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To: Salisbury Housing Committee C/O Housing Enterprises 51 College Street Enfield, CT 06882

Date: September 15, 2020

Project #: 42683.00

From: Joseph Balskus, P.E., PTOE

Molly Pause, EIT

Re: Traffic Evaluation

Proposed Affordable Housing

11 Holley Street Salisbury, Connecticut

Overview

VHB has conducted a traffic evaluation for a proposed affordable housing development at 11 Holley Street in Salisbury, CT. As part of this evaluation, VHB has investigated existing conditions on the roadways adjacent to the site, the proposed driveway access, and the anticipated traffic volumes generated by the project. This traffic evaluation is intended to support an application to the Town of Salisbury submitted by the Salisbury Housing Committee.

Project Description

The proposed project consists of the development of an existing parking lot located at 11 Holley Street into an apartment building with a total of 13 units. This development proposes 8 one-bedroom, 2 two-bedroom, and 3 three-bedroom units available. Approximately 24 parking spaces are to be provided on site, with 12 of the 24 spaces proposed to be located in a parking garage constructed under the proposed apartment building. Based on the current site plan, access to the complex will be provided by one entrance only driveway on Route 44 and one full access driveway on Holley Street.

The preliminary site plan is included in the Appendix.

Existing Traffic Conditions

A site visit was conducted for the proposed project location in August 2020. During this visit, VHB measured the existing roadway, shoulders, and sight lines and observed factors affecting access and egress to the site such as roadway speeds. VHB's observations and the existing roadway conditions in the vicinity of the site are summarized below.

Millerton Road (Route 44) is a two-lane roadway (one lane in each direction) under state jurisdiction and is classified as a principal arterial roadway. The posted speed limit on Millerton Road (Route 44) is 30 miles per hour in the vicinity of the site and increases to 40 miles per hour just west of Holley Street. CTDOT in collaboration with AECOM completed a Road Safety Audit (RSA) on Route 44 to the east of Holley Street in Spring 2016. From this RSA, pedestrian connectivity improvements have been made to the corridor connecting the district of Lakeville to the Downtown area.

Sidewalks have been made available on both sides of Route 44 and crosswalks with Rapid Rectangular Flashing Beacons (RRFBs) have been installed across this roadway. On-street parking is allowed on the southern side of Route 44 adjacent to the proposed project site but prohibited and posted on the northern side of the roadway. Millerton Road maintains a roadway width of approximately 26 feet near the project site with 11-foot travel lanes and two-foot shoulders on each side of the roadway. Street illumination in the project area was deemed adequate as there exists a streetlamp at the intersection of Route 44 at Holley Street and two additional streetlamps to the west of the project site.

Holley Street is a two-lane roadway (one lane in each direction) with a northwest-southeast orientation that runs between Millerton Road (Route 44) and Ethan Allen Street, approximately 320 feet in length. Holley Street is classified as a local road under local jurisdiction. Holley Street maintains a road width of 34 feet adjacent to the site and tapering down to 23 feet to the south. No parking signs are posted on the western side of the roadway.

Project Area Intersection

Millerton Road (Route 44) is intersected by Holley Street from the south and a private driveway from the north to form a four-leg unsignalized intersection. The northbound Holley Street approach provides a single multi-purpose lane. While no signage is provided, the northbound approach is assumed stop controlled. The eastbound and westbound Route 44 approaches provide one multi-purpose lane and operate freely. Sidewalks are provided on the south side of Route 44 west of Holley Street and on the north side of Route 44 to the east of Holley Street. A crosswalk is provided across the eastern leg of Route 44. Pedestrian push buttons and RRFBs are provided at this location.

Crash Analysis

To identify potential vehicle crash trends and/or roadway deficiencies near the project site, VHB conducted a review of the UConn Crash Database to document the number of geolocated vehicular collisions that have taken place over the most recent three years (2017-2019).

The review revealed zero reported crashes at the Millerton Road & Holley Street intersection or along the site frontage. It should be noted that the results of the Crash Database review were dependent on the accuracy of crash reporting and geolocating.

Trip Generation

The Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition* was used to estimate vehicle trips to be generated by the proposed development. ITE land use code (LUC) 220 "Multifamily Housing (Low-Rise)" was used to estimate vehicle trips for all peak hours.

Table 1 presents the resulting total new trips for the weekday daily, morning peak hour, and afternoon peak hour for the proposed apartment complex. It is anticipated to generate 2 entering trips and 5 exiting trips (7 total) during the

morning peak hour, and 6 entering trips and 4 exiting trips (10 total) during the afternoon peak hour. The ITE Trip Generation data are included in the Appendix.

Table 1 Trip Generation

Time Period	Trip Generation
Daily (vpd)	57
Morning Peak Hour (vph)	
Enter	2
<u>Exit</u>	<u>5</u>
Total	7
Evening Peak Hour (vph)	
Enter	6
<u>Exit</u>	<u>4</u>
Total	10

Source: Institute of Transportation Engineers, Trip Generation, 10th Edition, LUC 220 Multifamily Housing (Low-Rise), 13 units vpd= vehicles per day, vph = vehicles per hour

Trip Distribution

The trip distribution of site-generated traffic to/from the proposed development would be expected to reflect the vehicle patterns of existing volumes within the study area. With easy access to downtown Salisbury to the east of the project site, New York state to the west of the project site, and the Town of Sharon to the south, it is expected that the trip distribution would be evenly split to/from each direction.

Parking

The proposed site plan shows 24 parking spaces on site supporting the 13 units of housing which exceeds the minimum zoning requirements. A review the Institute of Transportation Engineers (ITE) Parking Generation Manual, 5th edition for Multi-Family Low Rise residential use with no access to transit indicates a maximum of 16 parking spaces will be utilized for the proposed development during peak parking demand for residents and visitors. This is based upon parking surveys for over 119 other developments.

The proposed parking will primarily be accessed to and from Holley Street via the existing curb cut and provides standard parking stalls and parking aisle in conformance with standards.

Intersection Sight Distance

A field visit was conducted to measure the available sight distance from Holley Street onto Millerton Road (Route 44). and observe other potential conditions that may affect the safety and operation of the proposed full access driveway. The available sight distance was then compared with the sight distance requirements outlined in the CTDOT Highway Design Manual to ensure that adequate sight distance is provided to allow a vehicle exiting the site driveway and turning onto Millerton Road to safely enter the traffic stream.

Based on field measurements, adequate sight distance was found to be available from the driveway on Holley Street to see to the end of the road in each direction. To evaluate the adequacy of the sight distance from Holley Street onto Millerton Road, the minimum suggested sight distance was calculated based on a conservative design speed of 40 miles per hour on Millerton Road (Route 44) (10 miles per hour above the posted speed limit).

The sight distance at the intersection of Route 44 at Holley Street is inadequate due to a few factors. On-Street parking is allowed on the south side of Route 44 to the west of Holley Street, which obstructs sightlines to the left for vehicles exiting Holley Street. The horizontal curvature of the existing roadway obstructs sightlines to the right, as the Holley Street entrance is at the focal point of the roadway curvature. However, as noted above, the sight distance requirement was calculated based on a conservative design speed of 10 miles per hour above the speed limit. The available sight distance at this intersection would meet the minimum requirements if the posted speed limit was used as the design speed. Furthermore, the crash research indicates that no crashes have been reported at this intersection in the last three years. Therefore, the crash data does not indicate that the sight distance presents a safety concern.

The results of the sight distance investigation are summarized in Table 2.

Table 2 Intersection Sight Distances

	Available S		Meets	Standard	
Location	Left	Right	Minimum	Left	Right
Holley Street at Millerton Road (Route 44)	440′	400°	445'	No	No
Proposed Site Drive at Holley Street	*	*	*	Yes	Yes

Source: Vanasse Hangen Brustlin, Inc.

^{*} Sight distance for motorists exiting the site driveway on Holley Street is available to the end of the street in both directions

Conclusion

The results of this review indicate that the proposed affordable housing development at 11 Holley Street will not have a significant impact on the roadway network adjacent to the project site. There are adequate sight lines for traffic exiting Holley Street and ample parking. VHB forecasts that the project will generate 7 total trips during the morning peak hour and 10 total trips during the afternoon peak hour. Based on Office of the State Traffic Administration (OSTA) guidelines, intersection capacity analyses are required if a project is expected to generate 100 or more new vehicles trips through an intersection. The minimal traffic volumes projected for this development are far below this threshold, a fraction of the area traffic volumes, and therefore, additional traffic analyses are not warranted.

