MEMORANDUM

To:	Rick Corsi Project Manager	Date:	July 23, 2019
From:	Hannah Brockhaus Howard Stein Hudson	HSH Project No.:	2018214.00
Subject:	DCR Memorial Drive Greenway Improvements, Phase III Public Meeting Meeting Notes of June 25, 2019		

Overview

On June 25, members of the Department of Conservation and Recreation (DCR) Memorial Drive Greenway Improvements Phase III project team and DCR staff associated with the job held the project's second public meeting. Through this project, the agency seeks to complete the improvement of the greenway along Memorial Drive from the Boston University (B.U.) Bridge to the Eliot Bridge and analyze opportunities to reclaim riverfront parkland through lane reductions and intersections improvements, where feasible.

The meeting took place at the Dr. Martin Luther King, Jr. School's Cafeteria, located at 102 Putnam Avenue in Cambridge. The purpose of the public meeting was to present existing conditions, results from the traffic study, and provide an opportunity to allow the public-at-large an allow to weigh in on conceptual alternatives for the corridor, so that the project team can incorporate their input into the conceptual design for the corridor. The project team is currently refining concept development based on input received at the meeting documented in these minutes. Public comments on the materials presented June 25th are open until July 25th and may be submitted in writing or by email.

At the meeting documented herein, the DCR and consultant team re-introduced themselves and the project. The project team shared with the public an overview of the 800 comments received from the public listening session which chiefly advocated for more space for cyclists and pedestrians and for the preservation or enhancement of the existing tree canopy. The comments helped to shape the shared goals for the project corridor which were presented to attendees. The design consultant team walked attendees through data from the existing conditions and traffic study, which along with the public comments, shaped the conceptual alternatives for the project corridor. The concepts shared on

June 25th, proposed to conduct a road diet from four lanes to two lanes from Eliot Bridge to JFK Park. Along the corridor where space allows, conceptual alternatives would separate bicycle and pedestrian paths or widen the shared use path to improve the users' experience and make open space improvements in the park areas. After a presentation, breakout groups discussed the Boston University Rotary/Reid Overpass alternatives, the Western Avenue/River Street/Memorial Drive "box" intersections, the traffic study and the proposed concepts on the corridor roll plan. Attendees had the opportunity to engage in a dot polling exercise for the concept alternatives.

As this was the first public's first glimpse at the conceptual alternatives, the approximately 100 attendees were eager to provide feedback for the team to consider as they move the designs forward. Items to be addressed at the next meeting include traffic impacts on a road diet from four lanes to three as the public urged the team to consider taking the road diet further.

Agenda

Detailed Meeting Minutes[1]

Welcome & Opening Remarks

C: Jeff Parenti, *Department of Conservation and Recreation (DCR)*: Good evening everyone and welcome. This is public meeting number two for the Memorial Drive Greenway Improvements Phase III. I want to welcome you to the King School. My name is Jeff Parenti; I'm the Deputy Chief Engineer for the DCR. Tonight, we are going to talk about improvements on Memorial Drive from the Boston University Bridge all the way to Eliot Circle. We had our first meeting on April 11th at the Morse School in Cambridgeport, which was a great meeting. How many people were at that first meeting? Great, we also have a lot of new faces, which is terrific.

Meeting number one was a listening session. The attendees worked really hard for a couple of hours to break down the two-mile project limit and talk about things we wanted to see improved.

[1] Herein "C" stands for comment, "Q" for question and "A" for answer. For a list of attendees, please see Appendix 1. For copies of meeting flipcharts, please see Appendix 2.

After the meeting there was an opportunity for the public to provide comments via the project Wikimap, email and the DCR website. As of tonight, we received 800 comments which is great participation.

Tonight, we are going to show you what we heard from you during that process including the breakdown of your comments. We'll also share the work that the team has done in between meetings. Before I start, I want to recognize people that in the room tonight. I want to recognize Cambridge City Councilor Quinton Zondervan, Representative John Hecht, Representative Jay Livingstone and City Councilor Devereux's aide who are here tonight. Thank you for coming. I also want to recognize other DCR staff in attendance this evening: Stella Lensing, from our landscape architect department; Val Soroka, from our traffic engineering department, and Rick Corsi, the project manager. The format of this evening is a presentation followed by breakout groups for you to look at concepts and interact with DCR staff and the project team during the second half of the meeting. Our design consultant is AECOM. You'll hear from Mike Stiller, project manager and Dennis Flynn. Howard Stein Hudson is helping us out this evening as well. That is some background of what we are going to do this evening.

On behalf of Commissioner Roy, I want to welcome you to tonight's meeting. I want to start by giving you DCR's mission statement which I showed last time. Our mission as an agency is to protect, promote and enhance our commonwealth of natural, cultural and recreational resources for the well-being of all. The reason I point that out is what we are doing this evening is not a traditional roadway project. As you will see many of your comments were regarding transportation, but because this is a greenway, we take a slightly different approach than a traditional roadway project. I look at the well-being part of that vision statement and I translate that as safety. Our mission at DCR is to give you safe and convenient access to the reservation. As I said at the first public meeting, we are very fortunate to have the Charles River at our front door. We don't want our parkway to be a barrier for you to reach the river reservation or to travel along the reservation by foot and by bicycle. I'm going to turn things over to our project manager Mike Stiller from AECOM.

Presentation

C: Mike Stiller, *AECOM*: Thank you Jeff. Just to review the project limits are from the Boston University Bridge past River Street, Western Avenue, the Weeks Bridge, Anderson Memorial Bridge up to the Eliot Bridge, Eliot Circle, major intersections, and the Dr. Paul Dudley White Bicycle Path.

We were together last back on April 11th listening to community priorities and community feedback regarding what they would like to see for improvements. We have now assessed the existing conditions. We have started to look at what might be possible for early conceptual alternatives. We are here tonight to present the existing conditions, a summary of the completed traffic study and the survey of what is out there presently.

C: Nate Cabral-Curtis, *Howard Stein Hudson*: Good evening everyone. I'm Nate Cabral-Curtis, the head of public involvement with Howard Stein Hudson. Beginning at the last meeting we inaugurated a comment period. If you attended the meeting you were able to provide comments, there. Comments were also accepted through the DCR website, email and a project Wikimap. Through that process we received over 800 comments. These are some screen captures from what we had in the listening session. We broke the comments out into the same categories as what you saw on the Wikimap. Looking at the pie chart, most of the comments were about transportation or recreation, which overlap in this corridor. Where there is space, people would like to see improvements in the public realm. Where there is space, people would like to activate that space. One of the things that is good about all the commentary we received, is that I don't think there is a single thing in there that came as a shock to the project team. The top two takeaways you will see reflected here tonight are people would like to get more space for cyclists and pedestrians and they would like to preserve or enhance the existing tree canopy.

As you can see, down around the Boston University Rotary, there were lots of transportation comments there. We know this is a space that works for few if any, as even drivers find it challenging. People have problems with street crossings. Where the pathway crosses the street is a point of pain for many users. There are also comments regarding activating the public realm.

As you start to move outbound towards Harvard Square to what are referred to locally as the box intersections of Western Avenue and River Street, you start to see that there is an acknowledgement that this is a challenging section of corridor as there is not a lot of room, but there is a lot of demand on it. There is a desire to improve these crossings for pedestrians and cyclists.

As you start to move further out and the corridor begins to widen, you begin to see more comments regarding enhancing the tree canopy, finding things to make the park space a more active location. We had comments asking for additional water fountains for those using the path recreationally and not familiar with the adjacent neighborhoods. Rick is going to discuss how we turned these comments into shared goals for the project that we hope you will see reflected in tonight's presentation. We had a nice geographical spread from where people and organizations

commented. I want to end by thanking the Cambridge Bicycle Committee for helping people find their way to the meeting room this evening; I know there are about twenty ways into this building.

C: Rick Corsi, *DCR*: The intuitive shared goals are broken down into several categories: public realm, recreation and transportation. The public realm goals include: improve drainage through the use of green stormwater management; design for habitat enhancement using native plant species which is something we are encouraging as part of a separate project, the Charles River Basin Riverbank Management Vegetation Plan, which will allow us to do placemaking where space allows; and enhance the tree canopy, through the selection of species that will thrive. It is a tough spot for some trees to exist.

In terms of recreation the shared goals include providing access to and through the park by separating the paths, improving the paths' surfaces and improving the crossings at the intersections. The drainage impacts bicyclists and runners as well as automobiles. We want to make the park accessible to everyone, which is part of our mission statement that we intend to make happen. We want to look into how we can expand the car-free Memorial Drive currently on Sundays. We are looking to perhaps expand that to Saturdays as well during the summer. We are also looking at ways to shorten the access points from the neighborhoods into the park and provide lighting to increase the perception of public safety.

