



September 4, 2009

Mr. Zach Robbins
Senior Planner
Dept. of Planning & Community Development
Town of Ashland
P.O. Box 1600
Ashland, Virginia 23005

Subject: East Ashland Traffic Impact Analysis Review

Dear Mr. Robbins:

Wilbur Smith Associates has completed a review of the East Ashland Development Traffic Impact Analysis, prepared by Timmons Group, dated July 1, 2009. Our review has found the report to be in conformance with standard practices and the VDOT requirements under the 527 regulations.

The report examines year 2015 and year 2021 traffic conditions both without the East Ashland development (Background Conditions) and with the East Ashland development (Total Conditions). Each of these conditions was evaluated for three scenarios. The scenarios are variations of where Woodside Lane and Site Entrance #2 intersect Route 54 in relation to each other. The three scenarios are:

- The intersections of Route 54 with Site Entrance #2 and Woodside Lane remain offset
- Woodside Lane remains at its existing location and Site Entrance #2 is relocated east to intersect Route 54 across from Woodside Lane
- Site Entrance #2 remains at its proposed location and Woodside Lane is relocated west to intersect Route 54 across from Site Entrance #2.

Each Scenario was further examined for two alternatives. Alternative A maintains the intersection of Providence Church Road and Route 54 at its current location. Alternative B assumes the relocation of Providence Church Road through the Providence Creek development, intersecting with Woodside Lane north of Route 54.

Background Conditions

The report assumes existing traffic volumes increase 2 percent per year, compounded annually, through the year 2015. The 2015 traffic volumes are increased 1 percent per year, compounded annually, to determine the 2021 traffic volumes without any additional developments.

Other Developments

In addition to increasing the traffic volumes by an annual percentage, the traffic generated by three planned developments are also included in the Background Conditions. The traffic volumes projected to be generated by the developments of Hickory Hills, Providence Creek, and Woodside Estates have been added to the Background Conditions.

Roadway Improvements

The Background Conditions assume a number of roadway improvements are in place by the year 2015. The improvements are attributed to the Hickory Hill development, the Providence Creek development, and VDOT. Improvements associated with the Hickory Hill development are proffered. Improvements proposed by the Providence Creek development are not funded nor proffered.

The Hickory Hill development has proffered the following improvements:

- 150 foot left turn lane with a 70 foot taper on westbound Route 54 at the southbound I-95 ramps
- Traffic signal at the intersection of Route 54 and the southbound I-95 ramps

The Providence Creek proposed improvements include:

- Left turn lane on eastbound Route 54 at Woodside Lane / Providence Church Road
- Right turn lane on westbound Route 54 at Woodside Lane / Providence Church Road
- Right turn lane on southbound Woodside Lane at Route 54.

In addition to the roadway improvements by other developments, VDOT has programmed improvements for the intersection of US Route 1 and Route 54. The improvements include:

- Add a second eastbound through lane on the west leg of the intersection
- Add a northbound lane on US Route 1 north of the intersection
- Modify the westbound right to a free-flow condition
- Add a southbound right turn lane on US Route 1.

Level of Service

Under the 2015 and 2021 Background Conditions, the intersections generally operate at Level of Service (LOS) D or better. Exceptions for the year 2015 analysis period include the ramp to southbound I-95, which operates at LOS F during the AM, PM, and Saturday peak hours and the westbound through traffic at the intersection of US Route 1 and Route 54, which operates at LOS E during the PM peak hour. The year 2021 exceptions are the same as the year 2015

exceptions with the addition of the southbound left turn at the US Route 1 and Route 54 intersection, which operates at LOS E during the PM Peak hour in 2021.

Queue Lengths

The 2015 and 2021 analysis show a number of queue lengths expected to exceed the available storage capacity. During the Saturday peak hour, the westbound left turn queue at the intersection of Route 54 and the southbound I-95 ramps exceeds the storage capacity in both the 2015 (by 20 feet) and 2021 analysis (by 34 feet). At the yield point on the ramp from Route 54 to southbound I-95, and at the intersection of US Route 1 and Route 54, the queue length for one or more movements exceeds the storage capacity during the AM, PM, and Saturday peak hours. At a number of locations, the queue lengths during the PM peak hour (the worse case) will exceed the available storage capacity. The queue length in excess of the storage length for the PM peak hour is shown in the table below.

Background Conditions
PM Peak Hour
Queue in Excess of Storage Length (feet)

Intersection	Movement	Year 2015	Year 2021
Route 54 / US Route 1	EB Left	25	40
	WB Thru	234	286
	NB Left	107	144
	SB Left	181	236
Yield Point on Ramp to SB I-95 from Route 54	SB Left	719	799

At these locations the queues will spill back into the through lanes (in the case of left turn movements), or into the next upstream intersection (in the case of through movements), and will negatively affect traffic flow.

Total Conditions

The Total Conditions analysis evaluates conditions with the East Ashland development fully built out. The year 2015 is assumed for the build out year. The East Ashland Traffic Impact Analysis (TIA) assumes the following levels of development for East Ashland:

- 85 single family detached homes
- 597 townhouses and condominiums
- 384 apartments
- 350 hotel rooms
- 593,00 square feet of office space
- 376,400 square feet of retail space
- 21,500 square feet of high turn-over sit-down restaurant space

Based upon information contained in the eighth edition of the Trip Generation Handbook, published by the Institute of Transportation Engineers (ITE), the predicted traffic volume generated by the East Ashland development is shown in the table below.

East Ashland Development Trip Generation Summary

	In	Out	Total
Weekday Average Daily Traffic (ADT)	16,608	16,608	33,216
AM Peak Hour	1,231	804	2,034
PM Peak Hour	1,515	1,801	3,316
Saturday Average Daily Traffic	17,659	17,659	35,318
Saturday Peak Hour of East Ashland Development	1,704	1,525	3,229

Trip Distribution

The East Ashland traffic is distributed to the surrounding roadway network based on the TIA prepared for the previous East Ashland development, average daily traffic volumes from the 2009 VDOT traffic count data, and existing directional turning movement count data. The trips are distributed as shown in the Table below.

East Ashland Site Entrance Trip Assignment

	Residential	Office	Hotel	Retail & Restaurant
Mt. Hermon Rd at Route 54	60%	65%	95%	10%
Site Entrance #1	25%	7%	0%	50%
Site Entrance #2	17%	12%	0%	30%
Site Entrance #3	20%	11%	0%	5%
Mt. Hermon Rd toward south	5%	5%	5%	5%

The distribution used in the TIA does not match up with the development pattern within East Ashland. According to Figure 6-1A in the TIA, 84% of the residential development is grouped in the area of Site Entrance 1, 2, and 3, yet only 62% of the residential traffic volumes are assigned to these entrances.

In addition to the questionable distribution of the residential trips, 5% of all traffic is assigned to Mt. Hermon Road toward the south. According to VDOT 2008 traffic data, the ADT on this section of roadway is approximately 510 vehicles per day. Given the nature of Mount Herman Road south of the proposed site, assignment of 5% of the total traffic volumes (1,660 trips) is too high.

Roadway Improvements to be provided by the East Ashland Development

The Total Conditions analysis assumes the roadway improvements included in the Background Conditions as well as several additional improvements. The additional improvements included in the Total Conditions analysis are proposed by the East Ashland development. They include:

- Widen Route 54 from 2 lanes to 4 lanes from Mt. Hermon Road to Site Entrance #3

- Extend northbound I-95 off-ramp merge lane to Mt. Hermon Road where it will become a channelized free-flow right turn lane
- Add a left turn lane on eastbound Route 54 at Francis Road
- Widen Mt. Hermon Road from 2 lanes to 4 lanes from Route 54 to approximately 900 feet south of Route 54
- Signalize the Route 54 intersections with Mt. Hermon Road, Site Entrance #1, Site Entrance #2, and Site Entrance #3
- Add right turn lane on eastbound Route 54 at Site Entrance #2
- Drop the eastbound Route 54 right lane into Site Entrance #3
- Add left turn lane on westbound Route 54 at Mt. Hermon Road, Site Entrance #1, Site Entrance #2, and Site Entrance #3.

Two improvements assumed under the Total Conditions, but not proffered or currently programmed, are also included in the analysis. These improvements are:

- Add roadway and ramp capacity on westbound Route 54 to ramp to southbound I-95
- Modify the yield point on ramp to southbound I-95 to yield traffic from eastbound Route 54.

Level of Service

The TIA calculated the level of service for the total conditions based upon the sum of the traffic volumes calculated under the Background Conditions and the traffic volumes calculated for the East Ashland development. Under the 2015 and 2021 Total Conditions, a number of intersections operate at LOS E or F.

2015 Conditions

During the PM peak hour, the westbound through and southbound left movements at the intersection of Route 54 / US Route 1 operate at LOS E. At the Route 54 / southbound I-95 ramp intersection, the westbound through and southbound through/left operates at LOS F during the AM, PM, and Saturday peak hours. The eastbound through movement operates at LOS E during the AM peak hour and LOS F during the PM and Saturday peak hour. The unsignalized intersection of Route 54 at the ramp to northbound I-95 operates at LOS F during the PM peak hour and LOS E during the Saturday peak hour. The Route 54 / southbound I-95 ramp intersection operates at LOS F during the AM, PM, and Saturday peak hours.

