

## COMMITTEE ON INFRASTRUCTURE

### PUBLIC HEARING

NOVEMBER 28, 2018

A Public Hearing was conducted by the Committee on Infrastructure on Wednesday, November 28, 2018, at 7 p.m. in the Aldermanic Chamber.

Alderman-at-Large Michael B. O'Brien, Sr., Chair, presided.

Members of Committee present: Alderman Tom Lopez, Vice Chair  
Alderman Jan Schmidt  
Alderman Ernest A. Jette

Members not in Attendance: Alderman Ken Gidge (excused)

Also in Attendance: Alderman-at-Large Brandon Michael Laws  
Sarah Marchant, Director Community Development

---

### **PUBLIC HEARING**

**R-18-087**

### **APPROVING THE PRELIMINARY DESIGN AND CONSTRUCTION OF THE GREELEY PARK BOAT RAMP**

#### Chairman O'Brien

I did hear from Alderman Ken Gidge and he did give a proper excuse for missing tonight's meeting. At this particular point we are going to allow a presentation to be conducted by Director Marchant. Also for the record, Alderman Laws will be in attendance. At this particular point, I think we are not at a quorum. I can appoint you as Alderman-at-Large as a voting member of the Board so we will reflect that, so we have that on record.

Again, we are going to be receiving public testimony, but so that we all know and can be briefed about and make informed decisions, I am going to turn the meeting over to Director Marchant and she is going to make a slide presentation to brief us all.

#### Sarah Marchant, Director Community Development

Thank you Alderman O'Brien, I would like to introduce Kevin Gagne of Stantec who has been the engineer on this project and works on boat projects all over the State of New Hampshire. So we are here to talk to you about the Greeley Park Boat Ramp Project. For those of you who are not aware, you can't actually get to this boat ramp by getting to Greeley Park off of Concord Street, it is not a walk through the park to get there. The access point for this park is down Hills Ferry Road. The piece of land is actually on the other side of the railroad tracks, it is between the railroad tracks and the river. So that is where the existing boat ramp is; that is in pretty rough shape and that is what we are here to talk about tonight, the improvements to this.

So just as a quick history on where we have been and how we got here – the Department of Public Works is a very big partner in this project along with the Fire Department and certainly Community Development. For many years this has been going on in the background. It is one of the few public access sites on the Merrimack River and it is a very important site for both emergency purposes and just for general public access to the river.

It has been in very bad condition and there has been a lot of uncertainty over the railroad crossing in the past

Before the Waterways Manager position was created in this City, the Waterways Committee, I believe several members are here tonight, included in their report one of their high priorities was to redevelop this boat ramp site. So in bringing a Waterways Manager into the City, we applied for a Land & Water Conservation Fund Grant which was tentatively given based on the City resolving the railroad crossing issue. The issue was, is the crossing public or is it private? We went through a petition process with NH DOT and the Railroad and it was determined that it is a public crossing and therefore we can use. We were awarded the Land & Water Conservation fund grant in the amount of \$400,000.00 total, 50% of that 200,000 is from the Land & Water Conservation fund, 50% is a match from the City which has already been appropriated.

We kicked off the project early in 2018 with some public outreach, we had a meeting on a very cold day last February and went out for RFP on engineering design permitting and that has led us to where we are today. Some of the initial things we heard from the neighborhood and the community was to try and outline goals for the project and those are to resurface and regrade the boat ramp; relocate the storm water outfall which you will see in some pictures. If you haven't been there, you can kind of see it underneath the words "Access Road". It sticks out in the downstream flow of the river so it is very hard to keep your boat from smashing into it; develop a parking area. Right now people just park under trees and wherever you can fit. Provide emergency access for Fire and Police; improve accessibility for all users; possibly improve and re-route the access road, that is in the plans right now, funding contingent. And then to maintain the natural aesthetic; it was incredibly important to the neighborhood that this stay feeling pretty rural and so we have worked hard to keep it that way.

The other thing that is really important that is not on this list to the neighborhood is adequate signage on Hills Ferry Road to make sure people can see the turn and we don't have cars and boats with trailers in the neighborhood. So that is something that we have promised as part of this as well, but in preliminary design is not necessarily going to be shown on the plans tonight.

So here are some pictures of existing conditions of the ramp; these are from nicer weather than today. But you can see the ramp is in pretty rough condition; it is very difficult to get a boat in and out of. You can see the large stone headwall from the storm water drain both here and here. This is a very low water flow picture but if the water was up here it is hard to see this and it is very easy for your boat to swing into it as the water flows this way. This is the parking area, just parking under the trees as it exists currently. I am going to turn it over to Kevin at this point.