In terms of transportation, the signal timing could be improved in order to have traffic flow continuously even if it's at a lower speed. With proper synchronization of the traffic signals, traffic will get through Memorial Drive faster. We are going to take a look at areas where we can reduce the cross section of Memorial Drive to give that land back over to pathways and parkland. This is similar Phase I of Memorial Drive, Greenough Boulevard, Nonantum Road. We have some designs for the Boston University Rotary that we will be presenting that we think can improve what we think is not a very good situation. Trying to get through it a 3 p.m. drive me crazy.

We looked at existing conditions, tree health, stormwater management, and road conditions. AECOM performed a traffic study which can be made available. In regards to the evaluation of the condition of the trees, we are going to be going through this portion with our arborist in the next couple of weeks to confirm what we have from one study to make sure that the trees are healthy and what we need to do to get them healthy. There are areas that need improvement. This is the equivalent of the throat on Soldiers Field Road and we have a plan to deal with that. The box area (Western Avenue and River Street intersections), the area heading towards

Magazine Beach on a narrow strip and the Boston University Rotary are the major areas that need to be addressed in terms of multimodal use and parkland accessibility. Mike Stiller, project manager from AECOM will further address the existing conditions.

C: Mike Stiller, *AECOM*: Thanks Rick. Over the past few months, AECOM has been compiling the existing conditions data for the project area. AECOM has also compiled the archive plans as well as conducting a topographic survey of the existing conditions out there to see what the dimensions are for improvements plus completing an extensive traffic study. This slide represents some of our topographic plans and some of the sections. The top section is located between Eliot Bridge and Hawthorne Street. In this area the roadway width is 42 feet. Throughout the project area the roadway width varies curb to curb from 39 feet to 42 feet, which is four travel lanes 10' in width or less, which is pretty narrow for anyone who has driven out there. In this area we have a relatively steep bank, a roughly 7' wide shared use path, and the existing sycamore or London planetree that are not as prevalent in this area. In terms of some of the constraints for improvements, widening the path is difficult under this configuration. That is the challenge in the design as we need to know what the dimensions are moving forward.

Moving further downstream around the Anderson Memorial Bridge and the Weeks Footbridge, we have a wider park space and the trees we are trying to protect along the roadway provide a constraint to improvements. There are four travel lanes in this section as well. Once we get between Western Avenue and River Street, the granite block wall is a hard boundary. Currently there is an existing roughly 10' wide shared-use path. London planetrees that are characteristic of the roadway are also prevalent in this section of the corridor as well. This section also features the four 10' travel lanes. This stretch also has a prior constraint on the opposite side with a narrow sidewalk and buildings up against the sidewalk. As Nate mentioned, there is a lot of demand for this space and there are a lot of spatial constraints that we are trying to work with within the existing conditions. As we get into some of the initial conceptual thoughts on what might be possible for improvements, a lot of these constraints really play into what we think may be possible. At this point I am going to turn it over to Dennis Flynn who will tell you about the traffic study we completed as well as pedestrian and bicycle volumes following up on the 2014 Connectivity Study.

C: Dennis Flynn, *AECOM:* Thank you Mike. As Mike mentioned, my name is Dennis Flynn and tonight I am going to talk to you about the traffic in this corridor. By traffic, I mean all users: cyclists, pedestrians, automobiles and miscellaneous. Why are vehicles, cyclists and pedestrians utilizing this corridor? How are they utilizing it? Where are the primary origins and destinations through this area? These are the main questions that we have to answer, amongst others, to

determine what our opportunities for modifications or improvements for all users of this facility are.

I am going to start with cyclists and pedestrians. What you are seeing is a few locations along the pathway where cyclists and pedestrians were counted during the a.m. peak hour, p.m. peak hour, and Saturday peak hour. The main reason I wanted to represent it in this illustration is that I feel that there are two distinct characteristics when we look at the cyclists and pedestrians along the pathway. One is that this is very much utilized as a commuter route for cyclists and pedestrians. In the a.m. volumes most of them are travelling east or south towards downtown Boston or further east into Cambridge and in the p.m., it is the opposite happening. The other feature is that this is very much a recreational facility. I don't know how unique that is to other DCR roadways or pathways, but I did think that was particularly interesting and it is something we need to understand when we talk about what our opportunities are.

Q: **No Name Given:** What is the time unit on those?

A: **Dennis Flynn:** Did we talk about questions?

C: **Nate Cabral-Curtis**: Just quick questions folks as there will be a whole breakout session on this alone.

A: **Dennis Flynn**: Very quickly the top number is a single hour of typical a.m. peak weekday-just hourly volumes. Again, the reason we presented it this way was to represent those two characteristics. Since you asked, one thing I do want to point out, these were collected very recently, the first week of May when the weather was dry, which had been a concern of ours given how wet this spring has been. They represent dry conditions in early May, so we thought this was a good representation of the path uses for cyclists and pedestrians.

C: **Dennis Flynn**: Moving on to traffic volumes on Memorial Drive. This looks similar to our map apps. This illustrates the variation in the motor vehicle demand over a 24-hour period on weekdays. The green over to the west over by the Eliot Bridge sees about 20,000 vehicles a day. This does start to increase to the 25,000 vehicle a day range once you get past JFK. It tops out around 30,000 near River Street. Just to the east you do see it drop down to around 20,000 which is Reid Overpass traffic. The first thing one can take away from looking at this illustration is that there is a lot of traffic that is destined for the Boston University Bridge or off into the rotary which is why you see the big drop from 30,000 to 20,000.

This is a similar slide, but what I wanted to illustrate here are the critical approaches and turning movements. These black arrows represent significant traffic volume that is coming off of the side streets or turning off of Memorial Drive. We aren't just talking about motor vehicles going east and west or north and south along Memorial Drive, but we also have a significant volume, and these aren't the only critical areas, where traffic is entering from the Boston side as well as the Cambridge side. Some of the traffic continues into the Cambridge side while other traffic continues into Boston or onto the Mass Pike and turning onto and off Memorial Drive. When we are thinking about traffic volumes the story is more than just traffic traveling along Memorial Drive. We have a significant amount of volume on these cross streets. These represent the critical intersections along this stretch of Memorial Drive. The reason I feel they are critical is they also line up with critical pedestrian and bicycle crossings, again they are not the only ones that are important, but they are the ones that are elevated to the top. There are a significant number of right turns at JFK. Those do run concurrently if you look at the signal phasing. There is what is called a lead pedestrian interval. This runs concurrently with a high number of cyclists and pedestrians crossing creating a conflict.

Western Avenue concerns me a little bit more, not because of the through traffic coming across as they will have a red light, but the westbound left turn from Memorial Drive onto Western Avenue that currently runs concurrently, or at the same time of the pedestrians and cyclists. So, if you are a left turn motorist, your eyes are first on a gap in motor vehicles to be able to make that left-hand turn. You also have to consider the pedestrians and cyclists making that a particularly difficult maneuver. Further down on the far side of the slide, that heavy right turn traffic going over the BU Bridge, there is also a significant amount of pedestrian and cyclist traffic that crosses there as well. It is a difficult location.

We also looked at travel times. This is a.m./p.m. peak motor vehicle times. We measure these times during critical a.m. and p.m. peak periods. We did it in segments or between the major signalized intersections as well as the overall travel time of the project limits. In the morning starting at the Eliot Bridge and traveling to the BU Rotary it is about an 11-minute drive. You can see with the color coding some of the more significant areas approaching JFK, and Western Avenue. Outbound traffic volumes are a bit lighter and the ride goes a little smoother. P.m. travel times tells a slightly different story, but I don't think it's much of a surprise. Most of our heavy travel delay times are down by the BU Rotary. In this case, it is not the same story as is in the a.m. peak where one direction is a little bit light and the other travel time is pretty reasonable. In both cases these are pretty heavy travel times. Particularly coming outbound in the afternoon, we recorded 15 minutes coming from the Boston University Rotary to the Eliot Bridge. One thing we did look at is if you were to start at either end travelling 25 MPH getting

through all of the green lights the total travel time is about 5 minutes or a third of the current travel times, indicating slow and steady. We know during the peak periods, the travel times and the speeds associated with these travel times are much slower, however, we also know that other parts of it are much higher than 25 MPH. On average they do exceed 25 MPH. That's an interesting point to keep in mind as we look into solutions.

Sticking with motor vehicles, level of service is the metric we use to assess intersections. Is it the most significant assessment for measuring intersections? No, but it is a good qualitative assessment essentially of the measure of effectiveness. It is the industry standard for measuring the qualitative assessment or the effectiveness of the intersection which is based on delay. We try to color code. So, anything in that A or B range is operating fairly well or operating with low delays. F's are failure and E's represent you are running at capacity. Initially my reaction to these was, this is better than I expected particularly based on those travel times. That is why it is a good metric. From my experience it is more to gauge what kind of capacity we have, based on the traffic demand or volumes, how is it able to process or deal with that demand. That was looking at the overall operations of the intersection with all the volumes and all the movements coming though. The red arrows represent turning movements or particular approaches that are operating at failure. When you look at it, it doesn't look terrible. The operations don't look as bad as we'd expect, but when you look at the individual movements at different time periods throughout the day, these represent various time periods. We do have several across the corridor that are operating at level of service F or failing.

