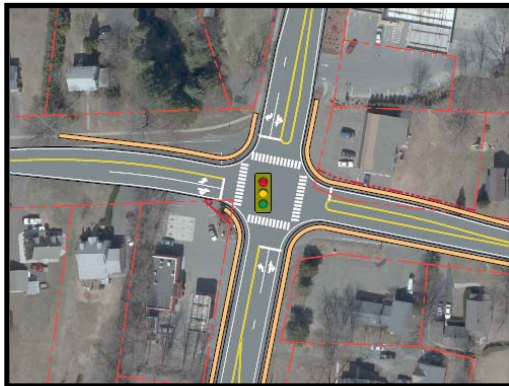
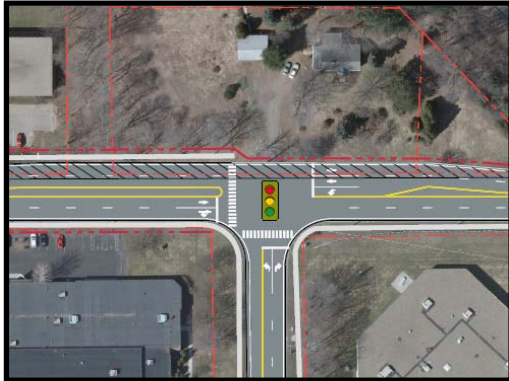


Route 3 Traffic and Development Study

Final Study Report – Executive Summary



Prepared For:
Capitol Region Council of Governments
and
Town of Rocky Hill



Prepared By:
Tighe & Bond, Inc



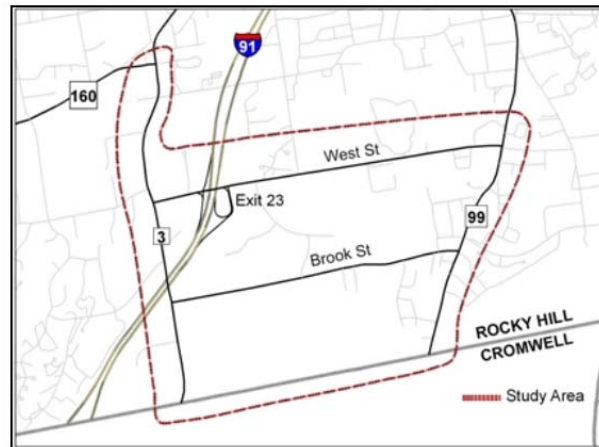
In Association with:
Susan Jones Moses & Associates
Fitzgerald & Halliday, Inc
Weston Solutions

May 31, 2012

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Executive Summary

The Route 3 Traffic and Development Study was conducted in cooperation with the Town of Rocky Hill, the Capitol Region Council of Governments (CRCOG), and the Connecticut Department of Transportation (ConnDOT). The purpose was to develop a comprehensive transportation plan for the study area to guide the Town and State on future transportation system improvements. The main study roadways include Cromwell Avenue (Route 3), West Street (SR 411), Brook Street, New Britain Avenue (Route 160), Elm Street (Route 160), and Main Street (Route 99). Local roads that play an important role in traffic circulation within this network were reviewed as well.



The study was conducted under the guidance of the Technical Review/Steering Committee (TR/SC) comprised of elected officials, town staff, a member of the town Planning and Zoning Commission, ConnDOT, and CRCOG. The TR/SC developed the following Mission Statement to serve as a foundation for the study:

Mission Statement

- *Develop sustainable strategies and recommendations to provide a measured approach, identifying both short-term and long range study area transportation system improvement scenarios that accommodate projected growth of the Town of Rocky Hill*
- *Identify improvement strategies that recognize and accommodate all modes of transportation within the study area, including transit, pedestrians, and bicycles, providing a complete transportation network*
- *Seek improvements to the study area transportation system that enhance and preserve the character and setting of residential neighborhoods*
- *Formalize a transportation system management and improvement plan that effectively correlates growth in development with enhancements to the study area transportation system and presents them in a manner that will assist the town in assessing development proposals.*

Engaging members of the public throughout this transportation planning process was a priority. Meetings with the public, Town Council, Chamber of Commerce, and the Economic Development Commission were held throughout the study at critical milestones to gain input and feedback on findings and concepts in the developmental stages. Appearances on the Mayor's Report television program and updates to the study website kept interested parties informed on the study progress. Additional outreach efforts included a survey and comment forms.

Needs and Deficiencies

Data analysis, field visits, and a review of both existing and future conditions were supplemented by discussions with stakeholders, town staff and officials, and members of the public to develop a set of needs and deficiencies for the study to address. The following summarizes issues that were identified, grouped by location.

