

Vertical Conveyance Systems Audit

Report #: 2022-04

Internal Audit

Audit Report



Sound Transit Audit Division

January 30, 2023

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- Email: stdiscriminationcomplaint@soundtransit.org;
- Mailing to Sound Transit, Attn: Customer Service, 401 S. Jackson St. Seattle, Washington 98104-2826; or
- Visiting our offices located at 401 S. Jackson St. Seattle, Washington 98104.

A complaint may be filed directly with the Federal Transit Administration Office of Civil Rights, Attention: Complaint Team, East Building, 5th Floor – TCR, 1200 New Jersey Avenue, SE, Washington, DC 20590 or call 888-446-4511.

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Abbreviations

ADA	Americans with Disabilities Act
AUD	Audit Division
AMP	Asset Management Plan
COI	Conflict-of-Interest
DSTT	Downtown Seattle Transit Tunnel
EAMS	Enterprise Asset Management System
MOU	Memorandum of Understanding
P&CD	Procurement & Contracts Division
PCAM	Procurement and Contracts Administration Manual
PM	Preventive Maintenance
REO	Ridership Experience and Operations Committee
USC	U.S. Code
VC	Vertical Conveyance

Executive Summary

Why did we audit?

Many of the current link light rail stations in the Downtown Seattle Transit Tunnel (DSTT) are several hundred feet underground.

Over the next few years, several capital expansion projects will tie into the existing line; requiring Sound Transit to think differently about system accessibility impacts for passenger mobility using vertical conveyance systems (elevators & escalators).

The Audit Division is Sound Transit’s independent assurance function that improves how the agency is operated and managed, ensuring public funds are managed transparently, and ultimately keeping employees, contractors and our riding public safe.

Sound Transit knows that our riding public depends on working vertical conveyance systems in order to access our system; especially when large amounts of people need to use them to get to their next destination.

When these systems are working and dependable, ride quality is good, our passengers, including our ADA community can be confident in our system. When not operating as intended, vertical conveyance issues greatly impact and inconvenience our passengers because systems meant to get passengers to and from trains and platforms are not working, adding time to their commute.

Our audit objectives were to review and evaluate whether Sound Transit has effective controls in place to ensure:

- Conveyance systems (such as elevators, and escalators) project procurements were completed fairly & equitably;
- Service repair costs, maintenance schedules, availability are adhered to by service providers; and
- Reporting processes accurately advise stakeholders and passengers of availability.

Moreover, it was noted that providing an independent review surrounding Vertical Conveyance Systems aligns with two (2) key agency strategic goals related to:

- **Agency Goal 5.2:** Create a cost-consciousness mindset among all employees.
- **Agency Goal 5.3:** Implementing and maintaining a “best-in-class” asset management system that ensures physical assets, including all facilities and equipment, are maintained in a state of good repair.

The achievement of these strategic goals (among others) represents the agency’s commitment to equity and fairness, environmental stewardship, and partnership to the communities we serve.

Additionally, our audit of this area will assist the agency in assessing the degree to which these strategic goals have been achieved. We note that there has not been previous coverage in this area by the Audit Division; however, a separate audit is planned to be performed later this year by the divisions' Compliance Audit group to further assess the agency's overall readiness to improve how assets are procured, maintained, and kept in a state of good repair.

What we found

We observed that the overall vertical conveyance program is comprehensive and well documented. Specific controls observed included interagency collaboration and partnership in achieving enhanced data & reporting capabilities and strides towards a comprehensive Transit Asset Management Plan (TAMP).

However, we found several key areas to include: (1) Strengthening oversight and monitoring performance management of key service agreements; and (2) data maintenance over PM related work orders.

Audit Process

The audit involved an evaluation of the early procurement phase, adherence to key contractual terms, and monitoring efforts from fiscal year 2019 through 2022 (as of May 2022).

As we scoped our audit plan and determined what controls would be tested, we found that this audit would encompass four areas: Vertical conveyance, Operations, Business Intelligence, and Procurement. Our initial audit plan was conveyed with all listed areas staff included during our audit entrance meeting.

Our audit required a comprehensive review of multiple policies, procedures and records relating to the agency's vertical conveyance systems. Over the course of the audit, we interviewed and conducted documentary reviews with multiple stakeholders ranging from Facilities, Procurement and Contracts, as well as agency executives.

Simultaneously, Sound Transit management has been implementing additional corrective steps to improve and be more transparent with vertical conveyance systems by reporting quarterly progress to agency leadership and relevant oversight bodies (e.g., REO, etc.) on those actions. Details of those actions are contained further in this report.

Conclusions

Our results indicate that management's controls in ensuring maintenance standards are adhered to by service providers are reasonably effective but should be improved upon.

Overall, our audit resulted in **six (6) findings** related to strengthening controls over the monitoring, measurement, analysis and evaluation of vertical conveyances.

1. Findings Summary

The audit team completed its review and identified six (6) findings, which are listed below and explained in greater detail in the report.

Audit Areas	Audit Findings	Risk Rating			Risk Level
		Severity	Probability	Risk Score	
Procurement Planning & Evaluation	1) Formal procedures should be established to ensure contractors 'past performance is captured during the pre-procurement phase.	4	1	4A	Serious
	2) The Conflict-of-Interest process should be strengthened to include all types of procurements.	4	2	4B	Serious
Performance Management and Reporting	3) Lack of documentary controls over conditions assessments.	3	2	3B	Serious
	4) Backlog of Scheduled Preventive Maintenance data, indicative of underreporting.	4	3	4C	Medium
	5) Incomplete Asset Inventory Listings to support Capitalization of Assets	3	2	3B	Serious
	6) Inadequate documentary controls evidencing sufficiency of compliance verification reviews of payments against key requirements	4	3	4C	Medium

Table 1. Summary of Audit Results.

There are multiple opportunities to strengthen internal processes. See [Section 4](#) and [Appendix A](#) for more details on how we risk-rated our findings.

2. Approach to this audit

To comprehensively evaluate proper oversight of the agency's Vertical Conveyance Systems, ST Performance Auditors looked across agency processes and functions to understand key risks and controls. This involved an evaluation of current processes to include procurement, contract administration, service repair costs, maintenance schedules, availability, and industry reporting guidelines.

ST Performance auditors approached their work based on the following steps:

Phase 1: Planning, Scope and Objectives

During the Planning process, the audit team met with key stakeholders, reviewed documents and performed research to better understand the area under consideration. Through a risk-based analysis, we identified where risks were appropriately mitigated with controls and where risks were not adequately mitigated. Ultimately, we focused on how effective and efficient current program practices are and how we can go even further to be 'best in class'. This informed the audit scope and objectives which guided the focus areas for the field work phase.

Specific audit procedures during the planning phase were applied as follows:

Step 1: Confirm scope and approach

The audit scope involved an evaluation of conveyance contracts during the early procurement phases; and monitoring and reporting efforts from fiscal year 2019 through 2022 (as of May 2022).

We formulated our scope through analytical procedures obtained from agency system of records, e.g., EAMS, Enterprise One (E-1), and agency reports. The information obtained was further validated against key contract and project documentation (as needed).

Furthermore, we assessed internal and external assurances to ensure proper coverage and minimize duplication of efforts in line with auditing standards. The following areas were **scoped-out** for the purposes of this engagement:

- Agreements related to Department of Labor & Industries (L&I), which will be further assessed in a separate engagement over the 'Agency's Agreements'.
- Quality and technical reviews (e.g., inspection testing, installation verification, commissioning, systems test, etc.), which are currently performed by ST Quality Division – PSO.
- Conditions assessments of Downtown Seattle Transit Tunnel (DSTT) station assets, which was recently performed by an external sub-consultant in 2019.¹

¹ Downtown Seattle Transit Tunnel Condition Assessments Elevators and Escalators 2019 (Submitted By: Vertical Transportation Excellence).

Lastly, we performed a **limited scope review** for procurement and contracts that expired on CY 2012 and prior; only analyzing and testing specific information as part of our audit procedures.

