, REVIEWS, & MEETINGS.
2. §142-29 , §142-26.E , AND §142-41 - TO NOT REQUIRE IMPROVEMENTS INCLUDING CURB, SIDEWALK, ROAD WIDENING, AND STORM SEWERS ALONG THE FULL PROPERTY FRONTAGE OF MORRIS ROAD.
   2.1. PARTIAL REQUEST BASED ON THE POTENTIAL ROAD SAFETY HAZARD CREATED FROM THE IMPROVEMENTS. THE PROJECT PROPOSES TO CONSTRUCT THE MENTIONED IMPROVEMENTS AT AND 33.0-FEET BEYOND THE NEW ACCESS DRIVE AS SHOWN ON THIS PLAN.
3. §142-40-DR329 - TO REQUIRE THE MINIMUM RAIN GARDEN BERM WIDTH TO BE 10-FEET.
   3.1. REQUEST BASED ON RESOLUTION WITH TOWNSHIP ENGINEER IF AMENDED SOILS NOT INCLUDING WATER QUALITY AND NO STANDING WATER ARE IMPLEMENTED WITHIN THE RAIN GARDEN (BASIN) DESIGN.
4. §107.6 - TO NOT ALLOW FOR THE USE OF CMP CONTROL RISERS WITHIN THE STORMWATER MANAGEMENT SYSTEMS.
   4.1. REQUEST BASED ON UPDATED DESIGNS OF SYSTEM FUNCTIONALITY.
5. §107.2.D AND §107.5.A - TO REQUIRE STORM DRAINAGE PIPE BE A MINIMUM INTERNAL DIAMETER OF 18-INCHES.
   5.1. REQUEST BASED ON COMPLETE HYDRAULIC ANALYSIS OF STORM SEWERS PROVING ADEQUATE PIPE SIZING OF LESS THAN THE TOWNSHIP REQUIREMENT.
6. §107.6.A - TO REQUIRE ALL STORM DRAINAGE PIPE MATERIAL SHALL BE REINFORCED CEMENT CONCRETE.
   6.1. PARTIAL REQUEST BASED ON RESOLUTION WITH TOWNSHIP ENGINEER TO ALLOW FOR HDPE STORM PIPE EXCEPT FOR RAIN GARDEN OUTLET PIPE.
7. §107.7.B.3 - TO REQUIRE RAIN GARDEN (STORMWATER BASIN) SIDE SLOPES BE A MAXIMUM OF 25 PERCENT (25%).
   7.1. REQUEST BASED ON RESOLUTION WITH TOWNSHIP ENGINEER TO ALLOW FOR MAXIMUM BASIN SIDE SLOPES OF 33 PERCENT (33%).
8. §142-42.D.(2)(B) - TO REQUIRE A 15-FOOT PLANTING STRIP ALONG PARKING ROWS.
   8.1. PARTIAL REQUEST FOR THE AREA LOCATED BETWEEN THE PROPOSED RESIDENTIAL BUILDINGS AND PARKING ROW DUE TO INSUFFICIENT SPACE. A TYPE 1 SITE ELEMENT SCREEN OR TOWNSHIP RECOMMENDED ALTERNATIVE SHALL BE IMPLEMENTED IN PLACE OF THE PLANTING STRIP.

RECORDING NOTES
1. THE APPLICANT SHALL BE REQUIRED TO PAY A RECREATION IMPACT FEE IN THE AMOUNT OF $500 PER UNIT FOR THE NEW RESIDENTIAL LAND DEVELOPMENT.
2. MAINTENANCE OF THE 45.0' WIDE ACCESS EASEMENT IMPROVEMENTS, PROPOSED LIGHTING, AND PROPOSED LANDSCAPING, SHALL BE THE SHARED RESPONSIBILITY OF THE ADJOINING PROPERTY OWNERS.
3. A PROPERTY BLANKET EASEMENT SHALL BE REQUIRED FOR INSPECTION OF THE PROPOSED STORMWATER MANAGEMENT FACILITIES BY LOWER SALFORD TOWNSHIP.
4. THE AREA BETWEEN THE TITLE LINE AND ULTIMATE RIGHT-OF-WAY SHALL BE OFFERED TO THE AGENCY HAVING AUTHORITY AT THE TIME OF DEDICATION

PROPERTY DENSITY CALCULATION PER 164-70.4.C.(3).(a)
A = [(1+C)/7500] * [E - 7500(B/(1250+D))]
A = PERMITTED NUMBER OF DWELLING UNITS
B = 0, C = 1, D = 250, E = 77,218
A = 20 UNITS = PERMITTED NUMBER OF DWELLING UNITS
** DENSITY BONUS INCLUDED FOR PROPOSED SHARED ACCESS DRIVEWAY
** PROPOSED PROJECT NUMBER OF DWELLING UNITS = 20 UNITS

PROPOSED PARKING CALCULATION PER 164-99.A
TWO (2) PARKING SPACES PER DWELLING UNIT
20 DWELLING UNITS * 2 = 40 SPACES REQUIRED
** PROPOSED PROJECT NUMBER OF PARKING SPACES = 40 SPACES

PARKING NOTES
1. THERE WILL BE NO SHARED PARKING BETWEEN USES REGARDING THE NEIGHBORING PARCEL (50-00-03709-00-3).
2. 2 PARKING SPACES ARE PROPOSED TO BE REMOVED FROM PARCEL 50-00-03709-00-3 WITH THE CONSTRUCTION OF THE SHARED ACCESS DRIVE. TWO SPACES ARE TO BE ADDED TO PARCEL 50-00-03709-00-3 AS A PART OF THIS PROJECT. THE LOCATION OF THESE SPACES ARE SHOWN ON SHEET 10 OF THESE PLANS.

SCHOCK GROUP LLC
1958 BUTLER PIKE, SUITE 200
CONSHOHOCKEN, PA 19428
610.590.7373 | SCHOCKGROUP.COM

LOCATIONS OF EXISTING UTILITIES ON THIS PLAN HAVE BEEN DEVELOPED FROM FIELD LOCATIONS OF VISIBLE ABOVE GROUND UTILITY STRUCTURES AND INFORMATION FURNISHED BY THE UTILITY COMPANIES. ALL LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. COMPLETENESS OR ACCURACY OF THE LOCATIONS AND DEPTH OF ALL STRUCTURES CANNOT BE GUARANTEED.

CONTRACTORS MUST VERIFY ALL LOCATIONS AND DEPTHS OF ALL UNDERGROUND UTILITIES BEFORE STARTING ANY WORK.

BEFORE STARTING ANY WORK THE CONTRACTOR SHALL NOTIFY ALL AFFECTED UTILITY COMPANIES THROUGH THE PA ONE CALL SYSTEM THREE DAYS PRIOR TO THE START OF ANY WORK.

RECORD PLAN

SHEET 1 OF 4 FOR RECORDING

PROJECT STAGE: LAND DEVELOPMENT PRELIMINARY / FINAL

PROJECT NAME: LEDERACH VILLAGE HOMES - MORRIS ROAD

LOWER SALFORD TOWNSHIP * MONTGOMERY COUNTY * PENNSYLVANIA

REV.	DATE	DESCRIPTION
1	10/14/2022	ADDRESS TOWNSHIP COMMENTS

PLAN PREPARED FOR
LEDERACH HOMES LLC
1715 W TOWNSHIP LINE ROAD
BLUE BELL, PA 19422

DRAWN BY:	WOD
CHECKED BY:	DRF
ONE-CALL:	20192801040-000
SCALE:	1" = 20'
DATE:	APRIL 20, 2022
REVISED:	OCTOBER 14, 2022
FILE NO.	M-1125
SHEET NO.	2 OF 22

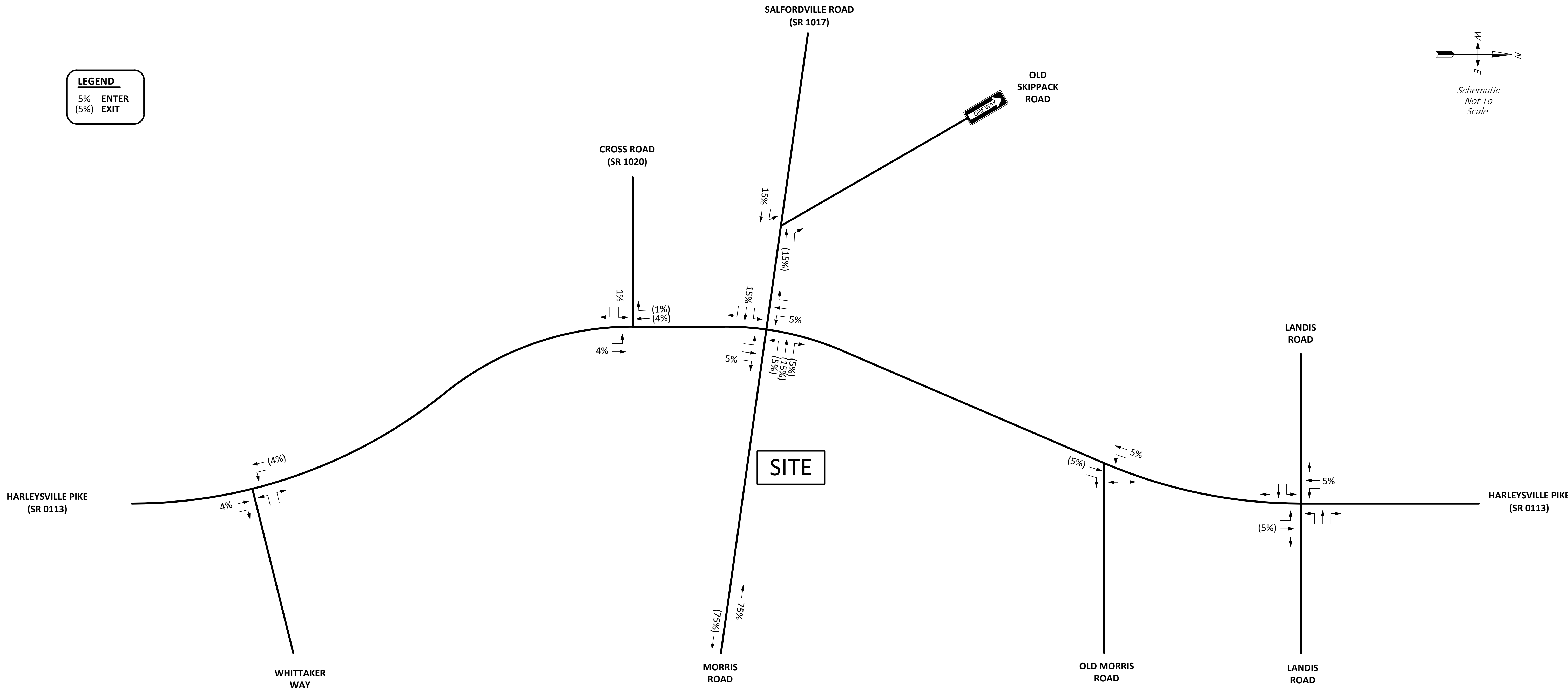


FIGURE G

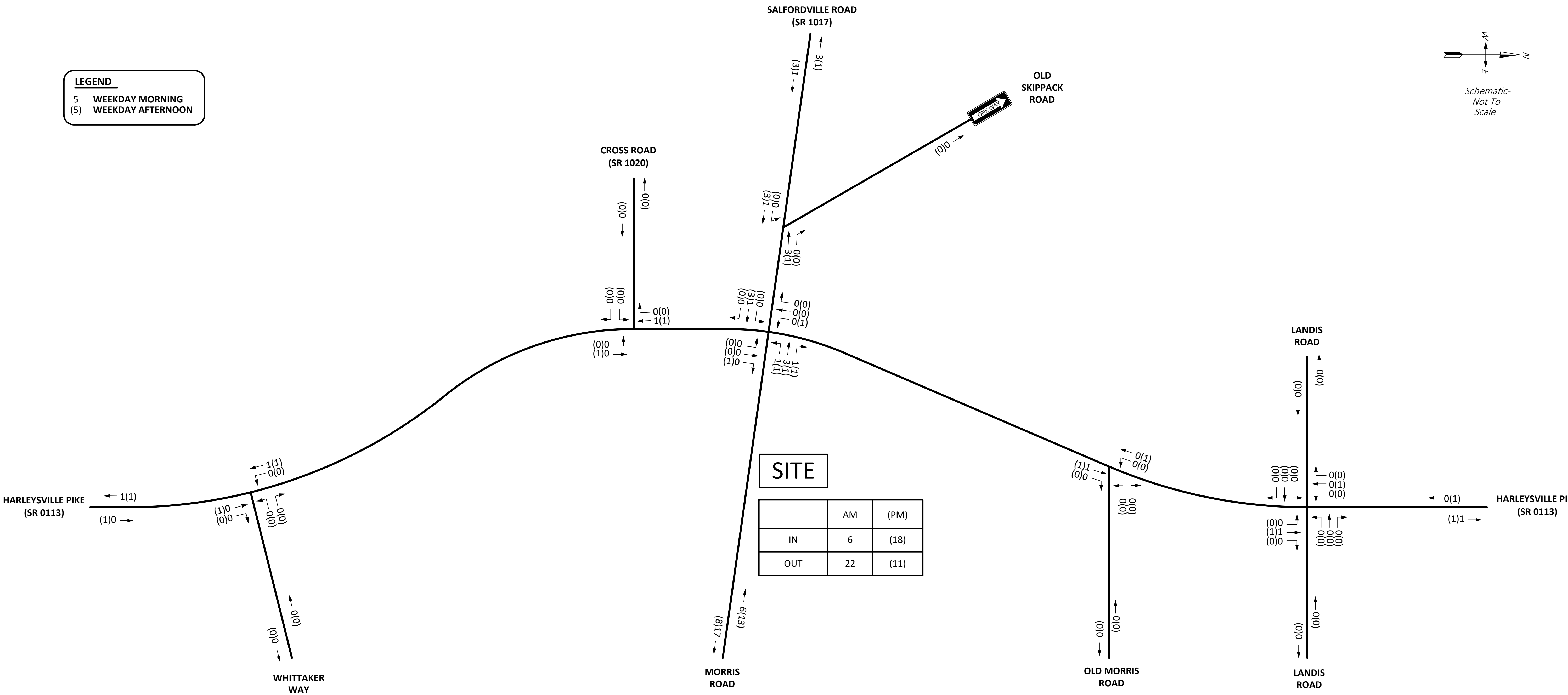
Local Growth - Morris Road Homes TripDistribution

WALKABLE LEDERACH

LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

Q:\PA-FTWA-MC\MCM\eng\LOWERSA1\822255_TCDI Walkable Lederach\Traffic\2-TrafficEval\7-Graphics\Figure CDEFG.dwg



	AM	(PM)
IN	6	(18)
OUT	22	(11)

FIGURE H

Local Growth - Morris Road Homes Trip Assignment

WALKABLE LEDERACH

LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

Q:\PA-FTWA-MC\MCM\eng\LOWERSA1\822255_TCDI Walkable Lederach\Traffic\2-TrafficEval\7-Graphics\Figure CDEFG.dwg

Attachment 5

2035 Future Base
Volume Projection Worksheets

425 Commerce Drive, Suite 200, Fort Washington, PA 19034
P: 215.283.9444
mcmahonassociates.com | bowman.com

Harleysville Pike (S.R. 0113) & Whittaker Way
INTERSECTION VOLUME PROJECTION SUMMARY
Weekday 7 AM - 9 AM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
					Whittaker Way			Harleysville Pike (S.R. 0113)			Harleysville Pike (S.R. 0113)		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		0	0	0	4	0	2	0	242	0	1	519	0
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**0**	**0**	**0**	**4**	**0**	**2**	**0**	**242**	**0**	**1**	**519**	**0**
Background Growth to 2035	3.57%	0	0	0	0	0	0	0	9	0	0	19	0
Harleysville Homes	DIST IN								4%				
	DIST OUT											(4%)	
	ASSIGN	0	0	0	0	0	0	0	0	0	0	1	0
Morris Homes	DIST IN								4%				
	DIST OUT											(4%)	
	ASSIGN	0	0	0	0	0	0	0	0	0	0	1	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*2*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2035 WITHOUT DEVELOPMENT VOLUMES		**0**	**0**	**0**	**4**	**0**	**2**	**0**	**251**	**0**	**1**	**540**	**0**

Harleysville Pike (S.R. 0113) & Whittaker Way
INTERSECTION VOLUME PROJECTION SUMMARY
Weekday 4 PM - 6 PM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
					Whittaker Way			Harleysville Pike (S.R. 0113)			Harleysville Pike (S.R. 0113)		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		0	0	0	1	0	3	0	500	3	3	305	0
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**0**	**0**	**0**	**1**	**0**	**3**	**0**	**500**	**3**	**3**	**305**	**0**
Background Growth to 2035	3.57%	0	0	0	0	0	0	0	18	0	0	11	0
Harleysville Homes	DIST IN								4%				
	DIST OUT											(4%)	
	ASSIGN	0	0	0	0	0	0	0	1	0	0	0	0
Morris Homes	DIST IN								4%				
	DIST OUT											(4%)	
	ASSIGN	0	0	0	0	0	0	0	1	0	0	1	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*2*	*0*	*0*	*1*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2035 WITHOUT DEVELOPMENT VOLUMES		**0**	**0**	**0**	**1**	**0**	**3**	**0**	**520**	**3**	**3**	**317**	**0**

Harleysville Pike (S.R. 0113) & Cross Road (S.R. 1020)
INTERSECTION VOLUME PROJECTION SUMMARY
Weekday 7 AM - 9 AM

		EASTBOUND Cross Road (S.R. 1020)			WESTBOUND			NORTHBOUND Harleysville Pike (S.R. 0113)			SOUTHBOUND Harleysville Pike (S.R. 0113)		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		203	0	1	0	0	0	3	241	0	0	489	144
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		2	0	0	0	0	0	0	2	0	0	3	1
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**205**	**0**	**1**	**0**	**0**	**0**	**3**	**243**	**0**	**0**	**492**	**145**
Background Growth to 2035	3.57%	7	0	0	0	0	0	0	9	0	0	18	5
Harleysville Homes	DIST IN	1%							4%				
	DIST OUT											(4%)	(1%)
	ASSIGN	0	0	0	0	0	0	0	0	0	0	1	0
Morris Homes	DIST IN	1%							4%				
	DIST OUT											(4%)	(1%)
	ASSIGN	0	0	0	0	0	0	0	0	0	0	1	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*2*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2035 WITHOUT DEVELOPMENT VOLUMES		**212**	**0**	**1**	**0**	**0**	**0**	**3**	**252**	**0**	**0**	**512**	**150**

Harleysville Pike (S.R. 0113) & Cross Road (S.R. 1020)
INTERSECTION VOLUME PROJECTION SUMMARY
Weekday 4 PM - 6 PM

		EASTBOUND Cross Road (S.R. 1020)			WESTBOUND			NORTHBOUND Harleysville Pike (S.R. 0113)			SOUTHBOUND Harleysville Pike (S.R. 0113)		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		155	0	1	0	0	0	2	486	0	0	286	206
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	19	14
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**155**	**0**	**1**	**0**	**0**	**0**	**2**	**486**	**0**	**0**	**305**	**220**
Background Growth to 2035	3.57%	6	0	0	0	0	0	0	17	0	0	11	8
Harleysville Homes	DIST IN	1%							4%				
	DIST OUT											(4%)	(1%)
	ASSIGN	0	0	0	0	0	0	0	1	0	0	0	0
Morris Homes	DIST IN	1%							4%				
	DIST OUT											(4%)	(1%)
	ASSIGN	0	0	0	0	0	0	0	1	0	0	1	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*2*	*0*	*0*	*1*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2035 WITHOUT DEVELOPMENT VOLUMES		**161**	**0**	**1**	**0**	**0**	**0**	**2**	**505**	**0**	**0**	**317**	**228**

Harleysville Pike (S.R. 0113) & Salfordville Road (S.R. 1017) / Morris Road
INTERSECTION VOLUME PROJECTION SUMMARY
Weekday 7 AM - 9 AM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Salfordville Road (S.R. 1017)			Morris Road			Harleysville Pike (S.R. 0113)			Harleysville Pike (S.R. 0113)		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		21	52	243	0	7	3	51	375	22	1	394	6
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**21**	**52**	**243**	**0**	**7**	**3**	**51**	**375**	**22**	**1**	**394**	**6**
Background Growth to 2035	3.57%	1	2	9	0	0	0	2	13	1	0	14	0
Harleysville Homes	DIST IN		15%							5%	5%		
	DIST OUT				(5%)	(15%)	(5%)						
	ASSIGN	0	1	0	1	3	1	0	0	0	0	0	0
Morris Homes	DIST IN		15%							5%	5%		
	DIST OUT				(5%)	(15%)	(5%)						
	ASSIGN	0	1	0	1	3	1	0	0	0	0	0	0
Total Other Development New Trip Assignments		*0*	*2*	*0*	*2*	*6*	*2*	*0*	*0*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2035 WITHOUT DEVELOPMENT VOLUMES		**22**	**56**	**252**	**2**	**13**	**5**	**53**	**388**	**23**	**1**	**408**	**6**

Harleysville Pike (S.R. 0113) & Salfordville Road (S.R. 1017) / Morris Road
INTERSECTION VOLUME PROJECTION SUMMARY
Weekday 4 PM - 6 PM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Salfordville Road (S.R. 1017)			Morris Road			Harleysville Pike (S.R. 0113)			Harleysville Pike (S.R. 0113)		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		18	14	95	25	77	2	226	391	6	1	405	16
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	7	11	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**18**	**14**	**95**	**25**	**77**	**2**	**233**	**402**	**6**	**1**	**405**	**16**
Background Growth to 2035	3.57%	1	0	4	1	3	0	8	15	0	0	14	1
Harleysville Homes	DIST IN		15%							5%	5%		
	DIST OUT				(5%)	(15%)	(5%)						
	ASSIGN	0	2	0	0	1	0	0	0	1	1	0	0
Morris Homes	DIST IN		15%							5%	5%		
	DIST OUT				(5%)	(15%)	(5%)						
	ASSIGN	0	3	0	1	1	1	0	0	1	1	0	0
Total Other Development New Trip Assignments		*0*	*5*	*0*	*1*	*2*	*1*	*0*	*0*	*2*	*2*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2035 WITHOUT DEVELOPMENT VOLUMES		**19**	**19**	**99**	**27**	**82**	**3**	**241**	**417**	**8**	**3**	**419**	**17**

Old Skippack Road & Salfordville Road (S.R. 1017)
INTERSECTION VOLUME PROJECTION SUMMARY
Weekday 7 AM - 9 AM

		EASTBOUND Salfordville Road (S.R. 1017)			WESTBOUND Salfordville Road (S.R. 1017)			NORTHBOUND			SOUTHBOUND Old Skippack Road		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		0	316	0	0	61	3	0	0	0	0	0	0
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**0**	**316**	**0**	**0**	**61**	**3**	**0**	**0**	**0**	**0**	**0**	**0**
Background Growth to 2035	3.57%	0	12	0	0	2	0	0	0	0	0	0	0
Harleysville Homes	DIST IN		15%										
	DIST OUT					(15%)							
	ASSIGN	0	1	0	0	3	0	0	0	0	0	0	0
Morris Homes	DIST IN		15%										
	DIST OUT					(15%)							
	ASSIGN	0	1	0	0	3	0	0	0	0	0	0	0
Total Other Development New Trip Assignments		*0*	*2*	*0*	*0*	*6*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2035 WITHOUT DEVELOPMENT VOLUMES		**0**	**330**	**0**	**0**	**69**	**3**	**0**	**0**	**0**	**0**	**0**	**0**

Old Skippack Road & Salfordville Road (S.R. 1017)
INTERSECTION VOLUME PROJECTION SUMMARY
Weekday 4 PM - 6 PM

		EASTBOUND Salfordville Road (S.R. 1017)			WESTBOUND Salfordville Road (S.R. 1017)			NORTHBOUND			SOUTHBOUND Old Skippack Road		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		1	127	0	0	290	29	0	0	0	0	0	0
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	6	1	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**1**	**127**	**0**	**0**	**296**	**30**	**0**	**0**	**0**	**0**	**0**	**0**
Background Growth to 2035	3.57%	0	5	0	0	11	1	0	0	0	0	0	0
Harleysville Homes	DIST IN		15%										
	DIST OUT					(15%)							
	ASSIGN	0	2	0	0	1	0	0	0	0	0	0	0
Morris Homes	DIST IN		15%										
	DIST OUT					(15%)							
	ASSIGN	0	3	0	0	1	0	0	0	0	0	0	0
Total Other Development New Trip Assignments		*0*	*5*	*0*	*0*	*2*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2035 WITHOUT DEVELOPMENT VOLUMES		**1**	**137**	**0**	**0**	**309**	**31**	**0**	**0**	**0**	**0**	**0**	**0**

Harleysville Pike (S.R. 0113) & Old Morris Road

INTERSECTION VOLUME PROJECTION SUMMARY

Weekday 7 AM - 9 AM

		EASTBOUND			WESTBOUND Old Morris Road			NORTHBOUND Harleysville Pike (S.R. 0113)			SOUTHBOUND Harleysville Pike (S.R. 0113)		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		0	0	0	4	0	13	0	406	2	9	402	0
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**0**	**0**	**0**	**4**	**0**	**13**	**0**	**406**	**2**	**9**	**402**	**0**
Background Growth to 2035	3.57%	0	0	0	0	0	0	0	14	0	0	14	0
Harleysville Homes	DIST IN											5%	
	DIST OUT								(5%)				
	ASSIGN	0	0	0	0	0	0	0	1	0	0	0	0
Morris Homes	DIST IN											5%	
	DIST OUT								(5%)				
	ASSIGN	0	0	0	0	0	0	0	1	0	0	0	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*2*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2035 WITHOUT DEVELOPMENT VOLUMES		**0**	**0**	**0**	**4**	**0**	**13**	**0**	**422**	**2**	**9**	**416**	**0**

Harleysville Pike (S.R. 0113) & Old Morris Road

INTERSECTION VOLUME PROJECTION SUMMARY

Weekday 4 PM - 6 PM

		EASTBOUND			WESTBOUND Old Morris Road			NORTHBOUND Harleysville Pike (S.R. 0113)			SOUTHBOUND Harleysville Pike (S.R. 0113)		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		0	0	0	3	0	7	0	439	1	6	424	0
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**0**	**0**	**0**	**3**	**0**	**7**	**0**	**439**	**1**	**6**	**424**	**0**
Background Growth to 2035	3.57%	0	0	0	0	0	0	0	16	0	0	15	0
Harleysville Homes	DIST IN											5%	
	DIST OUT								(5%)				
	ASSIGN	0	0	0	0	0	0	0	0	0	0	1	0
Morris Homes	DIST IN											5%	
	DIST OUT								(5%)				
	ASSIGN	0	0	0	0	0	0	0	1	0	0	1	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*2*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2035 WITHOUT DEVELOPMENT VOLUMES		**0**	**0**	**0**	**3**	**0**	**7**	**0**	**456**	**1**	**6**	**441**	**0**

Harleysville Pike (S.R. 0113) & Landis Road

INTERSECTION VOLUME PROJECTION SUMMARY

Weekday 7 AM - 9 AM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Landis Road			Landis Road			Harleysville Pike (S.R. 0113)			Harleysville Pike (S.R. 0113)		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		13	61	11	9	6	23	0	391	17	37	386	5
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**13**	**61**	**11**	**9**	**6**	**23**	**0**	**391**	**17**	**37**	**386**	**5**
Background Growth to 2035	3.57%	0	2	0	0	0	1	0	14	1	1	14	0
Harleysville Homes	DIST IN											5%	
	DIST OUT								(5%)				
	ASSIGN	0	0	0	0	0	0	0	1	0	0	0	0
Morris Homes	DIST IN											5%	
	DIST OUT								(5%)				
	ASSIGN	0	0	0	0	0	0	0	1	0	0	0	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*2*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2035 WITHOUT DEVELOPMENT VOLUMES		**13**	**63**	**11**	**9**	**6**	**24**	**0**	**407**	**18**	**38**	**400**	**5**

Harleysville Pike (S.R. 0113) & Landis Road

INTERSECTION VOLUME PROJECTION SUMMARY

Weekday 4 PM - 6 PM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Landis Road			Landis Road			Harleysville Pike (S.R. 0113)			Harleysville Pike (S.R. 0113)		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		17	12	6	9	59	61	8	422	15	25	412	17
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**17**	**12**	**6**	**9**	**59**	**61**	**8**	**422**	**15**	**25**	**412**	**17**
Background Growth to 2035	3.57%	1	0	0	0	2	2	0	15	1	1	15	1
Harleysville Homes	DIST IN											5%	
	DIST OUT								(5%)				
	ASSIGN	0	0	0	0	0	0	0	0	0	0	1	0
Morris Homes	DIST IN											5%	
	DIST OUT								(5%)				
	ASSIGN	0	0	0	0	0	0	0	1	0	0	1	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*2*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2035 WITHOUT DEVELOPMENT VOLUMES		**18**	**12**	**6**	**9**	**61**	**63**	**8**	**438**	**16**	**26**	**429**	**18**

Attachment 6

Capacity and Levels-of-Service Methodology

425 Commerce Drive, Suite 200, Fort Washington, PA 19034
P: 215.283.9444
mcmahonassociates.com | bowman.com

CAPACITY/LEVEL-OF-SERVICE ANALYSIS METHODOLOGY

The detailed capacity/level-of-service analysis contained in this transportation impact study was performed in accordance with the standard techniques contained in the *Highway Capacity Manual 6th Edition.* By definition, capacity represents "the maximum sustainable hourly flow rate at which persons or vehicles reasonably can be expected to traverse a point or a uniform section of a lane or roadway during a given time period under prevailing roadway, environmental, traffic, and control conditions." The level at which an intersection or a uniform section of a lane or roadway function can be expressed in terms of a level of service. Level of service (LOS) is defined as "a quantitative stratification of a performance measure or measures that represent quality of service, measured on an A-F scale, with LOS A representing the best operating conditions from the traveler's perspective and LOS F the worst."

Stop-Controlled Intersections

At unsignalized stop-controlled intersections, such as two-way stop-controlled (TWSC) or all-way stop-controlled (AWSC), a methodology for evaluating the relative functioning of these intersections is based upon the control delay. For these types of unsignalized intersections, the analysis of the control delay is based upon the following data:

- Number and configuration of lanes on each approach;
- Percentage of heavy vehicles on each approach;
- Demand flow rate for each entering vehicular movement and pedestrian crossing movement;
- Unique geometric factors such as, channelization aspects; two-way left-turn lanes, raised or striped median storage; approach grades, flared approaches on the minor street; and upstream signals within 0.25 miles.

At TWSC intersections, only drivers on the minor street approaches are required to stop before proceeding into the intersection and left-turning drivers from the major street may have to yield to on-coming major street through or right-turning traffic, but are not required to stop in the absence of on-coming traffic. The capacity at stop-controlled legs is based primarily on three factors: the distribution of gaps in the major stream, driver judgment in selecting the gaps, and the follow-up headways required by each driver in a queue.

At AWSC intersections, every vehicle is required to stop at the intersection before proceeding, and as a result, the decision to proceed is a function of the traffic conditions on the other approaches. Each driver proceeds only after determining that no vehicles are currently in the intersection and that it is the driver's turn to proceed. Capacity at an AWSC intersection is described by the saturation headway or time between departures of successive vehicles on a given approach for a particular case assuming a continuous queue; departure headway or the average time between departures of successive vehicles on a given approach accounting for the probability of each possible case; and service time or the average time sent by a vehicle in first position waiting to depart.

At both TWSC and AWSC intersections, the level of service is based upon the control delay, as well as the corresponding volume-to-capacity ratio for each movement/lane group. For TWSC intersections, the level of service is not calculated for major-street approaches or for the intersection as a whole; however, the intersection-wide level of service is calculated for AWSC intersections. The following table provides a summary of the relationship between the level of service, control delay, and volume-to-capacity ratio for TWSC and AWSC intersections.

Control Delay (Sec/Veh)	LOS by Volume-to-Capacity Ratio	
	v/c ≤ 1.0	v/c > 1.0
≤ 10	A	F
> 10 – 15	B	F
> 15 – 25	C	F
> 25 – 35	D	F
> 35 – 50	E	F
> 50	F	F

Signalized Intersections

At three or four-legged signalized intersections, a methodology for evaluating the capacity and quality of service provided to road users traveling through the signalized intersection. For signalized intersections, the level of service can be characterized for the entire intersection, each approach, and each lane group. The level of service is based upon the control delay and volume-to-capacity ratio. The delay quantifies the increase in travel time due to the traffic signal control and is a surrogate measure of driver discomfort and fuel consumption, while the volume-to-capacity ratio quantifies the degree to which a phase's capacity is utilized by a lane group. Input data in determining the delay and volume-to-capacity ratio include:

- Demand flow rate for each entering vehicular movement and pedestrian crossing movement, including right-turn on red volumes and percent of heavy vehicles;
- Initial queue for each lane group;
- Number and configuration of lanes on each approach;
- Type of signal control and phase sequence;
- Allocation of minimum/maximum green times and clearance intervals (Yellow plus All Red phases); and
- Phase recall.

At signalized intersections, the level of service is based upon the control delay, as well as the corresponding volume-to-capacity ratio for each movement/lane group. The following table provides a summary of the relationship between the level of service, control delay, and volume-to-capacity ratio for signalized intersections.

Control Delay (Sec/Veh)	**LOS by Volume-to-Capacity Ratio**	
	v/c ≤ 1.0	**v/c > 1.0**
≤ 10	A	F
> 10 – 20	B	F
> 20 – 35	C	F
> 35 – 55	D	F
> 55 – 80	E	F
> 80	F	F

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Attachment 7

Levels-of-Service Matrix Tables

425 Commerce Drive, Suite 200, Fort Washington, PA 19034
P: 215.283.9444
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Table 2 - Level of Service Matrices

1. Harleysville Pike (S.R. 0113) and Whittaker Way

Time Period			Weekday Morning Peak Hour		Weekday Afternoon Peak Hour	
Year			2022	2035 Design Year	2022	2035 Design Year
Development Condition			Existing	w/o Dev	Existing	w/o Dev
Whittaker Way	WB	Left Right	B 11.0	B 11.1	B 11.2	B 11.4
Harleysville Pike (S.R. 0113)	NB	Thru Right	(1)	(1)	(1)	(1)
	SB	Left	A 8.7	A 8.7	A 9.6	A 9.6
		Thru	(1)	(1)	(1)	(1)
Overall			A 0.1	A 0.1	A 0.1	A 0.1

(1) Movement operates at free-flow conditions.

Table 2 - Level of Service Matrices

2. Cross Road (S.R. 1020) and Harleysville Pike (S.R. 0113)

Time Period			Weekday Morning Peak Hour						Weekday Afternoon Peak Hour					
Year			2022	2035 Design Year					2022	2035 Design Year				
Development Condition			Existing	w/o Dev	Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4	Existing	w/o Dev	Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4
Cross Road (S.R. 1020)	EB	Left	F	F	E	C	D	E	F	F	E	D	E	E
		Right	99.8	106.9	64.7	27.9	50.8	64.8	92.5	95.2	66.4	49.4	55.6	77.9
Harleysville Pike (S.R. 0113)	NB	Left	C	C	D	(1)	(1)	D	C	C	D	(1)	(1)	E
		Thru	29.3	29.8	35.7			35.6	21.1	21.5	43.8			58.4
	SB	Thru	A	A	A	A	A	A	A	A	A	A	A	A
		Right	1.5	1.4	1.1	2.2	1.0	3.0	2.4	2.2	0.9	0.7	0.7	2.0
Overall			C	C	C	B	C	C	C	C	C	B	B	C
			26.4	27.7	26.8	11.1	20.4	25.3	22.0	22.7	28.8	16.0	19.3	34.2

(1) Movement does not exist

Table 2 - Level of Service Matrices

3. Salfordville Road (S.R. 1017)/Morris Road and Harleysville Pike (S.R. 0113)

Time Period			Weekday Morning Peak Hour						Weekday Afternoon Peak Hour					
Year			2022	2035 Design Year					2022	2035 Design Year				
Development Condition			Existing	w/o Dev	Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4	Existing	w/o Dev	Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4
Salfordville Road (S.R. 1017)	EB	Left Thru Right	F 175.3	F 194.3	E 66.2	B 18.4	D 35.2	E 58.7	F 167.2	F 188.9	D 38.5	A 8.5	B 18.1	C 29.2
Morris Road	WB	Left Thru Right	D 50.9	D 51.5	E 55.9	B 18.3	C 29.2	E 69.8	F 138.5	F 167.6	E 63.4	B 19.2	C 32.8	E 62.7
Harleysville Pike (S.R. 0113)	NB	Left Thru Right	A 2.9	A 3.4	A 1.7	A 3.1	(1)	A 3.5	A 6.3	A 7.8	A 4.0	A 7.3	(1)	A 3.9
	SB	Left Thru Right	E 57.0	E 58.9	D 53.8	(1)	C 33.2	(1)	E 55.8	E 57.9	D 53.6	(1)	D 49.8	(1)
Overall			E 68.1	E 74.2	D 43.1	B 14.2	C 33.3	D 42.2	D 48.9	E 55.5	D 37.5	B 15.4	C 33.3	C 31.2

(1) Movement does not exist

Table 2 - Level of Service Matrices

4. Salfordville Road (S.R. 1017) and Old Skippack Road

Time Period			Weekday Morning Peak Hour						Weekday Afternoon Peak Hour					
Year			2022	2035 Design Year					2022	2035 Design Year				
Development Condition			Existing	w/o Dev	Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4	Existing	w/o Dev	Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4
Salfordville Road (S.R. 1017)	EB	Left / Thru	A 0.0	A 0.0	(1)	(1)	(1)	N/A	A 0.1	A 0.1	(1)	(1)	(1)	N/A
Salfordville Road (S.R. 1017)	WB	Thru / Right	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Overall			A 0.0	A 0.0	N/A	N/A	N/A	N/A	A 0.0	A 0.0	N/A	N/A	N/A	N/A

(1) Movement operates at free-flow conditions.

Table 2 - Level of Service Matrices

5. Harleysville Pike (S.R. 0113) and Old Morris Road

Time Period			Weekday Morning Peak Hour						Weekday Afternoon Peak Hour					
Year			2022	2035 Design Year					2022	2035 Design Year				
Development Condition			Existing	w/o Dev	Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4	Existing	w/o Dev	Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4
Old Morris Road	WB	Left / Right	B 12.0	B 12.2	(1)	(2)	(1)	(2)	B 12.3	B 12.6	(1)	(2)	(1)	(2)
Harleysville Pike (S.R. 0113)	NB	Thru / Right	(1)	(1)	(1)	(1)	(2)	(1)	(1)	(1)	(1)	(1)	(2)	(1)
	SB	Left	A 0.2	A 0.2	A 9.0	A 9.0	(3)	A 9.0	A 0.1	A 0.1	A 9.0	A 8.9	(3)	A 8.9
		Thru						(2)						(2)
Overall			A 0.3	A 0.3	A 0.5	A 0.5	N/A	A 0.5	A 0.2	A 0.2	A 0.3	A 0.4	N/A	A 0.4

(1) Movement operates at free-flow conditions.

Table 2 - Level of Service Matrices

6. Landis Road and Harleysville Pike (S.R. 0113)

Time Period			Weekday Morning Peak Hour						Weekday Afternoon Peak Hour					
Year			2022	2035 Design Year					2022	2035 Design Year				
Development Condition			Existing	w/o Dev	Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4	Existing	w/o Dev	Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4
Landis Road	EB	Left / Thru / Right	B 18.6	B 19.2	B 13.4	B 13.4	B 13.4	B 13.4	B 16.8	B 17.3	B 12.4	B 12.4	B 12.4	B 12.4
Landis Road	WB	Left / Thru / Right	B 17.7	B 18.2	B 12.8	B 12.8	B 12.8	B 12.8	B 18.4	B 19.0	B 13.6	B 13.6	B 13.6	B 13.6
Harleysville Pike (S.R. 0113)	NB	Left	A 4.4	A 4.4	A 0.0	A 0.0	A 0.0	A 0.0	A 4.6	A 4.6	A 7.6	A 7.6	A 7.6	A 7.6
Harleysville Pike (S.R. 0113)	NB	Thru / Right			A 6.4	A 6.4	A 6.4	A 6.4			A 6.5	A 6.5	A 6.5	A 6.5
Harleysville Pike (S.R. 0113)	SB	Left	A 4.2	A 4.3	A 8.6	A 8.6	A 8.6	A 8.6	A 4.3	A 4.4	A 8.5	A 8.5	A 8.5	A 8.5
Harleysville Pike (S.R. 0113)	SB	Thru / Right			A 6.0	A 6.0	A 6.0	A 6.0			A 6.0	A 6.0	A 6.0	A 6.0
Overall			A 6.0	A 6.1	A 7.2	A 7.2	A 7.2	A 7.2	A 6.2	A 6.3	A 7.3	A 7.3	A 7.3	A 7.3

Table 2 - Level of Service Matrices

7. New Harleysville Pike (S.R. 0113) and Whittaker Way

Time Period			Weekday Morning Peak Hour				Weekday Afternoon Peak Hour			
Year			2035 Design Year				2035 Design Year			
Development Condition			Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4	Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4
Whittaker Way	EB	Left	B 12.8	B 12.7	C 25.8	B 12.7	A 9.8	A 9.7	C 27.3	A 9.7
		Thru Right			B 12.6				A 9.8	
	WB	Left Thru Right	C 18.1	C 17.0	C 16.5	C 18.4	B 13.8	B 13.0	B 13.0	B 14.4
New Harleysville Pike (S.R. 0113)	NB	Left	A 9.4	(2)	(2)	A 9.2	A 9.5	(2)	(2)	A 9.7
		Thru Right	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
	SB	Left	A 8.6	A 8.7	A 8.7	A 8.6	A 9.0	A 9.6	A 9.6	A 8.8
		Thru Right	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Overall			A 4.0	A 4.3	A 8.5	A 4.9	A 3.2	A 1.2	A 5.5	A 4.2

(1) Movement operates at Free flow conditions

Table 2 - Level of Service Matrices

8. New Harleysville Pike (S.R. 0113) and Morris Road

Time Period			Weekday Morning Peak Hour						Weekday Afternoon Peak Hour					
Year			2035 Design Year						2035 Design Year					
Development Condition			Alt Build #1	Alt Build #2A	Alt Build #2B	Alt Build #3A	Alt Build #3B	Alt Build #4	Alt Build #1	Alt Build #2A	Alt Build #2B	Alt Build #3A	Alt Build #3B	Alt Build #4
Morris Road	EB	Left / Thru / Right	C 19.6	D 29.1	B 15.1	C 20.2	B 15.6	C 19.6	E 48.7	(2)	C 23.8	(2)	B 19.0	D 28.5
Morris Road	WB	Left / Thru / Right	B 14.1	C 18.7	B 12.8	C 17.9	B 12.6	C 15.5	D 30.5	F 275.0	C 21.3	F 211.8	C 20.2	C 23.4
New Harleysville Pike (S.R. 0113)	NB	Left	A 9.1	A 9.9	A 9.7	A 9.3	A 8.0	A 0.0	A 9.6	B 12.0	B 13.7	B 10.6	A 7.9	A 0.0
New Harleysville Pike (S.R. 0113)	NB	Thru / Right	(1)	(1)	A 5.2	(1)	A 7.5	(1)	(1)	(1)	A 5.1	(1)	A 5.3	(1)
New Harleysville Pike (S.R. 0113)	SB	Left	A 0.0	A 9.7	A 5.8	A 0.0	A 0.0	A 9.8	A 0.0	A 8.8	A 6.0	A 0.0	A 0.0	A 8.8
New Harleysville Pike (S.R. 0113)	SB	Thru / Right	(1)	(1)	A 6.9	(1)	A 6.4	(1)	(1)	(1)	A 6.3	(1)	A 4.6	(1)
Overall			A 7.9	A 6.5	A 8.4	A 5.0	A 9.0	A 4.3	B 13.5	D 28.8	B 10.5	C 22.0	A 8.1	A 5.8

(1) Movement operates at free flow conditions

Table 2 - Level of Service Matrices

9. New Harleysville Pike (S.R. 0113) and Old Morris Road

Time Period			Weekday Morning Peak Hour				Weekday Afternoon Peak Hour			
Year			2035 Design Year				2035 Design Year			
Development Condition			Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4	Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4
Old Morris Road	EB	Left / Thru / Right	D 25.2	D 27.6	(2)	D 28.4	D 26.3	D 26.6	(2)	D 27.6
Old Morris Road	WB	Left / Thru / Right	B 13.6	B 13.7	B 12.2	B 13.8	B 14.4	C 15.4	B 13.2	C 15.6
New Harleysville Pike (S.R. 0113)	NB	Left	A 0.0	(2)	(1)	(2)	A 0.0	(2)	(1)	(2)
New Harleysville Pike (S.R. 0113)	NB	Thru / Right	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New Harleysville Pike (S.R. 0113)	SB	Left	A 0.0	A 0.0	A 0.0	A 0.0	A 0.0	A 0.0	A 0.0	A 0.0
New Harleysville Pike (S.R. 0113)	SB	Thru	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Overall			A 5.0	A 5.1	A 0.2	A 5.2	A 5.2	A 3.7	A 0.1	A 3.8

(1) Movement operates at free flow conditions

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Attachment 8

95th Percentile Queue Matrix Tables

425 Commerce Drive, Suite 200, Fort Washington, PA 19034
P: 215.283.9444
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Table 3 - 95th Percentile Queue Matrices (feet)

1. Harleysville Pike (S.R. 0113) and Whittaker Way

Time Period			Current Storage (1)	Future Storage (2)	Weekday Morning Peak Hour		Weekday Afternoon Peak Hour	
Year					2022	2035 Design Year	2022	2035 Design Year
Development Condition					Existing	w/o Dev	Existing	w/o Dev
Whittaker Way	WB	Left / Right	*1,000'*		0	0	0	0
Harleysville Pike (S.R. 0113)	NB	Thru / Right	*1,000'+*		0	0	0	0
	SB	Left	25'		0	0	0	0
		Thru	*665'*		0	0	0	0

(1) Distance to adjacent intersections shown in italics.

(2) Future storage/distance to adjacent intersections shown if different/improved from existing conditions.

Table 3 - 95th Percentile Queue Matrices (feet)

2. Cross Road (S.R. 1020) and Harleysville Pike (S.R. 0113)

Time Period			Current Storage (1)	Future Storage (2)	Weekday Morning Peak Hour						Weekday Afternoon Peak Hour					
Year					2022	2035 Design Year					2022	2035 Design Year				
Development Condition					Existing	w/o Dev	Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4	Existing	w/o Dev	Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4
Cross Road (S.R. 1020)	EB	Left Right	*1,000'+*		372	388	291	166	259	267	287	306	227	191	202	251
Harleysville Pike (S.R. 0113)	NB	Left Thru	*1,000'+*		228	238	66	(4)	(4)	66	409	431	198	(4)	(4)	255
	SB	Thru Right	25'		(3)	(3)	(3)	(3)	(3)	31	(3)	(3)	(3)	(3)	(3)	16

(1) Distance to adjacent intersections shown in italics.

(2) Future storage/distance to adjacent intersections shown if different/improved from existing conditions.

(3) Queue metered by upstream signal.

(4) Movement does not exist

Table 3 - 95th Percentile Queue Matrices (feet)

3. Salfordville Road (S.R. 1017)/Morris Road and Harleysville Pike (S.R. 0113)

Time Period			Current Storage (1)	Future Storage (2)	Weekday Morning Peak Hour						Weekday Afternoon Peak Hour					
Year					2022	2035 Design Year					2022	2035 Design Year				
Development Condition					Existing	w/o Dev	Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4	Existing	w/o Dev	Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4
Salfordville Road (S.R. 1017)	EB	Left Thru Right	*1,000'+*		627	663	480	209	251	377	331	362	167	69	108	138
Morris Road	WB	Left Thru Right	*1,000'+*		28	43	183	153	122	242	267	302	501	460	485	459
Harleysville Pike (S.R. 0113)	NB	Left Thru Right	25'		20	26	4	6	(3)	28	20	93	15	12	(3)	26
Harleysville Pike (S.R. 0113)	SB	Left Thru Right	*1,000'+*		538	562	192	(3)	126	(3)	611	644	201	(3)	158	(3)

(1) Distance to adjacent intersections shown in italics.

(2) Future storage/distance to adjacent intersections shown if different/improved from existing conditions.

(3) Movement does not exist

Table 3 - 95th Percentile Queue Matrices (feet)

4. Salfordville Road (S.R. 1017) and Old Skippack Road

Time Period			Current Storage (1)	Future Storage (2)	Weekday Morning Peak Hour						Weekday Afternoon Peak Hour					
Year					2022	2035 Design Year					2022	2035 Design Year				
Development Condition					Existing	w/o Dev	Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4	Existing	w/o Dev	Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4
Salfordville Road (S.R. 1017)	EB	Left Thru	*1,000'+*		0	0	0	0			0	0	0	0		
	WB	Thru Right	N/A		0	0	0	0			0	0	0	0		

(1) Distance to adjacent intersections shown in italics.

