



Town of Wolfeboro

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BOARD OF SELECTMEN
Linda T. Murray, Chairman
David A. Senecal, Vice Chairman
Brad Harriman
Q. David Bowers
Paul O'Brien

TOWN MANAGER

September 17th, 2018

Donald Lyford, P.E., Project Manager
NH Department of Transportation
PO Box 483
Concord, NH 03302-0483

Subject: Town of Wolfeboro, Ten Year Plan, Route 28 Corridor Improvements

Dear Mr. Lyford:

Please accept this Report as a representation of the culmination of five (5) years of work on the part of the Route 28 Steering Committee and the sole opportunity for the Town of Wolfeboro to comment on and present its vision for the community's primary access way. The recommendations presented herein have been presented to community stakeholders as part of two public engagement forums, and we believe they represent a consensus-based and context sensitive approach led by the Steering Committee. On August 1st, 2018, the Wolfeboro Board of Selectmen unanimously voted to accept the Route 28 Corridor Preliminary Project Planning Report and the recommendations contained herein.

However, this report does *not* capture a significant cultural component of Wolfeboro that lends itself to the ongoing functionality of the Route 28 Corridor: courteousness and politeness. Despite high levels of congestion, in many portions of the corridor, residents, guests, and passers-through alike do move through safely and securely.

At its community core Wolfeboro is defined by its traditional New England character and the presence of Lakes Winnepesaukee and Wentworth. Scenic vistas such as that at the existing Pickering Corner intersection of NH Routes 109 and 28 define the gateway to our village core and the picturesque entrance to Brewster Academy. Transitional corridors like that from the Alton town line into our community complex area at Huggins Hospital, the public safety facility, and newly approved library building renovation, create the 'look and feel' that define Wolfeboro's aesthetic.

Several segments of the corridor have been analyzed and recommend for upgrade by the Steering Committee process. At the Pickering Corner intersection alone, five (5) independent alternatives have been considered. As a Board, we feel that data and information are critical to understand the short and long term impacts of each of the alternatives analyzed within this Report. The following recommendations were unanimously approved by Board of Selectmen

84 South Main Street Post Office Box 629 Wolfeboro, New Hampshire 03894

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1. The Enhanced Intersection Design is the PREFERRED option with the following eight (8) conditions:
 - a. Brewster Academy maintains existing Academy Drive entrance
 - b. An additional crosswalk to be created from the "Richardson House" to the Three Sisters service station
 - c. Extension of the right-turning lane heading North on South Main St. (Route 28)
 - d. Reduction of the speed limit in the area to 20 MPH from the Wolfeboro Children's Center to the Carpenter School
 - e. Installation of signage alerting motorists to Stop for Pedestrians
 - f. Enhanced lighting to be installed at all crosswalks that is aesthetically compatible with Wolfeboro's character. Reflective painting for crosswalks should also be utilized.
 - g. Improved striping of the left turn lane and straight lane entering Center Street heading South on South Main Street (Route 28)
 - h. Enhanced curbing at both service station businesses to provide pedestrian protection, but large enough to facilitate fuel delivery and safe motorist use. Mountable curbs should be used if possible.
2. The Mini-Roundabout Design is an ACCEPTABLE design but conditional upon access being maintained to the two (2) existing businesses and ensuring that full use and protection of Brewster Academy and Brewster Field which are both critical to the community.
3. The Signalized Intersection is NOT PREFERRED.

In the interim, the Town of Wolfeboro hopes to work with NHDOT to consider implementing/testing of lower cost improvements at the Pickering Corner intersection including signage, curb work, and striping.

In order to protect the stakeholders of the corridor, we would also request that further investigation be conducted into lowering the speed limits in the segment from Kingswood Golf Course into the Village Core. Further, we recognize the importance of comprehensive updates to pedestrian lighting through the corridor in crosswalks and sidewalk areas. We hope that any critical lighting upgrades implemented are done with Wolfeboro's traditional aesthetic in mind.

Thank you for your consideration of this report. We look forward to working alongside the New Hampshire Department of Transportation (NHDOT) through the context sensitive solutions process to refine these recommendations and create the most Wolfeboro-compatible project possible.

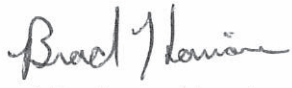
Sincerely,



Linda T. Murray, Chairman



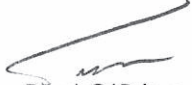
David A. Senecal, Vice Chairman



Brad Harriman, Member



Q. David Bowers, Member



Paul O'Brien, Member
Wolfeboro Board of Selectmen

TOWN OF WOLFEBORO

ROUTE 28 CORRIDOR PRELIMINARY PROJECT PLANNING REPORT

PREPARED BY: ROUTE 28 STEERING COMMITTEE
DATE: 07/18/2018



TABLE OF CONTENTS

Acknowledgments.....	3
Introduction.....	3
Project Overview.....	3
Public Engagement.....	4
Context Sensitive Solutions	4
Problem and Vision Statements.....	4
Pickering Corner (Segment 4).....	6
Review of Existing Conditions	6
Designs	6
Analysis (Alternatives Matrix)	7
Recommendation	7
Hospital/Safety Building/Library (Segment 4).....	8
Review of Existing Conditions	8
Design/Analysis.....	8
Recommendation	9
Kingswood Complex/Golf Course (Segment 3).....	9
Review of Existing Conditions	9
Design/Analysis.....	9
Recommendation	9
Weston’s Auto/Middleton Road (Segment 1+2)	10
Review of Existing Conditions	10
Design/Analysis.....	10
Recommendation	10
Crosswalk Lighting.....	10
Next Steps	11
Attachments.....	12
Attachment 1: Pickering Corner Design Alternative Matrix.....	12
Attachment 2: Pickering Corner Design Alternatives.....	14
Attachment 3: Pickering Corner-Alton Corridor Designs	20
Attachment 4: 2018 Public Forum Notes	24
Attachment 5: Segment Problem and Needs Statements	27

ACKNOWLEDGMENTS

The Town of Wolfeboro would like to extend a thank you to the following members of the Route 28 Steering Committee who were invaluable to the development of this Report:

Kathy Barnard
Maryann Belanger
Lisa Braiterman
Mary DeVries
Dave Ford
Cindy Melanson

Linda Murray
Roger Murray
Paul O'Brien
Dave Senecal
Matt Sullivan
Bob Tougher

INTRODUCTION

The intent of this report is to document the progress of the Town of Wolfeboro in preparation for the Route 28 (Main Street) reconstruction project scheduled to occur in 2024 from the Pickering Corner Intersection (Center and Main Street) to the Wolfeboro-Alton town line. This report is intended to inform the Board of Selectmen and New Hampshire Department of Transportation (NHDOT) during the pre-construction decision making process.

For a detailed report of corridor conditions, including infrastructure conditions and traffic conditions, please see the 2017 Corridor Overview Report prepared by Stantec Consulting Services. Copies of this report are available from the Town of Wolfeboro Public Works Office.

PROJECT OVERVIEW

The Town of Wolfeboro Route 28 Corridor project is a New Hampshire Department of Transportation (NHDOT) Ten Year Plan (TYP) Project. The extent of the project is from the intersection of Route 109 with Route 28 at Pickering Corner, south to the Alton town line. At this time, construction is planned for 2024 with preliminary engineering and right-of-way acquisition beginning in 2018. The estimated total project cost is \$10,521,761.

The project area includes (4) Corridor Study Segments:

- Segment 1: From the Wolfeboro/Alton to Middleton Road (4,750')
- Segment 2: From Middleton Road to Pleasant Valley Road (5,250')
- Segment 3: From Pleasant Valley Road to Christian Ridge Road (4,450')
- Segment 4: From Christian Ridge Road to Pickering Corner (2,350')

PUBLIC ENGAGEMENT

CONTEXT SENSITIVE SOLUTIONS

The Town of Wolfeboro has committed to implementing the Context Sensitive Solutions (CSS) process for transportation and infrastructure planning in accordance with the New Hampshire Department of Transportation (NHDOT) and United States Department of Transportation (USDOT) Federal Highway Administration (FHWA).

Per FHWA, CSS is defined as:

“CSS is a collaborative, interdisciplinary, and holistic approach to the development of transportation projects. The CSS process involves all stakeholders, including community members, elected officials, interest groups, and affected local, state, and federal agencies. The CSS process values equally the needs of agency and community, considering all trade-offs in decision-making.”

For the Route 28 Corridor Planning Process, the Steering Committee used the following customized process for design development review:

1. Identifying Problems and Needs
2. Develop Project Problem Statement
3. Develop Project Vision Statement
4. Identify and Review Alternatives
5. Build Consensus on a Course of Action

The Context Sensitive Solutions process which is a collaborative interdisciplinary approach that involves all stakeholders to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic and environmental resources, while maintaining safety and mobility. CSS is an approach that considers the total context within which a transportation improvement project will exist.

A “Stakeholder” is anyone who has something at stake in a specific policy or particular project; all who use or are affected by the transportation facility are considered “Stakeholders”.

Context-sensitive design asks questions first about the need and purpose of the transportation project, then addresses equally: safety, mobility and preservation of scenic, aesthetic, historic, environmental and other community values. It involves a collaborative, interdisciplinary approach in which citizens are a part of the design team.

