Final Report

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Since April 2022 I have served as the Sound Transit Board of Directors' Independent Consultant. Specifically, I was tasked with tracking whether the direction and requirements of Board Resolution No. 2021-05 ("Realignment") were being met.

As a result of my reviews and analyses over the past year, I have developed the following major recommendations:

Establish an Independent Megaproject Delivery Team

It is a universal megaproject best practice to establish an independent, focused megaproject team (i.e., a "special purpose delivery vehicle") to manage complex projects. The team should be developed with staff having both megaproject experience and expertise. It is recommended that the megaproject director report directly to the agency's top leadership and have authority for on-the-spot decisions including change order approvals and scope changes within the overall project budget.

Examples include the organization structures used for the Oregon Bridge Delivery Program, New York's MTA Capital Construction Company, Boston's Big Dig, Canada's Via Rail High-Frequency Rail Team, Amtrak's Northeast Corridor Improvement Program, and WSDOT's Urban Corridors and Mega-Programs offices.

Embrace a Culture of Urgency

The Board of Directors, as well as its Technical Advisory Group, have observed that the agency lacks a sense of urgency for its ST3 program. This is partly exacerbated by the capital program's duration of over 25-years. This timeframe is unlike a typical megaproject which has a discrete lifecycle characterized by rapid scale-up, accelerated delivery, and rapid scale-down. As a result, the ST3 program appears to be an ongoing, never-ending process. While Sound Transit is organized with well-defined organization charts, chains of command, roles and responsibilities, processes, and procedures, those result in a bureaucratic organization. And bureaucracies are anathema to megaprojects.

Megaprojects should be fast-moving and require extraordinary efforts from all involved. They should have an innovative, rather than a bureaucratic, outlook. While the establishment of an independent, focused megaproject team will help, the imperative for urgent action must also

come from the Board and agency leadership, and it must be a routine practice for today, tomorrow, and the next 25 years.

Seek Legislation to Facilitate Permitting, Right-of-Way, and Utility Relocations

Numerous agency reports note chronic issues with right-of-way, utility relocations, and permitting. These can result in significant delays and greatly increase program costs. These issues are well-recognized across the industry and many approaches have been recommended and/or tried with varying success, such as:

- Early engagement with permitting entities
- Development of model municipal agreements
- Provision of staff resources to municipalities
- Development of a formal betterment policy
- Early planning and construction of utility relocations
- Push-back on local restrictions on construction operations
- Organization of a "one stop shop" permitting process

In Ontario, the province passed a bill giving Metrolinx, Toronto's regional transit agency, enhanced powers regarding corridor control, utility relocations, and municipal services. It includes:

- Corridor Control: Along transit corridors or in their vicinity, development requires a Metrolinx permit, with some exceptions for already approved projects. Also, preview inspections may take place to enter property for testing and due diligence.
- Utility Company Cooperation: Utility companies may be required to move utility infrastructure if necessary for transit. Enforcement powers may include stop-work orders, inspections, and administrative penalties.
- Municipal Service and Right-of-Way Access: A mechanism is provided for municipal service and right-of-way access for transit. The process is based around negotiation, with the possibility for an order if negotiation fails.

Change the Project Delivery Method for Parking Facilities

Structured parking (i.e., parking garages) costs Sound Transit at least double what it costs the private sector. Although the ST3 program includes many parking facilities, a significant number have been deferred. The question is why Sound Transit undertakes these parking projects on its own account. For example:

- The private sector is quite adept at designing, constructing, operating, and maintaining parking facilities; it also tends to be well-versed in local permitting requirements and community concerns.

- The total capital costs for these parking projects are significant. An alternate approach, such as build-to-suit/leasing, would free up needed financial capacity for the agency.
- Sound Transit staff has specialized expertise in developing complex transit projects. Much of that expertise is underutilized on generic parking structures and could be re-directed to other critical programs.
- Sound Transit's organization, which is well-suited for major transit projects, imposes a cost burden on these relatively simple structures – the private sector can do it at lower cost.

An example of this approach is Amtrak and Boston's MBTA working with the private sector to construct a new Route 128/Westwood rail station. The transportation agencies received new high-level platforms, canopies, pedestrian bridges, a ticketing and waiting area, passenger drop-off, and short- and long-term parking. The developer in turn, built other commercial buildings on the site.

