Elmwood Dry Pond and Sanitary Upgrades

Project Background

A Flood Reduction Strategy conducted by the City in 2006, identified the need for sanitary and stormwater sewer upgrades in west Edmonton. Two upgrades have already been constructed in the Elmwood neighbourhood, including a sanitary sewer drop manhole at 161 Street and 87 Avenue, and a new storm sewer that extends south along 159 Street from 80 Avenue to Whitemud Drive.

In addition to the above improvements, storm and sanitary sewer upgrading projects are proposed for the Elmwood neighbourhood. The stormwater upgrade includes a new stormwater dry pond in the City owned greenspace located south and west of 80 Avenue and 162 Street.

The sanitary sewer upgrade includes increasing sewer capacity along:

- 80 Avenue from 161 Street to 159 Street
- 83 Avenue from 160 Street to 159 Street
- 159 Street from 80 Avenue to 87 Avenue
- 162 Street from 82 Avenue to 83 Avenue
- 164 Street from 83 Avenue to 87 Avenue

Dry Pond Project Benefits

The new dry pond will reduce the depth of water that pools in the lane east of 163 Street between 79A Avenue and 80 Avenue during a major rainfall, as well as the risk of flooding to neighbouring homes.

The dry pond project includes a modified curb at the intersection of 80 Avenue and 162 Street, a shallow ditch to the dry pond, and piping to the local stormwater sewer. During major storm events, excess stormwater will flow from the intersection to the dry pond via the swale, and then drain out into the stormwater sewer within a few hours after the storm event. It is expected this will reduce street ponding in the lane south and west of the existing greenspace to less than 0.35m.

Proposed Sanitary Sewer Project Benefits

The sanitary upgrades will minimize overloading in the sanitary sewer system, reducing the risk of sanitary sewer backup into area basements.

The sanitary sewer upgrades include twinning or replacement of existing sanitary sewer pipes to increase the capacity of the sewer system.

Project Timeline

March 2016 – Public Information Session 1

November 2016 – Engineering Completion

April 2017 – Public Information Session 2

January 2017 to October 2017 – Construction

For More Information

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Frequently Asked Questions

Q: Why are the upgrades required?
A: In 2004, storms caused extensive flooding, damaging homes, vehicles and property, resulting in sewage backup in basements throughout the Elmwood neighbourhood.

As part of the City's Flood Mitigation Program, the upgrades will reduce the risk of future flooding by providing a level of flood protection that is consistent with standards in newly developed neighbourhoods.

Dry Pond Upgrade

Q: How does the dry pond function?
During normal operation of small rainfall events, storm water is collected by the storm sewer system and the pond will remain dry. During large storms, pipes in the community and downstream sewers can fill up. When the pipe system is full, water will back up into the dry pond. In addition, the dry pond will collect surface stormwater directed overland into the pond. The dry pond will store any collected stormwater until capacity is available in the downstream system. When capacity becomes available, the stormwater will drain through an outlet pipe in the bottom of the dry pond into the pipe system. As the name indicates, the dry pond will be dry the vast majority of the time.

Q: Why will the dry pond be located in the greenspace?
A: Investigation has shown that significant pooling of water can occur within the lane adjacent to the dry pond location. This location was determined to be the most economically feasible option to reduce flooding in this area.

Q: I'm concerned about the impact this project will have on the greenspace. Is there an option not to build the dry pond?
A: The City is committed to reducing flood risk in flood prone areas. It has been determined that the construction of the dry pond at this location is the most effective means of mitigating flood risk in the area.

Q. Will any trees be removed as part of construction?
A: No, the plans include protecting the existing trees. Some pruning will be required for construction.

Q: Is there anything that can be done to improve the aesthetic appearance of the dry pond?
A: Amenities including a new walkway, bench and waste receptacle are to be constructed.

Q. Are dry ponds safe?
A. Several factors make dry ponds as safe as possible:

- The slopes are gentle, approximately five feet in horizontal length for every foot of vertical drop
- Dry ponds do not have water in them most of the time
- Water that does collect in a dry pond drains away quickly, often within an hour or two of a heavy rainfall
- Hazard signs warn of the safety risk when ponds are wet
- The outlet pipe is designed with a bar style grate to prevent entry

Q: How frequent will the pond fill? How long will it take for the pond to fill/drain?
A: Water will accumulate in the pond only during larger, infrequent storm events. The pond has been designed to meet a 1:100 year standard where it will take about one hour to fill to capacity and two hours to drain.

Q. Who will clean up any debris left by the water once it drains away?
A. City crews remove any debris left behind by flood waters.

Q: Will the slopes be too steep to make it useful for recreation?
A: The proposed side slopes are gentle enough to accommodate City maintenance equipment and should not affect recreational activities.

Q: What activities can occur within the dry pond?
A: There are no specific regulations on what is allowed within a dry pond in terms of recreational activities.