PROBLEM AND VISION STATEMENTS

On September 23, 2010 Stakeholders were invited to participate in the first Route 28 Stakeholders meeting. Input from this initial meeting was used to develop a list of problems and needs of each section of the corridor (see Attachment 4). Based on this input the following **Problem Statement** was developed:

“Route 28 Corridor from the Wolfeboro/Alton Town Line thru Wolfeboro Falls (aka South Main Street, Pickering Corner and Center Street) is subject to commuter and seasonal congestion

caused by vehicle numbers in excess of the road's capacity with no viable by-pass. Conflicts between pedestrians, bicyclists and vehicles compromise the safety and efficiency of the corridor. Existing driveway cuts, buildings, sightlines and topography further complicate safety and transportation needs. The Corridor as it presently exists does not balance community goals from the Town's Master Plan, including:

- *Friendly pedestrian ways;*
- *Maintenance of the rural, historic and scenic character;*
- *Fostering of economic and social vitality; and*
- *Sustaining a high quality of life for residents, visitors, business owners and commuters."*

The CSS process recommends developing a "Vision Statement" which will assist engineers in drafting possible designs and help Stakeholders screen these alternative solutions. A Vision Statement compiles the desired characteristics of a place at a specific future time, often 10 to 15 years. This statement should address transportation goals and include other community and environmental goals related to the transportation corridor. From input received from Stakeholders and the Town's Master Plan, the following **Vision Statement** was developed:

"Wolfeboro's gateway to its village core will be enhanced by the Route 28 corridor, which will provide access to downtown areas while moving traffic through in a slow, steady and efficient manner, while providing safe, friendly and aesthetically pleasing walk ways and bike paths for pedestrians. People will feel comfortable using the corridor which will promote:

- *The town's social life,*
- *Recreational offerings, historic and natural resource features and*
- *Economic vitality while balancing the*
- *Needs/interests of residents, businesses and visitors.*
- *It will become a town priority to rebuild and maintain this important transportation asset, while considering:*
 - *Safety,*
 - *Environment,*
 - *Property rights,*
 - *Natural and historically significant resources,*
 - *Scenic views and*
 - *Economic impacts."*

On May 10, 2011 a second Stakeholders Meeting was held to present and discuss the Problem and Vision Statements and alternative designs that were developed to address Stakeholder concerns. A third Stakeholders meeting was held on Tuesday May 24th, 2011 to review and discuss the alternative designs developed by Stantec to address identified problems and needs and the Stakeholders Vision.

A steering committee was developed to screen the proposed alternatives based on the Problem and Vision Statements and to recommend a preferred solution for each segment. The original Steering committee was formed in July of 2011 and focused its effort on segment 5, from Pickering corner to Wolfeboro Falls.

At this time, the Town was in the process of designing a NHDOT Municipally Managed project for the reconstruction of that segment and focused its efforts on Center Street, up to, but not including the redesign of Pickering Corner. The significant decisions made were to recommend a cross section (11 foot lanes, 4 foot shoulder, granite curb and sidewalk) and to relocate the intersection of Lehner Street and Center Street 10 feet east to improve site distance for vehicles coming out of Lehner Street. That project is currently under construction and scheduled to be completed by the end of 2018.

Following recommendations made in 2011 on segment 5, the Steering Committee went on hiatus.

The Route 28 Steering Committee was reconvened to address segments 1 through 4 prior to NHDOT starting preliminary design work on the Route 28 Ten Year Plan (TYP) Project. The reconvened committee comprised of the following community representatives:

Kathy Barnard
Maryann Belanger
Lisa Braiterman
Mary DeVries
Dave Ford
Cindy Melanson

Linda Murray
Roger Murray
Paul O'Brien
Dave Senecal
Matt Sullivan
Bob Tougher

The Committee met on six occasions in 2017 and 2018. In the interest of collecting input on the proposed alternative designs for the four corridor segments, the Steering Committee hosted two public forums. Stakeholders were presented with past work of the committee, that is, the agreed upon Problem and Vision Statements and the forums were structured with the intent of presenting the alternative designs in smaller groups in order to solicit input. The first meeting was focused on Pickering Corner and was attended by almost 100 people.

PICKERING CORNER (SEGMENT 4)

REVIEW OF EXISTING CONDITIONS

The intersection of Route 109 and Route 28, known as Pickering Corner, is the gateway to Wolfeboro's village center. Further, it serves as the pedestrian connection between Brewster Academy and the downtown walking area.

Traffic patterns in this area are highly congested during peak flows in the summer season and during school drop-off times at the Kingswood Complex and Carpenter School. It is anticipated that pedestrian and vehicle congestion will increase with the exciting redevelopment of the Pickering House project.

This intersection is home to two operational gas stations/convenience stores (Three Sisters and The Corner Store). The gas stations have been in existence for decades and are important businesses supplying critical services to the community. The Committee was very concerned about intersection improvements and the potential negative impact on these businesses. The committee agreed that it was critical that these 2 businesses remain and that the final solution had to assure that they could continue to function as they presently do.

Brewster Academy property abuts this intersection opposite Center Street and along South Main Street. On the Brewster property, there are 3 historical monuments, mature trees, an historic building (the Richardson House) and the large playing field that hosts the annual Huggins Hospital Fair as well as other public & sporting events. The committee was concerned about the impacts to these resources and considered these impacts during the review process.

DESIGNS

In cooperation with the Town's engineering consultant, Stantec, Town staff and the Steering Committee oversaw the development of three (3) broad concept designs with a total of five (5) specific alternatives. Four (4) leg alternatives incorporate the relocation of the Brewster Academy entrance from Academy

Drive to the Pickering Corner intersection. Amenity to this solution has been expressed by Brewster Academy staff who were part of the community engagement process. These designs are included in Attachment 2 and are as follows:

- Enhanced Intersection (Increased-Stacking Lanes and Striping)
- Signalized Intersection
 - 3 Leg
 - 4 Leg
- Mini-Roundabout
 - 3 Leg
 - 4 Leg

ANALYSIS (ALTERNATIVES MATRIX)

The five alternatives were analyzed in the context of the following twelve (12) factors. The result of that analysis is shown in Appendix 1 and was presented to stakeholders on January 18th, 2018.

- | | |
|---|---------------------------|
| ▪ Parking | ▪ |
| ▪ Stacking Lane | ▪ Vehicle Traffic |
| ▪ Corner Store and Three Sisters Impacts | ▪ Pedestrian Safety |
| ▪ Brewster Academy Impact (Memorial Field and Events) | ▪ Trees |
| ▪ Pickering House, School, Church | ▪ Aesthetics and Lighting |
| ▪ Monument Area | ▪ Other |
| | ▪ Utilities |

RECOMMENDATION

On May 31st, 2018, the Route 28 Steering Committee reconvened at the request of the Board of Selectmen to develop a ranking for the three (3) options presented above. The following recommendations were unanimously approved by the Steering Committee:

1. The Enhanced Intersection Design is the **PREFERRED** option with the following eight (8) conditions:
 - a. Brewster Academy maintains existing Academy Drive entrance
 - b. An additional crosswalk to be created from the “Richardson House” to the Three Sisters service station
 - c. Extension of the right-turning lane heading North on South Main St. (Route 28)
 - d. Reduction of the speed limit in the area to 20 MPH from the Wolfeboro Children’s Center to the Carpenter School
 - e. Installation of signage alerting motorists to Stop for Pedestrians
 - f. Enhanced lighting to be installed at all crosswalks that is aesthetically compatible with Wolfeboro’s character. Reflective painting for crosswalks should also be utilized.
 - g. Improved striping of the left turn lane and straight lane entering Center Street heading South on South Main Street (Route 28)
 - h. Enhanced curbing at both service station businesses to provide pedestrian protection, but large enough to facilitate fuel delivery and safe motorist use. Mountable curbs should be used if possible.
2. The Mini-Roundabout Design is an **ACCEPTABLE** design but conditional upon access being maintained to the two (2) existing businesses and ensuring that full use and protection of Brewster Academy and Brewster Field which are both critical to the community.
3. The Signalized Intersection is **NOT PREFERRED**.

In the interim, the Town of Wolfeboro will work with NHDOT to consider implementing/testing of lower cost improvements at the Pickering Corner intersection including signage, curb work, and striping.

