

Mill Woods Double Barrel Replacement Project

June 7, 2016

Status Update 23 Avenue

Tunnelling along 23 Ave is in progress but the contractor is currently behind their baseline schedule due to their tunnel boring machine arriving later than expected and lower than anticipated productivity during the initial portion of tunnelling.

The contractor is proposing to work double shifts from 7 a.m. to 3 a.m. Mon-Sat starting on June 20 to July 9 to help address current delays and prevent further delay. However, the extended working hours are subject to approval from noise bylaw and public acceptance. Notices about the extended work hours will be delivered to residents directly impacted by the work and the adjacent community leagues and information will be posted on the project webpage.

This delay will delay the start of the 85 Street connections work by about two months. The overall project can still meet the anticipated completion date (August 2017) by using multiple resources.

Scope of Work

- The project scope includes installing approximately 3,390 m of new storm trunk sewer along the alignment as shown on the Attachment 1, and connect existing sewers to the new trunk. The four major legs of the sewer are:
 - 85 Street (between 23 Avenue and Knottwood Road) - tunnel construction completed, service connections outstanding
 - 23 Avenue (between 91 Street and 85 Street) – Under construction
 - 91 Street (between 23 Avenue and 30 Avenue) – Tunnel construction completed but not in service, service connections outstanding
 - 30 Avenue (between Gateway Boulevard and 91 Street) – Completed and in service
- Converting the existing double barrel sewer into a full sanitary sewer

Budget and Expenditures

The current approved budget is \$81.0 million. The total spent to May 31, 2016 was \$63.1 million.

Schedule

85th Street Tunnel and Connections

- Tunnel Completion: Completed

- Connections: October 2016

23rd Avenue Tunnel and Connections

- Tunnel Completion: July 2016
- Connections: December 2016

91st Street Tunnel and Connections

- Tunnel Completion: Completed
- Connections: January 2017

Double Barrel Conversion to Full Sanitary Sewer

- Conversion completion: March 2017

Surface Restoration

- Surface restoration: August 2017

Progress Highlights

85th Street Tunnel and Connections

- There are three major components to this work: tunnel excavation and concrete tunnel segment installation, construction of three shafts and structures, and construction of connections to new tunnel.
- The construction of tunnel and three shafts were completed in 2015.
- As the 23rd Avenue portion of the tunnel gets closer to completion, a secondary shaft will be constructed at 85th Street and Knottwood Road to complete the final connections of the existing storm trunks to the newly constructed storm tunnel; and connection of the local sewer infrastructure to the new tunnel will be completed using open cut construction.
- The southbound traffic on 85 Street will be closed to facilitate the construction of connections to the new tunnel.

23rd Avenue Tunnel and Connections

- There are three major components to this work: construction of three shafts and structures, tunnel excavation and concrete tunnel segment installation, and construction of connections to the new tunnel.
- Shaft excavation has been completed on three shafts (6A, 6B, 6C). Shaft concrete structures will be completed with the tunnel construction along 23rd Avenue.

- The total length of tunnel construction is 310 m. Drainage crews completed 95 m of the tunnel before they had to halt due to unanticipated wet sandy ground conditions that created an unsafe work environment.

A contractor has been retained to complete the construction of the remaining 215 m of tunnel between Shaft 6A and 6C using a tunneling technology specific to variable wet ground conditions.

- The connections from the existing stormwater infrastructure to the new tunnel will be completed using open cut construction after the tunnel is completed, which may require eastbound traffic be reduced to one lane between 91 Street and 85 Street.

