

December 7, 2010

**STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN**

CONFERENCE REPORT

PROJECT: SWANZEY
X-A000(889)
15697
NH 12 & Lake Street/Swanzey Factory Road Intersection Safety Improvements

DATE OF CONFERENCE: November 10, 2010

LOCATION OF CONFERENCE: Swanzey Town Hall, Swanzey

ATTENDED BY: NHDOT
Ronald Grandmaison
Michael Dugas
Steven Babalis
Douglas Graham

(See Attached Attendees List)

SUBJECT: Public Informational Meeting

NOTES ON CONFERENCE:

Ronald Grandmaison explained that this intersection had come to the Department's attention through studies undertaken as part of the Highway Safety Improvement Program (HSIP). He explained that the current Federal highway funding law, known by its acronym of SAFETEA-LU, created the HSIP to identify highway safety issues and provide for modest safety improvements that would achieve a significant reduction in traffic fatalities and serious injuries. New Hampshire receives \$5.5 million per year to implement modest safety improvements in locations where crash data indicates safety deficiencies. He stressed that the HSIP is intended to be data driven; locations identified to use these funds must have a crash history that demonstrates there is a safety need.

This particular intersection came to the Department's attention through the development of the NHDOT's annual "5% Report" identifying the State's most severe safety needs. The NHDOT identified locations with the highest crash rates for roadway segments and highest number of crashes for intersections for each functional class of roadway. From the "5% Report" further analysis of the locations was used to narrow the number of locations, of which this intersection was one of approximately 30 selected for further study.

Michael Dugas addressed the existing conditions and known issues with the NH Route 12 and Lake Street intersection. NH 12 is a north south commuter route between Troy / Northern Massachusetts, and Keene. Lake Street and Swanzey Factory Road act as short cuts

between NH 101 and NH 32. Heavy traffic volume along NH 12 during the peak hours makes exiting the side streets difficult due to the lack of acceptable gaps. The wide shoulders on NH 12 encourages through vehicles to bypass waiting left turning vehicles, creating many near misses. The speed limit on NH 12 is 30 mph but average vehicle speeds are reportedly higher.

Two conceptual alternatives were displayed at the informational meeting. Alternative one proposes installing a signal. Alternative two proposes constructing a roundabout.

Alternative One – Signal (aka. traffic light)

The concept proposes installing a signal and creating opposing 12' left turn lanes on NH 12, by narrowing the shoulders to 4'. The intersection marginally meets signal warrants based upon current traffic volumes. (Traffic volumes and signal warrants will need to be reevaluated if and when the Town's proposed extension of Safford Drive is undertaken, because this new roadway could divert traffic away from the subject intersection.) Minor road widening would be required at the intersection to accommodate truck turning movements to and from Lake Street and Swanzy Factory Road. The modified roadway would remain within the existing right-of-way, but minor slope impacts are likely upon adjacent parcels. The signalized intersection would function efficiently through the design year; however, vehicle queues exceeding 500' would be anticipated during peak hours. The existing sidewalks along the west side of NH 12 would be retained. A Sidewalk Maintenance Agreement would need to be executed with the Town if the sidewalks were to be reconstructed as part of the project.

Alternative Two – Roundabout

The concept plan proposes constructing a 115' inscribed diameter roundabout. The through movements on NH 12 are designed to accommodate a truck with a 53-foot trailer and the side road movements are designed for a truck with a 42.5-foot trailer. The roundabout would operate efficiently for present and future traffic volumes. The roundabout would require more reconstruction work than the signal concept with greater slope impacts to the adjacent properties. It is anticipated this alternative would take a year longer to advertise than the signal concept due to the additional Right-of-Way work required. An existing telephone manhole, currently at the edge of the roadway, would now be within the circulating roadway. The roundabout design could potentially be modified to avoid the manhole, thus avoiding the delays that its relocation would cause. As is common for roundabouts, a detailed traffic control plan will be developed to maintain traffic during construction. The existing sidewalks along the west side of NH 12 would be retained. A Sidewalk Maintenance Agreement would also need to be executed for this alternative. This alternative would cost more than the signal alternative, but would offer greater safety and more efficient traffic operations than the signal alternative.

Open Discussion:

Question: A resident felt installing a signal made more sense due to the alternative's lesser property impact, lesser construction cost, and quicker installation time line. The resident inquired what advantages the roundabout provided that the signals did not.

