



COMMUNITY
connectivity program

Newington

Town Center – Road Safety Audit

July 27, 2016



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Acknowledgements:

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With assistance from AECOM Transportation Planning Group

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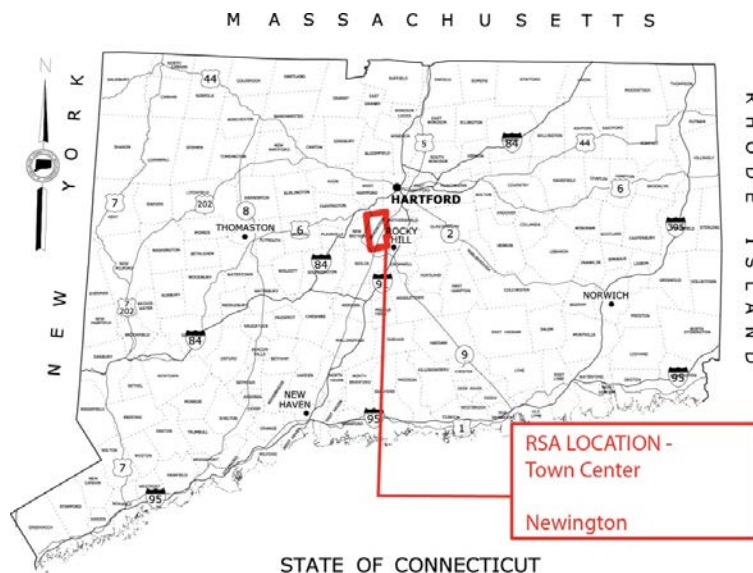
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The Connecticut Department of Transportation (CTDOT) is undertaking a Community Connectivity Program that focuses on improving the state's transportation network for all users, with an emphasis on bicyclists and pedestrians. A major component of this 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 Town Center, Newington RSA

The Town of Newington submitted an application to complete an RSA in the Town Center along Route 175, Main Street, Market Square, Constance Leigh Drive and Garfield Street. Although this area currently has sidewalks on at least one side of the street, there are no bike lanes or sharrows. Newington is looking to identify roadway improvements to improve the pedestrian environment and encourage greater bicycle use in the area.

The Town of Newington's application contained a mapping of the corridor. The application and supporting documentation are included in Appendix A.

1.1 Location

The RSA site is the section of Cedar Street (Route 175) between the Lucy Robbins Welles Library and Constance Leigh Drive, Garfield Street from the town hall and east, Main Street (Route 176) between Route 175 and Walsh Avenue, Constance Leigh Drive from Route 175 to Market Square, and Market Square (Figure 1). The study area includes the town hall, library and retail and commercial business in the center area. Main Street and Route 175 are both state routes and are classified as minor arterial roads. The remaining roadways are classified as collectors. Route 175 experiences heavy traffic during the peak times, as it is the primary east-west corridor in Newington. Market Square and Main Street have a considerable amount of pedestrian traffic generated by the local businesses. Transit service is available on Route 175 (Bus Route 44) and on Constance Leigh Drive (Bus Route 144).

According to CTDOT data, the average daily traffic (ADT) on Route 175, in the road safety audit study area, ranges from 23,700 vehicles per day (vpd) west of Main Street to 27,000 vpd east of Constance Leigh Drive. These are high volumes for an arterial roadway. Main Street has approximately half of the volume as Route 175 (11,900 vpd). Constance Leigh Drive has an ADT of 4,300 vpd, and Garfield Drive has 3,500 vpd. Figure 2 shows the road safety audit corridor in a regional context.

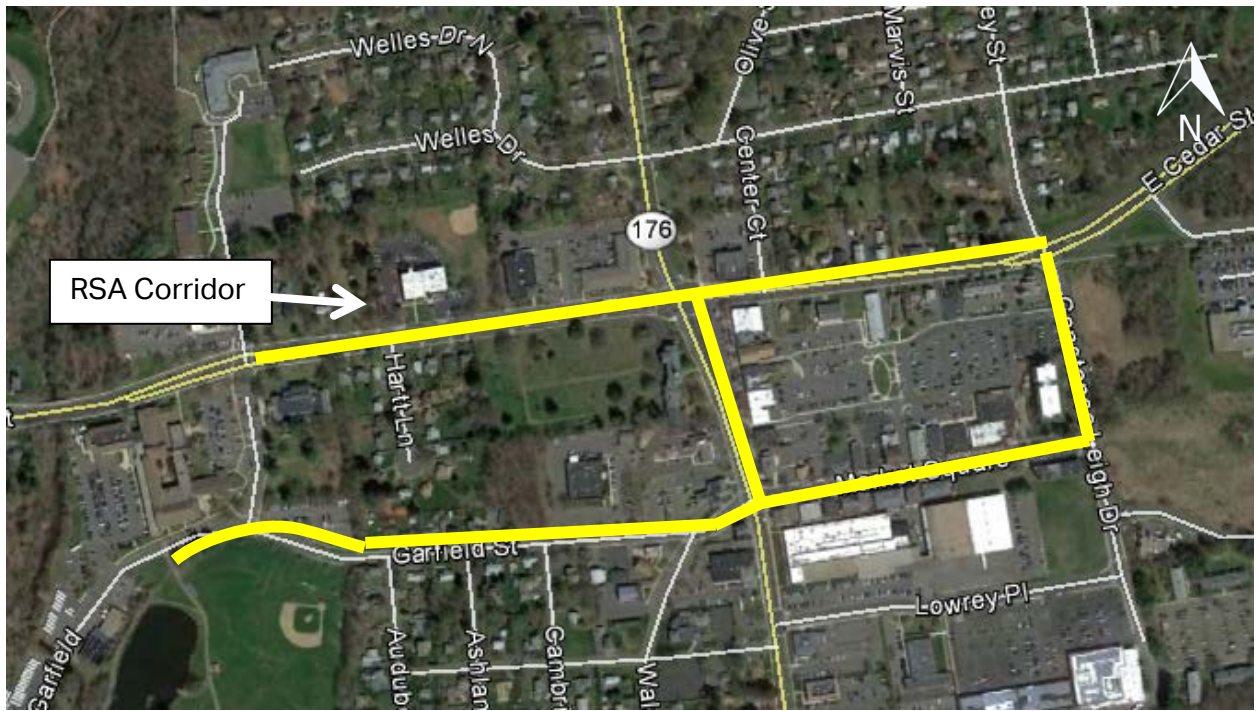


Figure 1. Newington Town Center

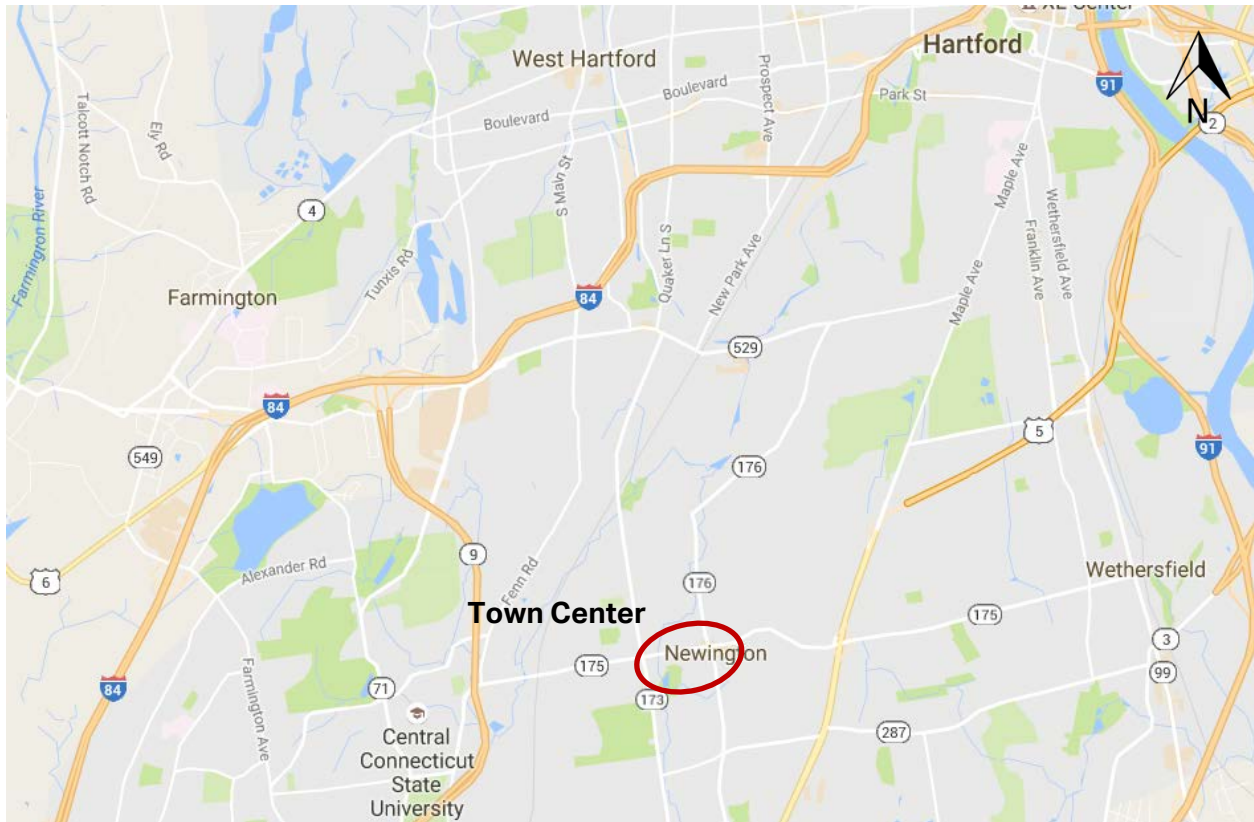


Figure 2. Study Area – Regional Context

2 Pre-audit Assessment

2.1 Pre-audit Information

As noted previously, traffic volumes are significant along the Route 175 and Route 176 corridors and this is where the majority of the crashes occurred. A high number of crashes (273) were reported within the study area between 2012 and 2014. Table 1 and Table 2 provide data on Crash Severity and Type, respectively. The more severe crashes, those that resulted in an injury, occurred around the intersection of Main Street and Route 175. Crashes resulting in injuries typically indicate vehicles traveling at high speeds. The highest percentage (52%) of accidents were rear-ends, which is typically related to high levels of congestion. Figure 3, displays crashes that occurred in this area in 2015.