Cromwell Avenue – Between New Britain Avenue and the Cromwell town line

- Statewide data indicates that the section of Cromwell Avenue from New Britain Avenue to Elm Street and from West Street to Cold Spring Road should be evaluated for safety improvements.
- Long vehicle queues develop during the afternoon peak hour on the northbound approach at New Britain Avenue, caused by the heavy left turning volume at this intersection.
- Reports that queues during the afternoon peak hour on New Britain Avenue's eastbound approach to Cromwell Avenue block emergency vehicles exiting Rocky Hill Fire Department Station 2 and nearby driveways.
- Public comments indicate that the installation of a traffic signal at Rhodes Road should be considered to facilitate safe egress from the street.
- The long cycle length at the cluster intersections at West Street and France Street results in long queues on both West Street and France Street.
- Field observations identified a queuing issue at the Dunkin Donuts near the West Street intersection.
- Prior to the installation of the traffic control signal at the Westside Market driveway, this intersection exhibited a high rate of collisions. The installation of the traffic control signal appears to have mitigated the safety issues at this intersection.
- During higher traffic periods, the left lane on the southbound approach at Brook Street becomes a defacto left turn lane, forcing all through traffic into the right lane. Just south of this intersection, the right lane becomes a right turn only lane, forcing through traffic into the left lane. It is undesirable to require multiple lane changes for through vehicles along this road segment.
- In the future, several intersections with Cromwell Avenue are expected to operate poorly during the morning and/or afternoon peak hours. These intersections include New Britain Avenue, Elm Street, France Street, and West Street.
- Existing lane configurations in some areas do not provide the necessary capacity for the expected future traffic volumes. Traffic movements of concern include Cromwell Avenue northbound left turns to New Britain Avenue and southbound left turns to West Street.

West Street

- Statewide data indicates that the intersection with the I-91 southbound ramps should be evaluated for safety improvements.
- At the I-91 southbound exit ramp, poor intersection sight lines are provided for right turning vehicles due to the bridge parapet and intersection geometry.
- Long vehicular queues for traffic turning left onto I-91, particularly during the afternoon peak hour.

West Street (cont'd)

- During peak traffic hours, eastbound queue lengths at the signalized intersection with the I-91 north ramps block access to the right turn lane due to its short length.
- Long vehicular queues on Capitol Boulevard for the left turn movement heading towards the I-91 interchange during the afternoon peak hour.
- Poor intersection sight distance provided from the stop bar looking east from Gilbert Avenue.
- Steep downhill gradient on West Street on the eastbound approach to the Main Street intersection encourages higher travel speeds.
- Currently, the offset intersection alignment at the intersection with Main Street, West Street, and Forest Street requires a split signal phase, resulting in poor afternoon peak hour traffic operations.
- In the future, the West Street intersections with the I-91 access ramps (southbound and northbound), Capital Boulevard, and Main Street are expected to operate poorly during the morning and/or afternoon peak hours.
- Long queue lengths are anticipated in the I-91 interchange area in the future.
- Existing lane configurations in some areas do not provide the necessary capacities for the expected future traffic volumes. Traffic movements of concern include the westbound movements at Cromwell Avenue, right turning movements to Capital Boulevard, and left turning movements from Capital Boulevard onto West Street.

Brook Street

- The existing truck restriction sign located at the intersection with Henkel Way is difficult to see and read. A similar observation was made at the intersection of Brook Street and Main Street.
- In the future, the intersection at Henkel Way is expected to operate poorly during the afternoon peak hour.
- High travel speeds and lack of delineation between the commercial and residential sections of the street.

Study Wide

- Lack of continuously adequate bicycle and pedestrian accommodations and along many of the study area roadways.
- Lack of adequate Transit rider accommodations within the study area. Need for bus shelters at stops on Capital Avenue near West Street and on Elm Street near Rose Hill Cemetery.

Recommendations

In line with the Mission Statement, the recommendations include improvements that address the existing and future needs of motor vehicles and alternative modes of transportation. The set of recommendations range from improvements at particular intersections and along roadway segments to a new local road providing improved circulation throughout the study area.

The following briefly summarizes each of the recommended improvements by location.

Cromwell Avenue at Inwood Road

- Widen Cromwell Avenue along the west side of the road south of the intersection with Inwood Road to facilitate the extension of two southbound travel lanes through the intersection.
- Provide an exclusive left turn lane into Inwood Road for northbound traffic along with a through lane. Conduct minor widening along the east side of Cromwell Avenue.
- Provide sidewalks to enhance connectivity in this area.



Cromwell Avenue at Brook Street

- Widen Cromwell Avenue to provide a short exclusive southbound exclusive left turn lane to Brook Street, removing left turning vehicles from the through traffic stream.
- Install new sidewalk along both sides of Cromwell Avenue to connect with existing sidewalk. Crosswalks are recommended on the south approach of Cromwell Avenue and on Brook Street.



