

Fremont Highway Study Committee
Approved 04/28/2011

28 March 2011

Present: Highway Study Committee members Mark Pitkin, Leon Holmes Jr, Steve Harms and Jack Downing; Hoyle Tanner & Associates Inc Representatives Matt Low and Nelson Thibault; and Town Administrator Heidi Carlson.

The meeting came to order at 6:00 pm in the main floor of the Fremont Town Hall. The representatives from Hoyle Tanner were introduced. Nelson Thibault is an Executive Vice President and Matt Low is a Vice President and Manager of the Bridge & Structures Group.

Carlson indicated that she volunteered with Thibault on the Fire Department and that he had offered to have Hoyle Tanner's bridge engineer come and look at Fremont's red listed bridges and offer some technical advice to the Town as a courtesy. This contact was made shortly after the last meeting where the Committee had begun reviewing bridges and the NH Bridge Aid Program. After talking with the Road Agent and Selectman St Germain, Carlson was asked to have them attend a meeting as this would be beneficial information for Fremont.

Carlson explained that Selectman St Germain had called earlier and was unable to attend this evening due to a medical issue. She sent her apologies for having to miss the meeting.

Pitkin said that he was meeting on Thursday with a NH DOT Bridge representative to talk about maintenance and point out the areas that need attention at the Fremont bridges. Pitkin said that he has applied for the free estimate via the forms from NH DOT Bridge Aid Program and spoken at length with the Bridge Program Administrator Nancy Mayville.

Low gave a summary of the NH Bridge Aid program and reviewed the current Fremont reports on the red listed bridges. Reference was made through the evening to the two current bridge reports for Fremont's Scribner Road Bridge and Martin Road Bridge. Low presented additional copies of these reports for Committee members to review.

Low said that Hoyle Tanner is currently doing the Crawley Falls Road Bridge by the old fire station in Brentwood. He said they have done over 70 bridges within this program. He said the NH Bridge Aid Program started back in 1994 and is an 80/20 funding program and it is a good program for towns. The State funds 80% of the cost and the Town funds 20%.

Low indicated that there is annually \$6.4 million dollars in the Bridge Aid Program and towns contribute another 20%. Obviously this does not pay for as much as it used to. Now there is more pre-planning that needs to be done in the time between when you start and when you are actually listed on the State's approved list for funding. If Fremont could get on line now, the next available funding would be available in 2019.

With regard to these two Fremont bridges, Low and Thibault had been out to look at them on their way in to Fremont this afternoon. Low stated they did not get under them, but made some observations taking into account the NH DOT reports, which summarize the condition. DOT bridge engineers go out every two years to do a report; but once on the red list, they go out every year. State bridges are inspected every year; and if on the red list, they are inspected every six months.

Low said there is no quantitative measurement of how a bridge gets on the red list. Once DOT inspection crews feel it should be watched more often due to accelerated deterioration or its overall condition, it is placed on the "red list." Low said that there is no magic number; but an understanding that they know if should be looked at annually based on condition.

Holmes asked a question about the meaning of an "E2 Posting." Low explained that the E2 posting means that no certified loads can cross the bridge and cited NH RSA266:18. He said that a legal load is a vehicle up to 80,000 pounds. Certified loads can go from 80,000 to 99,000 pounds.

Scribner Road has recently been posted for a 15 ton weight limit. The Town can put any posting it deems necessary on a bridge. The State will make certain recommendations and the Town can be more restrictive as they choose.

What NH DOT typically does for Town bridges is rate them for legal loads, not certified loads. The E2 posting lowers the load limit; and is the general recommendation by the NH DOT.

Holmes asked what it was that his firm did in terms of the process. Low explained that they would engineer the project; initially survey work, borings and site investigation, followed by putting together contract documents; doing wetlands and other permitting necessary, which now included fairly significant historical and archaeological research. He said they could put it out to bid if the Town so chose; then follow with construction contract administration and construction engineering.

Low said that some towns will choose to do some of those things themselves. They also do hydrology studies to size the work properly. In some cases they work with other sub-contractors who specialize in certain areas.

There was some discussion of Fremont history of the Scribner Road dam and how flooding situations have affected the road and the bridge. Low said that in looking at the dam, bridge, and sluesway, that the Scribner Road Bridge could be huge and multi-million dollar project, depending on how it is to be addressed.