Severity Type	Number of Crashes	
Property Damage Only	216	79%
Injury (No fatality)	57	21%
Fatality	0	0%
Total	273	

Table 1. Crash Severity 2012- 2014

Source: UConn Connecticut Crash Data Repository

Manner of Crash / Collision Impact	Number of Crashes	
Unknown	1	0%
Sideswipe-Same Direction	41	15%
Rear-end	142	52%
Turning-Intersecting Paths	22	8%
Turning-Opposite Direction	18	7%
Fixed Object	11	4%
Backing	10	4%
Angle	9	3%
Turning-Same Direction	9	3%
Moving Object	4	1%
Parking	1	0%
Pedestrian	1	0%
Overturn	1	0%
Head-on	0	0%
Sideswipe-Opposite Direction	2	1%
Miscellaneous- Non Collision	1	0%
Total	273	

Table 2. Crash Type 2012-2014

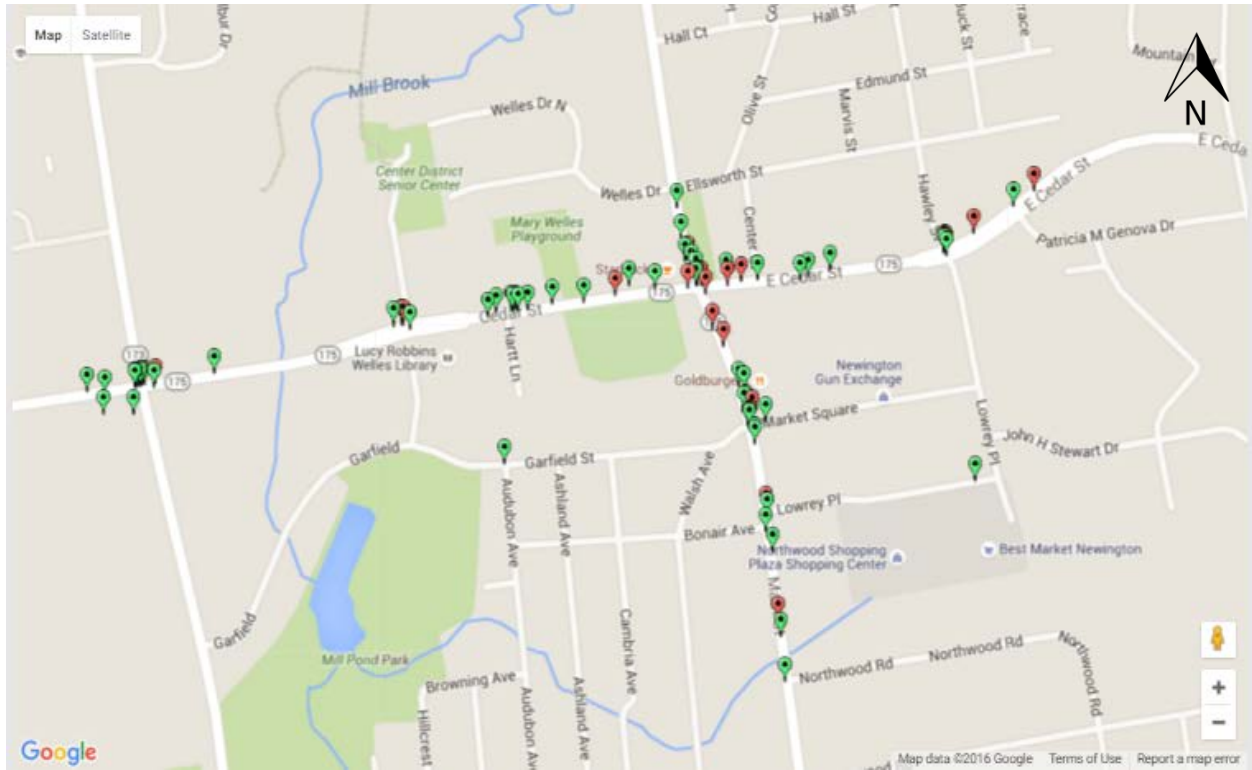


Figure 3. Crashes that Occurred in 2015 (Connecticut Crash Data Repository)

There are five signalized intersections within the study area; they are all in the process of being upgraded by the state with new sidewalk ramps, pedestals, countdown pedestrian signals, and accessible pedestrian signal design. Route 175 has four lanes and all other roads in the corridor have two lanes. Main Street has a short section between Route 175 and Market Square where there are two lanes northbound and one lane southbound. Additional turn lanes are provided at signalized intersections in the study area. There are sidewalks on both sides of Route 175, Market Square, and Main Street. On Constance Leigh Drive there is a sidewalk only on the west side. Along Garfield Street there is sidewalk along the entirety of the north side and on the south side from Cambria Avenue east. There is marked on-street parking on both sides of Market Square and along the northbound side of Main Street. Figure 4 shows the roadway geometrics along the study corridor and Table 3 summaries roadway inventory information.

Newington - Town Center

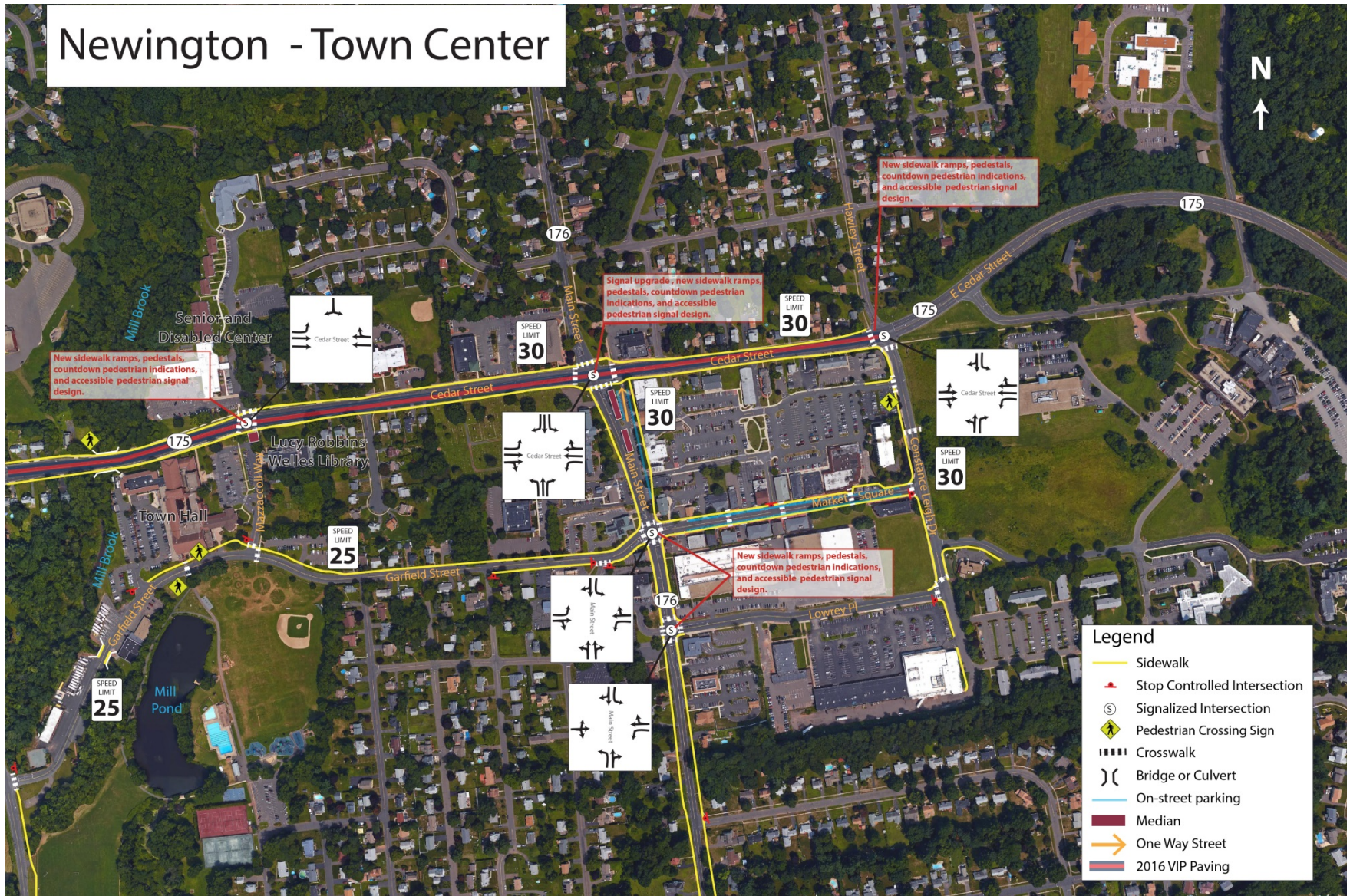


Figure 4. Town Road Geometrics

Newington - Town Center Street Inventory

Road	Lanes	Sidewalk				Curb	Speed	Shoulder	Ramps	
		Side	Type	Width	Condition				Exist	Compliant
Garfield St	1 - 16'	EB	Concrete	5'	Fair	Concrete	25	unstriped	Yes	No
	1 - 18'	WB	None	None	None	None	25	unstriped	N/A	N/A
Route 175	2 - 11' *	EB	Concrete	4'	Fair	Granite	30	1'	Yes	No
	2 - 11' *	WB	Concrete	7'	Fair	Granite	30	1'	Yes	No
Main Street	1 - 16' *	NB	Pavers	5'-12'	Good	Granite	30	unstriped	Yes	Yes
	2 - 13' *	SB	Concrete	5'	Good	Granite	30	unstriped	Yes	Yes
Market Square	1- 12'	EB	Pavers	3'-12'	Good	Granite	25	Parking Stall	Yes	Yes
	1- 12'	WB	Pavers	3'-12'	Good	Granite	25	Parking Stall	Yes	Yes
Constance	1 - 19.5'	NB	Concrete	6'	Fair	Granite	30	unstriped	N/A	N/A
Leigh Dr	1 - 19.5'	SB	None	None	None	Granite	30	unstriped	N/A	N/A

Table 3. Street Inventory

*Measurements are approximate

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.

2.2 Prior Successful Effort

The Town Center has been the subject of an on-going streetscape revitalization program that began in 2003. The improvements include decorative brick pavers for the sidewalks, street furniture such as benches, decorative lighting, and plantings. They are currently in Phase VI of the program to install granite curbing, decorative sidewalks, streetlights, and other amenities along Constance Leigh Drive.

2.3 Pre-Audit Meeting

The RSA was conducted on July 25, 2016. The Pre-Audit meeting was held at 8:30 AM in the Town Hall located at 131 Route 175 in Newington.

