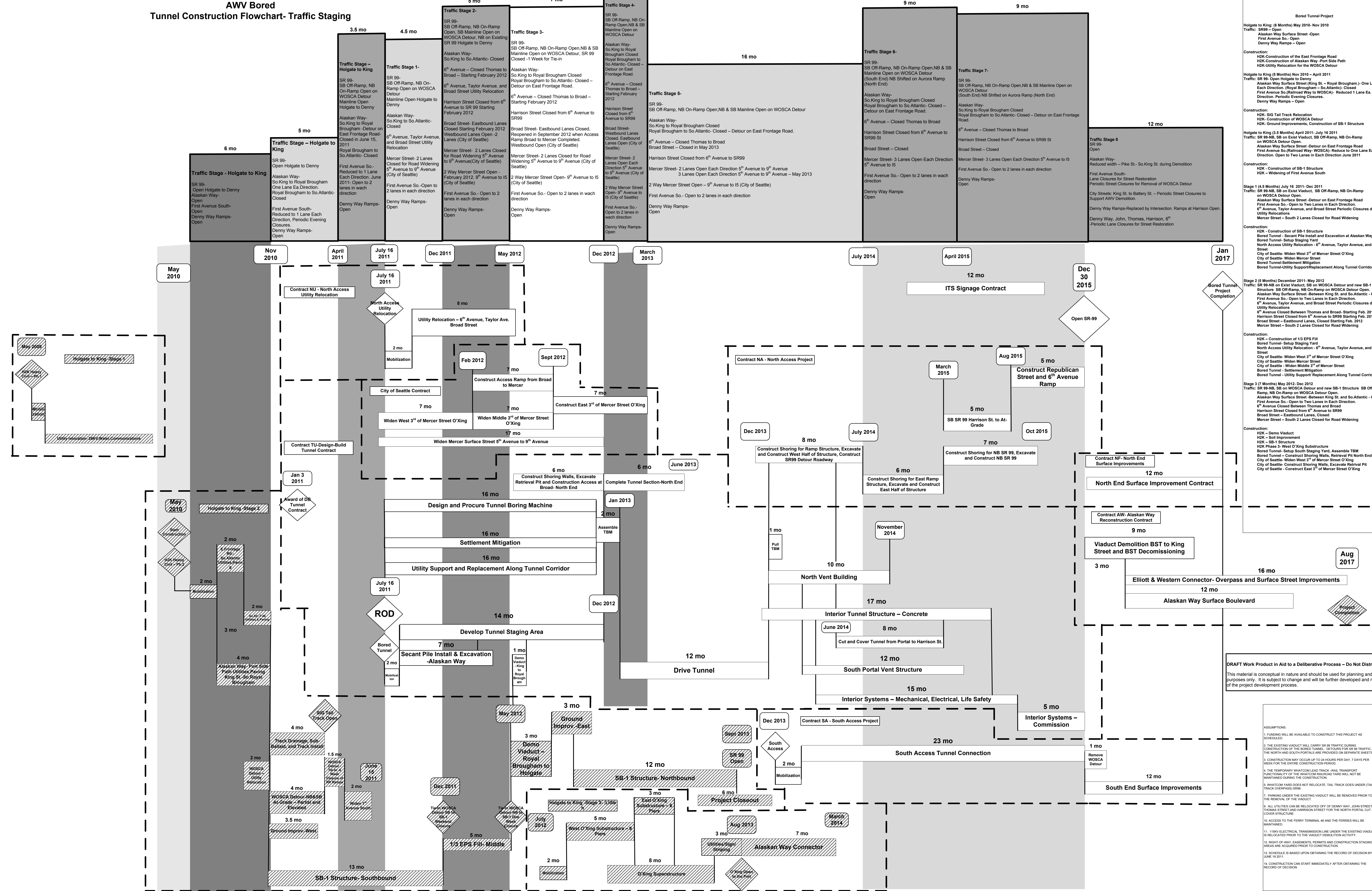


### AWW Bored Tunnel Construction Flowchart- Traffic Staging

**February 2, 2010**  
NO RISK



**PRE-DECISIONAL DRAFT**  
For Internal Use Only

**Duration Assume**

**Bored Tunnel Project**

Phase 1 (8 Months) Nov 2010 - Nov 2010  
Traffic: SR99 - Open  
SR99 NB - Open  
Denny Way Ramps - Open  
Construction: HKZ Construction of the East Frontage Road  
HKZ Construction of Alaskan Way and Pike St Path  
HKZ Utility Relocation for the WOSCA Detour

