

GENERAL ORDER NO. 164-C

(Supercedes General Order No. 164-B)

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

RULES AND REGULATIONS GOVERNING STATE SAFETY OVERSIGHT OF RAIL FIXED GUIDEWAY SYSTEMS

Adopted February 27, 2003. Effective February 27, 2003.

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IT IS ORDERED that the following rules and regulations governing the safety oversight of rail fixed guideway systems shall hereafter be observed in this State unless otherwise directed by the Commission.

1. GENERAL PROVISIONS

- 1.1 *Authority.* These rules and regulations are authorized by and implement the provisions of 49 U.S.C. 5330, Section 99152 of the Public Utilities Code, and Title 49 of the Code of Federal Regulations, Part 659, Rail Fixed Guideway Systems, State Safety Oversight, Final Rule.
- 1.2 *Applicability.* These rules and regulations are applicable to all rail fixed guideway systems in California.
- 1.3 *Additional Rules.* The Commission may make such additional rules and regulations or changes to these rules and regulations as necessary for the purpose of safety.
- 1.4 *Exemptions or Modifications.* Requests for exemptions from or modifications of these rules and regulations shall contain a full statement of the reasons justifying the request and demonstrating that safety is not reduced thereby. Any exemption or modification so granted shall be limited to the particular matter covered by the request. All exemptions and modifications shall require Commission Approval.

2. DEFINITIONS

- 2.1 *APTA Guidelines* means the American Public Transportation Association's "Manual for the Development of Rail Transit System Safety Program Plans."
- 2.2 *Business Day* is any calendar day the California Public Utilities Commission is open for normal business.
- 2.3 *Certifiable Elements List* means a list that contains all facilities, systems, or other factors that are subject to safety certification due to their safety functions
- 2.4 *Existing Industry Standards* means the currently accepted industry and professional engineering standards relating to the design, construction, operation, and maintenance of rail fixed guideway systems such as ANSI, APTA, ASCE, ASEE, ASME, IEEE, NFPA, and others.
- 2.5 *Fatality* means the death of a person at the scene of an accident, or that the rail fixed guideway system knows that the person died within 30 days of the incident from injuries related to the accident.
- 2.6 *First Aid* means medical attention for minor conditions such as abrasions, cuts, or bruises, typically confined to a single treatment.
- 2.7 *FTA* means the Federal Transit Administration.
- 2.8 *Hazard Analysis* means any analysis performed to identify hazardous conditions for the purpose of their elimination or control.
- 2.9 *Hazardous Condition* means a condition that may endanger human life or property. It includes

unacceptable hazardous conditions.

- 2.10 *Immediate Notification* means as soon as possible, but not to exceed 4 hours.
- 2.11 *Major Projects* means new rail systems and extensions, the acquisition and integration of new vehicles and safety critical technologies into existing service, and major safety critical redesign projects, excluding functionally similar replacements.
- 2.12 *May* is permissive.
- 2.13 *Notice* is the process of informing persons of the existence of a filing.
- 2.14 *Person* includes any individual, group, or legal entity.
- 2.15 *Protest* is a document objecting in whole or in part to the authority sought.
- 2.16 *Protester* is any person, persons, entity, or an organization, which files a protest.
- 2.17 *Rail Fixed Guideway System* means any light rail system, rapid rail system, monorail, inclined plane, funicular, trolley, or automated guideway transit system used for public transit and not regulated by the Federal Railroad Administration or specifically exempted by statute from Commission oversight.
- 2.18 *Replies to Protests* are replies in writing to a protest.
- 2.19 *Safety* means freedom from danger.
- 2.20 *Safety Certification* is the series of acts or processes that collectively verify the safety readiness of a project for public use.
- 2.21 *Safety Certification (SC) Plan* means a project-specific document developed by the rail fixed guideway system,

which ensures that elements critical to safety are planned, designed, constructed, analyzed, tested, inspected, implemented, training provided and rules and procedures followed, in compliance with rail fixed guideway system safety requirements.

2.22 *Safety Certification Verification Report (SCVR)* means a project-specific document that will be the final certificate of compliance verifying that the project complies with all safety requirements identified by the agency's project-specific SC Plan.

2.23 *Safety Design Criteria* means the organized listing of safety codes, regulations, rules, design procedures, existing industry standards, recommended practices, handbooks and manuals prepared to provide guidance to project designers in development of technical specifications that meet minimum safety parameters.

2.24 *Security* means freedom from intentional danger.

