

1. Old William Penn Highway and Thompson Run Road

Intersection Characteristics: Unsignalized, “+” Intersection.
 Stop Controlled on all four intersection approaches
 Thompson Run Road Bridge is closed south of the intersection.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997 *	2004 *
Thompson Run Road SR 2065 (State)	Northbound	(A)	(A)	CNC	
	Left	Negligible	10		
	Straight	Negligible	5		
	Right	Negligible	10		
	Southbound	(B)	(E)	3,400 (NB) 4,370 (NB) 3,440 (SB) 4,370 (SB)	
	Left	230	180		
Straight	5	5			
Right	20	70			
Old William Penn (Municipal)	Eastbound	(C)	(C)	CNC	
	Left	65	180		
	Straight	245	355		
	Right	5	5		
	Westbound	(D)	(F)	5,280 (EB) 5,600 (EB) 5,200 (WB) 5,500 (WB)	
	Left	10	5		
Straight	225	330			
Right	90	240			

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ Adjusted STOP AHEAD sign on the eastbound approach and installed an intersection warning sign on westbound approach prior to entering tunnel.



#1 - Old William Penn eastbound approach



#2 - Thompson Run Road southbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Install guide rail and end treatments per PENNDOT Standards on the southeast corner of the intersection to close opening between bridge wall and concrete barrier; at the southbound bridge approach; and on the southwest corner of the intersection to close opening between structures.
Estimated Cost: \$3,000
- Install Stop Ahead sign on the southbound Thompson Run Road approach
Estimated Cost: \$250



MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG-TERM RECOMMENDATIONS

- Existing and projected traffic volumes warrant the installation of a traffic signal. If congestion and queuing continue to worsen along Old William Penn Highway a traffic signal should be considered.
Estimated Cost: \$95,000



#3 - Old William Penn westbound approach



#4 - Thompson Run Road northbound approach

MONROEVILLE

2. Old William Penn Highway and Evergreen Drive

Intersection Characteristics: Unsignalized, "T" Intersection.
 Stop Controlled on southbound Evergreen Road approach.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	Peak Hour PM *	1997	2004 *
Old William Penn (Municipal)	Eastbound				
	Left	10 (A)	15 (A)	5,280 (EB)	5,600 (EB)
	Straight	425	455	5,200 (WB)	5,500 (WB)
	Westbound				
	Straight	255	525	4,740 (EB)*	5,020 (EB)
	Right	5	Negligible	4,680 (WB)*	4,960 (WB)
Evergreen Road (Municipal)	Southbound	(A)	(B)		
	Left	Negligible	Negligible	160 (NB)*	170 (NB)
	Right	15	15	190 (SB)*	200 (SB)

* Estimated.

ACCOMPLISHMENTS SINCE 1989

✓ No Change.



#1 - Old William Penn Highway eastbound approach



#2 - Old William Penn Highway westbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Install intersection warning signs on all approaches to the intersection.
Estimated Cost \$ 550

MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Evergreen Drive southbound approach



#4 - Looking north at Evergreen Drive southbound approach

MONROEVILLE

3. Old William Penn Highway and Duff Road

Intersection Characteristics: Unsignalized, “T” Intersection.
 Stop Controlled on all Intersection approaches.
 Substandard turning radius for eastbound Old William Penn vehicles turning onto Duff Road with narrow lanes on Duff.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997 *	2004 *
Old William Penn (Municipal)	Eastbound	(C)	(D)		
	Straight	235	275	4,740 (EB)	5,020 (EB)
	Right	175	185	4,680 (WB)	4,960 (WB)
	Westbound	(B)	(D)		
	Left	310	335	5,550 (EB)	5,880 (EB)
	Straight	185	305	6,640 (WB)	7,040 (WB)
Duff Road (Municipal)	Northbound	(A)	(C)		
	Left	70	195	4,560 (NB)	4,830 (NB)
	Right	90	275	5,970 (SB)	6,330 (SB)

* Estimated.

ACCOMPLISHMENTS SINCE 1989

- ✓ Replaced faded STOP sign on northbound Duff Road approach.

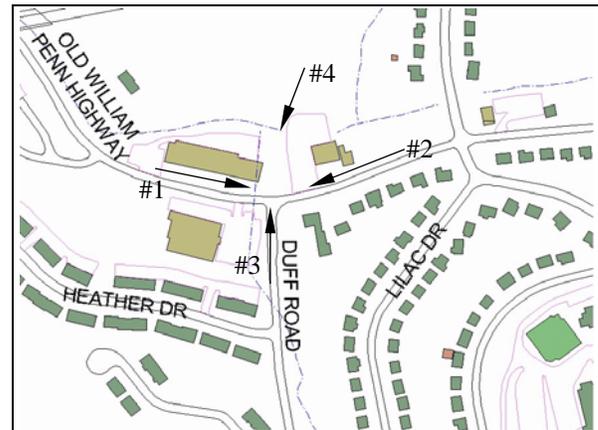


#1 - Old William Penn Highway eastbound approach



#2 - Old William Penn Highway westbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- None at this time.

MEDIUM-TERM RECOMMENDATIONS

- Reconstruct Intersection as shown in Map 22, including:
 - Widening Duff Road by 4 to 6 feet, from existing 32 feet roadway width;
 - Widen Old William Penn Highway westbound approach to accommodate an exclusive left-turn lane (approximately 250 feet long) and provide adequate transition area on eastern leg of intersection; and
 - Widen turning radius for eastbound Old William Penn vehicles turning onto Duff Road.

Estimated Cost: \$445,000

LONG-TERM RECOMMENDATIONS

- Even though existing and projected traffic volume warrants are met for signalization, traffic conditions should be reviewed throughout the Old William Penn Highway corridor once the traffic signal installations are implemented at both the Center Road and Garden City Drive intersections.

Estimated Cost: \$ 5,500



#3 - Duff Road northbound approach.



#4 - Aerial view of Intersection of Old William Penn and Duff.

MONROEVILLE

4. Old William Penn and Garden City Drive

Intersection Characteristics: Unsignalized, “+” Intersection.
 Stop controlled on all four intersection approaches.
 Existing and projected traffic volumes warrant installation
 of a traffic signal.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997 *	2004 *
Old William Penn (Municipal)	Eastbound	(B)	(E)		
	Left	30	65	5,550 (EB)	5,880 (EB)
	Straight	200	435	6,640 (WB)	7,040 (WB)
	Right	85	60		
	Westbound	(C)	(F)		
	Left	20	10	5,660 (EB)	6,000 (EB)
Garden City Drive (Municipal)	Northbound	(A)	(E)		
	Left	40	115	2,200 (NB)	2,330 (NB)
	Straight	50	125	2,480 (SB)	2,630 (SB)
	Right	20	15		
	Southbound	(C)	(F)		
	Left	100	120	2,790 (NB)	2,960 (NB)
	Straight	95	110	3,250 (SB)	3,450 (SB)
	Right	80	45		

* Estimated.

ACCOMPLISHMENTS SINCE 1989

- ✓ No Change.



#1 - Old William Penn Highway eastbound approach



#2 - Garden City Drive southbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Install “4-WAY” placards under each STOP sign.
Estimated Cost: \$500
- Re-stripe and upgrade pavement markings and stop bars on all intersection approaches.
Estimated Cost: \$750



MEDIUM-TERM RECOMMENDATIONS

- Reconstruct intersection as shown in Map 22, including:
 - Widening the eastbound and westbound approaches of Old William Penn Highway to provide for two opposing exclusive left-turn lanes. The eastbound left-turn lane length should be designed at 150 feet while the westbound left-turn lane length should provide for 75 feet; and
 - Installation of traffic signal that should be hard wire interconnected to a master controller to be located at the intersection of Center Road and Old William Penn Highway.**Estimated Cost: \$530,000**

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Looking east at Old William Penn westbound approach



#4 - Garden City Drive northbound approach

MONROEVILLE

5. Old William Penn Highway and Center Road

Intersection Characteristics: Unsignalized, "T" Intersection.
 Stop controlled on all three intersection approaches.
 Existing and projected traffic volumes warrant installation of a traffic signal.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997	2004 *
Old William Penn (Municipal)	Eastbound	(B)	(D)		
	Straight	275	515	5,660 (EB)*	6,000 (EB)
	Right	35	50	6,630 (WB)*	7,030 (WB)
	Westbound	(C)	(C)		
	Left	360	350	11,270 (EB)	11,950 (EB)
	Straight	420	505	10,780 (WB)	11,430 (WB)
Center Road (County)	Northbound	(F)	(F)		
	Left	70	60	6,550 (NB)*	6,950 (NB)
	Right	285	530	4,890 (SB)*	5,180 (SB)

* Estimated.

ACCOMPLISHMENTS SINCE 1989

- ✓ Widened the westbound approach of Old William Penn Highway to provide an exclusive left-turn lane and another lane for westbound through traffic only.
- ✓ Placed double yellow pavement markings and stop bars on all approaches.



#1 - Old William Penn Highway eastbound approach



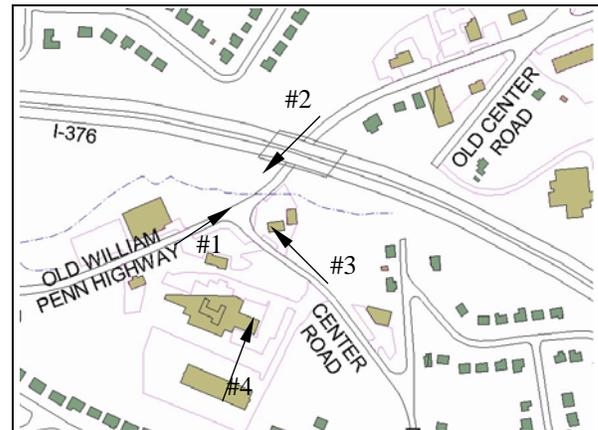
#2 - Old William Penn Highway westbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Install “3-WAY” placards below each STOP sign.
Estimated Cost: \$375



MEDIUM-TERM RECOMMENDATIONS

- Reconstruct intersection as shown in Maps 22 and 23, including:
 - Widening the northbound approach of Center Road from one lane to two lanes wide. This widening will provide for one exclusive left-turn lane and one exclusive right-turn lane; and
 - Installation of traffic signal that will also serve as the master controller interconnecting future traffic signals along the Old William Penn/Center Road corridor. It is recommended that a traffic responsive closed loop system be implemented within this corridor to reduce travel time delays and congestion currently experienced.**Estimated Cost: \$350,000**

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Center Road northbound approach



#4 Aerial view of intersection of Old William Penn and Center.

MONROEVILLE

6. Old William Penn Highway at Center Road and St. Martin Drive

Intersection Characteristics: Unsignalized, “+” Intersection.
 Stop Controlled on the Center Road southbound approach and the St. Martin Drive northbound approach.
 Existing and projected traffic volumes warrant installation of a traffic signal.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	PM Peak Hour	1997	2004 *
St. Martin Drive (Municipal)	Northbound	(C)	(F)	CNC	
	Left	Negligible	Negligible		
	Straight Right	Negligible 5	Negligible 5		
Center Road (County)	Southbound	(C)	(F)	CNC	
	Left	40	20		
	Straight Right	5 600	5 545		
Old William Penn Highway (Municipal)	Eastbound				
	Left	325 (A)	735 (C)	11,270 (EB)	11,950 (EB)
	Straight	270	330	10,780 (WB)	11,430 (WB)
	Right	5	5		
	Westbound				
	Left	5 (A)	5 (A)	4,750 (EB) *	5,040 (EB)
Straight	185	350	4,750 (WB) *	5,040 (WB)	
Right	30	125			

* Estimated

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ No Change.



#1 - Old William Penn Highway eastbound approach



#2 - Center Road southbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Upgrade pavement marking for both intersection approaches of Old William Penn Highway as well as stop bar on minor street approaches.

Estimated Cost: \$1,000

MEDIUM-TERM RECOMMENDATIONS

- Reconstruct intersection as shown in Map 23 including:
 - Realignment of the western leg of Old William Penn Highway with the northern leg of Center Road. This improvement would result in a T-intersection with the major approaches being Old William Penn eastbound and Center Road. The minor leg would be the Old William Penn Highway westbound approach.
 - Provide an exclusive left-turn lane and one exclusive right-turn lane for the Old William Penn Highway westbound approach.
 - Widen Center Road to accommodate three travel lanes with one northbound and two southbound (an exclusive left-turn lane and a through lane to the western leg of Old William Penn Highway)
 - Realign St. Martin Drive to “T” intersection into Old William Penn Highway and narrow the width of the throat.

Estimated Cost: \$790,000



LONG-TERM RECOMMENDATIONS

- To accommodate projected traffic volumes, install a traffic signal that is interconnected with the adjacent signalized intersections proposed at Center Road and Old William Penn Highway as well as Center Road and Logans Ferry Road.

Estimated Cost: \$120,000

- Widen Old William Penn Highway to provide two travel lanes in each direction of travel between this intersection and the “T” intersection at Center Road. Right of way acquisition and utility relocation will be required to facilitate widening.

Estimated Cost: \$510,000



#3 - Old William Penn westbound approach



#4 - St. Martin Drive northbound approach

MONROEVILLE

7. Center Road at Beatty Road and Evergreen Drive

Intersection Characteristics: Unsignalized, “+” Intersection.
 Stop Controlled on the eastbound Evergreen Drive and the westbound Beatty Road approaches.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic			
		AM Peak Hour	PM Peak Hour	1997 *	2004 *		
Evergreen Drive (Municipal)	Eastbound	(B)	(D)	CNC			
	Left	5	10				
	Straight Right	10 10	10 5				
Beatty Road (County)	Westbound	(C)	(F)	2,430 (EB) 2,220 (WB)			
	Left	135	95				
	Straight Right	20 5	25 15				
Center Road (County)	Northbound	CNC					
	Left					15 (A)	60 (A)
	Straight Right					160 155	605 195
	Southbound	5,570 (NB) 5,540 (SB)		5,900 (NB) 5,870 (SB)			
	Left					10 (A)	10 (B)
Straight Right	465 10					470 20	

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ Trimmed and/or removed vegetation growth on southwest corner of the intersection to improve sight distance.



#1 - Evergreen Drive eastbound approach



#2 - Looking south at Center Road northbound approach

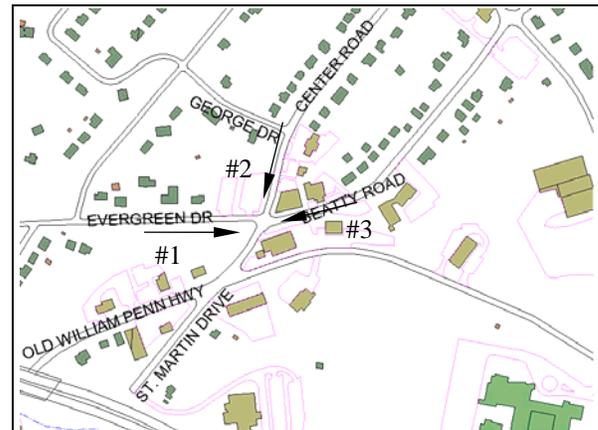
MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Upgrade pavement markings on Evergreen Drive and stop bars on the eastbound and westbound minor street approaches.

Estimated Cost: \$ 500



MEDIUM-TERM RECOMMENDATIONS

- Maintain existing two-way stop controlled intersection. Review operations and recent accident history of intersection, especially regarding left-turns from both minor street approaches during peak hour periods, to assess impacts subsequent to the redesign and possible signalization of adjacent intersections along Center Road at Old William Penn Highway and Logans Ferry Road. In conjunction with improvements proposed at the Center and Logans Ferry intersection, shown in Map 25, a No Left Turn restriction during the PM peak hour period could be implemented for the Beatty Road westbound approach.

Estimated Cost: \$ 2,400

LONG-TERM RECOMMENDATIONS

- As shown in Map 23, remove eastern leg of this intersection to create a "T" intersection with Evergreen and Center Roads. Relocate and extend Beatty Road to create an unsignalized intersection with Old William Penn Highway, approximately 500 feet east of Center Road/St. Martin Drive.

Estimated Cost: \$ 305,000



#3 - Beatty Road westbound approach

MONROEVILLE

8. Old William Penn at Mosside Boulevard, Haymaker Road and Old Haymaker Road

Intersection Characteristics: Signalized, “+” Intersection.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	PM Peak Hour	1997	2004 *
Old William Penn Highway (Municipal)	Eastbound	(D)	(C)		
	Left	65	15	4,750 (EB) *	6,000 (EB)
	Straight	100	160	4,750 (WB) *	5,200 (WB)
	Right	160	110		
	Westbound	(D)	(D)		CNC
	Left	70	70		
Mosside Boulevard/SR48 (State)	Northbound	(B)	(F)		
	Left	120	145	7,890 (SB) *	7,890 (SB)
	Straight	680	580		
Haymaker Road SR 2057 (State)	Southbound	(B)	(B)		
	Left	20	50	5,780 (NB)	6,100 (NB)
	Straight	575	665	5,320 (SB)	5,750 (SB)
	Right	30	65		

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ Installation of new traffic signal to replace the previously outdated and damaged signal equipment
- ✓ Total redesign of the intersection, included:
 - Realignment of Haymaker Road to eliminate the horizontal curve in conjunction with the widening of all intersection approaches.
 - Improvement of the intersection geometrics.
 - Widening of the roadway segment between the Parkway over-pass and Old William Penn Highway to provide two through lanes in each direction.
 - Installation of Sidewalks, Bus Turn-off area



#1 - Haymaker Road southbound approach



#2 - Old William Penn Highway westbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- None at this time.

MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Old William Penn Highway eastbound approach



#4 - Old William Penn Highway westbound approach

MONROEVILLE

9. Haymaker Road and Beatty Road

Intersection Characteristics: Unsignalized, “+” Intersection.
 Stop Controlled on all four-intersection approaches.
 Limited/insufficient sight line for vehicles on the northbound Beatty Road approach looking to the left and for the Beatty Road southbound approach looking in both directions Haymaker Road is misaligned through intersection. Existing traffic volumes warrant the installation of a signal.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	PM Peak Hour	1997	2004 *
Beatty Road (County)	Northbound	(C)	(D)		
	Left	5	25	2,430 (NB) *	2,430 (NB)
	Straight Right	125 45	170 5	2,220 (SB) *	2,250 (SB)
Beatty Road (County)	Southbound	(C)	(C)		
	Left	205	100	CNC	
	Straight	140	100		
Right	10	20			
Haymaker Road (Municipal)	Eastbound	(D)	(C)		
	Left	30	15	CNC	
	Straight	490	360		
Right	5	5			
Haymaker Road SR 2057 (State)	Westbound	(C)	(F)		
	Left	20	30	5,320 (EB)	5,750 (EB)
	Straight Right	230 140	440 150	5,780 (WB)	6,100 (WB)

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ No Change.



#1 - Haymaker Road eastbound approach



#2 - Beatty Road southbound approach

MONROEVILLE

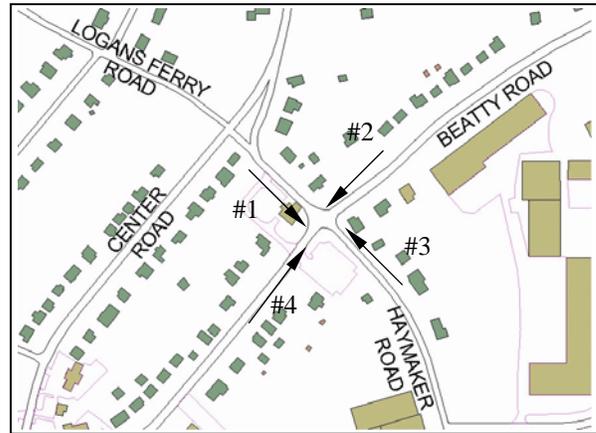


SHORT-TERM RECOMMENDATIONS

- None at this time.