The RSA Team was comprised of staff from CTDOT, staff from AECOM, representatives from several Newington departments including Engineering, Department of Public Works, Planning, and the police department, and residents. 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 is in the process of upgrading all signals with accessible pedestrian signal (APS) devices. They are optimizing the timing, installing count down pedestrian heads, tactile warning strips and exclusive pedestrian phases.
- The overall feeling of safety in the Town Center for people who walk and bike has diminished considerably over the past decade, as transportation improvements have focude predominanly on accommodating pass-through, peak hour commuting traffic. Local RSA members recalled the Town Center being a safe destination for community residents, families, visitors, people who work, shoppers, movie goers and for enjoyment.
- There are no bike lanes in Newington.
- Newington does not have a pedestrian/bicycle or complete streets plan. There is a map of all existing cycling areas that has been added to the regional pedestrian and bicyclist plan the Capital Region Council of Governments (CRCOG) is developing.
 - Newington does not have a large bicycle advocacy group that could assist in developing a plan. Any plan that is created must be vetted through the community.
- A multi-use trail was constructed along sections of CTFastrak, including the section through Newington. There is no safe way to access the trail from downtown Newington.
- The town needs a bicycle advisory committee.
- There are several community bike rides which go through Newington.

- Most roads in Newington are not wide enough to accommodate bicycle lanes without widening roads or performing road diets. Route 175 runs east-west through Newington center. The road was designed to move vehicles through town without stopping. A road diet would slow down and possibly decrease pass through/peak hour commuting traffic as it would encourage motorists to stay on the highway, or make use of recently provided transit options, and not cut through the Town.
- There is a concern, and potential benefit, that a road diet along Route 175 would cause motorists passing through town to seek other options as travel time along Route 175 would initially be increased.
- Newington has discussed with CTDOT the possibility of creating complete streets on state highways. Newington has seven state routes. In order to create complete streets the town and state must agree to either narrow the roadway cross-section and increase commute times or widen the roadway and take land. While the town council made it a priority to create complete streets they were not willing to reduce vehicle capacity or take land.
- Road diets require strong political leadership and support from the community. A complete streets plan would need to be vetted through the local community.
- Route 175 is a major east-west connection south of Hartford. It was widened to four lanes when the proposed I-291 beltway project around Hartford was cancelled after the northeast quadrant was constructed.
- Vehicles attempt to avoid the Route 175 and Main Street intersection by cutting through the one way northbound parking area on Main Street, to turn right onto Route 175.
- Route 175 was recently widened from Mill Street Extension west to Willard Avenue.
- Constance Leigh Drive was reconstructed; there was controversy over whether to allow parking. The next phase of construction will add sidewalks on the east side. Currently there are no "No Parking" signs but there are also no pavement markings indicating parking stalls.
- Parking in downtown Newington is ample and free. There is on street parking on Market Square and a municipal lot between Market Square and East Route 175.
- Newington would like a study of origins and destinations on Route 175 to determine where traffic is coming from and going to and if motorists could use alternative routes.
- Merchants could be approached to conduct a coordinated zip code study to determine where people are coming from?
- UConn is conducting a statewide travel study.
- At a recent event the Open Space Committee handed out pamphlets of the walking trails in town. The community responded positively.
- Along Route 175 there is no snow shelf on the south sidewalk between Constance Leigh Drive and a couple of hundred feet west of Main Street. This is an uncomfortable environment for pedestrians who must walk adjacent to faster moving

traffic and heavy vehicles. There is a snow shelf on the north side of Route 175 in the study area and on the south side beginning about mid block at the cemetery and continuing west. Vehicles travel above the posted speed limit of 30 mph on Route 175.

- People avoid crossing the intersection of Route 175/Main Street
- During peak commute hours there is significant queueing at the traffic signals.
- It is difficult to enforce speeds during rush hour due to high volumes.
- Route 175 from Willard Avenue to Constance Leigh Drive is planned for 2016 VIP improvements.
 - The current roadway width is 50 feet with 1 foot shoulders on either side. The VIP paving will restripe all lanes as 11 feet and create wider shoulders.
- Sharrows are used for roadways with low speeds, low traffic volumes and low percentages of truck traffic.
- Wider shoulders would improve safety for cyclists.
- Bicycle accommodations can range from signaavement markings to be bicycle lanes or paths. It is noted that The Complete Streets Act of 2209 (S.584/H.R. 1443) states that streets work for all users (pedestrians, bicyclists. transit, auto). Some meausres, such as pavement markings and signage, may not provide an ultimate solution to acommdoate all users on some roadways and infrastructure imnpromvements may be needed in the long-term.
- The town should determine the type of bicyclist facilities should serve – commuters versus recreational riders.
- A connection should be made from the center to Russell Road via the old highway (which is a discontinued roadway on Cedar Mountain). The town is exploring the feasibility of this connection.
 - There are questions as to whether it is still graded and cleared.
- The town and state should create safe connections for people who walk andbike to the multi-use trail and *CTFastrak*.
- While peak hour commuting traffic will continue to be an issue there is a need to make the center more pedestrian and bicycling friendly and safe. There is a need to focus on the community first and then traffic.
- The town and state should seek to incentivize the use of CTfastrak as an alternative to commuting through town.

3 RSA Assessment

3.1 Field Audit Observations

- The crosswalk across Garfield Street, in front of the Town Hall, is used heavily in the summer by children attending the summer camp crossing between Mill Pond Park and the restrooms at the Town Hall (Figure 5).
 - This crossing has an in street yield crossing sign.
 - This is a mid-block crosswalk.
 - There are no tactile warning strips.
 - The south end of the crosswalk ends in a catch basin.
 - The crosswalk pattern used at this location is the traditional parallel line type.
 - This location would be a candidate for a flashing beacon.
 - There is no sidewalk connection to Mill Pond Falls.

- The signal along Route 175 at the senior center has an exclusive pedestrian phase (Figure 6).
 - The pedestrian signal does not have a count down. It is audible.
 - The travel lanes are 11 feet wide on Route 175 with one foot shoulders.
 - The sidewalks are five feet wide with four foot grass buffers.



Figure 5. Crosswalk in Front of Town Hall



Figure 6. Traffic Signal at the Senior Center

- The crosswalk on the west side of the intersection is diagonal.
- There is significant pedestrian activity at this location. Six pedestrians were observed crossing within a ten minute period during mid-morning.
- There are tactile warning strips on all ramps.
- Mazzaccoli Street used to connect to this intersection but was closed off and plantings added. A paved strip remains to connect the sidewalk on either side. It is not ADA compliant (Figure 7).
- The Stop sign in the library-town hall parking lot is located on the far side of the pedestrian crossing. It should be relocated to the near side.



Figure 7. Mazzaccoli Street Connection to Route 175



Figure 8. Crosswalk Ends in Grass

- The crosswalk across Garfield Street at Mazzaccoli Street does not have a ramp on the south side. It does not connect to any sidewalk and ends in the grass. On the north side the crosswalk is not aligned with the ramp (Figure 8). There are no tactile warning strips or pedestrian crossing signs.
 - This crossing does not have an in street yield crossing sign.
- The crosswalk across Mazzaccoli Street at Garfield Street is not aligned with the ramp on the east side. There are no tactile warning strips.
- In front of Mill Pond Park there is no parking on either side of the road.

- Garfield Street is 34 feet wide. The eastbound lane is 16 feet wide, the westbound is 18 feet.
 - There are no shoulder lines painted on Garfield Street.
 - Utility poles are on the south side (eastbound) of the road.
 - The sidewalk is on the north (westbound) side of the street. It has no buffer/snow shelf or shade east of Mill Pond Park. It is five feet wide and concrete.
 - The curbing is concrete on the north side, and bituminous asphalt on the south side.
 - On-street parking is allowed on both sides of the road west of Mill Pond Park.
 - Garfield Street has a mix of catch basin grate styles, including the non-bicycle friendly style (Figure 9).



Figure 9. Clogged Non-Bicycle Friendly Catch Basin

- A cyclist was observed traveling against traffic on Garfield Street.



Figure 10. Overgrown Tree branch

- Where Garfield Street becomes Walsh Avenue there was a tree branch overgrowing into the sidewalk path (Figure 10).

- The intersection of Walsh Avenue and Main Street has an exclusive pedestrian phase. The pedestrian crossing timing does not appear to be long enough.



Figure 11. Recent Streetscaping on Market Square

- Market Square was recently reconstructed with bulb outs, raised crossings, streetscaping, parking, and wide sidewalks (Figure 11).

- Utility poles are in the middle of the sidewalk in some spots, but due to the large width of the sidewalk there is still the minimum width (3 feet) required to be ADA compliant (Figure 12).
- There are three mid-block crossings on Market Square.
- The sidewalks extend through driveways and provide pedestrians the right of way (Figure 13).
- It can be difficult to see pedestrians in the sidewalk when exiting the municipal parking lot onto Market Square.
- Constance Leigh Drive is a two lane road and has 19.5 foot wide lanes (Figure 14).
 - There are no shoulder lines.
 - There is a mid-block crossing to the CTfastrak bus stop.
 - Currently there is only a sidewalk on the southbound side of the road. There are plans to install sidewalks on the northbound side, and extend the decorative pavers on Market Square to Constance Leigh Drive.
 - The sidewalk is 6 feet wide, concrete with granite curbing.
- The Route 175 (Route 175) and Constance Leigh Drive intersection is a wide intersection (Figure 15).
 - The signal has an exclusive pedestrian phase.



Figure 12. Utility Pole in the Middle of the Sidewalk



Figure 13. Driveway with Crosswalk Giving Pedestrians the Right of Way



Figure 14. Constance Leigh Drive



Figure 15. Intersection of Cedar Street and Constance Leigh Drive

- The outside lanes on Route 175 are wider than the inside.
- There are crosswalks across Constance Leigh Drive and on the west side of East Route 175. The crosswalk across Route 175 is on a diagonal.
- There are no tactile warning strips.
- This signal is currently being upgraded. An ambient audible signal is being installed. The volume of the audible tone will adjust based on the noise levels. This noise level is high due to the high volume and speed of traffic.
- Motorists travel at high speed through this intersection. Vehicles heading west on Route 175 are coming down from Cedar Mountain.
- The sidewalk at this location on the south side is 7 feet wide.
- The intersection is wide with larger turning radii on the southwest and northwest corners (Figure 16). This results in long crosswalks and vehicles turning at high speed.
- Along the south side of Route 175 the sidewalk does not have a grass buffer/snow shelf (Figure 17), and the shoulder is only one foot wide. Traffic travels at high speed along Route 175, providing an uneasy feeling for pedestrians on the sidewalk (Figure 18). Figure 18. Route 175 looking west showing little separation between sidewalk and traffic.



