

April 29, 2010

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

CONFERENCE REPORT

PROJECT: DERRY
X-A000 (883)
15690
NH 28 / Kilrea Road / Windham Depot Road safety improvements study

DATE OF CONFERENCE: April 28, 2010

LOCATION OF CONFERENCE: Derry Municipal Building

ATTENDED BY: NHDOT Attendees
C. Green See attached
M. Dugas
C. Goodmen

SUBJECT: Public Informational Meeting

NOTES ON CONFERENCE:

C. Green explained that the intersection had been identified for improvements through the work the Department had done with the Highway Safety Improvement Program (HSIP). C. Green explained that the Highway Safety Improvement Program was added to the last reauthorization of the Federal Highway Program. The HSIP is intended 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. C. Green 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.

The NHDOT analyzed crash sites around the state and identified locations with significant number of crashes that could be funded through the Highway Safety Improvement Program. This particular intersection was identified by the Bureau of Municipal Highways after their work with the Town and a developer proposing to make improvements to the intersection, had become problematic due to the inability of the developer to move utility poles for the necessary widening. Municipal Highways noted there had been a significant crash history at this intersection and suggested a further review for possible HSIP funding. NHDOT requested crash records from the Town and found that based on the number and severity of crashes that this intersection fell within the list of locations for HSIP funding.

Prior to beginning any engineering designs, the Department had met with Town Officials, businesses, and property owners near the intersection in June 2009, at a Traffic Safety Committee

meeting. The intent of the meeting was to solicit input into the problems and issues that were contributing to the crashes occurring at the intersection. The following is a list of the comments on problems and issues that were provided at that meeting:

Problems contributing to intersection crashes:

- Heavy volume of traffic.
- Speed of traffic going faster than the posted speed on NH 28.
- Difficulty finding a safe gap to get out onto NH 28, people becoming impatient and taking chances.
- Long line of traffic on side roads.
- Crest in the roadway restricted sight distance (at station 227 –229).
- Telephone pole in southeast quadrant partially blocks sight distance.

Other Issues

- DRED property for snowmobiling and parking taking place beyond the limits of the property.
- Access to preschool is difficult for buses and parents going in and out of the facility to find a safe gap.
- (Corrie Leger) Preschool property - concern for her water well and the possible influence of road runoff on its water quality.
- Winter icing occurs near the intersection caused by drainage deficiencies on Kilrea Road near Stark Road and also near station 108 on NH 28.
- Mr. Palmer's house is close to the road and is potentially historic.
- Difficulty of school buses getting in and out of side roads.
- Septic system located in southeast corner of intersection.
- Deep drainage ditch in southwest corner of intersection where cars have gone off the road.

M. Dugas then presented the concept for improving safety at the intersection. The intersection will be signalized and its approaches reconstructed and widened to add exclusive left turn lanes and four-foot shoulders to NH 28. The work on NH 28 will extend 900' south and north of the intersection, while the improvements to Kilrea Road and Windham Depot Road will extend 200' and 400' from NH 28, respectively. Because of the proximity of the Palmer house to the edge of NH 28, only a four-foot wide shoulder will be added to the east side of NH 28 with the northbound travel lane will remain in its existing location; the remainder of the widening will occur to the west side of NH 28. The existing profile of NH 28 will be retained. The police chief had expressed concern that the existing crest south of the intersection restricts sight lines to the south from the side roads; however, the Department found that the available sight distance is more than adequate for the posted speed limit. The Department feels that the addition of a traffic signal and turning lanes will better indicate the intersection to through traffic and reduce speeds. The left turn lanes will be kept as short as feasible so that a painted median can be provided to offer refuge for left-turning vehicles waiting to turn into driveways. The profile of Windham Depot Road will be raised slightly to provide a suitable platform adjacent to NH 28. The elevation of the roadway will impact and require the elimination of the gravel parking area next to the rail trail. No changes are proposed for the rail trail crossing of NH 28.

The proposed improvements will require the acquisition of small areas of private property in three of the four quadrants of the intersection for the placement of signal equipment. Also slope and drainage easements will need to be acquired from several properties. The construction will also necessitate the relocation of several utility poles, including the heavily laden pole in the southeast quadrant of the intersection. The estimated cost of the construction is \$900,000.

C. Green explained that because of the property impacts caused by the project, a public hearing would be needed. This will be held in late summer. He anticipates that the project could be advertised

for bids by August 2011, presuming that all design issues have been resolved, right of way acquired, and the necessary permits received. Utility relocations could commence in the winter of 2011, but roadwork would not likely start until spring 2012.

The following is a summary of questions/comments from the meeting:

Corrie Catalfimo-Leger, owner of the Over the Rainbow Preschool, expressed concern for the highway drainage that was coming toward her property. She felt the proposed widening would direct more drainage toward her property. She also noted that there is a well on her property that she is required to test for her business use. She agreed to help identify the location of the well. In addition, she requested consideration for relocating her northerly drive further north (and possibly her southern drive further north) from the intersection to provide better opportunity to access NH 28 away from the influence of the signal. She also suggested consideration of a guardrail along her frontage to protect her property from errant vehicles.