(2) Future storage/distance to adjacent intersections shown if different/improved from existing conditions.

Table 3 - 95th Percentile Queue Matrices (feet)

5. Harleysville Pike (S.R. 0113) and Old Morris Road

Time Period			Current Storage (1)	Future Storage (2)	Weekday Morning Peak Hour						Weekday Afternoon Peak Hour					
Year					2022	2035 Design Year					2022	2035 Design Year				
Development Condition					Existing	w/o Dev	Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4	Existing	w/o Dev	Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4
Old Morris Road	WB	Left Right	*1,000'+*		3	3	0	0	0	0	3	3	0	0	0	0
Harleysville Pike (S.R. 0113)	NB	Thru Right	*1,000'+*		0	0	0	0	0	0	0	0	0	0	0	0
Harleysville Pike (S.R. 0113)	SB	Left Thru	*585'*		0	0	0	0	0	0	0	0	0	0	0	0

(1) Distance to adjacent intersections shown in italics.

(2) Future storage/distance to adjacent intersections shown if different/improved from existing conditions.

Table 3 - 95th Percentile Queue Matrices (feet)

6. Landis Road and Harleysville Pike (S.R. 0113)

Time Period			Current Storage (1)	Future Storage (2)	Weekday Morning Peak Hour						Weekday Afternoon Peak Hour					
Year					2022	2035 Design Year					2022	2035 Design Year				
Development Condition					Existing	w/o Dev	Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4	Existing	w/o Dev	Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4
Landis Road	EB	Left / Thru / Right	*920'*		38	40	25	25	25	25	13	15	10	10	10	10
Landis Road	WB	Left / Thru / Right	*1,000'*+		15	15	10	10	10	10	43	45	28	28	28	28
Harleysville Pike (S.R. 0113)	NB	Left	*585'*		25	30	0	0	0	0	38	43	3	3	3	3
		Thru / Right					55	55	55	55			55	55	55	55
Harleysville Pike (S.R. 0113)	SB	Left	*1,000'*+		35	40	5	5	5	5	38	40	5	5	5	5
		Thru / Right					28	28	28	28			33	33	33	33

(1) Distance to adjacent intersections shown in italics.

(2) Future storage/distance to adjacent intersections shown if different/improved from existing conditions.

Table 3 - 95th Percentile Queue Matrices (feet)

7. New Harleysville Pike (S.R. 0113) and Whittaker Way

Time Period			Future Storage (2)	Weekday Morning Peak Hour				Weekday Afternoon Peak Hour			
Year				2035 Design Year				2035 Design Year			
Development Condition				Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4	Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4
Whittaker Way	EB	Left	600'+	38	45	100	45	8	10	75	13
		Thru	100'			35				8	
		Right									
	WB	Left	600'+	3	3	3	3	0	0	0	0
		Thru									
		Right									
Harleysville Pike (S.R. 0113)	NB	Left	100'	5	(3)	(3)	5	18	(3)	(3)	25
		Thru	600'+	0	0	0	0	0	0	0	0
		Right									
	SB	Left	100	0	0	0	0	0	0	0	0
		Thru	600'+	0	0	0	0	0	0	0	0
		Right									

(1) Distance to adjacent intersections shown in italics.

(2) Future storage/distance to adjacent intersections shown if different/improved from existing conditions.

(3) Movement does not exist

Table 3 - 95th Percentile Queue Matrices (feet)

8. Morris Road and New Harleysville Pike (S.R. 0113)

Time Period			Future Storage (2)	Weekday Morning Peak Hour						Weekday Afternoon Peak Hour					
Year				2035 Design Year						2035 Design Year					
Development Condition				Alt Build #1	Alt Build #2A	Alt Build #2B	Alt Build #3A	Alt Build #3B	Alt Build #4	Alt Build #1	Alt Build #2A	Alt Build #2B	Alt Build #3A	Alt Build #3B	Alt Build #4
Morris Road	EB	Left / Thru / Right	600'+	90	78	50	65	68	50	120	(3)	60	(3)	43	50
Morris Road	WB	Left / Thru / Right	600'+	5	5	5	5	5	5	60	225	63	203	55	45
New Harleysville Pike (S.R. 0113)	NB	Left	100'	3	8	13	5	10	0	13	43	115	30	58	0
New Harleysville Pike (S.R. 0113)	NB	Thru / Right	600'+	0	0	20	0	73	0	0	0	50	0	70	0
New Harleysville Pike (S.R. 0113)	SB	Left	100'	0	0	0	0	0	0	0	0	0	0	0	0
New Harleysville Pike (S.R. 0113)	SB	Thru / Right	600'+	0	0	60	0	43	0	0	0	105	0	40	0

(1) Distance to adjacent intersections shown in italics.

(2) Future storage/distance to adjacent intersections shown if different/improved from existing conditions.

(3) Volume exceeds capacity, no queue reported by HCM

Table 3 - 95th Percentile Queue Matrices (feet)

9. Old Morris Road and New Harleysville Pike (S.R. 0113)

Time Period			Future Storage (2)	Weekday Morning Peak Hour				Weekday Afternoon Peak Hour			
Year				2035 Design Year				2035 Design Year			
Development Condition				Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4	Alt Build #1	Alt Build #2	Alt Build #3	Alt Build #4
Old Morris Road	EB	Left Thru Right	350'	70	73	(3)	75	78	55	(3)	58
	WB	Left Thru Right	600'	3	3	3	3	3	3	3	3
New Harleysville Pike (S.R. 0113)	NB	Left	100'	0	(3)	0	(3)	0	(3)	0	(3)
		Thru Right	600'+	0	0	0	0	0	0	0	0
	SB	Left	100'	0	0	0	0	0	0	0	0
		Thru Right	600'+	0	0	0	0	0	0	0	0

(1) Distance to adjacent intersections shown in italics.

(2) Future storage/distance to adjacent intersections shown if different/improved from existing conditions.

(3) Movement does not exist

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Attachment 9

2022 Existing Conditions
Capacity/Level-of-Service
Analysis Worksheets

425 Commerce Drive, Suite 200, Fort Washington, PA 19034
P: 215.283.9444
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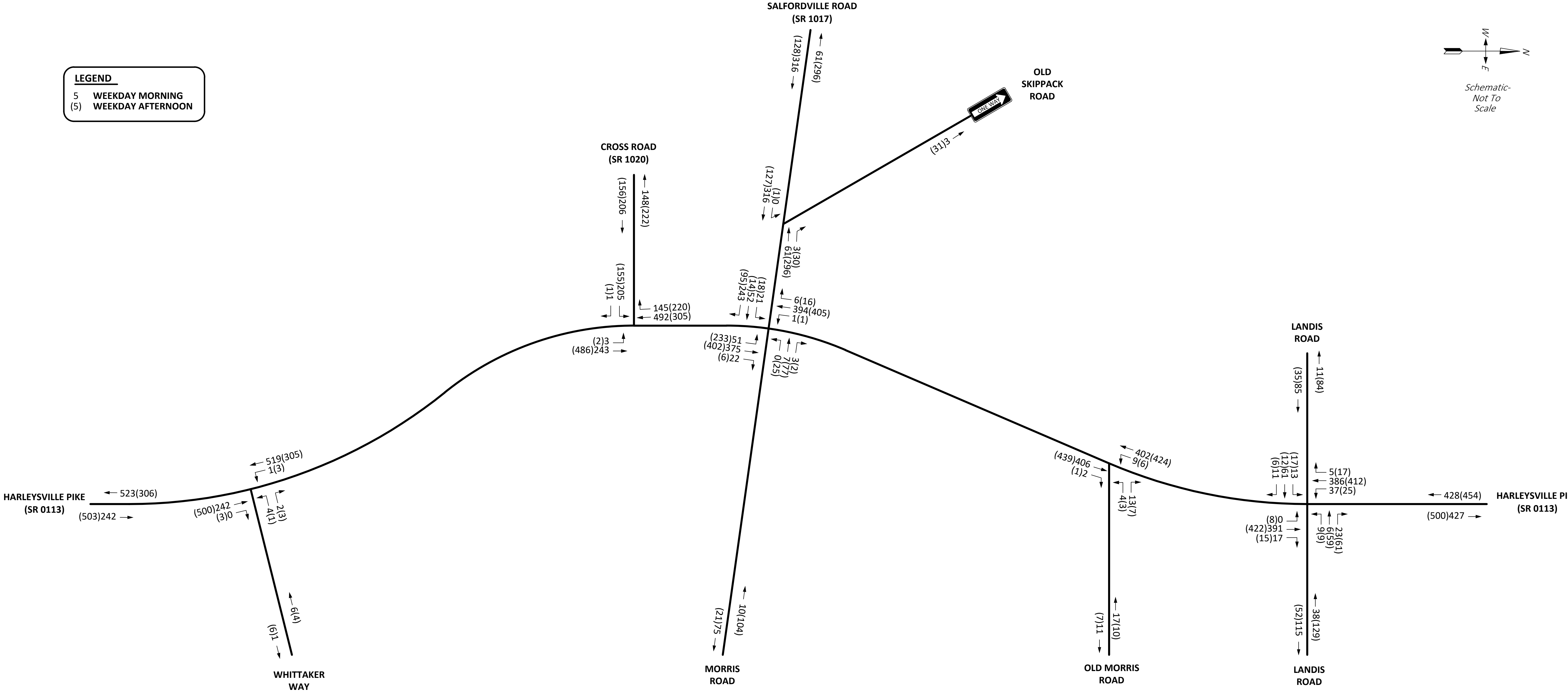

FIGURE C

2023 Existing Peak Hour Traffic Volumes

WALKABLE LEDERACH

LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PA

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Q:\PA-FTWA-MC\MCM\eng\LOWERSA1\822255_TCDI Walkable Lederach\Traffic\2-TrafficEval\7-Graphics\Figure 2A.dwg

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	4	2	242	0	1	519
Future Volume (vph)	4	2	242	0	1	519
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	14	14	12	12	12	12
Grade (%)	-2%		2%			-3%
Storage Length (ft)	0	0		0	25	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.955					
Flt Protected	0.968				0.950	
Satd. Flow (prot)	1793	0	1591	0	1736	1724
Flt Permitted	0.968				0.950	
Satd. Flow (perm)	1793	0	1591	0	1736	1724
Link Speed (mph)	25		45			45
Link Distance (ft)	706		871			367
Travel Time (s)	19.3		13.2			5.6
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	12%	0%	0%	6%
Adj. Flow (vph)	4	2	266	0	1	570
Shared Lane Traffic (%)						
Lane Group Flow (vph)	6	0	266	0	1	570
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	14		11			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	0.97	0.97	1.09	1.09	1.05	1.05
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	2	242	0	1	519
Future Vol, veh/h	4	2	242	0	1	519
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	25	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	2	-	-	-3
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	12	0	0	6
Mvmt Flow	4	2	266	0	1	570

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	838	266	0	0	266	0
Stage 1	266	-	-	-	-	-
Stage 2	572	-	-	-	-	-
Critical Hdwy	6	6	-	-	4.3	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	413	834	-	-	974	-
Stage 1	925	-	-	-	-	-
Stage 2	682	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	413	834	-	-	974	-
Mov Cap-2 Maneuver	538	-	-	-	-	-
Stage 1	925	-	-	-	-	-
Stage 2	681	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	610	974	-
HCM Lane V/C Ratio	-	-	0.011	0.001	-
HCM Control Delay (s)	-	-	11	8.7	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4	Ø6	Ø8	Ø9	Ø10
Lane Configurations												
Traffic Volume (vph)	205	1	3	243	492	145						
Future Volume (vph)	205	1	3	243	492	145						
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800						
Lane Width (ft)	12	12	12	12	11	11						
Grade (%)	-1%			1%	-2%							
Lane Util. Factor	1.00	1.00	*1.00	*1.00	1.00	1.00						
Frt	0.999				0.969							
Flt Protected	0.953			0.999								
Satd. Flow (prot)	1656	0	0	1623	1607	0						
Flt Permitted	0.953			0.996								
Satd. Flow (perm)	1656	0	0	1618	1607	0						
Right Turn on Red		No				No						
Satd. Flow (RTOR)												
Link Speed (mph)	40			35	35							
Link Distance (ft)	553			1699	100							
Travel Time (s)	9.4			33.1	1.9							
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96						
Heavy Vehicles (%)	4%	0%	33%	10%	6%	6%						
Adj. Flow (vph)	214	1	3	253	513	151						
Shared Lane Traffic (%)												
Lane Group Flow (vph)	215	0	0	256	664	0						
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Right	Left	Left	Left	Right						
Median Width(ft)	12			0	0							
Link Offset(ft)	0			0	0							
Crosswalk Width(ft)	16			16	16							
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.08	1.08	1.11	1.11						
Turning Speed (mph)	15	9	15			9						
Number of Detectors	1		1	1	0							
Detector Template	Left		Left									
Leading Detector (ft)	35		20	35	0							
Trailing Detector (ft)	-5		0	-5	0							
Detector 1 Position(ft)	-5		0	-5	0							
Detector 1 Size(ft)	40		20	40	6							
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex							
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0							
Detector 1 Queue (s)	0.0		0.0	0.0	0.0							
Detector 1 Delay (s)	0.0		0.0	0.0	0.0							
Turn Type	Prot		custom	NA	NA							
Protected Phases	1		5	2 5	6 10		2	4	6	8	9	10
Permitted Phases			2									
Detector Phase	1 9		5	2 5 6 11	6 10							
Switch Phase												
Minimum Initial (s)	5.0		3.0				15.0	5.0	19.0	5.0	8.0	8.0
Minimum Split (s)	13.0		12.0				25.0	14.0	25.0	14.0	13.0	18.0
Total Split (s)	31.0		21.0				64.0	40.0	64.0	40.0	31.0	40.0

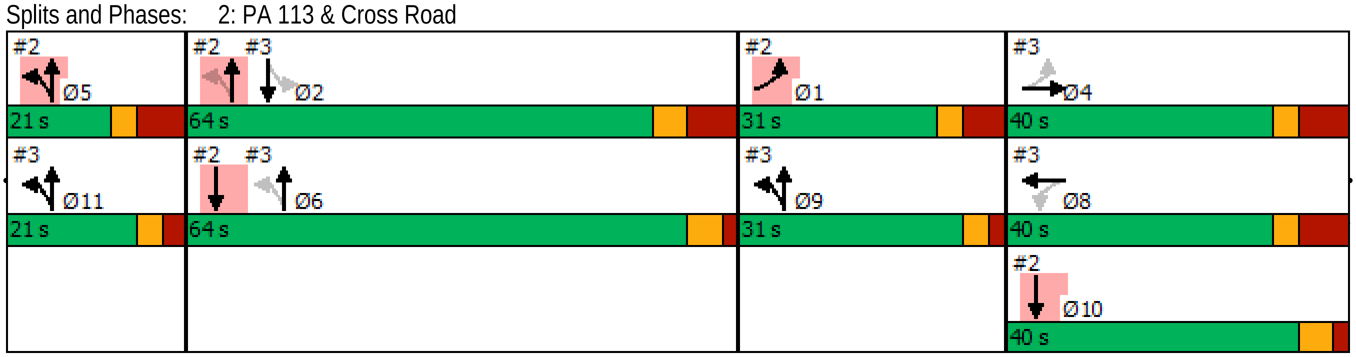
Lane Group	Ø11
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	11
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	6.0
Minimum Split (s)	12.0
Total Split (s)	21.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4	Ø6	Ø8	Ø9	Ø10
Total Split (%)	19.9%		13.5%				41%	26%	41%	26%	20%	26%
Maximum Green (s)	23.0		12.0				54.0	31.0	58.0	31.0	26.0	34.0
Yellow Time (s)	3.0		3.0				4.0	3.0	4.0	3.0	3.0	4.0
All-Red Time (s)	5.0		6.0				6.0	6.0	2.0	6.0	2.0	2.0
Lost Time Adjust (s)	0.0											
Total Lost Time (s)	8.0											
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0		3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None		None				Min	None	Min	None	None	None
Act Effct Green (s)	23.0			65.0	92.0							
Actuated g/C Ratio	0.15			0.42	0.59							
v/c Ratio	0.88			0.38	0.70							
Control Delay	98.3			29.3	1.5							
Queue Delay	1.6			0.0	0.0							
Total Delay	99.8			29.3	1.5							
LOS	F			C	A							
Approach Delay	99.8			29.3	1.5							
Approach LOS	F			C	A							
Queue Length 50th (ft)	218			158	0							
Queue Length 95th (ft)	#372			228	m0							
Internal Link Dist (ft)	473			1619	20							
Turn Bay Length (ft)												
Base Capacity (vph)	244			674	947							
Starvation Cap Reductn	0			0	0							
Spillback Cap Reductn	4			1	0							
Storage Cap Reductn	0			0	0							
Reduced v/c Ratio	0.90			0.38	0.70							

Intersection Summary

Area Type: Other
Cycle Length: 156
Actuated Cycle Length: 156
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.21
Intersection Signal Delay: 26.4 Intersection LOS: C
Intersection Capacity Utilization 60.4% ICU Level of Service B
Analysis Period (min) 15
* User Entered Value
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: PA 113 & Cross Road



Lane Group	Ø11
Total Split (%)	13%
Maximum Green (s)	15.0
Yellow Time (s)	3.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	52	243	0	7	3	51	375	22	1	394	6
Future Volume (vph)	21	52	243	0	7	3	51	375	22	1	394	6
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	12	12	12	12	12	12	11	11	11
Grade (%)		1%			-1%			1%			-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.896			0.963			0.993			0.998	
Flt Protected		0.997						0.994				
Satd. Flow (prot)	0	1437	0	0	1742	0	0	1624	0	0	1601	0
Flt Permitted		0.978						0.920			0.999	
Satd. Flow (perm)	0	1410	0	0	1742	0	0	1503	0	0	1599	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			35			35			35	
Link Distance (ft)		93			732			100			2015	
Travel Time (s)		1.6			14.3			1.9			39.3	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	19%	2%	3%	0%	0%	0%	8%	9%	9%	100%	9%	33%
Adj. Flow (vph)	23	56	261	0	8	3	55	403	24	1	424	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	340	0	0	11	0	0	482	0	0	431	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.18	1.18	1.18	1.07	1.07	1.07	1.08	1.08	1.08	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	0		1	1	
Detector Template	Left	Thru		Left	Thru							
Leading Detector (ft)	20	35		20	35		35	0		35	35	
Trailing Detector (ft)	0	-5		0	-5		-5	0		-5	-5	
Detector 1 Position(ft)	0	-5		0	-5		-5	0		-5	-5	
Detector 1 Size(ft)	20	40		20	40		40	6		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA			NA		custom	NA		Perm	NA	
Protected Phases		4			8		9 11	6 9 11			2	
Permitted Phases	4			8			6			2		
Detector Phase	4	4 10		8	8 10		9 11	6 9 11		2	2 6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0					15.0	15.0	
Minimum Split (s)	14.0	14.0		14.0	14.0					25.0	25.0	
Total Split (s)	40.0	40.0		40.0	40.0					64.0	64.0	

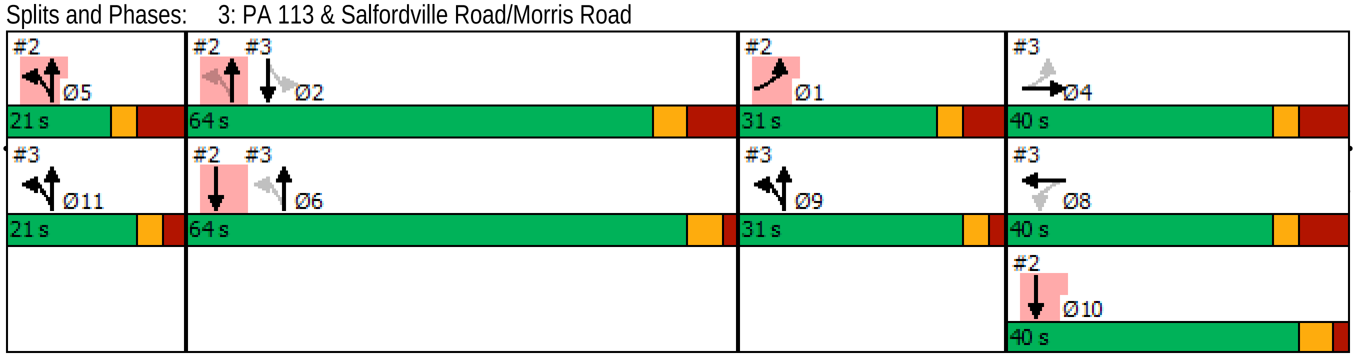
Lane Group	Ø1	Ø5	Ø6	Ø9	Ø10	Ø11
Lane Configurations						
Traffic Volume (vph)						
Future Volume (vph)						
Ideal Flow (vphpl)						
Lane Width (ft)						
Grade (%)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Turn Type						
Protected Phases	1	5	6	9	10	11
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	5.0	3.0	19.0	8.0	8.0	6.0
Minimum Split (s)	13.0	12.0	25.0	13.0	18.0	12.0
Total Split (s)	31.0	21.0	64.0	31.0	40.0	21.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	25.6%	25.6%		25.6%	25.6%					41.0%	41.0%	
Maximum Green (s)	31.0	31.0		31.0	31.0					54.0	54.0	
Yellow Time (s)	3.0	3.0		3.0	3.0					4.0	4.0	
All-Red Time (s)	6.0	6.0		6.0	6.0					6.0	6.0	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		9.0			9.0						10.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0					3.0	3.0	
Recall Mode	None	None		None	None					Min	Min	
Act Effct Green (s)		31.0			31.0			98.0			54.0	
Actuated g/C Ratio		0.20			0.20			0.63			0.35	
v/c Ratio		1.21			0.03			0.49			0.78	
Control Delay		175.3			50.9			2.9			57.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		175.3			50.9			2.9			57.0	
LOS		F			D			A			E	
Approach Delay		175.3			50.9			2.9			57.0	
Approach LOS		F			D			A			E	
Queue Length 50th (ft)		~422			9			5			393	
Queue Length 95th (ft)		#627			28			m20			538	
Internal Link Dist (ft)		13			652			20			1935	
Turn Bay Length (ft)												
Base Capacity (vph)		280			346			975			553	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		1.21			0.03			0.49			0.78	

Intersection Summary

Area Type: Other
Cycle Length: 156
Actuated Cycle Length: 156
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.21
Intersection Signal Delay: 68.1 Intersection LOS: E
Intersection Capacity Utilization 95.0% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: PA 113 & Salfordville Road/Morris Road



Lane Group	Ø1	Ø5	Ø6	Ø9	Ø10	Ø11
Total Split (%)	20%	13%	41%	20%	26%	13%
Maximum Green (s)	23.0	12.0	58.0	26.0	34.0	15.0
Yellow Time (s)	3.0	3.0	4.0	3.0	4.0	3.0
All-Red Time (s)	5.0	6.0	2.0	2.0	2.0	3.0
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	None	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	316	61	3	0	0
Future Volume (vph)	0	316	61	3	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	11	11	14	14
Grade (%)		1%	-1%		-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.994			
Flt Protected						
Satd. Flow (prot)	0	1607	1586	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1607	1586	0	0	0
Link Speed (mph)		40	40		35	
Link Distance (ft)		802	93		617	
Travel Time (s)		13.7	1.6		12.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	4%	7%	67%	0%	0%
Adj. Flow (vph)	0	340	66	3	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	340	69	0	0	0
Enter Blocked Intersection	Yes	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.18	1.18	1.11	1.11	0.98	0.98
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	4	13	406	2	9	402
Future Volume (vph)	4	13	406	2	9	402
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	11	11	12	12
Grade (%)	-2%		1%			-3%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.893		0.999			
Flt Protected	0.990					0.999
Satd. Flow (prot)	1485	0	1584	0	0	1663
Flt Permitted	0.990					0.999
Satd. Flow (perm)	1485	0	1584	0	0	1663
Link Speed (mph)	35		35			35
Link Distance (ft)	663		2015			653
Travel Time (s)	12.9		39.3			12.7
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	15%	9%	50%	0%	10%
Adj. Flow (vph)	4	15	456	2	10	452
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	0	458	0	0	462
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.13	1.13	1.05	1.05
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	13	406	2	9	402
Future Vol, veh/h	4	13	406	2	9	402
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	1	-	-	-3
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	15	9	50	0	10
Mvmt Flow	4	15	456	2	10	452

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	929	457	0	0	458	0
Stage 1	457	-	-	-	-	-
Stage 2	472	-	-	-	-	-
Critical Hdwy	6	6.15	-	-	4.3	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3	3.2	-	-	3	-
Pot Cap-1 Maneuver	366	627	-	-	835	-
Stage 1	765	-	-	-	-	-
Stage 2	754	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	360	627	-	-	835	-
Mov Cap-2 Maneuver	360	-	-	-	-	-
Stage 1	765	-	-	-	-	-
Stage 2	742	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	534	835	-
HCM Lane V/C Ratio	-	-	0.036	0.012	-
HCM Control Delay (s)	-	-	12	9.4	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	61	11	9	6	23	0	391	17	37	386	5
Future Volume (vph)	13	61	11	9	6	23	0	391	17	37	386	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	13	12	12	12	12	12	12	13	13	13
Grade (%)		-2%			-1%			1%			-4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.982			0.919			0.994			0.998	
Flt Protected		0.993			0.988						0.996	
Satd. Flow (prot)	0	1785	0	0	1525	0	0	1638	0	0	1701	0
Flt Permitted		0.938			0.890						0.933	
Satd. Flow (perm)	0	1686	0	0	1373	0	0	1638	0	0	1594	0
Right Turn on Red			No			Yes			Yes			No
Satd. Flow (RTOR)					27			6				
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		495			475			653			1186	
Travel Time (s)		9.6			9.3			9.9			18.0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	8%	2%	0%	11%	17%	4%	0%	8%	24%	8%	11%	20%
Adj. Flow (vph)	15	72	13	11	7	27	0	460	20	44	454	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	100	0	0	45	0	0	480	0	0	504	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.07	1.07	1.07	1.08	1.08	1.08	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	35		20	35		20	456		20	456	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								450			450	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA			NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	9.0	9.0		9.0	9.0		22.0	22.0		22.0	22.0	
Total Split (s)	21.0	21.0		21.0	21.0		62.0	62.0		62.0	62.0	
Total Split (%)	25.3%	25.3%		25.3%	25.3%		74.7%	74.7%		74.7%	74.7%	
Maximum Green (s)	15.0	15.0		15.0	15.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		5.0			5.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	

Intersection Summary	
Area Type:	Other
Cycle Length: 83	
Actuated Cycle Length: 47	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 6: PA 113 & Landis Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	61	11	9	6	23	0	391	17	37	386	5
Future Volume (veh/h)	13	61	11	9	6	23	0	391	17	37	386	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1831	1920	1950	1681	1596	1780	1794	1682	1457	1909	1864	1731
Adj Flow Rate, veh/h	15	72	13	11	7	20	0	460	18	44	454	6
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	8	2	0	11	17	4	0	8	24	8	11	20
Cap, veh/h	124	146	25	148	38	82	0	1009	39	142	1061	13
Arrive On Green	0.08	0.11	0.08	0.08	0.11	0.08	0.00	0.63	0.60	0.60	0.63	0.60
Sat Flow, veh/h	225	1364	237	333	358	768	0	1608	63	76	1691	21
Grp Volume(v), veh/h	100	0	0	38	0	0	0	0	478	504	0	0
Grp Sat Flow(s),veh/h/ln	1827	0	0	1460	0	0	0	0	1671	1789	0	0
Q Serve(g_s), s	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.2	0.0	0.0	1.0	0.0	0.0	0.0	0.0	6.2	5.9	0.0	0.0
Prop In Lane	0.15		0.13	0.29		0.53	0.00		0.04	0.09		0.01
Lane Grp Cap(c), veh/h	252	0	0	234	0	0	0	0	1048	1173	0	0
V/C Ratio(X)	0.40	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.46	0.43	0.00	0.00
Avail Cap(c_a), veh/h	754	0	0	605	0	0	0	0	2257	2419	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.6	0.0	0.0	17.3	0.0	0.0	0.0	0.0	4.0	4.0	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	0.0	0.0	0.6	0.0	0.0	0.0	0.0	1.0	1.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.6	0.0	0.0	17.7	0.0	0.0	0.0	0.0	4.4	4.2	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		100			38			478			504	
Approach Delay, s/veh		18.6			17.7			4.4			4.2	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		32.0		9.5		32.0		9.5				
Change Period (Y+Rc), s		7.0		6.0		7.0		6.0				
Max Green Setting (Gmax), s		55.0		15.0		55.0		15.0				
Max Q Clear Time (g_c+I1), s		8.2		4.2		7.9		3.0				
Green Ext Time (p_c), s		15.7		0.2		17.1		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			6.0									
HCM 6th LOS			A									

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1	3	500	3	3	305
Future Volume (vph)	1	3	500	3	3	305
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	14	14	12	12	12	12
Grade (%)	-2%		2%			-3%
Storage Length (ft)	0	0		0	25	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.899		0.999			
Flt Protected	0.988				0.950	
Satd. Flow (prot)	1722	0	1746	0	1736	1791
Flt Permitted	0.988				0.950	
Satd. Flow (perm)	1722	0	1746	0	1736	1791
Link Speed (mph)	25		45			45
Link Distance (ft)	706		871			367
Travel Time (s)	19.3		13.2			5.6
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	2%	0%	0%	2%
Adj. Flow (vph)	1	3	521	3	3	318
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	0	524	0	3	318
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	14		11			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	0.97	0.97	1.09	1.09	1.05	1.05
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	3	500	3	3	305
Future Vol, veh/h	1	3	500	3	3	305
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	25	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	2	-	-	-3
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	2	0	0	2
Mvmt Flow	1	3	521	3	3	318

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	847	523	0	0	524	0
Stage 1	523	-	-	-	-	-
Stage 2	324	-	-	-	-	-
Critical Hdwy	6	6	-	-	4.3	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	408	603	-	-	792	-
Stage 1	716	-	-	-	-	-
Stage 2	873	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	406	603	-	-	792	-
Mov Cap-2 Maneuver	540	-	-	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	870	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.2	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	586	792	-
HCM Lane V/C Ratio	-	-	0.007	0.004	-
HCM Control Delay (s)	-	-	11.2	9.6	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4	Ø6	Ø8	Ø9	Ø10
Lane Configurations												
Traffic Volume (vph)	155	1	2	486	305	220						
Future Volume (vph)	155	1	2	486	305	220						
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800						
Lane Width (ft)	12	12	12	12	11	11						
Grade (%)	-1%			1%	-2%							
Lane Util. Factor	1.00	1.00	*1.00	*1.00	1.00	1.00						
Frt	0.999				0.942							
Flt Protected	0.953											
Satd. Flow (prot)	1625	0	0	1739	1623	0						
Flt Permitted	0.953											
Satd. Flow (perm)	1625	0	0	1739	1623	0						
Right Turn on Red		No				No						
Satd. Flow (RTOR)												
Link Speed (mph)	40			35	35							
Link Distance (ft)	553			1699	100							
Travel Time (s)	9.4			33.1	1.9							
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.92						
Heavy Vehicles (%)	6%	0%	0%	3%	2%	2%						
Adj. Flow (vph)	161	1	2	506	318	239						
Shared Lane Traffic (%)												
Lane Group Flow (vph)	162	0	0	508	557	0						
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Right	Left	Left	Left	Right						
Median Width(ft)	12			0	0							
Link Offset(ft)	0			0	0							
Crosswalk Width(ft)	16			16	16							
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.08	1.08	1.11	1.11						
Turning Speed (mph)	15	9	15			9						
Number of Detectors	1		1	1	0							
Detector Template	Left		Left									
Leading Detector (ft)	35		20	35	0							
Trailing Detector (ft)	-5		0	-5	0							
Detector 1 Position(ft)	-5		0	-5	0							
Detector 1 Size(ft)	40		20	40	6							
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex							
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0							
Detector 1 Queue (s)	0.0		0.0	0.0	0.0							
Detector 1 Delay (s)	0.0		0.0	0.0	0.0							
Turn Type	Prot		custom	NA	NA							
Protected Phases	1		5	2 5	6 10		2	4	6	8	9	10
Permitted Phases			2									
Detector Phase	1 9		5	2 5 6 11	6 10							
Switch Phase												
Minimum Initial (s)	5.0		3.0				15.0	5.0	19.0	5.0	8.0	8.0
Minimum Split (s)	13.0		12.0				25.0	14.0	25.0	14.0	13.0	18.0
Total Split (s)	32.0		41.0				76.0	27.0	76.0	27.0	32.0	27.0

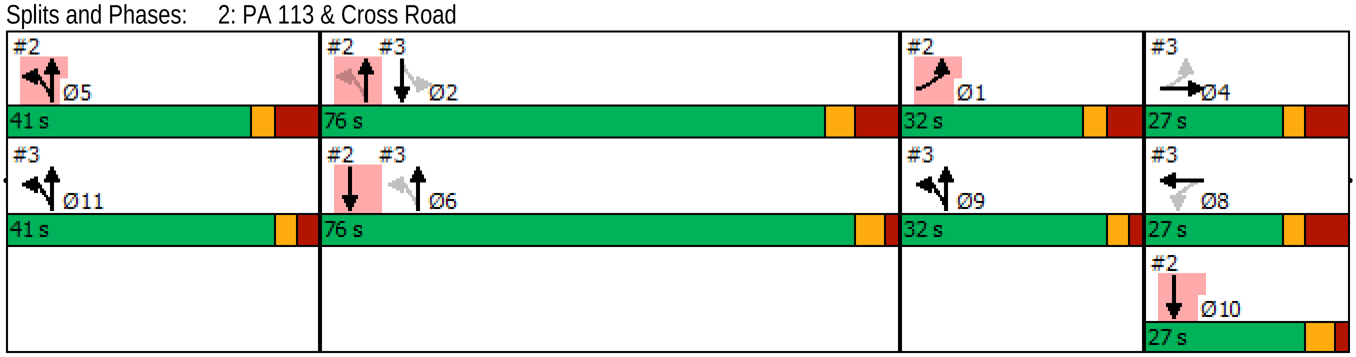
Lane Group	Ø11
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	11
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	6.0
Minimum Split (s)	12.0
Total Split (s)	41.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4	Ø6	Ø8	Ø9	Ø10
Total Split (%)	18.2%		23.3%				43%	15%	43%	15%	18%	15%
Maximum Green (s)	24.0		32.0				66.0	18.0	70.0	18.0	27.0	21.0
Yellow Time (s)	3.0		3.0				4.0	3.0	4.0	3.0	3.0	4.0
All-Red Time (s)	5.0		6.0				6.0	6.0	2.0	6.0	2.0	2.0
Lost Time Adjust (s)	0.0											
Total Lost Time (s)	8.0											
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0		3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None		None				Min	None	Min	None	None	None
Act Effct Green (s)	24.0			107.0	91.0							
Actuated g/C Ratio	0.14			0.61	0.52							
v/c Ratio	0.73			0.48	0.66							
Control Delay	92.5			21.0	2.4							
Queue Delay	0.0			0.0	0.0							
Total Delay	92.5			21.1	2.4							
LOS	F			C	A							
Approach Delay	92.5			21.1	2.4							
Approach LOS	F			C	A							
Queue Length 50th (ft)	182			314	0							
Queue Length 95th (ft)	#287			409	m0							
Internal Link Dist (ft)	473			1619	20							
Turn Bay Length (ft)												
Base Capacity (vph)	221			1057	839							
Starvation Cap Reductn	0			0	0							
Spillback Cap Reductn	0			33	0							
Storage Cap Reductn	0			0	0							
Reduced v/c Ratio	0.73			0.50	0.66							

Intersection Summary

Area Type: Other
Cycle Length: 176
Actuated Cycle Length: 176
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.07
Intersection Signal Delay: 22.0 Intersection LOS: C
Intersection Capacity Utilization 52.8% ICU Level of Service A
Analysis Period (min) 15
* User Entered Value
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: PA 113 & Cross Road



Lane Group	Ø11
Total Split (%)	23%
Maximum Green (s)	35.0
Yellow Time (s)	3.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	14	95	25	77	2	233	402	6	1	405	16
Future Volume (vph)	18	14	95	25	77	2	233	402	6	1	405	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	12	12	12	12	12	12	11	11	11
Grade (%)		1%			-1%			1%			-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.899			0.998			0.999			0.995	
Flt Protected		0.993			0.988			0.982				
Satd. Flow (prot)	0	1492	0	0	1716	0	0	1702	0	0	1716	0
Flt Permitted		0.876			0.711			0.532			0.999	
Satd. Flow (perm)	0	1316	0	0	1235	0	0	922	0	0	1714	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			35			35			35	
Link Distance (ft)		93			732			100			2015	
Travel Time (s)		1.6			14.3			1.9			39.3	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	4%	4%	0%	2%	4%	0%	0%	2%	0%
Adj. Flow (vph)	20	16	107	28	87	2	262	452	7	1	455	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	143	0	0	117	0	0	721	0	0	474	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.18	1.18	1.18	1.07	1.07	1.07	1.08	1.08	1.08	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	0		1	1	
Detector Template	Left	Thru		Left	Thru							
Leading Detector (ft)	20	35		20	35		35	0		35	35	
Trailing Detector (ft)	0	-5		0	-5		-5	0		-5	-5	
Detector 1 Position(ft)	0	-5		0	-5		-5	0		-5	-5	
Detector 1 Size(ft)	20	40		20	40		40	6		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		custom	NA		Perm	NA	
Protected Phases		4			8		9 11	6 9 11			2	
Permitted Phases	4			8			6			2		
Detector Phase	4	4 10		8	8 10		9 11	6 9 11		2	2 6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0					15.0	15.0	
Minimum Split (s)	14.0	14.0		14.0	14.0					25.0	25.0	
Total Split (s)	27.0	27.0		27.0	27.0					76.0	76.0	

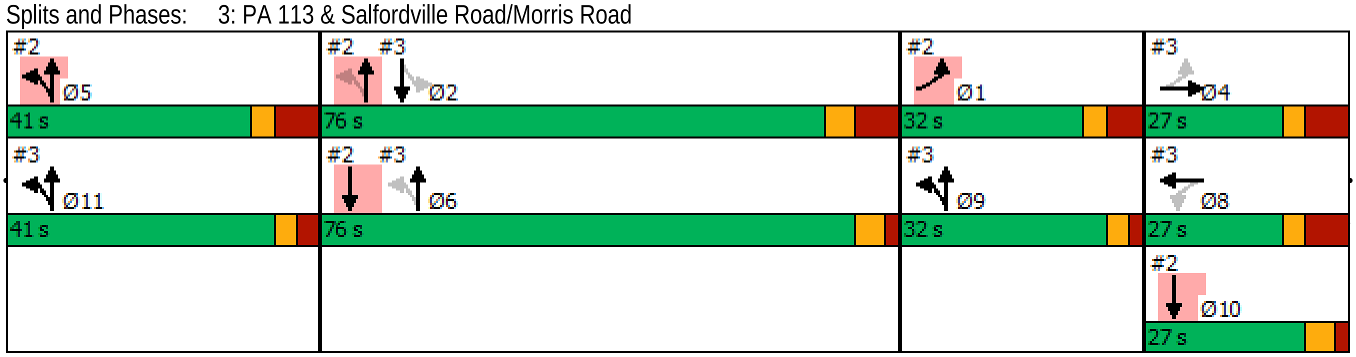
Lane Group	Ø1	Ø5	Ø6	Ø9	Ø10	Ø11
Lane Configurations						
Traffic Volume (vph)						
Future Volume (vph)						
Ideal Flow (vphpl)						
Lane Width (ft)						
Grade (%)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Turn Type						
Protected Phases	1	5	6	9	10	11
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	5.0	3.0	19.0	8.0	8.0	6.0
Minimum Split (s)	13.0	12.0	25.0	13.0	18.0	12.0
Total Split (s)	32.0	41.0	76.0	32.0	27.0	41.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	15.3%	15.3%		15.3%	15.3%					43.2%	43.2%	
Maximum Green (s)	18.0	18.0		18.0	18.0					66.0	66.0	
Yellow Time (s)	3.0	3.0		3.0	3.0					4.0	4.0	
All-Red Time (s)	6.0	6.0		6.0	6.0					6.0	6.0	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		9.0			9.0						10.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0					3.0	3.0	
Recall Mode	None	None		None	None					Min	Min	
Act Effct Green (s)		18.0			18.0			131.0			66.0	
Actuated g/C Ratio		0.10			0.10			0.74			0.38	
v/c Ratio		1.07			0.93			0.75			0.74	
Control Delay		167.2			138.5			6.3			55.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		167.2			138.5			6.3			55.8	
LOS		F			F			A			E	
Approach Delay		167.2			138.5			6.3			55.8	
Approach LOS		F			F			A			E	
Queue Length 50th (ft)		~181			136			14			473	
Queue Length 95th (ft)		#331			#267			20			611	
Internal Link Dist (ft)		13			652			20			1935	
Turn Bay Length (ft)												
Base Capacity (vph)		134			126			956			642	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		1.07			0.93			0.75			0.74	

Intersection Summary

Area Type: Other
Cycle Length: 176
Actuated Cycle Length: 176
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.07
Intersection Signal Delay: 48.9 — Intersection LOS: D
Intersection Capacity Utilization 90.4% — ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: PA 113 & Salfordville Road/Morris Road



Lane Group	Ø1	Ø5	Ø6	Ø9	Ø10	Ø11
Total Split (%)	18%	23%	43%	18%	15%	23%
Maximum Green (s)	24.0	32.0	70.0	27.0	21.0	35.0
Yellow Time (s)	3.0	3.0	4.0	3.0	4.0	3.0
All-Red Time (s)	5.0	6.0	2.0	2.0	2.0	3.0
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	None	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	127	296	30	0	0
Future Volume (vph)	1	127	296	30	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	11	11	14	14
Grade (%)		1%	-1%		-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.987			
Flt Protected						
Satd. Flow (prot)	0	1672	1695	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1672	1695	0	0	0
Link Speed (mph)		40	40		35	
Link Distance (ft)		802	93		617	
Travel Time (s)		13.7	1.6		12.0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%
Adj. Flow (vph)	1	143	333	34	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	144	367	0	0	0
Enter Blocked Intersection	Yes	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.18	1.18	1.11	1.11	0.98	0.98
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	7	439	1	6	424
Future Volume (vph)	3	7	439	1	6	424
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	11	11	12	12
Grade (%)	-2%		1%			-3%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.902					
Flt Protected	0.987					0.999
Satd. Flow (prot)	1672	0	1665	0	0	1773
Flt Permitted	0.987					0.999
Satd. Flow (perm)	1672	0	1665	0	0	1773
Link Speed (mph)	35		35			35
Link Distance (ft)	663		2015			653
Travel Time (s)	12.9		39.3			12.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	4%	0%	0%	3%
Adj. Flow (vph)	3	8	488	1	7	471
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	0	489	0	0	478
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.13	1.13	1.05	1.05
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	7	439	1	6	424
Future Vol, veh/h	3	7	439	1	6	424
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	1	-	-	-3
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	4	0	0	3
Mvmt Flow	3	8	488	1	7	471

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	974	489	0	0	489	0
Stage 1	489	-	-	-	-	-
Stage 2	485	-	-	-	-	-
Critical Hdwy	6	6	-	-	4.3	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	346	630	-	-	815	-
Stage 1	741	-	-	-	-	-
Stage 2	744	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	342	630	-	-	815	-
Mov Cap-2 Maneuver	342	-	-	-	-	-
Stage 1	741	-	-	-	-	-
Stage 2	735	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.3	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	503	815	-
HCM Lane V/C Ratio	-	-	0.022	0.008	-
HCM Control Delay (s)	-	-	12.3	9.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	12	6	9	59	61	8	422	15	25	412	17
Future Volume (vph)	17	12	6	9	59	61	8	422	15	25	412	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	13	12	12	12	12	12	12	13	13	13
Grade (%)		-2%			-1%			1%			-4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.975			0.936			0.996			0.995	
Flt Protected		0.977			0.996			0.999			0.997	
Satd. Flow (prot)	0	1740	0	0	1618	0	0	1701	0	0	1833	0
Flt Permitted		0.847			0.972			0.989			0.961	
Satd. Flow (perm)	0	1509	0	0	1579	0	0	1684	0	0	1767	0
Right Turn on Red			No			Yes			Yes			No
Satd. Flow (RTOR)					48			5				
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		495			475			653			1186	
Travel Time (s)		9.6			9.3			9.9			18.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	0%	0%	0%	2%	7%	0%	5%	0%	12%	2%	6%
Adj. Flow (vph)	18	13	7	10	64	66	9	459	16	27	448	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	38	0	0	140	0	0	484	0	0	493	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.07	1.07	1.07	1.08	1.08	1.08	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	35		20	35		20	456		20	456	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								450			450	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	9.0	9.0		9.0	9.0		22.0	22.0		22.0	22.0	
Total Split (s)	21.0	21.0		21.0	21.0		62.0	62.0		62.0	62.0	
Total Split (%)	25.3%	25.3%		25.3%	25.3%		74.7%	74.7%		74.7%	74.7%	
Maximum Green (s)	15.0	15.0		15.0	15.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		5.0			5.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	

Intersection Summary	
Area Type:	Other
Cycle Length: 83	
Actuated Cycle Length: 43.8	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 6: PA 113 & Landis Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	12	6	9	59	61	8	422	15	25	412	17
Future Volume (veh/h)	17	12	6	9	59	61	8	422	15	25	412	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1861	1950	1950	1837	1809	1738	1794	1724	1794	1850	1997	1938
Adj Flow Rate, veh/h	18	13	7	10	64	34	9	459	15	27	448	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	0	0	0	2	7	0	5	0	12	2	6
Cap, veh/h	208	94	39	109	123	62	95	1011	33	119	1124	44
Arrive On Green	0.09	0.12	0.09	0.09	0.12	0.09	0.59	0.61	0.59	0.59	0.61	0.59
Sat Flow, veh/h	671	800	332	111	1042	530	8	1646	53	43	1830	71
Grp Volume(v), veh/h	38	0	0	108	0	0	483	0	0	493	0	0
Grp Sat Flow(s),veh/h/ln	1803	0	0	1683	0	0	1707	0	0	1945	0	0
Q Serve(g_s), s	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.8	0.0	0.0	2.5	0.0	0.0	6.3	0.0	0.0	5.3	0.0	0.0
Prop In Lane	0.47		0.18	0.09		0.31	0.02		0.03	0.05		0.04
Lane Grp Cap(c), veh/h	297	0	0	253	0	0	1096	0	0	1240	0	0
V/C Ratio(X)	0.13	0.00	0.00	0.43	0.00	0.00	0.44	0.00	0.00	0.40	0.00	0.00
Avail Cap(c_a), veh/h	737	0	0	708	0	0	2362	0	0	2657	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.6	0.0	0.0	17.3	0.0	0.0	4.3	0.0	0.0	4.1	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	1.1	0.0	0.0	0.3	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.0	0.0	1.7	0.0	0.0	1.5	0.0	0.0	1.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.8	0.0	0.0	18.4	0.0	0.0	4.6	0.0	0.0	4.3	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		38			108			483			493	
Approach Delay, s/veh		16.8			18.4			4.6			4.3	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.2		9.8		31.2		9.8				
Change Period (Y+Rc), s		7.0		6.0		7.0		6.0				
Max Green Setting (Gmax), s		55.0		15.0		55.0		15.0				
Max Q Clear Time (g_c+I1), s		8.3		2.8		7.3		4.5				
Green Ext Time (p_c), s		15.9		0.0		16.6		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			6.2									
HCM 6th LOS			A									

