



COMMUNITY
connectivity program

Ellington

Route 83 – Road Safety Audit

October 27, 2016



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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

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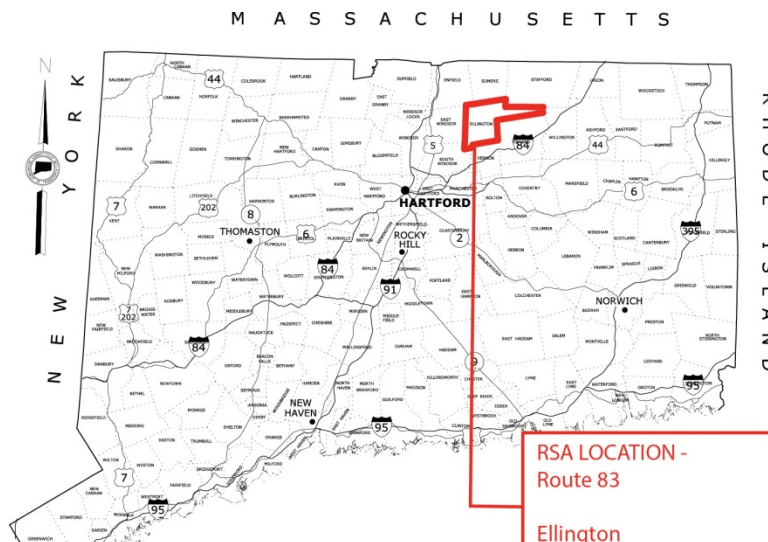
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The Connecticut Department of Transportation (CTDOT) is undertaking a Community Connectivity Program that focuses on improving the state's transportation network for all users, with an emphasis on bicyclists and pedestrians. A major component of this 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 Federal Highway Administration (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 Ellington (Route 83) RSA

The town of Ellington submitted an application to complete an RSA along Route 83 to improve safety for pedestrians and bicyclists. Sidewalks and bicycle paths would enable non-motorized travel options for residents to either work or shop at the various stores and restaurants along the corridor. Currently, infrastructure limitations hinder the means for non-motorized activity to be conducted in a safe manner. Route 83 provides access to Main Street and the village center; sidewalks are needed to improve the connection between the downtown and commercial/residential activities along Route 83.

The Ellington 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 Route 83 from the Vernon town line to Main Street (Route 286) (Figure 1). Route 83 (West Road) is classified as a principal arterial. The Route 83 Average Daily Traffic (ADT) ranges from 12,100 to 15,000 vehicles per day (vpd). Figure 2 shows the regional context of the study area.

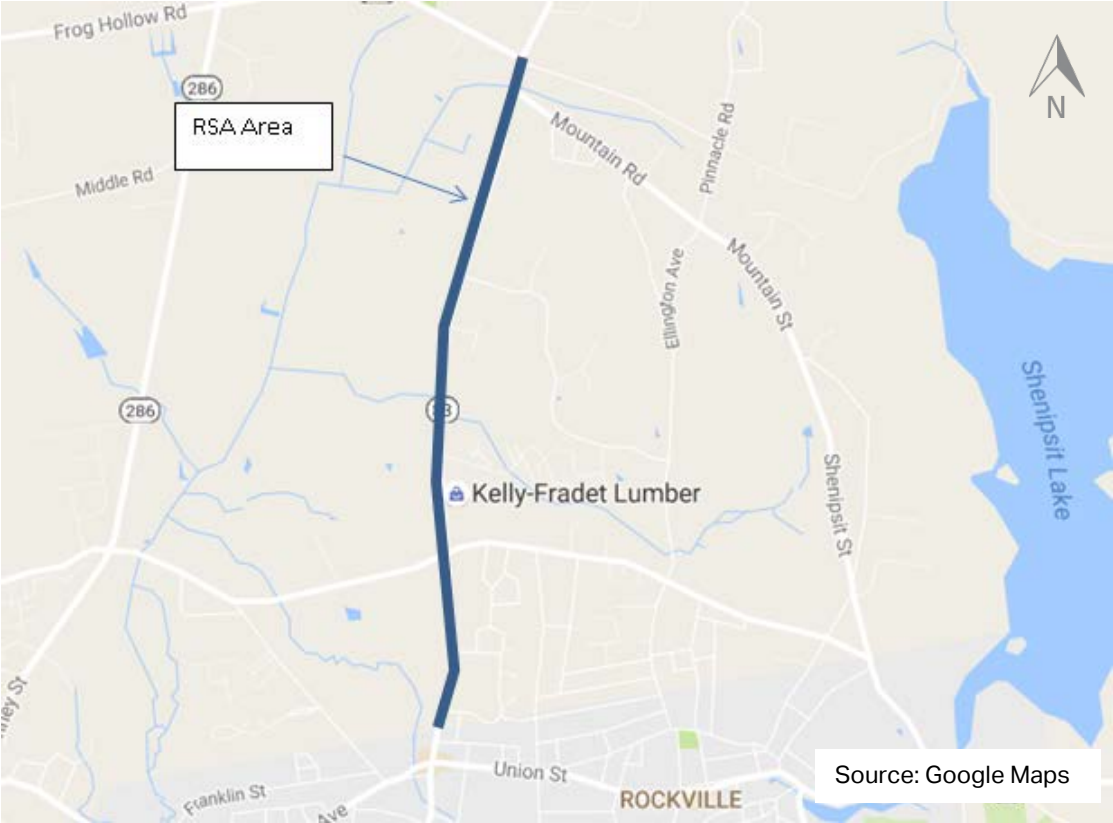


Figure 1. Route 83 Ellington

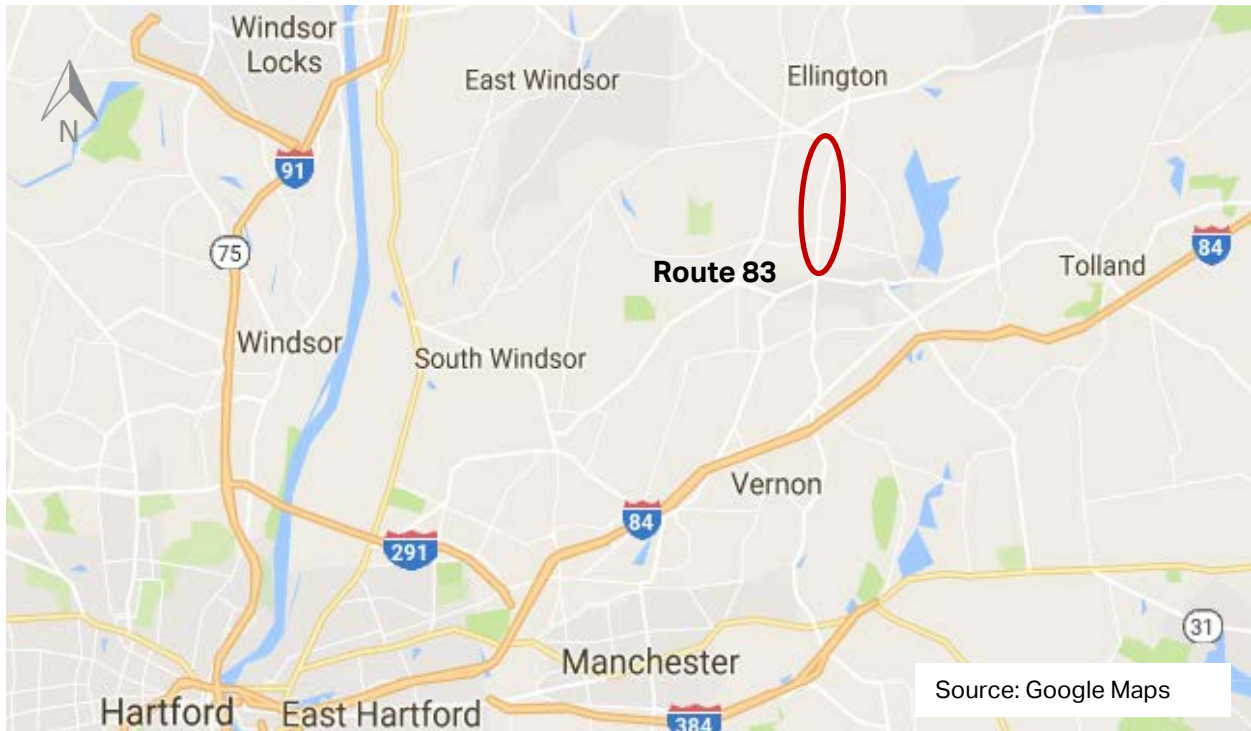


Figure 2. Route 74 and Old Post Road Regional Context

2 Pre-Audit Assessment

2.1 Pre-Audit Information

Between 2012 and 2014 there were 92 crashes in the RSA corridor. The majority of crashes (73%) reported in this area resulted in property damage only; however 27% of crashes did result in an injury (Table 1). No crashes involved bicyclists, but one did involve a pedestrian. This crash occurred at night at the exit to the Big Y plaza, and did result in injuries. The highest crash types reported were rear end and turning-intersecting paths.

Figure 3 displays crashes that occurred in this area during 2015, and shows spacing all along the corridor. There was one fatality in 2015, it occurred at night in a mid-block location (Figure 3).

Severity Type	Number of Accidents	
Property Damage Only	67	73%
Injury (No fatality)	25	27%
Fatality	0	0%
Total	92	

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	3	3%
Rear-end	47	51%
Turning-Intersecting Paths	19	21%
Turning-Opposite Direction	4	4%
Fixed Object	9	10%
Backing	3	3%
Angle	3	3%
Turning-Same Direction	1	1%
Moving Object	0	0%
Parking	0	0%
Pedestrian	1	1%
Overturn	0	0%
Head-on	1	1%
Sideswipe-Opposite Direction	1	1%
Miscellaneous- Non Collision	0	0%
Total	92	