In terms of regional coordination, the "s" represents where there is a signalized intersection. We are trying to show you a regional perspective. When we are talking about the traffic signals, with the exception of the ones that are not color-coded, the others are being coordinated as part of a system with signals on the other side of the river. That is a particular challenge when we are looking at the corridor and trying to optimize operations for all through here, we do need to consider that these are part of a system that is supposed to be synchronized with signals on the other side of the river. The other part of this slide that I want to highlight is that when we think about motor vehicle traffic utilizing Memorial Drive, that it's not just vehicles coming from further west and heading north, there is also a significant amount of local traffic using Memorial Drive which impacts the operations of those signals. Storrow Drive is a similar roadway; connectivity from the west to Storrow Drive is very simple. The problem is that Storrow Drive doesn't take you to the destinations Memorial Drive does. So many of them turn right to Boston University Bridge. The other option doesn't take you to the same destination. That is looking at it from a slightly regional perspective as to why are people using this road instead of an alternative and what makes them need to utilize Memorial Drive.

I want to talk about safety – little bit of text. At a high level, MassDOT publishes a list of the top 200 crash locations. The data usually lags behind a few years. This is a summary of what the crash analysis shows us. Being on this list is not an honor – it's an indication of a safety deficiency. Memorial Drive and River Street is at 86 on the list while Memorial Drive at Western Avenue, is 135. Of the top 200 crash locations, two of them are in this corridor due to safety deficiencies. In addition, there are two locations with bicycle crash clusters. In looking at accident data, the safety industry, in this case MassDOT, uses the term cluster after a high concentration of crashes. The bicycle crash clusters are Memorial Drive and JFK and Memorial Drive at Boston University rotary. Memorial Drive at JFK had some recent improvements there and the dates of our data may not be providing an accurate representation, however, based on the listening session feedback there are still concerns about safety at that location. Bicycle crashes to clarify – it could be a situation where bicycles are crashing into bicycles, into pedestrians, more significantly motor vehicles and bicycles are colliding. Between 2014-2016 there were 225 accidents total, about 20 involved non motor-vehicles. Memorial Drive at JFK, we talked about how there were some recent changes there. Hopefully they have addressed this with the highest number of crashes of pedestrians and bicycles at JFK and Memorial Drive. A concern in this last bullet, the most prevalent are angle collisions which is a concern as they are more likely to cause injuries as opposed to a rear-end crash, obviously not as significant as a head-on. Angle collisions mean we have a lot of problems at the turning points.

Just a bit about the traffic study as we have already talked about it but to recap – what are we looking at when we're determining what opportunities we can take advantage of? What is the existing peak hour demand? It's not just motor vehicles who are using this facility as pedestrians and bicyclists are using it as well. We talked about the travel times as I find this to be a better measure of how the facility is operating for the motor vehicle standpoint versus delay calculation. These are actual in the field data collected that is giving us an assessment of how long it takes an actual individual user to get drive through this facility. What are the current operations? What will reducing capacity due? There are opportunities for optimizing phasing and progression or coordination along the corridor. There are critical turning movements throughout the corridor at the signalized intersections and some of the unsignalized intersections. Those are the ones that could be improved for safety issues. If it's at an unsignalized intersection, you have vehicles that want to continue on to travel and then there is a left turn in front of them, what is that doing to some of our maneuverability, our operations, are vehicles being aggressive getting stuck behind the left turn? These are some of the considerations as part of the evaluation we are building into the traffic study. We shouldn't ignore the safety for all of the users. What are the opportunities to improve safety? What could

some of the safety concerns be with some of the modifications we consider? With that I think I am done and will turn it back over to Mike.

C: Mike Stiller: We have looked at what the existing conditions are, the data from the traffic study, all of the comments from the public at the April 11th listening session, the Wikimap and we have put together some preliminary concepts of what we think might be possible. We are looking for your feedback tonight on these concepts. We've looked at the larger corridor and then the rotary is its own special entity that we will talk about concepts for it at the end.

This is the overall corridor looking at the traffic study data. We'll start at the western part, upriver at Eliot Bridge/Gerry's Landing and then go downstream. Starting here we do believe the traffic study supports a road diet which would take the four lanes down to two to about JFK Park. The benefit of that is it frees up space for a new dedicated separated bicycle path as well as separated pedestrian path. When we get into JFK Street/Anderson Bridge, as Dennis said the turning movements warrant four lanes, but we have a lot of green space that we can use to continue a dedicated bicycle path all the way to Flagg Street. That would give us dedicated bicycle lane and separated running path full length. There is also substantial space for open space improvements in the park areas as well.

As Dennis mentioned, continuing in this area there are a whole lot of traffic constraints, spatial constraints and there is just not enough space to do what we want to do. We do recognize in this area of the path the shared-use path is very narrow and there is space available to widen the path. Once we get to Magazine Beach, we can separate them out and expand a bit more and then we'll get into the BU Rotary after these slides.

The next slides are a typical section for each of the locations looking at what may be a conceptual design for each of these locations. The existing condition on bottom is roughly four 10' wide travel lanes, 40' wide. Roughly the path there is about 7' wide, existing. So, we go to two lanes, a new 10' dedicated bicycle path, a buffer zone, then a new 6' running /pedestrian path. You are constrained by the shoreline. On the other side we have the constraints of trying to preserve and protect the street trees. This tree doesn't actually look like that when you're out there. On this side of the road there are seven to eight of these that aren't nearly as healthy as what is shown on there. To facilitate the continuation of the separation of the paths we need to look at whether those are healthy to keep or if they could be removed to facilitate this.

As a reminder, these are concepts. We are looking for feedback tonight as we develop the design improvements going forward. Continuing on to JFK Park to Flagg Street, this includes the Anderson Memorial Bridge and the Weeks footbridge areas. Here we have enough park space to

install a new dedicated bicycle path continued at 10' wide, a buffer and then a new 6' pedestrian walking/jogging path to separate the modes of travel. Obviously, there are opportunities for preservation of the existing street trees. The London planetrees are significant and healthy on both sides. These configurations allow for the preservation of the trees as well as the improvements we would like to make as well as some further improvements to the green and the open space.

From Flagg Street to Pleasant Street this includes Western/River box and the approaches to Western Avenue and River Street on either upstream or downstream sides. Approaching Western/River we have a steep shoreline which is why there is only a 5' wide existing path. We do believe we can expand that to make a 12' shared use path. Between Western and River is a granite block wall. On the approach to Western Avenue we are looking at maybe a boardwalk concept that would also have benefits to the vegetation on the shoreline as well as maximize the space for a shared use path. On the downstream side of River Street towards Pleasant Street the grading might warrant a 12' shared path without a need for a boardwalk. There is a steep slope and we are close to the edge of the river.

Moving downstream further at Pleasant Street to the BU Rotary area, this is essentially Magazine Beach. There have been some designs developed that have separate paths as the approach from that project area to our project area. We continued the separate paths and then merge in as it joins to rotary it becomes a shared use path.

That brings us to the Boston University Rotary and the Reid overpass. The project area is very unique as it includes a rotary, an overpass, and a signalized intersection. We're still not even sure what to call it. What we heard from the public comments is consistent with what we've been anticipating, and what I've personally observed as well, is to remove the pedestrian connectivity barriers, organize and calm traffic for the benefit of all, remove conflict points to the extent we can to try to improve safety, and try not to preclude a rail/trail connection to the future Grand Junction Rail Trail, if and when, that transpires. We did conduct a topographic survey. We looked at the traffic study and compiled existing conditions data. Again, this is a rotary, an overpass, and a signalized intersection all in one. It's a very unique condition that presents unique challenges. It has constraints with topography. There is land owned by the Massachusetts Water Resources Authority right up against the bicycle path and bridge. The overpass is owned by MassDOT and is also considered a historic stricture.

Just a brief overview of where the flows are. Coming from the west on Memorial Drive, if you're not going overpass more likely you're coming to Boston University Bridge. There is a smaller

subset of vehicles that turns left into Cambridgeport down Brookline Street. If you're coming from the BU Bridge, most vehicles either go straight through or turn right to go eastbound. There is a much smaller set that continues onto Memorial Drive westbound. In general, the important takeaway is where the majority of vehicles are moving. Most likely you're going over BU Bridge if you're coming westbound. Same thing from Brookline Street, a majority of those vehicles and the 47 bus, continue straight through to the Boston University Bridge.