Kevin Gagne, Stantec Engineer

Thank you Sarah. I am going to talk briefly about the composition of the existing site that you can see in this photograph. We have given this sort of out looking view here so when we get to the next slide you'll see the site itself, the proposed site and you will get some perspective as to how much of the area of the site we are actually utilizing to provide this access facility.

The existing site here is a total of 32 acres. It is largely wooded, so 30.8 acres of that site is currently vegetated and impervious areas which consists of this gravel access road and the existing disturbed area around the boat launch which is gravel and broken pavement what you saw in the photographs, consists of about 1.61 acres. The next slide will show the extent of the site foot print, the proposed site.

The proposed site you can see has a new access road alignment that shortens the distance greatly from the existing entry access road to the proposed site, almost a straight line after you've traveled a couple hundred feet from the entrance. The purpose for this is multifold; we are working with local emergency responders, coordinating the site design and the location of an access road because this is the primary or the only location in this area where they can get watercraft in for water rescue whether it is someone who fell in while they were fishing or boating or kayaking or whatnot. When we move on and I talk a little bit about the design itself, keep in mind that turning movements and the way we have oriented the site for backing into the ramp is also not just for boat trailers and canoe/kayakers it is also for the City's emergency vehicles.

What we would be proposing to do here is gate off the existing road right at that point that Sarah is pointing out where the new access road takes off and also gate it at the site itself. So it will remain available for emergency access and also for a foot trail. What we are proposing to do to actually take several feet of that existing wide gravel roadway and revegetate it and let it basically turn back to undisturbed forested segment thereby reducing the impervious area on the site and making more of a woods/walking trail. It will be just wide enough though for maintenance pickup trucks to access.

The next slide then just sort of zooms in on the site and you can see if you look around the existing access road, you see these little green foot print, that's the area that I was talking about revegetating the existing access road. Then you will see green all around the site itself, that is essentially the footprint of grading and disturbance that is required to get the proposed layout graded to meet existing, that is all going to be vegetated and go back to sort of a natural, you know, revert to a natural state. It is not intended to be, although the color appears to be that of grass, it is not going to be grass that is maintained and mowed and that sort of thing. The intent for all the vegetation on the site is to use low maintenance natural vegetation, so essentially it becomes part of the landscape.

So with the proposed site that you see there, the proposed green space that we are going to be restoring from disturbed areas and the addition or the reduction of the existing gravel roads with, this whole project results in only just slightly more than  $\frac{1}{2}$  of an acre of impervious area added to the site. So .6 acres becomes impervious that was formally pervious. The site itself provides 24 total parking spaces, 12 of those spaces are for vehicles with trailers and 12 are what we would call car top accessible, so that's for people who are bringing canoes and kayaks on their roofs. The one of each type will also be van accessible so that means there will be an 8 foot unusable lane right next to the van accessible parking spot to increase the accessibility of the site for all users.

The overall approach to designing the site is to take a low impact design approach and what that means is that we try to follow the existing topography to the extent possible, we try to follow the existing drainage patterns that are out there. We divide the site up by pitching and changing grade in different directions so that we can collect water in smaller localized areas so each of those four areas that you see in blue are small bio-retention areas; they are actually basically small depressions with natural vegetation that will collect water as it is broken up and divided amongst the site and then treat that water and then eventually allow it to seep into the ground. Or, in the case of an overflow condition, it will drain out to the river after the initial storm has been treated.

The site itself employs a 45 degree angle of the parking spaces, it is a one way circulation clockwise around the site that allows people to get oriented in the most user friendly way to back up a trailer, which is when you can see outside your driver's side window as you make that reverse movement down the ramp. Then you pull directly into one of the parking spaces because of the angle it is easy to get and then back out and again circulate and get yourself in position.

The only wetland impact on the site is the area where the ramp itself meets the water so it is quite a small foot print of impact very typical of the permitting we do for the boat launches throughout the State. We also have to get a permit called the Shore Land Permit which is for the work we are doing beyond the top of the bank. And then the third permit we will be getting is called the Alteration of Terrain Permit which is going to be very much focused on our addressing the storm water on the site. So that is why we are employing this approach you are seeing here.

We have a very interesting add to this project, it is the little white area that you see right there, it is called a Pre-Launch Platform. It is an ADA accessible platform where let's say a family arrives and they have a boater who is also using a wheelchair. What that is it is an ADA accessible wheelchair ramp that goes up to a multi-level platform that is open on one side. The person can, and there is a van accessible space just prior to it, so the person can get out of the vehicle, they can wheelchair up to one of two levels depending on the height of the boat on the trailer.

