



3495 Winton Place
Building E, Suite 110
Rochester, NY 14623

phone 585.272.4660
fax 585.272.4662

February 3, 2017

Hamister Group, LLC
10 Lafayette Square, Suite 1900
Buffalo, NY 14203
Attn: Mr. Matt Roland, AICP

RE: Proposed Westwood Development, Town of Amherst, NY
Summary of NYSDOT Safety Study and PIL Investigation

Dear Mr. Roland,

The purpose of this letter is to provide a summary of the results of two studies recently completed by the New York State Department of Transportation Engineers (NYSDOT). The following studies have been reviewed by our office: 1) 20% PIL Investigation on North Forest Road between Wiltshire Road and Sheridan Drive dated August 18, 2016; and 2) Safety Study on Sheridan Drive between Harlem Road and North Forest Road dated November 4, 2016.

I) 20% PIL Investigation on North Forest Road between Wiltshire Road and Sheridan Drive dated August 18, 2016

- A PIL is a Priority Investigation Location.
- This study investigated crashes that occurred on North Forest Road in the roadway segment between Wiltshire Road and Sheridan Drive.
- It also included review of crash data at the three intersections of North Forest Road with Wiltshire Road, Tee Court and Sheridan Drive.
- The study included all crashes that occurred between November 1, 2012 and October 31, 2015 – a duration of three years total.
- 68 crashes occurred within the study limits over the three-year period.
- 65 of the 68 crashes in the study limits occurred at the intersection of North Forest Road and Sheridan Drive.
- There were no crashes at either Wiltshire Road or Tee Court.
- Crash rates are calculated for segments and intersections. The crash rate for the study segment was 25.27 ACC/MVM (ACC/MVM = accidents per million vehicle miles); while the average rate for this type of facility statewide is 4.23 ACC/MVM. Thus the crash rate for this segment is approximately 5 to 6 times greater than the statewide average.
- The intersection crash rate is 1.29 Acc/MEV (accidents per million entering vehicles, i.e. vehicles entering the intersection). The statewide average rate for similar

intersections is 0.50 Acc/MEV. Thus the actual crash rate is approximately 2.5 times greater than the statewide average rate for similar intersections.

- The investigation evaluated types of crashes and their causes, with rear end accidents being the most common accident type.
- There were no fatal crashes and the number of injury crashes fell within the expected range for these types of intersections.
- No deficiencies were identified at the North Forest Road/Sheridan Drive intersection.
- NYSDOT is formulating a signal coordination plan for all of the signals along Sheridan Drive.
- No other recommendations were made in this study.

2) Safety Study on Sheridan Drive between Harlem Road and North Forest Road dated November 4, 2016

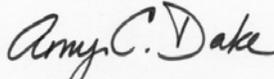
- The study includes the segment of Sheridan Drive between Harlem Road and a point west of North Forest Road.
- Seven intersections along Sheridan Drive were included in the study: Harlem Rd, I-290 ramps, I-290 on-ramp, Sunrise Blvd, Cranburne Lane, Frankhauser Rd, and Fenwick Dr.
- Three years of crash data were reviewed for the time period from November 1, 2012 through October 31, 2015.
- 105 crashes occurred in the study segment during this time period and were evaluated as part of this study.
- 14 crashes occurred in the segment west of Harlem Rd; mostly overtaking crashes.
- 48 crashes occurred between Harlem Rd and the I-290 ramps. Over 50% were left-turn crashes; 16% were rear-end crashes.
- 44 crashes occurred between the I-290 ramps and the end of the study area east of Fenwick Drive. 55% of these crashes were rear-ends and 25% were related to left turns.
- 82 of the 105 crashes occurred at the intersections: 27 at Harlem Road (12 rear-end, 4 left-turn), 35 at the I-290 ramps (23 left-turn, 9 rear-end), 3 at Sunrise Blvd (2 rear-end, 1 left-turn), 1 at Cranburne Lane (left-turn), 9 at Frankhauser Rd (5 rear-end, 2 left-turn), and 3 at Fenwick Drive (2 left-turn, 1 rear-end).
- There were no fatal crashes and the number of injury crashes fell within the expected range for these types of intersections.
- Crash rates were calculated for the three “zones/segments” of Sheridan Drive. The calculated crash rates were then compared to statewide averages for similar facilities. The segment west of Harlem Rd was above the statewide average, Harlem Rd to the I-290 ramps was significantly above the statewide average and between the I-290 ramps and east of Fenwick Drive was below the statewide average.
- Similarly, crash rates were calculated and compared to statewide averages at the intersections. The intersections of Harlem Rd and the I-290 ramps were above the statewide average rates while the intersections of Sunrise Blvd, Frankhauser Rd, and Fenwick Dr were all below the statewide average.

- The study recommends the following:
 - a. The eastbound left turn signal for Sheridan Drive at the I-290 WB on-ramp be converted to protected only phasing (i.e. a green arrow) during non-peak hours only.
 - b. Replace the I-290 bridge over Sheridan Drive with a clear-span bridge to improve sight distance when the bridge needs to be replaced.
 - c. Synchronize the signals along Sheridan Drive, especially during peak hours.
 - d. Enforce proper use of two-way left-turn lanes on Sheridan Drive.
 - e. Install missing signs in various locations as needed.

If you have any questions or are in need of additional information, please do not hesitate to contact our office.

Very truly yours,

SRF & Associates



Amy C. Dake, P.E., PTOE

Senior Transportation Engineer

S:\Projects\2016\36069 Westwood Update\Accidents\Exhibit U- NYSDOT Safety Study Summary 02-03-17.docx



MEMORANDUM

TO: T. S. Messina, P.E., Regional Traffic Engineer
FROM: O. A. Wieand, P.E., Transportation Systems Operations Group
SUBJECT: 20% PIL INVESTIGATION
UNION ROAD NORTH & SOUTH, SH 9215
ROUTE NY 277, NORTH FOREST ROAD
WILTSHIRE ROAD to SHERIDAN DRIVE
RM 277-5301-1214 to RM 277-5301-1215
TOWN OF AMHERST, ERIE COUNTY

DATE: August 18, 2016

We have completed our investigation of the subject location and offer the following:

FINDINGS

o General Information:

Within the limits of this study, NY 277 is a four-lane divided urban highway located in the Town of Amherst with no control of access. The speed limit on NY 277 south of Sheridan drive is 40 miles per hour; it is 35 miles per hour north of Sheridan Drive. The speed limit on Sheridan Drive is 45 miles per hour.

There are three intersections within the study limits as described as follows:

Table with 4 columns: Intersection, Type, Control, Left Turn Lane (Y/N). Rows include NY 277/Sheridan Dr., NY 277/Tee Court, and NY 277/Wiltshire Rd.

