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## MEETING SUMMARY

**SUBJECT:** Willard Street Drainage Improvements Project  
Community Meeting #2 Summary

**DATE:** Thursday June 15, 2017; 6:30 – 8:30 PM

**LOCATION:** Friends Meeting at Cambridge, 5 Longfellow Park, Cambridge MA 02138

### 1. Presentation Overview

The second Community Meeting for the Willard Street Drainage Improvements Project reviewed the project location and background, goals and objectives, current conditions, and work that has been done so far. The majority of the meeting was devoted to discussion of the features and considerations of the three evaluated design solutions. Items for follow-up are included in **bold text**. A PowerPoint presentation was given (available for viewing at [www.cambridgema.gov/theworks/willardstreet](http://www.cambridgema.gov/theworks/willardstreet)).

Jerry Friedman, Project Manager for Cambridge DPW, began the meeting with a discussion of the project location and background. He reviewed the two main reasons for the project: stormwater/flood issues and surface transportation improvements. Roch Larochelle, Project Manager for HDR, reviewed the project goals and their objectives:

- a) Reduce Flooding
- b) Utility Upgrades
- c) Surface Improvements

A question was asked about the inclusion of Willard Court, as it is a private way, since it has issues with pooling water. Willard Court is not included in the surface improvements aspect of the project at this time, but will be checked for flooding and be included in flooding resolution, as will Dinsmore Court; however, neither street are currently programmed to undergo surface changes. Another question was asked about plans for underground utilities, but none are planned at this time.

- Roch reviewed the work that has been done so far. This includes a field survey, sewer/storm drain video inspection, the first community meeting, additional traffic data analysis, and the development of conceptual solutions. Information that was heard at the first community meeting was categorized by topic and presented.

- Roch then reviewed the additional traffic data collection. Traffic counts were conducted at five intersections, one of which is signalized (Mt. Auburn Street at Hawthorne Street). Current conditions were presented for traffic volumes for the weekday AM and weekday PM peak hours. Traffic volumes are higher in the northbound direction for both time periods, and significantly higher northbound during the PM peak.
- Traffic data was also presented for a one-way northbound option, illustrating the number of southbound trips that could potentially be diverted onto Sparks Street, Foster Street, and Hawthorn Street. Overall, the number of diverted southbound trips is relatively low compared to the existing volumes on these streets.
- A question was asked regarding why Willard Street is the only street that allows left turns from Mount Auburn Street between 4:00 PM and 7:00 PM. This participant stated that they were not aware of the first community meeting when this was discussed.
- There were additional questions asked about crash analysis, traffic data collection and related transportation issues in the neighborhood. City representatives responded that the focus of this project is on drainage improvements, and consideration of traffic calming that may be possible as surface improvements when the roadway is reconstructed. The broader, neighborhood traffic questions will be addressed by the City through a separate process.
- A question was asked regarding the gas main. City staff will coordinate with the gas company and more will be known about overall utility coordination once the project is progressing in design.

## 2. Evaluation of Design Solutions

Roch reviewed the following three design solutions:

- Two-way Traffic with Shared Lanes: This concept is essentially the same as the existing condition, with the addition of more clearly defined street curbs on both sides of the road. There are two 10-foot travel lanes to be shared by vehicles and bicycles; one seven-foot parking lane; and six-foot sidewalks on either side.
- One-way Northbound Traffic with Bike Lane "A": One 10-foot travel lane is provided in the northbound direction, with a 7-foot parking lane on the west side and six-foot bike lane on the east side. Two six-foot sidewalks are provided on either side of the street, with a four-foot tree planter on the north side. The tree planter provides an opportunity for improved stormwater management and an enhanced streetscape. This option provides the widest sidewalks.
- One-way Northbound Traffic with Bike Lane "B": This was referred to as the enhanced stormwater treatment option. One 10-foot travel lane is provided in the northbound direction, with a seven-foot parking lane on the north side and six-foot bike lane on the south side. The major difference from "A" is that "B" includes a 4-foot rain garden/bio-basin on the east side with a 5-foot sidewalk and a 3-foot tree planter with 4-foot sidewalk on the west (parking) side.