Figure 16. Wide Turning Radius at Route 75/Constance Leigh



Figure 17. Lack of Buffer/Snow Shelf on the South Side of Route 175



Figure 18. Sidewalk on the South Side of Route 175

Riding bicycles on the sidewalk on Route 175 is not currently discouraged. The sidewalk on Route 175 slopes toward the roadway which is an issue for pedestrians.

- There are three driveways into the municipal parking lot on Route 175. The easternmost driveway has been closed off by the property owner (Figure 19); the remaining two are entrances only.
- There are confusing signs at the westernmost driveway entrance to the municipal lot from Route 175. This entrance has a no left turn traffic sign for westbound traffic on the south side of Route 175, but has a Town Center Parking Sign here (Figure 20).
 - The driveway apron for this location is longer than necessary; it extends beyond the width of the driveway to the front of the adjacent business.
- The painted median along Route 175 extends into the intersection with Center Street (Figure 21).
- The intersection of Route 175 and Main Street was recently reconstructed. Countdown pedestrian signal heads, ADA compliant ramps, and tactile warning strips were installed.
 - The crosswalks at this intersection are long.
 - The intersection is wide with larger turning radii on all corners. This results in long crosswalks and vehicles turning at high speed.



Figure 19. Closed off Driveway



Figure 20. Conflicting Signs



Figure 21. Painted Median Extends into Intersection

- Main Street is a three lane road (two northbound, one southbound) between Route 175 and Market Square.
 - The roadway width is 48 feet and no shoulder lines.
 - Are two lanes needed northbound or is the additional lane to accommodate queuing?
 - Could optimizing the timing of the intersection reduce queuing?
- The sidewalk on the east side of Main Street is brick pavers, has streetscaping and is wide.
- There is a need to slow down traffic on Main Street by the parking area (Figure 22).
- Newington does have a blight ordinance that is enforced by the Zoning Department.
- Across Hart Lane at Main Street there are handicap ramps but no tactile warning strips and no crosswalk.

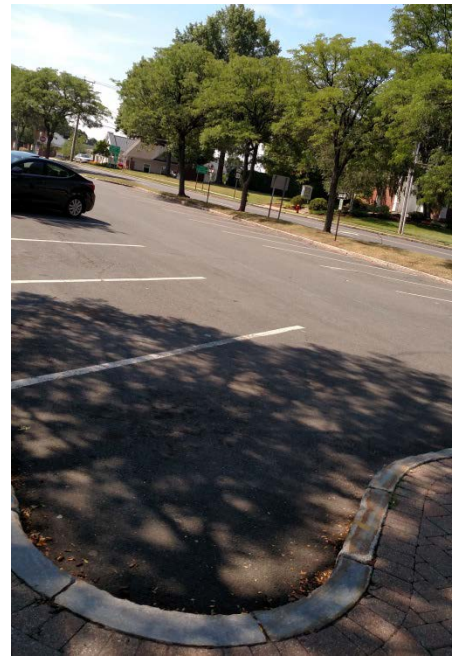


Figure 22. Parking Area Off Main Street Vehicles Use as a Cut Through

3.2 Post Audit Workshop - Key Issues

- Several handicap ramps are missing the tactile warning strips.
- Several crosswalks are not the current zebra or international pattern.
- Narrow lanes; is the cross walk timing adequate?
- Garfield Street is a wide street, the way it is designed encourages motorists to travel at high speeds. The low volumes make it a candidate for sharrows or shoulder line striping to accommodate bicyclists. The sidewalk is only on the north side of the street. On-street parking is allowed on both sides east of the park.
 - There are no shoulder lines on Garfield Street.
- Bicycle signage is needed, either paint sharrows, shoulder lines, or bike lanes on low volume roads or "Bikes May Use Full Lane" signs on higher volume roads.
- Market Square was recently redesigned with traffic calming features. The speed tables have helped reduce speeds. The sidewalks are wide with a decorative brick paver design. There are utility poles in the middle of the sidewalk at some locations,

but since the sidewalk extends to the front of the businesses there is room to maneuver around the poles.

- There was discussion about creating a safe network for non-motorized travelers (people who walk or biketo transit) between Newington Junction Station, Town Center, and Cedar Street Station.
- A streetscape plan exists for Constance Leigh Drive. It would extend the brick pavers and add a sidewalk to the east side. Currently it is only on the west side. A shoulder line will be added. Construction is expected to begin next year.
- The intersection of Constance Leigh Drive and Route 175 has been redesigned several times since the 1970's. The pedestrian amenities, including signal upgrades, new concrete sidewalk and tactile warning strips are being installed.
 - The southwest corner has a large turning radius.
- Route 175 (Route 175) has 7 foot wide sidewalks but no snow shelf on the south side (between Constance Leigh Drive and mid-cemetery). A snow shelf is needed to provide a sense of safety for pedestrians. The sidewalk on the north side has a snow shelf buffer.
- The outside lanes on Route 175 are wider than the inside lanes.
- The stop bars at the Main Street and Route 175 intersection are set back far. The crosswalks across Main Street are long.
- Main Street is three lanes wide in the center. The two northbound lanes are needed for queue storage during peak times at the Route 175 and Market Square intersection and not for traffic capacity.

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 years or more when funding is available.

4.1 Short Term

1. Establish a bicycle advisory committee.
2. Repaint crosswalks with the "Zebra Style" markings to improve visibility (Figure 23).
3. Consider adding a crosswalk across Hartt Lane and tactile warning strips.
4. Relocate the stop sign in the Mazzaccoli Way parking area from its current location to before the crosswalk.
5. Trim overgrown vegetation and limb up low hanging branches.
6. Paint shoulder lines on Garfield Street to create 10 to 11-foot travel lanes and to help reduce speed and provide bicycle accommodation.
7. Add sharrows to Market Square (Figure 24).
8. Cut back the painted median on Route 175 a few feet so that it is not in the intersection with Center Street.
9. Evaluate the feasibility of extending the curb at the southwest corner of the intersection of Route 175 and Constance Leigh and Route 175 and Main Street. Turning radius for trucks needs to be considered.
10. Evaluate the feasibility of extending the curbs at the intersection of Route 175 and Main Street. This would include providing shorter crosswalks and moving the the stop bars closer to the intersection. Turning radius for trucks needs to be considered.
11. Optimize the signal timing at the intersection of Main Street and Route 175.
12. Retime the signal at the intersection of Main Street and Walsh Avenue to meet the current pedestrian crossing minimum standards.
13. Provide pedestrian crossing signs on Garfield at Mazzaccoli Way.
14. Paint shoulder lines on Constance Leigh to help reduce speed and provide bicycle accommodation.



Figure 23. Zebra Style Crosswalk



Figure 24. Example of a Sharrow

Figure 25 displays short term recommendations.



Figure 25. Short Term Recommendations

4.2 Medium Term

1. Increase awareness at the crosswalk on Garfield Street in front of Mill Pond Park by installing an active crossing such as a rapid flashing beacon that is solar powered (Figure 26).
2. Relocate the sidewalk on Route 175 in front of the Newington Center Cemetery to be up against the fence in order to create snow shelf. Move the street signs to the snow shelf area.
3. Improve access management and pedestrian issues along Route 175 to the municipal parking lot by:
 - o Removing conflicting signs,
 - o Reducing driveway apron widths,
 - o Reopening the closed driveway or eliminate the curb cut,
 - o Realigning sidewalk on south side that slopes toward the roadway.
4. Conduct a study on reducing motorized pass-through traffic in town.
5. Create a multi-use trail along the Old Highway.
6. Install one or more raised crosswalks, rumble strips or speed bumps in the parking area on Main Street to slow traffic down.
7. Reduce the turning radius from the parking area on Main Street to Route 175.
8. Create a pedestrian and bicycle plan.
9. Redesign all non-complaint ramps and install tactile warning strips (Figure 27).
10. Replace catch basin grates that are not bicycle friendly with ones that are (Figure 28).
11. Evaluate parking options on Main Street in front of Goldburgers. This should include removing up to four perpendicular spaces and considering reverse angle parking. This will require vehicles to back into the parking stalls instead of backing out into traffic. This may require moderations to the sidewalk bump outs (Figure 29).
12. Restripe travel lanes on Route 175 with 11 foot lanes and increase shoulder width.



Figure 26. Example of Rapid Flashing Beacon



Figure 27. Tactile Warning Strip



Figure 28. Example of Bicycle Friendly Catch Basin



Figure 29. Reverse Angle Parking

13. Apply to CRCOG or pursue alternate funding sources to conduct a road diet study on Route 175.
14. Develop a plan for creating a safe network for non-motorized travelers (people who walk and bike to transit) between Newington Junction Station, Town Center and Cedar Street Station.

Figure 30 displays mid-term recommendations.