There are dedicated right turn lanes on both North Forest Road approaches to Sheridan Drive and to the intersection and on the eastbound Sheridan Drive approach. The intersection is skewed. Crosswalks are present on all four sides of the intersection. Pedestrian buttons, WALK/DON'T WALK indicators, and countdown timers are in place at each corner. There are no additional features at the Tee Court and Wiltshire Road intersections.

This portion of NY 277, i.e., reference marker range 277-5301-1214 to 277-5301-1215, has been listed as a Priority Investigation Location (PIL) for the following HAL (High Accident Location) years:

2000, 2005, 2008, 2009, and 2011 through 2014

Sixty-eight accidents were recorded within the study limits over the period of November 1, 2012 through October 31, 2015. This is the most recent three-year period for which accident

data was available through the Department's Safety Information Management System (SIMS) and Accident Location Information System (ALIS) databases at the time this study was begun. Sixty-five accidents were related to the NY 277/Sheridan Drive intersection, accounting for 95.6 percent of the 68-accident total.

o **Accident Rates and Related Information:**

Linear Rate

The sixty-eight accidents that occurred within the study limits yield a calculated linear accident rate of 25.27 accidents per million-vehicle-miles, i.e., 25.27 Acc/MVM. The mean linear accident rate for this type of facility (Free Access, Urban, Divided, 4 Lanes) is 4.23 Acc/MVM. The fact that its calculated linear accident rate exceeds the mean rate indicates that this portion of NY 277 has a below-average safety record when compared with similar facilities statewide.

Intersection Rate

The sixty-five accidents related to the NY 277/Sheridan Drive intersection yielded a calculated accident rate of 1.29 accidents per million entering vehicles, i.e., 1.29 Acc/MEV. The mean accident rate for this type of intersection, i.e., a 4-leg urban intersection with signalized control of one to four through lanes, is 0.50 Acc/MEV. The fact that the calculated accident rate exceeds the mean rate suggests that the NY 277/Sheridan Drive intersection has a below-average safety record when compared with similar intersections statewide.

There were no crashes identified at either Wiltshire Road or Tee Court intersections.

o **Prevalent Accident Types:**

Rear end accidents (34 events) were the most common accident type, making up 50.00 % of the 68-accident total. All the rear end accidents were related to the NY 277/Sheridan Drive intersection. The most frequently cited apparent contributing factor in the rear end accidents was following too closely. It was cited on 15 occasions. Driver inattention was cited eleven times; unsafe speed was cited seven times.

There were 18 left turn accidents, 17 of which took place at the NY 277/Sheridan Drive intersection. The remaining left turn accident involved a motorist attempting to turn into a private driveway on North Forest Road (NY 277). Thirteen of the seventeen left turn accidents that took place at the NY 277/Sheridan Drive intersection involved motorists traveling on the Sheridan Drive legs. Five of these took place under yellow. Three took place under red as motorists turned left to clear the intersection. The most commonly cited apparent contributing factor was failure to yield. It was cited on fifteen occasions. Disregarding a traffic control device was cited four times.

Seven overtaking accidents took place. All were intersection related. Five took place on the Sheridan Drive approaches to the NY 277/Sheridan Drive intersection. One took place within the intersection and involved a motorist turning right on red onto southbound NY 277 from eastbound Sheridan Drive. The other motorist was westbound on Sheridan drive and was turning left onto NY 277 southbound under a green left turn arrow. Failure to yield on the part of the eastbound motorist was cited as an apparent contributing factor in the accident. The remaining overtaking accident took place on the northbound NY 277 approach to the intersection. A motorist struck another vehicle while attempting to switch from the northbound through lane to the right turn lane. Following too closely and unsafe lane changing were cited as the apparent contributing factors in the accident.

See the attached Accident Summary Sheets for a complete summary of accident types.

o **Severity of Accidents:**

Intersection and Non-intersection Accidents

Twenty-one accidents of the 68-accident total resulted in personal injury. The remaining 47 accidents were property damage only events. There were no fatalities. A check of this severity distribution revealed that it falls within the expected range for facilities of this type.

Intersection Accidents

Twenty accidents of the sixty-five intersection related accidents resulted in personal injury. The remaining 45 accidents were property damage only events. There were no fatalities. A check of this severity distribution revealed that it falls within the expected range for this type of facility.

o **Specialty High Accident Locations (HALs):**

A query of the Region's specialty HAL list for HAL Year 2014, i.e., August 1, 2012 through July 31, 2014, revealed that there are no specialty HALs within the limits of this study.

SUMMARY & RECOMMENDATIONS

Field inspection revealed that there are no sight distance deficiencies throughout the location.

The Region is currently formulating a signal coordination plan for Sheridan Drive that includes the NY 277/Sheridan Drive intersection. As part of the coordination process, signal timing at the intersection will be evaluated and adjusted as necessary.

There were only three accidents recorded on the linear segment of NY 277, North Forest Road between RM 277-5301-1214 and RM 277-5301-1215. All remaining crashes in this study are directly related to the NY 277/Sheridan Drive intersection. In view of these considerations, we have no further recommendations to make at this time.

We have no further comments at this time. Please contact Otto Wieand at extension 3382 or Chris Underwood at extension 3840 if you have any questions.

OAW/CJU/paf
Attachments

cc: A. Borgese, P.E., Regional Traffic Operations Engineer
N. Kinderman, P.E., North Erie Resident Program Manager

ACCIDENT SUMMARY SHEET

Location: NY Rte. 277: Wiltshire Rd. to Sheridan Dr. **Town/City/Village:** Town of Amherst
Date: 11/1/2012 - 10/31/2015 **County:** Erie

<p align="center">Time of Day</p> <p align="center"># %</p>			<p align="center">Weather</p> <p align="center"># %</p>		
0600-1000	14	20.59%	Clear	25	36.76%
1000-1600	24	35.29%	Cloudy	27	39.71%
1600-1900	19	27.94%	Rain/Snow	10	14.71%
1900-2400	11	16.18%	Sleet/Hail/	1	1.47%
2400-0600	0	0.00%	Freezing Rain		
Unknown	0	0.00%	Fog/Smog/Smoke	0	0.00%
Total	68	100.00%	Other/Unknown	5	7.35%
			Total	68	100.00%
<p align="center">Light Condition</p> <p align="center"># %</p>			<p align="center">Time of Year</p> <p align="center"># %</p>		
Daylight	48	70.59%	Winter (Dec-Feb)	18	26.47%
Dawn	0	0.00%	Spring (Mar-May)	21	30.88%
Dusk	3	4.41%	Summer (Jun-Aug)	17	25.00%
Dark Lighted	12	17.65%	Fall (Sep-Nov)	12	17.65%
Dark Unlighted	4	5.88%	Total	68	100.00%
Unknown	1	1.47%			
Total	68	100.00%			
<p align="center">Accident Type</p> <p align="center"># %</p>			<p align="center">Roadway Character</p> <p align="center"># %</p>		
Overtaking	7	10.29%	Straight & Level	64	94.12%
Rear End	34	50.00%	Straight & Grade	0	0.00%
Right Angle	1	1.47%	Straight & Hillcrest	0	0.00%
Left Turn	18	26.47%	Curve & Level	4	5.88%
Head on/SS	1	1.47%	Curve & Grade	0	0.00%
Run Off Rd./	1	1.47%	Curve & Hillcrest	0	0.00%
Fixed Object			Unknown	0	0.00%
Pedestrian	0	0.00%	Total	68	100.00%
Bicycle	0	0.00%			
Animal	2	2.94%			
Backing	0	0.00%			
Right Turn	4	5.88%			
Other/Unknown	0	0.00%			
Total	68	100.00%			
<p align="center">Accident Severity</p> <p align="center"># %</p>			<p align="center">Roadway Surface Condition</p> <p align="center"># %</p>		
Fatal	0	0.00%	Dry	37	54.41%
Injury	21	30.88%	Wet	18	26.47%
PDO	47	69.12%	Muddy	0	0.00%
Unknown	0	0.00%	Snow/Ice	8	11.76%
Total	68	100.00%	Slush	1	1.47%
			Other	0	0.00%
			Unknown	4	5.88%
			Total	68	100.00%

