

**2011
TRIENNIAL ON-SITE
SAFETY REVIEW OF
SACRAMENTO REGIONAL TRANSIT DISTRICT
(SRTD)**

RAIL TRANSIT SAFETY SECTION
RAIL TRANSIT AND CROSSINGS BRANCH
CONSUMER PROTECTION AND SAFETY DIVISION
CALIFORNIA PUBLIC UTILITIES COMMISSION
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Final Report

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2011 TRIENNIAL ON-SITE SAFETY REVIEW SACRAMENTO REGIONAL TRANSIT DISTRICT

ACKNOWLEDGEMENT

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1. EXECUTIVE SUMMARY

The California Public Utilities Commission's (Commission) Consumer Protection and Safety Division (CPSD), Rail Transit Safety Section staff (Staff), conducted an on-site system safety program review of the Sacramento Regional Transit District (SRTD) in May 2011.

The on-site review was preceded by an opening conference with SRTD personnel on May 02, 2011. Staff conducted the 2011 SRTD on-site safety review from May 2 through May 6, 2011. The review focused on verifying the effective implementation of the System Safety Program Plan (SSPP).

Staff held a post-review conference with SRTD personnel on May 26, 2011. Staff provided SRTD personnel with a synopsis of the preliminary review findings and preliminary recommendations for corrective actions.

The review results indicate that SRTD has a comprehensive system safety program and has effectively implemented its SSPP. However, staff noted exceptions during the review. These exceptions are described in the Findings and Recommendations sections of each checklist. Of the 33 checklists used to guide the review, staff identified 10 recommendations for corrective actions. These are distributed among the following departments: Light Rail Operations, Wayside Maintenance, Safety, and Engineering.

The Introduction and Background Sections of this report are presented in Section 2 and 3 respectively. The Background Section contains a description of SRTD's rail transit system and a status of the corrective actions resulting from the 2008 on-site safety review recommendations. Section 4 describes the review procedure. The review findings and recommendations are listed in Section 5. The 2011 SRTD Triennial Safety Review Acronyms List is found in Appendix A, Checklist Index in Appendix B, Recommendations List in Appendix C and Review Checklists in Appendix D.

2. INTRODUCTION

The Commission's General Order (GO) 164-D *Rules and Regulations Governing State Safety Oversight of Rail Fixed Guideway Systems*, and the Federal Transit Administration's (FTA) Rule, Title 49 Code of Federal Regulations (CFR) Part 659, *Rail Fixed Guideway Systems: State Safety Oversight*, require the designated State Safety Oversight Agencies to perform a review of each rail transit agency's system safety program at a minimum of once every three years. The purpose of the triennial review is to verify compliance and evaluate the effectiveness of each rail transit agency's System Safety Program Plan (SSPP), their implementation of it, and to assess the level of compliance with GO 164-D and other Commission safety requirements. Staff conducted the most recent previous on-site safety review of SRTD in April 2008.

Staff advised the SRTD's General Manager/Chief Executive Officer (GM/CEO) by a letter dated April 1, 2011 of the scheduling of the Commission's safety review on May 2-6, 2011. The letter included 33 checklists that served as the basis for the review. Six of the 33 checklists outlined inspection of track, signals, traction power system, and vehicles. The remaining 27 checklists focused on the verification of the effective implementation of the SSPP.

Staff conducted an opening conference on May 2, 2011 with SRTD's GM/CEO and the Executive Management Team.

The RTSS inspection staff conducted the on-site safety inspections and corresponding records review the week prior to the review beginning, during the week of April 25-29, 2011. At the conclusion of each review activity, staff provided SRTD personnel a verbal summary of the preliminary findings and discussed preliminary recommendations for corrective actions.

On May 26, 2011, staff conducted a post-review exit meeting with SRTD's GM/CEO and the department managers. Staff provided the attendees a synopsis of the non-compliant findings from the 33 checklists and discussed the need for corrective actions where applicable.

3. BACKGROUND

The Sacramento Regional Transit District (SRTD) is governed by an 11-member Board of Directors comprised of members of the Sacramento, Rancho Cordova, Citrus Heights, Elk Grove, and Folsom City Councils as well as the Sacramento County Board of Supervisors.

SRTD Rail System Description

SRTD currently operates approximately 39 miles of track, covering a 418 square-mile service area including 47 stations. Light rail trains currently operate from 4:30 AM to 10:30 PM daily with service every 15 minutes during the day and 30 minutes in the evening, on weekends, and during holidays. Weekday ridership averages 51,000 passengers.

SRTD began operations in 1973 with the acquisition of the Sacramento Transit Authority. Over the next decade, SRTD continued to expand its bus service while a cooperative effort emerged among city, county and state government officials to develop a light rail system. In 1987 an 18.3 mile light rail system opened linking the northeast (Interstate 80) and eastern (Highway 50) corridors with downtown Sacramento. In 1998 SRTD began expanding the light rail system to further meet the transportation needs of the Sacramento area. Since then, a number of light rail expansion projects have been completed, including:

- 1998 - 2.3 mile Mather Field extension and Brighton Bridge double track project
- 2003 - Bee Bridge double track project
- 2003 - 6.3 mile South Line Phase I extension
- 2004 - 2.8 mile extension from Mather to Sunrise
- 2005 - 2.4 mile extension from Sunrise to Folsom
- 2006 - 0.55 mile extension from downtown core to Amtrak station
- 2009 - Watt Avenue Grade Separation

In late 2005, SRTD changed its light rail system's names from the North Line, Folsom Line and South Line to the Gold Line and the Blue Line. The Gold Line runs from the Historic Folsom Station in downtown Folsom to the Sacramento Valley Station at the Amtrak Station in downtown Sacramento. The Blue Line runs from the Watt/I-80 Station in the northeast corridor to the Meadowview Station in the south area.

Additional projects include the Green Line to the River District extension, which is a one mile extension from the downtown Sacramento core area to Richards Boulevard and the future 7th and Richard/Township 9 Station. This design/build project will include two stations and runs 30 minute service from the Township 9 Station to the existing 13th Street Station. The extension is currently under construction and scheduled for completion in the spring of 2012.

The South Sacramento Corridor Phase II is an extension from the Meadowview Station to Cosumnes River College, a 4.3 mile extension. Currently, the project is in final design phase and expected to begin construction in 2012 with completion in December 2014.

Green Line to the Airport project is a future extension extending the system from the Richards Boulevard/Township 9 Station to the Sacramento International Airport. This project is in its early stages and if funded is expected to be completed in 2017.

In 2003 SRTD purchased 21 light rail vehicles from the Santa Clara Valley Transportation Authority. A project is under way to renovate these cars so they may operate on the SRTD light rail system and resemble similar operating conditions of the existing fleet. These cars are expected to be ready for operation with the completion of the South Sacramento Corridor Phase II project scheduled to open in December 2014.

Status of the 2008 SRTD Triennial Review Recommendations

Staff performed the most recent previous triennial on-site safety review in April 2008. Of the thirty-two checklists used to guide that review, staff made nine recommendations for corrective actions. The results of the 2008 Triennial Review demonstrated that SRTD was largely in compliance with its SSPP, with just several exceptions noted.

CPUC Commission Resolution ST-99 adopted staff's final report and ordered SRTD to develop an appropriate corrective action plan and implementation schedule to respond to the issued recommendations. Resolution ST-99 also ordered SRTD to submit monthly status reports tracking the implementation of these corrective actions through full completion.

SRTD developed and submitted a corrective action plan and an implementation schedule to fulfill each of the nine recommendations. On May 14, 2009, SRTD submitted its final 2008 CPUC Safety Review Monthly Status Report completing its last corrective action in compliance with ST-99.

4. SAFETY REVIEW PROCEDURE

Staff conducted the 2011 safety review in accordance with Rail Transit Safety Section Procedure RTSS-4, *Procedure for Performing Triennial Safety Reviews of Rail Transit Systems*. Staff developed 33 checklists to cover various aspects of system safety responsibilities, based on Commission and FTA requirements, SRTD SSPP, safety-related SRTD documents, and the knowledge staff has of SRTD's operations. A list of the 33 checklists is contained in Appendix B.

Each checklist identified safety-related elements and characteristics that were either inspected or reviewed by staff. The completed checklists include the staff's findings and recommendations corresponding to non-compliant findings with SRTD's SSPP, its procedures, or Commission regulations. The methods used to perform the review included:

- Discussions and interviews with SRTD's management
- Review of rules, procedures, policies, and records
- Observations of operations and maintenance activities
- Interviews with rank and file employees
- Inspections and measurements of equipment and infrastructure

The review checklists concentrated on requirements that affect the safety of rail operations and are known or believed to be important in reducing safety hazards and preventing accidents.

5. FINDINGS AND RECOMMENDATIONS

The triennial on-site safety review shows that SRTD's rail system has a comprehensive SSPP and has been effectively implementing it. Review findings identify areas where changes should be made to further improve the SSPP. The review results are derived from activities observed, documents reviewed, issues discussed with management, and field inspections. Overall, the review results confirm that SRTD is generally in compliance with its SSPP. The review identified ten recommendations from the 33 checklists. Following are the findings and recommendations for each checklist:

1. **Executive Management Involvement and Commitment to Safety**

No findings of non-compliance; no recommendations.

2. **Light Rail Vehicle Inspection – CPUC Inspector**

No findings of non-compliance; no recommendations.

3. **Track and Switch Inspections – CPUC Inspectors**

No uncorrected findings of non-compliance; no recommendations.

4. **Gated Grade Crossing Warning Devices – CPUC Inspector**

No uncorrected findings of non-compliance; no recommendations

5. **Traction Power Inspection**

No findings of non-compliance; no recommendations.

6. **Overhead Catenary System Inspection & Records**

Findings of non-compliance:

Overhead Catenary System (OCS) quarterly inspections have not been conducted consistently.

Recommendation:

SRTD should take appropriate measures to ensure OCS quarterly inspections are consistently performed and develop the controls necessary to alert management when inconsistencies occur.

7. Substation Inspections & Records

Findings of non-compliance:

A number of inspection forms (identified in the checklist) could not be located. Additionally, several of the inspection forms were not completely filled out and were missing some information.

Recommendation:

SRTD should take appropriate measures to ensure substation inspections are conducted and documented as required by its procedures and develop the controls necessary to alert management when adherence with its substation preventive maintenance procedures is not achieved.

8. Internal Safety Reviews

No findings of non-compliance; no recommendations.

9. Right-of-Way Maintenance

Findings of Non-Compliance:

A number of non compliances relating to vegetation encroaching upon SRTD Facilities and fencing issues, as outlined on the checklist, were identified.

Recommendation:

SRTD should take appropriate actions to address the identified deficiencies as well as review its fencing and vegetation control program and take the necessary measures to ensure compliance with GO 143-B requirements.

10. Vital Relays Inspections, Maintenance & Records

No findings of non-compliance; no recommendations.

11. Employee & Contractors Safety Program

No findings of non-compliance; no recommendations.

12. Hazard Management Process

No findings of non-compliance; no recommendations.

13. Gated Crossing Maintenance

Findings of Non-Compliance:

For some of the crossings selected, not all of the required quarterly inspection records were produced, or their preventive maintenance records were not filed in an organized manner, which could result in untimely handling of maintenance items.

Recommendation:

SRTD should take appropriate measures to ensure grade crossing inspections are conducted and all maintenance items handled in a timely manner as required by its procedures, and it should develop the controls necessary to alert management when adherence is not achieved.

14. Accident/Incident Reporting & Investigation

No findings of non-compliance; no recommendations.

15. Safety Certification

No findings on non-compliance; no recommendations.

16. Configuration Management

No findings of non-compliance; no recommendations.

17. Review of Operating Rules & Procedures Manual

Findings of Non-Compliance:

Some Light Rail Operations documents were either not appropriately updated (issued without cancelling older documents) or referenced information that was no longer valid.

Recommendation:

SRTD should review its Light Rail Operations' documents and eliminate conflicting procedures and develop a clear process for updating and keeping all these operating procedures current.

18. Hazardous Materials Programs/Environmental Management

No findings of non-compliance; no recommendations.

19. Emergency Response Planning, Coordination, and Training

No findings of non-compliance; no recommendations.

20. Light Rail Supervisor/Controller Certification Program

Findings of non-compliance:

Light Rail Operations is not current on its training and certification/recertification program of supervisors/controllers.

Recommendation:

SRTD should take the necessary actions to ensure Light Rail Operations is in compliance with the requirements of its Supervisor/Controller Certification Program and develop the controls necessary to alert management when full compliance is not achieved.

21. Light Rail Vehicle Maintenance

No findings of non-compliance; no recommendations

22. Drug and Alcohol Program

No findings of non-compliance; no recommendations.

23. Rules Compliance – Wayside and Near Miss Reports

No findings of non-compliance; no recommendations.

24. Hours of Service – Train Operators, Train Controllers, and Supervisors

No findings of non-compliance; no recommendations.