91st Street Tunnel and Connections

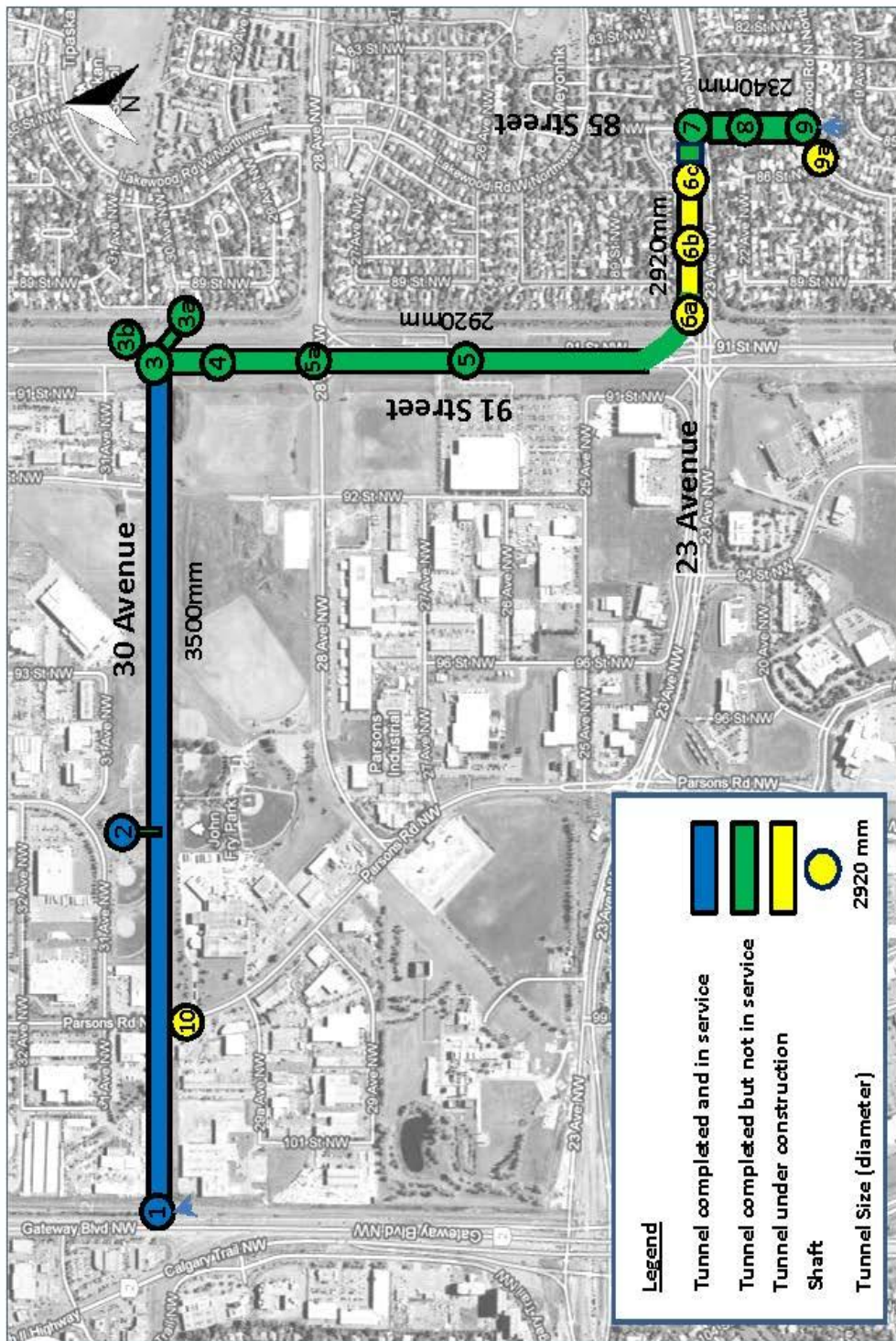
- There are two major components to this work: shaft and tunnel construction, and construction of connections to new tunnel.
- The shaft and tunnel construction has been completed.
- The connections to the new tunnel will be completed after the tunnel construction along 23rd Avenue.

Full conversion of the Double Barrel at Parsons Road

- The double barrel conversion work will be completed once the new storm trunk is fully operational. This work will not have any impact on traffic along 23rd Avenue and 85th Street.

Surface Restoration

- All damaged landscape, side walk, road surface, curbs and gutters along the construction alignment will be restored at the end of the construction.



Attachment 1
 Mill Woods Double Barrel New Storm Trunk Alignment