Table 2. Crash Type 2012-2014

Source: UConn Connecticut Crash Data Repository

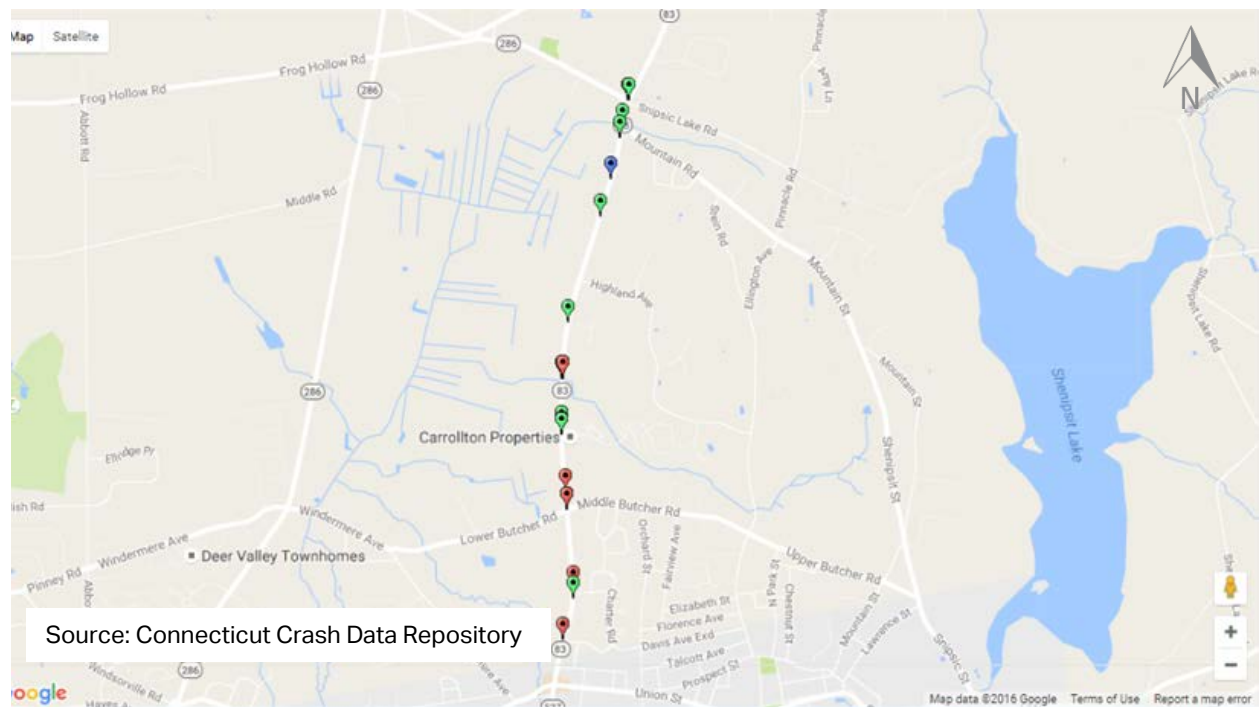


Figure 3. Crashes That Occurred in 2015 (Connecticut Crash Data Repository)

Route 83 is a two lane, state owned road with a speed limit of 40 mph in the northern section and 35 mph in the south. The RSA corridor is approximately 2.2 miles long. There are two small segments of sidewalk along the corridor, but the majority of the corridor lacks sidewalks. The lanes are separated by a double yellow center line and there are shoulder lines along both sides of the entire corridor. There are four signalized intersections, described in the following sections. The geometry of the corridor is shown in Figure 4 and described in Table 3.

#1 Intersection of Route 83 and Main Street (Route 286)/Snipsic Lake Road. This is a four way signalized intersection with a crosswalk only on the southern leg of Route 83. Route 83 southbound and Snipsic Lake Road westbound have one approach lane. The northbound Route 83 approach have two lanes, striped as a dedicated left turn lane and a shared through and right turn lane. The eastbound Main Street approach has a dedicated right turn lane and a shared through and left turn lane.

#2 Intersection of Route 83 and Mountain Road. This is a three way signalized intersection located approximately 500 feet south of Snipsic Lake Road. There is a crosswalk at the north leg of Route 83. Route 83 northbound has one approach lane, the southbound approach has two lanes, with a dedicated left lane and a dedicated through lane. Mountain Road has one approach lane.

#3 Intersection of Route 83 and the Big Y Plaza. This is a three way signalized intersection with no crosswalks. Each leg of the intersection has two approach lanes. Route 83 northbound has a through and right turn lane, and southbound has through and left turn lanes. The Big Y plaza has left and right turn lanes

#4 Intersection of Route 83 and Lower and Upper Butcher Roads. This is a four way signalized intersection. There is a crosswalk at the northern leg of Route 83. All four legs have two lane approaches. Each Leg has a dedicated left turn lane and a shared right turn and through lane.

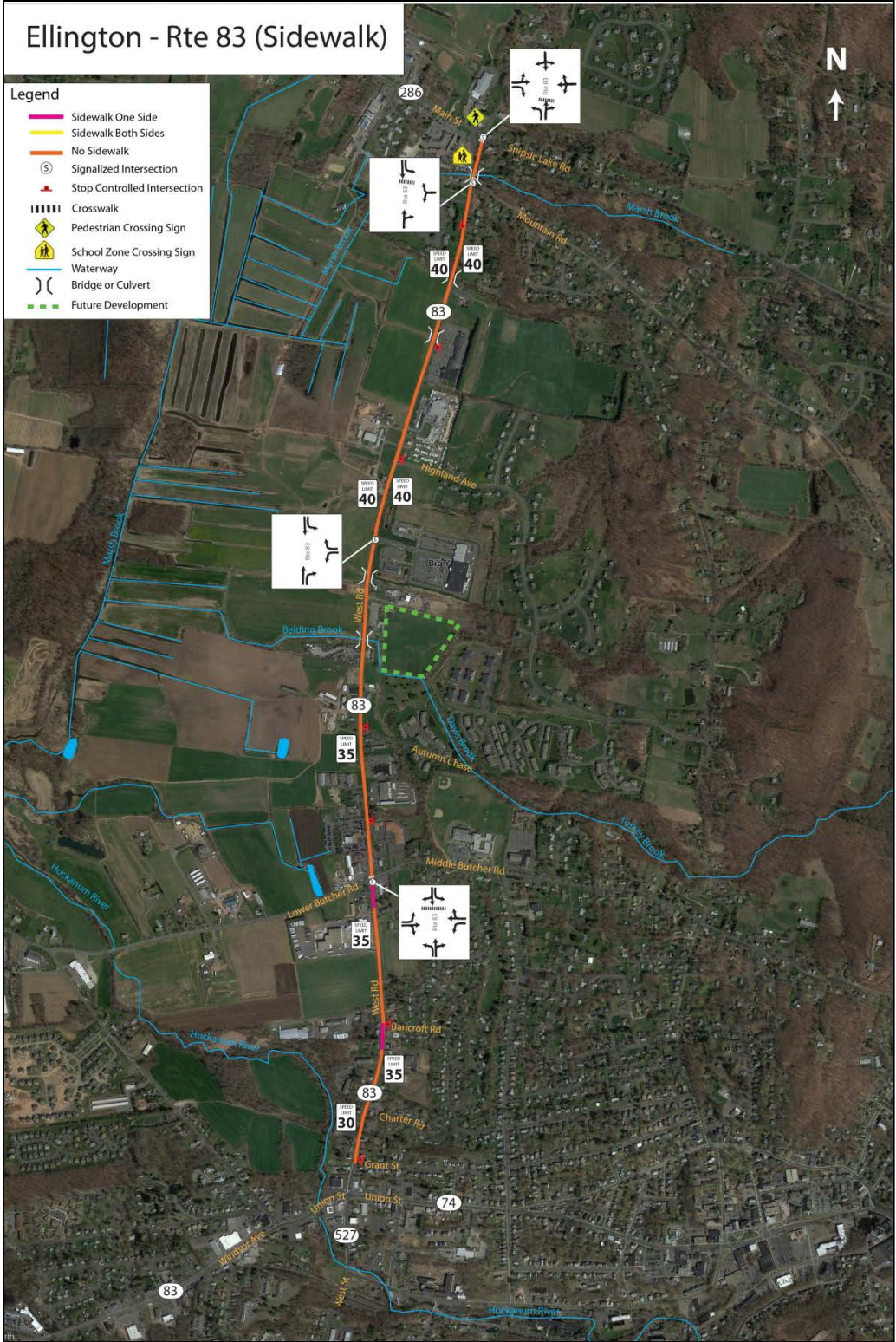


Figure 4. Route 83 Road Geometrics

Ellington - RSA

Street Inventory

Road	Width	Sidewalk				Curb	Parking	Shoulder	Ramps	
		Side	Type	Width	Condition				Exist	Compliant
Route 83	12'	EB	N/A	N/A	N/A	No	No	3'	N/A	N/A
	12'	WB	N/A	N/A	N/A	No	No	3'	N/A	N/A

***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. Ellington has created preliminary designs for a sidewalk along Route 83 (Appendix D). The town has required all new developments needing a special permit to construct sidewalk on their frontage. As a result, the proposed assisted living facility on Route 83 located at the former Ellington Golf Center will have a sidewalk along its frontage and create a pedestrian bridge over Belding Brook.

2.3 Pre-Audit Meeting

The Pre-Audit meeting was held on October 27, 2016 at 8:30 AM in the Town Hall Annex located at 59 Main Street in Ellington.

The RSA Team was comprised of staff from CTDOT, AECOM, and representatives from several town departments and organizations, including the resident trooper, planning office, and DPW. 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 Ellington presented relevant information for the audit, including:

- Route 83 is a mix of commercial, residential, farms, and industries.
- The road is relatively straight and flat, with good sight lines and a reasonable right-of-way.
- This is the main north-south corridor in the town.
- Traffic speeds make pedestrian travel difficult.
- One of the key goals is to enhance pedestrian traffic along this corridor, due to the amount of existing commercial activity and potential future development. Ellington proposes to enhance bicycle and foot traffic in the area. There are currently "goat paths" but these are not safe.
- A new assisted living facility is scheduled to be built at the site of the old driving range. As part of the design, a sidewalk will be constructed as well as a pedestrian bridge over Belding Brook.
- The Longview area has no sidewalk connection to the downtown.
- Planning and zoning has studied the corridor and wants to preserve sewer capacity for commercial and industrial interests.
- Commercial developments that need special permits are required to install sidewalks along the entire frontage of their property. The regulations could be made stronger to require for all site development - not just special permits.
- There are no bus stops in Ellington.

- Speeding is perceived to be an issue.
- There are issues with the Agway egress to the building since it is at the traffic signal. A potential cause of this is Agway places large tractors at the edge of their property line for display that can block sight lines. Several accidents have occurred there.
- The town has created draft plans for a sidewalk along the east side of Route 83. There are several brook/culvert crossings that would need to be dealt with. In general the topography would allow for a sidewalk but in a few locations would require a minor retaining wall due to slopes. The sidewalks are detailed to be five feet wide and have a snow shelf.