Phase 2: Field Work & Reporting

During field work, auditors performed a number of assessments, also known as ‘tests’ where expectations, based on policies, procedures, and standards are compared to the current state in order to determine how current conditions measured up to the ideal conditions. The results of these assessments informed our audit conclusion and the associated findings and observations.

Based on the results of our testing, we can show where risks were not adequately mitigated or where risks were found to be mitigated but could potentially benefit from additional improvements. Please refer to Section 4, “[Findings & Recommendations](#)” for further details.

Step 2: Review documents

To better understand operating processes and procedures for the vertical conveyances, the audit team reviewed relevant audit criteria comprised of applicable policies, laws, and regulations. These included the agency’s PCAM and Asset Management Policies along with key contract terms outlined in the agency’s contracts and record retention requirements.

The audit team next examined various documents, plans, and testing results on how the agency administers conveyance project procurements and maintains oversight of its contractual obligations.

This involved establishing an audit population through analytical procedures as mentioned above), in order to test selected attributes (audit-criteria) against current conditions. Specifically:

- **Planning and Pre-Procurement:** Conducted in-depth documentary reviews for 14 of the 34 contracts, estimating \$63M evidencing management’s diligence and monitoring efforts over vendor performance.
- **Contract Administration:** Sampled 36 work order invoices and associated documents to determine management’s oversight in ensuring costs incurred adhere to contractual requirements, e.g., determination of allowable costs against cost schedules, reconciliation, etc.
- **Diversity, Equity, and Inclusion Review:** Consistent with our engagement objectives and Auditing Standards, we assessed the distributional impacts of conveyance (elevators & escalators) project procurements, service repair costs, maintenance schedules & availability, and industry reporting guidelines.

Step 3: Interview key Sound Transit staff

Following our initial document review, the audit team interviewed and conducted further documentation reviews with numerous individuals including:

- Staff responsible for leading conveyance procurement and supporting all requesting organizations, project owners, or project managers with post-award contract administration activities as necessary.
- Staff responsible for technical oversight (e.g., daily field inspection, monthly or quarterly assessment and monitoring of project status used to determine and validate project performance) with daily contract performance oversight.
- Various agency leadership responsible for oversight and service performance.

Refer to [Appendix B](#).

Step 4: Conduct follow-up interviews and document requests

Based on initial interviews with staff, the audit team gathered the information they learned, met to review if any items that they were inquiring about were missed, and set up follow-up interviews and supplemental document requests to verify items, activities, and tasks.

Step 5: Develop the Final Audit Report

The audit team used the results from Steps 1 through 4 to provide a draft summary report of findings to selected Sound Transit Executive Directors and Senior Management. Once briefed, the audit team developed this Final Report that identifies findings and deficiencies to share with Sound Transit's Executive Leadership Council and the Finance & Audit Committee (FAC).

Audit Division Standards

The Audit Division conducted this work under the framework outlined in its charter. It governed itself adhering to the mandatory elements of The Institute of Internal Auditors' (IIA) International Professional Practices Framework (IPPF or "Red Book"), including the Core Principles for the Professional Practice of Internal Auditing, the Code of Ethics, the International Standards for the Professional Practice of Internal Auditing (the Standards), and the Definition of Internal Auditing.

The division conducts audits in accordance with Generally Accepted Government Auditing Standards (GAGAS or "Yellow Book") promulgated by the United States Government Accountability Office (GAO).

Additionally, the Audit Division is also committed to following safety oversight standards set forth by the Federal Transit Administration (FTA), Federal Railroad Administration (FRA); as well as all other relevant requirements or standards for auditing.

3. Background

3.1 Vertical Conveyance System

Sound Transit’s Vertical Conveyance Program is centered on achieving safety and reliability by leveraging maintenance, technology & data to optimize performance and keep all stakeholders better informed. The maintenance of these assets also enables passengers with physical mobility impairments to access station platforms and to facilitate the movement of passengers through the vertical transportation system.

ST’s in-house ‘Vertical Conveyance Team’² along with the support of ‘Operations Business (Data & Analytics) Team’ is responsible for providing oversight and status updates on the agency’s conveyance assets.

Data related to outages, repairs, and maintenance is gathered from multiple sources, reviewed daily for accuracy, and then entered into the agency’s Enterprise Asset Management System (EAMS). The results are then used to generate comprehensive dashboards for asset performance and manage planned and corrective maintenance activities to third party vendors.

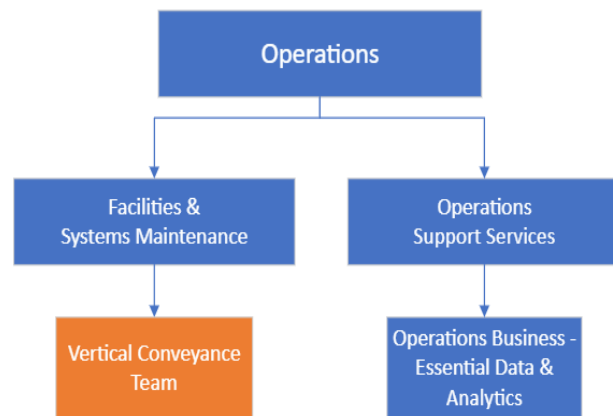


Figure 1: ST Operations Organizational Chart – Vertical Conveyance

The agency considers elevators and escalators as a formal “mode” of transportation integral planning, operations, maintenance, and overall passenger experience. Thus, in terms of ‘conveyance availability’ (a key performance metric), the agency has established an aggregate goal of 97% availability on average for each of its elevators and 95% for each of its escalators.

This metric is documented (as part of the overall **System Performance Tracker**) and reportable to governance oversight, e.g., Rider Experience and Operations (REO) Committee. Performance metrics are also directly available to the public through Sound Transit’s website.³

As of June 2022, Sound Transit operates 193 vertical conveyance assets, which is comprised of 101 elevators and 92 escalators located across the transit system for use by Link light rail, ST Express and Sounder Stations and Garages.

² ST Vertical Conveyance Team and Business Intelligence Division are under the agency’s Operations Department.

³ The metric calculates the percentage of time that a unit is running and available for passengers and excludes recurring preventive maintenance accounting for the 3% and 5% for certain assets. Refer to [link](#).

Additionally, this includes ownership of 58 DSTT assets that were transferred to ST's care and custody by way of Memorandum of Understanding (MOU) from King County Metro (KCM) to ST on January 1, 2021.

3.2 Key Service Agreements

Sound Transit oversees, but does not have dedicated staff to do crucial preventive maintenance for conveyance systems. So, when preventive maintenance or unplanned issues arise, the agency must work with the asset manufacturer to exercise service agreements to fix and keep conveyances working.

Each conveyance asset (elevator or escalator) requires preventive maintenance (PM) services, which are specified as a contractual obligation set up by asset type such as hydraulic or traction elevator and escalator. The frequency of maintenance tasks occurs monthly, regardless of asset type.

During its operations, ST has executed 38 related service agreement contracts (closed and opened), estimating \$63 million (M) from 2001 to present (October 2021).

The Agency's contract administration process for these service agreements is primarily guided by the agency's PCAM and specific contract requirements. The contract administration process is decentralized, often requiring Sound Transit Project Managers (PM)s to coordinate with contractors to prepare, maintain, and keep adequate and readily accessible project performance and financial records, well as other aspects of project implementation.

3.3 Service Repair & Maintenance Overview

In order for agency assets to have a normal service life, which includes routine, preventative maintenance (PM) and off-cycle service repair (i.e., from a conveyance inspection that was observed damaged), work orders are created in the agency's Enterprise Asset Management System (EAMS).

Those work orders are then used by Facilities (VC Team) to document the asset needing the work order, what needs to be done or repaired, what parts need to be procured to complete the repair; ultimately bringing the conveyance back to normal operation and documenting the assets service history. The work order process, which is part of that service history, is guided by comprehensive policies and procedures as part of the overall system requirements.

For the past two years, the agency accumulated a total 2,186 work orders from EAMS data associated with the 193 vertical conveyance assets that are currently maintained as part of transit system.

Through our analysis of those work orders, we found that **service repairs** accounted for 99% of the work orders; with the final 1% falling under the **preventive maintenance** category⁴, see Figure 2 below.