Attachment 10

2035 Future Base Conditions Capacity/Level-of-Service Analysis Worksheets

425 Commerce Drive, Suite 200, Fort Washington, PA 19034
P: 215.283.9444
mcmahonassociates.com | bowman.com

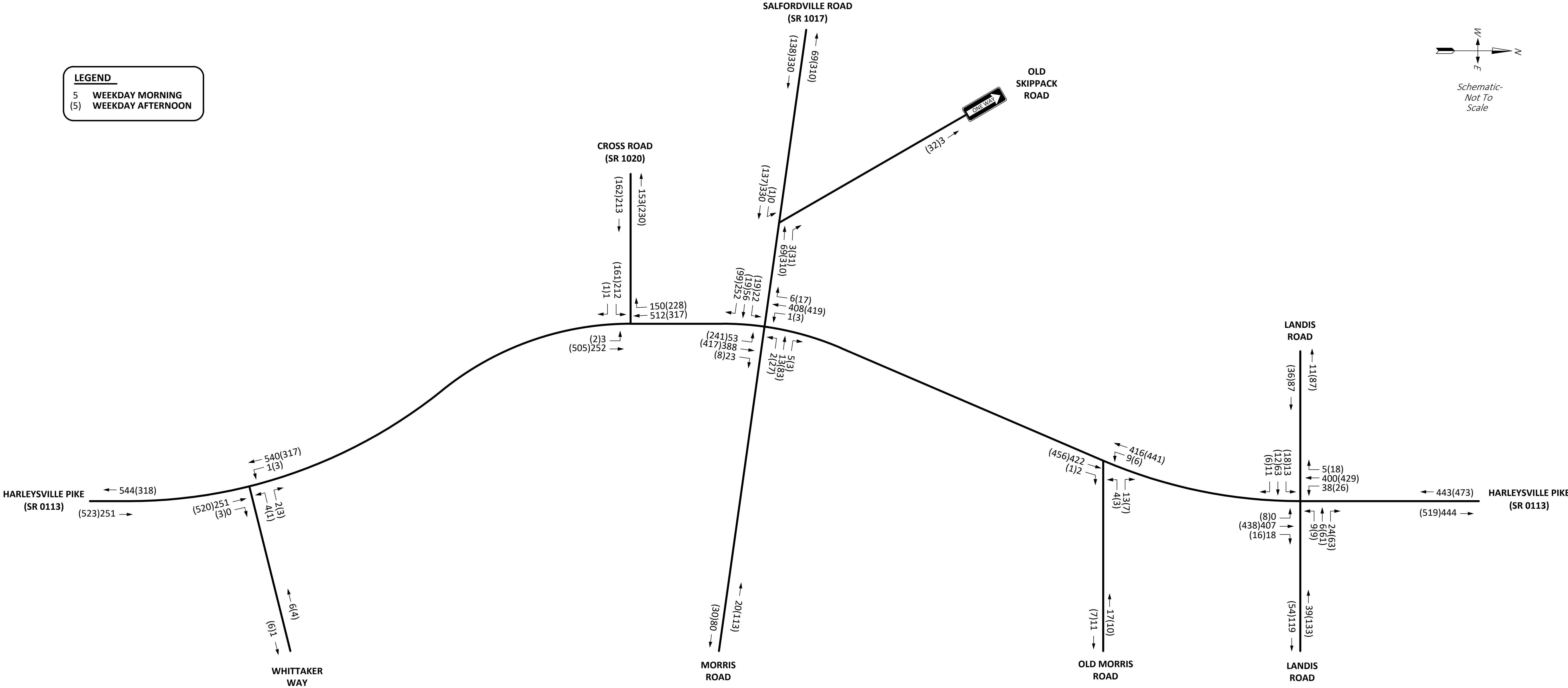


FIGURE I

2035 Base Peak Hour Traffic Volumes

WALKABLE LEDERACH

LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PA

McMAHON a Bowman company

Q:\PA-FTWA-MC\MCM\eng\LOWERSA1\822255_TCDI Walkable Lederach\Traffic\2-TrafficEval\7-Graphics\Figure 3A.dwg

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	4	2	251	0	1	540
Future Volume (vph)	4	2	251	0	1	540
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	14	14	12	12	12	12
Grade (%)	-2%		2%			-3%
Storage Length (ft)	0	0		0	25	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.955					
Flt Protected	0.968				0.950	
Satd. Flow (prot)	1793	0	1591	0	1736	1724
Flt Permitted	0.968				0.950	
Satd. Flow (perm)	1793	0	1591	0	1736	1724
Link Speed (mph)	25		45			45
Link Distance (ft)	706		871			367
Travel Time (s)	19.3		13.2			5.6
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	12%	0%	0%	6%
Adj. Flow (vph)	4	2	276	0	1	593
Shared Lane Traffic (%)						
Lane Group Flow (vph)	6	0	276	0	1	593
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	14		11			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	0.97	0.97	1.09	1.09	1.05	1.05
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection						
Int Delay, s/veh	0.1					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	2	251	0	1	540
Future Vol, veh/h	4	2	251	0	1	540
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	25	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	2	-	-	-3
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	0	0	12	0	0	6
Mvmt Flow	4	2	276	0	1	593

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	871	276	0	0	276	0
Stage 1	276	-	-	-	-	-
Stage 2	595	-	-	-	-	-
Critical Hdwy	6	6	-	-	4.3	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	395	824	-	-	966	-
Stage 1	916	-	-	-	-	-
Stage 2	666	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	395	824	-	-	966	-
Mov Cap-2 Maneuver	523	-	-	-	-	-
Stage 1	916	-	-	-	-	-
Stage 2	665	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	596	966	-
HCM Lane V/C Ratio	-	-	0.011	0.001	-
HCM Control Delay (s)	-	-	11.1	8.7	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4	Ø6	Ø8	Ø9	Ø10
Lane Configurations												
Traffic Volume (vph)	212	1	3	252	512	150						
Future Volume (vph)	212	1	3	252	512	150						
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800						
Lane Width (ft)	12	12	12	12	11	11						
Grade (%)	-1%			1%	-2%							
Lane Util. Factor	1.00	1.00	*1.00	*1.00	1.00	1.00						
Frt	0.999				0.969							
Flt Protected	0.953			0.999								
Satd. Flow (prot)	1656	0	0	1623	1607	0						
Flt Permitted	0.953			0.996								
Satd. Flow (perm)	1656	0	0	1618	1607	0						
Right Turn on Red		No				No						
Satd. Flow (RTOR)												
Link Speed (mph)	40			35	35							
Link Distance (ft)	553			1699	100							
Travel Time (s)	9.4			33.1	1.9							
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96						
Heavy Vehicles (%)	4%	0%	33%	10%	6%	6%						
Adj. Flow (vph)	221	1	3	263	533	156						
Shared Lane Traffic (%)												
Lane Group Flow (vph)	222	0	0	266	689	0						
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Right	Left	Left	Left	Right						
Median Width(ft)	12			0	0							
Link Offset(ft)	0			0	0							
Crosswalk Width(ft)	16			16	16							
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.08	1.08	1.11	1.11						
Turning Speed (mph)	15	9	15			9						
Number of Detectors	1		1	1	0							
Detector Template	Left		Left									
Leading Detector (ft)	35		20	35	0							
Trailing Detector (ft)	-5		0	-5	0							
Detector 1 Position(ft)	-5		0	-5	0							
Detector 1 Size(ft)	40		20	40	6							
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex							
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0							
Detector 1 Queue (s)	0.0		0.0	0.0	0.0							
Detector 1 Delay (s)	0.0		0.0	0.0	0.0							
Turn Type	Prot		custom	NA	NA							
Protected Phases	1		5	2 5	6 10		2	4	6	8	9	10
Permitted Phases			2									
Detector Phase	1 9		5	2 5 6 11	6 10							
Switch Phase												
Minimum Initial (s)	5.0		3.0				15.0	5.0	19.0	5.0	8.0	8.0
Minimum Split (s)	13.0		12.0				25.0	14.0	25.0	14.0	13.0	18.0
Total Split (s)	31.0		21.0				64.0	40.0	64.0	40.0	31.0	40.0

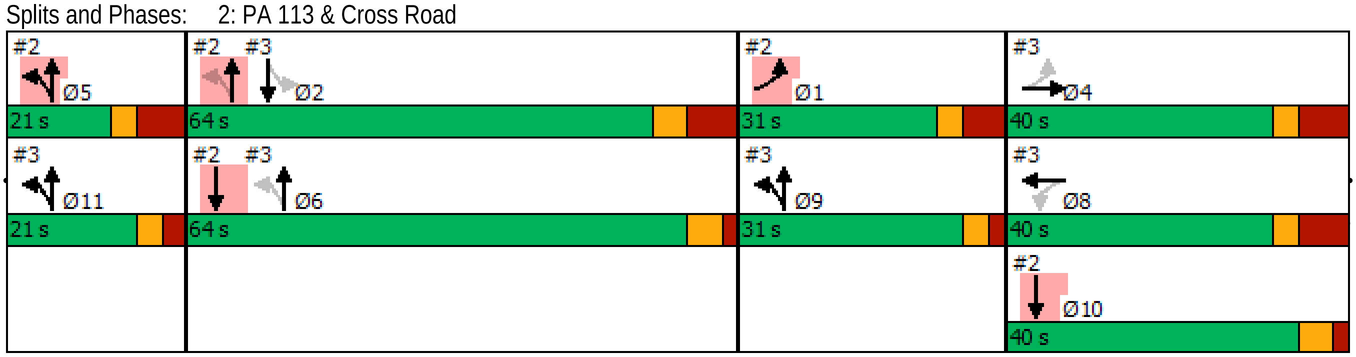
Lane Group	Ø11
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	11
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	6.0
Minimum Split (s)	12.0
Total Split (s)	21.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4	Ø6	Ø8	Ø9	Ø10
Total Split (%)	19.9%		13.5%				41%	26%	41%	26%	20%	26%
Maximum Green (s)	23.0		12.0				54.0	31.0	58.0	31.0	26.0	34.0
Yellow Time (s)	3.0		3.0				4.0	3.0	4.0	3.0	3.0	4.0
All-Red Time (s)	5.0		6.0				6.0	6.0	2.0	6.0	2.0	2.0
Lost Time Adjust (s)	0.0											
Total Lost Time (s)	8.0											
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0		3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None		None				Min	None	Min	None	None	None
Act Effct Green (s)	23.0			65.0	92.0							
Actuated g/C Ratio	0.15			0.42	0.59							
v/c Ratio	0.91			0.39	0.73							
Control Delay	103.0			29.8	1.4							
Queue Delay	3.9			0.0	0.0							
Total Delay	106.9			29.8	1.4							
LOS	F			C	A							
Approach Delay	106.9			29.8	1.4							
Approach LOS	F			C	A							
Queue Length 50th (ft)	226			166	1							
Queue Length 95th (ft)	#388			238	m1							
Internal Link Dist (ft)	473			1619	20							
Turn Bay Length (ft)												
Base Capacity (vph)	244			674	947							
Starvation Cap Reductn	0			0	0							
Spillback Cap Reductn	7			1	0							
Storage Cap Reductn	0			0	0							
Reduced v/c Ratio	0.94			0.40	0.73							

Intersection Summary

Area Type: Other
Cycle Length: 156
Actuated Cycle Length: 156
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.27
Intersection Signal Delay: 27.7 Intersection LOS: C
Intersection Capacity Utilization 62.2% ICU Level of Service B
Analysis Period (min) 15
* User Entered Value
# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: PA 113 & Cross Road



Lane Group	Ø11
Total Split (%)	13%
Maximum Green (s)	15.0
Yellow Time (s)	3.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	56	252	2	13	5	53	388	23	1	408	6
Future Volume (vph)	22	56	252	2	13	5	53	388	23	1	408	6
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	12	12	12	12	12	12	11	11	11
Grade (%)		1%			-1%			1%			-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.897			0.968			0.993			0.998	
Flt Protected		0.997			0.995			0.994				
Satd. Flow (prot)	0	1439	0	0	1742	0	0	1624	0	0	1601	0
Flt Permitted		0.977			0.952			0.913			0.999	
Satd. Flow (perm)	0	1410	0	0	1667	0	0	1491	0	0	1600	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			35			35			35	
Link Distance (ft)		93			732			100			2015	
Travel Time (s)		1.6			14.3			1.9			39.3	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	19%	2%	3%	0%	0%	0%	8%	9%	9%	100%	9%	33%
Adj. Flow (vph)	24	60	271	2	14	5	57	417	25	1	439	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	355	0	0	21	0	0	499	0	0	446	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.18	1.18	1.18	1.07	1.07	1.07	1.08	1.08	1.08	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	0		1	1	
Detector Template	Left	Thru		Left	Thru							
Leading Detector (ft)	20	35		20	35		35	0		35	35	
Trailing Detector (ft)	0	-5		0	-5		-5	0		-5	-5	
Detector 1 Position(ft)	0	-5		0	-5		-5	0		-5	-5	
Detector 1 Size(ft)	20	40		20	40		40	6		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		custom	NA		Perm	NA	
Protected Phases		4			8		9 11	6 9 11			2	
Permitted Phases	4			8			6			2		
Detector Phase	4	4 10		8	8 10		9 11	6 9 11		2	2 6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0					15.0	15.0	
Minimum Split (s)	14.0	14.0		14.0	14.0					25.0	25.0	
Total Split (s)	40.0	40.0		40.0	40.0					64.0	64.0	

Lane Group	Ø1	Ø5	Ø6	Ø9	Ø10	Ø11
Lane Configurations						
Traffic Volume (vph)						
Future Volume (vph)						
Ideal Flow (vphpl)						
Lane Width (ft)						
Grade (%)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Turn Type						
Protected Phases	1	5	6	9	10	11
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	5.0	3.0	19.0	8.0	8.0	6.0
Minimum Split (s)	13.0	12.0	25.0	13.0	18.0	12.0
Total Split (s)	31.0	21.0	64.0	31.0	40.0	21.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	25.6%	25.6%		25.6%	25.6%					41.0%	41.0%	
Maximum Green (s)	31.0	31.0		31.0	31.0					54.0	54.0	
Yellow Time (s)	3.0	3.0		3.0	3.0					4.0	4.0	
All-Red Time (s)	6.0	6.0		6.0	6.0					6.0	6.0	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		9.0			9.0						10.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0					3.0	3.0	
Recall Mode	None	None		None	None					Min	Min	
Act Effct Green (s)		31.0			31.0			98.0			54.0	
Actuated g/C Ratio		0.20			0.20			0.63			0.35	
v/c Ratio		1.27			0.06			0.51			0.81	
Control Delay		194.3			51.5			3.4			58.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		194.3			51.5			3.4			58.9	
LOS		F			D			A			E	
Approach Delay		194.3			51.5			3.4			58.9	
Approach LOS		F			D			A			E	
Queue Length 50th (ft)		~454			18			5			412	
Queue Length 95th (ft)		#663			43			m26			562	
Internal Link Dist (ft)		13			652			20			1935	
Turn Bay Length (ft)												
Base Capacity (vph)		280			331			970			553	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		1.27			0.06			0.51			0.81	

Intersection Summary

Area Type: Other

Cycle Length: 156

Actuated Cycle Length: 156

Natural Cycle: 100

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.27

Intersection Signal Delay: 74.2 Intersection LOS: E

Intersection Capacity Utilization 95.1% ICU Level of Service F

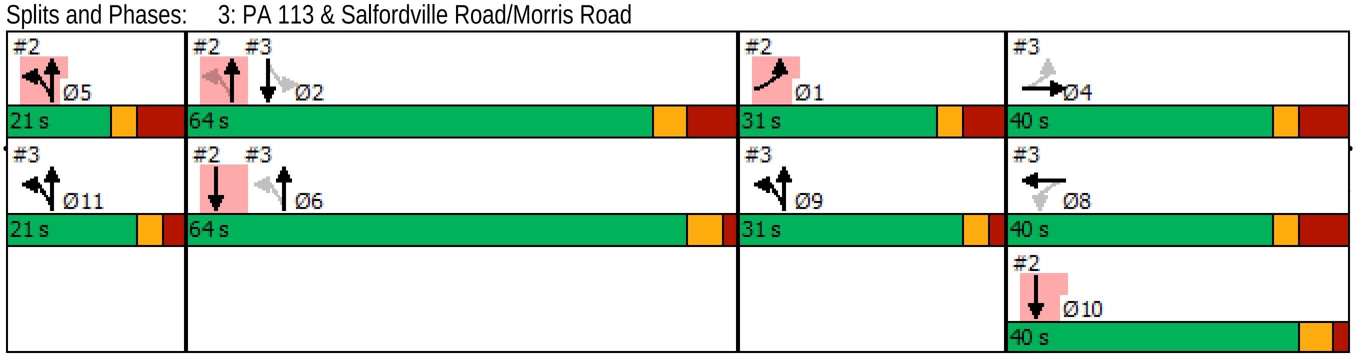
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: PA 113 & Salfordville Road/Morris Road



Lane Group	Ø1	Ø5	Ø6	Ø9	Ø10	Ø11
Total Split (%)	20%	13%	41%	20%	26%	13%
Maximum Green (s)	23.0	12.0	58.0	26.0	34.0	15.0
Yellow Time (s)	3.0	3.0	4.0	3.0	4.0	3.0
All-Red Time (s)	5.0	6.0	2.0	2.0	2.0	3.0
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	None	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	330	69	3	0	0
Future Volume (vph)	0	330	69	3	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	11	11	14	14
Grade (%)		1%	-1%		-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.995			
Flt Protected						
Satd. Flow (prot)	0	1607	1591	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1607	1591	0	0	0
Link Speed (mph)		40	40		35	
Link Distance (ft)		802	93		617	
Travel Time (s)		13.7	1.6		12.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	4%	7%	67%	0%	0%
Adj. Flow (vph)	0	355	74	3	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	355	77	0	0	0
Enter Blocked Intersection	Yes	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.18	1.18	1.11	1.11	0.98	0.98
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	4	13	422	2	9	416
Future Volume (vph)	4	13	422	2	9	416
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	11	11	12	12
Grade (%)	-2%		1%			-3%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.893		0.999			
Flt Protected	0.990					0.999
Satd. Flow (prot)	1485	0	1584	0	0	1662
Flt Permitted	0.990					0.999
Satd. Flow (perm)	1485	0	1584	0	0	1662
Link Speed (mph)	35		35			35
Link Distance (ft)	663		2015			653
Travel Time (s)	12.9		39.3			12.7
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	15%	9%	50%	0%	10%
Adj. Flow (vph)	4	15	474	2	10	467
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	0	476	0	0	477
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.13	1.13	1.05	1.05
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	13	422	2	9	416
Future Vol, veh/h	4	13	422	2	9	416
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	1	-	-	-3
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	15	9	50	0	10
Mvmt Flow	4	15	474	2	10	467

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	962	475	0	0	476	0
Stage 1	475	-	-	-	-	-
Stage 2	487	-	-	-	-	-
Critical Hdwy	6	6.15	-	-	4.3	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3	3.2	-	-	3	-
Pot Cap-1 Maneuver	351	613	-	-	823	-
Stage 1	751	-	-	-	-	-
Stage 2	742	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	345	613	-	-	823	-
Mov Cap-2 Maneuver	345	-	-	-	-	-
Stage 1	751	-	-	-	-	-
Stage 2	730	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.2	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	518	823	-
HCM Lane V/C Ratio	-	-	0.037	0.012	-
HCM Control Delay (s)	-	-	12.2	9.4	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	63	11	9	6	24	0	407	18	38	400	5
Future Volume (vph)	13	63	11	9	6	24	0	407	18	38	400	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	13	12	12	12	12	12	12	13	13	13
Grade (%)		-2%			-1%			1%			-4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.983			0.918			0.994			0.998	
Flt Protected		0.993			0.988						0.996	
Satd. Flow (prot)	0	1787	0	0	1524	0	0	1638	0	0	1701	0
Flt Permitted		0.939			0.892						0.931	
Satd. Flow (perm)	0	1690	0	0	1376	0	0	1638	0	0	1590	0
Right Turn on Red			No			Yes			Yes			No
Satd. Flow (RTOR)					28			6				
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		495			475			653			1186	
Travel Time (s)		9.6			9.3			9.9			18.0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	8%	2%	0%	11%	17%	4%	0%	8%	24%	8%	11%	20%
Adj. Flow (vph)	15	74	13	11	7	28	0	479	21	45	471	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	102	0	0	46	0	0	500	0	0	522	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.07	1.07	1.07	1.08	1.08	1.08	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	35		20	35		20	456		20	456	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								450			450	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA			NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	9.0	9.0		9.0	9.0		22.0	22.0		22.0	22.0	
Total Split (s)	21.0	21.0		21.0	21.0		62.0	62.0		62.0	62.0	
Total Split (%)	25.3%	25.3%		25.3%	25.3%		74.7%	74.7%		74.7%	74.7%	
Maximum Green (s)	15.0	15.0		15.0	15.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		5.0			5.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	

Intersection Summary	
Area Type:	Other
Cycle Length: 83	
Actuated Cycle Length: 48.1	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 6: PA 113 & Landis Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	63	11	9	6	24	0	407	18	38	400	5
Future Volume (veh/h)	13	63	11	9	6	24	0	407	18	38	400	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1831	1920	1950	1681	1596	1780	1794	1682	1457	1909	1864	1731
Adj Flow Rate, veh/h	15	74	13	11	7	21	0	479	19	45	471	6
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	8	2	0	11	17	4	0	8	24	8	11	20
Cap, veh/h	120	149	25	142	39	85	0	1019	40	140	1072	13
Arrive On Green	0.08	0.11	0.08	0.08	0.11	0.08	0.00	0.63	0.61	0.61	0.63	0.61
Sat Flow, veh/h	215	1380	233	315	357	784	0	1607	64	76	1690	21
Grp Volume(v), veh/h	102	0	0	39	0	0	0	0	498	522	0	0
Grp Sat Flow(s),veh/h/ln	1828	0	0	1457	0	0	0	0	1671	1787	0	0
Q Serve(g_s), s	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.3	0.0	0.0	1.1	0.0	0.0	0.0	0.0	6.6	6.2	0.0	0.0
Prop In Lane	0.15		0.13	0.28		0.54	0.00		0.04	0.09		0.01
Lane Grp Cap(c), veh/h	251	0	0	231	0	0	0	0	1060	1183	0	0
V/C Ratio(X)	0.41	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.47	0.44	0.00	0.00
Avail Cap(c_a), veh/h	732	0	0	587	0	0	0	0	2191	2345	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.1	0.0	0.0	17.8	0.0	0.0	0.0	0.0	4.1	4.0	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	0.0	0.0	0.6	0.0	0.0	0.0	0.0	1.2	1.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.2	0.0	0.0	18.2	0.0	0.0	0.0	0.0	4.4	4.3	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		102			39			498			522	
Approach Delay, s/veh		19.2			18.2			4.4			4.3	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		33.1		9.6		33.1		9.6				
Change Period (Y+Rc), s		7.0		6.0		7.0		6.0				
Max Green Setting (Gmax), s		55.0		15.0		55.0		15.0				
Max Q Clear Time (g_c+I1), s		8.6		4.3		8.2		3.1				
Green Ext Time (p_c), s		16.4		0.2		17.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay			6.1
HCM 6th LOS			A

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1	3	520	3	3	317
Future Volume (vph)	1	3	520	3	3	317
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	14	14	12	12	12	12
Grade (%)	-2%		2%			-3%
Storage Length (ft)	0	0		0	25	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				75	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.899		0.999			
Flt Protected	0.988				0.950	
Satd. Flow (prot)	1722	0	1746	0	1736	1791
Flt Permitted	0.988				0.950	
Satd. Flow (perm)	1722	0	1746	0	1736	1791
Link Speed (mph)	25		45			45
Link Distance (ft)	706		871			367
Travel Time (s)	19.3		13.2			5.6
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	2%	0%	0%	2%
Adj. Flow (vph)	1	3	542	3	3	330
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	0	545	0	3	330
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	14		11			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	0.97	0.97	1.09	1.09	1.05	1.05
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	3	520	3	3	317
Future Vol, veh/h	1	3	520	3	3	317
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	25	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	2	-	-	-3
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	2	0	0	2
Mvmt Flow	1	3	542	3	3	330

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	880	544	0	0	545	0
Stage 1	544	-	-	-	-	-
Stage 2	336	-	-	-	-	-
Critical Hdwy	6	6	-	-	4.3	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	391	587	-	-	779	-
Stage 1	701	-	-	-	-	-
Stage 2	863	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	389	587	-	-	779	-
Mov Cap-2 Maneuver	526	-	-	-	-	-
Stage 1	701	-	-	-	-	-
Stage 2	860	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.4	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	570	779	-
HCM Lane V/C Ratio	-	-	0.007	0.004	-
HCM Control Delay (s)	-	-	11.4	9.6	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4	Ø6	Ø8	Ø9	Ø10
Lane Configurations												
Traffic Volume (vph)	161	1	2	505	317	228						
Future Volume (vph)	161	1	2	505	317	228						
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800						
Lane Width (ft)	12	12	12	12	11	11						
Grade (%)	-1%			1%	-2%							
Lane Util. Factor	1.00	1.00	*1.00	*1.00	1.00	1.00						
Frt	0.999				0.943							
Flt Protected	0.953											
Satd. Flow (prot)	1625	0	0	1739	1625	0						
Flt Permitted	0.953											
Satd. Flow (perm)	1625	0	0	1739	1625	0						
Right Turn on Red		No				No						
Satd. Flow (RTOR)												
Link Speed (mph)	40			35	35							
Link Distance (ft)	553			1699	100							
Travel Time (s)	9.4			33.1	1.9							
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96						
Heavy Vehicles (%)	6%	0%	0%	3%	2%	2%						
Adj. Flow (vph)	168	1	2	526	330	238						
Shared Lane Traffic (%)												
Lane Group Flow (vph)	169	0	0	528	568	0						
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Right	Left	Left	Left	Right						
Median Width(ft)	12			0	0							
Link Offset(ft)	0			0	0							
Crosswalk Width(ft)	16			16	16							
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.08	1.08	1.11	1.11						
Turning Speed (mph)	15	9	15			9						
Number of Detectors	1		1	1	0							
Detector Template	Left		Left									
Leading Detector (ft)	35		20	35	0							
Trailing Detector (ft)	-5		0	-5	0							
Detector 1 Position(ft)	-5		0	-5	0							
Detector 1 Size(ft)	40		20	40	6							
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex							
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0							
Detector 1 Queue (s)	0.0		0.0	0.0	0.0							
Detector 1 Delay (s)	0.0		0.0	0.0	0.0							
Turn Type	Prot		custom	NA	NA							
Protected Phases	1		5	2 5	6 10		2	4	6	8	9	10
Permitted Phases			2									
Detector Phase	1 9		5	2 5 6 11	6 10							
Switch Phase												
Minimum Initial (s)	5.0		3.0				15.0	5.0	19.0	5.0	8.0	8.0
Minimum Split (s)	13.0		12.0				25.0	14.0	25.0	14.0	13.0	18.0
Total Split (s)	32.0		41.0				76.0	27.0	76.0	27.0	32.0	27.0

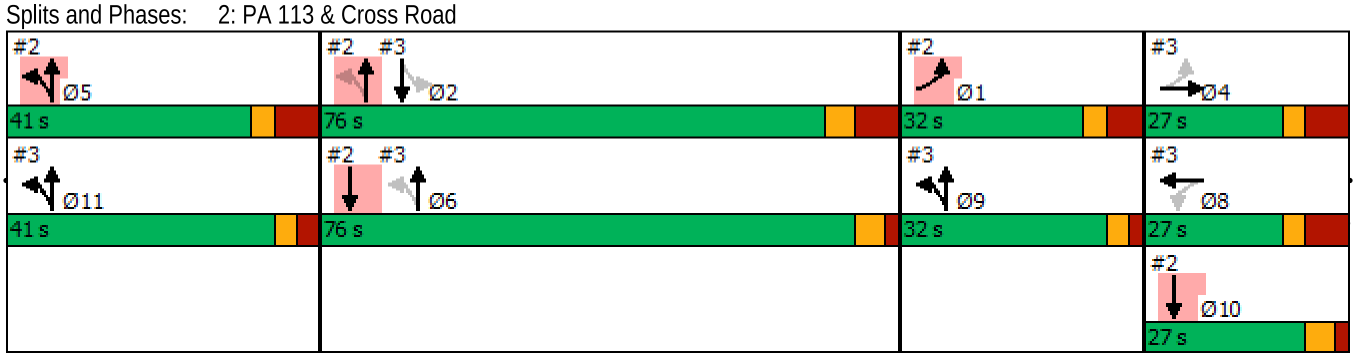
Lane Group	Ø11
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	11
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	6.0
Minimum Split (s)	12.0
Total Split (s)	41.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4	Ø6	Ø8	Ø9	Ø10
Total Split (%)	18.2%		23.3%				43%	15%	43%	15%	18%	15%
Maximum Green (s)	24.0		32.0				66.0	18.0	70.0	18.0	27.0	21.0
Yellow Time (s)	3.0		3.0				4.0	3.0	4.0	3.0	3.0	4.0
All-Red Time (s)	5.0		6.0				6.0	6.0	2.0	6.0	2.0	2.0
Lost Time Adjust (s)	0.0											
Total Lost Time (s)	8.0											
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0		3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None		None				Min	None	Min	None	None	None
Act Effct Green (s)	24.0			107.0	91.0							
Actuated g/C Ratio	0.14			0.61	0.52							
v/c Ratio	0.76			0.50	0.68							
Control Delay	95.2			21.5	2.2							
Queue Delay	0.0			0.1	0.0							
Total Delay	95.2			21.5	2.2							
LOS	F			C	A							
Approach Delay	95.2			21.5	2.2							
Approach LOS	F			C	A							
Queue Length 50th (ft)	191			332	0							
Queue Length 95th (ft)	#306			431	m0							
Internal Link Dist (ft)	473			1619	20							
Turn Bay Length (ft)												
Base Capacity (vph)	221			1057	840							
Starvation Cap Reductn	0			0	0							
Spillback Cap Reductn	0			43	0							
Storage Cap Reductn	0			0	0							
Reduced v/c Ratio	0.76			0.52	0.68							

Intersection Summary

Area Type: Other
Cycle Length: 176
Actuated Cycle Length: 176
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.15
Intersection Signal Delay: 22.7 Intersection LOS: C
Intersection Capacity Utilization 54.2% ICU Level of Service A
Analysis Period (min) 15
* User Entered Value
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: PA 113 & Cross Road



Lane Group	Ø11
Total Split (%)	23%
Maximum Green (s)	35.0
Yellow Time (s)	3.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	19	99	27	83	3	241	417	8	3	419	17
Future Volume (vph)	19	19	99	27	83	3	241	417	8	3	419	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	12	12	12	12	12	12	11	11	11
Grade (%)		1%			-1%			1%			-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.902			0.997			0.998			0.995	
Flt Protected		0.993			0.988			0.982				
Satd. Flow (prot)	0	1497	0	0	1715	0	0	1700	0	0	1716	0
Flt Permitted		0.863			0.681			0.520			0.996	
Satd. Flow (perm)	0	1301	0	0	1182	0	0	900	0	0	1709	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			35			35			35	
Link Distance (ft)		93			732			100			2015	
Travel Time (s)		1.6			14.3			1.9			39.3	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	4%	4%	0%	2%	4%	0%	0%	2%	0%
Adj. Flow (vph)	21	21	111	30	93	3	271	469	9	3	471	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	153	0	0	126	0	0	749	0	0	493	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.18	1.18	1.18	1.07	1.07	1.07	1.08	1.08	1.08	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	0		1	1	
Detector Template	Left	Thru		Left	Thru							
Leading Detector (ft)	20	35		20	35		35	0		35	35	
Trailing Detector (ft)	0	-5		0	-5		-5	0		-5	-5	
Detector 1 Position(ft)	0	-5		0	-5		-5	0		-5	-5	
Detector 1 Size(ft)	20	40		20	40		40	6		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		custom	NA		Perm	NA	
Protected Phases		4			8		9 11	6 9 11			2	
Permitted Phases	4			8			6			2		
Detector Phase	4	4 10		8	8 10		9 11	6 9 11		2	2 6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0					15.0	15.0	
Minimum Split (s)	14.0	14.0		14.0	14.0					25.0	25.0	
Total Split (s)	27.0	27.0		27.0	27.0					76.0	76.0	

Lane Group	Ø1	Ø5	Ø6	Ø9	Ø10	Ø11
Lane Configurations						
Traffic Volume (vph)						
Future Volume (vph)						
Ideal Flow (vphpl)						
Lane Width (ft)						
Grade (%)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Turn Type						
Protected Phases	1	5	6	9	10	11
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	5.0	3.0	19.0	8.0	8.0	6.0
Minimum Split (s)	13.0	12.0	25.0	13.0	18.0	12.0
Total Split (s)	32.0	41.0	76.0	32.0	27.0	41.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	15.3%	15.3%		15.3%	15.3%					43.2%	43.2%	
Maximum Green (s)	18.0	18.0		18.0	18.0					66.0	66.0	
Yellow Time (s)	3.0	3.0		3.0	3.0					4.0	4.0	
All-Red Time (s)	6.0	6.0		6.0	6.0					6.0	6.0	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		9.0			9.0						10.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0					3.0	3.0	
Recall Mode	None	None		None	None					Min	Min	
Act Effct Green (s)		18.0			18.0			131.0			66.0	
Actuated g/C Ratio		0.10			0.10			0.74			0.38	
v/c Ratio		1.15			1.05			0.79			0.77	
Control Delay		188.9			167.6			7.8			57.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		188.9			167.6			7.8			57.9	
LOS		F			F			A			E	
Approach Delay		188.9			167.6			7.8			57.9	
Approach LOS		F			F			A			E	
Queue Length 50th (ft)		~207			~157			16			500	
Queue Length 95th (ft)		#362			#302			93			644	
Internal Link Dist (ft)		13			652			20			1935	
Turn Bay Length (ft)												
Base Capacity (vph)		133			120			947			640	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		1.15			1.05			0.79			0.77	

Intersection Summary

Area Type: Other

Cycle Length: 176

Actuated Cycle Length: 176

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.15

Intersection Signal Delay: 55.5 Intersection LOS: E

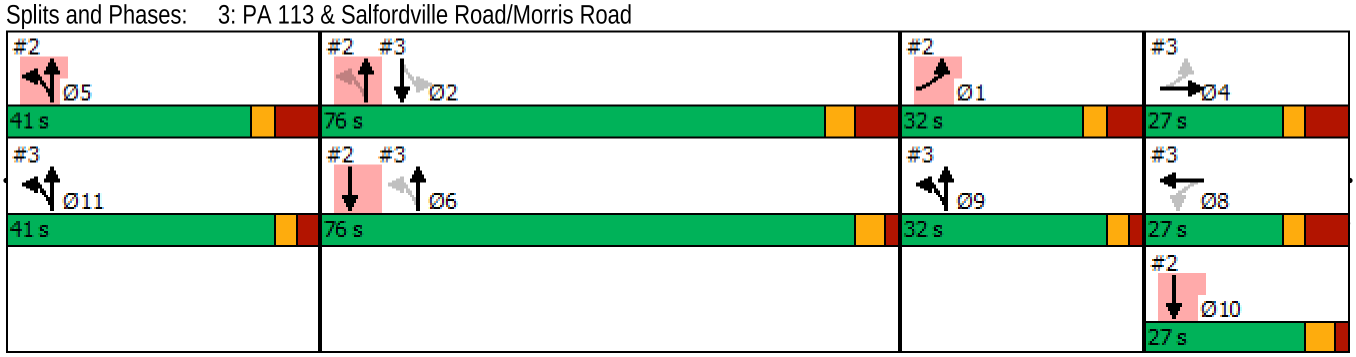
Intersection Capacity Utilization 93.7% ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: PA 113 & Salfordville Road/Morris Road



Lane Group	Ø1	Ø5	Ø6	Ø9	Ø10	Ø11
Total Split (%)	18%	23%	43%	18%	15%	23%
Maximum Green (s)	24.0	32.0	70.0	27.0	21.0	35.0
Yellow Time (s)	3.0	3.0	4.0	3.0	4.0	3.0
All-Red Time (s)	5.0	6.0	2.0	2.0	2.0	3.0
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	None	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	137	310	31	0	0
Future Volume (vph)	1	137	310	31	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	11	11	14	14
Grade (%)		1%	-1%		-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.988			
Flt Protected						
Satd. Flow (prot)	0	1672	1697	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1672	1697	0	0	0
Link Speed (mph)		40	40		35	
Link Distance (ft)		802	93		617	
Travel Time (s)		13.7	1.6		12.0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%
Adj. Flow (vph)	1	154	348	35	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	155	383	0	0	0
Enter Blocked Intersection	Yes	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.18	1.18	1.11	1.11	0.98	0.98
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	7	456	1	6	441
Future Volume (vph)	3	7	456	1	6	441
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	11	11	12	12
Grade (%)	-2%		1%			-3%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.902					
Flt Protected	0.987					0.999
Satd. Flow (prot)	1672	0	1665	0	0	1773
Flt Permitted	0.987					0.999
Satd. Flow (perm)	1672	0	1665	0	0	1773
Link Speed (mph)	35		35			35
Link Distance (ft)	663		2015			653
Travel Time (s)	12.9		39.3			12.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	4%	0%	0%	3%
Adj. Flow (vph)	3	8	507	1	7	490
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	0	508	0	0	497
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.13	1.13	1.05	1.05
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	7	456	1	6	441
Future Vol, veh/h	3	7	456	1	6	441
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	1	-	-	-3
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	4	0	0	3
Mvmt Flow	3	8	507	1	7	490

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1012	508	0	0	508	0
Stage 1	508	-	-	-	-	-
Stage 2	504	-	-	-	-	-
Critical Hdwy	6	6	-	-	4.3	-
Critical Hdwy Stg 1	5	-	-	-	-	-
Critical Hdwy Stg 2	5	-	-	-	-	-
Follow-up Hdwy	3	3.1	-	-	3	-
Pot Cap-1 Maneuver	329	615	-	-	802	-
Stage 1	727	-	-	-	-	-
Stage 2	730	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	325	615	-	-	802	-
Mov Cap-2 Maneuver	325	-	-	-	-	-
Stage 1	727	-	-	-	-	-
Stage 2	721	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.6	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	485	802	-
HCM Lane V/C Ratio	-	-	0.023	0.008	-
HCM Control Delay (s)	-	-	12.6	9.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	12	6	9	61	63	8	438	16	26	429	18
Future Volume (vph)	18	12	6	9	61	63	8	438	16	26	429	18
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	13	12	12	12	12	12	12	13	13	13
Grade (%)		-2%			-1%			1%			-4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.976			0.936			0.995			0.995	
Flt Protected		0.976			0.997			0.999			0.997	
Satd. Flow (prot)	0	1737	0	0	1620	0	0	1700	0	0	1833	0
Flt Permitted		0.838			0.973			0.989			0.960	
Satd. Flow (perm)	0	1492	0	0	1581	0	0	1683	0	0	1765	0
Right Turn on Red			No			Yes			Yes			No
Satd. Flow (RTOR)					48			5				
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		495			475			653			1186	
Travel Time (s)		9.6			9.3			9.9			18.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	0%	0%	0%	2%	7%	0%	5%	0%	12%	2%	6%
Adj. Flow (vph)	20	13	7	10	66	68	9	476	17	28	466	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	0	0	144	0	0	502	0	0	514	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.07	1.07	1.07	1.08	1.08	1.08	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	35		20	35		20	456		20	456	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								450			450	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	9.0	9.0		9.0	9.0		22.0	22.0		22.0	22.0	
Total Split (s)	21.0	21.0		21.0	21.0		62.0	62.0		62.0	62.0	
Total Split (%)	25.3%	25.3%		25.3%	25.3%		74.7%	74.7%		74.7%	74.7%	
Maximum Green (s)	15.0	15.0		15.0	15.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		5.0			5.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	

Intersection Summary	
Area Type:	Other
Cycle Length: 83	
Actuated Cycle Length: 44.9	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 6: PA 113 & Landis Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	12	6	9	61	63	8	438	16	26	429	18
Future Volume (veh/h)	18	12	6	9	61	63	8	438	16	26	429	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1861	1950	1950	1837	1809	1738	1794	1724	1794	1850	1997	1938
Adj Flow Rate, veh/h	20	13	7	10	66	36	9	476	16	28	466	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	0	0	0	2	7	0	5	0	12	2	6
Cap, veh/h	210	95	38	105	125	65	91	1021	34	117	1131	47
Arrive On Green	0.10	0.12	0.10	0.10	0.12	0.10	0.60	0.62	0.60	0.60	0.62	0.60
Sat Flow, veh/h	693	790	315	103	1039	541	8	1644	55	44	1822	76
Grp Volume(v), veh/h	40	0	0	112	0	0	501	0	0	514	0	0
Grp Sat Flow(s),veh/h/ln	1798	0	0	1683	0	0	1707	0	0	1942	0	0
Q Serve(g_s), s	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.8	0.0	0.0	2.7	0.0	0.0	6.8	0.0	0.0	5.7	0.0	0.0
Prop In Lane	0.50		0.17	0.09		0.32	0.02		0.03	0.05		0.04
Lane Grp Cap(c), veh/h	301	0	0	255	0	0	1106	0	0	1249	0	0
V/C Ratio(X)	0.13	0.00	0.00	0.44	0.00	0.00	0.45	0.00	0.00	0.41	0.00	0.00
Avail Cap(c_a), veh/h	712	0	0	684	0	0	2284	0	0	2567	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.1	0.0	0.0	17.8	0.0	0.0	4.3	0.0	0.0	4.2	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	1.2	0.0	0.0	0.3	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.0	0.0	1.8	0.0	0.0	1.7	0.0	0.0	1.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.3	0.0	0.0	19.0	0.0	0.0	4.6	0.0	0.0	4.4	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		40			112			501			514	
Approach Delay, s/veh		17.3			19.0			4.6			4.4	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		32.3		10.1		32.3		10.1				
Change Period (Y+Rc), s		7.0		6.0		7.0		6.0				
Max Green Setting (Gmax), s		55.0		15.0		55.0		15.0				
Max Q Clear Time (g_c+I1), s		8.8		2.8		7.7		4.7				
Green Ext Time (p_c), s		16.6		0.0		17.4		0.2				

Intersection Summary			
HCM 6th Ctrl Delay			6.3
HCM 6th LOS			A

Attachment 11

2035 Future Alternative #1 Capacity/Level-of-Service Analysis Worksheets

425 Commerce Drive, Suite 200, Fort Washington, PA 19034
P: 215.283.9444
mcmahonassociates.com | bowman.com

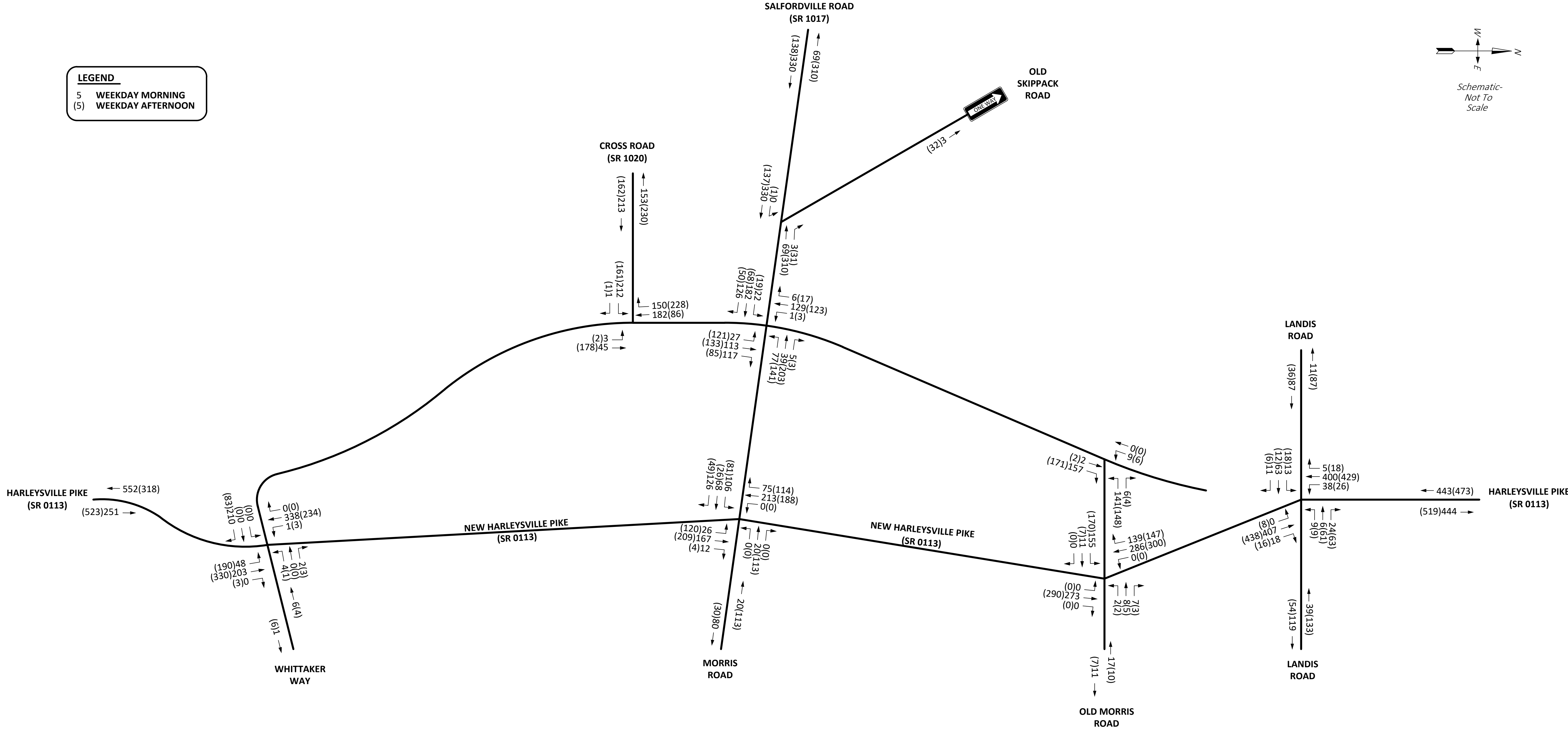


FIGURE J
2035 Future Peak Hour Traffic Volumes- Alternative #1

WALKABLE LEDERACH

LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

Q:\PA-FTWA-MC\MCM\eng\LOWERSA1\822255_TCDI Walkable Lederach\Traffic\2-TrafficEval\7-Graphics\Figure 4ABCD.dwg

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4	Ø6	Ø8	Ø9	Ø10
Lane Configurations												
Traffic Volume (vph)	212	1	3	45	182	150						
Future Volume (vph)	212	1	3	45	182	150						
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800						
Lane Width (ft)	12	12	12	12	11	11						
Grade (%)	-1%			1%	-2%							
Lane Util. Factor	1.00	1.00	*1.00	*1.00	1.00	1.00						
Frt	0.999				0.939							
Flt Protected	0.953			0.997								
Satd. Flow (prot)	1656	0	0	1603	1572	0						
Flt Permitted	0.953			0.981								
Satd. Flow (perm)	1656	0	0	1577	1572	0						
Right Turn on Red		No				No						
Satd. Flow (RTOR)												
Link Speed (mph)	40			35	35							
Link Distance (ft)	553			2066	100							
Travel Time (s)	9.4			40.2	1.9							
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96						
Heavy Vehicles (%)	4%	0%	33%	10%	5%	5%						
Adj. Flow (vph)	221	1	3	47	190	156						
Shared Lane Traffic (%)												
Lane Group Flow (vph)	222	0	0	50	346	0						
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Right	Left	Left	Left	Right						
Median Width(ft)	12			0	0							
Link Offset(ft)	0			0	0							
Crosswalk Width(ft)	16			16	16							
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.08	1.08	1.11	1.11						
Turning Speed (mph)	15	9	15			9						
Number of Detectors	1		1	1	0							
Detector Template	Left		Left									
Leading Detector (ft)	35		20	35	0							
Trailing Detector (ft)	-5		0	-5	0							
Detector 1 Position(ft)	-5		0	-5	0							
Detector 1 Size(ft)	40		20	40	6							
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex							
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0							
Detector 1 Queue (s)	0.0		0.0	0.0	0.0							
Detector 1 Delay (s)	0.0		0.0	0.0	0.0							
Turn Type	Prot		custom	NA	NA							
Protected Phases	1		5	2 5	6 10		2	4	6	8	9	10
Permitted Phases			2									
Detector Phase	1 9		5	2 5 6 11	6 10							
Switch Phase												
Minimum Initial (s)	5.0		3.0				15.0	5.0	19.0	5.0	8.0	8.0
Minimum Split (s)	13.0		12.0				25.0	14.0	25.0	14.0	13.0	18.0
Total Split (s)	37.0		16.0				41.0	51.0	41.0	51.0	37.0	51.0
Total Split (%)	25.5%		11.0%				28%	35%	28%	35%	26%	35%
Maximum Green (s)	29.0		7.0				31.0	42.0	35.0	42.0	32.0	45.0
Yellow Time (s)	3.0		3.0				4.0	3.0	4.0	3.0	3.0	4.0
All-Red Time (s)	5.0		6.0				6.0	6.0	2.0	6.0	2.0	2.0
Lost Time Adjust (s)	0.0											