HOSPITAL/SAFETY BUILDING/LIBRARY (SEGMENT 4)

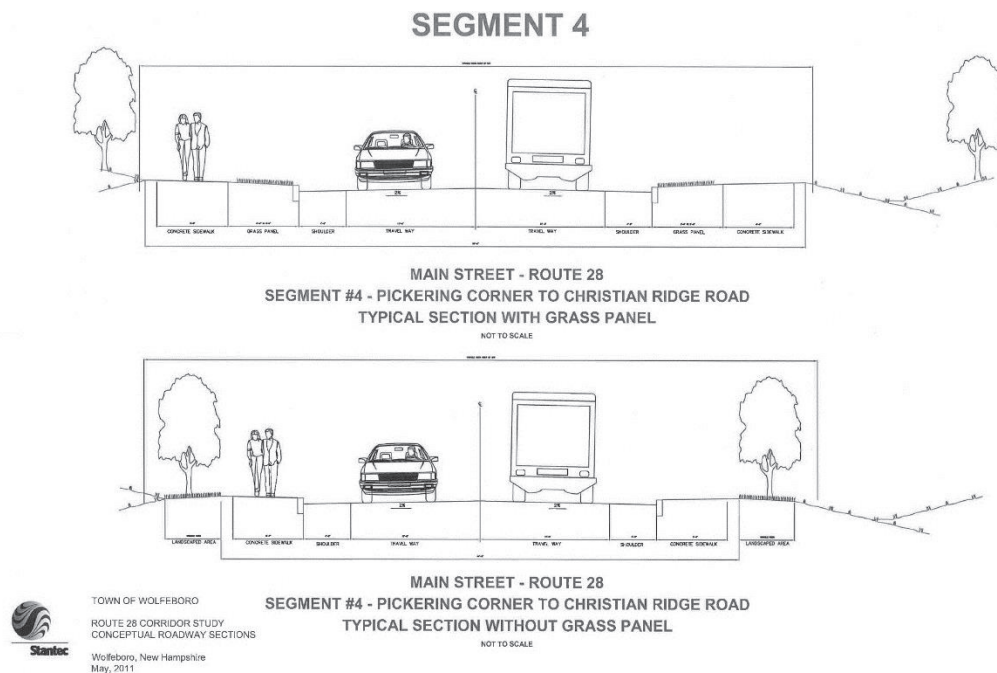
REVIEW OF EXISTING CONDITIONS

This section of the corridor is a mixed pedestrian and vehicular area with access to several community resources and services. These include, but are not limited to, Huggins Hospital, the Wolfeboro Public Safety Building, Wolfeboro Public Library and All Saints Episcopal Church. It should be noted that the Library was approved for addition and renovation in 2018-2019 and its new entrance was considered during the review process. The Public Safety complex is in the initial stages of developing a facility upgrade plan to include both Fire and Police. The Public Safety Complex conceptual plan is still in discussions with the upgrade project scheduled for 2022.

The corridor functions largely due to what is described as vehicle-to-vehicle courtesy. Despite the lack of dedicated turning lanes throughout the corridor, vehicles tend to yield to one another during high volume congestion.

DESIGN/ANALYSIS

The proposed design for this section of the corridor includes the alignment of the Public Safety Building entrance/exit with Christian Ridge Road. Additionally, while center turn lanes were evaluated for this portion of the corridor, it was determined that the preferred corridor cross section, with its widening shoulder area for bicycle use and pedestrian safety, green space, and sidewalk would not allow the addition of center turn lanes based on the existing right-of-way and proximity of buildings. The Committee recommends the cross section below with a grass panel between sidewalk and curb.



Although the design documents illustrate an entrance/exit only configuration for the reconfiguration of the Public Safety Building, this design is subject to the findings of the 2018 Public Safety Building Feasibility Study and associated preliminary site planning. The proposed design includes a flashing beacon to be placed at the entrance and/or exit of the public safety facility.

The Committee also considered relocation of the crosswalk between the library facility and All-Saints Church. The northern sidewalk adjacent to All-Saints is the primary pedestrian connection to the High School facility. In order to facilitate a safer pedestrian infrastructure, a re-alignment may be necessary after library reconstruction as part of this project. It was also noted that the All-Saints Church does use

the front entrance for funerals and weddings and that the design should include a drop off area to preserve these important church functions.

RECOMMENDATION

After review of public comment, the steering committee agreed via consensus to recommend the design shown in the attachments subject to further investigation and modeling by NHDOT and to incorporate a suitable drop off area for the church and evaluate the appropriate location/signage of crosswalk.

KINGSWOOD COMPLEX/GOLF COURSE (SEGMENT 3)

REVIEW OF EXISTING CONDITIONS

This existing corridor segment from east to west begins with the intersection of Pleasant Valley Road and Route 28. This presents a potential safety hazard as the entrance to Route 28 is controlled via a Yield sign that is frequently disregarded or can create some ‘close calls’ with moving traffic on Route 28 heading north.

Moving west, Route 28 reaches the primary entrance to Kingswood High School, McManus Road. During peak drop-off/pick-up times, this area is subject to high levels of congestion originating from downtown Wolfeboro and other points south. Currently, the south-heading lane is a single lane with no turning area available.

Further west, the existing de-facto crossing (not defined crosswalk) at Kingswood Golf Course has been a source of community concern for several years. Higher speeds, combined with somewhat limited visibility, make pedestrian cross at this location problematic. A pedestrian crossing sign exists, but is not adequate for ensuring the safety of golfers and other pedestrians.

DESIGN/ANALYSIS

The proposed design “T’s” the intersection of Pleasant Valley Road and Route 28, with an associated “Stop” sign.

At the intersection with McManus Road, a turning lane has been proposed to allow pass-through south-heading traffic to move while traffic sits in queue for the entrance to Kingswood High School.

The proposed design is somewhat complicated by the required establishment of green space for property owners currently with frontage on Pleasant Valley Road. Additionally, existing driveways will require extension and reconfiguration as part of the proposed design.

RECOMMENDATION

The Committee recommends the “T-ing” of Pleasant Valley Road with Route 28 per the design discussed above. Further investigation is needed of solutions for the crossing of Kingswood Golf Course.

Additionally, the Committee recommends a reduction of the speed limit in this corridor to 30MPH at all times. If the speed limit cannot be decreased, a crosswalk at the golf course is not recommended.

WESTON'S AUTO/MIDDLETON ROAD (SEGMENT 1+2)

REVIEW OF EXISTING CONDITIONS

The existing intersection of Route 28 and Middleton Road is complex. Currently, Middleton Road is controlled via a "Stop" sign. Route 28 entering from the south (Alton) has full right-of-way within the intersection. Route 28 entering from the north has right-of-way to continue to the south, but is subject to a "Stop" if seeking entrance to Middleton Road.

This traffic pattern is further complicated by the entrance to Weston's Auto Body directly to the east and multiple parking entrances for the financial services building on the west side of Route 28.

DESIGN/ANALYSIS

Limited right-of-way area makes adjustment to this intersection challenging. A signalized intersection has been explored in the past, but volumes from Middleton Road do not dictate this reconfiguration.

The proposed design does not impact the traffic circulation pattern at the intersection. However, reconstruction would include re-striping and may include small alignment modifications.

RECOMMENDATION

The Steering Committee recommends the modifications recommended in the Design/Analysis section above. Additionally, staff recommend that the shoulder be widened from Weston's Auto Body to the Alton town line to allow for safer bicycle use in that section of the corridor.

CROSSWALK LIGHTING

For all crosswalks proposed for reconstruction as part of this project, additional lighting will be required per Federal Highway standards. The design for that lighting will be Cobra-style lighting as depicted below to ensure pedestrian safety.

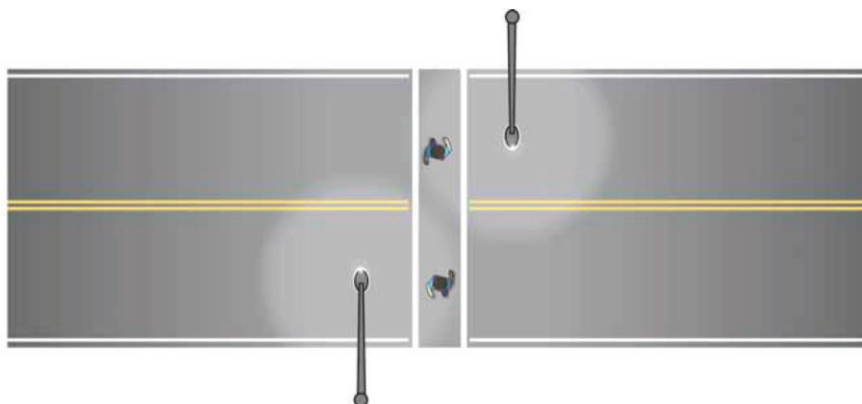


Figure 12. Drawing. New design for midblock crosswalk lighting layout.

NHDOT has informed the Town that all mid-block crosswalks will also have to have Rectangular Flashing Beacons, which could be solar powered and will flash when pedestrians push a button. The committee is concerned about these crosswalks, but would like to have NHDOT input on the final design, prior to making a recommendation.

NEXT STEPS

The Route 28 Steering Committee will present this report to the BOS, request its input and upon finalizing this report, submit it to the New Hampshire Department of Transportation (NHDOT). NHDOT will be deciding soon if it will perform the Route 28 design in-house or if it will select an outside consultant. Once the NHDOT preliminary design process begins, NHDOT should be contacting the Town for discussion on issues raised in this report. It should be noted that NHDOT was notified about the CSS process and invited to stakeholder meetings. Three NHDOT staff did attend the last Public Forum held on March 15, 2018. A final recommendation of this report is that NHDOT conduct a speed study for the corridor from the Huggins Hospital/Library area to the Weston's Auto Body intersection in the interest of reducing the speed limit from 40 MPH to consistent village-oriented speed limit throughout the length of this corridor.