ACCIDENT SUMMARY SHEET

Location: NY Rte. 277 at NY Rte. 324 Town/City/Village: Town of Amherst
 Period Covered: 11/1/2012 - 10/31/2015 County: Erie
 Date: _____

Time of Day			Weather		
	#	%		#	%
0600-1000	14	21.54%	Clear	24	36.92%
1000-1600	24	36.92%	Cloudy	27	41.54%
1600-1900	18	27.69%	Rain/Snow	9	13.85%
1900-2400	9	13.85%	Sleet/Hail/	1	1.54%
2400-0600	0	0.00%	Freezing Rain		
Unknown	0	0.00%	Fog/Smog/Smoke	0	0.00%
Total	65	100.00%	Other/Unknown	4	6.15%
			Total	65	100.00%

Light Condition			Time of Year		
	#	%		#	%
Daylight	47	72.31%	Winter (Dec-Feb)	18	27.69%
Dawn	0	0.00%	Spring (Mar-May)	20	30.77%
Dusk	3	4.62%	Summer (Jun-Aug)	16	24.62%
Dark Lighted	12	18.46%	Fall (Sep-Nov)	11	16.92%
Dark Unlighted	3	4.62%	Total	65	100.00%
Unknown	0	0.00%			
Total	65	100.00%			

Accident Type			Roadway Character		
	#	%		#	%
Overtaking	7	10.77%	Straight & Level	61	93.85%
Rear End	34	52.31%	Straight & Grade	0	0.00%
Right Angle	1	1.54%	Straight & Hillcrest	0	0.00%
Left Turn	17	26.15%	Curve & Level	4	6.15%
Head on/SS	1	1.54%	Curve & Grade	0	0.00%
Run Off Rd./	1	1.54%	Curve & Hillcrest	0	0.00%
Fixed Object			Unknown	0	0.00%
Pedestrian	0	0.00%	Total	65	100.00%
Bicycle	0	0.00%			
Animal	0	0.00%			
Backing	0	0.00%			
Right Turn	4	6.15%			
Other/Unknown	0	0.00%			
Total	65	100.00%			

Accident Severity			Roadway Surface Condition		
	#	%		#	%
Fatal	0	0.00%	Dry	36	55.38%
Injury	20	30.77%	Wet	17	26.15%
PDO	45	69.23%	Muddy	0	0.00%
Unknown	0	0.00%	Snow/Ice	8	12.31%
Total	65	100.00%	Slush	1	1.54%
			Other	0	0.00%
			Unknown	3	4.62%
			Total	65	100.00%



MEMORANDUM

14.21-324

TO: T. S. Messana, Regional Traffic Engineer
FROM: O. A. Wieand, Transportation Systems Operations Group
SUBJECT: Safety Study
Sheridan Drive, SH 9216
Route NY 324
Route NY 240, Harlem Road to west of Route NY 277, North Forest Road
Town of Amherst, Erie County
DATE: November 4, 2016

As requested in response to action letter #5160024, the Regional Transportation Systems Operations Group has completed an accident analysis for the subject project from RM 324-5302-1151 to RM 324-5302-1158 and offers the following comments:

FINDINGS:

The study segment, located on Route NY 324 (0.8 miles), is an urban principal arterial running west/east from Route NY 240, Harlem Road to a point west of Route NY 277, North Forest Road in the Town of Amherst. In order to adequately analyze this section of highway, it has been divided into three (3) zones as follows:

- ZONE 1: RM 324-5302-1151 (west of Harlem Road)
ZONE 2: RM 324 5302-1151 to RM 324 5302-1152 (Harlem Rd to I290 Ramps)
ZONE 3: RM 324 5302-1152 to RM 324 5302-1158 (I290 Ramps to east of Fenwick Dr)

Zones 1 and 2 are a 6-7 lane, divided, highway with a current speed limit of 40 MPH. Zone 3 is a 4-5 lane divided highway with a current speed limit of 45 MPH.

Table with 4 columns: Reference Marker (RM), Number of Lanes, Divided Highway (Yes/No), Control Access. Rows include markers 324 53021151, 324 53021151, 324 53021152, 324 53021153, 324 53021158 and road names JCT RT 240 HARLEM RD, ACC RT 290I YOUNGMANN EXPY, RT 277 N FOREST RD.

Per Planning & Program Management Group's 12/31/13 "Pavement Data Report"

There are seven (7) intersections in the "Intersection Master List" (IML) as follows:

*	NY Route 324 SHERIDAN DRIVE Intersection with	Intersection Class	Intersection Type	Type of Control	Left Turn Lane (Yes/No)
1.	Intersection Code: 36 RM 240 53011378 JCT NY 324 END NY 240 RM 324-5302-1151	311	T	Signal #157	Yes
	Intersection Code: 62 RAMPS TO & FROM I290 WB RM 324-5302-1152	211	4 LEG	Signal #463	Yes
2.	Intersection Code: 63 NY 324 WB TO I290 NB RM 324-5302-1153	152	Y	No Control	No
3.	Intersection Code: 91 SUNRISE BLVD RM324-5302-1154	332	T	STOP	Yes
3.	Intersection Code: 92 CRANBURNE LA RM 324-5302-1154	332	T	STOP	Yes
	Intersection Code: 93 FRANKHAUSER RD RM 324-5302-1155	311	T	Signal #447	Yes
3.	Intersection Code: 94 FENWICK DR RM 324-5302-1156	332	T	STOP	Yes

*NOTE: The IML is not correct based on field review as follows:

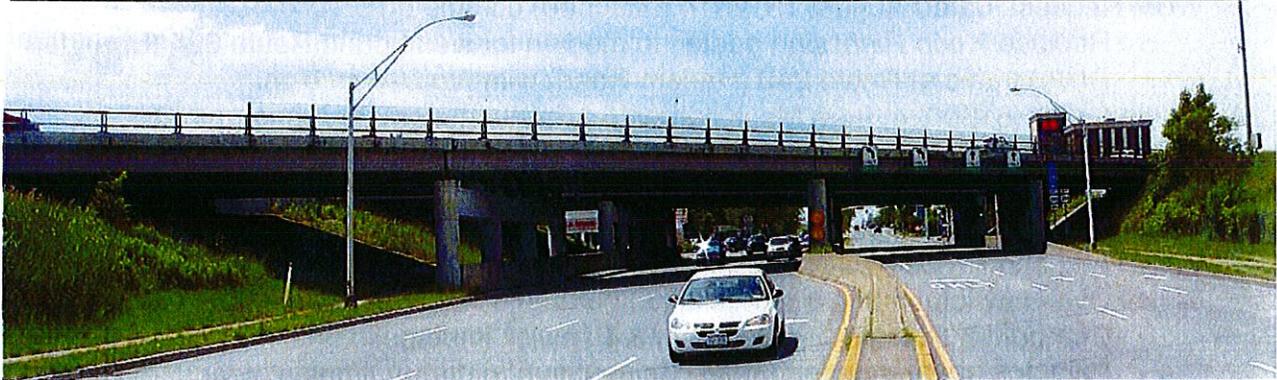
1. Feature is not described sufficiently, should be:
(JCT NY 324 END NY 240 HARLEM)
2. Feature is not described correctly; this is a dedicated ramp which should be
(OFF RAMP NY RTE 324 WB TO I290 WB)
and Intersection Class, Intersection Type, Intersection Traffic Control & Type
Ramp, should be
(554), (RAMP), (NO CONTROL) and (OFF)
3. Intersection Class, Intersection Type, Type of Control, Turn Lane should be
(331), ("T" INTERSECTION), (STOP CONTROL), (YES LEFT TURN LANE)

There is/are two (2) bridge(s) just east of Route NY 240, Harlem Road as follows:

BRIDGE IDENTIFICATION NUMBER: BIN 1045062

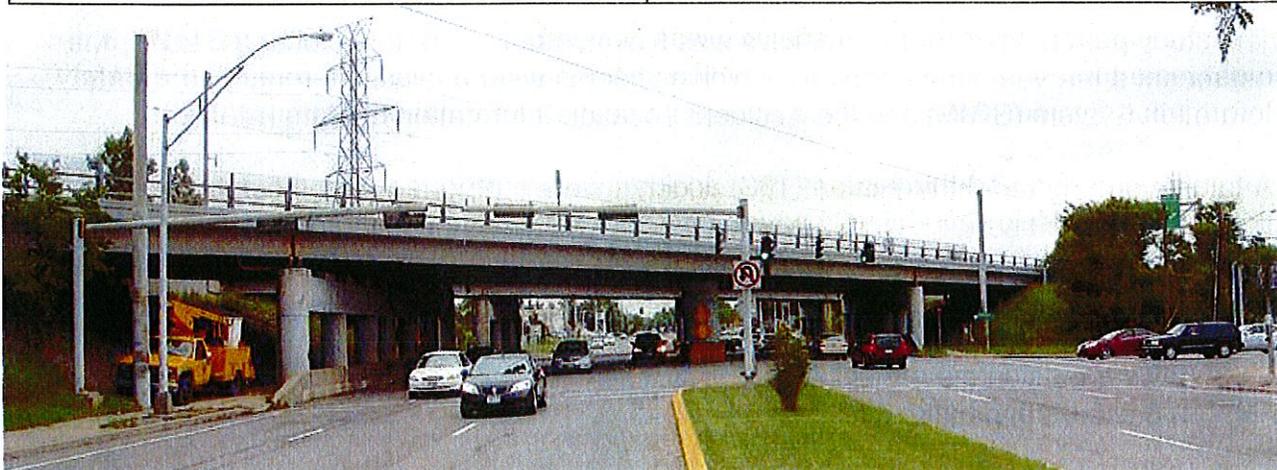
Feature Carried: 290I Youngman EB	Feature crossed: RTE 324
RM 324-5302-1151 (under)	Location: JCT RT 240 + I-290
Type Structure: Steel Girder	Structure Built: 1964

Bridge Inspected: 9/23/14	Type Inspection: General
Condition Rating: 4.531	General Recommendation: 5
Number Spans: 4	AADT 2002: 35,256 (under)
Total Horizontal Clearance: 44.8'	Bridge Length: 317'
Maximum VC UNDER: 15'-3"	Minimum VC UNDER: 13'-11"
BIN Folder Photo Date: Jun 15, 2010	



BRIDGE IDENTIFICATION NUMBER: BIN 1045061

Feature Carried: RTE 290I Youngman WB RM 324-5302-1151 (under)	Feature crossed: RTE 324 Location: JCT RT 324 + I-290
Type Structure: Steel Girder	Structure Built: 1964
Bridge Inspected: 11/24/15	Type Inspection: General
Condition Rating: 4.313	General Recommendation: 4
Number Spans: 4	AADT 2002: 35,256 (under)
Total Horizontal Clearance: 45'	Bridge Length: 306'
Maximum VC UNDER: 15'-7"	Minimum VC UNDER: 14'-7"
BIN Folder Photo Date: June 17, 2010	



The last contract work done in the area was a PMI project D262970, PIN 5812.49 let 7/9/15, accepted 3/3/16 (mill & resurface RT 324 & RT 240 & RT 277) ***Sheridan Drive from Harlem Road to Hopkins/Evans.***

A review of records in the Traffic & Safety Operations Unit shows the following:

- SAFETAP Report: **PMI-NY 324: NY 240-Hopkins/Evans; NY 240:Campus-NY324;NY 277: Wiltshire Rd-NY324** completed 5/13/2014 (attached)
 - RM 324-5302-1151 thru -1173
- Work Request, dated August 13, 2014 (attached) completed 5/12/2015.
 - Replace *Keep Right* sign posted in median for westbound Route 324 (Sheridan Drive) traffic at Route 240 (Harlem Road) with *No U-Turn* sign.
- Action Letter (5160024) from Ms. Koerber, 54 Frankhauser Rd, Amherst to D. Kaminski, Regional Director, dated March 8, 2016 (attached): State Highway between Harlem and North Forest , Amherst, NY
 - Report of unacceptable levels of accidents
 - Amherst Police Accident Complaint Lists for: 2011-2013 and partial 2014
 - Overview total number of accidents per year (not including I290 On/Off Ramps, Cranburne, Sunrise, Frankhauser & Fenwick intersections)
 - Photos of early morning traffic congestion at different times of year
- Response to Action Letter (5160024) to Ms. Koerber, from T. Messina dated March 14, 2016 (attached): REQUEST FOR REVIEW OF TRAFFIC CONDITIONS, RTE 324 (SHERIDAN DR), FROM HARLEM RD TO NORTH FOREST RD
 - Traffic engineering study has been initiated
- Memorandum: 20% PIL Investigation, NY ROUTE 277, NORTH FOREST ROAD, SH 9215, WILTSHIRE ROAD TO SHERIDAN DRIVE, date June xx, 2016.
 - 65 of 68 accidents were @ NY 277 & Sheridan Drive intersection.
 - Majority of accidents were: RE (34) & LT (17)
 - NYSDOT is formulating a signal coordination plan for Sheridan Drive that includes this intersection.