In summary, the project will generate minimal traffic onto the area roadways, the onsite 24 parking spaces will accommodate the parking demand, sight distances are adequate and access from Holley Street is appropriate.

Appendix

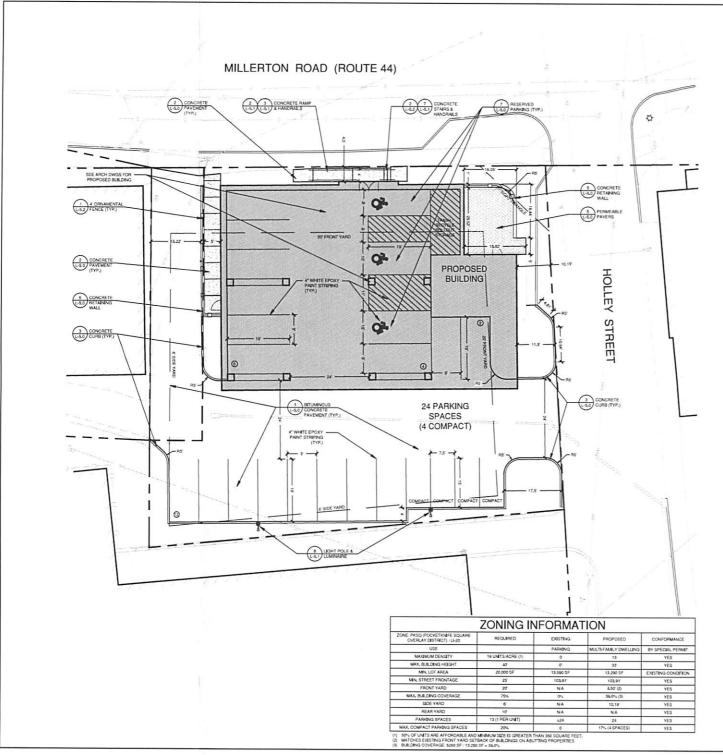
Preliminary Site Plan

Historic Traffic Data

ITE Trip Generation

Parking Generation

Preliminary Site Plan



LAYOUT NOTES

- 1. THE CONTRACTOR SHALL COMPLY WITH ALL STATE, LOCAL AND FEDERAL REGULATIONS.
- MATERIALS AND CONSTRUCTION PROCEDURES SHALL COMPLY WITH CT DOT FORM 816817 AND THE TOWN OF SALISBURY SPECIFICATIONS.
- 1. CONTRACTOR TO SECURE ALL NECESSARY TRADE PERMITS.
- 4. NEW PAVEMENT TO MEET UNE & GRADE OF EXISTING PAVEMENTS. 5. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE DUE TO CONSTRUCTION ACTIVITIES.
- 6. LOAM AND SEED ALL DISTURBED AREAS NOT COVERED BY OTHER IMPROVEMENTS.
- ALL LINES AND DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO THE LINES FROM WHICH THEY ARE MEASURED.
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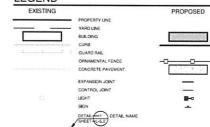
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- 13. CONTRACTOR IS RESPONSIBLE FOR YEARYOUTH THE VERTICAL AND HORZONTAL POSITION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.

 CONTRACTOR SHALL CONTROL DUST CAUSED BY HIS OPERATIONS BY APPLYING WATER OR DUST PALLATIVE, OTHER THAN CALCIUM OFLORIDE.
- 12. CONTRACTOR SHALL CONTROL NOISE TO AS GREAT AN EXTENT AS POSSIBLE. ALL POWER EOUPMENT USED DURING CONSTRUCTION SHALL BE COUPPED WITH MUFFLERS.

 13. MANUFACTURED ITEMS SHALL BE INSTALLED. CONNECTED AND CLEANED ACCORDING TO THE MANUFACTURERS DIRECTIONS.
- 14. PRIOR TO PROJECT CLOSE-OUT, CONTRACTOR SHALL REMOVE ALL DEBRIS AND EXCESS MATERIALS FROM SITE. ALSO, ANY DAMAGE TO FIELD OR FACTORY APPLIED PINISHES SHALL BE REPARRED.
- 13. EXPANSION AND SCORE JOINTS FOR NEW CONCRETE WALKS SHALL BLEND TO MATCH EXISTING PATTERISE, CONTRACTOR TO ARRANGE TIMELY ON-SITE CONFERENCES WITH LANDSCAPE ARCHITECT TO APPROVE LAYOUT OF JOINT PATTERNS.
- PROVIDE EXPANSION JOINTS FOR NEW CONCRETE PAYING AT ALL CURBS, BUILDING WALLS, SITE WALLS, STANS, EXISTING CONCRETE PAYING, AND ALL OTHER FIXED MATERIALS. MAXIMUM DISTANCE BETWEEN EXPANSION JOINTS SHALL NOT EXCEED 25 FEET.

LEGEND



architecture

Quisenberry/Arcarl Malik

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114 WEST MAIN STREET SUITE 202 NEW BRITAIN, CT 06051 860-612-1700

SITE DESIGN LANDSCAPE ARCHITECTURE URBAN PLANNING

HOLLEY PLACE

29 MAIN STREET SALISBURY, CT Project #: 6342

Revisions 07.15.2020-PKSQ ZONE

ssue Dates

APPLICATION FOR SPECIAL PERMIT 06.17.2020

Layout Plan

L-2.0



Historic Traffic Data



Salisbury

Route 44 Salisbury to Lakeville - Road Safety Audit





Acknowledgements:

OFFICE OF INTERMODAL PLANNING BUREAU OF POLICY AND PLANNING CONNECTICUT DEPARTMENT OF TRANSPORTATION

With assistance from AECOM Transportation Planning Group

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The Connecticut Department of Transportation (CTDOT) is undertaking a Community Connectivity Program that focuses on improving the state's transportation network for all users, with an emphasis on bicyclists and pedestrians. A major component of this program is conducting Road Safety Audits (RSA's) at selected locations. An RSA is a formal safety assessment of the existing conditions of walking and biking routes and is intended to identify the issues that may discourage or prevent walking and bicycling. It is a qualitative review by an independent team experienced in traffic, pedestrian, and bicycle operations and design that considers the safety of all road users and proactively assesses mitigation measures to improve the safe operation of the facility by reducing the potential crash risk frequency or severity.

The RSA team is made up of CTDOT staff, municipal officials and staff, enforcement agents, AECOM staff, and community leaders. An RSA Team is established for each municipality based on the requirements of the individual location. They assess and review factors that can promote or obstruct safe walking and bicycling routes. These factors include traffic volumes and speeds, topography, presence or absence of bicycle lanes or sidewalks, and social influences.

Each RSA was conducted using RSA protocols published by the FHWA. For details on this program, please refer to www.ctconnectivity.com. Prior to the site visit, area topography and land use characteristics are examined using available mapping and imagery. Potential sight distance issues, sidewalk locations, on-street and off-street parking, and bicycle facilities are also investigated using available resources. The site visit includes a "Pre-Audit" meeting, the "Field Audit" itself, and a "Post-Audit" meeting to discuss the field observations and formulate recommendations. This procedure is discussed in the following sections.



1 Introduction to Main Street, Salisbury RSA

The Town of Salisbury Pathways Committee submitted an application to complete an RSA on Main Street to improve safety for pedestrians and bicyclists travelling along the corridor between Salisbury Center and the Lakeville section of town. This corridor, which is designated as US Route 44 and State Route 41, experiences high traffic volumes and speeds, but has limited sidewalks. This has resulted in concerns for pedestrians and cyclists through this area. The Salisbury Central School is located adjacent to Main Street at Lincoln City Road. The planned emergency evacuation route for the school involves crossing Main Street and travelling easterly to the Town's fire department facility at Brook Street. This path does not currently have sidewalks for its entire length.

The Town of Salisbury's application contained information on traffic volumes, crash data, and mapping of the corridor. The application and supporting documentation are included in Appendix A.

1.1 Location

The RSA site is the section of Main Street (US Route 44 and State Route 41) between Salisbury Center and the Village of Lakeville (Figure 1). The Average Daily Traffic (ADT) on Main Street near the Prospect Street intersection is 7,200 vehicles per day (vpd). Main Street consists of a single lane in each direction, separated by a double yellow center line. There are striped shoulders on each side of the road, with widths that vary from less than one foot to over 10 feet.

All intersections throughout the study area are controlled by side-street stop signs, with the exception of the Lincoln City Road intersection, which is controlled by a traffic signal.