3 RSA Assessment

3.1 Field Audit Observations

- There are brook crossings by Kloter Farms, Johnny Appleseed, and the Barn Yard.
- The sidewalk in Vernon ends at the town line, there are goat paths leading from it on the Ellington side (Figure 5).
- Utilities are on the west side of the road.
- There is a short segment of sidewalk on the southwest corner of the Route 83/Lower Butcher Road intersection and on the west side of Route 83 across from the Bancroft Road.
- Access to the Hockanum River hiking trail is available behind the Al Noor Islamic Center. There is a sign but it does not provide an arrow.
- Between the town line and Charter Road there is a slope on the east side of the road. The west side is flat.
- The tree canopies on the east side of Route 83 in front of the Al Noor Islamic Center block the sight line of motorist trying to turn onto Route 83 from Charter Street.
- By Ellington Printery there is a culvert and on the east side with a retention pond. This will require a



Figure 5. Goat Path Leading From Sidewalk

bridge to cross. The roadway is beginning to deteriorate around the guide rail for the culvert. (Figure 6)

- Route 83 has 12 foot wide travel lanes and varies in shoulder width.
- The roadway is in fair condition.
- There is a sidewalk along the north side of Middle Butcher Road. It ends at Route 83.
- At the intersection of Middle Butcher Road and Route 83 there are pedestrian ramps on all but the southeast corner. There are tactile warning strips in the northern corners at the crosswalk. The ramp in the northeast corner is steep and most likely not ADA complaint. (Figure 7)
 - This intersection has a concurrent pedestrian phase with a "Push button for green light" to call the side street to allow the crossing of Route 83. There are push buttons at all corners except the southeast.
 - There are no pedestrian signal heads.
 - The crosswalk is faded.
- Along Middle Butcher Road, just past the driveway for Ed's Automotive, there is a bush which has grown blocking clear access to the sidewalk (Figure 8).
- There is a lack of sidewalk and snow shelf from Ed's Automotive to the Hidden Still.
- There are numerous driveways along Route 83.
- The sidewalk in the Big Y Plaza ends at Route 83, and there is no sidewalk along the frontage of Route 83.



Figure 6. Retention Pond Requiring Pedestrian Bridge



Figure 7. Intersection of Route 83 and Middle Butcher Road



Figure 8. Overgrown Bush

- Between Charter Road and Johnny Appleseed Farm it is relatively flat and has sufficient space for a sidewalk (Figure 9). The road then drops off sharply on the west side and there are numerous trees and slope issues on the east side. As the road gets closer to the Mountain Road signal, the grade becomes steeper on the east side (Figure 10). A three foot snow shelf and five foot sidewalk would most likely require a retaining wall.



Figure 9. Flat Roadway With Room for Sidewalk

- Just north of Johnny Appleseed Farm, there is a culvert which gets clogged easily because of the small pipe size (Figure 11).
- At the signalized intersection of Mountain Road and Route 83 there is a crosswalk at the northern leg of Route 83 but it does not connect to a sidewalk. On both sides it ends at the guide rail. (Figure 12).



Figure 10. Steep Slope Possibly Requiring a Retaining Wall

- This intersection has concurrent pedestrian phasing using "Push button for green light" to call the side street to allow the crossing of Route 83. There are push buttons in the northwest corner and southeast corner. The button in the northwest corner is placed behind the guide rail. It was observed that the push button was not operational at the time of the audit.
- There are no pedestrian signal heads.
- The crosswalk is faded



Figure 11. Culvert Which is Easily Clogged

- Marsh Brook crosses just past the Mountain Road intersection. A bridge would be required to place a sidewalk here.
- At the signalized intersection of Main Street and Route 83 there is a crosswalk on the southern leg of Route 83 but it does not connect to sidewalk nor have ramps (Figure 13).



Figure 12. Mountain Road Intersection

- This intersection has concurrent pedestrian phasing using "Push button for green light" to call the side street to allow the crossing of Route 83. There are push buttons on the southwest corner and southeast corner.
- There are no pedestrian signal heads.
- The crosswalk is faded.



Figure 13. Main Street Intersection

- The sidewalk on Main Street ends 350 feet short of the intersection.
- Sand and dirt have begun to build up in the shoulder and debris is in and on the catch basins.

3.2 Post-Audit Workshop - Key Issues

- The proposed sidewalk would be on the east side but it may be better to put the sidewalk on the west side at the southern end, with a crossing at Charter Road to connect to the proposed sidewalk on the east side due to the curvature in the road and slope on the east side of the road.
- A sidewalk would require easements, right-of-way, and tree removal in certain locations.
- The culvert at Johnny Appleseed needs a drainage study and the pipe size addressed. It has clogged several times. If new pipes are needed they could be extended out far enough that a pedestrian bridge would not be needed.
- Sign placements need to be evaluated; in several locations they block sightlines. At Agway the display items are beginning to encroach on the sightlines.
- The town does have a sidewalk plan with GIS maps of all sidewalks. It conducts repairs that are requested.
- None of the signals have pedestrian phases or crossings. All pedestrian pushbuttons call for the side street green.
- The town is working with Eversource to update to LED lighting.
- There was a discussion over the placement of the Middle Butcher Road stop bar and allowing right turns on red.

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. The Town to coordinate with CTDOT to get roads swept to keep them accessible.
2. The Town to coordinate with CTDOT to inspect and maintain the culverts.
3. Update regulations for all site development and expand beyond just special permits that require sidewalk on all road frontages.
4. The Town to coordinate with CTDOT to clean out the catch basins.
5. Repaint all crosswalks. The Town to coordinate with CTDOT to incorporate on next Vendor in Place (VIP) repaving project.
6. Replace existing signs with newer retroreflective ones.
7. Add an arrow on to the Hockanum River hiking trail sign.
8. The Town to coordinate with CTDOT to install active speed signs.
9. Add the sidewalk plan into POCD and reference in zoning.
10. Trim tree branches blocking sight distance and in utility wires across from the Al Noor Islamic Center.
11. Trim vegetation within any existing sidewalk right of way.
12. Investigate the Middle Butcher Road stop bar location and the possible need for a no turn on red.
13. Finalize the design plans for the sidewalk including where to connect the west side with the east side by the Vernon town line.
14. Evaluate sign placements at driveways for sight lines.
15. Contact Agway to relocate display items encroaching onto the state right-of-way and blocking the sightlines.

Figure 14 depicts these recommendations.

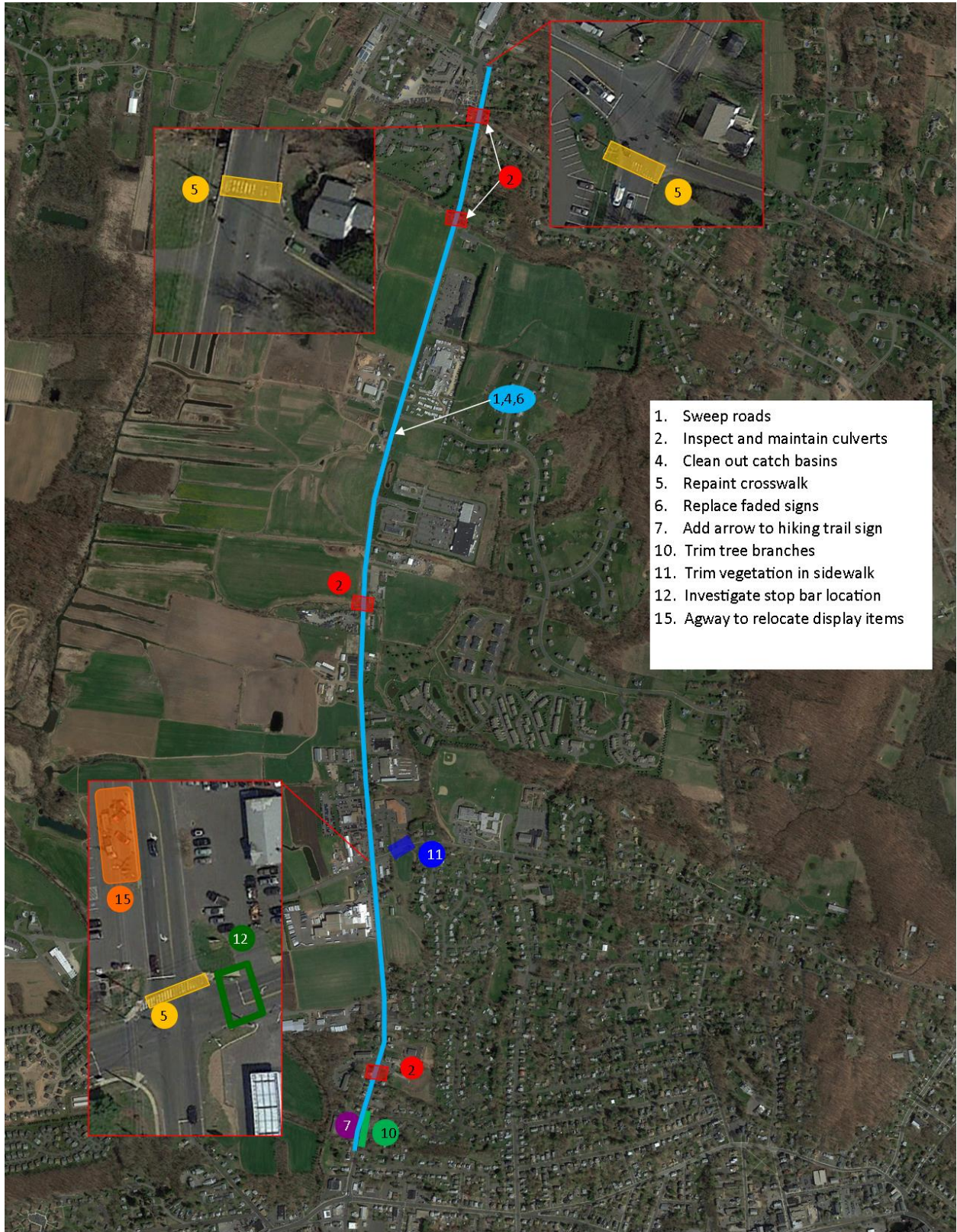


Figure 14. Short Term Recommendations

4.2 Mid Term

1. Conduct a drainage study for the culvert at Johnny Appleseed.
2. Install a crosswalk at Lower Butcher Road and install a ramp on the northeast corner. This will require relocating a catch basin.
3. Restripe with 11 foot travel lanes. The Town to coordinate with CTDOT to incorporate on next Vendor in Place (VIP) repaving project.
4. Update signals to be ADA accessible with ramps, tactile warning strips (Figure 16), proper grading, audible and tactile push button (Figure 17), and pedestrian signal heads with countdown (Figure 15).
5. Obtain easements and right-of-way required to install sidewalk.

Figure 18 depicts these recommendations.