A matrix of evaluation criteria to evaluate each surface option was presented. Each option was rated against the project goals and desired improvements generated from the first public meeting. The matrix illustrated that One-Way Option “B” satisfies the criteria most fully, with One-Way Option “A” next, and Maintain Two-Way last of the three options presented.

During this portion of the presentation, the following topics were discussed through questions posed by attendees:

- The possibility of adding a crosswalk at Foster Street across Willard Street in the Maintain Two-Way option. A crosswalk at this location could be added to this option.
  - The opportunity for curb bump-outs at Willard Street at Brattle and Mt. Auburn streets. City staff and Team will look into this as a traffic calming option as the design is refined. The turning radii for vehicles and trucks will need to be evaluated.
  - Utilizing speedbumps for traffic calming. City staff and project team will look at raised crosswalks and speed tables as an option to reduce speeds on the street.
  - Under all design options a variance for the sidewalk width will be required to accommodate an existing tree on the east side. Otherwise, ADA compliant sidewalks are provided in the design options.
  - Regarding the evaluation criteria, it was asked how it accounts for differences in sidewalk width between the options, especially accounting for if two people are able to walk side by side or not.
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- Rich Claytor of Horsley Witten Group provided an overview of watersheds and treatment options. The watershed overview provided information on the size of the watershed and drainage boundaries. He explained the larger watershed area versus the drainage area specific to Willard Street. The combined storm and sewer pipes at Mt. Auburn Street are undersized to carry the 21 acres of stormwater in the larger watershed area that drain into this one location. A new separate drain pipe is proposed, which will accommodate the needed stormwater capacity. First flush storm drainage will likely be directed to the sewer system to provide a level of treatment but the majority of stormwater flows will be directed to the new outfall in the Charles River. Separating sewer from stormdrain will help to resolve current occasional flooding in the street.
  - The need for water treatment is based on standards set by the Clean Water Act for the Total Maximum Daily Load (TMDL) of phosphorus. The goal for the Charles River is for a 51% reduction in phosphorus load. This only entails stormwater collected from the street, not sewerage, which will be handled in separate pipes.
  - Two types of Green Infrastructure (GI) treatment alternatives were discussed as options on Willard Street:

- Tree Trenches: A method of stormwater management where water filters into the tree pit, feeds the tree, and overflow goes back into the street. An example was shown from Chelsea, MA.
  - Bio Swales: A 3-4-foot planter that is raised from the sidewalk level. There is no standing water so mosquitos are not an issue. They can also be used for street beautification/planting purposes.
- Rich then identified the Willard Street project area and expected load reduction/treatment effectiveness for each alternative. Although all three solve the drainage flooding problem, only option One-Way "B" results in treatment that meets or exceeds the TMDL requirement of reducing phosphorus by at least 51%. The option does not meet the requirement for the greater watershed, but the site requirement specific to Willard Street is met.
  - Current conditions on the street tree inventory were reviewed by Roch. The tree inventory plan shows the existing street trees in the public right-of-way in dark green and street trees in private ways in light green. All street trees in the public right-of-way will be retained. Some options add new trees.

### **3. Schedule and Next Steps**

Roch reviewed the project schedule moving forward. The design options will be refined between July and August. During this time additional sewer inspections, involving dye testing, will also be completed. The final design and permitting is expected to occur during the winter and spring of 2018 with construction beginning tentatively in 2018.

A question was asked about the duration of construction. The duration will depend on the ultimate solution for stormwater and what happens underground. It was asked how this would relate to the Huron Avenue project. The duration of construction is expected to be much shorter as Willard Street is a smaller project.

### **4. Community Discussion**

The second half of the meeting was devoted to a discussion of the design options, led by Juan Avendano, Traffic Calming Project Manager for the City of Cambridge Community Development Department. The discussion is summarized by key topics below.

