



# **Montlake Project Community Construction Management Plan**

Prepared by:

**Graham Contracting, LTD**

For:

**SR 520 MONTLAKE PROJECT**

July 2019

Rev. 00

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## **1.0 COMMUNITY CONSTRUCTION MANAGEMENT PLAN OVERVIEW**

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### **1.1 PURPOSE AND BACKGROUND**

Design-build is a contracting method in which WSDOT completes a preliminary design and selects a contractor based on the best apparent value, which incorporates price and the design-builder's design and construction proposal. Graham was selected by WSDOT as the Montlake Project's design-build contractor. WSDOT provided Graham Notice to Proceed on the Contract on January 7, 2019.

Graham has developed a Montlake Project Community Construction Management Plan as part of the Project Environmental Compliance Plan to identify best measures and practices to reduce impacts from Project Work to historic properties, nearby neighbors, and the travelers on the SR 520 Corridor.

WSDOT first developed the Community Construction Management Plan (CCMP) as a mitigation commitment for adverse effects to historic properties from the I-5 to Medina: Bridge Replacement and HOV Project (I-5 to Medina project) during the National Historic Preservation Act Section 106 Consultation process. Because Section 106 consulting parties had significant concerns related to construction effects (both indirect and direct) to historic properties, development of the CCMP was included in the earliest iterations of the Section 106 Programmatic Agreement (PA). Construction effects (as defined in 36 CFR 800.5(a)(2)) may include vibration, noise, change of use or physical features of a property's setting, visual, atmospheric or audible intrusions.

During the consultation process, participants recognized that impacts the CCMP was intended to mitigate were not exclusive to historic properties but could potentially affect other resources in similar ways. The CCMP then became a project-wide commitment, not exclusive to Section 106 PA concurring parties. The PA language references the concurring parties "and others potentially affected by Project construction."

The SR 520 Montlake Project includes the construction of the West Approach Bridge South (WABS), Montlake lid and interchange, and Montlake bicycle/pedestrian "land bridge." Construction of this phase is expected to begin in 2019 with a duration of 4-5 years.

The CCMP allows members of the public an ongoing opportunity to provide input that may be considered for construction management decisions to avoid, minimize, or mitigate the impacts of construction activities on historic and other properties. Additional CCMP volumes and/or updates to existing CCMP volumes will be developed in conjunction with each contract awarded for future construction phases of the I-5 to Medina Project.

### **1.2 HOW TO USE THE CCMP**

The Montlake Project CCMP is a living document which may be updated through the course of the Project to incorporate changes to construction activities or approaches to the work.

The Montlake Project CCMP includes commitments made in accordance with the Section 106 PA, environmental and right of way commitments made through other regulatory processes, including the city of Seattle shoreline permit, best management practices (BMPs), and additional tools that will help to avoid, minimize, and/or mitigate construction impacts on local communities and historic properties. WSDOT will meet regularly with the concurring parties to the Section 106 PA and others potentially affected by construction throughout the duration of construction to discuss construction management.

The public is encouraged to provide feedback about the effectiveness of the CCMP and suggest changes. Information about the SR 520 Montlake Project is available at project-related public meetings and on the SR 520 Montlake Project website:

<https://www.wsdot.wa.gov/projects/sr520/montlake/home>.

While the Montlake Project CCMP is for construction impacts, questions on other topics such as design, permitting, operations and maintenance, Neighborhood Traffic Management Plan (NTMP), and other non-construction related activities on the SR 520 Montlake Project can be directed to [SR520Bridge@wsdot.wa.gov](mailto:SR520Bridge@wsdot.wa.gov).

### **1.3 PROJECT COMMITMENTS**

The SR 520 Montlake Project will be constructed accounting for commitments that are included in agreements with permitting agencies, local governments, and other interested parties.

Graham's commitments include:

- Performing construction management, including inspection and monitoring of the construction activities to ensure contract requirements are met.
- Developing a Montlake Project CCMP, as well as an Early Design Discovery Work CCMP (Appendix A), and ensuring the updating and implementation of the CCMP occurs to reflect construction activities.
- Ensuring local, state, and federal permits are obtained as necessary for compliance with applicable laws and regulations.
- Coordinating and communicating with neighborhoods and businesses about possible project impacts.
- Implementing environmental commitments related to historic properties made in compliance with other regulatory processes including, but not limited to the National Environmental Policy Act and the National Historic Preservation Act.
- Monitoring performance of the CCMP implementation with the public and the Section 106 PA concurring parties.

### **1.4 PROJECT OVERVIEW**

The SR 520 Montlake Project includes the construction of the West Approach Bridge South (WABS), Montlake lid and interchange, and Montlake bicycle/pedestrian land bridge. The WABS will connect eastbound traffic from Montlake to the new floating bridge. It will also feature a dedicated transit/HOV lane that connects these facilities to the floating bridge and, in turn, to Eastside SR 520. Implementation of this project also includes removal of the existing eastbound

Lake Washington Boulevard on-ramp to SR 520 near the Arboretum, and construction of an improved Montlake interchange.

The new Montlake interchange includes a lid that will incorporate direct-access ramps for transit and HOV in addition to new bicycle and pedestrian connections to existing regional and local trails. The Montlake lid will be a hub for local and regional transportation connectivity, and will include open spaces, urban trails, undercrossings, a regional shared-use path and transit connections. A new land bridge, to the east of the lid, will be a bicycle/pedestrian path over SR 520 that provides a north-south connection across the highway between the Arboretum and points north of the SR 520 corridor. The Montlake Project also features the construction of stormwater treatment facilities to capture and naturally filter highway runoff.

The four figures below depict final configuration of the SR 520 Montlake Project. Each of the four figures highlight major elements of the Montlake Project, including the Montlake Lid and the WABS structure.



Figure 1



**Figure 2**  
*Final configuration looking west.*  
For reference: A – West Portal; B – Neighborhood Open Space; C – South Montlake Plaza;  
D – North Montlake Plaza; E – SR 520 Trail



Western segment of the West Approach Bridge South looking north.

**Figure 3**



*Figure 4*

WSDOT issued Notice to Proceed (NTP) to Graham on January 7, 2019. Graham began project design upon issuance of NTP and anticipates the Design phase to continue through December 2020.

#### **Construction Phasing and Major Construction Elements:**

Major project construction is anticipated to start in late July 2019 and continue through Substantial Completion in February 2023. Graham has developed the following construction phasing for the project and anticipates constructing the project in four major phases. The construction phases are based on major traffic shifts and/or completing major elements of construction work. Planned phase durations with major construction elements of each phase are highlighted below.

\*\* Note: The phasing timeline below is based off Graham's schedule which is subject to change as design and construction progress forward.

- **June 2019 to September 2019 – Preliminary Work (Phase 0) to prep for Phase 1**
  - **Summary:** In Phase 0, Graham completes early work with key traffic shifts to gain access on to the existing WABS structure. Major elements in this phase include:
    - **June 21, 2019** – close the eastbound and westbound SR 520 Transit Flyer Stops.
    - **July 2019 to August 2019** – construct temporary walls, remove existing trees/vegetation along the Old Canal Reserve area (quantity and specific



trees to be determined and identified in accordance with the Tree and Vegetation Management and Protection Plan (TVMPP)), and construct Phase 1 ramp alignments north of the existing SR 520 westbound off ramp to Montlake Boulevard (MOHAI area).