Pre-Purchase Long Lead-Time Equipment and Materials

Given Link's extensive power distribution and substation infrastructure, Sound Transit is in many ways similar to a power distribution company. Recently, several construction contracts have experienced late deliveries of long lead-time equipment for traction power. These are critical path items for construction and the situation is likely to get worse as the Infrastructure Investment and Jobs Act ramps up in the power sector. For the 25-year ST3 program, early procurement could generate significant savings by locking-in favorable prices along with timely delivery. It would also provide an inventory of parts and equipment needed for ongoing operations and maintenance.

In New Jersey, NJ Transit successfully used this approach for its rail electrification program. Pre-purchase contracts were let to procure transformers, electrical switchgear, circuit breakers, and electrical cables. This equipment was delivered to a central warehouse and then released to construction contractors when needed, thus avoiding delays, and obtaining earlier and more favorable pricing.

Implement Station Experience Design Guidelines/Standardize Station Materials

An important megaproject best practice is avoiding complexity and standardizing sizes, materials, and construction components. This approach can reduce risks, reduce construction costs, and accelerate project delivery. Preference should be given to service-proven designs, modular components, labor markets, and supply chains. This also involves deemphasizing customization and eliminating iconic headhouses and bespoke stations. Future implementation of the "Station Experience Design Guidelines" should stress:

- Modular design through the use of Standard Drawings ("kit-of-parts") and Standard Specifications specific to each project delivery method.
- Limited station customization to bring durability, consistent appearance, and cost-effective construction and maintenance across the system.

Work Performed for the Board in 2022- 2023

- Reviewed and commented on the 2022 Board Annual Program Review ("BAPR"), both draft and final versions, and presented comments to the Board.
- Reviewed and commented on the revised outline, graphics, and project status sheets, and draft and final versions of the 2023 BAPR.
- Provided observations on megaproject best practices including pre-purchase contracts for materials and equipment, parking project delivery, contractor competition, standardization ("kit of parts"), and contractor incentives.
- Interviewed Board members and senior agency leadership to identify issues and concerns, and to obtain feedback related to capital project reporting.
- Led two reporting workshops with agency staff to better understand the various reports, data sources, and their intended audiences.
- Reviewed and commented on the Cost Drivers Report, Cost Savings Work Plan, other capital program reports, and PSO's Reporting Efficiencies plan. Presented findings to the Board. Recommendations were accepted by the Board and agency leadership and have been, or are in the process of being, incorporated into future reports by agency staff.
- Attended various Board and Subcommittee meetings, and Realignment check-ins with the Board Chair.
- Briefed the Technical Advisory Group ("TAG") on observations and findings.
- Reviewed the TAG's report and presentation to the Executive Committee.
- Performed an in-depth assessment of the West Seattle Ballard DEIS specifically focused on the CID 4th Ave Shallow Station alternative. Reviewed plans, reports, cost estimates, construction staging, etc.
- Coordinated with the TAG and presented five construction concepts to the WSB team for their evaluation of potential schedule and cost savings. Several of these recommendations were incorporated into subsequent alternatives (top-down construction, shallower profile, and crossing above the DSTT).
- Evaluated the CID 4th Ave Shallower alternative, as well as concepts for a CID North and CID South station. Also, assessed the revised SODO-1a and 1b options regarding their impacts on adjacent properties.
- Prepared memoranda as requested on various topics including construction project contingencies, East Link construction issues, construction quality, and further studies for the CID Station.

- Attended the agency's Contracting Expo and shared concerns and recommendations with agency staff regarding the procurement and contracting process.
- Supported staff on their procurement of a Quality Management Independent Assessment Panel.
- Prepared a report on Megaproject Best Practices from peer agencies and potential legislation/regulations to improve system expansion delivery. Examples included legislation in Ontario that provided Metrolinx with legal authority regarding future development, right-of-way needs, and utility relocations.
- Made a final presentation to the Board regarding Megaproject Best Practices and potential legislation/regulations, as well as a review of the 2023 BAPR.
- Presented a summary of completed work and consolidated recommendations as shown above.