



COMMUNITY
connectivity program

Tolland

Old Post Road & Tolland Stage Road (Route 74)

– Road Safety Audit

August 16, 2016



AECOM

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Acknowledgements:

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

With assistance from AECOM Transportation Planning Group

Contents

1	Introduction to the Tolland (Old Post Road and Route 74) RSA.....	5
1.1	Location	5
2	Pre-Audit Assessment	7
2.1	Pre-Audit Information.....	7
2.2	Prior Successful Efforts.....	11
2.3	Pre-Audit Meeting	11
3	RSA Assessment.....	12
3.1	Field Audit Observations	12
3.2	Post-Audit Workshop - Key Issues.....	14
4	Recommendations	16
4.1	Short Term	16
4.2	Medium Term	19
4.3	Long Term.....	21
4.4	Summary.....	21

Figures

Figure 1.	Tolland Stage Road (Route 74 and Old Post Road, Tolland.....	6
Figure 2.	Route 74 and Old Post Road Regional Context	6
Figure 3.	Crashes that Occurred in 2015 (Connecticut Crash Data Repository)	8
Figure 4.	Old Post Road/Tolland Stage Road Geometrics	9
Figure 5.	Intersection of Old Post Road and Tolland Green	12
Figure 6.	Old Post Road.....	12
Figure 7.	Old Catch Basin Sunk In.....	12
Figure 8.	Rutting on Old Post Road	13
Figure 9.	Wide Shoulders on Route 74	13
Figure 10.	Cars Parked in the Shoulder	13
Figure 11.	Culvert Without Protection	13
Figure 12.	Loose Guard Rail.....	14
Figure 13.	Poor Pavement Quality of Old Cathole Road	14
Figure 14.	Narrow Curvy Road (Old Post Road)	14
Figure 15.	Deteriorating Condition of Old Post Road	15
Figure 16.	Cyclist in Shoulder on Route 74	15
Figure 17.	Stop Bar At Old Cathole Road Set Back Far	15

Figure 18. Bicycles May Use Full Lane Sign	17
Figure 19. Fix Broken Guard Rail	17
Figure 20. Evaluate Stop Bar Location.....	17
Figure 21. Relocate Pedestrian Crossing Sign	17
Figure 22. Short Term Recommendations	18
Figure 23. Install Guard Rail	19
Figure 24. Advanced Warning Pedestrian Crossing	19
Figure 25. Bike Friendly Catch Basin Grate	19
Figure 26. Example of Shoulders Painted to Stand Out.....	19
Figure 27. ADA Push Button	19
Figure 28. Tactile Warning Strip.....	19
Figure 29. Mid Term Recommendations	20
Figure 30. Long Term Recommendations	21

Tables

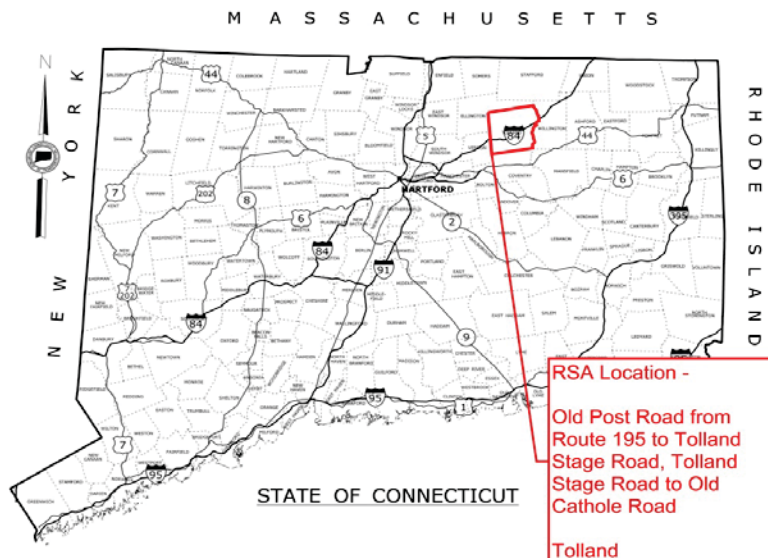
Table 1. Crash Severity 2012-2014	7
Table 2. Crash Type 2012-2014	7
Table 3. Street Inventory	10



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 the Tolland (Old Post Road and Route 74) RSA

The Town of Tolland submitted an application to complete an RSA along Old Post Road and Route 74 from Route 195 to Old Cathole Road to improve safety for pedestrians and bicyclists. These corridors connect the Village Center Zone on the western end with the middle and high schools on the eastern end. Zoning regulations designated the "Town Center Pathway" with a goal to "to provide an alternative transportation mode in the form of a pathway for non-motorized traffic, which will link the Municipal Building, Tolland Green, Town schools, Crandall Park, commercial areas, the Post Office, Senior Housing, the Senior Center and other areas in the Town Center." Old Post Road and this section of Route 74 are the only areas within the "Town Center Pathway" that have not been evaluated for bicycle and pedestrian improvements. Additionally the High School track team runs along Route 74 up to four days a week and any improvements to walkability would have an immediate benefit to the students.

The Tolland application contained information on traffic volumes, crash data, and mapping of the intersection. The application and supporting documentation are included in Appendix A.

1.1 Location

The RSA corridor includes Old Post Road from Route 195 to Route 74 (Tolland Stage Road) and Route 74 from Old Cathole Road to Route 195 (Figure 1). Route 74 is classified as a collector road and Old Post Road is a local road. The Route 74 Average Daily Traffic (ADT) just before the Tolland Green intersection is 2,000 vehicles per day (vpd), before the Old Post Road is 3,100 vpd and just east of Old Cathole Road is 2,400 vpd. While there are no ADT counts available for Old Post Road, the counts for Route 74 indicate that about 1/3 of the vehicles on Route 74 turn onto Old Post Road. These are not significant volumes of traffic for the corridor to process. Figure 2 shows the regional context of the study area.

