CPSD/RTSS/AM5/vdl * **Agenda ID #7228**

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Consumer Protection & Safety Division
Rail Transit and Crossing Branch
Rail Transit Safety Section

RESOLUTION ST- 92
January 10, 2008

R E S O L U T I O N

RESOLUTION ST-92 GRANTING SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY'S REQUEST TO DEVIATE FROM GENERAL ORDER 95 REQUIREMENTS FOR THE MINIMUM OVERHEAD CONTACT WIRE HEIGHT IN TUNNELS AND PORTALS ON ITS SAN FRANCISCO MUNICIPAL RAILWAY CENTRAL SUBWAY PROJECT.

SUMMARY

This resolution grants San Francisco Municipal Transportation Agency (SFMTA) the waiver that allows it to construct and maintain minimum contact wire height of 12'-2" above top of rail for its Central Subway tunnels and portals.

BACKGROUND

The Central Subway Project is Phase II of SFMTA's Third Street Light Rail Program. It consists of adding both at-grade trackway and subway tunnels trackway. The subway tunnels will be constructed by using Tunnel Boring Machines.

General Order (GO) 95, Rule 37, Table 1 establishes the basic minimum allowable vertical clearance of wires above railroads. In tunnels Rule 74.4E allows reduction of the contact wire height contained in Table 1 of Rule 37 to a minimum of 14 feet above top of rail.

By Resolution No. E-1462, the Commission granted SFMTA (then San Francisco Municipal Railway) a waiver from the 14' above top of rail requirement to 12' for the Market Street, Twin Peaks and Sunset tunnels.

By letter dated October 10, 2007, SFMTA requested authority to deviate from the 14' minimum clearance requirements of GO 95, Rule 74.4E to allow a minimum contact wire height of 12'-2" for the Central Subway tunnels and their portals that is consistent with the SFMTA's existing tunnels (Market Street, Twin Peaks, and Sunset tunnels).

NOTICE

SFMTA states that potentially affected parties including the San Francisco Fire Department, Police Department and Department of Public Works are aware of and do not object to this variance request.

PROTESTS

No protest of the variance application has been filed with the Commission.

DISCUSSION

The Consumer Protection and Safety Division (CPSD) staff discussed SFMTA's request with (1) SFMTA staff and its contractor PB Wong; (2) CPSD staff, especially the GO 95 experts within CPSD's Safety and Reliability Branch, and (3) Federal Transit Agency, San Francisco regional office staff.

CPSD staff held several meetings with the staff of the SFMTA Subway Project for clarification and discussion purposes.

SFMTA staff clarified the definition of "Portal." A portal includes the portion of the exclusive right-of-way between the entrance to the subway (tunnel) and the at-grade surface street. The SFMTA waiver request includes the portal portions of the exclusive right-of-way in addition to the tunnels.

Staff recommends the SFMTA request be granted based on the (1) past safe history of SFMTA working with the reduced 12' contact wire height in their existing tunnels and (2) the improvements in the design and safety of the new

system proposed by SFMTA. Staff believes that granting this waiver for the Central Subway tunnels would not adversely affect safety to authorized personnel and the general public for the following reasons:

1. In more that 30 years of operation, there has not been any safety related incidents or accidents attributed to the lower 12'contact wire height allowed by Resolution No. E-1462 in the Market Street, Twin Peaks and Sunset tunnels.

2. SFMTA's request will provide a contact wire height for the Central Subway tunnels that is consistent with its existing tunnels and a consistent and familiar work environment for SFMTA's workers who maintain the system, light rail vehicle (LRV) operators, and other authorized personnel accessing the tunnels.

3. The requested 12'-2" contact wire height satisfies the American Railway Engineering and Maintenance-of-Way Association Chapter 33, Part 2 guidelines which provide a formula for the computation of minimum wire height based on air clearance values, vehicle bounce and vehicle load height.

4. Trackway access in the tunnels and adjacent to the platform will be limited to authorized personnel.

5. SFMTA's Standard Operating Procedures require that the Overhead Contact System (OCS) be de-energized prior to hy-rail or other on-track vehicles entering the subway.

6. SFMTA's maintenance personnel are familiar with maintaining its system under the current tunnel contact wire height.

7. SFMTA's fleet of maintenance vehicles is configured for, and capable of, maintaining the contact wire at the current height.

8. SFMTA's LRV pantograph working range of 12'-2" to 19' is consistent with the proposed contact wire height.

Additionally, CPSD staff believes that safety will be enhanced by improvements proposed by the SFMTA in the design of the new Central Subway OCS, tunnel lighting, and security system which include the following safety features:

1. Catenary Detectors - provide visual indication of the power status of the OCS.

2. Safe design of Substations – design and equip the substations with trip units to instantaneously open the breakers in case of a ground fault, thereby removing power from that section of the OCS.

3. Tunnel Lighting – design the lighting level for Central Subway to exceed the current level in SFMTA's existing tunnels. The new design exceeds the level required by National Fire Protection Association 130-6.2.5, 2007 Edition and exceeds the level found in other transit tunnel systems. This will provide better visibility for authorized personnel.

4. Security – equip the tunnels and portals with closed-circuit television surveillance and intrusion detection devices to detect unauthorized entrance into the tunnels.

COMMENTS

This is an uncontested matter in which the resolution grants the relief requested. Accordingly, pursuant to Section 311 (g) (2) of the Public Utilities Code and Rule 14.6(c) (2) of the Commission's Rules of Practice and Procedure, the otherwise applicable 30-day period for public review and comment is waived.

FINDINGS

1. GO 95, Rule 37, Table 1 establishes the basic minimum allowable vertical clearance of wires above railroads.

2. GO 95, Rule 74.4E, allows reduction of the contact wire height specified in Table 1 of Rule 37 to a minimum of 14 feet above top of rail in tunnels.

3. On October 10, 2007, SFMTA requested a waiver from GO 95, Rule 74.4E to allow it to construct and maintain a minimum contact wire height of 12'-2" above top of rail for its Central Subway tunnels and portals.

4. In 1975, by Resolution No. E-1462, the Commission granted SFMTA (then San Francisco Municipal Railway) a waiver from the 14' above top of rail requirement to 12' for the Market Street, Twin Peaks and Sunset tunnels.

5. In more that 30 years of operation, there have not been any safety related incidents or accidents as a result of the 12' contact wire height in the tunnels and portals.

6. The waiver will provide a consistent and familiar work environment for SFMTA's workers who maintain the system, LRV operators, and any other authorized personnel accessing the tunnels.

7. Additionally, the SFMTA plans to enhance safety by improvements in the design of the OCS, tunnel lighting, and the security system.

8. SFMTA and CPSD staffs are in agreement that with the improvements in the proposed safety designs and features, reducing the height of contact wire in the Central Subway tunnel and its portals to 12'-2" from the required 14' will not adversely affect public safety.

THEREFORE IT IS ORDERED THAT:

San Francisco Municipal Transportation Agency (SFMTA) is granted authority to deviate from the requirements of General Order 95, Rule 74.4-E. SFMTA is granted this waiver for a minimum clearance of 12'-2" instead of the required 14'minimum height of the contact wire above the rail, only for its Central Subway tunnels and portals, and subject to improvements proposed by SFMTA in the design of the Overhead Contact System, tunnel lighting, and security system.

This resolution is effective today.

I certify that the foregoing resolution was duly introduced, passed, and adopted by the Commission at its regularly scheduled meeting on January 10, 2008. The following Commissioners voted favorably thereon:

PAUL CLANON
Executive Director