Final Environmental Impact Report

DNA LIGHT RAIL TRANSIT MOS-1 PROJECT

(SCH # 2008112042)

Prepared for: **Sacramento Regional Transit District and HDR**

Regional Transit

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1.0 INTRODUCTION

The Sacramento Regional Transit (RT) District is the CEQA Lead Agency for the DNA Light Rail Transit MOS-1 Project (DNA MOS-1 Project). The Draft Environmental Impact Report (DEIR) and the Final Environmental Impact Report (FEIR) have been prepared under the direction of RT. The DEIR was circulated from February 10, 2009 to March 27, 2009 for public review and comment in accordance with CEQA.

This FEIR consists of comments received on the DEIR; response to comments; the revised pages from the DEIR; and a Mitigation Monitoring and Reporting Program (MMRP).

The FEIR and the DEIR are available to the general public at the Sacramento Regional Transit District Office, which is located at 1400 29th Street, Sacramento, California 95812 and at **http://sacrt.com/dna/news/default.html**.

Table 2-1 Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.1 Air Quality			
Impact AQ-1 – Impacts of construction emissions - Construction of the proposed project has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated by construction workers traveling to and from the project site. Fugitive dust emissions would primarily result from site preparation (e.g., excavation) activities. NOX emissions would primarily result from the use of construction equipment. VOC emissions would primarily result from paving operations. Construction of the DNA project would include activities such as site preparation, demolition, utility relocation, and track work. The maximum estimated NOX emissions of 81 ppd for the project area would be less than the SMAQMD threshold of 85 ppd. Regional construction emissions would result in a less-than-significant impact.	***Potentially Significant***	**AQ-1 -** The construction contractor shall provide a plan, for approval by the lead agency and SMAQMD, demonstrating that the heavy-duty (> 50 horsepower) self-propelled off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average at time of construction.	***Less-than-significant***
		AQ-2 - The construction contractor shall submit to the lead agency and SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine production year, and projected hours of use for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project representative shall provide SMAQMD with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman.	
		AQ-3: Any equipment found to exceed 40	

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5.1 Air Quality			
		percent opacity (or Ringelmann 2.0) shall be repaired immediately, and the lead agency and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in¬operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this section shall supercede other SMAQMD or State rules or regulations.	
		AQ-4 - The construction contractor shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour.	
		AQ-5 - The construction contractor shall ensure that active grading and parking areas are watered at least twice daily.	
		AQ-6 - The construction contractor shall ensure that exposed stockpiles are enclosed, covered, watered twice daily.	
		AQ-7 - The construction contractor shall ensure that all trucks hauling dirt, sand, silt, or	

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5.1 Air Quality			
		other loose materials are covered or maintain at least two feet of freeboard.	
		AQ-8 - The construction contractor shall utilize ultra-low sulfur fuel (< 15 parts per million) at an incremental cost of $0.20 to $0.50 per gallon. Locations where ultra-low sulfur fuel is available in California are available at: http://ecdiesel.com/business/locator.	
		AQ-9 - The construction contractor shall establish an idling limit (e.g., 5 minutes per hour).	
		AQ-10 - The construction contractor shall ensure that equipment is tuned to manufacturers' specifications at the manufacturers' recommended frequency.	
		AQ-11 - The construction contractor shall prohibit any tampering with engines and continuing adherence to manufacturer's recommendations will be required.	
		AQ-12 - If necessary, additional emissions limits shall be established within 1,000 feet of any K-12 school, based on CARB proposals.	
		AQ-13 - Notification shall be provided to all schools within 1,000 feet of a construction site.	
		AQ-14 - Truck trips shall be reduced and/or hours of driving shall be restricted through	

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5.1 Air Quality			
		residential communities.	
		AQ-15 - Receipts of ultra-low sulfur fuel purchase and equipment tuning/repair shall be kept and made available upon request.	
		AQ-16 - The construction contractor's Project Manager shall conduct spot checks for compliance with committed measures.	
Impact AQ-2 – Impacts of PM10 emissions – The Basin is designated as a PM10 nonattainment area. Project-related fugitive dust emissions equal to or greater than five percent of the State 24-hour and annual PM10 standards would result in a significant impact. Therefore, any 24-hour PM10 emissions increase of 2.5 g/m3 or greater would result in a significant impact, and any annual PM10 emissions increase of 1.0 g/m3 or greater would result in a significant impact. Construction activity along the project corridor would increase 24-hour PM10 concentrations by approximately 3.8 g/m3, and would exceed the significance threshold of 2.5 g/m3. Annual PM10 concentrations would increase by approximately 1.3 g/m3, and would exceed the significance threshold of 1.0 g/m3. Localized construction emissions would result in a significant localized construction air quality impact without mitigation.	***Potentially Significant***	**AQ-17 -** The construction contractor shall water exposed soil with adequate frequency to ensure that soil is continually moist per SMAQMD guidelines throughout the construction process.	***Significant and unavoidable***

Table 2-1 Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.1 Air Quality			
Impact AQ-3 – Impacts of operational emissions -The project would reduce automobile VMT and increase light rail VMT in the transportation system. The proposed project would increase emissions by 1.1 ppd for ROG and reduce emissions by 0.03 ppd for NOX. Emissions associated with the project would not exceed the ROG and NOX significance thresholds of 65 ppd.	***Less-than-significant***	***None required***	***Less-than-significant***
Impact AQ-4 – Impacts of CO Hotspots - The CO hotspot evaluation indicates one-hour CO concentrations under "project" conditions would be approximately 9 ppm at worst-case sidewalk receptors. Eight-hour CO concentrations under "project" conditions would range from approximately 5.3 to 5.5 ppm. The State one- and eight-hour standards of 20 and 9.0 ppm, respectively, would not be exceeded at the analyzed intersections. As shown in Table 3-4, CO concentrations would not exceed the State one- and eight-hour standards. No significant increase in CO concentrations at sensitive receptor locations is expected.	***Less-than-significant***	***None required***	***Less-than-significant***
Impact AQ-5 Toxic Air Contaminants Impacts - Construction TAC Impacts - The	***Potentially Significant***	**AQ-18 -** To ensure the proper handling and removal of ACMs identified on the project site, the follow mitigation is recommended:	***Less-than-significant***

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5.1 Air Quality			
greatest potential for TAC emissions during construction would be diesel particulate emissions from heavy equipment operations. The short-term project construction schedule of approximately 12 months would not result in a long-term source of TAC emissions. No residual emissions and corresponding individual cancer risks are anticipated after construction. **Asbestos Containing Materials (ACM)** Demolition of structures and earth disturbances may result in airborne entrainment of asbestos, particularly where structures include ACMs (e.g., insulated pipes, ducts, stacks, beams, ceiling tiles, walls, etc.) or in areas where soil contains naturally-occurring deposits of ACMs. Approximately three acres of land would be graded during the construction process with the potential to disturb naturally occurring ACMs. **Operational TAC Impacts** The proposed project would reduce regional VMT and associated TACs, and increase light rail VMT in the transportation system. The light rail would be electrically powered from existing utilities and would not emit diesel particulate matter.		In the event that the project site is identified as containing ACMs, either naturally-occurring or those found within structures, the construction contractor shall consult with the SMAQMD to ensure the proper handling and removal of ACMs.	
Impact AQ-6 – Odor Impacts **Construction Odor Impacts** - Potential	***Less-than-significant***	***None required***	***Less-than-significant***

Table 2-1 Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.1 Air Quality			
sources that may emit odors during construction activities include equipment exhaust and architectural coatings. Odors from these sources would be localized and generally confined to the immediate area surrounding the project site. The proposed project would utilize typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. The proposed project construction activity would not cause an odor nuisance. **Operational Odor Impacts** Land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies and fiberglass molding. The proposed project would not include any land use or activity that typically generates adverse odors. The proposed project operational activity would not cause an odor nuisance, and construction odors.			
Impact AQ-7 – Climate Impacts The proposed project would not result in the alteration of air movement, moisture, or temperature, or in any change in climate, either locally or regionally over and above what is currently experienced in that area.	***Less-than-significant***	***None required***	***Less-than-significant***

Table 2-1 Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.1 Air Quality			
Impact AQ-8 – Greenhouse Gas Impacts Construction activity would generate GHG emissions from the operation of heavy-duty equipment, truck travel, and worker commute. The entire construction process would generate approximately 587 tons of GHG emissions. The proposed project would reduce automobile VMT and increase light rail VMT in the transportation system. The proposed project would reduce regional automobile VMT by 40,525 miles per year. The proposed project would decrease GHG emissions compared to "no project" conditions by approximately 20 tons per year. The proposed project would result in less GHG emissions than "no project" conditions, which would be a beneficial global warming impact.	***Less-than-significant***	***None required***	***Less-than-significant***
Cumulative Air Quality Impacts			
Cumulative Impact AQ-9 - The proposed project would be developed within the right-of-way of an existing transportation corridor (7th and 8th Streets), and would not require a change in land use designation or rezoning prior to construction.	***Less-than-significant***	***None required***	***Less-than-significant***

Table 2-1 Summary of Impacts and Mitigation Measures			
Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measures**	**Level of Significance After Mitigation**
5.2 Transportation			
Impact TC - 1 Intersections Changes in distribution with the project may increase traffic volumes at some study area intersections and decrease volumes at others. At stop-sign controlled intersections, side street delay will increase. However, the changes in intersection operating conditions do not exceed the standards of significance for impacts to intersections.	***Less-than-significant***	***None required***	***Less-than-significant***
Impact TC-2 Pedestrian and Bicycle Impacts - The Light Rail Alternatives include a single-track within the right-of-way of 7th Street where 7th Street passes under the Union Pacific Rail Road, and assumes relocation of existing pedestrian and existing designated bikeways from 7th Street to a new underpass west of 7th Street by others. The Light Rail Alternative is not anticipated to result in unsafe conditions for pedestrians, including unsafe bicycle/ pedestrian or pedestrian/motor vehicle conflicts. During preliminary engineering for MOS-1, details of station layouts, including walkways and bicycle access, would be developed.	***Significant***	**TC-2 -** Provisions would need to be made for bicycles and pedestrians within the existing underpass during construction. The existing sidewalk would be widened as much as possible while providing a southbound traffic lane. This temporary facility will be designed and constructed in accordance with applicable state and City standards.	***Less-than-significant***

Table 2-1 Summary of Impacts and Mitigation Measures			
Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measures**	**Level of Significance After Mitigation**
5.2 Transportation (continued)			
Impact TC – 3 Transit Services -The Light Rail Alternative would increase demand for transit services. It would result in the addition of employees, residents, patrons, and visitors to the study area, some of whom would travel by transit. Although particular transit vehicles operate at or near capacity during the peak commuter periods, a review of existing transit operations and plans for future transit services indicate that there is ample capacity on the RT system to support the anticipated increase in transit utilization.	***Less-than-significant.***	***None required***	***Less-than-significant***
Impact TC-4 Parking **7th Street - F Street to H Street** Funding constraints could prevent construction of new track on 8th Street between G and H and on G between 7th and 8th. If funding is insufficient, NB trains would travel west on H Street then north on 7th instead of traveling north on 8th then west on G. Without the 8th to G Street connection, 7th Street track between G and H Streets would operate in both north and south directions. Two-way operations would require the displacement of additional on-street parking: All on-street spaces on both sides of 7th from F to G, 3 additional spaces on the west side between G and F, and all the spaces on the east side	***Less-than-significant***	**TC-4 -** Prior to beginning of construction, a construction traffic and parking management plan would be prepared by the Contractor to the satisfaction of the City traffic engineer and subject to review by all affected agencies. The plan would ensure that acceptable operating conditions on local roadways and freeway facilities are maintained. The plan would include: • The number of truck trips, time, and day of street closures. • Time of day of arrival and departure of trucks. • Limitations on the size and type of trucks, provision of a staging area with a limitation on the number of trucks that can be waiting.	***Less-than-significant***

Table 2-1 Summary of Impacts and Mitigation Measures			
Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measures**	**Level of Significance After Mitigation**
between G and F would be displaced. Based on April 2008 parking surveys conducted for the City of Sacramento, the existing supply is 27 spaces and the existing midday (10 a.m. to 2 p.m.) occupancy is 20 vehicles. Some parking is designated for police only, and would likely need to be relocated. Within approximately three blocks, the surveys indicated the midday availability of 109 on-street spaces. Therefore, the 20 potentially displaced vehicles could be accommodated nearby. There are also ample opportunities for off-street parking in the vicinity, including, in the short term, the lot located along the west side of 7th Street - this lot is property owned by Railyards and is planed for development during initial phases of their development.		• Provision of a truck circulation pattern. • Provision of driveway access plan so that safe vehicular, pedestrian, and bicycle movements are maintained (e.g., steel plates, minimum distances of open trenches, and private vehicle pick up and drop off areas). • Maintain safe and efficient access routes for emergency vehicles. • Manual traffic control when necessary. • Proper advance warning and Construction posted signage concerning street closures. • Provisions for pedestrian safety. A copy of the construction traffic management plan would be submitted to local emergency response agencies and these agencies should be notified at least 14 days before the commencement of construction that would partially or fully obstruct roadways.	
8th Street – H Street to I Street The proposed Light Rail Alternative includes a station platform for northbound trains on 8th Street between H and I Streets and would require elimination of additional spaces. The subject block has 11 parking / loading spaces along the west curb, and 7 spaces along the east curb. All of them were occupied during midday (10 a.m. to 2 p.m.) parking surveys conducted in April	***Less-than-significant***	***None required***	***Less-than-significant***

Table 2-1 Summary of Impacts and Mitigation Measures			
Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measures**	**Level of Significance After Mitigation**
2008 for the City of Sacramento. Within three blocks of the subject block, there are about 1,058 other on-street spaces. 946 of these other spaces were occupied during the midday surveys, or about 89 percent. While there are available on-street spaces to accommodate parking space elimination in the subject block, the overall occupancy in the area is very high (about 90 percent).			
Richards Boulevard Area The proposed Light Rail Alternative would go into the existing 2-lane section on 7th Street between Richards Boulevard and North B Street and would not eliminate parking. Future striping changes by others to make this section 4-lanes would likely eliminate on-street parking if the existing right-of way were maintained. The widening to 4-lanes is not part of the proposed Light Rail Alternative. On-street parking could be restricted in the future in the area around the Township 9 light rail station. However, the extent of where parking would be restricted or removed is not known. Most business and industry have available off-street parking lots that are not full - on-street parking appears to be	***Less-than-significant***	***None required***	***Less-than-significant***

Table 2-1 Summary of Impacts and Mitigation Measures			
Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measures**	**Level of Significance After Mitigation**
occurring for convenience, and could be accommodated off-street. No parking is required as part of the Light Rail Alternative.			
Cumulative Transportation Impacts			
• **Cumulative Impact TC-5** – Intersections - The project would increase traffic volumes in the study area. The changes in intersection operating conditions with the addition of the project exceed the standards of significance for impacts to intersections at the following three locations: • 8th Street / G Street – In the a.m. peak hour, the intersection level of service remains at LOS "D" with an increase in delay from 42.3 to 51.1, an increase of 8.8 seconds under the Cumulative Plus Light Rail Alternative - Railyards EIR Option. • 7th Street / H Street – In the p.m. peak hour, the intersection level of service remains at LOS "F" with an increase in delay from 114.3 to 132.0, an increase of 17.7 seconds under the Cumulative Plus Light Rail Alternative - Railyards EIR Option. • 7th Street design option: 7th Street / H Street – In the p.m. peak hour, the intersection level of service remains at LOS "F" with an increase in delay from114.3 to 162.4, an increase of	***Significant***	**TC-5 -** Intersection of 8th Street and G Street – Modify the traffic signal cycle length during the a.m. peak hour by increasing the signal cycle length from 50 seconds to 100 seconds. This mitigation measure would improve traffic operations to LOS "D" with 40.5 seconds of delay, less than the Cumulative No project Alternative - Railyards EIR Option. Intersection of 7th Street and H Street – Modify the traffic signal cycle length during the p.m. peak hour by increasing the signal cycle length from 50 seconds to 100 seconds. This mitigation measure would improve traffic operations to LOS "E" with 65.8 seconds of delay, less than the Cumulative No project Alternative - Railyards EIR Option. Intersection of 7th Street and H Street – Modify the traffic signal cycle length during the p.m. peak hour by increasing the signal cycle length from 50 seconds to 100 seconds. This mitigation measure would improve traffic operations to LOS "E" with 75.0 seconds of delay, less than the Cumulative No project Alternative - Railyards EIR Option. Intersection of 7th Street and G Street – Modify the traffic signal cycle length during the p.m. peak hour by increasing the signal cycle length from 50 seconds to 100 seconds.	***Less-than-significant***

Table 2-1 Summary of Impacts and Mitigation Measures			
Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measures**	**Level of Significance After Mitigation**
48.1 seconds under the Cumulative Plus Light Rail Alternative - Railyards EIR Option (with the 7th Street design option.) There is a relatively large increase under the 7th Street option at this location because if funding is insufficient for NB trains to travel north on 8th Street to G Street to 7th Street, all NB trains would travel west on H Street to 7th Street, through the 7th Street and H Street intersection. Under the 7th Street option, all NB and SB MOS-1 trains, as well as all existing EB and WB Gold Line trains would preempt this signal. • 7th Street / G Street – In the p.m. peak hour, the intersection level of service remains at LOS "F" with an increase in delay from 204.4 to 211.2, an increase of 6.8 seconds under the Cumulative Plus Light Rail Alternative - Network 1 Option.		This mitigation measure would improve traffic operations to LOS "F" with 185.0 seconds of delay, less than the Cumulative No project Alternative - Network 1 Option.	
5.3 Noise/Vibration			
Impact NV-1 Construction Noise Impacts - Construction of the project may expose the public to high noise levels. The Sacramento Municipal Code, Title 8 - Health and Safety, Chapter 8.68 – Noise Control, limits construction activity to the period between the hours of 7:00 a.m. and 6:00 p.m. Monday through Saturday. Construction is also limited to the hours between 9:00 a.m. and 6:00 p.m. on Sunday. However, the	***Potentially significant***	**NV-1 -** Noise control devices, such as equipment mufflers, enclosures, and barriers can be used to reduce construction noise. Natural and artificial barriers such as ground elevation and existing buildings can shield construction noise. Staging areas should be kept as far from sensitive noise receptors as possible. Noise barriers, such as temporary walls or piles of excavated material, should be constructed between noisy activities and	***Less-than-significant***

Table 2-1 Summary of Impacts and Mitigation Measures			
Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measures**	**Level of Significance After Mitigation**
Codes do not mandate maximum allowable construction noise levels. Provided that the proposed construction activities occur during the allowed hours specified above, no significant construction noise impacts are anticipated. Table 5.3-3 summarizes construction noise levels at various distances.		noise-sensitive receivers. Avoid residential areas when planning haul truck routes. Replace noisy equipment with quieter equipment, such as vibratory pile driver instead of a conventional pile driver, enclosed air compressors, and mufflers on all engines.	
Impact NV-2 Construction Vibration Impacts - Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. The operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings founded on the soil in the vicinity of the construction site respond to these vibrations with varying results ranging from no perceptible effects at the lowest levels, low rumbling sounds, and perceptible vibrations at moderate levels and slight damage at the highest levels. Heaviest pieces of equipment such as a vibratory roller would be the most dominant source of overall construction vibration. The vibration levels created by the normal movement of vehicles including graders, front loaders, and backhoes are the same order-of-magnitude as the ground-borne vibration created by heavy trucks traveling on streets and highways. A vibratory roller, the highest vibration-generating	***Less-than-significant***	***None required***	***Less-than-significant***

Table 2-1 Summary of Impacts and Mitigation Measures			
Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measures**	**Level of Significance After Mitigation**
equipment for this project, would create ground-borne vibration levels up to 0.21 in/sec as PPV at 25 feet from the center of activity (FTA, 2006). The closest distance between any susceptible building structures and the new alignment is at least 40 ft away. Therefore, construction vibration levels at the adjacent structures would be less than 0.25 in/sec for fragile buildings. No significant vibration impacts are anticipated during the construction activities.			
Impact NV-3 Operational Noise Impacts - Operation of the proposed project may permanently expose sensitive receptors to increased noise levels. Noise-sensitive land uses that might be affected by the operation of the proposed project include two single-family residences shown on Figure 5.3-1. The interior noise level criterion of 45 dBA is applied to assess future noise impact according to the City's 1998 and 2030 General Plans. The interior noise level criterion of 45 dBA is applicable to residential uses and transient lodgings where people normally sleep. Noise sensitive sites are determined to be impacted by the future project if either incremental exterior noise criteria or the interior noise level criterion of 45 dBA is exceeded. According to the calculations, two	***Potentially significant***	**NV-3 -** Sound insulation could be used to reduce impacts by adding glazing to windows, or replacing outdated single-paned windows to acoustically-rated modern dual-pane windows. These forms of sound insulation can result in a 10 to 30-dB reduction; thus, the noise levels would be mitigated. The types and details of window material and design shall be discussed during the final stage of design. At locations along the alignment where there are tight-turn radii in the tracks, wheel squeal may become a source of noise complaints. To avoid wheel squeals, it is recommended that the track turn radius be kept above 1,000 feet at all locations. However, RT is aware that one turning radius would be 82 feet. Rail lubrication on sharp turns would be used to reduce or minimize squeals. As rails wear, both noise levels may increase.	***Less than Significant***

Table 2-1 Summary of Impacts and Mitigation Measures			
Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measures**	**Level of Significance After Mitigation**
single-family residences on 7th Street north of G Street would receive operational noise impacts because of the new LRT operation. The transit operational noise resulting from the proposed project is similar to that of the ambient noise at this location Table 5.3-4. As stated in "Exterior Incremental Noise Impact Standards for Noise Sensitive Uses" of the City's 2030 General Plan, the cumulative noise including both ambient and project noise levels cannot constitute more than 1-dB incremental noise when the ambient noise levels exceed 65 dBA. The LRT vehicles have warning devices that are sounded as the vehicles enter the stations and at-grade crossings. The City does not impose a quantitative noise limit specifically on warning devices. A noise criterion for warning devices recommended by American Association of Railroads' Signal Manual specifies that the noise levels of a warning bell should not be more than 105 dBA and not less than 75 dBA at a point 10 feet from the source. The warning device must be clearly audible to alert pedestrians or drivers on the roadways of imminent train pass-bys.		Grinding down or replacing worn rail will assist with maintaining operating levels of noise and vibration. Also, wheel truing, the grinding down of flat spots on the rails' wheels that occur due to braking, will reduce noise and vibration effects. Overall vehicle maintenance will help reduce the likelihood of increased noise and vibration. In regards to the warning device, transit gongs are designed to be clearly audible for safety reasons. Various gong sounding treatment options or mounting modifications can be applicable for noise reduction. .	