Then the driver pulls the trailer boat right up to the edge of the platform. They can load themselves into the boat, any gear and the family can bring the gear up the ramp as well and put that into the boat from the truck if

they'd like. Then the person can actually launch the boat. This allows accessibility in a way that you can't provide because of the topography of this site where it is about 15% from the water all the way up to that first loop which is well beyond the length of the ramp.

It is pretty far and it is a very unique solution to this kind of situation, it has not been done in New Hampshire yet; although I got the idea from the person I work with at the NH Fish & Game Department as a consultant designing the State's boat launches. So this is something that is being done and used widely in the State Washington and Montana, so that's where we are working with designers and borrowing details and approaches for designing this sort of system.

So that is essentially the project in a nutshell. We are open to any questions on any level of detail that you would like to discuss this particular plan here is the more engineered plan, it has all the grading, topography, proposed and existing and then the ramp profile. Oh thank you I forgot we had these at the end, so that's what one looks like. That's bigger than ours because that one is on essentially level ground. In order to get an ADA accessible ramp you can only go on a 1/12 slope for 30 foot maximum before you have to have a level landing. Well the situation that we have with our grading and the site topography is that the road that the vehicle will be pulling up next to this is going downward. So while the road is going down, and that ramp is going up in 1/12 it cuts the distance that is actually needed to get up to that elevation difference between the boat and the platform almost in half. So we have a very small foot print in comparison, but these pictures are from out West and we wanted to give you a sense of what that looks like.

#### Ms. Marchant

Just very quickly the timeline for the project, we are here before you presenting for hopefully a recommendation for approval tonight. We will move on to final design plans and permitting with a goal of getting this to bid in not too long over the winter months to get the best pricing. Earlier in the winter is better for us and then to issue the bid as it says and hopefully to have the project under construction this summer.

#### Chairman O'Brien

I do have a question perhaps maybe to Kevin, while we are doing this project, is that a viable angle to the boat ramp because we do it and I was in charge of the dive team when I was on the Fire Department and we use it a lot and it is a little challenging. I just hope when it becomes popular to which this does because we have such a beautiful resource here to use, that it can be used by hopefully – I hate to see a car backslide down or a pickup truck more likely.

#### Mr. Gagne

So are you talking about the pitch of the ramp itself or the angle of the back?

#### Chairman O'Brien

The pitch of the ramp itself.

#### Mr. Gagne

So the pitch, pitch is exactly the optimal pitch for the ramp which is 15%. Here is the issue you run into, this is why 15% works perfect for a typical vehicle on a boat trailer. As you are backing the trailered vehicle down the ramp you want to get a position where the boat begins to float off the trailer in the water before your truck's exhaust is underwater. And so the flatter the ramp is, the further you have to go out to get the water depth and you end with your truck underwater. So 15%, we shoot for 12% to 15%, 15% being ideal for exactly that reason. So it gets you to deeper water quicker, before your tires and exhaust are under water.

The other reason for going to as deep of water as you can before your vehicle is underwater is that people tend to use a practice called power loading which is not helpful to the longevity of the ramp. But they'll really

rev up their engines when they are pulling out or pulling in or getting on or off the trailer and that creates great force and it can undermine concrete plank ramps. It is far less damaging when you have proper 3 to 4 foot water depth at the end, so 15% also provides that.

Alderman O'Brien

And we could post on that, no power.

Mr. Gagne

It's a huge problem but because we have been doing, myself personally since '02 with the NH Fish & Game Department designing ramps, we have designed a sort of plank, a pre-cast concrete plank that is used as sort of a modular building block system for ramps. We have designed these planks in such a way with weight and size and configuration that they butt up against each other but yet easy to install and they create a concrete shield across the entire foot print of the ramp to protect against that power loading. So it is something we have been evolving to address for many years as well ice damage and other things that you could see at a site like this. We kind of have got the optimal ramp design approach for dealing with these things.

Chairman O'Brien

If I may just one more question for Director Marchant, the Fire Department when they use this, because it is really the only place they can gain access to even the Nashua River for the lower section with the dam; parking ability and it is not a deal breaker now but as we move on with this project, I would recommend maybe designating an area where the Fire Department can access, at least park the vehicles, more direct access in case of emergency and that there is enough designated space and be properly marked. If the parking lot becomes overflowed that it suits emergency vehicle only needs so they can have a place to go.