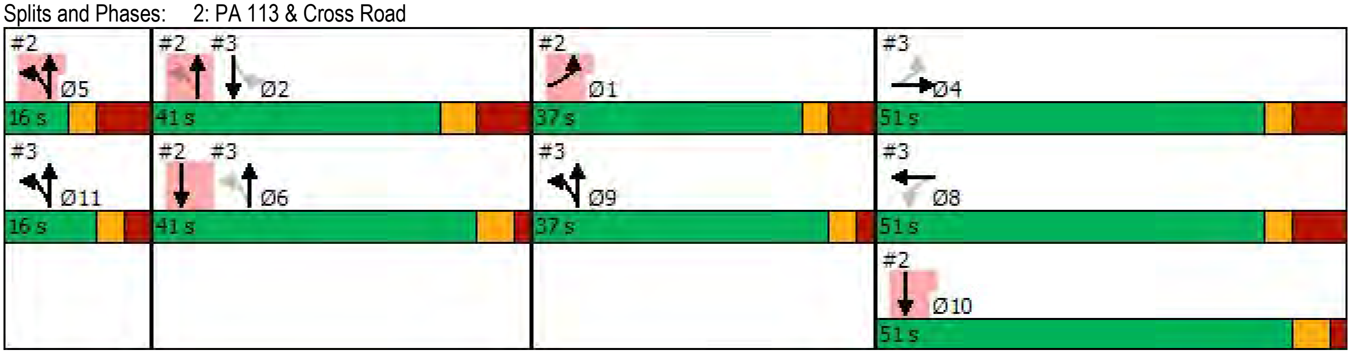
Lane Group	Ø11
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	11
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	6.0
Minimum Split (s)	12.0
Total Split (s)	16.0
Total Split (%)	11%
Maximum Green (s)	10.0
Yellow Time (s)	3.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4	Ø6	Ø8	Ø9	Ø10
Total Lost Time (s)	8.0											
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0		3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None		None				Min	None	Min	None	None	None
Act Effct Green (s)	29.0			36.8	80.0							
Actuated g/C Ratio	0.20			0.25	0.55							
v/c Ratio	0.67			0.12	0.40							
Control Delay	64.7			35.7	1.1							
Queue Delay	0.0			0.0	0.0							
Total Delay	64.7			35.7	1.1							
LOS	E			D	A							
Approach Delay	64.7			35.7	1.1							
Approach LOS	E			D	A							
Queue Length 50th (ft)	196			33	0							
Queue Length 95th (ft)	291			66	m0							
Internal Link Dist (ft)	473			1986	20							
Turn Bay Length (ft)												
Base Capacity (vph)	331			403	867							
Starvation Cap Reductn	0			0	0							
Spillback Cap Reductn	0			0	0							
Storage Cap Reductn	0			0	0							
Reduced v/c Ratio	0.67			0.12	0.40							

Intersection Summary

Area Type: Other
Cycle Length: 145
Actuated Cycle Length: 145
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 26.8 Intersection LOS: C
Intersection Capacity Utilization 43.9% ICU Level of Service A
Analysis Period (min) 15
* User Entered Value
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: PA 113 & Cross Road



Lane Group	Ø11
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	182	126	77	39	5	27	113	117	1	129	6
Future Volume (vph)	22	182	126	77	39	5	27	113	117	1	129	6
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	12	12	12	12	12	12	11	11	11
Grade (%)		1%			-1%			1%			-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.949			0.995			0.939			0.994	
Flt Protected		0.997			0.969			0.995				
Satd. Flow (prot)	0	1511	0	0	1674	0	0	1569	0	0	1609	0
Flt Permitted		0.970			0.451			0.981			0.998	
Satd. Flow (perm)	0	1470	0	0	779	0	0	1547	0	0	1606	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			35			35			35	
Link Distance (ft)		93			1156			100			2015	
Travel Time (s)		1.6			22.5			1.9			39.3	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	20%	4%	3%	2%	9%	0%	8%	9%	4%	0%	9%	0%
Adj. Flow (vph)	24	196	135	83	42	5	29	122	126	1	139	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	355	0	0	130	0	0	277	0	0	146	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.18	1.18	1.18	1.07	1.07	1.07	1.08	1.08	1.08	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	0		1	1	
Detector Template	Left	Thru		Left	Thru							
Leading Detector (ft)	20	35		20	35		35	0		35	35	
Trailing Detector (ft)	0	-5		0	-5		-5	0		-5	-5	
Detector 1 Position(ft)	0	-5		0	-5		-5	0		-5	-5	
Detector 1 Size(ft)	20	40		20	40		40	6		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		custom	NA		Perm	NA	
Protected Phases		4			8		9 11	6 9 11			2	
Permitted Phases	4			8			6			2		
Detector Phase	4	4 10		8	8 10		9 11	6 9 11		2	2 6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0					15.0	15.0	
Minimum Split (s)	14.0	14.0		14.0	14.0					25.0	25.0	
Total Split (s)	51.0	51.0		51.0	51.0					41.0	41.0	
Total Split (%)	35.2%	35.2%		35.2%	35.2%					28.3%	28.3%	
Maximum Green (s)	42.0	42.0		42.0	42.0					31.0	31.0	
Yellow Time (s)	3.0	3.0		3.0	3.0					4.0	4.0	
All-Red Time (s)	6.0	6.0		6.0	6.0					6.0	6.0	
Lost Time Adjust (s)		0.0			0.0						0.0	

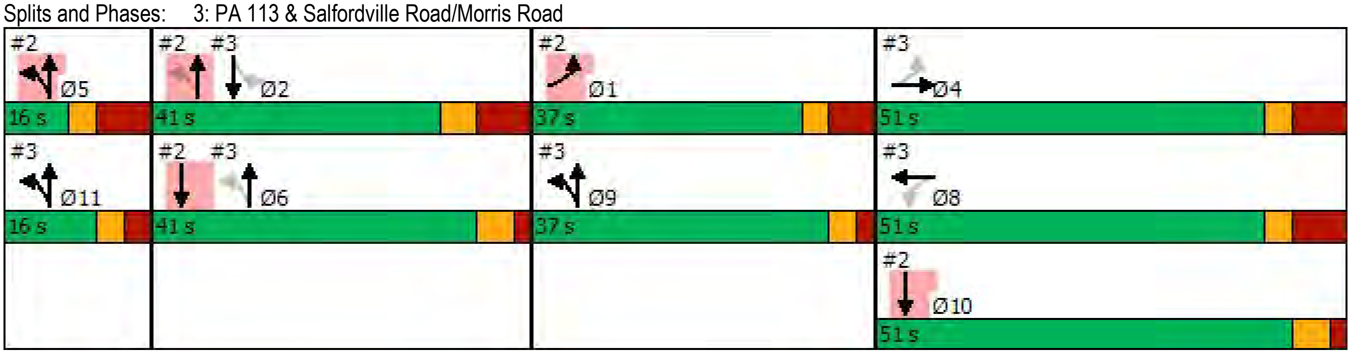
Lane Group	Ø1	Ø5	Ø6	Ø9	Ø10	Ø11
Lane Configurations						
Traffic Volume (vph)						
Future Volume (vph)						
Ideal Flow (vphpl)						
Lane Width (ft)						
Grade (%)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Turn Type						
Protected Phases	1	5	6	9	10	11
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	5.0	3.0	19.0	8.0	8.0	6.0
Minimum Split (s)	13.0	12.0	25.0	13.0	18.0	12.0
Total Split (s)	37.0	16.0	41.0	37.0	51.0	16.0
Total Split (%)	26%	11%	28%	26%	35%	11%
Maximum Green (s)	29.0	7.0	35.0	32.0	45.0	10.0
Yellow Time (s)	3.0	3.0	4.0	3.0	4.0	3.0
All-Red Time (s)	5.0	6.0	2.0	2.0	2.0	3.0
Lost Time Adjust (s)						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Lost Time (s)		9.0			9.0						10.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0					3.0	3.0	
Recall Mode	None	None		None	None					Min	Min	
Act Effct Green (s)		42.0			42.0			76.0			31.0	
Actuated g/C Ratio		0.29			0.29			0.52			0.21	
v/c Ratio		0.84			0.58			0.34			0.43	
Control Delay		66.2			55.9			1.7			53.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		66.2			55.9			1.7			53.8	
LOS		E			E			A			D	
Approach Delay		66.2			55.9			1.7			53.8	
Approach LOS		E			E			A			D	
Queue Length 50th (ft)		315			105			8			121	
Queue Length 95th (ft)		#480			183			4			192	
Internal Link Dist (ft)		13			1076			20			1935	
Turn Bay Length (ft)												
Base Capacity (vph)		425			225			817			343	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.84			0.58			0.34			0.43	

Intersection Summary

Area Type: Other
Cycle Length: 145
Actuated Cycle Length: 145
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 43.1 Intersection LOS: D
Intersection Capacity Utilization 81.6% ICU Level of Service D
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: PA 113 & Salfordville Road/Morris Road



Lane Group	Ø1	Ø5	Ø6	Ø9	Ø10	Ø11
Total Lost Time (s)						
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	None	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	330	69	3	0	0
Future Volume (vph)	0	330	69	3	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	11	11	14	14
Grade (%)		1%	-1%		-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.995			
Flt Protected						
Satd. Flow (prot)	0	1592	1630	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1592	1630	0	0	0
Link Speed (mph)		40	40		35	
Link Distance (ft)		802	93		617	
Travel Time (s)		13.7	1.6		12.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	5%	7%	0%	0%	0%
Adj. Flow (vph)	0	355	74	3	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	355	77	0	0	0
Enter Blocked Intersection	Yes	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.18	1.18	1.11	1.11	0.98	0.98
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	141	6	2	157	9	0
Future Volume (vph)	141	6	2	157	9	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	-2%		1%			0%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.994		0.867			
Flt Protected	0.954					0.950
Satd. Flow (prot)	1573	0	1426	0	0	1710
Flt Permitted	0.954					0.950
Satd. Flow (perm)	1573	0	1426	0	0	1710
Link Speed (mph)	35		35			30
Link Distance (ft)	424		2015			295
Travel Time (s)	8.3		39.3			6.7
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	10%	0%	0%	9%	0%	0%
Adj. Flow (vph)	158	7	2	176	10	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	165	0	178	0	0	10
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.08	1.08	1.07	1.07
Turning Speed (mph)	15	9		9	15	
Sign Control	Free		Free			Stop

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	141	6	2	157	9	0
Future Vol, veh/h	141	6	2	157	9	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	1	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	10	0	0	9	0	0
Mvmt Flow	158	7	2	176	10	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	0	0	90	178
Stage 1	-	-	0	0
Stage 2	-	-	90	178
Critical Hdwy	-	-	6.4	6.5
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.4	5.5
Follow-up Hdwy	-	-	3.5	4
Pot Cap-1 Maneuver	-	-	915	719
Stage 1	-	-	-	-
Stage 2	-	-	939	756
Platoon blocked, %	-	-		
Mov Cap-1 Maneuver	-	-	915	0
Mov Cap-2 Maneuver	-	-	915	0
Stage 1	-	-	-	0
Stage 2	-	-	939	0

Approach	NB	SB
HCM Control Delay, s	0	9
HCM LOS		A

Minor Lane/Major Mvmt	NBT	NBR	SBLn1
Capacity (veh/h)	-	-	915
HCM Lane V/C Ratio	-	-	0.011
HCM Control Delay (s)	-	-	9
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	63	11	9	6	24	0	407	18	38	400	5
Future Volume (vph)	13	63	11	9	6	24	0	407	18	38	400	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	12	12	12	12	12	12	12	13	12	13
Grade (%)		-2%			-1%			0%			-4%	
Storage Length (ft)	0		0	0		0	225		0	225		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.983			0.918			0.994			0.998	
Flt Protected		0.993			0.988					0.950		
Satd. Flow (prot)	0	1787	0	0	1524	0	1800	1648	0	1669	1635	0
Flt Permitted		0.939			0.887					0.480		
Satd. Flow (perm)	0	1690	0	0	1368	0	1800	1648	0	843	1635	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		8			28			6				
Link Speed (mph)		35			35			30			45	
Link Distance (ft)		472			496			693			1186	
Travel Time (s)		9.2			9.7			15.8			18.0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	8%	2%	0%	11%	17%	4%	0%	8%	22%	8%	12%	20%
Adj. Flow (vph)	15	74	13	11	7	28	0	479	21	45	471	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	102	0	0	46	0	0	500	0	45	477	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			13			13	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.06	1.07	1.07	1.07	1.07	1.07	1.07	1.00	1.05	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left			Left	Thru		Left	Thru	
Leading Detector (ft)	20	35		20	35		20	100		20	100	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	3.0		3.0	3.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	9.0	9.0		9.0	9.0		22.0	22.0		22.0	22.0	
Total Split (s)	21.0	21.0		21.0	21.0		62.0	62.0		62.0	62.0	
Total Split (%)	25.3%	25.3%		25.3%	25.3%		74.7%	74.7%		74.7%	74.7%	
Maximum Green (s)	15.0	15.0		15.0	15.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0		7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	

Intersection Summary

Area Type: Other

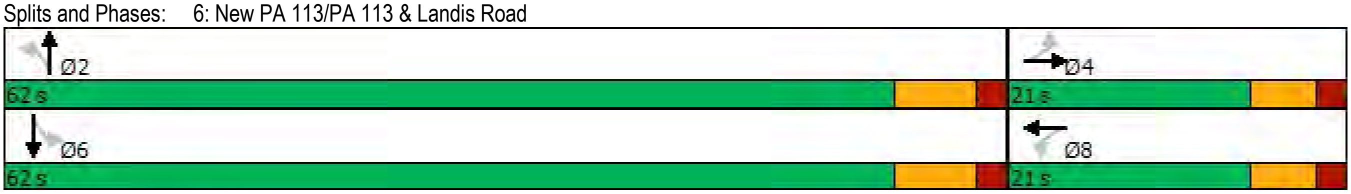
Cycle Length: 83

Actuated Cycle Length: 40.7

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Splits and Phases: 6: New PA 113/PA 113 & Landis Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	63	11	9	6	24	0	407	18	38	400	5
Future Volume (veh/h)	13	63	11	9	6	24	0	407	18	38	400	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1831	1920	1875	1681	1596	1780	1800	1688	1491	1909	1778	1731
Adj Flow Rate, veh/h	15	74	13	11	7	21	0	479	21	45	471	6
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	8	2	0	11	17	4	0	8	22	8	12	20
Cap, veh/h	166	160	28	197	35	94	235	785	34	498	857	11
Arrive On Green	0.09	0.12	0.09	0.09	0.12	0.09	0.00	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	259	1338	233	386	293	792	932	1605	70	967	1752	22
Grp Volume(v), veh/h	102	0	0	39	0	0	0	0	500	45	0	477
Grp Sat Flow(s),veh/h/ln	1830	0	0	1471	0	0	932	0	1675	967	0	1774
Q Serve(g_s), s	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	1.1	0.0	5.8
Cycle Q Clear(g_c), s	1.6	0.0	0.0	0.7	0.0	0.0	0.0	0.0	6.7	7.8	0.0	5.8
Prop In Lane	0.15		0.13	0.28		0.54	1.00		0.04	1.00		0.01
Lane Grp Cap(c), veh/h	293	0	0	278	0	0	235	0	820	498	0	868
V/C Ratio(X)	0.35	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.61	0.09	0.00	0.55
Avail Cap(c_a), veh/h	1020	0	0	815	0	0	1451	0	3005	1760	0	3183
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.7	0.0	0.0	12.6	0.0	0.0	0.0	0.0	5.7	8.5	0.0	5.5
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.7	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	2.2	0.2	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	0.0	0.0	12.8	0.0	0.0	0.0	0.0	6.4	8.6	0.0	6.0
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		102			39			500			522	
Approach Delay, s/veh		13.4			12.8			6.4			6.2	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.0		8.7		22.0		8.7				
Change Period (Y+Rc), s		7.0		6.0		7.0		6.0				
Max Green Setting (Gmax), s		55.0		15.0		55.0		15.0				
Max Q Clear Time (g_c+I1), s		8.7		3.6		9.8		2.7				
Green Ext Time (p_c), s		3.7		0.2		3.3		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			7.2									
HCM 6th LOS			A									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	210	4	0	2	48	203	0	1	338	0
Future Volume (vph)	0	0	210	4	0	2	48	203	0	1	338	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865			0.955							
Flt Protected					0.968		0.950			0.950		
Satd. Flow (prot)	0	1469	0	0	1664	0	1541	1607	0	1710	1698	0
Flt Permitted					0.968		0.950			0.950		
Satd. Flow (perm)	0	1469	0	0	1664	0	1541	1607	0	1710	1698	0
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		181			519			457			1291	
Travel Time (s)		3.5			14.2			8.9			25.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	6%	0%	0%	0%	11%	12%	0%	0%	6%	0%
Adj. Flow (vph)	0	0	231	4	0	2	53	223	0	1	371	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	231	0	0	6	0	53	223	0	1	371	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	210	4	0	2	48	203	0	1	338	0
Future Vol, veh/h	0	0	210	4	0	2	48	203	0	1	338	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	6	0	0	0	11	12	0	0	6	0
Mvmt Flow	0	0	231	4	0	2	53	223	0	1	371	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	703	702	371	818	702	223	371	0	0	223	0	0
Stage 1	373	373	-	329	329	-	-	-	-	-	-	-
Stage 2	330	329	-	489	373	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.26	7.1	6.5	6.2	4.4	-	-	4.3	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3	4	3.2	3	4	3.1	3.1	-	-	3	-	-
Pot Cap-1 Maneuver	396	365	693	330	365	869	862	-	-	1007	-	-
Stage 1	742	622	-	786	650	-	-	-	-	-	-	-
Stage 2	785	650	-	638	622	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	376	342	693	210	342	869	862	-	-	1007	-	-
Mov Cap-2 Maneuver	376	342	-	210	342	-	-	-	-	-	-	-
Stage 1	697	621	-	738	610	-	-	-	-	-	-	-
Stage 2	735	610	-	425	621	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.8	18.1	1.8	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	862	-	-	693	281	1007	-	-
HCM Lane V/C Ratio	0.061	-	-	0.333	0.023	0.001	-	-
HCM Control Delay (s)	9.4	-	-	12.8	18.1	8.6	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.5	0.1	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	68	126	0	20	0	26	167	12	0	213	75
Future Volume (vph)	106	68	126	0	20	0	26	167	12	0	213	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Grade (%)		0%			-1%			0%			0%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.943						0.990			0.961	
Flt Protected		0.983					0.950					
Satd. Flow (prot)	0	1596	0	0	1707	0	1583	1604	0	900	1606	0
Flt Permitted		0.983					0.950					
Satd. Flow (perm)	0	1596	0	0	1707	0	1583	1604	0	900	1606	0
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1156			811			1291			2237	
Travel Time (s)		22.5			15.8			25.1			43.6	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	6%	5%	3%	0%	6%	0%	8%	11%	12%	100%	8%	7%
Adj. Flow (vph)	114	73	135	0	22	0	28	180	13	0	229	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	322	0	0	22	0	28	193	0	0	310	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	7.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	106	68	126	0	20	0	26	167	12	0	213	75
Future Vol, veh/h	106	68	126	0	20	0	26	167	12	0	213	75
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-1	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	6	5	3	0	6	0	8	11	12	100	8	7
Mvmt Flow	114	73	135	0	22	0	28	180	13	0	229	81

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	524	519	270	617	553	187	310	0	0	193	0	0
Stage 1	270	270	-	243	243	-	-	-	-	-	-	-
Stage 2	254	249	-	374	310	-	-	-	-	-	-	-
Critical Hdwy	7.16	6.6	6.23	7.1	6.6	6.2	4.4	-	-	5.3	-	-
Critical Hdwy Stg 1	6.16	5.55	-	5.9	5.36	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.16	5.55	-	5.9	5.36	-	-	-	-	-	-	-
Follow-up Hdwy	3.1	4.1	3.1	3	4.1	3.1	3.1	-	-	3.9	-	-
Pot Cap-1 Maneuver	509	449	816	455	429	911	906	-	-	770	-	-
Stage 1	820	673	-	890	700	-	-	-	-	-	-	-
Stage 2	837	687	-	757	657	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	477	435	816	323	416	911	906	-	-	770	-	-
Mov Cap-2 Maneuver	477	435	-	323	416	-	-	-	-	-	-	-
Stage 1	795	673	-	862	678	-	-	-	-	-	-	-
Stage 2	785	666	-	563	657	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.6	14.1	1.2	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	906	-	-	563	416	770	-	-
HCM Lane V/C Ratio	0.031	-	-	0.573	0.052	-	-	-
HCM Control Delay (s)	9.1	-	-	19.6	14.1	0	-	-
HCM Lane LOS	A	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	3.6	0.2	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	11	0	2	8	7	0	273	0	0	286	139
Future Volume (vph)	155	11	0	2	8	7	0	273	0	0	286	139
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.943						0.951	
Flt Protected		0.955			0.995							
Satd. Flow (prot)	0	1586	0	0	1589	0	1800	1651	0	1800	1556	0
Flt Permitted		0.955			0.995							
Satd. Flow (perm)	0	1586	0	0	1589	0	1800	1651	0	1800	1556	0
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		424			345			2237			693	
Travel Time (s)		8.3			6.7			43.6			13.5	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	9%	0%	0%	0%	0%	15%	0%	9%	50%	0%	10%	10%
Adj. Flow (vph)	174	12	0	2	9	8	0	307	0	0	321	156
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	186	0	0	19	0	0	307	0	0	477	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	155	11	0	2	8	7	0	273	0	0	286	139
Future Vol, veh/h	155	11	0	2	8	7	0	273	0	0	286	139
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	9	0	0	0	0	15	0	9	50	0	10	10
Mvmt Flow	174	12	0	2	9	8	0	307	0	0	321	156

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	715	706	399	712	784	307	477	0	0	307	0	0
Stage 1	399	399	-	307	307	-	-	-	-	-	-	-
Stage 2	316	307	-	405	477	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.5	6.2	7.1	6.5	6.35	4.3	-	-	4.3	-	-
Critical Hdwy Stg 1	6.19	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.1	4	3.1	3	4	3.1	3	-	-	3	-	-
Pot Cap-1 Maneuver	373	363	690	391	327	769	823	-	-	943	-	-
Stage 1	691	606	-	808	665	-	-	-	-	-	-	-
Stage 2	770	665	-	712	559	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	361	363	690	381	327	769	823	-	-	943	-	-
Mov Cap-2 Maneuver	361	363	-	381	327	-	-	-	-	-	-	-
Stage 1	691	606	-	808	665	-	-	-	-	-	-	-
Stage 2	752	665	-	697	559	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	25.2	13.6	0	0
HCM LOS	D	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	823	-	-	361	438	943	-	-
HCM Lane V/C Ratio	-	-	-	0.517	0.044	-	-	-
HCM Control Delay (s)	0	-	-	25.2	13.6	0	-	-
HCM Lane LOS	A	-	-	D	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	2.8	0.1	0	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4	Ø6	Ø8	Ø9	Ø10
Lane Configurations												
Traffic Volume (vph)	161	1	2	178	86	228						
Future Volume (vph)	161	1	2	178	86	228						
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800						
Lane Width (ft)	12	12	12	12	11	11						
Grade (%)	-1%			1%	-2%							
Lane Util. Factor	1.00	1.00	*1.00	*1.00	1.00	1.00						
Frt	0.999				0.902							
Flt Protected	0.953			0.999								
Satd. Flow (prot)	1625	0	0	1754	1561	0						
Flt Permitted	0.953			0.997								
Satd. Flow (perm)	1625	0	0	1751	1561	0						
Right Turn on Red		No				No						
Satd. Flow (RTOR)												
Link Speed (mph)	40			35	35							
Link Distance (ft)	553			2066	100							
Travel Time (s)	9.4			40.2	1.9							
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96						
Heavy Vehicles (%)	6%	0%	0%	2%	3%	1%						
Adj. Flow (vph)	168	1	2	185	90	238						
Shared Lane Traffic (%)												
Lane Group Flow (vph)	169	0	0	187	328	0						
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Right	Left	Left	Left	Right						
Median Width(ft)	12			0	0							
Link Offset(ft)	0			0	0							
Crosswalk Width(ft)	16			16	16							
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.08	1.08	1.11	1.11						
Turning Speed (mph)	15	9	15			9						
Number of Detectors	1		1	1	0							
Detector Template	Left		Left									
Leading Detector (ft)	35		20	35	0							
Trailing Detector (ft)	-5		0	-5	0							
Detector 1 Position(ft)	-5		0	-5	0							
Detector 1 Size(ft)	40		20	40	6							
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex							
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0							
Detector 1 Queue (s)	0.0		0.0	0.0	0.0							
Detector 1 Delay (s)	0.0		0.0	0.0	0.0							
Turn Type	Prot		custom	NA	NA							
Protected Phases	1		5	2 5	6 10		2	4	6	8	9	10
Permitted Phases			2									
Detector Phase	1 9		5	2 5 6 11	6 10							
Switch Phase												
Minimum Initial (s)	5.0		3.0				15.0	5.0	19.0	5.0	8.0	8.0
Minimum Split (s)	13.0		12.0				25.0	14.0	25.0	14.0	13.0	18.0
Total Split (s)	31.0		16.0				39.0	54.0	39.0	54.0	31.0	54.0
Total Split (%)	22.1%		11.4%				28%	39%	28%	39%	22%	39%
Maximum Green (s)	23.0		7.0				29.0	45.0	33.0	45.0	26.0	48.0
Yellow Time (s)	3.0		3.0				4.0	3.0	4.0	3.0	3.0	4.0
All-Red Time (s)	5.0		6.0				6.0	6.0	2.0	6.0	2.0	2.0
Lost Time Adjust (s)	0.0											

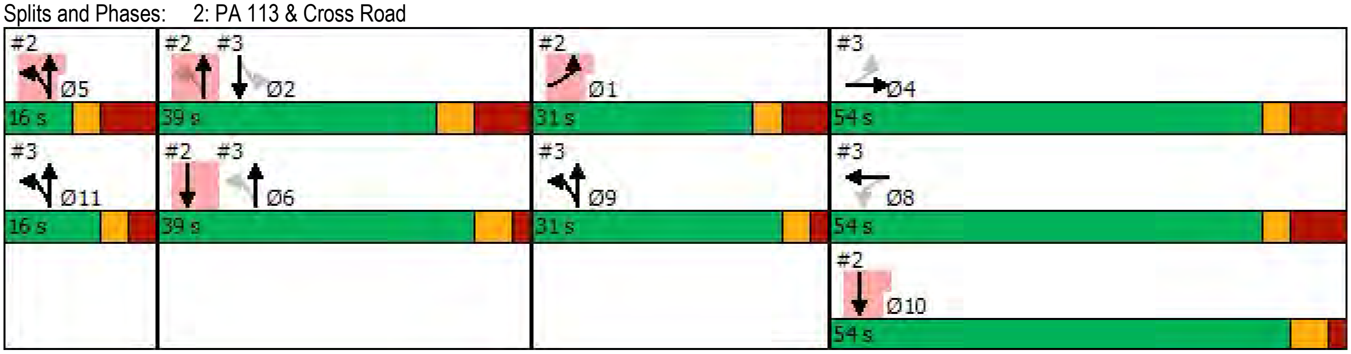
Lane Group	Ø11
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	11
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	6.0
Minimum Split (s)	12.0
Total Split (s)	16.0
Total Split (%)	11%
Maximum Green (s)	10.0
Yellow Time (s)	3.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4	Ø6	Ø8	Ø9	Ø10
Total Lost Time (s)	8.0											
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0		3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None		None				Min	None	Min	None	None	None
Act Effct Green (s)	23.0			35.0	81.0							
Actuated g/C Ratio	0.16			0.25	0.58							
v/c Ratio	0.64			0.43	0.36							
Control Delay	66.4			43.8	0.9							
Queue Delay	0.0			0.1	0.0							
Total Delay	66.4			43.8	0.9							
LOS	E			D	A							
Approach Delay	66.4			43.8	0.9							
Approach LOS	E			D	A							
Queue Length 50th (ft)	145			129	0							
Queue Length 95th (ft)	227			198	m0							
Internal Link Dist (ft)	473			1986	20							
Turn Bay Length (ft)												
Base Capacity (vph)	266			437	903							
Starvation Cap Reductn	0			0	0							
Spillback Cap Reductn	0			10	0							
Storage Cap Reductn	0			0	0							
Reduced v/c Ratio	0.64			0.44	0.36							

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 28.8 Intersection LOS: C
Intersection Capacity Utilization 40.7% ICU Level of Service A
Analysis Period (min) 15
* User Entered Value
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: PA 113 & Cross Road



Lane Group	Ø11
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	68	50	141	203	3	121	133	85	3	123	17
Future Volume (vph)	19	68	50	141	203	3	121	133	85	3	123	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	12	12	12	12	12	12	11	11	11
Grade (%)		1%			-1%			1%			-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.951			0.999			0.966			0.984	
Flt Protected		0.993			0.980			0.982			0.999	
Satd. Flow (prot)	0	1579	0	0	1744	0	0	1631	0	0	1698	0
Flt Permitted		0.911			0.797			0.783			0.990	
Satd. Flow (perm)	0	1448	0	0	1418	0	0	1300	0	0	1683	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			35			35			35	
Link Distance (ft)		93			1156			100			2015	
Travel Time (s)		1.6			22.5			1.9			39.3	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	1%	2%	0%	2%	5%	6%	0%	2%	0%
Adj. Flow (vph)	21	76	56	158	228	3	136	149	96	3	138	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	153	0	0	389	0	0	381	0	0	160	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.18	1.18	1.18	1.07	1.07	1.07	1.08	1.08	1.08	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	0		1	1	
Detector Template	Left	Thru		Left	Thru							
Leading Detector (ft)	20	35		20	35		35	0		35	35	
Trailing Detector (ft)	0	-5		0	-5		-5	0		-5	-5	
Detector 1 Position(ft)	0	-5		0	-5		-5	0		-5	-5	
Detector 1 Size(ft)	20	40		20	40		40	6		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		custom	NA		Perm	NA	
Protected Phases		4			8		9 11	6 9 11			2	
Permitted Phases	4			8			6			2		
Detector Phase	4	4 10		8	8 10		9 11	6 9 11		2	2 6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0					15.0	15.0	
Minimum Split (s)	14.0	14.0		14.0	14.0					25.0	25.0	
Total Split (s)	54.0	54.0		54.0	54.0					39.0	39.0	
Total Split (%)	38.6%	38.6%		38.6%	38.6%					27.9%	27.9%	
Maximum Green (s)	45.0	45.0		45.0	45.0					29.0	29.0	
Yellow Time (s)	3.0	3.0		3.0	3.0					4.0	4.0	
All-Red Time (s)	6.0	6.0		6.0	6.0					6.0	6.0	
Lost Time Adjust (s)		0.0			0.0						0.0	

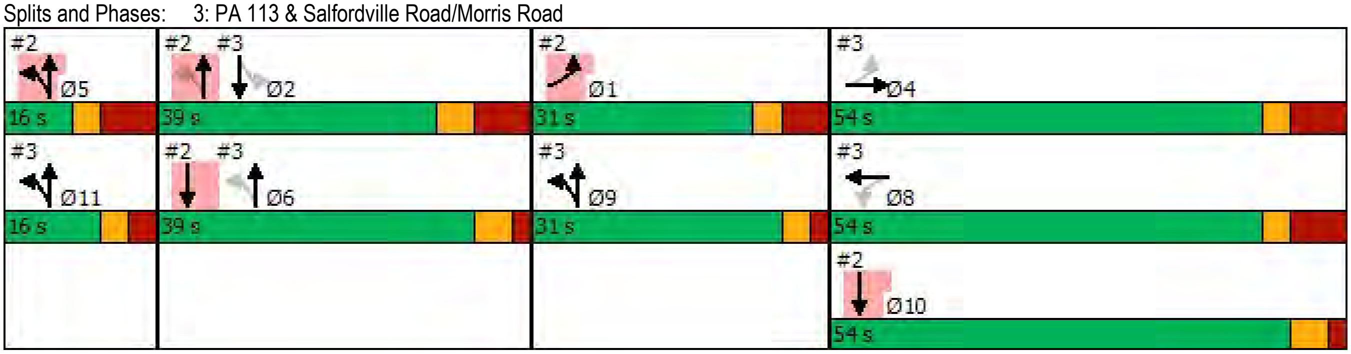
Lane Group	Ø1	Ø5	Ø6	Ø9	Ø10	Ø11
Lane Configurations						
Traffic Volume (vph)						
Future Volume (vph)						
Ideal Flow (vphpl)						
Lane Width (ft)						
Grade (%)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Heavy Vehicles (%)						
Adj. Flow (vph)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Enter Blocked Intersection						
Lane Alignment						
Median Width(ft)						
Link Offset(ft)						
Crosswalk Width(ft)						
Two way Left Turn Lane						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Turn Type						
Protected Phases	1	5	6	9	10	11
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	5.0	3.0	19.0	8.0	8.0	6.0
Minimum Split (s)	13.0	12.0	25.0	13.0	18.0	12.0
Total Split (s)	31.0	16.0	39.0	31.0	54.0	16.0
Total Split (%)	22%	11%	28%	22%	39%	11%
Maximum Green (s)	23.0	7.0	33.0	26.0	48.0	10.0
Yellow Time (s)	3.0	3.0	4.0	3.0	4.0	3.0
All-Red Time (s)	5.0	6.0	2.0	2.0	2.0	3.0
Lost Time Adjust (s)						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Lost Time (s)		9.0			9.0						10.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0					3.0	3.0	
Recall Mode	None	None		None	None					Min	Min	
Act Effct Green (s)		45.0			45.0			68.0			29.0	
Actuated g/C Ratio		0.32			0.32			0.49			0.21	
v/c Ratio		0.33			0.85			0.53			0.46	
Control Delay		38.5			63.4			4.0			53.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		38.5			63.4			4.0			53.6	
LOS		D			E			A			D	
Approach Delay		38.5			63.4			4.0			53.6	
Approach LOS		D			E			A			D	
Queue Length 50th (ft)		106			331			11			129	
Queue Length 95th (ft)		167			#501			15			201	
Internal Link Dist (ft)		13			1076			20			1935	
Turn Bay Length (ft)												
Base Capacity (vph)		465			455			714			348	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.33			0.85			0.53			0.46	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 37.5 Intersection LOS: D
Intersection Capacity Utilization 79.6% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: PA 113 & Salfordville Road/Morris Road



Lane Group	Ø1	Ø5	Ø6	Ø9	Ø10	Ø11
Total Lost Time (s)						
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	None	None	None
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						
Turn Bay Length (ft)						
Base Capacity (vph)						
Starvation Cap Reductn						
Spillback Cap Reductn						
Storage Cap Reductn						
Reduced v/c Ratio						

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	137	310	31	0	0
Future Volume (vph)	1	137	310	31	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	11	11	14	14
Grade (%)		1%	-1%		-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.988			
Flt Protected						
Satd. Flow (prot)	0	1672	1653	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1672	1653	0	0	0
Link Speed (mph)		40	40		35	
Link Distance (ft)		802	93		617	
Travel Time (s)		13.7	1.6		12.0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%
Adj. Flow (vph)	1	154	348	35	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	155	383	0	0	0
Enter Blocked Intersection	Yes	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.18	1.18	1.11	1.11	0.98	0.98
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	148	4	2	171	6	0
Future Volume (vph)	148	4	2	171	6	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	-2%		1%			0%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.997		0.866			
Flt Protected	0.953					0.950
Satd. Flow (prot)	1662	0	1492	0	0	1710
Flt Permitted	0.953					0.950
Satd. Flow (perm)	1662	0	1492	0	0	1710
Link Speed (mph)	35		35			30
Link Distance (ft)	424		2015			295
Travel Time (s)	8.3		39.3			6.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	0%	0%	4%	0%	0%
Adj. Flow (vph)	164	4	2	190	7	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	168	0	192	0	0	7
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.08	1.08	1.07	1.07
Turning Speed (mph)	60	60		9	15	
Sign Control	Free		Free			Stop

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	148	4	2	171	6	0
Future Vol, veh/h	148	4	2	171	6	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-2	-	1	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	4	0	0	4	0	0
Mvmt Flow	164	4	2	190	7	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	0	0	97	192
Stage 1	-	-	0	0
Stage 2	-	-	97	192
Critical Hdwy	-	-	6.4	6.5
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.4	5.5
Follow-up Hdwy	-	-	3.5	4
Pot Cap-1 Maneuver	-	-	907	707
Stage 1	-	-	-	-
Stage 2	-	-	932	745
Platoon blocked, %	-	-		
Mov Cap-1 Maneuver	-	-	907	0
Mov Cap-2 Maneuver	-	-	907	0
Stage 1	-	-	-	0
Stage 2	-	-	932	0

Approach	NB	SB
HCM Control Delay, s	0	9
HCM LOS		A

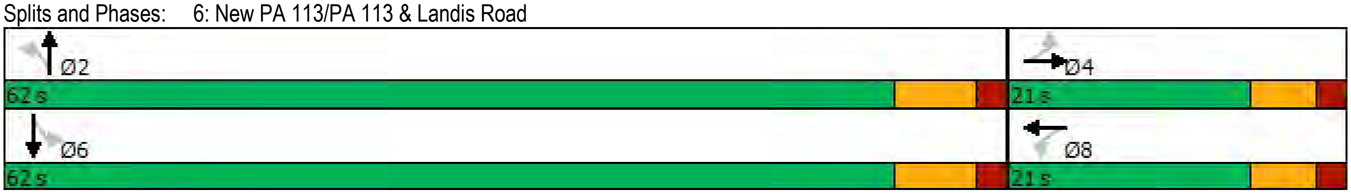
Minor Lane/Major Mvmt	NBT	NBR	SBLn1
Capacity (veh/h)	-	-	907
HCM Lane V/C Ratio	-	-	0.007
HCM Control Delay (s)	-	-	9
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	12	6	9	61	63	8	438	16	26	429	18
Future Volume (vph)	18	12	6	9	61	63	8	438	16	26	429	18
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	12	12	12	12	12	12	12	13	12	13
Grade (%)		-2%			-1%			0%			-4%	
Storage Length (ft)	0		0	0		0	225		0	225		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.976			0.936			0.995			0.994	
Flt Protected		0.976			0.997		0.950			0.950		
Satd. Flow (prot)	0	1737	0	0	1627	0	1710	1709	0	1609	1786	0
Flt Permitted		0.836			0.973		0.478			0.472		
Satd. Flow (perm)	0	1488	0	0	1588	0	860	1709	0	800	1786	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		7			48			5				
Link Speed (mph)		35			35			30			45	
Link Distance (ft)		472			496			693			1186	
Travel Time (s)		9.2			9.7			15.8			18.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	0%	0%	0%	2%	6%	0%	5%	0%	12%	2%	6%
Adj. Flow (vph)	20	13	7	10	66	68	9	476	17	28	466	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	0	0	144	0	9	493	0	28	486	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			13			13	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.06	1.07	1.07	1.07	1.07	1.07	1.07	1.00	1.05	1.00
Turning Speed (mph)	15		60	60		9	60		60	15		9
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left			Left	Thru		Left	Thru	
Leading Detector (ft)	20	35		20	35		20	100		20	100	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	3.0		3.0	3.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	9.0	9.0		9.0	9.0		22.0	22.0		22.0	22.0	
Total Split (s)	21.0	21.0		21.0	21.0		62.0	62.0		62.0	62.0	
Total Split (%)	25.3%	25.3%		25.3%	25.3%		74.7%	74.7%		74.7%	74.7%	
Maximum Green (s)	15.0	15.0		15.0	15.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0		7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	

Intersection Summary	
Area Type:	Other
Cycle Length: 83	
Actuated Cycle Length: 40.8	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 6: New PA 113/PA 113 & Landis Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	12	6	9	61	63	8	438	16	26	429	18
Future Volume (veh/h)	18	12	6	9	61	63	8	438	16	26	429	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1861	1950	1875	1837	1809	1752	1800	1730	1800	1850	1921	1938
Adj Flow Rate, veh/h	20	13	7	10	66	36	9	476	17	28	466	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	0	0	0	2	6	0	5	0	12	2	6
Cap, veh/h	279	88	41	142	133	71	515	802	29	491	883	38
Arrive On Green	0.10	0.13	0.10	0.10	0.13	0.10	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	805	676	314	123	1017	540	924	1660	59	944	1828	78
Grp Volume(v), veh/h	40	0	0	112	0	0	9	0	493	28	0	486
Grp Sat Flow(s),veh/h/ln	1795	0	0	1681	0	0	924	0	1719	944	0	1906
Q Serve(g_s), s	0.0	0.0	0.0	1.4	0.0	0.0	0.2	0.0	6.5	0.7	0.0	5.5
Cycle Q Clear(g_c), s	0.6	0.0	0.0	2.0	0.0	0.0	5.7	0.0	6.5	7.1	0.0	5.5
Prop In Lane	0.50		0.17	0.09		0.32	1.00		0.03	1.00		0.04
Lane Grp Cap(c), veh/h	351	0	0	292	0	0	515	0	830	491	0	921
V/C Ratio(X)	0.11	0.00	0.00	0.38	0.00	0.00	0.02	0.00	0.59	0.06	0.00	0.53
Avail Cap(c_a), veh/h	967	0	0	934	0	0	1705	0	3044	1707	0	3376
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.3	0.0	0.0	12.8	0.0	0.0	7.6	0.0	5.8	8.4	0.0	5.6
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	0.0	1.1	0.0	0.0	0.1	0.0	2.2	0.2	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.4	0.0	0.0	13.6	0.0	0.0	7.6	0.0	6.5	8.5	0.0	6.0
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		40			112			502			514	
Approach Delay, s/veh		12.4			13.6			6.5			6.2	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.0		9.1		22.0		9.1				
Change Period (Y+Rc), s		7.0		6.0		7.0		6.0				
Max Green Setting (Gmax), s		55.0		15.0		55.0		15.0				
Max Q Clear Time (g_c+I1), s		8.5		2.6		9.1		4.0				
Green Ext Time (p_c), s		3.7		0.1		3.2		0.2				

Intersection Summary			
HCM 6th Ctrl Delay			7.3
HCM 6th LOS			A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	83	1	0	3	190	330	3	3	234	0
Future Volume (vph)	0	0	83	1	0	3	190	330	3	3	234	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865			0.899			0.999				
Flt Protected					0.988		0.950			0.950		
Satd. Flow (prot)	0	1512	0	0	1599	0	1676	1763	0	1710	1765	0
Flt Permitted					0.988		0.950			0.950		
Satd. Flow (perm)	0	1512	0	0	1599	0	1676	1763	0	1710	1765	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		181			519			457			1291	
Travel Time (s)		4.1			11.8			10.4			29.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	3%	0%	0%	0%	2%	2%	0%	0%	2%	0%
Adj. Flow (vph)	0	0	86	1	0	3	198	344	3	3	244	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	86	0	0	4	0	198	347	0	3	244	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	3.2											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	83	1	0	3	190	330	3	3	234	0
Future Vol, veh/h	0	0	83	1	0	3	190	330	3	3	234	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	3	0	0	0	2	2	0	0	2	0
Mvmt Flow	0	0	86	1	0	3	198	344	3	3	244	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	993	993	244	1035	992	346	244	0	0	347	0	0
Stage 1	250	250	-	742	742	-	-	-	-	-	-	-
Stage 2	743	743	-	293	250	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.23	7.1	6.5	6.2	4.3	-	-	4.3	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3	4	3.1	3	4	3.1	3	-	-	3	-	-
Pot Cap-1 Maneuver	249	247	844	233	248	740	991	-	-	913	-	-
Stage 1	870	704	-	458	425	-	-	-	-	-	-	-
Stage 2	457	425	-	823	704	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	209	197	844	177	198	740	991	-	-	913	-	-
Mov Cap-2 Maneuver	209	197	-	177	198	-	-	-	-	-	-	-
Stage 1	696	702	-	366	340	-	-	-	-	-	-	-
Stage 2	364	340	-	736	702	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.8	13.8	3.5	0.1
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	991	-	-	844	412	913	-	-
HCM Lane V/C Ratio	0.2	-	-	0.102	0.01	0.003	-	-
HCM Control Delay (s)	9.5	-	-	9.8	13.8	9	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.7	-	-	0.3	0	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	26	49	0	113	0	120	209	4	0	188	114
Future Volume (vph)	81	26	49	0	113	0	120	209	4	0	188	114
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Grade (%)		0%			-1%			0%			0%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.958						0.997			0.943	
Flt Protected		0.975					0.950					
Satd. Flow (prot)	0	1634	0	0	1739	0	1676	1743	0	1800	1670	0
Flt Permitted		0.975					0.950					
Satd. Flow (perm)	0	1634	0	0	1739	0	1676	1743	0	1800	1670	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1156			811			1291			2237	
Travel Time (s)		26.3			18.4			29.3			50.8	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	5%	0%	1%	5%	4%	0%	2%	3%	0%	0%	2%	1%
Adj. Flow (vph)	91	29	55	0	127	0	135	235	4	0	211	128
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	175	0	0	127	0	135	239	0	0	339	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	13.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	81	26	49	0	113	0	120	209	4	0	188	114
Future Vol, veh/h	81	26	49	0	113	0	120	209	4	0	188	114
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-1	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	5	0	1	5	4	0	2	3	0	0	2	1
Mvmt Flow	91	29	55	0	127	0	135	235	4	0	211	128

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	846	784	275	824	846	237	339	0	0	239	0	0
Stage 1	275	275	-	507	507	-	-	-	-	-	-	-
Stage 2	571	509	-	317	339	-	-	-	-	-	-	-
Critical Hdwy	7.2	6.5	6.21	7.2	6.34	6.2	4.3	-	-	4.3	-	-
Critical Hdwy Stg 1	6.15	5.5	-	5.95	5.34	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.5	-	5.95	5.34	-	-	-	-	-	-	-
Follow-up Hdwy	3.1	4	3.1	3.1	4.036	3.1	3	-	-	3	-	-
Pot Cap-1 Maneuver	301	327	812	312	311	854	919	-	-	995	-	-
Stage 1	815	686	-	620	551	-	-	-	-	-	-	-
Stage 2	554	541	-	786	648	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	169	279	812	238	265	854	919	-	-	995	-	-
Mov Cap-2 Maneuver	169	279	-	238	265	-	-	-	-	-	-	-
Stage 1	695	686	-	529	470	-	-	-	-	-	-	-
Stage 2	345	461	-	702	648	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	48.7	30.5	3.5	0
HCM LOS	E	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	919	-	-	247	265	995	-	-
HCM Lane V/C Ratio	0.147	-	-	0.71	0.479	-	-	-
HCM Control Delay (s)	9.6	-	-	48.7	30.5	0	-	-
HCM Lane LOS	A	-	-	E	D	A	-	-
HCM 95th %tile Q(veh)	0.5	-	-	4.8	2.4	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	7	0	2	5	3	0	290	0	0	300	147
Future Volume (vph)	170	7	0	2	5	3	0	290	0	0	300	147
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.963						0.951	
Flt Protected		0.954			0.991							
Satd. Flow (prot)	0	1654	0	0	1718	0	1800	1731	0	1800	1657	0
Flt Permitted		0.954			0.991							
Satd. Flow (perm)	0	1654	0	0	1718	0	1800	1731	0	1800	1657	0
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		424			345			2237			693	
Travel Time (s)		8.3			6.7			43.6			13.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	0%	0%	0%	0%	0%	0%	4%	0%	0%	3%	4%
Adj. Flow (vph)	189	8	0	2	6	3	0	322	0	0	333	163
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	197	0	0	11	0	0	322	0	0	496	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	170	7	0	2	5	3	0	290	0	0	300	147
Future Vol, veh/h	170	7	0	2	5	3	0	290	0	0	300	147
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	4	0	0	0	0	0	0	4	0	0	3	4
Mvmt Flow	189	8	0	2	6	3	0	322	0	0	333	163

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	742	737	415	741	818	322	496	0	0	322	0	0
Stage 1	415	415	-	322	322	-	-	-	-	-	-	-
Stage 2	327	322	-	419	496	-	-	-	-	-	-	-
Critical Hdwy	7.14	6.5	6.2	7.1	6.5	6.2	4.3	-	-	4.3	-	-
Critical Hdwy Stg 1	6.14	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.14	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3	4	3.1	3	4	3.1	3	-	-	3	-	-
Pot Cap-1 Maneuver	369	348	676	373	313	764	810	-	-	931	-	-
Stage 1	699	596	-	793	655	-	-	-	-	-	-	-
Stage 2	785	655	-	699	549	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	362	348	676	367	313	764	810	-	-	931	-	-
Mov Cap-2 Maneuver	362	348	-	367	313	-	-	-	-	-	-	-
Stage 1	699	596	-	793	655	-	-	-	-	-	-	-
Stage 2	775	655	-	690	549	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	26.3	14.4	0	0
HCM LOS	D	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	810	-	-	361	394	931	-	-
HCM Lane V/C Ratio	-	-	-	0.545	0.028	-	-	-
HCM Control Delay (s)	0	-	-	26.3	14.4	0	-	-
HCM Lane LOS	A	-	-	D	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	3.1	0.1	0	-	-