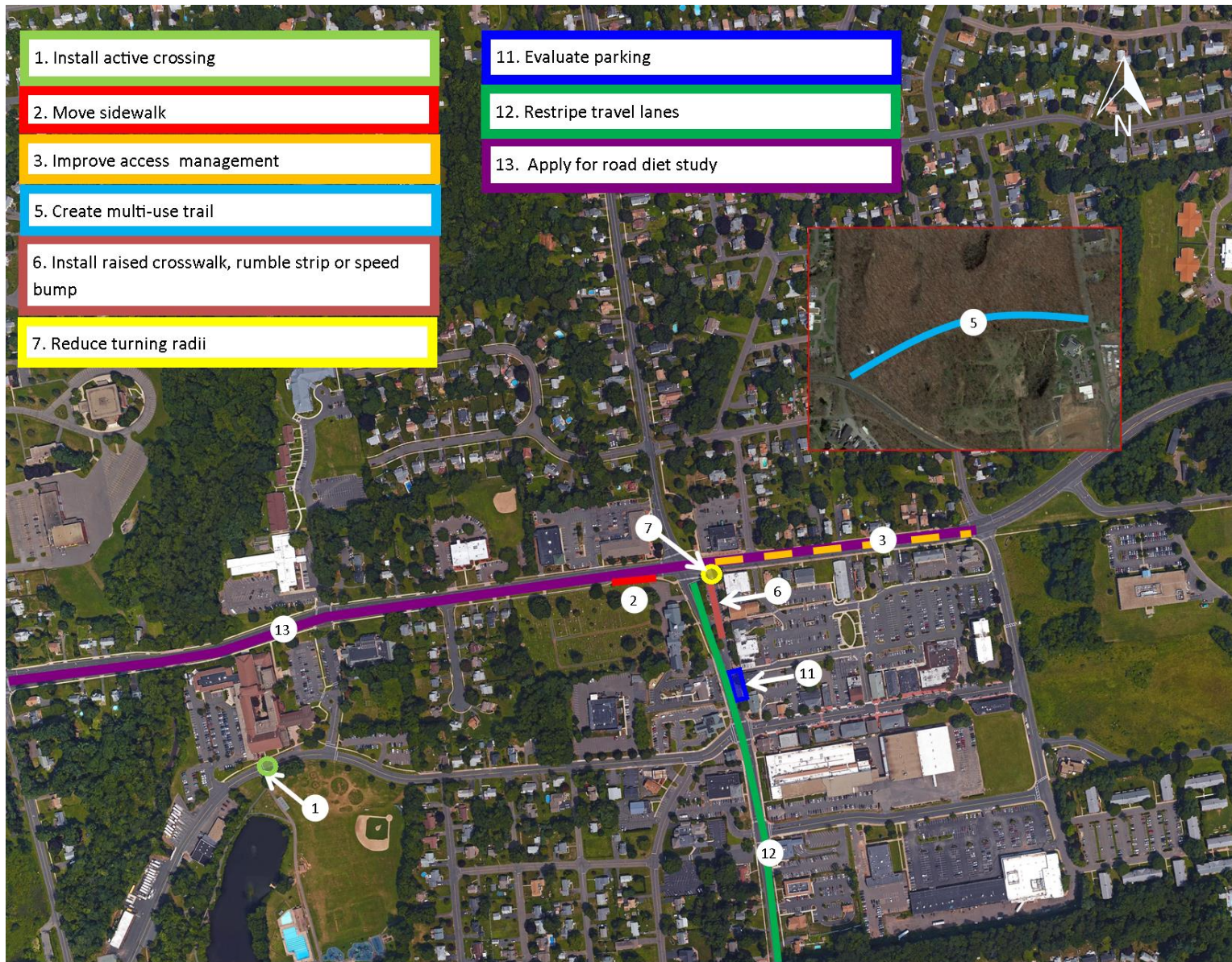


Figure 30. Medium Term Recommendations

4.3 Long Term

1. Redesign Main Street between Route 175 and Market Square to eliminate one northbound travel lane and increase bicycle and pedestrian amenities.
2. Redesign the island/median separating traffic from parking on Main Street so that it is not straight making it difficult for motorists to use as a cut through.
3. Install missing sidewalks on Garfield Street.
4. Create a gateway into town at the East Cedar and Constance Leigh intersection.
5. Evaluate options for creating a buffer on the south side cedar Street between the sidewalk and the roadwayRoute 175.
6. Provide sidewalk connection to Mill Pond Falls along Garfield Street.

Figure 31 displays long term recommendations.



Figure 31. Long Term Recommendations

4.4 Summary

This report documents the observations, discussions and recommendations developed during the successful completion of the Town of Newington RSA. It provides Newington with an outlined strategy to improve the transportation network for all road users in the town center, particularly focusing on pedestrians and cyclists. Moving forward, Newington 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 of the town center.



COMMUNITY
connectivity program

Appendix A



AECOM
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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	<input type="text"/>
Title	<input type="text"/>
Email Address	<input type="text"/>
Telephone Number	<input type="text"/>

2. Location information

Address	<input type="text"/>
Description	<input type="text"/>
City / Town	<input type="text"/>

3. Roadway type
(Please select all that apply)

State road

Local road

Private Road

Other (please specify)

4. Zoning
(Please select all that apply)

Industrial

Residential

Commercial

Mixed Use

Retail

N/A (not applicable)

Other (please specify)

5. Approximate mile radius around the location

Other (Please Specify)

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. Employment Facilities
(Retail, Industrial, etc...)

Yes

No

If Yes please describe (please specify)

8. Educational facilities

(Please select all that apply)

Public, Parochial, Private Schools (more than 1 school within a ½ mile)

University / Community Colleges

N/A (not applicable)

Other (please specify)

9. Transit facilities

(Please select all that apply)

Bus

Rail

Ferry

Airport

Park and Ride Lot

N/A (not applicable)

Other (please specify)

10. Safety Concerns

(Please select all that apply)

Traffic (volumes & speed)

Collisions

Sidewalks

Traffic Signals

Traffic Signs

Parking Restrictions / Additions

Drainage

ADA Accommodations

Agricultural & Live Stock crossing

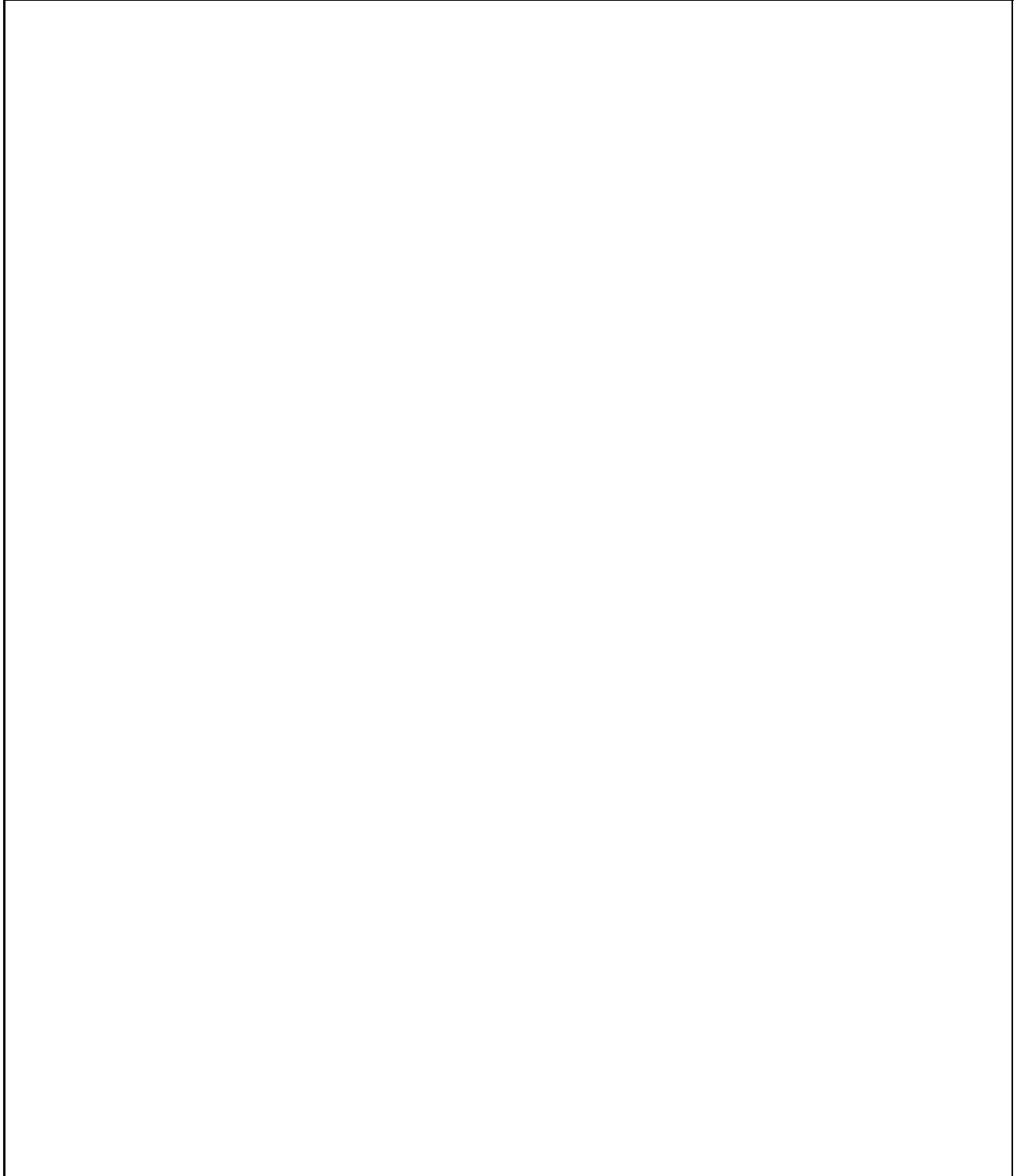
Maintenance issues (cutting grass, leaves, snow removal)

N/A (not applicable)

Other (please specify)

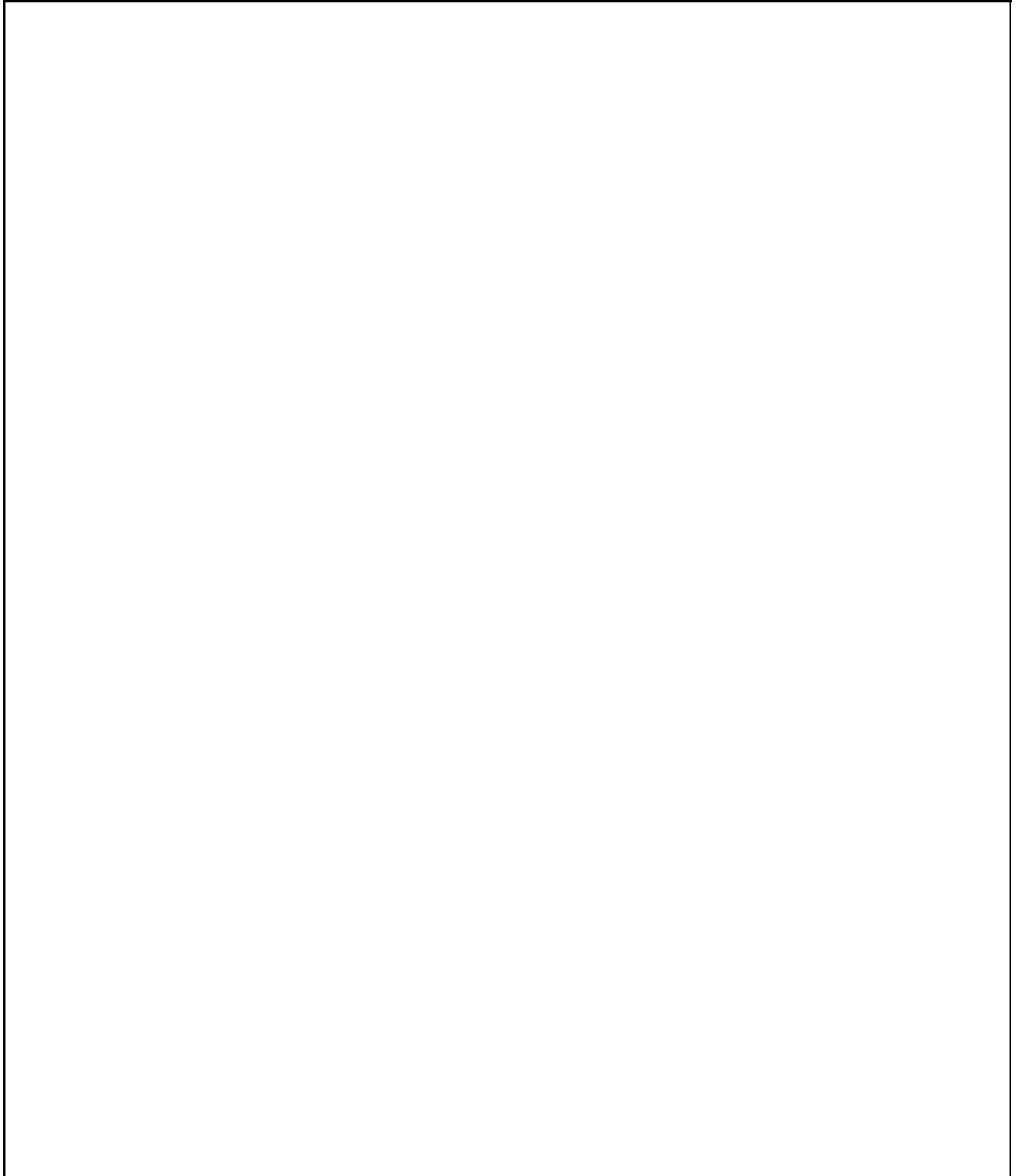
11. Are there any past, current or future transportation/economic development projects near this location (i.e. Federal, State or local projects)?