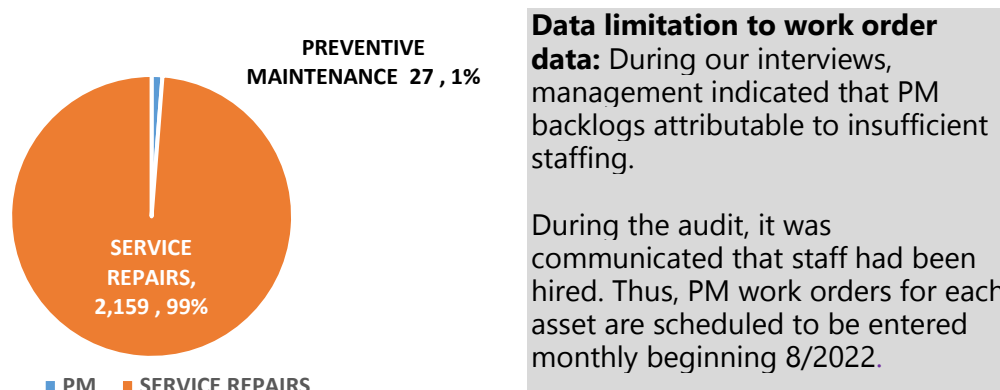


Figure 2: Work Order data (by type).

As we looked further, we found that of **900** Work Order Invoicing data (Service Repairs and PMs), estimating \$14.4 million (M), it was noted that the main causes behind service repair work orders were broken down into the following categories:

- Pre-maintenance (25%) – Pre-existing work that would not normally be considered maintenance (e.g., Rust remediation)
- Other (22%) – cataloged as backlogged PM data which had not been entered
- Environmental (20%) – Step debris, broken key box, water on top of car, etc.
- Misuse (16%) – Unintentional (e.g., includes debris users drop that damage equipment)
- Vandalism (10%) – Repair resulting in intentional damage to the asset (e.g., button damage, emergency glass repair)
- Labor & Industry (7%) – Annual L&I testing and operating certifications

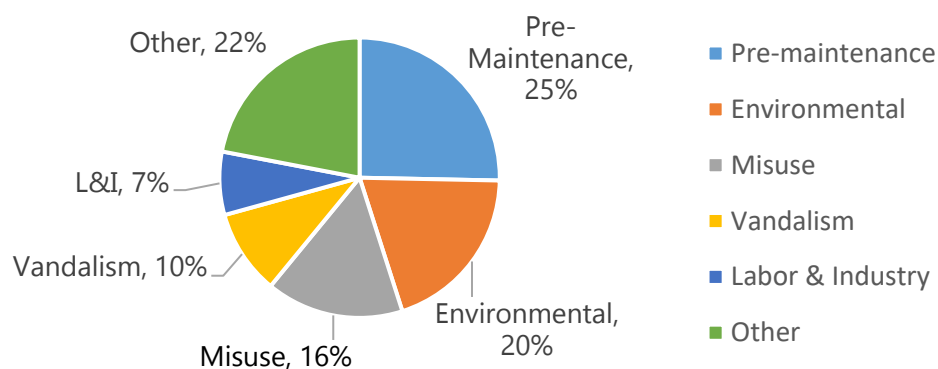


Figure 3. Main causes behind service repair work orders

⁴ See [Finding 4](#) for more details.

Audit notes that the level of categorization in the EAMS data obtained was primarily service repair data and wherein it was confirmed that this level of tracking is not included as part ST's enhanced internal tracker – Monthly Business Review (key agency control).

Simply put, the overall maintenance effectiveness ratio⁵ suggests a reactive approach, not proactive. These work orders were related to the “main Operations & Maintenance contract” the agency has with “System-Wide Elevator/Escalator Maintenance Services”, totaling \$28.1M (or 45%) of the total \$63M in related service agreement contracts.

The scope of work related to System-Wide Elevator/Escalator Maintenance Services contract is to provide an all-inclusive continuous system of full maintenance including systematic service, preventative and corrective maintenance, and repair for elevators, escalators, and material lifts.

Distribution of Service Repair and PM work orders (by stations) are provided below:

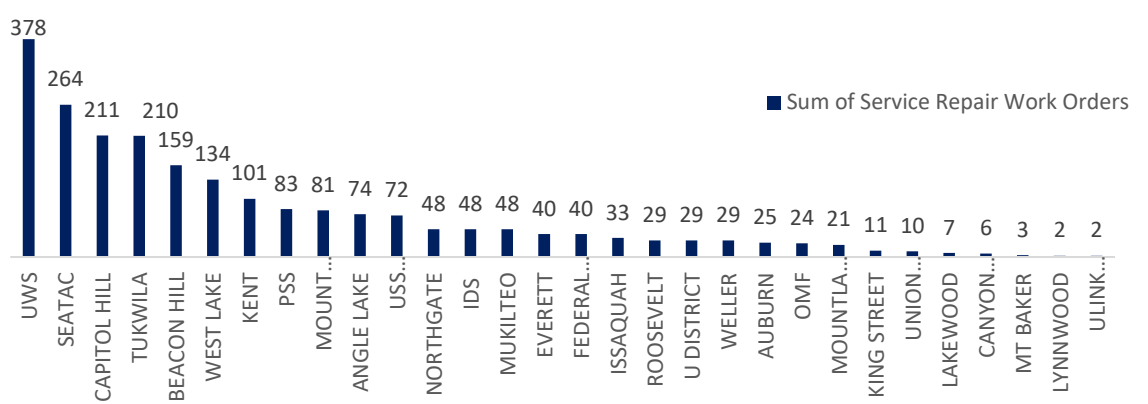


Figure 4. Snapshot of work order distribution (by station) illustrating distribution of service repair work orders for the period in-scope.⁶

⁵ **Maintenance Effective Ratio:** Relationship of Preventive Maintenance to Corrective Maintenance.

⁶ Retrieved from Agency Report: Invoicing Power BI (as of 7/21/22). Note: Filtered by Year (is 2019, 2020, 2021, or 2022), Reason (is Environmental, Labor & Industry, Mechanical, Misuse, Monthly Maintenance, Power, Pre-maintenance, Safety Device, Scheduled Maintenance, Schindler Incentive, Standby, Structural, Vandalism, or After Hours).

4. Analysis

4.1 Procurement Planning & Evaluation

49 U.S.C. 5325(j) states that “federal financial assistance may be provided for contracts only if a recipient awards such contracts to responsible contractors possessing the ability to successfully perform under the terms and conditions of a proposed procurement.

Before making an award to a contractor, a recipient shall consider — the integrity of the contractor; the contractor's compliance with public policy; the contractor's past performance, including the performance reported in the Contractor Performance Assessment Reports required under section 5309(l)(2).”

Additionally, the agency's Procurement and Contracts Administration Manual (PCAM) provides the procedural framework in ensuring **past performance** is considered throughout the agency's procurement lifecycle, i.e., Planning, Solicitation, Selection, and Award. Specific sections in ensuring vertical conveyances were procured fairly and equitably are as follows:

- **Section F(2)(g)(iii) Impaired Objectivity:** This may occur if a supplier, service provider or contractor work under an agency contract that requires the supplier, service provider or contractor to evaluate offers/past performance of itself or a competitor, which calls into question the supplier, service provider or contractor ability to render impartial advice to the agency.
- **Section D(6):** Contract Types Factors as discussed in FAR Part 16, the factors that should be considered in determining appropriate contract types are: price competition, realistic pricing standard, degree of uncertainty and impact on cost evaluation, type and complexity of the work, urgency, period of performance, contractor's technical qualification, contractor's financial responsibility, past performance, concurrent contract work load, extent of subcontracting, availability of procurement history, and contract administration. The Federal Common Grant Rules expressly prohibit the use of the cost plus a percentage of cost and cost plus a percentage of construction cost methods of contracting.

Moreover, PCPP-17⁷ (dated, 02/14) prescribes supplemental guidance related to Consultant Contractor Performance Evaluations, which is only applicable to contractor/consultant performance evaluation for A&E (Architecture and Engineering) and Construction Contracts (excludes Job Order Contracts and On-Call Contracts).