#### *Willard Street as the only Northbound/left turn Option from Mt. Auburn Street*

- Several community members were concerned with Willard Street as the only northbound street with left turns permitted from Mt. Auburn Street during the afternoon peak period between Fresh Pond Parkway and Harvard Square. Some expressed concern that this is a system-wide problem due to the left-turn restrictions on other streets and one-way southbound streets. It was

suggested that this drives more people to use Willard Street for northbound travel, than would use it if these restrictions were not in place.

- It is not the City's intent to evaluate the system of regulations along Mt. Auburn Street, as this is outside of the scope of the project. City staff suggested that this could be evaluated through a separate neighborhood Process. **Circulation concerns will be conveyed to the Traffic, Parking and Transportation Department for consideration.**
- One participant questioned whether the traffic data presented was skewed by only looking at the peak hour, when turn restrictions are in place.
- City representatives and consultants responded that traffic was counted for 48-hours on Willard Street, which helped to define the peak hour. Additional turning movement counts were collected at five intersections, for 2-hours in the morning and 2-hours in the afternoon. Traffic data analysis typically focuses on the peak hours. The data reflects the reality of regulations in place at this time.

#### *Traffic Congestion on Willard Street*

- Some residents expressed concern that converting Willard Street to one-way northbound would not solve the issue of northbound vehicles backing up on Willard Street. City staff responded that some parking could be eliminated on Willard Street at the Brattle Street end to accommodate a right turn lane, if that is desired. It may be a trade-off between parking and congestion.

#### *Speed*

- Concern was expressed that a one-way street would lead to increased speeds on Willard Street. It was compared to Sparks Street, which one community member described as a "race way."
- Juan suggested that traffic calming elements could be used to slow traffic, and that the congestion and cars idling at rush hour would naturally reduce speeds on the street. One participant opposed this idea, noting that slower vehicles would lead to increased air pollution for abutters.
- Several participants believe a two-way option will be safer and stated that curb bump-outs are not effective enough.
- Another participant stated that unless Willard Street is converted to one-way, the residents will have the same problems they have today, including narrow sidewalks, lack of bicycle facilities, and traffic congestion.
- Juan expressed concerns that retaining the two-way option is a missed opportunity, as only curbs will be added to the existing streetscape. It does not provide additional trees or bicycle facilities, or solve vehicular turning problems. Speeds can be mitigated with crosswalks and bump-outs, so this issue should not be a barrier to considering other types of improvements. The project team can look into raised crossings for the one-way options, as they provide many additional improvements for pedestrian safety and traffic calming.

### *Pavement Upgrades*

- It was asked if the street pavement will be upgraded with better material, as truck traffic deteriorates the roadway condition and creates potholes.
- The street will be rebuilt to modern standards.

### *Crossing Island at Mt. Auburn Street*

- One participant asked if the crossing island will be removed as it is narrow and vehicles frequently run over it.
- Another participant stated that traffic calming efforts at Mt. Auburn Street and Willard Street were not successful. If there are going to be more cars on Mt. Auburn this needs to be addressed.
- Juan stated there are no plans to remove the island as part of this project, but they will investigate whether the island could work with a bump-out and check turning movements. Although many drivers do not like the crossing island at this location, one resident stated it improves safety for pedestrians and uses it every morning. Juan was the project manager for this project, and stated that based on a survey, pedestrians like the island and drivers dislike it, so it depends on the user's perspective.

### *Underground Utilities*

- A community member asked about the total project cost and potential for underground utilities. Typically underground utilities require separate systems for each provider, and for all residents to agree to place them underground. Property owners must pay for service past the back of the sidewalk. Juan estimated this would be \$20,000-25,000 per household. **The City will provide a cost estimate for households, as requested by several residents.**

### *Bike Lanes*

- It was asked if there is a way to provide a protected bicycle lane, as even with a bicycle lane, the travel lane appears wider when the lane is void of bikes. It was asked if the bio swale could be moved to the opposite side of the street to provide separation between the travel lane and bike lane.
- Jerry stated that this would make the road too narrow for emergency vehicles and harder to plow in the winter. One option could be a 5-foot bike lane and 3-foot buffer with flexible posts if 2-feet is taken from elsewhere in the cross-section. It was also stated that the bike lane may not need to be as wide as 6-feet due to the low stress environment. A participant asked if a 2-foot bio swale is an option. Rich stated that they are hard to grow, but it is possible.
- It was confirmed that the Cambridge Bicycle Committee is comfortable with either one-way option with a bicycle lane.

