



City of Keene, N.H.
Transmittal Form

January 25, 2017

TO: Mayor and Keene City Council

FROM: Municipal Services, Facilities and Infrastructure Committee

ITEM: D.2.

SUBJECT: Winchester Street Preferred Alternative - Public Works Department

COUNCIL ACTION:

In City Council February 2, 2017.

Voted unanimously to carry out the intent of the report.

RECOMMENDATION:

On a vote of 5-0, the Municipal Services, Facilities, and Infrastructure Committee recommends the “Roundabout Alternative”, be selected as the proposed action for the reconstruction of Winchester Street, and that the City Manager be authorized to do all things necessary to implement this proposed action.

BACKGROUND:

Don Lussier, City Engineer, introduced Gene McCarthy and Brian Colburn with McFarland-Johnson, as well as Emily Gardner and Don Minnery with Saratoga Associates. He also welcomed NH DOT Project Representative, Jennifer Reczeik and explained she was the liaison with the DOT. He also wanted to thank Councilor Powers and Tom Bogar, members of the Steering Com-mittee who were in attendance.

Mr. Lussier explained the presentation would provide more details of the work that would be con-ducted. He said the purpose of this meeting was to hear from the public in order to get the feed-back needed in the design phase. Mr. Lussier continued it was also important to satisfy the re-quirements of the DOT’s LPA (Local Project Administration) that require a public meeting on the project to solicit public feedback. He continued that the information would need to be taken into account when the legislative body selected its proposed action. Mr. Lussier said he hoped by the end of the presentation the Committee would be fully informed and be in a position to recommend one of the proposed actions.

Gene McCarthy, Project Manager of the Design Team with McFarland-Johnson presented a repre-sentation that indicated the location and layout of the project.

Mr. McCarthy said there was a well-attended public listening session where the public was asked about their experiences with the corridor and what they would like to see. He continued they broke the group into sub-groups and each group gave an idea of what they felt were the issues. He said at the end they got together as a full group and each group provided their top issues.

Mr. McCarthy displayed a list of the challenges determined from the meeting listed in the order in which the number of times the same challenge was heard. He noted there were six groups and most comments were focused on the Pearl Street traffic. Mr. McCarthy said they also asked the attendees what were the opportunities they saw with the corridor over and above dealing with the issues. He said they heard a lot about connections

and making it easier to use Winchester Street. They also heard there were congestion issues within the corridor at some of the busier times.

He said they also heard a lot about bicycle and pedestrian accommodations and aesthetics. Mr. McCarthy explained this area was one of the key gateways into the City of Keene and that maybe if needed to be addressed as part of the project. He said they heard all of the ideas from the meet-ing along with what they had heard from the Steering Committee. Mr. McCarthy said this led them to look at the purpose of the project. He said with that in mind they developed a formal pur-pose and needs statement. The statement was developed by the design team and was presented to the Steering Committee. He continued it was a broad statement based on what they heard from the Steering Committee and the public as to what they were trying to get out of the project. He said they wanted to make it a complete street, easy for all users and also aesthetically appealing. The issue with the Island Street Bridge was that it was a temporary bridge that had been there for decades.

Mr. McCarthy continued there was also a list of the specific traffic accesses that were lacking. He explained that was an important milestone because in order for them to address alternatives that would be the metric used to evaluate how each alternative addressed the purpose of the project.

Mr. McCarthy talked about the traffic and wanted everyone to realize they conducted an extensive traffic count of the corridor. He said they did it both for peak periods and also did a week long two count in order to understand the peaks periods. The data was counted during peak hours in December. He continued they counted all traffic on Winchester Street for an entire week to see peaks and valleys throughout the corridor. Mr. McCarthy said they counted the morning and afternoon peak hours to get the real commute times. He said the Saturday count at the corridor had significant traffic issues during mid-day and at all three peaks.