MEDIUM-TERM RECOMMENDATIONS

- Reconstruct Intersection as shown in Map 25, including:
 - Widening Haymaker Road (western leg of intersection) from existing 20' width to 24 feet and transition as appropriate to accommodate improvements planned at the intersection of Center Road and Logans Ferry.
 - Widening and re-striping Haymaker Road (eastern leg of intersection) to accommodate an exclusive right-turn lane and a shared through/left-turn lane on the westbound approach. This will help to better align the through travel lanes on Haymaker Road and mitigate existing capacity constraints on the westbound intersection approach.



Estimated Cost: \$395,000

LONG-TERM RECOMMENDATIONS

- Review operations of this intersection under the existing four way stop control conditions following the intersection improvements and signalization of Center and Logans Ferry Roads. If queuing on the Haymaker Road eastbound approach becomes a problem during peak hour periods, the following mitigation strategy is suggested:
 - Assuming adequate sight distances are available following the widening and re-grading of the western leg of this intersection, remove the STOP sign on the eastbound Haymaker Road approach and install "3-WAY" placards under each remaining STOP sign together with a new "OPPOSING TRAFFIC DOES NOT STOP" sign on the westbound approach.

Estimated Cost: \$ 1,200

(OR)

- If sufficient sight distance is not available, then install a two-phase traffic signal and coordinate with adjacent signal controller at the intersection of Center Road and Logans Ferry Road.

Estimated Cost: \$ 96,000



#3 - Haymaker Road westbound approach



#4 - Betty Road northbound approach

MONROEVILLE

10. Center Road at Logans Ferry Road and Haymaker Road

Intersection Characteristics: Unsignalized, “+” Intersection with Slip Ramp.
 Stop controlled on Logans Ferry and Haymaker Roads.
 Stop controlled on Center - Haymaker Slip Ramp.
 Existing and projected traffic volumes warrant the installation of a traffic signal.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	PM Peak Hour	1997	2004
Logans Ferry Road (Municipal)	Eastbound	(B)	(D)		
	Left	5	5	1,770 (EB)	1,330 (EB)
	Straight Right	110 75	80 60	1,670 (WB)	1,720 (WB)
Haymaker Road (State)	Westbound	(B)	(E)		
	Left	5	10	5,315 (EB)	5,600 (EB)
	Straight Right (at Spur)	50 230 (B)	105 370 (B)	5,780 (WB)	6,100 (WB)
Center Road (County)	Northbound				
	Left	25 (A)	100 (A)	5,570 (NB)	5,750 (NB)
	Straight	145	525	5,540 (SB)	5,700 (SB)
	Right	5	5		
	Southbound				
	Left (at Spur)	405 (A)	325 (B)	9,040 (NB)	9,200 (NB)
Straight	440	410	9,230 (SB)	9,500 (SB)	
Right	5	5			

ACCOMPLISHMENTS SINCE 1989

√ No Change.



#1 - Logans Ferry Road eastbound approach



#2 - Center Road southbound approach, north of spur

MONROEVILLE

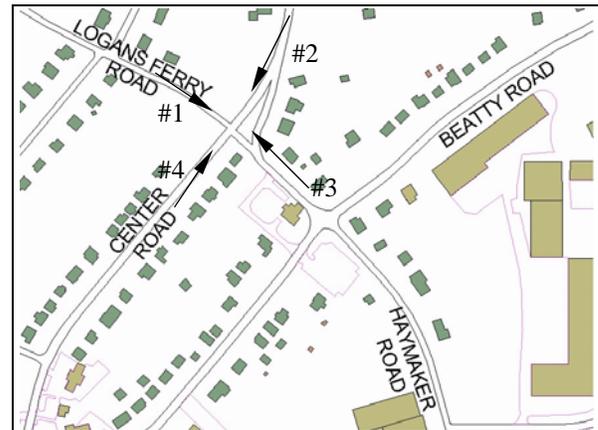


SHORT-TERM RECOMMENDATIONS

- Replace damaged guide rail along the slip ramp.
Estimated Cost: \$9,000

MEDIUM-TERM RECOMMENDATIONS

- Reconstruct the intersection as shown in Map 25 and provided in Intersection 9, including:
 - Widening the westbound Haymaker Road approach to accommodate an exclusive right turn lane (approx. 150 feet in length) and a shared through/left-turn lane
 - Widening Center Road to provide a three-lane roadway cross section to allow for opposing left-turn lanes. The left-turn lane on the southbound Center Road approach should be designed for 300 feet of storage capacity while the northbound left-turn lane should be approximately 150 feet long.
 - Convert the slip ramp into a private access drive for the two existing residences. Cul de sac the southern end of the existing slip ramp and realign the northern terminus to "T" into Center Road.**Estimated Cost: \$725,000**
- Install a new four-phase signal at the intersection to enhance safety and provide sufficient capacity for existing and future traffic demand. This signal controller should be capable of being inter connected with adjacent signals through out the Center Road/Old William Penn corridor, and also be equipped with pedestrian push buttons and indications, as well as an Opticom emergency vehicle preemption system.
Estimated Cost: \$95,000



LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Haymaker Road westbound approach, east of spur



#4 - Center Road northbound approach

MONROEVILLE

11. Beatty Road and Cooper Road at CCAC Driveway

Intersection Characteristics: Unsignalized “+” Intersection.
 Stop controlled on all four-intersection approaches.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	PM Peak Hour	1997 *	2004 *
Beatty Road (County)	Eastbound	(B)	(C)	CNC	
	Left	225	60		
	Straight Right	80 100	290 70		
Cooper Road (Municipal)	Westbound	(C)	(A)	2,640 (EB) 2,800 (WB) 2,720 (EB) 2,850 (WB)	
	Left	30	30		
	Straight Right	285 60	110 10		
Beatty Road (County)	Northbound	(D)	(C)	CNC	
	Left	65	110		
	Straight Right	65 20	25 65		
CCAC Driveway (Private)	Southbound	(A)	(A)	CNC	
	Left	10	5		
	Straight Right	5 10	5 10		

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

√ No Change.



#1 - Beatty Road eastbound approach



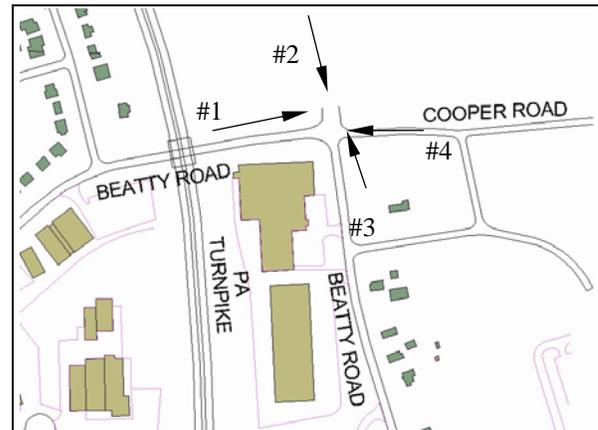
#2 - CCAC Driveway southbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Install new FOUR-WAY placards below each STOP sign.
Estimated Cost: \$ 250
- Trim vegetation along eastbound Beatty Road approach to improve visibility of STOP sign.
Estimated Cost: \$ 400
- Remove misplaced STOP sign and replace with a new YIELD sign for the channelized right turns out of the CCAC southbound approach. Place YIELD sign a minimum of two feet from edge of curb.
Estimated Cost: \$ 400



MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG TERM RECOMMENDATIONS

- Review traffic conditions at this intersection and determine if signalization is warranted.
Estimated Cost: \$5,500



#3 - Beatty Road northbound approach



#4 - Cooper Road westbound approach

MONROEVILLE

12. Old Frankstown Road and Logans Ferry Road

Intersection Characteristics: Unsignalized, "T" Intersection.
 Stop controlled on northbound Logans Ferry Road.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	PM Peak Hour	1997	2004
Old Frankstown Road SR 2066 (State)	Eastbound Straight	65	85	CNC	
	Right	50	70		
	Westbound Left	30 (A)	30 (A)	CNC	
	Straight	90	120		
Logans Ferry Road (Municipal)	Northbound	(A)	(B)	CNC	
	Left	40	85		
	Right	20	30		

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

√ No Change.

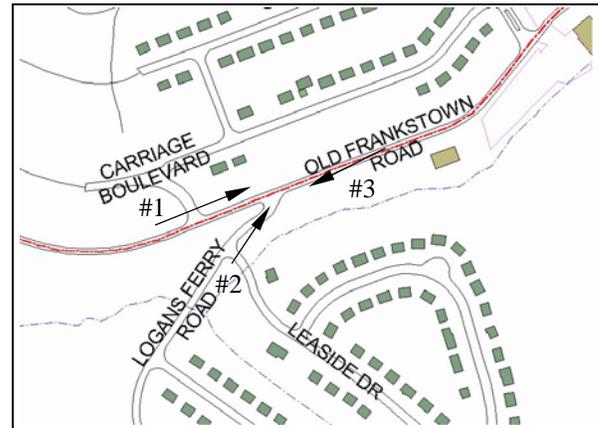


#1 - Old Frankstown Road eastbound approach



#2 - Logans Ferry Road northbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Re-stripe and upgrade pavement markings and stop bar on Logans Ferry Road.
Estimate: \$ 400

MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Old Frankstown Road westbound approach

MONROEVILLE

13. Old Frankstown Road and Cooper Road

**Intersection Characteristics: Unsignalized, "T" Intersection.
Stop controlled on northbound Cooper Road**

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997 *	2004 *
Old Frankstown Road SR 2066 (State)	Eastbound Straight	45	85	CNC	
	Right	35	5		
	Westbound Left	475 (A)	135 (A)	2,820 (EB)	2,950 (EB)
	Straight	80	55	3,150 (WB)	3,300 (WB)
Cooper Road (Municipal)	Northbound	(A)	(A)	2,640 (NB) 2,800 (SB)	
	Left	5	5		
	Right	70	360		

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

√ No Change.



#1 - Old Frankstown Road eastbound approach



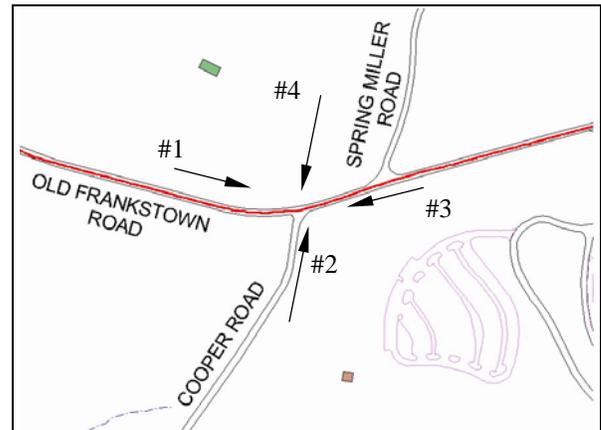
#2 - Cooper Road northbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Install STOP AHEAD sign for the Cooper Road northbound approach.
Estimated Cost: \$ 250
- Install curve warning signs for both eastbound and westbound Old Frankstown Road west of this intersection.
Estimated Cost: \$ 500



MEDIUM-TERM RECOMMENDATIONS

- Install a new stop sign on the eastbound approach of Old Frankstown Road. This will create a two-way stop at this T-intersection, promoting better traffic flow for the heavy left turn movement from Old Frankstown Road to Cooper Road during the AM Peak Hour. Install supplemental "TWO-WAY" placards below both STOP signs as well as a sign for Old Frankstown Road eastbound approach that states OPPOSING TRAFFIC DOES NOT STOP.
Estimated Cost: \$ 1,250

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Old Frankstown Road westbound approach



#4 - Looking south at Cooper Road northbound approach

MONROEVILLE

14. Old Frankstown Road at Hochberg Road and Lindsey Lane

Intersection Characteristics: Two offset, unsignalized, “T” Intersections (approx. 60’ apart)
 Stop controlled on Hochberg Road and Lindsey Lane.
 Unacceptable sight distance looking to left from Lindsey Lane.
 Operational problems were observed during peak hour periods regarding vehicles backing from one “T” intersection through the adjacent “T” intersection.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	PM Peak Hour	1997 *	2004 *
Old Frankstown Road SR 2066 (State)	Eastbound				
	Left	15 (A)	235 (A)	2,820 (EB)	2,950 (EB)
	Straight	175	345	3,150 (WB)	3,300 (WB)
	Right	35	75		
	Westbound				
	Left	60 (A)	30 (A)		CNC
	Straight	285	195		
	Right	5	25		
Hochberg Road (Municipal)	Northbound				
	Left	20	15		CNC
	Straight	10	140		
	Right	45	65		
Lindsey Lane (County)	Southbound				
	Left	15	15		CNC
	Straight	65	25		
	Right	205	55		

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

√ No Change.



#1 - Hochberg Road northbound approach



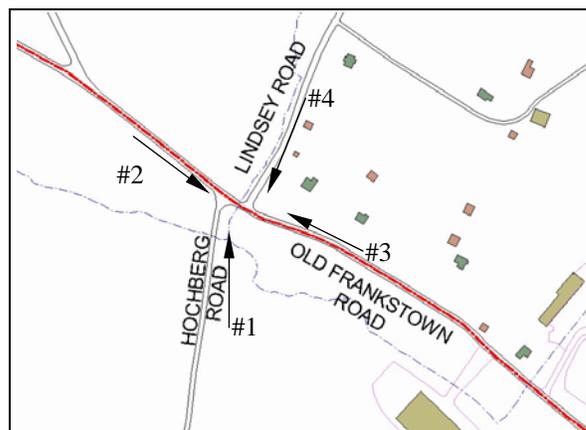
#2 - Old Frankstown Road eastbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Install a “STOP” sign on the westbound approach of Old Frankstown Road with a supplemental “OPPOSING TRAFFIC DOES NOT STOP” sign to mitigate existing safety and operational concerns. Also provide a “STOP AHEAD” sign on the Old Frankstown Road westbound approach.
Estimated Cost: \$ 900
- Install “2-WAY” placard under both “STOP” signs.
Estimated Cost: \$ 300



MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG-TERM RECOMMENDATIONS

- Relocate Lindsey Lane to the east, aligning with Hochberg Road to create a plus intersection. Re-grade and trim vegetation on the northeast corner of the existing Old Frankstown Road and Lindsey Lane intersection to gain additional sight distance for vehicles exiting relocated Lindsey Lane. Realignment will provide additional intersection capacity and improve operations.
Estimated Cost: \$1,100,000 (Joint Municipal Project)



#3 - Old Frankstown Road westbound approach



#4 - Lindsey Lane southbound approach

MONROEVILLE

15. William Penn Highway/Business Route 22 at Mall Boulevard and Holiday Center

Intersection Characteristics: Signalized, “+” Intersection.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997	2004
Business Route 22 SR 2048 (State)	Eastbound	(B)	(D)	CNC	
	Left	30	85		
	Straight	460	1165		
	Right	20	20		
	Westbound	(B)	(C)	CNC	
	Left	150	290		
Straight	755	775			
Right	95	150			
Mall Boulevard. (Private)	Northbound	(C)	(D)	CNC	
	Left	30	70		
	Straight	40	70		
Right	65	360			
Holiday Center (Private)	Southbound	(D)	(E)	CNC	
	Left	20	130		
	Straight	20	60		
Right	30	90			

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ Modified Mall Boulevard to include:
 - Removal of island on the northbound approach that separated the two egress travel lanes.
 - Removal of island separating two ingress lanes.
 - Improved the vertical profile of Mall Boulevard, as well as the turning radius on southeast corner.
- ✓ Modified lane arrangement of Holiday Center Drive to provide one ingress lane and three egress lanes rather than the previous two lane ingress and egress configuration.
- ✓ Traffic signal timing was revised to give more green time to Business Route 22 traffic movements.
- ✓ Installed sidewalks along the southwest corner of the intersection.



#1 - Aerial view looking to the north



#2 - Business 22 eastbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- None at this time.

MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG-TERM RECOMMENDATIONS

- Widen Business Route 22 to accommodate dual left turn lanes on the westbound intersection approach for accessing Mall Boulevard. Reconfigure Holiday Center Drive for two ingress and egress lanes to allow for opposing left turns to be executed simultaneously from Business Route 22. Modification of traffic signal installation will include signal pole, mast arm and controller relocation, re-wiring, additional signal head and timing adjustments. Right-of-way acquisition and utility relocation will be necessary. Implementation of this improvement should follow the Northern Pike Bridge replacement project.

Estimated Cost: \$ 1,600,000



#3 - Mall Boulevard northbound approach



#4 - Looking north at Holiday Center southbound approach

MONROEVILLE

16. William Penn Highway/Business Route 22 and Northern Pike (West)

Intersection Characteristics: Signalized, “T” Intersection.
Signal Controller is coordinated with four adjacent signals along Business Route 22 at Mall Boulevard, Value City/Chuck E. Cheese Driveways, Duff Road and Center/Stroschein Road.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	Peak Hour PM	1997	2004
Business Route 22 SR 2048 (State)	Eastbound	(A)	(B)	CNC	
	Left	50	55		
	Straight	500	1360		
	Westbound	(B)	(B)	CNC	
Straight	955	1030			
Right	400	400			
Northern Pike SR 2050 (State)	Southbound	(C)	(D)	CNC	
	Left	150	260		
	Right	20	50		

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ Traffic signal equipment upgraded to provide pedestrian push buttons, Walk/Don't Walk signal indications and signal timing adjustments.
- ✓ Opticom emergency vehicle preemption system was also installed as part of signal upgrade.
- ✓ Enhanced progression of traffic along William Penn Highway (Business Route 22) by incorporating signal controller into a closed loop interconnect system with four adjacent intersections.
- ✓ Added Northern Pike (West) Right Turn Green Arrow during the Business Route 22/William Penn Highway Left Turn Phase.
- ✓ Islands and channelization were altered and an additional eastbound through lane was striped out as part of a PENNDOT resurfacing project.

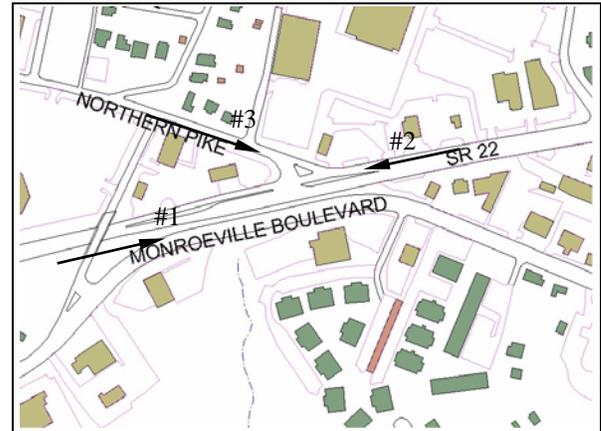


#1 - Business Route 22 eastbound approach



#2 - Business Route 22 westbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Upgrade all pavement markings including stop bars, pedestrian crosswalks and lane arrows.
Estimated Cost: \$ 1,450

MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG TERM RECOMMENDATIONS

- None at this time.



