TALSON
SOLUTIONS LLC

Safety Certification Audit Report
August 26, 2024

Projects: **Lynnwood Link Extension**

Audit Type: **Safety and Security Audit Profiles 2000 & 3000**

PREPARED BY (TALSON):

Sam Panella – Auditor   Date: *July 15, 2024*

Robert Farrow – Auditor   *August 22, 2024*

APPROVED BY (TALSON):

Kenneth Brzozowski – Project Manager   Date: *August 22, 2024*

APPROVED FOR ISSUE (SOUND TRANSIT):

Patrick Johnson – ST Director, Audit Division   Date: *August 26, 2024*

Contents

Safety Certification Audit Report

I. EXECUTIVE SUMMARY

Commencing in April 2024 and extending through July 2024, Talson Solutions, LLC (Talson) performed a desktop Safety and Security Certification Audit (SSCA) of Sound Transit's Lynnwood Link Extension (LLE) project. The audit was performed on behalf of the Sound Transit's Audit Division and focused on Audit Profiles 2000 and 3000 – *Design and Construction Conformance Verification*. Based on discussions with State Safety Oversight Program Administrators, subsequent modifications to the audit findings were made as part of the final issuance of the audit report.

Objectives

The objective of SSCAs is to independently verify evidence that design, construction, and operational activities are in conformance with Sound Transit hazard mitigation plans and certification policy. Sound Transit uses certifiable item forms in the Safety and Security Information Management System (SSIMS) to evidence hazard mitigating documentation in accordance with required specifications and plans. Hazard mitigation and certification standards are detailed within the Agency Safety and Security Certification Plan (SSCP), dated August 2018[1] (updated 2023) and the Agency Safety and Security Management Plan (SSMP), dated February 2017 (updated 2022). Audit Profile objectives for this audit focused on the following:

Audit Profile 2000 – Design Phase Conformance Verification
- ➢ Evaluated evidence that designs mitigated safety and security hazards according to the hazard analyses and the "Safety and Security Requirements" fields within SSIMS
- ➢ Key documents reviewed included Drawings, Specifications, and Calculations

Audit Profile 3000 – Construction Phase Conformance Verification
- ➢ Evaluated evidence that construction hazards were mitigated according to the hazard analyses and the "Safety and Security Requirements" SSIMS fields
- ➢ Key documents reviewed included Inspection Reports, Safety Security Verification Reports, Resident Engineer Summary Memorandums, Level 1 & 2 Plans & Testing Reports and other applicable drawings, specifications and documents

Results

Talson found that design and construction activities performed by Sound Transit generally align with safety and security certification processes and plans with noted exceptions. Testing resulted in **two (2) findings** and **one (1) observations** relating to the accuracy and availability of uploaded documentation and references within the SSIMS Project Dashboard.

Preliminary observations and audit checklists were shared with appropriate Sound Transit personnel prior to the issuance of this report. Continued discussion and correspondence will occur through the auditor's evaluation and acceptance of Audit Response Forms (ARFs), detailed in Section V. of this report.

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[1] The revised SSCP, dated April 2023 does not reference SSIMS but is not applicable to this project's start date

II.   SCOPE AND METHODOLOGY

SSCAs provide independent assurance that identified hazards are effectively mitigated and appropriately documented during each phase of a capital project spanning from preliminary engineering to revenue service. The Audit Profiles (APs) of SSCAs are specific to the completed phases of a capital project:

➢ **Audit Profile 1000** – *Hazard Analysis*
➢ **Audit Profile 2000** – *Design*
➢ **Audit Profile 3000** – *Construction*
➢ **Audit Profile 4000** – *System Testing*

➢ **Audit Profile 5000** – *Vehicle Fabrication*
➢ **Audit Profile 6000** – *Training/SOPs*
➢ **Audit Profile 7000** – *Fire/Life Safety Readiness / Certification Reporting*

SSCP Section 3.1.2, B., 2. (dated 2018), requires the use of Certifiable Item Forms (CIs) within SSIMS for uploading documented evidence that each identified hazard has been mitigated throughout each completed capital project phase. SSCA testing targets stratified sampling for 15% of all completed CIs covering each identified contract and element. Each sampled CI is verified for relevancy, appropriateness, traceability, and proper referencing. A three (3) tiered rating system is used to categorize the results:

- *Acceptable: No deviation from the implemented SSCP / SSMP standards*
- *Conditionally Acceptable: Minor deviation of the implemented SSCP /SSMP standard and unlikely to result in a nonconforming product or service*
- *Unacceptable: A significant breakdown or partial breakdown in processes that may result or has resulted in a nonconforming product or service.*

CIs that are rated "Conditionally Acceptable" may or may not result in the assignment of audit findings, observations, and corrective action plans based on the criteria listed in Section V of this report and the professional judgement of the auditor.