- **August 2019** – close the existing pedestrian/bicyclist access across 24<sup>th</sup> Avenue East and provide a temporary detour on local streets. Access over SR 520 will be across Montlake Boulevard.
- **August 2019** – shift SR 520 westbound off ramps to 24<sup>th</sup> Avenue East and Montlake Boulevard to new Phase 1 ramp alignment.
- **August 2019** – construct westbound SR 520 mainline between 24<sup>th</sup> Avenue East and Montlake Boulevard and shift westbound SR 520 traffic to the new alignment.
- **August 2019 to September 2019** – construct eastbound SR 520 mainline between Montlake Boulevard and east of 24<sup>th</sup> Avenue East.
- **August 2019 to October 2019** – construct a new temporary onramp to eastbound SR 520 from Lake Washington Boulevard northwest of the existing Arboretum onramp.
- **September 2019**
  - Shift Montlake Boulevard onramp to eastbound SR 520 and eastbound SR 520 mainline traffic to the new alignment.
  - Open the temporary shared use trail that parallels the new temporary onramp to eastbound SR 520, travels under SR 520 east of 24<sup>th</sup> Avenue East, and connects into the existing SR 520 Trail System north of SR 520.
- **October 2019**
  - Open new temporary onramp to eastbound SR 520.
  - Close the existing Arboretum onramp allowing Graham access to the existing West Approach Bridge South (WABS).
- **October 2019 to April 2020 – Phase 1**
  - Summary: In Phase 1, Graham begins work on the Montlake Lid structure, the Seattle Public Utilities (SPU) 54-inch waterline under SR 520, and the WABS structure.
    - **Montlake Lid structure** – construct Pier 2 concrete footing and vertical support wall between Montlake Boulevard and 24<sup>th</sup> Ave East (median SR 520).
    - **SPU 54-inch water line** – construct 54-inch water line which includes launching and receiving pits for the jack and bored water line installation under SR 520, installation of the new water line, and connections to existing systems.
    - **WABS structure** – construct the WABS temporary work trestle (pile driving) and begin select demolition of existing eastbound approach bridge.

- **April 2020 to January 2021 – Phase 2A**

- Summary: In Phase 2A, Graham continues work on the Montlake Lid structure, the WABS structure, and begins work on the SR 520 Trail tunnel under Montlake Boulevard.
  - **Montlake Lid structure** – shift both directions of SR 520 traffic toward the median. Begin construction of Pier 1 and Pier 3 concrete footings and vertical support walls between Montlake Boulevard and 24<sup>th</sup> Ave East (North & South of SR 520).
  - **WABS structure** – begin drilling shafts, column construction, pier cap construction, girder erection, bridge deck and barrier construction, and continue select demolition.
  - **SR 520 Trail tunnel** – begin construction on the tunnel, including construction of new concrete walls, underneath Montlake Boulevard.

- **January 2021 to August 2021 – Phase 2B**

- Summary: In Phase 2B, Graham continues work on the Montlake Lid structure, the WABS structure, and the SR 520 Trail tunnel.
  - **Montlake Lid structure** – complete the above ground portion of the Montlake Lid structure between Montlake Boulevard and 24<sup>th</sup> Avenue East. Work includes girder erection, concrete pours, integration of temporary electrical components into the lid, and integration of both temporary and permanent utilities in the Lid.
  - **WABS structure** – continue drilling shafts, column construction, pier cap construction, girder erection, bridge deck and barrier construction, and select demolition.
  - **SR 520 Trail tunnel** – continue trail tunnel construction, including construction of new concrete walls, underneath Montlake Boulevard.

- **August 2021 to November 2021 – Phase 2C**

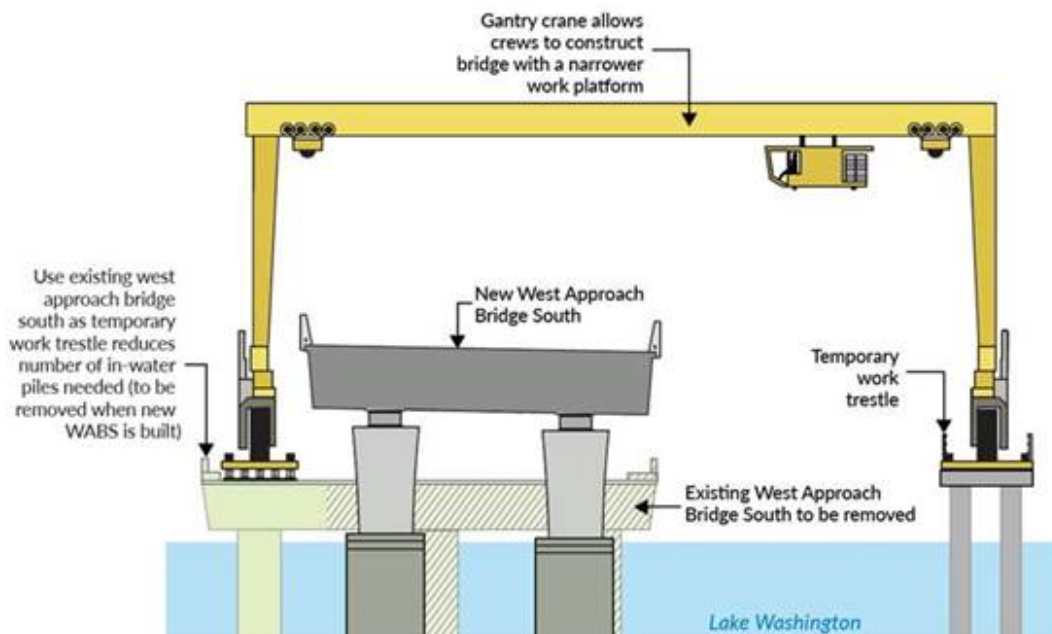
- Summary: In Phase 2C, Graham continues work on the Montlake Lid structure, the WABS structure, the SR 520 Trail tunnel, and begins work on the Pedestrian Land Bridge (PLB) Structure. Significant structure demolition also occurs.
  - **Montlake Lid structure** – complete construction of Pier 1 and Pier 3 concrete footings and vertical concrete support walls at Montlake Boulevard and at 24<sup>th</sup> Avenue East. Complete Pier 4 construction at 24<sup>th</sup> Avenue East and concrete walls along SR 520 mainline west of Montlake Boulevard as part of the Montlake Lid structure.
    - **Traffic shift** – upon completion of the Montlake Lid structure between Montlake Boulevard and 24<sup>th</sup> Avenue East, temporarily shift Montlake Boulevard and 24<sup>th</sup> Avenue East traffic onto the newly constructed lid.
  - **WABS structure** – continue drilled shafts, column construction, pier cap construction, girder erection, bridge deck and barrier construction, and select demolition.

- **SR 520 Trail tunnel** – complete trail tunnel construction west of Montlake Boulevard.
- **Pedestrian Land Bridge (PLB) structure** – begin PLB drilled shafts.
- **Demolition** – demolish the existing Montlake Boulevard overpass and the 24<sup>th</sup> Avenue East overpass structures.
  
- **November 2021 to June 2022 – Phase 3**
  - Summary: In Phase 3, Graham continues work on both the Montlake Lid structure and the WABS structure and completes work on the SR 520 Trail and the Pedestrian Land Bridge structure. Select demolition continues and project-wide landscaping begins.
    - **Montlake Lid structure** – complete concrete deck pours on the Montlake Boulevard and 24<sup>th</sup> Avenue East structures, connecting the portions of the lid structure that were built in Phase 1 through Phase 2C.
    - **WABS structure** – continue drilled shafts, column construction, pier cap construction, girder erection, bridge deck and barrier construction, and select demolition.
    - **SR 520 Trail** - complete trail construction.
    - **Pedestrian Land Bridge (PLB) structure** – construct Pier 2 and Pier 3 concrete support walls and all above ground structure work including girder erection early in this phase; complete the PLB late in this phase.
    - **Demolition** – remove the temporary onramp to eastbound SR 520.
    - **Landscaping** – begin project-wide landscaping.
  
- **June 2022 to February 2023 – Phase 4**
  - Summary: In Phase 4, Graham completes all major remaining construction elements and shifts the project into final configurations.
    - **Montlake Lid structure** – complete remaining miscellaneous roadway work on the Montlake Lid and near Montlake Boulevard.
    - **WABS structure** – complete remaining miscellaneous work and shift eastbound SR 520 traffic into final configuration on WABS. Open WABS to traffic.
    - **SR 520 Trail** – open the SR 520 Trail to the public with connections to the existing local trail system.
    - **Landscaping** – complete project-wide landscaping.
    - **Local Road improvements** – complete local road improvements to Lake Washington Boulevard, 24<sup>th</sup> Avenue East, and other roadway arterials.
    - **HOV/Direct Access Ramp** – complete HOV/direct access ramp including the HOV and 24<sup>th</sup> Avenue East intersection on the Montlake Lid. Open the HOV/direct access ramp to traffic.
    - **Traffic Shifts** – shift Lake Washington Boulevard, SR 520, Montlake Boulevard, 24<sup>th</sup> Avenue East, and other major and minor arterials into final configurations.