McMAHON
a Bowman company

Attachment 12

2035 Future Alternative #2
Capacity/Level-of-Service
Analysis Worksheets

425 Commerce Drive, Suite 200, Fort Washington, PA 19034
P: 215.283.9444
mcmahonassociates.com | bowman.com

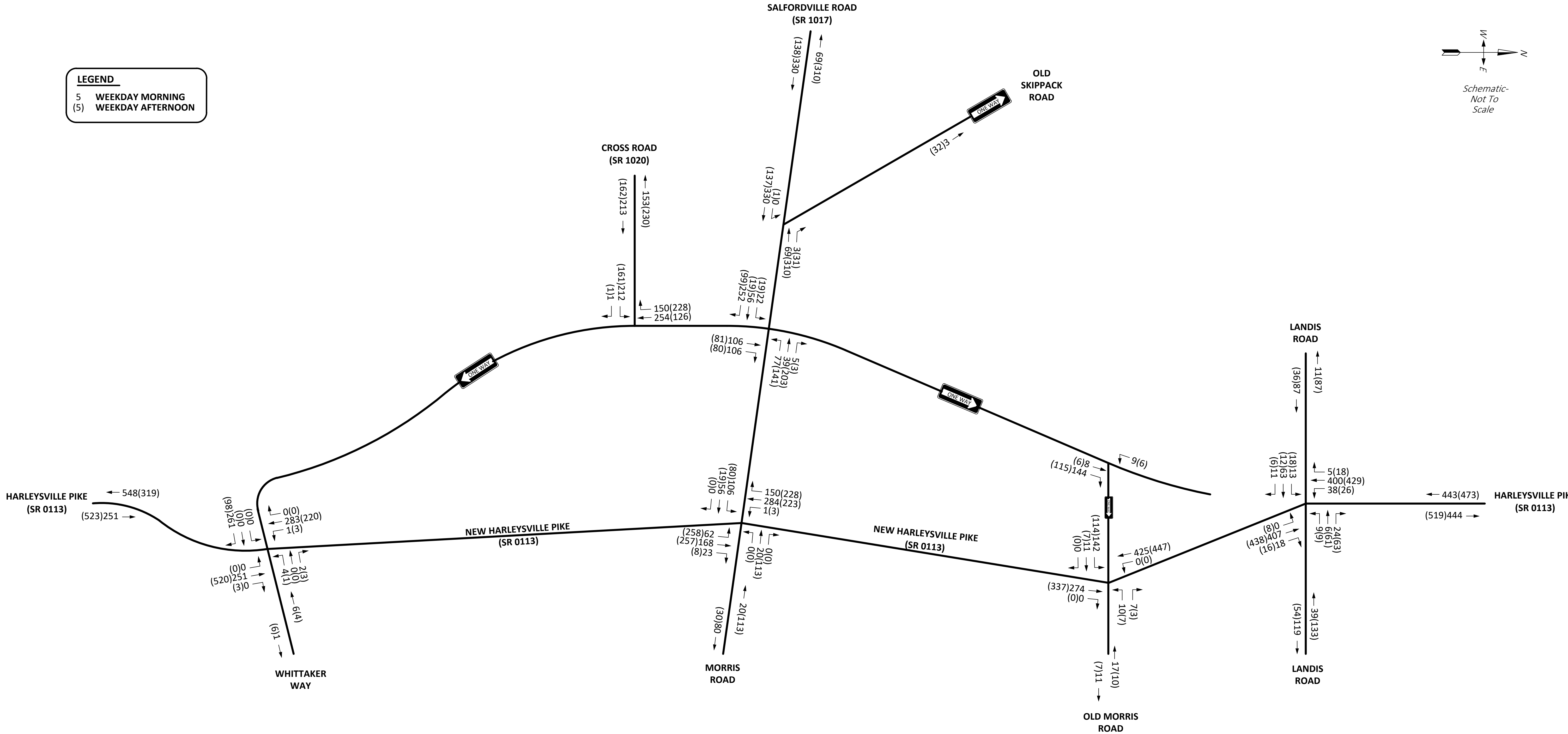


FIGURE K

2035 Future Peak Hour Traffic Volumes- Alternative #2

WALKABLE LEDERACH

LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

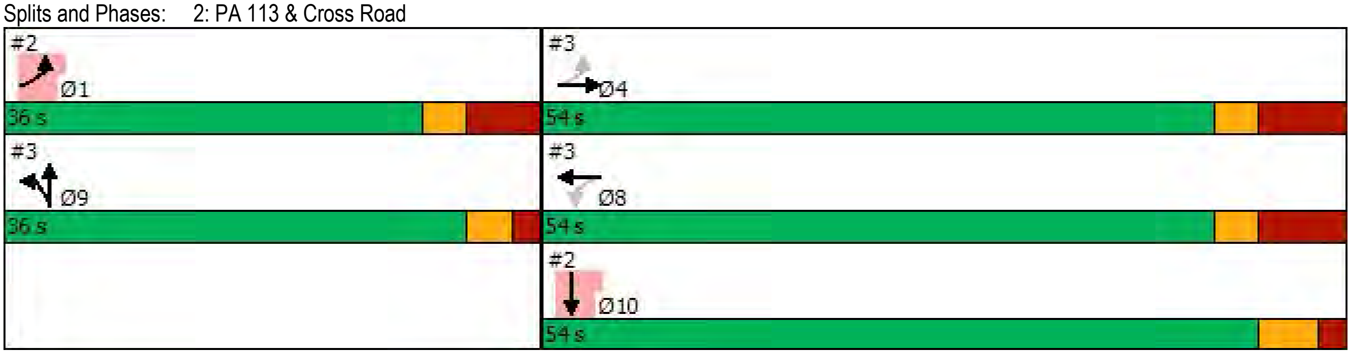
Q:\PA-FTWA-MC\MCM\eng\LOWERSA1\822255_TCDI Walkable Lederach\Traffic\2-TrafficEval\7-Graphics\Figure 4ABCD.dwg

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø4	Ø8	Ø9
Lane Configurations									
Traffic Volume (vph)	212	1	0	0	254	150			
Future Volume (vph)	212	1	0	0	254	150			
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800			
Lane Width (ft)	12	12	12	12	11	11			
Grade (%)	-1%			1%	-2%				
Lane Util. Factor	1.00	1.00	*1.00	*1.00	1.00	1.00			
Frt	0.999				0.950				
Flt Protected	0.953								
Satd. Flow (prot)	1656	0	0	0	1590	0			
Flt Permitted	0.953								
Satd. Flow (perm)	1656	0	0	0	1590	0			
Right Turn on Red		No				No			
Satd. Flow (RTOR)									
Link Speed (mph)	40			35	35				
Link Distance (ft)	553			2066	100				
Travel Time (s)	9.4			40.2	1.9				
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96			
Heavy Vehicles (%)	4%	0%	33%	10%	5%	5%			
Adj. Flow (vph)	221	1	0	0	265	156			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	222	0	0	0	421	0			
Enter Blocked Intersection	No	No	No	No	No	No			
Lane Alignment	Left	Right	Left	Left	Left	Right			
Median Width(ft)	12			0	0				
Link Offset(ft)	0			0	0				
Crosswalk Width(ft)	16			16	16				
Two way Left Turn Lane									
Headway Factor	1.07	1.07	1.08	1.08	1.11	1.11			
Turning Speed (mph)	15	9	15			9			
Number of Detectors	1				0				
Detector Template	Left								
Leading Detector (ft)	35				0				
Trailing Detector (ft)	-5				0				
Detector 1 Position(ft)	-5				0				
Detector 1 Size(ft)	40				6				
Detector 1 Type	Cl+Ex				Cl+Ex				
Detector 1 Channel									
Detector 1 Extend (s)	0.0				0.0				
Detector 1 Queue (s)	0.0				0.0				
Detector 1 Delay (s)	0.0				0.0				
Turn Type	Prot				NA				
Protected Phases	1				10		4	8	9
Permitted Phases									
Detector Phase	1				4 8				
Switch Phase									
Minimum Initial (s)	5.0				8.0		5.0	5.0	8.0
Minimum Split (s)	13.0				18.0		14.0	14.0	13.0
Total Split (s)	36.0				54.0		54.0	54.0	36.0
Total Split (%)	40.0%				60.0%		60%	60%	40%
Maximum Green (s)	28.0				48.0		45.0	45.0	31.0
Yellow Time (s)	3.0				4.0		3.0	3.0	3.0
All-Red Time (s)	5.0				2.0		6.0	6.0	2.0
Lost Time Adjust (s)	0.0				0.0				

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø4	Ø8	Ø9
Total Lost Time (s)	8.0				6.0				
Lead/Lag									
Lead-Lag Optimize?									
Vehicle Extension (s)	3.0				3.0		3.0	3.0	3.0
Recall Mode	None				None		None	None	None
Act Effct Green (s)	28.0				48.0				
Actuated g/C Ratio	0.31				0.53				
v/c Ratio	0.43				0.50				
Control Delay	27.9				2.2				
Queue Delay	0.0				0.0				
Total Delay	27.9				2.2				
LOS	C				A				
Approach Delay	27.9				2.2				
Approach LOS	C				A				
Queue Length 50th (ft)	100				7				
Queue Length 95th (ft)	166				0				
Internal Link Dist (ft)	473			1986	20				
Turn Bay Length (ft)									
Base Capacity (vph)	515				848				
Starvation Cap Reductn	0				0				
Spillback Cap Reductn	0				0				
Storage Cap Reductn	0				0				
Reduced v/c Ratio	0.43				0.50				

Intersection Summary	
Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 90	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 11.1	Intersection LOS: B
Intersection Capacity Utilization 47.9%	ICU Level of Service A
Analysis Period (min) 15	
* User Entered Value	

Splits and Phases: 2: PA 113 & Cross Road



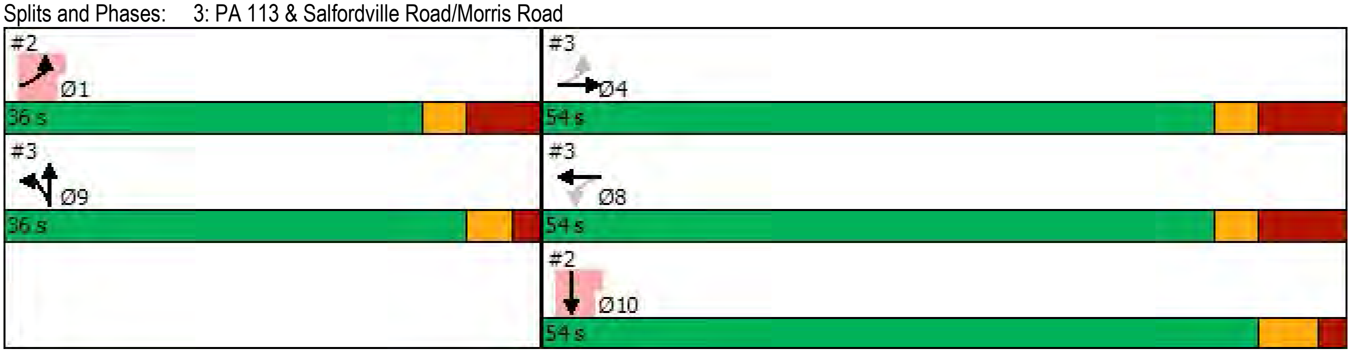
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	56	252	152	72	5	0	106	106	0	0	0
Future Volume (vph)	22	56	252	152	72	5	0	106	106	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	12	12	12	12	12	12	11	11	11
Grade (%)		1%			-1%			1%			-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.897			0.997			0.932				
Flt Protected		0.997			0.968							
Satd. Flow (prot)	0	1433	0	0	1676	0	0	1567	0	0	0	0
Flt Permitted		0.967			0.609							
Satd. Flow (perm)	0	1390	0	0	1055	0	0	1567	0	0	0	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			35			35			35	
Link Distance (ft)		93			1156			100			2015	
Travel Time (s)		1.6			22.5			1.9			39.3	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	20%	4%	3%	2%	9%	0%	8%	9%	4%	0%	9%	0%
Adj. Flow (vph)	24	60	271	163	77	5	0	114	114	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	355	0	0	245	0	0	228	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.18	1.18	1.18	1.07	1.07	1.07	1.08	1.08	1.08	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	0				
Detector Template	Left	Thru		Left	Thru							
Leading Detector (ft)	20	35		20	35		35	0				
Trailing Detector (ft)	0	-5		0	-5		-5	0				
Detector 1 Position(ft)	0	-5		0	-5		-5	0				
Detector 1 Size(ft)	20	40		20	40		40	6				
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Turn Type	Perm	NA		Perm	NA			NA				
Protected Phases		4			8		9	9				
Permitted Phases	4			8								
Detector Phase	4	4		8	8		1 9	1 9				
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		8.0	8.0				
Minimum Split (s)	14.0	14.0		14.0	14.0		13.0	13.0				
Total Split (s)	54.0	54.0		54.0	54.0		36.0	36.0				
Total Split (%)	60.0%	60.0%		60.0%	60.0%		40.0%	40.0%				
Maximum Green (s)	45.0	45.0		45.0	45.0		31.0	31.0				
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0				
All-Red Time (s)	6.0	6.0		6.0	6.0		2.0	2.0				
Lost Time Adjust (s)		0.0			0.0			0.0				

Lane Group	Ø1	Ø10
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Heavy Vehicles (%)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Turn Type		
Protected Phases	1	10
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	5.0	8.0
Minimum Split (s)	13.0	18.0
Total Split (s)	36.0	54.0
Total Split (%)	40%	60%
Maximum Green (s)	28.0	48.0
Yellow Time (s)	3.0	4.0
All-Red Time (s)	5.0	2.0
Lost Time Adjust (s)		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Lost Time (s)		9.0			9.0			5.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0				
Recall Mode	None	None		None	None		None	None				
Act Effct Green (s)		45.0			45.0			31.0				
Actuated g/C Ratio		0.50			0.50			0.34				
v/c Ratio		0.51			0.46			0.42				
Control Delay		18.4			18.3			3.1				
Queue Delay		0.0			0.0			0.0				
Total Delay		18.4			18.3			3.1				
LOS		B			B			A				
Approach Delay		18.4			18.3			3.1				
Approach LOS		B			B			A				
Queue Length 50th (ft)		129			87			3				
Queue Length 95th (ft)		209			153			6				
Internal Link Dist (ft)		13			1076			20			1935	
Turn Bay Length (ft)												
Base Capacity (vph)		695			527			539				
Starvation Cap Reductn		0			0			0				
Spillback Cap Reductn		6			4			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.52			0.47			0.42				

Intersection Summary	
Area Type: Other	
Cycle Length: 90	
Actuated Cycle Length: 90	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 14.2	Intersection LOS: B
Intersection Capacity Utilization 65.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 3: PA 113 & Salfordville Road/Morris Road



Lane Group	Ø1	Ø10
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	330	69	3	0	0
Future Volume (vph)	0	330	69	3	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	11	11	14	14
Grade (%)		1%	-1%		-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.995			
Flt Protected						
Satd. Flow (prot)	0	1592	1630	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1592	1630	0	0	0
Link Speed (mph)		40	40		35	
Link Distance (ft)		802	93		617	
Travel Time (s)		13.7	1.6		12.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	5%	7%	0%	0%	0%
Adj. Flow (vph)	0	355	74	3	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	355	77	0	0	0
Enter Blocked Intersection	Yes	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.18	1.18	1.11	1.11	0.98	0.98
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	8	144	9	0
Future Volume (vph)	0	0	8	144	9	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	-2%		1%			0%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.872			
Flt Protected					0.950	
Satd. Flow (prot)	0	0	1439	0	1710	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	1439	0	1710	0
Link Speed (mph)	35		35			30
Link Distance (ft)	424		2015			295
Travel Time (s)	8.3		39.3			6.7
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	10%	0%	0%	9%	0%	0%
Adj. Flow (vph)	0	0	9	162	10	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	171	0	10	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.08	1.08	1.07	1.07
Turning Speed (mph)	15	9		9	15	
Sign Control	Free		Free			Stop

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection						
Int Delay, s/veh	0.5					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	8	144	9	0
Future Vol, veh/h	0	0	8	144	9	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	-2	-	1	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	10	0	0	9	0	0
Mvmt Flow	0	0	9	162	10	0

Major/Minor			Major1		Minor2	
Conflicting Flow All			0	0	90	-
Stage 1			-	-	0	-
Stage 2			-	-	90	-
Critical Hdwy			-	-	6.4	-
Critical Hdwy Stg 1			-	-	-	-
Critical Hdwy Stg 2			-	-	5.4	-
Follow-up Hdwy			-	-	3.5	-
Pot Cap-1 Maneuver			-	-	915	0
Stage 1			-	-	-	0
Stage 2			-	-	939	0
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver			-	-	915	0
Mov Cap-2 Maneuver			-	-	915	0
Stage 1			-	-	-	0
Stage 2			-	-	939	0

Approach			NB		SB	
HCM Control Delay, s			0		9	
HCM LOS					A	

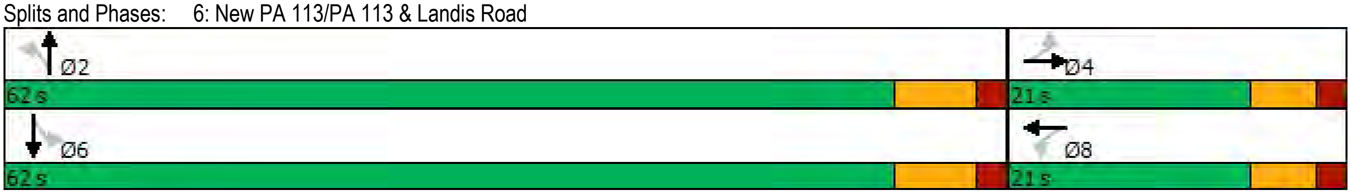
Minor Lane/Major Mvmt	NBT	NBR	SBLn1
Capacity (veh/h)	-	-	915
HCM Lane V/C Ratio	-	-	0.011
HCM Control Delay (s)	-	-	9
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	63	11	9	6	24	0	407	18	38	400	5
Future Volume (vph)	13	63	11	9	6	24	0	407	18	38	400	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	12	12	12	12	12	12	12	13	12	13
Grade (%)		-2%			-1%			0%			-4%	
Storage Length (ft)	0		0	0		0	225		0	225		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.983			0.918			0.994			0.998	
Flt Protected		0.993			0.988					0.950		
Satd. Flow (prot)	0	1787	0	0	1524	0	1800	1648	0	1669	1635	0
Flt Permitted		0.939			0.887					0.480		
Satd. Flow (perm)	0	1690	0	0	1368	0	1800	1648	0	843	1635	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		8			28			6				
Link Speed (mph)		35			35			30			45	
Link Distance (ft)		472			496			693			1186	
Travel Time (s)		9.2			9.7			15.8			18.0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	8%	2%	0%	11%	17%	4%	0%	8%	22%	8%	12%	20%
Adj. Flow (vph)	15	74	13	11	7	28	0	479	21	45	471	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	102	0	0	46	0	0	500	0	45	477	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			13			13	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.06	1.07	1.07	1.07	1.07	1.07	1.07	1.00	1.05	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left			Left	Thru		Left	Thru	
Leading Detector (ft)	20	35		20	35		20	100		20	100	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	3.0		3.0	3.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	9.0	9.0		9.0	9.0		22.0	22.0		22.0	22.0	
Total Split (s)	21.0	21.0		21.0	21.0		62.0	62.0		62.0	62.0	
Total Split (%)	25.3%	25.3%		25.3%	25.3%		74.7%	74.7%		74.7%	74.7%	
Maximum Green (s)	15.0	15.0		15.0	15.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0		7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	

Intersection Summary	
Area Type:	Other
Cycle Length: 83	
Actuated Cycle Length: 40.7	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 6: New PA 113/PA 113 & Landis Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	63	11	9	6	24	0	407	18	38	400	5
Future Volume (veh/h)	13	63	11	9	6	24	0	407	18	38	400	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1831	1920	1875	1681	1596	1780	1800	1688	1491	1909	1778	1731
Adj Flow Rate, veh/h	15	74	13	11	7	21	0	479	21	45	471	6
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	8	2	0	11	17	4	0	8	22	8	12	20
Cap, veh/h	166	160	28	197	35	94	235	785	34	498	857	11
Arrive On Green	0.09	0.12	0.09	0.09	0.12	0.09	0.00	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	259	1338	233	386	293	792	932	1605	70	967	1752	22
Grp Volume(v), veh/h	102	0	0	39	0	0	0	0	500	45	0	477
Grp Sat Flow(s),veh/h/ln	1830	0	0	1471	0	0	932	0	1675	967	0	1774
Q Serve(g_s), s	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	1.1	0.0	5.8
Cycle Q Clear(g_c), s	1.6	0.0	0.0	0.7	0.0	0.0	0.0	0.0	6.7	7.8	0.0	5.8
Prop In Lane	0.15		0.13	0.28		0.54	1.00		0.04	1.00		0.01
Lane Grp Cap(c), veh/h	293	0	0	278	0	0	235	0	820	498	0	868
V/C Ratio(X)	0.35	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.61	0.09	0.00	0.55
Avail Cap(c_a), veh/h	1020	0	0	815	0	0	1451	0	3005	1760	0	3183
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.7	0.0	0.0	12.6	0.0	0.0	0.0	0.0	5.7	8.5	0.0	5.5
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.7	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	2.2	0.2	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	0.0	0.0	12.8	0.0	0.0	0.0	0.0	6.4	8.6	0.0	6.0
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		102			39			500			522	
Approach Delay, s/veh		13.4			12.8			6.4			6.2	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.0		8.7		22.0		8.7				
Change Period (Y+Rc), s		7.0		6.0		7.0		6.0				
Max Green Setting (Gmax), s		55.0		15.0		55.0		15.0				
Max Q Clear Time (g_c+I1), s		8.7		3.6		9.8		2.7				
Green Ext Time (p_c), s		3.7		0.2		3.3		0.1				

Intersection Summary			
HCM 6th Ctrl Delay			7.2
HCM 6th LOS			A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	261	4	0	2	0	251	0	1	283	0
Future Volume (vph)	0	0	261	4	0	2	0	251	0	1	283	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865			0.955							
Flt Protected					0.968					0.950		
Satd. Flow (prot)	0	1469	0	0	1664	0	0	1607	0	1710	1698	0
Flt Permitted					0.968					0.950		
Satd. Flow (perm)	0	1469	0	0	1664	0	0	1607	0	1710	1698	0
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		181			519			457			1291	
Travel Time (s)		3.5			14.2			8.9			25.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	6%	0%	0%	0%	11%	12%	0%	0%	6%	0%
Adj. Flow (vph)	0	0	287	4	0	2	0	276	0	1	311	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	287	0	0	6	0	0	276	0	1	311	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection												
Int Delay, s/veh	4.3											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	261	4	0	2	0	251	0	1	283	0
Future Vol, veh/h	0	0	261	4	0	2	0	251	0	1	283	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	6	0	0	0	11	12	0	0	6	0
Mvmt Flow	0	0	287	4	0	2	0	276	0	1	311	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	590	589	311	733	589	276	-	0	0	276	0	0
Stage 1	313	313	-	276	276	-	-	-	-	-	-	-
Stage 2	277	276	-	457	313	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.26	7.1	6.5	6.2	-	-	-	4.3	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3	4	3.2	3	4	3.1	-	-	-	3	-	-
Pot Cap-1 Maneuver	474	423	750	378	423	811	0	-	-	966	-	0
Stage 1	802	661	-	842	685	-	0	-	-	-	-	0
Stage 2	840	685	-	665	661	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	473	423	750	233	423	811	-	-	-	966	-	-
Mov Cap-2 Maneuver	473	423	-	233	423	-	-	-	-	-	-	-
Stage 1	802	660	-	842	685	-	-	-	-	-	-	-
Stage 2	838	685	-	410	660	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.7	17	0	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	750	306	966	-
HCM Lane V/C Ratio	-	-	0.382	0.022	0.001	-
HCM Control Delay (s)	-	-	12.7	17	8.7	-
HCM Lane LOS	-	-	B	C	A	-
HCM 95th %tile Q(veh)	-	-	1.8	0.1	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	56	0	0	20	0	62	168	23	1	284	150
Future Volume (vph)	106	56	0	0	20	0	62	168	23	1	284	150
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Grade (%)		0%			-1%			0%			0%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt								0.982			0.948	
Flt Protected		0.968					0.950			0.950		
Satd. Flow (prot)	0	1649	0	0	1707	0	1583	1591	0	855	1585	0
Flt Permitted		0.968					0.950			0.950		
Satd. Flow (perm)	0	1649	0	0	1707	0	1583	1591	0	855	1585	0
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1156			811			1291			2237	
Travel Time (s)		22.5			15.8			25.1			43.6	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	6%	5%	3%	0%	6%	0%	8%	11%	12%	100%	8%	7%
Adj. Flow (vph)	114	60	0	0	22	0	67	181	25	1	305	161
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	174	0	0	22	0	67	206	0	1	466	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	6.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	106	56	0	0	20	0	62	168	23	1	284	150
Future Vol, veh/h	106	56	0	0	20	0	62	168	23	1	284	150
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-1	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	6	5	3	0	6	0	8	11	12	100	8	7
Mvmt Flow	114	60	0	0	22	0	67	181	25	1	305	161

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	727	728	386	746	796	194	466	0	0	206	0	0
Stage 1	388	388	-	328	328	-	-	-	-	-	-	-
Stage 2	339	340	-	418	468	-	-	-	-	-	-	-
Critical Hdwy	7.16	6.6	6.23	7.1	6.6	6.2	4.4	-	-	5.3	-	-
Critical Hdwy Stg 1	6.16	5.55	-	5.9	5.36	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.16	5.55	-	5.9	5.36	-	-	-	-	-	-	-
Follow-up Hdwy	3.1	4.1	3.1	3	4.1	3.1	3.1	-	-	3.9	-	-
Pot Cap-1 Maneuver	368	340	700	370	310	903	798	-	-	760	-	-
Stage 1	703	597	-	801	646	-	-	-	-	-	-	-
Stage 2	750	627	-	716	564	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	324	311	700	295	284	903	798	-	-	760	-	-
Mov Cap-2 Maneuver	324	311	-	295	284	-	-	-	-	-	-	-
Stage 1	644	596	-	734	592	-	-	-	-	-	-	-
Stage 2	662	574	-	643	563	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	29.1	18.7	2.4	0
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	798	-	-	319	284	760	-	-
HCM Lane V/C Ratio	0.084	-	-	0.546	0.076	0.001	-	-
HCM Control Delay (s)	9.9	-	-	29.1	18.7	9.7	-	-
HCM Lane LOS	A	-	-	D	C	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	3.1	0.2	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	56	0	0	20	0	62	168	23	1	284	150
Future Volume (vph)	106	56	0	0	20	0	62	168	23	1	284	150
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Grade (%)		0%			-1%			0%			0%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt								0.982			0.948	
Flt Protected		0.968					0.950			0.950		
Satd. Flow (prot)	0	1649	0	0	1707	0	1583	1591	0	855	1585	0
Flt Permitted		0.789					0.445			0.629		
Satd. Flow (perm)	0	1344	0	0	1707	0	742	1591	0	566	1585	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)								13			49	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1156			811			1291			2237	
Travel Time (s)		22.5			15.8			25.1			43.6	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	6%	5%	3%	0%	6%	0%	8%	11%	12%	100%	8%	7%
Adj. Flow (vph)	114	60	0	0	22	0	67	181	25	1	305	161
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	174	0	0	22	0	67	206	0	1	466	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	35		20	35		35	256		35	256	
Trailing Detector (ft)	0	-5		0	-5		-5	-5		-5	-5	
Detector 1 Position(ft)	0	-5		0	-5		-5	-5		-5	-5	
Detector 1 Size(ft)	20	40		20	40		40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		15.0	15.0		15.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.0	9.0		9.0	9.0		21.0	21.0		21.0	21.0	
Total Split (s)	33.0	33.0		33.0	33.0		57.0	57.0		57.0	57.0	
Total Split (%)	36.7%	36.7%		36.7%	36.7%		63.3%	63.3%		63.3%	63.3%	
Maximum Green (s)	27.0	27.0		27.0	27.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 48.5	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 8: New PA 113 & Morris Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	56	0	0	20	0	62	168	23	1	284	150
Future Volume (veh/h)	106	56	0	0	20	0	62	168	23	1	284	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1716	1730	1758	1837	1752	1837	1688	1646	1632	396	1688	1702
Adj Flow Rate, veh/h	114	60	0	0	22	0	67	181	25	1	305	161
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	5	3	0	6	0	8	11	12	100	8	7
Cap, veh/h	310	87	0	0	279	0	464	712	98	316	523	276
Arrive On Green	0.16	0.16	0.00	0.00	0.16	0.00	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	896	546	0	0	1752	0	883	1415	195	263	1040	549
Grp Volume(v), veh/h	174	0	0	0	22	0	67	0	206	1	0	466
Grp Sat Flow(s),veh/h/ln	1442	0	0	0	1752	0	883	0	1610	263	0	1589
Q Serve(g_s), s	3.8	0.0	0.0	0.0	0.4	0.0	2.1	0.0	2.6	0.1	0.0	7.3
Cycle Q Clear(g_c), s	4.1	0.0	0.0	0.0	0.4	0.0	9.4	0.0	2.6	2.7	0.0	7.3
Prop In Lane	0.66		0.00	0.00		0.00	1.00		0.12	1.00		0.35
Lane Grp Cap(c), veh/h	397	0	0	0	279	0	464	0	810	316	0	799
V/C Ratio(X)	0.44	0.00	0.00	0.00	0.08	0.00	0.14	0.00	0.25	0.00	0.00	0.58
Avail Cap(c_a), veh/h	1277	0	0	0	1330	0	1287	0	2310	560	0	2279
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.3	0.0	0.0	0.0	12.7	0.0	9.5	0.0	5.0	5.8	0.0	6.2
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.2	0.0	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.0	0.0	0.0	0.0	0.2	0.0	0.5	0.0	0.8	0.0	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.1	0.0	0.0	0.0	12.8	0.0	9.7	0.0	5.2	5.8	0.0	6.9
LnGrp LOS	B	A	A	A	B	A	A	A	A	A	A	A
Approach Vol, veh/h		174			22			273			467	
Approach Delay, s/veh		15.1			12.8			6.3			6.9	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.9		11.7		23.9		11.7				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		51.0		27.0		51.0		27.0				
Max Q Clear Time (g_c+I1), s		11.4		6.1		9.3		2.4				
Green Ext Time (p_c), s		3.5		0.5		8.6		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			8.4									
HCM 6th LOS			A									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	142	11	0	10	0	7	0	274	0	0	425	0
Future Volume (vph)	142	11	0	10	0	7	0	274	0	0	425	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.943							
Flt Protected		0.956			0.972							
Satd. Flow (prot)	0	1588	0	0	1552	0	0	1651	0	1800	1636	0
Flt Permitted		0.956			0.972							
Satd. Flow (perm)	0	1588	0	0	1552	0	0	1651	0	1800	1636	0
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		424			345			2237			693	
Travel Time (s)		8.3			6.7			43.6			13.5	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	9%	0%	0%	0%	0%	15%	0%	9%	50%	0%	10%	10%
Adj. Flow (vph)	160	12	0	11	0	8	0	308	0	0	478	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	172	0	0	19	0	0	308	0	0	478	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	142	11	0	10	0	7	0	274	0	0	425	0
Future Vol, veh/h	142	11	0	10	0	7	0	274	0	0	425	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	9	0	0	0	0	15	0	9	50	0	10	10
Mvmt Flow	160	12	0	11	0	8	0	308	0	0	478	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	790	786	478	792	786	308	-	0	0	308	0	0
Stage 1	478	478	-	308	308	-	-	-	-	-	-	-
Stage 2	312	308	-	484	478	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.5	6.2	7.1	6.5	6.35	-	-	-	4.3	-	-
Critical Hdwy Stg 1	6.19	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.1	4	3.1	3	4	3.1	-	-	-	3	-	-
Pot Cap-1 Maneuver	330	326	622	344	326	768	0	-	-	942	-	0
Stage 1	623	559	-	807	664	-	0	-	-	-	-	0
Stage 2	774	664	-	642	559	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	327	326	622	334	326	768	-	-	-	942	-	-
Mov Cap-2 Maneuver	327	326	-	334	326	-	-	-	-	-	-	-
Stage 1	623	559	-	807	664	-	-	-	-	-	-	-
Stage 2	766	664	-	628	559	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	27.6	13.7	0	0
HCM LOS	D	B		

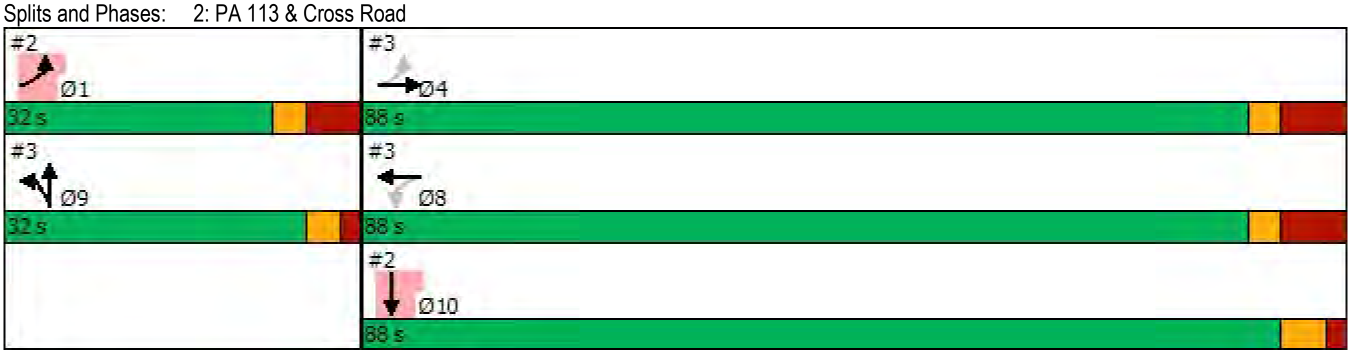
Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	327	435	942	-
HCM Lane V/C Ratio	-	-	0.526	0.044	-	-
HCM Control Delay (s)	-	-	27.6	13.7	0	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	2.9	0.1	0	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø4	Ø8	Ø9
Lane Configurations									
Traffic Volume (vph)	161	1	0	0	126	228			
Future Volume (vph)	161	1	0	0	126	228			
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800			
Lane Width (ft)	12	12	12	12	11	11			
Grade (%)	-1%			1%	-2%				
Lane Util. Factor	1.00	1.00	*1.00	*1.00	1.00	1.00			
Frt	0.999				0.913				
Flt Protected	0.953								
Satd. Flow (prot)	1625	0	0	0	1578	0			
Flt Permitted	0.953								
Satd. Flow (perm)	1625	0	0	0	1578	0			
Right Turn on Red		No				No			
Satd. Flow (RTOR)									
Link Speed (mph)	40			35	35				
Link Distance (ft)	553			2066	100				
Travel Time (s)	9.4			40.2	1.9				
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96			
Heavy Vehicles (%)	6%	0%	0%	2%	3%	1%			
Adj. Flow (vph)	168	1	0	0	131	238			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	169	0	0	0	369	0			
Enter Blocked Intersection	No	No	No	No	No	No			
Lane Alignment	Left	Right	Left	Left	Left	Right			
Median Width(ft)	12			0	0				
Link Offset(ft)	0			0	0				
Crosswalk Width(ft)	16			16	16				
Two way Left Turn Lane									
Headway Factor	1.07	1.07	1.08	1.08	1.11	1.11			
Turning Speed (mph)	15	9	15			9			
Number of Detectors	1				0				
Detector Template	Left								
Leading Detector (ft)	35				0				
Trailing Detector (ft)	-5				0				
Detector 1 Position(ft)	-5				0				
Detector 1 Size(ft)	40				6				
Detector 1 Type	Cl+Ex				Cl+Ex				
Detector 1 Channel									
Detector 1 Extend (s)	0.0				0.0				
Detector 1 Queue (s)	0.0				0.0				
Detector 1 Delay (s)	0.0				0.0				
Turn Type	Prot				NA				
Protected Phases	1				10		4	8	9
Permitted Phases									
Detector Phase	1				4 8				
Switch Phase									
Minimum Initial (s)	5.0				8.0		5.0	5.0	8.0
Minimum Split (s)	13.0				18.0		14.0	14.0	13.0
Total Split (s)	32.0				88.0		88.0	88.0	32.0
Total Split (%)	26.7%				73.3%		73%	73%	27%
Maximum Green (s)	24.0				82.0		79.0	79.0	27.0
Yellow Time (s)	3.0				4.0		3.0	3.0	3.0
All-Red Time (s)	5.0				2.0		6.0	6.0	2.0
Lost Time Adjust (s)	0.0				0.0				

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø4	Ø8	Ø9
Total Lost Time (s)	8.0				6.0				
Lead/Lag									
Lead-Lag Optimize?									
Vehicle Extension (s)	3.0				3.0		3.0	3.0	3.0
Recall Mode	None				None		None	None	None
Act Effct Green (s)	24.0				82.0				
Actuated g/C Ratio	0.20				0.68				
v/c Ratio	0.52				0.34				
Control Delay	49.4				0.7				
Queue Delay	0.0				0.0				
Total Delay	49.4				0.7				
LOS	D				A				
Approach Delay	49.4				0.7				
Approach LOS	D				A				
Queue Length 50th (ft)	118				0				
Queue Length 95th (ft)	191				0				
Internal Link Dist (ft)	473			1986	20				
Turn Bay Length (ft)									
Base Capacity (vph)	325				1078				
Starvation Cap Reductn	0				0				
Spillback Cap Reductn	0				0				
Storage Cap Reductn	0				0				
Reduced v/c Ratio	0.52				0.34				

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 16.0	Intersection LOS: B
Intersection Capacity Utilization 42.9%	ICU Level of Service A
Analysis Period (min) 15	
* User Entered Value	

Splits and Phases: 2: PA 113 & Cross Road



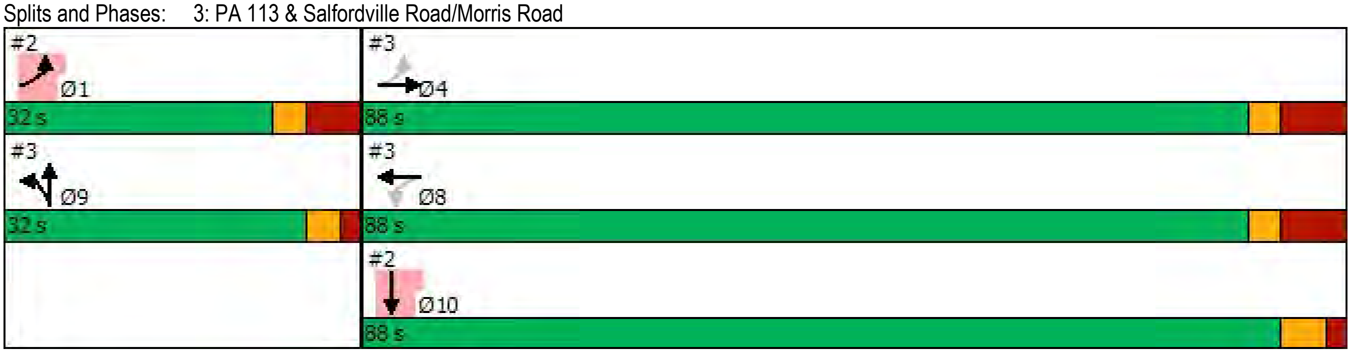
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	19	99	255	341	3	0	81	80	0	0	0
Future Volume (vph)	19	19	99	255	341	3	0	81	80	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	12	12	12	12	12	12	11	11	11
Grade (%)		1%			-1%			1%			-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.902			0.999			0.933				
Flt Protected		0.993			0.979							
Satd. Flow (prot)	0	1497	0	0	1742	0	0	1584	0	0	0	0
Flt Permitted		0.883			0.792							
Satd. Flow (perm)	0	1331	0	0	1409	0	0	1584	0	0	0	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			35			35			35	
Link Distance (ft)		93			1156			100			2015	
Travel Time (s)		1.6			22.5			1.9			39.3	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	1%	2%	0%	2%	5%	6%	0%	2%	0%
Adj. Flow (vph)	21	21	111	287	383	3	0	91	90	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	153	0	0	673	0	0	181	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.18	1.18	1.18	1.07	1.07	1.07	1.08	1.08	1.08	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	0				
Detector Template	Left	Thru		Left	Thru							
Leading Detector (ft)	20	35		20	35		35	0				
Trailing Detector (ft)	0	-5		0	-5		-5	0				
Detector 1 Position(ft)	0	-5		0	-5		-5	0				
Detector 1 Size(ft)	20	40		20	40		40	6				
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Turn Type	Perm	NA		Perm	NA			NA				
Protected Phases		4			8		9	9				
Permitted Phases	4			8								
Detector Phase	4	4 10		8	8 10		1 9	1 9				
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		8.0	8.0				
Minimum Split (s)	14.0	14.0		14.0	14.0		13.0	13.0				
Total Split (s)	88.0	88.0		88.0	88.0		32.0	32.0				
Total Split (%)	73.3%	73.3%		73.3%	73.3%		26.7%	26.7%				
Maximum Green (s)	79.0	79.0		79.0	79.0		27.0	27.0				
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0				
All-Red Time (s)	6.0	6.0		6.0	6.0		2.0	2.0				
Lost Time Adjust (s)		0.0			0.0			0.0				

Lane Group	Ø1	Ø10
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Heavy Vehicles (%)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Turn Type		
Protected Phases	1	10
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	5.0	8.0
Minimum Split (s)	13.0	18.0
Total Split (s)	32.0	88.0
Total Split (%)	27%	73%
Maximum Green (s)	24.0	82.0
Yellow Time (s)	3.0	4.0
All-Red Time (s)	5.0	2.0
Lost Time Adjust (s)		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Lost Time (s)		9.0			9.0			5.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0				
Recall Mode	None	None		None	None		None	None				
Act Effct Green (s)		79.0			79.0			27.0				
Actuated g/C Ratio		0.66			0.66			0.22				
v/c Ratio		0.17			0.73			0.51				
Control Delay		8.5			19.2			7.3				
Queue Delay		0.0			0.0			0.0				
Total Delay		8.5			19.2			7.3				
LOS		A			B			A				
Approach Delay		8.5			19.2			7.3				
Approach LOS		A			B			A				
Queue Length 50th (ft)		42			313			8				
Queue Length 95th (ft)		69			460			12				
Internal Link Dist (ft)		13			1076			20			1935	
Turn Bay Length (ft)												
Base Capacity (vph)		876			927			356				
Starvation Cap Reductn		0			0			0				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.17			0.73			0.51				

Intersection Summary	
Area Type: Other	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 15.4	Intersection LOS: B
Intersection Capacity Utilization 62.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: PA 113 & Salfordville Road/Morris Road



Lane Group	Ø1	Ø10
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	137	310	31	0	0
Future Volume (vph)	1	137	310	31	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	11	11	14	14
Grade (%)		1%	-1%		-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.988			
Flt Protected						
Satd. Flow (prot)	0	1672	1653	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1672	1653	0	0	0
Link Speed (mph)		40	40		35	
Link Distance (ft)		802	93		617	
Travel Time (s)		13.7	1.6		12.0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%
Adj. Flow (vph)	1	154	348	35	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	155	383	0	0	0
Enter Blocked Intersection	Yes	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.18	1.18	1.11	1.11	0.98	0.98
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	6	115	6	0
Future Volume (vph)	0	0	6	115	6	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	-2%		1%			0%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.872			
Flt Protected					0.950	
Satd. Flow (prot)	0	0	1505	0	1710	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	1505	0	1710	0
Link Speed (mph)	35		35			30
Link Distance (ft)	424		2015			295
Travel Time (s)	8.3		39.3			6.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	0%	0%	4%	0%	0%
Adj. Flow (vph)	0	0	7	128	7	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	135	0	7	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.08	1.08	1.07	1.07
Turning Speed (mph)	60	60		9	15	
Sign Control	Free		Free			Stop

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection						
Int Delay, s/veh	0.4					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	6	115	6	0
Future Vol, veh/h	0	0	6	115	6	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	-2	-	1	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	4	0	0	4	0	0
Mvmt Flow	0	0	7	128	7	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	0	0	71	-
Stage 1	-	-	0	-
Stage 2	-	-	71	-
Critical Hdwy	-	-	6.4	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.4	-
Follow-up Hdwy	-	-	3.5	-
Pot Cap-1 Maneuver	-	-	938	0
Stage 1	-	-	-	0
Stage 2	-	-	957	0
Platoon blocked, %	-	-		
Mov Cap-1 Maneuver	-	-	938	0
Mov Cap-2 Maneuver	-	-	938	0
Stage 1	-	-	-	0
Stage 2	-	-	957	0

Approach	NB	SB
HCM Control Delay, s	0	8.9
HCM LOS		A

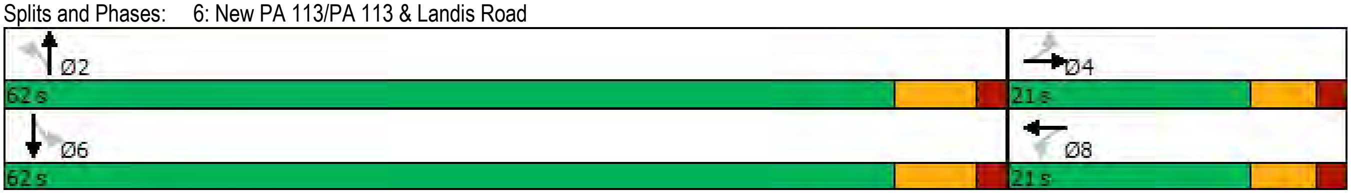
Minor Lane/Major Mvmt	NBT	NBR	SBLn1
Capacity (veh/h)	-	-	938
HCM Lane V/C Ratio	-	-	0.007
HCM Control Delay (s)	-	-	8.9
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	12	6	9	61	63	8	438	16	26	429	18
Future Volume (vph)	18	12	6	9	61	63	8	438	16	26	429	18
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	12	12	12	12	12	12	12	13	12	13
Grade (%)		-2%			-1%			0%			-4%	
Storage Length (ft)	0		0	0		0	225		0	225		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.976			0.936			0.995			0.994	
Flt Protected		0.976			0.997		0.950			0.950		
Satd. Flow (prot)	0	1737	0	0	1627	0	1710	1709	0	1609	1786	0
Flt Permitted		0.836			0.973		0.478			0.472		
Satd. Flow (perm)	0	1488	0	0	1588	0	860	1709	0	800	1786	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		7			48			5				
Link Speed (mph)		35			35			30			45	
Link Distance (ft)		472			496			693			1186	
Travel Time (s)		9.2			9.7			15.8			18.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	0%	0%	0%	2%	6%	0%	5%	0%	12%	2%	6%
Adj. Flow (vph)	20	13	7	10	66	68	9	476	17	28	466	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	0	0	144	0	9	493	0	28	486	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			13			13	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.06	1.07	1.07	1.07	1.07	1.07	1.07	1.00	1.05	1.00
Turning Speed (mph)	15		60	60		9	60		60	15		9
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left			Left	Thru		Left	Thru	
Leading Detector (ft)	20	35		20	35		20	100		20	100	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	3.0		3.0	3.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	9.0	9.0		9.0	9.0		22.0	22.0		22.0	22.0	
Total Split (s)	21.0	21.0		21.0	21.0		62.0	62.0		62.0	62.0	
Total Split (%)	25.3%	25.3%		25.3%	25.3%		74.7%	74.7%		74.7%	74.7%	
Maximum Green (s)	15.0	15.0		15.0	15.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0		7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	

Intersection Summary	
Area Type:	Other
Cycle Length: 83	
Actuated Cycle Length: 40.8	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 6: New PA 113/PA 113 & Landis Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	12	6	9	61	63	8	438	16	26	429	18
Future Volume (veh/h)	18	12	6	9	61	63	8	438	16	26	429	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1861	1950	1875	1837	1809	1752	1800	1730	1800	1850	1921	1938
Adj Flow Rate, veh/h	20	13	7	10	66	36	9	476	17	28	466	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	0	0	0	2	6	0	5	0	12	2	6
Cap, veh/h	279	88	41	142	133	71	515	802	29	491	883	38
Arrive On Green	0.10	0.13	0.10	0.10	0.13	0.10	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	805	676	314	123	1017	540	924	1660	59	944	1828	78
Grp Volume(v), veh/h	40	0	0	112	0	0	9	0	493	28	0	486
Grp Sat Flow(s),veh/h/ln	1795	0	0	1681	0	0	924	0	1719	944	0	1906
Q Serve(g_s), s	0.0	0.0	0.0	1.4	0.0	0.0	0.2	0.0	6.5	0.7	0.0	5.5
Cycle Q Clear(g_c), s	0.6	0.0	0.0	2.0	0.0	0.0	5.7	0.0	6.5	7.1	0.0	5.5
Prop In Lane	0.50		0.17	0.09		0.32	1.00		0.03	1.00		0.04
Lane Grp Cap(c), veh/h	351	0	0	292	0	0	515	0	830	491	0	921
V/C Ratio(X)	0.11	0.00	0.00	0.38	0.00	0.00	0.02	0.00	0.59	0.06	0.00	0.53
Avail Cap(c_a), veh/h	967	0	0	934	0	0	1705	0	3044	1707	0	3376
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.3	0.0	0.0	12.8	0.0	0.0	7.6	0.0	5.8	8.4	0.0	5.6
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	0.0	1.1	0.0	0.0	0.1	0.0	2.2	0.2	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.4	0.0	0.0	13.6	0.0	0.0	7.6	0.0	6.5	8.5	0.0	6.0
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		40			112			502			514	
Approach Delay, s/veh		12.4			13.6			6.5			6.2	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.0		9.1		22.0		9.1				
Change Period (Y+Rc), s		7.0		6.0		7.0		6.0				
Max Green Setting (Gmax), s		55.0		15.0		55.0		15.0				
Max Q Clear Time (g_c+I1), s		8.5		2.6		9.1		4.0				
Green Ext Time (p_c), s		3.7		0.1		3.2		0.2				