Figure 16. Detectable Warning Strip



Figure 15. Pedestrian Signal Head



Figure 17. Pedestrian Pushbutton

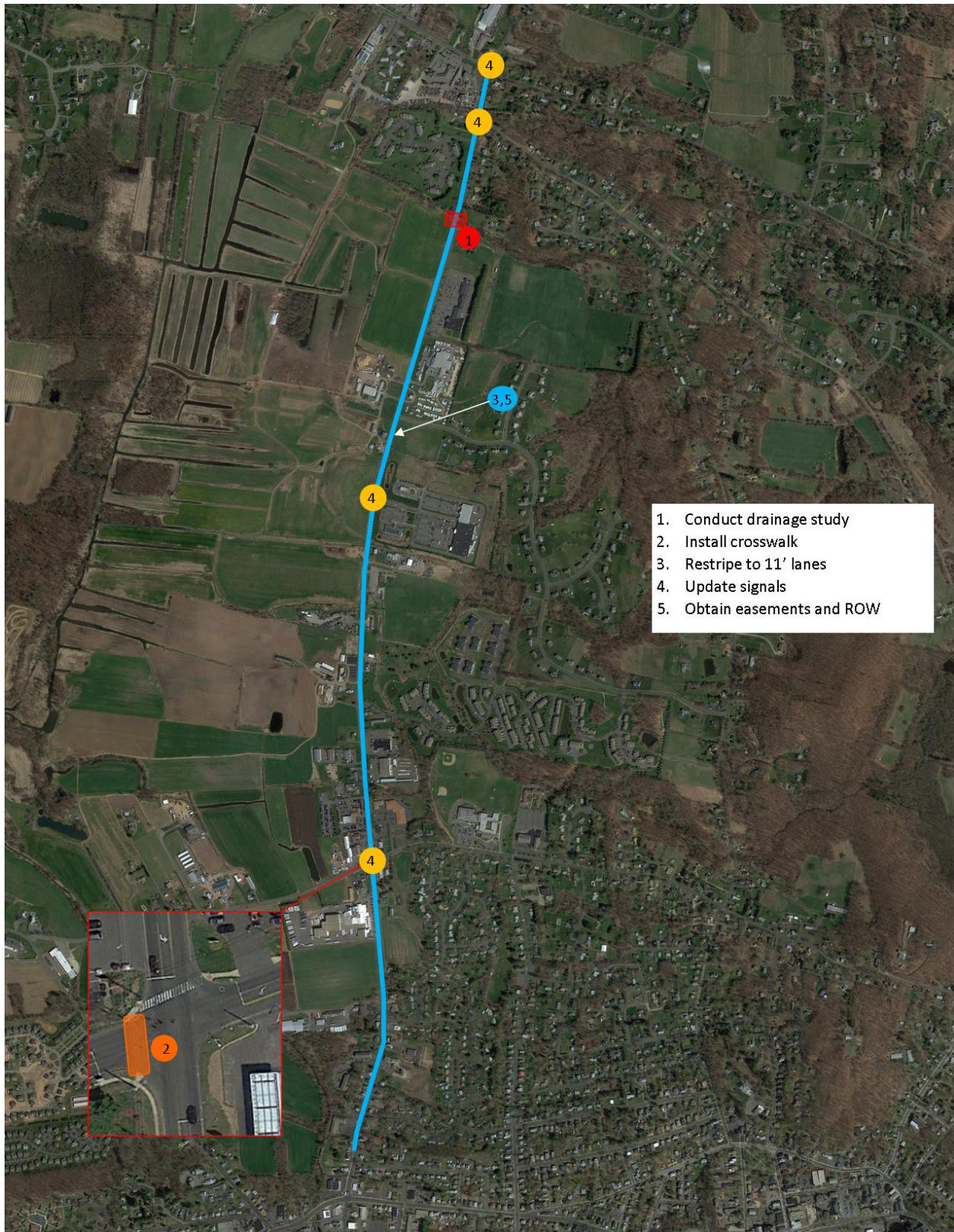


Figure 18. Mid Term Recommendations

4.3 Long Term

1. Install sidewalk along the east side of Route 83.
 - a. Install pedestrian bridges or culverts where needed over brooks.
2. Extend sidewalk from Kloter Farms to Route 83.

Figure 19 depicts these recommendations.

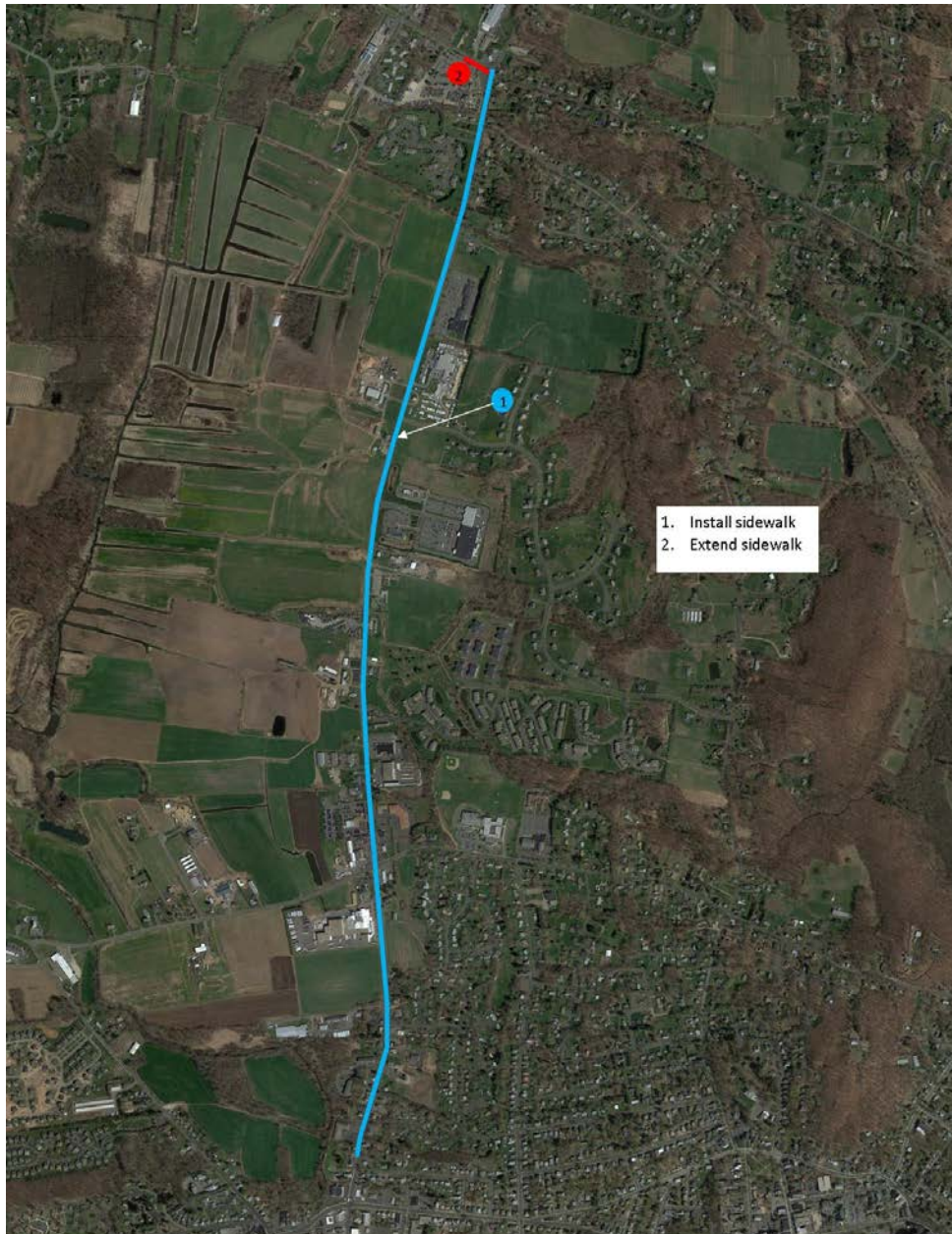


Figure 19. Long Term Recommendations

4.4 Summary

This report outlines the observations, discussions and recommendations developed during the RSA. It documents the successful completion of the Town of Ellington RSA and provides Ellington with an outlined strategy to improve the transportation along Route 83 for all road users and particularly focusing on pedestrians and cyclists. Moving forward, Ellington 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 83.



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Appendix A



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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

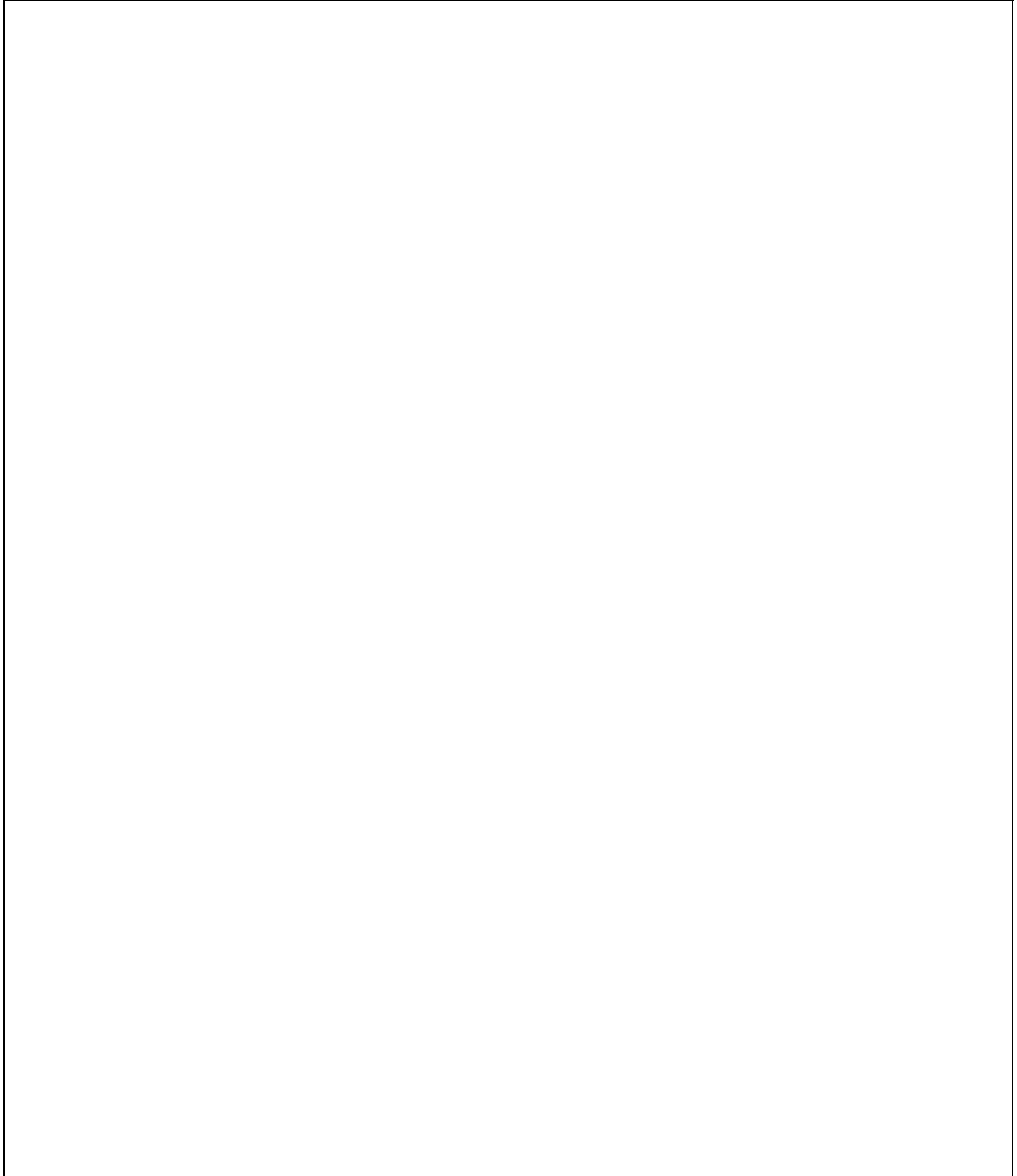
Maintenance issues (cutting grass, leaves, snow removal)

