

With more than 30 years of nearly continuous teaming on design-build projects and more design-build volume than any other contractor in Washington State, the East Link Constructors team members have a proven approach to successfully deliver E360 to Sound Transit. We will:

- assemble an integrated team with members who have solid working relationships and a deep familiarity with the project's stakeholders
- partner with Sound Transit to develop a quality project on time and budget
- establish a quality plan founded on a complete understanding of the design intent
- communicate openly and routinely across organizations and disciplines
- use discipline task forces extensively to develop and coordinate ideas
- deliver critical project elements early, such as the Microsoft pedestrian bridge

We will listen to and involve Sound Transit and the project's stakeholders every step of the way. With input, we will leverage design and construction opportunities to the benefit of Sound Transit, WSDOT, City of Redmond, City of Bellevue, and Microsoft.

Already, our team has worked out the first ideas for alternative technical concepts (ATCs). We look forward to vetting these ATCs with Sound Transit in the future "one-on-one meetings" to demonstrate the benefits to all stakeholders.

APPROACH TO TEAM INTEGRATION

Our approach brings together experts in design, construction, safety, quality, compliance, and scheduling, among others, to maximize the benefits of the ATCs during the RFP process. This team will jointly contribute to E360's progression of the project from award through commissioning and turnover.

Shortly after notice to proceed (NTP), the management team will invite Sound Transit and other key stakeholders to participate in a formal partnering workshop to determine common objectives and to align with one another. The agreements made there will be formalized in a partnering charter that we will share with the rest of the team as the project continues to grow.

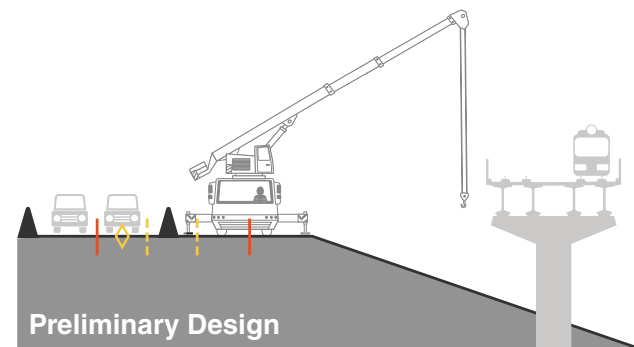
Task Force Meetings and Progress Reviews

The project team will rely heavily on task force meetings to generate ideas and make decisions. Along with progress reviews, these are effective strategies for addressing the communication, coordination, planning, and decision-making needs of E360.

We will establish task forces comprised of project management, design, and construction personnel for each design discipline. These task forces will meet regularly to share ideas, resolve technical challenges, set team goals, and review progress. Co-located task force members and experts from across all disciplines and parties will sit side by side, interacting daily to understand the requirements to advance the design and construction approach (Figure 1).

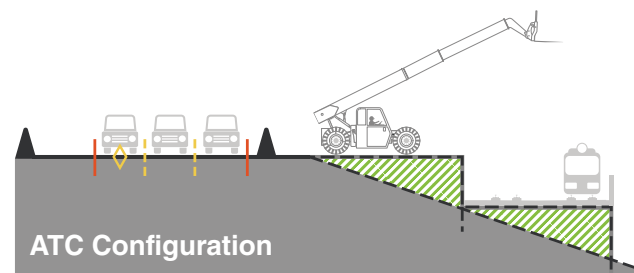
ATC #1: Win/Win Along SR-520

Replaces the elevated guideway with an at-grade guideway on a retained embankment that meets WSDOT's future compatibility requirements. This is done at less cost and under the existing traffic configuration.



Preliminary Design

Uses two existing lanes and shoulder to construct elevated guideway.