Table 2-1 Summary of Impacts and Mitigation Measures			
Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measures**	**Level of Significance After Mitigation**
Impact NV-4 – Operational Vibration Impacts - Operation of the proposed project may permanently expose sensitive receptors to increased vibration levels. The proposed LRT vehicles for this project would be similar to the vehicles in existing service for the Blue and Gold lines. The current revenue vehicles are manufactured by Siemens Transportation Systems and Construcciones y Auxiliar de Ferrocarriles. As a result, future pass-by vibration levels would closely resemble the levels currently experienced by the adjacent sensitive receptors. For sensitive receptors north of H Street, the new proposed LRT service would be a new source of ground-borne vibration. According to the results summarized in Table 5.3-2, LRT pass-by Peak Particle Velocity (PPV) vibration levels are lower by almost an order of magnitude than the City's required 0.5 in/sec for residential structures and 0.25 in/sec for historical buildings. For the new construction segment of the proposed alignment north of H Street, the closest residential structure is at least 50 feet away from the proposed tracks. Measured vibration levels were recorded at approximately 50 feet away from existing tracks. These measured vibration levels can be used to estimate future operational vibration impacts at	***Less-than-significant***	***None required***	***Less-than-significant***

Table 2-1 Summary of Impacts and Mitigation Measures			
Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measures**	**Level of Significance After Mitigation**
the residences north of H Street due to their comparable distances to the source. According to the measured levels, these residences would experience LRT pass-by vibration levels in the range of 0.008 and 0.048 in/sec that are well below the City's mandated vibration levels of 0.5 in/sec for residential structures and 0.25 in/sec for historical buildings. No operational vibration impacts are anticipated for these residences north of H Street.			
Cumulative Noise Impacts			
Overall noise increase due to the proposed LRT operation would be perceived at nearby sensitive locations in various levels. Along the new alignment north of H Street, the project would result in an approximate increase of 3-dB of cumulative noise levels at nearby sensitive locations including two single-family residences.	***Less-than-significant***	***None required***	***Less-than-significant***
No significant cumulative vibration impacts are anticipated.	***Less-than-significant***	***None required***	***Less-than-significant***

Table 2-1 Summary of Impacts and Mitigation Measures			
Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measures**	**Level of Significance After Mitigation**
5.4 Aesthetics			
Impact VIS -1 Visual Intrusion into Historic Ares - The addition of the OCS near the homes in the historic Alkali Flat Neighborhood district, would cause a visual intrusion along the edge of the neighborhood.	***Potentially significant***	**VIS-1 -** Work with the community during preliminary through final design to develop Aesthetic and Design Guidelines for the project improvements through a formalized structure that allows for community input (Context Sensitive Solutions). Design the overhead contact system (OCS) to preserve the existing mature street trees along 7th Street in the Alkali Flat Neighborhood area.	***Less-than-significant***
Impact VIS-2 Removal of Mature Trees Along 7th Street - Along 7th Street the project is likely to lower the existing visual quality, especially if the construction requires the removal of the existing street trees, which would be a substantial impact to the streetscape.	***Potentially significant***	**VIS-2 -** Design the OCS to preserve the existing mature street trees along 7th Street in the Alkali Flat Neighborhood area. If trees are impacted, replacement trees would be planted to restore the Alkali Flat view shed.	***Less-than-significant***
Impact VIS-3 Visual Intrusion of OCS Previous Visual and Aesthetic Resource analysis (DNA Corridor Draft PEIR, July 2007) have identified the inclusion of the OCS as a significant visual impact (Impact VIS-3). The poles and associated overhead lines would add a significant element of visual clutter to the views, particularly along 7th Street, south of the underpass, where there are currently no overhead lines, such as power and telephone lines. From North B to Richards Boulevard and along Richards Boulevard, such overhead lines already exist, so the addition of the catenary lines would not be a significant addition here.	***Potentially significant***	**VIS-3 -** Work with the community during preliminary through final design to develop Aesthetic and Design Guidelines for the project improvements through a formalized structure that allows for community input (Context Sensitive Solutions).	***Significant and unavoidable***

Table 2-1 Summary of Impacts and Mitigation Measures			
Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measures**	**Level of Significance After Mitigation**
Cumulative Aesthetic Impacts			
No significant cumulative visual impacts associated with the MOS-1 Project.	***Less-than-significant***	***None required***	***Less-than-significant***
Appendix A			
Cultural Resources			
Downtown Sacramento has many subsurface cultural resources that are under pavement and buildings and at depth under previously disturbed areas. The location of many of these cultural resource sites are unknown and cannot be identified through pre-construction activities. Therefore, it is possible that deeper earthmoving and excavation during construction could disturb unknown archaeological or paleontological resources beneath the surface.	***Potentially significant***	**CR-1 -** Implement preconstruction training for construction employees to familiarize them with cultural resources and to explain the protocols on how to proceed if subsurface cultural resources are encountered during construction. The legal ramifications of impacting cultural resources will also be explained. **CR-2 -** A qualified archaeologist, who is certified by the Society of Professional Archeologists (SOPA) and/or meet the federal standards as stated in the Code of Federal Regulations (36 CFR 61) should monitor the project site during earthmoving or excavation construction activities (deeper than 12 to 18 inches). A site-specific cultural resource monitoring plan will be developed by Regional Transit, prior to construction, once the construction activities are better defined.	***Less-than-significant***

Table 2-1 Summary of Impacts and Mitigation Measures			
Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measures**	**Level of Significance After Mitigation**
Appendix A: Cultural Resources			
		CR-3 - In the event that any prehistoric subsurface archeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, animal bone, obsidian and/or mortars are discovered during construction-related earth-moving activities, all work within 50 yards of the resources shall be halted, and the qualified archaeologist would assess the significance of the find and monitor the site. Archeological test excavations shall be conducted by a qualified archeologist to aid in determining the nature and integrity of the find. If the find is determined to be significant by the qualified archeologist, RT representatives and the qualified archeologist shall coordinate to determine the appropriate course of action. All significant cultural materials recovered shall be subject to scientific analysis and professional museum curation. In addition, a report shall be prepared by the qualified archeologist according to current professional standards. The report will be submitted to RT.	

Table 2-1 Summary of Impacts and Mitigation Measures			
Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measures**	**Level of Significance After Mitigation**
Appendix A: Cultural Resources			
		CR-4 - If a Native American site is discovered, the evaluation process shall include consultation with the appropriate Native American representatives. If Native American archeological, ethnographic, or spiritual resources are involved, all identification and treatment shall be conducted by qualified archeologists, and Native American representatives, who are approved by the local Native American community as scholars of the cultural traditions. In the event that no such Native American is available, persons who represent tribal governments and/or organizations in the locale in which resources could be affected shall be consulted. If historic archeological sites are involved, all identified treatment is to be carried out by qualified historical archeologists.	
		CR-5 - If a human bone or bone of unknown origin is found during construction, all work shall stop in the vicinity of the find, and the County Coroner shall be contacted immediately. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission, who shall notify the person most likely believed to be a descendant. The most likely descendant shall work with the contractor to develop a program for re-internment of the human remains and any associated artifacts.	

Table 2-1 Summary of Impacts and Mitigation Measures			
Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measures**	**Level of Significance After Mitigation**
		No additional work is to take place within the immediate vicinity of the find until the appropriate actions have taken.	
Appendix A: Water			
The relocation of utilities and project-related excavations may be up to 60 inches deep and some of the OCS foundations may be 15 to 20 feet deep. Groundwater depths range from 14 to 33 feet, with an average of approximately 20 feet. The contractor would follow Central Valley Regional Water Quality Control Board requirements to ensure that such activities would not result in substantial changes in groundwater flow or quality	***Potentially significant***	**WAT -** In the event that groundwater is encountered during construction, dewatering would be conducted locally. Dewatering effluent would be tested for contamination. Contaminated effluent would be disposed of in accordance with applicable federal, state, and local regulations.	***Less-than-significant***
Appendix A: Hazards			
Construction of the proposed project may involve the relocation of utilities and project-related excavations up to 60 inches deep and some of the OCS foundations may be 15 to 20 feet deep. If any of the excavations occur within 10 potential hazardous substance sites, including the Railroads area, in the project area (shown in Table 9-1 and Figure 5).	***Potentially significant***	**HM-1 - Confirming the Status of Remediation Activities**. If any of the excavations occur within the Railroads area, a review will be conducted of the remediation status of the site. If remediation activities will be complete before construction of the project, then no further mitigation will be necessary. If remediation would not be completed prior to project construction, then an alternate mitigation plan will be prepared and implemented.	***Less-than-significant***

Table 2-1 Summary of Impacts and Mitigation Measures			
Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measures**	**Level of Significance After Mitigation**
Appendix A: Hazards			
		HM-2 - Site Evaluation. If any of the excavations occur within the other nine potential hazardous substance sites in the project area (see Table 9-1), a Phase II Site Specific Evaluation will be made of any known and suspected contaminated sites that would be disturbed by construction operations before any soil is removed from affected areas for construction, using the following procedure: 1) implementation of a Worker Health and Safety Plan; 2) preparation of a site-specific work plan specifying the proposed location for surface samples or soil borings or trenches; 3) soil boring or trenching and sample collection; 4) laboratory analysis of samples; and 5) preparation of a findings and recommendations report. If the site-specific evaluations determine that contaminants are present, RT will determine the type and extent of contamination and will prepare and implement a remediation plan to avoid risks to public health and safety.	

Table 2-1 Summary of Impacts and Mitigation Measures			
Impact	**Level of Significance Prior to Mitigation**	**Mitigation Measures**	**Level of Significance After Mitigation**
Appendix A: Hazards			
		HM-3 - Worker Health and Safety Plan & Training. To avoid health effects on construction personnel, all personnel who may come in contact with contaminated soil or groundwater would be trained in accordance with the OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) standard (29CFR 1910. 120). A site-specific worker health and safety plan defining potential contaminants and, where appropriate, proper personnel protective equipment would be employed. Proper decontamination procedures for workers and equipment would be followed. **HM-4 - Notify Appropriate Regulatory Agencies and Enact Specific Mitigation Plans.** RT will notify the State Department or Toxic Substances Control, Sacramento County Environmental Health Department and the local fire department of any contaminants encountered during construction.	

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

March 30, 2009

Mr. Paul Marx
Sacramento Regional Transit District
P.O. Box 2110
Sacramento, CA 95812-2110

Subject: DNA Light Rail Transit MOS-1 Project
SCH#: 2008112042

Dear Mr. Paul Marx:

1-1 The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. The review period closed on March 26, 2009, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Terry Roberts

Terry Roberts
Director, State Clearinghouse

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2008112042
Project Title DNA Light Rail Transit MOS-1 Project
Lead Agency Sacramento Regional Transit District

Type **EIR** Draft EIR

Description The MOS-1 Project would be located in Downtown Sacramento and would extend along 7th Street between the Alkali Flat Neighborhood and the Richards Blvd. Redevelopment Area to the north. The RT Downtown Natomas Airport Light Rail Transit MOS-1 Project would consist of the construction of a 1 mile extension of the current Light Rail system from H Street to Richards Blvd in Downtown Sacramento. Northbound trains would leave the existing track at 8th Street and H Street, proceed north on 8th Street to G Street, west for one block on G Street and north along North 7th Street to Richards Blvd. Southbound trains would go south on 7th Street, intersecting the existing track running in the North 7th Street traffic lanes from North B Street to Richards Blvd, and an exclusive double-track on the north side of Richards Blvd west of North 7th Street.

Lead Agency Contact

Name Mr. Paul Marx
Agency Sacramento Regional Transit District
Phone 916.556-0507 **Fax** 916 557-4519
email
Address P.O. Box 2110
City Sacramento **State** CA **Zip** 95812-2110

Project Location

County Sacramento
City
Region
Lat / Long
Cross Streets 7th & H to 7th & Richards Blvd
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways
Airports
Railways UPRR
Waterways American and Sacramento Rivers
Schools
Land Use

Project Issues Air Quality; Aesthetic/Visual; Archaeologic-Historic; Noise; Toxic/Hazardous; Traffic/Circulation; Water Supply

Reviewing Agencies Resources Agency; Department of Fish and Game, Region 2; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, District 3; Air Resources Board, Transportation Projects; Regional Water Quality Control Bd., Region 5 (Sacramento); Department of Toxic Substances Control; Department of Corrections; Native American Heritage Commission; Public Utilities Commission

Date Received 02/10/2009 **Start of Review** 02/10/2009 **End of Review** 03/26/2009

Note: Blanks in data fields result from insufficient information provided by lead agency.

Response to Comments
Submitted by: Terry Roberts, Director – State Clearinghouse
State of California – Governor's Office of Planning and Research
State Clearinghouse and Planning Unit
30 March 2009

1-1

Thank you for your letter indicating that no state agencies commented on the Draft EIR and that Regional Transit has complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

CALIFORNIA STATE
RAILROAD
MUSEUM

March 27, 2009

Mr. Don Smith, Senior Planner
Sacramento Regional Transit District
PO Box 2110
Sacramento, CA 95812
dsmith@sacrt.com

Regional Transit DNA MOS-1 Draft Environmental Impact Report Comments (State Clearing House # 2008112042)

Dear Mr. Smith:

The following comments are submitted on behalf of the California State Railroad Museum, a unit of California State Parks that collects, preserves and interprets the rich heritage of railroading in California in the West. The Museum is widely regarded as the finest and most popular railroad museum in North America, and one of the top two in the entire world.

As you are aware, California State Parks is an interested party because it is a property owner of adjacent land in Old Sacramento and along the Railyards' riverfront, a tenant of current property owner Thomas Enterprises, and a potential landowner and museum operator within the Central Shops Historic District of the Railyards. As such, we are submitting the following comments, tied to the relevant sections of the Draft EIR:

2-1 As you know, the MOS-1 line will cross Track 150 at-grade in the Railyards as it follows Seventh Street north to Richards Boulevard. Track 150 currently provides rail access to the California State Railroad Museum complex, including the Museum's facilities and operations in Old Sacramento and extending southward to provide both freight service and excursion train rides, plus the Museum's current maintenance and repair shops in the Railyards and its proposed Railroad Technology Museum. The Museum's track connection to the Union Pacific mainline (and thus the North American general railroad system) is federally prescribed.

2-2 The Draft EIR appears to reference this at-grade "diamond" crossing of Track 150 only in section 4.2.2 Other Alternatives, thus it is unclear to us what suppositions have been used relative to this track crossing in preparing this document. Of concern to us are the timelines that are being, or may be, contemplated for eventual removal of Track 150 and the MOS-1 line's at-grade "diamond" crossing thereof.

2-3 We are writing to comment on the DEIR because of a statement made at the March 11, 2009 Public Workshop regarding the MOS-1 DEIR. At this meeting, a staff member from HDR, Inc. (one of the firms involved in project planning) noted in his public presentation that the at-grade crossing of Track 150 was only temporary, and that Track 150 and the diamond crossing would be removed just as soon as the Track Relocation Project (currently in design to move the Union Pacific/Capitol Corridor mainline tracks) was complete. This statement is not correct; Track 150 cannot be removed until a feasible replacement alignment has been adopted, and a new access track constructed. Currently there is not an adopted alignment providing this access, therefore the at-grade diamond crossing of Track 150 could potentially be in place for some time to come.

Thank you for this opportunity to comment on the DEIR.

Sincerely,

Paul Hammond
Museum Director
California State Railroad Museum

Cc: Catherine A. Taylor, District Superintendent, Capital District
Gary L. Riddle, Program Manager, Union Pacific Railroad

Response to Comments
Submitted by: Paul Hammond, Museum Director
California State Railroad Museum
27 March 2009

2-1

Comment noted.

2-2

The at-grade "diamond" crossing between the proposed bi-directional single-track for the DNA MOS-1 LRT Project on the east side of 7th Street and Track 150 will be added to the Project Description in Section 3.1. RT has discussed the at-grade crossing with the Union Pacific Railroad and the California Public Utilities Commission. RT will coordinate with Union Pacific Railroad, the Federal Railroad Administration, and the Public Utilities Commission for the necessary approvals to construct the at-grade crossing, including providing an opportunity for design review. The improvements to allow for the at-grade crossing would remain until Track 150 is removed. The design and installation of safety devices for this crossing would not assume the near-term removal of Track 150.

2-3

The commenter is correct that Track 150 would not be removed until a replacement has been constructed. The removal of Track 150 is not related to the DNA MOS-1 Project, and the DNA MOS-1 Project does is not affected by the schedule of Track 150's removal.

PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

March 24, 2009

Mr. Paul Marx
Sacramento Regional Transit District
P.O Box 2110
Sacramento, CA 95812-2110

Re: Draft Environmental Impact Report (DEIR)
DNA Light Rail Transit MOS-1 Project
SCH# 2008112042

Dear Mr. Marx:

We have completed our review of the DEIR and offer the following comments:

3-1 As a responsible agency under CEQA section 15381 we concur with the inclusion of the following CPUC General Order application requirements referenced in the DEIR.

Section 99152 of State of California Public Utilities Code and FTA 49 CFR Part 659 Final Rule requires the California Public Utilities Commission (CPUC) to provide safety oversight of rail fixed guideway systems. The design criteria of the proposed project must comply with CPUC General Orders (GOs), such as "Safety Rules and Regulations Governing Light-Rail Transit", (GO) 143-B, "Rules and Regulations Governing State Safety Oversight of Rail Fixed Guideway Systems", GO 164-D, "Overhead Electric Line Construction", GO 95, and “Regulation, Governing the Construction, Reconstruction, Maintenance and Operation of Automatic Train Control Systems with Respect to Train Detection and Separation, Route Interlocking, Speed Enforcement and Right of Way Hazard Protection on Rapid Transit Systems requirements”, GO 127.

3-2 We further recommend that the above requirements be included in the mitigation monitoring section of the FEIR for CEQA compliance. If you have any questions regarding this oversight, please contact David Stewart at (916) 324 -7134.

Sincerely,

Moses Stites
Rail Safety Corridor Specialist
Consumer Protection and Safety Division
Rail Transit and Crossings Branch
515 l Street, Suite 1119
Sacramento, CA 95814

Response to Comments
Submitted by: Moses Stites, Rail Safety Corridor Specialist
Public Utilities Commission – Consumer Protection and Safety Division
24 March 2009

3-1

Comment noted. The CPUC General Order application requirements were referenced in the DEIR.

3-2

Comment noted. The CPUC General Order application requirements will be included in the mitigation monitoring plan section of the FEIR for CEQA compliance.

State of California • Arnold Schwarzenegger, Governor
State and Consumer Services Agency
DEPARTMENT OF GENERAL SERVICES
Real Estate Services Division - Asset Management Branch
707 Third Street, 6th Floor • West Sacramento, CA 95605 • (916) 376-1900
Fax (916) 376-1895 • www.dgs.ca.gov

March 25, 2009

Mr. Don Smith, Senior Planner
Sacramento Regional Transit District
P.O. Box 2110
Sacramento, CA 95812-2110

SUBJECT: Downtown-Natomas-Airport (DNA) Light Rail
MOS-1 Draft Environmental Impact Report

Dear Mr. Smith:

Thank you for the opportunity for the California Department of General Services (DGS) to comment on the Draft Environmental Impact Report (EIR) for the DNA Light Rail Transit MOS-1 Project (the Project), in the City of Sacramento.

The DGS is interested in the Project because the DGS owns 17.32 acres at 344 North 7th Street, at the intersection of North 7th Street and Richards Boulevard. This property is adjacent to a portion of the proposed one-mile DNA light rail extension, known as the MOS-1 Project, which would run from downtown Sacramento, along 7th Street to Richards Boulevard. The site is also across the street from the light rail station proposed to be constructed at the Township 9 Development. The DGS Office of State Publishing, State Printing Plant (SPP) provides printing and communication solutions for State, federal, county and city agencies, and is housed in 323,460 gross square foot in two buildings on this property. The DGS has had a vested interest as a land owner in this area for over 50 years, and has always seen this as a significant State-owned property, going back as far as 1953 when the SPP was constructed at the site.

4-1 The DGS appreciates that construction of the Project would help to promote increased urban densities around the transit station to be built at Richards Boulevard and North 7th Street. The DGS considers this beneficial because it would promote the economic vitality of the area and fulfill the community vision of Transit Oriented Development. Please note in the development of the Draft Program Environmental Impact Report, two assumptions were made regarding the SPP site. The first, to which the DGS has committed, includes the DGS

4-2 granting a future easement to allow for North 7th Street to be widened to four lanes, an action that would result in partial demolition of the SPP, and could be undertaken only when a new State Printing Plant has been constructed and is operational. The second assumption, on which the DGS has not had any detailed discussions with the City of Sacramento, includes the extension of Bannon Street through the SPP site parallel to Richards Boulevard

4-2 cont'd. to North 7th Street. The DGS has a continued commitment to the State Printing Plant site, therefore we cannot agree to any activity that would affect the site until decisions are made regarding its long-term use. Additionally, there is a 20-foot wide Pacific Gas and Electric (PG&E) power easement improved with an overhead 12 kw line crossing the property above ground midway on the property. PG&E's rights under the easement run with the land,

4-3 therefore negotiations with PG&E must be taken into consideration for any future development plans for the site.

4-4 As a property owner adjacent to the Project site, the DGS is concerned with the effect the Project's construction would have on the area immediately surrounding the SPP, the impact that a potential shortage of parking in the area could have on the SPP site, the effects that increased traffic would bring to the neighborhood, and the possible safety issues that could result with the establishment of new light rail stations and parking areas.

4-5 Construction activities on this phase of the Project include substantial work planned to the roads in the Richards neighborhood, including utility relocation, which would be the most intensive along North 7th Street and Richards Boulevard. This would significantly impact access for the businesses along Richards Boulevard, potentially including access interruption to the State Printing Plant by its employees and customers. The SPP operates three shifts per day. For six months of the year, crews run on Saturday and Sunday, as well. Approximately 480 employees work at the SPP. Most SPP employees commute in their own vehicles and there is no close public parking. During shift changes, 405 employees arrive and leave the SPP parking lot at the same time. Construction could cause periodic blocking of SPP driveways, and lead to congestion, unexpected traffic delays, and lost productivity. Access to 320 employee spaces during shift changes is critical to the operation of the presses and bindery equipment.

4-6 The traffic coming to and from the new station at North 7th Street and Richards Boulevard would result in traffic increases on some roadways in the surrounding neighborhood, including some intersection impacts related to increases in delay due to new at-grade rail crossings.

4-7 Lastly, the DGS is concerned about any safety and security issues that might arise from the operation of the new station at Richards Boulevard and North 7th Street.

Thank you again for the opportunity to respond to the Draft Environmental Impact Report for the DNA Light Rail Transit MOS-1 Project, and we hope the information we have shared is useful to you. If you have any questions, please contact Liz Ames at (916) 376-1831.

Sincerely,

Zachary Miller
Assistant Branch Chief

Response to Comments
Submitted by: Zachary Miller, Assistant Branch Chief
Real Estate Services Division – Department of General Services
26 March 2009

4-1

Comment noted. Thank you for your support of the proposed project.