N/A (not applicable)

Other (please specify)

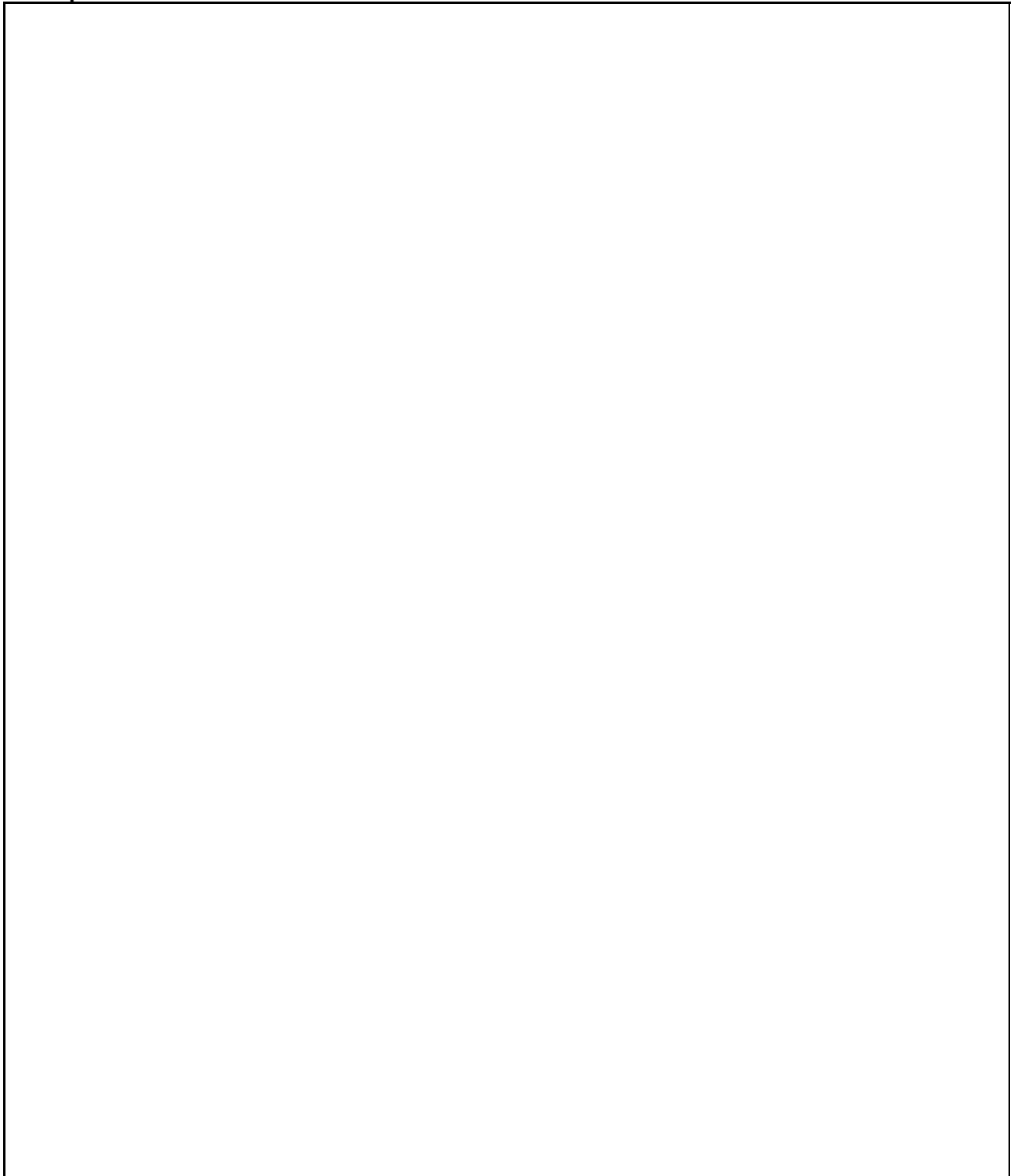
11. Are there any past, current or future transportation/economic development projects near this location (i.e. Federal, State or local projects)?

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.

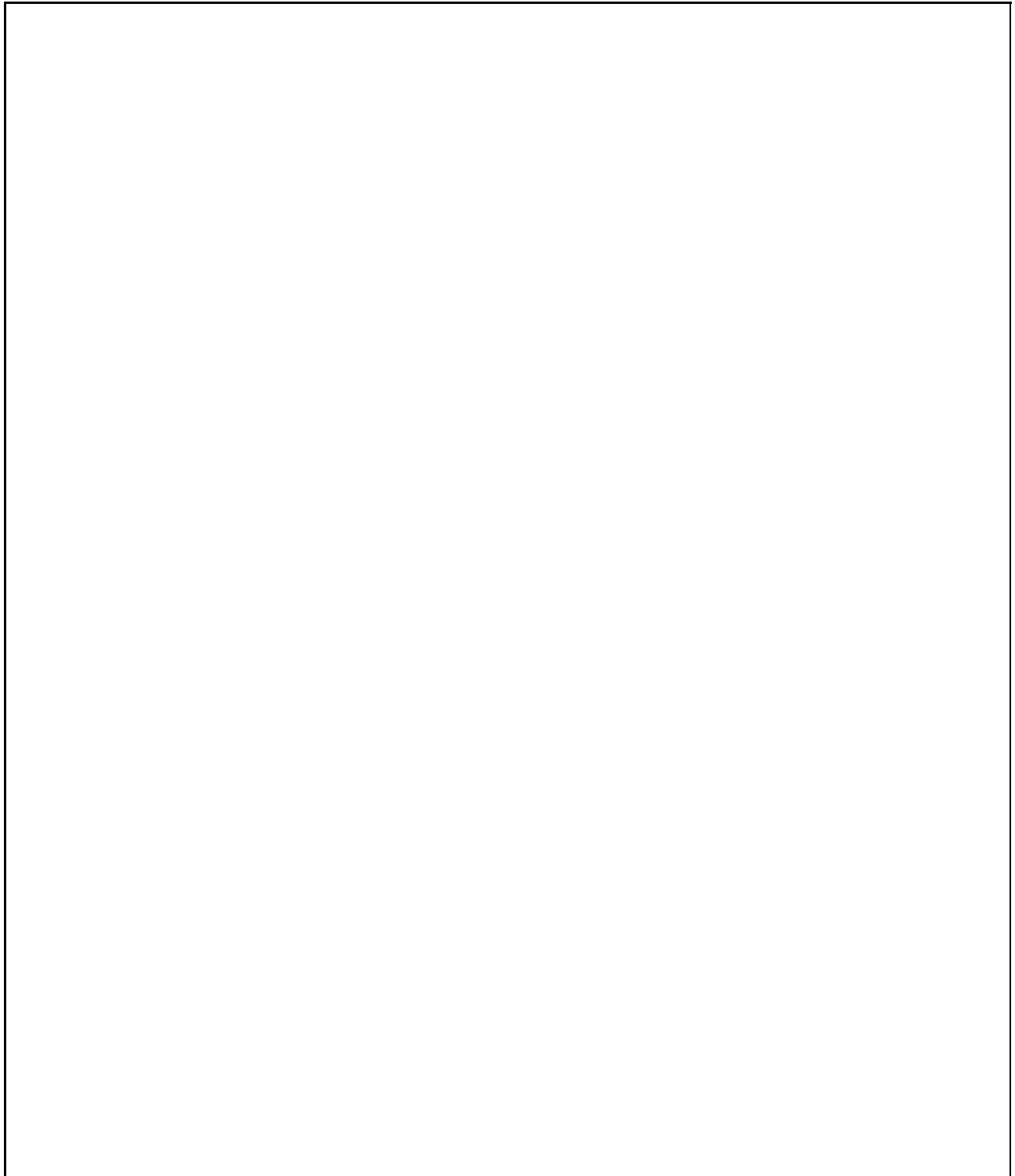
A large, empty rectangular box with a thin black border, intended for the user to describe and list any environmental concerns. The box occupies most of the page's vertical space below the instruction.

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?

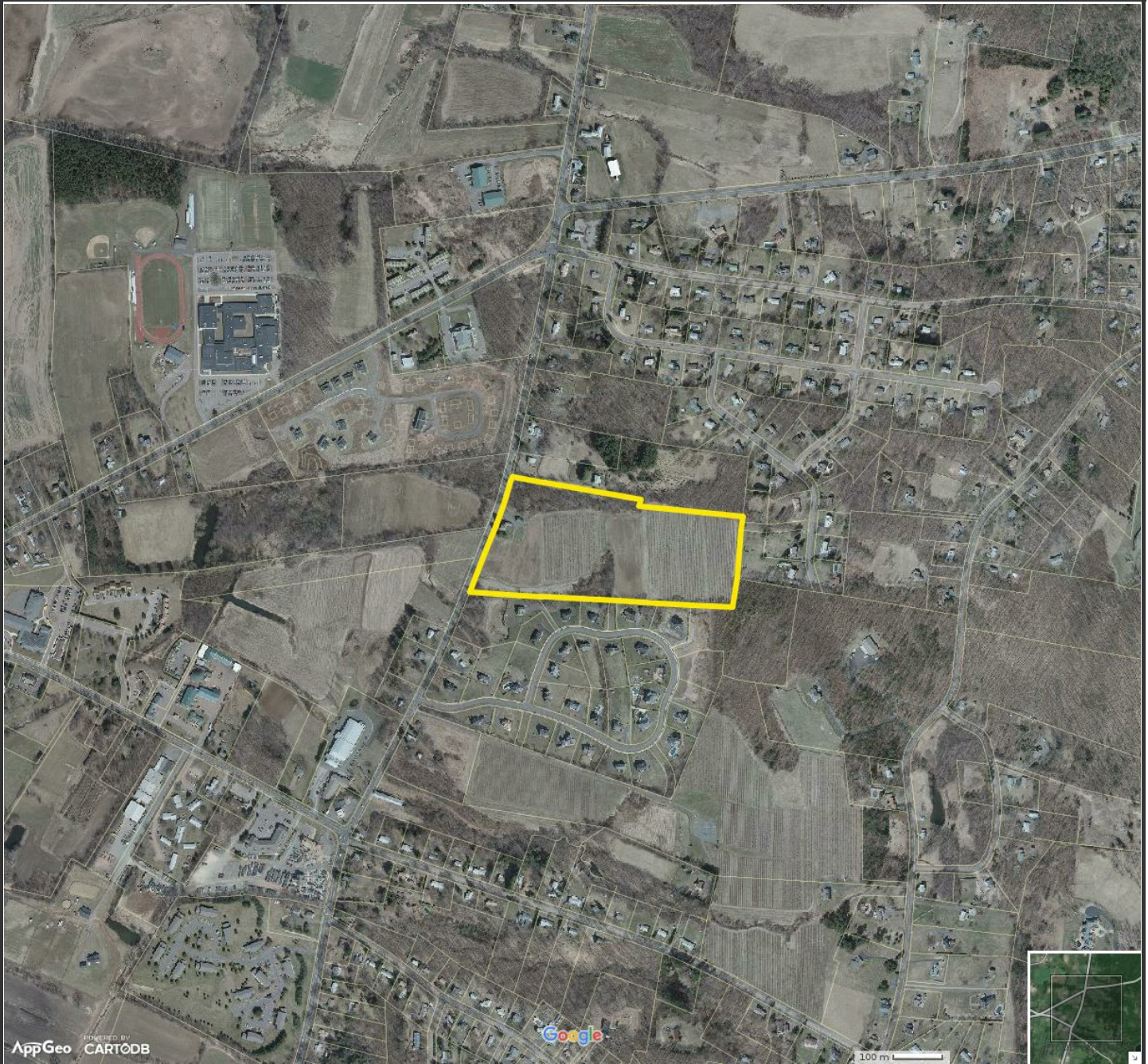
A large, empty rectangular box with a thin black border, intended for the user to provide any other pertinent information unique to the location.