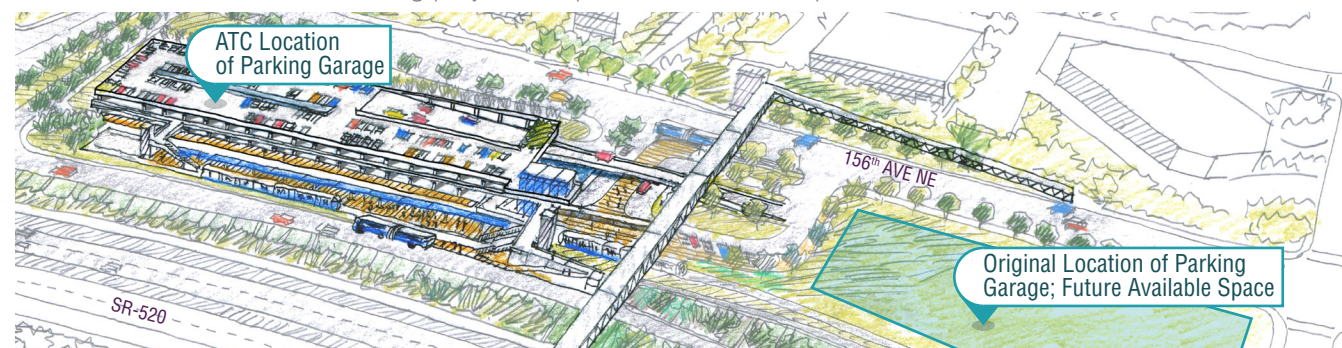


ATC Configuration

Creates temporary access on engineered fill, limiting lane closures, eliminating risky drilled shaft work and heavy girder lifts.

ATC #2: Elegant Station

Relocates the parking garage to the north and combines it with the station and Overlake Transit Center. During construction the transit center would temporarily be moved to the south with construction isolated on the north. This configuration is a more elegant use of space and provides more efficient and safer pedestrian and vehicle traffic patterns both during and after construction. In addition, following project completion, it frees the space at the south end for other uses.



ATC #3: ABC Pedestrian Bridges

Incorporates accelerated bridge construction (ABC) techniques to modularly construct portions of the pedestrian bridges in a temporary staging area prior to setting into place in a single shift. This approach puts these bridges in use earlier, without multiple lane closures, with much less construction over live traffic, and maintains the design aesthetic.

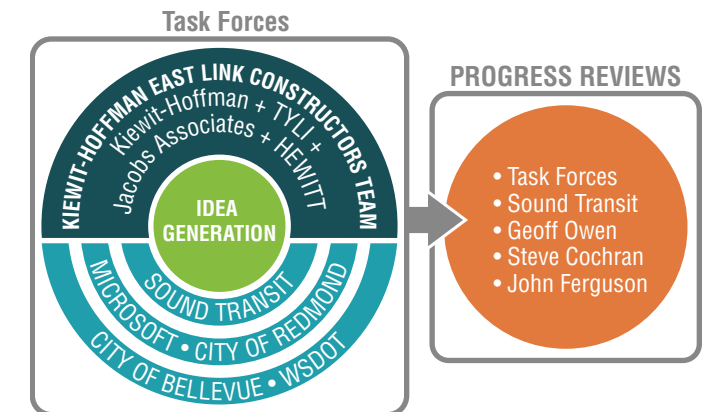
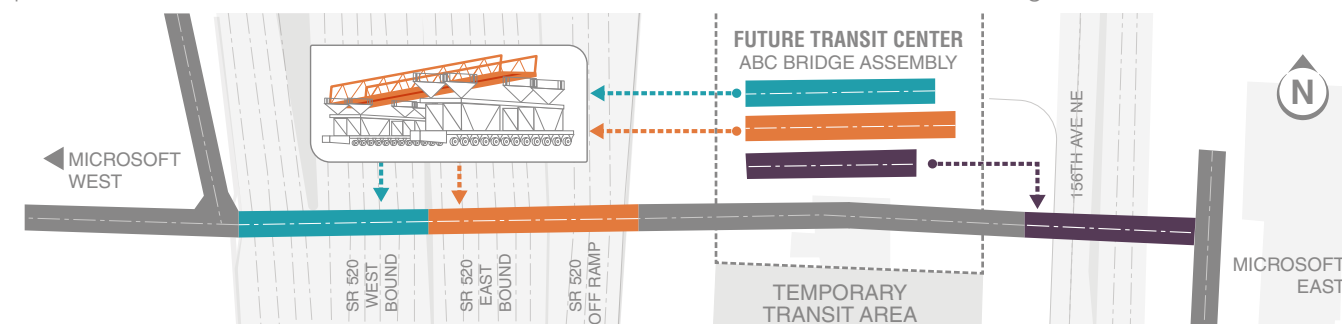


Figure 1: Task force meetings and formal progress reviews keep the project moving forward on the right track.