2021 Conditions

Under the year 2021 conditions, the intersection of Route 54 and US Route 1 operates at LOS E and LOS F during the PM peak hour. The eastbound left and the northbound through movements operate at LOS E, while the westbound through and southbound left movements operate at LOS F. At the Route 54 / southbound I-95 ramp intersection, the westbound left and southbound through/left operates at LOS F during the AM, PM, and Saturday peak hours. The eastbound through movement operates at LOS E during the AM peak hour and LOS F during the PM and Saturday peak hour. The unsignalized intersection of Route 54 at the ramp to northbound I-95 operates at LOS F during the PM peak hour and LOS E during the Saturday

peak hour. The intersection of Route 54 and the southbound I-95 ramps operates at LOS F during the AM, PM, and Saturday peak hours.

Queue Lengths

The 2015 and 2021 Total Conditions analysis show a number of queue lengths expected to exceed the available storage capacity. During the AM, PM, and Saturday peak hour, the westbound left turn queue at the intersection of Route 54 and the southbound I-95 ramps exceeds the storage capacity in both the 2015 and 2021 analysis. At the yield point on the ramp from Route 54 to southbound I-95, and at the intersection of US Route 1 and Route 54, the queue length for one or more movements exceeds the storage capacity during the AM, PM, and Saturday peak hours. At a number of locations, the queue lengths during the PM peak hour (the worse case) will exceed the available storage capacity. The queue length in excess of the storage length for the PM peak hour is shown in the table below.

**Total Conditions
 PM Peak Hour
 Queue in Excess of Storage Length (feet)**

Intersection	Movement	Year 2015	Year 2021
Route 54 / US Route 1	EB Left	25	40
	WB Thru	344	403
	NB Left	107	144
	SB Left	278	331
Route 54 at SB I-95 Ramps	WB Left	291	292
Route 54 at NB I-95 on-ramp	EB Left	291	362
Yield Point on Ramp to SB I-95 from Route 54	SB Left	**	**

** Synchro unable to calculate queue length

At these locations the queues will spill back into the through lanes (in the case of left turn movements), or into the next upstream intersection (in the case of through movements), and will negatively affect traffic flow. The most critical queue will be the queue at the yield point on the ramp from Route 54 to southbound I-95. If traffic from westbound Route 54 must yield to traffic from eastbound Route 54 (the current condition), the queue on westbound Route 54 may extend back to the second East Ashland site entrance. If the yield point is changed to require traffic from eastbound Route 54 to yield to traffic from westbound Route 54, the queue on westbound Route 54 will be substantially reduced. The ramp traffic from eastbound Route 54 will queue onto Route 54, but overall operational impact will not be as great.

The traffic study does not show the southbound I-95 off-ramp to Route 54 exceeding the available storage capacity. However, a review of the Synchro analysis and the SimTraffic

simulation shows the queue on this ramp as being much longer than shown in the report. In fact, the queue along the southbound I-95 off-ramp is expected to extend back to I-95.

Comparison of Background and Total Conditions

A comparison of the Background and Total Conditions shows a number of movements will have a decrease in level of service once the East Ashland development is completed. Most of the intersection movements will remain LOS D or better. However, the intersections of Route 54 with the ramps to northbound and southbound I-95 will operate at LOS F during one or more peak hours for both the 2015 and 2021 analysis years.

The location with the largest change in operations will be the merge point on the ramp to SB I-95 from eastbound and westbound Route 54. Under Background Conditions, this merge operates at LOS F during each of the peak hours and has a queue length of approximately 900 feet in 2015, which increases to approximately 1,000 feet in 2021. Under Total Conditions, the merge continues to operate at LOS F during each of the peak hours; however, the queue lengths increase significantly. The queue length at the merge point is expected to exceed 1,400 feet during each of the 2015 peak hour, and 1,500 during each of the 2021 peak hours. The software used for the analysis is unable to calculate the delay and queue length for the Total Conditions PM peak hour for either 2015 or 2021 because the delay will exceed 9999 seconds. However, it is clear the queue will extend to Route 54.

Number of Intersection Movements with LOS E or F

Analysis Year	AM Peak Hour		PM Peak Hour		Saturday Peak Hour	
	Without East Ashland	With East Ashland	Without East Ashland	With East Ashland	Without East Ashland	With East Ashland
2015	1	4	2	7	1	5
2021	1	4	3	9	1	5

Attachment A contains a comparison of level of service between the Background and Total Conditions.

Other Concerns

The traffic study did not analyze the public roadways and intersections within the East Ashland development. A brief review of the SimTraffic simulation files raises concerns as to the operations of the intersections along Mount Hermon Road, Site Entrance #1, and Site Entrance #2. It is believed, that at a minimum, traffic queues will block the access to the first internal site entrance along each of these roadways.

The traffic study does not contain any discussion of the future reconstruction of the Route 54 / I-95 interchange. The applicant should reserve right-of-way for the future reconstruction of the interchange. This reservation should take into consideration the alignment of a Route 54 bridge replacement over I-95 as part of the interchange reconstruction.

Recommendations

The traffic study makes the following recommendations:

- Add roadway and ramp capacity on Route 54 and the ramp to southbound I-95 from westbound Route 54
- Modify the yield point on the ramp to southbound I-95 to require traffic from eastbound Route 54 to yield to traffic from westbound Route 54
- Widen Route 54 from two-lane to four lanes from Mount Hermon Road through the intersection of Site Entrance #3, where the eastbound Route 54 outside lane will become a right turn lane into Site Entrance #3
- Extend the merge lane from northbound I-95 onto eastbound Route 54 to the intersection of Mount Hermon Road, where the lane will become a free-flow right turn lane into Mount Hermon Road
- Construct a left turn lane on eastbound Route 54 at the intersection of Frances Road
- Widen Mount Hermon Road from two lane to four from the intersection of Route 54 to approximately 900 feet south of the intersection
- Install traffic signals on Route 54 at the intersections of Mount Hermon Road, Site Entrance #1, and Site Entrance #2
- Install right turn lanes on eastbound Route 54 at Site Entrance #1 and Site Entrance #2
- Construct left turn lanes on westbound Route 54 at the intersections of Mount Hermon Road, Site Entrance #1, Site Entrance #2, and Site Entrance #3.

In addition to these recommendations, the southbound I-95 off ramp to eastbound Route 54 should be widened to two lanes to better accommodate the projected traffic volumes. The ramp from eastbound Route 54 to southbound I-95 should be reconfigured to bring the right turn from eastbound Route 54 onto the southbound I-95 ramp to the intersection of Route 54 and the southbound I-95 ramps. This will eliminate the yield point on the ramp and may reduce rear-end collisions on the ramp.

Conclusions

The East Ashland Development Traffic Impact Analysis, prepared by Timmons Group, dated July 1, 2009 has been found to be in conformance with standard practices, the scoping documents, and VDOT requirements under the 527 regulations.

The report examines year 2015 and year 2021 traffic conditions both without the East Ashland development (Background Conditions) and with the East Ashland development (Total Conditions).

Traffic generated by the East Ashland development will have a negative impact on the surrounding roadways and intersections. The recommendations proposed in the East Ashland Traffic Impact Analysis will lessen some of these impacts, but impacts will remain. The queues created by the East Ashland development are of a concern. In particular, the applicant should

provide additional recommendation to reduce the queues on the I-95 southbound off ramp and the I-95 southbound on ramp.

The roadways and intersections within the East Ashland site were excluded from the Traffic Impact Study. If these roadways are to become public streets, a supplemental traffic impact analysis addressing the roadways and intersections internal to the East Ashland site should be prepared.

The applicant should address the future reconstruction of the Route 54 / I-95 interchange and right-of-way dedication for this reconstruction should be proffered.

Please contact me if you have any questions concerning this review of the East Ashland Traffic Impact study.

Sincerely,

WILBUR SMITH ASSOCIATES

A handwritten signature in cursive script that reads "Paul A. Nelson".

