

Surveillance and Control System, and will be coordinated to give priority to train traffic (green extension or early green) and will also be programmed to allow for an all-red phase of at least one second between each conflicting vehicle traffic signal phase at the intersections. All of these devices will be installed in accordance with the attached Exhibit B.

Automatic train protection signaling with cab signals³ as installed on the Metro Blue Line and Metro Gold Line will be installed in the Flower-Figueroa Grade Separation and from Gramercy Place to Culver City. All of the at-grade crossings in this semi-exclusive right of way will have one or more of the following safety features for vehicle traffic: PUC standard automatic four quadrant gates and flashing lights; active LED TRAIN signs warning of approaching trains; photo red-light enforcement systems; standard City traffic signals; active LED no-left or no-right turn signs where appropriate for regulating conflicting turns; enhanced signing and striping; and median islands. Pedestrian safety features at these crossings will include: pedestrian automatic gates; swing gates; and signage. PUC Number 8 flashing lights and swing gates and signage will be installed at pedestrian crossings in the exclusive right-of-way segment. The maximum train speed in this semi-exclusive right-of-way will be 55 MPH. All of these devices will be installed in accordance with the attached Exhibit B.

The Expo Authority will also implement two proven noise mitigation measures at the six gated crossings on the Expo Line that are equipped with flashing lights, gates and bells. First, the Expo Authority proposes to design the crossings such that the bells on the warning devices sound only until the crossing gates reach a horizontal position. Once this occurs, the bells will be turned off until another approaching train activates the warning devices. The warning lights will continue to flash from the time they are initially activated by approaching trains until such time that the train completely clears a crossing and the crossing gates go back to a vertical position. Metro, the agency responsible for operating the Expo Line, concurs with this proposed design and has implemented this approach at crossings on the Metro Gold Line. Furthermore, Metro train operators will continue to sound an audible warning utilizing the LRV on-board devices in

³ Each section of track has a coded signal in the rails for the maximum speed in that section. Equipment on the LRVs receive that signal and it is transmitted to the operator's instrument panel where the allowable speed is shown. If the operator operates the LRV in excess of the allowable speed, or if the operator passes a train signal with a stop indication, the LRV brakes will be applied automatically.

accordance with CPUC regulations and Metro's established rules and procedures which will supplant the warning from the bells.

Based on Metro's experience on previous projects, residents could raise concerns regarding noise from the warning bells once revenue service begins on the Expo Line. Therefore, this request is a proactive approach to mitigate the noise for residents from the incessant ringing of the bells during the full warning activation phase.

The Expo Authority's request for this exemption is in accordance with guidance found in industry standards promulgated by the Federal Highway Administration (FHWA) and the American Railway Engineering and Maintenance of Way Association (AREMA). FHWA's Railroad-Highway Grade Crossing Handbook: Chapter IV(C) (3), page, 114 states in part: "When gates are used, the bell may be silenced when the gate arms descend to within 10 degrees of the horizontal position. Silencing the bell when . . . the gates are down may be desired to accommodate residents of suburban areas."

The Expo Authority believes the exemption sought for the six gated crossings is a practical and reasonable approach in balancing the safety needs and noise pollution issues for residents. With the measures described above, Expo Authority and Metro believe safety will not be compromised if the exemption is granted.

Second, if further noise mitigation is deemed necessary as the project enters the testing phase, the Expo Authority could install 'shrouds', similar to the ones installed on the Gold Line while maintaining the minimum decibel levels required by CPUC General Orders.

IV

The Expo Authority requests the authorization to construct two tracks of the Expo LRT Project across Farmdale Avenue on Exposition Boulevard located in the City of Los Angeles. Attached as Exhibit A is a vicinity map showing the relation of the subject crossings to existing roads and railroads. Attached Exhibit B shows the plans and profile of two light rail tracks across Farmdale