25. Operator Training, Retraining, and Efficiency Test Records

Findings of non-compliance:

SRTD is not meeting the retraining requirements of some of its train operators and not following up with additional testing on train operators who failed Level-3 testing.

Recommendation:

SRTD should take the necessary actions to ensure its Light Rail Operations is in compliance with the requirements of its Operator Lesson Plan and follow up with additional testing on operators who do not meet its Operator Efficiency Testing requirements.

26. Bridge/Structures Inspections and Reports

No findings of non-compliance; no recommendations.

27. Procurement

No findings of non-compliance; no recommendations.

28. Facility Inspections

No findings of non-compliance; no recommendations.

29. Track Components Inspection

Findings of non-compliance:

Some incomplete/missing bi-annual track inspection records and no documented correction for the exception noted during the June quarterly inspection of switch N33-A.

Recommendation:

SRTD should take necessary actions to ensure all bi-annual track inspections are conducted as required. In addition, all corrective actions, including switch corrections, should be documented and implemented in a timely manner.

30. Rules Compliance - Operations

No findings of non-compliance; no recommendations.

31. Safety Data Collection and Analysis

No findings of non-compliance; no recommendations.

32. Cell Phone Policy

Findings of non-compliance:

SRTD has no specific current means for adequately monitoring and enforcing its cell phone policy.

Recommendation:

SRTD should include a section in its Efficiency Testing Form(s) for cell phone use observations and develop a procedure for periodic focused cell phone policy monitoring and enforcement.

33. System Modifications

Findings of non-compliance:

No process currently exists for formal review and approval of outside projects and internal requests for modifications to rail Standard Operating Procedures (SOPs) and Departmental Operating Procedures (DOPs).

Recommendation:

SRTD should either follow the Configuration Management Program for reviewing and approving outside projects and internal requests for modifying its rail procedures or have these requests submitted to the Change Review Committee (CRC) as specified in its SSPP.

APPENDICES

- A. Abbreviation and Acronym List
- B. SRTD 2011 Triennial Safety Review Checklist Index
- C. SRTD 2011 Triennial Safety Review Recommendations List
- D. SRTD 2011 Triennial Safety Review Checklists

APPENDIX A

ABBREVIATION and ACRONYM LIST

Abbreviation / Acronym	Description
SRTD	Sacramento Regional Transit District
CAP	Corrective Action Plan
CFR	Code of Federal Regulations
Commission	California Public Utilities Commission
CPSD	Consumer Protection and Safety Division
CPUC	California Public Utilities Commission
FTA	Federal Transit Administration
GO	General Order
HOS	Hours of Service
IIPP	Injury and Illness Prevention Program
ISSA	Internal Safety and Security Audit
OCC	Operations Control Center
PHA	Preliminary Hazard Analysis
PM	Preventive Maintenance
RTCB	Rail Transit and Crossing Branch
RTSS	Rail Transit Safety Section
SAP	Substance Abuse Professional
SCP	Safety Certification Plan
SCVR	Safety Certification Verification Report
SSP	System Security Plan
SSPP	System Safety Program Plan
Staff	Consumer Protection and Safety Division personnel

APPENDIX B

2011 SRTD TRIENNIAL SAFETY REVIEW CHECKLIST INDEX

Checklist No.	Element / Characteristic	Checklist No.	Element / Characteristic
1	Executive Management Involvement and Commitment to Safety	17	Review Operating Rules and Procedures Manual
2	Light Rail Vehicle Inspection – CPUC Inspector	18	Hazardous Material Programs/Environmental Management
3	Track and Switch Inspection – CPUC Inspectors	19	Emergency Response, Planning, Coordination, and Training
4	Gated Grade Crossings Warning Devices – CPUC Inspector	20	Light Rail Supervisor/Controller Certification Program
5	Traction Power Inspection	21	Light Rail Vehicle Maintenance
6	Overhead Catenary System Inspections and Records	22	Drug & Alcohol Program
7	Substation Inspections and Records	23	Rules Compliance (Wayside and Near Miss Reports)
8	Vital Relays Inspections, Maintenance and Records	24	Hours of Service – Train Operators, Train Controllers, and Supervisors
9	Right-of-Way Maintenance	25	Operator Training, Retraining, and Efficiency Testing Records
10	Vital Relays Inspections, Maintenance and Records	26	Bridges/Structures Inspections and Reports
11	Employee and Contractors Safety Programs	27	Procurement
12	Hazard Management Process	28	Facility Inspections
13	Gated Crossing Maintenance	29	Track Components Inspection
14	Accident/Incident Reporting and Investigation	30	Rules Compliance - Operations
15	Safety Certification	31	System Modifications
16	Configuration Management	32	Cell Phone Policy
		33	System Modifications

APPENDIX C

2011 SRTD TRIENNIAL SAFETY REVIEW RECOMMENDATIONS LIST

No.	Recommendation	Checklist No.
1	SRTD should take appropriate measures to ensure OCS quarterly inspections are consistently performed and develop the controls necessary to alert management when inconsistencies occur.	6
2	SRTD should take appropriate measures to ensure substation inspections are conducted and documented as required by its procedures and develop the controls necessary to alert management when adherence with its substation preventive maintenance procedures is not achieved.	7
3	SRTD should take appropriate actions to address the identified deficiencies as well as review its fencing and vegetation control program and take the necessary measures to ensure compliance with GO 143-B requirements.	9
4	SRTD should take appropriate measures to ensure grade crossing inspections are conducted and all maintenance items handled in a timely manner as required by its procedures, and it should develop the controls necessary to alert management when adherence is not achieved.	13
5	SRTD should review its Light Rail Operations' documents, eliminate conflicting procedures, and develop a clear process for updating and keeping all of these operating procedures current.	17
6	SRTD should take the necessary actions to ensure Light Rail Operations is in compliance with the requirements of its Supervisor/Controller Certification Program and develop the controls necessary to alert management when full compliance is not achieved.	20
7	SRTD should take the necessary actions to ensure its Light Rail Operations is in compliance with the requirements of its Operator Lesson Plan and follow up with additional testing on operators who do not meet its Operator Efficiency Testing requirements.	25

No.	Recommendation	Checklist No.
8	SRTD should take necessary actions to ensure all bi-annual track inspections are conducted as required. Also, all corrective actions, including switch corrections, should be documented and implemented in a timely manner.	29
9	SRTD should include a section in its Efficiency Testing Form(s) for cell phone use monitoring and develop a procedure for periodic focused cell phone policy monitoring and enforcement.	32
10	SRTD should either follow the Configuration Management Program for reviewing and approving outside projects and internal requests for modifying its rail procedures or have these requests submitted to the Change Review Committee (CRC) as specified in its SSPP.	33

APPENDIX D

2011 SRTD TRIENNIAL SAFETY REVIEW CHECKLISTS

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	1	Subject	Executive Management Involvement and Commitment to Safety
Date of Review	May 2, 2011	Department(s)	Executive Management
Reviewers/ Inspectors	Anton Garabetian Stephen Artus	Person(s) Contacted	Mike Wiley, General Manager/CEO Mark Lonergan, Chief Operating Officer Rufus Francis, Director of Safety Mike Mattos, Chief of Facilities & Adm. Services Diane Nakano, AGM of Engineering Services

REFERENCE CRITERIA

1. SSPP dated February 2008

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Executive Management Involvement and Commitment to Safety

Conduct the necessary interviews of executive management as necessary to evaluate the scope of Management involvement, coordination, and communication for improving the System Safety Program Plan. Specific commitments of review should include the following tasks:

1. Determine the source, frequency, and depth of safety information provided to the General Manager/Chief Executive Officer (GM/CEO)
2. Determine the methods and incentives included in the management performance system to facilitate a system safety culture within the organization.
3. Determine the involvement of management in accident/hazardous condition investigations and corrective actions.
4. Determine the level where key safety and security decisions are made and the involvement of the management team in these decisions.
5. Determine the level and depth of Management review and follow-up on corrective actions, including those initiated by accidents, hazardous conditions, internal audits, and triennial reviews.

RESULTS/COMMENTS

Activities:

Staff interviewed SRTD's General Manager/Chief Executive Officer, Chief Operations Officer, Director of Safety, Chief of Facilities and Administrative Services, and Assistant General Manager of Engineering Services, to evaluate the scope of management involvement, coordination, and communication for improving the System Safety Program Plan.

Findings:

According to the SRTD System Safety Program Plan (SSPP), page vi, the General Manager/CEO has delegated the safety authority to the Chief Operating Officer and the Director of Safety to monitor implementation of SRTD's SSPP. The Safety Department reports to the Chief of Facilities and Administrative Services making it independent of the Rail Operations Department. However, the Safety Department has direct access to the General Manager/CEO on safety issues. According to the SRTD Director of Safety job description, the Director of Safety is empowered with authority to stop any practice or operation that jeopardizes the safety of either the public or employees.

The Director of Safety Department updates the Chief Operating Officer (COO) on safety issues on a daily basis. The General Manager/CEO receives safety reports, such as Hazard Resolution Fire/Life Safety Committee Meeting minutes, on a monthly and quarterly basis. The General Manager/CEO meets with the executive management twice a month, where safety issues are on the agenda. He also meets with the overall management team on a quarterly basis. The COO receives more detailed reports on safety.

The Chief Operating Officer meets with the SRTD Security Department on a weekly basis. The Security Department submits a monthly security report to the SRTD Board. The Security Department participates in the Hazard Resolution Committee meetings.

According to SRTD, the Hazard Resolution Fire/Life Safety Committee (HRF/LSC) chair position is vacant and the COO is currently filling this position. The Director of the Safety Department is the vice chair of this committee. The HRF/LSC meets on a monthly basis and tracks hazards through closure.

SRTD encourages a safety culture by giving special recognition to employees who work and operate trains in a safe manner. SRTD organizes employee picnics and banquets and gives special recognition to its employees. The General Manager/CEO signs letters to employees recognizing their safety records. All new employees go through an orientation program emphasizing safety. SRTD adopted a mentor type program for employees to emphasize safety and encourages employees to report any hazards. SRTD has developed a "near miss" program for roadway worker protection.

Recommendations:

None.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	2	Subject	Light Rail Vehicle Inspection – CPUC Inspector
Date of Review	April 25, 2010	Departments	Vehicle Maintenance
Reviewers/ Inspectors	Michael Borer	Persons Contacted	Laura Espinoza, LRV Maintenance Superintendent Michael Ornelas, LRV Maintenance Supervisor

REFERENCE CRITERIA

1. LR-SOP-01-224
2. VMP-06-002
3. VMP-06-006
4. VMP-07-009

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Light Rail Vehicle Inspection-CPUC Inspector

1. Randomly select at least three CAF and three Siemens cars and perform detailed inspections to determine if SRTD is properly and adequately maintaining:
 - a. Traction motors
 - b. Truck/wheel components
 - c. Brake systems
 - d. Doors and pantograph assemblies
 - e. Coupling mechanism
 - f. Passenger component/safety appliances
 - g. Operator cab/appurtenance.
2. Based on the inspections, determine whether or not the selected light rail vehicles (LRVs) are in compliance with the applicable reference criteria.

RESULTS/COMMENTS

Activities:

Staff conducted equipment inspections on April 25, 2011 at SRTD's light rail maintenance shop

Findings:

Staff randomly inspected CAF and Siemens light rail vehicles that included traction motors, truck/wheel components, brake system, doors, coupling, operator cab and safety compliance. SRTD personnel worked very well with staff.

Staff conducted inspections on the following CAF and Siemens light rail vehicles:

Car #101 – No Defects

Car #130 – No Defects

Car #136 – No Defects

Car #204 – No Defects

Car #209 – No Defects

Car #232 – No Defects

Staff also observed SRTD personnel perform an inspection and repairs on CAF and Siemens light rail vehicles. SRTD personnel performed the inspection and repaired in a very professional manner.

Recommendations:

None.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	3	Subject	Track & Switch Inspections - CPUC Inspectors
Date of Review	April 25, 2011	Department(s)	Wayside Maintenance
Reviewers/ Inspectors	John Madriaga Thomas Govea	Person(s) Contacted	Michael Cormiae, Wayside Maintenance Superintendent Rick Stevens, Wayside Maintenance Supervisor Manuel De Anda, Wayside Foreworker

REFERENCE CRITERIA

1. LR-WMP-87-413
2. LR-WMP-87-414
3. LR-WMP-87-416
4. LR-WMP-91-424
5. Code of Federal Regulations CFR 49, Part 213-Track Safety Standards
6. GO 143-B, Section 14.04-Track Maintenance Practices

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Track & Switch Inspections - CPUC Track Inspectors

1. Randomly select at least two sections of the mainline track, and two turnouts on the South, North, and Folsom Lines and perform visual & dimensional inspection/measurements to determine whether or not all track components within the areas selected are in compliance with the applicable reference criteria.
2. Randomly select four switches and inspect for gauge measurements and components and perform an adjustment and functional check of selected switch machines to determine whether or not all selected components are in compliance with the applicable reference criteria.