Sanitary Sewer Upgrades

Q: Why are the sanitary sewer upgrades necessary?
A: The sanitary upgrades are required to reduce overloading in the sewer system and to reduce risk of basement backup.

Q: Is there any capacity in the sewer system for future development (i.e., infill housing or more multifamily housing)?
A: Although it is not the objective of the project to increase sewer capacity for intensification, there will be increased capacity for some infill development.

Q: What can homeowners do to reduce their risk of flooding?
A: There are numerous ways a homeowner can minimize their risk of flooding. These include, but are not limited to:

- The installation of a backwater valve
- Ensuring appropriate lot grading
- Ensuring timely maintenance of eaves troughs

Q: Will there be any sewer service disruptions during construction?
A: Yes, there will be some sewer disruptions during construction. Advanced notice of disruptions will be provided to affected residents.

Construction Activities

Q: When is construction scheduled to occur?
A: The tentative construction schedule is as follows*:

- June 5 to June 30, 2017 - Dry Pond
- June 5 to July 7, 2017 - 164 Street
- July 10 to Sept. 8, 2017 - 159 Street
- Aug. 21 to Sept. 1, 2017 - 162 Street
- Aug. 21 to Sept. 29, 2017 - 83 Avenue
- Sept. 11 to Oct. 20, 2017 - 80 Avenue

**Dates are subject to change due to weather*

Q: How will construction affect access to my home?
A: During construction, residents in some areas will lose access to their driveways and street parking, and areas adjacent to construction zones may be more congested as street parking shifts to these areas. The project team works to limit the duration of closures, but wet weather can significantly impact the construction schedule, access and site conditions. Residents with special mobility concerns can contact the project manager to discuss accommodation during construction.

Q: How will construction affect my property?
A: The road right of way typically extends into front yards, sometimes as much as five metres. Utilities and services such as cable are located within this right of way. Sometimes these utilities need to be exposed for construction work. In cases where large or multiple pipes are being constructed and located deeper in the ground, the excavated trench may need to extend close to a resident's property line to maintain a safe excavation. The contractor is required to restore any impacted landscaping to pre-construction conditions.

Q: Will contractors be storing materials on my property?
A: **Materials storage on road right of way:** Construction contractors will store pipes, materials, and equipment or supplies necessary for this work along the roadway around the construction site. When storage space is available off the roadway, they will make use of this space. Contractors try to limit the amount of material stored on the roadways, and amounts may vary depending on how quickly the contractor is advancing construction, ground conditions encountered, supplier availability, etc.

Materials storage on private property: Contractors are not to store materials on or use private property without permission from the property owner. Any concerns related to inappropriate storage of material or use of private property should be directed to the City's project manager or directly to the construction contractor's site representative.

Q: Will I experience any disruptions to my services?
A: Utilities may need to be disconnected, relocated or temporarily shut down to allow construction to proceed safely or to avoid damage to the utility. The project team will arrange for a temporary supply of any affected services. There may be short duration outages associated with connecting the property to these temporary services. The contractor or utility company will notify homeowners of any planned outages at least 24 hours prior to the planned outage.

What should I do if service is unexpectedly lost during construction?
If you experience an unplanned loss of service, please contact:

- EPCOR Water's Trouble Line - 780-412-6800
- ECPOR Power - 780-412-4500
- Telus - 1-888-811-2323
- Shaw - 1-888-472-2222
- Other - City project manager or contractor listed on construction notice

Q: What should I do if road conditions in the construction area are poor?
A: Wet weather can create muddy and messy conditions at construction sites. The project team and contractor will work to keep roadways and sidewalks as clean and safe as possible. However, if you have concerns, please call the City project manager or the contractor contact listed on your construction notice. The City will work with the contractor to improve the site conditions in these situations.

Q: What will be the impacts to traffic in the area of the proposed upgrades?
A: Some road and lane closures will be required during construction. The City and contractor will provide updates to residents as construction progresses.

Q: Will there be notifications to residents about road closures?
A: During construction, the contractor will notify residents of any upcoming disruptions to services and local roadways.

Sewer Odour in the Community

While odour control is not part of this project scope, a study was done last year to see how to minimize the nuisance of sewer odour to residents during the construction of these types of sewer upgrades.

A team from the City of Edmonton, along with a hired design consultant, examined the historical sewer odour issues in Elmwood. The team:

- Identified the sewer odour complaint locations mentioned in past public information session, and reviewed historical data
- Monitored air movements in the sewers
- Conducted field monitoring of sewer pressure and odour
- Further examined the sewer network and identified critical drainage structures that may significantly affect sewer air movement in Elmwood

Monitored locations:

- Sewer gas fumes at edge of dry pond proposed site on 162 Street
- Sewer gas smell at 87 Avenue and 165 Street
- Sewer gas smell at 79 Avenue and 169 Street

Results:

- Low levels of sewer gas smells in monitored areas found
- Low air pressures and air movements found in monitored locations

In the future, continuous monitoring and investigation will be done through the City Wide Odour Control program