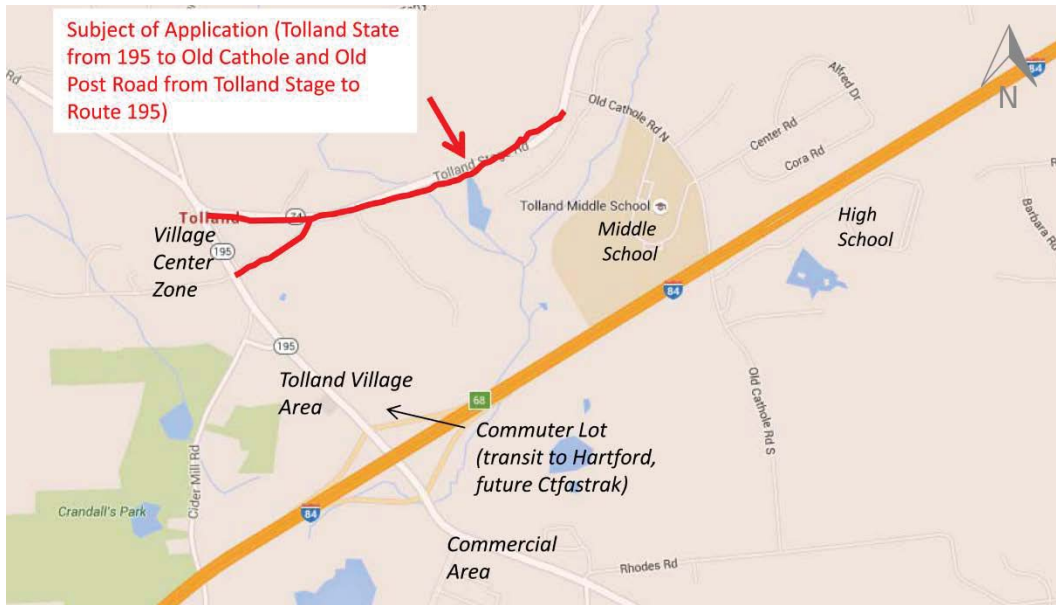


Figure 1. Tolland Stage Road (Route 74 and Old Post Road, Tolland)

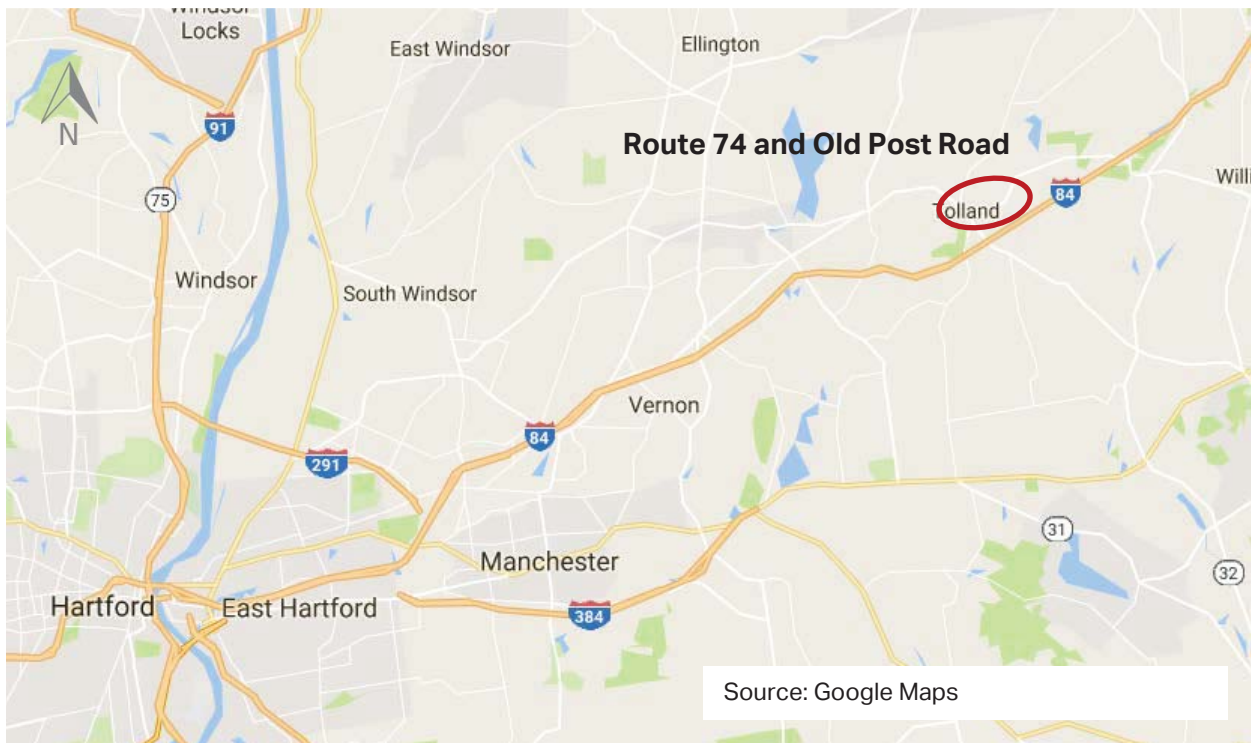


Figure 2. Route 74 and Old Post Road Regional Context

2 Pre-Audit Assessment

2.1 Pre-Audit Information

Between 2012 and 2014 there were 18 crashes in the RSA Area. The majority of crashes (78%) reported in this area resulted in property damage only; however 21% of crashes did result in an injury (Table 1). No crashes involved pedestrians or bicyclists. The crash types reported were primarily rear-end collisions, turning-intersecting paths, and fixed objects. Figure 3 displays crashed that occurred in this area during 2015. The crash history for year 2015 shows that they are clustered around intersections.

Severity Type	Number of Accidents	
Property Damage Only	14	78%
Injury (No fatality)	4	22%
Fatality	0	0%
Total	18	

Table 1. Crash Severity 2012-2014

Source: UConn Connecticut Crash Data Repository

Manner of Crash / Collision Impact	Number of Accidents	
Unknown	0	0%
Sideswipe-Same Direction	1	6%
Rear-end	6	33%
Turning-Intersecting Paths	4	22%
Turning-Opposite Direction	2	11%
Fixed Object	3	17%
Backing	0	0%
Angle	2	11%
Turning-Same Direction	0	0%
Moving Object	0	0%
Parking	0	0%
Pedestrian	0	0%
Overturn	0	0%
Head-on	0	0%
Sideswipe-Opposite Direction	0	0%
Miscellaneous- Non Collision	0	0%
Total	18	