RESULTS/COMMENTS

Activities:

Staff inspected and observed SRTD personnel performing field operations, maintenance, and interlocking testing activities at the following locations:

1. Folsom Line
 - a. 18th Street
 1. Switch F11A, spring switch, "Out of Service" is locked, clamped, spiked.
 2. Switch F115, visual inspection
 3. Switch F112, visual inspection
2. Blue Line
 - a. Meadowview Interlocking S2351H
 1. Switch 235B, visual inspection

2. Switch 235A, visual inspection
3. Switches 240 A&B, visual inspections
3. North Line
 - a. Switch N41, visual inspection
 - b. Switch N43A, visual inspection
 - c. Switch N 43B, visual inspection
4. Randomly selected switches
 - a. 109A, visual inspections
 - b. 109B, visual inspection
 - c. Spring switch #8, visual inspection
 - d. F124RC, visual inspection

Findings:

All the switches inspected on the Folsom, Blue, and South Lines were in compliance with the applicable reference criteria.

Regarding the section in LR-WMP-87-416 dealing with vegetation control, staff observed uncontrolled vegetation next to switch F112 on the right-of-way. This was corrected by SRTD the same day.

Recommendations:

None.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	4	Subject	Gated Grade Crossings Warning Devices - CPUC Inspector
Date of Review	April 25, 2011 May 3, 2011	Department	Wayside Maintenance
Reviewers/ Inspectors	Thomas Govea	Person(s) Contacted	Michael Cormiae, Wayside Maintenance Superintendent Jarrod Burklow, Wayside Maintenance Supervisor Rob Hoslett, Senior Safety Specialist

REFERENCE CRITERIA

1. Code of Federal Regulations CFR 49, Part 234-Grade Crossing Signal System Safety
2. GO- 75-D
3. LR-WMP-86-408

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Gated Grade Crossings Warning Devices - CPUC Inspector

1. Randomly select an appropriate number of gated crossings and perform detailed inspections to determine whether or not warning devices are in compliance with the applicable reference criteria. The inspection should include the alignment of warning lights, gate heights, reflective striping on the gate arms, and the voltage levels of the warning lights both in normal mode (Alternating Current (AC) power) and in standby mode (Direct Current (DC) battery power).

RESULTS/COMMENTS

Activities:

Staff inspected and observed SRTD personnel performing field operation, maintenance, and testing activities on the following locations:

1. Folsom Line
 - a. 17th Street 83E-1.12
 - b. 18th Street Interlocking
 - c. 13th Street 83E-0.81
 - d. 14th Street 83E-0.89
 - e. Glenn 82E84-84.33
 - f. Blue Ravine 83E-20.36
 - g. Mill Park 83E-12.60

- h. Coloma Pedestrian Crossing 83E-12.20
- i. 23rd Street 83E-1.58
- j. 24th Street 83E-1.66
- k. 25th Street 83E-1.73
- l. 26th Street 83E-1.81
- m. Alhambra 83E-2.11

2. Blue Line

- a. 41st Ave 83S-5.04

Findings:

1. Blue Ravine 83E-20.36, unwanted vegetation around control house, GO 143-B, 9.12(a), SOP LR-WMP-86-408
2. Alhambra 83E-2.11, missing all railroad crossing symbol pavement markings for northbound traffic GO 75-D, CAMUTCD 10C.23, Figure 8B-7 (CA)
3. 14th Street 83E-0.89
 - a. Event recorder one hour ahead of actual time, SOP LR-WMP-408, 1.n. (corrected in field)
 - b. Flasher roundel out of alignment, loose bolt, SOP LR-WMP-86-408, 3.a. (corrected in field)
 - c. Gate height 3ft. 4 ½ "not in compliance with GO 75-D 4. CAMUTCD 8D.04

Comments:

1. Since the street looked as though it had been recently refurbished without finishing the necessary pavement markings, staff suggests that SRTD meet with its assigned CPUC rail crossings engineer and the appropriate city personnel to correct this.
2. Staff findings were minor in nature with no major problems observed during the field inspection.
3. The remainder of the findings were corrected in the field during the audit.

Recommendations:

None.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	5	Subject	Traction Power Inspection
Date of Review	May 3, 2011	Department(s)	Wayside Maintenance
Reviewers/ Inspectors	Steve Espinal	Person(s) Contacted	Chris Olivas, Wayside Maintenance Supervisor

REFERENCE CRITERIA

1. CPUC General Order 95-Rules for Overhead Electric Line Construction
2. GO 143-B, Section 10-Traction Power Requirements and Section 14.06-Traction Power System Inspections and Records
3. LR-SOP-86-405

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Traction Power Inspection

Randomly select at least three overhead catenary system (OCS) sections and three traction power substations (TPSS) on the North Line, Gold Line, and South Lines to perform detailed inspections and determine whether or not the selected OCS sections and TPSS are in compliance with the applicable reference criteria.

RESULTS/COMMENTS

Activities:

South Line OCS Inspection:

Staff inspected the South Line OCS AT STREET CROSSING LOCATIONS s, t, v, x, AND w. All areas inspected were in compliance with General Order 95.

North Line OCS Inspection:

Staff conducted a walking inspection of the OCS starting at K-Street and finishing at 12th and I Street. Staff conducted the OCS wire gauge measurement test by the K Street crossover. All of the conductor wires were within SRTD's specifications with less than 40 millimeters of wear.

Gold Line OCS Inspections:

Staff conducted a walking inspection of the Gold Line OCS starting at 52nd Street finishing up at 39th Street. A Comcast communication line was encroaching on a SRTD conductor. The Comcast line appeared to be less than one foot from the SRTD OCS. SRTD will follow up with Comcast.

Substation Inspection:

Staff inspected Substations S7, F2, N6, and N5. The substation facilities were in a state of good repair.

Findings:

None.

Recommendations:

None.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	6	Subject	Overhead Catenary System Inspections & Records
Date of Review	May 4, 2011	Department(s)	Wayside Maintenance
Reviewers/ Inspectors	Steve Espinal	Person(s) Contacted	Garry Stanislaw (Transportation Superintendent) John Carlson (OCC Superintendent) Bruce Turner (Transit Systems Safety Supervisor)

REFERENCE CRITERIA

1. General Order 143-B, Section 14.06-Traction Power System Inspections & Records
2. LR-SOP-86-405, Traction Power OCS-Quarterly Inspection

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Overhead Catenary System Inspections & Records

Review the records of Overhead Catenary System (OCS) inspections performed during the last three years to determine whether or not:

1. OCS was inspected and adjusted at the required frequencies as specified in the reference criteria.
2. Inspections were properly documented and tracking methods were used to verify the timely closure of work orders when generated as a result of scheduled inspections.
3. Noted defects corrected in a timely manner.

RESULTS/COMMENTS

Activities:

Traction power overhead catenary system quarterly inspections were reviewed by CPUC RTSS staff covering years 2008-2011. The inspection reported reviewed include North, South, and Folsom Lines both inbound and outbound directions. The inspection records are shown below:

Inspections Conducted:	Dates
Inbound North Line	3/16/11, 5/5/10-6/2/10, 11/3/10-11/23/10, 3/4/09, 6/3/09-6/10/09, 9/2/09-9/16/09, 12/2/09-12/14/09, 12/5/08-12/23/08
Outbound North Line	3/2/11, 5/5/10-6/2/10, 11/3/10-11/23/10, 3/4/09, 6/3/09-6/10/09, 9/2/09-9/16/09, 12/2/09-12/14/09, 12/5/08-12/23/08
Inbound Folsom:	1/07/11-2/2/11, 2/3/10-4/21/10, 9/1/10-10/28/10, 2/4/09-2/18/09, 5/6/09, 8/5/09-8/25/09, 11/4/09-11/18/09, 8/6/08-8/20/08

Outbound Folsom:	2/1/11-2/7/11, 2/3/10-2/24/10, 9/1/10-9/23/10, 2/4/09-2/18/09, 5/6/09-5/26/09, 8/5/09-8/26/09, 11/4/09-11/10/09, 8/6/08-8/20/08
Inbound South Line	12/15/10-1/20/10, 8/11/10-8/18/10, 1/21/09, 7/22/09, 10/10/09, 7/12/08, 10/1/08
Outbound South Line	1/12/11, 1/13/10, 7/7/10-7/29/10, 4/22/09, 7/08/09, 10/17/09, 7/28/08, 10/8/08

Findings:

Traction power overhead catenary system quarterly inspections have not been conducted consistently on a quarterly basis.

Recommendations:

SRTD should take appropriate measures to ensure OCS quarterly inspections are consistently performed and develop the controls necessary to alert management when inconsistencies occur.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	7	Subject	Substation Inspection and Records
Date of Review	May 4, 2011	Department(s)	Wayside Maintenance
Reviewers/ Inspectors	Steve Espinal	Person(s) Contacted	Chris Olivas, Wayside Maintenance Supervisor

REFERENCE CRITERIA

1. General Order 164-B-Traction Power System Inspections & Records
2. Substation Inspection Procedures.

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Substation Inspection & Records

Randomly select at least three substations and review their inspection records prepared during the last years to determine whether or not:

1. Each substation was inspected at the required frequencies as specified in the reference criteria
2. Inspections were properly documented and tracking methods were used to verify the timely closure of work orders when generated by the scheduled inspections
3. Noted defects were corrected in a timely manner

RESULTS/COMMENTS

Activities:

The review focused on the traction power substation bi-weekly, quarterly, and quadrennial inspection documentation. Substations N6, F19 and F2 were the focus of the review.

All bi-weekly, quarterly and quadrennial inspections were conducted in a timely manner and all repairs were conducted as stated on the inspection reports. However, SRTD staff could not find the quarterly report conducted in 2011.

Findings:

Sacramento RTD staff could not find the Substation F19 quarterly report conducted in 2011. The quarterly inspection was documented according to the Substation F19 log book, but the actual inspection report could not be located.

For Substation N6, all quarterly inspections were conducted on a timely basis. However, the following information was not documented on the inspection forms:

Substation N6

Information not documented

Leadman will ensure all participants observe procedures
(6/9/10, 12/8/9, 9/13/08)
Battery test on alarm (not conducted 3/10/10, 9/11/09,
4/1/09)

Substation F19

SRTD could not produce the quarterly inspection report
for 2011
Test 49 device 1st stage and 2nd stage alarm (3/25/08)
One inspection report is missing the date conducted;
it may have taken place in 2009.

Substation F2

82 recloser voltage reading (6/9/09)
Battery maintenance & test (3/25/09)

Recommendations:

SRTD should take appropriate measures to ensure substation inspections are conducted as required by its procedures and develop the controls necessary to alert management when adherence with its substation preventive maintenance procedures is not achieved.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	8	Subject	Internal Safety Audits
Date of Review	May 2, 2011	Department(s)	Safety Department
Reviewers/ Inspectors	Erik Juul	Person(s) Contacted	Rufus Francis, Director of Safety

REFERENCE CRITERIA

1. SSPP
2. GO 164-D
3. SA-SOP-06-007, Internal Safety Audit Program, Dated 10/25/06, Rev. 103106-A

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Internal Safety Audits

Interview the SRTD representative in charge of the Internal Safety Audit Program and review the internal safety audit reports for the years 2008, 2009, and 2010 to determine whether or not:

1. Annual internal safety audits were performed in accordance with the applicable reference criteria.
2. All the required safety program elements were covered within a three year review cycle. Compliance with the System Safety Program Plan (SSPP) and Security Plan was evaluated by reviewers who are independent from the first line of supervision responsible for performance of the activity being reviewed.
3. The annual Internal Safety Audit (ISA) reports were prepared and submitted to the CPUC by February 15th of each year and corrective action plan recommendations were prepared, tracked and implemented in a timely manner

RESULTS/COMMENTS

Activities & Findings:

1. The annual internal safety audit was performed in accordance with the SRTD Internal Safety Audit Procedure. Staff reviewed the 2008, 2009, and 2010 Internal Safety Audits and found that all of the required safety program elements were covered within the three year audit cycle (2008, 2009, and 2010) and compliance with the SSPP and Security Plan was evaluated by the auditors who were independent from the first line of supervision responsible for performance of the activity being audited.
2. The annual Internal Safety Audit Reports were prepared and submitted to the CPUC. Corrective Action Plans (CAPs) were electronically tracked and implemented in a timely manner within the three year audit cycle. The electronic database tracks all Internal Safety Audit data

Recommendations:

None.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	9	Subject	Right-of-Way Maintenance
Date of Review	May 3, 2011	Department(s)	Facilities Maintenance
Reviewers/ Inspectors	Jimmy Xia	Person(s) Contacted	Lynn Cain, Director of Facilities Joe Lentz, Facilities Supervisor Rob Hoslett, Senior Safety Specialist

REFERENCE CRITERIA

1. CPUC GO 143-B Section 9.03-Installation of Curbs, Fences, and Barriers; Section 9.12-Clearing Vegetation
2. SSPP

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Right-of-Way Maintenance

Conduct operational observations by riding a train on the North, Gold, and South Lines and randomly select a total of at least three stations to visually inspect the right-of-way and determine whether or not:

1. The requirements of Section 9.12 of GO 143-B are met.
2. Fences are such that they offer an adequate degree of security to the right-of-way from any possible intrusions.