Response: M. Dugas first noted the safety benefits the roundabout design provides. Overall, roundabouts have reduced the number of crashes at intersections with a significant reduction in the crash severity. The intersection type also provides traffic calming effects downstream of the intersection. R. Grandmaison noted that vehicles couldn't

run roundabouts whereas they can run red lights. There are beneficial environmental aspects to the roundabout design including reduced emissions, fuel usage, and noise pollution. The larger upfront construction cost would be partially mitigated by the long term reduction in maintenance cost. Towns have the option to install aesthetic enhancements to the roundabout design, which usually involves landscaping the roundabout's central island. The roundabout would operate with shorter vehicle queues and the queues would be rolling, rather than stationary. Both alternatives would accommodate all modes of transportation, including cyclists and pedestrians.

Comment: A resident expressed concern how either alternative would function during the annual fair. Most agreed that no intersection traffic control option would address fair traffic.

Comment: A resident commented that trucks park along the shoulder by the Dunkin Donuts and Citgo blocking the sight line when trying to turn out of Park Street. R Grandmansion commented that this project did not extend that far and could not address that concern. Someone mentioned no parking signs or increased enforcement.

Question: It was inquired which alternative could potentially have the greatest traffic calming effect.

Response: M. Dugas responded that the roundabout alternative has the greatest traffic calming influence. By design, all vehicles are forced to travel between 15-20 mph through the roundabout due to the intersection's geometry. During a signal's green phase, a signal allows traffic to pass through the intersection at full speed. M. Dugas did add that though the roundabout does calm traffic, the traffic calming influence extends only a limited distance from the intersection.

Question: A resident inquired whether turning left off NH 12 would be permitted during the red signal phase.

Response: M. Dugas responded that left turns would not be permitted on a red arrow.

Question: Will the vehicle queues from the signal alternative block the surrounding drives?

Response: M. Dugas responded that during the peak hours, maximum queues at the signal would extend several hundred feet along NH 12 and would periodically block nearby driveways.

Question: The opinion and alternative preference of the Swanzey Chief of Police was requested.

Response: Chief Richard Busick responded that he feels there are three elements to traffic safety: Engineering, Enforcement, and Education; the road network being designed well by engineers; the laws of the road being enforced by officers; and the public motoring safely. His recommendation is that everyone, including himself, should take some time to digest the material presented, then formulate an opinion but emphasized he believed the engineers' professional opinion should be seriously considered while formulating their own opinion.

Question: A resident asked what impacts the roundabout alternative would have to the side roads.

Response: M. Dugas responded first that Lake Street would have an opening within the splitter island for a pedestrian crosswalk. The motel drive located on Swanzey Factory Road would be restricted to right in / right out only turn movements. The reason for this is because the drive would be located along the roundabout splitter island, which is required for safety. The motel would retain its full access driveway on NH 12.

Question: A resident inquired if these alternatives would require side road widening.

Response: M. Dugas commented that both alternatives would require minor widening to incorporate the turn path for the tractor-trailers with 42.5' trailers.

Question: It was inquired how long it would take to begin construction.

Response: M. Dugas responded that it is anticipated that the project would advertise in the fall of 2012 and construction would begin in the spring of 2013. The signal alternative could begin a year earlier due to the lesser Right-of-Way considerations.

Question: A resident inquired how the improvements at this intersection would affect other locations in the road network.

Response: M. Dugas responded that the regional planning agency would be able to assist in assessing the [tm1]influence this improvement would have to the overall network. It could be expected that improvements at this intersection could draw traffic away from other less efficient intersections along NH 12.

Question: William Snyder of the water department inquired if the proposed work would impact any of the underground water lines. If waterlines are impacted, would the state be responsible for financing their relocation.

Response: M. Dugas commented that no direct impacts have yet been located, but the concepts are still in the preliminary stage. If the Town's utilities were impacted, the state would fund their replacement or relocation. *Subsequent to the meeting, R. Grandmaison inquired as to the specifics of this situation with the Utilities section supervisor and the Department policy is to follow RSA 228:22 as stated below:* [n2]

TITLE XX
TRANSPORTATION
CHAPTER 228
ADMINISTRATION OF TRANSPORTATION LAWS
Commissioner, Deputy and Assistant Commissioners
Section 228:22

228:22 Cost of Trenching for Relocation of Underground Utilities. – When the commissioner shall determine that a highway reconstruction, relocation, or maintenance project financed in whole or in part by state funds and conducted under department of transportation supervision or control necessitates the relocation of any municipally-owned subterranean utilities facilities, any trenching and backfilling required for such relocation shall be part of the

cost of such reconstruction, relocation, or maintenance and shall be provided by the governmental agency which is carrying out such highway work at no cost to the municipally-owned utility, and the governmental agency shall pay the municipality for the book value (original cost less allowable depreciation) at the time the municipally-owned subterranean facility is retired. Provided, however, that if a public utility other than a municipally-owned utility makes use of a relocation trench provided for in this section, said utility shall pay the governmental agency carrying out such work its proportionate share of the cost of such trenching and backfilling.