4-2

Comment is noted regarding DGS commitment to granting a future easement to allow for North 7th Street to be widened to four lanes, after a new SPP is constructed and operational. Comment regarding DGS' concerns over the proposed future extension of Bannon Street through the SPP site is also noted. As noted in the DEIR on page 5.2-19 and illustrated in Figure 5.2-5, future proposed roadways in the study area were based upon roadway geometrics contained in the City of Sacramento's recently adopted Railyards EIR.

4-3

The DNA MOS-1 Project would not affect PG&E 12kV line or the associated 20-foot-wide easement.

4-4

The comment expresses concern over several effects including:

- Construction around the SPP (**see response 4-5**);
- Parking impacts in the area;
- Effects of increased traffic (**see response 4-6**); and
- Possible safety issues (**see response 4-7**).

This response discusses parking impacts in the area around the Richards Boulevard Station and on 7th Street between North B Street and Richards Boulevard with the City's requested outside lane alignment.

The determination of the significance of the parking impact is based upon the criteria specified in the thresholds of significance. For this document, the threshold of significance for parking is based upon the practice of the City of Sacramento. As noted in the DEIR on page 5.2-13, "a significant impact to parking would occur if the proposed project parking supply were less than the estimated parking demand." Additionally, the City deems that an impact is not significant if the project is consistent with the parking requirements stipulated in the City Code (zoning ordinance). Therefore, as the project is not required to provide parking per the City Code, the impact is determined to be "less than significant."

For clarification purposes, the threshold of significance for parking is revised to current City practice (see, for example, Railyards Specific Plan, Draft Environmental Impact Report, August 2007, page 6.12-60):

> "For the purposes of this analysis, impacts to parking are considered significant if the project would:
>
> - Result in parking demand that exceeds the available or planned parking supply. However, the impact would not be significant if the project is consistent with the parking requirements stipulated in the City Code."

It is recognized that the Richards Boulevard Station will likely result in transit riders accessing the station via automobile. Such automobiles could be accommodated via existing on-street parking in the station vicinity. The demand for on-street parking is self-regulating; as nearby parking becomes occupied, it becomes less desirable for transit patrons to walk longer distances to access the station. As noted in the DEIR (page 5.2-19), existing on-street parking oriented to local industries and businesses can be readily accommodated in available private off-street lots; most on-street parking today in the Richards area occurs for convenience purposes.

At this time, no decisions have been made by the City regarding the supply, regulation, and potential cost of on-street parking in the vicinity of the Richards Boulevard Station. A potential exists for off-street station parking, although such plans are indefinite at this time. As noted in the response to 6-2, Regional Transit will coordinate with the City of Sacramento Parking Division regarding future parking options.

The proposed project would place light rail track in the number one travel lanes on North 7th Street between Richards Boulevard and North B Street and would not eliminate parking. Comments on the DEIR received from the City of Sacramento request modification of the proposed line to locate track in the number two travel lanes. This would require elimination of all parking on both sides of North 7th Street.

Based on midday field reviews conducted on 3/26/09, less than half of the approximately 69 available on-street spaces were occupied; 22 vehicles were parked on the west side, and 7 vehicles and 1 big rig truck were parked on the east side of North 7th Street between North B Street and Richards Boulevard. The subject block has 40 parking / loading spaces along the west curb, and 29 spaces along the east curb.

Within one block of the subject block, parking is available on dirt shoulders on North B Street east and west of North 7th Street. There were 42 available spaces along the south side of North B Street west of North 7th Street, and 31 available spaces on the south side of North B Street east of North 7th Street.

Occupancy surveys conducted in March 2009 show overall occupancy in the area is very low. While moving track from the number one to the number two travel lanes would eliminate on-street parking, adequate additional parking is available within one block.

The proposed project would place light rail track in the number one travel lanes on North 7th Street between Richards Boulevard and North B Street and would not eliminate parking. Comments on the DEIR received from the City of Sacramento request modification of the proposed line to locate track in the number two travel lanes. This would require elimination of all parking on both sides of North 7th Street.

4-5

Regional Transit recognizes construction could include disruptions to the transportation network near the SPP, including the possibility of temporary lane closures, street closures, sidewalk closures, and bikeway closures. Pedestrian, bicycle, and transit access may be disrupted. Heavy vehicles may access the site and may need to be staged for construction. These activities could result in degraded roadway operating conditions.

Prior to beginning of construction, a construction traffic and parking management plan would be prepared by Regional Transit to the satisfaction of the City traffic engineer and subject to review by all affected agencies. The plan would ensure that acceptable operating conditions on local roadways and freeway facilities are maintained. The plan would include:

- The number of truck trips, time, and day of street closures.
- Time of day of arrival and departure of trucks.
- Limitations on the size and type of trucks, provision of a staging area with a limitation on the number of trucks that can be waiting.
- Provision of a truck circulation pattern
- Provision of driveway access plan so that safe vehicular, pedestrian, and bicycle movements are maintained (e.g., steel plates, minimum distances of open trenches, and private vehicle pick up and drop off areas).
- Maintain safe and efficient access routes for emergency vehicles.
- Manual traffic control when necessary.
- Proper advance warning and Construction posted signage concerning street closures.
- Provisions for pedestrian safety.

A copy of the construction traffic management plan would be submitted to local emergency response agencies and these agencies should be notified at least 14 days before the commencement of construction that would partially or fully obstruct roadways.

Per Section 3.1, Project Description of the Draft EIR, the LRT tracks from North B Street to Richards Boulevard would be supported by a 12 to 18-inch thick track slab. Excavation can be performed underneath a track slab without the need for extensive shoring or reconstruction of the track.

4-6

Transportation and Circulation are discussed in Section 5.2-1 of the DEIR. As noted in the DEIR on pages 5.2-15 and 5.2-22, changes in traffic distribution with the project may increase volumes at some study area intersections and decrease volumes at others. At stop-sign controlled intersections, side street delay will increase. However, the changes in intersection operating conditions do not exceed the standards of significance for impacts to intersections in the Richards Area.

4-7

As described on page 4.10-2 of the DNA PEIR, "security for the existing light rail system consists of a combination of contracted law enforcement officers, RT transit officers, and contract private security guards. RT maintains a fixed-term contract with both the Sacramento City Police Department and Sacramento County Sheriff's Department. The contracts call for each department to provide officers/deputies and management personnel expressly dedicated to providing for the safety and security of RT's passengers, employees, and facilities. These law enforcement officers work closely with local law enforcement to prevent and respond to crimes and to address quality-of-life issues at Park-and-Ride facilities, at stations, and on light rail and bus vehicles.

The RT police force responds to emergency calls and patrols the transit system. Security forces are also contracted to be present on the RT vehicles, at stations, and in Park-and-Ride lots to serve as a deterrent to criminal activities and to provide customer service. Security on light rail and bus vehicles is provided in the evenings, seven days a week. Currently, most of the security guards are deployed at Park-and-Ride lots and light rail stations."

SACRAMENTO METROPOLITAN
AIR QUALITY
MANAGEMENT DISTRICT

Larry Greene
AIR POLLUTION CONTROL OFFICER

March 27, 2009

SENT VIA E-MAIL

Mr. Don Smith
Sacramento Regional Transit District
P.O. Box 2110
Sacramento, CA 95812-2110

Subject: Downtown Natomas Airport Light Rail Transit MOS-1 Project Draft Environmental Impact Report

Dear Mr. Smith:

Thank you for providing the Draft Environmental Impact Report (EIR) for the Downtown Natomas Airport Light Rail Transit MOS-1 project (DNA MOS-1) to the Sacramento Metropolitan Air Quality Management District (SMAQMD) to review. This project improves transit facilities and will result in a net reduction in air pollutants associated with vehicle travel. SMAQMD comments focus on providing additional construction impacts on air quality, and on assessing the project's impacts on pedestrian and bicycle travel. SMAQMD comments follow.

Operational Impacts
To fully assess the project's operational impacts, it is important to have as much project information as possible. The following information would provide a fuller description of the project:

5-1 • Please provide graphics that detail sidewalk improvements and pedestrian crossings, track alignments, bicycle access and other improvement specifications. This kind of graphic was available as an exhibit at the March 11, 2009 open house for the project. Providing this graphic in the environmental document would help full public understanding of the project. Providing cross-sections of the project for the 7th Street underpass area would also be helpful.

5-2 • Please describe bicycle parking facilities at the proposed light rail stations, especially Richards Boulevard station.

5-3 • Please discuss the project's consistency with existing land use plans for the area. For example, the Sacramento Railyards Specific Plan provides cross-sections for portions of 7th Street that are on the DNA MOS-1 route; and the Draft EIR does not make clear that all of the project alignments are consistent with this plan. If the alignments are not consistent, please provide an evaluation of the project alignment versus the specific plan cross-sections.

777 12th Street, 3rd Floor • Sacramento, CA 95814-1908
916/874-4800 • 916/874-4899 fax
www.airquality.org

Construction-Related Impacts

5-4 Because the DNA MOS-1 project is part of the larger Downtown Natomas Airport Light Rail Transit Program EIR, and SMAQMD standard construction mitigation was included in that Program EIR, the mitigation must be applied to the DNA MOS-1 project. The standard construction mitigation is provided on the attached sheet entitled *SMAQMD Recommended Mitigation for Reducing Emissions from Heavy-Duty Construction Vehicles*.

5-5 Mitigation measures AQ1 – AQ3 appear to be modeling assumptions from the *Roadway Construction Emissions Model* prepared for the project. Generally, the SMAQMD does not recommend using modeling assumptions as mitigation measures. They can be difficult to monitor and enforce. If the purpose of AQ1-AQ3 is to ensure construction emissions do not exceed the SMAQMD threshold of 85 pounds of NOx per day, the inclusion of the SMAQMD's standard construction mitigation should provide RT some reassurance.

5-6 Finally, the ISCST3 air dispersion model was used to determine localized construction impacts from PM10 emissions for the project, according to page 5.1-14. As with all modeling runs used to analyze the project, the outputs from the ISCST3 run should be included in an appendix to be reviewed and evaluated.

If you have any questions regarding these comments, please contact Molly Wright at 916-874-4886 or mwright@airquality.org. This project is also subject to any and all SMAQMD rules in effect at the time of construction. The attached sheet entitled *SMAQMD Rules & Regulations Statement* enumerates some of those rules for your convenience. Additional information about those and all other rules that may be applicable can be found at www.airquality.org or by calling Compliance Assistance at (916) 874-4884

Sincerely,

Molly Wright

Molly Wright
Air Quality Planner/Analyst

Cc: Larry Robinson, Program Coordinator, SMAQMD

SMAQMD Recommended Mitigation for Reducing Emissions from Heavy-Duty Construction Vehicles

Apply only to projects with construction emissions above the CEQA Threshold of Significance.

Revised December 1, 2008

Category 1: Reducing NOx emissions from off-road diesel powered equipment

The project shall provide a plan, for approval by the lead agency and SMAQMD, demonstrating that the heavy-duty (> 50 horsepower) self-propelled off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20 percent NOx reduction and 45 percent particulate reduction[1] compared to the most recent CARB fleet average at time of construction; and

The project representative shall submit to the lead agency and SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine production year, and projected hours of use for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project representative shall provide SMAQMD with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman.

and:

Category 2: Controlling visible emissions from off-road diesel powered equipment

The project shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately, and the lead agency and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The SMAQMD and/or other

officials may conduct periodic site inspections to determine compliance. Nothing in this section shall supercede other SMAQMD or state rules or regulations.

and/or:

If at the time of construction, the SMAQMD has adopted a regulation applicable to construction emissions, compliance with the regulation may completely or partially replace this mitigation. Consultation with SMAQMD prior to construction will be necessary to make this determination.

---

[1]Acceptable options for reducing emissions may include use of newer model year engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.

SMAQMD Rules & Regulations Statement (revised 1/07)

*The following statement is recommended as standard condition of approval or construction document language for **all** development projects within the Sacramento Metropolitan Air Quality Management District (SMAQMD):*

All projects are subject to SMAQMD rules and regulations in effect at the time of construction. A complete listing of current rules is available at www.airquality.org or by calling 916.874.4800. Specific rules that may relate to construction activities or building design may include, but are not limited to:

Rule 201: General Permit Requirements. Any project that includes the use of equipment capable of releasing emissions to the atmosphere may require permit(s) from SMAQMD prior to equipment operation. The applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact the District early to determine if a permit is required, and to begin the permit application process. Portable construction equipment (e.g. generators, compressors, pile drivers, lighting equipment, etc) with an internal combustion engine over 50 horsepower are required to have a SMAQMD permit or a California Air Resources Board portable equipment registration.

Other general types of uses that require a permit include dry cleaners, gasoline stations, spray booths, and operations that generate airborne particulate emissions.

Rule 403: Fugitive Dust. The developer or contractor is required to control dust emissions from earth moving activities or any other construction activity to prevent airborne dust from leaving the project site.

Rule 417: Wood Burning Appliances. Effective October 26, 2007, this rule prohibits the installation of any new, permanently installed, indoor or outdoor, uncontrolled fireplaces in new or existing developments.

Rule 442: Architectural Coatings. The developer or contractor is required to use coatings that comply with the volatile organic compound content limits specified in the rule.

Rule 902: Asbestos. The developer or contractor is required to notify SMAQMD of any regulated renovation or demolition activity. Rule 902 contains specific requirements for surveying, notification, removal, and disposal of asbestos containing material.

Response to Comments
Submitted by: Molly Wright, Air Quality Planner / Analyst
Sacramento Metropolitan Air Quality Management District
27 March 2009

5-1

RT has posted cross sections and additional details associated with DNA MOS-1 Plans on the project website: http://sacrt.com/dna/news/default.html. Cross sections are also available from RT staff, upon request.

5-2

Bike lockers and racks would be provided at the Richards Boulevard Station.

5-3

RT has been coordinating with the City of Sacramento and Thomas Enterprises, the developer of Railyards, to assure that the DNA MOS-1 Project is consistent with the Railyards Project. The project is also consistent with the City of Sacramento General Plan (adopted March 3, 2009).

5-4

The construction mitigation measures included in the Program EIR have been added to the DEIR. The standard SMAQMD mitigation measures have been updated based on recent SMAQMD guidance and are as follows:

- **AQ1** The construction contractor shall provide a plan, for approval by the lead agency and SMAQMD, demonstrating that the heavy-duty (> 50 horsepower) self-propelled off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average at time of construction.

- **AQ2** The construction contractor shall submit to the lead agency and SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine production year, and projected hours of use for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project representative shall provide SMAQMD with the anticipated construction

timeline including start date, and name and phone number of the project manager and on-site foreman.

- **AQ3** The construction contractor shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately, and the lead agency and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in¬operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this section shall supercede other SMAQMD or State rules or regulations.

Additional mitigation measures were included in the Program EIR and they are applicable to the project. The mitigation measures are as follows:

- **AQ4** The construction contractor shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour.

- **AQ5** The construction contractor shall ensure that active grading and parking areas are watered at least twice daily.

- **AQ6** The construction contractor shall ensure that exposed stockpiles are enclosed, covered, watered twice daily.

- **AQ7** The construction contractor shall ensure that all trucks hauling dirt, sand, silt, or other loose materials are covered or maintain at least two feet of freeboard.

- **AQ8** The construction contractor shall utilize ultra-low sulfur fuel (< 15 parts per million) at an incremental cost of $0.20 to $0.50 per gallon. Locations where ultra-low sulfur fuel is available in California are available at: http://ecdiesel.com/business/locator.

- **AQ9** The construction contractor shall establish an idling limit (e.g., 5 minutes per hour).

- **AQ10** The construction contractor shall ensure that equipment is tuned to manufacturers' specifications at the manufacturers' recommended frequency.

- **AQ11** The construction contractor shall prohibit any tampering with engines and continuing adherence to manufacturer's recommendations will be required.

- **AQ12** If necessary, additional emissions limits shall be established within 1,000 feet of any K-12 school, based on CARB proposals.

- **AQ13** Notification shall be provided to all schools within 1,000 feet of a construction site.

- **AQ14** Truck trips shall be reduced and/or hours of driving shall be restricted through residential communities.

- **AQ15** Receipts of ultra-low sulfur fuel purchase and equipment tuning/repair shall be kept and made available upon request.

- **AQ16** The construction contractor's Project Manager shall conduct spot checks for compliance with committed measures.

5-5

Mitigation Measures AQ1 through AQ3 have been removed from the DEIR and replaced with the mitigation measures included in the Program EIR. The revised mitigation measures are consistent with the SMAQMD standard construction mitigation measures.

5-6

The ISCSST3 modeling file was accidently omitted from the appendix. It has been included in a revised appendix, which can be reviewed at http://sacrt.com/dna/news/default.html.

DEPARTMENT OF TRANSPORTATION

TRAFFIC ENGINEERING DIVISION

CITY OF SACRAMENTO
CALIFORNIA

915 I STREET, Room 2000
SACRAMENTO, CA
95814-2604

PH. (916) 808-5307
FAX (916) 808-8404

Date: March 25, 2009

Don Smith, Senior Planner
Sacramento Regional Transit District
P.O. Box 2110
Sacramento, CA 95812-2110
Email: dsmith@sacrt.com

Subject: Downtown-Natomas- Airport Light Rail- MOS-1 Draft Environmental Impact Report.

Thank you for the opportunity to review the Downtown-Natomas- Airport Light Rail- MOS-1DEIR. I am submitting these comments and request that these comments be considered in the preparation of Final EIR for the subject project.

6-1 1. The traffic study, conducted for the proposed project, assumed that the intersection of North B St/ 7th shall be signalized with the proposed project. Please confirm this assumption and if so, a signal concept report and coordination with the City of Sacramento, Traffic Engineering Department shall be conducted regarding all required equipment for this signalized intersection.

6-2 2. The Transportation and Circulation chapter (Chapter 5.2) analyzed different scenarios: No Parking Option, On-street Parking Option, Off Street Parking Option. For either one of the option analyzed there is a need to coordinate with Parking Division of Department of Transportation to decide which option shall be implemented regarding parking in the area of the Richards/ 7th Street station. If there is a need to install equipments/ signs to implement any of the analyzed options, then RT and the City has to implement a working plan for such implementation. Please contact Howard Chan at (916) 808-7488 to coordinate parking needs around the 7th / Richards station.

6-3 3. Page 5.2-19 under Richards Boulevard Area, the document stated that No parking is required as part of the Light Rail Alternative. Parking impact is considered less than significant. This finding is not considered accurate since the location of the station is anticipated to be considered attractive to the downtown employees who come from the north and can easily park their cars in the Richards area and ride the train to the downtown area. If parking is free or not restricted in the Richards/ 7th St. station, then this project shall have a significant impact on parking in the Richards Boulevard Area. Please revise and clarify.

6-4 4. On page 5.2-28, second paragraph, the study shows that the new MOS-1 will add 4 inbound and 4 outbound trains in addition to the existing 8 inbound and 8 outbound Blue Line and Gold Line Trains, but it did not explain the impact of the additional number of trains that will affect the existing signal timing and the existing intersections. More trains mean more delay to traffic. Any new equipment shall be needed? Please include more details about routes, headways, length of stops and how the new trains will operate with the other trains/ routes in the downtown area.

6-5 5. Page 5.2-22, under Mitigation Measure: a mitigation measure to increase the signal cycle length from 50 seconds to 100 seconds was defined. The study shows that implementing this mitigation measure shall improve the LOS for these intersections to less than significant but did not include if there will be more queuing, especially on the side street, due to the long cycle length. Since the analysis was done for only the peak hour, please include some information about the off peak hours. For example: would the 50 sec cycle still work during the off peaks? Please clarify.

6-6 6. Page 5.2-22, under Mitigation Measure, the mitigation measure call to increase the cycle length to 100 seconds. Is there other mitigation measures that could be implemented and reduce the impact to less than significant? As mentioned under comment No. 5 above, the analysis did not look at the impacts of implementing this mitigation measure. For example, increasing queue length on the side streets. The City would prefer to maintain the 50 seconds cycle length since it has been more efficient, practical and it has been used for most intersections within the Downtown area.. Additionally, it will be better to have the Traffic Operation Center to monitor and adjust signal timing when needed, rather than be very specific with this project since other projects are under development in the downtown area and adjustment and changes to signal timing would be needed to accommodate all traffic from other projects in the area.

6-7 7. All changes to existing signal timing shall be subject to review and approval by the City of Sacramento, Traffic Engineering Division. All equipment needed for the train operation within any signalized intersection shall be provided by Regional Transit and subject to the approval of the City of Sacramento, Traffic Engineering Division. Please coordinate with Angie Louie, Senior Engineer at 916-808-7921 for any traffic signal timing revisions required for this project

6-8 8. Reference to comment No. 7 above, Regional Transit should consider several ITS items to be implemented with this project. For example: cctv at 8th & Gst, cctv on 5th-10th & Richards, As well as cctv at 7th and Railyards, if not provided by others. In addition, a count station on 7th St. shall be required since hose tubes are no longer effective.

6-9 9. The track alignment as shown on the plans included in the DEIR document and prepared by HDR is not considered accepted and approved by the City until further review and approval of the Department of Transportation.

10. Our initial comments on the track alignment plans included in the DEIR are:

6-10 • Convert 7th Street from one way to two way operation per the 7th Street Feasibility Study Technical memorandum dated August 2, 2006. Modify the traffic signal at 7th and H Street to include the conversion.

6-11 • All Light Rail tracks shall be place in the number two travel lanes (as shown on the future and ultimate plans submitted to the City of Sacramento, Department of Transportation on February 2009 for review).

6-12 • Bike lanes shall be provided between the train and curb except: in the 7th Street tunnel area and north bound 7th Street (between G and H) where there are no bike lanes required.

6-13 • Provide a safe pedestrian refuge area at the northwest corner of at Richards and 7th Street between the north and south bound RT Tracks. The dynamic train envelope shall be outside the transition areas of the curb ramps.

6-14 • Construct 7th Street north of North B Street to a five lane section with bike lanes and no parking. Trains shall run exclusive in the number two lanes until the future double tracking project south of North B Street is constructed.

6-15 • Construct a Traffic Signal at North B Street/ 7th Street intersection.

6-16 • Re-stripe 7th Street between H and I Streets to accommodate the train and provide acceptable transitions.

Please submit revised track alignment plans to the Department of Transportation and contact Jon Blank, Supervising Engineer at 916-808-7914 for all proposed plans regarding this project.

If I can be of further assistance, please contact me at (916) 808-7808 or via e-mail at shajeer@cityofsacramento.org.

Sincerely,

Samar Hajeer
Senior Engineer

cc: Hector Barron, City Traffic Engineer
Howard Chan, Parking Division Manager
Jon Blank, Supervising Engineer, Engineering Services
Azadeh Doherty, Principal Planner
Ryan Billeci, Telecommunication Engineer

Department of TRANSPORTATION City of Sacramento

Response to Comments
Submitted by: Samar Hajeer, Senior Engineer
Traffic Engineering Division – City of Sacramento
25 March 2009

6-1

As noted in the DEIR on page 3-3, a new traffic signal at the intersection of North 7th Street and North B Street is included with the proposed project. Comment concerning preparation of a signal concept report and coordination with the City of Sacramento Traffic Engineering Department regarding required equipment for this intersection is noted.