RESULTS/COMMENTS

Activities and Findings:

Staff reviewed the SRTD representatives in charge of the Facilities Maintenance Program and found the following:

SRTD has contract services for weed abatement along the right-of-ways (ROWs) for its entire light rail system. It has a contractor who comes twice a year and also on an on-call basis as needed for weed abatement activities. In addition, SRTD does upkeep on vegetation along the ROWs by performing inspections and trimming foliage to remove growing vegetation on an ongoing basis.

SRTD performs inspections of ROW fencing and vegetation using its Light Rail ROW Fence/Vegetation Quarterly Inspection checklist and also fixes problems on the ROWs (e.g. broken fencing repairs and weed abatement) on a quarterly basis for the entire system. It implemented the quarterly inspection and preventive maintenance program for the ROW fencing and vegetation along with the quarterly ROW inspection checklist in response to the deficiencies that staff found for checklist #8 from the 2008 SRTD Triennial Review, which deals with the same subject matter as mentioned on this checklist. The SRTD Wayside Department works with tree trimmers from an outside vendor, contractor or contractors to trim trees along the ROWs on an as needed basis. The Facilities Maintenance Department focuses more on the maintenance of everything at stations. SRTD does fencing repairs by itself on an as needed basis.

In addition, staff reviewed SRTD's Light Rail ROW Fence/Vegetation Quarterly Inspection Forms for each quarter from September 2008 to March 2011. All the quarterly ROW inspections from that time period were completed as required. The noted repairs were corrected and documented in a timely manner. The next quarterly inspection will be performed sometime in June 2011.

After each quarterly ROW inspection is completed, SRTD will put in work orders to fix the problems that are noted on the inspection form. The time it takes to fix each noted defect varies depending on the workload. SRTD tries to finish the repair of every noted defect within 30 days of discovery. All work orders from the completed inspection forms are entered into the SAP computer program and the problems are typically taken care of in 30 days.

Also, SRTD gets work orders related to ROW fencing/vegetation issues from its employees by mail. These work orders are entered into the SAP program for tracking through corrective action and resolution. Afterwards, the facilities maintenance personnel will complete each work order.

Staff conducted visual inspections of the ROWs along the Folsom, North, and South Lines and found the following regarding vegetation along the ROWs:

The Folsom Line:

1. The ROW appeared to be well-maintained.
2. A tree observed next to the eastbound track at the 48th Street station with branches that are close to touching the side of the LRV.
3. A tree observed at the beginning of the 59th Street station next to the eastbound track with branches that are close to touching the side of the LRV.
4. A tree observed at the beginning of the College Greens station next to the eastbound track with branches that are close to touching the side of the LRV.
5. Some vegetation observed at the beginning of the Starfire station next to the eastbound track is close to the field side rail of the track.
6. Some trees observed next to both tracks at the Tiber station that are close to the field side rails of the tracks.
7. A tree observed just at the beginning of the Mather Field/Mills station has branches that are touching the Overhead Catenary Wire System's (OCS') messenger wire slightly.
8. A small tree observed at the end of the Zinfandel station has branches that are close to the field side rail of the eastbound track.
9. Some trees with overgrown branches observed on a bridge next to the eastbound track near a freeway overpass prior to Iron Point Road crossing.
10. An overgrown branch of a tree observed that almost touches the OCS' messenger wire prior to Parkshore Dr crossing next to the eastbound track.
11. An overgrown tree observed with branches that are almost touching the OCS' messenger wire both next to the track at the Glenn station and next to the track past this station on the westbound/southbound.
12. Some trees observed with branches that are very close to the field side rail of the track past the Iron Point station to the east of Milepost (MP) F18.25.
13. Some vegetation appears to encroach on the 18-inch clearance as required by GO 143-B rule 9.06 c(2) next to the westbound track to the east of switch #F216A.
14. A tree observed next to the westbound track near MP F12.25 that has branches close to the field side rail of the track.
15. Some vegetation observed at the end of the Mather Field/Mills station next to the westbound track that is close to the field side rail of the track.
16. Some trees observed with branches that are almost touching the OCS' messenger wire past the Mather Field/Mills station to the east of MP F10.75 next to the westbound track.
17. Some trees observed with branches that are close to the field side rail next to the westbound track prior to the Butterfield station.
18. A big tree observed with branches that are close to touching the OCS' messenger wire next to the westbound track at the Butterfield station.

19. A tree observed with branches that are touching the OCS' messenger wire just east of MP F9.00 or the Tiber station next to the westbound track.
20. Few trees observed with branches close to touching the OCS' messenger wire next to the westbound track at the Starfire station and just to the west of this station.
21. Some trees observed with branches close to touching the OCS' messenger wire next to the westbound track between the Watt/Manlove station and College Greens station.
22. A tree observed with branches close to the field side rail next to the westbound track east of MP F5.75.
23. Few trees observed next to the westbound track at the 39th Street station with branches close to the field side rail of the track.
24. Minor vegetation observed next to the westbound track prior to the 16th Street station.
25. The ROW appeared to be cleared of all vegetation that would interfere with employees in performing normal trackside duties.

The North Line:

1. A tree observed past the N St crossing with branches almost touching the OCS' messenger wire next to the northbound track.
2. An overgrown branch of a tree observed next to the northbound track that almost touches the OCS' messenger wire past the 9th St & K St station.
3. A few trees observed next to the northbound track prior to the J St crossing have branches that are above but near the OCS' messenger wire.
4. A few trees observed past the F St crossing next to the northbound track have branches that almost touch the OCS' messenger wire.
5. A few trees observed next to the northbound track past the D St crossing with branches that almost touch the OCS' messenger wire.
6. Minor vegetation observed at the following areas:
 - a. on the northbound trackway just south of a pole labeled N203,
 - b. on the northbound trackway just to the south of the Arden/Del Paso station,
 - c. next to either side of the northbound track just to the south of the Roseville Road station,
 - d. next to the northbound track prior to the Watt/I-80 West station,
 - e. next to the southbound track to the north of switch #57A.
7. Moderate vegetation observed at the following areas:
 - a. past the C St crossing at the UP underpass next to the northbound track,
 - b. next to the northbound track that went over the fencing south of the Royal Oaks station,
 - c. next to the northbound track just to the south of the Watt/I-80 station,
 - d. next to the southbound track to the north of the Roseville Road station,
 - e. next to the southbound track to the north of MP N6.25,
 - f. next to the southbound track just to the south of the Marconi/Arcade station,
 - g. next to the southbound track to the south of the Swanston station,
 - h. next to the southbound track near the signal pole labeled "N250" that encroaches on the 18-inch clearance as required by GO 143-B rule 9.06 c(2).
8. A few trees with overgrown branches observed on the Globe station.
9. Excessive vegetation observed next to both sides of the track to the south of the Watt/I-80 West station.
10. The ROW appeared to be cleared of all vegetation that would obstruct Train Operators' visibility and interfere with employees in performing normal trackside duties.

The South Line:

1. A few trees observed with overgrown branches close to the field side rail next to the southbound track to the south of the 16th Street station.
2. A few tall shrubs observed next to the southbound track went over the barrier and almost reach to the side of the LRV prior to or to the north of the 4th Ave/Wayne Hultgren station.
3. Minor vegetation observed at the following areas:
 - a. between the two tracks just to the north of the Florin station that almost touches a tie end on the southbound track,
 - b. between the two tracks just to the south of the City College station that encroaches on the 18-inch clearance as required by GO 143-B rule 9.06 c(2).

4. Moderate vegetation observed at the following areas:
 - a. just to the south of the 4th Ave/Wayne Hultgren station between the two tracks,
 - b. through the fencing next to the track just to the south of the Meadowview station,
 - c. between the two tracks just to the south of the Broadway station that encroaches on the 18-inch clearance as required by GO 143-B rule 9.06 c(2),
 - d. next to the northbound trackway that is growing on a barrier south of switch #F-111A that encroaches on the 18-inch clearance as required by GO 143-B rule 9.06 c(2).
5. A tree with an overgrown branch observed next to the southbound track that is close to the field side rail of the track near MP S4.00.
6. A tree with overgrown branches observed that almost touch the OCS' messenger wire just south of the Fruitridge station next to the southbound track.
7. A tree observed with branches that reach to near the field side rail next to the southbound track to the north of MP S5.25.
8. Vegetation observed next to the northbound track to the south of MP S4.50 that almost touches the tie end.
9. Excessive vegetation observed between the two tracks just to the south of the 4th Ave/Wayne Hultgren station, which also encroaches on the 18-inch clearance as required by GO 143-B rule 9.06 c(2).
10. A few trees observed have overgrown branches that almost touch the OCS' messenger wire at the Archives Plaza station.
11. A few trees observed have overgrown branches that are above but near the OCS' messenger wire prior to the 9th St crossing next to the northbound track.
12. A few trees observed with overgrown branches next to the southbound track that are above but near the OCS' messenger wire prior to the 8th St crossing.
13. The ROW appeared to be cleared of all vegetation that would interfere with employees in performing normal trackside duties.

Staff conducted visual inspections of the ROW fencing along the following lines:

The Folsom Line:

1. The ROW fencing appeared to be well-maintained.
2. Fencing prior to the 48th Street station next to the eastbound track has a gap.
3. A fence next to the westbound track prior to the University/65th St station has been damaged.
4. There is a couple missing sections of fences next to the westbound track prior to the signal pole labeled F645 prior to the College Greens station.

The North Line:

1. The ROW fencing appeared to be well-maintained.
2. Fencing next to the northbound track prior to a bridge and along the side of the bridge to the southwest of the Globe Ave crossing has been damaged.
3. There is a big opening in the fence next to the Swanston station or MP N4.50 next to the northbound track.
4. Some fences next to the southbound track north of the Marconi/Arcade station have been damaged.
5. Some short fences next to the southbound track prior to Richards crossing have been damaged.
6. Some short fences next to the southbound track on a bridge next to the freeway to the south of the Globe station are broken.

The South Line:

1. The ROW fencing appeared to be well-maintained.
2. A few fences next to the northbound track to the east of the 13th Street station have been slightly damaged.

Staff conducted visual inspection of the ROW at the following stations:

University/65th Street Station:

1. Some trees observed with branches that are close to the field side rail next to the westbound track.
2. Some minor vegetation observed on both trackways just to the west of this station.

3. Some vegetation observed next to the eastbound track at this station that almost touches the side of the train.
4. The ROW fencing appeared to be well-maintained.

47th Ave Station:

1. Minor vegetation observed just to the south of this station next to the southbound track that almost touches some tie ends.
2. Minor amounts of vegetation observed on the northbound trackway at this station.
3. The trees on the station are trimmed well.
4. The ROW fencing appeared to be well-maintained.

Arden/Del Paso Station:

1. Moderate vegetation observed next to the southbound track at the end of this station and next to the northbound track at this station.
2. Some trees with overgrown branches observed at this station.
3. Excessive vegetation observed just to the south of this station next to the southbound track that touches the side of the train.
4. The ROW fencing appeared to be well-maintained.

Staff provided SRTD Facilities Maintenance representatives with the aforementioned ROW maintenance findings documented in this checklist so that all the needed repairs can be conducted shortly after the inspection.

Recommendation:

SRTD should take appropriate action to address the identified deficiencies as well as review its fencing and vegetation control program and take the necessary measures to ensure compliance with GO 143-B requirements.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	10	Subject	Vital Relays Maintenance, Inspections, and Records
Date of Review	April 27, 2011	Department(s)	Wayside Maintenance
Reviewers/ Inspectors	Thomas Govea	Person(s) Contacted	Michael Cormiae, Wayside Maintenance Superintendent Jarrod Burklow, Wayside Maintenance Supervisor

REFERENCE CRITERIA

1. SSPP
2. LR-WMP-91-422 Vital Relay Testing and Interlocking Inspections

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Vital Relays Inspections, Maintenance, and Records

1. Review the records for preventive maintenance, scheduled and unscheduled maintenance activities for vital relays to determine if inspections were performed at the required frequencies as specified in the reference criteria.
2. Determine if inspections were properly documented and corrected in a timely manner.
3. Determine if SRTD identified and implemented the acceptable limits for voltage and amperage readings for vital relay inspection records

RESULTS/COMMENTS

Activities:

Staff interviewed SRTD personnel and selected and reviewed the following records of preventive maintenance (PM) for scheduled and unscheduled maintenance of vital relays that were completed in the last three years.