Intersection Summary			
HCM 6th Ctrl Delay			7.3
HCM 6th LOS			A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	98	1	0	3	0	520	3	3	220	0
Future Volume (vph)	0	0	98	1	0	3	0	520	3	3	220	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865			0.899			0.999				
Flt Protected					0.988					0.950		
Satd. Flow (prot)	0	1512	0	0	1599	0	0	1763	0	1710	1765	0
Flt Permitted					0.988					0.950		
Satd. Flow (perm)	0	1512	0	0	1599	0	0	1763	0	1710	1765	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		181			519			457			1291	
Travel Time (s)		4.1			11.8			10.4			29.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	3%	0%	0%	0%	2%	2%	0%	0%	2%	0%
Adj. Flow (vph)	0	0	102	1	0	3	0	542	3	3	229	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	102	0	0	4	0	0	545	0	3	229	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	98	1	0	3	0	520	3	3	220	0
Future Vol, veh/h	0	0	98	1	0	3	0	520	3	3	220	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	3	0	0	0	2	2	0	0	2	0
Mvmt Flow	0	0	102	1	0	3	0	542	3	3	229	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	780	780	229	830	779	544	-	0	0	545	0	0
Stage 1	235	235	-	544	544	-	-	-	-	-	-	-
Stage 2	545	545	-	286	235	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.23	7.1	6.5	6.2	-	-	-	4.3	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3	4	3.1	3	4	3.1	-	-	-	3	-	-
Pot Cap-1 Maneuver	350	329	861	323	330	570	0	-	-	779	-	0
Stage 1	887	714	-	594	522	-	0	-	-	-	-	0
Stage 2	593	522	-	831	714	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	347	328	861	284	329	570	-	-	-	779	-	-
Mov Cap-2 Maneuver	347	328	-	284	329	-	-	-	-	-	-	-
Stage 1	887	711	-	594	522	-	-	-	-	-	-	-
Stage 2	590	522	-	730	711	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.7	13	0	0.1
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	861	455	779	-
HCM Lane V/C Ratio	-	-	0.119	0.009	0.004	-
HCM Control Delay (s)	-	-	9.7	13	9.6	-
HCM Lane LOS	-	-	A	B	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	19	0	0	113	0	258	257	8	3	223	228
Future Volume (vph)	80	19	0	0	113	0	258	257	8	3	223	228
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Grade (%)		0%			-1%			0%			0%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt								0.995			0.924	
Flt Protected		0.961					0.950			0.950		
Satd. Flow (prot)	0	1662	0	0	1739	0	1676	1740	0	1710	1639	0
Flt Permitted		0.961					0.950			0.950		
Satd. Flow (perm)	0	1662	0	0	1739	0	1676	1740	0	1710	1639	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1156			811			1291			2237	
Travel Time (s)		26.3			18.4			29.3			50.8	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	5%	0%	1%	5%	4%	0%	2%	3%	0%	0%	2%	1%
Adj. Flow (vph)	90	21	0	0	127	0	290	289	9	3	251	256
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	111	0	0	127	0	290	298	0	3	507	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	28.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	80	19	0	0	113	0	258	257	8	3	223	228
Future Vol, veh/h	80	19	0	0	113	0	258	257	8	3	223	228
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-1	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	5	0	1	5	4	0	2	3	0	0	2	1
Mvmt Flow	90	21	0	0	127	0	290	289	9	3	251	256

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1322	1263	379	1270	1387	294	507	0	0	298	0	0
Stage 1	385	385	-	874	874	-	-	-	-	-	-	-
Stage 2	937	878	-	396	513	-	-	-	-	-	-	-
Critical Hdwy	7.2	6.5	6.21	7.2	6.34	6.2	4.3	-	-	4.3	-	-
Critical Hdwy Stg 1	6.15	5.5	-	5.95	5.34	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.5	-	5.95	5.34	-	-	-	-	-	-	-
Follow-up Hdwy	3.1	4	3.1	3.1	4.036	3.1	3	-	-	3	-	-
Pot Cap-1 Maneuver	138	171	708	151	153	792	803	-	-	949	-	-
Stage 1	707	614	-	390	383	-	-	-	-	-	-	-
Stage 2	341	368	-	712	548	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	109	708	93	~ 97	792	803	-	-	949	-	-
Mov Cap-2 Maneuver	-	109	-	93	~ 97	-	-	-	-	-	-	-
Stage 1	452	612	-	249	245	-	-	-	-	-	-	-
Stage 2	105	235	-	685	546	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		275	5.9	0.1
HCM LOS	-	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	803	-	-	-	97	949	-	-
HCM Lane V/C Ratio	0.361	-	-	-	1.309	0.004	-	-
HCM Control Delay (s)	12	-	-	-	275	8.8	-	-
HCM Lane LOS	B	-	-	-	F	A	-	-
HCM 95th %tile Q(veh)	1.7	-	-	-	9	0	-	-

Notes

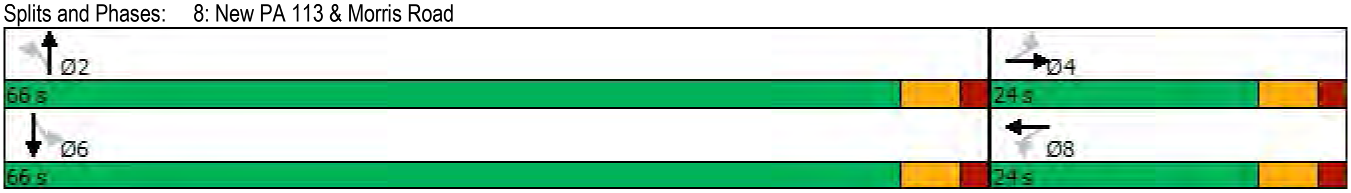
~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	19	0	0	113	0	258	257	8	3	223	228
Future Volume (vph)	80	19	0	0	113	0	258	257	8	3	223	228
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Grade (%)		0%			-1%			0%			0%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt								0.995			0.924	
Flt Protected		0.961					0.950			0.950		
Satd. Flow (prot)	0	1662	0	0	1739	0	1676	1740	0	1710	1639	0
Flt Permitted		0.682					0.446			0.578		
Satd. Flow (perm)	0	1180	0	0	1739	0	787	1740	0	1040	1639	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)								4			122	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1156			811			1291			2237	
Travel Time (s)		26.3			18.4			29.3			50.8	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	5%	0%	1%	5%	4%	0%	2%	3%	0%	0%	2%	1%
Adj. Flow (vph)	90	21	0	0	127	0	290	289	9	3	251	256
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	111	0	0	127	0	290	298	0	3	507	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	60		60	60		60	60		60	60		60
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	35		20	35		35	256		35	256	
Trailing Detector (ft)	0	-5		0	-5		-5	-5		-5	-5	
Detector 1 Position(ft)	0	-5		0	-5		-5	-5		-5	-5	
Detector 1 Size(ft)	20	40		20	40		40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		15.0	15.0		15.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.0	9.0		9.0	9.0		21.0	21.0		21.0	21.0	
Total Split (s)	24.0	24.0		24.0	24.0		66.0	66.0		66.0	66.0	
Total Split (%)	26.7%	26.7%		26.7%	26.7%		73.3%	73.3%		73.3%	73.3%	
Maximum Green (s)	18.0	18.0		18.0	18.0		60.0	60.0		60.0	60.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 55.7	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 8: New PA 113 & Morris Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	19	0	0	113	0	258	257	8	3	223	228
Future Volume (veh/h)	80	19	0	0	113	0	258	257	8	3	223	228
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1730	1800	1786	1766	1780	1837	1772	1758	1800	1800	1772	1786
Adj Flow Rate, veh/h	90	21	0	0	127	0	290	289	9	3	251	256
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	5	0	1	5	4	0	2	3	0	0	2	1
Cap, veh/h	233	42	0	0	297	0	522	1039	32	718	493	503
Arrive On Green	0.17	0.17	0.00	0.00	0.17	0.00	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	679	251	0	0	1780	0	892	1696	53	1098	804	820
Grp Volume(v), veh/h	111	0	0	0	127	0	290	0	298	3	0	507
Grp Sat Flow(s),veh/h/ln	930	0	0	0	1780	0	892	0	1748	1098	0	1624
Q Serve(g_s), s	3.7	0.0	0.0	0.0	3.5	0.0	14.8	0.0	4.3	0.1	0.0	9.6
Cycle Q Clear(g_c), s	7.2	0.0	0.0	0.0	3.5	0.0	24.4	0.0	4.3	4.4	0.0	9.6
Prop In Lane	0.81		0.00	0.00		0.00	1.00		0.03	1.00		0.50
Lane Grp Cap(c), veh/h	275	0	0	0	297	0	522	0	1072	718	0	996
V/C Ratio(X)	0.40	0.00	0.00	0.00	0.43	0.00	0.56	0.00	0.28	0.00	0.00	0.51
Avail Cap(c_a), veh/h	496	0	0	0	588	0	957	0	1923	1253	0	1787
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.9	0.0	0.0	0.0	20.4	0.0	12.8	0.0	4.9	6.0	0.0	5.9
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.0	1.0	0.0	0.9	0.0	0.1	0.0	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.4	0.0	0.0	0.0	2.5	0.0	4.6	0.0	2.0	0.0	0.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.8	0.0	0.0	0.0	21.3	0.0	13.7	0.0	5.1	6.0	0.0	6.3
LnGrp LOS	C	A	A	A	C	A	B	A	A	A	A	A
Approach Vol, veh/h		111			127			588			510	
Approach Delay, s/veh		23.8			21.3			9.3			6.3	
Approach LOS		C			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		39.4		15.1		39.4		15.1				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		60.0		18.0		60.0		18.0				
Max Q Clear Time (g_c+I1), s		26.4		9.2		11.6		5.5				
Green Ext Time (p_c), s		7.1		0.2		10.7		0.3				
Intersection Summary												
HCM 6th Ctrl Delay			10.5									
HCM 6th LOS			B									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	7	0	7	0	3	0	337	0	0	447	0
Future Volume (vph)	114	7	0	7	0	3	0	337	0	0	447	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.963							
Flt Protected		0.955			0.965							
Satd. Flow (prot)	0	1657	0	0	1673	0	0	1731	0	1800	1748	0
Flt Permitted		0.955			0.965							
Satd. Flow (perm)	0	1657	0	0	1673	0	0	1731	0	1800	1748	0
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		424			345			2237			693	
Travel Time (s)		8.3			6.7			43.6			13.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	0%	0%	0%	0%	0%	0%	4%	0%	0%	3%	4%
Adj. Flow (vph)	127	8	0	8	0	3	0	374	0	0	497	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	135	0	0	11	0	0	374	0	0	497	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	114	7	0	7	0	3	0	337	0	0	447	0
Future Vol, veh/h	114	7	0	7	0	3	0	337	0	0	447	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	4	0	0	0	0	0	0	4	0	0	3	4
Mvmt Flow	127	8	0	8	0	3	0	374	0	0	497	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	873	871	497	875	871	374	-	0	0	374	0	0
Stage 1	497	497	-	374	374	-	-	-	-	-	-	-
Stage 2	376	374	-	501	497	-	-	-	-	-	-	-
Critical Hdwy	7.14	6.5	6.2	7.1	6.5	6.2	-	-	-	4.3	-	-
Critical Hdwy Stg 1	6.14	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.14	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3	4	3.1	3	4	3.1	-	-	-	3	-	-
Pot Cap-1 Maneuver	299	291	607	301	291	713	0	-	-	893	-	0
Stage 1	628	548	-	741	621	-	0	-	-	-	-	0
Stage 2	736	621	-	628	548	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	298	291	607	295	291	713	-	-	-	893	-	-
Mov Cap-2 Maneuver	298	291	-	295	291	-	-	-	-	-	-	-
Stage 1	628	548	-	741	621	-	-	-	-	-	-	-
Stage 2	733	621	-	619	548	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	26.6	15.4	0	0
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	298	358	893	-
HCM Lane V/C Ratio	-	-	0.451	0.031	-	-
HCM Control Delay (s)	-	-	26.6	15.4	0	-
HCM Lane LOS	-	-	D	C	A	-
HCM 95th %tile Q(veh)	-	-	2.2	0.1	0	-

McMAHON
a Bowman company

Attachment 13

2035 Future Alternative #3 Capacity/Level-of-Service Analysis Worksheets

425 Commerce Drive, Suite 200, Fort Washington, PA 19034
P: 215.283.9444
mcmahonassociates.com | bowman.com

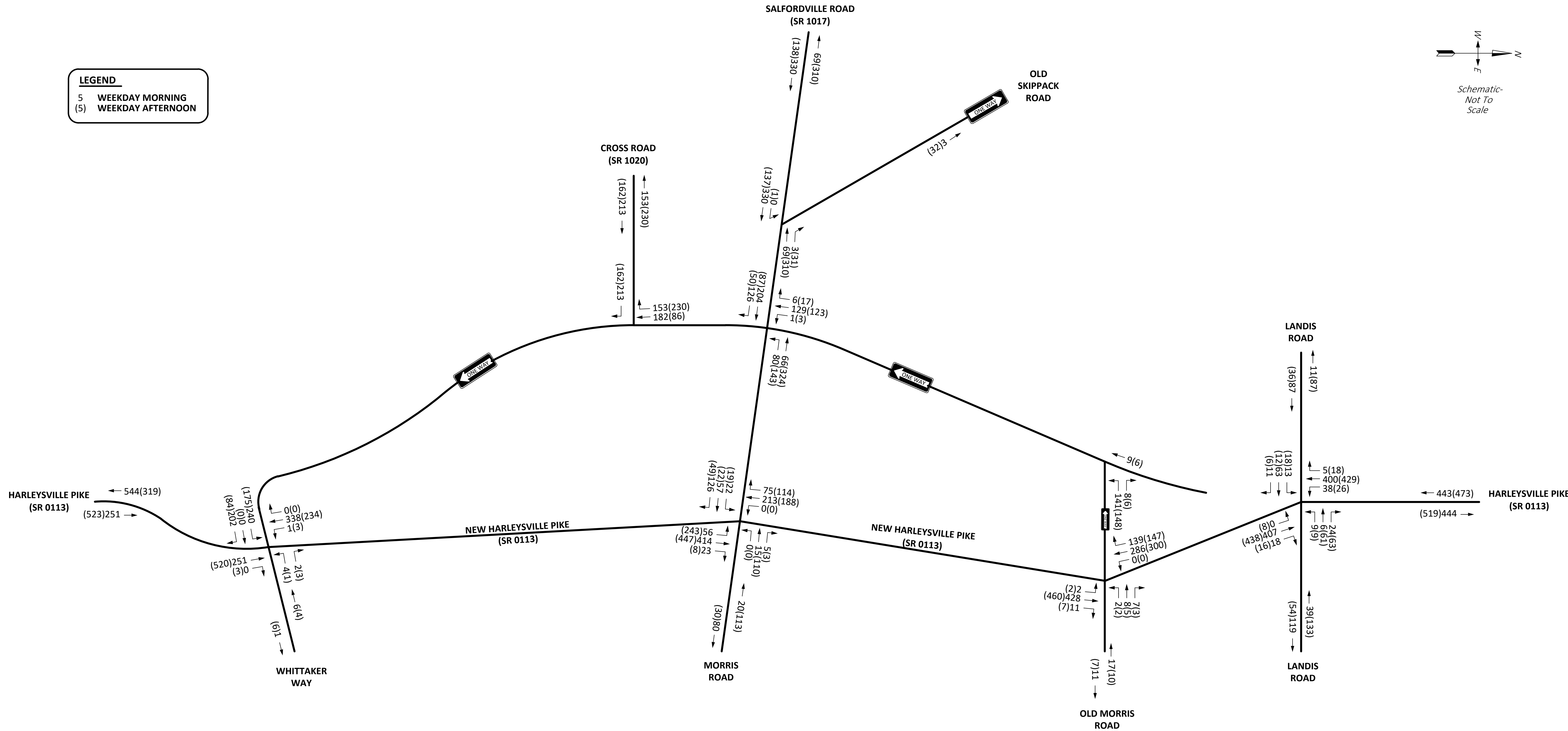


FIGURE L

2035 Future Peak Hour Traffic Volumes- Alternative #3

WALKABLE LEDERACH

LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

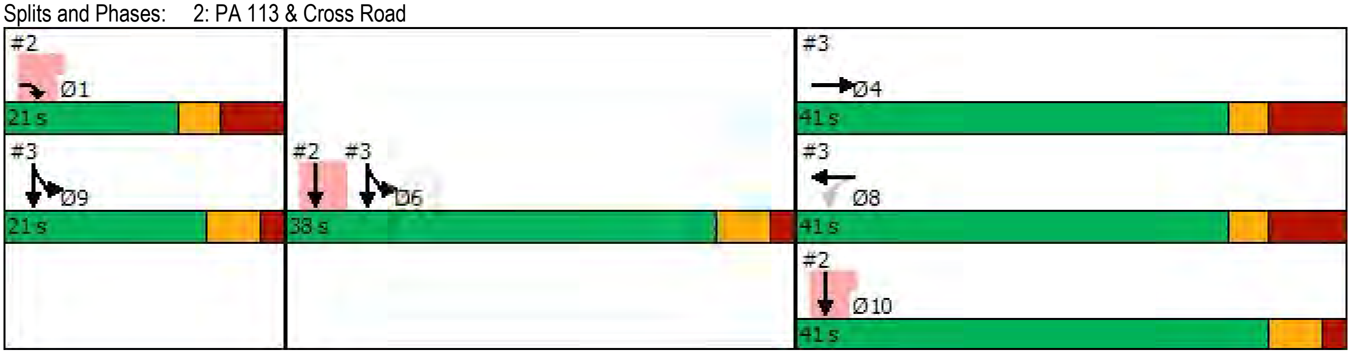
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø4	Ø6	Ø8	Ø9	Ø10
Lane Configurations											
Traffic Volume (vph)	0	213	0	0	182	153					
Future Volume (vph)	0	213	0	0	182	153					
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800					
Lane Width (ft)	12	12	12	12	11	11					
Grade (%)	-1%			1%	-2%						
Lane Util. Factor	1.00	1.00	*1.00	*1.00	1.00	1.00					
Frt		0.865			0.938						
Flt Protected											
Satd. Flow (prot)	0	1565	0	0	1570	0					
Flt Permitted											
Satd. Flow (perm)	0	1565	0	0	1570	0					
Right Turn on Red		No				No					
Satd. Flow (RTOR)											
Link Speed (mph)	40			35	35						
Link Distance (ft)	553			2066	100						
Travel Time (s)	9.4			40.2	1.9						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96					
Heavy Vehicles (%)	4%	0%	33%	10%	5%	5%					
Adj. Flow (vph)	0	222	0	0	190	159					
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	222	0	0	349	0					
Enter Blocked Intersection	No	No	No	No	No	No					
Lane Alignment	Left	Right	Left	Left	Left	Right					
Median Width(ft)	0			0	0						
Link Offset(ft)	0			0	0						
Crosswalk Width(ft)	16			16	16						
Two way Left Turn Lane											
Headway Factor	1.07	1.07	1.08	1.08	1.11	1.11					
Turning Speed (mph)	15	9	15			9					
Number of Detectors		1			0						
Detector Template		Right									
Leading Detector (ft)		20			0						
Trailing Detector (ft)		0			0						
Detector 1 Position(ft)		0			0						
Detector 1 Size(ft)		20			6						
Detector 1 Type		Cl+Ex			Cl+Ex						
Detector 1 Channel											
Detector 1 Extend (s)		0.0			0.0						
Detector 1 Queue (s)		0.0			0.0						
Detector 1 Delay (s)		0.0			0.0						
Turn Type		Prot			NA						
Protected Phases		1			10 6		4	6	8	9	10
Permitted Phases		1									
Detector Phase		1			6						
Switch Phase											
Minimum Initial (s)		5.0					5.0	5.0	5.0	5.0	8.0
Minimum Split (s)		13.0					14.0	13.0	14.0	11.0	18.0
Total Split (s)		21.0					41.0	38.0	41.0	21.0	41.0
Total Split (%)		21.0%					41%	38%	41%	21%	41%
Maximum Green (s)		13.0					32.0	32.0	32.0	15.0	35.0
Yellow Time (s)		3.0					3.0	4.0	3.0	4.0	4.0
All-Red Time (s)		5.0					6.0	2.0	6.0	2.0	2.0
Lost Time Adjust (s)		0.0									

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø4	Ø6	Ø8	Ø9	Ø10
Total Lost Time (s)		8.0									
Lead/Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)		3.0					3.0	3.0	3.0	3.0	3.0
Recall Mode		None					None	Min	None	None	None
Act Effct Green (s)		13.2			44.2						
Actuated g/C Ratio		0.18			0.62						
v/c Ratio		0.77			0.36						
Control Delay		50.8			1.0						
Queue Delay		0.0			0.0						
Total Delay		50.8			1.0						
LOS		D			A						
Approach Delay	50.8				1.0						
Approach LOS	D				A						
Queue Length 50th (ft)		93			0						
Queue Length 95th (ft)		#259			0						
Internal Link Dist (ft)	473			1986	20						
Turn Bay Length (ft)											
Base Capacity (vph)		289			968						
Starvation Cap Reductn		0			0						
Spillback Cap Reductn		0			0						
Storage Cap Reductn		0			0						
Reduced v/c Ratio		0.77			0.36						

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 71.7
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 20.4 Intersection LOS: C
Intersection Capacity Utilization 45.6% ICU Level of Service A
Analysis Period (min) 15
* User Entered Value
# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: PA 113 & Cross Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	204	126	80	66	0	0	0	0	1	129	6
Future Volume (vph)	0	204	126	80	66	0	0	0	0	1	129	6
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	12	12	12	12	12	12	11	11	11
Grade (%)		1%			-1%			1%			-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.949									0.994	
Flt Protected					0.973							
Satd. Flow (prot)	0	1531	0	0	1674	0	0	0	0	0	1609	0
Flt Permitted					0.553							
Satd. Flow (perm)	0	1531	0	0	951	0	0	0	0	0	1609	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			35			35			35	
Link Distance (ft)		93			1156			100			2015	
Travel Time (s)		1.6			22.5			1.9			39.3	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	20%	4%	3%	2%	9%	0%	8%	9%	4%	0%	9%	0%
Adj. Flow (vph)	0	219	135	86	71	0	0	0	0	1	139	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	354	0	0	157	0	0	0	0	0	146	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.18	1.18	1.18	1.07	1.07	1.07	1.08	1.08	1.08	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1		1	1					1	1	
Detector Template		Thru		Left	Thru							
Leading Detector (ft)		35		20	35					35	35	
Trailing Detector (ft)		-5		0	-5					-5	-5	
Detector 1 Position(ft)		-5		0	-5					-5	-5	
Detector 1 Size(ft)		40		20	40					40	40	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		4			8					6 9	6 9	
Permitted Phases				8								
Detector Phase		4		8	8					6	6	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0							
Minimum Split (s)		14.0		14.0	14.0							
Total Split (s)		41.0		41.0	41.0							
Total Split (%)		41.0%		41.0%	41.0%							
Maximum Green (s)		32.0		32.0	32.0							
Yellow Time (s)		3.0		3.0	3.0							
All-Red Time (s)		6.0		6.0	6.0							
Lost Time Adjust (s)		0.0			0.0							

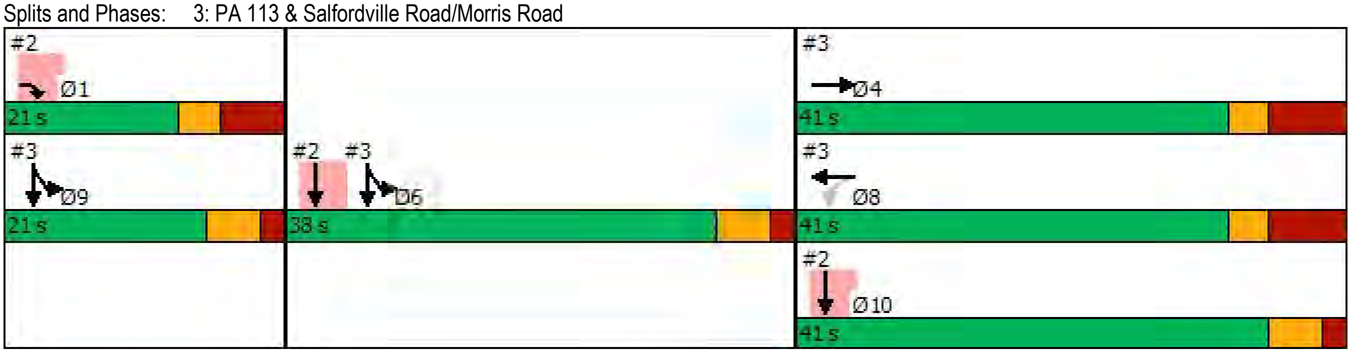
Lane Group	Ø1	Ø6	Ø9	Ø10
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (ft)				
Grade (%)				
Lane Util. Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Number of Detectors				
Detector Template				
Leading Detector (ft)				
Trailing Detector (ft)				
Detector 1 Position(ft)				
Detector 1 Size(ft)				
Detector 1 Type				
Detector 1 Channel				
Detector 1 Extend (s)				
Detector 1 Queue (s)				
Detector 1 Delay (s)				
Turn Type				
Protected Phases	1	6	9	10
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	8.0
Minimum Split (s)	13.0	13.0	11.0	18.0
Total Split (s)	21.0	38.0	21.0	41.0
Total Split (%)	21%	38%	21%	41%
Maximum Green (s)	13.0	32.0	15.0	35.0
Yellow Time (s)	3.0	4.0	4.0	4.0
All-Red Time (s)	5.0	2.0	2.0	2.0
Lost Time Adjust (s)				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Lost Time (s)		9.0			9.0							
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0							
Recall Mode		None		None	None							
Act Effct Green (s)		21.5			21.5						13.5	
Actuated g/C Ratio		0.30			0.30						0.19	
v/c Ratio		0.77			0.55						0.48	
Control Delay		35.2			29.2						33.2	
Queue Delay		0.0			0.0						0.0	
Total Delay		35.2			29.2						33.2	
LOS		D			C						C	
Approach Delay		35.2			29.2						33.2	
Approach LOS		D			C						C	
Queue Length 50th (ft)		139			57						57	
Queue Length 95th (ft)		251			122						126	
Internal Link Dist (ft)		13			1076			20			1935	
Turn Bay Length (ft)												
Base Capacity (vph)		695			432						731	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.51			0.36						0.20	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 71.7
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 33.3 Intersection LOS: C
Intersection Capacity Utilization 55.4% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: PA 113 & Salfordville Road/Morris Road



Lane Group	Ø1	Ø6	Ø9	Ø10
Total Lost Time (s)				
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	None	Min	None	None
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				
Queue Length 50th (ft)				
Queue Length 95th (ft)				
Internal Link Dist (ft)				
Turn Bay Length (ft)				
Base Capacity (vph)				
Starvation Cap Reductn				
Spillback Cap Reductn				
Storage Cap Reductn				
Reduced v/c Ratio				

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	330	69	3	0	0
Future Volume (vph)	0	330	69	3	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	11	11	14	14
Grade (%)		1%	-1%		-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.995			
Flt Protected						
Satd. Flow (prot)	0	1592	1630	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1592	1630	0	0	0
Link Speed (mph)		40	40		35	
Link Distance (ft)		802	93		617	
Travel Time (s)		13.7	1.6		12.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	5%	7%	0%	0%	0%
Adj. Flow (vph)	0	355	74	3	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	355	77	0	0	0
Enter Blocked Intersection	Yes	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.18	1.18	1.11	1.11	0.98	0.98
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	141	8	0	0	0	9
Future Volume (vph)	141	8	0	0	0	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	-2%		1%			0%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.993					
Flt Protected	0.955					
Satd. Flow (prot)	1575	0	0	0	0	1800
Flt Permitted	0.955					
Satd. Flow (perm)	1575	0	0	0	0	1800
Link Speed (mph)	35		35			30
Link Distance (ft)	424		2015			295
Travel Time (s)	8.3		39.3			6.7
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	10%	0%	0%	9%	0%	0%
Adj. Flow (vph)	158	9	0	0	0	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	167	0	0	0	0	10
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.08	1.08	1.07	1.07
Turning Speed (mph)	15	9		9	15	
Sign Control	Free		Free			Stop

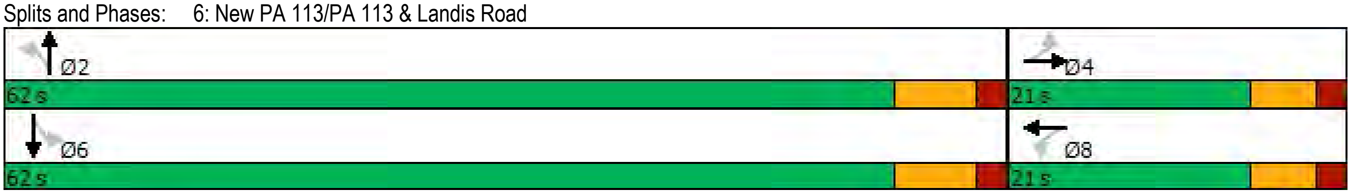
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	63	11	9	6	24	0	407	18	38	400	5
Future Volume (vph)	13	63	11	9	6	24	0	407	18	38	400	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	12	12	12	12	12	12	12	13	12	13
Grade (%)		-2%			-1%			0%			-4%	
Storage Length (ft)	0		0	0		0	225		0	225		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.983			0.918			0.994			0.998	
Flt Protected		0.993			0.988					0.950		
Satd. Flow (prot)	0	1787	0	0	1524	0	1800	1648	0	1669	1635	0
Flt Permitted		0.939			0.887					0.480		
Satd. Flow (perm)	0	1690	0	0	1368	0	1800	1648	0	843	1635	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		8			28			6				
Link Speed (mph)		35			35			30			45	
Link Distance (ft)		472			496			693			1186	
Travel Time (s)		9.2			9.7			15.8			18.0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	8%	2%	0%	11%	17%	4%	0%	8%	22%	8%	12%	20%
Adj. Flow (vph)	15	74	13	11	7	28	0	479	21	45	471	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	102	0	0	46	0	0	500	0	45	477	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			13			13	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.06	1.07	1.07	1.07	1.07	1.07	1.07	1.00	1.05	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left			Left	Thru		Left	Thru	
Leading Detector (ft)	20	35		20	35		20	100		20	100	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	3.0		3.0	3.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	9.0	9.0		9.0	9.0		22.0	22.0		22.0	22.0	
Total Split (s)	21.0	21.0		21.0	21.0		62.0	62.0		62.0	62.0	
Total Split (%)	25.3%	25.3%		25.3%	25.3%		74.7%	74.7%		74.7%	74.7%	
Maximum Green (s)	15.0	15.0		15.0	15.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0		7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	

Intersection Summary	
Area Type:	Other
Cycle Length: 83	
Actuated Cycle Length: 40.7	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 6: New PA 113/PA 113 & Landis Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	63	11	9	6	24	0	407	18	38	400	5
Future Volume (veh/h)	13	63	11	9	6	24	0	407	18	38	400	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1831	1920	1875	1681	1596	1780	1800	1688	1491	1909	1778	1731
Adj Flow Rate, veh/h	15	74	13	11	7	21	0	479	21	45	471	6
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	8	2	0	11	17	4	0	8	22	8	12	20
Cap, veh/h	166	160	28	197	35	94	235	785	34	498	857	11
Arrive On Green	0.09	0.12	0.09	0.09	0.12	0.09	0.00	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	259	1338	233	386	293	792	932	1605	70	967	1752	22
Grp Volume(v), veh/h	102	0	0	39	0	0	0	0	500	45	0	477
Grp Sat Flow(s),veh/h/ln	1830	0	0	1471	0	0	932	0	1675	967	0	1774
Q Serve(g_s), s	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	1.1	0.0	5.8
Cycle Q Clear(g_c), s	1.6	0.0	0.0	0.7	0.0	0.0	0.0	0.0	6.7	7.8	0.0	5.8
Prop In Lane	0.15		0.13	0.28		0.54	1.00		0.04	1.00		0.01
Lane Grp Cap(c), veh/h	293	0	0	278	0	0	235	0	820	498	0	868
V/C Ratio(X)	0.35	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.61	0.09	0.00	0.55
Avail Cap(c_a), veh/h	1020	0	0	815	0	0	1451	0	3005	1760	0	3183
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.7	0.0	0.0	12.6	0.0	0.0	0.0	0.0	5.7	8.5	0.0	5.5
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.7	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	2.2	0.2	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	0.0	0.0	12.8	0.0	0.0	0.0	0.0	6.4	8.6	0.0	6.0
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		102			39			500			522	
Approach Delay, s/veh		13.4			12.8			6.4			6.2	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.0		8.7		22.0		8.7				
Change Period (Y+Rc), s		7.0		6.0		7.0		6.0				
Max Green Setting (Gmax), s		55.0		15.0		55.0		15.0				
Max Q Clear Time (g_c+I1), s		8.7		3.6		9.8		2.7				
Green Ext Time (p_c), s		3.7		0.2		3.3		0.1				

Intersection Summary			
HCM 6th Ctrl Delay			7.2
HCM 6th LOS			A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	240	0	202	4	0	2	0	251	0	1	338	0
Future Volume (vph)	240	0	202	4	0	2	0	251	0	1	338	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0		100	0		0	100		0	100		0
Storage Lanes	1		1	0		0	0		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.955							
Flt Protected	0.950				0.968					0.950		
Satd. Flow (prot)	1710	1443	0	0	1664	0	0	1607	0	1710	1698	0
Flt Permitted	0.950				0.968					0.950		
Satd. Flow (perm)	1710	1443	0	0	1664	0	0	1607	0	1710	1698	0
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		181			519			457			1291	
Travel Time (s)		3.5			14.2			8.9			25.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	6%	0%	0%	0%	11%	12%	0%	0%	6%	0%
Adj. Flow (vph)	264	0	222	4	0	2	0	276	0	1	371	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	264	222	0	0	6	0	0	276	0	1	371	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	8.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	240	0	202	4	0	2	0	251	0	1	338	0
Future Vol, veh/h	240	0	202	4	0	2	0	251	0	1	338	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	100	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	6	0	0	0	11	12	0	0	6	0
Mvmt Flow	264	0	222	4	0	2	0	276	0	1	371	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	650	649	371	760	649	276	-	0	0	276	0	0
Stage 1	373	373	-	276	276	-	-	-	-	-	-	-
Stage 2	277	276	-	484	373	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.26	7.1	6.5	6.2	-	-	-	4.3	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3	4	3.2	3	4	3.1	-	-	-	3	-	-
Pot Cap-1 Maneuver	431	391	693	362	391	811	0	-	-	966	-	0
Stage 1	742	622	-	842	685	-	0	-	-	-	-	0
Stage 2	840	685	-	642	622	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	430	391	693	246	391	811	-	-	-	966	-	-
Mov Cap-2 Maneuver	430	391	-	246	391	-	-	-	-	-	-	-
Stage 1	742	621	-	842	685	-	-	-	-	-	-	-
Stage 2	838	685	-	436	621	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.8	16.5	0	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	430	693	320	966	-
HCM Lane V/C Ratio	-	-	0.613	0.32	0.021	0.001	-
HCM Control Delay (s)	-	-	25.8	12.6	16.5	8.7	-
HCM Lane LOS	-	-	D	B	C	A	-
HCM 95th %tile Q(veh)	-	-	4	1.4	0.1	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	57	126	0	15	5	56	414	23	0	213	75
Future Volume (vph)	22	57	126	0	15	5	56	414	23	0	213	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Grade (%)		0%			-1%			0%			0%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.917			0.968			0.992			0.961	
Flt Protected		0.995					0.950					
Satd. Flow (prot)	0	1581	0	0	1675	0	1583	1608	0	900	1606	0
Flt Permitted		0.995					0.950					
Satd. Flow (perm)	0	1581	0	0	1675	0	1583	1608	0	900	1606	0
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1156			811			1291			2237	
Travel Time (s)		22.5			15.8			25.1			43.6	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	6%	5%	3%	0%	6%	0%	8%	11%	12%	100%	8%	7%
Adj. Flow (vph)	24	61	135	0	16	5	60	445	25	0	229	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	220	0	0	21	0	60	470	0	0	310	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	57	126	0	15	5	56	414	23	0	213	75
Future Vol, veh/h	22	57	126	0	15	5	56	414	23	0	213	75
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-1	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	6	5	3	0	6	0	8	11	12	100	8	7
Mvmt Flow	24	61	135	0	16	5	60	445	25	0	229	81

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	858	860	270	946	888	458	310	0	0	470	0	0
Stage 1	270	270	-	578	578	-	-	-	-	-	-	-
Stage 2	588	590	-	368	310	-	-	-	-	-	-	-
Critical Hdwy	7.16	6.6	6.23	7.1	6.6	6.2	4.4	-	-	5.3	-	-
Critical Hdwy Stg 1	6.16	5.55	-	5.9	5.36	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.16	5.55	-	5.9	5.36	-	-	-	-	-	-	-
Follow-up Hdwy	3.1	4.1	3.1	3	4.1	3.1	3.1	-	-	3.9	-	-
Pot Cap-1 Maneuver	298	285	816	268	274	639	906	-	-	590	-	-
Stage 1	820	673	-	586	507	-	-	-	-	-	-	-
Stage 2	541	486	-	762	657	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	267	266	816	175	256	639	906	-	-	590	-	-
Mov Cap-2 Maneuver	267	266	-	175	256	-	-	-	-	-	-	-
Stage 1	766	673	-	547	474	-	-	-	-	-	-	-
Stage 2	484	454	-	578	657	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	20.2	17.9	1.1	0
HCM LOS	C	C		

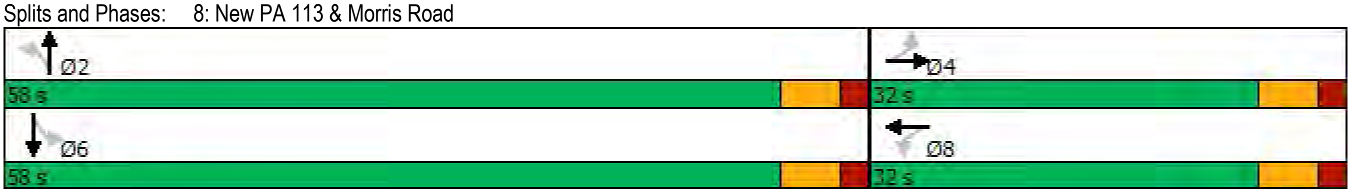
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	906	-	-	454	301	590	-	-
HCM Lane V/C Ratio	0.066	-	-	0.486	0.071	-	-	-
HCM Control Delay (s)	9.3	-	-	20.2	17.9	0	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	2.6	0.2	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	57	126	0	15	5	56	414	23	0	213	75
Future Volume (vph)	22	57	126	0	15	5	56	414	23	0	213	75
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Grade (%)		0%			-1%			0%			0%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.917			0.968			0.992			0.961	
Flt Protected		0.995					0.950					
Satd. Flow (prot)	0	1581	0	0	1675	0	1583	1608	0	900	1606	0
Flt Permitted		0.961					0.572					
Satd. Flow (perm)	0	1527	0	0	1675	0	953	1608	0	900	1606	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		89			5			5			34	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1156			811			1291			2237	
Travel Time (s)		22.5			15.8			25.1			43.6	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	6%	5%	3%	0%	6%	0%	8%	11%	12%	100%	8%	7%
Adj. Flow (vph)	24	61	135	0	16	5	60	445	25	0	229	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	220	0	0	21	0	60	470	0	0	310	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	35		20	35		35	256		35	256	
Trailing Detector (ft)	0	-5		0	-5		-5	-5		-5	-5	
Detector 1 Position(ft)	0	-5		0	-5		-5	-5		-5	-5	
Detector 1 Size(ft)	20	40		20	40		40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		15.0	15.0		15.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.0	9.0		9.0	9.0		21.0	21.0		21.0	21.0	
Total Split (s)	32.0	32.0		32.0	32.0		58.0	58.0		58.0	58.0	
Total Split (%)	35.6%	35.6%		35.6%	35.6%		64.4%	64.4%		64.4%	64.4%	
Maximum Green (s)	26.0	26.0		26.0	26.0		52.0	52.0		52.0	52.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 44.8	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 8: New PA 113 & Morris Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	57	126	0	15	5	56	414	23	0	213	75
Future Volume (veh/h)	22	57	126	0	15	5	56	414	23	0	213	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1716	1730	1758	1837	1752	1837	1688	1646	1632	396	1688	1702
Adj Flow Rate, veh/h	24	61	135	0	16	5	60	445	25	0	229	81
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	5	3	0	6	0	8	11	12	100	8	7
Cap, veh/h	124	94	179	0	243	76	568	758	43	191	585	207
Arrive On Green	0.19	0.19	0.19	0.00	0.19	0.19	0.49	0.49	0.49	0.00	0.49	0.49
Sat Flow, veh/h	96	496	941	0	1280	400	1019	1543	87	206	1191	421
Grp Volume(v), veh/h	220	0	0	0	0	21	60	0	470	0	0	310
Grp Sat Flow(s),veh/h/ln	1534	0	0	0	0	1680	1019	0	1630	206	0	1612
Q Serve(g_s), s	2.1	0.0	0.0	0.0	0.0	0.4	1.5	0.0	7.8	0.0	0.0	4.6
Cycle Q Clear(g_c), s	5.1	0.0	0.0	0.0	0.0	0.4	6.0	0.0	7.8	0.0	0.0	4.6
Prop In Lane	0.11		0.61	0.00		0.24	1.00		0.05	1.00		0.26
Lane Grp Cap(c), veh/h	398	0	0	0	0	319	568	0	801	191	0	792
V/C Ratio(X)	0.55	0.00	0.00	0.00	0.00	0.07	0.11	0.00	0.59	0.00	0.00	0.39
Avail Cap(c_a), veh/h	1157	0	0	0	0	1160	1474	0	2251	375	0	2226
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	14.4	0.0	0.0	0.0	0.0	12.5	7.9	0.0	6.8	0.0	0.0	6.0
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.7	0.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.7	0.0	0.0	0.0	0.0	0.2	0.4	0.0	2.9	0.0	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.6	0.0	0.0	0.0	0.0	12.6	8.0	0.0	7.5	0.0	0.0	6.4
LnGrp LOS	B	A	A	A	A	B	A	A	A	A	A	A
Approach Vol, veh/h		220			21			530			310	
Approach Delay, s/veh		15.6			12.6			7.6			6.4	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.5		13.2		24.5		13.2				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		52.0		26.0		52.0		26.0				
Max Q Clear Time (g_c+I1), s		9.8		7.1		6.6		2.4				
Green Ext Time (p_c), s		8.7		0.7		5.2		0.0				

Intersection Summary			
HCM 6th Ctrl Delay			9.0
HCM 6th LOS			A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	2	8	7	2	428	11	0	286	139
Future Volume (vph)	0	0	0	2	8	7	2	428	11	0	286	139
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.943			0.996			0.951	
Flt Protected					0.995		0.950					
Satd. Flow (prot)	0	0	0	0	1589	0	1710	1630	0	1800	1556	0
Flt Permitted					0.995		0.950					
Satd. Flow (perm)	0	0	0	0	1589	0	1710	1630	0	1800	1556	0
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		424			345			2237			693	
Travel Time (s)		8.3			6.7			43.6			13.5	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	9%	0%	0%	0%	0%	15%	0%	9%	50%	0%	10%	10%
Adj. Flow (vph)	0	0	0	2	9	8	2	481	12	0	321	156
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	19	0	2	493	0	0	477	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	2	8	7	2	428	11	0	286	139
Future Vol, veh/h	0	0	0	2	8	7	2	428	11	0	286	139
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	9	0	0	0	0	15	0	9	50	0	10	10
Mvmt Flow	0	0	0	2	9	8	2	481	12	0	321	156

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	890	968	487	477	0	0	493	0	0
Stage 1	491	491	-	-	-	-	-	-	-
Stage 2	399	477	-	-	-	-	-	-	-
Critical Hdwy	6.4	6.5	6.35	-	-	-	4.3	-	-
Critical Hdwy Stg 1	5.4	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.4	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3	4	3.1	-	-	-	3	-	-
Pot Cap-1 Maneuver	349	256	602	-	-	-	812	-	-
Stage 1	700	552	-	-	-	-	-	-	-
Stage 2	775	559	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	349	0	602	-	-	-	812	-	-
Mov Cap-2 Maneuver	349	0	-	-	-	-	-	-	-
Stage 1	700	0	-	-	-	-	-	-	-
Stage 2	775	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.2		0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	-	-	-	518	812	-	-
HCM Lane V/C Ratio	-	-	-	0.037	-	-	-
HCM Control Delay (s)	-	-	-	12.2	0	-	-
HCM Lane LOS	-	-	-	B	A	-	-
HCM 95th %tile Q(veh)	-	-	-	0.1	0	-	-

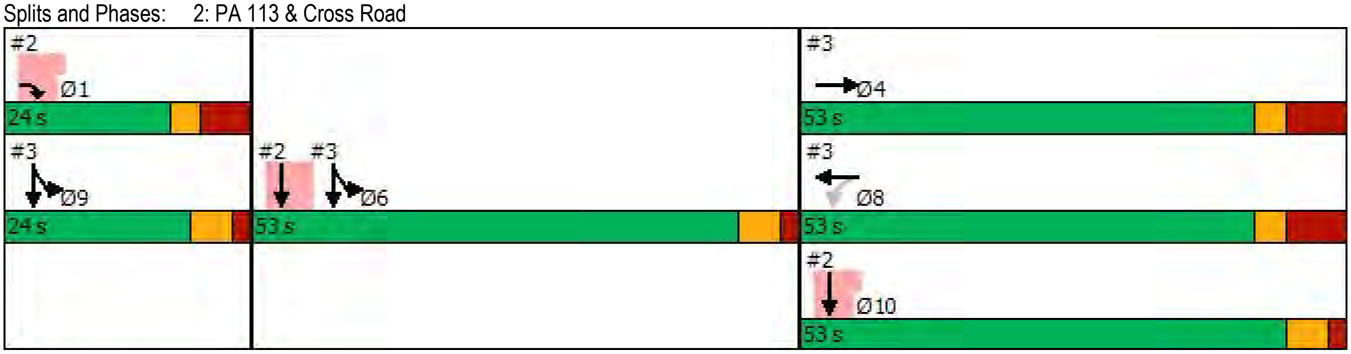
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø4	Ø6	Ø8	Ø9	Ø10
Lane Configurations											
Traffic Volume (vph)	0	162	0	0	86	230					
Future Volume (vph)	0	162	0	0	86	230					
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800					
Lane Width (ft)	12	12	12	12	11	11					
Grade (%)	-1%			1%	-2%						
Lane Util. Factor	1.00	1.00	*1.00	*1.00	1.00	1.00					
Frt		0.865			0.902						
Flt Protected											
Satd. Flow (prot)	0	1565	0	0	1561	0					
Flt Permitted											
Satd. Flow (perm)	0	1565	0	0	1561	0					
Right Turn on Red		No				No					
Satd. Flow (RTOR)											
Link Speed (mph)	40			35	35						
Link Distance (ft)	553			2066	100						
Travel Time (s)	9.4			40.2	1.9						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96					
Heavy Vehicles (%)	6%	0%	0%	2%	3%	1%					
Adj. Flow (vph)	0	169	0	0	90	240					
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	169	0	0	330	0					
Enter Blocked Intersection	No	No	No	No	No	No					
Lane Alignment	Left	Right	Left	Left	Left	Right					
Median Width(ft)	0			0	0						
Link Offset(ft)	0			0	0						
Crosswalk Width(ft)	16			16	16						
Two way Left Turn Lane											
Headway Factor	1.07	1.07	1.08	1.08	1.11	1.11					
Turning Speed (mph)	15	9	15			9					
Number of Detectors		1			0						
Detector Template		Right									
Leading Detector (ft)		20			0						
Trailing Detector (ft)		0			0						
Detector 1 Position(ft)		0			0						
Detector 1 Size(ft)		20			6						
Detector 1 Type		Cl+Ex			Cl+Ex						
Detector 1 Channel											
Detector 1 Extend (s)		0.0			0.0						
Detector 1 Queue (s)		0.0			0.0						
Detector 1 Delay (s)		0.0			0.0						
Turn Type		Prot			NA						
Protected Phases		1			6 10		4	6	8	9	10
Permitted Phases		1									
Detector Phase		1			6						
Switch Phase											
Minimum Initial (s)		5.0					5.0	5.0	5.0	5.0	8.0
Minimum Split (s)		13.0					14.0	13.0	14.0	13.0	18.0
Total Split (s)		24.0					53.0	53.0	53.0	24.0	53.0
Total Split (%)		18.5%					41%	41%	41%	18%	41%
Maximum Green (s)		16.0					44.0	47.0	44.0	18.0	47.0
Yellow Time (s)		3.0					3.0	4.0	3.0	4.0	4.0
All-Red Time (s)		5.0					6.0	2.0	6.0	2.0	2.0
Lost Time Adjust (s)		0.0									