Phase 2 (8 Months) Nov 2010 - April 2011  
Traffic: SR 99 Open Holgate to Denny  
Construction: HKZ - Demolition  
HKZ - Soil Improvement  
HKZ Phase 2 - East O'King Substructure and Superstructure  
Bored Tunnel TBM Drive Tunnel  
Bored Tunnel - Construct Shoring North End  
City of Seattle - Mercer Street Overcrossing

Phase 3 (5 Months) April 2011 - July 2011  
Traffic: SR 99 NB, SB on WOSCA Detour and new SB-1 Structure - SB Off-Ramp, NB On-Ramp on WOSCA Detour Open.  
Alaskan Way Surface Street - Detour on East Frontage Road  
First Avenue So - Railroad Way - WOSCA - Reduced Lane E, D, Direction, Open to Two Lanes in Each Direction.  
Construction: HKZ - Construction of SB-1 Structure  
HKZ - Widening of First Avenue South

Phase 4 (3 Months) July 2011 - April 2012  
Traffic: SR 99 NB, SB on WOSCA Detour and new SB-1 Structure - SB Off-Ramp, NB On-Ramp on WOSCA Detour Open.  
Alaskan Way Surface Street - Detour on East Frontage Road  
First Avenue So - Open to Two Lanes in Each Direction.  
6<sup>th</sup> Avenue Closed Between Thomas and Broad  
Broad Street - Closed  
Harrison Street Closed from 6<sup>th</sup> Avenue to SR99  
Mercer Street - 2 Lanes Open Each Direction

Phase 5 (3 Months) April 2012 - May 2012  
Traffic: SR 99 NB, SB on WOSCA Detour and new SB-1 Structure - SB Off-Ramp, NB On-Ramp on WOSCA Detour Open.  
Alaskan Way Surface Street - Detour on East Frontage Road  
First Avenue So - Open to Two Lanes in Each Direction.  
6<sup>th</sup> Avenue Closed Between Thomas and Broad  
Broad Street - Closed  
Harrison Street Closed from 6<sup>th</sup> Avenue to SR99  
Mercer Street - 2 Lanes Open Each Direction

Phase 6 (3 Months) May 2012 - Dec 2012  
Traffic: SR 99 NB, SB on WOSCA Detour and new SB-1 Structure - SB Off-Ramp, NB On-Ramp on WOSCA Detour Open.  
Alaskan Way Surface Street - Detour on East Frontage Road  
First Avenue So - Open to Two Lanes in Each Direction.  
6<sup>th</sup> Avenue Closed Between Thomas and Broad  
Broad Street - Closed  
Harrison Street Closed from 6<sup>th</sup> Avenue to SR99  
Mercer Street - 2 Lanes Open Each Direction

Phase 7 (3 Months) Dec 2012 - March 2013  
Traffic: SR 99 NB, SB on WOSCA Detour and new SB-1 Structure - SB Off-Ramp, NB On-Ramp on WOSCA Detour Open.  
Alaskan Way Surface Street - Detour on East Frontage Road  
First Avenue So - Open to Two Lanes in Each Direction.  
6<sup>th</sup> Avenue Closed Between Thomas and Broad  
Broad Street - Closed  
Harrison Street Closed from 6<sup>th</sup> Avenue to SR99  
Mercer Street - 2 Lanes Open Each Direction

Phase 8 (3 Months) March 2013 - May 2013  
Traffic: SR 99 NB, SB on WOSCA Detour and new SB-1 Structure - SB Off-Ramp, NB On-Ramp on WOSCA Detour Open.  
Alaskan Way Surface Street - Detour on East Frontage Road  
First Avenue So - Open to Two Lanes in Each Direction.  
6<sup>th</sup> Avenue Closed Between Thomas and Broad  
Broad Street - Closed  
Harrison Street Closed from 6<sup>th</sup> Avenue to SR99  
Mercer Street - 2 Lanes Open Each Direction

Phase 9 (3 Months) May 2013 - Aug 2013  
Traffic: SR 99 NB, SB on WOSCA Detour and new SB-1 Structure - SB Off-Ramp, NB On-Ramp on WOSCA Detour Open.  
Alaskan Way Surface Street - Detour on East Frontage Road  
First Avenue So - Open to Two Lanes in Each Direction.  
6<sup>th</sup> Avenue Closed Between Thomas and Broad  
Broad Street - Closed  
Harrison Street Closed from 6<sup>th</sup> Avenue to SR99  
Mercer Street - 2 Lanes Open Each Direction