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)

Route 83, section between Route 286



Property Information

Property ID 073-023-0000
Location 251 SOMERS RD
Owner CHAPMAN SUMNER L



**MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT**

Town of Ellington, CT makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Parcels updated 10/1/2014
Properties updated Daily



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Appendix B



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Road Safety Audit

Town: Ellington
RSA Location: Route 83 (Sidewalk)
Meeting Location: Ellington Town Hall Annex
Address: 59 Main Street, Ellington, CT 06029
Date: 10/27/2016
Time: 8:30 AM

Participating Audit Team Members

Audit Team Member	Agency/Organization
Krystal Oldread	Aecom
Tim Webb	Town of Ellington
Gary Sojka	CTDOT
Ryan Dolan	CTDOT
Patrick Zapatka	CTDOT
Lisa Houlihan	Town of Ellington
Steve Mitchell	Aecom
Brian santz	CT State Police RTO
Lori Spielman	Town of Ellington



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Appendix C



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Road Safety Audit – Ellington

Meeting Location: Ellington Town Hall Annex
Address: 59 Main Street
Ellington, CT 06029
Date: 10/27/2016
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	



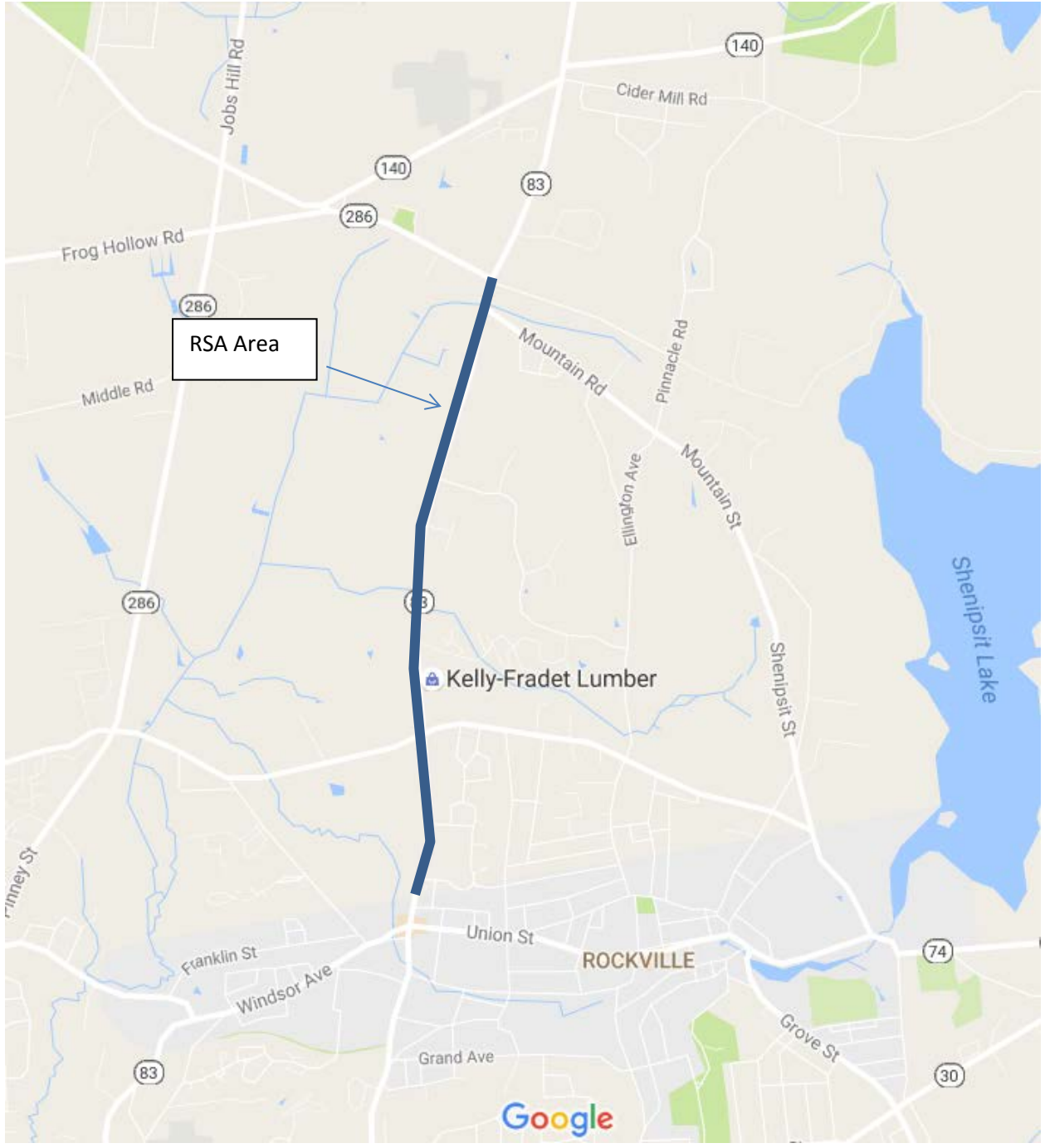
Bicycles <ul style="list-style-type: none">• Bicycle facilities/design• Separation from traffic• Conflicts with on-street parking• Pedestrian Conflicts• Bicycle signal detection• Visibility• Roadway speed limit• Bicycle signage/markings• Shared Lane Width• Shoulder condition/width• Traffic volume• Heavy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

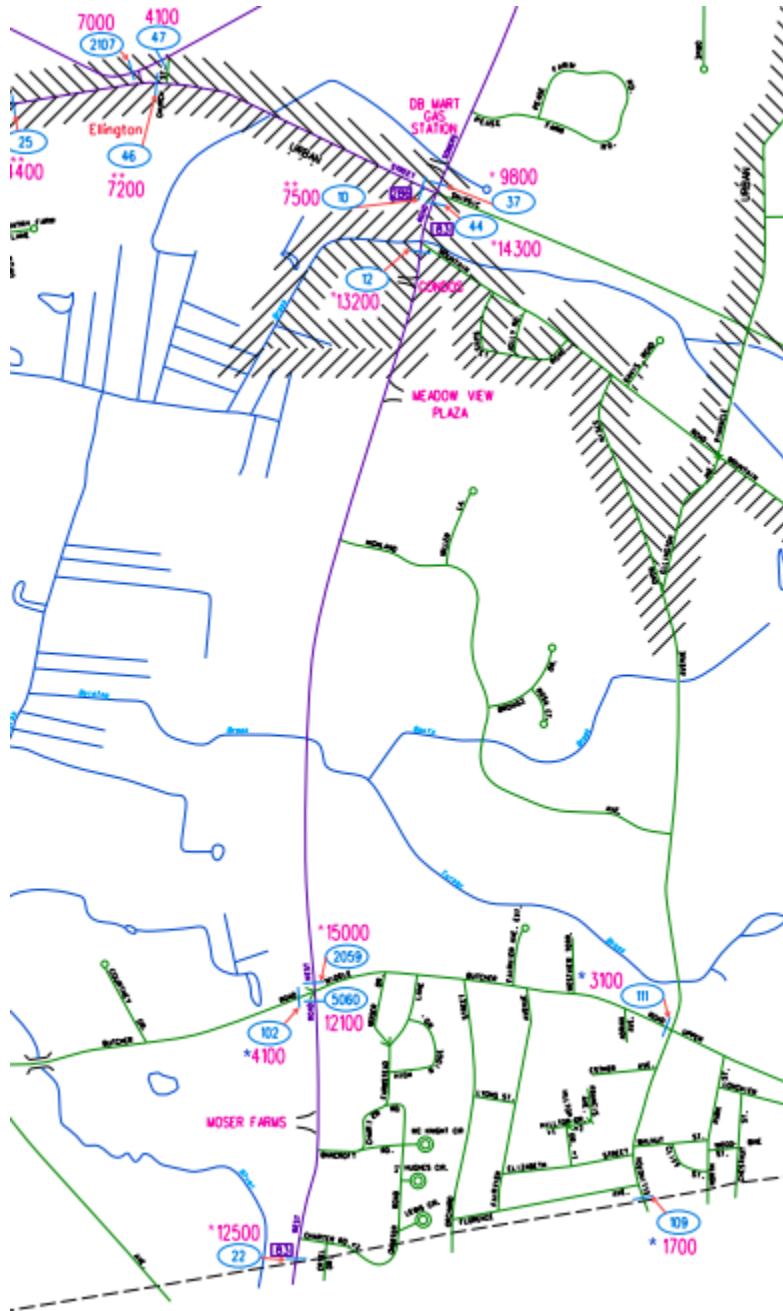
<ul style="list-style-type: none">• Intersections<ul style="list-style-type: none">○ Geometrics○ Sight Distance○ Traffic control devices○ Safe storage for turning vehicles○ Capacity Issues	
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<ul style="list-style-type: none">• Pavement<ul style="list-style-type: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



Average Daily Traffic (ADT)