#3 - Northern Pike southbound approach

MONROEVILLE

17. William Penn Highway/ Business Route 22 and Duff Road

Intersection Characteristics: Signalized, “T” Intersection
Signal Controller is coordinated with four adjacent signals along Route 22 at Mall Boulevard, Value City/Chuck E. Cheese Driveways, Northern Pike and Center/Stroschein Road.
Eleven reportable accidents during past three years
(No identifiable accident trends noted)

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	Peak Hour PM	1997	2004
Business Route 22 SR 2048 (State)	Eastbound	(B)	(C)	CNC	
	Left	150	340		
	Straight	510	1250		
	Westbound	(B)	(C)	CNC	
Straight	780	980			
Right	45	105			
Duff Road (Municipal)	Southbound	(B)	(C)	CNC	
	Left	60	60		
	Right	430	430		

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ Traffic signal was upgraded including the addition of a right turn green arrow phasing for Duff Road during left turn phase off of Route 22 plus the installation of pedestrian push buttons and Walk/Don't Walk signal indications, Opticom Emergency Vehicle Preemption Equipment, as well as replaced some vehicle signal indications. Traffic signal timing was adjusted to provide additional advance green time for eastbound left-turns during the PM peak hour. Also enhanced progression of traffic along William Penn Highway (Business Route 22) by incorporating signal controller into a closed loop interconnect system with four adjacent intersections.
- ✓ As part of a PENNDOT resurfacing project, an additional eastbound through lane was added to William Penn Highway/Business Route 22.
- ✓ Existing traffic signal was replaced with the Sheetz development, to accommodate anticipated site traffic. The main site access is directly opposite Duff Road and a dedicated left turn lane has been striped out for the westbound Business Route 22 intersection approach.



#1 - William Penn Highway eastbound approach



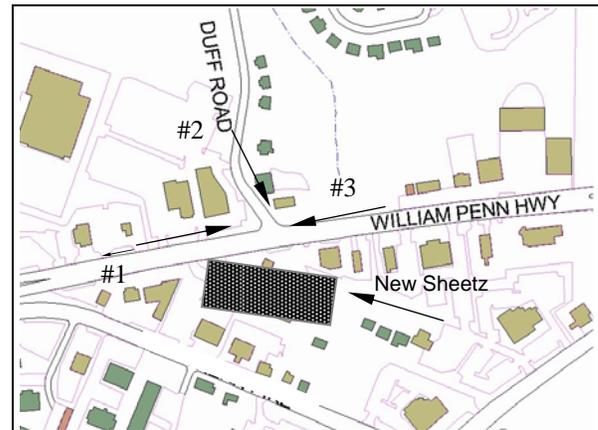
#2 - Duff Road southbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- None at this time.



MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG-TERM RECOMMENDATIONS

- Construct an extension of Duff Road between Business Route 22 and Monroeville Boulevard to provide another connection between these two major east/west arterials while helping to reduce traffic on Stroschein Road between these arterials. Signalize the new intersection and widen Monroeville Boulevard to provide an eastbound left-turn lane. Also revise the signal installation at Business Route 22 as appropriate. Right of way acquisition is imperative to the success of this roadway network improvement.

Estimated Cost: \$ 975,000



#3 - William Penn Highway westbound approach



Aerial view of Route 22 and Duff Road Intersection

MONROEVILLE

18. William Penn Highway/Business Route 22 at Center Road and Stroschein Road

Intersection Characteristics: Signalized, “+” Intersection.
Signal Controller is coordinated with four adjacent signals along Route 22 at Mall Boulevard, Value City/Chuck E. Cheese Driveways, Northern Pike and Duff Road.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	PM Peak Hour	1997 *	2004 *
Business Route 22 SR 2048 (State)	Eastbound	(D)	(D)	CNC	
	Left	75	205		
	Straight	400	1020		
	Right	65	150	17,460 (EB) 21,600 (EB)	
	Westbound	(D)	(E)		
	Left	170	195		
Straight	760	825	8,200 (NB) 9,360 (NB) 8,500 (SB) 11,850 (SB)		
Right	80	85			
Stroschein Road (County)	Northbound	(C)	(D)	8,200 (NB) 9,360 (NB) 8,500 (SB) 11,850 (SB)	
	Left	120	275		
	Straight	200	395		
Center Road (County)	Right	175	210	CNC	
	Southbound	(D)	(E)		
	Left	150	180		
	Straight	205	295		
	Right	115	85		

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ Overhead lane control signs installed on the northbound Stroschein Road approach allowing dual left turns to Business Route 22. Traffic signal was upgraded including the installation of pedestrian push buttons and Walk/Don't Walk signal indications, Opticom emergency vehicle preemption equipment, as well as replaced some vehicle signal indications. Also enhanced progression of traffic along William Penn Highway (Business Route 22) by incorporating signal controller into a closed loop interconnect system with four adjacent intersections.
- ✓ Islands and channelization were altered and an additional eastbound through lane was striped out as part of a PENNDOT resurfacing project.



#1 - Stroschein Road northbound approach



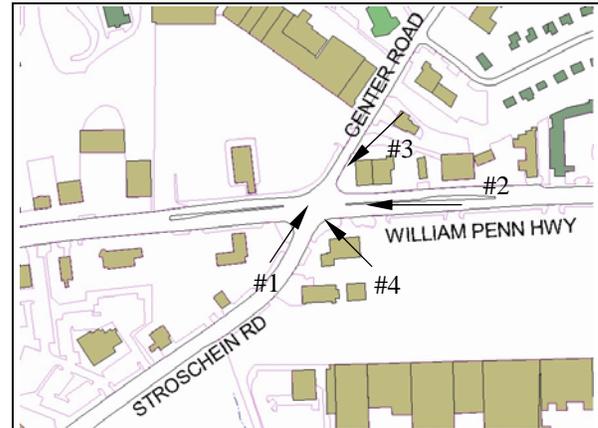
#2 - William Penn Highway westbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Upgrade all pavement markings including stop bars, pedestrian crosswalks, lane arrows and tracking lines for northbound Stroschein Road dual left turn through intersection area.
Estimated Cost: \$ 1,800



MEDIUM-TERM RECOMMENDATIONS

- Widen Center Road to accommodate four travel lanes between Business Route 22 and Kenmar Drive with the following lane arrangement:
 - One northbound travel lane and three southbound lanes (an exclusive left-turn lane, one through lane and a shared through/right-turn lane) between Business Route 22 and the Jonnet Plaza Driveway;
 - Two travel lanes southbound and one travel lane northbound between the Jonnet Plaza Driveway and Kenmar Drive.Right of way acquisition and utility relocation along Center Road will be required to facilitate widening
Estimated Cost: \$ 550,000.
- Upgrade signal to accommodate intersection improvements to include signal phasing and timing changes, re-wiring, provide new signal supports for the entire intersection and overhead lane control for northbound Center Road and for both approaches on Business Route 22.
Estimated Cost: \$ 90,000

LONG-TERM RECOMMENDATIONS

- Investigate and implement ways to reduce traffic on Stroschein Road (i.e. see improvements listed for the adjacent intersections along Old William Penn Highway at McMasters Drive and Duff Road).



#3 - Center Road southbound approach



Aerial view looking northbound

MONROEVILLE

19. Center Road and Garden City Drive

Intersection Characteristics: Unsignalized, "T" Intersection.
 Stop controlled on the Garden City Drive and the Center Road Plaza Driveway approaches.
 No defined access point(s) along Center Road to/from the Center Road Plaza parking area (potential safety concern as traffic volumes increase).

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997 *	2004 *
Center Road (County)	Northbound				
	Left	85 (A)	245 (A)		
	Straight	270	540		
	Right	25	30		
	Southbound				
	Left	30 (A)	10 (A)	5,700 (NB)	6,040 (NB)
Straight	315	370	5,700 (SB)	6,040 (SB)	
Right	10	10			
Garden City Drive (Municipal)	Eastbound	(C)	(E)		
	Left	15	5	2,400 (EB)	2,475 (EB)
	Straight	15	10	2,400 (WB)	2,475 (WB)
	Right	195 (B)	195 (B)		
Plaza Driveway (Private)	Westbound	(C)	(F)		
	Left	25	25		
	Straight	15	15		
	Right	35	20		

* Estimated.

ACCOMPLISHMENTS SINCE 1989

- √ Traffic islands were constructed on the Garden City Drive eastbound approach to safely and efficiently guide traffic flow.



#1 – Garden City Drive Eastbound approach



#2 – Center Road Southbound approach.

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Re-stripe the Center Road northbound and southbound approaches to the intersection to provide for a 10' wide left-turn lane and an 11' wide shared through/right-turn lane. This can be done within the existing roadway geometry.
Estimated Cost: \$ 2,450



MEDIUM-TERM RECOMMENDATIONS

- Reconstruct intersection to include:
 - Extending the four lane roadway cross section of Center Road from just south of Kenmar Drive to Garden City Drive.
 - The northbound Center Road approach should include an exclusive left-turn lane into Garden City Drive and a shared through/right-turn lane. There would be two southbound travel lanes, one of which is a continuation of the channelized right-turn from Garden City Drive.
 - The southbound Center Road approach should include an exclusive left-turn lane into the mini shopping plaza and a shared through/right-turn lane. There would be an adjoining additional northbound travel lane.
 - Constructing a raised curb for the parking lot of the mini shopping plaza along Center Road, placing the curb cut to align the main entrance/exit access of the plaza with Garden City Drive. Provide a minimum width right-turn enter only access driveway from northbound Center Road into the plaza to facilitate truck movements and vehicles entering from the downhill grade.

Utility relocation along Center Road will be required to facilitate widening and possibly some limited right of way acquisition.

Estimated Cost: \$ 365,000

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 – Center Road Northbound approach.

MONROEVILLE

20. Center Road and My Way

Intersection Characteristics: Unsignalized, "T" Intersection.
 Stop Controlled on the westbound approach of My Way.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997 *	2004 *
Center Road (County)	Northbound Straight	(A) 345	(A) 565	CNC	
	Right	5	0		
	Southbound Left	(A) 10 (A)	(A) 10 (A)	4,890 (EB)	5,180 (EB)
	Straight	365	390	6,550 (WB)	6,940 (WB)
My Way (Municipal)	Westbound	(B)	(B)	CNC	
	Left	5	0		
	Right	10	55		

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- √ Installed curve warning signs and intersection warning signs on the Center Road approaches to the intersection.

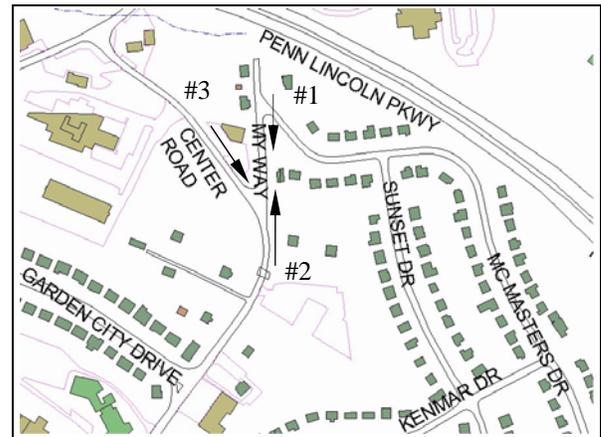


#1 - My Way westbound approach



#2 - Center Road northbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Construct an island on the westbound approach separating right and left turning vehicles exiting My Way to reduce the width of the intersection and facilitate traffic movement into and out of My Way.
Estimated Cost: \$ 6,000

MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Center Road southbound approach

MONROEVILLE

21. William Penn Highway/Business Route 22 at McMasters Drive and Lowes Drive

Intersection Characteristics: Signalized, “+” Intersection.
Traffic Signal is coordinated with adjacent signal controller at
Mosside Boulevard /Route 48 and Business Route 22.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997 *	2005 *
Business Route 22 SR 2048 (State)	Eastbound	(A)	(B)	17,460 (EB)	21,600 (EB)
	Left	5	40		
	Straight	705	1465		
	Right	65	60	17,240 (WB)	18,200 (WB)
	Westbound	(B)	(B)		
	Left	40	105		
Straight	1070	1135	CNC	CNC	
Right	20	40			
Northbound	(D)	(E)			CNC
Left	35	85			
Straight	10	65			
McMasters Drive (Municipal)	Right	55	145	CNC	CNC
	Southbound	(D)	(E)		
	Left	25	65		
	Straight	15	25		
	Right	20	30		

* Estimated.

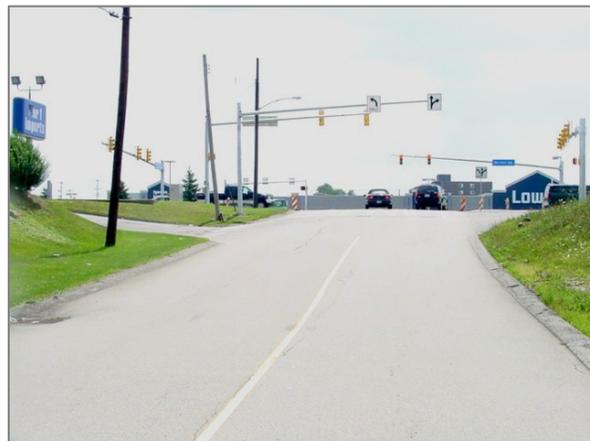
(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ Traffic signal heads adjusted for Business Route 22 eastbound approach.
- ✓ Installed Opticom Emergency Vehicle Preemption Emergency Equipment.
- ✓ Islands and channelization were altered and an additional eastbound through lane was striped out as part of a PENNDOT resurfacing project.
- ✓ New traffic signal equipment installed during 2004 as a part of Lowes land development mitigation.



#1 - Lowes Drive northbound approach



#2 - McMasters Drive southbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- None at this time.

MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG-TERM RECOMMENDATIONS

- Pursue Multi-Municipality Study; Wilkins, Monroeville and Murrysville, to coordinate signal timings along the Route 22 Corridor.
Funding: State Grant; Municipalities; and Developers.



#3 - Business Route 22 eastbound approach



#4 - Looking west at Route 22 eastbound approach

MONROEVILLE

22. William Penn Highway/Business Route 22 and Mosside Boulevard/Route 48

Intersection Characteristics: Signalized, “+” Intersection.
Traffic Signal is coordinated with adjacent signal controllers at Mosside Boulevard/Route 48 and Holiday Lane as well as Business Route 22 at McMasters and Lowes Drives.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997 *	2005 *
Business Route 22 SR 2048 (State)	Eastbound	(D)	(E)	17,240 (WB)	18,200 (WB)
	Left	160	310		
	Straight	450	1025		
	Right	140	350	CNC	
	Westbound	(E)	(E)		
	Left	465	430		
Straight	800	770			
Right	20	100			
Mosside Boulevard SR 0048 (State)	Northbound	(D)	(D)	17,240 (NB)	19,100 (NB)
	Left	170	190		
	Straight	560	770		
	Right	330	315	16,560 (SB)	17,100 (SB)
	Southbound	(E)	(E)		
	Left	95	155		
Straight	795	865			
Right	135	210			

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ As part of a PENNDOT resurfacing project along Business Route 22, islands were reconfigured.
- ✓ Provided dual left-turn lanes for the westbound Business Route 22 approach.
- ✓ Upgraded signal equipment including the installation of Opticom emergency vehicle preemption equipment.



#1 - Aerial view of intersection looking toward the south



#2 - Route 48 southbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Widen the westbound approach of Route 22 to provide an exclusive right turn lane (approximately 150 feet long) and upgrade signal to provide right-turn overlap phase with Route 48 left-turn phase.

Estimated Cost: \$207,000

MEDIUM-TERM RECOMMENDATIONS

- As shown in Map 16, widen the southbound approach of Route 48 to provide an additional exclusive right-turn lane from the Parkway off-ramp to Route 22 westbound. The proposed lane arrangement for the Route 48 approach would include for Route 48 an exclusive left-turn lane and one through lane; Signage will be required indicating "No Left Turn" for Ramp traffic at Route 22 and "No Right Turn" at Route 22 for Route 48 traffic. a shared through/right-turn lane and the new exclusive right-turn lane. The traffic signal would need to be modified by relocating the signal support structure on the northwest quadrant as well as replacing the overhead lane control mast arm on the southbound Route 48 approach.

Estimated Cost: \$1,100,000

- Relocate the main entrance/exit driveway of the Palace Inn, or future tenant to the south, aligning it with Holiday Lane and further connecting to service road behind Lowes, where all turning movements would occur at a signalized intersection. Modify the existing traffic signal accordingly. This new driveway would be the start of the recommended access road behind Miracle Mile Shopping Center. Restrict the existing Palace Inn driveway to right-turns in and right-turns out.

Estimated Cost: \$1,050,000 (Includes driveway relocation only)

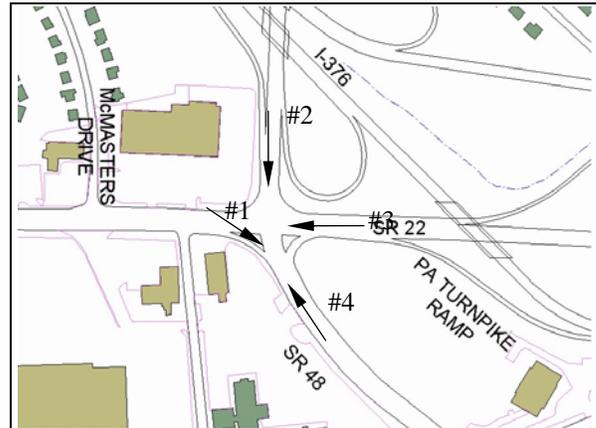
- On the westbound approach, widen Route 22 to provide a 150-foot exclusive, right turn lane onto Route 48.

Estimated Cost: \$200,000

LONG-TERM RECOMMENDATIONS

- Pursue Multi-Municipality Study; Wilkins, Monroeville and Murrysville, to coordinate signal timings along the Route 22 Corridor.
- Explore design options to improve access to this intersection from the Parkway exit and Turnpike exit to relieve congestion and delay while enhancing public safety.

Funding: State Grant; Municipalities; and Developers.



#3 - looking to the west at the Route 22 eastbound approach



#4 - Northbound Moss Side Boulevard approach

MONROEVILLE

23. William Penn Highway/Business Route 22 and PA Turnpike Off-Ramp

Intersection Characteristics: Yield Controlled Ramp accessing westbound Business Route 22.

Observations indicate a potential for westbound Route 22 traffic to stack past the off-ramp during peak hour periods, blocking southbound traffic flow from the ramp.

Present design requires Turnpike Off-Ramp traffic destined to southbound Route 48 weave across two lanes of Route 22 traffic within 500 feet in order to enter the westbound dual left-turn lanes. This maneuver will become increasingly more difficult to execute as traffic and development within the Route 22 and Route 48 corridors (i.e. the Pitcairn Rail Yard industrial development) continue to grow.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997 *	2005 *
Business Route 22 SR 2048 (State)	Westbound				
	Straight	570	765	9,910 (WB)	10,500 (WB)
PA Turnpike Off-Ramp (PA Turnpike Commission)	Southbound				
	Straight	710	475	7,320 (SB)	7,760 (SB)

* Estimated.

ACCOMPLISHMENTS SINCE 1989

√ No Change.



#1 - Turnpike Off-Ramp southbound approach

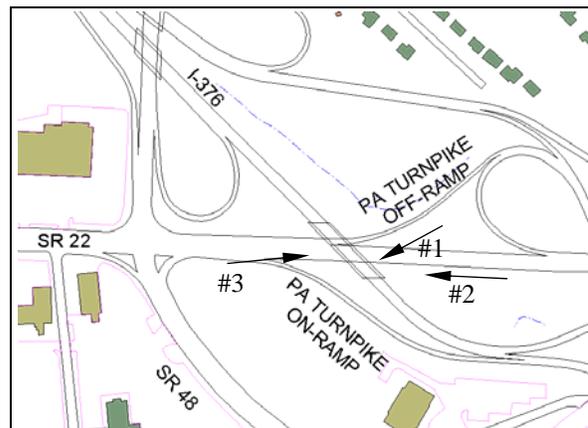


#2 - Business Route 22 westbound approach

MONROEVILLE

SHORT-TERM RECOMMENDATIONS

- Initiate discussions between the Pennsylvania Turnpike Commission, PENNDOT, and the municipality to develop improvement plans that address the potential safety concerns surrounding traffic queues on the Turnpike Off-Ramp and weaving between the off-ramp and the westbound Route 22 dual left-turn lanes.