This section of roadway contains a significant number of driveways, adding complexity to walking and bicycling maneuvers through the area.

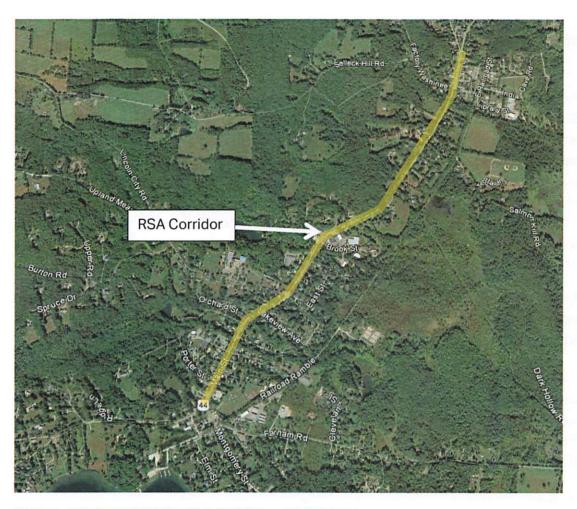


Figure 1. Main Street (US Route 44 & State Route 41), Salisbury



Figure 2. Study Area - Regional Context

2 Pre-audit Assessment

2.1 Pre-audit Information

As noted above, traffic volumes are significant along this corridor, given the rural nature of this town. This is primarily because Route 44 is the only major east/west facility in the area, and because it is coincident with Route 41, which is a major north/south route. As a result, this portion of Main Street carries traffic to and through the town from other areas in all directions.

Although the crash history in this area is relatively low, there were two accidents involving pedestrians and two involving bicyclists between 2012 and 2014. **Error! Reference source not found.** Figure 3 displays crashes that occurred in this area during 2015.

Severity Type	Number of Accidents	
Property Damage Only	42	79%
Injury (No fatality)	11	21%
Total	53	

Table 1. Crash Severity 2012-2014

Source: UConn Connecticut Crash Data Repository

Manner of Crash / Collision Impact	Numbe	er of Accidents
Unknown	0	0%
Sideswipe-Same Direction	0	0%
Rear-end	26	49%
Turning-Intersecting Paths	9	17%
Turning-Opposite Direction	1	2%
Fixed Object	5	9%
Backing	3	6%
Angle	1	2%
Turning-Same Direction	1	2%
Moving Object	0	0%
Parking	4	8%
Pedestrian	2	4%
Overturn	0	0%
Head-on	0	0%
Sideswipe-Opposite Direction	0	0%
Miscellaneous- Non Collision	1	2%
Total	53	

Table 2. Crash Type 2012-2014

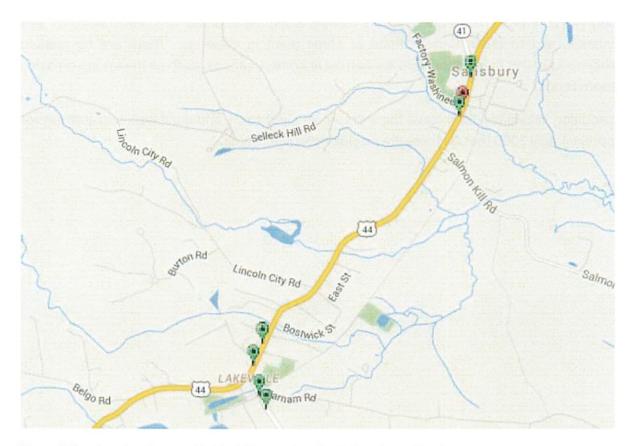


Figure 3. Crashes that Occurred in 2015 (Connecticut Crash Data Repository)

To improve connectivity within the town, Salisbury created the Pathways Committee in August, 2014. The committee works to identify pedestrian and bicyclist connectivity issues and to help foster a biking and walking community. The top priority of the committee is to enhance pathways between the Village of Lakeville and Salisbury Center in order to provide a safe walking route for pedestrians. Although there is a trail, known as the "Railroad Ramble" that is roughly parallel to Main Street, its distance from Main Street and its relatively difficult accessibility do not make it a viable pedestrian option. Furthermore, the unpaved path is not maintained during winter months, making it unpassable for portions of the year.

Currently there is a 0.8 mile gap in sidewalks along the corridor connecting the communities. The sidewalk gap occurs at a crucial location between the Salisbury Central School on Lincoln City Road and the emergency shelter located in the Fire Station on Brook Street. In the event of an emergency, students would be required to walk in the roadway for approximately 500 feet between Meadow Street (where the sidewalk ends) and the fire station shelter, crossing over the Pettee Brook culvert where the road is narrow and lacks any shoulder.

A second concern is related to the nearby Appalachian Trail, which crosses Canaan Road (Route 44) in the vicinity of Cobble Road, approximately ½ mile from Salisbury Center. The trail intersects Canaan Road from the west and from the east at two locations separated by

roughly 1200 feet. This requires hikers to walk along the shoulder of Canaan Road for this distance, and to cross Canaan Road at some point in between. There are no marked crosswalks in this area. Shoulders are narrow at some locations, such as the bridge crossing Moore Brook.

In addition, hikers regularly leave the trail to come into town, and must walk in the street for approximately 2000 feet, as there are no sidewalks in this area.

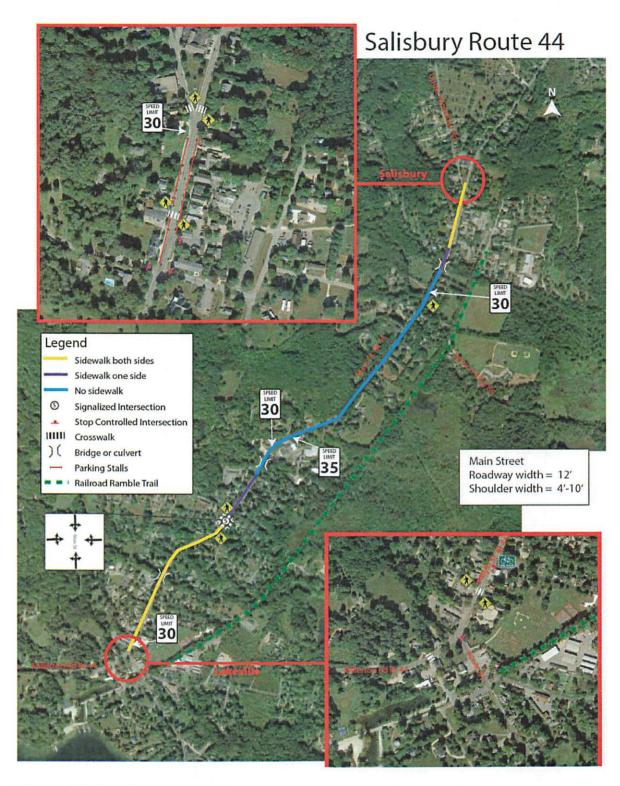


Figure 4. Main Street Road Geometrics

Salisbury - Route 44 Street Inventory

				Sidewalk					Ramps			
From	То	Distance	Lane width	Side	Туре	Width	Condition	Curb	Parking	Shoulder	Exist	Compliant
Route 41	Lincoln City Road	0.6 miles	12'	East	Concrete	5'	Good	None	No	4'	Yes	Yes
				West	Concrete	5'	Good	None	No	4'	Yes	Yes
Lincoln City Road	Meadow Street	700 ft	12'	East	Concrete	5'	Good	Asphalt	No	4'	Yes	Yes
				West	None	None	None	Asphalt	No	4'	None	None
Meadow Street	Vachocastinook Cree	0.8 miles	12'	East	None	None	None	None	No	4'	Yes	No
				West	None	None	None	None	No	4'	None	None
/achocastinook Cree	Library Street	400 ft	12'	East	Asphalt	4'	Good	Asphalt	Yes	8'	Yes	No
				West	None	None	None	Granite	Yes	8'	None	None
		9.025555										
Library Street	Under Mountain Road	800 ft	12'	East	Concrete	5'	Good	None	Yes	10'	Yes	Yes
				West	Concrete	5'	Good	None	Yes	10'	Yes	Yes
				WAS STAN								

^{*}CONDITION – "Good" is Serviceable Condition that meets current design standards. "Fair" is generally serviceable, but may need minor repairs, or may not completely align with current design standards. "Poor" is not serviceable, and generally inadequate for continued long-term use.