I'm now going to present the three concepts we've come up with. The first concept are the small changes and not a lot of modifications, the next one has more significant modifications to the geometry of the intersection and rotary, and the third one is a more drastic improvement that eliminates the overpass. We've considered a lot and we think this is an array of improvements each with pros/cons and benefits and constraints.

In this first configuration we recognize a lot of the vehicular conflict is due to the lack of lane designations to get three lanes of traffic into one lane. There is really no organization which causes lot of stress on the drivers and that stress gets inflicted on bicyclists and pedestrians. This organizes the lanes and allows for some increased space to increase the shared use path going through and across. It makes some reductions in the roadway around the rotary to again channelize and organize the vehicles, so they know where they're supposed to be. One of the benefits is that if you're on a bicycle or walking/jogging you now have to cross twice. This is one single crossing. The north/south interactions aren't changed much. We anticipate also expanding the currently narrow shared-use path. We will facilitate expanding that as well. The first alternative has modest improvements.

The second is a more significant revision which maintains the overpass but eliminates the rotary. We would take the existing signalized intersection to expand it to encompass all of the turning and through movements underneath the overpass. That has substantial benefits including restoring green space and eliminating pavement in all four quadrants. We still end up with a single crossing although it is a little wider. The crossings north/south are shorter distance wise, but you are still crossing twice. You'll see safety improvements in the crossings because they are now controlled by signals.

The third alternative is eliminating the overpass altogether which then brings all east/west traffic to a stop at the intersection. It has substantial improvements for pedestrians and bicycles going across the corridor. It has more green space in each quadrant. It has one single crossing north/south all controlled with signals for safety. A major drawback is conceptual queue lengths. Dennis looked at it and with the traffic the vehicular queue length is over 800' to the east and

also stretches on Brookline Street past Granite Street from the north. There are tradeoffs. We can improve bicycle and pedestrian crossings and remove the overpass, but a lot of cars will be sitting at that intersection trying to get through.

With that we have breakout groups. You probably have an awful lot of comments/questions. We have the BU Rotary/Reid overpass alternatives on the other wall there. If you have comments specific to the traffic study Dennis Flynn has his boards. We have the Western/River area blown up on a slide over there. You can also make comments on the corridor. If you don't have a comment but you just want to provide feedback, the yellow dots are if you like it and the orange dots if you do not like it.

C: Nate Cabral-Curtis: The only thing I would as is we are asking you folks to be on your honor. This is not a ballot effort. Don't just stand there stacking up dots, leave enough dots for everybody. We will report back at 8:15.

At this point the attendees migrated to maps and posters around the room to provide location specific and overall feedback. Members of the consultant team were stationed at each group in order to answer questions and lead a discussion.

Report from Breakout Groups

- **Traffic**: During the traffic breakout group attendees asked about bicycle travel times along the corridor and the time unit used to represent them. Current phasing at Western Avenue /River Street including the pedestrian flashing time was discussed. Travel times north/south at the BU Rotary were requested, however the project team did not analyze them for the meeting summarized herein. Attendees asked if the traffic study assumed future reductions in traffic. The project team responded that they had not assumed any future reductions in traffic or diversions from the corridor. Citing the Alaskan Way Viaduct in Seattle as an example, attendees pushed for increasing the length of the road diet suggesting that motorists would simply relocate to transit buses. Participants also urged the project team to factor in the impacts of the I-90 Allston Interchange project and work to find ways to reduce conflicts between bicycles and pedestrians.

- **Western Avenue/River Street Box Intersections:** Attendees asked the project team to figure out a way to extend the road diet into this area, particularly to perform an analysis of what it would take to go to a three lane cross section on Memorial Drive between Western Avenue and River Street. Participants also asked the project team to provide meaningful

intersection improvements to reduce conflicts. Raised/fully protected intersections and underpasses were mentioned as suggestions. Attendees would like the team to address waiting space for pedestrians and cyclists near the bridge abutments as these areas fill quickly at peak travel times for cyclists. Project team members suggested that existing constraints make it unlikely that underpasses would be considered as part of this project, but that nothing would be done to preclude them. The idea of cantilevering a boardwalk off the seawall was also discussed as a way to get more width for non-motorized users in the space between Western and River Street. The project team suggested that this could be possible, but the ability of the seawall to support such a structure would need further investigation. Any such board walk would need to go through environmental and possibly historical permitting; the higher off the water it could be kept, it is believed it would have an easier passage through permitting. Participants also noted their desire for improved lighting in this area, but requested that blue-tone LED's not be used as causing problems for wildlife on and in the river.

- **Concept Roll Plan:** Comments included continuing the lane reductions and/or exploring a three lane cross section between Western Avenue and River Street; exploring ways to continue the separated paths through the same area; providing a dedicated bus lane at the Boston University Rotary; consider tolling to control volumes; implementing traffic calming; considering underpasses and exploring ways to increase the length of 6' path for joggers/pedestrians/strollers.
- **Boston University Rotary Concepts**: Discussions focused on the functionality of the intersection, getting bicycles out of vehicles queues in the rotary and queue lengths for all alternatives. Attendees asked about ways to prevent right hooks accidents with bicycles and a dedicated pedestrian phase. Underpasses at the bridge and dedicated bicycle lanes through the rotary were also mentioned.

C: Rick Corsi: We are going to come back to you this fall with an update of what we talked about this evening. We'll take your comments. I'm sure we received another few hundred tonight. We as a design team will get together and talk through what we heard. You've given us a challenge here. One thing I heard from almost every breakout session and everyone I spoke to is that you want to see the road diet extended beyond what we have proposed here. We now have to go back and see if we can do it with less than four and what that would mean for the parkway. There are tradeoffs with removing vehicle lanes, so we will talk through those next time in more detail. Please stay involved we have our public involvement comment period open until July 25th. These are the various ways that you can do that and stay in touch with us. We welcome any feedback as long as it's friendly. For those of you who were at the first meeting, there are many ways to get in touch with us, pick your favorite. Before we close, I want to say thank you to Anne

Fiesinger, our Director of Public Outreach, who put this together this evening. If you have not signed in, please see Anne on your way out. Thank you to the King School for hosting us and have a great summer. Thank you.

Next Steps

The next Public Meeting will be held in the fall of this year when existing conditions including traffic data will be presented, as well as revisions to the concepts based on community input.

Appendix 1: Meeting Attendees

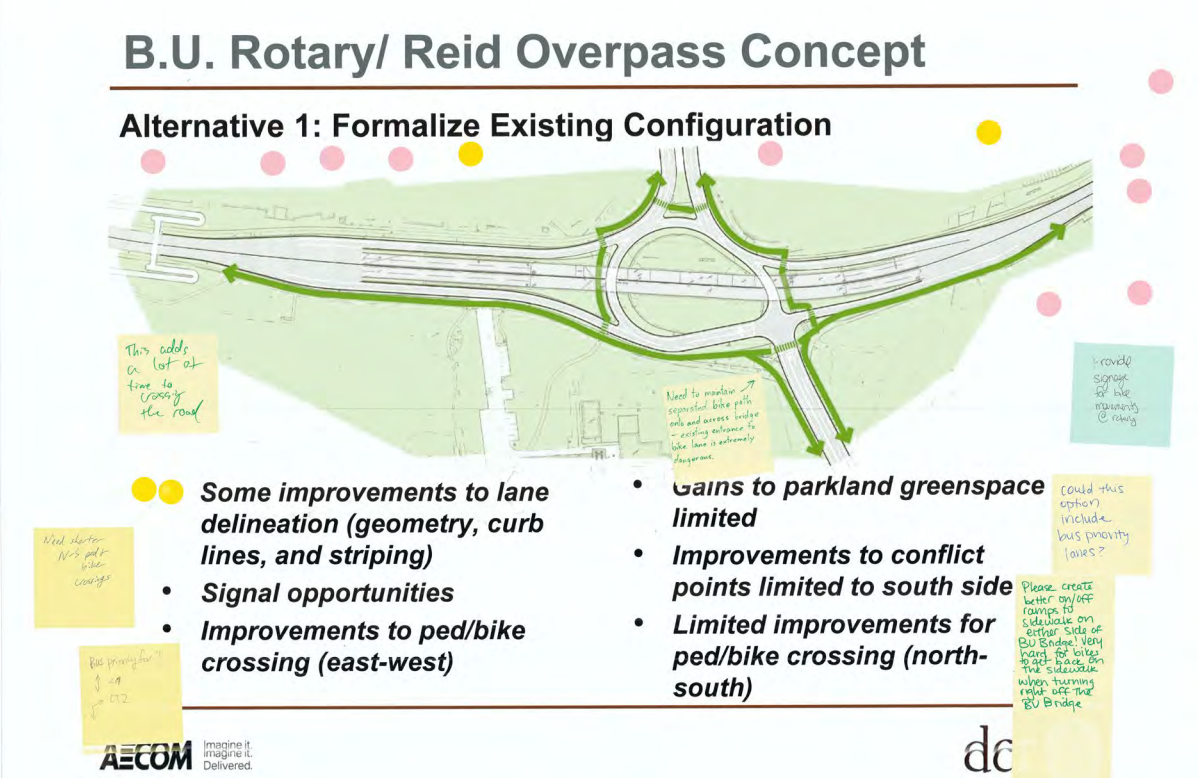
First Name	Last Name	Affiliation
John	Allen	CRW, Waltham Bicycle Committee
Amy	Almeida	Resident
Franziska	Amacher	Riverbend Park Trust
Joanaa	Antebi	Resident
Joseph	Antebi	Resident
Alex	Auriema	Resident
Elizabeth	Bierer	Resident
Maggie	Booz	Public Planting Garden Club
Hannah	Brockhaus	Howard Stein Hudson
Janet	Burns	CP+GC
Nate	Cabral-Curtis	Howard Stein Hudson
Brandon	Cardwell	Resident
Chris	Cassa	Resident
Todd	Consentino	JP Bikes
Brian	Conway	Resident
Rick	Corsi	DCR
Anna	Davis	Resident
Bill	Deignan	City of Cambridge
Chris	DiFranco	Riverside Resident
B. Daniel	Fairchild	STEP
Seth	Federspiel	Arlington Resident
Pamela	Ferrant	Resident
Anne	Fiesinger	DCR
Nate	Fillmore	Cambridge Bike Safety
Paul	Flores	Resident
Dennis	Flynn	AECOM
Alex	Frieden	
Louisa	Gag	Livable Streets Alliance

