

SDG&E ECO PTC Application A.09-08-003
CPUC ED DR15, Issued 8/8/11
SDG&E's Revised 8/26/11 Response

Noise

1. Please provide a noise analysis for the 138 kV Old Highway 80 – Carrizo Gorge Road reroute alternative for the residential properties near the proposed reroute alignment. If the noise analysis indicates that the noise associated with construction activities would exceed the applicable County of San Diego Noise Ordinance construction noise threshold (i.e.; 8-hour average of 75 dB between the hours of 7 a.m. and 7 p.m.), please suggest approved operational considerations (for example, restriction of construction activities to 5 hours instead of 8 hours a day). As needed, please expand upon existing noise-related applicant proposed measures (APMs) that would ensure that construction activities would comply with the County of San Diego Noise Ordinance noise level limits.

SDG&E Response 1:

In response to the California Public Utilities Commission email request on August 22, 2011, Acentech Incorporated (Acentech) conducted an analysis and calculations to analyze the potential noise impacts to property boundaries from undergrounding of the 138 kV transmission line along Old Highway 80 and Carrizo Gorge Road. The discussion that follows summarizes their findings and identifies an additional APM that is recommended to reduce potential Proposed Project impacts to a less-than-significant level.

Noise limits in the East County Substation Project (Proposed Project) area are set by the County of San Diego Noise Ordinance. Construction noise cannot exceed 75 A-weighted decibels (dBA) for an eight-hour period between 7 a.m. and 7 p.m. when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received.

Based on Google Earth imagery and San Diego County parcel data, Acentech identified approximately seven residential parcels¹ within 2,000 feet of the proposed Old Highway 80 – Carrizo Gorge Road Reroute. The locations of these parcels are depicted in Figure 1: Residential Properties Along the Old Highway 80 – Carrizo Gorge Road Reroute. One parcel boundary is located approximately 1,490 feet north of the alignment and directly adjacent to Interstate-8. The remaining six parcels are located near the intersection of Old Highway 80 and Carrizo Gorge Road. The closest residential parcel boundary is located approximately 10 feet southwest of the alignment.

¹ Residences present and whether the residences are occupied have not been field verified.

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A list of equipment required to construct this portion of the Proposed Project, their average daily operating hours, maximum noise levels (L_{max})² at a reference distance of 50 feet, use factors, and the eight-hour equivalent noise level (L_{eq}) at 50 feet was compiled. A summary of this information has been included as Table 1: Construction Equipment and Reference Noise Levels.

The eight-hour average L_{eq} at the boundary of each residential parcel from construction equipment use was then calculated by Acentech on August 23, 2011. The results of these calculations are presented in Table 2: Estimated Noise Levels at Residential Parcel Boundaries. In all cases, the proposed underground alignment was assumed to be between the roadway and the residence. The maximum eight-hour average L_{eq} , without the implementation of any applicant-proposed measures (APMs) will be range between approximately 58 dBA and 102 dBA. As a result, noise levels at the boundary of Assessor's Parcel Numbers 66104023, 66106011, and 66106007 will be in compliance with the applicable noise standard. The maximum L_{eq} at the four remaining residential property boundaries will be approximately 102 dB, which exceeds the applicable standard. The eight-hour average L_{eq} was recalculated at the residential parcel boundaries with the jackhammers omitted, and the resulting noise level at the nearest residence was 101 dBA, which also exceeds the San Diego County noise standards.

Further calculations were performed to determine the required buffer between construction activities and residential parcel boundaries to ensure compliance with the San Diego County standards. Without the implementation of any APMs, construction activities located less than 220 feet from residential parcel boundaries will exceed San Diego County standards. In areas where jackhammer use is not anticipated, a buffer of at least 190 feet between construction activities and residential parcel boundaries is required.

Due to the close proximity of construction activities to four residential parcel boundaries near the intersection of Old Highway 80 and Carrizo Gorge Road, the reduction of operating time per day or the erection of temporary noise barriers will not reduce construction noise levels below those required by San Diego County. In order to ensure that noise levels associated with the construction of this portion of the Proposed Project are in compliance with the San Diego County noise standards, SDG&E is proposing the following APM:

- **APM-NOI-XX:** SDG&E will coordinate construction activities to occur in the absence of residents, or at other acceptable times, to avoid nuisance or annoyance complaints. If necessary, SDG&E will temporarily relocate residents occupying properties located less

² L_{max} values and use factors were determined using the United States Department of Transportation Federal Highway Administration Roadway Construction Noise Model Version 1. A reference distance of 50 feet was used for all pieces of equipment except for the backup alarm. A reference value of 4 feet and an L_{max} of 103 dBA was determined from Operational Safety and Health Administration guidelines.

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than 220 feet from construction activities, on an as-needed basis, for the duration of construction activities that would affect them.