MEDIUM-TERM RECOMMENDATIONS

- As shown in Map 16, plans should consider signalization of the intersection, coordination with signal phasing at the Business Route 22 / Route 48 intersection, installation of loop detectors on the ramp to provide signal preemption, and widening the ramp to two lanes to maximize vehicle queuing capacity.
Estimated Cost: \$ 475,000

LONG-TERM RECOMMENDATIONS

- Pursue Multi-Municipality Study; Wilkins, Monroeville and Murrysville, to coordinate signal timings along the Route 22 Corridor.
Funding: State Grant; Municipalities; and Developers.
- Explore design options to improve access to this intersection from the Parkway exit and Turnpike exit to relieve congestion and delay while enhancing public safety.



#3 - Looking east at the Off-Ramp from Route 22 eastbound



Aerial View of Turnpike Off-Ramp/Route 48/Route 22 westbound weaving area

MONROEVILLE

24. William Penn Highway/Route 22 at Old William Penn Highway and Private Driveway

**Intersection Characteristics: Signalized, “+” Intersection.
Opticom Emergency Vehicle Preemption Equipment.**

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	PM Peak Hour	1997	2005*
William Penn Highway SR 0022 (State)	Eastbound	(B)	(D)	CNC	29,120 (EB) 27,300 (WB)
	Left	160	280		
	Straight Right	1195 35	2140 10		
	Westbound	(D)	(E)	CNC	
	Left	15	5		
	Straight Right	1980 230	1630 220		
Driveway (Private)	Northbound	(D)	(D)	CNC	
	Left	5	35		
	Straight Right	5 5	10 5		
Old William Penn (Municipal)	Southbound	(D)	(E)	CNC	
	Left	110	265		
	Straight Right	10 130	5 210		

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ Upgraded traffic signal equipment and operation timing plan. Modification to the intersection geometry provided a westbound Route 22 right-turn slip ramp to Old William Penn Highway. Also the southern leg of this four way intersection was added to provide signalized access to the frontage road servicing the car dealerships.
- ✓ Signal Controller interconnected to adjacent intersection at Cochran Drive and Elliott Road via spread spectrum radio to provide for progression of traffic along Route 22.



#1 - Route 22 eastbound approach



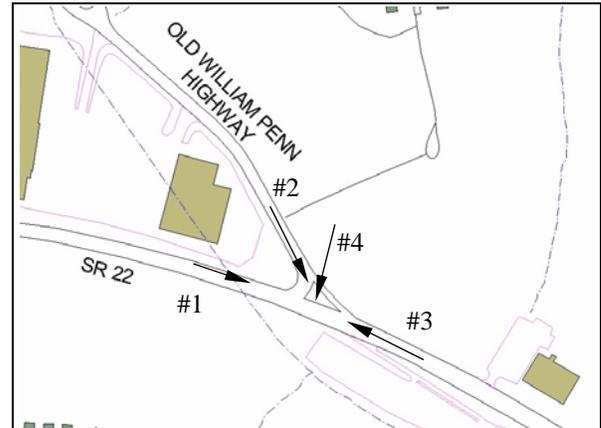
#2 - Old William Penn southbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Adjust existing signal timings by increasing traffic signal cycle lengths during the peak hour periods to reduce congestion and provide more time for vehicles traveling Route 22.
Estimated Cost: \$1,800



MEDIUM-TERM RECOMMENDATIONS

- Construct an exclusive right-turn lane on the westbound Route 22 approach, maintaining existing channelization to Old William Penn Highway.
Estimated Cost: \$280,000

LONG-TERM RECOMMENDATIONS

- Add a third lane to Route 22 in both directions of travel between the Pennsylvania Turnpike and Golden Mile Highway/Route 286 to accommodate future traffic demands. The additional lane westbound would continue to the ramp for the Parkway while the eastbound lane would begin approximately 350 feet prior to the Old William Penn intersection.
Estimated Cost: \$1,800,000 (for one additional lane westbound only)
- Pursue Multi-Municipality Study; Wilkins, Monroeville and Murrysville, to coordinate signal timings along the Route 22 Corridor.
Funding: State Grant; Municipalities; and Developers.



#3 - Route 22 westbound approach



#4 - Looking south at the frontage road eastbound approach

MONROEVILLE

25. Old William Penn Highway at Beatty Road and Private Driveway

**Intersection Characteristics: Unsignalized, “+” Intersection.
Stop Controlled on all four intersection approaches**

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour	1997	2005*
Old William Penn (Municipal)	Eastbound	(A)	(A)		
	Left	60	70	3,110 (EB)	3,200 (EB)
	Straight	130	145	3,370 (WB)	3,470 (WB)
	Right	10	45		
	Westbound	(B)	(C)		
	Left	5	25	CNC	
Plaza Driveway (Private)	Northbound	(A)	(B)		
	Left	20	70	CNC	
	Straight	20	75		
Beatty Road (County)	Right	25	40		
	Southbound	(C)	(B)		
	Left	150	150	3,275 (NB)	3,370 (NB)
	Straight	25	30	3,075 (SB)	3,170 (SB)
	Right	80	40		

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

√ No Change.

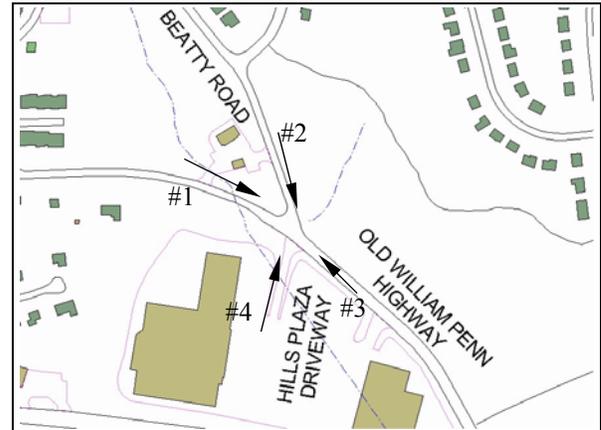


#1 - Old William Penn Highway eastbound approach



#2 - Beatty Road southbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Install “4-WAY” placards under each STOP sign.
Estimated Cost: \$ 500

MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Old William Penn Highway westbound approach



#4 - Plaza Driveway northbound approach

MONROEVILLE

26. William Penn Highway/Route 22 and Northern Pike (East)

Intersection Characteristics: Signalized, “T” Intersection.
 Signal controller coordinated along Route 22 with adjacent intersection controller at Northern Pike via a closed loop system.
 Westbound Route 22 approach left-turn lane capacity is exceeded during peak traffic flow periods.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997	2005
William Penn Highway SR 0022 (State)	Eastbound	(C)	(E)	CNC	
	Straight Right	860 25	1645 155		
	Westbound	(B)	(C)	CNC	
Left Straight	675 (D) 1740	500 (F) 1190			
Northern Pike SR 2054 (State)	Northbound	(B)	(E)	CNC	
	Left Right	50 355	50 660		

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ Traffic signal was installed at this intersection. The signalization improved intersection operations and allowed for left turns from Northern Pike to westbound Route 22.
- ✓ Traffic movements and volumes were monitored and reviewed to develop and implement optimal signal timing plans for the two signal interconnect operation.
- ✓ Installed Opticom Emergency Vehicle Preemption Emergency Equipment.



#1 - Route 22 eastbound approach



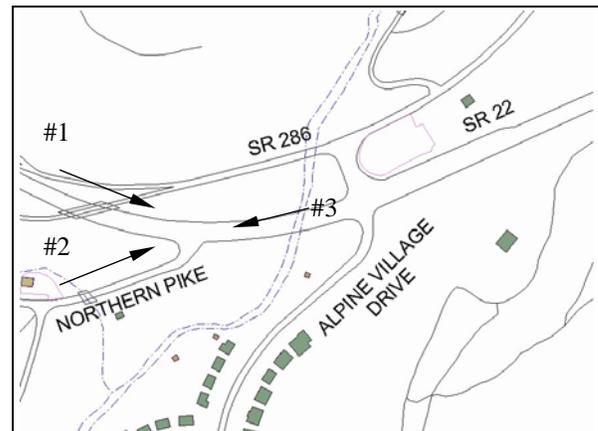
#2 - Northern Pike (East) northbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Municipal representation, involvement and coordination during the preliminary and final design portions of the Route 286 roadway widening and improvement project as this affects the Northern Pike/Route 22 intersection. This is especially important in the development of alternative interchange access schemes where Route 22 and Route 286 meet.



MEDIUM-TERM RECOMMENDATIONS

- To reduce congestion during peak hour periods and enhance safety in this area the goal of the Municipality should include the removal of this existing signalized intersection as well as, the removal or simplification of the intersection of Route 22 and Alpine Village Drive/Route 286 Connector (i.e. creating a “T” intersection by removing the Route 286 connector). Some optional conceptual interchange scenarios are illustrated in Section V.

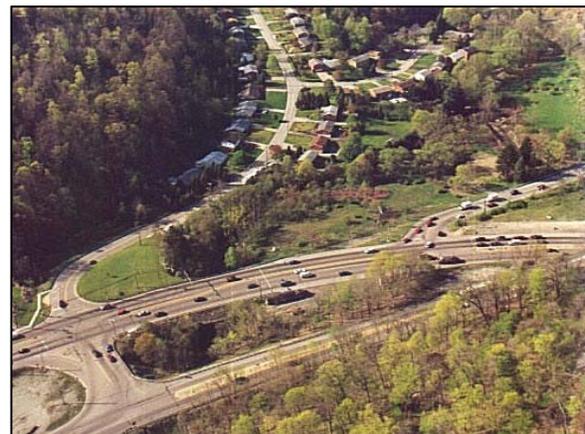
Estimated Cost: Preliminary & Final Design included in PENNDOT Budget. However, currently no moneys are available for the construction of the interchange. Construction Budget for interchange is dependent on scope of improvement.

LONG-TERM RECOMMENDATIONS

- Pursue Multi-Municipality Study; Wilkins, Monroeville and Murrysville, to coordinate signal timings along the Route 22 Corridor.
Funding: State Grant; Municipalities; and Developers.



#3 - Route 22 westbound approach



#4 - Aerial View looking toward the south

MONROEVILLE

27. William Penn Highway/Route 22 at Route 286 Connection and Alpine Village Drive

Intersection Characteristics: Signalized, “+” Intersection.
 Signal controller coordinated along Route 22 with adjacent intersection controller at Northern Pike via a closed loop system.
 Eastbound Route 22 Left-turn lane capacity is exceeded during peak traffic flow periods.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997	2005*
William Penn Highway SR 0022 (State)	Eastbound	(C)	(D)	CNC	
	Left	190 (F)	140 (C)		
	Straight	1010	2085		
	Right	20	80	21,650 (EB) 22,950 (EB) 21,040 (WB) 22,300 (WB)	
	Westbound	(C)	(D)		
	Left	5	30		
Straight	2090	1405			
Right	90	45			
Alpine Village Drive (Municipal)	Northbound	(D)	(D)	CNC	
	Left	30	145		
	Straight	10	20		
	Right	245	245		
Route 286 Connector SR 0286 (State)	Southbound	(C)	(D)	CNC	
	Left	85	30		
	Straight	30	20		
	Right	30	15		

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ Realignment of Alpine Village Drive with the Route 286 connection including construction of a mountable median on Route 22, addition of turning lanes and lengthening of deceleration lane on Route 22.
- ✓ Upgraded traffic signal equipment and timing plan to include new overhead signal heads, pedestrian signals heads and pavement loop detectors. Installed Opticom Emergency Vehicle Preemption Equipment. Signal timing and traffic flow was reviewed to develop and implement optimal signal timing plans for the two signal interconnect operation.



#1 - Route 22 eastbound approach



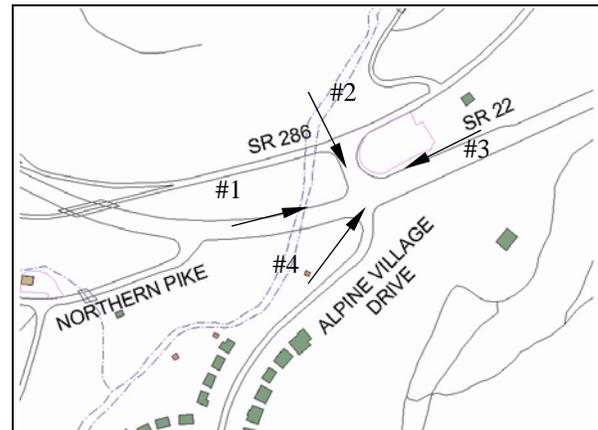
#2 - Aerial View looking toward the south

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Re-stripe all existing crosswalks and stop bars.
Estimated Cost: \$600
- Municipal representation, involvement and coordination during the preliminary and final design portions of the Route 286 roadway widening and improvement project. This is especially important in the development of alternative interchange access schemes where Route 22 and Route 286 meet.



MEDIUM-TERM RECOMMENDATIONS

- To enhance vehicular capacity and safety in this area the goal of the Municipality should include the removal of the existing signalized intersection of Northern Pike (east) and Route 22 as well as, the removal or simplification of this intersection (i.e. creating a “T” intersection by removing the Route 286 connector). Some optional conceptual interchange scenarios are illustrated in Section V..

Estimated Cost: Preliminary & Final Design included in PENNDOT Budget. However, currently no moneys are available for the construction of the interchange. Construction Budget for interchange is dependent on scope of improvement.

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Route 22 westbound approach



#4 - Alpine Village Drive northbound approach

MONROEVILLE

28. Golden Mile Highway/Route 286 and Old Frankstown Road

Intersection Characteristics: Signalized, “+” Intersection.
 Signal controller coordinated with adjacent signalized intersections via time based coordination.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	PM Peak Hour	1997	2005*
Old Frankstown Road SR 2066 (State)	Eastbound	(F)	(F)		
	Left	100	150	2,820 (EB)*	3,000 (EB)*
	Straight Right	105 40	200 30	3,150 (WB)*	3,350 (WB)*
Old Frankstown Road SR 2066 (State)	Westbound	(F)	(F)	CNC	
	Left	120	125		
	Straight Right	200 10	125 55		
Golden Mile Highway SR 0286 (State)	Northbound	(C)	(E)	10,860 (NB)	11,500 (NB)
	Left	60	35		
	Straight Right	470 65	700 35		
	Southbound	(D)	(D)	12,440 (SB)	13,200 (SB)
	Left	60	90		
	Straight Right	675 110	575 85		

* Estimated

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ Traffic signal equipment was upgraded to include replacement of broken pavement loop sensors, implementation of split signal phases for Old Frankstown Road movements, and the addition of Opticom Emergency Preemption equipment.



1 - Route 286 northbound approach



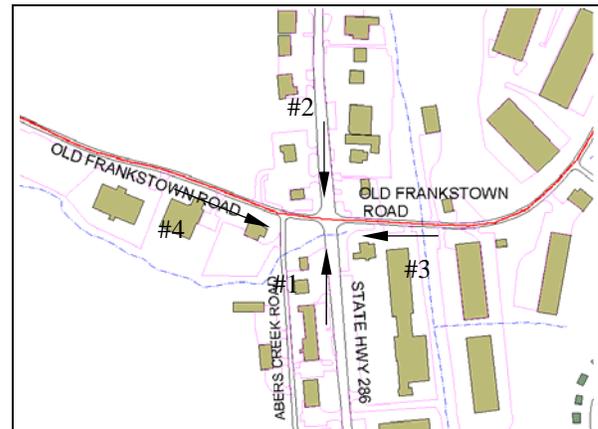
#2 - Route 286 southbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Municipal representation, involvement and coordination during the preliminary and final design portions of the Route 286 roadway widening and improvement project.



MEDIUM-TERM RECOMMENDATIONS

- Reconstruct intersection to include:
 - Widen Old Frankstown Road approaches to provide exclusive left turn lanes. Provide new left turn signals on these approaches and add an exclusive left turn phase.
 - Widen State Route 286 to provide two lanes in each direction of travel and an exclusive left-turn lane on the northbound and southbound intersection approaches.
 - New signal installation that is coordinated with adjacent signal controllers via a closed loop system to provide a progressive movement of traffic along Route 286.
 - Relocation of Old Abers Creek Road where it intersects Old Frankstown Road (approximately 200 feet further from Route 286) so it can effectively be used as a rear access road for the businesses along the western side of the Route 286 without adversely impacting the operations of the signalized intersection.

Estimated Cost: PENNDOT Budget

The project design has been initiated, with construction expected to begin during Spring of 2007.

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Old Frankstown Road westbound approach



#4 - Old Frankstown Road eastbound approach

MONROEVILLE

29. William Penn Highway/ Route 22 at Old William Penn and Miracle Drive

Intersection Characteristics: Signalized, “+” Intersection.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997	2005*
William Penn Highway SR 0022 (State)	Eastbound	(B)	(B)		
	Left	100	440	21,650 (EB)	21,650 (EB)
	Straight	900	1280	21,040 (WB)	21,040 (WB)
	Right	Negligible	5		
	Westbound	(C)	(C)		
	Left	5	50		
Miracle Drive (Private)	Straight	1390	1025		CNC
	Right	Negligible	Negligible		
	Northbound	(C)	(D)		
Old William Penn Highway (Municipal)	Left	5	65		CNC
	Straight	Negligible	60		
	Right	5	45		
	Southbound	(D)	(D)		
	Left	Negligible	Negligible		CNC
Straight	10	30			
Right	365	165			

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

√ Work in progress.

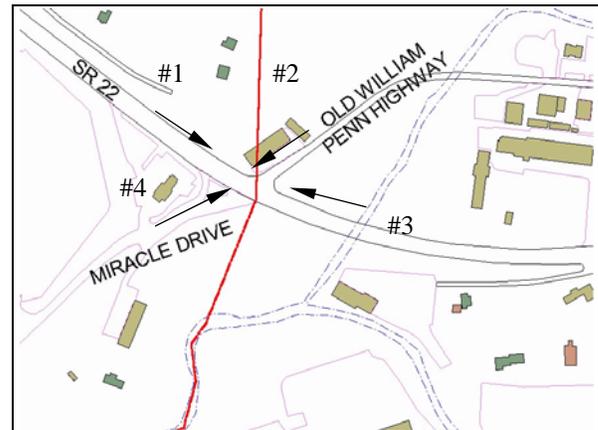


#1 – Route 22 eastbound approach



#2 - Old William Penn Highway southbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Modify signal operation/phasing to provide for a right-turn overlap for southbound Old William Penn Highway approach.

Estimated Cost: \$ 5,000

- As part of a PENNDOT reconstruction project for ROUTE 22, Section B01 (currently in construction) the following improvements are being implemented:
 - Construction on the eastern leg of intersection includes the addition of an exclusive right turn lane from ROUTE 22 westbound to Old William Penn and an additional right turn lane along ROUTE 22 eastbound from Miracle Drive to Mill Street
 - Renovation of traffic signal installation including the incorporation of this signal into a closed loop system with adjacent signalized intersections to the east along ROUTE 22. The Municipality should enter into discussions with PENNDOT, District 12-0 regarding modifications to this signal installation as well as the potential for including other intersections (i.e. McClure/Cavitt Road intersection) in the proposed closed loop system.