⁷ Project Control Policy & Procedure (PCPP)

Sub-objective 1:

- ✓ Was the procurement of vertical conveyances completed fairly and equitably?

This process was enhanced through the D&C (Design & Construction) Contractor Contractor/Consultant Performance Evaluation site⁸ (online forms and central repository) designed to allow project managers to give feedback on vendors based on their performance while working at Sound Transit.

Audit approach:

For the purposes of reviewing past performance, we established an audit population of 38 conveyance project procurements, totaling \$63M. Of the 38, 14 contracts, totaling \$62.5M, were selected for review based on risk and monetary impact.

Division	Audit Population		
	Count	Sum	%
FACILITIES MAINTENANCE	1	\$ 20,000,000	32%
ACTIVATION	1	1,032,094	2%
CIVIL & STRUCTURAL DESIGN	9	41,269,099	66%
FACILITIES OPERATIONS	1	125,597	0.2%
PROJECT MANAGEMENT	1	25,702	0.0%
PASSENGER EXPERIENCE	1	57,488	0.1%
Subtotal	14	62,509,979	
Subtotal - Selected for Review	14	62,509,979	99.4%
Total	38	\$62,893,003	

Table 2. Table of contracts selected for review retrieved from Agency Reporting Portal⁹

We examined documentation related to the completeness of the selected conveyance procurements during the pre-procurement phase included: evaluation forms, conflict-of-interest (COI) forms, Diversity Analysis Worksheet, etc.

Audit results:

Based on our analysis and audit procedures applied, we found inadequate controls and that improvements could be made to ensure 'past performance' during the pre-procurement and contract administration phases were functioning and present. Specifically:

Finding 1: Formal procedures should be established to ensure contractors 'past performance' is captured during the pre-procurement phase.

Audit Risk Rating: 4A (Serious)

Overall, 4 of 14 (or 29%) procurements reviewed, estimating \$32.2M of the total \$62.3M contained 'Evaluation Forms' with documentary deficiencies e.g., missing or

⁸ The online tool is currently used to manage the contractor/consultant performance evaluation for only A&E and Construction Contracts (excluding Job Order Contracts and On-Call Contracts).

⁹ Scope-exclusion: Department of Labor & Industries contracts and line-items below the Micro Purchases threshold (or ≤ \$10K).

incomplete, information and were primarily consolidated as notes.¹⁰

A review of the D&C's vendor performance evaluation database revealed that the contracts selected for review were absent performance assessments. This was primarily due to recent implementation last year.

Additionally, Performance evaluation design and implementation should be broadened to encompass all contracts

While sole source justification form and accompanying supporting documentation, e.g., Procurement Summary memorandums were on file, the basis of the documented justification for these procurement types were primarily due to the "uniqueness" of the vendor. We found that the process does not require additional due diligence, e.g., analysis and market research and consideration of past performance when determining non-competitive procurement method of this nature.

However, further review of federal regulations and audit-criteria (previously mentioned) indicates that the design and implementation of performance evaluations should be broadened in its application to encompass **all contracts** (key departmental-level control).¹¹

Finding 2: The Conflict-of-Interest process should be strengthened to include all types of procurements.

Audit Risk Rating: 4B (Serious)

An examination of agency records for 6 of 14 conveyance procurements, totaling \$24.6M did not have COI forms on file.

As a result, absent the required disclosure forms alongside proper evaluation of past performance pursuant to PCAM Section F(2)(g)(iii), there is a heightened risk to the appearance of a conflict-of-interest (reasonable third party), i.e., supplier, service provider or contractor ability to render "impartial advice."

The conditions above occurred due to gaps identified within current design and implementation of control activities. Specifically, while P&CD-D&C has made strides towards recently rolling out its online vendor performance evaluation tool and database, the overall applicability of this requirement is **restricted** to only A&E contracts.

Overall, the combination of documentary deficiencies related to the in-scope contracts means that management could not adequately demonstrate to what extent diligent reviews (market research and analysis) and past performance evaluations were

¹⁰ Of the 5, three public works contracts, totaling \$1.2M, were reviewed for determination of responsiveness and responsibility. While 2 of 3 were in the form of memos (not traceable to source documentation), **management has implemented a comprehensive checklist as of 2021.**

¹¹ Audit Division Report 2021-14 - Vendor Management Audit (dated 03/08/22).

objectively considered. Barring an on-going monitoring of vendor performance means that relevant information critical to the vendor selection process may not have been sufficiently considered. Therefore, there is an increased likelihood that that the agency may enter into service agreements with subpar vendors and/or procure conveyance assets (replacement and parts) that are not designed to meet the agency’s needs.¹²

4.2 Contract Administration

In 2019, as the agency executed an “System-Wide Elevator/Escalator Maintenance Services” contract to provide an all-inclusive continuous system of full maintenance, including vertical conveyances; the same vendor was awarded another \$9.2M contract based on a ‘non-competitive procurement’ (RP SS0308-18) to provide similar services to vertical conveyance assets located at University of Washington Station (UWS).

PO Number	Procurement Number	Start Date	Expiration Date	Award	Award Used	Award Remaining
176956	RTA/RP 0100-19	07/23/2019	07/22/2022	\$28,765,807	\$14,869,447	\$ 13,896,360
175579[1]	RTA/SS 0308-18	05/14/2019	05/13/2020	228,907	228,907	-
178450	RTA/SS 0308-18	05/14/2019	05/13/2022	9,039,391	3,813,834	5,225,557
Total				\$38,034,105	\$18,912,188	\$ 19,121,917

Table 3. Table of PO Summary Report (as of February 2022). Note: [1] Two PO(s) related to this SS0308-18 (Sole Source Procurement).

For the purposes of our audit, we selected the preceding key contracts for additional audit emphasis to determine management’s level of oversight in ensuring the level of work performed conforms with contractual obligations prior to payment.

Performance Management and Reporting

Industry best practices indicates that contractor performance evaluation to mitigate third party risk entails retaining documented information as evidence of the results of monitoring, measurement, analysis and evaluation.

This also includes the stakeholder requirements for recording financial and non-financial information relevant to asset management, and for reporting on it both internally and externally.

Currently, the agency’s ‘Conveyance Reporting and Tracking Process’ consists of data gathering of conveyance availability on a daily,

Sub-objective 2: Are management controls effective in ensuring maintenance standards are adhered to by service providers?

Sub-objective 3: Are management’s reporting controls and processes in advising stakeholders and passengers of conveyance availability effective and timely?

¹² Washington SAO Performance Audit: Improving Sound Transit’s Project Planning and Design to Reduce Costs (dated, June 2020). See [link](#) for report.

weekly, and monthly schedule; and is guided by internal policies and procedures. Conveyance reporting can be outlined in three discrete steps:¹³

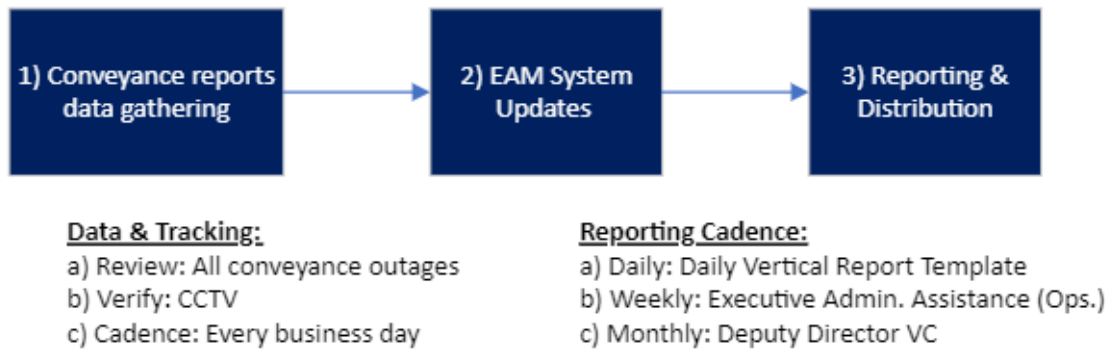


Figure 5. Logical Diagram of Conveyance reports data gathering¹⁴

Key metrics continuously updated and published within the agency's: (1) Monthly Business Reporting (internal-facing); and (2) Overall System Performance Tracker (public-facing) for informational purposes.