Cromwell Avenue at France Street/West Street

- Phase 1: Widen the France Street eastbound approach to Cromwell Avenue to a two lane approach, with an exclusive right turn lane and a through/left turn lane. This improvement is intended to mitigate the long queues on France Street during the peak traffic hours.
- Phase 2: Widen Cromwell Avenue to provide an additional southbound left turn lane at the intersection of West Street to improve future traffic operations.



Cromwell Avenue, Elm Street, and New Britain Avenue

- Widen New Britain Avenue to two lanes in the westbound direction from the intersection at Cromwell Avenue to the existing two westbound lanes leading to Hayes Road.
- Extend the length of the existing exclusive right turn on New Britain Avenue approaching Cromwell Avenue to provide additional vehicle storage.
- Coordinate with Rocky Hill Fire Department regarding the potential for hardwired fire pre-emption from Station 2 to nearby signalized intersections
- Widen Cromwell Avenue to provide double left turns at both New Britain Avenue in the northbound direction and at Elm Street in the southbound direction.
- Widen the segment between the intersections with New Britain Avenue and Elm Street to provide additional storage for vehicle queuing and reduce travel lane and shoulder widths in the segment to minimize the impacts to adjacent commercial properties and parking areas.
- Encourage access management and inter-parcel connections between commercial parcels to improve Cromwell Avenue safety and traffic operations.



Cromwell Avenue, Elm Street, and New Britain Avenue (cont'd)

- Widen Elm Street between Cromwell Avenue and the Big Y signalized driveway to provide two eastbound lanes. The additional eastbound lane is needed to accept a proposed double southbound left turn from Cromwell Avenue.
- Provide in-fill sidewalk, provide additional crosswalks and pedestrian ramps at Cromwell Avenue intersections.



Interstate 91 Interchange Area Recommendations

- Modify the lane use on the westbound approach along West Street at the I-91 southbound ramps to provide a double left turn onto the ramp. Widen the southbound entrance ramp to accept a double left turn movement.
- Widen West Street to provide a double left turn and two through lanes on the westbound approach to the northbound ramps. Install the widening along the south side of West Street.
- Modify the existing channelized free flow right turn lane into Capital Boulevard to provide a larger turning radius to provide increased lane capacity.



West Street at Main Street Recommendation

- Realign West Street and Forest Street to eliminate the offset alignment of the side streets and provide a conventional intersection configuration. Modify the signal operations to eliminate the split phasing.
- Provide exclusive left turn lanes on the eastbound and northbound intersection approaches. Provide an exclusive right turn lane on the southbound approach.
- Provide five-foot wide shoulders along Main Street to accommodate bicycle traffic. Install sidewalks along Main Street, and crosswalks on each intersection leg.



Brook Street at Henkel Way Recommendation

- Reconstruct the existing stop sign controlled intersection with a modern roundabout to improve traffic conditions, provide a traffic calming element on Brook Street, and provide the capability for errant trucks to turn around in the intersection and avoid travelling in the residential neighborhood to the east.
- Install sidewalks that connect to existing sidewalk to the west and the proposed sidewalks to the east.
- Provide aesthetic treatments along the intersection approaches and in the center island.



Brook Street Streetscape Enhancements

- Widen Brook Street to provide a 32' wide paved cross section, including 11' travel lanes and 5' shoulders, to accommodate bicycle traffic on either side of the street.
- Install sidewalks along both sides of Brook Street to accommodate pedestrians. Review the opportunity to include pedestrian level aesthetic lights along the street. Plant street trees along both sides of the street to enhance the character and aesthetics of the roadway.



Elm Street Connector – New Local Road

- Provide an extension from Corporate Place to Elm Street to enhance the transportation network and improve circulation.
- Include measures for pedestrians and bicycles including either a sidewalk and 5 foot shoulders or a multi-use path alongside the new local road.

Transit Improvements

- Provide concrete pads and bus stop shelters, conforming to aesthetics of other recently installed Town shelters, on Capitol Boulevard near West Street and on the south side of Elm Street at Rose Hill Cemetery
- Provide ADAAG compliant access