Estimated Cost: Previously Budgeted PENNDOT Project

MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG-TERM RECOMMENDATIONS

- Pursue Multi-Municipality Study; Wilkins, Monroeville and Murrysville, to coordinate signal timings along the Route 22 Corridor.

Funding: State Grant; Municipalities; and Developers.



#3 - Route 22 westbound approach



#4 - Aerial view toward Miracle Drive northbound approach

MONROEVILLE

30. Northern Pike and West Patty Lane

Intersection Characteristics: Signalized, “T” Intersection with an exclusive pedestrian phase and Opticom Emergency Vehicle Preemption.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	PM Peak Hour	1997	2005
Northern Pike SR 2054 (State)	Eastbound Straight	(A) 315	(A) 580	5,760 (EB)	7,320 (EB)
	Right	15	65	5,460 (WB)	7,000 (WB)
	Westbound Left	(A) 5	(A) 5	CNC	
Straight	695	360			
West Patty Lane (Municipal)	Northbound Left	(B) 75	(B) 45	CNC	
	Right	5	10		

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ Upgraded traffic signal equipment and operation timing plan.
- ✓ Damaged vehicle sensors were replaced with new loop detectors.
- ✓ Installed Opticom Emergency Vehicle Preemption Equipment.

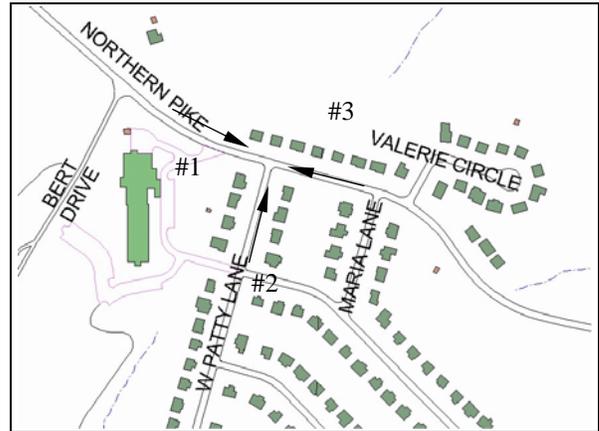


#1 - Northern Pike eastbound approach



#2 - West Patty Lane northbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Re-stripe all existing crosswalks and stop bars.
Estimated Cost: \$500

MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG-TERM RECOMMENDATIONS

- Modification of traffic signal installation to accommodate the proposed Northern Pike roadway project (widening from two to three lanes starting at Westinghouse Drive and terminating just east of this intersection). This roadway project will provide an exclusive left-turn bay for the westbound intersection approach.
Estimated Cost: \$36,500



#3 - Northern Pike westbound approach

MONROEVILLE

31. Northern Pike and Westinghouse Drive

Intersection Characteristics: Signalized, "T" Intersection.
Existing controller, signal supports and signal equipment in poor condition.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997	2005 *
Northern Pike SR 2054 (State)	Eastbound	(A)	(B)		
	Straight	305	610	6,630 (EB) *	7,030 (EB)
	Right	310	25	8,060 (WB) *	8,540 (WB)
	Westbound	(A)	(A)		
	Left	195	10	6,690 (EB)	7,090 (EB)
	Straight	570	385	6,280 (WB)	6,660 (WB)
Westinghouse Drive (Private)	Northbound	(B)	(B)	CNC	
	Left	20	235		
	Right	20	100		

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ Traffic signal upgrade completed during 1998 included replacing controller assembly with new electrical service, signal supports, pedestrian push buttons, pedestrian signal heads and vehicular signal indications.
- ✓ Revised phasing to an advance green for westbound Northern Pike.



#1 - Northern Pike eastbound approach



#2 - Westinghouse Drive northbound approach

MONROEVILLE



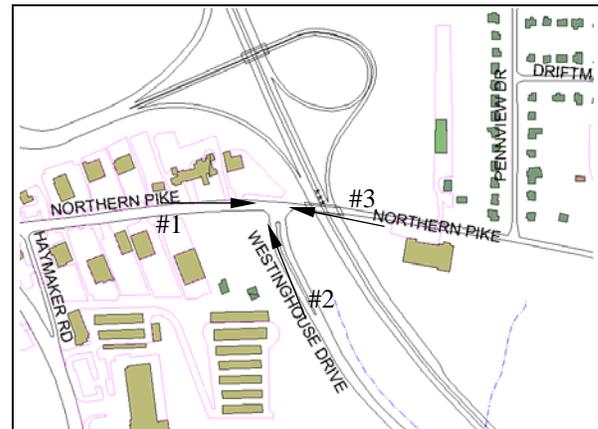
SHORT-TERM RECOMMENDATIONS

- None at this time

MEDIUM-TERM RECOMMENDATIONS

- Add an exclusive left-turn lane for the westbound approach of Northern Pike. This improvement should be implemented in conjunction with the replacement and widening of the Northern Pike Bridge over the PA Turnpike. The existing signal would need to be modified (i.e. signal supports along the northern side of the intersection would need relocated together with revisions to signal heads) to accommodate the roadway widening. Right of way and utility relocation will be required.

Estimated Cost: \$ 80,000 + Bridge Replacement Cost of \$2,500,000



LONG-TERM RECOMMENDATIONS

- The construction of a new roadway connector that would access Forbes Regional Health Center and tie into the Westinghouse Drive prior to the Westinghouse Campus.
Estimated Cost: Project dependent.



#3 - Northern Pike westbound approach



#4 - Existing signal equipment

MONROEVILLE

32. Mosside Boulevard/ Route 48 and Northern Pike

Intersection Characteristics: Signalized, “+” Intersection.
 Twenty-five reportable accidents in past three years.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997	2005 *
Northern Pike SR 0054 (State)	Eastbound	(D)	(D)		
	Left	95	115	6,840 (EB)	7,250 (EB)
	Straight	180	235	8,030 (WB)	8,510 (WB)
	Right	80	200		
	Westbound	(D)	(E)		
	Left	210	200	6,630 (EB) *	7,030 (EB)
Route 48, Mosside Blvd. SR 0048 (State)	Northbound	(D)	(E)		
	Left	200	290	20,280 (NB) *	21,500 (NB)
	Straight	815	710	18,590 (SB) *	19,700 (SB)
	Right	5	Negligible		
	Southbound	(D)	(E)		
	Left	255	160	16,560 (NB) *	17,550 (NB)
Straight	605	875	15,550 (SB) *	16,480 (SB)	
Right	5	25			

* Estimated.

ACCOMPLISHMENTS SINCE 1989

- ✓ The Northern Pike westbound approach was widened to provide an exclusive left-turn, through with left option and an exclusive right turn lanes and new signal heads to accommodate the new lane arrangements, as well as overhead lane control signage was provided.
- ✓ All existing crosswalks and stop bar pavement markings were re-striped.
- ✓ Pedestrian push buttons were provided at each corner of the intersection and R-Y-G vehicle signal heads were replaced with WALK-DON'T WALK signal indications.
- ✓ Opticom emergency vehicle preemption equipment was installed for this intersection.
- ✓ Extended hardwire interconnect along Mosside Blvd. to the signal at Mosside Plaza to provide a progressive movement of traffic along the Route 48 corridor



#1 - Aerial View looking southbound



#2 - Northern Pike westbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- None at this time.

MEDIUM-TERM RECOMMENDATIONS

- A number of reportable and non-reportable accidents at this intersection involved vehicles turning to/from driveways on the approaches to the intersection. As a safety enhancement the Municipality should consider stricter access management and control measures aimed at the relocation of curb cuts further back on intersection approaches or the consolidation of curb cuts accessing adjacent developments.



LONG-TERM RECOMMENDATIONS

- Widen the Northern Pike eastbound approach to provide an exclusive left-turn lane (approximately 250 feet in length) and modify traffic signal installation including a new loop sensor and vehicular signal head placement for this intersection approach as shown in Map 18.
Estimated Cost: \$ 250,000
- Review Interconnect (especially if a signal is installed at the intersection of Haymaker and Saunders Station Roads) and develop new timing plans for the A.M., P.M. and off-peak periods. Extension of the system cycle length (possibly to 180 seconds) during the peak hour periods should also be investigated.
Estimated Cost: See intersection summary for Route 48, Mossy Side Boulevard and Haymaker Road/ Gateway Campus Boulevard.



#3 - Mossy Side northbound approach



#4 - Northern Pike eastbound approach

MONROEVILLE

33. Monroeville Boulevard / Northern Pike and Pitcairn Road

Intersection Characteristics: Unsignalized, "T" Intersection.
 Stop Controlled on all intersection approaches.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	PM Peak Hour	1997	2005
Monroeville Boulevard (County)	Eastbound	(B)	(F)		
	Straight	255	555	8,600 (EB)	9,120 (EB)*
	Right	130	390	9,850 (WB)	10,440 (WB)*
Northern Pike SR 2054 (State)	Westbound	(D)	(F)		
	Left	85	190	6,840 (EB)	7,250 (EB)*
	Straight	345	570	8,030 (WB)	8,510 (WB)*
Pitcairn Road (County)	Northbound	(D)	(E)		
	Left	270	260	4,200 (NB)	4,270 (NB)
	Right	150	95	4,780 (SB)	4,710 (SB)

ACCOMPLISHMENTS SINCE 1989

√ No Change.

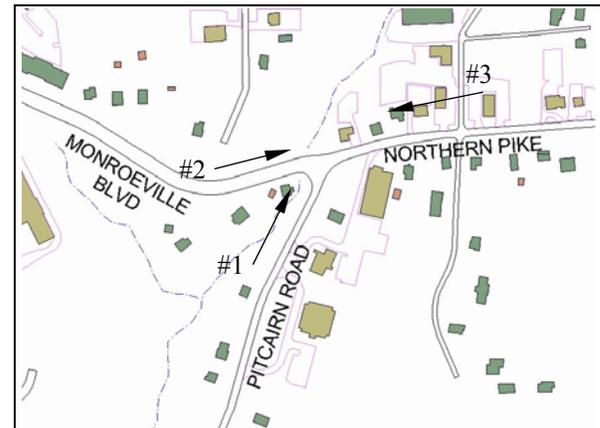


#1 - Pitcairn Road northbound approach



#2 - Monroeville Boulevard eastbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Widen Northern Pike westbound approach to provide an exclusive left turn lane.
Estimated Cost: \$ 240,000
- Widen Pitcairn Road northbound approach to provide an exclusive left turn lane.
Estimated Cost: \$ 260,000
- Install “3-WAY” placards under each stop sign.
Estimated Cost: \$ 400

MEDIUM-TERM RECOMMENDATIONS

- Existing and projected traffic volumes warrant the installation of a traffic signal at this intersection. Map 18 provides a schematic improvements for this area.
Estimated Cost: \$120,000

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Northern Pike westbound approach

MONROEVILLE

34. Monroeville Boulevard and Ivanhoe Drive

Intersection Characteristics: Unsignalized, "T" Intersection.
 Stop Controlled on the southbound approach.
 Existing and projected traffic volumes warrant installation of a traffic signal.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997	2005 *
Monroeville Blvd. (County)	Eastbound Left Straight	85 (B)	110 (B)	9,140 (EB) *	9,140 (EB)
		410	910	11,190 (WB) *	11,190 (WB)
	Westbound Straight Right	565	800	8,600 (EB)	8,600 (EB)
		80	60	9,850 (WB)	9,850 (WB)
Ivanhoe Drive (Municipal)	Southbound Left	25 (D)	50 (F)	1,590 (NB) *	2,020 (NB)
	Right	30 (A)	100 (B)	1,270 (SB) *	1,610 (SB)

* Estimated.

ACCOMPLISHMENTS SINCE 1989

- √ Installed a two-phase traffic signal at this intersection location.



#1 - Ivanhoe Drive southbound approach



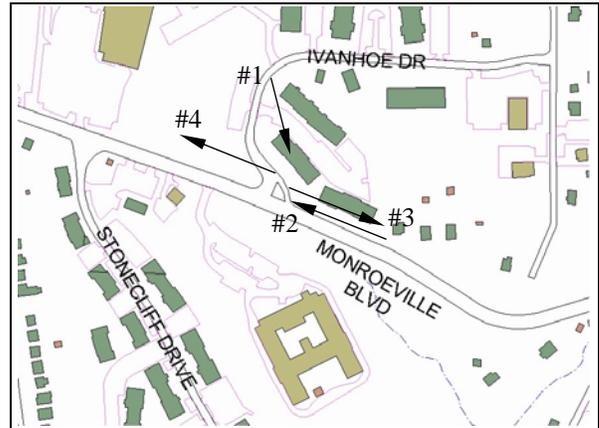
#2 - Monroeville Boulevard westbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- None at this time.



MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Looking east at Monroeville Blvd. westbound approach



#4 - Looking west at Monroeville Blvd. eastbound approach

MONROEVILLE

35. Monroeville Boulevard and Stroschein Road

Intersection Characteristics: Signalized, “+” Intersection.
 Poor Lane alignment for westbound Monroeville Boulevard through vehicles.
 Exclusive left-turn lane present on the westbound and southbound intersection approaches.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	PM Peak Hour	1997 *	2005 *
Monroeville Boulevard (County)	Eastbound	(C)	(C)		
	Left	270	335	9,530 (EB)	10,370 (EB)
	Straight	280	515	10,490 (WB)	11,410 (WB)
	Right	15	15		
	Westbound	(D)	(D)		
	Left	65	75	9,830 (EB)	9,830 (EB)
Stroschein Road (County)	Northbound	(D)	(F)		
	Left	45	40	2,640 (NB)	3,460 (NB)
	Straight	145	160	2,640 (SB)	3,460 (SB)
	Right	40	50		
	Southbound	(C)	(C)		
	Left	115	120	8,200 (NB)	9,790 (NB)
Straight	120	150	8,500 (SB)	10,140 (SB)	
Right	120	320			

* Estimated.

ACCOMPLISHMENTS SINCE 1989

- √ Widened the Stroschein Road northbound approach to provide one through/right-turn lane and an exclusive left-turn lane.
- √ Reconfigured the southbound approach of Stroschein Road to lengthen the existing left-turn lane to approximately 300 feet.
- √ Widened the Monroeville Boulevard westbound approach to accommodate an exclusive left-turn lane, two through lanes and an exclusive right-turn lane.
- √ Widened the Monroeville Blvd eastbound approach to provide dual left-turn lanes and make necessary adjustments to the northern leg of the intersection to accept this dual turn movement.



#1 - Monroeville Boulevard eastbound approach.



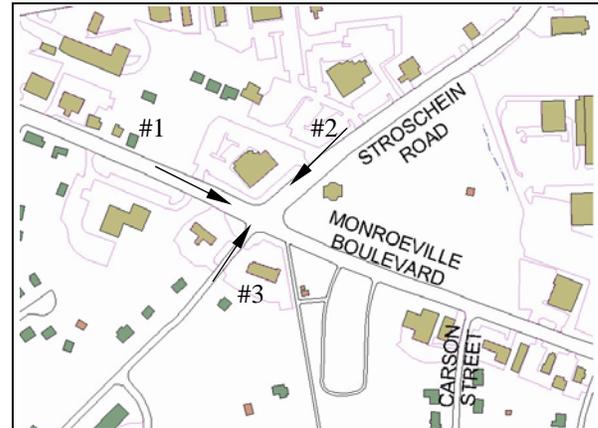
#2 – Stroschein Road southbound approach

MONROEVILLE



ACCOMPLISHMENTS SINCE 1989 (Cont.)

- ✓ Replaced existing traffic signal system to accommodate roadway improvements and provide Opticom emergency vehicle preemption system. Signal was interconnected and coordinated with adjacent signal controllers along Monroeville Boulevard at the Old Stone Commons Site Driveway and also at Caruso Drive.



SHORT-TERM RECOMMENDATIONS

- None at this time.

MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 – Stroschein Road northbound approach



Aerial view of intersection looking toward the south

MONROEVILLE

36. Monroeville Boulevard at Municipal Drive and Northern Pike

Intersection Characteristics: Signalized, “+” Intersection.
Westbound Monroeville Blvd. Left-turn lane is substandard.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997 *	2005 *
Monroeville Blvd. (County)	Eastbound	(A)	(B)		
	Left	40	140	10,600 (EB)	10,670 (EB)
	Straight	480	880	11,040 (WB)	11,110 (WB)
	Right	Negligible	10		
	Westbound	(B)	(B)		
	Left	10	5	9,530 (EB)	9,530 (EB)
Straight	390	720	10,490 (WB)	10,490 (WB)	
Right	115	135			
Municipal Bldg. Driveway (Municipal)	Northbound	(C)	(C)	CNC	
	Left	5	10		
	Straight	5	5		
	Right	10	15		
Connector to Northern Pike (State)	Southbound	(C)	(C)	CNC	
	Left	50	110		
	Straight	10	5		
	Right	265	265		

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ Upgraded traffic signal, including replacement of signal controller, wiring, pavement loop sensors and pedestrian push buttons.
- ✓ Installed Opticom Emergency Vehicle Preemption Equipment.
- ✓ Installed Intersection warning sign for “T” driveway intersection at the crest of the hill on the eastbound Monroeville Boulevard approach.
- ✓ Added short left-turn lane on the westbound Monroeville Boulevard approach to improve motorist’s line of sight and safety.
- ✓ Relocated signal controller box and signal pole posts and installed a new electrical service utilizing the emergency generator in connection with the construction of the new Monroeville Municipal Building.



#1 - Aerial view looking northwest



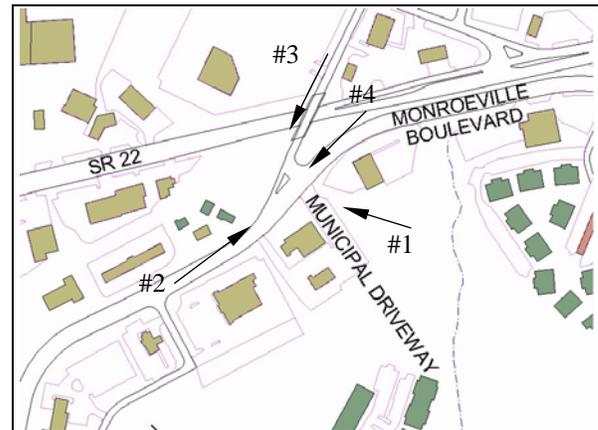
#2 - Monroeville Boulevard eastbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- None at this time.



MEDIUM-TERM RECOMMENDATIONS

Develop construction plans for the redesign of this intersection as shown in Map 27, including:

- Widening of the westbound Monroeville Boulevard approach to provide for a full left-turn lane (approx. 100 feet long) into the Municipal Driveway.
- Widen the northern leg of this intersection to accommodate one lane northbound and two lanes southbound (a shared through/left-turn lane and one exclusive right-turn lane). Will need to be done in conjunction with the Northern Pike Connector bridge replacement.
- Revise channelization islands and medians as necessary to support roadway widening.
- Modification of traffic signal installation to include replacement and relocation of the signal support structures along the northern side of Monroeville Boulevard, as well as signal timing and phasing revisions.