1. Blue Line North Line
 - a. Royal Oaks 83N-4.02
 - b. X Street 83S-1.77
 - c. 47th Avenue 83S-5.40
 - d. Watt Avenue 83E-7.58
2. Folsom Line
 - a. 13th Street 83E-0.81
 - b 15th Street 83E.096

c. 29th Street 83E-2.02

d. 16th Street 83E-1.04

e. 39th Street 83E-2.83

f. 69th Street 83E-4.77

Comment:

SOP LR-WMP-86-408 revision 041105-F, page 27 dealing with minimum drop-away and maximum pick-up chart does not make reference to all relays used in the field (23A).

Findings:

None.

Recommendations:

None.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	11	Subject	Employee and Contractors Safety Program
Date of Review	May 3, 2011	Department(s)	Safety Department
Reviewers/ Inspectors	Colleen Sullivan	Person(s) Contacted	Rufus Francis, Director of Safety Glenn Batilando, Safety Specialist II

REFERENCE CRITERIA

1. SSPP
2. Injury and Illness Prevention Program, Issued July 1, 2004

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Employee and Contractors Safety Program

1. Interview the SRTD representative in charge of Employee Safety Program and review employee safety program records to determine whether or not:
 - a. Appropriate procedure and reporting forms have been developed for all employees to effectively report safety hazards in the work place
 - b. Employees are aware of the existence of such a program and are comfortable utilizing it
 - c. Appropriate corrective action plans and schedules are developed, tracked, completed and documented to address all reported hazards
2. Interview the SRTD representative in charge of the Contractors' Safety Program and review contractor safety program records to determine whether or not:
 - a. Procedures and practices clearly identify, for the contractors and SRTD managers, that SRTD is in charge and that its contractors and their employees must comply with all established safety rules and procedures
 - b. Procedures require reviews and inspections of the construction sites to monitor compliance with all established safety requirements

RESULTS/COMMENTS

Activities & Findings:

1. Staff interviewed SRTD representatives and determined the following methods in which district employees may report safety hazards:
 - Informal report to supervisor or union representative at the shop area.
 - Using Safe-1 Form to formally document the hazard reported.
 - Presenting the hazard to the Hazard Resolution Safety Committee either directly or via a representative.
 - Directly report the hazard to the Safety Department either informally or by using the Safe-1

Form.

- Contacting the California Occupational Safety and Health Administration (Cal OSHA).
2. Staff reviewed Safe-1 forms from the year 2010 and determined almost all of the Safe-1 forms were bus related.

No exceptions were noted with the resolution of the reported hazard or safety concern.

The following information is included in the Safe-1 form:

- Employee information (optional)
 - Location of unsafe or hazardous condition
 - Description
 - Recommendation
 - District response
 - Corrective action, date for implementation, and signature
3. Year 2010 Safe-3 Forms were reviewed. These forms are used when corrective actions cannot be immediately implemented for identified hazards.
 4. SRTD is continuing its efforts to develop a centralized tracking system (database) incorporating convenient means for reporting Safe-3 Forms and ensuring managers report Safe-3 even when no hazards are being tracked.
 5. Monthly safety committee meetings were held and properly documented for the Year 2009.
 6. During the New Employee Safety Orientation, Safe-1, 2, and 3 Forms are distributed and explained. The monthly toolbox safety meetings address current safety concerns.
 7. On-Track safety Training was provided by SRTD to its contractors.
 8. For major capital projects, SRTD employs a representative dedicated to the safety oversight of the project. For other projects, the Safety Department's representatives conduct site visits and report safety concerns.

No exceptions were noted.

Recommendations:

None.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	12	Subject	Hazard Management Process
Date of Review	May 3, 2011	Department(s)	Safety Department
Reviewers/ Inspectors	Erik Juul	Person(s) Contacted	Rufus Francis, Director of Safety Mark Lonergan, Chief Operating Officer

REFERENCE CRITERIA

1. SSPP
2. GO 164-D, Section 6, Requirements for Hazard Management Process
3. Hazard Resolution Fire/Life Safety Committee

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Hazard Management Process

Interview SRTD representatives and review records to determine whether or not:

1. SSPP includes a process to identify and resolve hazards during operations, including and hazards from system extensions and modifications, operational changes or other changes within the rail transit environment.
2. The Hazard Management Process includes, at a minimum, the requirements listed in Section 6 of GO 164-D (a-f).
3. The process is coordinated with other important activities such as accident/incident investigation and safety data collection and analysis.
4. The process was followed to identify, categorize, and bring hazards down to a acceptable levels of risk (provide specific exampmples).

RESULTS/COMMENTS

Activities & Findings:

1. The SSPP does include, specifically in Section 6, a process to identify and resolve hazards during operations, including any hazards from system extensions and modifications, operational changes or changes within the rail transit environment.
2. The Hazard Management Process does include the requirements listed in Section 6 of GO 164-D (a-f), specifically:
 - a. Define the approach to hazard management and the implementation of an integrated system-wide hazard resolution process.
 - b. Specify the sources of and mechanisms to support the on-going identification of hazards.
 - c. Define the process by which identified hazards are evaluated and prioritized for elimination or control. The SRTD representatives gave specific examples from accident investigations.
 - d. Identify the mechanism used to track to resolution the identified hazard(s).
 - e. Define minimum thresholds for the notification and reporting of hazard(s) to the Commission.

f. Specify the process for the reporting of hazard resolution activities to the Commission.

3. The process is coordinated with other important activities such as accident/incident investigation and safety data collection and analysis.

4. The above process was followed to identify, categorize, and bring hazards down to acceptable levels of risk, pursuant to Chapter 6 of SSPP, Page 36-37, and Matrix Severity versus Probability. Risk is based on the chart.

Recommendations:

None.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	13	Subject	Gated Crossings Maintenance
Date of Review	April 25, 2011 May 3, 2011	Department(s)	Wayside Maintenance
Reviewers/ Inspectors	Thomas Govea	Person(s) Contacted	Michael Cormiae, Wayside Maintenance Superintendent Jarrod Burklow, Wayside Maintenance Supervisor

REFERENCE CRITERIA

1. GO 143-B
2. LR-WMP-86-408. Grade Crossing Protection Inspection.

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Gated Crossing Maintenance

Randomly select at least five gated grade crossings and review their inspection & maintenance records during the last four years to determine whether or not:

1. The gates were inspected and maintained regularly
2. Inspections were properly documented
3. Noted defects were corrected in a timely manner

RESULTS/COMMENTS

Activities:

Staff reviewed records and SRTD's schedule for maintenance and testing activities for the following crossing locations:

1. Blue Line North Line
 - a. Royal Oaks 83N-4.02
 - b. X Street 83S-1.77
 - c. 47th Avenue 83S-5.40
 - d. Watt Avenue 83E-7.58
2. Folsom Line
 - a. 13th Street 83E-0.81

- b 15th Street 83E.096
- c. 29th Street 83E-2.02
- d. 16th Street 83E-1.04
- e. 39th Street 83E-2.83
- f. 69th Street 83E-4.77

Findings:

1. 13th Street 83E-0.81 No Quarterly Testing was performed during the months of May 2010 to September 2010, SOP LR-WMP-86-408 2. Three Month Test
2. 15th Street 83E-0.96
 - a. No Quarterly Testing was performed during the months of May 2010 to September 2010, SOP LR-WMP-86-408 2. Three Month Test a, b, c, d,
 - b. Missing test record for November 2010, SOP LR-WMP-86-408 1.
3. 16th Street 83E-1.04 No Quarterly Testing was performed during the months of February 2010 to April 2010, SOP LR-WMP-86-408 2. Three Month Test
4. Preventive Maintenance (PM) records were completed for the months of March and April as required but were not filed in an organized manner. This may result in inspection results that can go unaddressed until sometime later when PM records are organized and filed as appropriate.

Recommendations:

SRTD should take appropriate measures to ensure grade crossing inspections are conducted and all maintenance items handled in a timely manner as required by its procedures. It should also develop the controls necessary to alert management when adherence is not achieved.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	14	Subject	Accident/Incident Reporting and Investigation
Date of Review	January 28, 2011	Department(s)	Safety Operations
Reviewers/ Inspectors	Rupa Shitole	Person(s) Contacted	Rufus Francis, Director of Safety Rob Hoslett, Senior Safety Specialist

REFERENCE CRITERIA

1. Code of Federal Regulations, CFR 49 Parts 659.41 Investigations & 659.43 Corrective Actions
2. CPUC General Order 164-D effective May 3, 2007
3. SSPP
4. SA-SOP-00-006, Rail Accident Investigation Procedure

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Accident/Incident Reporting & Investigation

Interview SRTD representatives that are directly involved in accident reporting and review at least six reportable accident reports submitted to the CPUC to determine whether or not:

- a. The accidents were reported to the CPUC within two hours as required by GO 164-D, section 7.
- b. The accident investigation activities and reports were in accordance with the reference criteria

RESULTS/COMMENTS

Activities and Findings:

Staff interviewed SRTD representatives in charge of the accident/incident reporting and investigation responsibilities and reviewed accident reports for years 2008, 2009 and 2010. The following accident reports were reviewed:

1. 12th and K Street dated 7/15/08 (Reported to CPUC within two hours)
2. Yard Derailment dated 2/4/09 (Not Reported to CPUC within two hours)
3. Hi Rail Derailment at switch N33A dated 3/26/09 ((Not Reported to CPUC within two hours)
4. 12th Street and Ahern Crossing dated 5/3/09 (Reported to CPUC within two hours)
5. South of Iron Point Crossing dated 2/15/10 (Reported to CPUC within two hours)
6. 12th Street and Ahern Crossing dated 5/28/10 (Reported to CPUC within two hours)
7. O/B Mills Park Drive Grade Crossing dated 6/3/10 (Not reported to CPUC within two hours)
8. 19th and S Streets dated 8/13/10 (Reported to CPUC within two hours)

All of the above accident investigation activities and reports were in accordance to the reference criteria. Also, staff was updated by SRTD and the CPUC representative (rep) that within the last three years only four accidents/incidents were not reported to the CPUC rep within the required two hours reporting window as per GO 164-D, Section 7. SRTD is aware of this situation and so the corrective action taken was to

counsel and retrain the Metro Controllers on CPUC GO 164-D reporting requirements, that are responsible for notifying the CPUC rep of any reportable accident/incident with in the required two hours reporting window according to GO 164-D requirements.

Comment:

SRTD should make sure that the Metro Controller in charge is providing details of the incident/accident as per GO 164-D, Section 7.3 to the CPUC rep as a follow-up after the initial telephone notification.

Recommendations:

None.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	15	Subject	Traction Power Inspection
Date of Review	May 4, 2011	Department(s)	Safety Department
Reviewers/ Inspectors	Rupa Shitole	Person(s) Contacted	Rufus Francis, Director of Safety Rob Hoslett, Senior Safety Specialist

REFERENCE CRITERIA

1. CPUC General Order 164-D
2. SSPP
3. SA-SOP-06-009, Dated 11/01/06

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Safety Certification

Interview the SRTD representative in charge of the Safety Certification Program to review safety certification documentation of the ongoing Downtown to the River District project to determine whether or not:

1. The safety certification activities are being performed in accordance with the reference criteria
2. Safety critical elements were identified and properly documented
3. All design and construction changes are being properly coordinated and addressed in the safety certification process
4. All safety certification activities are being thoroughly documented throughout the life of the project to substantiate safety certifiable elements, safety criteria, final design, construction, testing, operating, emergency and procedures, and training aspects of the project are being managed for this project.

RESULTS/COMMENTS

Activities and Findings:

Staff interviewed the SRTD representatives who are responsible for the Safety Certification Program and reviewed safety certification documents related to the project Green Line to the River District. The following documents were reviewed in reference to the Downtown to the River District project:

1. Safety and Security Certification Plan dated 6/8/10
2. Threat and Vulnerability Analysis (Final Draft Report) dated 8/24/10
3. Safety Certifiable Elements and Sub-elements tracking log dated 2/2/2011
4. Preliminary Hazard Analysis Report dated September 2010
5. Safety and Security Certification Plan Letter to the CPUC representative dated 6/24/2010

No exceptions were noted in the above.

Staff found that all required safety certification activities were completed and being performed in accordance with the reference criteria.

Staff found all safety critical elements were identified, certified, and properly documented.

Staff found all design and construction changes are being properly coordinated and addressed in the safety certification process.

Staff found that SRTD does maintain effective communications and liaison with CPUC staff throughout the life of the current and planned projects

Overall, staff found all safety certification activities are being thoroughly documented throughout the life of the project to substantiate safety certifiable elements, safety criteria, final design, construction, testing, operating, emergency and procedures, and training aspects of the project are being managed for the Downtown to River District project.