➤ **General Information:**

The study period utilized for this analysis was November 1, 2012 to October 31, 2015, the most recent three year time period for which accidents were available through the Safety Information System (SIMS) and the Accident Location Information System (ALIS).

A total of one-hundred-thirty-three (133) accidents were reported over the subject section for the study period. However twenty-seven (27) accidents were excluded due to miscoding in the computer databases (which we have since relocated in ALIS for future reference) as follows:

- 15 occurred on I-290
- 9 were outside the project limits
- 3 occurred in parking lot

Based on the remaining accidents, one-hundred-six (106), one (1) of these could not be plotted due to insufficient information (accident #40). It should also be noted that two (2) of the reported accidents (#75 & #76) resulted in utility pole hits.

➤ **PILs, PIIs, SDLs and Bad Actors:**

A query of SIMS indicated the following for **RM 324-5302-1151 to RM 324-5302-1158** (0.8 mile segment).

PILs/PIIs/SDLs:

1. There were no Priority Investigation Locations (PILs) reported on the 2015 HAL list.
2. **2015 Safety Deficient Locations (SDLs):**
 - **PIL 1: RM 324-5302-1149 to RM 324-5302-1151** (0.3 mile segment) – part of **ZONE 1** was based on a **free access, urban, divided, all lanes highway**. This section is Route NY 324 (Sheridan Drive) from Campus Dr/Bank Entrance to *Route NY 240 Harlem Road*.
 - a. Historically, SIMS noted this same section varying portions as a SDL in 2011-2013.
 - **PIL 2: RM 324-5301-1152 to RM 324-5301-1152** (0.1 mile segment) – **ZONE 2** was based on a **full access, urban, divided, all lanes highway**. This section is Route NY 324 (Sheridan Drive) @ *RAMPS TO & FROM I290 WB*.
 - a. Historically, SIMS noted RM 324-5302-1152 to RM 324-5302-1153, a 0.2 mile section varying portions as a SDL in 1992-1996, 2000, 2002, 2005, 2009-2010 & 2012-2014. This section is from *RAMPS TO & FROM I290 WB* to *OFF RAMP NY 324 WB TO I290 WB*.
 - **PIL 3: RM 324-5302-1154 to RM 324-5302-1157** (0.4 mile segment) – **ZONE 3** was based on a **free access, urban, divided, all lanes highway**. This section is Route NY 324 (Sheridan Drive) from *SUNRISE BLVD* to east of *FENWICK DR*.
 - a. Historically, SIMS noted RM 324-5302-1154 to RM 324-5302-1156, a 0.3 mile section as a SDL in 2013. This section is from *SUNRISE BLVD* to *FENWICK DR*.
 - **PIL 4: RM 324-5302-1157 to RM 324-5302-1159** (0.3 mile segment) – **ZONE 3** was based on a **free access, urban, divided, all lanes highway**. This section is Route NY 324 (Sheridan Drive) from east of *FENWICK DR* to North Forest Road.
 - a. Historically, SIMS noted RM 324-5302-1158 to RM 324-5302-1159, a 0.2 mile section as a SDL in 2013. This section is the area surrounding North Forest Road.
3. There were no Priority Investigation Intersections (PIIs) reported on the 2015 HAL list.
4. **2015 Right-Angle SPECIALTY HAL's:**
 - **PIL 1 - RM 324-5302-1145 to RM 324-5302-1151** (0.7 mile segment) – part of **ZONE 1** was based on a **free access, urban, divided, all lanes highway**. This is Route NY 324 from west of Getzville Rd to *Route NY 240 Harlem Road*.
 - a. Historically, SIMS noted RM 324-5302-1148 to RM 324-5302-1151, a 0.4 mile section as a Right-Angle PIL in 2002. This section is from Harold St to *NY Route 240 Harlem Road*.

- **PIL 2 - RM 324-5302-1154 to RM 324-5302-1156** (0.3 mile segment) – **ZONE 3** was based on a **free access, urban, divided, all lanes highway**. This is Route NY 324 from *SUNRISE BLVD* to *FENWICK DR.*
 - a. Historically, SIMS noted RM 324-5302-1152 to RM 324-5302-1156, a 0.5 mile section varying portions as a Right-Angle PIL in 2005, 2008-2009 & 2012-2013. This section is *RAMPS TO & FROM I290 WB* to *FENWICK DR.*

5. 2015 Aggressive Driving SPECIALTY HAL's:

- **PIL - RM 324-5302-1149 to RM 324-5302-1151** (0.3 mile segment) – part of **ZONE 1** was based on a **free access, urban, divided, all lanes highway**. This is Route NY 324 from Campus Dr/Bank Entrance to *Route NY 240 Harlem Road*.
 - a. Historically, SIMS noted RM 324-5302-1150 to RM 324-5302-1151, a 0.2 mile section varying portions as an Aggressive Driving PIL in 2012 & 2013. This section is from Campus Dr/Bank Entrance to *Route NY 240 Harlem Road*.

Bad Actors:

SIMS did not report any "Bad Actor" utility poles within the subject limits.

➤ **Prevalent Accident Types:**

LINEAR SECTION:

- **ZONE 1: RM 324-5302-1151** (west of Harlem Road)
SIMS and ALIS reported a combined fourteen (14) accidents along Route NY 324 in the Town Amherst for the study period as follows:
 - 11 Overtaking accidents (78.57% of total)
 - 2 Accidents classified as "Other" (14.29% of total)
 - 1 Right-turn accident (7.14% of total)
- **ZONE 2: RM 324-5302-1151 to RM 324 5302-1152** (Harlem Rd to I290 Ramps)
SIMS and ALIS reported a combined forty-eight (48) accidents along Route NY 324 in the Town Amherst for the study period as follows:
 - 25 Left-turn accidents (52.08% of total)
 - 8 Rear-end accidents (16.67% of total)
 - 4 Overtaking accidents (8.33% of total)
 - 4 Right-turn accidents (8.33% of total)
 - 3 Run-off-road/fixed object accidents (6.25% of total)
 - 2 Accidents classified as "Other" (4.17% of total)
 - 1 Pedestrian accident (2.08% of total)
 - 1 Backing accident (2.08% of total)
- **ZONE 3: RM 324-5302-1152 to RM 324 5302-1158** (I290 Ramps to east of Fenwick Dr)
SIMS and ALIS reported a combined forty-four (44) accidents along Route NY 324 in the Town Amherst for the study period as follows:

- 24 Rear-end accidents (54.55% of total)
- 11 Left-turn accidents (25.00% of total)
- 3 Overtaking accidents (6.82% of total)
- 2 Bicycle accidents (4.55% of total)
- 1 Right-angle accident (2.27% of total)
- 1 Head-on/SS accident (2.27% of total)
- 1 Run-off-road/fixed object accident (2.27% of total)
- 1 Backing accident (2.27% of total)

INTERSECTIONS: (ZONE 2)

A portion of the above accidents occurred at the intersections as follows:

JCT NY 324 END NY 240 HARLEM	27 Accidents	<ul style="list-style-type: none"> ➤ 12 Rear-end accidents (44.44% of total) ➤ 4 Left-turn accidents (14.81% of total) ➤ 4 Right-turn accidents (14.81% of total) ➤ 2 Overtaking accidents (7.41% of total) ➤ 2 Run-off-road/fixed-object accidents (7.41% of total) ➤ 2 Other accidents (7.41% of total) ➤ 1 Pedestrian accident (3.70% of total)
RAMPS TO & FROM I290 WB	35 Accidents	<ul style="list-style-type: none"> ➤ 23 Left-turn accidents (65.71% of total) ➤ 9 Rear-end accidents (24.71% of total) ➤ 1 Right-angle accident (2.86% of total) ➤ 1 Bicycle accident (2.86% of total) ➤ 1 Backing accident (2.86% of total)

INTERSECTIONS: (ZONE 3)

A portion of the above accidents occurred at the intersections as follows:

SUNRISE BLVD	3 Accidents	<ul style="list-style-type: none"> ➤ 2 Rear-end accidents (66.67% of total) ➤ 1 Left-turn accident (33.33% of total)
CRANBURNE LA	1 Accident	<ul style="list-style-type: none"> ➤ 1 Left-turn accident (100% of total)
FRANKHAUSER RD	9 Accidents	<ul style="list-style-type: none"> ➤ 5 Rear-end accidents (55.56% of total) ➤ 2 Left-turn accidents (22.22% of total) ➤ 1 Overtaking accident (11.11% of total) ➤ 1 Head-on/SS accident (11.11% of total)
FENWICK DR	3 Accidents	<ul style="list-style-type: none"> ➤ 2 Left-turn accidents (66.67% of total) ➤ 1 Rear-end accident (33.33% of total)

RAMPS: (ZONE 3)

A portion of the above accidents occurred at the ramp as follows:

OFF RAMP NY RTE 324 WB TO I290 WB	4 Accidents	<ul style="list-style-type: none">➤ 2 Rear-end accidents (50.00% of total)➤ 1 Overtaking accident (25.00% of total)➤ 1 Bicycle accident (25.00% of total)
--	-------------	---

➤ **Severity of Accidents:**

LINEAR SECTION:

▪ **RM 324-5302-1151 to RM 324-5302-1158**

There were no fatal accidents reported along this section of Route NY 324 during the study period.

▪ **ZONE 1: RM 324-5302-1151 (west of Harlem Road)**

Five (5) of the total accidents resulted in injury. Nine (9) accidents resulted in property damage only. A significance check of this severity distribution revealed that the linear severity distribution falls within for both 'INJURY' and 'FATAL -plus- INJURY' range for this type of highway.

- 5 Injury accidents (35.71% of total)
- 9 Property damage only accidents (64.29% of total)

▪ **ZONE 2: RM 324 5302-1151 to RM 324 5302-1152 (Harlem Rd to I290 Ramps)**

Twenty-three (23) of the total accidents resulted in injury. Twenty-five (25) accidents resulted in property damage only. A significance check of this severity distribution revealed that the linear severity distribution for both 'INJURY' and 'FATAL -plus- INJURY' exceeds the expected range for this type of highway.

- 23 Injury accidents (47.92% of total)
- 25 Property damage only accidents (52.08% of total)

▪ **ZONE 3: RM 324 5302-1152 to RM 324 5302-1158 (I290 Ramps to east of Fenwick Dr)**

Twenty (20) of the total accidents resulted in injury. Twenty-four (24) accidents resulted in property damage only. A significance check of this severity distribution revealed that the linear severity distribution for both 'INJURY' and 'FATAL -plus- INJURY' exceeds the expected range for this type of highway.

- 20 Injury accidents (45.45% of total)
- 24 Property damage only accidents (54.55% of total)

INTERSECTIONS: (ZONE 2)

A portion of the above accidents occurred at the intersections as follows:

*	
JCT NY 324 END NY 240 HARLEM	<ul style="list-style-type: none"> ➤ 10 Injury accidents (37.04% of total) ➤ 17 Property damage only accidents (62.96% of total)
*	
RAMPS TO & FROM I290 WB	<ul style="list-style-type: none"> ➤ 21 Injury accidents (60.00% of total) ➤ 14 Property damage only accidents (40.00% of total)

A significance check of the severity distributions revealed that the intersection severity distribution at the Harlem Road intersection falls within the expected range for this type of intersection. The severity distribution for the Ramps to & from I290 WB exceeds the exceeded range for this type of intersection for both "INJURY" and "FATAL-plus INJURY".

INTERSECTIONS: (ZONE 3)

A portion of the above accidents occurred at the intersections as follows:

*	
SUNRISE BLVD	<ul style="list-style-type: none"> ➤ 2 Injury accidents (66.67% of total) ➤ 1 Property damage only accident (33.33% of total)
*	
CRANBURNE LA	<ul style="list-style-type: none"> ➤ 1 Property damage only accident (100% of total)
*	
FRANKHAUSER RD	<ul style="list-style-type: none"> ➤ 4 Injury accidents (44.44% of total) ➤ 5 Property damage only accidents (55.56% of total)
*	
FENWICK DR	<ul style="list-style-type: none"> ➤ 1 Injury accident (33.33% of total) ➤ 2 Property damage only accidents (66.67% of total)

A significance check of the severity distributions for intersections with 3 or more accidents (*) revealed that the intersection severity distributions all fall within the expected range for these types of intersections.

RAMPS: (ZONE 3)

A portion of the above accidents occurred at the ramps as follows:

*	
OFF RAMP RTE NY 324 WB TO I290 WB	<ul style="list-style-type: none"> ➤ 2 Injury accidents (50.00% of total) ➤ 2 Property damage only accidents (50.00% of total)

A significance check of the severity distributions for ramps with 3 or more accidents (*) revealed that the intersection severity distributions all fall within the expected range for these types of ramps.