Table 3. Street Inventory

2.2 Prior Successful Effort

The "Center" of Salisbury generally has sidewalks located on both sides of Main Street (Route 44/41). Parking areas are well defined, crosswalks are well marked and signage is appropriate. "Bump-outs" are provided at the mid-block crossing just north-east of Town Hall. These sidewalks continue to the East Main Street / Under Mountain Road intersection (Route 44 and 410, and a single asphalt sidewalk continues through the triangle park, stopping just short of Conklin Street.

A paved, defined pedestrian path is available between the Salisbury Central School and Main Street (Route 44/41), and on both sides of Main Street into the Village of Lakeville. The signalized intersection of Lincoln City Road and Main Street provides an actuated, exclusive pedestrian crossing, with marked crosswalks on all four legs of the intersection. The sidewalk also extends to the north-east on the south side of Main Street, but terminates at Meadow Street, approximately 500 feet before the Brook Street intersection.

2.3 Pre-Audit Meeting

The RSA was conducted on April 11, 2016. The Pre-Audit meeting was held at 1:00 PM in the Town Hall located at 27 Main Street in Salisbury.

The RSA Team was comprised of staff from AECOM, staff from CTDOT, representatives from several Salisbury departments including the Board of Selectman, Pathways Committee, Board of Education, and the Resident State Trooper. The complete list of attendees can be found in Appendix B.

Several items were presented for general information prior to conducting the Audit in the field:

- CTDOT has placed new emphasis on all users of the highway facilities, not just automobiles.
- The corridor is designated a scenic road.
- A significant percentage of the residents are second home owners.
- There is high pedestrian activity in this corridor, especially in the summer. The corridor is narrow and lacks continuous sidewalks.
- The Appalachian Trail crosses Route 44 (Canaan Road) north of Salisbury center, in a dog-leg that requires hikers to use Canaan Road in an area restricted by a bridge and with generally narrow shoulders. Many hikers access the town center from the trail on Route 44.
- In the last five years bicycle traffic along the corridor has increased significantly.
- There are two private schools on opposite sides of town. Students use Main Street to travel between the schools or to get into town.

- The middle/elementary school is located on Lincoln City Road just off the corridor.
 The emergency shelter for the school is at the Fire Station on Brook Street but the sidewalk only extends to Meadow Street, placing the evacuation route in the roadway.
- Route 44 is scheduled to be repaved this summer; could the lanes be narrowed or lines adjusted to better accommodate bicycle traffic?
- There are several culverts that create narrow pinch points along the road.
- Historically, there were sidewalks along the corridor, but over time they were removed or neglected as the corridor was developed.
- It is preferred that pathways be made of stone dust or other porous materials that are a natural approach for the sidewalks. It must also be ADA compliant and not a maintenance problem.
- Cyclists must go with the flow of traffic, unless it is a separate multi use path.
- The impact of widening the shoulders should be investigated.

3 RSA Assessment

3.1 Field Audit Observations

The team visited the Culvert by Brook Street as it is a representative section of the road, and demonstrates a critical pinch-point in the sidewalk system. The following items were noted:

- A cyclist was observed on the road.
- The pavement is deteriorating in many places along the corridor. It is heavily cracked. (Figure 5).
- Drainage is a concern, particularly on the south/east side of the culvert. The home owner installed a swale to channel water from the road away from his property and toward the stream (Figure 6).
- The road by the culvert is eroding in places (Figure 7). This is most likely from water draining off of the road into the stream without a positive drainage system.
- The guide rail for the culvert is an old wire rope rail. It appears to not meet current standards (Figure 8).

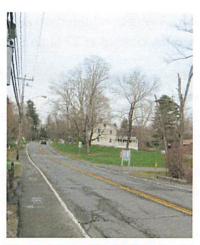


Figure 5. Deteriorating Pavement



Figure 6. Drainage Issues

- Lanes appear to be 12' in width, and shoulders are generally 4' in width, except at the culvert crossing where the shoulders are narrower.
- The sidewalk ends on the south side of the road a few hundred feet south of the culvert.
- When a fire truck leaves the station, someone must stand out at the Brook Street intersection to direct traffic.
- The headwall of the culvert and crib walls are old and falling apart.
- The culvert is in better condition on the north/west side.
- In order for the school to access the emergency shelter, students must walk in the road between the end of the sidewalk and Brook Street, the shoulder narrows over the culvert requiring individuals to walk in the roadway. This also places students walking toward the shelter on the wrong side of the road (walking with traffic).
- Is it possible to place an emergency-vehicle signal at Brook Street with pedestrian crossing phases?

Other findings along the corridor

- The roadway is not always centered in the rightof-way.
- East of the fire station there are large protected Elm trees near the road edge (Figure 9).
- The "Railroad Ramble" rail trail is owned by the town, and parallels this route. It is grass (not paved) and is not maintained in the winter.
- There is access off Brook Street for the rail trail but it is poorly marked. The town recently converted Brook Street to a public way and will soon be designating parking.



Figure 7. Eroding Roadway at Culvert



Figure 8. Inadequate Guide Rails



Figure 9. Protected Elm Trees

- There are places along the corridor where old sidewalk beds are visible.
- The Appalachian Trail from the west intersects Cobble Road west of Route 44, and from the east, it intersects Route 44 north of Lions Head. As a result, trail users must use Route 44 between these segments, and must cross the narrow bridge over Moore Brook (Figure 10).



Figure 10. Narrow Bridge Crossing

3.2 Post Audit Workshop - Key Issues

- All crossings and sidewalks must meet DOT requirements and be ADA compliant.
 Sidewalks must be 5' wide with no more than 2% cross-slope. Longitudinally, they can follow the existing grade of the roadway.
- Given the traffic volume, crash rates are low; this indicates that the road users are generally familiar with the road.
- There were two incidents involving pedestrians within the last year; one was a jaywalker.
- Half of all crashes are rear-ends, indicative of the large number of driveways and turning movements.
- If the sidewalk is extended over the Brook Street culvert on the south side, pedestrians
 could cross Main Street at the existing traffic signal. However, this would entail a large
 culvert reconstruction project. Placing the sidewalk on the north side would be easier
 but would require a pedestrian crossing at Brook Street. Sight lines appear to be
 adequate at this location.
- There is very little positive drainage along the road. This must be addressed if curbing and sidewalk are added.
- Sidewalks can be built in sections; it does not have to be all at once. The same
 material is not required everywhere. For example, it would not be recommended that
 stone dust be used by the school.
- The DOT is resurfacing this road this summer and it is now a common practice for DOT to narrow road widths to 11 feet to have wider shoulders and accommodate bicycles.

4 Recommendations

From the discussions during the Post-Audit meeting, the RSA team compiled a set of recommendations that are divided into short-term, mid-term, and long-term categories. For the purposes of the RSA, **Short-term** is understood to mean modifications that can be expected to be completed very quickly, perhaps within six months, and certainly in less than a year if funding is available. These include relatively low-cost alternatives, such as striping and signing, and items that do not require additional study, design, or investigation (such as right-

of way acquisition.) Mid-term recommendations may be more costly and require establishment of a funding source, or they may need some additional study or design in order to be accomplished. Nonetheless, they are relatively quick turn-around items, and should not require significant lengths of time before they can be implemented. Generally, they should be completed within a window of eighteen months to two years if funding is available. Long-term improvements are those that require substantial study and engineering, and may require significant funding mechanisms and/or right-of-way acquisition. These projects generally fall into a horizon of two or more years when funding is available.

4.1 Short Term

- 1. The locations of existing buried sidewalk should be investigated, and sidewalk should be uncovered for use until more permanent solutions can be realized. In some cases, sidewalk may not be suitable due to its condition, grading or drainage issues. It is recognized that this will create a discontinuous system, but it will define locations where sidewalk may be useable, and locations where it is missing or unusable. This information can lead to a definitive plan for constructing a continuous sidewalk.
- When CTDOT resurfaces the road this summer, it will provide an opportunity to restripe to maximize the shoulder width. Consideration could be given to stripe the shoulders as bicycle lanes in the future (Figure 11).
- 3. Clear brush to create a pathway connection between Brook Street and the Railroad Ramble.
- Improve Wayfinding signage related to the town center, nearby landmarks, the Appalachian Trail, the Railroad Ramble, Lakeville, educational facilities, etc (Figure 12).
- Conduct the necessary study to determine the feasibility of installing a joint emergency-vehicle signal and pedestrian crossing signal at Brook Street.



Figure 11. Typical Bicycle Lane



Figure 12. Typical Wayfinding Sign

Figure 13 depicts these recommendations.