He said they would need to know all of the goals of the repair project before undertaking any improvements. Low discussed a bridge project in Salem where the road is still designed to be overtopped by not the bridge. He said they may look at several options and the Town's overall goals have to be considered in choosing a final option.

Low said that the first step is to get the NH DOT free estimate and meet with the Bridge Aid folks and talk about the program. Then it is up to the Town to say we have some money. He said as engineers, they will work with the Town as much as the Town wants to and they look at many solutions to come to a resolution that solves a certain goal or falls within a budget line item or fits a certain service life.

Low said that they can help with budgetary numbers on the engineering and getting started with the process. He said that they would assist with planning for estimates on engineering and construction, which could be helpful to begin looking at savings to a Capital Improvement Fund for Bridges. He said that towns typically do is raise the money for the engineering study as a start. These studies range greatly in cost depending on the scope of work. He again outlined items such as survey costs, borings, engineering, historical and archeological considerations, and hydraulic analysis. He said a small study might cost \$25,000 and that a large scale (referring to one he was doing now) that are \$200,000. He thought that Scribner Road would be of considerable cost noting a huge historic impact.

Prioritizing the projects is completely up to the Town. He indicated considerations include cost, timing, the problems associated with any bridge being closed; and detour routes if they can be completely closed during construction versus having to keep one lane open.

He said Hoyle Tanner could help assess which what type of improvements will last longer or other factors that might help to decide what to do first and how to do it. He said that if you can completely detour a

bridge closure, it is much cheaper and gets done faster than keeping a portion of it open throughout construction.

He discussed some possible recommendations in the Scribner Road bridge scenario; perhaps studying a replacement versus a superstructure replacement. He suggested it would be better to get rid of the old steel (1941) and the deck and replace steel beams with pre-stressed concrete beams. He described the pre-stressed process where at the fabrication plant, they right strand wire and pull it to put a bow in it essentially; and the load is then resisted.

He said they study a wide variety of items to make determinations about feasibility and options. He said considerations include cost and service life of the new bridge. He said he does not like to use painted steel because it is a maintenance issue.

In the case of the Scribner Road bridge, the Town has to be concerned about the roadway as well as neighboring properties and how road and bridge work will affect them.

If the roadway (Scribner) was raised, there is a possibility this would help. He said FEMA will then get involved if it alters the water way and flood potential at all. A letter of map amendment (LOMA) may be necessary. As-built surveys and FEMA areas have to be reviewed upon completion.

You have to know going into the project and design around all the concern. All of these areas to include adjacent properties can be part of a study.

He said a study would conclude with recommendations and costs; and ultimately a final decision is made by the Town. He said you can decide to do all, some or none of the items. He said in the design phase, you then pull in plans and design based on recommendations and approvals out of the study phase.

These design and engineering phases are also eligible for the 80% State reimbursement funding.

From a cash flow point of view, the Town needs an appropriation to start and will have to pay some bills prior to being eligible for reimbursement.

In terms of process, Carlson asked some questions about the RFQ phase, which is different than the Town's normal RFP process. The Town will select a consultant based on a Request for Qualifications (RFQ) that involves at least three different engineering firms. It is based on the qualifications of the firms and does not at all address price structure.

The State provides a list of qualified engineers that can be consulted. From there, Low said the town needs to interview at least three, or could choose one and ask the State to allow the Town to work with that vendor. The RFQ can be done on a generic basis for all bridge services or could be done more than once for each bridge project. Members thought that doing this once would be more cost and time effective. Low offered to assist the Town in the RFQ drafting as well.

The NH DOT approves each step of the process. Once an engineering firm is in place, there is an Engineering Study Contract put in place based on a scope of services and fee. Then there would be a contract to do the design phase of the project. The bids would be then be tallied, reviewed and evaluated. The Town and the engineer would make their recommendation as to who to award the bid to. This is then reviewed by NH DOT.

Following that, a contract would be put together to put the work out to bid. At this point, the Town can submit reimbursement for 80% of the first three steps in the process. Low said that ROW easements and associated costs are also 80% reimbursable through the program.

NH DOT will give approval for a contract with XYZ vendor for \$xxx cost. The State will give you 40% of the total contract price then to work with. The Town has to backroll 60% of construction and 100% of construction engineering costs moving forward. Later the Town will get 80% back on the engineering costs.