Paul A. Nelson
Project Manager

Attachment A

Intersection Level of Service Comparison

East Ashland TIA Review
Level of Service Comparison - Off Site Intersections
Year 2015
Scenarios 1A, 1B, 2A, 2B, 3A and 3B

Weekday AM Peak Hour

Intersection	Type of Control	Approach	Lane Group	2015 Background		2015 Total	
				Delay	LOS	Delay	LOS
Route 54 / US Rte 1	Signal	EB	L	23.8	C	24.0	C
			T	31.6	C	32.2	C
			R	28.0	C	27.9	C
		WB	L	19.3	B	20.4	C
			T	42.0	D	43.1	D
			R - FF	0.2	A	0.2	A
		NB	L	21.4	C	22.8	C
			T	30.6	C	32.4	C
			R - FF	0.1	A	0.2	A
		SB	L	20.9	C	25.3	C
			T	29.5	C	30.4	C
			R	25.6	C	26.3	C
Route 54 at Ramp from SB I-95 / Ramp to SB I-95	Signal	EB	T	12.0	B	69.3	E
			L	5.0	A	112.2	F
		WB	T	4.4	A	9.7	A
			LT	41.8	D	138.0	F
Route 54 at Ramp to NB I-95	Unsignalized	EB	L	10.0	A	13.8	B
Ramp to NB I-95 from EB Rte 54 / Ramp to NB I-95 from WB Rte 54	Yield	WB	R	9.8	A	11.3	B
Ramp to SB I-95 from EB Rte 54 / Ramp to SB I-95 from WB Rte 54	Yield	SB	L	103.2	F	483.1	F

Weekday PM Peak Hour

Intersection	Type of Control	Approach	Lane Group	2015 Background		2015 Total	
				Delay	LOS	Delay	LOS
Route 54 / US Rte 1	Signal	EB	L	36.6	D	37.6	D
			T	32.7	C	32.9	C
			R	29.2	C	28.9	C
		WB	L	22.7	C	29.3	C
			T	63.1	E	78.0	E
			R - FF	0.3	A	0.4	A
		NB	L	33.6	C	37.5	D
			T	46.9	D	54.9	D
			R - FF	0.1	A	0.2	A
		SB	L	43.6	D	69.3	E
			T	43.3	D	45.4	D
			R	37.2	D	38.5	D
Route 54 at Ramp from SB I-95 / Ramp to SB I-95	Signal	EB	T	17.9	B	162.8	F
			L	15.7	B	368.0	F
		WB	T	3.4	A	6.9	A
Route 54 at Ramp to NB I-95	Unsignalized	EB	LT	35.0	C	346.9	F
			L	12.3	B	305.9	F
Ramp to NB I-95 from EB Rte 54 / Ramp to NB I-95 from WB Rte 54	Yield	WB	R	11.2	B	20.2	C
Ramp to SB I-95 from EB Rte 54 / Ramp to SB I-95 from WB Rte 54	Yield	SB	L	313.7	F	9999.0	F

East Ashland TIA Review
Level of Service Comparison - Off Site Intersections
Year 2015
Scenarios 1A, 1B, 2A, 2B, 3A and 3B

Saturday Peak Hour

Intersection	Type of Control	Approach	Lane Group	2015 Background		2015 Total	
				Delay	LOS	Delay	LOS
Route 54 / US Rte 1	Signal	EB	L	28.4	C	29.9	C
			T	32.6	C	33.3	C
			R	29.6	C	29.3	C
		WB	L	31.3	C	54.2	D
			T	42.1	D	43.9	D
			R - FF	0.4	A	0.5	A
		NB	L	20.8	C	24.0	C
			T	30.6	C	34.0	C
			R - FF	0.2	A	0.3	A
		SB	L	20.6	C	26.3	C
			T	31.2	C	33.5	C
			R	27.4	C	29.0	C
Route 54 at Ramp from SB I-95 / Ramp to SB I-95	Signal	EB	T	20.2	C	126.2	F
		WB	L	11.1	B	333.6	F
			T	6.5	A	12.1	B
SB	LT	43.3	D	341.2	F		
Route 54 at Ramp to NB I-95	Unsignalized	EB	L	11.2	B	35.1	E
Ramp to NB I-95 from EB Rte 54 / Ramp to NB I-95 from WB Rte 54	Yield	WB	R	11.4	B	18.8	C
Ramp to SB I-95 from EB Rte 54 / Ramp to SB I-95 from WB Rte 54	Yield	SB	L	88.5	F	592.2	F

East Ashland TIA Review
Level of Service Comparison - Site Entrances
Year 2015
Scenario 1A

AM Peak Hour

Intersection	Approach	2015 Background				2015 Total			
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	9.4	A	Signal	L	17.2	B
			TR	*	*		T	16.0	B
	WB		LT	0.4	A		R	0.7	A
			R	*	*		L	15.9	B
	NB		LTR	27.3	D		T	11.7	B
			LTR	14.6	B		R	7.1	A
	SB		DL	39.9	D		DL	39.9	D
			TR	35.0	C		TR	35.0	C
LTR	42.9	D	LTR	42.9	D				
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition	Signal	T	0.9	A			
	WB			R	0.2	A			
				L	3.7	A			
	NB			T	2.6	A			
Route 54 at Site Entrance #2	EB	Does not exist in Background Condition	Signal	DL	40.9	D			
	WB			R	37.9	D			
				L	1.3	A			
	NB			R	0.4	A			
Route 54 at Woodside Lane / Providence Church Road	EB	Stop	Stop	L	12.4	B			
	SB			L	10.3	B			
				L	138.8	F			
	R			17.0	C				
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition	Stop	L	21.1	C			
	NB			R	12.0	B			
				L	8.8	A			

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

PM Peak Hour

Intersection	Approach	2015 Background				2015 Total			
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	10.1	B	Signal	L	35.8	D
			TR	*	*		T	35.8	D
	WB		LT	0.2	A		R	0.4	A
			R	*	*		L	31.8	C
	NB		LTR	35.8	E		T	39.4	D
			LTR	22.0	C		R	8.5	A
	SB		DL	46.3	D		DL	46.3	D
			TR	33.9	C		TR	33.9	C
LTR	54.4	D	LTR	54.4	D				
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition	Signal	T	4.4	A			
	WB			R	0.4	A			
				L	27.4	C			
	NB			T	6.8	A			
Route 54 at Site Entrance #2	EB	Does not exist in Background Condition	Signal	DL	47.6	D			
	WB			R	38.5	D			
				L	4.2	A			
	NB			R	0.0	A			
Route 54 at Woodside Lane / Providence Church Road	EB	Stop	Stop	L	19.2	C			
	SB			L	12.4	B			
				L	8614.0	F			
	R			39.6	E				
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition	Stop	L	34.9	D			
	NB			R	25.2	D			
				L	11.5	B			

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

East Ashland TIA Review
Level of Service Comparison - Site Entrances
Year 2015
Scenario 1A

Saturday Peak Hour

Intersection	Approach	2015 Background				2015 Total			
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	9.4	A	Signal	L	11.0	B
			TR	*	*		T	50.8	D
	WB		LT	0.3	A		L	29.1	C
			R	*	*		T	11.8	B
	NB		LTR	38.0	E		DL	53.3	D
			LTR	19.6	C		TR	36.3	D
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	T	5.6	A
	WB						R	0.5	A
							L	25.5	C
NB	T	6.9	A	DL	36.4	D			
	R	29.0	C	R	29.0	C			
Route 54 at Site Entrance #2	EB	Does not exist in Background Condition				Signal	T	5.0	A
	WB						R	0.1	A
							L	23.4	C
NB	T	6.7	A	L	46.6	D			
	R	31.3	C	R	31.3	C			
Route 54 at Woodside Lane / Providence Church Road	EB	Stop	L	12.2	B	Stop	L	24.3	C
	SB		L	8511.0	F		L	43219.0	F
			R	20.8	C		R	24.5	C
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	L	26.2	D
	NB						R	18.5	C
							L	10.5	B

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

East Ashland TIA Review
Level of Service Comparison - Site Entrances
Year 2015
Scenario 1B

AM Peak Hour

Intersection	Approach	2015 Background				2015 Total			
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	9.4	A	Signal	L	17.2	B
			TR	*	*		T	16.0	B
	WB		LT	0.4	A		R	0.7	A
	R		*	*	L		16.1	B	
NB	LTR	27.3	D	R	7.1	A	DL	39.9	D
SB	LTR	14.6	B	TR	35.0	C	LTR	42.9	D
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	T	0.9	A
	WB						R	0.2	A
	NB						L	3.5	A
Route 54 at Site Entrance #2	EB	Does not exist in Background Condition				Signal	T	2.5	A
	WB						DL	40.9	D
	NB						R	37.9	D
Route 54 at Woodside Lane	EB	Stop	L	10.2	B	Stop	L	12.4	B
	SB		L	99.1	F		L	47.6	E
	R		16.6	C	R		15.3	C	
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	L	21.1	C
	NB						R	12.0	B
							L	8.8	A

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

PM Peak Hour

Intersection	Approach	2015 Background				2015 Total			
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	10.1	B	Signal	L	35.8	D
			TR	*	*		T	35.8	D
	WB		LT	0.2	A		R	0.4	A
	R		*	*	L		37.8	D	
NB	LTR	35.8	E	R	9.6	A	DL	46.3	D
SB	LTR	22.0	C	TR	33.9	C	LTR	54.4	D
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	T	4.4	A
	WB						R	0.4	A
	NB						L	21.7	C
Route 54 at Site Entrance #2	EB	Does not exist in Background Condition				Signal	T	5.9	A
	WB						DL	47.6	D
	NB						R	38.5	D
Route 54 at Woodside Lane	EB	Stop	L	12.2	B	Stop	L	18.5	C
	SB		L	>9999	F		L	>9999	F
	R		33.7	D	R		35.2	E	
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	L	34.0	D
	NB						R	25.2	D
							L	11.5	B

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

East Ashland TIA Review
Level of Service Comparison - Site Entrances
Year 2015
Scenario 1B