ATTACHMENTS

ATTACHMENT 1: PICKERING CORNER DESIGN ALTERNATIVE MATRIX

Route 28 Steering Committee - Alternatives Matrix of Impacts

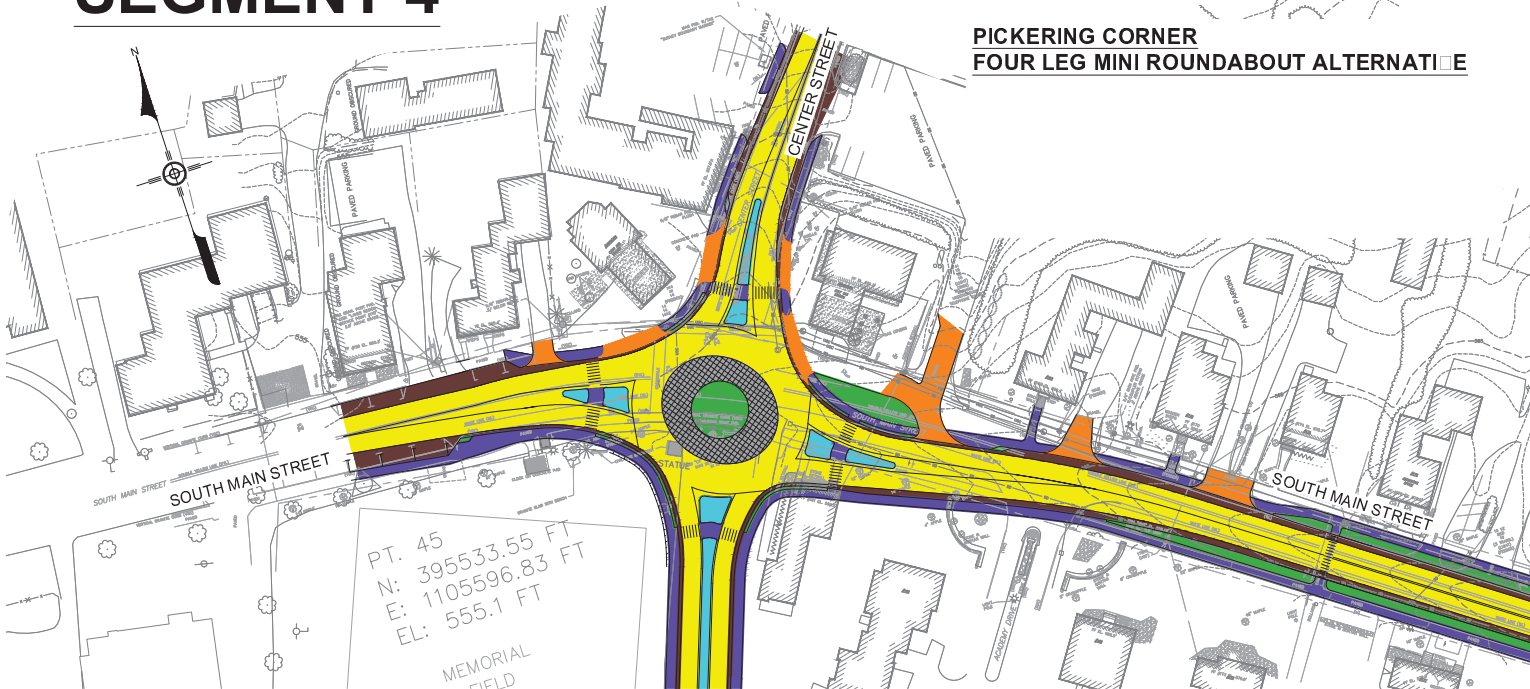
	Mini 4-Way Roundabout (110')*	Mini 3-Way Roundabout (110')*	Four Way Traffic Signals	Three Way Traffic Signals	Unmodified Intersection (Increased Stacking Lane and Striping)
Parking	<ul style="list-style-type: none"> 1 Parking Space Lost 	<ul style="list-style-type: none"> 1 Parking Space Lost 	<ul style="list-style-type: none"> 13 Parking Spaces Lost Reduction of Stacking Lane size may minimize impact to parking 	<ul style="list-style-type: none"> 13 Parking Spaces Lost Reduction of Stacking Lane size may minimize impact to parking 	<ul style="list-style-type: none"> No Parking Space Loss
Stacking Lanes	<ul style="list-style-type: none"> 4 Lanes - No True "Stacking" Lanes 	<ul style="list-style-type: none"> 3 Lanes - No True "Stacking" Lanes 	<ul style="list-style-type: none"> 8 Lanes (Most impervious surface) 	<ul style="list-style-type: none"> 6 Lanes (Less Impervious Surface) 	<ul style="list-style-type: none"> 6 (Striped)
Corner Store/ Three Sisters	<ul style="list-style-type: none"> More parking/circulation area at gas stations Potential for fuel delivery issues Sidewalk improvements will result in modified curb cuts Dependent on design of roundabout striping/curbing at entrance Additional area created adjacent to Three Sisters 	<ul style="list-style-type: none"> More parking/circulation area at gas stations Potential for fuel delivery issues Sidewalk improvements will result in modified curb cuts Dependent on design of roundabout striping/curbing at entrance Additional area created adjacent to Three Sisters 	<ul style="list-style-type: none"> Significant issue for fuel deliveries Slight property loss to Three Sisters of ~800-1,000 sq. ft. Modified driveway cuts will restrict access to stations, but will provide some order Current parking for fuel deliveries blocks sidewalk 	<ul style="list-style-type: none"> Potential for fuel delivery issues Slight property loss to Three Sisters of ~800-1,000 sq. ft. Modified driveway cuts will restrict access to stations, but will provide some order Current parking for fuel deliveries blocks sidewalk 	<ul style="list-style-type: none"> Slightly modified driveway cuts may impact access to stations (less impact than signals but more structured than existing conditions)
Brewster Academy/ Memorial Field/ Public Events	<ul style="list-style-type: none"> ~7,000 sq. ft. of impact along South Main St. to southeast of proposed Brewster entrance 3,000 sq. ft. of Memorial Field buffer impact Brewster's Richardson house must be moved* Impact on parking for events by crossing existing grass area 	<ul style="list-style-type: none"> 3,000 sq. ft. of Memorial Field buffer impact Brewster's Richardson house must be moved* Impact on parking for events by crossing existing grassed area 	<ul style="list-style-type: none"> Relocation of Academy Drive No property loss to Memorial Field (but indirect proximity impact) Parking for Brewster's Richardson house lost (investigate garage orientation) Property loss due to creation of stacking lane entering Brewster Brewster's Richardson house does not require relocation Impact on parking for events by crossing existing grassed area 	<ul style="list-style-type: none"> Least impact to Memorial Field Driveway relocation may be necessary for Brewster's Richardson house 	<ul style="list-style-type: none"> Dependent upon Brewster Academy Master Planning efforts Brewster Academy may request driveway entrance move under no-build scenario
Pickering House/ School/Church	<ul style="list-style-type: none"> Less impact than signalized intersections as limited parking loss anticipated 	<ul style="list-style-type: none"> Less impact than signalized intersections as limited parking loss anticipated 	<ul style="list-style-type: none"> Parking loss impact Increase in traffic calming 	<ul style="list-style-type: none"> Parking loss impact Increase in traffic calming 	<ul style="list-style-type: none"> No Impacts
Monuments	<ul style="list-style-type: none"> Civil War Monument must be relocated Additional monument may need to be relocated adjacent to sidewalk May involve re-planning monument park Flagpole relocation necessary 	<ul style="list-style-type: none"> Civil War Monument must be relocated Additional monument may need to be relocated adjacent to sidewalk May involve re-planning monument park Flagpole relocation necessary 	<ul style="list-style-type: none"> Civil War Monument must be relocated Additional monument may need to be relocated adjacent to sidewalk 	<ul style="list-style-type: none"> No Monument Impacts 	<ul style="list-style-type: none"> No monument impacts
Vehicle Traffic	<ul style="list-style-type: none"> Better traffic flow anticipated for low/medium flows Unknown impacts for high/peak times Emergency Vehicle Access during peak flows may be issue To be analyzed by NHDOT 	<ul style="list-style-type: none"> Better traffic flow anticipated for low/medium flows Unknown impacts for high/peak times Emergency Vehicle Access during peak flows may be issue To be analyzed by NHDOT 	<ul style="list-style-type: none"> Slowest traffic flow during peak and provides structure and order to intersection Safer Center Street turning Traffic speeds may be increased during certain situations Longer signal cycle To be analyzed by NHDOT 	<ul style="list-style-type: none"> Slower traffic flow during peak and provides structure and order to intersection Safer Center Street turning Traffic speeds may be increased during certain situations To be analyzed by NHDOT 	<ul style="list-style-type: none"> Existing traffic pattern Provide some order and structure through striping and curbs Limited safety Delays on Center Street with limited delays on Main Street May more clearly define lanes of existing situation
Pedestrian Safety	<ul style="list-style-type: none"> Increased traffic calming slows traffic at all times Provision for safety islands No expected RFB's 4 crosswalks 	<ul style="list-style-type: none"> Increased traffic calming slows traffic at all times Provision for safety islands No expected RFB's 3 crosswalks 	<ul style="list-style-type: none"> Excellent Pedestrian Safety due to intersection "freezing" No expected RFB's in intersection Vehicle traffic brought closer to pedestrian areas Fuel truck deliveries block pedestrian access 4 crosswalks 	<ul style="list-style-type: none"> Excellent Pedestrian Safety due to intersection "freezing" No expected RFB's in intersection Vehicle traffic brought closer to pedestrian areas Fuel truck deliveries block pedestrian access 3 crosswalks No Tree Loss 	<ul style="list-style-type: none"> Not improved (2 crosswalks)
Trees	<ul style="list-style-type: none"> 7 Trees Lost (Replant Trees) 	<ul style="list-style-type: none"> 7 Trees Lost (Replant Trees) 	<ul style="list-style-type: none"> 2 Trees Lost (Replant Trees) 	<ul style="list-style-type: none"> No Tree Loss 	<ul style="list-style-type: none"> No Tree Loss
Aesthetics/ Lighting	<ul style="list-style-type: none"> Beautification element through landscaping Softest of solutions Less impervious surface Adding a unique and new gateway Increased lighting for crosswalks 	<ul style="list-style-type: none"> Beautification element through landscaping Softest of solutions Less impervious surface Adding a unique and new gateway Increased lighting for crosswalks 	<ul style="list-style-type: none"> Push buttons and other signalized intersection infrastructure may make Wolfeboro "not look like Wolfeboro" Most impervious surface Increased lighting for crosswalks 	<ul style="list-style-type: none"> Push buttons and other signalized intersection infrastructure may make Wolfeboro "not look like Wolfeboro" Increased lighting for crosswalks 	<ul style="list-style-type: none"> Increased lighting for crosswalks
Other			<ul style="list-style-type: none"> Maintenance Cost for Infrastructure 8 Signals 	<ul style="list-style-type: none"> Maintenance Cost for Infrastructure 6 Signals 	<ul style="list-style-type: none"> Potential for Traffic Control officer during peak flows
Utilities	<ul style="list-style-type: none"> 1 Utility Pole to be relocated 	<ul style="list-style-type: none"> 1 Utility Pole to be relocated 	<ul style="list-style-type: none"> 1 Utility Pole to be relocated 	<ul style="list-style-type: none"> No Utility Pole Impact Anticipated 	<ul style="list-style-type: none"> No Utility Pole Relocation