The below chart details the CI population size and sample for each Safety and Security contract conducted as part of this SSCA:

Contract	Focus	AP Type	CI Total	Sampling	Percentage
L210	Security	2000	10	2	20%
L210	Safety	2000	8	2	25%
L230	Security	2000	71	10	14%
L230	Safety	2000	31	7	23%
L800	Safety	2000	76	25	33%
L800	Security	2000	84	20	24%
L800	Security	3000	76	25	33%
L800	Safety	3000	84	18	21%
L200	Security	3000	203	26	13%

L200	Safety	3000	140	15	11%
L300	Security	3000	165	26	16%
L300	Safety	3000	116	17	15%

Total	1064	193	18%

Talson's audit procedures included the following:
- ➢ Conducted Kick Off meeting with applicable personnel on April 17, 2024
- ➢ Assessed relevant compliance documentation including prior audit reports, SSCP, SSMP, and Preliminary Hazard Analysis, dated August 7, 2019
- ➢ Selected 66 Safety and Security CIs out of 280 (24%) for Audit Profile 2000 Testing
- ➢ Selected 126 Safety and Security CIs out of 784 (16%) for Audit Profile 3000 Testing
- ➢ Reviewed uploaded documentation and notations within each CI
- ➢ Completed Audit Profile 2000 and 3000 Testing Checklists/Workpapers
- ➢ Conducted a Closeout Briefing with preliminary results on June 13, 2024
- ➢ Produced audit draft and final reports

III. FINDINGS

The audit resulted in **two (2) findings**.

Finding No. 1
Construction conformance certification documentation was not demonstrated as complete (uploaded and approved in SSIMS) prior to performing audit work per the LLE Certification Schedule. The L200 contract had segments and elements with no completed CIs to sample, and were thus not auditable, providing no assurance as of May 31, 2024.

Unsampled Contract Segments and Elements from L200:

Contract	Element Name	Element Name	Element Name
N15	Communications	Fare Collection Equipment	Fire Life Safety
GW	Stations	Tunnels	
N17	Communications	Fare Collection Equipment	
NP15	Traction Electrification System	Communications	
NP17	Traction Electrification System	Communications	
N16	Traction Electrification System		
N18	Traction Electrification System		

Talson was advised that construction document certification was scheduled for completion in May 2024. However, the construction conformance phase within SSIMS did not reach an 80% completion rate until post June 2024. Talson notes that the LLE contracts L200, L300, and L800 had reached 85% completion overall ("CM Documentation Phase" verified and marked closed by

Sound Transit personnel) as of June 13, 2024. The most recent LLE certification schedule provided to Talson had an updated scheduled completion date of June 1, 2024.

To fully complete the construction conformance verification audit, Talson will assess a remaining sample of at least 13 CIs as part of the upcoming AP 4000, System Integrated Testing Audit. This will achieve not only 15% of the total CI population for contact L200, but also stratification and verification covering all contract segments and elements.

Finding No. 2

Talson observed that two (2) out of 192 (1%) safety and security CIs (CI Nos. 28 & 67) within SSIMS had no reference to the construction conformance, uploaded supporting documentation, nor adequate explanatory notation for closure of the hazard. These have been marked as *Unacceptable* within audit checklists:

- Contract L800 – Security – CI Nos: 28

Example screenshot from ID No. 28, Contract L800 - Required Construction Documentation Field is blank:

Required Construction Documentation
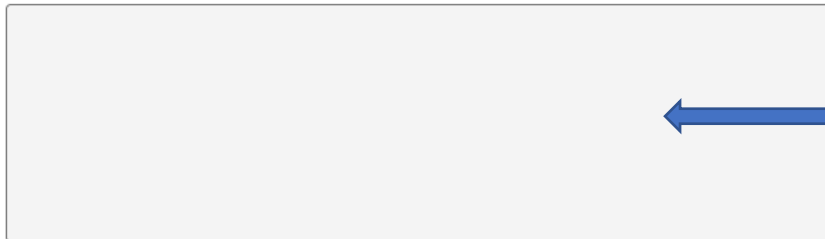
The data filed should have accurate references to drawings, specifications and/or other conformance documentation