## Locations of activities and access points:

Construction activities will occur at several locations and via various access points in the Montlake area and Lake Washington:

- **Barges on the lake.** Crews will use barges to transport some materials to and from the construction site during the construction of the WABS structure.
- **Construction access to the lake.** Crews may access the work zone on the lake from the existing WABS structure, the existing eastbound SR 520 on ramp through the arboretum, and by boat from the WSDOT-owned right of way land known as the “WSDOT Peninsula”.
- **Work trestles (temporary work bridges) on the lake.** Graham will use a temporary work bridge adjacent to the existing West Approach Bridge South (WABS) structure to construct the new WABS structure and demolish the old WABS structure. The temporary work bridge will be on both the north and south sides of the new structure. The figure below shows the gantry crane concept.



A temporary work bridge will remove and construct the west approach bridge from above.

*Figure 5 – the gantry crane concept shown here is 55-feet tall and 97-feet wide and is supported by a temporary work bridge on both the north and south sides of the new West Approach Bridge South*

- **Crew access to SR 520.** Crews may access the SR 520 roadway for construction from Foster Island, the WSDOT Peninsula, and construction on- and off-ramps via lane closures or following traffic shifts to create work zones.

- **Access from arterial streets.** Local arterial streets, identified on the Haul Routes graphic in Section 3.5, will be used for access to construction sites. These arterials will be both used to move project personnel to and from the project site and used to haul equipment and materials from the staging yards to the project site.
- **Staging areas.** Several project staging areas are located within WSDOT-owned rights of way adjacent to the Project limits. The exact use of each of these areas will be best defined as major construction commences. The staging areas include:
  - The former Museum of History and Industry (MOHAI) area adjacent to East Montlake Park
  - The Montlake Interchange including a portion of the Montlake Market site, and the areas adjacent to the eastbound onramp from Montlake Boulevard to SR 520
  - Two areas on the WSDOT Peninsula
  - An area in Eastlake under Interstate 5 near Fuhrman Avenue East – primarily will be used to park personal vehicles and transport personnel to and from the project site

#### **Agency Coordination:**

As part of the planning and construction process for the Montlake Project, WSDOT has been coordinating with and obtained numerous permits and approvals from several agencies, tribes and jurisdictions, including:

- Advisory Council on Historic Preservation
- Federal Highway Administration (FHWA)
- National Park Service
- National Oceanic and Atmospheric Administration – National Marine Fisheries Service
- U.S. Army Corps of Engineers
- U.S. Coast Guard
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- Puget Sound Clean Air Agency
- Washington State Department of Archaeology and Historic Preservation (DAHP)
- Washington State Department of Ecology
- Washington State Department of Fish and Wildlife
- Washington State Department of Natural Resources
- Washington State Recreation and Conservation Office
- King County
- City of Seattle
  - Seattle Department of Transportation (SDOT)
  - Seattle Public Utilities (SPU)
  - Seattle City Light (SCL)
  - Seattle Department of Construction and Inspections (SDCI)
- Tribal nations

During construction, Graham and WSDOT will comply with permit requirements and continue to coordinate with the permitting agencies, tribes and jurisdictions, as needed, throughout the Montlake Project.

## **2.0 PROJECT GOALS AND OBJECTIVES**

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WSDOT established the following Project goals for the SR 520 Montlake Project. Graham has adopted the Project goals and will ensure they are communicated and understood by the Project team and communicated to the community.

The Project goals established for the Montlake Project are:

- Project Management: Collaboration – Through effective project management, provide a successful Design-Build Project by collaborating with WSDOT to efficiently resolve issues at the Project level.
- Project Management: Quality – Through effective project management, implement a strong quality management program to ensure design and construction work meets or exceeds contract requirements.
- Design – Create excellent design through collaboration with stakeholders in meeting the vision and intent for the Montlake Project development.
- Minimize Impacts: Community/Mobility – Maintain freeway, local street, and transit operations; bicycle and pedestrian access; and safety performance through the various stages of construction; and engage community and successfully communicate project vision, progress, timeline, and challenges to the local community, motorists, and other users.
- Environmental Compliance – Meet or exceed environmental requirements with no permit violations.

## **3.0 CONSTRUCTION IMPACTS**

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### **What to expect during construction?**

The Montlake Project CCMP is organized by potential construction effects. Construction effects covered in this section include:

- Noise
- Vibration
- Air Quality and Fugitive Dust
- Visual Quality: Aesthetics, Glare, Lighting
- Traffic and Transportation
- Utilities and Services
- Vegetation Management and Erosion Control
- Over-Water and In-Water Work
- Staging in WSDOT Right of Way

Each construction effects section includes the following three subsections to provide additional details on the effect related to the Montlake Project work outlined above:

- What to expect – characterizes the location, potential construction activities, duration and intensity of activity for each construction effect
- Regulations and commitments – provides information about construction-related commitments, including resources that Graham will use to determine mitigation measures.
- Measures and practices – describes the potential mitigation measures that may be implemented to mitigated for the stated construction effect.

### **3.1 NOISE**

#### **What to expect**

Many construction activities will occur throughout the duration of the Montlake Project construction. Each activity uses different types of equipment and results in different levels and kinds of noise.

Construction is expected to occur day and night at several locations at any given time. These locations could include:

- Along the shoreline of Lake Washington
- Work bridges and barges in Lake Washington
- Work platforms in the Foster Island area
- Montlake Market parcel
- Staging areas at the former MOHAI property near East Montlake Park, and two areas south of SR 520 and east of East Lake Washington Boulevard on WSDOT-owned right of way land at the WSDOT peninsula
- The existing westbound Lake Washington Boulevard off-ramp
- SR 520 mainline, Montlake Interchange on- and off-ramps, Montlake Boulevard, 24<sup>th</sup> Avenue East, East Lake Washington Boulevard, various nearby local arterial streets, and areas adjacent to the roadways.

During the preliminary permitting and planning of the Montlake Project, it was identified that some critical elements of work are practical to be performed only at night, such as closures of any SR 520 lanes. Therefore, work will occur during the day as well as at night on weekdays, and on weekends and holidays as necessary.

Below are major construction activities that support Graham's strategy to complete loud activities during the day with quieter activities at night when possible. As discussed above, activities that require closure of any SR 520 lanes would have to occur at night to comply with the contract requirements. Graham will also take advantage of long weekend closures to minimize the durations of loud demolition activities to nearby historic properties, residents, and travelers and to accelerate the schedule of these construction activities.

Major Daytime Work activities (daytime hours are 7 a.m. to 10 p.m.):

- Sawcutting
- Vactor Truck Work – cleaning drainage structures and potholing utilities
- Pile Driving –limited to 8 a.m. to 5 p.m. only
- Drilling Shafts for support structures
- Miscellaneous Demolition
- Grading
- Material Deliveries – i.e. sand and gravel

Major Nighttime Work activities (nighttime hours are 10 p.m. to 7 a.m. during weekdays and 10pm to 9am during weekends and legal holidays):

- Girder Erection
- Paving
- Major Traffic Shifts including striping the roadway
- Setting temporary barrier
- Material Deliveries – i.e. asphalt/concrete

Major Weekend Closures (spanning both daytime and nighttime hours):

- Montlake Boulevard overpass structure demolition
- 24<sup>th</sup> Avenue East overpass structure demolition
- Montlake and Lake Washington Boulevard intersection closure – roadway grading to raise the intersection, material deliveries, select demolition and hauling, paving, and striping

Each of the activities above requires different equipment to complete the work. Examples of major construction work activities and associated equipment noise levels (measured at 50-feet; if available) are noted below:

- Pile Driving – typical equipment used in pile driving includes, but is not limited to vibratory hammer and diesel impact hammer
- Demolition – typical equipment used in demolition includes but is not limited to compressors (81dBA), crawler cranes (83 dBA), delivery/haul trucks (88 dBA), dump trucks (88 dBA), excavators (96 dBA), hydraulic cranes (88 dBA), and loaders (85 dBA).
- Paving – typical equipment used in paving operations include, but is not limited to: asphalt rollers (80 dBA), concrete pumps (82 dBA), concrete trucks (88 dBA), delivery trucks (88 dBA), dump trucks (88 dBA), street sweepers (80 dBA), and vibratory rollers (80 dBA).