*Assumes relocation of Brewster's Richardson House will be funded by NHDOT

ATTACHMENT 2: PICKERING CORNER DESIGN ALTERNATIVES

SEGMENT 4

PICKERING CORNER
FOUR LEG MINI ROUNDABOUT ALTERNATIVE



**SOUTH MAIN ST (NH ROUTE 28) /
CENTER ST (NH ROUTE 28/109A) INTERSECTION
TOWN OF WOLFEBORO, NH**

SCALE: 1" = 30'



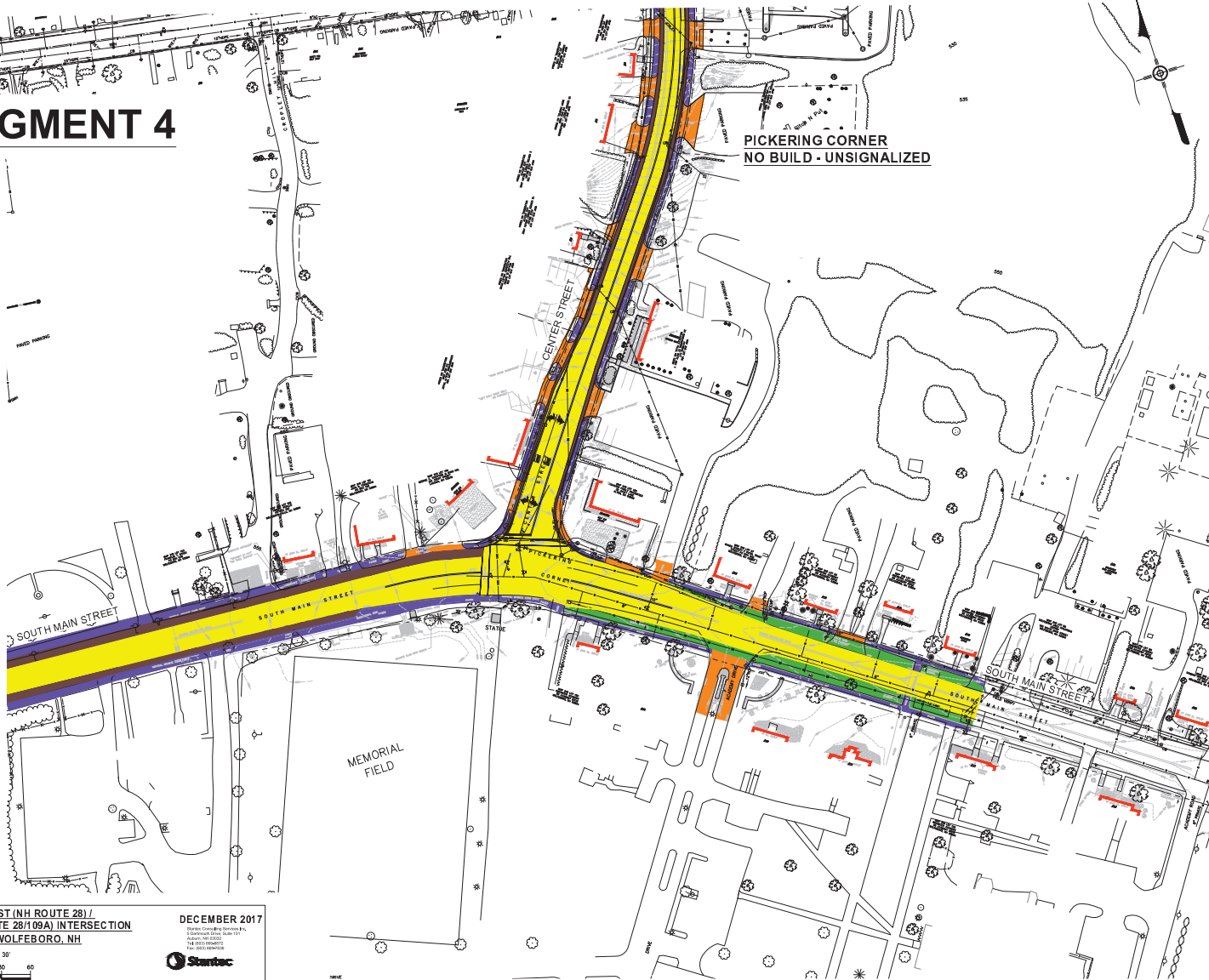
NOVEMBER 2017

Stantec Consulting Services Inc.
5 Dartmouth Drive, Suite 101
Auburn, NH 03032
Tel: (603) 669-8672
Fax: (603) 669-7636



SEGMENT 4

PICKERING CORNER
NO BUILD - UNSIGNALIZED



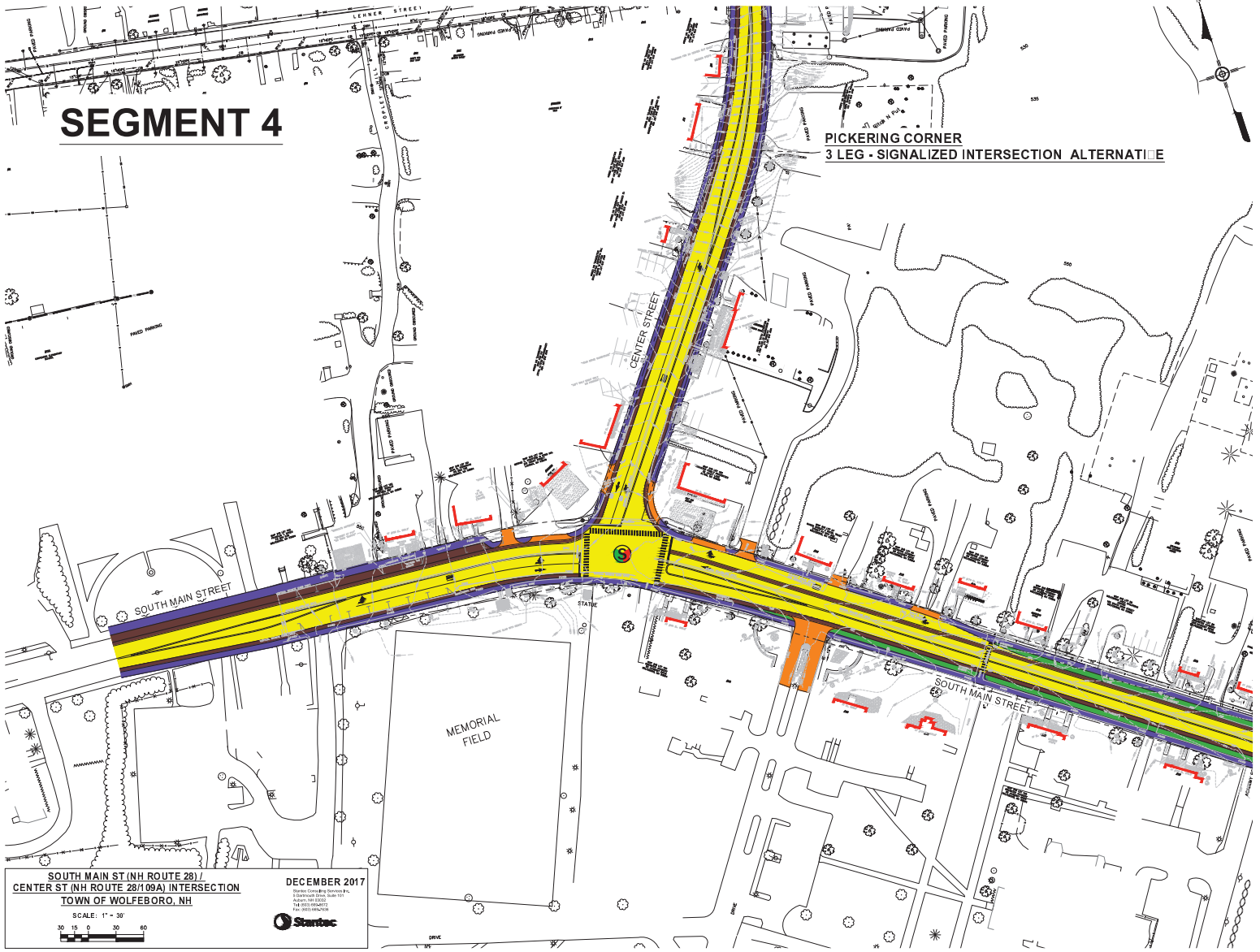
SOUTH MAIN ST (NH ROUTE 28) /
CENTER ST (NH ROUTE 28/109A) INTERSECTION
TOWN OF WOLFBORO, NH