First Name	Last Name	Affiliation
Phil	Goff	Arlington Resident
Donald	Grossman	Resident
Marissa	Grunes	Harvard University/Cambridge Bike Safety
Julia	Halprin	Cambridgeport Neighborhood Association
Jon	Hecht	MA House of Representatives
Laura	Jasinoki	Charles River Conservancy
Ambar	Johnson	Livable Streets Alliance
Kent	Johnson	Resident
Charlotte	Karney	Resident
Lee	Kennedy-Shaffer	Brookline Resident
Lily	Ko	Boston Cyclists Union
Nancy	Lamb	Resident
Qinrong	Liu	Resident
Jay	Livingstone	MA House of Representatives
Colin	McCarthy	Resident
Magda	McCormick	Resident
Walter	McDonald	Resident
K.A.	McHugh	Resident
Luis	Mejias	Resident
Elizabeth	Michelon	CP+GC
Christian	Milneil	Streets Blog Magazine
Jules	Milner-Brage	Brookline Resident
Jessica	Mink	Commuter
Adam	Mitchell	Resident
Jane	Morse	CBC
Patty	Nolan	Cambridge School Committee
Steven	Nutter	Green Cambridge
Jeff	Parenti	DCR
Nishaila	Porter	CRWA
Tom	Pounds	Cambridge Boat Club

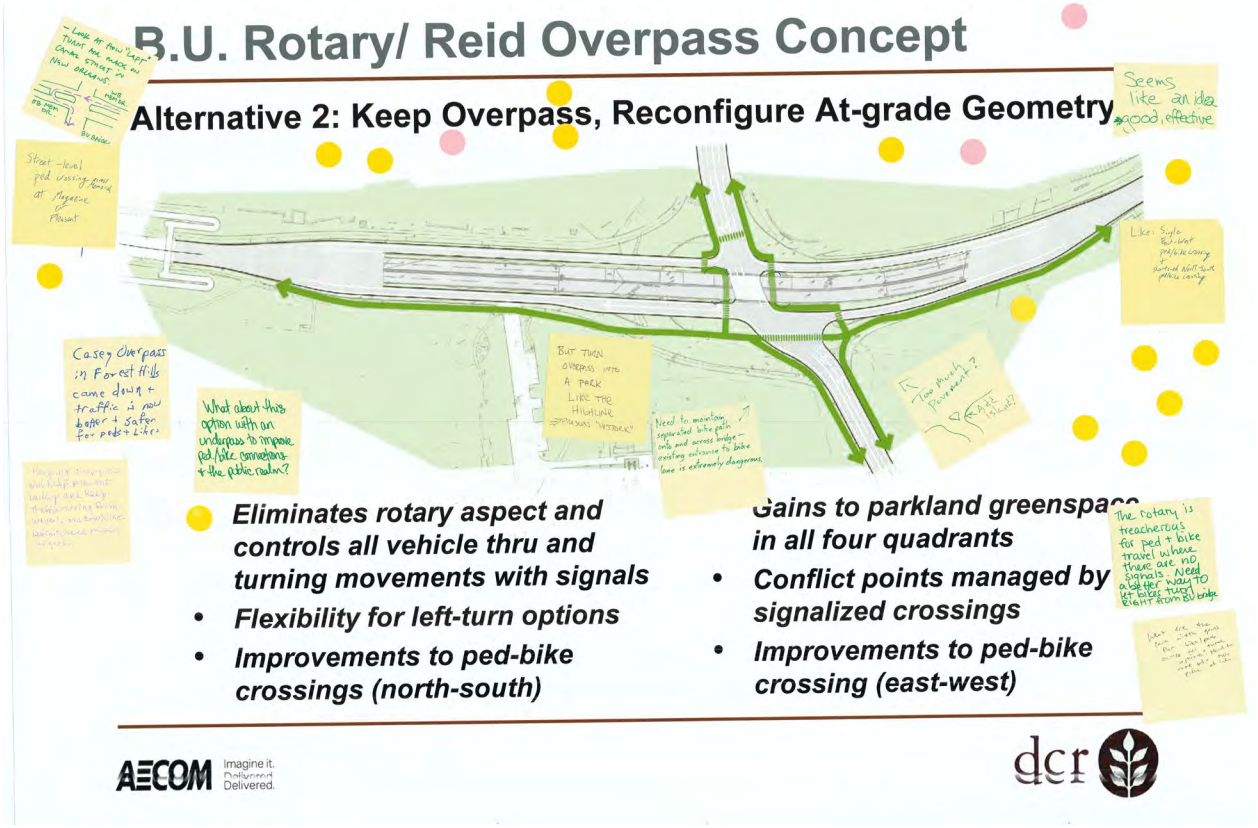
First Name	Last Name	Affiliation
Bella	Purdy	Resident
Andrew	Reker	Resident
Sarah	Romasanta	Medford Resident
Elena	Saporna	Resident
Pat	Selker	Resident
Libby	Shaw	Trees for Watertown
Bob	Sloane	
Jivan	Sobrino-Wheeler	Cambridge Bike Safety
Janet	Solomon	CBC
Martha	Stearns	Cambridge Plant and Garden Club
Randy	Stern	Cambridge Bike Safety
Pete	Stidman	HDR
Mike	Stiller	AECOM
Wendy	Stone	Resident
Guy	Stuart	Resident
William	Suter	Resident
David	Tisol	Cambridge Bike Safety
Dan	Totten	CP+GC
Tim	Tozza	Bike to the Sea
Itamar	Turner Tranring	Cambridge Bike Safety
Florine	W	Resident
Liz	Walker	Aide to Vice Mayor Deveroux
Cynthia	Westerman	Buckingham Browne & Nichols School
Walter	Willett	Resident
John	Williamson	Resident
Travis	Wojcik	Bike to the Sea
Daniel	Wolf	City of Cambridge
Alan	Wright	Rozzie Bikes/Boston Cyclists Union
Liz	Zagoreth	CPCC
Quinlon	Zondorvan	Cambridge City Council