If Yes please describe and list all projects.

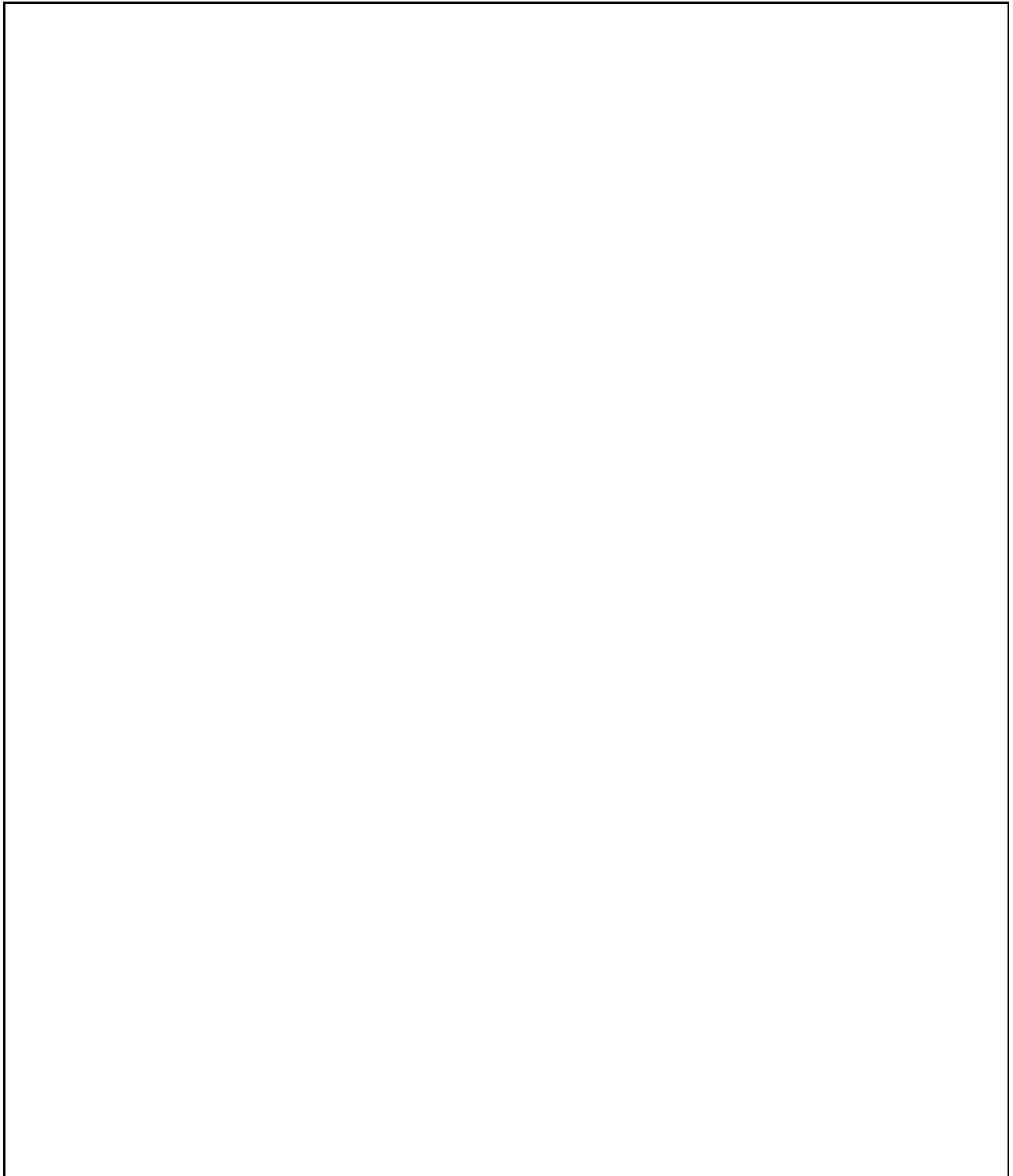
A large, empty rectangular box with a thin black border, intended for the user to describe and list any past, current, or future transportation or economic development projects near the location.

12. Environmental Concerns:

If Yes please describe and list.

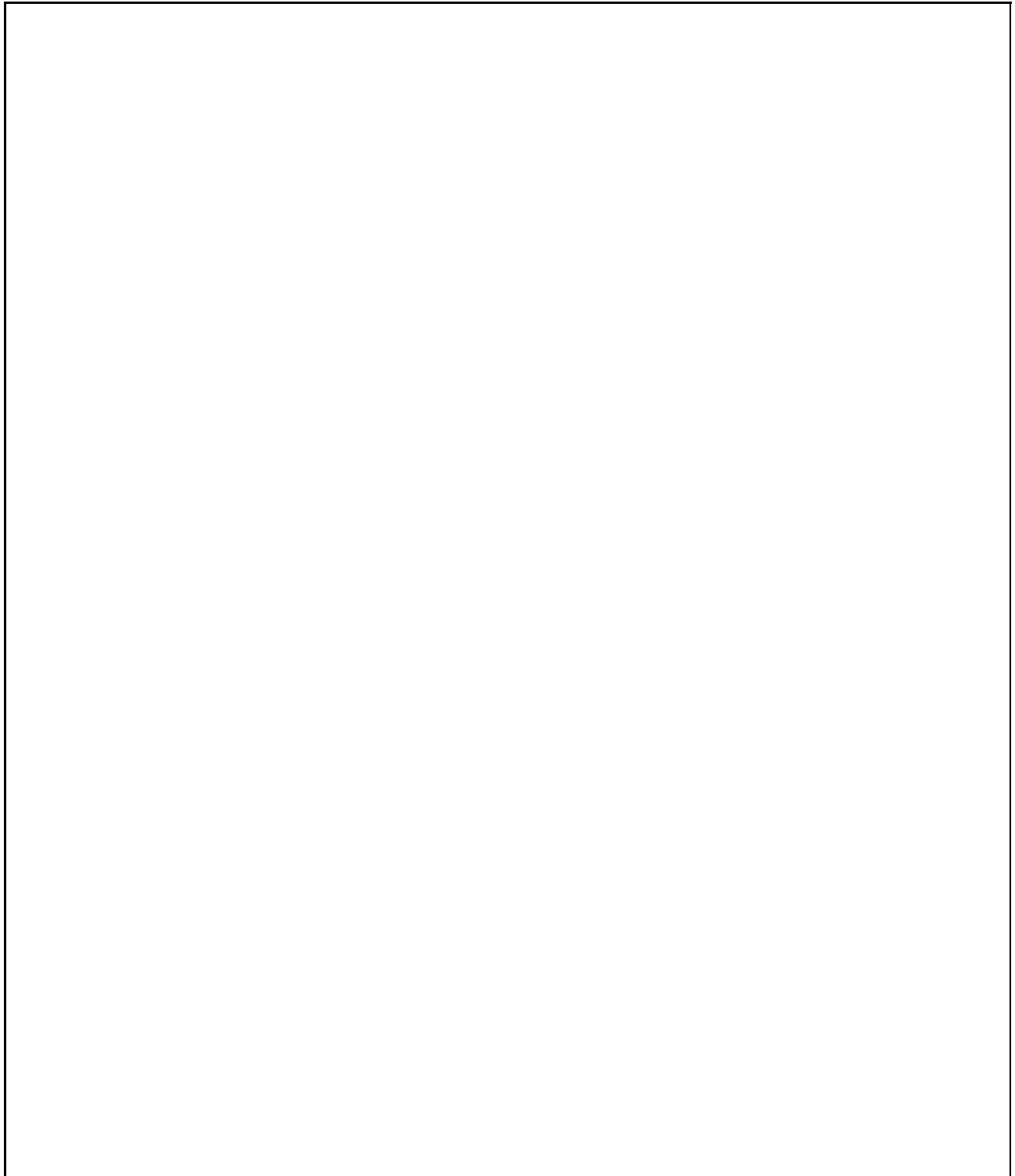
A large, empty rectangular box with a thin black border, intended for the user to describe and list any environmental concerns. The box occupies most of the page's vertical space below the instruction.

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

A large, empty rectangular box with a thin black border, intended for the user to provide an explanation for why a location should be considered for an RSA. The box occupies most of the page's vertical space below the question.

14. Are there plans to expand the area?

(Transportation Oriented Development, Economic Development, housing, etc...)



15. Any other pertinent information that is unique to this location?

A large, empty rectangular box with a thin black border, intended for the user to provide any other pertinent information unique to the location.

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)



COMMUNITY
connectivity program

Appendix B



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Road Safety Audit

Town: Newington
RSA Location: Town Center
Meeting Location: Newington Town Hall, Room L-101
Address: 131 Cedar Street
Date: 7/25/2016
Time: 8:30am

Participating Audit Team Members

Audit Team Member	Agency/Organization
Stanley Sobiesh	TPZ
Craig Minor	Town Planner
Neil Pade	Public
John DiMaria	Tom-Engrg
Michael J Fox	EDC
Gail Budrzjko	Town Council
Mike Morgan	P.D.
A. Brecher	Econ Dev
Chris Greenlaw	Tom-Engrg
Chip Stamm	EDC
Krystal Oldread	Aecom
Jeff M	Aecom



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Appendix C



AECOM
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Road Safety Audit – Newington

Meeting Location: Newington Town Hall, Room L-101
Address: 131 Cedar Street
Date: 7/25/2016
Time: 8:30 AM

Agenda

- Type of Meeting:** Road Safety Audit – Pedestrian Safety
- Attendees:** Invited Participants to Comprise a Multidisciplinary Team
- Please Bring:** Thoughts and Enthusiasm!!
- 8:30 AM** **Welcome and Introductions**
- Purpose and Goals
 - Agenda
- 8:45 AM** **Pre-Audit**
- Definition of Study Area
 - Review Site Specific Data:
 - Average Daily Traffic
 - Crash Data
 - Geometrics
 - Issues
 - Safety Procedures
- 10:00 AM** **Audit**
- Visit Site
 - As a group, identify areas for improvements
- 12:00 PM** **Post-Audit Discussion / Completion of RSA**
- Discussion observations and finalize findings
 - Discuss potential improvements and final recommendations
 - Next Steps
- 2:30 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.



