

Cutchin Drive Storm Drainage Improvement Project
Public Meeting #2
Sharon Presbyterian Church
5201 Sharon Road Charlotte, NC 28210
December 15, 2015 6:00 P.M.

Adrian Cardenas, Charlotte-Mecklenburg Storm Water Services (CMSWS) Project Manager, welcomed attendees and introduced Doug Lozner, CMSWS Watershed Area Manager, Steven McCraney, CMSWS, Billy Hattaway, CMSWS, and Karl Dauber and Derek Benenhaley (WSP | Parsons Brinckerhoff, consultant for the City).

Adrian explained the purpose of the second public meeting, which is to provide a summary of the recommended improvements and request feedback from property owner/residents within the project area. Adrian also gave a brief description of the different alternatives considered for this project.

Karl Dauber, the Project Manager for WSP | Parsons Brinckerhoff (WSP-PB), described the overall project area and overall watershed. Karl then described the drainage infrastructure within the project limits that is hydraulically or structurally deficient and the recommended improvements in the vicinity of Wamath Drive, Cutchin Drive, Chaucer Drive, Mountainbrook Road, Landerwood Drive, and Shaker Drive.

Adrian provided a general timeline update on the project's current status and the next steps which include Project Design Phase, a third Public Meeting, Easement Acquisition Phase, Permitting, Bid Phase, and Construction. Adrian reviewed the typical estimated timeframe for each project phase. Lastly, Adrian opened the floor for questions and explained that after general questions the meeting would break out into smaller groups to look at the display maps in detail and provide the citizens an opportunity to talk to a consultant or City staff member in order to describe any issues they may or may not be seeing on their specific property.

The following summarizes the General Questions:
(additional information provided after the public meeting in italics)

Q: Are there plans for channel work on this project?

A: Not currently. However, any resident who wants the City to perform channel work on their property are requested to discuss further with a City representative at the meeting. *Please contact the CMSWS Project Manager, Adrian Cardenas, for further information on how to include channel work on your property as part of this Storm Drainage Project.*

Q: Will this project modify the natural drainage areas, i.e. pipe-in channels?

A: The only open systems that would be modified would be two ditches that are heavily armored with riprap. *Ditch 1 is approximately 91 feet long, it begins behind 3062 and 3100 Wamath Drive, and continues south onto 3033 Cutchin Drive. Ditch 2 is approximately 80 feet long, it begins behind 3116 and 3124 Cutchin Drive, and continues south between 3129 and 3123 Chaucer Drive. The projects overall drainage area will not be altered or modified.*

Q: If this neighborhood was being built today what would be done with the active stream bed that is currently going into the culvert above Cutchin Drive?

A: It would be considered a “jurisdictional” stream, subject to the regulations of the U.S. Army Corps of Engineers (USACE) and the N.C. Department of Environment and Natural Resources (NCDENR). *NCDENR officially became the N.C. Department of Environmental Quality (NCDEQ) on Sept. 18, 2015.*

Q: To what extent did the City look at floodplain buy-back?

A: The City does not have a buy-out program. The County does have a buy-out program for properties that are within FEMA mapped floodplains and have a history of repetitive flood damage.

Q: Why wasn't detention above the neighborhood proposed or considered? Would construction save costs in comparison to the detention basin alternative?

A: Per feedback from the first public meeting, detention was considered, but was not cost effective. The detention basin alternative significantly impacted the neighborhood with the permanent loss of four residential structures: 3017, 3025, 3033, and 3041 Cutchin Drive (*see slide 26 from public meeting presentation available on the project website*). *The cost of the detention basin alone was estimated to be approximately \$3.4 million. The total estimated construction cost of the detention basin alternative, including replacing structurally deficient pipe downstream, amounted to \$5.6 million. In comparison, the total estimated construction cost of the City Recommended Alternative is \$3.6 million.*

Q: If detention is done, do other improvements need to be done as well?

A: If the detention basin alternative were constructed, the trunk line downstream of the drainage system on Chaucer Drive would not need to be replaced for hydraulic reasons. However, it is a corrugated metal pipe with structural deficiencies and will eventually need to be replaced anyway. In addition, the rest of the proposed drainage and culvert improvements would still need to be realized.

Q: How long does RCP (reinforced concrete pipe) last?

A: Service life of RCP is estimated to be 50 plus years.

Q: General question about the street flooding at the entrance of Mountainbrook Road off Sharon View Road.

A: As previously explained, that area is outside of the projects drainage area. However, the City is aware of it, and a Service Request has been initiated. The City video inspected the drainage system and was found to be silted in, and the outfall was buried. At the request of Storm Water Services, the system was cleaned and put on a “watched” list for known areas prone to clogging.

Q: General question about the development on Sharon View Road by Waters Construction.