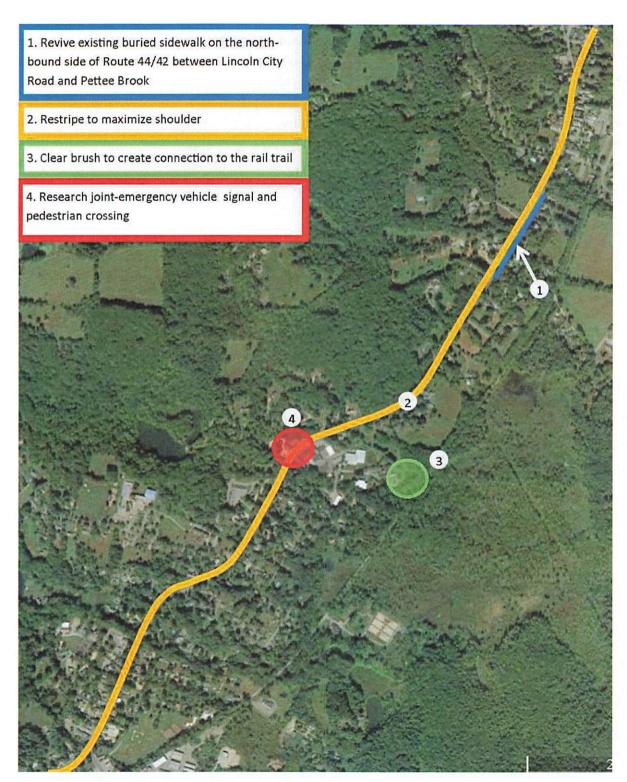


Figure 13. Short Term Recommendations

4.2 Medium Term

- 1. Connect the school and emergency shelter with a sidewalk on the North side of the road if research shows a signal is possible.
 - a. Add pedestrian bridge over the brook.
 - b. Install actuated pedestrian signal and crosswalk in conjunction with emergency vehicle signal.
- 2. Improve Rail Trail crossing on Salmon Kill Road (signing, striping, some grading and clearing).

Figure 14 depicts some of the recommendations along Main Street.

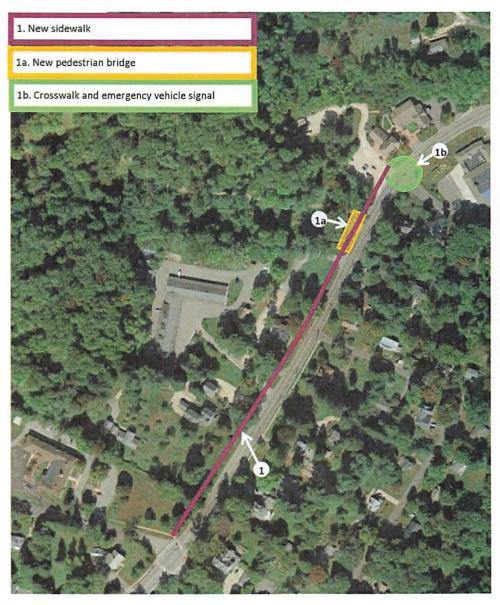


Figure 14. Medium Term Recommendations

4.3 Long Term

- 1. Install missing sidewalk between Salisbury center and Brook Street.
- 2. Install missing sidewalk between Meadow Street and Brook Street, including the reconstruction of the culvert over Pettee Brook.
- 3. Complete the portion of the Appalachian Trail along Canaan Road (Route 44) between Cobble Road and the easterly trail head, and pedestrian crossing of Canaan Road. This will require the crossing of Moore Brook, either by widening the existing Route 44 structure or building an additional structure adjacent to the roadway.
- 4. In conjunction with the construction of the sidewalks and trail, a number of factors must be considered, including:
 - a. Proper signing, striping, traffic controls, and wayfinding,
 - b. Drainage issues and considerations, including environmental impact,
 - c. Choice of materials that consider runoff, maintenance, projected usage, and aesthetics.
 - d. Impact on grading, wetlands and significant vegetation.

Figure 16 depicts some of these recommendations.



Figure 15. Typical Trail Crossing

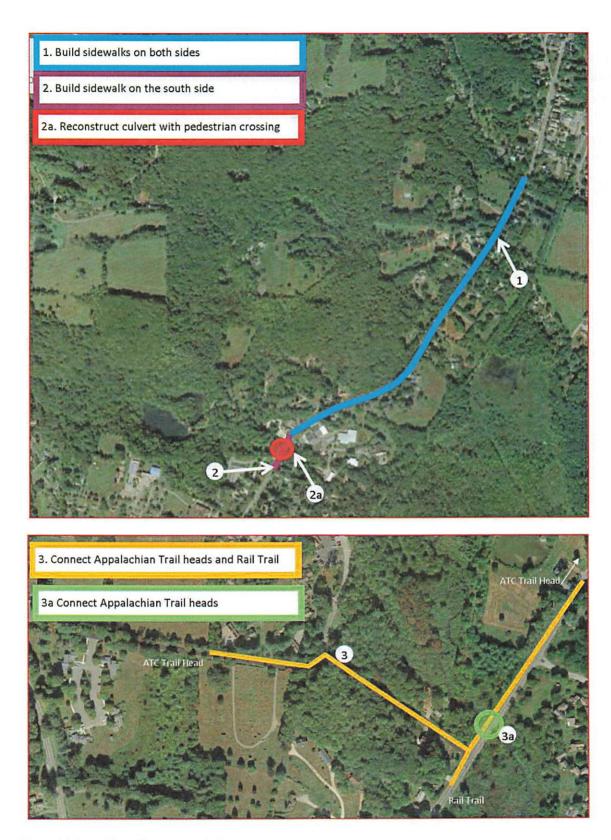


Figure 16. Long Term Recommendations

4.4 Summary

This report documents the observations, discussions and recommendations developed during the successful completion of the Town of Salisbury RSA. It provides Salisbury with an outlined strategy to improve the transportation network for all road users between Lakeville and Salisbury, particularly focusing on pedestrians and cyclists. Moving forward, Salisbury may use this report to prepare strategies for funding and implementing the improvements, and as a tool to plan for including these recommendations into future development along Route 44.



Appendix A





Welcome to the Community Connectivity Program Application



Please fill in the following information to provide the Audit team leaders with a comprehensive description of the area contained in this application.

1. Applicant contact information

Name	Natalia V. Smirnova
Title	Salisbury Pathways Committee member
Email Address	Natalia.Smirnova@aier.org
Telephone Number	(914) 260-3359

2. Location information

Address	Main Street
Description	walking pathways connecting villages of Salisbury and Lakeville
City / Town	Salisbury, CT

State road			
Local road			
Private Road			
Other (please spec	ify)		
4. Zoning (Please select all	that apply)		
Industrial			
■ Residential			
Commercial			
Mixed Use			
Retail			
N/A (not applicable)		
Other (please spec	ify)		
5. Approximate mile	radius around t	he location	
Greater than a ½ mil	 e		

6. Community Sites (Please select all that apply)	
Community Centers	
Business Districts	
Restaurant/Bar Districts	
Churches	
Housing Complexes	
Proximity to Schools	
Tourist Locations (examples – Casino, Malls, Parks, Aquarium, etc)	
N/A (not applicable)	
Other (please specify)	7
7. Employment Facilities (Retail, Industrial, etc)	j
■ Yes No	
If Yes please describe (please specify)	
Retail stores, businesses, churches along the road.	
	•

Public, Parochial, Private Schools (more than 1 school within a ½ mile)
University / Community Colleges
N/A (not applicable)
Other (please specify)
Transit facilities Please select all that apply)
Bus
Rail
Ferry
Airport
Park and Ride Lot
N/A (not applicable)

Traffic (volumes & speed)	
Collisions	
Sidewalks	
Traffic Signals	
Traffic Signs	
Parking Restrictions / Additions	
☐ Drainage	
ADA Accommodations	
Agricultural & Live Stock crossing	
Maintenance issues (cutting grass, leaves, snow removal)	
N/A (not applicable)	
Other (please specify)	

N/A not applicable		
lf Yes please describe an	d list all projects.	