Mr. McCarthy said they did counts at all three intersections including the existing roundabout. He noted the existing roundabout needed to be included in the evaluation. Mr. McCarthy explained they looked at all of the minor roads, driveways and the KSC parking lot. They took all of that information and projected it out into the future into a design year, which in this case was 2038. He explained it was a 20 year horizon beyond the opening of the project. Mr. McCarthy said they want their proposal to work with today's traffic as well as the increase of traffic in the future.

Mr. McCarthy displayed a representation that showed the level of detail received in the traffic counts. He noted they were looking at what was currently on Winchester Street and all of the dif-ferent turns. He displayed the results to show the high amount of turning volume at the intersec-tions. Mr. McCarthy indicated on the Key Road intersection there was a high volume of turning traffic. He said they looked at how the proposed alternative would perform and also what a future no build would like if nothing was done. He noted they also looked at other alternatives to see how they would perform. He explained to the Committee the LOS (level of service) listed on the outline he displayed was based on a grade of A to F. He continued the numbers showed how traffic was performing, delay time and how these intersections would perform in the future. He explained A was good and F was not so good. He explained grades A, B and C were usually a good LOS and grade D implied traffic would start to get troublesome. He continued showing how the traffic grades started to show grade E and F's and that indicated trouble.

The next representation Mr. McCarthy showed detailed the existing corridor data with both the current and future LOS for the existing intersections at Key Road and Pearl/Island Street. Mr. McCarthy provided comparisons of traffic today and traffic over a 20 year horizon. He said based on the data if nothing was done the delays would grow exponentially higher and the congestion of traffic would become worse.

Mr. McCarthy said they started looking for a solution and looked at signalized intersections by ex-panding the signalized intersections at Key Road as well as Pearl/Island Street. He explained what they saw in the footprint was a need for more land and the intersection at Key Road needing dou-ble left turns. He continued the traffic coming from Winchester Street would also need a double left turn to accommodate the heavy traffic load. He

noted this alternative solution would be adding lanes just to accommodate the traffic. Mr. McCarthy explained the Pearl/Island intersection was complex because of the traffic coming from north bound with the need to make left turns. Mr. McCarthy noted the data he displayed that showed the future LOS grade level as D's on Saturday and grades of F's and E's on Pearl/Island.

Another alternative looked at were roundabouts similar to size and look of the roundabout that was at the intersection of Winchester/Marlboro Street. Mr. McCarthy said based on their data the roundabouts were able to handle the volume of traffic better and according to the data it showed grades of A's and B's. He noted the roundabouts had the capacity to handle the volume of turning traffic. Mr. McCarthy said due to this information the Steering Committee came to the conclusion the roundabout alternative was a much better solution. He said it also had less of a footprint, handled the traffic better and also had the ability to provide a gateway to the City that the citizens were looking for in the corridor.

Emily Gardner, Saratoga Associates, said their focus was on the aesthetics of the corridor and the character of the street scape. She indicated the location of the corridor on the map and explained the entrance of the roundabout. She said this corridor was a transition zone that consisted of a Commercial Zones and Residential Zones. Ms. Gardner explained the corridor was broad and open and the goal was to have a Main Street feeling. She said they had to determine how to handle the aesthetics and accommodate that change.

She said they looked at the roundabouts first and how those aesthetics would be handled. Ms. Gardner said the roundabout could serve as welcome focal points for the gateway to give a sense of "Welcome to Keene." She continued as they thought about roundabouts they still needed to consider safety with having some views but also to close off the view a little bit to keep the traffic moving slowly. Ms. Gardner explained this could be accomplished by landscaping the center of the roundabout. She suggested a softer landscaping but not a fixed permanent object for safety reasons. She also suggested as they move forward to try to minimize signage.

Ms. Gardner said the counterpart to that was the portion of the road in between the roundabouts. She explained they thought about the elements of the street scape through the area by trying to create a gradient through the landscaping. Ms. Gardner said that idea was to move through a more open space to a narrower space. She that could be accomplished through the way the medians were created. She noted that could be accomplished by the type of pavements, sidewalks, type of lighting, spacing of the lighting and crosswalks.