Table 2. Crash Type 2012-2014

Source: UConn Connecticut Crash Data Repository

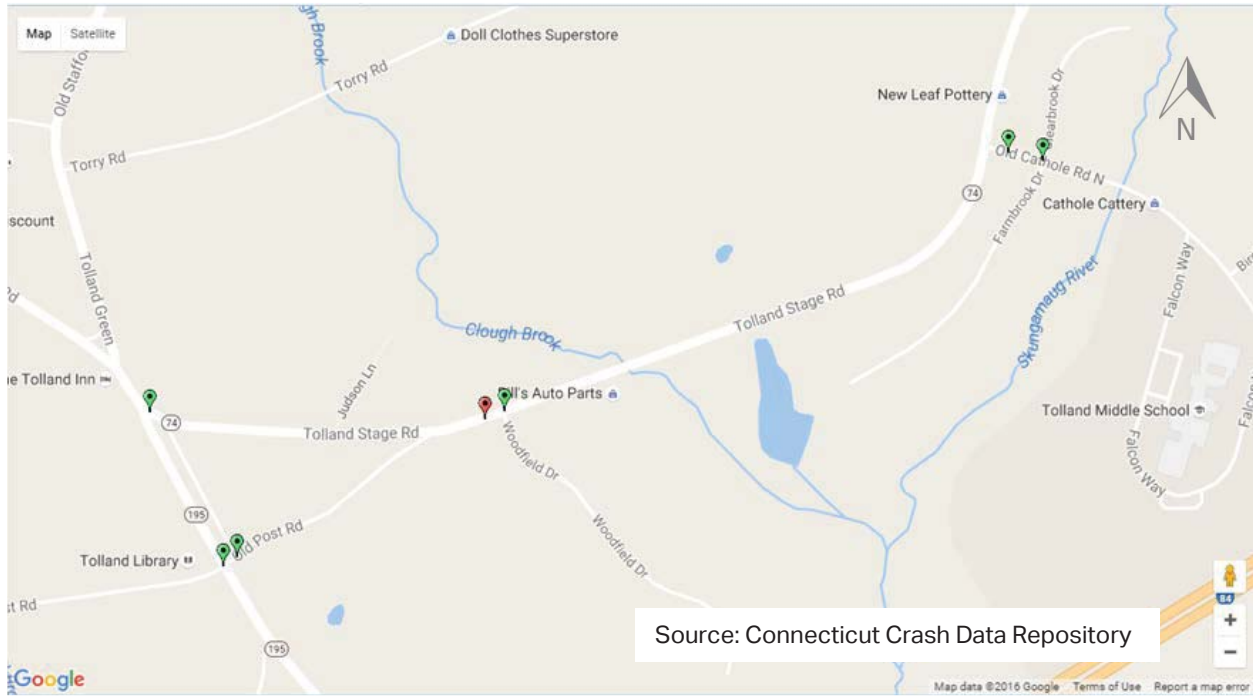


Figure 3. Crashes that Occurred in 2015 (Connecticut Crash Data Repository)

Old Post Road is a two lane, town owned road that is approximately 1,200 feet long. It is narrow and has no painted shoulder or sidewalk (Figure 4). Route 74 is state owned road and in the RSA area covers approximately 0.90 miles. There is a limited section of concrete sidewalk on the westbound side of Route 74 between Tolland Green and Old Post Village. There are three crosswalks in the RSA Area. One crosses Route 74 at Tolland Green, a midblock crosses Route 195 in front of the Green and the third is at the signalized intersection of Old Post Road and Route 195/Tolland Green on the northern side of Route 195. The signal has one lane in each direction on the approach.

Table 3 is a summary of the roadway conditions throughout the RSA area.

Tolland - RSA Street Inventory

Road	Width	Sidewalk				Curb	Parking	Shoulder	Ramps	
		Side	Type	Width	Condition				Exist	Compliant
Tolland Stage Rd (Route 74)	11'-13'	EB	No	N/A	N/A	No	No	N/A	N/A	N/A
	10'-13'	WB	No	N/A	N/A	No	No	N/A	N/A	N/A
Old Post Road	11'	EB	No	N/A	N/A	Asphalt	No	3'-9'	N/A	N/A
	11'	WB	No	N/A	N/A	No	No	5'-13'	Yes	No

*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 Efforts

A number of best practices have already been applied to this corridor. Tolland and CTDOT are currently redesigning the Tolland Green/Route 195 and Route 74 intersections in order to square up intersections, add sidewalk and improve connections (Appendix D). The project will eliminate the present skew at the Route 74/195 and Route 74/Tolland Green intersections, add crosswalks and ramps, relocate the mid-block crosswalk in front of the United Congressional Church, and add missing sidewalk segments on Route 74. Along Route 74 Tolland has implemented several successful efforts, including recent repaving that included narrowing the lane widths to 11 feet to create wider shoulders, installing center line rumble strips, and using retroreflective epoxy resin paint for the shoulders.

2.3 Pre-Audit Meeting

The RSA was conducted on August 16, 2016. The Pre-Audit meeting was held at 8:30 AM in the 6th Floor Council Chambers located at 21 Tolland Green in Tolland.

The RSA Team was comprised of staff from CTDOT and AECOM, and representatives from several Tolland departments and organizations including the Historic District Commission, Police Department, Tolland Schools, and the Planning Department. The complete list of attendees can be found in Appendix B. Materials distributed to the RSA Team, including the agenda, audit checklist, ADT counts, crash data and road geometrics, can be found in Appendix C.

RSA Team members from Tolland presented relevant information for the audit, including:

- The study corridor is Route 74 between Route 195 and Old Cathole Road and Old Post Road.
- The planning and zoning long term goal for Tolland is to create a network of walkways that form a loop from Route 74 to Old Cathole Road, Rhodes Road and Route 195,
- There are community concerns that sidewalks would change the character of the community away from rural. Any new construction would need to balance the rural nature of the community with the needs.
- Tolland is trying to accommodate more bicyclists and pedestrian activity and must think about how to address non-motorized traffic.
- The community wants to be able to walk places, especially the younger generations and in order to attract more people to move to the community this must be accounted for.
- Bike racks at destinations are needed.
- The high school athletic teams run along this corridor. The schools teach the students how to run safely and obey traffic laws. If a sidewalk was present they would use it.

- The shoulders are wide on Route 74 by Old Cathole Road.
- A Trail system through the wooded areas is a concern (UConn had issues with trails) regarding safety and provision of lighting and security against predators in secluded areas.
- Along Old Cathole Road a boy was hit by a car and hurt when he fell off the sidewalk.
- There is no sidewalk from Route 74 to connect to the Middle School, but there is sidewalk after the bridge for I-84.
- Tolland has applied for grant to put sidewalks by the tennis courts to help close the gaps.
- A connection should be made between the schools and library.
- There are children who bike to school.

3 RSA Assessment

3.1 Field Audit Observations

- The signal at the intersection of Old Post Road and Tolland Green has an exclusive pedestrian phase. There is a crosswalk across the northern side of Route 195 and the pedestrian signal heads are countdown. There appears to be insufficient time to cross. The ramps do not have tactile warning strips. (Figure 5).
- Old Post Road has no shoulders and has 10 foot wide lanes at the western end and 13 foot wide lanes at the eastern end. The side slopes are steep and the road is curvy and has a steep grade. Any widening would require retaining walls. (Figure 6).
- It is difficult to see the signal when approaching from Old Post Road.
- The utility poles on Old Post Road are on the westbound side, there is an old farm rock wall on the eastbound side.
- There is an old catch basin just off the roadway that has sunken in and has been partially filled in (Figure 7).