In response to a question from Pitkin, Low said that in general within a couple of years there are not a tremendous amount changes in the process, if the Town got to a certain point and had to “put the project on a shelf.” Low said that a new specification book was just issued by DOT and that it does not change greatly from year to year. Permits do have a shelf life and regulations could be subject to change. If starting today, it could take 3-4 years to be ready for construction on a fairly simple project.

The Town can set the deadline, and much depends on town meeting and funding and approvals. The State does not issue deadlines; that would be between the town and the engineer.

Low said that perhaps Martin Road would be done as a prefabricated box culvert. There was discussion about the fencing in this bridge to keep the cows from going under. Low said you might consider a shorter, wider bridge to avoid the gate and the debris which much get caught in there.

There was discussion about scope of work with all the engineering tasks and what subcontractors do, as well as a time schedule to get the work done; and fee for services. Low said that the State also reviews the contracts involved.

As a service, the Bridge Administrator Nancy Mayville assists town through all of this process. Pitkin said he has spoken with her and received a great deal of information.

In terms of process, Mark will meet with the DOT folks on Thursday. The State will get an estimate back to the Town on the bridge requests submitted. Low said that the State provides an overview letter that will provide estimated bridge, road, ROW, historical resources, etc, costs and come up with a budgetary estimate and they will put that on a page on the State website titled “Estimate issued, awaiting Town action.” From there, they wait for the Town to appropriate some money to commit to the project, and then the next step with the State is the application for construction funding.

The Town needs to make a financial commitment in order to get placed on the funding list.

To get started now we can start the consultant process by issuance of an RFQ. Pitkin has the State’s list of the pre-qualified engineers. Low said the Town will need qualifications from three or more engineers. The Town would then review those packages and decide who they want to talk to further.

Once determined, the engineer then submits a proposal of scope and fee and they start working on the details of the particular project. The engineer then writes contract for what the project is to include, using their experience, what they hear from the Town, and an understanding of the situation and the Town’s needs.

The NH DOT reviews the scope and fee and will grant approval to enter into an agreement. Low said the Town can ask for whatever you want in the RFQ, such as the firms’ background, projects of similar size, work done for similar towns, an organizational chart, project done that are similar to what the Town is looking for, what office will the staff be working out of.

The RFQ can be specific to one bridge or another or the Town can use QBS the first time and not have to do the process again.

QBS is Qualifications Based Selection of Design Professionals. This is unlike other usual municipal bidding or selection processes, which are more generally focused on scope of service and the associated fee. QBS and the RFQ focus on the qualifications of the professionals performing the service.

Low added that if the project gets up to say \$2M; the State may then involve some federal funding (injecting) into the process. This will result in some more regulatory and reporting oversight, but can be an asset to the project.

On projects like this, the engineering firm is generally the clerk of the works; as they have to produce as-built plans. On some State projects they do part-time resident engineering observations as required (measure quantities and meeting with the contractor as necessary, etc). Low said the Town certainly owns the project. He described a disconnected triangle with the Town at the top of the triangle; and the engineer can be there as much or as little as needed within the guidelines of the program.

Low said that Hoyle Tanner usually recommends that the Town hire the resident engineer from the same firm who did the initial design to keep the flow of the project. He said that if you hire an outside resident engineer that problems arise regarding design questions and such, and it adds confusion to the mix.

He said that Hoyle Tanner has been selected for more than 70 bridge projects. He said the smaller projects are more numerous and they have had tremendous success working on them with Towns. He said the engineer will review all contractor invoices before the Town approves them for payment; and will assist with reimbursement forms for NH DOT funding.

He said they provide all the points when they will definitely be there. One component of federal funding involvement is it now requires near-full-time inspections (34 hours per week on site), which raises the cost of a project.

Pitkin asked about investigating whether a bridge is needed in a location that might currently have culverts. Low explained that if the Town can prove they need a new bridge (at the Town's cost); that the Bridge Aid Program might then help to pay for a new bridge. There was discussion about the process of determining if a new bridge is needed, including a hydrology study. The Town would have to do the initial work and then could apply to the Bridge Aid Program.

Low said they would also help the Town write a warrant article. He said it is important to explain to voters and taxpayers that the full cost needs to be appropriated in a warrant article, and also important to list the 80% reimbursement funding so people know the hard costs to the tax payer.