Estimated Cost: \$187,500 (Includes design of the new bridge)

LONG-TERM RECOMMENDATIONS

- Implementation of Intersection Redesign. Acquisition of R-O-W and utility relocation may be required.
Estimated Cost: \$ 265,000 (Intersection) and \$1,500,000 (New Bridge)



#3 - Northern Pike Connector southbound approach



#4 - Municipal Driveway northbound approach

MONROEVILLE

37. Monroeville Boulevard and Wyngate Drive

Intersection Characteristics: Signalized, “+” Intersection.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	PM Peak Hour	1997 *	2005 *
Monroeville Boulevard (County)	Eastbound	(A)	(A)	CNC	
	Left	5	10		
	Straight	495	940		
	Right	55	90		
	Westbound	(A)	(A)	10,600 (EB) 11,040 (WB) 10,670 (EB) 11,110 (WB)	
	Left	60	70		
Straight	610	935			
Right	5	5			
Wyngate Drive (Municipal)	Northbound	(B)	(C)	CNC	
	Left	70	170		
	Straight	5	5		
	Right	20	35		
Private Drive (Private)	Southbound	(B)	(B)	CNC	
	Left	5	10		
	Straight	5	5		
	Right	5	10		

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

✓ No Change.



#1 - Monroeville Boulevard Eastbound Approach



#2 - Monroeville Boulevard Westbound Approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Upgrade traffic signal to include redesign of intersection operations, new signal supports, signal head equipment, new controller and electrical service, pedestrian indications, pavement loops and supplemental "left lane must turn left" sign for westbound Monroeville Boulevard.
Estimated Cost: \$100,000

MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Wyngate Drive Northbound approach

MONROEVILLE

38. Wyngate Drive at Tech One Drive and Anderson Lane

Intersection Characteristics: Four-Way Stop Controlled, “+” Intersection.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	PM Peak Hour	1997	2005 *
Wyngate Drive (Municipal)	Eastbound	(A)	(A)	CNC	
	Left	10	10		
	Straight	45	95		
	Right	55	70		
	Westbound	(A)	(A)	1,490 (EB) 1,270 (WB)	
	Left	135	30		
Straight	60	70			
Right	5	5	1,310 (WB)		
Tech. One Drive (Municipal)	Northbound	(A)	(B)	CNC	
	Left	30	200		
	Straight	5	25		
Right	10	130			
Anderson Lane (Municipal)	Southbound	(C)	(A)	CNC	
	Left	10	10		
	Straight	45	25		
Right	5	15			

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ No Change.



#1 - Tech One Drive northbound approach



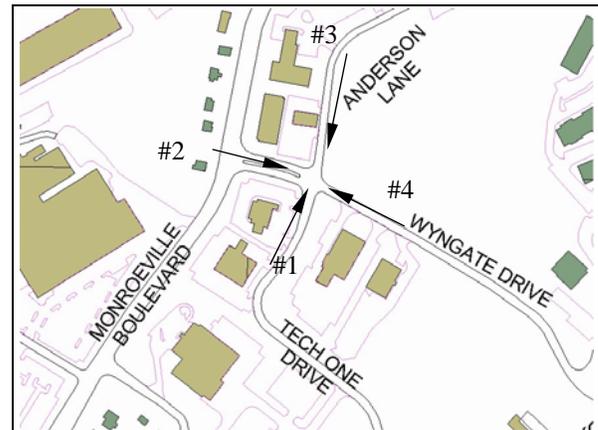
#2 - Wyngate Drive eastbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Correct line striping between the two travel lanes on the eastbound approach, as per the MUTCD.
Estimated Cost: \$ 500
- Install “Right Lane Must Turn Right” sign on eastbound intersection approach.
Estimated Cost: \$ 400



MEDIUM-TERM RECOMMENDATIONS

- The four-way stop controlled intersection does not meet the warrants for justification of a multiway stop as listed in PennDOT Publication 201. Modify the intersection control from a four-way stop to a two-way stop control with stop signs on the minor street approaches of Anderson Lane and Tech One Drive.
Estimated Cost: \$ 650

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Anderson Lane southbound approach



#4 - Looking west at Wyngate Drive eastbound approach

MONROEVILLE

39. Wyngate Drive and Stroschein Road

Intersection Characteristics: Unsignalized, "T" Intersection.
 Stop controlled on eastbound Wyngate Drive
 Northbound left-turn from Stroschein is prohibited

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	PM Peak Hour	1997 *	2005 *
Stroschein Road (County)	Northbound Straight	(A) 130	(A) 140	2,640 (NB) 2,640 (SB)	2,640 (NB) 2,640 (SB)
	Southbound Straight Right	(A) 45 170	(A) 130 75	2,640 (NB) 2,640 (SB)	2,900 (NB) 2,900 (SB)
Wyngate Drive (Municipal)	Eastbound Left Right	(A) 35 10	(B) 140 75	CNC	

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ No Change.



#1 - Wyngate Drive eastbound approach



#2 - Looking north along Stroschein Road from Wyngate

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- The “No Left Turn” signs on the northbound approach need to be relocated per the MUTCD.
Estimated Cost: \$ 650
- Re-stripe and upgrade pavement markings and stop bar on Wyngate Drive.
Estimated Cost: \$ 400

MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Looking south along Stroschein Road from Wyngate



#4 - Looking west at the Wyngate Drive eastbound approach

MONROEVILLE

40. Monroeville Boulevard at Jamison Lane and Oxford Drive

Intersection Characteristics: Signalized, “+” Intersection.
Dual left-turn lanes on southbound Oxford Drive approach.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	PM Peak Hour	1997 *	2005 *
Monroeville Boulevard (County)	Eastbound	(B)	(B)		
	Left	95	130	7,180 (EB)	7,610 (EB)
	Straight	495	515	6,520 (WB)	6,900 (WB)
	Right	5	5		
	Westbound	(B)	(C)		
	Left	75	10	10,600 (EB)	11,240 (EB)
Straight	300	640	11,040 (WB)	11,700 (WB)	
Right	225	430			
Jamison Lane Municipal)	Northbound	(C)	(D)		
	Left	5	15	CNC	
	Straight	15	45		
	Right	15	75		
Oxford Drive (Private)	Southbound	(C)	(C)		
	Left	145	445	CNC	
	Straight	40	10		
	Right	35	165		

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ Upgraded traffic signal equipment and adjusted signal timing and phasing, including widening Oxford Drive approach to provide dual left turns to Monroeville Boulevard, replacing pavement loop sensors, installing Opticom Emergency Vehicle Preemption Equipment, installing pedestrian push buttons, relocating the controller and upgrading all crosswalks and pavement markings.



#1 - Monroeville Boulevard eastbound approach



#2 - Oxford Drive southbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Revise traffic signal permit to reflect current intersection operations (i.e. the northbound Jamison Lane approach should be shown as an exclusive right turn lane and a shared through/left-turn lane and appropriately signed.
Estimated Cost: \$ 3,800
- Upgrade all pavement markings including stop bars, pedestrian crosswalks, lane arrows and tracking lines for dual left turn through intersection area.
Estimated Cost: \$ 2,000



MEDIUM-TERM RECOMMENDATIONS

- Widen the Monroeville Boulevard westbound approach to provide an exclusive right turn lane into Oxford Drive. Also widen the two eastbound travel lanes on the eastern leg of the intersection and extend the concrete median to better accept the dual left turn movement from Oxford Drive (Assumed to include relocation of existing utility pole and traffic signal strain pole on the southeast corner).
Estimated Cost: \$ 515,000

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Jamison Lane northbound approach



#4 - Aerial view looking south

MONROEVILLE

41. Monroeville Boulevard at James Street, Rosecrest Drive and Brinton Street

Intersection Characteristics: Signalized, Five-way Intersection.

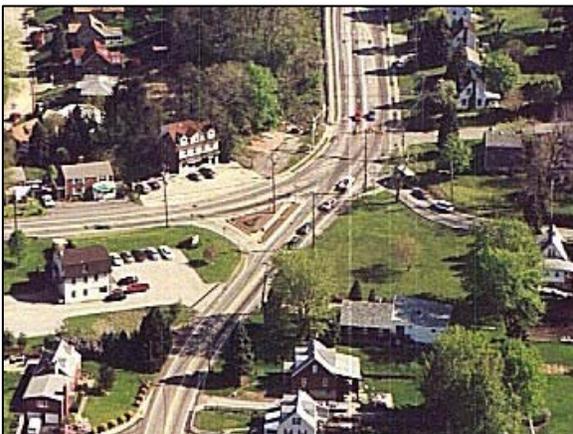
Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997 *	2005 *
Monroeville Road (County)	Northbound	(D)	(F)		
	Left	35	35	3,840 (NB)	4,070 (NB)
	Straight	410	450	3,850 (SB)	4,080 (SB)
	Right (to Brinton) Right (to Rosecrest)	Negligible Negligible	Negligible 5		
Monroeville Boulevard (County)	Southbound	(C)	(D)		
	Left (to Brinton)	10	5	7,180 (NB)	7,610 (NB)
	Left (to Rosecrest) Straight	10 170	40 480	6,520 (SB)	6,910 (SB)
	Right	90	440		
James Street (County)	Eastbound	(D)	(F)		
	Right (to Monroeville)	20	40	4,530 (WB)	4,800 (WB)
	Right (to Rosecrest) Left	20 205	75 240		
Rosecrest Drive (Municipal)	Westbound	(D)	(F)		
	Left (to Monroeville)	5	Negligible	950 (EB)	1,010 (EB)
	Left (to James) Right	35 40	60 55	1,160 (WB)	1,230 (WB)
Brinton Street (Municipal)	Westbound	(D)	(D)		
	Left	5	5		
	Right	35	20		

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ Redesign and replacement of traffic signal, including pavement loop sensors, controller, electrical service, new signal supports, pedestrian and vehicular signal heads, pedestrian push buttons and OPTICOM.



#1 - Aerial View looking northbound



#2 - Monroeville Boulevard southbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- None at this time.



MEDIUM-TERM RECOMMENDATIONS

- Prohibit left-turns from northbound Monroeville Boulevard onto James Street. Add appropriate NO LEFT TURN signs to the northbound Monroeville Road approach.
Estimated Cost: \$ 650
- Adjust signal timing and phasing for Monroeville Boulevard to (1) provide a southbound advance phase and (2) allow the southbound Monroeville Boulevard through/right and the northbound Monroeville Road through/right movements to run simultaneously. Also requires the replacement of a 4-section signal head with a three section for northbound Monroeville Road.
Estimated Cost: \$ 5,700

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - James Street eastbound approach



#4 - Monroeville Boulevard northbound approach

MONROEVILLE

42. James Street and James North

Intersection Characteristics: Stop Controlled, “T” Intersection.
 Stop Signs located on all Intersection approaches.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	PM Peak Hour	1997	2005 *
James Street (County)	Eastbound	(A)	(C)		
	Left	300	335	5,840 (EB)	6,190 (EB)
	Straight	130	155	6,090 (WB)	6,460 (WB)
James North (Private)	Westbound	(A)	(C)		
	Straight	80	240	4,530 (WB) *	4,800 (WB)
	Right	85	120		
James North (Private)	Southbound	(A)	(D)		
	Left	20	160	5,370 (NB)	5,530 (NB)
	Right	60	400	5,270 (SB)	5,430 (SB)

* Estimated.

ACCOMPLISHMENTS SINCE 1989

- ✓ Pavement markings updated.
- ✓ Installed “Three-Way” placards under Stop Signs on both James Street intersection approaches.



#1 - James Street eastbound approach



#2 - James North southbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Replace worn Stop Sign on the James North southbound approach and provide a “Three-Way” placard under the new Stop Sign.
Estimated Cost: \$ 400



MEDIUM-TERM RECOMMENDATIONS

- Traffic volume warrants for signalization are currently met. Review traffic volumes and intersection operations in approximately five years to determine if a traffic signal installation is needed.
Estimated Cost: \$ 5,600

LONG-TERM RECOMMENDATIONS

- Installation of a traffic signal.
Estimated Cost: \$ 100,000



#3 - James Street westbound approach

MONROEVILLE

43. James Street and Speelman Lane

Intersection Characteristics: Stop Controlled, "T" Intersection.
 Stop Sign on northbound minor street approach.
 Traffic volume warrants for signalization are not met.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	PM Peak Hour	1997	2005 *
James Street (County)	Eastbound Straight Right	270	275	3,400 (EB)	3,600 (EB)
		5	10	3,750 (WB)	3,980 (WB)
	Westbound Left Straight	25 (A)	245 (A)	5,840 (EB)	6,190 (EB)
		115	395	6,090 (WB)	6,460 (WB)
Speelman Lane (Municipal)	Northbound	(B)	(B)		
	Left	10	15	2,550 (NB)	2,700 (NB)
	Right	160	215	2,560 (SB)	2,710 (SB)

* Estimated.

ACCOMPLISHMENTS SINCE 1989

√ No Change



#1 - Speelman Lane northbound approach



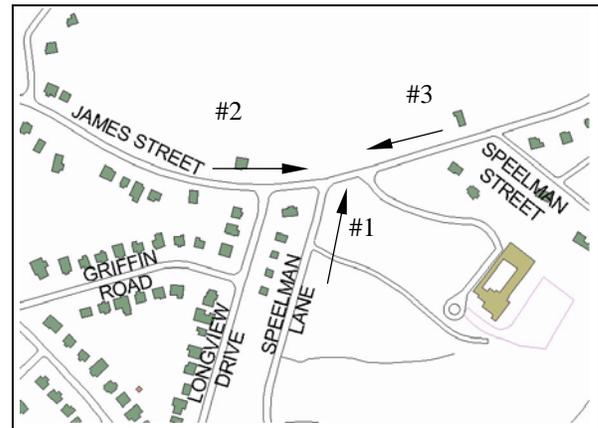
#2 - James Street eastbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Re-stripe and upgrade pavement markings and stop bar on Speelman Lane.
Cost Estimate: \$ 550
- Install guide rail on the Speelman Lane northbound approach to protect the electrical transmission towers and improve turn radius for the southeast quadrant of the intersection.
Cost Estimate: \$ 6,900



MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG-TERM RECOMMENDATIONS

- Widen the James Street westbound approach to provide an exclusive left-turn lane (approx. 100 feet long).
Cost Estimate: \$330,000



#3 - James Street westbound approach

MONROEVILLE

44. James Street at Stepp Drive and Pleasant View Drive

Intersection Characteristics: Unsignalized, “+” Intersection.
 Stop Controlled on Stepp and Pleasant View Drives as well as the eastbound James Street approach.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997	2005 *
James Street (County)	Eastbound				
	Left	Neg. (A)	5 (A)	3,380 (EB) *	3,580 (EB)
	Straight	220	280	3,700 (WB) *	3,920 (WB)
	Right	5	15		
	Westbound				
	Left	5 (A)	5 (A)	3,400 (EB)	3,600 (EB)
Straight	120	425	3,750 (WB)	3,980 (WB)	
Right	Neg.	Neg.			
Stepp Drive (Municipal)	Northbound	(A)	(B)	CNC	
	Left	10	15		
	Straight	Neg.	Neg.		
Right	10	10			
Pleasant View Drive (Municipal)	Southbound	(B)	(B)	CNC	
	Left	5	5		
	Straight	Neg.	Neg.		
Right	Neg.	Neg.			

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ Re-striped double yellow centerline markings on Stepp Drive.



#1 - James Street eastbound approach



#2-Peasant View Drive southbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Trim vegetation on the southeast quadrant of the intersection for increased visibility of the Stop Sign on the Stepp Drive approach and/or provide STOP AHEAD sign.
Estimated Cost: \$ 750
- Install “Three-Way” placards under STOP sign. Also, locate “Opposing Traffic Does Not Stop” placard under STOP sign at James Street eastbound approach.
Estimated Cost: \$ 700

MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - James Street westbound approach



#4 - Stepp Drive northbound approach

MONROEVILLE

45. Monroeville Road at Speelman Lane and Monroeville-Wilmerding Road

Intersection Characteristics: Unsignalized, “+” Intersection.
 Stop Controlled on all intersection approaches.
 Traffic volumes do not warrant a traffic signal.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	PM Peak Hour	1997	2005 *
Monroeville Road (County)	Eastbound	(A)	(B)		
	Left	20	50	2,230 (EB)	2,360 (EB)
	Straight	135	160	2,100 (WB)	2,230 (WB)
	Right	10	10		
	Westbound	(A)	(C)		
	Left	120	225	3,840 (EB)	4,070 (EB)
Straight	105	130	3,850 (WB)	4,080 (WB)	
Right	5	5			
Monroeville-Wilmerding Road Patton Street (County)	Northbound	(D)	(D)		
	Left	5	5	4,300 (NB)	4,560 (NB)
	Straight	145	175	4,220 (SB)	4,470 (SB)
	Right	230	170		
Speelman Lane (Municipal)	Southbound	(A)	(B)		
	Left	5	5	2,550 (NB)	2,700 (NB)
	Straight	25	215	2,560 (SB)	2,710 (SB)
	Right	5	45		

ACCOMPLISHMENTS SINCE 1989

√ No Change.



#1 - Monroeville-Wilmerding Road northbound approach



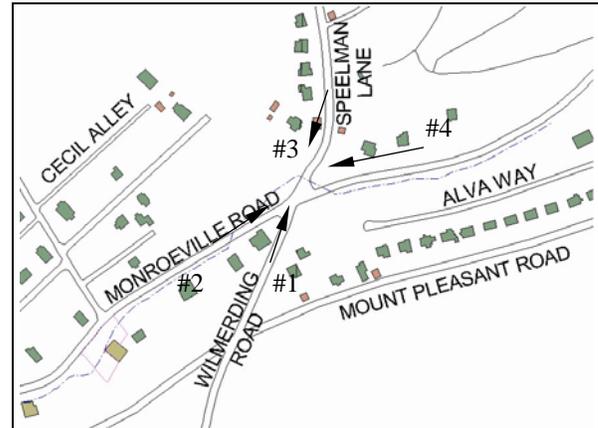
#2 - Monroeville Road eastbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Re-stripe and upgrade pavement markings and stop bars on Speelman Lane and Monroeville-Wilmerding Road.
Estimated Cost: \$ 700
- Replace faded stop sign and provide a STOP AHEAD sign on the southbound intersection approach.
Estimated Cost: \$ 750



MEDIUM-TERM RECOMMENDATIONS

- Assorted intersection geometric improvements to include:
 - Widening the Monroeville-Wilmerding Road approach to improve turning radii for the southeast and southwest intersection quadrants.
 - Realign the northbound Monroeville-Wilmerding Road and southbound Speelman Lane approach to improve intersection geometry.
 - Install a small island on the Speelman Lane approach to channelize westbound right turns and northbound throughs to Speelman Lane.**Estimated Cost: \$ 190,000**

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Speelman Lane southbound approach



#4 - Monroeville Road westbound approach

MONROEVILLE

46. Monroeville-Wilmerding Road and Johnston Road

Intersection Characteristics: Unsignalized, "T" Intersection.
 Stop controlled on westbound Johnston Road

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997	2005 *
Monroeville-Wilmerding Road (County)	Northbound			CNC	
	Straight Right	440 5	320 Negligible		
	Southbound			4,300 (NB)	4,560 (NB)
	Left Straight	10 (A) 180	10 (A) 490	4,220 (SB)	4,450 (SB)
Johnston Road (Municipal)	Westbound			CNC	
	Left	(B) 10	(B) 5		
	Right	5	5		

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

√ No Change.



#1 - Wilmerding Road southbound approach



#2 - Johnston Road westbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Install STOP AHEAD sign on Johnston Road approach.
Cost Estimate: \$ 300
- Re-stripe centerline and stop bar on Johnston Road approach.
Cost Estimate: \$ 400

MEDIUM-TERM RECOMMENDATIONS

- None at this time

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Wilmerding Road northbound approach

MONROEVILLE

47. Monroeville-Wilmerding Road and Thomas Street

Intersection Characteristics: Unsignalized, "T" Intersection.
 Stop controlled on westbound Thomas Street

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997	2005
Monroeville-Wilmerding Road (County)	Northbound				
	Straight Right	420 10	295 10		CNC
	Southbound				
	Left Straight	20 (A) 165	30 (A) 440		CNC
Thomas Street (Municipal)	Westbound				
	Left Right	(A) Negligible 20	(A) Negligible 40		CNC

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

√ No Change.