Response: M. Dugas agreed to investigate relocation of the drives. Preliminary Design will prepare sketches of potential driveway and parking reconfigurations for Ms. Leger's consideration.

There was a question if the new signals could be placed on flashing during times of inclement weather conditions, as there is a concern for starting and stopping on the hill.

Response: Alan Cote noted that the Town police have the ability at other signal locations to put them on flash during inclement weather conditions and felt this would be the same situation.

Ms. Melissa Polk questioned if there were going to be an air quality analysis done for this project. C. Goodmen responded that projects of this type do not generally require that an air quality analysis be performed, as the improvements have been designed to maximize capacity and efficiency in order to minimize disruptions to traffic flow. Experience with projects of this type has shown that there was no increase in emissions and that the improvements actually improve emissions. Ms. Polk requested consideration of an air quality analysis be performed.

Response: C. Goodmen agreed to consider the need for an air quality investigation.

Many attendees requested elimination of parking on the DRED property as the parking was taking place along Windham Depot Road well beyond the limits of the DRED property. They also noted that the parking was contributing to the degradation of the pavement edge along Windham Depot Road. One attendee noted that there was legislation (HB 420, 2003) that prohibited motorized vehicle usage on the recreational trail from NH 28 west toward Windham Depot (when it is not snow-covered).

There were a few who requested a right turn lane be provided on Kilrea Road, as they felt there was a heavy right turn movement (and likely to increase due to development) from Kilrea Road to head north on NH 28, and felt the signal operation would be made better.

Response: C. Green noted that it could be considered, however the widening would likely encroach on the Palmer property, which this concept was trying to avoid.

There was a request for a crosswalk and a pedestrian phase in the signal system. One resident noted that there were children walking or cycling from residential neighborhoods that were crossing NH 28 between Windham Depot Road and Kilrea Road.

Response: This request will be reviewed with the Bureau of Traffic

There was a suggestion to have bars placed on the recreation trail to prohibit recreational vehicles crossing NH 28. There was concern expressed that having recreation vehicles cross between left turning vehicles would create additional safety issues.

Response: C Green indicated this would be discussed with DRED.

Mr. Dilillo requested that the culverts located along his frontage be reviewed as the culverts appear to be undersized and do not handle the drainage coming to them.

There was a comment that the signals be designed so they would not immediately trip the signal timer when a vehicle came up to the intersection.

One person commented that he felt the signals would cause significant backups on the side roads, and that more should be done to prevent this.

Response: C Green responded that the intent of this project is to provide modest safety improvements that address the types of crashes that have been occurring at the intersection, and additional work required to provide capacity would be beyond the scope of this type of funding. He agreed that at times there could be backups on the side roads, however, the signals were intended to provide the vehicles on the side roads the ability to have a safe access onto or across NH 28.

Some residents noted there were school bus stops near the intersection. One was located near the Palmer home and one was located at the intersection of NH 28 and Mark Street.

Ms. Polk noted that the drainage problem on Kilrea Road should be addressed. The existing culvert near the intersection of Kilrea Road and Stark Road, meant to carry runoff north toward the rail corridor, is plugged which causes the runoff to flow along the roadside to the NH 28 intersection. This drainage becomes problematic in the wintertime as it freezes and ices over the approach to the intersection.

Response: C. Green noted the drainage at the intersection would be reviewed as part of the project.

There was a request that advance-warning signs, that indicated “signal ahead”, be placed on NH 28 prior to the intersection due to limited sight distance created by the existing the crest in the NH 28 profile.

Response: C. Green agreed to review this with the Bureau of Traffic.

Mrs. Marge Palmer asked if any improvements were planned to address flooding issues related to beaver activity at Ezekiel Pond.

Response: M. Dugas responded that this issue had been brought up at the last meeting and upon further investigation, it was found to be a drainage problem on Windham Depot Road which was a Town owned road and would be a Town issue.

Representative Jim Rausch stated that he was very happy to see that this project was being done, particularly after the 10 Year Plan project to improve this intersection had been removed.

Mrs. Marge Palmer expressed concern that the crest on NH 28 would not be lowered.

Response: C. Green reiterated that the sight distance is not deficient. Also, adjustments to the NH 28 profile would substantially increase the scope and cost of this “modest” improvement.

An attendee asked if a roundabout had been considered as an alternative to a traffic signal.

Response: C. Green answered that a roundabout was ruled out because it would have greater property impacts and would be screened from the view of northbound vehicles by the NH 28 profile (unlike a traffic signal, which would be visible from a great distance).

Ms. Polk suggested that gates and bars be installed on the westerly segment of the rail trail to prevent or discourage inappropriate use.

Response: C. Green answered that this could be reviewed with the DRED Trails Bureau.

C. Goodmen mentioned the requirements for Section 106 regarding consulting parties on historic properties. She gave the Palmers information about contacting the Federal Highway Administration.

There was a question if there would be funds for this project from the developer of the residential housing on Windham Depot Road.

Response: C. Green indicated that had been discussion that they developer would participate in the cost of the improvements. The exact amount would need to be coordinated with the Town.

Submitted by:

Craig A. Green, P.E.
Administrator, Highway Design

CAG/cag

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