Audit approach:

- Reviewed strategic documentation and plans regarding agency's Replacement Program. Key documents reviewed include Proposed – State of Good Repair & Prioritization Matrix; VC Modernization Program; etc.
- Analyzed 2,222 work order data for the period in-scope and reviewed documents for compliance verification per contract requirements, e.g., Exhibit C – Specifying the preventive maintenance task and frequencies standard.
- Key documents reviewed included:
 - Vertical Conveyance Availability Reports (daily, weekly, monthly).
 - VC 2020 Availability Summary
 - Maintenance call back schedule
- Sample Maintenance Control Program" (MCP) template. See Appendix A.
 - It was noted that MCPs are located in machine rooms, however, Maintenance Logs and access to vendor's online records per Sections 2.6(G) & 2.8(A) of the agency-wide contract were not readily available for review during our fieldwork phase.

¹³ Key Process Steps:

- **Conveyance reports data gathering:** Every business day morning, all conveyance outages from the previous day (include holidays or weekends) are reviewed through Action Board email alerts from Conveyance maintenance vendor, EAM alerts, etc. Closed Circuit TV (CCTV) Review: All reported outages must be verified by remote CCTV camera access (if possible).
- **EAM System Updates:** Confirmed data are then inputted into the EAM system.
- **Reporting & Distribution:** (a) Daily Conveyance Report and Distribution: Information is updated in "Daily Vertical Report Template" and stored in VC Team SharePoint repository; (b) Weekly Conveyance Report: Due by close of business every Tuesday to the Executive Administrative Assistant for Operations Department; and (c) Monthly Conveyance Report: Due within the first full business week of each Month to document availability of the previous month to the Deputy Director Vertical Conveyance.

¹⁴ Conveyance Reporting and Tracking Process (dated, 04/01/21).

- Analyzed Key Performance Metrics (KPM)s and related data from three agency reports (Power BI): (1) Monthly Business Report (MBR); (2) Conveyance Report; and (3) Systems Performance Tracker.
- Examined payments in the agency's E1 system to establish an audit population; Deployed sampling selection from the population derived to determine if expenses could be vouched to supporting documentation in the contract records.
- Performed a comparative analysis of Fixed Assets schedules obtained from (a) E1 and (b) VC Teams asset listings. These included: (a) VC LCP Snapshot; (b) VC Install Dates; etc.

Audit results:

Based on our analysis and audit procedures applied, we found the following related to monitoring controls and oversight of conveyance contracts:

1. Conditions assessments and processes are not formally documented, evidencing strategic plans (e.g., replacement plans) reflect all on-going and previously identified asset related risks.
2. Current backlog of scheduled preventive maintenance data, increasing the risk of potentially underreporting system availability and status.
3. Asset inventory listings are not complete to support proper capitalization of Assets.
4. Documentary controls evidencing sufficiency of compliance verification reviews of payments against key requirements should be strengthened.

These conditions occurred because the agency is absent a formal process and centralized group to provide oversight of vendor performance management. The process relies on PMs to perform all aspects of contract management, often resulting in inconsistent practices and informal monitoring controls, e.g., monitoring payments against contract requirements.

See below for a summary of these findings:

Finding 3: Lack of documentary controls over conditions assessments.

Audit Risk Rating: 3B (Serious)

The agency's Vertical Modernization Program consists of a three-pronged strategic approach, which includes: (1) State of Good Repair & Life Extension Investments, (2) Maintenance Program, and (3) VC Replacement Program (executed in 2021)¹⁵. Of the 3 programmatic objectives mentioned, the Vertical Conveyance Program includes the strategic prioritization of replacing aged assets.

¹⁵ Replacement Strategy documented in 2020 and began execution in 2021.

An examination of key documentation, e.g., VC Portfolio, revealed that there are an estimated 145 assets that have aged from a range of 1987 to 2016 (or an average aging of 18yrs.). The projected cost of the program is currently estimated at \$17M in 2022; and is projected to grow steadily to \$989M by 2046 (or average 4.2% each year) in line with the agency's Long-Range Financial Plan.

Furthermore, a review of the VC Program Schedule outlined key activities (e.g., replacement, construction, and commissioning) that are part of a multi-year effort, and subject to the availability of funds. Thus, prioritization of these capital renewal needs will require asset-level assessments (combination of data collection and observations) for informed decision-making.

For the purposes of our audit, we identified two known sub-consultants tasked to perform condition assessments for conveyance assets, which included safety and security updates, conveyance repairs, etc.

Through independent research, we obtained one external assessment of the DSTT Elevators and Escalators conducted in 2019. Related to **'Capital Improvement/Replacement Plan & Timeline'** the external assessors **recommended:**

- ✓ For all equipment surveyed, it is recommended that repairs be made as identified in this Condition Assessment Report and included in the Appendices for each station to improve availability of the elevator and escalators.
- ✓ Standardization around common safety devices, operating controls, and controllers (Non-Proprietary PLC based) with common programming should be considered when developing the scope of the full replacements. In order to achieve this level of standardization, VTX recommends that all thirty-five (35) escalators and two (2) elevators be the product of a single manufacturer.

In addition, the current agency-wide contract requires the vendor to provide on-going and annual conditions per section I(1)(a)(9) & Exhibit C.

Overall, management was not able to provide supporting documentation evidencing monitoring controls for: (a) The conditions set forth in the Schindler contract [Sections I(1)(a)(9); and Exhibit (C)] and/or (b) related assessments/remediation plans to address issues and recommendations identified in prior assessments. ¹⁶

We recommend that management maintain documentation related to the on-going identification of asset related and asset management related risks (internal and external) to inform strategic planning initiatives, e.g., Modernization Plan.

¹⁶ This entails a robust risk management process that involves the complete identification, evaluation, and prioritization of significant areas of risks (current and past observations) for strategic agency planning.

Finding 4: Scheduled Preventive Maintenance data is backlogged, increasing the risk of potentially underreporting system availability and status.

Audit Risk Rating: 4C (Medium)

Per the primary maintenance contract, Sections 2.3 and 2.5 require scheduled maintenance periods, which are defined as any monthly, quarterly, semi-annual, or annual maintenance as defined in this scope of work. Scheduled intervals and maintenance procedures are further defined in Maintenance Control Plan (MCP).

Furthermore, Section 2.6(F)-(G) indicates that one copy of all MCPs shall be submitted to Sound Transit annually for each calendar year no later than January 31st and again on the last day of this contract. All service records are subject to routine audits at any time.

Lastly, section 2.8 indicates that the Contractor shall have the capability to install and use advanced technology to enhance the quality and efficiency of its maintenance program. Such advanced technology shall include, but is not limited to, **immediate 24/7 access** to live technical support for front line technicians, advanced data collection and analysis capabilities, and **online customer access to maintenance records** (e.g., detailed complete history of service request data, service and maintenance conducted within 60 minutes after site visit is complete, etc.).

Based on our examination PM data below, it appears that only 9 of 27 (or 33%) work orders were performed for the following stations contrary to Section 2.2 of the agency wide contract agreement. It was noted that at this time, not all PM work is documented within EAMS, but are instead documented in comprehensive MCPs stored onsite.