DECEMBER 2017

Scale: Consulting Engineers P.C.
2000 North State Street
Rochester, NH 03003
Tel: 603.336.6600

SEGMENT 4

PICKERING CORNER
3 LEG - SIGNALIZED INTERSECTION ALTERNATIVE



SOUTH MAIN ST (NH ROUTE 28) /
CENTER ST (NH ROUTE 28/109A) INTERSECTION
TOWN OF WOLFEBORO, NH

DECEMBER 2017

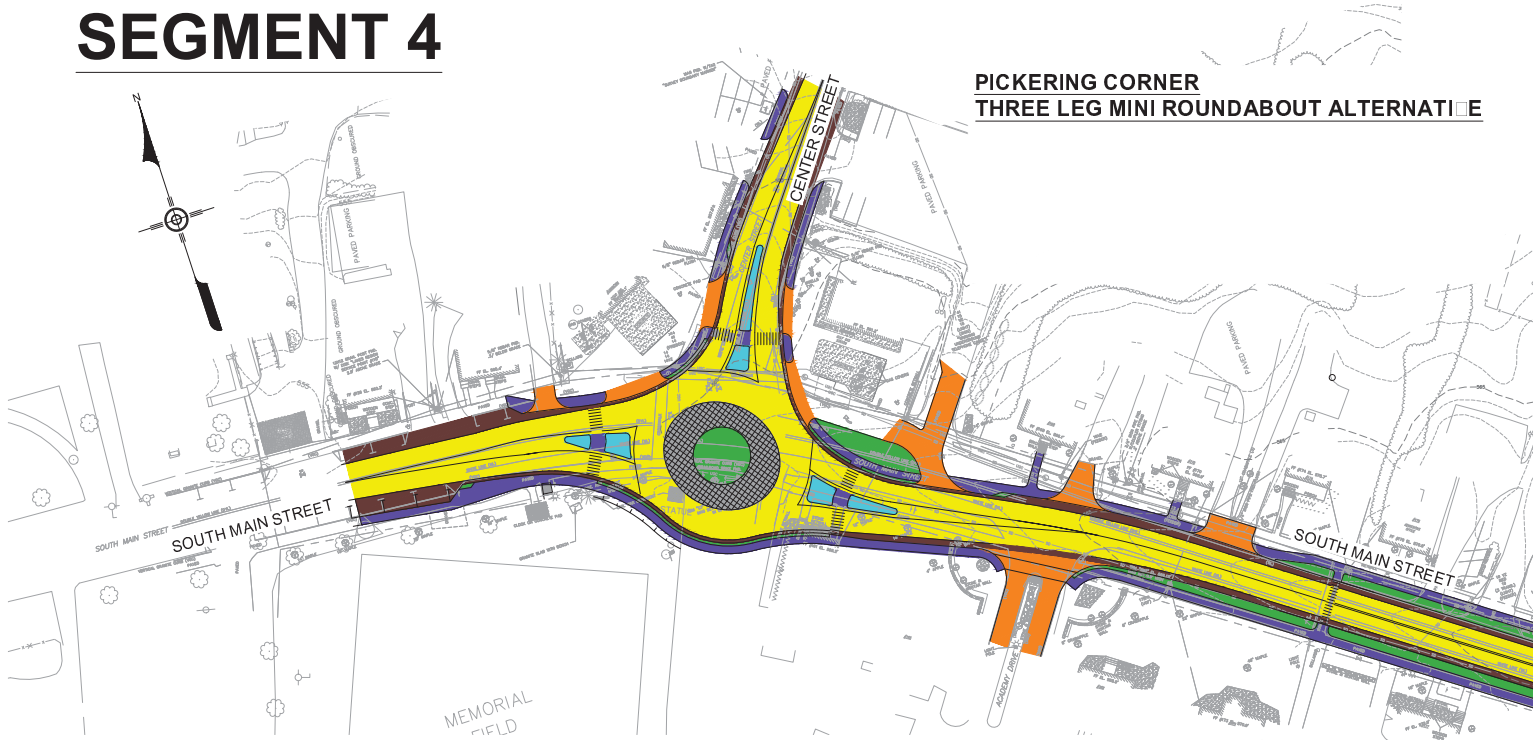
Stantec Consulting Services, Inc.
100 Water Street, Suite 1000
Amherst, NH 03025
Tel: 603.886.6200
Fax: 603.886.6201



SCALE: 1" = 30'
30 15 0 30 60

SEGMENT 4

PICKERING CORNER
THREE LEG MINI ROUNDABOUT ALTERNATIVE



**SOUTH MAIN ST (NH ROUTE 28) /
CENTER ST (NH ROUTE 28/109A) INTERSECTION
TOWN OF WOLFEBORO, NH**

SCALE: 1" = 30'



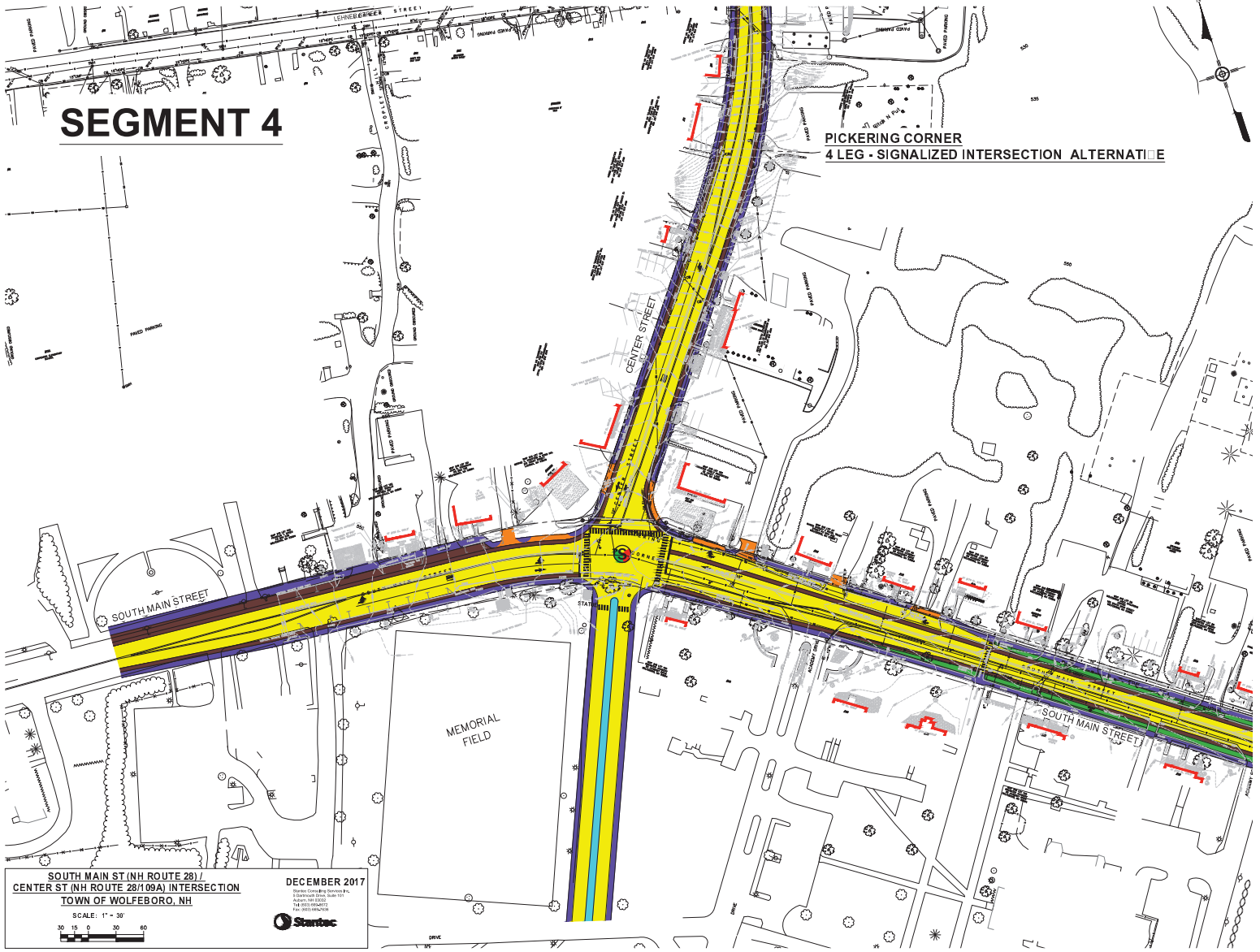
ANUAR 2018

Stantec Consulting Services Inc.
5 Dartmouth Drive, Suite 101
Auburn, NH 03032
Tel: (603) 669-8672
Fax: (603) 669-7636