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø4	Ø6	Ø8	Ø9	Ø10
Total Lost Time (s)		8.0									
Lead/Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)		3.0					3.0	3.0	3.0	3.0	3.0
Recall Mode		None					None	Min	None	None	None
Act Effct Green (s)		15.1			67.8						
Actuated g/C Ratio		0.16			0.70						
v/c Ratio		0.69			0.30						
Control Delay		55.6			0.7						
Queue Delay		0.0			0.0						
Total Delay		55.6			0.7						
LOS		E			A						
Approach Delay	55.6				0.7						
Approach LOS	E				A						
Queue Length 50th (ft)		99			0						
Queue Length 95th (ft)		#202			m0						
Internal Link Dist (ft)	473			1986	20						
Turn Bay Length (ft)											
Base Capacity (vph)		259			1091						
Starvation Cap Reductn		0			0						
Spillback Cap Reductn		0			0						
Storage Cap Reductn		0			0						
Reduced v/c Ratio		0.65			0.30						

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 96.9
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 19.3 Intersection LOS: B
Intersection Capacity Utilization 42.0% ICU Level of Service A
Analysis Period (min) 15
* User Entered Value
# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: PA 113 & Cross Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	87	50	143	324	0	0	0	0	3	123	17
Future Volume (vph)	0	87	50	143	324	0	0	0	0	3	123	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	12	12	12	12	12	12	11	11	11
Grade (%)		1%			-1%			1%			-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.951									0.984	
Flt Protected					0.985						0.999	
Satd. Flow (prot)	0	1590	0	0	1752	0	0	0	0	0	1698	0
Flt Permitted					0.840						0.999	
Satd. Flow (perm)	0	1590	0	0	1494	0	0	0	0	0	1698	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			35			35			35	
Link Distance (ft)		93			1156			100			2015	
Travel Time (s)		1.6			22.5			1.9			39.3	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	1%	2%	0%	2%	5%	6%	0%	2%	0%
Adj. Flow (vph)	0	98	56	161	364	0	0	0	0	3	138	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	154	0	0	525	0	0	0	0	0	160	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.18	1.18	1.18	1.07	1.07	1.07	1.08	1.08	1.08	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1		1	1					1	1	
Detector Template		Thru		Left	Thru							
Leading Detector (ft)		35		20	35					35	35	
Trailing Detector (ft)		-5		0	-5					-5	-5	
Detector 1 Position(ft)		-5		0	-5					-5	-5	
Detector 1 Size(ft)		40		20	40					40	40	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0					0.0	0.0	
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		4			8					6 9	6 9	
Permitted Phases				8								
Detector Phase		4		8	8					6	6	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0							
Minimum Split (s)		14.0		14.0	14.0							
Total Split (s)		53.0		53.0	53.0							
Total Split (%)		40.8%		40.8%	40.8%							
Maximum Green (s)		44.0		44.0	44.0							
Yellow Time (s)		3.0		3.0	3.0							
All-Red Time (s)		6.0		6.0	6.0							
Lost Time Adjust (s)		0.0			0.0							

Lane Group	Ø1	Ø6	Ø9	Ø10
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (ft)				
Grade (%)				
Lane Util. Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Number of Detectors				
Detector Template				
Leading Detector (ft)				
Trailing Detector (ft)				
Detector 1 Position(ft)				
Detector 1 Size(ft)				
Detector 1 Type				
Detector 1 Channel				
Detector 1 Extend (s)				
Detector 1 Queue (s)				
Detector 1 Delay (s)				
Turn Type				
Protected Phases	1	6	9	10
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	8.0
Minimum Split (s)	13.0	13.0	13.0	18.0
Total Split (s)	24.0	53.0	24.0	53.0
Total Split (%)	18%	41%	18%	41%
Maximum Green (s)	16.0	47.0	18.0	47.0
Yellow Time (s)	3.0	4.0	4.0	4.0
All-Red Time (s)	5.0	2.0	2.0	2.0
Lost Time Adjust (s)				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Lost Time (s)		9.0			9.0							
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0		3.0	3.0							
Recall Mode		None		None	None							
Act Effct Green (s)		44.1			44.1						14.6	
Actuated g/C Ratio		0.46			0.46						0.15	
v/c Ratio		0.21			0.77						0.62	
Control Delay		18.1			32.8						49.8	
Queue Delay		0.0			0.0						0.0	
Total Delay		18.1			32.8						49.8	
LOS		B			C						D	
Approach Delay		18.1			32.8						49.8	
Approach LOS		B			C						D	
Queue Length 50th (ft)		56			267						95	
Queue Length 95th (ft)		108			#485						158	
Internal Link Dist (ft)		13			1076			20			1935	
Turn Bay Length (ft)												
Base Capacity (vph)		723			680						825	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.21			0.77						0.19	

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 96.9

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.77

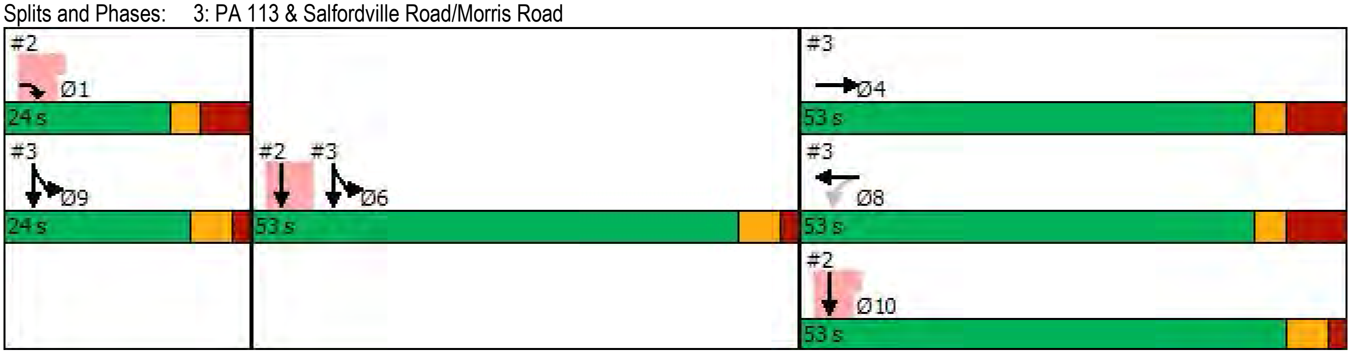
Intersection Signal Delay: 33.3 Intersection LOS: C

Intersection Capacity Utilization 62.5% ICU Level of Service B

Analysis Period (min) 15

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: PA 113 & Salfordville Road/Morris Road



Lane Group	Ø1	Ø6	Ø9	Ø10
Total Lost Time (s)				
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	None	Min	None	None
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				
Queue Length 50th (ft)				
Queue Length 95th (ft)				
Internal Link Dist (ft)				
Turn Bay Length (ft)				
Base Capacity (vph)				
Starvation Cap Reductn				
Spillback Cap Reductn				
Storage Cap Reductn				
Reduced v/c Ratio				

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	137	310	31	0	0
Future Volume (vph)	1	137	310	31	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	11	11	14	14
Grade (%)		1%	-1%		-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.988			
Flt Protected						
Satd. Flow (prot)	0	1672	1653	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1672	1653	0	0	0
Link Speed (mph)		40	40		35	
Link Distance (ft)		802	93		617	
Travel Time (s)		13.7	1.6		12.0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%
Adj. Flow (vph)	1	154	348	35	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	155	383	0	0	0
Enter Blocked Intersection	Yes	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.18	1.18	1.11	1.11	0.98	0.98
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	148	6	0	0	0	6
Future Volume (vph)	148	6	0	0	0	6
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	-2%		1%			0%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.994					
Flt Protected	0.954					
Satd. Flow (prot)	1660	0	0	0	0	1800
Flt Permitted	0.954					
Satd. Flow (perm)	1660	0	0	0	0	1800
Link Speed (mph)	35		35			30
Link Distance (ft)	424		2015			295
Travel Time (s)	8.3		39.3			6.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	0%	0%	4%	0%	0%
Adj. Flow (vph)	164	7	0	0	0	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	171	0	0	0	0	7
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.08	1.08	1.07	1.07
Turning Speed (mph)	60	60		9	15	
Sign Control	Free		Free			Stop

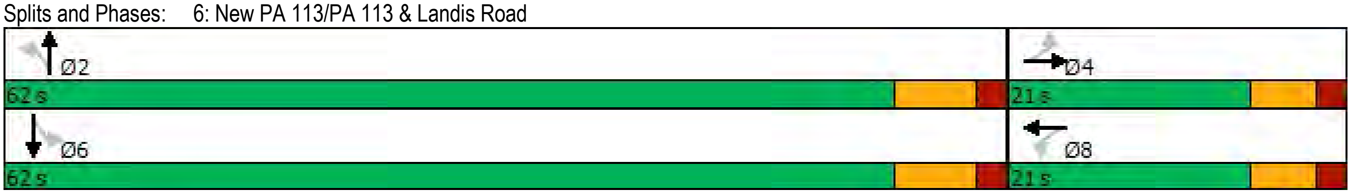
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	12	6	9	61	63	8	438	16	26	429	18
Future Volume (vph)	18	12	6	9	61	63	8	438	16	26	429	18
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	12	12	12	12	12	12	12	13	12	13
Grade (%)		-2%			-1%			0%			-4%	
Storage Length (ft)	0		0	0		0	225		0	225		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.976			0.936			0.995			0.994	
Flt Protected		0.976			0.997		0.950			0.950		
Satd. Flow (prot)	0	1737	0	0	1627	0	1710	1709	0	1609	1786	0
Flt Permitted		0.836			0.973		0.478			0.472		
Satd. Flow (perm)	0	1488	0	0	1588	0	860	1709	0	800	1786	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		7			48			5				
Link Speed (mph)		35			35			30			45	
Link Distance (ft)		472			496			693			1186	
Travel Time (s)		9.2			9.7			15.8			18.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	0%	0%	0%	2%	6%	0%	5%	0%	12%	2%	6%
Adj. Flow (vph)	20	13	7	10	66	68	9	476	17	28	466	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	0	0	144	0	9	493	0	28	486	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			13			13	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.06	1.07	1.07	1.07	1.07	1.07	1.07	1.00	1.05	1.00
Turning Speed (mph)	15		60	60		9	60		60	15		9
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left			Left	Thru		Left	Thru	
Leading Detector (ft)	20	35		20	35		20	100		20	100	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	3.0		3.0	3.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	9.0	9.0		9.0	9.0		22.0	22.0		22.0	22.0	
Total Split (s)	21.0	21.0		21.0	21.0		62.0	62.0		62.0	62.0	
Total Split (%)	25.3%	25.3%		25.3%	25.3%		74.7%	74.7%		74.7%	74.7%	
Maximum Green (s)	15.0	15.0		15.0	15.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0		7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	

Intersection Summary	
Area Type:	Other
Cycle Length: 83	
Actuated Cycle Length: 40.8	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 6: New PA 113/PA 113 & Landis Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	12	6	9	61	63	8	438	16	26	429	18
Future Volume (veh/h)	18	12	6	9	61	63	8	438	16	26	429	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1861	1950	1875	1837	1809	1752	1800	1730	1800	1850	1921	1938
Adj Flow Rate, veh/h	20	13	7	10	66	36	9	476	17	28	466	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	0	0	0	2	6	0	5	0	12	2	6
Cap, veh/h	279	88	41	142	133	71	515	802	29	491	883	38
Arrive On Green	0.10	0.13	0.10	0.10	0.13	0.10	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	805	676	314	123	1017	540	924	1660	59	944	1828	78
Grp Volume(v), veh/h	40	0	0	112	0	0	9	0	493	28	0	486
Grp Sat Flow(s),veh/h/ln	1795	0	0	1681	0	0	924	0	1719	944	0	1906
Q Serve(g_s), s	0.0	0.0	0.0	1.4	0.0	0.0	0.2	0.0	6.5	0.7	0.0	5.5
Cycle Q Clear(g_c), s	0.6	0.0	0.0	2.0	0.0	0.0	5.7	0.0	6.5	7.1	0.0	5.5
Prop In Lane	0.50		0.17	0.09		0.32	1.00		0.03	1.00		0.04
Lane Grp Cap(c), veh/h	351	0	0	292	0	0	515	0	830	491	0	921
V/C Ratio(X)	0.11	0.00	0.00	0.38	0.00	0.00	0.02	0.00	0.59	0.06	0.00	0.53
Avail Cap(c_a), veh/h	967	0	0	934	0	0	1705	0	3044	1707	0	3376
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.3	0.0	0.0	12.8	0.0	0.0	7.6	0.0	5.8	8.4	0.0	5.6
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	0.0	1.1	0.0	0.0	0.1	0.0	2.2	0.2	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.4	0.0	0.0	13.6	0.0	0.0	7.6	0.0	6.5	8.5	0.0	6.0
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		40			112			502			514	
Approach Delay, s/veh		12.4			13.6			6.5			6.2	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.0		9.1		22.0		9.1				
Change Period (Y+Rc), s		7.0		6.0		7.0		6.0				
Max Green Setting (Gmax), s		55.0		15.0		55.0		15.0				
Max Q Clear Time (g_c+I1), s		8.5		2.6		9.1		4.0				
Green Ext Time (p_c), s		3.7		0.1		3.2		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			7.3									
HCM 6th LOS			A									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	0	84	1	0	3	0	520	3	3	234	0
Future Volume (vph)	175	0	84	1	0	3	0	520	3	3	234	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0		100	0		0	100		0	100		0
Storage Lanes	1		1	0		0	0		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.899			0.999				
Flt Protected	0.950				0.988					0.950		
Satd. Flow (prot)	1710	1485	0	0	1599	0	0	1763	0	1710	1765	0
Flt Permitted	0.950				0.988					0.950		
Satd. Flow (perm)	1710	1485	0	0	1599	0	0	1763	0	1710	1765	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		181			519			457			1291	
Travel Time (s)		4.1			11.8			10.4			29.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	3%	0%	0%	0%	2%	2%	0%	0%	2%	0%
Adj. Flow (vph)	182	0	88	1	0	3	0	542	3	3	244	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	182	88	0	0	4	0	0	545	0	3	244	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection												
Int Delay, s/veh	5.5											
Movement	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Lane Configurations												
Traffic Vol, veh/h	175	0	84	1	0	3	0	520	3	3	234	0
Future Vol, veh/h	175	0	84	1	0	3	0	520	3	3	234	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	100	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	3	0	0	0	2	2	0	0	2	0
Mvmt Flow	182	0	88	1	0	3	0	542	3	3	244	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	795	795	244	838	794	544	-	0	0	545	0	0
Stage 1	250	250	-	544	544	-	-	-	-	-	-	-
Stage 2	545	545	-	294	250	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.23	7.1	6.5	6.2	-	-	-	4.3	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3	4	3.1	3	4	3.1	-	-	-	3	-	-
Pot Cap-1 Maneuver	342	323	844	319	323	570	0	-	-	779	-	0
Stage 1	870	704	-	594	522	-	0	-	-	-	-	0
Stage 2	593	522	-	822	704	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	339	322	844	285	322	570	-	-	-	779	-	-
Mov Cap-2 Maneuver	339	322	-	285	322	-	-	-	-	-	-	-
Stage 1	870	701	-	594	522	-	-	-	-	-	-	-
Stage 2	590	522	-	734	701	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.6	13	0	0.1
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	339	844	456	779	-
HCM Lane V/C Ratio	-	-	0.538	0.104	0.009	0.004	-
HCM Control Delay (s)	-	-	27.3	9.8	13	9.6	-
HCM Lane LOS	-	-	D	A	B	A	-
HCM 95th %tile Q(veh)	-	-	3	0.3	0	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	22	49	0	110	3	243	447	8	0	188	114
Future Volume (vph)	19	22	49	0	110	3	243	447	8	0	188	114
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Grade (%)		0%			-1%			0%			0%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.926			0.997			0.997			0.943	
Flt Protected		0.990					0.950					
Satd. Flow (prot)	0	1624	0	0	1736	0	1676	1743	0	1800	1670	0
Flt Permitted		0.990					0.950					
Satd. Flow (perm)	0	1624	0	0	1736	0	1676	1743	0	1800	1670	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1156			811			1291			2237	
Travel Time (s)		26.3			18.4			29.3			50.8	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	5%	0%	1%	5%	4%	0%	2%	3%	0%	0%	2%	1%
Adj. Flow (vph)	21	25	55	0	124	3	273	502	9	0	211	128
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	101	0	0	127	0	273	511	0	0	339	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	22

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	22	49	0	110	3	243	447	8	0	188	114
Future Vol, veh/h	19	22	49	0	110	3	243	447	8	0	188	114
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-1	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	5	0	1	5	4	0	2	3	0	0	2	1
Mvmt Flow	21	25	55	0	124	3	273	502	9	0	211	128

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1391	1332	275	1368	1392	507	339	0	0	511	0	0
Stage 1	275	275	-	1053	1053	-	-	-	-	-	-	-
Stage 2	1116	1057	-	315	339	-	-	-	-	-	-	-
Critical Hdwy	7.2	6.5	6.21	7.2	6.34	6.2	4.3	-	-	4.3	-	-
Critical Hdwy Stg 1	6.15	5.5	-	5.95	5.34	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.5	-	5.95	5.34	-	-	-	-	-	-	-
Follow-up Hdwy	3.1	4	3.1	3.1	4.036	3.1	3	-	-	3	-	-
Pot Cap-1 Maneuver	123	156	812	128	152	599	919	-	-	800	-	-
Stage 1	815	686	-	310	319	-	-	-	-	-	-	-
Stage 2	269	304	-	788	648	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	110	812	77	~ 107	599	919	-	-	800	-	-
Mov Cap-2 Maneuver	-	110	-	77	~ 107	-	-	-	-	-	-	-
Stage 1	573	686	-	218	224	-	-	-	-	-	-	-
Stage 2	84	214	-	708	648	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		211.8	3.7	0
HCM LOS	-	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	919	-	-	-	109	800	-	-
HCM Lane V/C Ratio	0.297	-	-	-	1.165	-	-	-
HCM Control Delay (s)	10.6	-	-	-	211.8	0	-	-
HCM Lane LOS	B	-	-	-	F	A	-	-
HCM 95th %tile Q(veh)	1.2	-	-	-	8.1	0	-	-

Notes

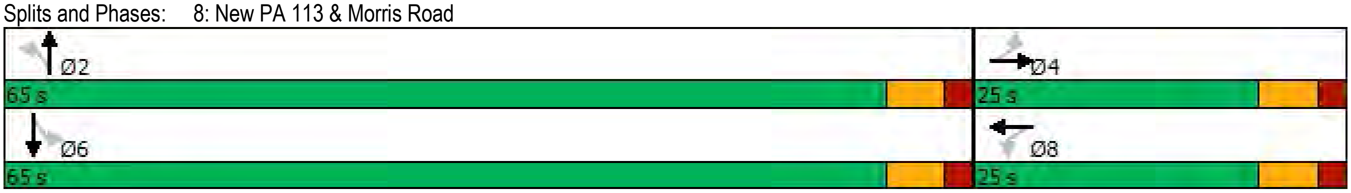
~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	22	49	0	110	3	243	447	8	0	188	114
Future Volume (vph)	19	22	49	0	110	3	243	447	8	0	188	114
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Grade (%)		0%			-1%			0%			0%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.926			0.997			0.997			0.943	
Flt Protected		0.990					0.950					
Satd. Flow (prot)	0	1624	0	0	1736	0	1676	1743	0	1800	1670	0
Flt Permitted		0.893					0.557					
Satd. Flow (perm)	0	1465	0	0	1736	0	983	1743	0	1800	1670	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		55			1			2			70	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1156			811			1291			2237	
Travel Time (s)		26.3			18.4			29.3			50.8	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	5%	0%	1%	5%	4%	0%	2%	3%	0%	0%	2%	1%
Adj. Flow (vph)	21	25	55	0	124	3	273	502	9	0	211	128
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	101	0	0	127	0	273	511	0	0	339	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	60		60	60		60	60		60	60		60
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	35		20	35		35	256		35	256	
Trailing Detector (ft)	0	-5		0	-5		-5	-5		-5	-5	
Detector 1 Position(ft)	0	-5		0	-5		-5	-5		-5	-5	
Detector 1 Size(ft)	20	40		20	40		40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								250			250	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		15.0	15.0		15.0	15.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.0	9.0		9.0	9.0		21.0	21.0		21.0	21.0	
Total Split (s)	25.0	25.0		25.0	25.0		65.0	65.0		65.0	65.0	
Total Split (%)	27.8%	27.8%		27.8%	27.8%		72.2%	72.2%		72.2%	72.2%	
Maximum Green (s)	19.0	19.0		19.0	19.0		59.0	59.0		59.0	59.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 51.2	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 8: New PA 113 & Morris Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	22	49	0	110	3	243	447	8	0	188	114
Future Volume (veh/h)	19	22	49	0	110	3	243	447	8	0	188	114
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1730	1800	1786	1766	1780	1837	1772	1758	1800	1800	1772	1786
Adj Flow Rate, veh/h	21	25	55	0	124	3	273	502	9	0	211	128
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	5	0	1	5	4	0	2	3	0	0	2	1
Cap, veh/h	118	54	88	0	220	5	681	1032	19	164	619	376
Arrive On Green	0.13	0.13	0.13	0.00	0.13	0.13	0.60	0.60	0.60	0.00	0.60	0.60
Sat Flow, veh/h	149	428	690	0	1731	42	1041	1721	31	903	1033	626
Grp Volume(v), veh/h	101	0	0	0	0	127	273	0	511	0	0	339
Grp Sat Flow(s),veh/h/ln	1267	0	0	0	0	1773	1041	0	1752	903	0	1659
Q Serve(g_s), s	0.8	0.0	0.0	0.0	0.0	3.0	7.9	0.0	7.2	0.0	0.0	4.5
Cycle Q Clear(g_c), s	3.7	0.0	0.0	0.0	0.0	3.0	12.4	0.0	7.2	0.0	0.0	4.5
Prop In Lane	0.21		0.54	0.00		0.02	1.00		0.02	1.00		0.38
Lane Grp Cap(c), veh/h	260	0	0	0	0	225	681	0	1051	164	0	995
V/C Ratio(X)	0.39	0.00	0.00	0.00	0.00	0.56	0.40	0.00	0.49	0.00	0.00	0.34
Avail Cap(c_a), veh/h	726	0	0	0	0	767	1457	0	2355	836	0	2230
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	18.1	0.0	0.0	0.0	0.0	18.0	7.5	0.0	5.0	0.0	0.0	4.4
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.0	0.0	2.2	0.4	0.0	0.4	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	0.0	0.0	0.0	0.0	2.2	2.3	0.0	2.8	0.0	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.0	0.0	0.0	0.0	0.0	20.2	7.9	0.0	5.3	0.0	0.0	4.6
LnGrp LOS	B	A	A	A	A	C	A	A	A	A	A	A
Approach Vol, veh/h		101			127			784			339	
Approach Delay, s/veh		19.0			20.2			6.2			4.6	
Approach LOS		B			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		32.3		11.6		32.3		11.6				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		59.0		19.0		59.0		19.0				
Max Q Clear Time (g_c+I1), s		14.4		5.7		6.5		5.0				
Green Ext Time (p_c), s		12.0		0.2		6.4		0.3				
Intersection Summary												
HCM 6th Ctrl Delay			8.1									
HCM 6th LOS			A									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	2	5	3	2	460	7	0	300	147
Future Volume (vph)	0	0	0	2	5	3	2	460	7	0	300	147
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.963			0.998			0.951	
Flt Protected					0.991		0.950					
Satd. Flow (prot)	0	0	0	0	1718	0	1710	1728	0	1800	1657	0
Flt Permitted					0.991		0.950					
Satd. Flow (perm)	0	0	0	0	1718	0	1710	1728	0	1800	1657	0
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		424			345			2237			693	
Travel Time (s)		8.3			6.7			43.6			13.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	0%	0%	0%	0%	0%	0%	4%	0%	0%	3%	4%
Adj. Flow (vph)	0	0	0	2	6	3	2	511	8	0	333	163
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	11	0	2	519	0	0	496	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	2	5	3	2	460	7	0	300	147
Future Vol, veh/h	0	0	0	2	5	3	2	460	7	0	300	147
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	4	0	0	0	0	0	0	4	0	0	3	4
Mvmt Flow	0	0	0	2	6	3	2	511	8	0	333	163

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	934	1015	515	496	0	0	519	0	0
Stage 1	519	519	-	-	-	-	-	-	-
Stage 2	415	496	-	-	-	-	-	-	-
Critical Hdwy	6.4	6.5	6.2	-	-	-	4.3	-	-
Critical Hdwy Stg 1	5.4	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.4	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3	4	3.1	-	-	-	3	-	-
Pot Cap-1 Maneuver	328	240	592	-	-	-	795	-	-
Stage 1	679	536	-	-	-	-	-	-	-
Stage 2	762	549	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	328	0	592	-	-	-	795	-	-
Mov Cap-2 Maneuver	328	0	-	-	-	-	-	-	-
Stage 1	679	0	-	-	-	-	-	-	-
Stage 2	762	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.2		0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	-	-	-	448	795	-	-
HCM Lane V/C Ratio	-	-	-	0.025	-	-	-
HCM Control Delay (s)	-	-	-	13.2	0	-	-
HCM Lane LOS	-	-	-	B	A	-	-
HCM 95th %tile Q(veh)	-	-	-	0.1	0	-	-

Attachment 14

2035 Future Alternative #4
Capacity/Level-of-Service
Analysis Worksheets

425 Commerce Drive, Suite 200, Fort Washington, PA 19034
P: 215.283.9444
mcmahonassociates.com | bowman.com

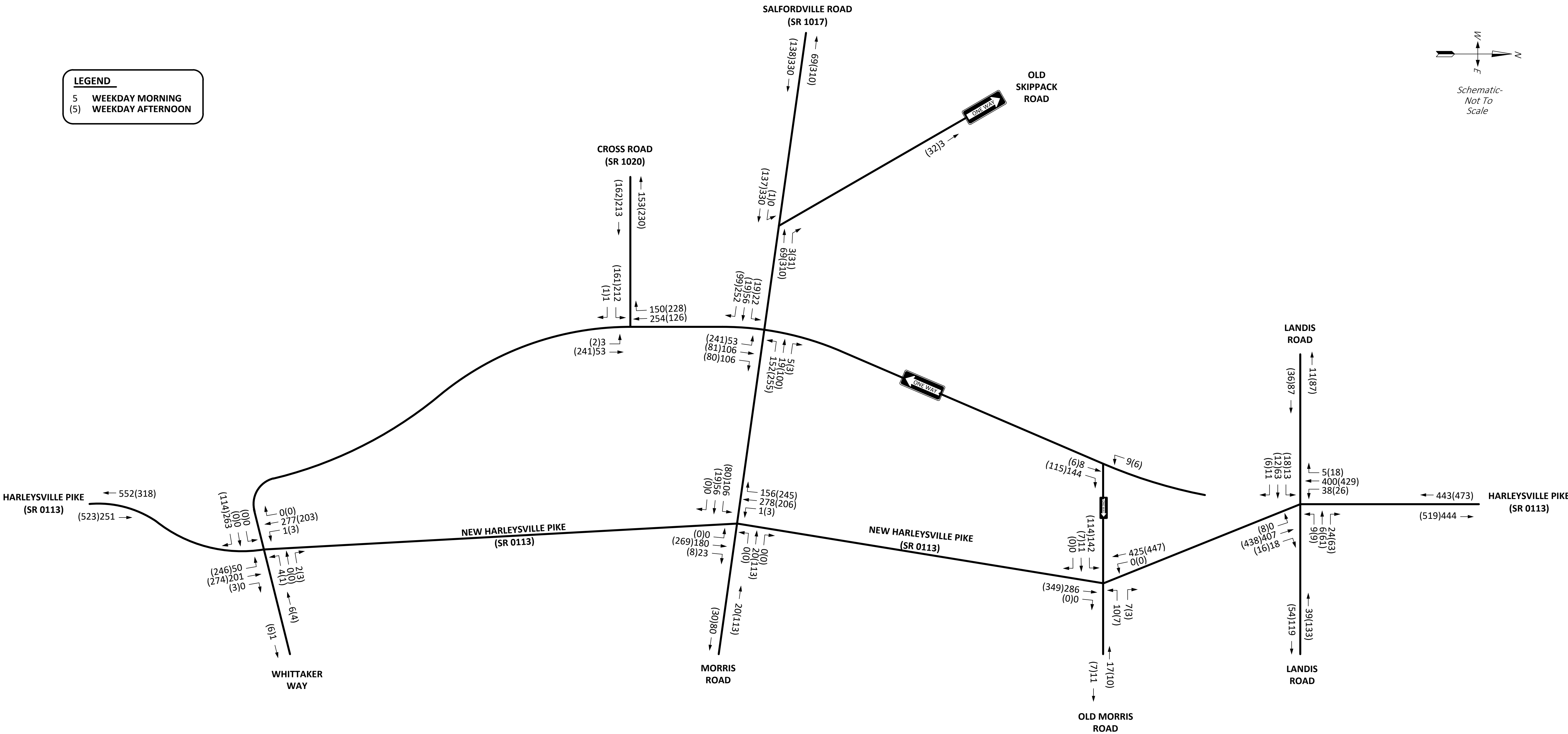


FIGURE M

2035 Future Peak Hour Traffic Volumes- Alternative #4

WALKABLE LEDERACH

LOWER SALFORD TOWNSHIP, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

Q:\PA-FTWA-MC\MCM\eng\LOWERSA1\822255_TCDI Walkable Lederach\Traffic\2-TrafficEval\7-Graphics\Figure 4ABCD.dwg

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4	Ø6	Ø8	Ø9	Ø10
Lane Configurations												
Traffic Volume (vph)	212	1	3	53	254	150						
Future Volume (vph)	212	1	3	53	254	150						
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800						
Lane Width (ft)	12	12	12	12	11	11						
Grade (%)	-1%			1%	-2%							
Lane Util. Factor	1.00	1.00	*1.00	*1.00	1.00	1.00						
Frt	0.999				0.950							
Flt Protected	0.953			0.997								
Satd. Flow (prot)	1656	0	0	1606	1590	0						
Flt Permitted	0.953			0.982								
Satd. Flow (perm)	1656	0	0	1582	1590	0						
Right Turn on Red		No				No						
Satd. Flow (RTOR)												
Link Speed (mph)	40			35	35							
Link Distance (ft)	553			2066	100							
Travel Time (s)	9.4			40.2	1.9							
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96						
Heavy Vehicles (%)	4%	0%	33%	10%	5%	5%						
Adj. Flow (vph)	221	1	3	55	265	156						
Shared Lane Traffic (%)												
Lane Group Flow (vph)	222	0	0	58	421	0						
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Right	Left	Left	Left	Right						
Median Width(ft)	12			0	0							
Link Offset(ft)	0			0	0							
Crosswalk Width(ft)	16			16	16							
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.08	1.08	1.11	1.11						
Turning Speed (mph)	15	9	15			9						
Number of Detectors	1		1	1	0							
Detector Template	Left		Left									
Leading Detector (ft)	35		20	35	0							
Trailing Detector (ft)	-5		0	-5	0							
Detector 1 Position(ft)	-5		0	-5	0							
Detector 1 Size(ft)	40		20	40	6							
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex							
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0							
Detector 1 Queue (s)	0.0		0.0	0.0	0.0							
Detector 1 Delay (s)	0.0		0.0	0.0	0.0							
Turn Type	Prot		custom	NA	NA							
Protected Phases	1		5	2 5	6 10		2	4	6	8	9	10
Permitted Phases			2									
Detector Phase	1		5	2 5	6 10							
Switch Phase												
Minimum Initial (s)	5.0		4.0				15.0	5.0	19.0	5.0	8.0	8.0
Minimum Split (s)	13.0		8.0				25.0	14.0	25.0	14.0	13.0	18.0
Total Split (s)	27.0		13.0				26.0	44.0	26.0	44.0	27.0	44.0
Total Split (%)	24.5%		11.8%				24%	40%	24%	40%	25%	40%
Maximum Green (s)	19.0		9.0				16.0	35.0	20.0	35.0	22.0	38.0
Yellow Time (s)	3.0		3.5				4.0	3.0	4.0	3.0	3.0	4.0
All-Red Time (s)	5.0		0.5				6.0	6.0	2.0	6.0	2.0	2.0
Lost Time Adjust (s)	0.0											

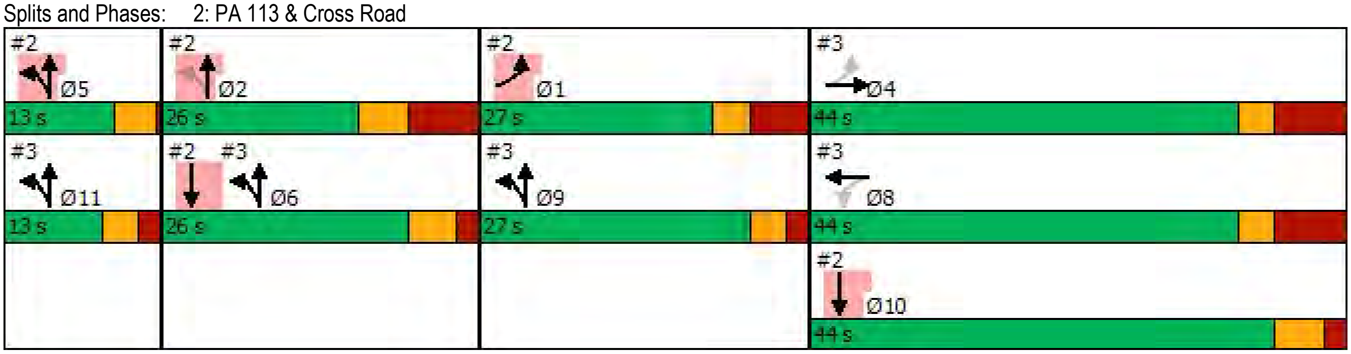
Lane Group	Ø11
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	11
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	8.0
Minimum Split (s)	13.0
Total Split (s)	13.0
Total Split (%)	12%
Maximum Green (s)	8.0
Yellow Time (s)	3.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4	Ø6	Ø8	Ø9	Ø10
Total Lost Time (s)	8.0											
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0		3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None		None				Min	None	Min	None	None	None
Act Effct Green (s)	17.0			17.5	51.9							
Actuated g/C Ratio	0.17			0.17	0.51							
v/c Ratio	0.81			0.21	0.52							
Control Delay	64.6			35.6	3.0							
Queue Delay	0.2			0.0	0.0							
Total Delay	64.8			35.6	3.0							
LOS	E			D	A							
Approach Delay	64.8			35.6	3.0							
Approach LOS	E			D	A							
Queue Length 50th (ft)	146			31	10							
Queue Length 95th (ft)	#267			66	31							
Internal Link Dist (ft)	473			1986	20							
Turn Bay Length (ft)												
Base Capacity (vph)	310			296	909							
Starvation Cap Reductn	0			0	0							
Spillback Cap Reductn	4			1	0							
Storage Cap Reductn	0			0	0							
Reduced v/c Ratio	0.73			0.20	0.46							

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 102.2
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 25.3 Intersection LOS: C
Intersection Capacity Utilization 47.9% ICU Level of Service A
Analysis Period (min) 15
* User Entered Value
# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: PA 113 & Cross Road



Lane Group	Ø11
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	56	252	152	19	5	53	106	106	0	0	0
Future Volume (vph)	22	56	252	152	19	5	53	106	106	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	12	12	12	12	12	12	11	11	11
Grade (%)		1%			-1%			1%			-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.897			0.996			0.946				
Flt Protected		0.997			0.958			0.990				
Satd. Flow (prot)	0	1433	0	0	1681	0	0	1571	0	0	0	0
Flt Permitted		0.965			0.428			0.990				
Satd. Flow (perm)	0	1387	0	0	751	0	0	1571	0	0	0	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			35			35			35	
Link Distance (ft)		93			1156			100			2015	
Travel Time (s)		1.6			22.5			1.9			39.3	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	20%	4%	3%	2%	9%	0%	8%	9%	4%	0%	9%	0%
Adj. Flow (vph)	24	60	271	163	20	5	57	114	114	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	355	0	0	188	0	0	285	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.18	1.18	1.18	1.07	1.07	1.07	1.08	1.08	1.08	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	0				
Detector Template	Left	Thru		Left	Thru							
Leading Detector (ft)	20	35		20	35		35	0				
Trailing Detector (ft)	0	-5		0	-5		-5	0				
Detector 1 Position(ft)	0	-5		0	-5		-5	0				
Detector 1 Size(ft)	20	40		20	40		40	6				
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Turn Type	Perm	NA		Perm	NA		custom	NA				
Protected Phases		4			8		6 9 11	6 9 11				
Permitted Phases	4			8			6					
Detector Phase	4	4		8	8		6 9 11	6 9 11				
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0							
Minimum Split (s)	14.0	14.0		14.0	14.0							
Total Split (s)	44.0	44.0		44.0	44.0							
Total Split (%)	40.0%	40.0%		40.0%	40.0%							
Maximum Green (s)	35.0	35.0		35.0	35.0							
Yellow Time (s)	3.0	3.0		3.0	3.0							
All-Red Time (s)	6.0	6.0		6.0	6.0							
Lost Time Adjust (s)		0.0			0.0							

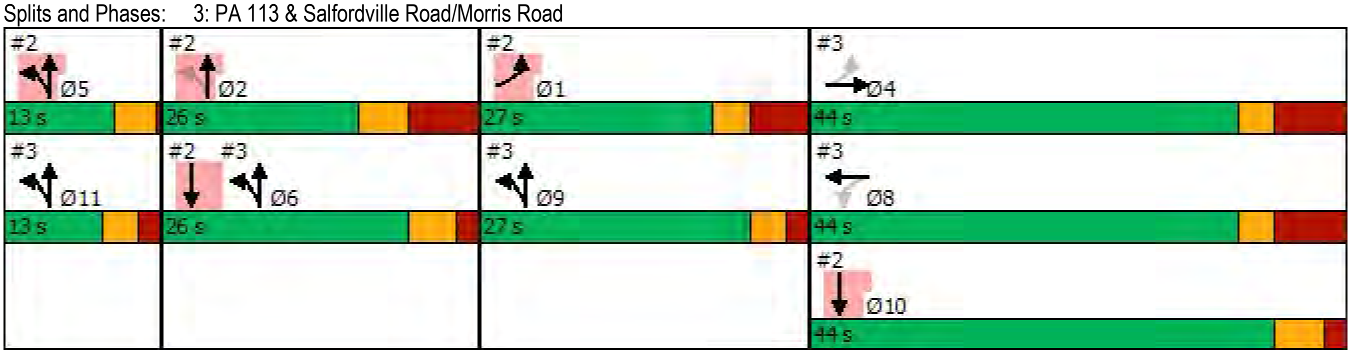
Lane Group	Ø1	Ø2	Ø5	Ø6	Ø9	Ø10	Ø11
Lane Configurations							
Traffic Volume (vph)							
Future Volume (vph)							
Ideal Flow (vphpl)							
Lane Width (ft)							
Grade (%)							
Lane Util. Factor							
Frt							
Flt Protected							
Satd. Flow (prot)							
Flt Permitted							
Satd. Flow (perm)							
Right Turn on Red							
Satd. Flow (RTOR)							
Link Speed (mph)							
Link Distance (ft)							
Travel Time (s)							
Peak Hour Factor							
Heavy Vehicles (%)							
Adj. Flow (vph)							
Shared Lane Traffic (%)							
Lane Group Flow (vph)							
Enter Blocked Intersection							
Lane Alignment							
Median Width(ft)							
Link Offset(ft)							
Crosswalk Width(ft)							
Two way Left Turn Lane							
Headway Factor							
Turning Speed (mph)							
Number of Detectors							
Detector Template							
Leading Detector (ft)							
Trailing Detector (ft)							
Detector 1 Position(ft)							
Detector 1 Size(ft)							
Detector 1 Type							
Detector 1 Channel							
Detector 1 Extend (s)							
Detector 1 Queue (s)							
Detector 1 Delay (s)							
Turn Type							
Protected Phases	1	2	5	6	9	10	11
Permitted Phases							
Detector Phase							
Switch Phase							
Minimum Initial (s)	5.0	15.0	4.0	19.0	8.0	8.0	8.0
Minimum Split (s)	13.0	25.0	8.0	25.0	13.0	18.0	13.0
Total Split (s)	27.0	26.0	13.0	26.0	27.0	44.0	13.0
Total Split (%)	25%	24%	12%	24%	25%	40%	12%
Maximum Green (s)	19.0	16.0	9.0	20.0	22.0	38.0	8.0
Yellow Time (s)	3.0	4.0	3.5	4.0	3.0	4.0	3.0
All-Red Time (s)	5.0	6.0	0.5	2.0	2.0	2.0	2.0
Lost Time Adjust (s)							

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Lost Time (s)		9.0			9.0							
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0							
Recall Mode	None	None		None	None							
Act Effct Green (s)		29.7			29.7			57.4				
Actuated g/C Ratio		0.29			0.29			0.56				
v/c Ratio		0.88			0.86			0.32				
Control Delay		58.5			69.4			3.5				
Queue Delay		0.2			0.4			0.0				
Total Delay		58.7			69.8			3.5				
LOS		E			E			A				
Approach Delay		58.7			69.8			3.5				
Approach LOS		E			E			A				
Queue Length 50th (ft)		225			119			5				
Queue Length 95th (ft)		#377			#242			m28				
Internal Link Dist (ft)		13			1076			20			1935	
Turn Bay Length (ft)												
Base Capacity (vph)		478			259			836				
Starvation Cap Reductn		0			0			0				
Spillback Cap Reductn		7			4			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.75			0.74			0.34				

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 102.2
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 42.2 Intersection LOS: D
Intersection Capacity Utilization 66.9% ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: PA 113 & Salfordville Road/Morris Road



Lane Group	Ø1	Ø2	Ø5	Ø6	Ø9	Ø10	Ø11
Total Lost Time (s)							
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Min	None	Min	None	None	None
Act Effct Green (s)							
Actuated g/C Ratio							
v/c Ratio							
Control Delay							
Queue Delay							
Total Delay							
LOS							
Approach Delay							
Approach LOS							
Queue Length 50th (ft)							
Queue Length 95th (ft)							
Internal Link Dist (ft)							
Turn Bay Length (ft)							
Base Capacity (vph)							
Starvation Cap Reductn							
Spillback Cap Reductn							
Storage Cap Reductn							
Reduced v/c Ratio							

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	330	69	3	0	0
Future Volume (vph)	0	330	69	3	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	11	11	14	14
Grade (%)		1%	-1%		-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.995			
Flt Protected						
Satd. Flow (prot)	0	1592	1630	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1592	1630	0	0	0
Link Speed (mph)		40	40		35	
Link Distance (ft)		802	93		617	
Travel Time (s)		13.7	1.6		12.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	5%	7%	0%	0%	0%
Adj. Flow (vph)	0	355	74	3	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	355	77	0	0	0
Enter Blocked Intersection	Yes	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.18	1.18	1.11	1.11	0.98	0.98
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	8	144	9	0
Future Volume (vph)	0	0	8	144	9	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	-2%		1%			0%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.872			
Flt Protected					0.950	
Satd. Flow (prot)	0	0	1439	0	1710	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	1439	0	1710	0
Link Speed (mph)	35		35			30
Link Distance (ft)	424		2015			295
Travel Time (s)	8.3		39.3			6.7
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	10%	0%	0%	9%	0%	0%
Adj. Flow (vph)	0	0	9	162	10	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	171	0	10	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.08	1.08	1.07	1.07
Turning Speed (mph)	15	9		9	15	
Sign Control	Free		Free			Stop

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection						
Int Delay, s/veh	0.5					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	8	144	9	0
Future Vol, veh/h	0	0	8	144	9	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	-2	-	1	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	10	0	0	9	0	0
Mvmt Flow	0	0	9	162	10	0

Major/Minor		Major1		Minor2	
Conflicting Flow All		0	0	90	-
Stage 1		-	-	0	-
Stage 2		-	-	90	-
Critical Hdwy		-	-	6.4	-
Critical Hdwy Stg 1		-	-	-	-
Critical Hdwy Stg 2		-	-	5.4	-
Follow-up Hdwy		-	-	3.5	-
Pot Cap-1 Maneuver		-	-	915	0
Stage 1		-	-	-	0
Stage 2		-	-	939	0
Platoon blocked, %		-	-		
Mov Cap-1 Maneuver		-	-	915	0
Mov Cap-2 Maneuver		-	-	915	0
Stage 1		-	-	-	0
Stage 2		-	-	939	0

Approach	NB	SB
HCM Control Delay, s	0	9
HCM LOS		A

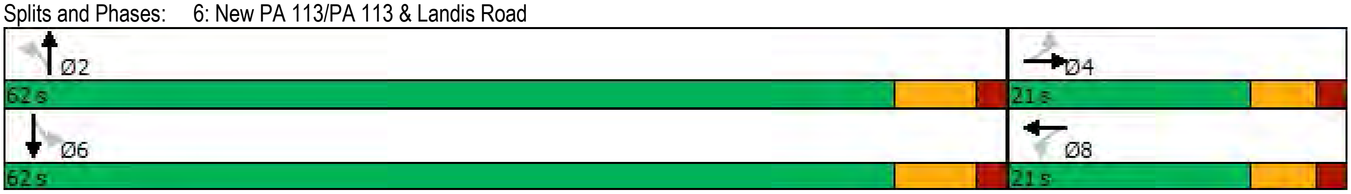
Minor Lane/Major Mvmt	NBT	NBR	SBLn1
Capacity (veh/h)	-	-	915
HCM Lane V/C Ratio	-	-	0.011
HCM Control Delay (s)	-	-	9
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	63	11	9	6	24	0	407	18	38	400	5
Future Volume (vph)	13	63	11	9	6	24	0	407	18	38	400	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	12	12	12	12	12	12	12	13	12	13
Grade (%)		-2%			-1%			0%			-4%	
Storage Length (ft)	0		0	0		0	225		0	225		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.983			0.918			0.994			0.998	
Flt Protected		0.993			0.988					0.950		
Satd. Flow (prot)	0	1787	0	0	1524	0	1800	1648	0	1669	1635	0
Flt Permitted		0.939			0.887					0.480		
Satd. Flow (perm)	0	1690	0	0	1368	0	1800	1648	0	843	1635	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		8			28			6				
Link Speed (mph)		35			35			30			45	
Link Distance (ft)		472			496			693			1186	
Travel Time (s)		9.2			9.7			15.8			18.0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	8%	2%	0%	11%	17%	4%	0%	8%	22%	8%	12%	20%
Adj. Flow (vph)	15	74	13	11	7	28	0	479	21	45	471	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	102	0	0	46	0	0	500	0	45	477	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			13			13	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.06	1.07	1.07	1.07	1.07	1.07	1.07	1.00	1.05	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left			Left	Thru		Left	Thru	
Leading Detector (ft)	20	35		20	35		20	100		20	100	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	3.0		3.0	3.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	9.0	9.0		9.0	9.0		22.0	22.0		22.0	22.0	
Total Split (s)	21.0	21.0		21.0	21.0		62.0	62.0		62.0	62.0	
Total Split (%)	25.3%	25.3%		25.3%	25.3%		74.7%	74.7%		74.7%	74.7%	
Maximum Green (s)	15.0	15.0		15.0	15.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0		7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	