Saturday Peak Hour

Intersection	Approach	2015 Background				2015 Total			
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	9.4	A	Signal	L	11.0	B
			TR	*	*		T	50.8	D
	WB		LT	0.3	A		L	29.4	C
			R	*	*		T	11.8	B
	NB		LTR	38.0	E		R	0.0	A
			LTR	19.6	C		DL	53.3	D
	SB		TR	36.3	D		LTR	43.5	D
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition			Signal	T	5.6	A	
	WB					R	0.5	A	
						L	25.8	C	
	NB					T	6.9	A	
Route 54 at Site Entrance #2	EB	Does not exist in Background Condition			Signal	DL	36.4	D	
	WB					R	29.0	C	
						L	3.8	A	
	NB					R	0.0	A	
Route 54 at Woodside Lane	EB	Stop	L	11.4	B	Stop	L	15.9	C
	SB		L	>9999	F		L	>9999	F
			R	17.5	C		R	35.2	E
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition			Stop	L	26.0	D	
	NB					R	18.5	C	
						L	10.5	B	

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

East Ashland TIA Review
Level of Service Comparison - Site Entrances
Year 2015
Scenario 2A

AM Peak Hour

Intersection	Approach	2015 Background				2015 Total			
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	9.4	A	Signal	L	17.3	B
			TR	*	*		T	16.0	B
	LT		0.4	A	R		0.7	A	
	R		*	*	L		21.6	C	
	LTR		27.3	D	T		12.4	B	
WB	R	3.8	A	R	3.8	A			
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition			Signal	DL	39.9	D	
	WB					TR	35.0	C	
NB	LTR					42.9	D		
Route 54 at Woodside Lane / Providence Church Road	EB	Stop	L	10.3	B	Intersection has different configuration in Total Conditions - See below			
	SB		L	138.8	F	R	17.0	C	
Route 54 at Woodside Lane / Providence Church Road / Site Entrance #2	EB	Intersection has different configuration in Background Conditions - See above			Signal	L	38.7	D	
						T	3.7	A	
	R					0.5	A		
	L					52.8	D		
	T					31.1	C		
WB Rte 54	R	24.5	C						
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition			Stop	LT	53.3	D	
	WB					R	39.9	D	
NB	LT					47	D		
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition			Stop	R	44.3	D	
	WB					LTR	46.4	D	
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition			Stop	L	22.4	C	
	NB					R	12.3	B	
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition			Stop	L	9.1	A	
	NB					L	9.1	A	

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

PM Peak Hour

Intersection	Approach	2015 Background				2015 Total			
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	10.1	B	Signal	L	35.8	D
			TR	*	*		T	35.8	D
	LT		0.2	A	R		0.4	A	
	R		*	*	L		25.6	C	
	LTR		35.8	E	T		32.6	C	
WB	R	7.0	A	R	7.0	A			
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition			Signal	DL	46.3	D	
	WB					TR	33.9	C	
NB	LTR					54.4	D		
Route 54 at Woodside Lane / Providence Church Road	EB	Stop	L	12.4	B	Intersection has different configuration in Total Conditions - See below			
	SB		L	8614.0	F	R	39.6	E	
Route 54 at Woodside Lane / Providence Church Road / Site Entrance #2	EB	Intersection has different configuration in Background Conditions - See above			Signal	L	58.4	E	
						T	20.9	C	
	R					15.6	B		
	L					45.0	D		
	T					55.4	E		
WB Rte 54	R	44.1	D						
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition			Stop	LT	183.1	F	
	WB					R	44.8	D	
NB	LT					73.7	E		
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition			Stop	R	51.4	D	
	WB					LTR	65.9	E	
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition			Stop	L	52.8	F	
	NB					R	42.5	E	
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition			Stop	L	15.1	C	
	NB					L	15.1	C	

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

East Ashland TIA Review
Level of Service Comparison - Site Entrances
Year 2015
Scenario 2A

Saturday Peak Hour

Intersection	Approach	2015 Background				2015 Total			
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	9.4	A	Signal	L	11.0	B
			TR	*	*		T	50.8	D
	LT		0.3	A	R		0.4	A	
	R		*	*	L		30.4	C	
	LTR		38.0	E	T		12.5	B	
WB	R	0.0	A	R	0.0	A			
NB	LTR	53.3	D	DL	53.3	D			
SB	LTR	36.3	D	TR	36.3	D			
		LTR	43.5	D	LTR	43.5	D		
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	T	5.6	A
	WB						R	0.5	A
	NB						L	31.2	C
							T	10.6	B
							DL	36.4	D
							R	29.0	C
Route 54 at Woodside Lane / Providence Church Road	EB	Stop	L	12.2	B	Intersection has different configuration in Total Conditions - See below			
	SB		L	8511.0	F				
			R	20.8	C				
Route 54 at Woodside Lane / Providence Church Road / Site Entrance #2	EB	Intersection has different configuration in Background Conditions - See above				Signal	L	53.3	D
	WB Rte 54						T	8.6	A
							R	11.9	B
	NB						L	66.2	E
							T	45.4	D
	WB Prov. Ch. Rd.						R	46.6	D
LT		183.1	F						
	R	44.8	D						
	LT	73.7	E						
	R	51.4	D						
	LTR	65.9	E						
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	L	30.3	D
	NB						R	21.8	C
							L	11.8	B

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

East Ashland TIA Review
Level of Service Comparison - Site Entrances
Year 2015
Scenario 2B

AM Peak Hour

Intersection	Approach	2015 Background				2015 Total				
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS	
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	9.4	A	Signal	L	17.3	B	
			TR	*	*		T	16.0	B	
							R	0.7	A	
	WB		LT	0.4	A		L	15.0	B	
			R	*	*		T	10.5	B	
							R	3.7	A	
	NB		LTR	27.3	D		DL	39.9	D	
	SB		LTR	14.6	B		TR	35.0	C	
				LTR	42.9	D				
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	T	0.7	A	
	WB						R	0.2	A	
	NB						L	10.7	B	
							T	6.3	A	
				DL	40.9	D				
				R	37.9	D				
Route 54 at Woodside Lane / Site Entrance #2	EB	Stop	L	10.2	B	Signal	L	31.6	C	
			T	*	*		T	2.2	A	
			R	Does not exist	R		1.0	A		
	WB		L	Does not exist	L		46.1	D		
			T	*	*		T	26.3	C	
			R	*	*		R	20.4	C	
	NB		Does not exist in Background Condition				L	44.3	D	
								TR	38.0	D
	SB		L	99.1	F		LT	43.1	D	
			R	16.6	C		R	41.0	D	
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	L	22.3	C	
	NB						R	12.3	B	
							L	9.1	A	

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

PM Peak Hour

Intersection	Approach	2015 Background				2015 Total				
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS	
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	10.1	B	Signal	L	35.8	D	
							T	35.8	D	
							R	0.4	A	
	WB		LT	0.2	A		L	26.1	C	
							T	33.3	C	
							R	7.0	A	
NB	LTR	35.8	E	DL	46.3	D				
SB	LTR	22.0	C	TR	33.9	C				
				LTR	54.4	D				
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	T	4.4	A	
	WB						R	0.4	A	
	NB						L	42.6	D	
							T	14.2	B	
				DL	47.6	D				
				R	38.5	D				
Route 54 at Woodside Lane / Site Entrance #2	EB	Stop	L	12.2	B	Signal	L	36.8	D	
			T	*	*		T	18.0	B	
			R	Does not exist	R		23.8	C		
	WB		L	Does not exist	L		44.2	D		
			T	*	*		T	53.3	D	
			R	*	*		R	39.4	D	
	NB		Does not exist in Background Condition				L	59.5	E	
								TR	38.2	D
	SB		L	>9999	F		LT	68.8	E	
			R	33.7	D		R	47.9	D	
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	L	52.2	F	
	NB						R	41.8	E	
							L	15.0	B	

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

East Ashland TIA Review
Level of Service Comparison - Site Entrances
Year 2015
Scenario 2B

Saturday Peak Hour

Intersection	Approach	2015 Background				2015 Total						
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS			
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	9.4	A	Signal	L	11.0	B			
							T	50.8	D			
							R	0.4	A			
	WB		LT	0.3	A		L	25.6	C			
					T	9.8	A					
	NB		LTR	38.0	E	DL	53.3	D				
					TR	36.3	D					
	SB		LTR	19.6	C	LTR	43.5	D				
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	T	5.6	A			
										R	0.5	A
	WB						L	33.2	C			
					T	11.0	B					
	NB					DL	36.4	D				
						R	29.0	C				
Route 54 at Woodside Lane / Site Entrance #2	EB	Stop	L	11.4	B	Signal	L	39.7	D			
							T	10.7	B			
							R	Does not exist	R	17.9	B	
	WB		L	Does not exist			L	40.0	D			
					T	*	*	T	43.9	D		
					R	*	*	R	35.3	D		
	NB		Does not exist in Background Condition				L	52.4	D			
						TR	32.3	C				
	SB		L	>9999	F	LT	51.6	D				
			R	17.5	C	R	39.8	D				
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	L	30.5	D			
										R	22.0	C
	NB						L	11.9	B			

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

East Ashland TIA Review
Level of Service Comparison - Site Entrances
Year 2015
Scenario 3A