A: The City is aware of this issue and is now a legal matter between the City and Waters Construction. However, as stated in our first public meeting, the overall volume of stormwater runoff from the area which includes the parcels being developed off Sharon View Road by Waters Construction are included in our calculations and models, therefore, the proposed storm drainage improvements are already sized appropriately to handle this runoff. (*see Overall Watershed Map on slide 8 from public meeting presentation*). *A hearing with the Storm Water Advisory Committee (SWAC) was held January 21, 2016. For further information please contact the City's Land Development Division at 704-336-6692.*

Q: The project team is showing 6 houses on Cutchin Drive that have flooding issues. Have we contacted the owners to ask if they have had issues?

A: Yes, and individuals have reached out to us and let us know that they are having issues. The degree of flooding is worse on the north side compared to the south side of Cutchin Drive. *Residents can reference exhibit "Recommended Design Alternative" as presented in the public meeting for feedback from neighborhood.*

Q: Design team says you are not sending flooding problems downstream with this project, but isn't that what is being done by increasing the pipe sizes?

A: A downstream analysis was performed to confirm that no structures will be adversely affected. In most locations, flood elevations will be lowered by the proposed improvements. In a few locations, flood elevations will increase by less than 6 inches, and there are no structures in any of those locations. *In addition, there are no modeled impacts to McMullen Creek peak flow.*

C: We are not getting the improvements that we have asked for.

A: In the first public meeting, some residents asked to consider a detention facility as one of the alternatives, additionally the City said we would look at minimizing any potential improvements. All of this was done and presented in the meeting. Failing pipe conditions create a need to replace the system regardless of flood control project.

Q: Why are you not taking neighboring storm drain improvements into consideration as part of your analysis of McMullen Creek?

A: The McMullen Creek study, performed by Mecklenburg County, incorporated the effects of anticipated development in the watershed. For the Cutchin Drive project, analysis has been performed to verify that the Cutchin Drive project will not have a negative impact on McMullen Creek.

Q: Have we addressed the issues with erosion that this project might cause?

A: Yes. Measures to address erosion control will be provided at all stormwater outfalls, and downstream of all culvert replacements. *Residents currently experiencing channel erosion are encouraged to contact the City Project Manager, Adrian Cardenas, for further information on how to include channel work on your property as part of this Storm Drainage Project.*

Q: Have we modeled impacts from upgrades without future build out?

A: Yes. Proposed improvements were designed for full build-out of watershed, but were also checked for existing watershed conditions.

Q: Some residents already have little to no backyards. What happens if the stream impacts (with either stream work or more erosion) their backyard?

A: The project is not proposing any stream work; we are simply making a more efficient drainage system. Hydraulic modeling of proposed improvements has shown that the impact on stream flow velocity and shear stress will be very minor. *Once again, residents currently experiencing channel erosion are encouraged to contact the City Project Manager, Adrian Cardenas, for further information on how to include channel work on your property as part of this Storm Drainage Project.*

Q: Does failure of culvert system contribute to increase of erosion problems?

A: There are many potential causes of erosion. The cause of erosion at any particular location must be evaluated on a case-by-case basis.

Q: Is there somewhere where peak hydrograph changes because of decreased runoff time?

A: No. The watershed is already serviced by a piped drainage system. The pipe upgrades will not decrease the “time of concentration” in a manner that will significantly change the timing of the watershed’s response to rainfall.

Q: Have regional BMP’s been looked at?

A: There are no feasible locations for large BMPs in the project area since the watershed is already developed, and it would cost way too much. *The cost of the detention basin alone was estimated to be approximately \$3.4 million. The total estimated construction cost of the detention basin alternative, including replacing structurally deficient pipe downstream, amounted to \$5.6 million. In comparison, the total estimated construction cost of the City Recommended Alternative is \$3.6 million.*

C: I am having a hard time understanding why this project is happening where 4 or 6 houses might have problems.

A: The system is undersized and the existing infrastructure is failing. Adrian Cardenas then showed additional slides with example images of a pipe and a pipe joint in good condition (*see slide 27 from public meeting presentation*) followed by images from the pipe video investigation indicating the pipe deficiencies at Cutchin Drive (*slide 28*), Wamath Drive (*slide 29*), Mountainbrook Road (*slide 30*), and Shaker Drive (*slide 31*).

C: The City should have collected money from developers to help pay for this project.

A: The drainage area was already developed with the exception of the townhomes across Sharon View Road, which has onsite detention.

Q: Why are designers proposing to abandon/fill pipe at Cutchin Drive?

A: The pipe is being upsized and a new pipe alignment is proposed to reduce the impacts to utilities in the area.

C: Concerned that the same wrong information is still on the map that was used at the first meeting. Resident, pointing to address on Cutchin Drive, states that his property doesn’t flood and his questionnaire reflects this. Another resident on Cutchin Drive says the same.

A: Residents can contact the City Project Manager, Adrian Cardenas, if they want a copy of their submitted questionnaire to verify the accuracy of this map. *After the meeting it was determined that the resident lives on Chaucer Drive but was pointing/looking at Cutchin Drive. The map correctly shows the address on Chaucer Drive as responding to the questionnaire with no drainage issues. The questionnaire for the other address on Cutchin Drive was reviewed and verified to show that they have reported drainage issues. A copy was provided to the resident. Residents can reference map “Recommended Design Alternative” as presented in the public meeting for feedback from neighborhood.*