Ms. Gardner displayed models of the possibilities of the different types of paving on the roundabout. She displayed a model that depicted the landscaping of trees on a roundabout. She noted the trees depicted in the model were spaced apart approximately 75 feet apart. Ms. Gardner said the medians could transition from a paved median to something that was provided to be lower maintenance.

She continued the types of trees could be looked at further in the process and would dependent upon the width of median and space available. She also said another option would be to transition from a lawn to incorporating trees along the way. Ms. Gardner said it may also be a nice idea to plant seasonal plantings to enhance the focal point.

She showed another model that depicted the median transition and explained that it had already happened in the roundabout near KSC. In discussions, Ms. Gardner said it was asked how to treat the apron of the roundabout. She said one of the elements discussed was moving large trucks/haulers through the intersections. Ms. Gardner explained the apron could be kept lower and treated with pavers to have the aesthetics. She noted this option would also have the function that was needed. Ms. Gardner stated by moving further through the street scape it would create a gradient by shifting the trees by 50 foot spacing and then introduce light poles so there would be pedestrian scale lighting at the center median.

The last model of a roundabout displayed by Ms. Gardner was similar but introduced trees along the way and spacing to accommodate the sidewalks without impacting any businesses. She noted there were also seasonal

plantings at the node. Ms. Gardner said they did some preliminary brain-storming about what this might look like in terms of permeable paving which would help with storm water. The smaller flowering trees with fairly narrow medians would perform better by incorporating the flower plantings would give a nice welcoming street scape. She said if the opportunity allowed itself this would also be the opportunity to bury the overhead lines. Ms. Gardner said as they looked at pedestrian lighting there will also be a solar option to compliment that design.

Ms. Gardner referenced tree species that would work and said that would be considered in the next phase of the project. She suggested a variety of species whether it was bright flowering or like a Hawthorne that moved from flowers to winter color.

She said the last feature of the roundabouts, depending on how the grading moved through the process could serve as opportunity to serve as storm water. She said they could channel smaller amounts depending on what they could handle into the center of the roundabouts and could hold or treat storm water with water runoff. She said it also an opportunity to try to incorporate a similar concept in the median itself and could be lowered rather than raised through the center to catch some of the street runoff there as well.

Mr. Lussier explained Ms. Gardner's role in the project was to paint a picture of the possibilities of the project. He noted they were still very early in process and all of the things Ms. Gardner discussed would be worked out during design process. Mr. Lussier thought it was a good idea to plant the seed about what was good for this corridor.

Councilor Filiault asked for an optimistic timeframe of the project if everything went accordingly. Mr. Lussier replied if everything went without a hitch it would fit into the states 10 year plan which would be in 2019, which coincided with FY19 and was budgeted in the CIP for construction funds. He continued in terms of overall project schedule it was toward the end of the engineering study phase. Mr. Lussier said the next step was the preliminary engineering and he explained they would be coming to the Committee with a contract to extend McFarland Johnson's work by mid to late fall. He noted they would also have preliminary design plans to review with Committee to get feedback. He noted it was still early in the design process and that was closer to a 65% level of design rather at the 10% where they were today.

Councilor Filiault asked if it would be shovel on the ground ready in late 2018. Mr. Lussier replied spring of 2019. He continued that due to the extensive project he was hesitant to start a project of this nature in July of the fiscal year and would make more sense to wait until the spring of 2019.

The City Attorney asked said options presented there were 1) signalization 2) the roundabouts. He asked if there were more or less land acquisitions required with respect to each option. Mr. McCarthy replied they both had acquisitions to a certain extent. He explained they tried to hold the existing sidewalk edge of road that was on the west side of Winchester Street, to minimize the impacts to all of the businesses on that side and do more of the shifting towards the eastern side. Mr. McCarthy explained there were impacts and he thought there was less in terms of area for the roundabout verses the signalization alternative because Winchester Street was not as wide. The City Attorney said the same number of land owners potentially had to be contacted with respect to either option. Mr. McCarthy replied fortunately there were fewer owners on that eastside.