2.25 *Serious Injury* means an injury that requires the individual to be transported to a medical facility for medical treatment beyond medical observations, diagnostic procedures such as X-rays, drawing blood samples, or first aid.

2.26 *Shall* is mandatory.

2.27 *Staff* is the Director of the California Public Utilities Commission Division overseeing the safety of Rail Fixed Guideway Systems, and persons delegated to act in his or her stead.

2.28 *System Safety Program Plan (SSPP)* means a document adopted by the Rail Fixed Guideway System detailing

its safety and security policies, objectives, responsibilities, and procedures.

2.29 *Unacceptable Hazardous Condition* means a hazardous condition determined to be an unacceptable hazardous condition using the APTA Guidelines' Hazard Resolution Matrix (APTA Guidelines, checklist number 7).

3. REQUIREMENTS FOR SYSTEM SAFETY PROGRAM PLANS

- 3.1 Each Rail Fixed Guideway System shall prepare a System Safety Program Plan. The plan shall conform to the APTA Guidelines and these rules and regulations.
- 3.2 Each Rail Fixed Guideway System shall submit its System Safety Program Plan to Staff for review and Commission Approval prior to the date it begins service. Subsequent revisions of the System Safety Program Plan shall be submitted to the Staff for review and approval.
- 3.3 The System Safety Program Plan shall address the personal security of the Rail Fixed Guideway's passengers and employees. The FTA's applicable report shall serve as a set of guidelines for preparation of the security portion of each rail fixed guideway system's System Safety Program Plan. Procedural details that the Rail Fixed Guideway System classifies as confidential information to prevent or mitigate breaches of security shall not be revealed in the System Safety Program Plan. Each Rail Fixed

Guideway System shall submit the security portion of its System Safety Program Plan separately to Staff for approval prior to the date it begins operations. The Security portion of the System Safety Program Plan shall be considered confidential, not released to the public, and shall not be subject to Public Records Act Requests.

- 3.4 Each Rail Fixed Guideway System's SSPP shall describe the controls used to maintain effective communications and liaison with Staff for reporting and investigating accidents and unacceptable hazardous conditions, submitting corrective action plans and annual internal safety audit reports, and facilitating on-site safety reviews.
- 3.5 Staff may perform inspections, investigations, and reviews of the design, construction, operation, and maintenance of each Rail Fixed Guideway System to assess whether the actual safety and security procedures and practices of the Rail Fixed Guideway System comply with its System Safety Program Plan.
- 3.6 Each Rail Fixed Guideway System shall undergo an on-site review of the implementation of its System Safety Program Plan by Staff at least once every three years to verify compliance with and evaluate the effectiveness of the plan. The Staff may conduct the on-site review with its own personnel or by employing the services of another organization other than the Rail Fixed Guideway System.
- 3.7 Following each on-site review, the Commission will

issue a decision based upon Staff findings and recommendations, including an analysis of the efficacy of the System Safety Program Plan and the need, if any, for updating the plan.

4. INTERNAL SAFETY AUDIT REQUIREMENTS

- 4.1 Planned and scheduled internal safety audits shall be performed annually by each Rail Fixed Guideway System to evaluate compliance and measure the effectiveness of its System Safety Program Plan.
- 4.2 All of the organizational elements described in the Internal Safety Audit Process section of the APTA Guidelines shall be included in the scope of the activities to be audited by each Rail Fixed Guideway System. This total scope must be completely covered by the internal safety audits conducted within a 3-year period, and every 3-year period thereafter.
- 4.3 Each Rail Fixed Guideway System shall prepare a schedule of internal safety audits to be performed during each calendar year. This schedule, including any subsequent changes, shall be submitted to the Staff before any of the scheduled audits are begun.
- 4.4 Each internal safety audit shall be performed in accordance with written checklists by personnel technically qualified to verify compliance and judge the effectiveness of the System Safety Program Plan activity being audited. The auditors may be organizationally assigned to the unit responsible for management of the activity being audited, but they

must be independent from the first line of supervision responsible for performance of the activity being audited.

- 4.5 Each internal safety audit shall be documented in an annual report that covers the audits performed during each calendar year. The annual report shall state the results of each audit in terms of the adequacy and effectiveness of the System Safety Program Plan. The annual report for the internal safety audits performed during the preceding year shall be submitted to the Staff prior to the 15th of February each year.