First Name	Last Name	Affiliation
Cathie	Zusy	CNA

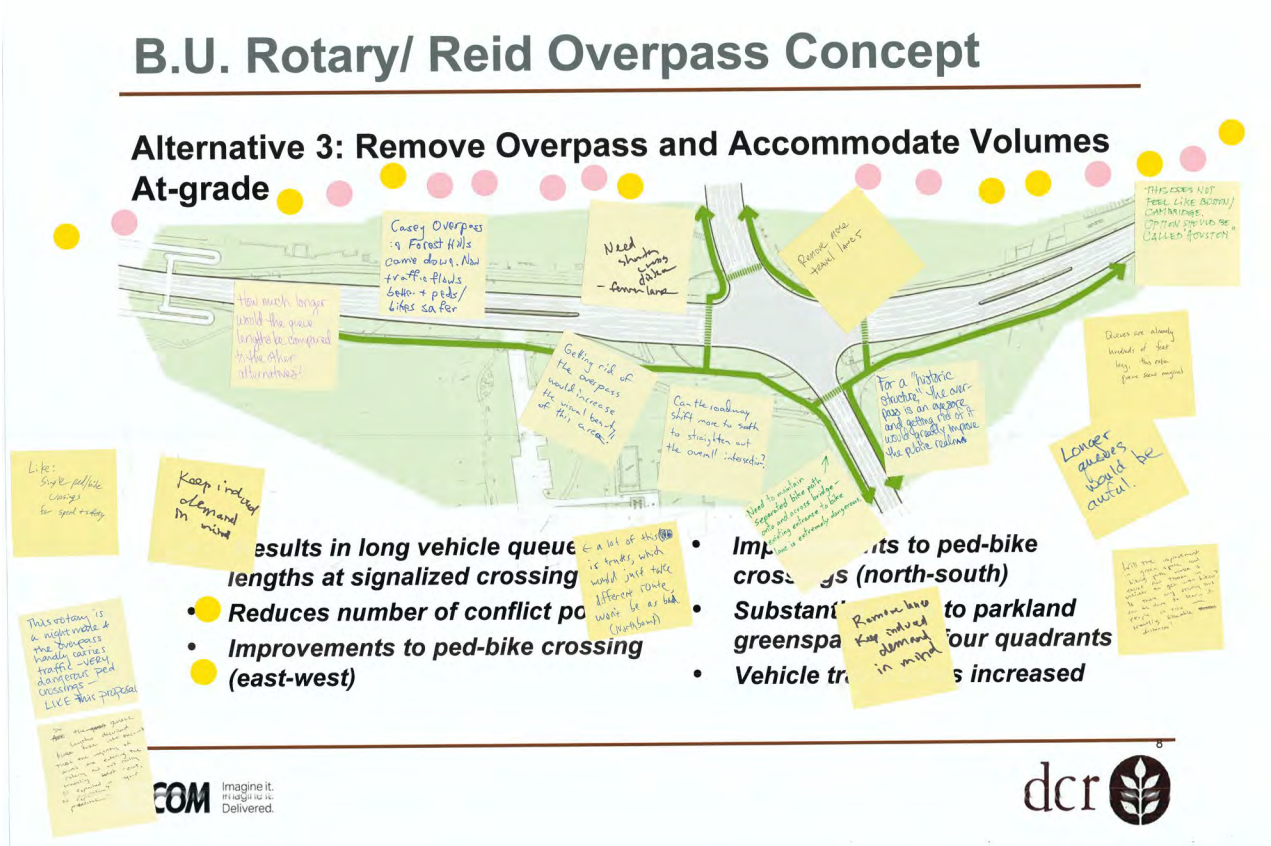
Appendix 2: Discussion Boards



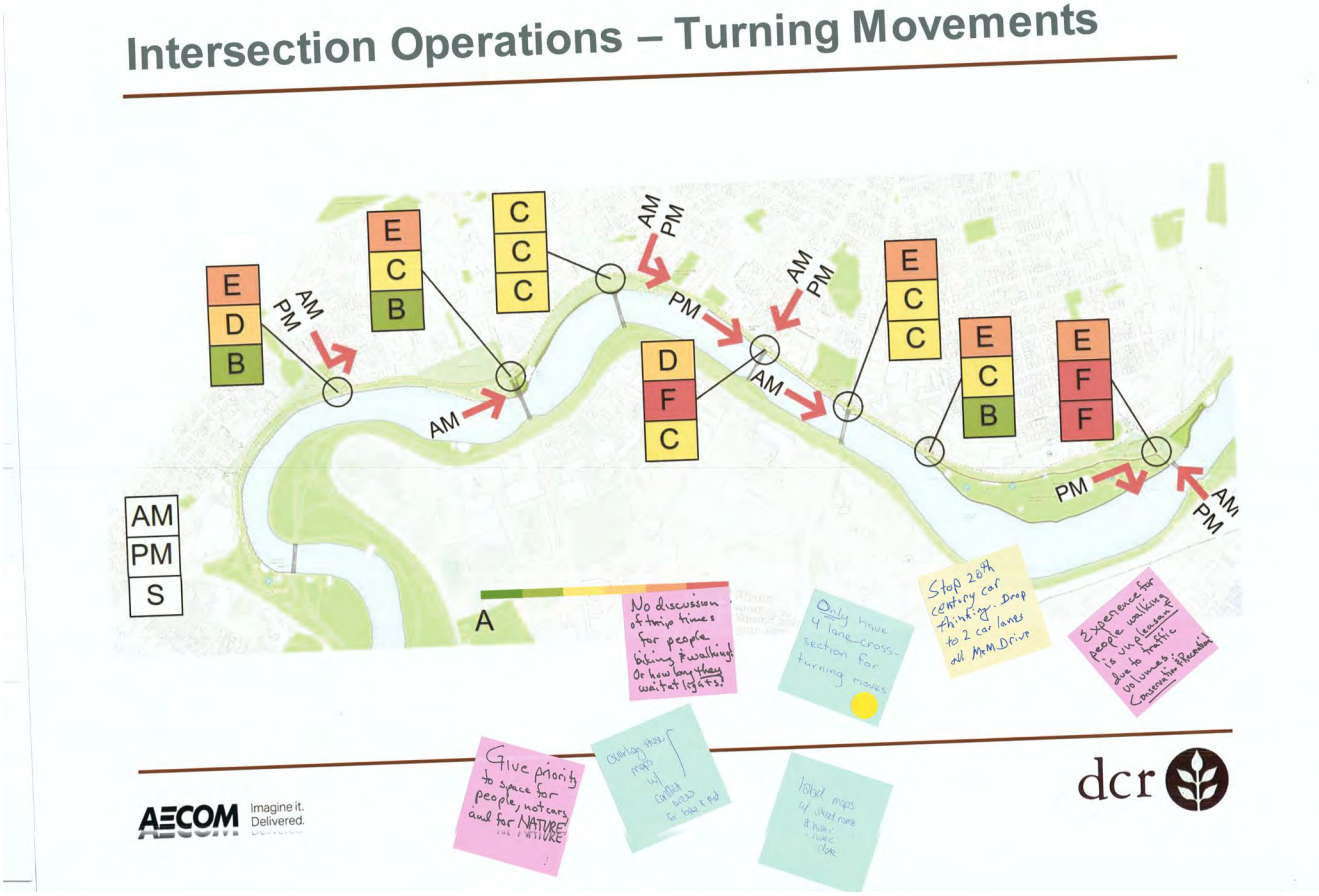
BU Rotary Concept 1: 4 attendees were in favor while 10 were not in favor of the concept. Attendees commented on the long crossings, asked about bus priority lanes and emphasized the need to improve bicycle lanes and bicycle connections here.



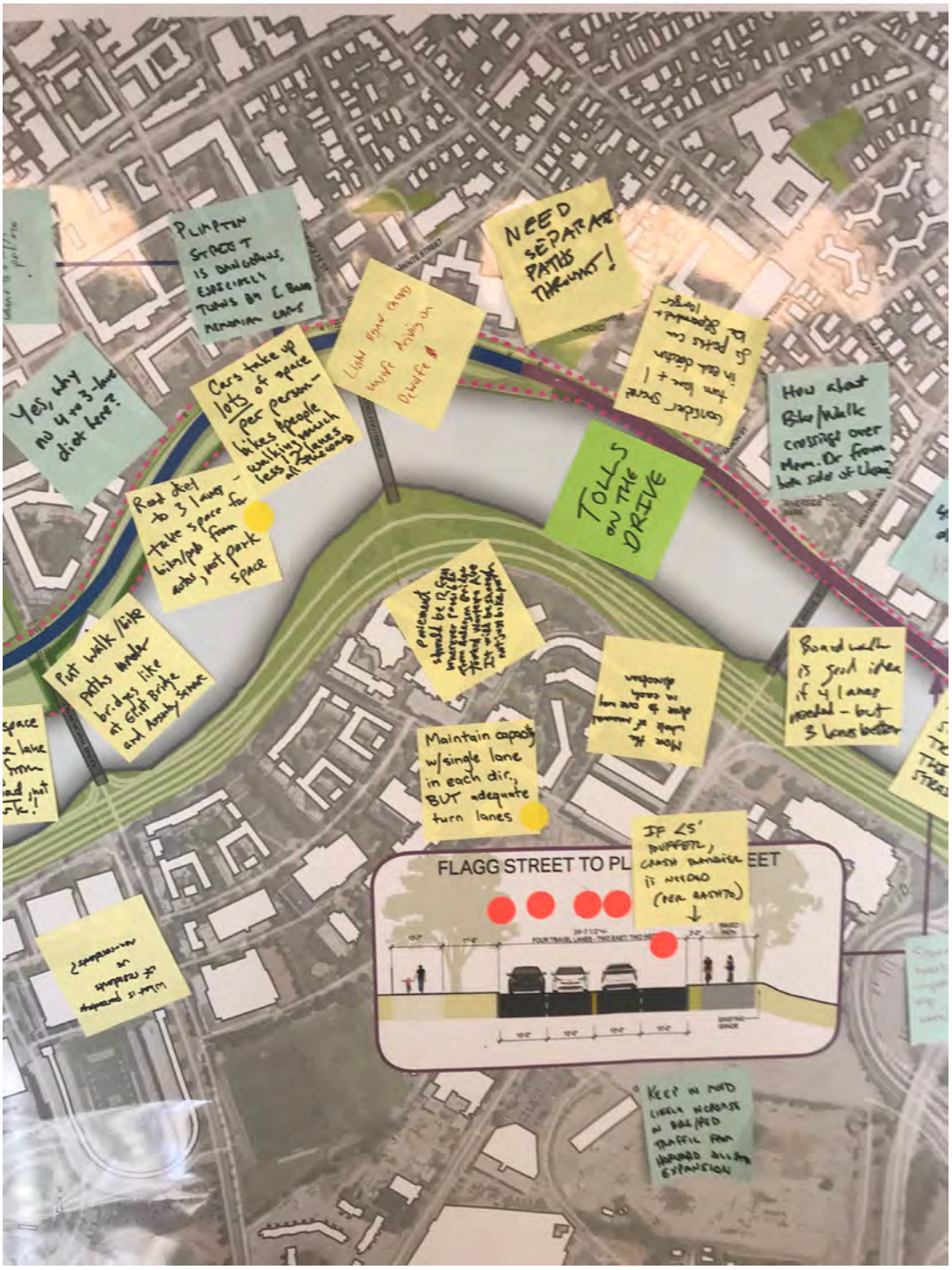
BU Rotary Concept 2: 14 attendees liked this concept while 3 did not like it. Attendees asked the project team to consider left turns similar to Canal Street in New Orleans. Others asked to consider an underpass for pedestrians and cyclists. Another comment urged the team to look at the crossings for bicycles and pedestrians. Commenters noted that keeping the overpass seems like an effective idea and will keep traffic moving while others asked to get rid of the overpass or turn it into a highline park.