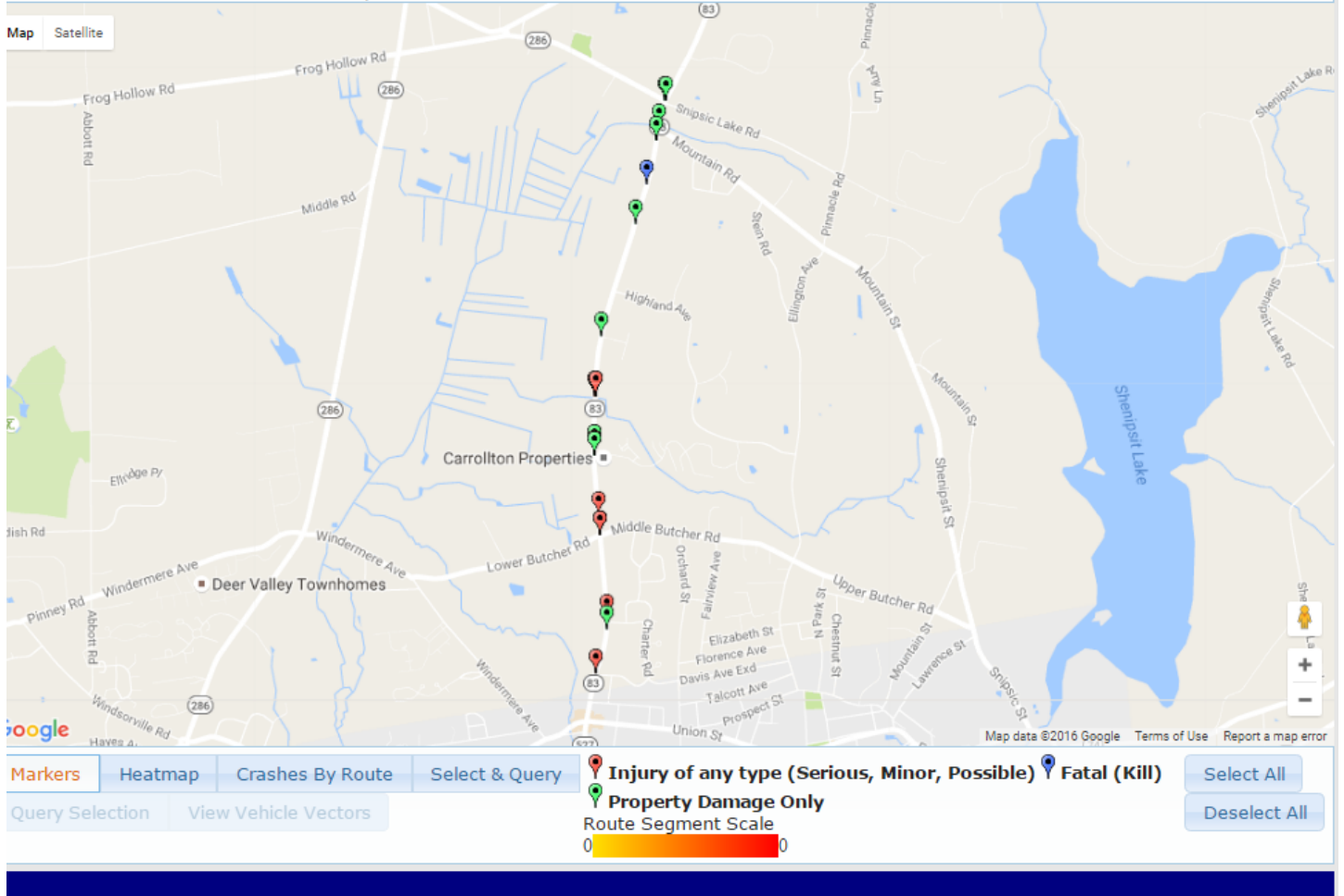
2015 Crashes

UConn

Connecticut Crash Data Repository

Search Criteria:

Dataset: mrucc
Date From: 01/01/2015
Date To: 12/31/2015
Towns: Ellington
Town & Route: Town:48 Route:83 Intersection:undefined Milepost:15-17.65
Crash Severity: Injury of any type (Serious, Minor, Possible), Fatal (Kill), Property Damage Only
Crash Status: Complete





Road Safety Audit – Ellington

Crash Summary

Data: 3 years (2012-2014)

There was 1 crash that involved pedestrians.

There were no crashes involving bicyclists.

Severity Type	Number of Crashes	
Property Damage Only	67	73%
Injury (No fatality)	25	27%
Fatality	0	0%
Total	92	

Manner of Crash / Collision Impact	Number of Crashes	
Unknown	0	0%
Sideswipe-Same Direction	3	3%
Rear-end	47	51%
Turning-Intersecting Paths	19	21%
Turning-Opposite Direction	4	4%
Fixed Object	9	10%
Backing	3	3%
Angle	3	3%
Turning-Same Direction	1	1%
Moving Object	0	0%
Parking	0	0%
Pedestrian	1	1%
Overturn	0	0%
Head-on	1	1%
Sideswipe-Opposite Direction	1	1%
Miscellaneous- Non Collision	0	0%
Total	92	



Weather Condition	Number of Crashes	
Snow	1	1%
Rain	16	17%
No Adverse Condition	74	80%
Unknown	0	0%
Fog	0	0%
Other	1	1%
Blowing Sand, Soil, Dirt or Snow	0	0%
Severe Crosswinds	0	0%
Sleet, Hail	0	0%
Total	92	

Light Condition	Number of Crashes	
Dark-Not Lighted	7	8%
Dark-Lighted	15	16%
Daylight	70	76%
Dusk	0	0%
Unknown	0	0%
Dawn	0	0%
Total	92	

Road Surface Condition	Number of Crashes	
Snow/Slush	1	1%
Wet	19	21%
Dry	70	76%
Unknown	0	0%
Ice	2	2%
Other	0	0.0%
Total	92	



Time		Number of Crashes	
0:00	0:59	0	0%
1:00	1:59	1	1%
2:00	2:59	1	1%
3:00	3:59	0	0%
4:00	4:59	1	1%
5:00	5:59	0	0%
6:00	6:59	3	3%
7:00	7:59	4	4%
8:00	8:59	1	1%
9:00	9:59	5	5%
10:00	10:59	0	0%
11:00	11:59	9	10%
12:00	12:59	3	3%
13:00	13:59	7	8%
14:00	14:59	11	12%
15:00	15:59	10	11%
16:00	16:59	4	4%
17:00	17:59	10	11%
18:00	18:59	9	10%
19:00	19:59	3	3%
20:00	20:59	4	4%
21:00	21:59	2	2%
22:00	22:59	3	3%
23:00	23:59	1	1%
Total		92	

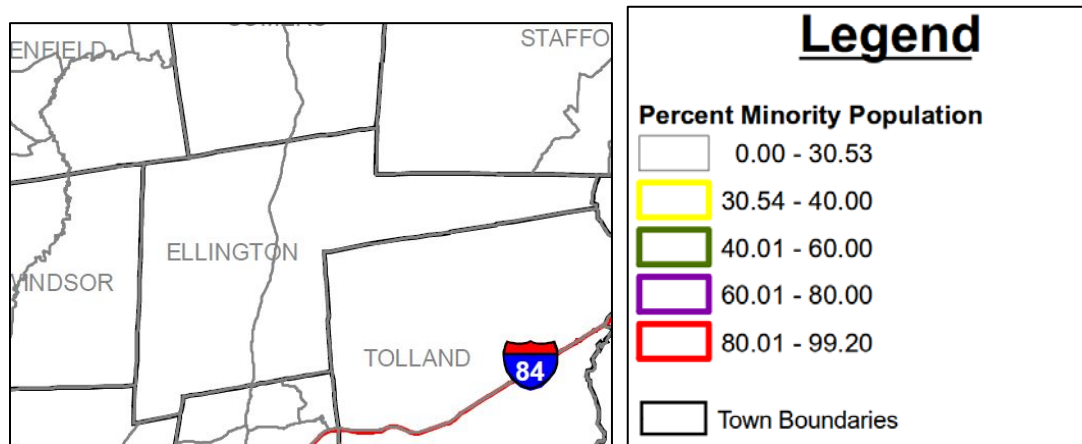
Ellington - Rte 83 (Sidewalk)

Legend

- Sidewalk Both Sides
- No Sidewalk
- Signalized Intersection
- Stop Controlled Intersection
- Crosswalk
- Pedestrian Crossing Sign
- School Zone Crossing Sign
- Waterway
- Bridge or Culvert



- The statewide average percentage minority population is 30.53%. Within the vicinity of Route 83 up to 30% of residents are minorities.



Air Quality

- Ellington's CIPP number 705
- Ellington is within the Greater CT Marginal Ozone Area
- Ellington is within a CO Attainment Area



COMMUNITY
connectivity program

Appendix D



AECOM
Built to deliver a better world

S:\6000dwg\6306 Ellington\6306-1308West Rd Sidewalk\Preliminary West Rd SW.dwg 11/3/2016 10:56:35 AM EDT

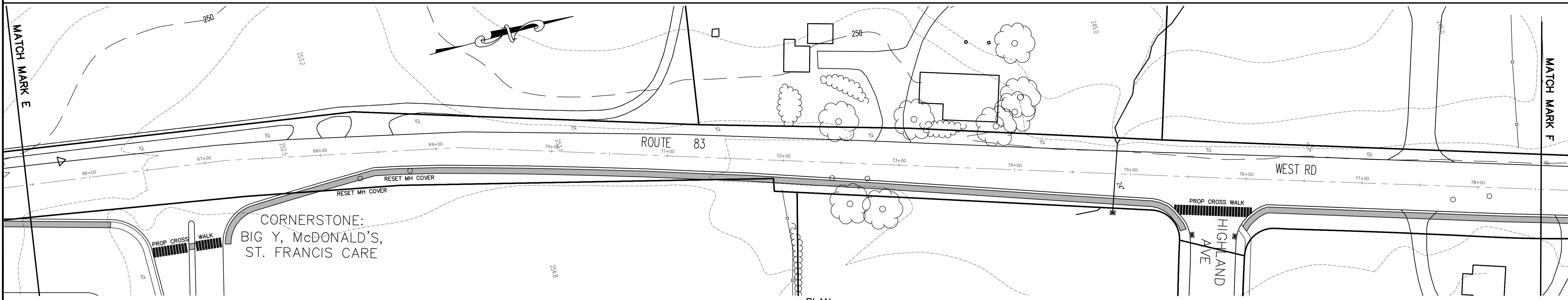
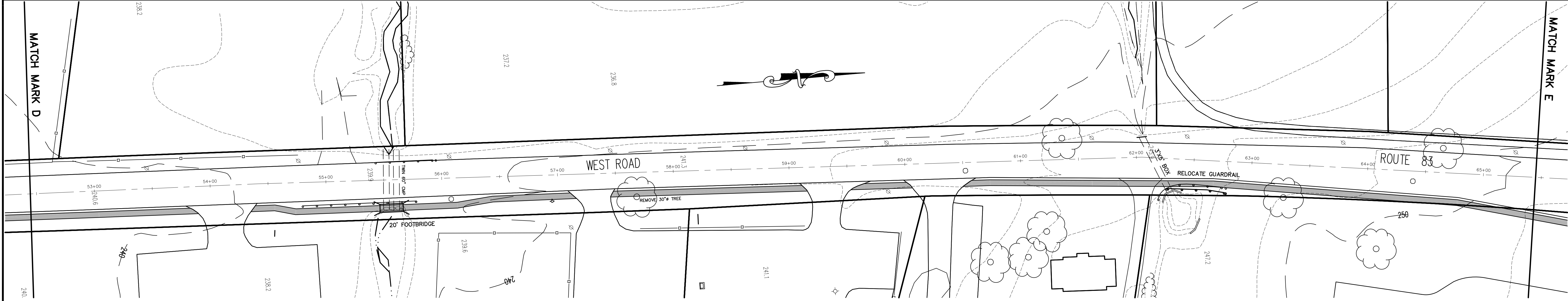
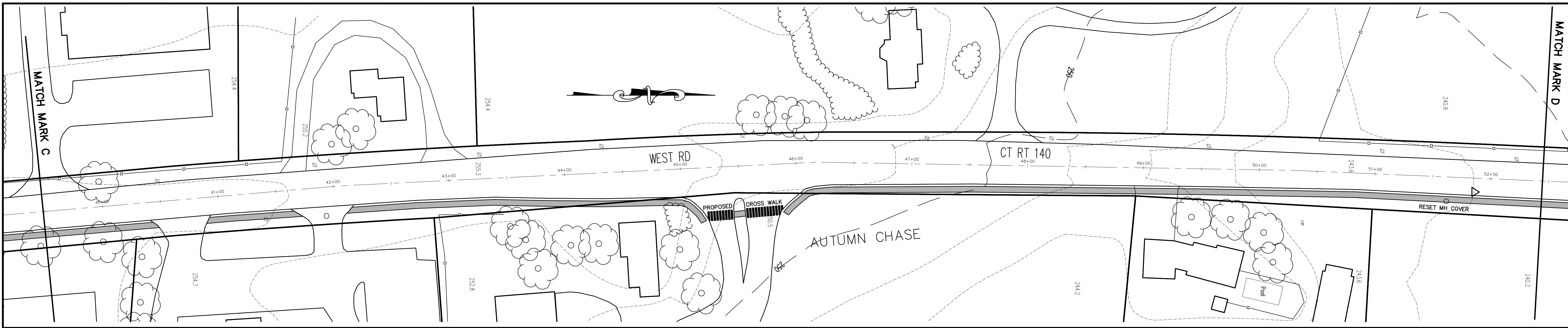