AM Peak Hour

Intersection	Approach	2015 Background				2015 Total			
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	9.4	A	Signal	L	17.2	B
			TR	*	*		T	16.0	B
	WB		LT	0.4	A		R	0.7	A
			R	*	*		L	9.7	A
	NB		LTR	27.3	D	T	12.5	B	
	SB		LTR	14.6	B	R	10.8	B	
						DL	39.8	D	
						TR	34.9	C	
						LTR	42.9	D	
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	T	0.9	A
	WB						R	0.2	A
	NB						L	2.6	A
						T	2.2	A	
						DL	40.9	D	
						R	17.9	B	
Route 54 at Relocated Woodside Lane / Site Entrance #2	EB	Stop	L	9.3	A	Signal	L	1.7	A
			T	*	*		T	4.6	A
			R	Does not exist			R	1.4	A
	WB		L	Does not exist			L	14.5	B
			T	*	*	T	18.3	B	
	NB		R	*	*	R	13.4	B	
	SB		Does not exist in Background Condition				L	40.9	D
						TR	36.5	D	
			L	37.6	E		LT	42.1	D
			R	15.6	C		R	41.5	D
Route 54 at Providence Church Road	EB	Stop	L	9.3	A	Stop	L	10.7	B
	SB		L	32.2	D		L	23.3	C
			R	12.8	B		R	12.1	B
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	L	21.1	C
	NB						R	12.0	B
						L	8.8	A	

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

PM Peak Hour

Intersection	Approach	2015 Background				2015 Total			
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	9.4	A	Signal	L	35.8	D
			TR	*	*		T	35.8	D
	WB		LT	0.4	A		R	0.4	A
			R	*	*		L	25.6	C
	NB		LTR	27.3	D	T	32.1	C	
	SB		LTR	14.6	B	R	7.2	A	
						DL	46.3	D	
						TR	33.9	C	
						LTR	54.4	D	
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	T	4.4	A
	WB						R	0.4	A
	NB						L	33.1	C
						T	7.1	A	
						DL	47.6	D	
						R	38.5	D	
Route 54 at Relocated Woodside Lane / Site Entrance #2	EB	Stop	L	9.3	A	Signal	L	12.4	B
			T	*	*		T	8.5	A
			R	Does not exist			R	7.2	A
	WB		L	Does not exist			L	37.8	D
			T	*	*	T	37.8	D	
	NB		R	*	*	R	25.7	C	
	SB		Does not exist in Background Condition				L	48.1	D
						TR	35.4	D	
			L	37.6	E		LT	51.7	D
			R	15.6	C		R	50.7	D
Route 54 at Providence Church Road	EB	Stop	L	9.3	A	Stop	L	11.9	B
	SB		L	32.2	D		L	130.5	F
			R	12.8	B		R	16.3	C
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	L	34.9	D
	NB						R	25.2	D
						L	11.5	B	

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

East Ashland TIA Review
Level of Service Comparison - Site Entrances
Year 2015
Scenario 3A

Saturday Peak Hour

Intersection	Approach	2015 Background				2015 Total			
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	9.4	A	Signal	L	11.0	B
			TR	*	*		T	50.8	D
	LT		0.4	A	R		0.4	A	
	R		*	*	L		24.2	C	
	LTR		27.3	D	T		9.5	A	
	R		0.0	A	R		0.0	A	
	LTR		14.6	B	DL		53.3	D	
	LTR		43.5	D	TR		36.3	D	
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition			Signal	T	5.6	A	
	WB					R	0.5	A	
	NB					L	28.3	C	
						T	6.5	A	
Route 54 at Relocated Woodside Lane / Site Entrance #2	EB	Stop	L	9.3	A	Signal	L	10.3	B
			T	*	*		T	11.3	B
	R		Does not exist		R		11.3	B	
	L		Does not exist		L		49.8	D	
	T		*	*	T		38.6	D	
	R		*	*	R		25.7	C	
	NB		Does not exist in Background Condition				L	38.6	D
			L	37.6	E		TR	39.0	D
SB	R	15.6	C	LT	41.8	D			
	R	41.1	D	R	41.1	D			
Route 54 at Providence Church Road	EB	Stop	L	9.3	A	Stop	L	11.2	B
	SB		L	32.2	D		L	72.8	F
			R	12.8	B		R	13.4	B
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition			Stop	L	26.2	D	
	NB					R	18.5	C	
						L	10.5	B	

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

East Ashland TIA Review
Level of Service Comparison - Site Entrances
Year 2015
Scenario 3B

AM Peak Hour

Intersection	Approach	2015 Background				2015 Total				
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS	
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	9.4	A	Signal	L	14.1	B	
			TR	*	*		T	13.2	B	
							R	0.7	A	
	WB		LT	0.4	A		L	23.1	C	
			R	*	*		T	15.9	B	
							R	7.2	A	
	NB		LTR	27.3	D		DL	40.3	D	
	SB		TR				TR	35.4	D	
LTR		14.6	B	LTR	42.9	D				
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	T	1.0	A	
	WB						R	0.0	A	
							L	3.7	A	
	NB						T	2.8	A	DL
				R	35.6	D				
Route 54 at Relocated Woodside Lane / Site Entrance #2	EB	Stop	L	10.2	B	Signal	L	5.7	A	
			T	*	*		T	2.6	A	
			R	Does not exist	R		0.1	A		
	WB		L	Does not exist	L		18.1	B		
			T	*	*		T	21.5	C	
			R	*	*		R	17.0	B	
	NB		Does not exist in Background Condition				L	41.4	D	
	SB		TR				TR	36.8	D	
L		99.1	F	LT	43.6	D				
	R	16.6	C	R	29.5	C				
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	L	20.2	C	
	NB						R	11.7	B	
							L	8.7	A	

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

PM Peak Hour

Intersection	Approach	2015 Background				2015 Total				
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS	
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	10.1	B	Signal	L	35.8	D	
			TR	*	*		T	35.8	D	
							R	0.4	A	
	WB		LT	0.2	A		L	33.6	C	
			R	*	*		T	40.9	D	
							R	8.7	A	
	NB		LTR	35.8	E		DL	46.3	D	
	SB		TR				TR	33.9	C	
LTR		22.0	C	LTR	54.4	D				
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	T	4.4	A	
	WB						R	0.4	A	
							L	25.0	C	
	NB						T	5.1	A	DL
				R	38.5	D				
Route 54 at Relocated Woodside Lane / Site Entrance #2	EB	Stop	L	10.9	B	Signal	L	17.6	B	
			T	*	*		T	10.3	B	
			R	Does not exist	R		20.7	C		
	WB		L	Does not exist	L		43.5	D		
			T	*	*		T	50.2	D	
			R	*	*		R	37.8	D	
	NB		Does not exist in Background Condition				L	58.4	E	
	SB		TR				TR	38.0	D	
L		>9999	F	LT	54.0	D				
	R	33.7	D	R	29.0	C				
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	L	34.9	D	
	NB						R	25.2	D	
							L	11.5	B	

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

East Ashland TIA Review
Level of Service Comparison - Site Entrances
Year 2015
Scenario 3B

Saturday Peak Hour

Intersection	Approach	2015 Background				2015 Total				
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS	
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	9.4	A	Signal	L	11.0	B	
			TR	*	*		T	50.8	D	
	LT		0.3	A	R		0.4	A		
	R		*	*	L		36.1	D		
	WB		DL	53.3	D		T	16.0	B	
			TR	36.3	D		R	0.0	A	
	NB		LTR	38.0	E		DL	53.3	D	
	SB		LTR	19.6	C		TR	36.3	D	
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	T	5.6	A	
	WB						R	0.5	A	
	NB						L	22.0	C	
							T	7.7	A	
Route 54 at Relocated Woodside Lane / Site Entrance #2	EB	Stop	L	11.4	B	Signal	L	20.3	C	
			T	*	*		T	11.6	B	
			R	Does not exist	R		40.3	D		
	WB		L	Does not exist	L		25.6	C		
			T	*	*		T	40.5	D	
			R	*	*		R	32.8	C	
	NB		Does not exist in Background Condition				L	52.6	D	
	SB		TR	32.4	C		LT	53.7	D	
L		>9999	F	R	26.7	C				
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	L	26.2	D	
	NB						R	18.5	C	
						L	10.5	B		

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

East Ashland TIA Review
 Level of Service Comparison - Off Site Intersections
Year 2021
Scenarios 1A, 1B, 2A, 2B, 3A and 3B

Weekday AM Peak Hour

Intersection	Type of Control	Approach	Lane Group	2021 Background		2021 Total	
				Delay	LOS	Delay	LOS
Route 54 / US Rte 1	Signal	EB	L	23.9	C	24.1	C
			T	31.3	C	31.7	C
			R	27.5	C	27.3	C
		WB	L	19.1	B	20.6	C
			T	43.4	D	44.2	D
			R - FF	0.2	A	0.3	A
		NB	L	22.4	C	23.5	C
			T	31.9	C	33.5	C
			R - FF	0.1	A	0.2	A
		SB	L	23.9	C	31.0	C
			T	31.0	C	32.3	C
			R	26.5	C	27.4	C
Route 54 at Ramp from SB I-95 / Ramp to SB I-95	Signal	EB	T	12.4	B	76.7	E
		WB	L	4.9	A	117.7	F
		T	4.5	A	10.1	B	
SB	LT	41.8	D	140.2	F		
Route 54 at Ramp to NB I-95	Unsignalized	EB	L	10.2	B	14.4	B
Ramp to NB I-95 from EB Rte 54 / Ramp to NB I-95 from WB Rte 54	Yield	WB	R	9.9	A	11.5	B
Ramp to SB I-95 from EB Rte 54 / Ramp to SB I-95 from WB Rte 54	Yield	SB	L	134.2	F	546.3	F