	Station	Count of W/O Status	%
1	KENT STATION	7	26%
2	ISSAQUAH TC	4	15%
3	Auburn Station	3	11%
4	Federal Way	3	11%
5	Everett Station	2	7%
6	KING STREET	2	7%
7	MOUNTLAKE	2	7%
8	NORTHGATE	2	7%
9	UNION STATION	1	4%
	Grand Total	27	

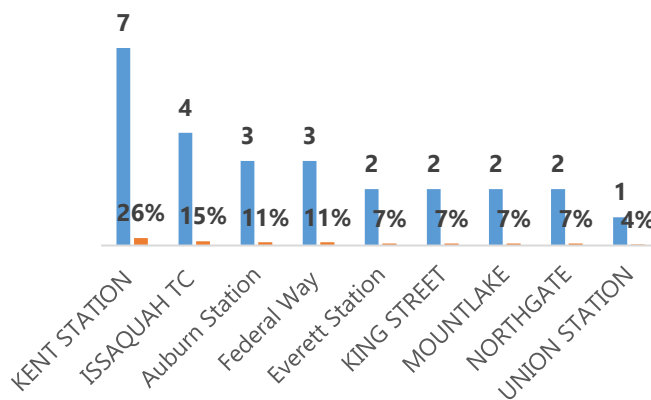


Table 4. Table of Preventive Maintenance Analysis for the period in-scope (EAMS database). **Figure 6.** Bar graph illustrating distribution of PM Work Orders by station.

Furthermore, barring access to the vendor’s system of records, we could only review available supporting documentation for additional due diligence. This included available

PM work order invoices on file, current call back log¹⁷, corresponding monthly reports, etc. However, we were unable to find supporting documentation for the 27 work orders for the 9 stations mentioned.

The conditions noted in our finding occurred due to inadequate staffing and turnover as management has indicated that a full-time staff member was recently hired to perform data entries in EAMS over PMs.¹⁸ This would enhance analysis over the agency's Preventive Maintenance program as it pertains to vertical conveyance.

According to management hard copies of formal handwritten documentation are performed by the vendor into the hard copy Maintenance Control Program (MCP), which are in the control rooms. MCPs undergo periodic reviews performed by VC Team and are also subject to inspections performed by Washington State Department Labor & Inspection (L&I).

However, we found that associated preventative maintenance work orders are not adequately captured in the agency's asset management system. Although management indicated that the detailed history for all preventive maintenance (PM) are stored in the vendor's information systems (Action Board), the process requires manual duplication of PMs to be entered into EAMS for conveyance availability reporting.

This system limitation was identified in 2020, resulting in additional FTE resources, which was approved for 2022 budget cycle in 2021. PM work orders for each asset are scheduled to be entered monthly beginning 8/2022.

Therefore, the agency does not have all datapoints¹⁹ related to PM services, scheduled maintenance, etc. to **sufficiently analyze** if such work has been consistently performed in accordance maintenance schedules and contractual requirements.

Finding 5: Incomplete Asset Inventory Listings to support Capitalization of Assets.

Audit Risk Rating: 3B (Serious)

Per Auditing Standards, capital assets are stated at cost with a value exceeding \$5,000 and a useful life of more than one year are capitalized. Depreciation and amortization of capital and intangible assets are recorded using the straight-line method applied to each asset over its estimated useful life, i.e., 3 to 8 years for furniture, equipment, and vehicles.

Consistent with the above requirement, the agency's Asset Management Policy 44, also indicated that Sound Transit will maintain accurate financial reporting and budgeting

¹⁷ Further reviews of interim communications, e.g., current call back log, revealed incomplete scheduled service start date and anticipated end date for certain stations and conveyance assets. Specifically, only 3 stations (UWS, Tukwila, and Roosevelt) contained those required fields for adequate monitoring.

¹⁸ During the course of the audit, we were provided access to VC Conveyance Report (Power BI), which showed an additional 82 work orders (Scheduled Maintenance) were captured in the agency's system of records.

¹⁹ Section 3.3 'EAM System Updates' requires the input confirmed data into EAM system to allow for the creation of daily conveyance report and distribution. The current data report view is generally a reflection of the previous business day.

related to fixed assets, which is in line with assets management per industry standards.²⁰

We reviewed key agency repositories and electronic asset registers, i.e., EAMS, to determine the completeness of conveyance asset inventory information, e.g., facility, historical costs, number of units, type, and date installed. We found that (1) internal listings and (2) the electronic asset register (EAMS) **did not contain accounting estimates or historical costs** (although subject to capital assets – depreciation²¹).

Additional reviews of ST Fixed Assets ledger (in consultation with key process owners) confirmed that conveyance assets were subject to capitalization and depreciable calculations as part of the financial statement audit. Therefore, absent historical cost information, management (Accounting) has implemented a 'compensating control' to perform depreciation calculation by 'group.' It was noted that there is **limited assurance** over the appropriateness of this accounting method as controls over detailed testing are deemed as out-of-scope by the external financial auditors.

As a result, inadequate reporting controls as it pertains to vertical conveyances, increases the likelihood of potential audit findings, e.g., improper valuation or misrepresentation.

Finding 6: Inadequate documentary controls evidencing sufficiency of compliance verification reviews of payments against key requirements

Audit Risk Rating: 4C (Medium)

To test the effectiveness of management's review over work performed, we established an audit population of 36 transactions, totaling \$822K for the period in-scope. Of the 36, a limited review of 31 transactions, totaling \$694K, could not be verified against required 'Monthly Inspection Reports' evidencing management's verification of the work performed.

According to management, reviews are performed directly within the vendor's system of records as a key mitigating control. However, it was noted that despite initial concurrence to provide Audit access to the vendor's system of records, we were not able to gain access to evaluate the sufficiency of management's reviews.

While we did not question the \$694K, there is limited assurance that detection controls (compliance verification and documentation) to mitigate key risks such as cost, and labor mischarging are functioning as intended.

²⁰ ISO 55001 Standards indicates the following related to assets management and financial information:

- Section 4.2 Understanding the needs and expectations of stakeholders: The stakeholder requirements for recording financial and non-financial information relevant to asset management, and for reporting on it both internally and externally.
- Section 7.5 (e) the organization shall ensure that there is consistency and traceability between the financial and technical data and other relevant non-financial data, to the extent required to meet its legal and regulatory requirements while considering its stakeholders' requirements and organizational objectives.

²¹ Depreciation and amortization comprise non-cash expenses that reflect the reduction in the value of capital and intangible assets over time.

5. Conclusion & Recommendations

The Audit Division completed its performance audit over the agency's Vertical Conveyance System and evaluated management controls in place to ensure: (1) Procurement of vertical conveyances is completed fairly & equitably; (2) that maintenance standards are adhered to by service providers, and (3) that reporting processes advise stakeholders and passengers of availability.

During our audit, we found that the Vertical Conveyance System program is comprehensive and well documented. Specific controls observed were as follows:

- ✓ P&CD has enhanced its Contractor/Consultant Performance Evaluation site (online forms and central repository) designed to allow project managers to give feedback on vendors based on their performance while working at Sound Transit.
- ✓ Vertical Conveyance Team with the support of Business Intelligence Team have implemented performance evaluation and tracking for vertical conveyances.
- ✓ Comprehensive reporting for over/underperforming assets (by station) are provided to governance oversight for increased transparency.
- ✓ Data & reporting capabilities incorporates other safety metrics, e.g., entrapments, and other reportable hazards/risks (e.g., vandalism, misuse, etc.).
- ✓ Elevator and escalator notification and updates are provided through agency alerts for resumption of service.
- ✓ The agency has updated its Asset Management Policy (dated, 03/7/22), which sets forth the requirement for strategic management of all assets to deliver service and asset knowledge.
- ✓ Efforts towards establishing a Strategic Plan for Vertical Conveyance is underway.
- ✓ Management has recently boarded and dedicated staffing resource, i.e., Quality Control Sr. Specialist, to ensure PM work orders for each asset are scheduled to be entered into the agency's asset management system monthly beginning 8/2022 and facilitate regular onsite spot audit checks with the VC Team.

Our audit concluded that the process can be strengthened through mitigating key risks related to the planning and performance management of third-party service agreements. We found the following:

1. Inadequate oversight of vendor performance management and evaluation.
2. Lack of supporting documentation evidencing prior and on-going conditions assessments to properly assess and plan for the disposition of assets (e.g., replacement, etc.).
3. Data gathering, analysis, and reporting of preventive maintenance work orders & data as it pertains to vertical conveyances.

The conditions above occurred due to: (1) Decentralized operating structure related to vendor performance management to adequately manage critical tasks and third-party risks; and (2) inadequate staffing required for adequate recordkeeping and data maintenance.