NOTE:
PROPOSED SIDEWALKS SHOWN SHADED

PLAN
SCALE 1" = 40'

REVISED	SIDEWALK STUDY	SCALE
	WEST / SOMERS ROAD	1" = 40'
	CT ROUTE 83	DATE
	ELLINGTON, CONNECTICUT	2/4/16
	BUCK & BUCK, LLC	COMM. NO.
	ENGINEERS	6306-1308
	HARTFORD, CONNECTICUT	DRAWING NO.
DRAWN BY: GBH	THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION EXCEPT UNDER THE SUPERVISION OF THE ENGINEER	1

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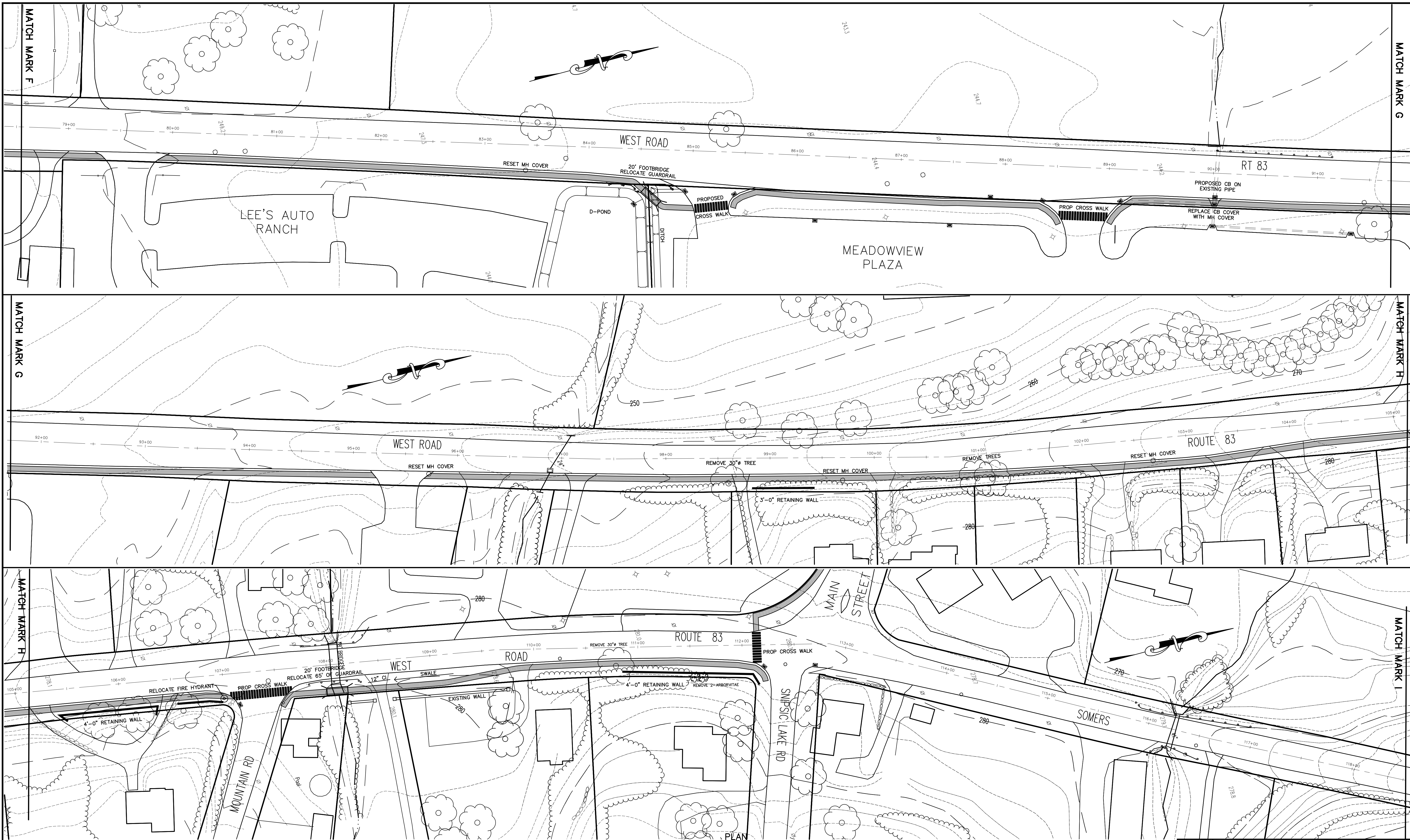


PLAN
SCALE 1" = 40'

NOTE:
PROPOSED SIDEWALKS SHOWN SHADED

REVISED	SIDEWALK STUDY	SCALE
	WEST / SOMERS ROAD	1" = 40'
	CT ROUTE 83	DATE
	ELLINGTON, CONNECTICUT	2/4/16
		COMM. NO.
	BUCK & BUCK, LLC	6306-1308
	ENGINEERS	DRAWING NO.
	HARTFORD, CONNECTICUT	2
DRAWN BY: GBH	THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION EXCEPT UNDER THE SUPERVISION OF THE ENGINEER	

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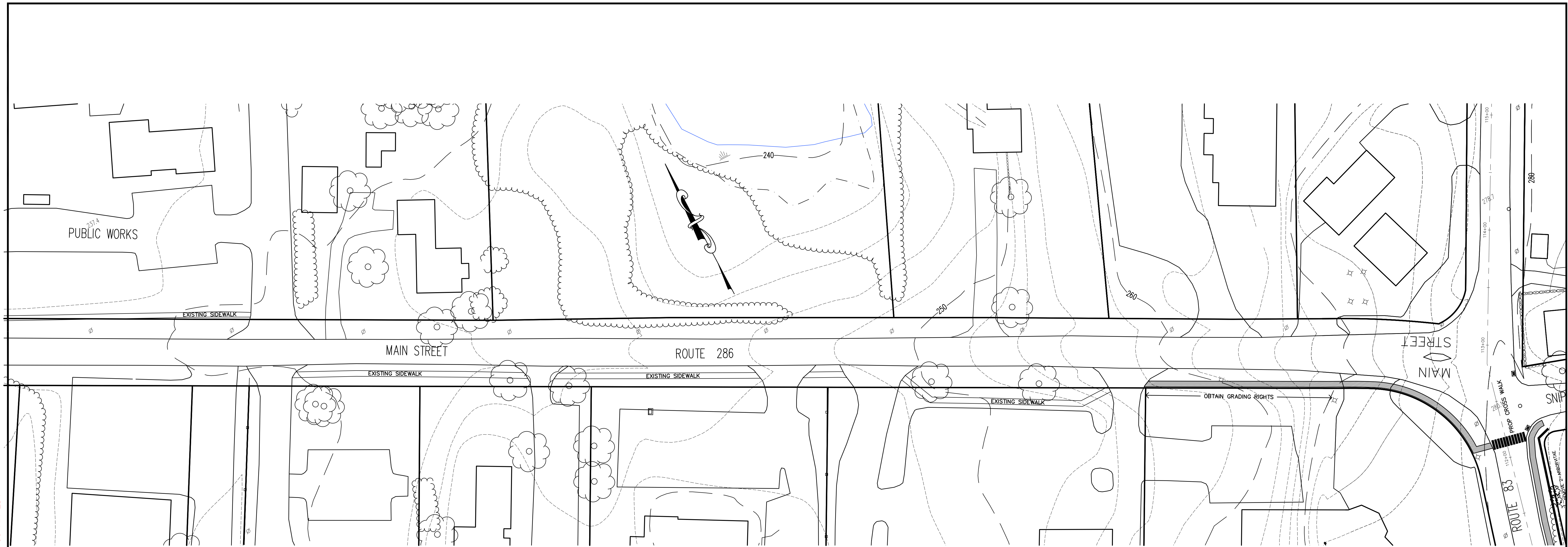


PLAN
SCALE 1" = 40'

NOTE:
PROPOSED SIDEWALKS SHOWN SHADED

REVISED	SIDEWALK STUDY	SCALE
	WEST / SOMERS ROAD	1" = 40'
	CT ROUTE 83	DATE
	ELLINGTON, CONNECTICUT	2/4/16
	BUCK & BUCK, LLC	COMM. NO.
	ENGINEERS	6306-1308
	HARTFORD, CONNECTICUT	DRAWING NO.
DRAWN BY: GBH		3
CHECKED BY:	THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION EXCEPT UNDER THE SUPERVISION OF THE ENGINEER	

S:\6000\dwg\6306 Ellington\6306-1308 West Rd Sidewalk\Preliminary West Rd SW.dwg 11/3/2016 11:00:55 AM EDT



PLAN
SCALE 1" = 40'

NOTE:
PROPOSED SIDEWALKS SHOWN SHADED

REVISED	SIDEWALK STUDY	SCALE
	MAIN STREET	1" = 40'
	CT ROUTE 286	DATE
	ELLINGTON, CONNECTICUT	2/4/16
	BUCK & BUCK, LLC	COMM. NO.
	ENGINEERS	6306-1308
DRAWN BY:	HARTFORD, CONNECTICUT	DRAWING NO.
GBH		4
CHECKED BY:	THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION EXCEPT UNDER THE SUPERVISION OF THE ENGINEER	