Construction equipment listed above is not expected to be used all together at the same time, or on all nights. Please reference the MPPCNV (Appendix B) for additional details on closure hours, nighttime construction equipment noise levels, monitoring and reporting requirements, and contractor mitigation measures.



## **Regulations and commitments**

WSDOT requires that Graham comply with local, state and federal environmental regulations on noise from traffic and construction.

The Seattle Municipal Code chapter 25.08.425 addresses sounds created by construction and maintenance equipment. City of Seattle noise-level limits allow different levels for various types of equipment. For this project, the construction noise analysis used the FHWA's manual on construction noise method to determine future construction noise levels.

For the daytime work, City of Seattle noise ordinances limit allowable noise levels and vary based on zoning and time of day. Construction noise-producing activities are not constant and will fluctuate throughout the day. Noise limits are based upon the average noise levels as measured over a one-hour period in decibels (dBA). The Montlake Neighborhood is classified as residential and has a noise level limit of 55 decibels during the day and 45 decibels during the night. During daytime hours, these limits do not apply to construction noise. Construction noise has a daytime hourly average limit of 80 decibels. All daytime work will be completed within these limits. A nighttime construction noise variance is required on this project since noise will exceed the 45-decibel limit at night.

For the SR 520 Montlake Project, WSDOT obtained a Major Public Project Construction Noise Variance (MPPCNV) from the Seattle Department of Construction and Inspections (SDCI), which establishes nighttime noise level limits and requirements that must be met during construction. The MPPCNV governs nighttime noise levels for the Project when major construction activities start in summer 2019. The variance allows work to exceed the limits established by the City of Seattle noise ordinance under specific circumstances and requires notifications to residents who live adjacent to the work. In accordance with the MPPCNV, the work will be performed using best management practices and sequenced in a way to minimize the duration and noise levels experienced by residents as much as possible.

As part of the requirements for the permit, a Noise Management and Mitigation Plan (NMMP) is being developed in coordination with SDCI and will be adhered to upon completion. The NMMP identifies the expected noise levels at specific locations, risk of exceeding allowable levels and measures for crews to implement if levels are anticipated to exceed allowable levels. A detailed mathematical model, based on the types of equipment and activities, is used to determine the expected levels of noise at nearby receivers.

## **Measures and practices**

Graham's strategy is to complete loud activities during the day with quieter activities at night when possible. Certain activities that would cause loud noises, such as impact pile driving, and certain types of demolition, will be limited to daytime hours.

Electronic noise meters installed within the Project limits will monitor noise levels 24 hours per day and detect any exceedance that occurs. Weekly and annual noise monitoring reports will be provided to the Seattle Department of Construction and Inspections. These reports will be made

available to the public online. WSDOT will provide an independent noise monitor staff person to be on site during all nighttime work, and report and violations or neighborhood complaints to the Seattle Department of Construction and Inspections. Residents can also report noise complaints to a 24-hour hotline.

WSDOT is implementing a Noise Mitigation Pilot Program to offer products, such as noise-cancelling headphones, white noise machines, and ear plugs to nearby residents. Homeowners can also receive reimbursement for modifications to their homes that meet the Pilot Program's intent. WSDOT and the Department of Archaeology and Historic Preservation shall consult to ensure historic properties are not adversely effected by these proposals per the Section 106 PA. Contact [SR520bridge@wsdot.wa.gov](mailto:SR520bridge@wsdot.wa.gov) or 206-770-3628 for more information.

Best Management Practices utilized on this Project include, but are not limited to:

- Prohibiting the banging of truck tailgates and use sand-, rubber-, or plastic- lined beds for all haul trucks.
- Prohibiting the use of compression brakes.
- Using noise-mitigation shields, noise blankets, or other means to reduce the effects of stationary noise-generating equipment, such as light plants, generators, and compressors.
- Using noise reducing fencing for frontline neighbors.
- Using compressors with a measured noise levels of 71 dBA at 50 feet or less for areas where modeling showed mitigation for compressors was needed to reduce noise levels below the noise limit.
- Using radios for all long-range communication on site.
- Removing material or debris spills on the pavement by hand sweeping if reasonable. Scraping type equipment or activity will be prohibited to clean pavement surfaces during nighttime hours.
- Paving construction access roads and haul routes near residences where possible to reduce dust and noise.
- Limiting engine idling when vehicle or equipment is not directly engaged in work activity, such as on-site pickup trucks and queued export haul trucks.
- Limiting the use of equipment using horns, alarms or sirens anywhere on site. No pure tone backup-warning devices will be used during nighttime activities. Use of a broadband alarm or backup observer will help reduce noise from backing up.
- Limiting night-time work operations; when working at night, limiting operations to less noisy construction such as material delivery, concrete placement, and/or reinforcing steel placement. Limiting loud "impact" operations such as pile-driving and demolition to daytime hours noted above.

The MPPCNV requires Graham to perform noise mitigation measures to minimize construction noise, except in the case of emergency, whenever work between 10 p.m. and 7 a.m. Monday through Friday, or between 10 p.m. and 9 a.m. Saturday through Sunday and legal holidays occurs. If Best Management Practices identified above are unsuccessful, additional mitigation

measures may need to be put in place. The MPPCNV (Appendix B) identifies additional mitigation measures that the contractor could implement.

In addition to implementing the Best Management Practices noted above, Graham is using innovative construction techniques to reduce the need to perform certain construction operations at the project site. Examples include:

- Graham will build some precast concrete elements at existing industrial sites and haul them to the project site. This eliminates the noise associated with building these elements onsite.
- Graham will construct a temporary work bridge with fewer driven piles than the temporary work bridge that was used to construct WABN. This directly correlates to less pile driving noise on the Project.
- Graham will use innovative techniques when completing bridge demolition. The existing WABS structure and Arboretum onramp will be demolished using a sawcut and pick method. Graham will sawcut large portions of the bridge structure, load them on to trucks, and haul them from the jobsite for offsite processing and recycling. Using this method for demolition eliminates noise associated with traditional demolition methods and onsite processing of materials.

### **3.2 VIBRATION**

#### **What to expect**

Various construction activities will cause vibration that may be felt and/or heard in the project vicinity. While low vibration levels may be imperceptible or only slightly noticeable, higher levels could be more noticeable to the point of being annoying or unpleasant. The highest levels of vibration could possibly result in damage to properties. However, the vibration-causing activities conducted during the construction of the SR 520 Montlake Project will be limited to levels below criteria expected to damage structures. These levels were established in the 2013 Construction Noise and Vibration Plan required by the Section 106 PA.

Vibration-producing equipment and activities may include: vibratory and impact hammers used for pile installation, drills and vibratory hammers used for shaft installation, hoe-rams and munchers used for structure removal, excavators used for digging and trenching, vibratory rollers used for paving roads, and concrete and flatbed trucks traveling within the corridor.

The only pile driving activities expected on the Project are for construction of the temporary work bridges north and south of the existing WABS structure. Permanent structure work will be completed by drilling shafts for foundations, rather than pile driving which is a benefit to the project as it reduces significant vibration-generating construction activities.

Shaft installations, structure removals, and hauling to and from the jobsite can all be expected along SR 520 throughout the entire project duration. Large excavations, embankments, and paving will also occur project-wide and throughout the entire project duration.

## **Regulations and commitments**

Graham is committed to minimizing vibrations to the maximum extent practicable and to limiting vibrations during nighttime operations as practical. A Vibration Monitoring Plan has been developed (Appendix D) to detail how vibration will be monitored and the thresholds that will trigger corrective actions. Should vibration exceed the defined limits, corrective actions or alternate construction methods will be adopted to ensure that vibration levels do not exceed limits where damage is expected to occur. These levels were established in the 2013 Construction Noise and Vibration Plan required by the Section 106 PA which outlines expected vibration levels caused by different types of equipment, the distance from historic properties required to stay below those thresholds, and potential measures to minimize vibration.

## **Measures and practices**

Equipment and construction methods will be chosen to minimize the vibrations that will be experienced by residents and nearby structures. If equipment still creates unacceptable vibrations, then smaller equipment will be utilized to reduce the vibrations.