Phase 10 (3 Months) Aug 2013 - Nov 2013  
Traffic: SR 99 NB, SB on WOSCA Detour and new SB-1 Structure - SB Off-Ramp, NB On-Ramp on WOSCA Detour Open.  
Alaskan Way Surface Street - Detour on East Frontage Road  
First Avenue So - Open to Two Lanes in Each Direction.  
6<sup>th</sup> Avenue Closed Between Thomas and Broad  
Broad Street - Closed  
Harrison Street Closed from 6<sup>th</sup> Avenue to SR99  
Mercer Street - 2 Lanes Open Each Direction

Phase 11 (3 Months) Nov 2013 - Jan 2014  
Traffic: SR 99 NB, SB on WOSCA Detour and new SB-1 Structure - SB Off-Ramp, NB On-Ramp on WOSCA Detour Open.  
Alaskan Way Surface Street - Detour on East Frontage Road  
First Avenue So - Open to Two Lanes in Each Direction.  
6<sup>th</sup> Avenue Closed Between Thomas and Broad  
Broad Street - Closed  
Harrison Street Closed from 6<sup>th</sup> Avenue to SR99  
Mercer Street - 2 Lanes Open Each Direction

Phase 12 (3 Months) Jan 2014 - April 2014  
Traffic: SR 99 NB, SB on WOSCA Detour and new SB-1 Structure - SB Off-Ramp, NB On-Ramp on WOSCA Detour Open.  
Alaskan Way Surface Street - Detour on East Frontage Road  
First Avenue So - Open to Two Lanes in Each Direction.  
6<sup>th</sup> Avenue Closed Between Thomas and Broad  
Broad Street - Closed  
Harrison Street Closed from 6<sup>th</sup> Avenue to SR99  
Mercer Street - 2 Lanes Open Each Direction

Phase 13 (3 Months) April 2014 - July 2014  
Traffic: SR 99 NB, SB on WOSCA Detour and new SB-1 Structure - SB Off-Ramp, NB On-Ramp on WOSCA Detour Open.  
Alaskan Way Surface Street - Detour on East Frontage Road  
First Avenue So - Open to Two Lanes in Each Direction.  
6<sup>th</sup> Avenue Closed Between Thomas and Broad  
Broad Street - Closed  
Harrison Street Closed from 6<sup>th</sup> Avenue to SR99  
Mercer Street - 2 Lanes Open Each Direction

Phase 14 (3 Months) July 2014 - Oct 2014  
Traffic: SR 99 NB, SB on WOSCA Detour and new SB-1 Structure - SB Off-Ramp, NB On-Ramp on WOSCA Detour Open.  
Alaskan Way Surface Street - Detour on East Frontage Road  
First Avenue So - Open to Two Lanes in Each Direction.  
6<sup>th</sup> Avenue Closed Between Thomas and Broad  
Broad Street - Closed  
Harrison Street Closed from 6<sup>th</sup> Avenue to SR99  
Mercer Street - 2 Lanes Open Each Direction

Phase 15 (3 Months) Oct 2014 - Jan 2015  
Traffic: SR 99 NB, SB on WOSCA Detour and new SB-1 Structure - SB Off-Ramp, NB On-Ramp on WOSCA Detour Open.  
Alaskan Way Surface Street - Detour on East Frontage Road  
First Avenue So - Open to Two Lanes in Each Direction.  
6<sup>th</sup> Avenue Closed Between Thomas and Broad  
Broad Street - Closed  
Harrison Street Closed from 6<sup>th</sup> Avenue to SR99  
Mercer Street - 2 Lanes Open Each Direction

Phase 16 (3 Months) Jan 2015 - April 2015  
Traffic: SR 99 NB, SB on WOSCA Detour and new SB-1 Structure - SB Off-Ramp, NB On-Ramp on WOSCA Detour Open.  
Alaskan Way Surface Street - Detour on East Frontage Road  
First Avenue So - Open to Two Lanes in Each Direction.  
6<sup>th</sup> Avenue Closed Between Thomas and Broad  
Broad Street - Closed  
Harrison Street Closed from 6<sup>th</sup> Avenue to SR99  
Mercer Street - 2 Lanes Open Each Direction