Weekly, in progress review meetings, task force leaders will discuss and advance the informal daily interactions and discipline-specific discussions. These short, effective meetings will identify action items, integrate project components across disciplines, and provide progress updates.

Using the task force process, we will evaluate and address all aspects of the project from technical requirements to environmental commitments to safety, quality, and stakeholder considerations at the time of design (Figure 2).

THIS PAGE INTENTIONALLY LEFT BLANK FOR DUPLEX PRINTING

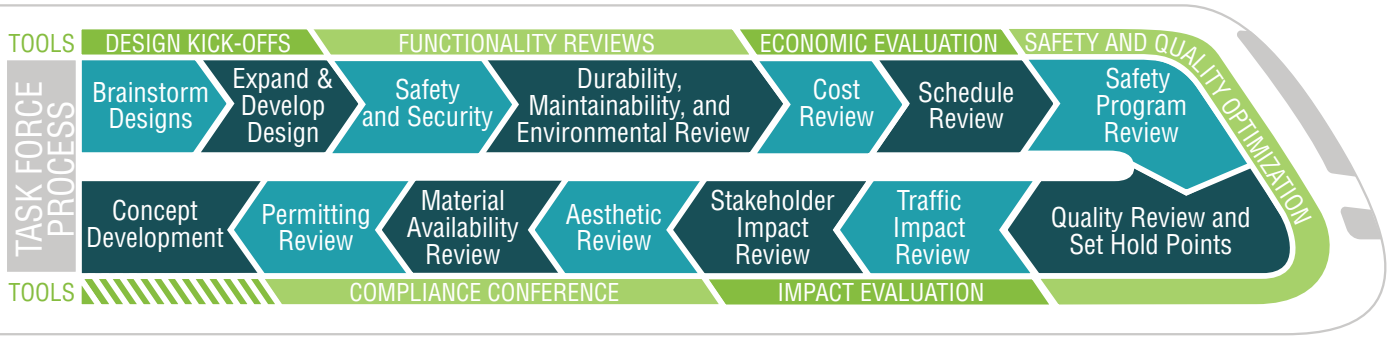


Figure 2: The task force process uses several tools to develop the best possible design and construction approach to meet Sound Transit's goals.

Kiewit and TYLI have used this process as an effective and efficient means of designing and planning projects in fast-paced and rapidly changing environments, as recently as on the Willamette River Transit Bridge and the Port Mann Bridge in Vancouver, BC.

COMMUNICATION PLAN

The best projects are a result of open and direct communication among all parties; this encourages understanding, trust, and mutual respect for one another's priorities.

We will partner with Sound Transit to incorporate other jurisdictions and stakeholders into all aspects of the project, building an environment of trust. Together we will create a project that is on time and on budget and that minimizes impacts to the community.

Based on our understanding of Sound Transit's and stakeholders' concerns, as well as the public interest, we have developed a preliminary communication matrix (**Figure 3**). Working with Sound Transit, we will finalize this matrix and build a communication plan around it.

These formal processes will encourage and support communication. Moreover, co-locating in one office will provide the benefit of informal gatherings. Ideas discussed in the hallway, issues resolved across a desk, and daily personal interaction promote camaraderie and trust and will foster effective collaboration.