6-2

Comment regarding needed coordination and development of a working plan between Regional Transit and the City of Sacramento Parking Division in the Richards / 7th Street Station area is noted.

6-3

The determination of the significance of the parking impact is based upon the criteria specified in the thresholds of significance. For this document, the threshold of significance for parking is based upon the practice of the City of Sacramento. As noted in the DEIR on page 5.2-13, "a significant impact to parking would occur if the proposed project parking supply were less than the estimated parking demand." Additionally, the City deems that an impact is not significant if the project is consistent with the parking requirements stipulated in the City Code (zoning ordinance). Therefore, as the project is not required to provide parking per the City Code, the impact is determined to be "less than significant."

For clarification purposes, the threshold of significance for parking is revised to current City practice (see, for example, Railyards Specific Plan, Draft Environmental Impact Report, August 2007, page 6.12-60):

> "For the purposes of this analysis, impacts to parking are considered significant if the project would:
>
> - Result in parking demand that exceeds the available or planned parking supply. However, the impact would not be significant if the project is consistent with the parking requirements stipulated in the City Code."

It is recognized that the Richards Boulevard Station will likely result in transit riders accessing the station via automobile. Such automobiles could be accommodated via existing on-street parking in the station vicinity. The demand for on-street parking is self-regulating; as nearby parking becomes occupied, it becomes less desirable for transit

patrons to walk longer distances to access the station. As noted in the DEIR (page 5.2-19), existing on-street parking oriented to local industries and businesses can be readily accommodated in available private off-street lots; most on-street parking today in the Richards area occurs for convenience purposes.

At this time, no decisions have been made by the City regarding the supply, regulation, and potential cost of on-street parking in the vicinity of the Richards Boulevard Station. A potential exists for off-street station parking, although such plans are indefinite at this time. As noted in the response to 6-2, Regional Transit will coordinate with the City of Sacramento Parking Division regarding future parking options.

6-4

The additional number of peak-period trains (eight per hour in addition to sixteen per hour currently operating) is not expected to significantly affect existing signal timing or delay existing traffic. A new train will pass through the subject intersections, on average, once every 7.5 minutes. As noted in DEIR Table 5.2-15 (page 5.2-28), the project is expected to generally result in minor reductions in peak period traffic volumes.

No new traffic signal equipment is needed. MOS-1 trains would operate on the same track between the 13th Street Station between Q and R Streets to south of H Street as existing Blue and Gold Line Trains. As noted on page 3-1 in the DEIR, this operation would increase rail traffic on these RT tracks and the increase in rail traffic along existing RT tracks is considered consistent with ongoing RT operations.

6-5 and 6-6

As noted in the DEIR on page 5.2-22, the proposed mitigation measure for the three significantly impacted intersections included changes in the peak period traffic signal cycle length from 50 seconds to 100 seconds. At the intersection of 8th and G Streets, this mitigation is proposed during the a.m. peak hour. At the intersections of 7th Street with G and H Streets, this mitigation is proposed during the p.m. peak hour.

It should be noted that the a.m. peak hour impact at 8th and G Streets would not be significant if evaluated in accordance with the City's recently adopted level of service policy (General Plan Update, March 3, 2009).

The increase in cycle length was chosen as a mitigation measure in accordance with City practice. Major corridors with congestion issues in the City, such as I Street and J Street, operate at 100-second cycle lengths in peak periods to increase efficiency by decreasing loss time. Due to limitation in available right-of-way in the Central City, other mitigation options, such as roadway widening, are generally not feasible.

Consistent with City practice in other locations, it is not necessary to implement the longer cycle length during off-peak periods, or during both peak hours. As RT does not

control the traffic signal operations, it is ultimately the purview of the City to implement traffic signal timing changes as the City deems appropriate.

6-7

Comment noted regarding coordination with City on traffic signal operations.

6-8

Comment noted regarding coordination with City on ITS elements.

6-9

Comment noted. RT will continue to work with the City of Sacramento on refinements to the precise track alignment until 100% track drawings are prepared and submitted to the City of Sacramento for final approval and signature, which will occur after the FEIR has been certified. The basic configuration of the DNA MOS-1 LRT Project has not changed, and is not expected to change.

6-10

There is no nexus between the DNA MOS-1 LRT Project and the conversion of 7th Street to two-way operation between G and H Streets. The conversion requires the southbound LRT track to be an exclusive LRT-only lane rather than a shared southbound lane, requiring the removal of 10 on-street parking spaces on the west side of the street. In addition, the introduction of northbound traffic requires new traffic signal equipment for northbound traffic at 7th and G Street.

Additional level of service analyses were conducted at four intersections assuming the conversion of 7th Street from one-way to two-way operation between H Street and G Street. Levels of service with the conversion are shown in the **Table 1** and **Table 2** at 7th Street / G Street, 7th Street / H Street, 8th Street / G Street, and 8th Street/ H Street and assume the conversion for 2010 no project and MOS1 conditions, as well as Cumulative no project and plus project conditions.

Intersection analysis with the conversion were not prepared for the Railyards alternative, since the subject segment would be the only block converted in what is otherwise a one-way street from Richards Boulevard to the CBD.

No significant impacts or mitigation measures are created or required due to an assumption of the conversion of 7th Street to two-way operations between G Street and H Street in no project and plus project conditions.

6-11 The City's request to move the light rail tracks to the number two travel lanes from the number one travel lanes from B Street to Richards Boulevard requires that the roadway be widened by two feet on both sides by reconstructing curbs and gutters, and

requires the elimination of all on-street parking on both sides of the street from B Street to Richards Boulevard. In addition, the transition from a single track to double tracks to the number two travel lanes at the intersection of 7th and North B Street requires more abrupt track geometry with slower design speeds and a greater distance, forcing the stop bars on the southbound approach to the intersection to be pulled back in addition to the stop bars on the northbound approach being pulled back.

RT has submitted a plan to Marc Lee and Jon Blank at the City of Sacramento that eliminates the proposed raised median, maintains the continuous left turn lane, and keeps the light rail tracks in the number one travel lanes. This alternative does not require the reconstruction of curbs and gutters, the narrowing of the public right-of-way from the curbs to private properties, or the elimination of on-street parking.

The traffic signal phasing at 7th and North B Streets, and at 7th Street and Richards Boulevard does not change with any of these alignment variations, and therefore the traffic analysis is unchanged. 7th Street and Richards Boulevard is a split phase traffic signal whereby northbound left turns and through moves are combined in one phase. Because of this arrangement, it is equally feasible for the LRT to turn left from 7th Street to Richards Boulevard from the left turn lane (where it would be if it were in the number one lane) or from the through lane (where it would be if it were in the number two lane) coincident with traffic and not requiring a separate phase.

6-12 Drawings received from Ed Cox at the City of Sacramento on 3/26/09 do not include a bike lane on 8th Street between H and G Street, but do eliminate 11 parking spaces on the west side of the street. On G Street between 8th and 7th Streets, the bike lane can be accommodated without impacts to curbs, gutters, street trees and utilities by eliminating seven on-street parking spaces from the south side of the street. Comments made by the City of Sacramento on 2/18/09 requested a right-turn-only lane for northbound 7th Street to eastbound F Street. There is no nexus between the DNA MOS-1 LRT Project and this right-turn-only lane. Adding this right-turn-only lane requires shifting the east curb on 7th Street by 4.75 feet and will impact or cause the relocation of trees, a traffic signal pole, a pole mounted traffic signal box, and utility vaults, boxes, and valves, including ones labeled SMUD (Sacramento Municipal Utility District), PG&E (Pacific Gas and Electric Company) gas, sewer, fire alarm, cable, and traffic signal.

6-13 RT will comply by increasing the curve radii of the tracks from 7th Street to Richards Boulevard. This modification does not result in any new impacts.

6-14 At a meeting on 3/11/09, Jon Blank requested that the southbound LRT lane be exclusive, and the northbound LRT lane be shared. These variations do not result in any new impacts.

6-15 RT will comply with the City's request. The LRT transition from side-running single-track south of North B Street to a double-track in shared traffic lanes north of North B Street requires a traffic signal with a special LRT phases to stop traffic while the LRT makes the transition. Because Railyards is already obligated to pay for a traffic

signal at North B Street and 7th Street per their Development Agreement with the City of Sacramento, RT would expect to be compensated the value of this traffic signal at time that the Development Agreement would have otherwise required the traffic signal.

6-16 RT will comply with the City's request.

CITY OF SACRAMENTO
CALIFORNIA

DEVELOPMENT SERVICES DEPARTMENT

ENVIRONMENTAL CLEARINGHOUSE COMMITTEE

300 RICHARDS BOULEVARD
3RD FLOOR
SACRAMENTO, CA
95811

ENVIRONMENTAL PLANNING SERVICES
916-808-5842
FAX 916-808-1077

March 26, 2009

Don Smith, Senior Planner
Sacramento Regional Transit District
P.O. Box 2110
Sacramento, CA 95812-2110

SUBJECT: MOS -1 Draft Environmental Impact Report Comments

Dear Mr. Smith,

The City of Sacramento, Environmental Planning Services, has received comments on the above mentioned project from the City Department of Utilities. These comments are attached and are in addition to the comments listed below.

7A-1

- In December 2007, the City adopted the Railyards Specific Plan. In doing so, the City amended the 1994 Facility Element of the Railyards Specific Plan and Richards Boulevard Area Plan to delete the Railyards Specific Plan area from the Facility Element and revise the circulation light rail system plans to incorporate the Sacrament Railyards Specific Plan Modifications, rescinded the 1994 Railyards Specific Plan.
- In May of 2008 the Richards Boulevard Redevelopment Plan Amendment separated the Richards Boulevard and Railyards area and renamed the Richards Boulevard Redevelopment Plan Areas to the River District.
- On March 3, 2008, the City of Sacramento adopted findings certifying the EIR and approving the 2030 General Plan. The 1988 General Plan is superseded by the 2030 General Plan.

We appreciate the opportunity to provide comments on the draft Environmental Impact Report. We are forwarding the comments received to date. If you have any questions, please do not hesitate to contact us.

Sincerely,

Scott Johnson
Environmental Planning Services

Attachments

cc: ECC 09-001

Response to Comments
Submitted by: Scott Johnson
City of Sacramento – Development Services Department
Environmental Planning Services
26 March 2009

7A-1

Comment noted. This information will be used to update the description of documents that were used in the preparation of the Draft EIR.

DEPARTMENT OF UTILITES

ENGINEERING
SERVICES DIVISION

CITY OF SACRAMENTO
CALIFORNIA

1395 35TH AVENUE
SACRAMENTO, CA
95822-2911

PH 916-808-1400
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March 20, 2009
906750:RA:ra

MEMORANDUM

TO: Scott Johnson, Development Services Department
John Law

FROM: Robert Armijo, Department of Utilities

SUBJECT: **DNA Light Rail Transit MOS-1 Project Draft EIR– DOU Comments**

Comments:

Please see comments made by Hong Lin on 3/19/20 on this EIR concerning Storm Water Quality. These comments are the remainder of the comments from the Department of Utilities (DOU) on this draft EIR:

7B-1 1. No discussion was found support or elaborating on relocating water, sewer and drainage facilities in 7th Street.

7B-2 2. Any modifications and improvements to the floodgate at 7th Street should be accomplished in a way that the floodgate remains fully functional and to the satisfaction of the DOU. That floodgate is part of the secondary levee system that protects the downtown area and should be preserved.

7B-3 3. Any relocation of City Utilities should be made at a distance from the tracks that are safe for the maintenance and operations of those utilities.

7B-4 4. Any sewer and water facilities under the RT tracks should be encased in a carrier pipe to accommodate future maintenance and to avoid future impacts to DOU and RT service.

7B-5 5. Any relocated City utilities should be designed so that they can be maintained and in services at all times.

7B-6 6. Relocated City Utilities will be in accordance with City design and construction standards and to the Satisfaction of the DOU.

Response to Comments
Submitted by: Robert Armijo
City of Sacramento – Department of Utilities
Engineering Services Division
20 March 2009

7B-1

While there have been meetings with each of utility owners associated with the DNA MOS-1 Project, decisions have not yet been made regarding the individual utilities to be relocated or protected in place. However, it is anticipated with the use of track slabs that the utility relocations and associated construction impacts can be reduced. Section 3-1, page 3-3 of the Draft EIR listed utility relocations that may be required; subject to further discussions with each utility owner.

7B-2

RT met with Department of Utilities Representatives on 11/13/08 to discuss the floodgate specifically. The DNA MOS-1 Project would pass between the floodgates, and would not affect their operation. RT will provide 100% plans for the DNA MOS-1 Project for the City's review, approval, and signature prior to construction in the public right-of-way.

7B-3 through 7B-6

RT will provide 100% utility relocation plans for the City's review, approval, and signature prior to construction.

March 19, 2009

To: Scott Johnson, Environmental Planning Services

From: Hong Lin, Water Quality Section, Department of Utilities

Subject: Comments to DNA Light Rail Transit MOS-1 Project Initial Study

I have reviewed the Initial Study Section III, water quality section (page 13 to 15) for the DNA Light Rail Transit MOS-1 Project. The following comments are offered for consideration:

7C-1 1. Most of the project area will be in the City's Combined Sewer System (CSS) area, which is not covered under City's municipal separate storm sewer system (MS4) NPDES permit. The on-site treatment of the stormwater runoff would not be required since the CSS flows are treated by the Sacramento Regional County Sanitation District. However, the runoff flow from the additional impervious area needs to be calculated and included in the drainage/CSS study.

7C-2 2. Construction phase stormwater runoff control is not adequately addressed in the Initial Study. In addition to complying with the City's Grading, Erosion and Sediment Control Ordinance, construction activities disturbing 1 or more acres of soil are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit 99-08-DWQ) from the State Water Resource Control Board (State Board). The applicant needs to check if the project is subject to General Permit. If so, the applicant/developer would be required to file a Notice of Intent with the State Board to obtain a General Construction Permit prior to disturbance of the site and construction of the proposed project. The permit requires the applicant prepare and implement a Storm Water Pollution Prevention Plan (SWPPP). The Erosion and Sediment Control (ESC) Plan required by the City is only a part of the SWPPP. Some required elements of a SWPPP include: (1) site description addressing the elements and characteristics specific to the site, (2) descriptions of BMPs for erosion and sediment controls, (3) BMPs for construction waste handling and disposal, (4) implementation of approved local plans, (5) proposed post-construction controls, including description of local post-construction erosion and sediment control requirements, and (6) non-storm water management.

7C-3 3. This project is located within the Railyards project area. The impact on the water quality, specifically the increased runoff volume, may be addressed through incorporated efforts with the Railyards project.

7C-4 4. The applicant needs to provide additional information on how the Contractor will ensure that project-related excavation would not result in substantial changes in groundwater flow or quality.

If you have any questions or need further clarifications of the above comments, feel free to contact me at 808-1449 or email hlin@cityofsacramento.org.

Response to Comments
Submitted by: Hong Lin
City of Sacramento – Department of Utilities
Water Quality Section
19 March 2009

7C-1

We concur. Calculations will be provided to the City showing the change in impervious area and the resulting change in stormwater runoff. From the Union Pacific Railroad Underpass to North B Street, a sidewalk on the east side of 7th Street will be replaced by ballasted track. This reduction in impervious area may more than compensate for the platforms at the 7th and Richards Station and minor roadway widening between G and F Streets.

7C-2

RT will file A Notice of Intent (NOI) with the Regional Water Quality Control Board (RWQCB) for this project. The Erosion and Sediment Control Plan (ESC) and the SWPPP will be submitted to the City for approval by RT's contractor. This way, the contractor can design the temporary BMP's so they do not interfere with construction operations. Several BMP's may be used:

- Straw bales or gravel bags around existing drop inlets
- Straw waddles to prevent runoff from construction site
- Silt fencing to prevent runoff from construction site
- Siltation pond to capture runoff from the construction site
- Baker tanks for storage and treatment of construction site runoff

7C-3

We concur. See response to 7C-1 above. It is likely that runoff will decrease within the Railyards project area.

7C-4

As described in Section 3.1, Project Description, of the Draft EIR, most excavation for the project will be shallow. The track slab will be between 12 and 18 inches deep. Ballasted track will be 24 to 36 inches deep. Supports for the overhead catenary poles may be cast-in-drilled hole foundations 10 to 15 feet deep. Station canopy supports at 7th and Richards may be deeper. Utility relocations have not been specified yet. It is possible that temporary construction dewatering could be required for utility relocations below groundwater. If so, RT's contractor would apply for a Dewatering Permit from the

RWQCB and they would comply with the conditions included in the permit, which could include requirements for sampling, testing, and handling of effluent.

Sacramento Area Bicycle Advocates
SABA
Making Sacramento a cycling capital

909 12th Street Ste 114 Sacramento, CA 95814 (916) 444-6600 www.sacbike.org

MAR 2 6 2009

March 24, 2009

Sacramento Regional Transit District
Attn: Don Smith, Senior Planner
P.O. Box 2110
Sacramento, CA 95812-2110

RE: Draft Environmental Impact Report on MOS-1 "Green Line to the River District"

Dear Mr. Smith:

Thank you for the opportunity to comment on the DEIR. Sacramento Area Bicycle Advocates (SABA) offers the following comments:

The project will affect the circulation of cyclists. The new light rail tracks will be a hazard to cyclists and the existing bikeways on 7th Street will be changed to a new shared bicycle/pedestrian configuration that is less safe and less convenient. That changed configuration must be planned very carefully.

8-1

Temporary bike and pedestrian passage through the 7th Street underpass. Because of the anticipated delay in constructing a new separate bike and pedestrian underpass west of the existing 7th Street underpass, it is critical that the project include a fully safe and usable temporary route for bikes and pedestrians through the current 7th Street underpass. The width of this shared facility should be maximized for safety reasons, roughly equivalent to the space being used for light rail (i.e. at least 12 ft). Because of the down grade leading to the underpass, bicyclists may be traveling at relatively high speeds. They will need space to pass other cyclists and pedestrians at the same time they need to keep a safe distance (Caltrans standards are 2 ft.) from the vertical barriers on either side. This facility should rely on a K-rail barrier for the full length of the underpass to separate vehicles from bike and pedestrian traffic through the underpass because of the narrow passage width and likely higher vehicle speeds as they travel the underpass.

8-2

Access to combined bike and pedestrian facility along 7th Street. Access to the bicycle/ pedestrian facility along 7th Street will create conflicts with the light rail tracks and opposing vehicle traffic at each end. This access needs to be carefully coordinated with the city to minimize these conflicts. A bicycle signal head directing bicycle traffic and allowing diagonal crossings of the 7th and F and 7th and B Street intersections is one possible way to minimize the conflicts and improve convenience for bicyclists.

8-2 (cont'd.) Routing of 7th Street Bikeway between G and H Streets. Currently, bicyclists traveling west on G Street have no obvious route at 7th Street to proceed on toward Sacramento Valley Station without riding on a sidewalk. Sidewalk riding is dangerous and violates city ordinances. We recommend including provisions for better access to the station. One option is that both lanes of the 7th Street bikeway continue southward on the west side of 7th Street as far as the alley between G and H Streets. At that point, the bikeway could turn west along the G/H alley to 6th Street, then south along 6th Street as a link for bicyclists from 7th Street and from G Street to get to the Sacramento Valley Station. Also, we request signage to the Sacramento Valley Station for bicyclists using G Street. We request that Regional Transit work with the city in designing access to the station from G and 7th Streets.

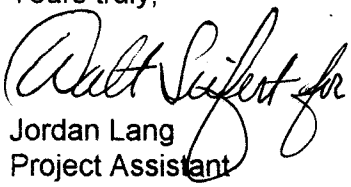
8-3 Design of Richards Boulevard Station. We understand the "above-ground" portions of this station are being designed by the Township 9 development team. We appreciated RT's General Manager's comments at the Open House that the station will represent the most integrated design of a development project and an RT station ever. We look forward to reviewing these plans as they are completed to help ensure the station provides excellent 1) access for bicyclists and pedestrians to station platforms, 2) bike parking facilities (both long-term and short-term), and 3) signage and signaling to direct bicyclists to the station.

8-4 Flangeway hazards for bicyclists. Throughout the project, the flangeways along the light-rail tracks where they cross pavement will pose hazards for bike traffic that may cause bike crashes and injury or even worse. We request that Regional Transit explore methods to create safe crossings of the flangeways for bicyclists.

Please keep us informed of future stages in completing the design of the Richards Boulevard Station and the bikeways associated with the project.

SABA is an award-winning nonprofit organization with more than 1400 members. We represent bicyclists. Our aim is more and safer trips by bike. We're working for a future in which bicycling for everyday transportation is common because it is safe, convenient, and desirable. Bicycling is the healthiest, cleanest, cheapest, quietest, most energy efficient, and least congesting form of transportation.

Yours truly,



Jordan Lang
Project Assistant

cc: Ed Cox, city of Sacramento

Response to Comments
Submitted by: Jordan Lang, Project Assistant
Sacramento Area Bicycle Advocates
24 March 2009

8-1

The comments regarding bicycle access through the 7th Street underpass during construction are noted. On 3/11/09, the City of Sacramento told RT that the separate bike and pedestrian underpass west of the existing 7th Street underpass would not be constructed coincident with the DNA MOS-1 Project, and that provisions should be made for bicycles and pedestrians within the existing underpass. The City suggested that the existing sidewalk be widened as much as possible while providing a 12-foot-wide southbound traffic lane. The widened sidewalk would be in lieu of a K-rail traffic barrier. This temporary facility will be designed and constructed in accordance with applicable state and City standards.

As noted in Impact TC-2 (see MMRP), provisions would be made for bicycles and pedestrians within the existing underpass during construction. The existing sidewalk would be widened as much as possible while providing a southbound traffic lane.

8-2

The comments regarding bicycle access at the termini of the 7th Street bicycle / pedestrian facility are noted. It should be noted that the location of the shared bicycle / pedestrian facility on the west side of 7th Street are associated with a separate project by others. The recommendations will be forwarded to the City of Sacramento, who will own, operate, and maintain the traffic signal system at the subject intersections

In response to: "Access to combined bike and pedestrian facility along 7th Street."

On 3/26/09, we met with Ed Cox at the City of Sacramento to discuss bicycle access to the bike and pedestrian path on the west side of 7th Street. At the south end of the project, the recommendation is for a bike lane on westbound G Street from 8th Street to 7th Street, and a northbound bike lane on 7th Street from G Street to F Street. This bike lane would not cross the light rail tracks; it would remain to the right of the tracks. Northbound bikes would cross the tracks at the F Street intersection at a marked crosswalk perpendicular to the tracks to get on the south end of the bike and pedestrian path. A southbound bike lane would be provided on 7th Street from F Street to H Street.

In response to: "Routing of 7th Street Bikeway between G and H Streets."