Recommendations:

None.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	16	Subject	Right of Way Inspection (Fencing, Warning Signs, Barrier, Vegetation)
Date of Review	May 3, 2011	Department(s)	Engineering
Reviewers/ Inspectors	Erik Juul	Person(s) Contacted	Eric Oparko, Quality Assurance Administrator

REFERENCE CRITERIA

1. SSPP
2. Configuration Management Procedure

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Configuration Management

Interview SRTD representatives who are responsible for configuration management and track a sample of changes to the rail system to determine whether or not:

1. The changes made were submitted, reviewed and approved, implemented and documented in accordance with the reference criteria.
2. SRTD is actively addressing all the safety-related issues stemming from the proposed changes to the rail system

RESULTS/COMMENTS

Activities and Findings:

Staff reviewed item # 11 CR # 022-09, light emitting diode (LED) Clearance Lights, from the Configuration Change Request Log.

Change Justification: Current clearance lights protrude from the vehicle and are prone to cracked lenses. Incandescent bulbs burn out frequently. LED replacements are flush with the surface of the LRV. LED's have a longer operating life of five to ten years.

Impact if change is not made: Repairs to current clearance lights generally require the LRV to be brought into the shop for access and repairs are frequent.

Change Description: No change to Siemens wiring diagrams is necessary. The only noticeable change is red/amber clearance light is now two units side by side requiring two holes in car body instead of one hole for current incandescent clearance lights.

Recommendations:

None.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	17	Subject	Review Operating Rules and Procedures Manual
Date of Review	April 29, 2011	Department(s)	Light Rail Operations
Reviewers/ Inspectors	Don Filippi	Person(s) Contacted	Christopher H. Uchman, Light Rail Superintendent

REFERENCE CRITERIA

1. SSPP
2. GO 143-B

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Review Operating Rules and Procedures Manual

Interview the SRTD manager responsible for the relevant documentation to determine whether or not:

1. All governing documents (Bulletins, Rules, and Standard Operating Procedures) are reviewed and updated annually
2. All updated governing documents were reviewed
3. All updated governing documents were distributed to the employees and appropriate training of staff on the changes was conducted as required

RESULTS/COMMENTS

Activities & Findings:

RTSS staff reviewed SRTD's documentation for rules and rule changes. Staff reviewed Bulletins, Rules, Standard Operating Procedures (SOPs), Emergency Response Plan, and employees' copies of these documents. Staff noted that bulletins, Rules, and Standard Operating Procedures were being issued to update new policy; however, in some cases there were documents issued without any cancellation process for the previous document. For example SOP #LR-SOP-99-029 was issued on 7/09/1999 and then a Departmental Operating Procedure (DOP) on the same topic was issued on 12/10/2004, #LR-DOP-04-003. Both documents address the Controller/Supervisor Certification Program with conflicting procedures. The questions staff was left with were: 1) what document supersedes the other? and, 2) When does this change take place? One document is titled SOP and one is titled DOP. There needs to be a clear understanding of which procedure to follow and what document supersedes the other. Another example of this is SOP #LR-SOP-99-30. This document has three pages, the first two are dated 6/30/1999, and the last page is dated 3/06/2001 with no revision date. This would be incorrect since all three pages have the same SOP #. If there are two dates, there would have to be a revision.

RTSS staff also noted that the binders located in the employee area had outdated SOPs, Bulletins, and

Transportation Notices in them. This is the area where employees come on duty to receive their assignments and to review new SRTD documents that will affect their train operations. These documents must be kept current so that all employees have the most up-to-date material. Staff also noted that the Rail Transit Emergency Plan and Accident Log were outdated. The documentation in the binder had not been revised in some cases since 1996. The emergency numbers were out of service and reference names and numbers that were no longer correct. (SSPP Section 5.3)

Recommendations:

SRTD should review its Light Rail Operations' documents, eliminate conflicting procedures, and develop a clear process for updating and keeping all of these operating procedures current.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	18	Subject	Hazardous Materials Programs/Environmental Management
Date of Review	May 4, 2011	Department(s)	Safety Department
Reviewers/Inspectors	Colleen Sullivan	Person(s) Contacted	Glenn Batilando, Safety Specialist II

REFERENCE CRITERIA

1. SSPP
2. GO 164-D
3. FM-SOP-06-022, Dated 07/07/06, Hazardous Materials Management Program

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Hazardous Materials Programs/Environmental Management

Interview the SRTD manager responsible for reviewing relevant documentation prepared during the last 12 months to determine whether or not:

1. The hazardous material and environmental management programs comply with the federal, state and local regulatory requirements.
2. Employees and contactors receive hazardous materials training
3. A program/procedure is developed and implemented for hazard reporting.

RESULTS/COMMENTS

Activities:

1. Staff interviewed the Senior Safety Specialist and the Safety Specialist II to determine how the Hazardous Materials programs/Environmental Management/Employee and Contractor Safety Program are implemented at Sacramento Regional Transit District (SRTD).
2. Staff requested documentation for the last 12 months to determine how the hazardous material and environmental management comply with the federal, state, and local regulatory requirements. No non-compliances were found.
3. Staff reviewed SRTD's SOP-06-022 ENTITLED Hazardous Materials Management Program. It complies with various state and federal codes as well as regulations that are mandated to be followed. The program details proper management and procedures for the protection against the dangers of hazardous materials use, handling, storage, transportation, disposal and/or treatment.

This program details management's responsibilities including the procedures, inventory, review, training, cleanup, procurement of supplies and materials by all concerned departments.

4. All safety-related requirements are stated in the referenced program/plan documents.

Recommendations:

None.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	19	Subject	Emergency Response Planning, Coordination, and Training
Date of Review	May 3, 2011	Department(s)	Light Rail Operations
Reviewers/ Inspectors	Howard Huie Arun Mehta	Person(s) Contacted	Chris Uchman, Light Rail Superintendent Glenn Batilando, Safety Specialist II Rufus Francis, Director of Safety

REFERENCE CRITERIA

1. SSPP
2. SRTD Light Rail Emergency Plan

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Emergency Response Planning, Coordination, and Training

Interview the SRTD representative responsible for the Emergency Response Planning, Coordination, Training program and review records and documentation for the last year to determine whether or not:

1. Emergency drills that included tabletop and practical exercises were planned and carried out with the involvement of appropriate external agencies (local, state, and federal agencies).
2. Required training that included simulated emergency drills were provided to all emergency response agencies in the area where SRTD operates.
3. All drills were performed regularly and any deficiencies were documented, scheduled, and tracked to completion.
4. Emergency planning addresses both accidental emergencies as well as security-related emergencies.

RESULTS/COMMENTS

Activities:

1. SRTD has 15 physical facilities but three of the facilities are grouped together to make one logical facility. Therefore, SRTD has 13 logical facilities with each logical facility having its own emergency response team. Each emergency response team conducts its own emergency drill at least once a year. The Safety Specialist creates a scenario for each drill at each of the facilities.
 - a. SRTD does two kinds of drills.
 - i. Facilities Emergency Drills – Emergency scenarios that may happen on SRTD’s facilities.
 - ii. Operations Emergency Drills – Emergency scenarios that may happen anywhere on SRTD’s lines.

Staff reviewed records of the following facility drills for years 2009 to 2011:

- 2009 – 2010 (Event date: 1/11/2010) Evergreen Building - Fire at the warehouse. SRTD notified the Sacramento Fire Department of the drill, but they did not participate as this drill was a typical warehouse fire.
- 2010 – 2011 (Event date: 5/3/2011) IT Building – Violent person in front of the IT building. SRTD's Corporate Safety and IT Department, Sacramento Police, Sacramento Sheriff's Department with K9 Unit participated in this drill. The Sacramento Fire Department was notified but did not participate as there were no casualties.
- 2010 – 2011 (Event date: 9/15/2010) Wayside Maintenance Building – Suspicious person regarding vehicle theft and copper wire theft. SRTD's Wayside Maintenance personnel and the Sacramento Police Department participated in this drill.

Staff reviewed records of the following Operations drills for years 2010 to 2011:

- 2010 – 2011 (Event date: 3/22/2011, 3/25/2011, 4/10/2011) Gold Line Emergency Drill - LRV Familiarization. The drill was designed to familiarize first responders with the locations of the KNOX Boxes and access to the LRVs in emergency situations. Three separate drills were held on three separate dates to cover a 24-hour shift of first responders. SRTD's Corporate Safety and Operations Departments, Sacramento Fire, and Folsom Police participated in the drill.

2. SRTD's Operations Department's Field Emergency Drills simulate rail emergencies that may happen on any of SRTD's lines. SRTD's Operations Department along with Corporate Safety coordinate with the local first responder agencies to train the various emergency agencies to familiarize them with SRTD's operations, procedures, and LRVs. In March and April of 2011, SRTD performed three drills with the local emergency responders to familiarize them with SRTD's LRVs. Training included, but was not limited to, location of KNOX boxes for key access into restricted areas of the stations, emergency entry into the LRVs, lowering of pantographs, heights of OCS wires, etc. SRTD's Operations Safety also participated in the I-STEP (Intermodal Security Training and Exercise Program) table top emergency exercise sponsored by the Department of Homeland Security which concluded in October of 2010.
3. All SRTD's Facilities and Operations drills are recorded and kept in three ring binders that are grouped by fiscal year. For example, one binder for fiscal year 2009-2010 for Facilities Emergency Drill and one for Operations. Each binder contains the master drill schedule for the fiscal year. Each master schedule contains the facility name, facility address, department, emergency scenario, date of emergency meeting, date of drill, and status. Each drill has a written emergency scenario with all the participating departments, outside agencies, and any other miscellaneous participants. Before each emergency drill, all participants are given the scenario of the drill. All drill activities are documented as the drill proceeds and progresses. After the completion of the drill, all participants and observers participate in a "hot wash" or "after action discussion" (review and critique the drill and the results). All results and comments are gathered from the "after action discussion" and logged into an "after action report" and kept in the corresponding binders with the corresponding drill. All minor deficiencies, deficiencies that are considered not to be life threatening if the drill were to be an actual emergency, are covered in Safety Toolbox refresher training. Safety Toolbox refresher trainings are held monthly and Refresher Training for supervisors is held annually. All SRTD employees are required to attend these meetings. If an employee is sick or on vacation, the Safety Toolbox refresher training, a letter with topics, and instructions to the Safety Toolbox are given to each employee or dropped in his or her mailbox. There have not been any major deficiencies in the last three years that required a corrective action. However, if one were to occur, the deficiency would be tracked via a spreadsheet and would be assigned to the appropriate supervisor for correction and tracked until it is completed.
4. SRTD's Emergency Planning addresses "Accidental Emergencies" by way of Shop Procedures.

False alarms due to “false positives” may cause departments to go into emergency mode. Various Shop Procedures, depending on the situation and the department, will guide the supervisor to address the emergency. In the event the emergency was false, the Shop Procedure will guide the supervisor to his/her department back to normal operation status.

All SRTD's security related emergencies are addressed through Police Services. Police Services are contracted through Sacramento Police's Transit Department.

Recommendations:

None.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	20	Subject	Light Rail Supervisor/Controller Certification Program
Date of Review	April 28, 2011	Department(s)	Way, Power, and Signals
Reviewers/ Inspectors	Don Filippi	Person(s) Contacted	Christopher H. Uchman, Light Rail Transportation Superintendent

REFERENCE CRITERIA

1. CPUC General Order 143-B, Section 12.02, 13.03, and 14.03
2. SSPP
3. LR-DOP-04-003 Supervisor/Controller Certification Program, Dated 12/10/04

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Light Rail Supervisor/Controller Certification Program

Interview the SRTD representative in charge of the Supervisor/Controller Certification Program and review relevant available documentation prepared during the last three years to determine whether or not the district complied with the requirements of the certification program for all Light Rail supervisors/controllers.

RESULTS/COMMENTS

Activities:

Staff reviewed Sacramento Regional Transit District's (SRTD) Light RAIL Supervisor/Controllers certification records from 2007 through 2011. Staff found that SRTD had no records of training prior to January 2011. The only certification noted was the initial training given to the employee upon promotion. All of these initial training records were dated prior to 2007; it was evident that SRTD personnel were not following the Certification/Re-certification program prior to January 2011.

SRTD issued a Departmental Operating Procedure on January 25, 2011 (LR-DOP-04-003) that outlined a certification process for supervisors/controllers. SRTD personnel have placed 19 of the 23 employees through the required training and plan to have the remaining employees finish training this year.

Findings:

RTSS staff found that SRTD has violated its own internal procedures as well as California Public Utilities Commissions General Order 143-B.

- 1) General Order 143-B, Section 13
13.03 PROGRAM OF INSTRUCTION. Each LRT system shall adopt a program of instruction for all

new employees. At least every two (2) years a refresher course on the meaning and application of the carrier's operating rules shall be provided. Records showing compliance with this requirement shall be maintained for four (4) calendar years.