Source. RSA 229:6-a. 1971, 78:1. 1981, 87:1. 1985, 402:6, I(a)(1).

Question: A resident inquired what advantages and disadvantages the alternatives have in regards to pedestrians.

Response: M. Dugas noted that the roundabout has distinct pedestrian benefits unique to the intersection type. Approximately 25' from the circulating roadway is an opening in the splitter island where a crosswalk is located. Due to the crosswalk placement, pedestrians only have to cross a single lane of traffic at a time. The opening in the splitter island provides a sanctuary for pedestrians to wait before completing their crossing. The traffic calming properties of the roundabout provide a safer environment for pedestrians. The roundabout's operations are less impacted by pedestrian crossings because the crosswalk is located behind the vehicle waiting to enter the roundabout and there is room at the roundabout departures for a vehicle to wait for a pedestrian to cross the exiting lane without impacting the actual circulating roadway. Signals provide benefits to pedestrians with visual disabilities by providing auditory signals. Besides that, pedestrians are often afforded an exclusive pedestrian phase during the light cycle. This, while being safer for the pedestrian, can increase wait times for vehicles and increase queues, thus resulting in longer delays. M. Dugas felt the roundabout design provided safer and more efficient access to pedestrians. R. Grandmaison reiterated that vehicles cannot run a roundabout.

Question: It was inquired how the decision gets made of which alternative moves forward for design.

Response: M. Dugas responded that comments gathered at this meeting and any comments submitted by the Town officials following this meeting, along with other factors such as construction cost, right-of-way impact, and construction feasibility will be discussed with the Department's Executive Office who will select a preferred alternative.

Question: It was asked if a sidewalk could be constructed on all four corners of the roundabout, specifically along Swanzey Factory Road.

Response: M. Dugas answered that additional sidewalk is possible but would call for additional property impacts and the support of the Town to maintain them in the future.

Question: It was requested if there could be a show of hands to determine the preferred design alternative of those in attendance.

Response: R. Grandmaison concurred that a show of hands could be done. The results of the hand vote would be given to the Town Selectboard for their consideration in

selecting the Town's preferred alternative. Those in attendance had four options to vote for; Alternative 1 – Signal, Turn lanes only, Alternative 2 – Roundabout, and Undecided.

The vote showed	
Alternative 1 – Signal	10 votes
Turn lanes only	0 votes
Alternative 2 – Roundabout	20 votes
Undecided	13 votes

Question: It was inquired how roundabouts usually get constructed while maintaining traffic.

Response: M. Dugas responded that traditionally, traffic is temporarily redirected around the construction site by the way of detours to other area streets. In areas where a temporary detour isn't possible, it is possible to circulate the traffic through the construction site. R. Grandmaison added that the Department's construction bureau has gained experience from constructing other roundabouts. The construction bureau is a valuable resource throughout the design process, providing a check on construction feasibility, and a voice in the traffic control plan development.

Comment: A resident suggested that the old Lake Street and Swanzey Factory Road intersection could be reopened temporarily to divert side road traffic away from the intersection construction.

Question: It was inquired if it is possible move the utilities underground in conjunction with this project.

Response: M. Dugas commented it would be possible, but it would be the responsibility of the town and the utility companies for the relocation costs. Traditionally, the utilities are not relocated underground due to its effect on the construction schedule and high additional costs that are ultimately borne by the ratepayers.

Question: It was inquired if the project would include overhead lighting.

Response: M. Dugas responded that a lighting plan would be developed by the Department during the design process and appropriate lighting would be included. Traditionally roundabout intersections include overhead lighting for illuminating splitter islands and the circulating roadway.

Question: It was asked how these projects would affect the taxes of the Swanzey taxpayer.

Response: M. Dugas replied there would be little or no cost to the Swanzey taxpayer.

Question: A resident inquired if other communities have been included in the discussions for this project.

Response: M. Dugas responded that a representative from the regional planning commission was present and that they play an active role in coordinating dialogue [tm3]with surrounding communities.

Question: It was inquired how the community could stay involved in the design process.

Response: M. Dugas commented that the Department could be contacted if anyone has any questions or comments. Ron Grandmaison is the project manager and his contact information is available on the Department's website. If a Public Hearing is deemed necessary, this would be an additional opportunity for residents and officials to voice any concerns and questions. In addition, M. Dugas suggested that because of the currently divided opinion on a preferred alternative, that once an alternative is selected a follow-up informational meeting should be held to confirm the project's direction before proceeding further. All agreed that this would be an appropriate procedure.