Phase 17 (3 Months) April 2015 - July 2015  
Traffic: SR 99 NB, SB on WOSCA Detour and new SB-1 Structure - SB Off-Ramp, NB On-Ramp on WOSCA Detour Open.  
Alaskan Way Surface Street - Detour on East Frontage Road  
First Avenue So - Open to Two Lanes in Each Direction.  
6<sup>th</sup> Avenue Closed Between Thomas and Broad  
Broad Street - Closed  
Harrison Street Closed from 6<sup>th</sup> Avenue to SR99  
Mercer Street - 2 Lanes Open Each Direction

Phase 18 (3 Months) July 2015 - Oct 2015  
Traffic: SR 99 NB, SB on WOSCA Detour and new SB-1 Structure - SB Off-Ramp, NB On-Ramp on WOSCA Detour Open.  
Alaskan Way Surface Street - Detour on East Frontage Road  
First Avenue So - Open to Two Lanes in Each Direction.  
6<sup>th</sup> Avenue Closed Between Thomas and Broad  
Broad Street - Closed  
Harrison Street Closed from 6<sup>th</sup> Avenue to SR99  
Mercer Street - 2 Lanes Open Each Direction

Phase 19 (3 Months) Oct 2015 - Jan 2016  
Traffic: SR 99 NB, SB on WOSCA Detour and new SB-1 Structure - SB Off-Ramp, NB On-Ramp on WOSCA Detour Open.  
Alaskan Way Surface Street - Detour on East Frontage Road  
First Avenue So - Open to Two Lanes in Each Direction.  
6<sup>th</sup> Avenue Closed Between Thomas and Broad  
Broad Street - Closed  
Harrison Street Closed from 6<sup>th</sup> Avenue to SR99  
Mercer Street - 2 Lanes Open Each Direction

Phase 20 (3 Months) Jan 2016 - April 2016  
Traffic: SR 99 NB, SB on WOSCA Detour and new SB-1 Structure - SB Off-Ramp, NB On-Ramp on WOSCA Detour Open.  
Alaskan Way Surface Street - Detour on East Frontage Road  
First Avenue So - Open to Two Lanes in Each Direction.  
6<sup>th</sup> Avenue Closed Between Thomas and Broad  
Broad Street - Closed  
Harrison Street Closed from 6<sup>th</sup> Avenue to SR99  
Mercer Street - 2 Lanes Open Each Direction

Phase 21 (3 Months) April 2016 - July 2016  
Traffic: SR 99 NB, SB on WOSCA Detour and new SB-1 Structure - SB Off-Ramp, NB On-Ramp on WOSCA Detour Open.  
Alaskan Way Surface Street - Detour on East Frontage Road  
First Avenue So - Open to Two Lanes in Each Direction.  
6<sup>th</sup> Avenue Closed Between Thomas and Broad  
Broad Street - Closed  
Harrison Street Closed from 6<sup>th</sup> Avenue to SR99  
Mercer Street - 2 Lanes Open Each Direction

Phase 22 (3 Months) July 2016 - Oct 2016  
Traffic: SR 99 NB, SB on WOSCA Detour and new SB-1 Structure - SB Off-Ramp, NB On-Ramp on WOSCA Detour Open.  
Alaskan Way Surface Street - Detour on East Frontage Road  
First Avenue So - Open to Two Lanes in Each Direction.  
6<sup>th</sup> Avenue Closed Between Thomas and Broad  
Broad Street - Closed  
Harrison Street Closed from 6<sup>th</sup> Avenue to SR99  
Mercer Street - 2 Lanes Open Each Direction

Phase 23 (3 Months) Oct 2016 - Jan 2017  
Traffic: SR 99 NB, SB on WOSCA Detour and new SB-1 Structure - SB Off-Ramp, NB On-Ramp on WOSCA Detour Open.  
Alaskan Way Surface Street - Detour on East Frontage Road  
First Avenue So - Open to Two Lanes in Each Direction.  
6<sup>th</sup> Avenue Closed Between Thomas and Broad  
Broad Street - Closed  
Harrison Street Closed from 6<sup>th</sup> Avenue to SR99  
Mercer Street - 2 Lanes Open Each Direction

Phase 24 (3 Months) Jan 2017 - April 2017  
Traffic: SR 99 NB, SB on WOSCA Detour and new SB-1 Structure - SB Off-Ramp, NB On-Ramp on WOSCA Detour Open.  
Alaskan Way Surface Street - Detour on East Frontage Road  
First Avenue So - Open to Two Lanes in Each Direction.  
6<sup>th</sup> Avenue Closed Between Thomas and Broad  
Broad Street - Closed  
Harrison Street Closed from 6<sup>th</sup> Avenue to SR99  
Mercer Street - 2 Lanes Open Each Direction