Observations with Recommendations:

Overall, as part of the continuous improvement process, we identified several key improvement areas for management's consideration as observations. We that recommend management:

1. Evaluate current policies and procedures to ensure design of control activities related to Vendor Performance Evaluation (planning and contract administration phases) are properly aligned with applicable regulations and standards.
2. Ensure all employees involved in contract award/or performance management activities are subject to all documentary requirement, e.g., Conflict-of-interest forms, to ensure an 'objective evaluation' of past performance per PCAM.
3. Continue efforts towards strengthening data gathering, analysis, and reporting of preventive maintenance data relative to vertical conveyances. This may include enhancing current metrics, i.e., establishing and benchmarking 'effective maintenance ratio' that would measure resource allocations to (a) Planned/scheduled maintenance, (b) corrective maintenance, or (c) breakdown (e.g., vandalism, misuse, etc.).

Appendix A: Audit Finding Risk Rating Process

To aid process owners in prioritization of the audit findings resulting from the audit, a level of audit risk will be assigned by assessing two factors: 1.) the probability that the associated problem will occur at some point in the future, and 2.) the impact or severity of that problem in relation to the overall business process.

Using the same Risk Assessment Matrix already in used throughout the agency and based on the MIL-STD-882-E; audit findings are qualitatively assessed based on the worst credible case that is anticipated from the result of human error, design inadequacies, component failure or a malfunction.

Risk Rating Scale						
	Severity	Catastrophic (1)	Critical (2)	Major (3)	Marginal (4)	Negligible (5)
Probability	Frequent (A)	High (1A)	High (2A)	High (3A)	Serious (4A)	Medium (5A)
	Probable (B)	High (1B)	High (2B)	Serious (3B)	Serious (4B)	Medium (5B)
	Occasional (C)	High (1C)	Serious (2C)	Serious (3C)	Medium (4C)	Low (5C)
	Remote (D)	Serious (1D)	Medium (2D)	Medium (3D)	Low (4D)	Low (5D)
	Improbable (E)	Medium (1E)	Medium (2E)	Low (3E)	Low (4E)	Low (5E)
	Eliminated (F)	Eliminated				

Resolution Requirements

Risk Score	Risk Level	Risk Rating	Minimum Actions	Risk Acceptance / Responsibility
1A, 1B, 1C, 2A, 2B, 3A	High	Unacceptable	Stop work & immediate correction required to reduce risk.	Not Acceptable. Executive Team is informed.
1D, 2C, 3B, 3C, 4A, 4B	Serious	Undesirable	Mitigation strategy required to reduce risk within 30 days of identification of risk.	Acceptable with risk controls and monitoring. Director-level committee review and approval.
1E, 2D, 2E, 3D, 4C, 5A, 5B	Medium	Acceptable w/ review	Monitor and consider actions to further reduce risks.	Acceptable with risk controls and monitoring. Technical Level committee review and approval.
3E, 4D, 4E, 5C, 5D, 5E	Low	Acceptable	Acceptable without further mitigation. May be accepted by the business unit in coordination with Audit and Safety.	Acceptable without further mitigation. May be acceptable by the business unit with coordination with Audit and Safety.
N/A	Eliminated	Eliminated	No actions needed.	N/A

Risk Matrices

Severity	Catastrophic (1)	Critical (2)	Major (3)	Marginal (4)	Negligible (5)
System Disruption / Operations	> 24 hrs Substantial or total loss of operations	12 – 24 hrs Partial shutdown of operation	4 – 12 hrs Prolonged disruption of operations	1 – 4 hrs Brief disruption of operations	<1 hour Minor to No disruption
Financial	>\$5,000,000	\$1,000,000 – 4,999,999	\$249,999 – 999,999	\$10,000 – 249,999	< \$10,000
Reputational	Prolonged negative media coverage for >30 days and / or irreparable reputational damage, resulting in government intervention	Ongoing negative media coverage for >14 days but ≤ 30 days causing serious reputational damage, resulting in government intervention.	Ongoing negative media coverage >7 days but ≤14, causing major reputational damage and possible government intervention	Ongoing negative media coverage for ≥ 24 hours but ≤ 7 days, causing some reputational damage	Negative media coverage for ≤ 24 hours, causing minor reputational damage
Injury	Several deaths (≥3) and / or numerous (≥3) serious injuries (excluding suicides or by natural causes)	1 -2 deaths and/or 2 or more serious injuries	Multiple minor injuries and possible serious injury (Ambulance transport)	Minor injury such as bruising, abrasions, bleeding; possible medical services required	No injuries
Equipment	Total loss of equipment or system interruption requiring more than 30 days to repair.	Significant loss of equipment or system interruption requiring more than 14 days but less than 30 days to repair.	Some loss of equipment or system interruption requiring more than 24 hours but less than 14 days to repair.	Minor system loss of equipment or system interruption requiring less than 24 hours to repair.	Minor damage to equipment or minor system interruption with no immediate repair necessary.
Regulatory	Cease and desist orders are delivered by regulators. Critical assets and facilities are forced by regulators to be shut down.	Governmental, regulator investigations, and enforcement actions, lasting longer than a year. Violations that result in multiple large non-financial sanctions; OR Regulators force the removal and replacement of management positions. Regulators begin agency monitoring activities.	Violations that result in significant fines or penalties above and beyond what is codified or a regulator enforces non-financial sanctions; OR Significant new and updated regulations are enacted as a result of an event.	Violations that result in fines or penalties	Self-reported or regulator identified violations with no fines or penalties

Probability Level	Likelihood of event in specific item	MTBE in Operating Hours **	Occurrence in time
Frequent (A)	Will occur frequently.	<1,000 oh	1 per week, likely to occur several times per month
Probable (B)	Will occur several times.	1,000 – 100,000 oh	1 per month, likely to occur several times per year
Occasional (C)	Likely to occur sometime.	100,000 – 1,000,000 oh	Once per year, likely to occur several times within 10 years
Remote (D)	Unlikely but possible to occur.	1,000,000 – 100,000,000 oh	1 per 10 years or likely to occur several times within 100 years
Improbable (E)	So unlikely, occur may not be experienced.	> 100,000,000 oh	1 per 100 years
Eliminated (F)	Risk removed / eliminated	Never	N/A

Appendix B: List of Interviewed staff (By Title)

Sound Transit:

Operations Department

Deputy Executive Director of Facilities and System Maintenance

Deputy Executive Director of Transportation & Maintenance

Deputy Executive Director of Operation Support Services

Deputy Director-Vertical Conveyances

Senior Business Analyst-Vertical Conveyance

Portfolio Services Office

Director-Enterprise Asset Management

Finance

Senior Accountant

Appendix C: Management Responses

Prepared by: Procurement, Contracts & Agreements Division (PCA)

Audit: Vertical Conveyance Systems Audit Report #: 2022-04

Management Response:

PCA appreciates the opportunity to respond to the above referenced audit report. Collaboration and the opportunity to evaluate and improve continuously is fundamental to our culture and our performance.

As noted in the report, the Vertical Conveyance Systems are in alignment with two key agency strategic goals to which PCA made major contributions: cost-consciousness; and implementing/maintaining a best-in-class asset management system.

Escalator performance at UW station, after failures on several occasions in 2018, has significantly improved. Downtime was greatly reduced, due substantially to the strategic partnership between the Vertical Conveyance team and PCA that resulted in the procurement of a new contract in 2019 to address the problems at UW Station that frequently generated ridership complaints and negative press coverage.

The proprietary contract with Schindler Elevator, the OEM, was executed specifically for vertical conveyance maintenance at UW with technicians on-site during weekday business hours as well as special events such as Husky games.

The contractor went to work to eliminate and mitigate the weaknesses of the systems at that location, including a pre-positioned inventory of spare parts available to quickly bring escalators back on-line when an outage occurs.

The result was the stabilization of those systems and UW became one of the top performing stations for passenger availability in ST's entire portfolio due to the new contract and the changes made.

Subsequently, PCA worked with the Vertical Conveyance team to compose and competitively procure an enterprise-wide agency contract for vertical conveyance maintenance across all Sound Transit stations.