Graham will install vibration monitoring equipment throughout the Montlake and Madison Park areas that will notify Graham if vibration levels rise to the point that they may damage structures. If any measurement reaches or exceeds the threshold value, Graham will take immediate steps to reduce the cause of the vibrations and notify WSDOT. A corrective action plan will be put in place and reports will be generated and provided to WSDOT to demonstrate the vibrations have been limited or reduced.

The specific monitoring locations are currently being identified by WSDOT and Graham, however, Graham anticipates installing these monitors towards the end of July 2019. The vibration monitors will provide Graham and WSDOT with necessary data to gauge vibration levels. Vibration monitors are used to track vibrations at buildings, bridges, walls, etc. near the corridor.

The only pile driving activities expected on the Project are for the construction of the temporary work bridges north and south of the existing WABS structure. To mitigate this activity as much as possible, Graham will construct a temporary work bridge with fewer driven piles than the temporary work bridge that was used to construct WABN. This directly correlates to less vibration generating activities as a result of pile driving.

In addition to pile driving, Graham will use innovative techniques when completing bridge demolition. The existing WABS structure and Arboretum onramp will be demolished using a sawcut and pick method. Essentially, Graham will sawcut large portions of the bridge structure, load them on to trucks, and haul them from the jobsite for offsite processing and recycling. Using this method for demolition eliminates vibration-generating activities associated with traditional demolition methods and onsite processing of materials.

## Home inspections / damage during construction

Home inspections have been offered to frontline homeowners to monitor damage potentially caused by vibration. If you're interested in an inspection prior to the beginning of major construction, contact the SR 520 program at 206-770-3554 or [sr520bridge@wsdot.wa.gov](mailto:sr520bridge@wsdot.wa.gov) as soon as possible.

If a property owner identifies damage during construction, the property owner should notify the project team by emailing [sr520bridge@wsdot.wa.gov](mailto:sr520bridge@wsdot.wa.gov) or using the 24-hour construction hotline (206-775-8885). WSDOT will respond within 72 hours and consult with property owners to assess the cause of the damage in order to identify and provide for any necessary repairs that result from project construction activities. If WSDOT determines that project construction activities are resulting in structural or architectural damage to properties, WSDOT will direct work to stop on that construction activity until appropriate safeguards are put in place. If an emergency occurs as a result of construction activities that threaten safety or cause significant structural damage, construction will halt as rapidly as possible and take necessary measures to stabilize structures and protect public safety.

## 3.3 AIR QUALITY AND DUST

### What to expect

All construction activities, especially those involving movement of soil, may result in emissions of air pollutants such as fugitive dust, engine exhaust from trucks or other construction equipment, and volatile organic compounds from asphalt paving. Fugitive dust is particulate matter that is suspended in the air by wind or human activities. Projects that require moving soil and other materials have the potential to create fugitive dust and are required to employ best management practices to control dust at project sites. Activities that are particularly problematic are truck traffic on bare earth, especially those involving movement of soil, and demolition activities. Frequent truck traffic and material hauling over large distances can also adversely affect air quality.

Excavations, embankments, material hauling, and demolition will occur throughout the entire corridor and throughout the duration of the project. These work activities will be primarily land-based activities in the MOHAI, Old Canal Reserve, and Montlake Boulevard areas.

Demolition activities that may generate concrete dust for major structure removals will occur at Montlake Boulevard, 24<sup>th</sup> Avenue East, and WABS. Land-based demolitions are likely to generate more fugitive dust than WABS sawcutting demolition activities.

### Regulations and commitments

Graham will adhere to WSDOT, federal, local, and statewide regulatory requirements and/or other regulations. As part of the Environmental Compliance Plan, Graham is developing a Fugitive Dust Prevention and Control Plan that provides additional details on activities to mitigate air quality impacts during construction.

The project will abide by the regulations of the Puget Sound Clean Air Agency. Graham will make every reasonable effort to minimize fugitive dust from construction activities, in particular, those due to hauling materials to and from the jobsite.

The Puget Sound Clean Air Agency is the primary agency overseeing air quality and fugitive dust issues in the Seattle area. More information about their operations and enforcement authority can be found at the Puget Sound Clean Air Agency website.

### **Measures and practices**

To reduce potential fugitive dust concerns related to various construction activities (i.e. hauling and demolition activities), water is applied to the dirt surface to help minimize the potential for dust. Haul and access roads around the site will also be watered during the summer months to help reduce dust. In some cases, Graham will pave construction access roads and haul routes near residences where possible to reduce dust and noise in accordance with Section 106 PA commitments.

To reduce potential fugitive dust and air quality concerns related to hauling activities, Graham will monitor construction equipment to ensure it meets current emission standards. Trucks hauling earth or demolished materials must be covered to reduce the generation of dust during transit.

The phasing of the project will avoid disturbing stabilized sections of the project until necessary, and areas that have been disturbed but will not be worked on for extended periods of time will be stabilized by seeding or other best management practices.

Equipment idling will be minimized to reduce unnecessary exhaust emissions.

Graham will use innovative techniques when completing bridge demolition. The existing WABS structure and Arboretum onramp will be demolished using a sawcut and pick method. Graham will sawcut large portions of the bridge structure, load them on to trucks, and haul them from the jobsite for offsite processing and recycling. Using this method for demolition will reduce the fugitive dust generating activities associated with traditional demolition methods and onsite processing of materials.

## **3.4 VISUAL QUALITY: AESTHETICS, GLARE AND LIGHTING**

### **What to expect**

During construction operations, Seattle residents near the shoreline of Lake Washington will see barges and work on trestles. Residents will also see work in and near construction staging areas near the former MOHA property, the WSDOT Peninsula and the Montlake Interchange. Active construction will occur in these areas for the duration of the construction period, which is expected to begin in 2019 and last 4-5 years.

During nighttime hours, residents and the traveling public can anticipate traffic closures on mainline SR 520, and associated on- and off-ramps. Construction equipment, including lights for the safety of the workers and the public, will be used. During the winter months (November

through March), there will be increased work zone lighting at the beginning and end of the workday due to decreased daylight hours.

Residents and the traveling public can anticipate seeing construction equipment, work trucks, and construction personnel on site during both daytime and nighttime hours. The various Figures in Section 1.4 reference project elements and areas in final configuration for this Project.

### **Regulations and commitments**

The project will adhere to all WSDOT, federal, local, and statewide regulatory requirements and/or as required by the contract documents. This includes WSDOT Standard Specifications.

To assist with visual quality, additional information related to tree protection and screening vegetation can be found in Section 3.7 of this document.

### **Measures and practices**

Graham will limit the use of construction lighting as much as possible and keep lighting shielded, directed downward, and pointed away from residences and other sensitive areas to the maximum extent practicable without creating a hazard for the workers. If residents feel the lights are directed towards the home of a resident or driver, the resident or driver should notify the project team by emailing [sr520bridge@wsdot.wa.gov](mailto:sr520bridge@wsdot.wa.gov) or using the 24-hour construction hotline (206-775-8885).

Additional BMPs utilized on the Project may include but are not limited to:

- Locating construction sheds, barricades, and material storage away from private properties, and avoid obscuring views of and from private properties.
- Coordinating with nearby residents and adjacent neighborhoods on temporary construction screens/barriers.
- Installing temporary construction screens/barriers, such as plantings or fencing around construction areas or adjacent to neighborhoods so that visual impacts of construction activities on private properties are minimized. The location and type of screens/barriers will be determined in consultation with adjacent property owners.

Note: Pre-project consultation with nearby residents on screening resulted in the installation of project fencing at the WSDOT Peninsula as well as the installation of noise reducing fencing at the Shelby-Hamlin neighborhood. Both BMPs have either already been implemented or will be implemented by Graham soon.

### 3.5 TRAFFIC AND TRANSPORTATION

#### What to expect

Construction activities will result in a variety of traffic and transportation impacts to the traveling public. The construction will result in several long duration shifts to the traffic patterns, on- and off-ramp revisions, temporary closures, and temporary lane restrictions. Lane closures and restrictions will be generally limited to low traffic times such as nights or weekends. In addition, these activities will result in changes to pedestrian and bicycle facilities, as well as removal and relocation of transit stops.