- 2) System Safety Program Plan Section 16, 16.1

Recommendations:

SRTD should take the necessary actions to ensure Light Rail Operations is in compliance with the requirements of its Supervisor/Controller Certification Program and develop the controls necessary to alert management when full compliance is not achieved.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	21	Subject	Light RAIL vehicle Maintenance
Date of Review	April 25, 2011	Department(s)	Vehicle Maintenance
Reviewers/ Inspectors	Michael Borer	Person(s) Contacted	Laura Espinoza, LRV Maintenance Superintendent Michael Ornelas, LRV Maintenance Supervisor

REFERENCE CRITERIA

1. GO 143-B
2. VMP-07-009, LRV Daily Pre-Pullout Inspection
3. VMP-06-006, LRV Weekly Inspection
4. VMP-06-002, LRV Mileage-Based Inspections

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Light Rail Vehicle Maintenance

Randomly select a minimum of 10 vehicles from the SRTD fleet (CAF and Siemens) and review their records to determine whether or not:

1. Vehicles were inspected at the required frequencies as specified in the reference criteria.
2. Inspections were properly documented.
3. Noted defects were corrected in a timely manner

RESULTS/COMMENTS

Activities:

Staff reviewed maintenance records on April 25, 2011 at SRTD light rail maintenance shop.

Findings:

Staff inspected random sample of mechanical records that included Daily Pre-Pullout Inspections, Weekly Inspections, and Mileage-Based Inspections. SRTD personnel worked very well with staff. When staff requested maintenance records, they were presented promptly.

Staff reviewed preventive maintenance records on the following CAF and Siemens light rail vehicles:

- Car# 101 for 2009 and 2010 Mileage-Based Inspection 10K, 20K, and 30K
- Car# 115 for 2009 and 2010 Mileage-Based Inspection 10K, 20K, and 30K
- Car# 119 for 2009 and 2010 Mileage-Based Inspection 10K, 20K, and 30K
- Car# 130 for 2009 and 2010 Mileage-Based Inspection 10K, 20K, and 30K
- Car# 135 for 2009 and 2010 Mileage-Based Inspection 10K, 20K, and 30K

Car# 201 for 2009 and 2010 Mileage-Based Inspection 10K, 20K, and 30K
Car# 209 for 2009 and 2010 Mileage-Based Inspection 10K, 20K, and 30K
Car# 225 for 2009 and 2010 Mileage-Based Inspection 10K, 20K, and 30K
Car# 231 for 2009 and 2010 Mileage-Based Inspection 10K, 20K, and 30K
Car# 240 for 2009 and 2010 Mileage-Based Inspection 10K, 20K, and 30K

No defects found.

The records were well maintained and easy to access.

Staff also observed SRTD personnel perform Daily Pullout and Weekly inspections on the CAF and Siemens light rail vehicles. SRTD personnel performed the inspections in a very professional manner.

Recommendations:

None.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	22	Subject	Drug and Alcohol Program
Date of Review	May 4, 2011	Department(s)	Employee Relations
Reviewers/ Inspectors	Erik Juul	Person(s) Contacted	Dan Bailey Mariza Montung Doug Miller

REFERENCE CRITERIA

1. Code of Federal Regulations, 49 Parts 40 and 655
2. CPUC GO 143-B, Section 12.03 - Use of Alcohol, Narcotics, or Drugs Forbidden
3. SSPP
4. SRTD Drug & Alcohol Program

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Drug and Alcohol Program

1. Interview the SRTD representative in charge of the Drug and Alcohol Policy and determine whether or not SRTD's policy is in compliance with state and federal regulations
2. Review the most recent FTA report regarding the SRTD Drug Prevention and Alcohol Misuse Program as well as the status of any corrective actions resulting from FTA recommendations.
3. Review the relevant records of employees in safety-sensitive positions who tested positive for drugs or alcohol in the past three years to determine, for each employee that tested positive, whether or not:
 - a. The employee was evaluated and released to duty by a Substance Abuse Professional (SAP)
 - b. The employee was administered a return-to-duty test with verified negative results
 - c. Follow-up testing was performed as directed by the SAP according to the required follow-up testing frequencies of the reference criteria after the employee has returned to duty
 - d. Consequences for repeat offenders were carried out as required by the reference criteria.
 - e. Random testing of safety-sensitive employees is performed within the one-week period without excusing individuals for unacceptable reasons as required
4. Safety-sensitive employees who have been off duty for more than 90 days have been drug tested before being allowed back to resume their duties

RESULTS/COMMENTS

Activities and Findings:

1. SRTD staff explained that SRTD's policy is in compliance with state and federal regulations.
2. SRTD staff explained that the last time the Federal Transit Administration (FTA) conducted a

Review of SRTD's Drug Prevention and Alcohol Misuse Program was October 23, 2000, more than 10 years ago.

3. Staff reviewed the relevant records of employees in safety-sensitive positions who tested positive for drugs or alcohol in the past three years to determine, for each employee who tested positive, whether or not:
 - a. The employees were evaluated and released to duty by a Substance Abuse Professional (SAP).
 - b. The employees were administered a return-to-duty test with verified negative results.
 - c. Follow-up testing was performed as directed by the SAP according to the required follow-up testing frequencies of the reference criteria after the employee has returned to duty.
 - d. Consequences for repeat offenders were carried out as required by the reference criteria.
 - e. Random testing of safety-sensitive employees is performed within the one-week period without excusing individuals for unacceptable reasons as required.
4. Safety-sensitive employees who have been off duty for more than 90 days have been drug tested before being allowed back to resume their duties.

Recommendations:

None.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	23	Subject	Rules Compliance – Wayside & Near Miss Reports
Date of Review	April 30, 2011	Department(s)	Wayside Maintenance
Reviewers/ Inspectors	Don Filippi	Person(s) Contacted	Michael D. Cormiaie, Wayside Superintendent

REFERENCE CRITERIA

1. SSPP
2. Wayside Near Miss Reporting Program

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Rules Compliance – Wayside & Near Miss Reports

Conduct the necessary interviews which should include at least two wayside workers and review appropriate records to determine whether or not:

1. Wayside near miss reports have been handled as appropriate and compliance with wayside protection rules have been evaluated and managed as appropriate.
2. Wayside workers are knowledgeable of SRTD's Operating Rules and Procedures relative to duties

RESULTS/COMMENTS

Activities and Findings:

RTSS staff reviewed Sacramento Regional Transit District's (SRTD) Wayside Near Miss Program from 2009 through 2011 and staff talked with Wayside personnel to determine how effective the program has been. Staff reviewed the forms used to identify and investigate each near miss incident and found that SRTD personnel were following the outlined procedures. Staff interviewed Wayside employees and determined that SRTD had provided the necessary forms and procedures to the employees, the employees were informed of the process and were taking an active role in the Near Miss Program. SRTD has identified near miss incidents, and it has taken measures to correct those concerns, as well as documenting these incidents on spreadsheets and graphs so they may be compared from year to year. Overall, the program seems to be well-organized. It appears this program is helping to improve safety throughout the system. Staff would recommend this program be identified as an Industry Best Practice for all Rail Transit Agencies throughout California. (SOP #LR-DOP-10-018).

Recommendations:

None.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	24	Subject	Hours of Service
Date of Review	May 4, 2011	Department(s)	Light Rail Operations
Reviewers/ Inspectors	Erik Juul	Person(s) Contacted	Chris Uchman, Transportation Superintendent

REFERENCE CRITERIA

1. General Order 143-B, Rule 12.04 Hours of Service-Safety Sensitive Employees

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Hours of Service – Train Operators, Train Controllers, and Supervisors

Randomly select ten persons from the rosters of LRV operators, controllers/supervisors and review their hours of service records prepared during a two month period within the past two years for the selected employees and determine whether or not:

1. SRTD complied with the requirement that employees in safety-sensitive positions may not remain on duty for more than 12 consecutive hours, or for more than 12 hours spread over a period of 16 hours.
2. The initial on duty status of each safety-sensitive employee only began after eight consecutive hours off duty.
3. Method exists to track the employees' hours of services. In situations where violations were found, these were appropriately resolved by SRTD.

RESULTS/COMMENTS

Activities & Findings:

Staff selected four LRV operators and six controllers/supervisors and reviewed their daily hours of service records during the two month period of January and February of 2011.

The record reviews for the two month period of January and February of 2011 revealed that:

All ten employees complied with the requirement that employees in safety-sensitive positions may not remain on duty for more than 12 consecutive hours, or for more than 12 hours spread over a period of 16 hours.

All ten employees complied with the requirement that the initial on duty status of each safety sensitive employee began after eight consecutive hours off duty.

A method does exist to track the employees' hours of services, in situations where violations would be found, these violations would be appropriately resolved by SRTD.

Recommendations:

None.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	25	Subject	Operator Training & Testing
Date of Review	April 28, 2011	Department(s)	Light Rail Operations
Reviewers/ Inspectors	Don Filippi	Person(s) Contacted	Christopher H. Uchman, Transportation Superintendent

REFERENCE CRITERIA

1. LR-SOP-99-027, Operator Efficiency Testing
2. LR-SOP-99-030, Operator Lesson Plan

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Operator Training, Retraining, and Efficiency Test Records

Review relevant documentation prepared during the last three years to determine whether or not all Light Rail Operators meet the Operator Efficiency Test (Levels I-III), training, and retraining requirements of SRTD

RESULTS/COMMENTS

Activities:

RTSS staff reviewed operator training, retraining, and efficiency test records that were provided by SRTD personnel.

Staff noted that SRTD was following all applicable procedures and regulation regarding efficiency testing, however, staff noted that on two occasions SRTD personnel conducted Level 3 testing on an operator that resulted in a rules compliance failure. SRTD personnel had not followed up on the operator with additional testing and there was not a procedure outlined for remedial action. RTSS staff would suggest that SRTD personnel document a clear procedure for Level 3 testing and the actions that will be taken in the event of an operator failure. (SSPP Section 6.2, Subsection 1-Section 13.3) (SOP# LR-SOP-99-027) (DOP# LR-DOP-09-017)

Findings:

Staff noted that the SRTD training department was certifying/re-certifying operators within the guidelines of the California Public Utilities Commission's General Order 143-B; however, SRTD personnel were not meeting the guidelines outlined in the SRTD SSPP (Sections 5.3.1-Section 16, 16.1 and 16.5) and SOP # (lr-sop-99-30). Staff reviewed records of ten random operators and found that three had exceeded the 90-day grace period for recertification and three had not been retrained annually.

Comments:

Staff would suggest that SRTD personnel review the language in the listed documents and revise those documents to fit the needs of the Training Department. Staff would also suggest SRTD personnel look

specifically at the word annual (yearly, once a year) if planning a revision of the training procedures

Recommendations:

SRTD should take the necessary actions to ensure Light Rail Operations is in compliance with the requirements of its Operator Lesson Plan and follow up with additional testing on operators who do not meet its Operator Efficiency Testing requirements.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	26	Subject	Bridges/Structures Inspections & Reports
Date of Review	May 4, 2011	Department(s)	Engineering
Reviewers/ Inspectors	Raed Dwairi	Person(s) Contacted	Darryl Abansado, Director of Civil & Track Design

REFERENCE CRITERIA

1. SSPP
2. CT-SOP-08-001, Bridge/Structure-Inspections & Reports

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Bridges/Structures Inspections & Reports

Interview SRTD representatives and review available records of bridge and other structural inspections at SRTD to determine whether or not these were inspected as required and remedial actions taken in a timely manner

RESULTS/COMMENTS

Activities and Findings:

Staff interviewed the Director of Engineering & Construction and discussed how CT-SOP-08-001 is utilized to consistently inspect and report on a bi-annual basis the light rail system bridges and structures. Staff also followed up on the implementation of the triennial review recommendation which was issued to SRTD in 2008 to finalize and approve CT-SOP-08-001. Also utilize it to track any deficiencies identified from the required inspections with an appropriate corrective action plan and corresponding implementation schedules. Staff determined the following:

1. CT-SOP-08-001 has been finalized and approved for use by the Executive Management Team.
2. The aforementioned procedure has been used to inspect on bi-annual basis the bridges and other concrete structures of the district. Year 2009 inspections were conducted by SRTD personnel in May 2009 with Caltrans inspecting shared bridges such as American Bridge.
3. SRTD Engineering has proposed using BRG Consulting to perform Year 2011 inspections and submitted a Capital Project Request to allocate the needed funding.
4. SRTD Identified defects that are repaired according to a repair priority and all reportable conditions (conditions that can contribute to a future failure or structure deterioration and any structural cracking of concrete and masonry structures).
5. No exceptions were noted.

Recommendations:

None.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	27	Subject	Procurement
Date of Review	May 4, 2011	Department(s)	Procurement Department
Reviewers/ Inspectors	Colleen Sullivan	Person(s) Contacted	Colleen Elder, Materials Management Superintendent Randall Miller, Director, Procurement Services

REFERENCE CRITERIA

1. SSPP

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Procurement

Conduct the necessary interviews and review appropriate records to determine whether or not:

1. Adequate procedures and controls are in place to preclude the introduction of defective or deficient equipment into the rail transit environment at SRTD.
2. Adequate procedures are in place to safely deal with defective or deficient equipment in the event these are introduced to the rail transit environment at SRTD.

RESULTS/COMMENTS

Activities:

Staff interviewed the SRTD Procurement Director and Material Management Superintendent to determine the adequacy of SRTD's Procurement Program.