Figure 5. Intersection of Old Post Road and Tolland Green

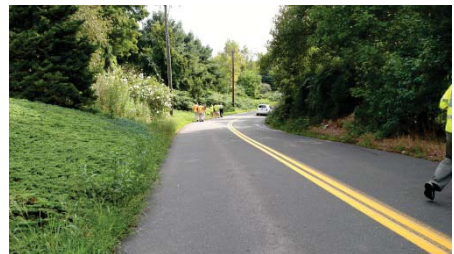


Figure 6. Old Post Road



Figure 7. Old Catch Basin Sunk In

- There is a mixture of bicycle friendly and non-friendly catch basin grates.
- There is a driveway curb cut and vacant lot on Old Post Road.
- The eastern end of Old Post Road has severe rutting, and the pavement has begun to break up (Figure 8).
- There is no posted speed limit on Old Post Road.
- Route 74 (Tolland Stage Road) pavement is in good condition and has centerline rumble strips. The shoulders are five feet wide on both sides with 11 foot wide lanes (Figure 9). Towards Old Cathole Road the road begins to widen and the shoulders increase to between 9 and 13 feet wide. The lane striping paint is reflective epoxy paint.
- The utilities on Route 74 are on the eastbound side until Bill's Auto where they transition to the westbound side.
- There are several passing zones along the corridor on Route 74. One of the passing zones, in front of Bill's Auto, creates a pinch point due to vehicles parking in the shoulder on the opposite side of the road and a culvert crossing with guide rail (Figure 10).
- Heading eastbound the speed limit is 45 mph.
- There are two culvert crossings on Route 74 that do not have guide rail. One crossing is where the utilities transition from the north to the south side of the road, the other is approximately 300 feet east. (Figure 11).
- Three bicyclists were observed on Route 74.
- There is no crosswalk across Woodfield Drive.



Figure 8. Rutting on Old Post Road



Figure 9. Wide Shoulders on Route 74



Figure 10. Cars Parked in the Shoulder

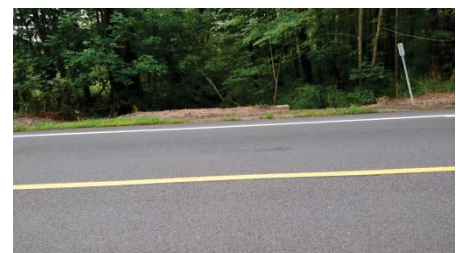


Figure 11. Culvert Without Protection

- Intersections are lighted but there is no street lighting elsewhere.
- The stop sign at Old Cathole Road is set back (approximately 30 feet) from the intersection.
- The guard rail on the northeast corner of the Route 74 and Old Cathole Road intersection is loose (Figure 12).
- There is no sidewalk on Old Cathole Road. A sidewalk would best be situated on the southbound side.
- Old Cathole Road is need of repaving (Figure 13).

3.2 Post-Audit Workshop - Key Issues

- Tolland is a rural community and is very concerned about keeping its rural character and view sheds. The town has submitted a proposal to the state to designate segments of Route 74 (Tolland Stage Road) as a scenic road.
- Old Post Road is a town owned curvy narrow road, and has no shoulder. There is poor sight distance at the curves. It is difficult to see vehicles coming around the curve, especially with the location of a stone wall.
- There are no sidewalks on Old Post Road.
- There are no speed limit signs on Old Post Road.
- There is no room to put a sidewalk in on Old Post Road without widening the cross-section or converting the road to one-way traffic. The narrow and steep side slopes would require a retaining wall if widened. It could also require right-of-way acquisitions and this could be a challenge with the Arts Building on the corner of



Figure 12. Loose Guard Rail



Figure 13. Poor Pavement Quality of Old Cathole Road



Figure 14. Narrow Curvy Road (Old Post Road)

Old Post Road and Route 195, which is close to the road with steep side grades. (Figure 14).

- Old Post Road is used as a bypass for trucks. The Local Traffic Authority can post it as “No Through Trucks” but there are enforcement issues due to the State’s definition of “through” traffic.
- There is rutting on Old Post Road due to drainage issues.
- Several of the catch basins on Old Post Road are filled. This may be contributing to the drainage issues but it is unclear if they are active catch basins or should be converted to manholes.
- Old Post Road is beginning to crack (Figure 15).
- Where Old Post Road intersects Route 74, there is poor sight distance. Vehicles traveling west on Route 74 turning onto Old Post Road often take the turn at high speed due to the roadway geometry.
- Route 74 was recently paved and there are 5 foot shoulders. The wide shoulders provide a place for pedestrians to run and walk and for cyclists (Figure 16).
- There are several culverts within the clear zone on the Route 74 but most do not have guide rails.
- The town would like to see sidewalks along Route 74 so that students can safely walk from the schools to the library.
- The sight distances at the Old Cathole Road intersection with Route 74 appear to be adequate.
- The stop bar and stop sign on Old Cathole Road are set back far from the intersection with Route 74. This has caused some difficulty with the turning radius of the school buses. (Figure 17).



Figure 15. Deteriorating Condition of Old Post Road



Figure 16. Cyclist in Shoulder on Route 74



Figure 17. Stop Bar At Old Cathole Road Set Back Far

- More parents would let their children walk to school if they felt it was safer and had sidewalks.
- There is no lighting along the corridor. Lighting is only located at intersections.
- Speed is an issue on Route 74 from between the town green and Old Post Road.

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. Install a speed limit sign on Old Post Road.
2. Install "Bicycles May Use Full Lane" advisory signs on Old Post Road and Route 74 (Figure 18).
3. Determine if the clogged catch basins on Old Post Road need to be cleared out or are unused and should be removed or converted to manholes.
4. The town could consider installing yield lines and the corresponding "Yield Here to Pedestrians" sign in advance of the crosswalk. Refer to Figure 3B-17 in the MUTCD.
5. Apply to OSTA to establish no passing zones in front of Bills Auto due to the sight distances and limited shoulder.
6. Create a sidewalk/pathways plan for the community.
7. Establish an educational program for the schools to further educate students on proper crossing and biking.

8. Fix the broken guide rail at the Old Cathole Road and Route 74 intersection (Figure 19).
9. Evaluate the stop bar location on Old Cathole Road (Figure 20).
10. Town to coordinate with CTDOT to conduct a lighting study/evaluation along the corridor.
11. Use active speed detection signs along Route 74 to assist in decreasing speeds.
12. Upgrade pedestrian crossing signs to be retroreflective.
13. Relocate pedestrian crossing signs for the crosswalk at Route 74 and Tolland Green to be in the correct locations by the crosswalk (Figure 21).
14. Retime the pedestrian signal phase for the Route 74 and Old Post Road intersection to meet current standards.
15. Install bike racks at key destination.