Opportunities for Communication and Coordination	Frequency	Internal				Client	External			
		Kiewit, Hoffman	TYLI, Jacobs Associates, HEWITT	Craft Employees	Subcontractors and Suppliers	SOUND TRANSIT	WSDOT, Microsoft, City of Redmond	Utility Owners	Regulatory Agencies	Public
Safety Meetings	Daily	●		●	●			●		
Foreman's Meetings	Weekly	●		●	●					
Schedule and Progress Meetings	Weekly	●	●		●	●				
Design Workshops	As Needed	●	●		●	●	●			
Task Force Meetings	As Needed	●	●		●	●	●			
Partnering Meetings	Quarterly	●	●	●	●	●				
Pre-Activity Reviews	As Needed	●	●	●	●	●	●	●		
Quality Reviews	Bi-Weekly	●	●		●	●	●			
Job Tours	As Needed	●			●	●	●		●	●
Stakeholder Updates	Monthly	●	●		●	●	●			
Outreach Events	As Needed	●	●		●	●		●	●	●
RFIs and Submittals	Continuous	●	●		●	●	●	●	●	
SharePoint E-Document Control	Continuous	●	●		●	●		●	●	
CPM and Linear Schedules	Continuous	●	●		●	●	●	●	●	
Project Signage and Website	Continuous	●		●	●	●	●			●
Construction Cameras	Continuous	●			●	●				●

Figure 3: Meetings, workshops, and proper documentation coordinate across parties and communicate the plan. We will actively support Sound Transit's third-party and public outreach.

“The attitude of your team created an environment of trust and follow-through that ultimately made the biggest difference and was the most effective way to interact with all the stakeholders.”

—Katherine Claeys, PE, former construction project engineer, Seattle Department of Transportation

"NOBODY GETS HURT"

That is our core safety philosophy. It applies not only to our employees, but to all people interfacing with the project. We consider subcontractors, suppliers, the public, and client personnel as part of our team. Our mandate is to provide a safe project for all by:

- designing safety into the project
- executing E360 safely by training and empowering our team
- inspecting and holding ourselves accountable for the process and results

Our commitment to following these practices has been effective in safely delivering design-build projects, documented by our long-term safety record (Figure 4).

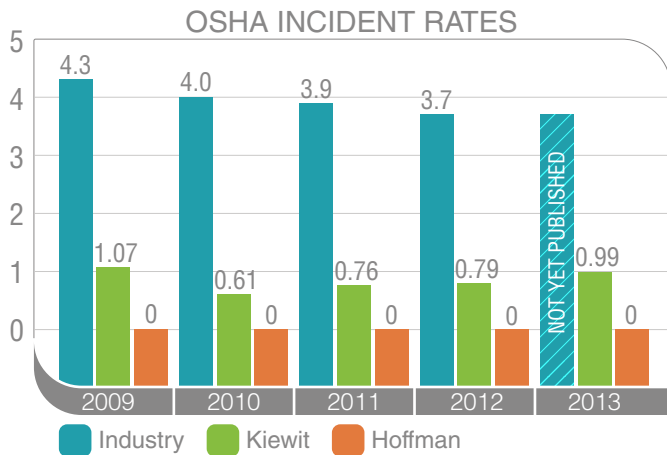


Figure 4: Kiewit's and Hoffman's five-year average OSHA incident rates are one-fifth that of the industry average.

Designing-In Safety

We will develop designs that improve public and worker safety during construction and operation. Construction manager, Jim Holmes, and design-build coordinator, Steve Cochran, will work with the designers to verify the design can be built safely. Jim will work with the project manager, Geoff Owen, and the safety manager, Ryan Gammons, to phase and sequence the work to avoid interaction with the public.

The ATCs already presented represent first steps to building a safe project.

ATC #1: Win/Win Along SR-520

By isolating work zones from traffic, we protect travelers and crews and dramatically reduce hazardous elevated work.

ATC #2: Elegant Station

A temporary transit facility on the south end of the site throughout construction reduces phase changes that confuse and disrupt commuters and bus service.

ATC #3: ABC Pedestrian Bridges

This limits at-height and night work, significantly improving public and crew safety, and minimizes work over SR-520 and within the Microsoft campus.