Page 6 of 11

12. Environmental Concerns:
Waterway (rivers, lakes, ocean, etc)
If Yes please describe and list.
The Town of Salisbury, incorporated in October of 1741, is located in the very Northwest corner of the State of Connecticut. The Housatonic River flows from North to South and crosses Town lines along its way. Within Salisbury are several ponds and six lakes: Wononscopomuc, Washinee, Washining, Wononpakook, Riga Lake and South Pond. As well as the lakes, the Salisbury land is comprised of low mountains, including access to the Appalachian Trail, and open fields.
The provision of opportunities for people to walk around the town will benefit the historic preservation of this beautiful part of Connecticut in addition to preservation of waterways, wetlands, and wildlife.

13. Please explain why this location should be considered for an RSA

RSA will be beneficial to this location because the town is working hard to improve walking and bicycling connectivity. Town of Salisbury adopted Plan of Conservation and Development in 2012 where the connectivity between villages was emphasized.
In August 2014, the Salisbury Pathways Committee was formed to work on the walking connectivity issues. The Committee developed a set of priorities to accomplish its goals. This project — called "The Connector" — is the first priority of the Committee focusing on the creation of pathways connecting the villages of Lakeville and Salisbury in order to provide safe walking for pedestrians. The increased foot traffic will be an economic boost to businesses in the area as more people use the sidewalk.
Salisbury Pathways Committee reached out to BikeWalkCT. They indicated that they would like to work with us to foster biking and walking in the area. Of 169 Connecticut towns, Salisbury ranks # 60.
Salisbury Pathways Committee also connected to the Appalachian Mountain Club. The Club is very enthusiastic about our efforts to create safe pathways connecting the two villages.
Overall, the connectivity project of the Town Salisbury will improve accommodations for pedestrians in our rural community, as well as will boost commerce along Route 44 through increased foot traffic.

Yes	
an overarching long-te 1. "The Connector" bet RSA. 2. "The Triangle with H head community on 44 to accommodate bicyc 3. "Around the Lake W town, and responding t 4. Lime Rock village	scopomuc" area – helping The Hotchkiss School students and faculty to walk to Belgo road residents' concerns.

15. Any other pertinent information that is unique to this location? Yes Town of Salisbury started working on the street improvement in 1876 when the Village Improvement Society was formed. Projects included planting trees (elms) along the streets, maintaining the sidewalks, lighting the streets, and the general betterment of the village. In 1908, new stone sidewalks were laid in Lakeville and 15 mph speed limit signs posted in all villages of Salisbury. Initially sidewalks were helpful to separate pedestrians from streets, which were muddy and dirty with horse manure. When streets were paved, people started walking on them. Now as traffic increased, people want to be separate from traffic once again and to be safe. So sidewalks are highly utilized. Particular emphasis currently is on safety as cars and trucks are speeding on highways 44 and 41. We are applying for the RSA in order to help us to prioritize pathways projects and pursue future funding opportunities.

Thank you for completing the Community Connectivity application.

Please click on the "submit button" below and include the following attachments

- 1 Location map (google, GIS) (Required)
- 2 Collision data (If available)
- 3 Traffic data (ADT or VMT) (If available)
- 4 Pedestrian/bicycle data (If available)





Appendix B









Road Safety Audit

Town:

Salisbury

RSA Location:

Rt 44

Meeting Location:

Town Hall

Address:

27 Main Street

Date:

4/11/2016

Time:

1:00 PM

Participating Audit Team Members

Audit Team	
Member	Agency/Affiliation
Krystal Oldread	AECOM
Colleen Kissane	CTDOT
Stephen Gazillo	AECOM
Christian Williams	Town of Salisbury
Katherine Kiefer	Town of Salisbury- Selectman
Steve Mitchell	AECOM
Natalia Swirnova	Town of Salisbury-Pathways- Board of Ed
Pat Hackett	Town of Salisbury - Pathways
Chris Sorrell	Resident state trooper



Appendix C









Road Safety Audit – Salisbury

Meeting Location: Salisbury Town Hall

Address:

27 Main Street

Date: Time: 4/11/2016 1:00 PM

Agenda

Type of Meeting:

Road Safety Audit - Pedestrian Safety

Attendees:

Invited Participants to Comprise a Multidisciplinary Team

Please Bring:

Thoughts and Enthusiasm!!

1:00 PM

Welcome and Introductions

Purpose and Goals

Agenda

1:15 PM

Pre-Audit

Safety Procedures

Definition of Study Area

Issues

2:15 PM

Audit

Visit Site

As a group, identify areas for improvements

3:30 PM

Post-Audit Discussion / Completion of RSA

Review Site Specific Data:

Average Daily Traffic

Crash Data

Geometrics

Discussion observations and finalize findings

Discuss potential improvements and final recommendations

Next Steps

5:00 PM

Adjourn for the Day - but the RSA has not ended

Instruction for Participants:

- Before attending the RSA, participants are encouraged to observe the intersection and complete/consider elements on the RSA Prompt List with a focus on safety.
- All participants will be actively involved in the process throughout. Participants are encouraged to come with thoughts and ideas, but are reminded that the synergy that develops and respect for others' opinions are key elements to the success of the overall RSA process.
- After the RSA meeting, participants will be asked to comment and respond to the document materials to assure it is reflective of the RSA completed by the multidisciplinary team.





Road Safety Audit - Salisbury Meeting Location: Salisbury Town Hall

Address:

27 Main Street

Date:

4/11/2016

Time:

1:00 PM

Audit Checklist

Pedestrians and Bicycles	Comment
Pedestrian Crossings	
Pedestrian Facilities Sidewalk Width Grade Materials/Condition Drainage Buffer Pedestrian lighting Pedestrian amenities (benches, trash receptacles) Other	