Comments from previous pha

Comment
TSS concur this is covered under civil for stations. CCTV covered under other L800 IDs. Moving to close.
CH 3/27/24

Transportation Safety and Security (TSS) provided the following comment within SSIMS which did not contain a reference to an appropriate CI number nor contract within

Note from Sound Transit Audit Director: While the sample size of documentation from this project is small, the continued inconsistencies and missing references in SSIMS without traceability to project documentation has larger implications as potential safety hazards not being addressed.

IV.   OBSERVATIONS

The audit resulted in **one (1) observation**:

Observation No. 1

Several sampled CI forms within SSIMS had missing references to uploaded documents and noted files that were not uploaded or located, or had incomplete documentation references. These have been marked as *Conditional Acceptable* within the audit checklist:

- Security Audit Profile 2000:   17 out of 37 samples (46%)
- Safety Audit Profile 2000:   7 out of 29 samples (25%)
- Security Audit Profile 3000:   6 out of 77 samples (8%)
- Safety Audit Profile 3000:   8 out of 49 samples (16%)

Example screenshot of ID No. 113, Contract L800 – Required Design Conformance Document Listing:

Design Conformance

Specification Reference: L800 IFC Systems
Specifications
34 21 16.25 Traction Power Substation Installation
34 21 16.11 Traction Power Substation Testing

Adding CCTV and Access Control Specs 28 23 00 and
28 13 01. CH 4/5/23

Design Deviation: None

Specification 28 23 00 was not uploaded into SSIMS

V.   Audit Response Forms (ARFs)

Observations can be addressed separately, but a management corrective action should be submitted within 30 days of the final distribution of this report and corresponding ARFs. Verification of conforming corrective action and root cause explanation will be reviewed by Talson upon submission of the ARFs by Sound Transit. Below are the definitions of a Finding and an Observation, along with the acceptable response requirements:

A. *Findings indicate areas where Sound Transit or another entity is non-compliant with its own established policy, plan, procedure and/or regulation and which must be corrected, and documented in writing on a corrective action plan. Action plans should also include a specific, measurable amount of time it will take to correct the issue and reduce risk.*

B. *Observations do not mean the issue is deficient; however, the auditor has determined that the issue poses the potential risks of becoming a finding in the future if recommended changes are not put in place to prevent occurrence.*

VI. DISTRIBUTION

Safety and Security Audit Dates:	May 2024 – July 2024
Organization:	Sound Transit *(Auditee)*
Responsible Party:	Branden Porter, Acting: Chief Safety Officer *(Auditee)*
Talson Auditor(s):	Ken Brzozowski, Sam Panella, and Robert Farrow *(Auditors)*

Report To:
- Robert Taaffe, Acting Director, Transportation Safety & Security
- Moises Gutierrez, DCEO & Chief Program Oversight Officer

Distribution List:
- Terri Mestas, Deputy CEO, Mega Project Capital Delivery
- Craig DeLalla, Acting Chief Engineer, PSO
- Ron Lewis, Executive Director, DECM
- Randy Harlow, Executive Project Director, DECM
- Kerry Pihlstrom, Acting Executive Director, Asset Transition Office
- Jodi Mitchell, ST Deputy Director – Safety Business Processes, Transportation Safety & Security
- Josiah Durham, ST Manager, Transportation Safety & Security
- Heather Wright, Deputy Director, Audit Division
- Michael Flood, ST Senior Auditor, Audit Division
- Molly Hughes, WSDOT State Safety Oversight Program Administrator
- Andrew Royer, WSDOT State Safety Oversight Program Administrator

Attachments:
- L200 Audit Profile 3000 Safety Audit Checklist
- L200 Audit Profile 3000 Security Audit Checklist
- L300 Audit Profile 3000 Safety Audit Checklist
- L300 Audit Profile 3000 Security Audit Checklist
- L800 Audit Profile 3000 Safety Audit Checklist
- L800 Audit Profile 3000 Security Audit Checklist
- L800, L210, L230 Audit Profile 2000 Safety Audit Checklist
- L800, L210, L230 Audit Profile 2000 Security Audit Checklist
- SSCA Audit Response Forms (ARFs)