#1 - Wilmerding Road northbound approach



#2 - Wilmerding Road southbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Install STOP AHEAD sign on Thomas Street approach.
Cost Estimate: \$300
- Provide pavement markings, including stop bar on Thomas Street approach.
Cost Estimate: \$400

MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Thomas Street westbound approach

MONROEVILLE

48. Pitcairn Road and Stroschein Road

Intersection Characteristics: Unsignalized, "T" Intersection.
 Stop controlled on eastbound Stroschein Road.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997 *	2005
Pitcairn Road (County)	Northbound				
	Left	135 (A)	150 (A)	2,540 (NB)	2,690 (NB) *
	Straight	110	100	2,870 (SB)	3,040 (SB) *
	Southbound				
	Straight	110	240	1,330 (NB)	1,150 (NB)
	Right	5	30	1,440 (SB)	1,314 (SB)
Stroschein Road (County)	Eastbound	(A)	(B)		
	Left	10	25	2,640 (EB)	2,800 (EB) *
	Right	55	205	2,640 (WB)	2,800 (WB) *

* Estimated.

ACCOMPLISHMENTS SINCE 1989

√ No Change.

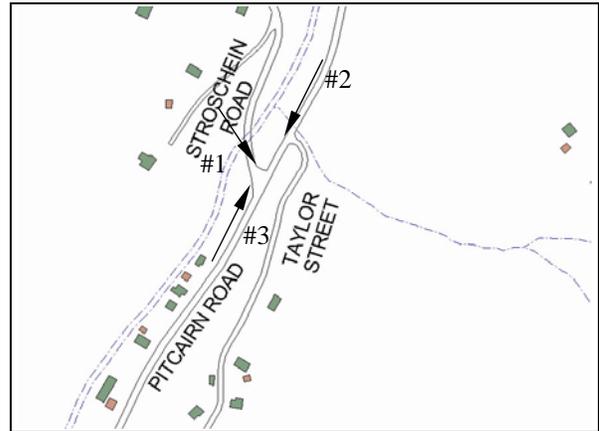


#1 - Stroschein Road eastbound approach



#2 - Pitcairn Road southbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- None at this time.

MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Pitcairn Road northbound approach

MONROEVILLE

49. Tilbrook Road and Pitcairn Road

Intersection Characteristics: Unsignalized, “Y” Intersection.
 Stop Controlled on all three intersection approaches.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	PM Peak Hour	1997	2005
Tilbrook Road (Municipal)	Westbound				
	Left	15 (B)	50 (E)	3,280 (EB) *	3,280 (EB) *
	Right	270	240	3,280 (WB) *	3,280 (WB) *
Pitcairn Road (County)	Northbound	(A)	(A)		
	Straight	100	80	1,330 (NB) *	1,150 (NB)
	Right	30	40	1,440 (SB) *	1,320 (SB)
	Southbound	(A)	(B)		
	Left	120	430	4,200 (NB)	4,270 (NB)
	Straight	55	115	4,780 (SB)	4,700 (SB)

* Estimated.

ACCOMPLISHMENTS SINCE 1989

√ No Change.



#1 - Pitcairn Road northbound approach



#2 - Pitcairn Road southbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Install 3-WAY placard below STOP sign on southbound Pitcairn Road.
Estimated Cost: \$ 200



MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG-TERM RECOMMENDATIONS

- Reconstruct and modify intersection to include:
 - Realign the northern leg of Pitcairn Road with Tilbrook Road.
 - Realign the southern leg of Pitcairn Road to form a "T" intersection with the major approaches being Pitcairn Road southbound and Tilbrook Road.
 - New "T" intersection would be Stop Controlled on the eastbound Pitcairn Road approach only.**Estimated Cost: \$480,000**



#3 - Tilbrook Road westbound approach

MONROEVILLE

50. Tilbrook Road and Cambridge Square Drive

Intersection Characteristics: Three-way Stop Controlled, “T” Intersection

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997 *	2005
Tilbrook Road (Municipal)	Northbound	(A)	(A)		
	Straight	95	85	1,270 (NB)	1,270 (NB) *
	Right	10	10	1,270 (SB)	1,270 (SB) *
	Southbound	(A)	(A)		
	Left	5	35	1,480 (NB)	1,490 (NB)
	Straight	35	105	1,480 (SB)	1,480 (SB)
Cambridge Square Drive (Private)	Westbound	(A)	(A)		
	Left	5	15	310 (EB)	460 (EB)
	Right	20	15	550 (WB)	600 (WB)

* Estimated.

ACCOMPLISHMENTS SINCE 1989

- ✓ Stop sign installed on Cambridge Square Drive intersection approach.

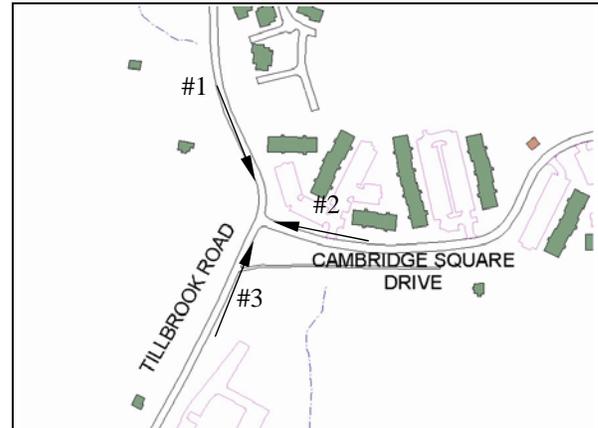


#1 Tilbrook Road southbound approach



#2 Cambridge Square Drive westbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Install STOP AHEAD sign on the Tillbrook Road southbound approach. Also provide “3-WAY” placards under each STOP sign.
Estimated Cost: \$ 750

MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Tillbrook Road northbound approach

MONROEVILLE

51. Mosside Boulevard/Route 48 and Broadway Boulevard/Route 130

Intersection Characteristics: Signalized, “+” Intersection.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997 *	2005 *
Broadway Boulevard SR 0130 (State)	Eastbound	(C)	(E)		
	Left	115	110	7,170 (EB)	7,600 (EB)
	Straight	180	500	7,165 (WB)	7,590 (WB)
	Right	25	65		
	Westbound	(D)	(D)		
	Left	190	165	8,670 (EB)	9,200 (EB)
Straight	475	275	7,100 (WB)	7,530 (WB)	
Right	140	105			
Mosside Boulevard SR 0048 (State)	Northbound	(D)	(D)		
	Left	55	80	8,200 (NB)	8,200 (NB)
	Straight	555	485	7,950 (SB)	8,700 (SB)
	Right	50	170		
	Southbound	(C)	(E)		
	Left	65	155	10,620 (NB)	11,250 (NB)
Straight	330	615	9,740 (SB)	10,300 (SB)	
Right	100	90			

* Estimated.

ACCOMPLISHMENTS SINCE 1989

- ✓ Upgraded traffic signal equipment. Installed Opticom Emergency Vehicle Preemption Equipment. New electrical service and pavement markings were included with signal equipment upgrade. Traffic signal phasing was modified to include protected/permissive left-turn phasing on all intersection approaches.
- ✓ Upgraded roadway geometry to provide an exclusive left turn lane, one through lane and one exclusive right turn lane for each of the four intersection approaches.



#1 - Broadway Boulevard eastbound approach



#2 - Mosside Boulevard northbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Pavement Markings are faded and need to be upgraded on all intersection approaches.
Estimated Cost: \$ 1,000

MEDIUM-TERM RECOMMENDATIONS

- None at this time.

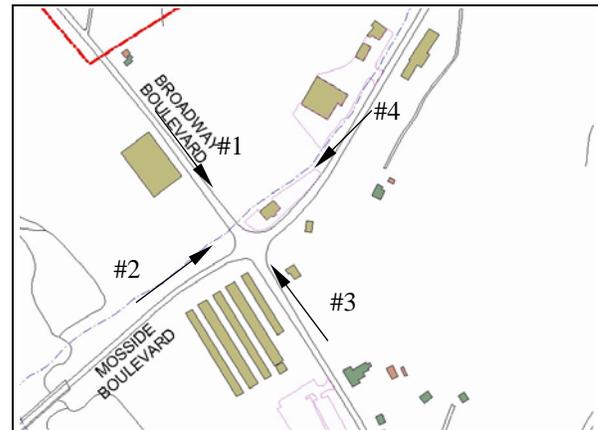
LONG-TERM RECOMMENDATIONS

- Develop construction plans for the redesign of this intersection to accommodate projected traffic demands and implement improvements as shown in Map 18, including:
 - Widen Broadway Boulevard (Route 130) to accommodate an exclusive left-turn lane, a through lane and a shared through/right-turn lane for both the eastbound and westbound approaches. (Will require relocation of utility pole line along the northern side of Route 130)
 - Change lane arrangement for the northbound and southbound Mosside Boulevard approaches by converting the exclusive right-turn lane to a shared through/right-turn lane and provide additional lane to receive the through movement.
 - Relocate and replace signal supports and upgrade entire traffic signal installation. Also provide for coordination with adjacent signal controllers to the east of this intersection along Route 130 via closed loop system.

This project would be completed in conjunction with the replacement of the Route 48 Bridge structure.

Estimated Cost: \$1,800,000 plus costs for bridge replacement.

- Widen Route 130 between Route 48 and Haymaker/Forbes Roads to include a four-lane roadway cross section.
Estimated Cost: \$1,500,000



#3 –Mosside Boulevard southbound approach.



#4 - View of Intersection looking westbound.

MONROEVILLE

52. Mosside Boulevard/Route 48 and Hillside Avenue

Intersection Characteristics: Unsignalized, "T" Intersection.
 Stop controlled on westbound Hillside Avenue.
 Traffic Signal not warranted based on existing or projected traffic volumes.
 Nine reportable accidents during past three years

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997 *	2005 *
Mosside Blvd. SR 0048 (State)	Northbound Straight Right	780 20	600 60	10,620 (NB)	11,260 (NB)
	Southbound Left Straight	10 (B) 405	100 (B) 765	9,740 (SB)	10,320 (SB)
Hillside Avenue (Municipal)	Westbound Left Right	(E) 95 20	(F) 30 15		

* Estimated.

ACCOMPLISHMENTS SINCE 1989

- ✓ No Change.

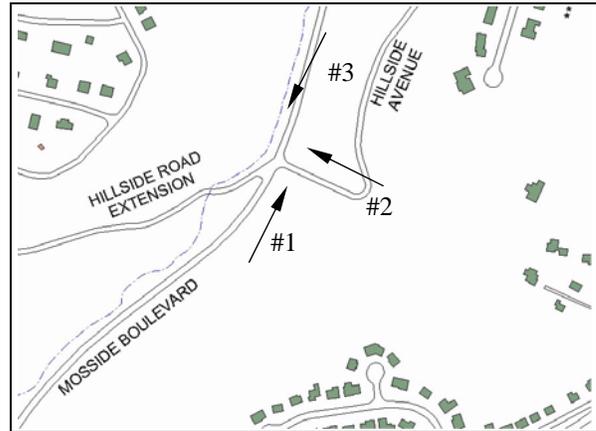


#1 - Mosside Boulevard northbound approach



#2 - Hillside Avenue westbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- None at this time.

MEDIUM-TERM RECOMMENDATIONS

- None at this time

LONG-TERM RECOMMENDATIONS

- None at this time



#3 - Mosside Boulevard southbound approach

MONROEVILLE

53. Mossie Boulevard/Route 48 and Cambridge Square Drive

Intersection Characteristics: Unsignalized, "T" Intersection.
 Stop controlled on eastbound Cambridge Square Drive

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997 *	2005 *
Mossie Blvd. SR 0048 (State)	Northbound				
	Left	5 (A)	5 (B)	10,620 (NB)	11,260 (NB)
	Straight	715	615	9,740 (SB)	10,320 (SB)
	Southbound				
	Straight	450	825	10,250 (NB)	10,865 (NB)
	Right	10	20	10,210 (SB)	10,800 (SB)
Cambridge Square Drive (Private)	Eastbound	(C)	(C)		
	Left	10	5	310 (EB)	320 (EB)
	Right	15	10	550 (WB)	565 (WB)

* Estimated.

ACCOMPLISHMENTS SINCE 1989

✓ No Change.

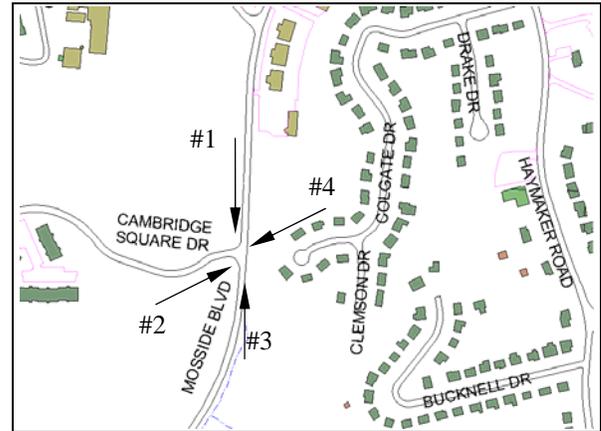


#1 - Mossie Boulevard southbound approach



#2 - Cambridge Square Drive eastbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Install intersection-warning signs on both Mossier Boulevard approaches to the intersection.
Estimated Cost: \$600

MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG TERM RECOMMENDATIONS

- None at this time.



#3 - Mossier Boulevard northbound approach



#4 - Looking west at Cambridge Square Drive approach

MONROEVILLE

54. Mosside Boulevard/Route 48 and Macbeth Drive

Intersection Characteristics: Unsignalized, "T" Intersection.
 Stop controlled on the eastbound Macbeth Drive approach.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997 *	2005 *
Mosside Blvd. SR 0048 (State)	Northbound				
	Left	75 (A)	80 (B)	10,250 (NB)	10,860 (NB)
	Straight	650	540	10,210 (SB)	10,800 (SB)
	Southbound				
	Straight	420	720	9,480 (NB)	10,050 (NB)
	Right	65	45	10,130 (SB)	10,740 (SB)
Macbeth Drive (Municipal)	Eastbound	(D)	(F)		
	Left	50	65	2,290 (EB)	2,360 (EB)
	Right	40	130	2,190 (WB)	2,250 (WB)

* Estimated.

ACCOMPLISHMENTS SINCE 1989

√ No Change.



#1 - Macbeth Drive eastbound approach



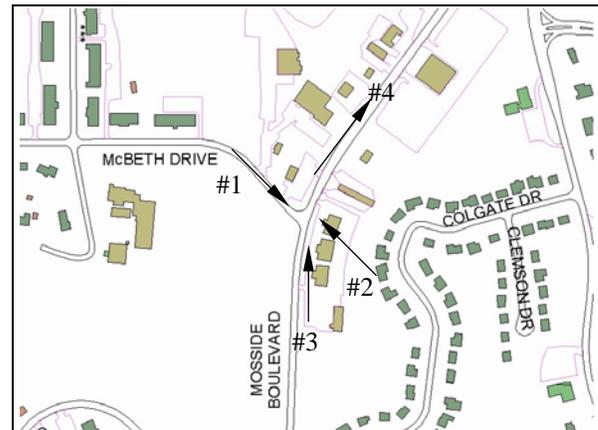
#2 - Looking west at Macbeth Drive eastbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Place intersection warning signs on Mosside Boulevard northbound and southbound approaches to the intersection.
Estimated Cost: \$ 500
- Re-stripe centerline and stop bar on Macbeth Drive eastbound approach.
Estimated Cost: \$ 500



MEDIUM-TERM RECOMMENDATIONS

- Reconstruct intersection to include:
 - Widen the Mosside Boulevard northbound approach to provide an exclusive left-turn lane into Macbeth Drive.
 - Widen Macbeth Drive eastbound approach to accommodate one exclusive right-turn lane (approximately 100 feet in length) and on left-turn lane.**Estimated Cost: \$650,000**
- Based on existing capacity constraints and recent accident history of angle collisions, Install a new three phase signal at the intersection and SIGNAL AHEAD signs on both Mosside Boulevard approaches to the intersection. Harris suggests locating signal supports and controller should be located toward the back of the existing roadway rights-of way in anticipation of the Route 48 widening project (which will provide a four-lane cross section) between State Route 130 and Haymaker/Gateway Campus Boulevard intersections.
Estimated Cost: \$ 100,000

LONG-TERM RECOMMENDATIONS

- Improvements anticipated as part of the Route 48 Widening Project include:
 - The extension of two southbound travel lanes from just south of Haymaker Road through the Route 48 corridor to State Route 130 (Broadway Boulevard);
 - The proposed lane arrangement for the Mosside Boulevard northbound approach consists of an exclusive left-turn lane and two through lanes; and
 - The modification of the traffic signal controller, signal heads and overhead lane control signage to accommodate the new lane arrangements.**Estimated Cost: Included as part of the Route 48 Widening Project.**



#3 - Mosside Boulevard northbound approach



#4 - Looking north at Mosside southbound approach

MONROEVILLE

55. Mosside Boulevard/Route 48 at Haymaker Road and Gateway Campus Boulevard

Intersection Characteristics: Signalized, “5-leg” Intersection.
Signal Controller is coordinated with adjacent signal at Loehmann’s Plaza and Route 48.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997 *	2005 *
Gateway Campus Boulevard (Private)	Eastbound	(D)	(D)	CNC	
	Left	150	85		
	Straight Right	60 15	50 5		
Haymaker Road (County)	Westbound	(D)	(D)	9,870 (EB) 10,450 (EB) 9,900 (WB) 10,500 (WB)	
	Left	40	110		
	Straight Right	110 735	30 680		
Mosside Boulevard SR 0048 (State)	Northbound	(D)	(D)	9,480 (NB) 10,050 (NB) 10,130 (SB) 10,740 (SB)	
	Left	10	5		
	Straight Right	640 65	550 40		
	Southbound	(C)	(C)	20,280 (NB) 21,490 (NB) 18,590 (SB) 19,700 (SB)	
	Left	465	660		
	Straight Right	430 200	650 85		

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ Intersection was reconstructed as part of an ECONS project to include a jug handle design connecting Haymaker Road to Route 48. The improvement allows all Haymaker Road turning movements to occur at the signal opposite Gateway Campus Boulevard. This design also included the widening of Route 48 southbound to provide dual left turn lanes and closure of the left-turn slip ramp from northbound Haymaker Road to southbound Route 48.



#1 - Aerial View looking toward the northwest



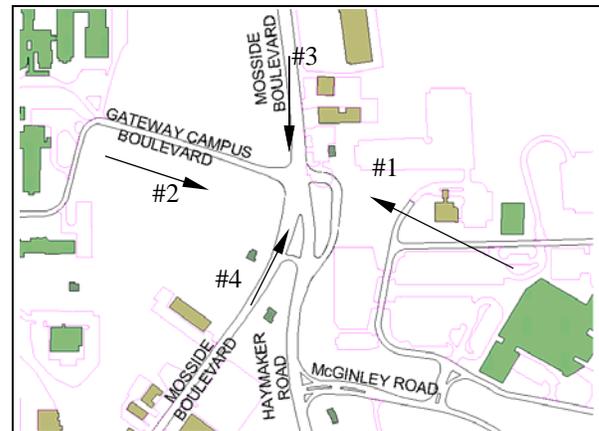
#2 - Gateway Campus Boulevard eastbound approach

MONROEVILLE



ACCOMPLISHMENTS SINCE 1989 (Continued)

- ✓ Installed hard wire interconnect along Haymaker Road to the signal controller at McGinley Road and also along Mosside Boulevard to the Northern Pike intersection controller to provide a progressive movement of traffic along these corridors.
- ✓ Widened Gateway Campus Boulevard to accommodate three 12 foot wide travel lanes:
 - One exclusive left-turn lane (lengthened to approximately 420 feet long) and one exclusive right-turn lane on the eastbound intersection approach; and
 - One westbound travel lane toward Gateway High School.