Submitted by:

/S/ ON FILE

Steven J. Babalis
Preliminary Design Section

SJB

Noted by: M. Dugas *MJD* , R Grandmaison *RIG*

cc: W. Cass
W. Oldenburg
D. Graham
R. Grandmaison
Town of Swanzey
T. Murphy,

MEETING ATTENDANCE

PROJECT Swanzey: NH 12 / Lake Street / Swanzey Factory Road intersection safety improvements
LOCATION Swanzey Town Hall
PROJECT NO. X-A000(889) Federal 15697 State

Name	Agency or Address	Comments
Ann Nelson	111 Bellview Drive Swanzey	Construction should include stop lights
Michael Nickorski	27 Swanzey Factory Rd	Thank this 2x plus per day
Ferneth P Calks	60 Longview Dr	For use of the area I have been trying to get it is done!
Heidi Wheeler	Swanzey Lake Rd Swanzey	I did a roundabout would cut down on accidents & traffic jams. Thank you
Rob Zelenka	32 Foxbridgeberry Lane Swanzey	
GERARD D. BRADONIS	23 Swanzey Factory Rd, Swanzey	
Elizabeth Nickorski	27 Swanzey Factory Rd N. Swanzey	
Helen Z. Babonis	23 Swanzey Factory Rd N. Swanzey	
ELIZABETH W. COLBOY	60 Longwood Dr N. Swanzey	I want to see the other 2x
Jane B. Johnson (Rep.)	Swanzey Grassing Swanzey	look forward to improvement.
Richard P. STRIBEL	53 Humphreys Hwy	
Polly (Thompson) Newman	115 Windmill Rd Swanzey	Police patrol to slow traffic from south - south
William S. Starks	NH 205 DISTRICT 4	
DOUG GRAHAM	956 W. Swanzey Rd (Rt 10)	
Amend Bedard	Selectman, Swanzey	PAPER ROUNDABOUT.
Nancy Carlson	Selectman, Swanzey	
BROCK TATRO	Selectman, Swanzey STATE RD	
BOB BRADONIS	71 Greenwood Ave N Swanzey	FAIR ROUNDABOUT
DOB DAVIS	Selectman, Swanzey	wait and see how the impact of Safford Drive changes things
Bobby Frigo	669 Old Homestead Hwy	
Francis W. Faulkner Jr	824 OLD HOMESTEAD HWY	
Linda Faulkner		
Mrs Mrs Frederick H. Steirka	17 Longwood Dr. N. Swanzey	PAPER TRAFFIC LIGHTS
FLOR MITCHELL	15 Hedgecroft Court Swanzey	

Date 11/10/2010

MEETING ATTENDANCE

PROJECT

Swanzy: NH 12 / Lake Street / Swanzy Factory Road intersection safety improvements

LOCATION

Swanzy Town Hall

PROJECT NO.

X-A000(889)

Federal

15697

State

Name	Agency or Address	Comments
Lyette Colson	9 Lake Street N. Swanzy	Check on light work.
JACK BYS	769 OLD HEMSTEAD Hwy-Swanzy	
JOVE FURSTEDER	277 FORT ROAD WYLL RD	RAWINS BOARDED
EVERETT SANDY PACE	77 WOODBURN HEIGHTS	RAWINS BOARD
W. William Snyder	164 EATON ROAD	WATER DEPT
Richard Busick	34 EATON ROAD SWANZY	SWANZY POLICE CHIEF
Brad Ryler	32 Pine St, Keene	Pres
Beth Fox	630 Old/Homestead Hwy	Town Administrator
Ros Pinfaney	43 Woodlawn Rlyts	
Tim Kneels	118 Concord Rd, Keene	
Lee Dunham	Town of Swanzy, TPD	
Sara Garbomucan	Swanzy Planner	
Gene Frenkel	Swanzy Factory/20	STATE REP
Mr. Martin Es New for	1815/56a Riv Rd	US/E lights
Ms. Charlie Wright	59 Pastore Rd	Raindabait
DAVE KRITCH	261 Ector Rn	EXCELLEN PRESENTATION - RAINDABAIT
Tim Murphy	20 Central Square, Keene	
Barbara Duquette	34 Longwood Dr, NO Swanzy	
Robin Dupette	34 Longwood Dr, N. Swanzy	Houndabout
Verita Hildebrandt	107 Qk Lane Swampy	
Hermann Botzoid	107 Qk Lane Swampy	
Arthur LaFontaine	44 Park St N. Swanzy	
Susan LaFontaine	44 Park St N. Swanzy	

Date 11/10/2010