Figure 22 depicts these recommendations.



Figure 18. Bicycles May Use Full Lane Sign



Figure 19. Fix Broken Guard Rail



Figure 20. Evaluate Stop Bar Location



Figure 21. Relocate Pedestrian Crossing Sign

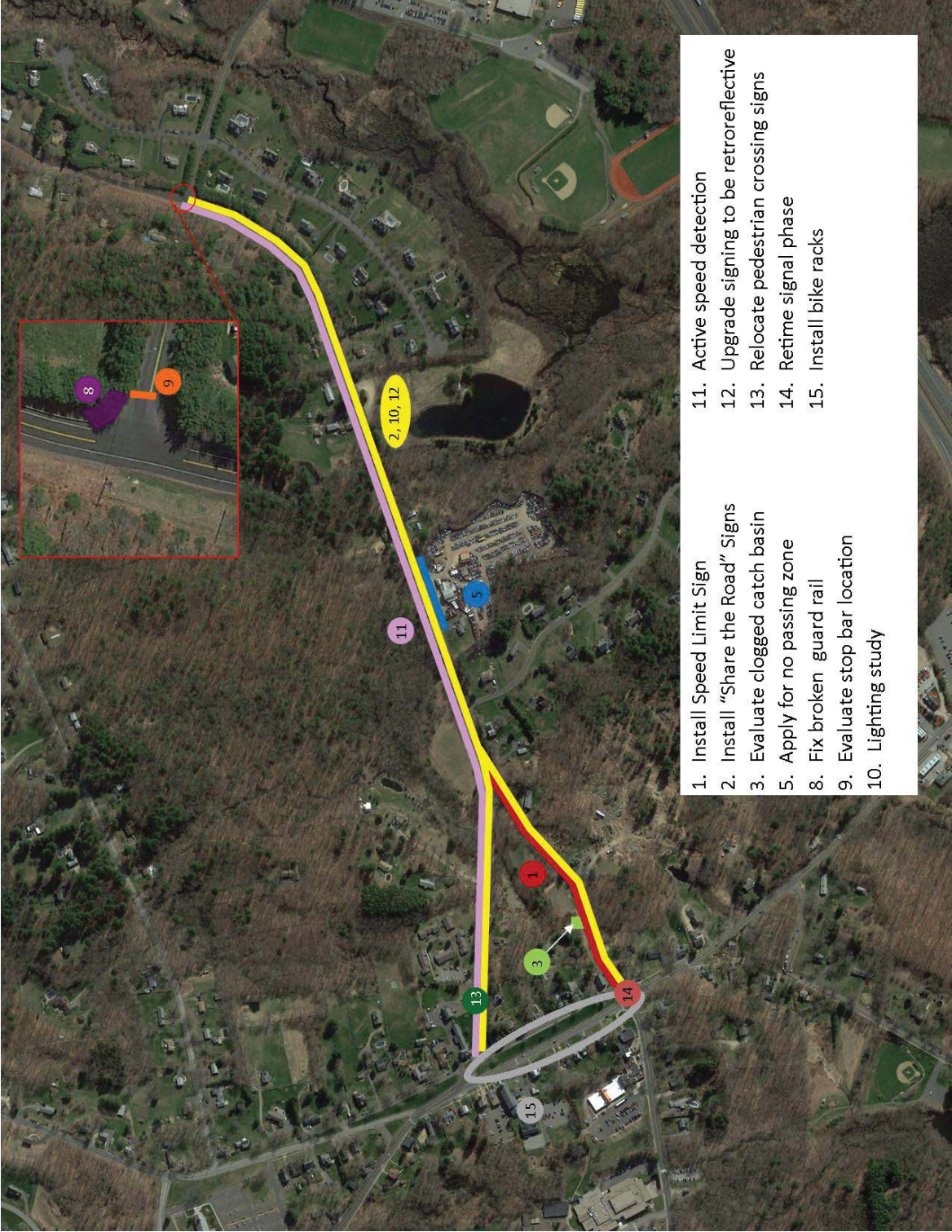


Figure 22. Short Term Recommendations

4.2 Medium Term

1. Widen Old Post Road by one to two feet to improve sight distances and add a shoulder.
2. Install guard rails at the culverts on Tolland Stage Road (Figure 23).
3. Install bicycle friendly catch basin grates (Figure 24).
4. Look into painting the shoulders a different color between the town green and Old Post Road to increase the awareness (Figure 25).
5. Install an active advanced warning high flashing pedestrian sign at the crossing on Route 74 at Old Cathole Road to increase visibility. The system should be pedestrian activated and solar powered. This would be subject to review by the Department. (Figure 26).
6. Upgrade the signalized intersection of Tolland Green and Old Post Road to be ADA compliant based on the most current standards. This includes installing tactile and audible push buttons (Figure 27), tactile warning strips (Figure 28), and landing ramps.
7. All proposed sidewalk ramps within the State's Right of Way should be constructed in accordance with the Department of Transportation's (Department) latest Standard Specifications and Sidewalk Detail Sheets.

Figure 29 depicts these recommendations.