Closures will be scheduled to avoid major regional events. Graham will coordinate our Work activities with other local events in the area in order to minimize impacts to major events. Events include, but are not limited to:

- Annual Seafair Hydroplane Race Weekend
- SR 520 Floating Bridge Closures
- Special Events (i.e. Seahawks games, Huskies games, Seafair Torchlight Parade, Opening Day of boating season (Yacht Club coordination), Northwest Folklife Festival, University District Street Fair, Beat the Bridge, Seafair Rock 'n Roll Marathon, Graduation Ceremonies, Bite of Seattle, Bellevue Arts Museum Artsfair, STP Bike Ride, Seafair Triathlon, Blue Angels air show, Obliteride, Bumbershoot, Athleta Iron Girl, Seattle Escape the Rock Triathlon, TREK Women's Triathlon, Montlake Garage Sale, St. Demetrios Greek Festival, and Seattle Marathon).

Types of closures range from full closures of mainline SR 520 and local streets, to single-direction and/or multi-lane closures of SR 520. Sidewalk and trail closures will range from intermittent closures, short-term detours, and long-term closures.

Construction workers, equipment, and trucking will also be present on and adjacent to the roadways. Marine traffic will be in the form of barges and crew boats that will be staged and moved around the construction zone in the water.

#### Regulations and commitments

Graham will adhere to WSDOT, federal, local, and statewide regulatory requirements and/or other regulations. A Street Use permit for the Project was obtained for work in the city streets from the City of Seattle. Graham will comply with the Programmatic Agreement haul routes identified in the Section 106 PA. Additional Section 106 coordination will be required if haul routes outside of those previously identified or restricted by the Section 106 PA coordination process are utilized. If WSDOT determines that haul routes in Seattle not outlined in the SR 520, I-5 to Medina: Bridge Replacement and HOV project Final Environmental Impact Statement might be used, WSDOT will follow the process described in the Section 106 PA.

SDOT developed a Neighborhood Traffic Management Plan in coordination with WSDOT that identifies traffic management measures during construction to keep traffic flowing, limit detour routes through residential areas by implementing traffic calming measures (i.e. speed humps),



and ensures access for residents. The plan defines measures to proactively reduce project construction effects and develop long term traffic management strategies that work in conjunction with the Project's preferred alternative and existing City of Seattle traffic management practices.

### **Measures and practices**

As noted above, lane closures will be generally limited to low traffic times such as nights or weekends in order to minimize traffic impacts. Graham will coordinate with WSDOT to notify the public of planned closures. Closures will be posted on the SR 520 Construction Corner website and in project email updates. Planned traffic shifts and/or closures will be announced using the WSDOT intelligent traffic system and using Portable Changeable Message Signs. This will help prevent confusion from changing traffic conditions. Access and egress for construction traffic will be planned and routed to minimize it going through residential neighborhoods. Graham will construct a new temporary eastbound onramp to help relieve congestion at Montlake prior to closing the existing eastbound onramp at the Arboretum.

Major roadways such as I-5, SR 520 and I-90 in Seattle will be used for major material haul routes. Other major city arterials designated as truck routes will also be used to access these major roadways, as well Lake Washington Boulevard, the westbound Lake Washington Boulevard off-ramp, 24th Avenue East, and the SR 520 on- and off-ramps to access construction staging areas at the former MOHAI property and in the WSDOT Peninsula.

Graham intends to use all primary and secondary routes identified in the figure below. Many of the secondary routes such as Fuhrman, Boyer, and 19th Avenue East will be primarily used to transport crews to and from the project site.

For in-water transportation, at least one navigation channel under the SR 520 Floating Bridge will be open at all times.

Haul routes and staging areas for the SR 520 Montlake Project are as follows:



Figure 6

In the event of damage to the roadway resulting from heavy trucks, hauling, or access, Graham will:

- Repair any project-generated potholes as needed
- Repair any project-generated damage to guardrails, barriers, attenuators, and traffic system signs as needed
- Provide adequate stormwater management during the project
- Restore property and landscaping that is damaged in the course of construction to a condition similar or equal to existing before the damage occurred by repairing, replacing, rebuilding, or replanting

In addition to planning and communicating lane closures and establishing haul routes on the Project, Graham will implement the following mitigation measures:

- Plan and perform the work in such a way as to prevent tracking of dirt and gravel onto local streets in accordance with the WSDOT's temporary erosion and sediment control (TESC) requirements. Street sweepers will be used to keep roadway surfaces free of debris to the maximum extent practicable.

- Construct the major Seattle Public Utilities 54-inch waterline underneath SR 520, using jack and bored construction methods, to avoid full closures of SR 520
- Access the worksite, including the staging yards, according to the terms of street use permit with the city of Seattle where applicable
- Coordinate local street closures and detours with the City of Seattle through the Street Use Permit
- Coordinate closures and detours in advance with WSDOT, SDOT, and local transit providers
- Provide signing for detours and closures according to approved traffic control plans.
- Ensure all detours, including all signing, is in place prior to the closure of any road or sidewalk
- Ensure proper coordination with local jurisdictions and SDOT is done regarding bicycle and pedestrian access

During construction, Graham will ensure Local, Public, and Emergency Access is maintained to homes and businesses through the following mitigation measures:

- Minimize interruptions to access to all public facilities affected by the project unless such access is determined to be a public/construction safety risk
- Allow access to the site for spill response and make personnel and equipment available to respond to emergencies
- Cooperate with law enforcement and other emergency response agencies responding to accidents, fires, spills or other emergencies in any area affected by the project
- Work with emergency service providers to address their concerns about emergency access to and through the project corridor.
- Graham shall ensure access to all historic properties is maintained. Except for emergency situations, 24 hours advance notice shall be provided to affected property owners before any unavoidable interruptions of access. Affected property owners will be consulted to address their needs, which may include the development of an alternate access strategy for short-term interruptions of access and longer-term detours.

### **3.6 UTILITIES AND SERVICES**

#### **What to expect**

The Montlake Project includes proposed relocations of utilities such as power, water, fiber optic and cable television lines, as well as interruption of some of those services. Nearby residents will be formally notified of potential effects on utilities and services by Seattle Public Utilities (SPU) and Seattle City Light (SCL). Graham will coordinate with SPU, SCL, Seattle Information Technology, Puget Sound Energy, Comcast and CenturyLink to identify potential effects early in the process.

Existing utilities located within Montlake Boulevard, on the Montlake Boulevard overpass, along SR 520, and on 24<sup>th</sup> Avenue East will be relocated. Graham will develop a work plan for utility installation in conjunction with utility owners to minimize the impacts. Potentially affected

residents will be notified of necessary work that may result in service interruptions or utility outages.

### **Regulations and commitments**

Graham will adhere to WSDOT, federal, local, and statewide regulatory requirements and/or other regulations as required by Contract.

Graham will coordinate with utility owners prior to any service interruption. Seattle Public Utilities will communicate any potential water shutdowns with affected customers. Seattle City Light will communicate any planned electrical outages with affected customers to help facilitate the overhead and underground electrical relocations.

### **Measures and practices**

Coordination with Utility owners regarding utility relocations and/or effects to service will occur. Utility relocations will be planned and incorporated into the overall project phasing to minimize impacts to the community. Any service interruptions will be announced ahead of time and minimized to the shortest practicable amount of time. Advanced notification to affected property owners will be provided if such disruptions are required. Timely response and protocols, in accordance with the Project Crisis Communication Plan and Traffic Incident Management Plan will be followed in the event of accidental disruptions.

## **3.7 VEGETATION MANAGEMENT AND EROSION CONTROL**

### **What to expect**

In various construction areas, vegetation will be removed from the project area to construct the temporary work bridges and the new SR 520 West Approach Bridge South (WABS) bridge structure, the Montlake lid and land bridge structures between the new Montlake Boulevard overpass, and the new 24<sup>th</sup> Avenue East Bridge.

### **Regulations and commitments**

Graham will adhere to all WSDOT, federal, local, and statewide regulatory requirements and/or other regulations as required by the Contract.

WSDOT has developed a Tree and Vegetation Management and Protection Plan (TVMPP; Appendix C) which preserves and protects existing trees and vegetated areas as noted within applicable environmental permit requirements. Graham will implement this plan during construction. The plan addresses areas within the Montlake Project where specific trees and/or vegetation are to be removed or disturbed as part of the construction or resulting project improvements.