It is our plan to design out hazards and engineer in safety as much as possible—a technique that has been successful on the current SR-520 Floating Bridge.

DESIGN OUT HAZARDS, ENGINEER IN SAFETY

On SR-520 Floating Bridge, the team used the preconstruction phase to eliminate safety risks by:

- reducing temporary pile installation by more than 75% and eliminating more than 27,000 sq. ft. of temporary platforms to reduce safety exposure, similar to "ATC #1: Win/Win Along SR-520," which exchanges high-risk elevated work for at-grade construction
- moving a major bridge pier from Lake Washington onto the shore, eliminating high-risk marine work—an approach similar to "ATC #2: Elegant Station"
- maximizing off-site prefabrication, providing the opportunity to build work away from the public and in more controlled environments, similar to "ATC #3: ABC Pedestrian Bridges," which prefabricates the bridge in modular components for easy erection



We will involve all parties throughout the design-build process, listening to all input and jointly developing a safe approach. We will strive to design out interactions with the public and develop the most appropriate physical controls for each situation, such as:

- physical barriers
- striping, signs, and lighting
- advanced warning and variable message boards
- minimal traffic switches

Project Execution

Our *Nobody Gets Hurt* philosophy requires continuous commitment from every employee. Accidents on the job don't just happen; they are preceded by unsafe habits and practices.

Our team will train our employees to identify and address hazards on the job through:

- instilling a commitment to never walk by an unsafe act and the authority to stop and correct any safety issues
- new-hire safety orientations for all employees, including subcontractors
- task-specific hazard analyses developed by the crews with input, oversight, and support from supervisors
- daily tool-box safety meetings and periodic tool training
- web-based safety training resources available to all employees and subcontractors

Full-time safety manager, Ryan Gammons, will develop and implement the safety program and verify that team members have all the resources they need to plan and perform the work safely.

Providing training, resources, and authority to plan and execute our work safely will result in a safe E360. Our team members' success on UW Station proves that this approach is effective; with more than 750,000 man-hours worked, it has the best safety performance of all University Link projects.

Maintaining the Safety Focus

Setting and maintaining the project's safety focus is the duty of the project manager and his management staff. Their experience and educated eyes ward off complacent attitudes and protect against potential incidents. Our managers will be actively involved in all phases of planning and performance of the work with:

- pre-activity kick-off meetings
- weekly safety walks
- daily safety reviews
- operation safety evaluations
- project manager meetings with all employees within two weeks of hiring to reiterate importance of safety

Safety focus is best maintained when management and craft take ownership and actively participate.

CRAFT VOICE IN SAFETY (CVIS)

A safety committee consisting of experienced and respected foremen will establish and administer the job-site safety program. Typically, committee members are elected by the craft, which increases their credibility with workers. Committee members lead meetings, train workers, and conduct reviews of craft personnel. Making them responsible for these parts of the program gives them the control they need to promote safe habits among all craft personnel.



On the Farrington and Kamehameha guideways, Ryan introduced CVIS. After it was introduced in 2014, the project team worked more than 650,000 man-hours without a single lost-time or recordable injury. We will use CVIS on E360 to fully engage the craft, maintain a focus on safety, and deliver a safe and successful project.

PROPOSED MANAGEMENT STRATEGY AND PROCESS

The East Link Constructors design-build organization divides the work along disciplines and areas of expertise and shares responsibility for the satisfactory delivery of the project to Sound Transit, stakeholders, and AHJs.

We will integrate the design, construction, controls, and compliance teams to maximize the benefits of the design-build process. Cross-discipline task forces will include representatives from Sound Transit and the AHJs. Both managerial and technical considerations will be addressed in these task forces.

E360 Considerations	
MANAGERIAL	TECHNICAL
<ul style="list-style-type: none"> • public safety • client satisfaction • risk management • quality management • stakeholder involvement, buy-in, and satisfaction • design progress • schedule and cost control 	<ul style="list-style-type: none"> • geotechnical access • logistics • construction safety • storm-water control • forward compatibility • durability • commissioning process • design, construction, and certification for safety and security

Designs for Multiple Jurisdictions

To conform with applicable design criteria, specifications, and industry standards, the design team will start with Sound Transit's Guide Specifications and refine the details as the design develops and as we complete reviews. We will develop and maintain environmental impact statement and AHJ compliance checklists and matrices. This will ensure the consistent application of relevant specifications, leading to a high-quality, compliant design produced on schedule.