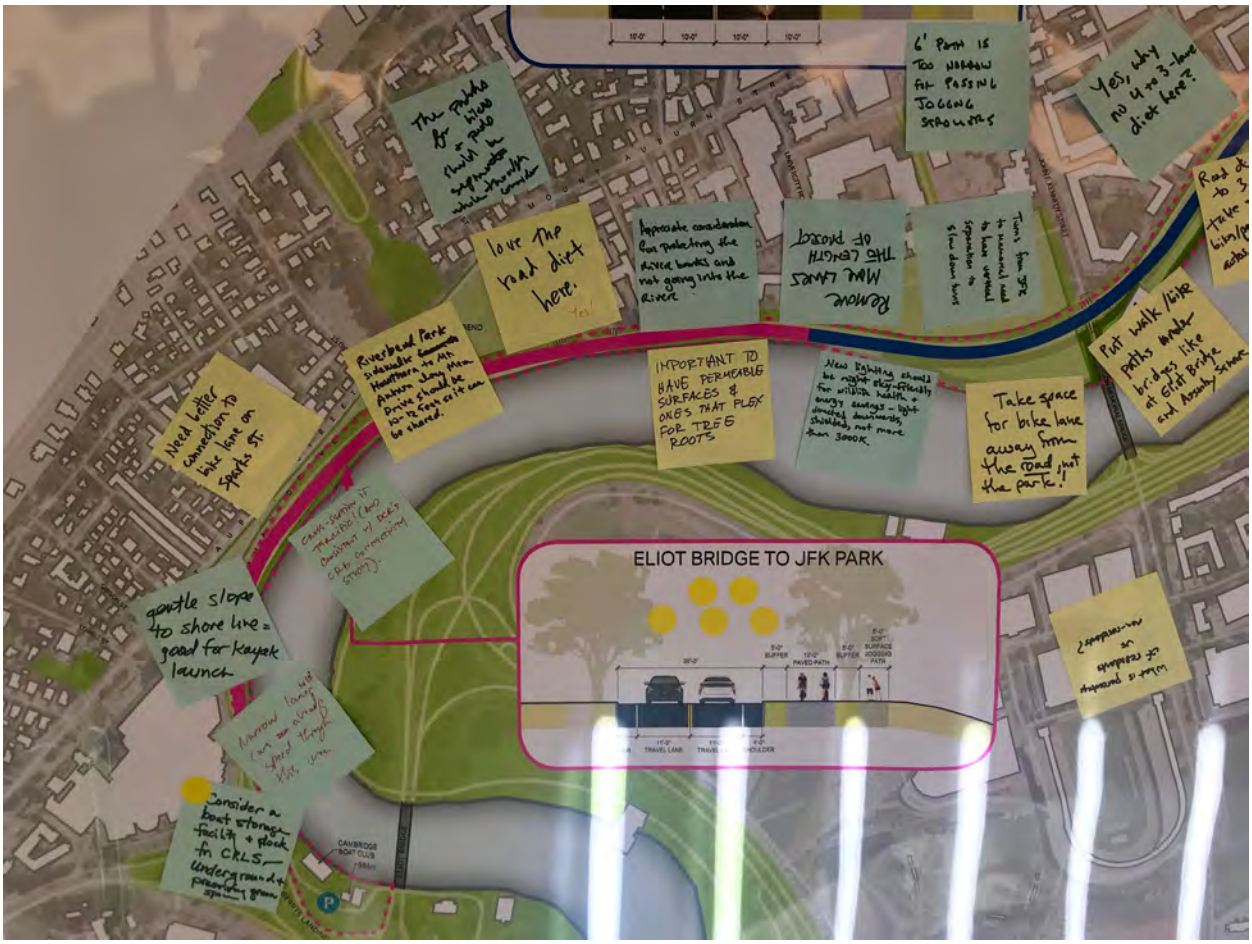
BU Rotary Concept 3. Attendees were split with 10 in favor and 10 opposed to this concept. Those in favor commented on how well the Casey Arborway functions without the overpass while others commented on how taking it down would improve the public realm and improve conditions for bicyclists and pedestrians. Others urged the team to reduce travel lanes to reduce crossing distances. Those opposed questioned how long the queues would be.



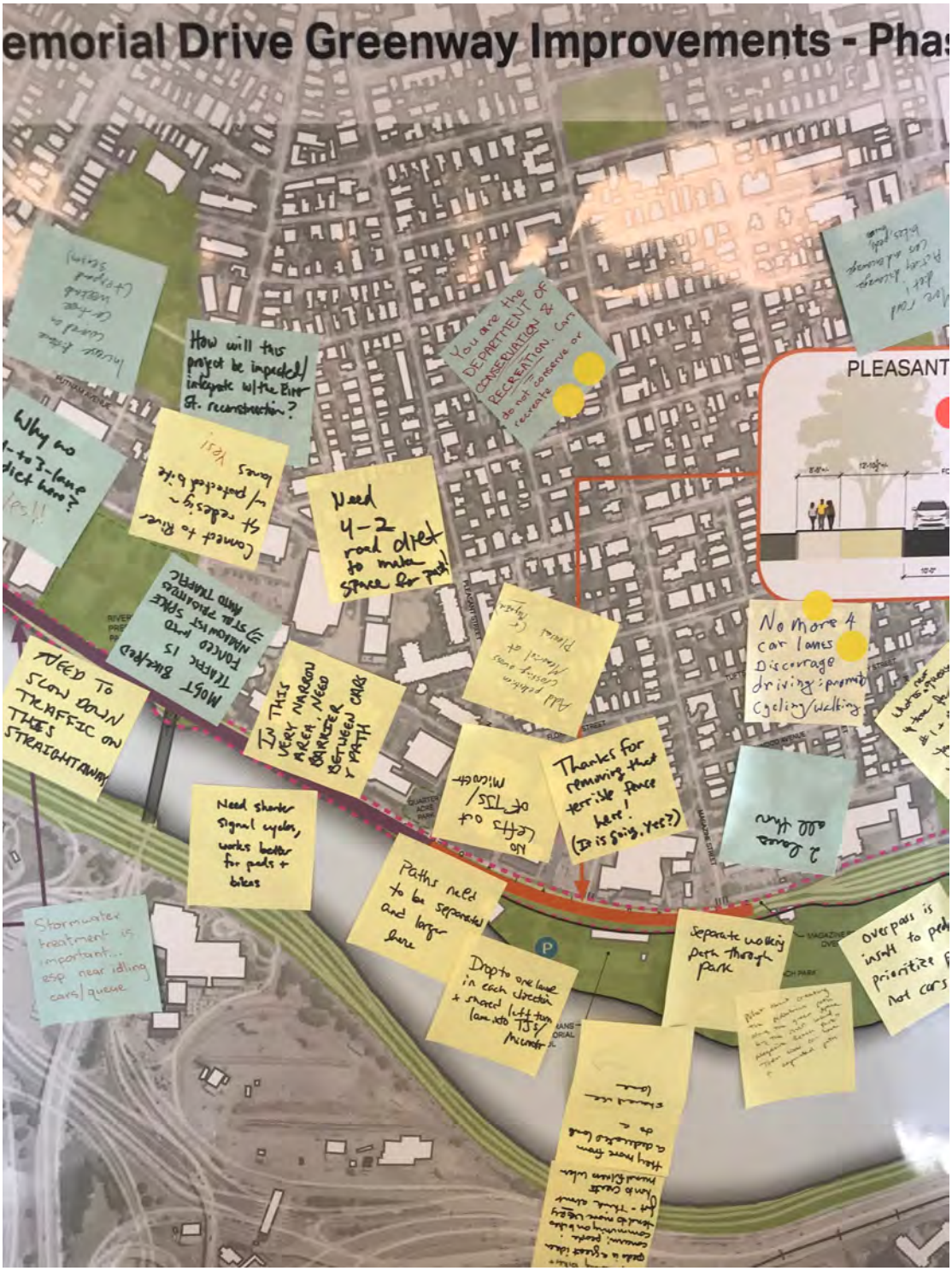
Intersection Operations-Turning Movements: Commenters noted that this map should be overlaid with conflict areas for bicycles and pedestrians. They would like a discussion on trip times for bicycles and pedestrians on the corridor and would like the project team to prioritize people, not cars and nature. A suggestion was made to only have four lanes for turning moves.