5. REQUIREMENTS FOR REPORTING ACCIDENTS AND UNACCEPTABLE HAZARDOUS CONDITIONS

- 5.1 Each Rail Fixed Guideway System shall submit accident and unacceptable hazardous condition reports to Staff. A reportable accident is one which exceeds the thresholds established in the following paragraphs and which is associated with the operation of rail transit vehicles and other on-track equipment at any location in the system including at-grade crossings, station platforms, mainline, and yard tracks.
- 5.2 Each Rail Fixed Guideway System shall immediately notify the Staff of the following classes of accidents and unacceptable hazardous conditions by telephone, e-mail or FAX:
- (a) Any event resulting in a fatality or serious injury;
 - (b) Any fire or other hazardous event that requires the

evacuation of passengers or requires fire suppression activities conducted by a fire department;

(c) Any accident that results in property damage in excess of \$100,000; and

(d) Any unacceptable hazardous condition.

5.3 Each Rail Fixed Guideway System shall submit written accident and unacceptable hazardous condition reports on forms prescribed by the Staff. Such written reports shall be submitted within 30 days after the last day of the month in which the accident occurred or the unacceptable hazardous condition was discovered. Written reports shall be filed for all unacceptable hazardous conditions and the following classes of accidents:

(a) Any accident requiring immediate notification by telephone, e-mail or FAX;

(b) Any derailment or collision between rail transit vehicles, or between rail transit vehicles and other on-track equipment, or between rail transit vehicles and motor vehicles, that meet either of the following two conditions:

i. The rail transit vehicle or other on-track equipment is removed from service or rendered unavailable for service due to damage which must be repaired before it can be returned to service; and

ii. The motor vehicle is removed from the scene by a tow truck or other means due to damage, which

precludes it from being safely operated.

- 5.4 Each Rail Fixed Guideway System shall file a monthly accident, unacceptable hazardous condition, and corrective action summary report. This report shall be filed on a form prescribed by the Staff within 30 days from the last day of the month covered. The monthly summary report shall be filed whether or not any reportable accident occurred or any unacceptable hazardous condition was identified during the month.

6. REQUIREMENTS FOR INVESTIGATING ACCIDENTS AND UNACCEPTABLE HAZARDOUS CONDITIONS

- 6.1 Each Rail Fixed Guideway System shall investigate all reportable accidents and unacceptable hazardous conditions. The Staff may also perform separate, independent investigations at its own discretion.
- 6.2 The accident investigations performed by each Rail Fixed Guideway System shall be conducted in accordance with written procedures. Accident Investigation Procedures, including any changes, shall be submitted to the Staff for review and approval.
- 6.3 When investigating accidents and unacceptable hazardous conditions that require immediate notification per 5.2 above, the Rail Fixed Guideway System shall:
- (a) Notify the Staff in advance whenever an investigator, investigation team, or panel performs interviews, questions witnesses, or conducts inspections, measurements, examinations, or tests as part of the

investigation;

- (b) Provide for the Staff's participation to the fullest extent possible in accident investigations;
- (c) Document in a written report each item investigated, the investigation findings, the most probable cause, contributing causes, and recommendations for corrective action to prevent a recurrence of the accident or unacceptable hazardous condition;
- (d) Prepare a corrective action plan and schedule as a part of the investigation report or in a separate document; and
- (e) Submit its investigation report and corrective action plan with an accompanying implementation schedule to the Staff within 60 days of the occurrence of the accident or identification of the unacceptable hazardous condition. If the investigation takes longer than 60 days to complete, interim status reports shall be submitted every 30 days.

6.4 For all other reportable accidents that do not require immediate notification, the Rail Fixed Guideway System is not required to submit formal accident investigation reports and corrective action plans unless specifically requested to do so by the Staff due to a specific safety concern.

6.5 The Commission may make such order with respect to the Rail Fixed Guideway System or Staff investigation, as the Commission deems necessary.

- 6.6 Investigation reports and corrective action plans prepared by a Rail Fixed Guideway System and filed with the Commission or the Staff shall not be admissible as evidence nor shall they be used in any civil action for damages based on or arising out of matters covered therein unless specifically authorized by the Commission.

7. SAFETY CERTIFICATION PLAN REQUIREMENTS

- 7.1 Each Rail Fixed Guideway System shall be responsible for Safety Certification of all major projects that initiate preliminary engineering after the effective date of this General Order. The Rail Fixed Guideway System shall ensure that all entities involved in design, construction, operation, and maintenance of all major projects shall comply with the requirements of the Safety Certification process.
- 7.2 Each Rail Fixed Guideway System shall prepare a project specific Safety Certification Plan (SC Plan) for each of its major projects. The applicable FTA guidelines shall be used as a reference.
- 7.3 The SC Plan shall be submitted to Staff for review and Commission Approval during the preliminary engineering phase. The Rail Fixed Guideway System shall revise and expand the SC Plan as the project progresses, as necessary.