Coordinating Design Approvals and Permits

In addition to verifying that the team is using the proper design requirements, we will account for the time needed to complete reviews and approvals in the project schedule. Our integrated schedule will allow for the City of Redmond's design review process of the pedestrian bridges, Overlake Transit Center, and Overlake Village. To facilitate the review and approval of permits, the project team will use task forces in which AHJs will be encouraged to participate in over-the-shoulder reviews and to address formal comments before submission. This transparent process involving all AHJs will lead to conflict-free and timely approvals.

Challenging Work Locations

Because E360 will be conducted adjacent to SR-520, along and in Redmond's city streets, on the Microsoft campus, and at an operating transit facility, we have devised three ATCs that optimize phasing and staging and offer multiple benefits. These ATCs make space available to build the work, separate construction from the traveling public, and minimize changes in traffic patterns in all critical areas.

COORDINATING COMPLEX URBAN WORK SITES



E360 poses work-location challenges similar in complexity to those at SR-519 near downtown Seattle. Kiewit built this project above active

rail lines and busy city streets, tying into the freeway system, and between two sports stadiums without any public incident—while regularly accommodating 60,000 pedestrians crossing the site to the stadiums. Early in this design-build project, long before construction began, a task force identified and developed controls to eliminate public safety hazards.

COMMISSIONING AND ACCEPTANCE

Success will depend on efficient and timely turnover of the project elements to their ultimate owners. Anthony Crockett, our proposed construction quality manager, will develop and implement the E360 four-phase commissioning plan by addressing these considerations in our task force meetings. Involving designers, construction experts, and AHJs will deliver an acceptance process free from surprises.

- Level 1—installation verification and component, equipment, and system testing
- Level 2—intra-system interface tests
- Level 3—inter-system interface tests
- Level 4—pre-revenue tests

Adequate time will be included in the schedule for a thorough start-up and commissioning process. Our team will complete Level 1 and 2 testing during E360. We will coordinate the Level 3 and 4 testing, which will likely occur after substantial completion, with the systems and other adjacent contracts.

With the help of Scott Setchell, our systems integration technical advisor, Anthony will develop testing procedures to verify proper functionality of all components and systems. The most critical tests will be for the fire alarm, fire suppression, elevator, and escalator systems. For efficiency, we will pre-check the components and coordinate witness-testing with the commissioning authority. Our team will troubleshoot, correct, and document any issues, and then rerun that test to verify functionality of the entire system.

Anthony will review the testing and interface plans with the systems contractor. We will then check interfaces between systems and stations before completing inter-station tests with the systems contractor. We will communicate regularly with the various AHJs for sign-off on the testing and commissioning process so there are no surprises or misunderstandings. We will pre-test all elements and devices to use the AHJs' time wisely.

This approach has been implemented at UW Station, and the AHJ testing has gone smoothly.

COMMISSIONING THE MID-JORDAN/DRAPER LRT

Kiewit managed all aspects of commissioning for Mid-Jordan/Draper LRT, including the safety- and security-certified items required for a federally funded transit project. Before the line opened to the public, Kiewit prepared the trains for pre-revenue operations and then transferred them to UTA for car testing and operator training. Kiewit completed all commissioning, testing, and start-up activities on schedule.

DESIGN PACKAGING AND CONSTRUCTION SEQUENCING

Our approach to design packaging, construction sequencing, along with schedule drivers and milestones is illustrated in **Figure 5**.

When developing the schedule, we will take into account stakeholder input and give special consideration to those elements of the work that, when constructed early, will provide substantial benefit to the end user. Once understood, we will develop both a CPM and an associated linear schedule to determine the optimal construction sequence, which will drive the design deliverable schedule and packaging. Our schedule will allow the time to design, review, permit, construct, and commission the project.