SEGMENT 4

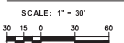
PICKERING CORNER
4 LEG - SIGNALIZED INTERSECTION ALTERNATIVE



SOUTH MAIN ST (NH ROUTE 28) /
CENTER ST (NH ROUTE 28/109A) INTERSECTION
TOWN OF WOLFEBORO, NH

DECEMBER 2017

Stantec Consulting Services Inc.
1000 North State Street
Amherst, NH 03025
Tel: 603.886.6200
Fax: 603.886.6201

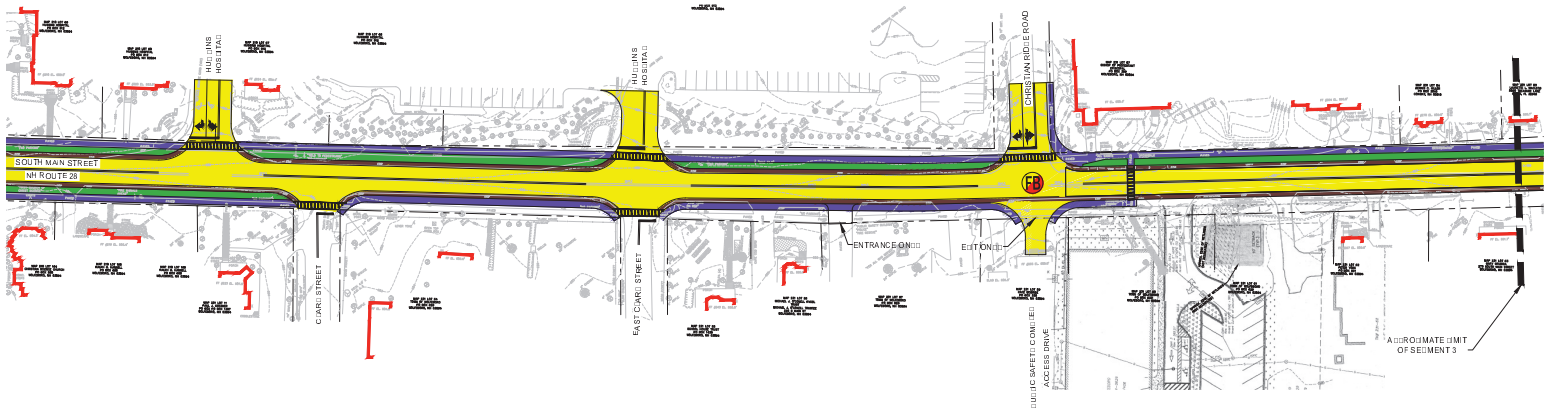


ATTACHMENT 3: PICKERING CORNER-ALTON CORRIDOR DESIGNS

SEGMENT 4



TOWN ADDITIONAL ALTERNATIVE



**SOUTH MAIN ST (NH ROUTE 28) /
SIDE STREET INTERSECTIONS
TOWN OF WOLFEBORO, NH**

SCALE: 1" = 20'



March 12, 2018
Stantec Consulting Services Inc.
3 Enterprise Drive, Suite 101
Auburn, NH 03032
Tel: (603) 896-4972
Fax: (603) 896-7638

SEGMENT 3

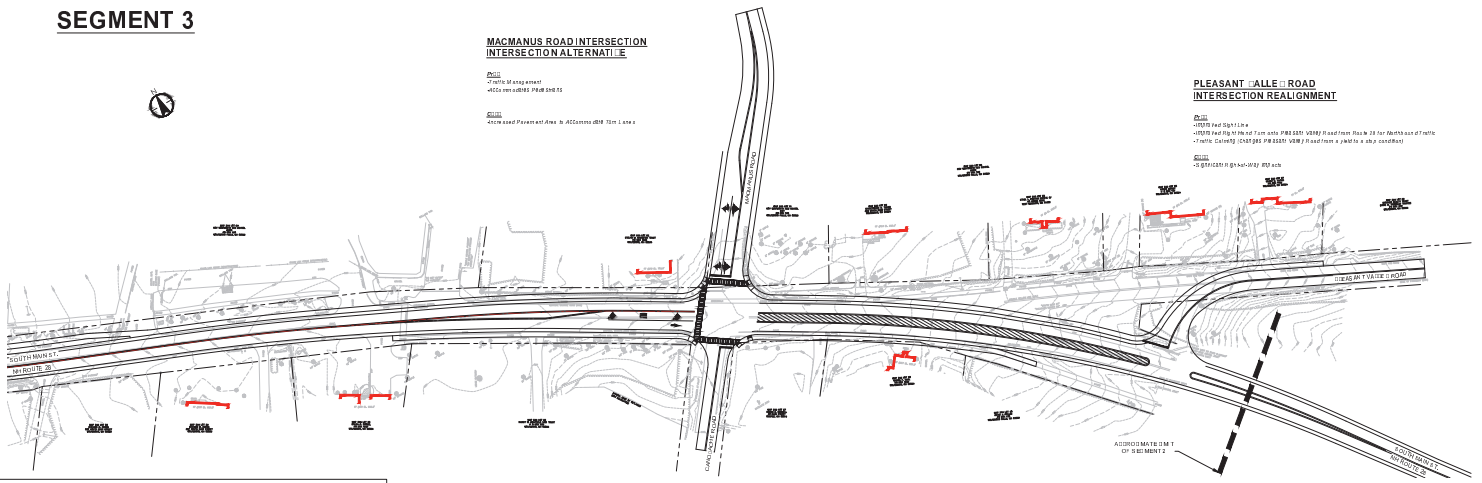


MACMANUS ROAD INTERSECTION INTERSECTION ALTERNATIVE

DATE: 01/10/18
 PROJECT: Pleasant Valley Road
 CLIENT: Town of Wolfboro, NH

PLEASANT VALLEY ROAD INTERSECTION REALIGNMENT

DATE: 01/10/18
 PROJECT: Pleasant Valley Road from Town to for Northside of the
 Town Center, Wolfboro, NH
 CLIENT: Town of Wolfboro, NH



**SOUTH MAIN STREET (NH ROUTE 28) /
 MACMANUS ROAD / PLEASANT VALLEY DRIVE
 TOWN OF WOLFBORO, NH**

MAY 12, 2018

Scale: 1" = 20'

SEGMENT 1

EXISTING INTERSECTION



**SOUTH MAIN ST (NH ROUTE 28) /
MIDDLETON ROAD INTERSECTION
TOWN OF WOLFBORO, NH**

SCALE: 1" = 20'



March 12, 2018

Stantec Consulting Services Inc.
5 Dartmouth Drive, Suite 101
Auburn, NH 03032
Tel: (603) 669-8672
Fax: (603) 669-7636



ATTACHMENT 4: 2018 PUBLIC FORUM NOTES

Questions/Comments from 01/18/2018 Public Stakeholder Meeting:

- How do larger trucks navigate the roundabout?
- How would north-south traffic be impacted during the summer time? Won't there be back up within the roundabout and other concepts?
- Individuals coming southbound (from Center Street) on Route 28 making a left turn cannot exit adequately. The only universal rule in roundabouts is that those within have the right of way. Therefore, during the summer time cars coming off of Center Street will not be able to get into the roundabout due to North-South traffic.
- Can the roundabout be moved 3' feet or more away from Center Street to decrease impact on gas stations, particularly if Academy is willing to move the intersection?
- During school drop off period, with only one lane coming out of the traffic circle, how will traffic traveling north on South Main Street take a right hand turn on Center Street with backup issues.
- Will there be slip lanes in the roundabout?
- The roundabout does not take away any parking, which is impressive.
- In a roundabout the only kind of turn you can take is a right hand turn, so left hand turn stacking is eliminated, which seems to be a problem in this intersection.
- Would like to see trees replanted with mature trees.
- The roundabout offers the most opportunity for planting and creating an entrance to town. Also, the roundabout is the most pedestrian friendly with the islands proposed.
- What types of traffic lights are being considered? Smart lights? Are they adaptive lights? Is there a sensor involved at the light?
- Is there potential to have a traffic light with a Rotary?
- Can we make photos available of Rotaries?
- Has the community talked to towns like Kennebunk, Kennebunkport, and Rye who have implemented these projects? It might be helpful to discuss their experience with design, implementation, and long term impacts.
- North Conway in 2019, will be adding a 3rd roundabout in the Conway district. There will also be a Route 16 and Route 153 roundabout.
- Sanford Maine is also a comparable roundabout to investigate.
- Have numbers been run regarding the efficacy of these alternatives with long term projections?
- What are the cost estimates for the various design alternatives
- Brewster Academy's decision making, as a private entity, will have a large impact on these alternatives.
- When DOT begins the design process, how does the process work?
- Can written input be submitted?