Weekday PM Peak Hour

Intersection	Type of Control	Approach	Lane Group	2021 Background		2021 Total	
				Delay	LOS	Delay	LOS
Route 54 / US Rte 1	Signal	EB	L	41.3	D	62.8	E
			T	31.9	C	33.5	C
			R	28.4	C	29.2	C
		WB	L	23.0	C	34.8	C
			T	68.0	E	96.0	F
			R - FF	0.3	A	0.4	A
		NB	L	39.4	D	40.7	D
			T	52.1	D	57.7	E
			R - FF	0.2	A	0.2	A
		SB	L	63.1	E	93.5	F
			T	47.0	D	47.0	D
			R	39.1	D	39.1	D
Route 54 at Ramp from SB I-95 / Ramp to SB I-95	Signal	EB	T	18.7	B	181.8	F
		WB	L	18.3	B	371.8	F
		T	3.6	A	7.2	A	
SB	LT	35.2	D	349.5	F		
Route 54 at Ramp to NB I-95	Unsignalized	EB	L	12.8	B	374.0	F
Ramp to NB I-95 from EB Rte 54 / Ramp to NB I-95 from WB Rte 54	Yield	WB	R	11.4	B	21.5	C
Ramp to SB I-95 from EB Rte 54 / Ramp to SB I-95 from WB Rte 54	Yield	SB	L	368.5	F	9999.0	F

East Ashland TIA Review
Level of Service Comparison - Off Site Intersections
Year 2021
Scenarios 1A, 1B, 2A, 2B, 3A and 3B

Saturday Peak Hour

Intersection	Type of Control	Approach	Lane Group	2021 Background		2021 Total		
				Delay	LOS	Delay	LOS	
Route 54 / US Rte 1	Signal	EB	L	21.9	C	31.0	C	
			T	36.2	D	34.2	C	
			R	31.8	C	29.6	C	
		WB	L	46.1	D	52.3	D	
			T	32.0	C	45.5	D	
			R - FF	0.4	A	0.5	A	
		NB	L	20.0	B	27.9	C	
			T	30.3	C	37.0	D	
			R - FF	0.2	A	0.3	A	
		SB	L	20.0	B	31.7	C	
			T	31.3	C	36.3	D	
			R	27.2	C	30.7	C	
Route 54 at Ramp from SB I-95 / Ramp to SB I-95	Signal	EB	T	21.3	C	143.4	F	
			L	12.2	B	337.6	F	
		T	6.7	A	12.5	B		
Route 54 at Ramp to NB I-95	Signal	SB	LT	43.6	D	344.2	F	
			EB	L	11.5	B	42.2	E
				T				
Ramp to NB I-95 from EB Rte 54 / Ramp to NB I-95 from WB Rte 54	Yield	WB	R	11.6	B	19.9	C	
Ramp to SB I-95 from EB Rte 54 / Ramp to SB I-95 from WB Rte 54	Yield	SB	L	113.2	F	657.7	F	

East Ashland TIA Review
Level of Service Comparison - Site Entrances
Year 2021
Scenario 1A

AM Peak Hour

Intersection	Approach	2021 Background Conditions				2021 Total Conditions			
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	9.5	A	Signal	L	17.8	B
			TR	*	*		T	16.3	B
	WB		LT	0.5	A		L	17.1	B
			R	*	*		T	12.2	B
	NB		LTR	29.3	D		R	7.1	A
			LTR	14.9	B		DL	39.9	D
	SB		LTR	14.9	B		TR	34.9	C
			LTR	14.9	B		LTR	42.9	D
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	T	0.9	A
	WB						R	0.2	A
	NB						L	3.6	A
Route 54 at Site Entrance #2	EB	Does not exist in Background Condition				Signal	T	2.5	A
							WB	DL	40.9
	WB						R	37.9	D
							L	1.0	A
	NB						R	0.1	A
							L	2.8	A
L	42.1	D							
Route 54 at Woodside Lane / Providence Church Road	EB	Stop	L	10.4	B	Stop	L	12.6	B
	SB		L	169.0	F		L	989.1	F
			R	17.7	C		R	15.7	C
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	L	21.7	C
	NB						R	12.1	B
							L	8.8	A

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

PM Peak Hour

Intersection	Approach	2021 Background Conditions				2021 Total Conditions			
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	10.2	B	Signal	L	35.4	D
			TR	*	*		T	39.1	D
	WB		LT	0.2	A		L	38.6	D
			R	*	*		T	48.0	D
	NB		LTR	39.0	E		R	9.9	A
			LTR	23.5	C		DL	46.5	D
	SB		LTR	23.5	C		TR	33.9	C
			LTR	23.5	C		LTR	54.6	D
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	T	4.6	A
	WB						R	0.4	A
	NB						L	22.9	C
Route 54 at Site Entrance #2	EB	Does not exist in Background Condition				Signal	T	6.0	A
							WB	DL	47.6
	WB						R	38.5	D
							L	22.1	C
	NB						R	9.1	A
							L	10.5	B
L	25.2	C							
Route 54 at Woodside Lane / Providence Church Road	EB	Stop	L	12.6	B	Stop	L	20.0	C
	SB		L	9643.0	F		L	28671.0	F
			R	46.4	E		R	47.2	E
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	L	36.4	E
	NB						R	26.4	D
							L	11.7	B

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

East Ashland TIA Review
Level of Service Comparison - Site Entrances
Year 2021
Scenario 1A

Saturday Peak Hour

Intersection	Approach	2021 Background Conditions			2021 Total Conditions				
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	9.4	A	Signal	L	10.5	B
			TR	*	*		T	54.6	D
	WB		LT	0.3	A		R	0.4	A
	NB		R	*	*		L	29.3	C
			LTR	41.1	E		T	12.0	B
SB	LTR	20.0	C	R	0.0	A			
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition			Signal	DL	54.9	D	
	WB					TR	36.4	D	
	NB					LTR	43.5	D	
Route 54 at Site Entrance #2	EB	Does not exist in Background Condition			Signal	T	5.5	A	
	WB					R	0.5	A	
	NB					L	26.2	C	
Route 54 at Woodside Lane / Providence Church Road	EB	Stop	L	12.4	B	Stop	T	6.9	A
	SB		L	9134.0	F		DL	36.4	D
			R	21.9	C		R	29.1	C
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition			Stop	L	3.5	A	
	NB					R	0.0	A	
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition			Stop	L	24.6	C	
						R	7.0	A	
	NB					L	44.6	D	
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition			Stop	R	30.9	C	
						L	18.9	C	
	NB					L	25914.0	F	R
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition			Stop	L	26.8	D	
	NB					R	19.0	C	
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition			Stop	L	10.6	B	
	NB					L	10.6	B	

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

East Ashland TIA Review
Level of Service Comparison - Site Entrances
Year 2021
Scenario 1B

AM Peak Hour

Intersection	Approach	2021 Background Conditions				2021 Total Conditions			
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	9.5	A	Signal	L	17.8	B
			TR	*	*		T	16.3	B
	WB		LT	0.5	A		L	16.9	B
			R	*	*		T	11.9	B
	NB		LTR	29.3	D		R	7.1	A
			LTR	14.9	B		DL	39.9	D
	SB		LTR	14.9	B		TR	34.9	C
			LTR	14.9	B		LTR	42.9	D
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	T	0.9	A
	WB						R	0.2	A
	NB						L	3.5	A
Route 54 at Site Entrance #2	EB	Does not exist in Background Condition				Signal	T	2.5	A
	WB						DL	40.9	D
	NB						R	37.9	D
Route 54 at Site Entrance #2	EB	Does not exist in Background Condition				Signal	T	1.0	A
	WB						R	0.1	A
	NB						L	3.1	A
Route 54 at Woodside Lane	EB	Stop	L	10.3	B	Stop	L	12.6	B
	SB		L	113.8	F		L	50.0	E
			R	17.2	C		R	15.6	C
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	L	21.7	C
	NB						R	12.1	B
						L	8.8	A	

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

PM Peak Hour

Intersection	Approach	2021 Background Conditions				2021 Total Conditions			
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	10.2	B	Signal	L	35.4	D
			TR	*	*		T	39.1	D
	WB		LT	0.2	A		L	38.6	D
			R	*	*		T	48.0	D
	NB		LTR	39.0	E		R	9.9	A
			LTR	23.5	C		DL	46.5	D
	SB		LTR	23.5	C		TR	36.9	D
			LTR	23.5	C		LTR	54.6	D
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	T	4.6	A
	WB						R	0.4	A
	NB						L	22.9	C
Route 54 at Site Entrance #2	EB	Does not exist in Background Condition				Signal	T	6.0	A
	WB						DL	47.6	D
	NB						R	38.5	D
Route 54 at Site Entrance #2	EB	Does not exist in Background Condition				Signal	T	22.1	C
	WB						R	9.1	A
	NB						L	10.5	B
Route 54 at Woodside Lane	EB	Stop	L	12.5	B	Stop	L	19.3	C
	SB		L	>9999	F		L	>9999	F
			R	37.3	E		R	37.5	E
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	L	36.4	E
	NB						R	12.1	B
						L	11.7	B	