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Figure 1: Residential Properties Along the Old Highway 80 – Carrizo Gorge Road Reroute

See Attached

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Table 1: Construction Equipment and Reference Noise Levels

Equipment	Approximate Quantity	Average Duration of Use (hours per day)	Lmax at Reference Distance (dBA)	Use Factor	Eight-Hour Leq at 50 Feet (dBA)
¾-ton or 1-ton pickup truck	6	2	75	40%	72.8
Air compressors	2	4	78	40%	74.0
Maintenance truck	1	2	79	20%	66.0
Concrete truck	4	2	82	40%	78.0
HDD Rig	2	6	82	20%	76.8
Backhoe	1	6	79	40%	73.8
Fork lift/skid steer	1	4	80	40%	73.0
Light duty crane	1	4	81	16%	70.0
Trencher/Ditch witch	1	6	80	50%	75.7
Loader	1	6	79	40%	73.8
Water truck	1	2	80	40%	70.0
Compactor -handheld	2	4	80	20%	73.0
Vibrating roller	1	6	80	25%	72.7
Pneumatic Tools (Impulsive Noise)	2	4	89	20%	82.0
Dump truck	2	6	76	40%	73.8
Backup Alarm	20	6	103	5%	79.8

Table 2: Estimated Noise Levels at Residential Parcel Boundaries

Approximate Distance to Parcel Boundary (feet)	Assessor's Parcel Number	Project 8-Hour Leq Unmitigated (dBA)	
		With Jackhammer	Without Jackhammer
1,490	66104023	58	57
10	66107008	102	101
10	66106006	102	101
10	66106015	102	101
470	66106011	68	67
480	66106007	68	67
10	66107006	102	101

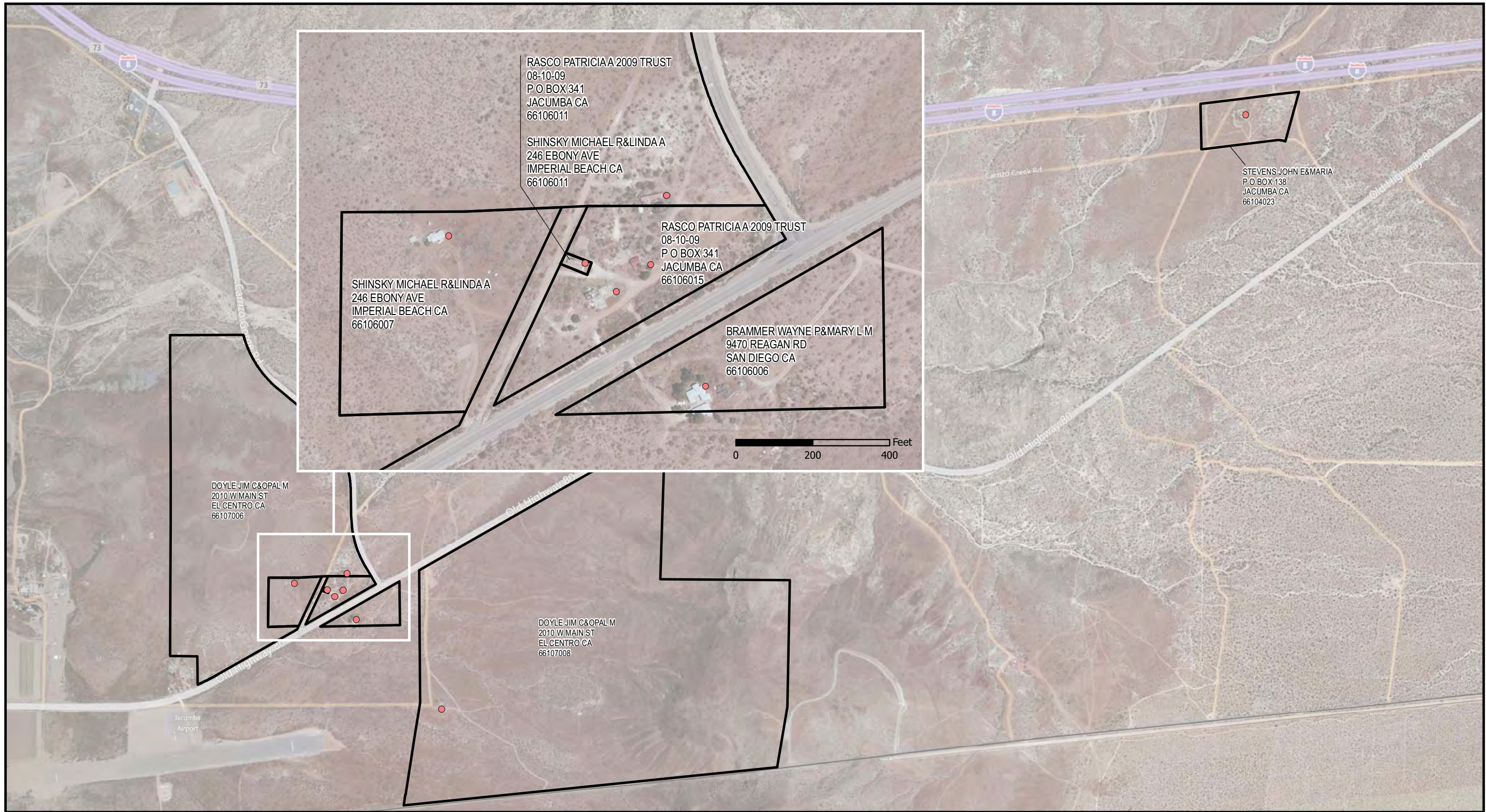


Figure 1: Residential Properties Along the Old Highway 80 – Carrizo Gorge Road Reroute

East County Substation Project

- Residence
- ▭ Parcel Boundary