03/15/2018 Stakeholder Meeting Comments:

- **McManus/High School**
 - Move flashing light for school to the crossing for golf course
 - Reconfiguration of Pleasant Valley Road is not necessary
 - Makes Sense
 - Audio Beeper on crosswalk
 - Length of left turn lane going south bound?
 - Tunnel for golf course
 - Add left turn lane for Pleasant Valley Road
- **Weston's/Middleton Road**
 - Better signage
 - 3-way stop sign
 - Larger arc
 - 2 lanes going south
 - Tighter turn radius (more of "T" configuration)
 - Rumble strips to slow traffic
 - Take front porch of buildings
 - Better signage to slow drivers down
 - Keep blinking light
- **Public Safety/Huggins/Library**
 - Reconfiguration of public safety building exit makes sense
 - Existing condition has been an issue for equipment
 - Need for center turn lane starting before Clark Road and continuing past Christian Ridge Road (All Saints)
 - Crosswalk at library could be moved closer to library if speed limit is reduced
 - Street entrance to All Saints needs to continue to accommodate undertaker's vehicle backing up to the front entrance. Emergency vehicles need access there too. Lower sloped curb possible.
 - Need additional crosswalk through the area
 - Need turning lane approaching main entrance to Huggins Hospital while traveling south
 - Potential new scenario:
 - Huggins Hospital closes current "main entrance"
 - Christian Ridge road then becomes the main entrance to the Hospital
 - If so, would that impact Christian Ridge (i.e. need widening)?
 - What do police and fire think about this idea?

ATTACHMENT 5: SEGMENT PROBLEM AND NEEDS STATEMENTS

**Context Sensitive Solutions
Wolfeboro New Hampshire
Route 28 / South Main Street Public Meeting / Workshop
September 23, 2010**

The following pages contain identified problems and needs for each of the five sections evaluated at the workshop. The concerns for each segment have been prioritized based on the public's scoring of each identified problem. We would like to thank all the stakeholders and state officials for participating in the workshop. The information gained is important to the community and will help build a vision statement to follow for planning and design.

Segment 1: Alton / Wolfeboro Town line to Middleton Road at Weston Auto Body

#, (Score)	Description of Identified Problems or Needs
1, (143)	<ul style="list-style-type: none">• The Intersection at Weston Auto Body:<ul style="list-style-type: none">➤ Poor sight distance➤ Narrow lanes for small radius turn➤ Add turning lane onto Middleton Road
2, (38)	<ul style="list-style-type: none">• No Bike lanes
3, (38)	<ul style="list-style-type: none">• Drainage Needs Improvement
4, (31)	<ul style="list-style-type: none">• Roadway shoulders too narrow south of intersection
5, (27)	<ul style="list-style-type: none">• Maintain Historical significance
6, (27)	<ul style="list-style-type: none">• No Sidewalk
7, (14)	<ul style="list-style-type: none">• Speed Limit
8, (13)	<ul style="list-style-type: none">• Need cross walk at Intersection at Weston Auto Body
9, (11)	<ul style="list-style-type: none">• Vertical Geometry is difficult in the vicinity of Oakwood road<ul style="list-style-type: none">➤ Need truck lane on hill
10, (10)	<ul style="list-style-type: none">• Utility Pole offset with road way is to close
11, (3)	<ul style="list-style-type: none">• Need Better signage along roadway for businesses
12, (3)	<ul style="list-style-type: none">• Roadway surface condition
13, (2)	<ul style="list-style-type: none">• Utilization of Public Park

Segment 2: Middleton Road to Pleasant Valley Road

#,(Score)	Description of Identified Problems or Needs
1, (127)	<ul style="list-style-type: none">• The Intersection at Weston Auto Body:<ul style="list-style-type: none">➤ Poor sight distance➤ Narrow lanes for small radius turn➤ Add turning lane onto Middleton Road
2, (44)	<ul style="list-style-type: none">• No Bike lanes along section
3, (39)	<ul style="list-style-type: none">• Pleasant Valley Intersection with Route 28 Issues<ul style="list-style-type: none">➤ Angle for left turn is too small➤ Trees block line of sight and views
4, (38)	<ul style="list-style-type: none">• Rust Pond Boat Access Issues<ul style="list-style-type: none">➤ Parking on Route 28➤ Need to make carry only no trailers➤ Questions of ownership, would like to see rust pond conservation commission own deed➤ Add parking along Abenauke drive's shoulder➤ Add cross walk for safety concerns
5, (33)	<ul style="list-style-type: none">• Drainage Issues along entire section<ul style="list-style-type: none">➤ Ice build up / low spots
6, (26)	<ul style="list-style-type: none">• Road Surface Condition
7, (25)	<ul style="list-style-type: none">• Speeding Issues Between Abenauke and Weston Auto
8, (14)	<ul style="list-style-type: none">• Right away along section is too narrow
9, (13)	<ul style="list-style-type: none">• Cross road intersection with Route 28 issues<ul style="list-style-type: none">➤ Sight / need to cut back trees➤ Poor angle➤ Need for additional signage
10, (6)	<ul style="list-style-type: none">• Cross road surface condition
11, (5)	<ul style="list-style-type: none">• Question of commercial sign usage at Start of Pleasant Valley Road
12, (5)	<ul style="list-style-type: none">• Need for a stop sign and/or school flasher at Pleasant Valley Route 28 intersection
13, (5)	<ul style="list-style-type: none">• Overall road width too narrow
14, (5)	<ul style="list-style-type: none">• Need for a center lane after Pleasant Valley Road

Segment 3: Pleasant Valley Road to Christian Ridge Road

#, (Score)	Description of Identified Problems or Needs
1, (84)	<ul style="list-style-type: none">• Need to Rebuild Roadway and Remove concrete base
2, (55)	<ul style="list-style-type: none">• Add turn lanes at High school
3, (52)	<ul style="list-style-type: none">• Need for safe bike lanes separate from roadway
4, (29)	<ul style="list-style-type: none">• Wider shoulders / Break down lanes
5, (28)	<ul style="list-style-type: none">• Improve drainage for entire corridor
6, (23)	<ul style="list-style-type: none">• Need for safer passage at golf course
7, (16)	<ul style="list-style-type: none">• Need for curbed side walks on both sides of road
8, (14)	<ul style="list-style-type: none">• Need for more cross walks
9, (12)	<ul style="list-style-type: none">• Need for turn lane at McManus Road
10, (10)	<ul style="list-style-type: none">• Need for landscape beautification of sidewalks
11, (9)	<ul style="list-style-type: none">• Reduce Number of highschool driveways
12, (8)	<ul style="list-style-type: none">• Need for safer crossing at McManus Road
13, (8)	<ul style="list-style-type: none">• Illuminated cross walks / different markings
14, (7)	<ul style="list-style-type: none">• Reduce Speed Limits
15, (5)	<ul style="list-style-type: none">• Combine Business Driveways
16, (4)	<ul style="list-style-type: none">• Need for right turn lane at Christian Ridge Rd.
17, (3)	<ul style="list-style-type: none">• Improve visibility at side roads
18, (3)	<ul style="list-style-type: none">• Need for separate bus exit out of high school
19, (1)	<ul style="list-style-type: none">• Need for a Traffic signal at high school
20, (1)	<ul style="list-style-type: none">• Need for consistent signage for businesses

Segment 4: Christian Ridge Road to Pickering Corner

#, (Score)	Description of Identified Problems or Needs
1, (105)	<ul style="list-style-type: none">• Problems at Pickering Corner<ul style="list-style-type: none">➤ Traffic Capacity➤ Unsafe➤ Crosswalk location➤ Grade➤ Curb cuts at the gas station
2, (66)	<ul style="list-style-type: none">• Road elevation and snow storage<ul style="list-style-type: none">➤ Drainage➤ Road construction, concrete base, width, and utilities
3, (50)	<ul style="list-style-type: none">• Sidewalk Issues<ul style="list-style-type: none">➤ Poor Drainage➤ Poor condition and lighting
4, (46)	<ul style="list-style-type: none">• Lack of Bike lanes
5, (34)	<ul style="list-style-type: none">• Crosswalk Issues<ul style="list-style-type: none">➤ Not enough➤ Poor lighting and locations➤ Pedestrians not following the rules
6, (32)	<ul style="list-style-type: none">• Lack of historic village sense
7, (31)	<ul style="list-style-type: none">• Traffic Speed<ul style="list-style-type: none">➤ Congestion at Huggins and Pickering Corner➤ Crescent Lake Road used as by pass➤ Hazardous and Noisy conditions
8, (14)	<ul style="list-style-type: none">• Lack of entrance to Huggins Hospital through Crescent Lake Ave
9, (6)	<ul style="list-style-type: none">• Lack of police to monitor public events
10, (5)	<ul style="list-style-type: none">• Blinking light missing at Pickering corner

Segment 5: Pickering Corner to Wolfeboro Falls / Route 109a

#, (Score)	Description of Identified Problems or Needs
1, (106)	Pine, Lehner, and Center Street have blind corners / safety concerns
2, (45)	Lack of bike lanes and space for bike safety
3, (41)	Environmental concerns with drainage in Wolfeboro Falls area
4, (39)	Wolfeboro Falls 109a/Route 28 Intersection traffic safety
5, (26)	Maintain rural character and Historical significance
6, (22)	Lack of cross walks at Pine, Lehner, and Center street.
7, (19)	Lack of right of way width
8, (14)	Road surface condition
9, (13)	Off set driveway cuts at shopping center / crossing traffic
10, (12)	Lack of truck Routes
11, (10)	Inconsistent signage Route 28 / 109 vs Center / South Main
12, (9)	Wider Sidewalks and condition
13, (8)	Speed limit to high, safety concern
14, (6)	Over head wires
15, (5)	Low curb cut, and driving on sidewalks
16, (5)	Traffic congestion
17, (3)	Wide open Driveway cuts at Irving station 120 degree cross walk
18, (2)	Coordinate public and private lights
19, (2)	Intersection at Grove street and Wolfgang restaurant safety concern
20, (2)	Steep grade at Center / Brickyard Hill
21, (2)	Need for more trees