➤ **Accident Rates:**

LINEAR SECTION:

▪ **ZONE 1: RM 324-5302-1151** (west of Harlem Road)

The computed linear accident rate for this section of NY Route 324 is 8.40 Accidents per Million Vehicle Miles of Travel (Acc/MVMT). The overall mean rate for this type of highway (free access, urban, divided, all lanes) is 4.49 Acc/MVMT. This indicates that the accident rate for this section of Route NY 324 is above the comparable statewide average.

▪ **ZONE 2: RM 324-5302-1151 to RM 324 5302-1152** (Harlem Rd to I290 Ramps)

The computed linear accident rate for this section of Route NY 324 is 8.27 Accidents per Million Vehicle Miles of Travel (Acc/MVMT). The overall mean rate for this type of highway (full access, urban, divided, all lanes) is 1.12 Acc/MVMT. This indicates that the accident rate for this section of Route NY 324 is significantly above the comparable statewide average.

▪ **ZONE 3: RM 324-5302-1152 to RM 324 5302-1158** (I290 Ramps to east of Fenwick Dr)

The computed linear accident rate for this section of NY Route 324 is 1.62 Accidents per Million Vehicle Miles of Travel (Acc/MVMT). The overall mean rate for this type of highway (free access, urban, divided, all lanes) is 4.49 Acc/MVMT. This indicates that the accident rate for this section of Route NY 324 is below the comparable statewide average.

INTERSECTIONS/RAMPS:

Only those intersections/ramps with 3 or more accidents are considered for accident rate analysis. This policy is used due to the tendency of low AADT's sometimes yielding unnaturally high accident rates at locations with very low numbers of accidents. In addition, "clusters" of accidents are identified. A "cluster" of accidents requires that three or more accidents have occurred at a single location.

Considering only the intersections/ramps with 3 or more accidents, the computed intersection accident rates - Accidents per Million Entering Vehicles (Acc/MEV) are as follows:

INTERSECTION	TYPE OF INTERSECTION	INTERSECTION ACCIDENT RATE (Acc/MEV)	INTERSECTION MEAN RATE (Acc/MEV)
JCT NY 324 END NY 240 HARLEM	3 Legs, Urban, w/Left Turn, Signal, 5>Lanes	0.69	0.14
RAMPS TO & FROM I290 WB	4 > Legs, Urban, Left Turn, Signal, 5>Lanes	0.93	0.24

SUNRISE BLVD	3 Leg, Urban, Sign, 4 Lanes	0.08	0.12
FRANKHAUSER RD	3 Leg, Urban, Signal, 1-4 Lanes	0.23	0.29
FENWICK DR	3 Leg, Urban, Sign, 4 Lanes	0.08	0.12

This indicates that the accident rate for Route NY 324 at **SUNRISE BLVD, FRANKHAUSER RD** and **FENWICK DR** are below the statewide averages for comparable intersections.

The accident rates for **JCT NY 324 END NY 240 HARLEM** and **RAMPS TO & FROM I290 WB** intersections are above the statewide average for comparable intersections.

RAMP	TYPE OF RAMP	RAMP ACCIDENT RATE (Acc/MEV)	RAMP MEAN RATE (Acc/MEV)
OFF RAMP NY RTE 324 WB TO I290 WB	OFF Ramp, Urban, All Controls, Merge w/1 Lane	0.10	0.17

This indicates that the accident rate for this Ramp is below the statewide average for comparable ramps.

➤ **Right-Angle Accidents:**

The criteria for meeting a right-angle PIL & PII analysis are as follows:

- Accident type has to be "Right-Angle" for an accident
- Accidents are based on 2 years of data
- A linear 3/10 mile section of roadway has had a minimum of:
 - 3 right-angle road crashes (rural functional class) or
 - 4 right-angle road crashes (urban functional class) and
- Percentage of right-angle road crashes is **1.5** times the average for similar highways in the region
- 2015 Regional expected accident Percentage State Highways (free access, urban, divided, all lanes) for Region 5 is **(15.3)%**
- 2015 Regional expected accident Percentage State Highways (full access, urban, divided, all lanes) for Region 5 is **(4.6)%**
- Threshold percentage of crashes needed to make the HAL list is **(22.95)% = (15.3) x 1.5 (free)**
- Threshold percentage of crashes needed to make the HAL list is **(6.9)% = (4.6) x 1.5 (full)**

* RIGHT-ANGLE PIL LINEAR	* 2 YEAR TIME FRAME	* NUMBER HAL ACCIDENTS	* HAL ACCIDENT %	Computed Threshold %
PIL 1 – ZONE 1				
RM 324-5302-1145 thru RM 324-5302-1151	11/1/13 thru 10/31/15	19	33	22.95 (free)

***RM 324-5302-1151 thru RM 324-5302-1151	same	0 actual	--**	same
PIL 2 – ZONE 3				
RM 324-5302-1154 thru RM 324-5302-1156	11/1/13 thru 10/31/15	4	25	22.95 (free) 6.9 (full)
same	same	1 actual	--**	same

NOTE: * represents information reported in SIMS for HAL and "actual" denotes found in study.

** Not computed due to insufficient number of accidents.

*** Linear segment is not sufficient for an accurate comparison.

According to SIMS*, the HAL Accident percentage for:

- **PIL 1: NY Route 324 from west of Getzville Rd to NY Route 240 Harlem Road** had fifty-seven (57) accidents during this time frame, of which nineteen (19) involved Right-Angle collisions.
 - However, actual data found fourteen (14) accidents during this time frame, of which zero (0) involved Right-Angle collisions (**HAL ACCIDENT % is not computed due to insufficient: linear section & accidents).
- **PIL 2: NY Route 324 from SUNRISE BLVD to FENWICK DR** had sixteen (16) accidents during this time frame of which 4 involved Right-Angle collisions.
 - However, actual data found twenty-two (22) accidents during this time frame of which only one (1) involved a Right-Angle collision (**HAL ACCIDENT % is not computed due to insufficient accidents),

Therefore this study **does not support** a RIGHT-ANGLE PIL.

SIMS has no further protocol for addressing this type of HAL.

➤ **Aggressive Driving Accidents:**

The criteria for meeting an Aggressive Driving Related PIL analysis are as follows:

- Contributing factor for an accident has to be any of the following:
 - Alcohol Involvement
 - Failure to Yield ROW
 - Following too Closely
 - Passing or Lane Usage Improper
 - Traffic Control Disregarded
 - Unsafe Speed
 - Unsafe Lane Change
 - Aggressive Driving/Road Rage
- Accidents are based on 2 years of data

- A linear 3/10 mile section of roadway has had a minimum of:
 - 12 aggressive driving/road rage related road crashes (rural functional class) for PIL/ 10 for PII or
 - 20 aggressive driving/road rage related road crashes (urban functional class) for PIL/ 15 for PII and
- Percentage of aggressive driving/road rage related road crashes is **1.2** times the average for similar highways in the region
- 2015 Regional expected accident Percentage State Highways (free access, urban, divided, all lanes) for Region 5 is **(57.7)%**
- Threshold percentage of crashes needed to make the HAL list is **(69.24)% = (57.7) x 1.2 (free)**

* AGGRESSIVE DRIVING RELATED PIL LINEAR	* 2 YEAR TIME FRAME	* NUMBER HAL ACCIDENTS	* HAL ACCIDENT %	Computed Threshold %
PIL 1 – ZONE 1 & 2				
RM 324-5302-1149 thru RM 324-5302-1151	11/1/13 thru 10/31/15	29	74	69.24 (free)
***RM 324-5302-1151 thru RM 324-5302-1151	same	14 actual	_**	same

NOTE: * represents information reported in SIMS for HAL and "actual" denotes found in study.