Audit Checklist

Pedestrians and Bicycles	Comment
<p>Pedestrian Crossings</p> <ul style="list-style-type: none">• Sufficient time to cross (signal)• Signage• Pavement Markings• Detectable warning devices (signal)• Adequate sight distance• Wheelchair accessible ramps<ul style="list-style-type: none">○ Grades○ Orientation○ Tactile Warning Strips• Pedestrian refuge at islands• Other	
<p>Pedestrian Facilities</p> <ul style="list-style-type: none">• Sidewalk<ul style="list-style-type: none">○ Width○ Grade○ Materials/Condition○ Drainage○ Buffer• Pedestrian lighting• Pedestrian amenities (benches, trash receptacles)• Other	



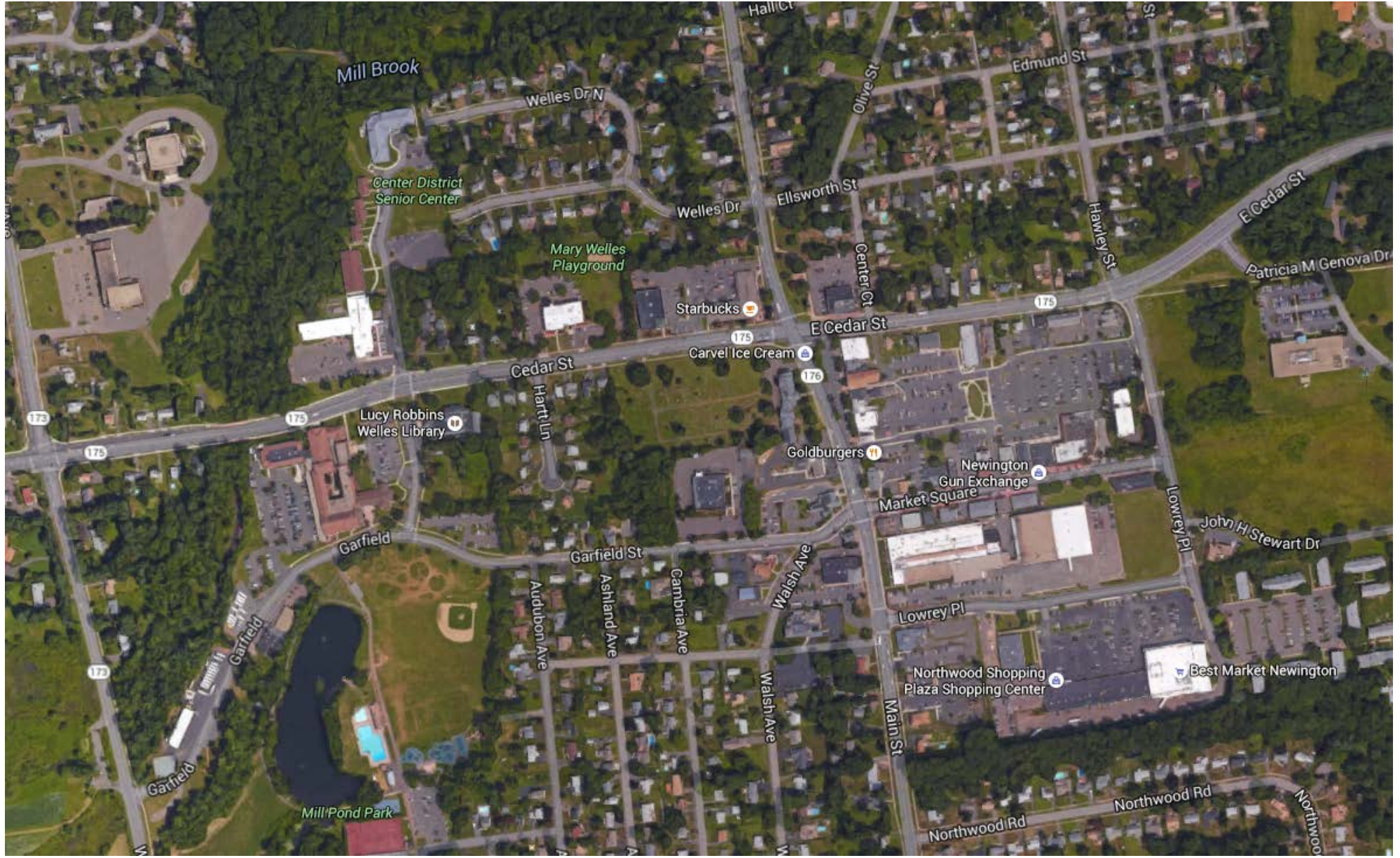
Bicycles <ul style="list-style-type: none">• Bicycle facilities/design• Separation from traffic• Conflicts with on-street parking• Pedestrian Conflicts• Bicycle signal detection• Visibility• Roadway speed limit• Bicycle signage/markings• Shared Lane Width• Shoulder condition/width• Traffic volume• Heavy vehicles• Pavement condition• Other	
--	--

Roadway & Vehicles	
<ul style="list-style-type: none">• Speed-related issues<ul style="list-style-type: none">○ Alignment;○ Driver compliance with speed limits○ Sight distance adequacy○ Safe passing opportunities	
<ul style="list-style-type: none">• Geometry<ul style="list-style-type: none">○ Road width (lanes, shoulders, medians);○ Access points;○ Drainage○ Tapers and lane shifts○ Roadside clear zone /slopes○ Guide rails / protection systems	

<ul style="list-style-type: none">• Intersections<ul style="list-style-type: none">○ Geometrics○ Sight Distance○ Traffic control devices○ Safe storage for turning vehicles○ Capacity Issues	
--	--



<ul style="list-style-type: none">• Pavement<ul style="list-style-type: none">○ Pavement Condition (excessive roughness or rutting, potholes, loose material)○ Edge drop-offs○ Drainage issues• Lighting Adequacy	
<ul style="list-style-type: none">• Signing<ul style="list-style-type: none">• Correct use of signing• Clear Message• Good placement for visibility• Adequate retroreflectivity• Proper support	
<ul style="list-style-type: none">• Signals<ul style="list-style-type: none">○ Proper visibility○ Proper operation○ Efficient operation○ Safe placement of equipment○ Proper sight distance○ Adequate capacity	
<ul style="list-style-type: none">• Pavement Markings<ul style="list-style-type: none">○ Correct and consistent with MUTCD○ Adequate visibility○ Condition○ Edgelines provided	
<ul style="list-style-type: none">• Miscellaneous<ul style="list-style-type: none">○ Weather conditions impact on design features.○ Snow storage	



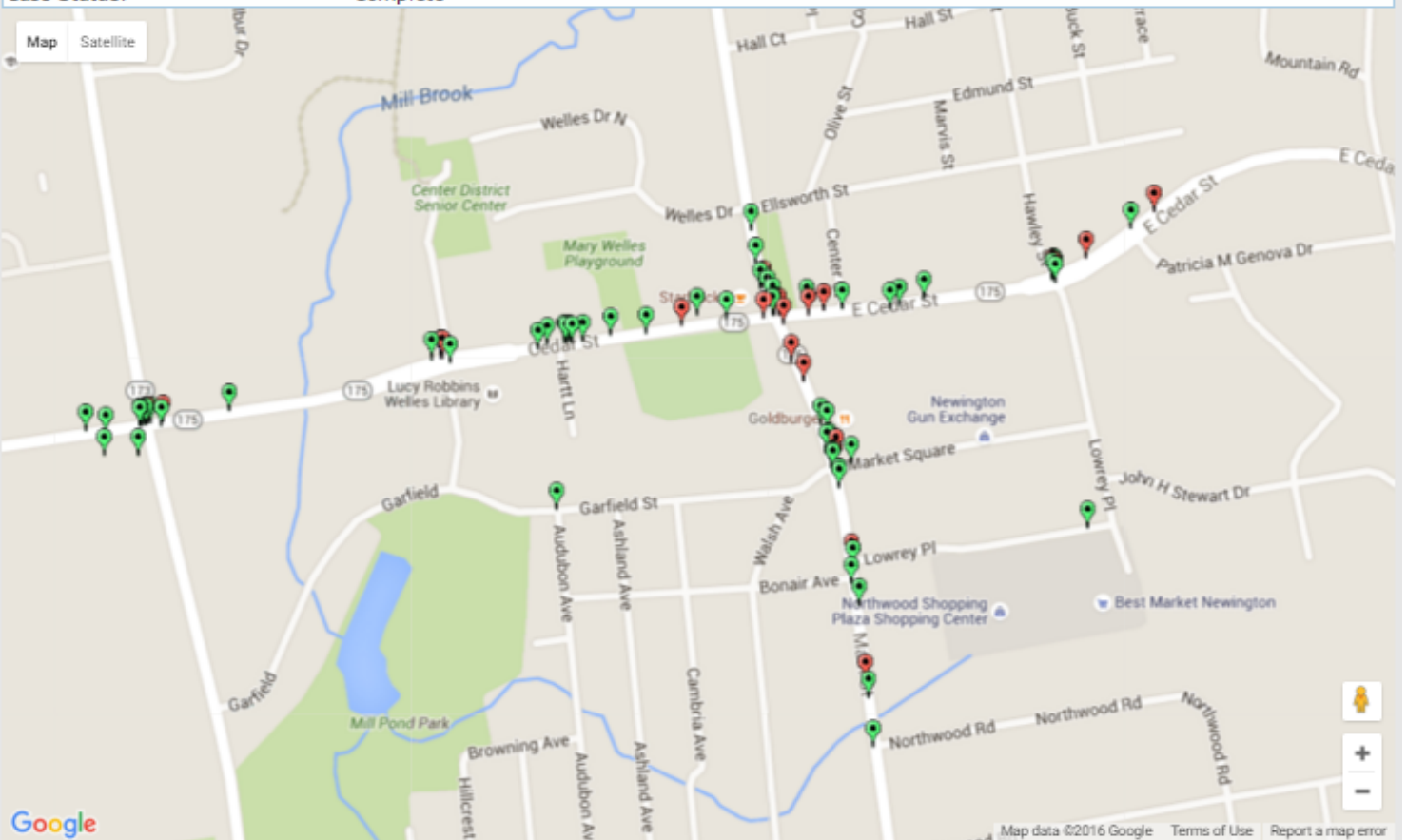
2015 Crashes

UConn

Connecticut Crash Data Repository

Search Criteria:

Dataset: mmucc
Towns: Newington
Town & Route: Town:94 Route:175 Intersection:undefined Milepost:2.25-3.14
Town & Route: Town:94 Route:170 Intersection:undefined Milepost:-
Town & Route: Town:94 Route:109 Intersection:undefined Milepost:-
Town & Route: Town:94 Route:176 Intersection:undefined Milepost:1.6-2.1
Town & Route: Town:94 Route:294 Intersection:undefined Milepost:-
Crash Severity: Injury of any type (Serious, Minor, Possible), Fatal (Kill), Property Damage Only
Case Status: Complete



Map data ©2016 Google Terms of Use Report a map error

[Markers](#) [Heatmap](#) [Select & Query](#)

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

[Select All](#) [Deselect All](#)

[Query Selection](#)

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 – Newington

Crash Summary

Data: 3 years (2012-2014)

One crash involved a pedestrian and resulted in an injury.