The City Attorney said in terms of the scheduling in place he asked if there was any preliminary contact with respect to land owners that may be potentially impacted. Mr. McCarthy replied no. Mr. Lussier said through the LPA process they would have an issue with the DOT if they began parcel acquisition and negotiations with landowners. The City Attorney asked if they would let him know when that action would begin. Mr. Lussier replied yes.

Mr. Lussier said he received a comment through City's website and it was a good enough comment to read it into the record and respond. He said the resident raised two concerns: 1) there was not enough accident history

in the corridor to warrant building roundabouts 2) pedestrian safety through the intersections. He said to take each one in turn it was important to point out that the recommended alternative, the roundabout, was being recommended because in the opinion of the design consultant and the Steering Committee it best meets the project's purpose and statement that included aesthetics, functionality and other factors.

He said the other point on pedestrian safety they believed a roundabout would result in greater pedestrian safety. He continued there were Federal Highway Administration studies to back up that claim that pedestrian safety was augmented by that kind of treatment. Mr. Lussier noted when comparing it to 60 or 80 foot wide 17 lanes of cross walks that was troublesome for people crossing. Mr. McCarthy said that he would concur with Mr. Lussier.

Mr. Lamoureux said a lot of the accidents that occurred in that area were not recorded because the police do not respond. He noted there were a lot of minor fender benders and unfortunately the data at the Police Department may not reflect everything that occurred in that area.

Councilor Filiault with reference to the Key Road Extension, noted there was some discussion of where it was blocked off and going onto West Street. He asked if there was any thought relative to possible opening of that corridor. Mr. Lussier replied it was not looked at as part of the project. Mr. Lussier said as he mentioned at Council there was nothing in the project that would preclude them from doing that in the future. He continued they were not proposing any changes that would eliminate that possibility or make it more difficult. Mr. Lussier said that there were some pros and cons of opening that end of Key Road and before that decision was made there needed to be a careful look at what it would do, not just to Meadow Road but also how it would impact the intersection where Pearl Street comes to West Street. He noted that was the sticking point when it was looked at in the past.

Councilor Filiault asked what the timeframe would be for the last shovel on the ground. Mr. McCarthy replied it would be a little too early to say if the project was a single season or two season project. He noted there was still a bridge that needed to be replaced and utilities that needed to be addressed. Mr. Lussier said it should be expected to be a two construction season project.

Chair Manwaring asked if she was a pedestrian coming from the location of Chipotle and needed to get to Walmart how would she get across the street with the roundabout. Mr. McCarthy showed the location of the sidewalk in front of the Chipotle building along Winchester Street, followed a depiction of the sidewalk, showing a crosswalk. He explained the crossing would be at the median, crossing again and then following the sidewalk all the way along and enter. Mr. Lussier explained one of the benefits of the roundabout that was an integral part into their designs were the splitter islands that divided traffic and guided motorists to make the curves. He continued those did double duty as islands of refuge for pedestrians. Chair Manwaring said that area was a high traffic area and asked how long a pedestrian would have to wait to get across the street. Mr. McCarthy replied the pedestrian would have the right of way. He said the design of the roundabout was anticipated to have a vehicle traveling at a speed of 15 mph.

Mr. Lussier said another advantage of the roundabout was that it placed the crossing pedestrian more in the line of sight of the motorist. Chair Manwaring said she was not sure if she agreed because part of what happened was that it stopped everyone at the roundabout.

Mr. McCarthy explained that part was included in the analysis and when they conducted their evaluation they did traffic counts as well as pedestrian counts. He said that the delays were factored into their analysis with pedestrian crossing.