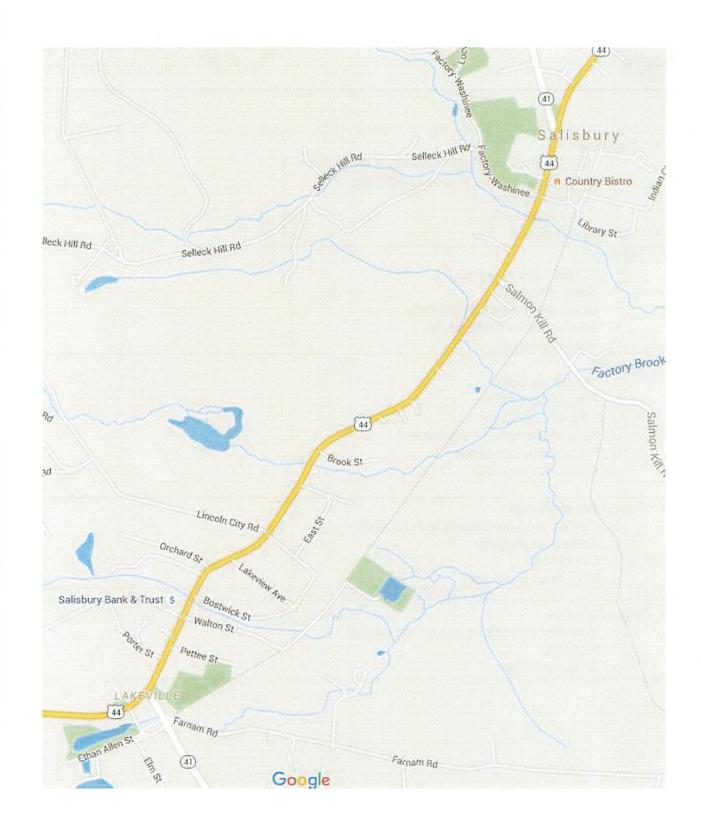


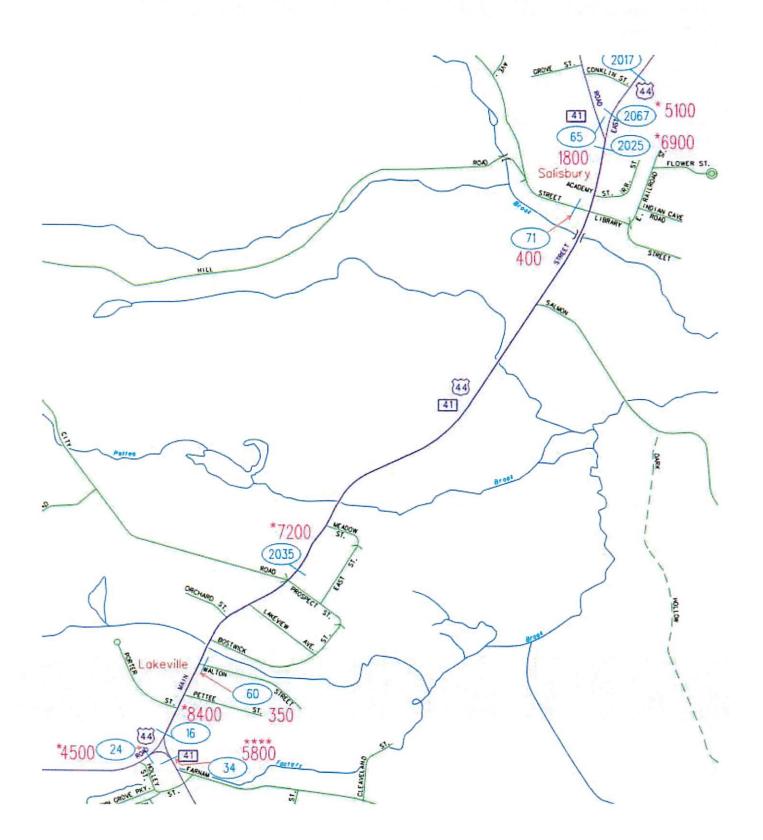
	The state of the s
Bicycle facilities/design Bicycle facilities/design Separation from traffic Conflicts with on-street parking Pedestrian Conflicts Bicycle signal detection Visibility Roadway speed limit Bicycle signage/markings Shared Lane Width Shoulder condition/width Traffic volume Heavy vehicles Pavement condition	
Other	
Roadway & Vehicles	
 Speed-related issues Alignment; Driver compliance with speed limits Sight distance adequacy Safe passing opportunities 	
Geometry Road width (lanes, shoulders, medians); Access points; Drainage Tapers and lane shifts Roadside clear zone /slopes Guide rails / protection systems	
 Intersections Geometrics Sight Distance Traffic control devices Safe storage for turning vehicles Capacity Issues 	





 Pavement Pavement Condition (excessive roughness or rutting, potholes, loose material) Edge drop-offs Drainage issues Lighting Adequacy 	
 Signing Correct use of signing Clear Message Good placement for visibility Adequate retroreflectivity Proper support 	
 Signals Proper visibility Proper operation Efficient operation Safe placement of equipment Proper sight distance Adequate capacity 	
 Pavement Markings Correct and consistent with MUTCD Adequate visibility Condition Edgelines provided 	
 Miscellaneous Weather conditions impact on design features. Snow storage 	





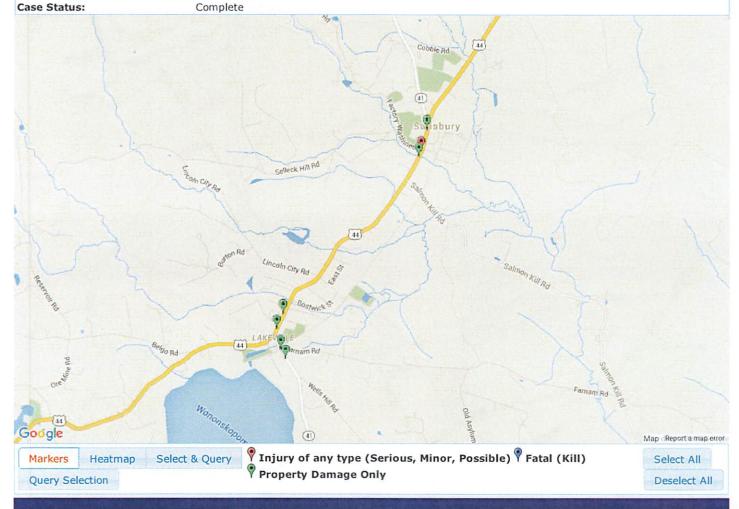
UCONN Connecticut Crash Data Repository

mmucc Dataset: Salisbury Towns:

Town & Route: Town:122 Route:41 Intersection:undefined Milepost:-Town & Route: Town:122 Route:44 Intersection:undefined Milepost:-

Crash Severity: Injury of any type (Serious, Minor, Possible), Fatal (Kill), Property Damage Only

Body Type: Condition at Time of Crash: null, null, null Driver Distracted By: null, null, null Non-motorist Distracted By: null, null, null



This web site is exempt from discovery or admission under 23 U.S.C. 409. Connecticut Crash Data Repository - User Guide Contact Us





Road Safety Audit — Salisbury Meeting Location: Salisbury Town Hall

Address:

27 Main Street

Date: Time: 4/11/2016 1:00 PM

Crash Summary

Data: 3 years (2012-2014)

2 accidents involved pedestrians, both resulted in injuries

2 accidents involved bicylists, both resulted in injuries

Severity Type	Number of Accidents	
Property Damage Only	42	79%
Injury (No fatality)	11	21%
Total	53	

Manner of Crash / Collision Impact	Number of Accidents	
Unknown	0	0%
Sideswipe-Same Direction	0	0%
Rear-end	26	49%
Turning-Intersecting Paths	9	17%
Turning-Opposite Direction	1	2%
Fixed Object	5	9%
Backing	3	6%
Angle	1	2%
Turning-Same Direction	1	2%
Moving Object	0	0%
Parking	4	8%
Pedestrian	2	4%
Overturn	0	0%
Head-on	0	0%
Sideswipe-Opposite Direction	0	0%
Miscellaneous- Non Collision	1	2%
Total	53	





Weather Condition	Number of Ac	cidents
Snow	3	6%
Rain	3	6%
No Adverse Condition	46	87%
Unknown	0	0%
Blowing Sand, Soil, Dirt or	0	0%
Snow		
Other	0	0%
Severe Crosswinds	0	0%
Sleet, Hail	0	0%
Fog	1	2%
Total	53	

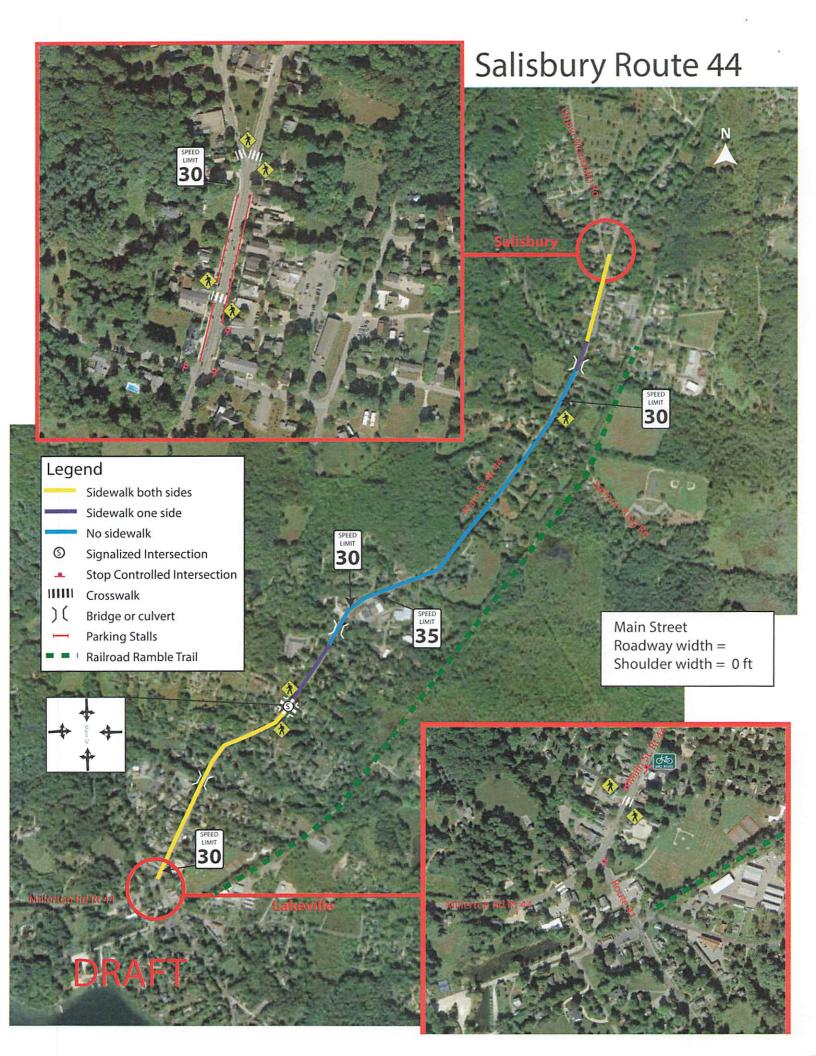
Light Condition	Number of Accidents	
Dark-Not Lilghted	2	4%
Dark-Lighted	3	6%
Daylight	48	91%
Dusk	0	0%
Unknown	0	0%
Dawn	0	0%
Total	53	