Ms. Marchant

Excellent point and that was one of their concerns and the Fire Department that is one of the reasons why they want this, I can't get to it, they want the old trail gated but still maintained and they can open it up right by the boat ramp there so they felt like they could open that gate and park down there in case, of course it will happen on the busiest day, right – when all the parking spaces are filled. So they felt like they could use the access road as well for extra back up parking but yet we will certainly take that into consideration.

Chairman O'Brien

Not so much anymore but I had a lot of brush fires along the tracks from those squeaky train brakes. I will open it up to any other member of the committee that has a question.

Alderman Jette

So you mentioned those four ponds that they would treat the water, how do they treat the water?

Mr. Gagne

What happens is that the treatment occurs below the bottom of the pond, you have several layers of materials that are designed to control the rate at which the water seeps through them and then also to filter and clean the water. It is going to consist of a certain mixture of sand and compost, so you have a mixture of organic materials and sand that you have these biological processes happening within the soil as the water sits and slowly percolates through. But then you also have the natural processes that occur with the vegetation itself in the surface.

So the intent is the media that you place underneath acts as a filter, it creates an environment for biological organisms, bugs essentially that actually eat certain nutrients. Then you have a controlled rate of percolation

through that media so the water stays in and ponds in the surface for a desired amount of time let's say, so that the plants and vegetation that are within that can also take up for transference and the natural process of evaporation that the vegetation within the little rain garden has its role as well. It is kind of a well-known concept called bio-retention so it is the combination of the filter media and the plants that are within, trying to mimic what the forest does naturally is really what is happening.

Alderman Jette

So once it is built I don't know if passive is the right word, but it just happens.

Mr. Gagne

Absolutely and that is a great point it is part of the low impact design approach, the reason being that it doesn't require a lot of maintenance so it does just become part of the landscape. The only maintenance that is required over time is it is possible that, I mean it is a gravel roadway surface, so some of that gravel, although we divide it up the grading in such a way as to not allow water to run too far for too long on the gravel surface so that it starts to erode that gravel, that's why we break it up to four or five different areas, instead of just allowing it to all go in one direction. So we try to minimize just through design the amount of gravel that is going to come off, but certainly some gravel in really rough rain storms can wash off the surface and go into those ponds. So on a yearly basis and this part of the Alteration of Terrain Permit we will have to have a maintenance plan. So on a yearly basis that should be, some of that sediment that accumulates will be removed.

Alderman Jette

And you said that the excess would flow into the river? How would it get there? Would it just flow over the land?

Mr. Gagne

What we have, this one here overflows right at this point and there is a swale and it goes over land along here, so it travels here and goes directly into this one. This one then does have a pipe, there's a natural depression a really large one, that's where the existing pipe is coming out it goes here and goes here that you saw in the photo. There is an existing pipe that goes to a manhole here into a large natural depression here. So we are allowing the overflow from this one, to pipe into this existing depression where then if it reaches a certain level it can actually go out the existing pipe, or as we are evaluating it, and as Sarah mentioned, we may be able to eliminate that pipe altogether and allow overflow from there to go over land down the side of a ramp.

Now that is a very deep, very large natural depression that is there. And in talking to Nick and others in the City, they said as long as they have been around, they have never seen it full of water. I mean it is really deep, all of the area that contributes to it, it is just not enough to fill it. So we are not expecting that but we would be providing for it. Now this one that you see at the bottom, this one is on the bottom and has an overflow that goes, a pipe that comes underneath and actually daylight into a swale that is coming along this edge and going along that side of the ramp. We are talking small pipes, these are not, these are small areas, small watersheds that contribute to them so small pipes coming out. So that is where that one would overflow to.

Now this one would overflow into a small structure, a small PVC base that is about 18 inches wide that has a pipe below the ground and that would also go into the depression, the existing one here. So this one here, which is in the middle, that one, that would have – the reason we use pipes rather than in some cases we use pipes rather than just letting it overflow the top. We can set the elevation of the grate on that small structure exactly where we want based on the calculations to control how much the water can pond before it spills out. These are just small little PVC devices this is not the kind of structure that you are thinking of when you think of drainage out here on the roadways, the concrete structures with pipes. These are small PVC pipes that have outlets formed in them, a yard drain we often call them.

So each one of these – the top three are essentially interconnected in that the end in the existing depression north of the ramp and the southernmost one has a small outlet that goes ramp side. So those outlets, it is the first flush of water that tends to wash things off the surface that you are treating for. And that is ponded into these basins, that is not going to that outlet structure, that is going the treatment media and then into the ground. It is possible, based on our recent GEO tech evaluations that we may also have to have an under drain system if the ground water gets too high or if that percolation rate is suddenly inundated in a large storm. But either way if we have an underdrain system it is going to be the water that goes through the treatment system before it goes out.