Figure 23. Install Guard Rail



Figure 24. Advanced Warning Pedestrian Crossing

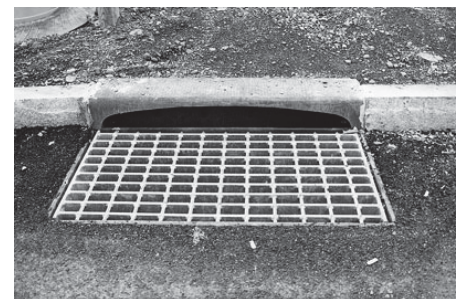


Figure 25. Bike Friendly Catch Basin Grate



Figure 26. Example of Shoulders Painted to Stand Out



Figure 27. ADA Push Button



Figure 28. Tactile Warning Strip

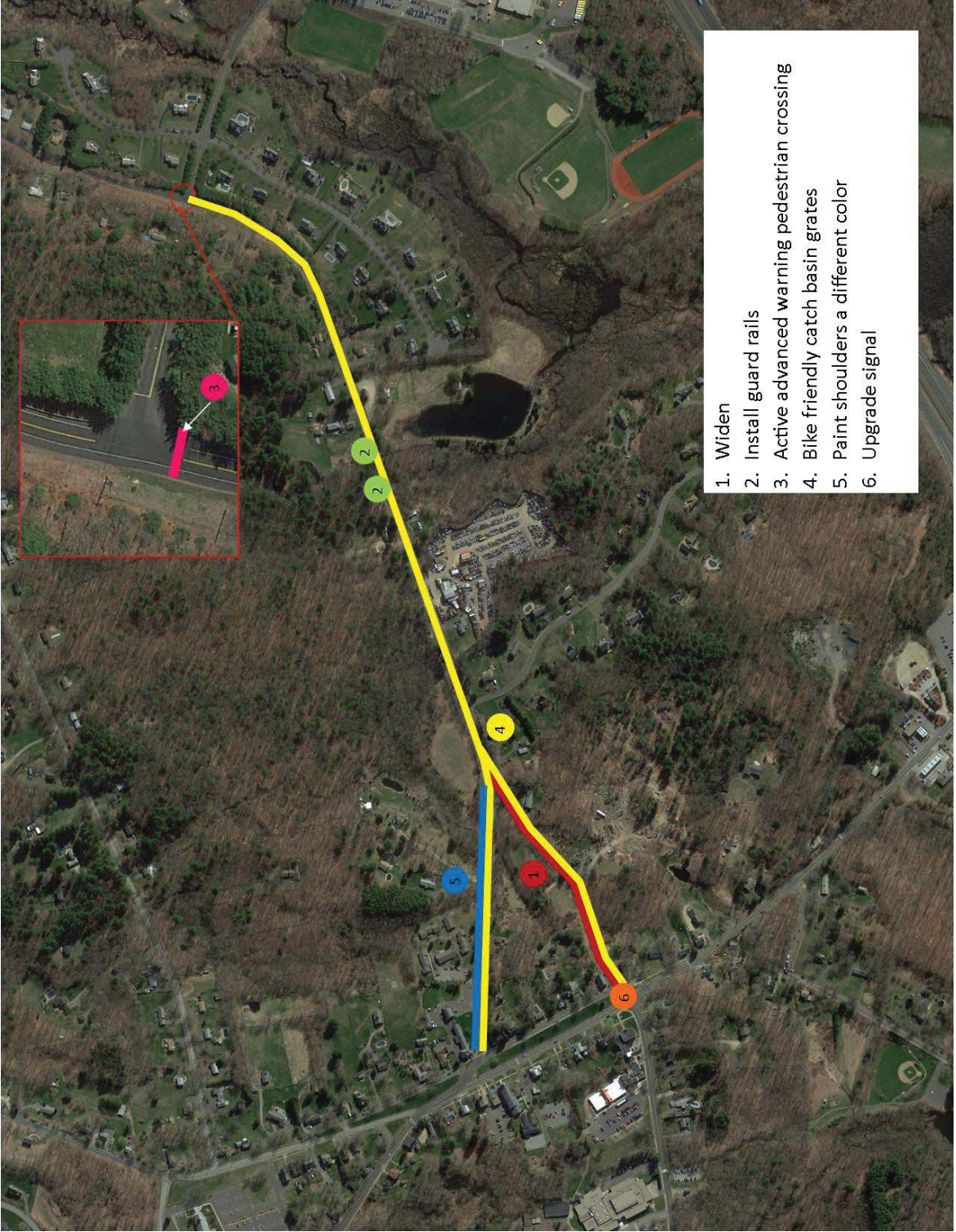


Figure 29. Mid Term Recommendations

4.3 Long Term

1. T-up the Old Post Road and Route 74 intersection.
2. Install sidewalk along the westbound side of Route 74 from the existing sidewalk at Old Post Village to Old Cathole Road.
3. Rebuild Old Cathole Road and shift the centerline over two to three feet to accommodate a sidewalk on the southbound side of Old Cathole Road from Falcon Way to Route 74.
4. Paint a crosswalk across Old Cathole Road and across Route 74 and install proper signage.

Figure 30 depicts these recommendations.

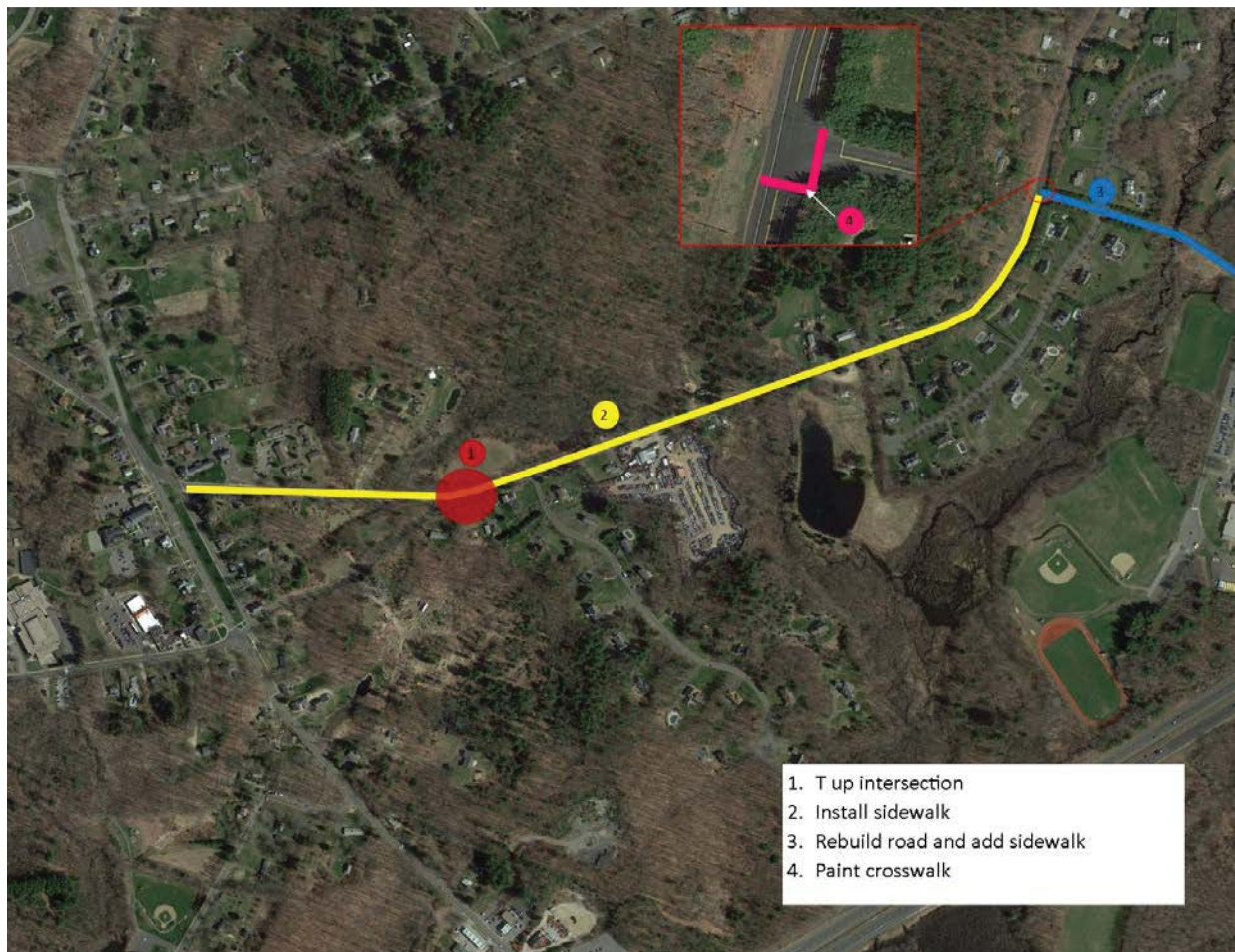


Figure 30. Long Term Recommendations

4.4 Summary

This report outlines the observations, discussions and recommendations developed during the RSA. It documents the successful completion of the Town of Tolland RSA and provides