Phase 25 (3 Months) April 2017 - July 2017  
Traffic: SR 99 NB, SB on WOSCA Detour and new SB-1 Structure - SB Off-Ramp, NB On-Ramp on WOSCA Detour Open.  
Alaskan Way Surface Street - Detour on East Frontage Road  
First Avenue So - Open to Two Lanes in Each Direction.  
6<sup>th</sup> Avenue Closed Between Thomas and Broad  
Broad Street - Closed  
Harrison Street Closed from 6<sup>th</sup> Avenue to SR99  
Mercer Street - 2 Lanes Open Each Direction

Phase 26 (3 Months) July 2017 - Oct 2017  
Traffic: SR 99 NB, SB on WOSCA Detour and new SB-1 Structure - SB Off-Ramp, NB On-Ramp on WOSCA Detour Open.  
Alaskan Way Surface Street - Detour on East Frontage Road  
First Avenue So - Open to Two Lanes in Each Direction.  
6<sup>th</sup> Avenue Closed Between Thomas and Broad  
Broad Street - Closed  
Harrison Street Closed from 6<sup>th</sup> Avenue to SR99  
Mercer Street - 2 Lanes Open Each Direction

Phase 27 (3 Months) Oct 2017 - Jan 2018  
Traffic: SR 99 NB, SB on WOSCA Detour and new SB-1 Structure - SB Off-Ramp, NB On-Ramp on WOSCA Detour Open.  
Alaskan Way Surface Street - Detour on East Frontage Road  
First Avenue So - Open to Two Lanes in Each Direction.  
6<sup>th</sup> Avenue Closed Between Thomas and Broad  
Broad Street - Closed  
Harrison Street Closed from 6<sup>th</sup> Avenue to SR99  
Mercer Street - 2 Lanes Open Each Direction

**Tunnel Program Duration = 65 Months**

- DRAFT Work Product in Aid to a Deliberative Process - Do Not Distribute**  
This material is conceptual in nature and should be used for planning and discussion purposes only. It is subject to change and will be further developed and refined as part of the project development process.
- ASSUMPTIONS**
1. FUNDING WILL BE AVAILABLE TO CONSTRUCT THIS PROJECT AS ANTICIPATED.
  2. THE EXISTING VIADUCT WILL CARRY SR 99 TRAFFIC DURING ROUTE RELOCATION. (8 MONTHS JANUARY 2010 - SEPTEMBER 2010). OPEN TO TRAFFIC (10 MONTHS SEPTEMBER 2010 - JANUARY 2011).
  3. CONSTRUCTION SHALL BE 10 HOURS PER DAY, 7 DAYS PER WEEK FOR THE ENTIRE CONSTRUCTION PERIOD.
  4. THE "TEMPORARY" WORKING TRACKS - RAIL TRANSPORT AUTHORITY'S (MTA) TRACKS - SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION AND WILL NOT BE REMOVED PRIOR TO THE CONSTRUCTION PERIOD.
  5. SHORING HANDS DOES NOT RELIEVE TAX TRACKS UNDER (D.A.T.) TRACKS PRIOR TO THE CONSTRUCTION PERIOD.
  6. FUNDING UNDER THE EXISTING VIADUCT WILL BE REMOVED PRIOR TO THE REMOVAL OF THE VIADUCT.
  7. ALL NECESSARY PERMITS AND CONSTRUCTION STAGING AREAS ARE ACQUIRED PRIOR TO CONSTRUCTION.
  8. SCHEDULE IS BASED ON THE RECORD OF DECISION BY JUNE 2011.
  9. CONSTRUCTION CAN START IMMEDIATELY AFTER OBTAINING THE RECORD OF DECISION.
  10. ACCESS TO THE FERRY TERMINAL AND THE FERRIES WILL BE MAINTAINED.
  11. 11KV ELECTRICAL TRANSMISSION LINE UNDER THE EXISTING VIADUCT IS TO BE REMOVED PRIOR TO THE RECORD OF DECISION.
  12. RIGHTS OF AVIARY EASEMENTS, PERMITS AND CONSTRUCTION STAGING AREAS ARE ACQUIRED PRIOR TO CONSTRUCTION.
  13. SCHEDULE IS BASED ON THE RECORD OF DECISION BY JUNE 2011.
  14. CONSTRUCTION CAN START IMMEDIATELY AFTER OBTAINING THE RECORD OF DECISION.
- Updated: 02/02/2010  
Prepared: 02/02/2010  
Date: 02/02/2010