At the north end of the project, bike lanes would be preserved from Richards to North B Street. The bike and pedestrian path on the west side of 7th Street through Railyards will end at North B Street. Bicyclists going northbound will be encouraged to cross 7th Street and the tracks at the new traffic signal at North B Street. We are planning to add a southbound bike lane on 7th Street between G and H Street. However, there is no nexus between the DNA MOS-1 Project and provision of bicycle paths west of 7th Street to the Sacramento Valley Amtrak Station.

8-3

Comment noted.

Per Regional Transit's Light Rail Transit Design Criteria, the station at 7th and Richards at the Township 9 development will include bike racks and bike lockers. The station design will integrate access for bicyclists and pedestrians to station platforms and will include signage to direct passengers to the station.

8-4

The design concept for the DNA MOS-1 Project is consistent with the City of Sacramento and Railyards plan for a separate bike facility on the west side of 7th Street to avoid conflicts in the underpass and at the transition from side-running single-track to street-running double-track at North B Street. The project includes new segments of on-street bike lanes. The design concept encourages bikes to cross the tracks at designated perpendicular crossings where the risk of a bicycle tire getting caught in a flangeway is minimized.

WALKSACRAMENTO
Walkable Communities = Communities of Walkers

March 27, 2009

Don Smith, Senior Planner, Sacramento Regional Transit District
dsmith@sacrt.com

RE: MOS-1 Project Draft Environmental Impact Report

Dear Mr. Smith:

Light rail provides convenient, safe transportation for many people who choose to leave their car at home and begin and end their trip with a walk. *WALK*Sacramento eagerly anticipates the construction and operation of the Downtown/Natomas/Airport line. However, we want to be confident that people walking in the vicinity of light rail also have safe journeys.

9-1 *WALK*Sacramento believes the Light Rail Alternatives temporary facilities as described in the mitigation measures for **5.2.7.2 Impact TC-2 – Pedestrian and Bicycle Circulation Impacts** on page 5.2-16 will result in conditions on the 7th-Street underpass that will be unsafe for pedestrians. The placement of a temporary K-Rail will protect cyclists from collisions with vehicles travelling in the opposite direction, but separation of the bicyclists from pedestrians is also needed. Because the underpass presents two downhill sections connected at the lowest point, bicycle traffic approaching the underpass from each direction may be moving faster than normal and much faster than pedestrians. Such mixed-flow traffic will be dangerous for both pedestrians and bicyclists. Consider that the existing structural wall on the west side of the sidewalk and the temporary K-rail on the east side will tend to shift travel paths toward the center of the ped/bike facility. Even if the mixed-flow ped/bike facility is 15' wide, it may not be safe.

9-2 *WALK*Sacramento recommends the following be used temporarily: retain the existing sidewalk for pedestrian use; widen the existing bicycle lane to 8' to accommodate two-way traffic; and place a K-Rail between the bicycle and vehicle lanes. Although the existing sidewalk does not allow for "shy" distance from the wall, the bike lane between pedestrians and vehicles helps to provide that distance. Bicyclists would also have a reduced effective width because of the "shy" distance from the K-Rail, but there would be "elbow room" to hang over the sidewalk curb. Caution signs should also be installed to help calm the traffic in the bicycle lanes and discourage bicyclists from using the sidewalk.

WALKSacramento encourages people to walk and bicycle in their communities. The benefits include improved physical fitness, less motor vehicle traffic congestion,

909 12th Street, Suite #122 • Sacramento, CA 95814 • 916-446-9255 • fax 916-443-9255
www.walksacramento.org

better air quality and a stronger sense of cohesion and safety in local neighborhoods. WALKSacramento is a member of the Partnership for Active Communities which is working to support increased physical activity such as walking and bicycling in local neighborhoods as well as helping to create community environments that support walking and bicycling.

*WALK*Sacramento appreciates the opportunity to comment on the MOS-1 DEIR. If you have questions about our comments, please contact me at (916) 446-9255 or cholm@walksacramento.org.

Sincerely,

Chris Holm
Project Analyst

*WALK*Sacramento
909 12th Street, Suite #122
Sacramento, CA 95814

Response to Comments
Submitted by: Chris Holm, Project Analyst
Walk Sacramento
27 March 2009

9-1 and 9-2

The comments regarding bicycle access through the 7th Street underpass during construction are noted. On 3/11/09, the City of Sacramento told RT that the separate bike and pedestrian underpass west of the existing 7th Street underpass would not be constructed coincident with the DNA MOS-1 Project, and that provisions should be made for bicycles and pedestrians within the existing underpass. The City suggested that the existing sidewalk be widened as much as possible while providing a 12-foot-wide southbound traffic lane. We agree with the City that it will be best to maximize the width of the raised sidewalk and eliminate the previously proposed K-rail traffic barrier. The widened sidewalk would be in lieu of a K-rail traffic barrier. This temporary facility will be designed and constructed in accordance with applicable federal, state, and City standards.

As noted in Impact TC-2 (see MMRP), provisions would be made for bicycles and pedestrians within the existing underpass during construction. The existing sidewalk would be widened as much as possible while providing a southbound traffic lane.

REGIONAL TRANSIT DOWNTOWN/NATOMAS/AIRPORT EXTENSION

PUBLIC OPEN HOUSE

DOWNTOWN/NATOMAS/AIRPORT LIGHT RAIL EXTENSION

MINIMUM OPERABLE SEGMENT (MOS-1) PROJECT

PUBLIC COMMENTS

WEDNESDAY, MARCH 11, 2009

5:30 P.M.

SACRAMENTO VALLEY STATION

AMTRAK DEPOT, WEST END

AT 5TH AND H STREETS

SACRAMENTO, CALIFORNIA

REPORTED BY: KATHRYN S. SWANK
CSR 13061

ATTENDEES

PRESENTATIONS BY:

Mike Wiley, Regional Transit

Jim Hecht, HDR

Elizabeth Hughes, Parsons

INTERESTED PERSON GIVING COMMENT:

Scott Dosick, President, North Natomas Transportation Management Association

SACRAMENTO, CALIFORNIA

WEDNESDAY, MARCH 11, 2009, 5:30 P.M.

--o0o--

MR. DOSICK: My name is Scott Dosick, D-O-S-I-C-K, president of the North Natomas Transportation Management Association.

10-1 And I am here in strong support on behalf of North Natomas's residents and businesses in support of the DNA line. Greatly committeed to see RT having gone this far. Hope to see things move very quickly.

10-2 And I wanted to let them know that our shuttles that we run from North Natomas to Downtown are at complete capacity right now; there's nothing else we can do to get people out of their cars.

And we would support RT starting to consider very aggressively how they are going to fund the operational aspects of the future operational segments as quickly as possible. That is, without operational money, the capital investments won't make a difference. And please let us know what we can do to help you throughout the process.

Thank you.

(The open house was concluded at 7:30 p.m.)

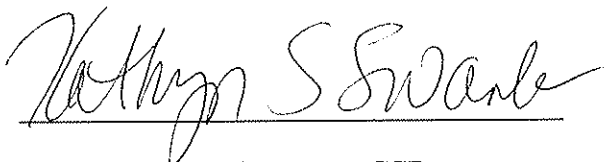
CERTIFICATE OF REPORTER

I, KATHRYN S. SWANK, a Certified Shorthand Reporter of the State of California, do hereby certify:

That I am a disinterested person herein; that the foregoing Downtown/Natomas/Airport Light Rail Extension Minimum Operable Segment (MOS-1) Project Public Open House, Public Comments, was reported in shorthand by me, Kathryn S. Swank, a Certified Shorthand Reporter of the State of California, and thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said open house nor in any way interested in the outcome of said open house.

IN WITNESS WHEREOF, I have hereunto set my hand this 16th day of March, 2009.



KATHRYN S. SWANK, CSR
Certified Shorthand Reporter
License No. 13061

Response to Public Open House Comments
Submitted by: Scott Dosick, President
North Natomas Transportation Management Association
11 March 2009

10-1

Comment noted. Thank you for your support of the proposed project.

10-2

Comment noted.

10-3

Comment noted.

Comment Card
Received on March 16, 2009
Pertaining to the Downtown Natomas Airport
MOS-1 Project

11-1 I appreciate RT's hospitality, food, etc. but it is very disturbing that we aren't moving faster toward the airport when light rail connection is needed more than a larger parking structure. I would suggest reading "China's Great Train" by Abrahm Lustgarten to see what emphasis rail development is in another country particularly one of our world competitors. I cannot push enough on the mind-set that good public transportation is a necessary part of the public infrastructure. We cannot be superficial locally on our world responsibility and helping to solve world problems.

Alfred P. Bulf
1428 Gladstone Drive
Sacramento, CA 95864-2728
916-482-7633
Alfred.bulf@surewest.net

Transcribed from original comment card

Response to Comment Card
Submitted by: Alfred P. Bulf
16 March 2009

11-1

Comment noted. Thank you for your support of the proposed project.

From: Don Smith [DSmith@sacrt.com]
Sent: Monday, March 16, 2009 3:28 PM
To: Joanne Koegel; Hughes, Elizabeth; Paul Marx; RoseMary Covington
Subject: Fwd: Draft EIR Mos-1
This is an old comment I received on February 13, 2009.

Kathi Crespin <seckecone@sbcglobal.net> 2/13/2009 7:00 PM

12-1 We are in agreement with option 1: proceed west via existing track on H Street to 7th. This just might help save some money. I look forward in great anticipation to having the d-n-a line cross I-5 to the airport just before the split to Hwy 9 as I live approximate 2 blocks from that site and am sure that a station hopefully is planned for close to the fly over.

Your reply form would not work.

Thanks -

Kathi and Sam Crespin
17 Enclave Place
Sacramento, CA 95835
seckecone@sbcglobal.net

Response to Emailed Comment
Submitted by: Kathi and Sam Crespin
13 February 2009

12-1

Comment noted. Thank you for your support of the proposed project.

Comment Card
DNA MOS-1

13-1 I thought, from my understanding in the very beginning of this project that the Gold Line was eventually going to be extended in three phases: 1) Richards Boulevard, 2) Natomas Town Centre, and 3) Sacramento International Airport. In doing this, I also thought that the existing Sacramento Valley Station was going to be re-positioned, and/or re-located. Is it now safe to say that these ideas or plans won't happen? Where did the concept of the "Green Line" come from? Couldn't the new "Green Line" travel to the existing 16th Street Station to allow seamless connections to existing RT Bus Route 63, and the Elk Grove forty-nighter as well as the Capital Area Shuttles?

Mike Barnbaum
89B Dean Road
Sacramento, CA 95815
(916) 390-3989
Mike_barnbaum@att.net

Transcribed from original comment card

Response to Comment Card
Submitted by: Mike Barnbaum
11 March 2009

13-1

It was your understanding that the Gold Line was going to be extended in three phases: 1) Richards Boulevard, 2) Natomas Town Center, and 3) Sacramento International Airport.

This phasing was presented at past meetings, and is still the target. However, the high cost of these light rail extensions require us to break them up so that we can qualify for funding and afford to build them. Although this is still our plan, it could change as the funding opportunities change. For example, if capital and operating funds became available to build it all the way to the airport in one segment, we might do that. On-the-other-hand, if we obtained funds to build a bridge over the American River and run it to El Camino or to Natomas Community Park, we might do that too.

The reason we are moving to develop the segment to Richards Boulevard at this time, is that we have identified non-federal money that will allow us to build that segment of the extension. The MOS-1 will not only have independent utility but will also serve as a starter line for future LRT expansion and will demonstrate that RT is serious about building rail service to the airport.

It was thought that the Sacramento Valley Station would be repositioned and/or relocated with the DNA project.

This is still the plan. The MOS-1 project can be considered an interim project. Once the UPRR main line is relocated north of where it is now, the platform will be repositioned from its current east-west configuration to a north-south configuration. The DNA tracks will then connect with the new platform, turn north along the platform, then back east to 7th Street to meet up with the track built with MOS-1.

Is safe to say that these plans won't happen.

We have not changed our plans and we are working to make them happen.

Where did the concept of the "Green Line" come from? Could the new "Green Line" travel to the existing 16th Street Station to meet up with the Route 63 bus, Elk Grove 49er, and Capital Area Shuttles?

The current plan is to take advantage of existing switches that are just east of the 13th Street Station. Trains can more easily make their return run from that location than at the 16th Street Station.

Kimley-Horn
and Associates, Inc.

March 27, 2009

11060 White Rock Road
Suite 150
Rancho Cordova, California
95670-6061

Sacramento Regional Transit District
Mr. Don Smith
Senior Planner
P.O. Box 2110
Sacramento, CA 95812-2110

RE: **DNA LIGHT RAIL TRANSIT MOS-1 PROJECT (SCH #2008112042)**
Draft Environmental Impact Report

Dear Mr. Smith:

Thank you for the opportunity to review the referenced document and offer our comments specifically as it relates to the Railyards project. On behalf of Thomas Enterprises and the entire Railyards team, we are very appreciative and excited for this initial phase of the future DNA In general, the document is consistent with and complimentary to our work with the Sacramento Regional Transit District (SRTD) team. We are excited and pleased to have developed such a close working relationship with the SRTD team.

14-1

14-2

The plans provided with the document in Appendix D (dated January 23, 2009) are generally consistent with the plans provided to us at various dates. However, they differ in some aspects from subsequent plans (which provide detail not included in the DEIR set) dated February 26, 2009. The following comments are based on the January 23, 2009 Appendix D plan set. Comments to the February 26, 2009 plan set are attached under separate cover.

Street cross sections are not provided in Appendix D, so it is difficult to the street configuration and right of way location.

Specific Comments;

14-3

- The document discusses MOS1 track construction and alignment without consideration of its impacts to future DNA phases. For instance we see no discussion of the need, costs or timing associated with rebuilding MOS-1 from Railyards Blvd. to North B Street to accommodate the secondary levee to be constructed between North Park and South Park Streets. Similarly, considerations of phased construction of additional DNA lines while preserving MOS-1 operation may impact both capital and operational costs, and depending on final routes, may impact development within the Railyards Specific Plan area.

TEL 916 858 5800
FAX 916 858 5805

Kimley-Horn
and Associates, Inc.

14-4 • Lacking cross sections it is not possible to determine how 7th Street would be configured for pedestrian sidewalks, bicycles and vehicles. The ultimate street sections must be consistent with the approved Sacramento Railyards Tentative Map both in this initial MOS-1 phase and the ultimate DNA construction.

14-5 • The intersection mechanics at Seventh and North B Street create a blind intersection. The stop bar for north bound autos would be approximately 150 feet south of the existing stop bar at the proposed signal controlled intersection.

14-6 • Special consideration must be made for bicycles and motorcycles crossing the light rail track as it transitions back onto Seventh Street near the flood gates and North B Streets due to the acute angle of incidence which poses a safety hazard as their wheels are captured by the rail insets.

14-7 • The plan (sheet 2 of 3) calls out a "Proposed Class 1 Ped/Bike Path (by others)". Since the timing and funding of this construction is uncertain, MOS-1 phasing plans should stand independent of this facility.

If you have any questions about these comments please contact me at (916) 858-5800 or by email at dennis.clift@kimley-horn.

Sincerely,
Kimley-Horn and Associates, Inc.

Dennis Clift, P.E.
Vice President

Attachment – Letter Dated March 27, 2009 containing comments to February 26, 2009 MOS-1 Plan Set

Copy: Jon Blank
Richard Rich
Suheil Totah

Kimley-Horn
and Associates, Inc.

March 27, 2009

Sacramento Regional Transit District (SRTD)
Ms. Rosemary Covington
Assistant General Manager
P.O. Box 2110
Sacramento, CA 95812-2110

RE: **MOS-1 and Ultimate DNA Alignment Comments**
February 26, 2009 Plan Set

Dear Ms.Covington:

Thank you for the opportunity to comment on the proposed alignments of the MOS-1 and ultimate DNA tracks proposed on Seventh Street through the Railyards project. We received the plan set dated **February 26, 2009** from your consultant (HDR). The plans differ from those included as part of the February 2009 Draft Environmental Impact Report (DEIR) in the following ways: (1) the revised plans change the block of Seventh Street between H and G Streets to two way vehicular traffic, (2) adds a south bound "emergency track" in the Ultimate configuration, and (3) moves the tracks to the outside travel lanes from North B to Richards Blvd. Our comments follow:

- **Substation:** SRTD needs a 64' x 36'site for its electrical substation (see Exhibit 1). The Railyards tentative map proposed a site at the northeast corner of Lot 60N. That location impacts the existing secondary levee and is further complicated in the need to eventually raise Seventh Street by several feet to accommodate the relocated levee. We propose a location on the south side of that Lot and with from the alley. This midblock location would be within 200 feet of the tracks, provide a location that could be aesthetically screened and constructed on a base elevation consistent with the ultimate adjacent level of Seventh Street, thereby eliminating reconstruction costs.

- **MOS-1 Track Alignment (Sheets 01-03) Plan View**:
  1. Seventh Street is shown with two way traffic (differing from the DEIR). On-street parking is eliminated from H Street to G Street.
  2. The proposed Ped/Bike path west of the underpass is designated as construction "by others". Recent discussions with the City and UPRR create doubt in the timing of construction of this path and bike tunnel

under the relocated tracks. It is likely that construction of these facilities will be delayed.

3. The installation of the Class 1 Ped/Bike Path north of F Street to the UPRR tracks eliminates about 35 to 40 off-street private parking stalls on the west side of Seventh Street.
4. The Railyards Tentative Map and Specific Plans are consistent with the City's downtown grid pattern and 80 feet wide Right of Ways. The proposed SRTD layout from H Street to F Street eliminates the specified 11 ½ foot sidewalk on the west side of the street which is not acceptable.
5. The intersection mechanics at Seventh Street and North B Street are problematic because a blind intersection is created. The stop bar for north bound autos would be about 150 feet south of the existing stop bar at the proposed signal controlled intersection. A car at the stop bar will not be able to see East or West on North B Street due to the existing secondary levee. Conversely, cars east or west bound on North B Street will not be able to see cars coming from the south. Right turn on red restriction will be necessary for north and west bound traffic.
6. The rail angle of incidence requires that special consideration be allowed for northbound bicycles and motorcycles crossing the light rail track as it transitions to Seventh Street near the flood gates and North B Street due to the safety hazard created as their wheels become trapped by the rail inset causing falls.

- **MOS-1 Track Alignment (Sheets 04-08) Sections:**
  1. Section 3 and 4: The Railyards Tentative Map and Specific Plans are consistent with the City's downtown grid pattern and 80 feet wide Right of Ways. The proposed SRTD layout from H Street to F Street eliminates the specified 11 ½ foot sidewalk on the west side of the street which is not acceptable
  2. Section 10: When the MOS-1 track is constructed on the east side of the existing street, there is an existing 5 foot sidewalk on the west side of the street for pedestrians that would remain. The "5 foot shoulders" called out in this section are actually existing bike lanes. These would remain and would eliminate the "proposed 10' Ped/Bike path" shown on the west side of the street.
  3. Section 11: On-street parking is eliminated from North B Street to Richards Blvd.

- **DNA Ultimate Track Alignment (Sheets 01-03) Plan View**:

1. The future light rail tracks, bike path and sidewalk would require an additional dedication of approximately 1,000 square feet from Lot 46b at the northwest corner of F and Seventh Streets as shown.. See Exhibit 2. Every effort should be made to decrease the rail curve radius and minimize this take.
2. The Class 1 Ped/Bike Path shown on the west side of Seventh Street at the Light Rail Station between Railyards and South Park would affect the operation of the shops and residences along this block. See further discussion under "Sections" below.
3. The Railyards project is patterned after the downtown grid and block system and will utilize mid-block alleys for linkage, deliveries and solid waste. The light rail station between Railyards Blvd. and South Park could block access to the alleys. Thus, consideration must be made during the design process so that there is access through the light rail station.

- **DNA Ultimate Track Alignment (Sheets 04-08) Sections**:
  1. Section 3 and 4: The Railyards Tentative Map and Specific Plans are consistent with the City's downtown grid pattern and 80 feet wide Right of Ways. The proposed SRTD layout from H Street to F Street eliminates the specified 11 ½ foot sidewalk on the west side of the street which is not acceptable
  2. Section 10A: We met with Ed Cox (City of Sacramento Bicycle Coordinator) earlier this month to discuss integrated bike operation through this block. Attaching a 15 foot concrete walk outside the Station platform (see Exhibit 3) would provide a bike path, pedestrian zone and frontage zone adjacent to the future buildings. This would be contained within a 95 foot right of way. Bike and pedestrian crossing would occur at Railyards Blvd.
  3. Sections 9-10B: We request the addition of the MOS-1 track to the section views to illustrate the vertical difference of the two alignments (which can be up to 14 feet) and address the complexity of timing and physical limitations in rebuilding the existing Seventh Street and constructing the ultimate DNA tracks while keeping the MOS-1 track and the transportation corridor through the Railyards project operational. How will this new construction be accomplished without impacting Railyards development? Additional sections showing the construction transition from MOS-1 to the ultimate DNA track position should be included.

Kimley-Horn
and Associates, Inc.

We thank you again for the opportunity to continue working with SRTD and greatly appreciate the cooperation we have received. Please feel free to contact me if you have any questions or comments.

Sincerely,
Kimley-Horn and Associates, Inc.

Dennis Clift, P.E.
Vice President

Copy: Jon Blank
Richard Rich
Suheil Totah

Response to Comments
Submitted by: Dennis Clift, P.E., Vice President
Kimley-Horn and Associates, Inc.
27 March 2009

14-1

Comment noted. Thank you for your support of the proposed project.

14-2

As we proceed into final design, the plans are being updated. Cross sections are located at: http://sacrt.com/dna/news/default.html (Appendix D).

14-3

RT met with Railyards on 9/2/08, 9/25/08, 10/16/08, and 12/3/08 to collaborate on the conceptual design for MOS-1 that would minimize the cost of the eventual widening, re-profiling, and double-tracking of 7th Street sometime in the future. RT and its consultant developed a staging plan to demonstrate that it will be feasible to make these improvements in the future. These improvements are not part of the DNA MOS-1 Project, and therefore are not described or analyzed in the DNA MOS-1 Environmental Impact Report.

14-4

See cross sections at the link above in Appendix D. As was discussed at the meetings with Railyards, between the Union Pacific Railroad Underpass and North B Street, the LRT tracks would be east of the existing east curb. The pedestrian sidewalk on the east side of the street would be eliminated. A bicycle path would be provided west of the west curb. The traffic lanes would not be modified. All improvements would be within the public right-of-way as defined in the Sacramento Railyards Tentative Map.

14-5

Comment noted. The intersection of 7th Street and North B Street will be signalized as part of the MOS-1 Project to hold vehicular traffic while the LRT transitions from a side-running single-track to a double-track in mixed traffic lanes. Pulling the stop bar back from the intersection for northbound vehicles is something that drivers in downtown Sacramento are accustomed to—for example at 8th and K Street and at H and 7th Street.