** Not computed due to insufficient number of accidents.

*** Linear segment is not sufficient for an accurate comparison.

According to SIMS*, the HAL Accident percentage for:

- **PIL 1: Route NY 324 from west of Getzville Rd to Route NY 240 Harlem Road** had thirty-nine (39) accidents during this time frame of which twenty-nine (29) involved Aggressive Driving.
 - However actual data found fourteen (14) accidents during this time frame of which zero (0) involved Aggressive Driving (**HAL ACCIDENT % is not computed due to insufficient: linear section & accidents).

Therefore this study **does not support** an AGGRESSIVE DRIVING PIL.

SIMS has no further protocol for addressing this type of HAL.

➤ **Summary, Conclusions, and Recommendations:**

The NYSDOT Regional Operations Unit has updated the "Intersection Master List" for all noted changes (see attached NYSDOT Safety Information Management System, Route 324 Feature Listing dated 6/7/16.)

The segment west of Sheridan Drive and Harlem Road intersection (Zone 1) is a commercial area

- SDL - **RM 324-5302-1149 to RM 324-5302-1151** Route NY 324 (Sheridan Drive) from Campus Dr/Bank Entrance to *Route NY 240 Harlem Road*.
- Linear Severity Distribution is within the expected range for this type of highway.
- The linear accident rate is above the statewide average for comparable highways.

The segment of Sheridan Drive between Harlem Road and the I-290 ramps (Zone 2) is full access control with much of the segment located under the I290 bridges over Sheridan Drive.

- SDL - **RM 324-5301-1152 to RM 324-5301-1152** NY Route 324 (Sheridan Drive) @ *RAMPS TO & FROM I290 WB*.
- Linear Severity Distribution is above expected range for "INJURY" and "FATAL-plus-INJURY".
- The intersection severity distribution at the Harlem Road intersection falls within the expected range for this type of intersection.
- Intersection Severity Distribution for the Ramps to & from I290 WB is above expected range for "INJURY" and "FATAL-plus-INJURY".
- The linear accident rate is significantly above the comparable statewide average.
- The accident rates for NY 240, Harlem Road, and Ramps to & from I290 WB intersections are above the statewide average for comparable intersections.

The segment of Sheridan Drive between I-290 ramps to east of Fenwick Dr. (Zone 3) is a mix of commercial and residential properties.

- SDL - **RM 324-5302-1154 to RM 324-5302-1157** NY Route 324 (Sheridan Drive) from *SUNRISE BLVD* to east of *FENWICK DR*.
- SDL - **RM 324-5302-1157 to RM 324-5302-1159** NY Route 324 (Sheridan Drive) from east of *FENWICK DR* to North Forest Road.
- Linear Severity Distribution is above the expected range for "INJURY" and "FATAL-plus-INJURY".
- Intersection Severity Distribution falls within the expected range for these types of intersections.
- The linear accident rate falls below the statewide average for comparable highways.
- The intersection accident rates for all intersections in this zone fall below the statewide average for comparable highways.

Field inspection for the above project was completed and we recommend the following:

1. The signal for east bound Sheridan Drive, turning left onto I-290 west bound currently operates using a "Protected / Permissive" left turn phase. The left-turn movement requires motorists to cross three lanes of oncoming traffic. The level of service (LOS) at this intersection currently operates at LOS C during the AM peak and LOS E during the PM peak. During the study period, seventeen (17) left-turn crashes occurred at this intersection as a result of vehicles making the turn from eastbound Sheridan Drive to I-290 westbound. Conversion of the signal operation from "Protected/Permissive" to "Protected Only" phasing would significantly reduce the number of left-turn accidents at this location. In an effort to reduce the potential for significant back-ups, a traffic

analysis was completed for such a conversion during non-peak hours only. The analysis indicates that the Sheridan Drive intersections at Harlem Road and I-290 WB would operate at an overall LOS B, with all individual movements at LOS D or better. Therefore, it is recommended that the signal for eastbound Sheridan Drive turning left onto westbound I-290 be converted from "Protected/Permissive" to "Protected Only" during non-peak hours only.

2. The Route I-290 bridge over Sheridan Drive limits sight distance for the Sheridan Dr. / Harlem Rd. intersection and also limits vehicle storage capability for Sheridan Dr. at Harlem Road and at the I-290 on and off ramps. When these bridges need to be replaced, consideration should be given to installing a bridge with a clear span. In doing so, this would eliminate the center bridge piers which would help vehicle storage capabilities along with increased sight distances at these intersections.
3. The signals within the Sheridan Drive corridor should be synchronized so traffic flows more efficiently, especially during peak hours.
4. Two-way left turn lanes are intended to delineate edges of a lane that can be used for traffic in either direction as part of a left turn maneuver. It provides storage area for left-turning vehicles to wait for gaps in opposing traffic. This improves operation of through traffic by removing left turning vehicles from the traffic stream and reduces the potential for rear-end collisions. There have been reports of auto haulers parking in the two-way left turn lane to load and unload vehicles in front of the auto dealerships located within Zone 3. This obstructs sight distance and traffic flow, and prevents left-turning vehicles from utilizing these lanes for their intended purpose. Local authorities should restrict these loading and unloading activities.
5. The speed limit on Sheridan Drive is 40 MPH in Zones 1 & 2, and 45 MPH in Zone 3. The point where the change occurs is 500 +/- feet east of I-290. There is no 40 MPH sign on Sheridan Drive in the WB direction at this location. Speed Limit sign R2-1 should be installed at this location.
6. The OM1-1 Object Markers mounted on the north bridge piers at Harlem Road and Sheridan Drive that carry the I-290 are missing some of there the reflective buttons and should be replaced.
7. Refer to S.H.I. #503334 for the Route 324 - Sheridan Drive and North Forest Road accident study.

We have no further comments at this time. Please contact Otto Wieand at extension 3382 or Marty Takac at extension 3227 if you have any questions.

OAW/MPT/AMC/paf
Attachments

cc: J. Elmore, Regional Traffic Operations (Recommendations 1 & 3)
D. Sobol, Regional Traffic Operations (Recommendation 5 & 6)