SHORT-TERM RECOMMENDATIONS

- None at this time.

MEDIUM-TERM RECOMMENDATIONS

- Review Interconnect (especially if a signal is installed at the intersection of Haymaker and Saunders Station Roads) and develop new timing plans for the A.M., P.M. and off-peak periods. Extension of the system cycle length during the peak hour periods should also be investigated.

Estimated Cost: \$6,250

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Mosside Boulevard southbound approach



#4 - Mosside Boulevard northbound approach

MONROEVILLE

56. Haymaker Road and McGinley Road

Intersection Characteristics: Signalized, “T” Intersection.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997 *	2005 *
McGinley Road (Municipal)	Westbound	(C)	(C)		
	Left	35	170	4,190 (EB)	4,450 (EB)
	Right	115	490	4,630 (WB)	4,900(WB)
Haymaker Road (County)	Northbound	(B)	(B)		
	Straight	735	330	7,820 (NB)	8,290 (NB)
	Right	210	35	7,320 (SB)	7,760 (SB)
	Southbound	(B)	(B)		
	Left	455	205	9,900 (NB)	10,500 (NB)
	Straight	145	530	9,870 (SB)	10,460 (SB)

* Estimated.

ACCOMPLISHMENTS SINCE 1989

- ✓ Traffic signal upgrade completed in 1998 included
 - Replaced the traffic signal controller, loop sensors, electrical service and all signal equipment.
 - Adjusted signal timings to accommodate the existing Haymaker Road southbound left turn volume.
 - Provided hard wire interconnect along Haymaker Road with the master controller located at the adjacent intersection of Haymaker Road and Gateway Campus Boulevard/Mossie Boulevard.

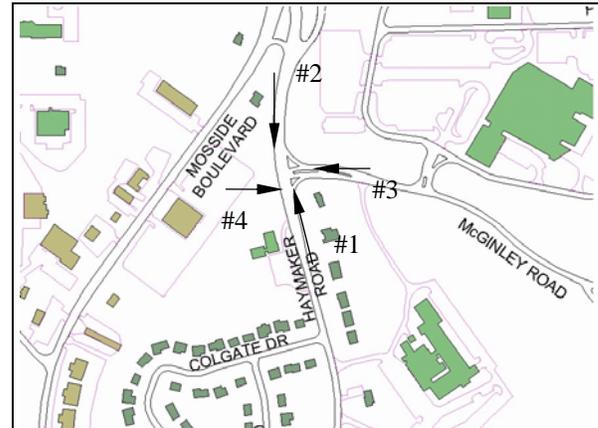


#1 - Haymaker Road northbound approach



#2 - Haymaker Road southbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- None at this time.

MEDIUM-TERM RECOMMENDATIONS

- The vehicular channelization taper along southbound Haymaker Road, south of the intersection needs to be reconstructed and lengthened to comply with current roadway standards. Also the turn radius for the southeast corner of the intersection should be improved together with widening eastbound McGinley Road to accommodate two lanes of traffic.

Estimated Cost: \$ 375,000

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - McGinley Road westbound approach



#4 - McGinley Road westbound approach

MONROEVILLE

57. Haymaker Road and Saunders Station Road

Intersection Characteristics: Unsignalized, "T" Intersection.
 Stop Controlled on westbound Saunders Station Road.
 Existing and projected traffic volumes warrant installation of a traffic signal.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	PM Peak Hour	1997	2005 *
Saunders Station (County)	Westbound	(F)	(C)		
	Left	45	30	3,270 (EB)	3,465 (EB)
	Right	470	175	3,510 (WB)	3,720 (WB)
Haymaker Road (County)	Northbound			CNC	
	Straight	570	295		
	Right	25	40		
	Southbound				
	Left	60 (A)	360 (A)	7,820 (NB) *	8,290 (NB)
	Straight	120	490	7,320 (SB) *	7,760 (SB)

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

√ No Change.



#1 - Haymaker Road southbound approach



#2 - Haymaker Road northbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- None at this time.

MEDIUM-TERM RECOMMENDATIONS

- Widen Haymaker Road to provide for a left-turn lane on the southbound approach. Also widen the Saunders Station Road westbound approach and add an additional lane to northbound Haymaker Road to provide a continuous right turn lane. Install "EXCEPT RIGHT TURN" sign under the STOP sign for the westbound approach.
Estimated Cost: \$ 655,000
- Since traffic volume warrants for signalization are currently met, review traffic volumes and intersection operations in approximately five years to assess the traffic control needs for a multi-way stop or the installation of a traffic signal.
Estimated Cost: \$ 5,700

LONG-TERM RECOMMENDATIONS

- Installation of a traffic signal that should be hard wire interconnected with adjacent signals at McGinley and also at Mossie Boulevard (SR 48)/Gateway Campus Boulevard.
Estimated Cost: \$ 100,000



#3 - Saunders Station Road westbound approach

MONROEVILLE

58. Haymaker Road and Ramsey Road

Intersection Characteristics: Signalized, "T" Intersection.
Signal operates in coordination with signal at Leslie Drive.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	PM Peak Hour	1997	2005
Ramsey Road (Municipal)	Westbound	(B)	(C)	CNC	
	Left	30	35		
	Right	105	75		
Haymaker Road (County)	Northbound	(A)	(A)	CNC	
	Straight	340	210		
	Right	35	50		
	Southbound	(B)	(C)	CNC	
Left	40	105			
	Straight	125	335		

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ Traffic signal was upgraded to include new pavement loop detectors on all approaches, a new controller, new vehicle and pedestrian signal heads, Opticom Emergency Vehicle Preemption Equipment, and new electrical service. Signal ahead warning signs on the Haymaker approaches were repositioned farther back from the intersection.

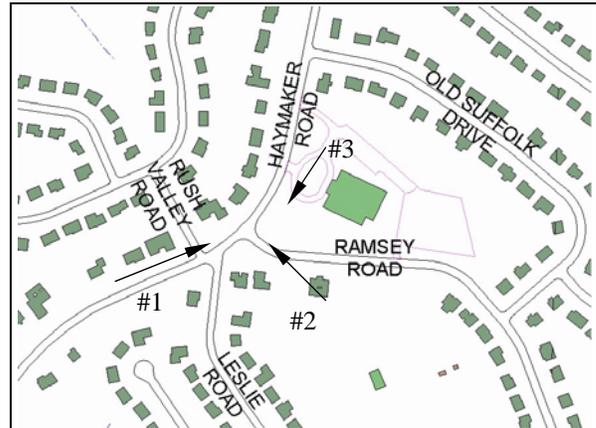


#1 - Haymaker Road northbound approach



#2 - Ramsey Road westbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Existing pedestrian crosswalks and stop bars need to be re-striped, as well as the centerline along Ramsey Road. Also remove the misplaced Do Not Enter Sign from the eastbound approach of Ramsey Road.
Estimated Cost: \$ 700

MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Haymaker Road southbound approach

MONROEVILLE

59. Haymaker Road at Leslie Drive and Rush Valley Road

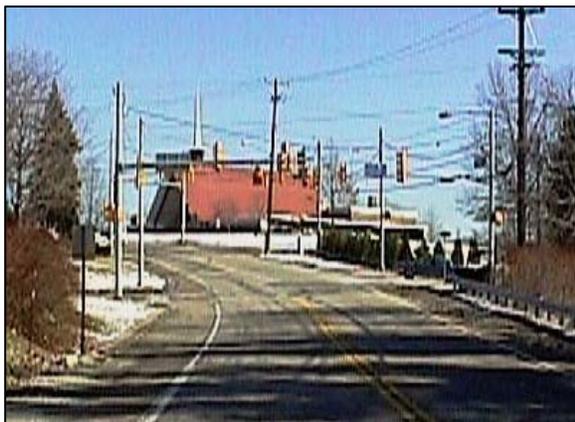
Intersection Characteristics: Signalized, “+” Intersection.
Signal operates in coordination with signal at Ramsey Road.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour	PM Peak Hour	1997	2005
Rush Valley Road (Municipal)	Eastbound	(C)	(C)	CNC	
	Left	25	20		
	Straight Right	0 5	0 5		
Leslie Drive (Municipal)	Westbound	(C)	(C)	CNC	
	Left	5	5		
	Straight Right	0 30	0 10		
Haymaker Road (County)	Northbound	(B)	(B)	CNC	
	Left	Negligible	15		
	Straight Right	340 5	230 5		
	Southbound	(A)	(A)	CNC	
	Left Straight Right	10 135 10	20 335 15		

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ Traffic signal was upgraded to include new pavement loop detectors on all approaches, a new controller, Opticom Emergency Vehicle Preemption Equipment, new vehicle and pedestrian signal heads and new electrical service.

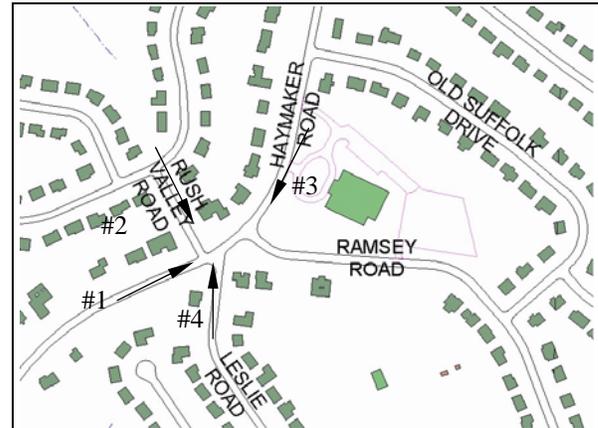


#1 – Haymaker Road northbound approach.



#2 - Rush Valley Road eastbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Existing pedestrian crosswalks and stop bars need to be re-stripped, as well as centerlines on the minor intersecting streets.
Estimated Cost: \$ 700

MEDIUM-TERM RECOMMENDATIONS

- None at this time.

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Haymaker Road southbound approach



#4 - Leslie Road westbound approach

MONROEVILLE

60. Broadway Boulevard/Route 130 at Forbes Road and Haymaker Road with Shopping Center Driveway

Intersection Characteristics: Signalized, Five-way Intersection.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997	2005 *
Broadway Boulevard SR 0130 (State)	Eastbound	(D)	(E)		
	Lt (to Haymaker)	5	5	8,670 (EB) *	9,190 (EB)
	Left (to Forbes)	90	320	7100 (WB) *	7,525 (WB)
	Straight	310	375		
	Right	10	150		
	Westbound	(D)	(F)		
	Left	5	10	4,960 (EB) *	5,260 (EB)
	Straight	370	210	4,960 (WB) *	5,260 (WB)
Village Shops Driveway #1 (Private)	Northbound	(D)	(E)		
	Left	5	100		
	Thru (to Haymaker)	5	45		
	Thru (to Forbes)	5	70		
	Right	5	20		
Haymaker Road (County)	Southbound	(E)	(F)		
	Left (to Forbes)	15	40	1,970 (NB)	2,090 (NB)
	Left (to Broadway)	35	100	1,980 (SB)	2,100 (SB)
	Straight	5	60		
	Right	40	30		
Forbes Road SR 2102 (State)	Southbound	(F)	(E)		
	Left	5	5		
	Straight	5	35		
	Rt. (to Broadway)	500	180		
	Rt. (to Haymaker)	80	35		

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- ✓ Intersection was reconstructed, including the realignment of Forbes Road with Haymaker Road to accommodate an exclusive left turn lane and a shared through/right-turn lane on the southbound Forbes Road approach. Installed a new traffic signal.



#1 - Aerial View looking toward the southwest



#2 - Route 130 westbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- None at this time

MEDIUM-TERM RECOMMENDATIONS

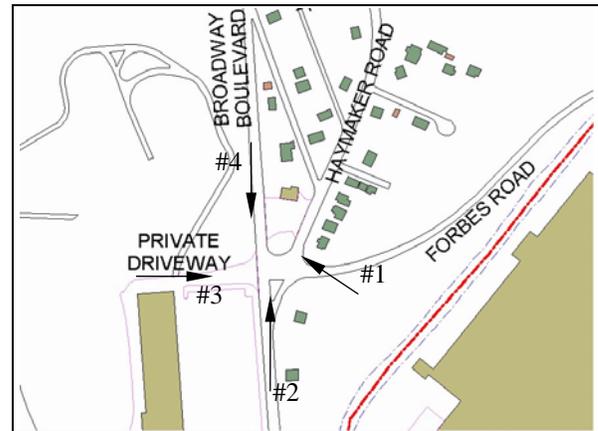
- None at this time

LONG-TERM RECOMMENDATIONS

- In an effort to accommodate future traffic demands, Harris recommends simplifying intersection operations and traffic flow within this area by
 - Removing the private Haymaker Village Driveway (#3 shown above) access from this intersection. Eliminating this access allows the existing westbound left-turn lane along Route 130 to be converted into a through-lane, providing two through lanes from this approach. The existing left-turn lane and through lane on the eastbound approach of Route 130 will be shifted 12 feet toward the south allowing for the addition of a westbound through lane on the west leg of the intersection.
 - Changing the lane arrangement on the Forbes Road southbound approach to include an exclusive right-turn lane and a shared left-right turn lane to better accommodate the heavy right turn movement to Broadway Boulevard during the AM peak period.
 - Relocating Driveway #1 approximately 400 feet to the east of its existing location and providing a westbound Broadway Boulevard left-turn lane and a traffic signal at this location.
 - Modifying the intersection of Broadway Boulevard and the other Haymaker Village Driveway (Not shown on the map) by removing the existing traffic signal and prohibiting the left-turn movement from the site driveway to westbound Route 130 via channelization and signage.
 - Relocation of traffic signal supports, controller and other equipment along the southern side of Route 130 will be required to accommodate the widening but right-of way acquisition is not anticipated.

Estimated Cost: \$ 750,000

All of these improvements should be advanced with the widening of Route 130 between Forbes Road and Route 48 to a four lane cross section.



#3 - Haymaker Village Driveway #1 northbound approach



#4 - Route 130 eastbound approach

MONROEVILLE

61. Saunders Station Road and Abers Creek Road

Intersection Characteristics: Unsignalized, "T" Intersection
 Stop controlled on southbound Abers Creek Road.

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997	2005 *
Saunders Station Road. (County)	Eastbound			CNC	
	Left	30 (A)	70 (A)		
	Straight	40	255		
	Westbound				
	Straight	300	95	2,220 (EB)	2,290 (EB)
	Right	40	15	2,150 (WB)	2,210 (WB)
Abers Creek Road (Municipal)	Southbound	(A)	(B)		
	Left	15	90	270 (NB) *	270 (NB)
	Right	40	70	890 (SB) *	890 (SB)

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

- √ Intersection warning sign installed on the Saunders Station Road westbound approach.

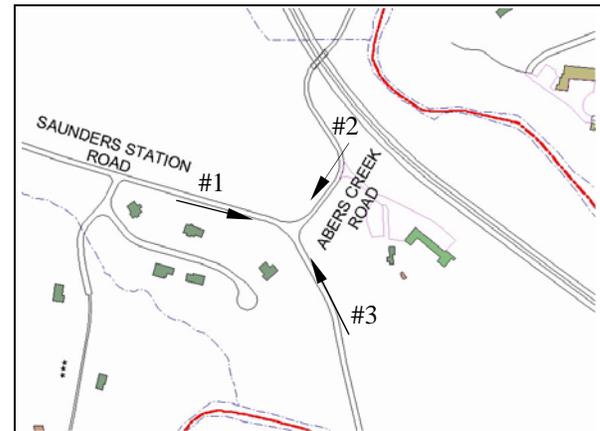


#1 - Saunders Station Road eastbound approach



#2 - Abers Creek Road southbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Install intersection warning sign on the Saunders Station Road eastbound approach.
Estimated Cost: \$300

MEDIUM-TERM RECOMMENDATIONS

- None at this time

LONG-TERM RECOMMENDATIONS

- None at this time



#3 - Saunders Station Road westbound approach

MONROEVILLE

62. Abers Creek Road and Cavitt Road

Intersection Characteristics: Unsignalized, "T" Intersection.
 Stop Controlled on westbound Cavitt Road
 and southbound Abers Creek Road

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997 *	2005 *
Abers Creek Road (Municipal)	Northbound Straight Right	15 15	10 45	CNC	
	Southbound Left Straight	5 (A) 20	10 (A) 135	270 (NB) 890 (SB)	290 (NB) 960 (SB)
Cavitt Road (Municipal)	Westbound Left Right	(A) 20 5	(A) 30 5	CNC	

* Estimated.

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

√ No Change.

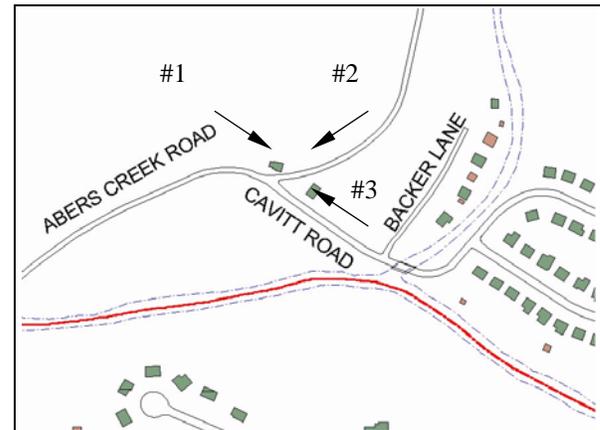


#1 - Abers Creek Road northbound approach



#2 - Abers Creek Road southbound approaches

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Install new STOP sign on Abers Creek Road northbound approach creating a three-way stop. Also install new THREE-WAY placards under each STOP sign.
Estimated Cost: \$ 650
- Trim vegetation on Cavitt Road westbound approach.
Estimated Cost: \$ 600

MEDIUM-TERM RECOMMENDATIONS

- None at this time

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Cavitt Road westbound approach

MONROEVILLE

63. Cavitt Road and Alpine Village Drive

Intersection Characteristics: Unsignalized, "T" Intersection.
 Stop Controlled on northbound Cavitt Road

Roadway (Ownership)	Approach/Movement	1997 Traffic Volumes (Level of Service)		Average Annual Daily Traffic	
		AM Peak Hour *	PM Peak Hour *	1997	2005
Cavitt Road (Municipal)	Northbound Left	(A) 10	(A) 10	CNC	
	Right	5	5		
	Westbound Left	5 (A)	5 (A)	CNC	
	Straight	5	20		
Alpine Village Drive (Municipal)	Eastbound Straight	10	15	CNC	
	Right	5	10		

(CNC=COUNTS NOT COLLECTED)

ACCOMPLISHMENTS SINCE 1989

√ No Change.



#1 - Alpine Village Drive eastbound approach



#2 - Cavitt Road westbound approach

MONROEVILLE



SHORT-TERM RECOMMENDATIONS

- Install intersection warning sign on the Cavitt Road westbound approach before the horizontal curve. Install curve warning sign (arrow panel or chevrons) for westbound Cavitt Road approach.
Estimated Cost: \$500
- Replace faded stop sign on Cavitt Road northbound approach.
Estimated Cost: \$300

MEDIUM-TERM RECOMMENDATIONS

- None at this time

LONG-TERM RECOMMENDATIONS

- None at this time.



#3 - Cavitt Road northbound approach

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