The Rail Fixed Guideway System shall file any revision of the SC Plan with Staff. Within 30 business days, Staff shall

approve or reject the proposed revisions. Staff shall approve revisions that retain the same level of safety or increase safety protections. Staff shall reject revisions that do not comply with the General Order or fail on other ministerial grounds. If a revision significantly lessens the safety oversight of the project, Staff shall reject or upon the request of the rail fixed guideway system submit the revised plan for Commission Approval (See Section 9 *infra*). In the case of rejection, staff shall identify the reasons for the rejection.

- 7.4 The SC Plan shall address safety certification management including organizational authority and responsibilities, safety certification activities, processes and procedures, documentation requirements and responsibilities, and reporting requirements.
- 7.5 The SC Plan shall describe the controls used to maintain effective communications and liaison with Staff throughout the life of the project. It shall also include procedures to obtain and adequately address Staff's written comments on safety and security design reviews conducted throughout project development lifecycle.
- 7.6 The SC Plan shall identify the process used to verify and document conformance with safety and security requirements during design, construction, testing, and operational readiness. The SC Plan shall include the following:
 - a) The hazard management process to conduct safety hazard analyses and safety hazard resolution. The document shall include a list of hazard analyses to be

performed. Hazard analysis shall be submitted upon request.

- b) A list of all safety and security design criteria that will be used in the planning, design, and construction of major projects;
- c) Certifiable elements and sub-elements list;
- d) Safety certification audits conducted in accordance with written checklists to verify compliance and judge the effectiveness of the Safety Certification Plan;
- e) Format of Conformance checklists, and a list of the actual checklists as they become available: the actual checklists shall be submitted upon request;
- f) Safety Certification milestones, and
- g) Procedure for updates.

8. SAFETY CERTIFICATION VERIFICATION REPORT REQUIREMENTS

- 8.1 Each Rail Fixed Guideway System shall submit a Safety Certification Verification Report in order to verify compliance of the major project with the SC Plan.
- 8.2 The SCVR shall be submitted to the Staff at least 15 business days prior to the start of service. The SCVR shall certify that: (a) all requirements of the SC Plan have been completed except for listed open items, if any, (b) that all safety hazards have been adequately mitigated, and (c) adequate restrictions/workarounds are in place to ensure the safety of operations until open items are closed. Staff shall respond to the

SCVR within 7 business days of filing approving the SCRV, or identifying areas that are not acceptable. The SCVR shall be approved through a letter signed by Staff. The project will not be placed in service until the SCVR is approved.

8.3 The SCVR shall include a:

- a) Letter of Intent to Operate;
- b) Final Project Verification of Safety; and
- c) Remaining Open Items List, if any, with appropriate workarounds.

9. COMMISSION APPROVAL

9.1. All requests for Commission Approval, as identified in this general order, shall be by letter to the Staff. The Staff shall prepare a resolution on the request for Commission consideration at a public meeting.

9.2. All requests for Commission Approval shall be noticed and subject to protest.

- a) Notice: Staff shall ensure the notification of the filing is included in the Commission's Daily Calendar. The filing party shall serve a copy of the filing on any member of the public upon request. The filing party shall also serve a copy at the time of filing upon any person identified by the Staff as requiring notice.
- b) Protest: Any person may file a protest, in writing, to a request for Commission Approval. Protests shall be served on the party seeking authority and the Staff within ten business days from the date notice of the filing appears in the Commission's Daily Calendar.

- c) To be considered a protest the filing shall state:
 - i. That it is a protest to a specific request for approval (identifying the request);
 - ii. The grounds for the protest and any information supporting the protest. The grounds for protesting a request must be directly related to the approval or authority sought. (e.g. General opposition to a project is not grounds to protest a Safety Certification plan); and,
 - iii. That the protest has been sent to the appropriate Rail Fixed Guideway System.
- d) The filing party may file a reply to the protest. Replies to protests shall be filed within ten business days after the date notice of the protest appears in the Commission's Daily Calendar. Replies shall be served on the protester, the Staff, and any other person upon request.

Dated February 27, 2003, at San Francisco, California.

PUBLIC UTILITIES COMMISSION
STATE OF CALIFORNIA

By WESLEY M. FRANKLIN
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