To accommodate the shift in light rail alignment from the east side of 7th Street to the median, it is necessary to locate the northbound 7th Street stop bar farther south than would normally occur. The effects of this stop bar location will be considered in the detailed traffic signal design in a later phase of project development. As this intersection

will be signal controlled, the location of the levee (which creates the "blind" intersection) does not affect required design sight distance parameters.

14-6

At the south end of the project, the recommendation is for a bike lane on westbound G Street from 8th Street to 7th Street, and a northbound bike lane on 7th Street from G Street to F Street. This bike lane would not cross the light rail tracks; it would remain to the right of the tracks. Northbound bikes would cross the tracks at the F Street intersection at a marked crosswalk perpendicular to the tracks to get on the south end of the bike and pedestrian path. A southbound bike lane would be provided on 7th Street from F Street to H Street.

The design concept encourages bikes to cross the tracks at designated perpendicular crossings where the risk of a bicycle tire getting caught in a flangeway is minimized. Motorcycle tires are too large to fall into the flangeway. Motorcycles do need to exercise caution when driving in lanes with rails, an occurrence throughout downtown Sacramento.

14-7

The comments regarding bicycle access through the 7th Street underpass during construction are noted. On 3/11/09, the City of Sacramento told RT that the separate bike and pedestrian underpass west of the existing 7th Street underpass would not be constructed coincident with the DNA MOS-1 Project, and that provisions should be made for bicycles and pedestrians within the existing underpass. The City suggested that the existing sidewalk be widened as much as possible while providing a 12-foot-wide southbound traffic lane. The widened sidewalk would be in lieu of a K-rail traffic barrier.

As noted in Impact TC-2 (see MMRP), provisions would be made for bicycles and pedestrians within the existing underpass during construction. The existing sidewalk would be widened as much as possible while providing a southbound traffic lane.

T O M N A Y G R O W
1416 45TH ST., SACRAMENTO, CA 95819-0407, (916) 456-6046

March 26th 2009

Sacramento Regional Transit District
Attn: Don Smith, Senior Planner
P.O. Box 2110
Sacramento, CA 95812-2110

Sent by e-mail -- dsmith@sacrt.com

Re: Comments on DNA MOS-1 Project Draft Environmental Impact Report --
- Concerning the DNA MOS-1 Project as it impacts property located at the southeast corner of the 7th Street and Richards Boulevard Intersection, including APN Nos. 001-0031-017,001-0031-014,001-0031-025, and 001-0031-026.

Dear Sacramento Regional Transit District:

I am writing as the owner of the above referenced properties located at the southeast corner of the intersection of 7th Street and Richards Boulevard to comment on the Draft Environmental Impact Report ("DEIR") for the "DNA Light Rail Transit MOS-1 Project" (SCH #2008112042) dated February 2009. Of the four legal parcels listed above, three have frontage on 7th Street and will be directly impacted by the DNA MOS-1 Project.

15-1 While I support the DNA MOS-1 Project, I am concerned that the "Transportation and Circulation" analysis contained in the DEIR does not address the impacts of the DNA MOS-1 Project on access to the properties on the southeast and southwest corners of the 7th Street and Richards Boulevard intersection. These project impacts should have been analyzed both from a short term perspective (assuming existing land uses and the interim two lane configuration of 7th Street with median improvements to accommodate the MOS-1 Project) and from a long term perspective (assuming future Transit Oriented Development at this intersection and the ultimate four lane configuration of 7th Street with median improvements to accommodate buildout of the DNA Corridor Project).

15-2 I raise these concerns for two principal reasons. First, I believe it is incumbent upon public agencies sponsoring public works projects (such as the MOS-1 light rail extension) to minimize the adverse effects that these projects might otherwise have on individual property owners. This obligation to minimize project impacts is particularly compelling where the burden of a public works project falls disproportionately upon certain individual property owners. Under such circumstances, it is both fair and reasonable to assume that a good faith, diligent effort will be made by the public agency to identify feasible mitigation strategies to reduce the disproportionate burden the individual properties are asked to bear.

I make this point knowing that in the long term the DNA line and the Richards Boulevard Light Rail Station will create an opportunity to redevelop my site with higher and better uses in accordance with Transit Oriented Development policies already in place. But I am certain you can appreciate my concern regarding the immediate impacts of the MOS-1 Project on the existing uses to which my property is being put.

T O M N A Y G R O W
1416 45TH ST., SACRAMENTO, CA 95819-0407, (916) 456-6046

I believe that a median design can be found that would both accommodate the MOS-1 Project and the continued presence of left hand turns off 7th Street into my site.

15-2 (cont'd.) The elimination of the left hand turn into my site poses a particular hardship. The property is currently occupied by Smurfit-Stone Container Enterprises, Inc. This business relies on a constant stream of deliveries off of 7th Street. The delivery trucks enter the site by way of the left turn in off of 7th Street where they are weighed on a scale located at the 7th Street entry to the site. They then proceed to the warehouse where they are unloaded and continue through the site to the exit onto Richards Blvd. As far as I am aware, no consideration was given in designing the 7th Street raised median, to the impact of eliminating the left turn into my property with respect to the existing one way on-site circulation pattern or to the possible ways of mitigating such impacts.

15-3 Second, although my property is currently zoned M-1, all of the planning documents upon which the DEIR relies anticipate the site will be part of a Transit Oriented Development to be built around the MOS-1 Richards Boulevard Light Rail Station. Indeed, with the approvals of the Township 9 project on the northwest corner of 7th and Richards and of the Continental Plaza project on the northwest corner of 7th and Richards, a TOD design for this critical intersection is already 50% complete. Yet, no consideration appears to have been given in the DNA MOS-1 Project DEIR to the ultimate design of 7th Street and to the impacts this design will have on access to the Transit Oriented Development that is expected on the southeast and southwest corners of the 7th and Richards intersection. On a more positive note, it is not too late to address these concerns. I would request that, before the Final EIR is prepared, the following steps are taken:

15-4.1 1. RT to reconsider the design of 7th Street between Bannon Street and Richards Boulevard to determine if it may be feasible to preserve the left turn into my property, at least on an interim basis.

15-4.2 2. RT to evaluate the way in which the ultimate circulation grid, including 7th Street as designed to incorporate the DNA Corridor Project, will provide sufficient access to the properties located at the southeast and southwest corners of the 7th and Richards intersection to make possible the sort of Transit Oriented Development the DNA line and Richards Boulevard Light Rail Station are intended to encourage.

Thank you for the opportunity to comment on the DNA MOS-1 DEIR.

Sincerely,

Thomas Naygrow

Response to Comments
Submitted by: Thomas Naygrow
Tom Naygrow
26 March 2009

15-1

Thank you for your support of the proposed project.

The raised median was proposed to eliminate conflicts between vehicles turning left and light rail trains. The raised median also would allow the overhead contact system to be supported by a single line of poles in the middle of the street versus double poles with span wires over the street. The elimination of left turns would require vehicles to go around the block formed by 10th Street, North B Street, 7th Street and Richards Boulevard to make right-turns into and out of the driveways on 7th Street. Openings in the median could be designed for major access points for future developments. The City of Sacramento has requested alternatives that maintain the center left turn lane and eliminate the raised median.

The City's request to move the light rail tracks to the number two travel lanes from the number one travel lanes from B Street to Richards Boulevard requires that the roadway be widened by two feet on both sides by reconstructing curbs and gutters, and requires the elimination of all on-street parking on both sides of the street from B Street to Richards Boulevard. In addition, the transition from a single track to double tracks to the number two travel lanes at the intersection of 7th and North B Street requires more abrupt track geometry with slower design speeds and a greater distance, forcing the stop bars on the southbound approach to the intersection to be pulled back in addition to the stop bars on the northbound approach being pulled back.

RT has submitted a plan to the City of Sacramento that eliminates the proposed raised median, maintains the continuous left turn lane, and keeps the light rail tracks in the number one travel lanes. This alternative does not require the reconstruction of curbs and gutters, the narrowing of the public right-of-way from the curbs to private properties, or the elimination of on-street parking.

The traffic signal phasing at 7th and North B Streets, and at 7th Street and Richards Boulevard does not change with any of these alignment variations, and therefore the traffic analysis is unchanged. 7th Street and Richards Boulevard is a split phase traffic signal whereby northbound left turns and through moves are combined in one phase. Because of this arrangement, it is equally feasible for the LRT to turn left from 7th Street to Richards Boulevard from the left turn lane (where it would be if it were in the number one lane) or from the through lane (where it would be if it were in the number two lane) coincident with traffic and not requiring a separate phase.

15-2

Comment noted.

Please see response to comment 15-1.

15-3

The DNA MOS-1 LRT alignment was designed to work with the current roadway geometrics, and proposed future geometrics based on drawings received from the City of Sacramento and Township 9 development. The design concept allowed for additional lanes to be added beyond what the City and Township 9 had identified, and as noted in the response to comment 15-1, new intersections were not precluded.

15-4.1

Please refer to the responses to comments 15-1 and 15-3. The City of Sacramento has requested preservation of the left turn lane.

15-4.2

RT is designing an LRT extension to be compatible with the ultimate circulation grid, which, for this area, is currently being addressed by the River District Specific Plan. As future RT projects are planned, RT will consider designs that are compatible with the ultimate circulation grid through coordination with the City of Sacramento and developers.

The proposed project does not contain lead emissions sources. Therefore, emissions and concentrations related to this pollutant are not analyzed in this report.[1]

Impact AQ-1 – Based on the construction emission estimates, the proposed project would result in a less-than-significant regional construction air quality impact.

Construction of the proposed project has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated by construction workers traveling to and from the project site. Fugitive dust emissions would primarily result from site preparation (e.g., excavation) activities. NOX emissions would primarily result from the use of construction equipment. VOC emissions would primarily result from paving operations. The assessment of construction air quality impacts considers each of these potential sources. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions.

The SMAQMD Road Construction Emissions Model was used to calculate daily construction emissions. Construction of the DNA project would include activities such as site preparation, demolition, utility relocation, and trackwork. Emissions were calculated using the model inputs presented in the Downtown Natomas Draft Program Environmental Impact Report as guidance. These model inputs were scaled back to more appropriately simulate the smaller scale of the proposed project. The model inputs are presented below:

- 12 months of construction
- Construction start year of 2009
- Project length of 1 mile
- Total project area of 3.3 acres
- Maximum area disturbed per day of 0.8 acres
- 1,000 cubic feet per day of soil imported
- Operation of water trucks for dust control

The maximum estimated NOX emissions of 81 ppd for the project area would be less than the SMAQMD threshold of 85 ppd. Based on the SMAQMD's Guide to Air Quality Assessment, if a project's NOX emissions are determined to be less than significant, then exhaust emissions from construction equipment and worker vehicles may be assumed to be less than significant. Regional construction emissions would result in a less-than-significant impact.

Mitigation Measures

Regional construction emissions would not exceed the SMAQMD significance thresholds. However, to ensure that construction activity is consistent with the assumptions generated by the Road Construction Emissions Model, and therefore not exceed the SMAQMD significance thresholds, the following mitigation measures are recommended:

- **AQ-1** - The construction contractor shall provide a plan, for approval by the lead agency and SMAQMD, demonstrating that the heavy-duty (> 50 horsepower) self-propelled off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average at time of construction.

[1]Prior to 1978, mobile emissions were the primary source of lead resulting in air concentrations. Between 1978 and 1987, the phase-out of leaded gasoline reduced the overall inventory of airborne lead by nearly 95 percent. Currently, industrial sources are the primary source of lead resulting in air concentrations. Since the proposed project does not contain an industrial component, lead emissions are not analyzed.

- **AQ-2** - The construction contractor shall submit to the lead agency and SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine production year, and projected hours of use for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project representative shall provide SMAQMD with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman.
- **AQ-3** - Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately, and the lead agency and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in¬operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this section shall supercede other SMAQMD or State rules or regulations.
- **AQ-4** - The construction contractor shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour.
- **AQ-5** - The construction contractor shall ensure that active grading and parking areas are watered at least twice daily.
- **AQ-6** - The construction contractor shall ensure that exposed stockpiles are enclosed, covered, watered twice daily.
- **AQ-7** - The construction contractor shall ensure that all trucks hauling dirt, sand, silt, or other loose materials are covered or maintain at least two feet of freeboard.
- **AQ-8** - The construction contractor shall utilize ultra-low sulfur fuel (< 15 parts per million) at an incremental cost of $0.20 to $0.50 per gallon. Locations where ultra-low sulfur fuel is available in California are available at: http://ecdiesel.com/business/locator.
- **AQ-9** - The construction contractor shall establish an idling limit (e.g., 5 minutes per hour).
- **AQ-10** - The construction contractor shall ensure that equipment is tuned to manufacturers' specifications at the manufacturers' recommended frequency.
- **AQ-11** - The construction contractor shall prohibit any tampering with engines and continuing adherence to manufacturer's recommendations will be required.
- **AQ-12** - If necessary, additional emissions limits shall be established within 1,000 feet of any K-12 school, based on CARB proposals.
- **AQ-13** - Notification shall be provided to all schools within 1,000 feet of a construction site.
- **AQ-14** - Truck trips shall be reduced and/or hours of driving shall be restricted through residential communities.
- **AQ-15** - Receipts of ultra-low sulfur fuel purchase and equipment tuning/repair shall be kept and made available upon request.

- **AQ-16** - The construction contractor's Project Manager shall conduct spot checks for compliance with committed measures.

Significance after Mitigation

Mitigation Measures AQ1 through AQ3 would ensure that regional construction emissions would result in a less-than-significant impact.

Impact AQ-2 – Based on localized emission calculations, the proposed project would result in a significant localized construction impact from PM10 emissions.

Construction activities such as demolition, clearing, grading, excavation, use of heavy equipment or trucks on unpaved surfaces, and loading/unloading trucks create large quantities of fugitive dust. SMAQMD requires that a localized analysis for fugitive dust be completed to determine if concentrations from construction activity would exceed significance thresholds. This determination was made using the ISCST3 air dispersion model.

The Basin is designated as a PM10 nonattainment area. Project-related fugitive dust emissions equal to or greater than five percent of the State 24-hour and annual PM10 standards would result in a significant impact. Therefore, any 24-hour PM10 emissions increase of 2.5 g/m3 or greater would result in a significant impact, and any annual PM10 emissions increase of 1.0 g/m3 or greater would result in a significant impact.

Based on modeled concentrations, construction activity along the project corridor would increase 24-hour PM10 concentrations by approximately 3.8 g/m3, and would exceed the significance threshold of 2.5 g/m3. Annual PM10 concentrations would increase by approximately 1.3 g/m3, and would exceed the significance threshold of 1.0 g/m3. Localized construction emissions would result in a significant localized construction air quality impact without mitigation.

Mitigation Measures

The Road Construction Emissions Model includes 50 percent PM10 dust control associated with the use of water trucks. This control measure was included as part of the ISCST3 modeling process. However, the SMAQMD's Guide to Air Quality Assessment suggests a fugitive dust reduction of 75 percent (an additional 25 percent) can be achieved by watering exposed soil with adequate frequency for continued moist soil. The following mitigation is recommended to help reduce fugitive dust emissions:

- **AQ-17** - The construction contractor shall water exposed soil with adequate frequency to ensure that soil is continually moist per SMAQMD guidelines throughout the construction process.

Significance after Mitigation

Mitigation Measure AQ4 would ensure a 75 percent control over PM10 fugitive dust emissions (an additional 25 percent over unmitigated conditions). This would reduce the 24-hour PM10 emissions from 3.8 to 2.8 g/m3, and annual PM10 emissions from 1.3 to 1 g/m3. The 24-hour and annual PM10 emissions would still exceed the significance thresholds, and would result in a significant and unavoidable localized construction impact.

Impact AQ-3 – Based on the operational emission estimates, the proposed project would result in a less-than-significant regional operational air quality impact.

The project would reduce automobile VMT and increase light rail VMT in the transportation system. The proposed project would increase emissions by 1.1 ppd for ROG and reduce emissions by 0.03 ppd for NOX. Emissions associated with the project would not exceed the ROG and NOX significance

thresholds of 65 ppd. The project would result in a less-than-significant regional operational air quality impact.

Mitigation Measures

None required.

Impact AQ-4 – Based on the CO hotspot analysis, the proposed project would result in a less-than-significant localized CO hotspot impact.

CO concentrations in 2010 are expected to be lower than existing conditions due to stringent State and federal mandates for lowering vehicle emissions. Although traffic volumes would be higher in the future both without and with the implementation of the proposed project, CO emissions from mobile sources are expected to be much lower due to technological advances in vehicle emissions systems, as well as from normal turnover in the vehicle fleet. Accordingly, increases in traffic volumes are expected to be offset by increases in cleaner-running cars as a percentage of the entire vehicle fleet on the road.2

The State one- and eight-hour CO standards may potentially be exceeded at congested intersections with high traffic volumes. An exceedance of the State CO standards at an intersection is referred to as a CO hotspot. SCAQMD recommends a CO hotspot evaluation of potential localized CO impacts when V/C ratios are increased by two percent at intersections with a LOS of D or worse. SCAQMD also recommends a CO hotspot evaluation when an intersection decreases in LOS by one level beginning when LOS changes from C to D.

Based on the traffic study, the selected intersections are as follows:

- 7th and B Streets – PM Peak Hour
- 7th and F Streets – PM Peak Hour
- 7th Street and Richards Boulevard – AM Peak Hour
- 8th and G Streets – AM Peak Hour

The USEPA CAL3QHC micro-scale dispersion model was used to calculate CO concentrations for 2010 "no project" and "project" conditions. CO concentrations at the analyzed intersections are shown for the AM and PM peak hours in Tables 3-4. As indicated, one-hour CO concentrations under "project" conditions would be approximately 9 ppm at worst-case sidewalk receptors. Eight-hour CO concentrations under "project" conditions would range from approximately 5.3 to 5.5 ppm. The State one- and eight-hour standards of 20 and 9.0 ppm, respectively, would not be exceeded at the analyzed intersections. Thus, a less-than-significant impact is anticipated.

CO is a gas that disperses quickly. Thus, CO concentrations at sensitive receptor locations are expected to be much lower than CO concentrations adjacent to the roadway intersections. Additionally, the intersections were selected based on poor LOS and high traffic volumes. Sensitive receptors that are located away from congested intersections or are located near roadway intersections with better LOS are expected to be exposed to lower CO concentrations. As shown in Table 3-4, CO concentrations would not exceed the State one- and eight-hour standards. No significant increase in CO concentrations at sensitive receptor locations is expected, resulting in a less-than-significant impact.

[2]California Air Resources Board, EMFAC2007, Version 2.3, November 1, 2006.

TABLE 3-4: 2008 AND 2010 CARBON MONOXIDE CONCENTRATIONS[1]

Intersection	1-hour (parts per million)			8-hour (parts per million)		
	Existing (2008)	No Project (2010)	Project (2010)	Existing (2008)	No Project (2010)	Project (2010)
7th and B Street	10	9	9	5.9	5.3	5.3
7th and F Street	10	9	9	5.8	5.3	5.3
7th Street and Richards Boulevard	10	9	9	6.1	5.5	5.5
8th and G Street	10	9	9	5.9	5.4	5.4
State Standard	20			9.0		

[1] Existing concentrations include year 2008 one- and eight-hour ambient concentrations of 9 and 5.6 ppm, respectively. No Project and Project concentrations include year 2010 one- and eight-hour ambient concentrations of 9 and 5.0 ppm, respectively.

SOURCE: TAHA, 2008 (Appendix C is available at **http://sacrt.com/dna/news/default.html**).

Mitigation Measures

None required.

Impact AQ-5 – The proposed project would not emit a substantial amount of Toxic Air Contaminants (TACs), and would result in a less-than-significant TAC impact.

Construction (TAC) Impacts

The greatest potential for TAC emissions during construction would be diesel particulate emissions associated with heavy equipment operations. Typically, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person continuously exposed to concentrations of TACs over a 70-year lifetime will contract cancer based on the use of standard risk assessment methodology. Given the short-term construction schedule of approximately 12 months, the proposed project would not result in a long-term (i.e., 70 years) source of TAC emissions. No residual emissions and corresponding individual cancer risk are anticipated after construction. Because there is such a short-term exposure period (12 out of 840 months), project-related construction TAC emissions would result in a less-than-significant impact.

Asbestos Containing Materials

Demolition of structures and earth disturbances may result in airborne entrainment of asbestos, particularly where structures include asbestos containing materials (ACMs) (e.g., insulated pipes, ducts, stacks, beams, ceiling tiles, walls, etc.) or in areas where soil contains naturally-occurring deposits of ACMs. This is of particular concern because of asbestos' known association with long-term toxic and chronic hazard risks. Approximately three acres of land would be graded during the construction process with the potential to disturb naturally occurring ACMs. This would result in a significant impact without mitigation.

Operational Toxic Air Contaminant Impacts

The proposed project provides for new light rail transit service in the corridor. The new services would be operated by electrically-powered vehicles operating along a combination of new exclusive and semi-exclusive rights-of-way. The proposed project would reduce regional VMT and associated TACs, and increase light rail VMT in the transportation system. The light rail would be electrically

powered from existing utilities and would not emit diesel particulate matter. Project-related operational emissions would result in a less-than-significant TAC impact.

Mitigation Measures

To ensure the proper handling and removal of ACMs identified on the project site, the follow mitigation is recommended:

- **AQ-18** - In the event that the project site is identified as containing ACMs, either naturally-occurring or those found within structures, the construction contractor shall consult with the SMAQMD to ensure the proper handling and removal of ACMs.

Significance after Mitigation

Mitigation Measure AQ5 would ensure the proper handling and removal of any ACMs identified on the project site, and would result in a less-than-significant asbestos impact.

Impact AQ-6 – The proposed project would not cause a significant odor impact.

Construction Odor Impacts

Potential sources that may emit odors during construction activities include equipment exhaust and architectural coatings. Odors from these sources would be localized and generally confined to the immediate area surrounding the project site. The proposed project would utilize typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. The proposed project construction activity would not cause an odor nuisance, and construction odors would result in a less-than-significant impact.

Operational Odor Impacts

Land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies and fiberglass molding. The proposed project would not include any land use or activity that typically generates adverse odors. The proposed project operational activity would not cause an odor nuisance, and construction odors would result in a less-than-significant impact.

Mitigation Measures

None required.

Impact AQ-7 – The proposed project would not alter air movement, moisture, or temperature, or cause any change in climate.

The area surrounding the project site consists of typical urban development. The proposed project would not result in the alteration of air movement, moisture, or temperature, or in any change in climate, either locally or regionally over and above what is currently experienced in that area. The proposed project would result in a less-than-significant impact.

Mitigation Measures

None required.

Impact AQ-8 – The proposed project would reduce greenhouse gas emissions in the region, and would result in a less-than-significant global warming impact.

Construction activity would generate GHG emissions from the operation of heavy-duty equipment, truck travel, and worker commute. The SMAQMD Road Construction Emissions Model was used to calculate construction GHG emissions. The entire construction process would generate approximately 587 tons of GHG emissions.