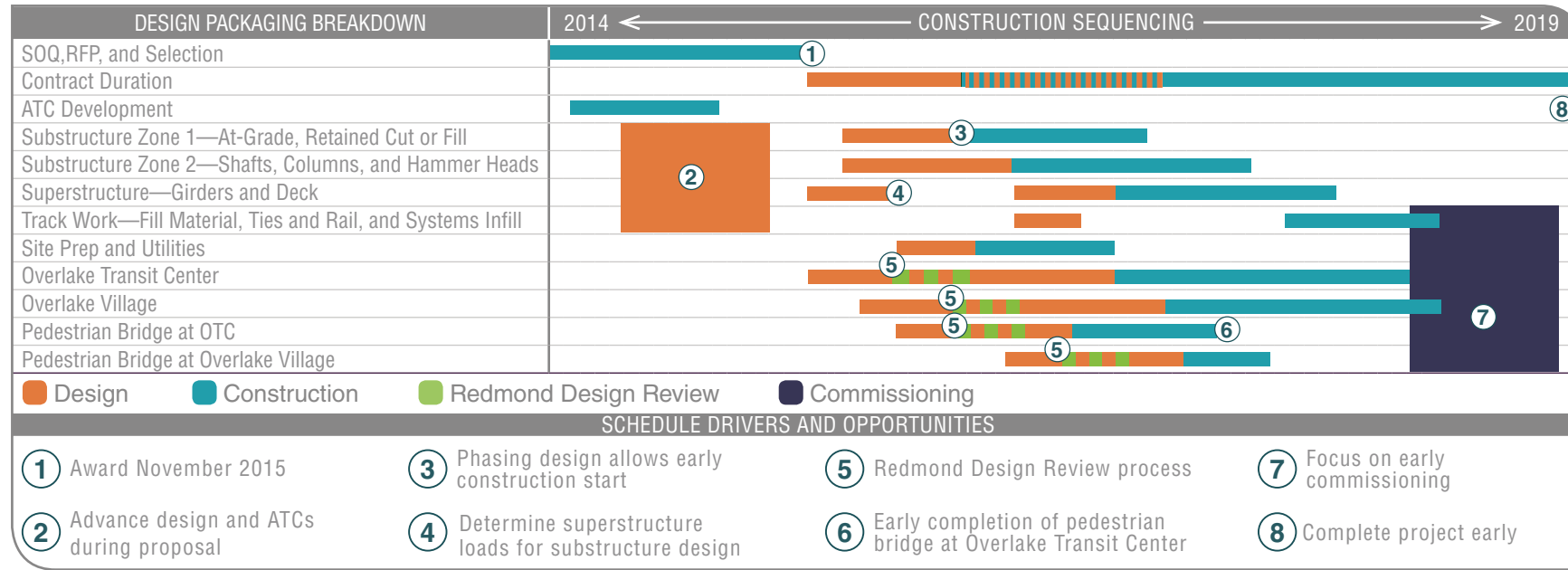


Figure 5: East Link Constructors final design packaging and construction sequencing schedule will be informed by chosen means and methods, stakeholder input, and the incorporation of alternative technical concepts to provide benefit to Sound Transit, stakeholders, and the end users.

Final Design Documents

Based on experience with similar design-build projects involving elevated, retained cut and fill, and at-grade guideways; station and garage work; and associated civil work, we expect the final design documents will contain these elements:

DESIGN DOCUMENTS	
<ul style="list-style-type: none"> Code Basis of Design Report Design Submittal Schedule Aesthetic Design and Review for Non-Station Structure Report Hydrology and Hydraulics Reports Geotechnical Investigation Plan Geotechnical Reports and All Technical Memoranda Safety and Security Design Report Design Narrative Report Reliability-Centered Maintenance Preventive Maintenance Analysis Design Life and Durability Report 	<ul style="list-style-type: none"> Station Configuration and Architectural Design (City of Redmond Permitting Document) Construction Drawing and Calculation Packages 30/60/100/IFCs <ul style="list-style-type: none"> Site Prep and Utilities Substructure Zone 1 Substructure Zone 2 Superstructure Track Work Maintenance of Traffic Design During Construction Design Compliance During Construction Reports Quality Assurance Audit Report