Low then offered some information about Hoyle Tanner. He said he is the Manager of the Bridge team and detailed out the remaining bridge staffing. He said there about about 60 people in the Manchester office, which is the home office. He said that they have been doing work for the NH DOT for a long time; are on a state-wide on-call contract with NHDOT for smaller bridge projects (couple million dollars or less). He said they have been involved with those State contracts about the past nine years in a row.

He said Hoyle Tanner has been in business since 1973 and has other satellite office, the largest of which is approximately 15 employees in Burlington VT; and a few other small offices in Florida and the east coast.

He described the NH Bridge Design Bureau and the Bureau of Planning and Community Assistance. He said Nancy Mayville is the Municipal Highways Engineer in that group. Hoyle Tanner also specializes in building roadways, bridges, wastewater systems and treatment plants, and airports. They primarily do municipal work and do not take on private development work in any of the Towns they work for.

Thibault said they have a lot of repeat business on the municipal bridge side. They described several bridges in Nottingham; four in Swansea; a couple in Salem; and consistent work with the Town of Derry and other municipalities. Low mentioned other State bridge work as well. They are currently working on a State project in Hampton/Hampton Falls that is a short length, but spans eight lanes of traffic at a toll booth.

Low said that Hoyle Tanner can assist the Town in making presentations or will do a public information meeting as well. He said they would be happy to offer assistance to the Town in the planning stages as they begin to prepare as well.

Thibault and Low were thanked for their time and information and left the Committee's meeting at 7:45 pm.

The Committee discussed doing a QBS process to choose an engineer. They discussed the process to include having the other two areas where they feel bridges are necessary and having a hydrology study done to work toward a bridge. The Committee felt that the Town should begin this process, even doing this administrative work up to next Town Meeting. There was discussion about how to begin planning for Capital Reserve Funding as well.

Carlson will talk with the Selectmen about getting the RFQ process underway as it would not cost the Town money at this point, just staff time in getting the requests out.

There was discussion about the Planning Board considering water flow and bridge items as developments come in; and having applications for development do hydrology studies in areas that may be affected by additional development. Downing will bring this idea back to the Planning Board. The Committee particularly discussed the development of Victoria Farm Road and Cavil Mill Road as affecting the culvert on Sandown Road in this area. Flooding had not been as significant prior to the additional development.

There was discussion about the draft Frost Ban Ordinance which members indicated St Germain was going to get to Chief Janvrin for his review and input. No further action was taken this evening. This is in the planning stages to be adopted by the Selectmen for next spring thaw season. Carlson will send the draft to Chief Janvrin in follow-up. A copy will be sent to members once put into a template similar to other Town Ordinances.

Holmes and Pitkin offered amendments to the minutes of March 7, 2011. Motion was made by Holmes to approve them as amended. Harms seconded and the vote was approved. The minutes will be redistributed to all.

There was some discussion about the Roadside Memorial Policy from the Town of Hampstead. Holmes felt that the Selectmen should adopt this policy if they felt it was appropriate. Other Committee members expressed their thoughts and most felt that roadside memorials should be temporary in nature and duration. A sample will be brought forward to the next meeting for further consideration and possible modeling for Fremont.

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Holmes said that a pressure washer had been purchased and a tank had been retrofitted with a pipe and discharge mechanism such that they could get the five gallons of water per minute volume to be able to run the pressure washer through gravity feed, even without water at the site. Holmes said he is filling it using the library hose to move more water through that system. Dick Rand had indicated and Carlson agreed, that this would be helpful to the testing process for the library water systems to flow more water.

Committee Members discussed holding another meeting prior to the end of April and decided that would be soon enough to review the next step in the bridge planning process and the other policies still outstanding.

Holmes inquired if Carlson would be able to attend meetings to provide input the Committee needed from time to time. He indicated that he felt there was value in this for the Committee.

The next meeting will be held on Monday April 25, 2011 at 6:00 pm.

With no further business to come before the Committee, the meeting was adjourned at 8:20 pm.

Respectfully submitted,

Heidi Carlson
Town Administrator

- In follow-up to the meeting, Carlson identified a research folder in her office outlining the QBS process and placed an informational handout in the minutes binder for reference. There is an additional guide pamphlet to the process with some sample documents.

Attachments in minutes binder: NH DOT Bridge Report Martin Road over Piscassic River 155/133
NH DOT Bridget Report Scribner Road over Exeter River 106/076
Frost Ban Ordinance Draft
No Thru Trucking Ordinance
Roadside Memorials Policy Draft
QBS in NH Pamphlet of information