The proposed project would extend the existing light rail system by an additional mile of track into the region. This would reduce automobile VMT and increase light rail VMT in the transportation system.[3] Based on information obtained from the traffic consultant, the proposed project would reduce regional automobile VMT by 40,525 miles per year. GHG-related pollutants would include methane and nitrous oxide. However, carbon dioxide would account for more than 99 percent of project-related operational GHG emissions. The automobile carbon dioxide emission rate of 461.361 grams per mile was obtained from the CARB EMFAC2007 emissions mode.[4] This emission rate was multiplied by the VMT to obtain the grams per year of GHG emissions. The proposed project would decrease GHG emissions compared to "no project" conditions by approximately 20 tons per year. The proposed project would result in less GHG emissions than "no project" conditions. This would result in a less-than-significant and long-term beneficial global warming impact.

Mitigation Measures

None required.

Cumulative Impacts

Impact AQ-9 – The proposed project would not require a change in existing land use designations, and would result in a less-than-significant cumulative impact.

Based on the SMAQMD methodology, a project would have a significant cumulative air quality impact if the project requires a change in the existing land use designation (i.e., general plan amendment, rezone), and projected emissions (ROG, NOX, or PM10) of the proposed project are greater than the emissions anticipated for the site if developed under the existing land use designation. The proposed project would be developed within the right-of-way of an existing transportation corridor (7th and 8th Streets), and would not require a change in land use designation or rezoning prior to construction. This would result in a less-than-significant cumulative impact.

Mitigation Measures

None required.

[3]Consistent with the energy section, it was assumed that the proposed project would not create a need for additional electricity generation.

[4]California Air Resources Board, EMFAC2007, Version 2.3, November 1, 2006.

- North 5th Street and Richards Boulevard
- North 7th Street and Richards Boulevard
- North 7th Street and Bannon Street
- North 7th Street and North B Street
- North 7th Street and North Park Street
- 7th Street and South Park Street
- 7th Street and Railyards Boulevard
- 7th Street and F Street
- 7th Street and G Street
- 7th Street and H Street
- 7th Street and I Street
- 7th Street and J Street
- 7th Street and L Street
- 7th Street and Capitol Mall
- 7th Street and N Street
- 8th Street and G Street
- 8th Street and H Street
- 8th Street and I Street
- 8th Street and J Street
- 8th Street and L Street
- 8th Street and Capitol Mall
- 8th Street and N Street
- 10th Street and Richard Boulevard
- Dos Rios and Richards Boulevard

5.2.1.7 Existing Intersection Geometry and Traffic Volumes

Peak period intersection turning movement counts were conducted at the study area intersections for the a.m. weekday peak period (7:00 to 9:00 a.m.) and the p.m. weekday peak period (4:00 to 6:00 p.m.). Weekday peak period counts were conducted in 2007 and 2008. Traffic count data and existing intersection geometry (number of approach lanes and traffic control) are contained on the project website, **http://sacrt.com/dna/news/default.html.**

5.2.2 Regulatory Setting

Roadway operations are regulated by agencies with jurisdiction of the particular roadway. Study area roadways are under the jurisdiction of the City of Sacramento.

5.2.3 Methodology

Field reconnaissance was undertaken to ascertain the traffic control characteristics of each of the study area intersections and roadway segments. Determination of roadway operating conditions is based upon comparison of known or projected traffic volumes during peak hours to roadway capacity. In an urban setting, roadway capacity is generally governed by intersection characteristics, and intersection delay is used to determine “levels of service.” Levels of service describe roadway operating conditions. Level of service is a qualitative measure of the effect of a number of factors, including speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, delay, and operating costs. Levels of service are designated "A" through "F" from best to worst, which cover the entire range of traffic operations that might occur. Levels of Service (LOS) "A"

5.2.5.5 Parking

A significant impact to parking would occur if the proposed project parking supply were less than the estimated parking demand.

5.2.6 2010 Conditions

Analysis of 2010 conditions includes the No-Action Alternative and the Light Rail Alternative. Evaluation of the Light Rail Alternative was conducted under three different parking options. The *2010 Plus Light Rail Alternative – No Parking Option* assumed no on-street parking or additional off-street parking within about a half-mile walking distance of the station on Richards Boulevard at the Township 9 Development. The *2010 Plus Light Rail Alternative – On-Street Parking Option* assumed the City of Sacramento would allow on-street parking within about half a mile walking distance of the Township 9 station, but no additional off-street parking. The *2010 Plus Light Rail Alternative – Off-Street Parking Option* assumed additional off-street parking would be provided on an undeveloped area of the Township 9 Development, and no on-street parking would be allowed by the City of Sacramento within about a half-mile walking distance of the station on Richards Boulevard at the Township 9 Development.

Traffic volumes and intersection geometries associated with 2010 conditions are located on the project website, **http://sacrt.com/dna/news/default.html.**

Table 5.2-4 summarizes a.m. and p.m. weekday peak hour intersection operations for the 2010 No project Alternative scenario.

Table 5.2-5 summarizes a.m. and p.m. weekday peak hour intersection operations for the 2010 Plus Light Rail Alternative – No Parking Option scenario.

Table 5.2-3: Intersection Levels of Service Existing Conditions

Intersection[b]	AM Peak Hour		PM Peak Hour	
	LOS	Delay (sec)	LOS	Delay (sec)
I-5 South Ramp & Richards Boulevard	C	23.7	C	25.7
I-5 North Ramp & Richards Boulevard	C	23.9	C	25.8
Bercut Dr & Richards Boulevard	B	15.8	C	25.0
N 5th St & Richards Boulevard	A	6.0	A	4.1
N 7th St & Richards Boulevard	B	18.5	B	15.9
N 7th St & Bannon St	-	-	-	-
7th St & N B St	B	14.0	C	15.5
N 7th St & North Park St	-	-	-	-
7th St & South Park St	-	-	-	-
7th St & Railyards Boulevard	-	-	-	-
N 7th St & F St	C [20.8]	4.3	C [18.2]	5.5
7th St & G St	B	10.6	B	10.9
7th St & H St	B	13.1	B	12.8
7th St & I St	B	10.1	C	20.4
7th St & J St	B	11.5	A	8.5
7th St & L St	A	8.3	A	8.4
7th St & Capitol Mall	A	8.5	A	9.3
7th St & N St	A	8.5	A	9.4
8th St & G St	A	9.4	A	8.9

Table 5.2-4: Intersection Levels of Service 2010 No Project Alternative				
	AM Peak Hour	PM Peak Hour		
Intersection[b]	LOS	Delay (sec)	LOS	Delay (sec)
10th St & Richard Boulevard	B	11.1	B	11.2
Dos Rios & Richards Boulevard	A	9.5	A	8.6
Dos Rios & Richards Boulevard	A	8.5	A	8.4

5.2.7 Impacts and Mitigation Measures - Year 2010 Scenarios

5.2.7.1 Impact TC-1 – Intersections

Changes in distribution with the project may increase traffic volumes at some study area intersections and decrease volumes at others. At stop-sign controlled intersections, side street delay will increase. However, the changes in intersection operating conditions do not exceed the standards of significance for impacts to intersections. The impacts of the project would be ***less-than-significant.***

Mitigation Measures

None required.

5.2.7.2 Impact TC-2 – Pedestrian and Bicycle Circulation Impacts

The Light Rail Alternatives would result in the addition of employees, residents, patrons, and visitors to the study area, some of whom would travel by bicycle. The Light Rail Alternatives include a single-track within the right-of-way of 7th Street where 7th Street passes under the Union Pacific Rail Road, and assumes relocation of existing pedestrian and existing designated bikeways from 7th Street to a new underpass west of 7th Street by others. The Light Rail Alternative is not anticipated to result in unsafe conditions for pedestrians, including unsafe bicycle/ pedestrian or pedestrian/motor vehicle conflicts. Localized pedestrian and bicycle improvements associated with construction of stations would be provided under the Light Rail Alternative. During preliminary engineering for MOS-1, details of station layouts, including walkways and bicycle access, would be developed.

Table 5.2-5: Intersection Levels of Service 2010 Plus Light Rail Alternative – No Parking Option				
	AM Peak Hour		PM Peak Hour	
Intersection[b]	LOS	Delay (sec)	LOS	Delay (sec)
I-5 South Ramp & Richards Boulevard	C	22.7	C	26.0
I-5 North Ramp & Richards Boulevard	C	24.1	C	26.6
Bercut Dr & Richards Boulevard	B	17.7	C	28.2
N 5th St & Richards Boulevard	A	5.6	A	3.9
N 7th St & Richards Boulevard	C	24.0	C	23.3
N 7th St & Bannon St	-	-	-	-
7th St & N B St	C	31.8	C	29.3
N 7th St & North Park St	-	-	-	-
7th St & South Park St	-	-	-	-
7th St & Railyards Boulevard	-	-	-	-
N 7th St & F St	C [22.5]	4.5	C [21.9]	6.5
7th St & G St	B	10.9	B	10.1

Table 5.2-5: Intersection Levels of Service 2010 Plus Light Rail Alternative – No Parking Option				
Intersection[b]	AM Peak Hour		PM Peak Hour	
	LOS	Delay (sec)	LOS	Delay (sec)
7th St & H St	B	14.3	B	13.6
7th St & I St	B	11.0	C	20.1
7th St & J St	B	12.1	A	9.0
7th St & L St	A	8.6	A	8.9
7th St & Capitol Mall	A	8.9	A	9.7
7th St & N St	A	8.9	A	9.8
8th St & G St	B	10.1	A	9.7
8th St & H St	B	11.8	B	11.3
8th St & I St	A	9.6	B	19.5
8th St & J St	A	9.8	A	8.6
8th St & L St	A	8.9	A	8.6
8th St & Capitol Mall	A	9.4	A	9.5
8th St & N St	A	9.1	A	9.2
10th St & Richard Boulevard	B	10.8	B	11.0
Dos Rios & Richards Boulevard	A	9.2	A	8.5

Due to uncertainties regarding the timing for construction of a new Ped/Bike Path underpass by others, pedestrian and bikeway impacts are considered as a ***significant impact.***

Mitigation Measures

Given the status of the improvement project by others that would construct a new underpass west of 7th Street for a Ped/Bike path, and the information available at this time, there is currently insufficient information and certainty on which to conclude it would be constructed before the Light Rail Alternative opening day.

TC -2 - Provisions would need to be made for bicycles and pedestrians within the existing underpass during construction. The existing sidewalk would be widened as much as possible while providing a southbound traffic lane. This temporary facility will be designed and constructed in accordance with applicable state and City standards. This mitigation measure would reduce the impact of the project to a ***less-than-significant*** level.

Table 5.2-6: Intersection Levels of Service 2010 Plus Light Rail Alternative – On-Street Parking Option				
Intersection[b]	AM Peak Hour		PM Peak Hour	
	LOS	Delay (sec)	LOS	Delay (sec)
I-5 South Ramp & Richards Boulevard	C	23.1	C	26.0
I-5 North Ramp & Richards Boulevard	C	23.9	C	26.6
Bercut Dr & Richards Boulevard	B	17.1	C	28.2
N 5th St & Richards Boulevard	A	7.9	A	9.3
N 7th St & Richards Boulevard	C	24.0	C	24.3
N 7th St & Bannon St	-	-	-	-
7th St & N B St	C	31.8	C	29.3
N 7th St & North Park St	-	-	-	-

Table 5.2-6: Intersection Levels of Service 2010 Plus Light Rail Alternative – On-Street Parking Option				
Intersection[b]	AM Peak Hour		PM Peak Hour	
	LOS	Delay (sec)	LOS	Delay (sec)
7th St & South Park St	-	-	-	-

Table 5.2-7: Intersection Levels of Service 2010 Plus Light Rail Alternative – Off- Street Parking Option				
Intersection[b]	AM Peak Hour		PM Peak Hour	
	LOS	Delay (sec)	LOS	Delay (sec)
7th St & Railyards Boulevard	-	-	-	-
N 7th St & F St	C [22.5]	4.5	C [21.9]	6.5
7th St & G St	B	10.9	B	10.1
7th St & H St	B	14.3	B	13.6
7th St & I St	B	11.0	C	20.1
7th St & J St	B	12.1	A	9.0
7th St & L St	A	8.6	A	8.9
7th St & Capitol Mall	A	8.9	A	9.7
7th St & N St	A	8.9	A	9.8
8th St & G St	B	10.1	A	9.7
8th St & H St	B	11.8	B	11.3
8th St & I St	A	9.6	B	19.5
8th St & J St	A	9.8	A	8.6
8th St & L St	A	8.9	A	8.6
8th St & Capitol Mall	A	9.4	A	9.5
8th St & N St	A	9.1	A	9.2
10th St & Richard Boulevard	B	11.1	B	11.1

5.2.7.4 Impact TC-4 – Parking

7th Street - F Street to H Street

Funding constraints could prevent construction of new track on 8th Street between G and H and on G between 7th and 8th. If funding is insufficient, NB trains would travel west on H Street then north on 7th instead of traveling north on 8th then west on G. Without the 8th to G Street connection, 7th Street track between G and H Streets would operate in both north and south directions. Two-way operations would require the displacement of additional on-street parking: All on-street spaces on both sides of 7th from F to G, 3 additional spaces on the west side between G and F, and all the spaces on the east side between G and F would be displaced.

DKS conducted on-street parking surveys for the City of Sacramento on 7th Street between F and H Streets. Based on April 2008 parking surveys conducted for the City of Sacramento, the existing supply is 27 spaces and the existing midday (10 a.m. to 2 p.m.) occupancy is 20 vehicles. Some parking is designated for police only, and would likely need to be relocated. Within approximately three blocks, the surveys indicated the midday availability of 109 on-street spaces. Therefore, the 20 potentially displaced vehicles could be accommodated nearby. There are also ample opportunities for off-street parking in the vicinity, including, in the short term, the lot located along the west side of 7th Street - this lot is property owned by Railyards and is planed for development during initial phases of their development.

8th Street – H Street to I Street

The proposed Light Rail Alternative includes a station platform for northbound trains on 8th Street between H and I Streets and would require elimination of additional spaces. The subject block has 11 parking / loading spaces along the west curb, and 7 spaces along the east curb. All of them were

occupied during midday (10 a.m. to 2 p.m.) parking surveys conducted in April 2008 for the City of Sacramento.

Within three blocks of the subject block, there are about 1,058 other on-street spaces. 946 of these other spaces were occupied during the midday surveys, or about 89 percent. While there are available on-street spaces to accommodate parking space elimination in the subject block, the overall occupancy in the area is very high (about 90 percent).

Richards Boulevard Area

The proposed Light Rail Alternative would go into the existing 2-lane section on 7th Street between Richards Boulevard and North B Street and would not eliminate parking. Future striping changes by others to make this section 4-lanes would likely eliminate on-street parking if the existing right-of way were maintained. The widening to 4-lanes is not part of the proposed Light Rail Alternative.

On-street parking could be restricted in the future in the area around the Township 9 light rail station. However, the extent of where parking would be restricted or removed is not known.

Most business and industry have available off-street parking lots that are not full - on-street parking appears to be occurring for convenience, and could be accommodated off-street.

No parking is required as part of the Light Rail Alternative. Parking impacts are considered ***less-than-significant.***

Mitigation Measures

TC-4 - The Department of General Services recommended mitigation measures for parking and traffic delays during construction, which are as follows:

Prior to beginning of construction, a construction traffic and parking management plan would be prepared by the Contractor to the satisfaction of the City traffic engineer and subject to review by all affected agencies. The plan would ensure that acceptable operating conditions on local roadways and freeway facilities are maintained. The plan would include:

- The number of truck trips, time, and day of street closures.
- Time of day of arrival and departure of trucks.
- Limitations on the size and type of trucks, provision of a staging area with a limitation on the number of trucks that can be waiting.
- Provision of a truck circulation pattern.
- Provision of driveway access plan so that safe vehicular, pedestrian, and bicycle movements are maintained (e.g., steel plates, minimum distances of open trenches, and private vehicle pick up and drop off areas).
- Maintain safe and efficient access routes for emergency vehicles.
- Manual traffic control when necessary.
- Proper advance warning and Construction posted signage concerning street closures.
- Provisions for pedestrian safety.

A copy of the construction traffic management plan would be submitted to local emergency response agencies and these agencies should be notified at least 14 days before the commencement of construction that would partially or fully obstruct roadways.

5.2.8 Cumulative Conditions

Figure 5.2-5 illustrates existing and proposed roadways in the study area under Cumulative Conditions. Analysis of cumulative Conditions includes the No-Action Alternative and the Light Rail

Alternative. Evaluation of the Light Rail Alternative was conducted for the following three future roadway network options:

- *Cumulative Plus Light Rail Alternative - Railyards EIR Option* traffic conditions are based on traffic volumes and roadway geometrics contained in the City of Sacramento Railyards EIR.
- *Cumulative Plus Light Rail Alternative - Network 1 Option* traffic conditions are based upon the SACMET model adopted by SACOG in 2007, with modifications to land use based upon documentation contained in the Railyards EIR.
- The *Cumulative No project Alternative - Network 2 Option* and the *Cumulative Plus Light Rail Alternative – Network 2 Option* forecasts are based on SACOG's 2035 SACMET MTP model with a few local revisions to the land use inputs for the Richards/Railyards area and some minor street edits to better reflect local traffic circulation.

Additionally, some of the traffic analysis zones (TAZs) in the Richards & Railyards area were split into smaller zones such that the model's trip loading would better match actual trip loading. Table 5.2-8 shows the land use assumptions in the SACMET model and the revisions for the 2035 DNA forecasts. The land use revisions were arrived at through a collaborative effort involving RT, City of Sacramento, and developer inputs.

Table 5.2-8: DNA 2035 Land Use Assumptions for Richards and Railyards Areas

SubArea	SACOG MTP Model		Current Planning Documents		DNA MOS-1 Model	
	Households	Employment	Households	Employment	Households	Employment
Richards Area						
Existing	350	13,630	270	11,670	270	11,670
Cumulative (2035)	4,200	14,930	2,570	15,640	2,570	15,640
Growth	3,850	1,300	2,300	3,970	2,300	3,970
Railyards Area						
Existing	0	1,490			0	1,490
Cumulative (2035)	6,600	14,250	12,220	12,510	12,220	12,510
Growth	6,600	12,760			12,220	11,020
Richards & Railyards						
Existing	350	15,120			270	13,160
Cumulative (2035)	10,800	29,180	14,790	28,150	14,790	28,150
Growth	10,450	14,060			14,520	14,990

Cumulative intersection geometries from the City of Sacramento's Railyards EIR were utilized for Railyards EIR scenarios. Intersection geometrics for Alternative 1 assumed a 5-lane section on 7th Street, including 2-northbound through lanes, 1- center lane for left turns at intersections and 2-southbound through lanes. Intersection geometrics for Alternative 2 assumed a 4-lane section on 7th Street, including 1-northbound through lane, 1- lane for left turns at intersections, and 2-southbound through lanes.

Traffic volumes and intersection geometries associated with Cumulative Conditions are located on the project website, **http://sacrt.com/dna/news/default.html.**

Table 5.2-8 summarizes a.m. and p.m. weekday peak hour intersection operations for the Cumulative No project Alternative - Railyards EIR Option.

Table 5.2-9 summarizes a.m. and p.m. weekday peak hour intersection operations for the Cumulative No project Alternative - Network 1 Option.

Table 5.2-10 summarizes a.m. and p.m. weekday peak hour intersection operations for the Cumulative No project Alternative - Network 2 Option.

Table 5.2-11 summarizes a.m. and p.m. weekday peak hour intersection operations for the Cumulative Plus Light Rail Alternative - Railyards EIR Option.

Table 5.2-12 summarizes a.m. and p.m. weekday peak hour intersection operations for the Cumulative Plus Light Rail Alternative - Network 1 Option.

Table 5.2-13 summarizes a.m. and p.m. weekday peak hour intersection operations for the Cumulative Plus Light Rail Alternative - Network 2 Option.

Additional analyses were conducted for a design option, called the 7th Street design option, where new track would not be constructed on 8th Street north of H nor on G Street between 7th Street and 8th Street. Under this design option, northbound 8th Street light rail trains would turn left at H Street, travel westbound on H Street, and turn right and proceed northbound on 7th Street. Additional analyses were conducted at the 7th / H Street intersection where this design option could potentially result in significant impacts.

5.2.8.1 Cumulative Impacts and Mitigation Measures (Cumulative with Light Rail Alternative)

Analysis of cumulative Light Rail Alternative impacts focuses on intersections. Impacts on bikeways, pedestrian facilities, transit services, and parking are the same as the 2010 Plus Light Rail Alternative Options.

5.2.8.2 Impact TC-5 – Intersections

The project would increase traffic volumes in the study area. Peak hour intersection volumes and geometry are located on the project website, **http://sacrt.com/dna/news/default.html**. Tables 5.2-9 – 5.2-14 summarize the resultant conditions. The changes in intersection operating conditions with the addition of the project exceed the standards of significance (described in Section 5.2.5.1) for impacts to intersections at the following three locations: The impacts at the three locations were triggered by an increase in delay of more than five seconds where the LOS was below C without the project.

- 8th Street / G Street – In the a.m. peak hour, the intersection level of service remains at LOS "D" with an increase in delay from 42.3 to 51.1, an increase of 8.8 seconds under the Cumulative Plus Light Rail Alternative - Railyards EIR Option.
- 7th Street / H Street – In the p.m. peak hour, the intersection level of service remains at LOS "F" with an increase in delay from 114.3 to 132.0, an increase of 17.7 seconds under the Cumulative Plus Light Rail Alternative - Railyards EIR Option.

  7th Street design option: 7th Street / H Street – In the p.m. peak hour, the intersection level of service remains at LOS "F" with an increase in delay from114.3 to 162.4, an increase of 48.1 seconds under the Cumulative Plus Light Rail Alternative - Railyards EIR Option (with the 7th Street design option.) There is a relatively large increase under the 7th Street option at this location because if funding is insufficient for NB trains to travel north on 8th Street to G Street to 7th Street, all NB trains would travel west on H Street to 7th Street, through the 7th Street and H Street intersection. Under the 7th Street option, all NB and SB MOS-1 trains, as well as all existing EB and WB Gold Line trains would preempt this signal.
- 7th Street / G Street – In the p.m. peak hour, the intersection level of service remains at LOS "F" with an increase in delay from 204.4 to 211.2, an increase of 6.8 seconds under the Cumulative Plus Light Rail Alternative - Network 1 Option.

Changes in intersection operating conditions under either the *Cumulative Plus Light Rail Alternative - Railyards EIR Option (with or without the 7th Street design option)* or under the *Cumulative Plus Light Rail Alternative - Network 1 Option* are considered ***significant***.