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

East Ashland TIA Review
Level of Service Comparison - Site Entrances
Year 2021
Scenario 1B

Saturday Peak Hour

Intersection	Approach	2021 Background Conditions			2021 Total Conditions				
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	9.4	A	Signal	L	10.5	B
			TR	*	*		T	54.6	D
	WB		LT	0.3	A		R	0.4	A
	NB		R	*	*		L	29.3	C
			LTR	41.1	E		T	12.0	B
SB	LTR	20.0	C	R	0.0	A			
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition			Signal	DL	54.9	D	
	WB					T	6.9	A	
	NB					R	29.1	C	
Route 54 at Site Entrance #2	EB	Does not exist in Background Condition			Signal	L	26.2	C	
	WB					T	7.0	A	
	NB					L	44.6	D	
Route 54 at Woodside Lane	EB	Stop	L	11.5	B	Stop	L	16.3	C
	SB		L	>9999	F		L	>9999	F
			R	18.1	C		R	20.1	C
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition			Stop	L	26.8	D	
	NB					R	19.0	C	
						L	10.6	B	

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

East Ashland TIA Review
Level of Service Comparison - Site Entrances
Year 2021
Scenario 2A

AM Peak Hour

Intersection	Approach	2021 Background Conditions				2021 Total Conditions			
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	9.5	A	Signal	L	17.8	B
			TR	*	*		T	16.3	B
	LT		0.5	A	R		0.7	A	
	R		*	*	L		22.5	C	
	LTR		29.3	D	T		12.5	B	
WB	R	3.8	A	R	3.8	A			
NB	LTR	39.9	D	DL	39.9	D			
SB	LTR	14.9	B	TR	34.9	C			
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	LTR	42.9	D
	WB						T	0.7	A
	NB						R	0.2	A
Route 54 at Woodside Lane / Providence Church Road	EB	Stop	L	10.4	B	Intersection has different configuration in Total Conditions - See below			
	SB		L	169.0	F				
Route 54 at Woodside Lane / Providence Church Road / Site Entrance #2	EB	Intersection has different configuration in Background Conditions - See above	R	17.7	C	Signal	L	39.1	D
			WB Rte 54	T	3.7		A	R	0.5
	NB		L	52.8	D		T	31.6	C
	SB		R	24.5	C		R	24.5	C
	WB Prov. Ch. Rd.		LT	53.3	D		LT	53.3	D
			R	39.9	D		R	39.9	D
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	LT	47.0	D
	NB						R	44.3	D
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	LTR	46.4	D
	NB						L	23.0	C
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	R	12.5	B
	NB						L	9.2	A

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

PM Peak Hour

Intersection	Approach	2021 Background Conditions				2021 Total Conditions			
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	10.2	B	Signal	L	35.4	D
			TR	*	*		T	39.1	D
	LT		0.2	A	R		0.4	A	
	R		*	*	L		26.9	C	
	LTR		39.0	E	T		35.7	D	
WB	R	7.4	A	R	7.4	A			
NB	LTR	46.5	D	DL	46.5	D			
SB	LTR	23.5	C	TR	33.9	C			
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	LTR	54.6	D
	WB						T	4.6	A
	NB						R	0.4	A
Route 54 at Woodside Lane / Providence Church Road	EB	Stop	L	12.6	B	Intersection has different configuration in Total Conditions - See below			
	SB		L	9643.0	F				
Route 54 at Woodside Lane / Providence Church Road / Site Entrance #2	EB	Intersection has different configuration in Background Conditions - See above	R	46.4	E	Signal	L	58.4	E
			WB Rte 54	T	20		B	T	20
	NB		L	45.8	D		R	14.8	B
	SB		T	57.2	E		L	45.8	D
	WB Prov. Ch. Rd.		R	43.9	D		T	57.2	E
			LT	150.0	F		R	43.9	D
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	LT	81.7	F
	NB						R	51.9	D
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	LTR	73.3	E
	NB						L	57.5	F
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	R	47.9	E
	NB						L	15.1	C

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

East Ashland TIA Review
 Level of Service Comparison - Site Entrances
 Year 2021
 Scenario 2A

Saturday Peak Hour

Intersection	Approach	2021 Background Conditions				2021 Total Conditions				
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS	
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	9.4	A	Signal	L	10.5	B	
			TR	*	*		T	54.6	D	
	LT		0.3	A	R		0.4	A		
	R		*	*	L		33.4	C		
	LTR		41.1	E	T		14.7	B		
WB	R	0.0	A	R	0.0	A				
NB	LTR	54.9	D	DL	54.9	D				
SB	LTR	36.4	D	TR	36.4	D				
		LTR	43.5	D	LTR	43.5	D			
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	T	5.5	A	
	WB						R	0.5	A	
	NB						L	30.1	C	
							T	9.7	A	
							DL	36.4	D	
							R	29.1	C	
Route 54 at Woodside Lane / Providence Church Road	EB	Stop	L	12.4	B		Intersection has different configuration in Total Conditions - See below			
	SB		L	9134.0	F					
			R	21.9	C					
Route 54 at Woodside Lane / Providence Church Road / Site Entrance #2	EB	Intersection has different configuration in Background Conditions - See above				Signal	L	52	D	
	WB Rte 54						T	11.9	B	
							R	16.7	B	
							L	40	D	
	NB						T	44.9	D	
							R	45.2	D	
SB	LT	108	F							
	R	35.8	D							
WB Prov. Ch. Rd.	LT	96.2	F							
	R	44.4	D							
	LTR	84.3	F							
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	L	31.8	D	
	NB						R	23.1	C	
							L	12.2	B	

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

East Ashland TIA Review
Level of Service Comparison - Site Entrances
Year 2021
Scenario 2B

AM Peak Hour

Intersection	Approach	2021 Background Conditions				2021 Total Conditions				
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS	
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	9.5	A	Signal	L	17.8	B	
			TR	*	*		T	16.3	B	
							R	0.7	A	
	WB		L	0.5	A		L	15.5	B	
			R	*	*		T	10.8	B	
							R	4.1	A	
	NB		LTR	29.3	D		DL	39.9	D	
	SB		LTR	14.9	B		TR	34.9	C	
				LTR	42.9	D				
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	T	0.7	A	
	WB						R	0.2	A	
	NB						L	11.3	B	
							T	6.6	A	
	DL	40.9	D	R	37.9	D				
Route 54 at Woodside Lane / Site Entrance #2	EB	Stop	L	10.3	B	Signal	L	32.1	C	
			T	*	*		T	2.3	A	
			R	Does not exist	R		0.9	A		
	WB		L	Does not exist	L		46.1	D		
			T	*	*		T	26.6	C	
			R	*	*		R	20.4	C	
	NB		Does not exist in Background Condition				L	44.3	D	
	SB		Does not exist in Background Condition				TR	38.0	D	
L		113.8	F	LT	43.1	D				
	R	17.2	C	R	41.0	D				
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	L	23.0	C	
	NB						R	12.5	B	
							L	9.2	A	

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

PM Peak Hour

Intersection	Approach	2021 Background Conditions				2021 Total Conditions				
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS	
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	10.2	B	Signal	L	35.4	D	
			TR	*	*		T	39.1	D	
							R	0.4	A	
	WB		L	0.2	A		L	27.4	C	
			R	*	*		T	36.2	D	
							R	7.6	A	
	NB		LTR	39.0	E		DL	46.5	D	
	SB		LTR	23.5	C		TR	33.9	C	
				LTR	54.6	D				
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	T	4.6	A	
	WB						R	0.4	A	
	NB						L	45.3	D	
							T	15.1	B	
	DL	47.6	D	R	38.5	D				
Route 54 at Woodside Lane / Site Entrance #2	EB	Stop	L	12.5	B	Signal	L	38.8	D	
			T	*	*		T	18.4	B	
			R	Does not exist	R		21.0	C		
	WB		L	Does not exist	L		44.0	D		
			T	*	*		T	54.1	D	
			R	*	*		R	39.1	D	
	NB		Does not exist in Background Condition				L	59.5	E	
	SB		Does not exist in Background Condition				TR	38.2	D	
L		>9999	F	LT	68.8	E				
	R	37.3	E	R	48.8	D				
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	L	57.1	F	
	NB						R	47.4	E	
							L	15.7	C	

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

East Ashland TIA Review
Level of Service Comparison - Site Entrances
Year 2021
Scenario 2B

Saturday Peak Hour

Intersection	Approach	2021 Background Conditions			2021 Total Conditions				
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	9.4	A	Signal	L	10.5	B
			TR	*	*		T	54.6	D
	WB		LT	0.3	A		L	25.9	C
			R	*	*		T	10.2	B
	NB		LTR	41.1	E		R	0.0	A
			SB	LTR	20.0		C	DL	54.9
								TR	36.4
							LTR	43.5	D
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition			Signal	T	5.5	A	
	WB					R	0.5	A	
						L	34.2	C	
	NB					T	11.6	B	
DL		36.4	D						
				R	29.1	C			
Route 54 at Woodside Lane / Site Entrance #2	EB	Stop	L	11.5	B	Signal	L	29.5	C
			T	*	*		T	8.7	A
			R	Does not exist	R		11.6	B	
	WB		L	Does not exist	L		40.0	D	
			T	*	*		T	42.0	D
			R	*	*		R	34.2	C
	NB		Does not exist in Background Condition				L	61.9	E
			SB	L	>9999		F	TR	33.3
					LT	63.3	E		
				R	41.0	D			
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition			Stop	L	31.5	D	
	NB					R	22.9	C	
						L	12.1	B	