Tolland with an outlined strategy to improve the transportation along Route 74 and Old Post Road for all road users at, particularly focusing on pedestrians and cyclists. Moving forward, Tolland 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 74 and Old Post Road.



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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

Title

Email Address

Telephone Number

2. Location information

Address

Description

City / Town

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)

Village Center Zone (residential, town offices, library, institutional)

5. Approximate mile radius around the location

Greater than a ½ mile

Other (Please Specify)

The location is a road corridor of just under a mile.

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)

Village Center Zone (residential, town offices, library, institutional)

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

Yes

No

If Yes please describe (please specify)

The corridor connects two employment destinations - the Village Center Zone with government and institutional employment on the western end of the corridor and educational facilities (High School and Middle School) on the eastern end.

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)?

Yes

If Yes please describe and list all projects.

CT DOT Project 142-149 is in the design phase. The project entails traffic calming in the Village Center Zone and additional pedestrian infrastructure. It also realigns certain intersections with Route 195. The project will also improve sight lines where Old Post Road meets Route 195.

The Town applied for a LOTCIP grant to repave Old Cathole Road from Tolland Stage Road to Rhodes Road. As part of the repaving, shoulders would be striped to provide a visual separation for bicyclists and a key gap in the sidewalk network would be filled.

South of I-84, CT DOT is in the construction phase of widening Route 195.

CT DOT recently announced that CTfastrak service would be extended to Tolland, connecting the commuter parking lot just south of the subject area to UConn via transit. Bus service from the lot to Hartford is already provided.

The Eastern Gateways Transportation Planning study is just beginning. That process will examine transportation alternatives for UConn and surrounding communities including Tolland.

Mixed use development, including apartments, a hotel, restaurants and retail have been part of a vision for the "Tolland Village Area" just south of the corridor. The intention is to provide a walkable village next to transit. This area of potential future development is approximately 1,300 feet south of the western end of the corridor that is subject of this application.

12. Environmental Concerns:

Wetlands

If Yes please describe and list.

The corridor does pass over Clough Brook and two wetlands systems. However, it is uncertain if the presence of wetlands would have any impact on possible pedestrian and bicycle accommodations.

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

For suburban towns with a rural heritage like Tolland, promoting walking and biking as legitimate means of transportation is a challenge. Land uses are spread out and roads that began as country pathways are often narrow with little room to provide wide shoulders or sidewalks due to environmental constraints. Residents and businesses become comfortable with the assumption that driving is the only viable way to get around town. Like many other communities, Tolland is seeing a boom in its over-65 population and understands that the current generation of young adults has less interest in car ownership and driving than previous generations.

Tolland is committed to expanding transportation choices in areas and ways that make sense for the community. The Town's Zoning Regulations designated a "Town Center Pathway", with a goal "to provide an alternative transportation mode in the form of a pathway, for non-motorized traffic, which will link the Municipal Building, Tolland Green, Town schools, Crandall Park, commercial areas, the Post Office, Senior Housing, the Senior Center and other areas in the Town Center." The corridor proposed for this application is one of the last key area's within the "Town Center Pathway" area that has not been studied, planned for, or improved for bicyclists and pedestrians.

When the town created its 2009 Plan of Conservation and Development, it asked a group of local bicycling enthusiasts to assess key roads in Tolland and determine whether simple or major improvements would be needed to make each road more bicycle-friendly. They felt that the subject corridor only needed simple improvements. We are ready to identify those simple improvements (along with improvements for pedestrians) but need help in doing so.

Lastly, members of the High School Track Team run along Tolland Stage Road in both directions two to four times per week, depending upon the season and weather. Measures to provide and improve walkability and bikability will provide an immediate benefit to these students and others.

The RSA can help us determine practical and appropriate options to make this corridor more accessible to walkers, runners and bicyclists.

14. Are there plans to expand the area?

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

No

While new development is not anticipated in the Village Center Zone, development is anticipated in the larger "Town Center Pathway" area. Pedestrian and bicycle improvements in the subject corridor could provide better linkages to these future development areas. Future development areas include the Tolland Village Area, which as noted earlier, will be home to CTFAstrak East service, new housing and commercial development.

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

No

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)



Submit Application



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Appendix B



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Road Safety Audit

Town: Tolland
RSA Location: Old Post Road / Tolland Stage Road
Meeting Location: 6th Floor Council Chambers
Address: 21 Tolland Green, Tolland, CT 06084
Date: 8/16/2016
Time: 8:30AM

Participating Audit Team Members

Audit Team Member	Agency/Organization
Krystal Oldread	AECOM
Kathy Bach	HDC/THS
Craig Babowicz	CT DOT
Bruce Mayer	P2C
Mike Whaley	CT DOT
Corey Bernier	Tolland High School
Kevin Ekuno	Resident Trooper
Brandon Elliot	Tolland High School
Heidi Samokar	Tolland - Planning
Jodie Coleman-Marzialo	TGHDC
Jillian Massey	CRCOG
Steve Mitchell	AECOM
Laplante MD	Resident Tolland
Rob Dabica	Tolland Public Safety



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Appendix C



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Road Safety Audit – Tolland

Meeting Location: 6th Floor Council Chambers
Address: 21 Tolland Green
Date: 8/16/2016
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	
--	--