Findings:

1. The Procurement Department is following the Procurement SOP which was developed according to the FTA guidelines.
2. For each rail transit project, the project specific Quality Assurance Program is used to verify the procured system components is in compliance with the procurement specifications.
3. The Engineering Department's Quality Assurance (QA) Manager develops a project specific Quality Assurance program.
4. The procurement procedure covers the entire Sacramento Regional Transit District (including Bus, Administration, etc.)
5. The QA plan for the corporate level is being developed by the QA Manager.

Recommendations:

None.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	28	Subject	Facility Inspections
Date of Review	May 4, 2011	Department(s)	Facilities Maintenance
Reviewers/ Inspectors	Jimmy Xia	Person(s) Contacted	Lynn Cain – Director of Facilities Joe Lentz – Facilities Supervisor Robert Hendrix – Facilities Supervisor
REFERENCE CRITERIA			
1. SSPP			
ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION			
<p>Facility Inspections Randomly select at least three light rail stations (one from each line) and review their maintenance records to determine whether or not:</p> <ol style="list-style-type: none"> 1. Inspections were performed and documented as required. 2. Noted defects were corrected and documented in a timely manner 			
RESULTS/COMMENTS			
<p><u>Activities:</u> Staff reviewed the Monthly Inspection Reports/Checklists for the following three randomly selected light rail stations completed for every month from January 2010 to March 2011: Roseville Road Station on the North Line, Florin Station on the South Line, and Sunrise Station on the Folsom Line. The following items are staff's findings from this checklist:</p> <ol style="list-style-type: none"> 1. The monthly inspections were performed and documented as required. 2. The defects that are noted on the Monthly Inspection Checklists that staff reviewed were corrected and documented in a timely manner. 3. SRTD will generate work orders for the defects noted on the Monthly Inspection Checklists to repair them. The time it takes to repair a defect will depend on the workload and available resources. The average time to finish the repair of a defect is typically one week. SRTD tries to finish repairing each noted defect within one month after discovering it, which is the maximum target time that SRTD aims at to repair a defect. Safety critical defects are given top priority for repair. 4. SRTD uses a computer program called System Applications and Products (SAP) to track work orders. Work orders are created and verified by the supervisor and are logged into the SAP. 5. In the winter of 2009, SRTD stopped using the Light Rail Station Log Sheets to track the number of hours worked at each station and the type of work that was done by the assigned person. Now, SRTD tracks this information in individual work orders that are logged into the SAP. 6. SRTD representatives stated that SRTD will modify its Monthly Inspection Checklist within a month of 			

the date of this checklist review to make sure the right elements for the checklist are there.

7. SRTD representatives stated the Monthly Inspection Checklist for April 2011 was completed and in SRTD Facilities Supervisor's office. SRTD is currently working on completing the work orders from the April 2011 monthly inspections as of 5/4/11.
8. No exceptions were noted.

Recommendations:

None.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	29	Subject	Track Components Inspection
Date of Review	April 26, 2011	Department(s)	Wayside Maintenance
Reviewers/ Inspectors	John Madriaga	Person(s) Contacted	Michael Cormaie, Wayside Superintendent Rick Stevens, Sup. Wayside Maintenance

REFERENCE CRITERIA

1. LR-WMP-87-416, Track Inspections and Maintenance Standards
2. LR-WMP-87-413, Turnout Inspections
3. LR-WMP-87-414, Street Track Maintenance

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Overhead Catenary System Inspections Records Review

Review the records of track, ties, rail fastenings, rail joints, and continuous welded rail (CWR) track to determine whether or not:

1. Inspections were performed and documented as required.
2. Noted defects were corrected and documented in a timely manner.

RESULTS/COMMENTS

Activities:

Staff reviewed records of track, rail fastenings, rail joints, and CWR track to determine if inspections were performed and documented as required and defects noted were corrected and documented in a timely manner.

Findings:

Staff found the following bi-annual track inspection reports to date, incomplete and/or missing on different mainlines: Track Safety Standards Subpart F, 213.241(b), LR-WMP-87-416.

8/2/10

7/28/10

7/29/10

7/4/09

1/28/09

1/18/08

1/16/08

1/10/08

Turnout inspection

6/5/10 Quarterly report indicates a gauge "T-4'-7 7/8" (55-7/8"), a guard face gauge of 55 7/8" with no remedial action at switch N33A.

Inspections

1. Track inspections are done with intervals in a timely manner
2. Ultrasonic rail inspections are done bi-annually and corrected accordingly.

Recommendations:

SRTD should take necessary actions to ensure all bi-annual track inspections are conducted as required. Also, all corrective actions, including switch corrections, should be documented and implemented in a timely manner.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	30	Subject	Rules Compliance
Date of Review	April 30, 2011	Department(s)	Light Rail Operations
Reviewers/ Inspectors	Don Filippi	Person(s) Contacted	Christopher H. Uchman, Transportation Superintendent

REFERENCE CRITERIA

1. SSPP

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Rules Compliance - Operations

Interview SRTD representative(s) responsible for Operations Safety, observe/inspect operations, and review documentation as necessary to determine whether or not:

1. Train Operators
 - a. Perform an inspection of one or two departing SRTD train operators operating revenue vehicles to determine if they have all of the required items.
 - b. Perform a "check ride" and observe, the operations of at least two SRTD trains in revenue service on the mainline to determine if:
 - i. Each SRTD train operator performs in compliance with the Light Rail Operating Rulebook, and bulletins.
 - c. Interview at least two SRTD train operators to evaluate their knowledge and understanding of SRTD's Operating Rules and Procedures relative to mainline operations.
2. Train Controller
 - a. Applicable reports, logs or records are properly prepared, maintained, and available upon request for review
 - b. Duties are performed in accordance with SRTD's SOPs
 - c. SRTD Train Controllers are knowledgeable in dealing and coordinating with other agencies during incidents, accidents, and emergency response situations.

RESULTS/COMMENTS

Activities and Findings:

RTSS staff verified that operators #895 and #427 had all of their required materials for train service. Staff also performed train ride observations with operators #2947, #427, and #895, all three operators performed in accordance with all applicable rules and procedures.

Operator #895

LRV #228-A/ Outbound Watt I-80, 13:47

LRV #236-A/ Outbound Watt I-80, 14:00

Operator #2947

LRV #225-A/ Outbound Watt I-80, 14:22

Operator #427

LRV #225-A/ Outbound Watt I-80, Crew Change 14:35

LRV #000-0/ Inbound Watt I-80, 14:45

RTSS staff off train at 14:52

RTSS staff interviewed two operators to evaluate their rules knowledge; staff interviewed operator #2845 and #606. Staff found both operators to have a good base knowledge of the operating rules and how they are applied in the field.

RTSS staff reviewed controllers' logs and all applicable records relating to the controllers daily operations. Staff found that the controllers' logs were in order and controllers were following SRTD's procedures while working in the Operations Control Center. RTSS staff interviewed two controllers to evaluate their rules and procedures knowledge as it related to daily operations in the Operations Control Center. Staff interviewed controllers #2426 and #560, Staff found that they were knowledgeable with rules and procedures related to dispatching trains, handling emergencies, and dealing with mechanical failures in-route.

Recommendations:

None.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	31	Subject	Safety Data Collection and Analysis
Date of Review	May 5, 2011	Department(s)	Safety Department
Reviewers/ Inspectors	Rupa Shitole	Person(s) Contacted	Rufus Francis, Director of Safety Rob Hoslett, Senior Safety Specialist J.M. Glenn Batilando, Safety Specialist II

REFERENCE CRITERIA

1. SSPP

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Safety Data Collection and Analysis

Conduct the necessary interviews and review appropriate records to determine whether or not:

1. SRTD has a process for the collection and analysis of safety data
2. The above process was followed to identify safety issues where recommendations were generated and implemented (list specific case studies or projects).

RESULTS/COMMENTS

Activities and Findings:

Staff interviewed SRTD representatives in charge of safety data collection and analysis. SRTD utilizes TransitSafe software for both rail and bus accident/incident occurrences. At the monthly Hazardous Committee Meeting, the monthly SRTD Vital Statistics Report is discussed. The report summarizes accident rate per 100,000 miles and incident rate per 100 employees. Staff reviewed the March 2011 dated Vital Statistics Report. There are three categories related to rail: CPUC Reportable, NTD reportable, and all other rail incidents. The report also contained the statistics for years 2008, 2009 and 2010. The other rail categories for data collection are Rail Collisions at Intersection, Rail Collision Between Intersections, Train Collision Rear End, Rail Collision with Bicycles, Rail Collision with District Vehicles, Rail Collision with Pedestrians, Train Other Collisions (Fixed Objects, Derailments), Rail Boarding, Rail Alighting, Rail on Board, Rail Incidents and Rail Other Reports (Injury, Assault).

SRTD representatives shared with staff the graphical statistics data report related to IBEW Employee Injuries-Illnesses for years 2008, 2009, and 2010. The data illustrated the following: Slips, Trips and Falls; Ergonomics – Musculoskeletal Disorder; Struck by Object, Moving Vehicle; Cuts & Scrapes; Other Injuries & Illnesses.

SRTD representatives conducted a case study on the analysis of injuries sustained by LRV Operators during deployment of LRV manually retractable ramps. SRTD found that since 2005-2010, there were 28 injuries by LRV operators that occurred while handling the retractable ramps. Staff reviewed this case study with the memo dated February 9, 2011. All safety-related recommendations were generated and implemented through training.

No exceptions were noted.

Overall, SRTD has an appropriate process for collection and analysis of safety data

Recommendations:

None.

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	32	Subject	Cell Phone Policy
Date of Review	April 27, 2011	Department(s)	Light Rail Operations
Reviewers/ Inspectors	Don Filippi	Person(s) Contacted	George Sandoval (Operations Manager, Maintenance) Tom Hardesty (Signal Supervisor)

REFERENCE CRITERIA

1. SSPP
2. GO 164-D

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

Cell Phone Policy

Conduct the necessary interviews and review appropriate records to determine whether or not SRTD has a process for monitoring and enforcing its cell phone policy to ensure operators are not using their cell phones during the operation of their trains.

RESULTS/COMMENTS

Activities and Findings:

RTSS staff reviewed Light Rail Transportation Notice #T-09-030 and #T-09-035; both notices prohibit cell phone use in the cab of the LRV. Staff reviewed efficiency testing records randomly and noted that the testing form did not include a section for cell phone observations. Staff noted that the managers could place comments on the form if they observed any cell phone use; however, staff did not see any official notice or testing procedure that highlighted a specific policy for monitoring and enforcing SRTD's cell phone policy.

Recommendations:

SRTD should include a section in its Efficiency Testing Form(s) for cell phone use monitoring and develop a procedure for periodic focused cell phone policy monitoring and enforcement. (SSPP 6.2, Sub-section 1&2, General Order 164-D Section 6)

2011 CPUC SYSTEM SAFETY REVIEW CHECKLIST FOR SACRAMENTO REGIONAL TRANSIT DISTRICT

Checklist No.	33	Subject	System Modification
Date of Review	May 4, 2011	Department(s)	Engineering
Reviewers/ Inspectors	Raed Dwairi	Person(s) Contacted	Darryl Abansado, Director of Civil & Track Design

REFERENCE CRITERIA

1. SSPP

ELEMENT/CHARACTERISTICS AND METHOD OF VERIFICATION

System Modification

Conduct the necessary interviews and review appropriate records to determine whether or not:

1. SRTD has a documented review and approval process with specifics of sign-off requirements and exception capability.
2. The above process was followed in the review and approval of the proposed modifications to the rail system at SRTD (example, Station Relocation and K-Street Projects).

RESULTS/COMMENTS

Activities and Findings:

Staff interviewed the Director of Civil & Track Design regarding the manner in which SRTD reviews and approves proposed modifications to its rail system and reviewed relevant project documentation. Staff determined the following:

1. Section 8 of the SSPP specifies a process for controlling, testing, and documenting proposed changes to the rail system at SRTD with recommendations and approval decisions and gives the authority to approve any changes to the Change Review Committee which, according to the SSPP, is chaired by the Director of System Design.
2. SSPP distinguishes between configuration and non-configuration changes and describes how change requests are initiated, evaluated, and how the Change Review Committee either accepts or rejects the proposed changes.
3. SRTD has a Configuration Management Control process that requires assigning a Change Request Number for tracking proposed changes.
4. Although SRTD coordinates with outside agencies through the Permit Process Application, it does not follow the formal process described in its SSPP for evaluating and either approving or rejecting proposed rail changes by outside agencies or by its internal departments through the Change Review Committee. Furthermore, SRTD does not have a form to track such proposed changes as it does in its Configuration Management Process.

Recommendations:

SRTD should either follow the Configuration Management Program for reviewing and approving outside projects and internal requests for modifying its rail procedures, or have these requests submitted to the Change Review Committee (CRC) as specified in its SSPP.