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

East Ashland TIA Review
Level of Service Comparison - Site Entrances
Year 2021
Scenario 3A

AM Peak Hour

Intersection	Approach	2021 Background Conditions				2021 Total Conditions			
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	9.5	A	Signal	L	17.8	B
			TR	*	*		T	16.3	B
	WB		LT	0.5	A		R	0.7	A
			R	*	*		L	8.4	A
	NB		LTR	29.3	D		DL	39.9	D
	SB		LTR	14.9	B		TR	34.9	C
			LTR				LTR	42.9	D
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	T	0.9	A
	WB						R	0.2	A
	NB						L	3.2	A
			T	3.5	A		DL	40.2	D
			R	37.9	D				
Route 54 at Relocated Woodside Lane / Site Entrance #2	EB	Stop	L	9.4	A	Signal	L	2.0	A
			T	*	*		T	2.1	A
			R	Does not exist			R	0.5	A
	WB		L	Does not exist			L	17.0	B
			T	*	*	T	21.5	C	
	NB		R	*	*	R	15.5	B	
	SB		Does not exist in Background Condition				L	40.9	D
			L	40.3	E		TR	36.5	D
			R	16.1	C		LT	42.1	D
			R	41.5	D		R	41.5	D
Route 54 at Providence Church Road	EB	Stop	L	9.4	A	Stop	L	10.9	B
	SB		L	34.3	D		L	23.9	C
			R	13.1	B		R	12.3	B
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	L	21.7	C
	NB						R	12.1	B
			L	8.8	A				

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

PM Peak Hour

Intersection	Approach	2021 Background Conditions				2021 Total Conditions			
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	10.2	B	Signal	L	35.4	D
			TR	*	*		T	39.1	D
	WB		LT	0.2	A		R	0.4	A
			R	*	*		L	26.9	C
	NB		LTR	39.0	E		T	35.3	D
	SB		LTR	23.5	C		R	7.5	A
							DL	46.5	D
							TR	33.9	C
							LTR	54.6	D
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	T	4.6	A
	WB						R	0.4	A
	NB						L	34.5	C
			T	7.1	A		DL	47.6	D
			R	38.5	D				
Route 54 at Relocated Woodside Lane / Site Entrance #2	EB	Stop	L	11.1	B	Signal	L	12.7	B
			T	*	*		T	8.7	A
			R	Does not exist			R	6.9	A
	WB		L	Does not exist			L	38.0	D
			T	*	*	T	38.4	D	
	NB		R	*	*	R	25.7	C	
	SB		Does not exist in Background Condition				L	48.1	D
			L	339.3	F		TR	35.4	D
			R	24.2	C		LT	51.7	D
			R	50.7	D		R	50.7	D
Route 54 at Providence Church Road	EB	Stop	L	9.9	A	Stop	L	12.1	B
	SB		L	491.1	F		L	143.0	F
			R	17.0	C		R	16.6	C
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	L	36.4	E
	NB						R	26.4	D
			L	11.7	B				

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

East Ashland TIA Review
Level of Service Comparison - Site Entrances
Year 2021
Scenario 3A

Saturday Peak Hour

Intersection	Approach	2021 Background Conditions				2021 Total Conditions			
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	9.4	A	Signal	L	10.5	B
			TR	*	*		T	54.6	D
	WB		LT	0.3	A		R	0.4	A
	NB		R	*	*		L	26.2	C
			LTR	41.1	E		T	10.6	B
	SB		R	0.0	A		R	0.0	A
			LTR	20.0	C		DL	54.9	D
				LTR	36.4		D	TR	36.4
		LTR	43.5	D	LTR	43.5	D		
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	T	5.5	A
	WB						R	0.5	A
							L	29.2	C
	NB						T	6.6	A
		R	29.1	C					
Route 54 at Relocated Woodside Lane / Site Entrance #2	EB	Stop	L	9.9	A	Signal	L	10.6	B
			T	*	*		T	9.5	A
	R		Does not exist		R		12.6	B	
	WB		L	Does not exist			L	28.2	C
			T	*	*		T	26.5	C
	NB		R	*	*		R	19.2	B
			Does not exist in Background Condition				L	46.4	D
	SB		L	120.2	F		TR	31.3	C
R		16.4	C	LT	42.5	D			
		R	41.7	D					
Route 54 at Providence Church Road	EB	Stop	L	9.5	A	Stop	L	11.3	B
	SB		L	192.6	F		L	76.8	F
			R	13.0	B		R	13.5	B
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	L	26.8	D
	NB						R	19.0	C
							L	10.6	B

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

East Ashland TIA Review
Level of Service Comparison - Site Entrances
Year 2021
Scenario 3B

AM Peak Hour

Intersection	Approach	2021 Background Conditions				2021 Total Conditions				
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS	
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	9.5	A	Signal	L	17.8	B	
			TR	*	*		T	16.3	B	
							R	0.7	A	
	WB		LT	0.5	A		L	9.8	A	
			R	*	*		T	9.9	A	
							R	7.9	A	
	NB		LTR	29.3	D		DL	39.9	D	
	SB		LTR	14.9	B		TR	34.9	C	
				LTR	42.9	D				
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	T	0.9	A	
	WB						R	0.2	A	
	NB						L	3.1	A	
Route 54 at Relocated Woodside Lane / Site Entrance #2	EB	Stop	L	10.3	B	Signal	L	4.5	A	
			T	*	*		T	1.8	A	
			R	Does not exist	R		0.6	A		
	WB		L	Does not exist	L		21.2	C		
			T	*	*		T	26.4	C	
			R	*	*		R	20.3	C	
	NB		Does not exist in Background Condition				L	41.4	D	
	SB		L	113.8	F		TR	36.8	D	
R		17.2	C	LT	43.6	D				
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	L	21.7	C	
	NB						R	12.1	B	
							L	8.8	A	

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PM Peak Hour

Intersection	Approach	2021 Background Conditions				2021 Total Conditions				
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS	
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	10.2	B	Signal	L	35.4	D	
			TR	*	*		T	39.1	D	
							R	0.4	A	
	WB		LT	0.2	A		L	31.8	C	
			R	*	*		T	42.2	D	
							R	8.4	A	
	NB		LTR	39.0	E		DL	46.5	D	
	SB		LTR	23.5	C		TR	33.9	C	
				LTR	54.6	D				
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	T	4.6	A	
	WB						R	0.4	A	
	NB						L	24.5	C	
Route 54 at Relocated Woodside Lane / Site Entrance #2	EB	Stop	L	12.5	B	Signal	L	19.5	B	
			T	*	*		T	11.7	B	
			R	Does not exist	R		33.0	C		
	WB		L	Does not exist	L		55.0	D		
			T	*	*		T	48.3	D	
			R	*	*		R	36.6	D	
	NB		Does not exist in Background Condition				L	36.6	D	
	SB		L	>9999	F		TR	58.2	E	
R		37.3	E	LT	60.2	E				
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	L	36.4	E	
	NB						R	26.4	D	
							L	11.7	B	

* Synchro does not calculate level of service for unsignalized movements with no conflicting volumes.

East Ashland TIA Review
Level of Service Comparison - Site Entrances
Year 2021
Scenario 3B

Saturday Peak Hour

Intersection	Approach	2021 Background Conditions				2021 Total Conditions				
		Type of Control	Lane Group	Delay	LOS	Type of Control	Lane Group	Delay	LOS	
Route 54 at Frances Rd / Mount Hermon Road	EB	Stop	L	9.4	A	Signal	L	10.5	B	
			TR	*	*		T	54.6	D	
	LT		0.3	A	R		0.4	A		
	R		*	*	L		35.3	D		
	WB		DL	54.9	D		T	15.7	B	
			TR	36.4	D		R	0.0	A	
	NB		LTR	41.1	E		DL	54.9	D	
	SB		TR	36.4	D		LTR	43.5	D	
LTR		20.0	C							
Route 54 at Site Entrance #1	EB	Does not exist in Background Condition				Signal	T	5.5	A	
	WB						R	0.5	A	
							L	22.5	C	
	NB						T	7.8	A	
Route 54 at Relocated Woodside Lane / Site Entrance #2	EB	Stop	L	11.5	B	Signal	L	21.4	C	
			T	*	*		T	11.8	B	
			R	Does not exist	R		39.9	D		
	WB		L	Does not exist	L		25.9	C		
			T	*	*		T	41.6	D	
			R	*	*		R	33.0	C	
	NB		Does not exist in Background Condition				L	41.6	D	
			SB	L	>9999		F	TR	33.0	C
	R	18.1		C	LT	53.7	D			
	R	18.1	C	R	26.5	C				
Route 54 at Site Entrance #3	EB	Does not exist in Background Condition				Stop	L	26.8	D	
	NB						R	19.0	C	
							L	10.6	B	

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