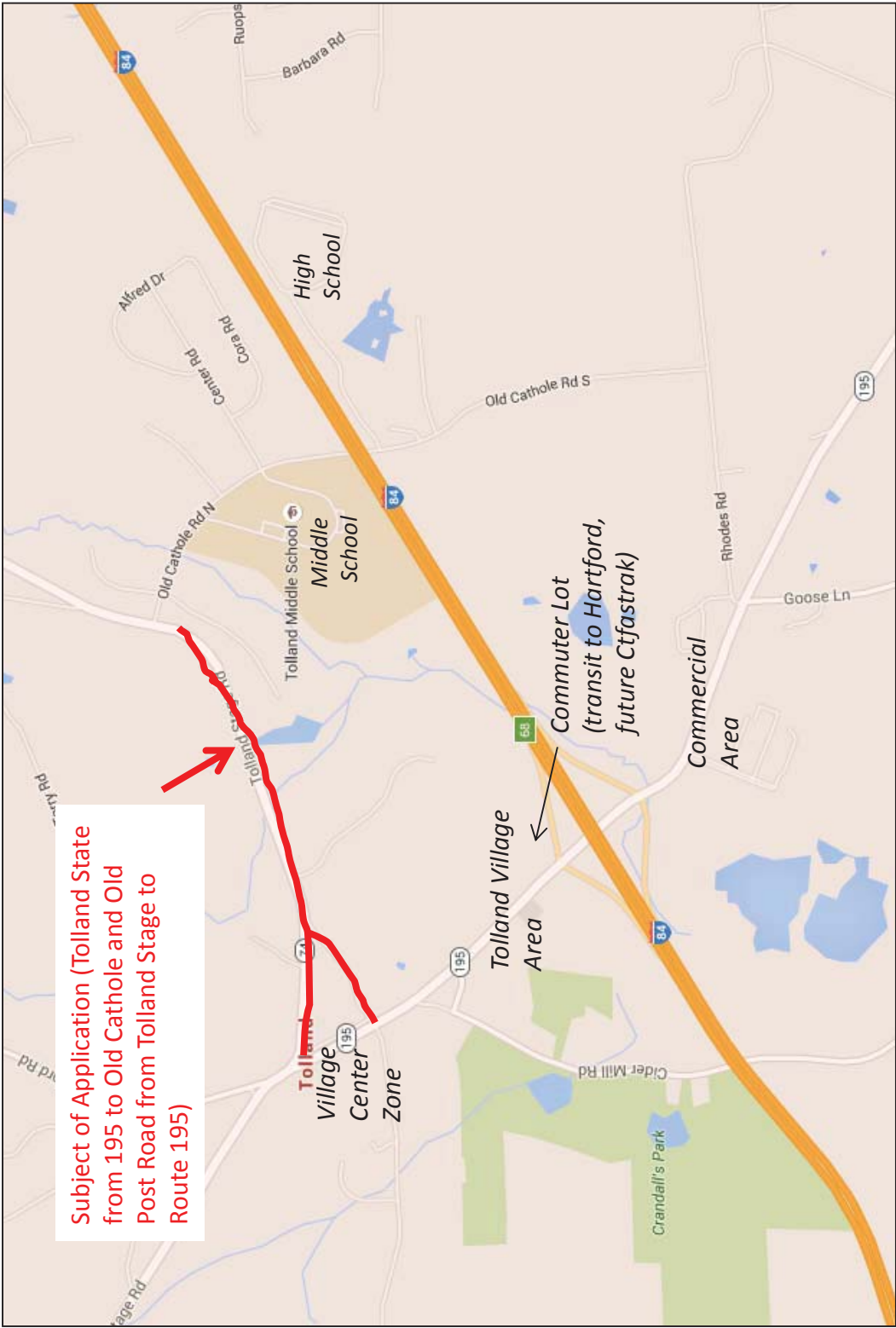


<ul style="list-style-type: none">• Pavement<ul style="list-style-type: none">○ Pavement Condition (excessive roughness or rutting, potholes, loose material)○ Edge drop-offs○ Drainage issues• Lighting Adequacy	
<ul style="list-style-type: none">• Signing<ul style="list-style-type: none">• Correct use 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	

Attachment 1: Location Map - Overview



Attachment 1: Location Map - Detailed



2015 Crashes

UCONN Connecticut Crash Data Repository

Search Criteria:
Dataset: mmucc
Towns: Tolland
Crash Severity: Injury of any type (Serious, Minor, Possible), Fatal (Kill), Property Damage Only
Case Status: Complete

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

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 – Tolland

Crash Summary

Data: 3 years (2012-2014)

There were no crashes that involved pedestrians.

There were no crashes involving bicyclists.

Severity Type	Number of Crashes	
Property Damage Only	14	78%
Injury (No fatality)	4	22%
Fatality	0	0%
Total	18	

Manner of Crash / Collision Impact	Number of Crashes	
Unknown	0	0%
Sideswipe-Same Direction	1	6%
Rear-end	6	33%
Turning-Intersecting Paths	4	22%
Turning-Opposite Direction	2	11%
Fixed Object	3	17%
Backing	0	0%
Angle	2	11%
Turning-Same Direction	0	0%
Moving Object	0	0%
Parking	0	0%
Pedestrian	0	0%
Overturn	0	0%
Head-on	0	0%
Sideswipe-Opposite Direction	0	0%
Miscellaneous- Non Collision	0	0%
Total	18	



Weather Condition	Number of Crashes	
Snow	1	6%
Rain	3	17%
No Adverse Condition	14	78%
Unknown	0	0%
Blowing Sand, Soil, Dirt or Snow	0	0%
Severe Crosswinds	0	0%
Sleet, Hail	0	0%
Total	18	

Light Condition	Number of Crashes	
Dark-Not Lighted	3	17%
Dark-Lighted	3	17%
Daylight	11	61%
Dusk	0	0%
Unknown	0	0%
Dawn	1	6%
Total	18	

Road Surface Condition	Number of Crashes	
Snow/Slush	1	6%
Wet	5	28%
Dry	12	67%
Unknown	0	0%
Ice	0	0%
Other	0	0%
Total	18	



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

Tolland - Old Post Rd / Tolland Stage Rd



This section of Route 74 had epoxy pavement markings installed under Project 0171-0405. Project is presently in construction, most of the work has been completed.

Operational improvements on files .092 & .74 at the Tolland Green, Tolland normalizes Old Post Rd. Intersection transitional.



- Legend**
- Sidewalk
 - Crosswalk
 - Stop Controlled Intersection
 - Pedestrian Crossing Sign
 - Signal Controlled Intersection
 - Park and Ride Lot
 - Study Corridor
 - Bridge or Culvert

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 – Tolland

Fact Sheet

Functional Classification:

- Tolland Stage Road is classified as a Collector
- Old Post Road is classified as a local road

ADT

- ADT on Tolland Stage Road ranges from is 2,000 – 3,100

Population and Employment Data (2014):

- Population: 14,971
- Employment: 3,763

Urbanized Area

- Tolland is in the Hartford Urbanized Area

Demographics

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

Air Quality

- Tolland's CIPP number 710
- Tolland is within the Greater CT Marginal Ozone Area
- Tolland is within a CO Attainment Area



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Appendix D



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LEGEND

- PROPOSED SIDEWALK
- PROPOSED GRADING LIMITS
- PROPOSED ACQUISITION LINE