The TVMPP identifies areas of mature tree removal, protection, potential relocation, and restoration of project areas. It also shows areas temporarily dedicated to construction, including staging and lay down areas. The goal of the plan is to minimize tree and vegetation removal.

## Measures and practices

By utilizing the TVMPP throughout the design and execution of the project, the removal of trees and vegetation will be limited as much as practical. Trees and vegetation that are meant to remain will be protected from construction using high visibility fencing that will remain in place while the trees and vegetation are at risk of damage. Graham will provide vegetation protection fencing for all trees and vegetation to remain within the affected Project area in the Tree and Vegetation Management and Protection Plan. Graham will perform site surveys early in the design phase, tag trees for removal or to remain, and hold site walks with WSDOT to ensure the Project Team is in agreement prior to work starting.

### 3.8 OVER-WATER AND IN-WATER WORK

#### What to expect

This project involves in- and over-water demolition of the existing west approach bridge and the west approach span of the Evergreen Point Bridge, as well as the construction of the new West Approach Bridge South (WABS). The project will have construction activities in Union Bay and Lake Washington, including movement of materials by barge, construction of temporary work platforms, bridge foundation construction, bridge superstructure construction, and removal of the existing bridge. The project may also transport materials and bridge components through the Lake Washington Ship Canal.

The WABS is being built over the water, largely within the alignment of the existing west approach bridge. Barges and temporary work platforms on steel pilings will be used to support equipment and materials used to demolish the existing bridges and to build the drilled shaft foundations, bridge columns and bridge superstructure.

The general work sequence for the demolition of the existing WABS structure, construction of the new WABS structure, and demolition of the existing Arboretum onramp is as follows:

1. Early select demolition to facilitate construction of the temporary work bridges
2. Construct the temporary work bridges
3. Complete demolition of the existing eastbound approach bridge from the temporary work bridges
4. Build a new the WABS structure
5. Complete demolition of the Arboretum onramp

In general, demolition activities will start at the west and work towards the east. The Arboretum onramp is the last piece of demolition work as it will be a primary access route to the bridges during construction.

Graham anticipates supplying some equipment and materials by barge to a construction staging area located on the work bridge. Access restrictions within the construction work zone will be necessary for safety and security purposes, which may restrict access for small crafts such as canoes and kayaks

## Regulations and commitments

Graham will adhere to WSDOT, federal, local, and statewide permits and approvals, including, but not limited to:

- Sections 401 & 404 of the Clean Water Act
- Hydraulic permit approval
- Coast Guard permit requirements
- Seattle SDCI SR 520 West Approach Shoreline/Master Use permit
- Formal Endangered Species Act consultation

## Measures and practices

Restrictions will be in place for work during certain fish migration times, and around certain events such as Seafair and opening day of boating season. Graham has already and will continue to closely coordinate with the Seattle Yacht Club.

Best management practices (BMPs) will be developed in accordance with the Water Quality Monitoring and Protection Plan (WQMPP) for in- or over-water work. The BMPs will vary depending on the work location and the type of work being performed and may include:

- Daily inspections of BMPs with repair and maintenance as required.
- Using fueling locations and procedures approved by the Washington State Department of Ecology.
- Having spill response kits and containment booms on board barges and vessels.
- Providing containment and/or covering for fuels, concrete, concrete process water, stormwater runoff, construction materials and debris.
- Sweeping barges and work platforms.
- Anchoring portable restrooms.
- Using containment methods beneath structures being constructed or demolished and beneath work platforms.
- Avoiding barge grounding within the project area.
- Spraying down dust and grinding residue.
- Installing turbidity curtains when required.
- Providing linings for barges used to hold concrete and/or slurry water waste bins.
- Placing absorbent materials under stationary vehicles and equipment on barges or temporary work platforms.
- Protecting fresh concrete from adverse weather.
- Installing and using emergency cut-off valves on concrete pumps and pipelines.
- Operating equipment to minimize suspension of near shore sediments.
- Installing valves on slurry lines and closing when the lines are not in use.

In addition to the BMPs above, Graham will establish a Marine Transportation Plan in accordance with the Contract. In-water work including construction barges, work bridges, barge moorage, barge towing, and boat navigation will be included in the Marine Transportation Plan.

Graham will utilize temporary work bridges on both the north and south side of WABS. Graham commits to constructing the temporary work bridges on fewer piles than the temporary work bridge that was used to construct WABN which is a benefit to the project. An additional benefit is the use of a gantry crane system shown in Section 1.4, *Figure 5*, to facilitate effective construction and demolition activities. A triple containment system will be used on the temporary work bridges to reduce risk of overwater spills and contain water from the construction work zones and pump it off the bridge.

In addition to implementing these BMPs, Graham is using innovative construction techniques to reduce the need to perform certain construction operations at the project site. Examples include:

- Graham will build some precast concrete elements at existing industrial sites and haul them to the project site. This eliminates the risk of building these elements onsite over the water.
- Graham will construct a temporary work bridge with fewer driven piles than the temporary work bridge that was used to construct WABN. This directly correlates to less pile driving on the Project.
- Graham will use innovative techniques when completing bridge demolition. The existing WABS structure and Arboretum onramp will be demolished using a sawcut and pick method. Essentially, Graham will sawcut large portions of the bridge structure, load them on to trucks, and haul them from the jobsite for offsite processing and recycling. Using this method for demolition eliminates risks associated with traditional demolition methods and onsite processing of materials over water.

### **3.9 STAGING IN WSDOT RIGHT OF WAY**

#### **What to expect**

Equipment and materials will be staged both on land and on barges near the construction areas. Staging areas will vary in size and function and will be available for use 24 hours per day, 7 days per week.

Equipment and materials will be stored at identified construction staging locations, which may include the former MOHAI area northeast of 24<sup>th</sup> Avenue East and SR 520, two areas south of SR 520 and east of East Lake Washington Boulevard on WSDOT-owned right of way known as the WSDOT Peninsula, and the Montlake Market parcel at Roanoke Plaza. The staging yard at the WSDOT Peninsula is away from nearby residences and separated by a berm and trees from the adjacent roadways.

In addition, an area in Eastlake under Interstate 5 near Fuhrman Avenue East will be used by Graham primarily as a parking lot for personal vehicles. Graham anticipates using this property as a drop off and pick up location for transporting project personnel to and from the project site.

Refer to Section 3.5, *Figure 6* for a graphic of the project staging areas.

## Regulations and commitments

Graham will adhere to WSDOT, federal, local, and statewide regulatory requirements and/or other regulations as required by the Contract.

## Measures and practices

Graham will limit the frequency of access to and from the staging areas as to minimize visual and noise disruptions to travelers and nearby residences.

BMPs utilized on the Project may include but are not limited to:

- Locating construction sheds, barricades, and material storage away from private properties, and avoid obscuring views of and from private properties.
- Coordinating with nearby residents and adjacent neighborhoods on temporary construction screens/barriers.
- Installing temporary construction screens/barriers, such as plantings or fencing around construction areas or adjacent to neighborhoods so that visual impacts of construction activities on private properties are minimized. The location and type of screens/barriers will be determined in consultation with adjacent property owners.

Note: Pre-project consultation with nearby residents on screening resulted in the installation of project fencing at the WSDOT Peninsula as well as the installation of noise reducing fencing at the Shelby-Hamlin neighborhood. Both BMPs have either already been implemented or will be implemented by Graham soon.

## 4.0 HOW TO STAY INFORMED

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The following communication mechanisms are currently available to the public and further detailed below:

- Project Website / SR 520 Construction Corner
- Project Hotline
- Information Center
- Correspondence
- Public Meetings and Briefings
- Social Media
- Community Relations Program
- Online Communications
- Community Events
- Collateral Materials
- WSDOT Coordinated Tribal Outreach
- Community Event Construction Coordination
- Construction Site Tours



#### 4.1 PROJECT WEBSITE / SR 520 CONSTRUCTION CORNER

Graham will develop and submit content to WSDOT for the project website (also known as the Construction Corner) on a weekly basis. The project website will include project updates and information on design, construction activities, and construction impacts. Construction information will include content on lane closures, detour routes, road, trail and waterway conditions, and other construction-related activities relevant to the public. The Construction Corner Website is intended to be a dynamic resource for the community to receive the latest Project information and can be found at [SR520Construction.com](http://SR520Construction.com). Information from this plan will also be included on the Construction Corner for easy access.