Public Comments on a section of the roll plan. Attendees would like to see a road diet, to accommodate for separated bicycle and pedestrian paths.

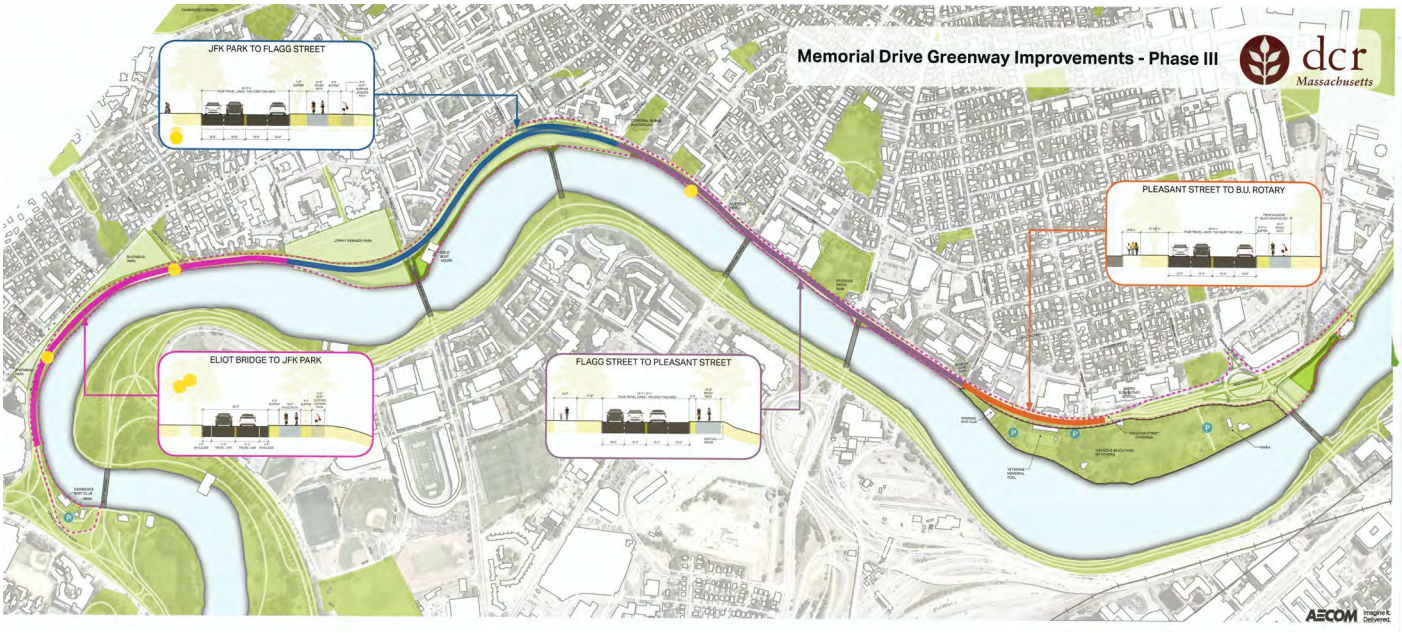


Public comments on the roll plan near Eliot Bridge. Users would like to see the road diet take space from the roadway, not the adjoining park land.

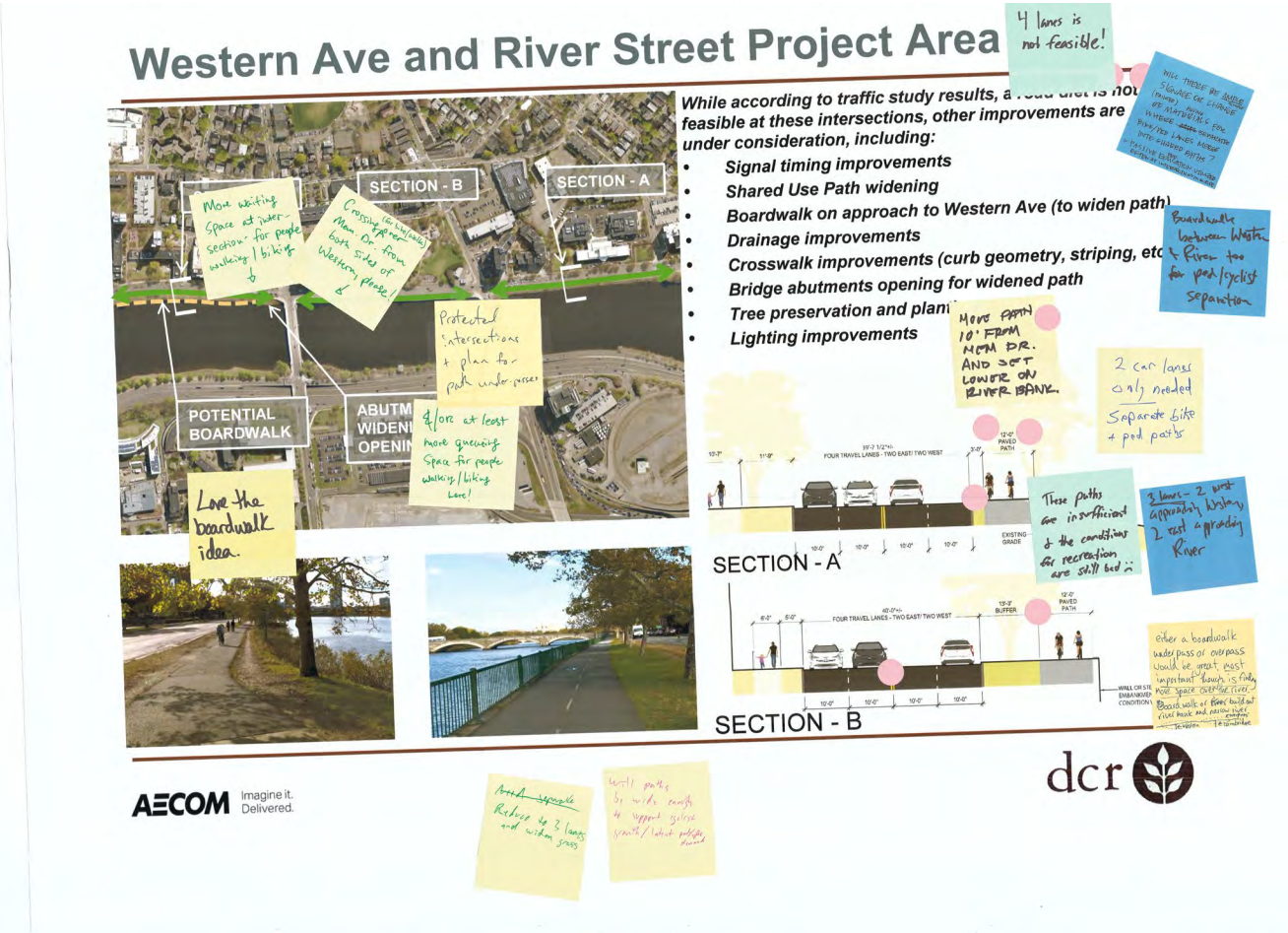


Public comments on the roll plan, attendees would like to see the lanes reduced, traffic calmed, and stormwater addressed

Public comments on the roll plan, attendees would like the 47 bus given priority, more path space for pedestrians and cyclists and would like to see further lane reductions.



Attendees voted on aspects of the roll plan



Public Comments the Western Avenue and River Street project area: Users would like more queueing space and/or protected intersections for cyclists and pedestrians. Users like the idea of a boardwalk, users would like to see lanes reduced to three to allow for more green space and/or more path space as the current path space in insufficient.