

SEQUENTIAL EXCAVATION METHOD (SEM)

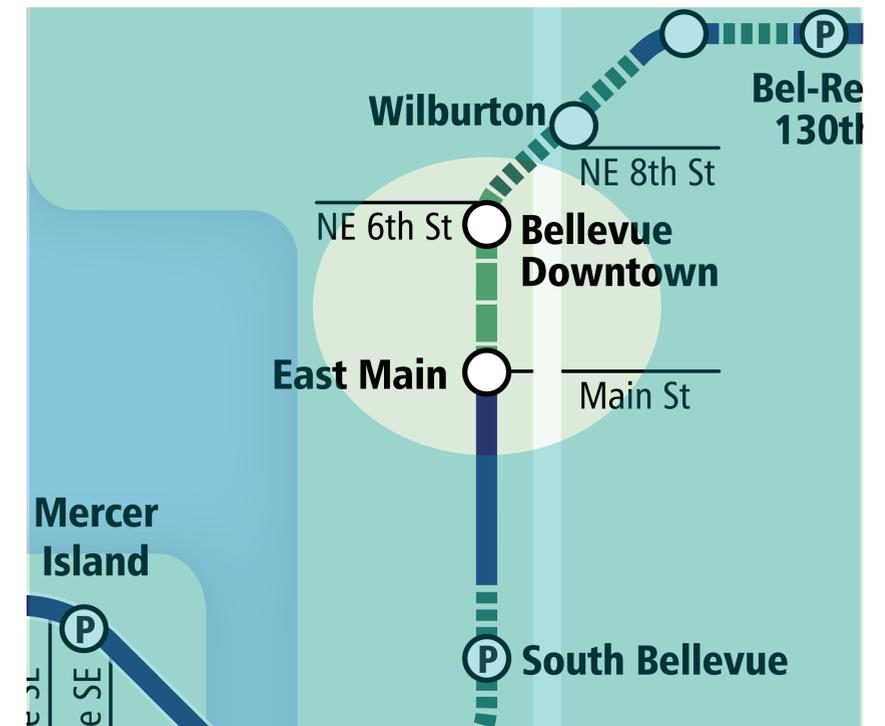
EAST LINK EXTENSION

What is it?

With SEM, the tunnel is dug out in small sections or bites using an excavator and cutting equipment. As soon as soil is removed pressurized concrete, called shotcrete, is sprayed on the tunnel's sides, ceiling and floor. Lattice girders provide additional structural support for the tunnel.

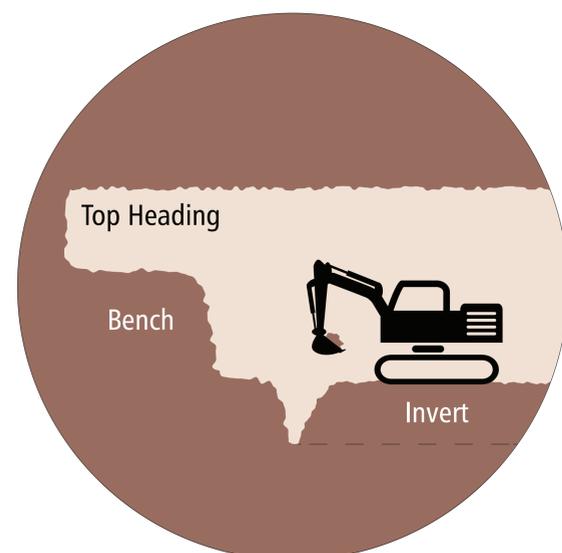
Benefits:

- Minimizes disruption to surface streets, resulting in significantly less impacts to traffic
- Eliminates access impacts to adjacent homes and businesses by maintaining existing roadways and driveways
- Minimizes truck traffic because less soil is removed versus cut-and-cover tunnel construction
- Reduces noise and dust impacts to neighboring residents and businesses versus cut & cover tunnel construction by concentrating construction activities in a secured South Portal location at 112th and Main behind sound walls
- Improved safety and security by concentrating construction activities in a secured South Portal location at 112th and Main
- Eliminates service disruptions by maintaining existing utilities



This is the tunnel that connects East Main Station and Bellevue Downtown Station.

1. Excavating



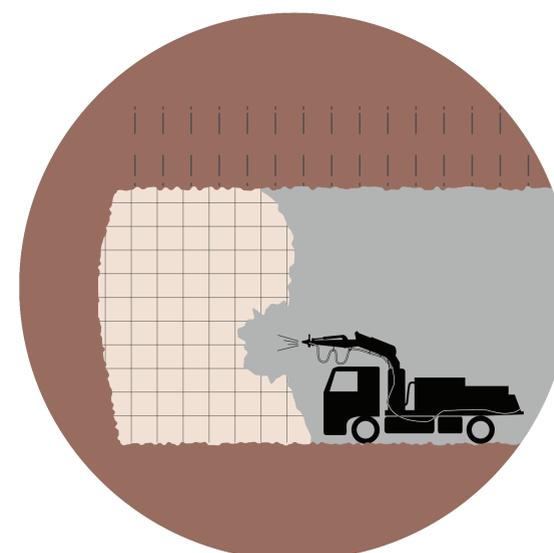
Done in small sections

2. Mucking



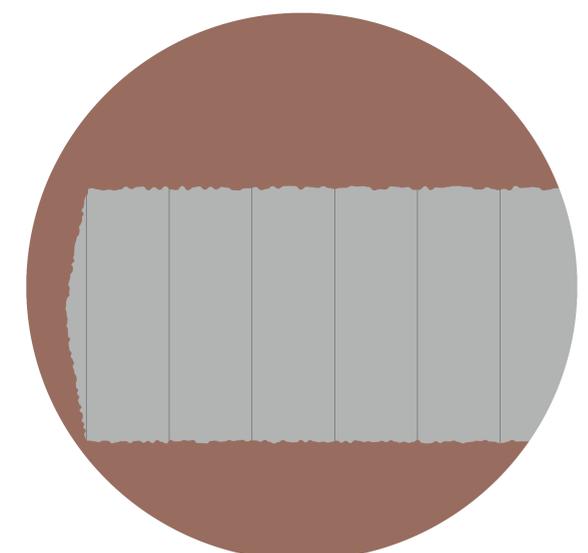
Soil is removed sequentially

3. Shotcrete



Applied immediately after face advance to minimize ground deformation

4. Final Lining



Lattice girders and spiling reinforce the tunnel