While many successes of the Vertical Conveyance and PCA teams are observed and praised in the audit report, for which we are grateful, and while PCA will continue its collaborative partnership with the Vertical Conveyance team in support of the vertical conveyance program and the agency's strategic goals, there are specific findings in the audit we agree with in part and disagree with in part, as summarized below.

Finding 1: Formal procedures should be established to ensure contractors 'past performance' is captured during the pre-procurement phase.

Overall, 4 of 14 (or 29%) procurements reviewed, estimating \$32.2M of the total \$62.3M contained 'Evaluation Forms' with documentary deficiencies e.g., missing or incomplete, information and were primarily consolidated as notes.

Management Response / Action Plan:

PCA **agrees** in part and **disagrees** in part with this finding.

We believe we do have formal procedures established to consider and evaluate contractor's past performance in our procurement processes.

The audit recognizes the performance evaluation tool utilized for our Design & Construction (D&C) contracts and recommends that it be used for all our procurements.

For Materials, Technology and Services (MTS), we have a cost-effective approach to contract management that successfully manages contractor performance. Staff work closely with departments to address performance issues timely and that process allows the agency to work with the contractors to improve performance and to meet contractual requirements. The process as designed allows contractors the opportunity "to cure their deficiencies" and if they do not, the contract may be terminated for default.

The MTS contract management model has been presented at National Institute of Governmental Purchasing (NIGP) forums and has been requested by other agencies across the nation for their own use. While the auditor recommends a different approach be utilized, PCA respectfully submits our contract management program provides the structure, training and guidance that is effective for Sound Transit contracts.

The audit, under Section 4,1 above, states "Overall, 4 of 14 (or 29%) procurements reviewed, estimating \$32.2M of the total \$62.3M contained 'Evaluation Forms' with documentary deficiencies e.g., missing or incomplete, information and were primarily consolidated as notes."

Of these "4 of 14 procurements," two of them were beyond record retention requirements due to their age. One was from 2007 and the other was from 2010. As stated in the audit report, "The complete retention of these procurement records was limited due to termination or disposal of records....."

At this point in time, it is not apparent to us whether or not the complete files contained additional documentation on contractor performance.

The other two were procurements from 2017 and 2019 utilizing the best-value, Request for Proposals (RFP) method conducted in full alignment with the process outlined by the FTA in its Best Practices Procurement Manual (BPPM). They included firm experience and history as a criterion for source selection evaluation and award.

It should be observed that there is no evidence of unsatisfactory contractor performance as a result of these procurements nor of any lack of integrity in the procurement process. To our understanding the procurements were conducted fairly and equitably, and met all public procurement standards and requirements.

Additionally, to further strengthen our administration of contractor responsibility and the significance of past performance in the procurement selection process, PCA worked closely with agency leadership in 2022 for the issuance of Agency Policy 301,

Responsible Contractor, which clearly and affirmatively includes the consideration of past performance of similar work prior to contract award.

Timeline for corrective action:

Agency Policy 301, Responsible Contractor, was signed in June 2022. PCA will continue diligently to evaluate and apply contractor past performance in the procurement selection process.

Finding 2: The Conflict-of-Interest process should be strengthened to include all types of procurements.

Management Response / Action Plan:

PCA **agrees** it is time to strengthen the process and is committed to a comprehensive update of the agency's Procurement Integrity (PI) program, including its conflict-of-interest disclosure features and an expansion of them. In fact, this is one of PCA's division goals for 2023, in partnership with the agency's legal department.

The agency's current Personal Conflict of Interest Declaration Form (Form 301) became effective in May, 2017 with the formation of the PI program. Prior versions of the form, and prescriptions for its use, were subject to prior versions of the PCAM before 2017. The PI program is recognized and emulated nationally.

The audit, under section 4.1 above, states: "An examination of agency records for 6 of 14 conveyance procurements, totaling \$24.6M did not have COI [Conflict of Interest] forms on file."

We are, respectfully, unable to fully understand the particular basis for the finding in view of the age and nature of the six procurements in question.

The six procurements took place in 2000, 2010, 2012, 2017, and two in 2021.

Of the six procurement files noted as deficient, three of them were procurements that took place prior to 2013. These three are beyond record retention requirements and, as such, it cannot be reasonably determined whether the complete files contained additional conflict of interest documentation. For two of the three remaining files noted as deficient, both from 2021, one was a "small works roster" procurement and one was a "micro-purchase" less than \$10,000. Neither of these methods required the production of conflict-of-interest forms under the current version, or past versions, of the PCAM. With respect to the sixth file, a best-value, Request for Proposals procurement conducted in 2017, PCA agrees that a conflict-of-interest form should have been obtained but was not.

Timeline for corrective action:

A comprehensive update of the agency's Procurement Integrity program, including its conflict-of-interest disclosure features and an expansion of them, in partnership with the agency's legal department, will be completed by December 31, 2023.

Findings 3, 4, 5, and 6 : These three items are the responsibilities of the Vertical Conveyance team in the Operations Department

Management Response from Vertical Conveyance

Prepared by: John Carini

Finding 3: Lack of documentary controls over conditions assessments. (Rating: 3b)

Management Response / Action Plan:

Management **agrees** with this finding and will improve accountability measures to the vendor to section I.1.a.9 of the All-Agency Maintenance contract (No. RTA/RP 0100-19) and require that they provide an annual formal condition assessment of all assets. In addition, we will formally document each asset condition assessment in the VC Team SharePoint location and EAMS.

Timeline for corrective action:

Q1 2023 per contract terms

Finding 4: Backlog of Scheduled Preventive Maintenance data, indicative of underreporting. (Rating: 4C)

Management Response / Action Plan:

Management **partially agrees** with this finding.

The preventative maintenance is formally documented on each Maintenance Control Program (MCPs), in adherence with Washington State Labor and Industries Maintenance Control Program, specifically the referencing of ASME 17.1 article 8.6.1.4.1. In compliance with this aforementioned AHJ requirement, all MCPs are located within station machine rooms.

While the audit was underway, the VC Team added 2 additional staff members to enhance our documentation and digitization of maintenance data. This is both in support of Agency goal 5.3, obtaining a best-in-class asset management system and achieving ISO 55000 certification, as well as providing efficient and digitized access to formal maintenance records.

These onsite audits of maintenance records are now located in both SharePoint and EAMS as well as the documentation of scheduled maintenance tasks under each asset in EAMS.

Timeline for corrective action: Completed Q3 2022

Finding 5: Incomplete Asset Inventory Listings to support Capitalization of Assets. (Rating: 3B)

Management Response / Action Plan:

Internal Audit of Vertical Conveyance Systems

Management **disagrees** with this finding.

All vertical transportation assets that have been appropriately transferred to Operation's care and custody are accurately documented within EAMS. This includes the documentation of 101 elevators and 92 escalators.

The determination to increase the granularity of an asset contained within EAMS is to support the appropriate and effective operation and maintenance of the asset, which includes effective maintenance program execution, maximizing asset availability and utility, and enabling data analysis to effectively manage the asset life cycle.

The financial function of determining the appropriate granularity of an asset hierarchy, or more specifically which sub-systems/components to be listed within our financial systems of record for capitalization/depreciation, is not one made by the VC team, and ought to be determined by the financial division.

Our understanding is that EAMS is not the current financial reporting document system of record. The VC team maintains an asset hierarchy within EAMS that affords us the ability to provide safe and reliable operation of VC assets. Certain costs and dollar amounts, while potentially beneficial to be stored within EAMS, should be located within financial systems not within our control such as the E1 system and/or other financial repositories, some of which we are not aware of.

Timeline for corrective action: No timeline.

Finding 6: Inadequate documentary controls evidencing sufficiency of compliance verification reviews of payments against key requirements

Management Response / Action Plan:

Management agrees with this finding and will improve accountability measures to the vendor to section I.1.a.9 of the All-Agency Maintenance contract (N. RTA/RP 0100-19) and require that they provide an annual formal condition assessment of all assets. In addition, we will formally document each asset condition assessment in the VC Team SharePoint location and in EAMS.