### *Tree Stump at 15 Willard*

- A resident complimented the City on their prompt response to the request to remove the tree stump in front of 15 Willard Street, but was concerned that it had not yet been removed. City

staff responded that they had to contact the historic commission and address concerns of the adjacent property owner who was worried about damage to their fence during the stump removal process. The tree stump will be removed when a date can be arranged with the property owner present.

#### *Bio Swale Maintenance*

- It was asked if the City would maintain the bio swale. The City will maintain the bio swales and also plant what the citizens desire, however plants that help handle water and drainage and are also salt tolerant are preferable. Different types of grass work well. They will work with the abutters to select plants.

#### *Lighting*

- HDR will check to ensure lighting is present at the crosswalk locations, though the City is not adding lights as part of the project.

#### *Criteria Matrix Discussion*

- It was asked why the two-way option was not rated as a safer option. It was also asked if the criteria could be weighted, for example, to weight safety more heavily than others elements. City staff reminded participants that the one-way options would have narrower travel lanes than the existing travel lanes by 4-feet.
- One resident commented that they like the idea of living on a two-way street, but there are so many opportunities with the one-way option, especially if speed could be controlled.
- Several community members were opposed to living on a one-way street due to inconvenience and aesthetic preference for living on a two-way street.
- Another resident agreed, stating their primary concerns are speed and convenience. There will be more pollution if people have to travel around the block to exit Willard Street. The topic of revisiting left turn restrictions elsewhere was mentioned again. **City staff will present this to the Traffic, Parking, and Transportation department;** however, Juan noted that based on other areas, changing the restrictions on streets does not typically change driver behavior because people operate out of habit.
- City staff reminded the audience that a one-way option was supported at the first community meeting, so that is why it was studied by the project team.
- One resident commented that the increased sidewalk width goal is desirable. A great opportunity would be missed if wider sidewalks are not included in the design, as these types of enhancements would improve the quality of the street for the neighbors.
- It was also said that if people feel safe walking and biking, less will be in their cars.
- Another participant expressed concern again that a one-way street would lead to increased speeds, with Sparks Street as an example. **City staff will examine traffic and sight lines on Mt. Auburn Street.**

**5. Conclusion**

- Juan summarized that the current preferred alternative (one-way Option “B”) will move forward as the alternative that provides the most benefit in terms of safety, multimodal accommodations and stormwater treatment.
- The project team will also pursue tools to improve the street and in particular, address speed through the introduction of speed tables, bumpouts and raised cross walks.
- The meeting concluded at approximately 8:30 p.m. Participants were reminded to include their information on the sign-in sheets in order to receive project updates.

Attachments

cc: Project Team





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**Meeting Attendees**

1. Jerry Grochow
2. Lloyd Weinreb
3. Ruth Plant Weinreb
4. Susan Miller-Havens
5. Jennifer Jones
6. Cynthia Smith
7. Magda McComia
8. Michael F. Epstein
9. Dixie Morse
10. Jon Devereux
11. Ann Wyman
12. Mead Wyman
13. Annette LaMarch
14. Louise Grochou

**Project Team**

1. Jerry Friedman, City of Cambridge
2. Juan Avendano, City of Cambridge
3. Roch Larochele, HDR
4. Travis Lucia, HDR
5. Richard Claytor, Horsley Witten Group
6. Cynthia Smith, Halvorson Design
7. Christi Apicella, McMahon Associates
8. Natalie Raffol, McMahon Associates