Chair Manwaring said she did not see anything shown in their layout in regards to bike lanes and asked if that was included in the project. Mr. McCarthy replied yes. He said on Winchester Street there was a section of a 5 foot shoulder/bike lane along both sides of Winchester Street. He said the design at the roundabout was such

that if someone was an avid cyclist and felt comfortable riding a bike around the roundabout it was perfectly legal. He continued if there was a recreational cyclist not wanting to enter the roundabout, a path that also serves as a sidewalk around what was a multiuse path is also incorporated. He said on the bike lane there would be a ramp that went around the roundabout on the multiuse path. He said this was a wide sidewalk to specifically accommodate pedestrians and cyclists. Mr. McCarthy noted the exiting roundabout on Route 101 had the same features and that they used this roundabout as model.

Councilor Hooper said he had the same concerns as Chair Manwaring. He asked how many car lengths there would be if someone stopped for a pedestrian. Mr. McCarthy explained the way the roundabouts were designed that there was a yield bar and the crosswalk was put one car length behind. He continued that was meant the car was to merge into roundabout and focused on entering. He said that was one of the safety feature was that the crossing was always behind the merging vehicle. Councilor Hooper asked if that would be true for a box truck. Mr. McCarthy said if a box truck was waiting it would likely block the cross walk. He said it was a 20-25 foot distance typically for a passenger vehicle. Councilor Hooper asked if the design could move the crosswalk further up in the design or if that would have a negative impact. Mr. McCarthy replied that it would have a negative impact. He said a roundabout was a tighter location and the cars approaching the roundabout had to slow down in order to maneuver around the roundabout.

Councilor Filiault asked if all of the fast food restaurants would be egressing onto Key Road. Mr. McCarthy replied there was once entrance at Chipotle right up next to Key Rd and the project pro-posed to close that one off and the rest would have the same access onto Winchester Street.

Councilor Filiault asked if it made sense to leave both egresses on Winchester Street open to allow a smoother flow. Mr. McCarthy replied he was not sure if they considered that option because it was already an existing egress. Mr. Lussier said that option was something to look at with the pre-liminary design.

Brian Colburn, McFarland Johnson, said in terms of circulation patterns, Wendy 's and McDon-ald's were set-up based on the egress on Winchester Street so you have to contact them to see how that would impact their internal flow operations.

Mr. Lamoureux said that he used the intersection coming out onto Key Road to do a left turn and that it would be too long of an area for all of the traffic from Wendy's and McDonald's turning left. He said this would create an issue. Mr. Lussier said that it was worth looking at the data and that it would also change the operating circumstances of those businesses. Mr. McCarthy said in terms of Chipotle, the developer knew that their location would be affected by the project. Mr. Lamoureux noted the exit at the Chipotle building was put in for fire services because they were not able to maneuver the parking lot with their equipment.

Chair Manwaring asked to see where the KSC student parking lot entrance was located on the map because it seemed to be located right on the circle. Mr. McCarthy indicated the location on the map and explained the exiting at the roundabout would allow an entrance to the round with an option to go in either direction on the roundabout on Winchester Street. Currently, he explained there was only a right turn and that option would be an enhanced exit from that parking lot.

Chair Manwaring asked if any members of the public had questions or comments.

Councilor Jacobs said it was alluded to earlier by Councilor Clark there was an interest in public art and that people were interested in the roundabout as a possible location. He said he hoped there would be some consideration of public art installation at the roundabouts. Mr. Lussier replied it was a wonderful idea. Mr. McCarthy said there were safety issues to be mindful of in the centers of roundabouts.

Councilor Filiault made the following motion, which was seconded by Councilor Lamoureux.

On a vote of 5-0, the Municipal Services, Facilities, and Infrastructure Committee recommends the “Roundabout Alternative”, be selected as the proposed action for the reconstruction of Winchester Street, and that the City Manager be authorized to do all things necessary to implement this proposed action.