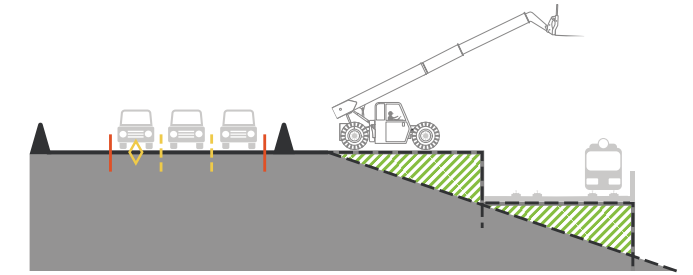
We will work with Sound Transit, AHJs, and other stakeholders to revise this list of design documents to incorporate all project requirements.

Challenges, Opportunities, and Competing Objectives

The E360 guideway is constrained by SR-520 for nearly its entire length. The Overlake Transit Center station is being integrated into an existing active transit hub that is the core of Microsoft employees' movements. Overlake Village Station is to be constructed without affecting busy 148th Avenue Northeast. We will take advantage of opportunities to satisfy the many, and sometimes competing, objectives of this large, complex project in its urban environment.

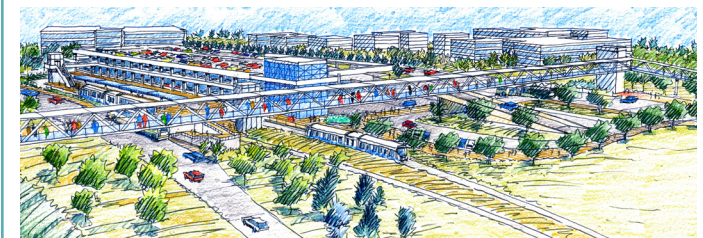
Turning these competing agendas into opportunities for mutual cooperation will require our team to engage actively and look for approaches that reduce costs and risk and provide benefits to third parties. Over the past six months, Geoff Owen has led brainstorming sessions to identify ways to do just that. As he has gotten to know Sound Transit and the project's setting and stakeholders, ideas have moved off the white board and onto the drawing board. The three ATCs discussed throughout this document will be beneficial to multiple parties and will provide substantial positive effects on E360. In terms of budget and schedule certainty, risk avoidance, safety, forward compatibility, and the experience for the transit patrons and the public, these ideas are worth moving off the drawing board and onto the estimating table.

ATC #1: Win/Win Along SR-520



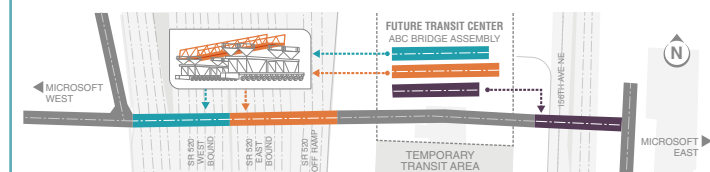
- reduces noise associated with elevated light rail
- simplifies long-term maintenance
- improves sight line and aesthetics
- enhances schedule flexibility
- reduces cost to Sound Transit and provides a forward-compatible lane to WSDOT
- creates much needed access along SR-520

ATC #2: Elegant Station



- improves access to the station from the garage
- simplifies OTC operations and pedestrian movement with a safer interim configuration
- accelerates completion of the pedestrian bridge, allowing for reduced Microsoft busing
- freed space for future Sound Transit opportunities

ATC #3: ABC Pedestrian Bridges



- minimizes work constructed over SR-520, reducing risk, traffic impacts, and safety hazards
- provides early access between the Microsoft campus and the transit center, saving Microsoft busing costs
- protects operations at the Microsoft campus
- moves work to a controlled facility, improving quality and safety while maintaining the design aesthetic