Mitigation Measures

1 *Intersection of 8th Street and G Street – Modify the traffic signal cycle length during the a.m. peak hour by increasing the signal cycle length from 50 seconds to 100 seconds. This mitigation measure would improve traffic operations to LOS "D" with 40.5 seconds of delay, less than the Cumulative No project Alternative - Railyards EIR Option. The Cumulative Plus Light Rail Alternative - Railyards EIR Option would be reduced to* ***less-than-significant.***

- Residential interior noise levels of Ldn 45 dBA or greater caused by noise level increases due to the project.
- Construction noise levels not in compliance with the City of Sacramento Noise Ordinance.
- Occupied existing and project residential and commercial areas are exposed to vibration peak particle velocities greater than 0.5 in/sec due to project construction.
- Project residential and commercial areas are exposed to vibration peak particle velocities greater than 0.5 in/sec due to highway traffic and rail operations.
- Historic buildings and archaeological sites are exposed to vibration peak particle velocities greater than 0.25 in/sec due to project construction, highway traffic, and rail operations.

5.3.5 Impacts and Mitigation

Impact NV-1 Construction of the project may expose the public to high noise levels

Analysis Potentially Significant

The Sacramento Municipal Code, Title 8 - Health and Safety, Chapter 8.68 – Noise Control, limits construction activity to the period between the hours of 7:00 a.m. and 6:00 p.m. Monday through Saturday. Construction is also limited to the hours between 9:00 a.m. and 6:00 p.m. on Sunday. However, the Codes do not mandate maximum allowable construction noise levels. Provided that the proposed construction activities occur during the allowed hours specified above, no significant construction noise impacts are anticipated. Table 5.3-3 summarizes construction noise levels at various distances.

Mitigation

NV-1 - Noise control devices, such as equipment mufflers, enclosures, and barriers can be used to reduce construction noise. Natural and artificial barriers such as ground elevation and existing buildings can shield construction noise. Staging areas should be kept as far from sensitive noise receptors as possible. noise barriers, such as temporary walls or piles of excavated material, should be constructed between noisy activities and noise-sensitive receivers.

Avoid residential areas when planning haul truck routes.

Replace noisy equipment with quieter equipment, such as vibratory pile driver instead of a conventional pile driver, enclosed air compressors, and mufflers on all engines.

The LRT vehicles have warning devices that are sounded as the vehicles enter the stations and at-grade crossings. The City does not impose a quantitative noise limit specifically on warning devices. A noise criterion for warning devices recommended by American Association of Railroads' Signal Manual specifies that the noise levels of a warning bell should not be more than 105 dBA and not less than 75 dBA at a point 10 feet from the source. The warning device must be clearly audible to alert pedestrians or drivers on the roadways of imminent train pass-bys.

Table 5.3-4: Summary of Operational Noise Impact Analysis

Site Number	Land Use Category[1]	Distance to Track[2],, feet	Ambient Noise Level L_{dn}, dBA	Project-level Noise Level, L_{dn}, dBA	Cumulative Noise, L_{dn}, dBA	Increase in Cumulative Noise, dBA	Interior Noise Level due to Project, L_{dn}/L_{eq}, dBA	Noise Impact
11	SFR	41	67	68	70	3	47	Yes
12	SFR	43	67	67	70	3	47	Yes

Notes:
1. SFR: single-family residence;
2. Measured from the center of the railroad alignment to the receptor points shown on Figure 5.3-1

Mitigation

NV – 3 - Sound insulation could be used to reduce impacts by adding glazing to windows, or replacing outdated single-paned windows to acoustically-rated modern dual-pane windows. These forms of sound insulation can result in a 10 to 30-dB reduction; thus, the noise levels would be mitigated. The types and details of window material and design shall be discussed during the final stage of design.

At locations along the alignment where there are tight-turn radii in the tracks, wheel squeal may become a source of noise complaints. To avoid wheel squeals, it is recommended that the track turn radius be kept above 1,000 feet at all locations. However, RT is aware that one turning radius would be 82 feet. Rail lubrication on sharp turns would be used to reduce or minimize squeals.

As rails wear, both noise levels may increase. Grinding down or replacing worn rail will assist with maintaining operating levels of noise and vibration. Also, wheel truing, the grinding down of flat spots on the rails' wheels that occur due to braking, will reduce noise and vibration effects. Overall vehicle maintenance will help reduce the likelihood of increased noise and vibration.

In regards to the warning device, transit gongs are designed to be clearly audible for safety reasons. Various gong sounding treatment options or mounting modifications can be applicable for noise reduction.

Significance After Mitigation

Less than significant.

Impact NV-4 **Operation of the proposed project may permanently expose sensitive receptors to increased vibration levels**

Analysis *Less than Significant*

The proposed LRT vehicles for this project would be similar to the vehicles in existing service for the Blue and Gold lines. The current revenue vehicles are manufactured by Siemens Transportation Systems and Construcciones y Auxiliar de Ferrocarriles. As a result, future pass-by vibration levels would closely resemble the levels currently experienced by the adjacent sensitive receptors. For sensitive receptors north of H Street, the new proposed LRT service would be a new source of ground-borne vibration.

experienced by the adjacent sensitive receptors. For sensitive receptors north of H Street, the new proposed LRT service would be a new source of ground-borne vibration.

According to the results summarized in Table 5.3-2, LRT pass-by Peak Particle Velocity (PPV) vibration levels are lower by almost an order of magnitude than the City's required 0.5 in/sec for residential structures and 0.25 in/sec for historical buildings.

For the new construction segment of the proposed alignment north of H Street, the closest residential structure is at least 50 feet away from the proposed tracks. Measured vibration levels were recorded at approximately 50 feet away from existing tracks. These measured vibration levels can be used to estimate future operational vibration impacts at the residences north of H Street due to their comparable distances to the source. According to the measured levels, these residences would experience LRT pass-by vibration levels in the range of 0.008 and 0.048 in/sec that are well below the City's mandated vibration levels of 0.5 in/sec for residential structures and 0.25 in/sec for historical buildings. No operational vibration impacts are anticipated for these residences north of H Street.

Mitigation No mitigation is necessary.

No Project Alternative

Under the No Project Alternative, the proposed MOS-1 Project would not be constructed and no new noise impacts would result.

Cumulative Impacts:

Overall noise increase due to the proposed LRT operation would be perceived at nearby sensitive locations in various levels. Along the new alignment north of H Street, the project would result in an approximate increase of 3-dB of cumulative noise levels at nearby sensitive locations including two single-family residences. No significant cumulative vibration impacts are anticipated.

MITIGATION MONITORING REPORTING PROGRAM

The California Environmental Quality Act requires that a lead agency adopt a mitigation monitoring and reporting program (MMRP) to ensure that project revisions and mitigation measures, which were identified in an EIR to mitigate or avoid significant environmental effects, are implemented (CEQA Guidelines §15097). The lead agency can delegate reporting and monitoring responsibilities, but remains responsible for ensuring implementation of the mitigation measures until they have been completed. The MMRP identifies responsible parties and timing for implementation.

The mitigation measures and other project features that the Sacramento Regional Transit District (RT) committed to in the DEIR to reduce adverse impacts are summarized in Table 1. This summary table is provided as part of the Final EIR to facilitate the monitoring of the implementation of the mitigation measures. However, the DEIR provides the full description of all mitigation measures that are included in the project. RT will establish a program for monitoring the implementation of the mitigation measures as part of its Project Management Plan.

TABLE 1: DNA LIGHT RAIL TRANSIT MOS-1 PROJECT MITIGATION MEASURES SUMMARY

Chapter/ Section	Measure/Description	DEIR Location (Page #)	Party Responsible for Implementation	Party Responsible for Verification	Timing
Section 5.1 Air Quality	**Mitigation Measures AQ-1:** The construction contractor shall provide a plan, for approval by the lead agency and SMAQMD, demonstrating that the heavy-duty (> 50 horsepower) self-propelled off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average at time of construction.	Revised page 5.1-13	Contractor	RT	Pre-Construction
	Mitigation Measures AQ-2: The construction contractor shall submit to the lead agency and SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine production year, and projected hours of use for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of subject heavy-duty off-road	Revised page 5.1-13	Contractor	RT	Pre-Construction and Construction

Chapter/ Section	Measure/Description	DEIR Location (Page #)	Party Responsible for Implementation	Party Responsible for Verification	Timing
Section 5.1 Air Quality (continued)	equipment, the project representative shall provide SMAQMD with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman.				
	Mitigation Measures AQ-3: Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately, and the lead agency and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in¬operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this section shall supercede other SMAQMD or State rules or regulations.	Revised page 5.1-13	Contractor	RT	Construction

Chapter/ Section	Measure/Description	DEIR Location (Page #)	Party Responsible for Implementation	Party Responsible for Verification	Timing
Section 5.1 Air Quality (continued)	**Mitigation Measures AQ-4:** The construction contractor shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour.	Revised page 5.1-13	Contractor	RT	Construction
	Mitigation Measures AQ-5: The construction contractor shall ensure that active grading and parking areas are watered at least twice daily.	Revised page 5.1-13	Contractor	RT	Construction
	Mitigation Measures AQ-6: The construction contractor shall ensure that exposed stockpiles are enclosed, covered, watered twice daily.	Revised page 5.1-13	Contractor	RT	Construction
	Mitigation Measures AQ-7: The construction contractor shall ensure that all trucks hauling dirt, sand, silt, or other loose materials are covered or maintain at least two feet of freeboard.	Revised page 5.1-13	Contractor	RT	Construction

Chapter/ Section	Measure/Description	DEIR Location (Page #)	Party Responsible for Implementation	Party Responsible for Verification	Timing
Section 5.1 Air Quality (continued)	**Mitigation Measures AQ-8:** The construction contractor shall utilize ultra-low sulfur fuel (< 15 parts per million) at an incremental cost of $0.20 to $0.50 per gallon. Locations where ultra-low sulfur fuel is available in California are available at: http://ecdiesel.com/business/locator.	Revised page 5.1-13	Contractor	RT	Construction
	Mitigation Measures AQ-9: The construction contractor shall establish an idling limit (e.g., 5 minutes per hour).	Revised page 5.1-13	Contractor	RT	Construction
	Mitigation Measures AQ-10: The construction contractor shall ensure that equipment is tuned to manufacturers' specifications at the manufacturers' recommended frequency.	Revised page 5.1-13	Contractor	RT	Contractor
	Mitigation Measures AQ-11: The construction contractor shall prohibit any tampering with engines and continuing adherence to manufacturer's recommendations will be required.	Revised page 5.1-13	Contractor	RT	Construction

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Section 5.1 Air Quality (continued)	**Mitigation Measures AQ-12:** If necessary, additional emissions limits shall be established within 1,000 feet of any K-12 school, based on CARB proposals.	Revised page 5.1-13	Contractor	RT	Construction
	Mitigation Measures AQ-13: Notification shall be provided to all schools within 1,000 feet of a construction site.	Revised page 5.1-13	Contractor	RT	Pre-Construction
	Mitigation Measures AQ-14: Truck trips shall be reduced and/or hours of driving shall be restricted through residential communities.	Revised page 5.1-13	Contractor	RT	Construction
	Mitigation Measures AQ-15: Receipts of ultra-low sulfur fuel purchase and equipment tuning/repair shall be kept and made available upon request.	Revised page 5.1-13	Contractor	RT	Construction

Chapter/ Section	Measure/Description	DEIR Location (Page #)	Party Responsible for Implementation	Party Responsible for Verification	Timing
Section 5.1 Air Quality (continued)	**Mitigation Measures AQ-16:** The construction contractor's Project Manager shall conduct spot checks for compliance with committed measures.	Revised page 5.1-13	Contractor	RT	Construction
	Mitigation Measures AQ-17: The construction contractor shall water exposed soil with adequate frequency to ensure that soil is continually moist per SMAQMD guidelines throughout the construction process.	Revised page 5.1-14	Contractor	RT	Construction
	Mitigation Measures AQ-18: In the event that the project site is identified as containing ACMs, either naturally-occurring or those found within structures, the construction contractor shall consult with the SMAQMD to ensure the proper handling and removal of ACMs.	Revised page 5.1-17	Contractor	RT	Construction
Section 5.2 Transportation	**Mitigation Measures TC-2:** Provisions would need to be made for bicycles and pedestrians within the existing underpass during construction. The existing sidewalk would be widened as much as possible while providing a southbound traffic lane. This temporary facility will be designed and constructed in accordance with applicable state and City standards	Revised Page 5.2-16	Contractor	RT	Construction

Chapter/ Section	Measure/Description	DEIR Location (Page #)	Party Responsible for Implementation	Party Responsible for Verification	Timing
Section 5.2 Transportation (continued)					
	Mitigation Measures TC-4: Prior to beginning of construction, a construction traffic and parking management plan would be prepared by Contractor to the satisfaction of the City traffic engineer and subject to review by all affected agencies. The plan would ensure that acceptable operating conditions on local roadways and freeway facilities are maintained. The plan would include: • The number of truck trips, time, and day of street closures. • Time of day of arrival and departure of trucks. • Limitations on the size and type of trucks, provision of a staging area with a limitation on the number of trucks that can be waiting. • Provision of a truck circulation pattern. • Provision of driveway access plan so that safe vehicular, pedestrian, and bicycle movements are maintained (e.g., steel plates, minimum distances of open trenches, and private vehicle pick up and drop off areas). • Maintain safe and efficient access routes for emergency vehicles. • Manual traffic control when necessary. • Proper advance warning and Construction	Revised Page 5.2-19	Contractor	RT	Pre-construction
Section 5.2					

Chapter/ Section	Measure/Description	DEIR Location (Page #)	Party Responsible for Implementation	Party Responsible for Verification	Timing
Transportation (continued)	posted signage concerning street closures. • Provisions for pedestrian safety. A copy of the construction traffic management plan would be submitted to local emergency response agencies and these agencies should be notified at least 14 days before the commencement of construction that would partially or fully obstruct roadways.				
Section 5.2	**Mitigation Measures TC-5:** Intersection of 8th Street and G Street – Modify the traffic signal cycle length during the a.m. peak hour by increasing the signal cycle length from 50 seconds to 100 seconds. This mitigation measure would improve traffic operations to level of service (LOS) "D" with 40.5 seconds of delay, less than the Cumulative No project Alternative - Railyards EIR Option. Intersection of 7th Street and H Street – Modify the traffic signal cycle length during the p.m. peak hour by increasing the signal cycle length from 50 seconds to 100 seconds. This mitigation measure would improve traffic operations to LOS "E" with 65.8 seconds of delay, less than the Cumulative No project Alternative - Railyards EIR Option. Intersection of 7th Street and H Street – Modify the traffic signal cycle length during the p.m. peak hour by increasing the signal cycle length from 50 seconds to 100 seconds. This mitigation measure would improve	5.2-22	RT	RT City Traffic Engineer	Pre-Construction

Chapter/ Section	Measure/Description	DEIR Location (Page #)	Party Responsible for Implementation	Party Responsible for Verification	Timing
Transportation (continued)	traffic operations to LOS "E" with 75.0 seconds of delay, less than the Cumulative No project Alternative - Railyards EIR Option. Intersection of 7th Street and G Street – Modify the traffic signal cycle length during the p.m. peak hour by increasing the signal cycle length from 50 seconds to 100 seconds. This mitigation measure would improve traffic operations to LOS "F" with 185.0 seconds of delay, less than the Cumulative No project Alternative - Network 1 Option.				
Section 5.3 Noise/Vibration	**Mitigation Measures NV-1:** Noise control devices, such as equipment mufflers, enclosures, and barriers can be used to reduce construction noise. Natural and artificial barriers such as ground elevation and existing buildings can shield construction noise. Staging areas should be kept as far from sensitive noise receptors as possible. Noise barriers, such as temporary walls or piles of excavated material, should be constructed between noisy activities and noise-sensitive receivers. Avoid residential areas when planning haul truck routes. Replace noisy equipment with quieter equipment, such as vibratory pile driver instead of a conventional pile driver, enclosed air compressors, and mufflers on all engines.	Page 5.3-7	Contractor	RT	Construction

Chapter/ Section	Measure/Description	DEIR Location (Page #)	Party Responsible for Implementation	Party Responsible for Verification	Timing
Section 5.3 Noise/Vibration (continued)	**Mitigation Measures NV-3:** Sound insulation could be used to reduce impacts by adding glazing to windows, or replacing outdated single-paned windows to acoustically-rated modern dual-pane windows. These forms of sound insulation can result in a 10 to 30-dB noise reduction; thus, the noise levels would be mitigated. The types and details of window material and design shall be discussed during the final stage of design. At locations along the alignment where there are tight-turn radii in the tracks, wheel squeal may become a source of noise complaints. To avoid wheel squeal, it is recommended that the track turn radius be kept above 1,000 feet at all locations. However, RT is aware that one turning radius would be 82 feet. Rail lubrication on sharp turns would be used to reduce or minimize squeal. As rails wear, both noise levels may increase. Grinding down or replacing worn rail will assist with maintaining operating levels of noise and vibration. Also, wheel truing, the grinding down of flat spots on the rails' wheels that occur due to braking, will reduce noise and vibration effects. Overall vehicle maintenance will help reduce the likelihood of increased noise and vibration. In regards to the warning device, transit gongs are designed to be clearly audible for safety	Page 5.3-11	RT	RT	Operations

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	reasons. Various gong sounding treatment options or mounting modifications can be applicable for noise reduction.				
Section 5.4 Aesthetics	**Mitigation Measures VIS-1:** Work with the community during preliminary through final design to develop Aesthetic and Design Guidelines for the project improvements through a formalized structure that allows for community input (Context Sensitive Solutions). Design the overhead contact systems (OCS) to preserve the existing mature street trees along 7th Street in the Alkali Flat Neighborhood area.	Page 5.4-12	RT Designer	RT	Pre-Construction
	Mitigation Measures VIS-2: Design the OCS to preserve the existing mature street trees along 7th Street in the Alkali Flat Neighborhood area. If trees are impacted, replacement trees would be planted to restore the Alkali Flat view shed.	Page 5.4-12	Contractor	RT	Pre-Construction and Operation
	Mitigation Measures VIS-3: Work with the community during preliminary through final design to develop Aesthetic and Design Guidelines for the project improvements through a formalized structure that allows for community input (Context Sensitive Solutions).	Page 5.4-12	RT	RT	Pre-Construction

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Appendix A: Cultural Resources	**Mitigation Measures CUL:** **CR-1** - Implement preconstruction training for construction employees to familiarize them with cultural resources and to explain the protocols on how to proceed if subsurface cultural resources are encountered during construction. The legal ramifications of impacting cultural resources will also be explained.	Page 38	Cultural Resource Specialist (Working for RT)	RT	Pre-Construction
	CR-2 - A qualified archaeologist, who is certified by the Society of Professional Archeologists (SOPA) and/or meet the federal standards as stated in the Code of Federal Regulations (36 CFR 61) should monitor the project site during earthmoving or excavation construction activities (deeper than 12 to 18 inches). A site-specific cultural resource monitoring plan will be developed by Regional Transit, prior to construction, once the construction activities are better defined.	Page 38	Cultural Resource Specialist (Working for RT)	RT	Construction
	CR-3 - In the event that any prehistoric subsurface archeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, animal bone, obsidian and/or mortars are discovered during construction-related earth-moving activities, all work within 50 yards of the resources shall be halted, and the qualified archaeologist would assess the significance of the find and monitor the site. Archeological test excavations shall be conducted by a qualified archeologist to aid in determining the nature and integrity of the find. If the find	Page 38	Cultural Resource Specialist (Working for RT)	RT	Construction

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Appendix A: Cultural Resources (continued)	is determined to be significant by the qualified archeologist, RT representatives and the qualified archeologist shall coordinate to determine the appropriate course of action. All significant cultural materials recovered shall be subject to scientific analysis and professional museum curation. In addition, a report shall be prepared by the qualified archeologist according to current professional standards. The report will be submitted to RT. **CR-4 -** If a Native American site is discovered, the evaluation process shall include consultation with the appropriate Native American representatives. If Native American archeological, ethnographic, or spiritual resources are involved, all identification and treatment shall be conducted by qualified archeologists, and Native American representatives, who are approved by the local Native American community as scholars of the cultural traditions. In the event that no such Native American is available, persons who represent tribal governments and/or organizations in the locale in which resources could be affected shall be consulted. If historic archeological sites are involved, all identified treatment is to be carried out by qualified historical archeologists. **CR-5 -** If a human bone or bone of unknown origin is found during construction, all work shall stop in the vicinity of the find, and the	Page 38 Page 38	Cultural Resource Specialist (Working for RT) Cultural Resource Specialist (Working for RT)	RT RT	Construction Construction

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Appendix A: Cultural Resources (continued)	County Coroner shall be contacted immediately. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission, who shall notify the person most likely believed to be a descendant. The most likely descendant shall work with the contractor to develop a program for re-internment of the human remains and any associated artifacts. No additional work is to take place within the immediate vicinity of the find until the appropriate actions have taken.		Contractor County Corner		
Appendix A: Water	**Mitigation Measures WAT:** In the event that groundwater is encountered during construction, dewatering would be conducted locally. Dewatering effluent would be tested for contamination. Contaminated effluent would be disposed of in accordance with applicable federal, state, and local regulations.	Page 15	Contractor	RT	Construction
Appendix A: Hazardous Waste	**Mitigation Measures HAZ:** **HM-1 - Confirming the Status of Remediation Activities**. If any of the excavations occur within the Railroads area, a review will be conducted of the remediation status of the site. If remediation activities will be complete before construction of the project, then no further mitigation will be necessary. If remediation would not be completed prior to project construction, then an alternate mitigation	Page 28	Hazmat Specialist (Working for RT)	RT	Pre-Construction

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Appendix A: Hazardous Waste (continued	plan will be prepared and implemented. **HM-2 - Site Evaluation.** If any of the excavations occur within the other nine potential hazardous substance sites in the project area (see Table 9-1), a Phase II Site Specific Evaluation will be made of any known and suspected contaminated sites that would be disturbed by construction operations before any soil is removed from affected areas for construction, using the following procedure: 1) implementation of a Worker Health and Safety Plan; 2) preparation of a site-specific work plan specifying the proposed location for surface samples or soil borings or trenches; 3) soil boring or trenching and sample collection; 4) laboratory analysis of samples; and 5) preparation of a findings and recommendations report. If the site-specific evaluations determine that contaminants are present, RT will determine the type and extent of contamination and will prepare and implement a remediation plan to avoid risks to public health and safety. **HM-3 - Worker Health and Safety Plan & Training.** To avoid health effects on construction personnel, all personnel who may come in contact with contaminated soil or groundwater would be trained in accordance with the OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) standard (29CFR 1910. 120). A site-specific worker health and safety plan defining potential contaminants and, where	Page 28 Page 28	Hazmat Specialist (Working for RT) Hazmat Specialist (Working for RT)	RT RT	Pre-Construction Pre-Construction

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	appropriate, proper personnel protective equipment would be employed. Proper decontamination procedures for workers and equipment would be followed. **HM-4 - Notify Appropriate Regulatory Agencies and Enact Specific Mitigation Plans.** RT will notify the State Department or Toxic Substances Control, Sacramento County Environmental Health Department and the local fire department of any contaminants encountered during construction.	Page 28	RT	RT	Construction