So the only thing that would then overflow into these devices and go into eventually the river is that which has been beyond the initial flush that our goal is to treat.

Alderman Jette

Could I have one more. Will there be any kind of structure you know like when people get their boat into the water, will there be there any kind of dock or pier or something that allows people to get from land into the boat?

Ms. Marchant

No and there is a good reason for that, that is an entirely separate set of wetlands permitting but the ice/freeze thaw pattern here is pretty tremendous, the power of the water here. It isn't something that we have the grant funding to do and it would have to be something that would have to be removed every year so that is not a maintenance thing that we are able to take on at this point either, never mind the lack of funding for it.

Mr. Gagne

It is a tremendous cost and almost an un-meet able challenge in the Merrimack River. If you want to see what it takes to do that you can go down to the one in Lowell where you will see guide piles that you can't even get your arms around in terms of the size that is required. We have one or two Fish & Game boat launches on lakes; lakes that don't have the same kind of flow or forces that we have to deal with here and those piles in many cases have been destroyed or uprooted from Nature's forces and talking about \$60,000.00 or \$70,000.00 to put two of them back in twice that or three times that to put them in and build a dock structure that is going to work here. That's why we started looking at these alternatives like that ADA accessible platform to accommodate accessibility in a different way.

Chairman O'Brien

Any other member of the Committee have a question? Ok seeing none, thank you for your presentation, please stand by. I am now going to open up to the Public Hearing on R-18-087 and anybody that wants to come to the microphone it is going to be in two parts, testimony in favor, testimony in opposition. So if there was a rebuttal that you wanted to make even though you already spoke you may speak at the second time when we go and when I accept the testimony. I am now willing to accept any testimony in favor. Please give your name, residence and organization please?

TESTIMONY IN FAVOR

Gene Porter Thank you Mr. Chairman I am Gene Porter, I live at 77 Concord Street in Nashua for the last 25 years. I have followed this project for a number of years. The first thing I want to do is compliment the City staff at having diligently taken on some serious challenges here, not the least of which dealing with the railroad that refused to recognize that Hills Ferry Road had been a public right of way for 200 years and the City almost had to go to Court to get that agreement in writing and has also had to deal internally with problems on storm drain relocation, what have you. It has taken awhile but I am very glad to see where we are.

My organization is the Lower Merrimack River Local Advisory Committee of which I am the Chairman. I am strong promoter of public use of the lower Merrimack River. This river down here from the brewery down to Pawtucket dam, if it were a lake it would be the eighth or tenth largest lake in New Hampshire and the only one without any modern boat access. That was recognized by the State Public Water Access Advisory Board two years ago who put public access to this piece of water at the top of its priority list. I can speak on their behalf to say that they are very pleased that this project is going forward. Thank you.

Frances Murphy Yes Mr. Chairman my name is Frances Murphy and I live at 72 Berkeley Street and I am actually a member of Gene's Committee but I am wearing another hat as well. I am a member of organization called the Friends of Greeley Park, we informally keep an eye on things in Greeley Park making sure there is no additional infrastructure things in place.

I have attended several of these informational sessions that Chairman Marchant so expertly chaired and we raised a couple of other issues and I am wondering if they are still on the list. One, we wanted to make sure that the curfew was in place, that is was like the park itself, it is dawn to dusk use and consistent with that there wouldn't be any lighting I believe on the access road to the ramp which will deter night-time use of the ramp and keep it consistent with the curfew of dawn to dusk.

There is one other that was raised is that presently there are informal sort of pathways, roadways within that section of Greeley Park used by ATV's, and big wheel pickup trucks, from my experience that I've seen they love to use it in weather, when there is a lot of mud which creates a lot of tearing up of the soil and erosion. And there was some discussion that there would be some sort of blocks put where it wouldn't have the easy access for the ATV's and pickups to go off-road and tear up the landscape.

Beyond those points and I hope they are still in the plans sort to speak, I am very much in favor of the boat ramp for the reason Gene said. We see as more public use of the river we will be informal watch dogs for the health of the river and preserve a magnificent resource that we have Hillsborough County. Thanks.

TESTIMONY IN OPPOSITION - None

TESTIMONY IN FAVOR - None

TESTIMONY IN OPPOSITION – None

ADJOURNMENT

The public hearings were declared closed at 7:37 p.m.

Alderman Jan Schmidt  
Committee Clerk