One crash involved a cyclist and resulted in property damage only.

Severity Type	Number of Crashes	
Property Damage Only	216	79%
Injury (No fatality)	57	21%
Fatality	0	0%
Total	273	

Manner of Crash / Collision Impact	Number of Crashes	
Unknown	1	0%
Sideswipe-Same Direction	41	15%
Rear-end	142	52%
Turning-Intersecting Paths	22	8%
Turning-Opposite Direction	18	7%
Fixed Object	11	4%
Backing	10	4%
Angle	9	3%
Turning-Same Direction	9	3%
Moving Object	4	1%
Parking	1	0%
Pedestrian	1	0%
Overturn	1	0%
Head-on	0	0%
Sideswipe-Opposite Direction	2	1%
Miscellaneous- Non Collision	1	0%
Total	273	



Weather Condition	Number of Crashes	
Snow	7	3%
Rain	39	14%
No Adverse Condition	223	82%
Unknown	2	1%
Blowing Sand, Soil, Dirt or Snow	0	0%
Other	1	0%
Severe Crosswinds	0	0%
Sleet, Hail	1	0%
Total	273	

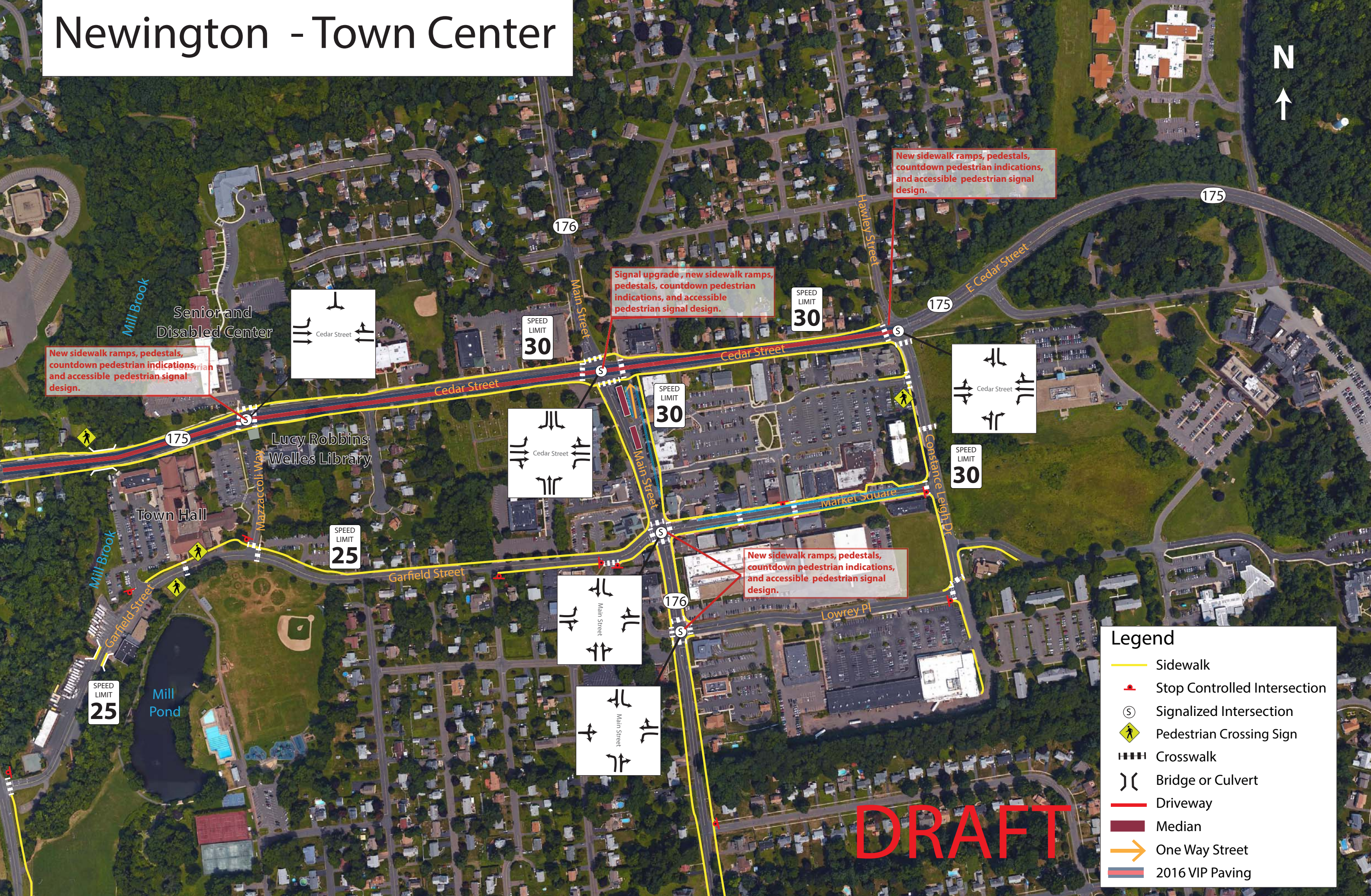
Light Condition	Number of Crashes	
Dark-Not Lighted	3	1%
Dark-Lighted	35	13%
Daylight	230	84%
Dusk	1	0%
Unknown	2	1%
Dawn	2	1%
Total	273	

Road Surface Condition	Number of Crashes	
Snow/Slush	8	3%
Wet	50	18%
Dry	212	78%
Unknown	1	0%
Ice	2	1%
Other	0	0%
Total	273	



Time		Number of Crashes	
0:00	0:59	0	0%
1:00	1:59	0	0%
2:00	2:59	2	1%
3:00	3:59	2	1%
4:00	4:59	1	0%
5:00	5:59	1	0%
6:00	6:59	3	1%
7:00	7:59	14	5%
8:00	8:59	22	8%
9:00	9:59	15	5%
10:00	10:59	16	6%
11:00	11:59	14	5%
12:00	12:59	21	8%
13:00	13:59	25	9%
14:00	14:59	21	8%
15:00	15:59	19	7%
16:00	16:59	24	9%
17:00	17:59	29	11%
18:00	18:59	22	8%
19:00	19:59	8	3%
20:00	20:59	7	3%
21:00	21:59	3	1%
22:00	22:59	4	1%
23:00	23:59	0	0%
Total		273	

Newington - Town Center



New sidewalk ramps, pedestals, countdown pedestrian indications, and accessible pedestrian signal design.

Signal upgrade, new sidewalk ramps, pedestals, countdown pedestrian indications, and accessible pedestrian signal design.

New sidewalk ramps, pedestals, countdown pedestrian indications, and accessible pedestrian signal design.

New sidewalk ramps, pedestals, countdown pedestrian indications, and accessible pedestrian signal design.

Legend

- Sidewalk
- Stop Controlled Intersection
- Signalized Intersection
- Pedestrian Crossing Sign
- Crosswalk
- Bridge or Culvert
- Driveway
- Median
- One Way Street
- 2016 VIP Paving

DRAFT



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 – Newington

Fact Sheet

Functional Classification:

- Main Street (Route 176) is classified as a Minor Arterial
- Cedar Street/East Cedar Street is classified as a Minor Arterial
- The following are classified as
 - Market Square
 - Constance Leigh Drive
 - Lowrey Place
 - Garfield Street

ADT

- ADT along Cedar Street spans between 23,500 and 28,000 in the Town Center area
- ADT along Main Street spans between 11,900 and 14,600 in the Town Center area
- ADT on Market Square is 1,900
- ADT on Garfield Street is 3,500
-

Population and Employment Data (2014):

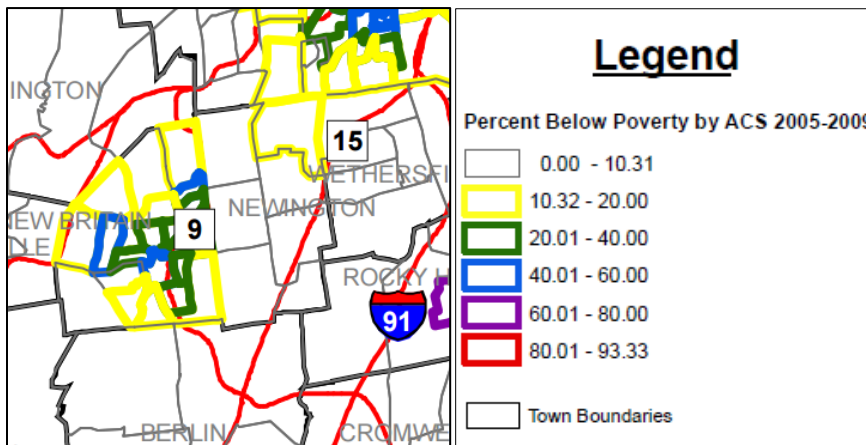
- Population: 30,652
- Employment: 17,604

Urbanized Area

- This area is located within the Hartford Urbanized Area

Demographics

- The statewide average percentage below the poverty line is 10.31%. Within the vicinity of this RSA area up to 20% of residents are below the state's poverty level.



- The statewide average percentage minority population is 30.53%. There are no areas in Newington exceeding the state's average.

Air Quality

- Newington's CIPP number 219
- Newington is within the Greater CT Marginal Ozone Area
- Newington is within a CO Attainment Area