Road Surface Condition	Number of Accidents		
Snow/Slush	2	4%	
Wet	11	21%	
Dry	40	75%	
Unknown	0	0%	
Ice	0	0%	
Other	0	0.0%	
Total	53		





Time		Number of A	ccidents
0:00	0:59	0	0.0%
1:00	1:59	0	0.0%
2:00	2:59	0	0.0%
3:00	3:59	0	0.0%
4:00	4:59	1	1.9%
5:00	5:59	0	0.0%
6:00	6:59	1	1.9%
7:00	7:59	3	5.7%
8:00	8:59	1	1.9%
9:00	9:59	4	7.5%
10:00	10:59	3	5.7%
11:00	11:59	3	5.7%
12:00	12:59	4	7.5%
13:00	13:59	4	7.5%
14:00	14:59	8	15.1%
15:00	15:59	10	18.9%
16:00	16:59	4	7.5%
17:00	17:59	1	1.9%
18:00	18:59	3	5.7%
19:00	19:59	1	1.9%
20:00	20:59	2	3.8%
21:00	21:59	0	0.0%
22:00	22:59	0	0.0%
23:00	23:59	0	0.0%
Total		53	







Road Safety Audit – Salisbury

Meeting Location: Salisbury Town Hall

Address:

27 Main Street 4/11/2016

Date: Time:

1:00 PM

Post-Audit Discussion Guide

Safety Issues

· Confirmation of safety issues identified during walking audit

Potential Countermeasures

Short Term recommendations

Medium Term recommendations

Long Term recommendations

Next Steps

Discussion regarding responsibilities for implementing the countermeasures (including funding)





Road Safety Audit - Salisbury

Meeting Location:

Salisbury Town Hall

Address:

27 Main Street

Date:

4/11/2016

Time:

1:00 PM

Fact Sheet

Functional Classification:

Route 44 is classified as a Principal Arterial

Route 41 is classified as a Major Collector

ADT

Route 41(Sharon Rd) intersection with Route 44: 5,800

Route 44: spans 6,900 - 8,400

Population and Employment Data (2014):

Population:

3,708

Employment: 2,046

Urbanized Area

Routes 41 and 44 are not located within an Urbanized Area

Demographics

- The statewide average percentage below the poverty line is 10.31%. There are no areas in Salisbury exceeding the state's average.
- The statewide average percentage minority population is 30.53%. There are no areas in Salisbury exceeding the state's average.

Air Quality

- Salisbury's CIPP number 318
- Salisbury is within the Greater CT Marginal Ozone Area
- · Salisbury is within a CO Attainment Area

ITE Trip Generation

(220)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday

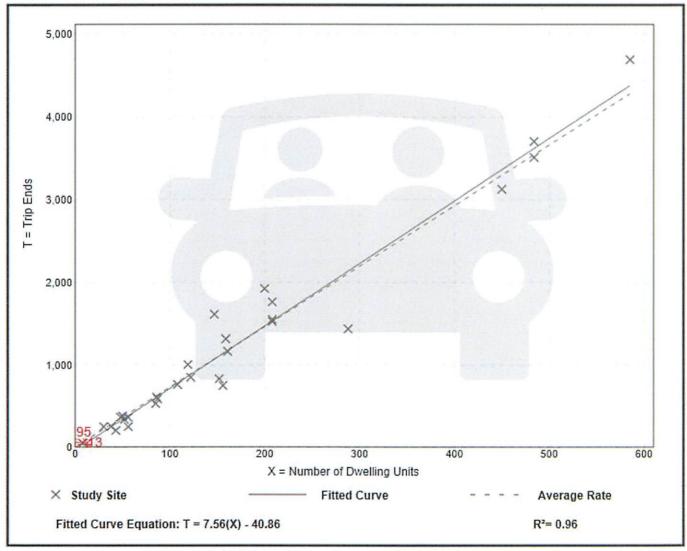
Setting/Location: General Urban/Suburban

Number of Studies: 29 Avg. Num. of Dwelling Units: 168

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation	
7.32	4.45 - 10.97	1.31	



(220)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

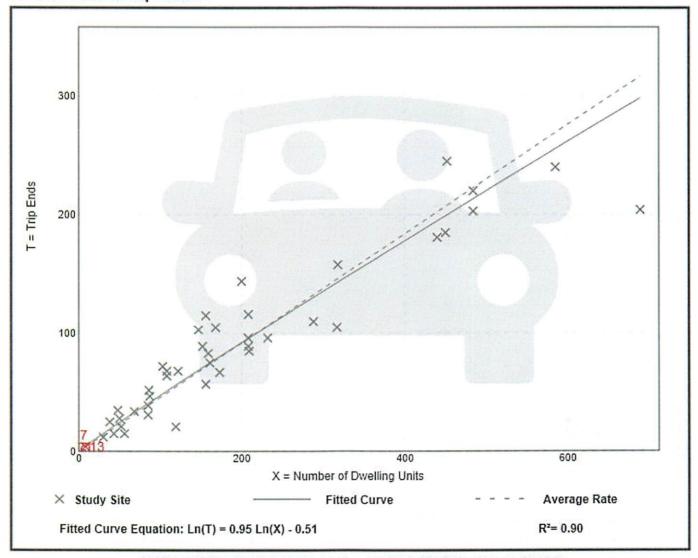
Setting/Location: General Urban/Suburban

Number of Studies: 42 Avg. Num. of Dwelling Units: 199

Directional Distribution: 23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.46	0 18 - 0 74	0.12



(220)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

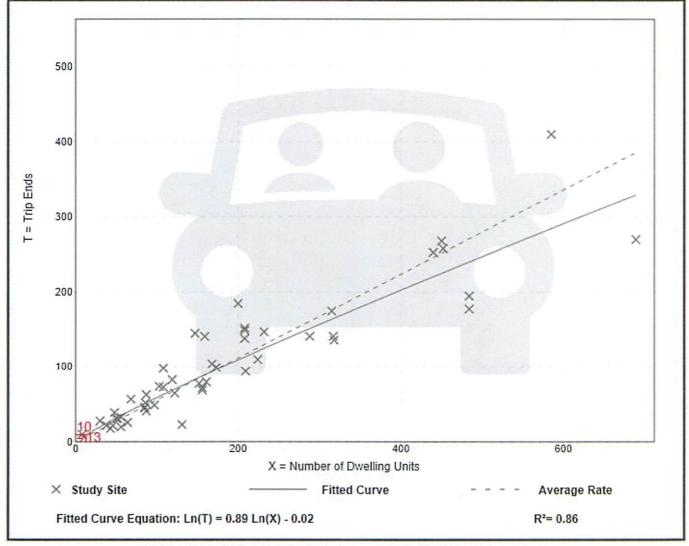
Setting/Location: General Urban/Suburban

Number of Studies: 50 Avg. Num. of Dwelling Units: 187

Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.56	0.18 - 1.25	0.16



(220)

Peak Period Parking Demand vs: Dwelling Units

On a: Weekday (Monday - Friday)

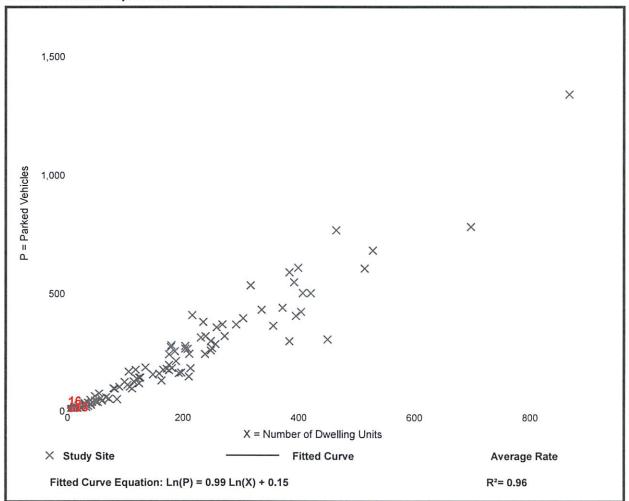
Setting/Location: General Urban/Suburban (no nearby rail transit)

Peak Period of Parking Demand: 11:00 p.m. - 6:00 a.m.

Number of Studies: 119 Avg. Num. of Dwelling Units: 156

Peak Period Parking Demand per Dwelling Unit

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
1.21	0.58 - 2.50	1.03 / 1.52	1.16 - 1.26	0.27 (22%)



Parking Generation Manual, 5th Edition • Institute of Transportation Engineers