Intersection Summary	
Area Type:	Other
Cycle Length: 83	
Actuated Cycle Length: 40.7	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 6: New PA 113/PA 113 & Landis Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	63	11	9	6	24	0	407	18	38	400	5
Future Volume (veh/h)	13	63	11	9	6	24	0	407	18	38	400	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1831	1920	1875	1681	1596	1780	1800	1688	1491	1909	1778	1731
Adj Flow Rate, veh/h	15	74	13	11	7	21	0	479	21	45	471	6
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	8	2	0	11	17	4	0	8	22	8	12	20
Cap, veh/h	166	160	28	197	35	94	235	785	34	498	857	11
Arrive On Green	0.09	0.12	0.09	0.09	0.12	0.09	0.00	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	259	1338	233	386	293	792	932	1605	70	967	1752	22
Grp Volume(v), veh/h	102	0	0	39	0	0	0	0	500	45	0	477
Grp Sat Flow(s),veh/h/ln	1830	0	0	1471	0	0	932	0	1675	967	0	1774
Q Serve(g_s), s	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	1.1	0.0	5.8
Cycle Q Clear(g_c), s	1.6	0.0	0.0	0.7	0.0	0.0	0.0	0.0	6.7	7.8	0.0	5.8
Prop In Lane	0.15		0.13	0.28		0.54	1.00		0.04	1.00		0.01
Lane Grp Cap(c), veh/h	293	0	0	278	0	0	235	0	820	498	0	868
V/C Ratio(X)	0.35	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.61	0.09	0.00	0.55
Avail Cap(c_a), veh/h	1020	0	0	815	0	0	1451	0	3005	1760	0	3183
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.7	0.0	0.0	12.6	0.0	0.0	0.0	0.0	5.7	8.5	0.0	5.5
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.7	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	2.2	0.2	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	0.0	0.0	12.8	0.0	0.0	0.0	0.0	6.4	8.6	0.0	6.0
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		102			39			500			522	
Approach Delay, s/veh		13.4			12.8			6.4			6.2	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.0		8.7		22.0		8.7				
Change Period (Y+Rc), s		7.0		6.0		7.0		6.0				
Max Green Setting (Gmax), s		55.0		15.0		55.0		15.0				
Max Q Clear Time (g_c+I1), s		8.7		3.6		9.8		2.7				
Green Ext Time (p_c), s		3.7		0.2		3.3		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			7.2									
HCM 6th LOS			A									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	263	4	0	2	50	201	0	1	277	0
Future Volume (vph)	0	0	263	4	0	2	50	201	0	1	277	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865			0.955							
Flt Protected					0.968		0.950			0.950		
Satd. Flow (prot)	0	1469	0	0	1664	0	1541	1607	0	1710	1698	0
Flt Permitted					0.968		0.950			0.950		
Satd. Flow (perm)	0	1469	0	0	1664	0	1541	1607	0	1710	1698	0
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		181			519			457			1291	
Travel Time (s)		3.5			14.2			8.9			25.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	6%	0%	0%	0%	11%	12%	0%	0%	6%	0%
Adj. Flow (vph)	0	0	289	4	0	2	55	221	0	1	304	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	289	0	0	6	0	55	221	0	1	304	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	263	4	0	2	50	201	0	1	277	0
Future Vol, veh/h	0	0	263	4	0	2	50	201	0	1	277	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	6	0	0	0	11	12	0	0	6	0
Mvmt Flow	0	0	289	4	0	2	55	221	0	1	304	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	638	637	304	782	637	221	304	0	0	221	0	0
Stage 1	306	306	-	331	331	-	-	-	-	-	-	-
Stage 2	332	331	-	451	306	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.26	7.1	6.5	6.2	4.4	-	-	4.3	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3	4	3.2	3	4	3.1	3.1	-	-	3	-	-
Pot Cap-1 Maneuver	440	398	757	349	398	872	910	-	-	1009	-	-
Stage 1	809	665	-	784	649	-	-	-	-	-	-	-
Stage 2	783	649	-	670	665	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	418	374	757	206	374	872	910	-	-	1009	-	-
Mov Cap-2 Maneuver	418	374	-	206	374	-	-	-	-	-	-	-
Stage 1	760	664	-	737	610	-	-	-	-	-	-	-
Stage 2	734	610	-	414	664	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.7	18.4	1.8	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	910	-	-	757	276	1009	-	-
HCM Lane V/C Ratio	0.06	-	-	0.382	0.024	0.001	-	-
HCM Control Delay (s)	9.2	-	-	12.7	18.4	8.6	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.8	0.1	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	56	0	0	20	0	0	180	23	1	278	156
Future Volume (vph)	106	56	0	0	20	0	0	180	23	1	278	156
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Grade (%)		0%			-1%			0%			0%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt								0.983			0.946	
Flt Protected		0.968								0.950		
Satd. Flow (prot)	0	1649	0	0	1707	0	1667	1592	0	855	1582	0
Flt Permitted		0.968								0.950		
Satd. Flow (perm)	0	1649	0	0	1707	0	1667	1592	0	855	1582	0
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1156			811			1291			2237	
Travel Time (s)		22.5			15.8			25.1			43.6	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	6%	5%	3%	0%	6%	0%	8%	11%	12%	100%	8%	7%
Adj. Flow (vph)	114	60	0	0	22	0	0	194	25	1	299	168
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	174	0	0	22	0	0	219	0	1	467	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	106	56	0	0	20	0	0	180	23	1	278	156
Future Vol, veh/h	106	56	0	0	20	0	0	180	23	1	278	156
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-1	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	6	5	3	0	6	0	8	11	12	100	8	7
Mvmt Flow	114	60	0	0	22	0	0	194	25	1	299	168

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	603	604	383	622	676	207	467	0	0	219	0	0
Stage 1	385	385	-	207	207	-	-	-	-	-	-	-
Stage 2	218	219	-	415	469	-	-	-	-	-	-	-
Critical Hdwy	7.16	6.6	6.23	7.1	6.6	6.2	4.4	-	-	5.3	-	-
Critical Hdwy Stg 1	6.16	5.55	-	5.9	5.36	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.16	5.55	-	5.9	5.36	-	-	-	-	-	-	-
Follow-up Hdwy	3.1	4.1	3.1	3	4.1	3.1	3.1	-	-	3.9	-	-
Pot Cap-1 Maneuver	449	401	703	451	365	888	797	-	-	751	-	-
Stage 1	706	599	-	931	724	-	-	-	-	-	-	-
Stage 2	877	708	-	719	564	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	428	401	703	399	365	888	797	-	-	751	-	-
Mov Cap-2 Maneuver	428	401	-	399	365	-	-	-	-	-	-	-
Stage 1	706	598	-	931	724	-	-	-	-	-	-	-
Stage 2	851	708	-	646	563	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.6	15.5	0	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	797	-	-	418	365	751	-	-
HCM Lane V/C Ratio	-	-	-	0.417	0.059	0.001	-	-
HCM Control Delay (s)	0	-	-	19.6	15.5	9.8	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	2	0.2	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	142	11	0	10	0	7	0	286	0	0	425	0
Future Volume (vph)	142	11	0	10	0	7	0	286	0	0	425	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.943							
Flt Protected		0.956			0.972							
Satd. Flow (prot)	0	1588	0	0	1552	0	0	1651	0	1800	1636	0
Flt Permitted		0.956			0.972							
Satd. Flow (perm)	0	1588	0	0	1552	0	0	1651	0	1800	1636	0
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		424			345			2237			693	
Travel Time (s)		8.3			6.7			43.6			13.5	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	9%	0%	0%	0%	0%	15%	0%	9%	50%	0%	10%	10%
Adj. Flow (vph)	160	12	0	11	0	8	0	321	0	0	478	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	172	0	0	19	0	0	321	0	0	478	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	142	11	0	10	0	7	0	286	0	0	425	0
Future Vol, veh/h	142	11	0	10	0	7	0	286	0	0	425	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	9	0	0	0	0	15	0	9	50	0	10	10
Mvmt Flow	160	12	0	11	0	8	0	321	0	0	478	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	803	799	478	805	799	321	-	0	0	321	0	0
Stage 1	478	478	-	321	321	-	-	-	-	-	-	-
Stage 2	325	321	-	484	478	-	-	-	-	-	-	-
Critical Hdwy	7.19	6.5	6.2	7.1	6.5	6.35	-	-	-	4.3	-	-
Critical Hdwy Stg 1	6.19	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.1	4	3.1	3	4	3.1	-	-	-	3	-	-
Pot Cap-1 Maneuver	324	321	622	337	321	755	0	-	-	932	-	0
Stage 1	623	559	-	794	655	-	0	-	-	-	-	0
Stage 2	761	655	-	642	559	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	321	321	622	327	321	755	-	-	-	932	-	-
Mov Cap-2 Maneuver	321	321	-	327	321	-	-	-	-	-	-	-
Stage 1	623	559	-	794	655	-	-	-	-	-	-	-
Stage 2	753	655	-	628	559	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	28.4	13.8	0	0
HCM LOS	D	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	321	427	932	-
HCM Lane V/C Ratio	-	-	0.536	0.045	-	-
HCM Control Delay (s)	-	-	28.4	13.8	0	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	3	0.1	0	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4	Ø6	Ø8	Ø9	Ø10
Lane Configurations												
Traffic Volume (vph)	161	1	2	241	254	150						
Future Volume (vph)	161	1	2	241	254	150						
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800						
Lane Width (ft)	12	12	12	12	11	11						
Grade (%)	-1%			1%	-2%							
Lane Util. Factor	1.00	1.00	*1.00	*1.00	1.00	1.00						
Frt	0.999				0.950							
Flt Protected	0.953											
Satd. Flow (prot)	1625	0	0	1756	1633	0						
Flt Permitted	0.953			0.995								
Satd. Flow (perm)	1625	0	0	1747	1633	0						
Right Turn on Red		No				No						
Satd. Flow (RTOR)												
Link Speed (mph)	40			35	35							
Link Distance (ft)	553			2066	100							
Travel Time (s)	9.4			40.2	1.9							
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96						
Heavy Vehicles (%)	6%	0%	0%	2%	3%	1%						
Adj. Flow (vph)	168	1	2	251	265	156						
Shared Lane Traffic (%)												
Lane Group Flow (vph)	169	0	0	253	421	0						
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Right	Left	Left	Left	Right						
Median Width(ft)	12			0	0							
Link Offset(ft)	0			0	0							
Crosswalk Width(ft)	16			16	16							
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.08	1.08	1.11	1.11						
Turning Speed (mph)	15	9	15			9						
Number of Detectors	1		1	1	0							
Detector Template	Left		Left									
Leading Detector (ft)	35		20	35	0							
Trailing Detector (ft)	-5		0	-5	0							
Detector 1 Position(ft)	-5		0	-5	0							
Detector 1 Size(ft)	40		20	40	6							
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex							
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0							
Detector 1 Queue (s)	0.0		0.0	0.0	0.0							
Detector 1 Delay (s)	0.0		0.0	0.0	0.0							
Turn Type	Prot		custom	NA	NA							
Protected Phases	1		5	2 5	6 10		2	4	6	8	9	10
Permitted Phases			2									
Detector Phase	1		5	2 5	6 10							
Switch Phase												
Minimum Initial (s)	5.0		3.0				15.0	5.0	19.0	5.0	8.0	8.0
Minimum Split (s)	13.0		12.0				25.0	14.0	25.0	14.0	13.0	18.0
Total Split (s)	23.0		12.0				32.0	53.0	32.0	53.0	23.0	53.0
Total Split (%)	19.2%		10.0%				27%	44%	27%	44%	19%	44%
Maximum Green (s)	15.0		3.0				22.0	44.0	26.0	44.0	18.0	47.0
Yellow Time (s)	3.0		3.0				4.0	3.0	4.0	3.0	3.0	4.0
All-Red Time (s)	5.0		6.0				6.0	6.0	2.0	6.0	2.0	2.0
Lost Time Adjust (s)	0.0											

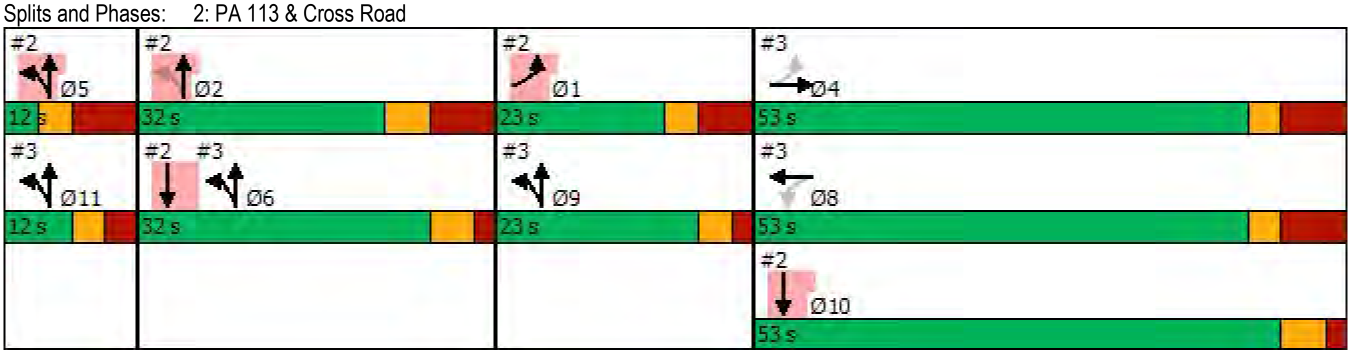
Lane Group	Ø11
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	11
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	6.0
Minimum Split (s)	12.0
Total Split (s)	12.0
Total Split (%)	10%
Maximum Green (s)	6.0
Yellow Time (s)	3.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø4	Ø6	Ø8	Ø9	Ø10
Total Lost Time (s)	8.0											
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0		3.0				3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None		None				Min	None	Min	None	None	None
Act Effct Green (s)	14.3			21.2	64.8							
Actuated g/C Ratio	0.13			0.19	0.58							
v/c Ratio	0.81			0.76	0.44							
Control Delay	77.9			58.3	2.0							
Queue Delay	0.0			0.0	0.0							
Total Delay	77.9			58.4	2.0							
LOS	E			E	A							
Approach Delay	77.9			58.4	2.0							
Approach LOS	E			E	A							
Queue Length 50th (ft)	129			164	9							
Queue Length 95th (ft)	#251			#255	m16							
Internal Link Dist (ft)	473			1986	20							
Turn Bay Length (ft)												
Base Capacity (vph)	221			380	1081							
Starvation Cap Reductn	0			0	0							
Spillback Cap Reductn	0			1	0							
Storage Cap Reductn	0			0	0							
Reduced v/c Ratio	0.76			0.67	0.39							

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 111.5
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 34.2 Intersection LOS: C
Intersection Capacity Utilization 44.9% ICU Level of Service A
Analysis Period (min) 15
* User Entered Value
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: PA 113 & Cross Road



Lane Group	Ø11
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	19	99	255	100	3	241	81	80	0	0	0
Future Volume (vph)	19	19	99	255	100	3	241	81	80	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	10	12	12	12	12	12	12	11	11	11
Grade (%)		1%			-1%			1%			-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.902			0.999			0.973				
Flt Protected		0.993			0.966			0.971				
Satd. Flow (prot)	0	1497	0	0	1724	0	0	1636	0	0	0	0
Flt Permitted		0.913			0.715			0.971				
Satd. Flow (perm)	0	1377	0	0	1276	0	0	1636	0	0	0	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			35			35			35	
Link Distance (ft)		93			1156			100			2015	
Travel Time (s)		1.6			22.5			1.9			39.3	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	1%	2%	0%	2%	5%	6%	0%	2%	0%
Adj. Flow (vph)	21	21	111	287	112	3	271	91	90	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	153	0	0	402	0	0	452	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.18	1.18	1.18	1.07	1.07	1.07	1.08	1.08	1.08	1.11	1.11	1.11
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	0				
Detector Template	Left	Thru		Left	Thru							
Leading Detector (ft)	20	35		20	35		35	0				
Trailing Detector (ft)	0	-5		0	-5		-5	0				
Detector 1 Position(ft)	0	-5		0	-5		-5	0				
Detector 1 Size(ft)	20	40		20	40		40	6				
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		4			8		6 9 11	6 9 11				
Permitted Phases	4			8								
Detector Phase	4	4		8	8		6 9 11	6 9 11				
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0							
Minimum Split (s)	14.0	14.0		14.0	14.0							
Total Split (s)	53.0	53.0		53.0	53.0							
Total Split (%)	44.2%	44.2%		44.2%	44.2%							
Maximum Green (s)	44.0	44.0		44.0	44.0							
Yellow Time (s)	3.0	3.0		3.0	3.0							
All-Red Time (s)	6.0	6.0		6.0	6.0							
Lost Time Adjust (s)		0.0			0.0							

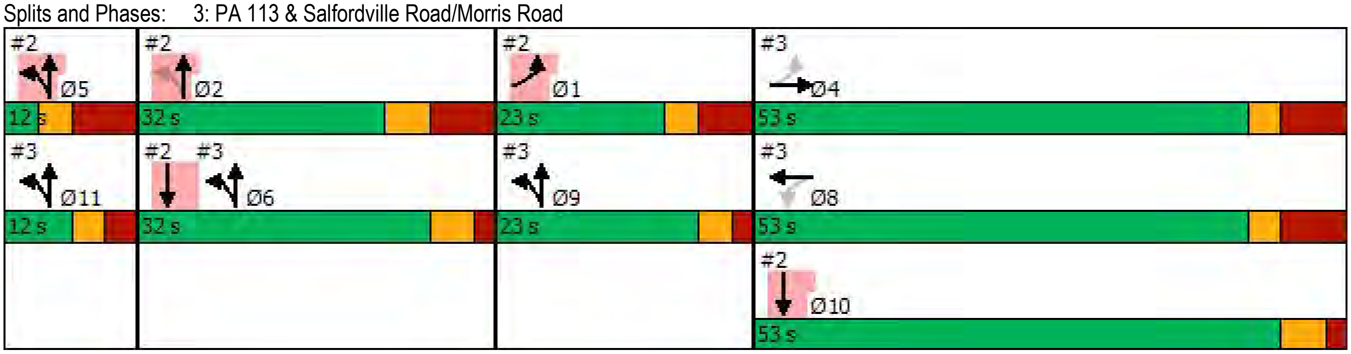
Lane Group	Ø1	Ø2	Ø5	Ø6	Ø9	Ø10	Ø11
Lane Configurations							
Traffic Volume (vph)							
Future Volume (vph)							
Ideal Flow (vphpl)							
Lane Width (ft)							
Grade (%)							
Lane Util. Factor							
Frt							
Flt Protected							
Satd. Flow (prot)							
Flt Permitted							
Satd. Flow (perm)							
Right Turn on Red							
Satd. Flow (RTOR)							
Link Speed (mph)							
Link Distance (ft)							
Travel Time (s)							
Peak Hour Factor							
Heavy Vehicles (%)							
Adj. Flow (vph)							
Shared Lane Traffic (%)							
Lane Group Flow (vph)							
Enter Blocked Intersection							
Lane Alignment							
Median Width(ft)							
Link Offset(ft)							
Crosswalk Width(ft)							
Two way Left Turn Lane							
Headway Factor							
Turning Speed (mph)							
Number of Detectors							
Detector Template							
Leading Detector (ft)							
Trailing Detector (ft)							
Detector 1 Position(ft)							
Detector 1 Size(ft)							
Detector 1 Type							
Detector 1 Channel							
Detector 1 Extend (s)							
Detector 1 Queue (s)							
Detector 1 Delay (s)							
Turn Type							
Protected Phases	1	2	5	6	9	10	11
Permitted Phases							
Detector Phase							
Switch Phase							
Minimum Initial (s)	5.0	15.0	3.0	19.0	8.0	8.0	6.0
Minimum Split (s)	13.0	25.0	12.0	25.0	13.0	18.0	12.0
Total Split (s)	23.0	32.0	12.0	32.0	23.0	53.0	12.0
Total Split (%)	19%	27%	10%	27%	19%	44%	10%
Maximum Green (s)	15.0	22.0	3.0	26.0	18.0	47.0	6.0
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	3.0
All-Red Time (s)	5.0	6.0	6.0	2.0	2.0	2.0	3.0
Lost Time Adjust (s)							

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Lost Time (s)		9.0			9.0							
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0							
Recall Mode	None	None		None	None							
Act Effct Green (s)		38.5			38.5			57.8				
Actuated g/C Ratio		0.35			0.35			0.52				
v/c Ratio		0.32			0.91			0.53				
Control Delay		29.2			61.7			3.9				
Queue Delay		0.0			1.0			0.0				
Total Delay		29.2			62.7			3.9				
LOS		C			E			A				
Approach Delay		29.2			62.7			3.9				
Approach LOS		C			E			A				
Queue Length 50th (ft)		83			283			12				
Queue Length 95th (ft)		138			#459			26				
Internal Link Dist (ft)		13			1076			20			1935	
Turn Bay Length (ft)												
Base Capacity (vph)		549			509			845				
Starvation Cap Reductn		0			0			0				
Spillback Cap Reductn		22			20			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.29			0.82			0.53				

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 111.5
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 31.2 Intersection LOS: C
Intersection Capacity Utilization 63.5% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: PA 113 & Salfordville Road/Morris Road



Lane Group	Ø1	Ø2	Ø5	Ø6	Ø9	Ø10	Ø11
Total Lost Time (s)							
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Min	None	Min	None	None	None
Act Effct Green (s)							
Actuated g/C Ratio							
v/c Ratio							
Control Delay							
Queue Delay							
Total Delay							
LOS							
Approach Delay							
Approach LOS							
Queue Length 50th (ft)							
Queue Length 95th (ft)							
Internal Link Dist (ft)							
Turn Bay Length (ft)							
Base Capacity (vph)							
Starvation Cap Reductn							
Spillback Cap Reductn							
Storage Cap Reductn							
Reduced v/c Ratio							

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	137	310	31	0	0
Future Volume (vph)	1	137	310	31	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	10	11	11	14	14
Grade (%)		1%	-1%		-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.988			
Flt Protected						
Satd. Flow (prot)	0	1672	1653	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1672	1653	0	0	0
Link Speed (mph)		40	40		35	
Link Distance (ft)		802	93		617	
Travel Time (s)		13.7	1.6		12.0	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%
Adj. Flow (vph)	1	154	348	35	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	155	383	0	0	0
Enter Blocked Intersection	Yes	Yes	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.18	1.18	1.11	1.11	0.98	0.98
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	6	115	6	0
Future Volume (vph)	0	0	6	115	6	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	-2%		1%			0%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.872			
Flt Protected					0.950	
Satd. Flow (prot)	0	0	1505	0	1710	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	1505	0	1710	0
Link Speed (mph)	35		35			30
Link Distance (ft)	424		2015			295
Travel Time (s)	8.3		39.3			6.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	0%	0%	4%	0%	0%
Adj. Flow (vph)	0	0	7	128	7	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	135	0	7	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.06	1.06	1.08	1.08	1.07	1.07
Turning Speed (mph)	60	60		9	15	
Sign Control	Free		Free			Stop

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	6	115	6	0
Future Vol, veh/h	0	0	6	115	6	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	-2	-	1	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	4	0	0	4	0	0
Mvmt Flow	0	0	7	128	7	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	0	0	71	-
Stage 1	-	-	0	-
Stage 2	-	-	71	-
Critical Hdwy	-	-	6.4	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.4	-
Follow-up Hdwy	-	-	3.5	-
Pot Cap-1 Maneuver	-	-	938	0
Stage 1	-	-	-	0
Stage 2	-	-	957	0
Platoon blocked, %	-	-		
Mov Cap-1 Maneuver	-	-	938	0
Mov Cap-2 Maneuver	-	-	938	0
Stage 1	-	-	-	0
Stage 2	-	-	957	0

Approach	NB	SB
HCM Control Delay, s	0	8.9
HCM LOS		A

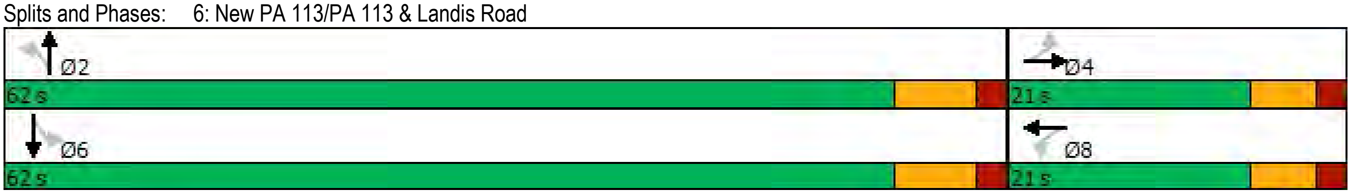
Minor Lane/Major Mvmt	NBT	NBR	SBLn1
Capacity (veh/h)	-	-	938
HCM Lane V/C Ratio	-	-	0.007
HCM Control Delay (s)	-	-	8.9
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	12	6	9	61	63	8	438	16	26	429	18
Future Volume (vph)	18	12	6	9	61	63	8	438	16	26	429	18
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	13	13	12	12	12	12	12	12	12	13	12	13
Grade (%)		-2%			-1%			0%			-4%	
Storage Length (ft)	0		0	0		0	225		0	225		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.976			0.936			0.995			0.994	
Flt Protected		0.976			0.997		0.950			0.950		
Satd. Flow (prot)	0	1737	0	0	1627	0	1710	1709	0	1609	1786	0
Flt Permitted		0.836			0.973		0.478			0.472		
Satd. Flow (perm)	0	1488	0	0	1588	0	860	1709	0	800	1786	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		7			48			5				
Link Speed (mph)		35			35			30			45	
Link Distance (ft)		472			496			693			1186	
Travel Time (s)		9.2			9.7			15.8			18.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	0%	0%	0%	2%	6%	0%	5%	0%	12%	2%	6%
Adj. Flow (vph)	20	13	7	10	66	68	9	476	17	28	466	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	0	0	144	0	9	493	0	28	486	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			13			13	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.06	1.07	1.07	1.07	1.07	1.07	1.07	1.00	1.05	1.00
Turning Speed (mph)	15		60	60		9	60		60	15		9
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left			Left	Thru		Left	Thru	
Leading Detector (ft)	20	35		20	35		20	100		20	100	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	3.0	3.0		3.0	3.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	9.0	9.0		9.0	9.0		22.0	22.0		22.0	22.0	
Total Split (s)	21.0	21.0		21.0	21.0		62.0	62.0		62.0	62.0	
Total Split (%)	25.3%	25.3%		25.3%	25.3%		74.7%	74.7%		74.7%	74.7%	
Maximum Green (s)	15.0	15.0		15.0	15.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0		7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	

Intersection Summary	
Area Type:	Other
Cycle Length: 83	
Actuated Cycle Length: 40.8	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 6: New PA 113/PA 113 & Landis Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	12	6	9	61	63	8	438	16	26	429	18
Future Volume (veh/h)	18	12	6	9	61	63	8	438	16	26	429	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1861	1950	1875	1837	1809	1752	1800	1730	1800	1850	1921	1938
Adj Flow Rate, veh/h	20	13	7	10	66	36	9	476	17	28	466	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	0	0	0	2	6	0	5	0	12	2	6
Cap, veh/h	279	88	41	142	133	71	515	802	29	491	883	38
Arrive On Green	0.10	0.13	0.10	0.10	0.13	0.10	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	805	676	314	123	1017	540	924	1660	59	944	1828	78
Grp Volume(v), veh/h	40	0	0	112	0	0	9	0	493	28	0	486
Grp Sat Flow(s),veh/h/ln	1795	0	0	1681	0	0	924	0	1719	944	0	1906
Q Serve(g_s), s	0.0	0.0	0.0	1.4	0.0	0.0	0.2	0.0	6.5	0.7	0.0	5.5
Cycle Q Clear(g_c), s	0.6	0.0	0.0	2.0	0.0	0.0	5.7	0.0	6.5	7.1	0.0	5.5
Prop In Lane	0.50		0.17	0.09		0.32	1.00		0.03	1.00		0.04
Lane Grp Cap(c), veh/h	351	0	0	292	0	0	515	0	830	491	0	921
V/C Ratio(X)	0.11	0.00	0.00	0.38	0.00	0.00	0.02	0.00	0.59	0.06	0.00	0.53
Avail Cap(c_a), veh/h	967	0	0	934	0	0	1705	0	3044	1707	0	3376
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.3	0.0	0.0	12.8	0.0	0.0	7.6	0.0	5.8	8.4	0.0	5.6
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	0.0	1.1	0.0	0.0	0.1	0.0	2.2	0.2	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.4	0.0	0.0	13.6	0.0	0.0	7.6	0.0	6.5	8.5	0.0	6.0
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		40			112			502			514	
Approach Delay, s/veh		12.4			13.6			6.5			6.2	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.0		9.1		22.0		9.1				
Change Period (Y+Rc), s		7.0		6.0		7.0		6.0				
Max Green Setting (Gmax), s		55.0		15.0		55.0		15.0				
Max Q Clear Time (g_c+I1), s		8.5		2.6		9.1		4.0				
Green Ext Time (p_c), s		3.7		0.1		3.2		0.2				

Intersection Summary			
HCM 6th Ctrl Delay			7.3
HCM 6th LOS			A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	114	1	0	3	246	274	3	3	203	0
Future Volume (vph)	0	0	114	1	0	3	246	274	3	3	203	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865			0.899			0.998				
Flt Protected					0.988		0.950			0.950		
Satd. Flow (prot)	0	1512	0	0	1599	0	1676	1762	0	1710	1765	0
Flt Permitted					0.988		0.950			0.950		
Satd. Flow (perm)	0	1512	0	0	1599	0	1676	1762	0	1710	1765	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		181			519			457			1291	
Travel Time (s)		4.1			11.8			10.4			29.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	3%	0%	0%	0%	2%	2%	0%	0%	2%	0%
Adj. Flow (vph)	0	0	119	1	0	3	256	285	3	3	211	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	119	0	0	4	0	256	288	0	3	211	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	114	1	0	3	246	274	3	3	203	0
Future Vol, veh/h	0	0	114	1	0	3	246	274	3	3	203	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	3	0	0	0	2	2	0	0	2	0
Mvmt Flow	0	0	119	1	0	3	256	285	3	3	211	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1017	1017	211	1076	1016	287	211	0	0	288	0	0
Stage 1	217	217	-	799	799	-	-	-	-	-	-	-
Stage 2	800	800	-	277	217	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.23	7.1	6.5	6.2	4.3	-	-	4.3	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3	4	3.1	3	4	3.1	3	-	-	3	-	-
Pot Cap-1 Maneuver	239	239	881	218	240	800	1017	-	-	957	-	-
Stage 1	908	727	-	424	401	-	-	-	-	-	-	-
Stage 2	424	400	-	840	727	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	191	178	881	152	179	800	1017	-	-	957	-	-
Mov Cap-2 Maneuver	191	178	-	152	179	-	-	-	-	-	-	-
Stage 1	679	725	-	317	300	-	-	-	-	-	-	-
Stage 2	316	299	-	724	725	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.7	14.4	4.6	0.1
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1017	-	-	881	387	957	-	-
HCM Lane V/C Ratio	0.252	-	-	0.135	0.011	0.003	-	-
HCM Control Delay (s)	9.7	-	-	9.7	14.4	8.8	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	1	-	-	0.5	0	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	19	0	0	113	0	0	269	8	3	206	245
Future Volume (vph)	80	19	0	0	113	0	0	269	8	3	206	245
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Grade (%)		0%			-1%			0%			0%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt								0.996			0.918	
Flt Protected		0.961								0.950		
Satd. Flow (prot)	0	1662	0	0	1739	0	1765	1742	0	1710	1629	0
Flt Permitted		0.961								0.950		
Satd. Flow (perm)	0	1662	0	0	1739	0	1765	1742	0	1710	1629	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1156			811			1291			2237	
Travel Time (s)		26.3			18.4			29.3			50.8	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	5%	0%	1%	5%	4%	0%	2%	3%	0%	0%	2%	1%
Adj. Flow (vph)	90	21	0	0	127	0	0	302	9	3	231	275
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	111	0	0	127	0	0	311	0	3	506	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	80	19	0	0	113	0	0	269	8	3	206	245
Future Vol, veh/h	80	19	0	0	113	0	0	269	8	3	206	245
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-1	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	5	0	1	5	4	0	2	3	0	0	2	1
Mvmt Flow	90	21	0	0	127	0	0	302	9	3	231	275

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	745	686	369	692	819	307	506	0	0	311	0	0
Stage 1	375	375	-	307	307	-	-	-	-	-	-	-
Stage 2	370	311	-	385	512	-	-	-	-	-	-	-
Critical Hdwy	7.2	6.5	6.21	7.2	6.34	6.2	4.3	-	-	4.3	-	-
Critical Hdwy Stg 1	6.15	5.5	-	5.95	5.34	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.5	-	5.95	5.34	-	-	-	-	-	-	-
Follow-up Hdwy	3.1	4	3.1	3.1	4.036	3.1	3	-	-	3	-	-
Pot Cap-1 Maneuver	355	373	717	386	322	779	804	-	-	940	-	-
Stage 1	716	621	-	796	669	-	-	-	-	-	-	-
Stage 2	721	662	-	722	549	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	245	372	717	368	321	779	804	-	-	940	-	-
Mov Cap-2 Maneuver	245	372	-	368	321	-	-	-	-	-	-	-
Stage 1	716	619	-	796	669	-	-	-	-	-	-	-
Stage 2	584	662	-	695	547	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	28.5	23.4	0	0.1
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	804	-	-	262	321	940	-	-
HCM Lane V/C Ratio	-	-	-	0.425	0.396	0.004	-	-
HCM Control Delay (s)	0	-	-	28.5	23.4	8.8	-	-
HCM Lane LOS	A	-	-	D	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	2	1.8	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	7	0	7	0	3	0	349	0	0	447	0
Future Volume (vph)	114	7	0	7	0	3	0	349	0	0	447	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.963							
Flt Protected		0.955			0.965							
Satd. Flow (prot)	0	1657	0	0	1673	0	0	1731	0	1800	1748	0
Flt Permitted		0.955			0.965							
Satd. Flow (perm)	0	1657	0	0	1673	0	0	1731	0	1800	1748	0
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		424			345			2237			693	
Travel Time (s)		8.3			6.7			43.6			13.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	0%	0%	0%	0%	0%	0%	4%	0%	0%	3%	4%
Adj. Flow (vph)	127	8	0	8	0	3	0	388	0	0	497	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	135	0	0	11	0	0	388	0	0	497	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	60		60	60		60	60		60	60		60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	114	7	0	7	0	3	0	349	0	0	447	0
Future Vol, veh/h	114	7	0	7	0	3	0	349	0	0	447	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	4	0	0	0	0	0	0	4	0	0	3	4
Mvmt Flow	127	8	0	8	0	3	0	388	0	0	497	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	887	885	497	889	885	388	-	0	0	388	0	0
Stage 1	497	497	-	388	388	-	-	-	-	-	-	-
Stage 2	390	388	-	501	497	-	-	-	-	-	-	-
Critical Hdwy	7.14	6.5	6.2	7.1	6.5	6.2	-	-	-	4.3	-	-
Critical Hdwy Stg 1	6.14	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.14	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3	4	3.1	3	4	3.1	-	-	-	3	-	-
Pot Cap-1 Maneuver	292	286	607	294	286	700	0	-	-	884	-	0
Stage 1	628	548	-	728	612	-	0	-	-	-	-	0
Stage 2	723	612	-	628	548	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	291	286	607	288	286	700	-	-	-	884	-	-
Mov Cap-2 Maneuver	291	286	-	288	286	-	-	-	-	-	-	-
Stage 1	628	548	-	728	612	-	-	-	-	-	-	-
Stage 2	720	612	-	619	548	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	27.6	15.6	0	0
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	291	350	884	-
HCM Lane V/C Ratio	-	-	0.462	0.032	-	-
HCM Control Delay (s)	-	-	27.6	15.6	0	-
HCM Lane LOS	-	-	D	C	A	-
HCM 95th %tile Q(veh)	-	-	2.3	0.1	0	-

APPENDIX F

Public Spaces Conceptual Renderings

Capstone in Sustainable Design

Emily Gates, Graduate Student

WALKABLE LEDERACH

Community and Connectivity at the Village Core: A Proposed Walkable Streetscape Design for the Village of Lederach, PA

Capstone in Sustainable Design

Emily Gates, Graduate Student
Professor Robert Fryer

Summer 2023

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WALKABLE

LEDERACH

About the Project

By involving key stakeholders and members of the public, the project aims to create a vision for a walkable Village of Lederach, located in Lower Salford Township in Montgomery County, Pennsylvania. The existing conditions analysis and the desire for enhancements that support walking and biking within the Village Core will be incorporated into a master plan to help advise the Township on what might be feasible and achievable with the addition of future funding.

CARS OVER PEOPLE

Village cores that prioritize motor vehicle travel over people have less foot traffic, lack economic stimulation and are considered dangerous by design

HEAVY VEHICLE TRAFFIC + SPEEDING

Reduces safety and discourages people from stopping off to spend time within the Village of Lederach

LACK OF SPACE

Lacks space for outdoor public areas near the street edge as well as bicycle and pedestrian facilities

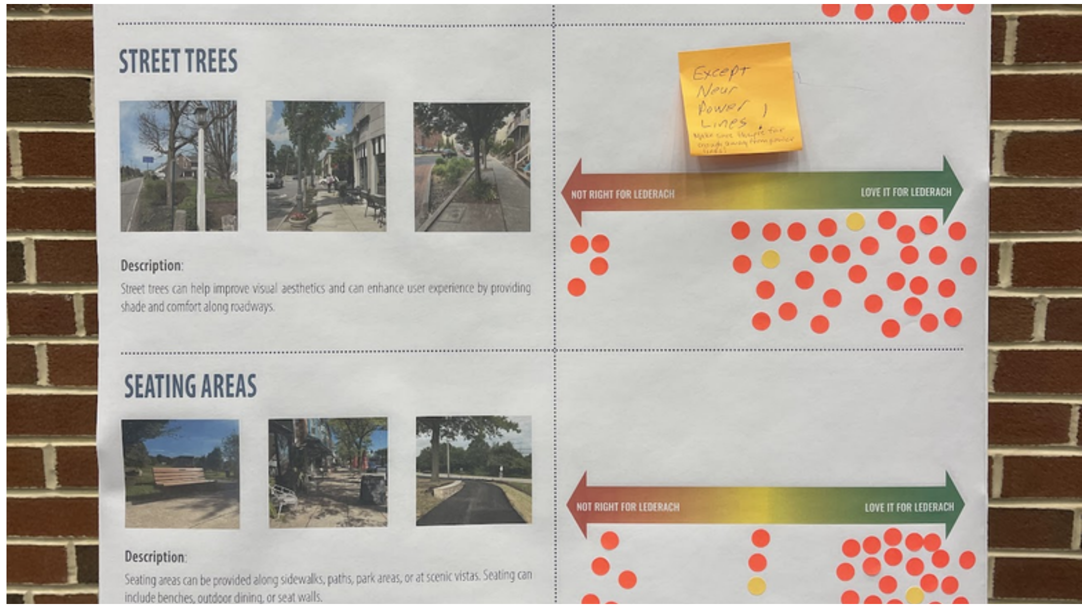
POOR AIR QUALITY + INCREASED CO2 EMISSIONS

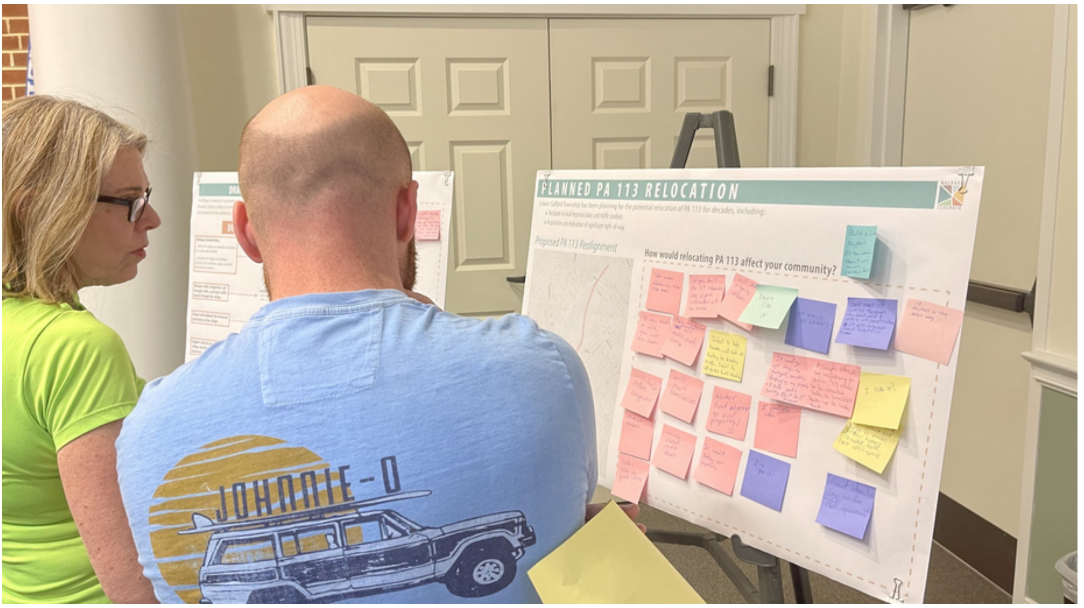
Reliance on motor vehicles is a leading contributor to increased greenhouse gas emissions and climate change

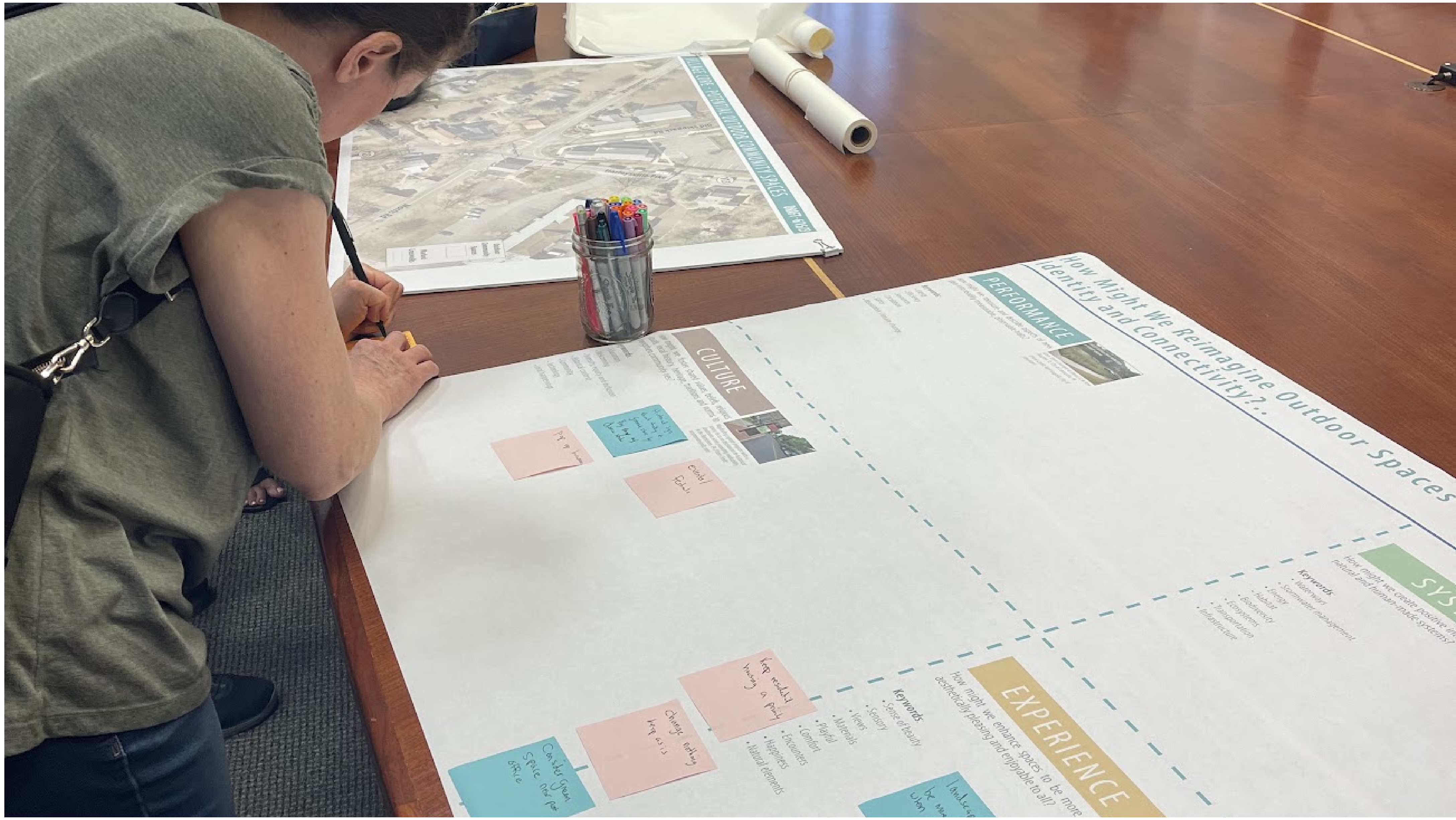
PROBLEMS

PRELIMINARY SITE PLANING: Culture - Public Meeting

June 18th, 2023
Lower Salford Township Town Hall







GUIDING PRINCIPLES + GOALS & STRATEGIES

Experience

Human comfort enhances the experience and enjoyment of the Village

Goals:

- 100% of outdoor spaces achieve adequate thermal comfort levels according to ASHRAE-55 in spring, summer and fall seasons

Strategies:

- Shade flexible seating areas in the summer and sun areas in the winter without blocking view corridors or pedestrian scaled lighting
- Select multi-sensory design features that limit heat absorption
- Block harsh NW winter winds and allow SW summer breezes to pass through outdoor spaces

Performance

Controlling vehicular traffic will lead to the Village having cleaner air and safer streets

Goals:

- Reduce vehicle crashes by 50% through the Village Core
- Achieve SITES Platinum certification

Strategies:

- Design traffic calming measures
- Install highly visible street crossings and pedestrian signals
- Use the SITES Scorecard to help in the planning stages
- Employ low impact development strategies that emphasize site design and planning techniques to mimic the natural infiltration-based, groundwater-driven hydrology of historic landscapes (SITES, 2015)

Culture

Celebrating the character and history will enrich the culture of the Village

Goals:

- 100% of open spaces are maintained, welcoming and engaging to all community members and visitors

Strategies:

- Form a diverse group of stakeholders and engage a wide variety of community members to provide project feedback early on
- Adapt universal design practices to enable all users to participate equally in access and enjoyment of site features and amenities (SITES, 2015)
- Install wayfinding and historical landmarking signage

Systems

Connectivity of multimodal transportation between important natural spaces will promote biodiversity and manage stormwater

Goals:

- 100% of landscaped areas use native or climate appropriate plantings
- Reduce current stormwater runoff by 50%

Strategies:

- Design with native landscaping or climate appropriate plantings
- Install green street infrastructure, rain gardens and permeable pavers along the street edge
- Create space for pedestrian and bicycle facilities as well as safer street crossings to outdoor community spaces

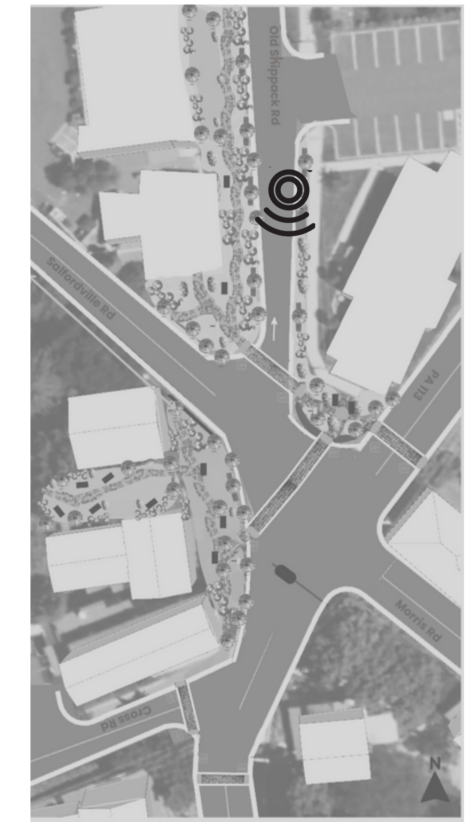
EXPERIENCE

Human comfort enhances the experience and enjoyment of the Village

Existing Conditions

PERFORMANCE

Controlling vehicular traffic will lead to the Village having cleaner air and safer streets



Existing Conditions

CULTURE

Celebrating the character and history will enrich the culture of the Village

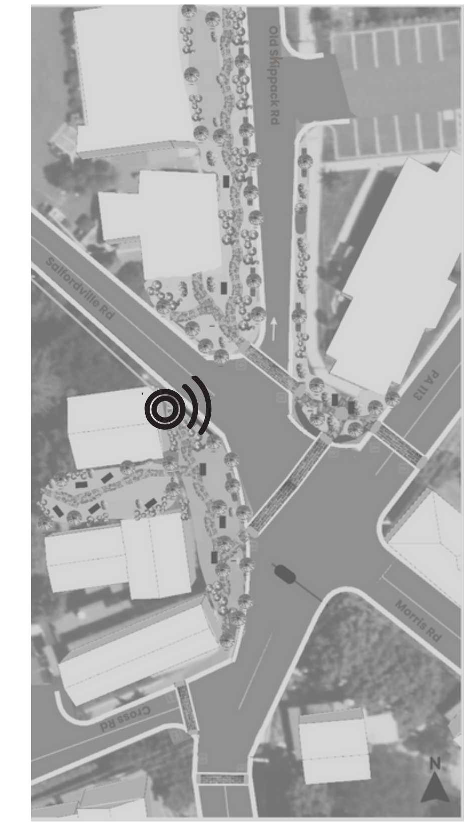
Existing Conditions

S Y S T E M S :

Connectivity of multimodal transportation between important natural spaces will promote biodiversity and manage stormwater

Existing Conditions

ADDTIONAL PERSPECTIVES:
Salfordville Rd



Existing Conditions

ADDTIONAL PERSPECTIVES:
Western Corner of Old Skippack Rd

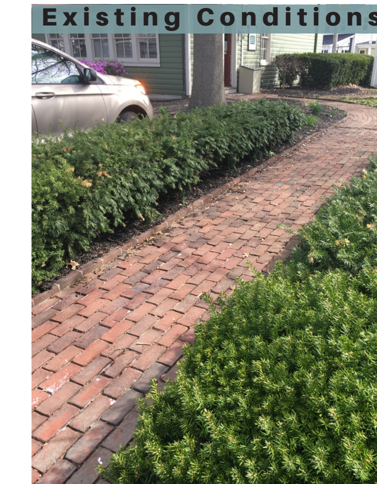
Existing Conditions

ADDTIONAL PERSPECTIVES:
Northwest Corner of Route 113

Existing Conditions

ADDTIONAL PERSPECTIVES:
Flexible Event Space

Existing Conditions



ADDTIONAL PERSPECTIVES:
Bird's Eye View

Existing Conditions