#### 4.2 HOTLINE

##### Construction hotline

Graham's communications team will manage and staff a 24-hour live telephone construction hotline for the duration of the project. The hotline shall be active no less than 30 calendar days prior to construction work or potential field work and will continue to be active through physical completion. All staff members responding to inquiries will be trained, friendly, responsive and informed about project construction and traffic impacts. The hotline number is 206-775-8885.

##### Project phone line

WSDOT has established a phone line that is staffed from 8 a.m. to 5 p.m., Monday through Friday, for general project inquiries regarding the SR 520 Bridge Replacement and HOV Program. The project information number is 206-770-3554. Please direct construction-specific inquiries to the hotline listed in the previous section.



**SR 520 Bridge Replacement  
and HOV Program**

Montlake Project



**Construction questions?**

**WEB: [www.SR520construction.com](http://www.SR520construction.com)**

**EMAIL: [SR520bridge@wsdot.wa.gov](mailto:SR520bridge@wsdot.wa.gov)**

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**24-HOUR HOTLINE: 206-775-8885**

### **4.3 INFORMATION CENTER**

Graham will provide an information center that the public can visit to learn about the project, ask questions and discuss concerns. The address is 2209 E Lake Washington Boulevard, Seattle, Washington. Graham will maintain and report a log of visitors to WSDOT.

#### **Hours**

Graham will have two communications staff working in the information center during the hours of operation.

The information center will be open at the following times:

- Four separate weekdays:
  - Monday and Wednesday from Noon to 6 p.m.
  - Tuesday and Thursday from 8 a.m. to Noon
- Third Saturday of each month from 9 a.m. to 12 p.m.

The hours will be publicly posted on the SR 520 website and near the entrance to the center.

In addition, Graham will host events at the center for neighbors to talk with the project team, learn about the design and provide input.

Graham anticipates the Information Center will be open in mid-August, 2019.

### **4.4 CORRESPONDENCE**

Graham will respond to phone calls that are received from sources other than the 24-hour construction telephone hotline within one calendar day, and to emails and letters, including comments forwarded from WSDOT, within five calendar days of the receipt of comments.

### **4.5 PUBLIC MEETINGS AND BRIEFINGS**

Graham will coordinate with WSDOT to schedule and host design and construction open houses. These open houses will inform the public of the project's status, share design and construction updates and answer questions related to the project. Graham will coordinate with WSDOT to schedule and host open houses on an annual basis to inform the public of the project's status, share design and construction updates, and to answer questions related to the project.

### **4.6 SOCIAL MEDIA**

Graham will assist WSDOT in maintaining the project's social media outlets by providing project update content, including photos and videos as well as providing responses to questions asked via social media.

#### **4.7 COMMUNITY RELATIONS PROGRAM**

Graham will provide, as directed by WSDOT, the following community relations activities to assist with construction relief for neighbors living near construction activities:

- Car washing services.
- Exterior pressure washing and house cleaning services and interior and exterior window cleaning services.
- Single-night hotel accommodations including pet services for community members.

#### **4.8 ONLINE COMMUNICATIONS**

##### **Online public update presentations**

Graham will conduct online design and construction update public meetings, which will include presentations with a project look-ahead, a discussion of potential impacts, and opportunities for attendees to make comments and ask questions via a live-chat function.

In addition, Graham will take a lead role in coordinating and presenting information at Monthly Public Construction Update meetings to inform the public of the project's status, design updates, upcoming construction activities, and to answer questions related to the project.

##### **Annual survey**

Graham will conduct an annual online survey that will ask the public how we are doing in our outreach and mitigation efforts and will target the key stakeholders on the project.

#### **4.9 COMMUNITY EVENTS**

##### **Pop-up events**

Graham will conduct "pop-up" events at key locations within the project area that target specific audiences (e.g., transit riders, bicyclists, neighborhoods). The "pop-up" events will include information and graphics appropriate to specific audiences and will be held at key milestones.

##### **Fairs and festivals**

Graham will assist WSDOT with, and participate in, fairs, festivals, and information tables. These will include staffed booths with information and graphics that have relevance to event attendees.

#### **4.10 WRITTEN MATERIALS**

Graham, in coordination with WSDOT, will produce and disseminate written materials regarding project status and project construction activities. Information will include schedule, design updates, and construction-related impacts such as traffic, noise, lights, and fugitive dust. Materials shall be made available to the public as requested via mail, email, WSDOT's website, and at individual and group meetings.

#### **4.11 WSDOT-COORDINATED TRIBAL OUTREACH**

Graham will support WSDOT by assisting with outreach to affected tribes, including providing construction updates, preparing meeting exhibits and project documents, and participating in meetings and presentations.

#### **4.12 COMMUNITY EVENT CONSTRUCTION COORDINATION**

Graham and WSDOT will identify community events held near the project location. Graham will develop and maintain a list of community events and will coordinate, communicate, and provide a plan to minimize construction impacts on these events.

#### **4.13 CONSTRUCTION SITE TOURS**

Graham will support and provide access for tours of the project for media, government entities, WSDOT management, professional associations, external stakeholders, and the public.

Graham has developed a procedure for project personnel entering the work zones. The purpose of this procedure is to define the process for ensuring roving project personnel are accounted for when on site, and made aware of the current and relevant hazards on site specific to their visit.

Visitor orientation will be required prior to executing site access. Visitors will be required to be accompanied with personnel that have completed the General Health, Safety, Environmental, Quality Project Orientation. All visitors will review the safety information boards for each work area that is entered prior to going onsite.

Graham requires the following information be provided for construction site tours:

- Notification to Graham through the Project construction hotline 206-775-8885 at least 48 hours prior to the site tour
- Scope of the site tour

### **5.0 MEASURING PERFORMANCE AND PROGRESS**

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An annual review of the Montlake Project CCMP will be performed and updated to reflect changes in the processes. As feedback from the public from the various communication mechanisms is received, it will also be considered for incorporation into the CCMP.

Graham, with WSDOT, will support and attend/present (as necessary) at the quarterly Section 106 Programmatic Agreement concurring party meetings. This will ensure the concurring parties have further input into the CCMP development and implementation, as well as receive routine construction updates from Graham. Questions and concerns of the Section 106 Programmatic Agreements concurring parties will be addressed within 10 Calendar Days.

Graham will develop various performance monitoring processes and tools to assess the progress and measure the success of the overall CCMP efforts. Graham will utilize progress charts and surveys at multiple pop-up events where the public can provide feedback on the construction effects and the effectiveness of Graham's mitigation efforts.

Graham will partner with WSDOT for the duration of the Project to provide additional opportunities for concurring party and public input into the CCMP. Graham will coordinate with WSDOT to revise and implement the CCMP, as well as coordinate any changes to the CCMP with WSDOT for review and approval.

## **6.0 QUESTIONS OR CONCERNS?**

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Graham and WSDOT are committed to being responsive to community concerns as they arise. Construction is complex and Graham and WSDOT both appreciate neighbors' patience with the disruptions during construction. Throughout construction, on-site inspectors are present to ensure compliance with various project commitments and requirements.

### **Information on property damage concerns:**

If damage is identified or suspected by a property owner during construction, the property owner is requested to notify the project team by calling the 24-hour construction hotline listed below. WSDOT will respond within 72 hours and consult with the property owner to assess the cause of the damage and will identify and provide for any necessary repairs that are a result of the project. If WSDOT determines that hauling activities are resulting in structural or architectural damage, crews will stop use of that route until appropriate safeguards can be put in place. If the property affected is a historic property, WSDOT is required to ensure the repairs will be consistent with the U.S. Secretary of the Interior's Standards for the Treatment of Historic Properties. Additionally, for affected historic properties, WSDOT will offer DAHP the opportunity to review and comment on the consistency of any repairs with the Standards.

## **7.0 APPENDICES**

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Supplemental information for the Montlake Project CCMP is available in appendices as outlined below:

- Appendix A – Early Design Discovery Work CCMP
- Appendix B – Major Public Project Construction Noise Variance (MPPCNV) – Decision and Application
- Appendix C – Tree and Vegetation Management and Protection Plan (TVMPP)
- Appendix D – Vibration Monitoring Plan