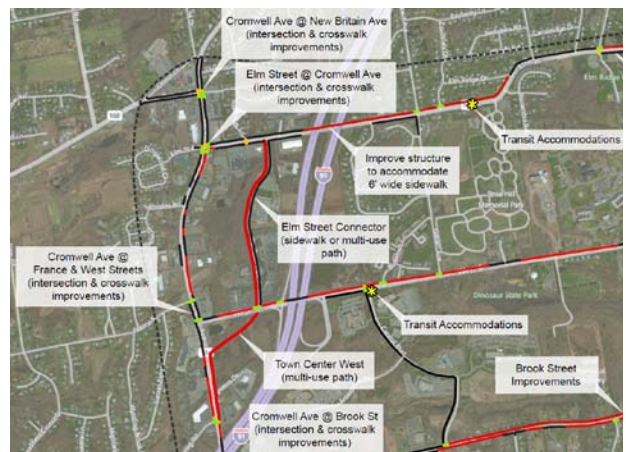


Typical Rocky Hill Bus Shelter



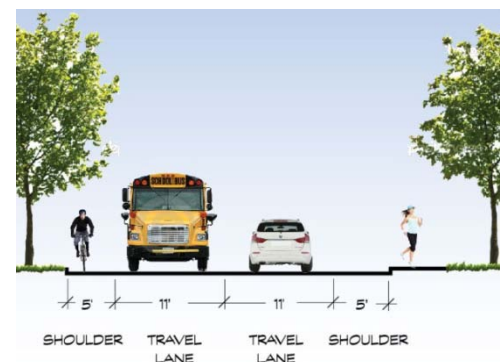
Study Area Pedestrian Improvements

- In-fill and extend sidewalk infrastructure to provide continuous facilities for pedestrians on Elm Street, West Street, Brook Street, and Cromwell Avenue within the study area.
- Upgrade intersections to accommodate pedestrians via marked crosswalks, pedestrian signals, and ADA accessible curb ramps.
- Provide a multi-use path along the east side of Cromwell Avenue from Cold Spring Road north, ending at a connection to the proposed multi-use path at the Town Center West development. The path will connect the residential areas west of the study area to West Street and Elm Streets via proposed pedestrian facilities. Continue efforts for developer construction of a multi-use path through the Town Center West development from Cromwell Avenue to West Street opposite Corporate Place.



Study Area Bicycle Improvements

- Widen shoulders along Elm Street and Main Street to provide a 5' wide minimum shoulder for cyclists.
- Construct multi-use pathway on Cromwell Avenue between Cold Springs Road and the Town Center West development. Connect to Town Center West pathways connecting to West Street and the Elm Street Connector pedestrian and cycling amenities.



Implementation Plan

The Transportation Improvement Program includes 13 potential projects that address the roadway network, transit system, and accommodations for pedestrian and bicycle traffic in the study area. Specifically, as shown in Table E-1, the study recommends physical roadway improvements, one roadway/streetscape enhancement, and several spot improvements to transportation facilities.

The Transportation Improvement Program classifies projects by size and priority for implementation. A project's size is determined by its complexity, estimated impacts, and anticipated permitting requirements and is categorized as small, medium, or large. Whether a project addresses an existing or future need establishes a project's priority: short, mid, or long term. Estimated project costs are provided based on 2012 dollars.

Table E-1: Summary of Projects in Implementation Plan

Project Description	Project Type	Project Priority	Project Cost
1. Intersection Improvements at Cromwell Avenue and West Street / France Street - (Phase 1)	Small	Short-Term	\$250,000
2. Intersection Improvements at Cromwell Avenue and West Street / France Street – (Phase 2)	Medium	Short-Term	\$1,300,000
3. Intersection Improvements at Brook Street and Henkel Way	Small	Short-Term	\$800,000
4. West Street and Interstate 91 Interchange Improvements	Large	Short-Term	\$2,300,000
5. Cromwell Avenue Improvements from Elm Street to New Britain Avenue	Large	Short-Term ¹	\$5,300,000
6. Study Area Transit Facility Improvements	Small	Short-Term	\$50,000
7. Study Area Sidewalk and Pedestrian Facility Improvements	N/A ²	Short-Term	\$4,400,000 ³
8. Study Area Bicycle Facility Enhancements	N/A ²	Short-Term	\$2,500,000 ³
9. Intersection Improvements at West Street and Main Street	Medium	Mid-Term	\$1,100,000
10. Brook Street Neighborhood Streetscape and Multimodal Improvements	Large	Mid-Term	\$2,300,000
11. Intersection Improvements at Cromwell Avenue and Inwood Road	Small	Long-Term	\$500,000
12. Intersection Improvements at Cromwell Avenue and Brook Street	Medium	Long-Term	\$1,300,000
13. Elm Street Connector Roadway	Large	Long-Term	\$3,200,000

¹ Short-term priority only for recommendations addressing New Britain Avenue queues and Fire Station 2 access concerns

² For summary purposes, Bicycle and Pedestrian Improvements are grouped as a combined project for each mode, however implementation will likely occur as many separate projects as funding from various sources becomes available

³ Not including costs of bicycle and pedestrian improvements identified as components of other recommended projects